

# How to disassemble API

Disassembly instruction API



# Objectives of this Presentation. Increase special knowledge.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly instruction Type 526](#)

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Aim of this presentation is to give an **overview** about the **disassembly of API safety valves type 526**.



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# General. API Safety Valves.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly instruction Type 526](#)

LESER API Safety Valves offer ultimate protection against overpressures in all applications for steam, gases and liquids. They can be used e.g. in refineries, in the chemical industry and with oil and gas-onshore and offshore.

## Vorteile:

- Single trim for steam, gas and liquid
- Valve sizes 1" – 8", Orifice D – T
- Great variety of aseptic connections and option to fit any application



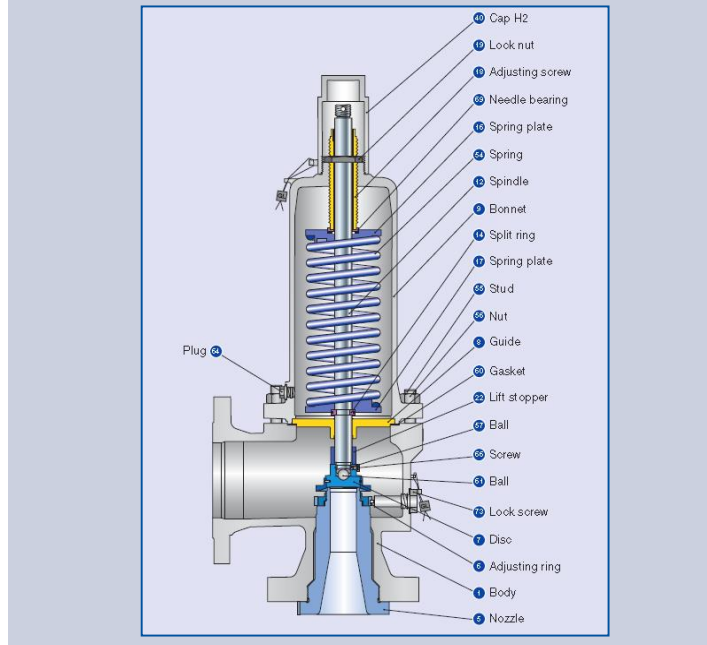
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# General Illustration.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Cross-sectional view API 526



# Disassembly of type 526. 1. Disassembly of caps and lever – 1.1 Cap H2.

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## Step 1.1-1

- Loosen cap with a spanner and screw off
- Tools: Open-end spanner



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# Disassembly of type 526. 1. Disassembly caps and lever – 1.2 Lever H3.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 1.2-1

- Remove retaining washers.

## Step 1.2-2

- Pull out the pin and lever



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# Disassembly of type 526. 1. Disassembly caps and lever – 1.2 Lever H3.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 1.2-3

- Loosen the clamping screw and screw the cap off
- Tools: Ring spanner



## Step 1.2-4

- Completely unscrew the screw and remove the plastic ball



# Disassembly of type 526. 1. Disassembly caps and lever – 1.2 Lever H3.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly instruction Type 526](#)

## Step 1.2-5

- Remove retaining clip and pin
- Pull spindle cap off the spindle





# Disassembly of type 526. 1. Disassembly caps and lever – 1.3 Lever H4.

1. [Objectives](#) | 2. [General](#) | 3. [General Illustration](#) | 4. [Disassembly instruction Type 526](#)

## Step 1.3-1

- Loosen lever with open-end spanner and screw it off
- Remove spacer rings
- Tools: Open-end spanner

## Step 1.3-2

- Remove the retaining clip and pin
- Pull the spindle cap off the spindle



# Disassembly of Type 526. 2. Disassembly of the lift indicator.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 2-1

- Loosen the lock nut of the lift indicator
- Loosen first nut and screw out the lift indicator

## 3. Removing the test gag (possible for H2 and H4)

### Step 3-1

- Loosen and unscrew the screw
- Remove sealing ring from the screw
- Tools: Open-end spanner



# Disassembly of type 526. 4. Disassembly of the O-ring damper. 4.1

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## 4.1 Disassembly of the O-ring damper H2.

