

1. Once the drawbar of the tractor has been adjusted and the machine has been correctly coupled to it, measure the distance between the slot on the PTO axle and the slot on the axle of the machine's multiplier.

The working length of the PTO must have about 100 mm of play in excess of the distance between the two axes. In other words, there must be 100 mm of cable over when the PTO is completely closed.

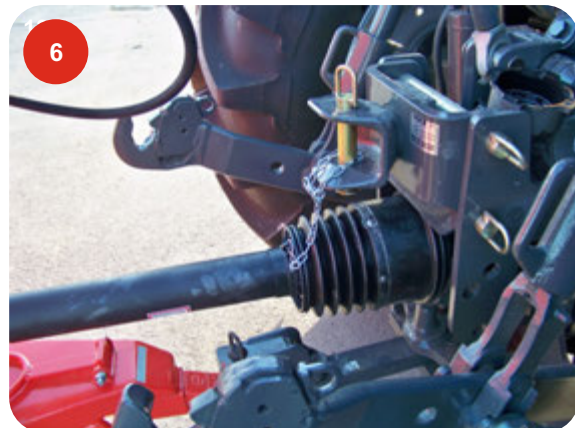
2. Unsheathe the PTO rods, positioning them one next to the other, and then SUBTRACT 100 mm from the previously obtained distance between the two axes. Spreading them evenly, use rods to mark the PTO in order to obtain the distance desired (x mm. - 100 mm.)

3. Cut the protectors with a handsaw.

4. Cut the rods of the PTO.

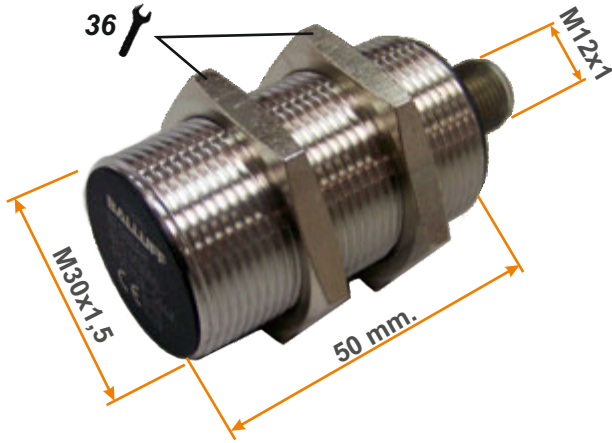
5. Polish the edges and re-sheathe the rods of the PTO.

6. Assemble the PTO with its corresponding safety chains.

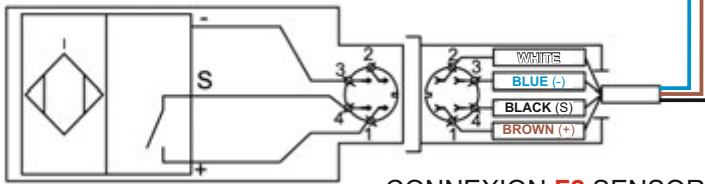
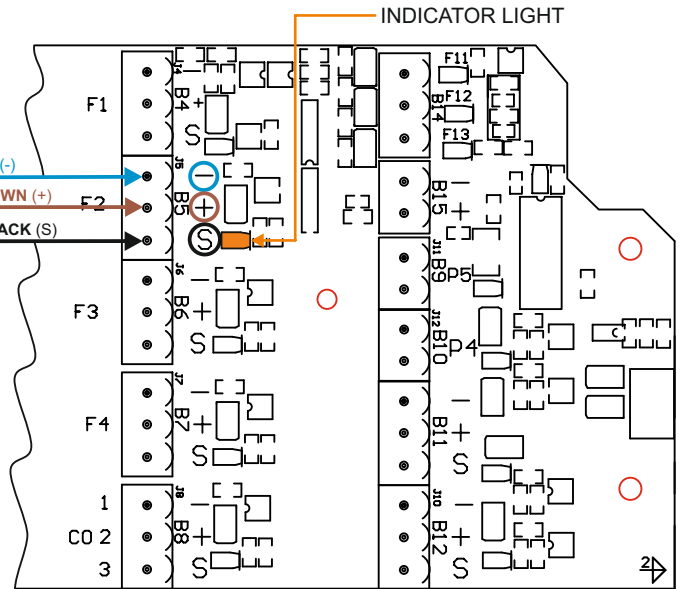


NOTE: These adjustment instructions are useful for all the types and models of ARCUSIN machines. (MultiPack B14/C14 _ AutoStack FS/XP)

INDUCTIVE SENSOR

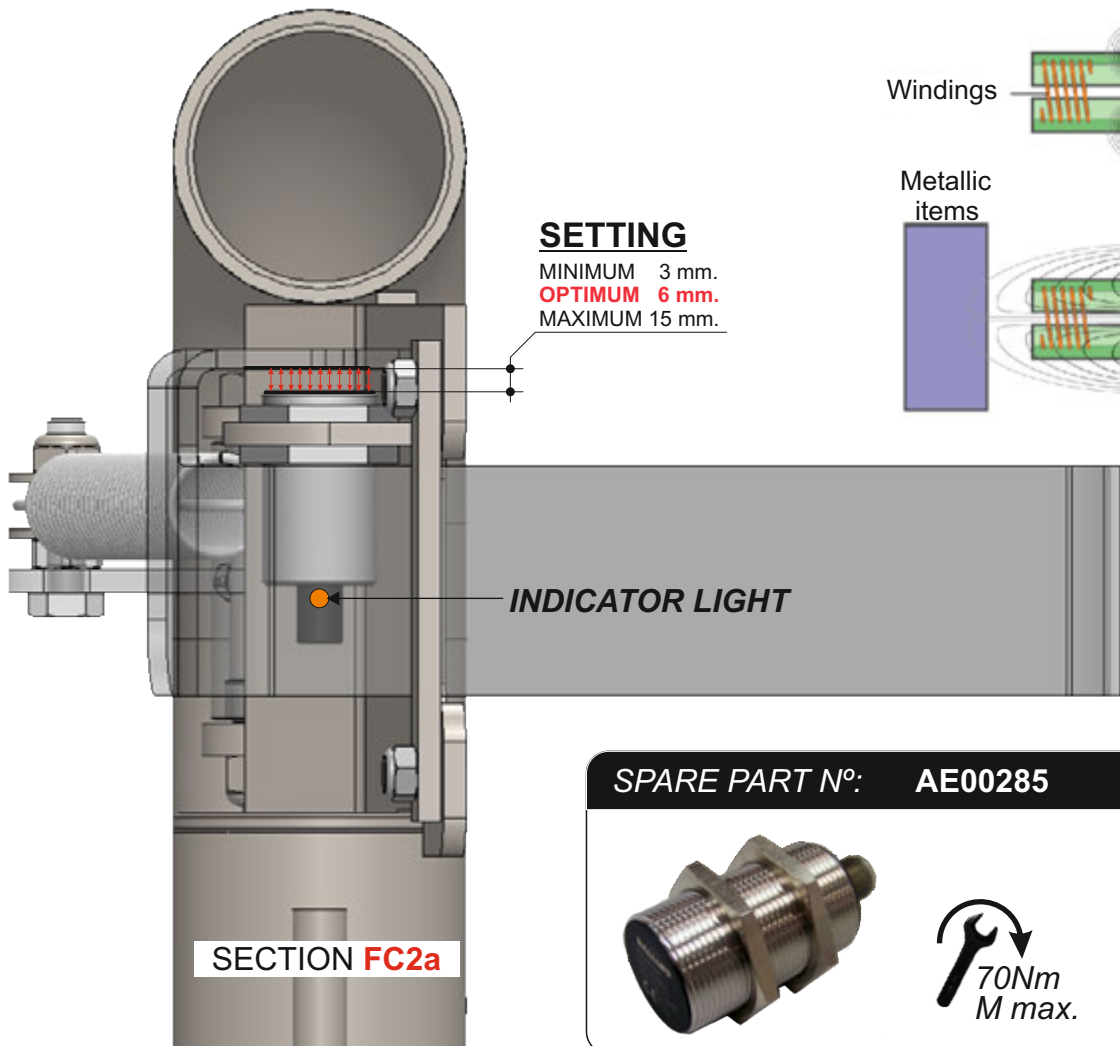
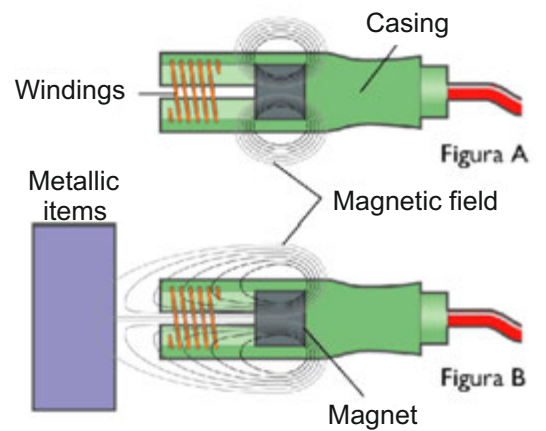


CONNECTION TO MOTHERBOARD



CONNEXION F2 SENSOR

HOW DOES IT WORK?



SETTING

- MINIMUM 3 mm.
- OPTIMUM 6 mm.
- MAXIMUM 15 mm.

INDICATOR LIGHT

SECTION FC2a

SPARE PART N°: AE00285



10-30V DC
< 200mA
S_n = 15mm



PERFORMANCE

PRESSURE TRANSDUCER
MBS 32
060G3608

RANGE P_e : 0...250 bar
 0...25 MPa

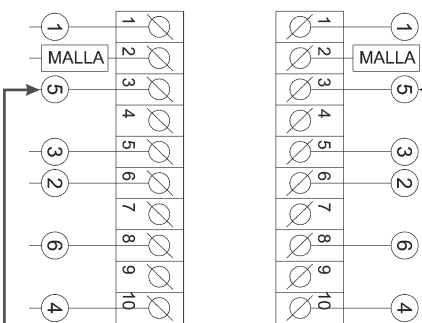
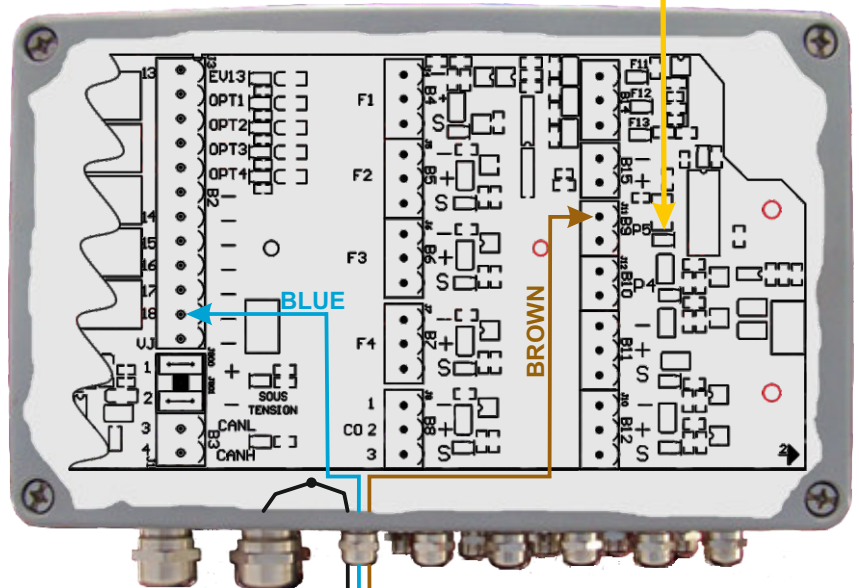
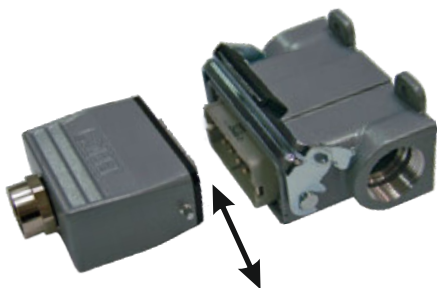
PB/MWP : 60 MPa/600 bar

SUPPLY : 10...30 V d.c.
 OUTPUT : 1...6 V d.c.

+ SUPPLY : PIN 1
 - COMMON : PIN 2
 + OUTPUT : PIN 3

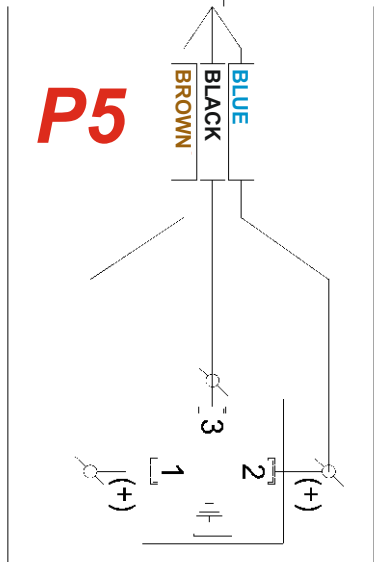


INDICATOR LIGHT D10

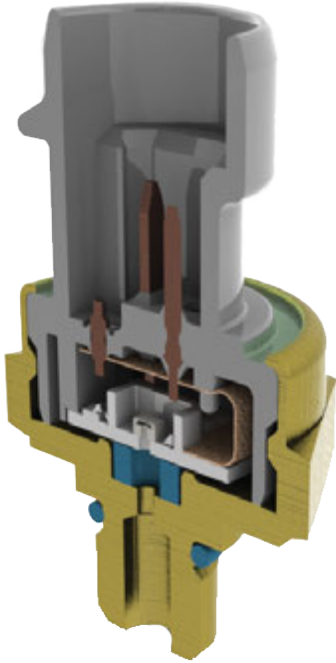


BLACK

P5



HOW DOES IT WORK?



control console



BUTTON -

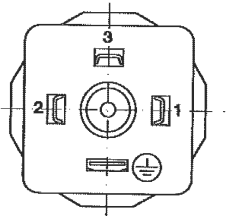
Touch pad button that allows the operator to reduce the value of the current operation. Pressing this button reduces the pressure of the bale press; its values can range between **0 - 250**.



