

BI-DIRECTIONAL KGV WITH PACKING GLAND



KGV AVK-PRE FULLY LUGGED WITH RISING STEM & HANDWHEEL




KGV AVK-PRE FULLY LUGGED WITH D/A PNEUMATIC ACTUATOR



KGV AVK-PRE FULLY LUGGED WITH LEVER

The AVK-PRE model knife gate is a Bi-directional resilient seated valve, leak proof in both directions of the flow, with independent packing gland mounted on top of the body's valve, suitable to handle solid and arid mediums, waste water, mud, sludge and waste from biogas plants.

GENERAL FEATURES

- 100 % water tight in both senses
- U-seat with a steel stiff core vulcanized, fixed between the two bodies by screws.
- Adjustable external packing gland, allowing upper sealing replacement without valve disassembling
- Two split body arrangements: fully lug-between flanges and fully lug-end valve without counter flange.
- Short face-to-face dimension
- Smooth and unobstructed full flow passage, no cavity or void in body, means no clogging
- Easy drive replacement
- Self cleaning design; little maintenance required
- Proximity and limit switch mounting points
- Directive 94/9/94EC, ATEX. 

APPLICATION FIELDS

- Waste treatment plants
- Food processing
- Slaughterhouses
- Paper mills
- Power plants
- Vacuum system
- Mining
- Biogas waste
- Fish pump service
- Ships
- Industrial applications

TECHNICAL DATA

Size range: DN-50 (2") to DN-600 (24")

Flange ratings: PN-10 / PN-16 / ASA 150 (Other flange drillings under customer's request)

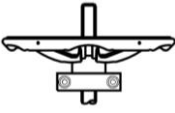
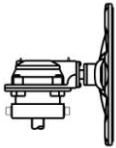
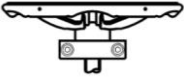
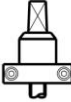


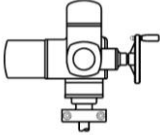


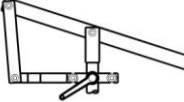

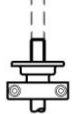
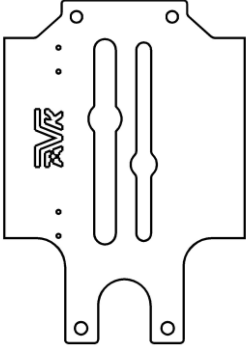
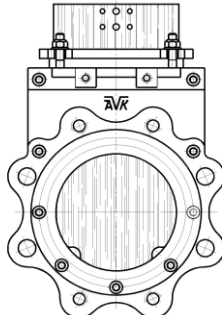
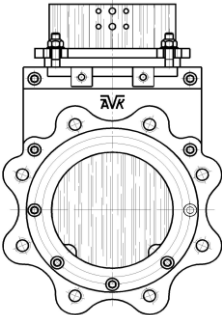
Face to face dimension: according to K1 DIN3202 up to DN-350

Pressure class: variable according to size (refer to dimensions table)

Temperature range: variable according to sealing material

Coating: internally and externally fusion bonded epoxy coated, RAL 5017, 150 microns (Other RAL and thicknesses under request)

