

# Coaxial valves Hydrogen

The STASTO is an pioneer in the world's leading valve manufacturer in the coaxial valve technology and high pressure valve. With its extensive experience, development and production of high pressure valves, STASTO is a leader in the industry. STASTO is a pioneer in the world's leading valve manufacturer in the coaxial valve technology and high pressure valve. With its extensive experience, development and production of high pressure valves, STASTO is a leader in the industry.

coaxial valves offer many decisive advantages:





- **bi-directional operation**  
The valve design allows the valve to operate in both directions. This is achieved by the symmetrical design of the valve body and the valve seat.
- **compact size**  
The compact design of the valve allows for easy installation in tight spaces. The valve is designed to be as small as possible while maintaining high performance.
- **pressure balanced design / operating force 3 bar**  
The pressure balanced design ensures that the valve operates smoothly and reliably, even at high pressures. The operating force is kept low to ensure easy operation.
- **high pressure type**  
The valve is designed to operate at high pressures, up to 350 bar. This makes it suitable for a wide range of industrial applications.

other advantages:

- **high pressure type / resistant to H<sub>2</sub>**
- **fast operation**



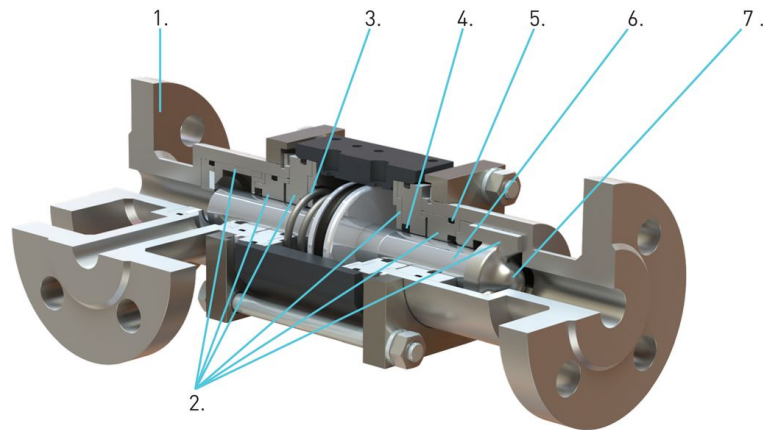
# VALVES FOR HYDROGEN

Type	Pressure range	Orifice	Kv value	Possible Applications
 KX1000	0-1000 bar	DN 8 mm	1,9 m³/h	Compressor Hydrogen Refilling stations Transport
 PCD-H 10	0-500 bar	DN 10 mm	1,5 m³/h	Hydrogen Refilling stations Test benches
 KBS 15	0-500 bar	DN 1,5-3 mm	0,066-0,312 m³/h	
 KB 15	0-400 bar	DN 2-8 mm	0,102-1,44 m³/h	
 MK/ FK	0-100 bar	DN 10-80 mm	1,6-70 m³/h	Electrolysis Pressure swing adsorption Fuel cells Gas turbines Test benches
 VMK/ VFK/ FCF/ FMX	0-200 bar	DN 8-250 mm	1,6-650 m³/h	
 Regelventil SPI	0-400 bar	DN 8-32 mm	1,6-24 m³/h	

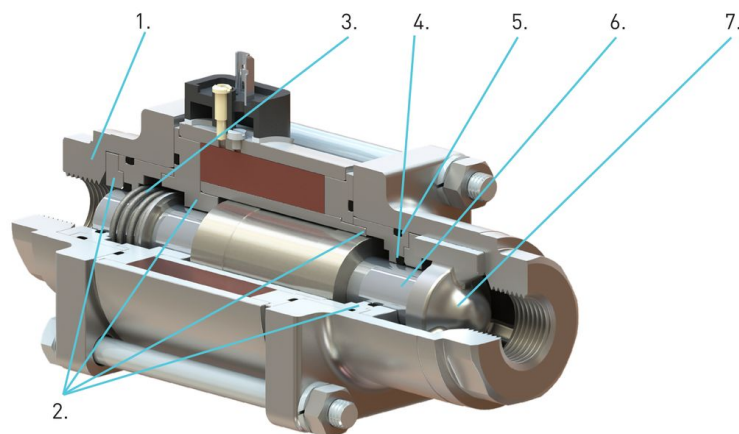
This is an information summary. For details on the individual series, please refer to the associated data sheets.



## Pneumatic actuated coaxial valves (3/2 version)



## Solenoid actuated coaxial valves (2/2 version)



Components for coaxial valves with 2 or 3 port connections

Item:	Material number (DIN)	AISI:
1. valve port	1.4581 or 1.4404 or 1.4571	316L or 316Ti
2. all media touched inner parts	1.4404	316L
3. return spring	1.4310	301
4. all dynamic seals	PTFE or FPM (Viton)	
5. all static seals	FPM (Viton)	
6. control tube	1.4404 or 1.4301	316L or 304
7. valve seat	PTFE or FPM (Viton)	



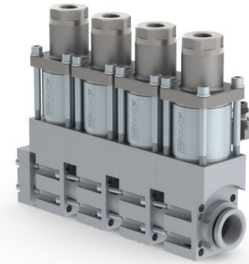
## Size comparison - space-saving in flexible modular bodies

Ball valve



(5)-FCF-K series  
(interchangeable „short“  
version without limit switch)

interchangeable



### Features of the coaxial valves - solenoid actuated

- Valves technically tight to the atmosphere, even if the seals are worn (closed design, tightness guaranteed, no open connection, no hazardous substance leakage/skin contact).
- Standard voltage 24V DC / 230V AC
- Special voltages on request
- available options:
  - with limit switch (direct indication OPEN/CLOSE)
  - mounting bracket
  - terminal box
  - device connector e.g. M12\*1 VDMA/DESINA
  - manual override
- Medium temperature range
  - f. Standard version: from -20°C to +100°C
    - optionally from -40°C to 160°C\*
  - f. Ex-Zone 1 equipment category 2 from -20°C to +40°C\*
  - f. Ex-Zone 2 equipment category 3 from -20°C to +80°C\*
  - f. IECEx: from -30°C to +50°C \* (only orifice DN10)
  - f. DVGW: from -15°C to +80°C \* (only orifice DN15 to 25)

### Features of the coaxial valves - general

- Compact and small design
- Valves with flow on both sides
- Very fast switching times
- Valve connection optionally in:
  - Flange (e.g. DIN EN 1092-1)
  - Socket version (e.g. SAE / NPT thread)
  - Weld end
- SIL 2 as standard, SIL 3 optional
- MTF values on request

### Features of the coaxial valves - pneumatically actuated

- 5/2-pilot valve – direct or externally mounted
- All valves switch from 3 bar control air pressure
- Pilot air consumption 1/10 of a ball valve
- Leakage hole with drainage connection
- Limit switch (direct indication OPEN/CLOSE)
- Mounting bracket
- Medium temperature range: from -20°C to +60°C
  - optional from -40° to 160°C (pilot external)\*
- Ex zone 1 – max. temperature from -20°C to +160°C\*

[\*] Depending on the temperature range, there may be adjustments to the desired valve configuration

Illustrations non-binding  
Design, dimensional and material changes reserved

Armatures / Special armatures / Other materials - Special armatures / Other materials - A08 / [CV-H2...] CV-H2...

Version 1.0

213214 / Generated 2026/23 EN

MADE IN EUROPE

+43 512 52076

austria@stasto.eu

© STASTO Automation KG

www.stasto.com

Open series online

Page 4 / 4