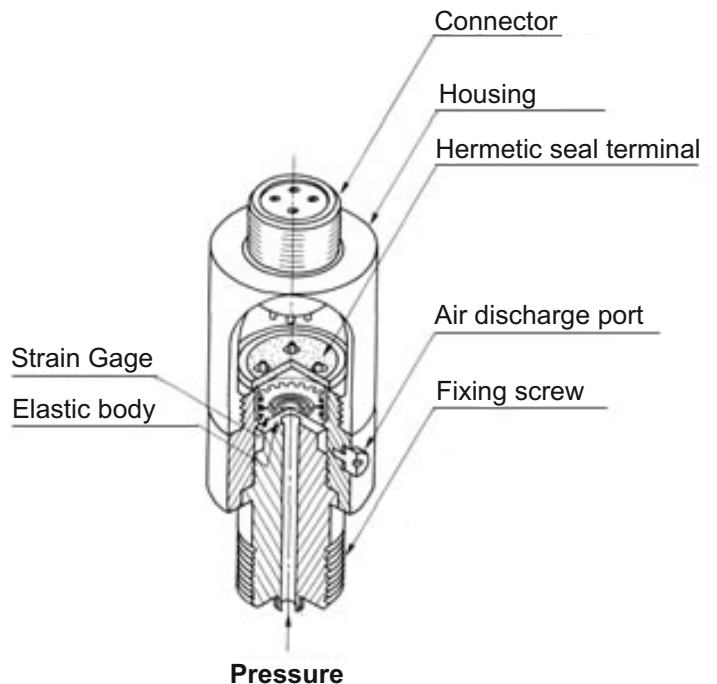
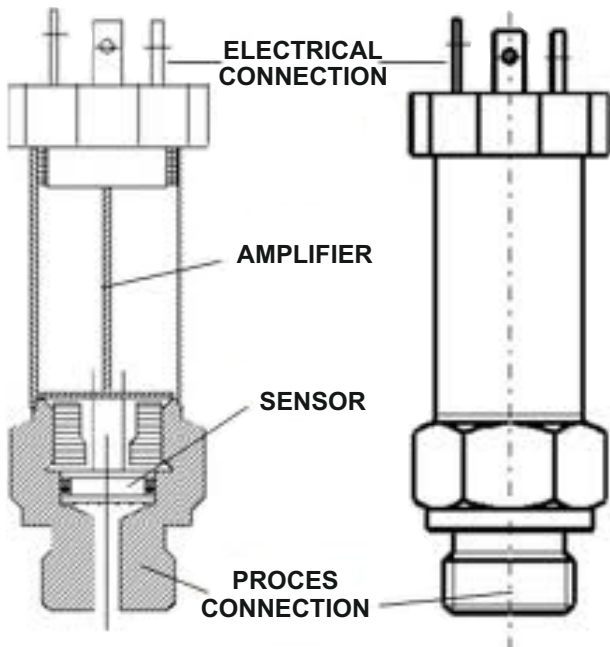
BUTTON +

Touch pad button that allows the operator to increase the value of the current operation. Pressing this button increases the pressure of the bale press; its values can range between **0 - 250**.

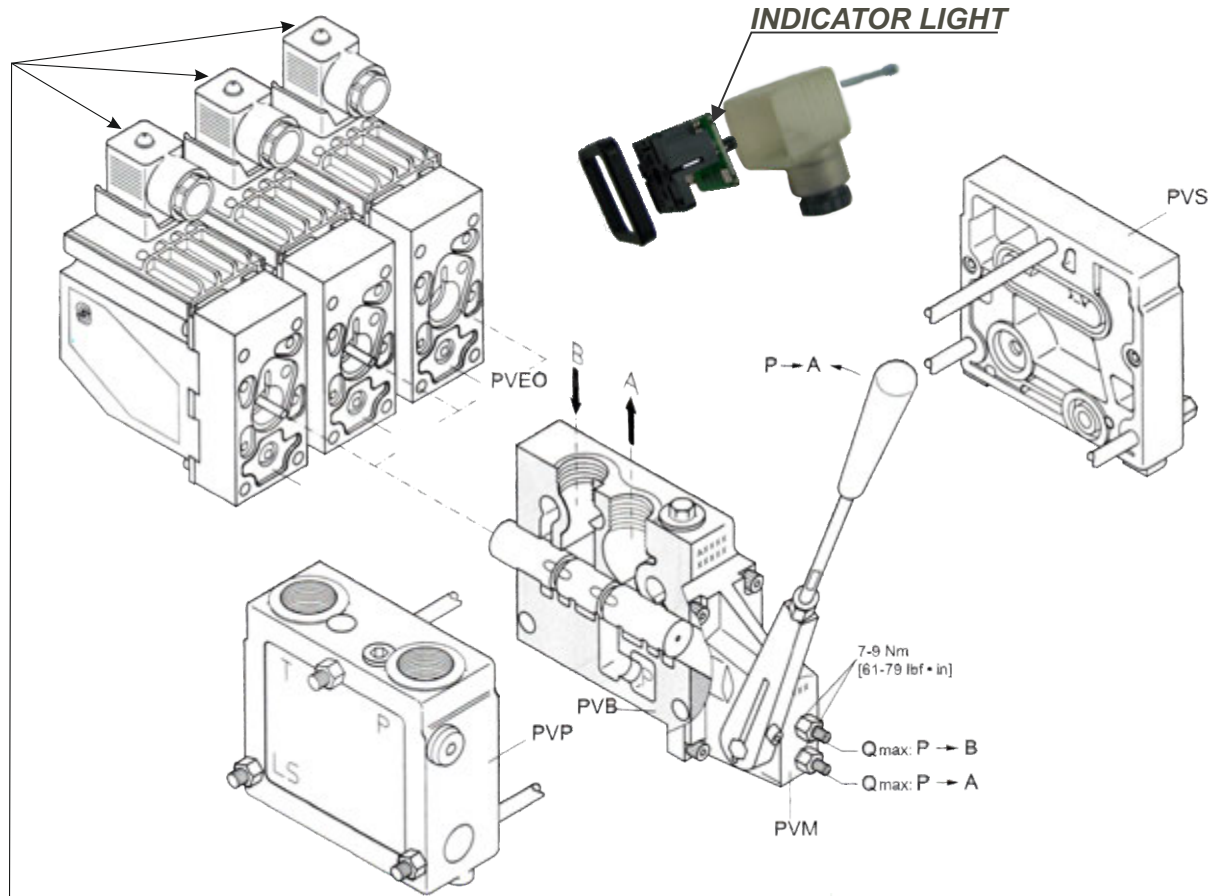
PLUG TRANSDUCER EN 175301-803



SETTING
 NO LESS THAN 100
Optimum setting 150 (Depends the material)
 NOT EXCEEDING 230

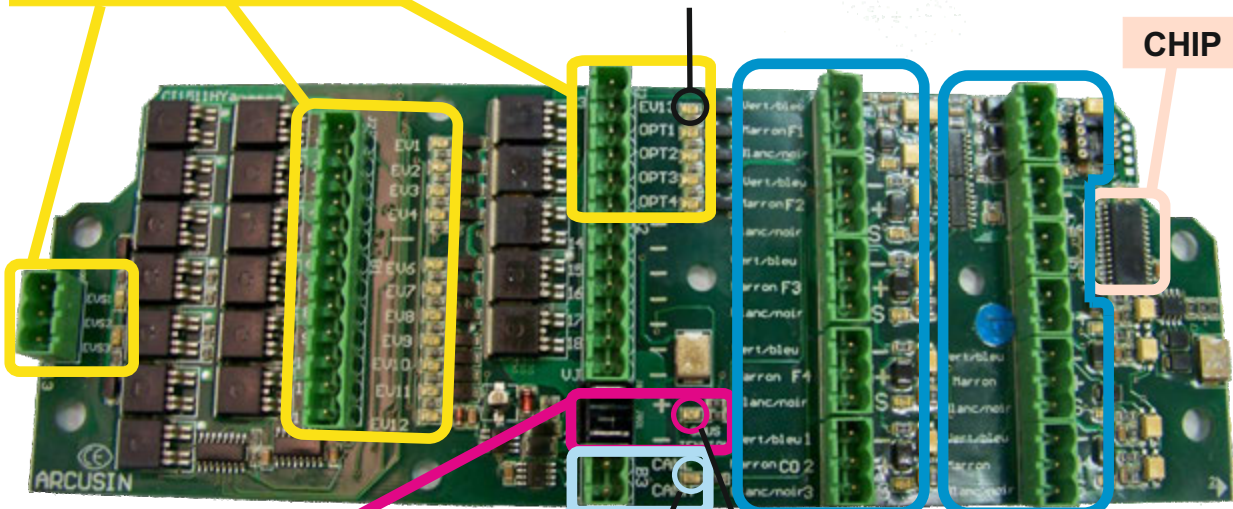


PVE series 4 for PVG 32



OUTPUTS

INDICATOR LIGHTS:
ACTUATING MODULE **PVE** ON: INDICATOR LIGHT ON
ACTUATING MODULE **PVE** OFF: INDICATOR LIGHT OFF



SUPPLY VOLTAGE

SIGN BUS

BUS INDICATOR LIGHT

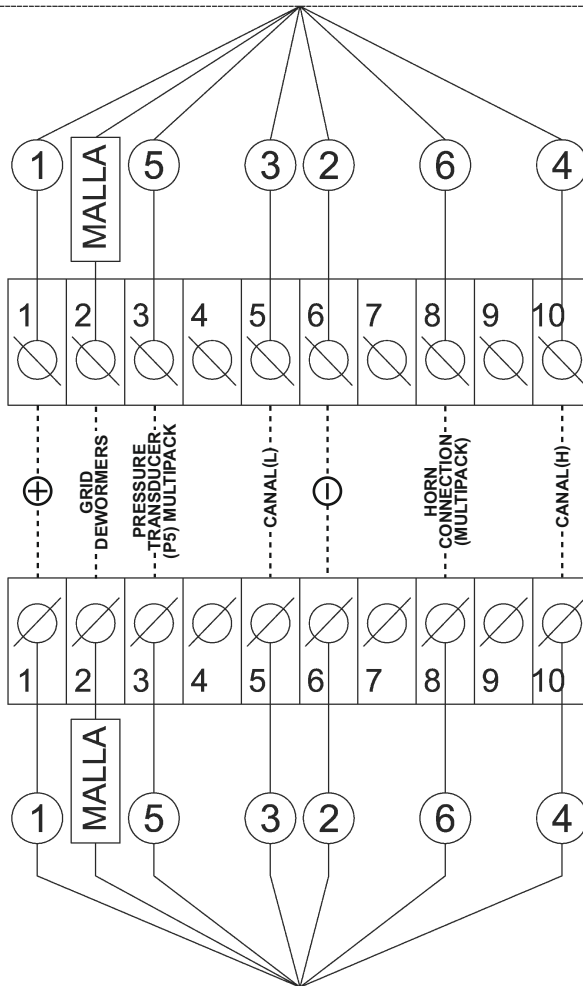
INDICATOR SUPPLY VOLTAGE

INPUTS

CHIP



CONNECT TOGETHER
(KEEP CLEAN)

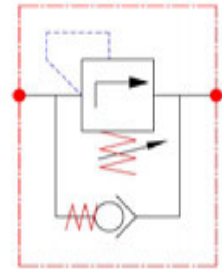
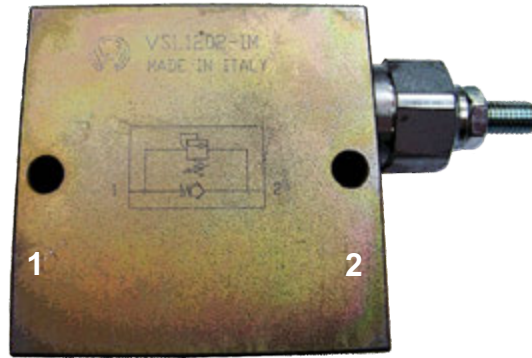


NAME

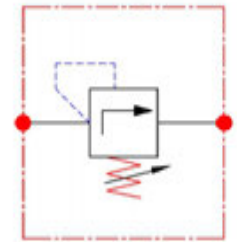
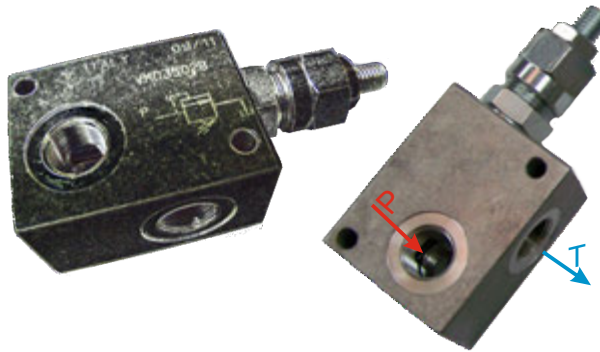
PICTURES

SYMBOL

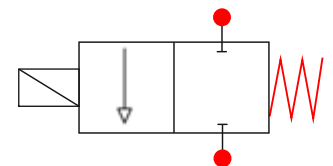
SEQUENTIAL VALVE



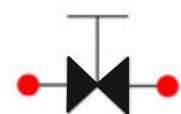
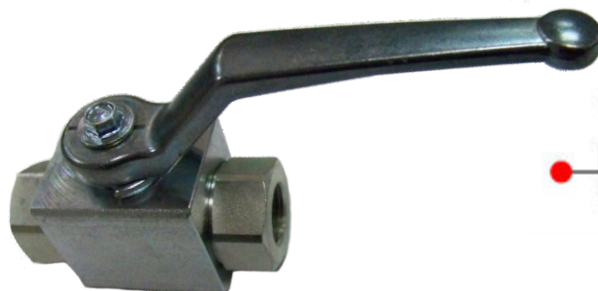
PRESSURE VALVE



