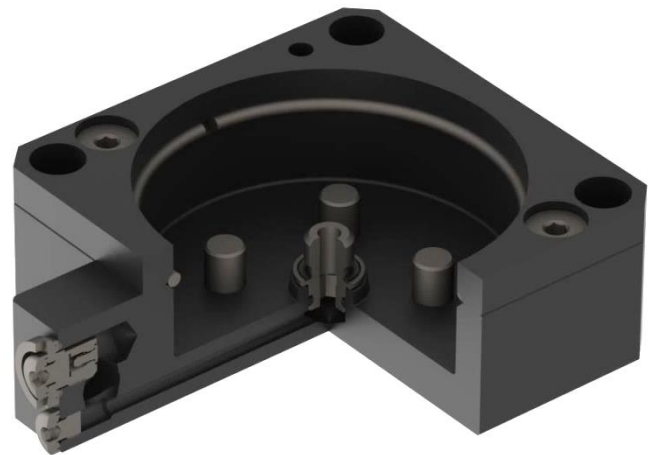
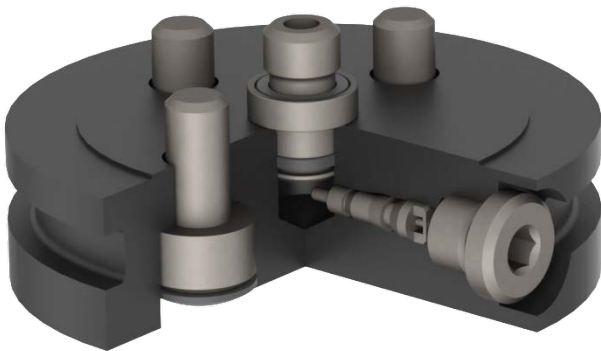
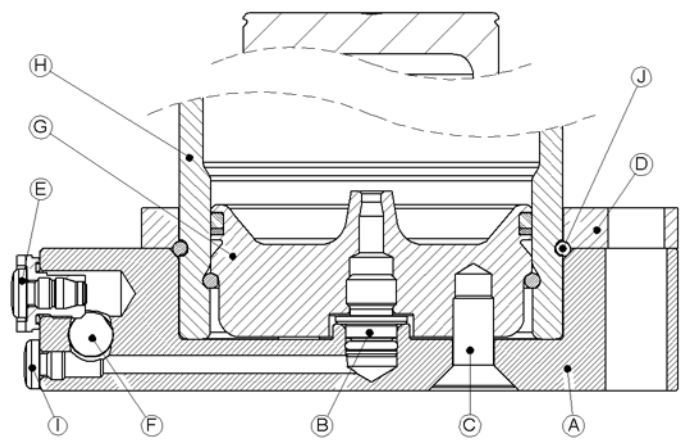
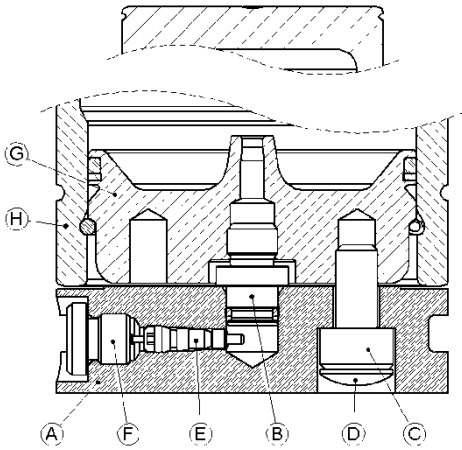


SP and SPRM Plates

Gas Spring Models

CU4 1000, CU4 1800,
CU4 2900, CU4 4700,
CU4 7500, CU4 11800,
CU4 18300





Parts List - SP

- A) *SP plate CU4 1000-18300
- B) *SP adapter 1800 - 18300
- C) *Socket head cap screw
- D) *Cap screw plug
- E) *Valve
- F) *Cover screw
- G) Bottom
- H) Tube

* = Parts incl. in the CU4-SP kit.

