GRUNER
SWITCH TO INNOVATIONS

Technical data sheet

Control ball valve
BOFB...K...B (2-way valve)
BOLB...K...B (3-way valve)

Description

Control ball valve to control the flow of hot and cold water and Glykol solutions (max. 50%) in HVAC systems conjunction with a rotary actuator

Technical data

Valve	Flow disc	with and without flow disk
	Media	- hot and cold water (VDI 2035) - water with glycol (max. 50%) - steam 121°C at 103 kPa
	Temperature of medium	-30°C...+140°C
	Body pressure rating	PN 40
	Close-off pressure ps	1380 kPa
	Differential pressure pmax	600 kPa (without flow disk) 340 kPa (with flow disk)
	Differential pressure note	240 kPa (low noise operation)
	Flow characteristic	equal percentage at 2-way/3-way valve linear at 3-way valve in bypass (VDI/VDE 2178)
	Leakage rate	< 0.01% from the Kvs, < 1% for bypass port leak-proof
	Connection	female thread (Rp, ISO 7/1)
	Angle of rotation	0...max. 90°
	Mounting position	vertical to horizontal (in relation to shaft)
Materials	Case	brass (DIN EN 12165, CW617N)

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Technical data

Materials	Valve ball	stainless steel (EN 10088-2)
	Valve shaft	stainless steel (EN 10088-2)
	Valve shaft gasket	2 x EPDM O-ring
	Gasket	PTFE with graphite part and EPDM O-ring
	Flow disc	AMODEL AS 1145HS
	Lubrication	accordance with approval
Safety	CE	PED 97/23/EC
	Maintenance	maintenance free
Equipment	Equipment	couplings inserts adapter
Dimensions / weight	Dimensions	see technical drawing

Functionality / Properties

Combination with actuator

The valves are according to the application with the listed actuators combined.

IP52:
- 225 - 24/230 VAC/DC - 5 Nm

IP54:
- 227 - 24/230 VAC/DC - 5; 10; 15 Nm
- 341 - 24/230 VAC/DC - 3; 5 Nm

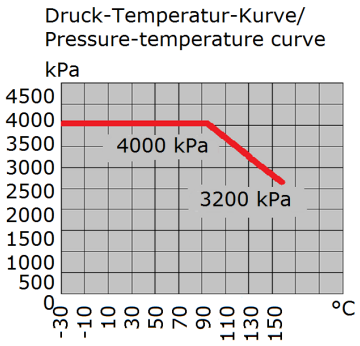
Ball valve flow

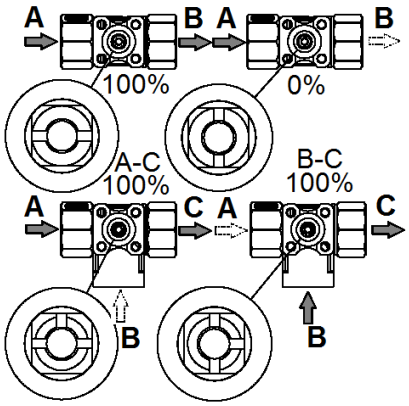
Kvs [m³/h]	DN	Kvs [m³/h]	DN
0,4	15	10	32
0,63		16	
1		• 25	
1,6		16	40
2,5		25	
4,0		• 40	
• 10		25	50
4,0	20	40	
6,3		• 63	
• 10		• without flow disk	
6,3	25		
10			
• 16			

Direct mounting

Simple direct mounting on the ball valve by closing the form of the shaft and screw, securing against rotation by twisting the adapter.

