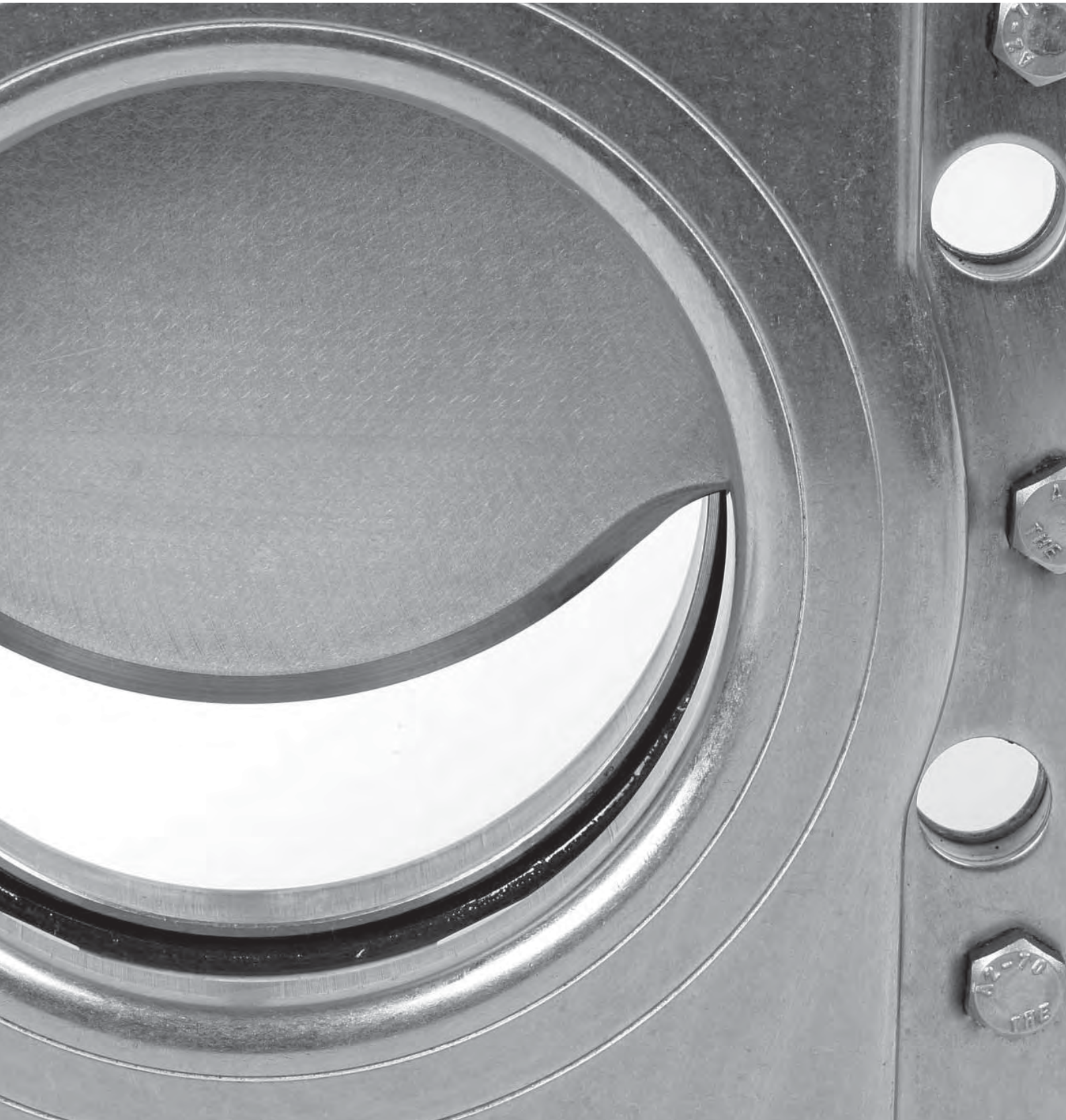


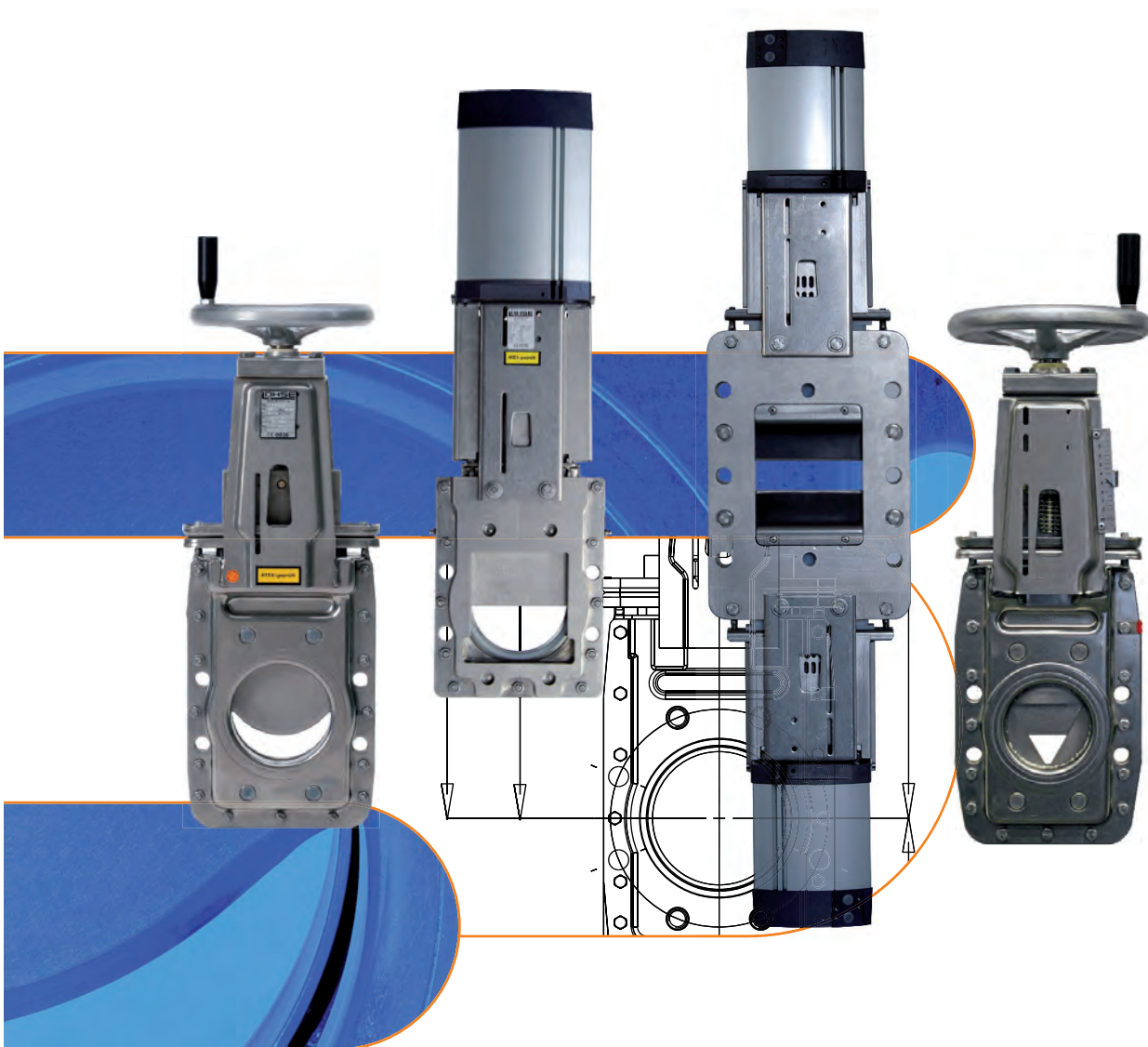
Valves

MARTIN LOHSE GmbH



Valves	3
Operating Elements	129
Dirt Traps	163
Vortex Breakers	169
Butterfly Valves	175
Ball Valves	229
Sampling Valves	277
Check Valves	295
Accessories	329

Valves



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www.lohse-gmbh.de

Shut-Off-Valves

- of stainless steel
Type CNA 5
- with through-going valve plate
Type CDS, CDSV, CDSR 25
- effluent and clarification
Type CAW 45
- Type CPD / CPD light 61

Regulating Valves

- Type CBS 67

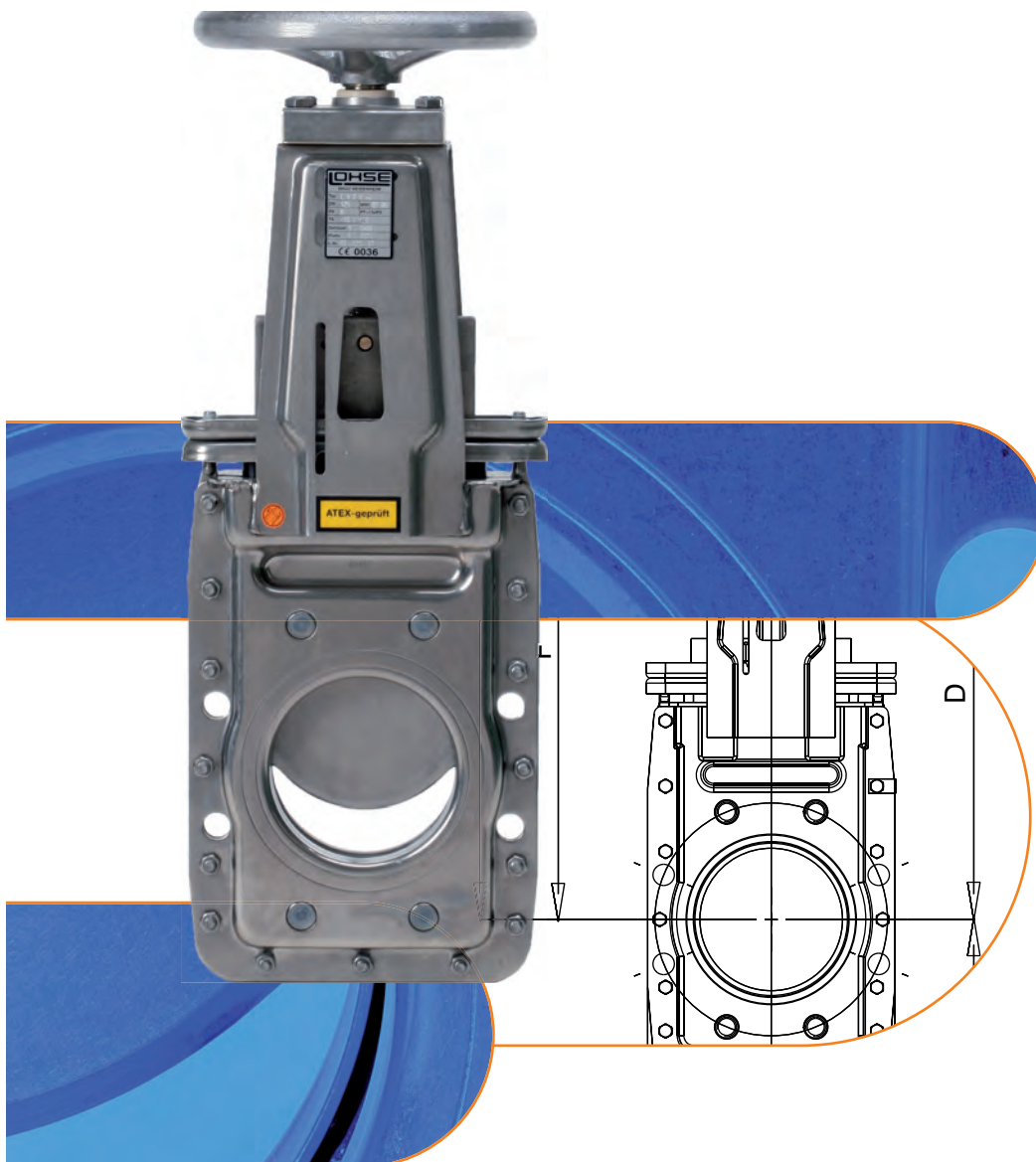
Reject-Valves

- Type RQS 83
- Type NAQ 91
- Type AEQ 99
- Type SAQ 107
- Type TA 111
- Type TAQ 117
- Type TRE 123

Valves of stainless steel · COMPACT-Program

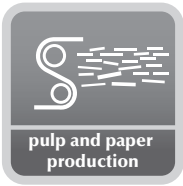
Shut-Off-Valves

CNA 50 – 1000 mm



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Applications



Paper industry and chemical industry

LOHSE COMPACT-gate valves have proved their value and reliability in all branches of paper and chemical industries. CNA-valves are “shut-off” type valves. The type is suitable for shut-off of stock and aggressive media.



Industrial sewage treatment

When LOHSE COMPACT-gate valves of acid resistant stainless steel are installed in waste water treatment plants, the need to use expensive isolation appliances to guard against contact-corrosion is removed.



Food industry

LOHSE COMPACT-gate valves are widely used as shut-off valves for viscous and glutinous media as for instance in salt works, sugar mills, wine making industry, breweries etc.

In special designs, the non-metallic components of the LOHSE valves can be equipped with FDA-approved components. The respective suitability must be checked for each application



Biogas Industry

In biogas plants LOHSE shut-off-valves find a use to shut-off the input pipes with high-viscosity, low-viscosity and aggressive medium e.g. silage, dung, liquid manure, vegetables and food and suspensions of this. These valves are tolerant against impurities.



Special models

For special applications, we can supply special valves constructed of various materials for differing temperatures, pressures and sealing properties to suit the particular application.

Construction

Housings entirely of stainless steel

- pressed steel design
- corrosion and acid resistant
- light
- easy to maintain
- the handwheel support also serves as a mounting for any switchgear or control apparatus

Slide guides of special plastic

- abrasion resistant
- excellent anti-friction properties
- temperature resistant
- acid resistant
- easily replaceable

Valve plate of stainless steel

- specially shaped to prevent depositing stock
- built in strength to resist water pressure vibration

Bore cross section = nominal diameter of piping

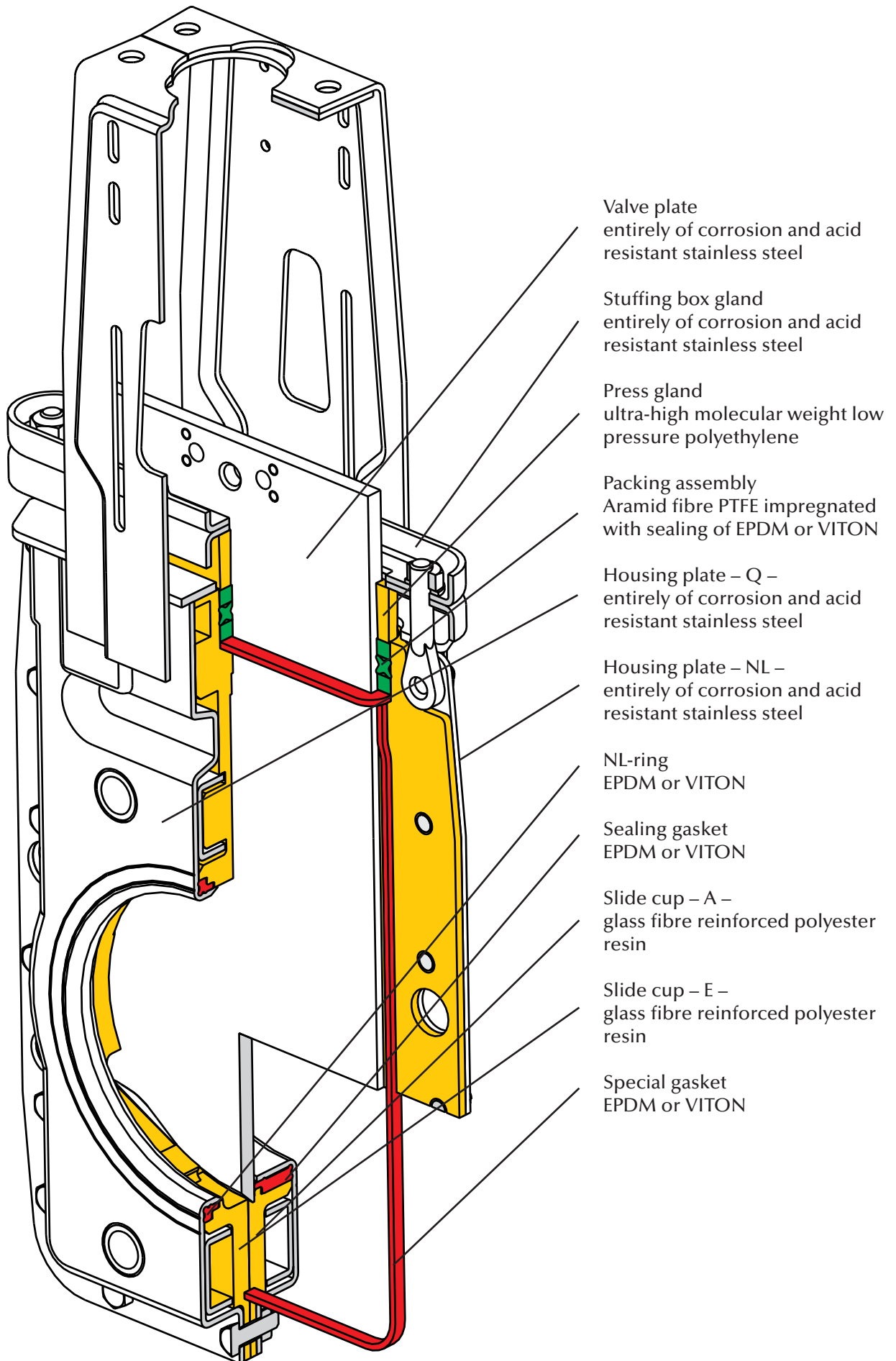
- no stringing of fibres is possible

Actuating elements in well-proved LOHSE modular system

- interchangeable on all valves of our make
- also interchangeable on the incorporated existing valve
- reduced stock holding

100 % water-tight

- seals resistant to temperature and acids
- seals easily replaceable but firmly anchored in the valve housing
- Leak test according to DIN EN 12266-02:2012-04 Table A5, test medium liquid, leakage rate A



- Valve plate
entirely of corrosion and acid resistant stainless steel
- Stuffing box gland
entirely of corrosion and acid resistant stainless steel
- Press gland
ultra-high molecular weight low pressure polyethylene
- Packing assembly
Aramid fibre PTFE impregnated with sealing of EPDM or VITON
- Housing plate – Q –
entirely of corrosion and acid resistant stainless steel
- Housing plate – NL –
entirely of corrosion and acid resistant stainless steel
- NL-ring
EPDM or VITON
- Sealing gasket
EPDM or VITON
- Slide cup – A –
glass fibre reinforced polyester resin
- Slide cup – E –
glass fibre reinforced polyester resin
- Special gasket
EPDM or VITON

Materials

- housing
 - DN 50 – 250 1.4404
 - DN 300 – 600 1.4307
 - DN 700 – 1000 1.4571
- flanging ring
 - DN 300 – 1000 1.4571
- valve plate 1.4571
- slide cups
 - DN 50 – 250 GRP
 - DN 300 – 600 PP
- sealing EPDM, VITON or NBR
- slide parts
 - DN 700 – 1000 CuSn6 / CuAL10Ni
- stuffing box gland
 - DN 50 – 150 1.4301
 - DN 200 – 450 1.4541
 - DN 500 – 600 1.4301
 - DN 700 – 1000 1.4571
- packing assembly
 - packing aramid fibre with impregnation of PTFE
 - p-ring EPDM, VITON or NBR
- press gland
 - DN 50 -150 PE-HMW
- bracket 1.4301
- screws / nuts A2
- max. operating pressure
 - DN 50 – 250 10 bar
 - DN 300 – 500 6 bar
 - DN 600 4 bar
 - DN 700 – 1800 3 bar
- max. operating temperature with sealing of
 - NBR 105° C
 - EPDM 120° C
 - VITON 200° C

Operating elements – the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body type: CNA
- operating elements type Hns, H, P, PV, E, GK, K, X

All elements are interchangeable for any given size. Thereby the connections of brackets as well as the coupling of actuator and valve plate will be removed and fixed again after the exchange. No removal of incorporated valve body (notice safety rules – pipes must be pressureless).

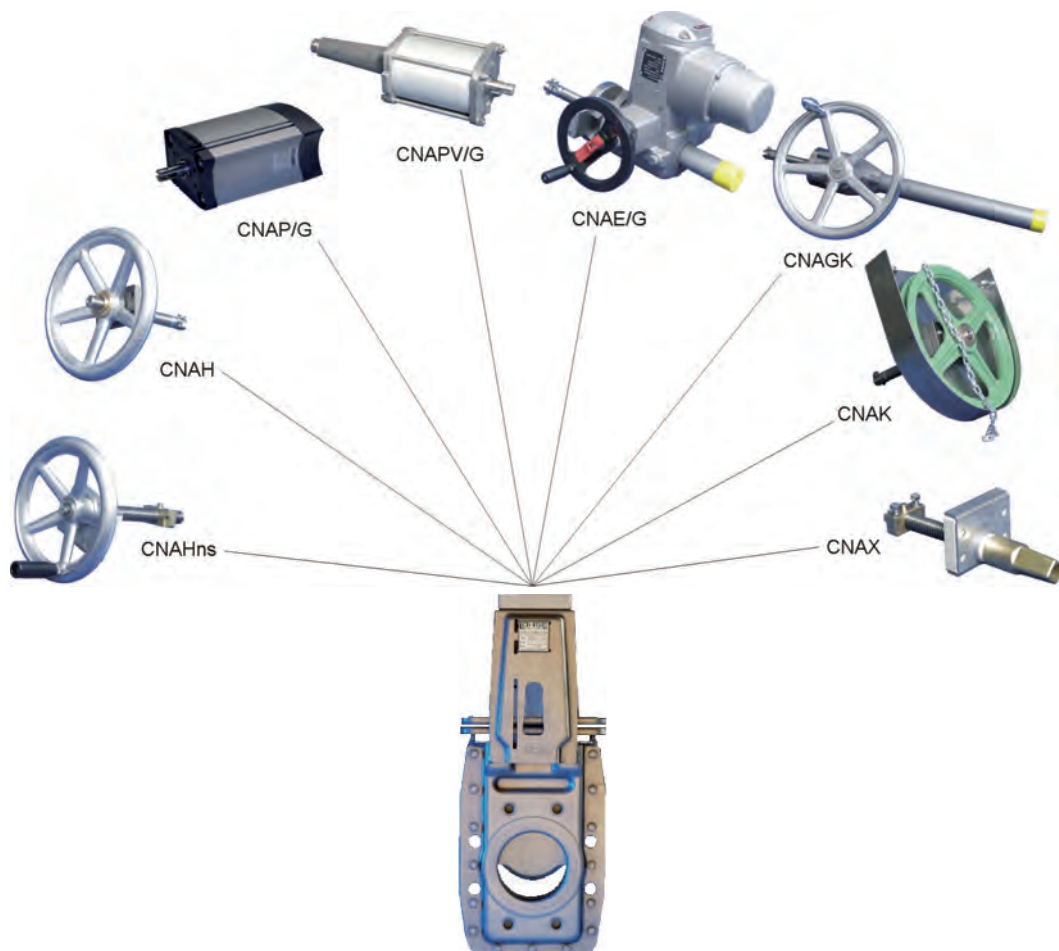
This facility is called the **LOHSE modular system** which offers the following advantages:

- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- if any valve drives have to be altered, replacement is easy and quick

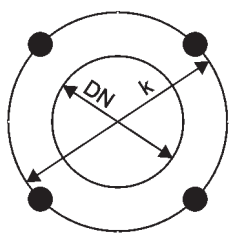
Protection guards (G)

According to machinery directive 2006/42/EG guards are compulsory to shield all moving parts on automated gate valves.

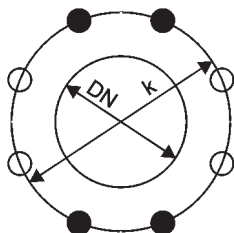
Protection guard of stainless steel.



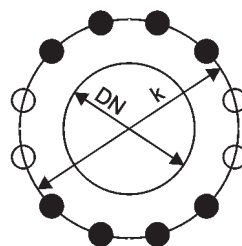
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



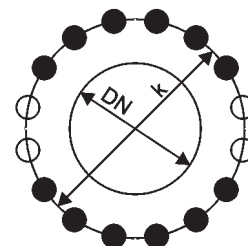
DN 50-65



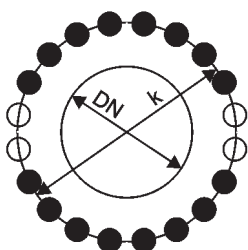
DN 80-200



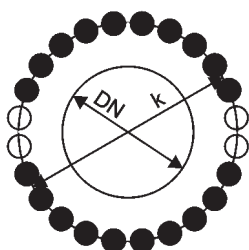
DN 250-300



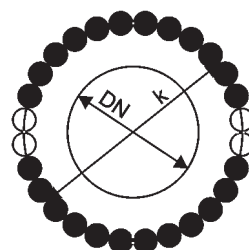
DN 350-400



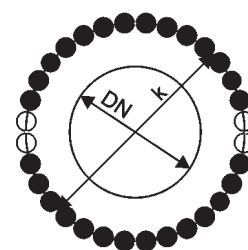
DN 450-600



DN 700-800

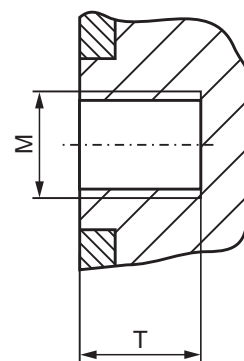


DN 900-1000



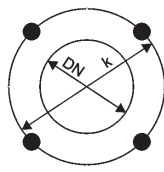
DN 1100-1200

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
50	125	4	M16	12	4	-
65	145	4	M16	12	4	-
80	160	8	M16	12	4	4
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4
900	1050	28	M30	45	24	4
1000	1160	28	M33	45	24	4
1100	1270	32	M33	50	28	4
1200	1380	32	M36	55	28	4

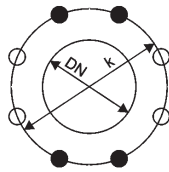


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

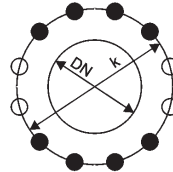
Flange bores for LOHSE COMPACT-valves
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



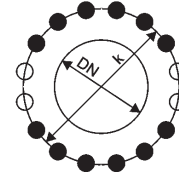
DN 50-80



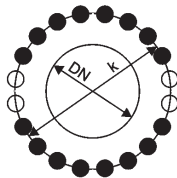
DN 100-200



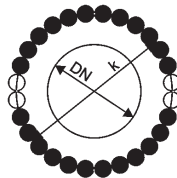
DN 250-350



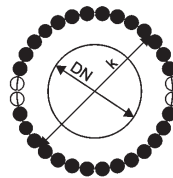
DN 400-450



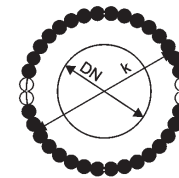
DN 500-600



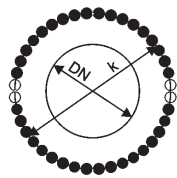
DN 700-800



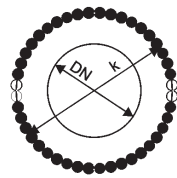
DN 900



DN 1000

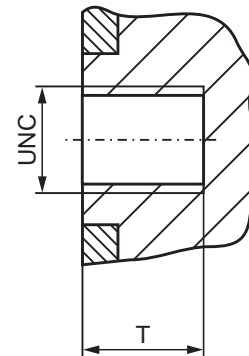


DN 1100



DN 1200

DN [mm]	DN [inch]	K [mm]	K [inch]	Z	UNC	T [mm]	T [inch]	Z1	Z2
50	2	120.6	4 3/4	4	5/8"-11	12	0.472	4	-
65	2.5	139.7	5 1/2	4	5/8"-11	12	0.472	4	-
80	3	152.4	6	4	5/8"-11	12	0.472	4	-
100	4	190.5	7 1/2	8	5/8"-11	12	0.472	4	4
125	5	215.9	8 1/2	8	3/4"-10	12	0.472	4	4
150	6	241.3	9 1/2	8	3/4"-10	16	0.630	4	4
200	8	298.5	11 3/4	8	3/4"-10	16	0.630	4	4
250	10	362	14 1/4	12	7/8"-9	20	0.787	8	4
300	12	431.8	17	12	7/8"-9	20	0.787	8	4
350	14	476.3	18 3/4	12	1"-8	20	0.787	8	4
400	16	539.8	21 1/4	16	1"-8	23	0.910	12	4
450	18	577.9	22 3/4	16	1 1/8"-7	30	1.181	12	4
500	20	635	25	20	1 1/8"-7	30	1.181	16	4
600	24	749.3	29 1/2	20	1 1/4"-7	35	1.378	16	4
700	28	863	34	28	1 1/4"-7	40	1.575	24	4
800	32	978	38 1/2	28	1 1/2"-6	45	1.772	24	4
900	36	1086	42 3/4	32	1 1/2"-6	45	1.772	28	4
1000	40	1200	47 1/4	36	1 1/2"-6	45	1.775	32	4
1100	44	1314	51 3/4	40	1 1/2"-6	50	1.969	36	4
1200	48	1422	56	44	1 1/2"-6	55	2.165	40	4



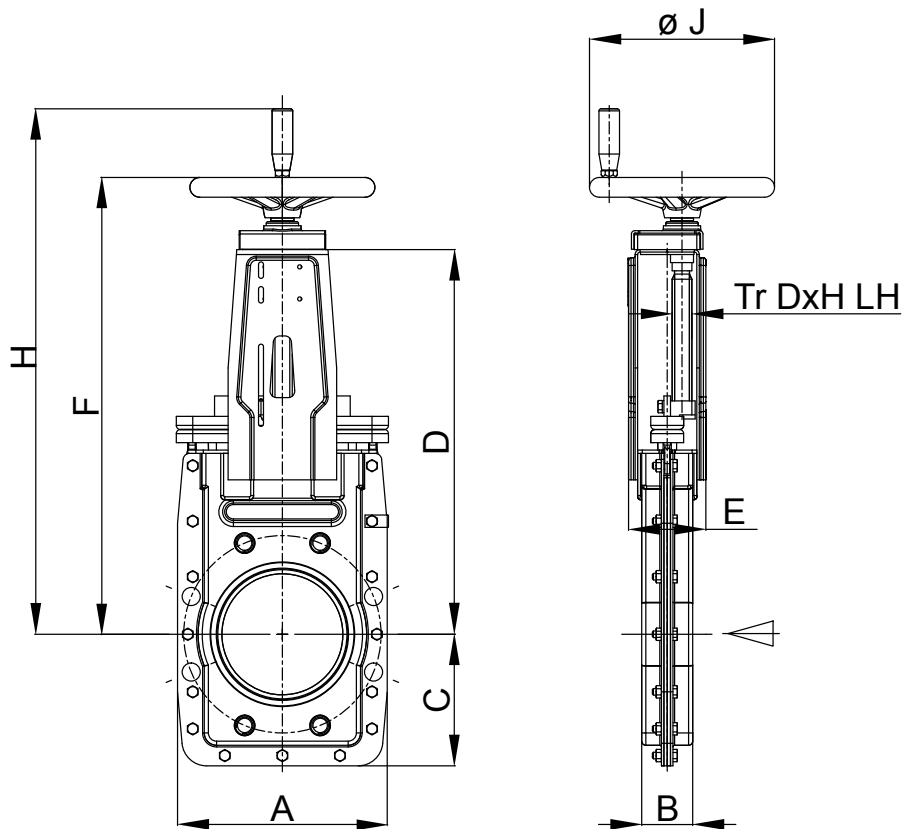
Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

Pressure ranges

DN	standard		options		
	flange connection *)	operating pressure [bar]	flange connection *)	operating pressure [bar]	
50	PN 10	10	PN 16-25-40	40	
65					
80					
100					
125					
150					
200		PN 16	PN 16-25	25	
250					
300					
350					
400					
450					
500		PN 10	4	PN 10	10
600					
700					
800					
		3			

*) Flange connection acc. to DIN EN 1092-1, PN...
Other sizes on request.

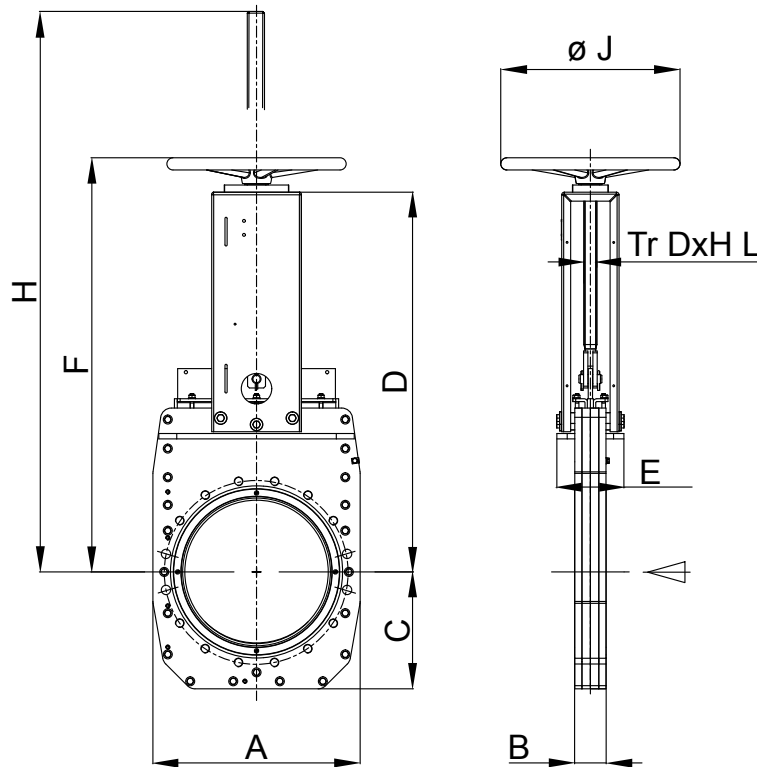
COMPACT-valve handwheel drive with non-rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	10	185	42	100	313	78	394	478	180	20 x 4	9
65	10	185	42	100	313	78	394	478	180	20 x 4	9
80	10	175	52	125	313	78	395	478	180	20 x 4	9
*)100	10	210	54	135	368	94	456	539	225	24 x 5	13
*)125	10	230	52	145	413	94	500	584	225	24 x 5	15
*)150	10	255	62	160	468	94	556	639	225	24 x 5	18
200	10	328	60	189	557	143	656	739	280	30 x 6	39
250	10	400	68	230	668	166	767	850	280	30 x 6	55
300	6	450	72	260	764	170	869	-	360	30 x 6	68
350	6	510	72	290	907	190	998	-	360	30 x 6	130
400	6	575	90	326	1059	190	1163	-	500	30 x 6	180
450	6	630	110	315	1200	208	1304	-	500	30 x 6	262
500	6	700	110	350	1265	228	1384	-	500	36 x 6	263
600	4	810	130	405	1495	268	1614	-	500	36 x 6	

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

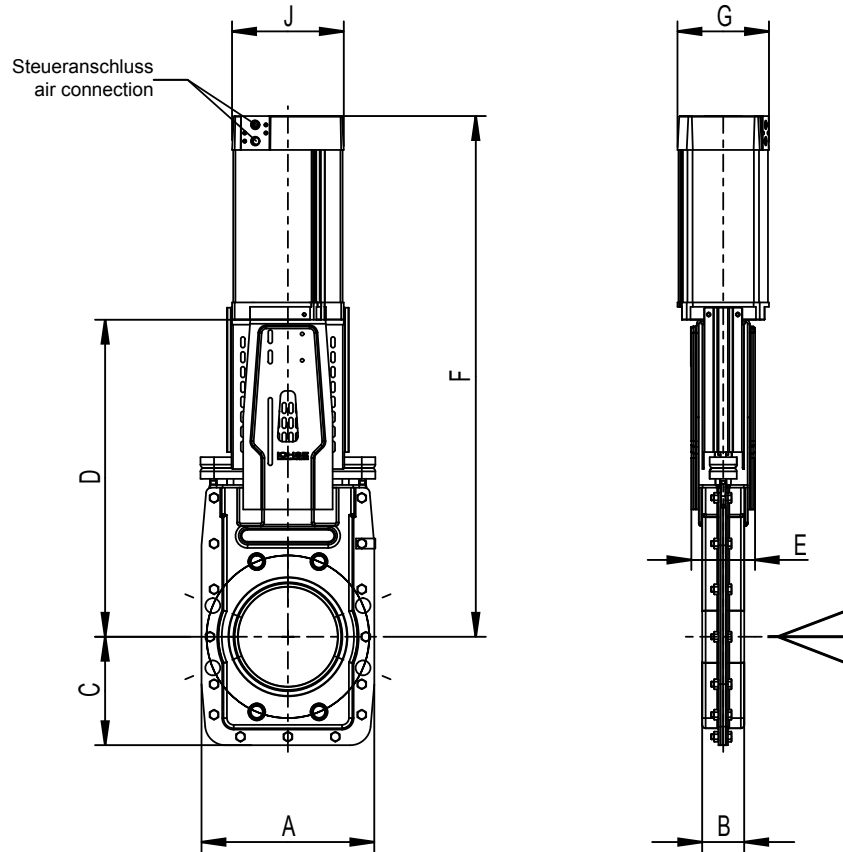
COMPACT-valve handwheel drive with rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H L	weight ~[kg]
50	10	185	42	100	313	78	378	425	225	20 x 4	8.3
65	10	185	42	100	313	78	378	440	225	20 x 4	8.8
80	10	175	52	125	313	78	378	455	225	20 x 4	9.1
*)100	10	210	54	135	368	94	437	540	280	24 x 5	13.5
*)125	10	230	52	145	413	94	482	610	280	24 x 5	15.3
*)150	10	255	62	160	468	94	537	690	280	24 x 5	18.4
200	10	328	60	189	557	143	637	840	360	30 x 6	39
250	10	400	68	230	668	166	748	995	360	30 x 6	55
300	6	450	72	260	764	170	844	1145	360	30 x 6	93
350	6	510	72	290	907	190	1003	1355	500	36 x 6	101
400	6	575	90	326	1059	190	1155	1555	500	36 x 6	174
450	6	630	110	315	1200	208	1296	1760	500	36 x 6	258
500	6	700	110	350	1265	228	1361	1975	500	36 x 6	263
600	4	810	130	405	1495	268	1591	2205	640	44 x 7	472
700	3	960	151	480	1756	307	1887	2610	800	44 x 7	1060
800	3	1060	151	530	1976	446	2107	2930	800	44 x 7	1262

