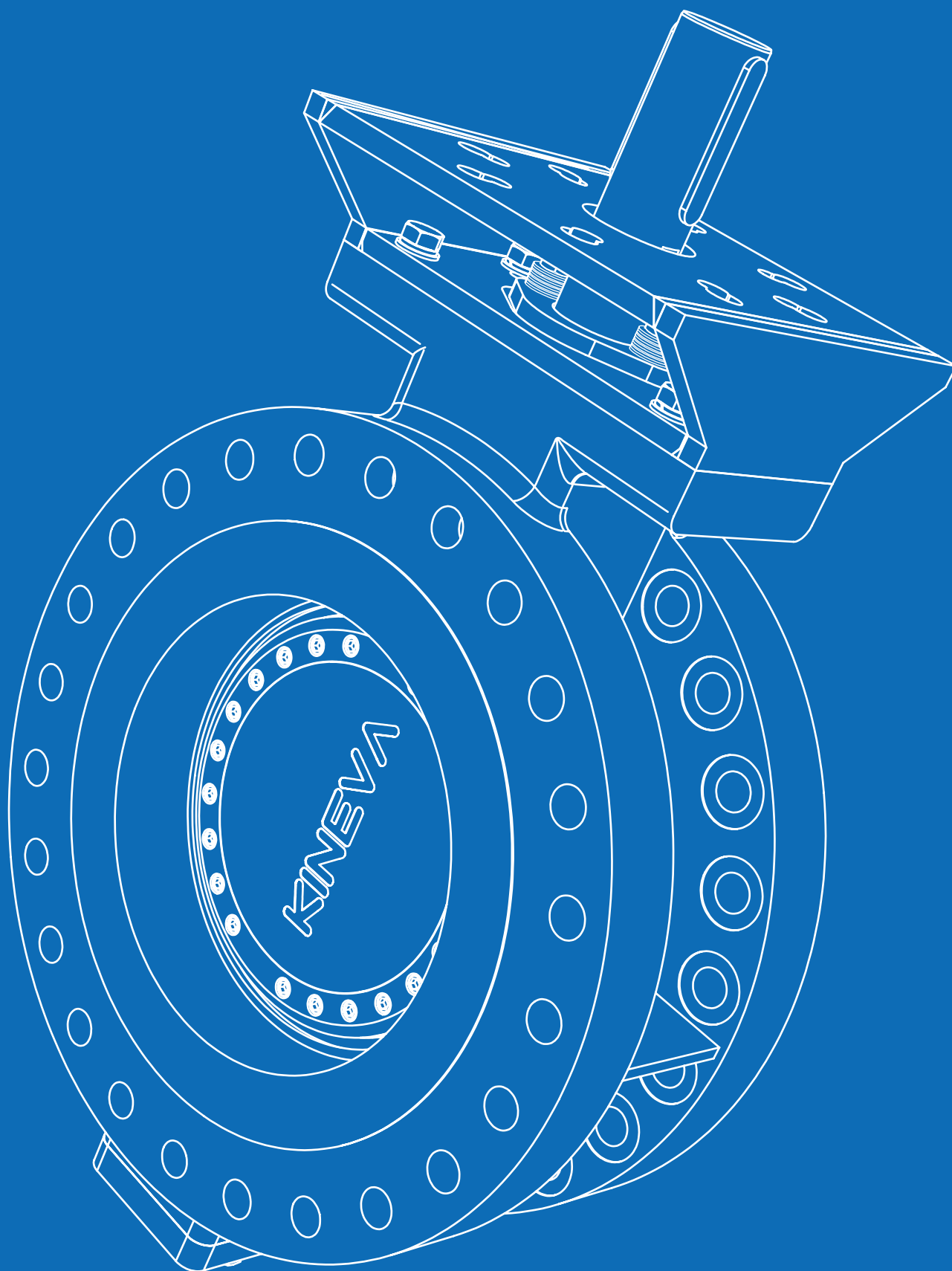


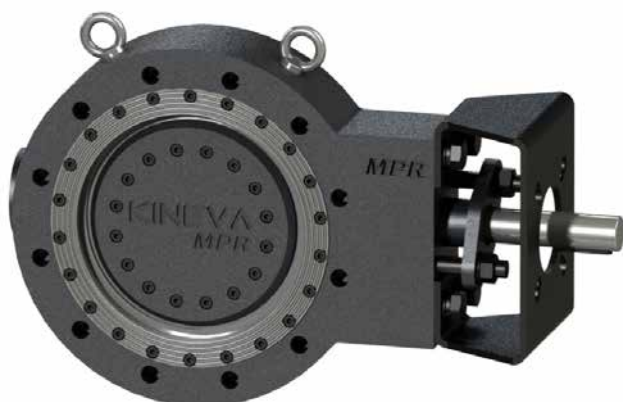


31158
32158
37158



Butterfly valves 4 offset DN65 up to DN2500/PN2,5 up to PN160/Class 150 up to Class 900





Main application

The range of application depends directly on materials, properties and temperature of the fluid.

The most frequent application:

- Steam and hot water systems.
- Flue gas systems.
- Chemical and petrochemical industries.
- Vacuum systems.
- Heavy industries.

Technical description

Four offset butterfly valve having either a wafer or lug type body, double flange type body or butt-welded ends type body for connection to flanges/piping of adjacent pipework components.

The valve is designed and made as a pressure equipment in conformity with requirements of the Pressure Equipment Directive 97/23/EC, module B+D. The valves is intended to be used as a shut off or control (regulating) designed according to EN 593.

The valves is designed for full bidirectional tightness with preferential flow of the fluid for:

- Shut off mode of operation, fluid pressure from the side of the shaft.
- Control mode of operation, opposite direction to that for shut off mode.

The shaft is made in anti-blow out design according to EN 736-3.

The four offset design eliminate any friction of the seating surface in service, which results in long service and long life of the valve and fulfilled characteristics of a tight closure.

The disc seal is replaceable. The seat in the body is replaceable only to special request.

Location of the valve at the end of the pipeline and dismantling of the pipeline system downstream of the valve are safe provided that:

- The valve is designed to be used in the shut off mode of operation.
- P20 test on special request, see section Pressure tests.

Standard coating Termo black on base the silicone, min. thickness 50 microns. Durability up to 400°C.

Operation

The valve is designed for operation with EN ISO 5211 attachment: Manual gearbox, electric actuator, pneumatic actuator, etc. All upon request of customer.



