

KNIFE GATE VALVE STAINLESS STEEL BODY

TECHNICAL PASSPORT

KNIFE GATE VALVE - RISING STEM WITH ELECTRIC ACTUATOR BERNARD STAINLESS STEEL BODY - BETWEEN FLANGES PN10

VG 6400-BX4

APPLICATION

The knife gate valve is particularly suitable for the most difficult applications.

Area of use: water treatment networks, pulp and paper industry, chemical plants, winemaking, cement works, pneumatic transport, storage.

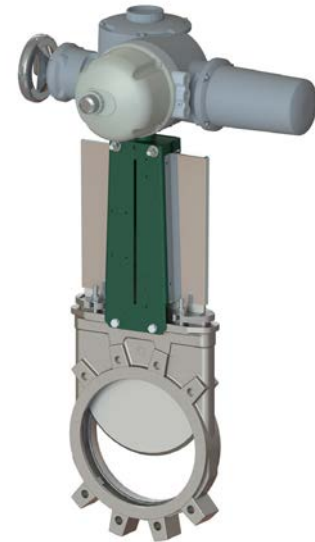


Fluids: water, sewage, pulp, pasty products, powdery, granular, fibrous, abrasive and crystallizing.

GENERAL CHARACTERISTICS

Range: from DN50 to DN1200.

- Knife Gate Valve on/off or regulation with rising stem.
- Molded monobloc body
- Unidirectional water tightness: Flow direction indicated on the body with an arrow.
- Installation between flanges ISO PN10.
- Small retention zone.
- Gate with a beveled cutting edge guided in the body with little backlash.
- Guaranteed closure, without risk of blockage.
- Standard polished gate, soft contact with the gaskets.
- Very resistant ductile iron packing flange avoids risks of breaks.
- Operating force reduced thanks to the elasticity of the gaskets.
- Pre-formed profiled sheet metal support plates from DN50 to DN300 for accessory or kit mounting.
- Full flow when fully opened, ensuring a high flow rate with low head loss.
- Flow regulation possible for pasty or abrasive fluids with installation of a deflector.



References	Actuator types
VG 6400-B04	BERNARD 400V 3PH
VG 6400-B14	BERNARD 230V 3PH
VG 6400-B24	BERNARD 230V 1PH

STANDARDS

Design	Manufacture according to the requirements of the European directive n° 2014/68/UE «Equipment under pressure» : modulate H.					
	In option: product conform to European directive ATEX «ATmosphère EXplosive» n° 2014/34/UE.					
Face to face	Face to face dimension according to TECOFI standard					
Connection	Mounting between flanges in accordance with EN1092-2 and DIN 2501 : ISO PN10					
Tests	Pressure test according to standards EN12266-1, DIN 3230 and ISO 5208.					
	DN	Body	Seat	DN	Body	Seat
	DN50-250 : DN500-600:	15.4 bar 7.2 bar	11 bar 4.4 bar	DN300-450: DN700-1200:	12.6 bar 3 bar	7.7 bar 2.2 bar

