

4 PORT HOSE REEL

Mod. A4D 520.10.T2/FT/IS

Ed. 10/2019



Do not start working before the machine, into which the reel will be annexed, will be declared conformity with the CE directions that can be applied.

This manual is an integral part of the machine: **the user has to read it before start working.**

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NOTE – The manufacturer declines all responsibility for damage or injury to persons, things or animals caused by:

- 1- The incorrect use of the equipment.
- 2- The use of the equipment for aims that are not included in this instructions manual.
- 3- The use of the equipment without taking note of the indispensable precautions contained in this manual.



Warning!

- Make sure that these instructions are fully understood by the operator before the product is installed and used.
- The A4 is a spring return hose reel assembly designed for use where movements occur requiring continuous variations in hose length, the DEMAC hose reel automatically rewinds the surplus hose.
- Maximum working pressure without hose: 300 bar (30 MPa).
- Working temperature: -20 / + 80 °C (-4 / 176 °F).
- The equipment can be delivered with or without hose.
- Always verify that the hose can tolerate the working pressure, the working temperature and the endurance of the work.
- For product liability and safety reasons, any modification of the product and its accessories must be agreed upon the manufacturer.
- All locally legislated safety rules with regard of installation, operation and maintenance must be respected all the time.
- Before servicing any hydraulic component, relieve the pressure in the system by shutting off the hydraulic supply and actuating the control levers for all functions several times in both directions.
- Before disconnecting the open end of the hose, read section 5 of this instruction manual.
- NEVER remove the band around the spring nor disturb its position.
- The maximum attention while handling the spring is recommended. Read the instructions on section 5: Servicing.

Sec. 2 – IDENTIFICATION



- The serial number of the hose reel is marked on the outer part of the shaft too (see the picture).

	<input type="text"/>
I-20013 MAGENTA (MI) Via R. Murri, 14-Tel. +39.02.9784488	Article model
 direction of the spring charge RIGHT	Serial number
	Hose type
<input type="text"/>	Working pressure
Prewinding turns	Year



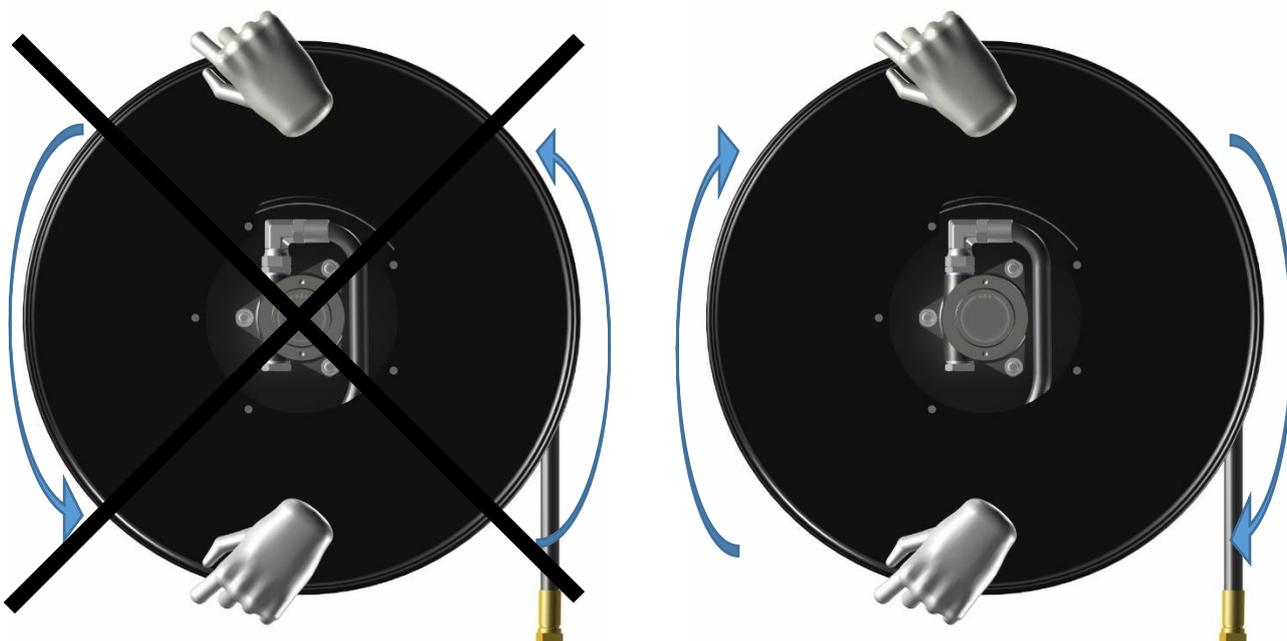
Serial number

- **DEMAG** name plate is clearly visible on the outer part of the hose reel
- It shows the directions of the spring charge and the part number, the model, the year of construction, the working pressure and the max prewinding turns of the hose reel
- **IMPORTANT:** When ordering parts or for any other possible request, you should always mention the specifications indicated on the name plate.



WARNING!