Valve materials

Material selection depends on valve application, the most common materials are specified in section Materials used for main valve parts. Other materials upon request.

Pressure tests

All pressure tests are provided according to EN 12266-1 and EN12266-2.

EN12266-1 include the tests P10, P11 and P12.
EN12266-2 include the tests F20, P20 (upon request).
Other pressure tests upon request.

Connection

The valves are made in size DN65 up to DN2500.

Connection dimensions of flanges as required:

- EN 1092-1 ... PN2,5 up to 160
- EN1759-1 ... Class 150 up to 900
- EN12627 ... Butt-welding ends, PS up to 100bar
- Other upon request

Face-to-face dimension:

According to EN558, DIN, ASME/ANSI, BS or others upon request.

Working parameters

Fluid temperature:

TS -200°C up to 830°C, according to material used.

Nominal pressure:

PN2,5 up to PN160.

Working pressure:

PS -1 up to 155bar.

Differential press. At closing:

$\Delta p=PS$, unless otherwise indicated.

Velocity of flow:

According to EN593, Table 1.

Vacuum:

Standard design 0,2bar abs., other upon request.

Seat leakage rate:

Metal-to-metal contact according to EN12266-1, leakage rate A for liquids, for gases upon request.

Metal-to-PTFE contact according to EN12266-1. Leakage rate A for both liquids and gases.

Metal-to-metal contact according to EN1349, leakage rate V for gases. Rate VI upon request.

Materials used for main valve parts

Body	Disc	Shaft	Key	Bearing of shaft	Stuffing box	Body seat	Seal ring	Screw	Coating
P265GH (3E0)*	P265GH*	1.4057*	1.4571*	1.4571*	Grafit - live loading*	Stellite gr. 21*	1.4571*	8.8*	Thermo black*
P295GH (3E1)	P295GH	1.4571	-	CC480K	PTFE	1.4469	1.4469	10.9*	Rilsan
16Mo3 (4E0)	16Mo3	1.4539	-	Roller bearings	Monitoring purge port	1.4571	1.4828	12.9	-
1.4301 (11E0)	1.4301	1.4980	-	-	TA-luft	-	1.4462	A2-70*	-
1.4401 (14E0)	1.4401	1.4462 (Duplex)	-	-	-	-	PTFE	A4-70	-
1.4571 (15E0)	1.4571	-	-	-	-	-	-	-	-
1.7335 (5E0)	1.7335	-	-	-	-	-	-	-	-
1.4470 (Duplex)	1.4470 (Duplex)	-	-	-	-	-	-	-	-

*Materials of basic design variant
Other materials upon request

Flow

DN	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1 000
Kv	38	115	251	418	652	1 425	2 451	3 718	5 120	7 290	9 986	12 090	19 251	23 078	33 341	43 214	51 396

Kv at 100% opening, shaft for Δp 50bar (KINEVA)

