

KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

KNIFE GATE VALVE WITH HANDWHEEL NON RISING STEM DUCTILE IRON BODY - WAFER TYPE PN10

VG 4400-001

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.

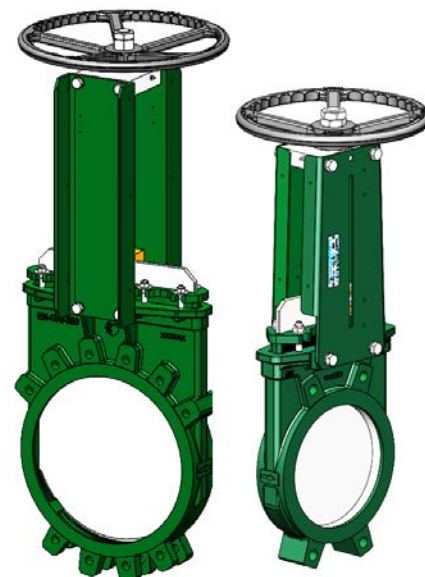


Fluids: water, sewage, pulp, pasty products, powdery, granular, fibrous, abrasive and crystallizing.

GENERAL CHARACTERISTICS

Range: from DN50 to DN600.

- Knife Gate Valve on/off or regulation with non 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.



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 :	15 bar	11 bar	DN300-450:	10.5 bar	7.7 bar
	DN500-600:	6 bar	4.4 bar			

PRODUCT APPROVALS



On request

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19
E-mail : sales@tecofi.fr - www.tecofi.fr



KNIFE GATE VALVE DUCTILE IRON BODY

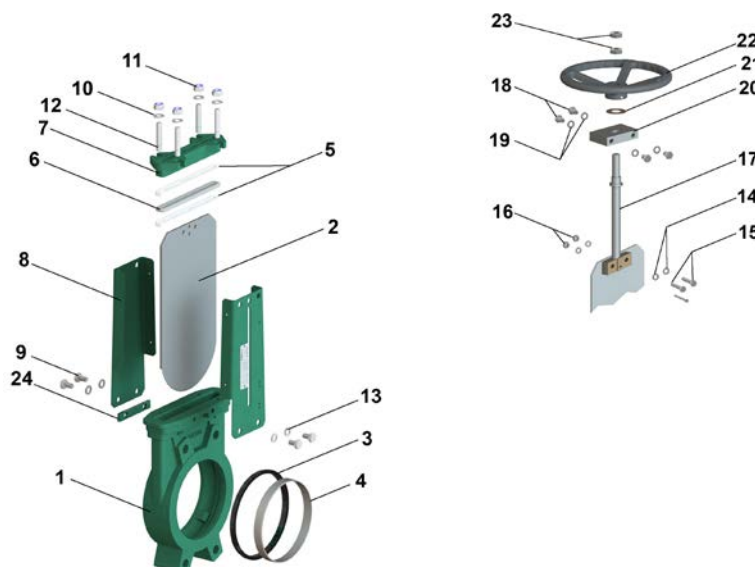
TECHNICAL PASSPORT

VG 4400-001

CONSTRUCTION DN50 - DN300

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

Component	Coating
Body (1)	Epoxy powder RAL 6005 150 microns
Support plate (8)	Liquid epoxy RAL 6005 70 microns
Gland packing (7)	
Handwheel (22)	Liquid epoxy RAL 9005 70 microns



Pos.	Q-ty	Description	Material	Equivalences		
				DIN	ASTM	BS
1	1	Body	Ductile iron EN-GJS-500-7	GGG 50	A536 65-70-50-05	1563 EN-JS1050
2	1	Gate	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
3	1	Seat gasket (1)	NBR			NBR
4	1	Support ring (1)	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
5	2	Packing	PTFE			
6	1	O-Ring	NBR			NBR
7	1	Packing gland	Ductile iron EN-GJS-400-15	GGG40	A536 65-45-12	1563 EN-JS1030
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	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
14	4	Washer	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	1	Stem	Stainless steel 13% Cr	X12Cr13	AISI 410	
18	4	Screw	Stainless steel A2-70			
19	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
20	1	Nut support	Acier zingué			
21	1	Support washer	Bronze CuSn5Zn8Pb5-C			
22	1	Handwheel	Cast iron EN-GJL-250	GG25	A48 class 40B	1452 Grade 250
23	2	Nut	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
24	1	Catch-up plate	Ductile iron EN-GJS-400-15	GGG40	A536 65-45-12	1563 EN-JS1030

