Varnasan

CONTROL VALVE TECHNOLOGIES

NEW PRODUCTS CATALOG

2023

6D-2036 KING CERT ISO 9001:2015 IEP ATEX TÜV AUSTRIA CE 0408 TÜV AUSTRIA FIRESAFE TCS

www.varnasan.com

About

Since 1976, VARNASAN aims to produce of high quality and long lasting valves with 40 years of experience. Since the day we found, we are controlling the fluid safely by producing stainless steel, carbon steel, cast and ductile iron ball valve, flow indicators, strainers, safety valves etc. with standing on our high quality standard.

In the second half of 2017 by incorporated into SMS-TORK group companies, we are continuing to progress in our sector with more innovative and more suitable production for your needs and expectation.

Our Values

- Reliability
- High sense of responsibility
- Experience
- Quality awareness
- Innovation

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CONTROL VALVE TECHNOLOGIES

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CONTROL VALVE TECHNOLOGIES

MANUALLY CONTROLLED KNIFE GATE VALVE

General Features

Model	: Varnasan BV
Working Pressure	: DN50-DN100 16bar DN125-DN200 14bar DN250-DN300 12Bar DN350-DN400 10bar
Operating Temperature	: -20°C / +130°C
Design Standard	: MSS SP-81
Flange Standard	: DIN PN10,PN16,150LB ,JIS 10K,TABLO E/D
Face to Face	: MSS SP-81
Testing Standard	: API-598
Transmission	: Manual, electric, pneumatic, hydraulic, sprocket, electro-hydraulic, gear
Main material	: WCB.F55.F53.2205.CF3M.CF8M.CF8
Wedge material	: F55, F53,2205, SS310, SS316L,SS316, SS304
Sealing material	: BR,EPDM,FKM,Metal
Packing	: High-water-based rubber packing graphite wheel

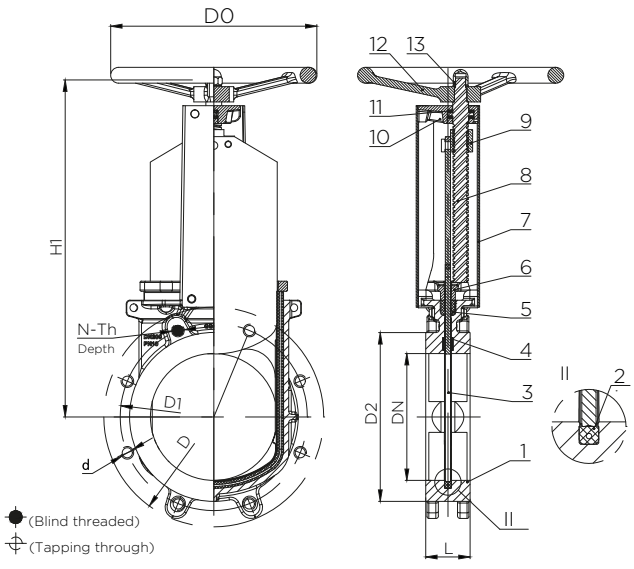
Features

- Unidirectional sealing
- 1PC Body design
- Full port design
- Mixed with a variety of materials packing

Application

For pulp, cement slurry, gold ore powder, coal slurry, pulp, chemical treatment of sewage, sedimentation tanks, asphalt, acid and other liquids and other media.

DN	L	D	D1	D2	D0	N-Th	d	H1
50	48	165	125	99	180	4-M16	Ø18	290
65	48	185	145	118	200	4-M16	Ø18	330
80	51	200	160	132	200	8-M16	Ø18	358
100	51	220	180	156	240	8-M16	Ø18	378
125	57	250	210	184	260	8-M16	Ø18	428
150	57	285	240	211	280	8-M20	Ø23	490
175	57	305	265	237	280	12-M20	Ø23	553
200	70	340	295	266	300	8-M20	Ø23	588
250	70	395	350	319	320	12-M20	Ø23	690
300	76	445	400	370	350	12-M20	Ø23	815



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CONTROL VALVE TECHNOLOGIES

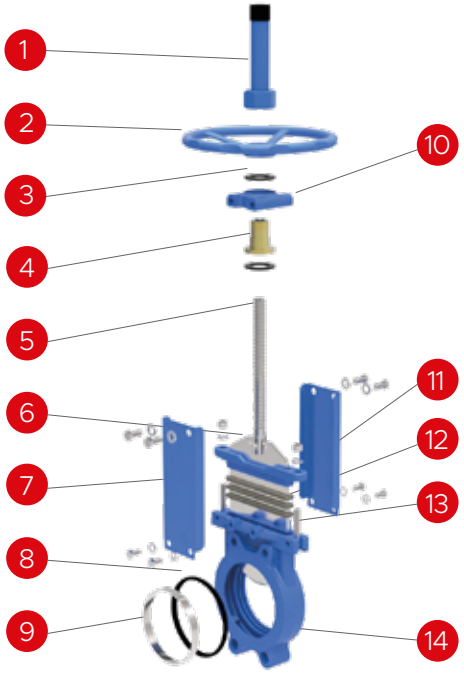
MANUALLY CONTROLLED KNIFE GATE VALVE

Product Description

BV Series Knife gate valve is with replaceable rubber seal knife gate structure, its sealing principle is mainly by closely connection between gate and rubber seals. Its main characters is that the rubber sealing ring is set in seat'groove and is locked by metal seat, which will prevent rubber seal off when opening and closing the valve. If the seal is broken, you can remove the metal sear and replace the rubber seal, which will greatly improve valve' working efficiency. This valve is a cost-effective, high-performance products. The series of knife gate valve can be equipped with pneumatic actuators, in order to meet the requirements of different industrial and mining use.

CODE	NAME	MATERIAL	QTY
1	HANDLE COVER	Q235+painting	1
2	HAND WHEEL	GGG40	1
3	BEARING	ZChSnSb10-6	2
4	STEM NUT	Pirinç	1
5	STEM	2Cr13/SS304/SS316	1
6	DISC	SS304/SS316/F55/2205	1
7	YOKE	Q235	1
8	SEAT	EPDM/NBR/PTFE/Metal	1
9	SEAT COVER	Q235/SS304/SS316	1
10	YOKE HEAD	GGG40	1
11	PACKING GLAND	WCB/CF8	1
12	PACKING	Aramid PRFE	3-5
13	BOLT	Fe+Zn ile Painting /SS304	N
14	BODY	WCB/GGG40/CF8/CF8M	1

*electric, pneumatic, hydraulic, sprocket, electro-hydraulic, gear available



NO	METARIAL NO	MATERIAL DESCRİPTION
1	V-IBV-01-04WF100B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN100 Gate 304SS EPDM Gasket Double Sided Sealing RAL5002 Blue
2	V-IBV-01-04WF125B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN125 Gate 304SS EPDM Gasket Double Sided Sealing RAL5002 Blue
3	V-IBV-01-04WF150B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN150 Gate 304SS EPDM Gasket Double Sided Sealing RAL5002 Blue
4	V-IBV-01-04WF200B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN200 Gate 304SS EPDM Gasket Double Sided Sealing RAL5002 Blue
5	V-IBV-01-04WF250B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN250 Gate 304SS EPDM Gasket Double Sided Sealed RAL5002 Blue
6	V-IBV-01-04WF300B-ED2	Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN300 Gate 304SS EPDM Gasket Double Sided Sealing RAL5002 Blue

Varnasan
CONTROL VALVE TECHNOLOGIES

PNEUMATIC PISTON CONTROLLED KNIFE VALVE

General Features

Model	: Varnasan BV
Working Pressure	: DN100: 16 bar, DN125-DN200: 10 bar, DN250-DN300: 7 bar
Operating Temperature	: -20°C / +130°C
Type	: Wafer, Lug, Flange
Design Standard	: MSS SP-81
Flange Standard	: DIN3202 PN10/PN16
Face to Face	: MSS SP-81
Test Standard	: API-598
Main Material	: GGG40
Knife Material	: SS304
Sealing Material	: NR,PU

Application

For pulp, cement slurry, gold ore powder, coal slurry, pulp, chemical treatment of sewage, sedimentation tanks, asphalt, acid and other liquids and other media.

