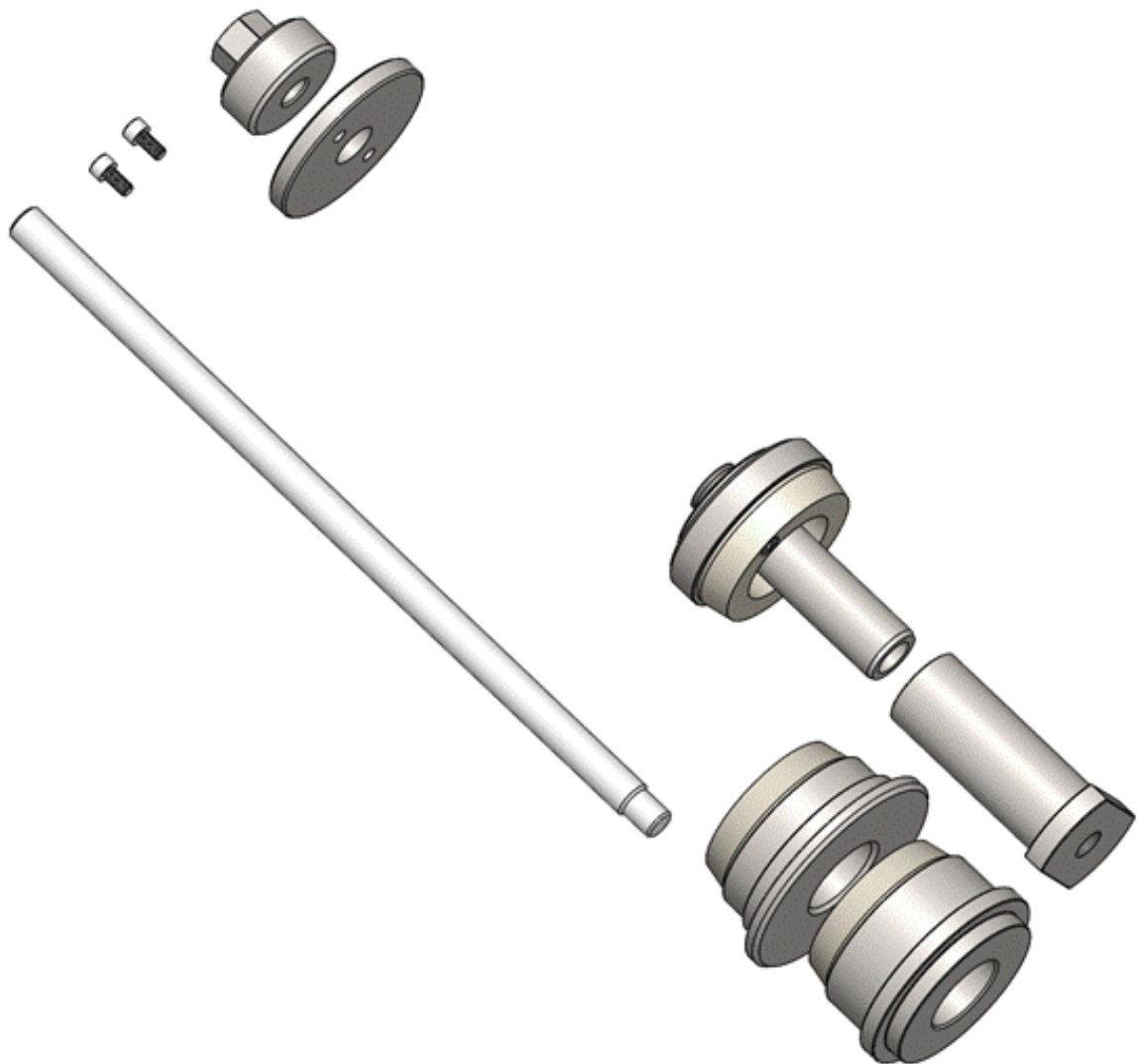


INSTRUCTION

HYDRAULIC PRESS

2902-16-0001

3HAC077981-001



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GENERAL INFORMATION

Instructions

This “Original instructions” is your direct guide in the correct usage and maintenance of the hydraulic press in question. The instructions must be studied carefully by all pertinent personnel before the hydraulic press is used.

"Original Instructions" means that it is a language version that has been developed and reviewed by the manufacturer. If there is no "Original instruction" in the user's language, it needs to be produced (translated). Such translated version shall be marked with "Translation of the original instructions". Such translations fall outside the manufacturer's responsibility.

The instructions should always be available to those who maintain and use the hydraulic press daily.

In addition, it is important that you:

- keep this instructions and other applicable documents for the entire life of the hydraulic press.
- forward the instructions and other applicable documents to other owners or users of the hydraulic press.
- add any supplements or modifications made by the manufacturer to the instructions.

Strictly observe the information mentioned in the instructions and found on the equipment. Serious personal injury and damages to the equipment can occur if you fail to observe this information.

Copyright

This instruction should be treated as confidential. It is intended solely for use by personnel authorized for this purpose. Information may only be disclosed to third parties upon written permission from the manufacturer. It is strictly prohibited to transmit or reproduce all or part of the content, or to sell or otherwise disseminate it, unless special permission has been expressly given in writing.

Responsibility

The manufacturer does not bear responsibility for personal injury or damage to equipment if this instruction is not observed.

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Marking

The hydraulic press is marked with the CE mark, Figure 1, which means that it is designed, manufactured, and described in accordance with EC Machinery Directive 2006/42/EC. The CE marking applies only when the hydraulic press is composed of the specified cylinder and pump provided by the user.



Figure 1 CE mark

Manufacturer

Deva Mecaneyes AB

Stansargränd 6

SE-721 30 Västerås

Sweden

Phone: +46 21-31 44 40

Warranty

The warranty period is 1 year from the date of delivery.

The warranty does not apply if the instructions have not been followed.

The warranty does not include Rehobot CHF 62 cylinder, Rehobot pump, provided by the user.

Modification of the equipment

If the hydraulic press is rebuilt or supplemented with other products without the consent of the manufacturer, the CE-marking does not cover these. If such rebuilding or modification change the original function of the equipment, the CE-marking in its entirety ceases to apply.

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Intended use

The hydraulic press is intended for mounting bearing race and rotary seal in link arm on the following robots:

- IRB460
- IRB660

in connection with maintenance and repair work.

All other use is prohibited.

The hydraulic press must be used with cylinder Rehobot CHF 62 and pump from Rehobot with a working pressure of max 700 bar. These components are provided by the user.