### Step 4.1-1

- Loosen the cap and unscrew it from the bonnet
- Tools: Open-end spanner

### Step 4.1-2

- Remove the retaining spring from the opposite ring



# Disassembly of Type 526. 4.1 Disassembly of the O-ring damper H2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 4.1-3

- Remove the opposite ring from the support sleeve



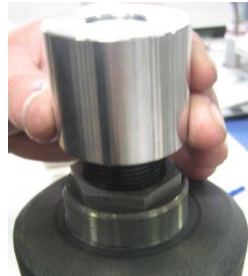
## Step 4.1-4

- Pull o-ring off the spindle over the support sleeve



## Step 4.1-5

- Remove the support sleeve from the spindle



# Disassembly of type 526. 4.2 Disassembly of the O-ring damper H4.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 4.2-1

- Loosen cap and screw it off

## Step 4.2-2

- Remove spring, first O-ring, support sleeve, opposite ring and second O-ring from the spindle

## Step 4.2-3

- Remove the retaining clip and pin
- Pull the spindle cap off the spindle

## Step 4.2-4

- Individual parts of the O-ring damper



# Disassembly of type 526. 5. Disassembly adjusting screw.

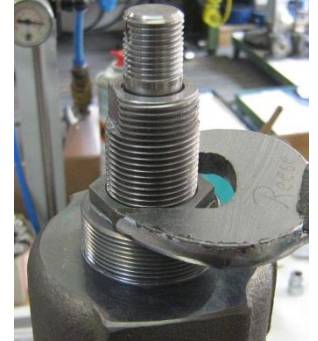
1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 5-1

- Remove lock nut from adjusting screw
- Tools: Open-end spanner

## Step 5-2

- Secure the spindle from turning with a pin punch
- Apply the open-end spanner in a clockwise direction until no more pressure can be felt from the spring
- Tools: Pin punch, Open-end spanner



# Disassembly of type 526. 5. Disassembly adjusting screw.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 5-3

- Screw adjusting screw out of the bonnet



## Step 5-4

- Unscrew the lock nut



## Step 5-5

- Remove PTFE bushing



# Disassembly of type 526. 6. Disassembly of the bonnet.

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## Step 6-1

- Loosen the nuts and unscrew them from the studs
- Lift the bonnet off the bolts
- Tools: Open-end spanner





# Disassembly of type 526. 7. Disassembly of the spindle/disc assembly. 7.1.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## 7.1 Disassembly of the spindle/disc assembly (without bellows).

### Step 7.1-1

- Remove the top spring plate, spring and bottom spring plate from the spindle one after the other
- Lift the spindle with the guide out of body

### Step 7.1-2

- Remove the retaining clip and split rings from the spindle
- Pull the guide off the spindle



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# Disassembly of type 526. 7. Disassembly of the spindle/disc assembly 7.1.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## 7.1 Disassembly of the spindle/disc assembly (without bellows).

### Step 7.1-3

- Remove the lift stopper from the spindle, if applicable



### Step 7.1-5

- Take the ball out of the disc



### Step 7.1-4

- Loosen and unscrew the clamping screw
- Shake out all 3mm balls
- Tools: Ring spanner



# Disassembly of type 526. 7. Disassembly of the spindle/disc assembly 7.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## 7.2 Removing the assembly (with stainless steel bellows).

### Step 7.2-1

- Pull the top spring plate and axial needle-bearing off the spindle
- Remove the spring and bottom spring plate one after the other

### Step 7.2-2

- Lift the spindle/disc/cooling zone/guide out of the body



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# Disassembly of type 526. 7. Disassembly of the spindle/disc assembly 7.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## 7.2 Removing the assembly (with stainless steel bellows).