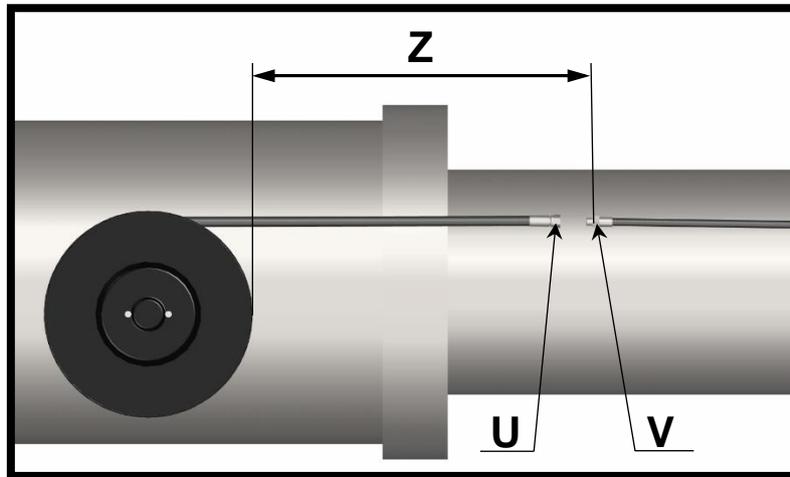
During this operation, **do not turn** the reel in the opposite direction to that of rotation indicated on the reel, in order to avoid damage to the inside spring.



Right

Model	Hose type	Hose working length max.	Prewinding turns max.	Turns for hose unwinding	Spring turns max.	Hose pressure max.
A4D 520.10.T2/FT/IS	3/8" – T2	10500 mm	3	10	14	330 bar

Sec. 3.2 – INSTALLATION ON TELESCOPIC CRANES



- 1- Place the hose reel, provided with the hose, in the desired position, trying to reduce the minimum clearance “Z” as much as you can.
- 2- After assembling the reel, prewind it by turning it for as many turns in the direction of rotation as indicated in the table in Section 3.1.

WARNING!

The prewinding turns are the total number of the turns that the operator must apply to the reel in the direction of the arrow “ROTATION” in order to fasten the free end of the hose “U” to point “V” of the machine.

- 3- Connect the free end of the hose “U” to the point “V” of the machine.

Sec. 4 – TROUBLE - SHOOTING



WARNING!

Before performing any repair operation, read thoroughly the manual at the section “Servicing”.

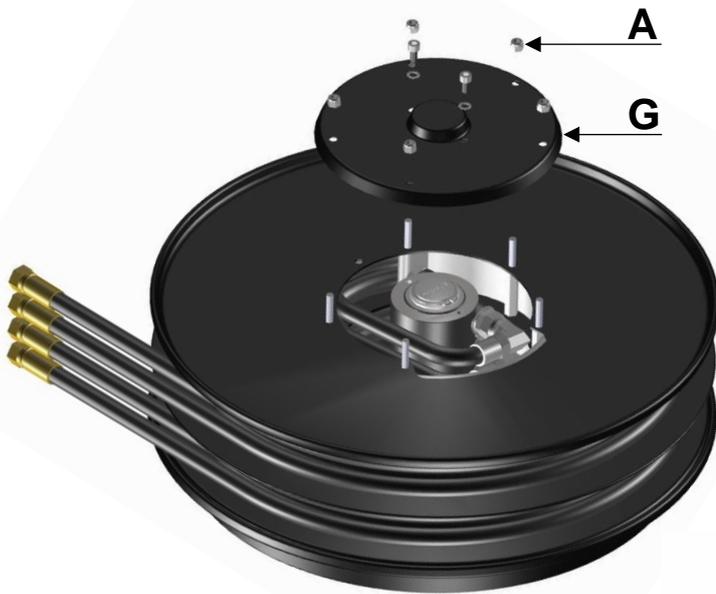
PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Hose reel winding action is jammed or works wrongly	<ul style="list-style-type: none"> ➤ Hose reel spring broken ➤ Hose reel spring damaged 	<ul style="list-style-type: none"> ➤ Replace the spring
Hose jumping off the reel	<ul style="list-style-type: none"> ➤ Inadequate prewind of the spring 	<ul style="list-style-type: none"> ➤ Control the prewinding turns in the table of Section 3.1, page 5
Excessive wear on hoses	<ul style="list-style-type: none"> ➤ Hose reel and junction block not in alignment 	<ul style="list-style-type: none"> ➤ Align reel and junction block ➤ Replace the flanges
Oil leaks at hub	<ul style="list-style-type: none"> ➤ Worn seals 	<ul style="list-style-type: none"> ➤ Replace the seals
Oil leaks at adaptors	<ul style="list-style-type: none"> ➤ Loose adaptors 	<ul style="list-style-type: none"> ➤ Tighten the adaptors

Sec. 5.1 – SPRING REPLACEMENT



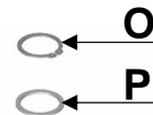
WARNING!

- 1- Cold working is recommended when operating on the machine.
- 2- Bring the machine to its rest position with its jibs completely lowered.
- 3- Relieve the pressure in the system by shutting off the electric and the hydraulic supply and actuate the control levers for all functions several times in both directions.
- 4- The hose reel spring is prewound when mounted in order to hold the hoses under tension. Before loosening the adaptors at the open end of the hoses, block the reel with the help of a second operator.
- 5- Disconnect the adaptors at the open end of the hose, gathering the discharged oil to avoid the contamination of the surroundings.
- 6- Allow to run down the prewinding of the spring, making the reel turn slowly to a stop. **NOTE:** count the turns made before the stop to be able to give the same number of turns of prewinding.
- 7- Remove the hose reel from the machine.



8- Place the reel as shown in the picture.

9- Unscrew the screws "A" and remove the cover "G".

