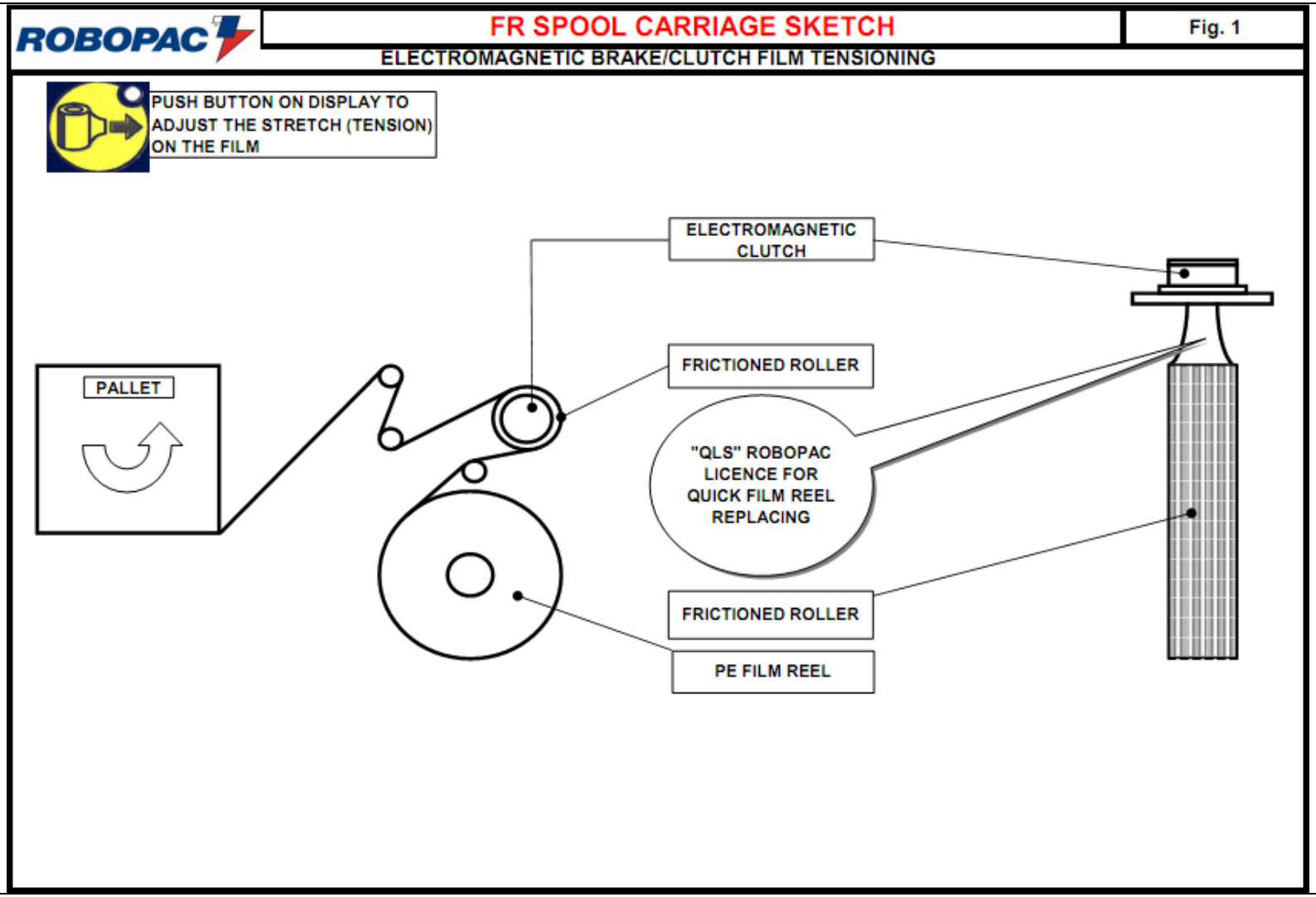
TECHNICAL DOCUMENTATION

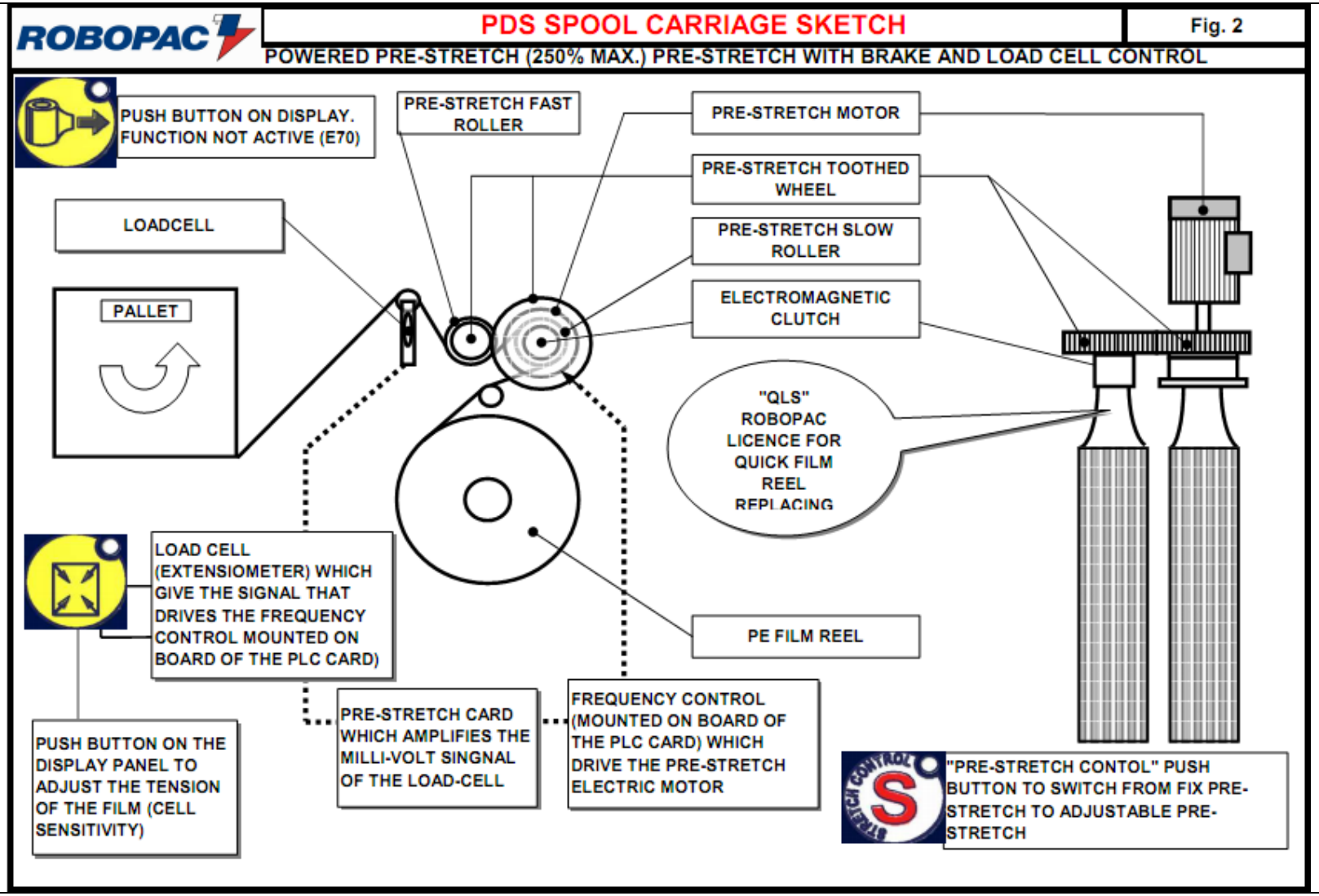
- TECHNOPLAT CS SERIE 7.1 -

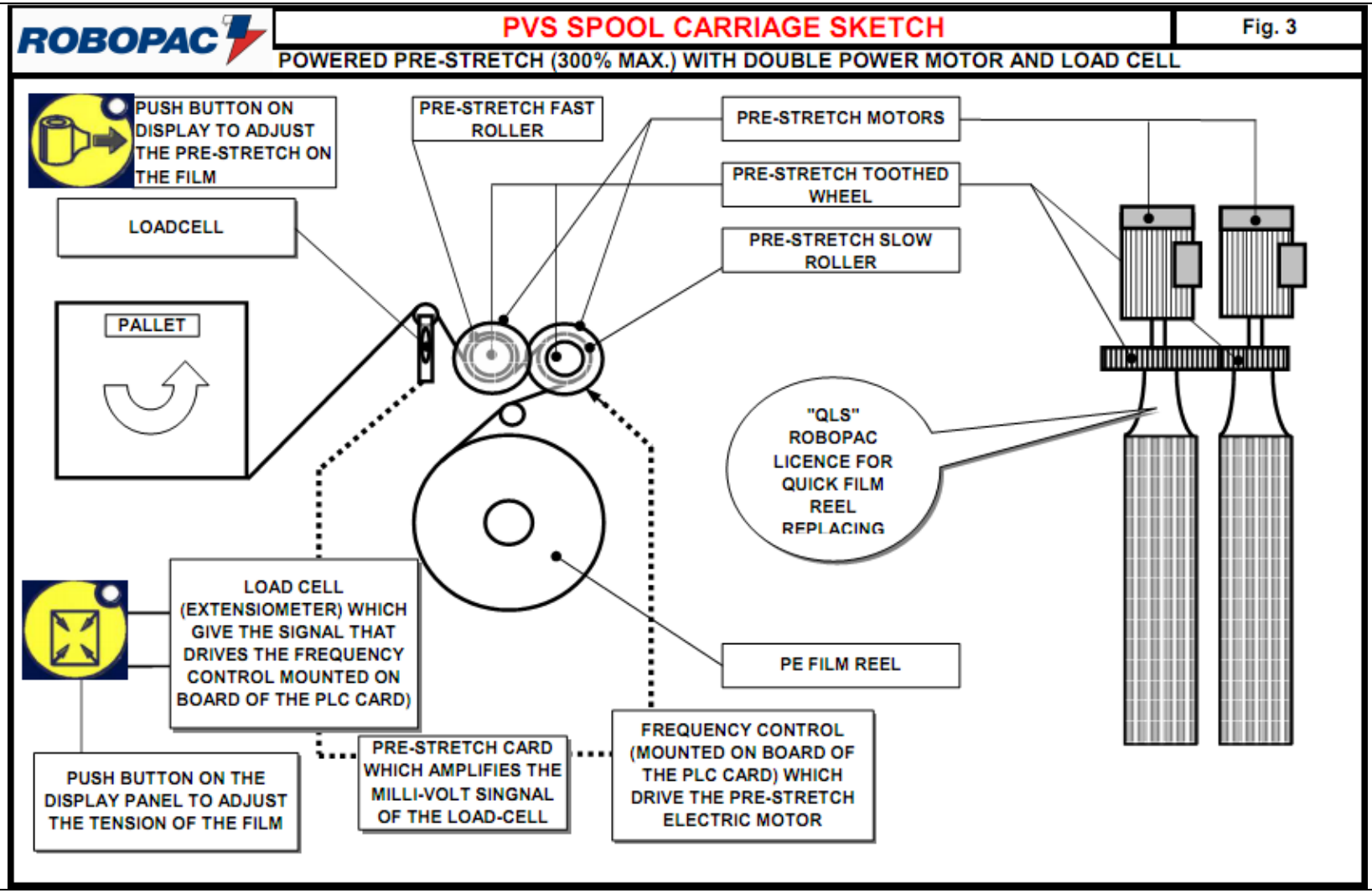
- TECHNOPLAT CW SERIE 7.1 -

Data	Revisioni	Motivi della Revisione	Emissione	Verifica	Approvazione
24/04/2012	00	Emission	Garavelli D.	Garavelli D.	Garavelli D.
22/07/2013	01	Revisione lista parametri e lista allarmi	Garavelli D.	Garavelli D.	Garavelli D.
16/12/2013	02	Revisione lista parametri	Garavelli D.	Garavelli D.	Garavelli D.
19/04/2017	03	Errore pag. 10 (11.7)	Baldinini F.	Baldinini F.	Baldinini F.
11/2021	04	New remote control group (from 2018)	Baldinini F.	Baldinini F.	Baldinini F.

1. SPOOL CARRIAGES SKETCH DETAILS TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1




ROBOPAC
PDS SPOOL CARRIAGE SKETCH
Fig. 2
POWERED PRE-STRETCH (250% MAX.) PRE-STRETCH WITH BRAKE AND LOAD CELL CONTROL
PUSH BUTTON ON DISPLAY. FUNCTION NOT ACTIVE (E70)
PRE-STRETCH FAST ROLLER
PRE-STRETCH MOTOR
PRE-STRETCH TOOTHED WHEEL
LOADCELL
PRE-STRETCH SLOW ROLLER
PALLET
ELECTROMAGNETIC CLUTCH
"QLS" ROBOPAC LICENCE FOR QUICK FILM REEL REPLACING
LOAD CELL (EXTENSIOMETER) WHICH GIVE THE SIGNAL THAT DRIVES THE FREQUENCY CONTROL MOUNTED ON BOARD OF THE PLC CARD)
PE FILM REEL
PUSH BUTTON ON THE DISPLAY PANEL TO ADJUST THE TENSION OF THE FILM (CELL SENSITIVITY)
PRE-STRETCH CARD WHICH AMPLIFIES THE MILLI-VOLT SINGNAL OF THE LOAD-CELL
FREQUENCY CONTROL (MOUNTED ON BOARD OF THE PLC CARD) WHICH DRIVE THE PRE-STRETCH ELECTRIC MOTOR
"PRE-STRETCH CONTOL" PUSH BUTTON TO SWITCH FROM FIX PRE-STRETCH TO ADJUSTABLE PRE-STRETCH


ROBOPAC
PVS SPOOL CARRIAGE SKETCH
Fig. 3
POWERED PRE-STRETCH (300% MAX.) WITH DOUBLE POWER MOTOR AND LOAD CELL
PUSH BUTTON ON DISPLAY TO ADJUST THE PRE-STRETCH ON THE FILM
PRE-STRETCH FAST ROLLER
PRE-STRETCH MOTORS
PRE-STRETCH TOOTHED WHEEL
PRE-STRETCH SLOW ROLLER
LOADCELL
PALLET
"QLS" ROBOPAC LICENCE FOR QUICK FILM REEL REPLACING
LOAD CELL (EXTENSIOMETER) WHICH GIVE THE SIGNAL THAT DRIVES THE FREQUENCY CONTROL MOUNTED ON BOARD OF THE PLC CARD)
PE FILM REEL
PUSH BUTTON ON THE DISPLAY PANEL TO ADJUST THE TENSION OF THE FILM
PRE-STRETCH CARD WHICH AMPLIFIES THE MILLI-VOLT SINGNAL OF THE LOAD-CELL
FREQUENCY CONTROL (MOUNTED ON BOARD OF THE PLC CARD) WHICH DRIVE THE PRE-STRETCH ELECTRIC MOTOR

2. OPERATOR PANEL DESCRIPTION TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

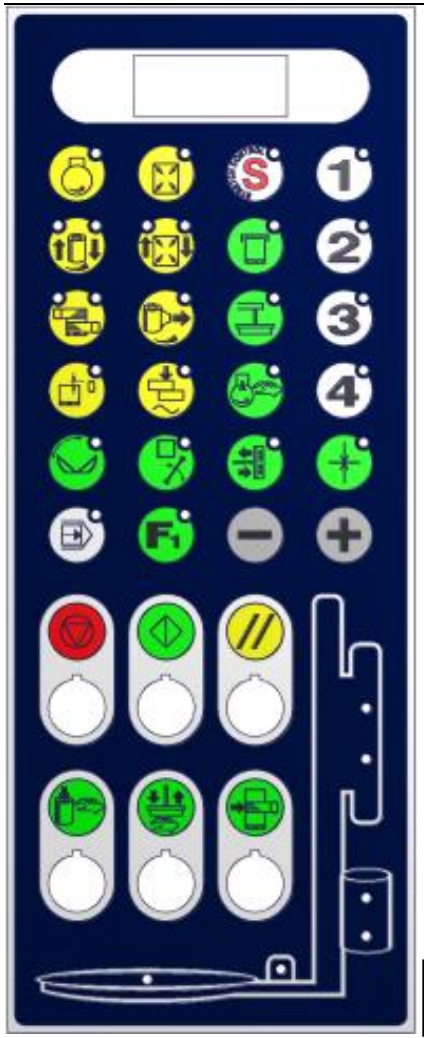


Fig.4