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Technical data/Identification data

Max force: 6,7 tons
Weight: - kg
Drawing number: 2902-16-0001
ABB article number: 3HAC077981-001
Noise level: Hand pump <70 dBA

Pneumatic pump 76 dBA

Measured A-weighted emission sound
Pressure level LpA 76dB.
Uncertainty KpA 4dB.
Measurement method: The sound measurement performed at 1m distance. The pump stands on the floor, the sound meter measuring 1.6m above the floor.

Electrical pump 72,5 dBA .

Measured A-weighted emission sound
Pressure level LpA 72.5dB.
Uncertainty KpA 4dB.
Measurement method: The sound measurement performed at 1m distance. The pump stands on the floor, the sound meter measuring 1.6m above the floor.

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SAFETY INFORMATION

General

Personnel working with the hydraulic press must have read the instructions and especially the chapter with safety information.

The instructions should always be available near the hydraulic press.

Failure to follow the safety instructions in these instructions may result in personal injury.

In addition to the instructions for use, all general and other applicable regulations for accident and environmental protection as well as general safety and health requirements must be followed. Such requirements may also e.g. include handling hazardous substances or providing/using personal protective equipment.

It is the responsibility of the operator to check before each use and, where applicable immediately report any visible damage on the hydraulic press.

It is the responsibility of the user to ensure that the hydraulic press is in good condition when used and that all relevant safety regulations and requirements are complied with.

The hydraulic press must immediately be taken out of service as soon as faults or deviations in the function are detected.

No alterations regarding extensions or alterations that may affect safety may be made without the manufacturer's permission.

Use only original parts. They meet the technical requirements and are a prerequisite for the guarantee to apply.

The prescribed maintenance intervals must be followed.

It is the user's responsibility to teach the staff to the required extent.

In the event of any uncertainty regarding the use of the hydraulic press, Deva Mecaneyes should be contacted.

Upon request, please provide hydraulic press 2902-16-0001 and serial number.

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Restrictions on use

The hydraulic press may only be used for its intended purpose. Any other use is prohibited.

Only Rehobot CHF 62 cylinder or equivalent may be used.

Only pumps with a maximum pressure of 700 bar may be used.

Do not hold in a pressurized hose due to the risk of damage in the case of hose failure.



Signs and decals

Warning signs/decals and machine sign with CE mark on the hydraulic press must always be kept in legible condition. If any part that is equipped with a warning sign/decal or machine sign with CE mark is replaced, then a new warning sign/decal and machine sign with CE mark must be installed at the corresponding place. Damaged sign/decal and machine sign with CE mark must be replaced immediately.

Signal word

Pay attention to the following signal words:

WARNING – Indicates a hazard that is likely to result in death or serious injury if not avoided.

Warning of residual risks

Despite the built-in safeguards, there may be remaining risks. Information on such risks is given in this section.



WARNING!

Risk of projections in line with the drawbar when the press is under



WARNING!

Risks associated with hydraulic oil when handling this substance.

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Hydraulic oil

Always use high-quality hydraulic oil type ISO VG10 or equivalent.

Fire-fighting measures:

- Suitable extinguishing media: Powder, CO₂, alcohol resistant foam or water spray (mist).
- Unsuitable extinguishing media: Water jet

The hydraulic oil is classified as hazardous according to Regulation (EC) 1272/2008 with changes.

See safety data sheet.



Personal protective equipment

The following personal protective equipment must be used to protect against risks from the hydraulic press:

- Safety shoes
- Safety glasses



Pump

Pump unit, which is held by the user, must be located such that inadvertent operation cannot take place.

When the pump unit is not connected, the hose must be placed so that it is not damaged and does not pose a danger to persons moving around the pump unit.

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FUNCTION DESCRIPTION

Structure

The hydraulic press parts, structure and their placement in the storage box are shown in Figure 2-3.

A. Press sleeve (IRB660)

B. Drawbar

C. Press sleeve (IRB460)

D. Press sleeve

E. Press sleeve

F. Hydraulic Cylinder
(provided by
the user)

G. Screws

H. Mounting washer

I. Anvil

J. CE plate

K. Storage box

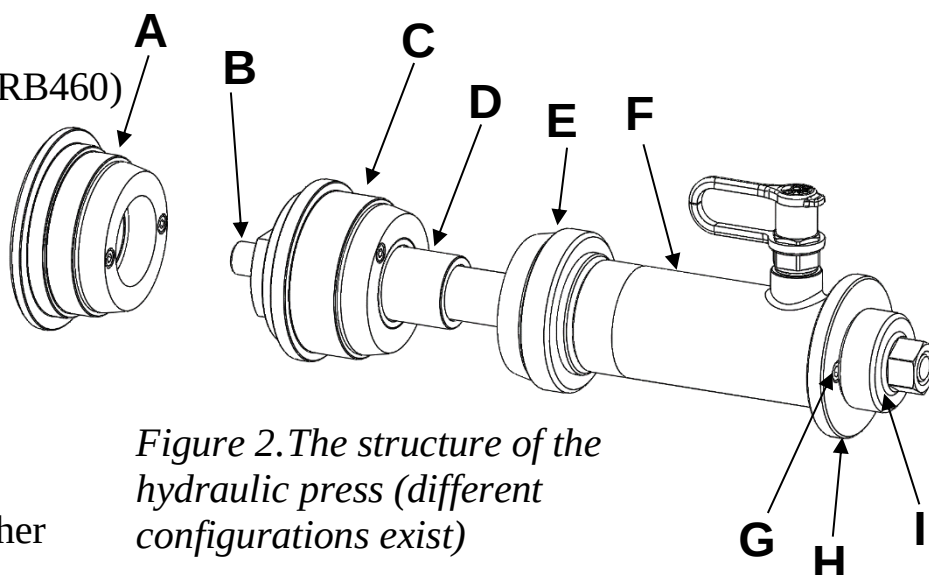


Figure 2. The structure of the hydraulic press (different configurations exist)

