



## ***USER'S GUIDE***

**23E195**

**Ed. III - 9902**

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## **WARNING**

*Caution must be taken in the close vicinity of the feeder as it contains moving parts that can cause injuries. In normal operation the feeder can start without prior warning.*

*Always turn off the main switch before any replacement or connection.*

*Any work on electrical components must be carried out by qualified personnel and authorized by Nuova Roj Electrotex.*

*You are asked to use always original spare parts and accessories for Feeders and Voltage Supply Boxes of our production.*

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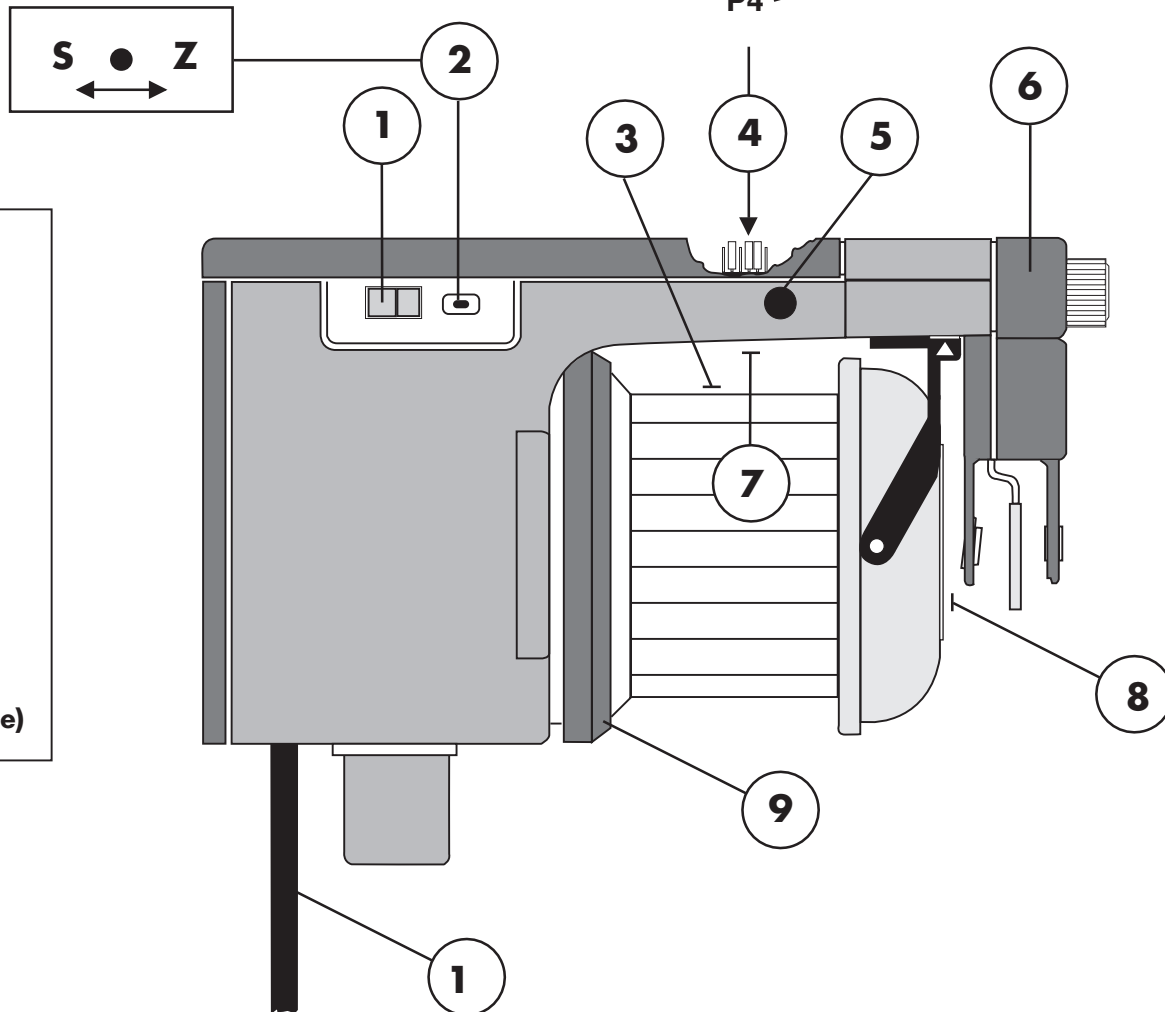
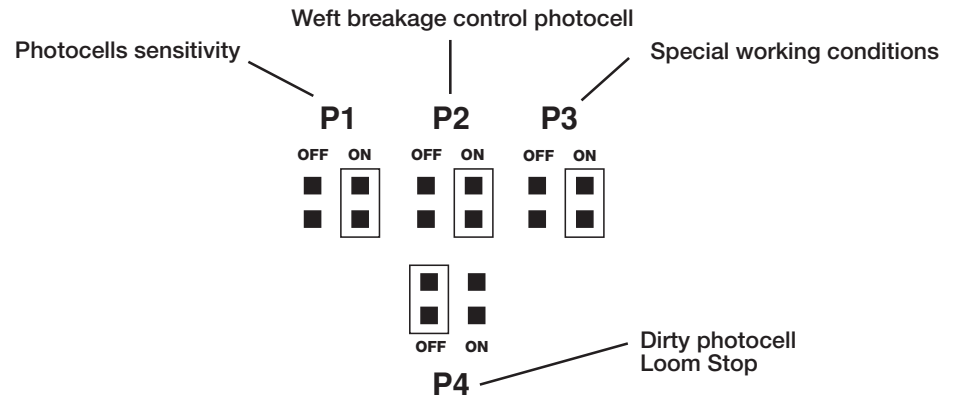
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# ROJ TRICOT

