



GALAXI

OPERATOR PANEL MANUAL – HOW TO PROGRAM THE MACHINE

TRANSLATION OF ORIGINAL INSTRUCTIONS IN ITALIAN

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SOCIETÀ COOPERATIVA BILANCI CAMPOGALLIANO. Thanks you for purchasing one of its products and recommends reading this manual and all the manuals and documents listed in chapter 11.

Inside you will find all information necessary for correctly managing the purchased machine.

Therefore, the user is kindly requested to carefully follow the warnings contained and read it all.

We also invite you to contact SOCIETÀ COOPERATIVA BILANCI CAMPOGALLIANO directly for any spare parts, advice on the choice of any special equipment or, simply, for information concerning the purchased machine.

This manual can be easily consulted due to the inclusion on the first page of the general index and the Manual layout that allows you to immediately find the topic of interest.

The chapters are structured so that the desired information can be easily found.

An explicit indication placed at the beginning of the chapter indicates, if any, that the chapter covers topics and gives information of specific interest for qualified personnel.

The documentation provided with the machine consists of the following Instructions and Warnings Manual as well as the manuals for the equipment, machines, partly completed machinery- and components listed in chapter 9, which are an integral part of this manual and for which the same recommendations and/or requirements as this manual apply.

SOCIETÀ COOPERATIVA BILANCAI CAMPOGALLIANO also wishes to congratulate the purchaser for choosing the quality and precision of our products, remembering that an appropriate use of the machine in compliance with the provided operating instructions, regular calibration and maintenance ensures efficient and accurate operations, thus protecting the investment made.

The instructions contained in this manual are: A TRANSLATION OF THE ORIGINAL INSTRUCTIONS.

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1. INSTRUCTIONS FOR THE INSTALLER

1.1 INTRODUCTION

1.1.1 Safety prescriptions for the installer



HAZARD

The information and instructions given in this chapter are intended for machine programmers and electrical maintenance technicians with electrical, electronic and programming skills.

Every removal and opening of the metrological sealing by the user or, in any case, unauthorised personnel, causes an immediate loss of warranty and relieves the Manufacturer from any liability for damage caused to property or people.

Operations that, in order to be carried out, require the removal and restoration of legal stamps, as well as the opening of the instrument, must be performed by personnel from the manufacturer.

It is forbidden to use the machine with the electrical panel open. Remove the safety guards after switching off the machine and disabling the electrical disconnect, only for the time strictly necessary to perform the required repairs or maintenance, then restore them immediately.

1.2 CONFIGURATION PARAMETERS

1.2.1 Machine Configuration

When the machine is turned on, the main page appears:



Figure 1-1

The main machine configuration parameters are found in the Terminal setting menu, accessible from the home page by pressing the following keys:

ARCHIVES -> SETTINGS -> TERMINAL SETTING

now you will be in the **Home\Arch.\Config\Term** menu indicated in the top-left of the pages.

Press:

MACHINE SETTINGS

to access the page Home\Arch.\Config\Term\Config. Machine

Some of the parameters listed below are only present on certain types of machines:

PARAMETER NAME	FIELD MEANING
LINE TYPE	Allows you to select the terminal model (Venus, Venus 3/4, Mercury, Checkweigher, Galaxi, etc..)
ADVANCED PRINT	Single belt machine operation with label printing on economy photocell (fixed weight only without range)
SCALE TYPE	If Mercury (not Plus), it displays the Mercury sampling Frequency field, otherwise the Venus one
IO EXPANSION	Allows you to select any I/O expansion board

PARAMETER NAME	FIELD MEANING
IO REMOTE COM	Used to set the serial port (COM) to which the I/O remote board is connected.
LINE MODEL	Parameters used for selecting the Mercury machine and weighing machine configurations in the "SOFTWARE TEST" menu, taking information from an external file

[+] LANGUAGES	
PARAMETER NAME	FIELD MEANING
COUNTRY	Selects the terminal language
ORIGINAL KEYBOARD	Allows you to select the old model of terminal keyboard. From version 4.0.0, this parameter is "NO" by default

[+] SCALE	
PARAMETER NAME	FIELD MEANING
CLASS	Allows you to set the terminal weighing class (X, Y, X/Y, NONE)
CHECK MINIMUM WEIGHING	Parameter that checks the validity of the weight even if working in LABELLING ONLY mode
SECOND SCALE	Indicates whether the double scale is present
EXTENDED STRING COM	Allows you to set the serial port (COM) dedicated to the cyclic sending of an EXTENDED string (see DIALOGIC terminals)
COM VISUAL. RD52	Allows you to set the serial port (COM) for using the RD52 viewer
ROUND OFF PRED. TARE	If set to YES, parameter for rounding off the predetermined tare to the scale division

[+] PROCESS	
PARAMETER NAME	FIELD MEANING
OPER. TYPE MANUAL	(KEYBOARD, EXTERNAL BUTTON)
PROCESS TYPE	Indicates whether the machine must work based on the concept of PLU only, PROCESS or REMOTE MANAGEMENT
PROC DATA MANAGEMENT	Parameter used for setting the process behaviour at the time of start. A new process can be created: create it only if it does not exist or enter resetting only the totals.
OPER TYPE	Parameter for setting the type of operation (Single product or Crate weigher)
MOD. SCANNER	Used to set the scanner operating mode. Crate weigher The read data will be set as STORE, PROCESS FIELD or the PICKING mode will be used.
DATA READ.SCANNER COM	Allows you to set the serial port (COM) to which the data reading scanner is connected

[+] PROCESS	
PARAMETER NAME	FIELD MEANING
BARCODE READING ID	Parameter used for setting the ID of the BC-READ which interprets the data read by the data reading scanner if the line works in CRATEWEIGHER mode
EVENT SCANNER COM	Allows you to set the serial port (COM) to which the scanner that sends the read data via network as an event, is connected
NO.EVENT SCAN.READINGS	Defines the maximum number of event scanner readings allowed consecutively without sending data via network
D.R. BARCODE ID	Parameter used for setting the ID of the BC-READ which interprets the data read by the data reading scanner
ENAB. D.R. ID CHANGE	Parameter used for changing the reference to the BC-READ record in use from the process window (F11)
PROGRESSIVE DAY FIELD	Defines the process field within which, when the process is created, the progressive day value set in the counters is stored
MIN REM.MGMT. REFRESH	Parameter used for setting the REFRESH time of the REMOTE MANAGEMENT screen (expressed in minutes)
INPUT PLU IN PROC	Parameter used for changing the current PLU directly from the process screen using the F12 key
DISPLAY CONTRAST	Parameter used for setting the terminal display contrast value (unused on LX, Check weigher and Mercury terminals)
BOX STOPPER	Parameter used for handling the box stopper
TOT.CLOSURE REQ.	If disabled, when the manual closing of the totals is requested the dialog boxes are not displayed but the box and pallet total is automatically closed

[+] CRATEWEIGHER	
PARAMETER NAME	FIELD MEANING
MULTIPROD INPUT TYPE	Parameter that defines the store input mode in crate weigher mode (from KEYBOARD, from SCANNER, via NETWORK)
SERIAL KEYBOARD COM	Allows you to set the serial port (COM) to which the serial keyboard for store input is to be connected
MULTIPROD SCANNER COM	Allows to set the serial port (COM) to which the store input scanner is to be connected
INTER. CRATE WEIGHER INTERF.	Parameter that enables on-screen loading of the data of the PLU selected with the last store entered in the queue
INTER.TARE	Parameter that enables on-screen loading of the TARE value set in the PLU selected with the last store entered in the queue
INVALID STORE REP	Parameter which, if the barcode has not been correctly read by the input scanner in crate weigher mode, allows you to set a store that does not allow the piece to be weighed and stops it on the scale belt, pending a valid store from keyboard
KEEP PCS OUT OF RANGE	Parameter which, combined with the CRATEWEIGHER mode, allows you to keep a piece rejected due to OUT OF RANGE on the scale, pending a new store
AUTOMATIC STORE	Enabling this parameter when the piece reaches the scale plate without there being stores in queue, automatically inserts a store in the PLU currently used at that moment. However, you can create a store queue from the keyboard or softkey
WEIGHT ACQ. ON STORE	When this parameter is set to TRUE, the weight acquisition in crate weigher mode occurs at the time of receipt of the store (if the weight is already on the scale)
SCANNER ERROR MGMT	If this field is set to YES, when the scanner reads an invalid barcode, an invalid store is sent to the queue
INTERACTIVE MOVEM.	Parameter that allows, after weighing a piece, to load the handing data relating to the PLU associated with the piece that is restarting from the scale belt

[+] REJECTS AND SELECTIONS	
PARAMETER NAME	FIELD MEANING
REJECT MANAGEMENT	Indicates if, in case of piece rejection, the machine must only NOT label, stop or eject the piece
EJECTION TIME (ms)	Ejector activation time, expressed in milliseconds
CHECK BARRIER	Parameter used to enable the control on the light curtain coverage in the presence of ejector and rejected piece
BARRIER: WAITING (ms)	Parameter where to set the maximum coverage waiting time (in milliseconds) of the barrier after activating the ejector
CHECK BARRIER 2	Parameter used to enable the control on the light curtain coverage in the presence of ejector 2 and rejected piece
BARRIER 2: WAITING (ms)	Parameter where to set the maximum coverage waiting time (in milliseconds) of the barrier after activating the ejector 2
REJECT TANK SENS	Parameter used to enable the control on the sensor connected to the door of the tank used to collect the rejected pieces; if the door remains open for a certain time, the alarm triggers
TANK ALARM (sec)	Parameter where to set the maximum time that the reject tank door can remain open without triggering the alarm (expressed in seconds)
REJECT TANK 2 SENS	Parameter used to enable the control on the sensor connected to the door of the second tank used to collect the rejected pieces; if the door remains open for a certain time, the alarm triggers
TANK 2 ALARM (sec)	Parameter where to set the maximum time that the second reject tank door can remain open without triggering the alarm (expressed in seconds)
EXTERNAL REJECT EVENT	Parameter that determines the control point of the external reject input (INPUT PHOT., WEIGHING TARGET, EJE.OUTSIDE MACHINE). The EJECTION OUTSIDE MACHINE event does not correspond to a reject handled by the scale, provided that the upstream machine ejects the piece directly
SELECTOR	Multiway diverter type

[+] EJECTORS	
PARAMETER NAME	FIELD MEANING
EJEC.1: OUTPUT NO	Parameter where to set the number of the input connected to ejector 1
EJEC.1: (CTRL) ZONE 1	Ejector 1: Reject the pieces that, in CTRL operation, fall in zone 1 (below limit --)
EJEC.1: (CTRL) ZONE 2	Ejector 1: Reject the pieces that, in CTRL operation, fall in zone 2 (between limit - and limit --)
EJEC.1: (CTRL) ZONE 3	Ejector 1: Reject the pieces that, in CTRL operation, are accepted
EJEC.1: (CTRL) ZONE 4	Ejector 1: Reject the pieces that, in CTRL operation, fall in zone 4 (between limit + and limit ++)
EJEC.1: (CTRL) ZONE 5	Ejector 1: Reject the pieces that, in CTRL operation, fall in zone 5 (above limit ++)
EJEC.1: REJECT METAL	Ejector 1: Reject the pieces that are reported to be incorrect by the metal detector
EJEC.1: EXTERNAL INPUT	Ejector 1: When this parameter is enabled, ejector 1 activates in case of reject due to the activation of an external input
EJEC.1: OUT OF RANGE	Ejector 1: Reject the pieces whose weight does not match the selection parameters of the minimum and maximum weight ranges
EJEC.1: ABOVE RANGE	Ejector 1: Reject the pieces whose weight is ABOVE the PLU range
EJEC.1: BELOW RANGE	Ejector 1: Reject the pieces whose weight is BELOW the PLU range
EJEC.1: INVALID STORE	Ejector 1: Reject the pieces for which the store is invalid
EJEC.1: PIECES NOT WEIGHABLE	Ejector 1: Reject the pieces in various cases: unstable weight, long piece, insufficient piece info, minimum weighing, minimum weight
EJEC.1: TOO FULL	NOT MANAGED: (Ejector 1: Reject when the reject tank of ejector 2 is too full and use ejector 1 as an alternative)
EJEC.2: OUTPUT NO	Parameter where to set the number of the input connected to ejector 2
EJEC.2: (CTRL) ZONE 1	Ejector 2: Reject the pieces that, in CTRL operation, fall in zone 1 (below limit --)
EJEC.2: (CTRL) ZONE 2	Ejector 2: Reject the pieces that, in CTRL operation, fall in zone 2 (between limit - and limit --)
EJEC.2: (CTRL) ZONE 3	Ejector 2: Reject the pieces that, in CTRL operation, are accepted
EJEC.2: (CTRL) ZONE 4	Ejector 2: Reject the pieces that, in CTRL operation, fall in zone 4 (between limit + and limit ++)

[+] EJECTORS	
PARAMETER NAME	FIELD MEANING
EJEC.2: (CTRL) ZONE 5	Ejector 2: Reject the pieces that, in CTRL operation, fall in zone 5 (above limit ++)
EJEC.2: REJECT METAL	Ejector 2: Reject the pieces that are reported to be incorrect by the metal detector
EJEC.2: EXTERNAL INPUT	Ejector 2: When this parameter is enabled, ejector 2 activates in case of reject due to the activation of an external input
EJEC.2: OUT OF RANGE	Ejector 2: Reject the pieces whose weight does not match the selection parameters of the minimum and maximum weight ranges
EJEC.2: ABOVE RANGE	Ejector 2: Reject the pieces whose weight is ABOVE the PLU range
EJEC.2: BELOW RANGE	Ejector 2: Reject the pieces whose weight is BELOW the PLU range
EJEC.2: INVALID STORE	Ejector 2: Reject the pieces for which the store is invalid
EJEC.2: PIECES NOT WEIGHABLE	Ejector 2: Reject the pieces in various cases: unstable weight, long piece, insufficient piece info, minimum weighing, minimum weight
EJEC.2: TOO FULL	NOT MANAGED: (Ejector 2: Reject when the reject tank of ejector 1 is too full and use ejector 2 as an alternative)

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
PRINTHEADS	Parameter that sets the number of terminal printheads
PROD PRINT COM PORT	Allows you to set the serial port (COM) to which the product 1 printer is to be connected
PROD. PTR IP	Parameter that sets the IP address of the product 1 printer in case of ethernet connection
PROD.1 PRINT BAUD RATE	Sets the baud rate of the serial to which the product 1 printer is connected
MODEL	Sets the product 1 printer model (Italora, Datamax)
PROD PRINTER TYPE	Indicates the product printer 1 type (manual, application hand, air jet, piston)
MAN APPL. TIME (s)	Parameter showing the time to be taken for application in case of manual application (expressed in seconds)
FAST REST.	Single belt machine quick operation
BLOW (th) DELAY TIME	Time expressed in ticks used to delay application in case of air jet applicator
BLOW TIME (ms)	It is the blow time (in milliseconds) of the label for air jet applicator of product 1 printer
DELAY TIME (s)	It is the waiting time (in seconds) before the start of application with delay hand applicator (product 1 printer)
WAITING TIME (x16ms)	It is the waiting time (in ticks) before the start of the belts after retraction of the hand in the hand application with wait (product 1 printer)
START CLUTCH-MOT TIME (th)	It is the time (in ticks) in which the clutch remains active for the start of the applicator hand of product 1 printer
STOP CLUTCH TIME (th)	It is the time in which the clutch remains active to stop the applicator hand of product printer 1
X PRINT. PROD. RESOL.	Resolution of product 1 printer head along the X axis (8 dots, 12 dots, 7.52 dots)
Y STMP PROD. RESOL.	Resolution of product 1 printer head along the Y axis (8 dots, 12 dots, 7.52 dots)
PROD PRINTER INTERNAT.MGMT	Parameter indicating whether the product 1 printer fits a firmware for managing the fonts that allow internationalisation (Nina)
PROLONGED VACUUM	Prolonged vacuum on product 1 printer until the hand goes back to starting position
SPEED OFFSET	Corrective Speed offset applied to the label printing speed for product 1 printer

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
Corrective BACKFEED	Corrective backfeed applied to the backfeed of the labels issued on product 1 printer
Corr.HEADER LENGTH	Corrective Heading length applied to the labels' header length for product 1 printer
Corrective PEELING	Corrective peeling applied to the peeling of labels for product 1 printer
Corrective X OFFSET	Additional X offset applied to the labels for product 1 printer
Corrective Y OFFSET	Additional Y offset applied to the labels for product 1 printer
Corrective TEMP OFFSET	Temperature offset applied to the temperature of the product 1 printer labels
ADAPT LABEL FOR AUT PRINT	Parameter used to adapt the centring of a label created for a manual printing unit (e.g. SMART2000) to the automatic product printing unit 1
ADAPT LABEL FOR MAN PRINT	Parameter used to adapt the centring of a label created for automatic product printing unit 1 to a manual printing unit (e.g. SMART2000)
PROD PRINTER FOIL	Parameter that checks the presence of foil for product 1 printer. Therefore differentiating whether you are printing in Direct Mode or Transfer Mode
PROLONGED ASSIST	Parameter that allows you to decide whether to disable the product 1 printer assist at the end of printing (NO) or at the end of application (YES)
PROD PRINT COM PORT 2	Allows you to set the serial port (COM) to which the product 2 printer is to be connected
PROD. PTR IP 2	Parameter that sets the IP address of the product 2 printer in case of ethernet connection
PROD.2 PRINT BAUD RATE	Sets the baud rate of the serial to which the product 2 printer is connected
MODEL	Sets the product 2 printer model (Italora, Datamax)
PROD PRINTER TYPE 2	Indicates the product printer 2 type (manual, application hand, air jet, piston)
PROD.2 BLOW TIME (ms)	It is the blow time (in milliseconds) of the label for air jet applicator of product 2 printer
PROD.2 DELAY TIME (s)	It is the waiting time (in seconds) before the start of application with delay hand applicator (product 2 printer)
START CLUTCH-MOT TIME (th)	It is the time (in ticks) in which the clutch remains active for the start of the applicator hand of product 2 printer
STOP CLUTCH TIME (th)	It is the time in which the clutch remains active to stop the applicator hand of product 2 printer

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
WAITING TIME (x16ms)	It is the waiting time (in ticks) before the start of the belts after retraction of the hand in the hand application with wait (product printer 2)
X PRINT. PROD.2 RESOL.	Resolution of product 2 printer head along the X axis (8 dots, 12 dots, 7.52 dots)
Y PRINT. PROD.2	Resolution of product 2 printer head along the Y axis (8 dots, 12 dots, 7.52 dots)
PROD.2 PRINT INTERNAT.MGMT	Parameter indicating whether the product 2 printer fits a firmware for managing the fonts that allow internationalisation (Nina)
PROLONGED VACUUM	Prolonged vacuum on product 2 printer until the hand goes back to starting position
SPEED OFFSET	Corrective Speed offset applied to the label printing speed for product 2 printer
Corrective BACKFEED	Corrective backfeed applied to the backfeed of the labels issued on product 2 printer
Corr.HEADER LENGTH	Corrective Heading length applied to the labels' header length for product 2 printer
Corrective PEELING	Corrective peeling applied to the peeling of labels for product 2 printer
HEAD 2 X OFFSET	Additional X offset applied to the labels for product 2 printer
Corrective Y OFFSET 2	Additional Y offset applied to the labels for product 2 printer
Corrective TEMP OFFSET 2	Temperature offset applied to the temperature of the product 2 printer labels
ADAPT LABEL FOR AUT PRINT	Parameter used to adapt the centring of a label created for a manual printing unit (e.g. SMART2000) to the automatic product printing unit 2
ADAPT LABEL FOR MAN PRINT	Parameter used to adapt the centring of a label created for automatic product printing unit 2 to a manual printing unit (e.g. SMART2000)
PROD 2 PRINT FOIL	Parameter that checks the presence of foil for product 2 printer. Therefore differentiating whether you are printing in Direct Mode or Transfer Mode
PICK-UP PHOTOS. PROD.2	Pick-up photosensor for product 2 printer, if set as manual
PROLONGED ASSIST	Parameter that allows you to decide whether to disable the product 2 printer assist at the end of printing (NO) or at the end of application (YES)

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
TOT.PTR COM PORT 1	Allows you to set the serial port (COM) to which the total 1 printer is to be connected
TOT. PTR IP 1	Parameter that sets the IP address of the total 1 printer in case of ethernet connection
TOT PRINT.1 BAUD RATE	Sets the baud rate of the serial to which the total 1 printer is connected
MODEL	Sets the total 1 printer model (Italora, Datamax)
TOT. PRINTER TYPE 1	Indicates the total printer 1 type (manual, CFL/A, CFL/A STANDARD, CFL/A CB, etc..)
X PRINT TOT 1 RESOL.	Resolution of total 1 printer head along the X axis (8 dots, 12 dots, 7.52 dots)
Y PRINT TOT 1 RESOL.	Resolution of total 1 printer head along the Y axis (8 dots, 12 dots, 7.52 dots)
TOT.PTR FOIL 1	Parameter that checks the presence of foil for the total 1 printer. Therefore differentiating whether you are printing in Direct Mode or Transfer Mode
PICK-UP PHOTOS. TOT. 1	Parameter that sets the presence of the pick-up photosensor for total 1 printer
TOT. PRINTER 1 INTERNAT.MGMT	Parameter indicating whether the total 1 printer fits a firmware for managing the fonts that allow internationalisation (Nina)
SPEED OFFSET	Corrective Speed offset applied to the label printing speed for total 1 printer
Corrective BACKFEED	Corrective backfeed applied to the backfeed of the labels issued on total 1 printer
Corr.HEADER LENGTH	Corrective Heading length applied to the labels' header length for total 1 printer
Corrective PEELING	Corrective peeling applied to the peeling of labels for total 1 printer
Corrective X OFFSET	Additional X offset applied to the labels for total 1 printer
Corrective Y OFFSET	Additional Y offset applied to the labels for total 1 printer
Corrective TEMP OFFSET	Temperature offset applied to the temperature of the total 1 printer labels
ADAPT LABEL FOR AUT PRINT	Parameter used to adapt the centring of a label created for a manual printing unit (e.g. SMART2000) to the automatic product printing unit

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
ADAPT LABEL FOR MAN PRINT	Parameter used to adapt the centring of a label created for an automatic product printing unit to a manual printing unit (e.g. SMART2000)
ENAB.TOT1 LAB.PRINTER	Parameter that allows you to bypass (if set to NO) the printing operations on total 1 even if the printer is connected and the label configured
ENAB.APPL.TOT1 LABEL	Parameter that, by properly configuring the line, allows you to apply the total 1 label on the last piece of the box. The label is printed on the automatic product printing unit
TOT.PTR COM PORT 2	Allows you to set the serial port (COM) to which the total 2 printer is to be connected
TOT. PTR IP 2	Parameter that sets the IP address of the total 2 printer in case of ethernet connection
TOT PRINT.2 BAUD RATE	Sets the baud rate of the serial to which the total 2 printer is connected
MODEL	Sets the total 2 printer model (Italora, Datamax)
TOT. PRINTER TYPE 2	Indicates the total printer 2 type (manual, CFL/A, CFL/A STANDARD, CFL/A CB, etc..)
X PRINT TOT 2 RESOL.	Resolution of total 2 printer head along the X axis (8 dots, 12 dots, 7.52 dots)
Y STMP TOT 2 RESOL.	Resolution of total 2 printer head along the Y axis (8 dots, 12 dots, 7.52 dots)
TOT.PTR FOIL 2	Parameter that checks the presence of foil for total 2 printer. Therefore differentiating whether you are printing in Direct Mode or Transfer Mode
PICK-UP PHOTOS. TOT. 2	Parameter that sets the presence of the pick-up photosensor for total 2 printer
TOT. PRINTER 2 INTERNAT.MGMT	Parameter indicating whether the total 2 printer fits a firmware for managing the fonts that allow internationalisation (Nina)
SPEED OFFSET	Corrective Speed offset applied to the label printing speed for total 2 printer
Corrective BACKFEED	Corrective backfeed applied to the backfeed of the labels issued on total 2 printer
Corr.HEADER LENGTH	Corrective Heading length applied to the labels' header length for total 2 printer
Corrective PEELING	Corrective peeling applied to the peeling of labels for total 2 printer
Corrective X OFFSET	Additional X offset applied to the labels for total 2 printer

[+] PRINTERS	
PARAMETER NAME	FIELD MEANING
Corrective Y OFFSET	Additional Y offset applied to the labels for total 2 printer
Corrective TEMP OFFSET	Temperature offset applied to the temperature of the total 2 printer labels
ADAPT LABEL FOR AUT PRINT	Parameter used to adapt the centring of a label created for a manual printing unit (e.g. SMART2000) to the automatic product printing unit
ADAPT LABEL FOR MAN PRINT	Parameter used to adapt the centring of a label created for an automatic product printing unit to a manual printing unit (e.g. SMART2000)
ENAB.TOT2 LAB.PRINTER	Parameter that, by properly configuring the line, allows you to apply the total 2 label on the last piece of the box. The label is printed on the automatic product printing unit
PLU PRINTER	Selects the printer to be used for the PLU labels (PRODUCT, PRODUCT 2, TOTAL 1 or TOTAL 2 printer)
PROD. PTR ERR. REP.	Parameter that, if set to YES, allows to stop the piece being applied in the event of an error on the printer (e.g. End of Paper). Instead of exiting the process, a restart window appears which must be confirmed by the operator once the problem has been solved.
PALLET PUSHBUTTON PANEL	By setting this parameter to YES and setting the Total 2 printer on the same COM as the Total 1 printer, the pallet label will be issued only after the operator has pressed a button.
CONSENT FILTER	Sets a minimum activation time for printing consent of a CFL. Time expressed in hundredths of a second. Set to 0 (zero) it indicates that the signal is taken from status
PRINT PTC.BELOW(sec)	Input connected to a photoc. pointing to the blow from below. If it remains closed for tot seconds (settable), it stops the process and exits (like emergency button)

[+] MOVEMENTS	
PARAMETER NAME	FIELD MEANING
PRE PHOTOCCELL	if = true, photocell present on pre belt
APPLICATOR BELT	Allows you to select the type of application (STATIC or DYNAMIC)
SCALE BELT	Allows you to select the type of weighing (STATIC or DYNAMIC)
BELT SAVING	Input belt always running or economy photocell and belt stopped
UPSTREAM CONSENT	Indicates whether the UPSTREAM machine consent is normally open (N.O.) or normally closed (N.C.)
DOWNSTREAM CONSENT	Indicates whether the DOWNSTREAM machine consent is normally open (N.O.) or normally closed (N.C.)
CONSENT DELAY	When there is no downstream consent, the line waits for the seconds indicated in this parameter before actually removing consent for its movement
CALCULATE LONG PIECE	Parameter that enables the long piece calculation function. It assumes that the application is on target and that the application photocell is moved next to the input photocell (5.6.44)
APP.PTC AND INP.PTC.DIST(mm)	Distance (in millimetres) between the input photocell and the application photocell in case the apply piece to queue function is used
APPLICATION ON	It determines whether the application is to take place on TARGET or on PHOTOCCELL
SPOOL LAST PIECE	If set to "YES", it exits the last box piece from the line, ignoring any missing consent from downstream
INP.PTC.TIMEOUT (sec)	Following the insertion of control on the input photocell occlusion time, entered parameter for defining the max coverage time (in seconds) at the end of which a light possibly starts flashing
STANDBY TIMEOUT (sec)	Following the insertion of control on the standby time, entered parameter for defining the max waiting time (in seconds) at the end of which a light starts flashing

[+] MECHANICAL PARAMETERS	
PARAMETER NAME	FIELD MEANING
PLATE LENGTH	Determines the length of the scale plate (visible only for checkweigher or automatic weighing lines with board 491021 0491064)
ROLLER LENGTH	Determines the length of the roller (visible only for checkweigher or automatic weighing lines with board 491021 0 491064)
MOTOR RED. RAT.	Motor reduction ratio
MOTOR PUL. DIAMETER	Motor Pulley Diameter
ROLLER PUL. DIAMETER	Roller Pulley Diameter
ENCODER RESOL.	Encoder Resolution
MOT.ROLLER DIAMETER	Motor Roller Diameter
TICKS NO. PER mm	Number of Ticks per millimetre
PRE BELT TARGET	Target between the input photocell and the end of the pre belt (expressed in millimetres)
SCALE BELT START	Distance between the input photocell and the scale belt start (expressed in millimetres)
SCALE BELT TARGET 1	Target between the scale belt start and the point where the start weighing command is sent to the scale
SCALE BELT TARGET 2	Target between Target One and the point where the piece stops on the scale belt, if necessary
SCALE BELT END TARGET	Target between Target Two and the end of the scale belt
LAB BELT TARGET 1	Target between the start of the lab belt and the point where the end weighing command is sent
PTC SAFETY TARGET	Control target that checks that a piece is detected on the application photocell before triggering again
APPLICAT. PHOT. POSITION	Applicator position target
APPLICATION TARGET	It is the position between Lab_belt_target_one and the point where the product label is applied
BOX APPL.TARGET	Application target of the box label on the last piece that closes it, printed and applied with the automatic product printer
APPLIC2 TARGET	It is the position between Application_Target and the point where the product label 2 is applied

[+] MECHANICAL PARAMETERS	
PARAMETER NAME	FIELD MEANING
BOX STOPPING TARGET	It is the position between Application_Target 2 and the point where the box stopper is "freed" (that is, it is allowed to go back up because the piece has bypassed it)
CONTROLLERS POSITION	It is the position between the Box stopping_Target and the point where the verifying scanners of heads 1 and 2 are disabled
EJECTOR TARGET	It is the position between Controllers_Target and the point where the ejector out is activated
EJECTOR 2 TARGET	It is the position between Ejector_Target and the point where the ejector 2 out is activated
DIVERTER TARGET	It is the position between Ejector_2_Target and the point where the diverter out is activated
MACHINE END TARGET	It is the position between the Diverter_Target and the end of the machine at logical level
WEIGHING TARGET	It is the position between the start of the scale belt and the point where the piece stops to be statically weighed
PTC. FILTER DEFAULT	Filter that inhibits the photocell reading for the number of set millimetres (avoid double readings)
SCANNER TARGET DELTA	Crate weigher with input belt scanner
BOX STOPPING TIME	This time is counted (expressed in milliseconds) once the piece has reached the labelling position. At the end, the box stopper is lowered
BELT SPEED 100% m/min	It shows the speed of the belts in metres per minute when they are set to run at 100%

[+] PRESEL. AND PROGRESS.	
PARAMETER NAME	FIELD MEANING
STOP MGMT ON TOT. 1	Indicates the behaviour of the line when the total 1 is reached (NO STOP, TIMED RESTART, WHEN BUTTON PRESSED, PHOTSENSOR)
REST. TIME TOT. 1 (s)	In case of timed restart on Total 1, it indicates the number of seconds to wait before the movement restarts
STOP MGMT ON TOT. 2	Indicates the behaviour of the line when the total 2 is reached (NO STOP, TIMED RESTART, WHEN BUTTON PRESSED, PHOTSENSOR)
REST. TIME TOT. 2 (s)	In case of timed restart on Total 2, it indicates the number of seconds to wait before the movement restarts
PROCESS LIMIT	Indicates the behaviour of the line when the piece process limit is reached (EXIT , REQUEST CONFIRMATION, REQUEST NETWORK CONFIRMATION)
EXIT WITH FULL QUEUE	If set to "YES", it allows you to exit the process with a queue of labels still to be printed
DIVERTER MANAGEMENT	Parameter that allows you to activate a diverter. It is possible to set PULSE or STATUS management
DIVERTER TIME (ms)	Diverter activation time (expressed in milliseconds)
PROG.TYPE PIECE	Determines whether the piece progressive must be limited to the box or continuous (RESET ON TOTAL, CONTINUOUS)
PROG.TYPE TOTAL_1	Determines whether the total 1 progressive must be limited to the pallet or continuous (RESET ON TOTAL, CONTINUOUS)
PROG.TYPE TOTAL_2	NOT MANAGED
PROGR. PIECE RECOV.	In case of piece cancellation, this parameter indicates if and how to recover its progressive (NO, YES, LAST WEIGHED PROG.)
PROGR. RECOV. TOT. 1	In case of total 1 cancellation, this parameter indicates if and how to recover its progressive (NO, YES, LAST WEIGHED PROG.)

[+] DATA REGISTER	
PARAMETER NAME	FIELD MEANING
REG RANGE(sec)	Access time to database for saving data
STORAGE DAYS	Maximum data storage days in the process history (PIECES, BOXES, PALLETS)

[+] TOTALS ENABLING	
PARAMETER NAME	FIELD MEANING
ENAB. GENERAL TOT	Enable General Total
ENAB. PARTIAL TOT	Enable Partial Total
ENAB. CLIENT TOT	Enable Total per Client
ENAB. PRODUCT TOT	Enable Total per Product
ENAB. BATCH TOT	Enable Total per Batch
ENAB. LOT TOT	Enable Total per Lot
ENAB. TRACE TOT	Enable Total per Code Traceability
COMMODITY CODE TOT ENAB.	Enable Total per Commodity
ENAB. ITEM TOT	Enable Total per Item
ENAB. LOT-PROD TOT	Enable Total per Lot-Product combination
ENAB. LOT-PLU TOT	Enable Total per Lot-PLU combination
ENAB. TRACE-PROD TOT	Enable Total per Traceability-Product
ENAB. TRACE-PLU TOT	Enable Total per Traceability-PLU
ENAB. CLIENT-PROD TOT	Enable Total per Client-Product
ENAB. CLI.ARCH.-PLU TOT	Enable Total per Client Archive-PLU

[+] PRINT REPORT	
PARAMETER NAME	FIELD MEANING
PRINTER TYPE	Select the printer model on which to print the reports (always "HP LaserJet 6 series")
RESOLUTION	Sets the printer model resolution (150dpi, 300dpi, 600dpi)
COLOUR	If available, it selects the colour print mode for the selected printer model
DESTINATION	Selects how to connect the printing device (PARALLEL PRINTER, NETWORK PRINTER, PRINT REPORT)
IP	IP address of the printer used for printing reports (if the DESTINATION parameter is set as NETWORK PRINTER)

[+] DATE	
PARAMETER NAME	FIELD MEANING
DATE POST.METHOD	Method for entering days for postponing dates. Enter either the days or the production date based on a standard format (DD/MM/YYYY)
PROD. POST. DATE ENAB.	Enables the influence of the POSTPONED_PRO_DD_SHORT_PRO_ST data (if set to "YES") on the PRODUCTION DATE
EXPI. POST. DATE ENAB.	Enables the influence of the POSTPONED_PRO_DD_SHORT_PRO_ST data (if set to "YES") on the EXPIRY DATE
CUR. POST. DATE ENAB.	Enables the influence of the POSTPONED_PRO_DD_SHORT_PRO_ST data (if set to "YES") on the CURING DATE
CHECK EXPI.DD	This parameter allows you to check the number of expiry days in process, so that a value BELOW the one originally set in PLU is not entered
CHECK CURI.DD	This parameter allows you to check the number of curing days in process, so that a value BELOW the one originally set in PLU is not entered

[+] RECORD WEIGHTS/CTRL	
PARAMETER NAME	FIELD MEANING
REG. PROD WEIGHING	Enabling this parameter allows the recording of the product weighing operations on a file
REG.PROD RANGE REJECTS	Enabling this parameter allows the recording of the REJECT weighing operations due to OUT OF RANGE weight of the product on the prod weighing operations file
REG.OTHER PROD REJECTS	Enabling this parameter allows the recording of the OTHER product REJECTS weighing operations on the prod weighing operations file
REG.PROD REVERSES	Enabling this parameter allows the recording of the product REVERSE weighing operations on the prod weighing operations
REG.TOT1 WEIGHTS	Enabling this parameter allows the recording of the total 1 weighing operations on a file
REG.TOT1 REVERSES	Enabling this parameter allows the recording of the total 1 REVERSE weighing operations on the tot1 weighing operations file
REG.TOT2 WEIGHTS	Enabling this parameter allows the recording of the total 2 weighing operations on a file
WEIGHING OPERATIONS: SEPARATOR	Field separator character "Weighing operations on File" (separates the fields of each individual weighing operation within the .PRD, .TT1 and .TT2 files)
WEIGHING OPERATIONS: DECIMAL SEP	Type of separator for decimal places in the weighing operations return files (.PRD, .TT1, .TT2)
GENERATE LOT FILE	If set to "YES", whenever the lot is closed a row is added to a text file in the memory (or saved on FTP) with data of the recently completed lot

[+] RECORD WEIGHTS/CTRL	
PARAMETER NAME	FIELD MEANING
CTRL: SEPARATOR	Field character separator "Lot File" (separates the fields of each individual ctrl lot within the "LOT.CSV" file)
CTRL: DECIMAL SEP	Type of separator for decimal places in the "LOT.CSV" file
REG. ON USB/DISK	Parameter used to choose whether to save the weighing operations files on Disc-On-Module or on USB

[+] CTRL	
PARAMETER NAME	FIELD MEANING
EXIT AT LOT END	If set to "YES", the line automatically exits the process when the lot is closed
LOT IDENTIFICATION	It can be MANUAL, MANUAL WITH SEQUENCE NUMBER or DATA
FEEDBACK	Indicates the type of feedback (NOT PRESENT, BY DURATION, BY PULSE)
PULSE DURATION (ms)	Specifies the duration of each pulse for PULSE FEEDBACK (in milliseconds)
PULSE WEIGHT (g)	Specifies the weight correction associated with each pulse (in grams)
WEIGHT (g/100 ms)	Weight variation that the checkweigher expects every 100 ms
COMPENSATION FACTOR	Used to define the adjustment criteria of the upstream machine
AVERAGE WEIGHT CHECK	Parameter linked to the CTRL. Allows to enable the check in PLU on the average weight each "n" of packages and restart via password after "n" of consecutive checks where the average is negative
NO. CTRL SEQUENCE	Progressive sequence number of the CTRL lots
DD STORAGE CTRL	Maximum number of days during which the closed CTRL lot remains saved in the terminal memory. After this time, the lot is deleted
CTRL PAGE STYLE	Parameter used to select the style of the CTRL process screen ("SELECTA" or "STANDARD")

[+] LAMPS AND BUZZER	
PARAMETER NAME	FIELD MEANING
AUX. LAMP	Allows you to set the operation of auxiliary lamp 1 from a list of conditions
LAMP 1 OFF	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of auxiliary lamp 1 (in case of "TIMED" switch-off)
AUX. LAMP 2	Allows you to set the operation of auxiliary lamp 2 from a list of conditions
LAMP 2 OFF	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of auxiliary lamp 2 (in case of "TIMED" switch-off)
AUX. LAMP 3	Allows you to set the operation of auxiliary lamp 3 from a list of conditions
TURN OFF LAMP 3	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of auxiliary lamp 3 (in case of "TIMED" switch-off)
AUX. LAMP 4	Allows you to set the operation of auxiliary lamp 4 from a list of conditions
TURN OFF LAMP 4	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of auxiliary lamp 4 (in case of "TIMED" switch-off)
AUX. LAMP 5	Allows you to set the operation of auxiliary lamp 5 from a list of conditions
TURN OFF LAMP 5	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of auxiliary lamp 5 (in case of "TIMED" switch-off)
CONTINUOUS BUZZER	Continuous buzzer that can be activated in a certain condition selectable from a list
TURN OFF CONTIN.BUZZER	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of the continuous buzzer (in case of "TIMED" switch-off)
INTERMITTENT BUZZER	Intermittent buzzer that can be activated in a certain condition selectable from a list

[+] LAMPS AND BUZZER	
PARAMETER NAME	FIELD MEANING
TURN OFF INTERM.BUZZ.	Parameter that refers to a list of options that indicate when to switch off the lamp/buzzer
OFF TIME (sec)	Automatic switch off time (in seconds) of the intermittent buzzer (in case of "TIMED" switch-off)

[+] METAL DETECTOR	
PARAMETER NAME	FIELD MEANING
METAL TYPE	Allows you to select the metal detector model connected to the line
COMBI	Combi On/Off (Visible only for DETELECTRONIC metal detectors)
METAL PTC VALUE	Distance value Metal end -> Input photocell to manage metal waste (Visible only for DETELECTRONIC metal detectors)
COM	Serial port used for communicating with the metal detector
BAUDRATE	MetalDetector Baudrate for metal version compatibility
METAL REJECT RECEPT.	Manages an input
MTL SGNL FILTER (ms)	Duration of the metal waste signal to be used if the machine is connected to a metal detector with independent ejector. Since it would not be possible to use the input ptc or the weighing target for counting the rejects as the piece is rejected before it enters the machine from the metal ejector
MESUTRONIC IP ADDR.	MESUTRONIC metal detector server IP address
MESUTRONIC PORT	MESUTRONIC metal detector server port
METAL REJECT EVENT	Event on which you need to control the metal reject input (PHOTOC. INPUT, WEIGHING TARGET, EXP. OUTSIDE MACHINE)

[+] MOTORISED COLUMN	
PARAMETER NAME	FIELD MEANING
HORIZONTAL AXIS COM	Inverter communication port for managing the motorised column
COL.1 MAX TRAVEL	MAXIMUM HORIZONTAL TRAVEL FOR COLUMN 1 (mm)
HORIZ.AXIS COM 2	Inverter communication port for managing the second head motorised column
COL.2 MAX TRAVEL	MAXIMUM HORIZONTAL TRAVEL FOR COLUMN 2 (mm)
BELT MOV.DIRECTION	Sets the machine handling direction to determine the motor direction for the motorised columns (LEFT->RIGHT, RIGHT->LEFT)
AUTOM. VERT. POSIT.	If "YES", the vertical handling of product printing column 1 is managed
COLUMN TRAVEL	Overall vertical travel of column 1 (in mm)
AUTOM. VERT. POSIT. 2	If "YES", the vertical handling of product printing column 2 is managed
COLUMN 2 TRAVEL	Overall vertical travel of column 2 (in mm)

[+] CHECK SCANNER	
PARAMETER NAME	FIELD MEANING
MAX NO.BAD READ	Maximum number of consecutive bad readings (or missed readings) admitted by a label check scanner
ENAB. SCANNER ON PROD	Parameter that activates a scanner mounted on the product printhead for label quality check
ENAB. SCANNER ON TOT	Parameter that activates a scanner mounted on the total printhead for label quality check
PROD LAB CHECK	If the "MAX NO.BAD READ" parameter is above zero and "PROD LAB CHECK" = YES, then the label check is activated
HEAD 1 CHECK	Parameter used to activate a label quality control of printhead 1. If the control is negative, the piece is not totalised
HEAD 2 CHECK	Parameter used to activate a label quality control of printhead 2. If the control is negative, the piece is not totalised

[+] SPECIAL PARAMETERS	
PARAMETER NAME	FIELD MEANING
REJECT IF LOT EMPTY	Checks if I weigh with an empty lot and eventually rejects the piece
REJECT INCORRECT LOT	WITH THIS PARAMETER SET TO "TRUE", THE FIRST WEIGHING OPERATION IS CHECKED TO VERIFY THAT THE LOT IS A 7-DIGIT NUMBER (NO LETTERS)
PRO.CANC.DIS.WITH FEED	WITH THIS PARAMETER SET TO "TRUE", THE PROCESS CANCELLATION IS DISABLED, TRIGGERED BY THE FEED KEY ON REACHING THE PROCESS LIMIT WITH REQUEST FOR CONFIRMATION FROM THE WINDOW
CLOSE INDIVIDUAL PLU DIS.	WITH THIS PARAMETER SET TO "TRUE", THE F7 KEY IN THE SUSPENDED PLU WINDOW IS DISABLED
REPROG.PCS MULTIPLICATION	If this parameter is set to "YES", the display of a new parameter is allowed in the PLU, which means that upon reaching the limit of pieces in the box (PRESEL_1_PIECES), the piece multiplication is set equal to the PRESEL_1_PIECES
VALID DATE CHECK	Checks if the manually entered date is valid (allowed formats: "dd-mm-yy" or "dd-mm-yyyy")
CLOSE AUTOMATIC.PRO	WITH THIS PARAMETER SET TO "YES", THE PROCESS IS AUTOMATICALLY CLOSED IN CASES OF: 1-REACHING WEIGHT/PIECES PRO LIMIT; 2-CTRL LOT CLOSURE (MANUAL OR AUTOMATIC); 3-PRESSING OF NEW F11 KEY ("CLOSE PROCESS")
CLOSE PLU IN PRO.	WITH THIS PARAMETER SET TO "YES", IF PROCESSING A SINGLE PRODUCT WITH VARIABLE WEIGHT, I CAN DIRECTLY CLOSE THE PROCESS AND EXIT BY PRESSING THE F11 KEY
REVERSE ACTIVATION LEV.	Selects the access level from which the process keys for carrying out the reversals are available
TOTAL CLOSURE LEV.	Selects the access level from which the process key for the forced closure of the totals is available
REM.MGMT./PLU OPER.LEV.	Selects the access level from which the combination of hotkeys "ALT + U" is available for switching between PLU and REMOTE MANAGEMENT operation
WINDOW TYPE	Allows you to select the type of process screen (INDUSTRY, FILE, LARGE FONTS, SMALL FONTS, CUSTOM)
CONFIGURATION FILE	Configuration file for the "FILE" window type

[+] SINGLE PRODUCT PROC END	
PARAMETER NAME	FIELD MEANING
MAX NUMBER ROWS	Maximum number of rows shown on the screen in the "CUSTOM" process screen
DESCRIPTION 1	Description associated with process field 1 shown on the screen
VALUE 1	Process field 1 shown on the screen
COLOUR DESCRIPTION 1	Colour combined with "DESCRIPTION 1" on the screen
COLOUR VALUE 1	Colour combined with "VALUE 1" on the screen
FONT 1	Type of font used to show the row 1 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 2	Description associated with process field 2 shown on the screen
VALUE 2	Process field 2 shown on the screen
COLOUR DESCRIPTION 2	Colour combined with "DESCRIPTION 2" on the screen
COLOUR VALUE 2	Colour combined with "VALUE 2" on the screen
FONT 2	Type of font used to show the row 2 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 3	Description associated with process field 3 shown on the screen
VALUE 3	Process field 3 shown on the screen
COLOUR DESCRIPTION 3	Colour combined with "DESCRIPTION 3" on the screen
COLOUR VALUE 3	Colour combined with "VALUE 3" on the screen
FONT 3	Type of font used to show the row 3 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 4	Description associated with process field 4 shown on the screen
VALUE 4	Process field 4 shown on the screen
COLOUR DESCRIPTION 4	Colour combined with "DESCRIPTION 4" on the screen
COLOUR VALUE 4	Colour combined with "VALUE 4" on the screen
FONT 4	Type of font used to show the row 4 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 5	Description associated with process field 5 shown on the screen
VALUE 5	Process field 5 shown on the screen

[+] SINGLE PRODUCT PROC END	
PARAMETER NAME	FIELD MEANING
COLOUR DESCRIPTION 5	Colour combined with "DESCRIPTION 5" on the screen
COLOUR VALUE 5	Colour combined with "VALUE 5" on the screen
FONT 5	Type of font used to show the row 5 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 6	Description associated with process field 6 shown on the screen
VALUE 6	Process field 6 shown on the screen
COLOUR DESCRIPTION 6	Colour combined with "DESCRIPTION 6" on the screen
COLOUR VALUE 6	Colour combined with "VALUE 6" on the screen
FONT 6	Type of font used to show the row 6 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 7	Description associated with process field 7 shown on the screen
VALUE 7	Process field 7 shown on the screen
COLOUR DESCRIPTION 7	Colour combined with "DESCRIPTION 7" on the screen
COLOUR VALUE 7	Colour combined with "VALUE 7" on the screen
FONT 7	Type of font used to show the row 7 text on the screen (SMALL FONTS, LARGE FONTS)
DESCRIPTION 8	Description associated with process field 8 shown on the screen
VALUE 8	Process field 8 shown on the screen
COLOUR DESCRIPTION 8	Colour combined with "DESCRIPTION 8" on the screen
COLOUR VALUE 8	Colour combined with "VALUE 8" on the screen
FONT 8	Type of font used to show the row 8 text on the screen (SMALL FONTS, LARGE FONTS)

1.3 SCALE SETTINGS

1.3.1 Scale configuration parameters

The main scale configuration parameters are found in the Scale setting menu, accessible from the home page by pressing the following keys:

ARCHIVES -> SETTINGS -> TERMINAL SETTING

now you will be in the **Home\Arch.\Config\Term** menu indicated in the top-left page.

Press

SCALE SETTINGS

to access the page Home\Arch.\Config\Term\Conf. Bil. 1

Some of the parameters listed below are only present on certain types of machines:

SCALE SETTINGS		
FIELD NAME	SETTABLE VALUES	NOTES
LOAD CELL MODEL	TEDEA 30 KG, HBM 18 KG	
DIVISION TYPE	SINGLE SCALE, 2-FIELD MULTI DIVISION, 3-FIELD MULTI DIVISION, 2-FIELD MULTI EXTENSION, 3-FIELD MULTI EXTENSION	
MAXIMUM CAPACITY (kg)	0.000 - 9999.9999	Value corresponding to the MAX capacity that can be set. In case of multiple scale instrument, it is necessary to set the capacities for each field
FIELD 1 CAPACITY (kg)	0.000 - 9999.9999	It only appears if DIVISION TYPE is different from SINGLE SCALE
FIELD 2 CAPACITY (kg)	0.000 - 9999.9999	It only appears if DIVISION TYPE has 3 FIELDS
DIVISION (kg)	0,001 - 0,002 - 0,005, 0,010 - 0,020 - 0,050 - 0,01 - 0,02 - 0,05 - 0,1 - 0,2 - 0,5 - 1 - 2 - 5 - 10 - 20 - 50	Selectable from a range of values. In case of multiple scale instrument, it is necessary to select the DIVISION field ONLY
DIVISION FIELD 1 (kg)	0,001 - 0,002 - 0,005, 0,010 - 0,020 - 0,050 - 0,01 - 0,02 - 0,05 - 0,1 - 0,2 - 0,5 - 1 - 2 - 5 - 10 - 20 - 50	It only appears if DIVISION TYPE is different from SINGLE SCALE
DIVISION FIELD 2 (kg)	0,001 - 0,002 - 0,005, 0,010 - 0,020 - 0,050 - 0,01 - 0,02 - 0,05 - 0,1 - 0,2 - 0,5 - 1 - 2 - 5 - 10 - 20 - 50	It only appears if DIVISION TYPE has 3 FIELDS
DECIMALS kg	0,1,2,3	
POUND DECIMALS	0.1.2.3.4	

SCALE SETTINGS		
FIELD NAME	SETTABLE VALUES	NOTES
SAMPLING TYPE	LINEAR, NON LINEAR, 2 LINES, 3 LINES	If NOT LINEAR the sampling is carried out with an intermediate point and a non-linear correction, if 2 LINES linear sampling is carried out at an intermediate point, if 3 LINES linear sampling is carried out at two intermediate points
GRAVITY CORRECT. (kg)	-99.999000 - 99.99900	A weight is set and not a coefficient.
Ka	NOT EDITABLE	
1 / Kb (pt / kg)	NOT EDITABLE	
Kc	NOT EDITABLE	
SCALE ZERO POINTS	0 - 999999999	Values that can be entered using the keyboard and can be used to store a manual sampling by pressing the MANUAL CALIBRATION and then the SAVE buttons
PTO.KG INT.	0 - 150.0000	Sampling intermediate point kg
INT. PNT PNTS	0 - 999999999	Intermediate point points
UNL INT. PNT PNTS	0 - 999999999	Intermediate point points in unload
PTO.KG INT. 2	0 - 150.0000	Second sampling intermediate point kg
INT. PNT PNTS 2	0 - 999999999	Second intermediate point points
UNL 2 INT. PNT PNTS	0 - 999999999	Second intermediate point points in unload
FULL SCALE KG	0 - 150.0000	
FULL SCALE POINTS	0 - 999999999	
HYSTERESIS	-999999999 - 999999999	Compensation in cell hysteresis points
LEGAL OPERATION	YES, NO	Legal metrology operation enabling
MEASURING INSTR. DIR.	YES, NO	MID standard specification enabling
FLOW RATE PERC. RES.		It only appears if LEGAL OPERATION is set to NO
TARE LOCK	YES, NO	
HIGH RESOLUTION	YES, NO	
AUTORESET MINUTES	0 - 60	This value indicates how often the machine starts the autoreset procedure. If set to 0, the subsequent parameters INACTIVITY SECONDS and SEC. FORCED AUTORESET are not displayed.

SCALE SETTINGS		
FIELD NAME	SETTABLE VALUES	NOTES
SECONDS INACTIVITY	10 - 600	After the previous interval, this value indicates in seconds how often the machine checks that the needle is stopped to perform the autoreset.
SECONDS FORCED AUTORESET	10 - 600	Time range that starts to run after the time set in AUTORESET MINUTES has expired, and that if the scale has <u>not</u> been reset yet, stops the infeed belt, unloads any piece from the scale and performs the autoreset.
VENUS SCALE	STANDARD, CUSTOM CONF.	STD if with preset parameters, CUSTOM CONF. with customised parameters.
Scale parameters		It only appears if MERCURY SCALE is set to CUSTOM CONF.
FILTER	1 - 50 recommended 12 >> 25	It enables the inclusion, or not, of software processing to filter output values from the conversion of analogue signal to digital. High values allow to obtain a stable but slow scale, low values allow to obtain a fast but not very stable scale
DIVIDER	1 - 25 recommended 1 >> 3	If multiplied by the FILTER, this value provides the size of data sent to the signal acquisition buffer. The product FILTER x DIVIDER does not normally exceed 75 ~ 80.
CAMP. STABLE WEIGHT	1 - 50 recommended 5 >> 15	Corresponds to the number of readings of the same value to obtain a stable weight signal. This value is proportional to the reliability of the detected weight
DIV. STABLE WEIGHT	0 - 15000	Range expressed in number of divisions by which, even if the weight varies, the stable weight signal is maintained
MONOTONOUS READINGS	1 - 1000	DO NOT TOUCH
MONOTONY THRESHOLD (div)	1 - 15000	DO NOT TOUCH
CALIB.FREQUENCY	1 - 400	Value that indicates the working frequency of the converter. Changing this value also affects the other parameters. The frequency of 200Hz is a compromise to obtain the best relationship between reliability of the detected weight, speed and stability
DELAY STABIL. (tick)	1-500	System tick value to delay the stability signal

1.4 SCALE SAMPLING

1.4.1 Introduction

To sample the instrument, it is necessary to access level 6 and go to:

Home\Arch.\Config.\Term\Conf.Scale 1

where the following window will appear.

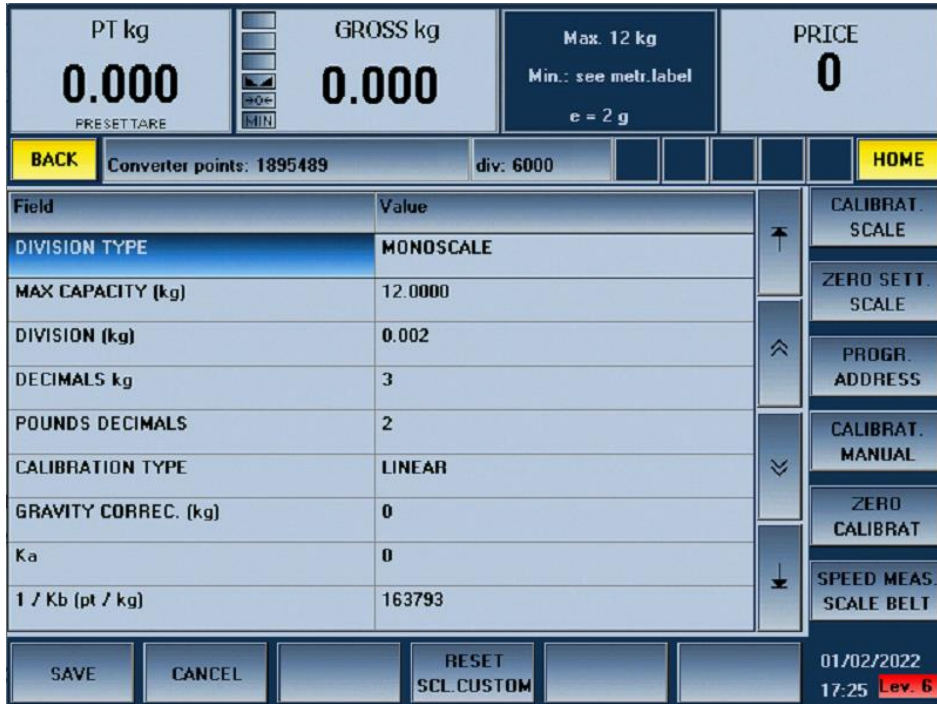


Figure 1-2

The customising of the scale parameters and its sampling can only be accessed if the calibration button is pressed within the current page.

Exiting the scale configuration page entails the loss of any parameter editing rights acquired.

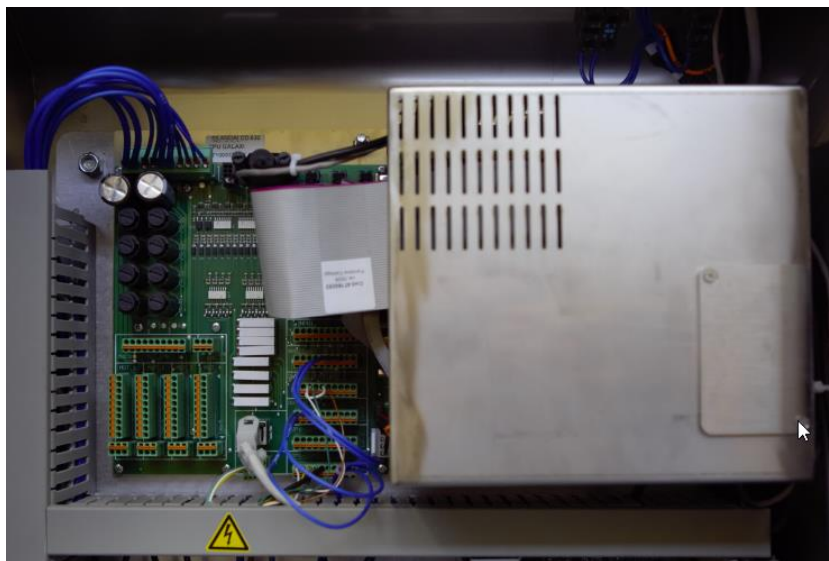


Figure 1-3

Proceed as follows:

- 1) open the panel door;
- 2) remove the instrument closing stamps (lead or labels);
- 3) press the calibration button using a non-metallic pointed tool.

The menus are now active (note that the buttons that allow metrologically relevant changes are not active) and it is possible to perform the sampling operation shown below

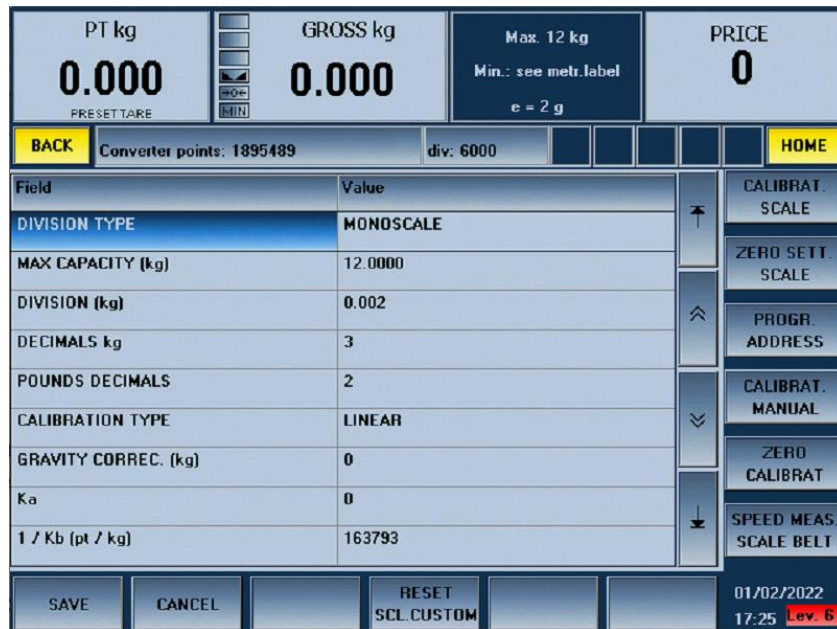


Figure 1-4



WARNING

Access to parameter customisation using the calibration button is reserved for specialised personnel.

Any tampering by unauthorised personnel immediately voids any warranty.

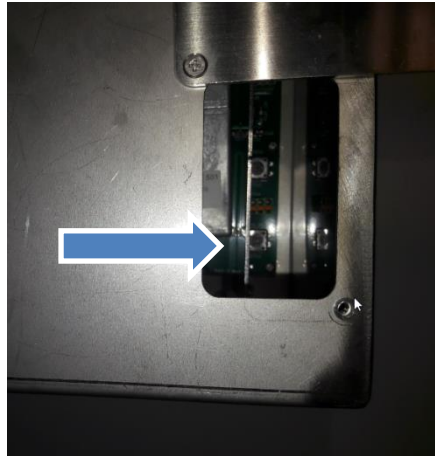


Figure 1-5

1.5 SAMPLING PROCEDURE

- Open the panel to access the calibration button.
- Turn on the machine and wait for the main menu page to appear.
- Press Lev.0 at bottom-left.
- A window appears where to enter the default code 666666.
- The work level indicator at bottom-right turns red Lev. 6.
- Press ARCHIVES.
- Press SETTINGS.
- Press TERMINAL SETT.
- Press SCALE SETT.
- Remove the protections and press the calibration button (with a non-metallic pointed tool) which enables the sampling operations.
- Press SCALE CALIBRATION now activated.
- Unload the scale and press ENTER.
- A window appears where to enter the weight actually available, position the load on the load receptor and confirm.
- Unload the scale and confirm.
- A window appears where to further confirm by pressing ENTER.
- Press SAVE.
- Press ENTER.

1.6 HANDLING MANAGEMENT

1.6.1 Photocells filtering

Automatic filtering mechanisms of the photocells' readings are implemented on the **GALAXI** in order to:

- avoid double readings.
- when the above cannot be avoided, not offset the machine.
- if a piece is removed from the machine, prevent the machine from waiting indefinitely for the reading on the next photocell.

The following mechanisms are active during processing:

1.6.2 Length filter

After each reading, a filtering mechanism is triggered which makes the photocell insensitive for a time equal to that taken to cover a space programmable from software, at the speed of the belt where the photocell is placed, and settable in:

Home\Arch.\Config.\Term.MachineConfig.\PTC FILTER DEFAULT

If the belt remains stationary, the filter still remains active until it restarts. Any "**Piece length**" values in the PLU will **replace** the **default filtering**.

This filter is designed to eliminate double readings.

1.6.3 Rejection of spurious readings

When a photocell reads a piece, a timer is activated that can be set in:

Home\Arch.\Config.\Term.\Config.Debug\PCS TIMEOUT

in the **SOFTWARE TEST** menu. If the piece does not reach the next photocell by the end of this time range, the piece is eliminated from the machine; if the belt where the photocell that triggered the count remains stationary, the timer is suspended until it restarts.

If the piece has passed the photocell on the scale, it is very likely that a product label has been issued (the label cannot come out if it is not set or if the piece has been rejected) and this is why the machine stops and communicates the error.

1.6.4 Labelling photocell filter (only for 2-3-4 belts)

If a piece is stationary in front of the photocell on the scale belt and no other piece is expected in labelling, the labelling photocell readings are inhibited in order to avoid an accidental reading that would produce undesirable effects.

1.6.5 Unexpected readings filter

Any reading by a photocell in front of which a piece is not **expected**, is not considered. A piece is "**expected**" in front of a photocell when the previous one is covered

1.7 PHOTOCCELL POSITIONING ANALYSIS

1.7.1 GALAXI single belt

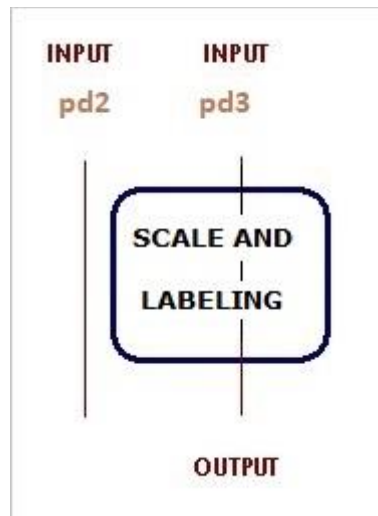


Figure 1-6 - GALAXI single belt

Two photocells are available, one at the scale belt input (**FC2**) and one at the scale belt weighing target (**FC3**).

The FC2 photocell has the following functions:

- Piece entry into the machine.
- Stop of pieces arriving on the belt if there is no consent or if autoreset is in progress.
- Belt economy function: with the machine empty the belt stops, it restarts as soon as the photocell is covered.

The FC3 photocell has the following functions:

- Piece positioning on the scale for weighing/pricing. A target can be set in PLU ("Weighing posit.") which indicates the photocell displacement for stopping the piece. The "Labelling posit." target in the PLU is not considered.

Problems:

With reference to the FC2 photocell functions, in this as in all configurations providing a photocell at the belt input which implements the belt economy function, according to the rising ramp of the motor and system reactivity, the time taken for the motor to reach running speed may differ between starting condition with belt stopped and belt already running. This may be due to: motor rising ramp (about 100 – 150 ms), notification delay of Venus photocell coverage (16 ms), fixed actuation delay (about 30 ms).

The delay in starting the belt could cause a temporary slowing down or even stop of the piece passing between the belts.

Note: the motor rising ramp cannot be reduced more than 100 ms since, during restarting of the belt with a piece, it could slip.

1.7.2 Two belt GALAXI

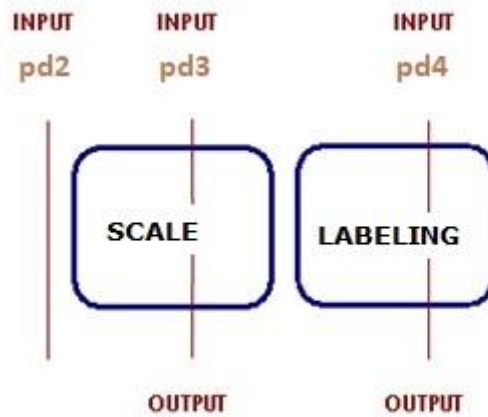


Figure 1-7 - two belt GALAXI

Three photocells are available, one at the scale belt input (**FC2**), one at the labelling belt labelling target (**FC3**) and one at the labelling target (**FC4**).

The FC2 photocell has the following functions:

- Piece entry into the machine.
- Stop of pieces arriving on the belt if there is no consent or if autoreset is in progress.
- Belt economy function: with the machine empty the belt stops, it restarts as soon as the photocell is covered.

The FC3 photocell has the following functions:

- Piece positioning on the scale for weighing. A target can be set in PLU ("Weighing posit.") which indicates the photocell displacement for stopping the piece.

The FC4 photocell has the following function:

- Piece positioning on the labelling target. A target can be set from the PLU ("Labelling posit.") which indicates the photocell displacement for stopping the piece.

Problems: the same as the single belt.

1.7.1 GALAXI three belts

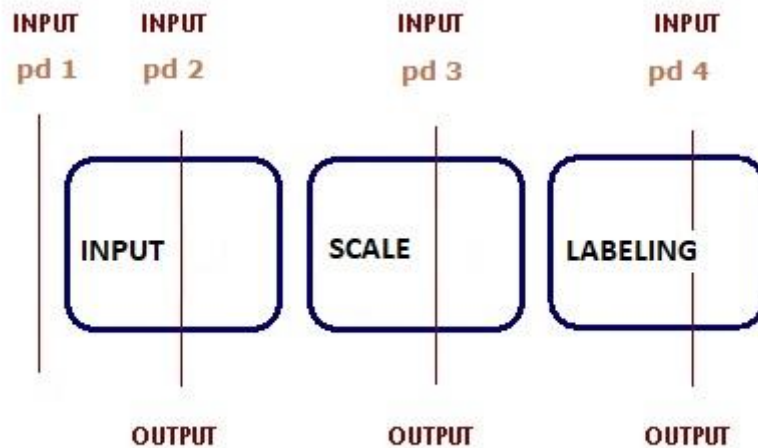


Figure 1-8 - three belt GALAXI

Four photocells are available, one at the input belt entrance (**FC1**), one at the zero target on the input belt (**FC2**), one at the weighing target on the scale belt (**FC3**) and one at the labelling target on the labelling belt (**FC4**).

The FC1 photocell has the following functions:

- Piece entry into the machine.
- Belt economy function: with the machine empty the belt stops, it restarts as soon as the photocell is covered.
- Provide consent upstream until it is covered and the input belt is stationary. Stopping of the pieces in case of autoreset in progress.

The FC2 photocell has the following function:

- Piece positioning on the zero target of the input belt (machine loading). This photocell regulates access to the scale, ensuring that only one piece at a time gets on it.

Problems: The delay in starting the belt could cause a temporary slowing down or even stop of the piece passing between the belts.

In this case it is not possible to eliminate the FC2 photocell as the uncertainty of the speed of the piece entering the first belt (which depends on the feeding belt speed) would make the piece positioning at target very uncertain.

The FC3 photocell has the following functions:

- Piece positioning on the scale for weighing. A target can be set from the PLU ("Weighing posit.") which indicates the photocell displacement for stopping the piece.

The FC4 photocell has the following functions:

- Piece positioning on the labelling target. A target can be set from the PLU ("Labelling posit.") which indicates the photocell displacement to stop the workpiece.

1.7.2 Four belt GALAXI

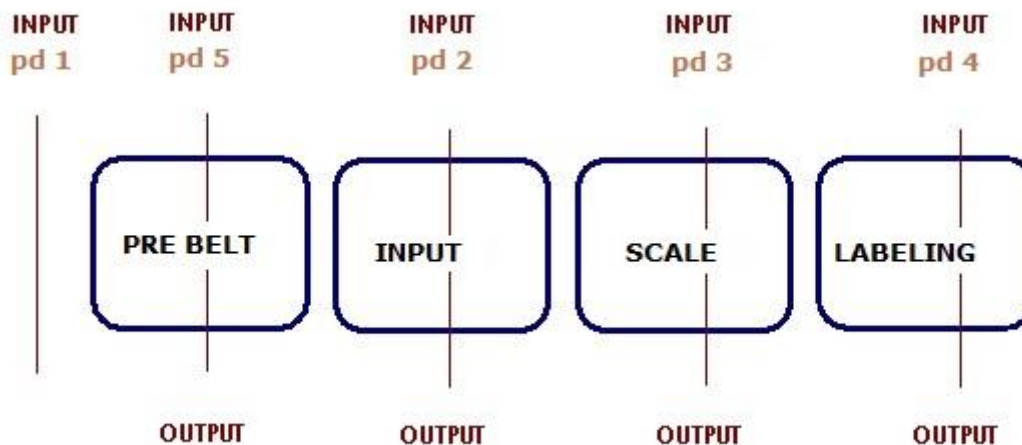


Figure 1-9 - Four belt GALAXI

Up to a maximum of five photocells are available, one at the input belt entrance (**FC1**), one on the pre belt (**FC5**), one on the input belt (**FC2**), one at the weighing target on the scale belt (**FC3**) and one at the labelling target on the labelling belt (**FC4**).

The FC1 photocell has the following functions:

- Piece entry into the machine.
- Belt economy function. With the machine empty the belt stops, it restarts as soon as the photocell is covered.
- Provide consent upstream until it is covered and the input belt is stationary.

Note: The FC1 photocell cannot be positioned in the middle of the **pre** belt to exploit the complete loading of the machine as, in this case, activating the pre belt and the input belt motors would not be contextual, because the pre belt would have to continue running until a piece is positioned on FC1, even if the input belt is stationary. However, this implies that, as they are not yet spaced out, upon restarting, after spacing, there would be a piece potentially stationary on FC2 and one across the pre belt and input belt, with the pre belt moving and the input belt stationary.

The FC2 photocell has the following function:

- Piece positioning on the zero target of the input belt (machine loading). This photocell regulates access to the scale, ensuring that only one piece at a time gets on it.
- Stopping of the pieces in case of autoreset in progress.

Problems: The delay in starting the belt could cause a temporary slowing down or even stop of the piece passing between the belts.

The FC3 photocell has the following functions:

- Piece positioning on the scale for weighing. A target can be set from the PLU ("Weighing posit.") which indicates the photocell displacement for stopping the piece.

The FC4 photocell has the following functions:

- Piece positioning on the labelling target. A target can be set from the PLU ("Labelling posit.") which indicates the photocell displacement for stopping the piece.

The FC5 photocell has the following functions:

- Ensure machine full loading in case of a prolonged stop of a piece on the scale (the pieces would stop in succession on FC3, FC2, FC5). This is to maximise the rate.

1.8 ELECTRONIC SECTION

1.8.1 GALAXI HS control panel

The electric panel contains the power management, CPU board, I/O remote boards, load cell converter and terminal boards for connecting the external utilities.

The machine is powered at 220-240 Vac via standard industrial socket:



Figure 1-10

The main power switch is located in the centre of the panel door, on the back of the machine:

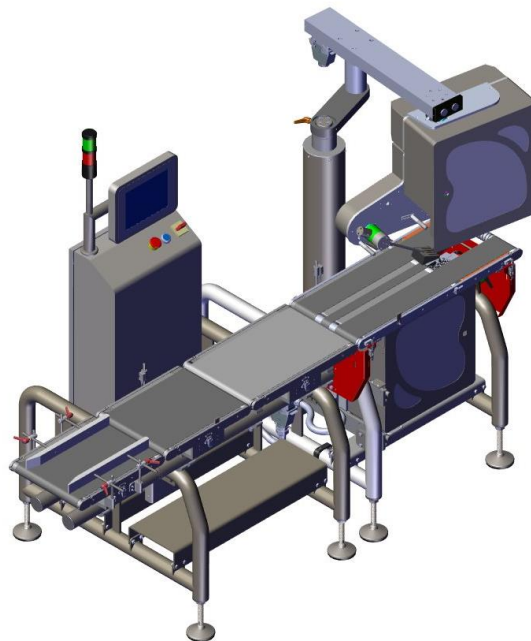


Figure 1-11

The Emergency and reset buttons are located on the panel on the front of the machine. If pressed, the Emergency button cuts off power to the motor drivers and to all actuators fed by the outputs. Pressing the reset button after restoring the Emergency button, reactivates power to all movement circuits and to the actuators.



Figure 1-12

The panel contains the following sections:

- CPU board, expansions, input-output board, converter and metrological coverage:

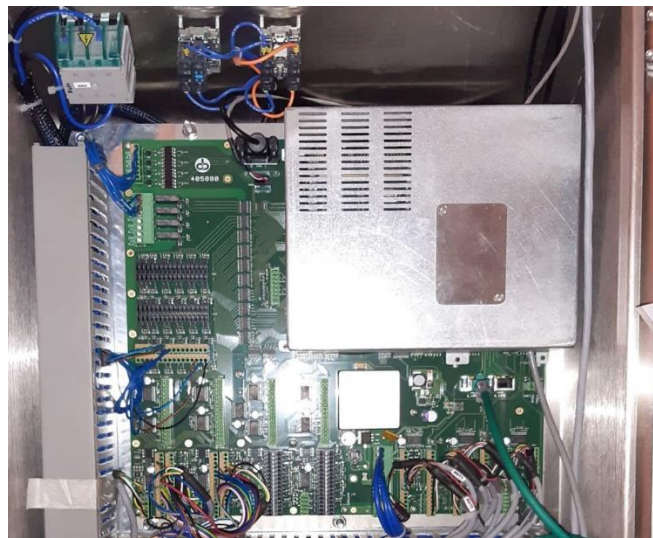


Figure 1-13

- Main switch, fuses, serial remote I/O expansion board and contactors:



Figure 1-14

- Transformer with rectifier bridge, utility terminal board, cable output:

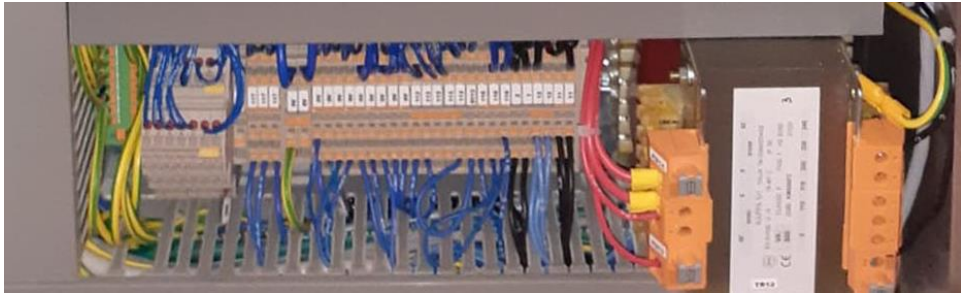


Figure 1-15

- Opening door with motor driver housing, power supplies, fan and filter:



Figure 1-16

The complete layout of the panel is identified with code 17060072.

1.8.1.1 CPU Board

The used PCM-9375 SBC board (Single Board Computing) is equipped with an 800Mhz AMD Lx800 microprocessor.

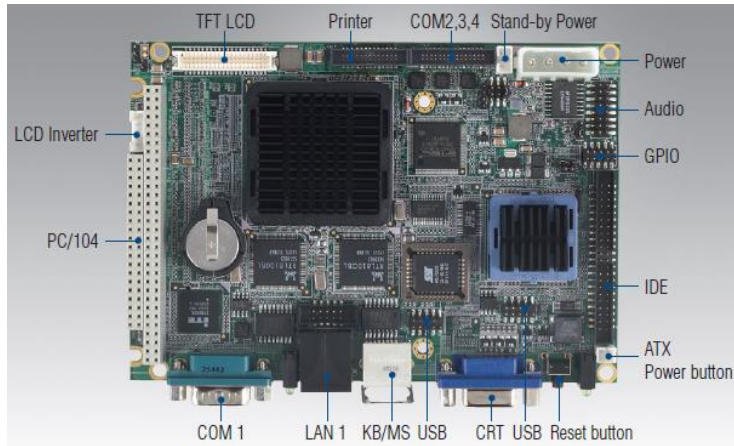


Figure 1-17

This board is committed via the PC/104 standard to the PCM-3614 serial expansion board (if any)

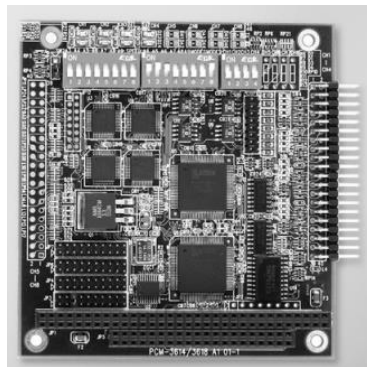
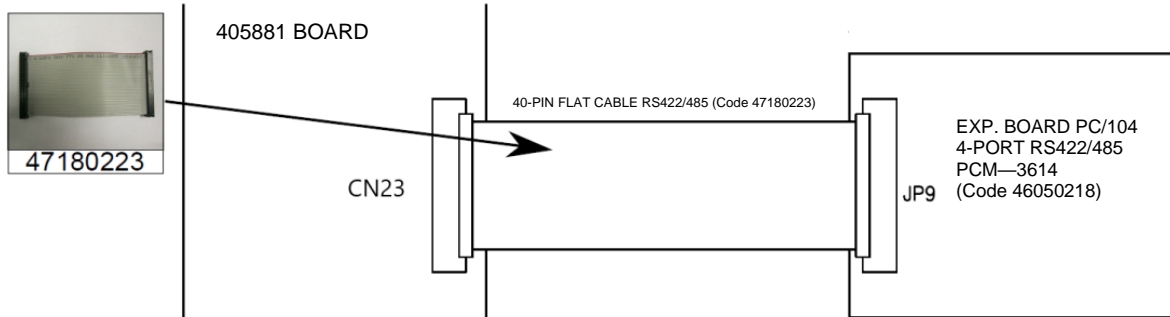


Figure 1-18

These boards are connected with boards having input/output and converter connectors:

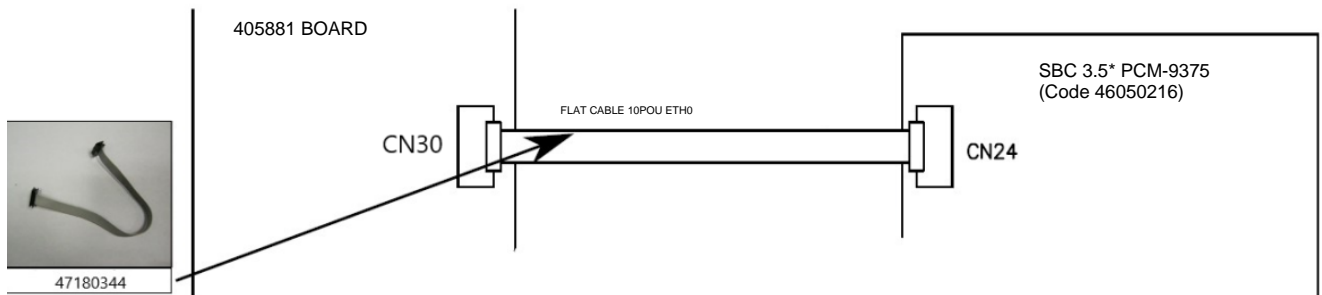
-If serial expansion is present, it remains hollow: **47180223**

Connecting PCM-3614 board (Ref. 46050218) with CN32 connector of board 405881



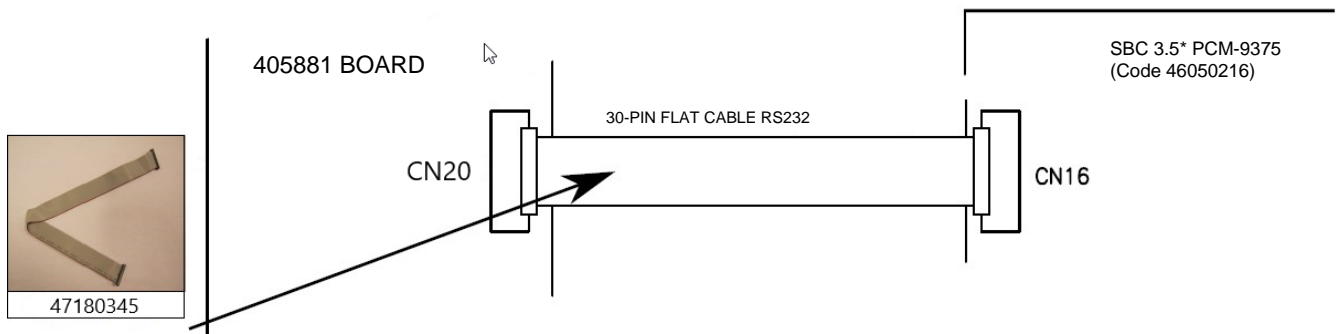
-47180344

Equivalent to cable 47180219 but Eth cable only 100mm long



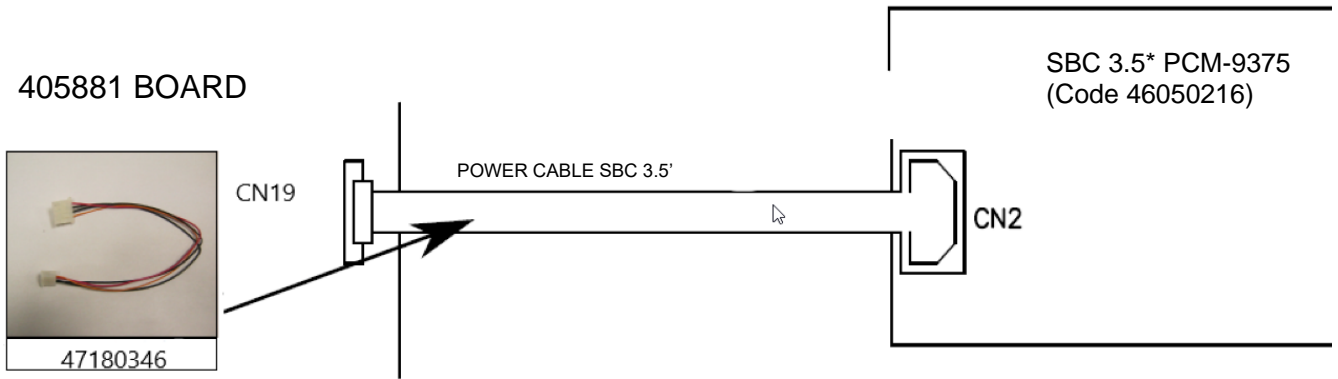
-47180345

Equivalent to cable 47180222 but Rs232 cable only 100mm long



-47180346

Equivalent to power cable 4718218 but only 100 mm long

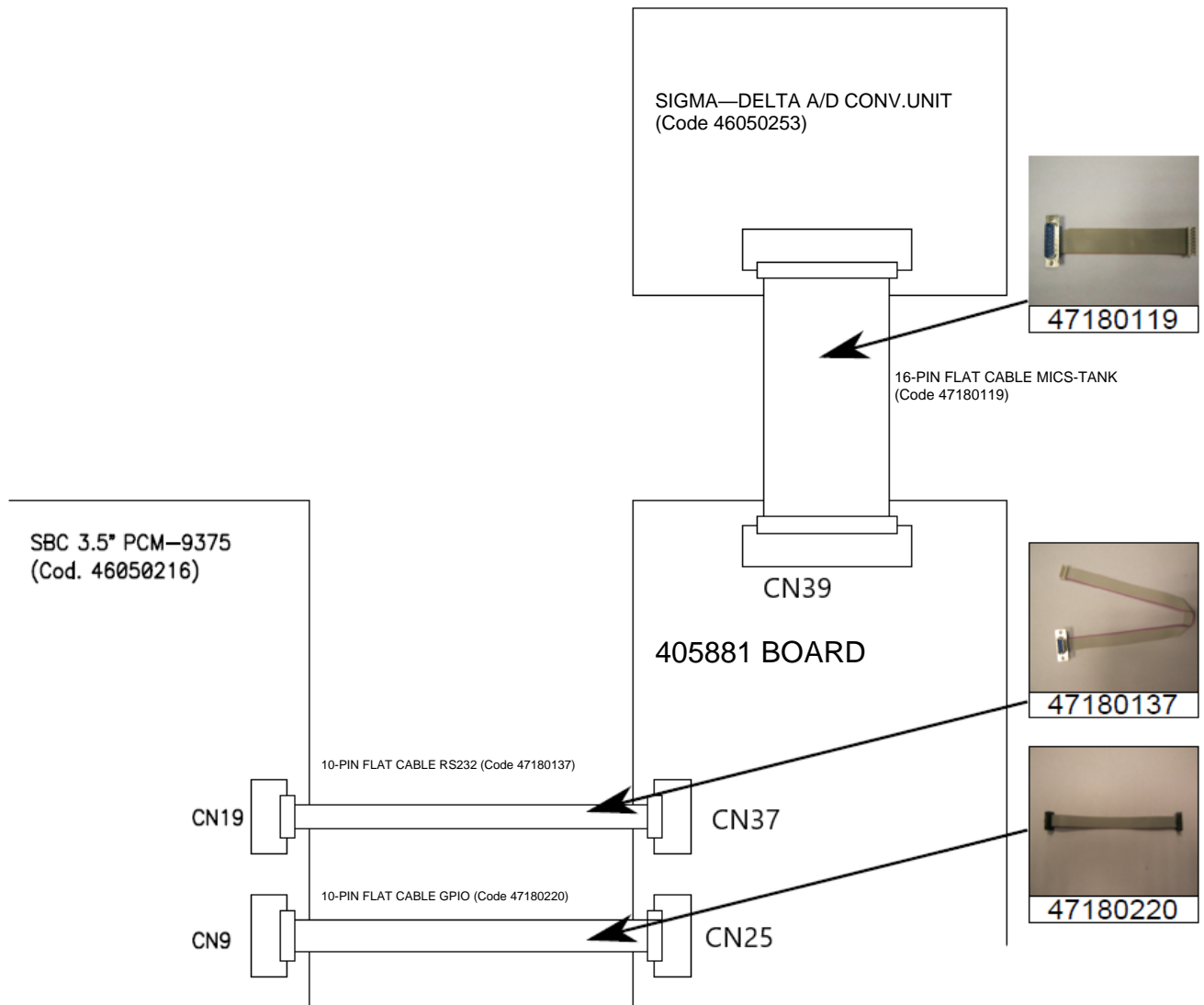


Other cables remain equivalent to those used on Galaxi:

-47180220

-47180137

-47180119 (for connection to converter 46050253)



1.8.2 GALAXI LT control panel

The electric panel contains the power management, CPU board, I/O remote boards, load cell converter and terminal boards for connecting the external utilities.

