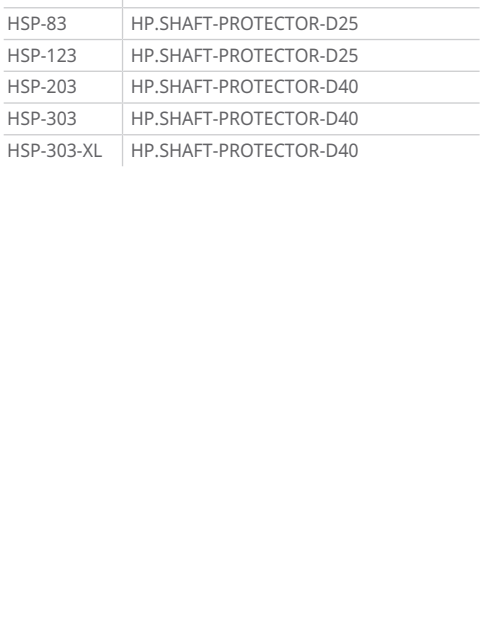
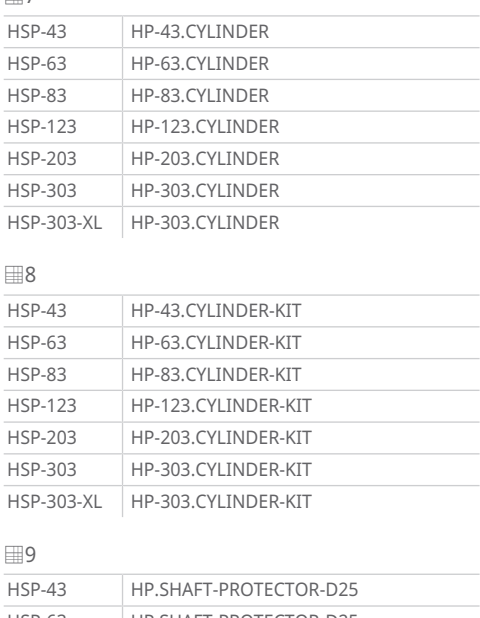
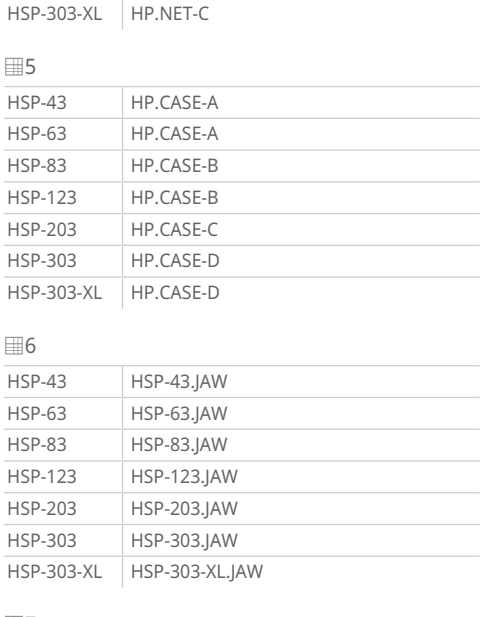
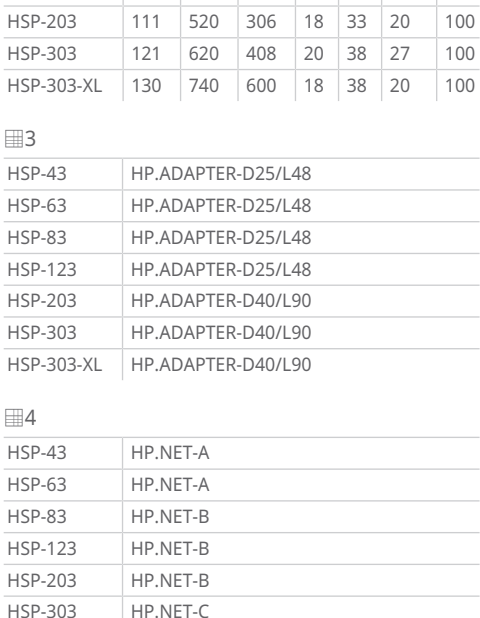