(1) - Parts missing on metal/metal sealing

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19
E-mail : sales@tecofi.fr - www.tecofi.fr



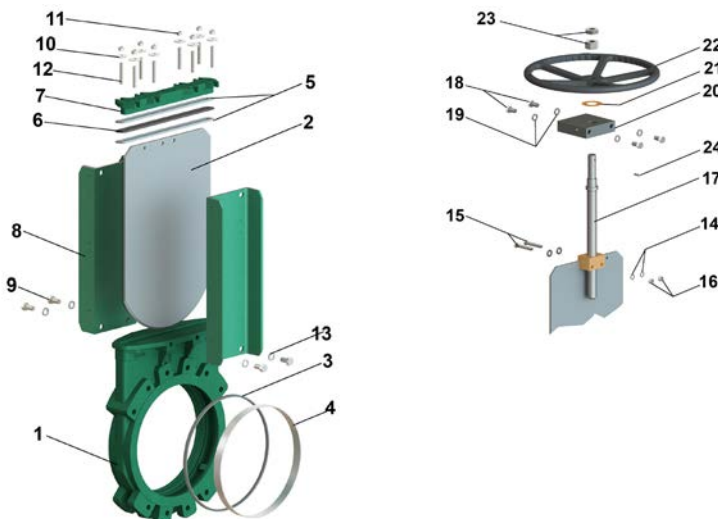
KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

VG 4400-001

CONSTRUCTION DN350- DN450

Component	Coating
Body (1)	Epoxy powder RAL 6005 150 microns
Support plate (8)	Liquid epoxy RAL 6005 70 microns
Gland packing (7)	
Handwheel (22)	Liquid epoxy RAL 9005 70 microns



Pos.	Q-ty	Description	Material	Equivalences		
				DIN	ASTM	BS
1	1	Body	Ductile iron EN-GJS-500-7	GGG 50	A536 65-70-50-05	1563 EN-JS1050
2	1	Gate	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
3	1	Seat gasket (1)	NBR			NBR
4	1	Support ring (1)	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
5	2	Packing	PTFE			
6	1	O-Ring	NBR			NBR
7	1	Packing gland	Ductile iron EN-GJS-400-15	GGG40	A536 65-45-12	1563 EN-JS1030
8	2	Support plate	Steel			
9	12	Screw	Stainless steel A2-70			
10	8	Washer	Stainless steel A2-70			
11	8	Nut	Stainless steel A2-70			
12	8	Tie rod	Stainless steel A2-70			
13	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
14	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
15	1	Bolt	Inox A2-70			
16	2	Nut	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
17	1	Stem	Inox 13% Cr	X12Cr13	AISI 410	
18	4	Bolt	Inox A2-70			
19	4	Washer	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
20	1	Nut support	Acier zingué			
21	1	Support washer	Bronze CuSn5Zn8Pb5-C			
22	1	Handwheel	Fonte EN-GJL-250	GG25	A48 class 40B	1452 Grade 250
23	2	Nut	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
24	1	Pin	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15

(1) - Parts missing on metal/metal sealing

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19
E-mail : sales@tecofi.fr - www.tecofi.fr



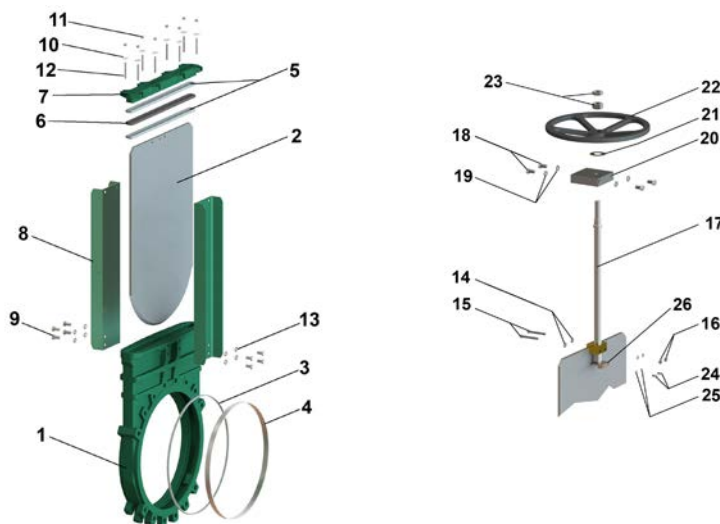
KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