The machine is powered at 220-240 Vac via standard industrial socket:



Figure 1-19

The main power switch is located in the centre of the panel door, on the back of the machine:

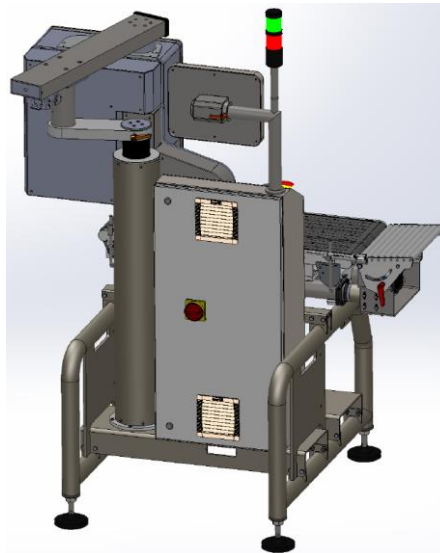


Figure 1-20

The Emergency and reset buttons are located on the panel on the front of the machine. If pressed, the Emergency button cuts off power to the motor drivers and to all actuators fed by the outputs. Pressing the reset button after restoring the Emergency button, reactivates power to all movement circuits and to the actuators.



Figure 1-21

The panel contains the following sections:

- CPU board, expansions, input-output board, converter and metrological coverage:



Figure 1-22

- Main switch, fuses, serial remote I/O expansion board and contactors:

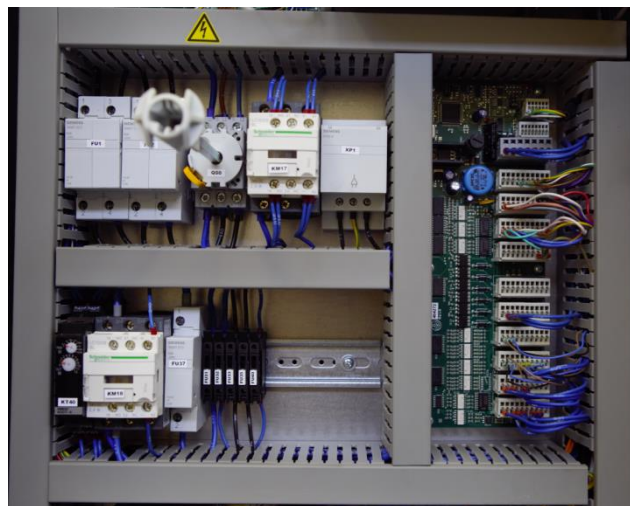


Figure 1-23

- Transformer with rectifier bridge, utility terminal board, cable output:

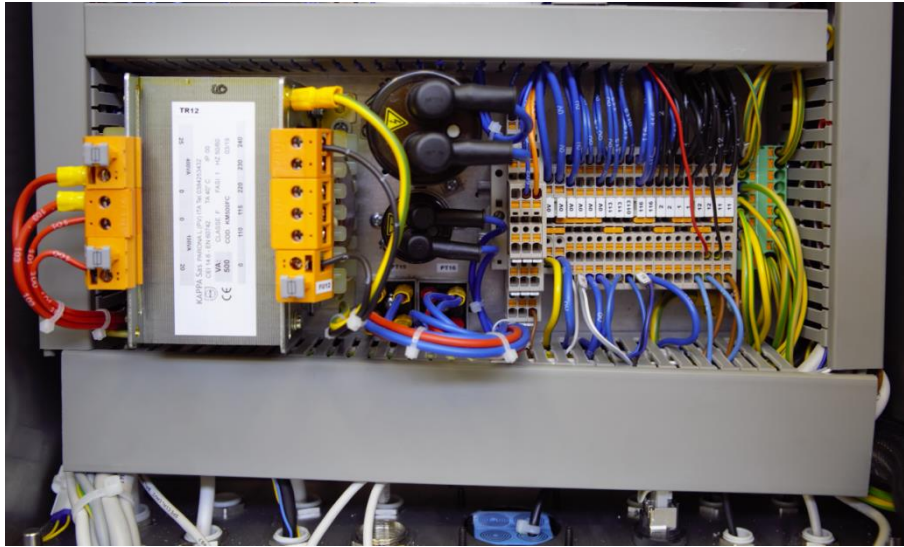


Figure 1-24

- Opening door with motor driver housing, power supplies, fan and filter:



Figure 1-25

The complete layout of the panel is identified with code 17060072.

1.8.2.1 CPU Board

The used PCM-9375 SBC board (Single Board Computing) is equipped with an 800Mhz AMD Lx800 microprocessor.

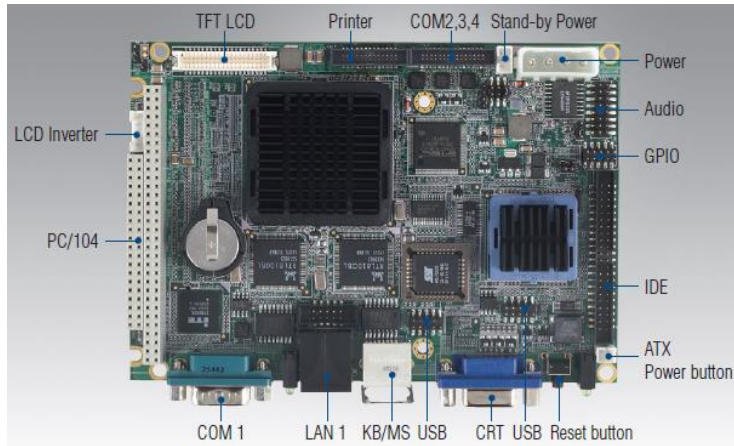


Figure 1-26

This board is committed via the PC/104 standard to the PCM-3614 serial expansion board

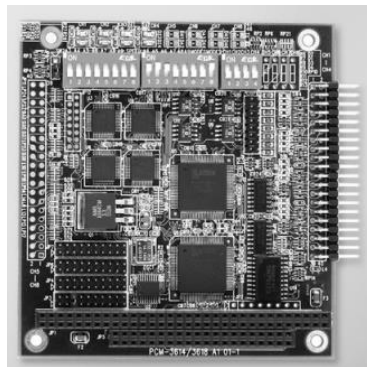


Figure 1-27

And to the PCM3780 input/output expansion board

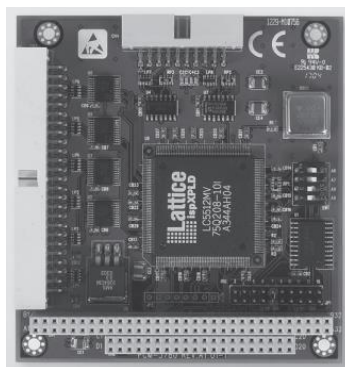


Figure 1-28

These boards are connected with boards having input/output and converter connectors:

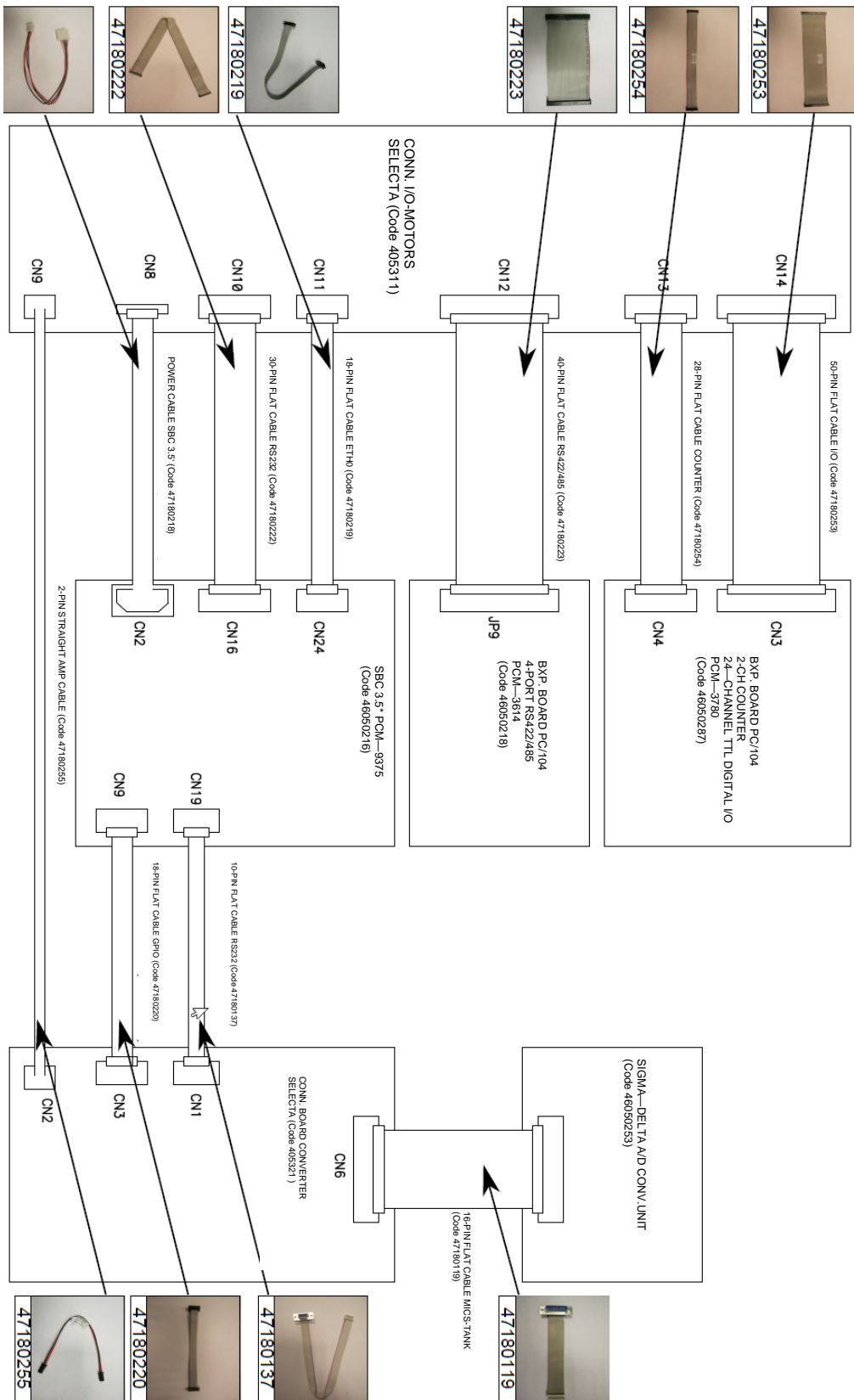


Figure 1-29

The expansion boards must be configured according to the following layout:

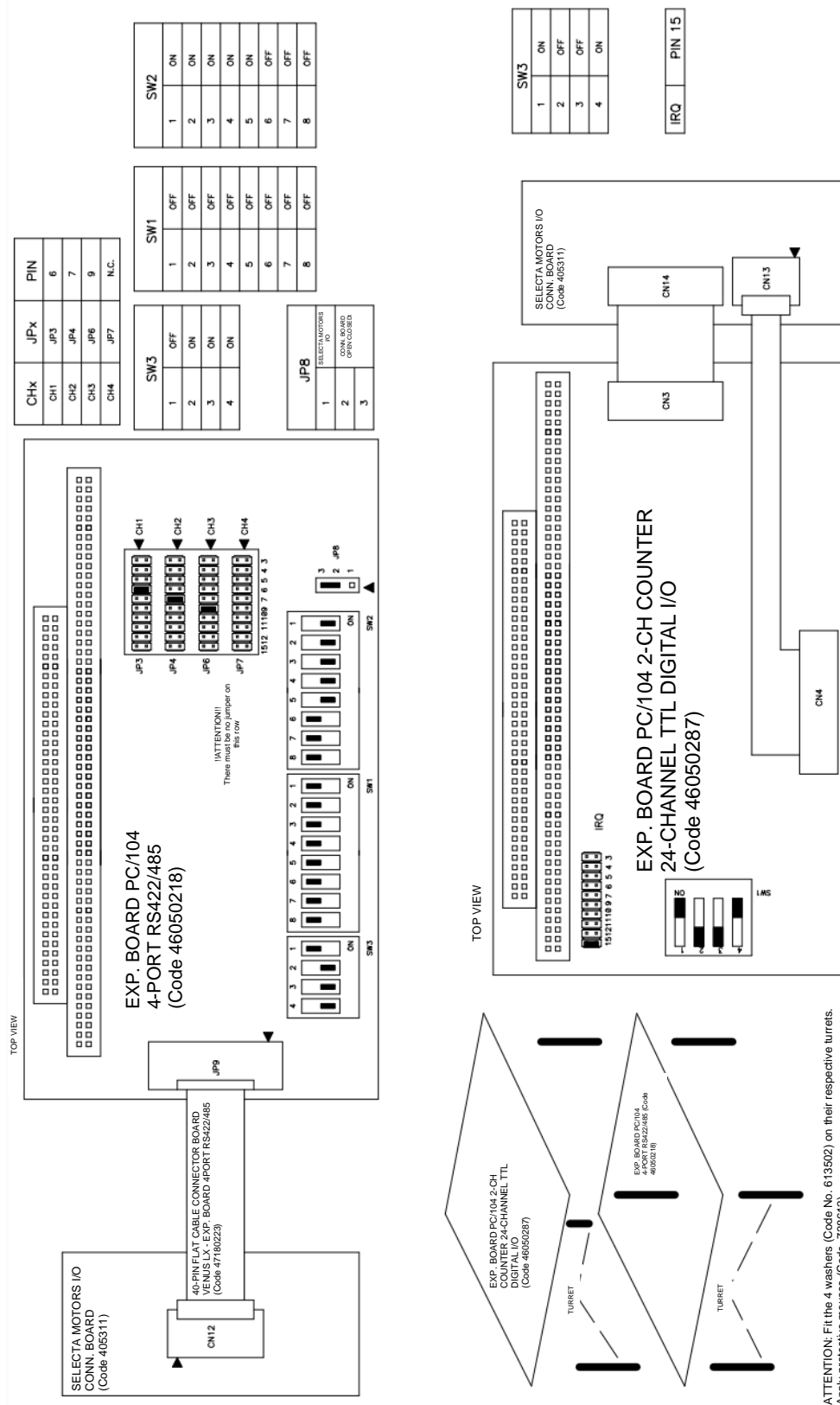


Figure 1-30

These boards are physically housed on a backplate and covered by a suitably processed metal box so that the I/O connectors face them directly. This container also ensures a legal metrological constraint since it also contains the converter.

There is also a connection board towards the converter and a calibration button:

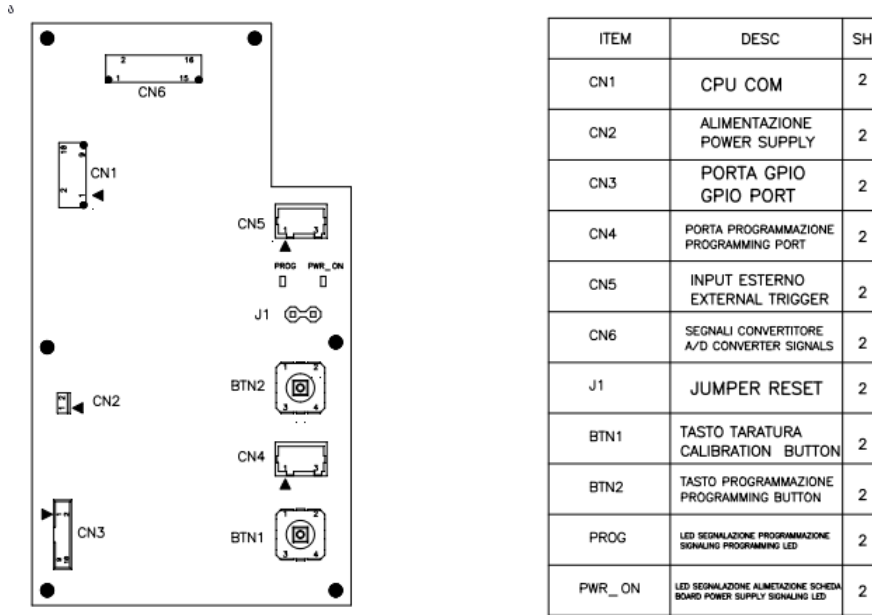


Figure 1-31

The layout of which is identified with code 405321.

Another board of the upper unit is used for connecting the serials, ethernet and inputs/outputs.

The layout of which is identified with code 405311.

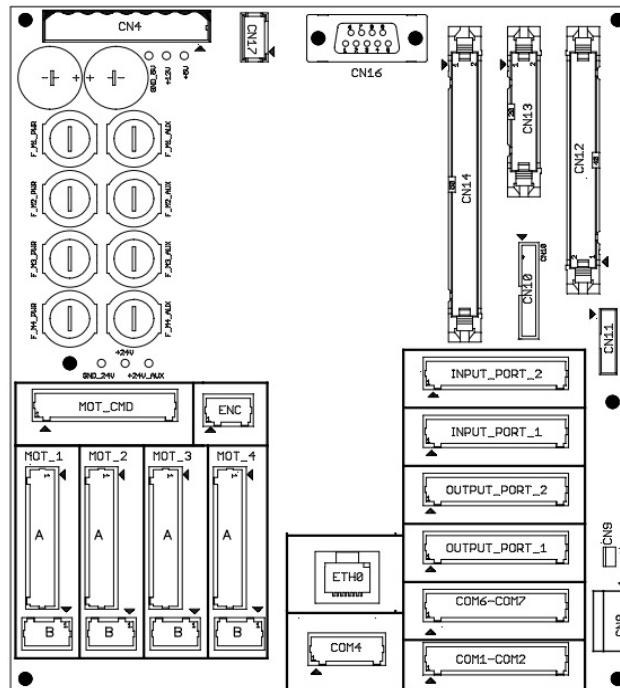


Figure 1-32

ITEM	DESC	SH.	ITEM	DESC	SH.
CN4	ALIMENTAZIONE PRIMARIA MAIN POWER SUPPLY	5	INPUT_PORT_1	INGRESSI DIGITALI 25:27 (0-24V) + FOTO. DIGITAL INPUT 25:27 (0-24V) + PHOTO.	2
CN8	ALIMENTAZIONE CPU CPU POWER SUPPLY	5	INPUT_PORT_2	INGRESSI DIGITALI 28:32 (0-24V) DIGITAL INPUT 28:32 (0-24V)	2
CN9	ALIMENTAZIONE CONVERTITORE A/D A/D CONVERTER POWER SUPPLY	5			
CN10	RS232 BUS (LATO CPU) RS232 BUS (CPU SIDE)	6			
CN11	ETH0 (LATO CPU) ETH0 (CPU SIDE)	7			
CN12	RS422 BUS (LATO CPU) RS422 BUS (CPU SIDE)	6			
CN13	ENC/CNT (LATO CPU) ENC/CNT (CPU SIDE)	3			
CN14	INPUT/OUTPUT - 25:32 (LATO CPU) INPUT/OUTPUT - 25:32 (CPU INTERFACE)	2			
CN16	TOUCHSCREEN COM (COM 5)	6			
CN17	ALIMENTAZIONE DI SERVIZIO SERVICE POWER SUPPLY	5			
COM1 - COM2	PORTE RS422 RS422 INTERFACES	6	OUTPUT_PORT_1	USCITE RELE' 25:29 (NO) RELAY OUTPUT 25:29 (NO)	2
COM4	PORTA COM SCHEDA I/O 1:24 COM PORT BOARD I/O 1:24	6	OUTPUT_PORT_2	USCITE RELE' 38:32 (NO) + ALL. AUX. (24V) RELAY OUTPUT 38:32 (NO) + AUX. SUPPLY (24V)	2
COM6 - COM7	PORTE RS232 RS232 INTERFACES	6			
ENC	ENC/CNT (INGRESSI MOTORI) ENC/CNT (ELE. MOTORS INPUT)	3			
F_Mx_PWR	FUSIBILI ALM. POTENZA MOT. x=1-4 FUSES OF MOT. POWER SUPPLY LINE x=1-4	5			
F_Mx_AUX	FUSIBILI ALM. LOGICA MOT. x=1-4 FUSES OF MOT. LOGIC SUPPLY LINE x=1-4	5			

Figure 1-33

1.8.2.2 Input output remote serial board

Part of the I/Os are managed through an I/O management board which dialogues with a proprietary protocol from and to the **GALAXI** terminal (COM 4).

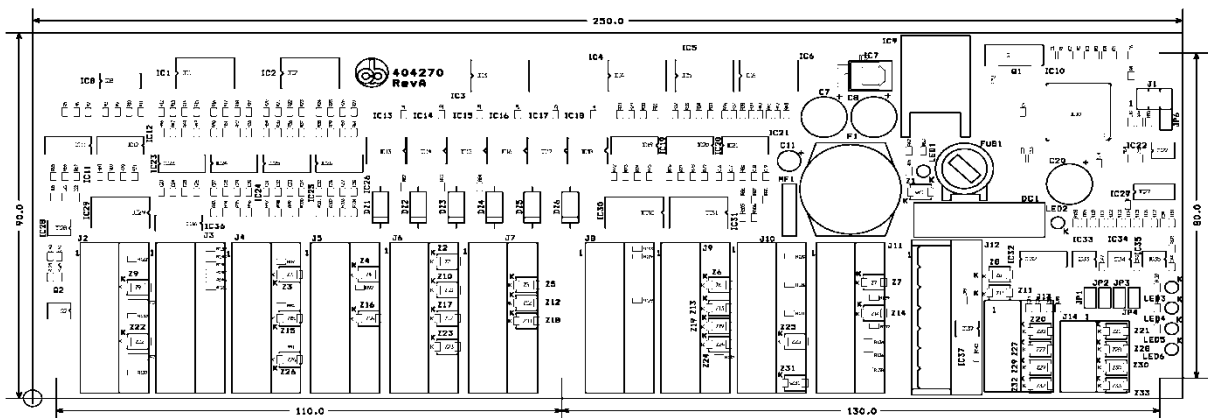


Figure1-34 - I/O board topological representation

1.8.2.3 I/O Test

To make it easier to identify any faults, the **GALAXI** lines are equipped with a troubleshooting program able to monitor the buttons and sensors and activate each actuator device (solenoid valves, motors, etc.) by means of a manual control.



Beware!

The check-control function can only be accessed at level 5 by means of a password. This can only be done by personnel with a **QUALIFICATION 3** professional profile (electrical maintenance technician).

To check the I/O system of the machine, access level 5 and go to

Home\Arch.\Config.\Test IO

This mask allows the user to check the status of the outputs, force the outputs, check the status of the dip-switches, enter the speed of the belts, command starting and stopping and check the readings made by a scanner connected to a serial port.

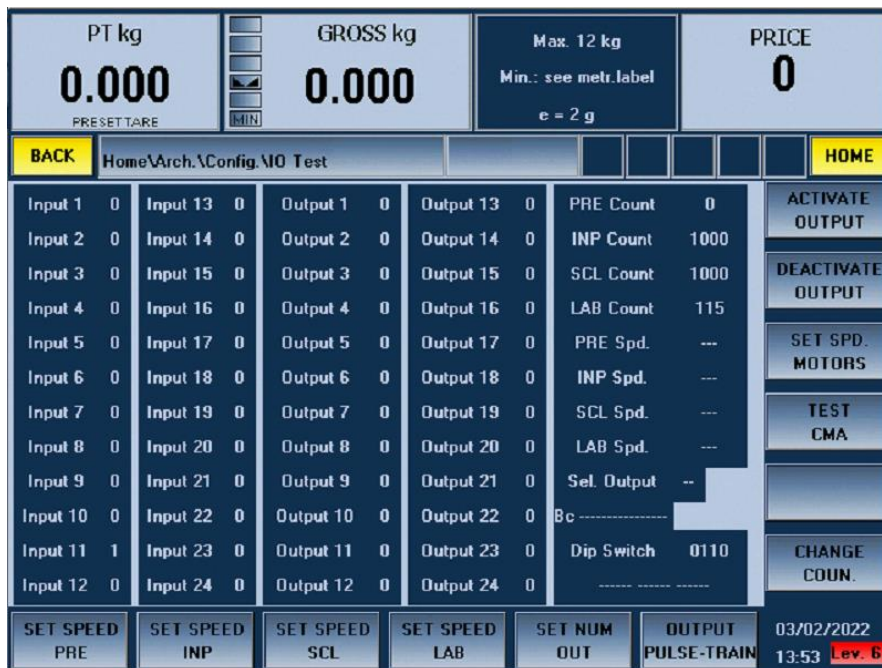


Figure 1-35 - IO Window



Beware!

The emergency device obviously remains activated even though the circuits are operated in manual mode. The presence of an alert operator, ready to act if required, is therefore of fundamental importance.

Only trained and explicitly authorised personnel may use the check-control function.

Manual activation of the control circuits does not include operating checks and synchronisms. The line must therefore be unloaded, the conveyors left vacant and all bystanders must leave the area.

Only activate one control at a time and once the inspections have been conducted, set it back to the hold condition (stopped, deactivated).

To activate an output, type the corresponding **output table** number in the **SET NUM OUT** field and press **ENABLE OUTPUT**, press **DISABLE OUTPUT** to disable.

The reading and **input** detection takes place in real time.

To test the correct operation of the belts, type in the **Set Speed LAB/SCA/PRE/INP** the speed as a percentage confirming the data, then activate the output of the belt to be tested.

The **Bc** field displays the result of a reading made by a scanner connected to a serial port.

The **Dip Switch** field displays the status of the internal dip switch unit.

Remember that only qualified personnel can act on the microswitches in question.

1.8.2.4 GALAXI input table

Logic input	Pin No.	Function	NOTES
IN-1	J4-PIN 2	Economy photocell	
IN-2	J4-PIN 5	Entrance photocell	
IN-3	J4-PIN 8	Scale photocell	
IN-4	J5-PIN 2	Labelling Is	
IN-5	J5-PIN 5	Pre (separator) belt photocell	
IN-6	J6-PIN 2 CP	Emergency	
IN-7	J6-PIN 4 CP	Reset	
IN-8	J6-PIN 6 CP	Starting	
IN-9	J6-PIN 8 CP	Stopping	
IN-10	J7 PIN 3		
IN-11	J7 PIN 4		
IN-12	J7 PIN 5		
IN-13	J9-PIN 3 CP/PNP	Enabling by next machine	

Logic input	Pin No.	Function	NOTES
IN-14	J9-PIN 5	Pressure switch	The pressure switch is a clean contact that is closed when air is present. If the pressure switch is NOT present, the input must be connected at 24V. When there is no air, the machine blocks and stops processing, indicating the fault. The operator must be informed that any label issued must be discarded and the machine unloaded.
IN-15	J9-PIN 6	End of ejection/Restart button	
IN-16	J9-PIN 7	SPARE	
IN-17	J10-PIN 7	Applicator/PNP ejector limit switch	
IN-18	J3-PIN 10	Applicator/ejector hold sensor	Not used with the air-jet
IN-19	J11-PIN 3(+)/4(-)	Product label ready	
IN-20	J11-PIN 5(+)/6(-)	Printer fault	

1.8.2.5 GALAXI output table

Logic Output	Pin No.	Function	NOTE
OUT-1	J2-PIN 1	Enable PRE belt (separator)	
OUT-2	J2-PIN 5	Enable input belt (prior to scale)	
OUT-3	J2-PIN 9	Enable scale belt	
OUT-4	J3-PIN 3	Enable labelling machine belt	
OUT-5	J7-PIN 6		
OUT-6	J7-PIN 7		
OUT-7	J7-PIN 8		
OUT-8	J8-PIN 1	Diverter	
OUT-9	J8-PIN 4	Ejector	
OUT-10	J8-PIN 6(+)/7(-)	Enabling by prior machine	


Logic Output	Pin No.	Function	NOTE
OUT-11	J8-PIN 8(+)-9(-)	Fault/Block	Activated RELAY output when the machine is blocked for one of the following faults, which will appear on the screen: emergency, no compressed air, no more paper, applicator error, positioning errors, blocking errors that force the machine to quit the process, red light.
OUT-12	J8-PIN 10(+)- J9-PIN1(-) CP	Line running/Line at a standstill	Line running: relay output activated when the machine is operating and the belts may start automatically at any time, even without the operator's intervention. Line at a standstill: output deactivated when the machine is at a standstill, the belts are stopped and cannot restart without a command from the operator. CONVEYOR BELT function enabled. The output is activated.
OUT-13	J9-PIN 8	Enable compressor	
OUT-14	J9-PIN 9	Enable label verification scanner/Pallet label at end	
OUT-15	J10-PIN 1	Suction	
OUT-16	J10-PIN 3	Applicator piston/Arm motor command/Comb ascent/blowing action	
OUT-17	J10-PIN 5	Clutch/Piston return/Ejector piston	
OUT-18	J11-PIN 7	Enable printer	
OUT-19	J11-PIN 9	Assist blow	

1.8.3 GALAXI Ethernet, serial, input output board

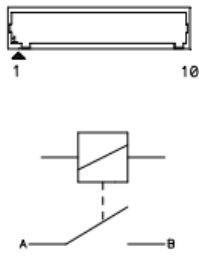
Part of the I/Os is managed via an I/O management board directly connected with the CPU board. This board also has the connections for the RS232 and RS422 and Ethernet serial ports.

1.8.3.1 Input Output Table


INPUT_PORT_1		
PIN	DESCR.	FUNC.
1	INPUT_25	
2	GND_24V	
3	INPUT_26	
4	GND_24V	
5	INPUT_27	
6	GND_24V	
7	FOTO_1	FOTO, RISPARMIO NASTRI STAND-BY BELTS PHOTO
8	FOTO_2	FOTOCPELLULA INGRESSO IN-FEED PHOTOCELL
9	FOTO_3	FOTOCPELLULA ETICHETT. LABELING PHOTOCELL
10	+24V_AUX Max 250 mA	



OUTPUT_PORT_1 (RELE' NORMALMENTE APERTO RELAY NORMALLY OPEN)		
PIN	DESCR.	FUNC.
1	OUTPUT_25_A Curr. Max 1A Volt. Max 270VA, 125VDC	CONSENSO A MONTE UPSTREAM SIGNAL
2	OUTPUT_25_B Curr. Max 1A Volt. Max 270VA, 125VDC	CONSENSO A MONTE UPSTREAM SIGNAL
3	OUTPUT_26_A Curr. Max 1A Volt. Max 270VA, 125VDC	
4	OUTPUT_26_B Curr. Max 1A Volt. Max 270VA, 125VDC	
5	OUTPUT_27_A Curr. Max 1A Volt. Max 270VA, 125VDC	
6	OUTPUT_27_B Curr. Max 1A Volt. Max 270VA, 125VDC	
7	OUTPUT_28_A Curr. Max 1A Volt. Max 270VA, 125VDC	
8	OUTPUT_28_B Curr. Max 1A Volt. Max 270VA, 125VDC	
9	OUTPUT_29_A Curr. Max 3A Volt. Max 270VA, 125VDC	
10	OUTPUT_29_B Curr. Max 3A Volt. Max 270VA, 125VDC	



INPUT_PORT_2		
PIN	DESCR.	FUNC.
1	INPUT_28	
2	GND_24V	
3	INPUT_29	
4	GND_24V	
5	INPUT_30	
6	GND_24V	
7	INPUT_31	
8	GND_24V	
9	INPUT_32	
10	GND_24V	



OUTPUT_PORT_2 (RELE' NORMALMENTE APERTO RELAY NORMALLY OPEN)		
PIN	DESCR.	FUNC.
1	OUTPUT_30_A Curr. Max 3A Volt. Max 270VA, 125VDC	
2	OUTPUT_30_B Curr. Max 3A Volt. Max 270VA, 125VDC	
3	OUTPUT_31_A Curr. Max 3A Volt. Max 270VA, 125VDC	
4	OUTPUT_31_B Curr. Max 3A Volt. Max 270VA, 125VDC	
5	OUTPUT_32_A Curr. Max 3A Volt. Max 270VA, 125VDC	
6	OUTPUT_32_B Curr. Max 3A Volt. Max 270VA, 125VDC	
7	GND_24V	
8	GND_24V	
9	+24V_AUX Max 250 mA	
10	+24V_AUX Max 250 mA	

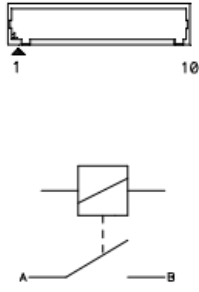
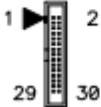
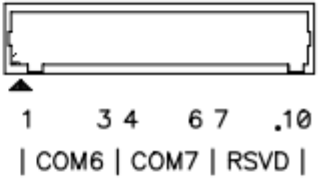


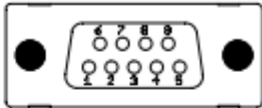
Figure 1-36

1.8.3.2 RS232 Serial table

RS232

CN10 – RS232 BUS (LATO CPU)		
PIN	DESCRIPTION	
1	DCD (COM5)	
2	DSR (COM5)	
3	RXD (COM5)	
4	RTS (COM5)	
5	TXD (COM5)	
6	CTS (COM5)	
7	DTR (COM5)	
8	RI (COM5)	
9	GND (COM5)	
10	N.C.	
11	N.C.	
12	N.C.	
13	RXD (COM6)	
14	N.C.	
15	TXD (COM6)	
16	N.C.	
17	N.C.	
18	N.C.	
19	GND (COM6)	
20	N.C.	
21	N.C.	
22	N.C.	
23	RXD (COM7)	
24	N.C.	
25	TXD (COM7)	
26	N.C.	
27	N.C.	
28	N.C.	
29	GND (COM7)	
30	N.C.	

COM6 – COM7 PORTE RS232		
PIN	DESCRIPTION	
1	RX (COM6)	
2	TX (COM6)	
3	GND (COM6)	
4	RX (COM7)	
5	TX (COM7)	
6	GND(COM7)	
7	RSVD	
8	RSVD	
9	RSVD	
10	RSVD	

CN16 – TOUCHSCREEN COM (COM5)		
PIN	DESCRIPTION	
1	GND	
2	DTR	
3	TX	
4	RX	
5	DCD	
6	DSR	
7	RTS	
8	CTS	
9	RI	

NOTA:

L'interfaccia TOUCHSCREEN COM e' di tipo RS232.

NOTE:

TOUCHSCREEN COM interface is based on RS232.

Figure 1-37

1.8.3.3 RS422 Serial table

RS422

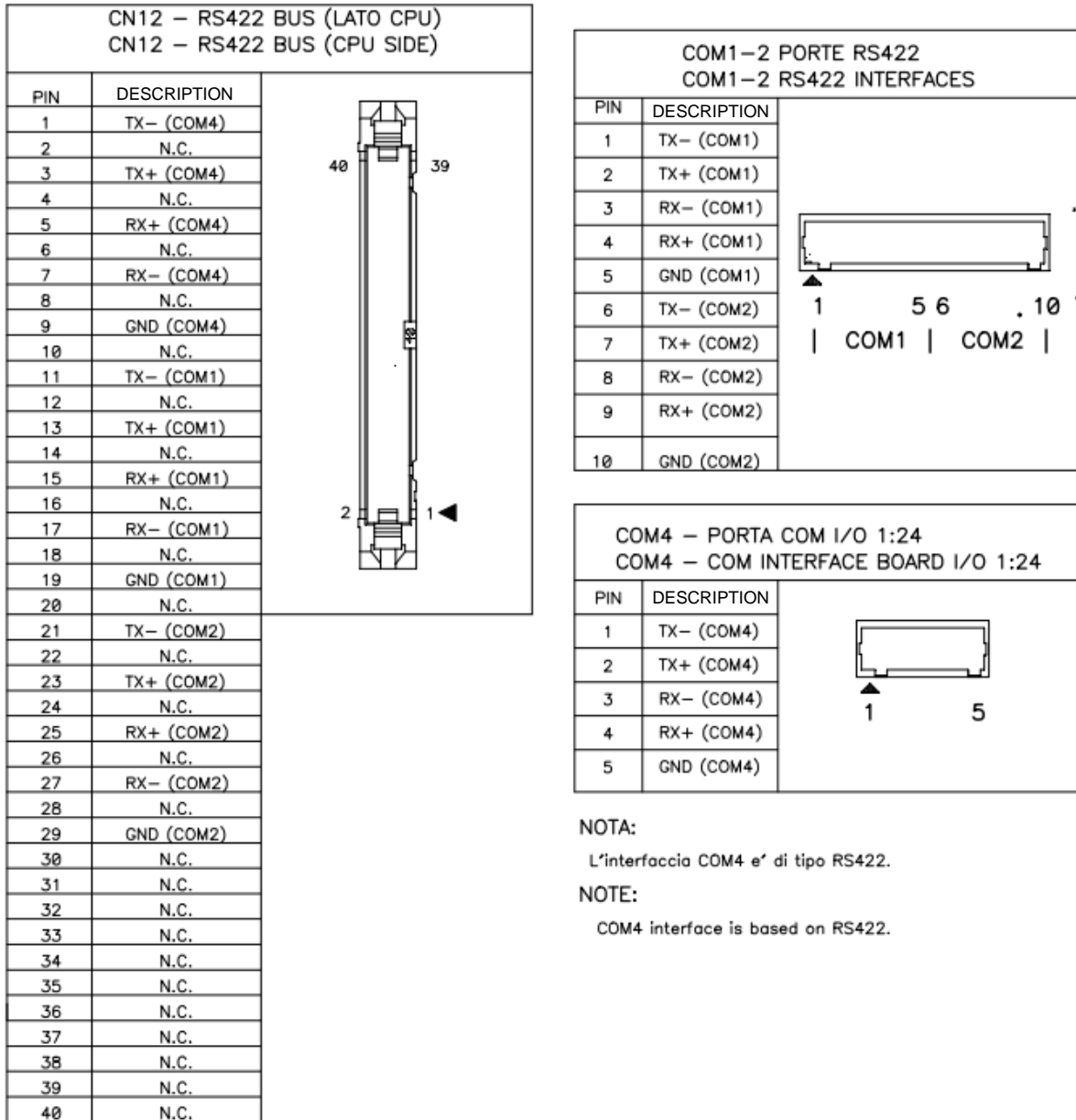


Figure 1-38

1.8.3.4 I/O expansions test

To make it easier to identify any faults, the **GALAXI** lines are equipped with a troubleshooting program able to monitor the buttons and sensors and activate each actuator device (solenoid valves, motors, etc.) by means of a manual control.



Beware!

The check-control function can only be accessed at level 5 by means of a password. This can only be done by personnel with a QUALIFICATION 3 professional profile (electrical maintenance technician).

To check the I/O system of the machine, access level 5 and go to

Home\Arch.\Config.\Test IO

This mask allows the user to check the status of the outputs, force the outputs, check the status of the dip-switches, enter the speed of the belts, command starting and stopping and check the readings made by a scanner connected to a serial port.

The Inputs and outputs of this board are numbered 25 and are located on the second page of the IO test selectable with **BENCH CHANGE**:

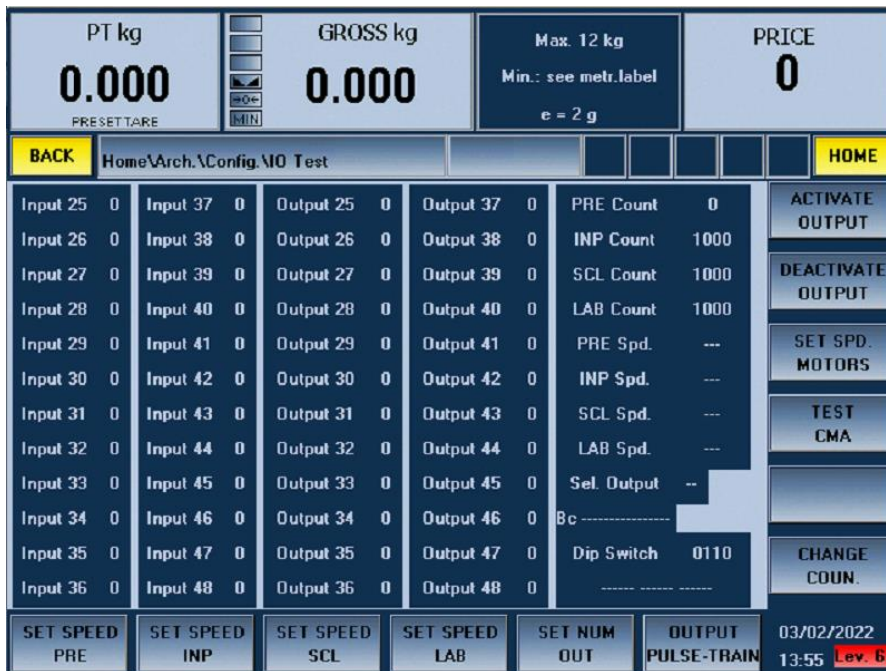


Figure 1-39

1.8.4 Printer board

The printer board is connected to the **GALAXI** via an RS422 serial interface.

From the **GALAXI** console you can run a printer data test such as the firmware release, head temperature, contrast and values of the reading indexes of the label photosensors.

The path to access the stated menu is as follows:

Home\Arch.\Config.\Pack.STP

Below are some notes from the testing procedure protocol:

<p>Paper pitch and foil sensor control</p>	<p>Check that the two sensors correctly perform their function: in the case of paper pitch sensor, adjust the trimmer if necessary.</p> <p>The trimmer adjustment must be carried out by checking the values of the photo label parameter during printer test:</p> <ul style="list-style-type: none"> • label presence: label photo. = 29-31 • silicone-coated paper presence: label photo. = 99-102 <p>The stated values refer to default settings, the range detectable on machines already in operation may be less-</p>
---	--

Figure 1-40 - Ptr sensor value table

The following page shows the topological representation of the printer CPU board with the list of connectors present.

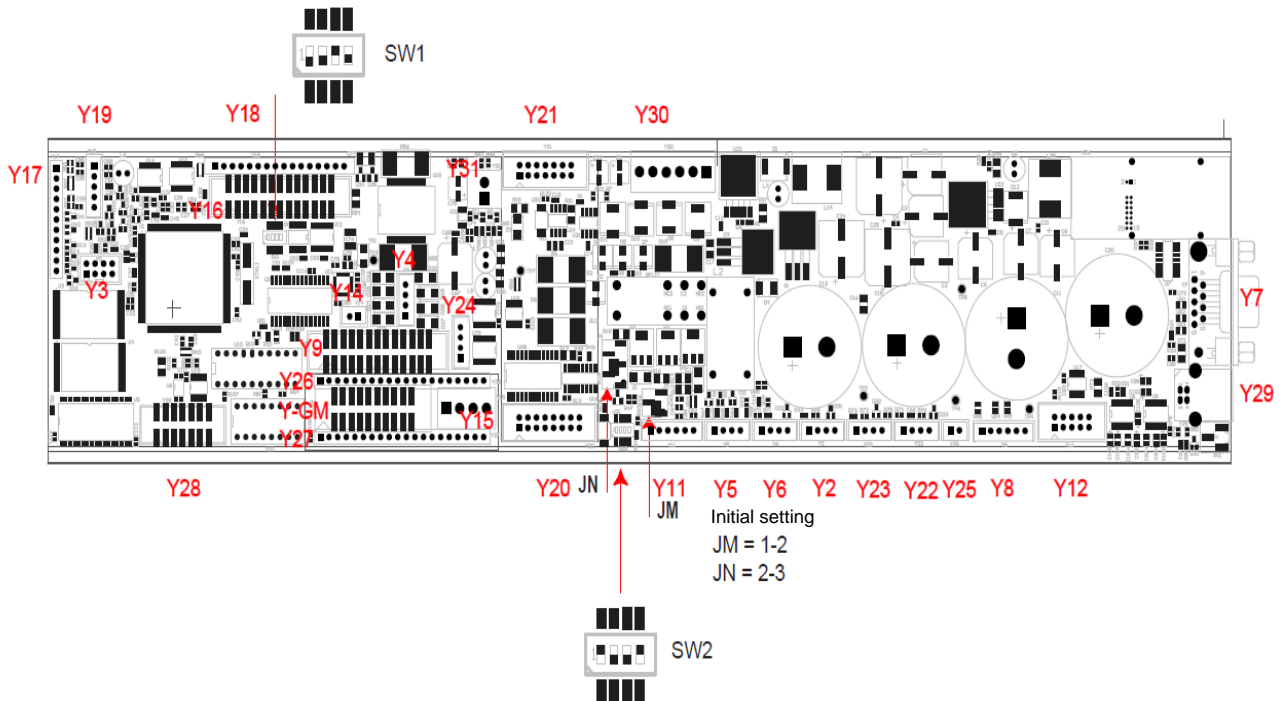


Figure 1-41

1.8.5 Motor driver board

1.8.5.1 Settings

The motors are driven by DC drivers shown in the following topological representation:

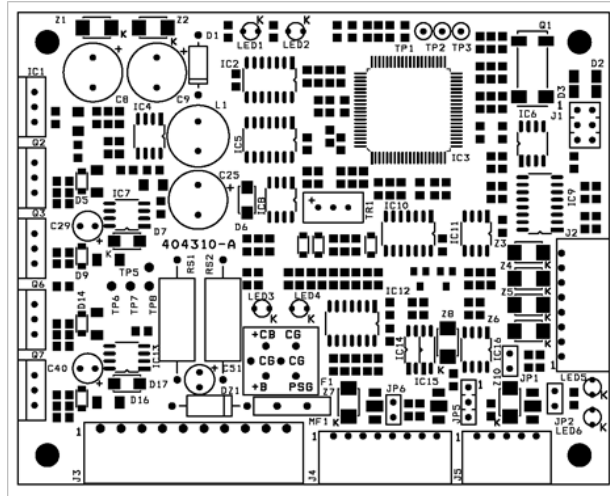


Figure 1-42 - Motor driver topological representation

Below are some notes from the testing notes protocol

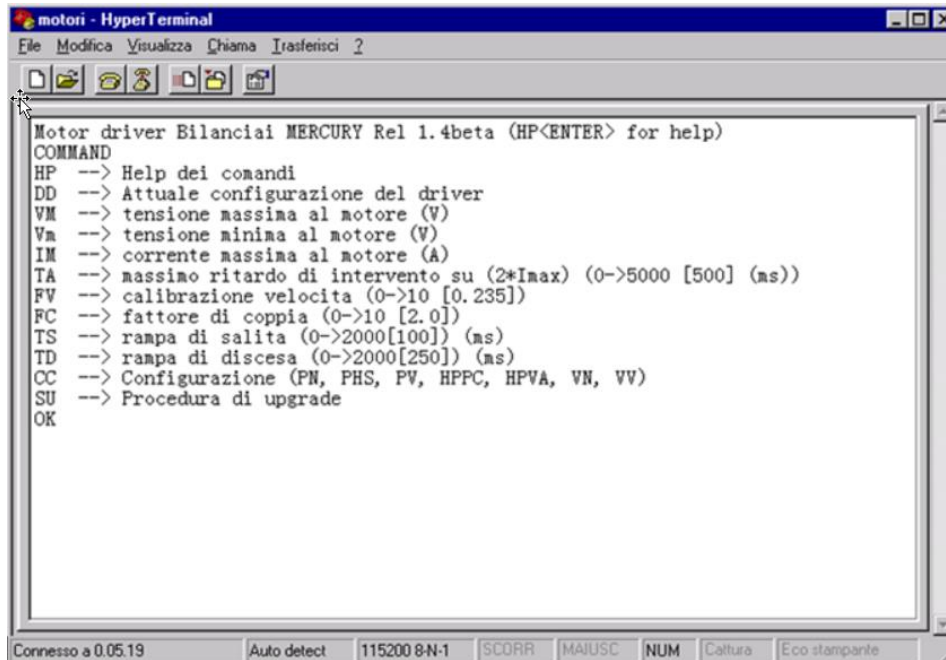
<p>Motor driver control</p>	<p>Check that the trimmer that manages the current hardware protection is completely turned clockwise.</p> <p>Check the correct type of motor driver is installed for the type of machine by checking and setting the JP5 and JP6 jumpers as follows:</p> <p>Galaxi LT – Galaxi HS</p> <p>JP5 1-2</p> <p>JP6 CLOSED</p> <p>Enabling: J4-PIN5</p>
<p>Parameterisation</p>	<p>Two standard closed or open loop control configurations are loaded by supplying, or not, power to the J4 PIN6. In particular, if the J4 PIN6 is floating, the driver understands that it is working in open loop; whereas, if it receives 24V there is a closed loop feedback system with encoder.</p> <p>If the machine is not within the two previous cases, it is necessary to correctly set the CC parameter that identifies the type of machine.</p>

Figure 1-43 - Motor driver settings

1.8.5.2 Connection procedure

1. Turn on the weighing-ricing machine and press reset to power the drivers.
2. Open Windows Hyperterminal ©.
3. Open the **File/Properties/Configure** menu and set the parameters

Bit per second	115200
Data bits	8
Parity	none
Stop bits	1
Flow control	none
4. Open the **File/Properties/Settings/ASCII Settings** menu and disable all the parameters, set the values to 0 remember **not** to set the addition of CR and LF characters and the local echo in the ASCII transmission part.
5. Connect and press **[ENTER]**
6. ALL commands must be typed in capital letters.
7. Type **HP** and press **[ENTER]**: the driver work menu appears (help of commands that will be described in the next section).



```

motori - HyperTerminal
File Modifica Visualizza Chiama Trasferisci ?
Motor driver Bilanciai MERCURY Rel 1.4beta (HP<ENTER> for help)
COMMAND
HP --> Help dei comandi
DD --> Attuale configurazione del driver
VM --> tensione massima al motore (V)
Vn --> tensione minima al motore (V)
IM --> corrente massima al motore (A)
TA --> massimo ritardo di intervento su (2*Imax) (0->5000 [500] (ms))
FV --> calibrazione velocità (0->10 [0.235])
FC --> fattore di coppia (0->10 [2.0])
TS --> rampa di salita (0->2000[100]) (ms)
TD --> rampa di discesa (0->2000[250]) (ms)
CC --> Configurazione (PN, PHS, PV, HPPC, HPVA, VN, VV)
SU --> Procedura di upgrade
OK
Connesso a 0.05.19 Auto detect 115200 8-N-1 SCORR MAIUSC NUM Cultura Eco stampante
  
```

Figure 1-44 - Hyperterminal Settings

8. The **DD** command displays the current driver configuration. Figure 1.38 - driver configuration

```

Motor driver Bilancai MERCURY Rel 1.4beta (HP<ENTER> for help)
COMMAND
HP --> Help dei comandi
DD --> Attuale configurazione del driver
VM --> tensione massima al motore (V)

Vm --> tensione minima al motore (V)
IM --> corrente massima al motore (A)
TA --> massimo ritardo di intervento su (2*Imax) (0->5000 [500] (ms))
FV --> calibrazione velocita (0->10 [0.235])
FC --> fattore di coppia (0->10 [2.0])
TS --> rampa di salita (0->2000[100]) (ms)
TD --> rampa di discesa (0->2000[250]) (ms)
CC --> Configurazione (PN, PHS, PV, HPPC, HPVA, VN, VV)
SU --> Procedura di upgrade
OK
Config. = PHS
VMax = 45.4 (V)
VMin = 0.0 (V)
IMax = 13.7 (A)
TI (2*Imax) = 500(ms)
FV = 0.4100
FC = 0.0000
TS = 100 (ms)
TD = 250 (ms)
kp = 7
ki = 17
kd = 6
OK
-

```

Figure 1-45 – Motor parameters

1.8.5.3 List of commands

The following table lists all the motor driver parameters

Parameters	
HP	Displays the list of commands
VM	If the load requires power with a voltage higher than the one set, the driver does not supply any more even if it does not go into protection mode.
Vm	If the load requires power with a voltage lower than the one set, the driver does not supply any more (the motors have minimum power supply voltage) even if it does not go into protection mode.
IM	Corresponds to VM but refers to current. The voltage control can be disabled and only have current control. If this limit is exceeded, the driver goes into software protection mode.
TA	Maximum intervention delay on 2*Imax , setting a time expressed in mS. This parameter is used to check the starting peak, after which the software protection is triggered.
FV	Speed calibration. It is a pure reference number of the motor speed. E.g. the weighing-ricing machine speed is set to 100 and the speed obtained by modulating this value is adjusted.
FC	Torque factor.

Parameters	
	In Galaxi models , this value is generally 0 since the feedback is implemented by the encoders.
FR	Braking %.
	Not used in Galaxi .
TS	Rising ramp.
	In Galaxi models , it is the time taken by the motor to reach maximum speed while keeping the ramp fixed. E.g.: if setting 300mS to reach 100% speed, it takes 150 mS to reach 50% only.
TD	Falling ramp.
	Only Galaxi. As above, but the considerations apply in stopping.
CC	Change configuration
SU	Start Upgrade
SX	Start data monitoring: vRef, vIn, vMotor, ampereXdiv*iMotor, ampereXdiv*iMotorMax, Downt, Upt. REMEMBER TO STOP THE MONITORING AT THE END OF MAINTENANCE.
EX	Motor operation data monitoring sending end.
LN	Linearisation: It linearises the motor behaviour when used with motorised sideboards with values between 0 and 1 .

Table 1-1

1.8.5.4 Standard parameterisation

The following table shows all the parameter configurations of the motor drivers of the automatic machines

Name Parameter	Command	GALAXI LT	GALAXI HS
Configuration	CC	PHS	PHS
Maximum voltage to motor (V)	VM	45.4	45.4
Minimum voltage to motor (V)	Vm	0	0
Maximum current to motor (A)	IM	11	11
Max intervention delay on (2*IMAX)	TA	500	500
Speed factor	FV	0.41	0.43
Torque factor	FC	0	0
Soft Start Time	TS		
Rising time	TS	150	150
Descent time	TD	150	150
Braking %	FR		
Kp	KP	7	7
Ki	KI	17	17
Kd	KD	6	6
LIN Filter	LN	OFF	OFF

Figure 1-46 - Parameters table for type of machine

1.8.5.5 Editing parameters

Type in the name of the command (see list of commands table) in capital letters (except for the **Vm** parameter), followed, even without a space, by the new value using, if necessary, as separator, the comma of the numeric keypad or keyboard (not the dot).

1.9 MONITORING NETWORK TRAFFIC

1.9.1 Hub connection

A hub is required to monitor network traffic.

The hubs, or repeaters, are devices that connect users to each other.

Each data pack coming from a computer is received by the hub on a port and transmitted to all the others and this is why this type of device is used rather than a switch (which discriminates and conveys the data packs from those transmitting them to recipients).

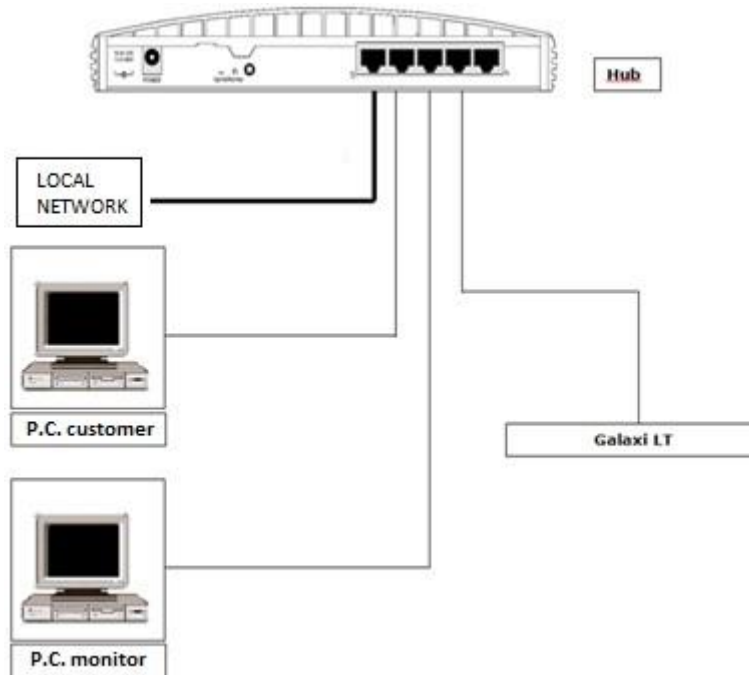


Figure 1-47 - Connection diagram

Hub connection for monitoring network traffic between client PC and weighing-pricing machine is carried out as follows:

1. use only even-even network cables.
2. press the button indicated with the number 1 in uplink position.
3. connect the network cable originally at the client PC's input, in the port 5 of the hub.
4. connect the network cables coming from the client PC, from the PC monitor and from the weighing-pricing machine in the remaining ports; the order is irrelevant.

A PC other than the one on which the client application runs is also needed since the pack analysis program that is used, and which is described later, would be unable to perform its recording activity if the client PC crashes.

Via a network connection to the machine it is possible to:

- make a backup of the entire machine archives folder through the PlanetZipper program
- manage on PC the weight control reports of the packing list and the weighing return files and the files containing the list of closed ctrl lots via PrintReport
- Check the packs transiting on the network via Wireshark

2. USE

2.1 DESCRIPTION OF COMMANDS

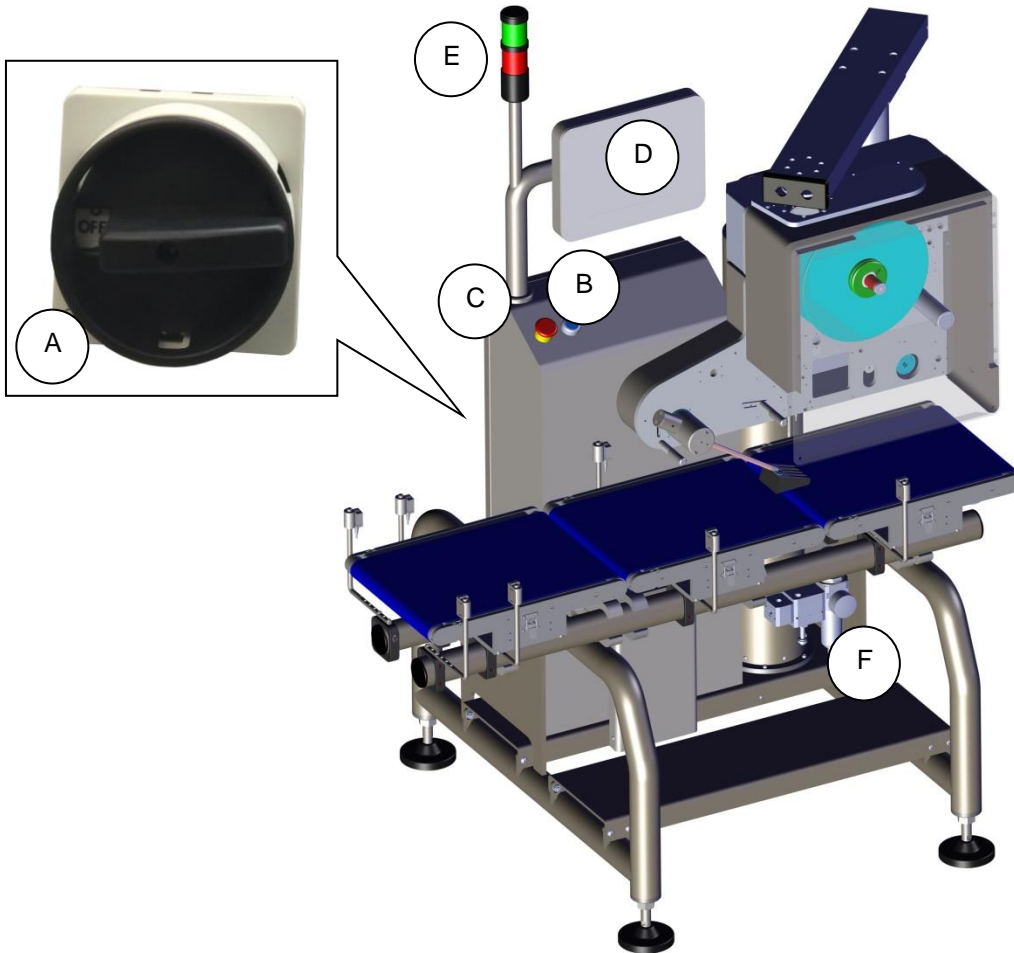


Figure 2-1 – 3 belt GALAXI LT

- A. **Main switch:** it gives and cuts off voltage to the panel (I=ON, 0=OFF). Padlock the switch during cleaning or maintenance and keep the key with you to prevent someone from inadvertently starting the machine.
- B. **Reset button:** it restores the machine following a stop
- C. **Emergency button:** it stops the machine in case of emergency
- D. **Operator panel:** (See paragraphs below)
- E. Luminous/acoustic stack light:

See electrical manual for its function.

The first time the blue reset button is pressed, once the machine has been started (home screen shown on display), the turret lights switch on for a few seconds in order to check that they are working properly.

When the machine is stopped, the lights must be off.

When the machine is running (i.e. after a recipe has been started by pressing the START button on the main screen, the "CONVEYOR BELT" mode has been started from the main screen or from the network) the GREEN light is on.

In case of an error and/or malfunction that stops the machine the RED light is on, except when the emergency button is pressed, cutting off power supply and the red light only turns on if the operator releases the emergency button and pressed the reset button before confirming the error window, or performing the emergency recovery procedure in slightly different order.

- F. **Air unit (optional):** equipped with a padlockable supply, adjustment and filter block, it handles the input air.

2.2 OPERATION

The product entering the belt is weighed and the weight is indicated by the stack light. If the machine is equipped with ejection unit, it automatically rejects the non-compliant product into the collection tank; otherwise, the operator manages the rejects.



Beware!

Check that the electric panel is closed during operation, and the key must be kept by the qualified maintenance technician according to the standard

2.3 TERMINAL

2.3.1 Conventions

In the remainder of this manual, only the path to be followed will be indicated, without reference to the keys to be pressed; for example, to change the commodity code during processing, the following will be indicated:

“Home \ START \ DATA MODIFICATION \ [+] CODES \ PRODUCT”

Press the keys on the display to access the submenus of the relevant sections.

Press the top-left “**BACK**” key to go back to the previous menu. Press the top-right “**HOME**” key to go back to the home page.

Each individual data entry window is customised with buttons contextual to their function (e.g. “**OK**” if confirmation is the only possible option, or “**ENTER**” and “**CANCEL**” if the temporary changes are to be cancelled).

When referring to the selection of a menu, it refers to the possibility of moving using the arrows and subsequent confirmation.

2.3.2 Browsing

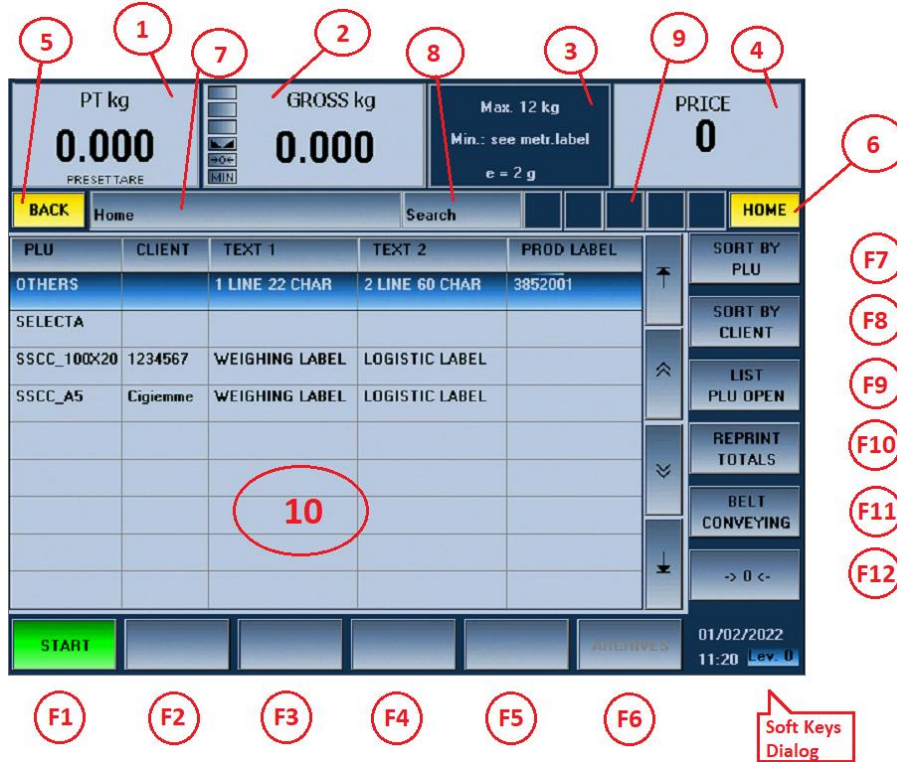


Figure 2-2 - Operator panel browsing areas

From **F1** to **F12**: Terminal keys contextual to the current page displayed. They are used to browse the menus and access the terminal functions.

- 1: Metrological area for displaying the TARE value. Common to all pages.
- 2: Metrological area for displaying the GROSS / NET weight, stability flag, minimum weight, centre-zero and preset weight.
In the case of "ON REQUEST" weighing (see parameter "MAN. LABEL PRINTING" in the "MISCELLANEOUS SETTINGS" menu), pressing this area of the screen starts manual weighing. Common to all pages.
- 3: Metrological area for displaying the characteristics relating to the capacity, minimum weight, division and class of use of the terminal. Common to all pages.

- 4: Metrological area for displaying the current unit price. The value is considered solely during the processing phase.
Common to all pages.
- 5: **BACK** key. It is used to go back through the navigation levels up to the HOME screen.
Common to all pages.
- 6: **HOME** key. It is used to go back directly to the home page from any menu.
Common to all pages.
- 7: Current path display area. It shows the path of the page currently displayed with respect to the Home page.
Common to all pages.
- 8: Record search display area. When pressed, it displays a virtual keypad to search for a record relating to the log displayed on the current page.
Common to all pages.
- 9: Icon display areas. For displaying active functions (such as the remote connection icon) or connected devices (such as the I/O expansion board).
Common to all pages.
- 10: Current screen. Contextual to the current path. The default one is the HOME screen.

2.3.3 Soft Keys Dialog

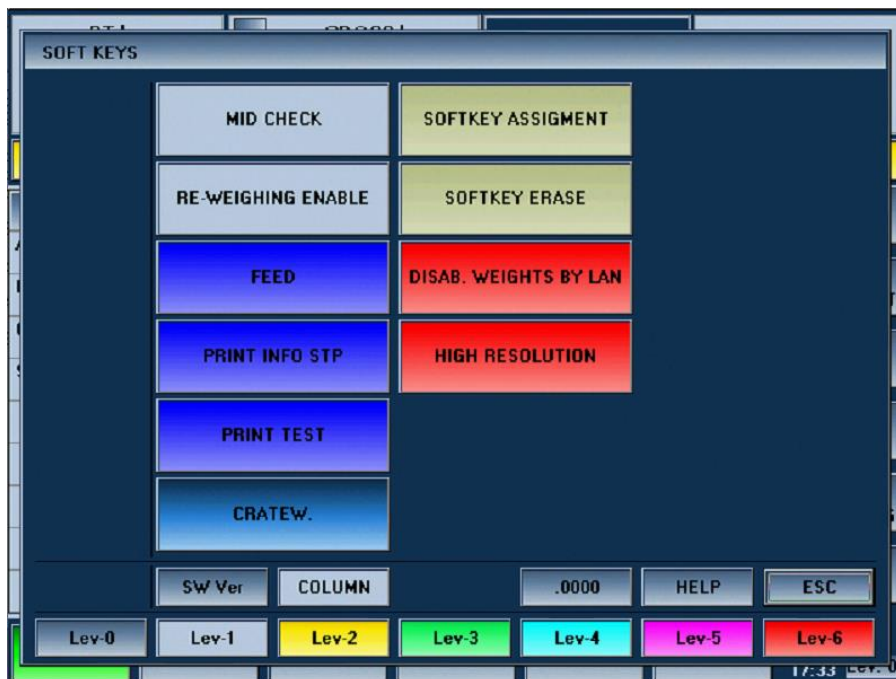
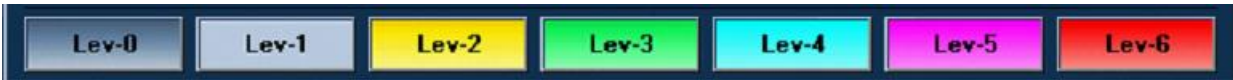


Figure 2-3 - Soft Keys Dialog

This dialogue box is used to access a series of quick functions. The list of available functions varies according to the current menu when the dialogue box is retrieved.

2.3.4 Operating levels

To modify the current operating level, access the **Dialog Soft Key** and select the desired access level by pressing the relative button.



For **Galaxi** weighing-pricing machines, there are 6 operator levels, which are described below:

LEVEL 0 (TRANSPARENT)	Level at which the operator can merely access the process and use any macros that may have been set. "Data editing" allows preselections and totals to be modified.
LEVEL 1 (WHITE)	"Data editing" allows codes, preselections and totals to be modified.
LEVEL 2 (YELLOW)	Level where PLU archives, texts and traceability data can be entered. "Data editing" allows level 1 data to be modified as well as weights, ranges, currencies, dates, article texts, consecutives numbers.
LEVEL 3 (GREEN)	Allows all functions in the previous level plus DATE/TIME editing of the terminal. "Data editing" allows the previous level data to be modified as well as Indicods and packing lists.
LEVEL 4 (LIGHT BLUE)	Level at which all the archives can be entered (PLU, lab, texts, barcodes, images, traceability, barcode reading, weight control, weight bounding, macros).
LEVEL 5 (PINK)	Level at which various and network configurations within the operator's grasp can be set-up and at which maintenance operations can be carried out.
LEVEL 6 (RED)	Access level reserved for authorised technicians.

To access a higher level than the current one, it is always necessary to enter the password. The password is not requested to access a lower level.

2.3.5 Modifying a password

Passwords can only be entered at 5th level, the default access password of which is "555555".

To change one or more passwords, you must access level 5.

Follow the pathway below to go to level 5:

"Home \ ARCHIVES \ SETUPS \ PASSWORD SETTINGS"

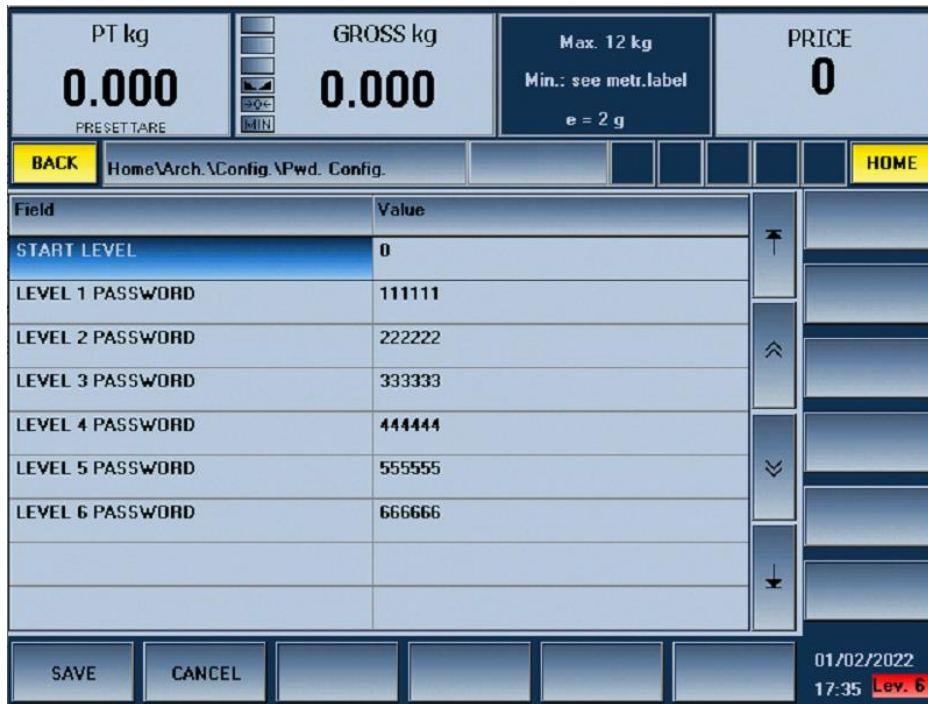


Figure 2-4

Table 2-1

STARTING LEVEL	0
LEVEL 1 PASSWORD	111111
LEVEL 2 PASSWORD	222222
LEVEL 3 PASSWORD	333333
LEVEL 4 PASSWORD	444444
LEVEL 5 PASSWORD	555555
LEVEL 6 PASSWORD	Reserved for authorised personnel. It is modified during installation.

Select the level of which the password must be changed.

Type the new password and press “ENTER”.

Press “SAVE (F1)” to store the changes.

2.3.6 Modifying access level when turning on the machine

When powered, the machine presents level 0, which is the lowest level.

Access level 5 to modify the access level.

Follow the pathway below to go to level 5:

“Home \ ARCHIVES \ SETUPS \ PASSWORD SETTINGS”

Select line:

STARTING LEVEL	0
-----------------------	---

Press the line again to edit its value.

Type the new level (from 1 to 5) and press “**ENTER**”.

Press **SAVE**.

The machine will start from the selected level when turned on the next time.

2.3.7 Shortcuts

Shortcuts can be accessed via the **Soft Keys Dialog**, which can be retrieved from any terminal screen.

Note: the following list contains all the quick functions available on the terminal. Some may not be visible due to insufficiently high access levels, current screen not congruent with the required function or if the function is not supported by the terminal model in use.

KEY	FUNCTION	MACHINE STATUS	CONFIGURATION
GO TO SCALE 1/2	Selected scale change	Home	DUPLEX machine (connected to 2 scales)
AUTOMATIC/MANUAL MODE	Activates/Deactivates the manual mode.	Process	Automatic lines only.
LABELLING ONLY	LABELLING ONLY mode	Process	FIXED WEIGHT PLU manual mode.
DISPLAY PACKING LIST	Displays list of weights for the Packing List.	Home	Packing List option enabled.
PACKING LIST / CTRL	Activates/Deactivates the Packing List and Ctrl.	Process	Packing List or CTRL options enabled.
START/STOP MACRO RECORDING	Start/End of Macro programming.	Modify PLU / Modify Process	
ENABLE/DISABLE WEIGHING VIA NETWORK	Enable/disable the sending of weighing operations via network	Process	
MACRO ALLOCATION	Associates a Macro with a free key	Modify PLU / Modify Process	
DELETE MACRO	Deletes a Macro from a key.	Modify PLU / Modify Process	
SOFT-KEY ALLOCATION	Allocates a SoftKey	Home	
SOFT-KEY CANCELLATION	Cancels a SoftKey	Home	
PTR INFO PRINTOUT	Label printout with printer information.	Home	
CONN. TO HOST	Enable/Disable the “Connection to Host” network parameter.	All items	
PRINT TEST	Thermal head condition test printout.	Home	
PAPER ALIGNMENT	It aligns paper in the selected printer.	Home	
BASIC / ADVANCED GUI	Switches from simplified to full data view (and vice-versa).	Home	Selecta terminals only
ENABLE / DISABLE RE-WEIGHING	Enables / Disables re-weighing mode	Process	

KEY	FUNCTION	MACHINE STATUS	CONFIGURATION
SCANNER READ. DEL.	Forced cancellation of the event scanner reading in memory.		
SEND READ. IN MEM	Forced sending via network of the event scanner reading in memory.		
SINGLE PRODUCT / CRATEWEIGHER	SINGLE PRODUCT / CRATEWEIGHER mode change	Home	
SELEC. WITH SCANNER/KEYBOARD	Keyboard / scanner input change.	Home	Scanner serial port configured.
ADDITIONAL/ALTERNATIVE HEADS MODE	ADDITIONAL HEAD/ALTERNATIVE HEAD mode change	Home	Mercury Plus Double Head.
GO TO HEAD 1/2	Printout group change active	Home and Process	Mercury Plus Double Head Alternative head mode.
SW Ver.	Firmware version display.	All items	
OFFSET	Modify property: - Contrast - Head temperature - Weighing Target - Labelling Target	Process	
LEGAL UPDATED	MID logger update	Home	MID active.
REPRINT PROD	Reprint the last product label.	Process	
REPRINT TOT 1	Reprint the last total 1 label.	Process	
REPRINT TOT 2	Reprint the last total 2 label.	Process	
HIGH RESOLUT.	Shows the weight in high resolution for 5 seconds.	Home	
MID CHECK	Starts the process window for the MID tests.	Home	Authorised personnel only.
REMOTE MANAGEMENT / PLU OPERATION	Switches from PLU Operation mode to Remote Management mode (and vice-versa).	Home	
CSV ON FTP	Forced sending of *.csv files on the disk to the FTP server.	Process	"SAVE REPORT ON FTP" option active.
QUIET ALARM	Resets the alarms of the auxiliary lamps	Process	"AUXILIARY LAMP MGMT." option active.
REJECT MODE	Enables/Disables the reject mode, where all the weighed pieces	Process	

KEY	FUNCTION	MACHINE STATUS	CONFIGURATION
	are rejected regardless.		
REJECTS DETAILS	Displays a window with the details and reasons for rejecting the pieces during processing	Process	Selecta terminals only.
RS232 – RS422	Changes communication protocol on the selected printer.	Printer Conf.Window	Italora EL7 printers only.
DIS.MEMO IN FLASH	Disables data storage on FLASH, speeding up printing operations.	Printer Conf.Window	Italora EL7 printers only.

2.3.8 OFFSET key

The “**OFFSET**” key can be accessed through the **Soft Keys Dialog** in process. The adjustments that can be made using this shortcut involve:

CONTRAST

HEAD TEMPERATURE

WEIGHING TARGET

LABELLING TARGET



Figure 2-5

2.3.9 Menu list

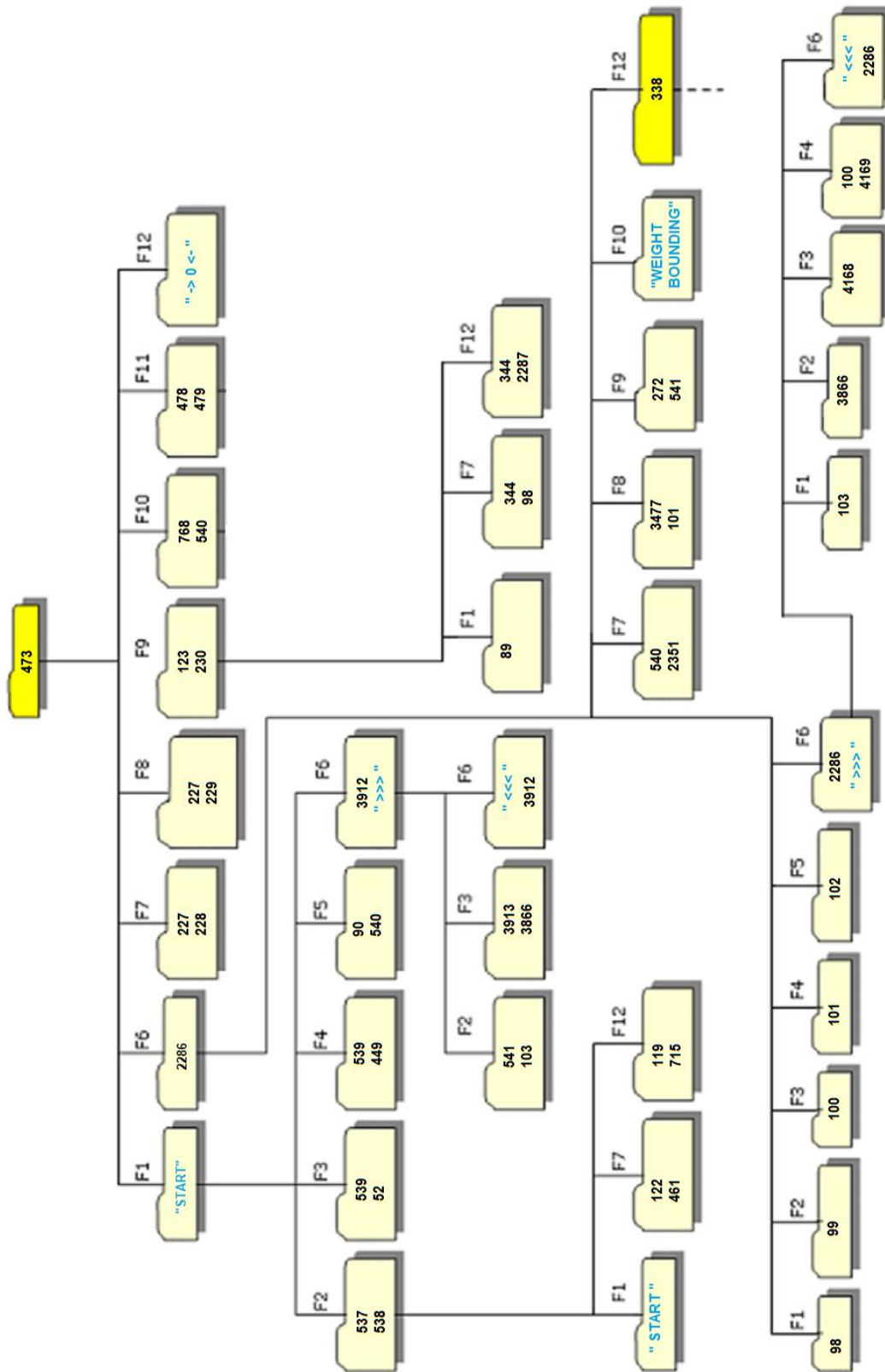


Figure 2-6

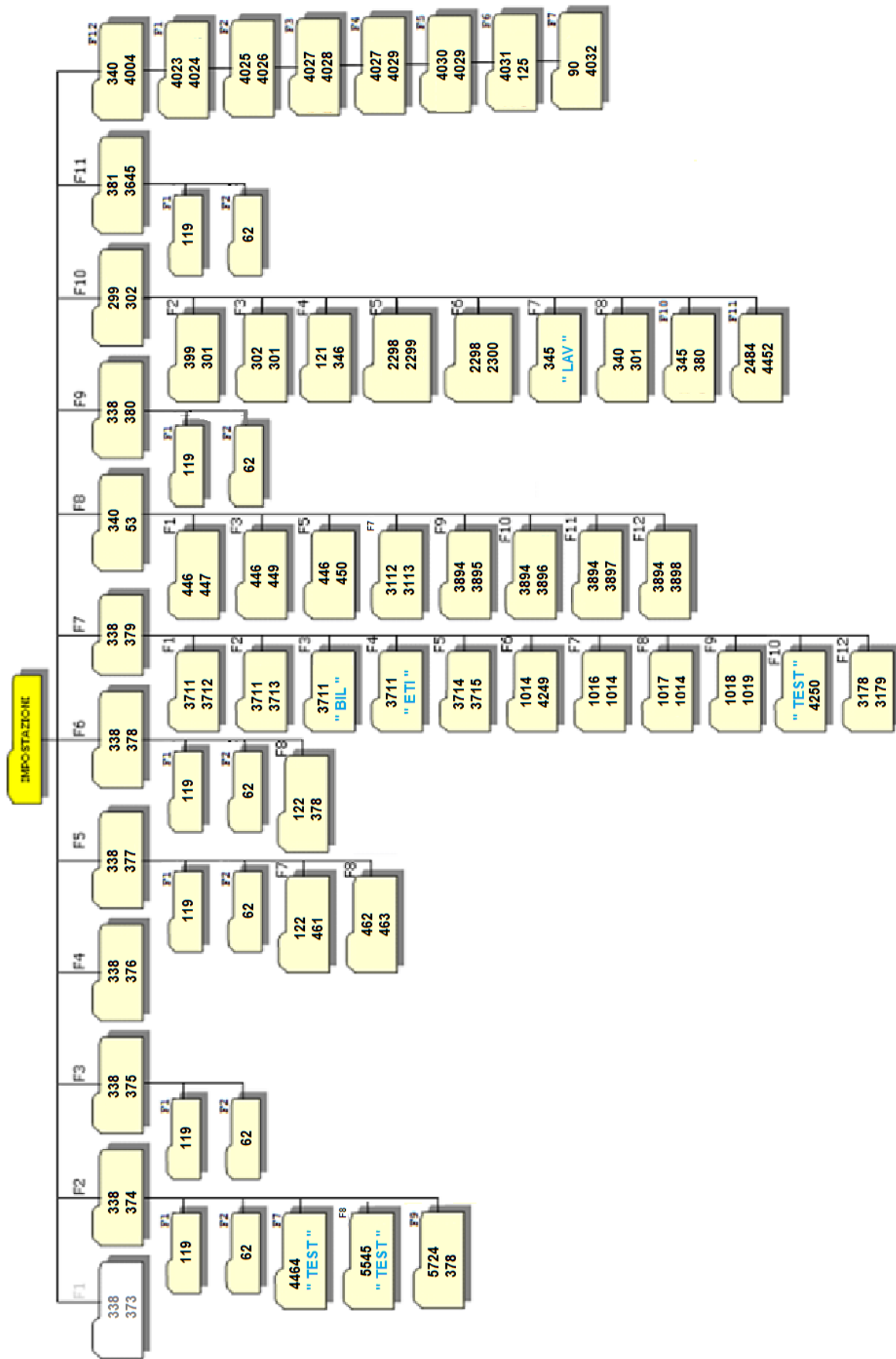


Figure 2-8

2.3.10 Menus accessible at 5th level

The menus accessed at level 5 are for the machine administrator and allow the software of the terminal to be customised and serviced.

