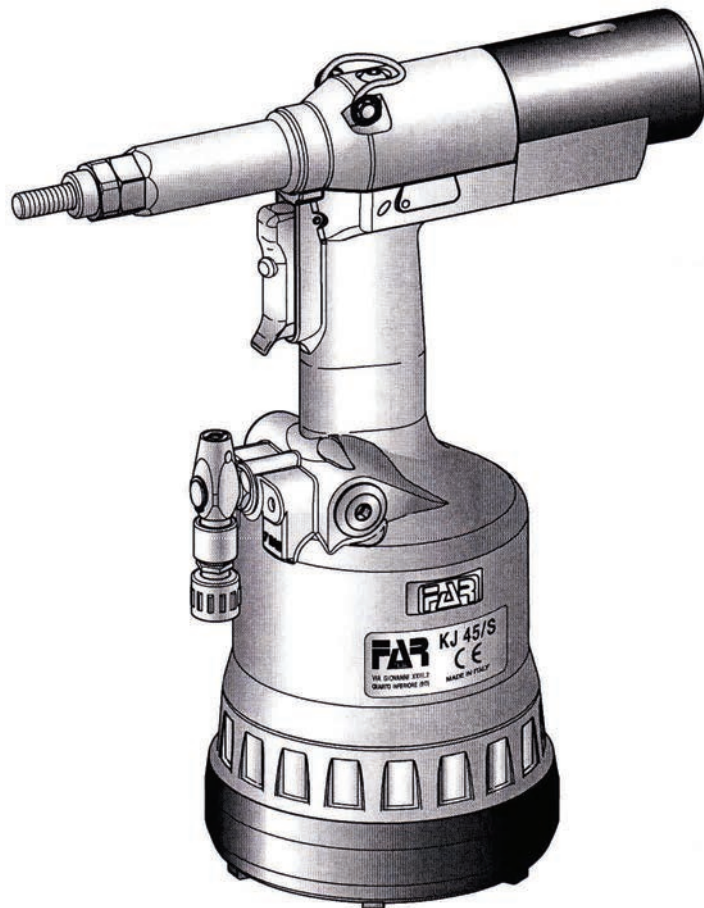
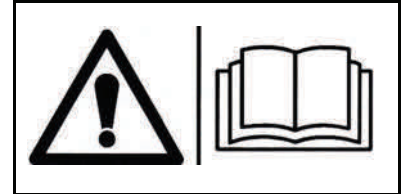




KJ 45/S

TRANSLATION OF ORIGINAL INSTRUCTIONS

HYDROPNEUMATIC TOOL
FOR INSERTS M4 - M12
INSTRUCTIONS FOR USE



www.air-allied.com.au





The undersigned Far S.r.l., having its office in Quarto Inferiore (BO), Via Giovanni XXIII No. 2, herewith

DECLARES

on its sole responsibility that the riveting machine

Type: KJ45/S - Hydropneumatic tool Application: for threaded inserts M4 - M12

which is the object of this declaration complies with the basic safety requirements established in the law decree Leg. D. 17/2010 of Machinery Directive 2006/42/CE acknowledge and subsequent amendments and integrations.

The person who is authorized to create the technical brochure is

Giacomo Generali, c/o Far S.r.l., head office in Quarto Inferiore (BO), via Giovanni XXIII n. 2.

Quarto Inferiore, 23-03-2010

Far S.r.l. – Giacomo Generali
 (Chairman of the Board of Directors)

INSTRUCTIONS FOR USE

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- If any drop of oil touches your skin, you must wash with water and alkaline soap.
- The tool can be carried and we suggest putting it into its box after using.
- The tool needs a thorough six-monthly overhaul.
- Repairing and cleaning operations must be done when the tool is not fed.
- If it is possible, we suggest a safety balancer.
- If the A-weighted emission sound pressure level is more than 70 dB (A), you must use some hearing protections (anti-noise headset, etc.).
- The workbench and the work surface must be always clean and tidy. The untidy can cause damages to people.
- Do not allow unauthorized persons to use the working tools.
- Make you sure that the compressed air feeding hoses have the correct size to be used.
- Do not carry the connected tool by pulling the hose. The hole must be far from any heating sources or from cutting parts.
- Keep the tools in good conditions; do not remove either safety parts or silencers.

GUARANTEE

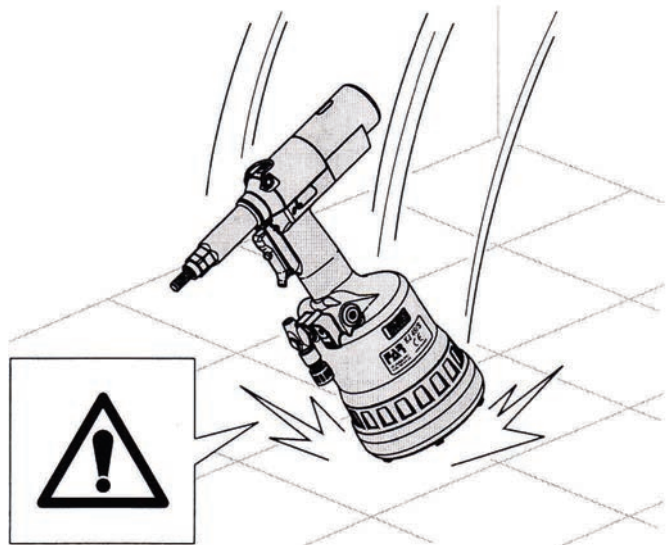
FAR riveting tools are covered by a **12-month** warranty. The tool warranty period starts on the date of delivery to the buyer, as specified in the relevant document. The warranty covers the user/buyer provided that the tool is purchased through an authorized dealer and only if it is used for the purposes for which it was conceived. The warranty shall not be valid if the tool is not used or maintained as specified in the instruction and maintenance handbook. In the event of defects or failures, **FAR S.r.l.** shall undertake solely to repair and/or replace the components it judges to be faulty.

WARNING!
 Before using the tool, assemble the protection bottom supplied with the tool, as indicated in the picture below. **FAR** has no responsibility for any damages of the tool, person or things caused by lack of the protection.

SAFETY MEASURES & REQUIREMENTS

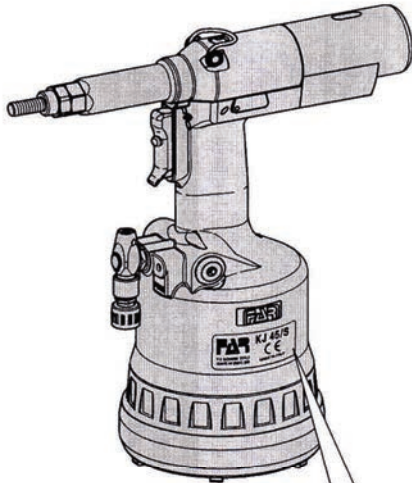
 **CAUTION!!!**
 All the operations must be done in conformity with the safety requirements, in order to avoid any consequence for your and other people's security and to allow the best tool work way.

- Read the instructions carefully before using the tool.
- For all maintenance and/or repairs please contact **FAR s.r.l.** authorized service centers and use only **original spare parts**. **FAR s.r.l.** may not be held liable for damages from defective parts caused by failure to observe what above mentioned (**EEC directive 85/374**).
- The tool must be used only by expert workers.
- A protective visor and gloves must be put on when using the tool.
- Use equipment recommended in the maintenance chapter to do any maintenance and/or regulation of the tool.
- For topping up the oil, we suggest using only fluids in accordance with the features specified in this working book.



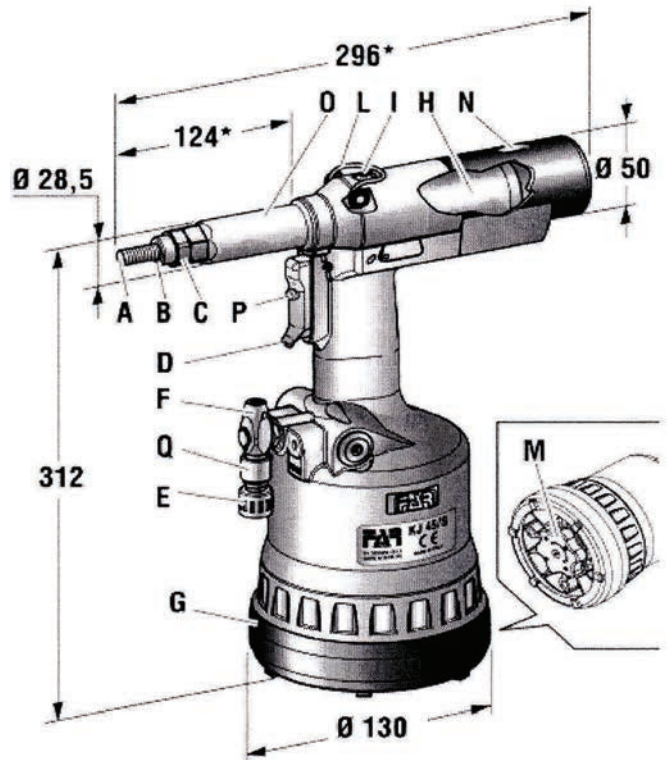
TOOL IDENTIFICATION

The riveting tool **KJ 45/S** is identified from a marking that shows company name and address of manufacturer, designation of the tool, CE mark and year of manufacturing. If any service is requested, please make reference to the data shown on the marking.



GENERAL NOTES AND USE

The tool can be employed only for threaded inserts **M4 - M12**. The **KJ45/S/S Hydropneumatic system** assures more power than the pneumatic system used for other models. That means a reduction in the problems due to wear and tear of the components, therefore, there will be an increase in reliability. The technical solutions adopted reduce the dimensions and the weight of the tool, which is very handy for these reasons. The possibilities of the leakage from the oil-dynamic system, are eliminated by some sealed gaskets, which solve this problem.