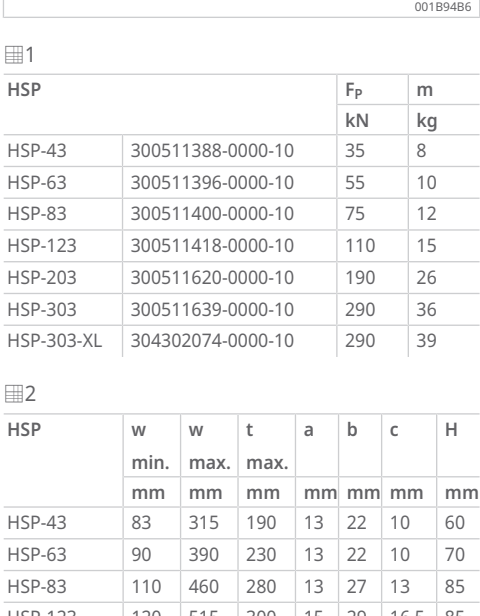
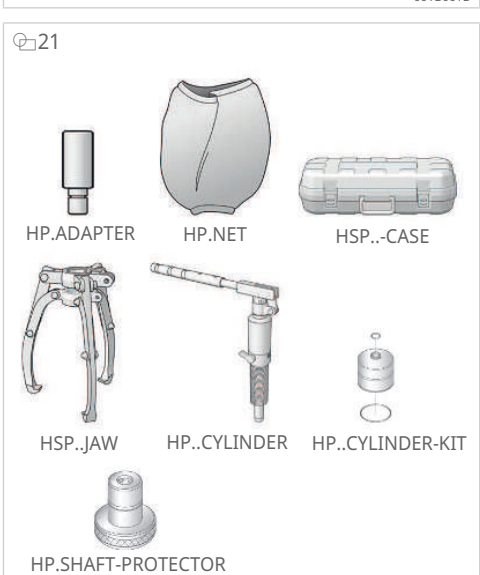
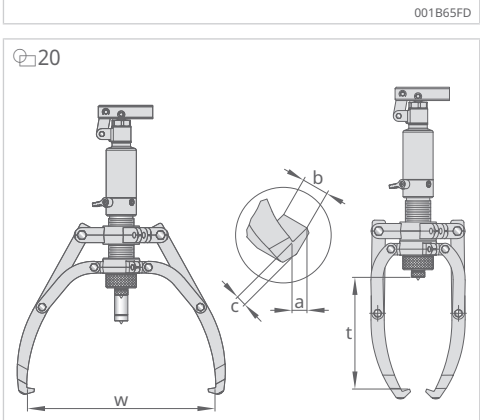
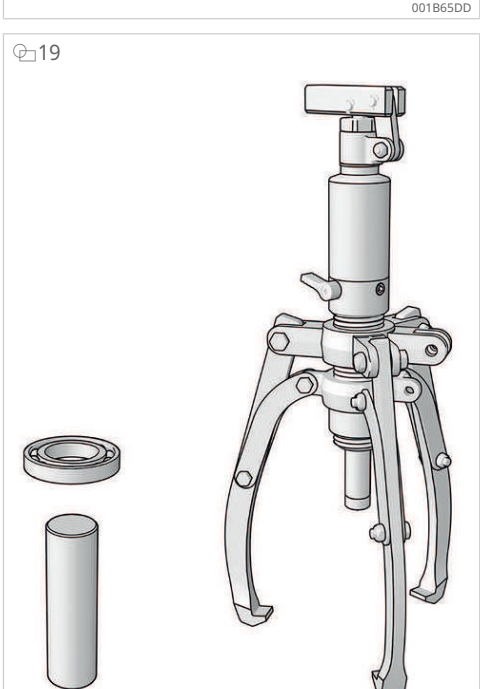