PRODUCT APPROVALS



On request

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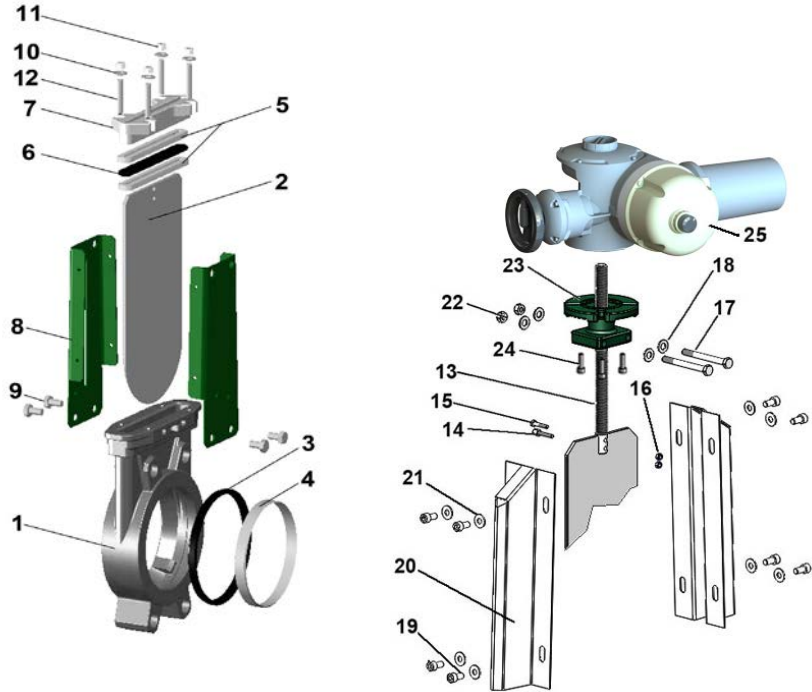
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CONSTRUCTION

The valves are coated with epoxy paint to protect them against corrosion

Component	Coating
Support plate (8)	Liquid epoxy RAL 6005 70 microns



Rep.	Q-té	Désignation	Matière	Equivalence		
				DIN	ASTM	BS
1	1	Body	Stainless steel GX5CrNiMo 19-11-2	G-X6CrNiMo18 10	A 351 grade CF8M	316 C16
2	1	Gate	Stainless steel X5CrNiMo 17-12-2	X2CrNiMo17-13-2	A 182 AISI 316L	1449-2 316 S11
3	1	Seat gasket (1)	EPDM			
4	1	Support ring (1)	Stainless steel X5CrNiMo 17-12-2	X5CrNiMo18 10	A 182 AISI 316	1449-2 316 S16
5	2	Packing	PTFE			
6	1	O-Ring	EPDM			
7	1	Packing gland	Inox GX5CrNiMo 19-11-2	G-X6CrNiMo18 10	A 351 grade CF8M	316 C16
8	2	Support plate	Steel			
9	4*	Screw	Stainless steel A2-70			
10	4*	Washer	Stainless steel A2-70			
11	4*	Nut	Stainless steel A2-70			
12	4*	Tie rod	Stainless steel A2-70			
13	1	Stem	Stainless steel 13% Cr	X12CR13	AISI 410	
14	1	Detection screw	Stainless steel X5CrNi 18 10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
15	1	Screw	Stainless steel A2-70			
16	2	Nut	Stainless steel X5CrNi 18 10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
17	2	Screw	Stainless steel A2-70			
18	4	Washer	Stainless steel A2-70			
19	8	Screw	Stainless steel A2-70			
20	2	Protection cap	Stainless steel X5CrNi 18 10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
21	8	Washer	Stainless steel A2-70			
22	2	Nut	Stainless steel A2-70			
23	1	ISO 5210 plate	Steel A45			
24	4	Screw	Stainless steel A2-70			
25	1	Electric actuator	BERNARD model			

* - 8 for DN350-400; - 12 for DN450-900 and 16 for DN1000-1200 (1) - Parts missing on metal/metal sealing