The network parameters can also be edited at this level.

Following the path

“Home \ ARCHIVES \ SETTINGS”

displays the following screen:

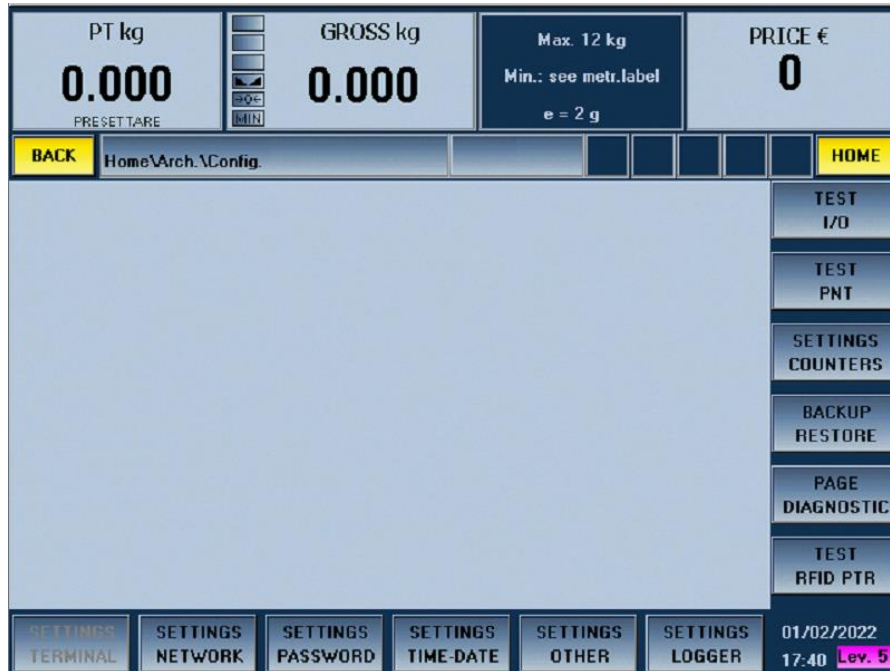


Figure 2-9

2.3.10.1 Network settings

From the screen described in section 7.3.10, by pressing the “NETWORK SETT.” key,

you can access the page with the settings for connecting to the company network or your personal computer in order to exchange data.

The parameters that can be modified are described in table 7-2:

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
NETWORK IP ADDRESS	0.0.0.0	MAX 16 CHARACTERS	
SUBNET MASK	255.255.0.0	MAX 16 CHARACTERS	
GATEWAY	1.1.1.1	MAX 16 CHARACTERS	
NETWORK IP ADDRESS 2	169.169.169.1	MAX 16 CHARACTERS	
SUBNET MASK 2	255.255.255.0	MAX 16 CHARACTERS	
DATA DOWNLOAD IP	0.0.0.0	MAX 16 CHARACTERS	
CGM SERVICE PORT	5001	FROM 0 TO 65536	
REMOTE HOST SERVICE PORT	0	FROM 0 TO 65536	Port to which an UDP message of the BROADCAST type can be transmitted on the network when the machine is powered
CONNECTION TO HOST	NO	YES, NO	If entered, requires a network connection with weighing acquisition request so as to enable the machine to work.
CHANGE CONN.HOST (ALT+J)	NO	YES, NO	Allows changing the status of the “CONNECTION TO HOST” parameter by using the shortcut “CONN TO HOST”.
OLD CGM PORT	NOT CONNECTED	List: <ul style="list-style-type: none"> • NOT CONNECTED • From COM 1 to COM 8 • NETWORK 	Obsolete.

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
PROGR.DECR.WITH REVERSAL	NO	YES, NO	If set to "YES" in the reverse weighing operations, the progressive fields are returned already decremented.
SEND WEIGHTS TO	LABELLED	List: • LABELLED • WEIGHED	Discriminates whether the BOX and PALLET weighing operations are sent to LABELLED or WEIGHED.
SEND PROD.WEIGHTS TO	LABELLED	List: • LABELLED • WEIGHED	Discriminates whether the PRODUCT weighing operations are sent to LABELLED or WEIGHED.
TOTALISE ON PRINT_REMOTE_LABEL	NO	YES, NO	Parameter that inhibits the automatic printing of the piece label, sending it to an external software that will have to use a PRINT_REMOTE_LABEL command
SEND REJECT OFF RANGE	YES	YES, NO	Sends to host the rejected weighing for out of range.
SEND OTHER REJECTS	NO	YES, NO	Sends to host all rejected weighing, except those for out of range.
SEND APPLICATION ERROR	NO	YES, NO	Sends product weighing even if an application error is detected.
BLOCK TX BEGIN PROC	NO	YES, NO	Blocks sending the "BEGIN_PROC" event to host.
BLOCK TX END PROC	NO	YES, NO	Blocks sending the "END_PROC" event to host.
BLOCK TX HOME_WIN	NO	YES, NO	Blocks sending the "HOME_WIN" event to host.
BLOCKS TX CTRL CLOS.	NO	YES, NO	Blocks sending the "CTRL CLOS." event to host.
BLOCK TX END EVENT_SCAN	NO	YES, NO	Blocks sending the "EVENT_SCAN" event to host.

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
NO. WEIGHING OPERATIONS IN QUEUE	5	From 0 to 99	Determines the number of weighing operations without answer from host that can be kept in memory. Beyond this limit, the terminal displays an error.
IP ADDR. MAIL SERVER	0.0.0.0	MAX 16 CHARACTERS	Parameters for accessing the customer's company mail server. The terminal can send an email to a recipient to be specified in case of an error on the screen, attaching the error message description and other useful information for analysing the problem.
SENDER EMAIL ADDRESS	coopbil@coopbilancai.it	MAX 40 CHARACTERS	
RECIPIENT EMAIL ADDRESS	coopbil@coopbilancai.it	MAX 40 CHARACTERS	
USER AUTHENTICATION	user	MAX 40 CHARACTERS	
PASSWORD AUTHENTICATION	password	MAX 40 CHARACTERS	
ENABLE SENDING LOGGER MAIL	NO	YES, NO	
SEND MAIL SERVICE	NO	YES, NO	
SCHED.ASSISTANCE HOURS	3000	From 160 to 30000	Number of PROCESSING HOURS after which the terminal automatically sends an email to the service for scheduled line assistance
PPP IP LOCAL ADDR	90.0.0.1	MAX 16 CHARACTERS	Obsolete
PPP IP REMOTE ADDR	90.0.0.2	MAX 16 CHARACTERS	
MODEM COM PORT	NOT CONNECTED	List: <ul style="list-style-type: none"> • NOT CONNECTED • From COM 1 to COM 8 NETWORK	
MODEM BAUD RATE	4800	List: <ul style="list-style-type: none"> • 4800 • 9600 • 19200 • 33600 • 56000 • 115200 	

Table 7-2

2.3.10.2 Notes on Network settings

A series of functions bound to the transmission of weights via the network will have built up over time and are described below individually:

Definitions:

- A box is said to be weighed when the last piece that forms it is labelled.
- A box is said to be labelled when its label is applied to the box itself
- A pallet is said to be weighed when the last box that forms it is labelled.
- A pallet is said to be labelled when its label is applied to the pallet itself
- When there are queues of boxes and/or pallets, the weighed and labelled events may even be very distant from each other. Thus, the weighing-pricing line may produce other pieces and other weighed boxes during the time it takes for a weighed box to reach the labelling area.
- The setting given to the option depends on the way in which the software of the software house that created the network connection with the weighing-pricing line has been implemented.

These parameters are to be found in the network menu and are:

SEND WEIGHTS TO: (Weighed / Labelled)

This option allows the user to choose whether the weight of the box or pallet must be transmitted to the weighed or labelled condition.

SEND PROD.WEIGHTS TO: (Weighed / Labelled)

This option allows the user to choose whether the weight of the piece must be transmitted to the weighed or labelled condition.

Beware!



We recommend leaving the default value (“LABELLED”), especially in the presence of host software capable of receiving the product weights. As a result of a machine stop with a piece transiting between the scale plate and the labelling target, any external database would contain a stored weighing operation but no paired labelled piece, with risks of mismatches in the counts/statistics.

TOTALISE ON PRINT_REMOTE_LABEL: (YES / NO)

This parameter is reserved for Bilanciai technicians. Do not modify the default value, otherwise the correct operation of the terminal would be compromised.

SEND REJECT OFF RANGE: (YES / NO)

This parameter allows the rejected weight transmission to be enabled so long as the type of reject **is the OFF RANGE one**. In short, a piece can be rejected for various different reasons, amongst which Off Range, i.e. weight not valid because it is minimum or more than the capacity or if a store has been associated with the wrong piece.

In this case, only pieces rejected as they are off range are transmitted via the network.

This option is particularly used in connections with the CTRL software which displays the representation of a Gaussian curve showing the pieces within range and those that are off range. Moreover, the terminal uses these data to create a series of statistics that can be used by the operator to calibrate the packaging machines or those prior to the weighing line.

The weighing-pricing machine sets field L133 = true to inform the host that the piece has been rejected (for more details see the “Network communication protocol”).

SEND OTHER REJECTS: (YES / NO)

This parameter allows the rejected weight transmission to be enabled so long as the type of reject **is different from OFF RANGE one**. As described in the previous point, there are various reasons for which a piece may be rejected. Only pieces rejected for being off range are transmitted via the network with option in point two. With this option, all the rejected pieces are transmitted so long as they are not off range. If YES is entered for both the options, all the rejected products are transmitted via the network.

The weighing-pricing machine sets field L133 = true to inform the host that the piece has been rejected (for more details see the "Network communication protocol").

SEND APPLICATION ERROR: (YES / NO)

This option must be enabled in particular cases in which a scanner is connected to the product printer that reads all the labels leaving the printer itself.

The weighing-pricing line only considers a piece is valid the moment in which its label is applied. A particular situation could occur whereby the piece is not a reject because its weight is valid and within range, its label has been produced but the applicator fails to apply it owing to a fault, or the line sets to the error status. In this case, the piece is not valid and is not a reject, thus it is not transmitted. However, if a scanner is installed on the printer, the produced label that has not been applied will have been read and sent to the Host. In this case, there is a discrepancy between the data transmitted by the scanner (the label has been read and sent) and the weights received by the line (as the piece has not been labelled, it will not have been sent). This problem is overcome by enabling the "SEND APPLICATION ERROR" option. If the label has been produced but not applied, the line transmits a rejected weight via the network, with a fictitious weight (-1 kg) which is used by the host to correct the data received from the scanner

BLOCK TX BEGIN_PROC: (YES / NO)

If there is a host program enabled to receive events from the terminal, this allows you to inhibit the sending of the specific event "**BEGIN_PROC**" (for more details see the network "Communication Protocol").

BLOCK TX END_PROC: (YES / NO)

If there is a host program enabled to receive events from the terminal, this allows you to inhibit the sending of the specific event "**END_PROC**" (for more details see the network "Communication Protocol").

BLOCK TX HOME_WIN: (YES / NO)

If there is a host program enabled to receive events from the terminal, this allows you to inhibit the sending of the specific event "**HOME_WIN**" (for more details see the network "Communication Protocol").

BLOCKS TX CTRL CLOS.: (YES / NO)

If there is a host program enabled to receive events from the terminal, this allows you to inhibit the sending of the specific event "**CTRL_CLOSURE**" (for more details see the network "Communication Protocol").

BLOCK TX EVENT_SCAN: (YES / NO)

If there is a host program enabled to receive events from the terminal, this allows to inhibit the sending of the events triggered by the "**EVENT_SCANNER**" readings (for more details see the network "Communication Protocol").

NO. WEIGHING OPERATIONS IN QUEUE: (from 0 to 99)

If there is a host program enabled to receive the weights from the terminal, it identifies the number of unanswered weighing operations in the memory before indicating an error on the screen (for more details see the network "Communication Protocol").

2.3.10.3 Password Setting

See chapter 2.5 in this manual.

2.3.10.4 Date and Time Setting

The date and time of the system can be set in this menu.

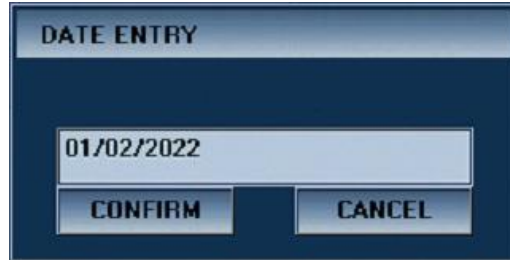


Figure 2-10



Figure 2-11

The **DATE** and **TIME** input formats must be as indicated in the screenshots.

2.3.10.5 Miscellaneous Settings

This menu contains a number of general terminal settings. All the parameters managed within this window are listed in table 7-3.

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
LIST OF CURRENCY SYMBOLS	CECIP SYMBOLS	List: <ul style="list-style-type: none"> • ISO 4217 SYMBOLS • CECIP SYMBOLS 	
PLU TOTAL LABEL	-1	Label archive links	A PLU total label must be selected if the printout is required when open PLUs are closed. A pallet printer must also have been entered.

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
TOTAL LABELS	-1	If the relative totals are enabled, each total can be linked to the relative label: GENERAL TOT. PARTIAL TOT CLIENT TOT. PRODUCT TOT. BATCH TOT. LOT TOT. TRACE. TOT. GOODS CODE TOT. LOT-PROD. TOT. LOT-PLU TOT. TRACE.-PROD. TOT. TRACE.-PLU TOT. CLIENT-PROD.TOT. PLU-CLIENT ARCH.TOT.	A total will not be visible at this level if it has not been enabled.
AUTOMATIC PRINT LIMIT	0.1000	From 0 to 99999.999	This parameter is only interpreted if automatic label printing has been enabled. The weight limit is given in kg. Once this weight limit has been passed (either above or below), it enables the piece after the one being processed to be weighed and labelled
AUTOMATIC PRINT LIMIT 2	0.1000	From 0 to 99999.999	Like "AUTOMATIC PRINT LIMIT" but for scale 2 (in case of duplex terminal).
MAN.LABEL PRINTOUT	AUTOMATIC	List: <ul style="list-style-type: none"> • AUTOMATIC • ON REQUEST 	If AUTOMATIC is selected, the label can be printed once the stable weight has been obtained. If ON REQUEST is selected, press the display area with the current weight to print the label.
MAN.LABEL PRINTOUT	AUTOMATIC	List: <ul style="list-style-type: none"> • AUTOMATIC • ON REQUEST 	Like "MAN.LABEL PRINTOUT" but for scale 2 (in case of duplex terminal).
TOT 1 PACKING FILE		The selectable "*.pak" files can be setup.	
TOT 2 PACKING FILE		The selectable "*.pak" files can be setup.	
NO. PACKING COPIES	1	From 1 to 100.	Select how many copies are to be printed of the same report.
ENAB. TIME SLOT LOT	NO	YES, NO.	Enables the special operation for which at EACH PROCESS START, the terminal automatically writes a code in the lot field made up of DD GIULIANO, a slash "/" and a letter corresponding to one of the 4 settable time slots.

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
START SLOT "A"	00:00	MAX 5 CHARACTERS	Sets the slot start time for lot "A".
END SLOT "A"	00:00	MAX 5 CHARACTERS	Sets the slot end time for lot "A".
START SLOT "B"	00:00	MAX 5 CHARACTERS	Sets the slot start time for lot "B".
END SLOT "B"	00:00	MAX 5 CHARACTERS	Sets the slot end time for lot "B".
START SLOT "C"	00:00	MAX 5 CHARACTERS	Sets the slot start time for lot "C".
END SLOT "C"	00:00	MAX 5 CHARACTERS	Sets the slot end time for lot "C".
START SLOT "D"	00:00	MAX 5 CHARACTERS	Sets the slot start time for lot "D".
END SLOT "D"	00:00	MAX 5 CHARACTERS	Sets the slot end time for lot "D".
LINE NUMBER	0	From 0 to 999.	Determines a line ID within a department. To be printed on the reports to identify the line of pertinence.
S/N (Serial Number)		MAX 707 CHARACTERS	It must contain the terminal Serial Number.

Table 2-2

2.3.10.6 Logger Settings

This menu can only be displayed and cannot be edited at level 5. It is only used for diagnostic purposes by qualified personnel.

2.3.10.7 I/O Test

To make it easier to identify any faults, the terminals are equipped with a troubleshooting program able to monitor the buttons and sensors and activate each actuator device (solenoid valves, motors, etc.) by means of a manual control.



Beware!

The check-control function can only be accessed at level 5 by means of a password. This can only be done by personnel with a QUALIFICATION 3 professional profile.

This mask allows the user to check the status of the outputs, force the outputs, check the status of the dip-switches, enter the speed of the belts, command starting and stopping and check the readings made by a scanner connected to a serial port.

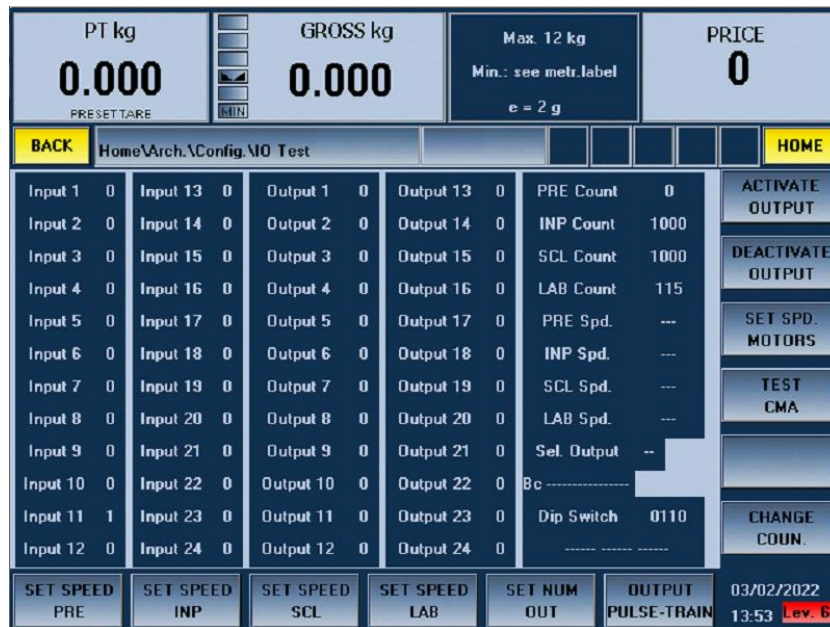


Figure 2-12



Beware!

The emergency device obviously remains activated even though the circuits are operated in manual mode. The presence of an alert operator, ready to act if required, is therefore of fundamental importance.

Only trained and explicitly authorised personnel may use the check-control function.

Manual activation of the control circuits does not include operating checks and synchronisms. The line must therefore be unloaded, the conveyors left vacant and all bystanders must leave the area.

Only activate one control at a time and once the inspections have been conducted, set it back to the hold condition (stopped, deactivated).

2.3.10.8 Input Table

See the installer manual for details on the terminal input signals.

2.3.10.9 Output Table

See the installer manual for details on the terminal output signals.

2.3.10.10 PTR Test

This page can be used to check that the dialogue with the printers connected to the terminal is correct.

For example, if only one printer is connected (without a sensor that detects labels) and PRODUCT PTR INFO is pressed, data similar to the following will be obtained under the column with the "PRODUCT PTR" heading.

However, if one or more of the components of the chain formed by the terminal's serial port output, the cable or the printer are faulty, after a time-out, error messages (ERR) will appear instead of the above mentioned values.

PT kg 0.000 PRESETTARE		GROSS kg 0.000		Max. 12 kg Min.: see metr.label e = 2 g		PRICE 0	
BACK		Home\Arch.\Config.\Pnt Conf.				HOME	
PRODUCT 1 PNT		BOX PNT		PALLET PNT			
HEAD Temp.: -----		HEAD Temp.: -----		HEAD Temp.: -----			
Contrast (%): -----		Contrast (%): -----		Contrast (%): -----			
LABEL Photo: -----		LABEL Photo: -----		LABEL Photo: -----		SET BAUD PNT PROD	
PICK Photo: -----		PICK Photo: -----		PICK Photo: -----		SET BAUD PNT PROD2	
FIRMWARE ver: -----		FIRMWARE ver: -----		FIRMWARE ver: -----		SET BAUD PNT TOT1	
Mem: -----		Mem: -----		Mem: -----		SET BAUD PNT TOT2	
SHC Version: -----		SHC Version: -----		SHC Version: -----			
LABEL Photo Lev. ---		LABEL Photo Lev. ---		LABEL Photo Lev. ---			
SILICONED Photo Lev. ---		SILICONED Photo Lev. ---		SILICONED Photo Lev. ---			
PNT INFO PRODUCT		PNT INFO TOTAL 1		PNT INFO TOTAL 2		03/02/2022 14:10 Lev. 6	

Figure 2-13

Using the "PTR INFO..." keys (PRODUCT, PRODUCT 2, TOTAL 1, TOTAL 2) it is possible to dialogue with the printers in order to check their correct operation and the sensor values, as well as the installed firmware versions.

Using the "SET BAUD..." keys (PRODUCT, PRODUCT 2, TOTAL 1, TOTAL 2) it is possible to program the baud rate to be used on the printer. The Italora printers use a manual mechanism that requires entering the current baud rate first and then the new baud rate to be used. The Datamax printers only require setting the baud rate to be used.

2.3.10.11 Machine diagnostics

Diagnostics is a tool for testing the machine's various peripherals.

The path Home\Arch.\Config.\Term gives access to menus and parameters that allow the programming of the metrological part of the terminal and to specific pages for the hardware test of the line and its peripherals.

Access to this route is restricted to level 6, i.e. only to specialised personnel such as installation technicians and/or authorised personnel.

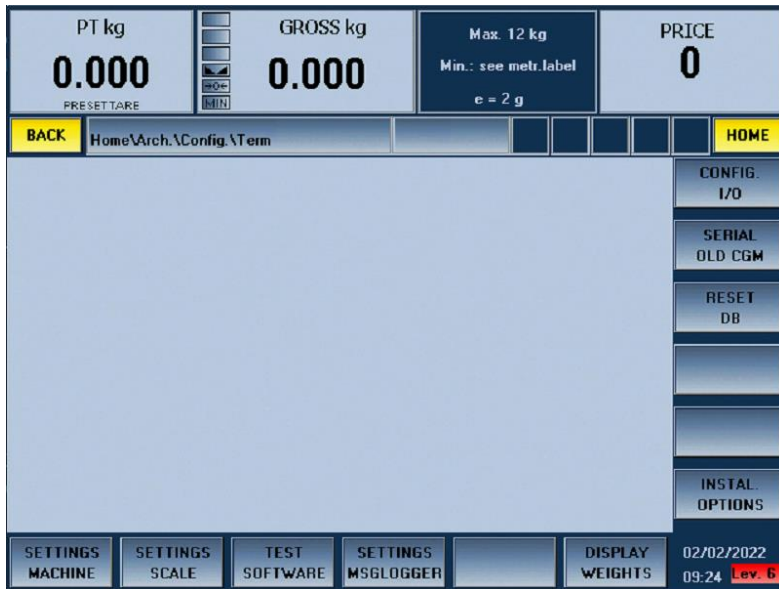


Figure 2-14

Pressing the "DIAGNOSTICS PAGE" button displays the diagnostics input page, which looks like Figure 2.

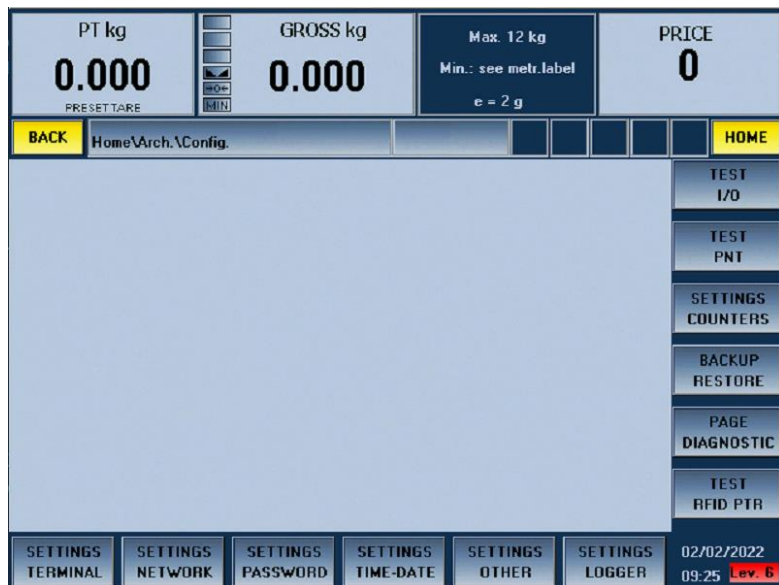


Figure 2-15

On this page you can select which section of the machine you wish to test. Pressing the various buttons will take you to the relevant sections.

INPUTS

The INPUTS section is used to check the status of the machine's inputs. The boxes are identified by the letter "I" (Input), followed by the number of the input. The status of the input can be checked through the colour of the box (GREY: not active; YELLOW: active).

Pressing the "INFO" button in the top right-hand corner of the screen will show the description of the function associated with the input in each box. Pressing 'INFO' again will return you to the numerical index display for each input. This feature is available on GALAXI HS only; on other machines, pressing the INFO button causes a window showing the input-feature association to be displayed.



Figure 2-16

OUTPUTS

In the OUTPUTS section it is possible to check the status of the outputs managed by the line. The buttons are divided into 4 pages, which can be selected from the "OUT" buttons. PG 1", "OUT. PG 2", "OUT. PG 3 and "OUT. PG 4" at the top of the screen.

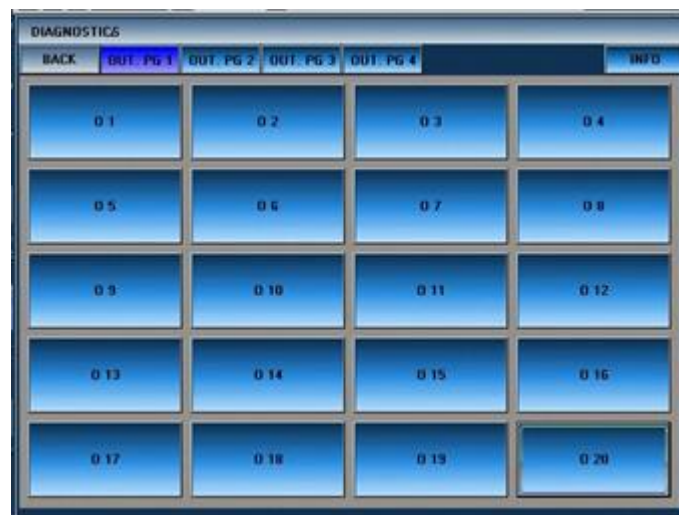


Figure 2-17

The colour of the button indicates the status of the output itself (GREY: not active; YELLOW: active). It is possible to force a status change of the output by pressing the button on the screen.

Pressing the "INFO" button in the top right-hand corner of the screen will cause the description of the function associated with the output to appear on each button. Pressing 'INFO' again will return you to the numerical index display for each output. This feature is available on GALAXI HS only; on other machines, pressing the INFO button causes a window showing the input-feature association to be displayed.

ANALOG PORTS

The analog section contains 6 controls that enable the activation and deactivation of the analog ports, as well as the possibility of manually adjusting the output voltage in percentage (0% = 0 Volt; 100% = 10 Volt).

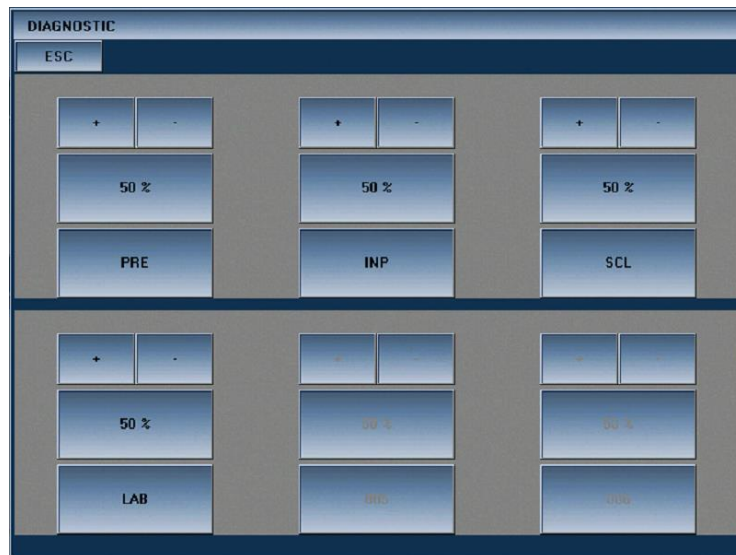


Figure 2-18

Depending on the machine being tested, the number of enabled controls will change as the number of conveyor belts varies. Pressing the button with the name of the belt enables the movement of that belt.

The '+' and '-' buttons allow fine adjustment of the percentage speed by respectively increasing or decreasing the speed by one percentage point. Speed control can also be carried out with the analog tab active.

By clicking on the percentage section you can directly enter the percentage you wish to apply.

SERIAL PORTS

The serial port test page is used to optionally connect RS232 and RS422 serial ports. Select the COM port and the baud rate of the port to be tested, then open it using the "OPEN" button.

It is possible to test both reception and transmission ports.

For reception, simply connect an external device (e.g. a scanner) and wait for a data string to be received from the device. In case of successful reception, the received string will be displayed on the screen instead of the default string '-----'.

If you want to test the output serial port, connect a device to the selected COM that is able to react to a string sent from the line (e.g. a printer). Select the "STRING TO SEND" box and type in the string you wish to send. Then press the "SEND STRING" button and check that the device connected on the serial line reacts compatibly to the command sent. For example, you could connect a printer and send the FEED command, then check that the printer issues a label.

In order to send specific commands, the following texts can also be entered into the string to be sent in order to indicate certain characters without graphic identification. The commands that the machine handles are:

- <STX>
- <SOH>
- <CR>
- <LF>

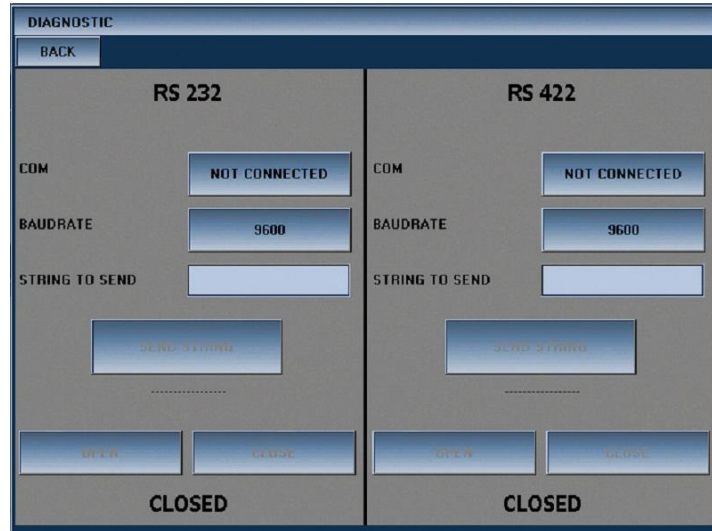


Figure 2-19

ENCODERS

On the ENCODERS page, you can check that the engine encoders are working properly. By running the belts whose encoders are connected, check for a decrease in the basic numerical value shown on the screen. If the counter value is decreased, it means that the encoders are correctly managed.

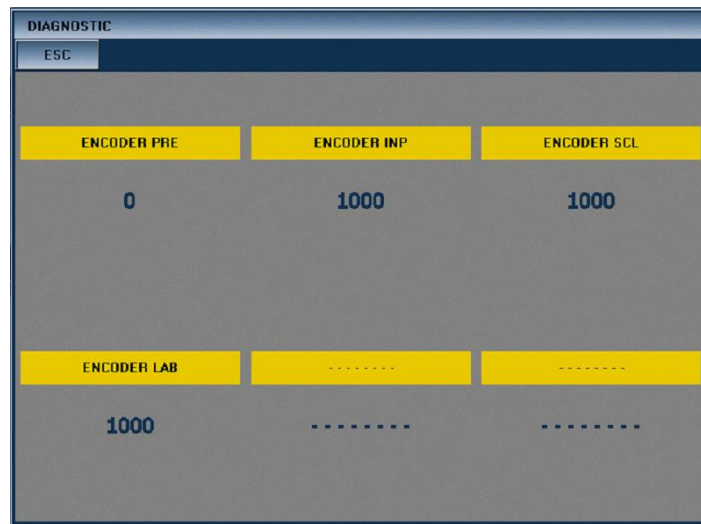


Figure 2-20

2.3.10.12 Counter setting

On this page you can read and set the parameters relating to the counters managed by the scale. The full list of available parameters is described in table 7-4:

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
MACHINE ON	0		Time the machine has been processing
PROD. PTR COUNT.	0		Number of labels whose print has been addressed to the PRODUCT PRINTER, regardless of the number of printers connected. This value increases even when the terminal is connected to one single printer that issues product, box and pallet labels.
TOT 1 PTR COUNT.	0		Like "PROD PTR COUNT" but valid for the TOTAL 1 printer (BOX).
TOT 2 PTR COUNT.	0		Like "PROD PTR COUNT" but valid for the TOTAL 2 printer (PALLET).
PROD LAB NO.	0	From 0 to 2147480000	Number of labels printed and classified as PRODUCT labels. Indicates progressive weighing and is never reset when the box or process is closed.
PROD LAB 2 NO.	0	From 0 to 2147480000	Like "PROD. LAB NO." To be used as an alternative counter for product labels.
PROD LAB 3 NO.	0	From 0 to 2147480000	Like "PROD. LAB NO." To be used as an alternative counter for product labels.
TOT 1 LAB NO.	0	From 0 to 2147480000	Like "PROD. LAB NO." but valid for TOTAL 1 labels (BOX)
TOT 1 LAB 2 NO.	0	From 0 to 2147480000	Like "NO. TOT 1 LAB". To be used as an alternative counter for box labels.
TOT 1 LAB 3 NO.	0	From 0 to 2147480000	Like "NO. TOT 1 LAB". To be used as an alternative counter for box labels.
TOT 2 LAB NO.	0	From 0 to 2147480000	Like " PROD LAB NO." but valid for TOTAL 2 labels (PALLET)
TOT 2 LAB 2 NO.	0	From 0 to 2147480000	Like "NO. TOT 2 LAB". To be used as an alternative counter for pallet labels.
TOT 2 LAB 3 NO.	0	From 0 to 2147480000	Like "NO. TOT 2 LAB". To be used as an alternative counter for pallet labels.
OVERALL LAB NO.	0	From 0 to 2147480000	Generic label counter that is increased by 1 whenever a label is printed, be it PRODUCT, TOTAL 1 or TOTAL 2.
PROC. LOG			Read only (for technical use).

FIELD NAME	DEFAULT	SETTABLE VALUES	NOTES
PIECE LOG			Read only (for technical use).
TOT 1 LOG			Read only (for technical use).
TOT 2 LOG			Read only (for technical use).
PROGR DAYS COUNTER	0	From 0 to 9999999999	Progressive number that can be set manually and via the network and that is automatically increased by 1 at midnight of each day.
CDF CHARACTERS	0	From 0 to 9	Number of digits with which to represent, via printing or network, the "PROGR DAYS COUNTER" (e.g. by setting 5, the PROGR DAYS COUNTER will go from 0 to 99999).

Table 2-3

2.3.10.13 Backup / Restore

This menu allows you to save archives, copy the configuration of a terminal to transfer it to another, reset the processes and counters and run some tests regarding the integrity/presence of the flash card and the remaining free memory.

All the operations described are to be carried out by highly qualified personnel.

The list of parameters managed in the Backup/Restore page is described in table 7-5

KEY NAME	DESCRIPTION
(F2) BACKUP FLASH	[OBSOLETE] Allows to backup the terminal data on an additional flash card. Operation not possible in case of flash card not present.
(F3) RESTORE FLASH	[OBSOLETE] Allows to restore the terminal data from an additional flash card. Operation not possible in case of flash card not present.
(F4) COPY CONFIG.	Allows to clone the configuration of an existing machine, while preserving the scale configuration (i.e. the metrological parameters) of the machine on which the copy is made.
(F5) LAST DOM BACKUP	[OBSOLETE] Allows to view the data saving history in a memory area of the DOM.
(F6) LAST FLASH BACKUP	[OBSOLETE] Allows to view the data saving history in an additional FLASH CARD.
(F7) RESET PROC	Resets all open processes. Operation to be performed only with the help of qualified technicians in case of blocking situations or damaged terminal database.
(F8) TEST FLASH	Check the correct operation of an additional flash card inserted in the terminal.
(F9) BACKUP ARCHIVES	[OBSOLETE] Restores all archives by recovering them from an additional flash card installed in the terminal. The button is disabled if the flash card is not present.
(F10) RESET COUNTERS	Resets all counters <i>Home \ Archives \ Sett. \ Counter Settings</i>) to their default values.
(F11) FREE SPACE	Displays the free space on DOM / COMPACT FLASH.

Table 2-4

2.4 OPERATOR DUTIES



During the normal operation of the machine, the operator must:

- Check the smooth operation of the machine,
- Load the product (in the non-automatic version)
- Change the printer spool
- Use the operator panel for the operations within his/her competence.
- Remove any rejects (if the ejector unit is present)

Perform the on, off, run and stop procedures.

2.5 INTERNATIONALISATION

2.5.1 Operation description

The machine is capable of proposing the **user interface and composing labels in the languages of all European countries**.

Each text element which can be handled inside the archives (for example fixed texts, written texts inside PLUs and processes, PLU and process codes, PLU and process names, traceability archive elements, ctrl lot, etc.) can be entered by selecting a language other than that set on the interface.

2.5.2 Entering texts in different languages

For this purpose, each time a text is to be entered, the relative window will show two additional buttons: one to **select the language** of the country of pertinence of the text in question (**LANGUAGE - PgDown**) and the other one to enter any symbols within the text that cannot be obtained directly from the keyboard (**SYMBOLS - PgUp**), taking them from a special drop-down box.

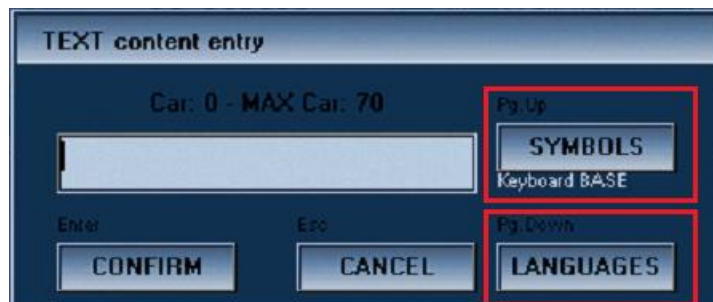


Figure 2-21

Depending on the terminal language and/or language to be used to enter a text, the virtual keyboard on the screen will show a set of characters and symbols relating to the codepage of the selected country.

The set of characters currently supported includes the countries of the following list:

CODEPAGE	COUNTRIES
0	Albania, Bosnia, Croatia, Poland, Czech Republic, Romania, Serbia, Slovakia, Slovenia, Hungary
1	Bulgaria, Macedonia, Russia, Ukraine
2	Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Iceland, Italy, Luxemburg, Malta, Norway, Netherlands, Portugal, United Kingdom, Spain, Sweden, Switzerland
3	Cyprus, Greece
4	Turkey
5	Estonia, Latvia, Lithuania

Table 2-5

2.5.3 Printing texts in different languages

Since the texts present in the archives may be reported on the label, it was necessary to extend the range of **fonts** that can be used for this purpose, so that the characters used in all the languages available are included. It will still be possible to use the old fonts; of course, if a text written in a language that did not exist before is printed by selecting an old font, it will become partially or fully illegible. In any case, it will be prevented to process PLUs that require printing text that require an international font in label fields set with a standard font.

The font can be chosen from the font selection drop-down box regardless of the text language: the application selects the appropriate set of characters. The list of fonts available for printing in different languages will be:

Nina 10
Nina 10 Bold
Nina 12
Nina 12 Bold
Nina 13
Nina 13 Bold
Nina 14
Nina 14 Bold
Nina 16
Nina 16 Bold
Nina 20
Nina 20 Bold
Nina 28
Nina 28 Bold

Table 2-6

2.5.4 Macros in different languages

There is the possibility of **recording macros using the characters of the country in which the interface is selected**. Both the button text and the customisation of the fields will appear in the set language. The name of the macro (file) is also attributed using the characters of the target language. However, since the file system only manages characters of the alphabet corresponding to countries in codepage 2, names of files written in languages of other layouts will appear without sense to a directory examination. This in no way jeopardises correct operation of the program.

2.6 PROGRAMMING

2.6.1 Common notes about archive programming

In order to correctly program the archives of the weighing-ricing machine, it is necessary to know the structure of the archives.

The PLU is the container that holds texts, labels, settings for monitoring pre-packaged products and settings for handling the weight classes (weight bounding). The labels contain texts, barcodes, images and graphic elements such as lines, rectangles and shaded areas.

Reasoned programming therefore requires the following data to be entered in the given order:

- Texts and Extended texts
- Barcodes
- Images
- Labels
- PLU
- Weight classes (weight bounding)

Remember that texts can be entered directly from the PLU archive, thus ingredients or any service texts linked to the individual PLU can be entered at this level.

Also remember that if the operations do not take place in the stand-alone mode and the Planet View application is used (optional) for compiling the archives, most of the data entry formalities are overcome since the work takes place in an environment that allows the user to construct the label and all its components in the graphic mode and to then associate them with the PLU. With Planet View, the work takes place in the WYSIWYG (What You See Is What You Get).



Beware!

The functions common to all the archives, such as SAVE, NEW, COPY and CANCEL are described below.

Refer to these instructions for all archives.

2.6.1.1 SAVE

The "**F1 (SAVE)**" key saves the archives entered and goes to the window in:
"Home \ ARCHIVES"

2.6.1.2 NEW

The "**F2 (NEW)**" key accesses a window where a new ID of the archive can be entered.

2.6.1.3 COPY

The “**F3 (COPY)**” key allows the user to copy the selected record into another destination and to allocate another ID to it.

2.6.1.4 DELETE

The “**F4 (DELETE)**” button is used to delete the selected record.

2.6.2 Texts

2.6.2.1 Introduction

The texts archive allows all the printable texts, from descriptions of the product to ingredients, to be entered and serviced. This can be done regardless of whether the texts are fixed ones on the label or texts that vary depending on the PLU. Fixed texts are associated straight to the label layout in a simple and automatic way. Variable texts are associated with the PLU to the extent of 20 variable texts containing 70 characters each.

Follow the path:

“Home \ ARCHIVES \ TEXTS”

The following window will appear:

PT kg 0.000 PRESETTARE	GROSS kg 0.000	Max. 12 kg Min.: see metr.label e = 2 g	PRICE 0									
BACK	Home\Arch.\Txt	Search	HOME									
TEXT	CATEGORY	CONTENTS										
1	Ingredient	38000430	↑									
2	Ingredient	38000430123										
3	Ingredient	1 LINE 22 CHARS	⌆									
4	Ingredient	2 LINE 60 CHARS										
5	Ingredient	LINES WEIGHING	⌇									
6	Ingredient	LOGISTIC LABEL										
7	Ingredient	LINES WEIGHING	⌈									
8	Ingredient	WEIGHING LABEL										
9	Ingredient	LINES WEIGHING	↓									
<table border="1"> <tr> <td>SAVE</td> <td>NEW</td> <td>COPY</td> <td>DELETE</td> </tr> </table>			SAVE	NEW	COPY	DELETE	<table border="1"> <tr> <td>DISPLAY ALL</td> </tr> <tr> <td>INGREDIENTS</td> </tr> <tr> <td>PRODUCTS</td> </tr> <tr> <td>TEXTS LABEL</td> </tr> <tr> <td>FIND TEXT</td> </tr> </table>	DISPLAY ALL	INGREDIENTS	PRODUCTS	TEXTS LABEL	FIND TEXT
SAVE	NEW	COPY	DELETE									
DISPLAY ALL												
INGREDIENTS												
PRODUCTS												
TEXTS LABEL												
FIND TEXT												
			02/02/2022 09:01 Lev. 6									

Figure 2-22

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

2.6.2.2 Properties of the texts archive

TEXT	Gives the storage number of the text, from 0 to 999999999.
CATEGORY	Identifies the type of text: INGREDIENT, PRODUCT or TEXT FOR LABEL.
CONTENTS	Effectively contains the text to be printed and/or displayed (70 characters).

Table 2-7

2.6.2.3 How to find a text

Texts or parts of texts can be searched within the texts archive by typing the required word on the keyboard and pressing “**F12 (FIND TEXT)**”.

When a word or part of a word is typed, it is displayed in an editing zone on the top (display area of the operator's messages, see par 2.3.2).

If “**F12 (FIND TEXT)**” is pressed again, the machine will search for other repeats, if any.

2.6.2.4 Pre-set texts

The terminal contains preset texts which can be used to manage the total labels or for some of the options, like packing list management or the weight control function.



WARNING

Do not cancel preset texts as this could lead to operating faults.

10001	Distinta Pesi del Prodotto:
10002	Products Weighing List:
10003	No. Piece
10004	N. Pezzo
10005	No. Box
10006	N. Cartone
10007	Pieces Total
10008	Totale Pezzi
10009	Tare Weight
10010	Peso Tara
10011	(kg/lb)
10012	Gross Weight
10013	Peso Lordo
10014	Net Weight
10015	Peso Netto
10016	Pallet Total nr.
10017	Totale Bancale nr.
10018	Pallet Tare
10019	Tara Bancale

10020	Pallet Gross Weight
10021	Peso Lordo Bancale
10022	Pallet Net Weight
10023	Peso Netto Bancale
10024	Totale Cartone
10025	Box Total
10028	Totale Bancale
10029	Pallet Total
10030	CONSECUTIVE PIECE
10031	CONSECUTIVE TOT 1
10032	CONSECUTIVE TOT 2
10033	NO.PIECES IN TOT 1
10034	NO.PIECES IN TOT 2
10035	NO.BOXES IN TOT 2
10036	Packing List
10037	Gross Weight
10038	Pallet Gross Weight
10039	Tot no. Bx.
10040	Tot no. Boxes
10041	Boxes
10042	Tot pcs.
10043	Tot no. pcs.
10044	on Pallet
15001	Lot no.
15002	Code Product:
15003	Description:
15004	Limit --
15005	Limit -
15006	Nominal Weight:
15007	Limit +
15008	Limit ++
15009	Lot starting date:
15010	Lot end date:
15011	Package No.
15012	Average Weight
15013	Tot. weight
15014	REJECTED
15015	ACCEPTED
15016	Zone 1

15017	Zone 2
15018	Zone 3
15019	Zone 4
15020	Zone 5
15021	Totals:
15022	Standard dev.
15023	Standard dev. accepted
15024	Total packages weighed
15025	Weighed pack. total weight
15026	Weighed pack. average weight
15027	Weight of lightest pack.
15028	Weight of heaviest pack.
15029	LOT ACCEPTED
15030	Metal Rejects
15031	Other Rejects
15032	Total accepted packages
15033	Total weight accepted pack.
15034	Average weight accepted pack.
15035	Average err.
15036	Serial:
20000	GENERAL TOTAL
20001	PARTIAL TOTAL
20002	CLIENT TOTAL
20003	PRODUCT TOTAL
20004	BATCH TOTAL
20005	LOT TOTAL
20006	TRACEABILITY TOTAL
20007	PRODUCT CODE TOTAL
20008	LOT
20009	PRODUCT
20010	PLU
20011	TRACEABILITY
20012	CLIENT
20013	TOTAL NO. PIECES
20014	NET WEIGHT
20015	GROSS WEIGHT
20016	TARE
20017	TOTAL LOT - PRODUCT
20018	TOTAL LOT - PLU

20019	TRACE. PRODUCT TOTAL
20020	TRACE. - PLU TOTAL
20021	CLIENT - PRODUCT TOTAL

Figure 2-23 - List of pre-set texts

2.6.3 Extended Texts

The new "EXTENDED TEXTS" archive has been added to be able to use long texts on the labels, generally spread out on several lines, fully exploiting multiline formatting, as for example ingredients and nutritional information. It is similar to the texts archive, capable of storing up to 1600 characters (instead of 70). While the extended texts are being entered, a window is proposed capable of receiving the text with several lines: it is possible to go to the next line by pressing ENTER, while to confirm the window, instead of ENTER, you must press "**F1 (ENTER)**". The extended texts can:

- be carried on the label as EXTENDED FIXED TEXTS: to this purpose, when a new fixed text is being entered in the label, you are requested whether the text must be recovered from the "text archive" or from the "extended texts archive"; in both cases both the single-line mode and the multiline mode can be used: nothing prohibits using an extended text with less than 70 characters;
- be associated to the PLU at a maximum of 10, exactly like the 20 article texts;
- be retrieved in the PROCESSES; unlike the 20 article texts, however, it is NOT possible to freely modify the process text but only to associate a different text in the extended text archive.

When an extended text associated to the PLU is specified as the VARIABLE FIELD of a label, it acts exactly like all other texts, obviously with the possibility of being formatted in multiline mode. Should an extended text be printed *without* multiline formatting, it could occur that the excessive length of just one line makes it incapable of being received by the system, which sends the user a specific error code.

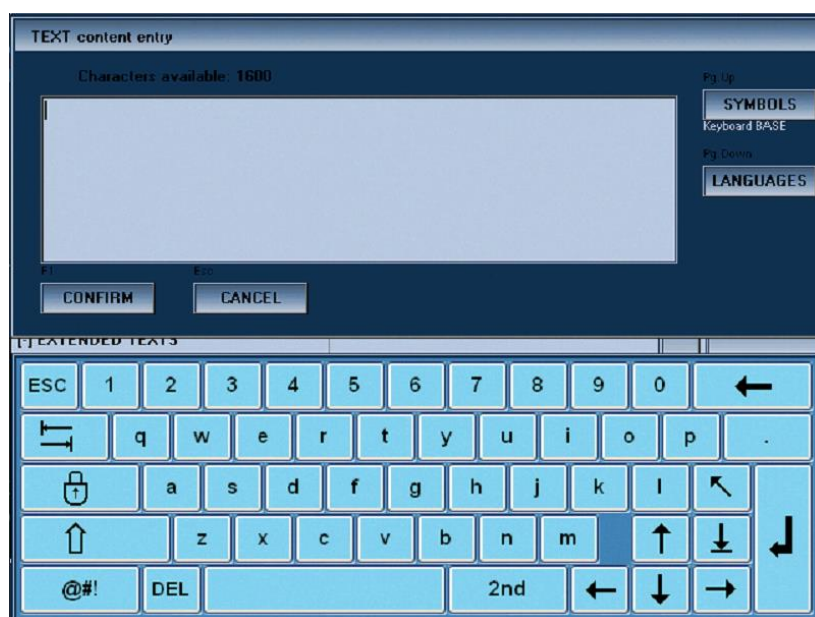


Figure 2-24

2.6.4 Barcodes

2.6.4.1 Introduction to the barcodes

The following is a list and a brief description of the most widely used barcodes, all of which can be printed by the **GALAXI** weighting-pricing machines.

- EAN 13/ EAN 8
- UPC A/ UPC E
- CODE 39/ CODE 32 Pharmaceutical Ita
- Interleaved 2 of 5/ ITF 14
- CODE 128/ EAN 128
- Monarch Codabar
- Pdf 417
- HIBC
- PLESSEY
- CODE 93
- POSTNET
- UCODE128 RANDOMWEIGHT
- TELEPEN
- GS1 DataBar (OMNIDIRECTIONAL, TRUNCATED, STACKED, OMNIDIR.STACKED, LIMITED, EXPANDED, EXPANDED STACKED)
- QR CODE
- DATAMATRIX
- GS1 DATAMATRIX

2.6.4.2 EAN 13/ EAN 8

Description

The EAN code (European Article Numbering) is used for coding large-scale distribution products in Europe and in other non-European countries.

The EAN 13/8 code is compatible with the UPC A/E code (used in the U.S.A. and Canada) from which it comes, and uses numeric characters only.

EAN 8 is a smaller code used for products whose size is unable to take an EAN 13 code.

The EAN 13/8 code can be given a 2 or 5-character ADD-ON, something that is often used in the publishing industry.

Format

National EAN prefix	Trademark proprietor's code	Product code	CD
N ₁ N ₂	N ₃ N ₄ N ₅ N ₆ N ₇ N ₈ N ₉	N ₁₀ N ₁₁ N ₁₂	N ₁₃

Figure 2-25 - EAN 13 fixed weight

National EAN prefix	Trademark proprietor's code	CD
N ₁ N ₂	N ₃ N ₄ N ₅ N ₆ N ₇	N ₈

Figure 2-26 - EAN 8 fixed weight

EAN prefix	Product code	Price	CD
N ₁	N ₂ N ₃ N ₄ N ₅ N ₆ N ₇	N ₈ N ₉ N ₁₀ N ₁₁ N ₁₂	N ₁₃

Figure 2-27 - EAN 13 variable weight

Notes:

National EAN prefix: This is a prefix ascribed by EAN International to the national coding organisations (e.g. Indicod in Italy, Gencode in France). Values 80 to 83 have been allocated to Italy.

Trademark proprietor's code: This code is assigned by Indicod to its associates and identifies the owner of the trademark on an international scale also, without the risk of misunderstandings.

Product code: Code assigned by Manufacturers (trademark owners) to their products so as to identify them in an unmistakable way.

CD: Check digit, control character.

EAN prefix: The prefix for variable weight products in Italy is 2.

Price: Field with the final amount.

Number of characters on symbol: 12, 12 + 2, 12 + 5 / 7, 7 + 2, 7 + 5

Check Digit: 1 character added automatically

Character set: 0 - 9

Advantages: A large amount of information

Disadvantages: Fixed number of digits, the spaces are significant

Reproduction



UPC A/ UPC E

Description

The UPC code (Universal Product Code) is the equivalent of EAN for the large-scale distribution industry in the United States and Canada. Here again, there are two types: UPC – A with twelve numeric characters and UPC – E which only encodes six numbers.

Format

Prefix	Trademark proprietor's code and product code	CD	
N ₁	N ₂ N ₃ NN ₅ N ₆ N ₇ N ₈	N ₉ N ₁₀ N ₁₁	N ₁₂

Figure 2-28 - UPC - A

Prefix	Trademark proprietor's code	CD
N ₁	N ₂ N ₃ NN ₅ N ₆	N ₇

Figure 2-29 - UPC – E

Notes:

Prefix: Assigned by UCC (Uniform Code Council) and takes on different meanings.

Trademark proprietor's code and product code: as EAN 13

CD: as EAN 13

Number of characters on symbol: 11, 11 + 2, 11 + 5 / 6, 6+ 2, 6 + 5

Check Digit: 1 character added automatically

Character set: 0 - 9

Advantages: A large amount of information

Disadvantages: Fixed number of digits, the spaces are Significant

Reproduction



2.6.4.3 CODE 39/ CODE 32 Pharmaceutical Ita

Description

Code 39 is used for automating processes in the industrial field.

Code 32 Pharmaceutical Ita has been developed according to the specifications of the Italian Ministry of Health, based on code 39.

Format

N ₁ . . . N ₃₂

Figure 2-30 - Code 39

A	N ₁ N ₂ N ₃ NN ₅ N ₆ N ₇ N ₈ N ₉
---	--

Figure 2-31 - Code 32 Pharmaceutical Ita

Notes:

Up to 32 alphanumeric characters can be encoded in code 39.

In code 32 Pharmaceutical Ita where there is a fixed initial "A" followed by nine characters, the first of which is always 0 and the last a control character.

Number of characters on symbol: 1 – 32 / 10

Check Digit: Optional / Specific

Character set: 0 to 9, A to Z, - + % \$ <space> / 0 to 9 and the characters of the English alphabet with the exclusion of A E I O

Wide/ Narrow Ratio: 2:1, 3:1

Advantages: Representation of alphabetical, numeric and special characters.

Disadvantages: The spaces are significant

Reproduction



Figure 2-32

2.6.4.4 Interleaved 2 of 5/ ITF 14

Description

The interleaved 2 or 5 barcode (ITF) is used in industry with a range of use similar to code 39.

However, compared to this latter, it can only encode numerical data.

The term interleaved stems from the fact that the characters in this barcode are encoded both in the bars and spaces.

A particular case of the interleaved 2 of 5 version is ITF 1, which is used as the European standard for encoding multiple packages of products encoded individually.

In practice, this is an interleaved 2 or 5 fourteen digits long, in which the most significant digit is always a 0 and where the remaining thirteen correspond to the numbers in the EAN 13 of the individual products.

It is always advisable to use a final check digit with this barcode.

Format

N ₂ . . . N ₃₂

Figure 2-33 - Interleaved 2 of 5

N ₁ . . . N ₁₃	CD
--------------------------------------	----

Figure 2-34 - ITF 14

Notes:

- Number of characters on symbol:** 2 – 32 / 13
- Check Digit:** Optional / A number is added automatically
- Character set:** 0 - 9
- Wide/ Narrow Ratio** 3:1
- Advantages:** A large amount of information
- Disadvantages:** The spaces are significant and the digits must always be even in number.

Reproduction



Figure 2-35

2.6.4.5 CODE 128/ EAN 128

Description

Code 128 is an alphanumerical, two-way barcode whose name stems from the ability to code the 128 characters of the ASCII table.

An important application of code 128 is EAN/UCC 128, created through collaboration amongst EAN, UCC and AIM (Automatic Identification Manufacturers).

The difference between a code 128 and an EAN 128 lies in the use, by this latter, of functional character FCN1 after the start character.

Through use of data identifiers, the EAN/UCC system allows supplementary information to be added to packaging units and logistic units.

The data identifiers are prefixes that distinguish the meaning and format of the following fields.

Format

Start Characters A, B, C	FCN1	Set of elements	CD	Stop
		Data Identifier	Information field(s)	

Figure 2-36 - EAN 128

Notes:

- Number of characters on symbol:** 1 to 48 (included in the "set of elements" field) and up to 165 mm in length
- Check Digit:** Optional
- Character set:** ASCII

Reproduction



Figure 2-37

2.6.4.6 Monarch Codabar

Description

The Codabar Code was developed by Monarch Marking Systems in 1972. This is why it is also called "Monarch Code" and sometimes even "Code NW7". Owing to its features of the very highest security against the risk of reading errors, this code is typically used in the medical-health sector to identify and associate test tubes, analyses results and blood bags to patients.

Format and Notes

Number of characters on symbol: Up to 32, including start, stop and CD

Check Digit: Optional

Character set: 0 to 9 and six special characters (-, \$, :, /, ., +)

Reproduction



Figure 2-38

2.6.4.7 PDF 417

Description and notes

PDF417 is a 2D code with two dimensions. This code was invented by Ynjiun Wang in 1991 on behalf of Symbol Technologies©. PDF means **Portable Data File**, and the symbology consists of 17 modules, each of which contains bars and spaces (from which 417 derives). The PDF417 code has a large data capacity of up to 2500 characters. It also has an optimum density and a low error percentage. The PDF417 code can also encode binary data as well as alphanumerical data or the characters of the ASCII table, thus allowing photos or any other type of binary data to be encoded. It is important to analyse the name of this code. The words "Portable data file" stand for a completely new concept of the barcode: in conventional systems, the data encoded in the barcode is merely a means for accessing a determined database. Thus, if there is a barcode but not the relative reference database, it will be impossible to use the system in a concrete way. PDF417 is the actual database. Depending on the data format, this code can contain from around one thousand to 2500 characters. This means that all the necessary information can be encoded within the code in order to obtain a code that is actually a file of data.

Reproduction

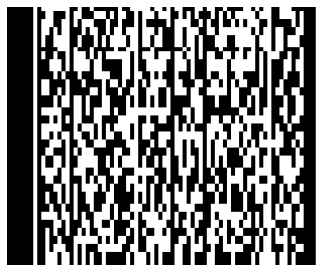


Figure 2-39

2.6.4.8 GS1 DATABAR

GS1 DataBar is a new symbol developed by GS1. It is a linear barcode which uses the application identifiers (already used by the symbol [GS1-128](#)) to encode [GTIN](#) and any extra information (e.g. lot number, net weight, price, etc.) in an extremely small space.

The GS1 DataBar symbol responds to many company requirements which today can find no efficient answer in EAN/UPC symbols. This is the case of barcodes for:

- small sized products;
- products with labels which do not allow printing a standard EAN-13 barcode;
- variable weight products (e.g. fruit and vegetables, dairy products, cold cuts, etc.).

GS1 DataBar has 7 types of barcodes, all supported by Venus/Mercury terminals. They are: OMNIDIRECTIONAL, STACKED OMNIDIRECTIONAL, EXPANDED, EXPANDED STACKED, LIMITED, STACKED and TRUNCATED.

Below are 4 symbols with characteristics suitable to pass the checkout barrier:

GS1 DataBar Omnidirectional



Figure 2-40

GS1 DataBar Stacked Omnidirectional



Figure 2-41

GS1 DataBar Expanded



Figure 2-42

GS1 DataBar Expanded Stacked



Figure 2-43

GS1 DataBar completes the system of GS1 enabling instruments (e.g. EAN/UPC, GS1-128, ITF-14 symbols), introducing new features at the point of sales.

The parameters guiding the creation of DataBar are:

- Expansion
- Rotation
- Interpreted

Segments (only for Expanded Stacked: regulates the number of “lines” which the code is written on).

2.6.4.9 QR CODE

A **QR Code** is a two-dimensional [barcode](#) (or 2D code), namely a [matrix code](#), consisting in black modules arranged inside a square pattern. It is used to store information generally read by [mobile telephones](#) or [smartphones](#). One cryptogram contains 7,089 numeric characters or 4,296 alphanumeric characters.

QR stands [for](#) *quick response* since the code was developed to quickly decode content.

QR codes can store up to 4,296 alphanumeric characters, 7,089 numeric characters. QR codes use the [Reed-Solomon code](#) to [detect and correct errors](#): should the QR be partly damaged, such as from stains and scratches from the paper support, the Reed-Solomon application reconstructs the lost [data](#), restoring up to 30% of the encoded information.

This is the data storage capacity:

- Only [numeric](#): max 7,089 characters.
- [Alphanumerical](#): max 4,296 characters.
- [Binary \(8 bits\)](#): max 2,953 byte.
- [Kanji/Kana](#): max 1,817 characters.

This is the error correction capacity:

- Level L: approximately 7% of codewords can be restored.
- Level M: approximately 15% can be restored.
- Level Q: approximately 25% can be restored.
- Level H: approximately 30% can be restored.

In the **food labelling** field, it is mainly used for product (or package) traceability.

The **parameters** regulating the composition of QR Code (selectable in the list of available barcodes) are:

- Expansion
- Rotation
- Correction level (which can take on the values L, M, Q and H, in order of the growing redundancy of the information).

Here is an example of a QR Code:



Figure 2-44

2.6.4.10 DATAMATRIX AND GS1 DATAMATRIX

Description and notes

Datamatrix is a matrix two-dimensional barcode, consisting in black and white cells (or modules) arranged inside a rectangular or square pattern.

The information to be encoded can be text or raw data. Usual data size is from a few bytes up to 2 kilobytes. The length of the encoded data depends on the symbol dimension used.

Error correction codes are added to increase symbol strength: even if a Data Matrix is damaged, it can still be read. A Data Matrix symbol can store up to 2,335 alphanumeric characters.

Data Matrixes are rectangular (usually square) and composed of cells, each representing a bit. Depending on the coding used, a light coloured cell represents bit 0 and a dark coloured cell bit 1 (or vice-versa).

The borders that delimit a Data Matrix have the following configuration:

two solid adjacent borders in an “L” shape, called the “Finder Pattern”;

two other borders consisting of alternating dark and light cells. They make up the Timing Pattern.

Within these borders are rows and columns of cells that make up the encoding information. The Finder Pattern is used to allow decoding devices to correctly locate and orient the Data Matrix, while the Timing Pattern provides a count of the number of rows and columns in the Data Matrix. As more data is encoded in the symbol, the number of rows and columns increases. Symbol sizes vary from 8x8 to 144x144.

Data Matrix codes are becoming common on printed media such as labels and letters. The code can be read quickly by a barcode reader which allows the media to be tracked, for example when a parcel has been dispatched to the recipient.

For industrial engineering purposes, Data Matrix codes can be marked directly onto components, ensuring that only the intended component is identified with the Data-Matrix-encoded data. The codes can be marked onto components with various methods, but within the aerospace industry these are commonly industrial ink-jet, dot-peen marking, laser marking and electrolytic chemical etching (ECE).

These methods give a permanent mark which can last as long as the component. After their application, Data Matrix codes are usually verified using specialist camera equipment and software. This verification ensures the code conforms to the relevant standards, and ensures readability for the lifetime of the component.

After the component enters service, the Data Matrix code can then be read by a reader camera, which decodes the Data Matrix data which can then be used for a number of purposes, such as movement tracking or inventory stock checks. Data Matrix codes, along with other Open Source codes such as 1D barcodes can also be read with mobile phones fitted with a camera, by downloading code specific mobile applications.

Although many mobile devices are able to read Data Matrix codes, few extend the decoding to enable mobile access and interaction. The codes can be used securely with multiple applications; for example, in track and trace, anti-counterfeit, e.government and banking solutions.

In Italy, for example, Data Matrix codes are used by the Post Office to track letters and by the Treasury in their pay slips as an anti-counterfeit mechanism.

In Italy, in the standard datamatrix GS1, the datamatrix code has been used since 2008 to label veterinary drugs.

Datamatrix codes' main application is traceability.

The **parameters** regulating the composition of Datamatrix (selectable in the list of available barcodes) are:

- Expansion
- Number of rows
- Number of columns

The number of rows and columns guide the height and width proportions of the code.

The printer automatically dimensions the code when set at 0.

Here is an example of a Datamatrix code:



Figure 2-45

2.6.4.11 Barcode in light letters

The "interpreted" data of a barcode in the archive of the terminal can be printed like any type of variable text on a label. This data can also be sent via network, as it resides inside a new string-type process field created specifically.

3 new fields have been entered in the "BARCODE" menu of the PLU, called respectively:

BARCODE IN LIGHT LETTERS 1
BARCODE IN LIGHT LETTERS 2
BARCODE IN LIGHT LETTERS 3

When one of these new fields is selected, the barcode archive will be retrieved. Here it will be possible to select a pre-existing barcode. Upon labelling, the software calculates the barcode and extracts its value in letters, storing them in a process field. This field can be retrieved both from the network, obtaining the calculated string at each weighing operation, and on the label, to be able to print the calculated data string like a normal variable text. It is calculated even if the barcode is not physically present on the label.

2.6.4.12 Barcode Programming

Three typologies can be considered when the fields are entered in a barcode:

- fixed field

a numeric field up to 10 characters in length can be entered.

- variable field

a variable field belonging to one of the following three families can be entered (for the complete list of fields, consult the end of paragraph 2.6.4.12):

- PROCESS
- TOTALS
- TRACEABILITY (optional, if activated)
- CUSTOMERS (optional, if activated)

- fixed text

a text, or part of one, can be entered in a barcode by retrieving it from the texts archive in the machine.

After having gone to the TEXT item, press ENTER to link to the texts archive. Now go to the required text and confirm it with ENTER. Press ENTER to return to the previous field. The description directly retrieved from the archive will be given alongside the TEXT field.

The ability to enter a text from the archive of the same name adds to the options offered by entering a fixed text since strings longer than ten characters will also be available.

The archive contains and memorises the barcodes that can be printed, and is organised in the following way:

BARCODE	Gives the ID of the barcode, from 0 to 30000.
BARCODE TYPE	Identifies the barcode type entered.
DESCRIPTION	Identifies the name and possible description of the barcode entered.

Figure 2-46 - Barcode archive properties

LIST OF VARIABLE FIELDS

- PROCESS

PROD. NET WEIGHT PRIMARY (7)
PRIMARY PROD. TARE (7)
PRIMARY PROD. GROSS WEIGHT (7)
SEC. PROD. NET WEIGHT (7)
SEC. PROD. TARE (7)
SEC. PROD. GROSS WEIGHT (7)
PLU CODE (15)
PRODUCT CODE (15)
CLIENT CODE (10)
LOT CODE (15)
BATCH CODE (15)
COMMODITY (15)
PRODUCTION DATA (16)
EXPIRY DATA (16)
CURING DATA (16)
PRICE PER kg 1 CURRENCY (10)
AMOUNT 1 CURRENCY (10)
PRICE PER kg 2 CURRENCY (10)
AMOUNT 2 CURRENCY (10)
PROD INDICOD (13)
TOT 1 INDICOD (13)
TOT 2 INDICOD (13)
PLU 1 TEXT (70)
PLU TEXT 2 (70)
PLU TEXT 3 (70)
PLU TEXT (70)
PLU TEXT 5 (70)
PLU TEXT 6 (70)
PLU TEXT 7 (70)
PLU TEXT 8 (70)
PLU TEXT 9 (70)
PLU TEXT 10 (70)
PLU TEXT 11 (70)
PLU TEXT 12 (70)
PLU TEXT 13 (70)
PLU TEXT 1(70)

PLU TEXT 15 (70)
PLU TEXT 16 (70)
PLU TEXT 17 (70)
PLU TEXT 18 (70)
PLU TEXT 19 (70)
PLU TEXT 20 (70)
PRODUCTION DATE TEXT (70)
EXPIRY DATE TEXT (70)
CURING DATE TEXT (70)
CONSECUTIVE PIECE (10)
CONSECUTIVE TOTAL 1 (10)
CONSECUTIVE TOTAL 2 (10)
TIME (5)
NO.PIECES IN TOT.1 (10)
PRIMARY TOT.1 NET WEIGHT (10)
PRIMARY TOT.1 TARE (10)
PRIMARY TOT.1 GROSS WEIGHT (10)
SECONDARY TOT.1 NET WEIGHT (10)
SECONDARY TOT.1 TARE (10)
SECONDARY TOT.1 GROSS WEIGHT (10)
NO.PIECES IN TOT.2 (10)
NO.BOXES IN TOT.2 (10)
PRIMARY TOT.2 NET WEIGHT (10)
PRIMARY TOT.2 TARE (10)
PRIMARY TOT.2 GROSS WEIGHT (10)
SECONDARY TOT.2 NET WEIGHT (10)
SECONDARY TOT.2 TARE (10)
SECONDARY TOT.2 GROSS WEIGHT (10)
NO.PIECES IN TOT.PLU (10)
NO.BOXES IN TOT.PLU (10)
NO.PALLETS IN TOT.PLU (10)
PRIMARY PLU NET WEIGHT (10)
PRIMARY PLU TARE (10)
PRIMARY PLU GROSS WEIGHT (10)
SECONDARY PLU NET WEIGHT (10)
SECONDARY PLU TARE (10)
SECONDARY PLU GROSS WEIGHT (10)
CHECKSUM
GS CHARACTER

BAYERLAND 13 CHAR – TXT 18
BAYERLAND 13 CHAR – TXT 19
BAYERLAND 13 CHAR – TXT 20
MACHINE COUNT ACT. (10)
PIECE PTR LAB NO.COUNT (10)
TOT 1 PTR LAB NO.COUNT (10)
TOT 2 PTR LAB NO.COUNT (10)
OVERALL PIECES NO. COUNT (10)
OVERALL TOT 1 NO. COUNT (10)
OVERALL TOT 2 NO. COUNT (10)
PCS NO. COUNT. OVERALL TOT 1 TOT 2 (10)
TOTAL AMOUNT 1 CURRENCY 1 (10)
TOTAL AMOUNT 1 CURRENCY 2 (10)
BARCODE PRODUCTION DATE (16)
BARCODE EXPIRY DATA (16)
BARCODE CURING DATA (16)
EXPI DD - TMC (5)
CUR DD (5)
SSCC (18)
DAY OF THE YEAR (3)
PRIMARY FROSTED PROD. NET WEIGHT (7)
SECONDARY FROSTED PROD. NET WEIGHT (7)
PRIMARY PROD. FIXED TARE (7)
SECONDARY PROD. FIXED TARE (7)
PRIMARY PROD. PERC. TARE (7)
SECONDARY PROD. PERC. TARE (7)
PRIMARY TOT.1 FROSTED NET WEIGHT (10)
SECONDARY TOT.1 FROSTED NET WEIGHT (10)
PRIMARY TOT.1 FIXED TARE (10)
SECONDARY TOT.1 FIXED TARE (10)
PRIMARY TOT.1 PERC. TARE (10)
SECONDARY TOT.1 PERC. TARE (10)
TIME (HH:MM: SS)
PRODUCTION DATE TEXT 2 (70)
EXPIRY DATE TEXT 2 (70)
CURING DATE TEXT 2 (70)
CONVERSION FACTOR 1 (10)
CONV. 1 PROD. RESULT (10)
CONV. 1 TOT1 RESULT (10)

CONVERSION FACTOR 2 (10)
CONV. 2 PROD. RESULT (10)
CONV. 2 TOT1 RESULT (10)
CONVERSION FACTOR 3 (10)
CONV. 3 PROD. RESULT (10)
CONV. 3 TOT1 RESULT (10)
DATE INCREASE DD (4)
LINE NUMBER (3)
CTRL LOT (15)
UNIT PRICE TEXT
PRIM.AMOUNT TEXT
OVERALL PIECES NO.COUNT2 (10)
OVERALL PIECES NO.COUNT3 (10)
OVERALL TOT1 NO. COUNT2 (10)
OVERALL TOT1 NO. COUNT3 (10)
OVERALL TOT2 NO. COUNT2 (10)
OVERALL TOT2 NO. COUNT.3 (10)

Figure 2-47 - Process variable fields

- TOTALS

TOT PASSWORD 1 (30)
TOT PASSWORD 2 (15)
TOT NET WEIGHT kg (10)
TOT TARE kg (10)
TOT GROSS WEIGHT kg (10)
TOT NET WEIGHT lb (10)
TOT TARE lb (10)
TOT GROSS WEIGHT lb (10)
TOT AMOUNT CURRENCY 1 (10)
TOT AMOUNT CURRENCY 2 (10)
NUMBER TOT PIECES (10)

Figure 2-48 - Totals variable fields

- TRACEABILITY

The variable fields regarding traceability that can be entered in barcodes depend on the structure of the "trace.cfg" file in DOM/COMPACT FLASH in:

ARCHIVES/USER/TRACE

The default setting has the following fields:

TRACEABILITY ID (30)
EARPIECE (30)
COUNTRY OF BIRTH (30)
COUNTRY OF BIRTH CODE (30)
FATTENING 1 (30)
FATTENING 2 (30)
SLAUGHTERING (30)
CUTTING (30)
PREPARATION (30)

Figure 2-49 - Traceability variable fields

- CLIENTS

COMPANY NAME (30)
ADDRESS (40)
POST CODE (6)
LOCATION (30)
PROVINCE (15)
COUNTRY (30)

Figure 2-50 - Clients variable fields

The properties of the fields that can be entered are:

	FIXED FIELD	VARIABLE FIELD	FIXED TEXT
Barcode id	Numeric from 0 to 30000. Cannot be edited as it is the barcode number stored in the archive.		
Description	Alphanumerical from 0 to 25 characters. A description can be assigned so as to recognise the barcode. "Ean 13 barcode amount", for example.		See variable field.
Fixed data	Numeric, up to 10 characters. Field in which the required value can be entered directly.		
Variable field		See list of variable fields (process, totals and traceability).	
Text			Link to texts archive.
Start position		Numeric data item, from 1 to the max length given alongside the field (x = max field length). Indicates the starting position from whence the data are taken from the selected variable field and that will then be included in the barcode.	See variable field.
How many characters		Numeric data item from 1 to the number of characters needed to complete the max field length (x = max field length). Indicates the quantity of characters selected, that will then be included in the barcode.	See variable field.
Without dot		YES/NO	
Type of filling		Zero on left Zero on right Blank on left Blank on right	See variable field.

	FIXED FIELD	VARIABLE FIELD	FIXED TEXT
Rounding off		YES/NO	

Figure 2-51 - Barcode field properties

2.6.5 Barcode reading (BCREAD)

2.6.5.1 Introduction

The **BCREAD** archive allows the user to define precise numeric structures, which will then be used to **modify the processing data** after readings made by a scanner (manual or via the line). The purpose is to acquire processing data, the PLU code, the traceability ID and other values to be modified, in a fast and reliable way. Up to 20 fields can be modified via scanner.

The fields that will be read and sent to the weighing-pricing machine via serial link must be entered in: "Home \ ARCHIVES \ BARCODE READING". Remember that only variable fields can be entered and that the type of barcodes that can be read depends on the scanner (**note for the installers**: the string transmitted by the scanner must be complete with a preface **STX** and a suffix **CR LF**).

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

2.6.5.2 BcRead application with store (Crate weigher mode)

The store concept is linked to the multiproduct mode and, along with the BCRead archive, allows a **queue** of PLU to process to be entered.

The PLU queue is associated with the items entered into the machine and dealt with by means of a FIFO logic. It can be generated via the touch screen (using the **soft key** dialog), by means of a serial keyboard and by means of a network command.

Currently, the 3 types of input are **mutually exclusive**, thus mixed serial keyboard/scanner store cannot be executed.

2.6.5.3 Crate weigher - Note for the installers:

In the **crate weigher** mode, a store can be executed via the scanner during the process, while the data available in the list of processing fields can also be edited. The data entry mode can be selected in the following way during the installation phase:

- Manual input
 - Serial keyboard (256 keys)
 - Terminal keyboard (70 keys) – Manual scanner (usable in parallel)

Note: the serial keyboard and stand-alone terminal keyboard (manual scanner) are mutually exclusive.

During the installation phase, it is also possible to select the operating mode of the scanner reader and to choose whether to execute or not execute a store when a reading is made with a scanner:

- Enter as store

Always enter a PLU ID in the BC READ archive, otherwise a non-valid store indication will be obtained when the piece reaches the scale.

Besides generating a store, it is also possible (if envisaged in the BC READ archive) to modify the process fields, which will be considered as global fields.

Do not overlap use of GLOBAL FIELDS with process field (considered as global fields) editing via scanner.

Automatic stores can be set by using the soft keys (see "**product with confirmation**"). However, using the scanner, the data can be edited before the actual store is generated: PLU store and data editing when an actual barcode is being read.

Note: The first 5 digits read are considered by default if the BC READ archive is empty or if none of its elements is associated with the machine settings.

- Enter as process field

The string read is **only** used for modifying the process fields. When this setting is activated, a PLU ID must **not** be entered in the BC READ archive as it will not be considered and a store will not be created. The store must be executed via the serial keyboard or stand-alone. The field entered is considered a **global field**.

2.6.5.4 Monoproduct - Note for the installers:

In the **monoproduct mode**, it is **NOT POSSIBLE** to retrieve a PLU via the scanner and process it, while it is still possible to modify the process data and traceability ID.

2.6.5.5 Properties of the BC Read archive

When a new barcode is read, the machine stops the process, changes the data and then restarts the process again. The new data will affect the next piece to be weighed if the updated data item concerns the PLU or traceability lot in progress (process data), while they will affect the next piece to enter the machine in the case of a global field.

If the selected field belonging to the PLU is handled in global mode, the machine will automatically load the data item read in the global field (see below) during the process, when the barcode is read, instead of in the PLU.

The scanner that reads the data only functions during the processing phase.

The machine configuration contains an item that enables the scanner to read the data, plus the relative serial port and barcode ID used for reading. There is also a field that enables macro key F11 during the process. This allows the ID of the barcode in progress to be changed during the process just as key F12 changes the PLU in progress if enabled.

ERROR SITUATIONS:

The following checks are available in the CRATE WEIGHER mode with scanner reading:

- there are no checks on access to the process.
- an error is activated that stops the process if the terminal reads a code whose size is less than the position (and length) of a field to be read inside it.
- if present in the selected barcode, the traceability fields are ignored.
- checks are made to ascertain the existence or presence in the setup of the barcode ID for reading during access to the process, with process block.

The following checks are available in the MONOPRODUCT mode with scanner reading:

- before accessing the process, the terminal checks to make sure that the selected barcode exists.
- before accessing the process, the terminal checks to make sure that the fields set in the barcode are valid.
- before accessing the process, the terminal checks for the presence of different traceability fields from the lot or whether traceability has been enabled in the lot field.
- an error is activated that stops the process if the terminal reads a code whose size is less than the position (and length) of a field to be read inside it.
- an error is activated that stops the process if a traceability lot is read but is not present in the archive.
- the checks conducted on access to the process will be repeated if a different barcode is loaded during the process
- checks are made to ascertain the existence or presence in the setup of the barcode ID for reading during access to the process, with process block.

NOTE:

Automatic management of the GS and AI characters is not currently available for the EAN128.

2.6.6 Images

2.6.6.1 Introduction

The archive contains and stores all the images that need to be printed. It is important to have a clear idea of the construction layout and modes for using the images in the **GALAXI** weighing-pricing machines.

In the working directories it is present in

ARCHIVI/USER/

the BMP folder containing files in *.bmp format that can be interpreted by the machine. The client's personal logos can be entered in the ARCHIVES/USER/BMP folder (**IMPORTANT:** the file must have been saved in the monochromatic mode and in the *.bmp format).

When new images are created, reference must be made to the bitmaps in:

ARCHIVES/USER/BMP.

There can be numerous *.BMP files in ARCHIVES/USER/BMP and relatively few images created in the relative archive.