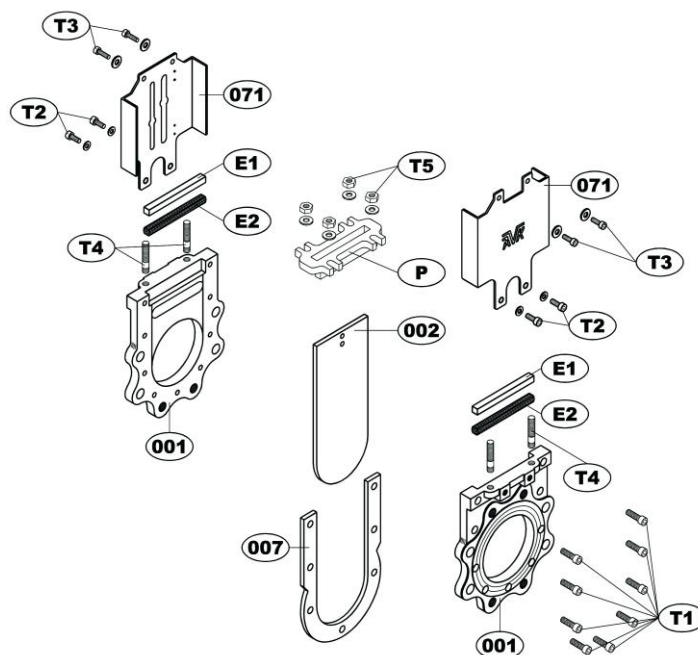
ASSEMBLY CONFIGURATION

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">OPERATION</p>	 Rising stem handwheel  Gearbox	 Non rising stem handwheel  Key Cap  Double acting pneumatic actuator  Spring-return pneumatic actuator  Electric actuator  Oil hydraulic actuator  Chain Wheel  Quick closing lever  Non rising stem coupling B-3  Rising stem coupling A
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">SHROUD S (PLATES)</p>		
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">BODY</p>	 Fully lugged between flanges (partly threaded and partly thru holes)	 Fully lugged End valve (All holes threaded)
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ACCESSORIES</p>	<ul style="list-style-type: none"> - Revolving handle - Locking device - Overriding actuator - Mechanical positioner - Limit stroke - Mechanical limit switches - Proximity limit switches - V-port - Deflector cone (Ni-hard) - Chest scraper (Bronze / PPS plastic) - Solenoid valve - Extension, extended guided plates - Etc. 	

MATERIAL SPECIFICATION & PART LIST

No.	DESCRIPTION	MATERIAL
001	Body	Cast iron - GJL250 (standard) Ductile iron - GJS400 (optional)
007	Seat	NBR (standard) PTFE, VITON, POLIURETHANE, EPDM (optional)
002	Gate	SS 316 (standard) DUPLEX 2205, SMO 254, SS 316Ti, SS 316L (optional)
E	Packing material	PTFE+NBR, PTFE+EPDM (standard) PTFE PURE, ARAMIDE, GRAPHITE (optional)
T	Screws and nuts	A-4
P	Packing gland	Ductile iron - GJS400
071	Plates	1.0580 (standard) SS 316 (optional)
-	Stem	SS 316
-	Bearing	1.0401 (standard) SS 316 (optional)
-	Handwheel	1.0037
-	Pneumatic act.	Aluminium

Figure 1. Exploded view of KGV-AVK-PRE fully lugged



SEAT TYPE

The seat consists of one piece vulcanized u-shaped rubber seat (optionally PTFE) with steel stiff core inside,, fixed between the two half bodies by screws, providing a bubble-tight shut off on both directions and avoiding at the same time any build-up of fluids inside the body that would prevent the valve from closing.

APPLICATION AND TEMPERATURE RANGE OF SEALING MATERIALS

RESILENT SEATS			
Material	Min. temperature (°C)	Max. temperature (°C)	APPLICATIONS
NBR	-30	+80	Hydrocarbons and biogas waste
EPDM	-30	+90	Clean and chlorided water
EPDM - POTABLE	-30	+90	Wrass approved potable water (FDA conformity)
VITON	-40	+180	Organic acids, hydrocarbons and heat resistant
PTFE	-10	+200	Heat, friction, acids, chemical and corrosion resistant
POLIURETHANE	-10	+80	Abrasive mediums / Mineral handling
WHITE NBR	-10	+60	Food industry
RED SILICONE	-20	+180	Food industry (FDA conformity)

***More details and other sealing materials under request.**

APPLICATION AND TEMPERATURE RANGE OF PACKING MATERIALS

PACKING MATERIAL			
Material	Min. temperature (°C)	Max. temperature (°C)	APPLICATIONS
PTFE+NBR	-30	+100	Hydrocarbons and biogas waste
PURE PTFE	-10	+200	Heat, friction, acids, chemical and corrosion resistant
ARAMIDE	-40	+250	Abrasive mediums
GRAPHITE	-40	+300	Hydrocarbons and heat resistant

