

Stainless steel flanged ball valves with electric actuator

Series BA051



Design type	Flanged ball valve with Electric geared motor, additional manual override, Actuator heater and Torque monitoring, Face-to-face length according to EN558-1 R27
Connection	Flanges DN15...DN150 according to EN1092-1
Materials Standard version	Actuator: Polymer housing PA6 or rather PA66 Ball valve: Body and ball stainless steel 1.4408, Ball seal PTFE, Spindle seal PTFE/FKM
Application range	Fluids and gases of group 1 and 2 in accordance with PED 2014/68/EU that do not attack the materials used
Medium temperature	-20...+160°C
Ambient temperature	-20...+55°C
Operating pressure	Vacuum max. 10^{-3} Torr up to Operating pressure according to table and pressure-temperature diagram
Mounting type	Installation in rigid piping system
Mounting position	any, except hanging downward

Electrical data:

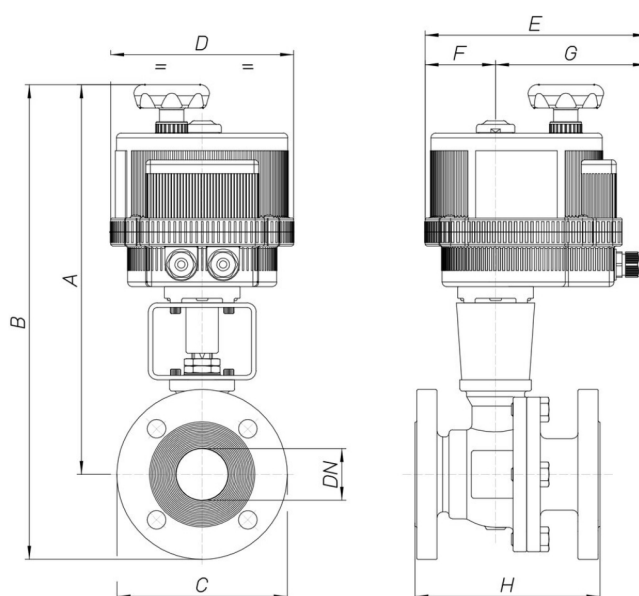
Voltage type	AC and DC voltage
Standard voltage	see table "Electrical data"
Permissible voltage fluctuation	± 10%
Electrical Connection	via cable gland PG11
End position shut-off	via integrated limit switches
Duty cycle	see table "Electrical data", however max. 100 switching cycles per day
Degree of protection	VB015 IP65 or rather all other sizes IP67 according to EN 60529 with properly installed cable entry (protection against dust ingress and splashing water)
Approvals	Ball valve ATEX, FireSafe, TA-Luft
Special version	oil-, grease- and silicone-free for oxygen, Battery pack for safety position, Positioner
Ordering note	When ordering, please also specify the operating medium, operating pressure and operating temperature.
Application note	The pressure and temperature specifications are maximum values for normal conditions, for lubricating or non-degreasing media. Degreasing media in particular reduce the specified values and increase the required torque. For these special cases, we recommend prior consultation.



Type code

BA051- 15 - 0L			
DN15	15		
DN20	20		
DN25	25		
DN32	32		
DN40	40		
DN50	50		
DN65	65		
DN80	80		
DN100	100		
DN125	125		
Nominal size DN150	150		
Voltage 12V/50-60Hz/12VDC		0D	
24V/50-60Hz/24VDC		0L	
100-240V/50-60Hz		0H	