Product Description

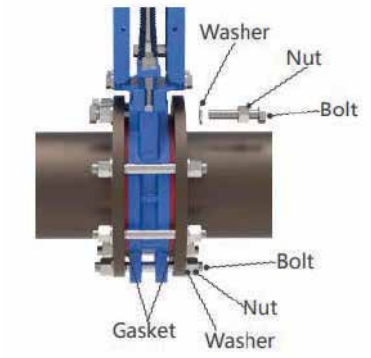
BV Series Knife gate valve is with replaceable rubber seal knife gate structure, its sealing principle is mainly by closely connection between gate and rubber seals. Its main characters is that the rubber sealing ring is set in seat'groove and is locked by metal seat, which will prevent rubber seal off when opening and closing the valve. If the seal is broken, you can remove the metal sear and replace the rubber seal, which will greatly improve valve' working efficiency. This valve is a cost-effective, high-performance products. The series of knife gate valve can be equipped with pneumatic actuators, in order to meet the requirements of different industrial and mining use.

Pneumatic Actuator

Pneumatic actuator is a double acting actuator. There are two different options as magnetic & padded and non-magnetic & non-cushioned according to customer demand. Before using the valve, the actuator must be turned on and off at least 2 times. The air used must be clean and dry.

Flange Mounting

As recommended in the picture below, the valve flange should be connected to the line and washers, bolts and nuts should be used in the connection.



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CONTROL VALVE TECHNOLOGIES

PNEUMATIC PISTON CONTROLLED KNIFE VALVE

Flange connection torque table

	DN100	DN125	DN150	DN200	DN250	DN300
Torque (Nm)	12	16	16	18	41	43

VALVE FEATURES		
NO.	Piston Valve No	Piston Valve Description
1	V-MPK-P1-0104W100B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN100 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
2	V-MPK-P1-0104W125B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN125 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
3	V-MPK-P1-0104W150B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN150 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
4	V-MPK-P1-0104W200B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN200 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
5	V-MPK-P1-0104W250B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN250 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
6	V-MPK-P1-0104W300B-E2	Magnetic Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flanged DN300 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
7	V-MPK-P2-0104W100B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN100 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
8	V-MPK-P2-0104W125B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN125 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
9	V-MPK-P2-0104W150B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN150 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
10	V-MPK-P2-0104W200B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN200 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
11	V-MPK-P2-0104W250B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN250 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue
12	V-MPK-P2-0104W300B-E2	Non-Magnetic & Non Cushioned Pneumatic Cylinder Knife Gate Valve GGG40 Ductile Iron PN16 Wafer Flange DN300 Gate 304SS EPDM Sealed Double Sided Sealed RAL5002 Blue

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SEGMENT BALL VALVE

Design
Size Range : DN25 - DN500
Actuator Connection : ISO 5211

Technical Features
Working Pressure : PN16, 25, 40 ANSI150, 300, 600
Working Temperature : -29°C / + 220°C (Optional +300°C)

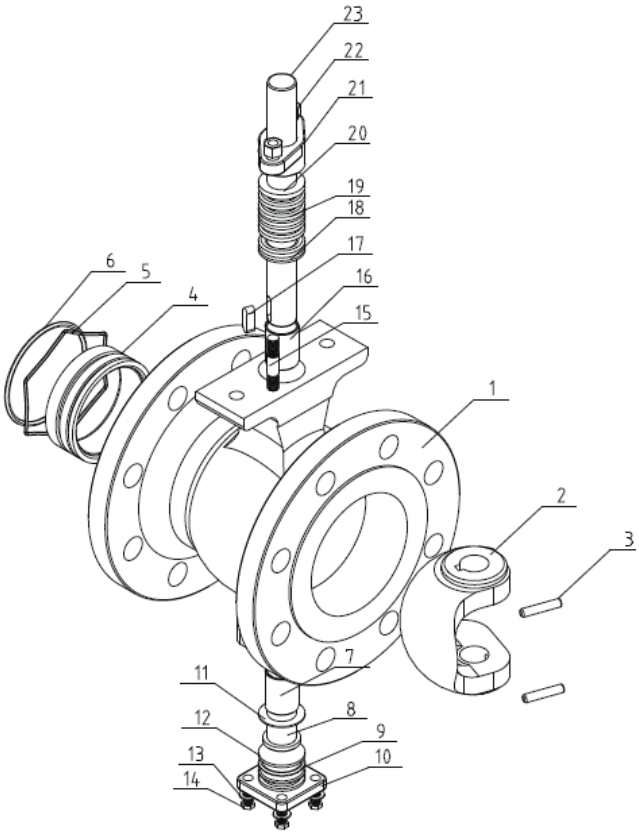
Certificate
ISO9001 & CE Accredited

Flange Type
Face to Face : ISA S75.04, IEC/DIN 534-3-2

Seal Tightness
Metal Seat : Class V (standard), Class VI (with Tungsten Carbide coated trim)
Soft Conta : Class VI
Valve Trim Rotation : Clockwise to close
Flow Characteristic : Equal Percentage

Application
Pulp and paper, waste water treatment, food and beverage, chemical plants, power plants, steel industry, etc.

NO	PART NAME	WCB	CF8	CF8M
1	BODY	WCB	CF8	CF8M
2	V-PORT SEGMENT	CF8+HCr	CF8+HCr	CF8M+HCr
3	PIN	304	304	316
4	SEAT	304+STL	304+STL	316+STL
5	SPRING	316L		
6	O-RING	VITON		
7	BEARING	304+PTFE	304+PTFE	316+PTFE
8	LOWER STEM	304	304	316
9	O-RING	VITON		
10	PACKING GLAND	WCB	CF8	CF8M
11	GASKET	PTFE		
12	GASKET	PTFE		
13	WASHER	Q235	304	316
14	BOLT	25	304	304
15	BOLT	25	304	304
16	BEARING	304+PTFE	304+PTFE	316+PTFE
17	KEY	304	304	316
18	PACKING	PTFE or Graphite		
19	PACKING	PTFE or Graphite		
20	PACKING	PTFE or Graphite		
21	PACKING GLAND	WCB	CF8	CF8M
22	NUT	Q235	304	304
23	UPPER STEM	304	304	316



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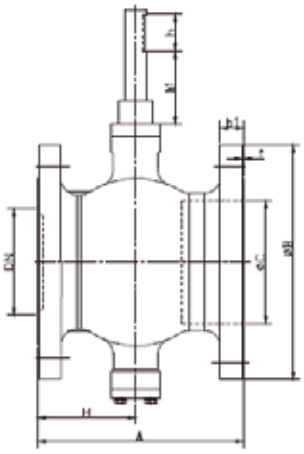
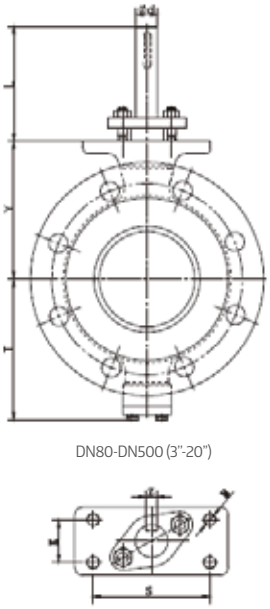
CONTROL VALVE TECHNOLOGIES