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

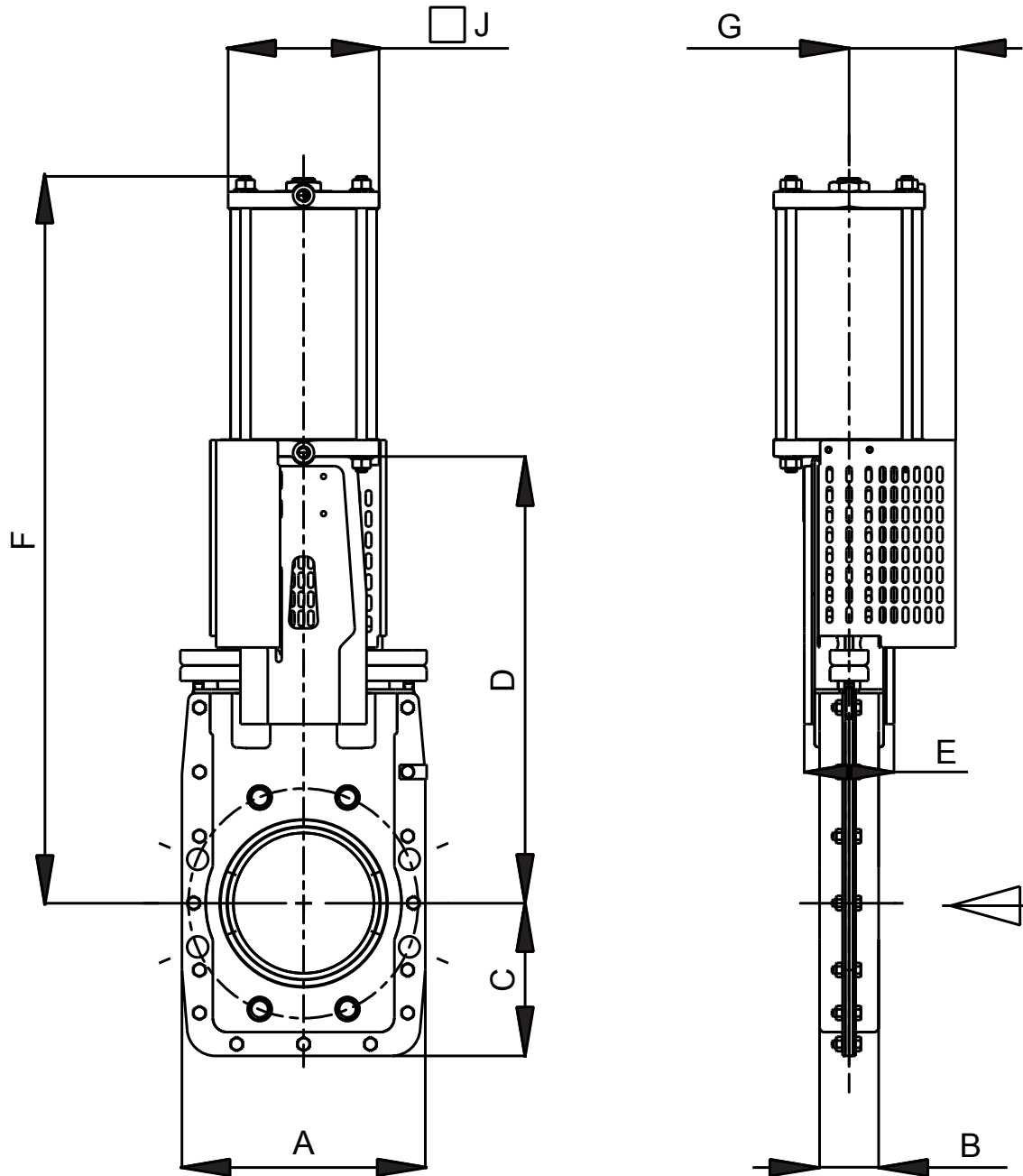
COMPACT-valve
pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	J	cyl Ø	air connection	control pressure [bar]	weight ~[kg]
50	10	185	42	100	313	78	495	118	139	100	G 1/4"	6	11.2
65	10	185	42	100	313	78	510	118	139	100	G 1/4"	6	11.6
80	10	175	52	123	313	78	523	118	139	100	G 1/4"	6	12.6
*)100	10	210	54	135	368	94	596	118	139	100	G 1/4"	6	15.4
*)125	10	255	52	145	413	94	691	145	162	125	G 1/4"	6	21.4
*)150	10	255	62	160	468	94	768	145	165	125	G 1/4"	6	25.3
200	10	328	60	190	557	143	917	178	204	160	G 1/4"	6	48.5
250	10	400	68	230	668	166	1069	178	204	160	G 1/4"	6	66.5
300	6	450	72	260	764	170	1218	178	204	160	G 1/4"	6	92
350	6	510	72	290	907	190	1452	215	244	200	G 1/2"	6	120
400	6	575	90	326	1059	190	1650	215	244	200	G 1/2"	6	207
450	6	630	110	315	1200	208	1870	242	283	230	G 1/2"	6	310
500	6	700	110	350	1265	228	1985	242	283	230	G 1/2"	6	350

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

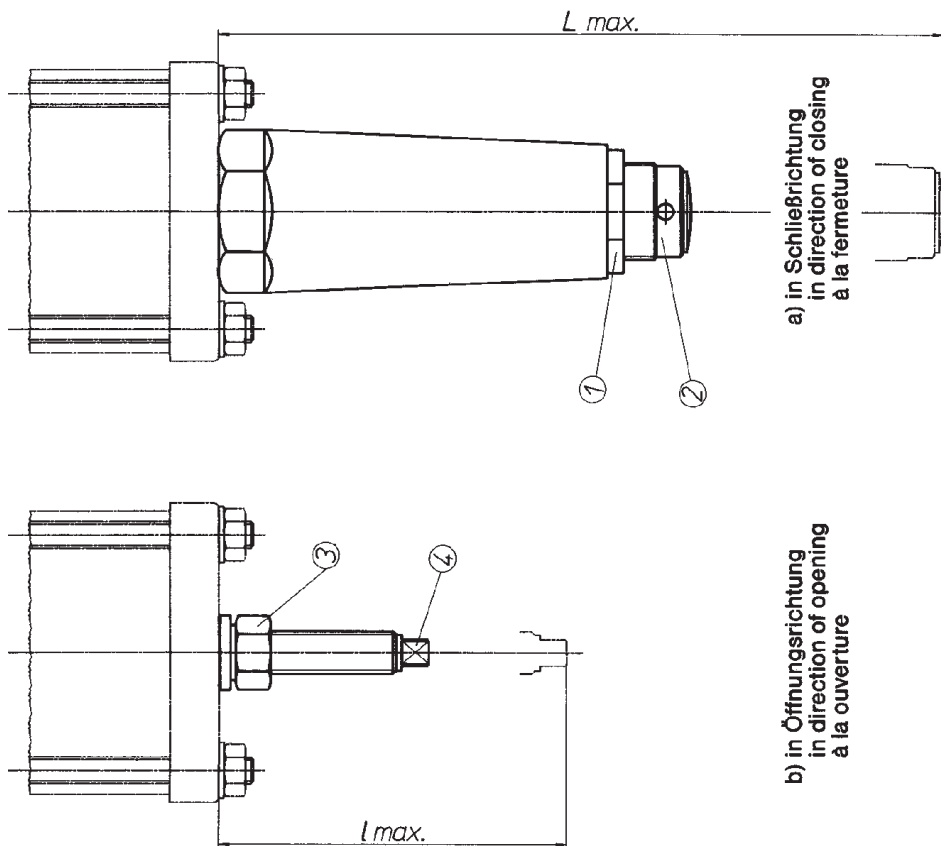
COMPACT-valve
pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	J	cyl Ø	air connection	control pressure [bar]	weight ~[kg]
600	4	810	130	405	1495	268	2314	318	318	300	G 1/2"	6	517
700	3	960	151	480	1756	307	2745	425	425	400	G 3/4"	6	1220
800	3	1060	151	530	1976	446	3065	425	425	400	G 3/4"	6	1340

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150). Further sizes on request.

COMPACT-valve pneumatic-cylinder and variable stroke limiter



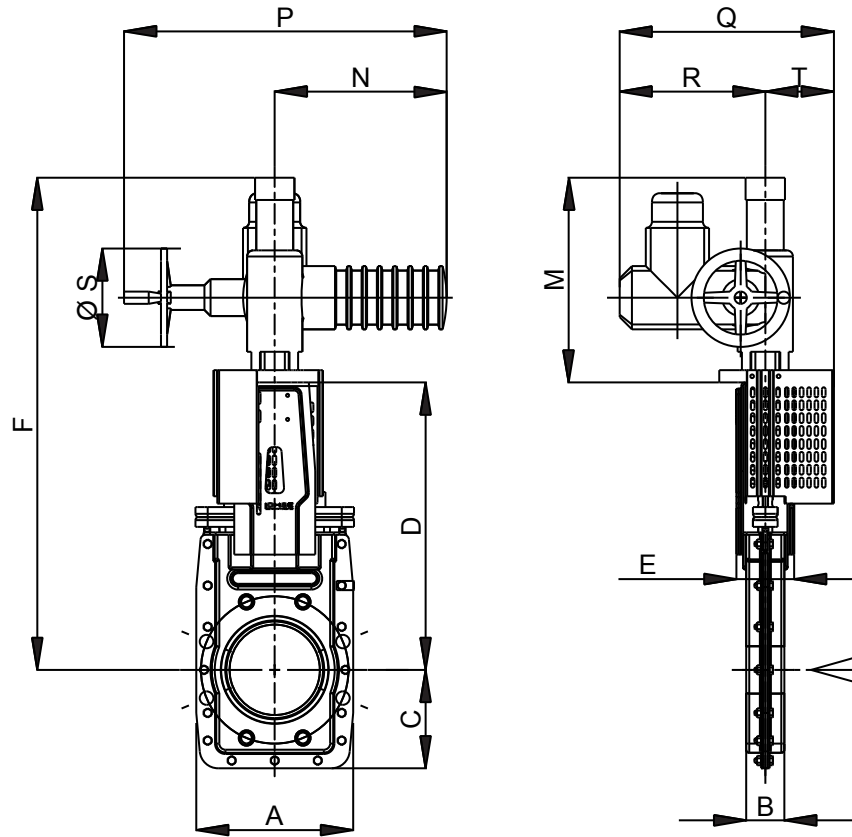
Variable stroke limiter

- in direction of closing: loosen the nut (1), adjust the adjustable pipe (2), tighten the nut (1)
- in direction of opening: loosen the nut (3), adjust the adjustable screw (4) tighten the nut

DN	cyl.Ø [mm]	in direction of opening		in direction of closing	
		L max ~	L max ~	L max ~	L max ~
50	100	140		268	
65	100	140		268	
80	100	140		268	
100	125	190		413	
125	125	190		413	
150	145	225		428	
200	175	252		550	

Further sizes on request.

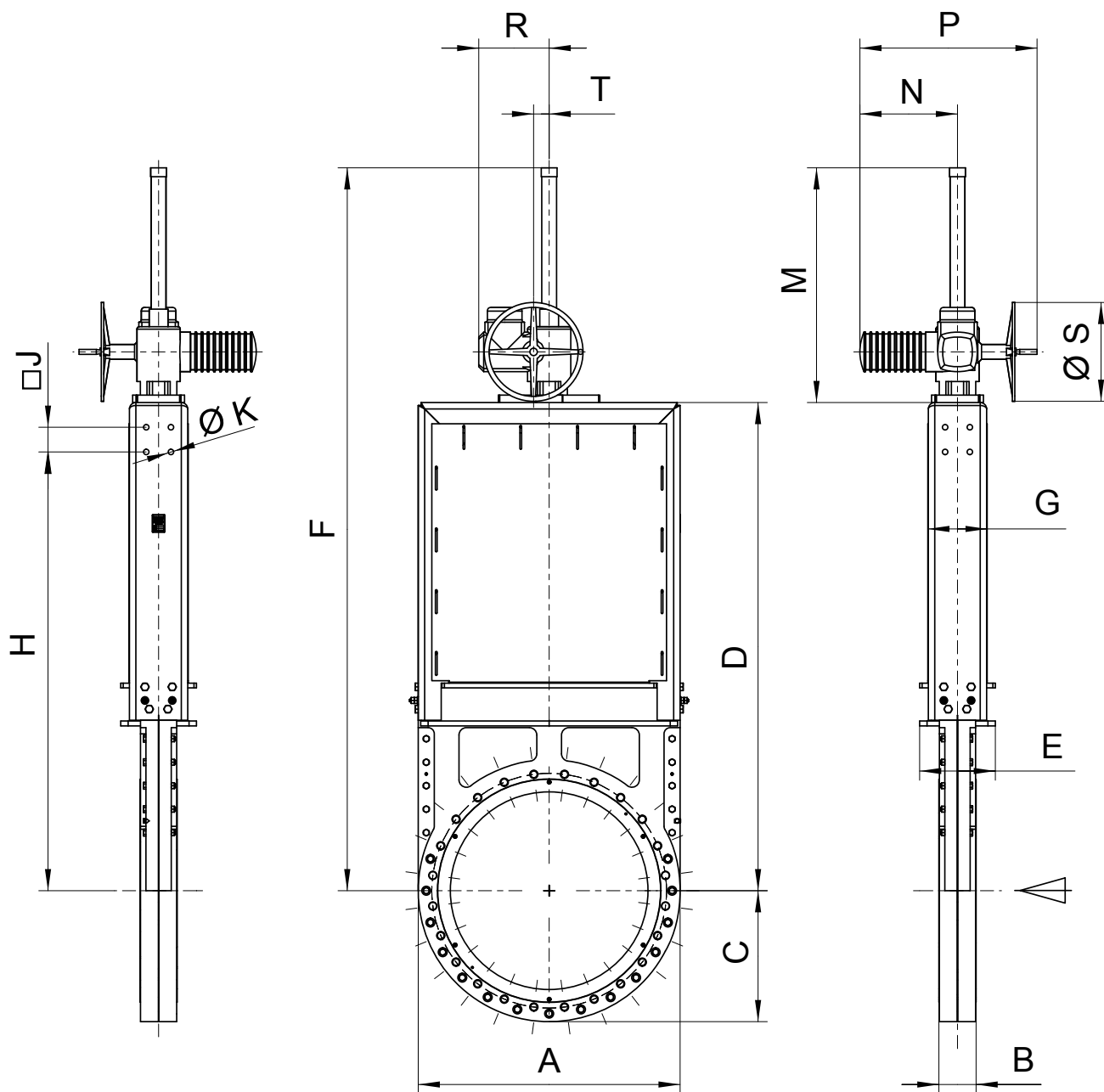
COMPACT-valve
electric drive and protection guard



DN	PS [bar]	A	B	C	D	E	F	M	N	P	Q	R	ØS	T	stem Tr DxH	closing time [s]	weight ~[kg]
50	10	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	18.7	32
65	10	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	24.4	32
80	10	175	52	125	313	78	646	333	280	515	349	237	160	112	20 x 4	29.7	32
*)100	10	210	54	135	368	94	701	333	280	515	349	237	160	112	24 x 5	28.3	37
*)125	10	230	52	145	413	94	746	333	280	515	349	237	160	112	24 x 5	35.2	38
*)150	10	255	62	160	468	94	801	333	280	515	349	237	160	112	24 x 5	41.6	42
200	10	328	60	190	557	143	902	345	355	536	373	247	200	126	30 x 6	46.7	58
250	10	400	68	230	668	166	1013	345	355	536	373	247	200	126	30 x 6	57.8	84
300	6	450	72	260	764	170	1202	438	355	536	373	247	200	126	30 x 6	68.9	96
350	6	510	72	290	907	190	1350	443	355	536	389	247	200	142	36 x 6	78.0	124
400	6	575	90	326	1059	190	1602	543	355	536	393	247	200	146	36 x 6	90.0	198
450	6	630	110	315	1200	208	1808	560	355	536	436	247	200	151	36 x 6	101.0	291
500	6	700	110	350	1265	228	1873	608	380	713	436	285	315	151	36 x 6	112.0	328
600	4	810	130	405	1495	268	2203	708	380	713	446	285	315	161	44 x 7	83.0	527

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

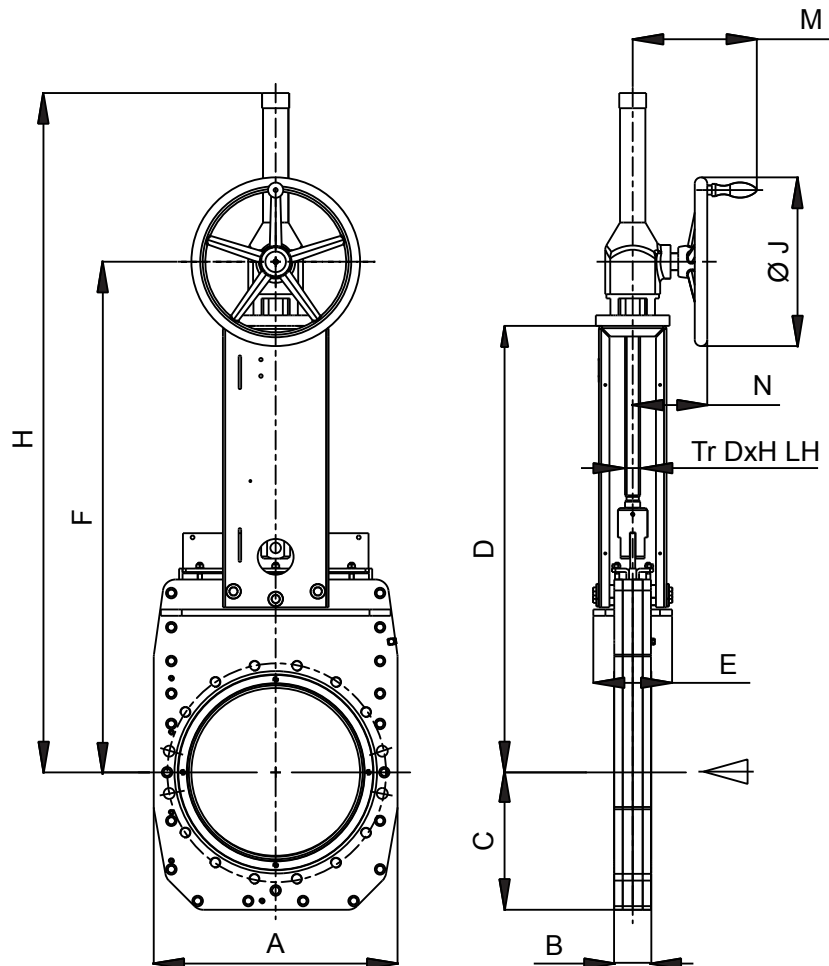
COMPACT-valve
electric drive and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	J	ØK	M	N	P	R	ØS	T	stem Tr DxH	closing time [s]	weight ~[kg]
700	3	960	151	480	1756	307	2606	240	1550	100	22	850	395	717	285	400	63	44 x 7	96.6	1099
800	3	1060	151	530	1976	446	2926	240	1776	100	22	950	395	717	285	400	63	44 x 7	110.2	1285
900	3	1170	160	585	2108	311	3253	240	1790	100	22	1145	510	860	330	500	80	44 x 7	108.9	1536
1000	3	1260	170	630	2470	311	3720	264	2170	100	22	1250	510	860	330	500	80	48 x 8	122.7	2125

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150). Further sizes on request.

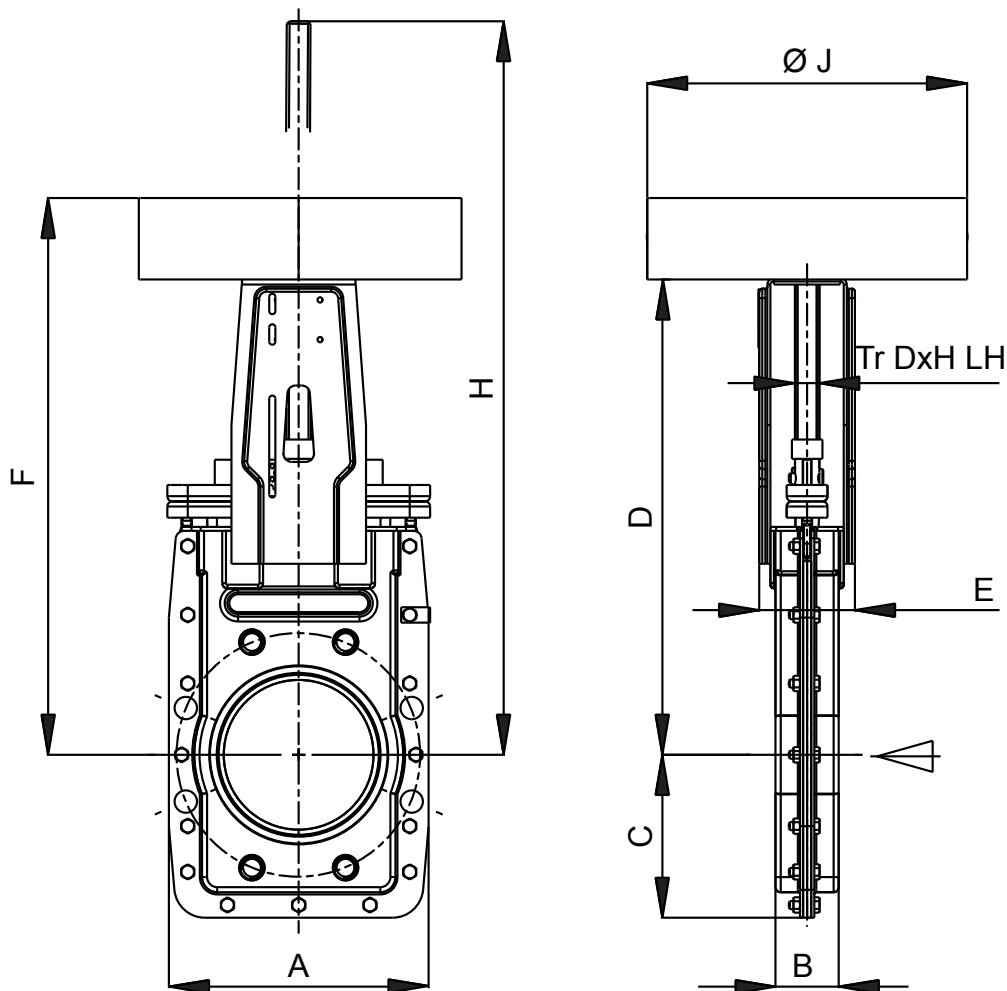
COMPACT-valve bevel gear box and handwheel



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	M	N	Tr D x H LH	weight ~[kg]
*)150	10	225	62	160	468	94	615	770	360	278	174	24 x 5	33
200	10	328	60	190	557	143	704	909	360	278	174	30 x 6	55
250	10	400	68	230	668	166	815	1070	360	278	174	30 x 6	72
300	6	450	72	260	764	170	911	1216	360	278	174	30 x 6	82
350	6	520	72	290	907	190	1059	1414	400	295	185	36 x 6	146
400	6	578	90	326	1059	190	1211	1611	400	295	185	36 x 6	191
450	6	630	110	315	1200	208	1352	1802	400	295	185	36 x 6	274
500	6	700	110	350	1265	228	1455	1947	400	340	222	36 x 6	327
600	4	810	130	405	1495	268	1685	2250	500	340	222	44 x 7	503
700	3	960	151	480	1756	307	1946	2422	500	340	222	44 x 7	1075
800	3	1060	151	530	1976	446	2166	2927	500	340	222	44 x 7	1265

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

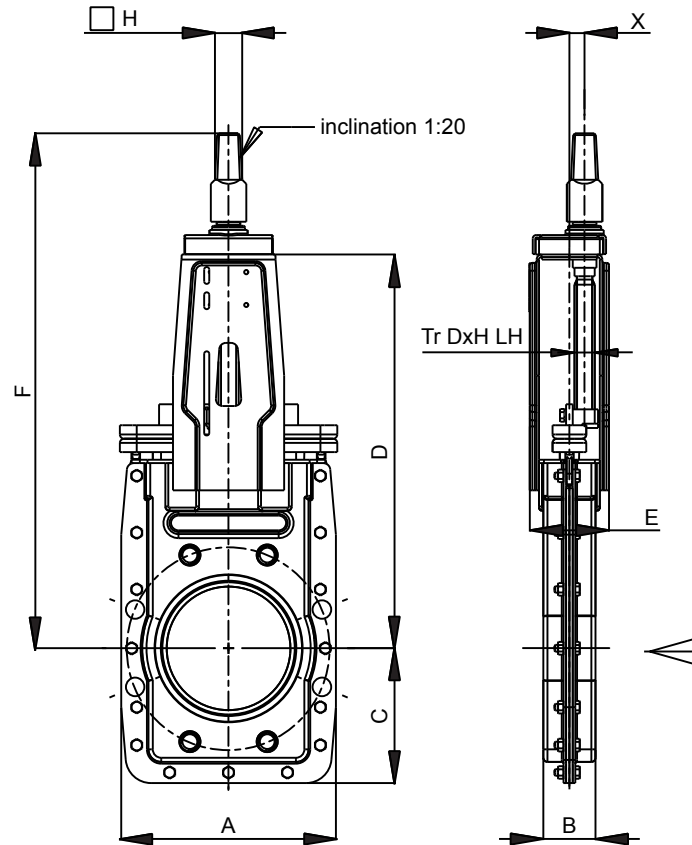
COMPACT-valve sprocket drive



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	10	185	42	100	313	78	394	397	274	20 x 4	14
65	10	185	42	100	313	78	394	412	274	20 x 4	14
80	10	175	52	125	313	78	394	437	274	20 x 4	14
*)100	10	210	54	135	368	94	447	520	314	24 x 5	18
*)125	10	230	52	145	413	94	492	595	314	24 x 5	21
*)150	10	255	62	160	468	94	547	665	314	24 x 5	25
200	10	328	60	190	557	143	636	821	394	30 x 6	50
250	10	400	68	230	668	166	747	981	394	30 x 6	66
300	6	450	72	260	764	170	843	1131	394	30 x 6	87
350	6	510	72	290	907	190	1000	1350	516	36 x 6	113
400	6	575	90	326	1059	190	1152	1550	516	36 x 6	198

*) Opening DN - 3mm, full opening on request.
 Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
 Further sizes on request.

COMPACT-valve
square head



DN	PS [bar]	A	B	C	D	E	F	H	X	Tr D x H LH	weight ~[kg]
50	10	185	42	100	313	78	455	32	15	20 x 4	9
65	10	185	42	100	313	78	455	32	15	20 x 4	10
80	10	175	52	125	313	78	456	32	15	20 x 4	10
*)100	10	210	54	135	368	94	512	32	18	24 x 5	12
*)125	10	230	52	145	413	94	557	32	18	24 x 5	15
*)150	10	255	62	160	468	94	612	32	18	24 x 5	18
200	10	328	60	190	557	143	707	32	22	30 x 6	38
250	10	400	68	230	668	166	818	32	22	30 x 6	51
300	6	450	72	260	764	170	914	32	22	30 x 6	67
350	6	510	72	290	907	190	1043	32	26	36 x 6	96
400	6	575	90	326	1059	190	1195	32	26	36 x 6	136
450	6	630	110	315	1200	208	1336	32	28.5	36 x 6	261
500	6	700	110	350	1265	228	1416	32	35	36 x 6	311
600	4	810	130	405	1495	268	1646	32	35	44 x 7	468

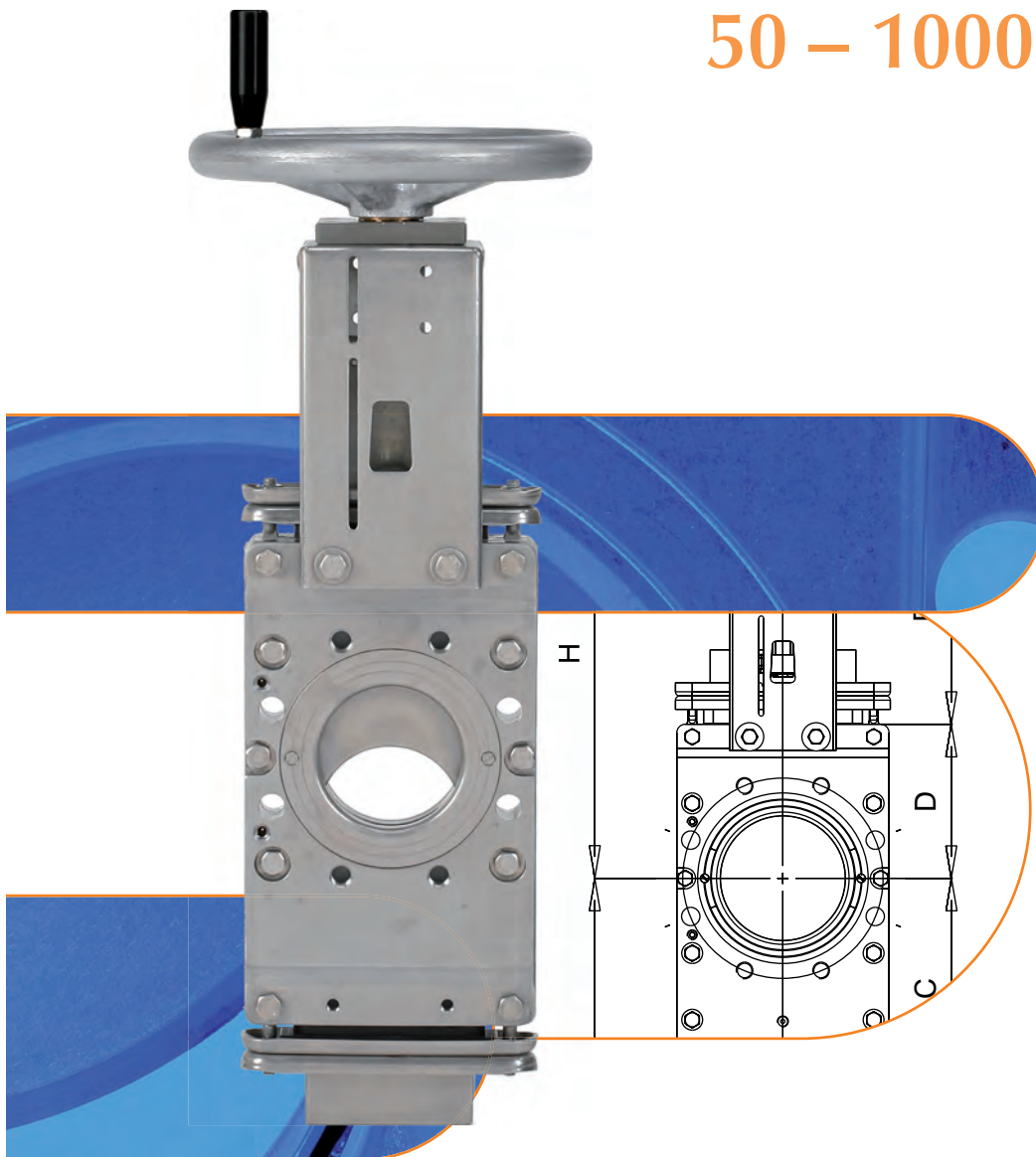
*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

Valves of stainless steel · COMPACT-Program

Shut-Off-Valves with through-going valve plate

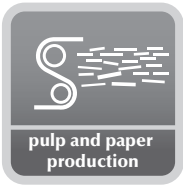
CDS/CDSV/CDSR

50 – 1000 mm



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Applications



Paper industry

LOHSE stock valves with through-going slide plate have been successfully tested thousands of times in all areas of the pulp and paper industry.

Valve types CDS and CDSV are installed as shut-off valves for pulp with a high degree of contamination, owing to their absolutely smooth, pocket-free passage.



Chemical industry and food industry

LOHSE stock valves with through-going slide plate, in special design with food-grade components, are used as shut-off valves and regulating valves for viscous, pulverulent, granular and sticky substances.



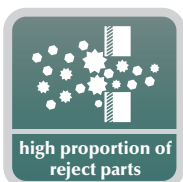
Waste treatment plants

LOHSE stock valves with through-going slide plate can be found in waste treatment plants for the shutting off of viscous and aggressive substances.

Special valves

On request we can supply specially designed valves of the most varied materials (e. g. titan) for special fields of application.

Media



Construction

Housing entirely of stainless steel

- corrosion and acid resistant
- easy to maintain
- the handwheel support also serves as a mounting for any control apparatus and protection guard

Slide cups of special plastic

- abrasion resistant
- excellent anti-friction properties
- temperature resistant
- acid resistant
- easily replaceable

Valve plate of stainless steel

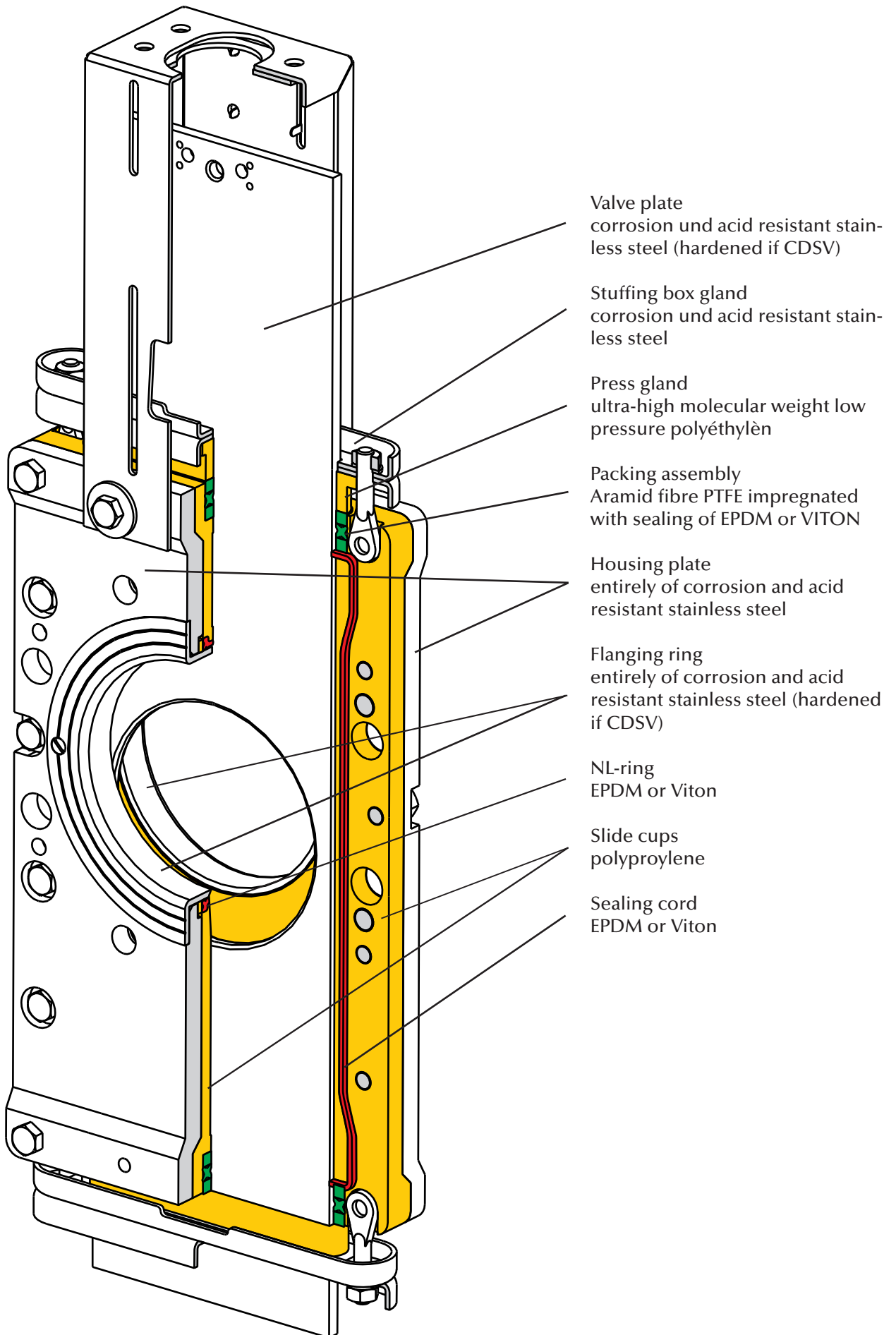
- corrosion and acid resistant – type CDSV has a hardened valve plate
- bare cross section = nominal diameter of piping
- no stringing of fibres is possible
- free of dead space in open position

100 % water-tight in both directions

- seals resistant to temperature and acids
- seals easily replaceable but firmly anchored in the valve housing
- Leak test according to DIN EN 12266-02:2012-04
Table A5, test medium liquid, leakage rate A

Actuating elements in well-proved LOHSE modular system

- interchangeable an all valves of our make
- also interchangeable on the incorporated existing valve
- reduced stock holding



Valve plate
corrosion und acid resistant stain-
less steel (hardened if CDSV)

Stuffing box gland
corrosion und acid resistant stain-
less steel

Press gland
ultra-high molecular weight low
pressure polyéthylèn

Packing assembly
Aramid fibre PTFE impregnated
with sealing of EPDM or VITON

Housing plate
entirely of corrosion and acid
resistant stainless steel

Flanging ring
entirely of corrosion and acid
resistant stainless steel (hardened
if CDSV)

NL-ring
EPDM or Viton

Slide cups
polypropylene

Sealing cord
EPDM or Viton

Materials

- housing
 - DN 50 – 400 1.4301
 - DN 450 – 600 1.4541
 - DN 700 – 1000 1.4571
- flanging ring
 - DN 50 – 65 1.4571
 - DN 80 1.4404
 - DN 100 – 1000 1.4571
- valve plate 1.4571
- slide cups
 - DN 50 – 600 PP
- sealing EPDM or VITON
- slide parts
 - DN 700 – 1000 CuSn6 / CuAl10Ni
- stuffing box gland 1.4301
- packing assembly
 - DN 50 – 500:
 - packing aramid fibre with impregnation of PTFE
 - p-ring EPDM, VITON or NBR
 - DN 600 aramid fibre with PTFE
 - DN 700 – 1000:
 - packing aramid fibre with impregnation of PTFE
 - p-ring EPDM, VITON or NBR
- press gland
 - DN 50 -150 PE-HMW
- bracket 1.4301
- screws / nuts A2
- max. operating pressure
 - DN 50 – 250 10 bar
 - DN 300 – 500 6 bar
 - DN 600 4 bar
 - DN 700 – 1800 3 bar
- max. operating temperature 120° C

Type CDSV similar, but with hardened flanging rings and valve plate.

Operating elements – the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body type: CDS, CDSV
- operating elements type Hns, H, P, PV, E, GK, K, X

All elements are interchangeable for any given size. Thereby the connections of brackets as well as the coupling of actuator and valve plate will be removed and fixed again after the exchange. No removal of incorporated valve body (notice safety rules – pipes must be pressureless).

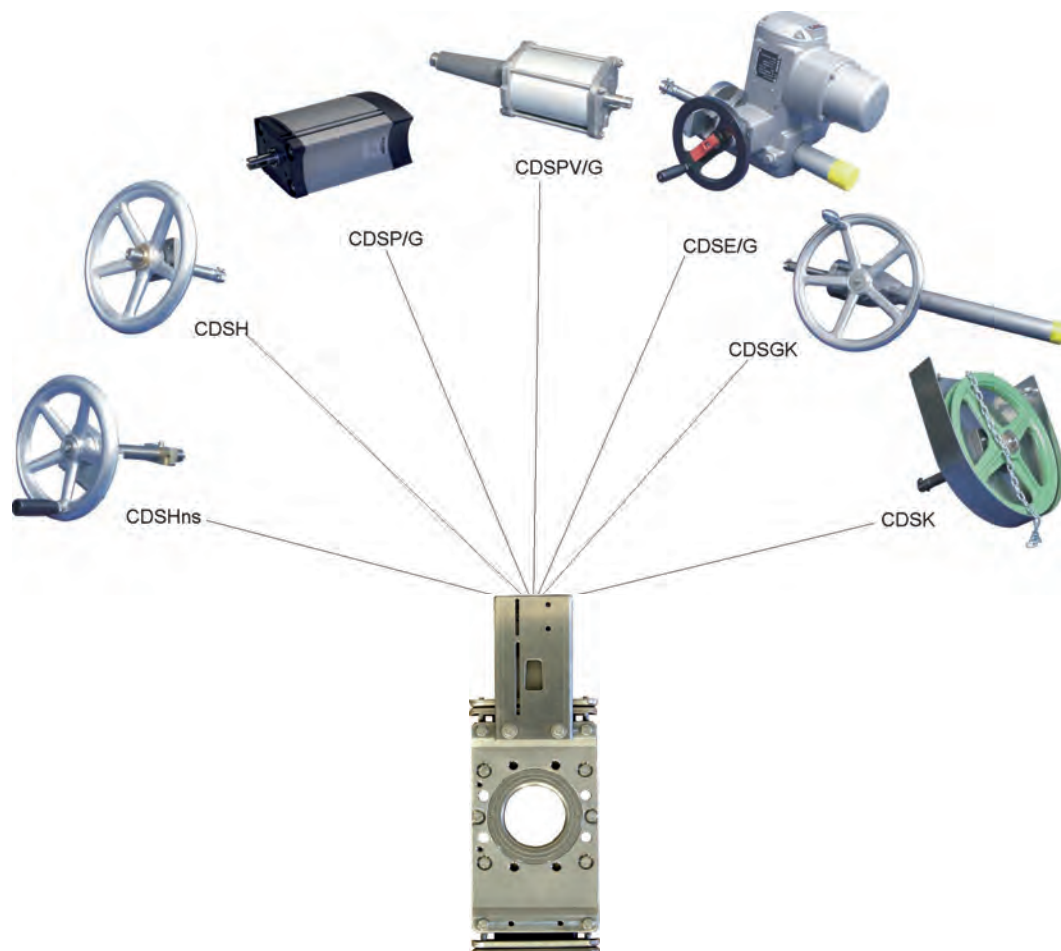
This facility is called the **LOHSE modular system** which offers the following advantages:

- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- if any valve drives have to be altered, replacement is easy and quick

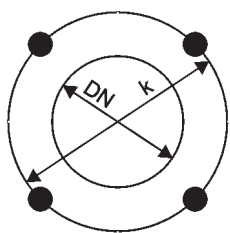
Protection guards (G)

According to machinery directive 2006/42/EG guards are compulsory to shield all moving parts on automated gate valves.