## MAIN PARTS



- 1 - ON-OFF SWITCH
- 2 - S-Z SWITCH
- 3 - REFLECTING AREA
- 4 - JUMPERS
- 5 - SIGNALLING LED
- 6 - BRAKE GROUP
- 7 - PHOTOCELLS
- 8 - INVERSION PUSH-BUTTON
- 9 - WINDER
- 10- POWER SUPPLY CABLE (other side)

**TECHNICAL FEATURES**

- **ROJ TRICOT** is a separated coils weft feeder.
- It is manufactured in two basic models:

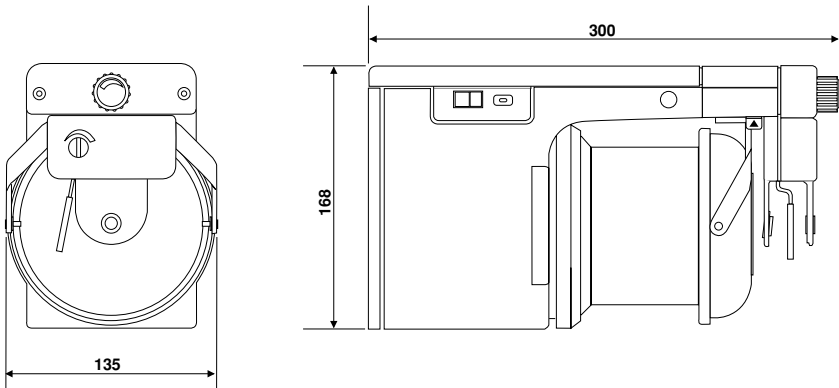
**ROJ TRICOT/S**

*Provided with a natural or synthetic bristle tension device*

**ROJ TRICOT/N**

*Provided with a metallic-sheet tension device*

- Motor power rating : 90 W
- Weight: 5.6 kg
- Operating temperature range: from 0 ° to 40 °C
- Nonoperating temperature range: from -25 ° to +65 °C
- Package dimension: as shown in the picture



## FEATURES - OPERATIONS - ADJUSTMENTS

**NOTE - Before operating, please remember to turn the unit off.**

### ■ WINDING SPEED

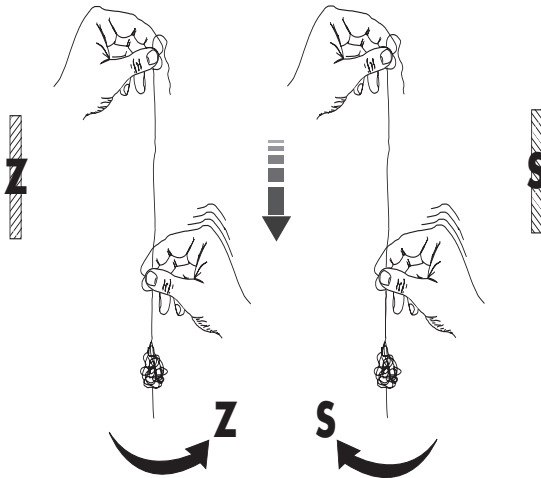
Self adjusting range:

**60 to 1200 m/min**

### ■ WINDING DIRECTION (S-Z)

Set the S/Z switch in the desired position (S-twist=clockwise; Z-twist=counterclockwise). Then set the coils feed direction and the coils pitch as described in the next paragraph.

The winding direction must be determined according to the yarn twist (see picture below).