SEGMENT BALL VALVE

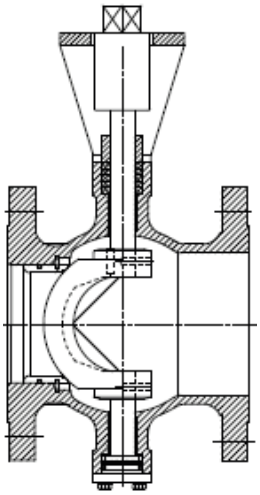
Dimension



DN25-DN65 (1"-1-1/2"



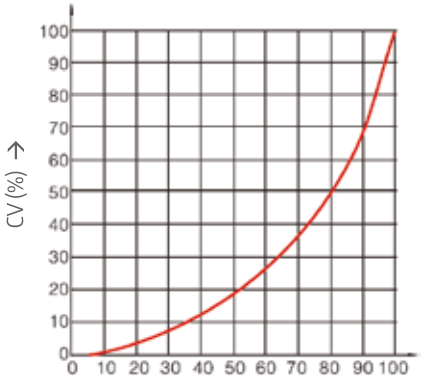
DN80-DN500 (3"-20")



Flow Direction →

Flow Characteristic

DN	A	B	b1	f	C	T	Y	L	d	H	S	K	M	Z	Weight (kg)
DN25	102	115	16	2	38	81	73	75	16	35	75	/	2-M10	5	4.9
DN32	102	140	18	2	45	86	78	75	16	35	75	/	2-M10	5	6.6
DN40	114	150	18	2	50	90	80	75	16	35	75	/	2-M10	5	7.6
DN50	124	165	20	2	62	93	90	75	16	35	75	/	2-M10	5	9.5
DN65	145	185	20	2	73	108	105	75	16	35	75	/	2-M10	5	12.4
DN80	165	200	20	2	90	123	118	75	20	35	90	28	4-M10	6	15.5
DN100	194	220	22	2	115	138	130	75	20	35	90	28	4-M10	6	20.6
DN125	194	250	22	2	134	148	145	80	25	40	90	28	4-M10	8	28.6
DN150	229	285	24	2	164	170	170	94	30	50	110	40	4-M10	8	42.5
DN200	243	340	24	2	206	200	201	94	30	50	110	40	4-M12	8	59.5
DN250	297	405	26	2	260	240	237	98	40	60	135	40	4-M12	12	99
DN300	338	460	28	2	316	286	282	98	40	60	135	40	4-M16	12	148
DN350	400	520	30	2	372	330	337	125	50	60	140	64	4-M16	14	216
DN400	400	580	32	2	420	367	372	172	60	80	170	80	4-M16	18	285
DN450	520	640	40	2	470	422	432	172	70	90	190	90	4-M24	20	370
DN500	600	715	44	2	516	490	498	180	80	100	190	90	4-M24	22	480



SIZE	CV
DN25	36
DN32	56
DN40	94
DN50	152
DN65	262
DN80	358
DN100	540
DN125	906

SIZE	CV
DN150	1424
DN200	2176
DN250	3532
DN300	5732
DN350	8245
DN400	10651
DN450	12878
DN500	16343

Varnasan
CONTROL VALVE TECHNOLOGIES

SEGMENT BALL VALVE

Valve Torque (1.3 Safety Factor)

SIZE	PN16 10 BAR PRESSURE METAL SEAT	PN16 10 BAR PRESSURE SOFT SEAT	PN25 20 BAR PRESSURE METAL/SOFT SEAT	PN40 30 BAR PRESSURE METAL/SOFT SEAT	PN63 50 BAR PRESSURE METAL/SOFT SEAT
DN25	20	20	30	70	150
DN32	25	25	36	90	230
DN40	30	30	40	140	270
DN50	35	35	42	150	520
DN65	50	50	62	300	640
DN80	60	80	95	300	640
DN100	80	120	140	420	900
DN125	110	180	220	600	1600
DN150	170	300	360	950	1600
DN200	240	500	590	1500	2700
DN250	430	900	1100	2300	4700
DN300	600	1400	1500	3500	7000
DN350	1200	2000	2500	6200	9300
DN400	1800	3200	4000	7200	13000
DN450	3000	4500	5600	11000	17300
DN500	4600	6500	8200	12500	22000

SIZE	150LB 10 BAR PRESSURE METAL SEAT	150LB 10 BAR PRESSURE SOFT SEAT	150LB 20 BAR PRESSURE METAL/SOFT SEAT	300LB 35 BAR PRESSURE METAL/SOFT SEAT	600LB 70 BAR PRESSURE METAL/SOFT SEAT
DN25	20	20	30	85	210
DN32	25	25	36	105	320
DN40	30	30	40	180	380
DN50	35	35	42	190	730
DN65	50	50	62	380	930
DN80	60	80	95	380	1000
DN100	80	120	140	530	1000
DN125	110	180	220	720	2200
DN150	170	300	360	1180	2500
DN200	240	500	590	1750	3800
DN250	430	900	1100	2800	6500
DN300	600	1400	1500	4000	10000
DN350	1200	2000	2500	7800	13100
DN400	1800	3200	4000	9000	18000
DN450	3000	4500	5600	13700	24000
DN500	4600	6500	8200	15500	31000

Codes

NO	MATERIAL NO	MATERIAL DESCRIPTION
1	V-IS2P-04-04F025-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN25 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle
2	V-IS2P-04-04F032-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN32 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle
3	V-IS2P-04-04F040-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN40 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle
4	V-IS2P-04-04F050-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN50 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle
5	V-IS2P-04-04F065-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN65 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle
6	V-IS2P-04-04F080-4V-G1A-0	Segment Ball Valve AISI304 Stainless PN16 Flanges DN80 V-PORT Ball Metal Seal-B ISO5211 Direct Compliant Without Handle

Varnasan
CONTROL VALVE TECHNOLOGIES

BELLOW SEAL GLOBE VALVE

V-IGV-01-04F0(15M-100M)-K2

Specification

Design standard : DIN 3356
Face to face dimension : DIN 3202
Flanged ends : DIN 2543-2545
Test & inspection : DIN 3230
Pressure Standard : PN16
Temperature Range : -10°C / +350°C

Application

Hot Oil System, Steam System, Hot And Cold Water System Etc.

Conical disc design
Benefit from the cone and streamline shape design, the disc can remove the impurity, keep valve in reliable seal and longer service life.

Double seal design (bellows+packing)
Bellow from a metal seal to prevent leakage, and packing can provide seal if the bellow failed.

Patented central locate design. It can protect stem from tremble and lower noise, so the bellow is with stable performance and long service life.

Coated sand casting technology
Sand mixed with binder and other additives, which makes the rough casting with less defects like pore, trachoma and cracks, and better tensile strength.