***More details and other sealing materials under request.**

DIMENSIONAL DRAWINGS

Figure 2. KGV AVK-PRE fully lugged rising stem & handwheel

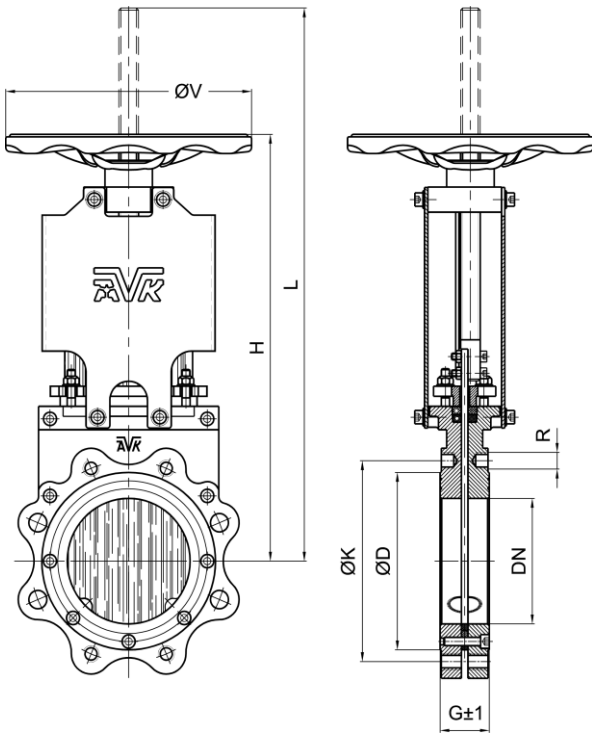


Figure 3. KGV AVK-PRE fully lugged with d/a pneumatic actuator

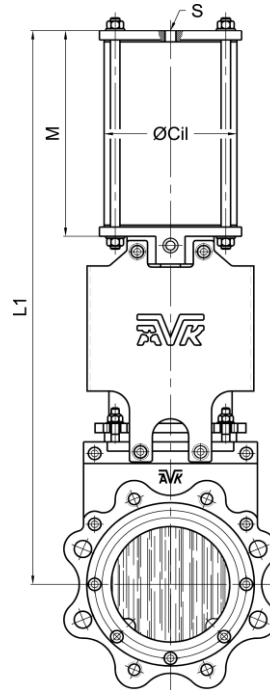
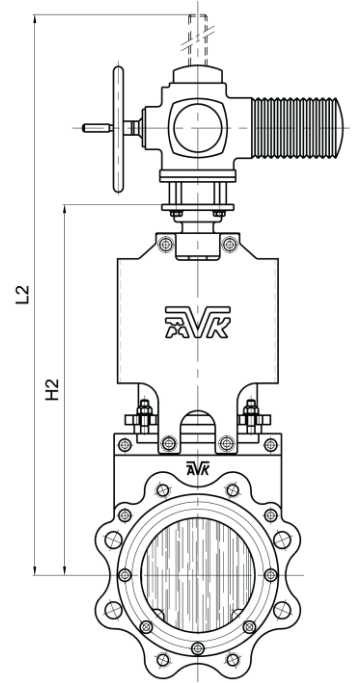