*Set the S/Z switch on the determined position*

**NOTE - For low twist (torsion) yarn, use an opposite winding direction in respect the determined one.**

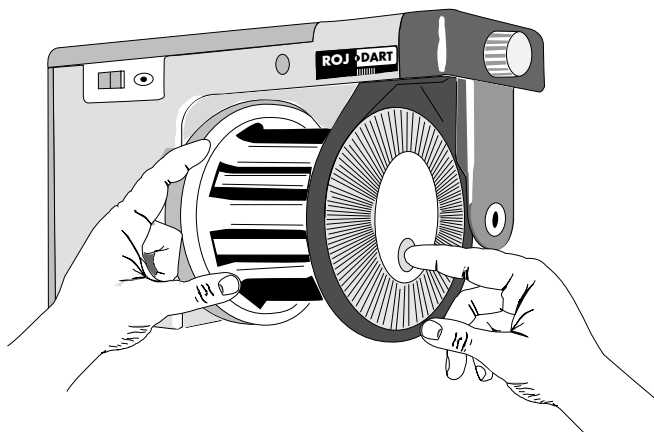
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## HOW IT WORKS

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### ■ FEED DIRECTION AND COILS PITCH

In reason to have the correct feeding direction it is necessary to preset the winding group to operate according to the winding rotation.

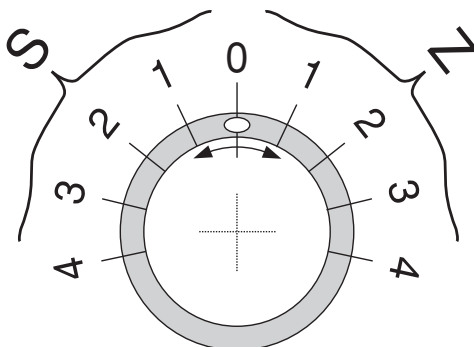


*The coils pitch is adjustable: 4 positions both in S and Z rotation.*

**NOTE - Turn off the unit before you setting it.**

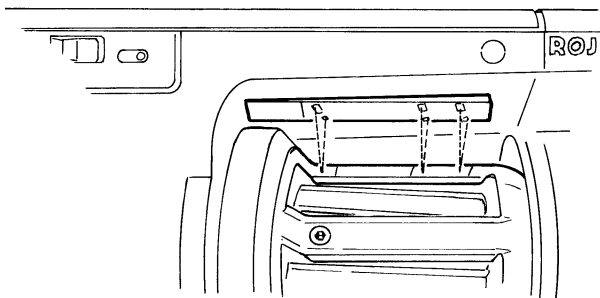
Push the front button located on the winding cage and rotate the winder until it locks in. While keeping the button pressed-in proceed rotating the winder until the right pitch between the coils is obtained. Then release the button.

**NOTE - The pitch selection must be done according to the winding rotation previously selected by the S/Z switch.**



*The maximum pitch is 1.8 mm (position 4)*

### ■ WEFT CONTROL PHOTOCELL



The yarn count range detected by the photocell is:

**20 den to 1800 den (5 Nm)**

### ■ PHOTOCELL SENSITIVITY

The unit is preset from the factory to self-adjust the sensitivity of the photocell according to the yarn count.

*(jumper **P1** position **ON**)*

It is possible, anyway, to disable the above mentioned function by setting the jumper P1 in position OFF. The unit will work in low sensitivity only.

It is important to limit this operation in the cases described at the troubleshooting paragraph only.

### ■ WEFT BREAKAGE CONTROL PHOTOCELL

The unit is preset to control the yarn input breakage (LOOM STOP function); jumper **P2** position **ON**.

It is possible to disable the Loom Stop function by setting the jumper P2 in position OFF.

**NOTE - In order to obtain the Loom Stop or the Color Change function, it is necessary to install an interface in the Voltage Supply Box or in the loom control panel.**

**NOTE - If the coils pitch is too small, it may be necessary to disable the Loom Stop photocell.**

### ■ TYPE OF MACHINE APPLICATION

The jumper **P3** allows to have a finer working operation of the feeder according to different kind of machines.

- **ON** position: for weft insertion machines - Raschel type - (and warping machines).

- **OFF** position: for circular knitting machines and tape looms (less than 80 cm wide).



### ■ DIRTY PHOTOCELL LOOM STOP

This function allows to stop the loom in case of a dirty photocell alarm (red light flashing).

The operator will be forced in this way, to clean the photocell before restarting the loom avoiding thus quality problem due to lack of maintenance on the unit. To enable the function set the jumper **P4** in position **ON**.

### ■ WEFT FEEDER DEACTIVATION

To deactivate a DART from a group of weft feeder while working in a Loom Stop or Color Change functions proceed as follow:

