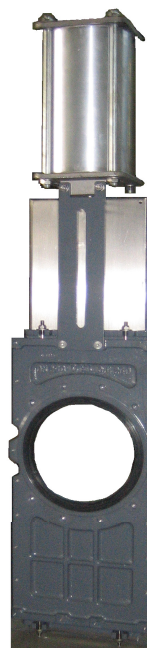


BI-DIRECTIONAL KNIFE GATE VALVE



The PT-CYL model knife gate is a Bi-directional valve, equipped with automatic or manual driver, that by its loose elastomeric clamping rings (tight version) design ensures a bubble-tight shut off in both directions of the flow, making it suitable for high density mediums within several industrial applications.

GENERAL FEATURES

- Bi-directional
- Short face-to-face dimension; easy to install between flanges
- Two split body arrangements
- One body style: semi lugged (wafer)
- Two packing glands and double sleeves
- Equipped with a through-going gate
- Full bore design; easy passage of medium
- Easy drive replacement
- Self cleaning designs
- Proximity and limit switch mounting points as standard

APPLICATION FIELDS

- Paper mills (pulp concentration > 5%)
- Sugar factories
- Food industry
- Mining industry
- Powder industry
- Dust
- Suction trucks
- Etc.

TECHNICAL DATA

Size range: DN-80 (3") to DN-300 (12")

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

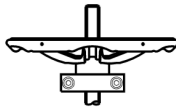
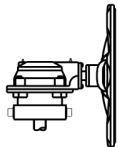
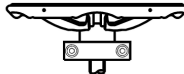
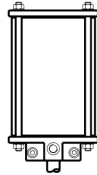
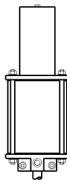
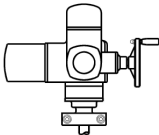
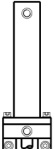
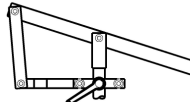
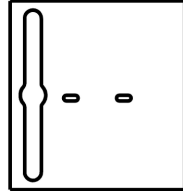
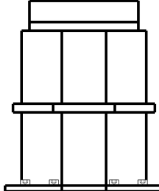
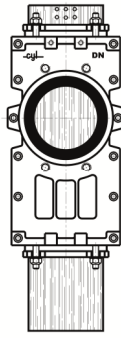
Face to face dimension: according to K1
DIN3202

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, 80-150
microns, as standard
(Other RAL and thicknesses under request)

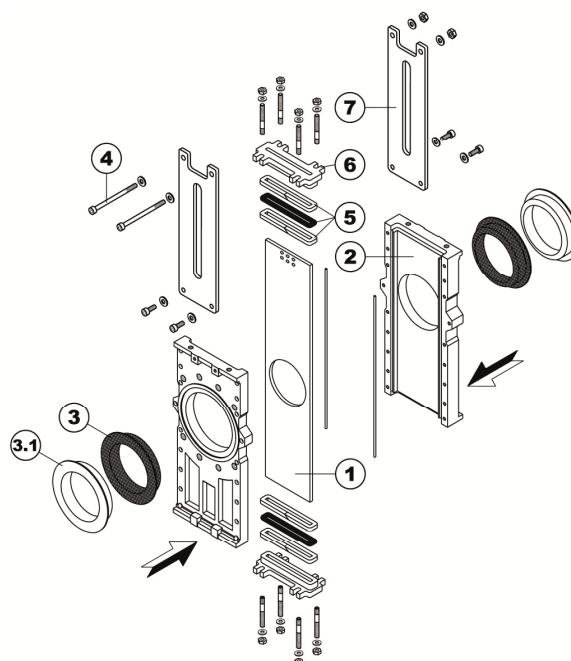
ASSEMBLY CONFIGURATION

	STANDARD	OPTIONAL					
OPERATION	 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					
SHROUD (PLATES)	 Open shroud	 Hand protections for automated valves  Bonnet					
BODY	 Semi lugged (wafer)						
ACCESORIES	- Revolving handle - Locking device - Overriding actuator - Mechanical positioner - Limit stroke - Mechanical limit switches - Proximity limit switches - V-port - Deflector cone - Chest scraper - Solenoid valve - Extension, extended guided plates - Etc.						

