

BI-DIRECTIONAL KNIFE GATE VALVE



KGV-XD SEMI LUGGED WITH
RISING STEM & HANDWHEEL



KGV-XD SEMI LUGGED WITH
D/A PNEUMATIC ACTUATOR



KGV-XD FULLY LUGGED
WITH BONNET &
HANDWHEEL

The XD model knife gate is a Bi-directional valve, equipped with automatic or manual driver that by design ensures a bubble-tight shut off in both directions of the flow; making it suitable for several industrial applications.

GENERAL FEATURES

- 100 % water tight
- Zero leakage in both senses
- Three body styles: semi lugged (wafer) as standard and fully lug-between flanges and fully lug-end valve under request.
- Short face-to-face dimension; easy to install between flanges
- Two split body arrangements
- Full bore design; easy passage of medium
- Minimal void between body and blade, providing easy maintenance
- No cavity or void in body, means no clogging
- Easy drive replacement
- Self cleaning design; little maintenance required
- Proximity and limit switch mounting points as standard

APPLICATION FIELDS

- Water treatment plants
- Food processing
- Slaughterhouses
- Paper mills
- Power plants
- Vacuum
- Mining industry
- Biogas
- Etc.

TECHNICAL DATA

Size range: DN-50 (2") to DN-1800 (72")

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

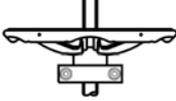
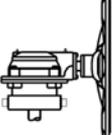
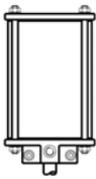
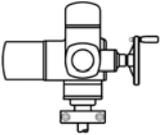
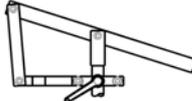
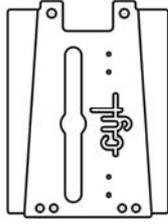
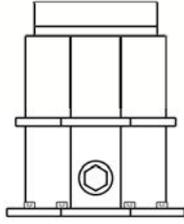
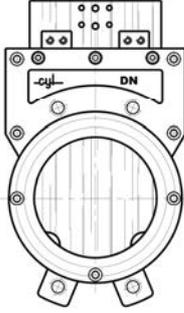
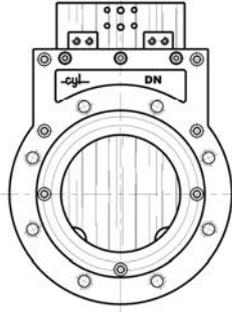
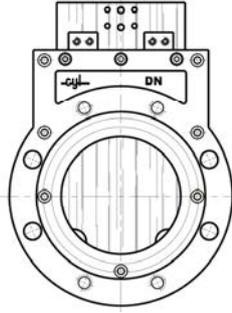
Face to face dimension: according to K1
DIN3202 up to DN-350

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

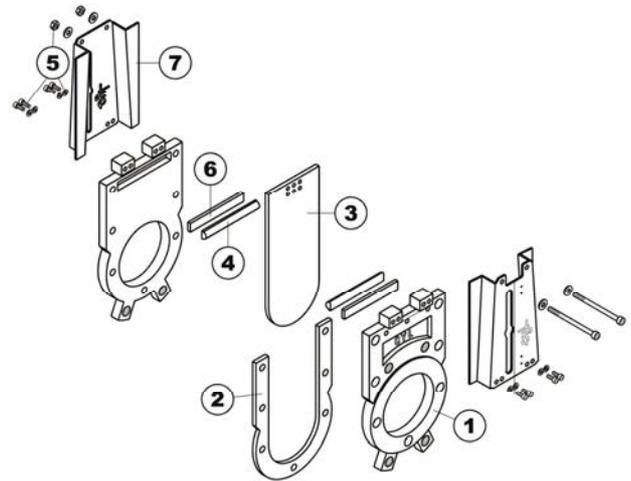
ASSEMBLY CONFIGURATION

	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	 Non rising stem coupling B-3	 Rising stem coupling A	
SHROUD (PLATES)	 Open shroud	 Tight closed bonnet	 Earth bonnet				
BODY	 Semi lugged (wafer)	 Fully lugged End valve (All holes threaded)	 Fully lugged between flanges (partly threaded and partly thru holes)				
ACCESORIES	<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 - Chest scraper - Solenoid valve - Extension, extended guided plates - Etc. 						