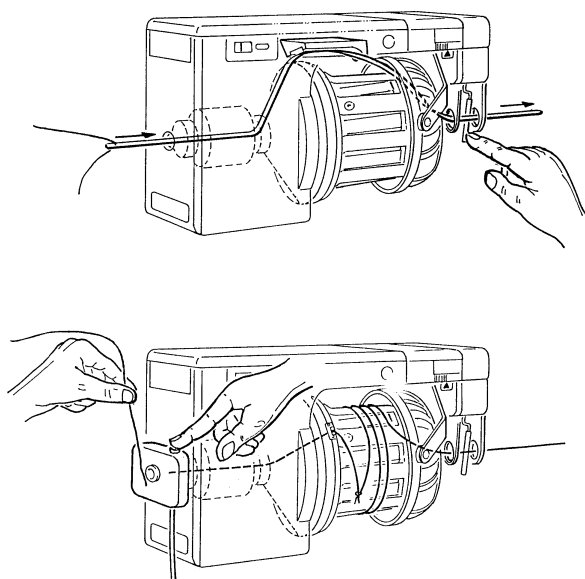
- SET **ON-OFF SWITCH** IN POSITION **OFF**
- SET **S/Z SWITCH** IN CENTRAL POSITION (**•**)

### ■ WEFT-THREADING

When a weft breakage occurs the unit will automatically set the winder eyelet on the right hand side in order to facilitate the tying operation.

The use of the Pneumatic threader is recommended (see **ACCESSORY** paragraph).

When the empty feeder is turned-on, the winder eyelet is lined up to the threader guide to facilitate the complete manual threading operation (brake included).

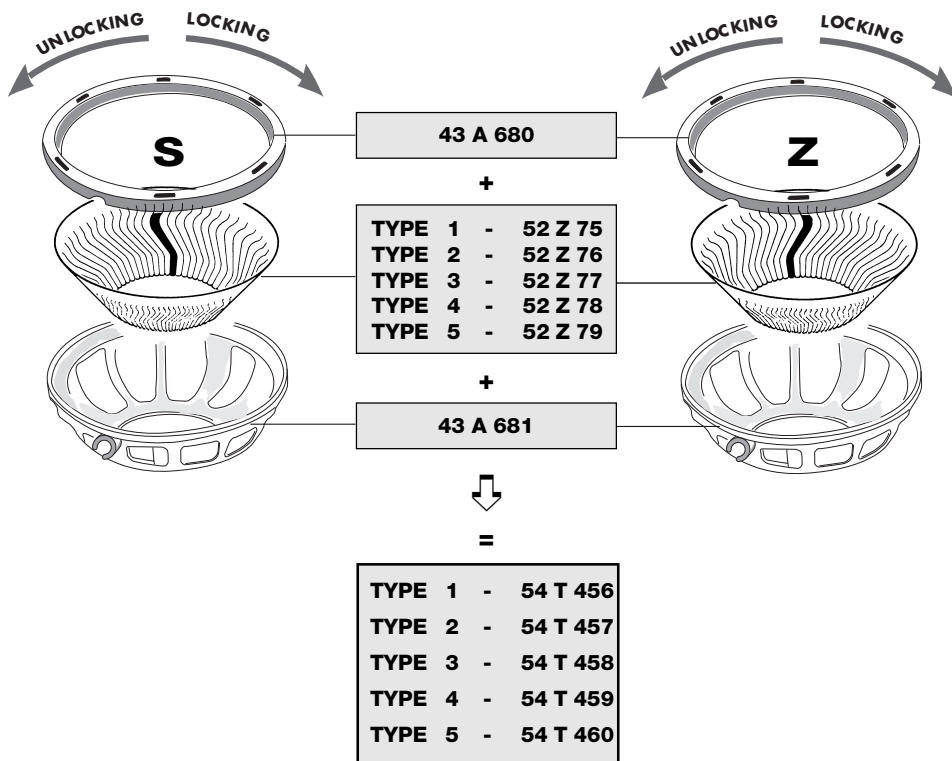


## HOW IT WORKS

### EXIT BRAKE

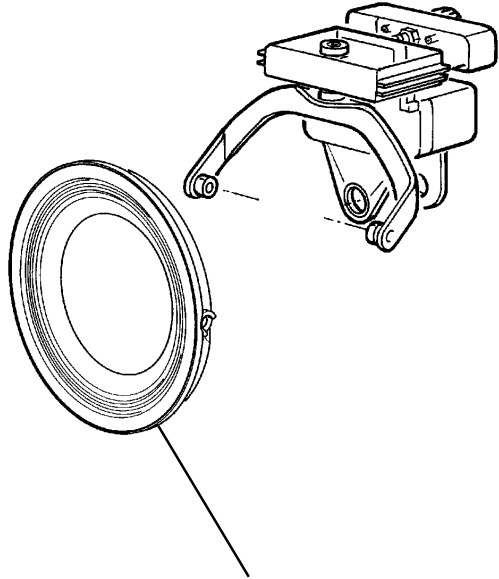
The exit brake must be selected based on the feeder winding rotation and the type of yarn woven. Refer to **tables I , II, and III** for detailed info.

