GRUNER
Schalten und Bewegen

Technical data sheet

Ball Valves

BOFB...K...B (2-way Valves)
BOLB...K...B (3-way Valves)

Description

Application

The ball valves are used to control the flow of hot, and cold water and Glykol solutions (max. 50%) used in ventilation, air-conditioning and heating systems in conjunction with rotary actuators.

- **Combination with spring return and non spring return**
- **Simple actuator mounting**
- **Runtime changes possible**
- **3-point or continuous control**

Technical data

Combination Actuators		
	actuators	- 225 (24 VAC/DC / 230 VAC/DC) 5;8 Nm IP52 - 227 (24 VAC/DC / 230 VAC/DC) 5;8;10;15 Nm IP54 - 341 (24 VAC/DC / 230 VAC/DC) 3;5 Nm IP54
Valve-Type		
	2-way Valves	with or without flow disk
	3-way Valves	with or without flow disk
Technical data valve		
	Media	Hot and cold water according to VDI 2035 Steam to max 100 kPa at 120 °C Water with glycol with max 50% volume
	Temperature of medium	-30°C...+130°C
	Body pressure rating	PN 20
	Close-off pressure	ps 1380 kPa
	differential pressure Delta p =	600 kPa valves without flow disk 340 kPa valves with flow disk 240 kPa low noise operation
	Flow characteristic	Equal percentage at 2-way valve Equal percentage at 3-way valve Linear at 3-way valve in bypass (VDI/VDE 2178)
	Leakage rate	< 0.01% from the Kvs, < 1% for bypass port close of air bubbles
	connectors	female thread (Rp, ISO 7/1)
	angle of rotation	0...90°
	mounting position	vertical to horizontal (in relation to shaft)
Materials Valve		
	case	brass

Technical data

	valve ball	stainless steel
	valve shaft	stainless steel
	flow disc	AMODEL AS 1145HS
	Valve shaft gasket	2 x EPDM O-ring
	gasket	PTFE with graphite part and EPDM O-ring
	lubrication	accordance with approval
Safety		
	CE	PED 97/23/EC
	Maintenance	maintenance free
mechanical equipment		
	equipment	couplings
		inserts
		adapter
Dimensions/ Weight		
	Dimensions	see thetable
	Weight	see thetable

Operating mode / Properties

Operating mode

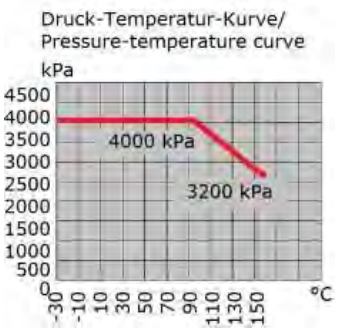
The control ball valve is operated by the actuator.
This opens or closes the valve.
It is controlled via 3-point or continuous control
whereby the valve ball is moved to the specified position.
The ball thereby acts as a throttle device.
Through the use of flow disks is an excellent given
regulation stability.

Direct mounting

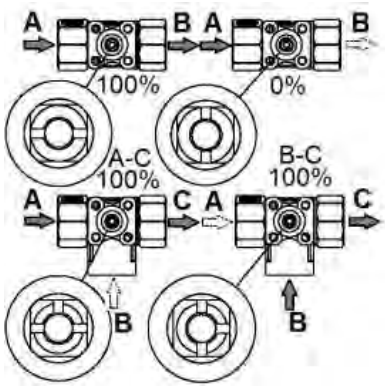
Simple direct mounting on the valve by the adapter
is connected centrally with a screw.
The valve shaft and the insert are form closure connected.
Through the use of various adapters can the level of the valve and actuator variable be selected.