MAIN COMPONENTS

- A) Threaded tie rod
- B) Head
- C) Ring-nut clamping head
- D) Control push-button
- E) Compressed air connection
- F) Pressure control valve
- G) Protection bottom
- H) Pneumatic motor
- I) Oil tank plug
- L) Balancer connection
- M) Stroke-adjusting knob
- N) Stroke indicator
- O) Tube carrying head
- P) Unscrewing button
- Q) Air-entry valve

TECHNICAL DATA

- Working pressure **6 - 7 BAR**
- Min. int. diam. Of the compressed air feeding hose **Min. diam = 8 mm**
- Air consumption per cycle **9 NI ****
- Maximum force **6.5 BAR – 27440 N**
- Weight **2.86 Kg**
- Working temperature **-5°/+50°**
- Root mean square in total acceleration frequency (Ac) to which the arms are subjected **2.5 m/s²**
- ** ni = litres at 20°, pressure of 1 atmosphere
- A-weighted emission sound pressure level **74 dBA**
- Peak C-weighted instantaneous sound pressure **<130 dBC**
- A-weighted emission sound pressure **86 dBA**

AIR FEED

The compressed air system must be provided with air cleaners and condensation drains and must guarantee that the air supplied to the feeder has a constant pressure of **min. 6 bars**. The regulator must be set at a pressure of **6.5 bars**.

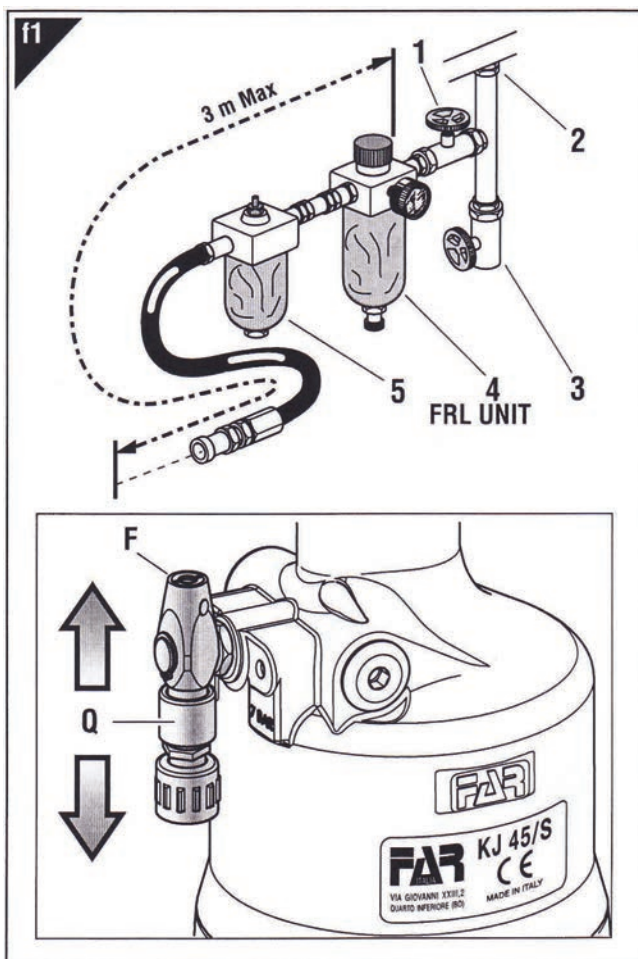
Connect the machine to the main compressed air supply as shown in the diagram (f1):

- 1) Cut off cock (used during maintenance of the filter regulator or of the lubricating unit).
- 2) Main supply inlet.
- 3) Main supply bleed.
- 4) Pressure regulator and filter (bleed daily).
- 5) Lubricating unit.



ATTENTION! The riveting tool is equipped with a relief valve (F) starting when the compressed-air pressure significantly exceeds 7 bar.

ATTENTION! If the relief valve (F) starts and the air consequently escapes, we recommend to check if the tool feed pressure corresponds to the pressure value indicated under the technical data.



- Move up the slider of the air-entry valve (Q) to feed the tool.
- Before regulating the stroke, discharge the tool by the air and stop the feeding, moving down the slider of the air-entry valve (Q).

TOPPING UP THE OIL-DYNAMIC CIRCUIT (fig. f2-f3)

Check that the threaded tie rod (A) and head (B) couple assembled on the riveting tool is suitable to the size of the insert to clamp; otherwise change the size. The tie-rod (A) and head (B) unit assembled on this riveting tool, corresponds to a **M10** thread.

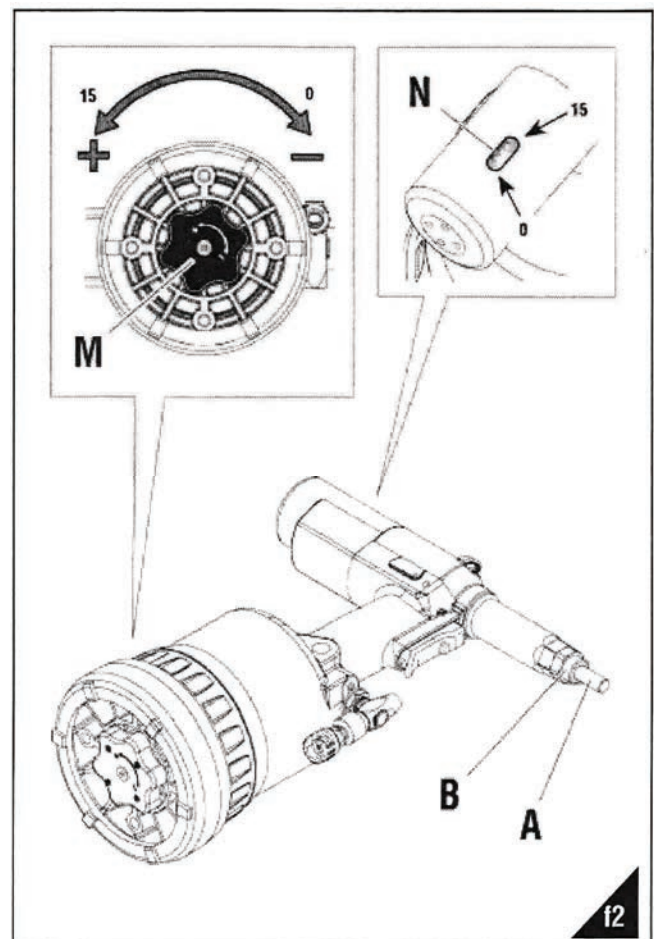
Before using the riveting tool and after each change of size, the stroke should be adjusted according to the dimensions, type of the insert and thickness of the material to clamp. Before carrying out this operation rotate the knob (M) according to the direction of the arrow, (+) for increasing the stroke (-) for decreasing it. Increasing the stroke—rotation of the knob (M) - in the direction indicated with the symbol (+), the distance “h” decreases increasing the clamping action. To verify that the stroke is correctly adjusted check the indicator (N) comparing it with the values of the table (fig. f3).

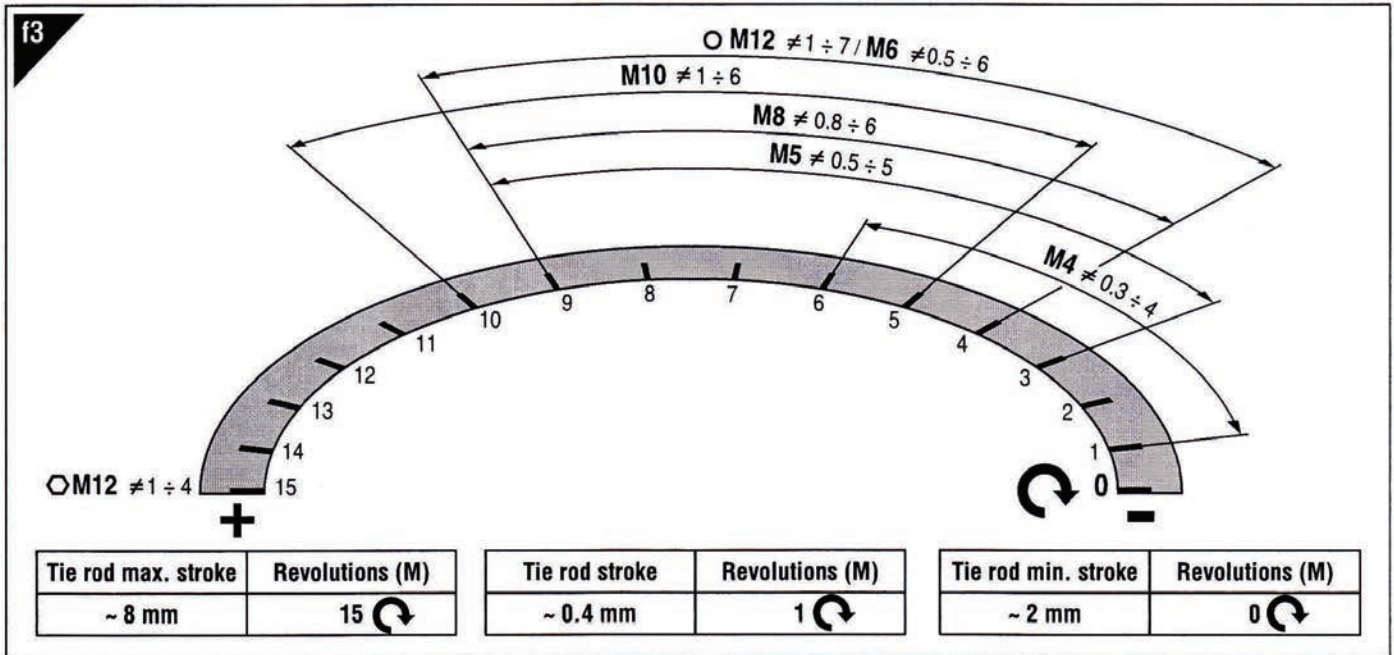
NOTE: it is very important to follow the about mentioned instructions and use gloves. If you need to empty fully the hydraulic circuit, you must put the oil in a suitable container and contact a Company that is authorized to discharge any waste.



ATTENTION! The incorrect adjustment of the riveting tool can cause a bad clamping of the inserts and a possible break of the tie rod!

ATTENTION! The above-mentioned operations must be done when the tools is not fed. For visualising the changed stroke (N) the tool must be fed.





PLACING OF THE INSERT (fig. f4-f5-f6)

Check that the threaded tie rod (A) and head (B) couple assembled on the riveting tool is suitable to the size of the insert to be used. Adjust the stroke as indicated (fig. f2-f3). Introduce the insert on the tie rod (A) and push slightly on it as indicated in f4, so as to make it clamp automatically on the threaded tie rod. Make sure that the insert head touches the head (B) checking that the tie rod (A) comes out of 2mm from the insert.