Performance Specification

NOMİNAL PRESSURE		PN	
Test Pressure	Shell test	1.5PN	Mpa
	Sealing test	1.1PN	
	Air test	0.6	
	Bellows test	1.1PN	
Suitable temp	-10°C~ 350°C		

Product Materials

BODY	JS1049 (GGG40)		
SEAT	1.4301	Stellit	
DISC	1.4021	1.4401+Stellite	
PIN	1.4301	1.4401	
BELLOWS	1.4301	1.4401	
STEM	20Cr13	F304	F316
GASKET	Flexible graphite + stainless steel		
BONNET	JS1049(GGG40)		
NUT	ASTM 194-2H	A194-8	
DOUBLE-HEADED BOLT	ASTM 194-B7	A193-B8	
PACKING	Flexible graphite		
GLAND	1C25	1.4301	1.4401
LOCATOR	1C25		
STEM NUT	Copper alloy	D2	BL2
HAND WHEEL	1025/KTH330		
CAP	1C45		

Codes

NO	MATERIAL NO	MATERIAL DESCRIPTION
1	V-IGV-01-04F015M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN15 Metal Bellows RAL5002 Blue
2	V-IGV-01-04F020M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN20 Metal Bellows RAL5002 Blue
3	V-IGV-01-04F025M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN25 Metal Bellows RAL5002 Blue
4	V-IGV-01-04F032M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN32 Metal Bellows RAL5002 Blue
5	V-IGV-01-04F040M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN40 Metal Bellows RAL5002 Blue
6	V-IGV-01-04F050M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN50 Metal Bellows RAL5002 Blue
7	V-IGV-01-04F065M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN65 Metal Bellows RAL5002 Blue
8	V-IGV-01-04F080M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN80 Metal Bellows RAL5002 Blue
9	V-IGV-01-04F100M-K2	Globe Valve GGG40 Ductile Iron PN16 Flange DN100 Metal Bellows RAL5002 Blue

Varnasan
CONTROL VALVE TECHNOLOGIES

HIGH PERFORMANCE METAL SEATED BALL VALVES

Design & Features

- Valve Design According to ASME B16.34
- Anti-Blow-out Proof Stem Design & Anti-Static Device(Ball-Stem-Body)
- Face to Face According to ASME B16.10
- Pressure Tested in accordance with API 598
- Flange Dimension According to ASME B16.5
- Leakage Rate : ASME / FCI 70-2 Class V
- Cold Working Pressure : 19.0 Kgf/cm2
- End Connection : Raised Face Flange End

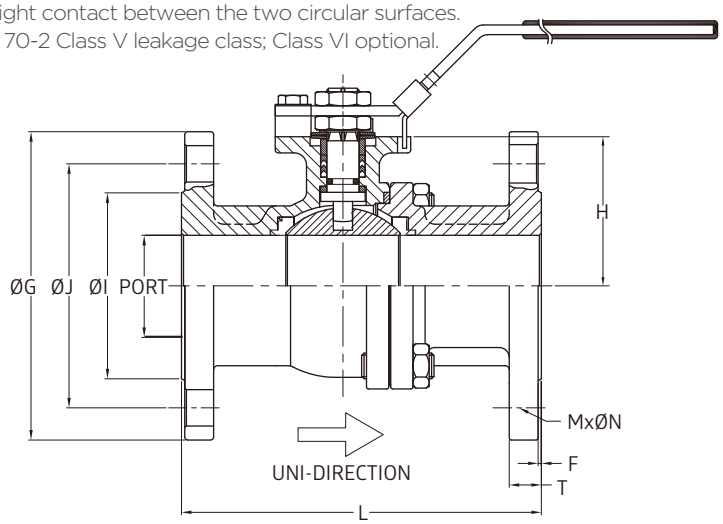
Tn : Torque(N-m)
Wg : Weight(Kg)

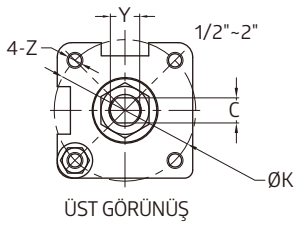
Standards

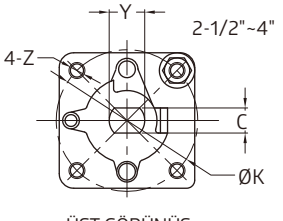
Class : 150/300
Design : ASME B16.34
Face-to-Face : ASME B16.10
Class 150 : 1/2"~5"
Steel Casting : MSS SP-55
Flange End Dimensions : ASME B16.5
Inspection & Test acc. to API598

Specifications

- High Quality Investment Casting according to MSS SP-55
- Valve ball/seat surface hardening treatment provides valve life cycles
- API6FA, ISO10497 Fire safe certified product.
- Valve ball remains in close and tight contact with spring loaded ball seat for maximum sealing effects.
- Wave spring in 17-7 is our standard, Disc Spring design and Coil Spring design is upon request.
- Variety Ball/Seat selections to meet severe applications
- Adjustable stem packing
- Bi-directional flow path is upon request
- ISO5211 mounted pad for actuation
- 17-4ph stem is necessary for actuator installation
- Extended stem 100mm or 180mm is available
- Live loaded & blow-out proof stem design V ball in 30°,45°,60° for flow control application are available for options
- Machine-lapped ball and seat for tight contact between the two circular surfaces.
- Conforming to ANSI B16.104 / FCI 70-2 Class V leakage class; Class VI optional.







Varnasan
CONTROL VALVE TECHNOLOGIES

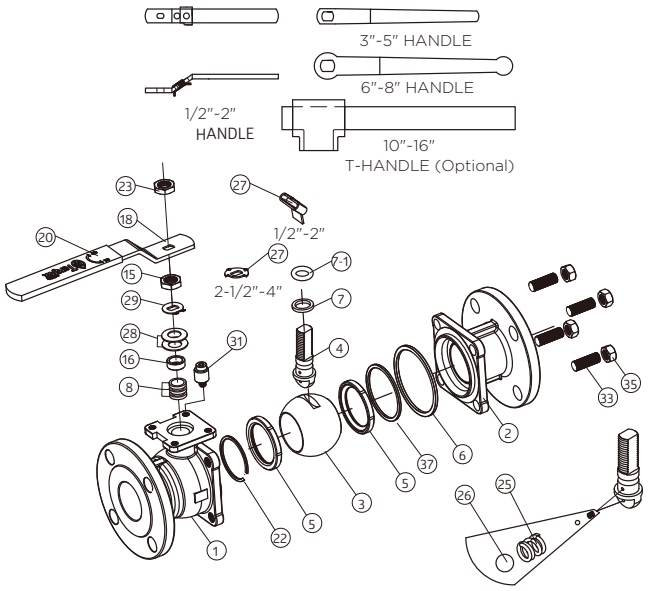
HIGH PERFORMANCE METAL SEATED BALL VALVES