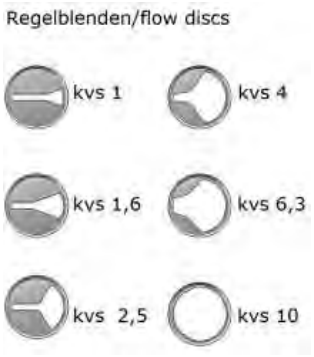
Combination with actuator

The valves are according to the application with the listed drives
combined. (see Technical Data)



Connection / Safety remarks

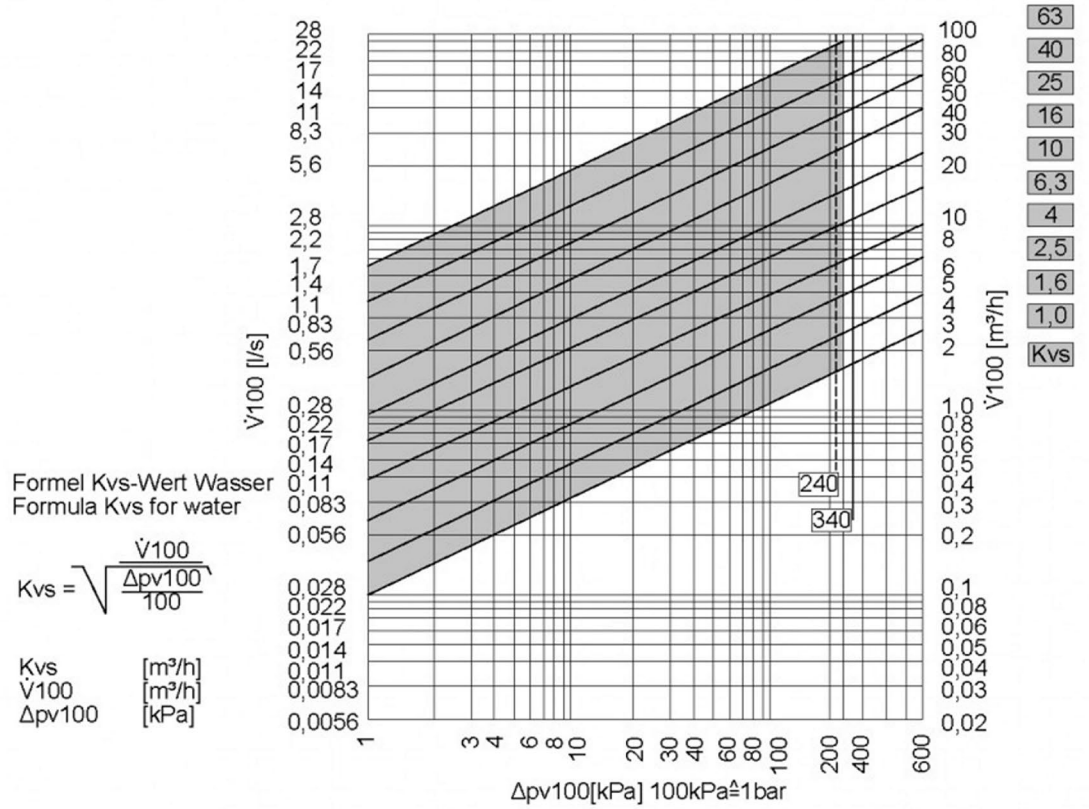


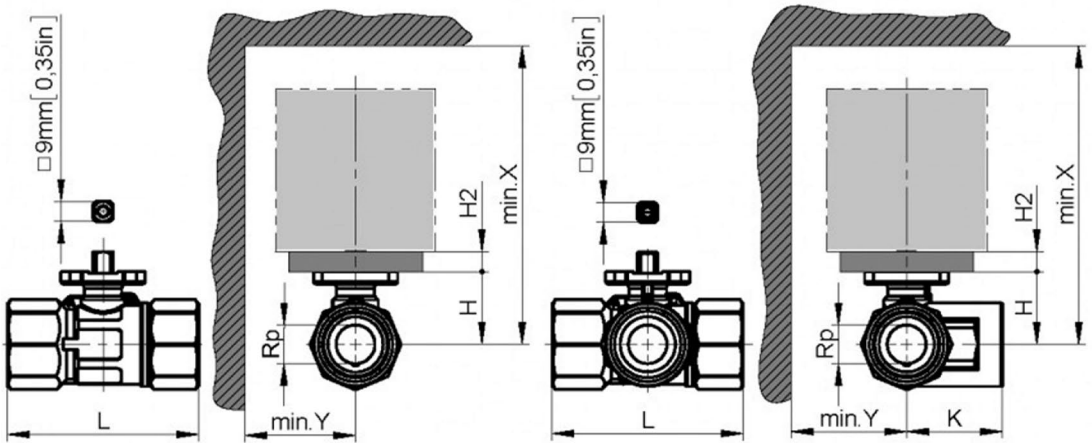


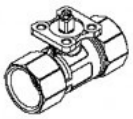
Safety remarks

-The ball valves 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.
-The valve contains no replaceable or repairable parts.
-When determining the flow characteristic the accepted directives must be observed.
-The ball valves is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Technical drawing

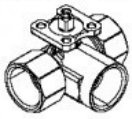






2-Weg-Ventil
2-Way-Valves

Type	DN	Rp [']	kvs [m³/h]	ps [kPa]	M min. [Nm]	L [mm]	H [mm]	H2 [mm]	K [mm]	X [mm]	Y [mm]	weight [kg]
BOFB151K0B	15	1/2	1,0	1380	3	64	31	11/18	-	170	90	0,26
BOFB151K6B	15	1/2	1,6	1380	3	64	31	11/18	-	170	90	0,26
BOFB152K5B	15	1/2	2,5	1380	3	64	31	11/18	-	170	90	0,26