Dimensions



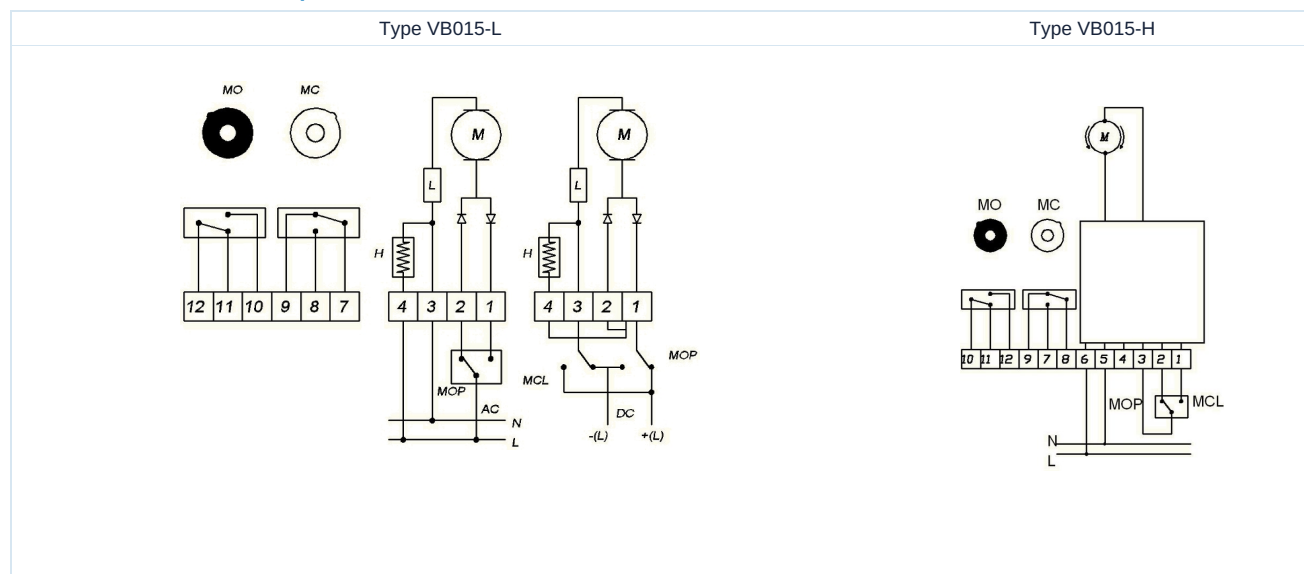
Nominal size DN[mm]	max. operating pressure [bar]	A	B	C	D	E	F	G	H	Kv value [m ³ /h]	Weight [approx. kg]	Actuator type	Type
15	40	225	272	95	123	164	43	121	115	16,3	4,2	VB015	BA051-15-0.
20	40	229	282	105	123	164	43	121	120	29,5	4,9	VB015	BA051-20-0.
25	40	294	351	115	157	191	61	130	125	43	7,1	VB030	BA051-25-0.
32	40	324	394	140	185	215	68	147	130	89	9,4	VB060	BA051-32-0.
40	40	351	426	150	185	215	68	147	140	230	11,7	VB060	BA051-40-0.
50	40	359	441	165	185	215	68	147	150	265	15	VB060	BA051-50-0.
65	16	386	478	185	211	237	84	153	170	540	20,6	VB110	BA051-65-0.
80	16	420	520	200	211	237	84	153	180	873	25,7	VB110	BA051-80-0.
100	16	435	544	220	211	237	84	153	190	1390	32	VB190	BA051-100-0.
125	16	458	583	250	222	247	77	170	325	1707	56,8	VB270	BA051-125-0.
150	16	491	634	285	222	247	77	170	350	2024	82	VB350	BA051-150-0.