Figure 4. KGV AVK-PRE fully lugged with electric actuator



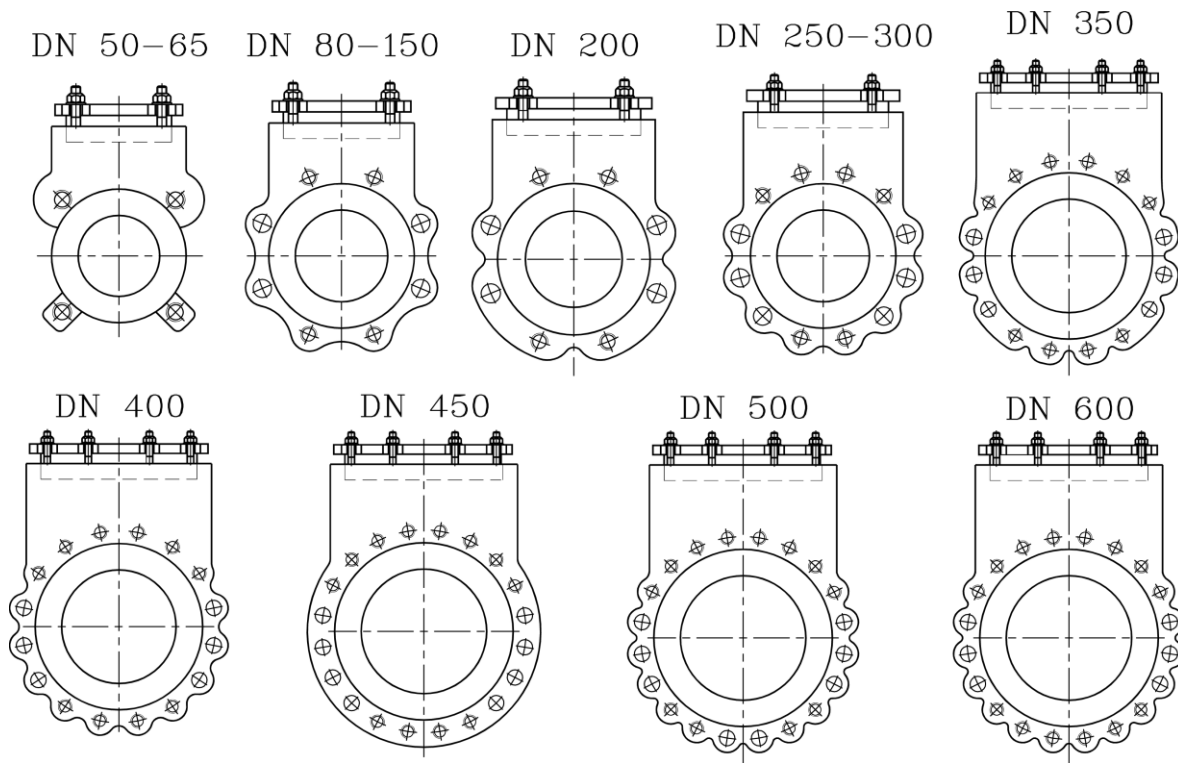
DN	G±1	L	H	ØV	L1	L2	H2	M	ØCil	S	Min. Torque (Nm)	Max. Torque (Nm)	Spindle thread	Max. Working Pressure (bar)
50	43	359	292	175	398	407	300	147	80	1/4 " G	8	16	Tr18x4i	10
65	46	399	317	175	436	444	325	160	80	1/4 " G	10	17	Tr18x4i	10
80	46	444	361	225	486	499	357	177	100	1/4 " G	12	19	Tr20x4i	10
100	52	499	396	225	541	582	392	197	100	1/4 " G	15	22	Tr20x4i	10
125	56	560	432	225	612	618	428	232	125	3/8 " G	17	24	Tr20x4i	10
150	56	674	523	300	732	732	510	267	160	3/8 " G	25	50	Tr24x5i	10
200	60	824	623	300	892	882	610	327	190	1/2 " G	27	53	Tr24x5i	10
250	68	980	729	300	1046	1044	716	375	190	1/2 " G	50	69	Tr24x5i	10
300	78	1160	858	400	1217	1219	834	428	190	1/2 " G	63	84	Tr28x5i	10
350	78	1303	951	400	1381	1362	927	499	250	1/2 " G	78	102	Tr28x5i	6
400	90	1433	1050	400	1530	1501	1026	549	250	1/2 " G	90	110	Tr28x5i	5
450	90	1677	1234	500	1737	1685	1135	590	300	1/2 " G	215	259	Tr40x7i	4
500	95	1819	1311	500	1878	1829	1214	656	300	1/2 " G	223	320	Tr40x7i	4
600	105	2106	1498	500	2166	2116	1401	757	300	1/2 " G	249	388	Tr40x7i	4

* Data sheet for ØK & ØD stated in "flange drillings chapter".

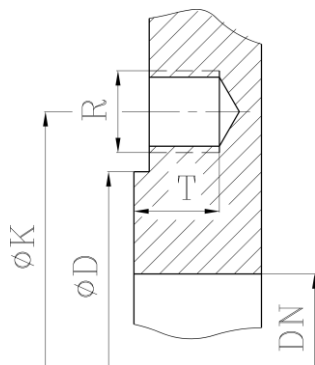
* From DN-350, these valves are wafer type only.