### METAL BRAKE



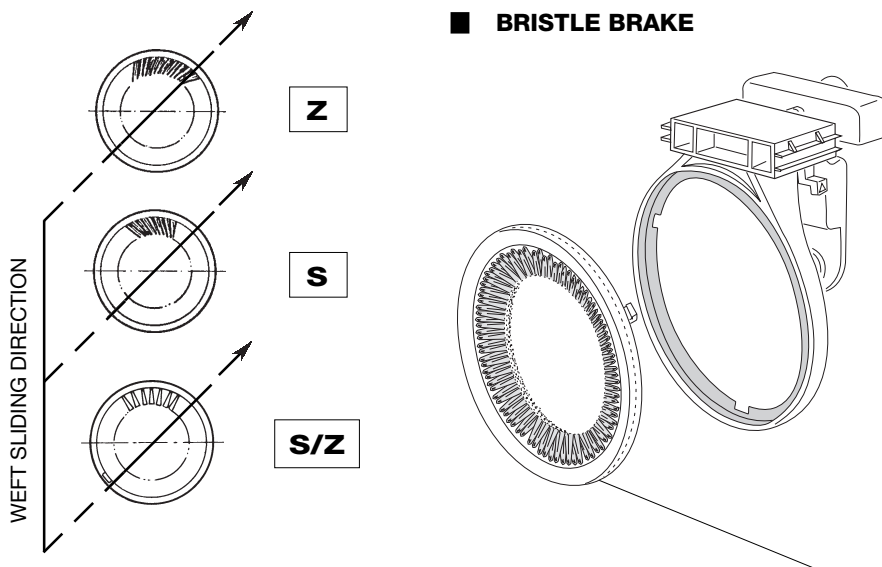
## HOW IT WORKS

### ■ FLEX BRAKE



YARN COUNT	BRAKE P/N
> 40 < 150 60 → 40 Ne dTex Nm	<b>54 F 12</b>
40 → 20 150 → 300 40 → 20 Ne dTex Nm	<b>54 F 10</b>
20 → 10 300 → 600 20 → 10 Ne dTex Nm	<b>54 F 11</b>
10 → 5 > 600 < 10 Ne dTex Nm	<b>54 F 13</b>

## HOW IT WORKS



RING COLOR	BRISTLE COLOR	DESCRIPTION	ROT	P/N
BLUE	NATURAL	NATURAL BRISTLE BRAKE (goat)	S/Z	54T450
GREY	NATURAL	NATURAL BRISTLE BRAKE (goat)	S/Z	54T451
BLACK	WHITE	BRISTLE BRAKE 0.1	S/Z	54T452
ORANGE	WHITE	BRISTLE BRAKE 0.2	S	54T453
ORANGE	BLACK	BRISTLE BRAKE 0.2	Z	54T454

### Brakes recommended for machines with continuous yarn withdrawal:

RING COLOR	BRISTLE COLOR	DESCRIPTION	ROT	P/N
ORANGE	NATURAL	BRISTLE BRAKE (goat) Z	Z	54T628
ORANGE	NATURAL	BRISTLE BRAKE (goat) S	S	54T629
BLACK	NATURAL	BRISTLE BRAKE (goat) LZ	Z	54T630
BLACK	NATURAL	BRISTLE BRAKE (goat) LS	S	54T631
GREY	NATURAL	BRISTLE BRAKE (goat) Z	Z	54T632

## **INSTALLATION GUIDE**

- Make sure that the power supply box is correctly wired before plugging the unit in
- The feeder's stand and the metallic parts in touch with the thread must be ground connected.

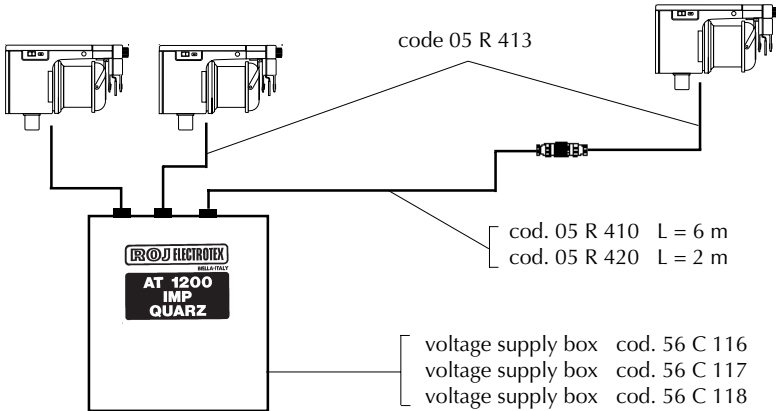
**Note - a complete line of stands expressly designed is available upon request to Roj Electrotex.**

- Do not operate the weft feeder immediately after removing it from a cold storage place. Moisture may causes failures or bad operation of the feeder.

