

# How to disassemble: Type 459

## Disassembly instruction Type 459



# Objectives of the presentation. Increase special knowledge.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly of the type 459](#)

The aim of this presentation is to give an overview how to **disassemble the LESER Compact Performance Safety Valves type 459.**



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# General. Compact Performance.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly of the type 459](#)

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LESER Compact Performance safety valves offer ultimate protection against overpressures in all applications for steam, gases and liquids where smaller capacities are required.

## Advantages:

- Great variety of threaded or flanged connections available
- Soft seat for superior tightness
- Valve sizes from 3/8" through 1 1/2"
- Wide range of materials and options to fit any application

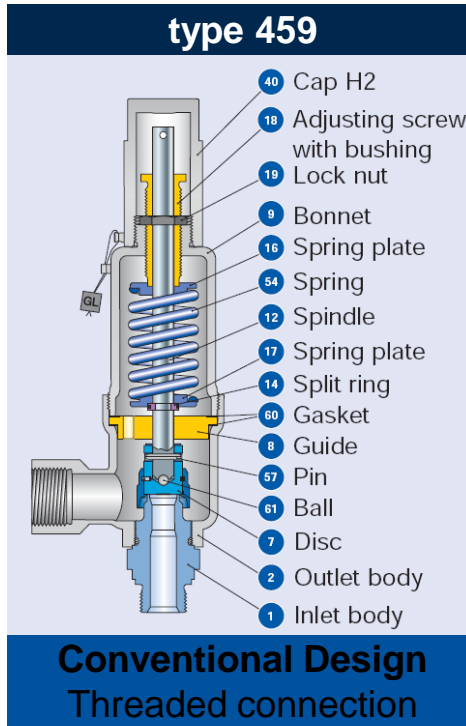


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# General Illustration.

1. Objectives | 2. General | 3. **General Illustration** | 4. Disassembly of the type 459



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# Disassembly of the type 459 1. Disassembly of the lift indicator in H4 lever.

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Step 1-1

- Remove lock nut.



Step 1-2

- 2. Remove nut and screw out the lift indicator completely

# Disassembly of the type 459 2. Disassembly of cap/lever.2.1

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 2.1 Disassembly of the cap H2



### Step 2.1-1

- Loosen bonnet and screw it off
- Tools: Open-end spanner

# Disassembly of the type 459 2. Disassembly of cap/lever.2.2

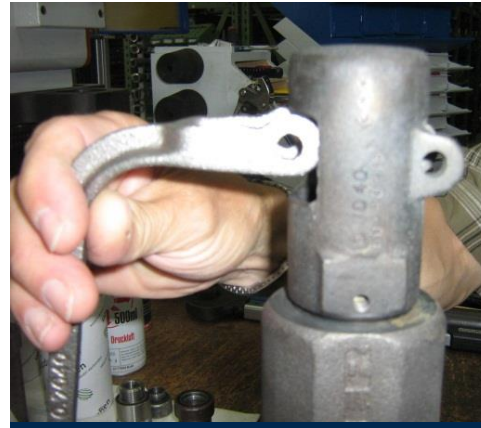
1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 2.2 Disassembly of the lever H3



**Step 2.2-1**

- Remove retaining washers on both sides.
- Pull out bolt.



**Step 2.2-2**

- Pull out the lever.



**Step 2.2-3**

- Loosen and remove lock screw. Remove plastic ball.

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# Disassembly of the type 459 2. Disassembly of cap/lever 2.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 2.2 Disassembly of the lever H3



### Step 2.2-4

- Individual parts of lever H3



### Step 2.2-5

- Remove the retaining clip and cylinder pin from the spindle cap. Pull the spindle cap off the spindle.



### Step 2.2-6

- Retaining clip and cylinder pin.



# Disassembly of the type 459 2. Disassembly of cap/lever 2.3.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 2.3 Disassembly of the lever H4



### Step 2.3-1

- Screw lever off.
- Remove spacer ring



### Step 2.3-2

- Remove the retaining clip and cylinder pin from the spindle cap. Pull the spindle cap off the spindle.



### Step 2.3-3

- Retaining clip and cylinder pin

# Disassembly of the type 459 3. Disassembly of outlet 3.1.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 3.1 Disassembly of outlet flange (conical NPT thread)



### Step 3.1-1

- Place flange over the outlet of the body. Unscrew nozzle from outlet body.



### Step 3.1-2

- Unwind sealing tape from the thread of the outlet nozzle.

# Disassembly of the type 459 3. Disassembly of outlet 3.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 3.2 Disassembly of outlet flange (cylindrical thread)

### Step 3.2-1

- Place flange over the outlet body. Screw outlet nozzle out of outlet body.
- Tools: Open-end spanner



# Disassembly of the type 459 4. Disassembly of the bonnet 4.1.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 4.1 Disassembly of bonnet (without stainless steel bellows)



### Step 4.1-1

- Secure the spindle/disc against turning.
- Tools: Open-end spanner Pin punch



### Step 4.1-2

- Unscrew and remove the bonnet.
- Tools: Open-end spanner

# Disassembly of the type 459 4. Disassembly of the bonnet 4.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 4.2 Disassembly of bonnet (with stainless steel bellows)



### Step 4.2-1

- Secure the spindle/disc against turning.
- Unscrew and remove the bonnet.
- Tools: Open-end spanner, Pin punch

## 5. Disassembly of the spindle/disc assembly

### 5.1 Disassembly of the assembly (with elastomer bellows)



### Step 5.1-1

- Carefully pull the assembly out of the outlet body.
- Pull the top spring plate, spring and bottom spring plate from the spindle one after the other.