- Turntable rotation speed
- Film stretch setting (tension)
- Pre-stretch control enable (fix pre-stretch / adjustable pre-stretch).
- Program packing cycle selection
- Spool carriage upward / downward speed
- Load-cell sensitivity setting (film stretch UP/DOWN spool carriage)
- Top sheet cycle
- Bottom wrap / Top wrap setting
- Film pre-stretch setting
- Enable Pneumatic top platen cycle
- Wielding time setting
- Manual movement Turntable
- Manual open clamp
- Welder arm manual forward/backward
- Buffer manual forward/backward
- Air pneumatic circuit discharge
- Photocell delay / Altimeter
- Start from ground (offset)
- Film Data (packing counters)
- Reverse cycle (bottom wraps at the end) / Cut and clamp device disable function
- Decreasing / Increasing values

- STOP
- START
- RESET
- Manual downward spool carriage
- Manual UP/DOWN pneumatic top platen
- Stop spool carriage (reinforcement rounds)

3. SPECIAL FUNCTIONS OVER "F1" PUSH BUTTONS.

The push button "F1", it gives the possibility to enable a couple of particolar functions of the machine as described here below:

When led on push button is ON

Pressing the F1 push button, it is possible to enable the "reverse" packing cycle. When activated, beginning a new packing cycle (START), the spool carriage move directly on up-ward direction wrapping the product till its top position and applying the set top over-wraps, then, wraps till the bottom position and then, it apply the bottom over-wraps set in the wrapping cycle. Finally the machine clamp and cut the film in the end of the packing cycle.

When led on push button is BLINKING

Keeping pressed the push button, "F1" for at least 4 seconds, the related led will begin to blinks.
In this setting condition, the automatic cut & clamping unit become completely disabled and the machine performs typical packing cycles as "Rotoplat Serie 7.1" without cut and clamping the PR film.

4. SINOPTIC PANEL DESCRIPTION TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

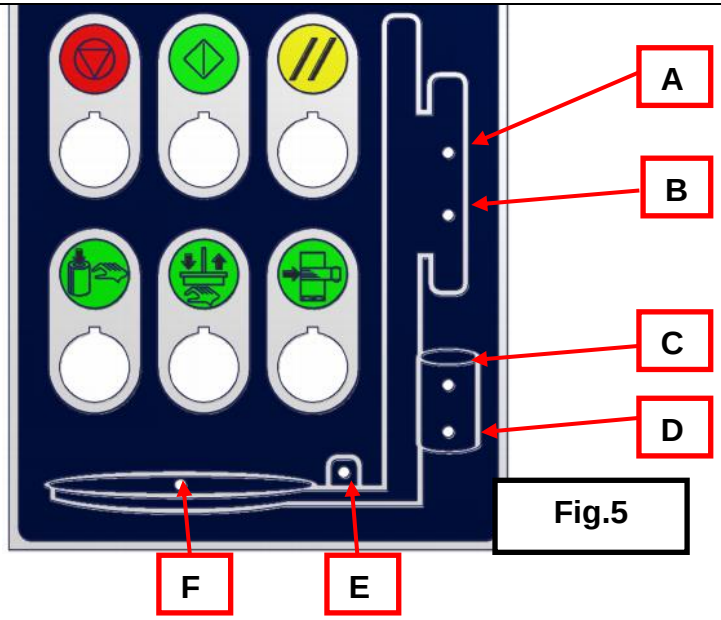


Fig.5

A – Main inverter alarm.
Main inverter overheating message.
B – Spool carriage lifting motor alarm.
Motor failure message.
C – Broken film alarm (707).
Broken film or empty film reel message..
D – Pre-stretch motor alarm.
Motor failure message.
E – Clamp unit alarm.
Clamp unit failure message.
F – Blocked turntable alarm.
Turntable blocked message caused by an obstacle or a failure.

