# INSTRUCTION MANUAL SAR002



# **SAR002**

HYDRO-PNEUMATIC TOOL FOR BLIND RIVETS 2,4 ÷ 4,0 MM ALL ALLOYS AND 4,8 MM ALUMINUM

#### **DISTRIBUTOR'S STAMP**



#### SARIV s.r.l. Unipersonale

Via del Progresso, 2 - 35014 FONTANIVA PD - ITALY Tel. (+39) 049 5941 313 - Fax. (+39) 049 5941 920

www.sariv.it- info@sariv.it



# Contents

| 1 – SAFETY INSTRUCTIONS              | 3 |
|--------------------------------------|---|
| 2 – GENERAL INFORMATION              | 3 |
| 2.1 - MANUFACTURER                   | 3 |
| 2.2 - ASSISTANCE                     | 3 |
| 2.3 – CERTIFICATION AND EC MARKING   |   |
| 2.4 - WARRANTY                       |   |
| 3 – TOOL DESCRIPTION                 |   |
| 3.1 – OPERATING SYSTEM               |   |
| 3.2 -TECHNICAL DATA                  |   |
| 4 – OPERATION                        |   |
| 4.1 – TOOL PREPARATION BEFORE USING. |   |
| 4.2 – OPERATING INSTRUCTIONS         |   |
| 5 – MAINTENANCE                      |   |
| 6 – SPERE PARTS                      |   |
| DECLARATION OF CONFORMITY            |   |

# 1 – SAFETY INSTRUCTIONS

Users must read the instructions given herein thoroughly before starting to use the tool.

If you have any doubts about the instructions contained in this user's manual, do not hesitate to contact Sariv S.r.l. (see Section 2.1) for further explanations. In any case:

- wear safety glasses or goggles while using the riveter rivets are dispensed with force and at high speed, and may cause damage or bodily harm;
- do not leave the riveter plugged into the air supply when the tool is not in use;
- never point the riveter towards someone;
- keep the tool out of reach of children at all times.

### 2 – GENERAL INFORMATION

#### 2.1 - MANUFACTURER

Sariv S.r.l. has been operating on the fasteners market for years. The company has a consolidated technical experience and offers a wide range of products related to fastening systems.

| <b>Phone</b> : +39 049 594 13 13 | Email: info@sariv.it |
|----------------------------------|----------------------|
|----------------------------------|----------------------|

### 2.2 - ASSISTANCE

In case you need any assistance concerning the use and the maintenance of the tool, or in case you need to order any spare parts, you shall contact your local authorized dealer (or Sariv directly) specifying the identification/serial numbers of the tool, written on its outer casing.

#### 2.3 - CERTIFICATION AND EC MARKING

The tool is manufactured in compliance with the European Directives, which are in force when the tool itself is put on the market. As the tool is not included in ENCLOSURE IV of DIRECTIVE 89/392/EEC, Sariv S.r.l. issues a self-certification to apply the EC marking.

#### 2.4 - WARRANTY

The warranty has a validity of 12 months, starting from the date indicated on the invoice, and covers only replaced parts (labour is not included).

Tool damages caused by any of these cases below are not covered by warranty:

- transport and/or handling,
- user's mistakes,
- failed servicing/maintenance, as indicated in section 5 of this manual,
- faults and/or breakages that are not attributable to tool anomalies,
- normal consumption of parts of the riveter.

| Instruction Manual | Hydro-pneumatic tool for blind rivets        | 2 A DOOD |
|--------------------|--|----------|
| Ed. February 2023  | 2,4 ÷ 4,0 mm all alloys, and 4,8 mm aluminum | SAR002   |

The warranty is invalidated both in case of unauthorised tampering/replacements of tool components and in case of use of accessories different to those recommended by the manufacturer, which could even cause injuries to the tool's user.

Sariv S.r.l. assumes responsibilities only if the tool is originally defective, but declines all forms of responsibility if the user fails to follow the instructions given.

# 3 - TOOL DESCRIPTION

#### 3.1 – OPERATING SYSTEM

La rivettatrice oleopneumatica SAR002 è progettata per l'applicazione di rivetti di diametro 2,4 mm, 3,0 mm, 3,2 mm, 4,0 mm di tutte le leghe e rivetti di diametro 4,8 mm in alluminio.

#### 3.2 - TECHNICAL DATA

The following table provides the technical data and features of the tool.