Following the path:

“Home \ ARCHIVES \ IMAGES”

the following window will appear:

PT kg 0.000 <small>PRESET TARE</small>		GROSS kg 0.000		Max. 12 kg Min.: see metr. label e = 2 g		PRICE 0	
BACK		Home\Arch.\Im.				HOME	
IMAGE	FILE NAME	MEMO IN PNT		↑ ⇧ ⇩ ↓		MEMORIZE IN PNT	
1	aragosta.bmp	YES				CALCULATION MEMORY	
2	e.bmp	YES					
3	e_big.bmp	YES					
4	e.bmp	YES					
5	E_BIG.BMP	NO					
6	ELLISSE BMP	YES					
7	EURO.BMP	YES					
8	RECYCLE2.BMP	YES					
9	term.bmp	NO					
SAVE		NEW		COPY		DELETE	
						02/02/2022 09:04 Lev. 6	

Figure 2-52 - Images archive

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

2.6.6.2 Images archive properties

IMAGE	Gives the storage number of the image, from 0 to 30000.
FILE NAME	Allows the "bmp" file to be selected from a list (in the DOS 8+3 format).
STORED IN PTR	Indicates whether the image in question is stored in the printer's permanent memory. An image in the permanent memory is processed in a faster way during the processing input phase than an image that must be loaded via the serial link each time the process is accessed.
ROTATION	Can be selected amongst 0, +90, +180, +270; indicates the extent to which the image is turned in degrees in relation to the label exiting direction.
ZOOM	from 10% to 200%; allows the correct sizing of the image in the label.

Figure 2-53 - Image archive properties

2.6.6.3 Store in PTR

To be able to print a drawing/image on a label, it must have first been created in the images archive. If a label has an image whose "**STORE IN PTR**" field setting is **NO**, the CPU loads the image used in the PTR memory when the processing phase starts, taking the time required to transfer the data via serial link. When the image has been loaded into the PTR memory, work can proceed normally without slowing down.

When the "**STORE IN PTR**" operation takes place, all the files of images with **YES** selected for the "**STORE IN PTR**" field are transmitted to the printer memory in a single file. Definitive storage will occur by pressing **SAVE**.

IMPORTANT: if a client's faulty printer is replaced, the "**STORE IN PTR**" operation must be carried out again for the images.

Retrieving a label containing an image when this refers to a file that is **NOT** in the **BMP** directory may block the program.

On access to:

"Home \ ARCHIVES \ IMAGES"

checks will be made to make sure that the BMP directory contains each ".bmp" file corresponding to the images created by pressing **NEW**.

If this match **FAILS** to occur, dashes will appear in place of the name of the image on access to the images archive and the "**STORE IN PTR**" field is **NO**.

2.6.7 Labels

2.6.7.1 Introduction

The archive contains and stores all the label formats that need to be printed. When the label is created, test prints can be made to make sure that the layout is correct.

The weighing-pricing machine is a metrologically approved instrument. It is therefore subject to the European and national rules and regulations governing weighing systems. Correct use of the machine is also therefore governed by a few simple rules that particularly concern the label:

- The net weight must always appear on the label.
- The weight values must always be represented along with the unit of measurement (0.234 kg, 1.25 lb).
- If other weight values are provided, it must be specified what the net weight is (e.g. NET WEIGHT: 0.256kg); if only one weight is reported, it is understood to be the net weight.
- If the label gives weights resulting from arithmetical calculations which are not directly measured by the weighing system, it is advisable to add the phrase "Values obtained by arithmetical calculations" to the label.

Following the path:

“Home \ ARCHIVES \ LABELS”

the following window will appear:

PT kg 0.000 PRESETTARE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MIN	GROSS kg 0.000	Max. 12 kg Min.: see metr.Label e = 2 g	PRICE 0
BACK	Home\Arch.\Lab			HOME
LABEL	DESCRIPTION	SPEED	PEELING	
100	SSCC 100x200	120	-40	↑
101	SSCC A5	120	-40	
3852001	38x52 d CONF.	120	-40	⏶
3852101	38x52 d TOT 1	120	-40	
3852201	38x52 d TOT 2	120	-40	⏷
3852301	38x52 d TOT PLU	120	-40	
3960002	39x60 r CONF.	120	-40	↓
3960102	39x60 r TOT 1	120	-40	
3960202	39x60 r TOT 2	120	-40	
SAVE	NEW	COPY	DELETE	02/02/2022 09:05 Lev. 6

Figure 2-54 - Label archive

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

The window used to enter and edit the label fields is the following:

PT kg 0.000 <small>PRESETTARE</small>		GROSS kg 0.000		Max. 12 kg Min.: see metr.Label e = 2 g		PRICE 0		
BACK		Home\Arch.\Lab\Dis.Lab				HOME		
FIELD TYPE	DESCRIPTION	X	Y	VAR	↑ ↕ ↓			INSERT FIXED TXT
SETTINGS	SSCC 100x200	0	0	NO				INSERT VARIAB. TXT
RECTANGLE	RETTANGOLO	4.5	1.0	NO				INSERT BAR CODE
LINE	LINEA 20	4.5	31.0	NO				INSERT IMAGE
LINE	LINEA 30	4.5	52.0	NO				AREA SHADED
LINE	LINEA 3V	73.0	16.0	NO				OTHERS >>>
LINE	LINEA 4V	33.0	52.0	NO				
LINE	LINEA 5V	66.0	52.0	NO				
LINE	LINEA 6V	75.0	66.0	NO				
FIXED TEXT	ITEM	6.0	28.5	NO				
SAVE	TEST OF PRINT	COPY	DELETE	MOVE FIELD UP	MOVE FIELD DOWN	02/02/2022 09:17 Lev. 6		

Figure 2-55 – Entry and editing of label fields

2.6.7.2 Label settings

FIELD NAME	TYPE AND LENGTH	DESCRIPTION
LABEL	Numeric data item - from 0 to 999999999	Not editable
DESCRIPT. LABEL	Alphanumerical - from 0 to 25 characters	A description can be assigned so as to recognise the label. E.g. "Lab 1 price in Euro".
PRINTING SPEED	Numeric data item - from 0 to 200	Printing speed in mm per second.
PEELING	Numeric data item - from -999 to 999	Label positioning in relation to the end of printing head (e.g. with negative values, the next label to print will not touch the printhead while with positive values, the label will protrude from the printhead and allow the silicone-coated paper of the printed label to be completely peeled off. (See NOTE 1).
BACKFEED	Numeric data item - from 0 to 100	Allows the entire available label surface to be written over by retracting the label itself prior to printing. (See NOTE 2).
TEMPERATURE TABLE	STANDARD TEMPERATURE or LOW TEMPERATURE	This parameter is not interpreted at the present time. The printing performance does not depend on the settings.
TEMPERATURE	Numeric data item - from 0 to 100%	Percentage of energy applied to the printhead.
X OFFSET	Numeric data item - from 0 to 100 mm	Allows all fields created on the label to be moved horizontally in mm.
Y OFFSET	Numeric data item - from 0 to 100 mm	Allows all fields created on the label to be moved vertically in mm.
HEADING LENGTH	Numeric data item - from 0 to 999.9	See NOTE 3
TYPE OF DEC.SEPARATOR	Dot (.) Comma (,)	Type of decimal separator for non-integer numeric values.
THROW AWAY	Boolean (YES / NO)	Setting this parameter to YES means printing a label automatically when the process is started (without application). It is used to eliminate a label containing spurious data relating to the previous process.
ITALORA EMULATION	Boolean (YES / NO)	Setting this parameter to YES indicates that the label must be built in accordance with the rules for managing the coordinates and rotation of Italora printers.
LABEL LENGTH	Numeric data item – from 0 to 999.99	Parameter that indicates the label width in millimetres. It is used by the Planet View program for drawing the actual printing area.
LABEL WIDTH	Numeric data item – from 0 to 999.99	Parameter that indicates the label length in millimetres. It is used by the Planet View program for drawing the actual printing area.

Figure 2-56 – Label settings property list

NOTE 1: If this parameter is programmed with a different value from the previous one, the printer will re-align at the beginning of the process and will issue a few white labels.

NOTE 2: this space would not be used by peeling the label, i.e. if the label edge were to be positioned a few mm beyond the head. If BACKFEED is given a different value from 0, the label will retract a few mm prior to printing, thus allowing all the label space to be used. This parameter is **only activated on machines connected to table labelling machines, such as Smart 2000.**

NOTE 3:

HOW TO CORRECTLY USE THE HEADING PARAMETER IN THE LABEL PROGRAMMING MODE

Correct use of this parameter also allows you to print in the initial part of the label which was hitherto unprintable and proportional to the selected peeling value (the larger the peeling area expressed in dots, the larger is the initial unprintable area).

To use this option, you need electronic box with Italora 2.63my firmware release (2.74 for table labelling machines) or more recent releases.

Follow the procedure:

- 1 Program a label with the peeling value most suited to the processing requirements.
- 2 Program a data item (e.g. fixed text) in the label with coordinate Y = 0.
- 3 Measure the space between the beginning of the label at the top and the beginning of the writing. Multiply the space, measured in mm, for the printer resolution (generally 8), thus obtaining the heading length expressed in dots.

Example with a -40 peeling value and with 8-dot printer resolution, you will obtain:

HEADING VALUE in dots $9 \times 8 = 72$

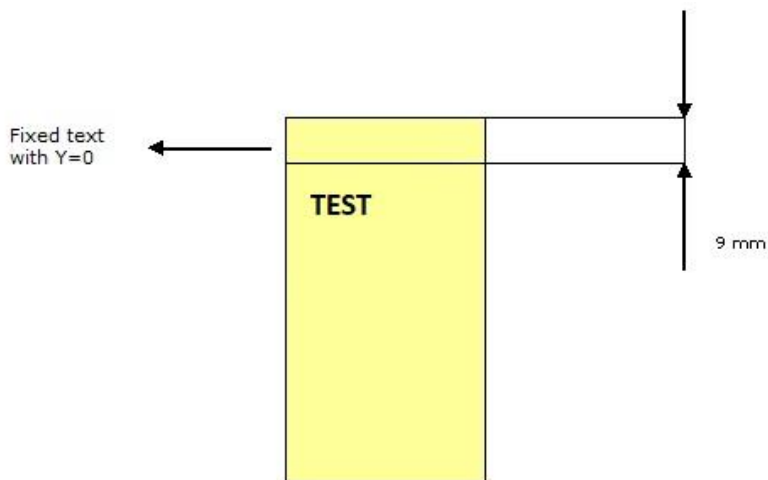


Figure 2-57 – Heading

- 4 Enter 72 for the **HEADING** field and decrease the peeling value by the same amount:
HEADING = 72
PEELING = -40 - 72 = - 112
- 5 Save the changes and access the process without loading pieces.
- 6 Press the **FEED** key several times to feed out scrap labels and allow the printer to re-align with the layout. At this point, you will note that the initial part of the label under the head has already been printed. This option therefore allows the heading to be printed without two labels being peeled at the same time.
- 7 Start the Process.

2.6.7.1 Label archive field properties

	FIXED TEXT	VARIABLE TEXT	BARCODE	LINE	RECTANGLE	IMAGE	SHADE AREA
LABEL	Numeric data item from 0 to 999999999. Not editable because ID in assigned archive.						
DESCRIPTION	Alphanumerical from 0 to 25 characters. A description can be assigned so as to recognise the fixed text (e.g. " deadline")						
LINK TO TEXTS ARCHIVE	Allows access to the text archive and to select the one to be printed.						
LINK TO LIST OF VARIABLE FIELDS PROC, TOT, TRACE, CLIENTS		See tables 7-47, 7-48, 7-49 and 7-50 (list of variable process, totals, traceability and client fields)					
LINK TO BARCODE ARCHIVE			Allows access to the barcode archive and to select the one to be printed.				

	FIXED TEXT	VARIABLE TEXT	BARCODE	LINE	RECTANGLE	IMAGE	SHADE AREA
LINK TO IMAGES ARCHIVE						Allows access to the image archive and to select the one to be printed.	
X COORDINATE	Number from 0 to 9999.9 mm. It is the value in mm of the horizontal position of the printing starting point of the field with respect to the label.						
Y COORDINATE	Number from 0 to 9999.9 mm. It is the value in mm of the vertical position of the printing starting point of the field with respect to the label.						
ROTATION	Field rotation on the label. Selectable between: 0° / + 90° / + 180° / + 270°						
TYPE OF CHARACTER	See table 7-58-B for the full list of available fonts.						
HORIZONTAL EXPANSION	Numeric data item from 0 to 99. Horizontal font magnifying factor.						
VERTICAL EXPANSION	Numeric data item from 0 to 99. Vertical font magnifying factor.						
LENGTH	Numeric data item from 0 to 70. Field used also by setting the alignment. Strings exceeding the set length are broken down.						

	FIXED TEXT	VARIABLE TEXT	BARCODE	LINE	RECTANGLE	IMAGE	SHADE AREA
ALIGNMENT		See table 7-58-C for the full list of available alignments.					
FILLING CHARACTER		One-character alphanumerical. A space or any character managed by the program can be used					
VARIABLE FIELD		Select YES or NO. It discriminates whether to send data only at the start of the process or in all weighing operations.					
HEIGHT			Numeric data item from 0 to 999.99 mm. Barcode printing height.		Numeric data item from 0 to 999.99 mm. Printing height of the rectangle.		Numeric data item from 0 to 999.99 mm. Print height of the shaded area
THICKNESS					Numeric data item from 1 to 16. Line thickness in dots.		
EXPANSION			Numeric data item from 0 to 9. Width expansion of the barcode.				
WIDE BAR DIMENSION			Numeric data item from 0 to 99. Multiplying factor of the wide bar printing dots.				

	FIXED TEXT	VARIABLE TEXT	BARCODE	LINE	RECTANGLE	IMAGE	SHADE AREA
NARROW BAR DIMENSION			Numeric data item from 0 to 99. Multiplying factor of the narrow bar printing dots.				
INTERPRETED			Selectable between: YES or NO. YES: the represented value will appear in light letters under the barcode. NO: no value will appear under the barcode.				
LINE NUMBER			Numeric data item from 0 to 999.				
COLUMN NUMBER			Numeric data item from 0 to 999.				
SAFETY LEVEL			Numeric data item from 0 to 8. The higher the factor, the greater the redundancy of printed data and so the ability to reconstruct the information if the barcode is damaged.				
TRUNCATED			Selectable between: YES or NO.				

Figure 2-58 - Label archive field properties

List of Fonts

VALUE	MEANING
0	Standard
1	Micro
2	Arial
3	Draft
4	Motor
5	New Century
6	Title
7	Compact
8	Century
9	Standard Rev.
10	Micro Rev.
11	Arial Rev.
12	Draft Rev.
13	Motor Rev.
14	Nina 10
15	Nina 10 Bold
16	Nina 12
17	Nina 12 Bold
18	Nina 16
19	Nina 16 Bold
20	Nina 20
21	Nina 20 Bold
22	Nina 28
23	Nina 28 Bold
24	Custom 1
25	Custom 2
26	Custom 3
27	Custom 4

Table 7-58-B – List of available fonts

List of Alignments

VALUE	MEANING
0	Automatic
1	To left
2	To right
3	Centred
4	To right real DTMX
5	Centred real DTMX

Table 7-58-C – List of alignments

NOTE 4 ABOUT BARCODES:

The NARROW BAR DIM. setting must never be zero in “*Home \ Archives \ Label \ Lab.Dis \ Lab.Mod*”.

In particular, a 1:0 wide-narrow ratio cannot be selected with the EAN 13 barcode as the program would be unable to print it correctly even though the barcode construction specifications do not allow for this ratio to be interpreted.

NOTE 5 ABOUT THE PRINTING ORDER

The fields in the labels are printed in the order in which they are entered. Thus, the last will possibly overlap the first. Bear this fact in mind when bringing initials and/or codes into logos or drawings (Oval EEC stamp). The entry order can be varied by means of the **MOVE FIELD UP/DOWN** buttons (see fig. 7.59)

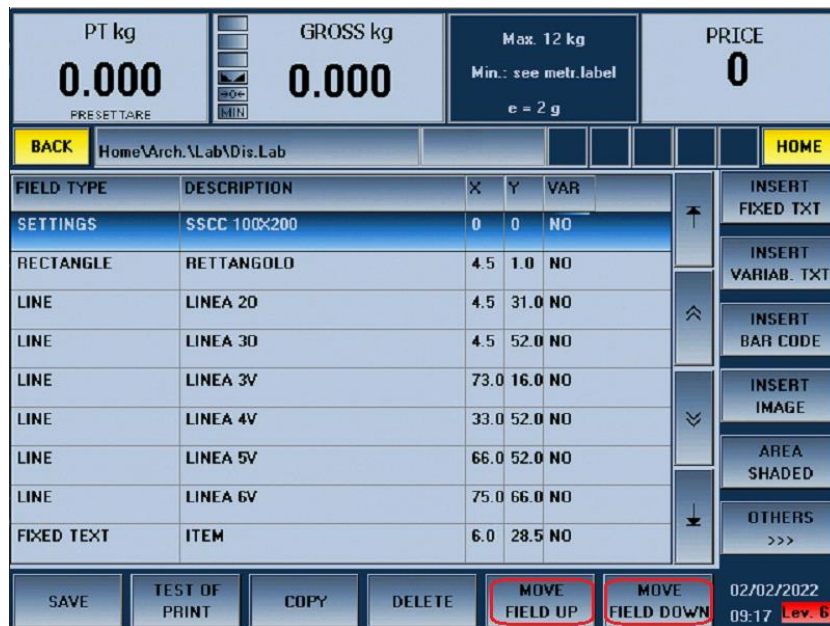


Figure 2-59 - Label editing window

2.6.8 PLU

2.6.8.1 Introduction

PLU stands for Product Look Up and the relative archive contains all the information about the articles that must be processed.

Following the path:

“Home \ ARCHIVES \ PLU”

the following window will appear:

PT kg 0.000 <small>PRESETTARE</small>		GROSS kg 0.000		Max. 12 kg Min.: see metr.label e = 2 g		PRICE 0	
BACK	Home\Arch.\Plu					HOME	
PLU	CLIENT	ARTICLE 1 TEXT	ARTICLE 2 TEXT	ETI	↑ ⇧ ⇩ ↓	SORT BY PLU	
OTHERS		1 LINE 22 CHAR	2 LINE 60 CHAR	385:		SORT BY CLIENT	
SSCC_100X2	1234567	WEIGHING LABEL	LOGISTIC LABEL			LIST PLU OPEN	
SAVE		NEW		COPY		DELETE	
						01/02/2022 11:39 Lev. 6	

Figure 2-60 - PLU Archive

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

PLU archive properties

Note: depending on the line model, some parameters in the following list may not be visible.

FIELD	TYPE AND LENGTH	DESCRIPTION
PLU	Alphanumeric data item from 0 to 15 characters	ID of the PLU, cannot be modified. It can be printed both in light letters and in barcodes.
CODES		
CLIENT	Alphanumeric data item from 0 to 10 characters	Identifies the name of the client.
PRODUCT CODE	Alphanumeric data item from 0 to 15 characters	Alphanumeric code that identifies the product. Can either be associated with the warehouse product code or with a code personalized for the client and can be printed both in light letters and in barcodes.
BATCH	Alphanumeric data item from 0 to 15 characters	Number that identifies a batch of products. It is displayed as soon as the PLU is selected; it can be printed both in plain text and in barcodes.
LOT	Alphanumeric data item from 0 to 15 characters	Number that identifies a lot of products. It is displayed as soon as the PLU is selected; it can be printed both in plain text and in barcodes.
COMMODITY	Alphanumeric data item from 0 to 15 characters	Alphanumeric code that identifies the product category. It can be printed both in plain text and in barcodes.
TRACEABILITY (optional)	Alphanumeric – Max. length dependent on file TRACE.CFG.	Visible only if the TRACEABILITY option is active. A traceability code can be associated with the PLU by specifying it in this field.
CUSTOMER CODE (optional)	Alphanumeric – Max. length dependent on file CLIENT.CFG.	Visible only if the CLIENTS option is active. A client code can be associated with the PLU by specifying it in this field.
INDICOD		
PRODUCT INDICOD	Numeric data item from 0 to 13 characters	Field of the numeric type that identifies the Indicod code to add to the EAN13 barcode or to other barcodes, with 13 characters. It is used in the labels of the individually weighed piece.
TOT 1 INDICOD	Numeric data item from 0 to 13 characters	Field of the numeric type that identifies the Indicod code to add to the EAN13 barcode or to other barcodes, with 13 characters. It is used in labels for total 1, which is the total of the package.

FIELD	TYPE AND LENGTH	DESCRIPTION
TOT 2 INDICOD	Numeric data item from 0 to 13 characters	Field of the numeric type that identifies the Indicod code to add to the EAN13 barcode or to other barcodes, with 13 characters. It is used in labels for total 2, which is the total of the pallet.
WEIGHTS		
WEIGHING TYPE	Can be selected between STATIC and DYNAMIC	Allows you to select the type of weighing to be used for the current PLU (static or dynamic)
UNIT OF MEASUREMENT FOR WEIGHT	Can be selected from either kg or lb	Allows the weight unit used to be selected for each PLU: kilograms (kg) or pounds (lb).
PRODUCT TARE	Numeric data item from 0 to 99.999 characters, expressed in kg	Identifier of the preset tare value of the package. For example, it is associated with the weight of the packet, polystyrene tray and relative polyethylene, etc. It is displayed as soon as the PLU is selected and is used for calculating the net weight; it is added to each weight made so as to obtain the final calculation of the overall tare for each total level (see "Totalizing" section"). It can be printed both in light letters and in barcodes.
PRODUCT % TARE	Numeric data item from 0 to 99.99	Identifier of the percentage weight drop due to the loss of liquids (e.g. when certain products drip, when products thaw or are cured). It is added to the product tare and is then printed and totalized along with the latter.
PRINT PROD. TARE	Selectable between: YES or NO	Establishes whether the tare value of each individual parcel is to be printed on the label or not.
PACKING TARE (TOT. 1)	Numeric data item from 0 to 999.999, expressed in kg	Identifier of the preset tare value of the package. For example, it is associated with the weight of the box or crate, etc. It is used to calculate the net weight of the package along with the total of the individual tares of each product it contains. It can be printed both in light letters and in barcodes.
PRINT TARE TOT. 1	Selectable between: YES or NO	Establishes whether the tare value of each individual package is to be printed on the label or not.

FIELD	TYPE AND LENGTH	DESCRIPTION
PALLET TARE (TOT. 2)	Numeric data item from 0 to 999.999, expressed in kg	Identifier of the preset tare value of the pallet; it is used to calculate the net weight of the pallet along with the total of the tares of each package it contains. It can be printed both in light letters and in barcodes.
PRINT TARE TOT. 2	Selectable between: YES or NO	Establishes whether the tare value of each individual pallet is to be printed on the label or not.
PRINT GROSS	Selectable between: YES or NO	Establishes whether the gross weight of each individual package is to be printed on the label or not.
PRINT WEIGHT SYMBOL	Selectable between: WITHOUT SYMBOL SYMBOL WITHOUT SPACE SYMBOL WITH SPACE	Identifies the mode in which the weight symbol is printed alongside the real weight value.
FIXED DATA	Selectable between: VARIABLE WEIGHT FIXED WEIGHT FIXED AMOUNT	Discriminates the product processing mode.
FIXED WEIGHT	Numeric data item from 0 to 999.999, expressed in kg	Identifier of the fixed weight value to print if the products are to be labelled with preset weights. It can be printed both in light letters and in barcodes.
FIXED AMOUNT	Numeric data item from 0 to 999999.999	Identifier of the fixed amount value to print if the products are to be labelled with preset amounts. It can be printed both in light letters and in barcodes.
TRACE CODE TOT EN.	Selectable between: YES or NO	Allows products processed with a pre-established re-traceability code to be totalized (or not) within the traceability total, if activated.
PROD PRIMARY WEIGHT DEC	List: SCALE CONFIG 1 2 3 4	Parameter used for setting the number of decimals to be used for the product weight value, both printed and via the network.
TOT1 PRIMARY WEIGHT DEC	List: SCALE CONFIG 1 2 3 4	Parameter used for setting the number of decimals to be used for the total 1 weight value, both printed and via the network.

FIELD	TYPE AND LENGTH	DESCRIPTION
TOT2 PRIMARY WEIGHT DEC	List: SCALE CONFIG 1 2 3 4	Parameter used for setting the number of decimals to be used for the total 2 weight value, both printed and via the network.
CTRL (optional)		
CTRL ENABLING	Selectable between: YES or NO	If "YES" is selected and the CTRL option is activated, the relative PLU is enabled
CTRL limit --	Numeric data item from 0 to 1000.0000	<p>CTRL lot limits, calculated by default on the basis of the PLU fixed weight. The + and ++ limits can be freely edited during the process. The - and - - default limits can only be edited if the CTRL lot does not contain a totalised piece yet.</p> <p><u>NOTE (only for Selecta terminals): In case of VOLUMETRIC mode (optional), these values will be expressed in the volume measurement unit selected in the PLU.</u></p>
CTRL limit -	Numeric data item from 0 to 1000.0000	
+ CTRL limit	Numeric data item from 0 to 1000.0000	
++ CTRL limit	Numeric data item from 0 to 1000.0000	
CTRL OPTIONS	From - to ++ with 2.5% From - to + with 2.5% From - on with 2.5% From - to ++ without 2.5% From - to + without 2.5% From - onwards without 2.5%	<p>"From - to ++ with 2.5%", pieces whose weight is between the -LIMIT and the ++LIMIT are accepted. Moreover, up to 2.5% of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.</p> <p>"From - to + with 2.5%", pieces whose weight is between the -LIMIT and the +LIMIT are accepted. Moreover, up to 2.5% of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.</p> <p>"From - onwards with 2.5%", pieces whose weight is higher than the -LIMIT are accepted. Moreover, up to 2.5% of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.</p> <p>"From - to ++ without 2.5%"; "From - to + without 2.5%"; "From - onwards without 2.5%".</p>

FIELD	TYPE AND LENGTH	DESCRIPTION
PIECE % BETWEEN - AND --	Numeric data item, between 0% and 100%.	Defines the percentage of pieces that can be accepted between limits – and -- of the CTRL.
ALLOW NEG.AVERAGE	Boolean (YES, NO).	Allows the CTRL lot to accept pieces that would send the average below the nominal weight. If the lot is closed with the average value below the nominal weight, the lot will be identified as “REJECTED”.
NO. AVERAGE PIECE CHECK	Numeric data item, from 0 to 999.	Parameter that sets the number of CTRL pieces after which the weight average is checked. If = 0, the check is not carried out.
MAX NO.AVERAGE CHECKS	Numeric data item, from 1 to 99.	Parameter that sets the maximum number of consecutive checks on the ctrl weight average, after which the restart must be preceded by control password entry.
LOT END	List: MANUAL NUMBER OF PIECES TIMED	Identifies the lot closing criterion (Manual, number of pieces or timed)
LOT PIECES	Numeric data item, from 0 to 65500.	If piece closure, defines the number of pieces for closing the lot.
LOT MINUTES	Numeric data item, from 0 to 30000.	If timed closure, defines the number of minutes for closing the lot
CALIBR. DYNAMICS (Selecta only)	Numeric data item, from 100.00000 to 100.00000.	Sets a weight correction offset to be applied to the weighing operations. Calculated using the dynamic calibration procedure.
CALIBR. WEIGHT (Selecta only)	Numeric data item, from 0 to 60. The settable decimals depend on the terminal configuration.	Defines the reference weight used for the dynamic calibration procedure.
CALIBRATION FREQ. (Selecta only)	Numeric data item, from 0 to 999.	Defines the frequency (pieces per minute) set during the dynamic calibration procedure.
++ REJECT LIMIT	Numeric data item, from 0 to 999.	Defines the number of consecutive pieces beyond the ++ limit, after which an auxiliary lamp is turned on.

FIELD	TYPE AND LENGTH	DESCRIPTION
-- REJECT LIMIT	Numeric data item, from 0 to 999.	Defines the number of consecutive pieces beyond the -- limit, after which an auxiliary lamp is turned on.
NW REJECT LIMIT	Numeric data item, from 0 to 999.	Defines the number of consecutive NON-WEIGHABLE pieces, after which an auxiliary lamp is turned on.
ZONES 2/4 PCS.LIMIT	Numeric data item, from 0 to 999.	Defines the number of consecutive pieces totalised between zones 2 and 4, after which an auxiliary lamp is turned on.
ZONES 1/5 PCS.LIMIT	Numeric data item, from 0 to 999.	Defines the number of consecutive pieces totalised in zones 1 and 5, after which an auxiliary lamp is turned on.
REPORT LANGUAGE	List of languages available on the terminal.	Defines the language used for printing the CTRL report fixed texts.
REPORT TYPE	List: COMPLETE CUSTOM	Defines the type of report printing when this is automatically triggered. There are 2 types: COMPLETE (with all the details) and CUSTOM (with data filtered after setting by a technician).
FEEDBACK		
ENABLE FEEDBACK	Boolean (YES, NO).	Enables/Disables the FEEDBACK option (optional).
CORRECTION	Numeric data item, from -1000 to 1000. The number of decimals depends on the terminal configuration.	Expresses the weight which, added to the nominal weight, determines the target weight, namely the value which is compared to the average adjustment weight to determine the extent of the adjustment itself.
UPPER LIMIT	Numeric data item, from 0 to 1000. The number of decimals depends on the terminal configuration.	Packages whose weight exceeds the upper limit are not used to calculate the average adjustment value.
LOWER LIMIT	Numeric data item, from 0 to 1000. The number of decimals depends on the terminal configuration.	Packages whose weight is less than the lower limit are not used to calculate the average adjustment value.
UPPER TOLERANCE	Numeric data item, from 0 to 1000. The number of decimals depends on the terminal configuration.	If the average adjustment value is between the target weight and the target weight plus the tolerance, the regulator will not be activated.

FIELD	TYPE AND LENGTH	DESCRIPTION
LOWER TOLERANCE	Numeric data item, from 0 to 1000. The number of decimals depends on the terminal configuration.	If the average adjustment value is between the target weight minus the tolerance and the target weight, the regulator will not be activated
AVERAGE PIECES	Numeric data item, from 0 to 999.	Number of packages to be used to determine the average adjustment weight, obtained through the mobile average
PIECES AWAITING START	Numeric data item, from 0 to 999.	Number of packages which must not be included to calculate the average after the start of the process.
PIECES AWAITING ADJUSTM.	Numeric data item, from 0 to 999.	Number of packages which must not be considered before resuming calculation of the average adjustment value after an adjustment has been made.
HANDLING		
INPUT BELT SPEED	Numeric data item from 0 to 100	Speed of first belt <u>if installed</u> .
FREQUENCY (Selecta only)	Numeric data item, from 0 to 500.	Frequency (pieces per minute) to be used for the current PLU. The terminal calculates the speed based on the scale plate length.
BELT SPEED	Numeric data item from 0 to 100	Speed of 2nd to 4th belts if there are four belts, of all if there are three belts.
UP/DOWN ENABLING	Selectable between: YES or NO	
WEIGHING POSIT.	Numeric data item from 0 to 400	Represents the target-delta in relation to the machine settings.
LABELLING POSIT.	Numeric data item from 0 to 400	Represents the target-delta in relation to the machine settings.
TOT1 APPL.DELTA (optional)	Numeric data item, from -999 to 999.	Delta used in case of print cycle/box label application management on the same product printer.
HEAD1 APPL. ON PIECE LENGTH	Boolean (YES, NO)	If set to YES, it automatically changes the printing head 1 application target so that the label is always applied at the same distance from the bottom of the piece.
LABELLING2 POSIT.	Numeric data item, from -999 to 999	Represents the application target-delta of printing head 2 with respect to the machine settings.
HEAD2 APPL. ON PIECE LENGTH	Boolean (YES, NO)	If set to YES, it automatically changes the printing head 2 application target so that the label is always applied at the same distance from the bottom of the piece.
POS. LAB. HORIZONTAL	Numeric data item, from 0 to 300.	Printing head 1 horizontal position target.
POS. LAB. VERTICAL	Numeric data item, from 0 to 999.	Printing head 1 vertical position target.

FIELD	TYPE AND LENGTH	DESCRIPTION
HORIZONTAL LAB.2 POS	Numeric data item, from 0 to 300.	Printing head 2 horizontal position target.
POS. LAB. VERTICAL 2	Numeric data item, from 0 to 999.	Printing head 2 vertical position target.
REJECT MANAGEMENT	List: DEFAULT WITHOUT LABELLING STOPPING	Parameter used for managing the type of reject for the current PLU.
PIECE LENGTH	Numeric data item from 0 to 109	Filter which, if present, substitutes the machine's default filtering and eliminates the double readings.
PHOTOCELL FILTER (mm)	Numeric data item, from 0 to 32767.	Parameter used only to filter the input photocell to avoid double readings.
PROD. MANUAL APPLIC.	Selectable between: YES or NO	
APPLICATION ON	List: DEFAULT APPLICATION TARGET PHOTOCELL	Specifies the product label application position for the current PLU. It can overwrite the mode specified in the terminal settings.
SELECTOR	List: NO EJECTOR EJECTOR EJE. / DIV.1 EJE. / DIV.2 EJE. / DIV.3 EJE. / DIV.4 EJE. / DIV.5 EJE. / DIV.6 EJE. / DIV.7 EJE. / DIV.8	Field that defines the number of the diverter from where the piece will be diverted.
EJECTORS		
EJECTOR 1 DELTA	Numeric data item, from -600 to 600.	Delta to be applied to the configured EJECTOR 1 target.
EJECTOR 2 DELTA	Numeric data item, from -600 to 600.	Delta to be applied to the configured EJECTOR 2 target
EJECTOR 1 TARGET	Numeric data item, from 0 to 2000.	
EJECTOR 2 TARGET	Numeric data item, from 0 to 2000.	
EJECTOR 1 TIME (ms)	Numeric data item, from 0 to 30000.	Activation time of ejector 1 associated with the PLU.
EJECTOR 1 TIME (ms)	Numeric data item, from 0 to 30000.	Activation time of ejector 1 associated with the PLU.

FIELD	TYPE AND LENGTH	DESCRIPTION
PAIRED EJECTOR	List: NONE EJECTOR 1 EJECTOR 2	Parameter indicating any exclusive ejector for this PLU (decide whether to reject only with ejector 1 or 2 for this PLU).
REJECT MINUS MINUS	Boolean (YES, NO).	Reject the pieces that, in CTRL operation, fall in zone 1 (below limit --)
REJECT MINUS	Boolean (YES, NO).	Reject the pieces that, in CTRL operation, fall in zone 2 (between limit -- and limit -)
REJECT OK	Boolean (YES, NO).	Reject the pieces that, in CTRL operation, fall in zone 3 (between limit - and limit +)
REJECT +	Boolean (YES, NO).	Reject the pieces that, in CTRL operation, fall in zone 4 (between limit + and limit ++)
REJECT ++	Boolean (YES, NO).	Reject the pieces that, in CTRL operation, fall in zone 5 (beyond limit ++)
REJECT METAL	Boolean (YES, NO).	Reject the pieces that are reported to be incorrect by the metal detector
REJECT ABOVE RANGE	Boolean (YES, NO).	Ejector 1: Reject the pieces whose weight is ABOVE the PLU range
REJECT BELOW RANGE	Boolean (YES, NO).	Ejector 1: Reject the pieces whose weight is BELOW the PLU range
REJECT OUT OF RANGE	Boolean (YES, NO).	Reject the pieces whose weight does not match the selection parameters of the minimum and maximum weight ranges
INVALID STORE REJECT	Boolean (YES, NO).	Reject the pieces for which the store is invalid (only for Crate weigher mode).
REJECT NOT WEIGHABLE	Boolean (YES, NO).	Reject the pieces in various cases: unstable weight, long piece, insufficient piece info, minimum weighing, minimum weight.
REJECT TOO FULL	Boolean (YES, NO).	Currently unmanaged.
EXTERNAL INPUT REJECT	Boolean (YES, NO).	When this parameter is enabled, ejector 1 activates in case of reject due to the activation of an external input
UPPER DYNAMIC CALIBRATION REJECT	Boolean (YES, NO).	reject the pieces whose weight is ABOVE the dynamic calibration range
LOWER DYNAMIC CALIBRATION REJECT	Boolean (YES, NO).	reject the pieces whose weight is BELOW the dynamic calibration range
EJE.1 RED MANAGEMENT	Boolean (YES, NO).	Currently unmanaged.

FIELD	TYPE AND LENGTH	DESCRIPTION
EJE.2 RED MANAGEMENT	Boolean (YES, NO).	Currently unmanaged.
METAL DETECTOR		
METAL ENABLING	Boolean (YES, NO).	Parameter that enables or disables the current PLU metal management.
RECIPE ID	String (from 0 to 12 characters)	Defines the recipe (stored in the metal detector memory) that must be retrieved when the process starts.
RANGE		
LOW. WGT LIMIT	Numeric data item from 0 to 999.999, expressed in kg	<p>The weighed packages can be checked by setting the two weight ranges envisaged in the PLU. All the weight packages within the two selected limits will be labelled if the WITHIN RANGE parameter is selected</p> <p>The packages outside the range will be: rejected, if the ejector is installed (OPTIONAL); not labelled; stopped on the line.</p> <p>If the EXTERNAL RANGE parameter is selected, all packages whose weight is not between the two set thresholds (lower and upper) will be labelled.</p> <p>The packages within the range will be: rejected, if the ejector is installed (OPTIONAL); not labelled; stopped on the line.</p> <p>NOTE (only for Selecta terminals): In case of VOLUMETRIC mode (optional), these values will be expressed in the volume measurement unit selected in the PLU.</p>
UPP. WGT LIMIT	Numeric data item from 0 to 999.999, expressed in kg	
RANGE TYPE	Within or outside	
WEIGHT BOUNDING ID	Weight Bounding Archive Link	
CURRENCIES		
PRIMARY CURRENCY	List of currencies in relation to the various geographical areas. Selection of one of these areas will access a mask containing all the countries in the selected area, allowing the required country to be chosen.	<p>Establishes the currency to use when the primary currency is printed. It is represented in geographical areas, which are:</p>
		EUROLAND
		WESTERN EUROPE

FIELD	TYPE AND LENGTH	DESCRIPTION
		EASTERN EUROPE
		AMERICA
		AFRICA
		ASIA
		OCEANIA
NUM. DECIMALS 1	Can be selected from 0 to 3	Gives the number of decimals to consider in the primary currency
ROUNDING OFF 1	Can be selected from 1, 5 and 10	Gives the degree of approximation of the value of the amount.
PRIMARY CURRENCY SYMBOL	Alphanumerical data item from 0 to 3 characters	Identifies the symbol of the primary currency, depending on the country selected.
UNIT PRICE	Numeric data item from 0 to 999999.999	Identifier of the value of the unitary price in relation to the currency used. It is displayed directly as soon as the PLU is selected; it can be printed both in plain text and in barcodes.
UNIT PRICE TEXT	String (from 0 to 70 characters)	Descriptive text to be associated with the unit price.
PRINT PRIMARY PRICE	Selectable between: YES or NO	Establishes whether the primary currency price is to be printed on each individual package or not.
PRIM.AMOUNT TEXT	String (from 0 to 70 characters)	Descriptive text to be associated with the primary amount.
PRINT PRIMARY AMOUNT	Selectable between: YES or NO	Establishes whether the primary currency amount is to be printed on each individual package or not
SECONDARY CURRENCY	List of currencies in relation to the various geographical areas. Selection of one of these areas will access a mask containing all the countries in the selected area, allowing the required country to be chosen.	Establishes the currency to use when the secondary currency is printed. It is represented in geographical areas, which are:
		EUROLAND
		WESTERN EUROPE
		EASTERN EUROPE
		AMERICA
		AFRICA
		ASIA
		OCEANIA
NUM. DECIMALS 2	Can be selected from 0 to 3	Gives the number of decimals to consider in the secondary currency
ROUNDING OFF 2	Can be selected from 1, 5 and 10	Gives the degree of approximation of the value of the amount.

FIELD	TYPE AND LENGTH	DESCRIPTION
SEC.CURRENCY SYMBOL	Alphanumeric data item from 0 to 3 characters	Identifies the symbol of the secondary currency, depending on the country selected.
PRIM.-SEC. CURRENCY CONV.	Numeric data item from 0 to 9999.999999	Establishes the conversion value, which is automatic for all countries in which the EURO is used. The adequate conversion value must be entered for all the other countries.
PRINT SEC.PRICE	Selectable between: YES or NO	Establishes whether the secondary currency price is to be printed on each individual package or not.
PRINT SEC.AMOUNT	Selectable between: YES or NO	Establishes whether the secondary currency amount is to be printed on each individual package or not
PRINT CURRENCY SYMBOL	Selectable between: WITHOUT SYMBOL SYMBOL WITHOUT SPACE SYMBOL WITH SPACE	Identifies the mode in which the currency symbol is printed alongside the price and amount.
DATE		
PROD. DATE TEXT	Direct entry or Text Archive Link	Gives the description associated with the production date, to be printed on the label. Also allows one of the texts in the texts archive to be selected.
PROD. DATE TEXT 2	Direct entry or Text Archive Link	Gives a second description associated with the production date, to be printed on the label. Also allows one of the texts in the texts archive to be selected.
PROD.DATE FORMAT	List of the ways in which the production date can be printed	List of date formats: Identifies the date printing mode and can be selected from amongst:
		DD MM YY
		DD MM YYYY
		DD.MM.YY
		DD.MM.YYYY
		DD/MM/YY
		DD/MM/YYYY
		DD ROM YY
		DD ROM YYYY
		DD MON YY
		DD MON YYYY
		MM DD YY
		MM DD YYYY
		MM.DD.YY
		MM.DD.YYYY
		MM/DD/YY
		MM/DD/YYYY

FIELD	TYPE AND LENGTH	DESCRIPTION
		DDMMYY
		DDMMYYYY
		DD PROG. OF THE YEAR
		ROM YY
		ROM YYYY
		MMDDYY
		MMDDYYYY
		YYMMDD
		YYYYMMDD
		WEEK OF YEAR
		DD-MM-YY
		DD-MM-YYYY
		MM-DD-YY
		MM-DD-YYYY
		YY MON(ENG) DD
		YYYY MON(ENG) DD
		YY-MON(ENG)-DD
		YYYY-MON(ENG)-DD
		YMMDD
		YY.JJJ
		MON YY
		MON YYYY
		YY-MM-DD
		DDYY
		DDRRMM
		DDRRYY
		DD MON(ENG)
		YY MO(BS) DD
PROD. DATE FORM. BARCODE	List of the ways in which the production date can be printed	See list of date formats.
PRINT PROD. DATE	Selectable between: YES or NO	Establishes whether the production date is to be printed on the label or not
DD. EXPIRY	Numeric data item from 0 to 999	Identifier of the number of the product's "use by" days. It is added to the production date so as to calculate the expiry date.
EXPIRY DATE TEXT	Direct entry or Text Archive Link	Gives the description associated with the expiry date, to be printed on the label. Allows one of the texts in the texts archive to be selected.

FIELD	TYPE AND LENGTH	DESCRIPTION
EXPIRY DATE TEXT 2	Direct entry or Text Archive Link	Gives the second description associated with the expiry date, to be printed on the label. Allows one of the texts in the texts archive to be selected.
EXPIRY DATE FORMAT	List of the ways in which the expiry date can be printed	See list of date formats.
EXPI. DATE FORM. BARCODE	List of the ways in which the production date can be printed	See list of date formats.
PRINT EXPIRY DATE	Selectable between: YES or NO	Establishes whether the expiry date is to be printed on the label or not
EXPIRY: SEL.DAY	Boolean (YES, NO).	If set to YES, it automatically increases the expiry date, bringing it to the day of the week indicated in the "DAY OF THE WEEK" parameter.
DAY OF THE WEEK	List: SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY	
CURING DD	Numeric data item from 0 to 999	Identifier of the number of the product's curing days. It is added to the production date so as to calculate the curing date.
CURING DATE TEXT	Direct entry or text Archive Link	Gives the description associated with the curing date, to be printed on the label. Allows one of the texts in the texts archive to be selected.
CURING DATE TEXT 2	Direct entry or text Archive Link	Gives the second description associated with the curing date, to be printed on the label. Allows one of the texts in the texts archive to be selected.
CURING DATE FORMAT	List of the ways in which the expiry date can be printed	See list of date formats.
CUR. DATE FORM. BARCODE	List of the ways in which the production date can be printed	See list of date formats.
PRINT CURING DATE	Selectable between: YES or NO	Establishes whether the curing date is to be printed on the label or not
CUR.: SEL.DAY	Boolean (YES, NO).	If set to YES, it automatically increases the curing date, bringing it to the day of the week indicated in the "DAY OF THE WEEK" parameter.

FIELD	TYPE AND LENGTH	DESCRIPTION
DAY OF THE WEEK	List: SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY	
PRINT TIME	Selectable between: YES or NO	Establishes whether the time is to be printed on the label or not
DATE INCREASE DD	Numeric data item, from -9999 to 9999.	This field indicates by how many days the dates will be moved forward during processing; this allows you to simulate processes that start after the current system date: all 3 days will be affected by this parameter.
PRESELECTIONS		
PRESELEC. TOT. 1 PC	Numeric data item from 0 to 999999999	Indicates the number of packages to reach to activate total label issue for the box or crate in the automatic or manual mode.
PRESELEC. TOT 1 WEIGHT	Numeric data item from 0 to 99999.999 characters, expressed in Kg (or Lb)	Indicates the weight value to reach to activate total label issue for the box or crate in the automatic or manual mode.
TOT.1 PRESELECTION	Numeric data item, from 0 to 9999999.	<u>Selecta only with volumetric mode:</u> indicates the product volume to be reached for total 1 closure, with relative issue of the box label where present. Note: "PRESELEC. TOT 1 PC" and "PRESELEC. TOT 1 WEIGHT" will not be visible for this parameter.
PRESELEC. TOT. 2 PCS	Numeric data item from 0 to 999999999	Indicates the number of packages to reach to activate total label issue for the pallet in the automatic or manual mode.
PRESELEC. TOT. 2 WEIGHT	Numeric data item from 0 to 99999.999 characters, expressed in Kg (or Lb)	Indicates the weight value to reach to activate total label issue for the box or pallet in the automatic or manual mode.

FIELD	TYPE AND LENGTH	DESCRIPTION
TOT.2 PRESELECTION	Numeric data item, from 0 to 9999999.	<u>Selecta only with volumetric mode:</u> indicates the total 1 volume to be reached for total 2 closure, with relative issue of the pallet label where present. Note: "PRESELEC. TOT 2 PCS" and "PRESELEC. TOT 2 WEIGHT" will not be visible for this parameter.
PIECES WEIGHED	Numeric data item from 0 to 999	Indicates the number of pieces to consider in a box after each weighing operation.
REPROG.PCS MULTIPLICATION	Boolean (YES, NO).	If set to YES, when the piece limit in the box is reached (PRESEL_1_PIECES) this parameter ensures that the "PIECES WEIGHED" value is reset equal to the PRESEL_1_PIECES.
TOT1 PRES. IN PCS MULT	Boolean (YES, NO).	When total 1 is closed, the "TOT.1 PRESELECTION" value is copied within the "PIECES WEIGHED" value.
PCS PROCESS LIMIT	Numeric data item from 0 to 109	Indicates the number of pieces to reach in order to conclude the process. A request to quit the process or proceed will appear once this limit has been reached.
WEIGHT PROCESS LIMIT	Numeric data item from 0 to 109	Indicates the weight to reach in order to conclude the process. A request to quit the process or proceed will appear once this limit has been reached.
TOT1 AUT.COMPLETE	Boolean (YES, NO)	If set to YES, each weighed piece that does not close the box performs a calculation that sets the number of pieces missing to close the box itself in "PIECES WEIGHED".
ARTICLE TEXTS		
ARTICLE TEXT 1 – 20 (70-character texts)	Direct entry or Text Archive Link	Alphanumerical code identifying a generic text to be printed. It can be used for printing the name of the product, the ingredients or any other text on the label. The first two lines of the description will appear on the screen when the PLU is selected.
EXTENDED TEXTS		

FIELD	TYPE AND LENGTH	DESCRIPTION
EXTENDED TEXT 1-10 (1600-character texts)	Direct entry or Extended Text Archive Link.	Alphanumerical code identifying a generic text to be printed. It can be used for printing the name of the product, the ingredients or any other text on the label. The first two lines of the description will appear on the screen when the PLU is selected.
LABELS		
PRODUCT LABEL	Label Archive Link	Allows one of the label formats in the labels archive to be selected and assigned to the pricing of the individual packages
PRODUCT LABEL 2	Label Archive Link	Allows one of the label formats in the labels archive to be selected and assigned to the pricing of the individual packages by means of the second printhead.
TOT.1 LABEL	Label Archive Link	Allows one of the label formats in the labels archive to be selected and assigned to the pricing of the box or crate total.
TOT.2 LABEL	Label Archive Link	Allows one of the label formats in the labels archive to be selected and assigned to the pricing of the pallet total.
PLU TOT.LABEL	Label Archive Link	Allows one of the label formats in the labels archive to be selected and printed when the process closes.
PROD.LAB.BARCODE	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE		
BARCODE 1	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 2	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 3	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 4	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 5	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 6	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.

FIELD	TYPE AND LENGTH	DESCRIPTION
BARCODE 7	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE 8	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro.
BARCODE IN LIGHT LETTERS 1	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro. The barcode value in light letters will be made available for printing on the label and among the data available via the network.
BARCODE IN LIGHT LETTERS 2	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro. The barcode value in light letters will be made available for printing on the label and among the data available via the network.
BARCODE IN LIGHT LETTERS 3	Barcode Archive Link	Allows the user to select a barcode from the barcode archive to allocate, also via macro. The barcode value in light letters will be made available for printing on the label and among the data available via the network.
IMAGES		
IMAGE 1	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
IMAGE 2	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
IMAGE 3	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
IMAGE 4	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
IMAGE 5	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
IMAGE 6	Image Archive Link	Allows the user to select an image from the image archive to allocate, also via macro.
CONSECUTIVE NUMBERS		

FIELD	TYPE AND LENGTH	DESCRIPTION
PIECE CONSEC. PRINT	Selectable between: YES or NO	Establishes whether the consecutive package number is to be printed on the label of the individual products or not.
TOT. 1 CONSEC. PRINT	Selectable between: YES or NO	Establishes whether the consecutive number of the box or crate is to be printed on the total 1 label.
TOT. 2 CONSEC. PRINT	Selectable between: YES or NO	Establishes whether the consecutive number of the pallet is to be printed on the total 2 label.
PACKING LIST (optional)		
TOT 1 PACKING FILE	Link to list of available packing layouts.	Establishes whether the type of box packing list report is to be printed or not.
TOT 2 PACKING FILE	Link to list of available packing layouts.	Establishes whether the type of pallet packing list report is to be printed or not.
CONVERSION FACTOR		
CONVERSION FACTOR 1	Numeric data item, from 0 to 100000 with 3 decimal digits	Value to be multiplied in the process Piece Net Weight field to obtain the weighing values expressed with alternative units of measurement, following an automatic calculation.
ROUNDING OFF CF.1	List: 1 2 5 10	Defines the resolution of the multiplication result between conversion factor 1 and the piece net weight.
NO. DECIMALS CF1	List: 0 1 2 3 4	Defines the number of decimals representing the multiplication result between conversion factor 1 and the piece net weight.
CONVERSION FACTOR 2	Numeric data item, from 0 to 100000 with 3 decimal digits	Value to be multiplied in the process Piece Net Weight field to obtain the weighing values expressed with alternative units of measurement, following an automatic calculation.

FIELD	TYPE AND LENGTH	DESCRIPTION
ROUNDING OFF CF.2	List: 1 2 5 10	Defines the resolution of the multiplication result between conversion factor 2 and the piece net weight.
NO. DECIMALS CF2	List: 0 1 2 3 4	Defines the number of decimals representing the multiplication result between conversion factor 2 and the piece net weight.
CONVERSION FACTOR 3	Numeric data item, from 0 to 100000 with 3 decimal digits	Value to be multiplied in the process Piece Net Weight field to obtain the weighing values expressed with alternative units of measurement, following an automatic calculation.
ROUNDING OFF CF.3	List: 1 2 5 10	Defines the resolution of the multiplication result between conversion factor 3 and the piece net weight.
NO. DECIMALS CF3	List: 0 1 2 3 4	Defines the number of decimals representing the multiplication result between conversion factor 3 and the piece net weight.
SPECIAL PARAMETERS		
ENAB. VERIFIC. HEAD 1	Boolean (YES, NO).	Enables/Disables check of the product label presence through a scanner positioned near printing head 1.
ENAB. VERIFIC. HEAD 2	Boolean (YES, NO).	Enables/Disables check of the product label 2 presence through a scanner positioned near printing head 2.
UNIT OF MEASUREMENT CONVERSION		
CONVERSION DATA FILE	"*.CFG" File.	Specifies a file in the terminal memory containing a set of precompiled values relating to the following parameters (unit of measurement, coefficient, rounding-off, etc..).
UNIT OF MEASUREMENT	String, from 0 to 2 characters.	Defines the new customised unit of measurement.

FIELD	TYPE AND LENGTH	DESCRIPTION
COEFFICIENT	Numeric data item, from 0.00000 to 99999.99999.	Conversion factor to be multiplied to the weights to obtain equivalent data expressed in the new customised unit of measurement.
ROUNDING OFF	List: 1 2 5 10	Defines the resolution of the multiplication result between the coefficient and the weights expressed in the main unit of measurement of the machine.
NUMBER OF DECIMALS	List: 0 1 2 3 4	Defines the number of decimals representing the multiplication result between the coefficient and the weights expressed in the main unit of measurement of the machine.
FIXED VALUE	Numeric data item, from 0.001 to 9999999.999.	Replaces the "FIXED WEIGHT" value when the "ALTERNATIVE UNIT OF MEASUREMENT" function is active.
ENABLE ML TABLE	Boolean (YES, NO).	Enables/disables the use of the ctrl limit calculation table in ml
COEFFICIENT 2	Numeric data item, from 0.00001 to 99999.99999.	Second conversion coefficient from ml to volumetric unit of measurement (ml/x).

Figure 2-61 - PLU field explanation

NOTE 1 ABOUT THE VARIABLE WEIGHT PROCESS

In this operating mode, the machine detects the gross weight of the package and prints it on the product label, subtracting the tare if set-up in this way. The detected gross weight, net weight and tare are added to the totals. The label must at least give the NET WEIGHT.

NOTE 2 ABOUT THE FIXED WEIGHT/AMOUNT PROCESS

In this operating mode, the machine detects the gross weight of the product, possibly compares it with the selected weight limits, but prints the label and totalizes the fixed weight and/or amount set in the PLU.

2.6.9 Traceability (Optional)

2.6.9.1 Introduction and properties of the traceability archive

Traceability is an identification, recording and labelling system for products that allows checks to be made throughout the entire production process (traceability).

Identification and traceability are the main tools used for dealing with emergency situations (e.g. goods withdrawn from the retail outlet) without having to destroy all the product regardless.

The current traceability systems conform to the European and national standard based on international standard UCC/EAN 128.

Thanks to this system, the entire product cycle can be checked right through to the retail outlet, while the consumer can be given a whole series of information.

The "traceability" option is sold separately for **GALAXI** weighing-pricing machines and is only activated in the machines after a special procedure has been carried out.

Besides the activation procedure, which enables the "traceability" function in the software, the machine must be programmed with the information that defines the fields in the archive that the operator can use, as well as the precompiled tables with the countries, breeds, size, source, origin, etc. (**note for the installers:** consult the "Installer's Manual" for instructions about how to program the fields).

When a traceability data item is entered in a label, specify that the field is NOT variable since each weighing operation is NOT transmitted to the printer.

There is an option that allows the request to be displayed in the traceability window when entering the process. This display is bound to the following **conditions:**

- The traceability option must be activated.
- The aforementioned option must be activated by means of the "TRACE. INPUT ON START" item in the Software Test menu (can only be accessed by installers).

If the above preconditions are fulfilled and the field "ENAB. TOT. CODE TRACE" is set to YES whenever you enter processing from the PLU Selection window, the traceability request window is displayed, otherwise (set to NO) nothing is requested and the last code set is valid.

The **PROGRAM** key can be pressed in the lot selection window in order to enter a new traceability lot.

If the archive is empty, the lot selection window will not appear and no entries can be made in this part of the program.

Following the path:

“Home \ ARCHIVES \ TRACEABILITY”

the following window will appear:

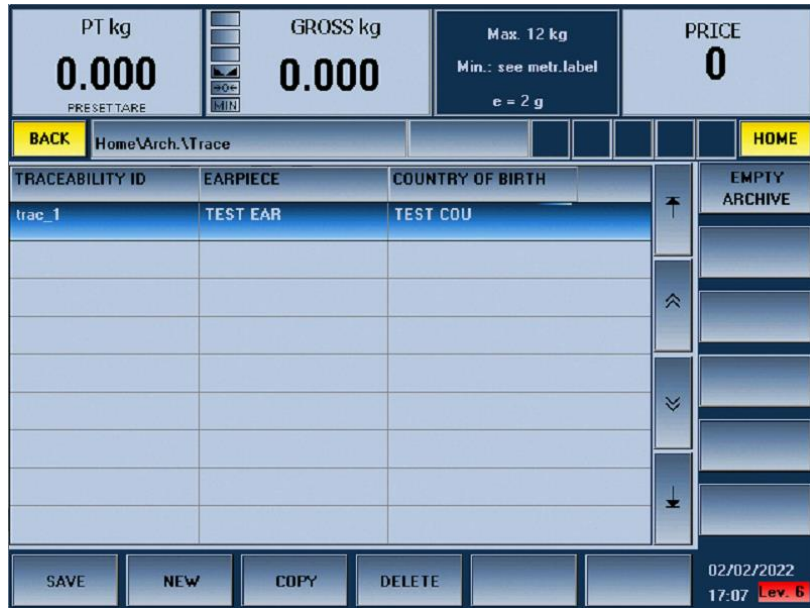


Figure 2-62 - Traceability Archive

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

2.6.9.2 Default settings

When activated the first time, the following default items are present. They can be modified by specialised personnel according to the requirements of the client:

- TRACEABILITY ID
- EARPIECE
- COUNTRY OF BIRTH
- COUNTRY OF BIRTH CODE
- FATTENING 1
- FATTENING
- CUTTING
- PREPARATION

2.6.9.3 File programming

The archive without programming, only shows a single lot identification field.

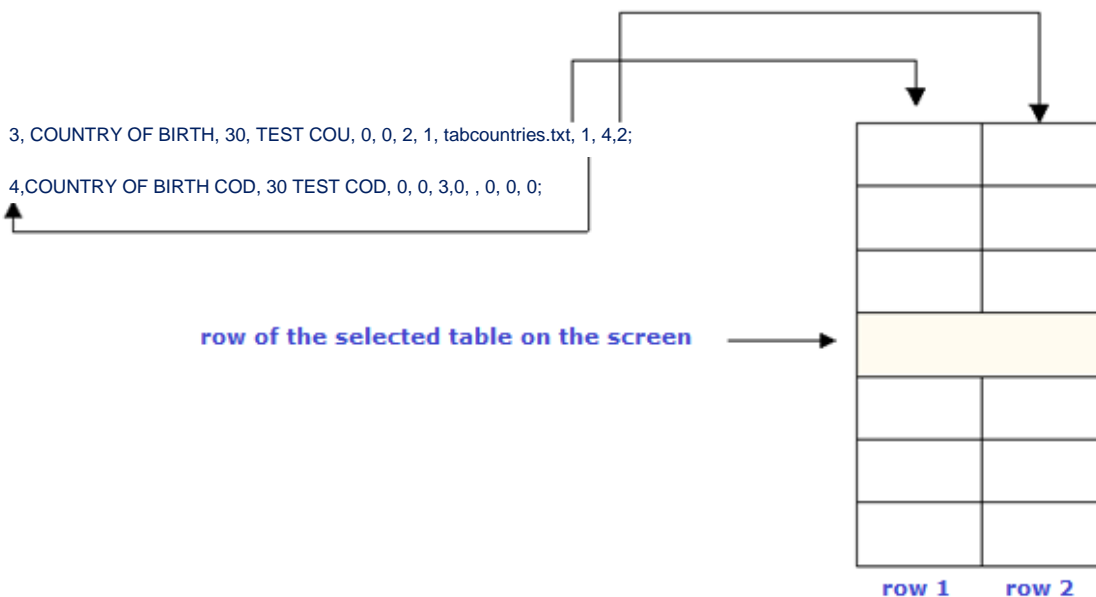
To specify which fields must be completed by the user, it is necessary to prepare a text file called **trace.cfg**

and download it to the machine in the directory

“ARCHIVES \ USER \ TRACE \”

The following information must be specified for each archive field, in the order:

- 1 The line number of the record to which subsequent information refers. The line numbers must be consecutive starting from 1 and cannot be skipped.
- 2 The name proposed as the field title and as name in the list of variable label and barcode fields.
- 3 The field length.
- 4 Default value: value displayed if no new data is entered.
- 5 Display level: operating level from which the field becomes visible in the archive. 66. By setting level 100, the field is not displayed.
- 6 Input level: operating level from which the field becomes editable in the archive. By setting value 100, the field cannot be modified.
- 7 Field display order. The definition order in the file and the display order may differ. The reason for this is that **new fields can be added in the archive after it has been compiled, but in the configuration file they must come after the existing fields. It is not possible to delete fields from the configuration file after compilation (even partial) of the archive**, but it is possible to hide them from the display by setting the display level to 100. The display sorting numbers are relative, so it is not necessary to start from 0.
- 8 If the field is linked to a table (0 if no, any other value if yes). Each field can be associated with a precompiled table from where to choose the string to insert. This table is retrieved when the field is compiled by pressing the F7 key.
- 9 Name of the table file. All table files must reside in the directory hd0/root/archives/trace/ and the name provided must relate to this pathname.
- 10 **C9 Element:** Pressing the F7 key on the screen displays a list of elements taken directly from the table specified in point 8. Move with the arrows to select the desired line, which is always made up of two elements separated by a dash. The C9 element indicates which of these two elements is entered in the archive field. Since the table can consist of more than two columns, nothing prevents the use of this index to specify from which column to take the values, even if it is not shown on the screen.
- 11 **C10 Element:** secondary linked field. As explained above, pressing the F7 key displays a list of elements taken from a file. Once a line has been selected from the list, it is possible to indicate another field from the traceability archive that will be filled with an element belonging to the same line and indicated by parameter C11.
- 12 **C11 Element:** indicates which table field must be inserted in the secondary linked field.



Example of linked table

2.6.9.4 Syntax

All of the above information, must be written in the file and separated by a comma.

The last piece of information (the 12th) must be followed by a semicolon if there is an additional field, or by a vertical bar (“|”) if the last field has been defined.

N.B.: DO NOT CLOSE THE LAST RECORD WITH “;|”. THE TWO CHARACTERS ARE ALTERNATIVE.

With reference to the list of fields, bear in mind that:

- The field in point 3 has a maximum length of 70 and higher values are broken down to 70 without notice.
- The field in point 4 has a maximum length of 26, this value does not pose particular management issues as it is a default value, often only a brief description.

The fields in the file referred to in point 9 cannot be shorter than point 3 otherwise an error message will appear. The error message appears in this case since very long lot codes and difficult to check must NOT be broken down without notice.

2.6.9.5 Examples

For example, the contents of a possible trace.cfg file may be:

```
1, TRACEABILITY ID, 30, TEST ID, 0, 0, 3, 0, 0, 0, 0;
2, EARPIECE, 30, TEST EAR, 0, 0, 2, 0, 0, 0, 0;
3, COUNTRY OF BIRTH, 30, TEST COU, 0, 0, 1, 1, tabcountries.txt, 1, 4, 2;
4, COUNTRY OF BIRTH COD, 30, TEST COD, 0, 0, 0, 0, 0, 0, 0, 0|
```

For example, the country of birth field specifies to link the values of the first table column to the field itself:

```
/hd0/root/archives/trace/tabcountries.txt
```

and the values of the second table column to the COUNTRY OF BIRTH COD field.

The display order is exactly reverse.

All fields can be viewed and edited by anyone.

The file is not specified for fields that have not linked to any table. The specification of the linked fields can be omitted, even if this makes the file less readable and is not recommended; we, therefore, recommend setting any value (0 for uniformity).

Each “line break” is ignored, as are all spaces preceding a terminator.

Therefore, for example, the following file, although meaningless, is exactly equivalent to the previous one:

```
TRACEABILITY ID
,30,
TEST ID ,0,0,3,0,0,0,0
; EARPIECE ,30, TEST EAR,0,0,2, 0,0,0,0; COUNTRY OF BIRTH,30, TEST COU,0,0,1,1,
tabcountries.txt,1,4,
2; COUNTRY OF BIRTH COD,30, TEST COD,0 ,0,0,0,0,0,0
|
```

A more sensible use of “line breakers” may be to spread each field over several lines to increase readability:

```
TRACEABILITY ID, 30, TEST ID,
0,0,3,
0,0,0,0
;
```

EARPIECE, 30, TEST EAR,
0,0,2,
0,0,0,0
;

COUNTRY OF BIRTH,30, TEST COU,
0,0,1,
1, tabcountries.txt,1,4,2
;

COUNTRY OF BIRTH COD,30, TEST COD,
0,0,0,
0,0,0,0
|

For example, according to this layout, the first line contains information about the name and default contents, the second about the display and edit options, and the third about a possible link with a table.

2.6.9.6 Operating notes

IMPORTANT: The end of a line must be indicated simply with “;” and not with the pair “;,” as the end of the information is automatically deduced by the end of the line. Similarly, for the end of the file, use only “|” and not “;|”.

Always enter the TRACEABILITY ID field that must be 30-characters long.

The files defining the tables are established exactly according to the same criterion.

For example, the tabcountries.txt file can be used to show a precompiled list of countries to which the relative Indicod is associated, which will automatically fill the “COUNTRY OF BIRTH COD” field when making the selection in the table, in order to speed-up compilations.

For example, this file could have the following structure:

```
ITALY, ITA;  
FRANCE, FRA;  
SPAIN, SPA|
```

When making the selection, the list shown on the screen will contain:

```
ITALY - ITA  
FRANCE – FRA  
SPAIN – SPA
```

Once one of the lines is confirmed, i.e. the first one, the “COUNTRY OF BIRTH” field will contain the word “ITALY” while the “COUNTRY OF BIRTH COD” field will automatically contain the word “ITA”.

Although not displayed, additional columns may be inserted if, for example, a new field needs to be introduced to which to automatically link additional information relating to each country. This is possible even if the archive has already been compiled, provided that the existing structure is not modified (i.e. lines and columns can be added to the table but not removed!).

New fields can be added but not DELETED. The user can modify the display level to make a field “invisible”. If the client wants to have a different display order, simply act on the specific sorting field: never insert new fields among the existing ones when working on a partially compiled traceability archive.

When a traceability data item is entered in a label, specify that the field is NOT variable since each weighing operation is NOT transmitted to the printer.

When preparing the trace.fig file, reference is made to a recommended field list; nothing prevents the insertion of fields with names other than those in the list, while respecting the previously listed syntax rules.

It is also possible to enter comments in these fields (at the beginning, at the end of the file or at the end of each line; clearly not in the middle of the fields that define its structure). Each line of comment must be

distinguished by a specific start and end **character: #**. A comment can also be written on multiple lines: the important thing is for the symbol # to be present at the beginning and end but not within the comment.

If visiting a client and having to reformat the entire traceability archive (e.g. because a machine has been delivered to the client with the traceability option already activated, but the trace.cfg file needs to be modified during installation in order to meet the client requests despite having a partially compiled archive), proceed as follows:

- Press F7 EMPTY ARCHIVE from the “Traceability Archive” window: the entire archive will be emptied by deleting all the lots present.
- Modify the trace.cfg file based on the client requests, defining its exact structure.
- Download the file to the correct directory.

Restart machine.

2.6.9.7 Error messages



WARNING

The error messages in the following list appear owing to incorrect entries made by the user. Note that it is incorrect to proceed with the process after one of these messages has appeared.

- If the terminal is switched on without the trace.cfg file in:

ARCHIVES\USER\TRACE

the following message will appear in the boot phase, before the application starts:

ERROR CLASS: 100; TYPE OF ERROR: 106

File config. Trace. Inexistent

- If the trace.cfg file is present but the archive is empty and the operator attempts to access the process, a warning window will appear with the message:

TRACEABILITY LOT NOT FOUND

If OK is pressed, the machine accesses the process. The piece is weighed, but the message "Field Not Valid: "Variable field ID" is printed on a level with the traceability fields in the label. The process fields are printed normally.

- The following message will appear in the boot phase, before the application starts if “;”, “,” are omitted or if excess data are entered (e.g. an extra 0) in the table:

ERROR CLASS: 7000; TYPE OF ERROR: 7006

Index Out of String

- The following message appears in the absence of the tabcountries.txt file (or any file that identifies the table with another name), or if reference is made to it in trace.cfg with the wrong name and the relative table is retrieved with F7:

Error 108:

No table file

2.6.10 Clients Archive (Optional)

2.6.10.1 Introduction

The clients archive allows you to compile, edit and retrieve, for label printing, a list of clients/consignees.

The operating principle of the archive is similar to the one for managing the traceability lot, with particular reference to use of the linked tables (consult the installer's manual).

Following the path:

“Home \ ARCHIVES \ CLIENTS \ Mod.Client”

the following window will appear:

Field	Value	TABLE
CLIENT ID	client_1	
BUSINESS NAME	Business name	
ADDRESS	Address	
CAP	CAP	
LOCALITY	Locality	
PROVINCE	Province	
NATION	Nation	

Figure 2-63 - Modify Client

The last Client ID retrieved will remain activated during the process and can be printed. For certain processes where the consignee need not be printed in the label, their use is advisable without fields that retrieve the clients archive, otherwise use a fictitious Client ID, without elements.

2.6.11 Weight Bounding (Optional)

2.6.11.1 Introduction

The Weight Bounding mode allows products entering the line to be weighed, labelled and totalised in a different way from the weight range to which they belong.

Up to 9 weight ranges are available and each range is characterised by a minimum limit and a maximum limit within the scale capacity. A range is considered to be enabled if the minimum and maximum values are **different** from zero.

Each valid weight range (W.B. ID) is associated with a PLU in which the weight-pricing modes of the product are described.

A Weight Bounding archive is defined and used for storing the weight range definitions and their associations with the PLU. Each set of nine weight ranges is associated with an ID that can be linked with one or more PLU.

The weight bounding option entails setting a weight range in the PLU, within which the piece normally being processed will be accepted. If the detected weight is outside of the set range, the software checks whether it is included in the ranges contained in the archive to which the Weight Bounding ID in the PLU RANGE group refers. If this condition is verified, the PLU matching the weight range to which the weighed piece belongs will be processed.

If the piece is not within the intended weight range in the weight bounding ID associated to the activated PLU, it will be rejected.

Totalizing will occur in the PLU selected from the weight range table. This means that if the same PLU is used in several ranges, it will not be possible to discriminate the total of each individual range used. The totals of the PLU must therefore be printed and possibly reset before a new weight range selection is used

To start processing a Weight Bounding, you need to select a "Master" PLU in which an element of the Weight Bounding archive is associated.

Following the path:

"Home \ ARCHIVES \ WEIGHT BOUNDING"

the following window will appear:



Figure 2-64 - Weight Bounding Archive

For instructions about ordinary archive management, consult paragraph 2.6.1 (Common notes about archive programming).

2.6.11.2 3-Way ejector

The 3-way selector feature allows to manage a product selection/routing device which sends different pieces to different exits in the WEIGHT BOUNDING mode. The selector is an ejection unit equipped with PLC capable of receiving two digital signals from the machine:

- a trigger indicating when a piece has reached the ejection position
- a pair of digital outputs which encodes the number of one of the 4 possible ways of the selector (3 exits plus the idle way).

Each PLU can have a specification concerning which of the selector's ways **accepted** products must take which, based on weight bounding mode, are totalised in that given PLU, based on the parameter SELECTOR, in the PLU MOVEMENTS group, which can take on the following values:

To this purpose, 2 parameters were introduced:

- NO EJECTOR: the products accepted for that given PLU undergo no treatment and continue until the end of the line;
- EJECTOR: the products accepted for that given PLU are routed on to the first selector.
- EJE / DIV.1, 2 or 3: the products accepted are sent towards the chosen selector (1, 2 or 3).

All products rejected by the "MASTER" PLU and by the WEIGHT BOUNDING PLU take the idle way of the selector (continue along the line without being deviated), regardless of the setting.

Notes

- When the reject setting is "EJECTOR", the rejected products are ejected (namely, the idle way of the selector is activated but the products end at the first selector way since the exit coincides with that of the ejector; not very useful).

The switch only works if the piece is not captured previously by a selector (namely in the PLU there is movement -> selector = none)

2.7 OPERATING MODES

2.7.1 How to prepare and power the line

To read this chapter and access this area, the PLU and labels of the product to be weighed and labelled must have already been programmed (see chap. "PROGRAMMING" of this manual).

The line is regulated via software by means of the speed, target and filter parameters entered in the PLU and MACHINE SETTINGS, and depends on the product being processed. The weighing unit is calibrated in the factory and the client need not carry out any other operations.

Power the line using the main switch on the electric panel, release the emergency switch if it has been pressed and then reset the auxiliary contacts by pressing the relative button.

Before accessing the process, make sure that the scale setting is 0. If necessary, unload the plate and reset with key

"Home \->0<" (SCALE RESET)

in the start window.

The height of the printing/application unit can be regulated with the button on the front of the electric panel.



WARNING

The printing system features functions that are regulated in the factory. NEVER ALTER THE SETTINGS. This operation, which is only necessary if the instrument is overhauled, requires specialised technicians and special tools.

Reset any already existing totals if they are not required prior to beginning the process. This is done by pressing "Home \ LIST OF OPEN PLU \ CLOSE ALL"

To access the process, select the PLU to be processed then press

"Home \ START"

Once in the process, it will be possible to go back to the Home window by pressing the "Stop" key.

The products to process are loaded in either the manual mode or by means of an automatic feeding system, so long as they are always and only loaded on the first conveyor belt of the line.

The terminal handles the sequence of pieces that enter and stops them when necessary to prevent collisions.



WARNING

Products can only be weighed when they are detected by the input photocell.

Printing is enabled and the label application system activated when the weight is stable (static weighing).



Beware!

The line can be stopped instantly in an emergency by pressing the relative mushroom shaped button. At the beginning of each work shift, it is important to check the position of this control and to make sure that it operates efficiently. With the line unloaded, make sure that there are no bystanders or obstructions, enable the processing function and start the line. Now press the EMERGENCY button and make sure that it has operated. If this fails to occur, DO NOT USE THE LINE and contact the maintenance engineers.



WARNING

Incorrect use of the printing system will prevent the machine from operating efficiently. Strictly comply with the instructions given in the maintenance manual in relation to:

- The choice of labels
- Type of paper
- Dimensions and thickness
- Cleaning
- Routine maintenance

2.7.2 Combinations available

GALAXI weighing-ricing machines are highly versatile and can adapt to different processing requirements. The main combinations that can be obtained by changing the terminal parameters in an appropriate way (only installer technicians may carry out this operation) are briefly described below. Remember that the following pairs of values are **antithetical**:

- Process with PLU – Remote Management
- Single product – Multiproduct(/Crate weigher)

The remaining two parameters (**CTRL** and **Weight Bounding**) can be set up along with the previous ones when this makes sense.

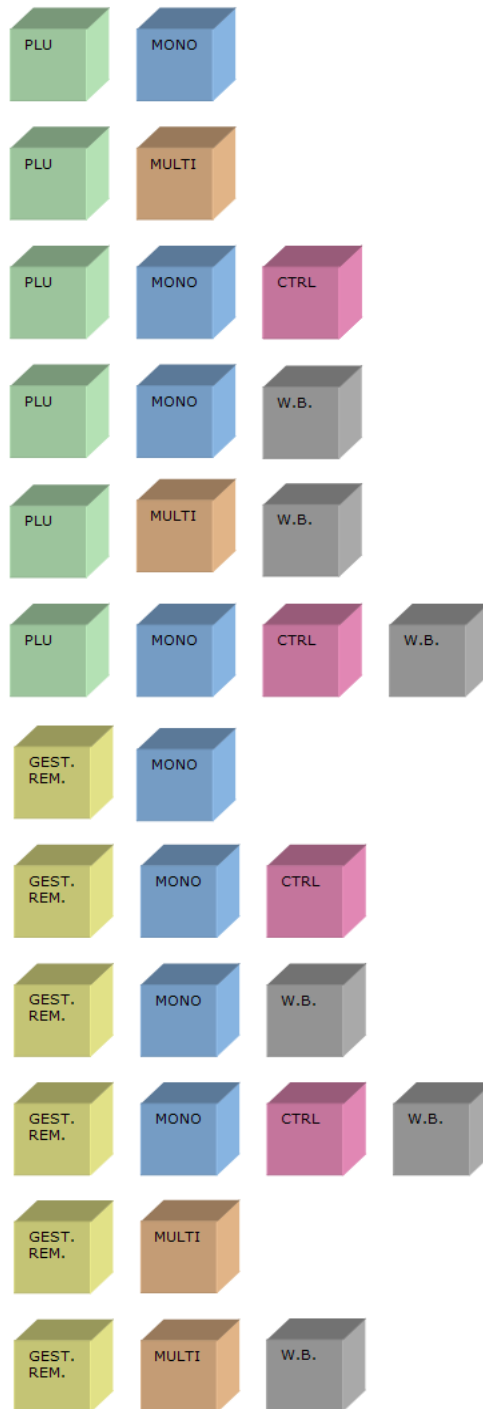


Figure 2-65 – Permitted combinations

2.7.3 Type of Home screen

2.7.3.1 PLU

During this type of management, the PLU to be processed is selected from a list in stand-alone mode. The list of PLUs is shown in the “*Home*” screen.

2.7.3.1.1. PLU customised grid

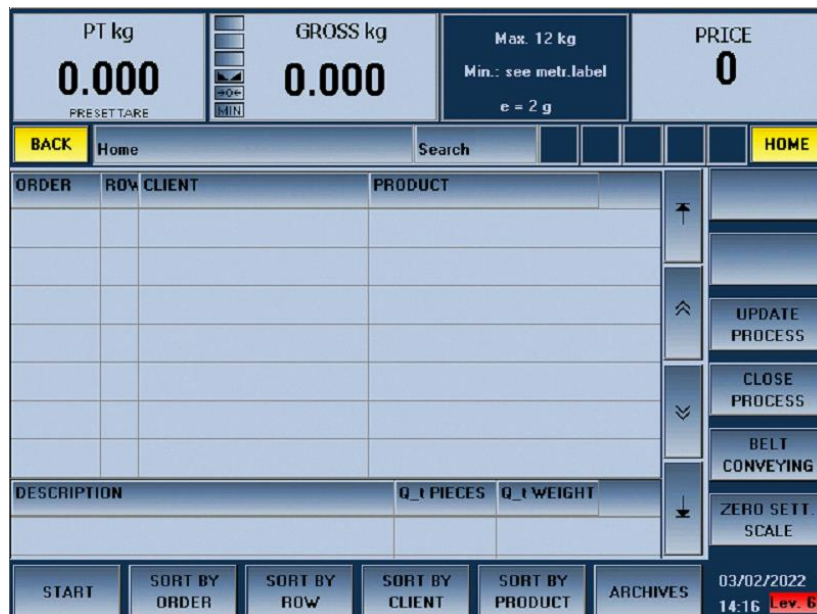
The presence of the "SEL_PLU.CFG" file in the "ARCHIVES \ USER \ CONFIG" folder allows to load a new grid of the PLU selection window, in order to customise the PLU fields displayed and the relative column width. If this file is not present in the "ARCHIVES/USER/CONFIG" folder, then the grid layout will remain the same as the PLU archive window by default.

The file contains a few lines providing instructions on how to make the grid and the minimum requirements to edit the file.

2.7.3.2 Remote management

This type of process involves terminal connection to a host program. The operator selects an order on the screen, from the grid visible on the “*Home*” screen. The grid data are populated through a communication protocol command from an external program. After selecting the order, a network command is transmitted to the host program which will then command entry into the process of the PLU linked to the previously selected order.

For further information on the REMOTE MANAGEMENT, see the “Communication Protocol” document.



Example screen in “Remote Management” mode

2.7.4.2 Crate weigher

During this type of operation, several PLUs are processed without the user having to quit and return to the process. To implement this type of operation, “stores” must be created with different means, such as touch screen (by clicking on the grid housing the list of stores being processed), a serial keyboard (see the “Soft Keys” section) and network command (see the “Communication protocol” document under the “stores via network” section).

PT kg 0.000 PRESET TARE		GROSS kg 0.000	Max. 12 kg Min.: see metr.label e = 2 g	PRICE € 0.00
Home\Pro.				
Hamburger	0	0		
PLU				
Hamburger				
Plu: Hamburger	Tare:0	WB:		
Trace:tracc_1	Due date: 01 02 22			
Tot 1 pc: 2 1	Tot 1 wgt: 0.000 0.300			
Tot 2 pc: 2 0	Tot 2 wgt: 0.000 0.000			
Tot pc: 0 1	Tot wgt: 0.000 0.300			
LINE RUNNING				PLU
STOP	MODIFY DATA	REV. PIECE	REV TOTAL 1	PRINT TOTALS
				OTHERS >>>
				01/02/2022 16:19 Lev. 6

Example screen of “Crate weigher” process

2.7.4.3 Additional functions related to store management

2.7.4.3.1. Automatic store

In CRATE WEIGHER mode, this function allows the machine to automatically calculate an “**automatic store**”. When a piece reaches the scale without any store in queue, instead of stopping to wait to be inserted, it automatically creates a store deriving from the PLU currently activated. However this function does not prevent creating a store queue. As long as there are stores in the queue, the machine will process them in their order of entry and will only allow the modification to intervene when the stores in the queue are finished. This modification is enabled in the CRATEWEIGHER menu in machine configuration under the “**AUTOMATIC STORE**” item.

2.7.4.3.2. Manually replacing an invalid store

In CRATE WEIGHER mode with the entry of a “store from the SCANNER ON INFEED BELT”, this new function allows manually replacing an invalid store entered in the queue due to an incorrect reading by the scanner on the infeed belt. In order to enable this modification, set the parameter “**REPL.INVALID STORE**” in the CRATE WEIGHER menu in machine configuration at “YES”.

When the scanner at the infeed belt is unable to read a barcode correctly, it enters “NO STORE” in the store queue. As soon as the piece associated to that invalid store reaches the scale, instead of continuing on without being weighed or labelled, it stops and the invalid store will NOT be cancelled from the queue. In the meantime it will be possible to add other stores to the queue. At this point the operator, either manually or using the spacer bar or soft-key, chooses a PLU the store of which will replace the “NO STORE” at the end of the queue. The invalid store will be replaced by the new one and the piece stopped at the scale will continue on. There is also the possibility of combining the REJECT function to a soft-key, should you wish effectively to reject that piece.

2.7.4.3.3. Replacing off range rejects

In the OPERATION menu in the terminal settings, a new parameter called “**KEEP OFF RANGE PCS**” has been added. This parameter only works if the terminal is in CRATE WEIGHER mode. When a piece is rejected because of off range weight, it remains on the scale plate and does not continue. Nonetheless the weight is sent to the network, if enabled, with the flag L133 false (for further information, see the “Communication protocol” document), indicating the reject. This allows the programmer or possible host program to send a new store, deciding whether to widen the range to accept the piece, or to send a reject store.

2.7.5 Concept of “Processing”

When a PLU is sent for processing for the first time (via manual START or network command), an instance of a process is created in the memory, the basis of which are the data of the original PLU that has been selected. It is possible, limited to the use of the communication protocol commands, to create a process disconnected from any PLU in the terminal memory. In this case, it is necessary to specify all the data that characterise that process, by entering them in the appropriate command. For further information, see the “Communication protocol” document that describes the network commands.

The process will contain all data of the basic PLU that created it and will allow, limited to the current access level, to edit these data through the menu

“Home \ START \ MODIFY DATA”.

or by pressing the macro keys in the process window. In addition to the basic PLU data, the process will have additional data necessary for storing its progress (piece consecutives, total 1, total 2, totals, weight values, etc.).

The process will exist in the memory until it is deliberately deleted by the operator’s manual operation or by network command. Whenever the “*Stop*” key is pressed from the process window, this will simply be suspended and not eliminated. By retrieving the original PLU from the “*Home*” window, the terminal will verify the presence of an existing process linked to that PLU and retrieve it, giving the user the possibility to continue the production process from the same point where it was last suspended.

Turning the terminal off and on again will not lose the process data.

All the changes applied to the process will be temporary and limited to that process. The data of the basic PLU that generated processing will not be modified, unless within the menu

“Home \ START \ MODIFY DATA”.

the "F12" (Save) key is not pressed. In this case, the changes applied to the process will be copied within the basic PLU. The same concept applies to the MACRO keys. If these are configured to save the changes within the basic PLU, this will be modified whenever the MACRO is run.

