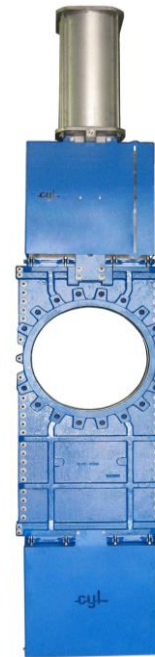


BI-DIRECTIONAL KNIFE GATE VALVE PT SERIES



KGV PT SERIES SEMI WAFER WITH ELASTOMERIC SLEEVES HANDWHEEL RS



KGV PT SERIES SEMI WAFER WITH PROFILE O-RINGS D/A PNEUMATIC ACTUATOR

The PT series knife gate is a bi-directional through going wafer valve, soft or metal-metal seated, designed to handle media with high consistency, mainly used on industrial bulk and paper applications. Sleeves (DN50-DN300) and packing materials can be replaced without valve disassembly from the pipeline.

GENERAL FEATURES

- Two-pieces casted body, wafer-design
- Through going gate
- Adjustable two stuffing boxes, allowing packing materials replacement without valve disassembly.
- Two sealing systems:
 - **DN50-DN300:** two sleeves (tight version) or two metallic rings (metal-metal valve). Same valve can be used for both options. Sleeves can be replaced without valve disassembly from the line.
 - **DN350-DN600:** two profile o-rings (tight version). Metal-metal seated valve without elastomeric parts on the passage. Profile o-rings cannot be replaced without valve disassembly from the pipeline.
- Short face-to-face dimension
- Easy drive replacement
- Proximity and limit switch mounting points

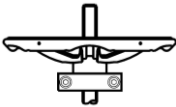
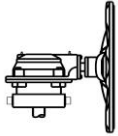
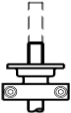
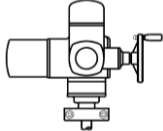
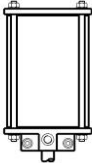
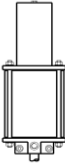

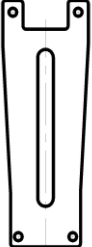
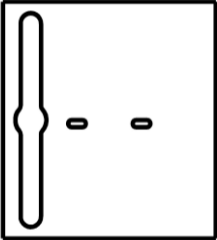
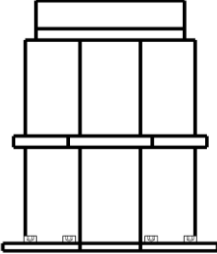
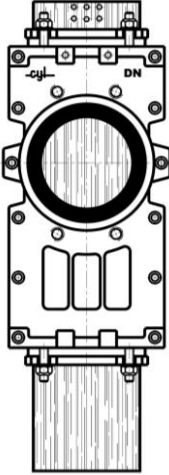
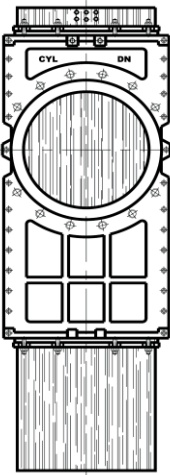
APPLICATION FIELDS

- Pulp and paper
- Mining
- Bulk handling
- Food and beverage
- Chemical process
- Etc

TECHNICAL DATA

- **Size range:**
DN-50 (2") to DN-600 (24")
- **Working pressure:**
DN 50 to DN 200: 10 kg/cm²
DN 250 to DN 300: 7 kg/cm²
DN 350 to DN 400: 6 kg/cm²
DN 450 to DN 600: 4 kg/cm²
- **Flange ratings:**
PN10, PN16 and ANSI B16.5 (class 150)
Note: other flange drillings under request
- **Face to face dimension:**
According to K1 DIN3202 up to DN-300
From DN-350 to DN-600 CYL standard
- **Coating:**
RAL 5017, 150 microns epoxy coated
- **Directives:**
Pressure equipment directive 97/23/CE
DIR 2006/42/CE (MACHINES)