TABLE 3.2 A – Technical data and features

| TOOL WEIGHT      | 1.3 kg       |
|------------------|--------------|
| LENGTH OF TOOL   | 245 mm       |
| AIR PRESSURE     | 85 – 110 psi |
| PULLING PRESSURE | 800 kg       |
| STROKE LENGTH    | 16 mm        |

### 4 - OPERATION

#### 4.1 - TOOL PREPARATION BEFORE USING

- 1. Prior to each operation of the riveter, you must choose the rivet size you are going to use. If you set 4.8mm rivets, no changes on the tool are necessary (4.8mm nosepiece is installed on the riveter).
- 2. If you set rivets with other diameters, you have to follow the instructions below:
  - A. If you set 4mm rivets: remove the nosepiece (#01), unscrewing it by turning counter-clockwise, then take the 4mm nosepiece and screw it onto the riveter by turning clockwise. Use the small wrench (included) to loosen and tighten the nosepiece.
  - B. If you set smaller rivets (2,4mm to 3,2mm) you have to change the pusher tube (insert part #05 instead of #060).
    - To do it, unscrew firstly the head (#02) and then the jaw housing (#03), then change the tube and insert part (#05) with the same spring (#06) put around the pusher tube originally installed.
    - At the end re-screw the jaw housing and the head, and insert the nosepiece as written above in point A.
- 3. Attach the mandrel collector tube (#55A) to the riveter by screwing it tightly onto the fitting in the back of the tool.
- 4. Make the air circulate through the tool when the air connection is hooked up, to insure correct alignment of jaws.
- 5. Adjust the air flow by screwing / unscrewing the regulator (#57): note that rivets of bigger diameter need more air than the smaller.

#### 4.2 - OPERATING INSTRUCTIONS

- 1. Attach a ¼" NPT (quick connect valve) to the brass air inlet fitting (#67) and then plug the air supply (not over 100 PSI) into the quick connect valve.
- 2. Push the trigger (#19) to start the vacuum system.
- 3. Insert the mandrel of the rivet into the riveter and position the rivet into the previously drilled hole (rivets will be held by the tool thanks to the vacuum system).
- 4. Squeeze the trigger to set the rivet (the trigger may need to be activated twice to set larger-size rivets completely).
- 5. The mandrel will be ejected into the mandrel collector once the trigger is released.
- 6. To empty the mandrel collector, remove it from the tool unscrewing it or open the small windows positioned in the back of the mandrel collector.

### 5 - MAINTENANCE

Regular services should be performed on the tool, in order to assure that the riveter could work properly and have a longer life.

- 1. Empty the mandrel collector before it gets more than 1/3 full of mandrels. Too many mandrels in it can damage the hydraulic plunger and/or cause a hazardous condition for the operator.
- 2. Keep jaws are clean and free of metal shavings, dirt and oil. To do it, remove the nosepiece (#01) and the head (#02) from the riveter; then remove the 3 jaws, and clean them with a wire brush or a steel wool to remove the debris.
- 3. Keep the oil at optimum level. With the use of the tool there may be a gradual loss of oil. When you notice a reduction in the stroke, you need to add a small amount of oil.

  In order to do it:
  - Insert the 4,8 mm nosepiece (the largest diameter that the tool accepts). This is necessary in order to test the tool after the oil has been filled.
  - Remove the air supply from the riveter and remove the screw (#51) on top of the riveter using Allen wrench (included) in order to open the oil hole.



Remove oil plug

- Put a small amount of hydraulic oil in a saucer or a cup and fill the syringe with it.
- Screw the syringe nozzle into the riveter oil hole where the screw (# 51) was removed. Push the plunger of the syringe very slowly to deliver oil into tool.



Add oil

- Unscrew the syringe nozzle from the riveter and insert the screw (# 51), then reconnect the tool to the air supply and depress the trigger 2-3 times.
- To test the oil level, insert a large-size rivet into the nosepiece and check if the mandrel can be inserted completely into the nosepiece (the rivet head must touch the nosepiece). If the rivet cannot be completely inserted into the tool, too much oil has been added and some must be removed.



Insert rivet

Rivet body touches nosepiece



To remove the oil in excess, unscrew part #51 approximately 1/4 turn. Depress and release the trigger to make the air circulate through the riveter; the oil will leak out of the top of the tool from the oil hole as the trigger is depressed.



Remove excess oil

- Depress and release the trigger as needed, until the rivet head touches the nosepiece and then tighten the screw (# 51) with Allen wrench.

