

## KNIFE GATE VALVE DUCTILE IRON BODY

### TECHNICAL PASSPORT

#### KNIFE GATE VALVE - RISING STEM WITH ELECTRIC ACTUATOR AUMA DUCTILE IRON BODY - BETWEEN FLANGES

VGA 4430-UX4

#### 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.

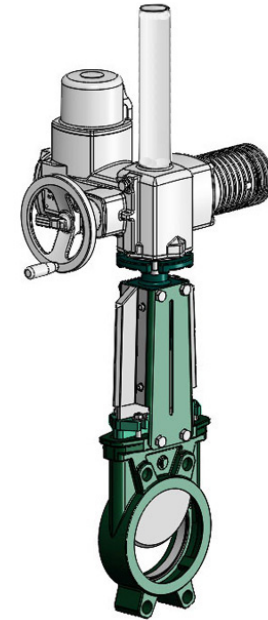


**Fluids:** water, sewage, pulp, pasty products, powdery, granular, fibrous, abrasive and crystallizing.

#### GENERAL CHARACTERISTICS

**Range:** from DN50 to DN600.

- Knife Gate Valve on/off or regulation with rising stem.
- Molded monobloc body
- Unidirectional water tightness: Flow direction indicated on the body with an arrow.
- Installation between flanges ASME 150 Lbs.
- 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
VGA 4430-U04	AUMA 400V 3PH
VGA 4430-U24	AUMA 230V 1PH

#### STANDARD

<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 ASME B16.5 Class 150					
<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 bar	11 bar	DN300-450:	10.5 bar	7.7 bar
	DN500-600:	6 bar	4.4 bar			

#### PRODUCT APPROVALS



**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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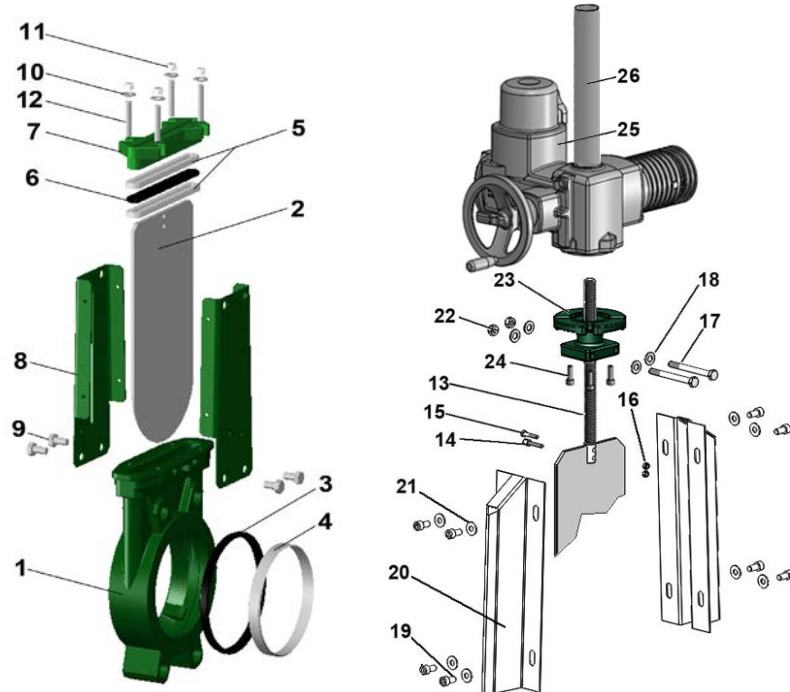
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#### CONSTRUCTION

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

Constituant	Revêtement
Body (1)	Epoxy powder RAL 6005 150 microns
Support plate(8)	
Packing gland (7)	Liquid epoxy RAL 6005 70 microns
ISO plate (23)	



Pos.	Q-ty	Description	Material	Equivalence		
				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 304	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	GGG 40	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	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	AUMA model			
26	1	Protection tube				

\* - 8 for DN350-400; - 12 for DN450-600 (1) - Parts missing on metal/metal sealing

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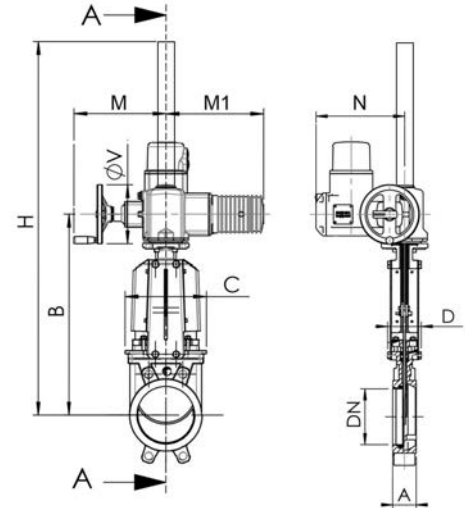
### TECHNICAL PASSPORT