Dimensions

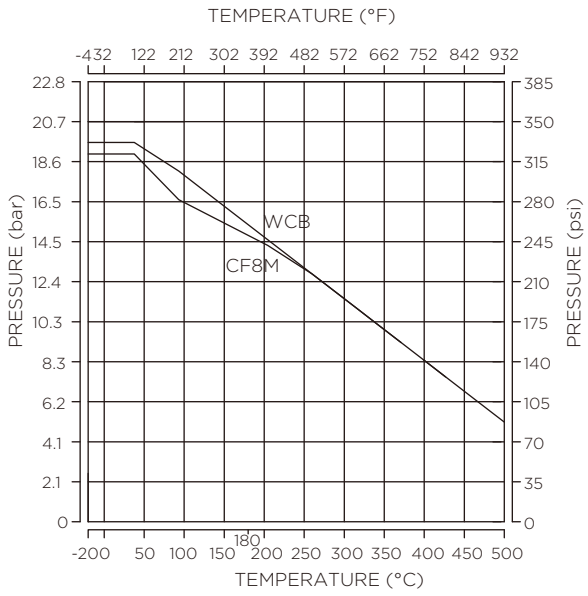
Unit:mm

SIZE		PORT	L	H	ØG	ØJ	ØI	MxØN	T	F	C	Y	ØK	4-Z	Tn	Wg
DN15	1/2"	15.0	108.0	40.0	89.0	60.5	35.0	4x16.0	11.2	1.6	6.35	9.3	42.0	10-24UNC	18.0	1.6
DN20	3/4"	20.0	117.0	43.0	98.0	70.0	43.0	4x16.0	11.2	1.6	6.35	9.3	42.0	10-24NUC	25.0	2.2
DN25	1"	25.0	127.0	51.0	108.0	79.5	51.0	4x16.0	11.2	1.6	8.00	10.9	50.0	1/4"-20UNC	30.0	3.0
DN40	1-1/2"	38.0	165.0	70.0	127.0	98.5	73.0	4x16.0	14.3	1.6	9.50	15.7	70.0	5/16"-18UNC	45.0	6.0
DN50	2"	50.0	178.0	73.0	152.0	120.5	92.0	4x19.0	16.0	1.6	9.50	15.7	70.0	5/16"-18UNC	65.0	9.5
DN65	2-1/2"	65.0	190.0	73.0	178.0	139.5	105.0	4x19.0	17.5	1.6	17.00	28.0	70.0	1/2"-13UNC	80.0	15.0
DN80	3"	76.0	203.0	102.0	190.0	152.5	127.0	4x19.0	19.1	1.6	17.00	28.0	102.0	1/2"-13UNC	99.0	20.0
DN100	4"	101.0	229.0	114.0	229.0	190.5	157.0	8x19.0	23.9	1.6	17.00	28.0	102.0	1/2"-13UNC	131.0	32.0
DN125	5"	125.0	356.0	155.0	254.0	216.0	186.0	8x22.0	23.9	1.6	17.00	29.5	102.0	1/2"-13UNC	488.0	47.5

Exploded View



Body Pressure / Temperature Chart



Varnasan
CONTROL VALVE TECHNOLOGIES

HIGH PERFORMANCE METAL SEATED BALL VALVES

Malzeme Listesi

VALVE OPTIONS		STAINLESS STEEL				CARBON STEEL			
		STANDARD	OPTIONAL			STANDARD	OPTIONAL		
		HARD CHROME	STELLITE SEAT	TUNGSTEN CARBIDE	CHROME CARBIDE	HARD CHROME	STELLITE SEAT	TUNGSTEN CARBIDE	CHROME CARBIDE
NO.	PART NAME	-29°C-350°C	-29°C-538°C	-29°C-400°C	-29°C-538°C	-29°C-350°C	-29°C-538°C	-29°C-400°C	-29°C-538°C
1	BODY	ASTM A351 Gr.CF8M				ASTM A216 Gr.WCB			
2	END CAP	ASTM A351 Gr.CF8M				ASTM A216 Gr.WCB			
3	BALL	ASTM A351 CF8M + HCr	ASTM A351 CF8M + STL	ASTM A351 CF8M + TC	ASTM A351 CF8M + CrC	ASTM A351 CF8M + HCr	ASTM A351 CF8M + STL	ASTM A351 CF8M + TC	ASTM A351 CF8M + CrC
4	STEM	17-4ph				17-4ph			
5	SEAT	SS316+STL	SS316+STL	SS316+TC	SS316+CrC	SS316+STL	SS316+STL	SS316+TC	SS316+CrC
6	BODY SEAL	GRAPHITE + SPIRALWOUND				GRAPHITE + SPIRALWOUND			
7	THRUST WASHER	GRAPHITE				GRAPHITE			
7-1	THRUST WASHER	STAINLESS				STAINLESS			
8	STEM PACKING	GRAPHITE				GRAPHITE			
15	GLAND BUSH	ASTM A276 Gr.304				ASTM A276 Gr.304			
16	STEM NUT	ASTM A276 Gr.304				ASTM A276 Gr.304			
18	HANDLE	ASTM A276 Gr.304				ASTM A276 Gr.304			
20	HANDLE COVER	PLASTIC				PLASTIC			
22	SPRING	INCONEL or 17-7				INCONEL or 17-7			
23	HANDLE NUT	ASTM A276 Gr.304				ASTM A276 Gr.304			
25	PLUNGER SPRING	ASTM A276 Gr.316				ASTM A276 Gr.316			
26	ANTI-STATIC BALL	ASTM A276 Gr.316				ASTM A276 Gr.316			
27	LOCKING PAD	ASTM A276 Gr.304				ASTM A276 Gr.304			
28	BELLEVILLE WASHER	SS420				SS420			
29	TAB WASHER	ASTM A276 Gr.304				ASTM A276 Gr.304			
31	STOP PIN	ASTM A276 Gr.304				ASTM A276 Gr.304			
33	BODY BOLT	ASTM A193 Gr.B8				ASTM A193 Gr.B7			
35	BOLT NUT	ASTM A194 Gr.8				ASTM A194 Gr.2H			
37	SEAT SEALS	GRAPHITE				GRAPHITE			

Varnasan
CONTROL VALVE TECHNOLOGIES

PNEUMATIC ACTUATED GLOBE CONTROL VALVE

V10P - V10T Series

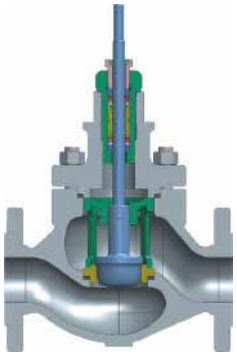
V10P Series

The V10P Series single-seat control valve adopts the top guided unbalanced structure, featured by high strength, heavy load, S type flow channel, low pressure drop loss, high flow coefficient, wide adjustable range, high flow characteristic precision, etc.

This kind of control valve is suitable for applications with relatively low differential pressure with tight shut-off. It is suitable for controlling medium flow or pressure. The cage adopts the press-in type seat design, which solves the problems of difficult disassembly and high leakage of the traditional thread screw-in type seat and prolongs the service life.

The flow to open design is adopted, and the medium flow direction tends to the opening direction of the valve with good controllability of small opening and low flow characteristic distortion.

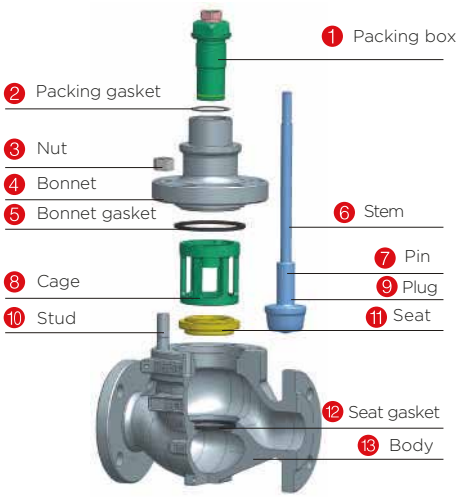
Special cages with noise reduction and anti-cavitation functions can be offered according to the requirements in different service conditions.