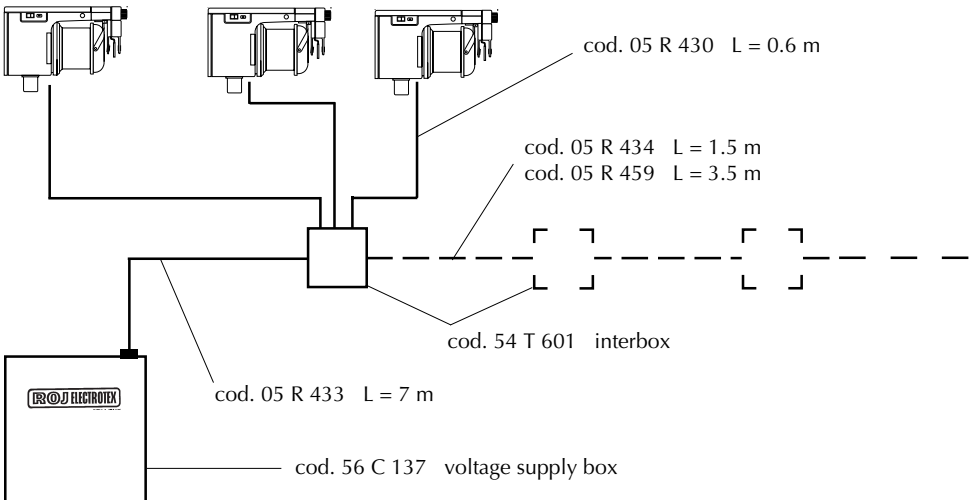
**Wait until it is completely dry before operating.**

## CONNEXION TO THE VOLTAGE SUPPLY BOX

### 1 - UNIVERSAL VOLTAGE SUPPLY BOX

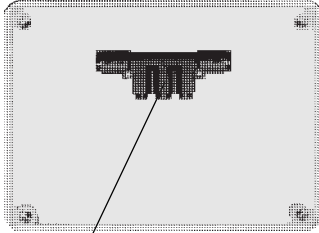


### 2 - SPECIAL VOLTAGE SUPPLY BOX (2 kW)

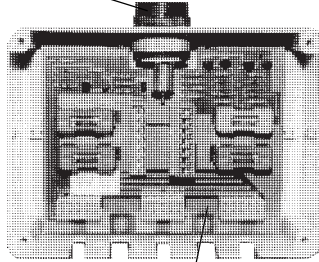


**Interbox part-nr. 54 T 601**

Yellow led part-nr. 14 C 16

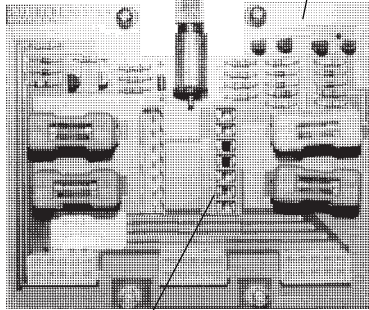


Air distribution kit cod. 65 A 61



Board part-nr. 50 H 518

Lamp 2W part-nr. 04 A 47



Connector part-nr. 53 F 5



jumper

**NOTE**

On the last interbox, put the connector part-nr. 53 F 5 on the free terminal placed on the board part-nr. 50 H 518. Make sure that the contacts #4 and #5 are connected between them (see picture).

### **PREVENTIVE MAINTENANCE**

**NOTE - turn off the unit before operating**

- When working with dusty yarns, clean periodically the unit with a low pressure compressed air jet.

**NOTE - before effecting this operation, in order to avoid the compressed air jet pushing the yarn behind the winder, first remove the yarn from the unit.**

- PHOTOCELL GLASS AND REFLECTOR MAINTENANCE

Use **only** a clean cloth damped in **alcohol**.

**NOTE - the use of abrasive or sharp tool will damage permanently the reflecting surface.**



**TROUBLESHOOTING**

ALARM SIGNALLING OR DEFECT	POSSIBLE SOLUTION
THE UNIT WILL NOT START AND THE LED (LIGHTS) ARE OFF EVEN THOUGH THE ON/OFF SWITCH IS ON	3 10 6 9
THE MOTOR DOESN'T RUN. RED LIGHT ON STEADY	7 14 12 6 9
THE MOTOR DOESN'T RUN. RED LIGHT FLASHING FASTLY	3 4 5 11 6 9
RED LIGHT FLASHING SLOWLY	8 1 2 17 19 6 9
WEFT BREAKAGE CONTROL PHOTOCELL DOESN'T WORK	13 2 14 8 17 19 20 6 21 9
FALSE STOP DUE TO YARN BREAKAGE CONTROL PHOTOCELL	8 18 19 6 21 9
STARTING THE LOOM, THE UNIT RUNS OUT OF RESERVE	1 2 3 4 5 10 18 17 20 6 9
EXCESSIVE RESERVE BUILD-UP	1 2 5 10 15 16 17 18 19 6 9
IRREGULAR WINDING SPEED	1 2 15 16 17 20 6 9