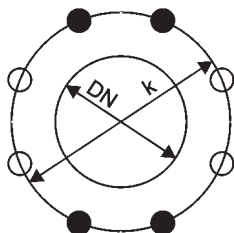
Protection guard of stainless steel.



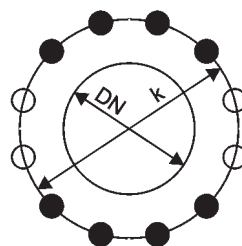
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



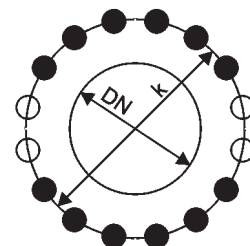
DN 50-65



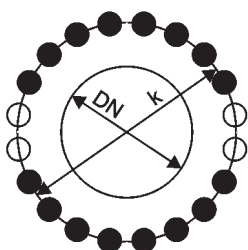
DN 80-200



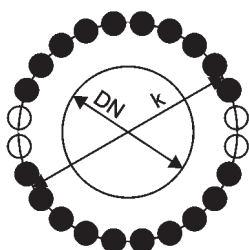
DN 250-300



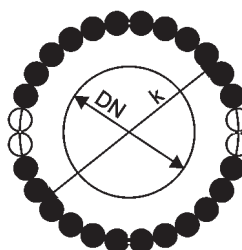
DN 350-400



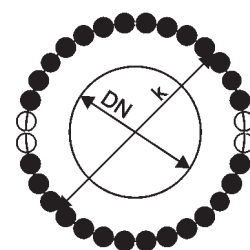
DN 450-600



DN 700-800

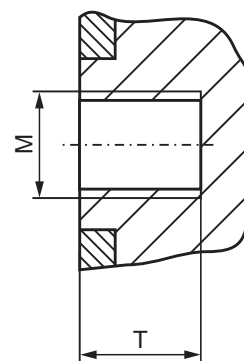


DN 900-1000



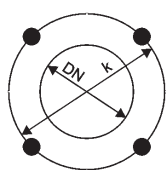
DN 1100-1200

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
50	125	4	M16	12	4	-
65	145	4	M16	12	4	-
80	160	8	M16	12	4	4
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4
900	1050	28	M30	45	24	4
1000	1160	28	M33	45	24	4
1100	1270	32	M33	50	28	4
1200	1380	32	M36	55	28	4

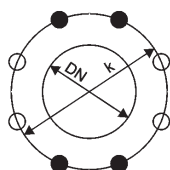


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

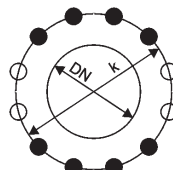
Flange bores for LOHSE COMPACT-valves
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



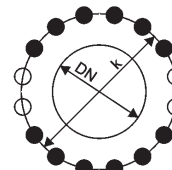
DN 50-80



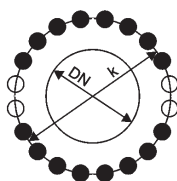
DN 100-200



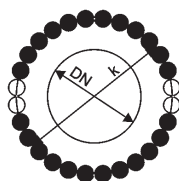
DN 250-350



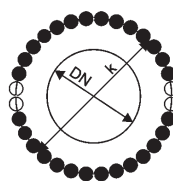
DN 400-450



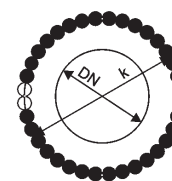
DN 500-600



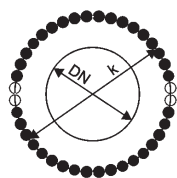
DN 700-800



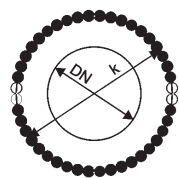
DN 900



DN 1000

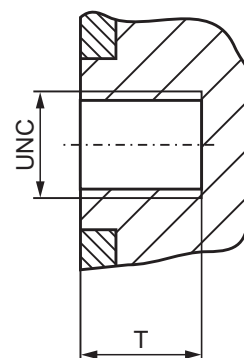


DN 1100



DN 1200

DN [mm]	DN [inch]	K [mm]	K [inch]	Z	UNC	T [mm]	T [inch]	Z1	Z2
50	2	120.6	4 3/4	4	5/8"-11	12	0.472	4	-
65	2.5	139.7	5 1/2	4	5/8"-11	12	0.472	4	-
80	3	152.4	6	4	5/8"-11	12	0.472	4	-
100	4	190.5	7 1/2	8	5/8"-11	12	0.472	4	4
125	5	215.9	8 1/2	8	3/4"-10	12	0.472	4	4
150	6	241.3	9 1/2	8	3/4"-10	16	0.630	4	4
200	8	298.5	11 3/4	8	3/4"-10	16	0.630	4	4
250	10	362	14 1/4	12	7/8"-9	20	0.787	8	4
300	12	431.8	17	12	7/8"-9	20	0.787	8	4
350	14	476.3	18 3/4	12	1"-8	20	0.787	8	4
400	16	539.8	21 1/4	16	1"-8	23	0.910	12	4
450	18	577.9	22 3/4	16	1 1/8"-7	30	1.181	12	4
500	20	635	25	20	1 1/8"-7	30	1.181	16	4
600	24	749.3	29 1/2	20	1 1/4"-7	35	1.378	16	4
700	28	863	34	28	1 1/4"-7	40	1.575	24	4
800	32	978	38 1/2	28	1 1/2"-6	45	1.772	24	4
900	36	1086	42 3/4	32	1 1/2"-6	45	1.772	28	4
1000	40	1200	47 1/4	36	1 1/2"-6	45	1.775	32	4
1100	44	1314	51 3/4	40	1 1/2"-6	50	1.969	36	4
1200	48	1422	56	44	1 1/2"-6	55	2.165	40	4



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

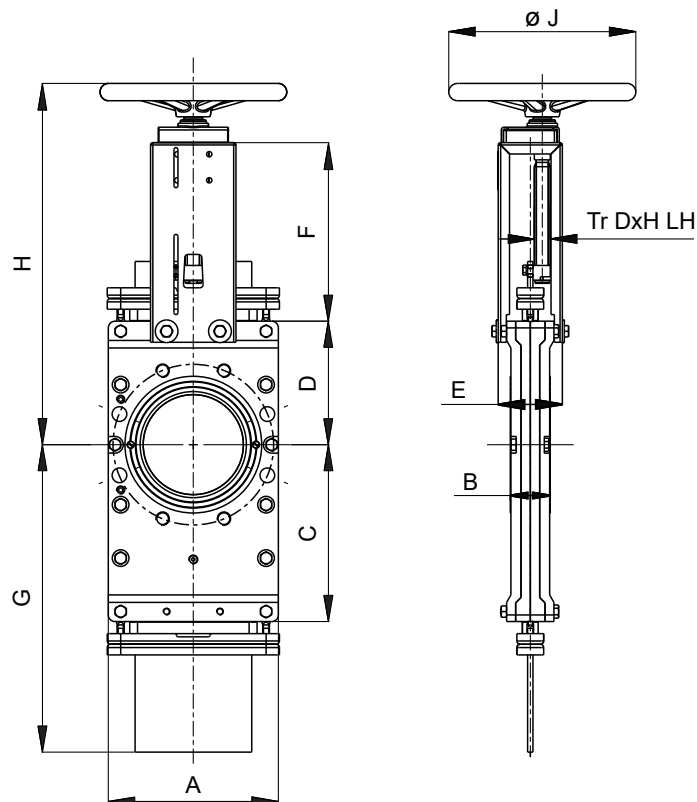
Pressure ranges

DN	standard		options		
	flange connection *)	operating pressure [bar]	flange connection *)	operating pressure [bar]	
50	PN 10	10	PN 16-25-40	40	
65					
80					
100			PN 16-25	25	
125					
150					
200		PN 16	16		
250					
300					
350					
400					
450					
500		PN 10	4	PN 10	10
600					
700			3		
800					

*) Flange connection acc. to DIN EN 1092-1, PN...
Other sizes on request.

COMPACT-shut-off valve with through-going valve plate
handwheel drive with non-rising stem

Type CDSVHns similar, but with hardened valve plate and flanging rings

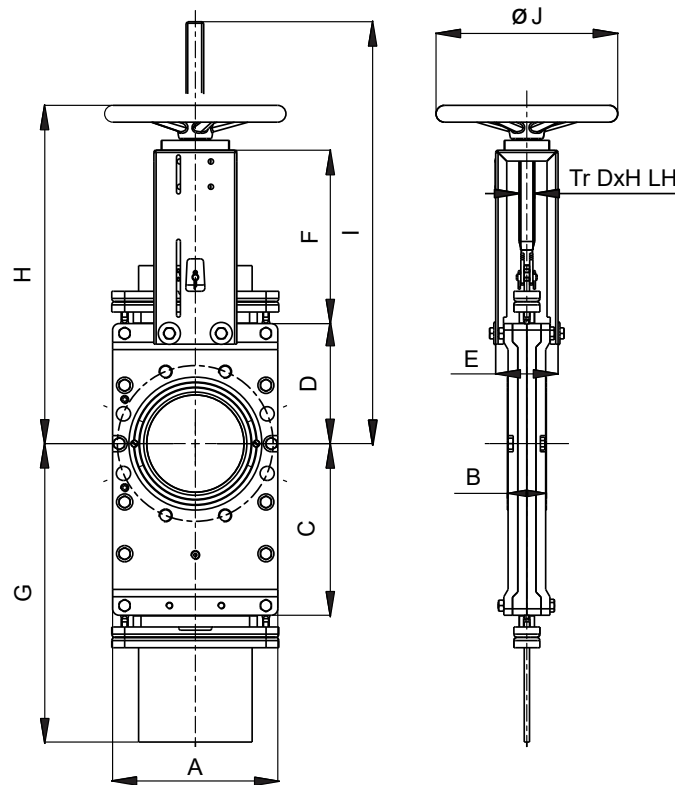


DN	PS [bar]	A	B	C	D	E	F	G	H	Ø J	Tr D x H LH	weight ~[kg]
50	10	160	40	125	125	85	160	212	368	225	20 x 4	13
65	10	160	40	140	140	85	160	238	383	225	20 x 4	13
80	10	185	50	160	145	85	176	282	404	225	20 x 4	16
100	10	205	49	190	155	96	207	331	451	280	24 x 5	24
125	10	235	50	230	170	96	233	401	492	280	24 x 5	31
150	10	255	60	265	185	96	270	461	541	280	24 x 5	39
200	10	325	60	355	222	120	315	614	637	360	30 x 6	67
250	10	400	70	440	263	127	368	753	731	360	30 x 6	115
300	6	430	70	505	300	127	427	873	832	360	30 x 6	143
350	6	490	70	580	340	167	511	1006	942	360	30 x 6	201
400	6	570	90	655	385	189	610	1122	1099	500	30 x 6	266
450	6	630	110	750	435	208	680	1282	1217	500	30 x 6	
500	6	700	110	840	470	228	735	1422	1324	500	36 x 6	
600	4	810	130	1000	545	368	850	1667	1514	500	36 x 6	

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off valve with through-going valve plate
handwheel drive with rising stem

Type CDSVH similar, but with hardened valve plate and flanging rings

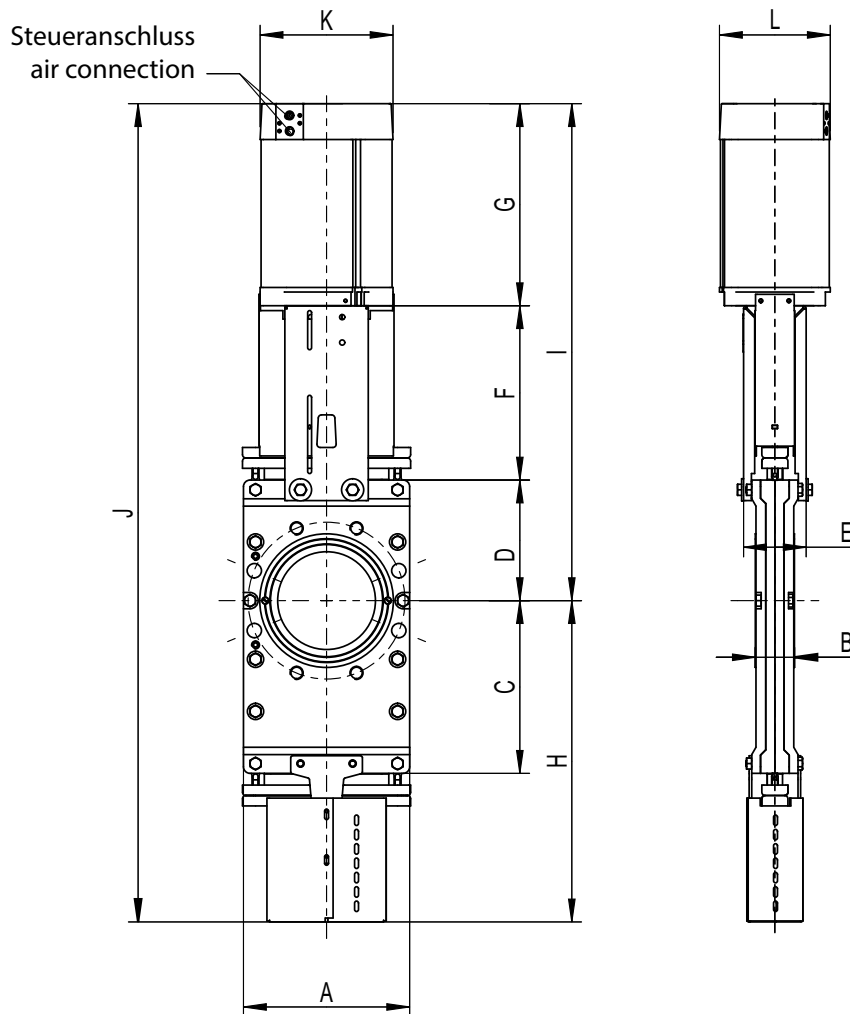


DN	PS [bar]	A	B	C	D	E	F	G	H	I	Ø J	Tr D x H LH	weight ~[kg]
50	10	160	40	125	125	85	160	212	350	395	225	20 x 4	13
65	10	160	40	140	140	85	160	238	365	425	225	20 x 4	13
80	10	185	50	160	145	85	176	282	386	465	225	20 x 4	17
100	10	205	49	190	155	96	207	331	431	530	280	24 x 5	25
125	10	235	50	230	170	96	233	401	472	595	280	24 x 5	31
150	10	255	60	265	185	96	270	461	522	672	280	24 x 5	39
200	10	325	60	355	222	120	315	614	617	820	360	30 x 6	67
250	10	400	70	440	263	127	368	753	711	960	360	30 x 6	116
300	6	430	70	505	300	127	427	873	807	1110	360	30 x 6	143
350	6	490	70	580	340	167	511	1006	947	1300	500	36 x 6	201
400	6	570	90	655	385	189	610	1122	1091	1500	500	36 x 6	266
450	6	630	110	750	435	208	680	1282	1211	1665	500	36 x 6	428
500	6	700	110	840	470	228	735	1422	1301	1805	500	36 x 6	564
600	4	810	130	1000	545	368	850	1667	1491	2105	640	44 x 7	898

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off valve with through-going valve plate
pneumatic cylinder and protection guard

Type CDSVP/G similar, but with hardened valve plate and flanging rings

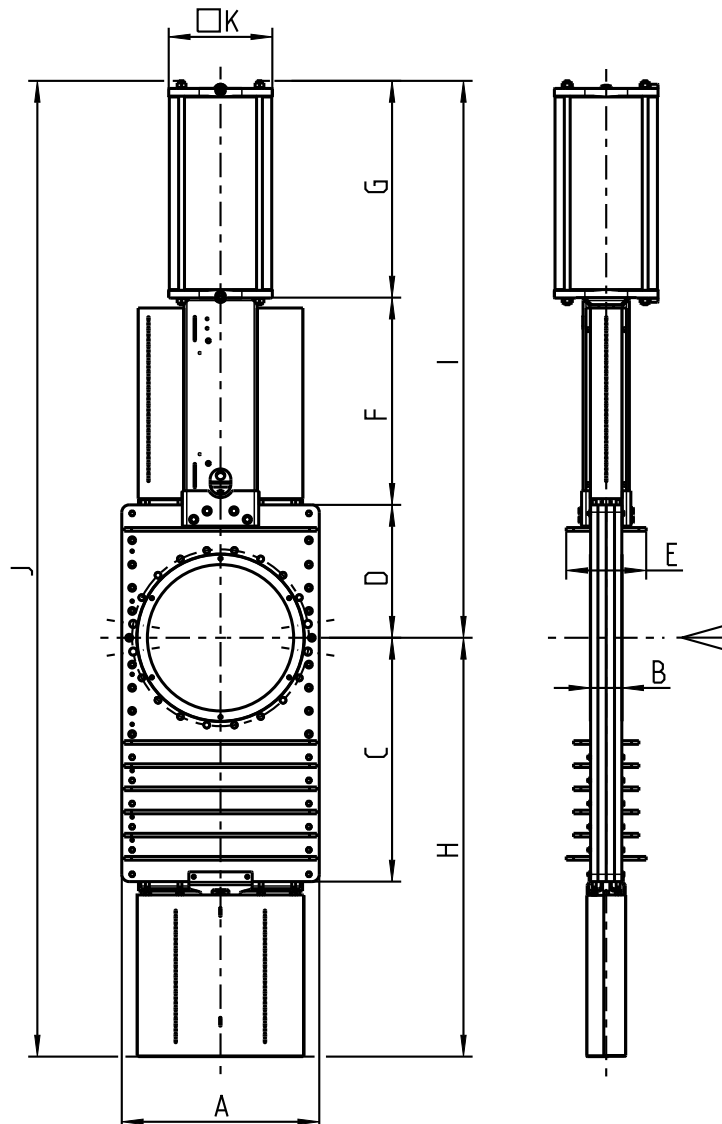


DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	L	cyl Ø	air connection	weigh ~[kg]
50	10	160	40	125	125	85	160	182	245	467	712	139	118	100	G 1/4"	15.3
65	10	160	40	140	140	85	160	197	260	497	757	139	118	100	G 1/4"	15.4
80	10	185	50	160	145	85	176	210	301	531	832	139	118	100	G 1/4"	15.5
100	10	205	49	190	155	96	207	253	358	615	973	165	145	125	G 1/4"	31.9
125	10	235	50	230	170	96	233	279	431	682	1113	165	145	125	G 1/4"	36.1
150	10	255	60	265	185	96	268	310	493	763	1256	204	178	160	G 1/4"	49.4
200	10	325	60	355	222	118	315	388	651	925	1576	244	215	200	G 1/2"	84.4
250	10	400	70	440	263	127	368	433	805	1064	1869	244	215	200	G 1/2"	134
300	6	430	70	505	300	127	427	515	915	1242	2157	283	242	230	G 1/2"	163

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150); air connection acc. VDI/VDE 3845 (NAMUR). Further sizes on request.

COMPACT-shut-off valve with through-going valve plate
pneumatic cylinder and protection guard

Type CDSVP/G similar, but with hardened valve plate and flanging rings

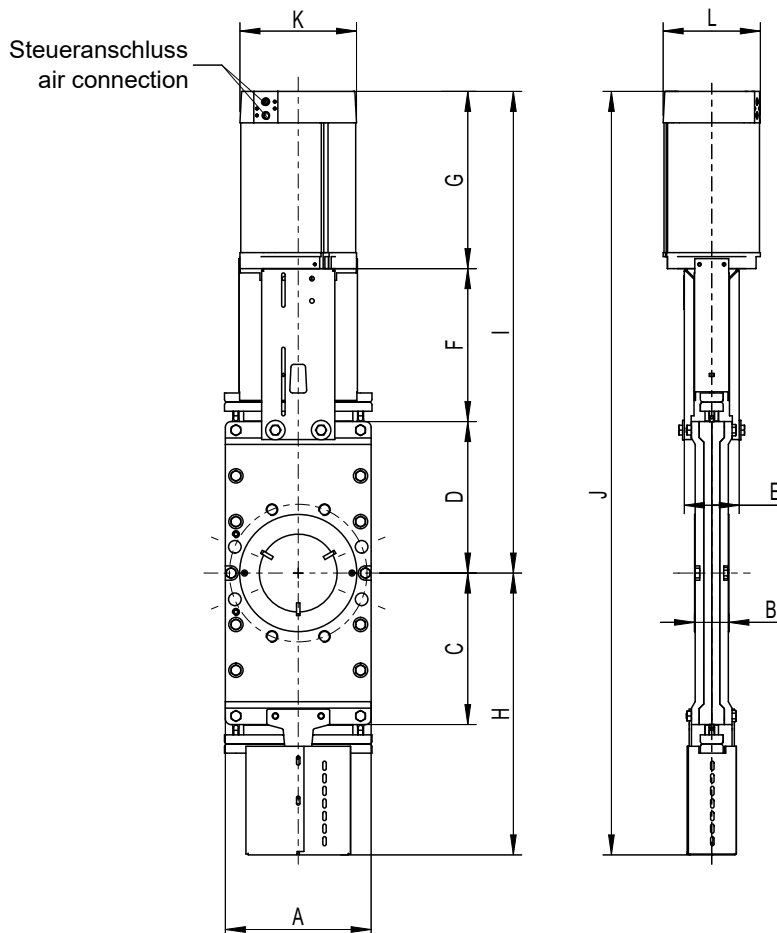


DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	cyl Ø	air connection	weight ~[kg]
350	6	490	70	580	340	167	511	571	1011	1422	2433	318	300	G 1/2"	235
400	6	570	90	655	385	189	610	621	1132	1616	2748	318	300	G 1/2"	320
450	6	630	110	750	435	208	680	666	1367	1781	3148	318	300	G 1/2"	519
500	6	700	110	840	470	228	735	789	1457	1994	3451	425	400	G 3/4"	718
600	4	810	130	1000	545	368	850	889	1720	2284	4004	425	400	G 3/4"	1046
700	3	960	150	1155	645	306	996	986	1995	2627	4622	645	500	G 3/4"	
800	3	1060	150	1310	710	306	1136	1086	2226	2932	5158	645	500	G 3/4"	

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off-valve

with through-going valve plate, extended housing, valve plate and flanging rings hardened, conical inlet with turbulence interrupter (ribs), with pneumatic cylinder and protection guard

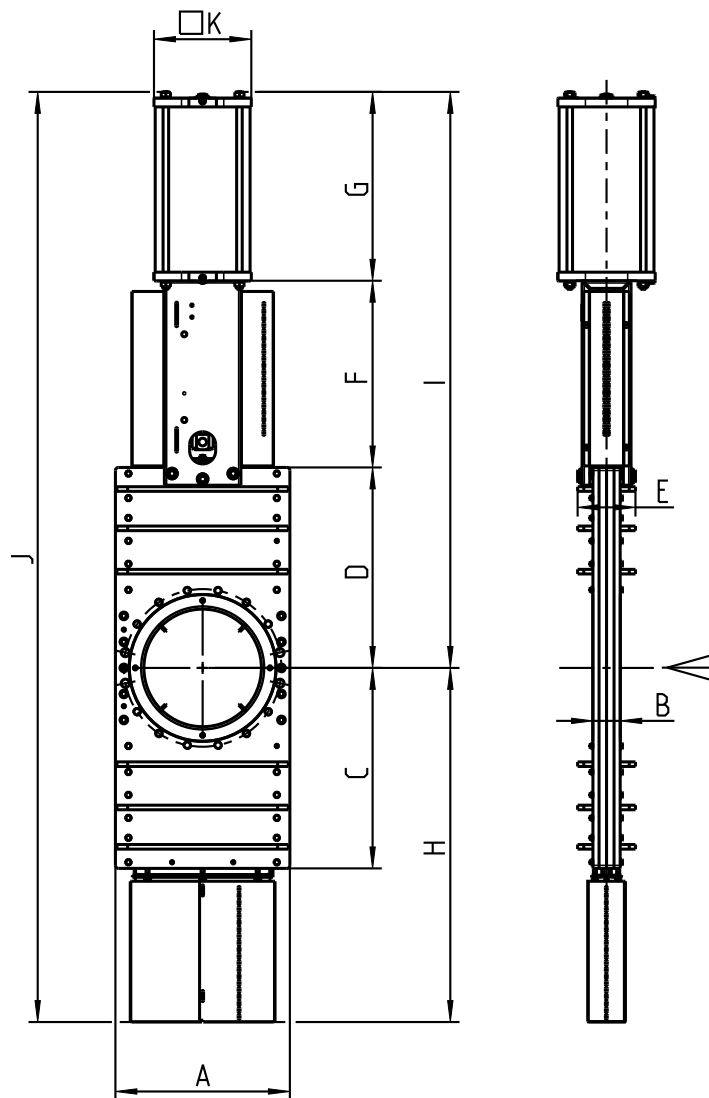


DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	L	cyl Ø	air connection
50	10	160	40	125	125	85	160	200	242	485	727	139	118	125	G 1/4"
65	10	160	40	140	140	85	160	206	257	506	763	139	118	125	G 1/4"
80	10	185	50	160	160	85	176	221	298	557	855	139	118	125	G 1/4"
100	10	205	49	190	190	96	207	243	350	640	990	165	145	145	G 1/4"
125	10	235	50	230	230	96	233	272	412	735	1147	165	145	145	G 1/4"
150	10	255	60	265	265	96	270	305	483	840	1323	204	178	175	G 1/2"
200	10	325	60	355	355	120	315	352	626	1022	1648	204	178	200	G 1/2"
250	10	400	70	440	440	127	368	401	762	1209	1971	244	215	200	G 1/2"
300	6	430	70	505	505	127	427	670	883	1602	2485	283	242	230	G 1/2"
350	6	490	70	580	580	167	511	720	1011	1811	2822	283	242	230	G 1/2"

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150); air connection acc. VDI/VDE 3845 (NAMUR). Further sizes on request.

COMPACT-shut-off-valve

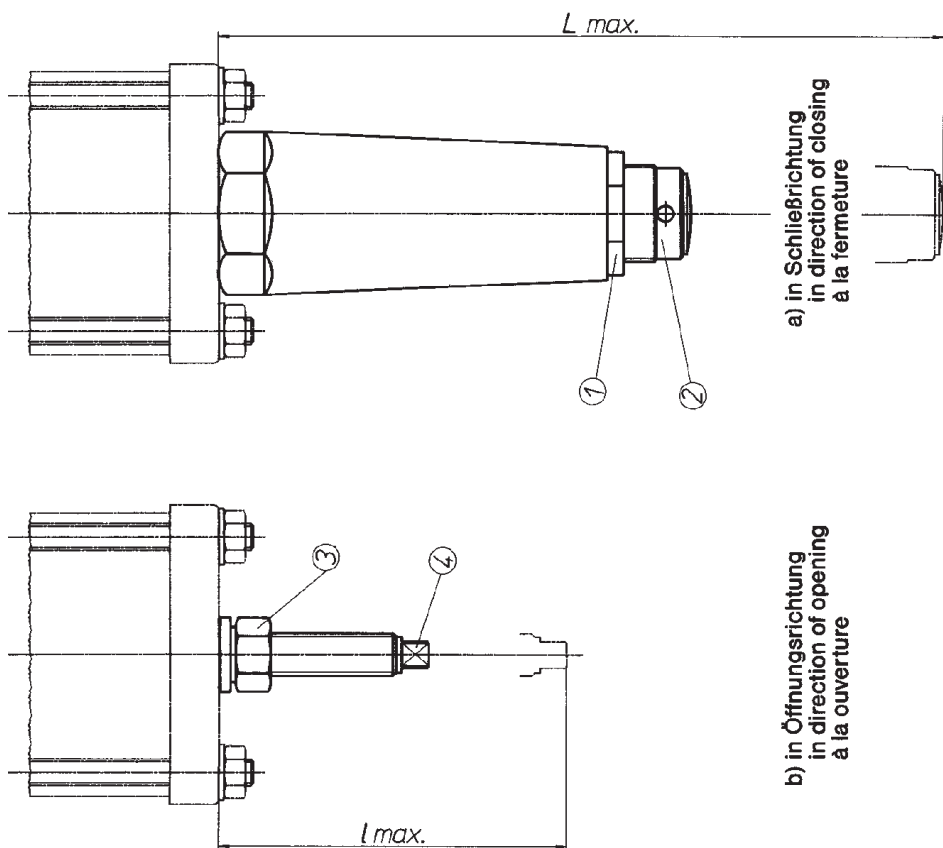
with through-going valve plate, extended housing, valve plate and flanging rings hardened, conical inlet with turbulence interrupter (ribs), with pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	□K	cyl Ø	air connecion
400	6	570	90	655	655	189	610	621	1132	1886	3018	318	300	G 1/2"
450	6	630	110	750	750	208	680	666	1367	2096	3463	318	300	G 1/2"
500	6	700	110	840	840	228	735	789	1457	2364	3821	425	400	G 3/4"
600	4	810	130	1000	1000	368	850	889	1720	2739	4459	425	400	G 3/4"
700	3	960	150	1155	1155	306	996	986	1995	3137	5132	645	500	G 3/4"
800	3	1060	150	1310	1310	306	1136	1086	2226	3532	5758	645	500	G 3/4"

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150). Further sizes on request.

COMPACT-shut-off-valve with through-going valve plate
 pneumatic-cylinder with variable stroke limiter and protection guard
 Type CDSVPV/G similar, but with hardened valve plate and flanging rings



Variable stroke limiter

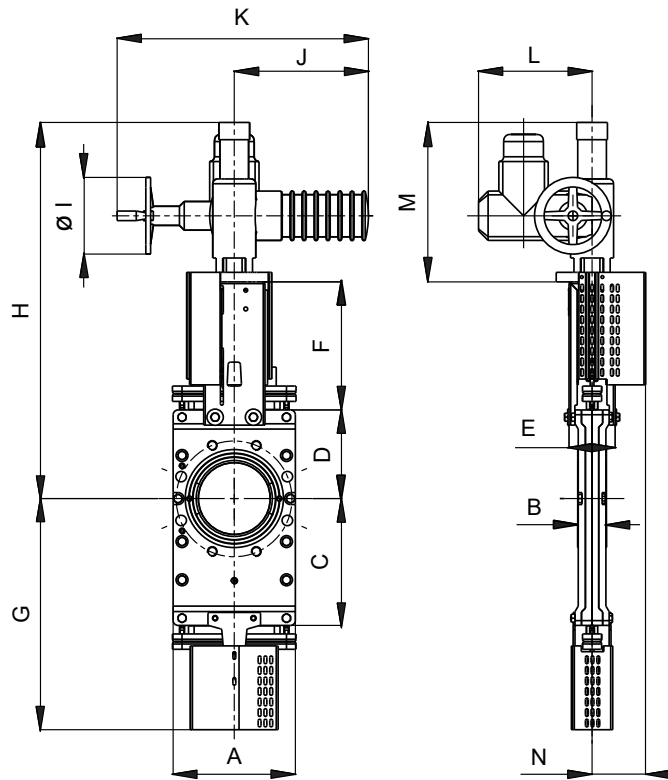
- in direction of closing:
 loosen the nut (1), adjust the adjustable pipe (2), tighten the nut (1)
- in direction of opening:
 loosen the nut (3), adjust the adjustable screw (4) tighten the nut

DN	cyl.Ø	in direction of opening	in direction of closing
		L max ~	L max ~
50	125	140	283
65	125	140	283
80	125	140	283
100	145	190	439
125	145	190	439
150	175	202	439
200	200	252	554

Further sizes on request.

COMPACT-shut-off-valve with through-going valve plate
electric drive and protection guard

Type CDSVE/G similar, but with hardened valve plate and flanging rings

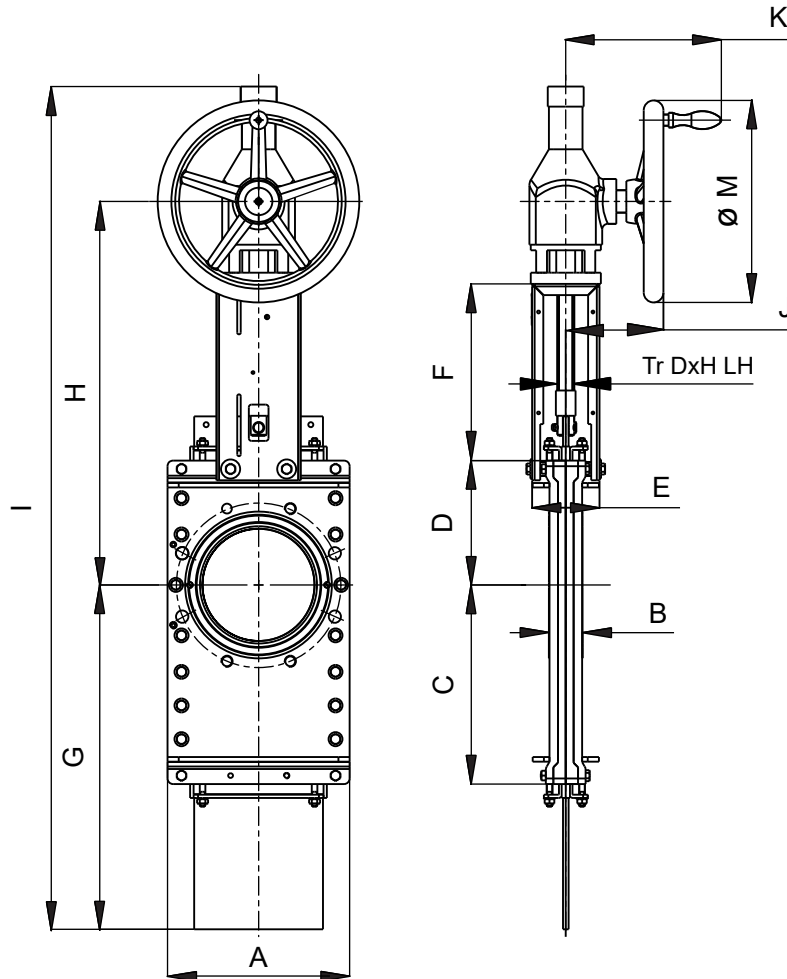


DN	PS [bar]	A	B	C	D	E	F	G	H	ØI	J	K	L	M	N	stem Tr DxH	closing time [s]	weight ~[kg]
50	10	160	40	125	125	85	160	242	618	140	280	509	237	333	108	20 x 4	19.3	36
65	10	160	40	140	140	85	160	257	633	140	280	509	237	333	108	20 x 4	24.3	36
80	10	185	50	160	145	85	176	298	654	140	280	509	237	333	108	20 x 4	29.3	40
100	10	205	49	190	155	96	207	350	695	160	280	525	237	333	114	24 x 5	29.1	47
125	10	235	50	230	170	96	233	412	736	160	280	525	237	333	114	24 x 5	35.7	54
150	10	255	60	265	185	96	270	483	786	160	280	525	237	333	112	24 x 5	42.4	62
200	10	325	60	355	222	120	315	626	882	200	355	603	247	345	126	30 x 6	45.0	96
250	10	400	70	440	263	127	368	762	976	200	355	603	247	345	126	30 x 6	56.4	145
300	6	430	70	505	300	127	427	883	1165	200	355	603	247	438	126	30 x 6	68.9	172
350	6	490	70	580	340	167	511	1011	1294	200	355	603	247	443	142	36 x 6	78.4	230
400	6	570	90	655	385	189	610	1132	1503	315	380	695	285	508	146	36 x 6	89.8	295
450	6	630	110	750	435	208	680	1367	1723	315	380	695	285	608	151	36 x 6	100.9	500
500	6	700	110	840	470	228	735	1475	1813	315	380	695	285	608	151	36 x 6	112.2	645
600	4	810	130	1000	545	368	850	1720	2103	315	380	695	285	708	161	44 x 7	83.0	989

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off-valve with through-going valve plate
bevel gear box and handwheel

Type CDSVGK similar, but with hardened valve plate and flanging rings

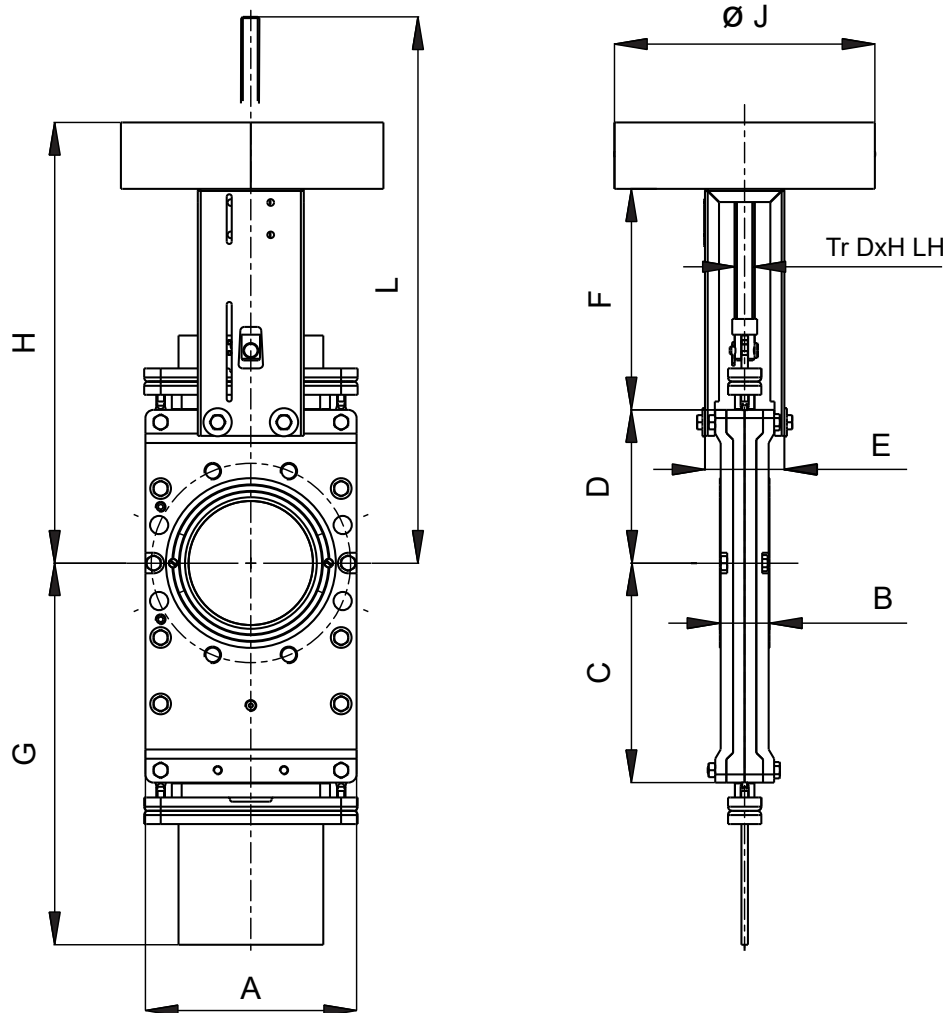


DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	ØM	Tr DxH	weight ~[kg]
200	10	325	60	355	222	120	315	614	684	1503	174	278	360	30 x 6	87
250	10	400	70	440	263	127	368	753	778	1786	174	278	360	30 x 6	134
300	6	430	70	505	300	127	427	873	874	2052	174	278	360	30 x 6	164
350	6	490	70	580	340	167	511	1006	1003	2364	185	295	400	36 x 6	215
400	6	570	90	655	385	189	610	1122	1147	2669	185	295	400	36 x 6	279
450	6	630	110	750	435	208	680	1285	1267	2999	185	295	400	36 x 6	431
500	6	700	110	840	470	228	735	1422	1395	3309	222	340	400	36 x 6	592
600	4	810	130	1000	545	368	850	1667	1585	3817	222	340	500	44 x 7	903
700	3	960	150	1155	645	306	996	1948	1831	4445	222	340	500	44 x 7	
800	3	1060	150	1310	710	306	1136	2178	2036	4978	222	340	500	44 x 7	