For CU4-SP 1000 the SP adapter is integrated in the SP plate.

Torque according to Table A.

Parts List - SPRM

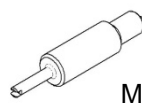
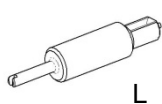
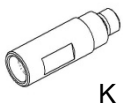
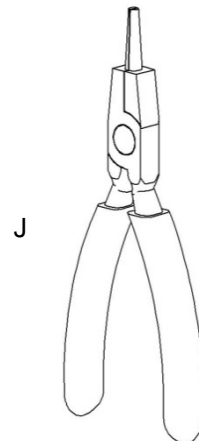
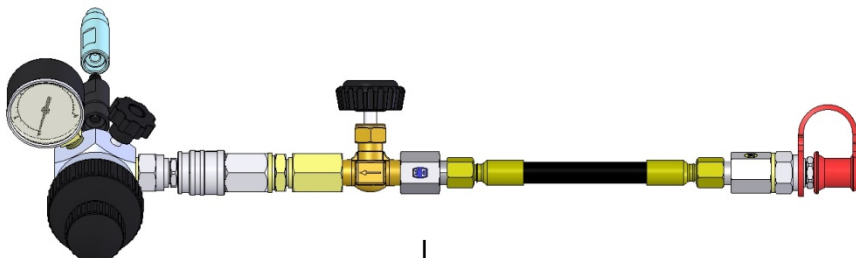
- A) *SPRM plate
- B) *SPRM adapter
- C) *Screw bolt
- D) *Upper flange
- E) *G1/8-M6 adapter with valve
- F) *Port plug
- G) Bottom
- H) Tube
- I) *Cover screw (do not remove or use)
- J) *Lock ring halves

* = Parts incl. in the CU4-SPRM kit.

Torque according to Table A.

Required Tools

- I) Charging Hose with Control Armature
- J) Needle Nose Pliers
- K) Charging Adapter G1/8"
- L) Valve Tool G1/8"
- M) Valve Tool M6



Warning!

- Only specially trained personnel with good knowledge of the products should carry out the following procedure.
- Before mounting or dismounting the SP or SPRM plate, make sure all gas pressure is exhausted.
- Once the cover screw is removed, never lean directly over the valve. Always direct the valve port away from yourself and others.
- Never use extreme force on the gas spring.
- Charged gas springs are under high internal pressure and should be protected against damage.
- Use only pure nitrogen (N₂) for gas charging.
- Maximum charging pressure is 150 bar (2175 psi).
- Always use protective jaws when clamping the spring in a vice.
- To achieve maximum service life, keep the gas spring protected from dirt, drawing fluids, and grinding dust.

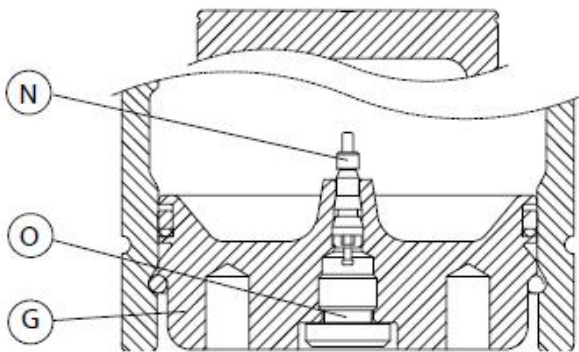



Table A


Mount Type	Gas Spring Size	Thread Size	Torque [Nm]
SP	CU4 1000 – 1800	M6	17
SP	CU4 2900 – 7500	M8	40
SP	CU4 11800 – 18300	M10	85
SPRM	CU4 4700 – 7500	M8	33
SPRM	CU4 11800 – 18300	M10	65

Instructions SP


- 1) Clamp the gas spring in a vice (fitted with protective jaws) with the piston directed downwards.
- 2) Unscrew the cover screw (O), M6 (for CU4 1000) or G1/8" (for CU4 1800 up to and including 18300). If there is no gas pressure inside the spring the bottom plate (G) may rotate.
- 3) If there is gas pressure inside the spring, release it by screwing the threaded end of the valve tool into the charging port until the valve needle opens.