- 1- The reflector must be facing the photocell. Verify if the winding cage has been rotated.
- 2- Verify the reflector condition: it must be clean and it must not show sign of damage.
- 3- Check the fuses integrity. Check if the power supply voltage is wired according to the power line voltage.
- 4- Verify if the feeder main shaft is free to rotate; if locked proceed in taking apart and cleaning the winding group.
- 5- Remove the top cover and verify that the motor supply cable is correctly plugged in.
- 6- Replace the circuit board.
- 7- Out of yarn: yarn broken or package empty.
- 8- Clean the photocell glass.
- 9- Call for service.
- 10- Verify that the connector of the power supply cable is correctly plugged in.
- 11- Motor overload: proceed as per paragraph 4.
- 12- Verify that the "S/Z" switch is not on central position "•"
- 13- Verify the position of the jumper P2: which enables the function Loom Stop enabled.
- 14- If the Loom Stop function is required, verify if the power supply box is provided of the Loom Stop Interface, and correctly wired to the loom.
- 15- The feeder's stand and the metallic parts in touch with the thread must be ground connected. If the yarn count is higher than than 200 den, try to set the jumper P1 in position Off.
- 16- Verify that close to the unit there is any device that generate electrical discharge. If the yarn count is higher than 200 den, try to set the jumper P1 in position OFF.
- 17- Verify that intense light sources are not directly pointed to the photocell or to the reflector.
- 18- Verify if the jumper P1 is in position ON.
- 19- Remove the yarn of the reserve in excess, and verify that the coils are enough separated. Eventually, increase the coil pitch.
- 20- Check that the feeder is not subjected to excessive vibrations.
- 21- Set jumper P2 in position OFF when the following yarns are woven: transparent yarns, very thin yarns, very thick yarns.

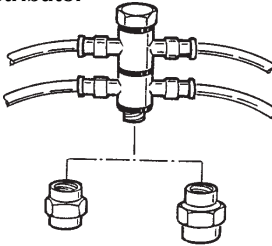
**ACCESSORIES**

The ROJ TRICOT accessories are basically the same used with the other Roj Electrotex weft feeders.

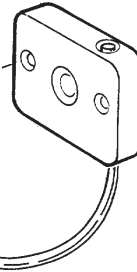
ENTRY ACCESSORIES

■ **PNEUMATIC THREADER cod. 54 R 26 + AIR DISTRIBUTION KIT (\*)**

air distributor



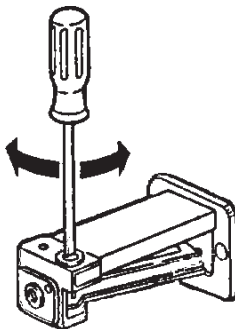
threader



(\*) Air distributor kit

1-2 OUTLETS cod. 54 R 38	4 OUTLETS cod. 54 R 39
6 OUTLETS cod. 54 R 41	8 OUTLETS cod. 54 R 42

■ **F.A.F. BRAKE cod. 26 B 34**

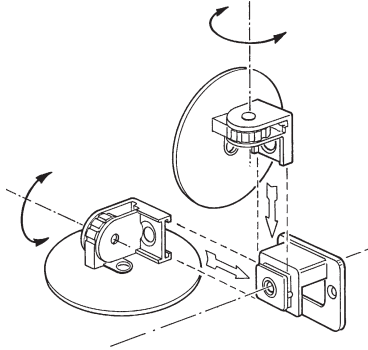


- minimum tension
- medium tension
- maximum tension

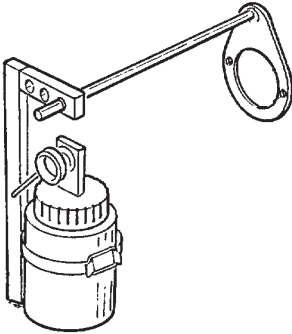
# ACCESSORIES

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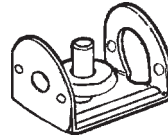
■ YARN GUIDE ASSEMBLY cod. 54 R 13