**SOLENOID VALVE
(2/2 TWO LINES AND
TWO POSITIONS)**



FAUCET NORMALLY OPEN



NAME

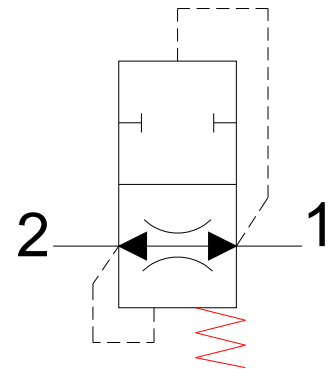
PICTURES

SYMBOL

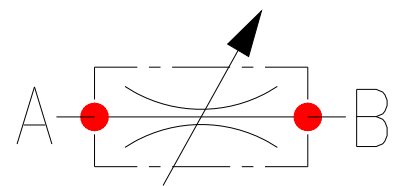
CHECK VALVE (ONE WAY)



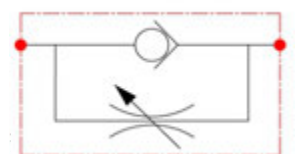
PIPE RUPTURE VALVE



FLOW REDUCER (TWO-WAY)



CHECK VALVE WITH FLOW REDUCER

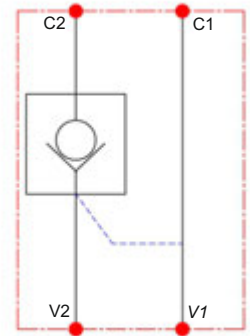
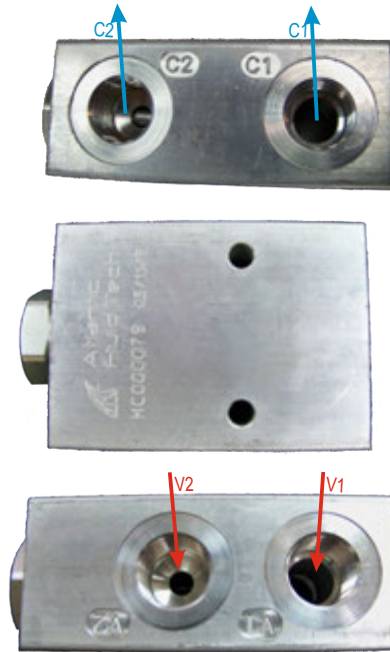


NAME

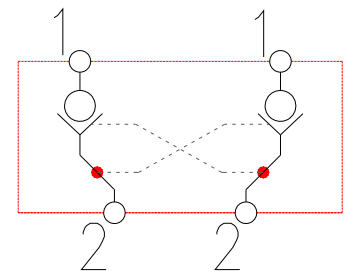
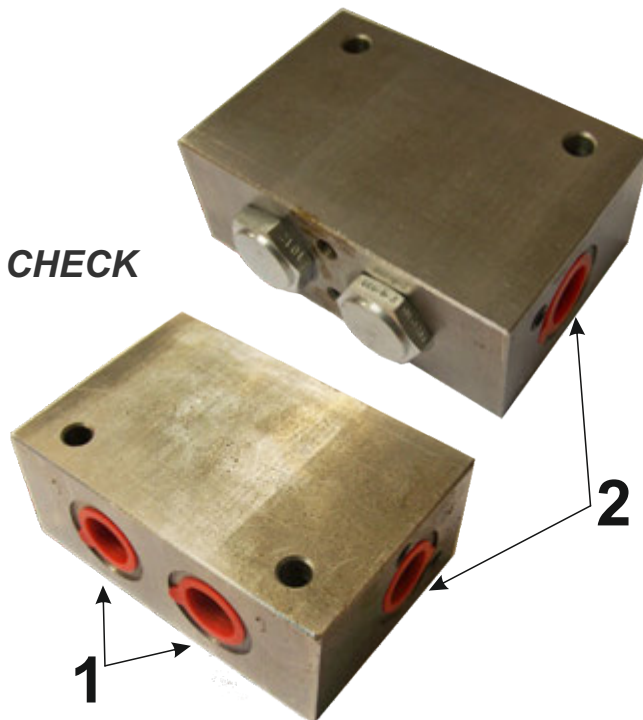
PICTURES

SYMBOL

**PILOT-OPERATED CHECK
1 WAY**



**PILOT-OPERATED CHECK
2 WAY**

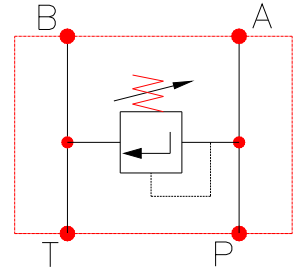
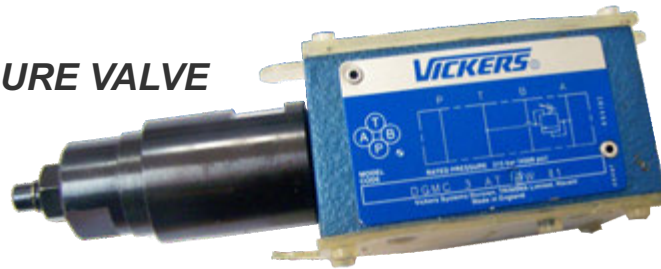


NAME

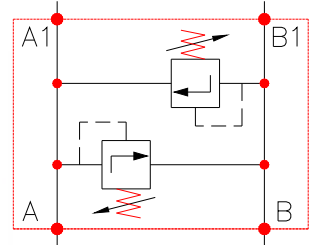
PICTURES

SYMBOL

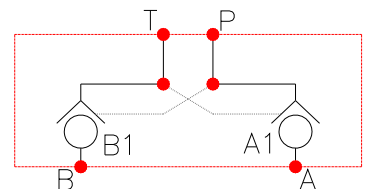
**MODULAR PRESSURE VALVE
ONE WAY**



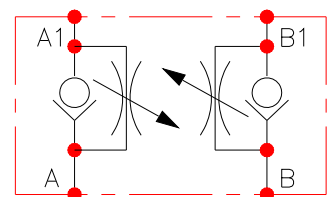
**MODULAR PRESSURE VALVE
TWO-WAY**



**MODULAR PILOT-OPERATED
CHECK VALVE IN TWO-WAY**



**FLOW REDUCER IN ONE WAY
AND CHECK VALVE TO THE
OTHER WAY**

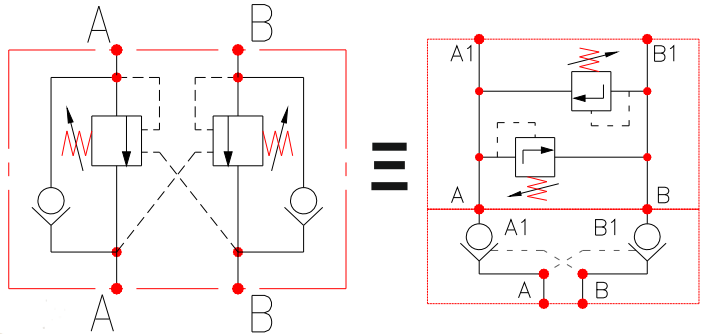
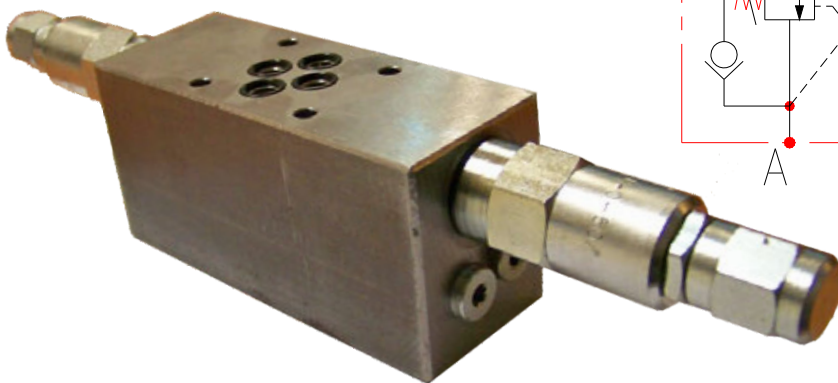


NAME

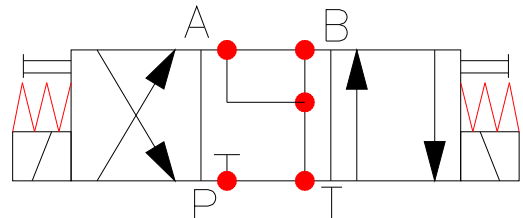
PICTURES

SYMBOL

**SPECIAL MODULAR PILOT-OPERATED
CHECK VALVE IN TWO WAY + PRESSURE
VALVE IN TWO WAY**

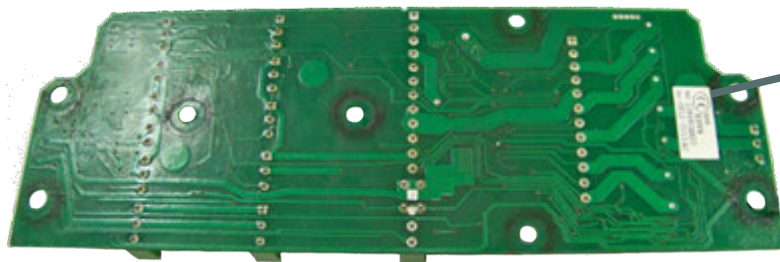
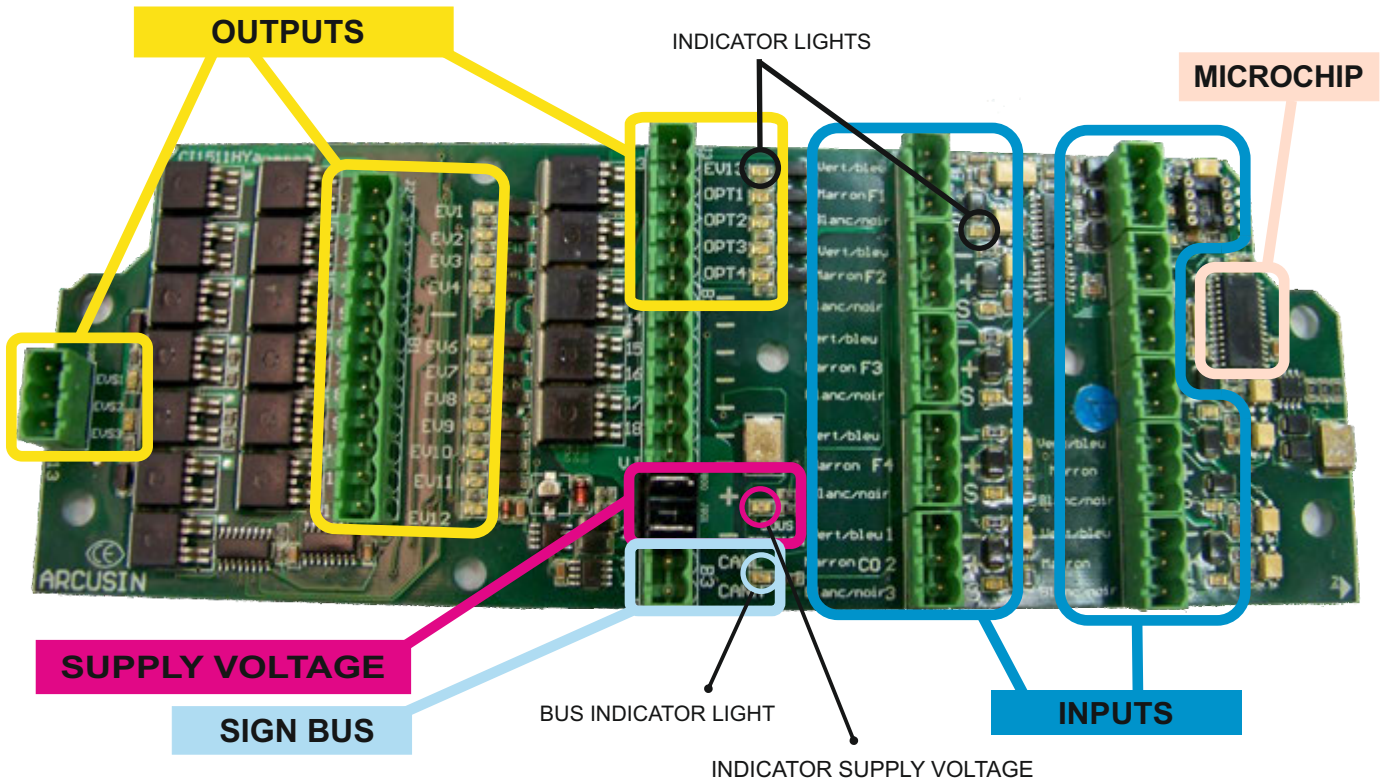