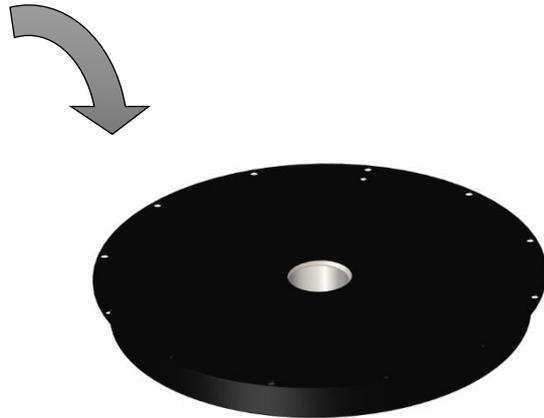
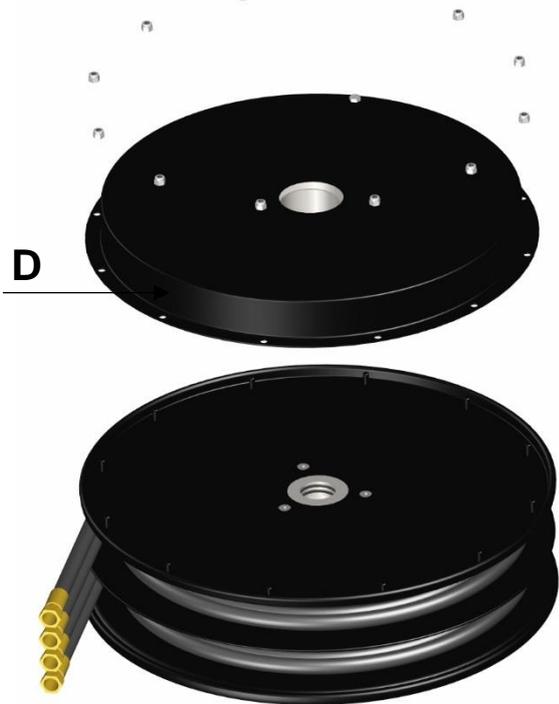
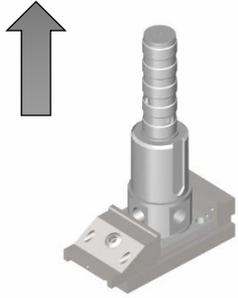


10- Remove the circlip "O" and the ring "P".

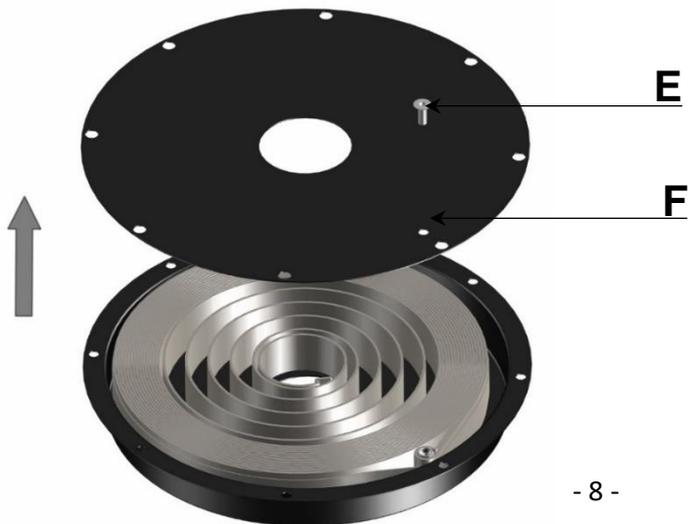




11- Unthread the whole reel body as shown in the picture, turn it over and place it on a workbench.



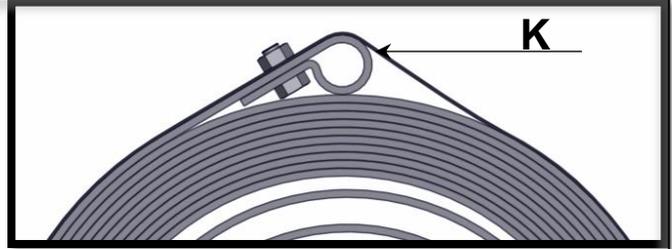
12- Lift the spring container "D" and turn it over on a bench as shown in the picture.



13- Loosen the screw "E" and lift the cover "F".



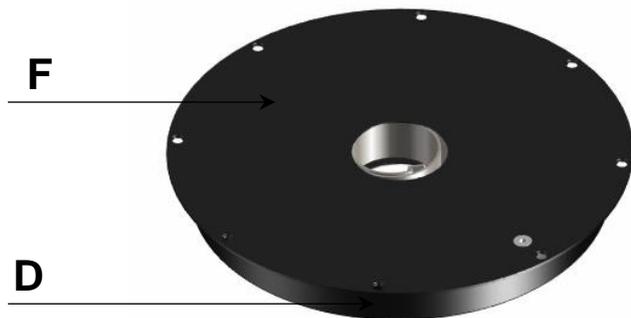
WARNING!



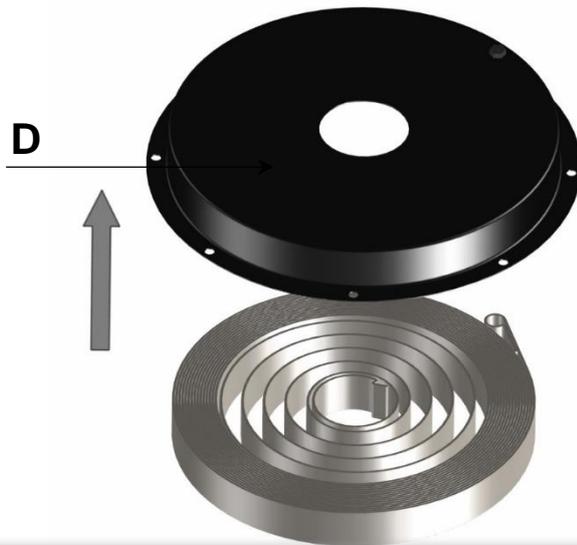
Before proceeding, check the integrity of the band "K" around the spring.

