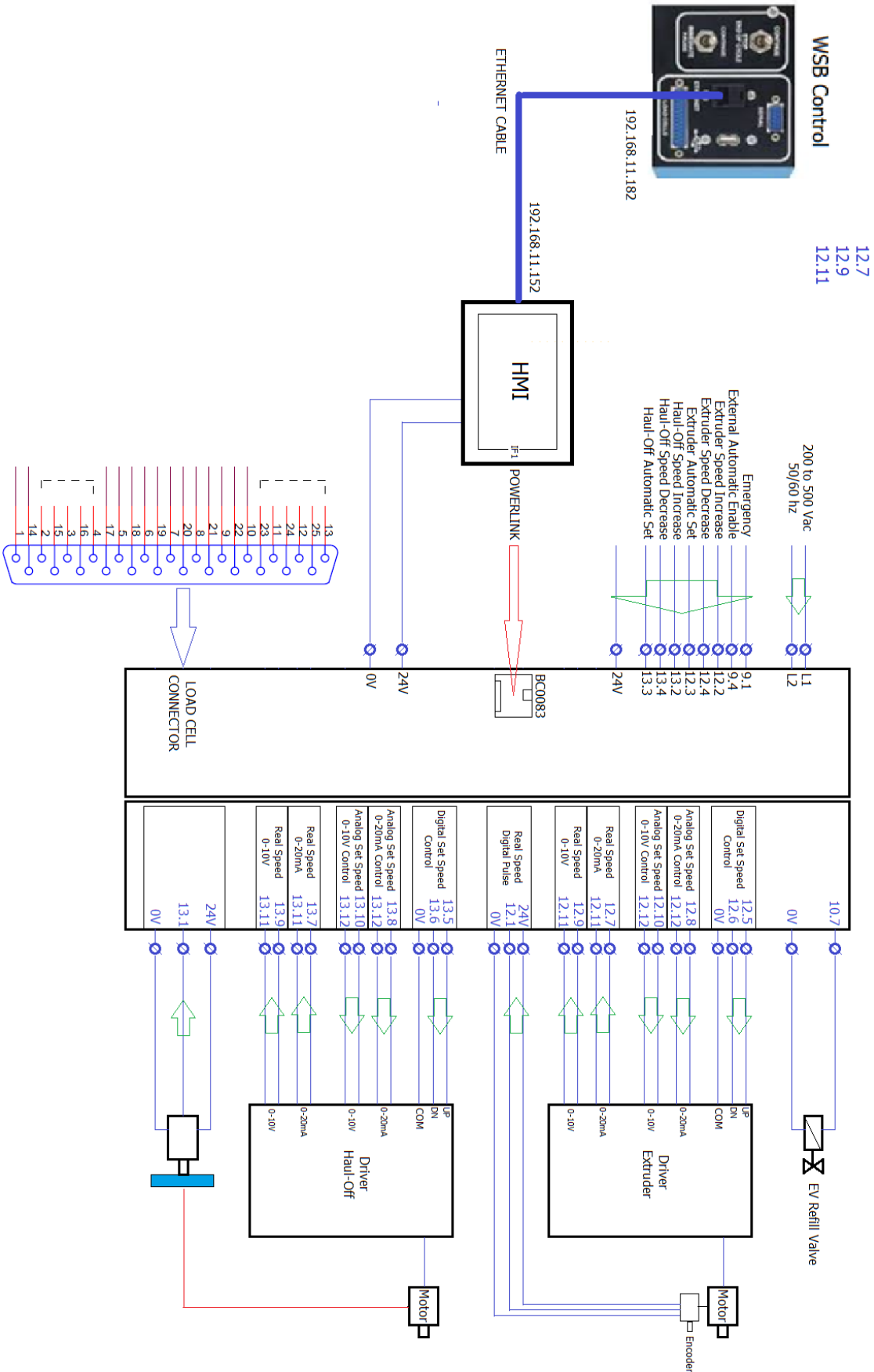
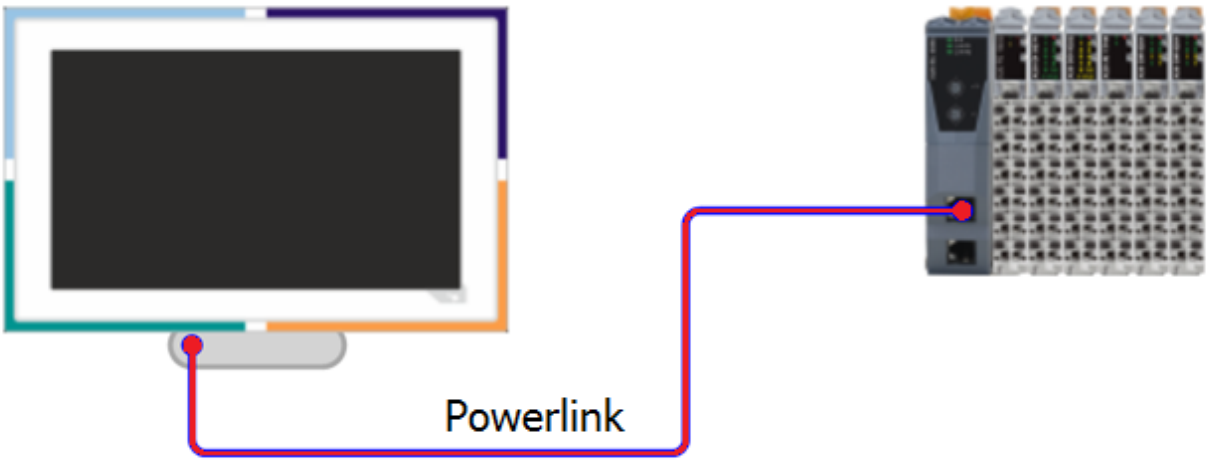
WSB + LIW + OPXS-KIT-M-10



Hardware configuration:

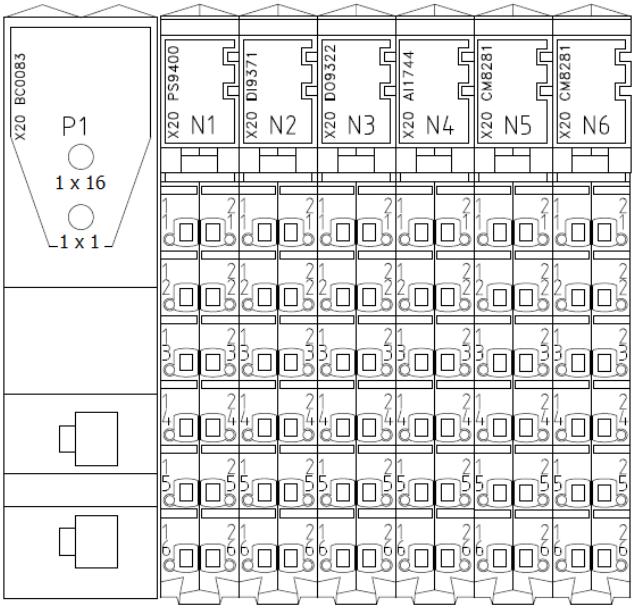
HMI 10"
Touchscreen

PLC Modules



Powerlink Node setting:

X20-BC0083 = 11H	Extruder "A"
X20-BC0083 = 12H	Extruder "B"
.....	
X20-BC0083 = 15H	Extruder "E"



Syncro Connections:

PS9400				
PIN	Description		Description	PIN
11				21
12				22
13				23
14	bridge		bridge	24
15	24Vdc			25
16	0Vdc			26

DI9371				
PIN	Description		Description	PIN
11	External Emergency		Trim Breaking	21
12	Pump Motor Thermal Alarm		Automatic Enable	22
13	free		free	23
14	free		free	24
15	Loader sensor level		Loading Request Sensor	25
16	free		free	26

MAGUIRE SYNCRO

DO9322				
PIN	Description		Description	PIN
11	Alarm ON		Trim Breaking	21
12	Pump Motor Thermal Alarm		Automatic Enable	22
13	free		free	23
14	free		free	24
15	Loader sensor level		Loading Request Sensor	25
16	free		free	26

AI1744				
PIN	Description		Description	PIN
11	Load-Cell 1 Excitation "+"		Load-Cell 2 Excitation "+"	21
12	Load-Cell 1 Sense "+"		Load-Cell 1 Sense "+"	22
13	Load-Cell 1 Signal "+"		Load-Cell 2 Signal "+"	23
14	Load-Cell 1 Signal "-"		Load-Cell 2 Signal "-"	24
15	Load-Cell 1 Excitation "-"		Load-Cell 2 Excitation "-"	25
16	Load-Cell 1 Sense "-"		Load-Cell 2 Sense "-"	26

CM8281				
PIN	Description		Description	PIN
11	Pulse Extruder Rotation	Digital input	Extruder Speed Increase	21
12	Extruder Automatic Selector	Digital input	Extruder Speed Decrease	22
13	Extruder Speed Increase	Digital output	Extruder Speed Decrease	23
14	Extruder Real Speed	mA	Extruder Speed Control	24
15	Extruder Real Speed	Volt	Extruder Speed Control	25
16	COM	0V	COM	26

CM8281				
PIN	Description		Description	PIN
11	Pulse Haul-Off Encoder	Digital input	Haul-Off Speed Increase	21
12	Haul-Off Automatic Selector	Digital input	Haul-Off Speed Decrease	22
13	Haul-Off Speed Increse	Digital output	Haul-Off Speed Decrease	23
14	Haul-Off Real Speed	mA	Haul-Off Speed Control	24
15	Haul-Off Real Speed	Volt	Extr Haul-Off Speed Control	25
16	COM	0V	COM	26

Interfaces with the Extrusion Line:

Step 1 .- Power Supply panel

Figure 2: Power supply

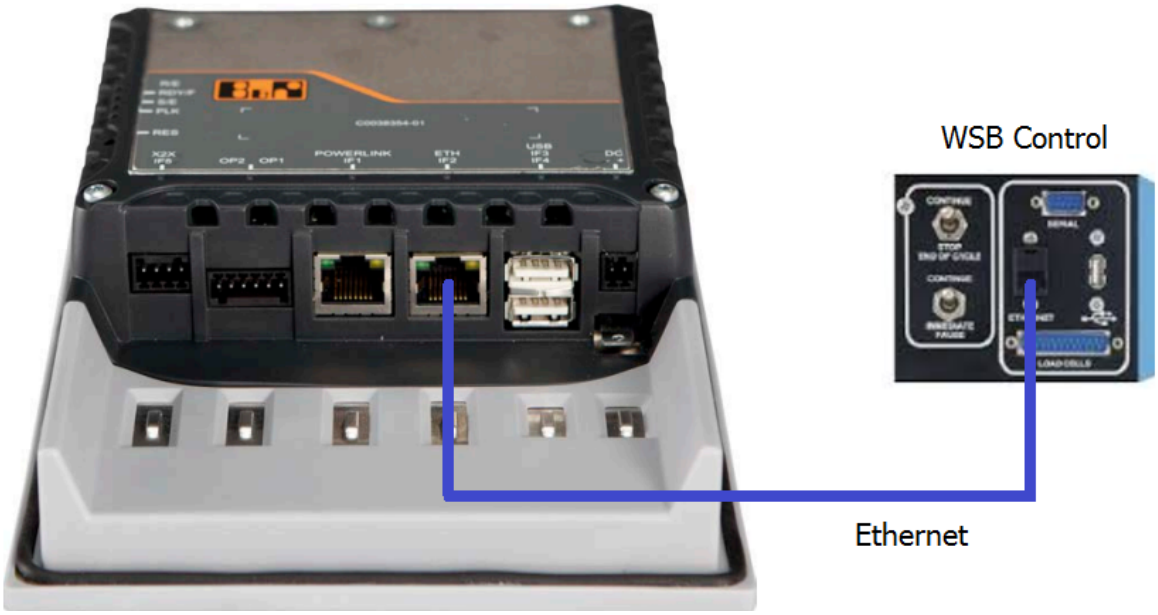
The pinout is listed in the following table and printed on the back of the Power Panel. The Power Panel has reverse polarity protection that prevents the supply voltage from being connected incorrectly and damaging the device. Overload protection must be provided by an external fuse (5 A, fast-acting).

Step 2 .- Powerlink Cable (RED color)

Interface	Pinout		
POWERLINK interface	Terminal	POWERLINK	
	1	RXD	Receive signal
	2	RXD\	Receive signal inverted
	3	TXD	Transmit signal
	4	Termination	Termination
	5	Termination	Termination
	6	TXD\	Transmit signal inverted
	7	Termination	Termination
	8	Termination	Termination
Shielded RJ45			

Table 3: POWERLINK interface - Pinout

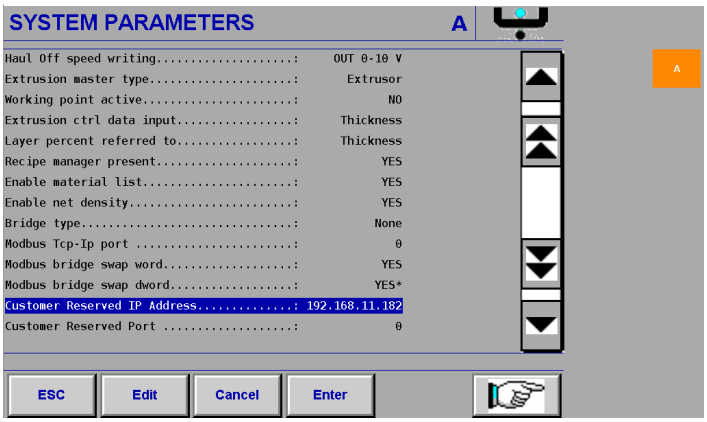
Step 3 .- Ethernet Cable



Syncro -Maguire Modbus TCP-IP connection

To enable this communication, set up the two systems appropriately, The IP Address of a Maguire controller must be set as a static IP address *192.168.11.182* **(*65)** , subnet *255.255.255.0*, gateway *192.168.11.151* and port *502*.

Syncro controller set "Customer Reserved IP Address *192.168.11.182* (same to WSB).

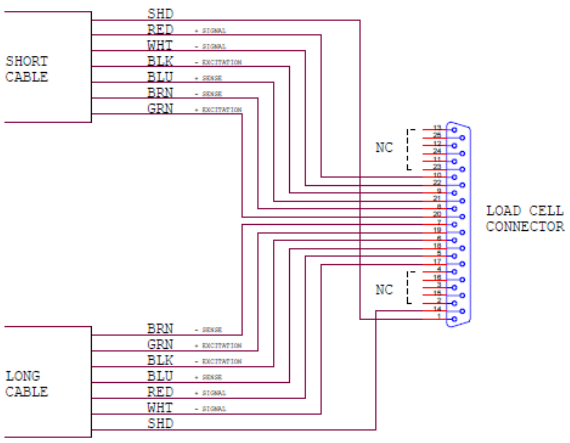


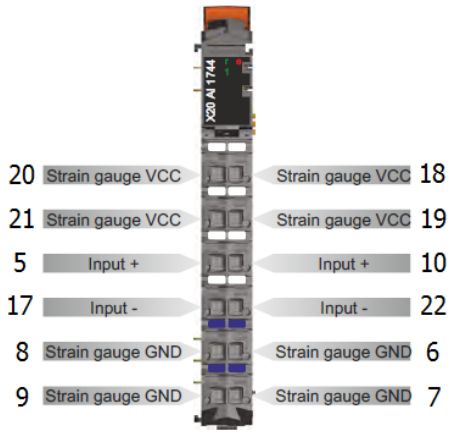
Step 4 .- Remove Line Master Control.

- Disconnected load-cell (DIN 25pin).
- Disconnected EV refill valve.

Step 4 .- Connected Load-cell DIN 25 to Syncro Control Box (Pin to Pin connection).

Electrical diagram syncro load-cell module:



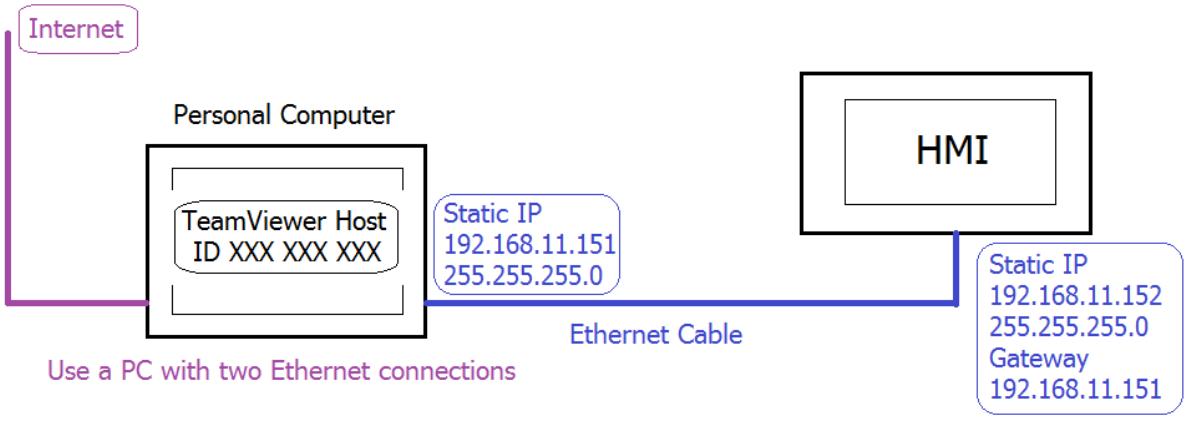


Step 5 .- General connections.