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off-valve with through-going valve plate
sprocket drive

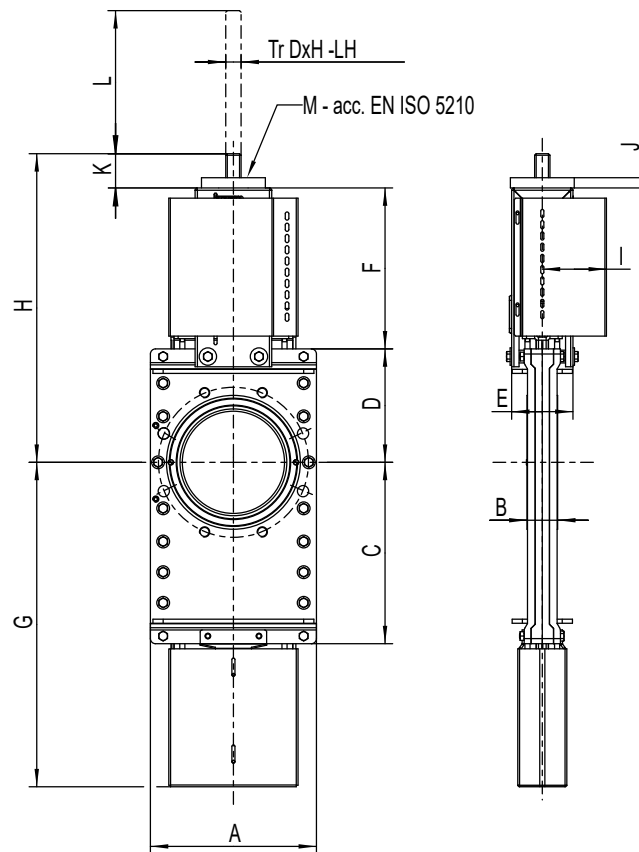
Type CDSVK similar, but with hardened valve plate and flanging rings



DN	PS [bar]	A	B	C	D	E	F	G	H	L	Ø J	Tr D x H LH	weight ~[kg]
50	10	160	40	125	125	85	160	212	366	395	274	20 x 4	18
65	10	160	40	140	140	85	160	238	381	425	274	20 x 4	19
80	10	185	50	160	145	85	176	282	402	460	274	20 x 4	23
100	10	205	49	190	155	96	207	331	441	530	314	24 x 5	31
125	10	235	50	230	170	96	233	401	482	595	314	24 x 5	37
150	10	255	60	265	185	96	270	461	532	667	314	24 x 5	47
200	10	325	60	355	222	120	315	614	616	815	394	30 x 6	79
250	10	400	70	440	263	127	368	753	710	955	394	30 x 6	127
300	6	430	70	505	300	127	427	873	806	1106	394	30 x 6	150

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-shut-off-valve with through-going valve plate + protection guard
 prepared for mounting an electric drive or bevel gearbox
 Type CDSVGK similar, but with hardened valve plate and flanging rings



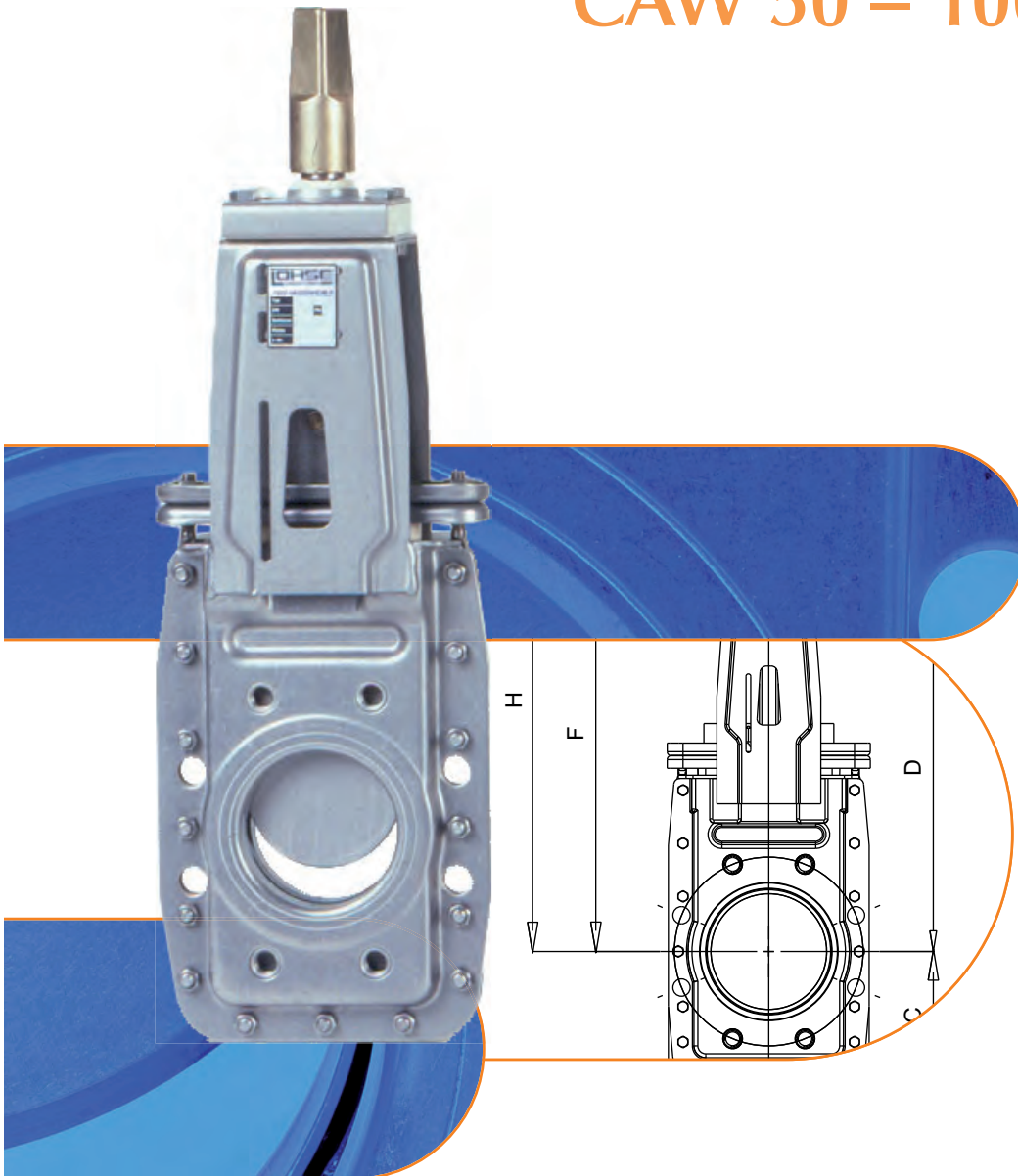
DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	L stroke	M	Tr DxH	weight ~[kg]
50	10	160	40	125	125	85	160	242	336	108	20	51	57	F10	20 x 4	12
65	10	160	40	140	140	85	160	257	355	108	20	55	72	F10	20 x 4	12
80	10	185	50	160	145	85	176	298	372	108	20	51	87	F10	20 x 4	16
100	10	205	49	190	155	96	207	350	419	114	20	57	108	F10	24 x 5	23
125	10	235	50	230	170	96	233	412	459	114	20	56	134	F10	24 x 5	30
150	10	255	60	265	185	96	270	483	511	112	20	56	158	F10	24 x 5	38
200	10	325	60	355	222	120	315	626	604	126	20	67	210	F10	30 x 6	68
250	10	400	70	440	263	127	368	762	693	126	20	62	262	F10	30 x 6	117
300	6	430	70	505	300	127	427	883	794	126	20	67	312	F10	30 x 6	144
350	6	490	70	580	340	167	511	1011	932	142	25	81	362	F14	36 x 6	175
400	6	570	90	655	385	189	610	1132	1083	146	25	88	412	F14	36 x 6	240
450	6	630	110	750	435	208	680	1367	1192	151	25	77	462	F14	36 x 6	445
500	6	700	110	840	470	228	735	1475	1288	151	25	83	512	F14	36 x 6	585
600	4	810	130	1000	545	368	850	1720	1477	161	25	82	612	F14	44 x 7	929

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
 Further sizes on request.

Valves of stainless steel · COMPACT-Program

Shut-Off-Valves sewage execution

CAW 50 – 1000 mm



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Applications



Municipal sewage treatment

When LOHSE COMPACT-gate valves of acid resistant stainless steel are installed in waste water treatment plants, the need to use expensive isolation appliances to guard against contact-corrosion is removed.



Food industry

LOHSE COMPACT-gate valves are widely used as shut-off valves for viscous and glutinous media as for instance in salt works, sugar mills, wine making industry, breweries etc.

In special designs, the non-metallic components of the LOHSE valves can be equipped with FDA-approved components. The respective suitability must be checked for each application.

Construction

Stainless steel housing

- of a rust and acid resistant material which prevents not only its own corrosion but also contact corrosion on stainless steel piping therefore saving expensive isolation materials
- two parts – easy to maintain
- made from pressed stainless steel plate which keeps its shape – light and easy to install
- the frame for the drive acts at the same as a fastening for the switch and control mechanisms

Plastic slide lining

- this material has the highest slide properties but at the same time is abrasion resistant
- resistant to temperature extremes and acid
- easy to change

Valve plate of stainless steel

- of a rust and acid resistant material

Flow opening = the nominal width of the piping

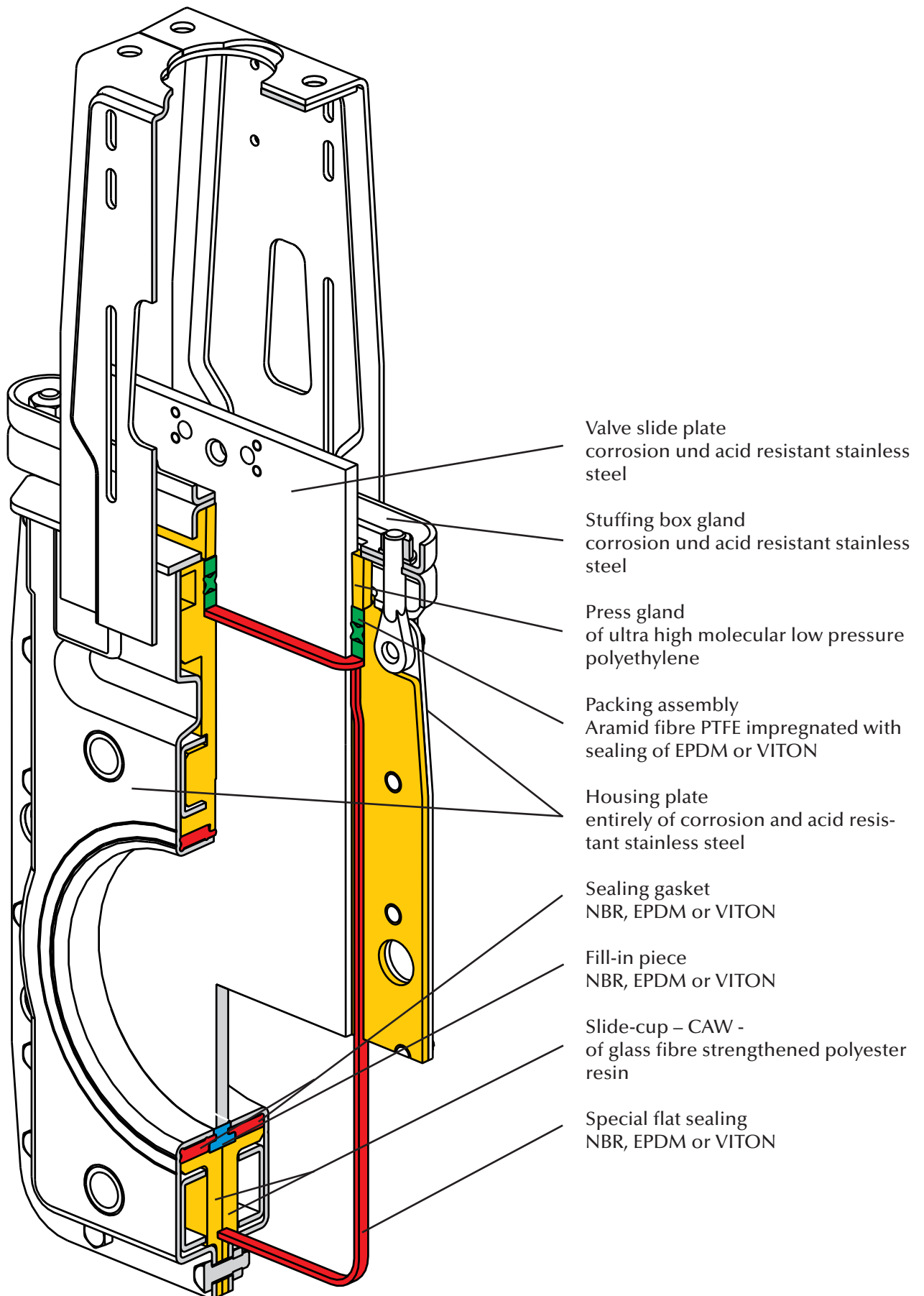
- no contraction caused by guide strips to the side
- by using an elastomer you guarantee a completely smooth flow

Drives all part of the proven LOHSE modular system

- easy-to-use handwheel with a handle grip to quickly open or shut the valve by hand
- electro or pneumatic drives to enable activation from a distance
- drives are exchangeable in the case of all our valves even in an assembled condition
- drive accessories can be optimally attuned to one another

Watertight

- Leak test according to DIN EN 12266-02:2012-04 Table A5, test medium liquid, leakage rate A



Valve slide plate
corrosion und acid resistant stainless steel

Stuffing box gland
corrosion und acid resistant stainless steel

Press gland
of ultra high molecular low pressure polyethylene

Packing assembly
Aramid fibre PTFE impregnated with sealing of EPDM or VITON

Housing plate
entirely of corrosion and acid resistant stainless steel

Sealing gasket
NBR, EPDM or VITON

Fill-in piece
NBR, EPDM or VITON

Slide-cup – CAW -
of glass fibre strengthened polyester resin

Special flat sealing
NBR, EPDM or VITON

Materials

- housing
 - DN 50 – 250 1.4404
 - DN 300 – 600 1.4307
 - DN 700 – 1000 1.4571
- flanging ring
 - DN 700 – 1000 1.4571
- valve plate 1.4571
- slide cups
 - DN 50 – 250 GRP
 - DN 300 – 600 PP
- sealing EPDM, VITON or NBR
- slide parts
 - DN 700 – 1000 CuSn6 / CuAL10Ni
- stuffing box gland
 - DN 50 – 150 1.4301
 - DN 200 – 450 1.4541
 - DN 500 – 600 1.4301
 - DN 700 – 1000 1.4571
- packing assembly
 - packing aramid fibre with impregnation of PTFE
 - p-ring EPDM, VITON or NBR
- press gland
 - DN 50 -150 PE-HMW
- bracket 1.4301
- screws / nuts A2
- max. operating pressure
 - DN 50 – 80 8 bar
 - DN 100 – 200 6 bar
 - DN 250 – 300 4 bar
 - DN 350 – 600 2.5 bar
 - DN 700 – 1000 1.5 bar
- max. operating temperature
 - with sealing NBR 105° C
 - with sealing EPDM 120° C
 - with sealing VITON 200° C

Operating elements – the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body type: CAW
- operating elements type Hns, P, E, GK, K, X (accessories such as e.g. extensions on inquiry)

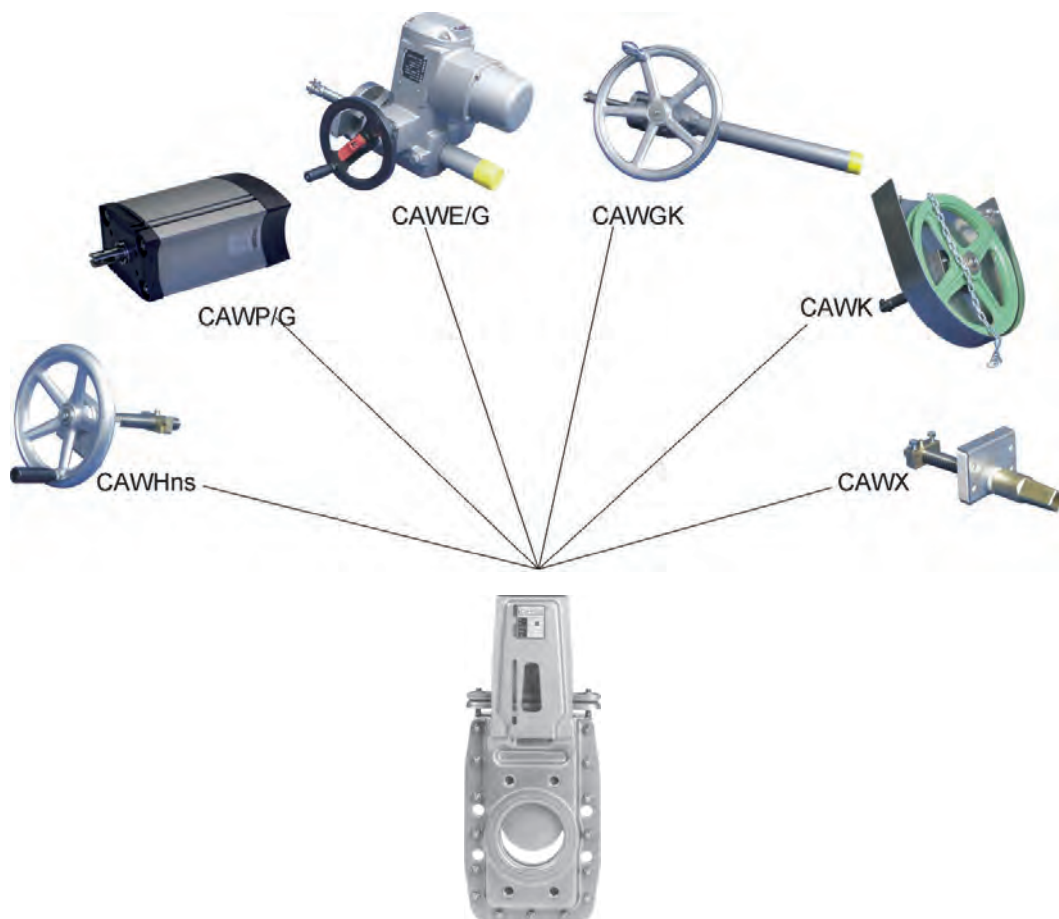
All elements are interchangeable for any given size. Thereby the connections of brackets as well as the coupling of actuator and valve plate will be removed and fixed again after the exchange. No removal of incorporated valve body (notice safety rules – pipes must be pressureless).

This facility is called the **LOHSE modular system** which offers the following advantages:

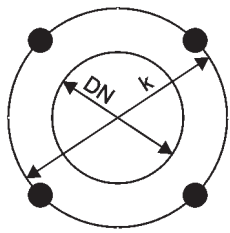
- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- if any valve drives have to be altered, replacement is easy and quick

Protection guards (G)

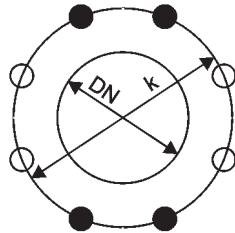
According to machinery directive 2006/42/EG guards are compulsory to shield all moving parts on automated gate valves.
Protection guard of stainless steel.



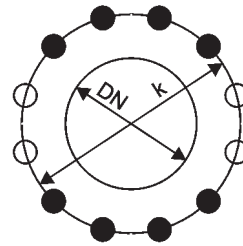
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



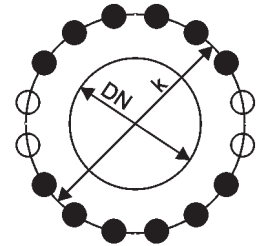
DN 50-65



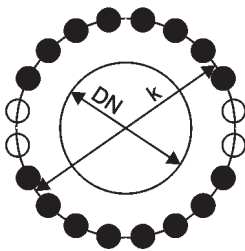
DN 80-200



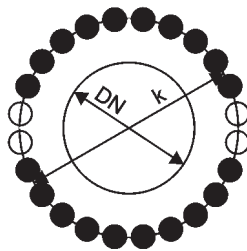
DN 250-300



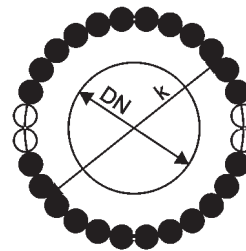
DN 350-400



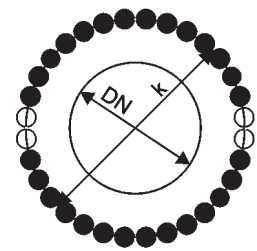
DN 450-600



DN 700-800

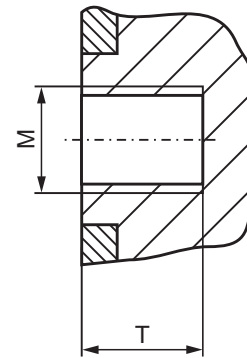


DN 900-1000



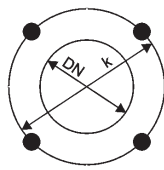
DN 1100-1200

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
50	125	4	M16	12	4	-
65	145	4	M16	12	4	-
80	160	8	M16	12	4	4
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4
900	1050	28	M30	45	24	4
1000	1160	28	M33	45	24	4
1100	1270	32	M33	50	28	4
1200	1380	32	M36	55	28	4

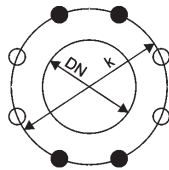


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

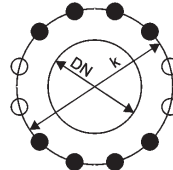
Flange bores for LOHSE COMPACT-valves
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



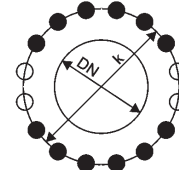
DN 50-80



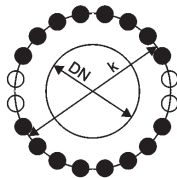
DN 100-200



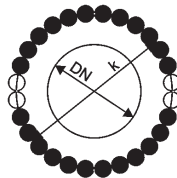
DN 250-350



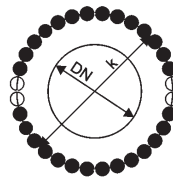
DN 400-450



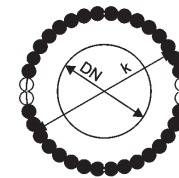
DN 500-600



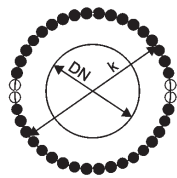
DN 700-800



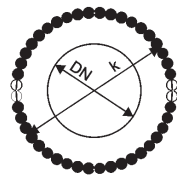
DN 900



DN 1000

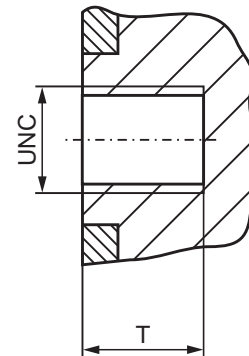


DN 1100



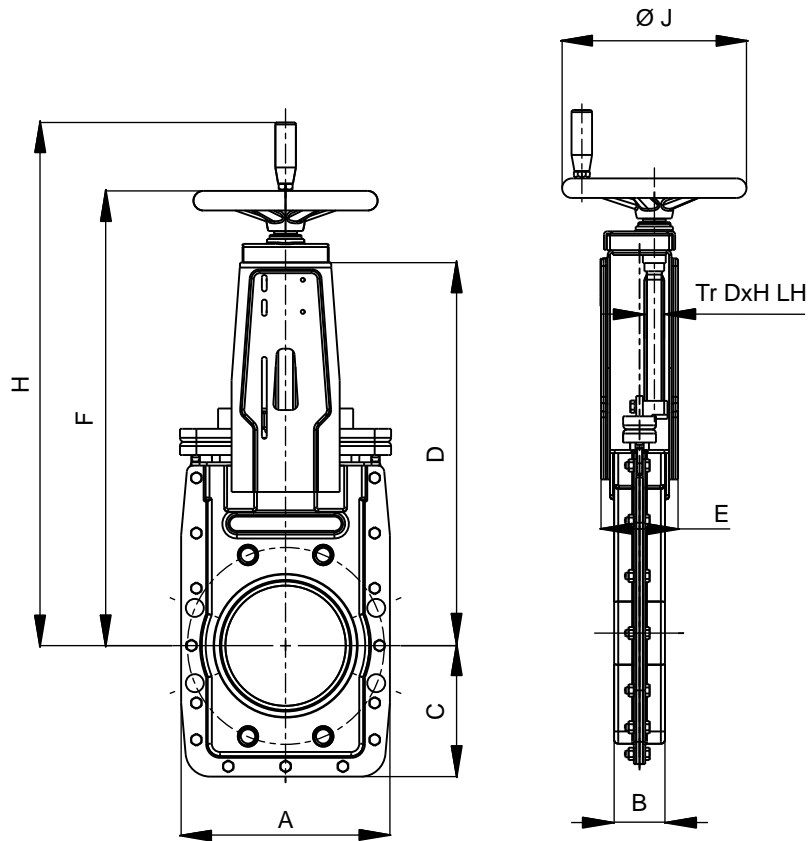
DN 1200

DN [mm]	DN [inch]	K [mm]	K [inch]	Z	UNC	T [mm]	T [inch]	Z1	Z2
50	2	120.6	4 3/4	4	5/8"-11	12	0.472	4	-
65	2.5	139.7	5 1/2	4	5/8"-11	12	0.472	4	-
80	3	152.4	6	4	5/8"-11	12	0.472	4	-
100	4	190.5	7 1/2	8	5/8"-11	12	0.472	4	4
125	5	215.9	8 1/2	8	3/4"-10	12	0.472	4	4
150	6	241.3	9 1/2	8	3/4"-10	16	0.630	4	4
200	8	298.5	11 3/4	8	3/4"-10	16	0.630	4	4
250	10	362	14 1/4	12	7/8"-9	20	0.787	8	4
300	12	431.8	17	12	7/8"-9	20	0.787	8	4
350	14	476.3	18 3/4	12	1"-8	20	0.787	8	4
400	16	539.8	21 1/4	16	1"-8	23	0.910	12	4
450	18	577.9	22 3/4	16	1 1/8"-7	30	1.181	12	4
500	20	635	25	20	1 1/8"-7	30	1.181	16	4
600	24	749.3	29 1/2	20	1 1/4"-7	35	1.378	16	4
700	28	863	34	28	1 1/4"-7	40	1.575	24	4
800	32	978	38 1/2	28	1 1/2"-6	45	1.772	24	4
900	36	1086	42 3/4	32	1 1/2"-6	45	1.772	28	4
1000	40	1200	47 1/4	36	1 1/2"-6	45	1.775	32	4
1100	44	1314	51 3/4	40	1 1/2"-6	50	1.969	36	4
1200	48	1422	56	44	1 1/2"-6	55	2.165	40	4



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

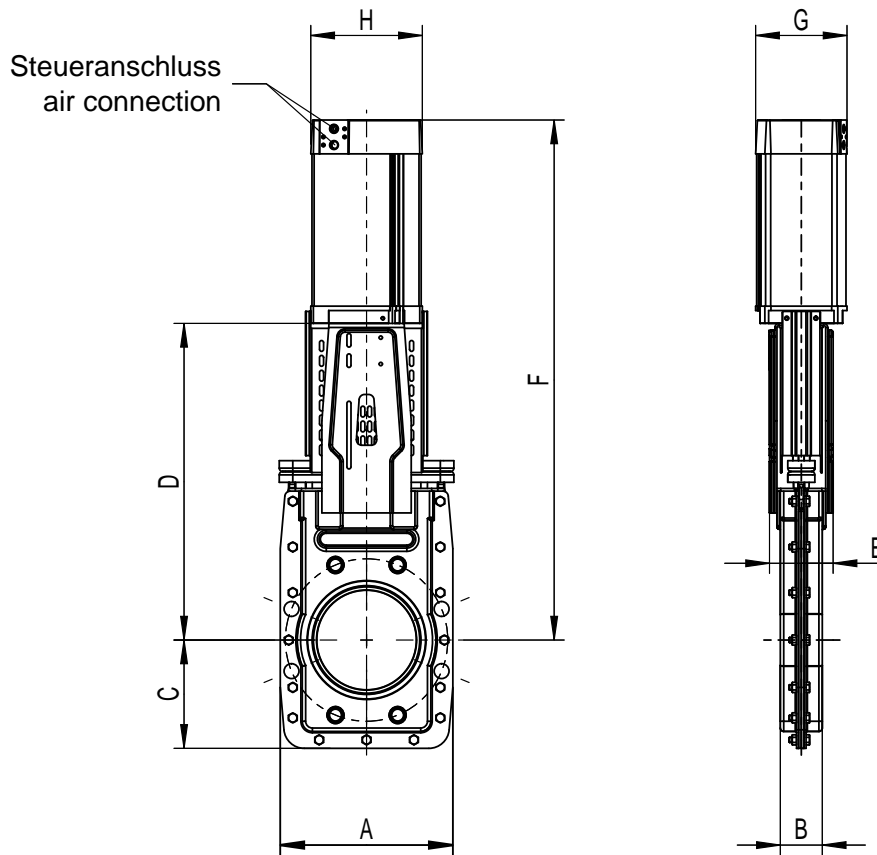
COMPACT-valve sewage execution handwheel drive with non-rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	8	185	42	100	313	78	394	478	180	20 x 4	9
65	8	185	42	100	313	78	394	478	180	20 x 4	9
80	8	175	52	125	313	78	395	478	180	20 x 4	9
*)100	6	210	52	135	368	94	456	539	225	24 x 5	13
*)125	6	230	52	145	413	94	500	584	225	24 x 5	15
*)150	6	255	62	160	468	94	556	639	225	24 x 5	19
200	6	328	60	189	557	143	656	739	280	30 x 6	38
250	4	400	68	230	668	166	767	850	280	30 x 6	49
300	4	450	72	260	764	170	869	–	360	30 x 6	77
350	2.5	510	72	290	907	190	998	–	360	30 x 6	129
400	2.5	575	90	326	1059	190	1163	–	500	30 x 6	182
450	2.5	630	92	315	1200	208	1304	–	500	30 x 6	249
500	2.5	700	92	350	1265	228	1384	–	500	36 x 6	263
600	2.5	810	112	405	1495	268	1614	–	500	36 x 6	461

*) opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

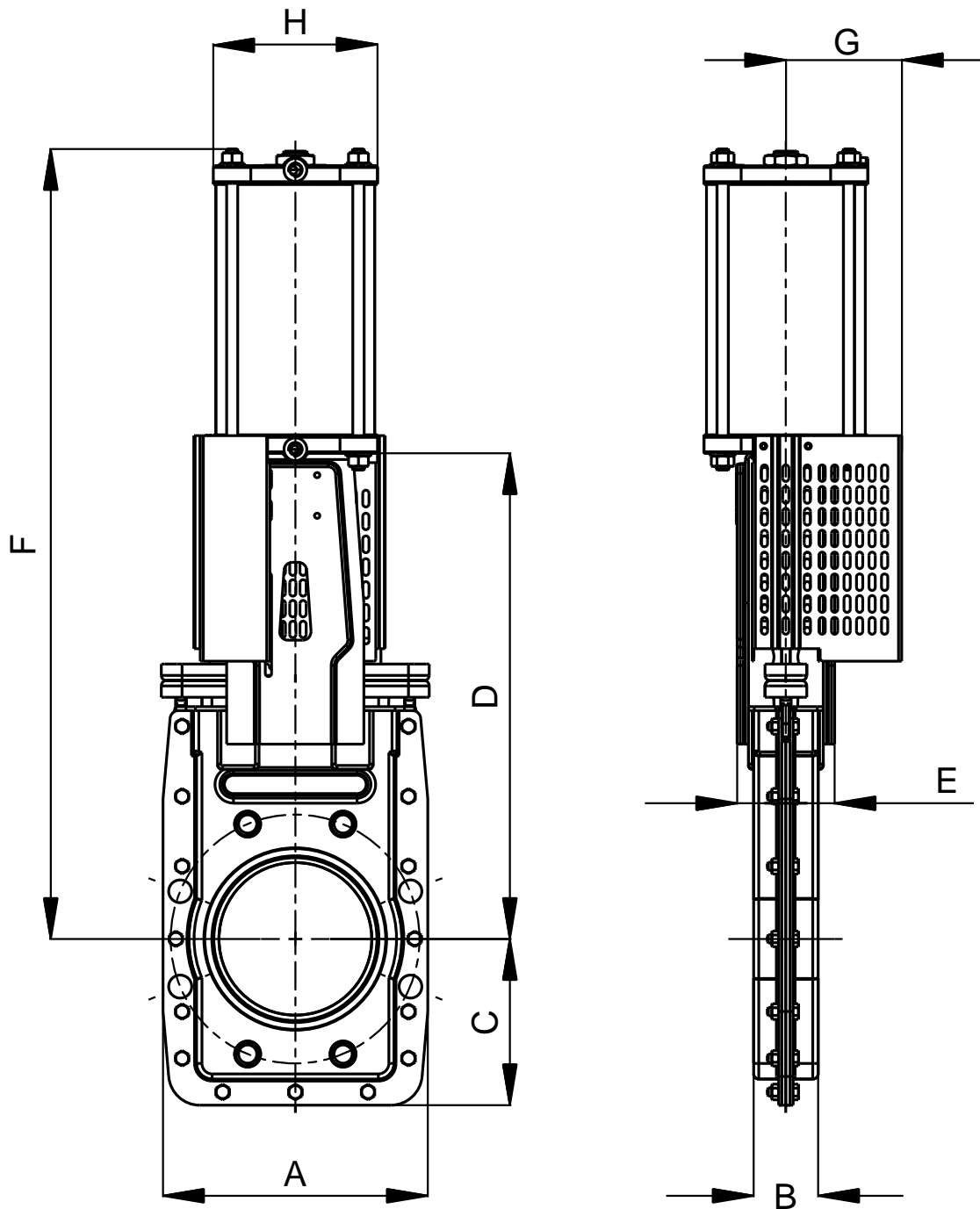
COMPACT-valve sewage execution
pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	Zyl Ø	air connection	control pressure [bar]	weight ~[kg]
50	8	185	42	100	313	78	495	118	139	100	G 1/4"	6	11.2
65	8	185	42	100	313	78	510	118	139	100	G 1/4"	6	11.6
80	8	175	52	123	313	78	523	118	139	100	G 1/4"	6	11.6
*)100	6	210	52	135	368	94	596	118	139	100	G 1/4"	6	15.4
*)125	6	255	52	145	413	94	691	145	165	125	G 1/4"	6	20.4
*)150	6	255	62	160	468	94	768	145	165	125	G 1/4"	6	24.3
200	6	328	60	190	557	143	917	178	204	160	G 1/4"	6	48.5
250	4	400	68	230	668	166	1069	178	204	160	G 1/4"	6	65.5
300	4	450	72	260	764	170	1224	178	204	160	G 1/4"	6	78
350	2.5	510	72	290	907	190	1452	215	244	200	G 1/2"	6	156
400	2.5	575	90	326	1059	190	1650	215	244	200	G 1/2"	6	204
450	2.5	630	92	315	1200	190	1870	242	283	230	G 1/2"	6	310
500	2.5	700	92	350	1265	210	1985	242	283	230	G 1/2"	6	343

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150);
air connection acc. VDI/VDE 3845 (NAMUR). Further sizes on request.

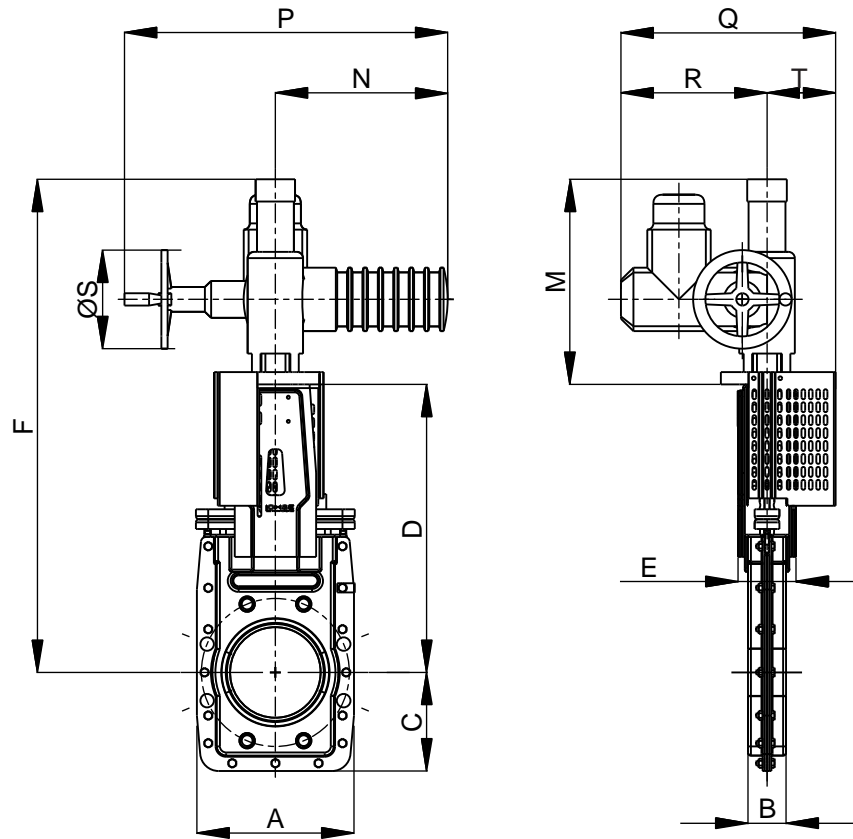
COMPACT-valve sewage execution
pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	Zyl Ø	air connection	control pressure [bar]	weight ~[kg]
600	2.5	810	112	405	1495	268	2314	318	318	300	G 1/2"	6	517

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150). Further sizes on request.