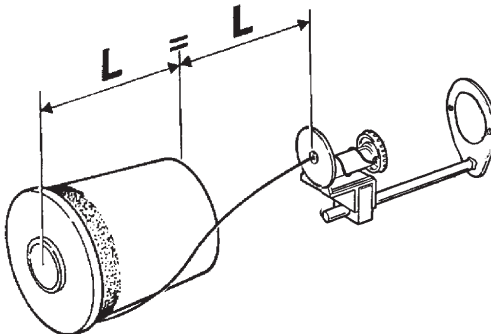
■ LUBRICATION DEVICE cod. 54 R 36



■ PARAFFIN APPLICATOR cod. 54 T 47

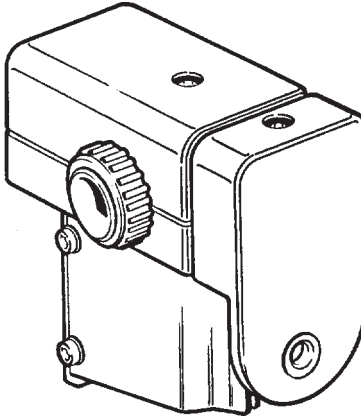


■ ANTI-SNARL GROUP cod. 54 T 49

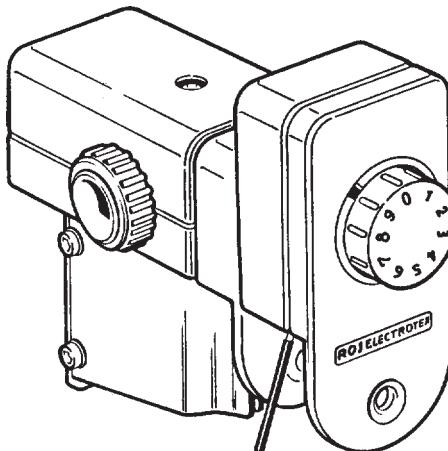


EXIT ACCESSORIES compatibles only with ROJ DART/S

■ **DOUBLE LEAF BRAKE cod. 54 R 8**



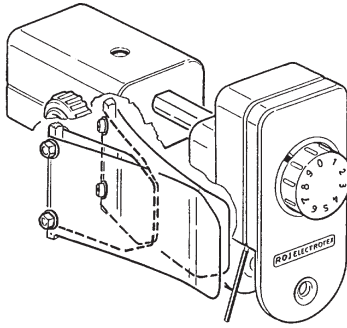
■ **DOUBLE LEAF BRAKE + TENSION ROD cod. 54 R 10**



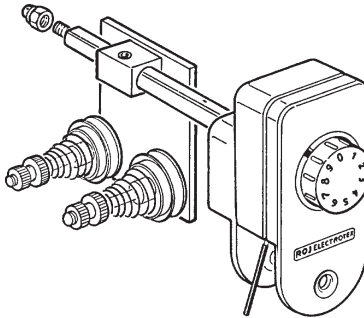
## ACCESSORIES

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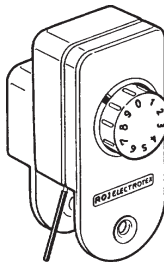
- DOUBLE BLADE LEAF BRAKE + TENSION ROD cod. 54 R 55



- TWO DOUBLE PLATE BRAKE + TENSION ROD cod. 54 R 44



- TENSION ROD cod. 52 R 10



**TABLES****TABLE I  
HOW TO CHOOSE THE METAL BRAKE**

	YARN COUNT				
		from to	from to	from to	from to
Nm	> 40	30 - 40	16 - 30	10 - 16	5 - 10
dTex	< 250	250 - 334	334 - 625	625 - 1000	1000 - 2000
Den	< 225	225 - 300	300 - 563	563 - 900	900 - 1800
Ne	> 24	18 - 24	18 - 10	6 - 10	3 - 6
BRAKE TYPE	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
KIT CODE	<b>54T456</b>	<b>54T457</b>	<b>54T458</b>	<b>54T459</b>	<b>54T460</b>
SPARE BRAKE CODE	<b>52Z75</b>	<b>52Z76</b>	<b>52Z77</b>	<b>52Z78</b>	<b>52Z79</b>

**TABLE II**  
**HOW TO CHOOSE THE BRISTLE BRAKE**

YARN COUNT	TORSION	
	S	Z
for very delicate yarns over: 70 Nm 143 dtex 129 den 41 Ne	Goatbristle blue ring  <b>54 T 450</b>	
from                      to 70 Nm                      50 Nm 143 dtex                      200 dtex 128 den                      180 den 41 Ne                      30 Ne	Hair bristle grey ring  <b>54 T 451</b>	
from                      to 50 Nm                      18 Nm 200 dtex                      556 dtex 180 den                      500 den 30 Ne                      11 Ne	Nylon bristle 0.10 black ring black bristle  <b>54 T 452</b>	
from                      to 18 Nm                      5 Nm 556 dtex                      2000 dtex 500 den                      1800 den 11 Ne                      3 Ne	Nylon bristle 0.20 orange ring white bristle  <b>54 T 453</b>	Nylon bristle 0.20 orange ring black bristle  <b>54 T 454</b>



**TABLE III**  
**HOW TO CHOOSE THE FLEX BRAKE**

<b>YARN COUNT</b>	<b>BRAKE P/N</b>
> 40 < 150 60 → 40 Ne dTex Nm	<b>54 F 12</b>
40 → 20 150 → 300 40 → 20 Ne dTex Nm	<b>54 F 10</b>
20 → 10 300 → 600 20 → 10 Ne dTex Nm	<b>54 F 11</b>
10 → 5 > 600 < 10 Ne dTex Nm	<b>54 F 13</b>