ASSEMBLY CONFIGURATION

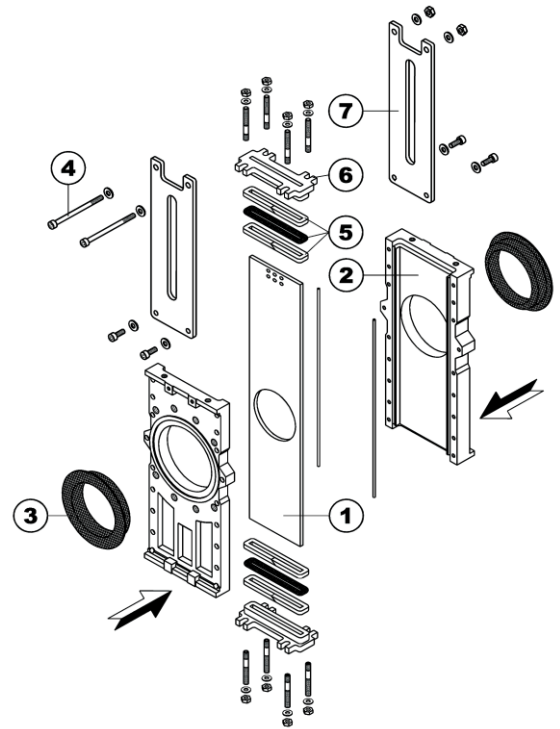
<p>OPERATION</p>	 <p>Rising stem handwheel</p>  <p>Gearbox</p>  <p>Rising stem coupling A</p>  <p>Electric actuator</p>  <p>Double acting pneumatic actuator</p>  <p>Spring-return pneumatic actuator</p>  <p>Oil hydraulic actuator</p>
<p>PLATES</p>	 <p>Plates</p>  <p>Hand protections for automated valves</p>  <p>Tight closed bonnet</p>
<p>BODY</p>	 <p>Semi lugged (wafer) DN50-DN300</p>  <p>Semi lugged (wafer) DN350-DN600</p>
<p>ACCESSORIES</p>	<ul style="list-style-type: none"> - Locking device - Overriding actuator - Limit stroke - Mechanical limit switches - Proximity limit switches - Mechanical position indicator - V-port (Aisi 316) - Deflector cone (Ni-hard) - Chest scraper (Bronze / PPS-plastic) - Solenoid valve - Flush holes - Etc.

MATERIAL SPECIFICATION & PART LIST

PT-SERIES FROM DN50 TO DN300

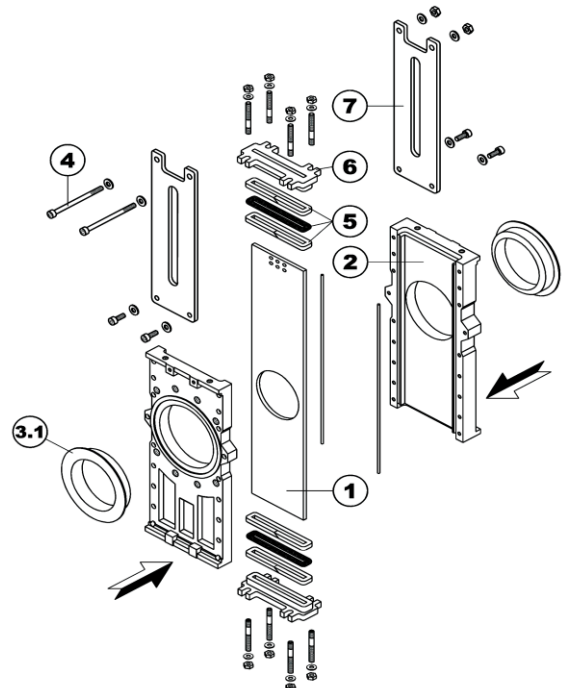
No.	DESCRIPTION	MATERIAL
1	Gate	SS 316 (standard) SS316L,SS316TI, DUPLEX2205,SMO254 optional)
2	Body	Cast iron - GJL250 (standard) GJS400, CF8M, DUPLEX2205, SMO254 (optional)
3	Sleeves	NBR (standard) EPDM, PTFE, VITON, POLIURETHANE (optional)
4	Screws & nuts	A-4
5	Packing materials	PTFE+NBR (standard) PTFE+EPDM, ARAMIDE, GRAPHITE (optional)
6	Packing glands	Ductile iron - GJS400 (standard) CF8M, DUPLEX 2205, SMO 254 (optional)
7	Plates	1.0580 (standard) SS 316 (optional)
-	Stem	SS 316
-	Bearing	1.0401 (standard) SS 316 (optional)
-	Handwheel	1.0037
-	Pneumatic act.	Aluminium
-	Hand-protections	1.0580 (standard) SS 316 (optional)