In case of further adjustments of the tie rod (A) follow the instructions of page 18.

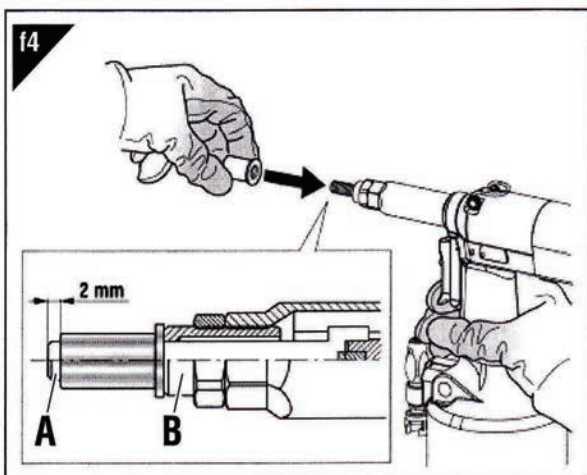
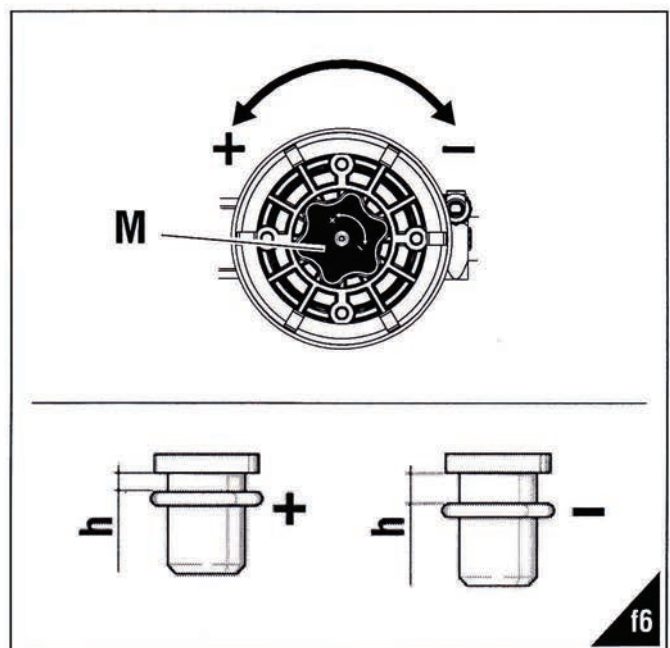
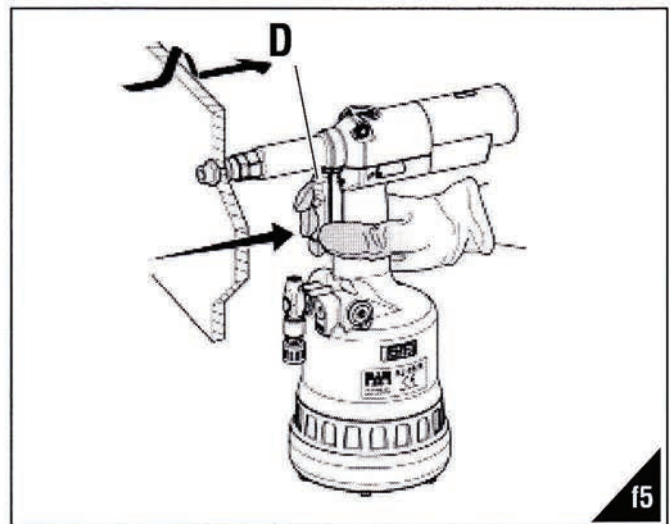
It is now possible to place the insert pushing the button (D) (fig. f5) until the insert is completely pulled, and push the button (P) to release the tie rod (fig. f7).

For a correct placing and right working of the machine the inserts to be used should be properly cleaned.

NOTE: According to the desired clamping, carry out other adjustments of the riveting tool stroke, rotating the knob (M) (fig. f2-f3-f6), if necessary.

Insufficient deformation = the insert could rotate inside the housing comprising its use and resistance.

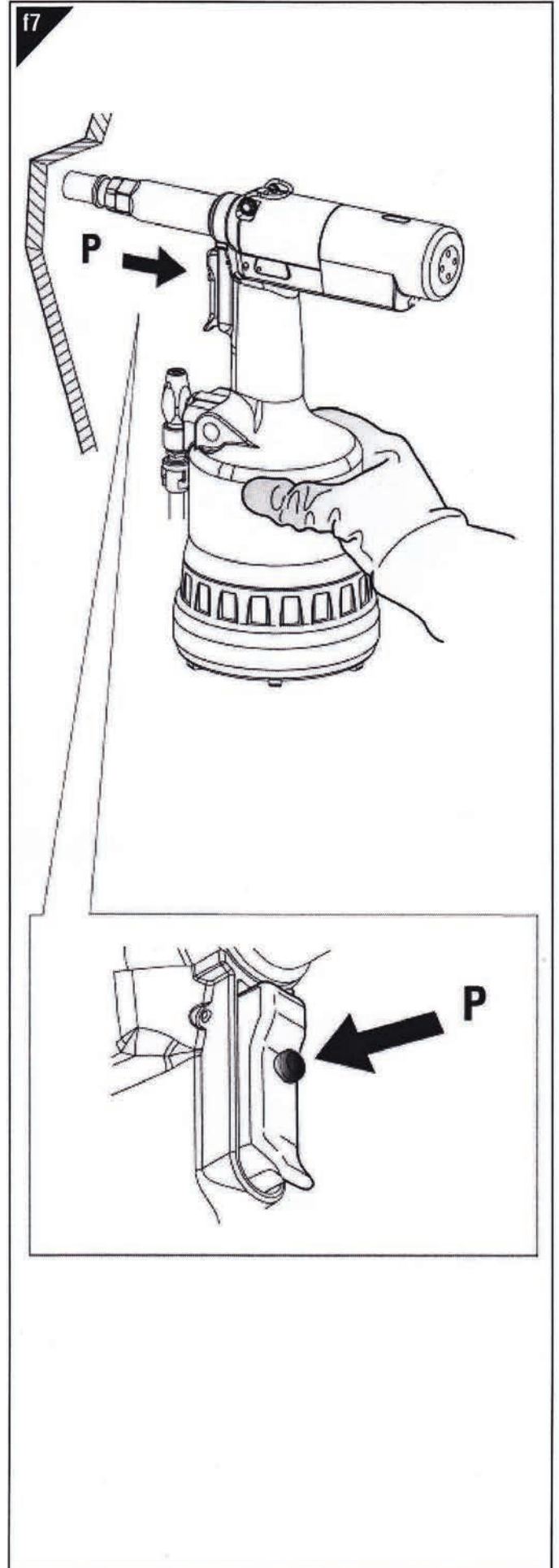
Excessive deformation = possible damages of the insert and tie rod (A) with eventual breaks of both components.



WORKING PROBLEMS (fig. f7)

Any time it is necessary to unscrew forcedly the threaded tie rod from the insert, push the button (P).

ATTENTION! Carry out this operating keeping the riveting tool firmly in order to avoid sharp movements which could damage people or things.



CHANGE OF SIZE (fig. f8-f9-f10-f11)

The riveting tool is supplied with **6 pairs** of threaded tie-rods (**A**), heads (**B**), screws (**R**) and spacers (**S**) only for tie-rods from **M4 to M6 (f8)**.


To change the size make as follows:

- Unscrew the cone-carrying head (**O**) by a **22 mm** standard spanner (**f9**).
- Extract the threaded tie-rod, pushing and lifting it at the same time (**f10**).
- After preparing the threaded tie-rod (**A**) of the size you need, arrange and keep the components as shown in **f11** and assemble. Be sure that the components are correctly placed, rotating the tie-rod by hand (**f11**).