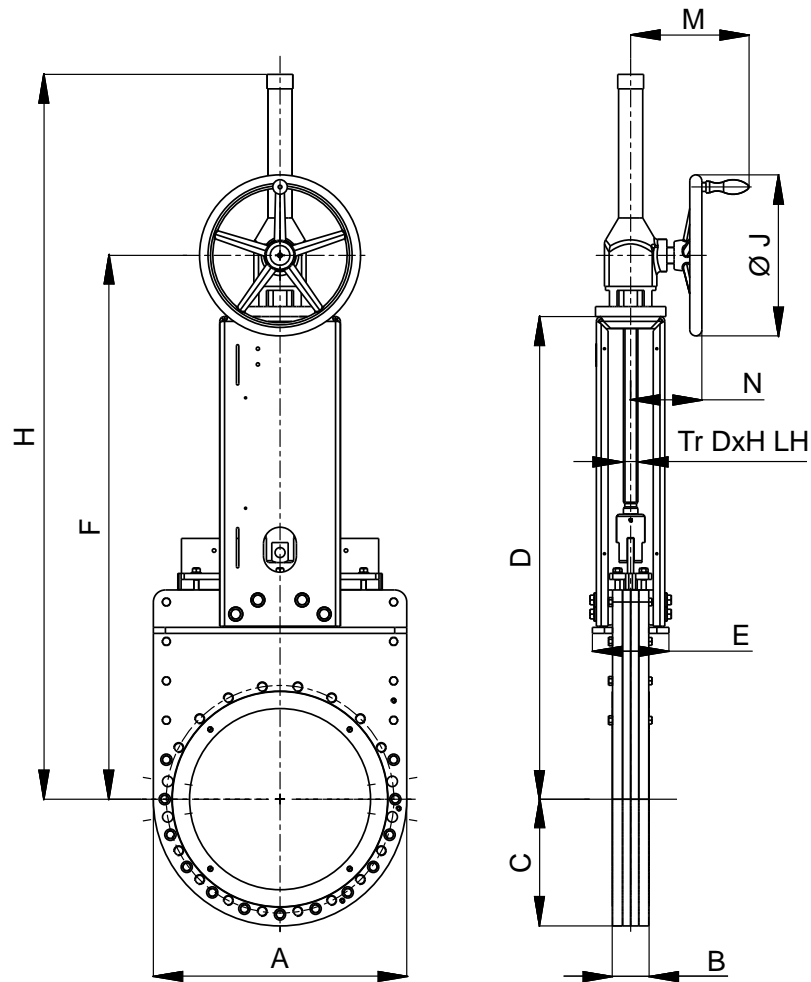
COMPACT-valve sewage execution
electric drive and protection guard



DN	PS [bar]	A	B	C	D	E	F	M	N	P	Q	R	ØS	T	stem Tr DxH	closing time [s]	weight ~[kg]
50	8	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	18	32
65	8	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	23	32
80	8	175	52	125	313	78	646	333	280	515	349	237	160	112	20 x 4	28	32
*)100	6	210	52	135	368	94	701	333	280	515	349	237	160	112	24 x 5	27	37
*)125	6	230	52	145	413	94	746	333	280	515	349	237	160	112	24 x 5	34	38
*)150	6	255	62	160	468	94	801	333	280	515	349	237	160	112	24 x 5	41	42
200	6	328	60	190	557	143	902	345	355	536	373	247	200	126	30 x 6	45	58
250	4	400	68	230	668	166	1013	345	355	536	373	247	200	126	30 x 6	56	84
300	4	450	72	260	764	170	1202	438	355	536	373	247	200	126	30 x 6	67	96
350	2.5	510	72	290	907	190	1350	443	355	536	389	247	200	142	36 x 6	78	151
400	2.5	575	90	326	1059	190	1602	543	355	536	393	247	200	146	36 x 6	90	198
450	2.5	630	92	315	1200	208	1808	560	355	536	436	247	200	151	36 x 6	102	304
500	2.5	700	92	350	1265	228	1873	608	380	713	436	285	315	151	36 x 6	115	328
600	2.5	810	112	405	1495	268	2203	708	380	713	446	285	315	161	44 x 7	138	554

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

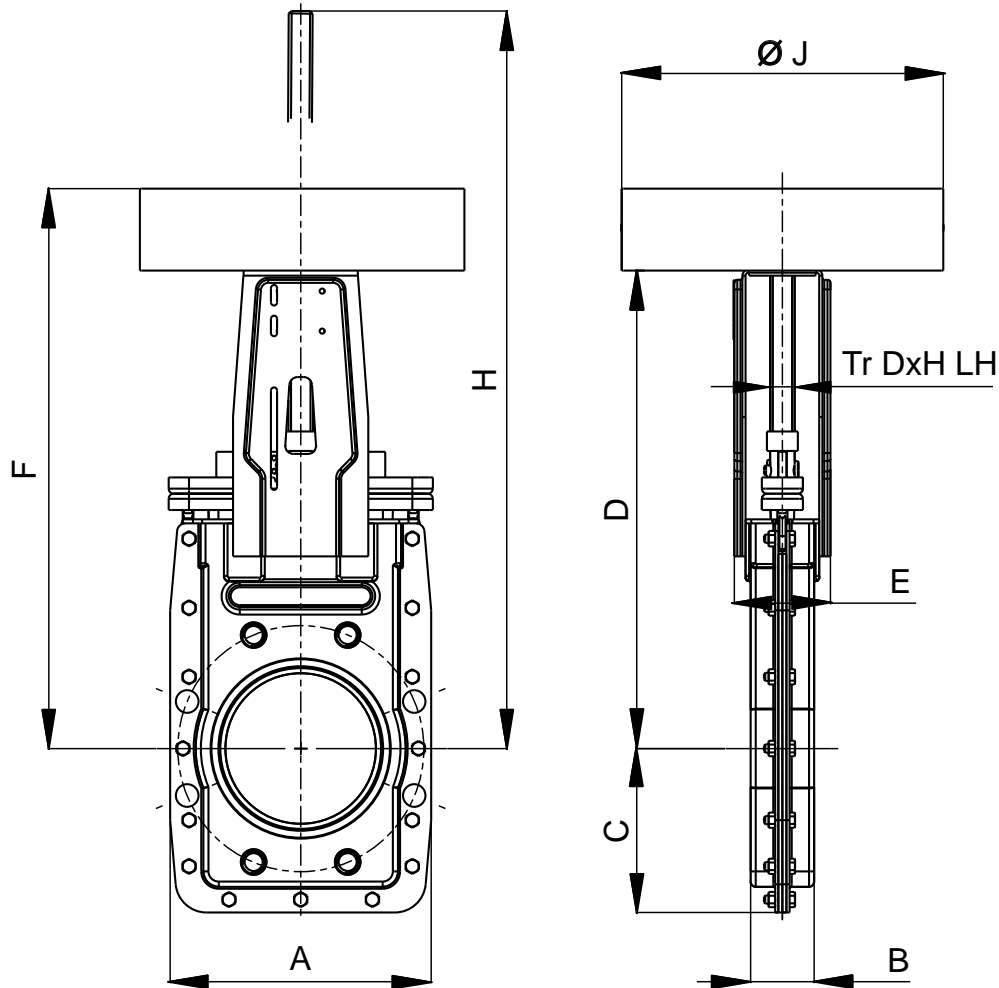
COMPACT-valve sewage execution bevel gear box handwheel



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	M	N	Tr D x H LH	weight ~[kg]
200	6	328	60	190	557	143	704	909	360	278	174	30 x 6	55
250	4	400	68	230	668	166	815	1070	360	278	174	30 x 6	72
300	4	450	72	260	764	170	911	1216	360	278	174	30 x 6	83
350	2.5	520	72	290	907	190	1059	1414	400	295	185	36 x 6	145
400	2.5	578	90	326	1059	190	1211	1611	400	295	185	36 x 6	195
450	2.5	630	92	315	1200	208	1352	1802	400	295	185	36 x 6	273
500	2.5	700	92	350	1265	228	1455	1947	400	340	222	36 x 6	292
600	2.5	810	112	405	1495	268	1685	2250	500	340	222	44 x 7	493
700	1.5	960	150	480	1756	307	1946	2422	500	340	222	44 x 7	1075
800	1.5	1060	150	530	1976	307	2166	2927	500	340	222	44 x 7	1265
900	1.5	1170	160	585	2108	311	2307	3159	500	340	222	44 x 7	1473

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

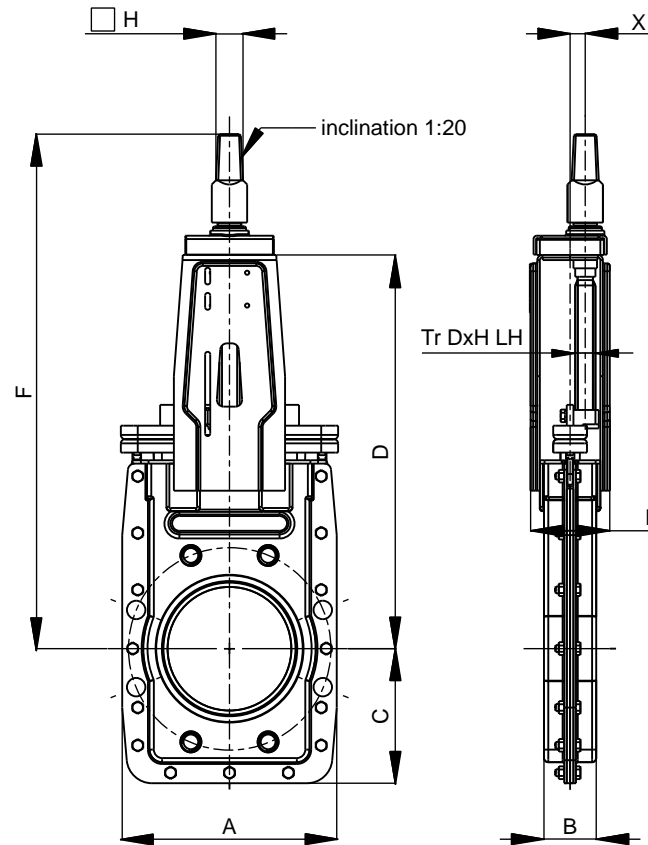
COMPACT-valve sewage execution
spocket drive



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	8	185	42	100	313	78	394	397	274	20 x 4	14
65	8	185	42	100	313	78	394	412	274	20 x 4	14
80	8	175	52	125	313	78	394	437	274	20 x 4	14
*)100	6	210	52	135	368	94	447	520	314	24 x 5	18
*)125	6	230	52	145	413	94	492	595	314	24 x 5	21
*)150	6	255	62	160	468	94	547	665	314	24 x 5	25
200	6	328	60	190	557	143	636	821	394	30 x 6	50
250	4	400	68	230	668	166	747	981	394	30 x 6	66
300	4	450	72	260	764	170	843	1131	394	30 x 6	87
350	2.5	510	72	290	907	190	1000	1350	516	36 x 6	133
400	2.5	575	90	326	1059	190	1152	1550	516	36 x 6	202

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

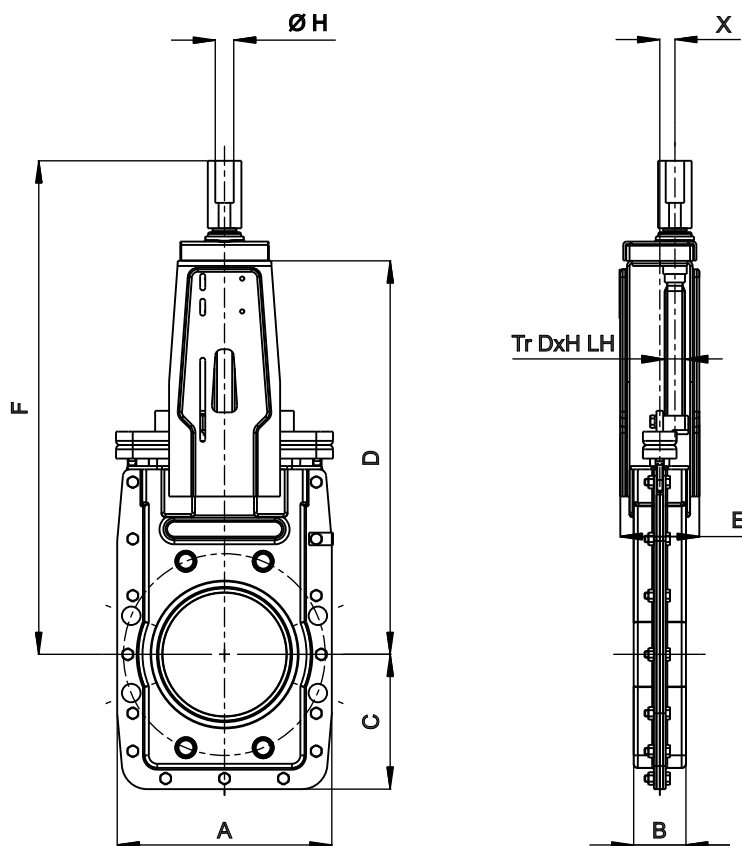
COMPACT-valve sewage execution
square head



DN	PS [bar]	A	B	C	D	E	F	H	X	Tr D x H LH	weight ~[kg]
50	8	185	42	100	313	78	455	32	15	20 x 4	9
65	8	185	42	100	313	78	455	32	15	20 x 4	10
80	8	175	52	125	313	78	456	32	15	20 x 4	10
*)100	6	210	52	135	368	94	512	32	18	24 x 5	13
*)125	6	230	52	145	413	94	557	32	18	24 x 5	15
*)150	6	255	62	160	468	94	612	32	18	24 x 5	18
200	6	328	60	190	557	143	707	32	22	30 x 6	38
250	4	400	68	230	668	166	818	32	22	30 x 6	51
300	4	450	72	260	764	170	914	32	22	30 x 6	67
350	2.5	510	72	290	907	190	1043	32	26	36 x 6	96
400	2.5	575	90	326	1059	190	1195	32	26	36 x 6	136
450	2.5	630	92	315	1200	208	1336	32	28.5	36 x 6	261
500	2.5	700	92	350	1265	228	1416	32	35	36 x 6	311
600	2.5	810	112	405	1495	268	1646	32	35	44 x 7	468

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-valve sewage execution round sleeve



DN	PS [bar]	A	B	C	D	E	F	H	X	Tr D x H LH	weight ~[kg]
50	8	185	42	100	313	78	430	20	15	20 x 4	9
65	8	185	42	100	313	78	430	20	15	20 x 4	10
80	8	175	52	125	313	78	431	20	15	20 x 4	10
*)100	6	210	52	135	368	94	487	22	18	24 x 5	13
*)125	6	230	52	145	413	94	531	22	18	24 x 5	15
*)150	6	255	62	160	468	94	587	22	18	24 x 5	18
200	6	328	60	190	557	143	692	25	22	30 x 6	38
250	4	400	68	230	668	166	803	25	22	30 x 6	51
300	4	450	72	260	764	170	899	30	22	30 x 6	67
350	2.5	510	72	290	907	193	1048	30	26	30 x 6	96
400	2.5	575	90	326	1059	190	1200	30	26	30 x 6	136
450	2.5	630	92	315	1200	208	1341	30	28.5	30 x 6	231
500	2.5	700	92	350	1265	228	1421	35	35	36 x 6	311
600	2.5	810	112	405	1495	268	1651	35	35	36 x 6	468

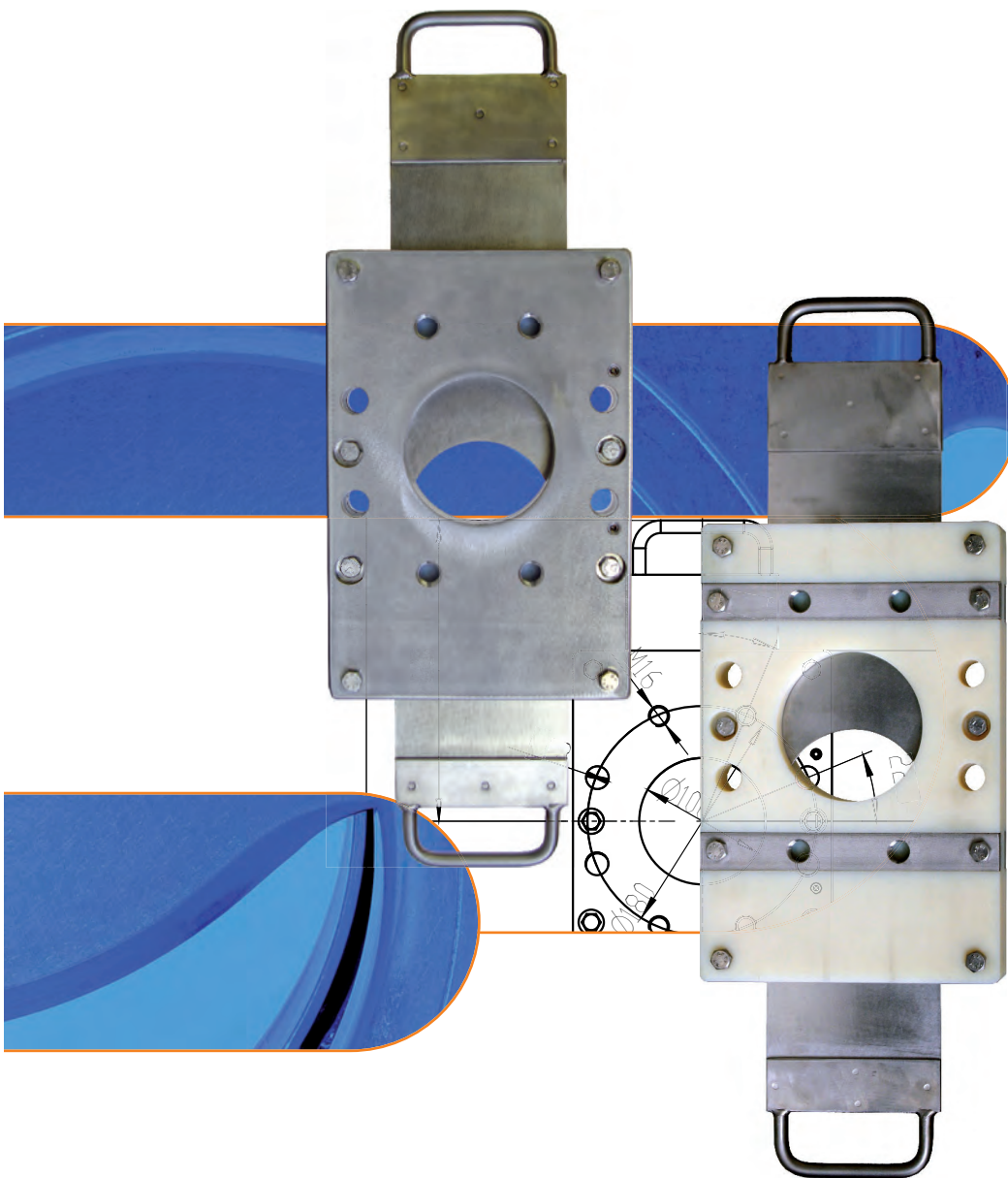
*) Opening DN - 3mm, full opening on request.
 Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
 Further sizes on request.

Valves of stainless steel

Shut-off-Valves

for bulk materials
in lightweight construction

CPD



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

Applications



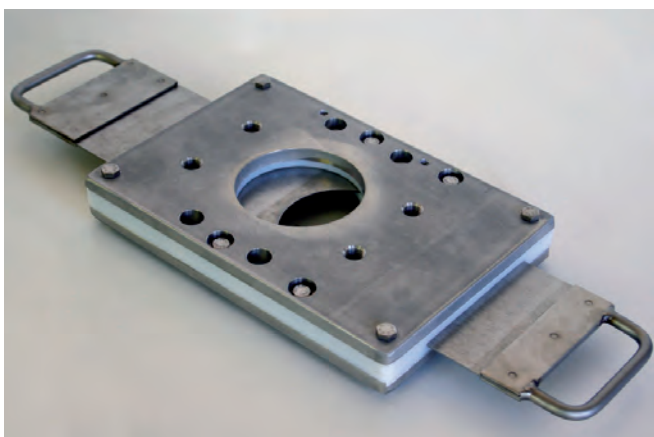
Chemical industry

LOHSE-COMPACT-bulk material valves have proved their value and reliability in all branches of chemical industries. The type is suitable for shut-off of bulk material.



Food industry and pharmaceutical industrie

LOHSE-COMPACT-valves are used as shut-off-valves for granual media.



Construction

Housing

- stainless steel - absolutely dimensionally stable
or
PE (Light-Version)
- corrosion and acid resistant
- light
- easy to maintain

Slide cups PE

- abrasion resistant
- excellent anti-friction proppe
- temperature and acid resistant
- easily replaceable

Valve plate stainless steel

- almost no dead space when open

Bore cross section = nominal diameter of piping

- blockage-free
- no stringing of fibres is possible

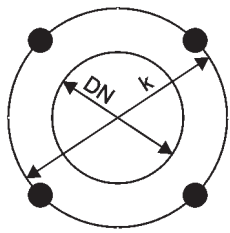
Actuator variants

- handle
- pneumatic cylinder
- electric actuator

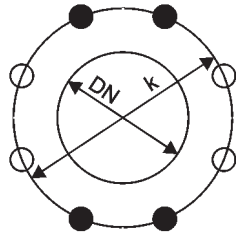
Materials

- housing
 - normal version: 1.4307
 - light version: PE / 1.4307
- valve plate 1.4571
- slide cups PE
- scraper Filz
- handle 1.4301
- screws / nuts A2
- max. operating pressure 2 bar
- max. operating temperature 80° C

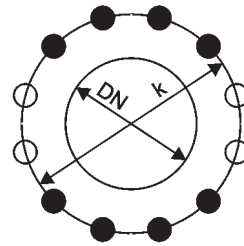
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



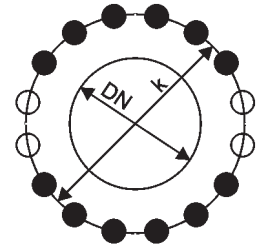
DN 50-65



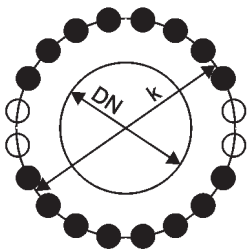
DN 80-200



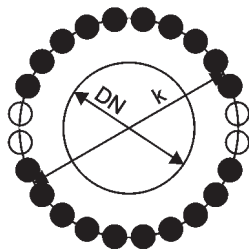
DN 250-300



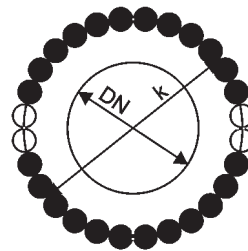
DN 350-400



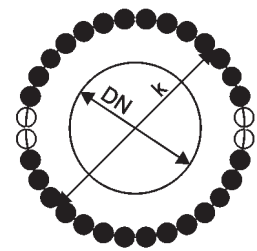
DN 450-600



DN 700-800

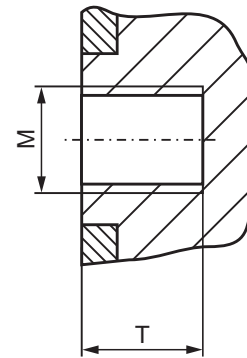


DN 900-1000



DN 1100-1200

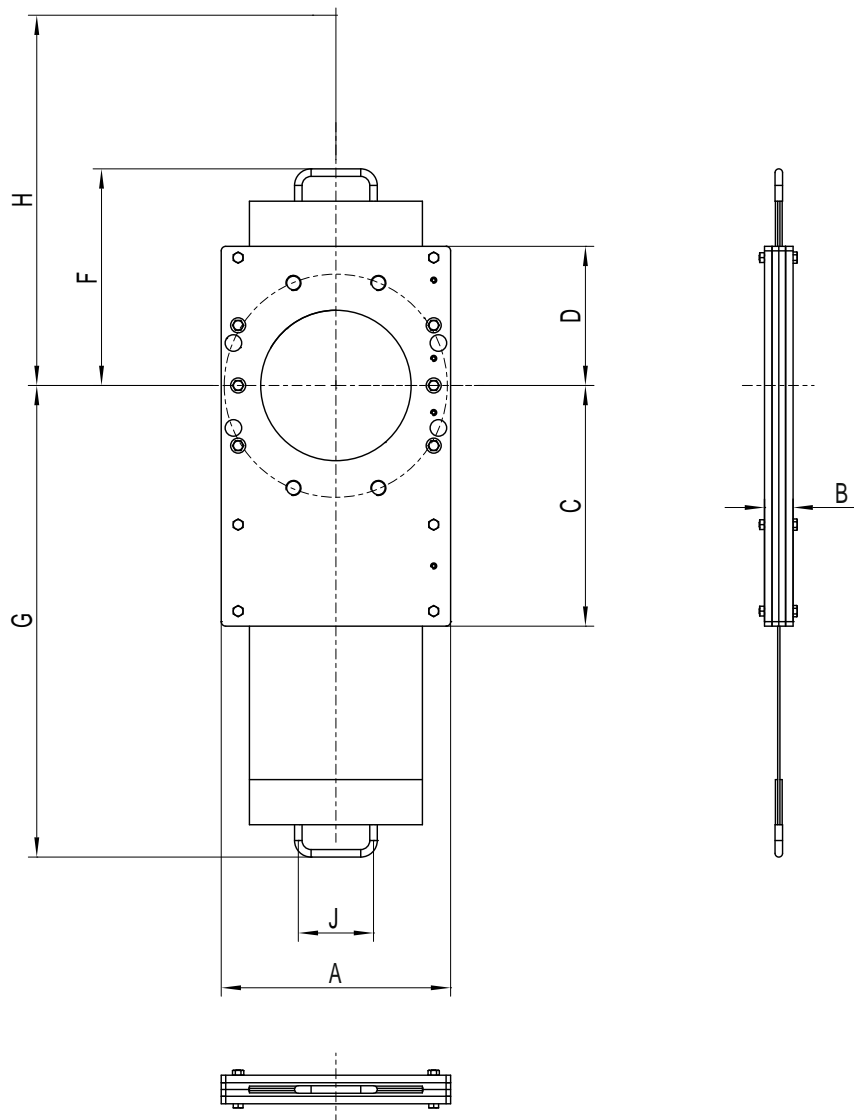
DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
50	125	4	M16	12	4	-
65	145	4	M16	12	4	-
80	160	8	M16	12	4	4
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4
900	1050	28	M30	45	24	4
1000	1160	28	M33	45	24	4
1100	1270	32	M33	50	28	4
1200	1380	32	M36	55	28	4



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

COMPACT-bulk material valve with through-going valve plate handle

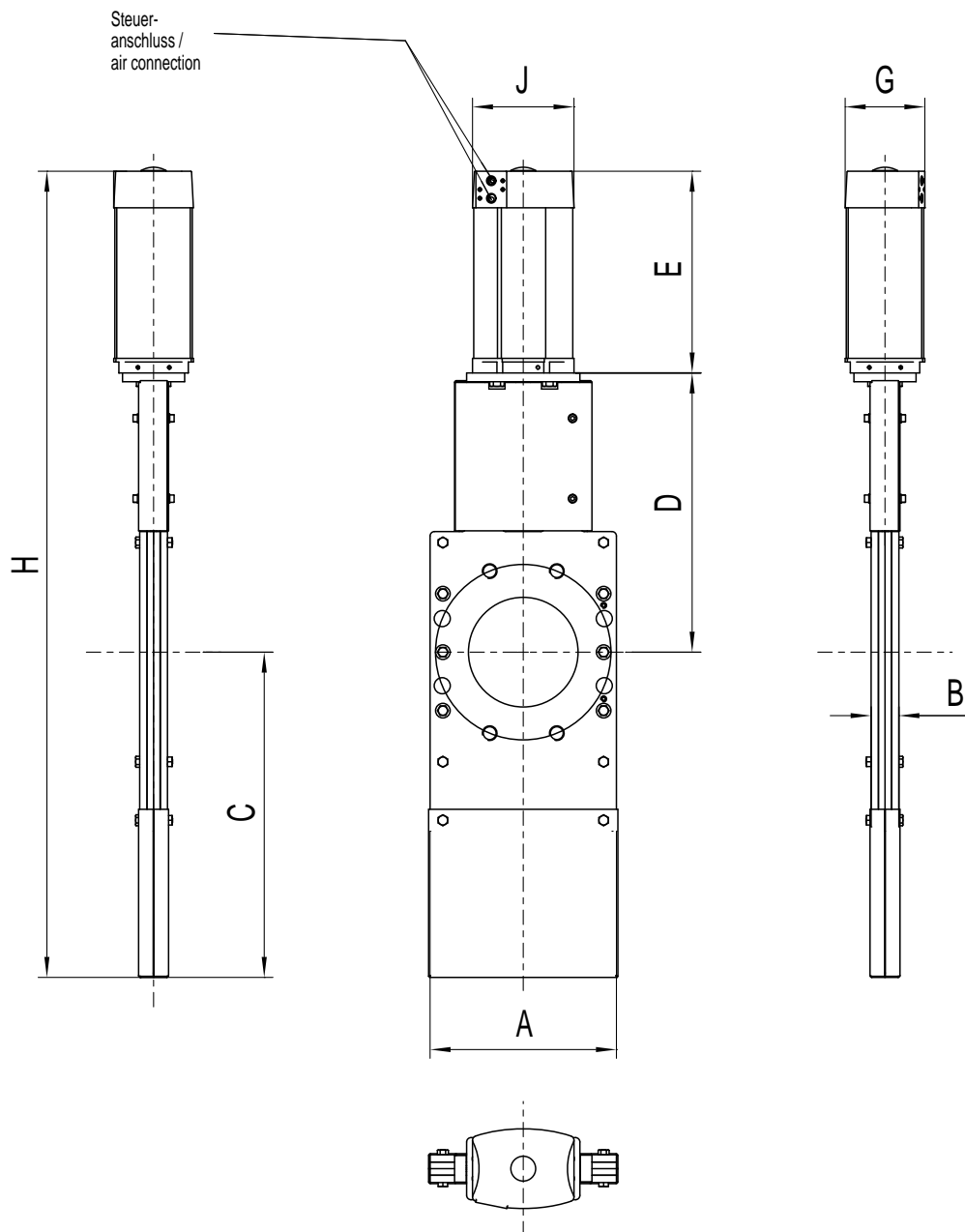
CPDBG light same sizes



DN	PS [bar]	A	B	C	D	F	G	H max.	J	weight ~[kg]
100	2	205	36	170	135	238	352	342	100	10.7
150	2	255	38	245	165	248	482	402	100	17.1
200	2	305	38	320	185	288	627	492	100	25.7
250	2	380	38	400	210	313	757	567	100	39.9
300	2	430	42	475	235	338	882	642	100	53.9
350	2	480	56	550	290	392	1006	456	100	85.7
400	2	540	68	635	380	521	1186	931	125	169.2

Dimensions in mm, fl ange dimensions to DIN EN 1092-1, PN 10.
Further sizes on request.

COMPACT-bulk material valve with through-going valve plate
pneumatic-cylinder and protection guard



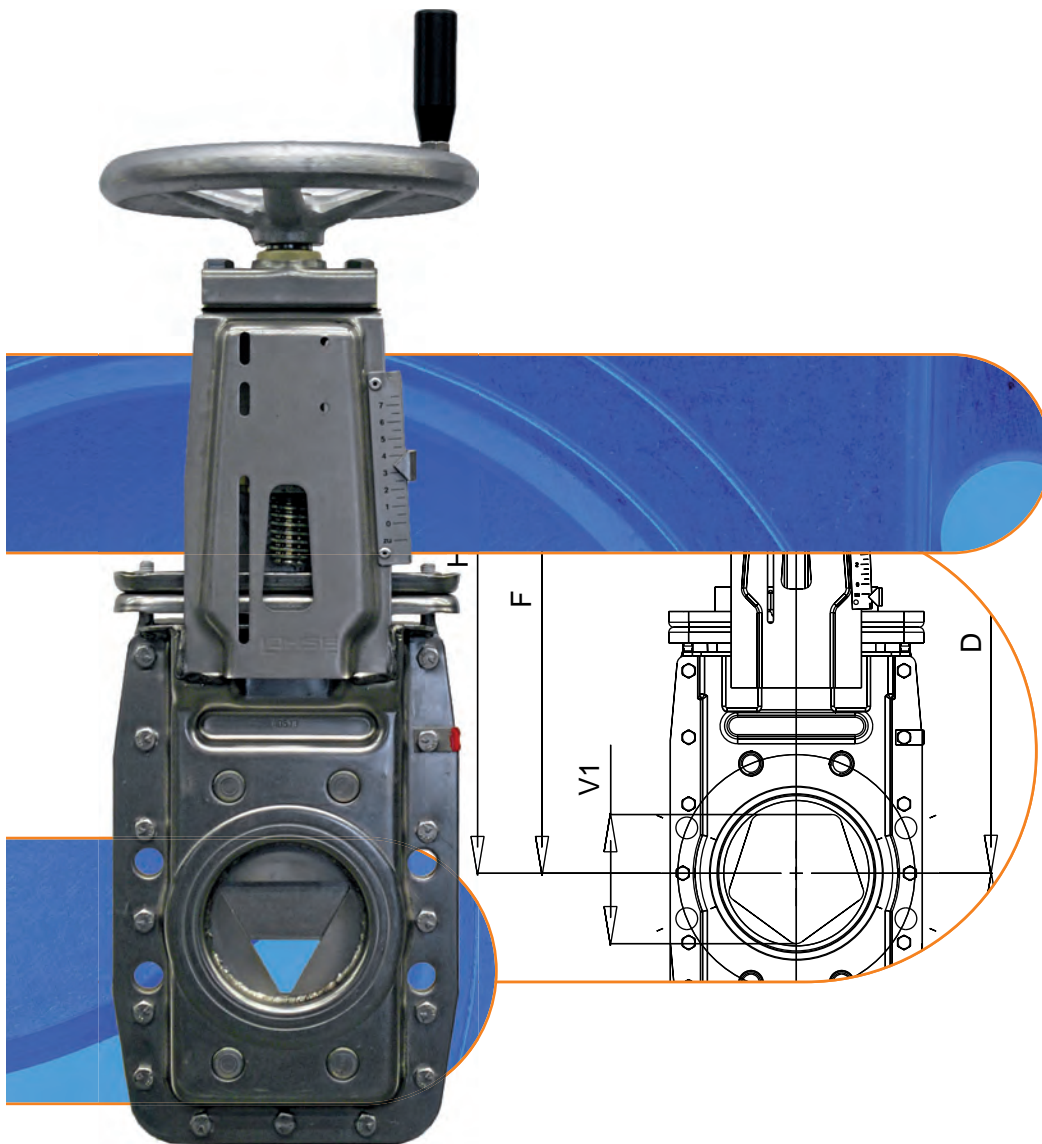
DN	PS [bar]	A	B	C	D	E	G	H	J	cyl Ø	air connection	control pressure [bar]	weight ~[kg]
100	2	205	39	315	307	240	118	862	139	100	1/4"	6	21.4
150	2	255	38	445	382	276	118	1103	139	100	1/4"	6	28.3
200	2	308	38	600	485	347	145	1432	165	125	1/4"	6	47.1
300	2	435	42	805	635	460	178	1945	204	160	1/4"	6	87.6

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10
air connection acc. VDI/VDE 3845 (NAMUR).
Further sizes on request.

Valves of stainless steel · COMPACT-Program

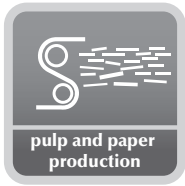
Regulating Valves

CBS 50 – 600 mm



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

Applications



Paper industry and chemical industry

LOHSE COMPACT-gate valves have proved their value and reliability in all branches of paper and chemical industries. The valves type CBS are regulating valves. The type is suitable for regulation of stock and aggressive media.



Sewage treatment

When LOHSE COMPACT-gate valves of acid resistant stainless steel are installed in waste water treatment plants, the need to use expensive isolation appliances to guard against contact-corrosion is removed.



Food industry

LOHSE COMPACT-gate valves are widely used as regulating valves for viscous and glutinous media as for instance in salt works, sugar mills, wine making industry, breweries etc.

In special designs, the non-metallic components of the LOHSE valves can be equipped with FDA-approved components. The respective suitability must be checked for each application.



Special models

For special applications, we can supply special valves constructed of various materials for differing temperatures, pressures and sealing properties to suit the particular application.

Construction

Housings entirely of stainless steel

- pressed steel design
- completely corrosion and acid resistant
- light
- easy to maintain
- the handwheel support also serves as a mounting for any switchgear or control apparatus

Slide guides of special plastic

- abrasion resistant
- excellent anti-friction properties
- temperature resistant
- acid resistant
- easily replaceable

Valve plate of stainless steel

- through its special design in combination with triangle and pentagon orifice is a constant regulation possible
- built in strength to resist water pressure vibration

Design of orifice triangle or pentagon

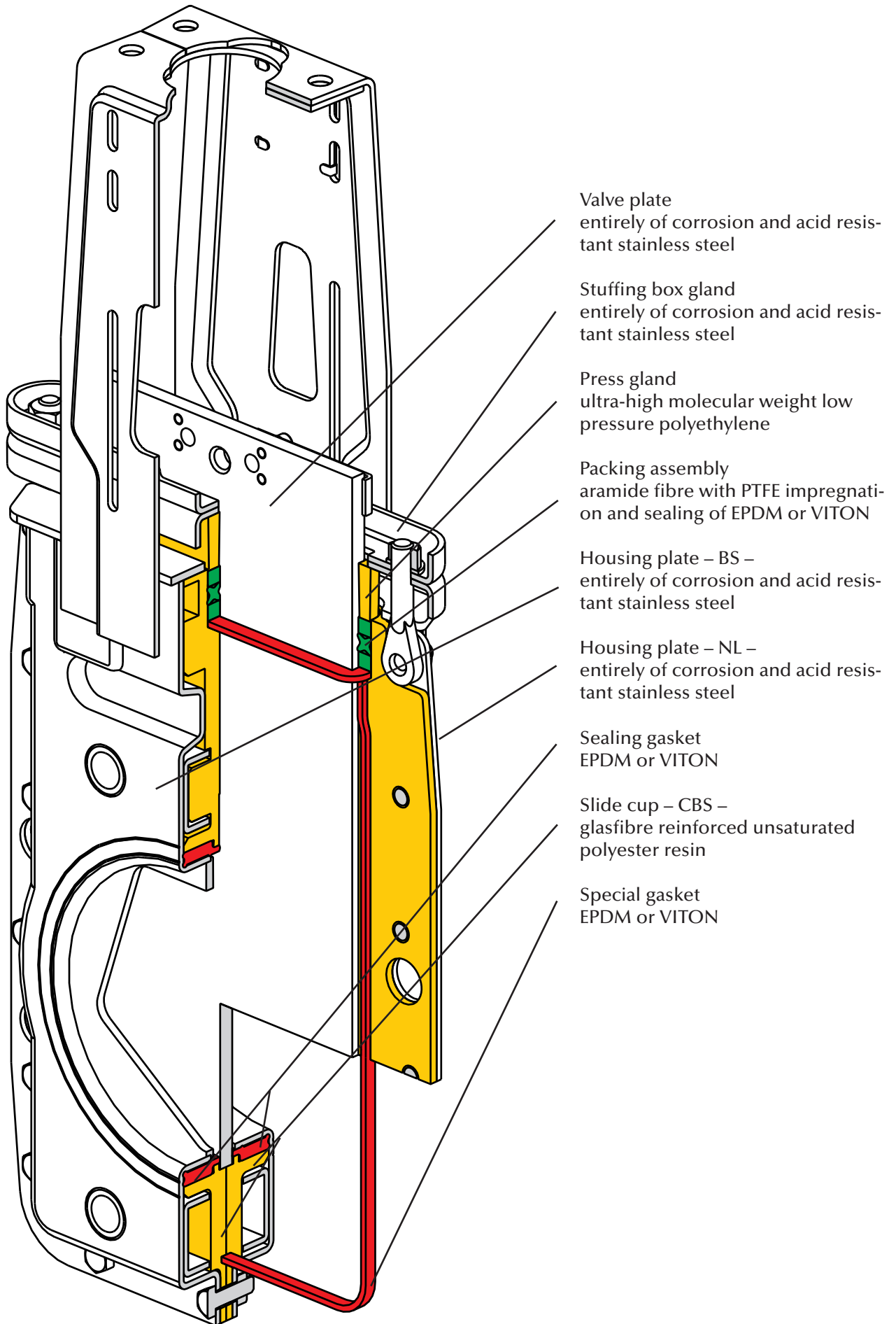
- triangle for precisely regulation
- pentagon for regulation with high flow

Actuating elements in well-proved LOHSE modular system

- interchangeable on all valves of our make
- also interchangeable on the incorporated existing valve
- reduced stock holding

Watertight

- Leak test according to DIN EN 12266-02:2012-04 Table A5, test medium liquid, leakage rate A



Valve plate
entirely of corrosion and acid resistant stainless steel

Stuffing box gland
entirely of corrosion and acid resistant stainless steel

Press gland
ultra-high molecular weight low pressure polyethylene

Packing assembly
aramide fibre with PTFE impregnation and sealing of EPDM or VITON

Housing plate – BS –
entirely of corrosion and acid resistant stainless steel

Housing plate – NL –
entirely of corrosion and acid resistant stainless steel

Sealing gasket
EPDM or VITON

Slide cup – CBS –
glasfibre reinforced unsaturated polyester resin

Special gasket
EPDM or VITON

Materials

- housing

DN 50 – 250	1.4404
DN 300 – 600	1.4541
DN 700 – 1000	1.4571
- flanging ring

DN 300 – 1000	1.4571
---------------	--------
- valve plate

	1.4571
--	--------
- slide cups

DN 50 – 250	GFRP
DN 300 – 600	PP
- sealing

	EPDM, VITON or NBR
--	--------------------
- slide parts

DN 700 – 1000	CuSn6 / CuAL10Ni
---------------	------------------
- stuffing box gland

DN 50 – 150	1.4301
DN 200 – 450	1.4541
DN 500 – 600	1.4301
DN 700 – 1000	1.4571
- packing assembly

packing	aramid fibre with impregnation of PTFE
p-ring	EPDM, VITON or NBR
- press gland

DN 50 -150	PE-HMW
------------	--------
- bracket

	1.4301
--	--------
- screws / nuts

	A2
--	----
- max. operating pressure

DN 50 – 250	10 bar
DN 300 – 500	6 bar
DN 600	4 bar
DN 700 – 1800	3 bar
- max. operating temperature with sealing of

NBR	105° C
EPDM	120° C
VITON	200° C

Operating elements – the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body type: CBS
- operating elements type Hns, H, P, PV, E, GK

All elements are interchangeable for any given size. Thereby the connections of brackets as well as the coupling of actuator and valve plate will be removed and fixed again after the exchange. No removal of incorporated valve body (notice safety rules – pipes must be pressureless).