Figure 1. Exploded view of KGV PT series semi lugged with **sleeves (tight version)**



No.	DESCRIPTION	MATERIAL
1	Gate	SS 316 (standard) SS316L,SS316TI, DUPLEX2205,SMO254 optional)
2	Body	Cast iron - GJL250 (standard) GJS400, CF8M, DUPLEX2205, SMO254 (optional)
3.1	Metallic rings	1.041 (standard) SS 316 (optional)
4	Screws & nuts	A-4
5	Packing materials	PTFE+NBR (standard) PTFE+EPDM, ARAMIDE, GRAPHITE (optional)
6	Packing glands	Ductile iron - GJS400 (standard) CF8M, DUPLEX 2205, SMO 254 (optional)
7	Plates	1.0580 (standard) SS 316 (optional)
-	Stem	SS 316
-	Bearing	1.0401 (standard) SS 316 (optional)
-	Handwheel	1.0037
-	Pneumatic act.	Aluminium
-	Hand-protections	1.0580 (standard) SS 316 (optional)

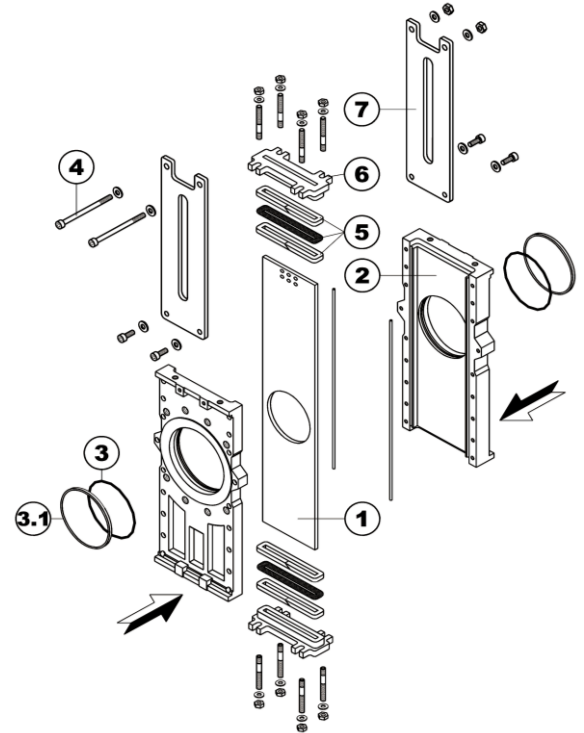
Figure 2. Exploded view of KGV PT series semi lugged with **metallic rings (metal-metal seat)**



PT-SERIES FROM DN350 TO DN600

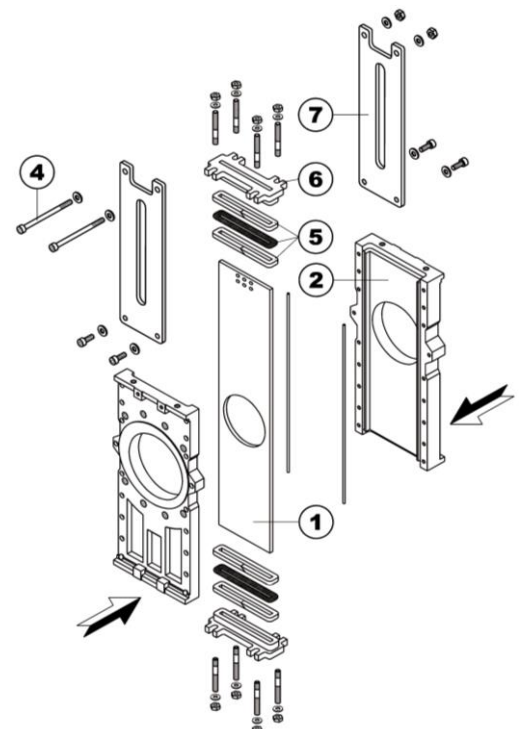
No.	DESCRIPTION	MATERIAL
1	Gate	SS 316 (standard) SS316L, SS316TI, DUPLEX2205, SMO254 (optional)
2	Body	Cast iron - GJL250 (standard) GJS400, CF8M, DUPLEX2205, SMO254 (optional)
3	Profile o-rings	NBR (standard) EPDM, PTFE, VITON, POLIURETHANE (optional)
3.1	Fastening ring	SS 316
4	Screws & nuts	A-4
5	Packing materials	PTFE+NBR (standard) PTFE+EPDM, ARAMIDE, GRAPHITE (optional)
6	Packing glands	Ductile iron - GJS400 (standard) CF8M, DUPLEX 2205, SMO254 (optional)
7	Plates	1.0580 (standard) SS 316 (optional)
-	Stem	SS 316
-	Bearing	1.0401 (standard) SS 316 (optional)
-	Handwheel	1.0037
-	Pneumatic act.	Aluminium
-	Hand-protections	1.0580 (standard) SS 316 (optional)