Thanks to the processing concept, the memory can contain a limited number of PLUs, generated so as to contain the data common to many production processes and thus not have to be duplicated for the need of minor variations (for example obtainable via MACRO or MACRO START).

All processes existing in the terminal memory will be visible within the menu

“Home \ LIST OF OPEN PLU”,

A single process can be deleted from this menu by pressing the “**F7 (Close PLU)**” key or delete them all simultaneously by pressing the “**F12 (Close All)**” key.

Once a process is deleted, it will no longer be possible to retrieve its data.

2.7.6 Modify data

The modify data menu, which can be accessed during the process, allows the data in the PLU to be temporarily modified. The changes made will remain valid for as long as the processes remain open (unless the changes are saved in the PLUs).

The menu can be accessed from

“Home \ START \ MODIFY DATA”.

The “Modify Data” screen will have the same structure as the modify PLU screen. The displayed data may have additional menus/items compared to the PLU, since the process manages a greater number of fields.

2.7.7 List of open PLUs

The open processes can be checked by accessing this menu.

To close and print the total of a PLU (open process), follow the pathway:

“Home \ LIST OF OPEN PLU”,

scroll the screen until the required PLU has been selected, then press “**F7 (CLOSE PLU)**”.

Remember that to obtain a print of the PLU total, the pallet printer must be present in the machine settings and a PLU total label must have been selected in:

“Home \ ARCHIVES \ SETUPS \ VARIOUS SETTINGS” \ PLU TOTAL LABEL”

The “**F7 (CLOSE ALL)**” cancels all the open processes and the relative totals.



WARNING

Remember that if the open processes cannot be closed with the standard procedure, forced deletion can be obtained by accessing the “RESET PROC” function. Follow the path:

“Home \ ARCHIVES \ SETTINGS \ BACKUP RESTORE \ RESET PROC”.

2.7.8 Operating modes – Examples of combinations

2.7.8.1 CTRL – Operation

The PLU can be processed after the machine and archives have been preset for operation in the weight control mode.

Each piece rejected in accordance with the described logic appears on the screen as having been rejected owing to the effects of the weight control and similarly to what happens in the case of rejects due to off range, the rejected weight is transmitted via the network if the respective option has been enabled.

If the MINIMUM WEIGHT and MAXIMUM WEIGHT fields (relative to the classic RANGE operating mode) are set at the same time as the weight control fields, the reject logic is as follows:

- piece IN RANGE: the validation logic relative to the weight control remains effective;
- piece OFF RANGE: the piece is rejected in any case. If the piece is also rejected according to the weight control logic, the reason for rejection will be "weight control" (instead of "off range").

A weight control lot is unambiguously associated with each process.

This lot is requested when the process is created (by effect of the start of processing with a PLU not yet open or the start control sent via network to a PLU not yet open). An already created lot that has not yet been eliminated cannot be used.

The process is activated in the normal way (without weight control) if no lot is ascribed when the request is made (pressure on the "CANCEL" key).

The process mask is different from that of the single product (in the various configurations) and crate weigher modes as it contains the graph and statistical data of the lot associated with the PLU being processed, updated in real time during the process itself.

Reports are printed automatically by default whenever a lot is closed. This function can be disabled by pressing the "**PACKING LIST / CTRL**" soft key, from the Soft Keys Dialog box. Printing will however be enabled the next time the machine is switched on. If the packing list function is enabled as well, pressing the "**PACKING LIST / CTRL**" soft keys will enable/disable the printing options.

The following combinations are available:

- no print;
- weight control;
- packing list;
- packing list + weight control;

2.7.8.2 CTRL - Process example

If the process begins with pieces that weigh less than the nominal weight, these pieces are rejected. If the average rises after this, the previously rejected pieces are re-weighed in consideration of the fact that if the piece in question weighs more than the "– limit" and, meanwhile, the instantaneous average is more than the nominal weight, it can be accepted.

2.7.8.3 CTRL - Lot closing

A weight control lot can be closed in the following ways:

- When a number of pieces set in the PLU has been reached, if the item "NUMBER OF PIECES" is set in the "[+] CTRL" menu of the PLU, under "LOT END".
- When a request is made to close down the lot being processed by pressing the F10 key ("**CTRL LOT CLOSING**").
- Timed: a Ctrl Lot duration will be requested, expressed in minutes.
- When the actual PLU is closed.

When the CTRL lot is closed, the terminal can behave in two ways, depending on how the line behaviour is configured (reserved for qualified personnel):

- Quit the process: the terminal will go to the "Home" window;
- Temporary suspension of the process: the terminal will continue working with any movement stopped and a dialog box will be proposed for entering a new Ctrl Lot code. Following window confirmation, the process will resume with the new parameters active;

In all four cases of lot closure (pieces, manual, timed, PLU closure), the lot is not eliminated from the system. This allows repeated prints to be made by means of the relative archive. Note that the PLU can be closed in one of the following modes: via the interface (pending PLU window), via the network (DELETE_PRO_ARC command) or when a processing limit is reached. If the "close all" function is selected from the pending PLU window (or via the network by sending the "DELETE_ARC=ALL command), the weight control lots are closed (but not eliminated) at the same time as the PLUs are closed but the relative reports are not printed.

Since the previous process will be closed, each time the process is accessed again, if the CREATE PROC AT EACH ACCESS WITH RESET (can be selected during the installation phase) is selected and if the lot associated with the process in question has not yet been closed, it will be closed and the relative report will be printed. After this, a new lot will be requested for the new process, as in the normal procedure.

The process can be quitted before a set processing limit has been reached. In this case, the lot will remain "frozen" and, thus, open. It will not be possible to obtain a printout of the report in this condition.

The created lots are stored in a lots archive (accessible by following the path "Home \Archives \Lots Archive"), which allows all the existing lots to be displayed. Each line corresponds to a lot, of which it gives the main information.

A single lot can be reprinted in the CTRL lots archive mask by pressing the "**F2**" key (Print), if it has already been closed. It is also possible to delete individual lots by pressing the "**F4**" key (Delete) or all closed lots by pressing the "**F5**" key (Delete Closed). The report will not be printed if this is done.

There is also an automatic method for deleting lots, so that closed lots remain stored within the system for a programmable number of days. This parameter is selected in the machine configuration, DATA RECORDING group, "CTRL STORAGE DAYS" item. This method does not affect the open lots in any way.

2.7.8.4 Weight Bounding - Standard single product:

The Weight Bounding archive associated with the initial PLU is loaded on access to the process. When the piece arrives, the terminal checks to make sure that the weight is within the range set in the PLU. If the piece is valid, it will be counted in this PLU. If the piece is rejected, Weight Bounding will be activated so as to check that the piece is within one of the 9 set in the Weight Bounding function. If it is, the relative PLU will be loaded so that it can be processed. However, in this case, the weight range of the destination PLU is also considered valid but any Weight Bounding ID that may have been set in this PLU will not be evaluated. This means that the piece may be definitively rejected because it is not within the range (within or outside the programmed values) of the PLU selected last

2.7.8.5 Weight Bounding - Single product with CTRL enabled:

If the CTRL is to be associated with the weight range, it must be enabled in the master PLU (the one run in order to access the process). The Weight Bounding archive associated with the initial PLU is loaded on access to the process. When the piece reaches the scale, it is first subjected to the CTRL verifications to find out whether it must be rejected or not and, if it is to be rejected, checks are conducted to find out whether the weight is within one of the 9 ranges set in the Weight Bounding function. If it is, the relative PLU will be loaded in order to process it. However, in this case, the weight range of the destination PLU is also considered valid but any Weight Bounding or CTRL that may have been set in this PLU will not be evaluated.

The opposite cannot be done, i.e. first find out to which weight range the piece belongs and then check whether that PLU conducts weight control. This is because CTRL calculation to find out whether the piece must be rejected or not also depends on the average. Thus it is not possible to know beforehand whether the piece will be rejected or not on the basis of its belonging to a determined range. To check the weight of the pieces for Weight Bounding first and then for the CTRL could result in pieces being rejected by the CTRL after having ascertained in which weight range they belong. This would clash with the purpose for which the weight ranges are used, i.e. to prevent pieces from being rejected in any case.

2.7.8.6 Weight Bounding - Crate weigher

On access to the process, the initial PLU is loaded but Weight Bounding is not loaded until the arrival of the piece, which will then be associated to a PLU. This is when the associated Weight Bounding archive will be checked and loaded. When the piece arrives, the terminal first checks to make sure that the weight is within the range set in the PLU associated with the piece on the scale. If the piece is valid, it will be counted in this PLU. If the piece is rejected, Weight Bounding will be activated so as to check that the piece is within one of the 9 set in the WEIGHT BOUNDING function. If it is, the relative PLU will be loaded so that it can be processed. However, in this case, the weight range of the destination PLU is also considered valid but any WEIGHT BOUNDING ID that may have been set in this PLU will not be evaluated. This means that the piece may be definitively rejected because it is not within the range (within or outside the programmed values) of the PLU selected last.

An explanatory example of the combined crate weigher-WB operating mode occurs in the poultry sector, where the weight of crates of the same PLU but with different weights (1 kg, 1.1 kg, 1.2 kg) must be discriminated.

In all cases, the piece will be rejected if a PLU that does not exist in the archive is loaded in a WEIGHT BOUNDING range. The same thing happens if the Weight Bounding code loaded in the PLU does not physically exist in the archive.

2.7.9 Labelling machine operation

A labelling function can be activated with the machine in manual mode, after the processing limit (N° of labels to print) has been established. When the relative device is installed at the printer output, the labels will not be peeled and will be wound on a take-up roller. Before the labelling function is activated, the manual mode must be selected by pressing “**MANUAL MODE**” during the process by accessing the Soft Keys Dialog box.

The labelling function can be accessed by pressing “**LABELLING ONLY**”.

To quit the labelling mode, press “**LABELLING ONLY**” again.

If the photosensor is selected, the labelling mode can be quitted when one of the following events occurs:

- as soon as the label is picked up by the photosensor, thus allowing the next label in the queue to be printed;
- when “**LABELLING ONLY**” is pressed.

When “**LABELLING ONLY**” is pressed to interrupt the labelling cycle, all printing and totalizing procedures stop immediately, regardless of the processing status of the current label.

If the printer is without a photosensor, the printing cycle of the label in progress is concluded with relative totalizing. After this, it will be possible to press “Stop”, “Modify Data”, use macros or access any other part of the menu.

The process can be quitted during continuous label issue (typically on a product printer without photosensor) by pressing “**F1**” (Stop).

This condition is explained by considering the case in which there is a label under the photosensor and another in the printer's print buffer. If total 1 is closed in advance, the relative label will only indicate the data pertaining to the previously printed labels with the exception of those in the buffer and the only way to quit without resulting in total 1 is to send a reset command to the printer.

Since this is not a mode that complies with metrological limitations, the labelling function can only be used with fixed weight PLU.

The mode is based on the processing limit and the number of labels to print is the difference between the selected processing limit in pieces and the number of pieces effectively processed.

Press “**LABELLING ONLY**” during the process to access a window asking for entry of the missing labels, which will effectively modify the processing limit in pieces. If 0 is entered for the quantity, there will be an infinite issue of labels until “**LABELLING ONLY**” is pressed again.

After a processing limit has been selected and reached, the system asks whether to proceed or terminate. If the user decides to continue, there will be an infinite issue of labels until “**LABELLING ONLY**” is pressed again.

If ‘n’ pieces have been processed and the processing limit is modified with a lower number of processed pieces, a warning window will appear even though it is possible to continue.

If the photosensor is not selected, the pre-selections are controlled as in a normal process.

The machine configuration allows the photosensor to be also entered in the product printer. If the terminal is equipped with the same printer for both the product and total 1 and the photosensor is set for PROD PTR, it will not be possible to set it for TOT1 PTR

2.7.10 Conveyor belt

The conveyor belt function is activated when, for temporary requirements, the pieces must transit on the line without any weighing and/or labelling operation taking place.

The percentage transit speed can be entered as for every PLU by accessing this function.

Except for customised configurations, 100% corresponds to a 70 m/min belt speed.

Emergency stopping and control of the enabling signals upstream and downstream are also available in the conveyor belt mode.

2.8 BASIC FUNCTIONS AND FEATURES

2.8.1 CTRL weight control (optional)

2.8.1.1 Explanations about the standards

Pre-packaged packing or pre-packaging means the unit formed by the product and its container. A product is said to be pre-packaged (OIML R87 2.10 – Law 690) when the packaging operation takes place in the absence of the purchaser, according to standard quantities determined in advance that cannot be modified without altering the packaging itself. The weight or volume quantity indicated on the package takes the name of "**nominal value**".

The current laws establish the rules that manufacturers must comply with and the statistical monitoring modes for the metric services of the Chambers of Commerce.

Packaging lot means a group of packages with the same nominal quantity, the same model and the same type of manufacture

The main rules established for pre-packages are:

- the effective average contents of a packaging lot must not be less than the nominal value indicated on the package;
- pre-packages that contain less than they should with an error that is double the tolerance margin, cannot be marketed.

The machine handles the weight monitoring function when appropriately programmed and enabled.

2.8.1.2 Properties of the weight monitoring archive

The "weight monitoring" mode can be enabled or disabled for each PLU. This is done by enabling the CTRL ENABLING field in the "[+] CTRL" group. This operating mode only functions if the PLU processed is the **fixed weight** type. The normal process will be activated if this is not the case. If the "crate weighing" function is selected, the weight control mode is **disabled**, regardless of the settings in the fields of the PLU being processed.

There are four fields in the "[+] CTRL" group of the PLU (LIMIT --, LIMIT -, LIMIT +, LIMIT ++), which identify the 5 weight summarising zones. These limits are loaded in automatic mode when fixed weight operation is selected and can be modified before the first piece passes. Following the totalisation of at least one piece within the lot, only the + LIMIT and ++ LIMIT values can be modified.

As for the automatic calculation of the weight limits, refer to the following table.

Each line in the table identifies a weight range (WEIGHT_FROM must be less than WEIGHT_TO) given in grams, for which the + and - limits are calculated beginning from the nominal weight and applying (either more or less) the error percentage (ERR_%) or the absolute weight (WEIGHT_ERR), depending on whether there is a positive value for one field or the other.

WEIGHT_FROM	WEIGHT_TO	ERR_%	WEIGHT_ERR
5	49	9	
50	99		4.5
100	199	4.5	
200	299		9
300	499	3	
500	999		15
1000	9999	1.5	
10000	14999		150
15000	9999999	1	

Figure 2-66 – Reference table for weight control

Different acceptance logics for the lot can also be selected by means of the CTRL OPTIONS field in the WEIGHTS group of the PLU. The following options can be selected:

- "From - to ++ with % limit", pieces whose weight is between the -LIMIT and the ++LIMIT are accepted. Moreover, up to % limit of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.
- "From - to + with % limit", pieces whose weight is between the - LIMIT and the + LIMIT are accepted. Moreover, up to % limit of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.
- "From - onwards with % limit", pieces whose weight is above the -LIMIT are accepted. Moreover, up to % limit of pieces whose weight is between the --LIMIT and the -LIMIT are accepted so long as the average is higher than the nominal value.
- "From - to ++ without % limit".
- "From - to + without % limit".
- "From - onwards without % limit".

2.8.1.3 Operating logic

Each piece rejected in accordance with the described logic appears on the screen as having been rejected owing to the effects of the weight control, and similarly to what happens in the case of rejects due to off range, the rejected weight is transmitted via the network if the respective option has been enabled. If the MINIMUM WEIGHT and MAXIMUM WEIGHT fields (relative to the classic RANGE operating mode) are set at the same time as the weight control fields, the reject logic is as follows:

- piece IN RANGE: the validation logic relative to the weight control remains effective;
- piece OFF RANGE: the piece is rejected in any case. If the piece is also rejected according to the weight control logic, the reason for rejection will be "weight control" (instead of "off range").

Among all the pieces processed in a lot, there can be pieces rejected due to weight control rules and pieces rejected for other reasons, such as pieces impossible to be weighed or containing metal. The "METAL" and "OTHER REJECTS" statistical categorisation of rejected pieces exists within a lot. These data are provided on the statistical report.

The parameter ALLOW NEGATIVE AVERAGE has been entered in the PLU. This makes it possible to accept weighing operations with an average below the nominal weight, though all checks are linked to the zones (pieces below -- are never accepted, pieces between - and -- are only accepted based on criteria set in the PLU and only if the % remains above the % value indicated in the relative PLU parameter, while for the + and ++ zones, the criteria set in the PLU remains valid). Should the average drop below the nominal weight, the graphic will show the bars identifying the accepted products in red (instead of green), and the bars identifying rejected products in yellow (instead of red). Moreover, in the printing report, the text "ACCEPTED LOT", which now is the fixed text referring to the text archive, must be replaced by a variable text no. 30150, automatically reading "LOT ACCEPTED" if the average when the lot is closed is \geq the nominal weight, or otherwise "LOT REJECTED".

2.8.1.4 Lot identification

A lot can be identified in three different ways, set by the LOT IDENTIFICATION parameter in MACHINE configuration, within the CTRL group:

- **Manual:** the operator assigns a name when each lot is opened. This is done when entering a process and closing a lot, when the option process exit at lot closing is not selected.
- **Manual + sequence:** In this case, a consecutive number is added at the end of the manually entered lot code which is increased every time the lot is closed, thus generating a new lot. In this case, if the machine is programmed to continue processing when the lot is closed, the consecutive number will increase automatically without requesting the new lot from the operator. The consecutive number is a global data of the machine. Its value can be modified at any time by configuring (VARIOUS settings, parameter NR. CTRL SEQUENCE).
- **Date with progressive number:** the lot code is provided by the date on which it is generated (in ddmmyyyy format), to which the consecutive number is added. The consecutive number increases automatically when a new lot is opened.

2.8.1.5 Lot management

A weight control lot is unambiguously associated with each process. This lot is requested when the process is created (by effect of the start of processing with a PLU not yet open or the start control sent via network to a PLU not yet open). An already created lot that has not yet been eliminated cannot be used. The process is activated in the normal way (without weight control) if no lot is ascribed when the request is made (pressure on the ESC key). The process mask is different from that of the single product (in the various configurations) and crate weigher modes as it contains the graph and statistical data of the lot associated with the PLU being processed, updated in real time during the process itself.

A weight control lot can be closed in the following ways:

- When a default number of pieces inside the PLU has been reached.
- When the time set in the PLU is up.
- When a request is made to close down the lot being processed by pressing the F10 key ("CTRL LOT CLOSING"). In a similar way to the previous case, the machine quits the process automatically and allows the same PLU to be processed in the normal mode again.
- When the actual PLU is closed. The lot is not eliminated from the system. This allows repeated prints to be made by means of the relative archive (see further on). Note that the PLU can be closed in one of the following modes: via the interface (pending PLU window), via the network (DELETE_PRO_ARC command) or when a processing limit is reached. If the "close all" function is selected from the pending PLU window (or via the network by sending the "DELETE_ARC=ALL command), the weight control lots are closed (but not eliminated) at the same time as the PLUs are closed but the relative reports are not printed.
- Each time the process is accessed, if the CREATE PROC ON EACH ACCESS WITH RESET is selected. Since the previous process will be closed, if the lot associated with the process in question has not yet been closed, it will be closed and the relative report will be printed. After this, a new lot will be requested for the new process, as in the normal procedure.

If the process is quitted before a set processing limit has been reached, the lot will remain "frozen" and, thus, open. It will not be possible to obtain a printout of the report in this condition.

The created lots are stored in a lots archive (accessible from "Home \ Archives \ Lots Archive"), which allows all the existing lots to be displayed and delete one or all closed lots. Each line corresponds to a lot, of which it gives the main information. From the relative window a single lot can be reprinted (**F2** key), or multiple prints (**F3** key) if it has already been closed. Individual lots can be deleted. The report will not be printed if this is done. There is also an automatic method for deleting lots, so that closed lots remain stored within the system for a programmable number of days. This parameter is selected in the machine configuration, DATA RECORDING group, "STORAGE DAYS" item. This method does not affect the open lots in any way.

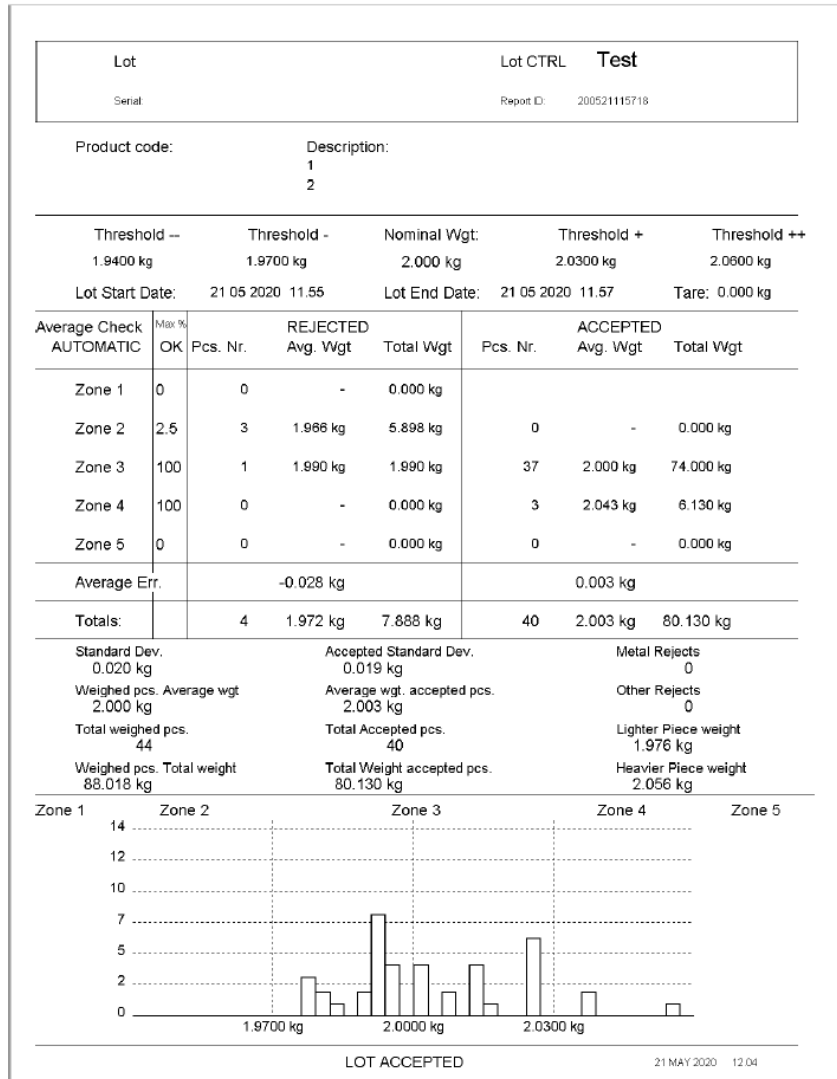
2.8.1.6 Printing reports

Reports are printed automatically by default whenever a lot is closed. This function can be enabled (as specified in paragraph 7.3.7) during processing. If the packing list function is enabled as well, each selection of the quick function for printing the reports will enable/disable printing options; the combinations available are: no print, weight control, packing list, packing list + weight control.

Reports can be printed by means of a network printer (in both cases the printer model must be among those envisioned) or a file can be produced in PDF format by using the specific software on PC (PrintReport).

The print function on PARALLEL PRINTER is now obsolete, since today's terminals are no longer equipped with parallel port, unlike the previous models of weighing-ricing machines.

2.8.1.7 Example of report



2.8.1.8 Piece reversal

All products rejected for reasons other than their weight are however valid for the **CTRL** lot and must be counted. The fact that an operator reverses a product (for example when vacuum is lost) does not affect the piece count and the average of the lot which is being checked. It is actually like having two machines in one. The first checks the lot and rejects pieces based on the average of the pieces and on the nominal weight. The second labels the pieces, totalises them and prints the carton, pallet and packing list labels. The reversal therefore only affects product totals but not the statistics of the fixed weight.

In general, weight control should be enabled and loaded (nominal weight and options) in the PLU to be used and then the process started from the network by pressing start. In any case, the START control makes it possible to:

- write the **CTRL** lot which, if not sent, the operator is requested by means of a relative window before entering the process;
- modify the fixed weight, but only if the process has not yet been created (the first time the start control is sent);
- modify the weight limits, but only if the process has not yet totalised any piece;
- modify the type of **CTRL** operation, but only if the process has not yet been created;
- disable **CTRL** operation if it was enabled in the PLU. Vice versa it cannot be enabled if it was disabled, because the + and – weight limits are not recalculated based on the fixed weight (this operation is only possible when the fixed weight is set in the PLU).

There is a further possibility of modifying data by modifying process data, but only if no piece has passed yet. Therefore if you wish to modify the data relative to **CTRL** operation from the network, the only possibility without modifying the PLU is that of sending data at the START, but only the first time. If you wish to change data, first you must cancel the process and then rewrite it with new data.

2.8.1.9 Feedback management (Optional)

Possibility of adjusting dosage of upstream machine via digital outputs. This function has two different purposes:

1. When lot acceptance is forced, it allows starting an uncalibrated dosage, and therefore not to reject pieces at the start of the process, and then **to automatically adjust dosage without operator intervention**.
2. To resolve **basically systematic disturbances** by which the product actually introduced into the packages is different than that programmed on the dosage scale. It must be noted that the utmost dosing precision is that identified by the dosing scale. Even though our line has a higher precision, the system does not guarantee better performance. If the dosing system is more precise than our weighing-ricing machine, then the adjustment mechanism compensates all those disturbances **the extent of which is equal to the division of our scale**.

From a quality standpoint, the adjustment process occurs as follows: when the process starts, a few pieces are left to pass without starting to calculate the average N of last pieces transited; should the average be more or less than the nominal weight by an amount greater than a definable limit, specific digital signals are activated which control the dosage variation upstream the machine; this variation can follow two different criteria. Thresholds can be set outside of which products are not used to calculate the average. Furthermore there can be products which have already been dosed but not yet weighed (namely those between the dosing machine and the line). The effect of this adjustment cannot apply to them and therefore their weight will not be considered for the subsequent adjustment cycle. Finally since the dosing machine requires a start-up time, an initial number of pieces can be indicated which are excluded from the adjustment process. All the parameters which must be set to configure the adjustment process are described hereafter.

Two adjustment modes exist:

1. **BY PULSE**: adjustment occurs by sending pulses, upon which the dosing machine corrects the preset weight.
2. **BY DURATION**: adjustment occurs by keeping the output signal high for a time proportional to the weight variation to be controlled.

For each product (in the PLU and in the PROCESS), adjustment parameters can be specified within the FEEDBACK group, namely:

- **FEEDBACK:** possibility of selectively enabling or disabling feedback for each PLU.
- **CORRECTION:** expresses the weight which, added to the nominal weight, determines the target weight, namely the value which is compared to the average adjustment weight to determine the extent of the adjustment itself.
- **UPPER LIMIT:** packages whose weight exceeds the upper limit are not used to calculate the average adjustment value.
- **LOWER LIMIT:** packages whose weight is less than the lower limit are not used to calculate the average adjustment value.
- **UPPER TOLERANCE:** if the average adjustment value is between the target weight and the target weight plus the tolerance, the regulator will not be activated.
- **LOWER TOLERANCE:** if the average adjustment value is between the target weight minus the tolerance and the target weight, the regulator will not be activated.
- **AVERAGE PIECES:** number of packages to be used to determine the average adjustment weight, obtained through the mobile average.
- **PIECES AWAITING START:** number of packages which must not be included to calculate the average after the start of the process.
- **PIECES AWAITING ADJUSTM.:** number of packages which must not be considered before resuming calculation of the average adjustment value after an adjustment has been made. This is used to let those products pass which already been processed by the upstream machine but have not yet been weighed, and therefore the adjustment made has not yet had effect, and therefore would produce an error if used for the subsequent adjustment. Therefore for the pieces processed by the upstream machine, you must wait for the effect of the adjustment just made. It actually expresses the number of products between the dosing machine and the scale.

There are 2 digital outputs (FEEDBACK+ and FEEDBACK-), one which provides dose increase pulses and the other decrease pulses.

Notes on parameter setting

To make settings as accurate as possible, the upper and lower tolerances must be very low, close to the division of the scale, so that the regulator is activated often keeping the weight close to the nominal value. The upper and lower limits are used to exclude evident filling defects from the setting, such as lumps of cheese which block the dosing scale and give way to half-empty trays. To understand the right value of these parameters, you must consider the working limits of the dosing machine. The number of pieces for the average can effectively be between 5 and 10. If there are too many pieces, adjustments would be too seldom, while too few pieces makes the average unstable and forces continuous adjustments. It should be noted that the number of pieces transiting between two consecutive settings is the sum of the AVERAGE PIECES and PIECES AWAITING ADJUSTMENT, plus pieces which transit outside of the upper and lower limits.

Example of initial configuration:

FIXED WEIGHT: 0.100

UPPER LIMIT: 0.105

LOWER LIMIT: 0.095

UPPER TOLERANCE: 0.002

LOWER TOLERANCE: -0.002

AVERAGE PIECES: 5

PIECES AWAITING START: 0

PIECES AWAITING ADJUSTMENT: 25

In this case, at least 30 pieces pass between one adjustment and the next.

2.8.1.10 Storing CTRL lot files

By enabling the parameter GENERATE LOT FILE in machine configuration, it is possible to store a text file in CSV format every time the ctrl lot is closed during weighing operations. The file is stored on the device identified by the IP address indicated in the parameter "DATA DOWNLOAD IP" in NETWORK CONFIGURATIONS,

which can refer to a PC with a FTP server (such as Filezilla server) or the device which links a USB pen drive to the terminals.

The product file is in the format:

lot - hh.mm.ss - dd.mm.yy.csv

where:

hh = hour of day; mm = minutes; ss = seconds

dd = day of month; mm = month; yy = year

All of the CTRL fields are included in the file (namely those documented in the network protocol which can be obtained by requesting the CTRL archive) in numerical order (C10, C1, C2, ...).

2.8.2 Packing list (optional)

2.8.2.1 Introduction

The **packing list** is a machine feature that enables the production of a summary A4 report containing the detail of the contents of boxes and/or pallets produced for a given order. The information in the **packing list** can be configured through a suitable file. The **packing list** can be produced:

- directly on a printer connected via port parallel to the machine;
- [on a network printer](#) (from Rel. 5.0.0);
- in the format of a pdf file (from Rel. in pdf file format (from Rel. 5.0.0), which can be stored on a PC and printed using the [PrintReport](#) program. Two strategies are possible to transfer the file to PC:
 - direct PC connection via Ethernet;
 - [use of USB flash drive](#) (with appropriate adapter).

2.8.2.2 Example of Packing List report

Distinta Pesì del Prodotto: 90 Packing List		ASIAGO ALLEVO 300 G BOX						
	N.Box N.Cartone	Pieces Total Totale Pezzi	Tare Weight Peso Tara (kg/lb)		Gross Weight Peso Lordo (kg/lb)		Net Weight Peso Netto (kg/lb)	
Totale Cartone	1	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	2	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	3	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	4	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	5	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	6	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	7	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	8	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	9	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	10	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	11	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	12	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	13	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	14	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	15	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	16	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	17	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	18	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	19	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	20	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	21	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	22	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	23	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	24	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	25	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	26	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	27	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	28	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	29	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Cartone	30	2	2.500 kg	5.51 lb	8.500 kg	18.73 lb	6.000 kg	13.22 lb
Box Total								
Totale Bancale nr. Pallet Total nr.	Tot nr. Ct. Boxes Tot nr. Cart.	Tot pcs Tot nr. pz. in Bancale	Pallet Tare Tara Bancale (kg/lb)		Pallet Gross Weight Peso Lordo Bancale (kg/lb)		Pallet Net Weight Peso Netto Bancale (kg/lb)	
4	30	60	75.000 kg	165.30 lb	255.000 kg	561.90 lb	180.000 kg	396.60 lb

2.8.2.3 Configuration

The **packing** list is an **option that can be activated**. For its configuration, it is necessary to set:

2.8.2.4 Data recording interval

MACHINE CONFIGURATION --> RECORD DATA --> REC.INTERVAL (sec)

Settable values: 0 – 3

Default: 1[[BR]] indicates every how many seconds the terminal writes the weighing data stored in a buffer to D.O.M..

The higher the number the greater the efficiency and speed in transferring the temporarily stored data to D.O.M..

On the other hand, if there is a sudden power cut to the terminal, the data contained in the buffer is lost before being saved on D.O.M.

2.8.2.5 Storage days

MACHINE CONFIGURATION --> RECORD DATA --> STORAGE DAYS

Settable values: 1– 9999

Default: 1

If setting the recording of one of the three archives, minimum duration in days in which the data is stored is enabled.

2.8.2.6 Parallel printer features (if necessary)

MACHINE CONFIGURATION --> PARALLEL PRINTER --> PRINTER TYPE

This field shows the printers available and that can be connected to the terminal parallel port.

It is necessary to set **HP [LaserJet 6 series](#)**.

MACHINE CONFIGURATION --> PARALLEL PRINTER --> RESOLUTION

It is necessary to set: **150dpi**.

The resolution expressed in dots per inch identifies the final printing quality.

2.8.2.7 Report configuration packing file)

The *.pak files contain the layout that will be printed by the external printer.

All label fields can be printed in the **packing** list.

The document to be prepared consists of three fundamental parts that must always be present even if empty:

Header

Body

Footer

Each tag has its tag-end.

Each tag must be between < and >.

The <**PACKING_LIST = 1**> and <**END_PACKING_LIST**> tags are inserted to provide greater formal cleanliness to the document, without affecting the general operation if missing.

Set the dimension in mm for each tag (e.g. Header).

In the following example the dimension from the top is 30 mm.

<HEADER = 30>

<END_HEADER>

The other tags start where the previous one ends.

The BODY tag dimension data establishes, together with the dimensions of the individual tags that characterise the PROD, TOT_1 and TOT_2 lines, any page break if the number of records to be printed is too high to be contained within the dimension specified in the BODY itself.

IMPORTANT to remember that:

Information concerning the individual weighing operations and the TOT_1 (box) are the ONLY data that can be added to a TOT_1 **packing** list file.

Information concerning the boxes and the TOT_2 (pallet) are the ONLY data that can be added to a TOT_2 **packing** list file.

The PROD, TOT_1 and TOT_2 must be inserted in the BODY tag.

If, for example, one is working with a box **packing** file, the pallet tag will be empty but present:

<TOT_2 = 0>
<END_TOT_2>

Below is a list of fields that can be inserted within the PROD, TOT_1 and TOT_2 tags and the allowed values.

	x	y	Font	Font Dim	Txt_Lngh	Rot	All
FIX_TXT	0-999.9	0-999.9	1 - 5	n.a.	70	n.a	0 - 3
VAR_TXT	0-999.9	0-999.9	1 - 5	n.a.	70	n.a	0 - 3
	x	y	x2	y2	Thickness		
LINE	0-999.9	0-999.9	0-999.9	0-999.9	1 - 16		

	x	y	Width	Height	Thickness
RECT	0-999.9	0-999.9	0-999.9	0-999.9	1 - 16
	x	y			
IMAGE	0-999.9	0-999.9			

belongs to the right, left or centre with respect to the number of characters indicated under text length (Txt Lngh).

In particular, values from 0 to 3 have the following meaning:

automatic (to right for numbers, to left for strings)

to right

to left

centred

The types of fields that can be inserted in the **packing** file are listed on the following pages.

Below is an example of a PALLET.PAK file and related print report.

The numbering of the variable fields that can be printed follows the criterion below, as documented in the network protocol:

PROCESS FIELDS: 0 – 1999

TRACEABILITY FIELDS: 10000 – 10999

CLIENT FIELDS: 15000 – 15999

TOTALS FIELDS: 20000 – 20999

CTRL FIELDS: 30000 – 30999

2.8.2.7.1. Example

```
<PACKING_LIST = 1, 0, 2>
<HEADER = 30>
<VAR_TXT = 22,100, 7, 4, 0, 50, 0, 3> //Plu text 1
<RECT = 0, 5, 197, 21, 1> //Rectangle
// ID X Y FONT DIM LNG ROT ALL

<VAR_TXT = 6, 40, 7, 3, 0, 0, 0, 0> //PLU Code
<FIX_TXT = 10001, 5, 7, 1, 0, 0, 0, 0> //Product Weight List
<FIX_TXT = 10036, 5, 10, 1, 0, 0, 0, 0> //Packing List
<FIX_TXT = 10006, 30, 15, 1, 0, 0, 0, 0> //Box No.
<FIX_TXT = 10005, 32, 18, 1, 0, 0, 0, 0> //Box No.
<FIX_TXT = 10008, 50, 15, 1, 0, 0, 0, 0> //Pieces Total
<FIX_TXT = 10007, 50, 18, 1, 0, 0, 0, 0> //Pieces Total
<FIX_TXT = 10010, 80.5, 15, 1, 0, 0, 0, 0> //Tare Weight
<FIX_TXT = 10009, 79.5, 18, 1, 0, 0, 0, 0> //Tare Weight
<FIX_TXT = 10011, 83, 21, 1, 0, 0, 0, 0> //(kg/lb)
<FIX_TXT = 10013,123, 15, 1, 0, 0, 0, 0> //Gross Weight
<FIX_TXT = 10037,122, 18, 1, 0, 0, 0, 0> //Gross Weight
<FIX_TXT = 10011,126, 21, 1, 0, 0, 0, 0> //(kg/lb)
<FIX_TXT = 10015,166, 15, 1, 0, 0, 0, 0> //Net weight
<FIX_TXT = 10014,166, 18, 1, 0, 0, 0, 0> //Net Weight

<FIX_TXT = 10011,169, 21, 1, 0, 0, 0, 0> //(kg/lb)

<END_HEADER>

<BODY = 230>
<PROD = 0>
<END_PROD>

<TOT_1 = 6>
// ID X Y FONT DIM LNG ROT ALL
<FIX_TXT = 10024, 5, 0, 1, 0, 0, 0, 0> //Box Total
<FIX_TXT = 10025, 5, 3, 1, 0, 0, 0, 0> //Box Total
<VAR_TXT = 46, 37, 0, 3, 0, 0, 0, 0> //Prog. Total 1
<VAR_TXT = 49, 57, 0, 3, 0, 0, 0, 0> //Tot.Pieces No. 1
<VAR_TXT = 51, 84, 0, 3, 0, 0, 0, 0> //Primary Tot.Tare 1
<VAR_TXT = 54,104, 0, 3, 0, 0, 0, 0> //Secondary Tot.Tare 1
<VAR_TXT = 50,125, 0, 3, 0, 0, 0, 0> //Primary gross tot. 1
<VAR_TXT = 55,149, 0, 3, 0, 0, 0, 0> //Secondary gross tot. 1
<VAR_TXT = 50,171, 0, 3, 0, 0, 0, 0> //Primary net tot. 1
<VAR_TXT = 53,195, 0, 3, 0, 0, 0, 0> //Secondary net tot. 1
<END_TOT_1>

<TOT_2 = 30>
<LINE = 0, 5,197, 5, 1> //Line
// ID X Y FONT DIM LNG ROT ALL
```

```
<FIX_TXT = 10017, 5, 10, 1, 0, 0, 0, 0> //Pallet Total no.
<FIX_TXT = 10016, 5, 13, 1, 0, 0, 0, 0> //Pallet Total nr.
<FIX_TXT = 10019, 80, 10, 1, 0, 0, 0, 0> //Pallet Tare
<FIX_TXT = 10018, 81, 13, 1, 0, 0, 0, 0> //Pallet Tare
<FIX_TXT = 10011, 83, 16, 1, 0, 0, 0, 0> //(kg/lb)
<VAR_TXT = 59, 84, 21, 3, 0, 0, 0, 0> //Primary Tare tot. 2
<VAR_TXT = 62,104, 21, 3, 0, 0, 0, 0> //Secondary Tare tot. 2
<FIX_TXT = 10021,119, 10, 1, 0, 0, 0, 0> //Pallet gross weight
<FIX_TXT = 10038,119, 13, 1, 0, 0, 0, 0> //Pallet Gross Weight
<FIX_TXT = 10011,126, 16, 1, 0, 0, 0, 0> //(kg/lb)
<VAR_TXT = 60,125, 21, 3, 0, 0, 0, 0> //Primary gross tot. 2
<VAR_TXT = 63,149, 21, 3, 0, 0, 0, 0> //Secondary gross tot. 2
<FIX_TXT = 10023,162, 10, 1, 0, 0, 0, 0> //Pallet Net Weight
<FIX_TXT = 10022,163, 13, 1, 0, 0, 0, 0> //Pallet Net Weight
<FIX_TXT = 10011,169, 16, 1, 0, 0, 0, 0> //(kg/lb)
<VAR_TXT = 58,171, 21, 3, 0, 0, 0, 0> //Primary net tot. 2
<VAR_TXT = 61,195, 21, 3, 0, 0, 0, 0> //Secondary net tot. 2
<VAR_TXT = 47, 15, 21, 3, 0, 0, 0, 0> //Prog. Total 2
<FIX_TXT = 10040, 30, 10, 1, 0, 0, 0, 0> //Tot no. Boxes
<FIX_TXT = 10039, 31, 13, 1, 0, 0, 0, 0> //Tot no. Bx.
<FIX_TXT = 10041, 32, 16, 1, 0, 0, 0, 0> //Boxes
<VAR_TXT = 57, 37, 21, 3, 0, 0, 0, 0> //Total_1 Total_2
<FIX_TXT = 10043, 50.4, 10, 1, 0, 0, 0, 0> //Tot no. pcs.
<FIX_TXT = 10044, 50, 13, 1, 0, 0, 0, 0> //in pallet
<FIX_TXT = 10042, 51, 16, 1, 0, 0, 0, 0> //Tot pcs.
<VAR_TXT = 56, 57, 21, 3, 0, 0, 0, 0> //Total_2 Pieces

<LINE = 0, 32,197, 32, 1> //Line
<END_TOT_2>

<END_BODY>

<FOOTER = 10>
<LINE = 0, 5,197, 5, 1> //Line
<FIX_TXT = 10045, 5, 6.5, 1, 0, 0, 0, 0> //Date
<FIX_TXT = 10046, 5, 9.5, 1, 0, 0, 0, 0> //Date
<DATE = 5,15, 7.5, 2, 0, 0, 0, 0> //

<FIX_TXT = 10047, 176, 6.5, 1, 0, 0, 0, 0> //Page
<FIX_TXT = 10048, 176, 9.5, 1, 0, 0, 0, 0> //Page
<PAGE = 0, 192, 7.5, 2, 0, 0, 0, 0> //
<END_FOOTER>
<END_PACKING_LIST>
```

2.8.2.8 Selection of the “machine” packing file

Whenever a box or pallet is closed, the machine produces a report in accordance with the specified formats. The format of the report is defined through a textual configuration file, with a **.pak** extension. A file format common to all PLUs or a different format for each PLU can be specified (*see the following section*). The common one will be used if a file is not specified for the PLU being processed.

The common format, which can be different for boxes and pallets, is specified by indicating the configuration file name to the machine, in the following fields:

VARIOUS SETTINGS --> **PACKING** FILE TOT 1

VARIOUS SETTINGS --> **PACKING** FILE TOT 2

If wanting to avoid the production of a box and/or pallet file, do not set anything.

2.8.2.9 Possible packing files associated with the PLUs

If a **packing** file other than the standard one is to be used for a given PLU, specify the file in the fields

PLU (or PROCESS) --> **PACKING** LIST --> TOT 1 **PACKING** FILE

PLU (or PROCESS) --> **PACKING** LIST --> TOT 2 **PACKING** FILE

even if the general file is not specified (obtaining the issue of the **packing** list only for the PLUs in which the format has been specified).

2.8.3 Dates and coins

2.8.3.1 Date increase during process

A number of days from -9999 to +9999 can be stored in the PLU parameter called "DATE INCREASE DD". This number of days will be added to the 3 dates calculated by the process.



Beware!

In order to make this function more flexible, it is possible to SELECT which dates must and must not be affected by this number of days. A new item called "DATE POSTPONEMENT" will be present in the "MACHINE SETTINGS" menu to be able to define these dates. It will be possible inside this menu to select each individual date to decide whether to make it subject to variations of the new parameter or not. The values are set at NO for all 3 dates by default.



WARNING

This new parameter works correctly even if associated to a GLOBAL field. If working in CRATE WEIGHER mode and you wish to increase the dates of all open PLU by the same number of days, you may recur to global fields. However be careful of this detail: if you edit the CAMPGLOB.CFG file to associate one of the fields to the L312 process data, it is **ABSOLUTELY NECESSARY** to set the letter “N” and not “S” as the final parameter of the line of the individual field in the file. If this procedure is not performed, the modification will not work with global fields! Lastly, again concerning global fields, pay attention to the fact that in SINGLE PRODUCT mode, if new data are entered through the GLOBAL FIELD, the dates will not be displayed until you exit and re-enter the process. However in CRATE WEIGHER mode, as in all the other displayed fields, even the dates will be updated after having performed the first weighing operation after the modification.

2.8.3.2 Calculation of consecutive day

This function allows to set a whole number in the machine's “COUNTERS” page which will increase every day. This value can be set via the network with the general data writing control by setting the data G13. This number can also be associated automatically to a process field (selected from the MACHINE CONFIGURATION menu by means of the parameter “CONSECUTIVE DD FIELD”) whenever a NEW PROCESS IS CREATED.

If the data is entered in a STRING-type process field (such as text fields), the number of characters with which the CONSECUTIVE DAY data must be represented are defined by the parameter CDF CHARACTERS; in particular, if the number of characters is 0 or less, or greater than 9, then it is represented by all the characters making it up (e.g. 1 --> 1, 56 --> 56); if the value is from 1 to 9, then it is used to format the data preceded by 0 (e.g. if the field CDF CHARACTERS is 5, then we have 56 --> 00056).

The menu where the data “CONS. DAY COUNTER.” is located, to view the value or to set it manually is:

Archives \ Settings \ Counter Settings

The menu where the “CONSECUTIVE DD FIELD” is located in which the process data which the consecutive day value is automatically associated to is a menu that can only be accessed by authorised personnel:

Archives \ Settings \ Terminal Settings \ Machine Settings \ Process

2.8.3.3 Managing pounds and pence

Just set the Pound (£) symbol in the symbol of the amount inside the PLU or process and the machine will automatically manage the amount in Pounds or Pence based on the amount. If for example the amount is 0.34 pounds, the label will bear 34 p (pence) as the amount is less than 1 pound.

If the amount is 1.34 pounds, the label will bear 1.34 £ (1.34 pound) because the amount is greater than 1 pound. This is the only way possible by English law to provide the amount on product labels.

2.8.4 Multiline Formatting

2.8.4.1 Introduction

All text fields in the label archive (fixed and variable texts) can now be automatically divided by the machine in several lines.

2.8.4.2 Parameters in Label

To obtain this effect, the new **MULTILINE** parameter in the text field must be set at YES. Therefore, the width and height must be attributed to the multiline field (new **MULTILINE BOX HEIGHT** and **MULTILINE BOX WIDTH** parameters, expressed in mm) which represent the area of the label, described starting from the position (x, y) of the field, in which the text will be arranged on several lines.

Spacing between lines of the text can be increased by acting on the **INTERLINE** parameter, with a hundredth of a millimetre resolution, very useful to improve the legibility of small lines, especially when printing with Datamax, which provides a more faithful rendering of Nina, merging a bit more than Italora.

2.8.4.3 Description of function

The text is divided according to the following criteria:

- The text continues on the following line if the part of the text not yet arranged exceeds the length of one line in millimetres, namely the width of the box.
- The new line starts with a word, unless the same word takes up more space than one line, or else one line has more than 100 characters: in this case the word is broken *without being divided into syllables* and continues on the next line.
- Words are separated by spaces, punctuation marks or hyphens.
- A new line is started even if a CR LF character (see extended texts) is present in the text.
- If, once divided, the text takes up more space than the height of the multiline box, it is broken so that the last fully legible line is the last one to be printed (there will be no half-printed lines).

2.8.4.4 Notes

Multiline texts work both with Italora and Datamax.

- Multiline texts can be used on Italora only with Nina fonts and on Datamax with any TrueType font.
- If Datamax prints a label in "Italora emulation" mode, multiline texts can only be printed with Nina fonts. The algorithm dividing the text uses the dimensions of the text as *if it were Italora rendering*, and this can bring about some discrepancies such as the division into a virtually smaller box.
- If a Datamax label is printed (therefore not Italora emulation) but the TrueType font is not valid, then the multiline text will only be able to be printed if the character selected in the CHARACTER TYPE parameter belongs to the Nina family.
- When a printing test including VARIABLE FIELDS is performed (namely retransmitted at each weight), since the length of the text is not known, the entire area available for the box is engaged. If the box overlaps other fields of the label, overlapped writings will appear; however, if the text engages an area smaller than the box and therefore does not overlap while the texts are being transmitted during the weighing operation, the excess area of the box will be completely transparent.
- Use of the "Italora" alignment, namely choosing **"RIGHT"** or **"CENTRED"** in the **"ALIGNMENT"** parameter, produces unspecified effects on the multiline texts. Choosing **"REAL DTMX RIGHT"** and **"REAL DTMX CENTRED"** both with Italora and Datamax printers (aside from the emulation mode) works suitably; nonetheless for Italora printers centring ONLY works for fixed or variable texts NOT RETRANSMITTED AT EACH WEIGHT.
- Setting the "LENGTH" parameter will limit the overall length of the multiline field.
- The use of expansions is supported for multiline texts but is not recommended (as the size of the font should be increased).

Multiline texts can also be rotated. The entire box is rotated: for rotations which are not specular, and therefore when the width of the box becomes its height and vice versa. For Datamax labels, the point at which the text is applied remains unchanged and rotation is exact. For labels printed with Italora (or on Datamax with Italora emulation), the point at which each text and text line is applied varies according to Italora specifications. When

this is applied to multiline, it produces an alignment fault with 0° rotation: in fact in this case the printer uses the end of the text as the starting point and the text is aligned on the left using spaces; therefore having more lines, alignment to the left is slightly different for each line

2.8.5 Multifont Formatting

2.8.5.1 Introduction

The multi-font function allows printing labels with words or phrases in the same text using different fonts. To achieve this result, enter a particular syntax in the text that the software will recognise as an indication of the font to be used from that point on.

To achieve this result in previous versions it was necessary to create different texts, since the type of font used for printing was set on the label and changes were not possible. Now this information can be managed directly within the text.

This function can be used on all printers currently managed directly by our weighing-ricing machines, by applying it to all weighing-ricing machine text fields and respecting the following conditions of use.

2.8.5.2 Conditions of use

From rel. From rel. 7.2.1 up to rel.7.3.0 (included), the MULTIFONT option can be activated via the release code in the “OPTIONS INSTALLATION” menu. Firstly activate this parameter.

From version 7.3.1 onwards, this option has been enabled by default. Therefore the parameter has been removed from the “OPTIONS INSTALLATION” menu.

Once the option is activated, the MULTIFONT feature is automatically applied to all texts on the label with the MULTILINE function set to YES. The starting representation features are those indicated on the label (fonts, expansions, dots, etc.) and they can be modified by inserting different syntax explained below.

There are certain conditions that the text must observe in order to use the MULTIFONT feature:

- 1) The text on the label must activate the MULTILINE mode;
- 2) The type of basic font used (set on the label) must be a “Nina” font in the case of Italora printers;
- 3) Labels with the parameter “ITALORA EMULATION = YES” containing MULTIFONT texts cannot be printed on Datamax printers;
- 4) The presence of the “TAB_FONT.CFG” file within the following menu is mandatory: “ARCHIVES \ VER \ FONT”

2.8.5.3 Multifont management with variable texts

(from sw ver. 7.2.1)

In order to correctly print the text on the label respecting the position and alignment between texts with different fonts, the text content must be known when sending the fixed part of the label. Consequently, whenever a variable text containing a MULTIFONT syntax is printed, the fixed part of the label will also be sent to the printer.

However, the rule still applies whereby, if a text does not change compared to the printing of the previous label, this is not considered for printing purposes, speeding up the data transmission operations.

2.8.5.4 Command syntax

The MULTIFONT function can be applied to texts of labels printed on different printers, such as ITALORA and DATAMAX.

Depending on the printer, the syntax used to exploit the function will be different.

Below is a list of the syntax that can be used to exploit the MULTIFONT function:

2.8.5.4.1. Syntax 1 (Italora Fonts) (Only Italora)

^Ix; text

Where:

I	" I " (capital i) = indicates the use of a Nina font belonging to the family of fonts that can be used on Italora printers;
x	Number of Nina font to be used for printing the text. See the " Nina Fonts Correspondence Table " (par.2.8.5.5) for more information on the value of this field;

Example:

^I9; Test text

2.8.5.4.2. Syntax 2 (Italora Fonts with expansions) (Only Italora)

^Ix. y.z; text

Where:

I	" I " (capital i) = indicates the use of a Nina font belonging to the family of fonts that can be used on Italora printers;
x	Number of Nina font to be used for printing the text. See the " Nina Fonts Correspondence Table " (par. 2.8.5.5) for more information on the value of this field;
y	Horizontal Expansion Value (Optional) = where specified, it indicates the horizontal expansion to be applied to the font used for printing the text;
z	Vertical Expansion Value (Optional) = where specified, it indicates the vertical expansion to be applied to the font used for printing the text;

NOTE: if including the "y" field in the command syntax, it is MANDATORY to also specify the "z" field;

Example:

^I9.2.1; Test text

2.8.5.4.3. Syntax 3 (True Type Fonts) (Only Datamax)

^Tx. k; text

Where:

T	" T " (capital t) = indicates the use of a True Type font that can be used on Datamax printers, with "non" Italora Like labels;
x	ID of the font in the Datamax printer ; corresponds to the position in the printer memory where the font resides;
k	Character dots;

Example:

^T52.12; Test text

2.8.5.4.4. Syntax 4 (True Type Fonts with expansions) (Only Datamax)

^Tx.k.y.z; text

Where:

T	"T" (capital t) = indicates the use of a True Type font that can be used on Datamax printers, with "non" Italora Like labels;
x	ID of the font in the Datamax printer ; corresponds to the position in the printer memory where the font resides;
k	Character dots;
y	Horizontal Expansion Value (Optional) = where specified, it indicates the horizontal expansion to be applied to the font used for printing the text;
z	Vertical Expansion Value (Optional) = where specified, it indicates the vertical expansion to be applied to the font used for printing the text;

NOTE: if including the "y" field in the command syntax, it is MANDATORY to also specify the "z" field;

Example:

^T52.12.2.1; Test text

2.8.5.4.5. Syntax 5 (Table Fonts) (Only Italora)

^a; text

Where:

a	ID of the font to be used for printing. See the " TAB_FONT.CFG " structure for more information on the value of this field;
----------	--

Example:

^2; Test text

2.8.5.4.6. Syntax 6 (Bold) (both Italora and Datamax)

^<; text

Where:

<	<p>“<” (less than symbol). It indicates the switching from a normal character to a bold character.</p> <p>In the case of Italora, the font in use at that moment is checked and the corresponding Bold is retrieved. If the Nina font in use was already a Bold font, then nothing changes.</p> <p>In the case of Datamax (True Type) printers, at the moment this syntax is bound to the “NINA.TTF” and “NINAB.TTF” fonts that must mandatorily be stored in the Datamax memory, under ID 52 and 53.</p>
---	--

Example:

^<; Test text

2.8.5.4.7. Syntax 7 (Normal) (both Italora and Datamax)

^>; text

Where:

>	<p>“>” (greater than symbol). It indicates the switching from a bold character to a normal character.</p> <p>In the case of Italora, the font in use at that moment is checked and the corresponding Normal is retrieved. If the Nina font in use was already a Normal font, then nothing changes.</p> <p>In the case of Datamax (True Type) printers, at the moment this syntax is bound to the “NINA.TTF” and “NINAB.TTF” fonts that must mandatorily be stored in the Datamax memory, under ID 52 and 53.</p>
---	---

Example:

^>; Test text

2.8.5.4.8. Syntax 8 (label Base Font) (both Italora and Datamax)

^#; text

Where:

#	<p>“#” (hash key).</p> <p>This syntax cancels all the font changes applied during the processing of the text and the font, expansion, dots, etc. information indicated in the base label is retrieved.</p>
---	--

Example:

^#; Test text

2.8.5.5 Nina fonts correspondence table

When using syntax 1 and 2 to print a MULTIFONT text, refer to the following table for correspondence of the fonts used in the print:

ID	FONT
1	Nina 10
2	Nina 10 Bold
3	Nina 12
4	Nina 12 Bold
5	Nina 13
6	Nina 13 Bold
7	Nina 14
8	Nina 14 Bold
9	Nina 16
10	Nina 16 Bold
11	Nina 20
12	Nina 20 Bold
13	Nina 28
14	Nina 28 Bold

2.8.5.6 Retrieve Fonts + Expansions combination

This table was created in order to be able to use texts already created for Bizerba weighing-pricing machines on Cigiemme terminals.

Since no absolute correspondence with the Bizerba fonts can be found (because proprietary fonts), we tried to find a similarity as real as possible using the Nina fonts present on the Cigiemme terminals.

By using syntax 5 for printing a MULTIFONT text, the "TAB_FONT.CFG" file contained in the "ARCHIVES \ USER \ FONTS" folder, that can be accessed via FTP connection with the weighing-pricing machine, can be configured.

Through this table it is possible to configure up to 50 combinations, and the following must be set for each:

- A number that will indicate the sequence of elements in the table (these values must be consecutive as the entered combinations increase);
- A numeric ID (Font_ID) which will represent the identifier of the combination itself, to be retrieved in the text syntax;
- A FontId (numeric) which will retrieve a certain Italora Nina font (see the "ID Nina Fonts in memory" table);
- An X expansion to be applied to the font with which the text will be printed (allowed values from 1 to 9);
- A Y expansion to be applied to the font with which the text will be printed (allowed values from 1 to 9);

2.8.5.7 ID Nina Fonts in memory

ID	FONT
32	Nina 10
33	Nina 10 Bold
34	Nina 12
35	Nina 12 Bold
36	Nina 16
37	Nina 16 Bold
38	Nina 20
39	Nina 20 Bold
40	Nina 28
41	Nina 28 Bold
56	Nina 13
57	Nina 13 Bold
58	Nina 14
59	Nina 14 Bold

2.8.5.8 Example of a "TAB_FONT.CFG" structure

#	PROGR.ELEMENT,	Font_ID,	FontId,	EXP.X,	EXP.Y
	1,	10,	32,	1,	1,
	2,	20,	33,	1,	1,
	3,	30,	34,	1,	1,
	4,	31,	34,	2,	2,
	5,	40,	36,	1,	1,
	6,	50,	37,	1,	1,
	7,	60,	38,	1,	1,
	8,	61,	38,	2,	2,
	9,	70,	57,	1,	1,
	10,	80	58	1,	1

2.8.5.9 Errors

In case the MULTIFONT function is used improperly, reports have been handled whose numeric codes retrieve the following explanations:

Code 9012: ERR_FONT_MULTIFONT_SYNTAX_ERROR

- Indicates that a syntax for the font change was found in one of the texts retrieved on the label, but that this is incomplete or incorrect. Check the labels linked to the reference process to identify the texts with incorrect syntax.

Code 9013: ERR_FONT_MULTIFONT_TRUETYPE_NOT_ALLOWED

"TrueType font incompatible with Italora multifont"

Indicates that a syntax for the font change dedicated to the TrueType fonts is being used in a text on a label whose parameter "ITALORA EMULATION" is set to YES.

Code 9014: ERR_FONT_MULTIFONT_BITMAP_FONT_NOT_ALLOWED

"Italora font incompatible with TrueType multifont"

Indicates that a syntax for the font change dedicated to Italora Bitmap fonts is being used in a text on a label whose parameter "ITALORA EMULATION" is set to NO.

Code 9015: ERR_FONT_MULTIFONT_TOO_MANY_FONTS_IN_A_SINGLE_LINE

"There are more than 15 font changes on the same text line."

Indicates that more than 15 syntaxes have been found for the font change within the same text line of a multiline box;

Code 9016: ERR_FONT_MULTIFONT_X_EXPANSION_NOT_IN_RANGE

"X expansion out of range in a font change command"

Indicates that a horizontal expansion value out of the allowed ranges has been expressed in a font change command.

Code 9017: ERR_FONT_MULTIFONT_Y_EXPANSION_NOT_IN_RANGE

"Y expansion out of range in a font change command"

Indicates that a vertical expansion value out of the allowed ranges has been expressed in a font change command.

Code 9018: ERR_FONT_MULTIFONT_NO_VARIABLE_TEXT_ALLOWED

"Multifont not allowed with variable fields"

Indicates that a syntax for font change has been found within a text indicated on the label as "VARIABLE FIELD = YES". The multi-font function is only allowed for texts shown on the label as "VARIABLE FIELD = NO".

Code 9019: ERR_FONT_MULTIFONT_TOO_MANY_LINES_IN_A_BOX

"It is not possible to print a multifont text in a box with more than 100 lines."

Indicates that an attempt is being made to show a multi-font text within a multi-line box and that the text is divided into more than 100 lines.

Code 9020:ERR_FONT_MULTIFONT_NOT_ALLOWED_ON_DATAMAX_WITH_ITALORA_LIKE

"MULTIFONT not allowed on DATAMAX printers in Italora Emulation"

It is not allowed to print labels in Italora emulation, containing texts with font change syntax dedicated to Italora, on Datamax printers;

Code 9021: ERR_FONT_MULTIFONT_ID_FONT_NOT_FOUND

"Font_ID not found in the TAB_FONT.CFG table"

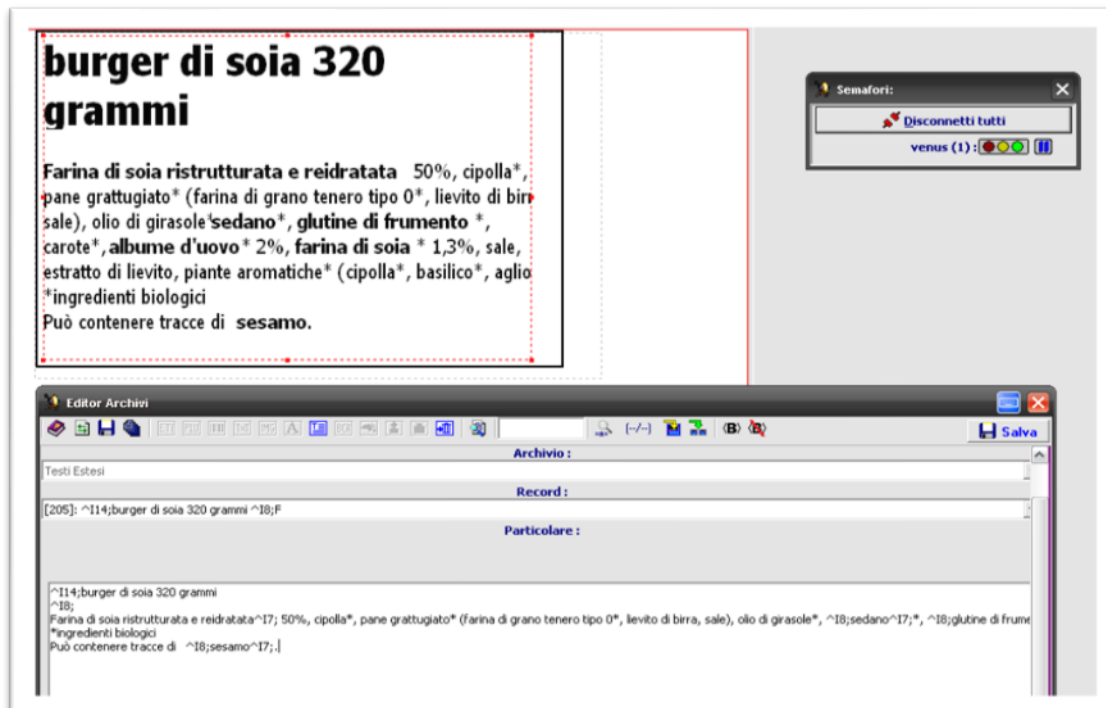
Indicates that the syntax for retrieving a table font has been used within a label text, but that the numeric ID specified in the syntax was not found within the "TAB_FONT.CFG" table.

2.8.5.10 Planet View (version 3.x.x)

The Planet View 03.00.00 versions and higher support the MULTIFONT function in the following features:

- graphic representation of the label
- implementation of hotkeys for switching fonts from “normal” to “bold”
- TAB_FONT.CFG table management for each individual linked line
- incorrect font retrieval multi-font syntax error management;

Graphic representation




The Planet View is able to recognise the different multi-font syntaxes and adapt the graphic representation of the label on the screen, respecting the font changes and their dimensions.

If a text is retrieved with a syntax that foresees different values between horizontal and vertical expansions, the graphic representation of the result will not be real but will show the text within an additional dashed box that will indicate the occupation of that particular word or phrase expressed with that particular combination of fonts/expansions. In all other cases, what will be displayed will correspond to what will be printed.

Toggle Bold / Non Bold

Two buttons have been implemented that, during text editing, automatically retrieve the syntax for switching



from a normal font to a bold font and vice-versa. The first button is:  and it is used for inserting the syntax for inversion between normal and bold in the text being edited. Pressing this button scans the text starting from the beginning. If no syntax is found for switching to bold, pressing the button will automatically insert the syntax



On the other hand, if scrolling the text back a syntax is found for switching to bold, pressing the button will insert the tag for switching from bold to normal, namely:



Toggle Cancellation


Each time the toggle key is pressed, the text written until that moment is saved. Pressing  automatically reloads the last save made on the text, cancelling all subsequent changes.

Table Font (TAB_FONT.CFG)

Whenever the Planet View connects to the scale, the "TAB_FONT.CFG" file is read so that the program can internally create an association between fonts and expansions fully identical to that set for each individual weighing-pricing line.

In this way, by entering a text that retrieves one of the syntax for using the font in the table, its graphic representation can be seen on the label editing page.

Error Management

As for the weighing-pricing line, the Planet View also checks that correct font switching syntax is inserted in a text.

Depending on the type of error that Planet View could encounter, the detailed description of the error can be traced by opening the warning window. In case of a new warning, the following icon will appear in the bottom-



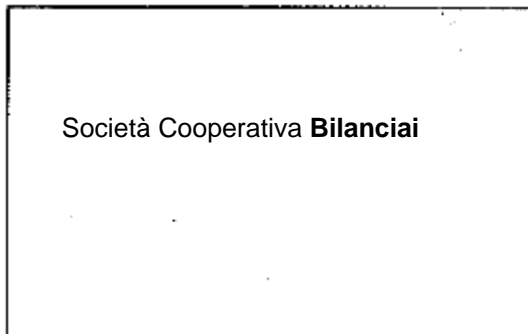
left corner of the program:

Click on it to open the dialog box containing the detailed description of the warning messages, with detail of the detected fault.

2.8.5.11 EXAMPLES

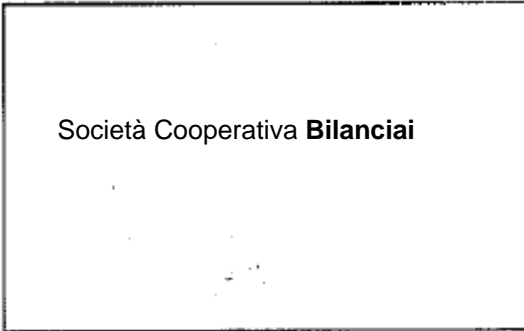
Example Syntax 1 – Nina Font on Itabora

^19; Società Cooperativa ^12; Bilanciai



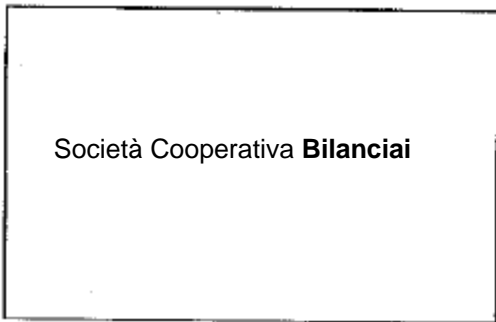
Example Syntax 2 – Nina Font on Italora

^I9; Società Cooperativa ^I2.1.2; Bilanciai



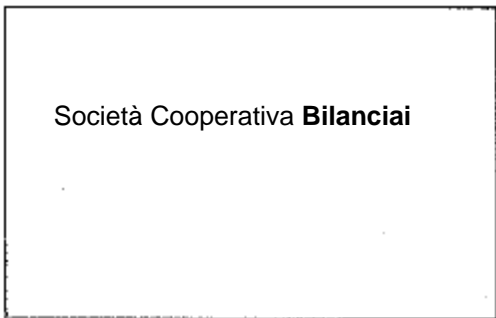
Example Syntax 3 – True Type Font on Datamax

^T52.10; Società Cooperativa ^T53.12; Bilanciai



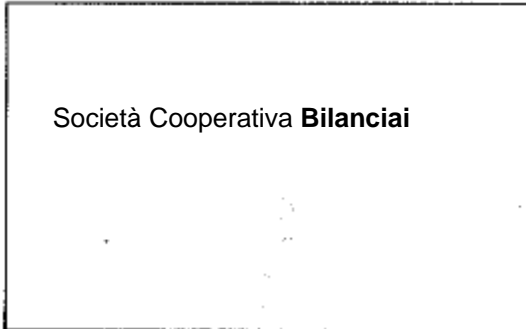
Example Syntax 4 – True Type Font on Datamax

^T52.10.1.2; Società Cooperativa ^T53.12.1.2; Bilanciai



Example Syntax 5 – Table of Fonts on Itabora

^2; Società Cooperativa ^8; Bilanciai



Where:

“2” corresponds to combination

Nina 10;

ExpX = 1;

ExpY = 1

“8” corresponds to combination

Nina 12;

ExpX = 2;

ExpY = 2

2.8.6 Automatically entering LOT by time slots

2.8.6.1 Description

Activating this function allows the automatic writing, within the process “LOT” field, of a string composed as follows:

DDD\X

where:

DDD = Julian day (from 1 to 365);

X = letter relating to the time slot (from A to D);

At path:

“Home \ archives \ setups \ various settings \ [+] HOURLY LOT”

it will be possible to enable the function by setting the “**ENAB.TIME SLOT LOT**” field to “**YES**”.

A start and end time can be specified for the 4 allowed time slots (from “A” to “D”). The start and end fields for the time slots must be entered with the correct syntax, that is:

HH:SS

where:

HH: Hour (from 00 to 23)

SS: Seconds (from 00 to 59)

When the process is started, the string described in the introduction will be inserted in the “LOT” field, after checking the current system date and time.

Any MACROs acting on the “LOT” field will overwrite the value until the next time the process is started.

The lot can be refreshed during the process by pressing the “**REFRESH LOT**” key from the Soft Keys Dialog.

2.8.7 External viewers

2.8.7.1 RD52HL viewer

The RD52HL external viewer can be used to repeat the weight of the scale together with metrological indications which appear on the display in the weight box.

To set connection with the viewer, access the menu:

“Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] SCALE \ RD52 VIEWER COM”
and select a serial port to which to connect the viewer.

Save to confirm the changes.

The weight will be transmitted about 3 times per second outside production, and about 7 times per second during production.

2.8.7.2 EXTENDED STRING support

The EXTENDED STRING defines a connection protocol with Bilanciai weighing terminals, with which it is possible to be linked to repeat the weight.

Access the following menu to set the serial port for extended string cyclical transmission:

“Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] SCALE \ EXTENDED STRING COM”

and select a serial port.

Save to confirm the changes.

2.8.8 Conversion factors

It is possible to specify up to 3 **conversion factors** for each PLU, to multiply the weight in order to obtain the net weight processed in 3 different ways.

To obtain the weight in pounds, it is sufficient to use the automatic calculation performed by the machine.

To obtain the weight in ounces or grams, it is possible to use the customisable conversion factors which are applied to the net weight: putting them equal respect to the relationships between kg and g, and between kg and ounces can obtain the weight in ounces.

The rounding off and decimal number can be specified for each conversion factor.

Conversion factors must also be used to obtain the amounts starting from price/lb or price/oz, specifying the factor as the product of the kg and measurement unit ratio and the price by unit of the same. This procedure however exposes to the risk of a rounding off defect when performing a check by multiplying the weight in the derived unit of measurement by the respective unit price: in this case, the weight expressed in the derived unit of measurement is rounded off, while that calculated by the machine with the conversion factor, multiplied by the unit price, is not.

2.9 MACRO, SOFT KEYS AND GLOBAL FIELDS

2.9.1 Soft Keys

2.9.1.1 Introduction

The **GALAXI** weighing-pricing machine makes it possible to associate up to 72 keys that directly access the PLU to be processed by means of the touch screen and 128 with the optional external keyboard. A typical use of the soft-keys is for the crate weighing mode with store via the keyboard (touch). Naturally, the soft-keys can be used in all **GALAXI** terminal configurations.

2.9.1.2 Programming

To program the soft-keys, go to the "Home" of the application, access the "SOFT KEY DIALOG" and select "SOFTKEY ALLOCATION"

The window that appears in the left-hand column contains direct access keys to which the PLUs can be linked, while any already allocated PLUs appear in the right-hand column. Proceed in the following way to associate one of the 72/128 available keys to the required PLU:

- Select the item from the list that you want to customise and press "ENTER". Now select the utilization mode for the required PLU in the window that appears, as indicated in the table below:

0	PC	PRODUCT WITH CONFIRMATION
1	PN	PRODUCT WITHOUT CONFIRMATION
2	C1	CUSTOM 1
3	C2	CUSTOM 2
4	C3	CUSTOM 3
5	Ok	SPACE/CONFIRMATION
6	Sc	REJECT
7	Cc	CANCEL QUEUE
8	cl	CAPS LOCK
9	2n	SHIFT

Figure 2-67 - Soft-key Options

Note: a dash ("-") will appear before the slash ("/") if the normal PLU code is not associated.

PRODUCT WITH CONFIRMATION

The PLU associated with this soft-key in relation to the current status (normal PLU or shift PLU) is retrieved after which a store is produced and added to the queue.

PRODUCT WITHOUT CONFIRMATION

The PLU associated with this soft-key in relation to the current (normal PLU or shift PLU) is retrieved, but no store is produced.

CUSTOM KEYS (Custom 1, Custom 2, Custom 3)

These keys allow the keyboard to be divided so as to be able to select a PLU by "composing" optional elements (up to 4) forming portions of code, in sequence. The first three elements are associated with one custom key, while the last is associated with a product key (points 2 and 3). This means that when the relative key is pressed, the code of the specific PLU associated with the key is entered in the PLU code.

The pre-defined sequence in which the elements are composed in the code is:

custom1-custom2-custom3-product

although the order in which they are digitized may vary (the dash has only been entered to make the sequence legible but it does not appear in the code). For example, if custom2 is pressed and then custom1, the PLU code will first contain the code associated with custom2, which will then be put before the code associated with custom1.

Both during and after code composition (and also after the creation of stores, after which the activated PLU is not eliminated), the elements can be modified in an independent way by pressing the relative key, leaving the remaining code elements unchanged. This allows a PLU that only partly differs from the previous one to be identified.

A confirmation action is never associated with the custom keys as it would prevent the PLU elements from being modified without ascribing the entire PLU code again. The store can be confirmed by:

- a) using a confirmation key (space or a programmed soft-key);
- b) retrieving a product with confirmation key as last element of the sequence.

Note that if the last element of the sequence is a product without confirmation key, the store must be confirmed by means of the procedure described in point a). Also note that in this case, once the entire code has been digitized, the composition can be modified still further while this cannot be done when the last element of the digitized sequence is the product with confirmation key, which automatically creates the store.

The **CUSTOM** key function has been added to allow clients who work in the crate weighing mode to orthogonally select certain elements associated with the PLU, such as the true code and the client, for example. This means that a group of PLU codes that share the coding element that expresses the product can be entered into the system, differently from the coding element that expresses the client.

For example, data:

PLU: **CHICKEN**

Size: **SMALL, LARGE**

Clients: **ROSSI, BIANCHI**

the following PLU:

SMALLROSSICHICKEN

SMALLBIANCHICHICKEN

LARGEROSSICHICKEN

LARGEBIANCHICHICKEN

and the following soft-keys are entered:

1 PC **CHICKEN/**

2 C1 **SMALL**/
3 C1 **LARGE**/
C2 **ROSSI**/
5 C2 **BIANCHI**/
6 Ok /

a store for **LARGE CHICKEN** for **ROSSI** can be entered by simply digiting
341;

after this, the size alone can be changed while maintaining the same client and product (and confirming the store) by digiting:

26

CONFIRMATION

The key repeats the function whereby a store relative to the currently selected PLU is produced in a similar way to the **SPACER BAR**.

REJECT

The key enters a non-valid store to the queue (N. B.: nothing apparently happens when the key is pressed. As soon as the next store is added to the queue, the position occupied by the spurious store is indicated with a 0).

CANCEL QUEUE

This key is used for cancelling the queue of stores. Unlike the result achieved after the **DEL** key has been pressed, in this case the currently selected store is also eliminated.

CAPS LOCK

This key is used to simulate pressure on the key of the same name and differs from the **SHIFT** key since it remains in its status once pressed (capitals or lower case) until pressed again.

SHIFT

Two different PLUs can be associated with each individual soft key so as to duplicate the number of keys available. The "shift" mode is used to distinguish which PLU must be retrieved when the soft-key is pressed, i.e. a status in which pressure on a soft-key retrieves the second PLU associated with the key itself. To change from the "normal PLU" mode to the "shift PLU" mode, press the key (or any one of the keys) associated with the **SHIFT** function.

2.9.1.3 Cancellation

Open the "SOFT KEY DIALOG" and select "SOFTKEY CANCELLATION". From the list of programmed softkeys, select the one to be deleted and press "ENTER".

2.9.2 Function macros

2.9.2.1 Introduction: difference between macro and global field

The difference between the function macro and global field concept lies in the length of time the intervention involving the modified field lasts and in the number of function keys available. When it comes to macro functions, the modifications entered remain activated until the process closes (except when the operator opts for saving the modifications in the archives when the macro is created). Modifications entered in global field mode always remain valid until the field itself is modified again. Use of a macro-function may therefore be useful in order to automate the entry of lots of data that change for each process. The global fields are used

when the same field must be entered for the first time and remains valid for several PLU to be subsequently processed (a typical example is that of the lot code in a multiproduct/crate weigher context).

2.9.2.2 Introduction

The "macro functions" allow you to associate a function or data item of the weighing-pricing machine to a function key, in a clear and simple way. This association simply occurs the first time the operating sequence that accesses the value to be changed is stored. This storage can then be associated with any vacant key. As part of the standard supply, the machine comes with the following macros already activated, available through the "SOFT KEY DIALOG":

- Date 1
- Date 2
- Date 3
- Tare
- Autotare

A macro-function directly accesses the data in the process in the same way as they are accessed by means of the **DATA MODIFICATION** menu in the process screen.

2.9.2.3 How to program a macro function

Proceed in the following way to program a macro:

- With the machine running, go to the "**DATA MODIFICATION**" menu.
- Access the "SOFT KEY DIALOG" and select "**START MACRO REG.**".
- A mask will now appear asking you to name the macro function to be recorded (e.g. "Price"). Type the required name and confirm.
- The "**MACRO ACTIVATED REGISTRATION PHASE**" indication will appear on the top left of the display.
- Move to the field to be edited using the arrows (e.g. price).
- Select and confirm the field to be associated with the macro.
- The message "Field selected..." (e.g. "field selected: unit price") will appear on the top right of the display. At the same time, a dialog on the screen will request the insertion of a description to be shown to the operator when action on the macro is required during processing. Type a description (e.g. "UNIT PRICE" and confirm).
- The user will be asked whether the change must be saved in the PLU. If yes, the field changes will also be saved in the base PLU that generated the process.
- Close the storage phase of the macro by pressing the "**STOP MACRO REGISTRATION**" key from the "SOFT KEY DIALOG".
- Return to the process by pressing START.
- To associate the programmed macro to a free key in the process screen, access the "SOFT KEY DIALOG" and press "**MACRO ALLOCATION**".
- A mask with the prompt to "Select Macro File" will appear, with a list of the recorded macros.
- Select the programmed macro (e.g. "price.mcx") and confirm.
- The "**Macro 1 text**" mask will appear. This prompt concerns the name to put on the key that will be selected. The text consists of two separate lines of 10 characters each. The first is requested in this mask: enter the first part of the name and confirm (e.g.: "CHANGE" + ENTER).
- The mask requesting the "Macro text 2" will appear, requiring entry of a second line of 10 characters describing the key: enter the second part of the name and confirm (e.g.: "PRICE" + ENTER). If you choose not to enter the second text, press "ENTER" and the text previously entered will be automatically centred.
- The "**MACRO ALLOCATION**" indication will appear on the top left of the display.
- Press the free key to which the macro will be assigned, which will become "CHANGE PRICE" (e.g. F10).

2.9.2.4 Start Macro

The "START MACRO" concept allows processing of a macro to be automatically enabled.

START MACRO must be saved when a "start.mcx" file is made.

An already existing macro can be copied into another and called **start**, thus obtaining a **START MACRO**. This must be carried out by qualified personnel since, in order to access the macros already in the memory, it is necessary to access the terminal through an FTP client service.

2.9.2.5 How to delete a macro function

Proceed in the following way to delete a macro function:

- Access the "SOFT KEY DIALOG" from the process page and select "**DELETE MACRO**".
- The "**MACRO DELETION**" indication will appear on the top right of the display.
- Press the macro key that must be eliminated (e.g. "CHANGE PRICE") which will disappear. The key will be free again.

2.9.3 Global Fields

It is now possible to enter the fields so that they are valid and activated for all the PLUs regardless, by overwriting the values in the PLUs until they are modified again.



Beware!

Only the manufacturer's specialised technical personnel may be allowed to program the file that enables the global fields to be used.

Note for the installers:

on the Compact Flash, through an access via FTP to the path "ARCHIVES\USER\CONFIG", there is a **campglob.cfg** file which can be edited with Windows® Notepad and in which up to 3 lines can be entered. Each of these lines corresponds to the global field to use in the process.

The syntax to use for compiling the file is:

```
# COMMENT START-END CHARACTER
, FIELD SEPARATOR CHARACTER
; RECORD END CHARACTER
| FILE END CHARACTER #
```

The structure of the code to enter is:

1st LINE TEXT DESCRIPTION	2nd LINE TEXT DESCRIPTION	PROCESSING FIELD NO.	GLOBAL YES_NO
------------------------------	------------------------------	-------------------------	---------------

NOTE:

if value **-1** is entered on a level with the PROCESSING FIELD N°, the function relative to the global fields is disabled.

If the letter **S** (default) is entered in the last column, the fields will be global and, with reference to dates (expiry and curing), will not be recalculated. If * (asterisk) is entered, the field typed by the user will **only** be global if it **does not** begin with *, otherwise it will be non-global if the user types an *. This latter option is **only** valid for the dates (prod., expiry and curing).

If this function is activated during the installation phase, the preset labels of the keys will appear on a level with the **F7**, **F8** and **F9** function keys.

Example of file campglob.cfg

```
# COMMENT START-END CHARACTER
, FIELD SEPARATOR CHARACTER
; RECORD END CHARACTER
| FILE END CHARACTER #
```

```
# LOT BATCH MANAGEMENT IN DATES#
  DATE/LOT      , PRODUC  ,43, S;
CODE           , TRACEAB  ,49, S;
  THIRD        , DATE     , -1, S|
```

A partial list of the more significant fields that can be entered in the **campglob.cfg** script is given below.

