

## KNIFE GATE VALVE STAINLESS STEEL BODY

TECHNICAL PASSPORT

### KNIFE GATE VALVE WITH HANDWHEEL NON RISING STEM STAINLESS STEEL BODY - WAFER TYPE PN10

VG 6400-001

#### 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:** DN50 to DN600.

- 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 stainless steel 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

<b>Design</b>	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.						
<b>Face to face</b>	Face to face dimension according to TECOFI standard						
<b>Connection</b>	Mounting between flanges in accordance with EN1092-2 and ISO 7005-1 : ISO PN10						
<b>Tests</b>	Pressure test according to standards EN12266-1, DIN 3230, BS 5154 and ISO 5208.						
		DN	Body	Seat	DN	Body	Seat
		DN50-250 :	15.4 bar	11 bar	DN300-450:	12.6 bar	7.7 bar
	DN500-600:	7.2 bar	4.4 bar				

#### PRODUCT APPROVALS



On request

ISO 9001  
ISO 14001  
BUREAU VERITAS  
Certification



**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](http://www.tecofi.fr)



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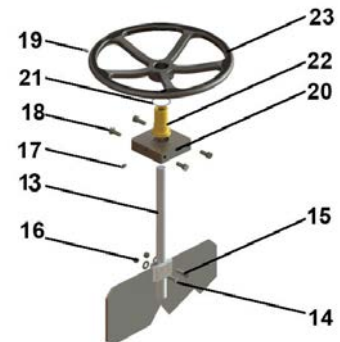
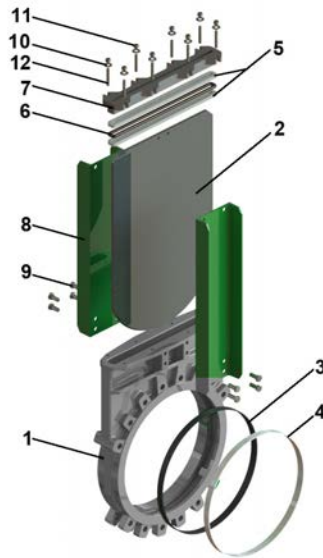
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### CONSTRUCTION

Coatings applied on the valve :

Component	Coating
Support plate (8)	Liquid epoxy RAL 6005 70 microns
Handwheel (23)	Liquid epoxy RAL 9005 70 microns
Protection tube (24)	



Pos.	Q-ty	Description	Material	Equivalences		
				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 X2CrNi 17-12-2	X2CrNiMo17-13-2	A 182 AISI 316L	1449-2 316 S11
3	1	Seat gasket	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	Stainless steel GX5CrNiMo 19-11-2	G-X6CrNiMo18 10	A 351 grade CF8M	316 C16
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	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	1	Greaser	Stainless steel X5CrNi 18-10	X5CrNi 18 10	A 182 AISI 304	1449-2 304 S15
18	4	Screw	Stainless steel A2-70			
19	1	Screw	Stainless steel A2-70			
20	1	Nut support	Zinc plated steel			
21	1	Support washer	Bronze CuSn5Zn8Pb5-C			
22	1	Nut	Bronze CuSn5Zn8Pb5-C			
23	1	Handwheel	Cast iron EN-GJL-250	GG25	A48 class 40B	1452 Grade 250