- If it's integral, follow the instructions as indicated from point 13 to point 15 and demolish the spring as indicated at point **a** of Sec. 6.1.
- If it is broken follow the instructions as indicated at point **b** of Sec. 6.1.

14- Put back the cover "F" on the part "D" as shown in the picture.



15- Turn over the spring container and lift the part "D".

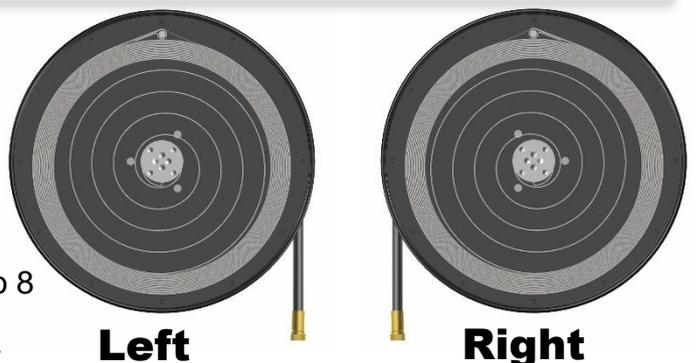


WARNING!

The band around the spring must never be removed or its position disturbed. Maximum attention is recommended while handling the spring in order to avoid any possible ejection from the band.

16- Install the new spring on the flange hose reel "J" in the direction of rotation marked on the hose reel.

17- Reassemble the hose reel following in reverse order the instructions from 14 to 8



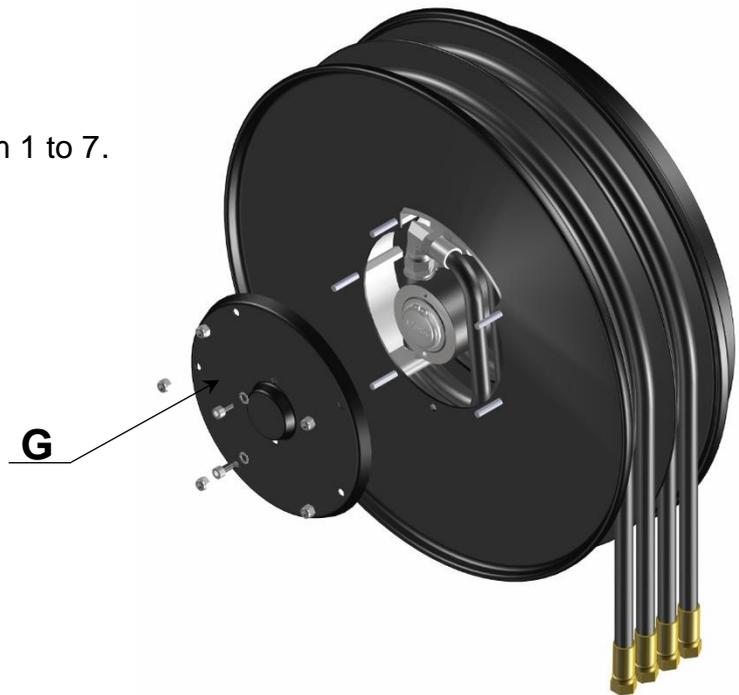
Sec. 5.2 – HOSE REPLACEMENT



Follow the instructions of Section 5.1 from 1 to 7.

8- Disassemble the cover “G”.

9- Replace the hose.



WARNING!

During this operation, do not turn the reel in the opposite direction to that of rotation indicated on the reel, in order to avoid damage to the inside spring.

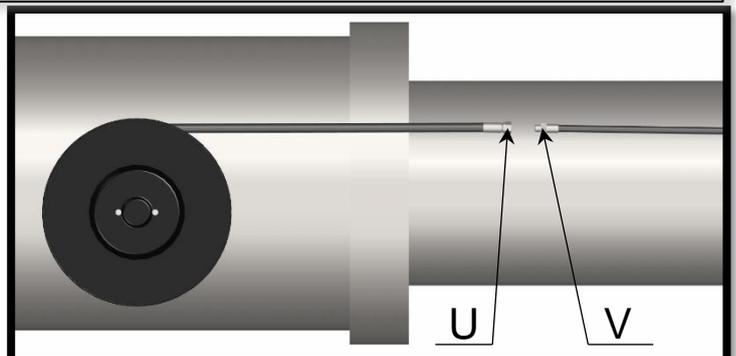
10- Put the cover in its former position.

11- Prewind the spring as many turns as indicated in par. 6 of the Section 5.1.

WARNING!

We mean “prewinding turns” the total number of turns that the operator must apply on the hose reel, in the direction of the arrow “ROTATION” to fasten the free end of the hose “U” with the point “V” of the machine.

12- Connect the free end of the hose “U” to the point “V” of the machine.



Sec. 5.3 – CHANGE OF THE DIRECTION OF ROTATION



LEFT

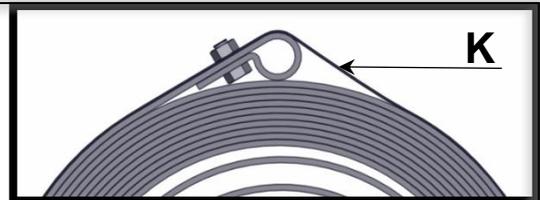


RIGHT

Follow the instructions of Section 5.1 from 1 to 14.



