MP 1000 A + MP 3000 A
ML 1000 C + ML 12000 C

* included in the maintenance kit

- One way valve*
- Retaining ring
- Dual ring*
- Rod seal*
- Bottom base

- Anti scratch nylon tube.

- Discharging device.
  BLUE side for M6 hole
  GOLD side for 1/8"G hole

- Hex T-key to remove charging hole plug and valve retaining screw.

- Multipurpose pliers with spouts.

- Table manual press for easy and safe positioning of components.

- Reassembly guiding tube + reassembly positioning tube for the retaining C-ring.

- Reassembly positioning tube.

- Before starting any maintenance operation, carefully check the model of cylinder for which it is required.

- Before starting any maintenance work, carefully check if the rod or the body of the cylinder are damaged or worn-out. If yes, it is recommended to replace the cylinder immediately and do not proceed with the maintenance operation.

- Before starting any maintenance operation, carefully check that this step-by-step manual corresponds to the model of cylinder for which it is intended.

- Special Springs along with its own global network are pleased to help you anytime for the best result of your work.

- Special Springs nitrogen gas cylinders are regenerated as new. Few minutes and the Special Springs nitrogen gas cylinders are regenerated as new.

- Special Springs research for the most useful maintenance kit is result of Special Springs along with its own global network.

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- Instructions and pictures of this step-by-step manual could slightly differ from practice, depending on the cylinder’s model.

- The complete assembled kit along with this step-by-step service manual is result of Special Springs research for the most useful maintenance operation for Special Springs nitrogen gas cylinders. Few minutes and the Special Springs nitrogen gas cylinders are regenerated as new one.

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I. DISCHARGING AND VALVE REMOVAL for self-contained cylinders

1. Remove the protection plug from the charging hole by using the special spring grease tool 49TB.. or 49TC.. for further safety. Replace immediately after use. 

II. DISCHARGING linked cylinders

1. Carefully check and clean the seals and guiding elements. Pay attention NOT to damage the sealing grooves. 

III. RETAINING RING REMOVAL

1. To exhaust pressure of linked cylinders open the discharging valve on the control panel.
2. Make sure the pressure is completely exhausted by pressing down the glass window. 
3. Unthread and remove the one way valve from the cylinder by unscrewing the M6 inner nut and the retaining C-ring from the groove. 
4. Push the bottom base into the body using the manual press (58CD01) and the positioning tube (58TT..) for an easy removal of the retaining C-ring. 

VIII. REASSEMBLY OF THE ROD AND BOTTOM BASE

1. Check the correct assembly of the one way valve, press the cylinder upside down into the body. Then thread the protective plug into the charging port.
2. Adjust and assemble the adaptable adapter and thread it on the charging port. For an easy and safe operation carefully follow the instructions supplied with the charging adapter.
3. Check the correct assembly of the control panel charging adapter and thread it on the charging port.
4. Cross section of correct reassembly: ALWAYS check the correct and complete positioning of the C-ring into the proper groove. 

IX. CHARGING AND FORCE TEST for self-contained cylinders

1. Follow the instructions supplied with the charging adapter and thread it on the charging port. For an easy and safe operation carefully follow the instructions supplied with the charging adapter.
2. Use a force tester to check the connection pressure. 

X. CHARGING AND FORCE TEST for linked cylinders

1. Follow the instructions supplied with the charging adapter and thread it on the charging port. For an easy and safe operation carefully follow the instructions supplied with the charging adapter. 

NOTE:

- It is always recommended to check on the upper side of the cylinders after the maintenance work and before reusing the cylinders by using the special gas detector. 
- It is always recommended to check on the upper side of the cylinders after the maintenance work and before reusing the cylinders by using the digital force tester. 
- The correct positioning will make a “click” sound. 
- The correct positioning will make a “click” sound. 
- After positioning and fixing all the components to the proper position and reassembly of the cylinder, close the charging port. 
- The correct positioning will make a “click” sound. 

3. Cross section of the cylinder to see the correct position of the seals and guiding elements. 

4. Cross section of the cylinder to see the correct position of the seals and guiding elements. 

5. Cross section of the cylinder to see the correct position of the seals and guiding elements.