**EXAMPLE DISTRIBUTOR
NG 4/3 (4 LINES 3 POSITIONS)
ACTUATED BY SOLENOID + SPRING +
MANUAL**



MOTHERBOARD FOR MULTIPACK

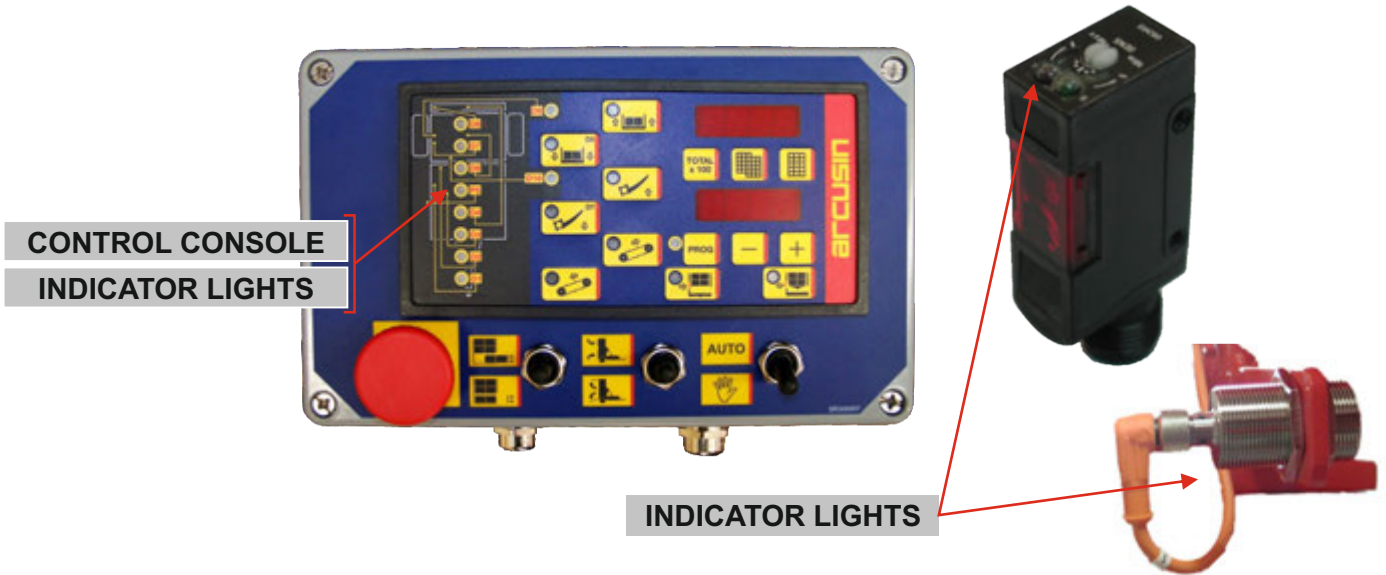
ESV4



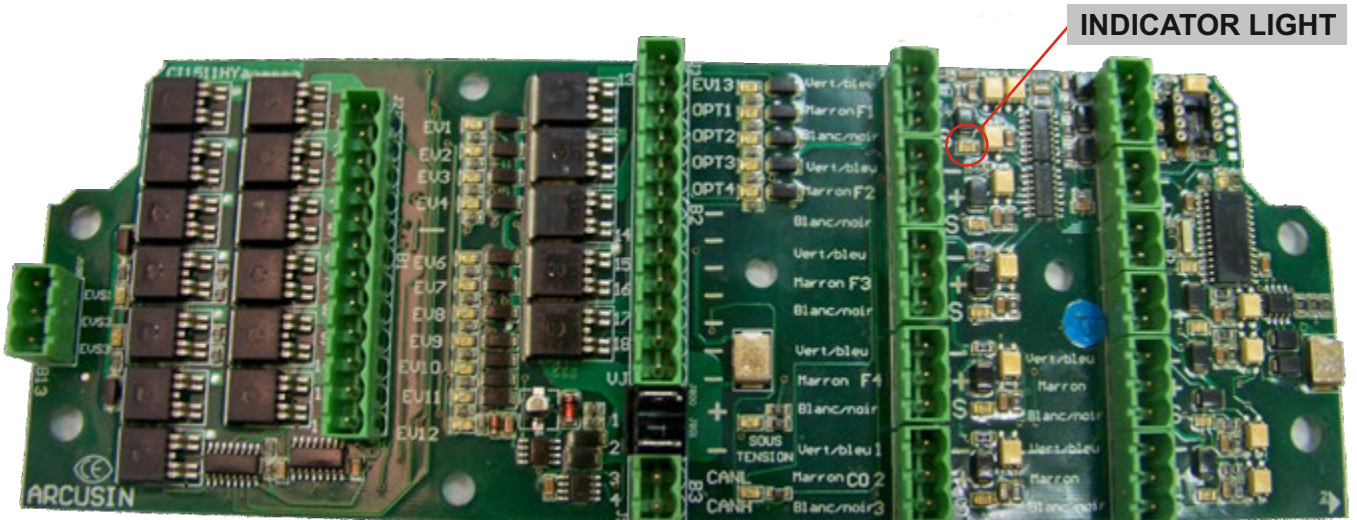
Model: **ESV4**

In the table there are all the indicator lights that the machine has.

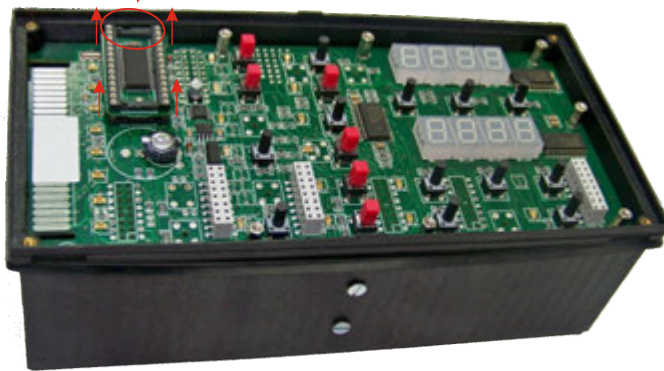
In this case the machine is ready to start working, so that the LEDs in the control console should be OFF.



PHOTOCCELL	CONTROL CONSOLE	PHOTOCCELL	MOTHERBOARD
GĈ	OFF	OFF	B4-OFF
D2	OFF	OFF	B10-OFF
D3	OFF	ON	B5-ON
D4	OFF	OFF	B6-OFF
P5	OFF	OFF	
D6	OFF	OFF	B7-OFF
D7	OFF	ON	B8-ON
D8	OFF	ON	B11-ON
D9	OFF	ON	B12-ON
D10	OFF	ON	B9-ON
D11		OFF	F11-OFF



CHECK
CORRECT POSITION





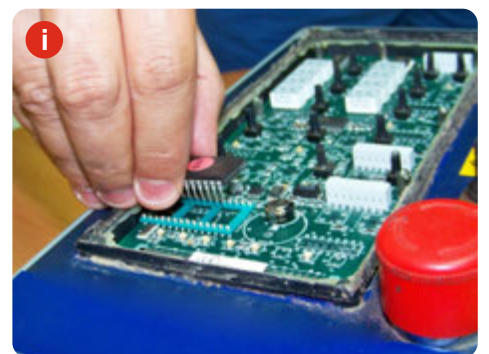
1. Take out the black cover.



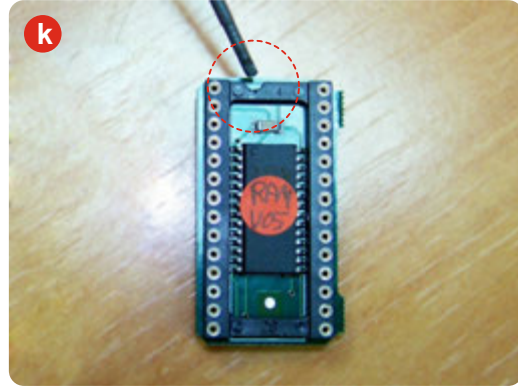
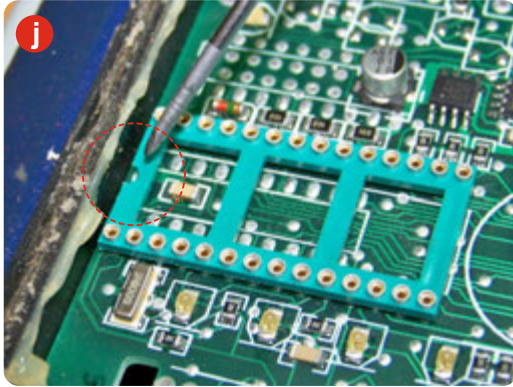
2. Take out the mask and locate the chip.



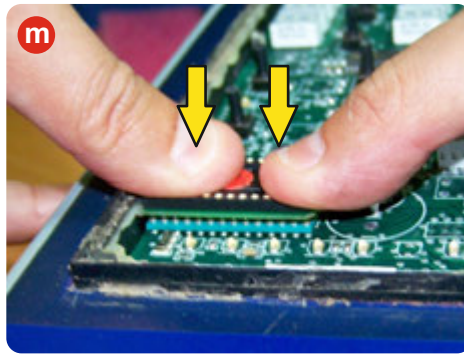
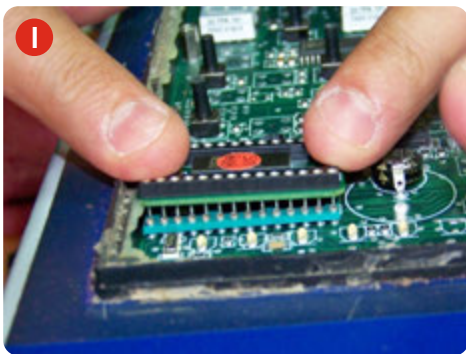
3. Carefully take out the chip without breaking anything.



4. Assemble the new chip with extremely precautions avoiding break some pins. If one or some of them are bended the chip might not work and should be replaced for a new one.



While are assembling the new one make sure that the position indicated on the pictures above coincides. (Pictures j/k)



5. Finally assemble the mask and the cover. The control box is already to work again.









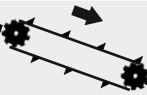





serie

FZ

**LINK OUTPUTS MULTIPACK
B14 / C14**

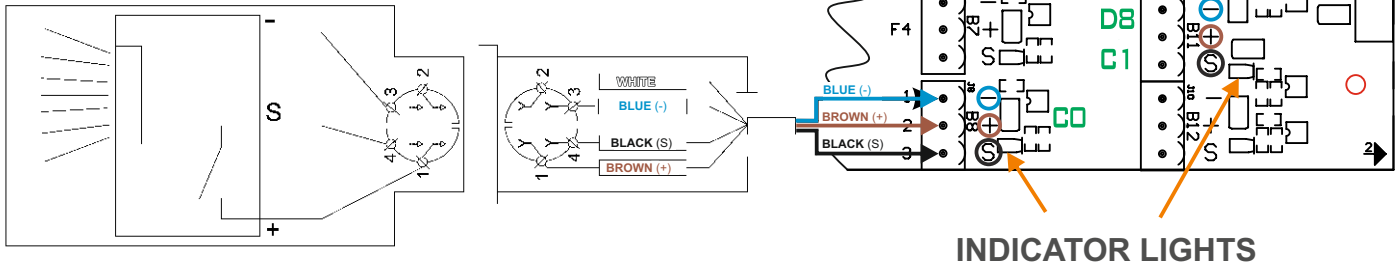
HT-131114-01

HYDRAULIC	FUNCTION OR MOVEMENT	CONNECTION MOTHERBOARD
PVG 1.1		EV2
PVG 1.2		EV1
PVG 2.1		EV4
PVG 2.2		EV3
PVG 3.1		EV6
PVG 3.2		EV7
PVG 4.1		EV8
PVG 4.2		EV9
PVG 5.1		EV11
PVG 5.2		EV10
PVG 6.1		EV13
PVG 6.2		EV12

SPARE PART CODE: AEFTC08

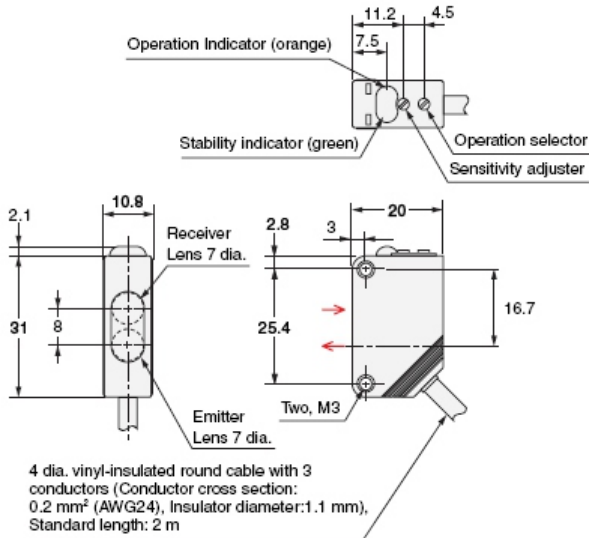


CONNECTION TO MOTHERBOARD



INDICATOR LIGHTS

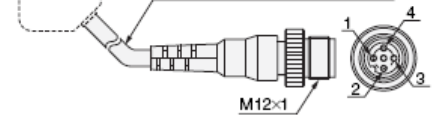
DIMENSIONS



CONNEXIONS

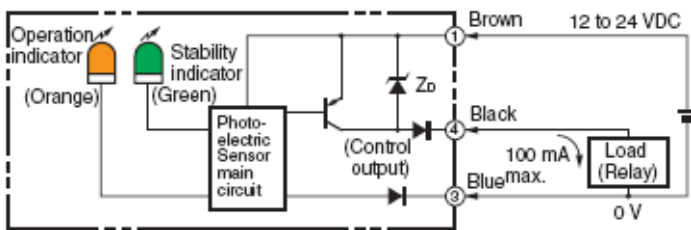
M12 Pre-wired Connector (E3Z-□□□-M1J)

4 dia. vinyl-insulated round cable with 3 conductors, Standard length: 0.3 m

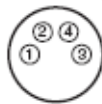


Terminal No.	Specifications
1	+V
2	---
3	0V
4	Output

OUTPUT CONNECTION

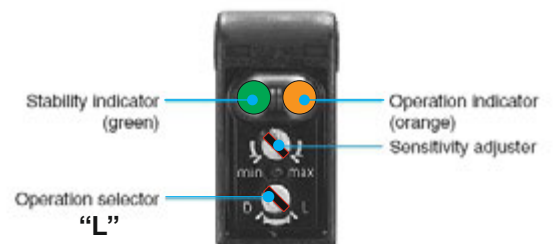


Connector Pin Arrangement



Pin 2 is not used.