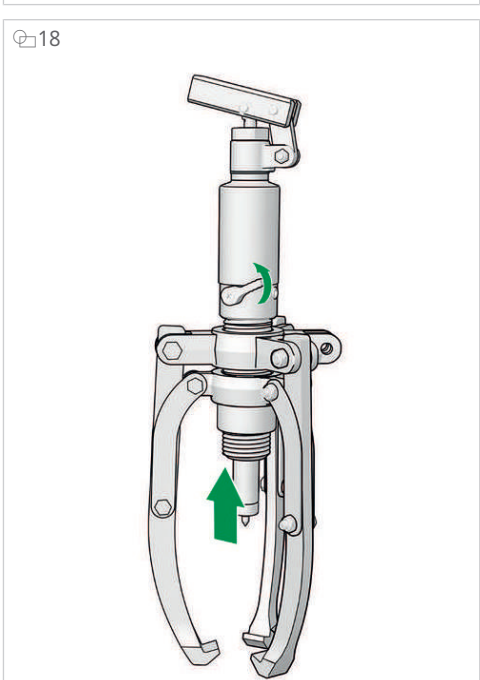
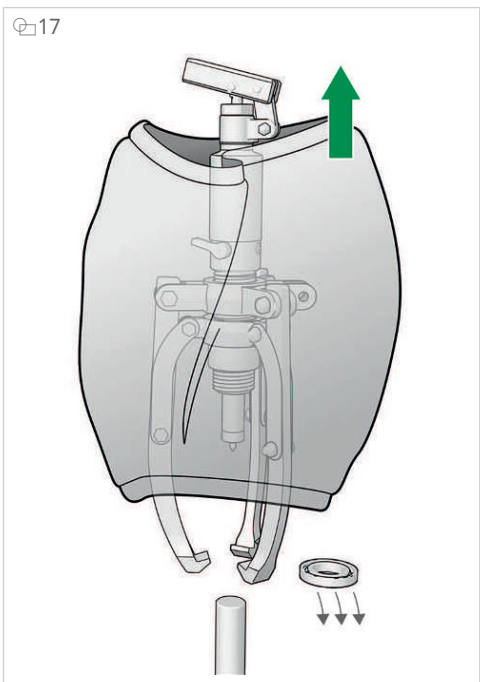
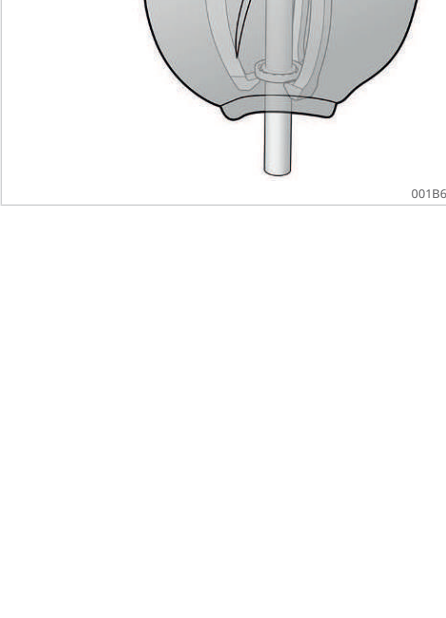
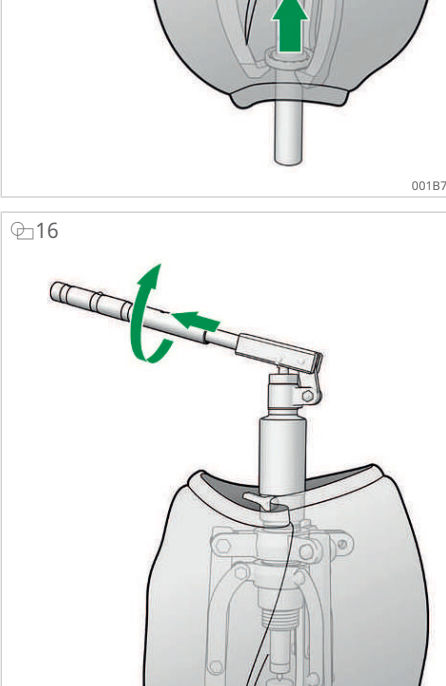