CLIENT_CODE (10)	L2
PRODUCT_CODE (15)	L3
BATCH_CODE (15)	L4
LOT_CODE (15)	L5
COMMODITY_CODE (15)	L6
PRODUCT_INDICOD (13)	L7
TOTAL_1_INDICOD (13)	L8
TOTAL_2_INDICOD (13)	L9
UNIT_MEAS	L10
PRODUCT_TARE (0, 100)	L11
PRODUCT_PERC_TARE (0, 99.99)	L12
PRODUCT_TARE_PRINT_ENABLE	L13
TOTAL_1_TARE (0, 1000)	L14
TOTAL_1_TARE_PRINT_ENABLE	L15
TOTAL_2_TARE (0, 1000)	L16
TOTAL_2_PRINT_ENABLE	L17
WEIGHT_SYMBOL_PRINT_ENABLE	L19
FIXED_WEIGHT (0, 1000)	L21
FIXED_AMOUNT (0, 1000000)	L22
MINIMUM_WEIGHT (0,1000)	L23
MAXIMUM_WEIGHT (0,1000)	L24
IN_RANGE	L25
PRICE_1_CURRENCY	L28
PRICE_1_ROUND OFF	L29
PRICE_1_DECIMALS	L30
PRICE_1_CURRENCY_SYMBOL	L31
PRICE_1	L32
PRICE_1_PRINT_ENABLE	L33
AMOUNT_1_PRINT_ENABLE	L34
CURRENCY_SYMBOL_PRINT_ENABLE	L42
PROD_DATE (15)	L43
PROD_DATE_TEXT (70)	L44
PROD_DATE_PRINT_ENABLE	L45
EXPI_DATE (15)	L46
EXPI_DATE_TEXT (70)	L47
EXPI_DATE_PRINT_ENABLE	L48
CURI_DATE (15)	L49
CURI_DATE_TEXT (70)	L50
CURI_DATE_PRINT_ENABLE	L51

ITEMS_1_PRESEL (0, 9999)	L52
WEIGHT_1_PRESEL (0, 100000)	L53
ITEMS_2_PRESEL (0, 9999)	L54
WEIGHT_2_PRESEL (0, 100000)	L55
TIME_FORMAT	L80
TIME_PRINT_ENABLE	L81
PROD_CONSEC (0, 999999999)	L82
PROD_CONS_PRINT_ENABLE	L83
TOTAL_1_CONSEC (1, 999999999)	L84
TOTAL_1_CONS_PRINT_ENABLE	L85
TOTAL_2_CONSEC (1, 1, 999999999)	L86
TOTAL_2_CONS_PRINT_ENABLE	L87
PROD_APPLIC_TARGET_DELTA (-600, 600)	L90
PIECES_PROC_LIMIT (0, 999999999)	L91
WEIGHT_PROC_LIMIT (0, 1000000000)	L92
PIECE_LENGTH (0, 999999999)	L130
SCALE_TARGET_DELTA (-600, 600)	L132
ITEMS_NUM_COUNT (0, 2147480000)	L141
BARCODE_PROD_DATE (16)	L148
BARCODE_EXPI_DATE (16)	L149
BARCODE_CURI_DATE (16)	L150
EXPI_DD (0, -999, 999)	L153
EXPI_DATE_FORMAT	L154
CUR_DD (0, -999, 999)	L155
CURI_DATE_FORMAT	L156

2.10 OPERATING MODES

2.10.1 Consecutive recovery

There are three modes available:

- **NO** - No Recovery. When a piece is reversed, the consecutive value sent to the network (field L82 for the piece and L84 for the box) always returns "-1". This is because, at the moment of the reversal, it is not possible to know whether piece consecutives on the machine previously had "jumps" or not. Therefore, as a rule, each piece reversal will return the value "-1" in the relative consecutive field.
- **YES** - Recovery of a consecutive chosen among those already used in a box or open pallet. In this mode, when a reverse is performed, you will be requested to type the value of the consecutive number to be recovered. The first valid weighing operation following the reverse will print the value consecutive to that of the last weighing operation, but the second weighing operation after the reverse will attribute to the piece/box the previously reversed progressive value, recovering it.
- **LAST DRAFT WEIGHED** - Recovery of last consecutive used in a box or open pallet. This way there can be no values missing in the consecutive values since whenever a reverse is performed, the consecutive value is decreased by 1 (both for pieces and for boxes). Thus already the first weighing operation after the reverse will recover the consecutive value just reversed.

Note for installers: these settings can be set in the menu:

"Home \ archives \ setups \ Terminal sett. Machine [+] Presel. And Progress. \

By appropriately setting the items "**PROGR. PIECE**" and "**REC. PROGR. TOT.1**".

When operating with optional consecutive recovery, during the reversal, aside from the weight and number of pieces to be reversed, the consecutive number of the element being reversed is also requested.

2.10.2 Reverse entry management

The reversal operation can be carried out during the process where necessary.

Press

"Home \ Start \Reverse Piece"

and type a quantity in kg between the suggested limits and confirm. The belts will stop (if applicable - automatic versions) during this operation.

Press

"Home \ Start \Total 1 Reverse"

and type a quantity in kg between the suggested limits, then confirm. After this, type a quantity in pcs between the suggested limits and confirm. The belts will stop during this operation.

After the reversal operations have terminated, the totals will be updated on the screen and the belts will start again.

Note: it is only possible to:

- reverse pieces belonging to partially open boxes;
- reverse boxes belonging to partially open pallets;

2.10.3 Print totals (Advanced closing)

Totalizing always occurs when labelling has terminated correctly and the summed values are the ones given on the print itself.

It is possible to close the box or pallet in advance of the values set in the PLU by following the pathway: "Home \ Start \ Totals Print".

A print-out of the box and/or pallet total will be requested as the machine settings change.

2.10.4 General totals

2.10.4.1 Introduction and properties

Various different totalising modes can be enabled on the **GALAXI** terminal across the processes (in which the totals per box, pallet and PLU are present).

Note for the installers: follow the pathway below to enable all or even only some of the available totals:

“Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] Totals Enabling

After this, the programmed labels can be associated with the totals fields by following the pathway:

“Home \ Archives \ Settings \ Various Settings \ [+] TOTAL LABELS”

The following totals are available:

General

Partial

Client Code

Product Code

Batch code

Lot code

Traceability code

Commodity code

Article code

Lot – Product

Lot – PLU

Traceability - Product

Traceability – PLU

Client – Product

Client Arch. - PLU

Following the path:

“Home \ Archives \ Settings \ Various Settings \ [+] SUMMING KEYS”

The more frequently used totals can be retrieved by using the “**SUM1**”, “**SUM 2**”, “**SUM 3**” and “**SUM**” keys in the Soft Keys Dialog from the process screens.

2.10.4.2 General Totals management

Follow the pathway Home \ Archives \ General Totals to open the general totals window.

The enabled totals can be displayed and printed from this window (after printing, the total will be cancelled).

The general totals can be enabled during the terminal configuration, by qualified personnel only.

2.10.4.3 Reverse with weight becoming negative

Currently there is a control by which, if you wish to reverse a piece or box during processing, but this weight is to be stored in a general total record which DOES NOT EXIST, the operation is impeded and an error message is displayed.

EXAMPLE: Suppose that the GENERAL TOTAL by LOT is enabled. One begins to work with the "PLU_1" and the lot "A" and performs a series of weighing operations. At a certain point, with a macro or in any other way, the lot code is changed to "B" and the operation immediately after is a piece reverse. The software will search, among the general totals by lot, the line attributed to lot "B". When it is not found (since no valid weighing operation was ever performed with lot "B") a window will indicate that it is impossible to perform the reverse because general totals do not allow it.

At the moment however there is no control of the weight value of each element in the general total. If at least 1 valid weighing operation was performed with the "PLU_1" and lot "B" and one wishes to reverse a series of

pieces greater than 1 from the same PLU (which is possible and allowable), there would be a reference of the reverses all attributed to lot "B", the net weight of which could become negative.

2.10.4.4 Forced closing of totals with weights of 0

Another particular example is that of a forced closing of totals which generate a new record within the general totals with weight values at zero. Returning to the previous example, if a series of weighing operations with "PLU_1" and lot "A" was performed and then the lot code changed to "B" and the totals closed by force, 2 different records would be generated in the general totals:

- The lot "A" line, with all the weighing operations and tares of the individual pieces but WITHOUT the tare values of TOTAL 1 and TOTAL 2;
- The lot "B" line, with weight values at zero, these also WITHOUT the tare values of TOTAL 1 and TOTAL 2. The fact that these tares are not present in the second line either has been done on purpose. It has been chosen that in case the overall value of the net weight is zero, all the weight values linked to that general total record are set at zero (to avoid creating weight differences).

2.10.4.5 Storing weights in case of active box queue

If a box queue is active, it can be noted that the tares of TOTAL 1 and TOTAL 2 are added to the general totals only when the label has been printed. The product weighing operations and their net weight and tare will be regularly present in the records if processing ends with a box queue active, but the tares of TOTALS 1 and TOTALS 2 for which the label has not yet been issued are missing.

2.10.5 PLU changing during process

If the WEIGHT CONTROL function is not enabled, the PLU can be changed directly from the process screen by pressing "F12" (PLU) or, in the same conditions, by reading a barcode with a manual scanner connected to the terminal (the barcode must contain a valid PLU ID).

Note for installers: this mode can be activated by acting on the parameter:

"Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] PROCESS \ PLU INPUT IN PROC"

2.11 PRINTING AND APPLICATION

2.11.1 Adjusting end of printing/application

2.11.1.1 Automatic label centring

The possibility of printing layouts designed for Italora SMART printers (with $x=0$ per stroke) has been introduced on automatic Italora printers (with the label centred respect to the head). In particular, the parameters "**CENTRED LABEL**" in printer configuration (for product 1 and 2 printers and for total 1 and 2 printers) have been added in order for the machine to automatically readjust the offset X before printing a layout.

In this configuration, the machine expects the label to have been designed for Italora SMART printers and readapts the offset to print the same layout on automatic Italora printers. In order to do this, the system requires the "**WIDTH**" parameter to be set in the label.

Since TOT45 also uses centred printing, it is possible to print labels designed for TOTS on TOT45 configured as product or total printers.

NOTE: The centring option **MUST NOT** be used to print with Datamax printers.

2.11.1.2 Association of Offset X, Y and temperature of printer

Possibility of associating an X, Y offset and a temperature offset to a printer in order to print the same layout on printers which are mechanically different.

2.11.1.3 Shade area management

There can be 5 different types of shade area:

- White
- Black
- Reverse (all the fields in the area are printed in reverse)
- Black shade (all black fields in the area appear grey)
- White shade (all white fields in the area appear grey)

The area can be entered freely in the label as a label element. As for other label elements, it can be entered or modified by the label editor.



Beware!

- The order in which the area is entered determines the coverage (it is generally the last element).
- A field which is not completely covered by the reverse area will be partially reversed (unless it is a wanted effect).
- Where reverse areas overlap, the drawing goes back to normal.



WARNING

The work area is actually on pixels, ignoring the field concept.

Setting "variable" parameter

- If only fixed texts, lines or anyway static elements are used, it is recommended to set the "variable" parameter of the area at "**NO**". (for printing speed purposes)
- Variables on a text or barcode **must** be placed in areas with the "variable" parameter set at "**YES**".

2.11.1.4 Application hand with waiting (only Venus series 100, GALAXI and Mercury Plus)

The “APPLICATION HAND WITH WAITING” is available. When this is selected as the type of applicator, it introduces a programmable delay after the label has been applied in order to prevent unexpected bounces of the arm after the return sensor is covered and the label of the next product exits without the arm being perfectly horizontal, thus causing serious application errors. The waiting time (“**WAITING TIME** item (**x16ms**)”) is expressed in ticks (like the “**START HAND TIME**” and “**STOP HAND TIME**”). It can be programmed and appears in the configuration only when the concerned applicator has been selected. Since each tick lasts 16,66666 ms, the actual waiting time is equivalent to the value multiplied by 16,66666. Since the delay is introduced as part of the application process itself, the next product will wait this amount of time before leaving the scale belt. This is considered in terms of rate drop (note: the rate drop can be calculated mathematically).



Beware!

Do not confuse “WAITING TIME” with “DELAY TIME”, linked to the type of “HAND APPLICATOR WITH DELAY”. The latter (incidentally expressed in seconds and not in ticks) introduces a delay BEFORE the application (to allow repositioning products which could have slipped during the stopping phase) and not AFTER. It would be of no use to delay the exit of the label since the delay is inserted at the start of the application process, namely when the piece reaches the position, and therefore the label is already (partially or completely) out.

2.11.1.5 Reprinting last label

Possibility of reprinting last label on product, box and pallet printers by pressing the “**REPRINT PROD.**”, “**REPRINT TOT.1**” and “**REPRINT TOT.2**” keys from the process Soft Keys Dialog.

This function is very useful if Datamax printers are used which have no button on the machine allowing to reprint the last printed label.

2.11.1.6 PLU label

The PLU label can be specified from within the PLU itself, and during installation you may decide which printer must be used to print it.

2.11.2 Network printers management

The possibility of directing the printing of CTRL and Packing list reports on printers linked via Ethernet has been introduced. To this purpose, a parameter called “**DESTINATION**” has been introduced in MACHINE CONFIGURATION in the “[+] PARALLEL PRINTER” group which proposes the “**PARALLEL PRINTER**” (default), “**NETWORK PRINTER**” and “**PRINT REPORT**” values. When “**NETWORK**” is selected, the “**IP**” field appears in which the IP address of the network printer is entered. The printing process is identical to the parallel port; if the network printer is printing other documents, the report will be queued. For the moment troubleshooting (paper finished, printer fault, etc.) is the same as the parallel printer, though not very evolved.

Obviously if the machine is already connected to the client's network, the introduction of the network printer makes it necessary to insert a switch (or hub) to manage several nodes on the network, if not already present.

2.11.3 Datamax

Product labels on manual Venus and total labels can be printed with almost all Datamax printer models.

These are the main novelties/improvements proposed by Datamax printers:

- Better performance regarding:
 - printing speed
 - label processing time
 - printing quality
- Appropriate rotation management
- Possibility of managing true type fonts
- Appropriate feedback management
- Automatic realignment management
- Possibility of setting font size in dots
- "Real" centred and right-side alignment for texts added
- Ethernet connectivity
- Download of truetype fonts from terminal
- 12 dots printers management. In this case, with the same sizes and fonts, the same label printed on 8 and 12 dots is the same but obviously more defined.

2.11.3.1 Differences from Italora

- With Datamax, the y coordinate = 0 corresponds to the real start of the label (and not to the position of the label below the head with the label peeled).
- Datamax does not peel the label and print the next one without backfeed, even when the peeled area does not need to be printed.
- Datamax does not continue printing the next label and stopping the label to be able to perform "throw away". This is because if the label is peeled, backfeed is foreseen in all cases and this function is not necessary.
- In order to design a label according to Italora rules, the parameter "**ITALORA EMULATION**" must be set at **YES** in label settings.
- If the printer is switched off and back on - or replaced - after the terminal has started up, it is necessary to enter machine configuration and to exit for all to work regularly.
- Datamax printers do not reprint the last label by means of a button, as does Italora. Since version 5.1.10, this possibility has been replicated through the softkeys "**REPRINT PROD.**", "**REPRINT TOT.1**" and "**REPRINT TOT.2**" (accessible from the process Soft Keys Dialog), **which reprints the last label respectively for product, box and pallet printers.**

2.11.3.2 Peculiar features

- When a TrueType character is used for printing, for example **Nina**, the size of the characters is expressed in dots by using the "**DTMX DOTS**" parameter; in this way, the size specified in the chosen character is ignored (it ignores Nina 10, Nina 16, ...), which remains valid only to determine the type of character (Standard, Nina, etc.) and no longer the size.
- The rotations of barcode texts and lines envisions printing from left to right for 0 degrees, and from top to bottom for 90° and other rotations.
- The measurements are expressed in millimetres with a decimal position of 0.1
- Images can be re-dimensioned on the label by using the X and Y expansion parameter for images as well.
- The use of expansion does not divide the fonts into steps.
- Real centred and right-side alignment added according to Datamax.
- The point of application of rotated texts is corrected.
- The BACKFEED and HEADING parameters are no longer visible since they are no longer necessary.

2.11.3.3 Italora Emulation

Labels designed for Italora printers can be printed on Datamax printers, in order to share (and/or reuse) archives already in the client's possession.

These are the features of the emulation mode:

- Labels printed by SMART 2000 desk printers are almost the same as those produced by Datamax.
- The texts no longer have a white area around them. The barcodes are covering.
- Real centred and right-side alignment have been added according to Datamax (this alignment is not available when printing with Italora).
- Both the BACKFEED and HEADING parameters of the label are used to write on the whole area of the label, keeping the set coordinates. In particular, the BACKFEED parameter does not determine the BACKFEED distance (now always the same as peeling) but it only determines the correct position of the starting y coordinate.
- The PEELING, HEADING and BACKFEED parameters are expressed in 7.52 (1/mm) dots.
- The procedure for setting the "heading" parameter in Italora is still valid for Italora emulation, namely:
 - The correct peeling is determined.
 - The white area is measured.
 - The value obtained in the HEADING LENGTH parameter is multiplied by 7.52 and set
 - The same value is subtracted from the PEELING parameter.
- If the "TRUE TYPE FONT USE" field inside fixed, extended fixed and variable texts is set at TRUE, it is used to print the text as long as a valid true type font is selected. In all other cases, the font on the list is used (as for Italora) with an automatic rendering mechanism which tries to maintain the maximum compatibility with the same label printed on Italora printers.
- GS1 DATABAR barcodes are **not** supported.
- In EAN13 barcodes with checksum, by setting an overall of 13 characters in barcodes, Italora prints from the 2nd to the 13th, places them at the start of the barcode and then adds the checksum at the end. Datamax operates differently. Namely it interprets the last character as the checksum of the first 12, it compares it with the checksum which it calculates on the first 12 characters, and, if they coincide, it prints the barcode with the 13 characters, otherwise it prints all zeros. This must be taken into account if labels designed for Italora erroneously have barcodes of just one variable field of 13 characters which points at the Indicod code of the PLU in which however only 12 characters are entered (setting which does not make much sense but which causes no problems for Italora).

2.11.3.4 TrueType font management

The FONT ARCHIVE, similar to the image archive, has been introduced in which the fonts present on the machine can be indexed in order to be sent to the printer and used on the label. The function is ONLY available for DATAMAX printers. The supported fonts are TRUE TYPE (.tff extension) and must be downloaded in the new FONTS folder present in \ARCHIVES\USER on Compact Flash. When a new element is entered in the font archive, it requests the number, the file (similarly to that which occurs for images, a list of the files present in the FONTS folder is proposed) and the position in which the font is to be stored in the printer. Currently the position inside the printer must be known. The first free position in the Datamax printer is 50; as a rule, Nina and Nina bold fonts are stored respectively in positions 52 and 53. The machines are supplied with nina.tff and ninab.tff fonts already in the font archive and associated respectively to positions 52 and 53. Once the font is entered in the archive, it must be sent to the printer just like the images. The "STORE FONT" button is used which, unlike the images, only sends the currently selected font to the printer (this is because is not possible **not** to store the font on the printer, and because it takes longer to store fonts than to store images).

The "TRUETYPE FONT" and "CHARACTER DOTS" parameters have been added to the text fields of the label (fixed and variable texts), in addition to the "CHARACTER TYPE" parameter which already existed. *The new parameters are viewed and considered only for labels designed for DATAMAX printers, namely where the "ITALORA EMULATION" parameter in the label settings is set at NO.* The TRUETYPE FONT parameter is associated to the FONT archive and therefore allows selecting a truetype font for the concerned text. The CHARACTER DOTS parameter is used to specify the size of the font in dots. If no font existing on the machine is associated to the TRUETYPE FONT parameter or if the file of reference is illegible, the machine produces an error and prevents it from starting processing.

Notes:

- The value of the "CHARACTER DOTS" field **must not** be compared to the number expressing the size of the Nina font in the CHARACTER TYPE list (Nina 10, Nina 16, etc.). In fact it is much closer to the standard size of the fonts (for example printing with Windows at size 10) than the Nina characters implemented by Italora; therefore the Nina 10 character is much smaller than the Nina.ttf font printed with size 10. *By the way: the number of dots of the font makes a 72 dot character 1 inch wide (or high) if printed (or viewed) with a 72 dpi resolution.*
- Should justified **nutritional tables** need to be printed (namely with words written on the left- Carbohydrates, Proteins, etc. - and weights on the right), the Nina file would not be adequate since, being proportional, it would not correctly justify the weights on the right though having the same number of characters for each line. For this reason therefore it is necessary to use a font **with fixed spacing**, namely with each character taking up the same amount of space; examples of fonts with fixed spacing found in Windows are: DejaVu Sans Mono, Courier New, Fixed Miriam Transparent, Lucida Console, MS Gothic, MS Mincho, OCR A Extended. Concerning the use of Windows fonts, see the following note.

*Many fonts are subject to **copyright**. Currently the fonts used on the terminal are Microsoft Sans Serif for displays, Nina for printing labels and Arial for printing reports on laser printers; for each machine sold, a royalty is paid (approximately 50 cents euro per font) to the company with the font license. This aspect must be considered if a client requests a new font to be downloaded. Even the fonts in the Windows\Fonts directory of the PC are subject to a license, the cost of which is included in the price of the operative system. Therefore it is technically possible to use one of the said fonts, but this operation must consider licensing aspects.*

2.12 METAL DETECTOR

2.12.1 CEIA Metal Detector

The possibility of connecting the CEIA metal detectors has been introduced. When entering the process, the machine programs the recipe specified in the process in the metal detector (parameter inside METAL group). The metal detector recipe must be stored on the metal detector through the self-acquisition procedure.

The machine is capable of connecting to 3 different metal detector models:

- MTL
- THS/21E (and THS/21E-3F, respectively mono and multifrequency)
- THS/21 (multispectrum, leading technology)

It is also possible to report the number of products rejected during the weight control by a CEIA metal detector which in this case is connected by means of the input/output line.

2.12.2 MESUTRONIC Metal Detector

2.12.2.1 Scale Configuration

The machine parameters for connection with the Mesutronic metal detector are found in “Archives > Settings > Terminal Configuration > Machine Configuration > Metal detector”

Table 2-8

METAL TYPE	MESUTRONIC
RECEIVING METAL REJECTS	YES enables the reject input management
MTL REJECT FILTER (ms)	Filter for detecting two consecutive reject inputs It must be greater than the activation of the metal detector reject output Refer to the document EXTERNAL METAL REJECT COUNT MANAGEMENT (METAL EQUIPPED WITH EJECTOR).docs
MESUTRONIC IP ADDR.	IP address of the metal detector control processor server
MESUTRONIC PORT	Port number of the metal detector control processor server

2.12.2.1.1. Detected metal input

If wanting to count the metal detector rejects, it is necessary to also configure the following parameters in the section *Archives > Settings > Terminal Settings > Machine Settings > Rejects and selections*.

METAL REJECT EVENT	EJE. EJE.{J}OUT OF MACHINE
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The **GALAXI** input which receives the signal that metal has been detected by the metal detector is configured in the menu *Archives > Settings > Terminal Configuration > IO Configuration > METAL DETECTOR*.

METAL REJECT INPUT	Input number associated with the metal detector reject signal
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If the metal detector management is enabled, activating this input during the process means that the metal reject counter increases.

Refer to the document EXTERNAL METAL REJECT COUNT MANAGEMENT (METAL EQUIPPED WITH EJECTOR).docs

2.12.2.1.2. Metal detector error input

The **GALAXI** input which receives the metal detector error status signal is configured in the menu *Archives > Settings > Terminal Configuration > IO Configuration > METAL DETECTOR*.

METAL ERROR INPUT	Input number associated with the metal detector error signal
METAL ERROR SIGNAL	N.C. normally closed signal

If this input is active, it is not possible to start processing for a PLU with metal detector management enabled (Error 2046).

If the metal detector management is enabled, activating this input during the process means that the metal detector signal is faulty and the process is immediately quitted (Error 2046).

This input is normally closed to detect if the metal detector switches off during the process.

2.12.2.1.3. Metal detector product programming

The product must have been previously stored directly on the metal detector. A preliminary product signal learning stage is necessary so that the alteration generated by any contaminating metal agents can be correctly detected.

The product ID attributed during storage on the metal detector must be entered in the corresponding PLU. The metal detector management must be enabled and the product ID as stored on the metal detector must be set in the group *Archives > PLU > PLU Selection > Metal detector*.

METAL ENABLING	YES
RECIPE ID	(corresponding product ID on the metal detector)

If the metal detector management is enabled, when processing starts for the selected PLU, **GALAXI** sends the loading command of the specified product via an Ethernet connection to the metal detector.

The following errors could occur, so it will not be possible to start the process:

- Active metal detector error input (Error 2046);
- It was not possible to establish a connection with the metal detector command processor within 5 s (Error 2037);
- The product loading command generates an error (e.g. recipe not present on the metal detector) or does not receive a response (Error 2047);

2.12.2.1.4. Ad hoc subnet configuration

If an ad hoc subnet needs to be configured between the Mesutronic metal detector and **GALAXI**, use the second network interface available on the **GALAXI** motherboard (the one usually used for the Ethernet-USB converter). Connect the interface RJ45 connector with the Mesutronic metal detector interface and set two static IP addresses on both devices on the same subnet.



Beware!

In this case, both subnet masks of the two GALAXI network boards must be different in order for them to work simultaneously and separately.

2.12.2.2 Mesutronic metal detector configuration

To configure the meter detector, refer to the user manual and installation manual provided by Mesutronic.

At *level 3* of the configuration, in the *Outputs* section, the metal detector provides the inputs that can be configured for signalling detected metal and error status.

2.12.2.2.1. **Detected metal output (R1)**

The detected metal output corresponds to the **GALAXI** reject input. In the selected output configure:

NORMAL STATUS	OFF or ON
NOTICE	
WARNING	
ERROR	
FUNCTION	Metal

Set the following parameters in the output settings, which can be modified using the key next to the function:

POSITION (mm)	Activation delay of the reject output, calculated as distance from the metal detector's head to the point where the signal is to be triggered.
DURATION	Activation time of the reject output. Refer to the document EXTERNAL METAL REJECT COUNT MANAGEMENT (METAL EQUIPPED WITH EJECTOR).docs
MODE	Timer
RESET MODE	Automatic
TRIGGER	Front edge
MECHANICAL DELAY	0 ms

2.12.2.2.2. Metal detector error output (A3)

NOTE: since the R2 relay is occupied by the Metal Detector for managing its movement, it is necessary to use output A3 with the help of an additional relay for connecting with the GALAXI input for managing the Metal detector error.

NORMAL STATUS	ON
NOTICE	X (optional, if wanting to stop the Galaxi in case of a notice on the Metal detector)
WARNING	X (optional, if wanting to stop the Galaxi LT in case of a warning on the Metal detector)
ERROR	X
FUNCTION	-----

2.12.2.2.3. Reject unit output (A1)

Leave the default configuration.

For any customisations, refer to the Mesutronic Metal Detector user manual.

2.12.2.2.4. Acoustic signal output (A2)

Leave the default configuration.

For any customisations, refer to the Mesutronic Metal Detector user manual.

2.12.2.2.5. Conveyor belt error management output (R2)

Leave the default configuration.

For any customisations, refer to the Mesutronic Metal Detector user manual.

2.13 TROUBLESHOOTING

2.13.1 Introduction

To make it easier to identify any faults, the **GALAXI** lines are equipped with a troubleshooting program able to monitor the buttons and sensors and activate each actuator device (solenoid valves, motors, etc.) by means of a manual control.



Beware!

The check-control function can only be accessed at level 5 by means of a password.

This can only be done by personnel with a QUALIFICATION 3 professional profile.

2.13.2 Troubleshooting – Warnings and Common errors

CODE	PROBLEM	SOLUTION
2008	An emergency button is pressed	1- disengage the red emergency button. 2- press the reset button
24	Operation is not resumed. Process cannot be started nor conveyor belt activated	The red emergency button has been disengaged but the reset button must be pressed.
2004	No paper in printer	1- Insert a new roll of labels 2- Press "PAPER ALIGNMENT" from the Soft Keys Dialog to align the printer carrying the new roll.
5	Process cannot be accessed since the machine is in conveyor belt mode	Disable "conveyor belt" mode before performing this operation. From the main page, press "CONVEYOR BELT".
2013	Air pressure is insufficient	Air pressure in the system is not sufficient to guarantee correct label application. Check the compressed air connection and correct opening of the valve.
2004	Printer in error condition	Make sure printer is connected correctly to the power supply. Make sure that the printer is on and the paper roll is inserted with the head lowered.
620	Request for zero with scale loaded	The metrological limits relating to the possibility to reset the scale with its plate loaded have been exceeded. Empty the scale to reset.
608	Timeout error during communication with scale	The scale board has not responded to a command (generally a weight request). 1. Make sure cables are correctly connected. 2. Check compatibility between scale software and machine software.

CODE	PROBLEM	SOLUTION
610	CRC error on scale	There is an error involving serial communication between machine and scale. Causes include cable problems, a connector coming loose, electromagnetic disturbance from an external source.
614	An error involving a piece weighing end procedure has occurred	The scale has received a 'weighing end' command but not a 'weighing start' command. This means that a piece has reached weighing start position before the previous piece reaches the bottom end of the scale belt (weight end position). This situation occurs in the event of double photocell reading. Try resetting the length of the piece.
2003	A double reading in scale or label timeout error occurred	A piece travelling from the scale belt did not engage the application photocell or double reading of the scale photocell occurred. Check photocell setting.
2009	No response from host	The PC connected to the machine did not respond to a weighing command. Check the network connections and correct operation of PC software.
2010	Response from host with error	The PC connected to the machine has given the wrong response to a weighing command. Check the PC software.
3	There is no flash card	1- turn the machine off 2- remove front casing 3- insert flash card into the special slot 4- refit casing 5- restart machine
13	Impossible to reverse a box as there is a box open	The box has not been completed yet. Only one pack can be reversed.
28	Soft key not assigned	No PLU is assigned to a specific soft key. To assign a PLU, press keys "SOFTKEY ASSIGNMENT" from the Soft Keys Dialog, select a soft key and specify the PLU to associate to it.

2.13.3 Complete list of errors

2.13.3.1 Stream Errors (100 - 199)

100: Stream error category (indicates the error category. The following number indicates the error)

CODE	DESCRIPTION
101	Error that occurs in the Get String Field when the type of field sent fails to exist
102	Error, a larger stream has been defined than necessary
103	The type of variable specified does not exist or is not handled
104	The field number of the stream sent to the function fails to exist
105	Data entry error
106	Error in opening the traceability configuration file. The file does not exist or is in the wrong place
107	Error in the structure of the traceability configuration file
108	Error in opening a traceability table file
109	Error in the structure of a traceability table file
110	Error in the coherence of the structure of a traceability table file
111	Error in opening the LIST configuration file
112	Error in the structure of the LIST configuration file
113	Error in opening the terminal configuration file
114	Error in the structure of the terminal configuration file
115	Error in opening the WEIGHING configuration file
116	Error in the structure of the WEIGHING configuration file
117	Error in opening the Configurable Process Window configuration file
118	Error in the structure of the Configurable Process Window configuration file
119	Error in opening the client archive configuration file
120	Error in the structure of the client archive configuration file
121	Error in opening a client archive table file
122	Error in the structure of a client archive table file
123	Error in coherence of the structure of a client archive table file
124	Problem in the TAB_FONT.CFG file (structure error or file missing)
125	Error in opening the IO configuration file
126	Error in the structure of the IO configuration file

2.13.3.2 Process Errors (200 - 299)

200: Process error category (indicates the error category. The following number indicates the error)

CODE	DESCRIPTION
201	The program expected to find a process that actually does not exist. Contact UTESW, or the attempt to load the Weight B. processes has failed.
202	The traceability lot does not exist. Choose an already existing one or create one
204	An attempt has been made to access the crate-weigher with PLU process with CTRL enabled. This combination is explicitly forbidden. Correct the PLU or change the type of process. NB In version 4.2.2 and previous version, this error is mistakenly signalled for every processing start difficulty.
205	Process attempt failed, generic error. NB The number of the error that generated the error status (from 4.2.19 onwards) also appears in the text
206	in a product label, total 1 or 2 has been wrongly entered in a variable label taken from the totals group
207	The client id has not been loaded correctly
208	Unable to launch a CTRL process with the setting "CREATE PROCESS ON EACH NEW ACCESS"
209	MID: error net weight not present on label
210	MID: processing with unit of measurement in pounds not allowed
211	MID: unable to run processing with fixed weight with "Y" category terminal
222	Extension of error 201. Report the error code to technical assistance
223	Extension of error 201. Report the error code to technical assistance
224	Extension of error 201. Report the error code to technical assistance
225	Extension of error 201. Report the error code to technical assistance
230	MID: Checkweigher calibration speed different from the used rate
231	Inconsistent CTRL limits. Follow the sequence --, -, +, ++
232	Process input error: fixed weight equal to zero
233	Legal terminal: fixed weight below minimum weighing value

NB other errors that prevent starting the process are:

502 PTR_ERR_TOO_MANY_ELEMENTS_IN_LABEL:

2029: GEN_ERR_IMAGE_INEXISTENT

2028: GEN_ERR_IMAGE_WITH_DIMZERO

2025: GEN_ERR_FONT_FIRMWARE_NOT_COMPATIBLE

2.13.3.3 Record Data errors (300 - 399)

CODE	DESCRIPTION
300	The queue of boxes or pallets is corrupted. Make a Proc. Reset. If this fails to resolve the problem, contact UTESW and specify the origin of the problem
301	Too many boxes or pallets in the queue (queue full), spool the labels in the queue. Make a Proc. Reset if the system fails to begin operating correctly again. If the reset also fails to function, contact UTESW and specify the origin of the problem

2.13.3.4 Printer errors (500 - 599)

500: Printer error category (indicates the error category. The following number indicates the error)

CODE	DESCRIPTION
501	One of the images (meaning element of the image archive, not as bmp) in the label has been cancelled after having been associated with the label. Re-compile the images archive correctly, then associate the image in the label again
502	Each label can contain up to 60 elements (50 in the old sw versions). The label being printed contains a larger number of elements. Reduce the number of elements in the label.
503	The field of the PLU in the specified barcode does not contain enough characters. Correct the value of the field of the PLU specified after "field" in the barcode specified after "barcode"
504	unexpected response from the printer after an error.
505	the time envisaged for emptying the reception buffer has been exceeded. NB One of the possible causes of the reception buffer having failed to empty is that the printer's storage buffer is fully occupied

2.13.3.5 Scale errors (600 - 699)

CODE	DESCRIPTION
601	Generic error from CMA protocol (contact UTESW)
602	Error in DEST NPACK (contact UTESW)
603	Serial port opening error (contact UTESW)
604	Error in IOCTL FIONREAD (contact UTESW)
605	Error in IOCTL FIOFLUSH (contact UTESW)
606	Error in IOCTL FIONREAD2 (contact UTESW)
607	Error in IOCTL FIOBAUDRATE (contact UTESW)
608	Scale broken or not connected. The scale board has not responded to a command. Check the scale board connection to the serial port and make sure that the board functions correctly. If no faults are discovered, upgrade the firmware to version 3.0.0 or more recent.
609	The scale or remote control board has given an incorrect response to a command. Make sure that the version of the line firmware and board are compatible
610	The scale or remote control board has given a response to a command ruined by interference. Check the wiring and connector and cable filtering. Make sure that there is no interference in the surrounding environment. Exclude the presence of electromagnetic discharges. Replace the board if necessary.
611	Impossible to carry out command: serial port closed (contact UTESW)

CODE	DESCRIPTION
612	Zero not stable. The attempt to reset the scale has not been successful since the stable weight condition has not been reached within a preset time. Make sure that there were no oscillatory phenomena on the scale plate during the resetting procedure (air, lift truck driving past, etc.). Check the scale calibration.
613	Converter error during calibration (contact UTESW)
614	Error, reception of end of weighing command without the start of weighing one (contact UTESW)
615	Reception of two start of weighing commands without the end of weighing one (contact UTESW)
616	Request for zero during the weight processing phase (contact UTESW)
617	Buffer overflow (contact UTESW)
618	Not enough samples to validate the weight (contact UTESW)
619	Request for zero during static weighing without the tare set (contact UTESW)
620	The attempt to reset the scale has not been successful since the scale contains a greater load than the one tolerated for the resetting procedure in question, or the scale has not been calibrated correctly. Empty the scale. Check the scale calibration.
621	Sampling impossible: tare set (contact UTESW)
622	Calibration: scale zero not set (contact UTESW)
623	Calibration: full scale not set (contact UTESW)
624	Calibration: intermediate point not within scale (contact UTESW)
625	Calibration not valid (contact UTESW)
626	Preset tare setting impossible: value off range. The tare value set in the PLU or in the process is higher than the maximum capacity of the scale. Change the set tare value. Make sure that the scale's metrological parameters have been entered correctly
627	Self-weighing tare off range (contact UTESW)
628	Self-weighing tare: weight not stable (contact UTESW)
629	Self-weighing tare percentage ≤ 0 or > 100 (contact UTESW)
630	Request for calibration during the weight processing phase (contact UTESW)
631	Request for samples beyond the weighing range (contact UTESW)
632	Setting error in DTR (contact UTESW)
633	Setting error in 485 (contact UTESW)
634	Wrong sampling frequency selected for Venus (contact UTESW)
635	FILTER scale parameter off range. An attempt has been made to enter a value in the FILTER parameter of the CUSTOM weight that is not permitted by the board. Reduce the value of the parameter in question
636	STABLE WEIGHT CALI scale parameter off range. An attempt was made to set in the CAMP parameter. STABLE WEIGHT of CUSTOM weighing a value not allowed by the card. Reduce the value of the parameter in question
637	Return code not known (contact UTESW)
638	MID: LEGAL.OUT file missing
639	Scale board reset
640	Filter number for dynamic weighing of new board out of range
641	Received request to change filter before the previous request has been completed
650	Error during transmission-reception (contact UTESW)

2.13.3.6 Miscellaneous errors (800 - 1099)(1200 - 1299)

CODE	DESCRIPTION
850	Error in opening Old Cigiemme serial link
851	Error in writing on Old Cigiemme serial link
852	Error in reading from Old Cigiemme serial link
901	Error in opening serial link (GENERIC)
902	Error in setting baud rate of serial link
903	Baud Rate value not tolerated
905	Error: Use of a closed serial port
906	Error in Fioflush of serial link
907	Error in FIOBUFSET of serial link
1001	Error in opening modem port
1002	Error in setting baud rate of modem's serial port
1003	Error in setting modem's automatic answer
1004	Error in initialising modem's PPP protocol
1005	Error in cancelling modem's PPP protocol
1006	An attempt has been made to transmit a command to a closed serial port of the modem
1201	Error in Fion Read of the serial port connected to the scanner
1202	Error in reading the serial port connected to the scanner

2.13.3.7 Input Output Remote Control errors (1100 - 1199)

The remote I/O board is only installed in Automatic and Automac integrated lines.

CODE	DESCRIPTION
1101	Command length or data error
1102	Incorrect or inexistent command
1103	Filtering time programming error (command 0x85)
1104	Filter already programmed (originally 0x85, now not used)
1105	Inexistent filter number (0x85, 0x87)
1106	Output already used for timed activation (0x86)
1107	Error in analogue programming address (0x88)
1108	Error in analogue programming values (0x88)
1109	Inexistent output number (0x89, 0x85)
1110	Output already used in a filtering operation
1111	Control input number off range (0x85)
1112	Control output number off range (0x85)
1113	The remote board fails to respond (timeout). Make sure that the serial cable between the board and Venus is connected correctly. Make sure that the board is on
1114	The remote board restarted while the Venus terminal was working. Make sure that board powering is not faulty
1115	Unable to detect dynamic weighing speed. Contact the service dept.

2.13.3.8 Generic Errors (2000 - 2099)

CODE	DESCRIPTION
2001	<p>Weighing target too far in advance. This problem is due to the incorrect position of the static weighing target. Typically, a static weighing target that is too far in advance makes the piece to be weighed stop after having passed beyond the end of the belt as well. Alternatively, if the target is too far back, the piece to be weighed stops too soon and the previous piece will have not yet left the scale.</p> <p>Proceed in the following way to modify the "weighing target" value:</p> <ul style="list-style-type: none"> • re-access the process • press "MODIFY DATA" immediately, before a package has time to transit • modify the "WEIGHING POS." value WEIGHING • save the changes and access the processing phase again <p>This changes the value of that PLU. If the problem persists even with the minimum (or maximum) value, check the same value entered in the general settings of the machine.</p>
2002	<p>Label delayed. The piece has reached the application target before the label has been completely issued.</p> <p>Possible causes:</p> <ul style="list-style-type: none"> • belt targets too far in advance • label too long • belt speed too fast • label issue speed too slow or too much information in the label
2003	<p>Double reading in scale or lab timeout. The last piece weighed failed to reach the labelling photocell within the preset time. The labelling photocell was probably unable to detect the piece. Check the photocell setting. The same effect is obtained if the operator takes the piece from the line before it reaches the level of the labelling photocell.</p>
2004	<p>There has been an error in the product, box or pallet printer. Depending on the message, make sure that the printer is on, check the connection to the terminal, the serial setting in the bios (232 or 422), whether the printer has paper, that the label detecting photosensor is connected correctly, that the printer is on-line.</p>
2005	<p>Applicator malfunction. The applicator has not completed the application cycle correctly. The piece has not been totalised. Make sure that the applicator is connected and operating correctly (there is a dedicated "applicator test" button for the arm in the sw test window. Make sure that there are no mechanical impediments to prevent the arm from moving correctly</p>
2006	<p>Piece off machine still in application status. A piece reached the machine end target when, in the dynamic application mode, the application device had not finished applying the label. Make sure that the applicator functions correctly. Move the machine end target forwards. The piece that generated the error (i.e. that reached the machine end target) has not been totalised.</p>
2007	<p>Weighing target programming error. Serious error inside the software. Contact the software office.</p>
2008	<p>Emergency button pressed. The emergency mushroom button was pressed during the process. Confirm the window, then release the emergency mushroom button and reset the machine again.</p>
2009	<p>No response from host on weight. The machine has not received a response to the transmission, via the network, of 5 consecutive product, box or pallet weights. Check the network connection. Make sure that the program on the PC with which the machine actuates the dialogue via the network protocol is on, and that the relative software is functioning correctly. Make sure that the setting of the network board on the PC is Auto Detect in relation to the characteristics of the link (10/100 half/full duplex). Check whether there is interference in the network. If the results of these tests are negative, monitor the network via the sniffer installed in an external PC connected via hub (not switch!!).</p>
2010	<p>Incorrect response from host on weight. The response command to a weight sent by the PC is structurally wrong. Make sure that the connection software on the PC side has been programmed correctly.</p>

CODE	DESCRIPTION
2011	Flow packer faulty. A fault condition has occurred in the flow packer (Automac, etc.) to which the Venus terminal is connected. Check the status of the flow packer. Confirm the window. Re-access the process
2012	Timeout for application. The Automac system has not informed the Venus terminal about the application position reading in time. Make sure that the photocell is positioned correctly. Check the wiring. Confirm the window and re-access the process. The processed piece has not been totalised.
2013	Insufficient air pressure. There has been a sudden drop in the pressure of the air in the compressed air supply system. Check the connections of the compressed air system and the pressure switch. Confirm the window and re-access the process.
2014	Targets too near. A target has tripped in a situation where the machine was unable to process it (belts stopping on a previous target or moved beyond the process). Find out which pair of targets are so near that when the piece stops on a level with the first, the other also trips automatically. This problem frequently occurs in relation to the weighing target/enabling target on the input. Space the targets in question further apart. Do not move the belts beyond the process if there are pieces in the machine
2015	Connection shut-down whilst the machine is processing. A network connection has been shut-down by the PC with the machine processing and programmed for sending some type of weight. Find out why the connection shut-down, particularly the network connection. Make sure that the software in the PC functions correctly.
2016	Ejector timeout. One of the sensors in the automatic ejection systems (piston, piston with recirculation) has not tripped in time to close the ejection cycle correctly. Make sure that the sensors are correctly connected and positioned.
2017	Heads too near. Serious error inside the software. Contact the software office.
2019	Barcode scanner not valid. The structure of BcRead is not compatible with the barcode read via the scanner. Check the formatting of the currently used BcRead.
2020	Traceability lot not found. The traceability lot retrieved via the barcode being read (BcRead) is not present in the system. Enter the traceability lots that can be retrieved via the scanner.
2021	Label being printed not valid. This is a simple informational message that is only issued after other errors that quit the process. It indicates that when the error occurred a total label was being printed and that it will be reprinted on the next access to the process. If the label is reprinted on the next access to the process, discard one of the two copies so as to prevent two consecutive boxes (or pallets) from being labelled with the same label. This problem is particularly evident in the case of lines with queues of boxes (cfl).
2022	Scale enabling target error. The piece had not been completely processed when TARGET 1 LAB BELT was reached. Mercury: Check the targets programmed in the machine. Move the target in question forwards. Reduce the speed of the belts. Contact the software office if the problem persists. Automatic Venus: the problem could be due to the scale photocell and the labelling machine being too near to each other, or a piece length that is too short and that leads to double readings by the labelling machine photocell.
2023	Ejector target too far back. The ejection target is too near the application target and trips incorrectly when the piece stops. Decrease the application target or increase the ejection target.
2024	Piece on infeed belt has reached scale. The piece that was stopping on the photocell on a level with the infeed belt, exceeded the scale belt starting target during the stopping phase. Decrease the speed of the belts (or retract the position of the photocell installed on a level with the entrance belt).
2025	Font not compatible with text language. The font selected for printing one of the textual elements in the label is unable to support the language in which the text to be printed has been set (whether fixed or variable). Change the label layout by selecting a font that supports the language selected for that text (i.e. a font of the Nina family).

CODE	DESCRIPTION
2026	Font not compatible with printer firmware. There is at least one text in the label being printed for which an international font has been selected (i.e. of the Nina family) but the international option has not been selected. If necessary, proceed by upgrading the printer's firmware to version J2.10 or more recent (note: hw with 4 Mb of memory is required). Then select the international option for the printer.
2027	Image too large. An attempt has been made to load an excessively large bitmap image into the printer. Check the image file and replace it if necessary.
2028	Image with zero dimension. An attempt has been made to load a bitmap file of 0 dimension into the printer. The file with 0 dimension may have been caused by an incorrect transfer of archives by CuteFTP or Planet View. Cancel the file or transfer it again
2029	Inexistent image. The bitmap file associated with the images file does not exist in the dom for the current image. Probable fault in the image transferring procedure via CuteFTP or Planet View. Repeat the procedure or check to make sure that the images archive is correct.
2030	Box stopping target error. A piece has reached the BOX STOPPING TARGET before the BOX STOPPING TIME expired. This may happen if the box stopping time is too long. Reduce the BOX STOPPING TIME or lengthen the BOX STOPPING target.
2031	Piece under labelling photocell not detected. Two consecutive pieces have reached the SAFETY TARGET without the first one having been detected by the relative photocell. This fault may have been caused by the input photocell having made a double reading or by the SAFETY TARGET being incorrectly positioned. Correct the PIECE LENGTH and make sure that the SAFETY TARGET has been set so that its distance from the photocell is less than the length of the piece.
2032	<p>Ask the operator which message appears in the window and compare it with the ones that appear afterwards. Make sure that the targets entered are correct when the weighing line starts. Different messages appear, depending on the fault detected, as explained below.</p> <p>a) Weighing target in PLU too negative: The delta of the weighing target set in the PLU is negative and its absolute value is higher than the weighing target set in the configuration. E.g. Weighing Target Delta = -340, Weighing target in the config = 300. Solution: Decrease the weighing target of the PLU or increase the weighing target in the configuration</p> <p>b) Application target in PLU too negative: Negative application target in the PLU and higher, as to absolute value, than the application target in the configuration. E.g. Application Target Delta = -450, Application Target in the configuration = 300. Solution: Decrease the application target in the PLU or increase that target (if possible) in the configuration</p> <p>c) Applic. targets 1 and two incorrect: The head 1 appl. target in the PLU is too positive or the head 2 appl. target in the PLU is too negative. Solution: Reduce Application target 1 or increase target 2.</p> <p>d) Weighing target in PLU too large: The weighing target delta of the PLU is too positive and interacts negatively with the application target. Solution: Decrease the weighing target in the PLU or increase the application target if possible.</p> <p>e) Appl. target too large or Ejec. target too small: The application target of the first head set in the PLU makes the application target go beyond the ejection target. Solution: Decrease the application target in the PLU or increase the application target in the configuration or the ejection target.</p> <p>f) Applic. target 2 too large or Ejec. target too small: The application target of the second head set in the PLU makes the application target of the second head go beyond the ejection target. Solution: Decrease the application target of the second head in the PLU or increase the application target of the second head in the configuration or the ejection target.</p> <p>g) Weighing target less than Lab. belt 1 target: The weighing target is less than Lab. belt target 1. Solution: Increase the weighing target or reduce the Lab. belt target 1.</p>
2033	A Client ID that is not in the archive has been searched for in the clients archive.

CODE	DESCRIPTION
2034	An attempt is being made to process with a PLU with a variable weight or with min weight/max weight limit settings that are different from zero, with a SINGLE BELT machine entered as SINGLE BELT WITH ADVANCED PRINT. Only PLU configured as "fixed weight without range" can be processed in this configuration
2035	Blow photocell obscured from below. Clear the obstructions.
2037	Metal Detector: Metal Detector Off or Not Connected
2038	Unable to store the weighing operations on file.
2039	Print column: positioning failed. Check for obstructions.
2040	Print column: zero point not executed.
2041	Print column: off or not connected.
2043	Double print head generic error. Contact the service dept.
2044	FAULT warning from "CFL CB".
2045	Infeed belt photocell obstructed for more than 5 seconds. Clear any obstructions.
2046	Error in the composition of data making up the barcode (e.g. not enough for the type of chosen barcode).
2047	An attempt was made to enter a tare on a MID checkweigher whose value exceeds the allowed percentage calculated on the gross weight.
2048	An attempt was made to enter a tare on a VENUS MID terminal whose value exceeds the one allowed by the MID approval (2000 divisions)
2049	An attempt was made to enter a tare on an X category MERCURY MID terminal whose value exceeds the one allowed by the MID approval
2050	An attempt was made to enter a tare on a Y category MERCURY MID terminal whose value exceeds the one allowed by the MID approval
2051	Faulty metal detector: check metal detector status.
2052	Metal Detector: recipe not present on Metal Detector
2053	Product printer delay on Total 1 label application: extend the box application target, slow down the belts or speed up tot 1 lab printing
2054	Writing error of the parameters read by the configuration file for volumetric mode

2.13.3.9 Memory errors (4000 - 4099)

The errors generated by the memory normally denote a fault in the software that only the software technicians can resolve. A correct diagnosis of the fault by the after-sales personnel is therefore of fundamental importance if the correct solution is to be found.

Proceed in the following way to make a correct analysis:

Ask the customer for the full text of the message, the situation in which it occurred as well as a copy of the archives and/or errors logger if necessary, and send everything to the software office.

CODE	DESCRIPTION
4001	"Alloc: Out of memory (Category ...)". Contact the service dept.
4002	"Alloc: Out of pool space (Classe ...)". Contact the service dept.
4003	"Alloc: Release: address not found (Classe...)". Contact the service dept.
4004	The software has found a different memory pointer from the expected one. The on-screen message has the following structure "Alloc: Invalid pointer (class name)" where class name indicates the name of the object for which the error was generated.
4005	The right allocator for the vector or string has not been found (the size of the object is larger than those envisaged). The on-screen message has the following structure "Alloc: Bad allocator (class name)" where class name indicates the name of the object for which the error was generated.
4006	Memory has not been reserved for the indicated objects. The on-screen message has the following structure "Alloc: Unreserved memory (class name)" where class name indicates the name of the object for which the error occurred.
4007	Not enough memory has not been reserved for the indicated objects. The on-screen message has the following structure "Alloc: Out of tag list space (class name)" where class name indicates the name of the object for which the error was generated.
4008	The pointer has attempted to access the marked object by means of an invalid object. The on-screen message has the following structure "Alloc: Invalid tag (class name)" where class name indicates the name of the object for which the error was generated.
4009	An attempt has been made to reserve memory for an object for which that memory has already been reserved. The on-screen message has the following structure "Alloc: Memory already reserved (class name)" where class name indicates the name of the object for which the error was generated.

2.13.3.10 Database error (5000 - 5099)(1 - 10)(-1, -945)

The errors generated by the database can have the following motivations:

The database is corrupted. Try with reset Proc and/or reset DB

If error is given after a DOM/COMPACT FLASH has been made, the DOM/COMPACT FLASH may not have been initialised correctly (repeat the initialising procedure or change the DOM/COMPACT FLASH)

If the customer systematically obtains an error signal when covering a route by accessing menus and/or functions that he normally does not use, report the sequence of operations performed to the service department in order to replicate the error.

5000: DB error category (indicates the error category. The following number indicates the error)

CODE	DESCRIPTION
5001	Error in search key (See beginning of page)
5002	Error in CR Read (See beginning of page)
5003	Error in CR Write (See beginning of page)
5004	Error in Setor (See beginning of page)
5005	Error in FindNM (See beginning of page)
5006	Error in Rec Read (See beginning of page)
5007	Error in Disdel (See beginning of page)
5008	Error in Open (See beginning of page)
5009	Error in Close (See beginning of page)
5010	Error in rec write (See beginning of page)
5011	Error in DB Connect (See beginning of page)
5012	Error in instruction that enters a new record in the table. (See beginning of page)
5013	Error in instruction that moves the pointer to the first record in the table (See beginning of page)
5014	Error in instruction that moves the pointer to the next record in the table (See beginning of page)
5015	Error in instruction that moves the pointer to the previous record in the table (See beginning of page)
5016	Error in instruction that moves the pointer to the last record in the table (See beginning of page)
5017	Error in instruction that reads the password from the index file (See beginning of page)
5018	The name of a password that has not been defined has been specified. (See beginning of page)
5019	Error in instruction that takes the database address (See beginning of page)
5020	Error in instruction that sets the database address (See beginning of page)
5021	Error in instruction that makes the set address the current record (See beginning of page)
5022	Password entry error. (See beginning of page)
5023	Error in Set_Key (See beginning of page)
5024	Error in Key First (See beginning of page)
5025	Error in Key Next (See beginning of page)
5026	Error in Key Prev (See beginning of page)
5027	Error in Key Last (See beginning of page)
5028	Error in NR Frame (See beginning of page)
5029	Error in Delete (See beginning of page)

CODE	DESCRIPTION
5030	Error in Lock Set Time out (See beginning of page)
5031	Error in Lock Write (See beginning of page)
5032	Error in Lock Read (See beginning of page)
5033	Error in DB Rec Free (See beginning of page)
5034	Error in Set free (See beginning of page)
5035	Error generated within a Format Compound Index function. (See beginning of page)
5036	Error in Curr Key (See beginning of page)
5037	Error in DB Engine (See beginning of page)
5038	Error in invalid Key (See beginning of page)
5039	Error in Key Build (See beginning of page)

Negative errors:

The line could also give the following error signals that denote problems with the database. For troubleshooting **See beginning of page**

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, -1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20, -21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -33, -34, -35, -36, -37, -38, -39, -40, -41, -42, -43, -44, -45, -46, -47, -48, -49, -50, -51, -52, -53, -54, -900, -901, -902, -903, -904, -905, -906, -907, -908, -909, -910, -911, -912, -913, -914, -915, -916, -917, -918, -919, -920, -921, -922, -923, -924, -925, -937, -938, -939, -940, -941, -942, -943, -944, -945

2.13.3.11 String Errors (7000 - 7099)

A string is an element of the machine's memory that contains alphanumeric texts. All the alphanumeric texts in the machine's archives are handled by the software with strings. The errors generated by the strings can denote incorrectly programmed archives or a software error. Typically, incorrect programming occurs during label printing (especially with barcodes) or in communications via the network. If the error occurs when the label is being printed, try to find out which element generates it and modify the texts printed with that element.

7000: Generic error generated by a string

CODE	DESCRIPTION
7001	A string has been initialised with an excessively long string in relation to the memory defined during the initialising phase
7002	The length of the sum of two strings is greater than the length of the destination string
7004	The length of the sum of two strings is greater than the length of the destination string
7005	The string cannot be re-structured as there is no more space in the string
7006	The software has attempted to take characters from a string beyond its maximum length. This can happen if (for example), characters from 3 to 7 of a field are taken in a barcode and a text 2 characters in length have been stored in the field.
7007	An attempt has been made to index a character of the string with a negative index
7008	Sprintf Overflow
7009	an attempt has been made to remove a character from the string that was null
7010	Memcpy Overflow. The Memcopy has gone beyond the maximum length of the string
7011	The string is too long
7012	Strncpy overflow
7013	Memset overflow

CODE	DESCRIPTION
7014	String not initialised. An attempt has been made to use a string that has not been initialised
7015	The parameter sent to the string and that expresses its length, is larger than the length of the string
7016	An attempt has been made to codify a Unicode string with a function that does not tolerate Unicode.
7017	An attempt has been made to convert a Non Unicode string into a standard string.
7018	An attempt has been made to read a longer string from the database than the one present in that database
7019	An attempt has been made to link two strings with different code pages

2.13.3.12 Network errors

The errors related to the use of the communication protocol are discussed in detail within the "Communication Protocol" document, dedicated to explaining how the terminals are remotely interfaced.

For greater clarity, given the ever increasing number of terminals interfaced with management systems and/or host programs, the errors reported via tcp socket from the line in case of incorrect programming or fault are also reported in this manual.

CODE	DESCRIPTION
701:	command not recognised.
702:	syntax error in command.
703:	structural error in message.
704:	wrong number of parameters in command.
705:	archive not recognised.
706:	PLU field not recognised.
707:	Syntax error in a PLU field.
708:	type of parameter incorrect. The operator has attempted to enter a value in a field that is incompatible with the type of field itself (e.g. an attempt is made to enter an integer in a string field).
709:	PLU Id containing spaces.
710:	value beyond list range. The operator has attempted to set up a field with a value that is not in the relative list of options.
711:	field value off range. In the case of a number, the minimum or maximum limits have been exceeded.
712:	NON-BOOLEAN field value.
713:	Incorrect field id (e.g. a TAG of the PP12 type would be signalled for the PLU).
714:	string field too long.
715:	item not present in archive. An item has been searched for in an archive that does not exist (e.g. READ_ARC = PLU, PLU152 when PLU152 does not exist).
716:	TAG not permitted. A TAG parameter has been found in a command that does not tolerate TAGs (e.g. READ_ARC = PLU ALL does not tolerate the TAGs of parameters).
717:	Syntax error in a field of the NET_LOGIN command.

CODE	DESCRIPTION
718:	USR not defined. An attempt has been made to define the PWD without the USR having been defined.
719:	login refused. The user or PWD are not permitted.
720:	the buffer of the socket is too small or too large. The buffer size in the Login command must be between a minimum of 1000 characters and a maximum of 8000.
721:	user not logged in. The user has still not been defined, thus it is impossible to respond to any command.
722:	user already logged in.
723:	request for transmission of an unrecognised type of weight.
724:	Syntax error in a field of the WEIGHT response to a weight transmitted to the HOST.
725:	Syntax error in a field of the OPTION_CONNECTION command.
726:	connection option not recognised.
727:	Syntax error in a field of the SET_READ_STRUCT command.
728:	Syntax error in a PROC field.
729:	Mercury faulty. It is not possible to start the process because the check on the peripherals was not positive (e.g. emergency button pressed, missing reset, insufficient air pressure, active conveyor belt, etc.)
730:	the SOCKET in question does not have total control of the machine. This error could occur when an attempt is made to enable the START or STOP commands to the machine without having been first registered as having total control over it.
731:	no home window. An attempt has been made to enable the machine to process without it having set to the HOME window.
732:	no process window. An attempt has been made to enable a STOP command without the machine having set to the PROCESS window.
733:	Syntax error in a TEXT field.
734:	archive empty.
735:	<GET_NEXT> TAG without the machine having first sent a <CONTINUE> TAG.
736:	PROC Id containing spaces.
737:	error due to an attempt to delete a PLU with the relative PROCESS open.
738:	Machine PROCESSING. Operation not allowed whilst the machine is processing (e.g. archive deletion).
739:	total control of the machine already defined (impossible to connect with this option).
740:	Impossible to enable transmission of product weights on this channel. The maximum number of connections to the scale that require receipt of product weights has already been reached (maximum 8 connections allowed);
741:	Impossible to enable transmission of TOT 1 weights on this channel. The maximum number of connections to the scale that require receipt of TOT 1 weights has already been reached (maximum 8 connections allowed);

CODE	DESCRIPTION
742:	Impossible to enable transmission of TOT 2 weights on this channel. The maximum number of connections to the scale that require receipt of TOT 2 weights has already been reached (maximum 8 connections allowed);
743:	<GET_NEXT> TAG with a READ command relative to a different ID (e.g. <READ_ARC = PLU, ABCD > the first time, then <READ_ARC = PLU, XYZ > the second time with GET NEXT).
744:	Syntax error in a LAB field.
745:	LABEL item ID not handled (e.g. E12 = ...).
746:	Label item ID incorrect. An item that forms a label has a different label number from the one specified in the "WRITE_ARC = LAB, 123" command
747:	traceability not enabled. An attempt has been made to enter a label in a variable field pertaining to the traceability option when this has not been enabled.
748:	Incorrect type of alignment of a label item (FIXED or VARIABLE TEXT) since the field length entered is 0.
749:	Syntax error in a BARCODE field.
750:	BARCODE item ID not handled (e.g. B7 = ...).
751:	BARCODE item ID incorrect. An item that forms a BARCODE has a different BARCODE ID from the one specified in the "WRITE_ARC = BARCODE, 123" command.
752:	Value in list for a BARCODE variable field not permitted.
753:	Incompatibility between FIELD STARTING CHARACTER + NUMBER OF CHARACTERS in relation to the VARIABLE FIELD LENGTH selected in a BARCODE item.
754:	Syntax error in a IMAGE field.
755:	Unable to process the operation: the emergency button has been pressed. This error occurs when sending the start, conveyor belt start and remote label printing commands;
756:	Unable to process the operation: no reset. This error occurs when commanding the start of the conveyor belt;
757:	conveyor belt mode activated.
758:	Syntax error in a field of the REVERSE_ENTRY command.
759:	there are no pieces to reverse.
760:	an attempt has been made to reverse a number of pieces or an overall weight that is higher than the quantity effectively weighed up to that time.
761:	impossible to reverse a box as there is a box open.
762:	there are no boxes to reverse.
763:	incorrect reverse entry values in command.
764:	Syntax error in a field of the TOTAL CLOSING command.
765:	an attempt has been made to print a label with a printer that has not been assigned in the total closing command.
766:	An attempt has been made to close a TOT_1 without there being any boxes open.
767:	An attempt has been made to close a TOT_2 without there being any pallets open.

CODE	DESCRIPTION
768:	An attempt has been made to delete a PROC currently in the PROCESS phase.
769:	An attempt has been made to modify a PROC currently in the PROCESS phase.
770:	Error during printout of a label following the PRINT_LABEL command.
771:	Incorrect type of PTR in PRINT_LABEL command.
772:	option not enabled. An attempt has been made to access an archive (e.g. TRACEABILITY) without this option having been enabled on the machine.
773:	TRACEABILITY Id containing spaces.
774:	Syntax error in a TRACEABILITY field.
775:	An attempt has been made to modify the TRACEABILITY item associated with the PROCESS in progress.
776:	Error in writing on DB. The DB cannot be accessed in the writing mode owing to an error on the screen which requires manual confirmation by the operator.
777:	An attempt has been made to execute the CONVEYOR BELT command in a MANUAL machine.
778:	REMOTE CONTROL mode not enabled.
779:	Error in the identification number of a record in the PROGRAMMABLE LIST in the REMOTE CONTROL operating mode (for example, an attempt has been made to enter record 12 when there are only 8 in the list).
780:	Syntax error in a field of the PROGRAMMABLE LIST record transmitted by the HOST.
781:	Incorrect number of fields that form the record of the PROGRAMMABLE LIST.
782:	Identification number of a record in the PROGRAMMABLE LIST too large.
783:	BUFFER OVERFLOW error. A command whose dimensions exceed the value specified in the initial LOGIN command has been transmitted to the machine.
784:	Error in creating a new process due to the fact that a process with that specific ID already exists.
785:	operation not allowed owing to the fact that the machine is dealing with an application or is totalising (e.g. if a reverse entry operation is attempted while the machine is totalising).
786:	Syntax error in a GENERAL DATA field.
787:	GENERAL DATA is only accessible in the reading mode.
788:	Error while a GENERAL DATA item was being stored in the archives.
789:	Error in allocating the serial port used for activating the old CGM serial protocol.
790:	Serial port to be used for activating the old CGM serial protocol already occupied by another device.
791:	ERROR when the COM of the old serial protocol was set up in the machine configuration.
792:	Enabling/disabling of the old serial protocol not accepted since the operator is in the NETWORK CONFIGURATION mask of the machine.
793:	tare more than scale capacity: an attempt has been made to enter a product tare value in the PLU or PROCESS that exceeds the scale capacity.

CODE	DESCRIPTION
794:	Some of the PLU data have not been linked correctly (texts or labels), thus it is impossible to enable the machine to process.
795:	Syntax error in a field of the SHOW MESSAGE command.
796:	SHOW MESSAGE already displayed.
797:	Impossible to display a SHOW MESSAGE since the machine is processing with an ERROR DIALOG already displayed.
798:	Incorrect type of SHOW MESSAGE.
799:	Impossible to enable transmission of TOT PLU weights on this channel. The maximum number of connections to the scale that require receipt of TOT PLU weighs has already been reached (maximum 8 connections allowed);
800:	SHOW MESSAGE displayed. Wait for confirmation from the operator before carrying out any other command
801:	Some of the PROCESS data have not been linked correctly (labels), thus it is impossible to enable the machine to process.
802:	general total not enabled.
803:	syntax error in a general total field
804:	general total inexistent.
805:	Syntax error in a SET KEY CAPTION field.
806:	error in the key customising command due to an attempt to program a fixed button of a window.
807:	error due to an attempt to customise the keys of an inexistent window.
808:	a command concerning the STORES has been transmitted without the weighing terminal having been set up for the CRATEWEIGHING operating mode with STORE management via the network.
809:	"WRITE_ARC = STORE" command containing CONTINUE TAGs.
810:	Syntax error in a field concerning the STORES in the CRATEWEIGHING operating mode.
811:	a Store command has been received without the CRATEWEIGHING function having been set up with INPUT via the NETWORK
812:	CONTINUE tag not allowed with this command (dialogue structure error)
813:	Syntax error in a STORE field
814:	box and/or pallet queue not empty: impossible to make forced closures or reversals for boxes or pallets
815:	File name error in FILES command
816:	Syntax error in a FILES field
817:	file opening error after reception of a FILES command
818:	too many fields have been entered in the store
819:	restart command received on processing limit since the limit has not been reached
820:	there has been an attempt to cancel a process with the label
821:	there has been an attempt to cancel a process with the terminal in the processing status

CODE	DESCRIPTION
822:	there has been an attempt to cancel a process already cancelled or renamed
823:	Syntax error in a CTRL field
824:	an attempt has been made to delete CTRL with PROC open
825:	CTRL lot identifier containing spaces
826:	CTRL lot open: impossible to write the process
827:	Generic CTRL error
828:	There has been an attempt to give a STOP command, but the line has a dialogue open and cannot quit the process
829:	An attempt has been made to enable a STOP command, but the line is in the process editing window
830:	An attempt has been made to enable a STOP command, but the line is in the traceability archive window
831:	Syntax error in a WEIGHTB field
832:	It is impossible to add a new store to the queue because it is full.
833:	Syntax error in a CONFIG field;
834:	Syntax error in a CLIENTS field;
835:	Client's archive not enabled;
836:	The number of fields does not correspond. The extra ones are ignored;
837:	The number of fields does not correspond. The missing ones are replaced by defaults:
838:	The number of fields fails to correspond in many cases;
839:	
840:	
841:	
842:	Error message that appears if a window closing command is sent from the network but there are no active show messages;
843:	Error message that appears if an attempt is made to delete a TRACE lot in use at that moment, from WITHIN THE PROCESS
844:	
845:	The printer is busy;
846:	The NET WEIGHT is not present on the PRODUCT label (with MID machine);
847:	Attempt to START PLU with primary unit of measurement in Pounds (but machine in MID mode, where pounds are not approved);
848:	Error message that appears if an "ERROR DIALOG" closing command is sent from the network but there are no active dialogs on the screen;
849:	Pending previous printouts
853:	Syntax error in a FONT field
854:	Syntax error in a EXT_TEXT field
855:	Error during the start procedure

CODE	DESCRIPTION
856:	A PLU is retrieved with zero fixed weight (for non-legal machines and with fixed weight pro type) or lower than the minimum weight (legal machines and with fixed weight pro type).
857:	In case of Checkweigher MID, an attempt was made to set a tare value higher than the allowed percentages (indicated in the GALAXI MID decree)
858:	In case of VENUS MID, an attempt was made to set a tare value higher than 2000 divisions (as per the Venus MID degree)
859:	In case of MERCURY MID, an attempt was made to set a tare higher than the one allowed in case of X category dynamic weighing (as per the Mercury MID degree)
860:	In case of MERCURY MID, an attempt was made to set a tare higher than the one allowed in case of Y category dynamic weighing (as per the Mercury MID degree)
861:	A PLU is retrieved with fixed weight < 50g, but the converter firmware does not handle weights between 20 and 50 grams.
862	Reached MID open ctrl lots limit of 10000. Close and delete CTRL lots to continue.
863	syntax error in a K1 field
864	field value K1 off range
865	error in the clock update function, date/time NOT updated
866	error in the clock reading function, date/time NOT available
867	invalid date error (e.g. 30 February)
868	tag missing error with clock data programming <K1=...>

2.14 APPENDIX “A” - SPECIAL OPERATIONS

This section contains a list of additional functions available on the automatic weighing terminals. Each paragraph describes a function, specifying where possible the firmware version from which it was integrated. Since terminals are constantly developed, this section may be incomplete if in possession of an outdated manual version.

NOTE: some functions may not be available on all types of terminals since each model has electronic, mechanical and performance differences that may not be compatible with the described functions. For more information contact the service centre.

2.14.1 BOX STOPPER

VERSION: 4.0.1

DATE: xx.xx.xxxx

2.14.1.1 Modification description

The box stopper is a mechanical device designed to be applied on the high flow, which ensures box positioning during labelling, in order to correctly apply the head labels.

The box stopper consists of a vertical mobile bulkhead which is placed immediately after the labelling belt, capable of rising and lowering to physically stop the box which, once in labelling position, tends to slide due to the ramp of the motors, poor friction with the belt surface or because labelling takes place on a roller conveyor instead of on a belt.

For easier device configuration, which is currently managed only in case of APPLICATION ON PHOTOCCELL with SINGLE PRINT HEAD, the BOX STOPPER parameter has been introduced (yes / no) and only appears in the aforementioned case.

When the BOX STOPPER parameter is enabled, the BOX STOPPING TARGET becomes visible, replacing the PIECE OUTPUT DELAY parameter present in previous versions. It is important to remember to reconfigure the box stopper when updating from version 3 to version 4.

The photocell and box stopper operating sequence can be summarised as follows:

- 1) When the process starts, the box stopper remains lowered.
- 2) When the first piece reaches the LAB TARGET 1, the box stopper becomes “engaged” and is only raised if the piece in question is to be applied; otherwise, it cannot be moved until it is released, meaning until the piece comes out from its action range (i.e. will reach BOX STOPPING TARGET).
- 3) The piece triggers the SAFETY TARGET
- 4) During application, the piece arrives in front of the photocell.
- 5) The encoder waits for any APPLICATION TARGET DELTA present in PLU to pass.
- 6) A time that can be set during configuration by means of the BOX STOPPING TIME parameter (TARGET group) is pending.
- 7) After this time, the box stopper is lowered.
- 8) The piece restarts.
- 9) When the belt restarts (if it has been stopped for application), the photocell remains insensitive for a space equal to PIECE LENGTH (in the PLU) if different from 0, or equal to PHOTOCCELL FILTER DEFAULT (in configuration) if equal to 0. This restores (definitively...) the operation implemented since version 3.1.28, then modified by version 3.5.14.
- 10) When the BOX STOPPER TARGET is triggered, the device is considered “free” (i.e. it can rise again to stop the next box), since the box, by definition of the target, has completely passed the box stopper position.
- 11) The system triggers the next targets.

==>> Criticalities:

If, when LAB TARGET 1 is reached, the box stopper is engaged by the previous piece (i.e. the previous piece has not yet triggered the BOX STOPPING TARGET), its possible rise will be postponed until the previous piece has triggered the target. If this does not happen before the piece reaches the application position, the

box stopper will not be moved for the piece in question; bear this in mind during system setup: this anomaly can be caused by a too high box stopping target.

==>> Criticalities:

The box stopping time, i.e. the time to wait before lowering the box stopper (points 6 and 7 above) depends on extremely variable factors (belt speed, application time, conditions that cause sliding, box stopper activation time) that cannot be automatically controlled; too short a time does not allow the box stopper to remain raised enough time to stop the box, while too long a time means that, when the piece restarts, the box stopper may have not lowered completely (given the long activation times).

==>> Criticalities:

If the LAB TARGET 1 is too high, there is a risk of excessively delaying the rise of the box stopper (remember that the activation /deactivation times are rather long); therefore, the right compromise must be found (moving it too far back can cause the SCALE CONSENT TARGET ERROR, even if with the new faster 1420 cpu, it should be less frequent).

==>> Criticalities:

If the piece **triggers the BOX STOPPING TARGET before the time expires**, the “Error on box stopping target” is generated. This situation should never occur during normal operation; it could occur if a time too long is set and the box is manually removed from the photocell in the absence of an adequate piece filter. Bear this in mind when setting up the system.

==>> Note:

The fact that the BOX STOPPING TARGET must be triggered when the box has fully bypassed the box stopper position, and not when it reaches it, means that, in order to determine the target itself and subsequent targets, it is necessary to think a bit differently from other targets, which must be triggered when they are reached by the product head (see annex).

2.14.1.2 Example

Below is an **example of configuration of the targets** mentioned, in order to clarify certain potential operational scenarios.

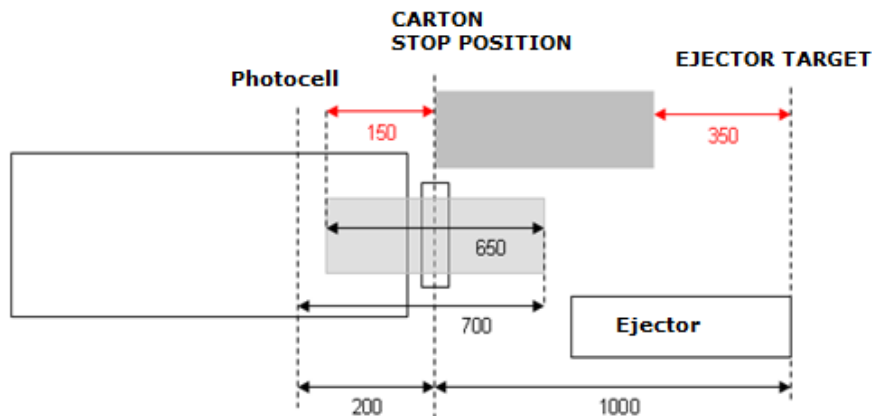


Figure 2-68

In the figure the light-grey box is photographed the moment calculation of the BOX STOPPING TARGET begins; in red is the space it must still cover before the box stopper can be raised, namely when the box has completely bypassed the box stopper and the target can be triggered. The dark-grey box is photographed the moment the box stopper is raised, and the space that must still be covered before reaching the ejection position (i.e. the next target) is highlighted in red.

The measurements given are shown in black. The measurements to be applied as parameters in the system are shown in red.

Box length: 650 Piece length: 700

BOX STOPPING TARGET = 200 – (700 – 650) = 150 EJECTOR TARGET = 1000 – 650 = 350

It may be easier (and more realistic) to consider the box as long as is set as PIECE LENGTH, automatically leaving some space after the box is beyond the box stopper, equal to the difference between the real length and the set filter (in this case 5 cm). The values in question would become:

BOX STOPPING TARGET = 200 EJECTOR TARGET = 1000 – 700 = 300

(the figure shows how to move the dark-grey box to the right by 50 mm).

In both cases, the targets begin to be programmed when the box has travelled 700 mm from when it is read by the photocell. Therefore, the sum of BOX STOPPER + EJECTOR targets must be:

$1000 + 200 - 700 = 500$ mm

It is important to note that, contrary to what happens for all other targets, the sum of the targets is not equal to the physical space (which in this case would be $1000 + 200 = 1200$ mm), and this is a consequence of the fact that the BOX STOPPING TARGET begins to be calculated from the uncovering, and not from the covering, of the photocell.

2.14.2 3-WAY SELECTOR

VERSION: 4.5.2

2.14.2.1 Modification description

The 3-way selector feature is used

1. to activate a trigger for each product transiting on the line, in correspondence with the EJECTOR TARGET.
2. to **manage a product selection/routing device** which sends different pieces to different exits in the WEIGHT BOUNDING mode.
3. to enable the ejection output for each accepted product (instead of rejected).

Two parameters have been introduced to manage these functions:

1. The SELECTOR parameter in CONFIGURATION (which can have the values NO SELECTOR, EJECTOR, THREE-WAY CB)
2. The SELECTOR parameter in the HANDLING menu within the PLU (which can have the values (NO SELECTOR, EJECTOR, 1-WAY CB, 2-WAY CB, etc..)

2.14.2.2 Trigger activation for each product

Setting the SELECTOR parameter in CONFIGURATION on THREE-WAY CB, activates the TRIGGER output (see table below) when each piece reaches the EJECTION TARGET for 16 ms, regardless of the SELECTOR parameter setting in the PLU.

2.14.2.3 Selection / Routing

The selector generally consists of an ejection unit equipped with PLC capable of receiving two digital signals from the machine:

- a trigger indicating when a piece has reached the ejection position
- a pair of digital outputs which encodes the number of one of the 4 possible ways of the selector (3 exits plus the idle way).

Each PLU can have a specification concerning which of the selector's ways **accepted** products must take which, based on weight bounding mode, are totalised in that given PLU.

This configuration is an evolution of the previous one since, in addition to the trigger signal (required by the selector), the two BIT1 and BIT2 outputs are activated which encode the number of the selector bay concerned, therefore:

- the SELECTOR parameter in configuration is set to THREE-WAY CB (as in the previous case)
- for each weight bounding PLU SLAVE, the correct selection way is set in the PLU SELECTOR parameter; in this case, the EJECTOR item matches the 1-WAY CB, while by selecting NO EJECTOR, the products accepted for that given PLU continue along the idle way.

All products rejected by the "MASTER" PLU and by the WEIGHT BOUNDING PLU take the idle way of the selector (continue along the line without being deviated), regardless of the setting.

When the piece approaches the EJECTOR TARGET, the TRIGGER output is activated for 16 milliseconds. The following signals are activated according to the settings of the "SELECTOR" parameter in the "HANDLING" menu set for the PLU where the piece is totalised ("MASTER" PLU or recipient PLU in case of WB):

- none: does nothing else
- 1-way module: activates the BIT1 output for 32 milliseconds
- 2-way module: activates the BIT2 output for 32 milliseconds
- 3-way module: activates the BIT1 output and the BIT2 output simultaneously for 32 milliseconds

NOTE: If in the PLU, under the item "SELECTOR", any value other than "NO EJECTOR" is set, then the DIVERTER is never activated;

2.14.2.4 Ejection of accepted products

This operation requires the activation of the EJECTOR output (coinciding with the BIT1 output) for each **accepted product** (instead of rejected). This configuration is obtained by setting:

- the SELECTOR parameter in CONFIGURATION to EJECTION;
- the SELECTOR parameter in the PLU to EJECTION

The ejection time can be set in the EJECTION TIME parameter which is normally used to manage a reject.

2.14.2.5 Outputs table

OUTPUTS	Venus / Galaxi	Mercury	Mercury Plus
TRIGGER	5	8	11
BIT1	9	17	17
BIT2	6	19	19

NOTE: If in the PLU, under the item "SELECTOR", any value other than "NO EJECTOR" is set, then the DIVERTER is never activated;

2.14.2.6 NOTES

- In any case, the **rejected products** are handled according to the setting in configuration. This means that, if the reject setting is "EJECTOR", the same ejection output can be used for the rejection and selection of the first way (operation 2.) and for signalling accepted products (operation 3.).

From a practical point of view, with a selector present, it makes no sense to the reject with ejection (since the rejected products generally have to continue along the idle way). Similarly, in case 3., if the ejection output is used to signal the accepted products, it makes no sense to also use it for rejected products (otherwise it's within case 1.).

- All combinations of SELECTOR parameters in CONFIGURATION and in PLU that have not been described are ineffective or redundant.

2.14.3 CONTROLLER SCANNER

VERSION: 5.3.0

"MERCURY PLUS" TERMINALS ONLY

2.14.3.1 Modification description

This function, thanks to two scanners positioned beyond the printheads, really totalises a piece only if the label of the piece is correctly read by the scanners. It therefore delays totalisation of the piece which normally occurs after the weighing operation beyond the labelling position. The scanners are activated when the application target is reached and deactivate when the reading is correct or when the controllers position is reached, following the application target and prior to the ejection target. When the scanner is deactivated, either when the reading was poor or when nothing was read, the product is not totalised and is therefore rejected. Only one of the two scanners is enabled to verify the PLU. If the PLU did not associate the label related to one of the two heads, it will not wait for the verification for the corresponding head. If one of the two scanners does not perform the reading correctly, the piece will be rejected with the message "REJECT DUE TO CONTROLLER" indicating the head (or heads) in which the reading failed. After a set number of consecutive rejects at the same head, the machine is stopped as already occurred for product label verification. NOTE: the machine only stops the belts and with the message "LINE IN STOP". Press "F1" (STOP) to exit the process screen.



Beware!

As an installation note, attention must be paid to the correct adjustment of the belt ramps!

At present this modification only works with MERCURY.

This modification goes alongside the previous product label verification by a scanner which reads the presence of the barcode during label printing.

2.14.3.2 MACHINE CONFIGURATION parameters

An item called "VERIFICATION SCANNER" has been added inside the terminal configuration page, which groups some items related to scanners and the like. The new items present are:

- **HEAD 1 CHECK:** enables the verification scanner for the first printhead;
- **HEAD 2 CHECK:** enables the verification scanner for the second printhead;
- **T1 SCANNER ENAB.OUT:** indicates the output number to which the first head scanner enabling is to be connected;
- **HEAD 1 GOOD READ:** indicates on which input the GOOD READ signal of the first head scanner arrives;
- **T2 SCANNER ENAB.OUT:** indicates the output number to which the second head scanner enabling is to be connected;
- **HEAD 2 GOOD READ:** indicates on which input the GOOD READ signal of the second head scanner arrives;

2.14.3.3 PLU parameters

Once the HEAD 1 CHECK and HEAD 2 CHECK parameters have been enabled, two further items (according to the heads really installed) will become visible in the PLU in the "SPECIAL PARAMETERS" menu:

- **ENAB. VERIFIC. HEAD 1:** enables the check scanner function for the first printing head of that PLU;
- **ENAB. VERIFIC. HEAD 2:** enables the check scanner function for the second printing head of that PLU.

These two parameters are used if some PLUs wish to enable the check function and others no.

Finally, again in the terminal configuration menu, the "CONTROLLERS POSITION" was entered in the "POSITIONS" item between the application position and the ejector position. This is the position which when reached disables the scanners. Both scanners are disabled at the same time.

2.14.3.4 Installation note

There is a feature to be considered, relating to the aforementioned target. When having to work using the process limits, the piece following the last processed one stops on the scale, waiting for the last piece (already validated during weighing) to be labelled and made to exit the line. With the new operation there will be a problem: we do not know if the last processed piece will be validated until it reaches the controllers position. Therefore, we must stop the belts so that, if the piece is validated, it is possible to manage the process limit without problems. Whereas, if the piece is to be rejected by the scanners, the piece stopped on the scale must restart. The real problem arises from the fact that, by stopping the belts, the piece on the labelling belt would stop at the labelling target and would not reach the reading beam of the scanners, which are further down. It is, therefore, **ESSENTIAL** to adjust the falling ramp of the labelling belt (TD) during installation, to make sure that the piece, once the labelling target is reached, progressively slows down until the controllers position is triggered and the label is read by the scanners. It is only then that we will know how to behave with the next piece. Indicatively, based on the tests made so far, the value to be set for the TD parameter is between 1000 and 1600. This adjustment is very delicate because the ramp must not be too abrupt (otherwise the piece will not reach the controllers position) nor too long (otherwise, in addition to the controllers position, subsequent positions would also be triggered, generating probable errors 4008).

2.14.3.5 Scanner Programming

For the purpose of this modification, it is **NECESSARY** for the scanners to be programmed so that they do not report BAD READ in case of wrong reading. In fact, the software will trigger the mechanism generated by the bad read if the piece has reached the controllers position without the scanner having correctly read the barcode.

2.14.3.6 Target Programming

When adjusting the terminal, remember that the maximum distance between "APPLICATION TARGET" and "CONTROLLERS POSITION" can never exceed the distance between two consecutive pieces. In short, a piece must always reach the "CONTROLLERS POSITION" before the next one reaches the "APPLICATION TARGET".

2.14.4 FEEDBACK MANAGEMENT

VERSION: 5.5.10

2.14.4.1 Modification description

Possibility of adjusting dosage of upstream machine via digital outputs. This function has two different purposes:

1. When lot acceptance is forced, it allows starting with high dosages in order to immediately guarantee a positive average, and therefore not to reject pieces at the start of the process, and then **to automatically reduce dosage without operator intervention**.
2. To resolve **basically systematic disturbances** by which the product actually introduced into the packages is different than that programmed on the dosage scale. It must be noted that the utmost dosing precision is that identified by the dosing scale. Even though our line has a higher precision, the system does not guarantee better performance. If the dosing system is more precise than our weighing-ricing machine, then the adjustment mechanism compensates all those disturbances **the extent of which is equal to the division of our scale**.

From a quality standpoint, the adjustment process occurs as follows: when the process starts, a few pieces are left to pass without starting to calculate the average N of last pieces transited; should the average be more or less than the nominal weight by an amount greater than a definable limit, specific digital signals are activated which control the dosage variation upstream the machine; this variation can follow two different criteria. Thresholds can be set outside of which products are not used to calculate the average. Furthermore there can be products which have already been dosed but not yet weighed (namely those between the dosing machine and the line). The effect of this adjustment cannot apply to them and therefore their weight will not be considered for the subsequent adjustment cycle. Finally since the dosing machine requires a start-up time, an initial number of pieces can be indicated which are excluded from the adjustment process. All the parameters which must be set to configure the adjustment process are described hereafter.