SET / SIGNAL



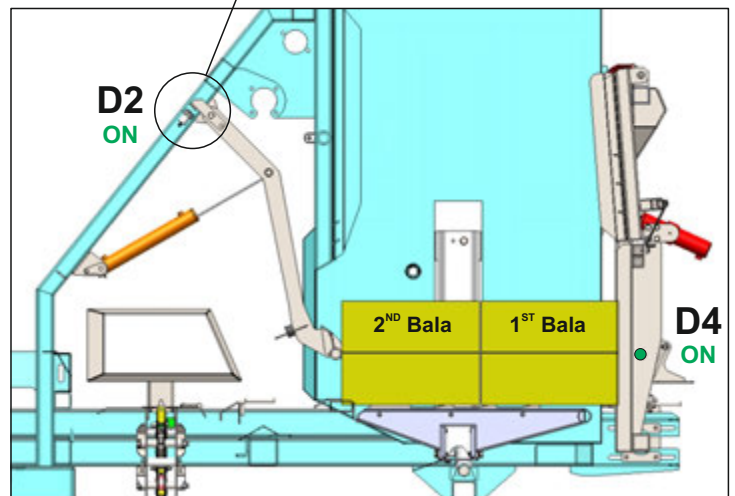
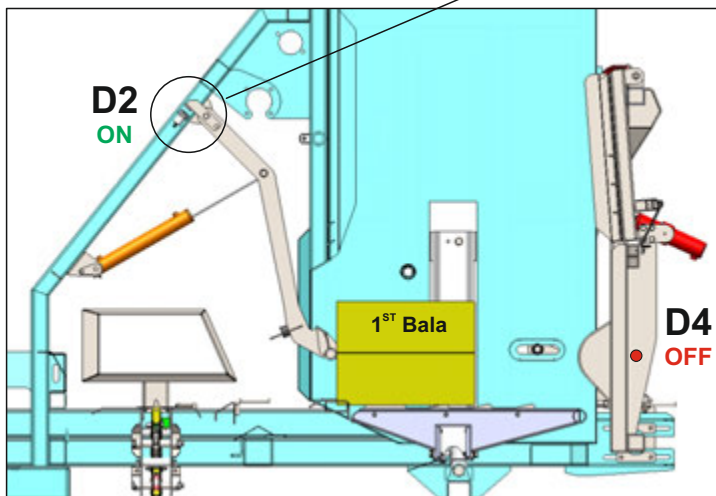
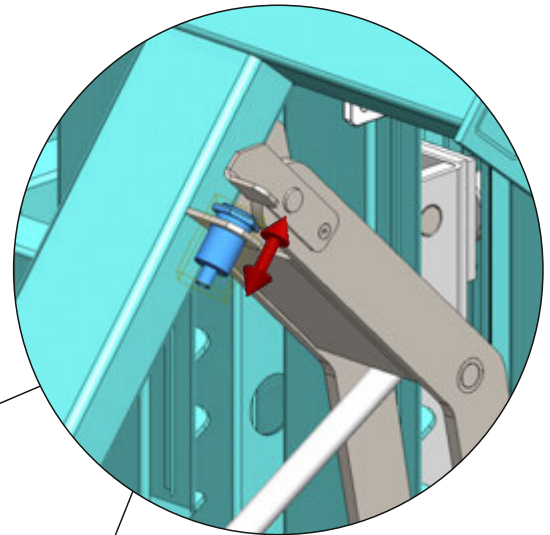
GREEN LIGHT ON = POWER OK (No detection object)

GREEN AND ORANGE LIGHT ON = CORRECT DETECTION (Max.1m)

To correctly adjust the input signal of detector D2 (which indicates the end of travel of the pusher), proceed as follows:

1. Put the tilter at its maximum limit (cylinder expanded to maximum, approximate d.e.c. 675 mm).
2. Adjust the position of inductive detector D2 so that it detects when the pusher has reached end of travel, not before.
3. Block the detector position using fastening screws.
4. Check in automatic mode (minimum 5 cycles) that the input signal of detector D2 lights up on the machine indicator screen once the pusher has reached end of travel, not before.

Move the inductive detector towards / away from the detector flag when the pusher is at end of travel.



WARNING!

When the second bale enters, in order to ensure correct sequence and the elevator to rise, FIRST trigger the D4 mechanism and then give the end of travel signal to the "D2" pusher.

PROBLEM: *If, on pushing the second bale, the D2 signal is activated before the D4 signal, THE ELEVATOR WILL NOT RISE, and a third bale will attempt to enter.*

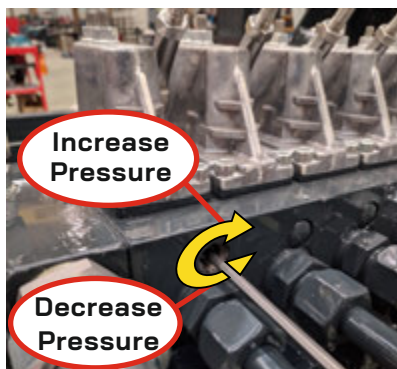
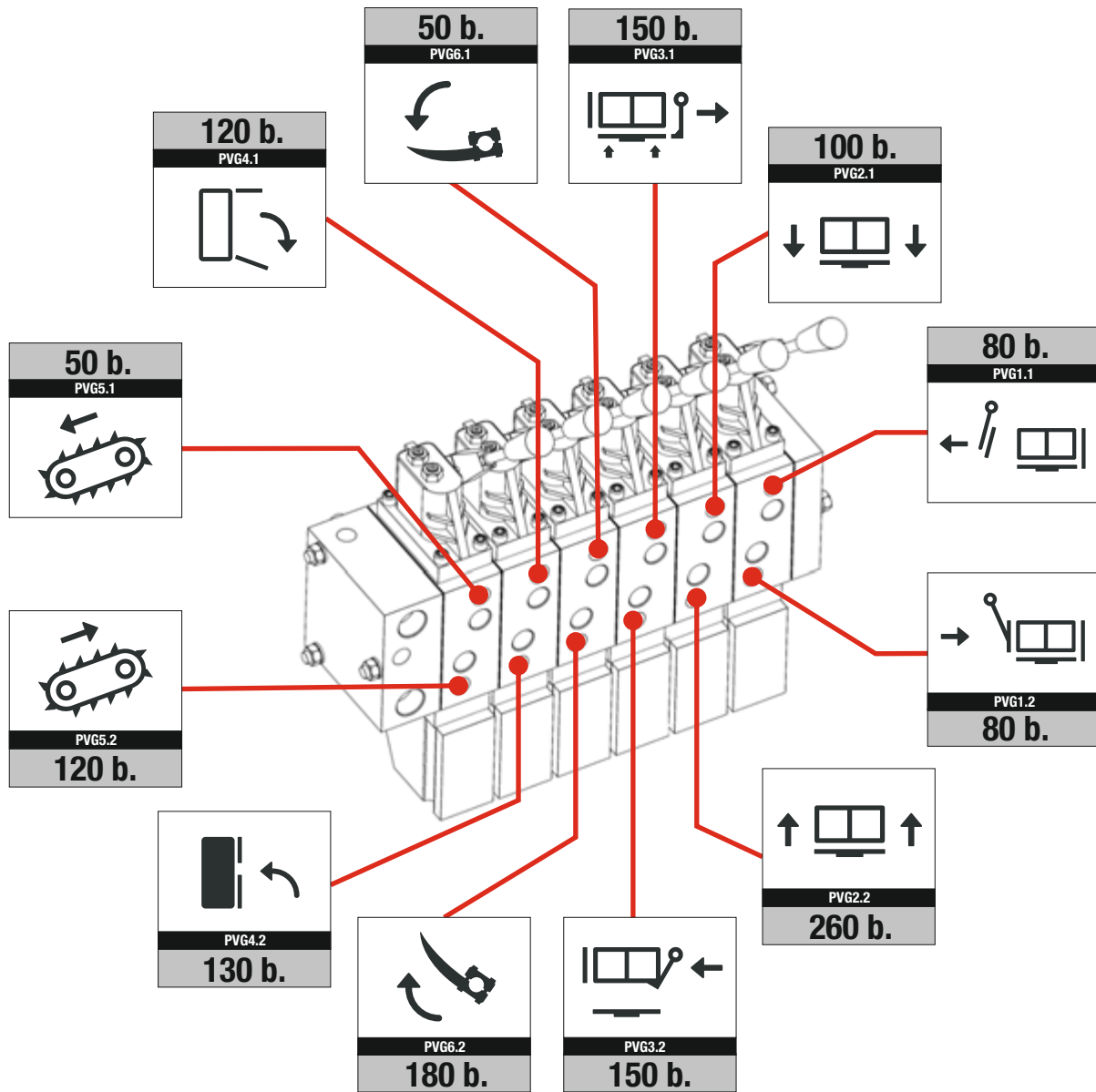
Important settings:

1. A misregulated hatch can affect this sequence. Depending on the bale section to be grouped, the hatch opening should be regulated correctly.
2. Timer Tp14 acts as filter on the D2 sensor (delaying the signal), allowing D4 to be activated in the first place, when the second bale enters, thus ensuring the elevator raising sequence.

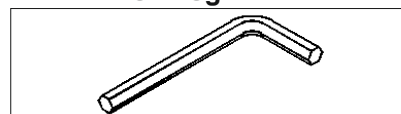
D14 PRESSURE SERVICES ADJUSTMENT

HT-220425-01

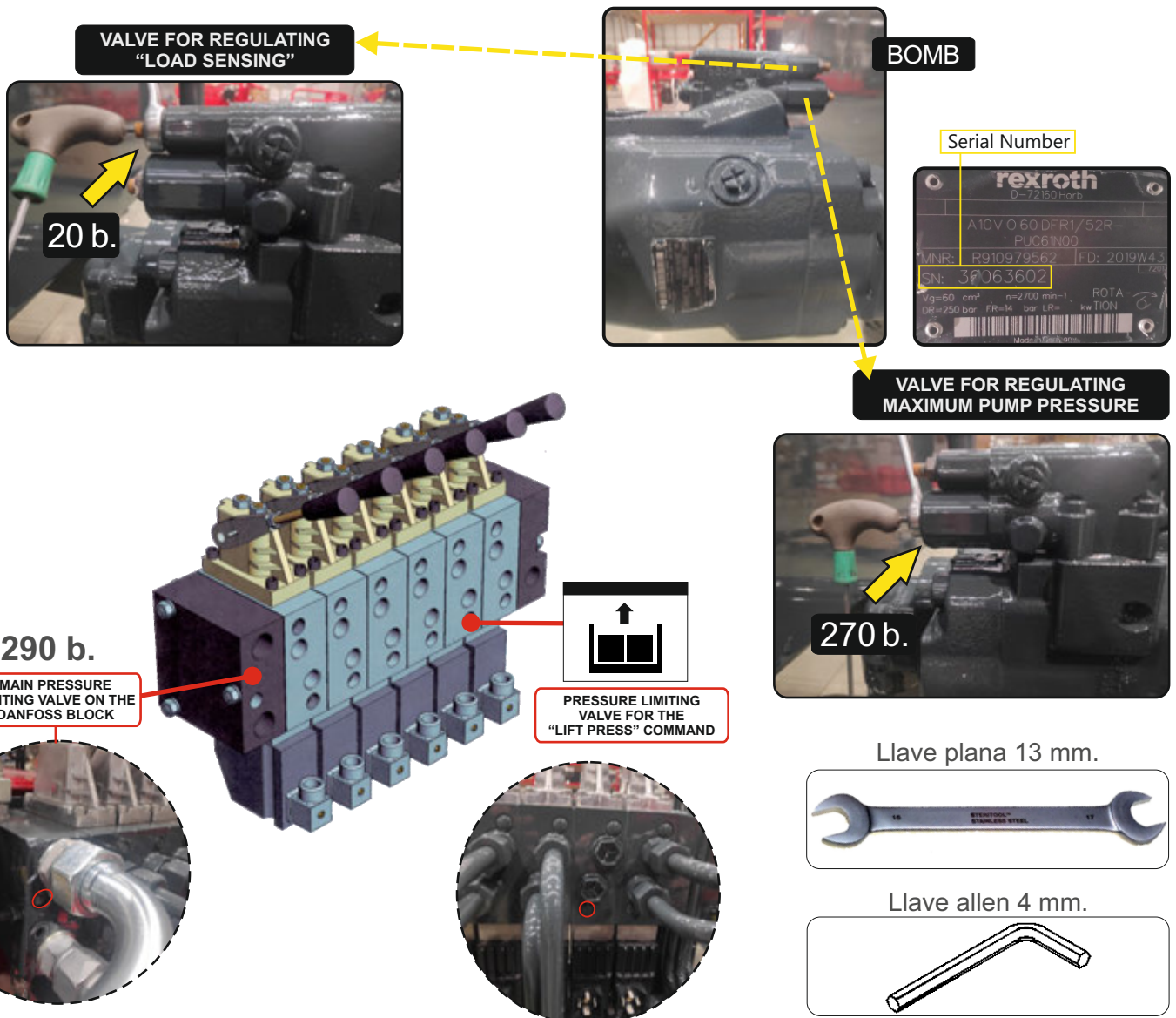
B



Allen key 4 mm



1. Fill the pump casing with approximately 0.5 litres of hydraulic oil (VG 46).
2. Completely close the "Load Sensing" valve.
3. Open the maximum pressure limiting valve on the pump (4 turns) to ensure that the pressure is low.
4. Completely close the main pressure limiting valve on the Danfoss hydraulic block.
5. Completely close the "LIFT PRESS" movement limiting valve.
6. Connect the tractor PTO at 350 r.p.m. and leave the machine working for two minutes so that the oil can circulate.
7. Gradually close the maximum pressure limiting valve of the pump until the meter reads **290 bars**.
8. Then, open and set the "Load Sensing" valve on the pump so that the meter reads **20 bars**.
9. Activate the "LIFT PRESS" lever, while gradually opening the main pressure limiting valve on the Danfoss hydraulic block until the tractor motor experiences a noticeable fall in power (which is when the pressure of the pump coincides with that of the hydraulic block). Check that the reading on the meter shows a pressure setting of **290 bars**.
10. Then, activate the "LIFT PRESS" lever and gradually open the maximum pressure limiting valve on the pump until the meter reads **270 bars**.
11. It is now possible to adjust all of the other pressure settings related with operations controlled by the Danfoss hydraulic block.