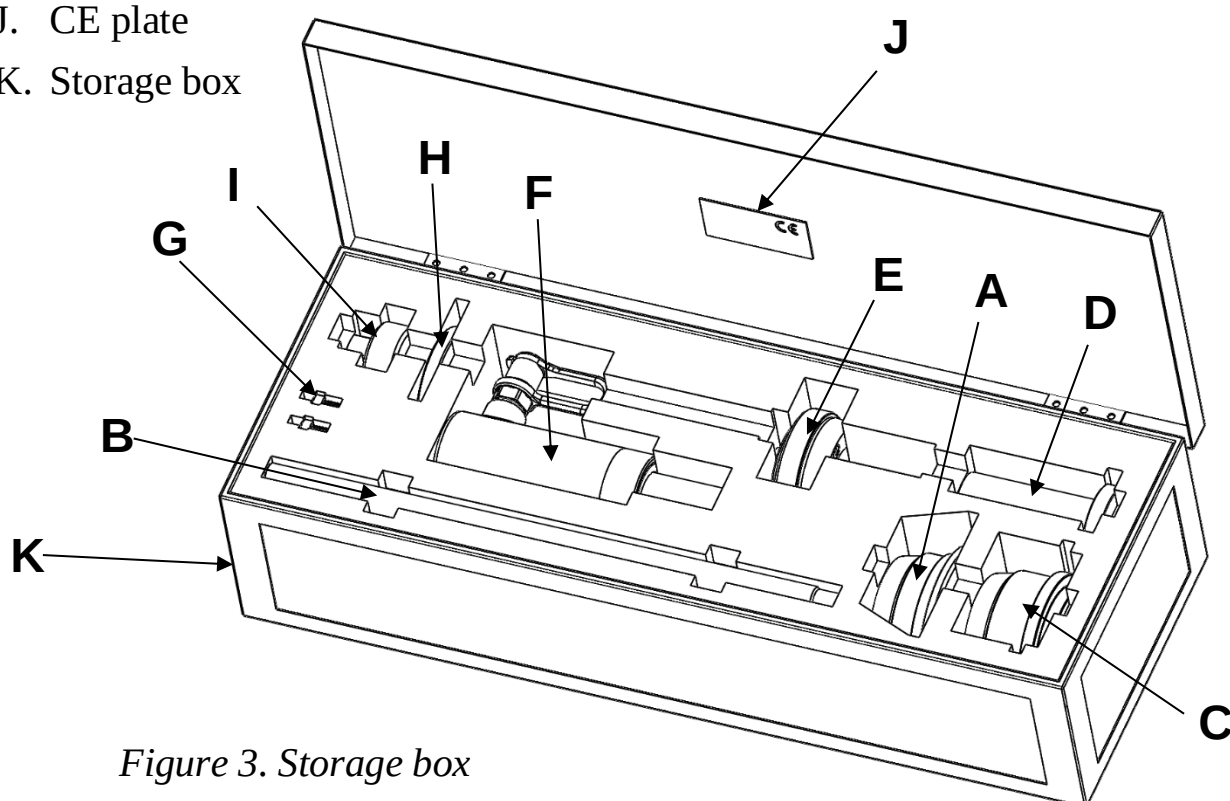


Figure 3. Storage box

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Configuration for mounting – IRB460

Figure 4 shows how the hydraulic press should be configured for mounting the bearing race and rotary seal on IRB460. The following parts are used in this configuration:

- B. Drawbar
- C. Press sleeve (IRB460)
- D. Press sleeve
- E. Press sleeve
- F. Hydraulic Cylinder
- G. Screws
- H. Mounting washer
- I. Anvil

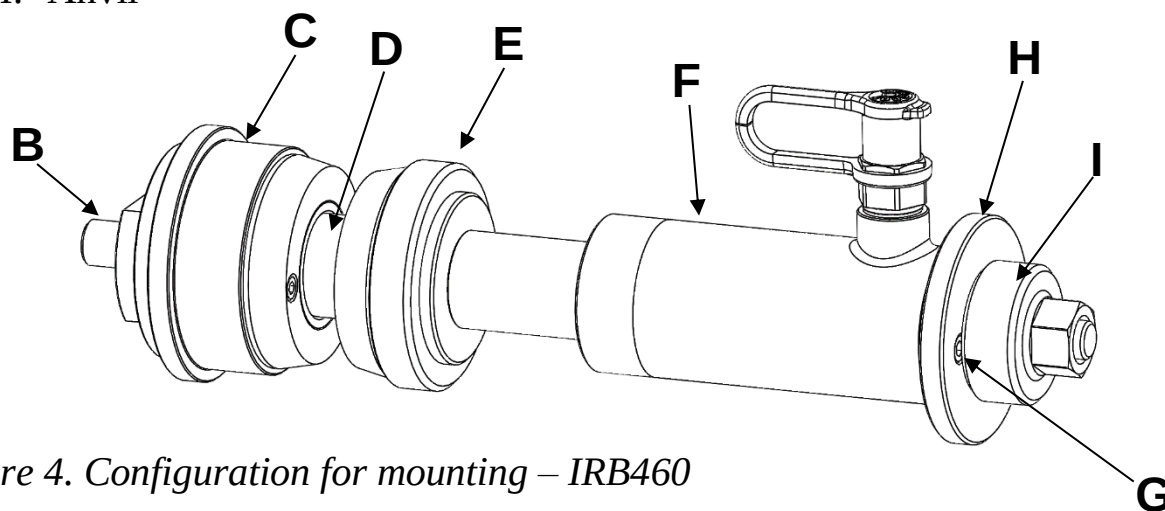


Figure 4. Configuration for mounting – IRB460

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Configuration for mounting – IRB660

Figure 5 shows how the hydraulic press should be configured for mounting the bearing race and rotary seal on the IRB660. The following parts are used in this configuration:

- A. Press sleeve (IRB660)
- B. Drawbar
- D. Press sleeve
- E. Press sleeve
- F. Hydraulic Cylinder
- G. Screws
- H. Mounting washer
- I. Anvil

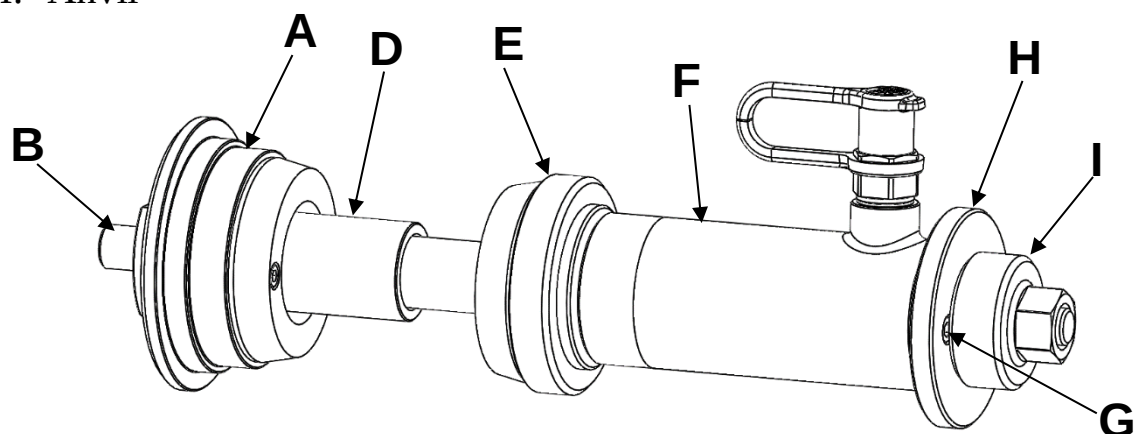


Figure 5. Configuration for mounting – IRB660

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USE

Prerequisites

The hydraulic press may only be used by personnel who meet the following conditions:

- is at least 18 years of age.
- is educated and has shown knowledge of the use of the hydraulic press.