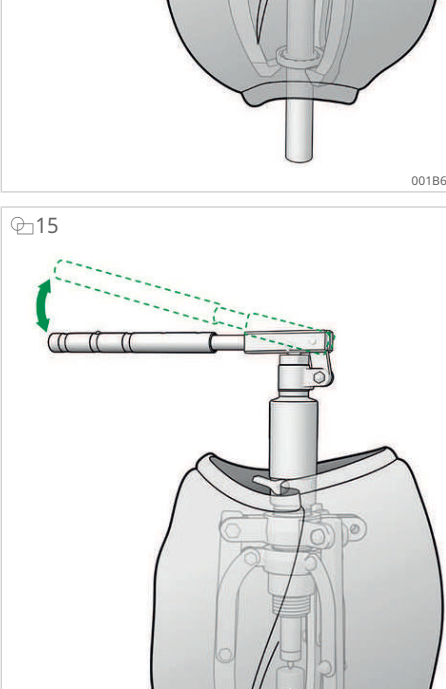
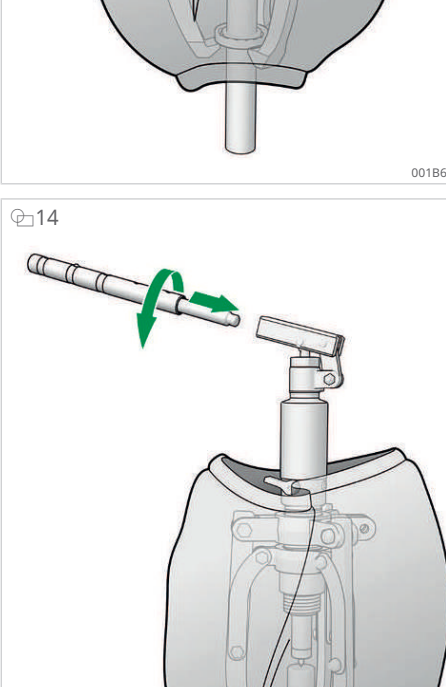
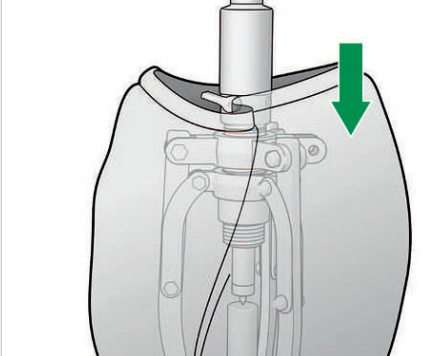
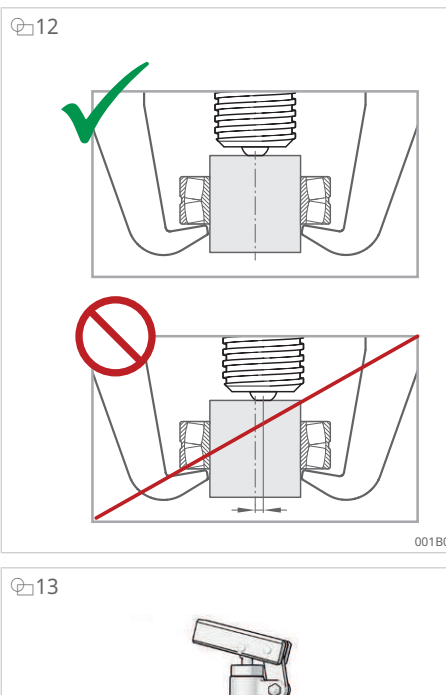