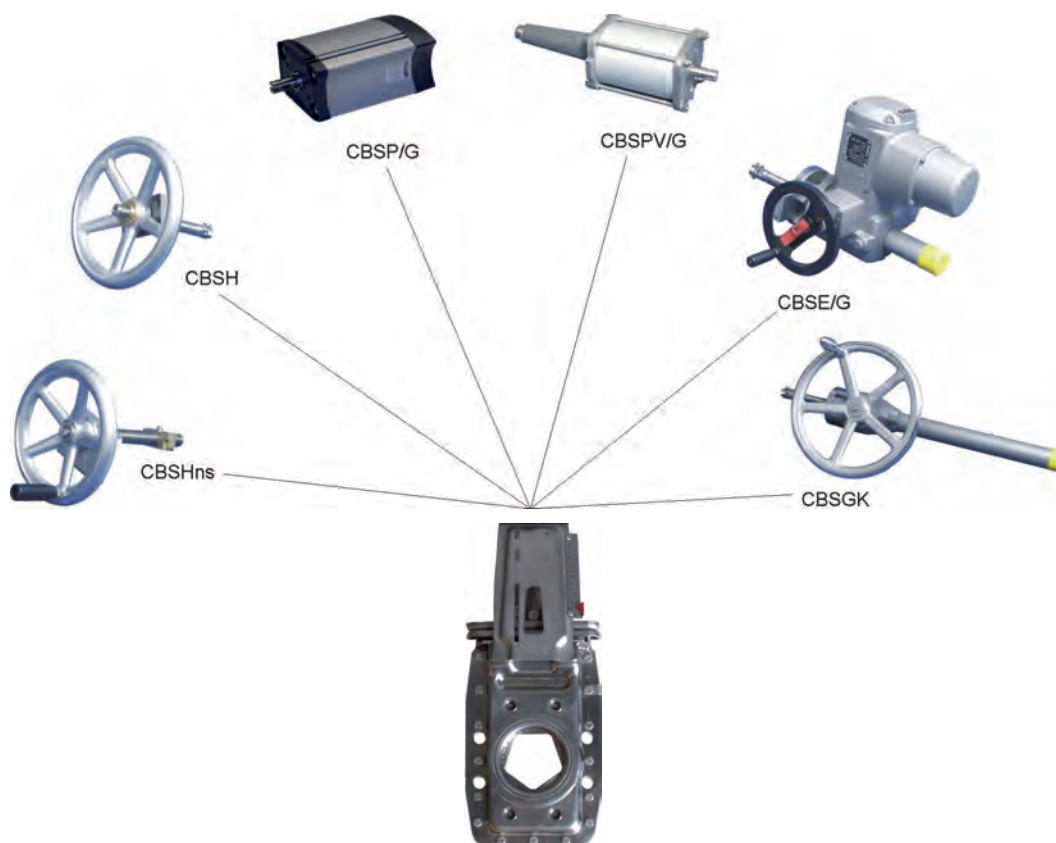
This facility is called the **LOHSE modular system** which offers the following advantages:

- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- if any valve drives have to be altered, replacement is easy and quick

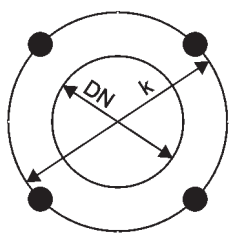
Protection guards (G)

According to machinery directive 2006/42/EG guards are compulsory to shield all moving parts on automated gate valves.

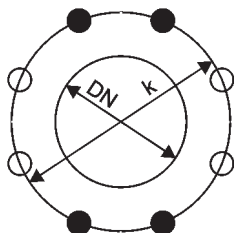
Protection guard of stainless steel.



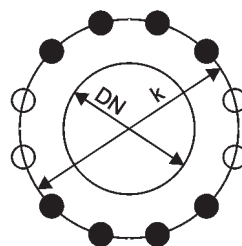
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



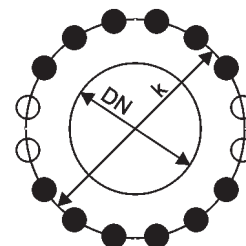
DN 50-65



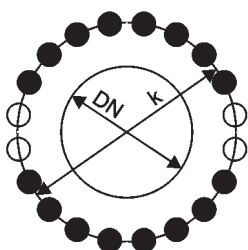
DN 80-200



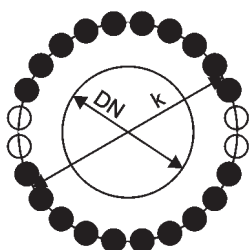
DN 250-300



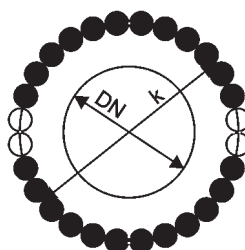
DN 350-400



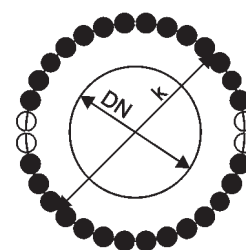
DN 450-600



DN 700-800

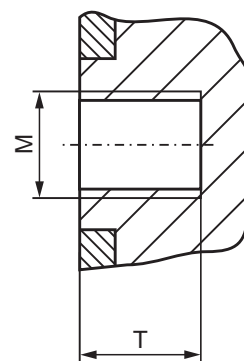


DN 900-1000



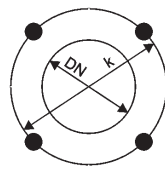
DN 1100-1200

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
50	125	4	M16	12	4	-
65	145	4	M16	12	4	-
80	160	8	M16	12	4	4
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4
900	1050	28	M30	45	24	4
1000	1160	28	M33	45	24	4
1100	1270	32	M33	50	28	4
1200	1380	32	M36	55	28	4

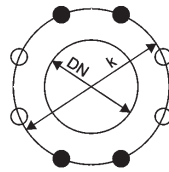


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

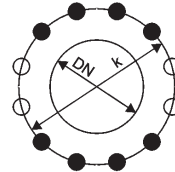
Flange bores for LOHSE COMPACT-valves
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



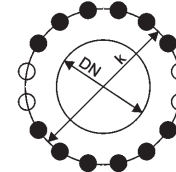
DN 50-80



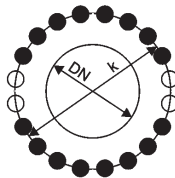
DN 100-200



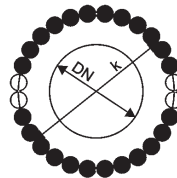
DN 250-350



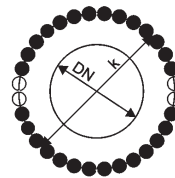
DN 400-450



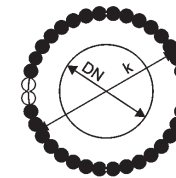
DN 500-600



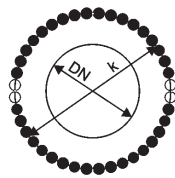
DN 700-800



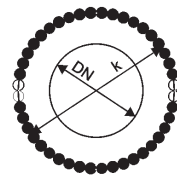
DN 900



DN 1000

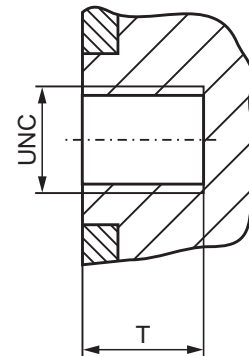


DN 1100



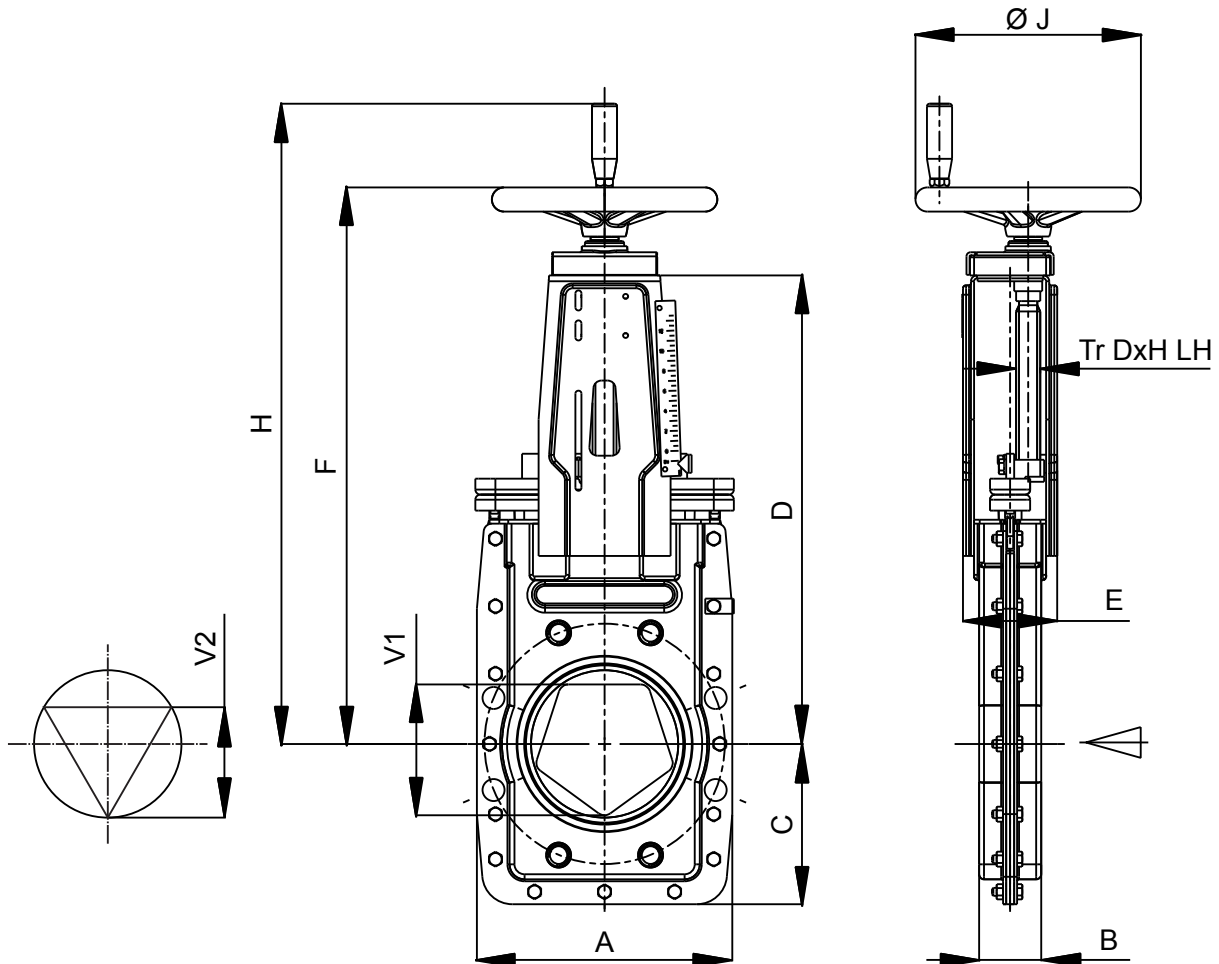
DN 1200

DN [mm]	DN [inch]	K [mm]	K [inch]	Z	UNC	T [mm]	T [inch]	Z1	Z2
50	2	120.6	4 3/4	4	5/8"-11	12	0.472	4	-
65	2.5	139.7	5 1/2	4	5/8"-11	12	0.472	4	-
80	3	152.4	6	4	5/8"-11	12	0.472	4	-
100	4	190.5	7 1/2	8	5/8"-11	12	0.472	4	4
125	5	215.9	8 1/2	8	3/4"-10	12	0.472	4	4
150	6	241.3	9 1/2	8	3/4"-10	16	0.630	4	4
200	8	298.5	11 3/4	8	3/4"-10	16	0.630	4	4
250	10	362	14 1/4	12	7/8"-9	20	0.787	8	4
300	12	431.8	17	12	7/8"-9	20	0.787	8	4
350	14	476.3	18 3/4	12	1"-8	20	0.787	8	4
400	16	539.8	21 1/4	16	1"-8	23	0.910	12	4
450	18	577.9	22 3/4	16	1 1/8"-7	30	1.181	12	4
500	20	635	25	20	1 1/8"-7	30	1.181	16	4
600	24	749.3	29 1/2	20	1 1/4"-7	35	1.378	16	4
700	28	863	34	28	1 1/4"-7	40	1.575	24	4
800	32	978	38 1/2	28	1 1/2"-6	45	1.772	24	4
900	36	1086	42 3/4	32	1 1/2"-6	45	1.772	28	4
1000	40	1200	47 1/4	36	1 1/2"-6	45	1.775	32	4
1100	44	1314	51 3/4	40	1 1/2"-6	50	1.969	36	4
1200	48	1422	56	44	1 1/2"-6	55	2.165	40	4



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

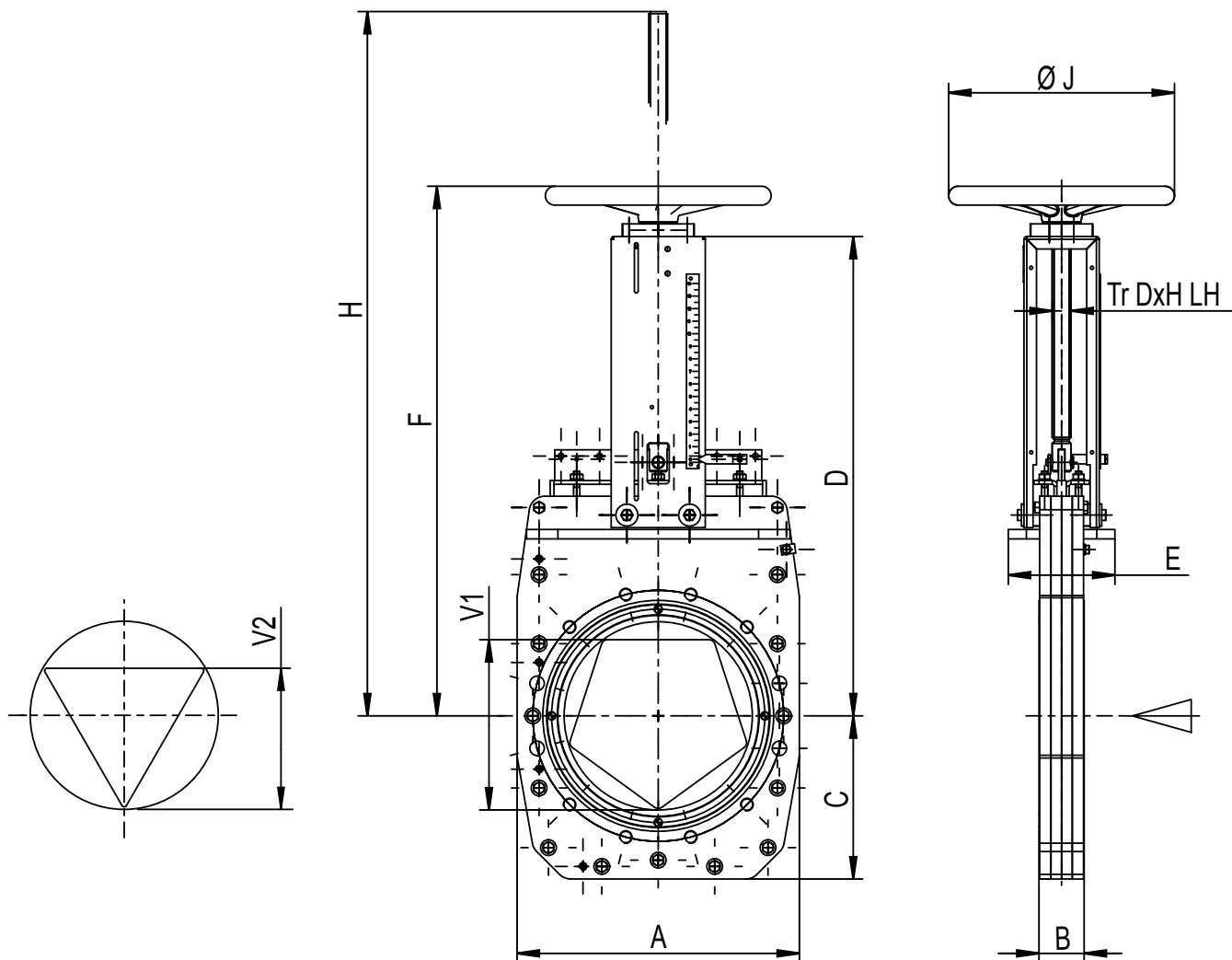
COMPACT-regulating valve with orifice
handwheel drive with non-rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	V1	V2	weight ~[kg]
50	10	185	42	100	313	78	394	478	180	20 x 4	45	38	9
65	10	185	42	100	313	78	394	478	180	20 x 4	59	49	9
80	10	175	52	125	313	78	395	478	180	20 x 4	72	49	9
*)100	10	210	52	135	368	94	456	539	225	24 x 5	88	73	13
*)125	10	230	52	145	413	94	500	584	225	24 x 5	110	92	16
*)150	10	255	62	160	468	94	556	639	225	24 x 5	133	110	19
200	10	328	60	189	557	143	656	739	280	30 x 6	181	150	38
250	10	400	68	230	668	166	767	850	280	30 x 6	226	188	53
300	6	450	72	260	764	170	869	-	360	30 x 6	271	225	68
350	6	510	72	290	907	190	998	-	360	30 x 6	317	263	131
400	6	575	90	326	1059	190	1163	-	362	30 x 6	362	300	160

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

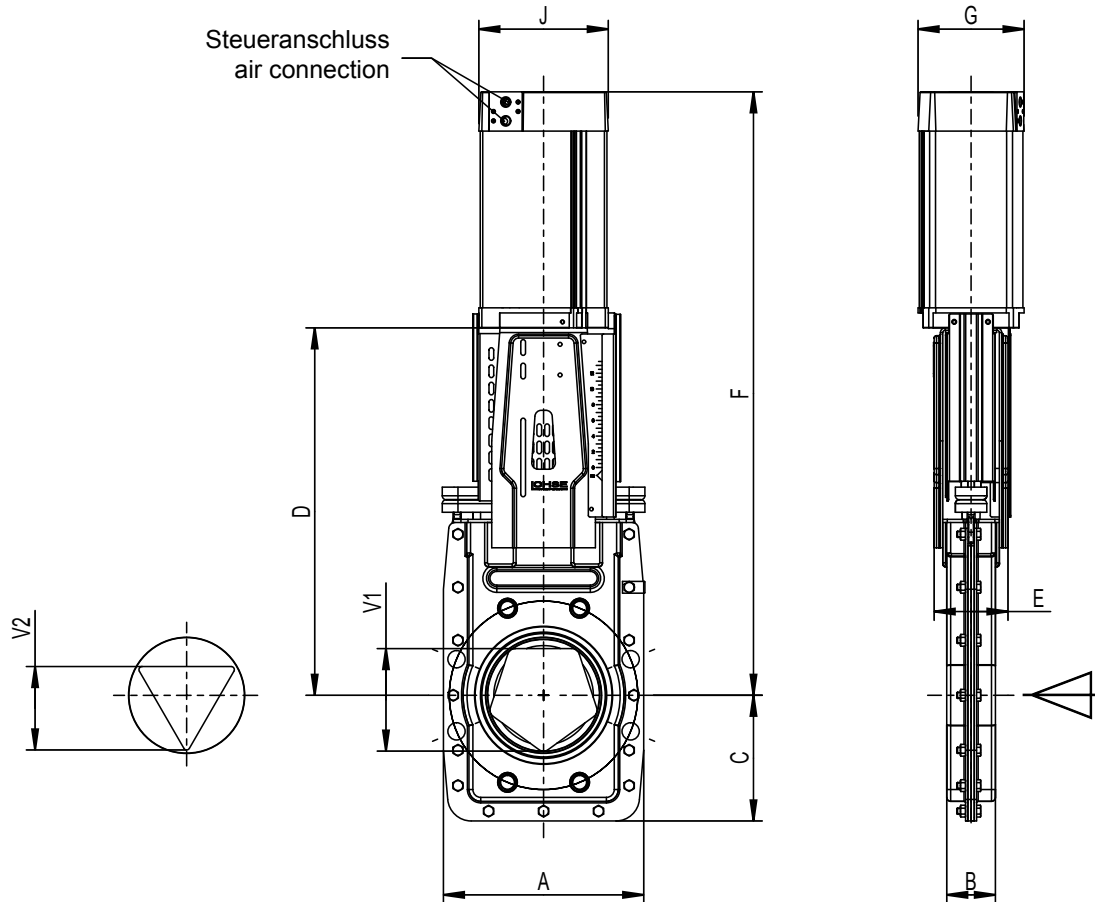
COMPACT-regulating valve with orifice
handwheel drive with rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	V1	V2	weight ~[kg]
350	6	510	71	290	907	190	1003	1355	500	36 x 6	317	263	102
400	6	575	90	326	1059	190	1155	1555	500	36 x 6	362	300	175
450	6	630	110	310	1200	208	1296	1760	500	36 x 6	404	334	
500	6	700	110	375	1265	308	1361	1975	500	36 x 6	452	375	280
600	4	810	130	440	1495	368	1591	2205	640	44 x 7	543	450	495

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

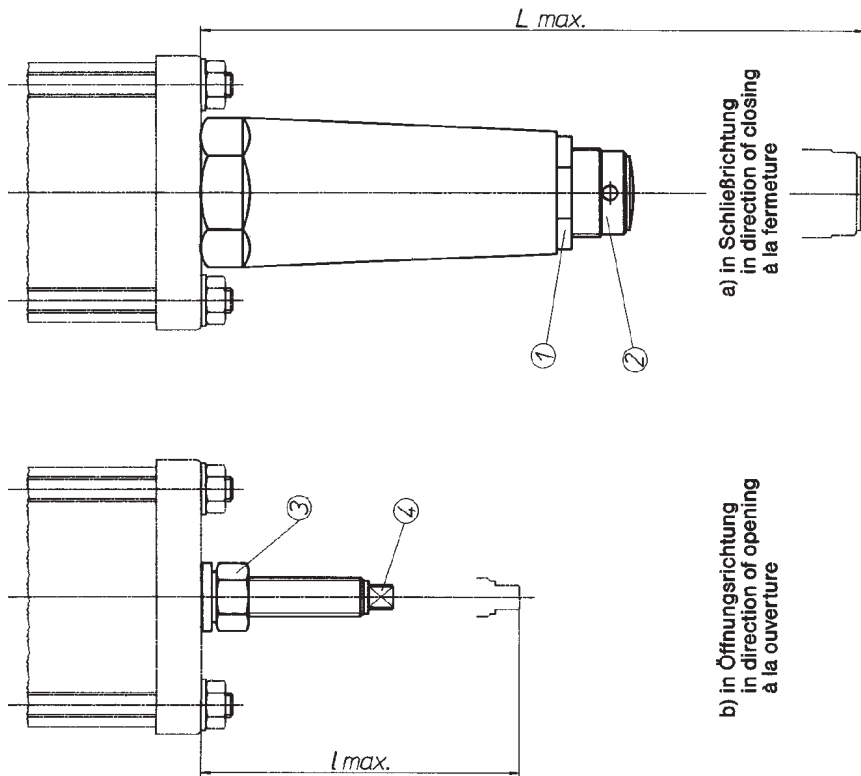
COMPACT-regulating valve with orifice
pneumatic-cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	J	cyl Ø	air connection	control pressure [bar]	V1	V2	weight ~[kg]
50	10	185	42	100	313	78	495	118	139	100	G 1/4"	6	45	38	11.3
65	10	185	42	100	313	78	510	118	139	100	G 1/4"	6	59	49	11.4
80	10	175	52	123	313	78	523	118	139	100	G 1/4"	6	72	60	11.5
*)100	10	210	52	135	368	94	596	118	139	100	G 1/4"	6	88	73	17.9
*)125	10	255	52	145	413	94	691	145	165	125	G 1/4"	6	110	92	21.1
*)150	10	255	62	160	468	94	768	145	165	125	G 1/4"	6	133	110	29.3
200	10	328	60	190	557	143	917	178	204	160	G 1/4"	6	181	150	49.5
250	10	400	68	230	668	166	1069	178	204	160	G 1/4"	6	226	188	65.5
300	6	450	72	260	764	170	1224	178	204	160	G 1/4"	6	271	225	78
350	6	510	72	290	907	190	1452	215	244	200	G 1/2"	6	317	263	141
400	6	575	90	326	1059	190	1650	215	244	200	G 1/2"	6	362	300	227
500	6	700	110	375	1265	228	1985	242	283	230	G 1/2"	6	450	375	

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150);
air connection acc. VDI/VDE 3845 (NAMUR). Further sizes on request.

COMPACT-regulating valve with orifice pneumatic-cylinder, variable stroke limiter and protection device



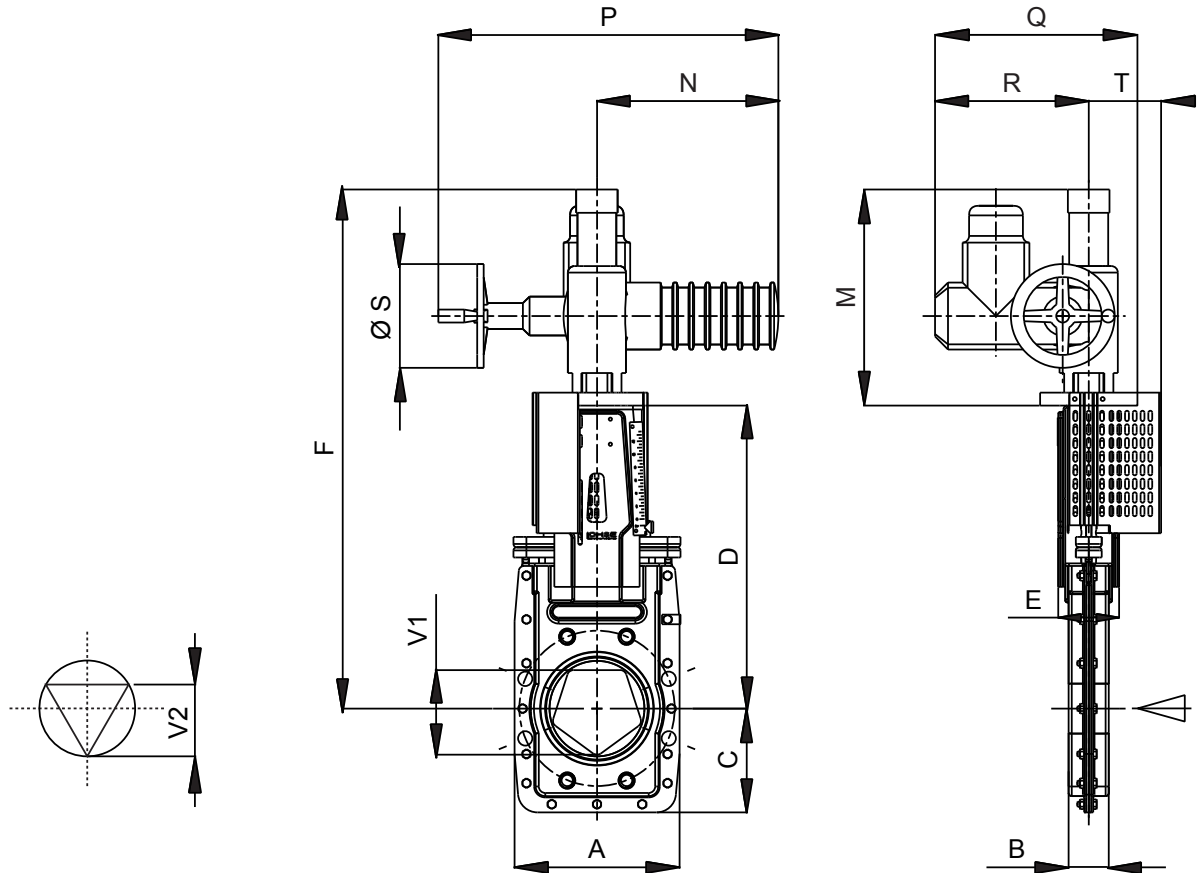
Variable stroke limiter

- In direction of closing:
loosen the nut (1), adjust
the adjustable pipe (2), tight-
ten the nut (1).
- In direction of opening:
loosen the nut (3), adjust
the adjustable screw (4)
tighten the nut.

DN	cyl.Ø	in direction of opening		in direction of closing	
		L max ~	L max ~	L max ~	L max ~
50	125	140		283	
65	125	140		283	
80	125	140		283	
100	145	190		439	
125	145	190		439	
150	175	225		439	
200	200	225		554	

Further sizes on request.

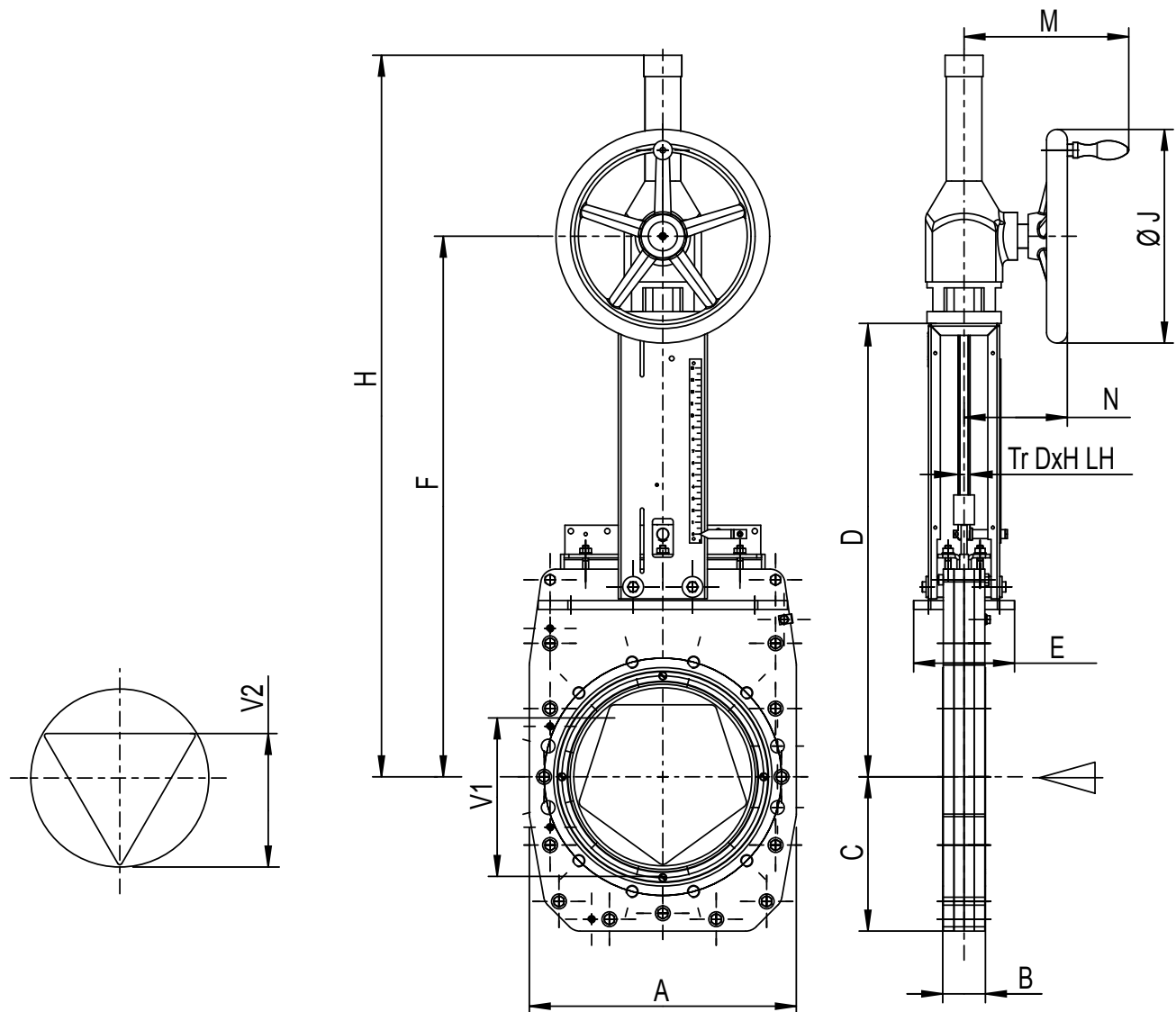
COMPACT-regulating valve with orifice
electric-drive and protection guard



DN	PS [bar]	A	B	C	D	E	F	M	N	P	Q	R	ØS	T	V1	V2	stem Tr DxH	closing time [s]		weight ~[kg]
																		pen- tagon	trian- gel	
50	10	185	42	100	313	78	646	333	280	515	349	237	160	112	45	38	20 x 4	66.8	55.9	31
65	10	185	42	100	313	78	646	333	280	515	349	237	160	112	59	49	20 x 4	84.5	70.9	31
80	10	175	52	125	313	78	646	333	280	515	349	237	160	112	72	60	20 x 4	103.6	85.9	31
*)100	10	210	52	135	368	94	701	333	280	515	349	237	160	112	88	73	24 x 5	102.5	85.0	35
*)125	10	230	52	145	413	94	746	333	280	515	349	237	160	112	110	92	24 x 5	126.5	105.8	37
*)150	10	255	62	160	468	94	801	333	280	515	349	237	160	112	133	110	24 x 5	151.6	127.6	41
200	10	328	60	190	557	143	902	345	355	536	373	247	200	126	181	150	30 x 6	167.3	113.1	65
250	10	400	68	230	668	166	1013	345	355	536	373	247	200	126	226	188	30 x 6	208.2	173.6	80
300	6	450	72	260	764	170	1202	438	355	536	373	247	200	126	271	225	30 x 6	249.1	207.3	95
350	6	510	72	290	907	190	1350	443	355	536	389	247	200	142	317	263	36 x 6	200.0	166.3	130
400	6	575	90	326	1059	190	1602	543	355	536	393	247	200	146	362	300	36 x 6	228.2	189.4	195
500	6	700	110	375	1265	228	1873	608	380	695	373	285	315	146	452	375	36 x 6	289.9	236.3	383

*) Opening DN - 3mm, full opening on request.
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

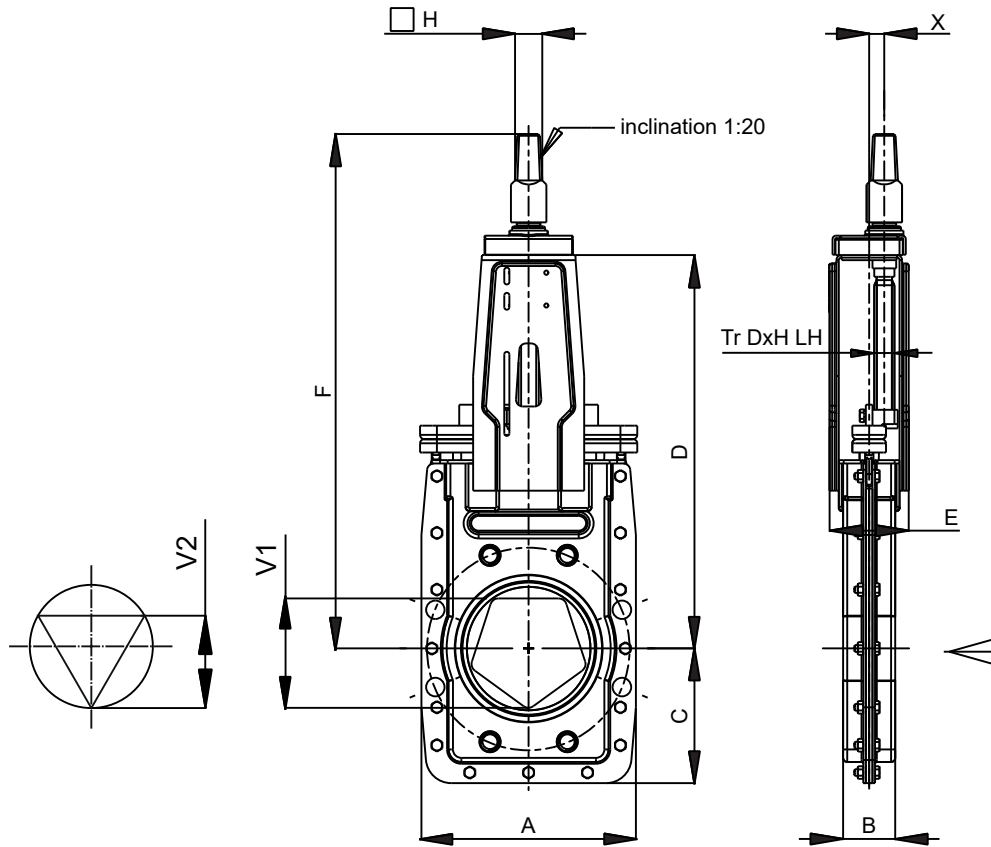
COMPACT-regulating valve with orifice
bevel gear box and handwheel



DN	PS [bar]	A	B	C	D	E	F	H	ØJ	N	M	V1	V2	Tr D x H LH	weight ~[kg]
150	8	255	62	160	468	94	615	765	360	174	278	133	110	24 x 5	
200	8	328	60	190	557	143	704	909	360	174	278	181	150	30 x 6	52
250	8	400	68	230	668	166	815	1070	360	174	278	226	188	30 x 6	70
300	6	450	72	260	764	170	911	1216	360	174	278	271	225	30 x 6	84
350	6	520	72	290	907	190	1059	1414	400	185	295	317	263	36 x 6	115
400	6	578	90	326	1059	190	1211	1611	400	185	295	362	300	36 x 6	155
500	6	700	110	375	1268	222	1455	1947	400	222	339	445	371	36 x 6	
600	4	810	130	450	1495	222	1685	2250	400	222	340	540	446	44 x 7	

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
Further sizes on request.