#### VGA 4430-UX4

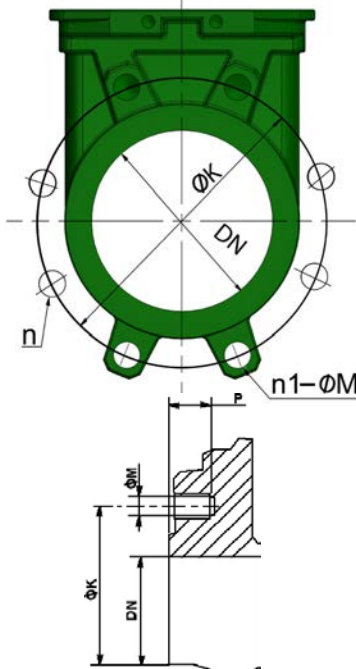
### DIMENSIONS

DN		Type moteur	A	B	C	D	M	M1	N	ØV	H	Poids (kg)
mm	inch											
50	2"	SA07.2	40	383	124	83	249	265	238	160	578	27
65	2 1/2"	SA07.2	40	408	139	83	249	265	238	160	603	29
80	3"	SA07.2	50	433	154	83	249	265	238	160	628	30
100	4"	SA07.2	50	478	174	83	249	265	238	160	673	31
125	5"	SA07.6	50	516	189	93	249	265	238	160	711	38
150	6"	SA07.6	60	567	220	93	249	265	238	160	762	42
200	8"	SA07.6	60	686	275	108	249	265	238	160	881	57
250	10"	SA10.2	70	778	326	108	254	282	248	200	973	75
300	12"	SA7.6	70	887	380	108	249	265	238	160	1082	87
350	14"	SA10.2	96	990	438	290	254	283	248	200	1185	137
400	16"	SA10.2	100	1100	494	290	254	283	248	200	1295	167
450	18"	SA14.2	106	1225	547	290	336	389	286	315	1430	231
500	20"	SA14.2	110	1335	613	290	336	389	286	315	1540	266
600	24"	SA14.2	110	1539	716	290	336	389	286	315	1744	310

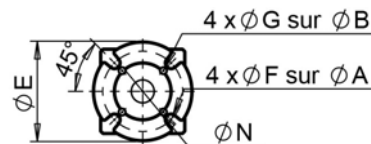
Dimension A - face à face suivant standard TECOFI



### MOUNTING



Body details



Embase ISO

DN		Maximum pressure (bar)	n	n1-ØM	P	ØK	ISO plate	ØA	ØB	ØE	ØF	ØG	ØN
mm	inch												
50	2"	10	4	4 - 0.75	8	125	F07/F10	70	102	125	9	11	70
65	2 1/2"	10	4	4 - 0.75	8	145	F07/F10	70	102	125	9	11	70
80	3"	10	4	4 - 0.75	9	160	F07/F10	70	102	125	9	11	70
100	4"	10	8	4 - 0.75	9	180	F07/F10	70	102	125	9	11	70
125	5"	10	8	4 - 0.88	9	210	F07/F10	70	102	125	9	11	70
150	6"	10	8	4 - 0.88	10	240	F07/F10	70	102	125	9	11	70
200	8"	10	8	4 - 0.88	12	295	F10	102	-	125	12	-	70
250	10"	10	12	8 - 1.00	12	350	F10	102	-	125	12	-	70
300	12"	7	12	8 - 1.00	19	400	F10	102	-	125	12	-	70
350	14"	7	12	10 - 1.12	20	460	F10/F14	102	140	175	11	17	100
400	16"	7	16	10 - 1.12	24	515	F10/F14	102	140	175	11	17	100
450	18"	7	16	14 - 1.25	24	565	F10/F14	102	140	175	11	17	100
500	20"	4	20	14 - 1.25	24	620	F10/F14	102	140	175	11	17	100
600	24"	4	20	14 - 1.38	24	725	F10/F14	102	140	175	11	17	100

n- Total number of holes

n1- number of threaded holes

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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 / +80°C (standard tightness)

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

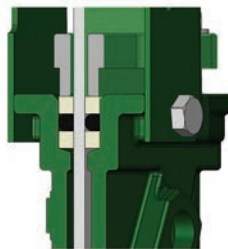
#### Upstream/downstream tightness



Elastomer tightness

Metal/metal tightness

#### Packing tightness



PTFE/élastomer

#### 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 gasket, the operating pressure must be at least 1 bar.

#### FLOWS

##### Flow rates of valves under different differential pressure (m<sup>3</sup>/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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