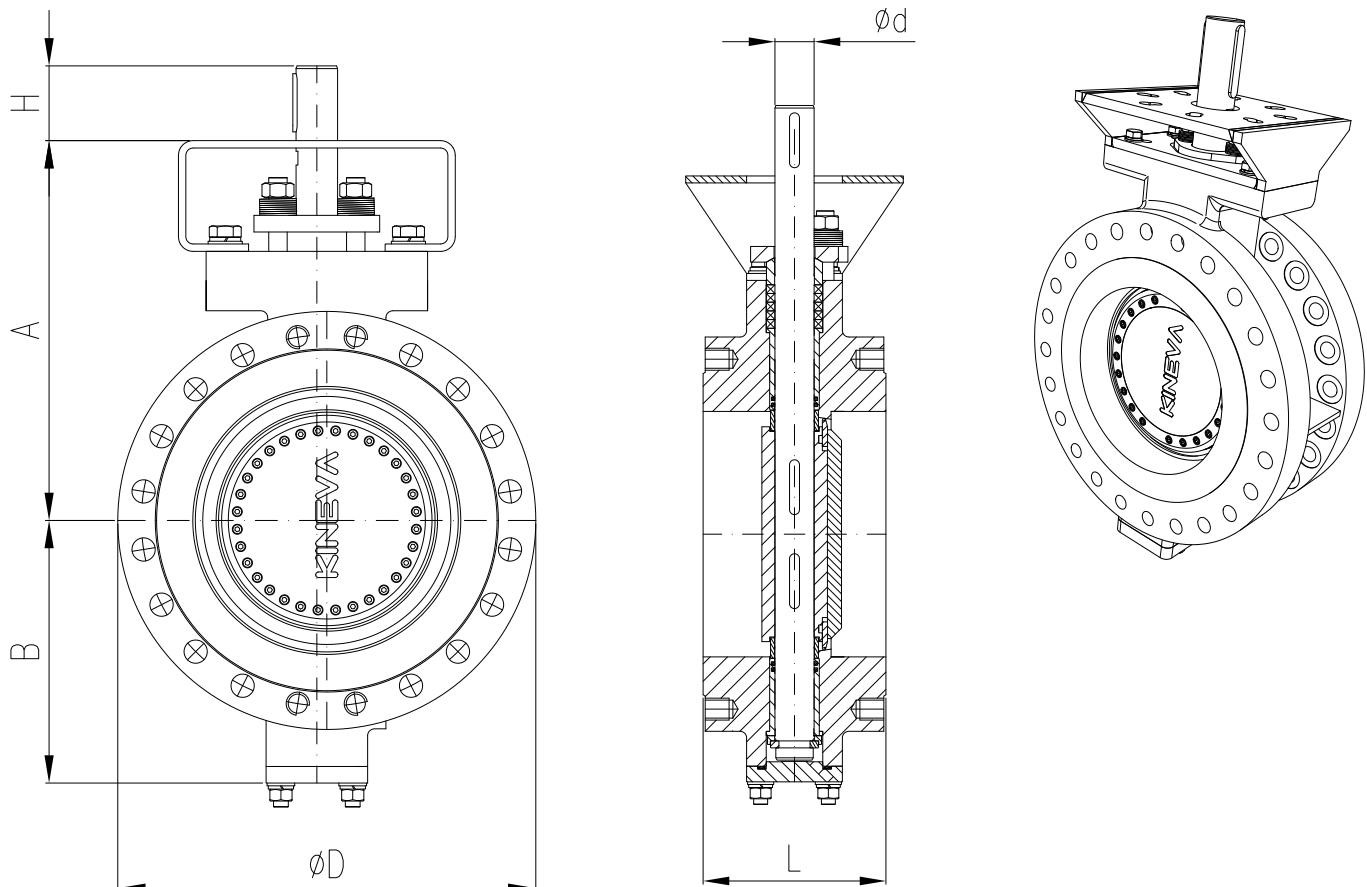


31158
32158
37158

Technical data KINEVA 31158 - Double flange design

DN (inch)	FTF Series		65 2,5"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"	700 28"	800 32"	900 36"	1000 40"
PN10 PN16 PN25 PN40 PN63 PN100 PN160	D	A	210	210	245	285	305	350	390	420	500	520	530	580	660	810	880	1010	1100
		B	130	130	158	186	204	241	281	307	333	383	403	441	541	635	710	840	930
		D	185	200	220	250	285	340	395	445	505	565	615	670	780	895	1015	1115	1230
		D	185	200	230	250	285	340	405	460	520	580	640	715	840	910	1025	1125	1255
		D	185	200	235	270	300	360	425	485	555	620	670	730	845	960	1085	1185	1320
		D	185	200	235	270	300	375	450	515	580	660	685	755	890	995	1140	1250	1360
		D	205	215	250	295	345	415	470	530	600	670	-	800	930	1045	1165	1285	1415
		D	220	230	265	315	355	430	505	585	655	715	-	870	-	-	-	-	-
		D	220	230	265	315	355	430	515	585	-	-	-	-	-	-	-	-	-
		D	-	190	230	-	280	352	405	485	550	590	640	700	815	927	1085	1168	1290
ANSI 300	D	-	210	254	-	320	380	445	515	585	660	710	770	908	1035	1149	1270	1238	
ANSI 600	D	-	210	275	-	355	420	508	560	605	685	745	815	940	1073	1194	1315	1320	
ANSI 900	D	-	240	292	-	350	380	470	545	610	640	705	790	860	1040	1170	1315	1460	
ISO 5211 flange	F	F10	F10	F10	F12/14	F12/14	F12/14	F14/16	F16/25	F16/25	F25/30	F25/30	F25/30	F30/35	F40	F40/48	F48/60	F48/60	
Δp 20bar max.	H	40	40	40	50	60	60	70	80	110	110	110	130	160	180	200	230	250	
	Ød	20	20	20	22	28	28	32	40	45	50	55	60	70	80	100	110	120	
Δp 50bar max.	H	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-	
	Ød	22	22	28	32	40	45	55	65	75	80	90	100	120	-	-	-	-	
Δp 100bar max.	H	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-	
	Ød	22	22	28	32	40	45	55	65	75	80	90	100	120	-	-	-	-	
PN6 up to PN40* PN63 up to PN100** PN160***	13	L	112	114	127	140	140	152	165	178	190	216	222	229	267	292	318	330	410
	14	L	170	180	190	200	210	230	250	270	290	310	330	350	390	430	470	510	550
	8	L	145	155	175	200	225	275	325	375	425	475	500	-	-	-	-	-	-
Weight		kg (ca.)	24	26	34	48	59	105	136	225	330	434	568	692	946	1086	1426	1702	1816

*for ANSI 150
**for ANSI 300, 600
***for ANSI 900



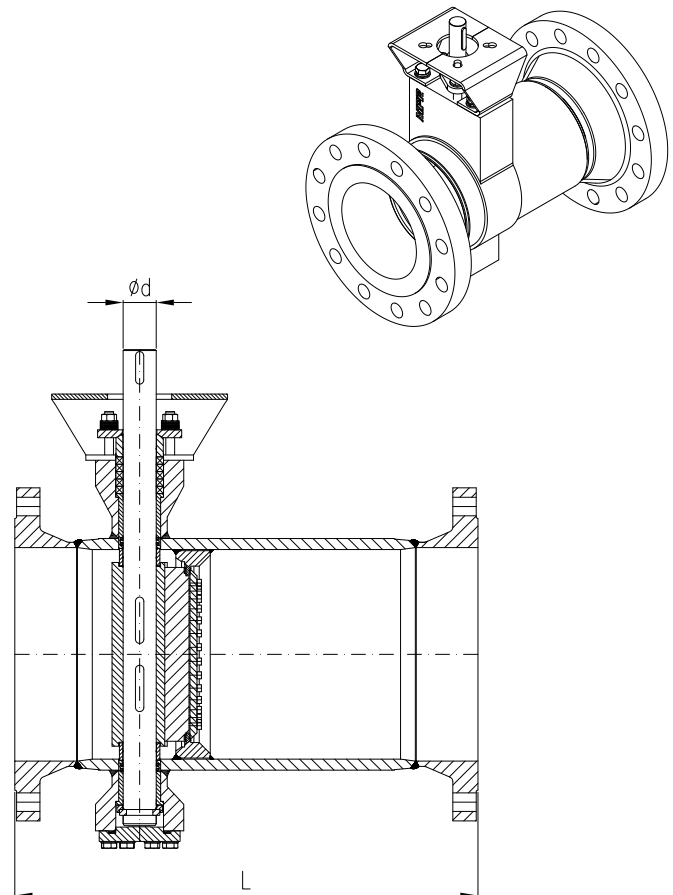
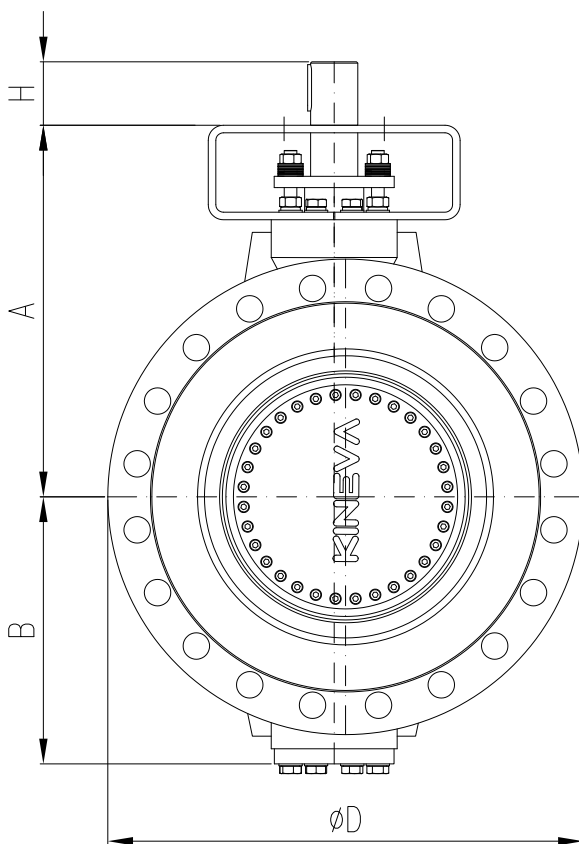