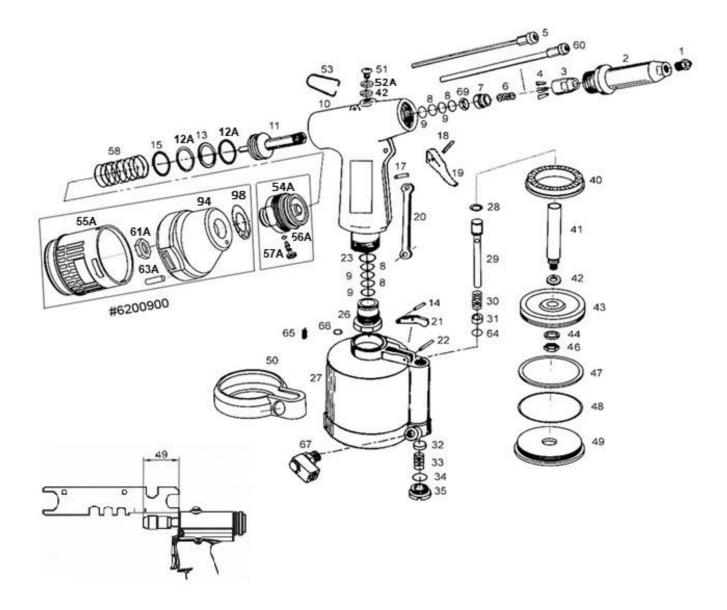


Tighten oil plug

The tool is now ready to be used.

# 6 - SPERE PARTS

Picture 6.1-A – Spare Parts



|   |                                      | MACHIN | NE SPARE PARTS |                                    |  |
|---|--------------------------------------|--------|----------------|------------------------------------|--|
| CODE DESCRIPTION Q.TY CODE DESCRIPTION Q. |                                      |        |                |                                    |  |
| SAR002/8-01                               | NOSEPIECES SET                       | 4      | SAR002-30      | SPRING FOR AIR VALVE ROD           |  |
| SAR002-02                                 | HEAD                                 | 1      | SAR002-31      | WASHER FOR AIR VALVE ROD           |  |
| SAR002-03                                 | JAW HOUSING                          | 1      | SAR002-32      | PLATE FOR AIR VALVE                |  |
| SAR002/8-04                               | JAWS - SET 3 PCS                     | 3      | SAR002-33      | SPRING FOR AIR VALVE PLATE         |  |
| SAR002/8-04A                              | FINE PITCH JAWS - SET 3 PCS          | 3      | SAR002-34      | O-RING FOR AIR VALVE CAP           |  |
| SAR002-06                                 | PUSHER TUBE 4.0 MM                   | 1      | SAR002-35      | CAP FOR AIR VALVE                  |  |
| SAR002-07                                 | SPRING                               | 1      | SAR002-40      | DAMPING RING                       |  |
| SAR002-08                                 | JAW HOUSING COUPLER                  | 4      | SAR002-41      | ROD FOR PNEUMATIC PISTON           |  |
| SAR002-09                                 | X-RING SEAL                          | 4      | SAR002-42      | O-RING FOR PNEUMATIC PISTON ROD    |  |
| SAR002-10                                 | HANDLE                               | 1      | SAR002-43      | RING FOR PNEUMATIC PISTON          |  |
| SAR002-11                                 | HYDRAULIC PISTON                     | 1      | SAR002-44      | WASHER FOR PNEUMATIC PISTON ROD    |  |
| SAR002-12A                                | OR P22X2.4                           | 2      | SAR002-46      | NUT FOR PNEUMATIC PISTON ROD       |  |
| SAR002-13                                 | O-RING WASHER                        | 1      | SAR002-47      | O-RING FOR PNEUMATIC PISTON        |  |
| SAR002-14                                 | SHORT ELASTIC PLUG FOR TRIGGER GROUP | 1      | SAR002-48      | O-RING FOR PNEUMATIC PISTON BOTTOM |  |
| SAR002-15                                 | O-RING (P26X2)                       | 1      | SAR002-49      | PNEUMATIC BODY BOTTOM              |  |
| SAR002-17                                 | ELASTIC PLUG FOR TRIGGER ROD         | 1      | SAR002-50      | RUBBER CUSHION                     |  |
| SAR002-18                                 | ELASTIC PLUG FOR TRIGGER             | 1      | SAR002-51      | OIL CAP SCREW                      |  |
| SAR002-19                                 | TRIGGER                              | 1      | SAR002-52A     | OIL CAP WASHER                     |  |
| SAR002-20                                 | TRIGGER                              | 1      | SAR002-58      | SPRING FOR HYDRAULIC PISTON        |  |
| SAR002-21                                 | TRIGGER ROD                          | 1      | SAR002-60      | PUSHER TUBE for 4,8mm rivets       |  |
| SAR002-22                                 | LONG ELASTIC PLUG FOR TRIGGER GROUP  | 1      | SAR002-64      | LOWER O-RING FOR AIR VALVE ROD     |  |
| SAR002-23                                 | OUTER O-RING FOR SCREW PLUG          | 1      | SAR002-65      | ROLL PIN                           |  |
| SAR002-26                                 | SCREW PLUG                           | 1      | SAR002-66      | INTERMEDIATE O-RING                |  |
| SAR002-27                                 | AIR CYLINDER BODY                    | 1      | SAR002-67      | ADJUSTABLE AIR CONNECTION          |  |
| SAR002-28                                 | O-RING (P6X1.9)                      | 1      | SAR002-69      | NUT FOR PNEUMATIC PISTON ROD       |  |
| SAR002-29                                 | VALVE ROD                            | 1      | SAR002/8-98    | FLAT GASKET                        |  |