Figure 3. Exploded view of KGV PT series semi lugged with **profile o-rings (tight version)**



No.	DESCRIPTION	MATERIAL
1	Gate	SS 316 (standard) SS316L, SS316TI, DUPLEX2205, SMO254 (optional)
2	Body	Cast iron - GJL250 (standard) GJS400, CF8M, DUPLEX2205, SMO254 (optional)
4	Screws & nuts	A-4
5	Packing materials	PTFE+NBR (standard) PTFE+EPDM, ARAMIDE, GRAPHITE (optional)
6	Packing glands	GJS400 (standard) CF8M, DUPLEX 2205, SMO254 (optional)
7	Plates	1.0580 (standard) SS 316 (optional)
-	Stem	SS 316
-	Bearing	1.0401 (standard) SS 316 (optional)
-	Handwheel	1.0037
-	Pneumatic act.	Aluminium
-	Hand-protections	1.0580 (standard) SS 316 (optional)
-	Metal-Metal seats	Cast iron/Ductile iron (standard) AISI 316 (optional)

Figure 4. Exploded view of KGV PT series semi lugged with **metal-metal seat (without elastomeric parts of the passage)**



APPLICATION AND TEMPERATURE RANGE

SEAT MATERIALS			
Material	Min. temperature (°C)	Max. temperature (°C)	APPLICATIONS
NBR	-30	+80	Hydrocarbons and biogas waste
EPDM	-30	+90	Clean and chlorided water
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 SILICONE	-20	+180	Food industry (FDA conformity)
METAL-METAL	-30	+400	Solids, abrasive/high temperature mediums

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

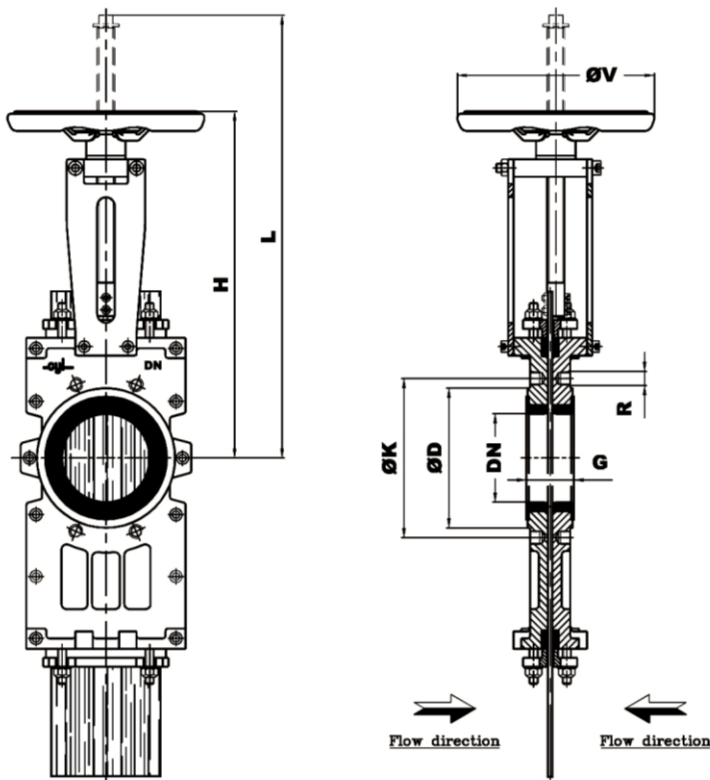
PACKING MATERIALS			
Material	Min. temperature (°C)	Max. temperature (°C)	APPLICATIONS
COTTON-PTFE	-30	+100	Hydrocarbons
PURE PTFE	-10	+200	Heat, friction, acids, chemical and corrosion resistant
ARAMIDE	-40	+250	Bulk handling
GRAPHITE	-40	+300	Hydrocarbons, heat resistant and solids
SPECIAL PACKING FOR HIGH TEMPERATURE	-10	+1000	High temperature