Preparatory measures

In order for the hydraulic press to be used, it must be equipped with a hydraulic cylinder, which is provided by the user.

Before use:

- Determine which press configuration is required for the actual pressing operation. See the pages 11-12.
- Pick up the required parts from the storage box.
- Check that the hydraulic press does not have broken or otherwise defective parts. Any damage to the hydraulic press must be repaired by maintenance personnel before use.
- Check that no persons are in the risk area of the hydraulic press, which is in line with the drawbar when the press is pressurized.

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Mounting of bearing race and rotary seal – IRB460

The following steps should be followed when mounting bearing race and rotary seal on IRB460:

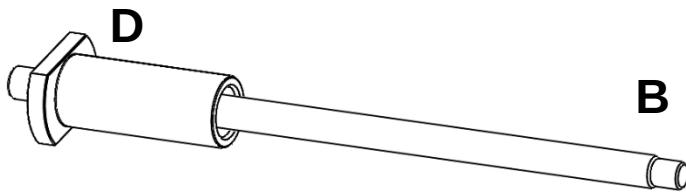


Figure 6. Drawbar with press sleeve

1. Assemble drawbar (B) and press sleeve (D). Observe the drawbar's orientation.

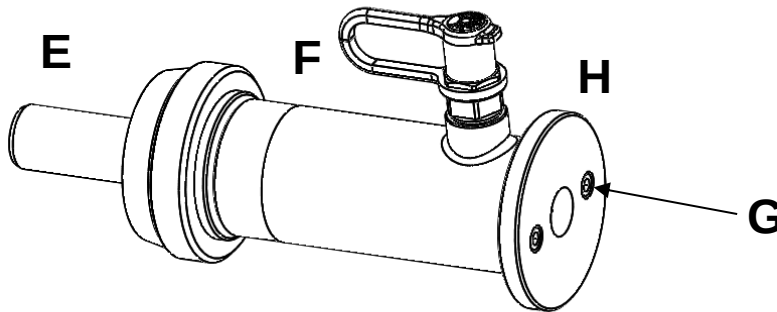


Figure 7. Hydraulic Cylinder with press sleeve and mounting washer

2. Assemble the hydraulic cylinder (F), press sleeve (E), and mounting washer (H) with screw (G), use 5 mm Allen key.

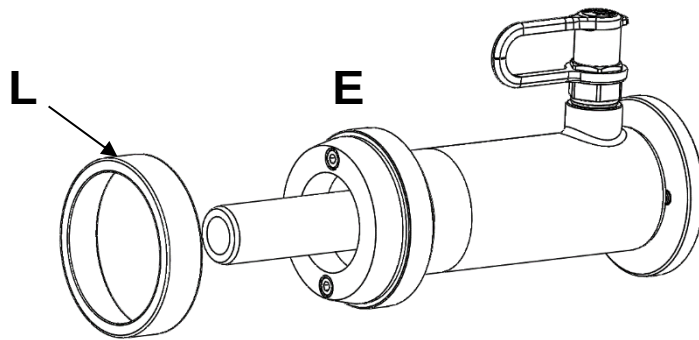


Figure 8. Bearing race on press sleeve

3. Slide the bearing race (L) on to the press sleeve (E).

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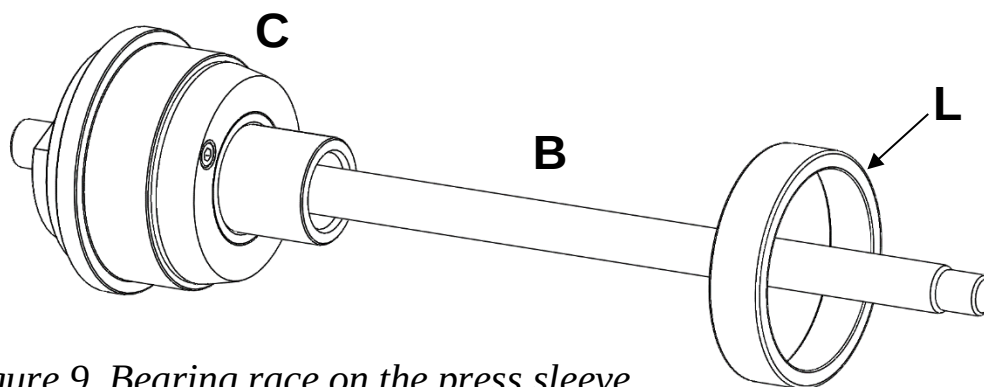


Figure 9. Bearing race on the press sleeve

4. Slide the press sleeve (C) on to the drawbar (B) and the second bearing race (L) on to the press sleeve (C).

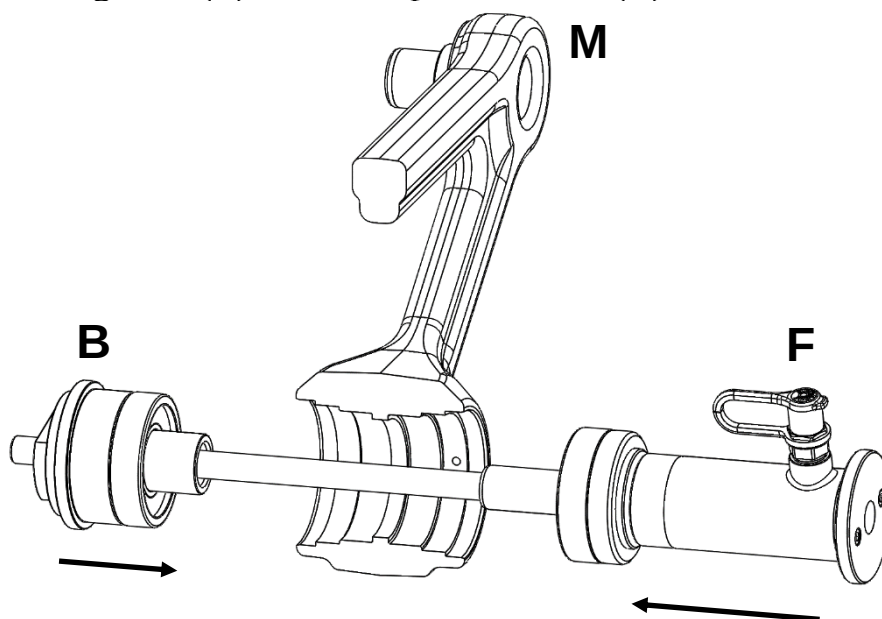


Figure 10. Mounting the tool on the link arm.