VG 4400-001

CONSTRUCTION DN500- DN600

Component	Coating
Body (1)	Epoxy powder RAL 6005 150 microns
Support plate (8)	Liquid epoxy RAL 6005 70 microns
Gland packing (7)	
Handwheel (22)	Liquid epoxy RAL 9005 70 microns



Pos.	Q-ty	Description	Material	Equivalences		
				DIN	ASTM	BS
1	1	Body	Ductile iron EN-GJS-500-7	GGG 50	A536 65-70-50-05	1563 EN-JS1050
2	1	Gate	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
3	1	Seat gasket (1)	NBR			NBR
4	1	Support ring (1)	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
5	2	Packing	PTFE			
6	1	O-Ring	NBR			NBR
7	1	Packing gland	Ductile iron EN-GJS-400-15	GGG40	A536 65-45-12	1563 EN-JS1030
8	2	Support plate	Steel			
9	12	Screw	Stainless steel A2-70			
10	8	Washer	Stainless steel A2-70			
11	8	Nut	Stainless steel A2-70			
12	8	Tie rod	Stainless steel A2-70			
13	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
14	4	Washer	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
15	1	Bolt	Inox A2-70			
16	2	Nut	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
17	1	Stem	Inox 13% Cr	X12Cr13	AISI 410	
18	4	Bolt	Inox A2-70			
19	4	Washer	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
20	1	Nut support	Acier zingué			
21	1	Support washer	Bronze CuSn5Zn8Pb5-C			
22	1	Handwheel	Fonte EN-GJL-250	GG25	A48 class 40B	1452 Grade 250
23	2	Nut	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
24	2	Bolt	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
25	2	Washer	Inox X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
26	1	Guide bearing	Bronze			