V10P Series General Features

Trim features : Top guided, unbalanced trim, quick disassembly cage structure
Body type : Straight-through type, angle type.
Bonnet type : Standard type, heat dissipation type, cryogenic type, bellows
Flow characteristic : Equal percentage, linear, quick open
Shut-off class : ASME B16.104 V (standard metal seat)
ASME B16.104 VI (shut-off soft seat)
Pipe connection type : Flange type, butt welding type
Applicable temperature range : -29°C / +230°C
Actuator type : Pneumatic diaphragm actuator
Pneumatic piston actuator
Electric actuator

Exploded Picture



Varnasan
CONTROL VALVE TECHNOLOGIES

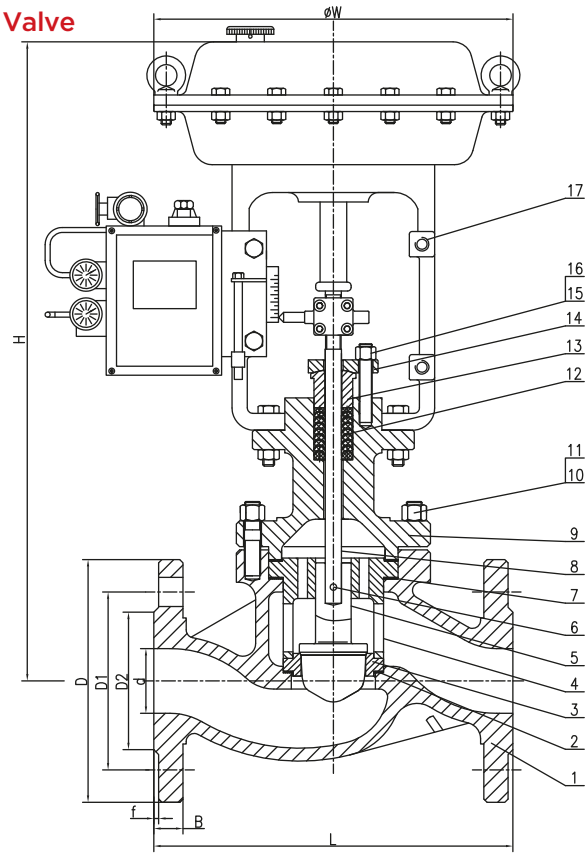
PNEUMATIC ACTUATED GLOBE CONTROL VALVE

V10P - V10T Series

Dimensions Of V10p Series Pneumatic Actuated Globe Control Valve

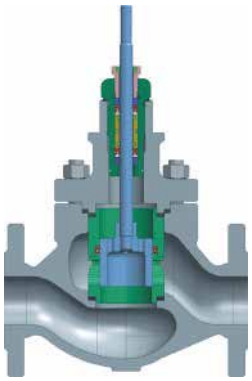
NO	PART TIME	BILL OF MATERIAL
1	BODY	ASTM A216 WCB
2	SEAT GASKET	SS304+Grafit
3	SEAT	ASTM A276 SS304
4	CAGE	ASTM A351 CF8
5	PLUG	ASTM A276 SS304
6	PIN	ASTM A276 SS304
7	BONNET GASKET	SS304+Grafit
8	STEM	ASTM A276 SS304
9	BONNET	ASTM A216 WCB
10	BOLT	ASTM A193 B7
11	NUT	ASTM A194 2H
12	PACKİNG	V-PTFE
13	GLAND	ASTM A276 410
14	GLAND FLANGE	ASTM A216 WCB
15	BOLT	ASTM A193 B7
16	NUT	ASTM A194 2H
17	DIAPHRAGM ACTUATOR	MONTAJ

DN	PN	DIMENSION(MM)								
		L	øD	øD1	øD2	B	f	n-ød	øW	H
20	40	181	105	75	58	18	2	4—ø14	290	415
25	40	184	115	85	68	18	2	4—ø14	290	430
32	40	222	140	100	78	18	2	4—ø18	290	455
40	40	222	150	110	88	18	2	4—ø18	290	455
50	40	254	165	125	102	20	2	4—ø18	290	460



V10T Series

The V10T Series cage single-seat control valve adopts the cage guided structure and pressure balanced plug. It is suitable for applications with relatively high differential pressure.
The balanced seal ring replaces the upper seat to change the traditional cage double-seat valve structure into the cage single-seat structure. This improvement has greaty enhanced the shut-off class of the cage valve. The plug makes use of the pressure balanced structure, the opening and closing force is low and the media under service conditions with high differential pressure can be controlled through relatively low actuator thrust. It is widely used for fluid control on pipelines of middle and low temperature and middle and low pressure that require good dynamic stability.



With such features as good sealing performance, high allowable differential pressure, cage guiding, large guiding area, good stability and compact structure, it can realize fast replacement of trims on the line with high maintenance efficiency, saving manpower and time. The balanced plug structure makes sure that the actuator thrust required is the lowest.

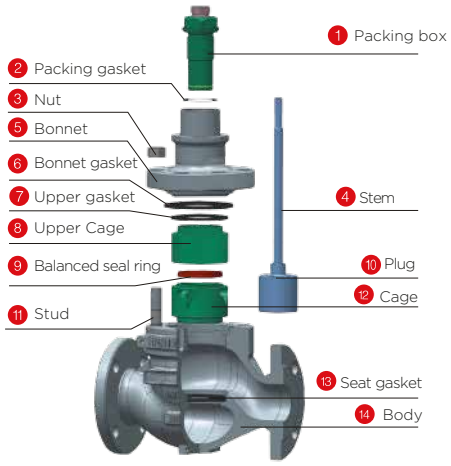
Varnasan
CONTROL VALVE TECHNOLOGIES

PNEUMATIC ACTUATED GLOBE CONTROL VALVE

V10P - V10T Series

V10T Series General Features

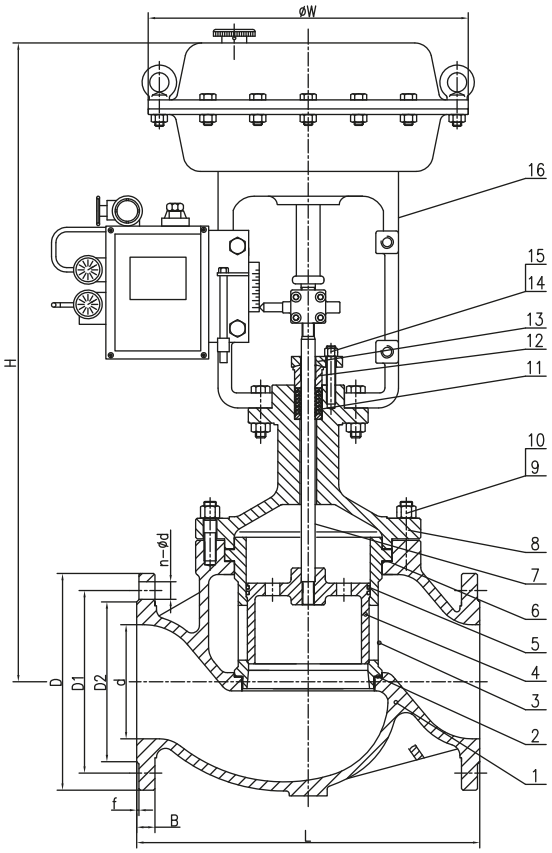
Trim features : Top guided, unbalanced trim, quick disassembly cage structure
Body type : Straight-through type, angle type.
Bonnet type : Standard type, heat dissipation type, cryogenic type, bellows
Flow characteristic : Equal percentage, linear, quick open
Shut-off class : ASME B16.104 V (standard metal seat)
ASME B16.104 VI (shut-off soft seat)
Pipe connection type : Flange type, butt welding type
Applicable temperature range : -29°C / +230°C
Actuator type : Pneumatic diaphragm actuator
Pneumatic piston actuator
Electric actuator