Connector / Security Note

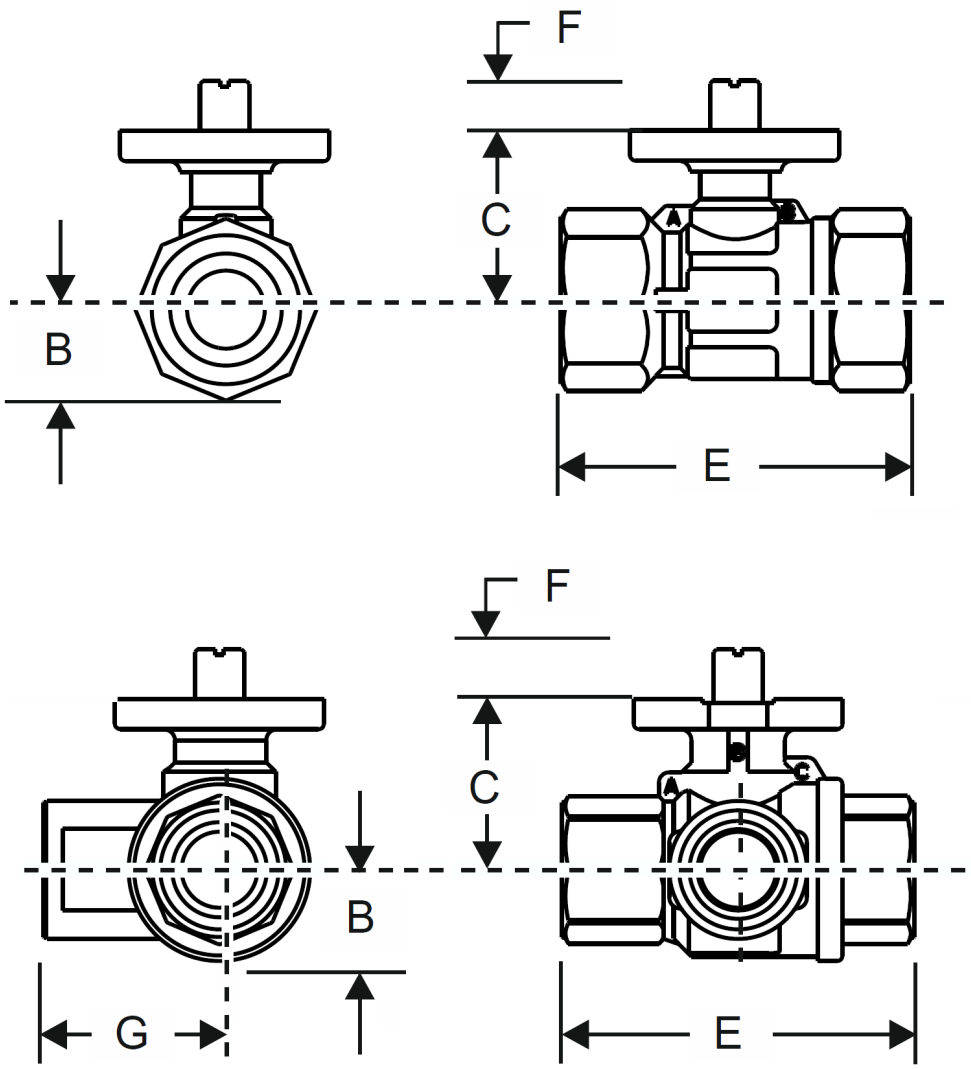




Safety remarks

- The device is not allowed to be used outside the specified field of application, especially in airplanes.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- When determining the flow characteristic the accepted directives must be observed.
- The device is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

