

# Disassembly of the Main Valve. Series 810 and 820.



# Objectives of the presentation. Increase special knowledge.

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. [Piston, liner and disc](#) | 5. [Piston](#) | 6. [Luproseal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. [Pitot tube](#)

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Aim of this presentation is to **explain** the **disassembly** of the **Main Valve**.



# Disassembly Instructions. Disassembly of the fittings.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

## 1. Steps – Descriptions

- 1 Loosen and screw off angular screw-in fitting, while loosening counter fitting [4]
- 2 Remove compression fitting

## 2. Supplies

- None

## 3. Tools

- Open-end wrench acc. to LID

## 4. Appliance

- Test bench



# Disassembly Instructions. Removing the top plate.

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. [Piston, liner and disc](#) | 5. [Piston](#) | 6. [Lupro seal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. [Pitot tube](#)

## 1. Steps – Descriptions

- 1** Loosen ringnuts [57] and screw them off

Loosen and remove nuts [56]

Remove top plate [9]

- 2** Remove stud bolts [55] (if necessary)

- 3** Remove dome spring [59]



# Disassembly Instructions. Removing the top plate.

1. Objectives | 2. Fittings | 3. **Top plate** | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

**4** Remove O-rings [60], [67]

**5** Remove roll pin [10] (if necessary)

## 2. Supplies

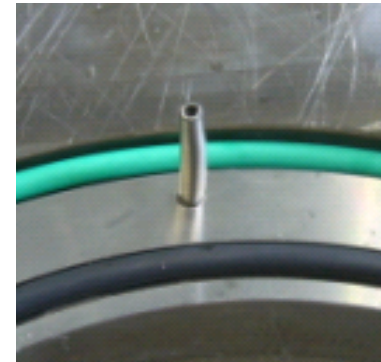
- None

## 3. Tools

- **Helpful:** Impact wrench acc. to LID
- Ring wrench acc. to LID

## 4. Appliance

- Test bench



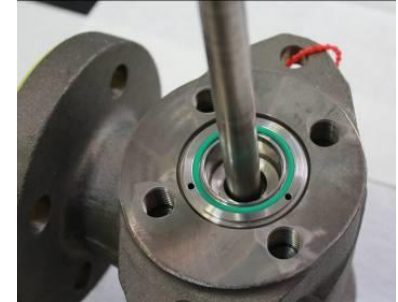


# Disassembly Instructions. Remove the piston and liner.

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. [Piston, liner and disc](#) | 5. [Piston](#) | 6. [Lupro seal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. [Pitot tube](#)

## 1. Steps – Descriptions

- 1** Screw in piston [6] disassembly tool – if necessary
- 2** Pull out piston [6] with aid of disassembly tool or by hand – depends on size  
(nominal size 1x2...2x3 by hand)



# Disassembly Instructions. Remove the piston and liner.

1. Objectives | 2. Fittings | 3. Top plate | 4. **Piston, liner and disc** | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

**3** Pull liner [8] out of body [1]

## 2. Supplies

■ None

## 3. Tools

■ **Helpful:** Piston disassembly tool  
(for nominal size 3x4 and above)

## 4. Appliance

■ Test-bench



# Disassembly Instructions. Disassembly of the piston/liner.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

## 1. Steps – Descriptions

### Piston size 1x2...2x3

- 1 Push piston [6] through liner [8] to separate piston [6] and liner [8]

### Piston size 3x4...8x10

Pull out piston [6] of liner [8]





# Disassembly Instructions. Disassembly of the piston/liner.

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. **[Piston, liner and disc](#)** | 5. [Piston](#) | 6. [Lupro seal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. [Pitot tube](#)

## 2. Supplies

- None

## 3. Tools

- None

## 4. Appliance

- None



# Disassembly Instructions. Disassembly of the piston and disc.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Lupro seal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

## 1. Steps – Descriptions

- 1 Loosen screw [58] with socket wrench and remove it.

## 2. Supplies

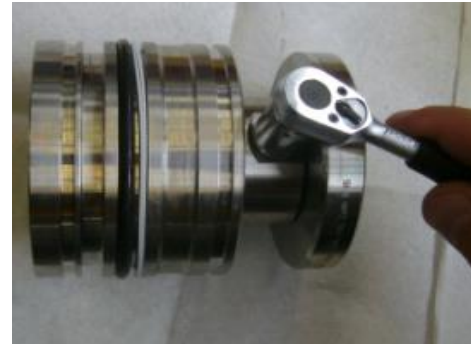
- None

## 3. Tools

- Socket wrench acc. to LID

## 4. Appliance

- None



# Disassembly Instructions. Disassembly of the piston.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

## 1. Steps – Descriptions

- 1 Loosen allen screws and remove  
Separate all components by lifting or pulling  
them apart
- 2 Remove O-ring [6.3] , guide rings [6.5]  
and backup ring [6.4]