MULTIPACK THREAD TENSIONER ADJUSTMENT

HT-200121-01

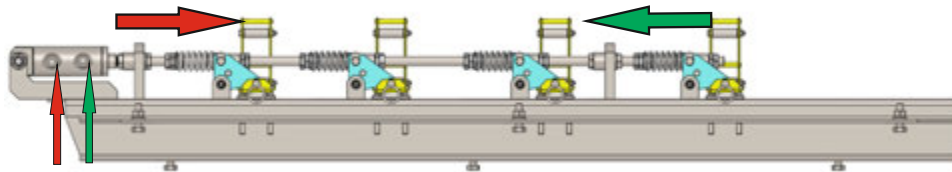
B



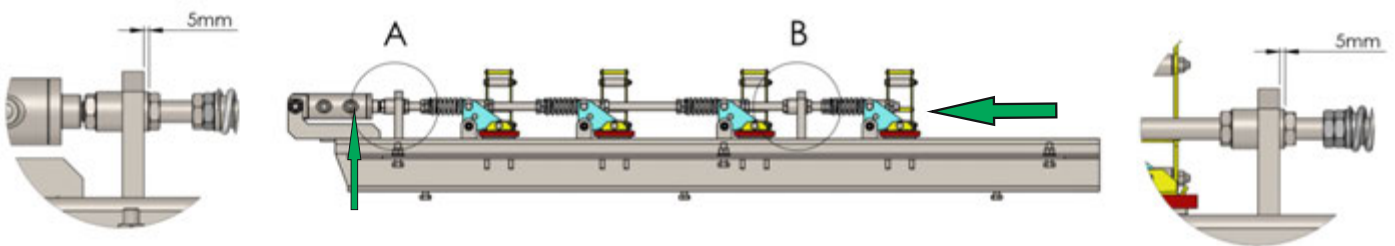
ATTENTION!

The illustrations in the document are for 4 knotters, although it is still compatible for the regulation of the 5 thread tensioners that can be found in the Multipack E14.

1. Use the cylinder to open and close the twine tensioner 5 times, in order to correctly position all parts.

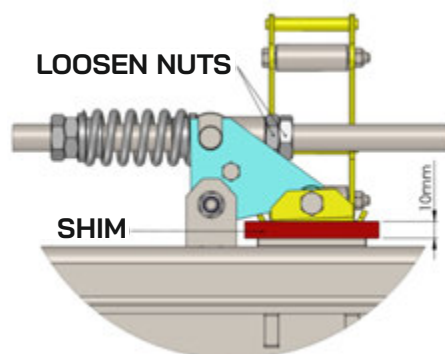
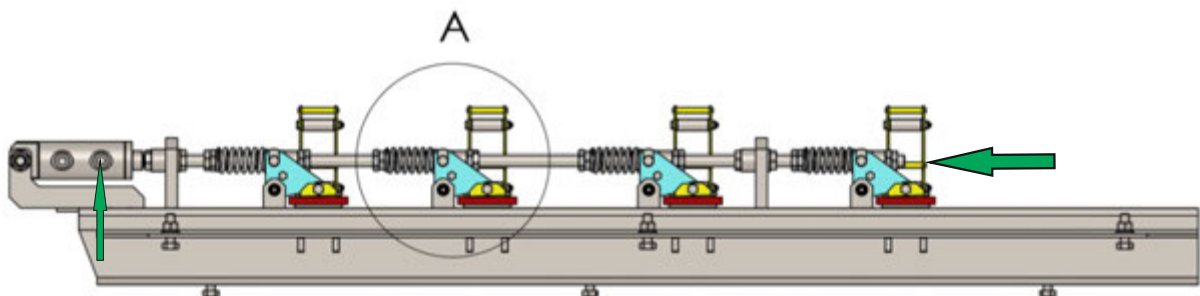


2. Position the 2 support bushes 5 mm away from the support with the cylinder closed.



3. Loosen the nuts to raise the 4 flatteners with a 10-mm shim.

Adjust the nuts so that the shim can be inserted and removed with a sliding fit.

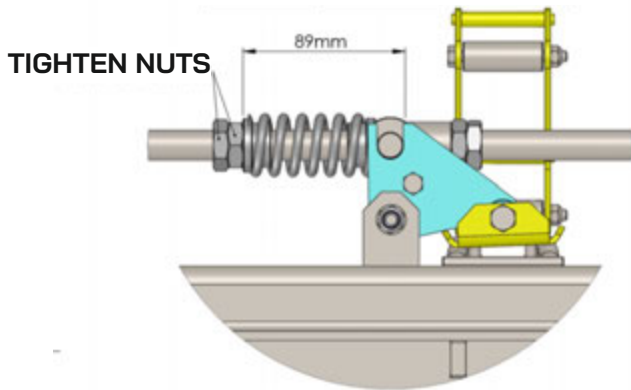


MULTIPACK THREAD TENSIONER ADJUSTMENT

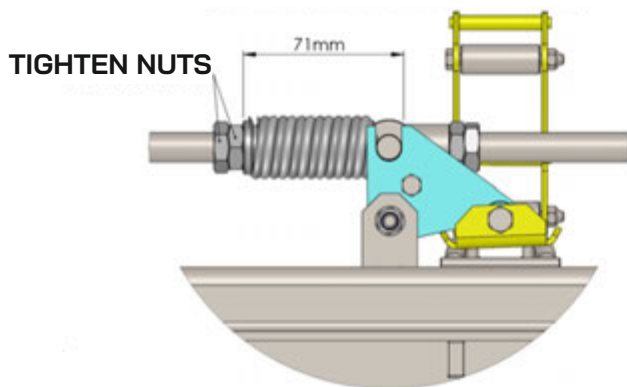
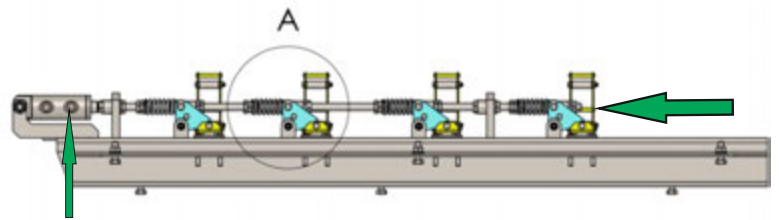
HT-200121-01

B

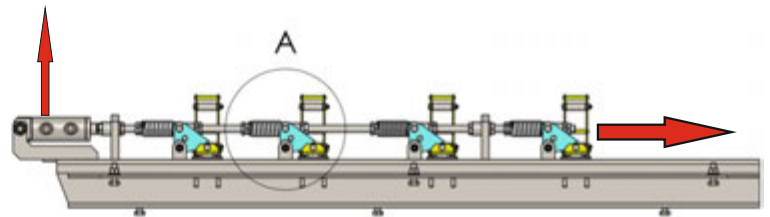
4. Position the nuts so that the springs measure **89 mm** with the cylinder closed and **71 mm** with the cylinder open.



CLOSED CYLINDER

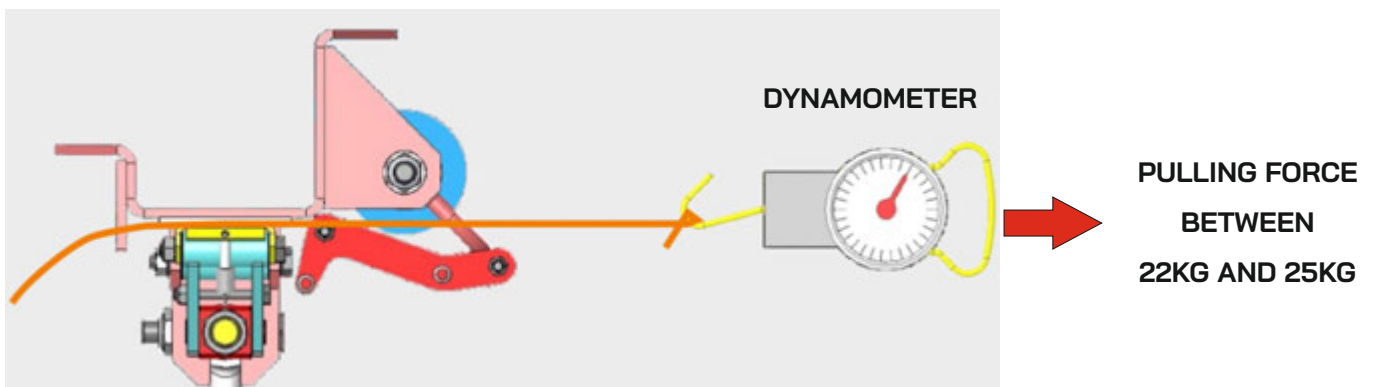


EXTENDED CILINDRO



5. Using a dynamometer, check the tension of the twine with the cylinder open.

Adjust so that the dynamometer reading is between **22kg and 25 kg** before the twine is pulled.



MULTIPACK THREAD PATH

HT-200131-01

B

For the correct running of the thread, it must be passed through the indicated points:

1°. TOP RING

2°. LATERAL RING

3°. TENSOR

4°. EXIT RING

5°. RING

6°. THREAD PIPE

7°. RING

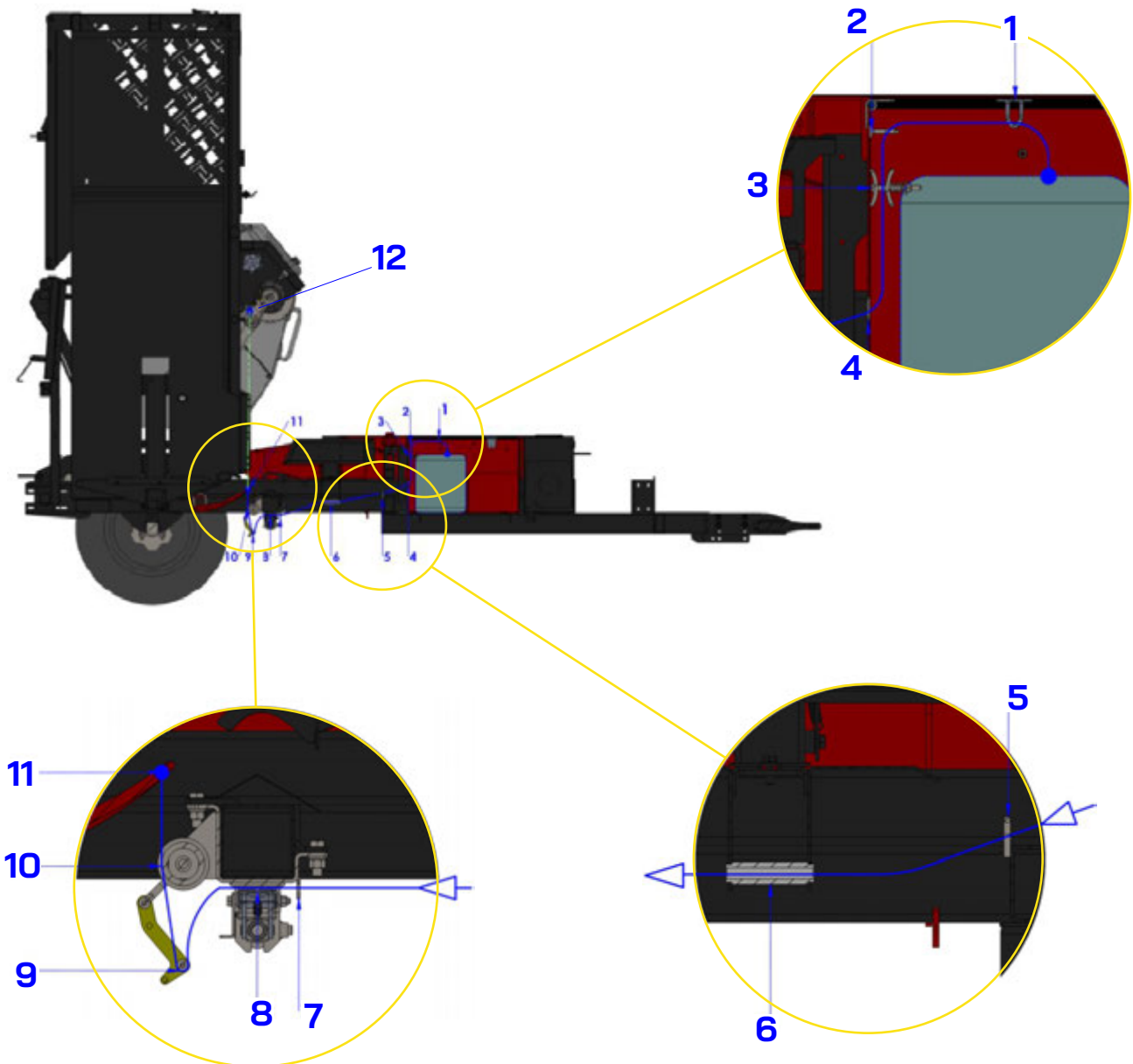
8°. TENSOR

9°. TENSIONER

10°. ROLLER

11°. NEEDLE

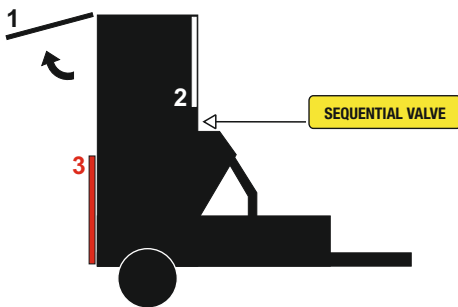
12°. KNOTTER



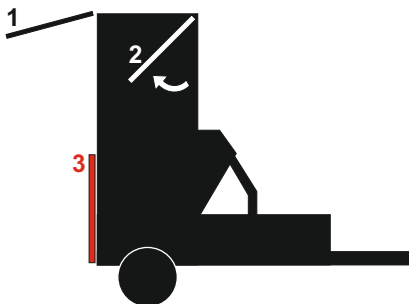
Repeat the procedure for each of the knotters you want to work with.

GATE OPENING SEQUENCE

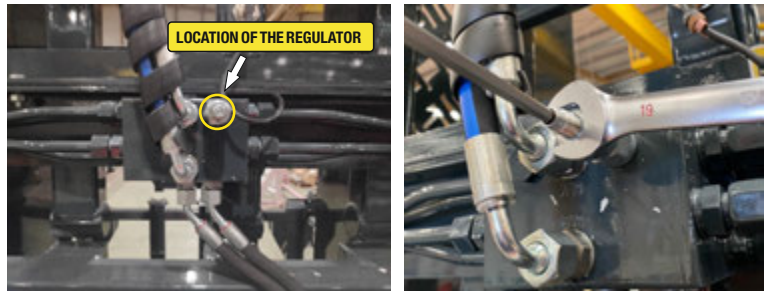
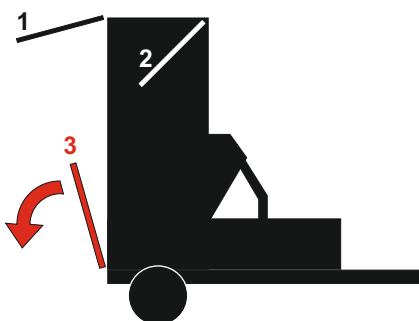
A. The top retainer (1) arrives to the final position.



