





**Pneumatically actuated 2/2-way globe valve for decentralised automation**

- For high-pressure applications up to 1000 bar
- Long service life
- Simple, compact valve design
- Reliable and tested sealing elements
- Suitable for hydrogen



Product variants described in the data sheet may differ from the product presentation and description.

**Can be combined with**

	<b>Type 7012</b> Direct-acting 3/2-way plunger valve	▶
	<b>Type 6014</b> Plunger valve 3/2-way direct-acting	▶

**Type description**

The innovative Bürkert process on/off valve Type 2111 is the solution when it comes to shut-off tasks under demanding operating conditions. The directly controlled globe valve is specifically designed for high-pressure applications and meets all hydrogen-related industry requirements. Maximum service life and tightness are ensured by the Dynamic Sealing Package, even under heavy load conditions. High-quality stainless steels and additional refinement processes make pressure-bearing, moving parts resistant to hydrogen embrittlement. Furthermore, the unique design allows for easy detection of leaks and escaping gases, providing an enhanced degree of safety.

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## 1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "5. Dimensions" on page 7.
Material	
Body	Stainless steel 1.4404
Seal	Metal
Design	Seat valve with disc seal
Nominal diameter	DN 4 and DN 8
Safety position in the event of power failure	Closed (control function A)
Flow direction	In closing direction (above seat)
Performance data	
Operating pressure	0...1000 bar
Nominal pressure	PN 1000
Pilot Pressure	6...10 bar
Tightness	
Permissible internal leakage rate	$2 \times 10^{-3}$ mbar l/s at 20 bar, $5 \times 10^{-5}$ mbar l/s at nominal pressure
Permissible external leakage rate	$5 \times 10^{-5}$ mbar l/s
Max. switching cycles with regard to leakage rates	Ca. 30.000 at $\Delta p = 100...200$ bar
Max. absolute switching cycles (service)	Ca. 80.000 (1 year) at $\Delta p = 100...200$ bar
$K_v$ value	0,4 m <sup>3</sup> /h...0,7 m <sup>3</sup> /h
Medium data	
Operating medium <sup>1)</sup>	Hydrogen
Medium temperature	- 40 °C...+ 80 °C
Viscosity	Max. 22 mm <sup>2</sup> /s
Control medium	Clean, neutral gases
Approvals and conformities	
Further information can be found in chapter "3. Approvals and conformities" on page 5.	
Explosion protection	Further information can be found in chapter "3.4. Explosion protection" on page 5.
Material certificate	2,2, 3,1
Process/Port connection & communication	
Port connection	
Threaded connection	UNF 13/16 - 16
Pilot air port	G 1/8
Environment and installation	
Installation position	Upright or horizontal actuator
Ambient temperature	- 20 °C...+ 60 °C

1.) Media resistance according to the material combination

## 2. Control functions

### **⚠ CAUTION**

**Risk of injury due to bursting pipes and bursting appliance if the flow is above the seat.  
In the case of liquid media, a closing impact can cause pipes and the appliance to burst.**

Do not use valves with flow direction above the seat for liquid media.

Symbol	Description
<b>Flow direction under seat</b>	
	<p><b>Control function A (CF A)</b>                      Pneumatically operated 2/2-way on/off valve                      Flow direction above seat                      Normally closed by spring force</p>

### 3. Approvals and conformities

#### 3.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available versions can be supplied with the below mentioned approvals or conformities.

#### 3.2. Conformity



In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

- Pressure Equipment Directive 2014/68/E
- Machinery Directive 2006/42/EC

#### 3.3. Standards


The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

#### 3.4. Explosion protection

Approval	Description
 	<p><b>Optional: Explosion protection</b> As a category 2 device suitable for zone 1/21 and zone 2/22 (optional).</p> <p><b>ATEX:</b> II 2G Ex h IIC T6...T4 Gb X II 2D Ex h IIIC T80 °C Db X</p> <p><b>IECEx:</b> Ex h IIC T6...T4 Gb X Ex h IIIC T80 °C Db X</p>

#### 3.5. Others

##### Hydrogen

Conformity	Description
	<p><b>Suitability for hydrogen</b> The products are suitable for use with gaseous hydrogen, in accordance with the manufacturer's declaration.</p> <ul style="list-style-type: none"> <li>• ISO 19880 - 3: Gaseous hydrogen - Refuelling stations - Part 3: Shut-off devices</li> <li>• SAE J2601: Fueling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles → 700 bar</li> <li>• SAE J2601 - 2: Fueling Protocol for Gaseous Hydrogen Powered Heavy Duty Vehicles → 350 bar</li> <li>• ISO 14687: Characteristics of hydrogen as a fuel - Specification of the product</li> <li>• DIN 17124: Hydrogen as a fuel</li> <li>• SAE J2719: Hydrogen Purity</li> </ul>

## 4. Materials

### 4.1. Bürkert resistApp



#### **Bürkert resistApp – Chemical resistance chart**

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start chemical resistance check](#)