5. PARAMETER CYCLE RANGE TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

Technoplat FR CS/CW Serie 7.1

Parameter	Min. – Max.	Step	Measure unit
Bottom wraps	0 – 10	1	Rounds
Top wraps	0 – 10	1	Rounds
Photocell delay	0 – 100	1	Cm
Altimeter	50 -- 305	1	Cm
Offset from ground	0 – 100	1	Cm
Turntable speed rotation (variable by disc diameter size): • Diameter 1650 mm • Diameter 1800 mm	 4 – 12 4 – 11	1	Rpm
Up-ward spool carriage speed	1.0 – 4.0	0.1	mt/minute
Down-ward spool carriage speed	1.0 – 4.0	0.1	mt/minute

FR SPOOL CARRIAGE

Parameter	Min –Max.	Step	Measure unit
Film stretch	0 – 100	10	No dimension

Technoplat PDS/PVS CS/CW Serie 7.1

Parameter	Min. – Max.	Step	Measure unit
Bottom wraps	0 – 10	1	Rounds
Top wraps	0 – 10	1	Rounds
Photocell delay	0 – 100	1	Cm
Altimeter	50 -- 305	1	Cm
Offset from ground	0 – 100	1	Cm
Turntable speed rotation (variable by disc diameter size): • Diameter 1650 mm • Diameter 1800 mm	 4 – 12 4 – 11	1	Rpm
Up-ward spool carriage speed	1.0 – 4.0	0.1	mt/minute
Down-ward spool carriage speed	1.0 – 4.0	0.1	mt/minute
Film stretch when carriage stop (bottom / top and reinforcement wraps)	0 – 100	10	No dimension
Film stretch on carriage up-ward	0 – 100	10	No dimension
Film stretch on carriage down-ward	0 – 100	10	No dimension

PDS SPOOL CARRIAGE

Parameter	Min. – Max.	Step	Measure unit
Film pre-stretch **(when Pre-Stretch Control disabled)**	250 – standard 200 – option 150 – option	10	No dimension
Film pre-stretch **(when Pre-Stretch Control enabled)**	0 – 25	10	Adimensionale

CARRELLO PVS

Parameter	Min. – Max.	Step	Measure unit
Film pre-stretch	0 -- 300	10	%
Film stretch when carriage stop (bottom / top and reinforcement wraps)	0 -- 100	10	No dimension

6. KEYBOARD LOCK FUNCTION TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

It is possible to lock the keyboard to avoid anybody to change the
packing cycle parameters selecting between the 4 packing programs, giving the operator the only possibility to select one of the programs pressing the button 1, 2, 3, 4 to choose the desired one and START and STOP buttons to start and stop the packing.
To lock and unlock the keyboard it is necessary to perform the
following operations:

1. Turn OFF the machine.
2. Press simultaneously and keep pressed the push button “TURNTABLE ROTATION SPEED” & “BOTTOM WRAPS / TOP WRAPS SETTING” and turn ON the machine till will shown on the display the message rES (RESET).

To remove the locking to the keyboard, it is enough to repeat the same procedure.

7. PACKING CYCLE WITH ALTIMETER MODE (PRODUCT PHOTOCELL EXLUDED) TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

It is possible to use the machine without product detection by the photocell and manually set the high of the pallet in CMS..
To work with this kind of wrapping cycle it is necessary to perform the following operations:

1. Be sure that the machine is on STOP mode.
2. Press and keep pressed the push button “PHOTOCELL DELAY / ALTIMETER” for 4 seconds until the related led will blinks.
3. The display will shows the value which represent the high of the pallet in CMS.
4. To change the value press the buttons ‘+’ & ‘-‘
5. To return back to the working cycle with detection of the product by the photocell, press the push button “PHOTOCELL DELAY / ALTIMETER” push button for 4 seconds until the related led will not blinks anymore.

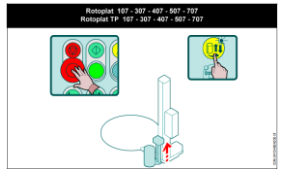
The working cycle (with photocell detection or with altimeter) is memorized into the Parameter cycles.
It will be possible then to have the Program No.1 that works with photocell detection, and the Program No.2 that works with altimeter perhaps.
This setting will be kept if the machine will switched off

8. POWER SUPPLY TEST FOR BRAKE/CLUTCH ON SPOOL CARRIAGE TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1 (for Techoplat CS/CW PDS & PVS only)

Set the parameter P15=200 and the film stretch ( ) on the display to maximum (100). Turn ON the machine and play a packing cycle measuring on the connectors on the brake on the spool carriage the voltage that must be 18.8 Volt ±1 Volt.

9. MANUAL FUNCTIONS

9.1. Manual operation up-ward spool carriage



To enable the manual function to move up-ward the spool carriage, it is necessary to press the “STOP” push button, in the same time of the “SPOOL CARRIAGE UP-WARD / DOWN-WARD SPEED” push button, as shown in the sketch on the side.

9.2. Manual operation down-ward spool carriage

To enable the manual function to move down-ward the spool carriage, il is necessary to press “MANUAL DOWN-WARD SPOOL CARIAGE” push button

9.3. Manual operation turntable rotation

To enable the manual function to run the turntable of the machine, it is necessary to press “MANUAL MOVEMENT TURNTABLE” push button. Pressing the push button one time only, the turntable run in slow speed from starting phase position to stop phase position. Pressing the push button meanwhile the table is manually running, it stops instantly in that position.

10. FILM / PRODUCTION DATA TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

Press the push button “ DATA “ , the display of the machine will show the message ‘Dx’ alternately to the value.

Pressing again the push button ‘DATA’ will be possible to scroll the list of all available production DATA .

It is possible to RESET to zero, the partial counter “D1” pressing simultaneously the push buttons “-” & “+“.

- D1 = partial counter cycle (it is possible to reset)
- D2 = total counter cycle (1.000 – 999.000)
- D3 = total counter (0 - 999)
- DP = Minimum film stretch set at display.

Meanwhile the value of DP is visualized keeping pressed the push button DATA for 4 seconds at least will be possible to access to a second level hidden values:

- D4 = mother board Software release FW.
- D5 = pre-stretch card Software release FW.
- D6 = load-cell (extensometer) actual value.
- D7 = Instantaneous value of stretch film inverter.

To exit from the data menu, press each one of the yellow push buttons on the display.

11. INSTRUCTIONS TO REPLACE THE OPERATOR PANEL TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

(This procedure must be followed to replace machine's software also)

1. Turn the machine OFF.
2. Move the switch 1 di SW1 in position ON (please refer to fig.6).
3. Turn the machine ON.
4. The display will show the parameter 'P1' blinking alternatively with the set value
5. Keep note of all the intrernal parameter of the machine (il possible)
6. Replace to operator panel of the machine or the micro-chip which contains the machine's software mounted on the display panel card.
7. Move back the switch 1 of the SW1 to position "ON" (please refer to fig.6).
8. Turn the machine ON
9. To scroll the parameters, push button 'PNEUMATIC AIR DISCHARGE BUTTON' (Enter) to visualize 'SET' on the display.
10. Press simultaneously the buttons 'ARM ROTATION SPEED' & 'FILM STRETCH SETTIN' to visualize the message '**dEF**' (this operation will avoid that the machine shows the alarm message **E43** "***WRONG INITIALIZAZION OF CYCLE PARAMETERS***" upon next RESTART).
11. Reinsert the internal parameters like original to restore the machine to end-user requirements using the buttons '+' & '-'
12. Turn the machine OFF and move back switch 1 of the SW1 to position "OFF" (please refer to fig.6).
13. Turn the machine ON keeping pressed the button "PROGRAMMA 1" until The display will shows the next messages '888', 'rel.x', 'SET', 'RES' in sequence (this operation will avoid that the machine shows the alarm message **E42** "***WRONG INITIALIZAZION OF INTERNAL PARAMETERS***").

12. INTERNAL PARAMETER LIST AND SETTING PROCEDURE TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

1. Turn the machine OFF.
2. Move the switch 1 di SW1 in position ON (please refer to fig.9).
3. Turn the machine ON.
4. The display will show the parameter 'P1' blinking alternatively with the set value
5. To scroll the parameters, push button 'AIR PNEUMATIC CIRCUIT DISCHARGE' (Enter).
6. To modify the value of the parameter, press the buttons '+' & '-'
7. Turn the machine OFF.
8. Move back switch 1 of the SW1 to position "OFF" (please refer to fig.9).
9. Turn the machine ON to restore the machine to the packing mode.