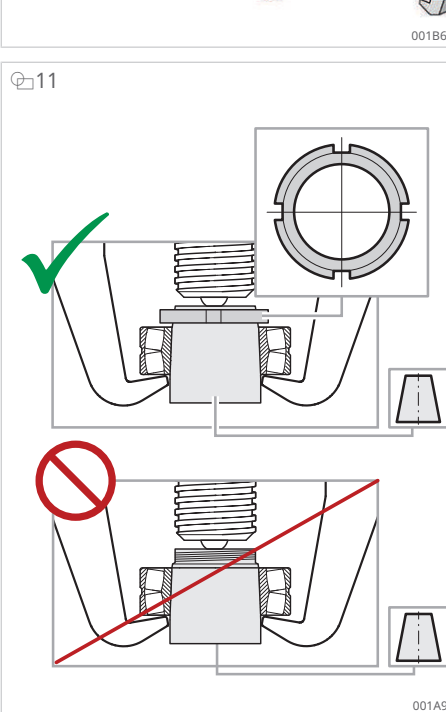
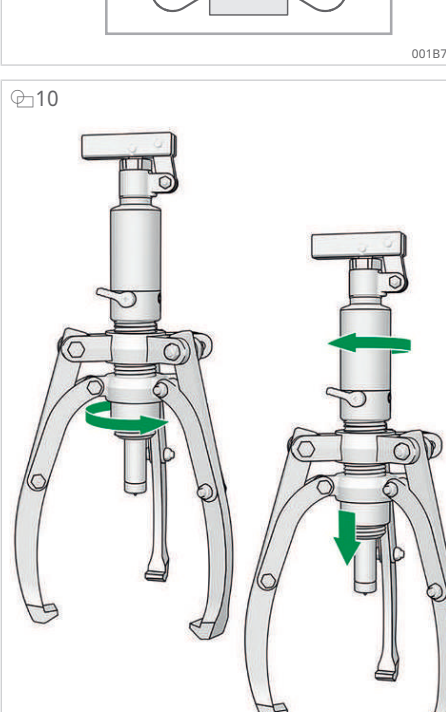
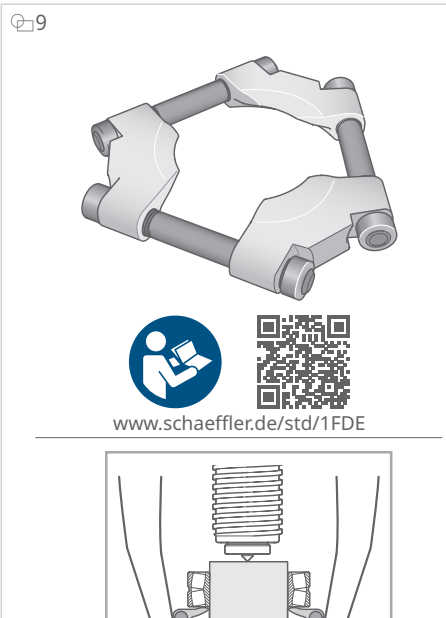
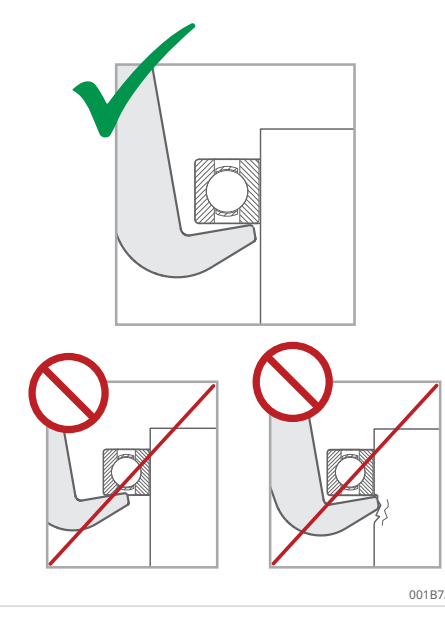