Electrical data

Type	Voltage	Current consumption [A]	Rated torque [Nm]	Duty cycle (S3)	Actuation time [Sek.]
VB015-L-12	12V/50-60Hz/12VDC	1,2	15	AC 50% / DC 75%	10
VB015-L-24	24V/50-60Hz/24VDC	0,6	15	AC 50% / DC 75%	10
VB015-H	100-240V/50-60Hz	0,3-0,19	15	75%	10
VB30-L-12	12V/50-60Hz/12VDC	AC 2,2 / DC 1,8	30	50%	8
VB30-L	24V/50-60Hz/24VDC	AC 1 / DC 0,7	30	75%	8
VB30-H	100-240V/50-60Hz	0,4-0,2	30	75%	8
VB060-L-12	12V/50-60Hz/12VDC	AC 3,8 / DC 2,85	60	50%	9
VB060-L	24V/50-60Hz/24VDC	AC 1,8 / DC 1,2	60	75%	9
VB60-H	100-240V/50-60Hz	0,6-0,3	60	75%	9
VB110-L-12	12V/50-60Hz/12VDC	AC 2,2 / DC 1,8	110	50%	27
VB110-L	24V/50-60Hz/24VDC	AC 1 / DC 0,7	110	75%	27
VB110-H	100-240V/50-60Hz	0,4-0,2	110	75%	27
VB190-L-12	12V/50-60Hz/12VDC	AC 3,8 / DC 2,85	190	50%	27
VB190-L	24V/50-60Hz/24VDC	AC 1,8 / DC 1,2	190	75%	27
VB190-H	100-240V/50-60Hz	0,6-0,3	190	75%	27
VB270-L-12	12V/50-60Hz/12VDC	AC 3,8 / DC 2,85	270	50%	50
VB270-L	24V/50-60Hz/24VDC	AC 1,8 / DC 1,2	270	75%	50
VB270-H	100-240V/50-60Hz	0,6-0,3	270	75%	50
VB350-L-12	12V/50-60Hz/12VDC	AC 4,75 / DC 3,65	350	50%	50
VB350-L	24V/50-60Hz/24VDC	AC 1,895 / DC 1,65	350	75%	50
VB350-H	100-240V/50-60Hz	0,75-0,4	350	75%	50

Electrical connection example VB015



Position	Description	Note
H	Heater	Standard
L	Torque limiter	Standard
MC	End position feedback signals CLOSED	Standard max. 1A/250VAC-1A/30VDC
MO	End position feedback signals ON	Standard max. 1A/250VAC-1A/30VDC
MCL	Actuator CLOSED	
MOP	Actuator OPEN	

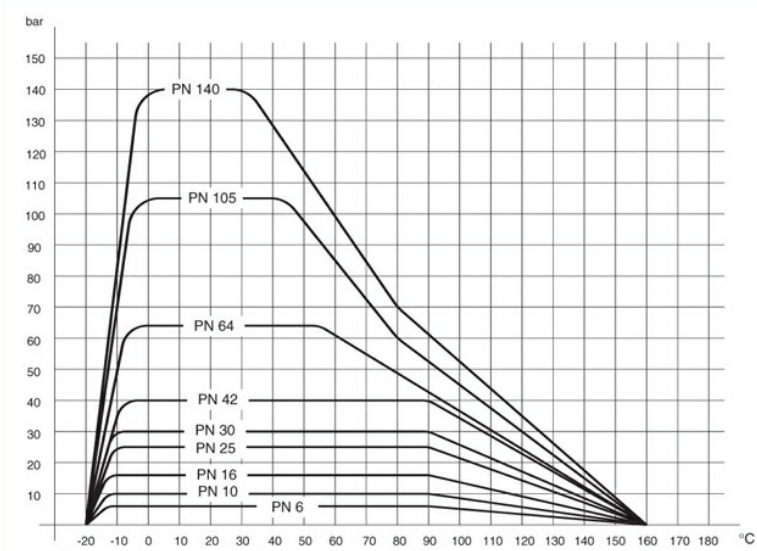


The diagram illustrates a control circuit for a motor (M1). The power supply consists of three lines: PE (Protective Earth), L (+) (Live), and N (-) (Neutral). A fuse (F1) is connected to the L (+) line. The circuit is divided into three main sections: X:F, X:G, and X:R. Section X:F contains a capacitor (C1) and a relay (X:F) with terminals 1, 2, and 3. Section X:G contains two relays (X:G) with terminals A, B, C, D, E, and H, and two switches (S1 and S2) with NC (Normally Closed) and NO (Normally Open) contacts. Section X:R contains a relay (X:R) with terminals J and K, and a switch (S3) with NO contacts. A resistor (R1) is connected to the L (+) line and the X:R section. The motor (M1) is connected to the X:R section and the N (-) line.

2-Point control or 3-point control by changing the electrical connection VB030 - VB350



Pressure-temperature diagram



Illustrations non-binding
Design, dimensional and material changes reserved

Armatures / Ball valves - automatically operated / Other materials - A03 / Flanged ball valve with pneumatic actuator Series BA051-S0