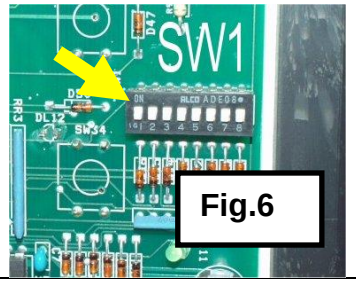


Fig.6

Machine internal parameter list suitable for Technoplat CW-CS Serie 7.1 (software release from 338 to 356)						
Parameter	**Range**	**Step**	**Measure unit**	**Default (producer values)**	**Parameter description**	**End-user internal parameter setting**
SET					To reset all parameters to default value (producer values)	
P1	**1 - 2**	1	--	**1**	Machine type (1=CW, 2=CS).	
P2	**1 - 3**	1	--	**2**	Film spool carriage type (1=FR, 2=PDS; 3=PVS)	
P3	**0 – 1**	1	--	**1**	Enable blocked turntable alarm	
P4	**0 - 1**	1	--	**1**	Enable broken film alarm	
P5	**0 - 1**	1	--	**1**	Enable blocked film spool carriage alarm	
P6	**0-1**	1	--	**0**	Enable Top Platen	
P7	**0 - 60**	1	Sec/2	**12**	Top platen downward delay time upon wrapping cycle start	
P8	**1 - 30**	1	--	**5**	Software filter for push buttons (to rectify electrical disturbs from source)	
P9	**10 - 40**	1	--	**25**	Maximum pre-stretch value (10=100%; 40=400%) -PDS & PVS only -	
P10	**1-2**	1		**1**	Basement diameter (1=1650, 2=1800)	
P11	**0 - 100**	1	--	**10**	Corner before turntable deceleration (set it to 42 always)	
P12	**10 - 30**	1	Sec/10	**30**	Beep length (acoustic signal on wrapping start)	
P13	**1 - 50**	1		**20**	Acceleration	
P14	**1 - 50**	1		**15**	Deceleration	
P15	**0 - 200**	1	--	**200**	Maximum voltage output friction on spool carriage (FR & PDS only)	
P16	**5 - 99**	1	--	**20**	Kp: proportional Gain on pre-stretch load cell (PDS only)	
P17	**1 - 99**	1		**40**	KTiro (proportional value to adjust the load cell sensitiviity for low values stretch)	
P18	**1 - 255**	1		**200**	Acceleration/deceleration Inverter stretch and pre-stretch	
P19	**0 - 30**	1	Pre-stretch	**14**	SCS deactivation lower limit	
P20	**0 - 200**	1	--	**170**	SCS shutter (PDS only)	
P21	**10 - 35**	1	cm	**15**	Film spool carriage upward on packing cycle start	
P22	**0 - 100**	1	--	**20**	Film stretch during arm forward phase	
P23	**0 - 100**	1	--	**70**	Film stretch during buffer, clamp, cut, welder and arm backward phase	
P24	**0 - 40**	1	Sec/10	**38**	Cutting time	

Machine internal parameter list suitable for Technoplat PDS CW-CS Serie 7.1 (software release 357)						
Parameter	**Range**	**Step**	**Measure unit**	**Default (producer values)**	**Parameter description**	**End-user internal parameter setting**
SET					To reset all parameters to default value (producer values)	
P1	**1 - 2**	1	--	**1**	Machine type (1=CW, 2=CS).	
P2	**1 - 3**	1	--	**2**	Film spool carriage type (1=FR, 2=PDS; 3=PVS)	
P3	**0 - 1**	1	--	**1**	Enable blocked turntable alarm	
P4	**0 - 1**	1	--	**1**	Enable broken film alarm	
P5	**0 - 1**	1	--	**1**	Enable blocked film spool carriage alarm	
P6	**0 - 1**	1	--	**0**	Enable fo up/down spool carriage geabox with ratio 1/80	
P7	**0 - 60**	1	Sec/2	**12**	Top platen downward delay time upon wrapping cycle start	
P8	**1 - 30**	1	--	**5**	Software filter for push buttons (to rectify electrical disturbs from source)	
P9	**10 - 40**	1	--	**25**	Maximum pre-stretch value (10=100%; 40=400%) -PDS & PVS only -	
P10	**0 - 2**			**0**	Mechanical turntable configuration diameter and speed: • 0 → basement diam. 1650 mm - max speed rotation 12 rpm. • 1 → basement diam. 1800 mm - max speed rotation 11 rpm. • 2 → basement diam. 2200 mm or 2400 mm - max speed rotation 8 rpm.	
P11	**0 - 100**	1	--	**70**	Film stretch during buffer, clamp, cut, welder and arm backward phase	
P12	**1 - 50**	1		**20**	Acceleration	
P13	**0 - 100**	1		**25**	Film spool carriage down-ward time fro Top Sheet Cycle	
P14	**0 - 100**	5	--	**0**	Film stretch on cycle start	
P15	**0 - 200**	1	--	**200**	Maximum voltage output friction on spool carriage (FR & PDS only)	
P16	**5 - 99**	1	--	**20**	Kp: proportional Gain on pre-stretch load cell (PDS only)	
P17	**1 - 99**	1		**40**	KTiro (proportional value to adjust the load cell sensitivity for low values stretch)	
P18	**1 - 255**	1		**200**	Acceleration/deceleration Inverter stretch and pre-stretch	
P19	**0 - 30**	1	Pre-stretch	**14**	SCS deactivation lower limit	
P20	**0 - 200**	1	--	**170**	SCS shutter (PDS only)	
P21	**0 - 200**	1	1 / Hz	**22**	Turntable deceleration	
P22	**0 - 200**	1	1 / Hz	**100**	Turntable deceleration for TP shaped basement	

P23	**0 - 1**	1	--	**0**	Enable Top Platen	
P24	**0 – 200**	1	--	**0**	Ki/10 (PID factor) – NON FUNZIONALE PER CARRELLO PDS -	
P25	**10 - 35**	1	cm	**15**	Film spool carriage up-ward setting on cycle start	
P26	**0 - 100**	1	--	**20**	Film stretch during automatic film cutter forward	
P27	**0 - 100**	1		**50**	Corner before turntable deceleration	
P28	**0 - 40**	1	Sec/10	**38**	Cutting time	

Machine internal parameter list suitable for Technoplat PVS CW-CS Serie 7.1 (software release 358 and after)						
Parameter	**Range**	**Step**	**Measure unit**	**Default (producer values)**	**Parameter description**	**End-user internal parameter setting**
SET					To reset all parameters to default value (producer values)	
P1	**1 - 2**	1	--	**1**	Machine type (1=CW, 2=CS).	
P2	**1 - 3**	1	--	**2**	Film spool carriage type (1=FR, 2=PDS; 3=PVS)	
P3	**0 - 1**	1	--	**1**	Enable blocked turntable alarm	
P4	**0 - 1**	1	--	**1**	Enable broken film alarm	
P5	**0 - 1**	1	--	**1**	Enable blocked film spool carriage alarm	
P6	**0 - 1**	1	--	**0**	Enable fo up/down spool carriage geabox with ratio 1/80	
P7	**0 - 60**	1	Sec/2	**12**	Top platen downward delay time upon wrapping cycle start	
P8	**1 - 30**	1	--	**5**	Software filter for push buttons (to rectify electrical disturbs from source)	
P9	**10 - 40**	1	--	**25**	Maximum pre-stretch value (10=100%; 40=400%) -PDS & PVS only -	
P10	**0 - 2**			**0**	Mechanical turntable configuration diameter and speed: • 0 → basement diam. 1650 mm - max speed rotation 12 rpm. • 1 → basement diam. 1800 mm - max speed rotation 11 rpm. • 2 → basement diam. 2200 mm or 2400 mm - max speed rotation 8 rpm.	
P11	**0 - 100**	1	--	**70**	Film stretch during buffer, clamp, cut, welder and arm backward phase	
P12	**1 - 50**	1		**20**	Acceleration	
P13	**0 - 100**	1		**25**	Film spool carriage down-ward time fro Top Sheet Cycle	
P14	--	--	--	--	Free	
P15	**0 - 200**	1	--	**200**	Maximum voltage output friction on spool carriage (FR & PDS only)	
P16	**5 - 99**	1	--	**20**	Kp: proportional Gain on pre-stretch load cell (PDS only)	

P17	**1 - 99**	1		**40**	KTiro (proportional value to adjust the load cell sensitivity for low values stretch)	
P18	**1 - 255**	1		**200**	Acceleration/deceleration Inverter stretch and pre-stretch	
P19	**0 - 30**	1	Pre-stretch	**14**	SCS deactivation lower limit	
P20	**0 - 200**	1	--	**170**	SCS shutter (PDS only)	
P21	**0 - 200**	1	1 / Hz	**22**	Turntable deceleration	
P22	**0 - 200**	1	1 / Hz	**100**	Turntable deceleration for TP shaped basement	
P23	**0 - 1**	1	--	**0**	Enable Top Platen	
P24	**0 – 200**	1	--	**0**	Ki/10 (PID factor) – solo per carrello PVS -	
P25	**10 - 35**	1	cm	**15**	Film spool carriage up-ward setting on cycle start	
P26	**0 - 100**	1	--	**20**	Film stretch during automatic film cutter forward	
P27	**0 - 100**	1		**50**	Corner before turntable deceleration	
P28	**0 - 40**	1	Sec/10	**38**	Cutting time	

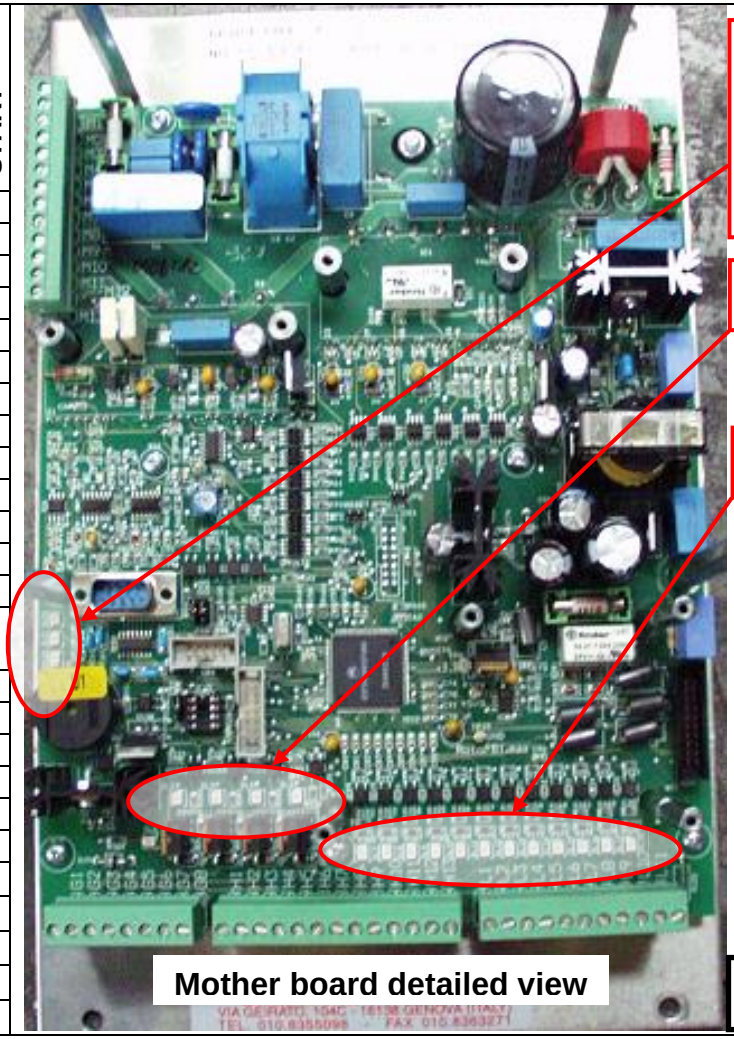
13. DEFAULT SETTING PROCEDURE CONTATORI TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