MATERIAL SPECIFICATION & PART LIST

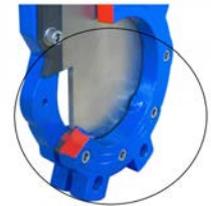
No.	DESCRIPTION	MATERIAL
1	Body	GJL250 Iron (standard) GJS400 Iron, CF8M, DUPLEX 2205, SMO 254 (optional)
2	Resilient seat	NBR (standard) PTFE, VITON, POLIURETHANE, EPDM (optional)
3	Gate	SS 316 (standard) DUPLEX 2205, SMO 254, SS 316Ti, SS 316L (optional)
4	Packing material	NBR (standard) PTFE, VITON, POLIURETHANE, EPDM (optional)
5	Screw and nut	A-4
6	Push rod	SS 316
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

Figure 1. Exploded view of KGV-XD semi lugged with open shroud



SEAT TYPE

The seat consists of one piece vulkanised u-seat with steel core inside. The seat is fixed at the body 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

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
WHITE NBR	-10	+60	Food industry
RED SILICONE	-20	+160	Food industry

*More details and other sealing materials under request.

DIMENSIONAL DRAWINGS

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

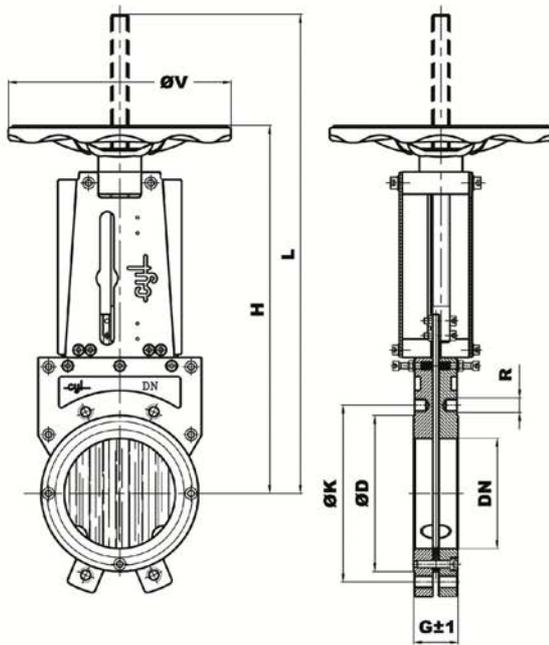


Figure 3. KGV-XD semi lugged rising stem with handwheel & gearbox*

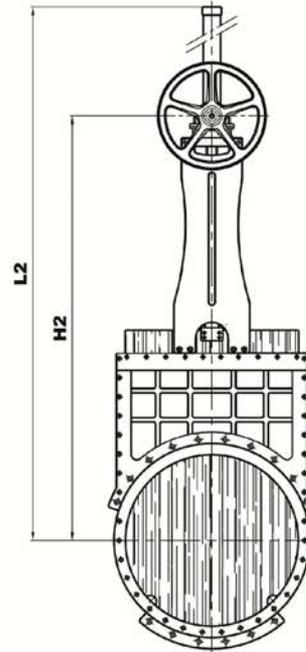
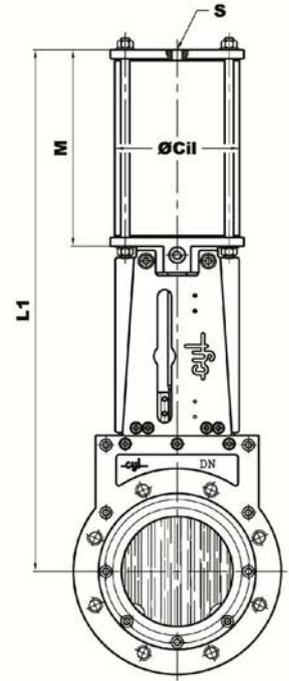