Dimensions Of V10t Series Pneumatic Actuated Globe Control Valve

NO	PART TIME	BILL OF MATERIAL
1	BODY	ASTM A216 WCB
2	SEAT GASKET	SS304+Graphite
3	CAGE	ASTM A276 SS304
4	PLUG	ASTM A276 SS304
5	BALANCE SEALİNG RİNG	Viton
6	BONNET GASKET	SS304+Graphite
7	STEM	ASTM A276 SS304
8	BONNET	ASTM A216 WCB
9	STUD	ASTM A193 B7
10	NUT	ASTM A194 2H
11	PACKİNG	V-PTFE
12	GLAND	ASTM A276 410
13	GLAND FLANGE	ASTM A216 WCB
14	STUD	ASTM A193 B7
15	NUT	ASTM A194 2H
16	DİAPHRAGM ACTUATOR	Assembly

DN	PN	DIMENSION(MM)								
		L	øD	øD1	øD2	B	f	n-ød	øW	H
65	40	276	185	145	122	22	2	8—ø18	365	610
80	40	298	200	160	138	24	2	8—ø18	365	620
100	40	352	235	190	162	24	2	8—ø22	365	630
150	40	451	300	250	218	28	2	8—ø26	475	855



Varnasan
CONTROL VALVE TECHNOLOGIES

PNEUMATIC ACTUATED GLOBE CONTROL VALVE

V10P - V10T Series

VL1000

The VL1000 Series pneumatic actuator is a multi-spring diaphragm actuator with such features as light weight, small volume, stable output force, etc. Through acting on the diaphragm inside the actuator, the air supply conquers the reverse action force of the spring and makes upward and downward linear movement. When there is no air pressure, the compression spring releases pressure and pushes the push shaft of the actuator to move upwards or downwards. The actuators of this series can be classified into direct action type and reverse action type.

Diaphragm effective area(cm2)	Travel
360	16
360	25
560	40
900	60
1400	100

Product Selection Table

NO	NOMINAL DİAMETER		Kv (m/h)	ACTUATOR DIAMETER (cm2)	WORKING TEMP (°C)	RATED STROKE (mm)
1	DN 15	V10P	4	360	-29 / +230	16
2	DN 20		6,3	360	-29 / +230	16
3	DN 25		10	360	-29 / +230	16
4	DN 32		16	360	-29 / +230	25
5	DN 40		25	360	-29 / +230	25
6	DN 50		40	360	-29 / +230	25
7	DN 65	V10T	63	560	-29 / +230	40
8	DN 80		100	560	-29 / +230	40
9	DN 100		160	560	-29 / +230	40
10	DN 150		250	900	-29 / +230	60

Codes

MATERIAL NO.	MATERIAL DESCRIPTION
V-IGV-19-06F015D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN15 V10P Series Globe Valve
V-IGV-19-06F020D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN20 V10P Series Globe Valve
V-IGV-19-06F025D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN25 V10P Series Globe Valve
V-IGV-19-06F032D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN32 V10P Series Globe Valve
V-IGV-19-06F040D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN40 V10P Series Globe Valve
V-IGV-19-06F050D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN50 V10P Series Globe Valve
V-IGV-19-06F065D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN65 V10T Series Globe Valve
V-IGV-19-06F080D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN80 V10T Series Globe Valve
V-IGV-19-06F100D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN100 V10T Series Globe Valve
V-IGV-19-06F150D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN25 DN150 V10T Series Globe Valve

V-IGV-19-07F015D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN15 V10P Series Globe Valve
V-IGV-19-07F020D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN20 V10P Series Globe Valve
V-IGV-19-07F025D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN25 V10P Series Globe Valve
V-IGV-19-07F032D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN32 V10P Series Globe Valve
V-IGV-19-07F040D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN40 V10P Series Globe Valve
V-IGV-19-07F050D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN50 V10P Series Globe Valve
V-IGV-19-07F065D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN65 V10T Series Globe Valve
V-IGV-19-07F080D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN80 V10T Series Globe Valve
V-IGV-19-07F100D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN100 V10T Series Globe Valve
V-IGV-19-07F150D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A216 WCB PN40 DN150 V10T Series Globe Valve

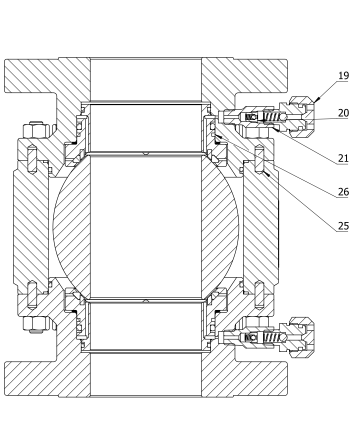
V-IGV-22-07F015D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN15 V10P Series Globe Valve
V-IGV-22-07F020D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN20 V10P Series Globe Valve
V-IGV-22-07F025D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN25 V10P Series Globe Valve
V-IGV-22-07F032D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN32 V10P Series Globe Valve
V-IGV-22-07F040D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN40 V10P Series Globe Valve
V-IGV-22-07F050D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN50 V10P Series Globe Valve
V-IGV-22-07F065D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN65 V10T Series Globe Valve
V-IGV-22-07F080D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN80 V10T Series Globe Valve
V-IGV-22-07F100D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN100 V10T Series Globe Valve
V-IGV-22-07F150D-P2	VL1000 Diaphragm Type Pneumatic Actuator Controlled Flanged A351 CF8M PN40 DN150 V10T Series Globe Valve

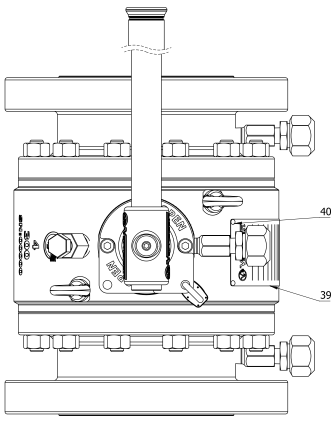
Varnasan
CONTROL VALVE TECHNOLOGIES

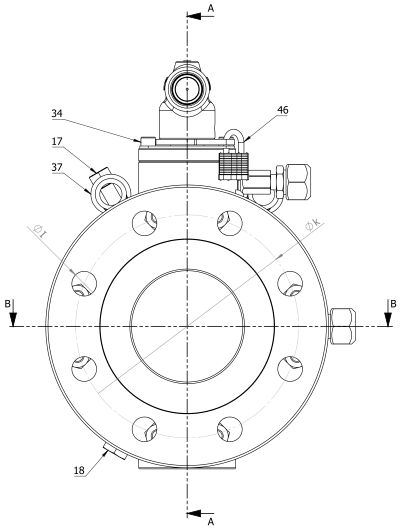
3 PIECE API 6D BALL VALVE
Flanged

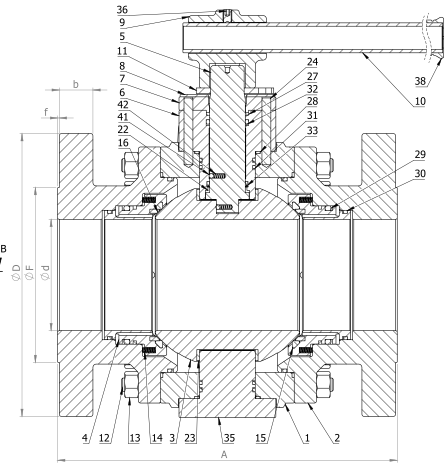
General Features

Design	: API 6D
Size	: ASME B16.10
Connection	: ASME B16.5
Body Material	: ASME B16.34
Working Pressure	: Class150 (PN20), Class300 (PN50), Class600 (PN100)
Working Temperature	: -29°C / +180°C
Actuator Connection	: ISO 5211
Usage Areas	: Oil, LPG & LNG, Naturel Gas Piping Lines