To reset the machine to default “producer parameters” it is necessary to follow the next procedure:

1. Keep note of all the internal parameter of the machine (please refer to the above paragraph #9 from point 1 to 5).
2. Turn the machine OFF.
3. Turn the machine ON keeping pressed the push button  “PROGRAM 1”.
4. The display will shows the next messages ‘888’, ‘rel.x’, ‘SET’, ’RES’ in sequence.
5. Turn the machine OFF to restore to the “packing mode”.

14. DESCRIPTION LIST FOR "LED" (INPUT / OUTPUT) ON MAIN BOARD TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

Led	Connettor #	Description	Led status uponn START
DL2	G2	NO LED	OFF
DL3	G3	(Free OUTPUT)	OFF
DL4	G7	Upward pressure	OFF
DL5	G8	Downward pressure	OFF
DL6	G4	Electromagnetic clutch	OFF
DL7	--	Presence 24 Vdc	OFF
DL8	H2	Detecting product Photocell	ON
DL9	H5	Turntable phase	ON
DL10	H7	Emergency TP photocell	ON
DL11	H10	NO LED	OFF
DL12	H12	NO LED	OFF
DL13	H13	NO LED	OFF
DL14	L1	NO LED	OFF
DL15	L5	Spool Carriage Safety Alarm (base of spool carriage)	ON
DL16	L6	Film reel unwinding input (push button)	OFF
DL17	L7	Spool Carriage Top switch	ON
DL18	L9	Spool Carriage bottom switch	OFF
DL20	--	Upward Spool Carriage	OFF
DL21	--	Downward Spool Carriage	OFF
DL22	--	Rotation of turn table plate	OFF



Mother board detailed view

Fig.11

15. LED DESCRIPTION TABLE FOR INPUT/OUTPUT EXPANSION CARD

Led	Connector	Description	Led status upon START
DL14	I11	Arm forward limit switch	OFF
DL15	I12	Arm backward limit switch	ON
DL16	I13		
DL17	I14	Thermal alarm	ON
DL18	I15		
DL19	I16		
DL20	I17		
	A01		
	A02		
	UA0		
	A03		
	A04		
DL1	U00	Brake on turntable motor	
DL2	U01	PE film welder	
DL3	U02	PE film cut	
DL4	U03		
DL5	U04		
	A05		
	A06		
DL6	U05	Solenoid valve arm forward	
DL7	U06	Solenoid valve buffer forward	
DL8	U07	Solenoid valve closed clamp	
DL9	U10	Solenoid valve pneumatic air discharge	
	GP5		
DL11	U15		
DL12	U16		
DL13	U17		

16. AMPLIFIER CARD/SECOND INVERTER TUNING TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1 (for Techoplat CS/CW PDS & PVS only)

To perform the offset of the load cell it is necessary to carry out the following operations:

1. The machine MUST be in ON MODE for 2 minutes at least
2. Move the switch 7 of SW1 to position “ON” (see Fig.10)
3. Check to be sure that the load cell is completely free and on rest position.
4. Press the ‘DATA FILM ’ push button to visualize D3
5. Press again and keep pressed the ‘DATA FILM’ push button for 4 seconds at least (it access to D4)
6. Press the ‘DATA FILM’ push button to visualize D6 (Instant value of the weight applied on the load cell, that for Rotoplat 507 and Rotoplat 707 that equips pre-stretch boards produced before board’s s/n **12F8032** it must be comprised between **280 & 330 points**, and for machines Rotoplat 707 that equips pre-stretch cards produced starting from boards s/n **12F8032** it must be comprised between **440 and 500 points.**
7. Move back the switch 7 of the SW1 to position “OFF” (see Fig.6).

Trouble-shooting for amplifier / inverter card pre-stretch motor

Led DL2	OFF	Card not powered / defected
	ON	Card ready to work
	Regular continuous blinking	Normal working and regular communication with mother-board
	1 Blink	Power supply of logic section of the card non sufficient
	2 Blinks	Power module not initialized
	3 Blinks	Over temperature alarm
	4 Blinks	Overload alarm
	5 Blinks	Film break alarm

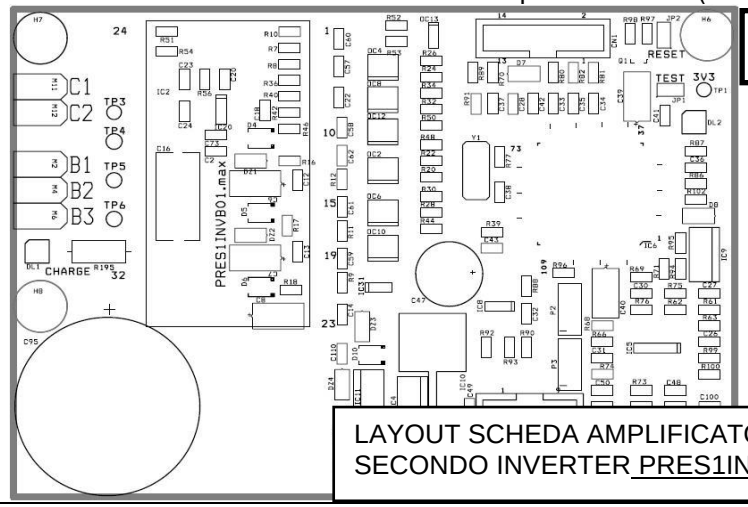


Fig.8

LAYOUT SCHEDA AMPLIFICATORE - SECONDO INVERTER PRES1INV

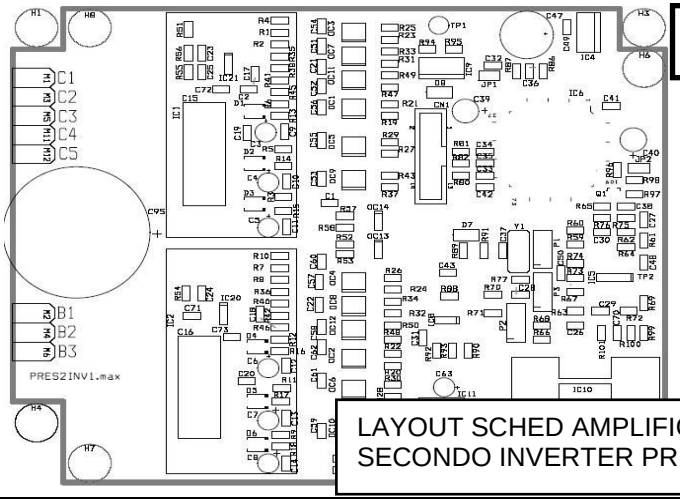


Fig.9

LAYOUT SCHED AMPLIFICATORE - SECONDO INVERTER PRES21INV

17. REMOTE CONTROL INSTALLATION & SETTING TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

To install the remote control it is necessary to perform the procedure of RX & TX codes in self-learning of the receiver.

1. New code setting

1.1. Set the dip switch 1 & 2 to OFF.
1.2. For the channel 1, press the button P1 till the related led will become ON (LED1).
1.3. Press the (START) push button of the remote and keep it pressed until the second led will become ON too (the second led makes a blink).
1.4. Release the (START) push button of the remote
1.5. The receiver will confirm the successful setting by a double blinks (2) of the two leds
1.6. In case of failed setting, the receiver will turn OFF the related led of the channel and will not make any double blink of setting confirmation. If the memory of the codes is full, the receiver will advise this event by seven (7) blinks of the two leds.
1.7. For the channel 2, press the push button P2; the other operations works the same as above (setting the STOP push button of the remote).