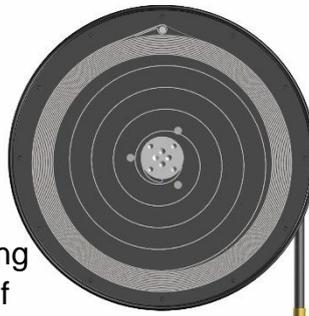
WARNING!



Before proceeding, check the integrity of the band "K" around the spring.

- If it is integral follow the instructions from point 15 to point 20.
- If it's broken, demolish the spring following the instructions as indicated at point b of Sec. 6.1. Order a new spring and a new spring container then follow the instructions from point 15 to point 20.

15- Turn over the spring and install it in the new direction of rotation of the hose reel (see the picture).



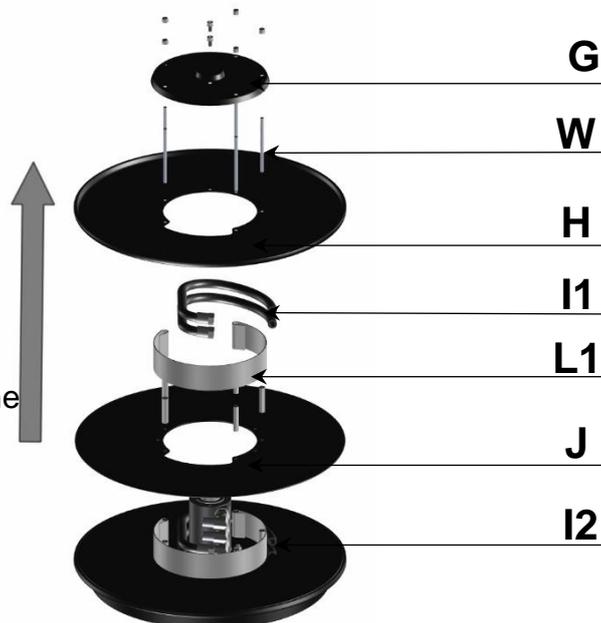
Left



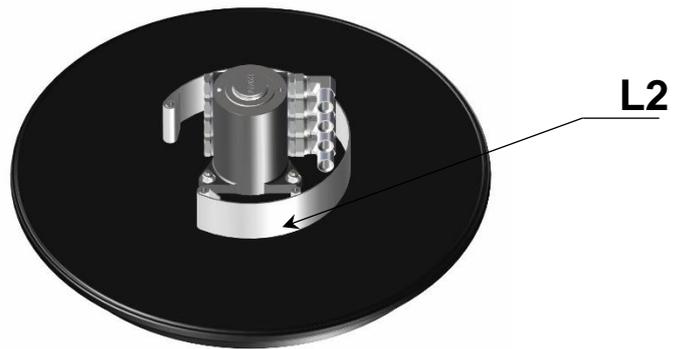
Right

16- Reassemble the hose reel following in reverse order the instructions of the Section 5.1 from 13 to 8.

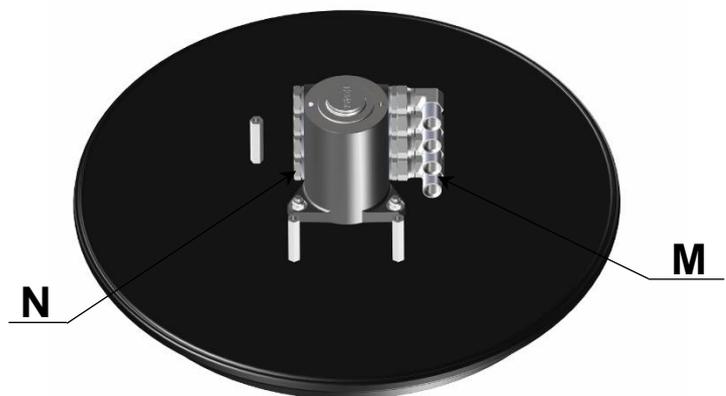
17- Disassemble the cover "G", the pins "W", the outer flange "H", the hoses "I1", the support "L1", the flange "J" and the hoses "I2".



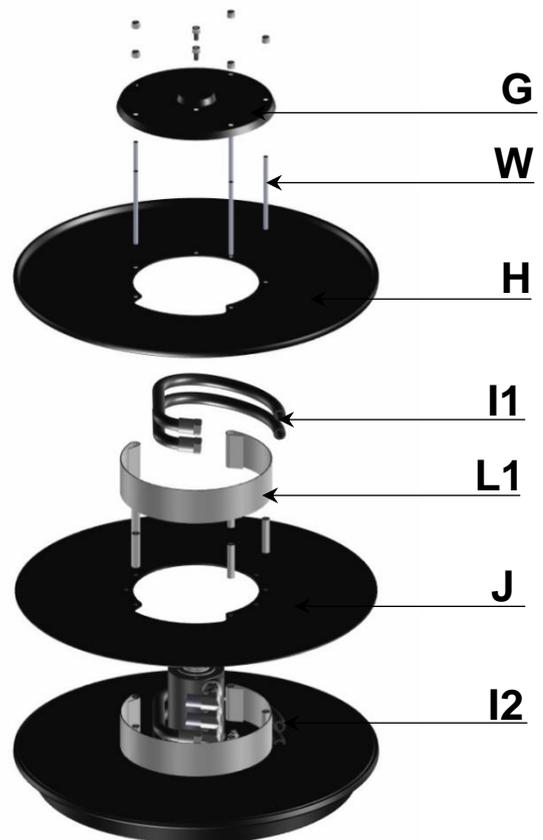
18- Reverse the hose support
"L2" by 180°.