31158
32158
37158

Technical data KINEVA 31158 - Double flange design, instead of gate valves, ball valves, globe valves

DN (inch)	FTF Series		65 2,5"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"	700 28"	800 32"	900 36"	1000 40"
PN10 PN16 PN25 PN40 PN63 PN100 PN160	A		210	210	245	285	305	350	390	420	500	520	530	580	660	810	880	1010	1100
	B		130	130	158	186	204	241	281	307	333	383	403	441	541	635	710	840	930
	D		185	200	220	250	285	340	395	445	505	565	615	670	780	895	1015	1115	1230
	D		185	200	230	250	285	340	405	460	520	580	640	715	840	910	1025	1125	1255
	D		185	200	235	270	300	360	425	485	555	620	670	730	845	960	1085	1185	1320
	D		185	200	235	270	300	375	450	515	580	660	685	755	890	995	1140	1250	1360
	D		205	215	250	295	345	415	470	530	600	670	-	800	930	1045	1165	1285	1415
	D		220	230	265	315	355	430	505	585	655	715	-	870	-	-	-	-	-
	D		220	230	265	315	355	430	515	585	-	-	-	-	-	-	-	-	-
	D		-	190	230	-	280	352	405	485	550	590	640	700	815	927	1085	1168	1290
D		-	210	254	-	320	380	445	515	585	660	710	770	908	1035	1149	1270	1388	
D		-	210	275	-	355	420	508	560	605	685	745	815	940	1073	1194	1315	1320	
D		-	240	292	350	380	470	545	610	640	705	790	860	1040	1170	1315	1460	1510	
ISO 5211 flange		F	F10	F10	F10	F12/14	F12/14	F12/14	F14/16	F16/25	F16/25	F25/30	F25/30	F25/30	F30/35	F40	F40/48	F48/60	F48/60
Δp 20bar max.		H	40	40	40	50	60	60	70	80	110	110	110	130	160	180	200	230	250
Δp 50bar max.		Ød	20	20	20	22	28	28	32	40	45	50	55	60	70	80	100	110	120
		ØD	20	20	20	22	32	32	40	45	55	65	70	75	90	110	130	150	160
		H	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-
Δp 100bar max.		ØD	22	22	28	32	40	45	55	65	75	80	90	100	120	-	-	-	-
Δp 160bar max.		Ød	22	22	28	32	40	50	65	75	-	-	-	-	-	-	-	-	
PN6 up to PN40 PN160*	1 8	L	290 145	310 155	350 175	400 200	480 225	600 275	730 325	850 375	980 425	1100 475	1200 500	1250	1450	1650	1850	2050	2250
PN25 up to PN100 PN160	26 99	L	290 360	310 390	350 450	400 525	450 600	550 750	650 900	750 1050	850	950	-	-	-	-	-	-	-
Weight		kg (ca.)	24	26	34	48	59	105	136	225	330	434	568	692	946	1086	1426	1702	1816