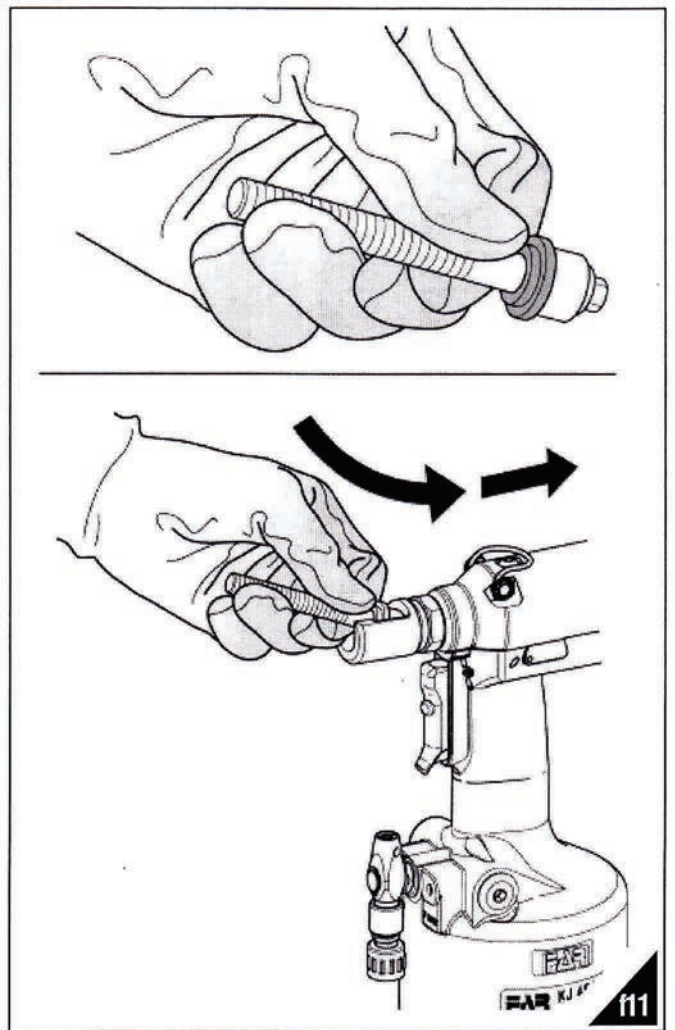
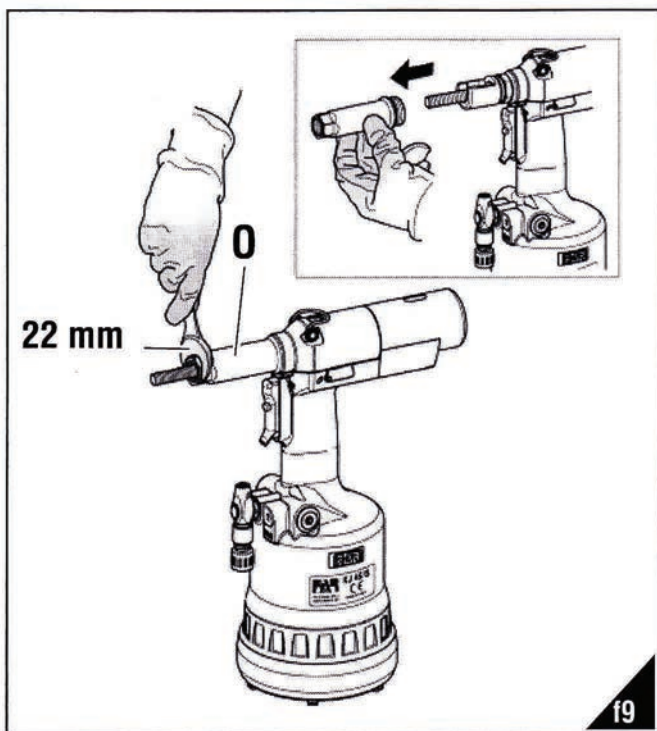
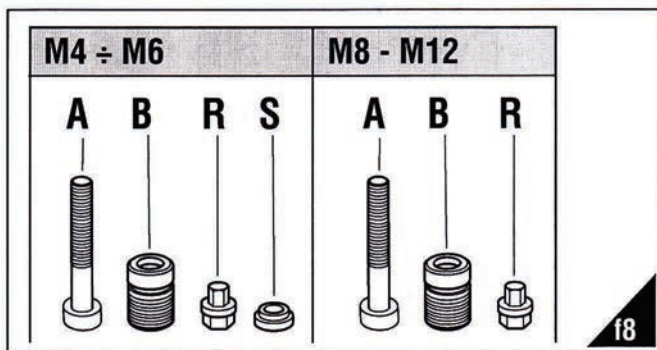
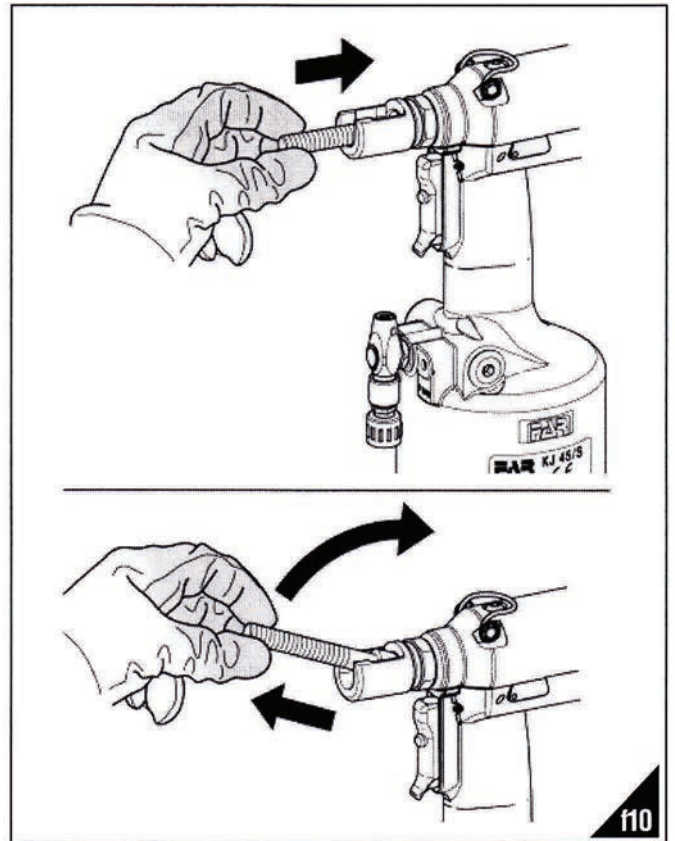
ATTENTION!

- The side of the component (**R**) to be entered in the head of the tie-rod is provided of a magnet to avoid accidental fall during the operations of the change of size.
- Screw the cone carry heads (**O**) by a **22 mm** standard spanner and clamp correctly.

WARNING!



Disconnect the machine before carrying out the above mentioned operations.



TIE-ROD/HEAD UNIT ADJUSTMENT (fig. f14-f15-f16)

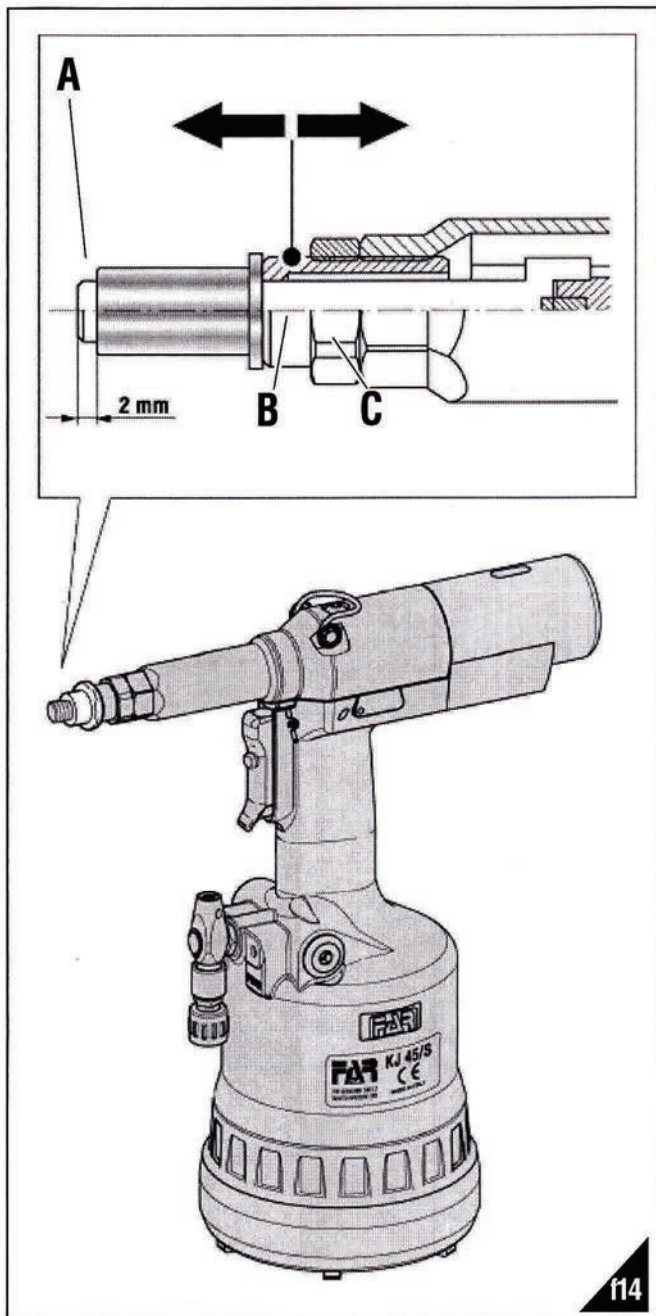
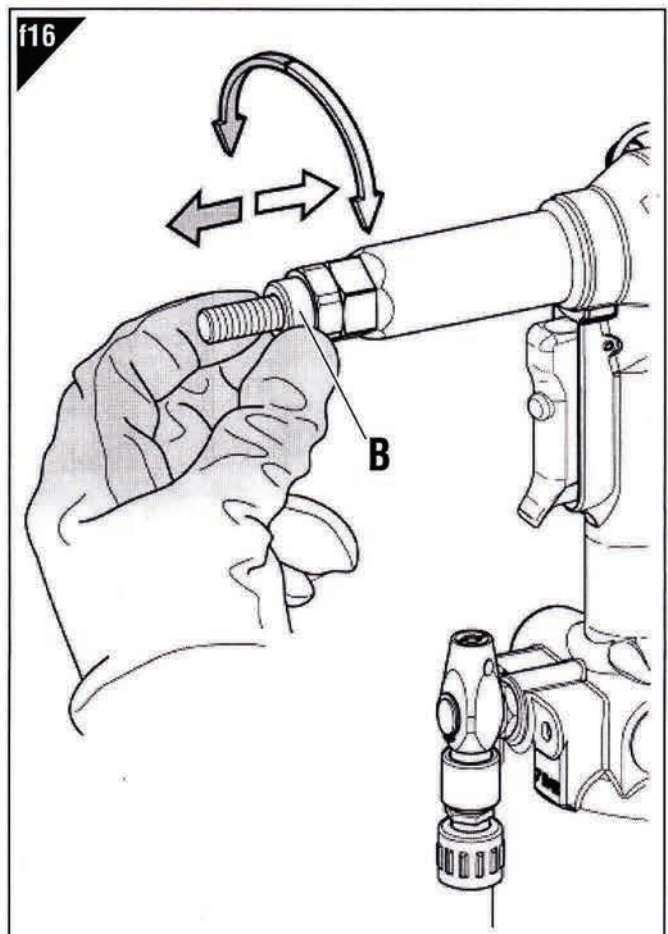
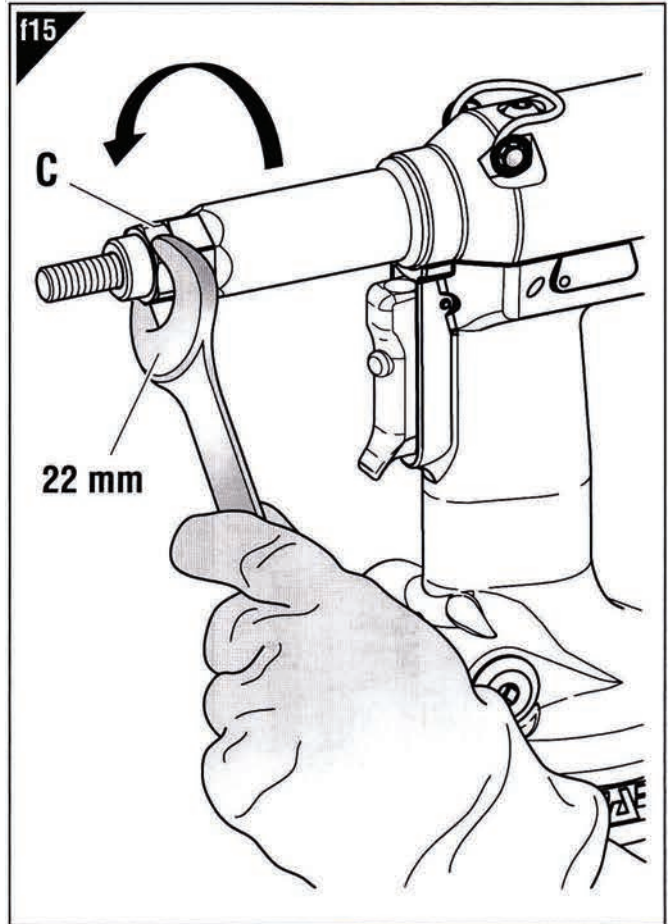
Changing the length of the insert to clamp, the position of the head (B) compared to the threaded tie rod (A) should be adjusted.