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

DIMENSIONAL DRAWINGS

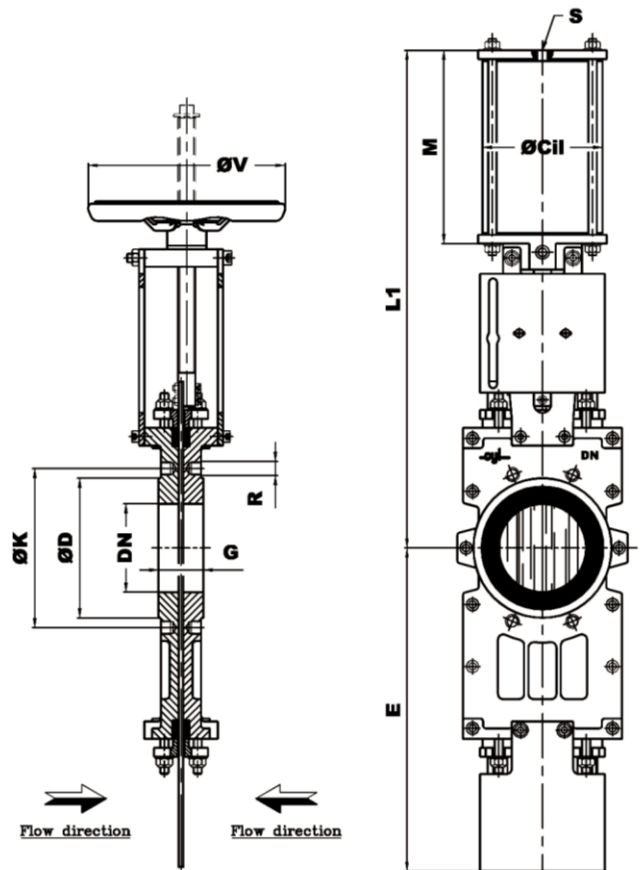
PT-SERIES FROM DN50 TO DN300

Figure 5. KGV PT series semi lugged rising stem & handwheel



Tight elastomeric-seat

Figure 6. KGV PT series semi lugged with d/a pneumatic actuator



Steel ring-seat
Metal/metal seat

DN	G±1	H	L	ØV	L1	M	E	S	Ø Cil	Min. Torque (Nm)	Max. Torque (Nm)	Spindle thread
80	49	366	451	225	488	177	301	1/4 "	100	12	19	Tr20x4i
100	52	390	495	225	537	197	366	1/4 "	100	15	22	Tr20x4i
150	57	522	674	300	731	267	543	3/8 "	160	25	50	Tr24x5i
200	60	627	828	300	896	327	657	1/2 "	190	27	53	Tr24x5i
250	66	737	988	300	1054	375	792	1/2 "	190	50	69	Tr24x5i
300	74	866	1168	400	1214	417	875	1/2 "	190	63	84	Tr28x5i