*for ANSI 900

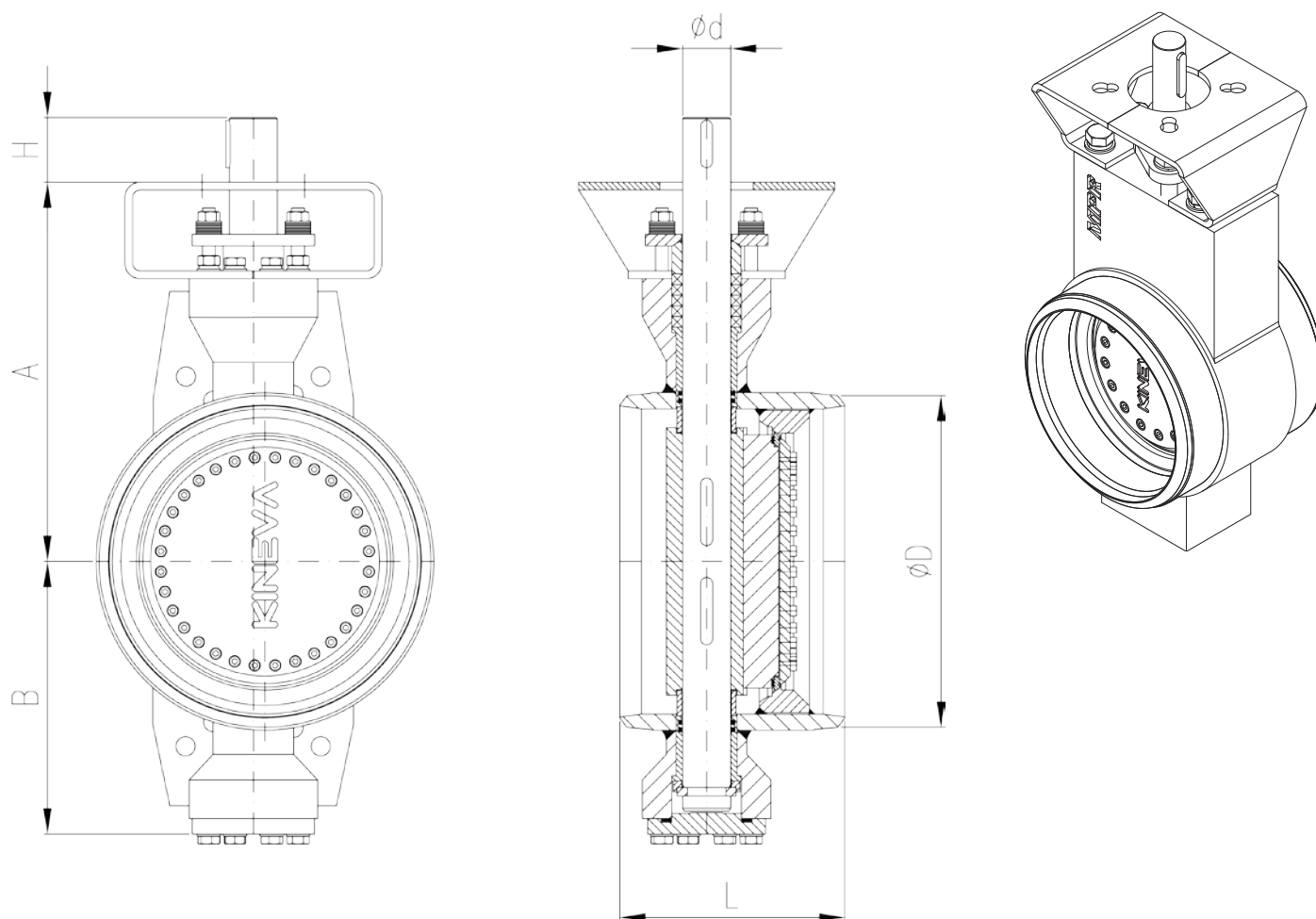




Technical data KINEVA 32158–Butt-welding ends design

DN (Inch)	FTF Series		65 2,5"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"	700 28"	800 32"	900 36"	1000 40"
		A	210	210	245	285	305	350	390	420	500	520	530	580	660	810	880	1010	1100
		B	130	130	158	186	204	241	281	307	333	383	403	441	541	635	710	840	930
ISO 5211 flange		F	F10	F10	F10	F12/14	F12/14	F12/14	F14/16	F16/25	F16/25	F25/30	F25/30	F25/30	F30/35	F40	F40/48	F48/60	F48/60
Δp 20bar max.		H	40	40	40	50	60	60	70	80	110	110	110	130	160	180	200	230	250
		Ød	20	20	20	22	32	32	40	40	45	55	55	60	70	80	100	110	120
Δp 50bar max.		H	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-
		Ød	22	22	28	32	40	45	55	65	75	80	90	100	120	-	-	-	-
PN6 up to PN100*	14	L	170	180	190	200	210	230	250	270	290	310	330	350	390	430	470	510	550
Weight		kg (ca.)	15	16	18	24	31	68	82	129	165	243	305	370	520	644	931	1049	1162