Power Supply :	200Vac to 500Vac , 50/60hz.
External Emergency :	24Vdc.
External Auotomatic Enable:	24Vdc.
Extruder Speed Increase :	24Vdc.
Extruder Speed Decrease :	24Vdc.
Extruder Automatic Set :	24Vdc.
Haul-Off Speed Increase :	24Vdc.
Haul-Off Speed Decrease :	24Vdc.
Haul-Off Automatic Set :	24Vdc.
Power supply HMI :	24Vdc

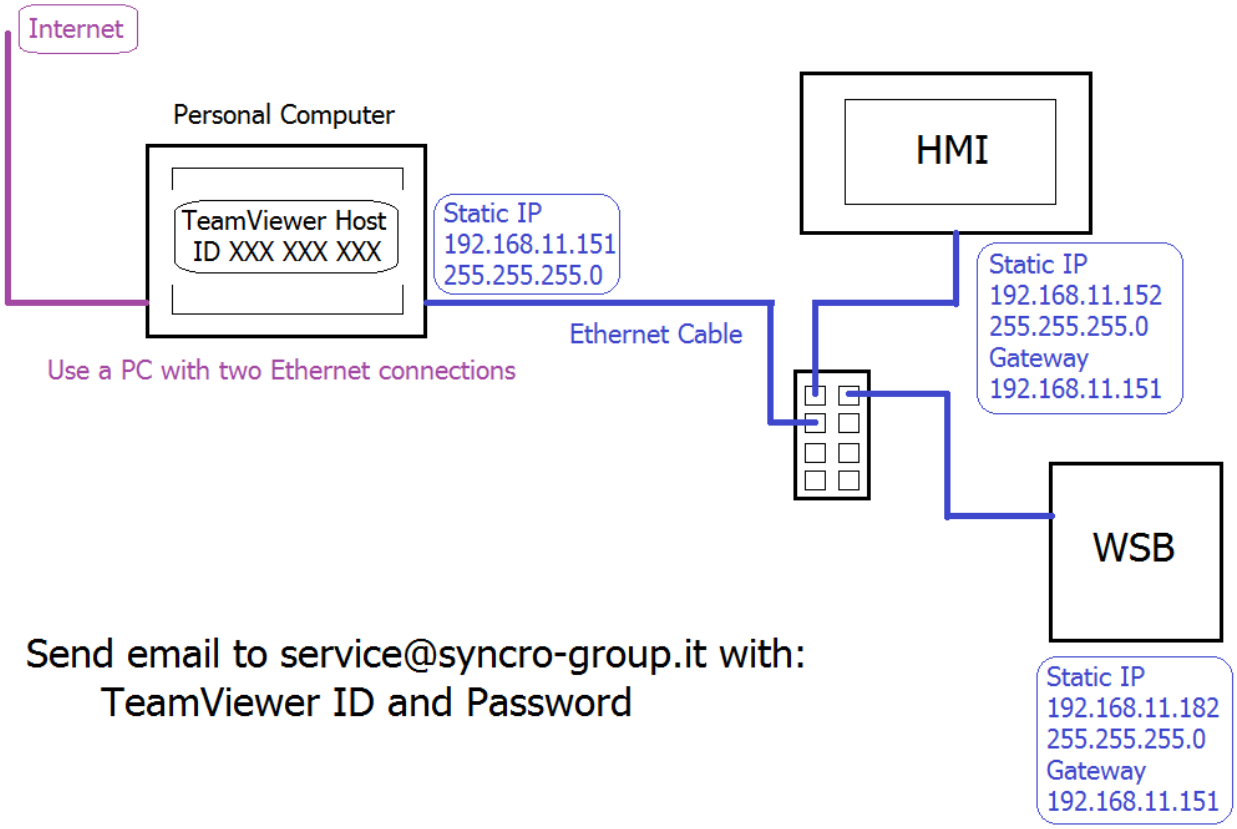
PC Connection for Service Support:

Example without HUB switches:



Send email to service@syncro-group.it with:
TeamViewer ID and Password

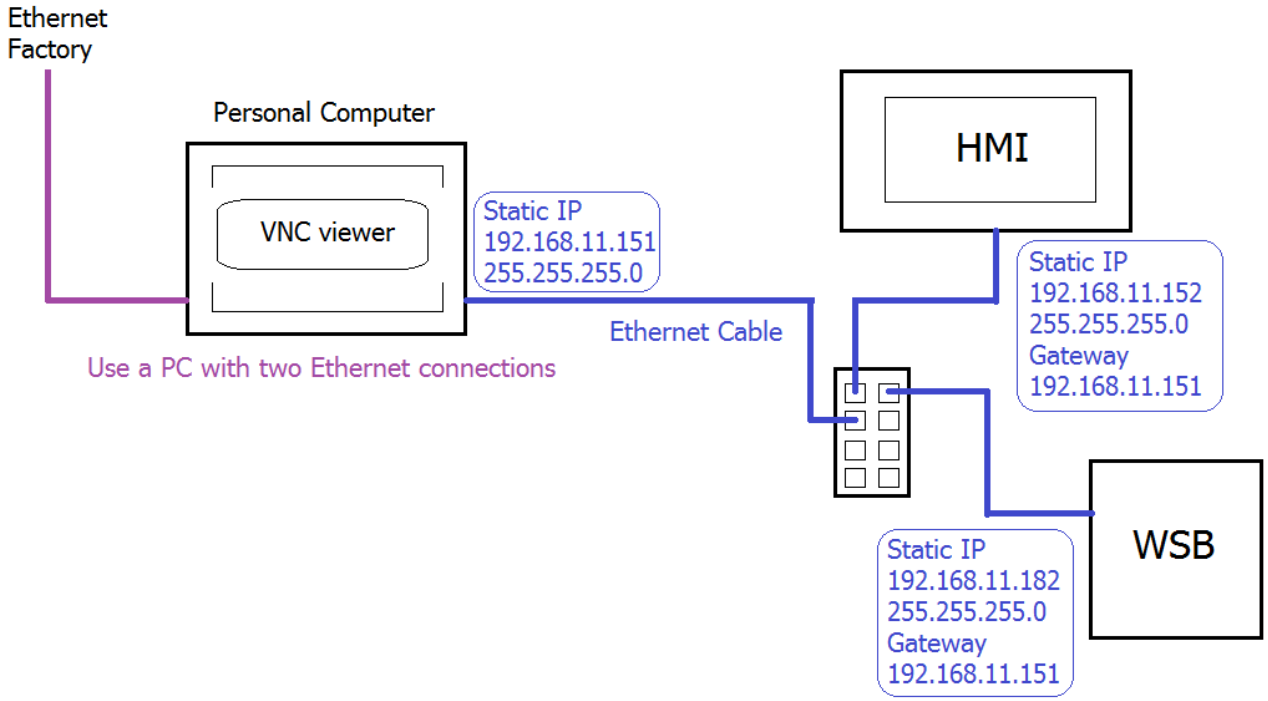
Example with HUB switch:



Send email to service@syncro-group.it with:
TeamViewer ID and Password

Install TeamViewer Host with Active VPN Service and Disable Firewall, please check before contacting the service that the Internet connection is working properly.

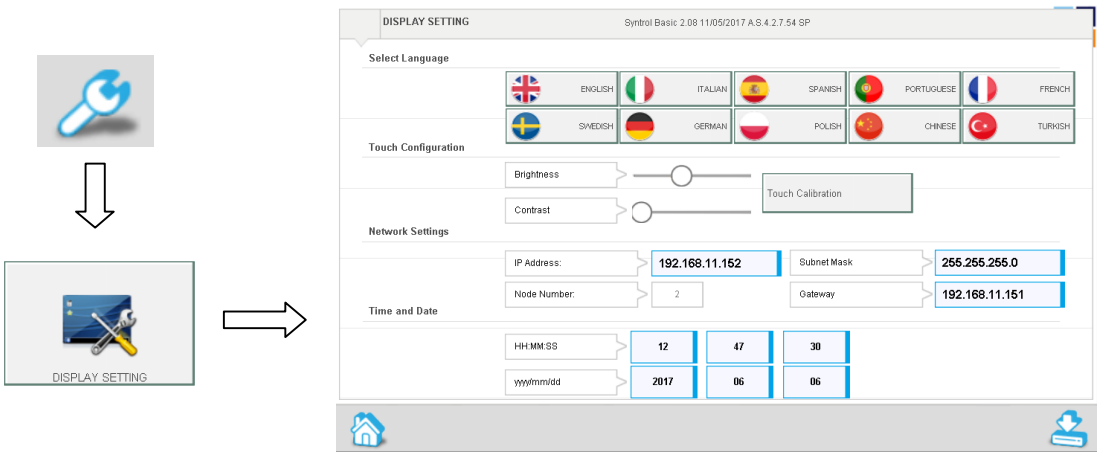
PC free remote connection:



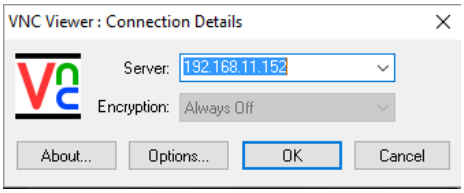
Use for VNC intranet connection and the Internet connection (service).

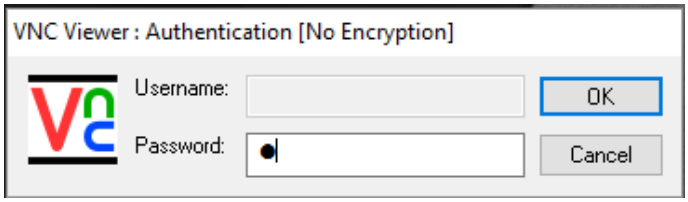
HMI defaut setting

IP	192.168.11.152
MASK	255.255.255.0
GATEWAY	192.168.11.151

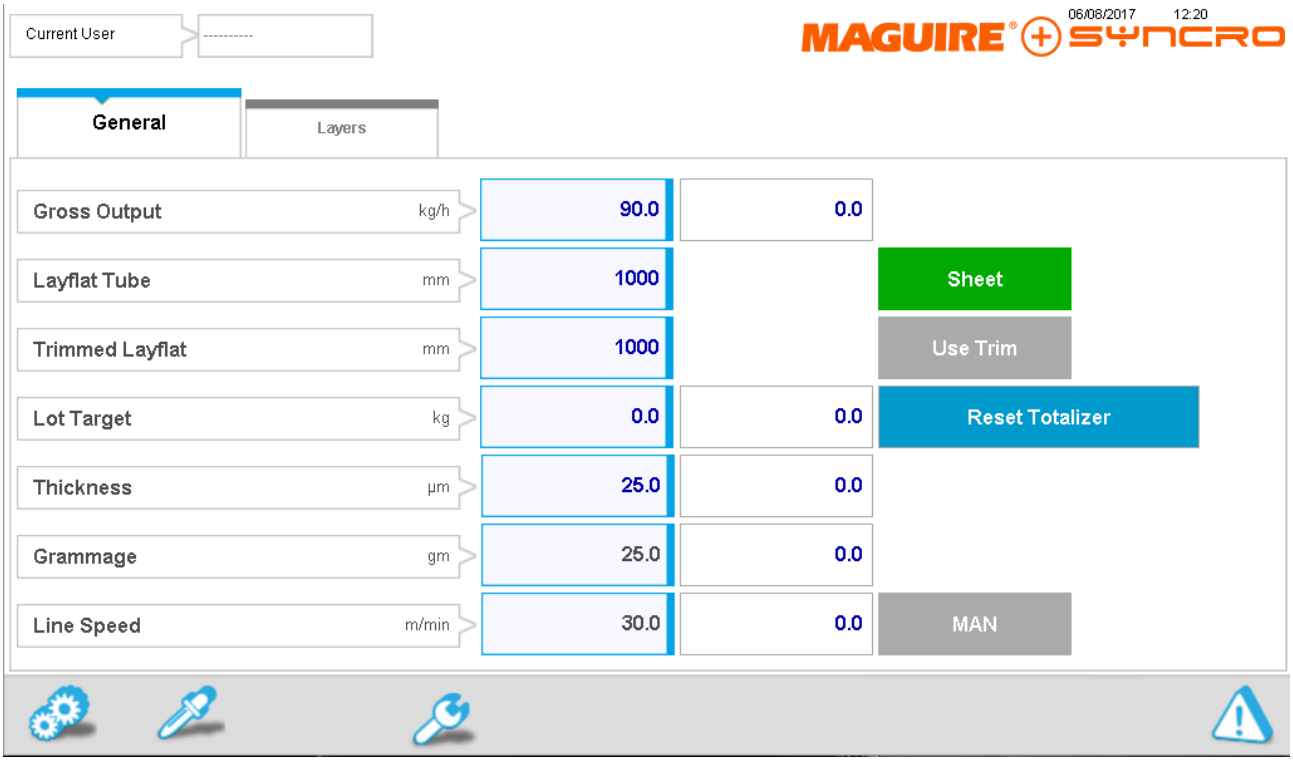


VNC connection **192.168.11.152**, password ="**b**" :

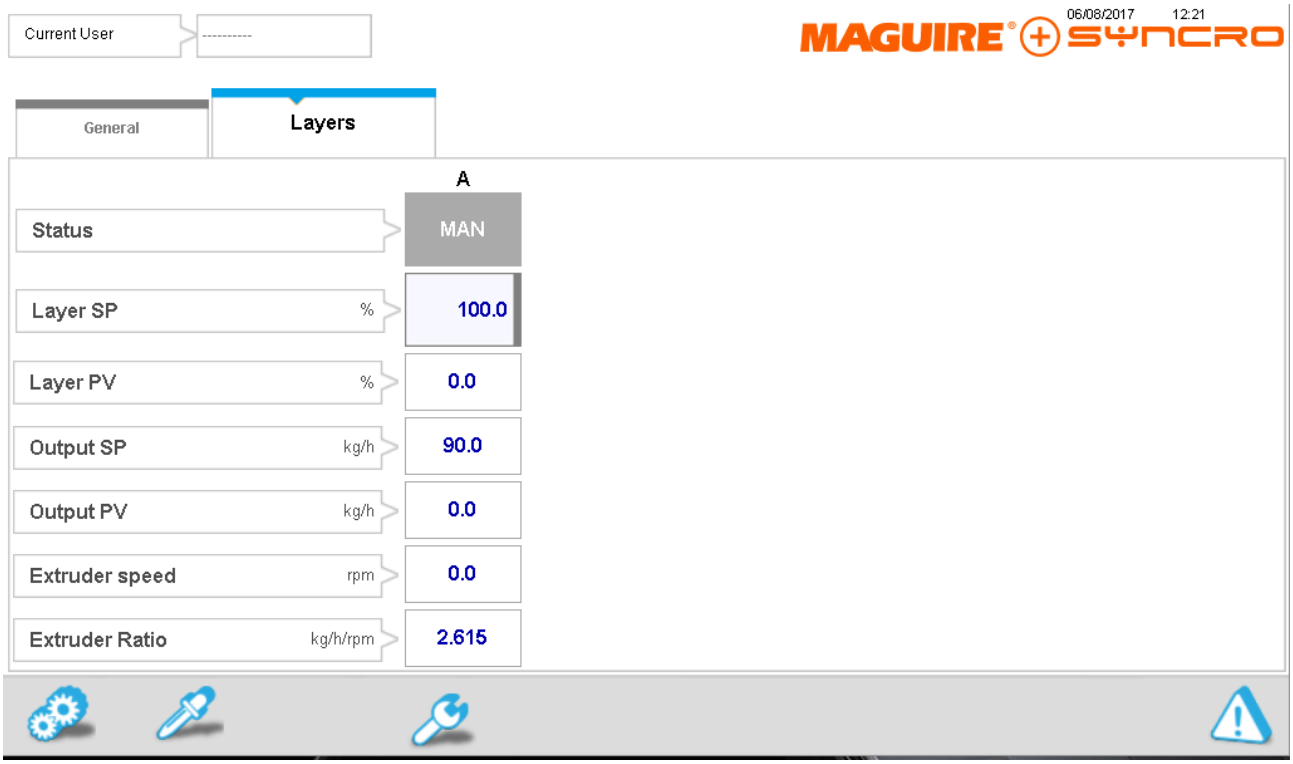




HMI Menu:

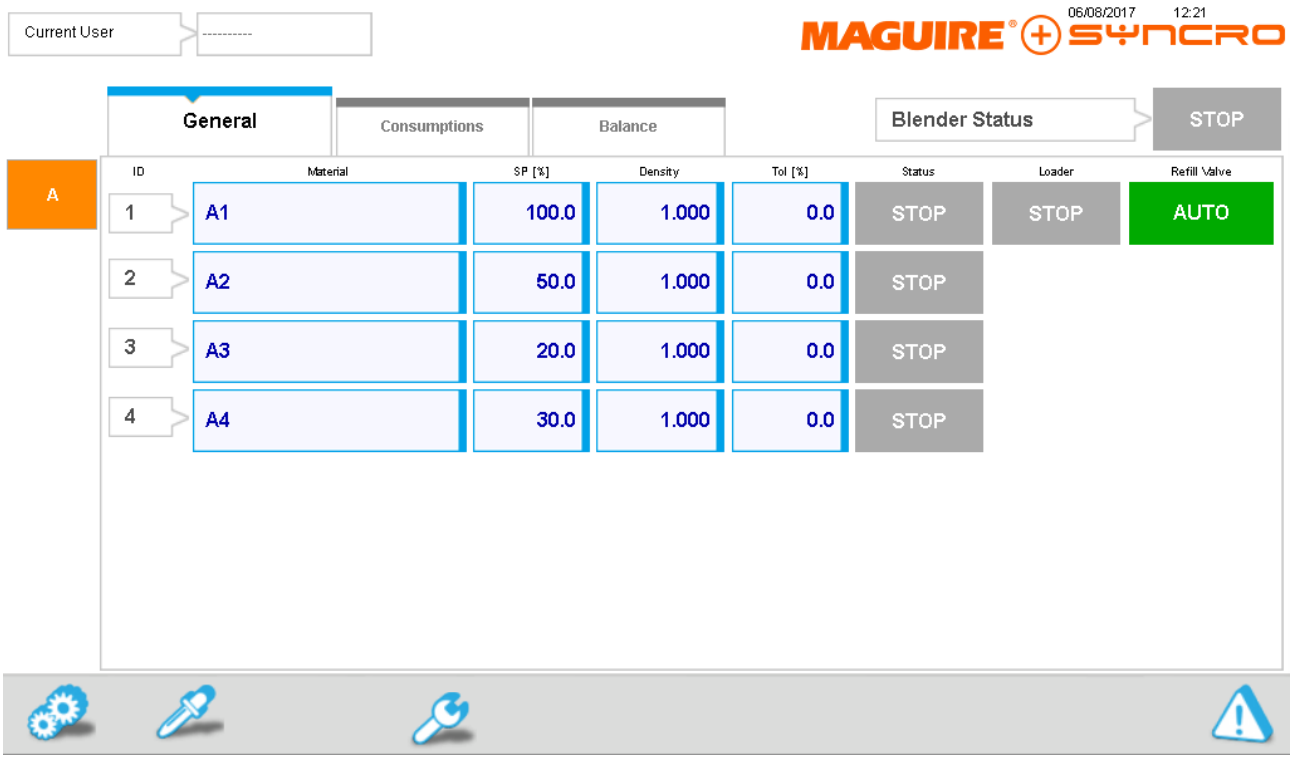

Current User

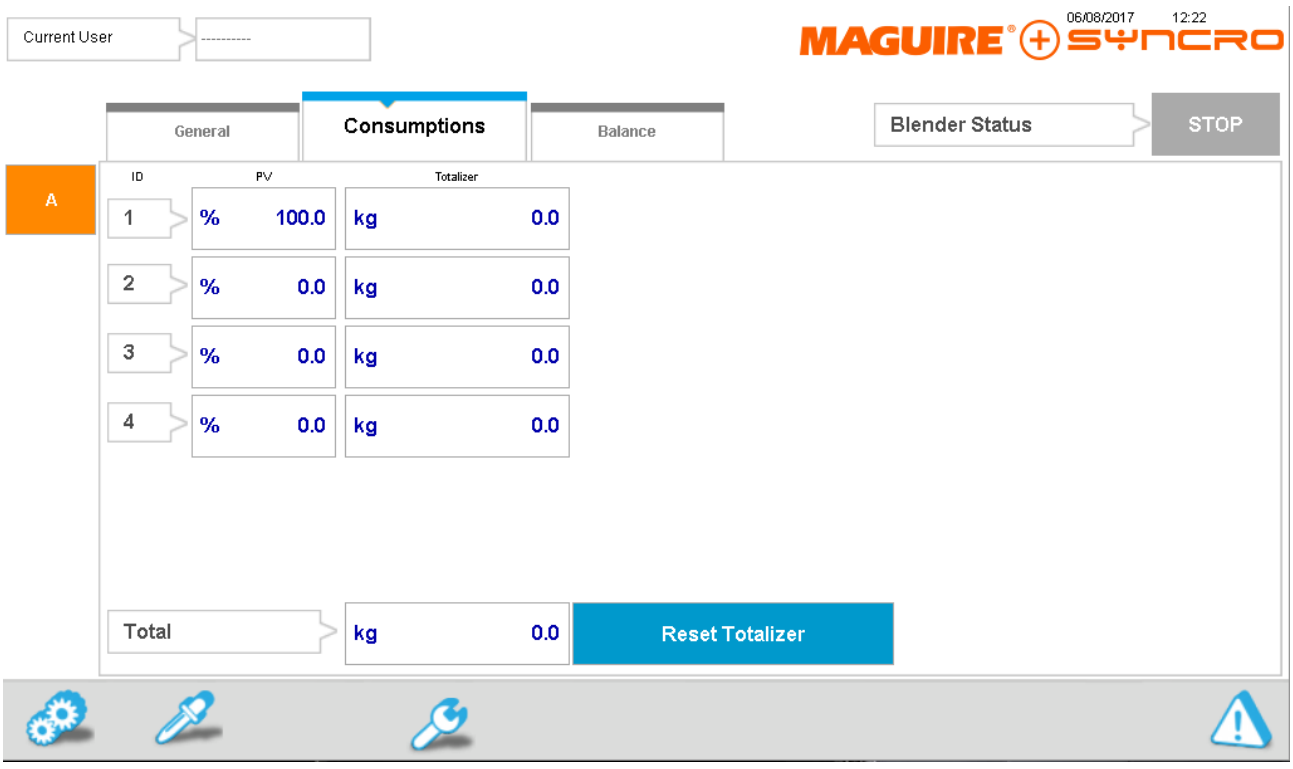
06/08/2017 12:20
General
Layers
Gross Output kg/h 90.0 0.0
Layflat Tube mm 1000 Sheet
Trimmed Layflat mm 1000 Use Trim
Lot Target kg 0.0 0.0 Reset Totalizer
Thickness µm 25.0 0.0
Grammage gm 25.0 0.0
Line Speed m/min 30.0 0.0 MAN

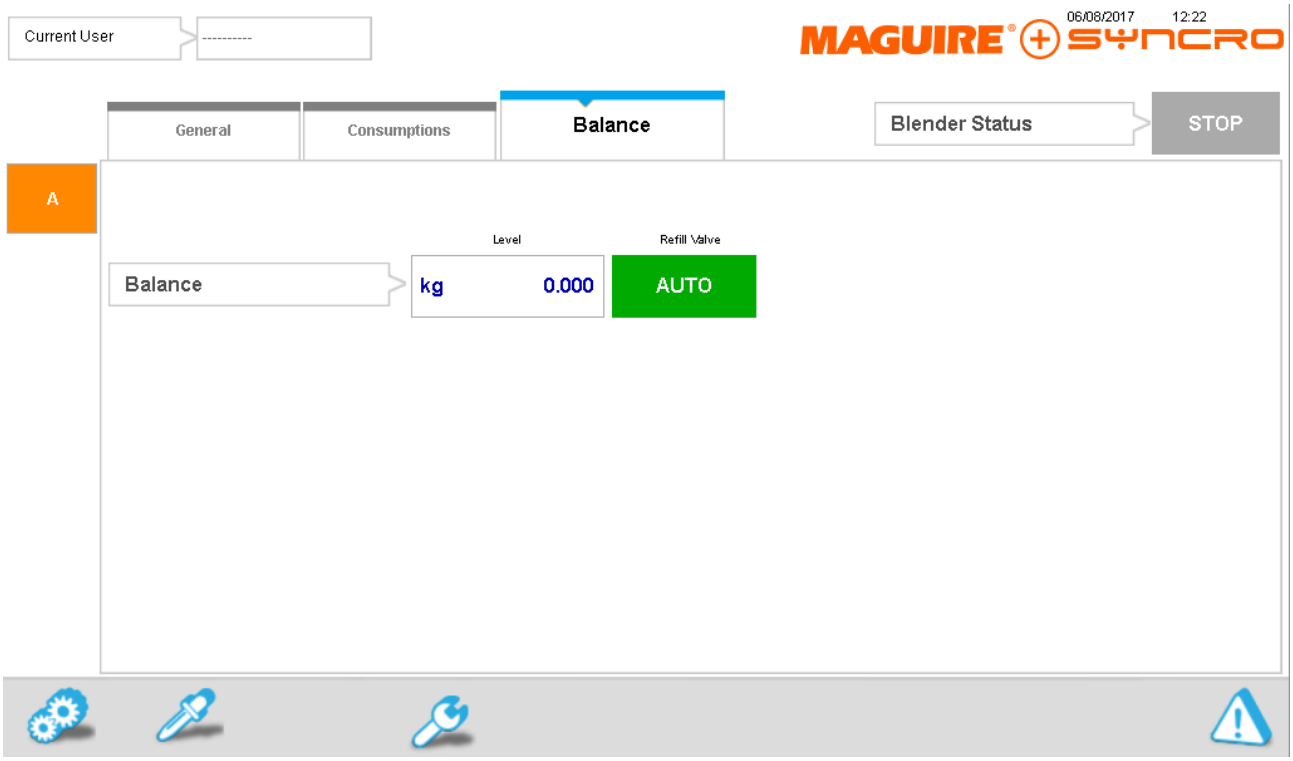

Current User

06/08/2017 12:21
General
Layers
A
Status MAN
Layer SP % 100.0
Layer PV % 0.0
Output SP kg/h 90.0
Output PV kg/h 0.0
Extruder speed rpm 0.0
Extruder Ratio kg/h/rpm 2.615

MAGUIRE SYNCRO

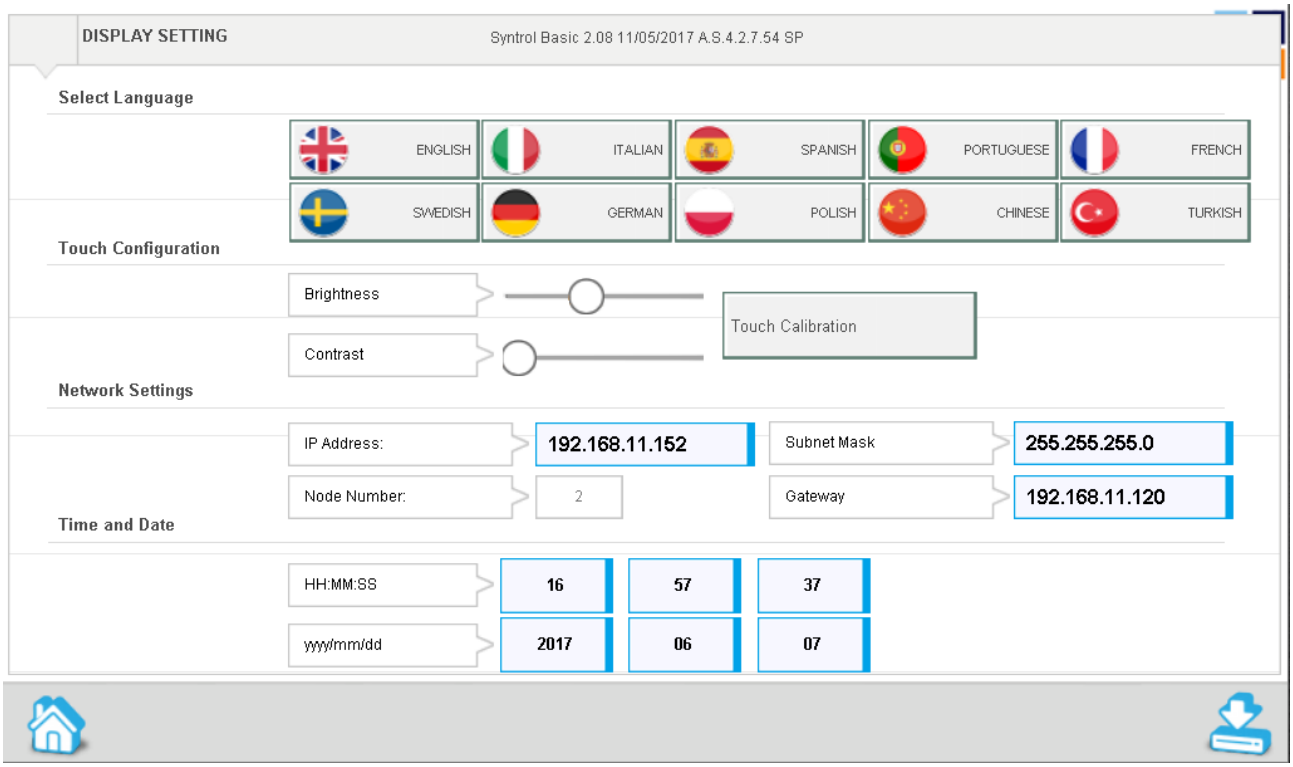





Current User

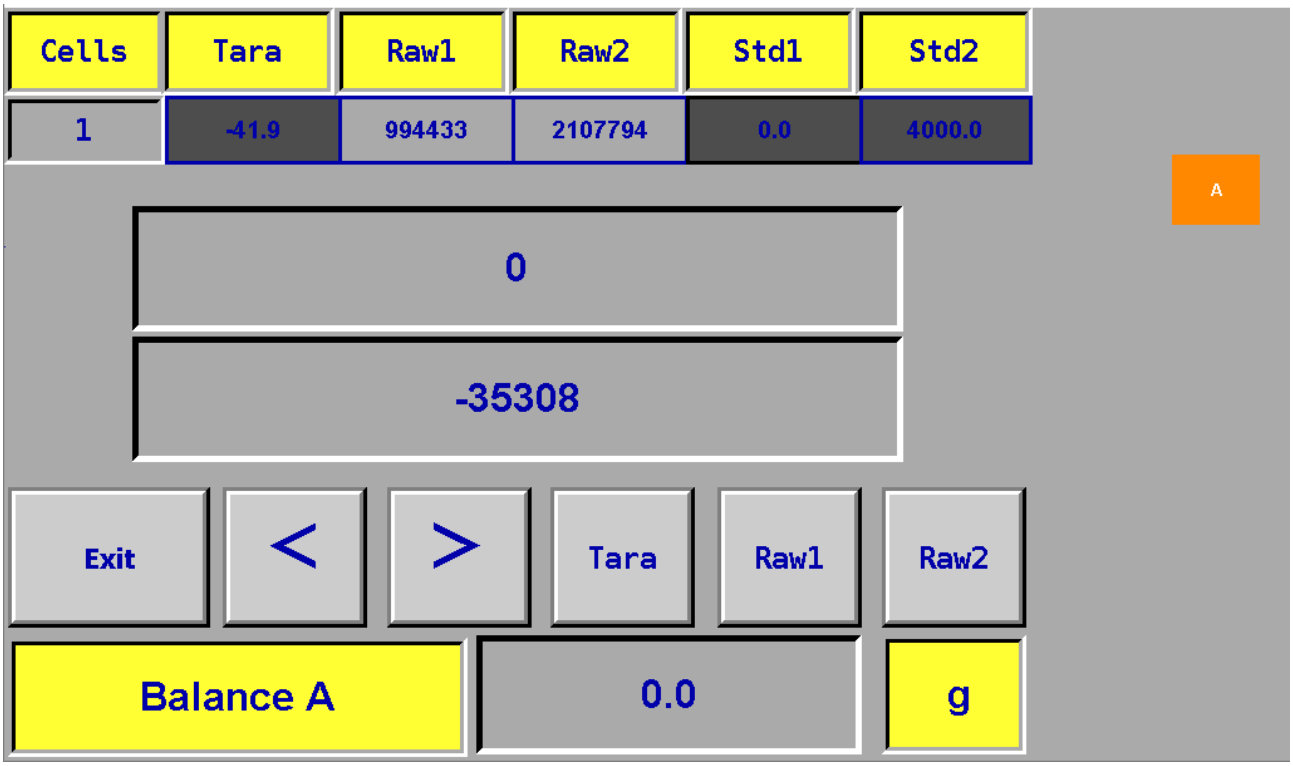
06/08/2017 12:22
General
Consumptions
Balance
Blender Status
STOP
A
Level
Refill Valve
Balance
kg
0.000
AUTO


06/08/2017 12:23
DISPLAY SETTING
BALANCE TUNING
SYSTEM SETTING
DOSING PARAMETERS
LOADING PARAMETERS
HAUL OFF PARAMETERS
EXTRUSION PARAMETERS
UNIT MEASURE


DISPLAY SETTING
Syntrol Basic 2.08 11/05/2017 A.S.4.2.7.54 SP
Select Language
ENGLISH
ITALIAN
SPANISH
PORTUGUESE
FRENCH
SWEDISH
GERMAN
POLISH
CHINESE
TURKISH
Touch Configuration
Brightness
Contrast
Touch Calibration
Network Settings
IP Address:
192.168.11.152
Subnet Mask
255.255.255.0
Node Number:
2
Gateway
192.168.11.120
Time and Date
HH:MM:SS
16
57
37
yyyy/mm/dd
2017
06
07