BOFB154K1B	15	1/2	4,1	1380	3	64	31	11/18	-	170	90	0,26
BOFB1510KB	15	1/2	10,1	1380	3	64	31	11/18	-	170	90	0,26
BOFB204K1B	20	3/4	4,1	1380	3	71	31	11/18	-	170	90	0,26
BOFB206K4B	20	3/4	6,4	1380	3	71	31	11/18	-	170	90	0,26
BOFB2010KB	20	3/4	10,1	1380	3	71	31	11/18	-	170	90	0,26
BOFB256K4B	25	1	6,4	1380	5	87	33	11/18	-	170	90	0,46
BOFB2510KB	25	1	10,1	1380	5	87	33	11/18	-	170	90	0,46
BOFB2516KB	25	1	16,2	1380	5	87	33	11/18	-	170	90	0,46
BOFB3210KB	32	1-1/4	10,1	1380	8	100	44	11/18	-	170	90	0,82
BOFB3216KB	32	1-1/4	16,2	1380	8	100	44	11/18	-	170	90	0,82
BOFB3225KB	32	1-1/4	25,3	1380	8	100	44	11/18	-	170	90	0,82
BOFB4016KB	40	1-1/2	16,2	1380	8	110	48	11/18	-	170	90	1,18
BOFB4025KB	40	1-1/2	25,3	1380	8	110	48	11/18	-	170	90	1,18
BOFB4040KB	40	1-1/2	40,5	1380	8	110	48	11/18	-	170	90	1,18
BOFB5025KB	50	2	25,3	1380	8	123	53	11/18	-	170	90	2,68
BOFB5041KB	50	2	40,5	1380	8	123	53	11/18	-	170	90	2,68
BOFB5064KB	50	2	63,8	1380	8	123	53	11/18	-	170	90	2,68