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# Disassembly of the type 459 5. Disassembly of the spindle/disc assembly 5.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 5.2 Disassembly of the assembly (with stainless steel bellows)



### Step 5.2-1

- Pull the top spring plate, spring and bottom spring plate from the spindle one after the other.



### Step 5.2-2

- Loosen the bonnet spacer with the C-spanner and remove.
- Tools: C-spanner with a nose

# Disassembly of the type 459 5. Disassembly of the spindle/disc assembly.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 5.2 Disassembly of the assembly (with stainless steel bellows)

### Step 5.3-1

- Carefully pull the assembly out of the outlet body.



# Disassembly of the type 459 5. Disassembly of the spindle/disc assembly 5.3.

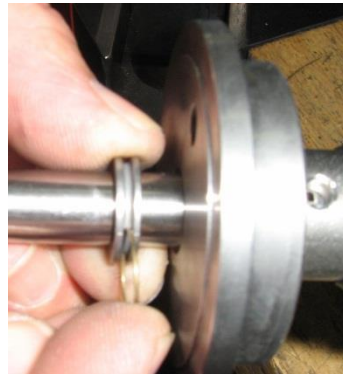
1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 5.3 Disassembly of the assembly (without bellows)



### Step 6.1-1

- Pull the top spring plate, spring and bottom spring plate from the spindle one after the other.



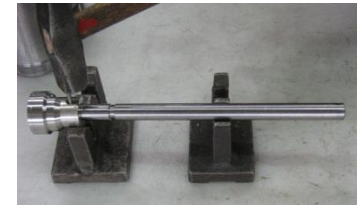
### Step 6.1-2

- Remove retaining clip and split rings.



### Step 6.1-3

- Pull the guide off the spindle



### Step 6.1-4

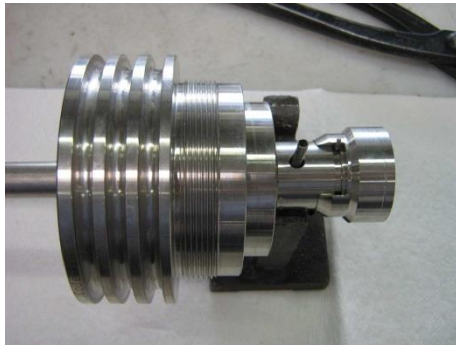
- Drive the pin out of the spindle with the pin punch. Pull disc off the spindle.



# Disassembly of the type 459 6. Disassembly of the spindle/disc assembly 6.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 6.2 Disassembly of the spindle/disc assembly (with stainless steel bellows)



### Step 6.2-1

- Drive the pin out of the spindle with the pin punch. Pull disc off the spindle.



### Step 6.2-2

- Pull the spindle with the bellows out of the cooling zone.



### Step 6.2-3

- Remove retaining clip and half-washers.
- The bellows and spindle cannot be separated because they are glued together

# Disassembly of the type 459 6. Disassembly of the spindle/disc assembly 6.3.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 6.3 Disassembly of the spindle/disc assembly (with elastomer bellows)



### Step 6.3-1

- Cut through cable tie.



### Step 6.3-2

- Pull elastomer bellows from the disc and from the guide washer. Pull the bellows and guide washer from the spindle.



### Step 6.3-3

- Pull out the 4 pins and remove the disc.

# Disassembly of the type 459 7. Disassembly of the inlet body 7.1.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 7.1 Inlet body disassembly for flanged connector (cylindrical thread)



### Step 7.1-1

- Remove outlet body from inlet body with an open-end spanner.



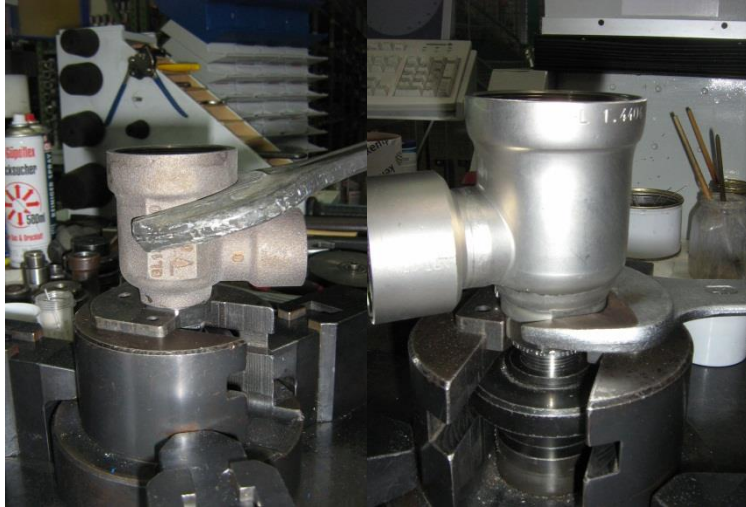
### Step 7.1-2

- Screw off the outlet body. Remove the loose flange from the inlet body.

# Disassembly of the type 459 7. Disassembly of the inlet body 7.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459

## 7.2 Disassembly of the inlet body for threaded connector (cylindrical thread)



### Step 7.2-1

- Loosen the outlet body with the open-end spanner. Unscrew outlet body from inlet body.

# Disassembly of the type 459 8. Disassembly of the pressure screw.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly of the type 459



## Step 8-1

- Screw adjusting screw out of the bonnet.



## Step 8-2

- Unscrew lock nut from adjusting screw.



## Step 8-3

- Unscrew lock nut from adjusting screw.

**How to disassemble Compact Performance.** Thank you.



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