Disconnect the compressed air feeding from the tool. Screw an insert of the desired length on the threaded tie rod manually until the insert head touches the riveting tool head (B). The head is adjusted correctly if the threaded tie rod comes out of the insert screwed on it of about 2 mm. Otherwise unblock the ring nut (C) with a 22 mm standard spanner then screw or unscrew the head (B) up to the right position, and block the ring nut (C).



WARNING!

Disconnect the machine before carrying out the above mentioned operations.



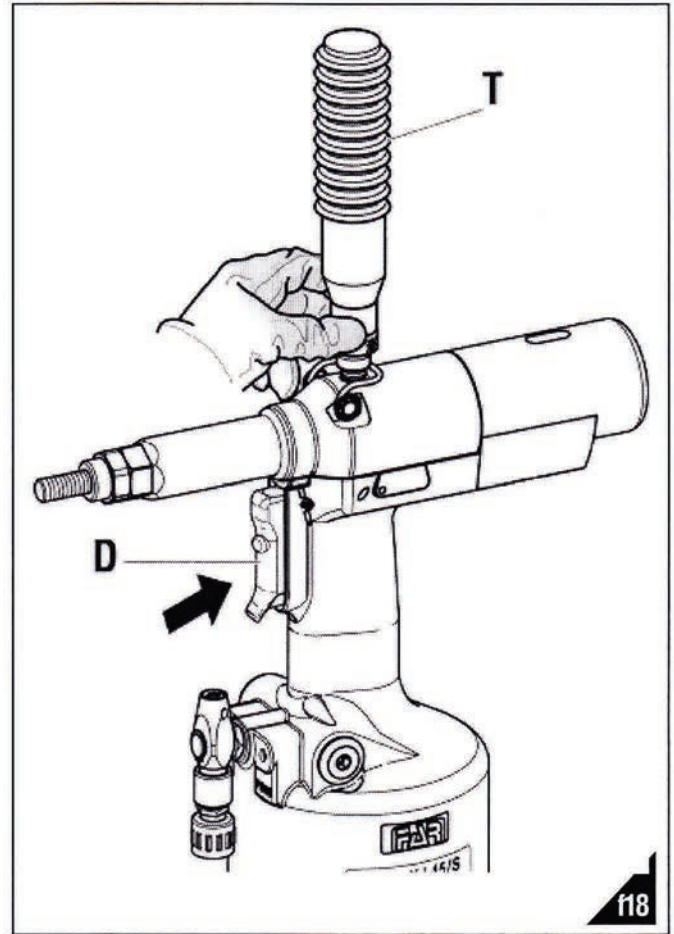
TOPPING UP THE OIL-DYNAMIC CIRCUIT (fig. f8)

You need to top up the oil-dynamic circuit after a long period of work, when you note a power loss.

Put the riveting tool (**DWELL AND NOT FED**) in a horizontal position

and remove the plug (**F**), by means of a 5 mm Allen wrench (equipped with the riveting tool); during this operation, check the oil level in order to avoid any overflowing. Then, slowly pour the oil **PANOLIN HLP ISO 32** into the bellows container (**O**) which shall be screwed to its seat on the plug (**F**). While keeping the riveting tool in a horizontal position and starting air feeding, push the tensile strength button and make the riveting tool carry out some cycles until air bubbles inside the container (**O**) stop coming out. This condition indicates that the topping up of the oil has fully been achieved. At this point **stop the air feeding** and, while keeping the riveting tool in a horizontal position, unscrew and close up the container (**O**) and the plug (**F**).

WARNING: it is very important to follow the about mentioned instructions and use gloves. If you need to empty fully the hydraulic circuit, you must put the oil in a suitable container and contact a Company that is authorized to discharge any waste.

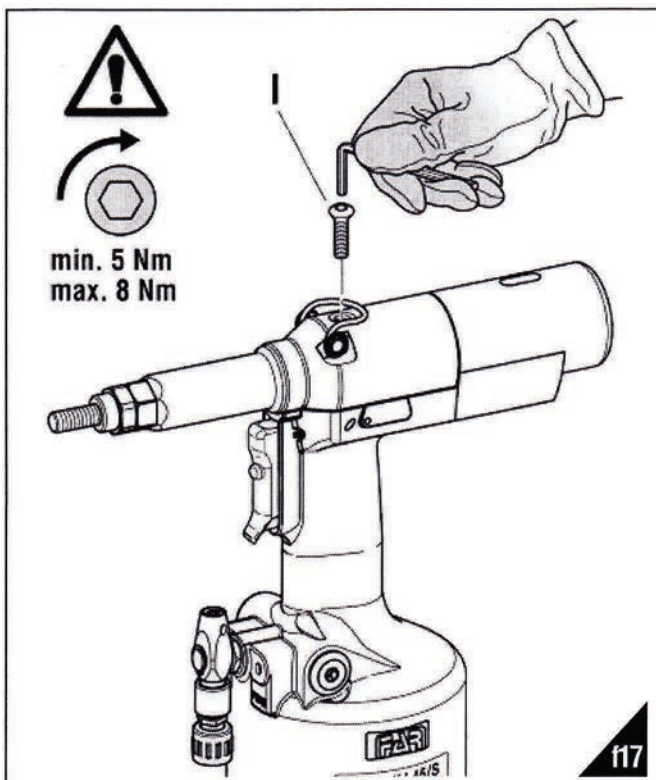


ATTENTION!

Before disconnecting the compressed air hose, make sure that it is not under pressure!

ATTENTION: Make sure that the oil filter cap (F) is tightened at a torque corresponding to **Min. 5 Nm ÷ Max. 8 Nm**.

We recommend to use oil **PANOLIN HLP ISO 32**



MAINTENANCE

Daily maintenance

- Check that the threaded tie rod is not damaged.
- Check the supply system of the compressed air.
- Check that the stroke of the tool is suitable for the selected insert to clamp.
- Check that there are neither air nor oil leakages. In this case replace possible damaged connectors or seals.
- Check that the supply pressure of the compressed air does not exceed **7 bar**.

Weekly maintenance

- Check the oil level controlling the stroke of the riveting tool. If necessary fill up for preventing failures of the riveting tool as indicated (fig. f18).

Overhaul of the riveting tool

It is advisable to carry out a complete overhaul of the riveting tool after **600,000 cycles** or **every year**.