Load cells Calibration

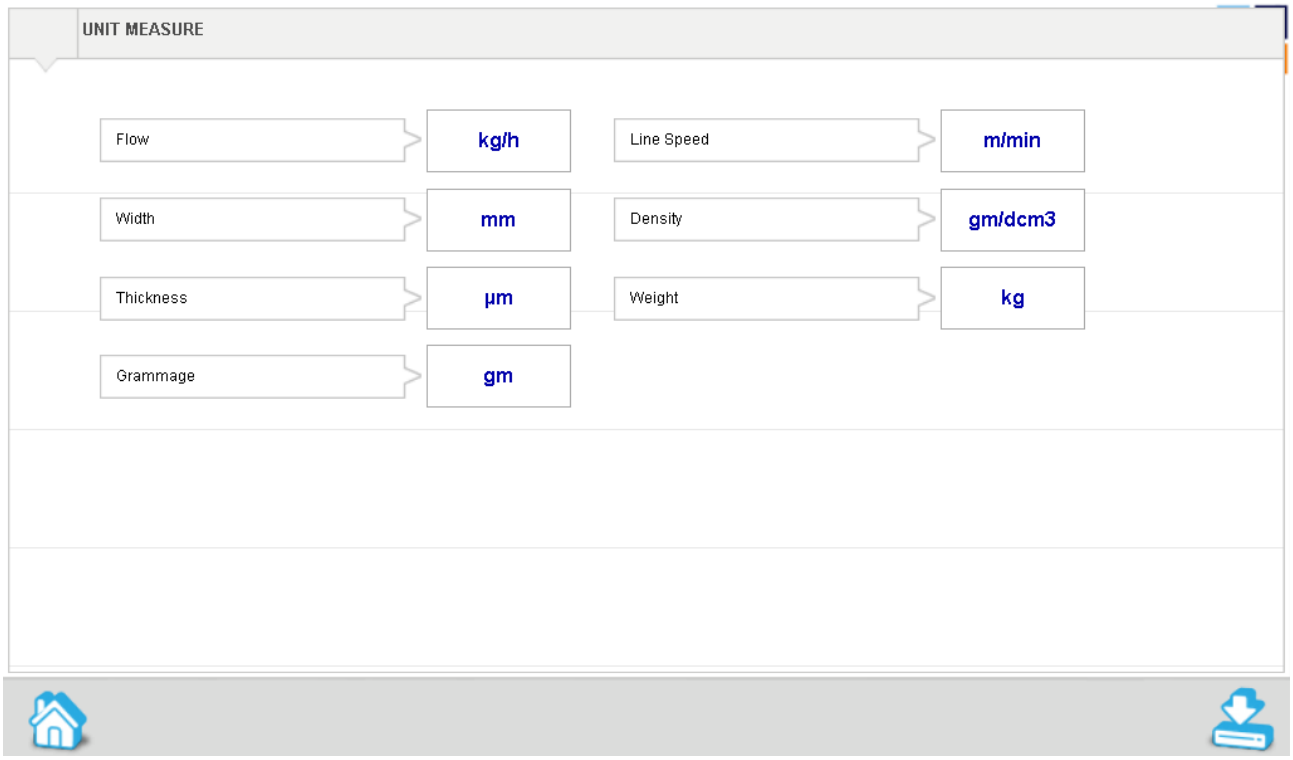
Press this button to go to this page:



With the left and right arrow you select the cell to calibrate. To make the ZERO weight calibration you have to empty the hopper and press the button RAW1 to acquire the weight 0. Be sure that the Number under the Std1 label is set to 0, otherwise push on it and set to 0. The button became dark and when the procedure is finished back to the original color. In order to calibrate the full scale weight put a sample weight in to the Hopper and press RAW2; under the STD2 label enter the sample weight in grams. If you have used a hook to hang the sample weight to the hopper, please add the hook's weight to value of Std2. For example you use a hook of 100g and a sample of 5000g, enter 5100g.
To calibrate the cell with a hook, is also possible to use the following procedure:

hang the hook to hopper and press the button RAW1 to acquire the weight 0. Be sure that the Number under the Std1 label is set to 0. Otherwise push on it and set to 0. The button became dark and when the procedure is finished back to the original color. Now you have to calibrate the full scale weight, for this you need to put a sample weight in to the hopper and press RAW2; under the STD2 label enter the sample weight in grams (without the hook's weight). Remove sample weight and press Tara button and the weight of the hook was acquire automatically from the system. Now you can select another Cell or press Exit and go back to the main Page.

UNIT MEASURE

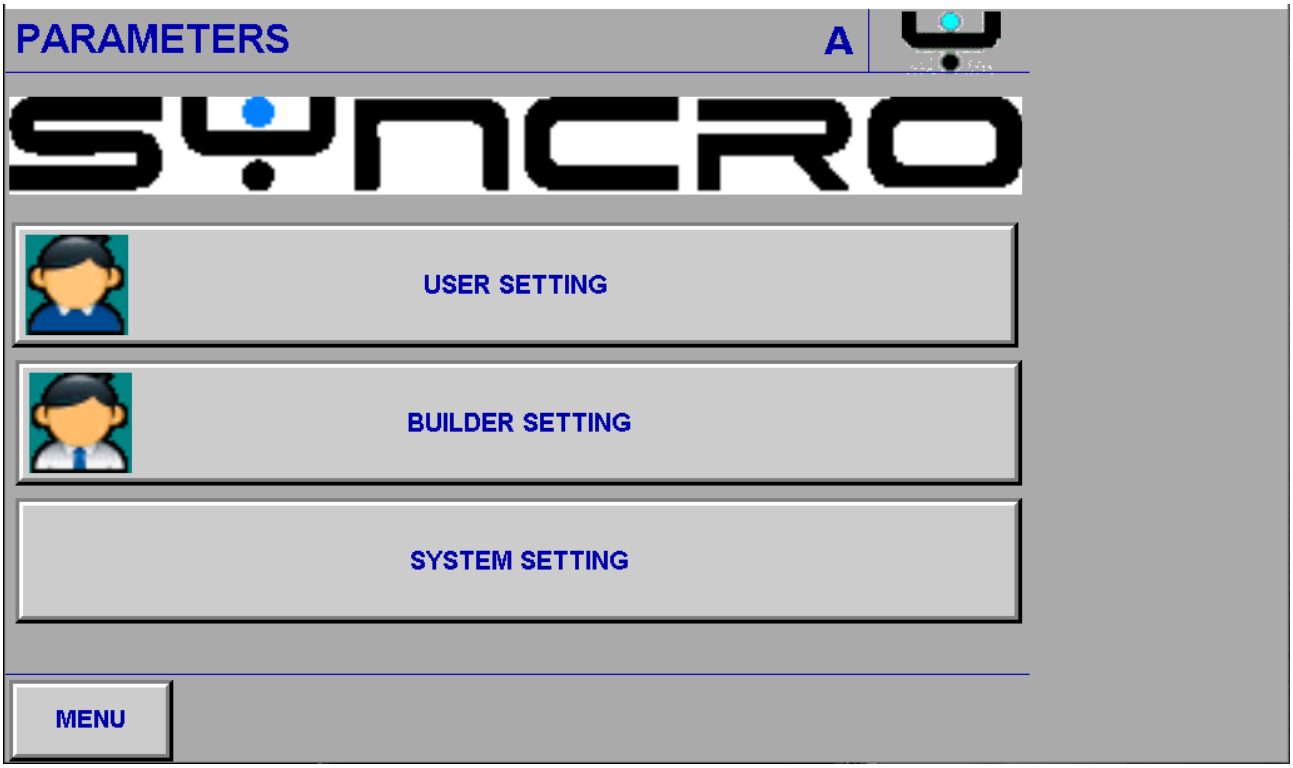


Press this button to go to this page:

- **USER SETTING**
  Here you can set the plant parameters at the user level and modify the parameters to better suit your production.

- **BUILDER SETTING**
  This contains the "USER" level parameters along with a series of parameters to be configured at initial start up.

- **SYSTEM SETTING**
  This contains the software module configuration parameters.



User Setting

This item lets you set user-level plant parameters and modify the parameters to better suit your production. To configure a plant component, just move to the desired machine and press **[SELECT]**. Whatever selection you make will bring you to a page similar to the one below.

The upper part offers a list of parameters with the relative settings. Select a parameter using the side arrows.

COMMANDS

ESC: Go to main menu;
EDIT: Modifies the parameter selected;
CANCEL: Cancels the modifications made to the parameters;
ENTER: Confirms the modifications and send them to the PLC. They can no longer be cancelled;
SAVE IN ROM: This saves the data to an area of the non volatile memory so that they can be recovered if the battery dies.

You can only save to ROM a limited number of times. Therefore, you should only perform this operation under particular conditions such as when plant operations, type of system, initial Manufacturer calibration and final calibration at the Customer's site are modified. N.B.: The first time data are saved after a program or compact flash change, the parameters must be saved to ROM memory twice in a row.

Builder Setting

This contains the "Builder" level parameters along with a series of parameters to be configured at initial start up. To configure a plant component, just move to the desired machine and press **[SELECT]**. Whatever selection you make will bring you to a page similar to the one indicated in the paragraph **User Setting**. The upper part offers a list of parameters with the relative settings. Select a parameter using the side arrows.

ESC: Go to main menu;
EDIT: Modifies the parameter selected;
CANCEL: Cancels the modifications made to the parameters;
ENTER: Confirms the modifications and send them to the PLC. They can no longer be cancelled;
SAVE IN ROM: This saves the data to an area of the non volatile memory so that they can be recovered if the battery dies.

You can only save to ROM a limited number of times. Therefore, you should only perform this operation under particular conditions such as when plant operations, type of system, initial Manufacturer calibration and final calibration at the Customer's site are modified. N.B.: The first time data are saved after a program or compact flash change, the parameters must be saved to ROM memory twice in a row.

System Setting

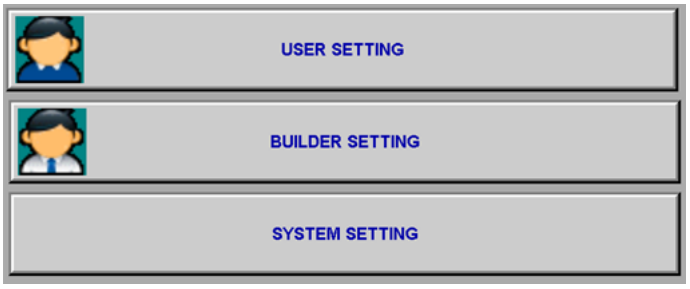
This contains the "Builder" level parameters along with a series of parameters to be configured at initial start up. To configure a plant component, just move to the desired machine and press **[SELECT]**. Whatever

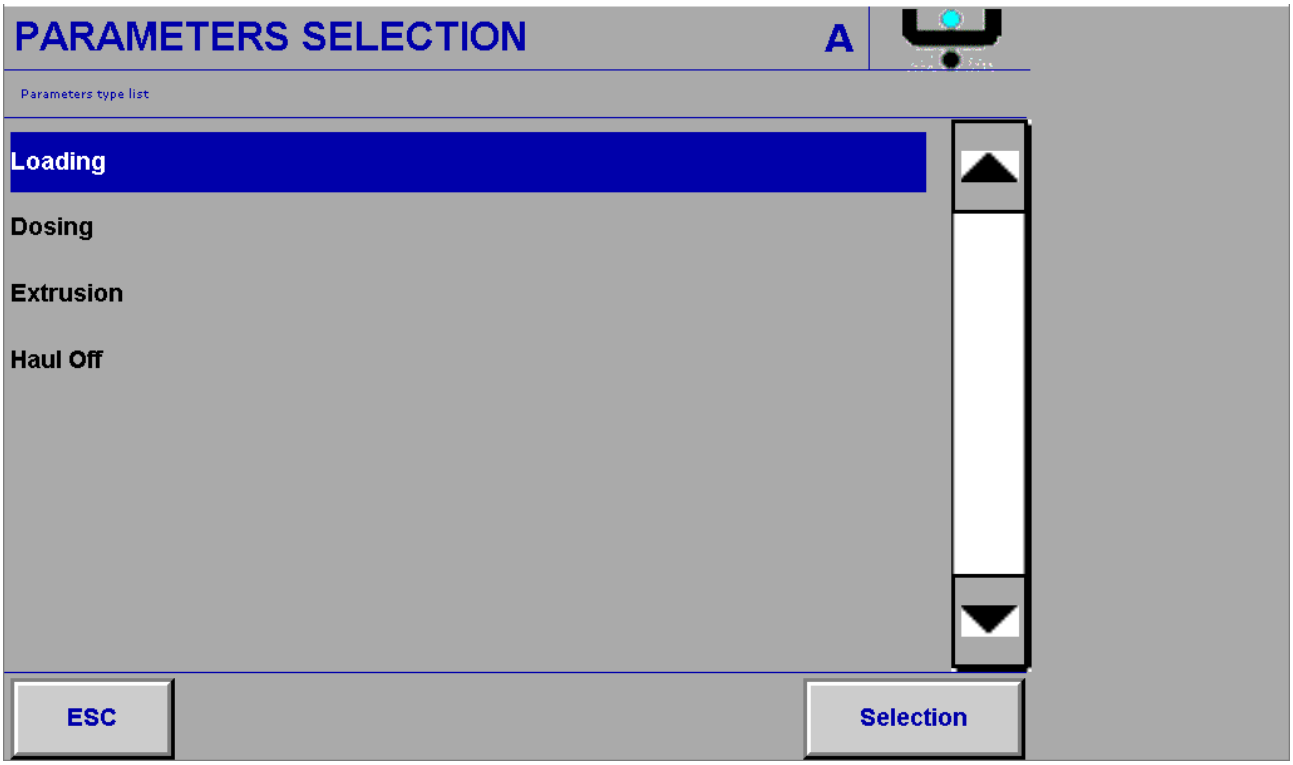
selection you make will bring you to a page similar to the one indicated in the paragraph **User Setting**. The upper part offers a list of parameters with the relative settings. Select a parameter using the side arrows.

ESC: Go to main menu;
EDIT: Modifies the parameter selected;
CANCEL: Cancels the modifications made to the parameters;
ENTER: Confirms the modifications and send them to the PLC. They can no longer be cancelled;
SAVE IN ROM: This saves the data to an area of the non volatile memory so that they can be recovered if the battery dies.

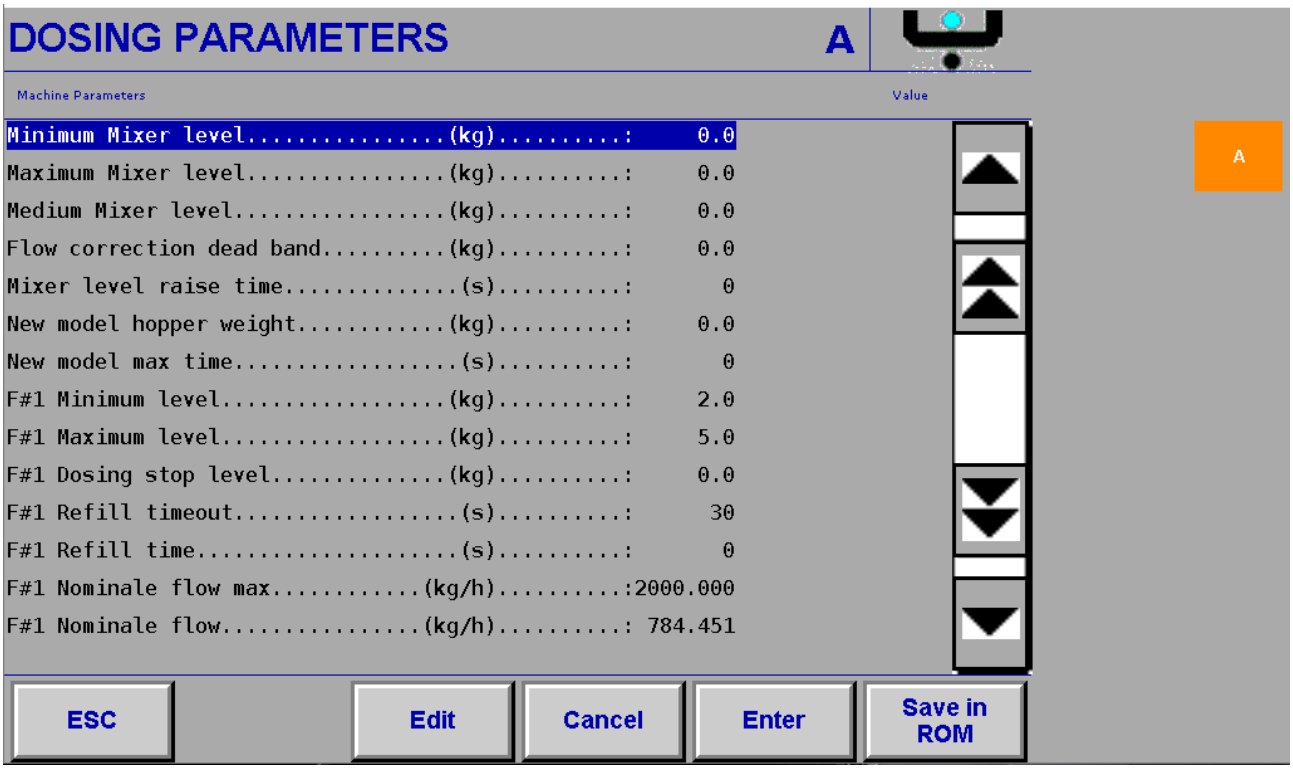
You can only save to ROM a limited number of times. Therefore, you should only perform this operation under particular conditions such as when plant operations, type of system, initial Manufacturer calibration and final calibration at the Customer's site are modified.
N.B.: The first time data are saved after a program or compact flash change, the parameters must be saved to ROM memory twice in a row.