3-Weg-Ventil
3-Way-Valves

Type	DN	Rp [']	kvs [m³/h]	ps [kPa]	M min. [Nm]	L [mm]	H [mm]	H2 [mm]	K [mm]	X [mm]	Y [mm]	weight [kg]
BOLB151K0B	15	1/2	1,0	1380	3	64	31	11/18	33	170	90	0,26
BOLB151K6B	15	1/2	1,6	1380	3	64	31	11/18	33	170	90	0,26
BOLB152K5B	15	1/2	2,5	1380	3	64	31	11/18	33	170	90	0,26
BOLB154K1B	15	1/2	4,1	1380	3	64	31	11/18	33	170	90	0,26
BOLB1510KB	15	1/2	10,1	1380	3	64	31	11/18	33	170	90	0,26
BOLB204K1B	20	3/4	4,1	1380	3	71	31	11/18	38	170	90	0,26
BOLB206K4B	20	3/4	6,4	1380	3	71	31	11/18	38	170	90	0,26
BOLB2010KB	20	3/4	10,1	1380	3	71	31	11/18	38	170	90	0,26
BOLB256K4B	25	1	6,4	1380	5	87	33	11/18	46	170	90	0,46
BOLB2510KB	25	1	10,1	1380	5	87	33	11/18	46	170	90	0,46
BOLB2516KB	25	1	16,2	1380	5	87	33	11/18	46	170	90	0,46
BOLB3210KB	32	1-1/4	10,1	1380	8	100	44	11/18	54	170	90	0,82
BOLB3216KB	32	1-1/4	16,2	1380	8	100	44	11/18	54	170	90	0,82
BOLB3225KB	32	1-1/4	25,3	1380	8	100	44	11/18	54	170	90	0,82
BOLB4016KB	40	1-1/2	16,2	1380	8	110	48	11/18	59	170	90	1,18
BOLB4025KB	40	1-1/2	25,3	1380	8	110	48	11/18	59	170	90	1,18
BOLB4040KB	40	1-1/2	40,5	1380	8	110	48	11/18	59	170	90	1,18
BOLB5025KB	50	2	25,3	1380	8	123	53	11/18	74	170	90	2,68
BOLB5041KB	50	2	40,5	1380	8	123	53	11/18	74	170	90	2,68
BOLB5064KB	50	2	63,8	1380	8	123	53	11/18	74	170	90	2,68

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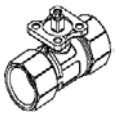
ball valves, female threaded, with standard actuators

control s	nominal voltage	running time motor	optional S2	Typ 225 (IP52)	
2/3 point	24VAC/DC	< 20…35s	x	225S-024T-05	
		< 60…120s	x	225-024T-05	225-024T-08
	230VAC/DC	< 20…35s	x	225S-230T-05	
		< 60…120s	x	225-230T-05	225-230T-08
0(2)…10VDC 0(4)…20mA	24VAC/DC	< 20…35s	x	225CS-024T-05	
		< 60…120s	x	225C-024T-05	

ball valve Typ	port	DN	Rp	Kvs		
BOFB151K0B	2-way 	15	1/2"	1	x	
BOFB151K6B				1,6	x	
BOFB152K5B				2,5	x	
BOFB154K1B				4,1	x	
BOFB1510KB				10,1	x	
BOFB204K1B		20	3/4"	4,1	x	
BOFB206K4B				6,4	x	
BOFB2010KB				10,1	x	
BOFB256K4B		25	1"	6,4	x	
BOBF2510KB				10,1	x	
BOFB2516KB				16,2	x	
BOFB3210KB		32	1-1/4"	10,1		x
BOFB3216KB				16,2		x
BOFB3225KB				25,3		x
BOFB4016KB		40	1-1/2"	16,2		x
BOFB4025KB				25,3		x
BOFB4040KB				40,5		x
BOFB5025KB		50	2"	25,3		x
BOFB5041KB				40,5		x
BOFB5064KB				63,8		x
BOLB151K0B	3-way 	15	1/2"	1	x	
BOLB151K6B				1,6	x	
BOLB152K5B				2,5	x	
BOLB154K1B				4,1	x	
BOLB1510KB				10,1	x	
BOLB204K1B		20	3/4"	4,1	x	
BOLB206K4B				6,4	x	
BOLB2010KB				10,1	x	
BOLB256K4B		25	1"	6,4	x	
BOLB2510KB				10,1	x	
BOLB2516KB				16,2	x	
BOLB3210KB		32	1-1/4"	10,1		x
BOLB3216KB				16,2		x
BOLB3225KB				25,3		x
BOLB4016KB		40	1-1/2"	16,2		x
BOLB4025KB				25,3		x
BOLB4040KB				40,5		x
BOLB5025KB		50	2"	25,3		x
BOLB5041KB				40,5		x
BOLB5064KB				63,8		x
close off pressure = 1380kPa	max.fluide temperature				xxx°C	xxx°C

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