MATERIAL SPECIFICATION & PART LIST

No.	DESCRIPTION	MATERIAL
1	Gate	SS 316 (standard) DUPLEX 2205, SMO 254, SS 316Ti, SS 316L (optional)
2	Body	GJL250 Iron (standard) GJS400 Iron, CF8M, DUPLEX 2205, SMO 254 (optional)
3	Tight seat	EPDM (standard) PTFE, VITON, POLIURETHANE, NBR (optional)
3.1	Metal seat	1.041 (standard) SS 316 (optional)
4	Screw & nut	A-4
5	Packing material	PTFE+EPDM (standard) PTFE+VITON, ARAMIDE, GRAPHITE (optional)
6	Packing gland	GJS400 (standard) CF8M, DUPLEX 2205, SMO 254 (optional)
7	Open shroud	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 semi lugged with open shroud


APPLICATION AND TEMPERATURE RANGE OF SEALING MATERIALS

RESILIENT SEATS			
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	+160	Heat, friction, acids, chemical and corrosion resistant
POLIURETHANE	-10	+80	Abrasive mediums
METAL-METAL	-30	+400	Solid and abrasive mediums

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

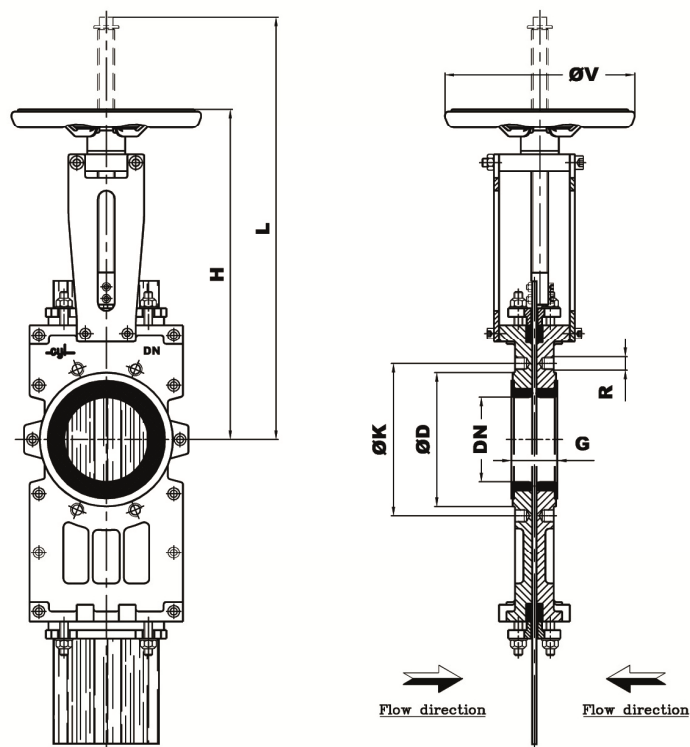
APPLICATION AND TEMPERATURE RANGE OF PACKING MATERIALS

RESILENT SEATS			
Material	Min. temperature (°C)	Max. temperature (°C)	APPLICATIONS
COTTON-PTFE	-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
SPECIAL PACKING FOR HIGH TEMPERATURE	-10	+1000	High temperature