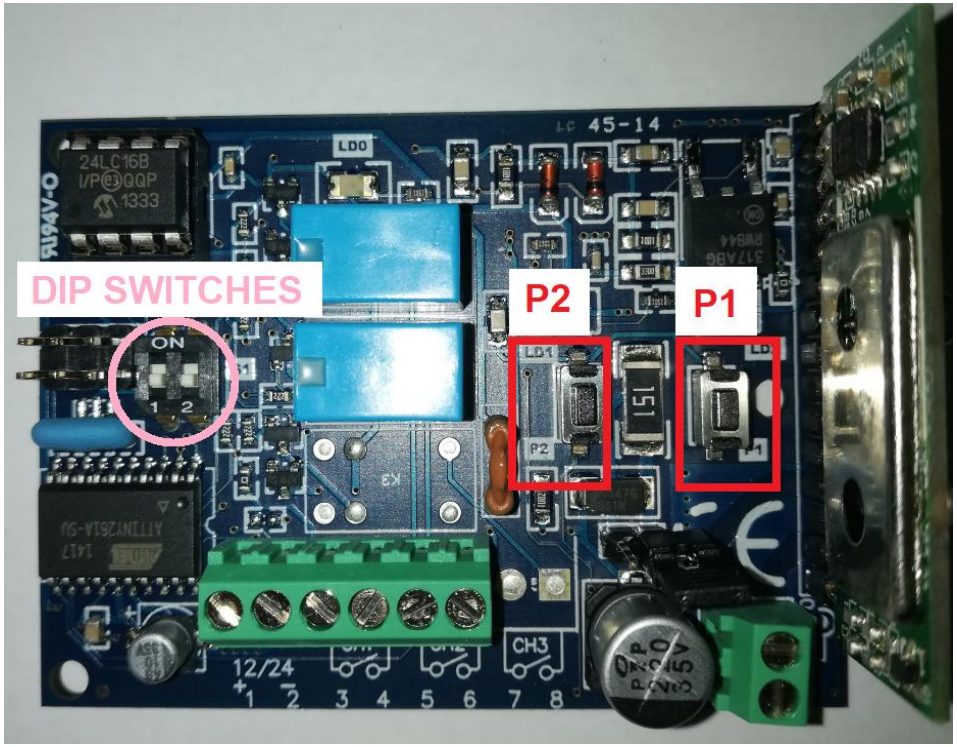
2. Set code deleting

2.1. Press the push button P1 (or P2) until the related led will become ON LED1 (or LED2).
2.2. Press the push button Ch.1 (or Ch.2) of the remote.
2.3. The receiver will confirm the successful deleting by five (5) blinks of the two leds
2.4. In case of failure on the receiver the related led of the selected channel and will not make the five blinks of confirmation.

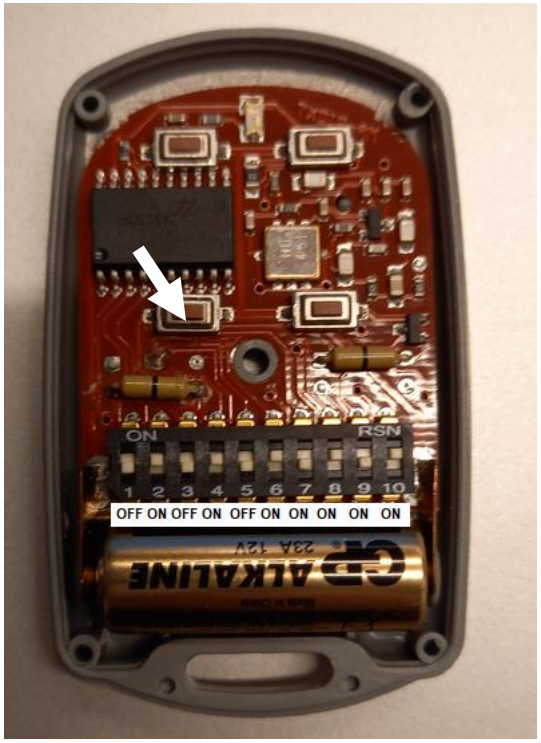
3. All set code deleting

3.1. Press the push button P1 until the LED1 will become ON and keep it pressed until it will become OFF again..
3.2. On the receiver will become ON the LED1, and after 7 seconds will become OFF again giving confirmation of the deleted codes.

Receiver card detail



Remote emitter card configuration.



4. Electrical connections

9,10	Central “Antenna” – Sock “Antenna”
3,4	N.O. contact channel 1 (START)
5,6	N.O. contact channel 2 (STOP)
1	0 V ac,dc
2	+12V,+24V ac,dc

5. Technical characteristics

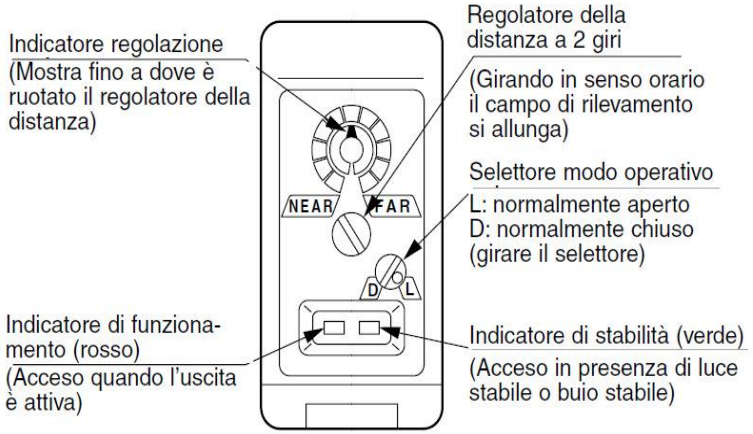
Power supply	+12V,+24V ac,dc

18. PRODUCT DETECTION PHOTOCELL SETTINGS TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1 (standard version and dark product version)

STANDARD PHOTOCELL

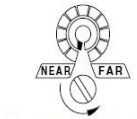
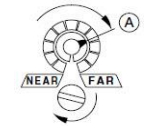
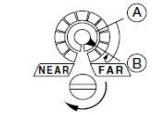
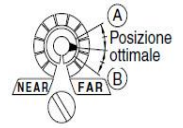
Adjust the trimmer of the photocell sensitivity (distance detection) to the centre of the product to pack

DARK PRODUCTS PHOTOCELL



Set the selector “operation mode” to “L” (turn the selector clock-wise direction till the end).

Sensitivity setting for dark product photocell

Description	Distance selector
Turn completely the selector counter clock-wise direction in case of minimum distance (about 0.2mm).	 Ruotare completamente
Locate the object to detect from the photocell (pallet centre) and turn the selector clock-wise direction till “A” to set the photocell in “light” condition (output active)	
Remove the a.m. object. Turn the selector in clock-wise direction till switch again the photocell to “light” condition. When it become on, turn again the selector to switch to “dark” to “B” (if absence of the object to detect the photocell do not switch to “light” condition ON, the “B” point must be considered like maximum point of the setting range).	
Set the selector to half range (middle between point “A” and point “B” that should be the best point to detect the object	

19. MECHANICAL SETTINGS FOR CUT/CLAMP AND WELDER DEVICES TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

The position of the cam “low position spool carriage” must be 18 cm from the bottom of the mast as shown in the below sketch.

Fig.12

The support must be positioned in a different way according the diameter of the basement of the machine as shown in the above sketch.
To be sure about the perfect positioning of the cutter/welder on the product (full pallet) it is possible to adjust the final position by the dowels which fit the support on the basement as shown in the below sketch..

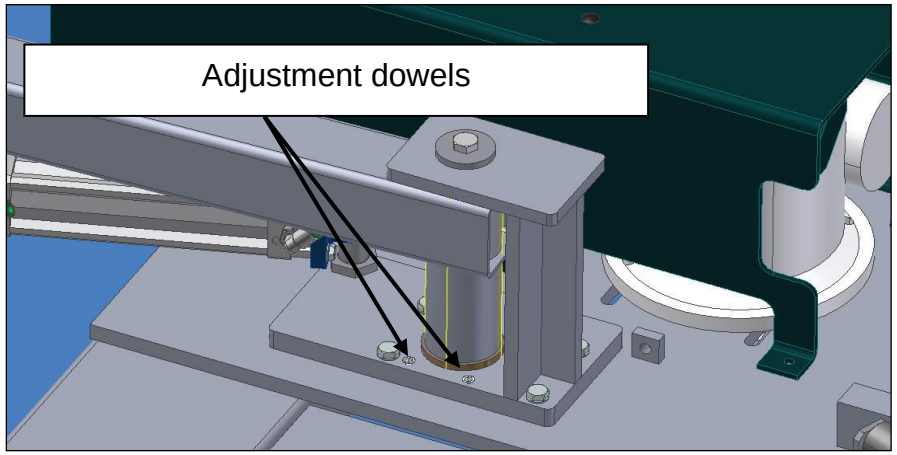


Fig.13

INTERFERENCES

After made the above described settings, it must be 5 mm gap approximately between the bottom of the support of the roller and the protection cover of the clamp device. It must not happen that there are hits between the guide-film plate and the parts on the arm

20. WELDER ARM SETTING TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

FOR TECHNOPLAT CS ONLY

The brushes device must be fit with a distance in the way that the brush lap the product

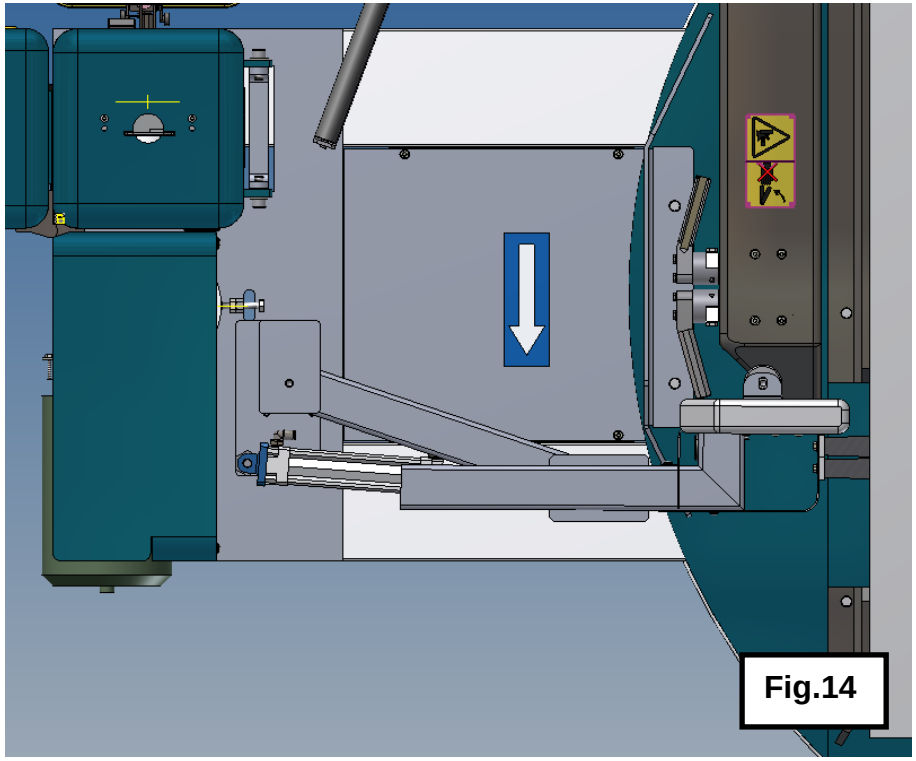


Fig.14

FOR TECHNOPLAT CW ONLY

The cutter/welder device must be assembled with a gap of 2 mm between the support and the corner of the guide as shown in the below sketch (see fig.15).