COMPACT-regulating valve with orifice square head



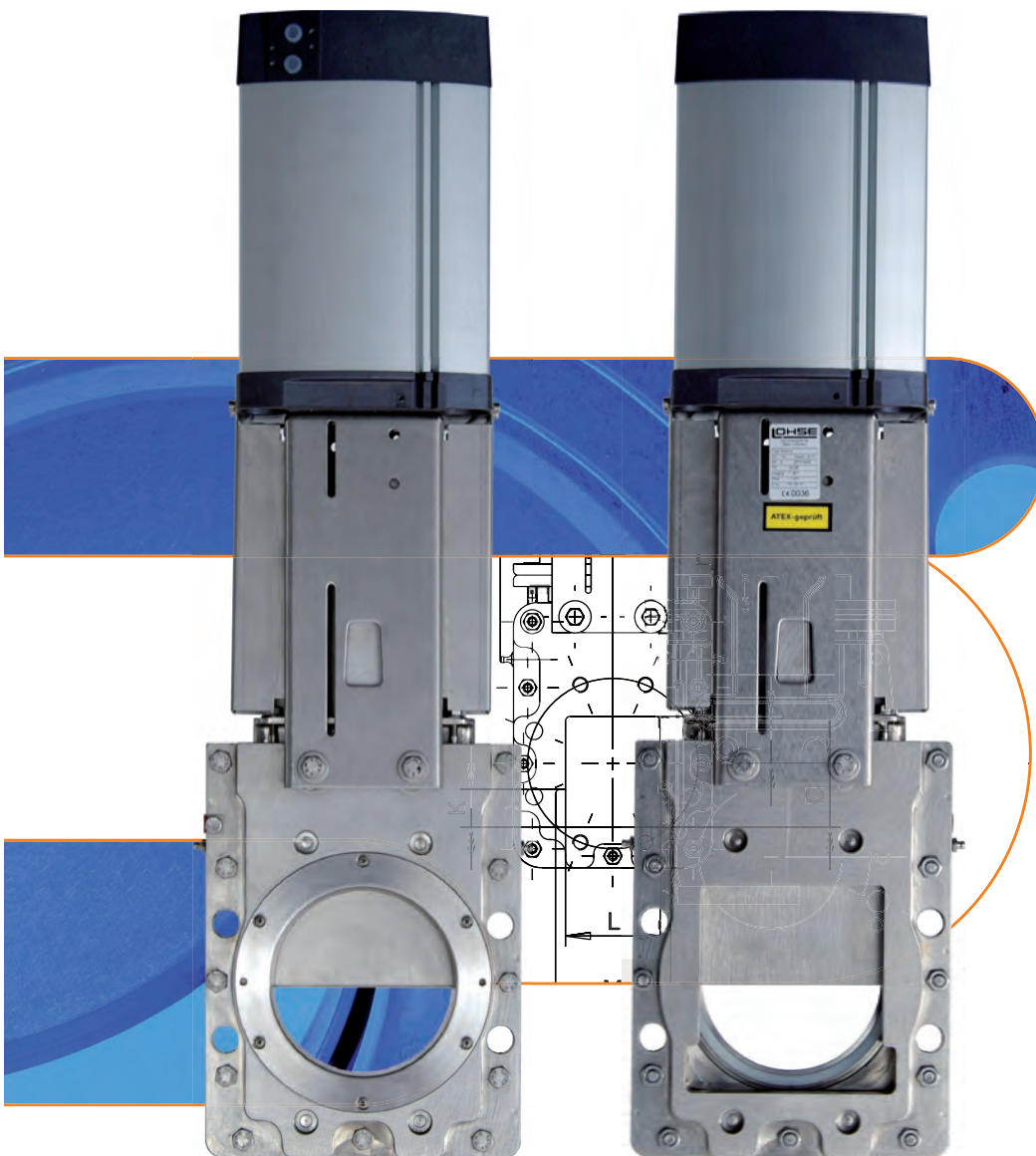
DN	PS [bar]	A	B	C	D	E	F	H	X	V1	V2	Tr D x H LH	weight ~[kg]
50	10	185	42	100	313	78	455	32	15	45	38	20 x 4	9
65	10	185	42	100	313	78	455	32	15	59	49	20 x 4	10
80	10	175	52	125	313	78	456	32	15	72	60	20 x 4	10
*)100	10	210	52	135	368	94	512	32	18	88	73	24 x 5	12
*)125	10	230	54	145	413	94	557	32	18	110	92	24 x 5	15
*)150	10	255	62	160	468	94	612	32	18	133	110	24 x 5	18
200	10	328	60	190	557	143	707	32	22	181	150	30 x 6	38
250	10	400	68	230	668	166	818	32	22	226	188	30 x 6	51
300	6	450	72	260	764	170	914	32	22	271	225	30 x 6	67
350	6	510	72	290	907	190	1043	32	26	317	263	36 x 6	96
400	6	575	90	326	1059	190	1195	32	26	362	300	36 x 6	136
450	6	630	110	315	1200	208	1336	32	28,5	404	334	36 x 6	261
500	6	700	110	350	1265	228	1416	32	35	452	375	36 x 6	311
600	4	810	130	405	1495	268	1646	32	35	543	450	44 x 7	468

*) Opening DN - 3mm, full opening on request.
 Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10 or ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150).
 Further sizes on request.

Valves of stainless steel

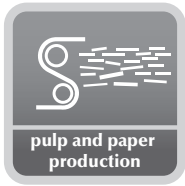
Bulk- and Reject-Valves

RQS/RQSV



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
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Applications



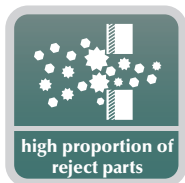
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media



Operating elements – the LOHSE modular system

- Hns handwheel drive with non-rising stem
 P pneumatic cylinder

Watertight

Leak test according to DIN EN 12266-02:2012-04
 Table A5, test medium liquid, leakage rate A

Description

Valves of stainless steel with round inlet and square outlet.

Depending on the design or rather the application there is in the inlet of the valve a wear ring of stainless steel or a sealing ring of rubber.

In the case if a wear ring of stainless steel, the seating is brought about via a sealing ring of either PE, PTFE or bronze.

In the case of a sealing ring of rubber (SBR), the seating is effected by means of an inserted sealing lip. The sealing ring of rubber also takes in the seating of the flange connection on the inlet side.

The guides of broze are positioned in such a way that the medium passing through cannot build up in these. At the end of the guides there is a lager free area so that the medium doesn't pressed together inside the valve. To enabel a good discharge out of the valve, a square outlet has been selected.

Materials

- housing 1.4571
- valve plate 1.4571
- flow sealing SBR, PE, PTFE or CuSn 12
- slide borders CuAL 10 Ni5Fe4
- wear ring 1.4571, SBR / 1.4571
- slide blocks CuSn6
- stuffing box gland 1.4307
- packing assembly Aramid / EPDM
- bracket 1.4301
- max. operating pressure

DN 100 – 200	10 bar
DN 250 – 300	8 bar
DN 400 – 600	6 bar
- max. operating temperature with

sealing ring of PE	80° C
wear ring of SBR	80° C
wear ring with bronze slide ring	120° C
sealing ring of PTFE	200° C

Type RQSV similar, but with hardened wear ring and valve plate.

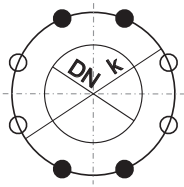
Flange bores for LOHSE RQS valves with metric tread

Inlet side

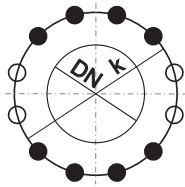
according DIN EN 1092-1, PN 10

Outlet side

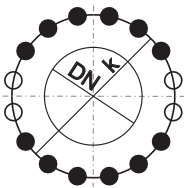
according LOHSE standard



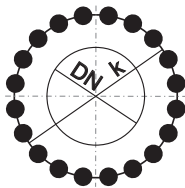
DN 100-200



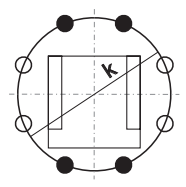
DN 250-300



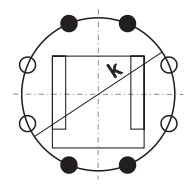
DN 400



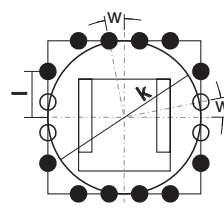
DN 500-600



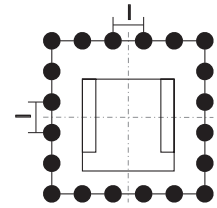
DN 100-200



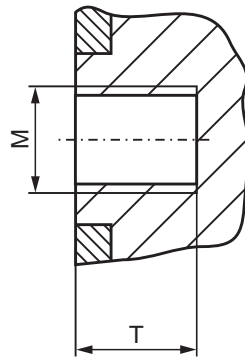
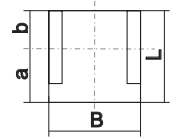
DN 250-300



DN 400



DN 500-600



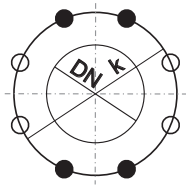
- Z = total number of holes
- Z1 = number of joint-holes
- Z2 = number of through-going bores
- T = usable depth of thread

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2	l [mm]	w [°]	L [mm]	B [mm]	a [mm]	b [mm]
100	180	8	M16	13	4	4			117	121	67	50
150	240	8	M20	18	4	4			163	169	88	75
200	295	8	M20	20	4	4			217	218	117	100
250	350	12 resp. 8	M20	22	8 resp. 4	4			267	273	142	125
300	400	12 resp. 8	M20	22	8 resp. 4	4			317	335	167	150
400	515	16	M24	24	12	4	170	11.25	418	439	218	200
500	620	20	M24	34	20	0	121		520	540	270	250
600	725	20	M27	35	20	0	143		627	642	327	300

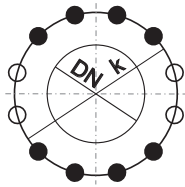
Flange bores for LOHSE RQS valves with UNC thread

Inlet side
according ANSI B16.5 Class 150:

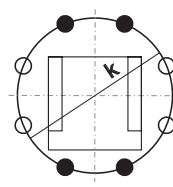
Outlet side
according Standard



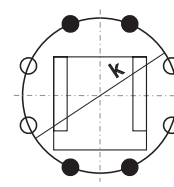
DN 100-200
(4"-8")



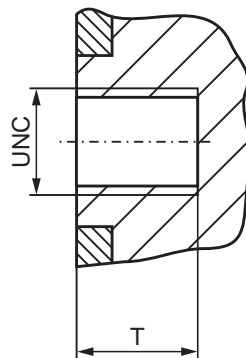
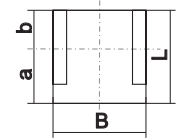
DN 250
(10")



DN 100-200
(4"-8")



DN 250
(10")

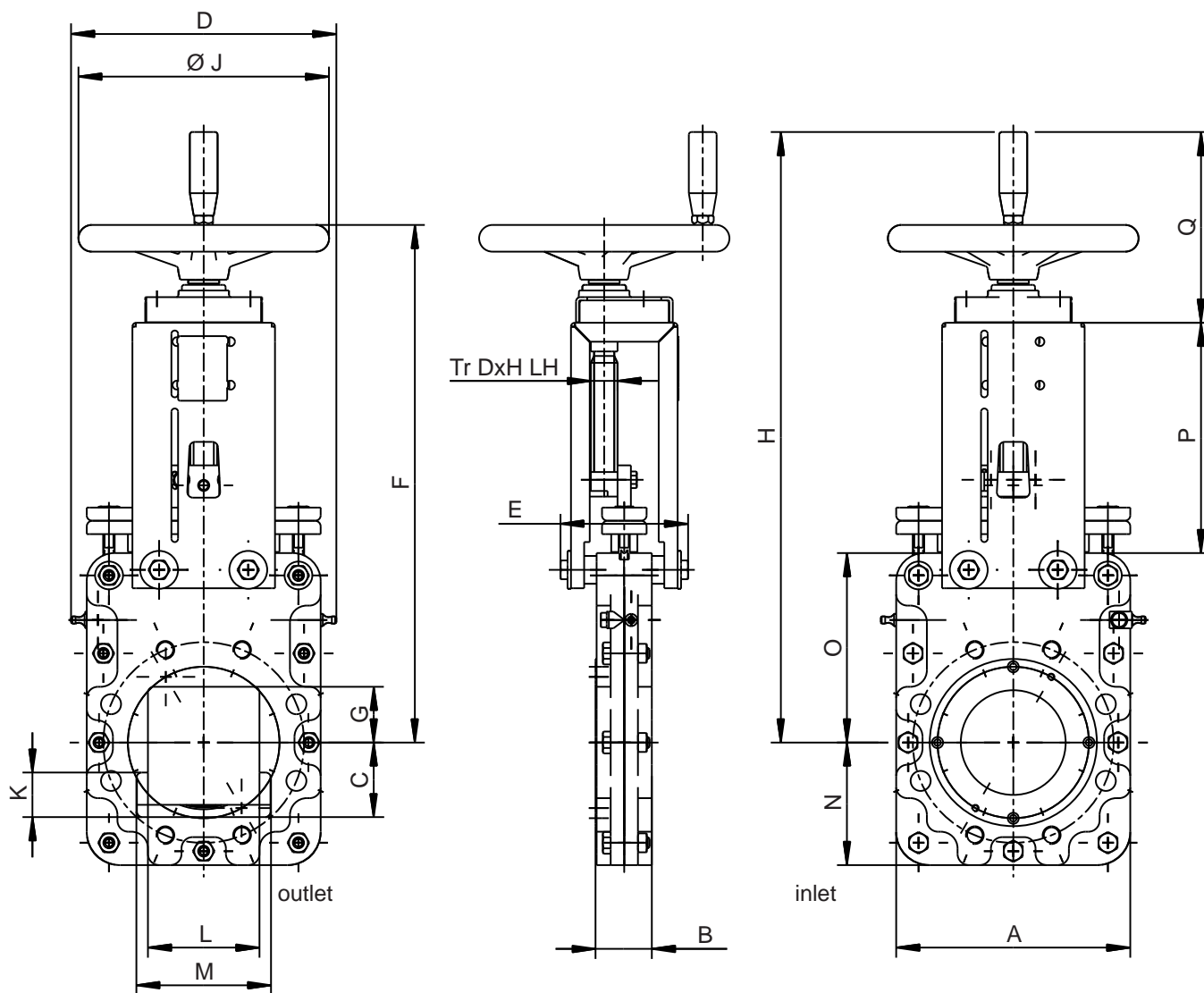


- Z = total number of holes
- Z1 = number of joint-holes
- Z2 = number of through-going bores
- T = usable depth of thread

DN [mm]	DN [inch]	K [inch]	Z	UNC [inch]	T [inch]	Z1	Z2	L [mm]	B [mm]	a [mm]	b [mm]
100	3 1/2	7	8	3/4	1/2	4	4	117	121	67	50
150	6	9 1/2	8	3/4	11/16	4	4	163	169	88	75
200	8	11 3/4	8	3/4	3/4	4	4	217	218	117	100
250	10	14 1/4	12 resp. 8	7/8	7/8	8 resp. 4	4	267	273	142	125

Reject-valve of stainless steel
 circular inlet, square outlet
 handwheel drive with non-rising stem

Type RQSVHns similar, but with hardened wear ring and valve plate.



DN	PS [bar]	A	B	C	D	E	F	G	H	Ø J	K	L	M	N	O	P	Q	Tr D x H LH
100	8	210	50,5	67	238	115	465	50	548	225	40	100	121	110	170	207	171	24 x 5
150	8	255	66	88	283	115	540	75	624	255	36	146	167	140	190	263	171	24 x 5
200	8	320	66	117	348	139	636	100	720	280	40	185	215	160	225	313	98	24 x 5

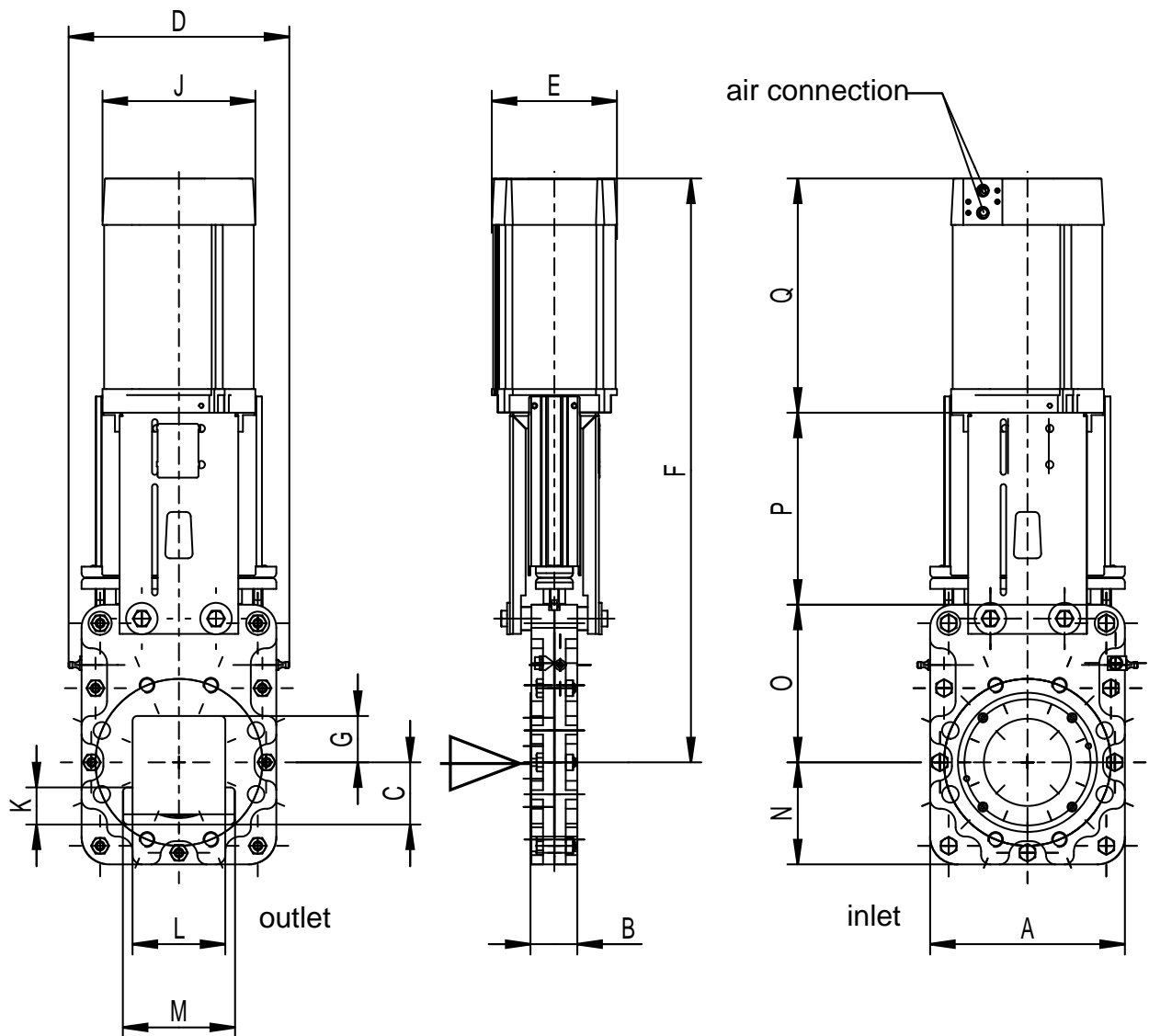
Dimensions in mm, flange bores to on request.
 Further sizes on request.

Reject valve of stainless steel

circular inlet, square outlet

pneumatic cylinder and protection guard

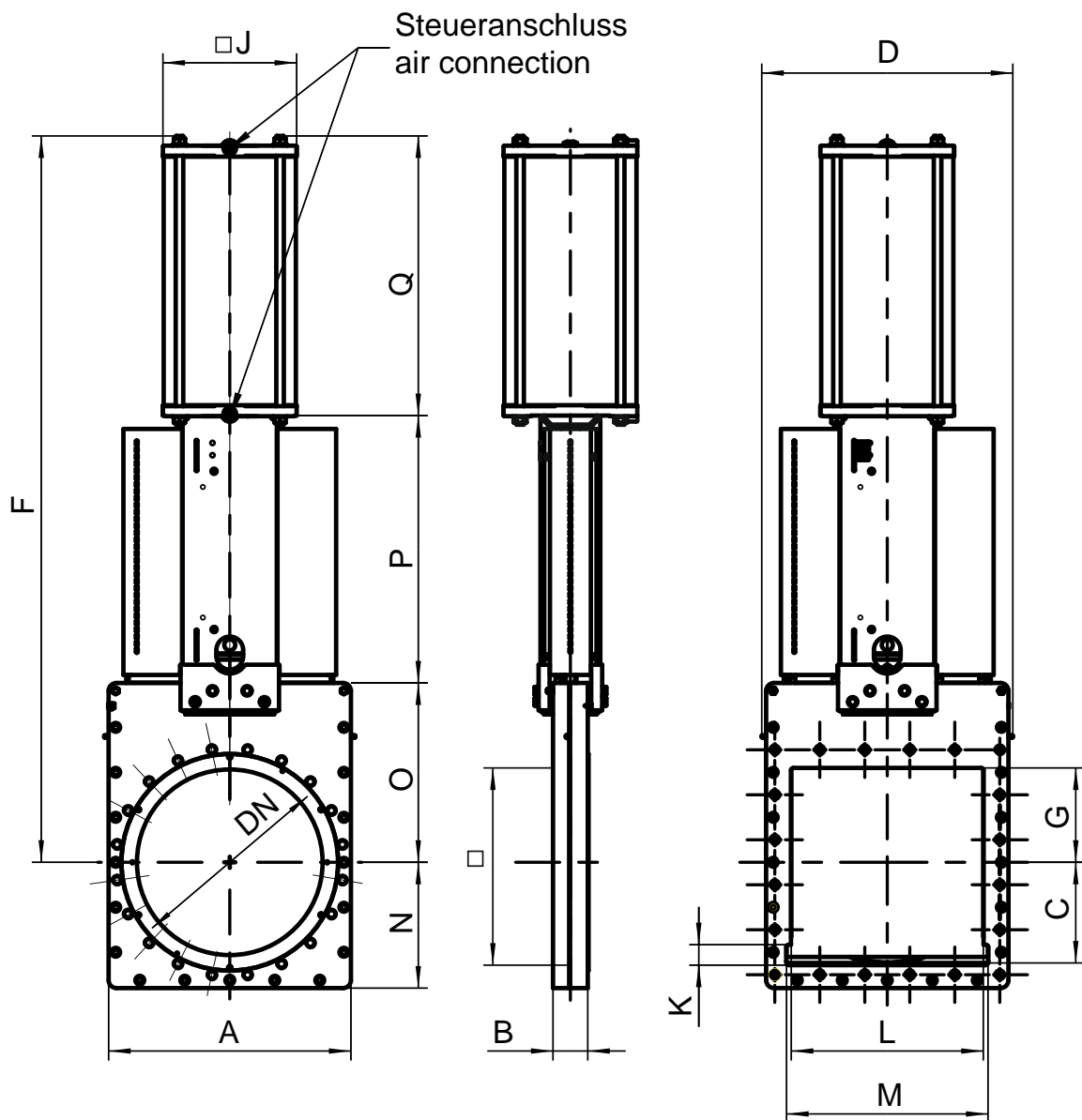
Type RQSVP/G similar, but with hardened wear ring and valve plate.



DN	PS [bar]	A	B	C	D	E	F	G	J	K	L	M	N	O	P	Q	cyl Ø	air connection	control pressure
100	8	210	51	67	238	145	740	50	165	40	100	121	110	170	207	253	125	G 1/4"	6 bar
150	8	255	66	88	283	178	763	75	204	36	146	167	140	190	263	310	160	G 1/4"	6 bar
200	8	320	66	117	348	215	926	100	244	40	185	215	160	225	313	388	200	G 1/2"	6 bar
250	8	352	80	142	352	215	1065	125	244	50	241	273	195	270	362	433	200	G 1/2"	6 bar
300	4	460	75	167	488	242	1274	150	283	65	304	334	235	340	419	515	230	G 1/2"	6 bar

Dimensions in mm, flange bores to on request; air connection acc.VDI/VDE 3845 (NAMUR).
Further sizes on request.

Reject valve of stainless steel
 circular inlet, square outlet
 pneumatic cylinder and protection guard
 Type RQSVP/G similar, but with hardened wear ring and valve plate.



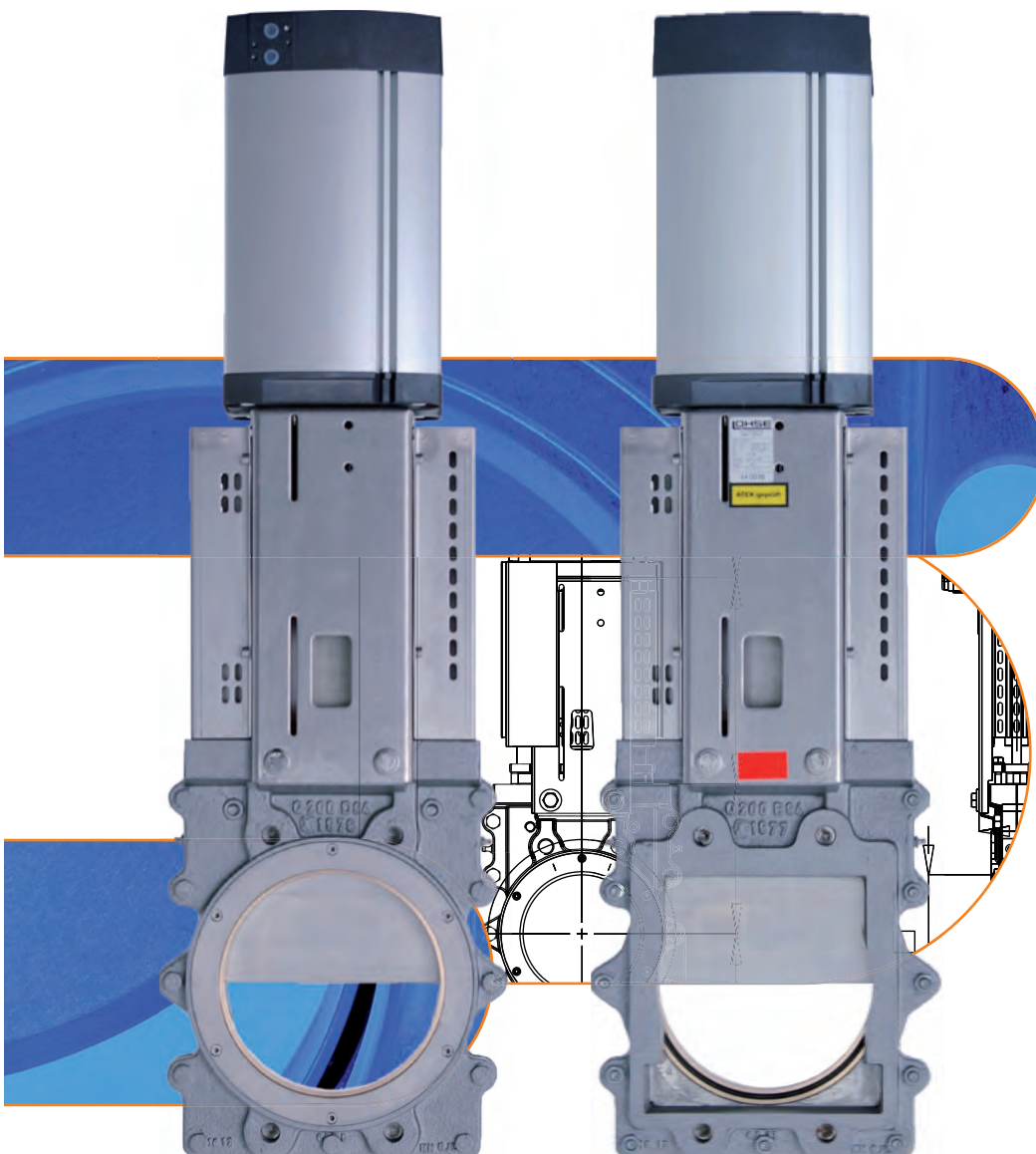
DN	PS [bar]	A	B	C	D	F	G	J	K	L	M	N	O	P	Q	cyl Ø	air con- nection	control pressure
350	2	510	92	192	510	1445	175	318	65	354	390	260	365	508	572	300	G 1/2"	6 bar
400	2	570	92	218	598	1639	200	318	65	405	435	285	410	608	621	300	G 1/2"	6 bar
500	2	680	112	270	708	2024	250	425	65	510	540	345	510	725	789	400	G 3/4"	6 bar
600	2	770	111	327	798	2309	300	425	65	610	640	400	570	850	889	400	G 3/4"	6 bar

Dimensions in mm, flange bores to on request.
 Further sizes on request.

Valves

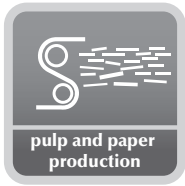
Reject-Valves

NAQP/G



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

Applications



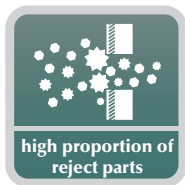
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media



Features

Model

- round inlet
- allows it to be connected to DIN EN 1092-1, PN 10 round pipes, with integral wearing ring and gasket, spring-mounted
- square outlet
- the outlet is larger than the inlet, allowing unwanted materials to fall out freely, no pockets in the base of the housing

Valve plate

- prepared so that switch sensors may be connected for limit position monitoring

Valve plate guide

- the guides in the front third are shortened, i.e. the sliding plate guarantees a clearance
- replaceable sliding rails made from bronze or special plastic
- protected by housing plate on the inlet side

Seal

- the combination of wearing ring and gasket on the inlet side, with the pressure deflected away to the inlet side, is made possible because the sliding plate is guided exactly
- easy to replace, can be accessed from outside

Watertight

- Leak test according to DIN EN 12266-02:2012-04 Table A5, test medium liquid, leakage rate A

Accessories

On the inlet side:

- conical ring insert, hardened

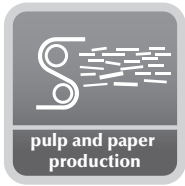
On the outlet side:

- stainless steel adapter, square to round, allows outlet to be continued on round DIN EN 1092-1, PN 10 pipes

Options:

- holding parts and switching sensors for limit switches, suitable for all common types of limit switch
- solenoid valve attached directly to the pneumatic cylinder
- housing and sliding plate in other materials (as required by customer)
- highly wear-resistant version of the sliding plate made from hardened stainless steel

Applications



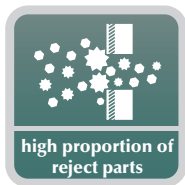
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media



Materials

- | | |
|---|--------------------|
| • housing | EN-GJL-250 (GG 25) |
| • valve plate | 1.4571 |
| • sealing | NBR |
| • slide borders | CuAl10 Mo5Fe4 |
| • wear ring | CuSn12 |
| • scraper | CuAl10 Ni5Fe4 |
| • stuffing box gland | CuSn5ZnPb |
| • packing assembly | Arostat / EPDM |
| • press ring | 1.4541 |
| • bracket | 1.4301 |
| • max. operating pressure
DN 150 – 250 | 8 bar |
| • max. operating temperature | 80° C |

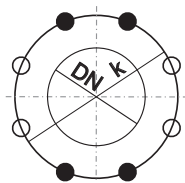
Flange bores for LOHSE NAQ valves with metric tread

Inlet side

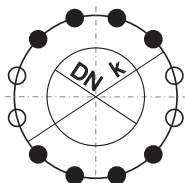
according DIN EN 1092-1, PN 10

Outlet side

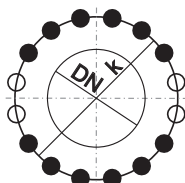
according LOHSE standard



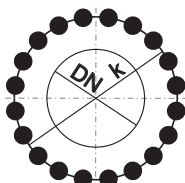
DN 100-200



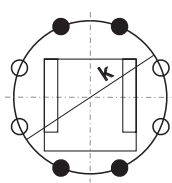
DN 250-300



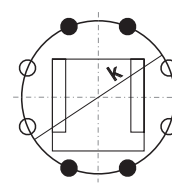
DN 400



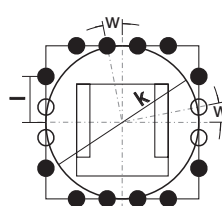
DN 500-600



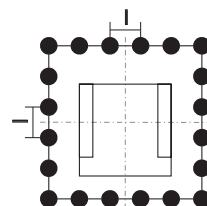
DN 100-200



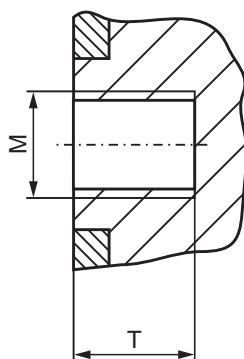
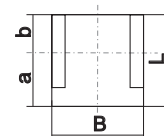
DN 250-300



DN 400



DN 500-600



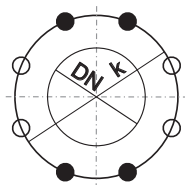
- Z = total number of holes
- Z1 = number of joint-holes
- Z2 = number of through-going bores
- T = usable depth of thread

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2	l [mm]	w [°]	L [mm]	B [mm]	a [mm]	b [mm]
100	180	8	M16	13	4	4			117	121	67	50
150	240	8	M20	18	4	4			163	169	88	75
200	295	8	M20	20	4	4			217	218	117	100
250	350	12 resp. 8	M20	22	8 resp. 4	4			267	273	142	125
300	400	12 resp. 8	M20	22	8 resp. 4	4			317	335	167	150
400	515	16	M24	24	12	4	170	11.25	418	439	218	200
500	620	20	M24	34	20	0	121		520	540	270	250
600	725	20	M27	35	20	0	143		627	642	327	300

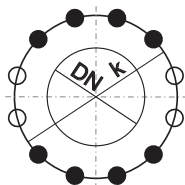
Flange bores for LOHSE NAQ valves with UNC thread

Inlet side
according ANSI B16.5 Class 150:

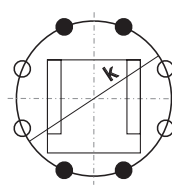
Outlet side
according Standard



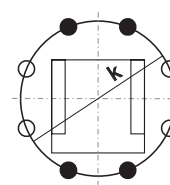
DN 100-200
(4"-8")



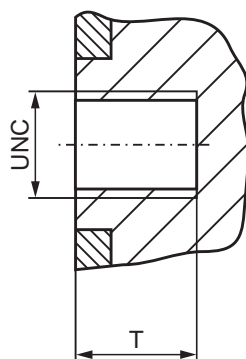
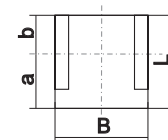
DN 250
(10")



DN 100-200
(4"-8")



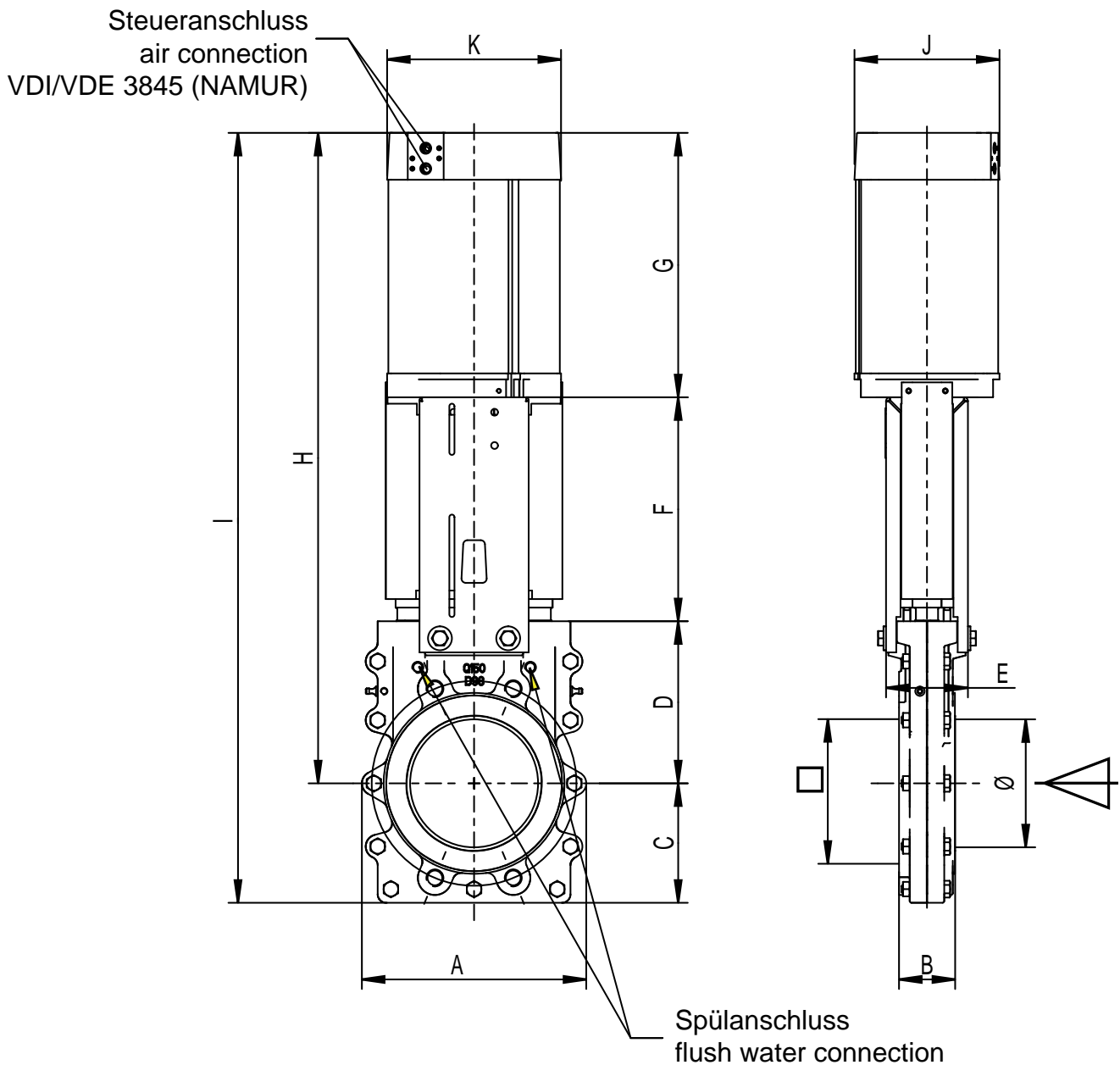
DN 250
(10")



- Z = total number of holes
- Z1 = number of joint-holes
- Z2 = number of through-going bores
- T = usable depth of thread

DN [mm]	DN [inch]	K [inch]	Z	UNC [inch]	T [inch]	Z1	Z2	L [mm]	B [mm]	a [mm]	b [mm]
100	3 1/2	7	8	3/4	1/2	4	4	117	121	67	50
150	6	9 1/2	8	3/4	11/16	4	4	163	169	88	75
200	8	11 3/4	8	3/4	3/4	4	4	217	218	117	100
250	10	14 1/4	12 resp. 8	7/8	7/8	8 resp. 4	4	267	273	142	125

Reject-valve
 circular inlet, square outlet
 pneumatic cylinder and protection guard



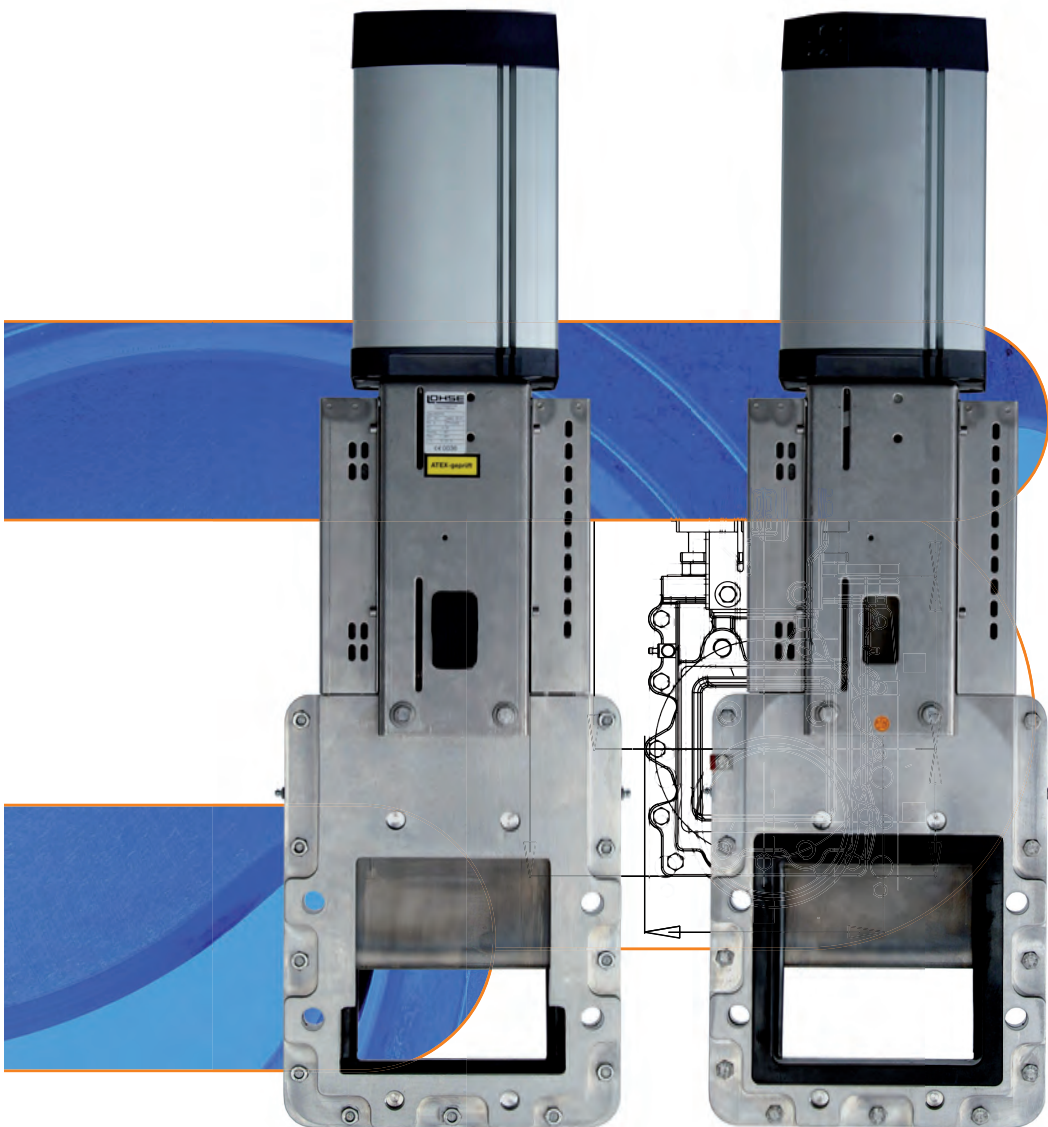
DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	Zyl Ø	air connection	flush water connection	weight ~[kg]
150	8	263	66	140	190	96	263	310	763	903	178	190	160	G 1/4"	G 1/4"	41.4
200	8	325	66	160	225	120	310	388	923	1083	215	244	200	G 1/2"	G 1/2"	56.5
250	8	350	78	195	270	120	362	433	1065	1260	215	244	200	G 1/2"	G 1/2"	82

Dimensions in mm, flange bores on request; air connection acc. VDI/VDE 3845 (NAMUR).
 Further sizes on request.