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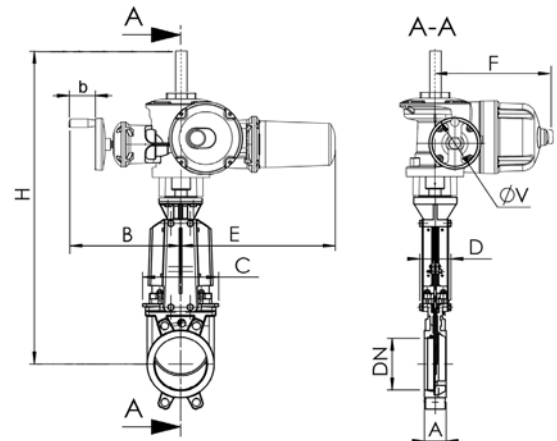
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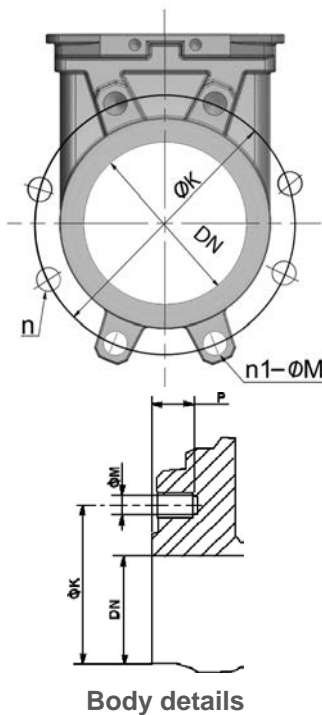
DIMENSIONS

DN		Actuator type	A	B	b	C	D	E	F	øV	H	Weight (kg)
mm	inch											
50	2"	AT3_	40	246	80	124	83	388	315	160	587	30
65	2 1/2"	AT3_	40	246	80	139	83	388	315	160	612	30
80	3"	AT3_	50	246	80	154	83	388	315	160	637	31
100	4"	AT3_	50	246	80	174	83	388	315	160	682	32
125	5"	AT6_	50	246	80	189	93	388	315	160	720	37
150	6"	AT6_	60	246	80	220	93	388	315	160	771	41
200	8"	AT6_	60	246	80	275	108	388	315	160	890	58
250	10"	AT14_	70	262	81	326	108	472	347	160	1013	72
300	12"	AT14_	70	262	81	380	108	472	347	160	1157	83
350	14"	AT14_	96	262	81	438	290	472	347	160	1305	135
400	16"	AT14_	100	262	81	494	290	472	347	160	1473	165
450	18"	AT25_	106	299	-	547	290	572	385	250	1628	206
500	20"	AT25_	110	299	-	613	290	572	385	250	1778	241
600	24"	AT25_	110	299	-	716	290	572	385	250	2079	296
700	28"	AT50_	110	299	-	835	320	572	385	250	2252	476
800	32"	AT50_	110	299	-	972	320	572	385	250	2838	626
900	36"	AT50_	110	299	-	1041	320	572	385	250	3235	846
1000	40"	AT50_	110	299	-	1152	320	572	385	250	3517	1051
1200	48"	AT50_	150	299	-	1255	400	572	385	250	4154	1701

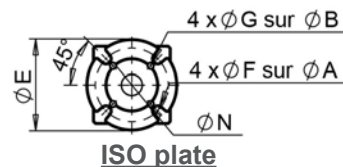


Dimension A - face to face according to TECOFI standard

MOUNTING



Body details



ISO plate

DN		Maximum pressure (bar)	n	n1-øM	P	øK	ISO plate	øA	øB	øE	øF	øG	øN
mm	inch												
50	2"	10	4	4xM16	8	125	F07/F10	70	102	125	9	11	70
65	2 1/2"	10	4	4xM16	8	145	F07/F10	70	102	125	9	11	70
80	3"	10	8	4xM16	9	160	F07/F10	70	102	125	9	11	70
100	4"	10	8	4xM16	9	180	F07/F10	70	102	125	9	11	70
125	5"	10	8	4xM16	9	210	F07/F10	70	102	125	9	11	70
150	6"	10	8	4XM20	10	240	F07/F10	70	102	125	9	11	70
200	8"	10	8	4XM20	12	295	F10	102	-	125	12	-	70
250	10"	10	12	8XM20	12	350	F10	102	-	125	12	-	70
300	12"	7	12	8XM20	19	400	F10	102	-	125	12	-	70
350	14"	7	16	10XM20	20	460	F10/F14	102	140	175	11	17	100
400	16"	7	16	10XM24	24	515	F10/F14	102	140	175	11	17	100
450	18"	7	20	14XM24	24	565	F10/F14	102	140	175	11	17	100
500	20"	4	20	14XM24	24	620	F10/F14	102	140	175	11	17	100
600	24"	4	20	14XM27	24	725	F10/F14	102	140	175	11	17	100
700	28"	2	24	16XM27	29	840	F14	140	-	175	17	-	100
800	32"	2	24	16XM30	29	950	F14	140	-	175	17	-	100
900	36"	2	28	20XM30	40	1050	F16	165	-	210	23	-	130
1000	40"	2	28	20XM33	40	1160	F16	165	-	210	23	-	130
1200	48"	2	32	24XM36	40	1380	F16	165	-	210	23	-	130