19- Invert the plugs "N"
and the adaptors "M".



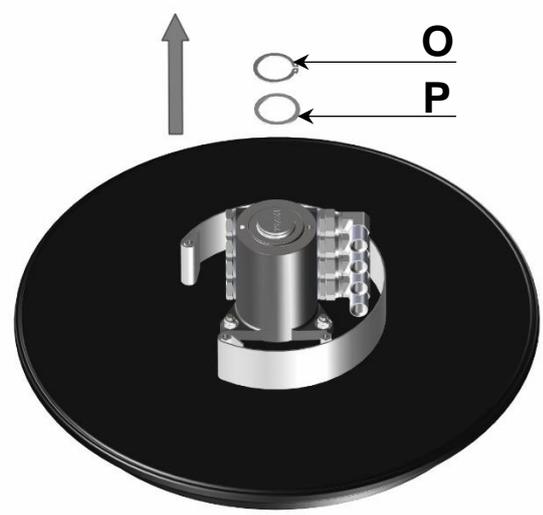
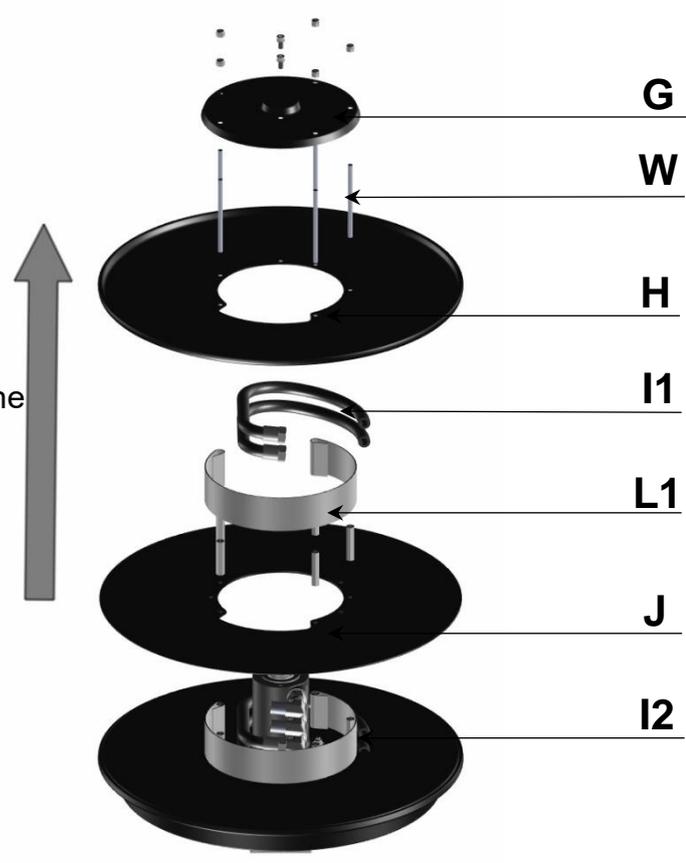
20- Reassemble the hose "I2", the flange "J",
the hose support "L1", the hoses "I1", the
outer flange "H", the pins "W"
and the cover "G".



Sec. 5.4 – SEAL REPLACEMENT

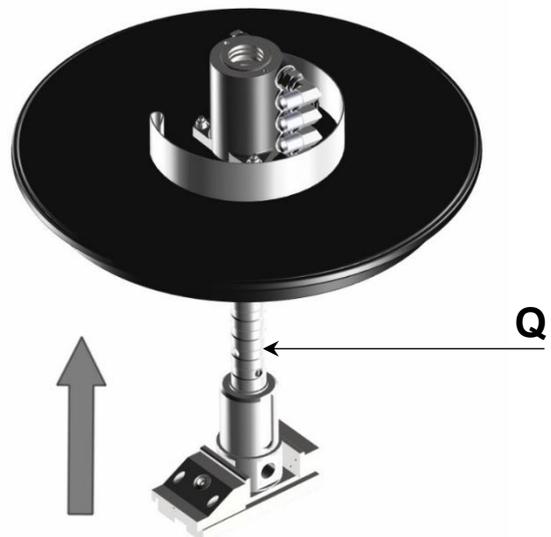


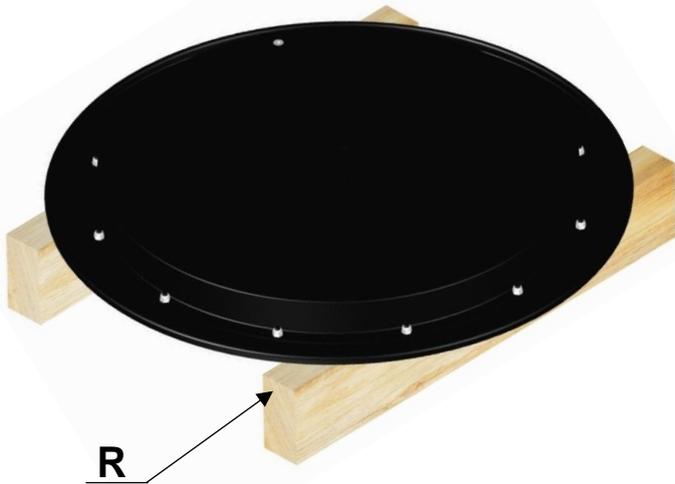
17- Disassemble the cover "G", the pins "W", the outer flange "H", the hoses "I1", the support "L1", the flange "J" and the hoses "I2".