Figure 4. KGV-XD fully lugged with d/a pneumatic actuator



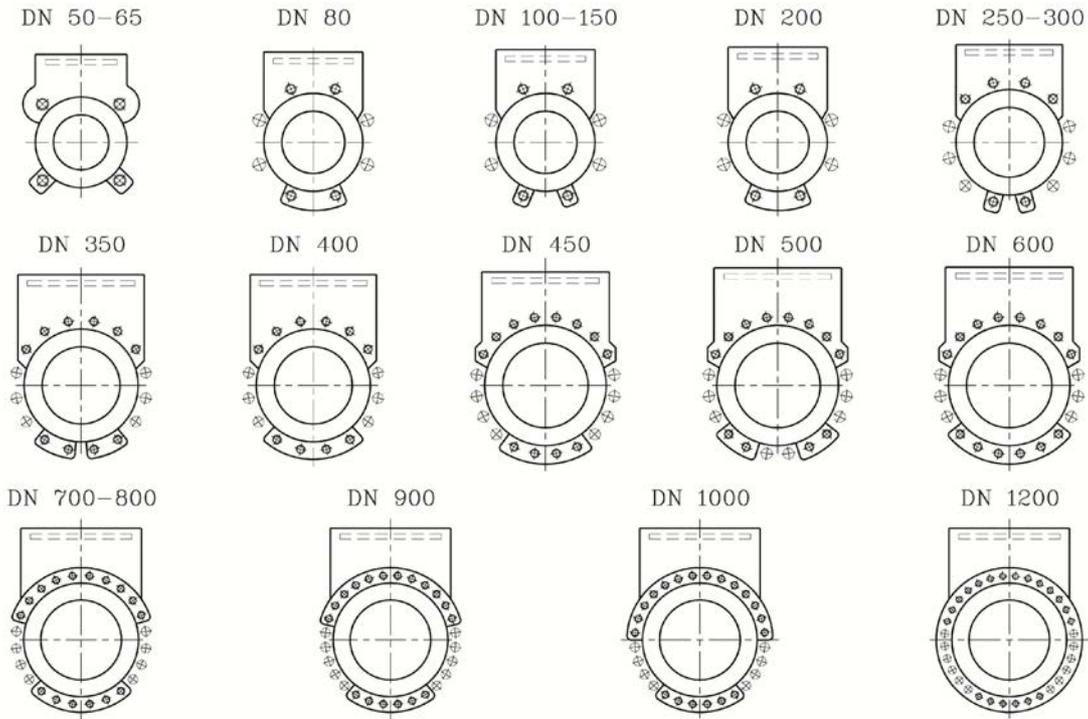
DN	G±1	L	H	ØV	L2	H2	L1	M	ØCil	S	Min. Torque (Nm)	Max. Torque (Nm)	Spindle thread	Max. Working Pressure (bar)
50	43	335	267	175	-	-	375	147	80	1/4 " G	8	16	Tr18x4i	10
65	46	376	293	175	-	-	412	160	80	1/4 " G	10	17	Tr18x4i	10
80	46	419	334	225	-	-	460	177	100	1/4 " G	12	19	Tr20x4i	10
100	52	476	371	225	-	-	517	197	100	1/4 " G	15	22	Tr20x4i	10
125	56	541	411	225	-	-	594	232	125	3/8 " G	17	24	Tr20x4i	10
150	56	651	500	300	-	-	757	267	160	3/8 " G	25	50	Tr24x5i	10
200	60	803	602	300	-	-	928	327	190	1/2 " G	27	53	Tr24x5i	8
250	68	954	703	300	-	-	1050	375	190	1/2 " G	50	69	Tr24x5i	7
300	78	1137	835	400	-	-	1195	428	190	1/2 " G	63	84	Tr28x5i	7
350	78	1273	921	400	1370	980	1354	499	250	1/2 " G	78	102	Tr28x5i	6
400	90	1433	1031	400	1530	1090	1505	549	250	1/2 " G	90	110	Tr28x5i	5
450	90	1604	1161	500	1667	1164	1664	590	300	1/2 " G	215	259	Tr40x7i	5
500	95	1779	1271	500	1829	1276	1843	656	300	1/2 " G	223	320	Tr40x7i	4
600	105	2066	1458	500	2116	1463	2124	757	300	1/2 " G	249	388	Tr40x7i	4
700*	110	-	-	500	2528	1735	2486	845	300	1/2 " G	330	436	Tr50x8i	3
800*	110	-	-	500	2911	2058	2984	1025	350	1/2 " G	420	570	Tr50x8i	2
900*	125	-	-	500	3179	2222	3217	1128	350	1/2 " G	512	783	Tr50x8i	1,5
1000*	125	-	-	500	3599	2542	3637	1228	350	1/2 " G	620	987	Tr60x9i	1
1200*	125	-	-	500	4128	2871	-	-	-	-	950	1460	Tr60x9i	1