### Step 7.2-3

- Remove the retaining clip and split rings from the spindle



### Step 7.2-4

- Unscrew the clamping screw
- Tools: Ring spanner



### Step 7.2-5

- Take the ball out of the disc



# Disassembly of type 526. 7. Disassembly of the spindle/disc assembly 7.2.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

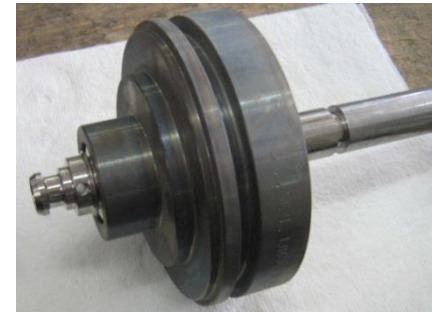
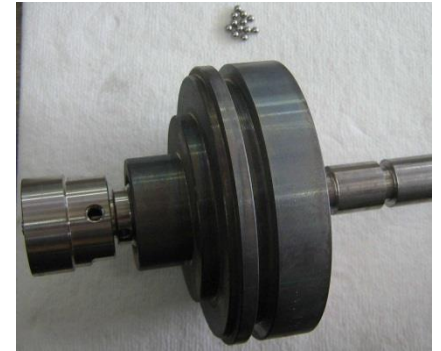
## 7.2 Removing the assembly (with stainless steel bellows).

### Step 7.2-6

- Take all 3 mm balls out of the disc

### Step 7.2-7

- Pull the cooling zone off the spindle
- The spindle and bellows cannot be disassembled because they are glued together



# Disassembly of type 526. 8. Disassembly of disc assembly – 8.1 Metallic Seal.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 8.1-1

- Unscrew the retaining ring with the C-spanner
- Tools: Hook spanner

## Step 8.1-2

- Remove lifting aid from disc body



# Disassembly of type 526. 8. Disassembly of disc assembly – 8.2 O-ring seal.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 8.2-1

- Loosen nut and screw it off.
- Tools: Open-end spanner



## Step 8.2-2

- Disc with washer and O-ring



## Step 8.2-3

- Remove retainer and O-ring



## Step 8.2-4

- Individual parts of the disc assembly with O-ring

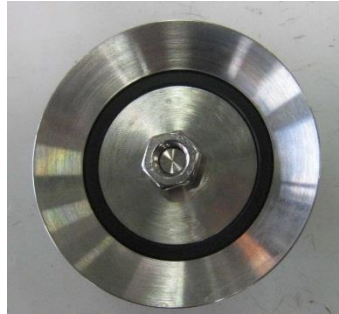


# Disassembly of type 526. 8. Disassembly of disc assembly – 8.3 Sealing plate.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 8.3-1

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



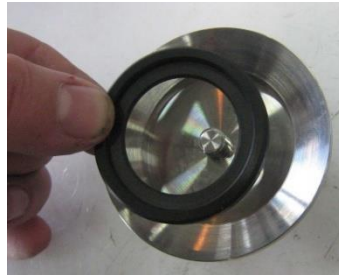
## Step 8.3-2

- Remove the retainer from the sealing plate



## Step 8.3-3

- Take the sealing plate out of the disc



## Step 8.3-3

- Individual parts of the disc assembly with sealing plate





# Disassembly of type 526. 9. Unscrewing the locking screw and screw plug.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 9-1

- Loosen and remove the plug screw from the side of the body
- Tools: Open-end spanner



## Step 9-2

- Loosen and remove the locking screw from the back part of the body
- Tools: Open-end spanner



## Step 9-3

- Remove the spacer from each of the two screws



# Disassembly of type 526. 10. Removing the studs from the body.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 10-1

- Remove studs with impact wrench
- Tip: Place the guide on the opening of the body so that no studs can fall on the seat
- Tools: Impact wrench



# Disassembly of type 526. 11. Disassembly of the nozzle and blow down ring.

1. Objectives | 2. General | 3. General Illustration | 4. Disassembly instruction Type 526

## Step 11-1

- Completely unscrew the blow down ring from the nozzle



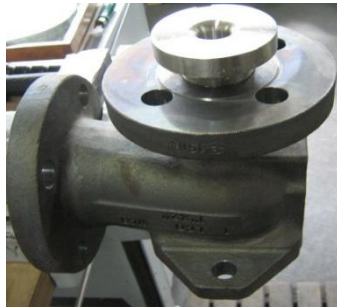
## Step 11-2

- Remove nozzle with C-spanner (put a small protective slab between the nozzle and C-spanner)
- Tools: Hook spanner



## Step 11-3

- Unscrew nozzle from the body



**How to disassemble API**  
Thank you for your attention.



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