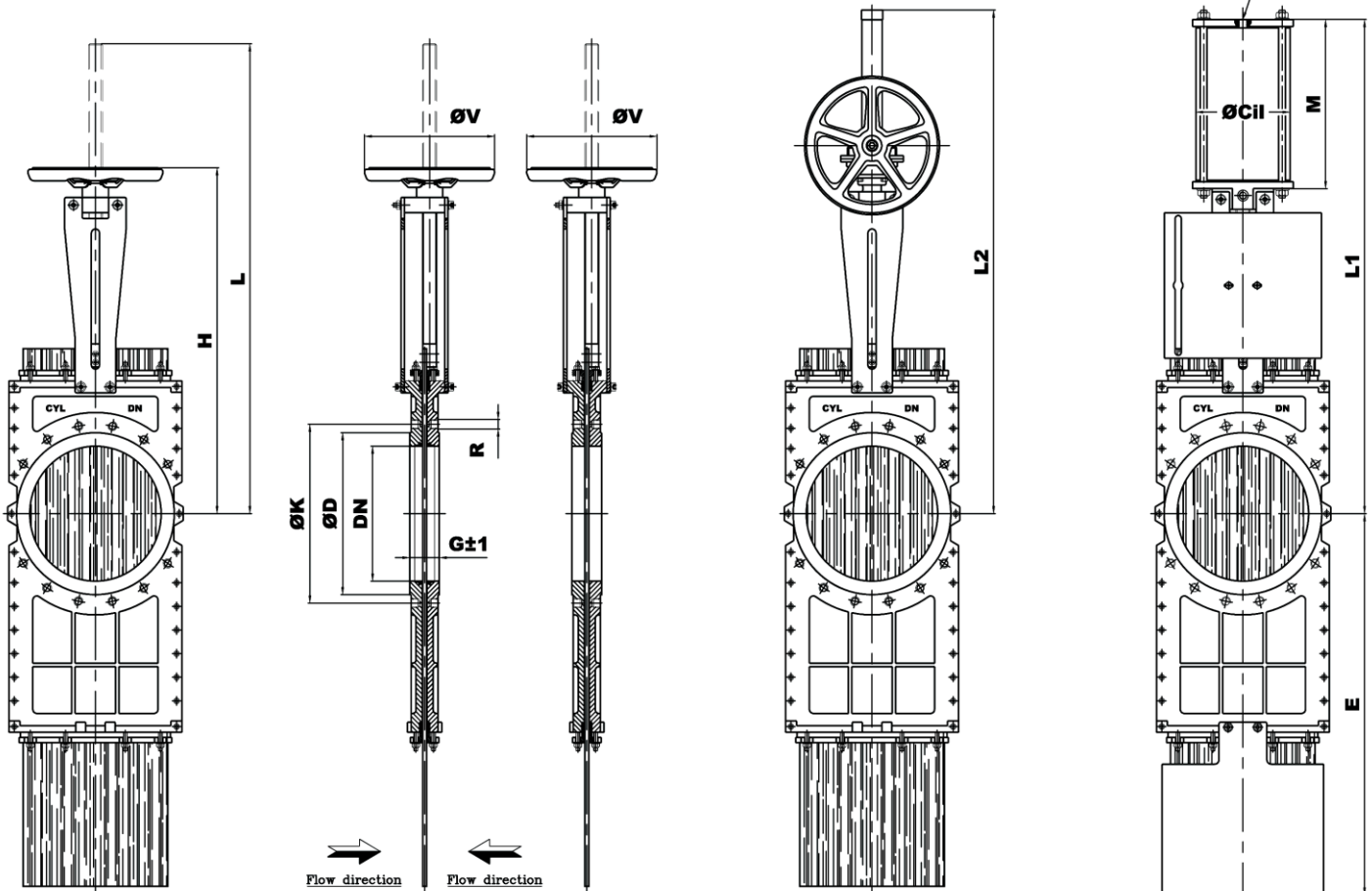
* Data sheet for ØK & ØD stated in "flange drillings chapter".

PT-SERIES FROM DN350 TO DN600

Figure 7. KGV PT series semi lugged rising stem & handwheel

Figure 8. KGV PT series semi lugged rising stem with handwheel & gearbox

Figure 9. KGV PT series semi lugged with d/a pneumatic actuator



Tight profile o-ring

Metal-metal seat

DN	G±1	H	L	ØV	L2	L1	E	M	ØCi1	S	Min. Torque (Nm)	Max. Torque (Nm)	Spindle thread
350	96	902	1254	400	1351	1332	1043	499	250	½"G	78	102	Tr28x5i
400	100	981	1383	400	1530	1461	1192	549	250	½"G	90	110	Tr28x5i
450	106	1114	1572	500	1644	1653	1330	606	300	½"G	215	259	Tr40x7i
500	110	1214	1722	500	1772	1781	1460	656	300	½"G	223	320	Tr40x7i
600	110	1394	2002	500	2052	2061	1709	756	300	½"G	249	388	Tr40x7i