* We advise gearbox for valves above DN-700.

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

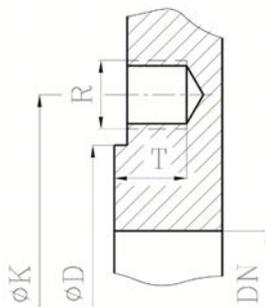
FLANGE DRILLINGS

FLANGE DRILLING- PN10



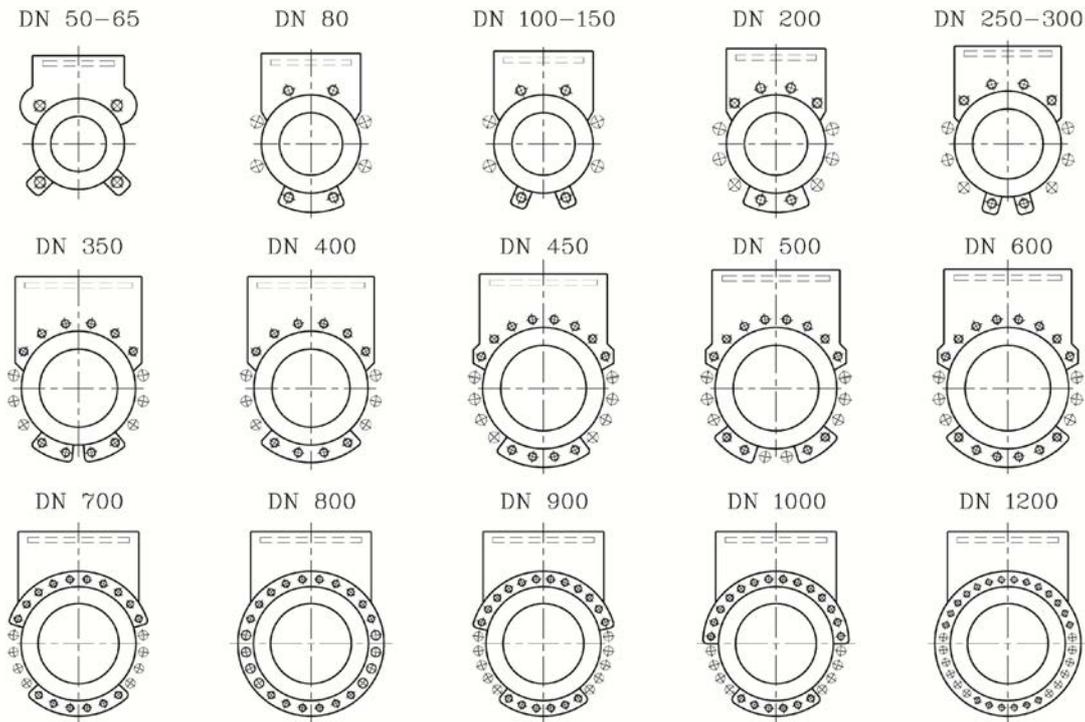
Bolting Arrangements PN-10 Knife Gate Valve

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
700	840	800	16	8	22	35	M-27
800	950	905	16	8	22	30	M-30
900	1050	1005	18	10	28	39	M-30
1000	1160	1110	20	8	28	39	M-33
1200	1380	1330	20	12	32	35	M-36