5. Insert the cylinder (F) and the drawbar (B) into the link arm (M).

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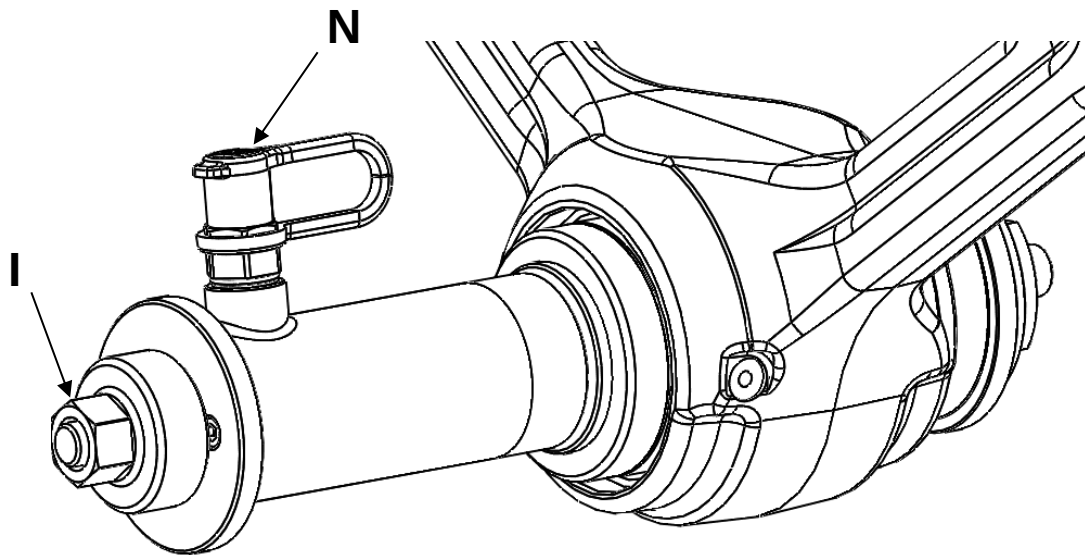


Figure 11. Mounted hydraulic press

6. Screw the anvil (I) on to the drawbar. Use 24 mm wrench.
7. Connect the hydraulic hose of the pump to the cylinder coupling (N).
8. Pressurize the pump to mount the bearing races.
Never touch the **pressurized** hose due to risk of serious injury in case of a rupture.
9. Depressurize the pump.
10. Disconnect the hydraulic hose from the cylinder coupling (N).
11. Unscrew the anvil (I) and remove the cylinder (F) and the drawbar (B).

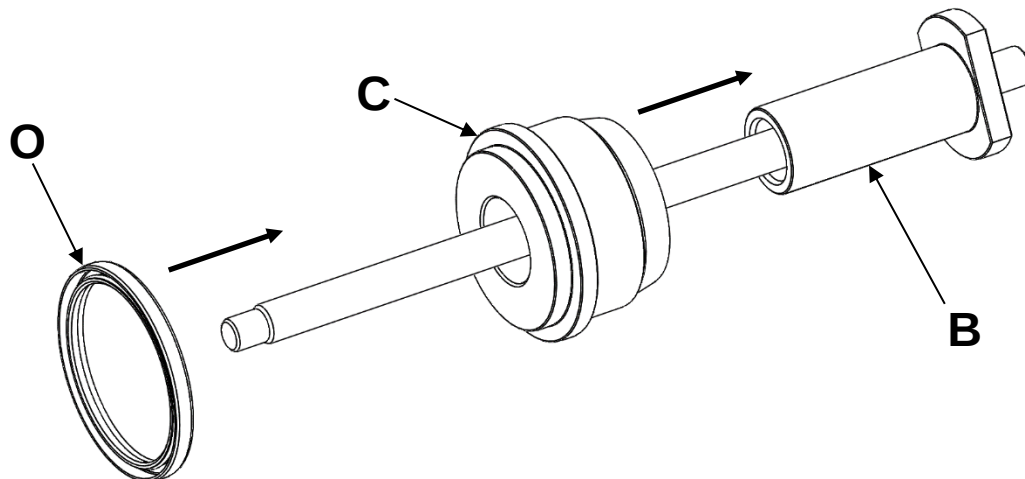


Figure 12. Rotary seal on reversible press sleeve

12. Turn over the press sleeve (C) and slide it and the rotary seal (O) on to the drawbar (B).

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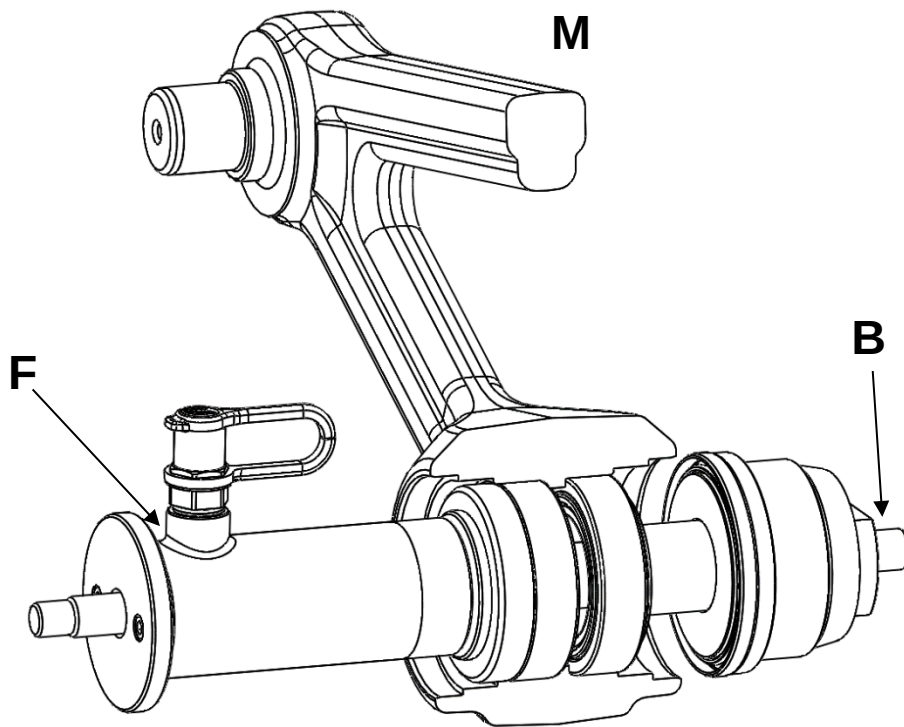


Figure 13. Mounting the tool on the link arm.