8- Turn over the machine so disassembled and take off the circlip "O" and the ring "P".

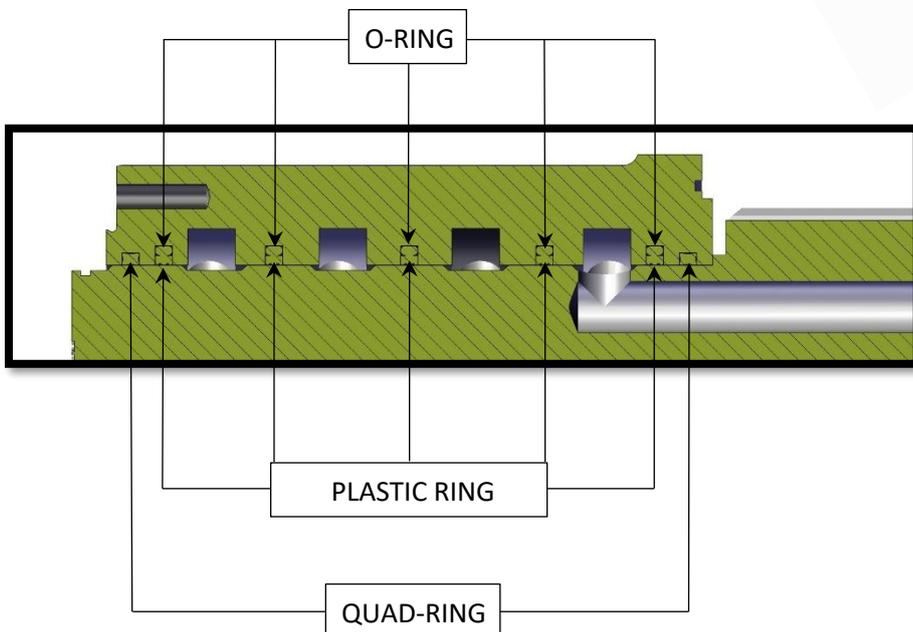
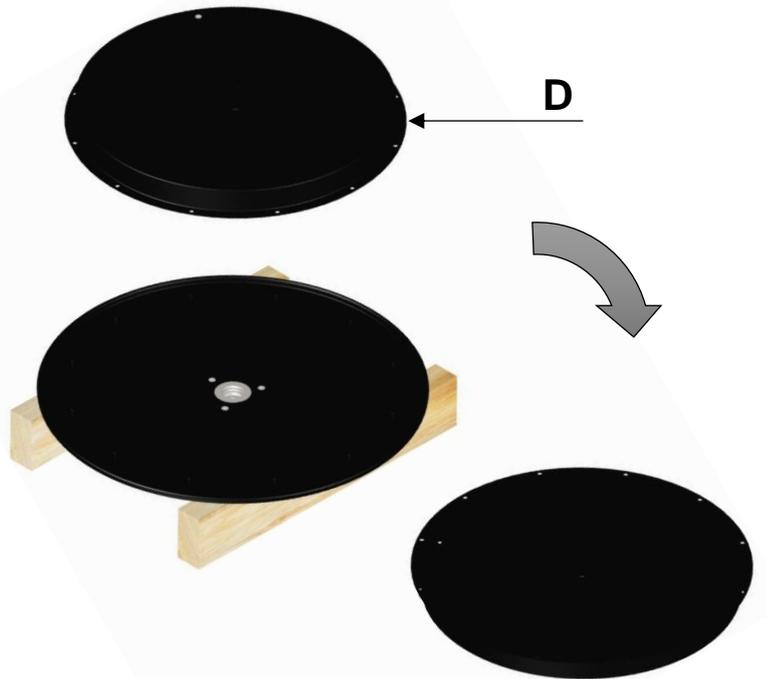
9- Block the shaft "Q" in a vise and unthread it as shown in the picture.





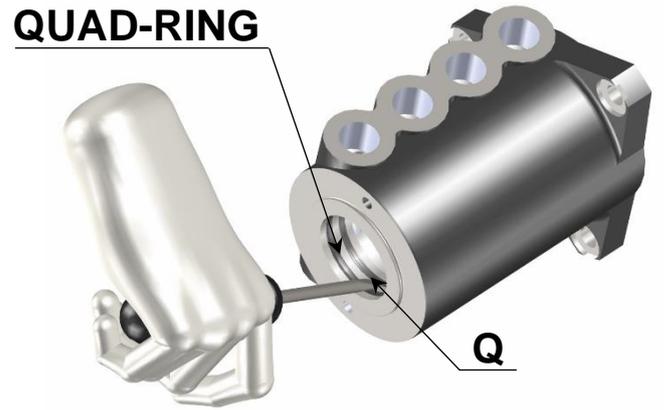
11- Place the reel on two wooden supports and unscrew the fixing nuts "R".

12- Lift the spring container "D" and turn it over as shown in the picture.