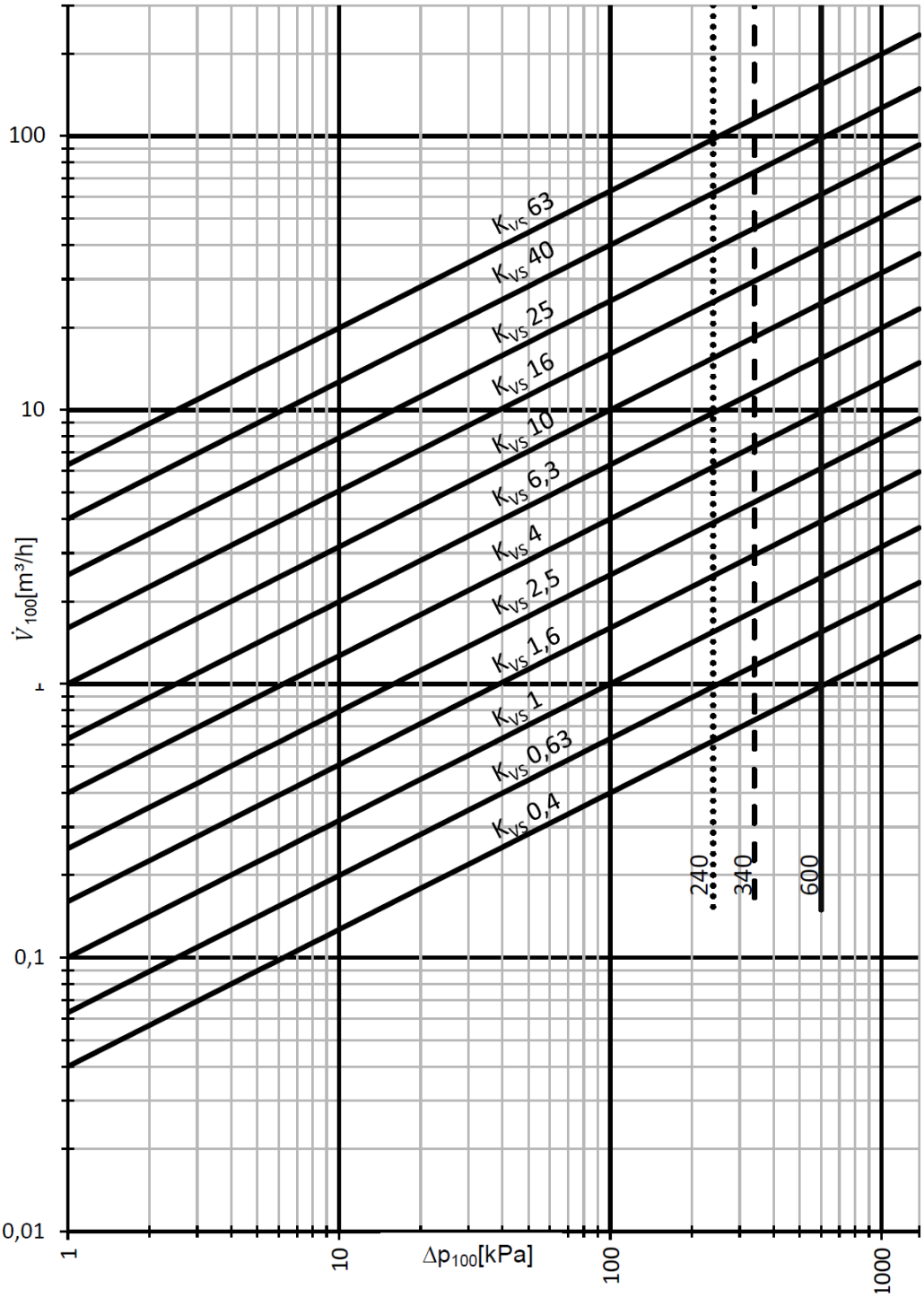
Technical Drawing



Valve	B	C	E	F	G*
DN 15	17	31	67	9	33
DN 20	17	31	75	9	38
DN 25	19	33	92	9	46
DN 32	26	44	109	9	54
DN 40	29	48	119	9	59
DN 50	37	53	139	9	74

* Only for three-way valves

Kvs diagram



Formel Kvs-Wert Wasser
Formula Kvs for water

Kvs	[m³/h]	$Kvs = \sqrt{\frac{\dot{V}100}{\frac{\Delta pv100}{100}}}$
$\dot{V}100$	[m³/h]	
$\Delta pv100$	[kPa]	

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