In this case apply only to centres authorised by **FAR S.r.l.**

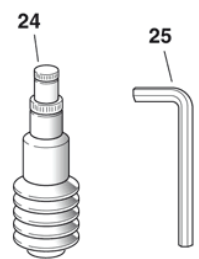
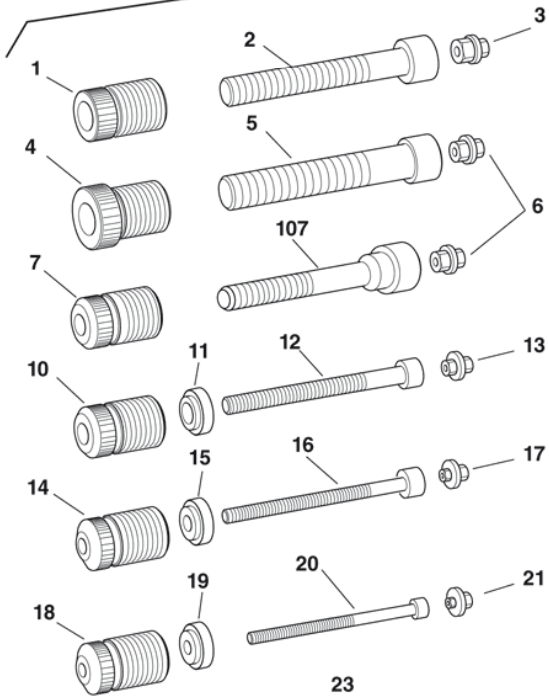
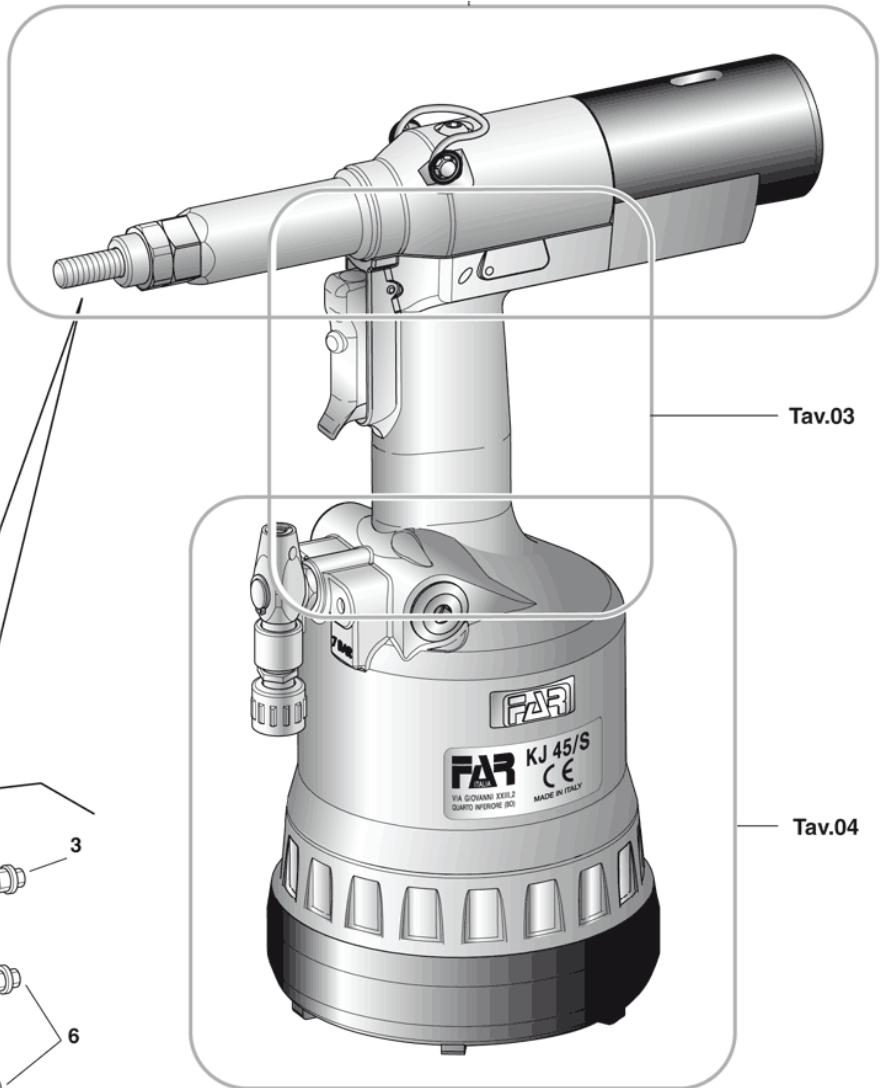
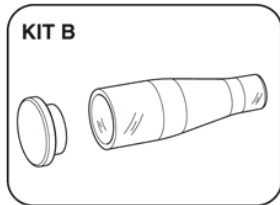
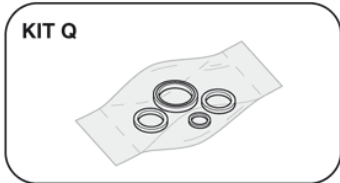
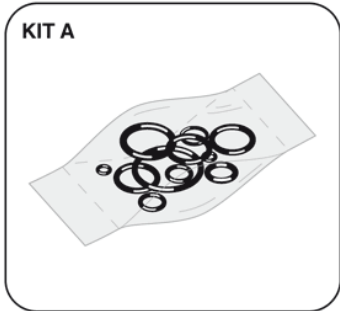
DISPOSAL OF THE RIVETING TOOL



Follow the prescriptions of the national laws for disposing of the riveting tool.

After disconnecting the tool from the pneumatic system, disassemble and split all the components according to the material: steel, aluminium, plastic material, etc.

Then proceed to scrap the materials in accordance with current laws.



WARNING - M8

- I** **NOTA** : è ancora possibile montare :
- GB** **NOTE** : It is still possible to assemble :
- F** **NOTE** : Vous pouvez toujours monter :
- D** **HINWEIS** : Es ist noch möglich zu montieren :
- E** **NOTA** : Se puede todavia montar :
- PL** **UWAGA** : Można jeszcze zamontować :
- RUS** **ПРИМЕЧАНИЕ** : Также возможно смонтировать :

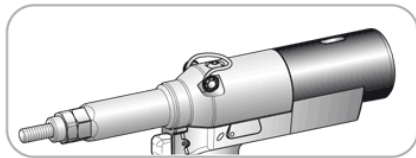
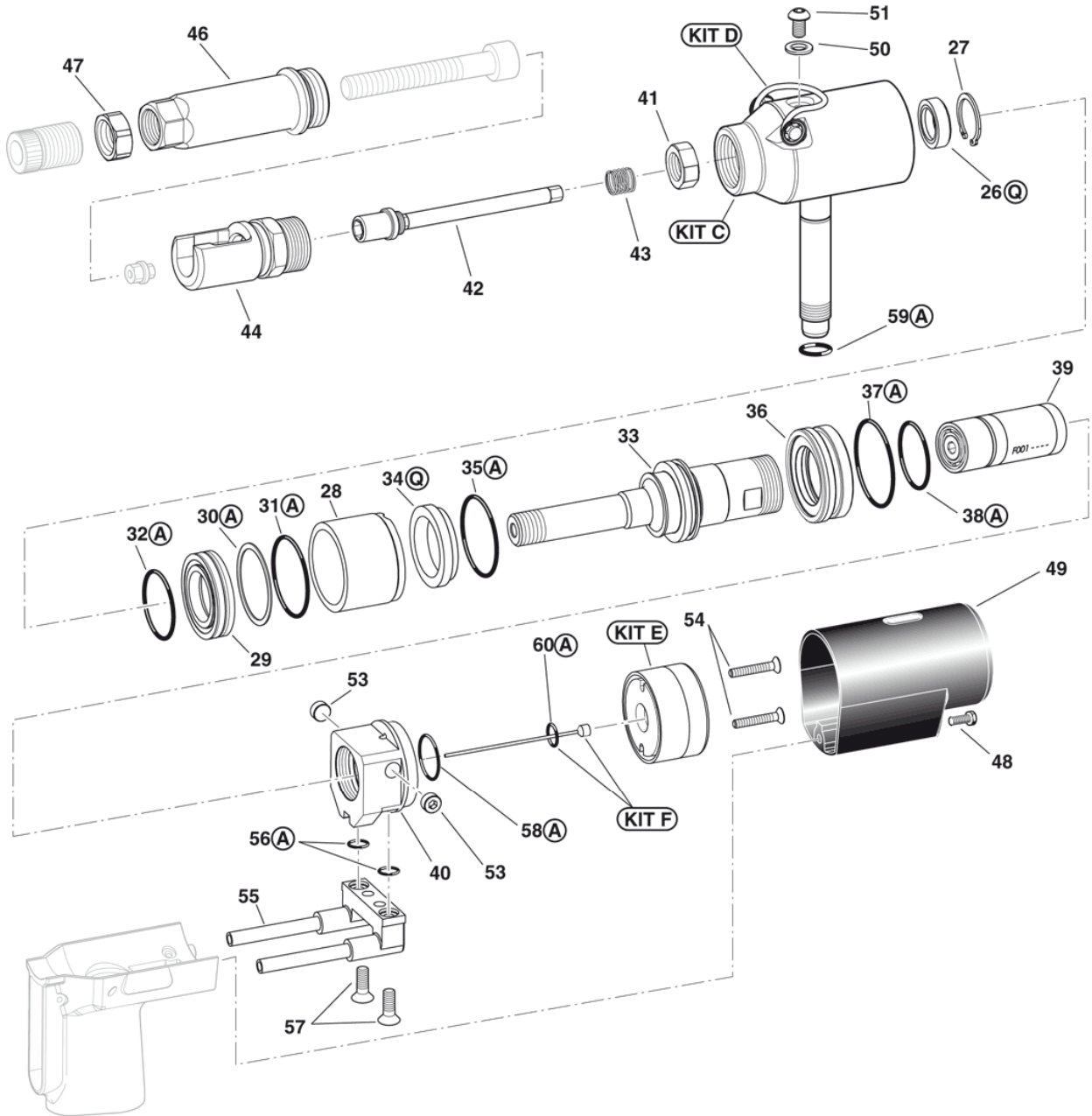
Pos.	Code	Description	Qty
001	713291	Head M 10	1
002	71C00281	Screw TCCE M10 x 70 UNI 5931 - 12,9	1
003	72A00105	Hexagonal unit for tie-rod M 10	1
004	713292	Head M 12	1
005	713177	Tie rod M 12	1
006	72A00104	Hexagonal unit for tie-rod M 8 ÷ M 12	2
007	713290	Head M 8	1
008	71345529	Spacer for screw M 8	1
009	71C00514	Screw TCCE M8 x 70 UNI 5931 - 12,9	1
010	713289	Head M 6	1
011	71345276	Spacer for screw M 6	1
012	71C00279	Screw TCCE M6 x 70 UNI 5931 - 12,9	1
013	72A00103	Hexagonal unit for tie-rod M 6	1
014	713288	Head M 5	1
015	71345275	Spacer for screw M 5	1
016	71C00278	Screw TCCE M5 x 70 UNI 5931 - 12,9	1
017	72A00102	Hexagonal unit for tie-rod M 5	1
018	713287	Head M 4	1
019	71345274	Spacer for screw M 4	1
020	71C00277	Screw TCCE M4 x 65 UNI 5931 - 12,9	1
021	72A00101	Hexagonal unit for tie-rod M 4	1
022	709033	Plastic case	1
023	75036018	Instructions for use	1
024	72A00053	Oil container	1
025	712225	Wrench 4 mm	1
107	71345831	Tie rod M 8	1

KITA	74000042	Pneumatic kit	
	Code	Description	Qty
	71C00295	Ring Parbak 8-028	1
	71C00296	Gasket OR 5-670	1
	710925	Gasket OR 027	1
	711062	Gasket OR 2-126	1
	710244	Gasket OR 2-130	1
	713275	Gasket OR 2-122	1
	713390	Gasket OR 2-007	2
	710258	Gasket OR 5-612	1
	710921	Gasket OR 2-115	1
	71C00529	Gasket XR 008 PP180 B	1
	710528	Gasket OR 2-120	1
	710385	Gasket OR 2-006	2
	713394	Gasket OR 2-106	1
	710376	Gasket OR 2-009	2
	711338	Gasket OR 2-003	2
	710918	Gasket OR 2-005	2
	716060	Gasket OR 2-010	5
	713400	Gasket OR 5-616	7
	71C00355	Gasket OR 1,78 x 8,73	1
	71C00356	Gasket OR 1,78 x 7,66	1
	71C00522	Gasket OR 5-615	1
	710914	Gasket OR 2-116	1
	71C00297	Gasket OR 6-700	2
	713398	Gasket OR 2-340	1
	710350	Gasket OR 2-109	1
	713792	Cage	5
	713271	Gasket OR 2-014	2