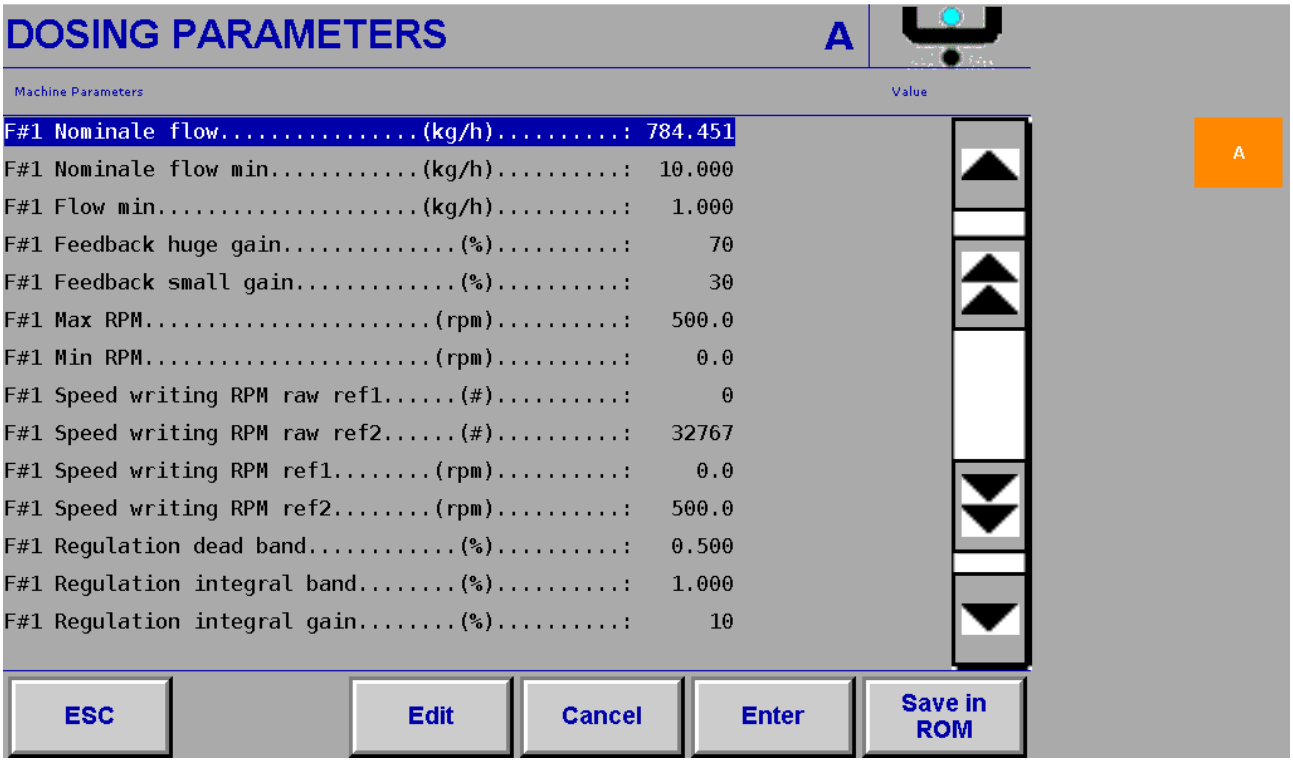
Press one of this buttons to go to this page:



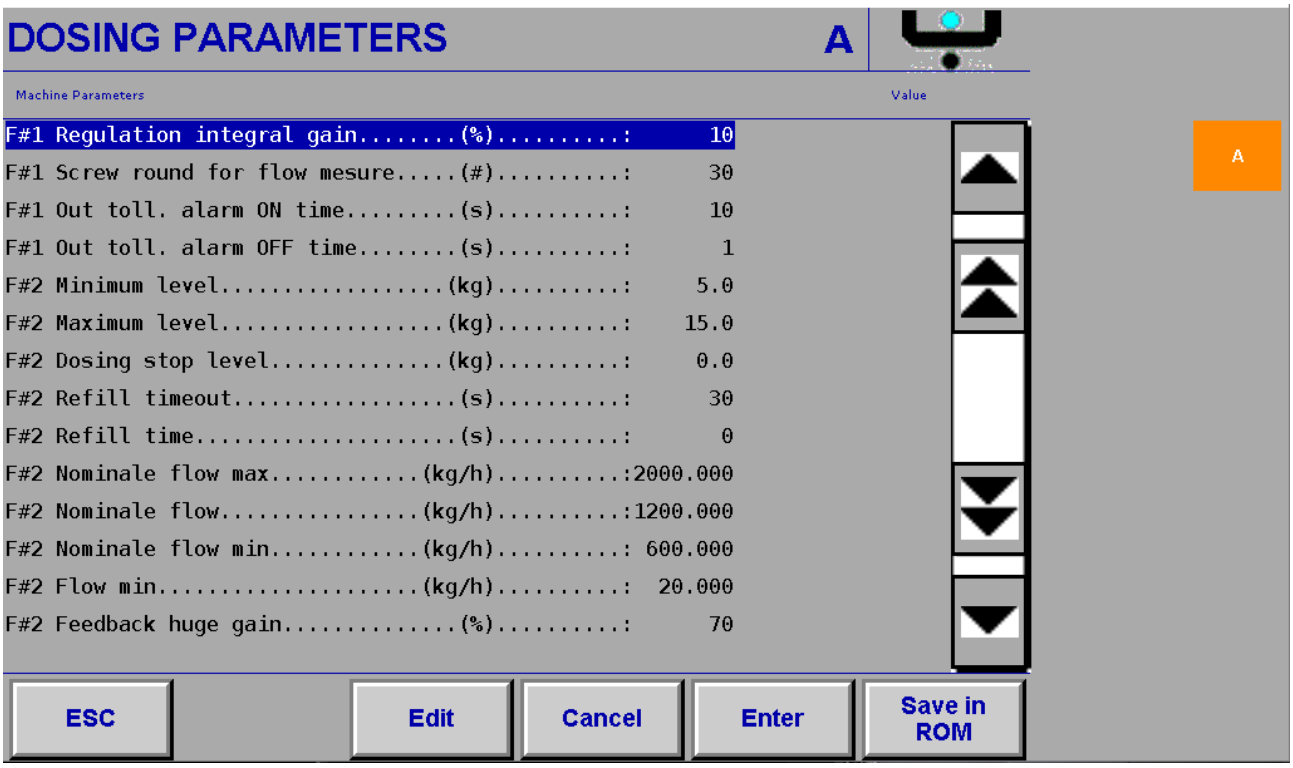


Dosing Parameters

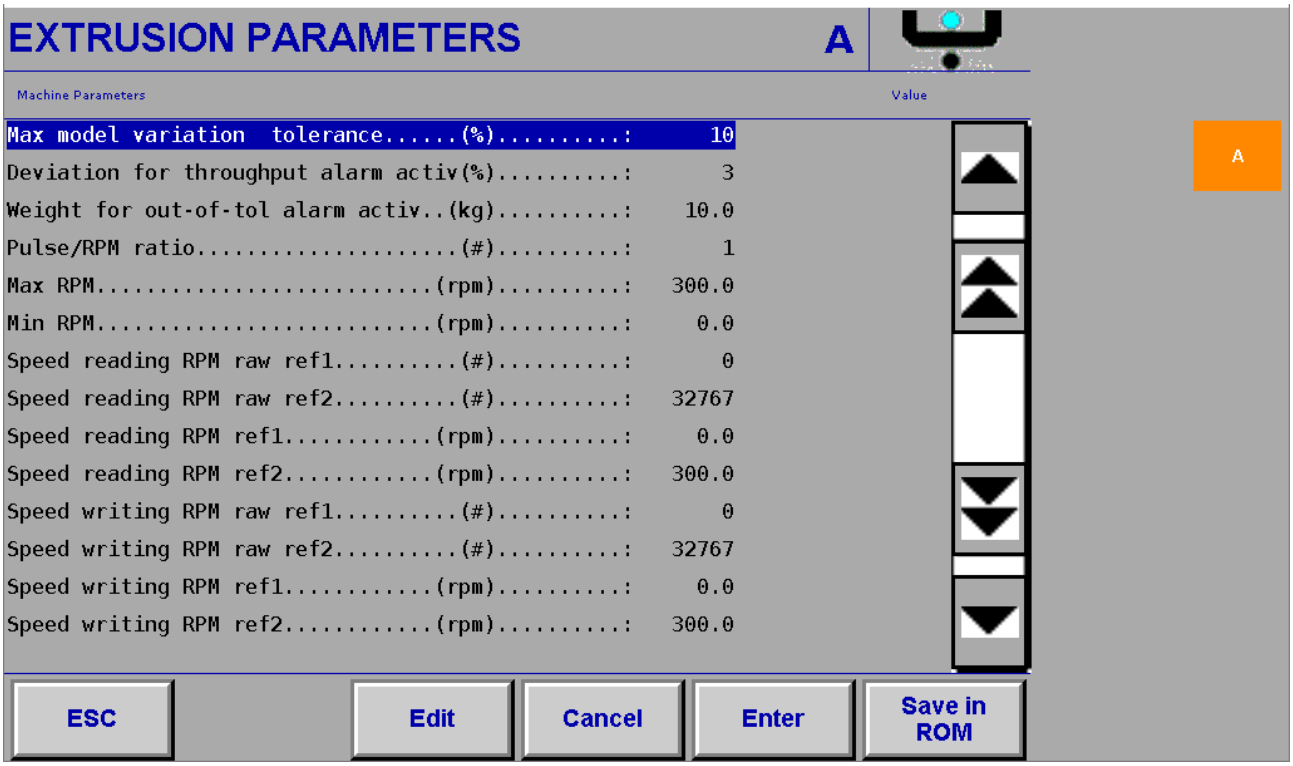


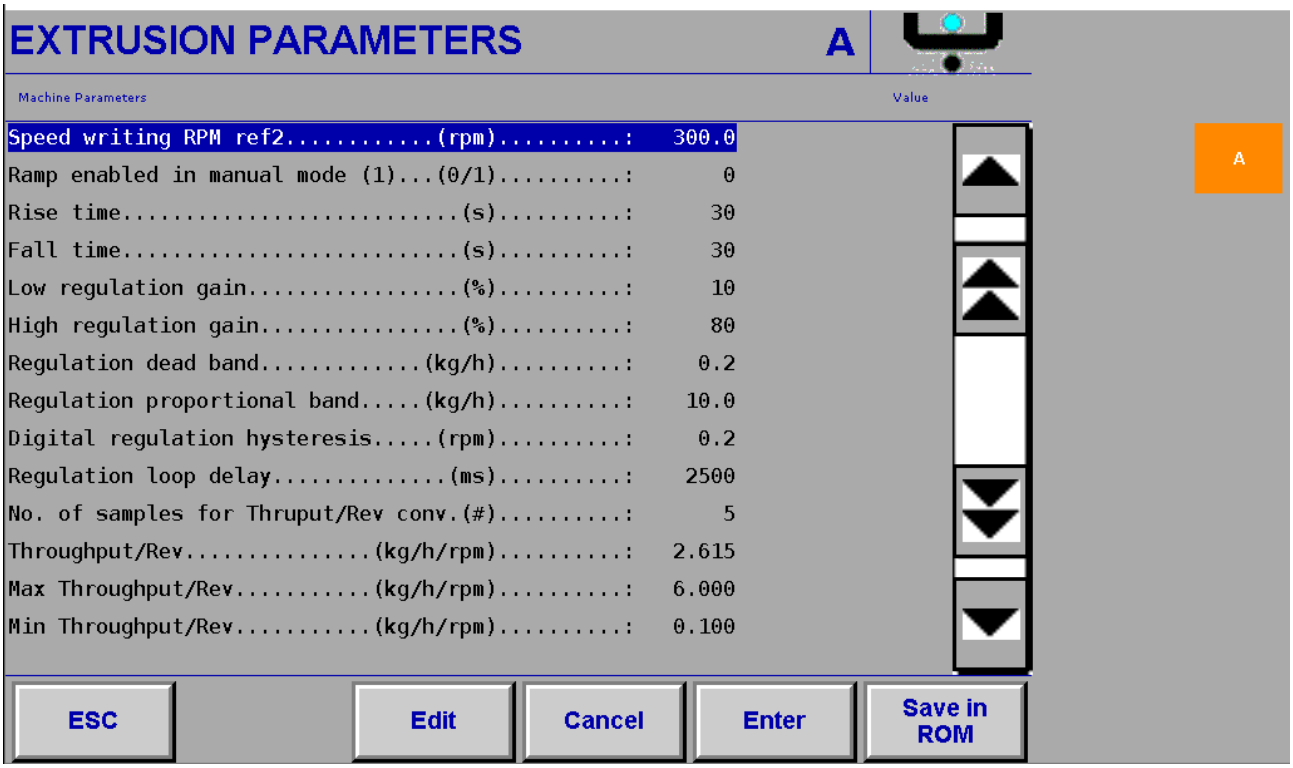


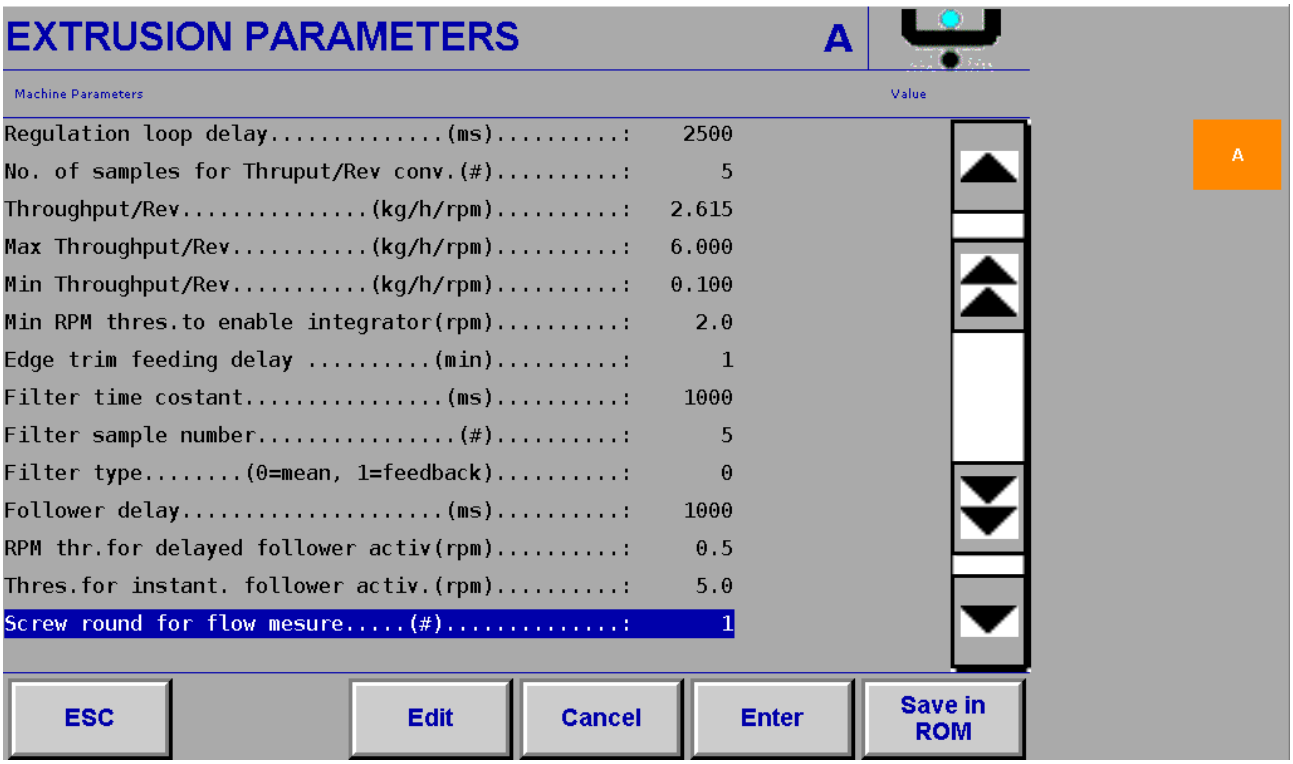
MAGUIRE® SYNCRO



Extrusion Parameters

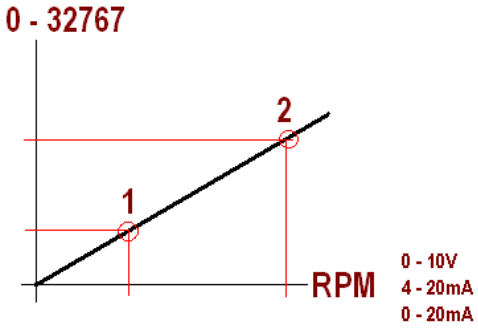




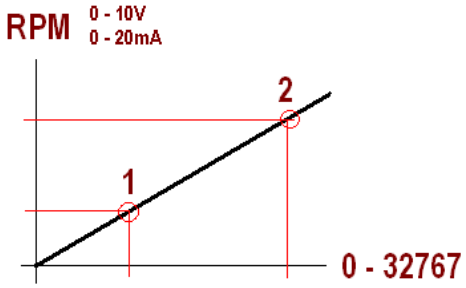


Max model variation tolerance (%) = 10 %
Each time the working set-point is changed, the system saves the RPM required to achieve the desired throughput. While functioning in automatic mode, if, to maintain the same throughput, it proves necessary to increase the RPM by a percentage greater than that indicated, the system generates the decreased flow alarm. When the alarm is reset, the system takes the current working point as point for comparison.
Flow alarm deviation (%) = 3 %
This indicates the tolerance vs. the throughput set-point. If this tolerance is exceeded, hysteresis mechanisms are activated to generate an alarm.
Out tolerance alarm weight ON (Kg) = 10 kg
This indicates the amount, in weight, of product that must be produced with the flow out of tolerance before the pertinent alarm is given.
Out tolerance alarm weight OFF (Kg) = 5 kg
This indicates the amount, in weight, of product that must be produced inside the tolerance limits before the "flow out of tolerance" alarm is reset.
PULSE/RPM RATIO (#) = 1
This indicates how many pulses are associated with an extruder revolution. It is advisable to have the pulses separated by at least 100 ms.
Max RPM (rpm) = max extruder speed RPM
This indicates the maximum limit for output rpm. The system limits the upper output with this value.
Min RPM (rpm) = 0.0 rpm
This indicates the minimum limit for output rpm. The system limits the lower output with this value.
1 rev. reading raw reference (#) = 0
Analogue ⇒ digital conversion for RPM reading. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 1 rev. reading (rpm)**.
2 rev. reading raw reference (#) = 32767

Analogue ⇒ digital conversion for RPM reading. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 2 rev. reading (rpm)**.