 **Warning! The valve (N) must not be removed until the bottom plate can be pushed into the spring by hand or be tapped in using a plastic mallet.**


- 4) Unscrew the valve with the opposite end of the valve tool and remove it by using the needle nose pliers.

 **Warning! The valve must be removed before mounting the SP plate onto the gas spring. Otherwise the gas spring cannot be discharged through the SP plate.**


- 5) Unpack the SP plate.
- 6) Mount the SPRM adapter (B) onto the spring bottom using a 4 mm Allen key (except for CU4 1000)
- 7) We recommend applying Loctite 2701 on the SP adapter's threaded end to secure it firmly to the bottom plate.
- 8) Lubricate the O-ring on the SP adapter as well as the hole in the SP plate with some oil.
- 9) Mount the SP plate onto the SP adapter and center by hand.

 **Warning! Do not use excessive force. Misalignment of the SP adapter and bottom plate can result in damage to the bottom plate and/or O-ring.**

- 10) Mount the cap screws (C) by hand and use the prescribed torque (see table A) to tighten the screws.

 **Warning! If incorrect torque is used, a fatigue type failure may occur.**


- 11) Due to the high strain on the screws, it is recommended that these are replaced after 400,000 strokes to ensure the function (class 12.9).
- 12) Mount the cap screw plugs (D) in the hex sockets of the cap screws (C).
- 13) For self-contained gas springs, mount the valve (E) into the charging port using the valve tool. Finger strength is enough to tighten the valve.

 **Warning! Do not mount the valve when the gas spring is to be linked to a hoses system. Otherwise the gas spring cannot be discharged through a control block.**


For gas charging instructions, see Service Instruction 8200-1364.

Instructions SPRM


- 1) Clamp the gas spring in a vice (fitted with protective jaws) with the piston directed downwards.
- 2) Unscrew the cover screw (O), G1/8" (for CU4 4700 up to and including 18300). If there is no gas pressure inside the spring the bottom plate (G) may rotate.
- 3) If there is gas pressure inside the spring, release it by screwing the threaded end of the valve tool into the charging port until the valve needle opens.

 **Warning! The valve (N) must not be removed until the bottom plate can be pushed into the spring by hand or be tapped in using a plastic mallet.**


- 4) Unscrew the valve with the opposite end of the valve tool and remove it by using the needle nose pliers.

 **Warning! The valve must be removed before mounting the SPRM plate onto the gas spring. Otherwise the gas spring cannot be discharged through the SPRM plate.**


- 5) Unpack the SPRM plate.
- 6) Mount the SPRM adapter (B) onto the spring bottom using a 4 mm Allen key.
- 7) We recommend applying Loctite 2701 on the SP adapter's threaded end to secure it firmly to the bottom plate.
- 8) Mount the upper flange (D) onto the gas spring tube.
- 9) Position the lock ring halves (J) in the lower C-groove of the gas spring. Make the sure the upper flange is above the lock ring halves.
- 10) Lubricate the O-ring on the SPRM adapter as well as the hole in the SPRM plate with some oil.
- 11) Mount the SPRM plate onto the SPRM adapter and center by hand.

 **Warning! Do not use excessive force. Misalignment of the SPRM adapter and bottom plate can result in damage to the bottom plate and/or O-ring.**

- 12) Mount the screw bolts (C) by hand and use the prescribed torque (see table A) to tighten the screws.

 **Warning! If incorrect torque is used, a fatigue type failure may occur.**

- 13) Mount the upper flange (D) onto the SPRM plate (A) using the assembly screws and tighten.
- 14) For self-contained gas springs the charging valve is included in the plug insert. Remove the M6 cover screw and charge the gas spring. Do not use the M6 port located below the plug insert as there is no valve behind.

 **Warning! When linking the gas spring to a hoses system remove the valve if this connection port is to be used. Otherwise the gas spring cannot be discharged through a control block.**

For gas charging instructions, see Service Instruction 8200-1364.