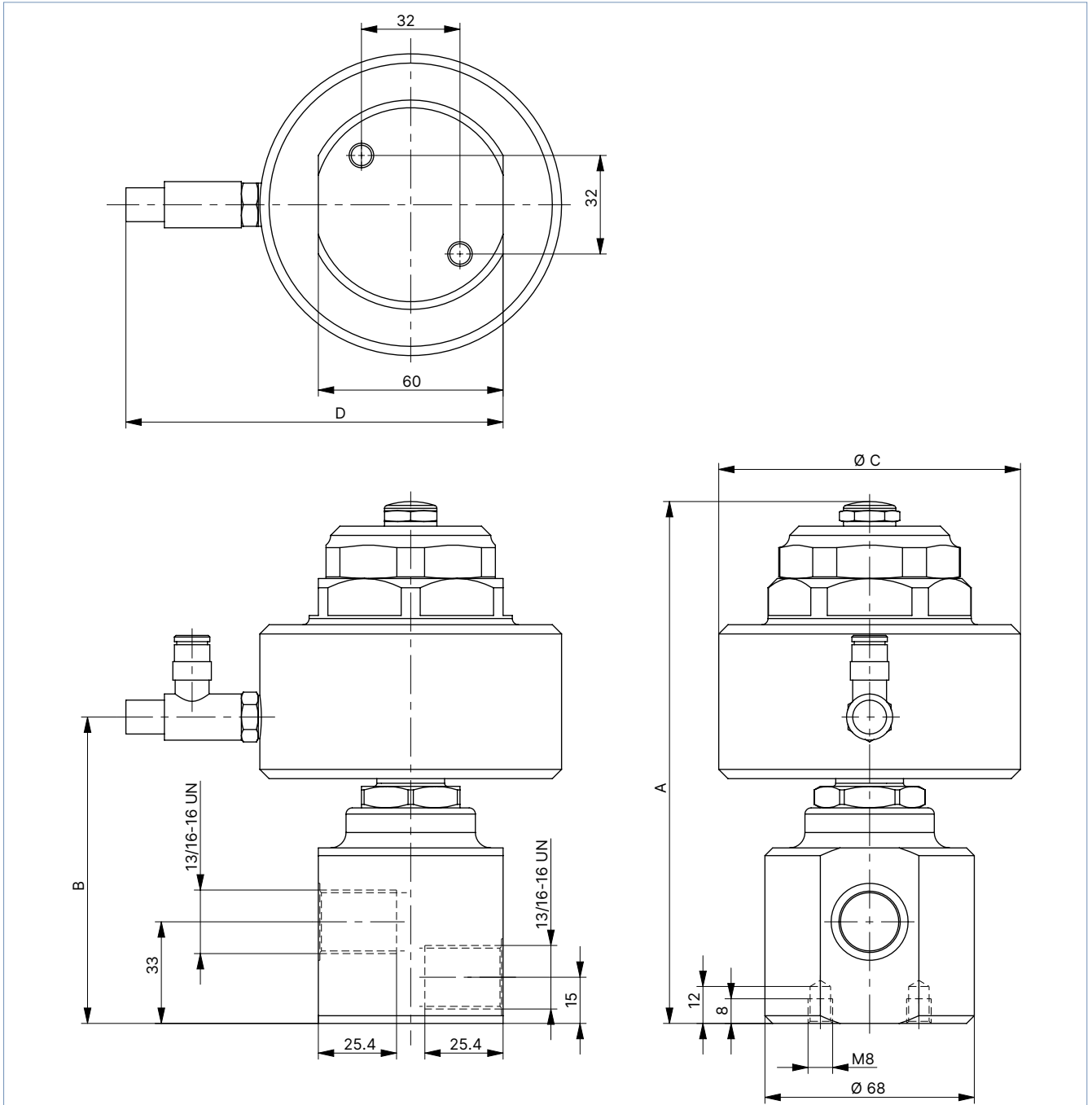
## 5. Dimensions

### 5.1. Actuator

ATEX variant

**Note:**

Dimensions in mm



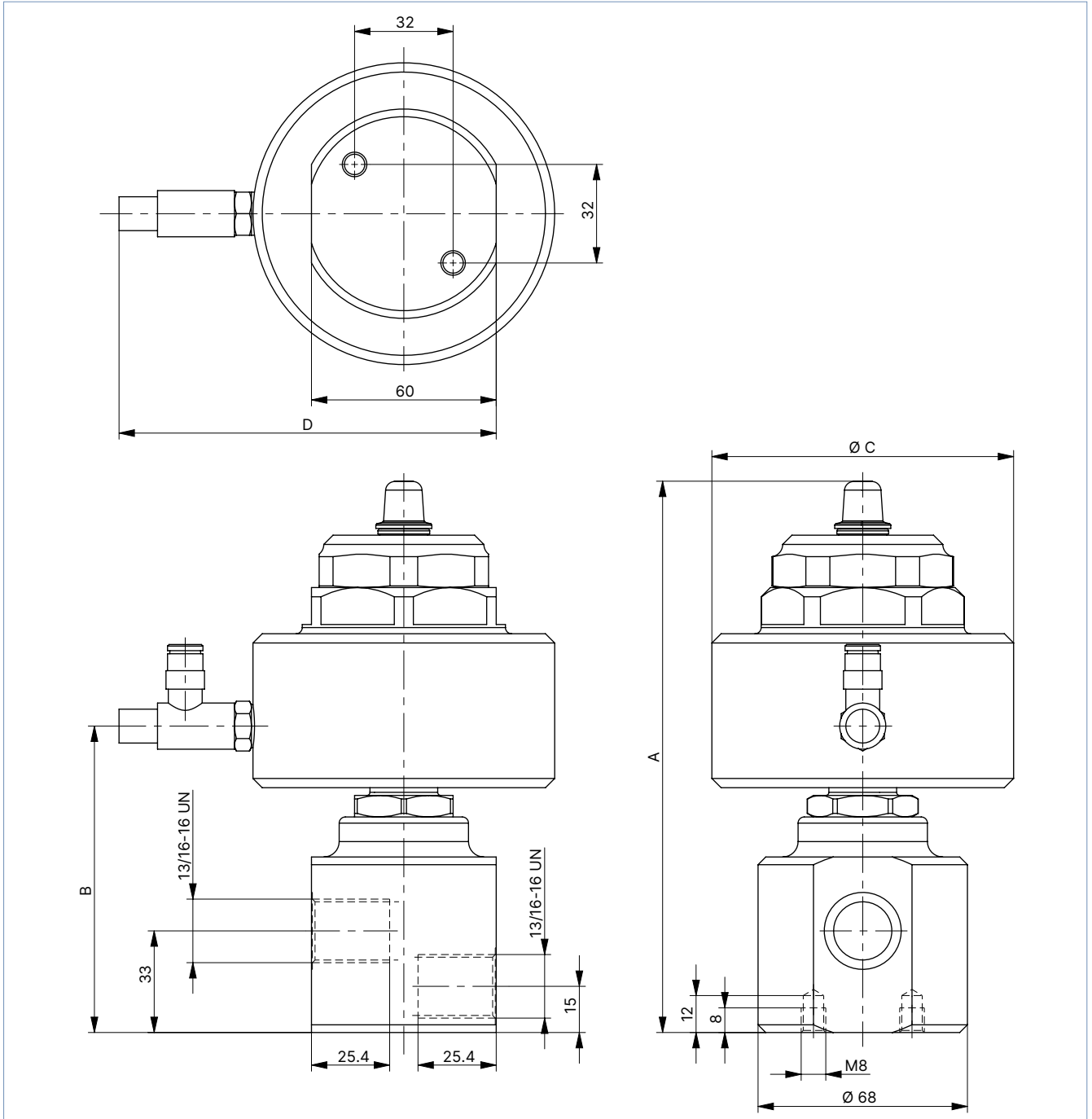
DN	A	B	Ø C	D
4	169.5	99.5	98	122.5
8	220.1	118.6	149	148

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**Standard variant**

**Note:**

Dimensions in mm



DN	A	B	Ø C	D
4	179	99.5	98	122.5
8	230	118.6	149	148



## 6. Ordering information

### 6.1. Bürkert eShop



#### Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

### 6.2. Bürkert product filter

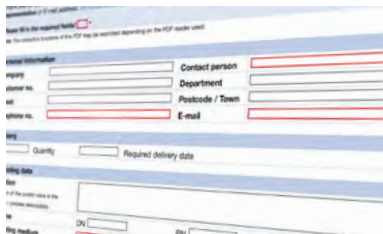


#### Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

### 6.3. Bürkert Product Enquiry Form



#### Bürkert Product Enquiry Form – Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

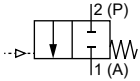
[Fill out the form now](#)

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### 6.4. Ordering chart

**Valves with flow direction below seat**

Control function	Nominal diameter	Actuator size Ø	Pilot pressure	Pressure range	Article no.	Article no.
	[mm]	[mm]	[bar]	[bar]		Certified ATEX II XX
<b>UNF 13/16 - 16 connector</b>						
<b>A (CF A)</b> Pneumatically operated 2/2-way on/off valve Flow direction above seat Normally closed by spring force <sup>1)</sup>	<b>Stainless steel actuator</b>					
	4.0	80 (F)	6...10	0...1000	20093254	20093266
	8.0	80 (F)	6...10	0...1000	20093255	20093267



1.) Further information can be found in chapter "2. Control functions" on page 4.

2.) In accordance with the Pressure Equipment Directive 2014/68/EU for compressible fluids of group 1 (hazardous gases and vapours in accordance with Article 4, paragraph (1), c), i), first indent)