Ref. 1 rev. reading (RPM) = 0.0 RPM
This specifies the rpm used to calibrate the **1 rev. reading raw reference (#)** point**.**
Ref. 2 rev. reading (RPM) = max. extruder speed RPM
This specifies the rpm used to calibrate the **2 rev. reading raw reference (#)** point**.**
1 rev. writing raw reference (#) = 0
Digital ⇒ Analogue conversion for RPM writing. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 1 rev. writing (rpm)**.
2 rev. writing raw reference (#) = 32767
Digital ⇒ Analogue conversion for RPM writing. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 2 rev. writing (rpm)**.



Ref. 1 rev. writing (RPM) = 0.0 RPM
This specifies the rpm used to calibrate the **1 rev. writing raw reference (#)** point**.**
Ref. 2 rev. writing (RPM) = max. extruder speed RPM
This specifies the rpm used to calibrate the **2 rev. writing raw reference (#)** point**.**
Ramp enable in manual (0/1) = 0
Not used. Leave **0.**
Rise time (s) = 30 s
Time required for the ramp to rise from minimum to maximum output.
Fall time (s) = **30 s**
Time required for the ramp to fall from maximum to minimum output.
Narrow regulation game (%) = 10%
It indicates the regulation percentage the system applies when the extrusion throughput value is within the proportional band.
Wide regulation game (%) = 80%
It indicates the regulation percentage the system applies when the extrusion throughput value is outside the proportional band.
Regulation dead band (kg/h) = 0.1 kg/h
This indicates the kg/h error below which the system does not make any form of compensation.
Regulation proportional band (kg/h) = 10 kg/h
When the kg/h error exceeds the set threshold, the system reacts proportionally.
Digital regulation hysteresis (rpm) = 0.5 RPM

This indicates the resolution obtainable from the digital control activation system. If, for example, the inverter that controls the extruder motor adjusts the speed by 1 RPM for each digital impulse, there is no point in attempting to correct speed errors that are smaller than this; indeed the system would be subject to fluctuations and become unstable.
This parameter, used only with the Digital OUT setting of the EXTRUDER RPM WRITING parameter, must be tuned to suit the control system of the particular extruder.

Digital regulation delay (ms) = 2500 ms

This indicates the system minimum built-in delay between an instruction to carry out a command and its actual occurrence; the system waits for the period set before confirming the actual result of the command. The minimum period recommended is 3 seconds.

Flow/rev. conv. sample number (#) = 5

Maximum number of samples used to calculate the throughput per extruder revolution.

Throughput/RPM (Kg/h/rpm) = calculated

Mass transported by the extruder screw per revolution. If the throughput is to be per rpm, just multiply this value by 60. The program calculates this data in continuous, automatic mode. It serves to calculate the plant throughput and adjustments to be implemented

Max throughput /RPM (Kg/h/RPM) = it depends on the extruder size 150% of the nominal throughput

Upper mathematical value applied to the calculation carried out for **Throughput/RPM.**

Min throughput /RPM (Kg/h/RPM) = it depends on the extruder size 50% of the nominal throughput

Lower mathematical value applied to the calculation carried out for **Throughput /RPM.**

Min enable integrator rpm (rpm) = 2.0 RPM

This indicates the minimum rpm. Below this level the system interrupts the transport of the mass carried by the extruder screw per revolution.

Trim propagation delay (min) = 180 min

This indicates the time that elapses before trim interruption or trim feed propagates to the gravimetric control system.

Filter time constant (ms) = 1000 ms

This indicates the first order filter time constant. After a stepped variation, the amount of time required for the output to stabilize is 3 times the filter time constant. This filter is used to stabilize a fluctuating measurement.

Filter sample number (#) = 5

This specifies the number of samples to be used.

Filter type (0 = MEAN, 1 = FEEDBACK) (0/1) = 0

Setting for the type of filter to be used. It indicates whether the filter used to estimate the mass carried by the screw uses a mean or feedback method. Select the mean method.

Follower delay (ms) = **1000 ms**

This indicates the time delay the tracking system uses to track the current throughput value vs. a shift in the upper rpm when specified by the "Follower RPM delayed threshold (rpm)" parameter.

Follower rpm delayed threshold (rpm) = **0.5 %**

This specifies the threshold. If this threshold is exceeded, the tracking delay count is activated.

Instantaneous follower thresh (rpm) = 5.0 %

If the shift between the last follower position and the current measured value exceeds the amount specified in this parameter, the tracking system runs an instantaneous tracking.

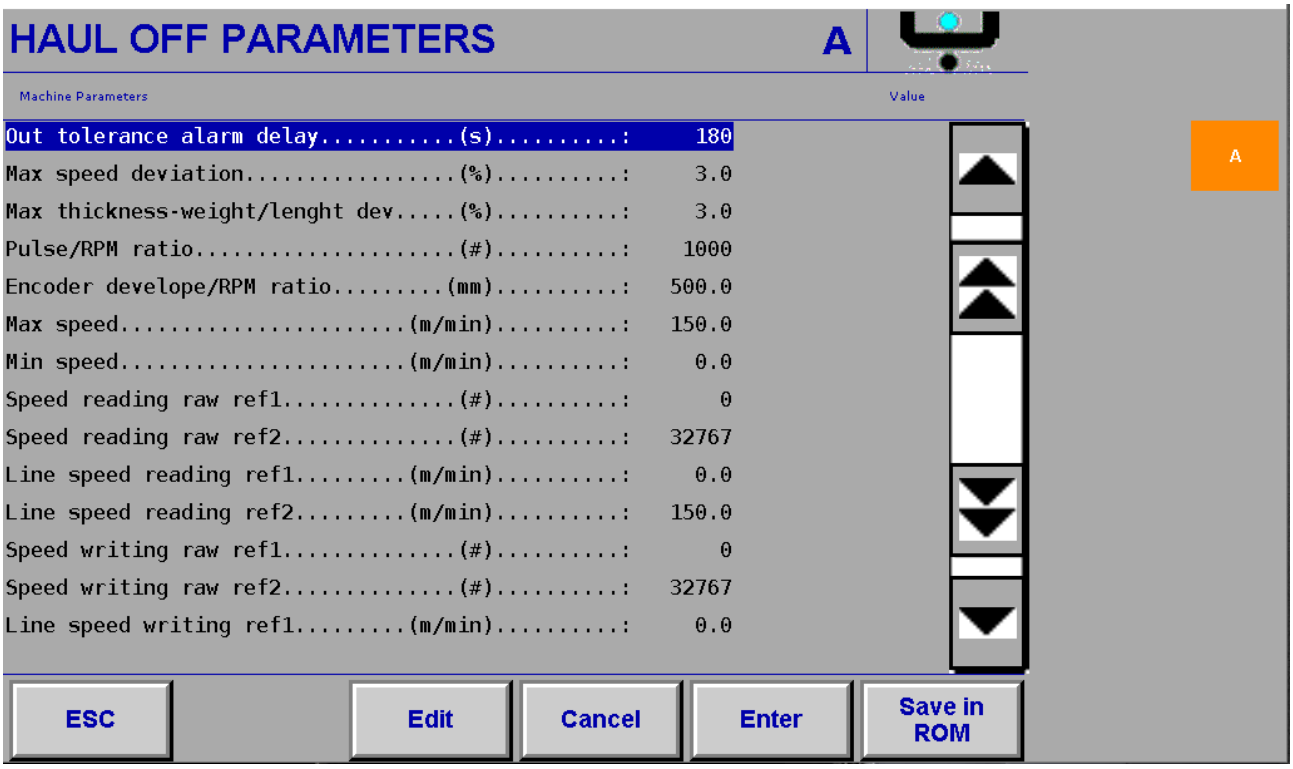
Minimum extruder PV output (kg/h) = 0.0 kg/h

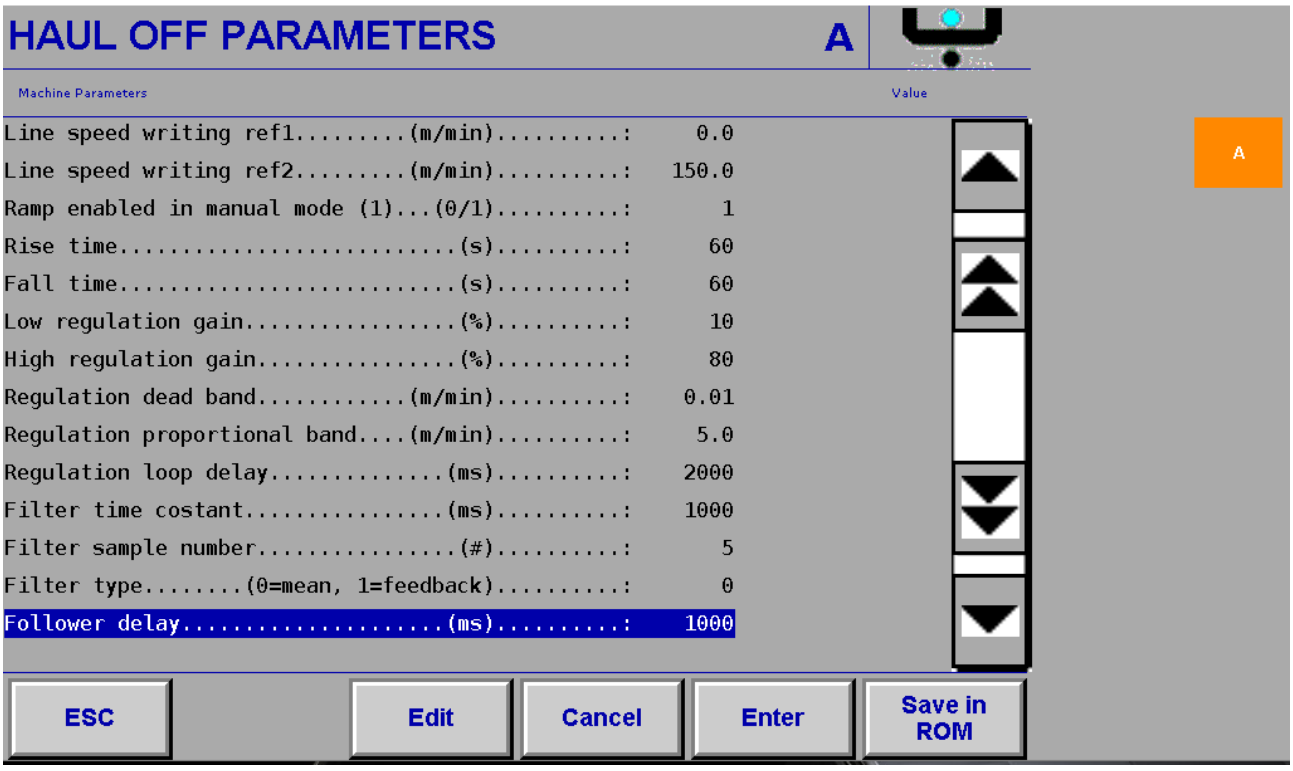
Minimum factor to generate an analogue output that is proportional to the maximum flow rate on the output.

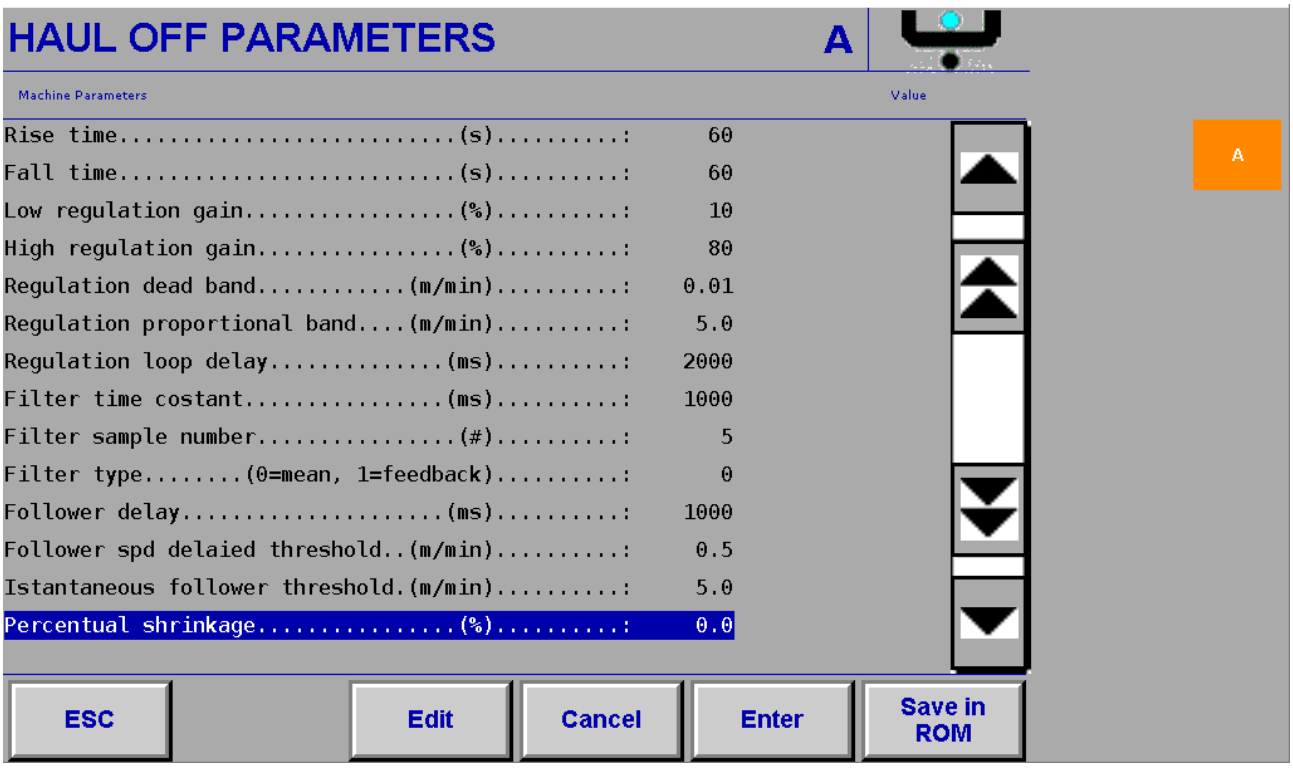
Extruder PV output full scale (k/h): maximum extruder flow rate

Maximum factor to generate an analogue output that is proportional to the maximum flow rate on the output.

Haul-Off Parameters

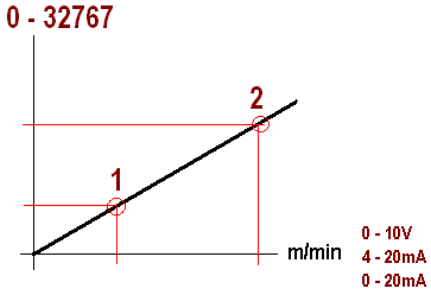




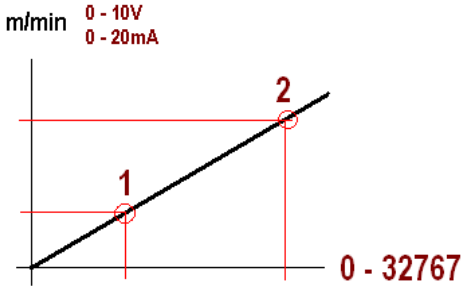


Out tolerance alarm delay (s) = 180 s
This is the time delay for onset of the haul-off out of tolerance alarm. We suggest a time equal to half the average time that the film takes to run from the haul-off zone to the spool winder.
Max speed deviation (%) = 3 %
This indicates the maximum acceptable percentage error between the speed set-point and the real haul-off speed.
Max thickness-weight deviation (%) = 3 %
This indicates the maximum acceptable percentage deviation from the thickness or basic weight set-points.
Pulse/RPM ratio (#) = 1000
This indicates the number of pulses provided by the encoder for each revolution of the metric wheel.
Encoder develop/rpm ratio (mm) = 500.0 mm
This indicates the development of the metric wheel used to measure the haul-off speed.
Max speed (m/min.) = max line speed value (m/min)
Maximum speed used to limit the haul-off control output.
This value, combined with the rise time and fall time parameters in digital control and with "HAUL-OFF SPEED WRITING" set to "DIGITAL OUT", is fundamental to the correct regulation of the system, without fluctuations.
Min speed (m/min) = 0.0 m/min
Minimum speed used to limit the haul-off control output.
This value, combined with the rise time and fall time parameters in digital control and with "HAUL-OFF SPEED WRITING" set to "DIGITAL OUT", is fundamental to the correct regulation of the system, without fluctuations.
1 speed reading raw reference (#) = 0
Analogue ⇒ digital conversion for line speed reading. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 1 speed reading (m/min)**.
2 speed reading raw reference (#) = 32767

Analogue ⇒ digital conversion for line speed reading. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 2 speed reading (m/min)**.