13. Insert the cylinder (F) and the drawbar (B) into the link arm (M).

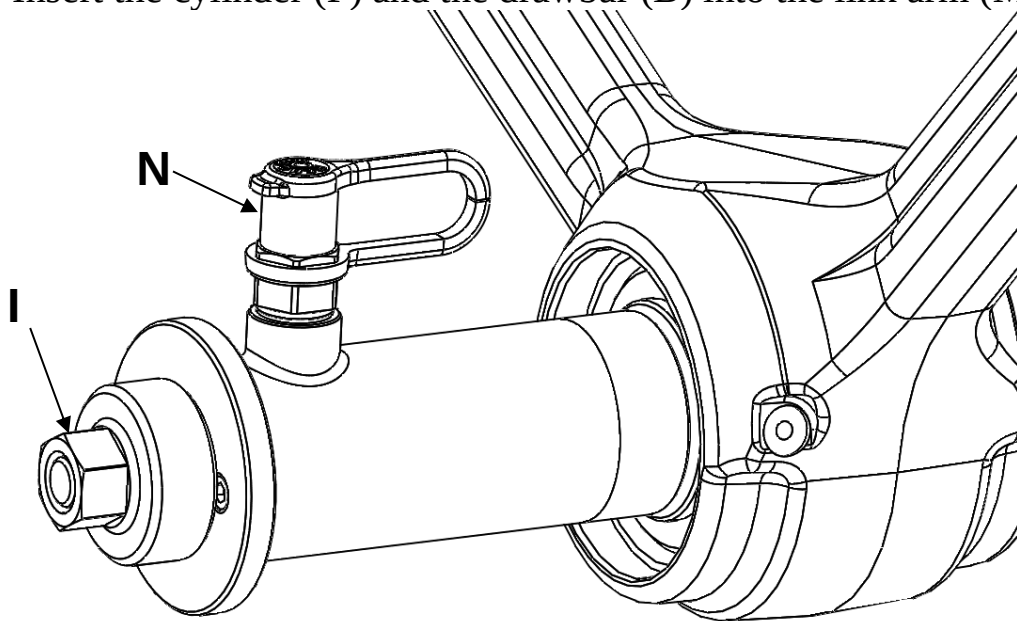


Figure 14. Mounted hydraulic press

14. Screw the anvil (I) on to the drawbar. Use 24 mm wrench.
15. Connect the hydraulic hose of the pump to the cylinder coupling (N).

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16. Pressurize the pump to mount the bearing races.
Never touch the **pressurized** hose due to risk of serious injury in case of a rupture.
17. Depressurize the pump.
18. Disconnect the hydraulic hose from the cylinder coupling (N).
19. Unscrew the anvil (I) and remove the cylinder (F) and the drawbar (B).
20. Disassemble all the parts and place them in the designated area of the storage box.



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Mounting of bearing race and rotary seal – IRB660

The following steps should be followed when bearing race and rotary seal are mounted on the IRB660:

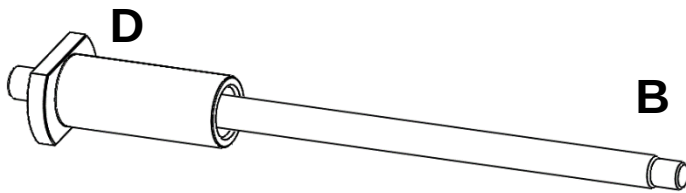


Figure 15. Drawbar with press sleeve

1. Assemble drawbar (B) and press sleeve (D). Observe the drawbar's orientation.

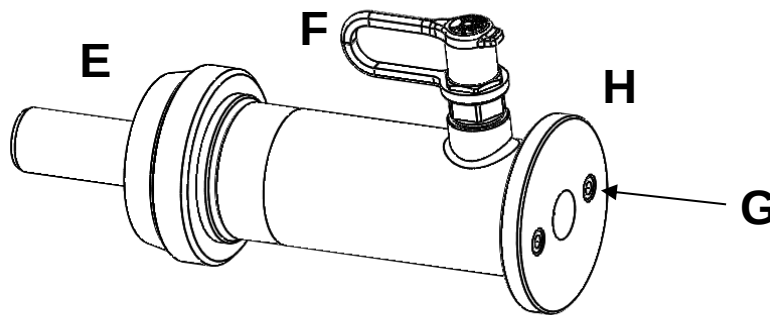


Figure 16. Hydraulic Cylinder with press sleeve and mounting

2. Assemble the hydraulic cylinder (F), press sleeve (E), and mounting washer (H) using screws (G), use 5 mm Allen key.

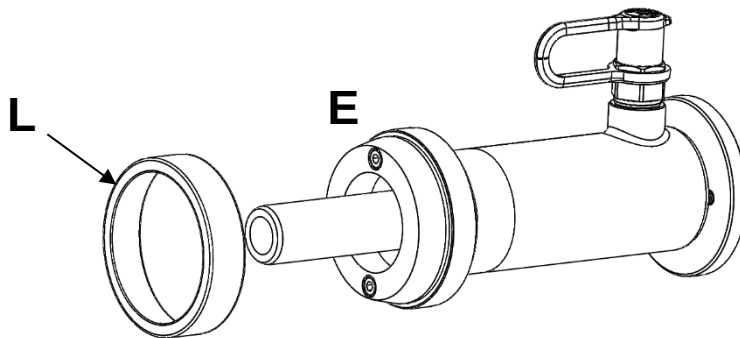


Figure 17. Bearing race on press sleeve

3. Slide the bearing race (L) on to the press sleeve (E).

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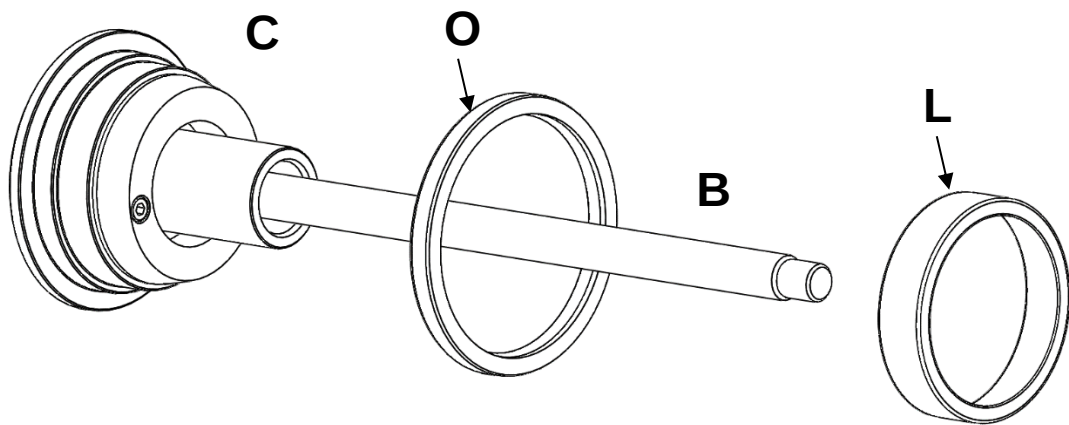


Figure 18. Bearing race and rotary seal on the press sleeve

4. Slide the press sleeve (C) on to the drawbar (B).
5. Slide the rotary seal and the second bearing race (L) on to the press sleeve (C).