n- Total number of holes

n1- number of threaded holes

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ISO 9001
ISO 14001
BUREAU VERITAS
Certification



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WORKING CONDITIONS

Maximum working pressure: DN50-250 : 10 bar
 DN300-450 : 7 bar
 DN500-600 : 4 bar
 DN700-1200 : 2 bar

Maximum working temperature : -10°C / +130°C (EPDM joint in standard)

⚠ The above mentioned pressures are only valid if the direction of assembly indicated by the arrow on the valves is observed.

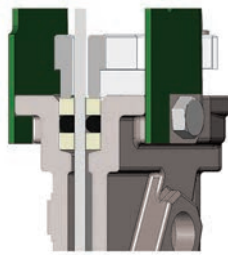
Upstream/downstream tightness



Elastomer
tightness

metal/metal
tightness

Packing tightness



PTFE/Elastomer

Tightness in option

Tightness	Maximum temperature
Métal/métal	Tmax : -10°C / +80°C
NBR	Tmax : -10°C / +80°C
White EPDM	Tmax : -10°C / +130°C
Silicone	Tmax : -10°C / +170°C
FPM (Type Viton®)	Tmax : -10°C / +170°C
PTFE	Tmax : +4°C / +170°C
CSM (Type Hypalon®)	Tmax : +4°C / +80°C

⚠ To ensure a satisfactory tightness, when using the PTFE gasket, the operating pressure must be at least 1 bar.

FLOWS

Kv of valves (m³/h)

DN		Operating stroke, %									
mm	inch	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
50	2"	1,41	7,57	18,4	33,27	52,61	74,78	98,45	120,81	149,53	161,66
65	2"1/2	2,41	8,58	25,4	49,32	85,77	121,51	167,85	219,67	287,45	317,77
80	3"	3	13,1	46,66	79,57	122,11	199,58	276,85	359,84	432,49	461,98
100	4"	3,86	33,06	75,62	125,01	206,17	311,72	474,43	681,36	865,17	993,21
125	5"	19,64	47,05	107,47	177,8	295,95	444,71	675,13	973,05	1231,14	1385,15
150	6"	28,88	104,25	181,37	281,61	418,76	614,83	884,79	1177,11	1482,44	1613,77
200	8"	24,04	141,73	251,71	418,72	514,76	785,11	1227,16	1982,56	2491,22	2783,27
250	10"	115,44	367,52	693,84	1141,65	1634,09	2342,79	3243,71	3960,67	5336,19	5951,8
300	12"	103,12	535,87	1023,55	1619,5	2441,26	3508,29	4553,83	6339,29	7862,36	8373,88
350	14"	218,4	725,8	1323	2173,2	3294,8	4914,3	7120,9	11415,3	19105,4	24890,7
400	16"	389,1	1150,1	2024,4	3130,9	4669,6	7009,1	10355,2	16014,2	22600,5	26497,7
450	18"	402,7	1287,3	2402,9	3803,4	5686,8	8247,3	12248,7	17298,5	26403,9	29485
500	20"	617	1611,1	2935,9	4625,8	7054,7	10438,9	15446	23582,8	35107,4	42784

The photographs and technical art works are not contractual. The specifications of the presented products are open to modifications without previous advice

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