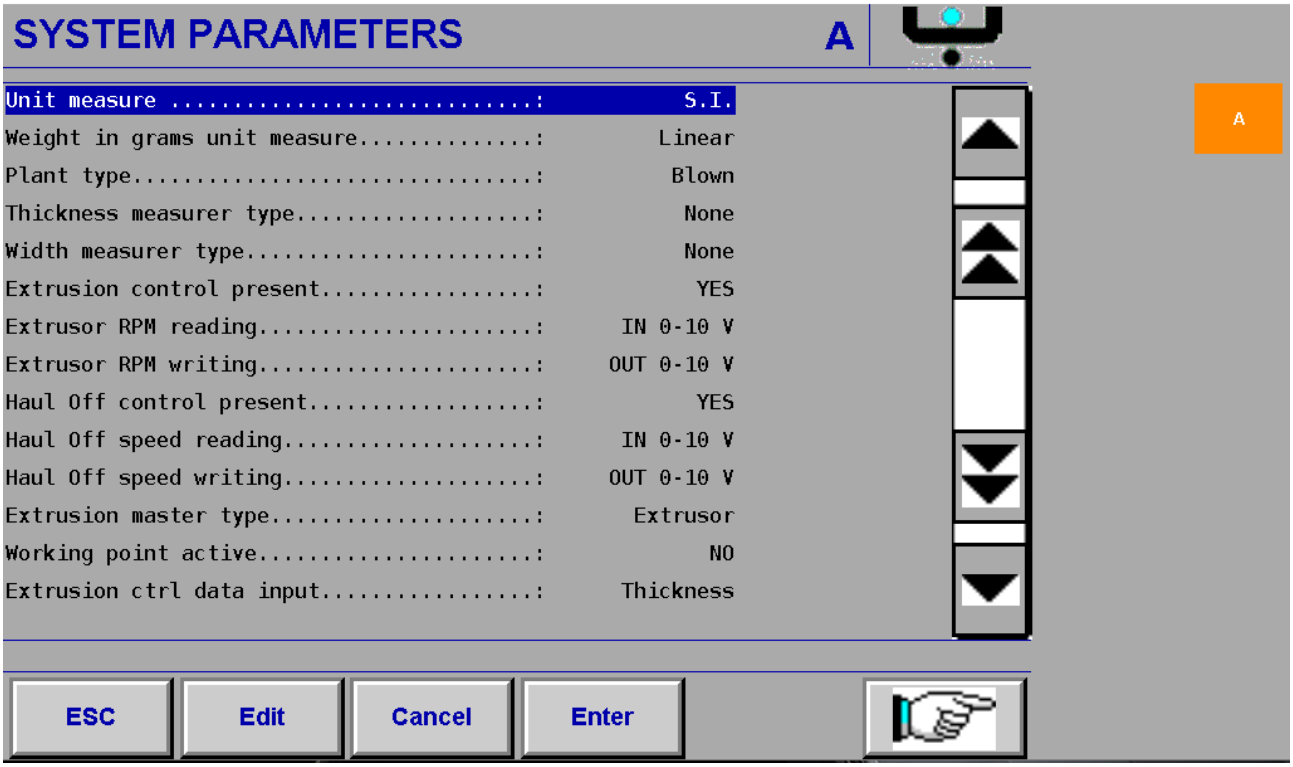
Ref. 1 speed reading (m/min) = 0.0 m/min
This specifies the speed used to calibrate the **1 speed reading raw reference (#)** point**.**
Ref. 2 speed reading (m/min) = max. line speed (m/min)
This specifies the speed used to calibrate the **2 speed reading raw reference (#)** point**.**
1 speed writing raw reference (#) = 0
Digital ⇒ Analogue conversion for the line speed writing. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 1 speed writing (m/min)**.
2 speed writing raw reference (#) = 32767
Digital ⇒ Analogue conversion for the line speed writing. This indicates the decimal value that corresponds to the calibration value specified in **Ref. 2 speed writing (m/min)**.

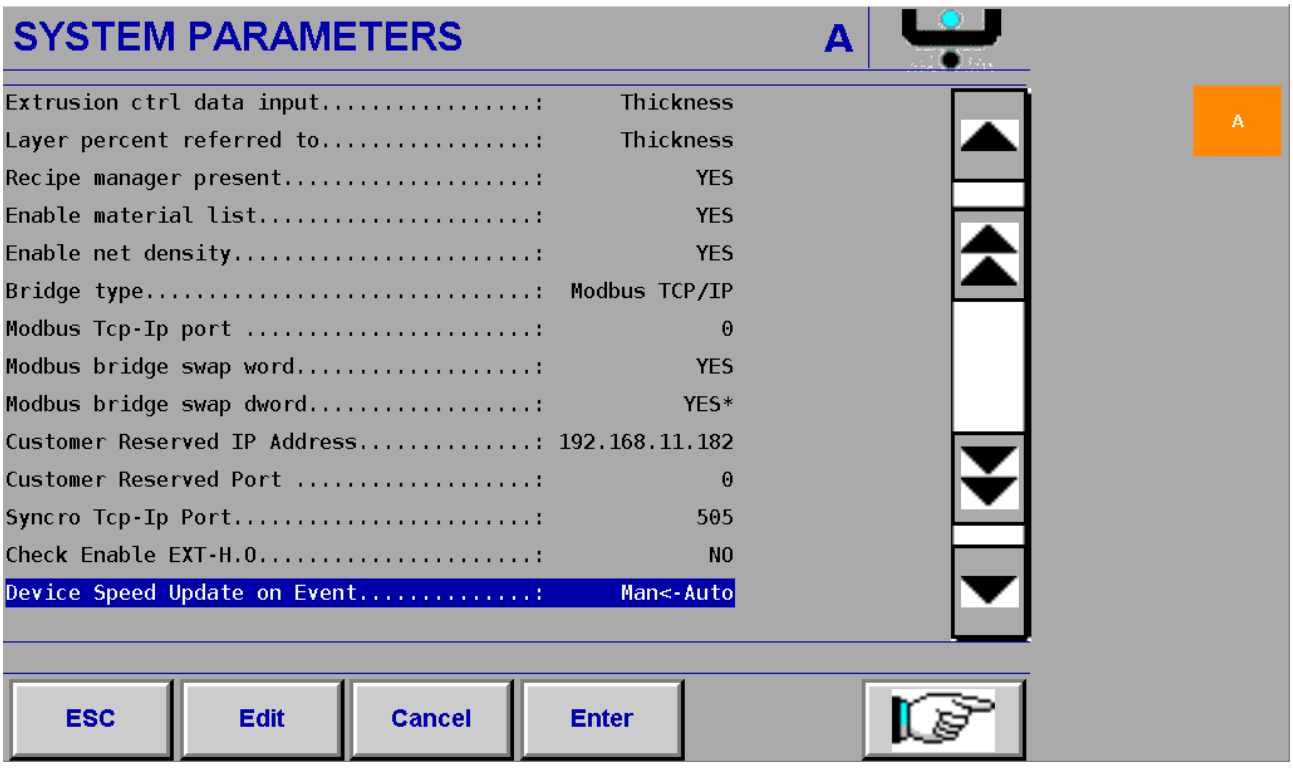


Ref. 1 speed writing (m/min) = 0.0 m/min
This specifies the speed used to calibrate the **1 speed writing raw reference (#)** point**.**
Ref. 2 speed writing (m/min) = max. line speed (m/min)
This specifies the speed used to calibrate the **2 speed writing raw reference (#)** point**.**
Ramp enable in manual (1) (0/1) = 1
Always set to 1.
Rise time (s) = 60.0 s
Time required for the ramp to rise from minimum to maximum speed.
Fall time (s) = **60.0 s**
Time required for the ramp to fall from maximum to minimum speed.
Narrow regulation gain (%) = 10%
This indicates the regulation percentage the system applies when the haul-off speed value is within the proportional band.
Wide regulation gain (%) = 80%
It indicates the regulation percentage the system applies when the haul-off speed value is outside the proportional band.
Regulation dead band (m/min) = 0.50 m/min
This indicates the line speed error below which the system does not make any form of compensation.
Regulation proportional band (m/min) = 5.0 m/min
When the line speed error exceeds the set threshold, the system reacts proportionally.
Regulation loop delay (ms) = 2500 ms
Ii indicates the time between one haul-off speed correction and the next when the actual speed is within the proportional band.

Filter time constant (ms) = 1000 ms
This indicates the first order filter time constant. After a step variation, the amount of time required for the output to stabilize is 3 times the filter time constant. This filter is used to stabilize a fluctuating measurement.
Filter sample number (#) = 10
This specifies the maximum number of samples used for the line speed filter.
Filter type (0 = mean, 1 = feedback) (0/1) = 0
This indicates the type of filter used to filter haul-off speed noise. Select the mean method.
Follower delay (ms) = 100 ms
This indicates time delay the tracking system uses to track the current throughput value vs. a shift in rpm when higher than the "**Follower RPM delayed threshold (rpm)**" parameter.
Follower speed delayed threshold (m/min) = 0.0 m/min
If this threshold is exceeded the tracking delay count is activated.
Instantaneous follower threshold (m/min) = 0.0 m/min
If the shift between the last follower position and the current measured value exceeds the amount specified in this parameter, the tracking system runs an instantaneous tracking.
Shrink percentage (%) = 0.0 %
Correction of the mathematical calculation of the haul-off speed set-point, to correct the difference in the actual speed of the material compared to the speed of the rollers.

System Parameters





Measure unit = S.I.

S.I. International system (gram / meter / second).

Imperial English system (lb. / mils / second).

ATTENTION: carry on the calibration by stating the sample weights in the relative units.

Weight in grams unit measure = Linear

linear= g/m.

surface = g/m^2.

It can have two values: Linear or Surface. The system performs the calculations considering the g/m or g/m2.

Plant type = Bubble

This specifies the type of plant. This parameter affects management of the thickness and basic weight as well as process throughput and haul-off speed. The options are **Bubble or Cast**

Thickness measurer type = None

This indicates the type of thickness measurement device used. The possible choices are: **Syncro, Kundig K-100, None.**

Width measurer type = None

This indicates the type of width measurement device used. The possible choices are: **Syncro, Kundig FE-6, None.**

Extrusion control present = YES

This indicates whether or not the extrusion control page is to be displayed. This value must be Yes, even if you only want to display the throughput.

Extruder RPM reading = IN 0-10V

None: no RPM are read;

Digital IN: the rpm are acquired through the digital input by counting cam pulses.
(input 1 of the CM8281 sheet).

Field bus - indicates that RPM are acquired through digital communication.

IN 0-10V - RPM are acquired through the analogue signal 0-10V.

IN 0-20mA - RPM are acquired through the analogue signal 0-20mA.

IN 4-20mA - RPM are acquired through the analogue signal 4-20mA.

High Speed DI - RPM are acquired through the encoder digital IN (optional).

Extruder rpm writing = OUT 0-10V

None – no RPM are written (this choice locks the possibility to establish the set-point value of the extruder kg/h flow rate).

Digital OUT – the extruder is controlled by operating a digital output for increase in speed and a digital output for decrease in speed.

Field bus – the RPM are made available through digital communication.

OUT 0-10V - the RPM are made available through analogue signal 0-10V.

OUT 0-20mA - the RPM are made available through analogue signal 0-20mA.

Haul off control present = NO

If set to "Yes" the system calls for the haul-off module, otherwise the system does not provide for it.

Haul-off speed reading = IN 0-10V

None – The speed is not read.

Digital IN – the speed is detected through digital input by means of the pulses of the encoder applied to a metric wheel (input 1 of the CM8281 sheet).

Field bus – the speed is acquired through digital communication.

IN 0-10V - the speed is acquired through analogue signal 0-10V.

IN 0-20mA - the speed is acquired through analogue signal 0-20mA.

IN 4-20mA - the speed is acquired through analogue signal 4-20mA.

Haul-off speed writing = OUT 0-10V

None – The speed set is not written (this choice locks the possibility to establish the set-point value of the line speed).

Digital OUT - the haul-off speed set is controlled by operating a digital output for increase in speed and a digital output for decrease in speed.

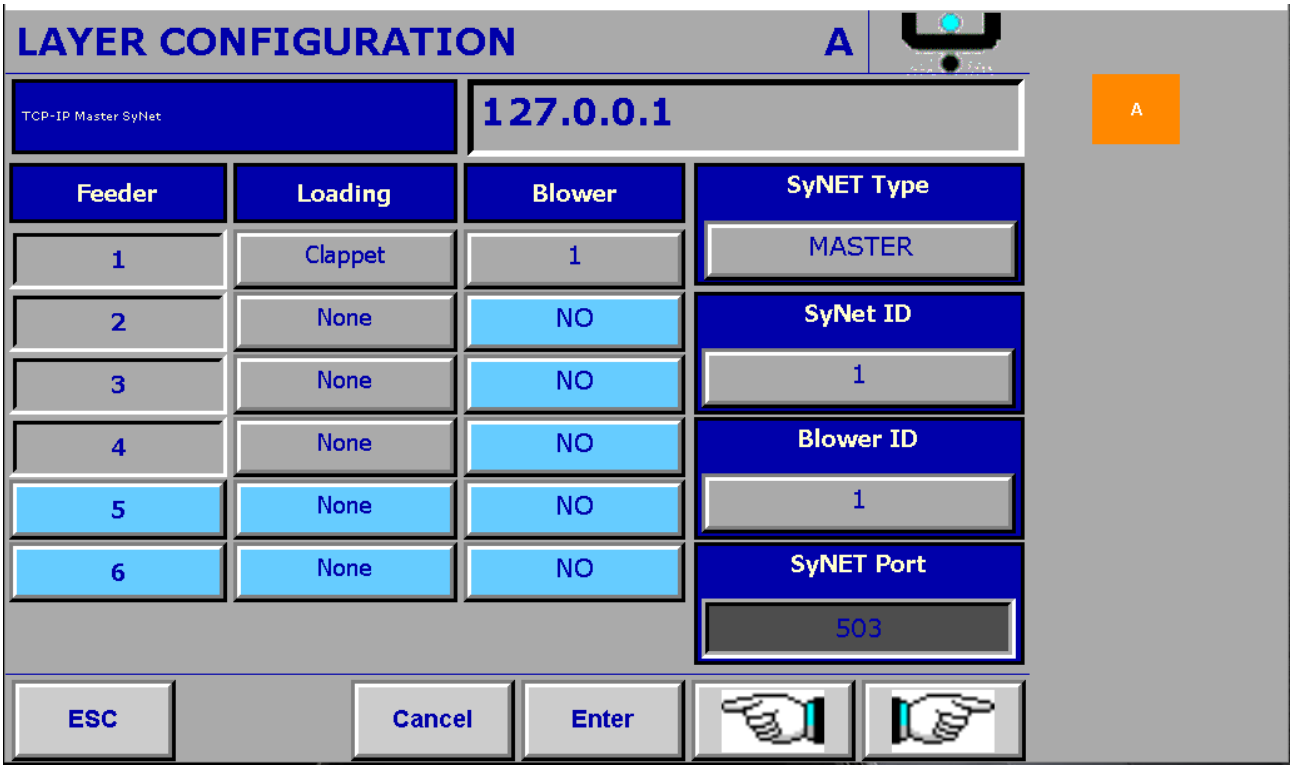
Field bus – the haul-off speed set is made available through digital communication.

OUT 0-10V - the haul-off speed set is made available through analogue signal 0-10V.
OUT 0-20mA - the haul-off speed set is made available through analogue signal 0-20mA.

Extrusion control master = Haul-off
The parameter indicates which speed parameter must be kept constant and which speed parameter must be calculated. There are 2 possible settings:
Extruder: the system keeps the extruder speed steady and recalculates the haul-off speed.
Haul off: the system keeps the haul off speed steady and recalculates the extruder speed.
Working point active= YES
No - the working point is not active.
Yes - The parameter operates in conjunction with "**Extrusion control master** "; in other words, it uses the master parameter measurement, suitably filtered to generate the set-point, and recalculates the dependent parameter.
Extrusion control data input = Thickness
This specifies whether the data input is made on the **Basic weight** or on the **Thickness**.
Layer percentage referred to = Thickness
Not used. Possible values: **Basic weight** or **Thickness**

Recipe management = NO
Enable material list = YES
Enable net density = YES
Bridge type = None
Bridge type = None
Tcp-Ip Modbus port = 0
Word Modbus Swap = NO
Dword Modbus Swap = NO
Customer Reserver IP Address = 0.0.0.0
Customer Reserver Port = 191.168.11.182
Tcp-Ip Syncro port= 505
Control extruder and haul-off enabling = NO

Layer Configuration



TCP-IP Master Synet = 0.0.0.0

IP address of the master unit that manages the suction of materials, if the unit is **MASTER** type you must use the IP address of this same unit, or the local host IP address **127.0.0.1**.

LOading = Clappe / None

Table with the list of components enabled for operation; these must correspond to those physically installed.

Blower = 1 / NO / NO / NO / NO / NO

Number of the blower whose vacuum circuit is physically connected to the enabled component.

SyNET Type = MASTER

SLAVE – the logic of the suction management is not controlled by this unit.

Master - the logic of the suction management is controlled by this unit; **attention: in a system you can declare only one master unit.**

SyNET ID = 1

Unit identification number on which you are working in the **SyNET**; make sure that there are no doubles in the same network.