| ACCESSORIES   |                                  |      |  |
|---------------|----------------------------------|------|--|
| CODE          | DESCRIPTION                      | Q.TY |  |
| SAR002/8-01A  | 3.2 mm NOSEPIECE                 | 1    |  |
| SAR002/8-01AL | 3.2 mm NOSEPIECE L = 15mm        | 1    |  |
| SAR002/8-01B  | 2.4 mm NOSEPIECE                 | 1    |  |
| SAR002/8-01BL | 2.4 mm NOSEPIECE L = 15mm        | 1    |  |
| SAR002/8-01C  | 4.0 mm NOSEPIECE                 | 1    |  |
| SAR002/8-01CL | 4.0 mm NOSEPIECE L = 15mm        | 1    |  |
| SAR002/8-01D  | 4.8 mm NOSEPIECE                 | 1    |  |
| SAR002/8-01DL | 4.8 mm NOSEPIECE L = 15mm        | 1    |  |
| SAR002-05     | PUSHER TUBE for rivets 2,4-4,0mm | 1    |  |
| SAR002-53     | HANDLING RING                    | 1    |  |
| SAR002-SR     | OIL SYRINGE                      | 1    |  |
| *             | HEXAGONAL WRENCH                 | 1    |  |
| *             | WRENCH                           | 1    |  |
| *             | WRENCH 14/17mm                   | 2    |  |

| MANDREL COLLECTOR KIT |   |      |
|-----------------------|---|------|
| CODE                  | DESCRIPTION                             | Q.TY |
| SAR002-16             | O-RING FOR MANDREL COLLECTOR CONNECTION | 1    |
| SAR002-54A            | MANDREL COLLECTOR CONNECTION            | 1    |
| SAR002-55A            | MANDREL COLLECTOR                       | 1    |
| SAR002-56A            | O-RING FOR AIR SETTING SCREW            | 1    |
| SAR002-57A            | AIR SETTING SCREW                       | 1    |
| SAR002/8-61A          | NUT FOR COLLECTOR CONNECTION            | 1    |
| SAR002-63A            | ANTI-ROTATION PIN                       | 1    |
| SAR002/8-94           | COLLECTOR CONNECTION                    | 1    |

# **IMPORTANT: CORRESPONDANCE NOSEPIECE – PUSHER TUBE**

The standard tool is supplied with nosepiece and pusher tube for 4.8mm rivets. If for small rivets 1/8"(3.2mm), 3/32" (2.4mm) application, please change #60 (#480065H) and insert #05 (#480065) into the #07, #11

# **DECLARATION OF CONFORMITY**

We, SARIV S.R.L. Unipersonale

Via del Progresso, 2 – Fontaniva (PD) – Italy

#### **STATE**

In the person of the Legal Representative Nicola Sartore that the following tool

SAR002 – Hydro pneumatic riveting tool for blind rivets

IS MANUFACTURED ACCORDING TO

the requirements Council Directive Machineries C.E.E. 89/392 (Machinery), subsequent amendments, and standards EN292-1, EN292-2

SARIV s.r.l. Unipersonale