Two adjustment modes exist:

1. **BY PULSE**: adjustment occurs by sending pulses, upon which the dosing machine corrects the preset weight.
2. **BY DURATION**: adjustment occurs by keeping the output signal high for a time proportional to weight variation to be controlled.

In any case, the **minimum** adjustment is 16.666666 ms (60 adjustment per second), both in case of pulse adjustment and duration adjustment.

2.14.4.2 CONFIGURATION parameters

In MACHINE CONFIGURATION, within the CTRL group.

*Note: exceptionally, given the small weights in case of **feedback**, the weight parameters in this section are expressed in **grams** (and not in **kg** as in the rest of the application).*

The parameter:

- **COMPENSATION FACTOR**: allows to define the adjustment criteria of the upstream machine.
 - If **0** (default), the adjustment takes place by supplying the upstream machine with an entity that reflects a change in weight equal and contrary to the deviation between nominal weight and average value: in this way adjustment will be very quick (as the entire compensation takes place at first adjustment) but can lead to continuous oscillations around the average value if the disturbances in the dosing chain are impulsive and uneven.
 - If **different from 0**, it establishes, regardless of the extent of the deviation, the supply of many adjustment units equal to the indicated value; in this way the adjustment will be slower but will tend to be very stable. If, during a given adjustment, the value shows a higher number of adjustment units than those corresponding to the deviation, in that case the entire compensation will be dispensed (and no more, to avoid making the system unstable). Each adjustment unit corresponds to 16.6666 ms, therefore, the real adjustment depends on the configuration of the upstream machine.

2.14.4.3 Pulse adjustment

- **PULSE DURATION (ms)**: duration of each pulse which corresponds to a weight variation, established by the upstream machine, settable in the PULSE WEIGHT parameter.
- **PULSE WEIGHT (g)**: weight variation corresponding to each pulse sent to the upstream machine.

2.14.4.4 Duration adjustment

- **WEIGHT (g/100 ms)**: weight variation that the checkweigher expects every 100 ms.

2.14.4.5 PLU parameters

For each product (in the PLU and in the PROCESS), adjustment parameters can be specified within the **FEEDBACK** group, namely:

- **FEEDBACK**: possibility of selectively enabling or disabling **feedback** for each PLU.
- **CORRECTION**: expresses the weight which, added to the nominal weight, determines the target weight, namely the value which is compared to the average adjustment weight to determine the extent of the adjustment itself.
- **UPPER LIMIT**: packages whose weight exceeds the upper limit are not used to calculate the average adjustment value.
- **LOWER LIMIT**: packages whose weight is less than the lower limit are not used to calculate the average adjustment value.
- **UPPER TOLERANCE**: if the average adjustment value is between the target weight and the target weight plus the tolerance, the regulator will not be activated.
- **LOWER TOLERANCE**: if the average adjustment value is between the target weight minus the tolerance and the target weight, the regulator will not be activated.
- **AVERAGE PIECES**: number of packages to be used to determine the average adjustment weight, obtained through the mobile average.
- **PIECES AWAITING START**: number of packages which must not be included to calculate the average after the start of the process.
- **PIECES AWAITING ADJUSTM.**: number of packages which must not be considered before resuming calculation of the average adjustment value after an adjustment has been made. This is used to let those products pass which already been processed by the upstream machine but have not yet been weighed, and therefore the adjustment made has not yet had effect, and therefore would produce an error if used for the subsequent adjustment. Therefore for the pieces processed by the upstream machine, you must wait for the effect of the adjustment just made. It actually expresses the number of products between the dosing machine and the scale.

2.14.4.6 Digital outputs

There are 2 digital outputs (**FEEDBACK+** and **FEEDBACK-**), one which provides dose increase pulses and the other decrease pulses.

2.14.4.6.1 Mercury

FEEDBACK+: 11

FEEDBACK-: 19

2.14.4.6.2 Venus/Galaxi

FEEDBACK+: 5

FEEDBACK-: 6

Note: the outputs are voltage-free contacts that have a terminal in common; the best configuration is to bring voltage to the common terminal; the voltage can be taken internally by short-circuiting pins 1 and 9 of J7; enabling the output brings the common terminal voltage to the selected output.

2.14.4.7 Notes on parameter setting

To make settings as accurate as possible, the upper and lower tolerances must be very low, close to the division of the scale, so that the regulator is activated often keeping the weight close to the nominal value. The upper and lower limits are used to exclude evident filling defects from the setting, such as lumps of cheese which block the dosing scale and give way to half-empty trays. To understand the right value of these parameters, you must consider the working limits of the dosing machine. The number of pieces for the average can effectively be between 5 and 10. If there are too many pieces, adjustments would be too seldom, while too few pieces makes the average unstable and forces continuous adjustments. It should be noted that the number of pieces transiting between two consecutive settings is the sum of the AVERAGE PIECES and PIECES AWAITING ADJUSTMENT, plus pieces which transit outside of the upper and lower limits.

Example of initial configuration:

ADJUSTMENT TYPE: COMPENSATION FACTOR DURATION: 2
FIXED WEIGHT: 0.100
UPPER LIMIT: 0.105
LOWER LIMIT: 0.095
UPPER TOLERANCE: 0.002
LOWER TOLERANCE: -0.002
AVERAGE PIECES: 5
PIECES AWAITING START: 0
PIECES AWAITING ADJUSTMENT: 25

In this case, at least 30 pieces pass between one adjustment and the next.

2.14.5 CTRL AVERAGE CHECK EVERY "N" PIECES

VERSION: 5.6.0

2.14.5.1 Modification description

This function makes it possible to carry out a regular check (every "n" pieces) on the value of the average weight in the case of processing with WEIGHT CONTROL, and to interrupt processing if the average is lower than the nominal weight, to allow any adjustments to be made on the packaging upstream (slicer adjustment, manual filling of trays, etc.). In the event that the average weight check is lower than the nominal weight, the terminal will display, depending on the consecutive number of negative checks, a warning window that will stop the machine or a dialogue that will require the insertion of a password to allow restarting.

This type of control, once enabled in the configuration, can be activated on individual PLUs, so it will be possible to work with PLUs that have this control and others that work with standard CTRL operation. This check only makes sense if the PLU works with the possibility of accepting negative averages. Checking the average to see if it is lower than the nominal weight would not make sense if the average could never be lower than the fixed weight. For this reason, the parameters of this function will only be displayed in the PLU if the parameter "ALLOW NEG. AVERAGE" is set to "YES". This check has NO EFFECT if the CTRL batch limit is set "ON TIME".

2.14.5.2 Settings and parameters

To use this function it will be necessary to enable certain parameters both in the configuration and in the PLU. In the machine configuration, enable the "AVERAGE WEIGHT CHECK" parameter in the CTRL menu.

The following parameters will be present within the PLU:

- ALLOW MEDIA NEG. must be set to YES. This parameter is used to allow processing to accept parts whose weight value falls within the CTRL thresholds even if the average weight value falls below the nominal weight value. With this parameter set to YES the following two parameters will appear;
- N.PIECES AVERAGE CHECK: (from 0 to 999) represents the number of pieces, accepted by the CTRL, after which the check on the value of the average weight is carried out. Pieces discarded by CTRL will not be counted for the purpose of triggering the check. If this value is set to '0' (zero), the check on weight average is disabled, and the terminal will work in the standard CTRL mode with negative average acceptance.
- MAX AVERAGE CHECKS: (from 1 to 99) represents the number of consecutive checks in which the average is found to be lower than the nominal weight, after which, instead of an error dialogue that warns the operator of too low weight values, a dialogue appears with a request to enter a password.

In practice, at each negative check of the mean, a warning dialogue is shown alerting the operator to the fact that the weights accepted by the CTRL are too low overall. Such a dialogue stops the machine but does not release it from machining. By simply confirming the dialogue, it disappears and the machine can continue its machining operations. After a certain number of consecutive negative checks (at each of which the warning dialogue is displayed), defined by the value "MAX AVERAGE CHECKS", a new window is displayed instead of the normal dialogue, which requires a password to be entered in order to restart the line. This password is the same as the password for accessing level 5 of the terminal. Once this window appears, there is no way to unlock it except by entering the correct password.

2.14.5.3 Notes on networking

In the case of PLU and WORK programming via the network, the fields affected by this new function are as follows:

ST_LAV_SHORT_CTRL_NUM_PIECES_FOR_CHECK_AVERAGE (0 - 999)	L359
ST_LAV_SHORT_CTRL_NUM_MAX_VERIFICHE_MEDIA_NEGATIVE (1 - 99)	L360
ST_PLU_SHORT_CTRL_NUM_PIECES_FOR_CHECK_AVERAGE (0 - 999)	P182
ST_PLU_SHORT_CTRL_NUM_MAX_VERIFICHE_MEDIA_NEGATIVE (1 - 99)	P183

2.14.6 ENABLE/DISABLE WEIGHT TRANSMISSION TO NETWORK EVENT

VERSION: 5.6.50

2.14.6.1 Modification description

By activating reception of the events on the communication channel open with the scale, a message will be received if the sending of the weighing operations through this channel is enabled/disabled.

The weighing transmission is enabled/disabled by pressing the combination of keys ALT+N on the display keyboard (or, in the touch screen versions, by selecting "DISAB.WEIGHING VIA NETWORK" from the Soft keys menu).

2.14.6.2 Technical features

By disabling the sending of the weighing operations, the scale will send the following event on the channels that receive events:

```
<EVENT>  
<E0 = PROC_EVENT>  
<E1 = DISABLE_WEIGHTS>  
<END_EVENT>
```

Vice-versa, by activating the sending of weighing operations, the scale will send the following event:

```
<EVENT>
```

<E0 = PROC_EVENT>
<E1 = ENABLE_WEIGHTS>
<END_EVENT>

2.14.7 CUSTOMISATION OF SEPARATOR CHARACTERS FOR THE WEIGHING DISCHARGE AND BATCH FILE GENERATION FUNCTIONS CTRL

VERSION: 5.6.52

2.14.7.1 Modification description

This modification allows you to customise the character separator between fields stored in CSV files if the "DOWNLOAD WEIGHTS" or "GENERATE LOT FILE (CTRL)" functions are active.

Prior to this change, the separator character that divided the machining fields in the weigh-out function was the ";" (semicolon) character (semicolon), while the character dividing the ctrl fields in the case of the generate batch file option was "#" (hash mark).

For backward compatibility, the default values of the two new parameters remained unchanged in both cases.

2.14.7.2 Settings and parameters

Once the "WEIGHT RECORD" function has been activated in the installation options menu, a new menu called "WEIGHT RECORD" will be visible in the machine configuration.

The entry "CAR.SEPARATOR FIELDS" will now be visible within it, and its default value will be ";".

Similarly, once the "CONTROL FUNCTION" function has been activated in the installation options menu, a new menu called "CTRL" will be visible in the machine configuration.

The entry "CAR.SEPARATOR FIELDS" will now be visible within it, with a default value of "#".

2.14.8 PIECE TOTALISATION ON NETWORK COMMAND "PRINT_REMOTE_LABEL"

VERSION: 5.6.XX

2.14.8.1 Modification description

This function allows the weighing and print/apply operations triggered by the network command PRINT_REMOTE_LABEL to be synchronised. To make this synchronisation possible, the original sequence of operations is modified:

- weighed piece
- labelled piece (automatically from the scale)
- network transmitted weighing
piece restart

With a new cycle behaving in this way:

- weighed piece
- network transmitted weighing
- send "WAIT_PRINT_REMOTE_LABEL" event via network
- part that stops in application, waiting for a PRINT_REMOTE_LABEL command from a HOST program
- reception of "PRINT_REMOTE_LABEL" command from HOST program
- print/apply the label specified in the network command
- piece restart

2.14.8.2 Settings and parameters

The following parameters must be enabled to make this mode operational:

- In the NETWORK SETTINGS menu, set the parameter "SEND PRODUCTION WEIGHTS TO: WEIGHED". This setting will allow the piece weighing to be sent on the restart of the piece from the scale.
- In the NETWORK SETTINGS menu, set the parameter "TOTALISE ON PRINT_REMOTE_LABEL: YES". In this way, following product weighing, an event will be sent via the network as a signal to the HOST program, if any, to warn it that there is a part in the application waiting for a PRINT_REMOTE_LABEL command, necessary to complete the print/apply/totalise run.

2.14.9 PICKING WITH SCANNER

VERSION: 5.6.22

2.14.9.1 Modification description

This modification automatically triggers a weighing operation following the reading by the scanner connected to the weighing-ricing machine. By properly configuring the scanner operating mode, and the active BC READ, any data present on the read barcode can be loaded into the active process. In particular, by working with fixed weight and reading the weight from the barcode, it will no longer be necessary to pass the products on the scale for these to be re-weighed.

On the other hand, if the PLU in process is set to work with variable weight, reading the barcode with the scanner will load the data into the process and perform the weighing operation with the weight on the scale at that moment.

2.14.9.2 Settings and parameters

In order to use this mode, the scale must be configured as follows:

- Set the scale to work in "CRATEWEIGHER" mode;
- In the "OPERATION" menu in the machine configuration, set the "MULTIPROD SCANNER COM" to which the scanner will be physically connected;
- In the "OPERATION" menu in the machine configuration, set the "SCANNER MODE" parameter to "PICKING MODE";
- In the "CRATEWEIGHER" menu in the machine configuration, set the "AUTOMATIC STORE" parameter to "YES";
- In the "OPERATION" menu in the machine configuration, the BCREAD set for the barcode to be read must be linked to the "D.R. BARCODE ID" parameter. It is mandatory for the barcode to contain a link to the "FIXED WEIGHT" value;
- Within the menu "SETTING. MISCELLANEOUS", the parameter "PRINT LABEL MAN. = ON REQUEST";

2.14.9.3 Operating mode

Once the terminal is set as described above, the operator will select the PLU and start the process. Using the scanner connected to the scale, the operator will read the barcode on the box label. All data will be extracted from the barcode. Any weight will be stored in the FIXED WEIGHT value. Once the data has been correctly stored, the printing process will be automatically triggered.

2.14.10 ITALORA EL7: RS232/RS422 PROTOCOL CHANGE

VERSION: 5.6.25

2.14.10.1 Modification description

This modification allows to set the serial communication protocol of a new generation Italora printer (ELETTRONICA 7), directly by pressing a combination of keys on the weighing-ricing machine. This procedure prevents the technician who changes this setting from opening the printer drawer.

2.14.10.2 Settings and parameters

In order to use this mode, the scale must be configured as follows:

- Make sure that the Italora EL.7 printer dialogues correctly with the printing-weighing machine;
- Enter the “TEST PTR” menu;
- Access the Soft Keys Dialog and press “RS232 / RS422”;
- Select the printer whose serial protocol is to be modified;
- Select the serial protocol **to be set** (it doesn't matter if the protocol already active at that moment is reselected);



Beware!

As described in the window that will appear, the operation necessary for changing the protocol activates data storage in FLASH. This slows down printing, verifiable by restoring the printer communication with the pricing-weighing machine and printing a test label. You will notice that the label takes several seconds to exit.

- After having restored communication with the new serial protocol set (COM change, serial cable change, etc.), go back to the “TEST PTR” menu to disable the automatic data storage in FLASH setting.
- Access the Soft Keys Dialog and press “DIS.MEMO IN FLASH”;

Select the printer whose data storage in FLASH is to be disabled; (To ensure the correct disabling of the data in FLASH, test print a label and check that its exit times are almost immediate);

2.14.11 PRODUCT APPLICATION IN QUEUE

VERSION: 5.6.44

2.14.11.1 Modification description

This modification allows to apply product labels to the piece queue. By adequately configuring the line, the label application point will be calculated in real time and automatically for each piece, regardless of its length.

2.14.11.2 Technical features

The following parameters must be activated to use this function:

2.14.11.2.1. CONFIGURATION

APPLICATION ON	The application parameter must be set to "APPLICATION TARGET" , since the labelling photocell will be used to calculate the real length of the piece and it cannot be used for the application.
LENGTH CALCULATION PIECE	Set this parameter to "YES" to enable the real piece length calculation.
APP.PTC AND INP.PTC.DIST	Set the distance in mm between the entrance photocell and the application photocell.

2.14.11.2.2. PLU

HEAD 1 APPL. ON PIECE LENGTH	Set to "YES" to activate application in the queue on the first printhead.
HEAD 2 APPL. ON PIECE LENGTH	Set to "YES" to activate application in the queue on the second printhead.

2.14.11.2.3. LABEL

LABEL LENGTH	The length of the label used in the process is necessary to calculate the application point.
---------------------	--

2.14.11.3 Mechanical parameters

Place the application photocell between the input photocell and the beginning of the scale belt. Adjust the application photocell trimmer to its maximum value so that the uncovering of the photocell triggers a rising edge (the photocell must work "in reverse").

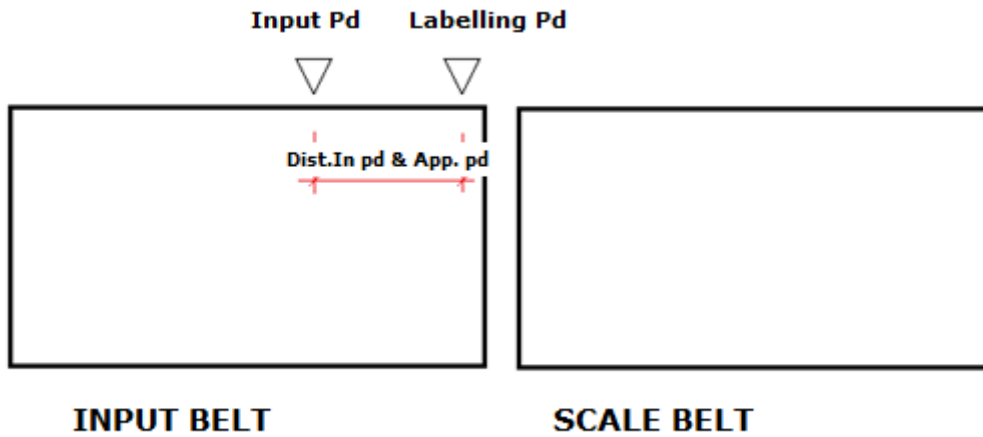


Figure 2-69

Also make sure to correctly space out the machine targets. Otherwise, if the recalculated application target is positioned after the next target, the following error will be displayed on the terminal:

"THE TARGET AFTER APPLIC.TARGET 1 IS TOO CLOSE FOR APPLICATION IN THE QUEUE."

2.14.11.4 Operating logic

The operating logic entails that the piece application target is moved forward by a length equal to the difference between the piece length and the label length.

To make the operation flexible, the piece length is dynamically calculated thanks to the inputs of the input and labelling photocells.

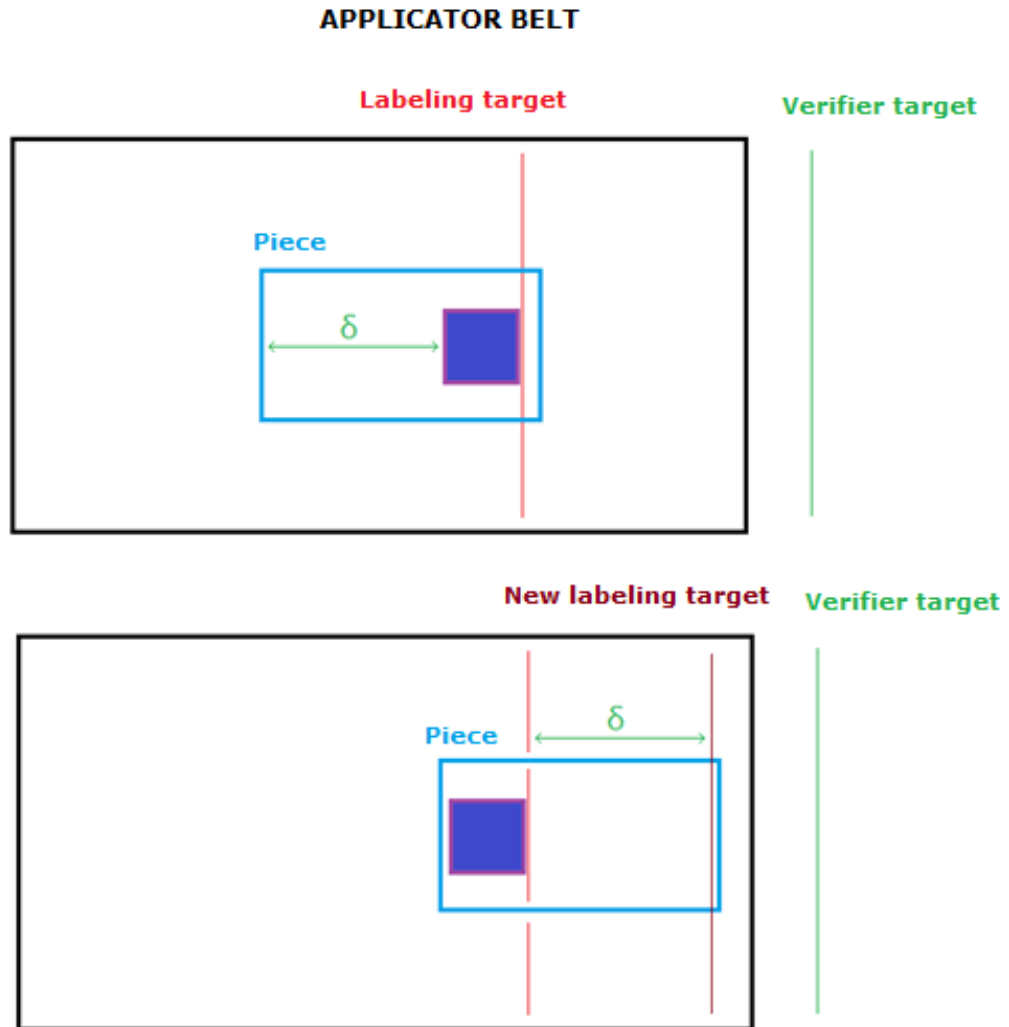


Figure 2-70

2.14.12 WEIGHT DOWNLOADING

VERSION: 5.6.44

OPTION CAN BE ACTIVATED SEPARATELY

2.14.12.1 Modification description

This function makes it possible to export all product, box and pallet weighing operations performed during the process in text format. The structure of the weights can be configured.

You may also decide whether to save the weights files on USB (which actually is not necessarily a USB but fundamentally FTP space, even on a PC), or directly on the DOM/COMPACT FLASH.

2.14.12.2 Technical specifications

To enable this modification, a new menu has been entered on the page

“Home \ Archives \ Settings \ Terminal Settings \ Machine Settings”

This menu is called "RECORD WEIGHTS/CTRL". Here it is possible to enable saving of each individual type of weight and to decide whether the files will be generated on USB or on DOM.

- REG.PROD WEIGHTS: enables saving each individual product weight on a file;
- REG.PROD RANGE REJECTS: enables saving on a file each individual product reject weight caused by an off range weight (starting from rel. 5.5.15);
- REG.OTHER PROD REJECTS: enables saving on a file each individual product reject weight caused by a reject which is NOT off range (starting from rel. 5.5.15);
- REG.PROD REVERSES: enables saving on a file each individual product reverse weight (manual or via network) (starting from rel. 5.5.15);
- REG.TOT1 WEIGHTS: enables saving each individual total 1 weight on a file;
- REG.TOT1 CANCELLATIONS: enables saving on a file each individual total 1 reverse weight (manual or via network) (starting from rel. 5.5.15);
- REG.TOT2 WEIGHTS: enables saving each individual total 2 weight on a file;
- WEIGHING OPERATIONS: SEPARATOR: specifies the separator character of all fields of each individual weighing operation (default "#");
- WEIGHING OPERATIONS: DECIMAL SEP: specifies the character to be used to separate the integer part from the decimal part in numeric values (default ",");
- GENERATE LOT FILE: (only with active CTRL operation) specifies whether to generate the "LOTS.CSV" file in which a row containing all data of a CTRL lot will be added whenever a lot is closed;
- CTRL: SEPARATOR: specifies the separator character of all fields of each individual line present in the "LOTS.CSV" file;
- CTRL: DECIMAL SEP: specifies the character to be used to separate the integer part from the decimal part in numeric values within the "LOTS.CSV" file (default ",");
- USB/DISK REG.: determines whether the save files (WEIGHING OPERATIONS and CTRL) must be created on USB or directly on DOM/COMPACT FLASH;

If you wish to register the file with the weighing results on an FTP space, the IP address of this space must be indicated to the terminal. This address must be set in the menu:

“Home \ Archives \ Settings \ Network Settings \ DATA DOWNLOAD IP”

The weighing operations and the lots are stored in the terminal memory during the normal process. If requested to save on USB/FTP, if you are not linked the machine will however begin processing correctly, providing a prior indication on the screen reproduced by colouring the printer icon at top-right of the display red; the weights will be registered on the DOM/COMPACT FLASH to avoid data loss. Normally the files are transferred from DOM/COMPACT FLASH to FTP space when the process ends. If the transfer fails, the message "INCOMPLETE WEIGHTS TRANS." will appear at the top of the display, indicating that the data has remained in the terminal memory. The new data will be added to the queue of the existing files and, the next time the process ends, a new transfer attempt will be carried out.

Alternatively, once the communication is restored between the terminal and the FTP space, sending of the local data to the server can be forced by pressing:

"Home \ Archives \ TRANSFER CSV TO FTP"

This manually transmits all data still present in the local memory (prod., tot1, tot2 weighing and lots.csv file).

Each type of weight will have its own saving file, recognised by the file extension (".prd" for products ".tt1" for totals 1 and ".tt2" for totals 2). The files will be generated "daily", in order to avoid creating files which are too large which could be difficult to open. The name of the files is structured so as to provide information concerning the creation date and the line number that generated it.

The structure is the following:

"DDDYLLLL.ext"

where:

- DDD = 3 digits of Julian Day (day of the year);
- YY = 2 digits of the Year;
- LLL = 3 digits expressing the parameter "LINE NUMBER", set in the "VARIOUS CONFIGURATIONS" menu of the terminal;

ext = file extension (".prd" for products ".tt1" for totals 1 and ".tt2" for totals 2);

2.14.12.3 Structure of the weights

For each type of weight, it is possible to set the process parameters which must be saved in the data string in the same way as that of network connection. To do so, the following have been inserted in the folder that can be accessed via FTP:

"ARCHIVES \ USER \ CONFIG"

contains 3 new files with the process fields which the system must enter in the weight string. The files are divided by weight type:

- PRODFLD.CFG = list of product weights fields;
- TOT1FLD.CFG = list of total 1 weights fields;
- TOT2FLD.CFG = list of total 2 weights fields;

If the saving function is enabled, but the respective configuration file is not present or its structure is not correct, an error message will appear at start-up, or when leaving the configuration. Inside each file the process fields to be saved for each weight must be stored. The fields must be positioned one per line and the line must end with a ";" (semicolon), except for the last field on the list which must close the file with the character "|". The fields stored in the file must correspond to the process fields which can be consulted in the "Communication protocol" document. Just specify the process field number without having it preceded by the letter "L" like for the network. If for example you wish to request the code LOT (L5), just enter a new line with the number 5 inside the file.

2.14.13 WEIGHING VIA NETWORK COMMAND

VERSION: 6.5.1

2.14.13.1 Modification description

This command allows to simulate pressing of the BACKSPACE key on the scale terminal. This forces the weighing operation, acquiring the weight on the scale (or the weight set in case of FIXED WEIGHT PROCESS). Since the weighing option via the BACKSPACE key is limited to manual Venus, the network command will also be enabled in this case only and will show an error if sending on different types of lines.

2.14.13.2 Modification description

This command can only be sent through a communication channel in which the COMPLETE MANAGER option has been activated (i.e. TOTAL_CONTROL = true).

Furthermore, this command will only be effective during the process.

In all other cases, a response to the command will be given via the network indicating a code and an error description, informing the program of the reason why the command was not correctly processed.

The command syntax is as follows:

```
<ACTIVATE_WEIGHT>  
<END_ACTIVATE_WEIGHT>
```

If the command is correctly processed, the scale will give the following response:

```
<ACTIVATE_WEIGHT>  
<RO = 0, "OK">  
<END_ACTIVATE_WEIGHT>
```

triggering the classic piece weighing operation.

2.14.13.3 Notes

The constraint for which the manual weighing request did not work if the scale was configured for automatic weighing was removed from version 6.5.1. Consequently, this command works in both configurations.

If the command is sent to unloaded scale (or with a weight below the minimum allowed), the response will still be sent to the ACTIVATE_WEIGHT command but, as happens by pressing the backspace key, the weighing operation will not be triggered and thus nothing will be returned via the network.

2.14.14 SELECTION OF DAY OF THE WEEK FOR EXPIRY AND CURING

VERSION: 6.5.1

2.14.14.1 Modification description

This modification allows to “round off” the EXPIRY and CURING dates on the first day of the week indicated by the parameter, following the dates calculated by the software via calculation with the days of expiry and curing.

If the week day indicated is exactly the one of the date calculation, these will not be modified. Otherwise, as many days will be added as it will take to take the dates up to the week day indicated.

The use of this function is independent for both dates, which will be subject to control on two different parameters.

E.g.: Assuming to set the expiry days at 100 with respect to the production date, the made calculation could make the date of expiry fall on a TUESDAY. By activating the parameter that allows to choose the day of the week for the expiry and selecting THURSDAY as that day, the date of expiry will be automatically changed by adding two days, i.e. those necessary for this to be on a Thursday.

2.14.14.2 Technical features

The following parameters must be enabled to make this mode operational:

- The following parameters have been added in the “DATE” menu of the PLU

“EXPIRY: SEL.DAY” (Boolean true/false)

“CUR.: SEL.DAY” (Boolean true/false)

By setting the individual parameter to “YES”, a new item called “DAY OF THE WEEK” (list) will be immediately displayed under it in which it will be possible to select the desired week day.

2.14.14.3 Details of the individual fields

2.14.14.3.1. PLU Fields

ST_PLU_BOOL_INCREASE_EXP_DATE_WEEK_DD (true/false) P208

Establishes the possibility of moving the curing date forward to the first day of the week corresponding to that set in field P209

ST_PLU_SHORT_WEEK_DD_FOR_EXPIRY_DATE (list 0-6) P209

Numeric field indicating one of the seven days of the week to which the expiry date should move (see LIST OF WEEK DAYS)

ST_PLU_BOOL_INCREASE_CUR_DATE_WEEK_DD (true/false) P210

Establishes the possibility of moving the curing date forward to the first day of the week corresponding to that set in field P211

ST_PLU_SHORT_WEEK_DD_FOR_CURING_DATE (list 0-6) P211

Numeric field indicating one of the seven days of the week to which the curing date should move (see LIST OF WEEK DAYS)

2.14.14.3.2. PROCESS Fields

ST_PRO_BOOL_INCREASE_EXP_DATE_WEEK_DD (true/false) L389

Establishes the possibility of moving the curing date forward to the first day of the week corresponding to that set in field L390

ST_PRO_SHORT_WEEK_DD_FOR_EXPIRY_DATE (list 0-6) L390

Numeric field indicating one of the seven days of the week to which the expiry date should move (see LIST OF WEEK DAYS)

ST_PRO_BOOL_INCREASE_CUR_DATE_WEEK_DD (true/false) L391

Establishes the possibility of moving the curing date forward to the first day of the week corresponding to that set in field L392

ST_PRO_SHORT_WEEK_DD_FOR_CURING_DATE (list 0-6) L392

Numeric field indicating one of the seven days of the week to which the curing date should move (see LIST OF WEEK DAYS)

2.14.14.4 LIST OF WEEK DAYS

VALUE	MEANING
0	SUNDAY
1	MONDAY
2	TUESDAY
3	WEDNESDAY
4	THURSDAY
5	FRIDAY
6	SATURDAY

2.14.15 INPUT (OR SCALE) PHOTOCCELL STATUS MANAGEMENT

VERSION: 7.2.10

2.14.15.1 Modification description

Checkweigher and Mercury machines with “BELT SAVING” parameter set to “INPUT BELT RUNNING” and active luminous signals:

- A) If the input photocell is not covered for more than 15 seconds, the green lamp starts flashing and the screen message switches from “LINE RUNNING” to “LINE IN STANDBY”. This signal is used to indicate that the machine does not see pieces passing on the scale and, probably, the input photocell does not work properly.
- B) If the input photocell remains covered for more than 5 seconds, the red lamp starts flashing and a photocell obstructed error appears on the screen. This signal is used to indicate that the input photocell could be obstructed by a piece or not work properly.

Venus/Galaxi and Mercury machines with “BELT SAVING” parameter set to “ECONOMY PHOTOCCELL”:

The logic of the signals remains as previously described. However, the counting of the seconds begins from the covering of the “ECONOMY PHOTOCCELL” otherwise the belts would be stopped pending detection of a piece and this type of signal would not make sense.

SINGLE BELT Venus/Galaxi machines:

The logic of the signals remains as previously described, but the controlled photocell is the “SCALE PHOTOCCELL”. This is because the “INPUT PHOTOCCELL” may not be present or always be covered.

2.14.16 MOTORISED COLUMNS

VERSION: 6.6.2



WARNING

The protection of the motorised column could trip and stop, if used continuously. It resets automatically after a few minutes.

2.14.16.1 Modification description

The motorised management of the printing column allows to manually position the head 1 applicator printing unit in different position, so as to be able to adapt to the type of product that must be labelled.

Positioning takes place by pressing the “**COLUMN**” key in the Soft Keys Dialog.

The following dialog will be shown:

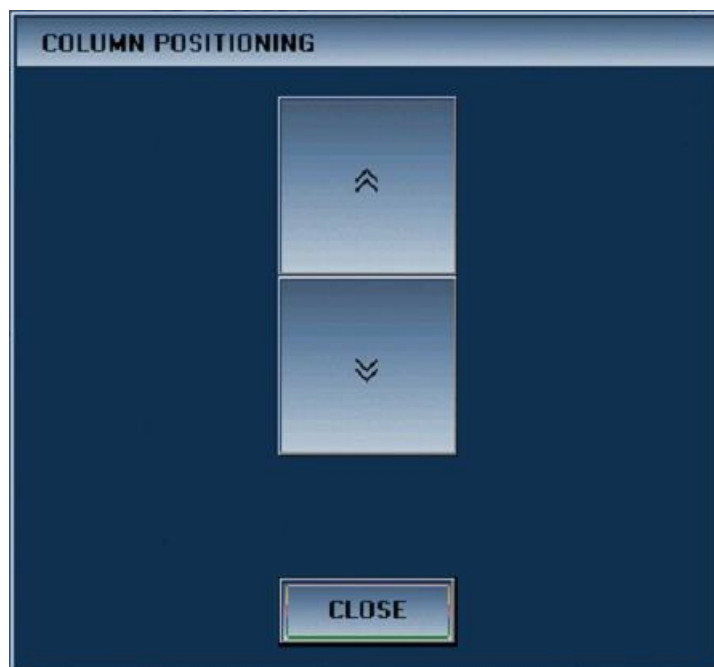


Figure 2-71

Using the “**UP**” and “**DOWN**” keys the operator will be able to vertically move the printing unit. Press “**CLOSE**” to close the dialog box.

The motorised management of the printing columns allows the head 1 and head 2 applicator printing units to be automatically placed in different positions, depending on the values set within the PLU. In this way, it will be possible to obtain different application points of the labels for each PLU.

For each individual printhead it will be possible to indicate both a **HORIZONTAL** positioning value (movement of the printing unit perpendicular to the belts, currently reserved for Mercury Plus terminals only) and a **VERTICAL** positioning value (upward or downward movement of the printing unit).

2.14.16.2 Automatic vertical column positioning (only Mercury Plus)

With this function it is possible to set an application position (vertical) for each PLU at which the machine, equipped with specific mechanics, automatically positions itself to enter processing.

2.14.16.2.1. Description of function

When the machine is switched on (and/or restarted) it is automatically reset, consisting in moving the column to the lowest point possible and then moving it back 0.5 cm. This operation effectively absorbs uncertainties concerning positions close to zero without incurring in full-scale errors. However, this means that useful travel of the column is reduced upwards by 0.5 cm.

Whenever the required position is less than 2.5 cm from the completely lowered position of the column, the movement is preceded by a resetting. This procedure helps to guarantee that the accumulation of movement errors causes the low full-scale of the column to be reached and therefore to trigger an error.

During movements, an error is triggered if, when positioning is requested, the column does not move for one second. A reset procedure is carried out once again after each column movement error, as ensuing the pressing of the emergency button while the column is moving.

During vertical movements of the column, a message is displayed similar to that which occurs for horizontal movements. Horizontal and vertical movements are implemented simultaneously. For double head machines, the vertical movements of the two columns cannot be simultaneous for reasons linked to the hardware available on the line. For this reason, first the column of the first head will be positioned vertically and then the column of the second head will be positioned, possibly simultaneously with the horizontal movement.

2.14.16.2.2. Precision

Movement precision is about +/- 1 cm respect to the indicated measurement. The movement error is however subject to accumulation. For this reason, the parameter "SPOST. AUTOZERO VERT." which indicates the number of moves made that an autozero is forced before the next move.

2.14.16.2.3. Parameters

In order to activate column management, it is necessary to set the following parameters present in the "MOTORISED COLUMN" menu, in the machine configuration page:

PARAMETER	DESCRIPTION
HORIZONTAL AXIS COM	Allows to select the serial port to which to connect the column for the HORIZONTAL movement of head 1.
COL.1 MAX TRAVEL	Only visible when "HORIZONTAL AXIS COM" is different from "NOT CONNECTED". Indicates the maximum horizontal movement (in millimetres) that printing unit 1 can manage. This value is strictly linked to the physical positioning of the sensors and to the mechanical features of the column. This value will affect the maximum limit of the PLU/PROCESS parameters in which the horizontal positioning value of the column will be specified.
HORIZ.AXIS COM 2	Allows to select the serial port to which to connect the column for the HORIZONTAL movement of head 2
COL.2 MAX TRAVEL	Only visible when "COM ORIZZ. 2' is different from 'NOT CONNECTED'. Indicates the maximum horizontal movement (in millimetres) that printing unit 2 can manage. This value is strictly linked to the physical positioning of the sensors and to the mechanical features of the column. This value will affect the maximum limit of the PLU/PROCESS parameters in which the horizontal positioning value of the column will be specified.

PARAMETER	DESCRIPTION
BELT MOV. DIRECTION	Indicates the direction of the belts during the process, observing the line from its front side. It is used to correctly manage the horizontal movement of the horizontal columns since, depending on the direction of the belts, the horizontal movements will be reversed or not.
AUTOM. VERT. POSIT.	By setting this parameter to YES, the vertical positioning values of printhead 1 will be managed in PLU / PROCESS.
COLUMN TRAVEL	Visible only when "AUTOM. VERT. POSIT." is set to YES. It is the maximum vertical travel value (in millimetres) that printhead 1 can reach. This value will affect the maximum limit in the PLU / PROCESS parameter in which the vertical positioning value of the column will be specified.
AUTOM. VERT. POSIT. 2	By setting this parameter to YES, the vertical positioning values of printhead 2 will be managed in PLU / PROCESS.
COLUMN 2 TRAVEL	Visible only when "AUTOM. VERT. POSIT. 2" is set to YES. It is the maximum vertical travel value (in millimetres) that printhead 2 can reach. This value will affect the maximum limit in the PLU / PROCESS parameter in which the vertical positioning value of the column will be specified.

Below is the list of parameters added in the PLU / PROCESS for managing the motorised columns:

PARAMETER	DESCRIPTION
POS. LAB. HORIZONTAL	<p>Only visible when "HORIZONTAL AXIS COM" is different from "NOT CONNECTED".</p> <p>Indicates the horizontal travel (in millimetres) that printhead 1 will reach when starting the process. If the horizontal column is already positioned, this will not move.</p> <p>PLU field = P178 (value from 0 to COL.1 MAX TRAVEL) PROC field = L354 (value from 0 to COL.1 MAX TRAVEL)</p>
POS. LAB. VERTICAL	<p>Visible only when "AUTOM. VERT. POSIT." is set to YES.</p> <p>Indicates the horizontal travel (in millimetres) that printhead 1 will reach when starting the process. Whenever the process is started or this value is modified, the vertical column will reset in order to obtain a precise final positioning.</p> <p>PLU field = P179 (value from 0 to COLUMN TRAVEL) PROC field = L356 (value from 0 to COLUMN TRAVEL)</p>
POS. LAB. HORIZONTAL 2	<p>Only visible when "COM ORIZZ. 2" is different from 'NOT CONNECTED'.</p> <p>Indicates the horizontal travel (in millimetres) that printhead 2 will reach when starting the process. If the horizontal column is already positioned, this will not move.</p> <p>PLU field = P213 (value from 0 to COL.2 MAX TRAVEL) PROC field = L394 (value from 0 to COL.2 MAX TRAVEL)</p>

PARAMETER	DESCRIPTION
POS. LAB. VERTICAL 2	<p>Visible only when “AUTOM. VERT. POSIT. 2” is set to YES.</p> <p>Indicates the horizontal travel (in millimetres) that printhead 2 will reach when starting the process. Whenever the process is started or this value is modified, the vertical column will reset in order to obtain a precise final positioning.</p> <p>PLU field = P180; (value from 0 to COLUMN 2 TRAVEL)</p> <p>PROC field = L357; (value from 0 to COLUMN 2 TRAVEL)</p>

2.14.16.3 Automatic horizontal column positioning (only Mercury Plus)

This function allows to set a cross labelling position for each PLU respect to the direction the product is moving. This makes it possible to set a position for each PLU (similar to that foreseen for the labelling position). An automatic system will position the print/application group correctly every time the PLU is changed.

2.14.16.3.1 Machine start-up

The motorised column resets the printhead at point zero when the machine starts up. The machine cannot start processing until this operation is over.

2.14.16.3.2 Changing PLU

Every time the PLU is changed, the machine, based on the value set inside the PLU itself, moves the printhead. The machine cannot start processing a new PLU until this operation is over.

2.14.16.3.3 Machine Emergency

If the EMERGENCY button is pressed on board the machine, at the ensuing restoration the motorised column resets the printhead at point zero. The machine cannot start processing until this operation is over.

2.14.16.3.4 Point Zero

At any time it is possible to reset the printhead to “**point zero**” by pressing the EMERGENCY button on the machine followed by the RESTORE button.

2.14.16.4 Notices and signals

2.14.16.4.1 Positioning

During positioning, whether you are starting the process via the main window or modifying a positioning value via a MACRO, a red message “**!!! MOVEMENT COLUMN!!!**” will appear in the top-left corner of the screen, indicating that the columns are moving.

After the positioning, the process will start normally.

NOTE: this notice does not appear during resetting.

2.14.16.4.2 Starting the process

By activating the “PERIPHERAL CHECK” function, it will not be possible to start the process as long as the columns are moving.

Depending on the movement of the columns, the following error message will appear:

“VERTICAL COLUMNS ERROR”, “VERTICAL COL.MOVING. WAIT...”

or

“HORIZONTAL COLUMNS ERROR”, “HORIZONTAL COL.MOVING. WAIT...”

2.14.16.4.3. Positioning failed

In case of positioning errors due to mechanical obstructions or incorrect target settings, a window showing the **error code 2039** will be displayed.

This error indicates that the positioning of the columns (horizontal or vertical) was not successful and, after confirming the error, it is necessary to press the emergency and reset keys to reset the columns.

Following this error, remove any obstructions to the correct movement of the columns and check the values set in PLU / PROCESS, to ensure that they are not out of range.

2.14.17 MANUAL CSV EXPORT

VERSION: 7.3.10

2.14.17.1 Modification description

Implemented the possibility of manually exporting files via FTP in the terminal, in particular files with the extension .PRD, .TT1, .TT2 and .LOT.

This is possible whether the CTRL function is activated or not.

The minimum conditions for using this operation are:

1. “SAVE report on FTP” option active.
2. Weighing registration" service activated

If these conditions are met, the "TRANSFER CSV" button from the "ARCHIVES" page will be displayed, allowing the files to be sent via FTP to the IP set in "IP DOWNLOAD DATA". For Venus, Mercury and Selecta with advanced GUI the button corresponds to F11; for Selecta basic GUI the button corresponds to F3.

If, in addition to the above minimum conditions, the CTRL function is activated, a further CSV transfer option is added: in the LOT ARCHIVE window, during a single or multiple print out, it is automatically proposed to send the files to the IP set in "IP DOWNLOAD DATA".

2.14.18 CARDBOARD LABELLING ON PRODUCT PRINTER

VERSION: 7.3.16

2.14.18.1 Modification description

Activating this function will add a new target to the system and will be used to define the application point of total 1.

2.14.18.2 Technical features

2.14.18.2.1. Conditions of use

This functionality has only been implemented for VENUS machines with a single applicator MANINA head.

2.14.18.2.2. Parameters

Set the following parameters in the configuration menu:

- PRESEL. AND PROGRESS. -> MANAG. STOP ON TOT.1 = 'TIME RESTART'.
- PRESEL. AND PROGRESS. -> REPEAT TIME TOT1 (s) = "0".
- Set the total printer 1 to the same COM as the product printer under the PRINTERS group.
- Now, again under the PRINTERS group, you can see two parameters called "ENABLE LAB. PRINT. TOT1 1" and "ENABLE LAB.APPL.TOT1" set to YES both.
- You can now configure the total application target 1 from the route: MECHANICAL PARAMETERS -> CARDBOARD APPLICATION TARGET.

In the PLU there is the relative total label application DELTA 1 in case you need to customise the application target.

2.14.18.2.3. Considerations

Double application on the same workpiece requires a low speed and a high print speed; if the system cannot cope with these speeds, you may see a label left in the queue.

This can be remedied:

1. Lowering the cadence
2. Speeding up label printing
3. Move total label application target forward 1
4. Move the product application target backwards

2.14.19 EXTERNAL INPUT REJECT MANAGEMENT

VERSION: 7.3.24

2.14.19.1 Modification description

The management of an external input (e.g. connected to a metal detector) allows to associate the piece information to a flag also that specifies if this piece must be rejected or not.

2.14.19.2 Technical features

2.14.19.2.1. Conditions of use

This function is available on all weighing-pricing and checkweigher machine models, except the manual Venus.

2.14.19.2.2. Parameters

In order to use this function, activate the "REJECT ON EXTERNAL INPUT" option in the installation menu:

"Home \ Archives \ Settings \ Terminal Settings \ Option Install."

Once the option is activated, you can set in the menu:

"Home \ Archives \ Settings \ Terminal Settings \ I/O Config."

the parameter "EXTERNAL REJECT INPUT" under the menu "[+] REJECTS AND SELECTIONS".

By setting a valid input value in the menu:

"Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] REJECTS AND SELECTIONS"

the "EXTERNAL REJECT EVENT" parameter will appear, establishing the moment of evaluation of the reject input, setting the piece as a reject or not.

2.14.20 METAL INPUT REJECT MANAGEMENT

VERSION: 7.3.24

2.14.20.1 Modification description

The management of an external input connected to a metal detector allows to associate the piece information to a flag also that specifies if this piece must be rejected or not.

2.14.20.2 Technical features

2.14.20.2.1. Conditions of use

This function is available on all weighing-ricing and checkweigher machine models, except the manual Venus.

2.14.20.2.2. Parameters

In order to use this function:

- activate the "REJECT ON EXTERNAL INPUT" option in the OPTIONS installation menu;
- in the "METAL DETECTOR" menu in machine configuration, set:
 - Metal Detector model under "METAL TYPE"
 - set a Set the parameter "RECEIVER. METAL REJECTS = YES" to be able to manage metal rejects;
 - MTL SGNL FILTER (ms): default 300ms. Filters any metal reject signal bounces, from first reading for that time any other readings are ignored;
 - - In case of MESUTRONIC, set Metal Port and IP;
 - - Once configured a METAL REJECT INPUT from CONFIG/IO (See below), the following is visible:

METAL REJECT EVENT	<p>Indicates the moment the signal status is queried to associate the reject information to the piece.</p> <ul style="list-style-type: none"> - INPUT PTC: means that the metal input status is checked when the piece passes in front of the input photocell. - WEIGHING TARGET: means that the metal input status is checked when the piece passes through the weighing target. - EJE.OUT OF MACHINE: it is used in case of STAND-ALONE Metal for which the piece ejection is managed directly by the metal.
---------------------------	--

2.14.20.2.3. Config/IO

Physically define the input dedicated to the Metal reject in CONFIG/IO -> METAL DETECTOR:

PARAMETER	DESCRIPTION
METAL REJECT INPUT	Indicates the number of the input to which the input signal from the metal detector is connected (default 20)
METAL ERROR INPUT	Input listening to the Metal status (default 19).
METAL INPUT SIGNAL	<ul style="list-style-type: none"> - LOW INPUT (N.C.): indicates that the input signal is Normally Closed and that the contact must be opened to activate the input. - HIGH INPUT (N.O.): indicates that the input signal is Normally Open and that the contact must be closed to activate the input.

If the reject management is associated with the EJECTOR, two parameters have been added for ejectors 1 and 2 to allow directing the metal input reject to the individual ejectors.

PARAMETER	DESCRIPTION
EJEC.1: REJECT METAL	If set to "YES" it indicates that the external input reject of the metal detector is managed by ejector 1.
EJEC.2: REJECT METAL	If set to "YES" it indicates that the external input reject of the metal detector is managed by ejector 2.

2.14.20.3 NOTES

It is necessary to synchronise the metal detector output signal so that its value is valid when the input is read by the scale (see description "METAL REJECT EVENT").

It is not possible, as for the other reject reasons, to associate the metal reject to more than one ejector at a time.

2.14.21 REJECT MANAGEMENT IN THE PLU

VERSION: 7.2.2

2.14.21.1 Modification description

Managing the reject within the PLU entails for the possibility of differentiating the type of PLU reject by PLU, so that the machine behaviour can be varied in view of the different type of product reject. For example, if light and heavy products are weighed on a line during the same production, it would be possible to eject the rejects of light pieces with the air jet and stop the line in case of heavy pieces reject.

2.14.21.2 Technical features

2.14.21.2.1. Conditions of use

The types of machines affected by this type of function are:

- Automatic Venus / Automatic Galaxi
- Mercury

Manual Venus and the Selecta checkweighers are excluded.

2.14.21.2.2. Parameters

The following parameters have been added to the PLU "HANDLING" menu or "DATA MODIFICATION" menu during the process:

PARAMETER	DESCRIPTION
REJECT MANAGEMENT	This parameter can have 3 values: - DEFAULT : the PLU rejects are managed as indicated in the configuration, under "REJECT MANAGEMENT" in the "REJECTS AND SELECTIONS" menu; - WITHOUT LABELLING : the rejected pieces continue without being labelled and without stopping the line; - STOP : the rejected pieces stop on the labelling belt and a dialog box appears on the screen that must be confirmed by the operator for the line to restart

Below is the list of parameters added in the PLU / PROCESS for managing the motorised columns:

PARAMETER	DESCRIPTION
REJECT MANAGEMENT	Visible only in case of automatic Venus, automatic Galaxi and Mercury machines. With its value, it indicates the type of reject to be adopted for that PLU. 0 = DEFAULT; 1 = WITHOUT LABELLING; 2 = STOPPING PLU Field = P220; (value from 0 to 2) PROC Field = L401; (value from 0 to 2)

2.14.21.3 Operation

From version 7.2.2, the piece reject management is set following the weighing of the piece itself, in case this is to be rejected. The software checks the field value of the "REJECT MANAGEMENT" process field and initialises the correct protocol to manage the indicated reject (this protocol is associated with each individual piece).

With this mode it will be possible to have up to 3 types of rejects manageable on the lines.

2.14.21.4 Notes

Following this change, it is possible to manage up to three types of different rejects without having to change anything at line configuration level:

- EJECTION
- WITHOUT LABELLING
- STOPPING

To manage the ejector, it is necessary to set this mode as configuration mode, then setting the "REJECT MANAGEMENT" parameter in the PLUs with the "DEFAULT" value.

It is not possible to currently manage two types of rejects with different ejectors on the same line (e.g. EJECTOR and PISTON).

2.14.22 STATISTICAL AND GRAPHICAL INDICATORS

VERSION: 7.2.2

2.14.22.1 Modification Description

From this software versions, and subsequent, it will be possible to view statistical indicators and related graphical representations to follow their progress over time; in particular, the graphs of: Mean, Average Error and Standard Deviation. The Cp and Cpk statistical indicators, and indicatively, an overweight percentage with relative cost, are also calculated on each lot piece.

2.14.22.2 Requirements

This function is available only on Selecta weighing terminals (CHECKWEIGHER) after activating the paid option.

2.14.22.3 Parameters

The following parameters have been included within the “[+] STATISTICAL” menu in the PLU and in the process DATA MODIFICATION:

PARAMETER	DESCRIPTION
MOBILE AVERAGE PIECES	Indicates the number of pieces (among the valid ones) to calculate the average and standard deviation represented in the graph, which by convention we will call P ; range: 1 – 1000;
PRICE PER STATIST.	Indicate the price of an individual piece (optional field), range: 0 – 100000;
PRICES PER PAGE	Indicate how many pieces to show on each page, it will be indicated with N in the explanations below; range: 50 – 5000;
Y AXIS: STD DEV.%	Indicate the full scale of the ordinate axis in the standard deviation graph, indicated as FDS ; range: 0.1 – 10;
SPEC.UPP.LIM.USL(g)	upper control limit: USL ; range: 0 – 12000;
SPEC.LOW.LIM.LSL(g)	lower control limit: LSL ; range: 0 – 12000;

2.14.22.4 Pages and Operating specifications

Graph operation and use and commands available:

the pages are redrawn when the line reaches 100% of the representable values **N** moving the values back to 50% of the x axis; i.e. assuming to have a value **N** = 100, when piece 100 which will be drawn at the end of the x axis is reached, pieces from the 50th to the 100th will be redrawn in the first half of the x axis, the new X full scale will be set at the 150th piece.

Initially the graphs are drawn in grey until the number of pieces indicated in field **P** is reached, then the line turns yellow and is considered stable; the average is always calculated with the last **P** values.

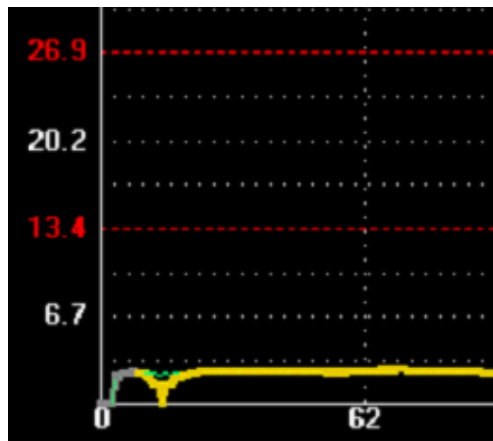


Figure 2-72

The pages of the graphs can be scrolled forward and backward using the right and left ARROW KEYS that appear automatically when the pages become more than one, thus allowing to scroll the history of the pieces produced.

You can zoom in/out a portion of the graph through the specific ZOOM key with which to alternately switch from viewing **N** pieces per page to the graph from piece 1 to the last weighed piece.

There are three pages with a graph and only one with text with the summary statistics summarised below. The statistics are reset parallel to the production lot management.

2.14.22.4.1. Average graph page



Figure 2-73

The dynamic average of the last detected weights **P** is shown in grey-yellow;

The weights of the individual pieces accepted are shown in blue;

The absolute M and P limits of the Control calculation are drawn in red;

Above the graph you can read:

- last value read in grams (blue);
- the instantaneous average value in grams (yellow);
- total number of accepted pieces (blue);

2.14.22.4.2. Average error graph page



Figure 2-74

The average dynamic error of the last detected weights **P** is shown in grey-yellow;

The relative Control M and P limits Control are shown in red, centred on the nominal weight reference set, e.g. with a fixed weight of 70g, the P and M limits will be equal at $\pm 4.5g$.

Above the graph you can read:

- instantaneous average error (yellow)
- total number of accepted pieces (blue);

2.14.22.4.3. Standard deviation graph page



Figure 2-75

The dynamic standard deviation of the last detected and accepted weights **P** is shown in grey-yellow; Limit standard dev.references are shown in red at 40% and 80% of the set full scale nominal value: **FDS**. Above the graph you can read:

- dynamic standard deviation (last weights **P**) (yellow);
- standard deviation of the entire lot (green);
- total number of accepted pieces (blue);

Standard deviation calculation reminder:

$$\sigma^{\wedge} = \sqrt{\frac{\sum_{i=1}^N (x_i - \mu)^2}{N - 1}}$$

2.14.22.4.4. Summary page of the statistical data



Figure 2-76

Process data are displayed relating to the entire lot:

Pieces: number of all weighed and valid values;

Average: average in g of all weighed and valid values;

Standard Deviation: σ of all weighed and valid values;

Cp: indicates the Potential Capacity of the process calculated as:

$$Cp = \frac{USL - LSL}{6 * \sigma}$$

Cpk: indicates the Effective Capacity of the process obtained by taking the minimum value between Cpu and Cpl

$$Cpu = \frac{USL - \mu}{3 * \sigma}$$

$$Cpl = \frac{\mu - LSL}{3 * \sigma}$$

where μ is the average of all weighed and valid values and σ is the standard dev.of all weighed and valid values.

OverWeight Cost: estimate of how much the total price of the lot differs from the ideal value;

OverWeight Percent: estimate in percentage of how much the total weight of the lot differs from the ideal weight;

The following process settings are also shown as a reminder:

USL Limit: see the SPEC.UPP.LIM.USL(g) parameter;

LSL Limit: see the SPEC.LOW.LIM.LSL(g) parameter;

Unit price: see the PRICE PER STATIST. parameter

2.14.23 EVENT SCANNER FOR DATA INPUT ON SCREEN DIALOG

VERSION: 7.2.8

2.14.23.1 Modification Description

This modification allows to use a scanner connected to the scale in order to show a data string, read by a barcode, inside an active dialog on the screen while waiting for data entry. The barcode reading will also trigger the closure of the dialog box, simulating its confirmation via the “OK” key.

E.g. In view of the call-up, via the macro key, of a dialog box for entering the LOT code, it will be possible to read a barcode whose entire content will be reported in the data entry area, with the scanner. The dialog box will close, confirming the read data entry.

2.14.23.2 Technical features

This function relies on the management of a scanner already present on the machine: the “Event Scanner” management. This function allows to connect a scanner to the scale and transmit the read string to any host programs listening and enabled to receive the events.

The following parameters must be enabled to make this mode operational:

- In the “[+] PROCESS” menu of the Machine Configuration page, set the parameter:
“EVENT SCANNER COM”
selecting the port to which to connect the scanner.
- In the “[+] WEIGHING AND EVENTS” menu of the Network Configuration page, you can activate the parameter
“BLOCK TX EVENT_SCAN”
to avoid also transmitting via network any reading made with the event scanner, in the form of a protocol message.

2.14.23.3 Feature details

This function allows to show the entire content of a barcode within the data entry area of a dialog box.

It will not be possible to show part of the barcode content, nor configure the structure of the barcode being read.

The function is active on three types of dialog box:

- **STRING DIALOG:** dialogs that allow the entry of ALPHANUMERIC fields. If the data read by the barcode is longer than the maximum number of characters that can be entered in the dialog, the string will be broken down, losing all data in the queue.

- **INTEGER DIALOG:** dialogs that allow the entry of NUMERIC fields. If the data is lower or greater than the limits allowed in the entry, a warning dialog box will be displayed which, once confirmed, will allow the operator to make a new entry.

If the data is a number with decimals, this will be rounded-off to an integer.

If the data contains letters or characters, this will be converted to a “0” (zero) and the dialog box will be confirmed.

- **REAL DIALOG:** dialogs that allow the entry of NUMERICAL fields WITH DECIMALS.

If the data is lower or greater than the limits allowed in the entry, a warning dialog box will be displayed which, once confirmed, will allow the operator to make a new entry.

If the data is a number with decimals, a check will be carried out on the number of decimals passed. If these are greater than the maximum number of decimals allowed, a warning dialog box will be displayed which, once confirmed, will allow the operator to make a new entry.

If the data contains letters or characters, this will be converted to a "0" (zero) and the dialog box will be confirmed.

2.14.24 CALIBRATION FOR DETELECTRONIC COMBI METAL

VERSION: 7.2.10

2.14.24.1 Modification Description

For Combi Checkweigher machines with Detelectron Metal Detector it is possible to calibrate the equipment for each PLU that requires it.

Remember that the PLU must have the "METAL ENABLING" parameter enabled to perform this operation.

The following steps must be followed to perform a configuration, starting from the home screen with access level greater than or equal to 2:

Press ARCHIVES -> Press PLU -> Select the PLU with which to calibrate the Metal -> Press METAL CALIB.

NB: If METAL CALIB is not visible, it means that the terminal has not been configured properly, read the section "Configuration Parameters" in this document.

NB: If pressing METAL CALIB generates an error, it means that the PLU does not have the "METAL ENABLING" parameter enabled.

If everything is properly configured, the window appears where to enter the metal recipe ID.

Now it is possible to:

- A) Choose a "Recipe ID" to be associated with the PLU between 1 and 15 using the numeric keypad.
- B) Start/Stop the belts using the START/STOP key.
 - By starting the belts at the speed associated with the PLU, it is possible to pass the pieces on the Metal belt and start the calibration procedure directly from the metal detectors interface.
 - The PLU will retrieve the "Recipe ID" during the process so that the metal can retrieve the calibration data related to this ID.
- C) Pressing "CANCEL" stops the belts and no "Recipe ID" is saved.
- D) Pressing "END" stops the belts and the "Recipe ID" is saved within the selected PLU. If an ID is chosen that is not between 0 and 15, the window is reopened.
-

NB: Please note that the calibration procedure must be carried out by the metal detector. The Checkweigher terminal associates a "Recipe ID" to the PLU and moves the belts.

2.14.24.2 CONFIGURATION PARAMETERS

The machine must be correctly configured in order to use this calibration procedure.

In particular, under "METAL DETECTOR" in "Machine Setting", set:

- A) METAL TYPE -> DETELECTRONIC
- B) COMBI -> YES

Under "METAL DETECTOR" in the PLU modification window, set:

- A) METAL ENABLING -> YES

2.14.25 REJECT DISPLAY

VERSION: 7.2.10

2.14.25.1 Modification Description

For machines with Control operation or for Checkweigher machines, a window can be retrieved to view the process rejects in detail.

To access this window for terminals with keyboard, simply enter the process and press the “CTRL” + “D” keys together.

If the key combination has no effect, the causes could be:

- A) The “CONTROL FUNCTION” option was not activated in “MACHINE OPTIONS”
- B) The “CTRL ENABLING” function was not enabled in the PLU.
- C) Check that the PLU process type is “FIXED WEIGHT” and that the fixed weight is greater than zero.

On the other hand, for Checkweigher terminals, it is necessary to:

- 1) Activate the “ADVANCED GUI” by pressing the bottom-right corner key.
- 2) Enter the process
- 3) Access the SoftKey list by pressing the bottom-right corner key.
- 4) Press “REJECTS DETAILS”.

The result is the display of the following window.



Figure 2-77

This window shows in detail the rejects recorded so far for the current process and the relative code.

The rejects display is composed of:

[Reject Code] Reject description No. of rejects

The window automatically updates in case of a new reject.

At the end of the process or control lot, these values are reset.

Furthermore, for Checkweigher machines, the weight page was graphically updated by adding the numerical code of the type of reject next to each weight (in square brackets).

Now the composition includes:

- * weight
- * weight positioning area (in round brackets)
- * reject code (in square brackets)

2.14.25.2 reject codes and relative meanings

VALUE	MEANING
0	PIECE ACCEPTED
1	REJECT FOR EMPTY LOT
2	REJECT FOR INVALID STORE
3	REJECT FOR WEIGHT OUT OF RANGE
4	CTRL REJECT
5	REJECT FOR M.I.D. SPEED
6	REJECT FOR MINIMUM WEIGHING
7	REJECT FOR REJECT MODE
8	REJECT FOR INVALID TRACEABILITY
9	REJECT FOR INVALID CLIENTS ARCHIVE
10	REJECT FOR EXTERNAL INPUT
11	REJECT FOR INCORRECT LOT
12	REJECT FOR UNSTABLE WEIGHT
13	REJECT FOR WEIGHT OUT OF RANGE
14	REJECT FOR PIECE TOO LONG
15	REJECT FOR INSUFFICIENT PIECE INFORMATION
16	...
17	REJECT FOR MINIMUM WEIGHT
18	REJECT FOR METAL WEIGHT
19	REJECT FOR WEIGHTBOUNDING DESTINATION PLU ERROR
20	REJECT FOR CONTROLLER SCANNER
21	REJECT FOR PIECES TOO CLOSE
22	REJECT FOR WEIGHT ABOVE RANGE
23	REJECT FOR WEIGHT BELOW RANGE

2.14.26 PRINT AREA (Y AXIS) WITH DATAMAX LABEL TURNED BY 180°

VERSION: 7.2.12

2.14.26.1 Modification Description

The labels created for the Datamax printers can use the “180° ROTATION” parameter which allows to completely rotate the label and avoid the rotation of each individual parameter. This parameter rotates the label by 180° and the printer automatically uses the print area element that occupies the major Y coordinate as support on the coordinate $Y = 0$ once the label has been turned. Using this parameter ensures that the label is no longer affected by a possible Y OFFSET value set in label configuration.

In order to distance the entire printing area of a rotated label from the coordinate $Y = 0$, the printer must be informed that the label printing area includes an additional space that is to be considered in case of rotation.

To set the overall space along the Y axis, occupied by the print data, act on the new parameter “PRINT AREA (Y AXIS)”.

2.14.26.2 Technical features

The “PRINT AREA (Y AXIS)” parameter indicates the actual printing area developed on the Y axis that must be considered in case of rotation of the whole label. It is a value expressed in millimetres

2.14.26.2.1. Conditions of use

The new parameter “PRINT AREA (Y AXIS)” can only be used on Datamax printers. In order to set the value of this field, the following must be set in the label settings:

- ITALORA EMULATION = NO;

180° ROTATION = YES

Otherwise, the parameter will not be visible.

Once displayed, the new parameter “PRINT AREA (Y AXIS)” will replace the “Y OFFSET” field, not used if the label is rotated.

2.14.26.2.2. Parameters

PARAMETER	DESCRIPTION
PRINT AREA (Y AXIS)	Min value: 0.00 Max value: 999.99 This parameter allows to establish the actual print height, expressed in millimetres, which must be considered in case of 180° rotation of the label.

2.14.26.3 OPERATION

Below is an example of how the "PRINT AREA (Y AXIS)" parameter acts. Therefore, all values refer only to the example in question.

Fig. 1

This figure shows printing of a label containing 3 fields.

In red is the real print area developed on the Y axis (50 mm).

In blue is the print area on the Y axis which must be considered in case of 180° rotation of the label.

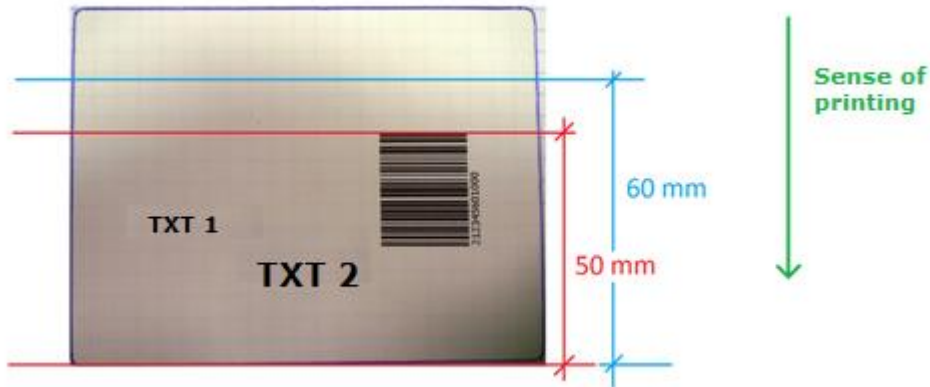


Figure 2-78

Fig. 2

By activating the 180° rotation, the printing effect obtained is the following:

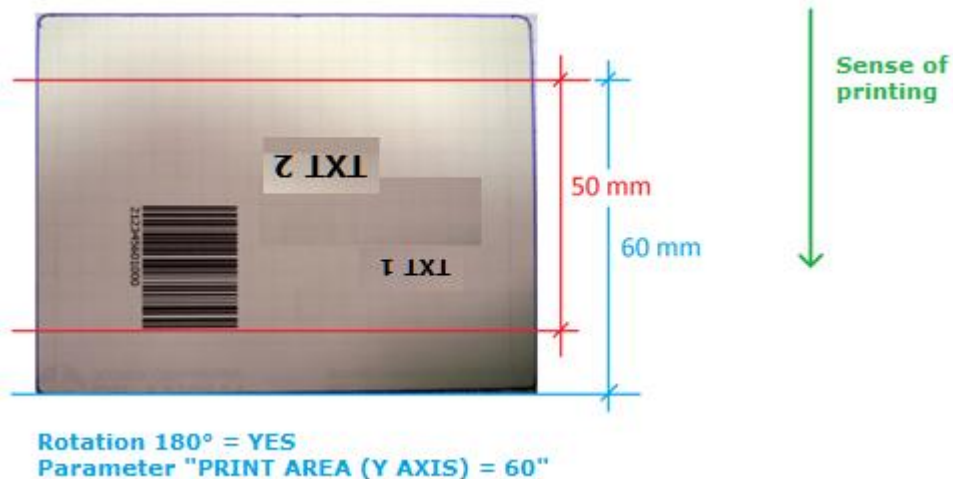


Figure 2-79

This management will allow to completely rotate a label and manage any pre-printed area at the start.

2.14.26.4 Notes

Fig. 3

By setting a "PRINT AREA (Y AXIS)" value below the print area on the Y axis occupied by the label elements, the following result is obtained:

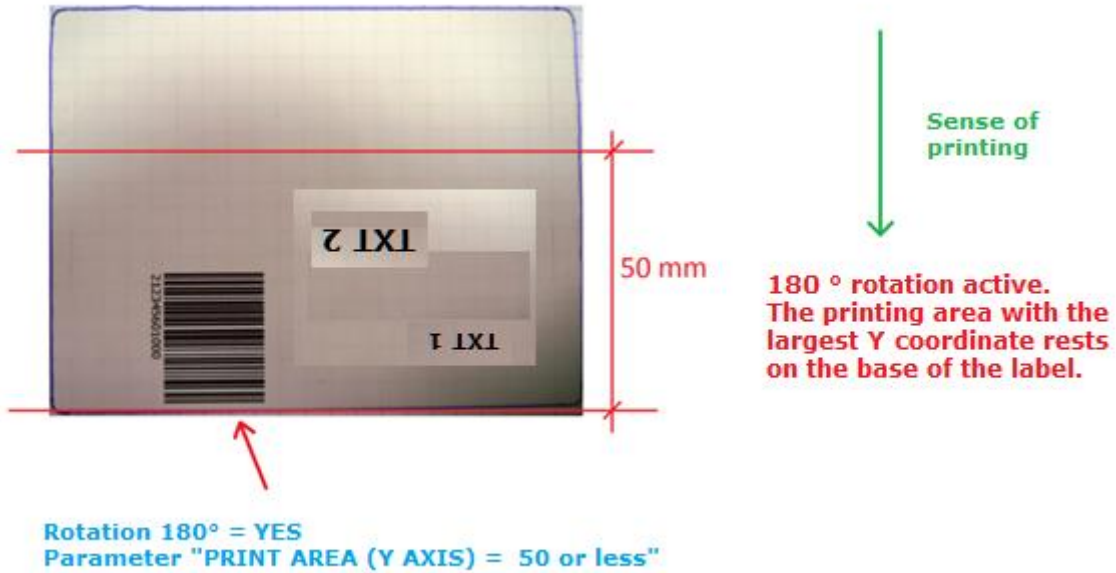


Figure 2-80

The element that occupied the print area on the label with greater Y coordinate is used as reference to rest on the bottom of the rotated label (coordinate Y = 0).

2.14.27 EXTERNAL METAL REJECT COUNT MANAGEMENT (METAL EQUIPPED WITH EJECTOR)

VERSION: 7.2.16

2.14.27.1 Modification Description

In the presence of an automatic line, preceded by a stand-alone metal detector with ejector, it is possible to count the number of “metal” rejects on the machine that have been made by the metal itself, even if the piece has been ejected by the metal and so no longer transits through the automatic machine.

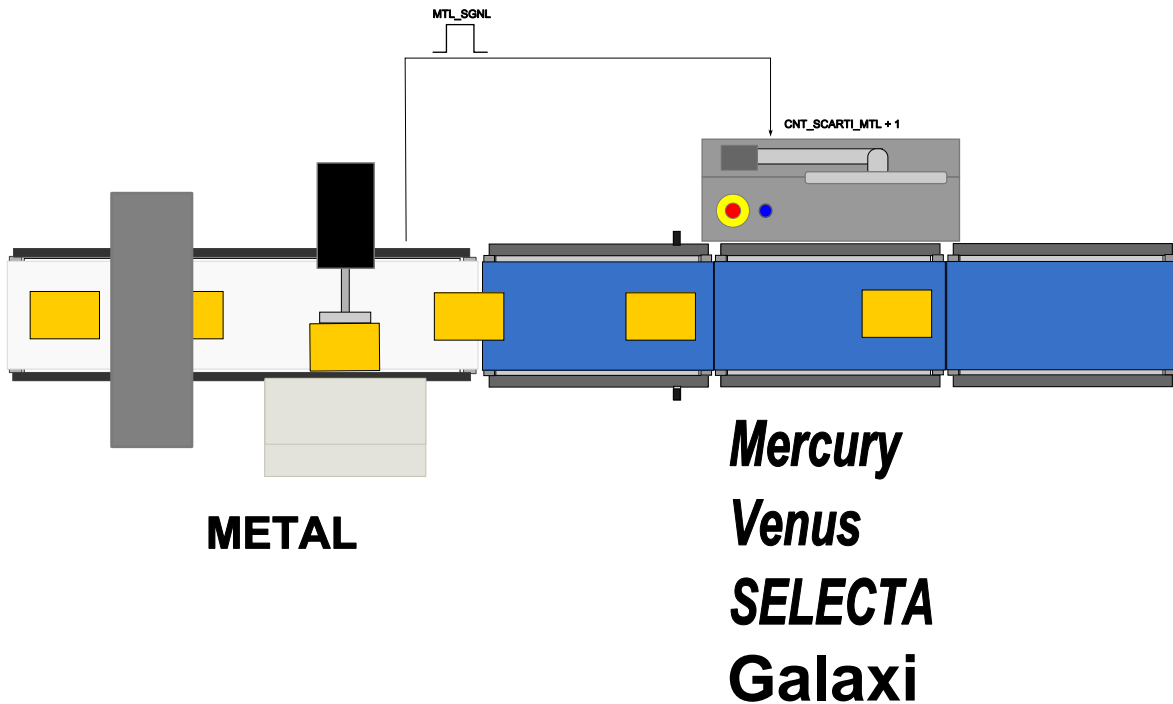


Figure 2-81

2.14.27.2 Technical features

To use this function, it is necessary for:

1. Be active on board the machine: **"REJECT ON EXTERNAL INPUT"**.
2. There is an electrical connection between the metal reject signal and the metal reject input of the automatic machine. The input is correctly configured in the configuration page of the machine inputs.
3. The METAL REJECT EVENT parameter is set to EJE. OUT OF MACHINE.

From version 6.5.7 onwards, the active PLU must manage the interface with the metal detector. Activate the **"METAL ENABLING"** parameter in the **"[+] METAL DETECTOR"** menu of the PLU. Otherwise, the reject will still take place for the metal detector but the metal reject counter will not be increased;

The rejects can be counted with any type of metal connected to the automatic machine, provided that a digital signal is available that provides an indication of each individual reject.

2.14.27.3 Parameters

PARAMETER	DESCRIPTION
MTL SGNL FILTER (ms)	<p>Min value: 1 Max value: 2000</p> <p>This parameter represents a “blinding” value of the metal reject signal reception. In other words, it indicates the time during which, in case of a signal on the metal reject input, the machine acknowledges the reject signal, counting a reject for metal in the machine counter, and for a time (in milliseconds) it does not consider the high input signal, thus avoiding double readings.</p>

Parameter path:

“Home \ Archives \ Settings \ Terminal Settings \ Machine Settings \ [+] METAL DETECTOR \ MTL SGNL FILTER(ms)” (set the value in milliseconds: 1/1000 s).

2.14.28 ASSISTANCE SERVICE SCHEDULED VIA MAIL

VERSION: 7.2.17

2.14.28.1 Modification Description

It is possible to have the CIGIEMME terminal automatically sent a notification email upon reaching a certain number of hours of production.

This service is used to ensure that a scheduled assistance activity is planned.

2.14.28.2 Technical features

In order to use this function, the terminal must be connected to the company network to be able to communicate with the e-mail server.

In order to send the emails, the terminal will use an e-mail account recognised by the server.

Two files will be attached to the e-mail, respectively containing the sequence of assistance signalling events and the terminal configuration.

Both the e-mail subject and the text will indicate the SERIAL NUMBER of the terminal, so that the recipient can easily trace the line features (model, client, firmware version, etc.).

2.14.28.3 Parameters

PARAMETER	DESCRIPTION
SERVICE MAIL	Purchasable option. To activate in the menu: "ARCHIVES (F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ INSTALL. OPTIONS (F12)" Without this option, it will not be possible to use the scheduled assistance service.
SEND MAIL SERVICE	This parameter activates/deactivates the automatic sending of the service mail. Settable in path: "ARCHIVES (F6) \ SETTINGS (F12) \ NETWORK SETTINGS (F2) \ [+] LOGGER VIA MAIL" Visible only if the "SERVICE MAIL" option is active. Permitted values: - YES - NO
SCHED.ASSISTANCE HOURS	This parameter establishes the number of hours spent by the terminal "processing", after which the sending of the e-mail is triggered. Settable in path: "ARCHIVES (F6) \ SETTINGS (F12) \ NETWORK SETTINGS (F2) \ [+] LOGGER VIA MAIL" Visible only if the "SERVICE MAIL" option is active. Permitted values: - From 160 to 30000 (default: 3000)

In order to use the service, it is also necessary to be sure to correctly configure all the parameters relating to the sending of e-mails via the terminal.

These parameters are found at the path:

"Home \ Archives \ Settings \ Network Settings \ [+] LOGGER VIA MAIL"

and are described below:

PARAMETER	DESCRIPTION
IP ADDR. MAIL SERVER	Parameter indicating the IP address of the e-mail server;
SENDER EMAIL ADDRESS	Parameter indicating the e-mail address to be used to send the e-mail (e.g. client@gmail.com)
RECIPIENT EMAIL ADDRESS	Parameter indicating the e-mail address to which to send the service e-mail (e.g. support@support.com)
USER AUTHENTICATION	"User" credential associated with the sender's e-mail address;
PASSWORD AUTHENTICATION	"Password" credential associated with the sender's e-mail address;

2.14.28.4 Operation

Whenever the terminal starts processing, a timer is increased (whose resolution is 1 second).

When the terminal is started, a check is carried out on the timer value and whenever the processing time is greater than or equal to the number of hours set in the "SCHED.ASSISTANCE HOURS" parameter, a notification line is added within the "SER.TXT" file and the notification e-mail is sent.

All notification events for the scheduled assistance service are stored within the "SER.TXT" file, indicating their date and time. In this way it is possible to trace back to the history of all assistance signals sent by that terminal.

The e-mail structure will be composed of:

From: Cigiemme_Terminal
To: Cigiemme_Assistance
Subject: SERVICE_NOTIFICATION - S/N: #123456#
(the line Serial Number is indicated between #)
E-mail text: CGM MACHINE (s/n: 123456) internal logger.

Annexes: "SER.TXT"; "CONFIG.CFG";

2.14.29 AUXILIARY LAMPS AND BUZZERS

VERSION: 7.3.0

2.14.29.1 Modification Description

The auxiliary lamps and the buzzers are luminous and acoustic signals that can be used for signalling events and/or anomalies detected by the weighing lines.

Through the use of the I/Os of the lines, you can connect one or more indicators and customise their behaviour by configuring the parameters in the appropriate line menus.

2.14.29.2 Technical features

Given the need to use the line I/Os, the use of auxiliary lamps and the buzzers is reserved for automatic lines and checkweighers alone.

It is also necessary that the option "GEST. AUXILIARY LAMPS" is active.

At that point you can access the "[+] LAMPS AND BUZZER" menu in the machine configuration. Through this menu you can activate up to 5 auxiliary lamps, a continuous buzzer and an intermittent buzzer.

The activation of each of these signalling systems can be selected from a pre-compiled list of events.

2.14.29.3 Parameters

NOTE: the description of the following parameters considers only the “AUXILIARY LAMP 1”. However, all the parameter descriptions are valid for all other lamps and buzzers.

PARAMETER	DESCRIPTION
AUXILIARY LAMP MGMT	To activate in the menu: “ARCHIVES (F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ INSTALL. OPTIONS (F12)” Without this option, it will not be possible to use the auxiliary lamps and buzzers service. Activating this option will display the menu “[+] LAMPS AND BUZZERS” in the machine configuration menu.
AUX. LAMP	To be set in the menu: “ARCHIVES (F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ MACHINE SETTINGS (F1) \ “[+] LAMPS AND BUZZERS” Allows you to set the event for which the lamp will be activated. The possible selections are shown in table
LAMP 1 OFF	Parameter that allows to select the type of lamp switch-off. The possible selections are shown in table
OFF TIME (sec)	Parameter that allows to set a number of seconds after which the lamp will automatically switch off (visible only with “TIMED” switch-off).
AUX. LAMP OUT	To be set in the menu: “ARCHIVES (F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ CONFIG. I/O (F7) \ “[+] LAMPS AND BUZZER” Parameter visible only if the auxiliary lamp has an activation even other than “NOT ACTIVE”. Allows to select the output to which to connect the auxiliary lamp.
LAMP 1 RESET IN.	To be set in the menu: “ARCHIVES(F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ I/O CONFIG. (F7) \ “[+] LAMPS AND BUZZERS” Parameter visible only if the auxiliary lamp is active and the type of switch-off is set on “FROM EXTERNAL INPUT”. Allows to select the input which, once activated, will switch off the auxiliary lamp.

2.14.29.4 List of lamps and buzzers activation events

EVENT	DESCRIPTION
NON PRESENT	The lamp / buzzer is not active.
NW CONS.REJECTS	The lamp / buzzer activates after a series of consecutive pieces rejected as NON-WEIGHABLE.
CONS.REJECTS. ++	[CTRL ONLY] The lamp / buzzer activates after a series of consecutive pieces totalised in zone 5 of the CTRL (above the ++ limit).
CONS.REJECTS --	[CTRL ONLY] The lamp / buzzer activates after a series of consecutive pieces totalised in zone 1 of the CTRL (below the -- limit).
REJECT METAL	The lamp / buzzer activates in case of a reject indicated by the metal detector.
NEGATIVE AVERAGE ERROR	[CTRL ONLY] The lamp / buzzer activates in case of an average ctrl lot weight below the nominal weight.
LOT END	[CTRL ONLY] The lamp / buzzer activates in case the ctrl lot being processed closes.
NO EJECTION	The lamp / buzzer activates in case of a failed ejection signal (check carried out by the light curtain).
RESETTING OUT OF RANGE	The lamp / buzzer activates in case of a failed ejection signal (check carried out by the light curtain).
FAILED RESET	Not implemented.
ZONES 2/4 CONSECUTIVE PCS	[CTRL ONLY] The lamp / buzzer activates in case of a series of consecutive pieces totalised in zone 2 (between the - and - limits) or in zone 4 (between the + the ++ limits).
ZONES 1/5 CONSECUTIVE PCS	[CTRL ONLY] The lamp / buzzer activates in case of a series of consecutive pieces totalised in zone 1 (below the -- limit) or in zone 5 (above the ++ limit).
ON EJECTOR 1	The lamp / buzzer activates due to the activation of ejector 1.
ON EJECTOR 2	The lamp / buzzer activates due to the activation of ejector 2.

2.14.29.5 List of lamps and buzzers switch-off events

EVENT	DESCRIPTION
PROCESS EXIT	The lamp / buzzer turns off when exiting the process.
CONDITION RESET	<p>The lamp / buzzer turns off in case of a switch-on condition that is no longer valid (e.g. in case of negative average, if this returns to positive the lamp automatically turns off).</p> <p>NOTE: if the line exits the process without the condition being restored, the lamp will still be turned off.</p>
TIMED	<p>The lamp / buzzer turns off after a time set in the configuration of "n" seconds (see "AUX.LAMP OUT" parameter).</p> <p>NOTE: if the line exits the process without the time having completely elapsed, the lamp will still be turned off.</p>
FROM EXTERNAL INPUT	<p>The lamp / buzzer turns off due to the activation of an external input (see "LAMP 1 RESET IN" parameter).</p> <p>NOTE: if the line exits the process without the input being previously activated, the lamp will still be turned off.</p>

2.14.30 CONFIRM ERRORS WITH PASSWORD

VERSION: 7.3.7

2.14.30.1 Modification Description

The presence of the "PWDERROR.CFG" file within the "ARCHIVES\USER\CONFIG" folder allows you to associate a password with each error window (e.g. "Emergency button pressed").