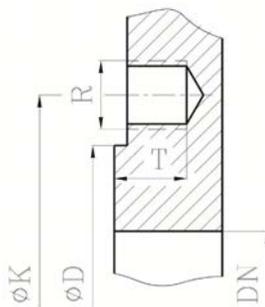


N (1)- N° of threaded holes N (2)- N° of thru bolts N (3)- N° of flange holes

FLANGE DRILLING- PN16



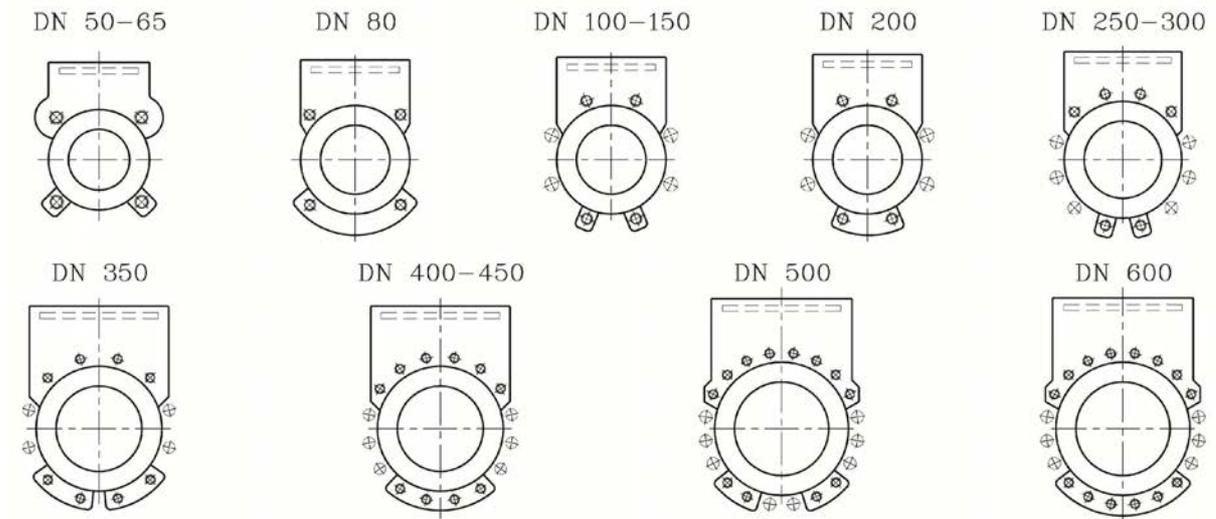
Bolting Arrangements PN-16 Knife Gate Valve



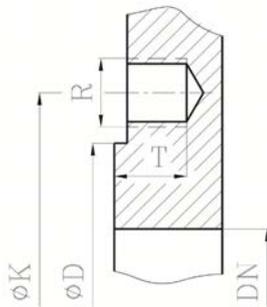
DN	K	D	N (1)	N (2)	N (3)	T	R
50	125	100	4	-	4	9	M-16
65	145	120	4	-	4	9	M-16
80	160	135	4	4	8	13	M-16
100	180	158	4	4	8	13	M-16
125	210	188	4	4	8	13	M-16
150	240	212	4	4	8	12	M-20
200	295	268	6	6	12	12	M-20
250	355	320	6	6	12	16	M-24
300	410	370	6	6	12	16	M-24
350	470	430	10	6	16	20	M-24
400	525	482	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
700	840	800	16	8	24	35	M-33
800	950	915	16	8	24	30	M-36
900	1050	1014	18	10	28	39	M-36
1000	1170	1118	20	8	28	39	M-39
1200	1390	1330	20	12	32	38	M-45

N (1)- N° of threaded holes N (2)- N° of thru bolts N (3)- N° 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)- 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: XD	V	11		NI	W	PN-10
XD	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		
	CR → Key cap + Spur Gearbox			SI → SILICONE		
	B → Iso top flange r.s.			NIB → WHITE NBR		
	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
XD	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		
	H → Oil hydraulic actuator			SI → SILICONE		
	VCH → Chain wheel r.s.			NIB → WHITE NBR		
	VCHR → Chain wheel r.s. + Bevel Gearbox					
	FCH → Chain wheel n.r.s.					
	FCHR → Chain wheel n.r.s. + Bevel Gearbox					