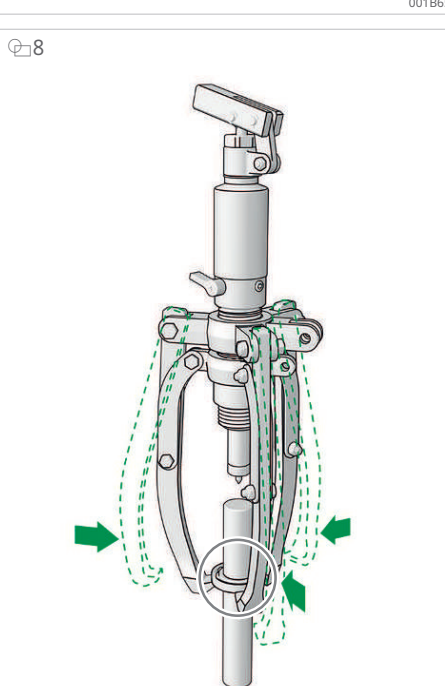
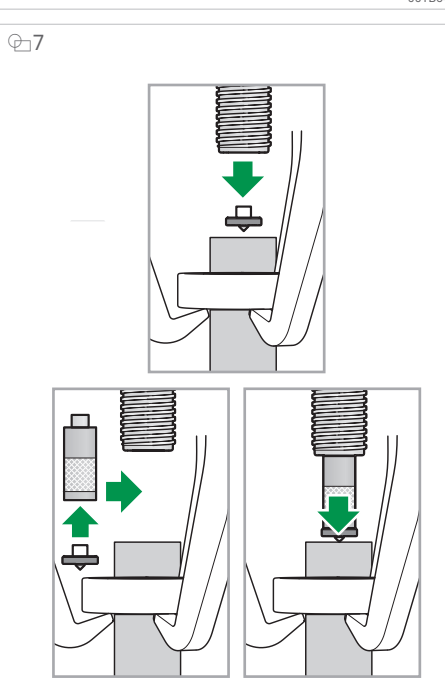
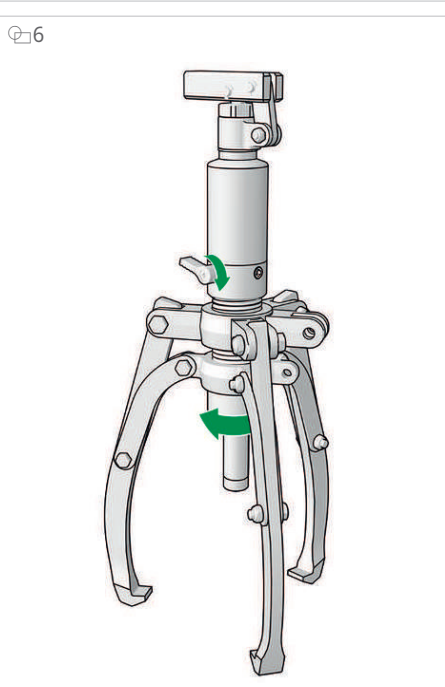
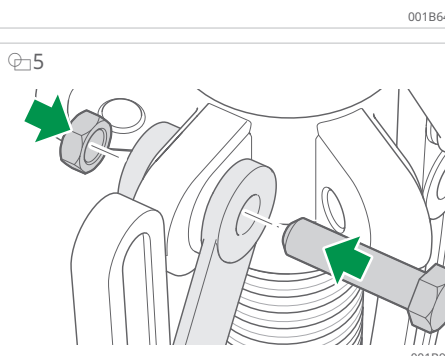