B. When the retainer (1) has reached its end position, the extractor (2) starts to come out.



C. When the retainer and the extractor are in its final position, is when the door (3) must be opened.



DOOR OPENING SEQUENTIAL VALVE REGULATION PROCEDURE

1° Operate the "open doors and extractor" lever very slowly, maintaining a constant flow rate.

2° When the retainer and the extractor reach their final position (**B**), the discharge door must be opened when the pressure gauge reads **60bar (C)**.

3° If the door opens when the pressure is below 60bar, tighten the sequential valve.
If the pressure is higher than 60bar, loosen the sequential valve.

4° Repeat procedure until the door opens at **60bar**.



IMPORTANT

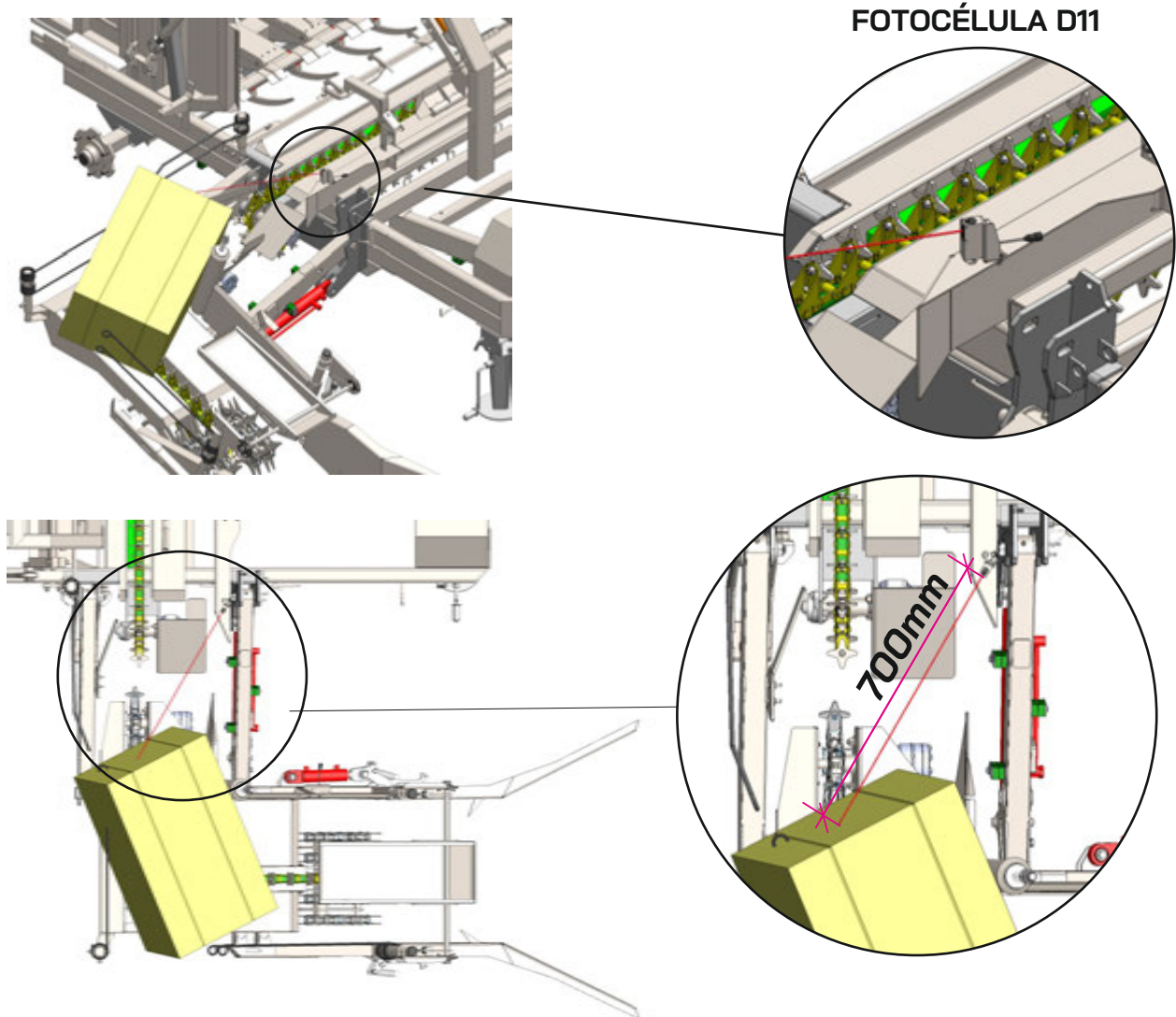
Depending on working conditions, the settings mentioned above may need to be adjusted for the machine to work correctly.

PHOTOCELL D11 REGULATION

HT-200312-02

B

The D11 photocell must be correctly adjusted for the pick-up bale loading operation.



FACTORY SETTING ADJUSTMENT

Adjust the potentiometer (6) of the photoelectric cell to detect up to a distance of 700 mm.



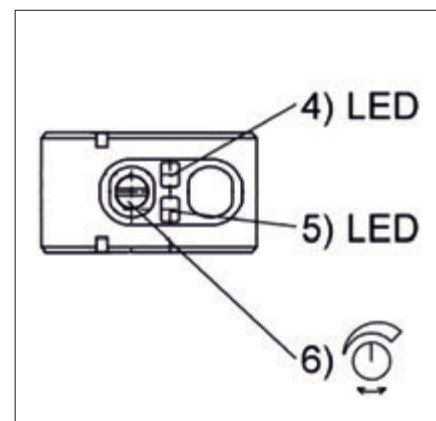
ATTENTION!

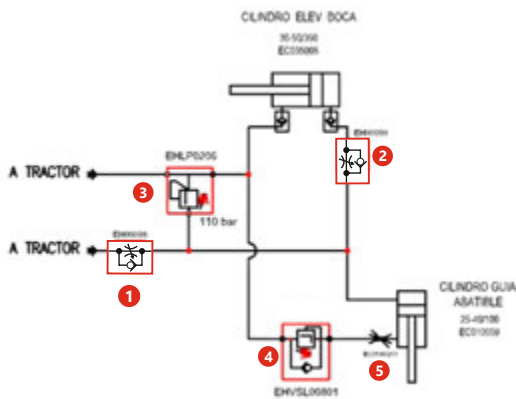
Depending on the length of the bale, the detection distance of the photocell D11 must be adjusted.

OPERATING NOTE

The **green LED** indicates that the photocell is receiving power.

The **orange LED** indicates that the photocell is detecting an object.





- ❶ Pick-up rise one-way flow regulator
- ❷ Pick-up lowering one-way flow regulator
- ❸ Pressure limiting valve
- ❹ Sequential valve
- ❺ Hollow screw with regulator

Rising and lowering times recommended:

Raising time \sim = 6 segundos.
Lowering time \sim = 6 segundos.



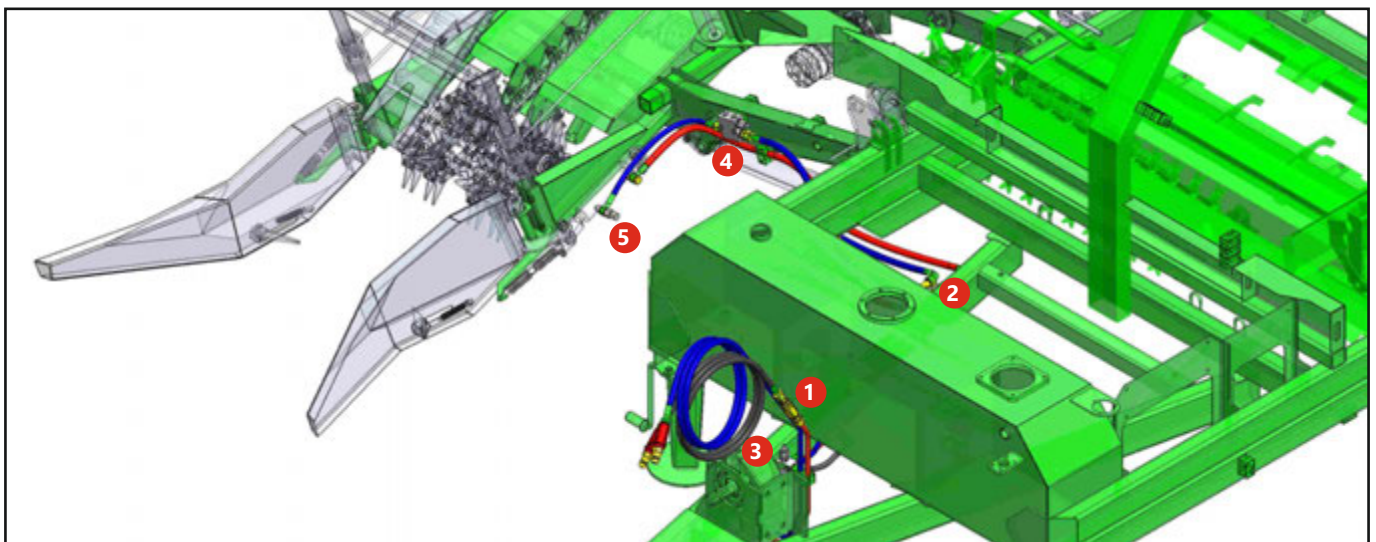
In order to correctly regulate the up/down movement of the pick-up, a specific sequence of movements must take place. To do this, the hydraulic circuit must be modified.

When the pick-up is raised: As soon as the pick-up reaches its maximum position, the inner guide must be closed. (approaching the outer fixed guide)

When lowering the pick-up: The inner guide must be opened before starting to lower the pick-up. (to the working position)

REGULATION PROCESS

1. Close the regulators (1) - (2) and open two turns.
Open the limiting valve (3) fully and close the sequential valve fully. (4)
Close the hollow screw (5) fully and open it by 3 turns.
2. Pull the pick-up up to the top. It may be that after this we can't go down because of the limiting valve. (3)
3. Adjust the limiter (3) to 14mm as in the image, is equivalent to 80 bar.
In case the pick-up does not lower, tighten one more turn to guarantee the correct operation.
4. Loosen the sequence (4) 2-3 turns. .
Activate the pick-up lift and check that the inner guide closes when the pick-up is in its maximum position, approaching the outer guide.
If this is not the case, loosen the sequence a little more (4), until the sequence is completed.
5. Raise and lower the pick-up to optimum speed using the controls (1) and (2).



For this regulation, take as reference a link of the transporter chain (make a mark to identify it from the rest with paint / insulating tape, etc.).

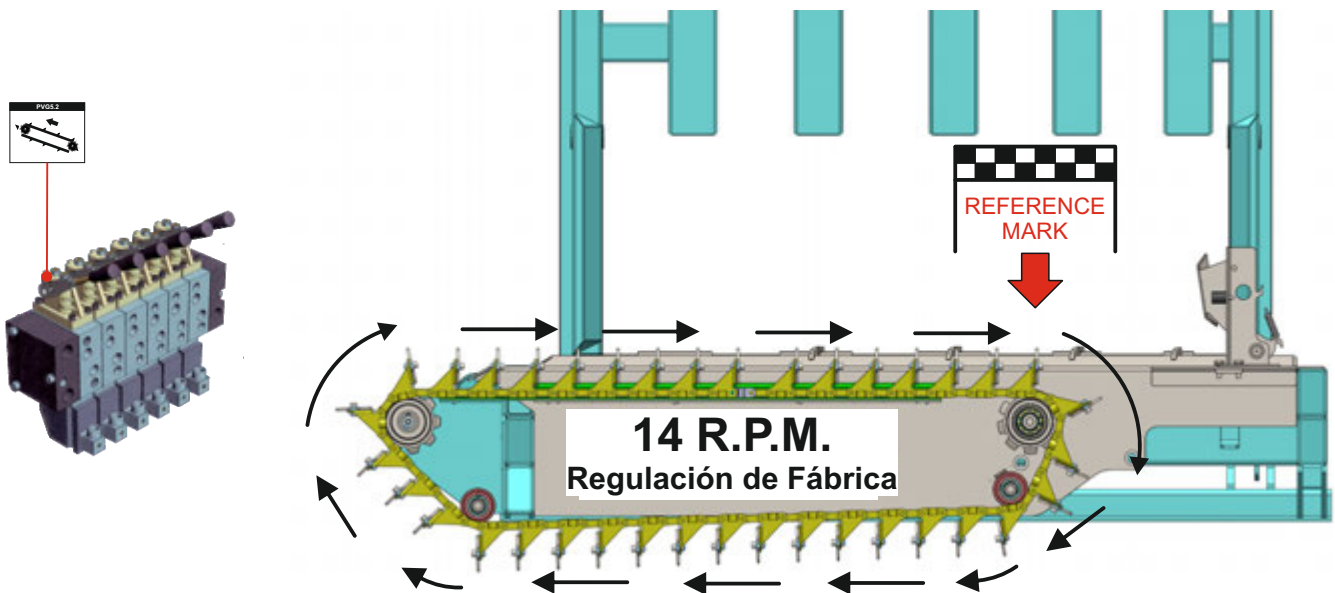
Connect the tractor power take-off to a work rate of 450 rpm (approximately).

Using the distributor lever, place the "marked" link of the transporter chain on the reference point (start / initiate) to be able to make the adjustment.

Place the control box switch in AUTO position and check the number of turns made during 60 seconds of chronometer.

It should be regulated to make 14 complete turns per minute.

Once regulated, tighten the screw which fixes the regulation of the "chains forward" service rate in the hydraulic distributor.