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

DIMENSIONAL DRAWINGS

Figure 2. KGV-PT semi lugged rising stem & handwheel



Tight elastomeric-seat

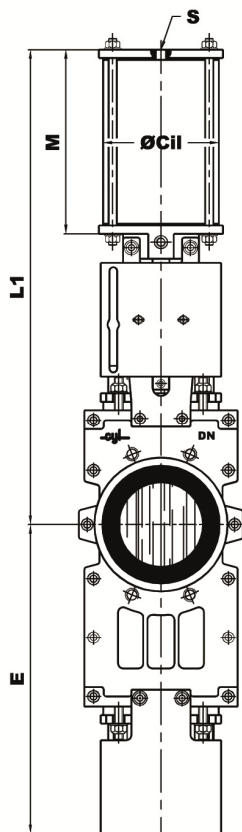


Figure 3. KGV-PT semi lugged with d/a pneumatic actuator

Steel ring-seat
Metal/metal seat

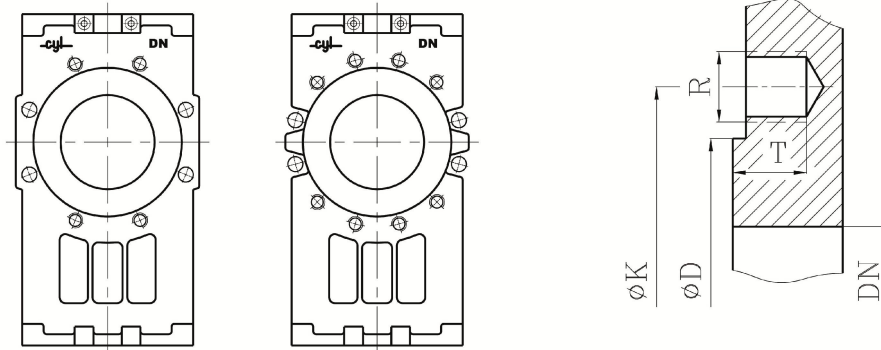
DN	G±1	H	L	ØV	L1	M	E	S	ØCil	Min. Torque (Nm)	Max. Torque (Nm)	Spindle thread	Max. Working Pressure (bar)
80	49	366	452	225	488	177	301	1/4 "	100	12	19	Tr20x4i	10
100	52	390	501	225	537	197	366	1/4 "	100	15	22	Tr20x4i	10
150	57	522	682	300	731	273	543	3/8 "	160	25	50	Tr24x5i	10
200	60	627	834	300	896	327	657	1/2 "	190	27	53	Tr24x5i	8
250	66	737	992	300	1054	375	792	1/2 "	190	50	69	Tr24x5i	7
300	74	866	1156	400	1214	420	875	1/2 "	190	63	84	Tr28x5i	6

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

FLANGE DRILLINGS

FLANGE DRILLING- PN10

DN 80–200 DN 250–300



Bolting Arrangements PN-10 Knife Gate Valve

DN	K	D	N (1)	N (2)	N (3)	T	R
80	160	135	4	4	8	13	M-16
100	180	158	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	8	4	12	14	M-20
300	400	370	8	4	12	14	M-20