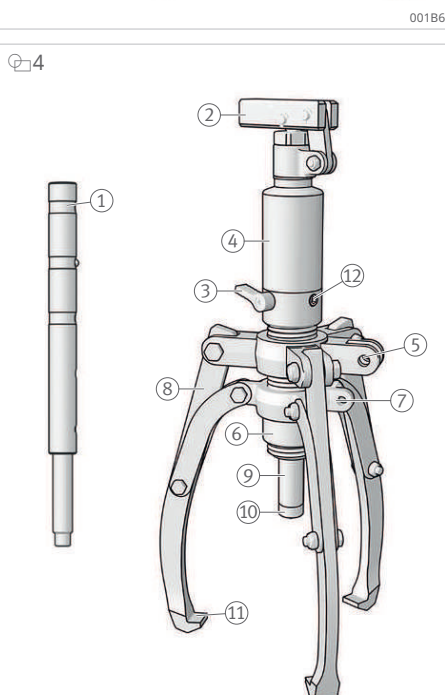
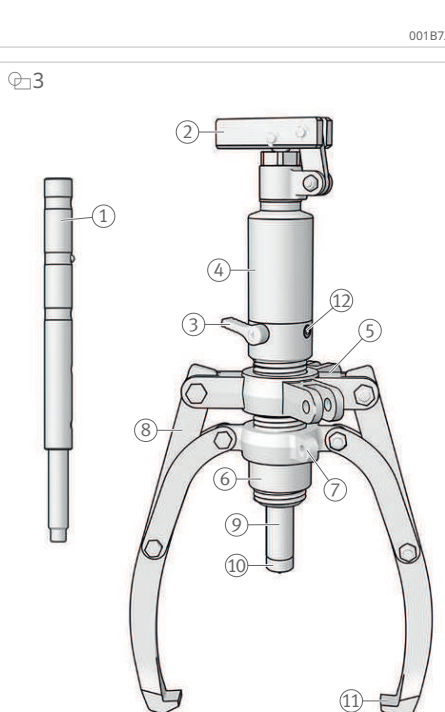
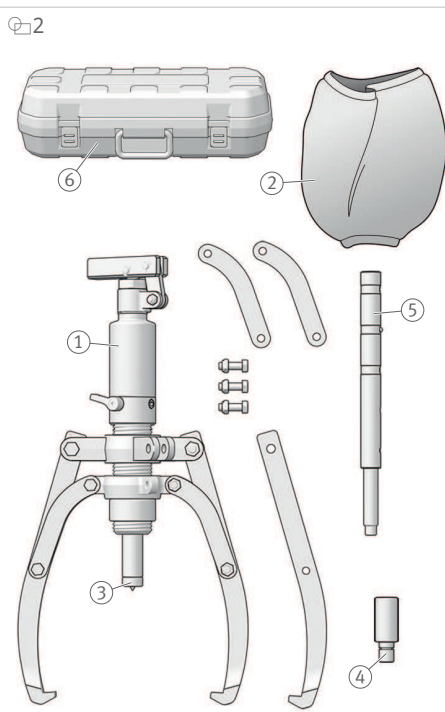
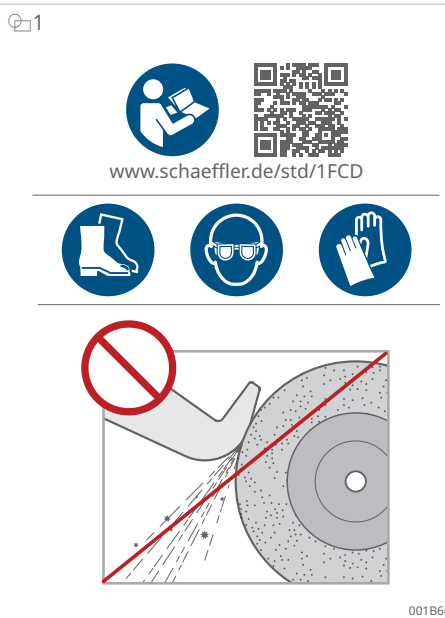