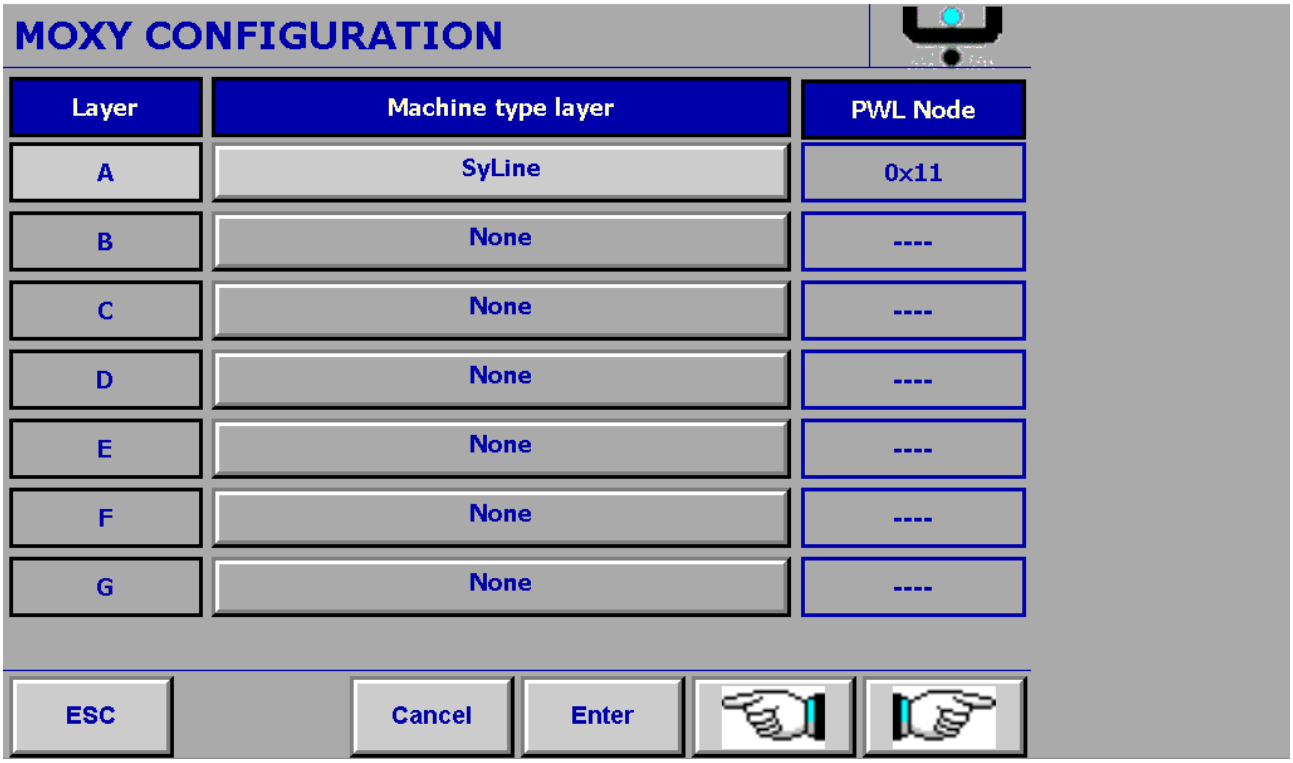
BLOWER ID = 1

If the unit on which you are working is provided with connected commands and signals for the management of another blower, using this parameter it is possible to indicate the ID number to identify it; make sure that there are no doubles in the same network.

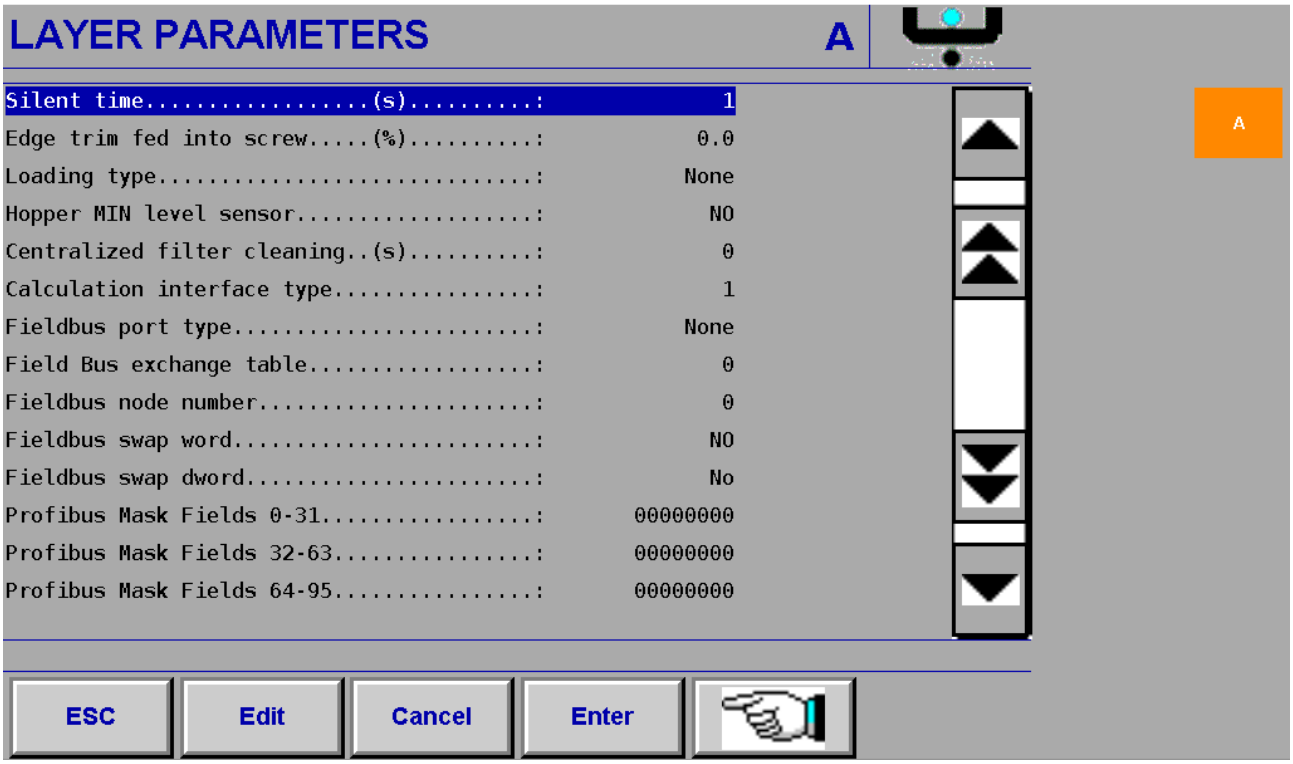
SyNET Port = 503

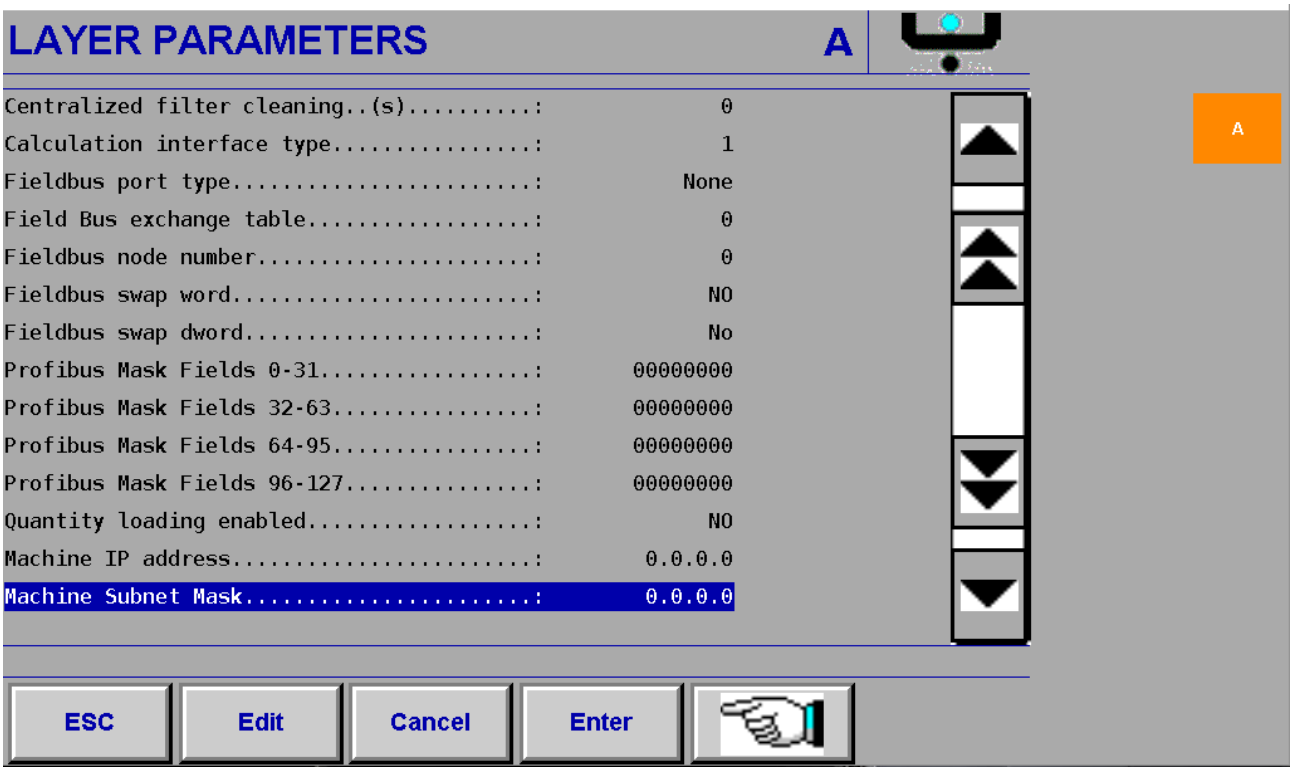
Number of the communication port used for **SyNET** communication management; be sure to use the same port for all units in the same network and do not use that port for other types of communications.

Moxy Configuration



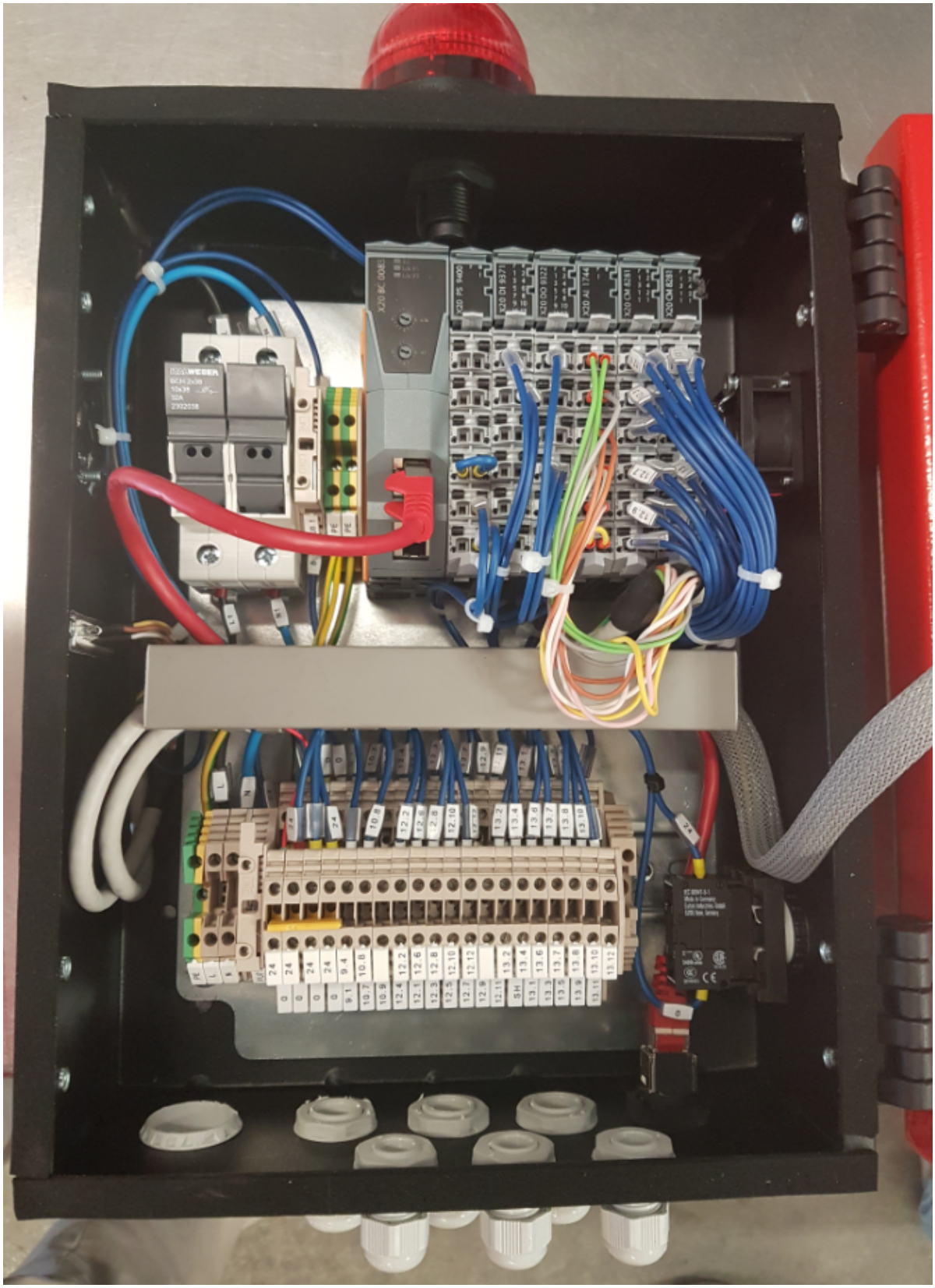
Layer Configuration





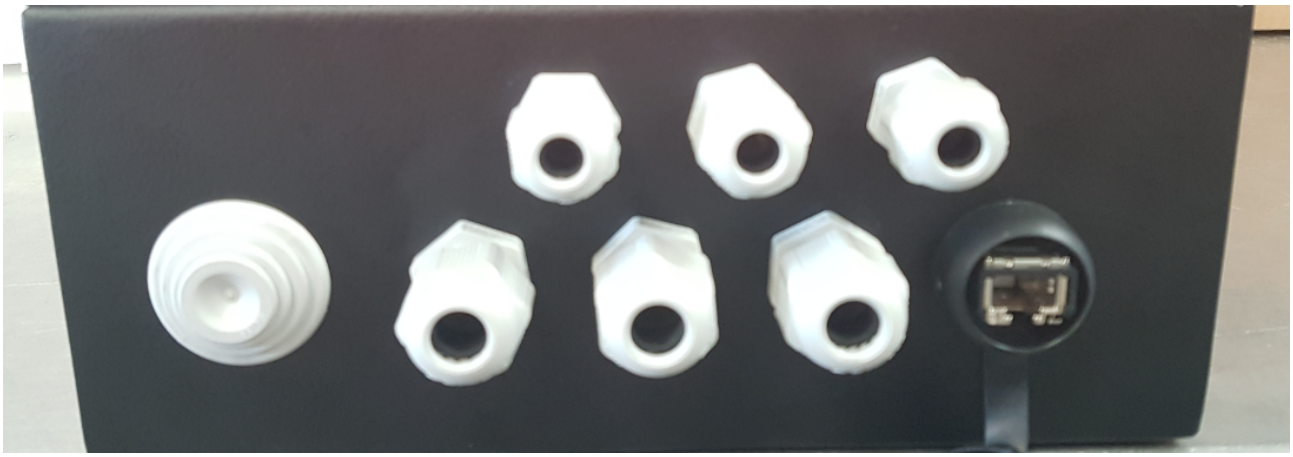
Alarm disconnection time (s) = 20
It refers to the acoustic alarm disconnection time. Once this time has elapsed, all alarm signals are reactivated.
Calculation interface time (s) = 0
Screw injected trim (%) = 0.0
Parameter that activates the trim compensation logic, 0.0 = not active, 1.0 = active.
Feeder #1 used with trim = NO
No: the first feeder is not used to feed trim in line.
Compensative: the feeder is used to feed trim in line, using the complementary method (sum of the % of the components = 100%).
Incremental: the feeder is used to feed trim in line, using the incremental method
Trim feeder min level Sensor = NO
No: The only sensor installed on feeder #1 is used to detect maximum level.
Yes: An additional minimum level sensor is installed in feeder #1.
Mixer weighing cell present = YES
No: there is no load cell installed on the mixer.
Yes: the system has a load cell installed on the mixer.
Min mixer level sensor present = NO
No: there is no level sensor installed on the mixer.
Yes: the system has a level sensor installed on the mixer.
Valve present under the mixer = NO
No: there is no mixer discharge gate installed on the mixer.
Yes: there is a mixer discharge gate installed on the mixer.
Mixer hopper min level sensor = NO
No: there is no level sensor installed on the hopper.
Yes: the system has a level sensor installed on the hopper.
Centralized filter cleaning (s) = 0
A centralized filter can be present when a single blower is used, with an integrated loading system; this parameter indicates cleaning time (0 = no time, which is equivalent to no filter being present).
Extruder lock min. level = NO
When the material in the mixer reaches a value equal to or less than this parameter, the extruder speed set-point is reset, thus causing the stop of the extruder.

MAGUIRE® SYNCRO



load Cell Connector

Power Supply 200Vac to 500Vac.
Digital input/output.
Analog input/output.
Power-Link.



Power Supply ON.

Cooling Fan.

Alarm ON.