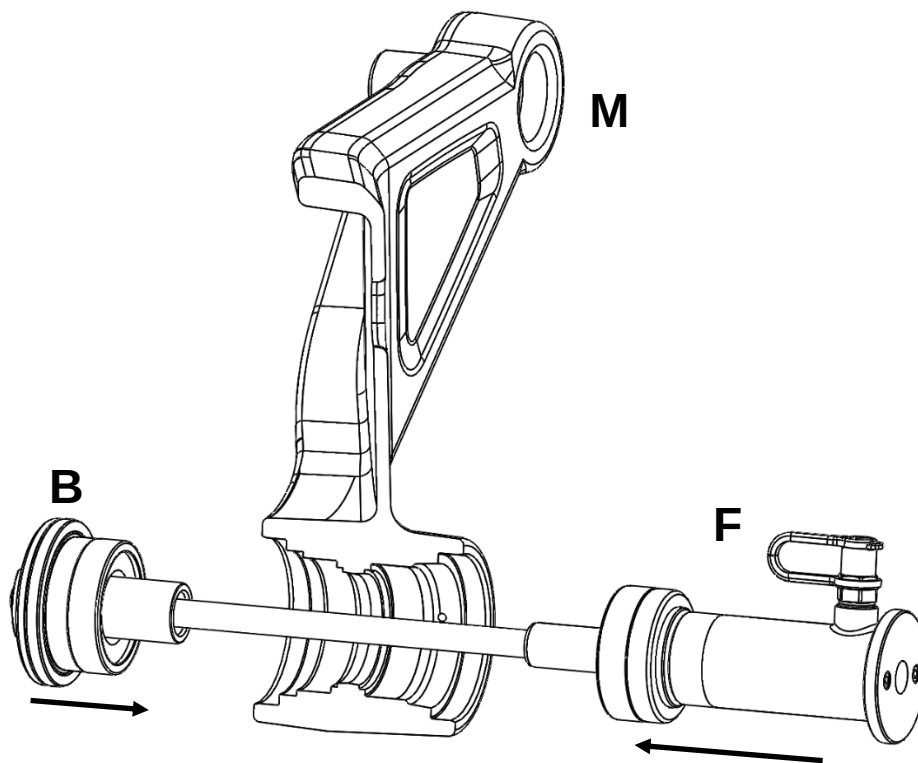


Figure 19. Mounting the tool on the link arm.

6. Insert the cylinder (F) and the drawbar (B) into the link arm (M).

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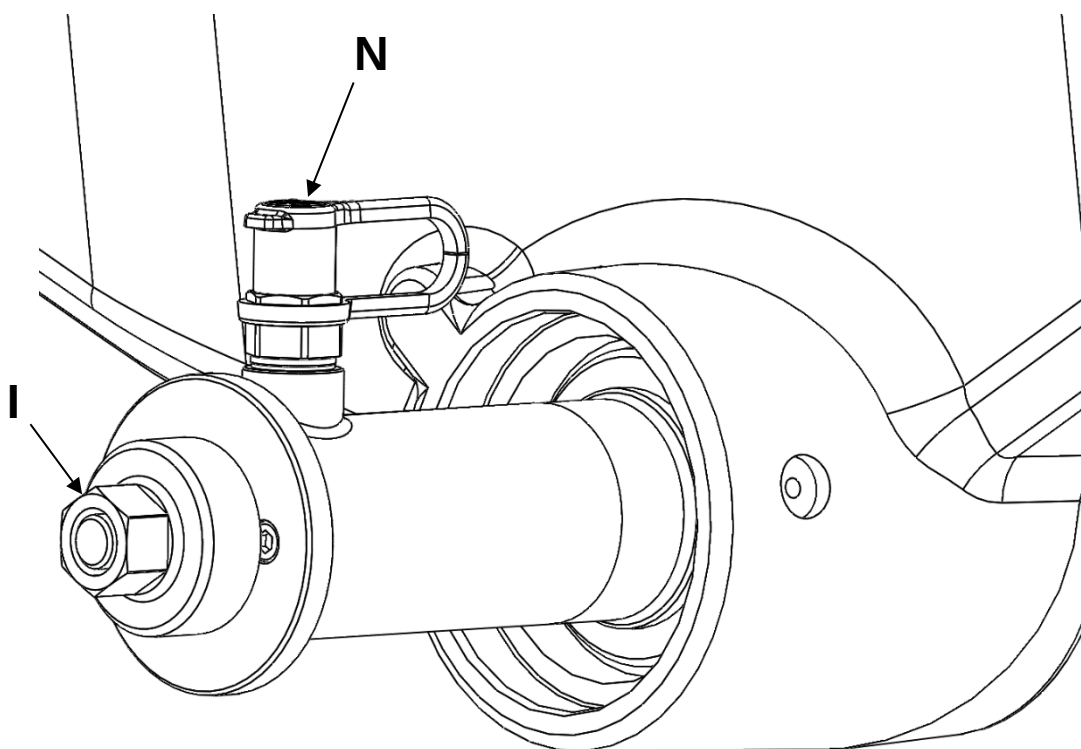


Figure 20. Mounted hydraulic press

7. Screw the anvil (I) on to the drawbar. Use 24 mm wrench.
8. Connect the hydraulic hose of the pump to the cylinder coupling (N).
9. Pressurize the pump to mount the bearing races.
Never touch the **pressurized** hose due to risk of serious injury in case of a rupture.
10. Depressurize the pump.
11. Disconnect the hydraulic hose from the cylinder coupling (N).
12. Unscrew the anvil (I) and remove the cylinder (F) and the drawbar (B).
13. Disassemble all the parts and place them in the designated area of the storage box.



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BREAKDOWN AND MISHAP

In the event of a breakdown or mishap, the pressure in the pump shall be relieved and compressed air or electricity disconnected before any action on the implement is started.