* for ANSI 150, 300, 600



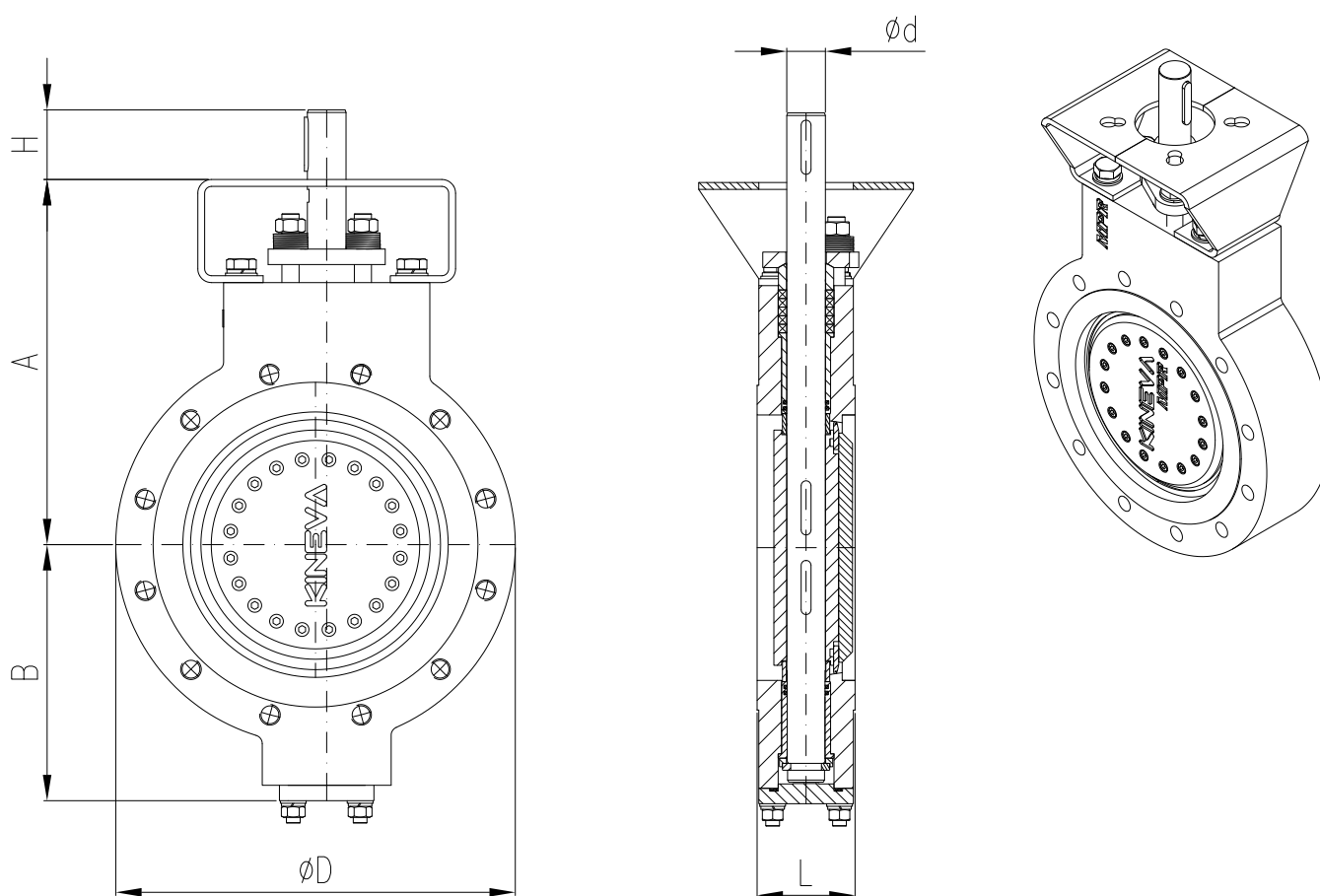


31158
32158
37158

Technical data KINEVA 37158–Lug design

DN (inch)	FTF Series		65 2,5"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"	700 28"	800 32"	900 36"	1000 40"
PN10 PN16 PN25 PN40 PN63 PN100 ANSI 150 ANSI 300 ANSI 600	D	A	210	210	245	285	305	350	390	420	500	520	530	580	660	810	880	1010	1100
		B	130	130	158	186	204	241	281	307	333	383	403	441	541	635	710	840	930
		D	210	220	230	250	304	345	405	460	520	565	615	670	780	895	1085	1115	1230
		D	210	220	230	250	304	345	405	460	520	585	640	725	845	910	1085	1125	1255
		D	210	220	230	274	304	380	430	490	560	625	680	725	845	960	1085	1185	1320
		D	210	220	254	274	304	380	455	520	585	665	690	770	908	1010	1160	1260	1370
		D	210	220	254	300	350	420	475	535	605	675	-	800	930	1045	1165	1285	1415
		D	220	230	270	320	360	435	510	590	660	725	-	875	-	-	-	-	-
		D	-	190	230	-	280	352	405	485	550	590	640	700	815	927	1085	1168	1290
D	-	210	254	-	320	380	445	515	585	660	710	770	908	1035	1149	1270	1238		
D	-	210	275	-	355	420	508	560	605	685	745	815	940	1073	1194	1315	1320		
ISO 5211 flange		F	F10	F10	F10	F12/14	F12/14	F12/14	F14/16	F16/25	F16/25	F25/30	F25/30	F25/30	F30/35	F40	F40/48	F48/60	F48/60
Δp 20bar max. Δp 50bar max.	H	Ød	40	40	40	50	60	60	70	80	110	110	110	130	160	180	200	230	250
		Ød	20	20	20	22	28	28	32	40	45	55	65	75	90	110	130	150	160
Δp 100 bar max.	H	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-	
Ød	22	22	28	32	40	45	55	65	75	80	90	90	100	120	-	-	-	-	
PN6 up to PN63* PN6 up to PN63* PN100 **	13 16 110	L	112	114	127	140	140	152	165	178	190	216	222	229	267	292	318	330	410
		L	64	64	64	70	76	89	114	114	127	140	152	152	178	229	241	241	300
		L	-	64	64	-	78	102	117	140	155	178	200	216	232	-	-	-	-
Weight		kg (ca.)	18	18	22	34	39	68	128	150	221	319	349	457	715	1017	1336	1744	2467