FLANGE DRILLINGS

FLANGE DRILLING - PN10



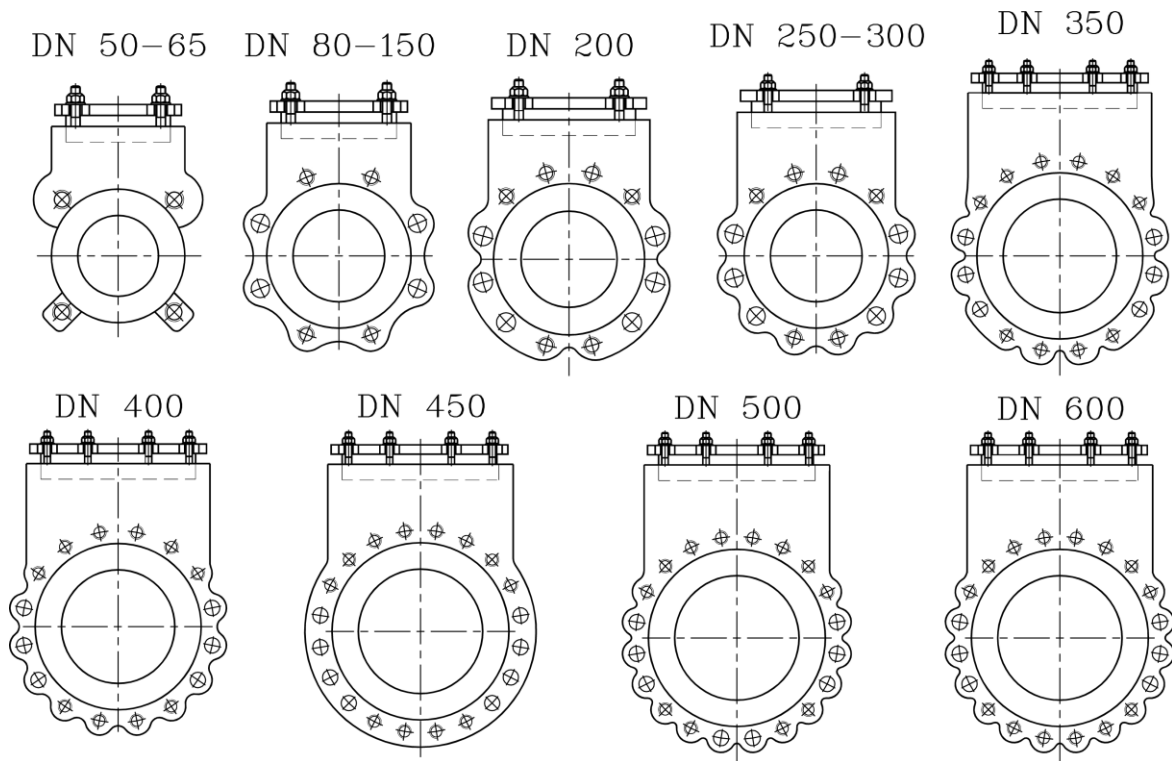
Bolting Arrangements PN-10 Knife Gate Valve



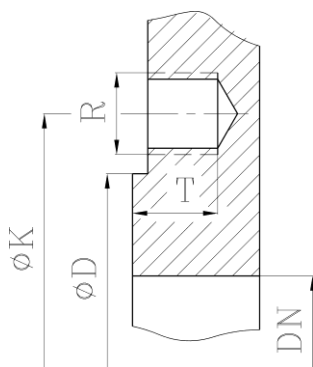
DN	K	D	N (1)	N (2)	N (3)	T	R
50	125	100	4	-	4	9	M-16
65	145	120	4	-	4	9	M-16
80	160	135	4	4	8	13	M-16
100	180	158	4	4	8	13	M-16
125	210	188	4	4	8	13	M-16
150	240	212	4	4	8	12	M-20
200	295	268	4	4	8	12	M-20
250	350	320	6	6	12	16	M-20
300	400	370	6	6	12	16	M-20
350	460	430	10	6	16	20	M-20
400	515	482	10	6	16	24	M-24
450	565	532	12	8	20	24	M-24
500	620	585	12	8	20	25	M-24
600	725	685	14	6	20	29	M-27