EN Hydraulic puller

HSP User Manual

1 About the manual

The original language of the manual is German. All other languages are translations from the original language.

► 1.1 Symbols

The warning and hazard symbols are defined in accordance with ANSI Z535.6-2011.

► 1.10 Warning and hazard symbols

Signs and descriptions

WARNING	In case of non-compliance, death or serious injury may occur.
CAUTION	In case of non-compliance, minor or moderate injury may occur.

1.2 Legal guidelines

The information in this manual reflects the status at the time of publication. Unauthorised modifications to or improper use of the product are not permitted. Schaeffler accepts no liability in these cases.

1.3 Images

The images in this manual may be schematic representations and may differ from the delivered device.

2 General safety regulations

2.1 Intended use

The puller may only be used to dismantle pulleys, bearings, couplings and other rotationally symmetrical workpieces mounted on a shaft. The puller may only be operated in strict accordance with the technical data provided. Only use original spare parts and accessories supplied by Schaeffler.

2.2 Qualified personnel

Obligations of the operator:

- Ensure that only qualified and authorised personnel perform the activities described in this manual.
 - Ensure that personal protective equipment is used.
- Qualified personnel must:
- Ensure adequate product knowledge, e.g. through training on proper handling and use of the puller.
 - Be fully familiar with the contents of this manual, particularly all safety instructions.
 - Be aware of any relevant country-specific regulations.

3 Scope of delivery

► 3.2 Scope of delivery HSP

- 1 HSP (1x)
- 2 Safety net or safety blanket (1x)
- 3 Centring piece (1x)
- 4 Adapter piece (1x to 4x, depending on the size)
- 5 Pump lever (1x)
- 6 Case (1x)

4 Commissioning

The puller can be used with 2 or 3 arms. For a more evenly distributed pulling force, the 3-arm configuration is recommended.

- Ensure that the device shows no signs of damage.

1. Fit 2 or 3 arms, following the illustrations provided.

► 3.3 Configuration with 2 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.4 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.5 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.6 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.7 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.8 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.9 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.10 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.11 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.12 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.13 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

► 3.14 Configuration with 3 arms

- 1 Pump lever
- 2 Integrated hydraulic hand pump
- 3 Switching valve
- 4 Hydraulic cylinder
- 5 Upper star
- 6 Knurled nut
- 7 Lower star
- 8 Arm
- 9 Piston
- 10 Centring piece
- 11 Pulling jaws
- 12 Filler nozzle

7 Decommissioning

1. Clean the puller with a dry cloth.
2. Store the puller in a dry location.

8 Maintenance

- ✓ Clean the device with a cloth and a mild degreasing agent after each use.
- 8.1 Refilling with oil
- ✓ Use hydraulic oil PUMP.HYDOIL-LPS78-1L.
 - 1. Clamp the hydraulic cylinder gently and horizontally in a vice with the filler nozzle facing upwards.
 - 2. Set the switching valve to [RETURN].
 - 3. Fully retract the piston into the hydraulic cylinder.
 - 4. Loosen the set screw in the filler nozzle using an Allen key.
 - 5. Refill with oil up to the lower edge of the bore.
 - 6. Screw the set screw into the filler nozzle and tighten it using an Allen key.
 - 7. Retract and extend the piston several times.

9 Disposal

Disposal must be carried out in accordance with locally applicable regulations.

10 Technical data

► 10.1 Available models

► 10.2 Dimensions

► 10.3 Dimensions

F _p	kN	Extraction force
H	mm	Stroke
m	kg	Mass
t	mm	Grip depth
w	mm	Grip width

► 10.4 Dimensions

► 10.5 Dimensions

► 10.6 Dimensions

► 10.7 Dimensions

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