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MAINTENANCE

General

In order for the hydraulic press to function with as few operating disturbances as possible, it must be serviced regularly.

Maintenance refers to measures for service and repair.



WARNING!

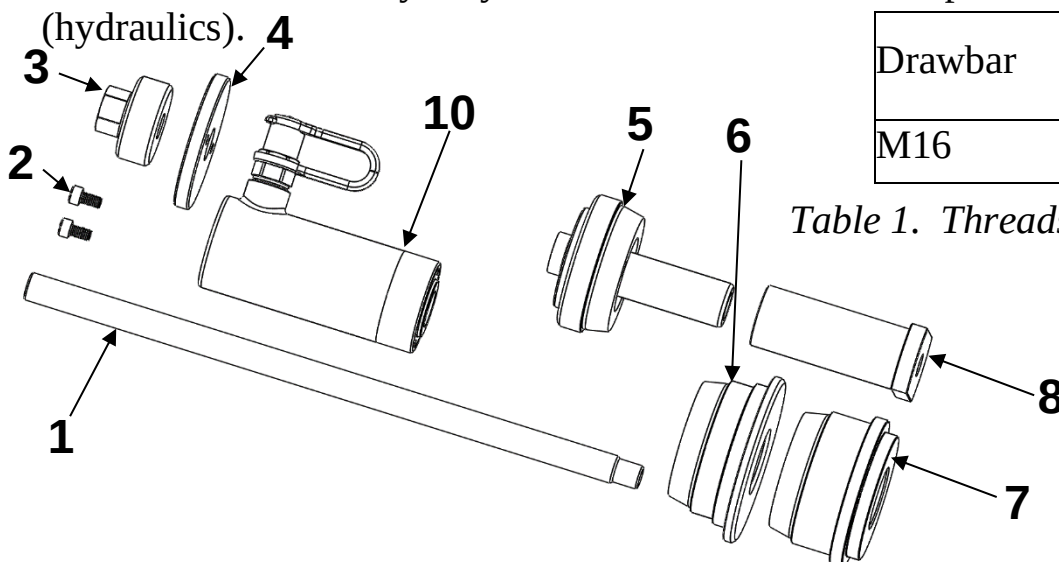
All maintenance must be carried out by trained maintenance personnel so that no personal or product damage occurs.

Preventive maintenance

Preventive maintenance should be performed and documented once a year. In connection with preventative maintenance, the following should be checked/corrected:

- Threads on drawbar (1) and screws (2): Regarding wear, see table 1.
- Threads and surfaces of anvil (3): Regarding wear.
- Surfaces on the mounting washer (4): Regarding wear.
- Press sleeves (5, 6, 7, 8): Regarding wear and function.
- CE sign (9): That it is mounted correctly and readable.

Maintenance work may only be done with disconnected power supply (hydraulics).



Drawbar	Min outer diameter
M16	15,5 mm

Table 1. Threads on drawbar

Figure 21. Spare parts list

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Hydraulic components

Hydraulic components are maintained according to the component manufacturer's recommendations.

Reservdelslista

Figures 21-22 and Table 2 show which components are considered as spare parts. Contact your local ABB office if spare parts are needed. Enter the item number and the desired quantity.

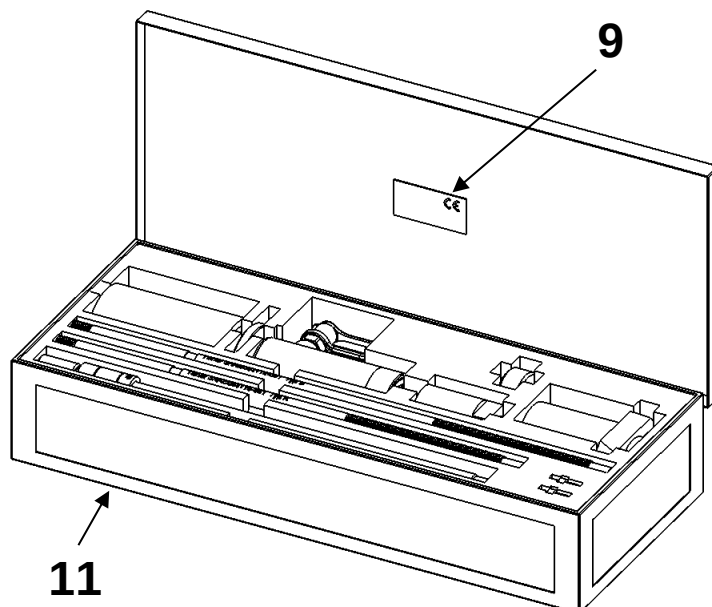


Figure 22. Storage box

Pos	Designation	Article number	ABB number
1	Dragstång	2634-0069	
2	Skruv	MC6S M6x12H	
3	Mothåll	3108-0207	
4	Monteringsbricka	2634-0007	
5	Presshylsa	2902-16-0005	
6	Presshylsa	3108-0208	
7	Presshylsa	3108-0209	
8	Presshylsa	3108-0204	
9	CE-skylt	2902-16-0004	
10	Hydraulisk cylinder	CHF62	
11	Låda	2902-16-0002	

Tabell 2. Reservdelslista

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DISMANTLING/ DISPOSAL

The hydraulic press is dismantled in detail.

Details are sorted as scrap metal and left for recycling.

Hydraulic oil is left as environmentally hazardous material

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EC DECLARATION OF CONFORMITY FOR MACHINERY

Original

Directive 2006/42/EC, Annex II 1A

Manufacturer (and where appropriate his authorised representative):

Company: Deva Mecaneyes AB

Address: Stansargränd 6, SE-721 30 Västerås, Sweden

Hereby declares that:

Type of machinery: Hydraulic press

Model: 2902-16-0001

ABB article number: 3HAC076203-001

Complies with the requirements of Machinery Directive 2006/42/EC.

Complies also with applicable requirements of the following EC directives:

The following harmonized standards have been applied

EN ISO 12100:2010 Maskinsäkerhet - allmänna konstruktionsprinciper - Riskbedömning och riskreducering

EN ISO 4413:2010 Maskinsäkerhet - Hydraulik - Allmänna regler och säkerhetskrav för system och deras komponenter

The following other standards and specifications have been applied:

Authorized to compile the technical file:

Name: William Noritis

Address: Deva Mecaneyes, Stansargränd 6, SE-721 30 Västerås

Signature:

Place and date: Västerås 2020-10-21

Name:

Name: Magnus Welén

Position: VD

Prepared William Noritis	Responsible department Inhouse	Description Technical Provisions	
Approved B-O Kvist	Take over department	Instruction for 2902-16-0001 (3HAC077981-001)	Page 26
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