In case of an error during machine operation, it is possible to continue only by entering the password associated with the ID of that error.

All errors can be configured with the same password or diversify case by case.

2.14.30.2 File configuration

The IDs of the errors that are to be password-protected must be inserted in the "ERROR ID" column.

Typing "ALL" refers to all the errors.

The "LEVEL" column is used to compose the password request message so as to diversify the message according to the password requested.

MAXIMUM PASSWORD LENGTH: 30 ALPHANUMERICAL CHARACTERS

MAXIMUM LEVEL LENGTH: 45 ALPHANUMERICAL CHARACTERS

E.g. 1) No password associated with all errors:

```
# ERROR ID, PASSWORD, LEVEL#  
ALL, , |
```

E.g. 2) Error 4008 has password "1234" and all other errors have password "ciao":

```
# ERROR ID, PASSWORD, LEVEL#  
4008, 1234, SERIOUS_ERROR_CALL_DEPARTMENT_HEAD;  
ALL, ciao, other_errors_handled_by_operator|
```

2.14.31 EJECTOR PAIRING WITH PLU

VERSION: 7.3.22

2.14.31.1 Modification Description

From this software version and subsequent, it will be possible to pair an ejector with a PLU, allowing to also select the reasons for the reject for which the ejector will be activated. Pairing an ejector with a PLU ignores the configuration settings related to the ejectors.

2.14.31.2 Requirements

This function is available on all automatic weighing terminals (Venus, Mercury, Selecta, Galaxi).

2.14.31.3 Parameters

The following parameters have been included within the "[+] EJECTORS" menu in the PLU and in the process DATA MODIFICATION:

PARAMETER	DESCRIPTION
PAIRED EJECTOR	<p>NONE: piece ejection management is tied to the configuration settings;</p> <p>EJECTOR 1: Ejector 1 is associated with the PLU as single piece reject device. The reasons for the rejection can be customised through the setting of the parameters below;</p> <p>EJECTOR 2: Ejector 1 is associated with the PLU as single piece reject device. The reasons for the rejection can be customised through the setting of the parameters below;</p>
REJECT MINUS MINUS (CTRL ONLY)	(YES, NO): activates the ejector to reject pieces below the minus limit of CTRL;
REJECT MINUS (CTRL ONLY)	(YES, NO): activates the ejector to reject pieces below the minus limit of CTRL;
REJECT OK (CTRL ONLY)	(YES, NO): activates the ejector to reject pieces below the ok limit of CTRL;
REJECT PLUS (CTRL ONLY)	(YES, NO): activates the ejector to reject pieces below the plus limit of CTRL;
REJECT PLUS PLUS (CTRL ONLY)	(YES, NO): activates the ejector to reject pieces below the plus plus limit of CTRL;
REJECT METAL	(YES, NO): activates the ejector for pieces rejected for metal detector;
REJECT ABOVE RANGE	(YES, NO): activates the ejector for pieces rejected for above range;
REJECT BELOW RANGE	(YES, NO): activates the ejector for pieces rejected for below range;
REJECT OUT OF RANGE	(YES, NO): activates the ejector for pieces rejected for out of range;
INVALID STORE REJECT	(YES, NO): activates the ejector for pieces rejected for invalid store;
REJECT NON-WEIGHABLE PIECES	(YES, NO): activates the ejector for pieces rejected for features that make them non-weighable;
REJECT FOR TOO FULL	Currently unmanaged;
REJECT FOR EXTERNAL INPUT	(YES, NO): activates the ejector for pieces rejected for activation of the external input;

2.14.32 MACHINE WITH SELECTABLE UNITS OF MEASUREMENT

VERSION: 7.5.0

2.14.32.1 Modification Description

From this and subsequent software versions, on SELECTA, VENUS and MERCURY type terminals that are NOT type-approved, it will be possible to set a basic unit of measurement other than kg, i.e. the machine can also work natively in g, oz and lb (grams, ounces, pounds).

Several functions have been adapted and are now homogeneous with the selected unit of measurement: printing of piece, carton, pallet, control, packing-list labels, and data transmission over TCP protocol.

In the case of the Volumetric option, the operation is the same as the original, so only the functions of the original specification have been adapted to the selectable u.d.m. mode.

Scope	u.d.m. alternative	volumetric management
On-screen data	YES	YES. Tares remain in the basic unit.
Data on CTRL report file	YES	YES. Tares remain in the basic unit.
Data retrievable via network	YES	NO
Data written to CSV file	YES	NO
Label data	YES	NO
General Totals	YES	NO

2.14.32.2 Requirements

This functionality is available on SELECTA, VENUS, MERCURY type terminals - NOT APPROVED.

2.14.32.3 Parameters

Operation is linked to a new global variable called UNIT OF MEASUREMENT, default = kg, located in the menu:

ARCHIVES / SETTINGS / TERMINAL SETTINGS / MACHINE SETTINGS / [+]BALANCE with password level = 6 protected by Dip-Switch-1 (metrological unlocking)

available units of measurement:	
kg	default
lb	
g	
oz	

If you set a unit of measurement other than kg, references to the second unit of measurement in the PLU will disappear, and the display of the unit of measurement will be hidden:

- decimals to be used in the pounds in the scale settings,
- unit of measurement to be displayed in PLU data
- units of measurement to be displayed in the machining data

Following the change of the unit of measurement, it will be necessary to go to the scale management page and set the base scale, divisions and number of decimals appropriate to the new unit of measurement, menu:

ARCHIVES \ SETTINGS \ TERMINAL SETTINGS \ SCALE SETTINGS / items:

MAXIMUM CAPACITY (g) / MAX CAPACITY (g):

DIVISION (g) / DIVISIONS (g):

DECIMALS (g) / DECIMALS (g):

The characterisation (calibration) of the scale must be carried out in accordance with the properties of the load cell and of the machine being configured, using 'typical' samples which are congruent with the full scale (capacity) chosen.

Always in the configurations balance the parameter: LEGAL OPERATION / LEGAL MODE should be set equal to NO. If the parameter is left set to YES, at the START of machining the machine will warn that it is not possible to go into machining with an alternative Udm and machine in Legal ON mode and will prevent entry into machining.

AUTOMATIC PRINT LIMIT parameter:

on MERCURY and VENUS machines (i.e. not CHECKWEIGHTER) it is necessary to adapt the value AUTOMATIC PRINT THRESHOLD. which is located in:

ARCHIVES \ SETTINGS \ VARIOUS SETUPS:

this value is 0.1kg by default and refers to calibrations in kg, it must therefore be adapted to the unit of measurement chosen, e.g. if the machine has been set in g, set 100 or the value in grams of interest.

Correct PLU:

in all the PLUs already set on the machine, it is necessary to adapt the values in kg to the alternative unit of measurement chosen, i.e. where there was previously e.g. 0.150, it is necessary to set 150:

- PRODUCT TARE
- PACKING TARE (TOT.1),
- PALLET TARE (TOT.2),
- NOMINAL WEIGHT
- LOW. WGT LIMIT
- UPP. WGT LIMIT
- UNIT PRICE (no longer €/kg but €/g or €/oz or €/lb),
- PRESELEC. TOT.1 WEIGHT
- PRESELEC. TOT.2 WEIGHT,
- PROCESS WEIGHT LIMIT

Re-do the Dynamic Calibration:

on CHECKWEIGHT machines, Dynamic Calibration must be performed again for each PLU.

2.14.33 CUSTOM SCALE PARAMETERS ON FILE

VERSION: 8.0.0

2.14.33.1 Modification Description

Editing allows information about custom balance parameters to be stored in files in the balance memory in both normal and high resolution.

Customising the parameters for each scale allows each instrument to be calibrated correctly, especially in the most difficult weighing cases.

The customised parameters will be stored in files, which will only be called up and used if you decide to use the custom scale type in the scale setup menu.

2.14.33.2 Parameters

In the path "ARCHIVES \ USER \ CONFIG \ SCALE" there are 4 files with ".CFG" extension.

LR_DEF.CFG	Contains the default values for the type "BALANCE VENUS = CONF.CUSTOM" in case of low resolution .
HR_DEF.CFG	Contains the default values for the type "BILANCIA VENUS = CONF.CUSTOM" in case of high resolution .

LR_CUST.CF G	Contains custom parameter values for the 'VENUS BALANCE = CONF.CUSTOM' type in case of low resolution .
HR_CUST.CF G	Contains custom parameter values for the 'VENUS BALANCE = CONF.CUSTOM' type in the case of high resolution .

To load or customise these values, access the menu on the balance:

"ARCHIVES (F6) \ SETTINGS (F12) \ TERMINAL SETTINGS (F1) \ BALANCE SETTINGS (F2)".

Set the parameter "VENUS BALANCE" with the value "CONF. CUSTOM". A new menu will appear on the screen, called "[+] BALANCE PARAMETERS".

The menu contains further parameters which, once set, will influence the programming of the converter board, correcting its operation.

By pressing the "F4" key ("RESTORE BIL. CUSTOM"), default values will be loaded from the "LR_DEF.CFG" or "HR_DEF.CFG" files, depending on whether the balance is in low or high resolution.

By making any change to the parameters in the "[+] BALANCE PARAMETERS" menu and exiting the configuration menu via the "F1" key, the set values will be saved inside the "LR_CUST.CFG" or "HR_CUST.CFG" files, depending on whether the balance is in low or high resolution. These values will remain active during normal scale operation until they are changed or reset to their default values.

The parameters stored in ".CFG" files are as follows:

- FILTER
- DIVIDER
- "M" BUFFER
- CAMP. STABLE WEIGHT
- DIV. STABLE WEIGHT
- MONOTONOUS READINGS
- MONOTONY THRESHOLD (div)
- CALIB.FREQUENCY
- STABIL. DELAY (thick)

Below are the default parameters of the two files

LR_DEF.CFG

ST_CONF_BIL_SHORT_N_BUFFERS	FILTER	60
ST_CONF_BIL_SHORT_L_BUFFERS	DIVIDER	1
ST_CONF_BIL_SHORT_M_BUFFERS	"M" BUFFER	37
ST_CONF_BIL_SHORT_DURATION	CAMP. STABLE WEIGHT	20
ST_CONF_BIL_FLOAT_THRESHOLD_STABLE	DIV. STABLE WEIGHT	1.5
ST_CONF_BIL_SHORT_READINGS_MONOTONE	MONOTONOUS READINGS	20
ST_CONF_BIL_SHORT_THRESHOLD_MONOTONY	MONOTONY THRESHOLD (div)	15000
ST_CONF_BIL_SHORT_FREQUENCY_CAMP	CALIB.FREQUENCY	200
ST_CONF_SHORT_TIME_STABILITY	STABIL. DELAY (tick)	12

HR_DEF.CFG

ST_CONF_BIL_SHORT_N_BUFFERS	FILTER	60
ST_CONF_BIL_SHORT_L_BUFFERS	DIVIDER	3
ST_CONF_BIL_SHORT_M_BUFFERS	"M" BUFFER	25
ST_CONF_BIL_SHORT_DURATION	CAMP. STABLE WEIGHT	20
ST_CONF_BIL_FLOAT_THRESHOLD_STABLE	DIV. STABLE WEIGHT	1.0
ST_CONF_BIL_SHORT_READINGS_MONOTONE	MONOTONOUS READINGS	20

ST_CONF_BIL_SHORT_THRESHOLD_MONOTONY	MONOTONY THRESHOLD (div)	15000
ST_CONF_BIL_SHORT_FREQUENCY_CAMP	CALIB.FREQUENCY	200
ST_CONF_SHORT_TIME_STABILITY	STABIL. DELAY (thick)	12

2.14.34 WITHDRAWAL WAITING PRINT REMOTE LABEL

VERSION: 8.0.3

2.14.34.1 Modification Description

In the case of printers WITH AUTOMATIC APPLICATOR, the modification allows you to keep the suction active until a button is pressed on the screen confirming that the label has been picked up, in order to avoid the LABEL FALLING TO THE GROUND in these cases.

When the PRINT_REMOTE_LABEL command is received, a waiting dialogue will be displayed on the screen, which must be confirmed by the operator only after he has taken the label from the printer.

2.14.34.2 Parameters

This function can be activated via a new parameter in the menu ARCHIVES -> SETTINGS > SETTINGS. TERMINAL -> SETTINGS. MACHINE -> SPECIAL PARAMETERS -> PREL. WAIT FROM PRINT REM. LAB. -> YES.

2.14.35 C LABELLING

VERSION: 8.0.6

2.14.35.1 Modification Description

In the case of automatic lines, the modification makes it possible to manage the activation of an output used to activate a blower with the task of pushing the label, already attached to the top of the tray, against the side wall of the workpiece. From the moment the arm used to apply the label returns to its position and the belts start up again, a space is measured, after which the blower is activated for a certain time. The distance to be covered after the arm returns to its position and the time for which the blower will remain active can both be set by the technician via a parameter.

2.14.35.2 Parameters

To activate this functionality, it is necessary to:

- Enable the functionality by going to "Home\Arch.\Plu\Mod.Plu\Labelling C" and set the parameter "ENABLE LABELLING C" = YES
- Two parameters will appear which must be set: "LABELLING C TARGET" and "APPLICATION TIME (ms)" which represent respectively the space to be covered after the application of the label with the arm before activating the blow (expressed in mm) and the time for which the blow will remain active (expressed in ms).
- Set the number of the output that will drive the blower by going to "Home\Arch.\Config.\Term" -> CONFIG. I/O" open the menu "LABELLING C" and set the parameter "APPLICATOR OUT" with a value from 1 to 48 after having identified the most suitable output on the wiring diagram.

2.14.35.3 Conditions of use

- The machine must be an automatic line
- The label applicator must be an arm.
- The application of the label should be done statically and not dynamically.

2.14.36 MULTIPLE LABEL

VERSION: 8.0.6

2.14.36.1 Modification Description

This feature allows you to print multiple copies of the same Total 1 or/and Total 2 label. It can of course only be used in cases where the label is applied manually. Suppose you want to apply a label to 4 sides of a carton, giving the same information on all of them, so that you can store the carton without having to worry about the reverse side: in this case it will be sufficient to tell the machine that for each label of total 1 it will have to generate 4 copies. Similarly, you can set the machine to print N labels of total 2. The number of labels to be printed for total 1 and total 2 can be set for each PLU.

2.14.36.2 Technical Features

2.14.36.2.1. Parameters

To activate this functionality, it is necessary to:

- Set a number from 1 to 5 for the parameter "TOT. LAB. COPY No. 1" inside "Home\Arch.\Plu\Mod.Plu" in the "LABELS" submenu (1 means that only one label of Total 1 will be printed, 5 means that 5 labels will be printed, the default value is 1);
- Set a number from 1 to 5 for the parameter "TOT. LAB. COPY No. 2" inside "Home\Arch.\Plu\Mod.Plu" in the "LABELS" submenu (1 means that only one label of Total 2 will be printed, 5 means that 5 will be printed, the default value is 1)

2.14.36.2.2. Conditions of use

The printer with which you want to perform the multiple printing must be a manual printer.

2.14.37 REVERSAL OF A CARTON FROM THE TAIL OF TOT 1

VERSION: 8.0.7

2.14.37.1 Modification Description

This introduced functionality allows a carton that has been weighed but not yet labelled to be removed from the total 1 label queue.

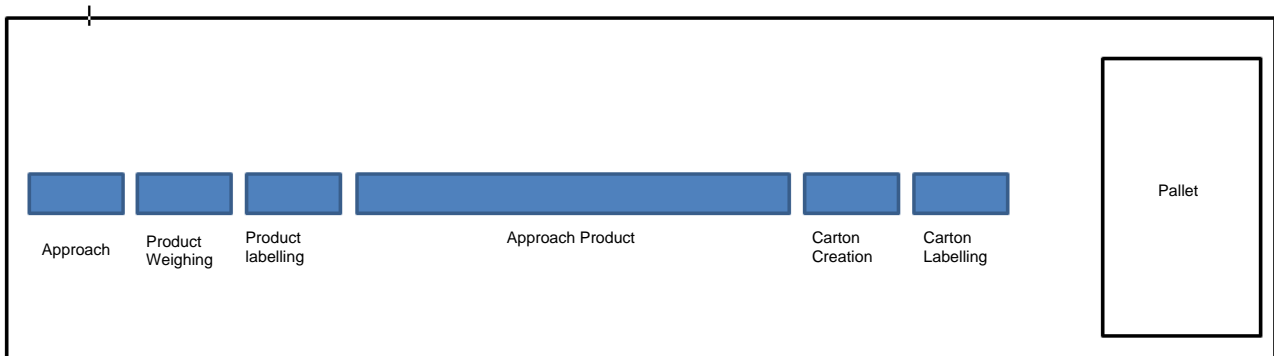


Figure 2-82 - Weighing, packaging and labelling line

Figure 2-83 shows a block diagram of an example of a line on which the reversal operation is to be carried out; in particular, the reversal is to be carried out while the products are travelling along the "Product Approach"

line. In order to better understand the problem to be solved and the limitations that will result, consider the following steps in the process:

- each product is weighed and at the next stage labelled;
- the label printed on the product, in addition to the standard information such as weight and price, must have a progressive number that identifies the carton inside which it will be introduced (the "Progressive Total 1" must be used, set so that this is a progressive number that is univocal within the same processing);
- labelled products enter the approach line to be placed inside the carton with which they have been associated;
- once the carton has been created, it will be labelled and then removed from the line and placed on the pallet with which it has been associated.

Assume that each carton consists of 2 products and each pallet consists of 2 cartons. Let us consider the case shown in Figure 2-83, where each red circle represents a product that has already been weighed and labelled, where the white number inside the circle represents the product number and the black number represents the "Progress of Total 1" with which the product has been associated. At this point in the process, each product is already associated, via the "Total Progress 1" printed on the label, with a specific carton and each carton is virtually associated with a pallet (virtually because no label has yet been printed and applied to either the carton or the pallet).

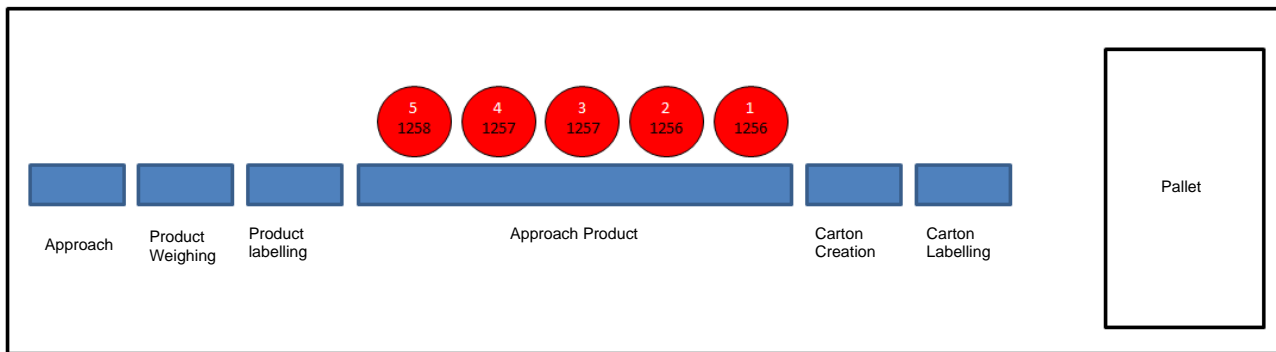


Figure 2-83

The change requested by the customer comes at this particular juncture in the production process: what you want to do is to remove from the queue of carton labels the one corresponding to the carton containing a defective product. This operation will involve:

- removal from the line of the defective product and the product(s) associated with the same carton as the non-conforming one;
- removal from the TOT.1 label queue of the one relating to the carton in question;
- the "virtual" shifting of all TOT.1 labels in the queue to reassign the cartons to the appropriate pallets.

Let us look again at the diagram shown at Figure 2-83: products 1 and 2 will be associated with the first carton of the first pallet, products 3 and 4 will be associated with the second carton of the first pallet and product 5 will be associated with the first carton of the second pallet. This condition is summarised at Figure 2-84. The "Progressive of Total 1" will be a progressive number unrelated to the index of the carton inside the pallet, whose objective is simply to associate each product to a carton and each carton to a pallet.

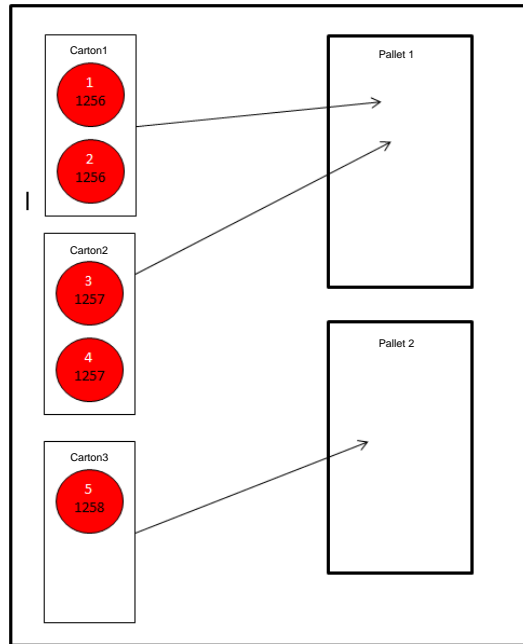


Figure 2-84 - Cartons and pallets before reversal

Let us suppose, for example, that we wish to cancel carton 2 because a defect has been detected on product 3. The operator will remove product 3 from the line and, by means of the "Progressive of Total 1" (in the example 1257), will be able to recognise and remove product 4, which was assigned to the same carton as product 3 by means of the "Progressive of Total 1" (e.g. 1257). The situation after the reversal of carton 2 will be as shown in Figure 4.

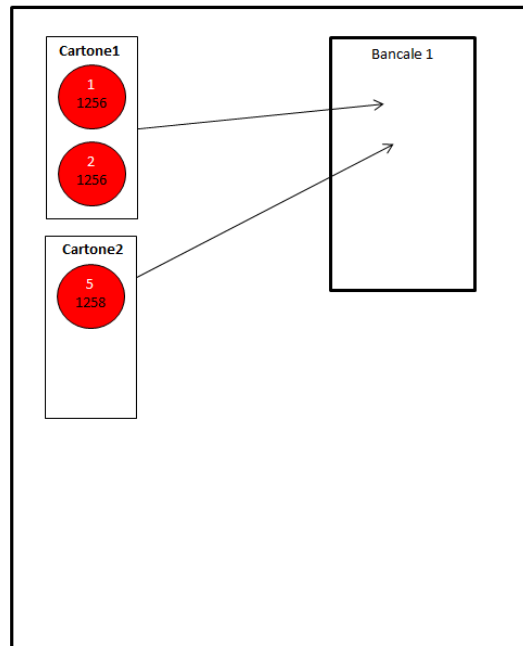


Figure 2-85- Cartons and pallets after reversal

By comparing Figure 2-84 and Figure 2-85, which show the allocation of products and cartons respectively before and after the reversal of carton 2, it can be seen that carton 3 no longer exists as product 5 has been "virtually" associated with carton 2. Similarly, pallet 2 no longer exists as this was populated by carton 3 which, as mentioned, no longer exists. It is of fundamental importance to note that the "Progressive of Total 1" has remained unchanged, only the virtual association between product and carton has been changed but not the "Progressive of Total 1". This continuity is necessary because the "Progress of Total 1" is printed on the product label, which has already been applied to the product at the time the transfer is made. This can be seen at Figure 2-85 as product 5 marked with the "Progressive of Total 1" 1258 is now part of carton 2.

2.14.37.2 Parameters

To activate this functionality, it is necessary to:

- Set the parameters "SEND WEIGHT UP" and "SEND WEIGHT DOWN". UP" equal to "LABELLED" ("Home" parameter path). Network" in the submenu "WEIGHTS AND EVENTS")
- Set the parameter "FULL OUTPUT" equal to YES (path of the parameter "Home/Arch.\Config.\Term.\Config.Machine" inside the submenu "PRESEL. AND PROGRESS.");
- Set the parameter "PROGR. TOT.1" equal to NO (path of the parameter "Home\Arch.\Config.\Term\Config.Machine" inside the submenu "PRESEL. AND PROGRESS.");
- Set the parameter "TYPE OF PROGR. TOTAL_1" equal to CONTINUOUS (path of the parameter "Home\Arch.\Config.\Term\Config.Machine" inside the submenu "PRESEL. AND PROGRESS.");
- Set the parameter "ABIL. CHANGE ID L.D" equal to NO ("Home" path in the "Machine" submenu)
- Ensure that the parameters "PRESET" are set. TOT. 1 WEIGHT' and 'PRESET. TOT. 2 WEIGHT" are equal to zero ("Home\Arch.\Plu\Mod.Plu" parameter path in the "PRESET" submenu)
- Set the parameter "ENABLE COOLING STROKE TOT.1" equal to YES (path of the parameter "Home/Arch.\Config.\Term.\Config.Machine" inside the submenu "PRESEL. AND PROGRESS.")

2.14.37.3 User's guide

Once the machine has been set up following the instructions listed in the "TECHNICAL CHARACTERISTICS" section of this guide, it will be possible to carry out the operation of transferring a carton from the TOT.1 queue.

Let us assume that we are in the condition shown in Figure 2-86, i.e. we have 5 cardboard labels in the queue to print. Pressing the "F11" button will activate the "REV. FROM TOT1 QUEUE" function.

PT kg 0.000 <small>PRESETTARE</small>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MIN	GROSS kg 0.000	Max. 12 kg Min.: see metr.label e = 2 g	PRICE € 0.00
Home\Pro.		LbLS QUEUED: 5		
PLU: Plu_10		Product Code: 000000114		Client: Henry
Des 1: Description 1		Des 2: Description 2		
Des 19: Description 19		Des 20: Description 20		
Batch: 7	Tare %: 0	PRO Type: Wgt VAR		
Stock:	Tare 1: 0	Wgt FIX:		
Prod. Code:	Tare 2: 0	Amount FIX:		
Date 1 Prod.: 20 01 22	Prod.Lab:	MIN-MAX W.: 0 - 0		
Date 2 Due: 20 01 22	Tot 1 Lab: 3852101	Av.wgt: 2.956		
Date 3 Cure.: 20 01 22	Tot 2 Lab: 3852201	Belt Spd.: 60 - 60		
Tot 1 PC: 2 0	0%	Tot 1 Wgt: 0 0	0%	
Tot 2 PC: 30 5	16%	Tot 2 Wgt: 0 29.562	0%	
Tot PLU PC: 0 10	0%	Tot PLU Wgt: 0 29.562	0%	
LINE RUNNING				
STOP	MODIFY DATA	REV. PIECE	REV. TOTAL 1	PRINT TOTALS
				20/01/2022 14:10 Lev 6

Figure 2-86 - Processing page with 5 labels in the queue

Figure 2-87 shows the window used to choose which carton you wish to cancel. For each carton waiting to be labelled, certain information is shown; the most important for the purpose of the reversal is the number contained in the first column called "PROGRESSIVE". This value represents the "Progress of Total 1" printed on each piece, so by looking at the label of the defective piece it will be possible to identify the carton to be reversed using this field. In the same way, it will be possible to identify the other products marked with the same "Progress of Total 1" on the line and remove them.

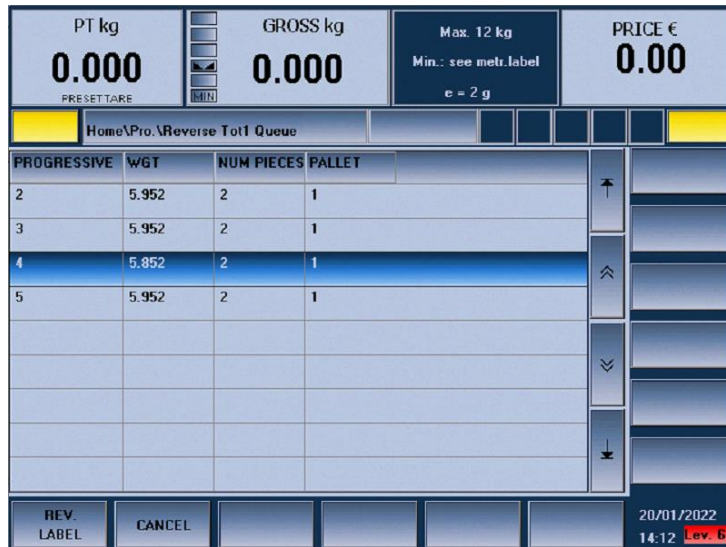


Figure 2-87 - Reversal page from queue Tot.1

Once the carton to be removed has been identified, pressing the "F1" key or the "Enter" button will display the dialogue box shown at Figure 2-88 to confirm the reversal of the selected carton. At this point the carton label will be removed from the list of labels to be printed and the weight and piece counters will be updated accordingly. Figure 2-89 shows the processing page after the carton has been reversed; comparing Figure 2-89 with Figure 2-87 it can be seen that the piece counters and the weights of the various totals have been updated after the removal of the pieces that made up the reversed carton.

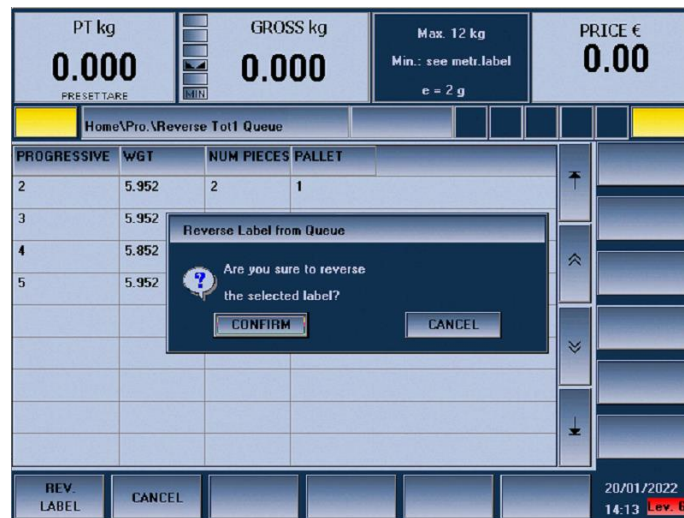


Figure 2-88 - Reversal confirmation window

PT kg 0.000 PRESET TARE	GROSS kg 0.000	Max: 12 kg Min.: see metr. label e = 2 g	PRICE € 0.00
Home\Pro.		LBS QUEUED: 3	
PLU: Pfu_10		Product Code: 000000114	Client: Henry
Des 1: Description 1 Des 19: Description 19		Des 2: Description 2 Des 20: Description 20	
Batch: 7	Tare 2: 0	PRO Type: Wgt VAR	
Stock:	Tare 1: 0	Wgt FIX:	
Prod. Code:	Tare 2: 0	Amount FIX:	
Date 1 Prod.: 20 01 22	Prod. Lab:	MIN-MAX W.: 0 - 0	
Date 2 Due: 20 01 22	Tot 1 Lab: 3852101	Av. wgt: 2.964	
Date 3 Cure.: 20 01 22	Tot 2 Lab: 3852201	Belt Spd.: 60 - 60	
Tot 1 PC: 2 0	0%	Tot 1 Wgt: 0 0	0%
Tot 2 PC: 30 4	13%	Tot 2 Wgt: 0 23.710	0%
Tot PLU PC: 0 8	0%	Tot PLU Wgt: 0 23.710	0%
LINE RUNNING			
STOP	MODIFY DATA	REV PIECE	REV TOTAL 1
		PRINT TOTALS	
			20/01/2022 14:14 Lev. 6

Figure 2-89 - Processing page after reversal

2.14.37.4 Operation with data transmission over the network

If weighing over a network is used using the network protocol, it is important to manage the reversal of a carton from the total 1 queue. This operation differs from the reversal of a labelled carton or a labelled part; when a carton is reversed from the total 1 queue, a message is sent over the network that a carton for which a weighing has never been sent has been reversed. If the procedure is the same as for other transfers, i.e. sending the negative weight of the carton to be reversed in "L105" and the progressive number identifying the carton in "L84", the remote software would have to manage inconsistent data. Since it has been defined that in order to use this function it is necessary to print the "Progress of total 1" on the label of the piece, it has been established that the remote software that wants to manage the transfer of a carton from the queue of total 1 must:

- Record for each part the field "L163" (Progressive Total 1) associated with that product;
- When receiving the weigh of a carton check first the weight sent in "L105", if this is equal to zero it means that a carton reversal has been made from queue total 1 so it will be necessary to check "L163" to identify the reversed carton;
- Once the progressive number of the carton is known, the remote software will have to eliminate all the products already recorded associated with that particular carton (it will be enough to search for all those products for which an "L163" equal to the "L163" obtained from the transfer of the carton from the total 1 queue was recorded.

2.14.37.5 Conditions of use

- The unlabelled carton must be reversed with the production line stopped;
- The "Progress of Total 1" must be printed on the label of each product;
- The machine must operate in the mode of sending data over the network after on label and CANNOT operate in the mode of sending data over the weighed;
- You must use carton pre-selection by number of pieces and you CANNOT use carton pre-selection by weight;
- The option "RECOVER. PROG. TOT." It must NOT be active;
- The parameter "TYPE PROGR. TOTAL_1" must be set equal to CONTINUOUS;
- The "ABIL CHANGE L.D. ID" parameter must NOT be enabled because the F11 key used for the reversal from the TOT.1 queue during processing is also used by this function;
- The "EXIT WITH FULL QUEUE" functionality must be enabled

2.14.38 MANAGEMENT OF EXPIRY TIME

VERSION: 8.0.11

2.14.38.1 Modification Description

This functionality provides the possibility of adding an expiry time to the expiry date. This will make it possible to set deadlines of less than one day.

2.14.38.2 Technical features

To use this functionality, simply set the PLU (or processing) field HH.EXPIRY as shown at Figure 2-90.

PT kg 0.000 <small>PRESETTARE</small>	GROSS kg 0.002	Max. 12 kg Min.: see metr.label e = 2 g	PRICE € 0.00
Home\Pro.\Pro.Mod.			
Field	Value		DELETE MATCH
[] DATES			
PRODUCTION DATE	27 09 19		
PROD. DATE TEXT			
PROD. DATE TEXT 2			
PRINT PROD. DATE	YES		
DUE DATE DAYS	0		
HH. EXPIRY	2		
DUE DATE	27 09 19		SAVE CHANGES
DUE DATE TEXT			
START			27/09/2019 15:26 Lev. 6

Figure 2-90-Editing the field HH.DEADLINE

The acceptable range of values for HH.EXPIRY is 0 - 23 where 0 means that the expiry time is disabled and 23 means that 23 hours will be added to the expiry date. If the HH. EXPIRY field is non-zero during processing, the expiry time will also be shown next to the expiry date. Each time a piece is weighed, the expiry date and time are updated. The date and time displayed on the processing page represent the data relative to the last piece weighed; if no piece has been weighed yet, the date and time displayed are calculated starting from the time of entry into processing.

Example:

Suppose you have set DUE DATE DAYS = 0 and HH.EXPIRY = 15; after weighing a piece, for example, on 27/09/2019 at 15:26 the expiry date and time displayed will be 28/09/2019 06:26.

As can be seen, the field HH.EXPIRY is added to the production date. If DUE DATE DAYS were different from 0, the expiry date and time would be calculated from the production date by adding DUE DATE DAYS and HH.EXPIRY. Taking the example above and only changing the value of DUE DATE DAYS = 1, the result would be 29/09/2019 06:26.

At Figure 2-91 the processing screen is shown with the field Date 2 Due: showing both the date and time of the due date.

PT kg 0.000 PRESET TARE	GROSS kg 0.000 MIN	Max. 12 kg Min.: see metr.label e = 2 g	PRICE € 0.00
Home\Pro.			
PLU: Plu_10		Product Code: 00000114	Client: Henry
Des 1: Description 1		Des 2: Description 2	
Des 19: Description 19		Des 20: Description 20	
Batch: 7	Tare %: 0	PRO Type: Wgt VAR	
Stock:	Tare 1: 0	Wgt FIX:	
Prod. Code:	Tare 2: 0	Amount FIX:	
Date 1 Prod.: 27 09 19	Prod.Lab:	MIN-MAX W.: 0 - 0	
Date 2 Due: 29 09 19 06:26	Tot 1 Lab: 3852101	Av.wgt: 2.956	
Date 3 Cure.: 27 09 19	Tot 2 Lab: 3852201	Belt Spd.: 60 - 60	
Tot 1 PC: 2 1	1%	Tot 1 Wgt: 0 2.956	0%
Tot 2 PC: 2 0	0%	Tot 2 Wgt: 0 0	0%
Tot PLU PC: 0 1	0%	Tot PLU Wgt: 0 2.956	0%
LINE RUNNING			
STOP	MODIFY DATA	REV. PIECE	REV. TOTAL 1
		PRINT TOTALS	
			27/09/2019 15:26 Lev. 6

Figure 2-91- Processing page with calculated expiry date and time with DUE DATE DAYS = 1 and HH.EXPIRY = 15

This parameter can also be modified via the network protocol with the WRITE_ARC command by modifying the P288 field for PLUs and the L471 field for machining.

ATTENTION: if HH.EXPIRY is modified during processing, this field will be updated after the weighing immediately following the change, therefore the first piece to be affected by the modification will be the second after sending the modification via network.

In order to be able to print the expiry date and time on a label, it is necessary to use the field DUE DATE AND HOUR as shown in Figure 2-92.

PT kg 0.000 PRESET TARE	GROSS kg 0.000 MIN	Max. 12 kg Min.: see metr.label e = 2 g	PRICE € 0
BACK	Home\Arch.V		HOME
Field	VAR. TEXT		DELETE MATCH
LABEL	PLAINTEXT BARCODE 2		
DESCRIPTION	PLAINTEXT BARCODE 3		
VAR. TEXT	LOT CTRL(15)		
X COORDINATE	UNIT.PRICE TEXT		
Y COORDINATE	PRIM.AMOUNT TEXT		
ROTATION	COUNT.2.OVERALL ITEMS (10)		
CHAR. TYPE	COUNT.3.OVERALL ITEMS (10)		
HORIZ. EXPANSION	COUNT.2.OVERALL TOT1 (10)		
VERT. EXPANSION	COUNT.3.OVERALL TOT1 (10)		
	COUNT.2.OVERALL TOT2 (10)		
	COUNT.3.OVERALL TOT2 (10)		
	TOTAL 2 CONSECUTIVE L2		
	DUE DATE AND HOUR		
	DUE HOUR		
	CONFIRM	CANCEL	
SAVE	CANCEL		19/01/2022 17:28 Lev. 6

Figure 2-92 - Selection of the field DUE DATE AND HOUR to be inserted on the label

2.14.38.3 Conditions of use

It is not possible to use the expiry time together with EXPIRATION: SEL.DAY active.

2.14.39 MANAGEMENT OF SENDING SINGLE BATCH FILES

VERSION: 8.0.17

2.14.39.1 Modification Description

This functionality has been introduced to avoid problems with corruption of the LOT_XXX.csv file. Until this version, when closing a batch, if the connection to the FTP server were available, the data for the batch that had just been closed would have been added as an append to the LOT_XXX.csv file (where XXX is the line number set in the automatic machine settings). From this firmware version it is possible to choose to stop adding data to the LOT_XXX.csv file directly from the machine; it will be possible to send to the server a file containing only the data of the last closed lot and then leave the burden of updating the LOT_XXX.csv file to the PrintReport installed on the server. In order to take advantage of this feature, it will be necessary to install firmware version 8.0.17 on the automatic machine and to install Print Report version 1.1.0 on the server.

2.14.39.2 Technical features

Each time a batch is closed, a file containing the data of the batch represented with the nomenclature "ddhmmss.tmp" will be generated on the automatic machine and placed in the USER\CTRL\LOTTI\YYYY\MM\ folder. If the connection to the FTP server is available, this file will be sent and then deleted from the machine's memory, but if connection problems are detected or during file transfer, the file will be retained and a new attempt to send it will be made when the next batch is closed. When a batch is closed, a file LOT_XXX.bkp will also be populated and stored on the machine; this backup file will be deleted and recreated every 180 days. The file "ddhmmss.tmp" will be sent to the server in the PUBLIC\Flags\ folder and renamed with the nomenclature "XXX_serialemacchina_yyyMMddhmmss.tmp". With this new nomenclature, the PrintReport will be able to distinguish files that come from one line rather than another. The PrintReport will cyclically check the Flags folder and process the detected files: the header of each tmp file will be compared with the header of the LOT_XXX.csv file and if the two files are compatible the content of the .tmp file will be appended to the content of the LOT_XXX.csv file and the .tmp file will be deleted. Conversely, if the compatibility check fails, the .tmp file will be renamed to .cb and its contents will not be appended to the LOT_XXX.csv file. In this way, the data will not be lost, but neither will it be queued to an incompatible file. This case could occur if the CTRLFLD.CFG file contained within the automatic machine is modified. If the .tmp file does not contain two lines it will be evaluated as corrupt and will be deleted.

Inside the ..\pc\BackUp\ folder, PrintReport will create a series of backups of LOT_XXX.csv files by dividing them into folders named LOT_XXX.

In order to avoid operations on the LOT_XXX.csv file, which could be processed by third party software, any operation of comparison and addition of data will be carried out using the LOT_XXX_Last.csv files contained in the ..\pc>LastCsv\ folder: the files contained in this folder will replace the LOT_XXX.csv files each time the integration process of a new lot is completed. The LastCsv folder is a hidden folder as it must not be touched by anyone.

To use this feature, it must be enabled on the automatic machine via the "ABIL" parameter. SENDING SINGLE FILES" in the machine configuration in the FTP section (see Figure 2-93).

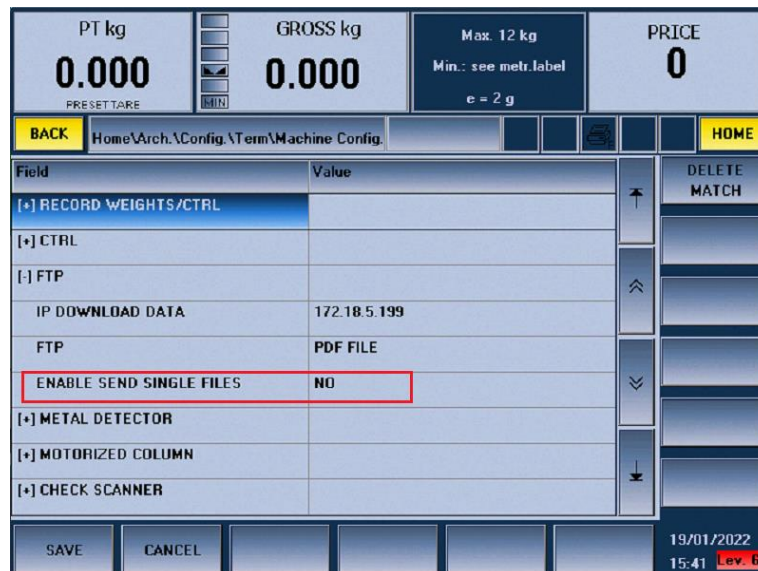


Figure 2-93 - Parameter for enabling the sending of individual files for each batch.

A number of items have been added to the PrintReport settings page (shown at Figure 2-94).

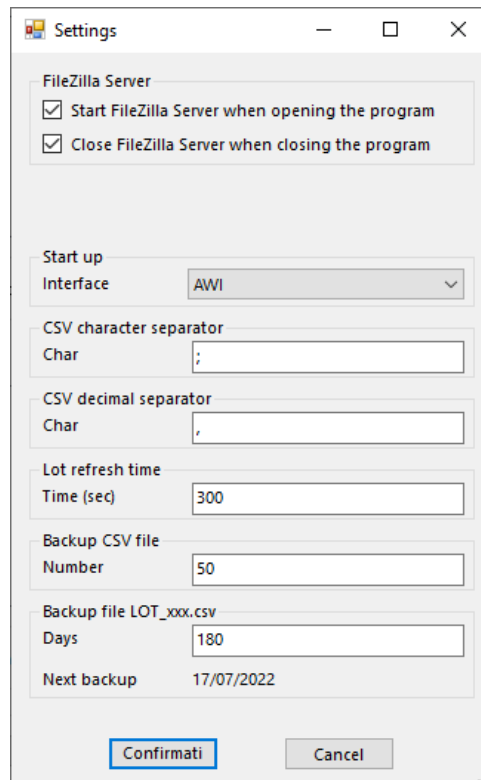


Figure 2-94 - PrintReport Settings Page

In order for this new feature to work properly, the PrintReport's "CSV Character Separator" and "CSV Decimal Separator" parameters must match the "CTRL:SEPARATOR" and "CTRL:DECIMAL SEP." parameters in the Setup menu of the automatic machine in the "RECORD WEIGHTS/CTRL" submenu (see Figure 2-95). These parameters must be aligned in order for the PrintReport to perform the compatibility check on the data contained within the .tmp files.

PT kg 0.000 <small>PRESETTARE</small>	GROSS kg 0.000	Max. 12 kg Min.: see metr.label e = 2 g	PRICE 0
BACK Home\Arch.\Config\Term\Machine Config		HOME	
Field	Value		DELETE MATCH
REC.PROD.REV.	NO		
REC.TOT1.WGHTS	NO		
REC.TOT1.REV	NO		
REC.TOT2.WGHTS	NO		
WEIG.OPS.SEPARATOR	:		
WEIGHTS.DEC.SEPARATOR	.		
CREATE LOT FILE	YES		
CTRL.SEPARATOR	:		
CTRL.DEC.SEPARATOR	.		
SAVE	CANCEL		14/01/2022 14:50 Lex 6

Figure 2-95 - Separator and Sep. parameters. Decimal

The following parameters have also been added to the PrintReport settings page:

- Batch Update Time: This is the period of time, in seconds, after which the PrintReport checks to see if new batches have arrived on the server to be added to the LOT_xxx.csv file.
- Backup csv file number: represents the number of backups of the LOT_xxx.csv file that are stored in the ..\pcl\BackUp\LOT_xxx\ folder. Once this number is reached, the files are deleted starting with the oldest.
- LOT_xxx.csv file backup period: period (in days) after which a backup of the LOT_xxx.csv file is made and the LOT_xxx.csv file is deleted. The backup copy is placed in the folder ..\pcl\BackUp\LOT_xxx\Programmed\ with the nomenclature LOT_xxx_yyyy_MM_dd.csv. This feature is useful to avoid having an oversized LOT_xxx.csv file. If set equal to -1 the functionality is disabled. Next backup' indicates when the next backup will be made based on the number of days set in the parameter 'Backup period file LOT_xxx.csv'.
-

2.14.39.3 Conditions of use

In order to use this feature, both the automatic machine must be updated to at least version 8.0.17 and the PrintReport to version 1.1.0. If the PrintReport version is older, the .tmp files will remain on the machine.

2.14.40 SCANNER MANAGEMENT LABEL CHECK ON MACHINE 2 BELTS

VERSION: 8.0.17

2.14.40.1 Modification Description

This new functionality involves the implementation of the software required to make it possible to check the presence of the label on a parcel with a 2 Belt machine (Scale belt + Labelling belt). In order to perform this function, a machine has been designed and built that will have an additional belt on which the presence of the label will be checked once the parcel has left the labelling belt. The control operations will be carried out by means of a scanner mounted integral to the printing unit. The management of the belt power-up, the power-up of the check scanner and the management of the good read signal generated by it will all be handled by the machine.

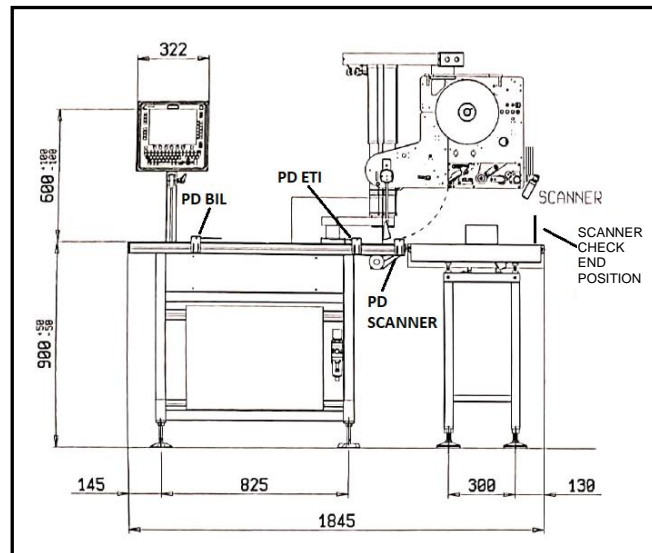


Figure 2-96 - 2 Belt machine configured for label check

As can be seen at Figure 2-96, in addition to the standard, weighing and labelling photocells, it will be necessary to add a photocell (PD SCANNER to be connected to IN12) at the end of the labelling belt. In addition, a new target has been defined (END TARGET SCANNER CHECK). This target represents the point at which it will be necessary to assess whether or not a label is present on the parcel. Once this target has been reached, if a missing label is detected the parcel will stop and the user will be asked if he/she wishes to reprint the label. It will be necessary to adjust this target so that the labelling arm is not prevented from moving once a parcel has stopped at the end of the check target. Assuming there is a labelled piece on the line, once it reaches the PD SCANNER photocell, the check scanner will be switched on and will continue running until it reaches the scanner check end position. Once this goal has been reached, the machine will evaluate the outcome of the check operation: if the check has a positive outcome, the piece will continue on its way, otherwise the piece will stop and the user will be asked, via a dialogue window on the screen, if he wishes to reprint the label. If the user chooses to reprint the label, it will be necessary to confirm via another dialogue box that the line is to be restarted.

2.14.40.2 Technical features

To enable this function, first of all the LINE TYPE parameter in the configuration must be set equal to VENUS/2. It will then be necessary, in the machine configuration, to set the parameter CHECK SCANNER ->HEAD 1 CHECK = YES. Once the parameter has been enabled, the "SCANNER CHECK END POSITION" parameter will appear in the MECHANICAL PARAMETERS menu, which must be set considering that this target must be measured starting from the labelling target (position of the labelling photocell). Since once a workpiece reaches this target it can stop, it is important to set this target so that the labelling arm can move with a stationary workpiece at the end of the scanner check target. The unit of measurement used is millimetres.

To summarise on the configuration page it will be necessary to set:

- LINE TYPE = VENUS/2 or GALAXI/2
- CHECK SCANNER->HEAD 1 CHECK = YES
- MECHANICAL PARAMETERS-> SCANNER CHECK END POSITION

It will also be necessary to set the inputs and outputs to be used for this functionality: these will obviously have to be physically reflected in the wiring.

In the CONFIG I/O page it will then be necessary to set the parameters present in the CHECK SCANNER menu:

- SCANNER T1 ENAB.OUT = 14
- HEAD 1 GOOD READ = 10
- ENABLE ADDITIONAL BELT = 13

The first parameter represents the output used to switch the check scanner on and off; the second indicates the input used to control the GOOD READ signal generated by the scanner. Finally, ENABLE ADDITIONAL BELT is the output used to switch the additional check belt on and off.

The PLU parameter must be set for each PLU for which you wish to use the label check scanner:

- LAB. CHECK SCANNER -> ENABLE SCANNER HEAD 1 = YES

2.14.40.3 Conditions of use

The use of this functionality brings with it a number of important limitations:

- NO SPOOL LAST PIECE: it is not possible to use this feature as it would unintentionally modify the management of the additional belt.
- NO EJECTOR 2: the output intended for ejector 2 was reused to turn the scanner on and off.
- NO COMPRESSOR: the output used for the compressor (13) has been reused to manage the switching on and off of the additional belt.
- NO CARTON PRINT REQUEST: input 12 has been used for the PD SCANNER photocell.
- NO WRAPPERIN INPUT AVARIA: would use input 12.
- NO SCANNER ON TOT: would use output 14.
- NO INPUT BARRIER PHOTOCELL: would use input 10.
- NO MANAGEMENT. STOP ON TOT 1 other than NO STOP

2.14.41 BACKUP MANAGEMENT OF WEIGHTED AND CSV FILES

VERSION: 8.0.24

2.14.41.1 Modification Description

In order to avoid as much as possible the loss of data sent to an FTP server or a USB stick, a backup mechanism was introduced for the files of product weighings, total 1, total 2 and the Lot_xxx.csv file. A copy of these files will then be saved on the machine for a number of days that can be set by the user in the machine configuration (max. 30 days). By default, this parameter is initialised at 30.

2.14.41.2 Technical features

To use this feature, simply set the field "BKUP DAYS" of the machine configuration that can be found at the "Home\Arch.\Config.\Term\Machine Config." path, inside the "RECORD WEIGHTS/CTRL" submenu.

PT kg 0.000 <small>PRESETTARE</small>	GROSS kg 0.000	Max. 12 kg Min.: see metr.label e = 2 g	PRICE 0
BACK Home\Arch.\Config\Term\Machine Config.		HOME	
Field	Value		DELETE MATCH
REC.TOT1 REV	NO	↑	
REC.TOT2 WGHTS	NO		
WEIG.OPS: SEPARATOR	#	↑↑	
WEIGHTS: DEC.SEPARATOR	.		
CREATE LOT FILE	YES		
CTRL: SEPARATOR	#	↓↓	
CTRL: DEC.SEPARATOR	.		
REC. ON USB/DISK	FTP		
BACKUP DAYS	30	↓	
SAVE	CANCEL		19/01/2022 15:46 Lev. 6

Figure 2-97-Editing the field HH.DEADLINE

The acceptable range of values for BACKUP DAYS is 0 - 30 where 0 means that saving of backup files is disabled and 30 is the maximum number of days for which backups can be saved. If the BACKUP DAYS field is non-zero then backup files will be generated within the "/hd0/ROOT/ARCHIVES/USER/CONFIG/BACKUP" folder. The files to be created will have a nomenclature consisting of 3 digits for the Julian day, 2 digits for the year, 3 digits for the machine's line number. Each file will have this nomenclature with the specific extension (.prd, .tt1, .tt2, .csv). An example could be 09320001.prd, 09320001.tt1, 09320001.tt2, 09320001.csv where 093 indicates the day, 20 the year 2020 and 001 the line number of the machine.

2.14.41.3 Conditions of use

Parameter Config. Machine/CTRL/REG. ON USB/DISK = FTP

2.14.42 BC READ MANAGEMENT FOR EVENT SCANNER

VERSION: 8.0.25

2.14.42.1 Modification Description

This functionality has been introduced in order to be able to select which data, within a barcode, the machine should take into account when using the event scanner. In particular, the software modification makes it possible to set which characters of a bar code to insert within an input Dialog opened on the machine's screen. If we have a bar code that contains the numeric sequence "8017596066961", by programming the BC READ for the event scanner it will be possible to decide, for example, to insert in the input dialogue only the characters starting from the third by 4 characters (thus obtaining "1759"), while continuing to send the entire bar code over the network via the communication protocol.

2.14.42.2 Technical features

In order to use this functionality it will be necessary to create appropriate BC READs by entering the "Home\Arch.\BCREAD" page (from home, press F6 and then F8). In this page, shown in Figure 2-98, are listed all the READ BCs present in the machine and, by pressing the F2 button, it will be possible to insert new ones.

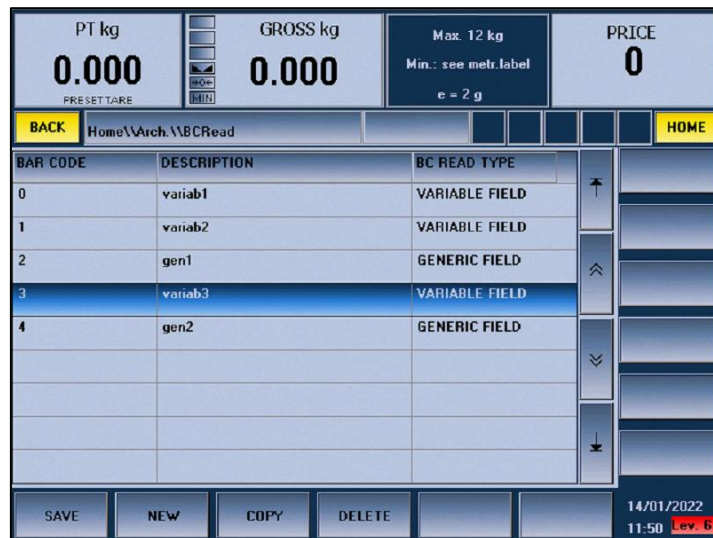


Figure 2-98 - List of READ BCs in the machine

Once a new BC READ has been created, it will be possible to select it and enter its editing page by pressing Enter (or double touch in case of a machine with Touch monitor). Once entered, it will be possible to assign a description to the BC READ through the window that appears by selecting SETTINGS and filling in the field DESCRIPTION. At this point, it will be necessary to enter variable fields (by pressing F7) or generic fields (by pressing F8); for event scanner data management, it will be necessary to add GENERIC FIELDS (F8). It will never be possible to create a BC READ consisting of both variable and generic fields. Once you have entered a generic field, you will need to fill it in by entering its configuration page (shown at Figure 2-99).

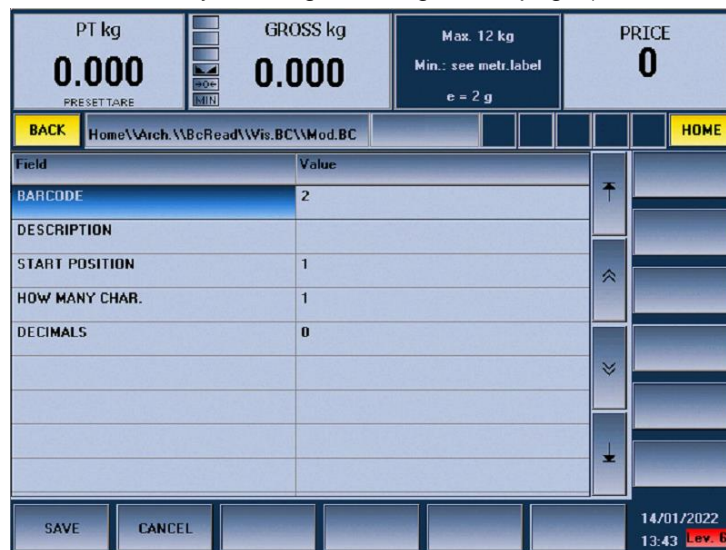


Figure 2-99 - Generic field configuration

Each generic field is characterised by 5 fields:

- **BARCODE:** indicates the barcode with which it is associated;
- **DESCRIPTION:** indicates how this field is represented
- **START POSITION:** indicates the first character to be taken into account
- **HOW MANY CHARACTERS:** indicates how many characters from the start position will be read; if this value is initialised to zero, it means that all characters up to the end of the bar code will be read.
- **NUMBER OF DECIMALS:** indicates how many digits to represent after a comma.

Once the characterisation of the parameter is complete by pressing F1 the changes will be saved and it will be possible, if necessary, to insert a new generic field or to save everything and return to the list of READ BCs. In this page it will be possible to observe that the BC READ just created and populated with a generic field, in the third column of the grid (BC READ TYPE) will have the word GENERIC FIELD; this categorisation makes it assignable to the event scanner. The READ BCs with the word VARIABLE FIELD in this column will be associated with the data reading scanner, while those with the word SETTINGS will not be associated with any type of scanner as they do not contain fields of any type.

In summary, the steps to insert a new BC READ that can be used for the event scanner are:

- Entering the Home\Arch.\BCRead page
- Create a new BC Read
- Enter the edit page of the individual BC READ and add the necessary generic fields
- Configuring generic fields
- Save

Once the appropriate BCREAD has been created, it will be necessary to enable the event scanner; to do this, select the COM port to which the scanner is connected inside the machine settings page through the "Home" parameter. Machine{COM SCANNER EVENT}. Once the appropriate serial port has been selected, it will be necessary to match the BARCODE ID to be used for the event scanner by populating the "HomeArch.\Config. Pressing this parameter will display a page containing the list of BC READs of the GENERIC FIELD type present in the machine. Selecting the desired one will make the association between event scanner and BC READ.

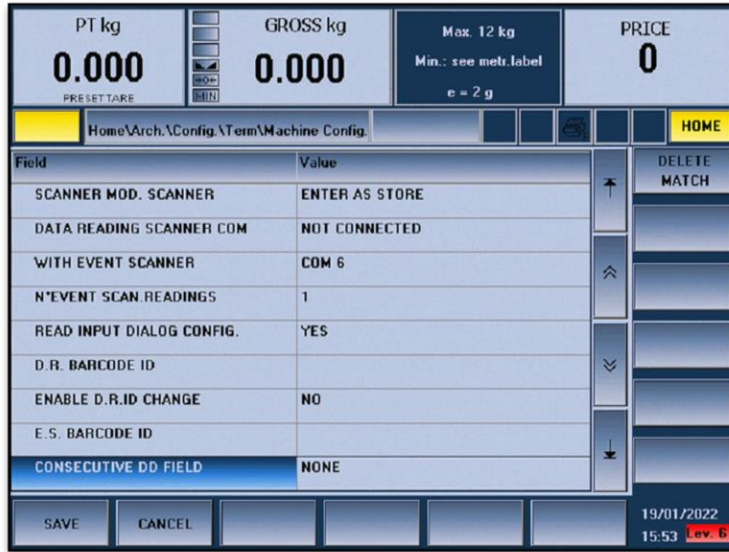


Figure 2-100 - E.S. BARCODE ID parameter of the machine settings page

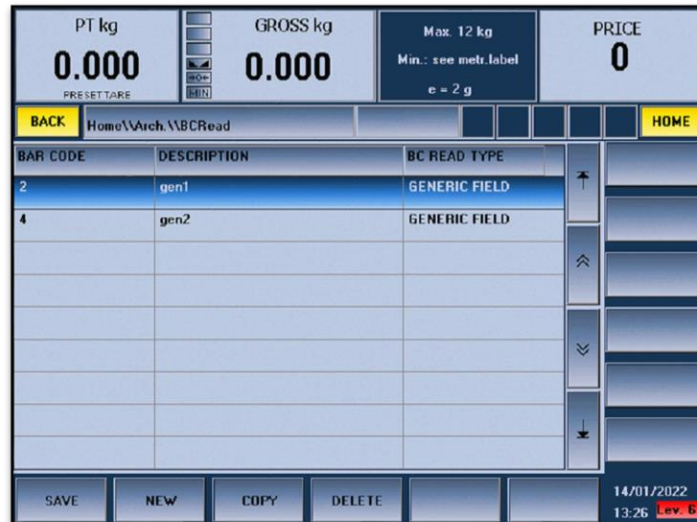


Figure 2-101 - BC READ selection page for E.S. BARCODE ID.

2.14.43 MANAGEMENT OF AUXILIARY LAMP WITH REJECT WITH STOP AND RESTART WITH EXTERNAL BUTTON

VERSION: 8.0.26

2.14.43.1 Modification Description

This modification allows an auxiliary lamp or buzzer to be lit when a workpiece is rejected and the machine is set to stop the invalid workpiece (Configuration Machine \Rejects and Selections \REJECT MANAGEMENT = STOP). 5 causes have been added to the list of possible causes of auxiliary lamp ignition:

- REJECT WITH STOP (14): the light will come on for each rejected and stopped piece.
- REJECT WITH STOP UNDER RANGE (15): The light will come on for each rejected and stopped piece because its weight is below range.
- REJECT WITH STOP OVER RANGE (16): The light will come on for each piece rejected and stopped because its weight is above range.
- REJECT WITH STOP UNDER/OVER RANGE (16): the light will come on for each piece rejected and stopped because its weight is below or above range.
- REJECT WITH STOP OUT OF RANGE (17): the light will come on for each piece rejected and stopped because its weight is out of range (machine set to work accepting pieces in the external ranges and piece with weight inside the range. E.g. Range Min = 0.200, Range Max = 0.300, piece weight 0.250 machine set to work with external ranges. The piece will be rejected and marked as out of range as the machine evaluates as valid all pieces weighing less than 0.200 and more than 0.300).

This modification also allows the conditions to be restored by closing the window indicating that the part has been rejected, thus allowing the line to restart, by means of a button connected to the machine's IN_MARCIA input (input 8, however, check this on the machine's electrical diagram). In this way, it will be possible to restore the operation of the machine either by pressing the OK button on the window or by pressing an external button.

2.14.43.2 Technical features

The management of auxiliary lamps is usually a paid option, so it must first be activated via the INSTALL OPTIONS menu by activating Manage Auxiliary Lamps. Once the installation has been carried out, after restarting the machine, the LAMPS AND BUZZER menu will appear on the machine configuration page, through which it is possible to decide which lamp to use. For each lamp it is necessary to choose the reason for switching the lamp on and the condition for switching it off (See Figure 2-102).

Field	Value
[+] TOTALS ENABLING	
[+] PRINT REPORT	
[+] DATES	
[+] FTP	
[+] LAMPS & BUZZER	
AUX.LAMP	REJECT WITH STOP
LAMP 1 OFF	RESTORE CONDIT.
AUX.LAMP 2	NOT PRESENT
AUX.LAMP 3	NOT PRESENT

Figure 2-102 - Auxiliary lamp selection menu.

The selection of the AUX LAMP parameter, which defines the reason for lighting the lamp, is done via the window shown at Figure 2-103.

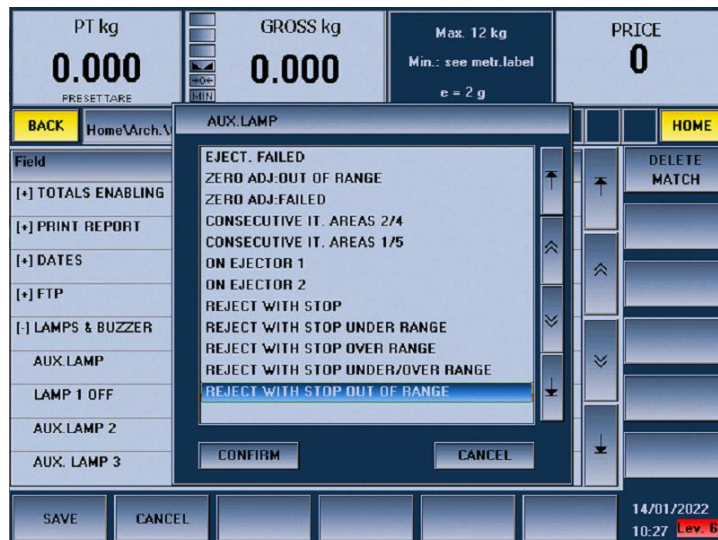


Figure 2-103 - Window for choosing the cause of lamp ignition

The last 5 options are those that allow you to light a lamp following a discarded and stopped piece.

After selecting the cause, it is necessary to set the lamp shutdown condition: since a warning window appears on the screen when a discarded piece is stopped, and the piece will only restart when the operator has removed the piece and confirmed the window, thus restoring optimal working conditions, it is advisable to choose the RESET CONDITION as the lamp shutdown option.

Once these two parameters have been set, save the configuration and open the CONFIG.IO page to select the output to be used to light the lamp, making sure to select a free one (for Galaxi, an option that could be considered is input 5).

Now the software is configured and it will be sufficient to connect the lamp to the selected output and the confirmation button to the IN_MARCIA input.

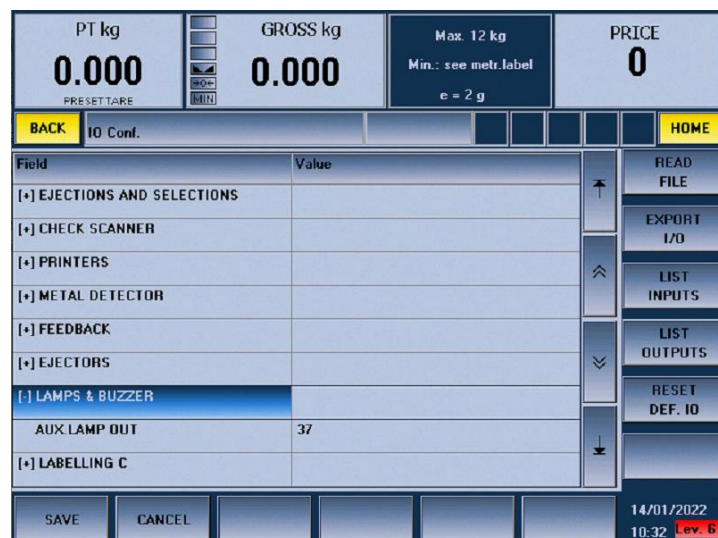


Figure 2-104 - Selecting the lamp output

2.14.44 TRACK & TRACE

VERSION: 8.0.32

2.14.44.1 Modification Description

The TRACK & TRACE function allows each weighed and labelled unit (PRODUCT, CARTON and BANK) to be associated with a unique code extracted from previously enhanced database tables.

The functionality will be available as an option in the price list.

2.14.44.2 Technical features

- TrackTrace codes for PRODUCT, TOTAL 1 and TOTAL 2 can be stored in database tables. Each code is associated with a numerical index, defined as "category", which may range from 0 to 9.
- The graphic display of these codes is not managed on the weighing line.
- Insertion, reading and deletion operations can only be managed by network commands and only when the line is not being worked on. See the "Communication Protocol" document for more details on network commands.
- Each table can contain a maximum value of 10000 codes.
- Each code is alphanumeric and can have a maximum length of 25 characters.
- No check is made on the uniqueness of the alphanumeric codes written within the table.
- The sorting of codes within the list is chronological (the first item entered is placed at the top of the list and will be the first to be used).
- Each time a PRODUCT, TOTAL 1 or TOTAL 2 is weighed, the first code in the relevant table is associated with the weighing/label and is then deleted from the table.
- There is no provision for the management of the recovery of any "Track & Trace" code against reversals on the weighing line.
- Each PLU has the possibility of setting the type of "Track & Trace" to be used (PRODUCT, TOTAL 1 and TOTAL 2). The types can also be activated simultaneously on the same PLU.
- A code reserve value can be set for each PLU for Track & Trace. Once the codes in a table fall below the reserve threshold, an event will be sent via the network whose purpose is to alert the management system that the codes are about to run out. The weighing line will not show any warning dialogues and will continue its machining operations.
- Whenever a table, whose codes are managed by the PLU being processed, completely runs out of codes within it, an event is sent via the network whose purpose is to alert the management system of the running out of codes. At the same time, the line will show a dialogue on the screen with a message of code exhaustion error, stopping processing.
- Each time a machining operation starts, a check is made on the number of codes contained in the "Track & Trace" tables managed by the operation itself.

If one or more tables, managed by the machining process, are empty or in reserve, the line will display an error dialogue on the screen, preventing entry into the machining process. At the same time, a network event will be sent to the management system as an exhausted code warning.

- No constraint is applied to processing entry linked to the presence of an active network connection in the case of processing using "Track & Trace" codes.

N.B. If it is not possible to maintain an active network connection during processing, it is possible to keep track of the "Track & Trace" codes used through the appropriately configured "Record Weighing" function.

2.14.44.3 Parameters

If the TrackTrace option is active, the item "[+] TRACK TRACE" will be visible in the menu of the PLUs and WORK. By opening the menu, the following parameters will be available:

PARAMETER NAME	DESCRIPTION
ENABLE TRACK TRACE PROD	Parameter indicating whether the TrackTrace function is active for the product of the specific PLU. Possible values: YES NO
CATEGORY TRACK TRACE PROD	Parameter indicating the category to be used for product TrackTrace codes. It is not considered if the parameter "ENABLE TRACK TRACE PROD" is set to NO. Possible values: from 0 to 9;
RESERVE TRACK TRACE PROD	Parameter indicating the number of minimum product TrackTrace codes in the database, below which the terminal will send a reserve event reached. This parameter is not considered if the parameter "ENABLE TRACK TRACE PROD" is set to NO. Possible values: from 0 to 10000;
ENABLE TRACK TRACE TOT 1	Parameter indicating whether the TrackTrace function is active for total 1 of the specific PLU. Possible values: YES NO
CATEGORY TRACK TRACE TOT 1	Parameter indicating the category to be used for TrackTrace codes of total 1. It is not taken into account if the parameter "ENABLE TRACK TRACE TOT 1" is set to NO. Possible values: from 0 to 9;
RESERVE TRACK TRACE TOT 1	Parameter indicating the number of minimum TrackTrace codes of total 1 present in the database, below which the terminal will send a reserve reached event. This parameter is not considered if the parameter "ENABLE TRACK TRACE TOT 1" is set to NO. Possible values: from 0 to 10000;
ENABLE TRACK TRACE TOT 2	Parameter indicating whether the TrackTrace function is active for total 2 of the specific PLU. Possible values: YES NO
CATEGORY TRACK TRACE TOT 2	Parameter indicating the category to be used for TrackTrace codes of total 2. It is not taken into account if the parameter "ENABLE TRACK TRACE TOT 2" is set to NO. Possible values: from 0 to 9;
RESERVE TRACK TRACE TOT 2	Parameter indicating the number of minimum TrackTrace codes of total 2 present in the database, below which the terminal will send a reserve reached event. This parameter is not considered if the parameter "ENABLE TRACK TRACE TOT 2" is set to NO. Possible values: from 0 to 10000;

2.14.45 NEW DATE FORMATS AND WEEK NUMBER MANAGEMENT

VERSION: 8.0.37

2.14.45.1 Modification Description

This modification adds the possibility of using 7 new date formats and the possibility of setting the number of the day to be associated with Monday.

2.14.45.2 Technical features

The formats that will be added are:

- N (day in the week)
- N WK (day in week and week in year separated by space)
- N.WK (as above, but separated by a dot)
- N/WK (as above, but separated by slash)
- NWK (as above, but without any separator character)
- MON-DD-YYYY
- MON(ENG)-DD-YYYY

Within the PLU menu, a parameter has been added to the [+] DATE set (MONDAY NUMBER OF THE WEEK) which indicates which day, on a scale of 0 to 7, is to be associated with Monday. On the basis of this parameter, the number N to be inserted in the new format is calculated.

The parameter MONDAY NUMBER OF THE WEEK has default value 1, i.e. the counting of the days of the week will start on Monday (Monday 1, Sunday 7).

If MONDAY NUMBER OF THE WEEK = 0 then the days of the week will go from 0 to 6 (Monday =0 , Sunday = 6).

Otherwise the days of the week will go from 1 to 7.

ATTENTION: The number of the week will not be affected in any way by this setting but will continue to be calculated according to ISO 8601.

Example.

MONDAY NUMBER OF THE WEEK = 1

In this case the days of the week will be numbered as follows:

Monday 1

Tuesday 2

Wednesday 3

Thursday 4

Friday 5

Saturday 6

Sunday 7

So if for example on the label the day 11/03/2021 is to be printed which is a Thursday in N day format, what you will get will be 4.

Example 2

MONDAY NUMBER OF THE WEEK = 3

In this case the days of the week will be numbered as follows:

Monday 3

Tuesday 4

Wednesday 5

Thursday 6

Friday 7

Saturday 1

Sunday 2

This would be the case if you wanted to start counting the week from Saturday, so if for example on the label the day 11/03/2021 is to be printed which is a Thursday in N day format, what you would get would be 6.

Example 3

MONDAY NUMBER OF THE WEEK = 0

In this case the days of the week will be numbered as follows:

- Monday 0
- Tuesday 1
- Wednesday 2
- Thursday 3
- Friday 4
- Saturday 5
- Sunday 6

If, for example, 11/03/2021 is to be printed on the label, which is a Thursday in N day format, then what you will get is 3.

2.14.46 BACKUP AND RESTORE CREATION

VERSION: 8.1.1

2.14.46.1 Modification Description

This change adds the possibility of backing up the entire user folder. This folder can later be restored in its entirety or even in sectors.

2.14.46.2 Technical features

From the Hom\Arch\Config\BacFiles page you can back up the user folder. Such a copy will be made in hd0\root\backup. It will only be possible to have one backup copy at a time, so each time a backup is made the previous copy will be overwritten.

To perform the backup, simply press the F1("BACKUP DOM") button as shown in Figure 2-105.

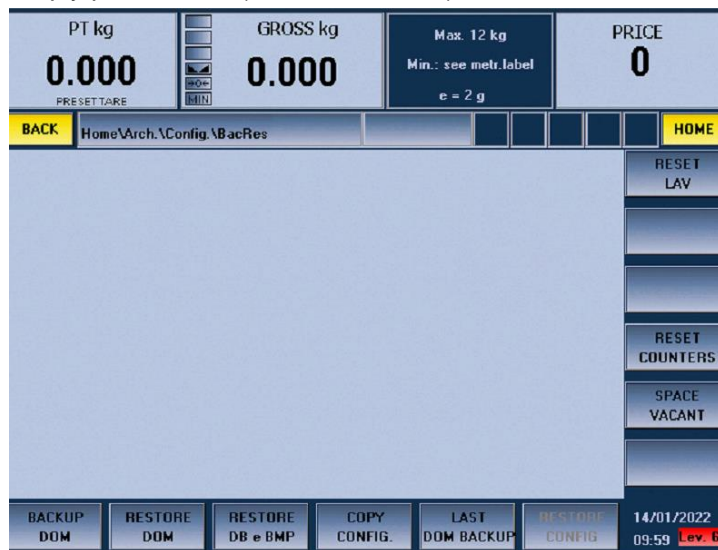


Figure 2-105 - Backup Restore page

From the same page, by pressing the F2 button ("RESTORE DOM") it will be possible to restore the entire backup previously carried out. ATTENTION: In order to also restore the CONFIG.CFG file, it will be necessary to press the calibration button. The machine will signal this need.

Through the F3 button ("RESTORE DB AND BMP") it will be possible to restore only the user\DB and user\BMP folders.

If you wish to restore only the CONFIG.CFG file, you will first need to press the physical calibration button and then the F6 ("RESTORE CONFIG") button.

2.14.47 INPUT AND OUTPUT PROGRAMMABILITY

VERSION: 8.1.12

2.14.47.1 Modification Description

This modification serves to integrate a function already present on all machines, but in a limited way. In particular, this modification allows the mapping of all inputs and outputs to be changed. This extensive possibility is only available on the GALAXI HS, on all other models there are some hardware limitations.

2.14.47.2 Technical features

The path Home\Arch.\Config.\Term gives access to menus and parameters that allow the programming of the metrological part of the terminal and to specific pages for the hardware test of the line and its peripherals.

Access to this route is restricted to level 6, i.e. only to specialised personnel such as installation technicians and/or authorised personnel.

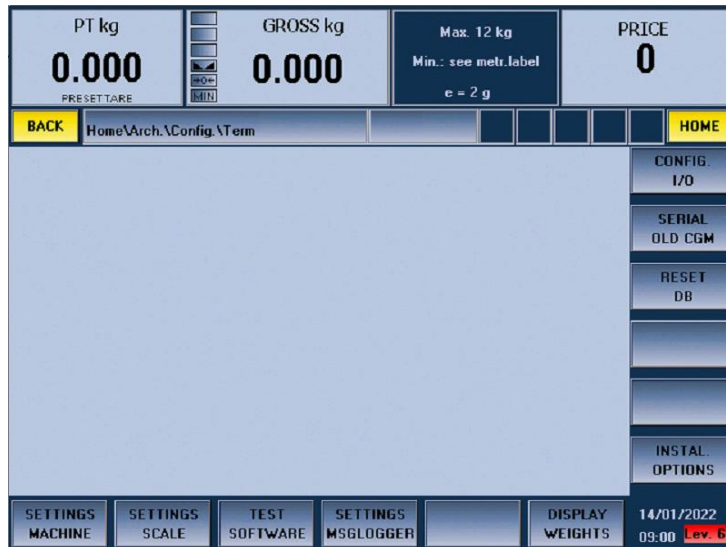


Figure 2-106 - Entry page to the diagnostics page

Pressing the "CONFIG I/O" button displays a page that allows you to perform certain operations on the machine's I/O.



Figure 2-107 - Config IO page

In order to be able to reprogram I/O, the current configuration must first be exported. This operation is performed by pressing the "EXPORT I/O" button. Once this button has been pressed, if all has been successful a dialogue box will appear confirming the successful export. At this point, you will need to connect to the machine using an ftp client (e.g. Filezilla) and download the file "IOEXPORT.CFG" located in the "/hd0/root/archives/USER/CONFIG/IO" folder. This file contains a list of all inputs and outputs of the machine. If, for example, you wanted to move the reset input, which by default is on input 4, to input 5, which by default is associated with the scrap tank sensor, you would need to find out which functionality input 5 is associated with by default and swap the two numbers.

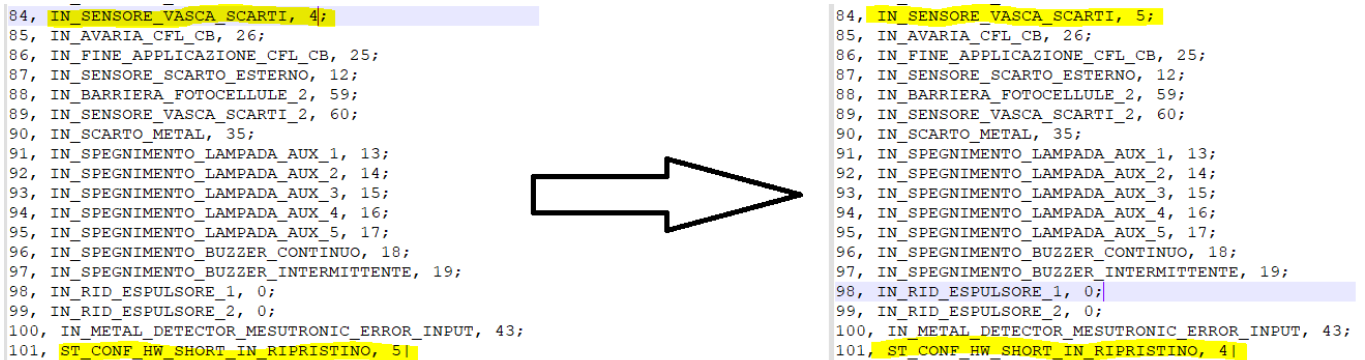


Figure 2-108 - Example of reprogramming

Once the exchange has been made, it will be necessary to download the modified file onto the machine in overwriting the existing file. At this point, from the Config IO page shown at Figure 2-107, press the "READ FILE" button, which will bring up a window containing a list of files including the file you have just modified (IOEXPORT.CFG). Select this file and press confirm. In this way, the machine will reprogram inputs and outputs based on what is written inside the file.

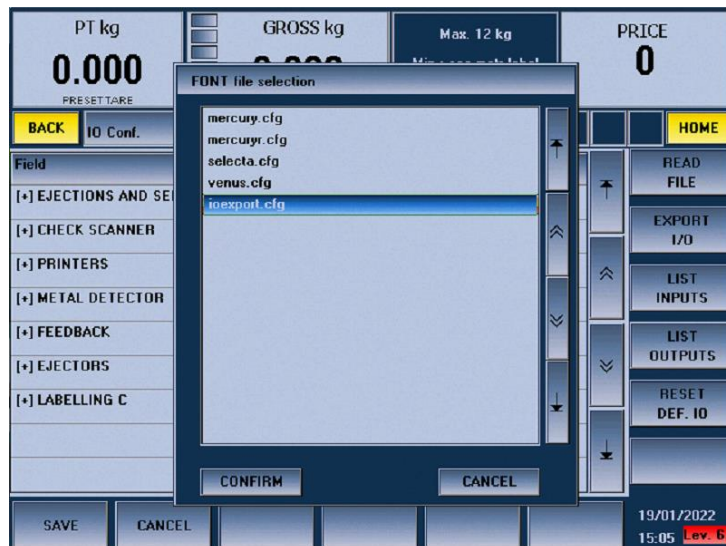


Figure 2-109 - IO file selection

You can check that the operation has had an effect by going to the machine's Diagnostics page.

In summary, the operations to be carried out in sequence are:

- Export the file containing the IOs by pressing the "EXPORT I/O" button (F8) on the IO Config page
- Download to a PC via filezilla the file IOEXPORT.CFG present in the machine folder "/hd0/root/archives/USER/CONFIG/IO"
- Edit the file and save it
- Download the modified file into the machine
- Reload the file by pressing the "READ FILE" button (F7) on the Config IO page
- Select the file IOEXPORT.CFG from the list
- Confirm
- Check on the diagnostics page that everything was successful.

2.14.47.3 Blocked inputs and outputs

As mentioned in the introduction, it is only possible to reprogram all inputs and outputs as desired on the Galaxi HS. On all other machines, some I/O are blocked. The following is a list of all I/O that cannot be reprogrammed.

- Enabling by prior machine
- Fault/block
- Running line
- Assist blow
- Applicator motor
- Blow
- Clutch
- Suction
- Diverter
- Enable printer
- Infeed belt guides
- Preliminary belt motor
- Scale belt motor
- Labelling machine belt motor
- Ejector 1
- Product label ready
- Printer fault
- Emergency
- Reset
- Entrance photocell
- Scale photocell
- Photocell labelling

- Economy photocell
- Pre photocell
- Enabling downstream machine
- Applicator hold sensor
- Restart button
- Starting
- Stopping
- Pressure switch