N (1)- N° of threaded holes N (2)- N° of thru bolts N (3)- N° of flange holes

FLANGE DRILLING - PN16



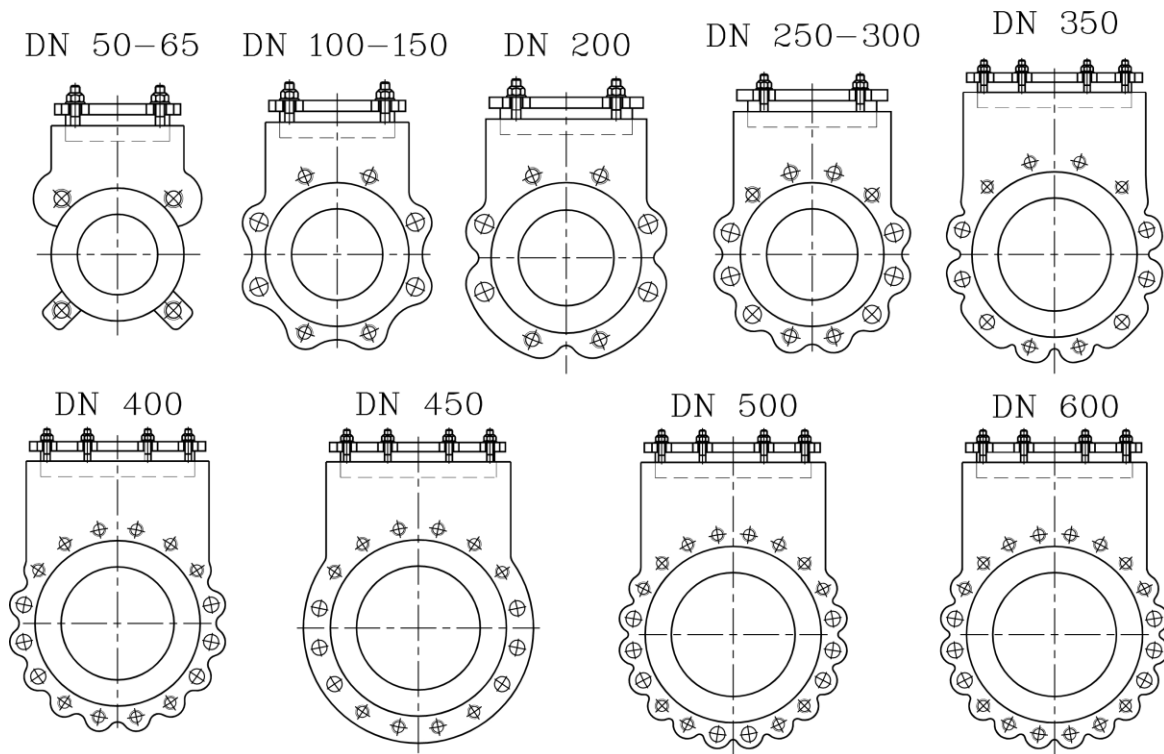
Bolting Arrangements PN-16 Knife Gate Valve



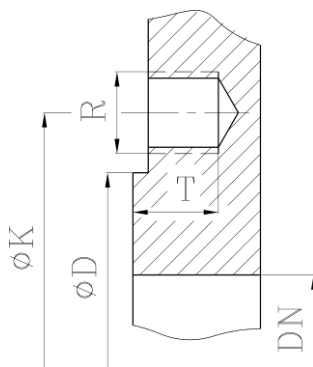
DN	K	D	N (1)	N (2)	N (3)	T	R
50	125	100	4	-	4	9	M-16
65	145	120	4	-	4	9	M-16
80	160	135	4	4	8	13	M-16
100	180	158	4	4	8	13	M-16
125	210	188	4	4	8	13	M-16
150	240	212	4	4	8	12	M-20
200	295	268	6	6	12	12	M-20
250	355	320	6	6	12	16	M-24
300	410	370	6	6	12	16	M-24
350	470	430	10	6	16	20	M-24
400	525	482	10	6	16	24	M-27
450	585	532	12	8	20	24	M-27
500	650	585	12	8	20	25	M-30
600	770	685	14	6	20	29	M-33

N (1)- Nº of threaded holes N (2)- Nº of thru bolts N (3)- Nº of flange holes

FLANGE DRILLING - ASA 150



Bolting Arrangements ASA 150 Knife Gate Valve

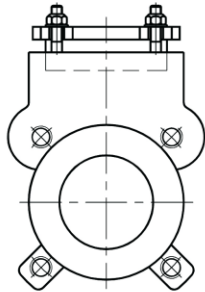


DN	K	D	N (1)	N (2)	N (3)	T	R
50	120,60	100	4	-	4	9	5/8 "
65	139,70	120	4	-	4	9	5/8 "
80	152,40	135	4	-	4	13	5/8 "
100	190,50	158	4	4	8	13	5/8 "
125	215,90	188	4	4	8	13	3/4 "
150	241,30	212	4	4	8	12	3/4 "
200	298,40	268	4	4	8	12	3/4 "
250	361,90	320	6	6	12	16	7/8 "
300	431,80	370	6	6	12	16	7/8 "
350	476,20	430	8	4	12	20	1 "
400	539,70	482	10	6	16	24	1 "
450	577,80	532	10	6	16	24	1 1/8 "
500	635,00	585	12	8	20	25	1 1/8 "
600	749,30	685	14	6	20	29	1 1/4 "