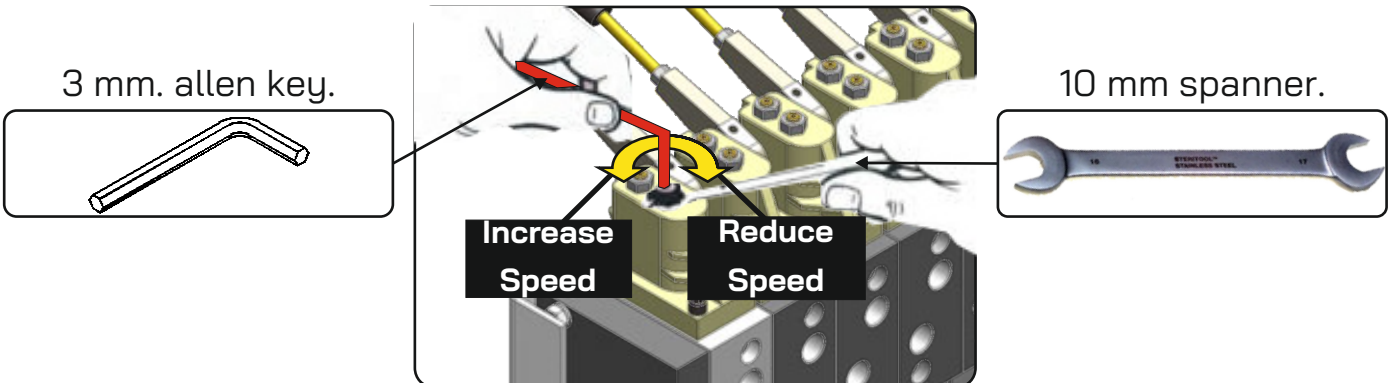
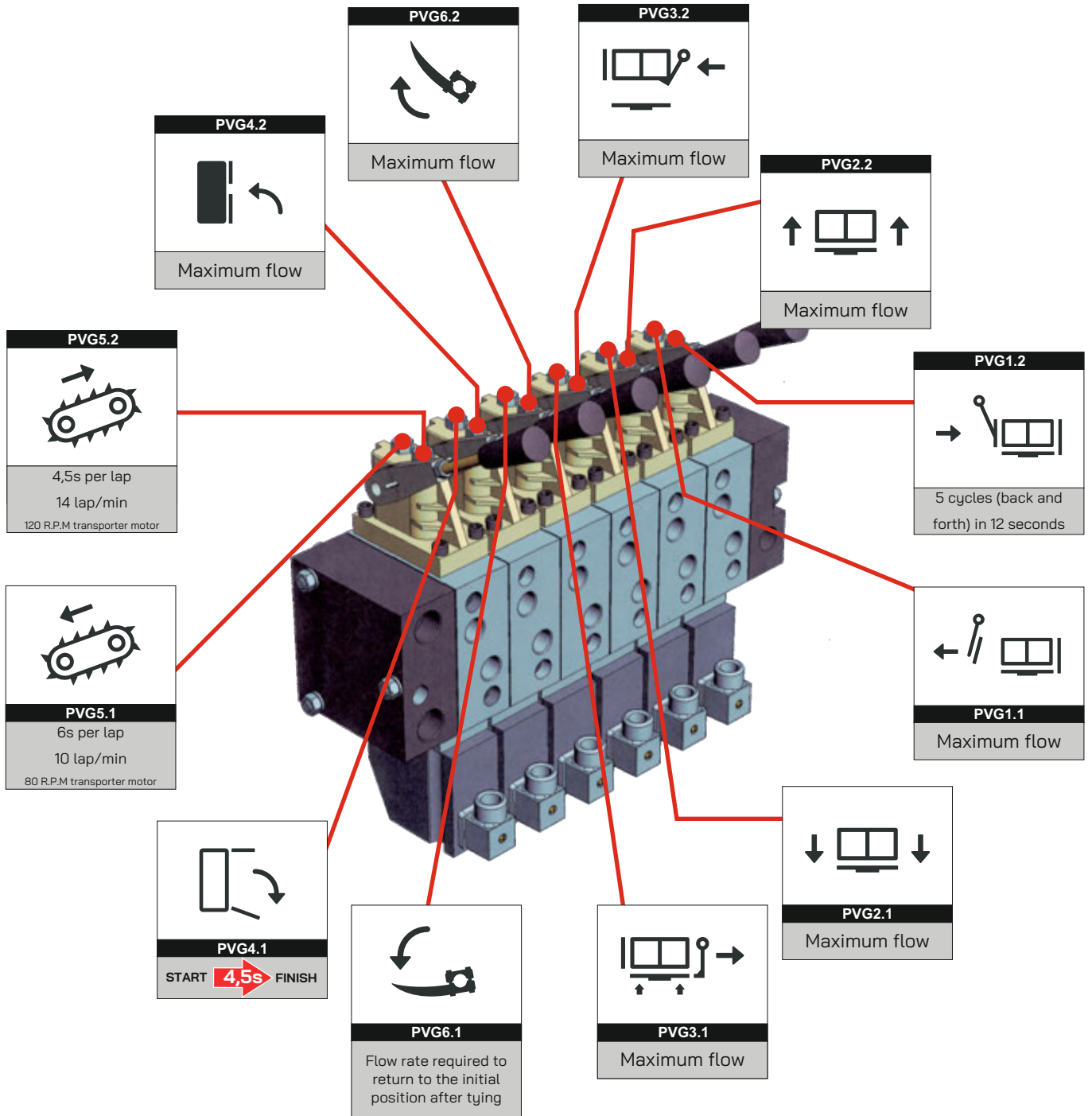


	12 R.P.M.	13 R.P.M.	14 R.P.M.	15 R.P.M.	16 R.P.M.	+ 16 R.P.M.
Long bales (> 1,10 m.) Moist materials			FACTORY SETTING			Chain speed can be increased depending on working conditions. WARNING! These conditions can be affected by weather conditions, terrain, production and type of material.
Long bales (> 1,10 m.) Dry materials						
Short bales (< 1,00 m.) Moist materials						
Short bales (< 1,00 m.) Dry materials						

SPEED SETTINGS FOR OPERATION

HT-201201-01

B



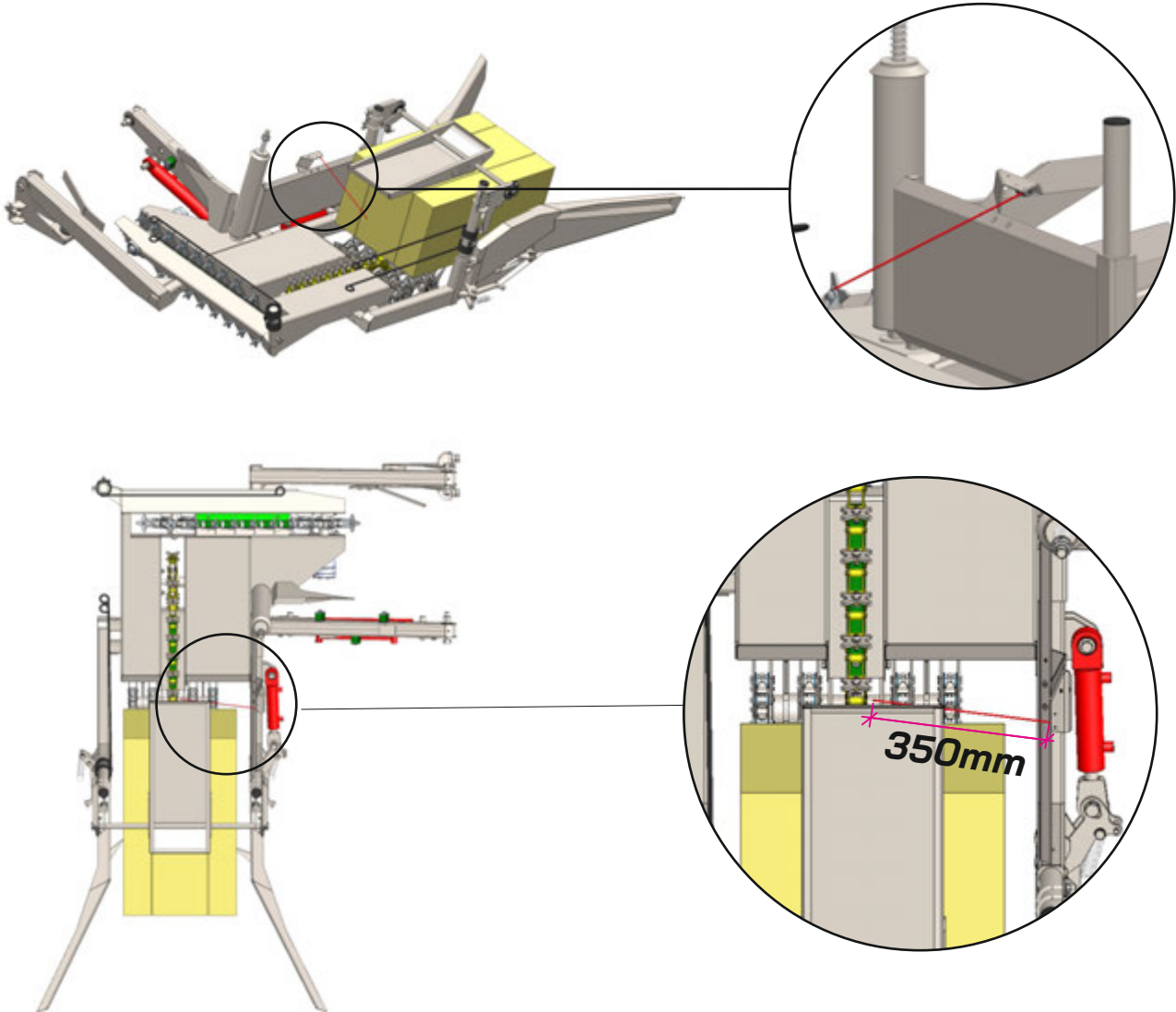
PHOTOCELL D12 REGULATION

HT-221223-01

A

For correct operation of the bale sequencer on the pick-up, the **D11 and D12 photocells must be correctly adjusted.**

PHOTOCELL D12



REGULATION NOTE

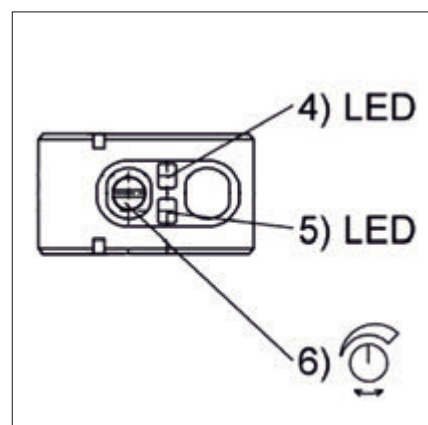
Adjust the potentiometer (6) of the photocell to detect up to a distance of 350 mm.

Ensure that it does not detect any object adjustable.

OPERATING NOTE

The **green LED** indicates that the photocell is receiving power.

The **orange LED** indicates that the photocell is detecting an object.



MULTIPACK GRP V32 TIMINGS
HT-230116-01
A

TEMP.	USE	DESCRIPTION
T1	0.2	FUNCTION: Waiting time between the lift-press starting to rise and the retainer starting to move backwards. EFFECT: Adjusts the layer of bales retained above the one that rises.
T2	0.8	FUNCTION: Time required for the retainer mechanism to move backwards (opening). EFFECT: Makes sure that the retainer has retracted and that the layer of bales has enough space to pass.
T3	1.5	FUNCTION: (FIXED) Duration of the action in which the retainer mechanism moves forwards (closure). EFFECT: Makes sure that the retainer is holding the layer of bales.
TA	0.5	FUNCTION: Time assigned for the gate to complete the action of closure once D8 has been activated. EFFECT: Ensures that the gate closes.
T5	0.1	FUNCTION: Time check for photocell D11 and D12. EFFECT: Avoid false signals.
T6	1.0	FUNCTION: Waiting time for the bale turner, while the lift-press rises (only when D4 is activated). EFFECT: Ensures that the layer of bales is guided as it is lifted up into the bale pressing chamber.
T7	1.5	FUNCTION: Time required for the motor that drives the knotters to lose signal D7. EFFECT: Asegura que se ha iniciado la acción de atar.
TD	0.1	FUNCTION: (FIXED) Time remaining for the cylinder of the bale turner to return to its position after detecting D3. EFFECT: Ensures that the bale turner is in its initial position.
TE	-	FUNCTION: Without use.
TH	1	FUNCTION: Name of bales that can enter during the discharge. (Selector of 1 or 2 bales) EFFECT: Reduces time to produce a bundled package.
T11	1.0	FUNCTION: It is the waiting time that exists after the tying cycle between the lit starting to be lowered and the door opening. EFFECT: It ensures that the tied package is decompressed before opening the door, allowing the bale extractor to do its job.
T12	3.0	FUNCTION: Duration of the action of D8 from when the gate starts to open. EFFECT: Gives time for the bale package to be delivered to the gate while it opens. CONSEQUENCE: During the unloading process, it delays the exit of the pusher, allowing space to be created for the entry of a bale.
T13	0.0	FUNCTION: Without use.
T14	0.3	FUNCTION: Time check for sensor D2. (Actioned each time the pusher advances) EFFECT: Ensure that D4 is actuated correctly. When the 2nd bale enters above the press, it must first activate D4 and then D2. If not, 3 bales may enter.
TJ	0.6	FUNCTION: Delay time to stop intermediate chain at D11. EFFECT: Leave the bale positioned at the entrance of the pusher.
T16	0.0	FUNCTION: Timing of signal D1. EFFECT: Ensures that D1 is correctly activated.
T4	0.5	FUNCTION: (FIXED) Time required for the motor to lose the D7 signal.
T10	0.6	FUNCTION: (FIXED) Waiting time between the start of the retainer's pressing action and the start of the elevator's descent. EFFECT: Ensures that the mantles are retained before the elevator is lowered.
T15	0.1	FUNCTION: (FIXED) Time from signal D1 until the pick-up chains are started. EFFECT: Ensures that when the pusher moves a bale into the press, the transporter chain is at rest.
TB	5.0	FUNCTION: (FIXED) Time during which we check D4 while in automatic mode.
TF	0.5	FUNCTION: (FIXED) Return waiting time PVG6.2.
TG	0.5	FUNCTION: (FIXED) Return waiting time PVG4.2.