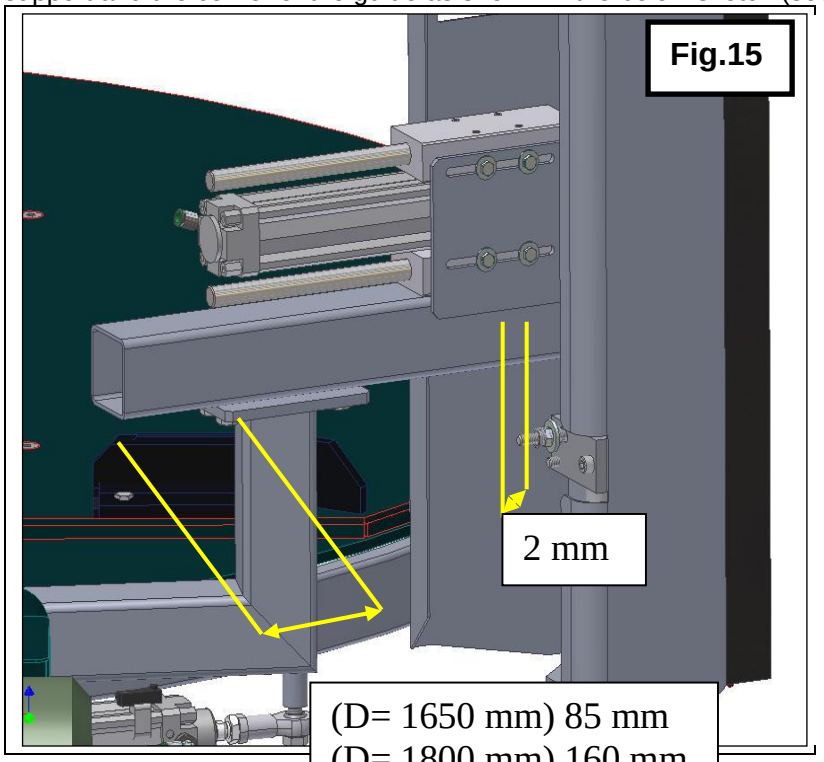
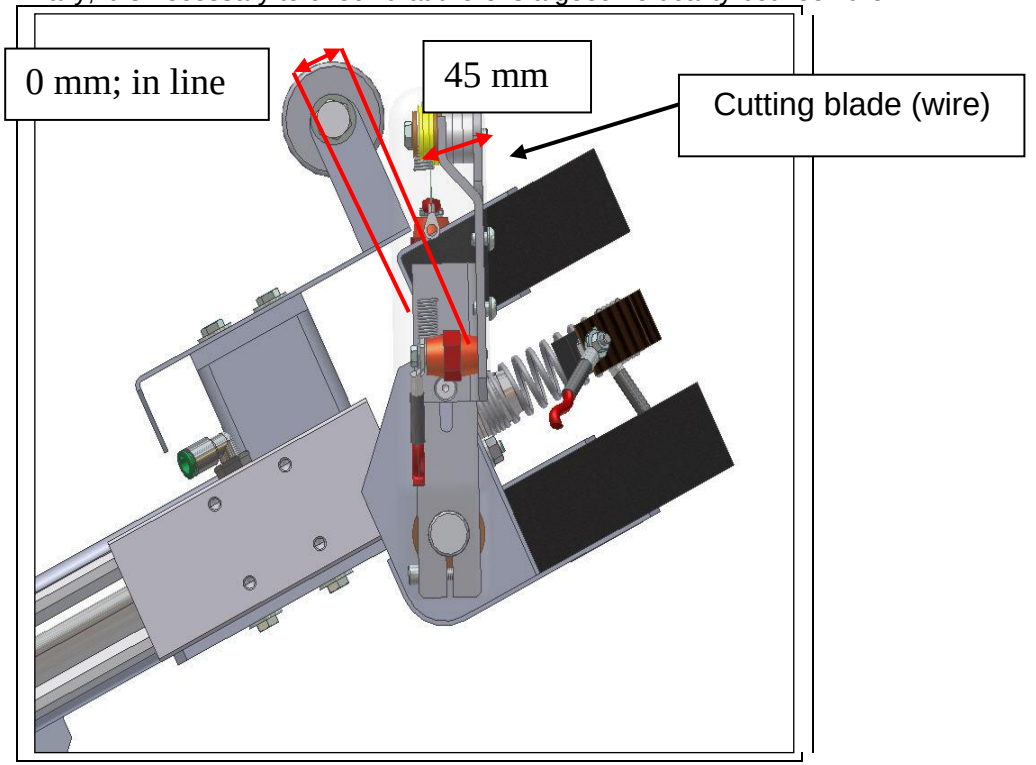


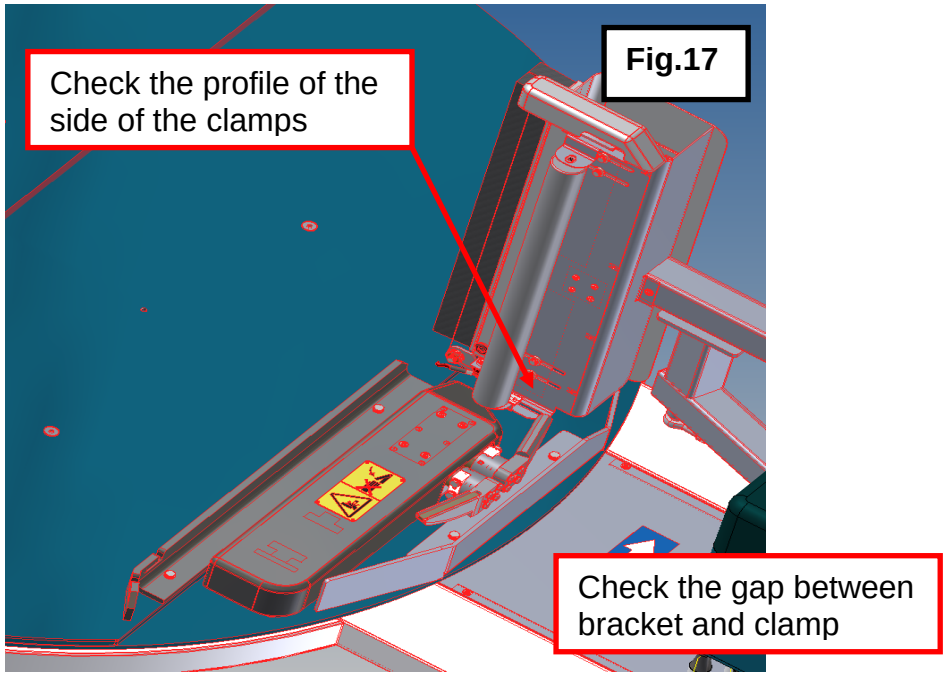
Fig.15

The cutting wire must be set more close as possibile to the product

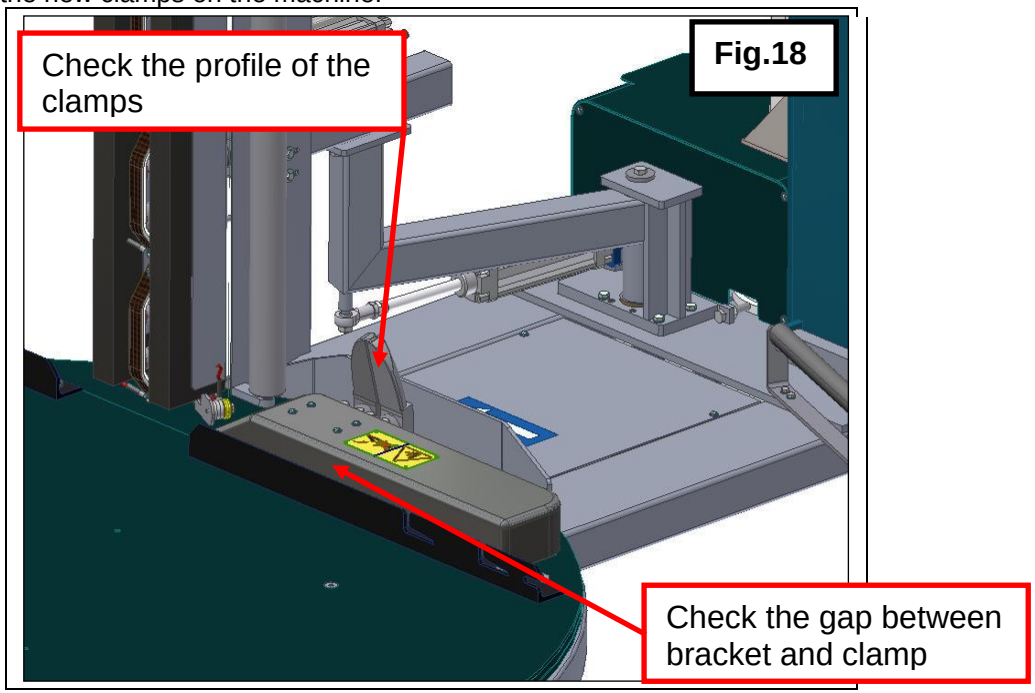
First of all, it is necessary to fit the support of the roller almost in the same line of the welders case (see below sketch).
Then, it is possible to adjust the position of the welder blade (wire) to have it in a distance of 45 mm approximately from the support of the roller.
Finally, it is necessary to check that there is a good verticality between them.



The profile of the clamps must be smooth and regular, so after the replacement of them on the support, it is necessary to check that they are smooth and regular.