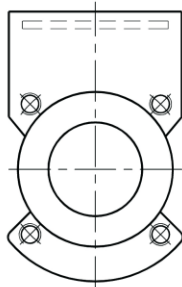
N (1)- N^o of threaded holes N (2)- N^o of thru bolts N (3)- N^o of flange holes

FLANGE DRILLING – AS 2129 TABLE C/D

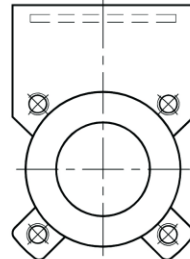
DN 50–65



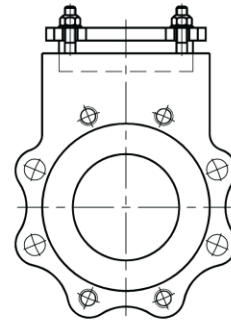
DN 80



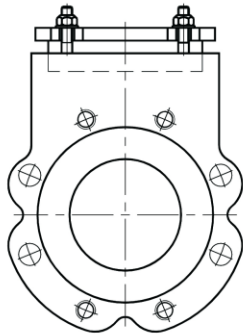
DN 100



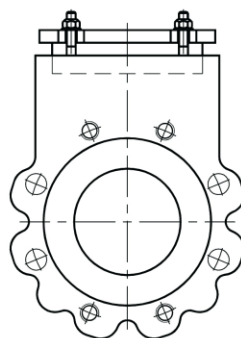
DN 125–150



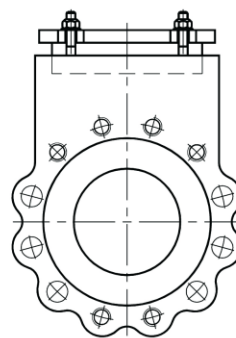
DN 200



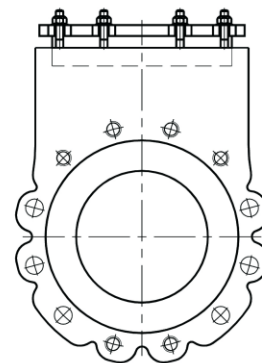
DN 250



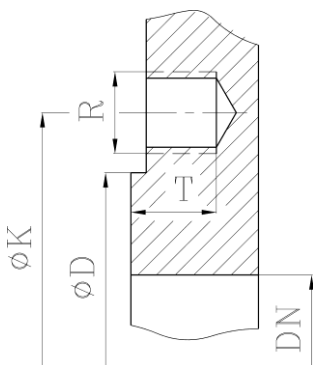
DN 300



DN 350



Bolting Arrangements AS 2129 Table C/D KGV



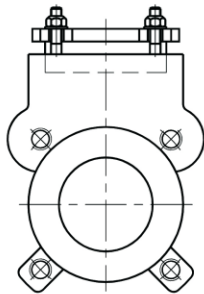
DN	K	D	N (1)	N (2)	N (3)	T	R
50	114	100	4	-	4	9	M-16
65	127	120	4	-	4	9	M-16
80	146	135	4	-	4	13	M-16
100	178	158	4	-	4	13	M-16
125	210	188	4	4	8	13	M-16
150	235	212	4	4	8	12	M-16
200	292	268	4	4	8	12	M-16
250	356	320	4	4	8	16	M-20
300	406	370	6	6	12	19	M-20
350	470	430	6	6	12	19	M-24

N (1)- N^o of threaded holes N (2)- N^o of thru bolts N (3)- N^o of flange holes

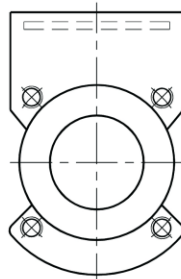
Please be aware that valves DN80 and DN100 can only be drilled at AS 2129 Table C/D on the standard 702 series valves without independent packing gland.