*for ANSI 150, 300
**for ANSI 600

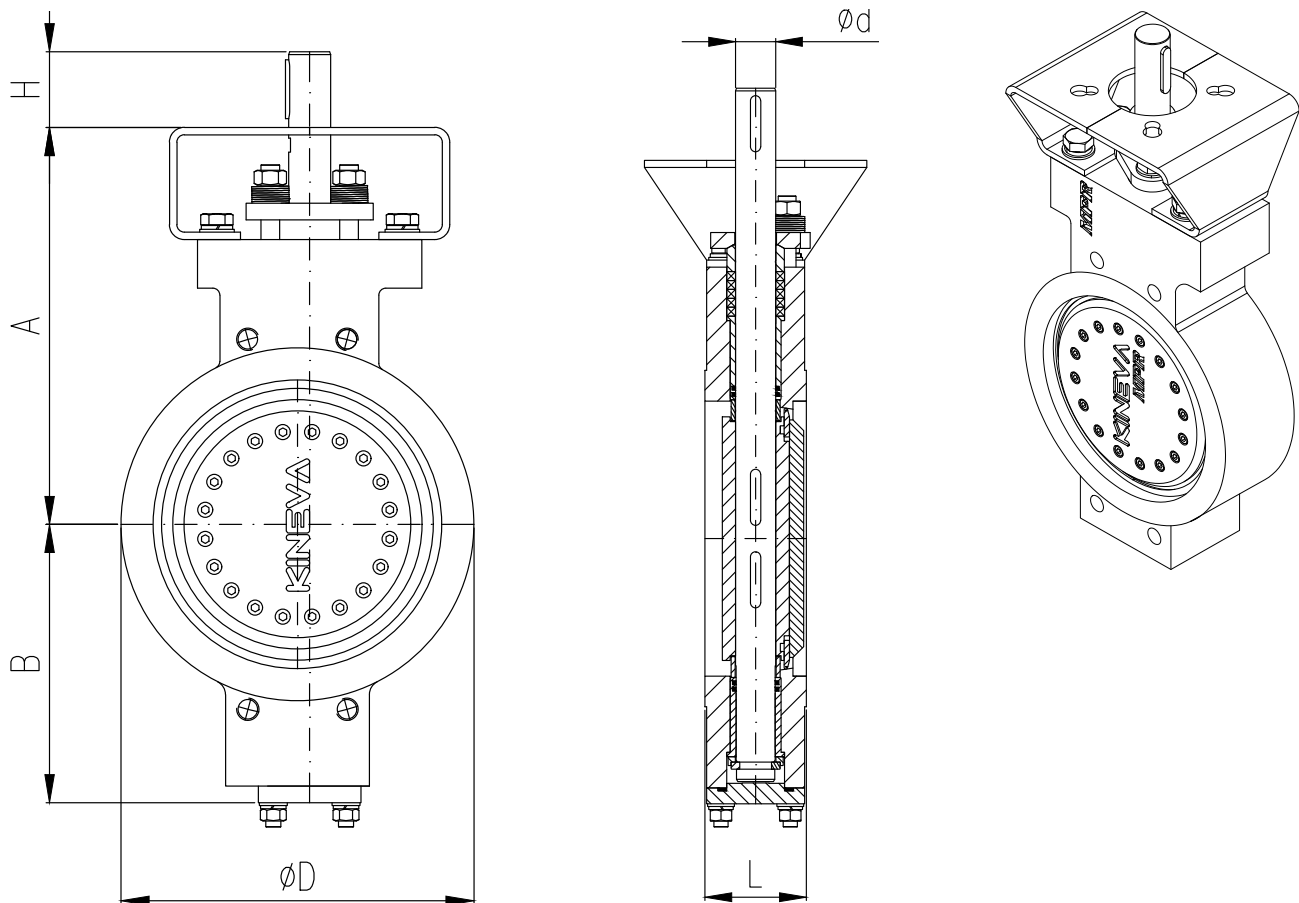




Technical data KINEVA 37158–Wafer design

DN (inch)	FTF Series		65 2,5"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"	300 12"	350 14"	400 16"	450 18"	500 20"	600 24"	700 28"	800 32"	900 36"	1000 40"
PN10 PN16 PN25 PN40 PN63 PN100 ANSI 150/300/600	D	A	210	210	245	285	305	350	390	420	500	520	530	580	660	810	880	1010	1100
		B	130	130	158	186	204	241	281	307	333	383	403	441	541	635	710	840	930
		D	110	138	158	188	212	268	320	370	430	482	532	585	685	800	905	1005	1110
		D	122	138	158	188	212	268	320	378	438	490	550	610	725	795	900	1000	1115
		D	122	138	162	188	218	278	335	395	450	505	555	615	720	820	930	1030	1140
		D	122	138	162	188	218	285	345	410	465	535	560	615	735	-	-	-	-
		D	122	138	162	188	218	285	345	410	465	535	560	615	735	840	960	1070	1180
		D	122	138	162	188	218	285	345	410	465	535	560	615	-	-	-	-	-
ANSI 150/300/600	D	105	127	158	186	216	270	324	381	413	470	534	585	693	-	-	-	-	
ISO 5211 flange	F	F10	F10	F10	F12/14	F12/14	F12/14	F14/16	F16/25	F16/25	F25/30	F25/30	F25/30	F30/35	F40	F40/48	F48/60	F48/60	
Δp 20bar max. Δp 50bar max.	H	Ød	40	40	40	50	60	60	70	80	110	110	110	130	160	180	200	230	250
		Ød	20	20	20	22	28	28	32	40	45	50	55	60	70	80	100	110	120
Δp 100 bar max.	H	Ød	40	40	40	50	65	80	110	140	140	160	160	200	220	-	-	-	-
		Ød	22	22	28	32	40	45	55	65	75	80	90	100	120	-	-	-	-
PN6 up to PN63* PN100**	16 110	L	64	64	64	70	76	89	114	114	127	140	152	152	178	229	241	241	300
		L	-	64	64	-	78	102	117	140	155	178	200	216	232	-	-	-	-
Weight		kg (ca.)	15	15	22	25	28	41	66	95	127	177	263	327	520	890	980	1412	1800

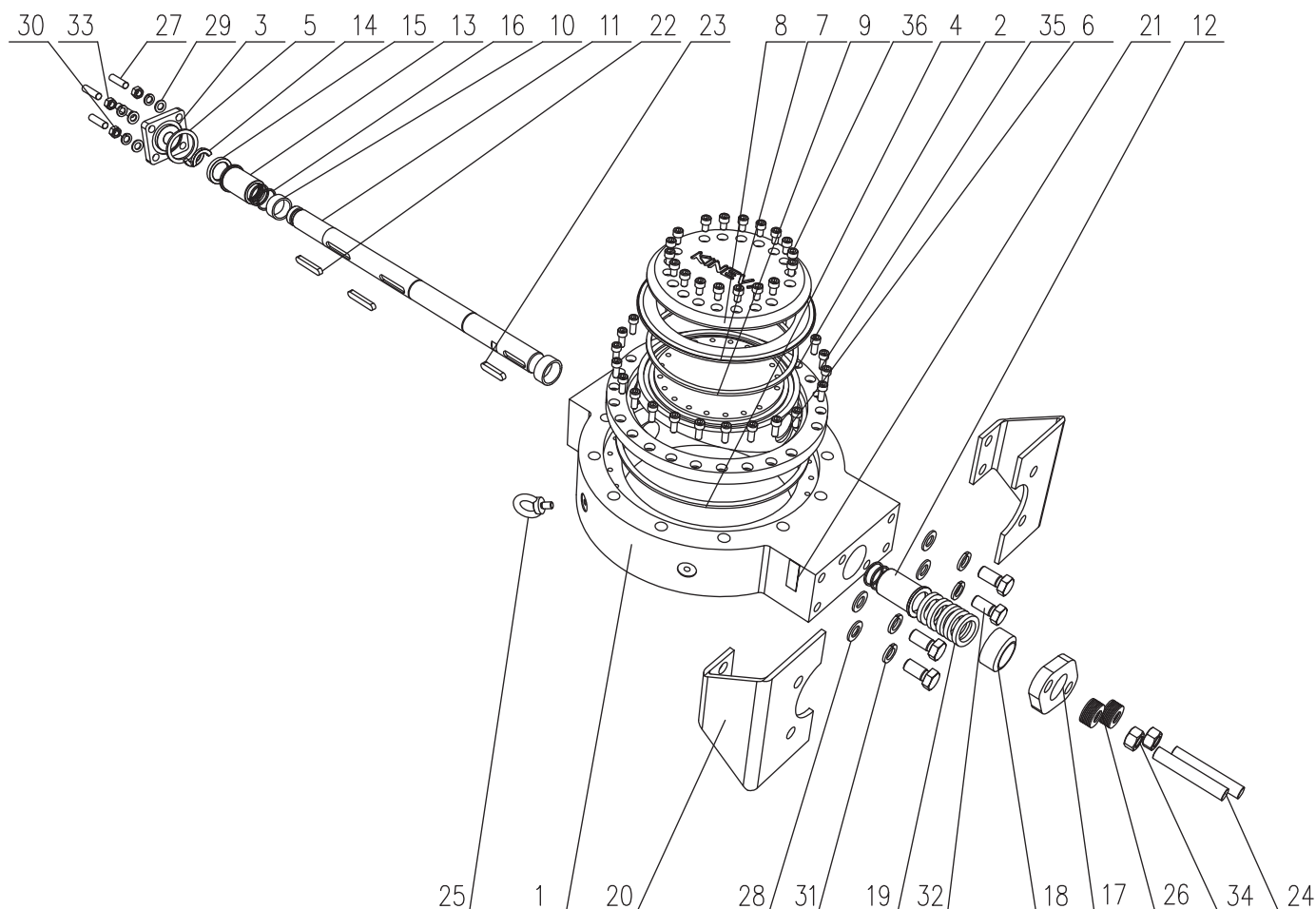
*for ANSI150/300
**for ANSI600





Construction

The set of spare parts contains parts and components Nos.: 5, 7, 9, 19; parts Nos. 2 and 4 for valve with replaceable seat on body only.