(1) - Parts missing on metal/metal sealing

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas

Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19

E-mail : sales@tecofi.fr - www.tecofi.fr

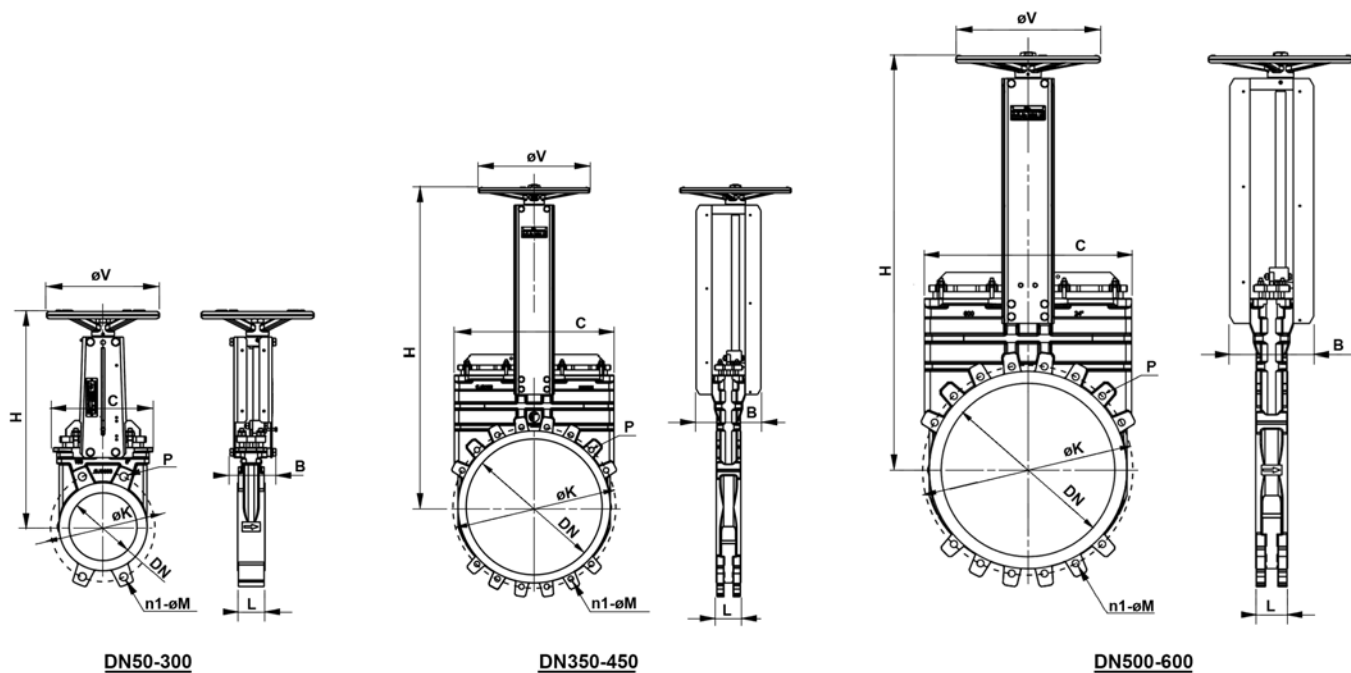


KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

VG 4400-001

DIMENSIONS



DN		L	H	C	B	Ø V	Maximum pressure (bar)	n	n1-ØM	P	ØK	Stem dimensions	Number of turns	Torque Nm	Packing screw tightening torque Nm	Weight (kg)
mm	inch															
50	2"	40	291	124	94	200	10	4	4xM16	8	125	Tr20x4-L	15	10	15	7,5
65	2 1/2"	40	318	139	94	200	10	4	4xM16	8	145	Tr20x4-L	19	12	15	9
80	3"	50	342	154	94	200	10	8	4xM16	9	160	Tr20x4-L	23	21	15	10
100	4"	50	383	174	94	200	10	8	4xM16	9	180	Tr20x4-L	27	20	15	11,5
125	5"	50	420	189	100	250	10	8	4xM16	9	210	Tr20x4-L	34	29	15	15,5
150	6"	60	471	220	101	250	10	8	4XM20	10	240	Tr20x4-L	40	23	20	18,5
200	8"	60	577	275	124	310	10	8	4XM20	12	295	Tr25x5-L	42	41	20	35
250	10"	70	677	326	126	310	10	12	8XM20	12	350	Tr25x5-L	50	56	40	47
300	12"	70	777	380	128	310	7	12	8XM20	19	400	Tr25x5-L	66	42	40	61
350	14"	96	939	438	290	500	7	16	10XM20	20	460	Tr35x6-L	60	70	40	117
400	16"	100	1037	494	290	500	7	16	10XM24	24	515	Tr35x6-L	69	91	40	151
450	18"	106	1125	547	290	500	7	20	14XM24	24	565	Tr35x6-L	77	115	40	187
500	20"	110	1237	613	290	500	4	20	14XM24	24	620	Tr35x6-L	87	110	40	205
600	24"	110	1432	716	290	500	4	20	14XM27	24	725	Tr35x6-L	105	135	40	292

Dimension A - face to face according to TECOFI standard

* - Depth of non-through tapped holes

n - total number of holes (according to ISO PN10)

n1 - number of tapped holes

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas

Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19

E-mail : sales@tecofi.fr - www.tecofi.fr

KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

VG 4400-001

WORKING CONDITIONS

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

Maximum working temperature : -10°C / +80°C
(Temperature with NBR gasket in standard)

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

Tightness in option

Tightness	Maximum temperature
Metal/metal*	Tmax : -10°C / +80°C
White NBR	Tmax : -10°C / +80°C
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 seal, the operating pressure must not be less than 1 bar.

* Maximum working temperature with different packing material :
PTFE (-40°C / +200°C) ; EPDM ACS (-10°C/+80°C); Hephaistos packing (0°C / +350°C); 2 PTFE packing+1 NBR Oring (-10°C / +80°C); 2 PTFE packing+1 FPM Oring (-20°C / +170°C)

Upstream/downstream and packing tightness

PTFE/elastomer



Elastomer tightness

Metal/metal tightness

FLOW RATES

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
600	24"	824.96	2347.72	4192.29	6367.56	9626.12	13780.4	19.393.58	26104.09	36144.08	42541.04

Tecofi France

83 rue Marcel Mérieux - 69960 Corbas
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19
E-mail : sales@tecofi.fr - www.tecofi.fr