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

FLANGE DRILLINGS

FLANGE DRILLING - PN10

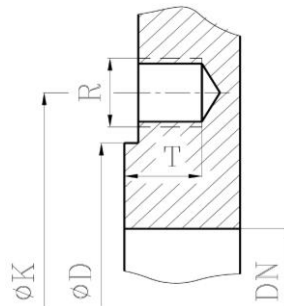
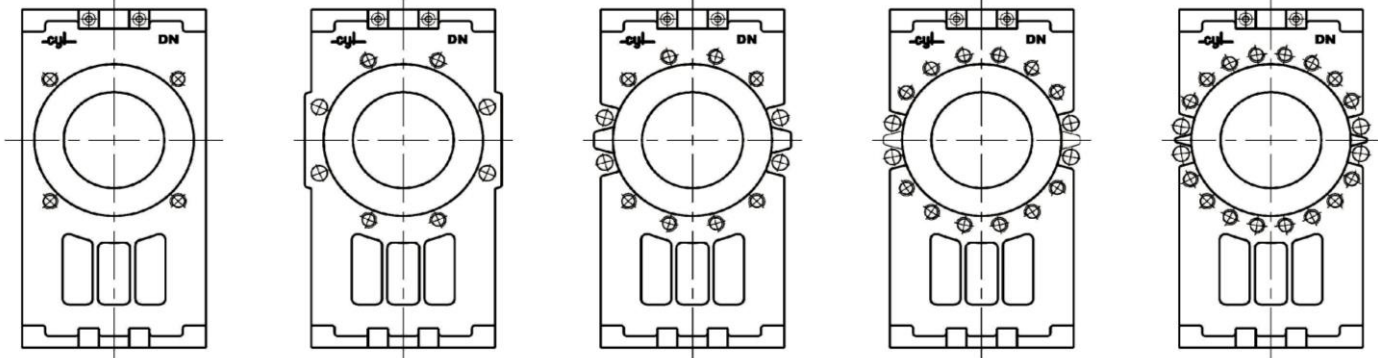
DN 50–65

DN 80–200

DN 250–300

DN 350–400

DN 450–600

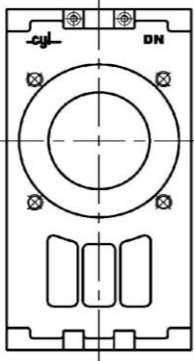
**Bolting Arrangements PN-10 Knife Gate Valve**

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	10	M-16
150	240	212	4	4	8	12	M-20
200	295	268	4	4	8	12	M-20
250	350	320	8	4	12	14	M-20
300	400	370	8	4	12	14	M-20
350	460	430	12	4	16	20	M-20
400	515	482	12	4	16	24	M-24
450	565	532	16	4	20	24	M-24
500	620	585	16	4	20	25	M-24
600	725	685	16	4	20	29	M-27

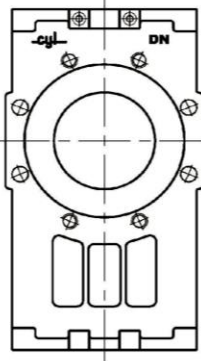
N (1)- N° of tapped holes N (2)- N° of through holes N (3)- N° of flange holes

FLANGE DRILLING - PN16

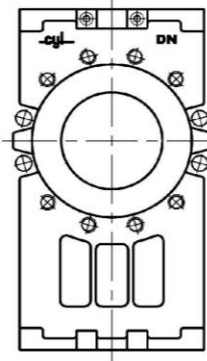
DN 50–65



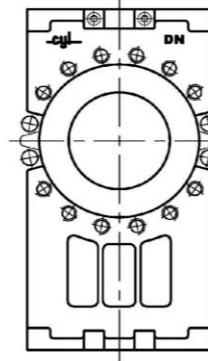
DN 80–150



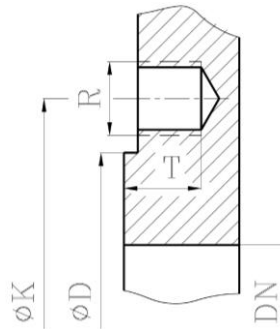
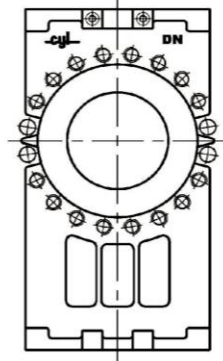
DN 200–300