## 2. Supplies

- None

## 3. Tools

- Ratchet with allen key acc. to LID

## 4. Appliance

- None



# Disassembly Instructions. Disassembly: Luproseal OC R20 (optional only).

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

## 1. Steps – Descriptions

- 1 Loosen allen screws and remove  
Separate all components by lifting or pulling them apart
- 2 Remove luproseal lip seal [6.3]  
OC R 20

## 2. Supplies

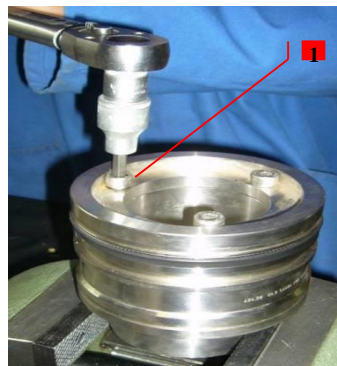
- None

## 3. Tools

- Ratchet with allen key acc. to LID

## 4. Appliance

- Parallel vice with aluminium jaws



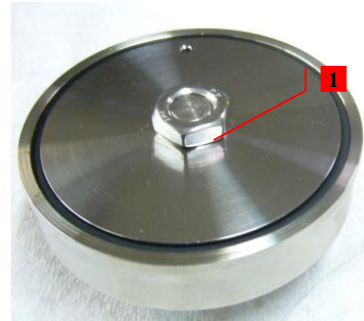
# Disassembly Instructions. Disassembly the disc.

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. [Piston, liner and disc](#) | 5. [Piston](#) | 6. [Lupro seal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. [Pitot tube](#)

## 1. Steps – Descriptions

- 1 Loosen and screw off nut [7.4]
- 2 Remove retainer [7.2]

**Nominal size 3x4 and above:** retainer [7.2] has three threads M8. Remove retainer by screwing in 3 bolts (M8) and pull apart





# Disassembly Instructions. Disassembly the disc.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

- 3 Take O-ring out of disc [7.1] by using Hook tool.

## 2. Supplies

- None

## 3. Tools

- Ring wrench acc. to LID
- Hook tool for O-rings

## 4. Appliance

- None

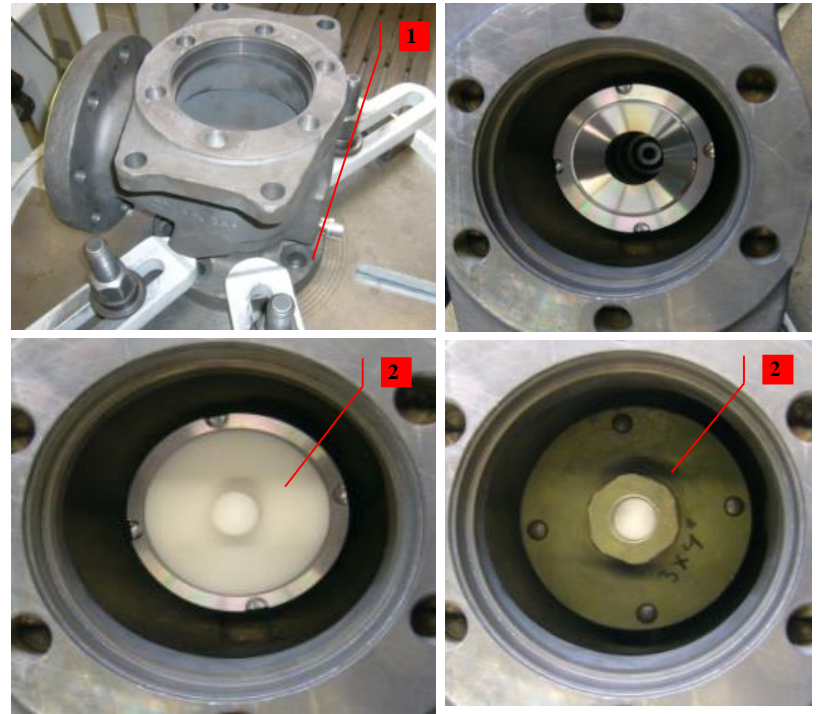


# Disassembly Instructions. Disassembly of the seat.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. **Seat** | 9. Pitot tube

## 1. Steps – Descriptions

- 1** Clamp body [1] at inlet
- 2** Mount seat-assembly-tool – step by step  
Screw out nozzle [5]



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# Disassembly Instructions. Disassembly of the seat.