(1) - Pièces non présentes sur étanchéité métal/métal

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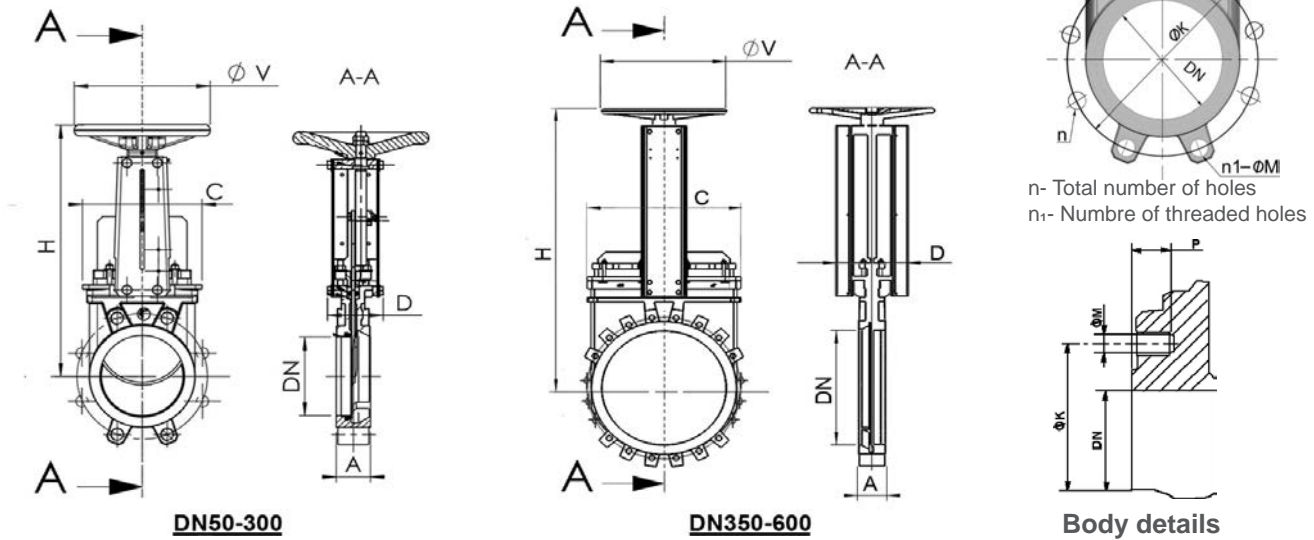


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### DIMENSIONS



### MOUNTING DIMENSIONS

DN		A	H	C	D	Ø V	Pression maxi (bar)	n	n-ØM	P	ØK	Poids (kg)
mm	inch											
50	2"	40	291	124	94	200	10	4	4xM16	8	125	7,5
65	2 1/2"	40	318	139	94	200	10	4	4xM16	8	145	9
80	3"	50	342	154	94	200	10	8	4xM16	9	160	10
100	4"	50	383	174	94	200	10	8	4xM16	9	180	11,5
125	5"	50	420	189	100	250	10	8	4xM16	9	210	15,5
150	6"	60	471	220	101	250	10	8	4XM20	10	240	18,5
200	8"	60	577	275	124	310	10	8	4XM20	12	295	35
250	10"	70	677	326	126	310	10	12	8XM20	12	350	47
300	12"	70	777	380	128	310	7	12	8XM20	19	400	61
350	14"	96	939	438	290	500	7	16	10XM20	20	460	117
400	16"	100	1037	494	290	500	7	16	10XM24	24	515	151
450	18"	106	1125	547	290	500	7	20	14XM24	24	565	187
500	20"	110	1237	613	290	500	4	20	14XM24	24	620	205
600	24"	110	1432	716	290	500	4	20	14XM27	24	725	292

Face to face dimension «A» in accordance with TECOFI standard



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#### WORKING CONDITIONS

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

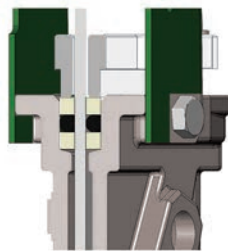
#### Upstream/downstream tightness



Elastomer tightness

Metal/metal tightness

#### Packing tightness



PTFE/Elastomer

#### Tightness in option

Tightness	Maximum temperature
Metal/metal	Tmax : -10°C / +130°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

Flow rates of valves under different differential pressure (m³/h)

DN		0.2 bar	0.4 bar	0.6 bar	0.8 bar	1.0 bar
mm	inch					
50	2"	93	134	165	185	206
65	2 1/2"	129	180	213	268	309
80	3"	191	309	371	422	494
100	4"	443	618	721	824	927
125	5"	700	927	1133	1339	1545
150	6"	927	1339	1545	1906	2060
200	8"	1597	2369	2987	3399	4017
250	10"	2472	3502	4429	5150	5665
300	12"	4120	5665	6798	7828	8755
350	14"	5335	7372	8730	9700	11640
400	16"	6693	9312	11640	13580	15520
450	18"	8342	12610	14550	16490	18430
500	20"	9700	14550	17460	19400	22310
600	24"	14550	19400	25220	29100	33950

The column of the table under 1 bar gives the values of the Kvs of the valves

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