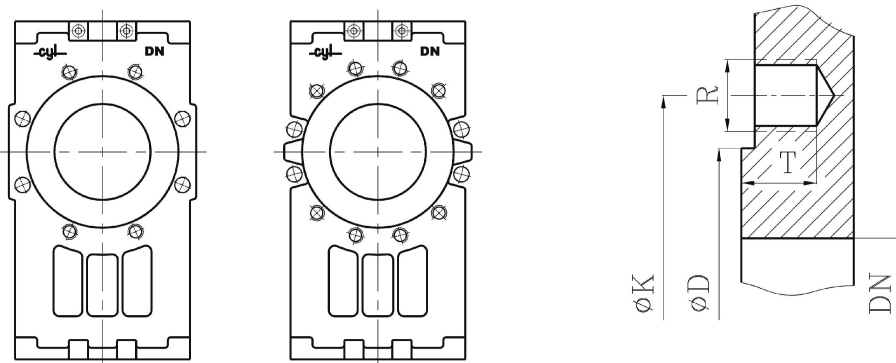
N (1)- Nº of threaded holes

N (2)- Nº of thru bolts

N (3)- Nº of flange holes

FLANGE DRILLING- PN16

DN 80–150 DN 200–300



Bolting Arrangements PN-16 Knife Gate Valve

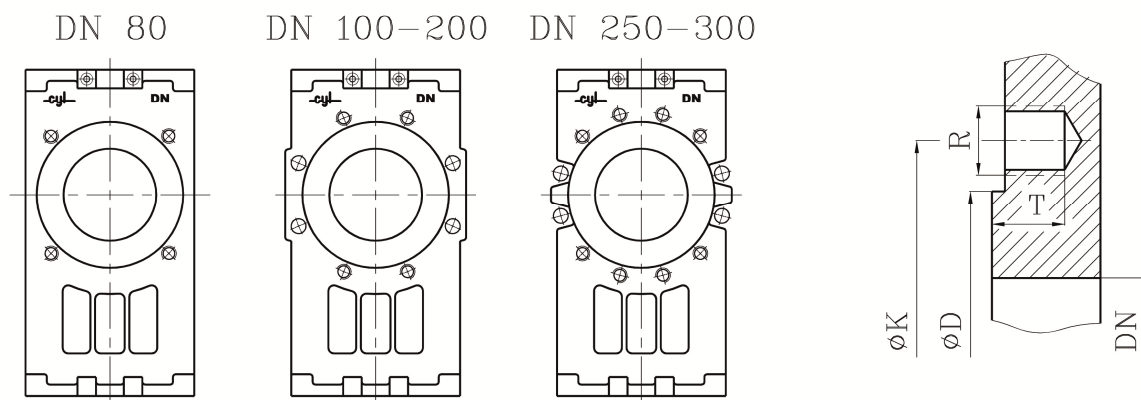
DN	K	D	N (1)	N (2)	N (3)	T	R
80	160	135	4	4	8	13	M-16
100	180	158	4	4	8	13	M-16
150	240	212	4	4	8	12	M-20
200	295	268	8	4	12	12	M-20
250	355	320	8	4	12	14	M-24
300	410	370	8	4	12	14	M-24

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
80	152,4	135	4	-	4	13	5/8 "
100	190,5	158	4	4	8	13	5/8 "
150	241,3	212	4	4	8	12	3/4 "
200	298,4	268	4	4	8	12	3/4 "
250	361,9	320	8	4	12	14	7/8 "
300	431,8	370	8	4	12	14	7/8 "

N (1)- Nº of threaded holes

N (2)- Nº of thru bolts

N (3)- Nº of flange holes

ORDERING GUIDE

SERIES	OPERATIONS	MATERIAL	DN	SEAT	BODY TYPE	FLANGE
Example: PT	V	11		NI	W	PN-10
PT	V → Handwheel r.s	11 → Cast iron		NI → NBR	W → Semi lugged (WAFER)	PN-10
	VR → Handwheel r.s + Bevel Gearbox	12 → Ductil iron		EP → EPDM		PN-16
	F → Handwheel n.r.s.	14 → Stainless steel		VI → VITON		ASA 150
	FR → Handwheel n.r.s. + Bevel Gearbox	17 → Fully stainless steel		TE → PTFE		
	C → Key cap	18 → Carbon steel		PU → POLIURETHANE		
	CR → Key cap + Spur Gearbox			MET → METAL-METAL		
	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
PT	FM → Electric actuator n.r.s	11 → Cast iron		NI → NBR	W → Semi lugged (WAFFER)	PN-10
	FMR → Electric actuator n.r.s + Bevel Gearbox	12 → Ductil iron		EP → EPDM		PN-16
	P → Quick closing lever	14 → Stainless steel		VI → VITON		ASA 150
	N → D/A penumatic actuator	17 → Fully stainless steel		TE → PTFE		
	SE → S/A penumatic actuator	18 → Carbon steel		PU → POLIURETHANE		
	H → Oil hydraulic actuator			MET → METAL-METAL		
	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					