The profile of the clamps must be flat and smooth, so check that carefully after you mount the new clamps on the machine.



The articulation of the pneumatic cylinder mast be set 2 mm only from its limit end stroke.

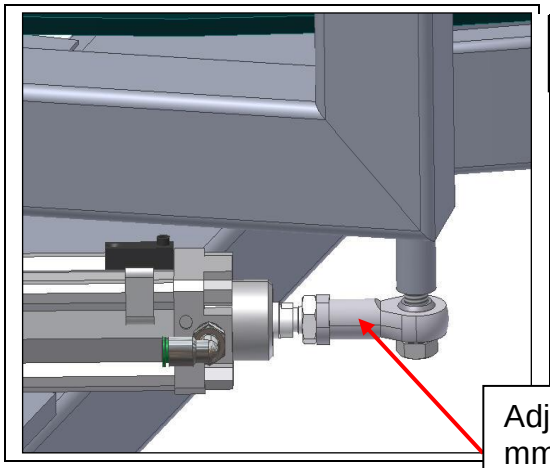


Fig.19

21. ALARM LIST AND TROUBLE-SHOOTING TECHNOPLAT CS & TECHNOPLAT CW SERIE 7.1

Alarm code	Alarm description	Troubleshooting	Cause of the fault	Solution
E11	Safety film spool carriage down-ward alarm	Check the mechanical conditions of the emergency plate below the carriage	The plate is mechanically stuck	Adjust the mechanical position of the plate.
		Check the conditions of the mechanical switch and its wiring	The mechanical switch is defective or wrongly wired	Replace the mechanical switch or the electrical wiring
E30	Rotation turntable inverter alarm	Disconnect the turntable rotation motor from the mother-board and start a packing cycle.	If the alarm message disappears there is a fault of the rotation turntable motor	Replace rotation turntable motor
			If the alarm message doesn't disappears, there is a fault on the mother-board.	Replace mother-board.
		Check the brake connected to the rotation turntable motor.	Possible fault of the brake	Replace the brake
		Check the gearbox connected to the rotation turntable motor	Possible fault of the gearbox	Replace the gearbox
E31	Up-ward / down-ward spool carriage inverter alarm	Disconnect the up-ward / down-ward spool carriage motor from the mother-board and start a packing cycle.	If the alarm message disappears there is a fault of the up-ward / down-ward spool carriage motor	Replace up-ward / down-ward spool carriage motor
			If the alarm message doesn't disappears, there is a fault on the mother-board.	Replace mother-board.
		Check the gearbox connected to the up-ward / down-ward spool carriage motor	Possible fault of the gearbox	Replace the gearbox
E32 / E33	Pre-stretch inverter alarm	Disconnect the pre-stretch motor from the inverter card and start a packing cycle.	If the alarm message disappears there is a fault of the pre-stretch motor	Replace pre-stretch motor
			If the alarm message doesn't disappears, there is a fault on the inverter card.	Replace inverter card.

E41	Serial communication error	Check the flat cable which connect the mother-board card to the operator panel display card	Defect of the flat cable.	Replace the flat cable
		Check the mechanical condition of the connectors of the two cards (mother-board and operator panel display).	Defect of one of the two cards	Replace the defected card.
E42	Missing cycle parameters list initialization		Installation of the operator panel display card or machine's software not completed	Make the initialization procedure as indicared in paragraph 10 & 11.
E43	Missing internal parameters list initialization		Installation of the operator panel display card or machine's software not completed	Make the initialization procedure as indicared in paragraph 10 & 11.
E46	Serial communication error with pre-stretch card	Check the flat cable which connect the mother-board card to the amplifier card	Defect of the flat cable.	Replace the flat cable
		Check the mechanical condition of the connectors of the two cards (mother-board and amplifier card).	Defect of one of the two cards	Replace the defected card.
E47	Serial communication error with I/O expansion card	Check the flat cable which connect the mother-board card to the I/O expansion card	Defect of the flat cable.	Replace the flat cable
		Check the mechanical condition of the connectors of the two cards (mother-board and I/O expansion card).	Defect of one of the two cards	Replace the defected card.
E48	Firmware pre-stretch card not compatible		Pre-stretch card not compatible with mother-board	Replace pre-stretch card with last release card production
E49	Firmware mother-board card not compatible		Mother board card not compatible with pre-stretch card	Replace mother-boad card with last release card production

E60	Broken / End film alarm (option)			Apply on the machine the correct film and run it properly into the rolls following the instructions and press START
		Check the appropriate working of the load-cell (extensometer)	The load cell (extensometer) doesn't give signals to the inverter/amplifier card	Replace load-cell (extensometer)
			The load-cell (extensometer) works fine	Replace the inverter/amplifier card
E61	Blocked turntable alarm	Check the position of the mechanical switch compared to its cam	Wrong positioning of the mechanical switch	Fit the mechanical switch in the appropriate position.
		Check that the mechanical switch is working properly	Damage of the mechanical switch or related wiring	Replace the mechanical switch
		Check that input #H5 (DL9) on the mother-board card works properly	Possible fault on the mother-board card.	Replace mother-board.
E62	Clamp blocked alarm	Check the position of the magnetic sensor on the clamp pneumatic cylinder	Wrong position of the magnetic sensor on the cylinder	Fit the magnetic sensor in the appropriate position.
		Check that magnetic sensor works properly	Damage of the magnetic sensor or its wiring	Replace the magnetic sensor
		Check that input #U07 (DL8) I/O expansion card works properly	Possible fault on I/O expansion card.	Replace I/O expansion card.
E63	Arm position alarm	Check the position of the inductive sensor on the clamp pneumatic cylinder	Wrong position of the inductive sensor	Fit the inductive sensor in the appropriate position.
		Check that inductive sensor works properly	Damage of the inductive sensor or its wiring	Replace the inductive sensor
		Check that input #I11 (D14) I/O expansion card works properly	Possible fault on I/O expansion card.	Replace I/O expansion card.
E65	Thermal protection alarm	Check the thermal relay in thr electrical box	Thermal relay is switched	Connect the thermal relay
		Check the condition of the resistors of the welder device	Welder device damage (shortcut).	Replaced the defected parts of the welder device
		Check the input #I14 (DL17) on I/O expansion card works.	Possible fault on I/O expansion card.	Replace I/O expansion card.

E70	Function not active information	Option not active		
		Operator panel display locking activated		Unlock the operator panel as indicated in paragraph 5.
		Check the control operator panel display card and mother-board card.	Possible fault of one of the two cards.	Replace mother-board card or operator panel display card.
E90	Low power supply voltage alarm	Check the power supply that must be according the machine's specifications	The power supply isn't according the technical specification.	Adjust the power supply according the specification
			The mother-board card is defected	Replaced mother-board card
E91	High power supply voltage alarm	Check the power supply that must be according the machine's specifications	The power supply isn't according the technical specification.	Adjust the power supply according the specification
			The mother-board card is defected	Replaced mother-board card
The machine does not stretch or pre-stretch the film		Make a view check of the rubber rolls	The rolls are dirty	Clean the rubber rolls (do not uses chemical additives)
			The rolls are worn	Replace the rubber rolls
		Check the run of the film into the rolls of the spool carriage and check the quality of the film.	Possible improper use of the machine.	Apply on the machine the correct film and run it properly into the rolls following the instructions
		Check that the brake on the spool carriage is not completely consumed, mechanically damaged or dirty/greased.	The brake is consumed or dirty or greased.	Replace the brake
		Check that the output voltage from the mother-board	Check that mother-board output gives the appropriate voltage (see paragraph 7 above)	Replace the mother-board
			Check that mother-board output gives the appropriate voltage (see paragraph 7 above)	Replace the brake

The spool carriage doesn't move up-ward or down-ward	Check top and bottom mechanical safety switches.	One of the two mechanical switch are defective.	Replace the defective switches.
	Check that top and bottom mechanical switches give signals to the mother-board.	Possible electrical fault of one of the two mechanical switches or an electrical interruption.	Replace the mechanical switches or adjust the wiring
	Check that mother-board is working properly.	Possible fault of the mother-board.	Replace the mother-board card
The film breaks during the packing of it is not properly applied to the pallet (too light or too tight)	Check that the film is running through the last dancing roller of the spool carriage (where it is connected the sensitivity sensor – load cell)	Wrong film insertion onto the spool carriage.	Insert the film on the spool carriage in the proper way following the instructions in the user manual.
	Make a view check of the rubber rolls	The rolls are dirty and sign the film	Clean the rubber rolls (do not uses chemical additives)
	Check that the sensitivity sensor – load cell isn't mechanical damaged or not properly fit (the dancing roller must move of just few millimetres in the top and bottom fitting points).	The sensitivity sensor – load cell is too tight or mechanically damaged.	Loosen the screws that fit the instrument to the carriage frame/dancing roller. If the instrument is mechanical defective, replace it.
	Check that the sensitivity sensor – load cell is working properly (no electrical fault).	Electrical damage on the instrument.	Make the tuning of the load-cell (extensometer) as indicated in paragraph, if not solve replace the instrument
	Check that the pre-stretch card properly manage the signal of the sensitivity sensor – load cell.	Possible fault of the pre-stretch card.	Make the tuning of the load-cell (extensometer) as indicated in paragraph, if not solve replace amplifier/inverter card

The machine does not react on RESET pushing.	Check that the contact of the RESET push button is working properly.	Possible damage of the contact of the push button.	Replace the contact and the push button
	Check the presence of the 24Vdc on the mother-board.	Possible fault on the mother-board that burn the 24Vdc fuse.	Replace the fuse.
		Possible fault on the mother-board.	Replace the mother-board card.
The machine (standard shape basement configuration) shows E10 alarm even if that it shouldn't happen	Check the connector X3 which connect the base of the machine to the mast	The bridge on X3 connector is opened	Close the bridge on connector X3.
	Check the input on the mother-board	Mother-board defected	Replace the mother-board card