FLANGE DRILLING – AS 2129 TABLE E

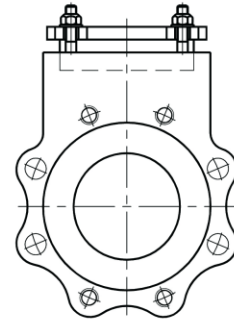
DN 50–65



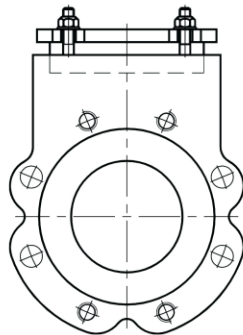
DN 80



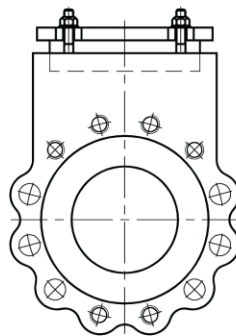
DN 100–150



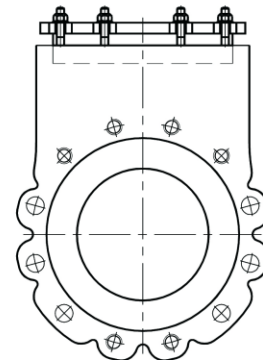
DN 200



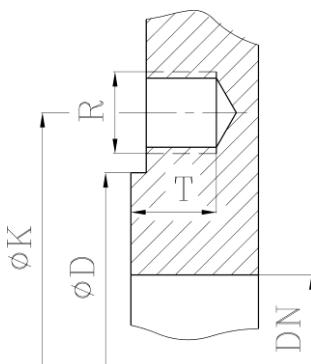
DN 250–300



DN 350



Bolting Arrangements AS 2129 Table E KGV



DN	K	D	N (1)	N (2)	N (3)	T	R
50	114	100	4	-	4	9	M-16
65	127	120	4	-	4	9	M-16
80	146	135	4	-	4	13	M-16
100	178	158	4	4	8	13	M-16
125	210	188	4	4	8	13	M-16
150	235	212	4	4	8	12	M-20
200	292	268	4	4	8	12	M-20
250	356	320	6	6	12	16	M-20
300	406	370	6	6	12	19	M-24
350	470	430	6	6	12	19	M-24

N (1)- N° of threaded holes N (2)- N° of thru bolts N (3)- N° of flange holes

Please be aware that valves DN80 can only be drilled at AS 2129 Table E on the standard 702 series valves without independent packing gland.

ORDERING GUIDE

SERIES	OPERATIONS	MATERIAL	DN	SEAT	BODY TYPE	FLANGE
Example: 702-PRE	V	11		NI	W	PN-10
702-PRE	V → Handwheel r.s	11 → Cast iron		NI → NBR	L → Fully Lugged (END VALVE)	PN-10
	VR → Handwheel r.s + Bevel Gearbox	12 → Ductil iron		EP → EPDM	LW → Fully Lugged (BETWEEN FLANGES)	PN-16
	F → Handwheel n.r.s.	14 → Stainless steel		VI → VITON	W → Semi lugged (WAFER)	ASA 150
	FR → Handwheel n.r.s. + Bevel Gearbox	17 → Fully stainless steel		TE → PTFE		AS-2129 Table C/D
	C → Key cap	18 → Carbon steel		PU → POLIURETHANE		AS-2129 Table E
	CR → Key cap + Spur Gearbox					
	B → Iso top flange r.s.					
	BR → Iso top flange r.s. + Bevel Gearbox					
	FB → Iso top flange n.r.s.					
	FBR → Iso top flange n.r.s. + Bevel Gearbox					
	M → Electric actuator r.s.					
	MR → Electric actuator r.s. + Bevel Gearbox					

SERIES	OPERATIONS	MATERIAL	DN	SEAT	BODY TYPE	FLANGE
702-PRE	FM → Electric actuator n.r.s	11 → Cast iron		NI → NBR	L → Fully Lugged (END VALVE)	PN-10
	FMR → Electric actuator n.r.s + Bevel Gearbox	12 → Ductil iron		EP → EPDM	LW → Fully Lugged (BETWEEN FLANGES)	PN-16
	P → Quick closing lever	14 → Stainless steel		VI → VITON	W → Semi lugged (WAFER)	ASA 150
	N → D/A penumatic actuator	17 → Fully stainless steel		TE → PTFE		AS-2129 Table C/D
	SE → S/A penumatic actuator	18 → Carbon steel		PU → POLIURETHANE		AS-2129 Table E
	H → Oil hydraulic actuator					
	VCH → Chain wheel r.s.					
	VCHR → Chain wheel r.s. + Bevel Gearbox					
	FCH → Chain wheel n.r.s.					
	FCHR → Chain wheel n.r.s. + Bevel Gearbox					