DN 350–400



DN 450–600

**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	10	M-16
150	240	212	4	4	8	12	M-20
200	295	268	8	4	12	12	M-20
250	355	320	8	4	12	14	M-24
300	410	370	8	4	12	14	M-24
350	470	430	12	4	16	20	M-24
400	525	482	12	4	16	24	M-27
450	585	532	16	4	20	24	M-27
500	650	585	16	4	20	25	M-30
600	770	685	16	4	20	29	M-33

N (1)- Nº of tapped holes N (2)- Nº of through holes N (3)- Nº of flange holes

FLANGE DRILLING - ASA 150

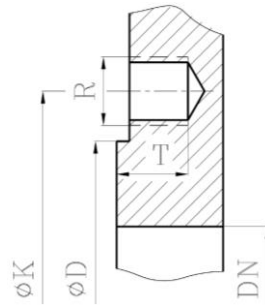
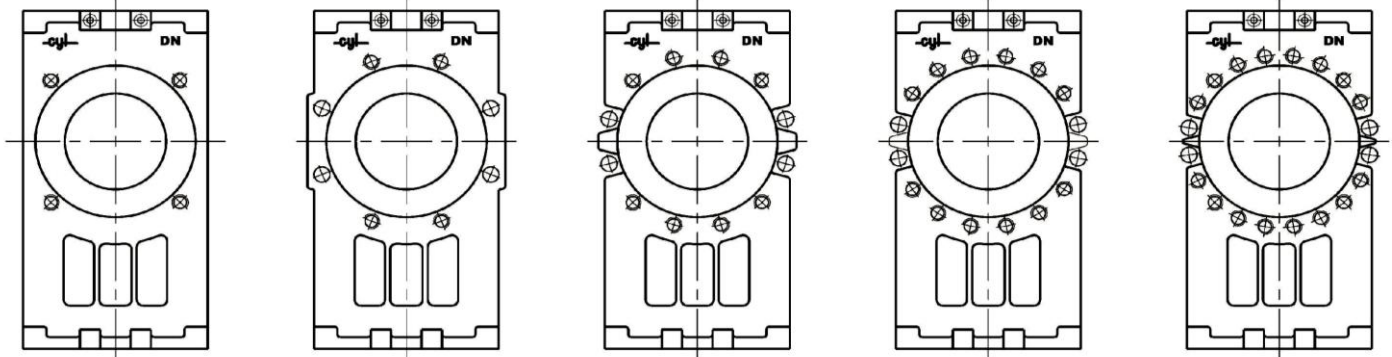
DN 50–80

DN 100–200

DN 250–300

DN 350–400

DN 450–600

**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	137,70	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	10	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	8	4	12	14	7/8 "
300	431,80	370	8	4	12	14	7/8 "
350	476,20	430	8	4	12	20	1 "
400	539,70	482	12	4	16	24	1 "
450	577,80	532	12	4	16	24	1 1/8 "
500	635,00	585	16	4	20	25	1 1/8 "
600	749,30	685	16	4	20	29	1 1/4 "

N (1)- Nº of tapped holes N (2)- Nº of through holes N (3)- Nº of flange holes

ORDERING GUIDE

SERIES	OPERATIONS	BODY MATERIAL	DN	SEAT MATERIAL	BODY TYPE	FLANGE DRILLING
PT SERIES	V	11		NI	W	PN-10
	V → Handwheel r.s	11 → Cast iron		NI → NBR	W → Semi lugged (WAFER)	PN-10
	VR → Handwheel r.s + Bevel Gearbox	12 → Ductile iron		EP → EPDM		PN-16
	B → Iso top flange r.s.	14 → Stainless steel		VI → VITON		ASA 150
	BR → Iso top flange r.s. + Bevel Gearbox	17 → Fully stainless steel		TE → PTFE		
	M → Electric actuator r.s.	18 → Carbon steel		PU → POLIURETHANE		
	MR → Electric actuator r.s. + Bevel Gearbox			MET → METAL-METAL		
	N → D/A pneumatic actuator					
	SE → S/A pneumatic actuator					
	H → Oil hydraulic actuator					