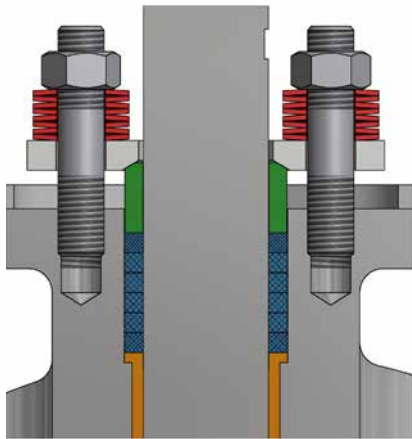
1	Body
2	Seat
3	Bottom cover
4	Spiral seal gasket
5	Spiral seal gasket
6	Disc
7	Seal ring
8	Retainer flange
9	Spiral seal gasket
10	Lantern ring
11	Shaft
12	Bearing

13	Bearing
14	Trust bearing
15	Supporting ring
16	Packing
17	Packing flange
18	Spacer
19	Packing
20	Bracket
21	Nameplate
22	Disc key
23	Actuator key
24	Threaded rod

25	Shackle
26	Spring washer
27	Threaded rod
28	Washer
29	Washer
30	Springy washer
31	Springy washer
32	Hex head cap screw
33	Hex nut
34	Hex nut
35	Socket head cap screw
36	Socket head cap screw

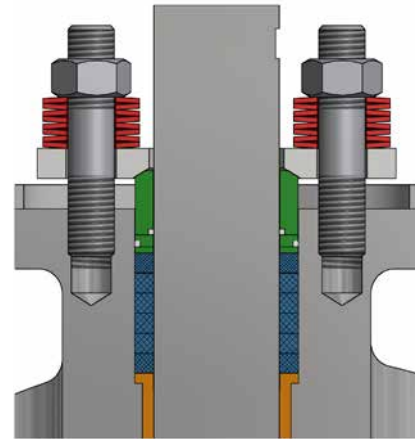
Stem seal

MPR STANDARD LIVE LOADING



Stuffing box for long periods of time without maintenance.

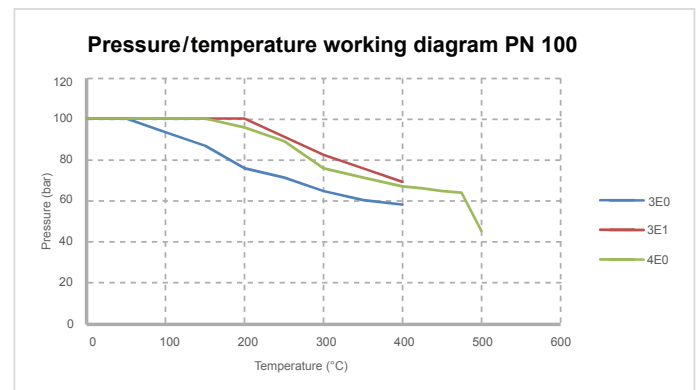
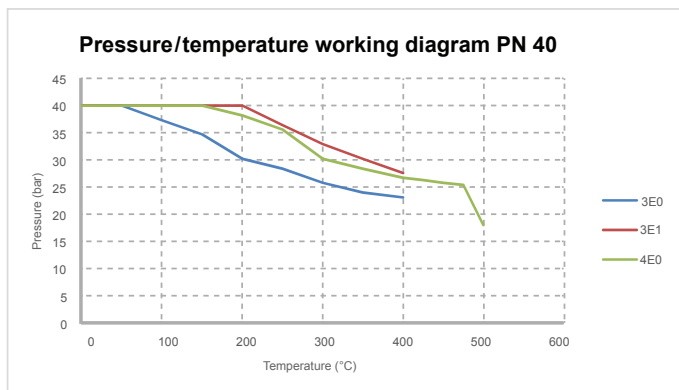
THE TA-LUFT SEAL



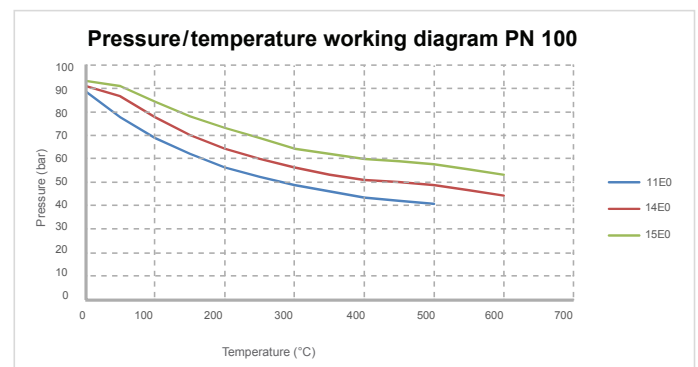
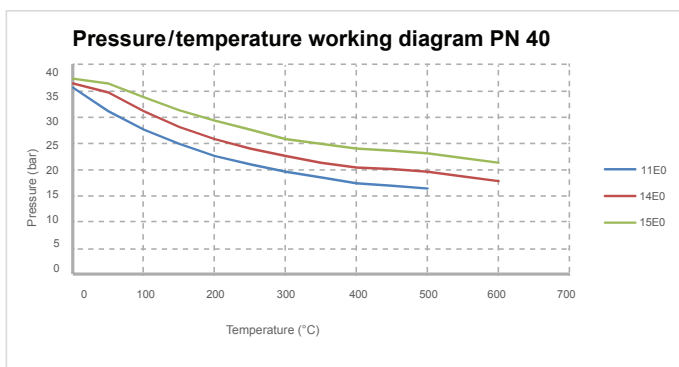
Demands for critical valves where provide additional stem seal protection to assure tightness of less than 1 ppm.

Pressure / temperature working diagram

For carbon steel



For stainless steel





Valve code

Type of body		Seal of disc		Material of body / disc	Group of fluid	Face to face dimension acc to EN 558 (FTF)		Other options	
31	Double flange	M	On / Off	3E0 (P265GH)	L1	8	Double flange PN160	EX	Explosion-proof ATEX
32	Welding ends	R	Regulation	3E1 (P295GH)	L2	13	Double flange or Lug type	FS	Fire safe
37	Wafer or Lug type	T	PTFE	4E0 (16Mo3)	G1	14	Double flange	SB	Changeable body seat
		X	Others	11E0 (1.4301)	G2	16	Wafer or Lug	TA	TA-luft
				12E0 (1.4541)		110	Lug PN100	VC	Vacuum
				15E0 (1.4571)		1	Replacement: Gate valves Ball valves Globe valves	SF	Silicone free
				16E0 (Duplex)		26		QC	Quick closing
				X (Others)		99		Wafer	Without threaded holes
						X	Others	Lug	With threaded holes

158 / 4x eccentric

PN 2.5 - 160 / ANSI 150 - 900

DN65 - 2500 / 2.5" - 100"

Photos





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