NO	PART NAME	MATERIAL
1	BODY	ASTM A105
2	CLOSURE	ASTM A105
3	BALL	ASTM A105 + ENP
4	SEAT RING WITH LUBRICATION	ASTM A105 + ENP
5	STEM - SQUARE HEAD	ASTM A105 + ENP
6	GLAND - WITH SEAL INJECTION	ASTM A105
7	GLAND FLANGE	ASTM A105
8	STOPER - LOCKING DEVICE	AISI 316
9	LEVER	GGG50
10	LEVER PIPE	St37
11	POSITION INDICATOR - LOCKING DEVICE	AISI 430
12	BODY BOLT	ASTM A193 Gr B7 + Zn
13	BODY NUT	ASTM A194 Gr 2H + Zn
14	SEAT RING - SPRING	AISI 316
15	SEAT RING - TRIANGLE SEAT	FKM / HNBR
16	SEAT INSERT	POM / POLYAMIDE
17	1/2" VENT	AISI 316
18	1/2" HEX HEAD PLUG	AISI 316
19	1/4" SEALANT INJECTOR	AISI 316
20	1/8" CHECK VALVE	AISI 316
21	1/4" LUBRICANT EXTENSION	AISI 316
22	STEM WASHER	BRASS
23	BALL BUSHING	PERMAGLIDE P10
24	PIN	AISI 5120 (16MnCr5)
25	PIN	AISI 5120 (16MnCr5)
26	FIRE SAFE GASKET	GRAPHITE
27	FIRE SAFE GASKET	GRAPHITE
28	FIRE SAFE GASKET	GRAPHITE
29	O-RING	NBR
30	O-RING	NBR
31	O-RING	NBR
32	O-RING	NBR
33	LIBSEAL	NBR
34	IMBUS BOLT	8.8 + Zn
35	TRUNNION	ASTM A 105
36	SETSCREW	8.8 + Zn
37	EYEBOLT	FORGING
38	HANDLE	PLASTIC
39	NAME PLATE	AISI 430
40	RIVET	AISI 316
41	ANTISATIC BALL	AISI 316
42	ANTISTATIC SPRING	AISI 316
43	PADLOCK	-

Varnasan
CONTROL VALVE TECHNOLOGIES

3 PIECE API 6D BALL VALVE
Flanged

DN	BODY MATERIAL	PRODUCT NO		
		Class150	Class300	Class600
DN15	A105	V-M3A-12-20F015-4B-SOLO-11	V-M3A-12-21F015-4B-SOLO-11	V-M3A-12-22F015-4B-SOLO-11
DN20		V-M3A-12-20F020-4B-SOLO-11	V-M3A-12-21F020-4B-SOLO-11	V-M3A-12-22F020-4B-SOLO-11
DN25		V-M3A-12-20F025-4B-SOLO-11	V-M3A-12-21F025-4B-SOLO-11	V-M3A-12-22F025-4B-SOLO-11
DN32		V-M3A-12-20F032-4B-SOLO-11	V-M3A-12-21F032-4B-SOLO-11	V-M3A-12-22F032-4B-SOLO-11
DN40		V-M3A-12-20F040-4B-SOLO-11	V-M3A-12-21F040-4B-SOLO-11	V-M3A-12-21F040-4B-SOLO-11
DN50		V-M3A-12-20F050-4B-SOLO-11	V-M3A-12-21F050-4B-SOLO-11	V-M3A-12-21F050-4B-SOLO-11
DN65		V-M3A-12-20F065-4B-SOLO-11	V-M3A-12-21F065-4B-SOLO-11	V-M3A-12-21F065-4B-SOLO-11
DN80		V-M3A-12-20F080-4B-SOLO-11	V-M3A-12-21F080-4B-SOLO-11	V-M3A-12-21F080-4B-SOLO-11
DN100		V-M3A-12-20F100-4B-SOLO-11	V-M3A-12-21F100-4B-SOLO-11	V-M3A-12-21F100-4B-SOLO-11
DN125		V-M3A-12-20F125-4B-SOLO-11	V-M3A-12-21F125-4B-SOLO-11	V-M3A-12-21F125-4B-SOLO-11
DN150		V-M3A-12-20F150-4B-SOLO-11	V-M3A-12-21F150-4B-SOLO-11	V-M3A-12-21F150-4B-SOLO-11
DN200		V-M3A-12-20F200-4B-SOLO-11	V-M3A-12-21F200-4B-SOLO-11	V-M3A-12-21F200-4B-SOLO-11

NPS	DN	Class150									Class300									Class600								
		A	ØD	Øk	Flange Hole Qtty	Øl	ØF	Ød	f	b	A	ØD	Øk	Flange Hole Qtty	Øl	ØF	Ød	f	b	A	ØD	Øk	Flange Hole Qtty	Øl	ØF	Ød	f	b
1/2"	DN15	108	89	60,5	4	5/8"	35,1	15	1,5	11,2	140	95	66,5	4	5/8"	35,1	15	1,5	14,2	165	95	66,5	4	5/8"	35,1	15	6,4	14,2
3/4"	DN20	117	99	69,8			42,9	20		12,7	152	117	82,6		3/4"	42,9	20		15,7	190	117	82,6		3/4"	42,9	20		15,7
1"	DN25	127	108	79,2			50,8	25		14,2	165	124	88,9			50,8	25		17,5	216	124	88,9			50,8	25		17,5
1 1/4"	DN32	140	117	88,9			63,5	32		15,7	178	133	98,6			63,5	32		19	229	133	98,6			63,5	32		20,6
1 1/2"	DN40	165	127	98,6			73	40		17,5	190	155	114,3		7/8"	73	40		20,6	241	155	114,3		7/8"	73	40		22,4
2"	DN50	178	152	120,6		3/4"	91,9	50		19	216	165	127	8	3/4"	91,9	50		22,4	292	165	127	8	3/4"	91,9	50		25,4
2 1/2"	DN65	191	178	139,7			104,6	65		22,4	241	190	149,4			104,6	65		25,4	330	190	149,4		7/8"	104,6	65		28,4
3"	DN80	203	190	152,4			127	80		23,9	282	210	168,1			127	80		28,4	356	210	168,1			127	80		31,8
4"	DN100	229	229	190,5	8		157,2	100		23,9	305	254	200,2		7/8"	157,2	100		31,8	432	273	215,9		1"	157,2	100		38,1
5"	DN125	356	254	215,9		7/8"	185,7			23,9	381	279	235			185,7			35,1		330	266,7		11/8"	185,7			44,4
6"	DN150	394	279	241,3			215,9	150		25,4	403	318	269,7	12		215,9	150		36,6	559	356	292,1	12		215,9	150		47,8
8"	DN200	457	343	298,4			269,7	200		28,4	502	381	330,2		1"	269,7	200		41,1	660	419	349,2		11/4"	269,7	200		55,6

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