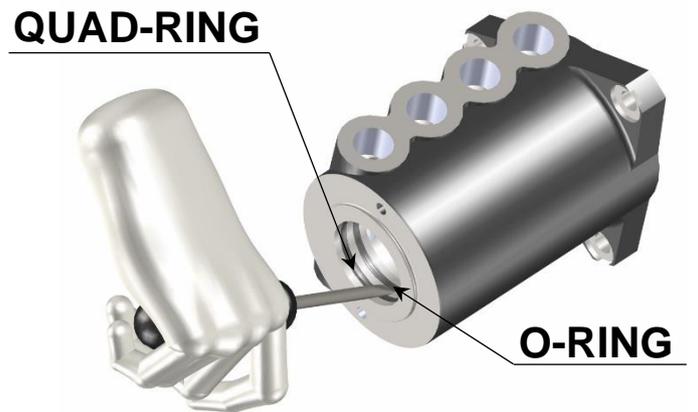


A4 Gasket Kit

10- Remove the plastic rings "Q" with a tool and do **not use them again**.



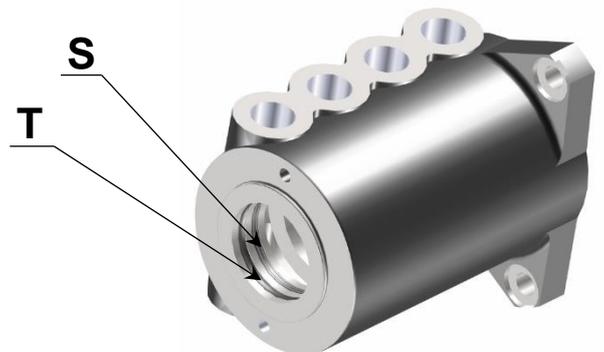
11- Remove the O-Rings and the Quad-Rings from their groove and do **not use them again**.



12- Clean perfectly the seals seats.



13- Place the new O-Rings "R" and the new Quad-Rings "S" in their grooves.



- 14-** Heat the plastic rings with air or oil (particularly in the cold season). Bend the rings as shown with the aid a smooth iron rod of about 10 mm diameter. Avoid the development of sharp bends.



- 15-** Put the deformed rings in the groove on the O-Rings and then straighten the fold by pushing it in the seat.



- 16-** Calibrate the seals with a plastic mandrel clean and lubricated.

- 17-** Reassemble the hose reel following the instructions in reverse order and paying particularly attention to the spring position (see point 15 Sec. 5.1, page 9).



Sec. 6.1 – SPRING DEMOLITION



WARNING!

The spring contained in each reel remains always under tension; it is indispensable, before considering it a normal refuse, to weld in 4 points all its turns in order to avoid any possible unwinding.

-a- INTEGRAL BAND “K”



Weldings

1

- Weld all the turns as shown in picture 1.
- Dispose the material according to the local rules in force.



-b- BROKEN BAND “K”



Weldings

2

WARNING!

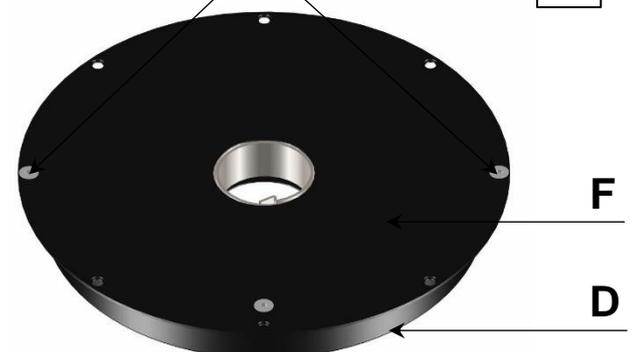
Do not take the spring out of its container. The spring turns must be welded inside the spring container.

- Weld all the turns as shown in picture 2.
- Close the spring container “D” with the cover “F” fastening it with two screws as shown in picture 3.
- Dispose the material according to the local rules in force.



Screws

3





DICHIARAZIONE DI INCORPORAZIONE

(Allegato II B DIR. 2006/42/CE)

IL FABBRICANTE

DEMAC s.r.l.

Azienda

Via R. Murri, 14

20013

MI

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ITALIA

Città

Nazione

DOCUMENTAZIONE TECNICA PERTINENTE AUTORIZZATA AD ESSERE COSTITUITA DA

Responsabile ufficio tecnico / ricerca e sviluppo di DEMAC s.r.l.

Nome e cognome

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Indirizzo

CAP

Provincia

MAGENTA

ITALIA

Città

Nazione

DICHIARA CHE LA QUASI MACCHINA

AVVOLGITUBO GEMELLATO A 4 VIE IDRAULICHE

A4D 520.10.T2/FT/IS

Quasi Macchina

Modello

437940-41

2023

Matricola

Anno costruzione

AVVOLGITUBO

Denominazione commerciale

AVVOLGITUBI

Uso previsto

- è conforme ai requisiti essenziali della direttiva applicabili al prodotto;
- è conforme alle norme:
 - UNI EN ISO 14121-1:2007
 - UNI EN ISO/TR 14121-2:2013
 - UNI EN ISO 12100-1: 2009
 - UNI EN ISO 12100-2:2009
 - UNI EN 349:2008
 - CEI EN 61310-1:2008
- è destinato ad essere incorporato in una macchina o ad essere assemblato con altre macchine onde costituire una macchina cui si applichi la direttiva macchine 2006/42/CE

La documentazione tecnica pertinente è stata compilata in conformità dell'allegato VII B, e si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti la quasi-macchina

VIETA

la messa in servizio finché la macchina finale di cui deve essere incorporata non è stata dichiarata conforme, se del caso, alle disposizioni della presente direttiva.

Luogo e data del documento

Magenta, 16/06/2023

Il fabbricante

Firma

Domenico Varano
(Legale rappresentante)