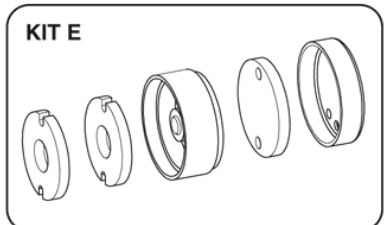
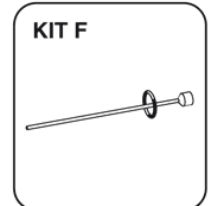
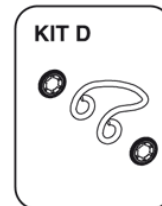
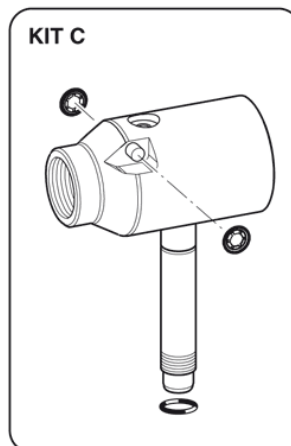
KITB	74000027	Tie rod container kit	
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KITQ	74000037	Oil-dynamic kit	
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	Code	Description	Qty
	711722	Gasket B-094063-B / NEI	1
	713389	Gasket 157118-B / NEO	1
	711827	Gasket TTS-12-19-5,7 / L	1
	710390	Gasket B-075047	1



Tav. 02



Pos.	Code	Description	Qty
026Q	711722	Gasket B-094063-B / NEI	1
027	713402	Seeger ring JV 25	1
028	71345258	Jacket	1
029	71345261	Flange	1
030A	71C00295	Ring Parbak 8-028	1
031A	71C00296	Gasket OR 5-670	1
032A	710925	Gasket OR 027	1
033	71345264	Oil-dynamic piston	1
034Q	713389	Gasket 157118-B / NEO	1
035A	711062	Gasket OR 2-126	1
036	71345260	Ring nut	1
037A	710244	Gasket OR 2-130	1
038A	713275	Gasket OR 2-122	1
039	72A00125	Pneumatic Motor F001	1
040	72A00188	Valve unit for motor control	1
040	72A00022	Valve unit for motor control	1
041	71345263	Nut M 16 x 1	1
042	72A00107	Driving unit	1
043	71345516	Spring for tie-rod	1
044	71345515	Sleeve carrying tie rod	1
046	71345517	Sleeve	1
047	713170	Ring nut	6
048	716198	Screw TCCE M4 x 12 UNI 5931	1
049	72A00009	Fender motor	1
050	710555	Washer 400-004-4490	1
051	713405	Screw TBCE M6 x 10 ISO 7380	1
053	713308	Cap	2
054	713406	Screw TSCE M4 x 25 UNI 5933	2
055	72A00007	Air connector	1
056A	713390	Gasket OR 2-007	2
057	716150	Screw TSCE M4 x 12 UNI 5933	2
058A	710258	Gasket OR 5-612	1
059A	710921	Gasket OR 2-115	1
060A	71C00529	Gasket XR 008 PP180 B	1

KITC 74000041 Oil-dynamic cylinder kit

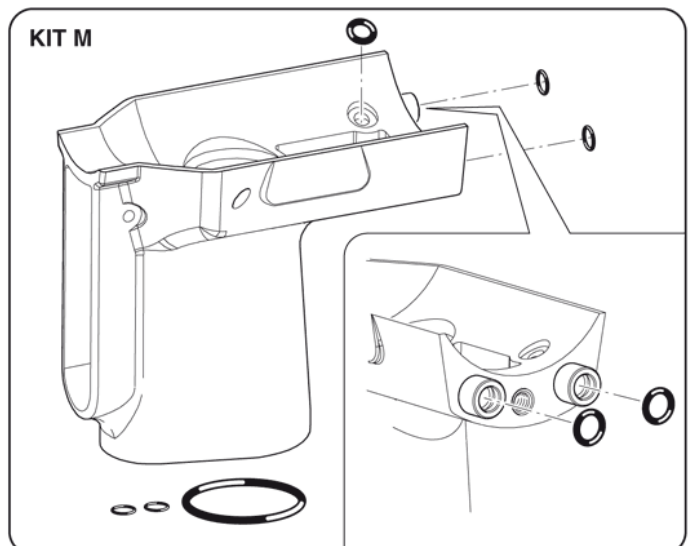
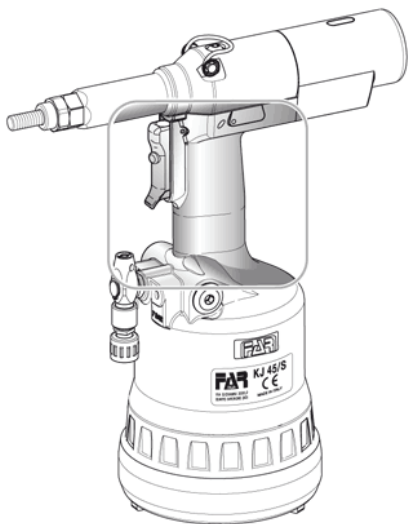
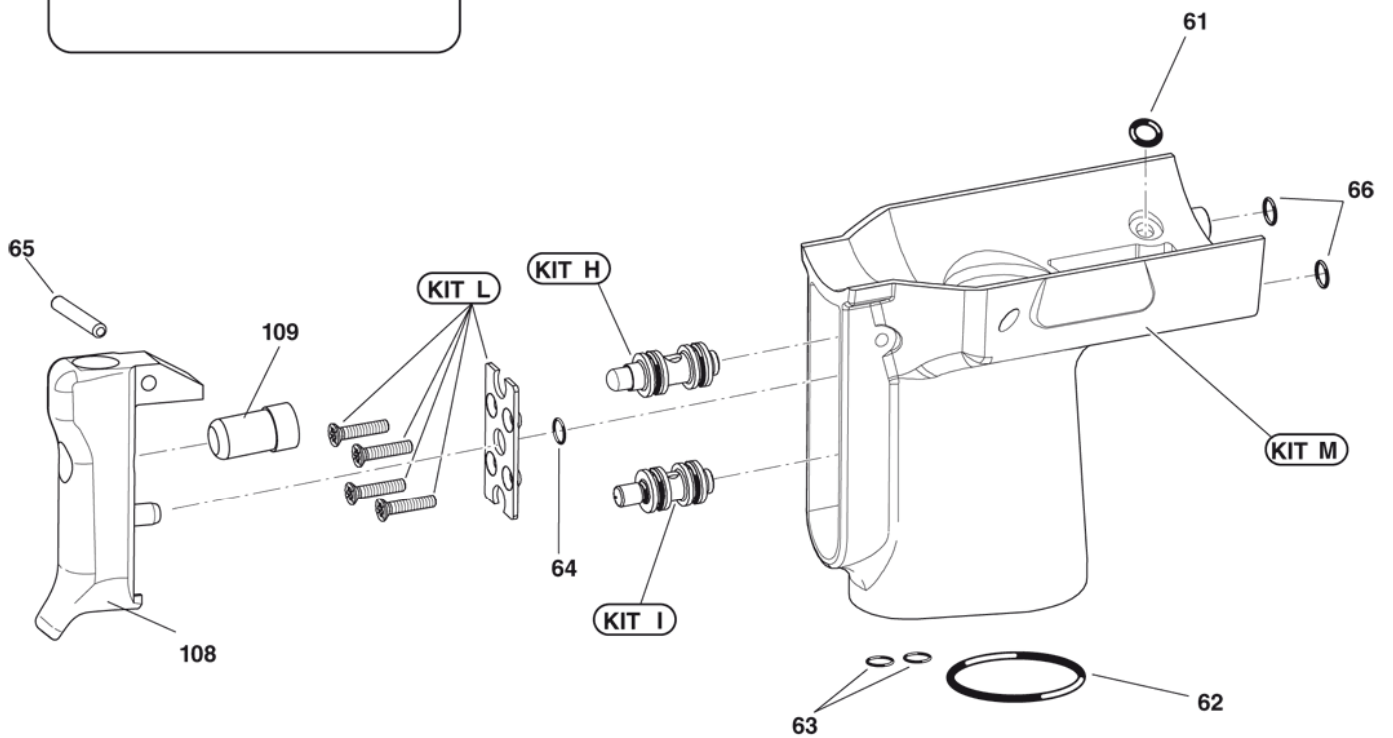
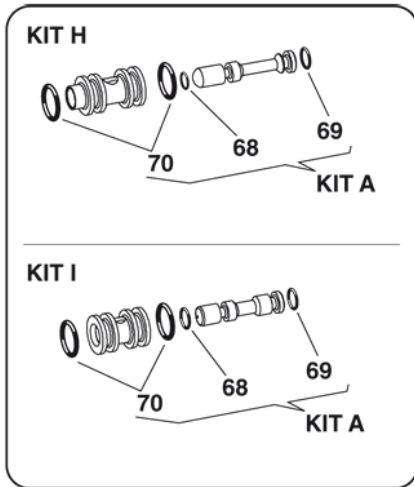
KITD 74000025 Hook kit

KITE 74000021 Silencer kit

KITF 74000029 Rod kit



KJ45/S



Pos.	Code	Description	Qty
061A	710528	Gasket OR 008	1
062A	710572	Gasket OR 2-120	1
063A	710385	Gasket OR 2-006	2
064A	713394	Gasket OR 2-106	1
065	713401	Pin NRB ø 3 x 19.8	1
066A	710376	Gasket OR 2-009	2
067	72A00019	Push-button unit	1
068AHI	711338	Gasket OR 2-003	2
069AHI	710918	Gasket OR 2-005	2
070AHI	716060	Gasket OR 2-010	4
108	71345648	Push-button	1
109	71345649	Unscrewing button	1