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. **Seat** | 9. Pitot tube

- 3** Remove O-ring [61] and back up ring [62] of nozzle

## 2. Supplies

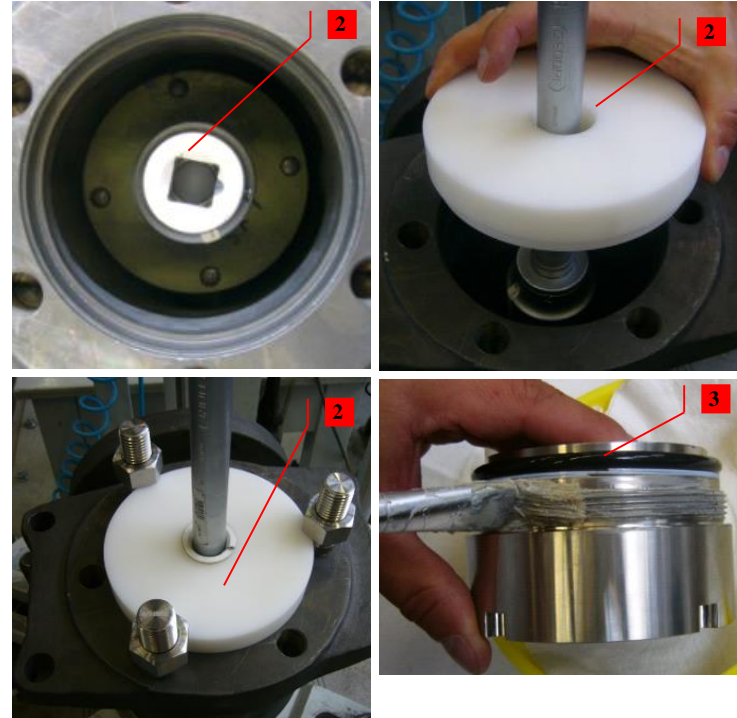
- None

## 3. Tools

- **Necessary:** Seat-assembly-tool acc. nominal size

## 4. Appliance

- Test bench



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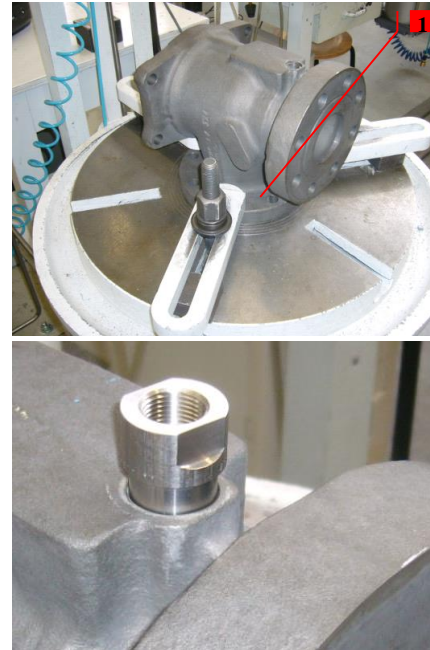
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# Disassembly Instructions. Disassembly of the pitot tube

1. [Objectives](#) | 2. [Fittings](#) | 3. [Top plate](#) | 4. [Piston, liner and disc](#) | 5. [Piston](#) | 6. [Luproseal OC R20](#) | 7. [Disc](#) | 8. [Seat](#) | 9. **Pitot tube**

## 1. Steps – Descriptions

- 1 Clamp body with outlet



# Disassembly Instructions. Disassembly of the pitot tube

1. Objectives | 2. Fittings | 3. Top plate | 4. Piston, liner and disc | 5. Piston | 6. Luproseal OC R20 | 7. Disc | 8. Seat | 9. Pitot tube

Loosen and remove fitting [4]

**1** Remove pipe and pitot tube

Depending on nominal size tube [3]  
is not applicable.

**3** Remove O-ring [63]

## 2. Supplies

■ None

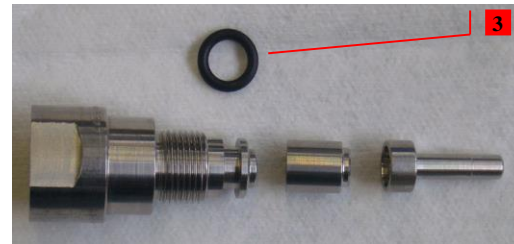
## 3. Tools

■ Hook tool for O-rings

■ Open-end wrench acc. to LID

## 4. Appliance

■ Test bench





**Disassembly of the Main Valve.**  
Thank you for your kind attention.