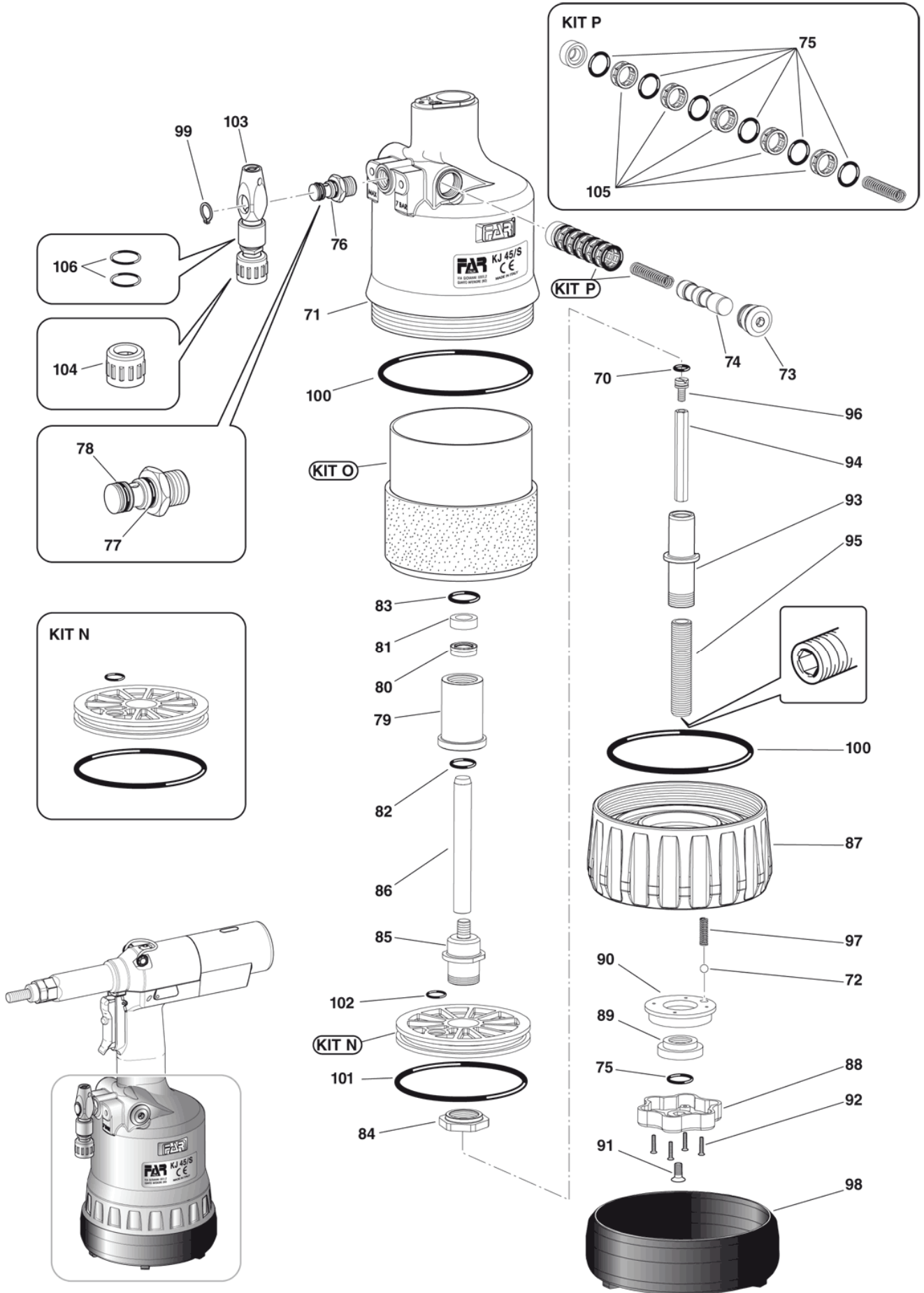
KITH 74000033 Upper piston kit

KITI 74000034 Lower piston kit

KITL 74000035 Retaining plate kit

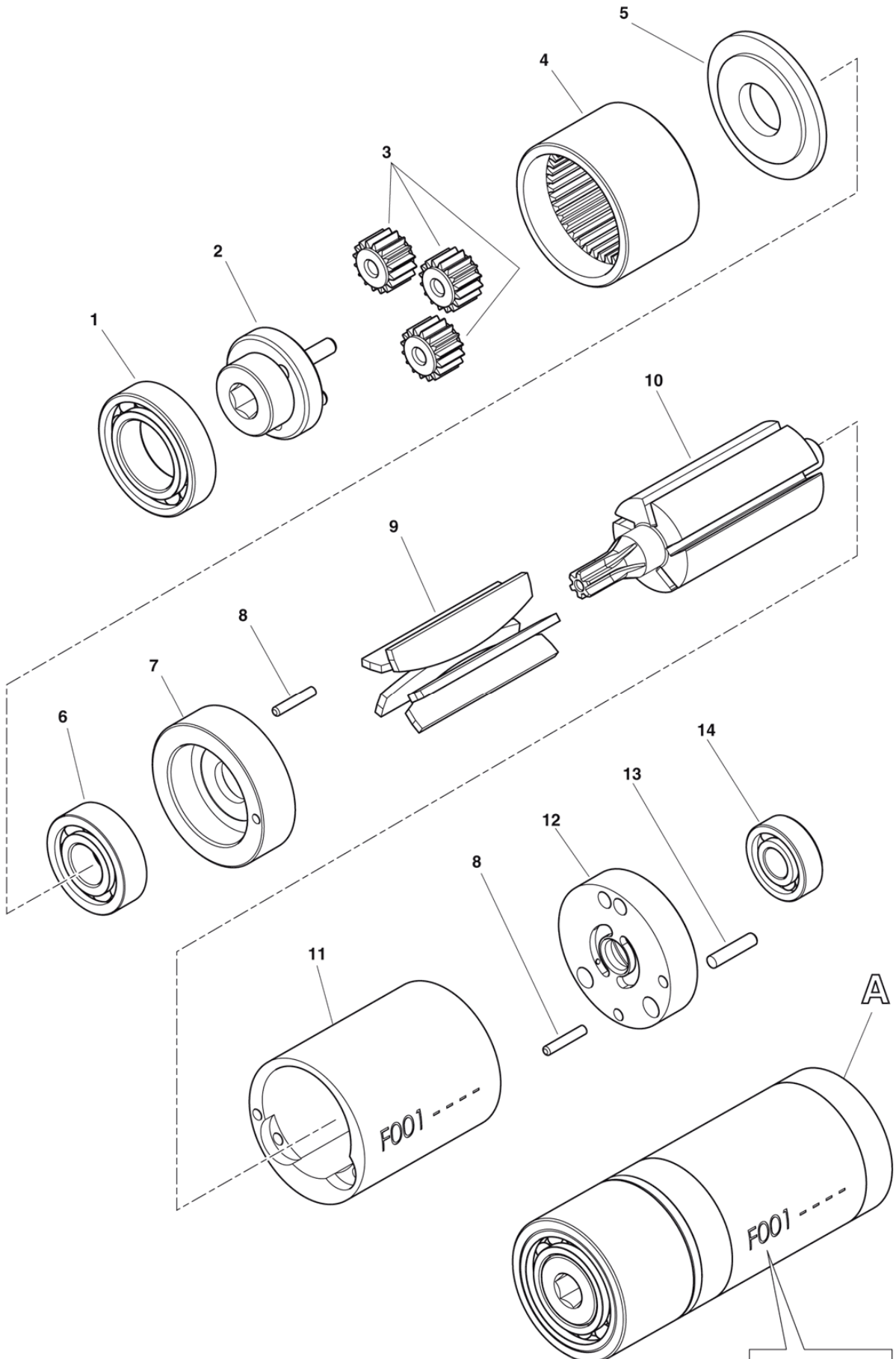
KITM 74000036 Handgrip kit

KITM 74000053 Handgrip kit



Pos.	Code	Description	Qty
070AHI	716060	Gasket OR 2-010	1
071	72C00003	Body	1
071	72C00017	Body	1
072	713403	Ball ø 5,5	1
073	71345272	Valve cap	1
074	71345273	Coil	1
075A	713400	Gasket OR 5-616	7
076	72A00028	Air connector unit 1/4"	1
077A	71C00355	Gasket OR 1,78 x 8,73	1
078A	71C00356	Gasket OR 1,78 x 7,66	1
079	713304	Rod guide connector	1
080Q	711827	Gasket TTS-12-19-5,7 / L	1
081Q	710390	Gasket B-075047	1
082A	71C00522	Gasket OR 5-615	1
083A	710914	Gasket OR 2-116	1
084	713319	Nut M 22 x 1,25	1
085	713320	Connector	1
086	713315	Rod	1
087	713197	Body cover	1
088	713194	Knob	1
089	713316	Ring nut	1
090	713191	Disc	1
091	712575	Screw TSCE M5 x 12 UNI 5933	1
092	713404	Tapping screw TSP ø 2,5 x 12	4
093	713317	Flanged connector	1
094	713318	Driving shaft	1
095	713321	Double-thread screw	1
096	713322	Screw M 5	1
097	713199	Push-button spring	1
098	713196	Short absorbent bottom plate	1
099	713434	Seeger ring 11 UNI 7435	1
100A	71C00297	Gasket OR 6-700	2
101A	713398	Gasket OR 2-340	1
102A	710350	Gasket OR 2-109	1
103	72B00021	Overpressure valve unit	1
104	71C00305	Ring nut 1/4"	1
105AP	713192	Cage	5
106A	713271	Gasket OR 2-014	2

KITN	74000030	Pneumatic piston kit
KITO	74000031	Pneumatic jacket kit
KITP	74000023	Coil kit



WARNING

Pos.	Code	Description	Qty
001	71C00764	Bearing 61801	1
002	71345645	Gear cage	1
003	71345644	Planetary gear	3
004	71345643	Crown gear	1
005	71345642	Washer	1
006	71C00763	Bearing AY7-ZZ	1
007	71345640	Connector	1
008	71C00761	Spring pin \varnothing 1,5 x 10 UNI 6875	2
009	71345639	Tongue	5
010	71345638	Rotor	1
011	71345637	Outside body	1
012	71345641	Back cap	1
013	71C00794	Pin \varnothing 2 X 9,8	1
014	71C00762	Bearing 695-ZZ	1

A

72A00125

Pneumatic Motor F001