Valves

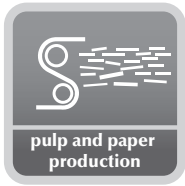
Reject-Valves

AEQP/G



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Applications



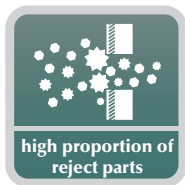
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media



Accessories

On the inlet side:

stainless steel intermediate flange, allows connection to round DIN EN 1092-1, PN 10 pipes or to locks (approx. 20 mm thick, drilled for both flange patterns)

On the outlet side:

stainless steel adapter, square to round, allows outlet to be continued on round DIN EN 1092-1, PN 10 pipes

Options:

- holding parts and switching sensors for limit switches, suitable for all common types of limit switch
- solenoid valve attached directly to the pneumatic cylinder
- housing and valve plate in other materials (as required by customer)

Features

Rectangular model

- free passage when opened
- the outlet is larger than the inlet, allowing unwanted materials to fall out freely
- braking of a rotation in progress

Valve plate

- highly wear-resistant version made from hardened stainless steel
- prepared so that switch sensors may be connected for limit position monitoring

Valve plate guide

- the guides in the front third are shortened, i.e. the valve plate guarantees a clearance
- replaceable sliding rails made from bronze

Sealing frame

- protects the sliding plate and sliding plate guide
- low-wear, material: SBR
- plug-in connection system makes replacement easy
- 2-in-1 system:
 1. flow seal
 2. flange seal (no additional flange seal required)

Watertight

- Leak test according to DIN EN 12266-02:2012-04 Table A5, test medium liquid, leakage rate A

Materials

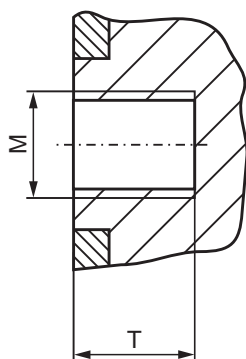
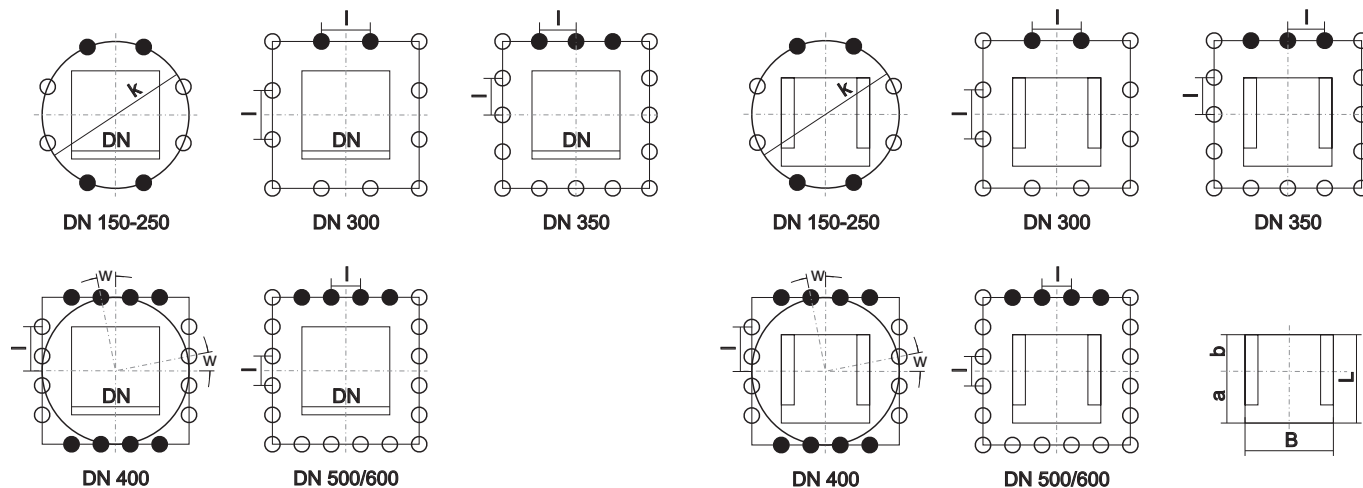
- housing EN-GJL-250 (GG 25)
or
1.4571
- valve plate 1.4571 hardened
- sealing frame SBR
- slide borders CuAl10Ni5Fe4
- packing assembly Arostat / EPDM
- bracket 1.4301
- max. operating pressure

DN 50 – 250	8 bar
DN 300	4 bar
DN 350 – 600	2 bar
- max. operating temperature 80° C

Flange bores for LOHSE AEQ-valves with metric thread according to LOHSE standard

Inlet site

Outlet site

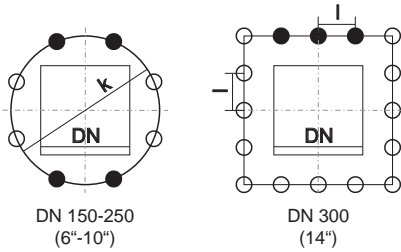


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

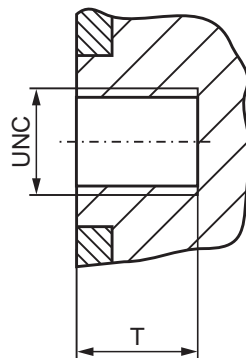
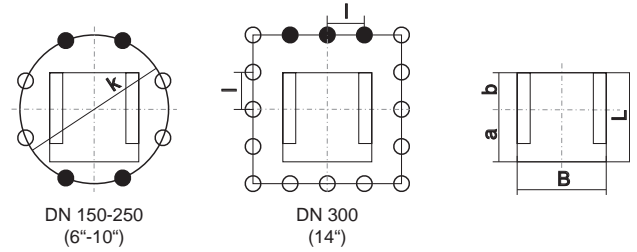
DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2	l [mm]	w [°]	L [mm]	B [mm]	a [mm]	b [mm]
150	240	8	M20	18	4	4			156	167	83	73
200	295	8	M20	20	4	4			211	222	111	100
250	350	8	M20	22	4	4			260	270	135	125
300		12	M20	24	2	10	129		317	335	167	150
350		16	M20	26	3	13	110		367	385	192	175
400	515	16	M24	24	8	8	170	11,25	418	437	218	200
500		20	M24	34	4	16	121		520	540	270	250
600		20	M27	35	4	16	143		620	640	320	300

Flange bores for LOHSE AEQ-valves with UNC thread according LOHSE standard

Inlet side



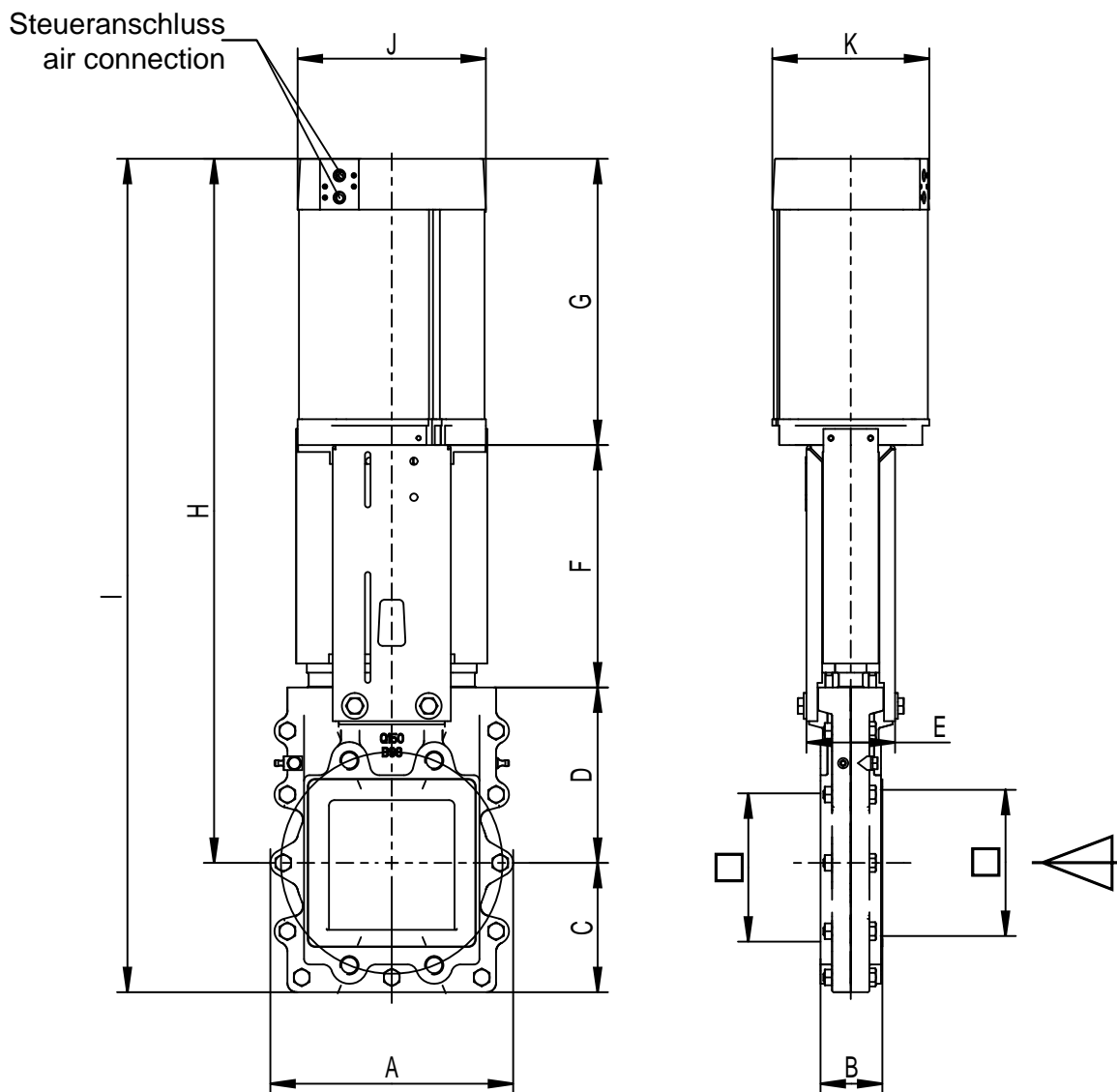
Outlet side



- Z = total number of holes
- Z1 = number of joint-holes
- Z2 = number of through-going bores
- T = usable depth of thread

DN [mm]	K [inch]	Z	UNC [inch]	T [inch]	Z1	Z2	l [inch]	w [°]	L [mm]	B [mm]	a [mm]	b [mm]
150	9 1/2	8	3/4	11/16	4	4			156	167	83	73
200	11 3/4	8	3/4	3/4	4	4			211	222	111	100
250	14 1/4	8	7/8	7/8	4	4			260	270	135	125
300		16	1	1	3	13	4 5/16		317	335	167	150

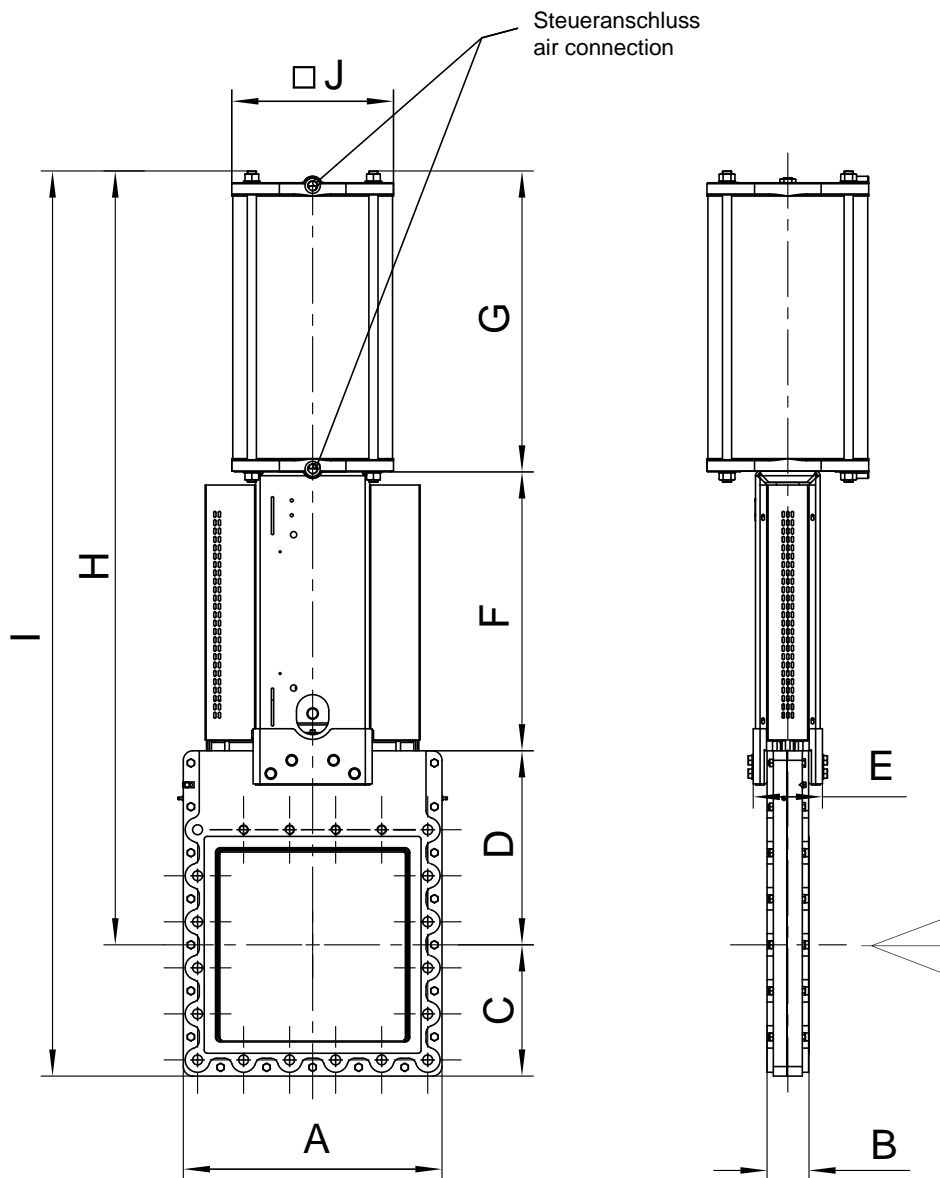
Reject-valve
square in- and outlet
pneumatic cylinder and protection guard
Housing EN-GJL-250 or stainless steel



DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	K	cyl Ø	air con- nection	weight ~[kg]	
															EN- GJL-250	stainless steel
100	8	210	50	110	170	96	207	253	630	740	165	145	125	G 1/4"		
150	8	263	67	140	190	96	263	310	763	903	204	178	160	G 1/4"	43.4	45.4
200	8	330	71	165	260	120	310	388	958	1123	244	215	200	G 1/2"		76.4
250	8	390	81	195	270	120	362	433	1065	1260	244	211	200	G 1/2"	88	87
300	4	470	81	235	340	120	419	515	1274	1509	242	283	230	G 1/2"	140	140

Dimensions in mm, flange bores on request; air connection acc. VDI/VDE 3845 (NAMUR).
Further sizes on request.

Reject-valve
 square in- and outlet
 pneumatic cylinder and protection guard
 Housing EN-GJL-250 or stainless steel



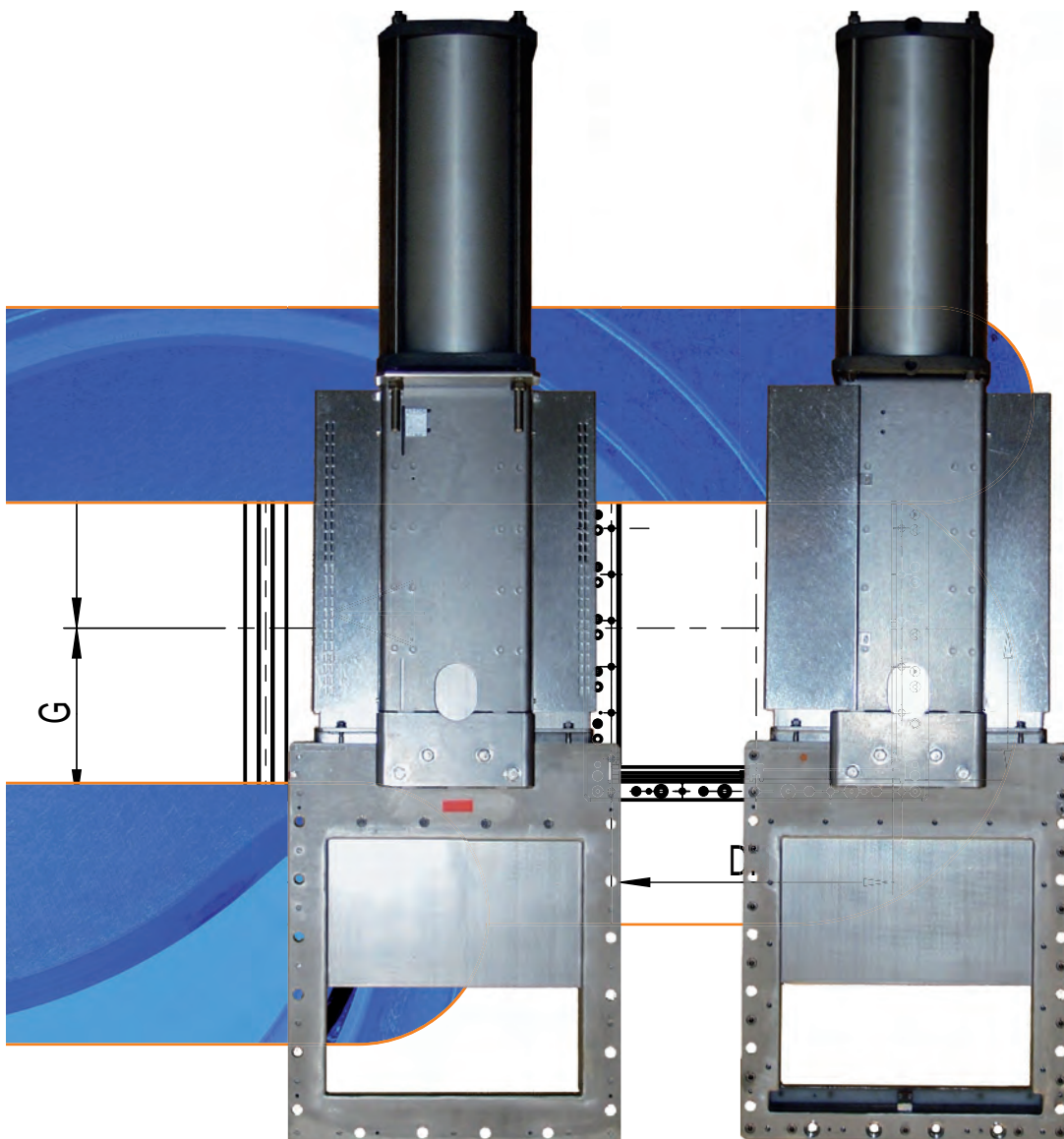
DN	PS [bar]	A	B	C	D	E	F	G	H	I	J	cyl Ø	air connection	weight ~[kg]	
														EN-GJL-250	stainless steel
350	2	510	92	260	365	160	509	571	1445	1705	318	300	G 1/2"		
400	2	570	92	285	410	160	608	621	1639	1924	318	300	G 1/2"	243	250
500	2	680	110	345	510	182	733	791	2034	2379	425	400	G 3/4"		
600	2	770	111	400	570	161	850	889	2309	2709	425	400	G 3/4"	572	572

Dimensions in mm, flange bores on request.
 Further sizes on request.

Valves of stainless steel

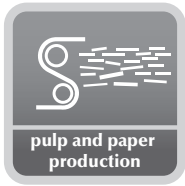
Reject Valves

SAQP/G



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Applications



General usage

- media with reject fraction
- coarse-grained media (granular material)
- fine-grained media (powder)
- temperature range -10 to 80° C

Locations

- pulper drain unit
- discharging device
- dumping and emptying devices

Description

- Valves of stainless steel with square inlet and outlet.
- Square design.
- Extended outlet space for unhindered discharge of reject.
- Valve plate in stainless steel, prepared for mounting the switch button of end position control unit.
- Valve plate guide by slide cups and slide borders guarantees maximum slip.
- Replaceable sliding components.

Watertight

Leak test according to DIN EN 12266-02:2012-04
Table A5, test medium liquid, leakage rate A

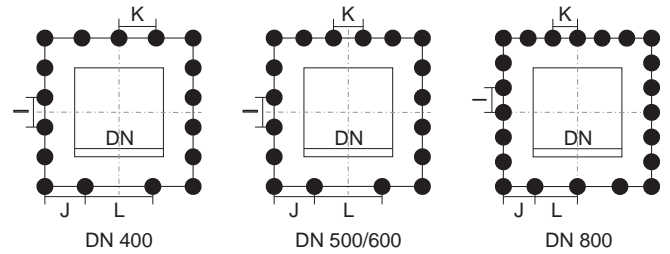
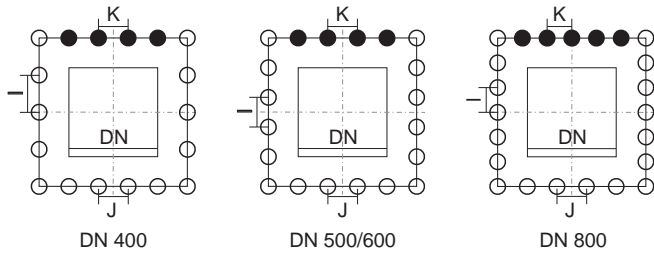
Materials

- housing 1.4571
- valve plate 1.4571
- sealings EPDM
- slide borders RCH 1000
(ultra-high molecular weight low pressure polyethylene)
- bracket St 37
- max. operating pressure 4 bar
- max. operating temperature 80° C

Flange bores for LOHSE SAQ-valves with metric thread according to LOHSE standard

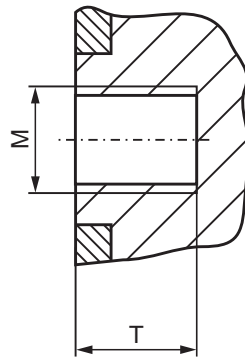
Inlet side

Outlet side



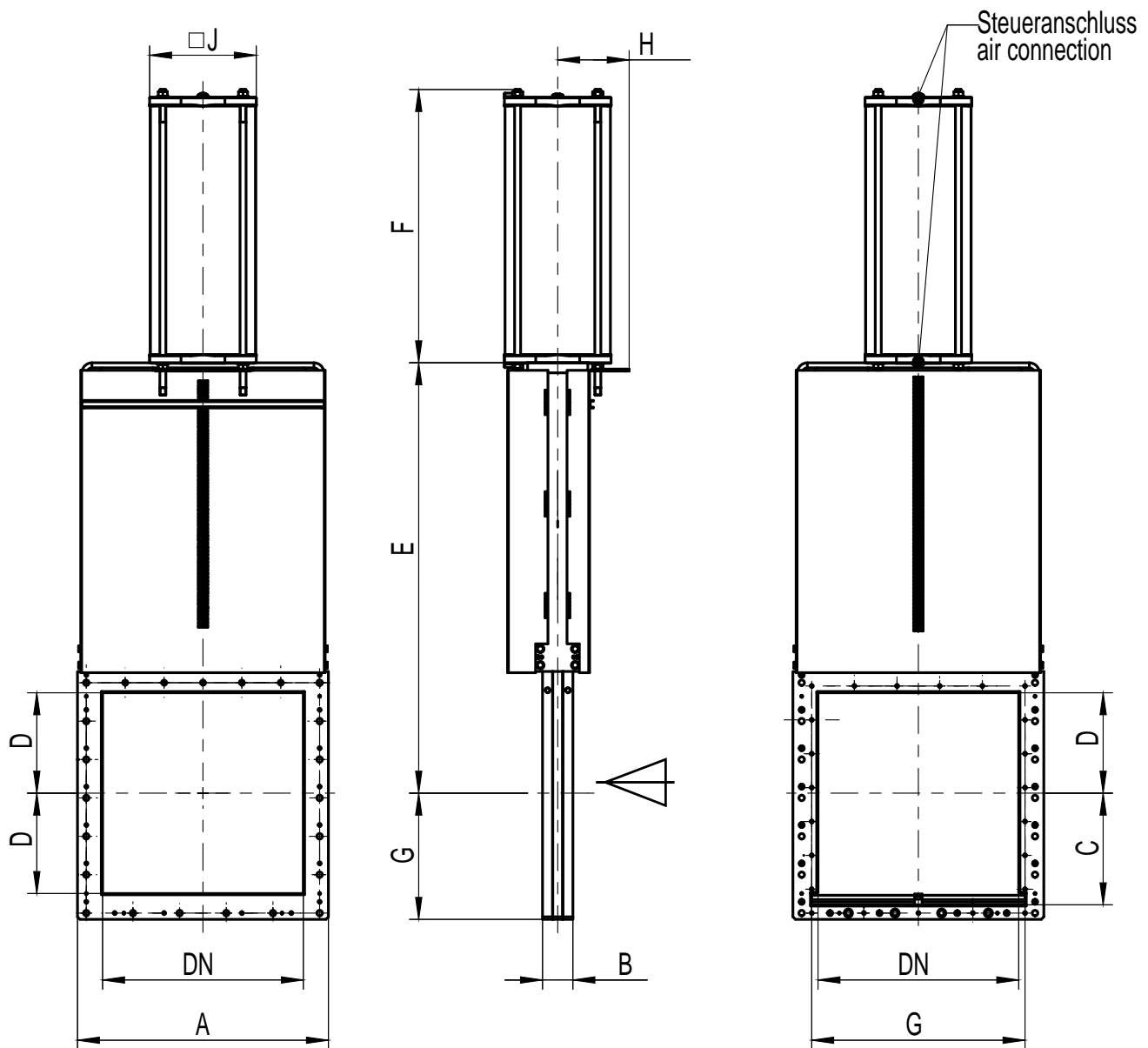
DN [mm]	Z	M	T [mm]	Z1	Z2	l [mm]	J [mm]	K [mm]
400	18	M16	21	4	14	125	103	103
500	20	M20	16	4	16	113	123	123
600	20	M20	16	4	16	132	145	145
800	23	M20	23	5	18	153	186	155

DN [mm]	Z	M	T [mm]	Z1	l [mm]	J [mm]	K [mm]	L [mm]
400	17	M12	15	17	99	130	110	180
500	18	M12	15	18	122	150	109	246
600	18	M12	17	18	150	187	131	290
800	23	M12	20	23	135	208	170	217



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

Reject valves of stainless steel
square inlet and outlet
pneumatic cylinder and protection guard



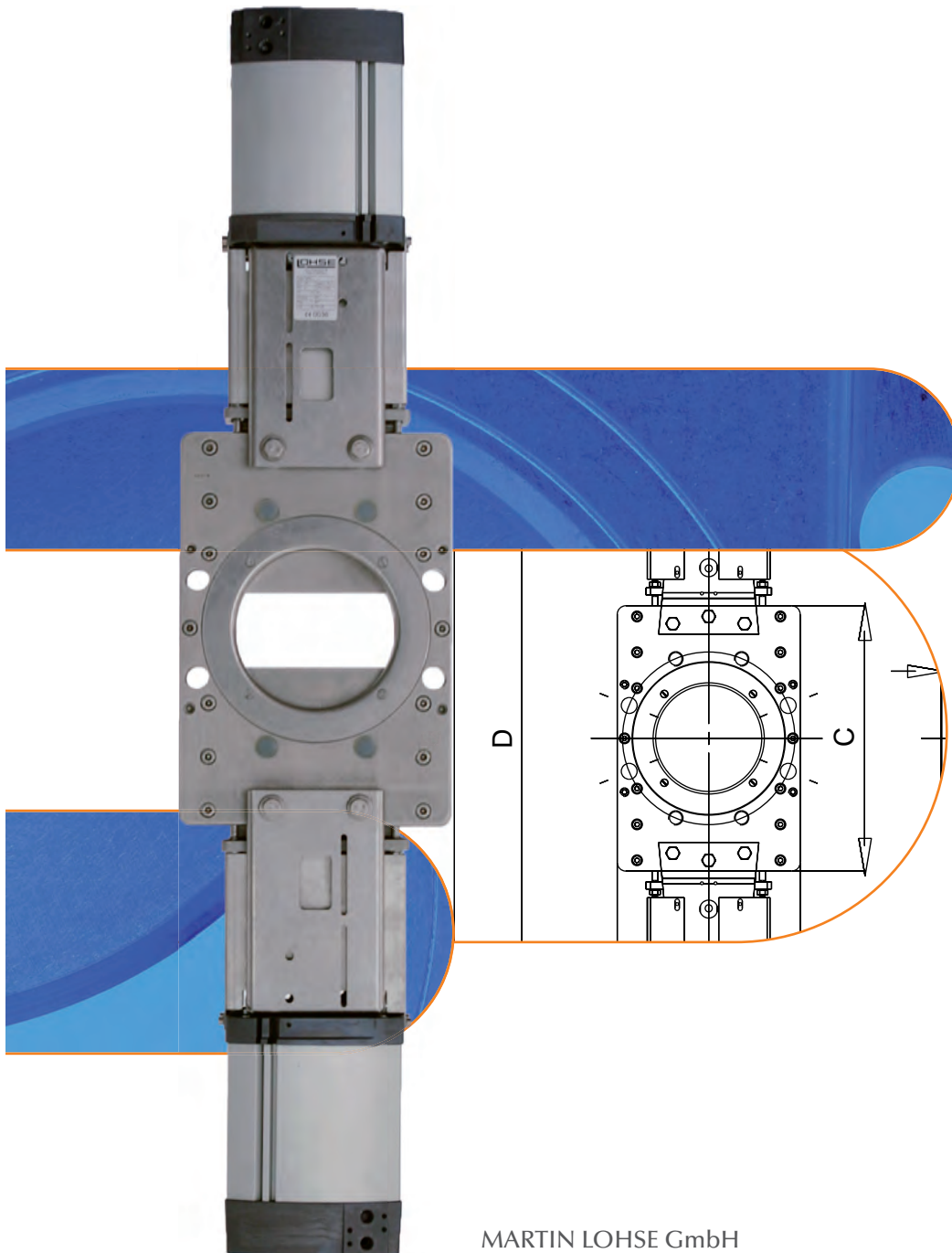
DN	PS [bar]	A	B	C	D	E	F	G	H	J	cyl. Ø	air connection	control pressure
400	4	555	94	240	200	968	610	290	200	318	300	G 1/2"	6
500	2.5	655	96	290	250	1179	721	350	285	425	400	G 3/4"	6
600	2	765	95	340	300	1348	823	400	285	425	400	G 3/4"	6
800	1.5	1000	121	445	400	1715	1089	503	420	645	500	G 3/4"	6

Dimensions in mm, flange bores to on request.
Further sizes on request.

Valves of stainless steel

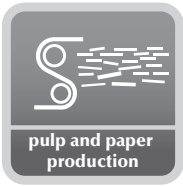
Reject-Valves

TAP/G



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Applications



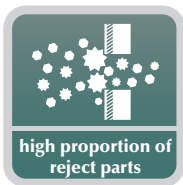
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

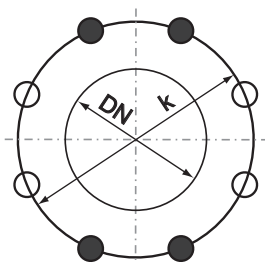
Media



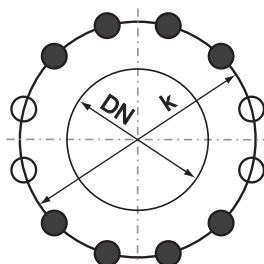
Materials

- housing S355J2
or
1.4541
- flanging ring 1.4571
- valve plate 1.4571
- slide cups PE-UHMW (RCH1000)
- sealing EPDM
- stuffing box gland
DN 100 – 500 1.4541
DN 600 – 800 1.4301
- bracket S355 J2 (steel)
or
1.4541
- max. operating pressure
DN 100 – 250 4 bar
DN 300 – 800 2 bar
- max. operating temperature 80° C

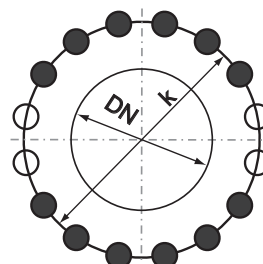
Flange bores for LOHSE TA-valves
according to DIN EN 1092-1, PN 10



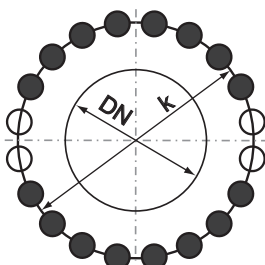
DN 100-200



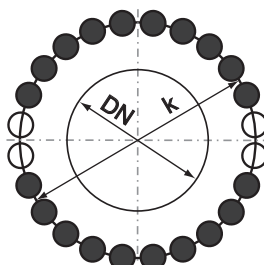
DN 250-300



DN 350-400

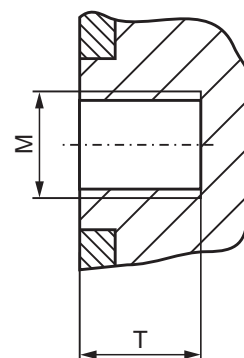


DN 450-600



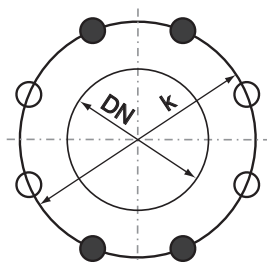
DN 700-800

DN [mm]	K [mm]	Z	M	T [mm]	Z1	Z2
100	180	8	M16	12	4	4
125	210	8	M16	12	4	4
150	240	8	M20	16	4	4
200	295	8	M20	16	4	4
250	350	12	M20	20	8	4
300	400	12	M20	20	8	4
350	460	16	M20	20	12	4
400	515	16	M24	23	12	4
450	565	20	M24	30	16	4
500	620	20	M24	30	16	4
600	725	20	M27	35	16	4
700	840	24	M27	40	20	4
800	950	24	M30	45	20	4

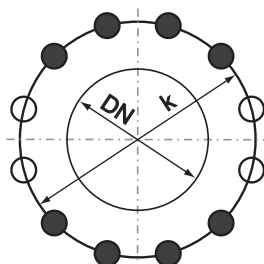


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

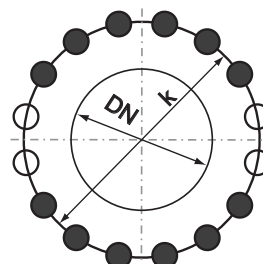
Flange bores for LOHSE TA-valves
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



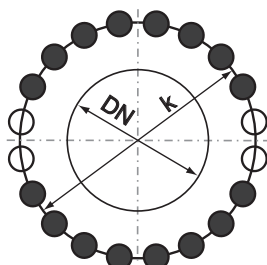
DN 100-200



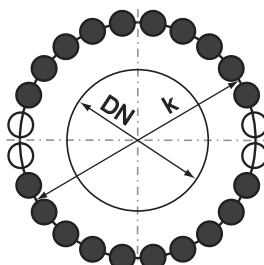
DN 250-350



DN 400-450

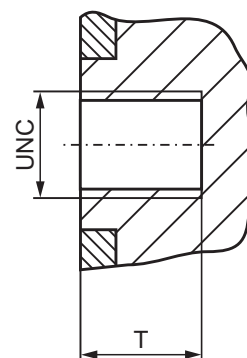


DN 500-600



DN 700-800

DN [mm]	DN [inch]	K [mm]	K [inch]	Z	UNC	T [mm]	T [inch]	Z1	Z2
100	4	190.5	7 1/2	8	5/8"-11	12	0.472	4	4
125	5	215.9	8 1/2	8	3/4"-10	12	0.472	4	4
150	6	241.3	9 1/2	8	3/4"-10	16	0.630	4	4
200	8	298.5	11 3/4	8	3/4"-10	16	0.630	4	4
250	10	362	14 1/4	12	7/8"-9	20	0.787	8	4
300	12	431.8	17	12	7/8"-9	20	0.787	8	4
350	14	476.3	18 3/4	12	1"-8	20	0.787	8	4
400	16	539.8	21 1/4	16	1"-8	23	0.910	12	4
450	18	577.9	22 3/4	16	1 1/8"-7	30	1.181	12	4
500	20	635	25	20	1 1/8"-7	30	1.181	16	4
600	24	749.3	29 1/2	20	1 1/4"-7	35	1.378	16	4
700	28	863	34	28	1 1/4"-7	40	1.575	24	4
800	32	978	38 1/2	28	1 1/2"-6	45	1.772	24	4

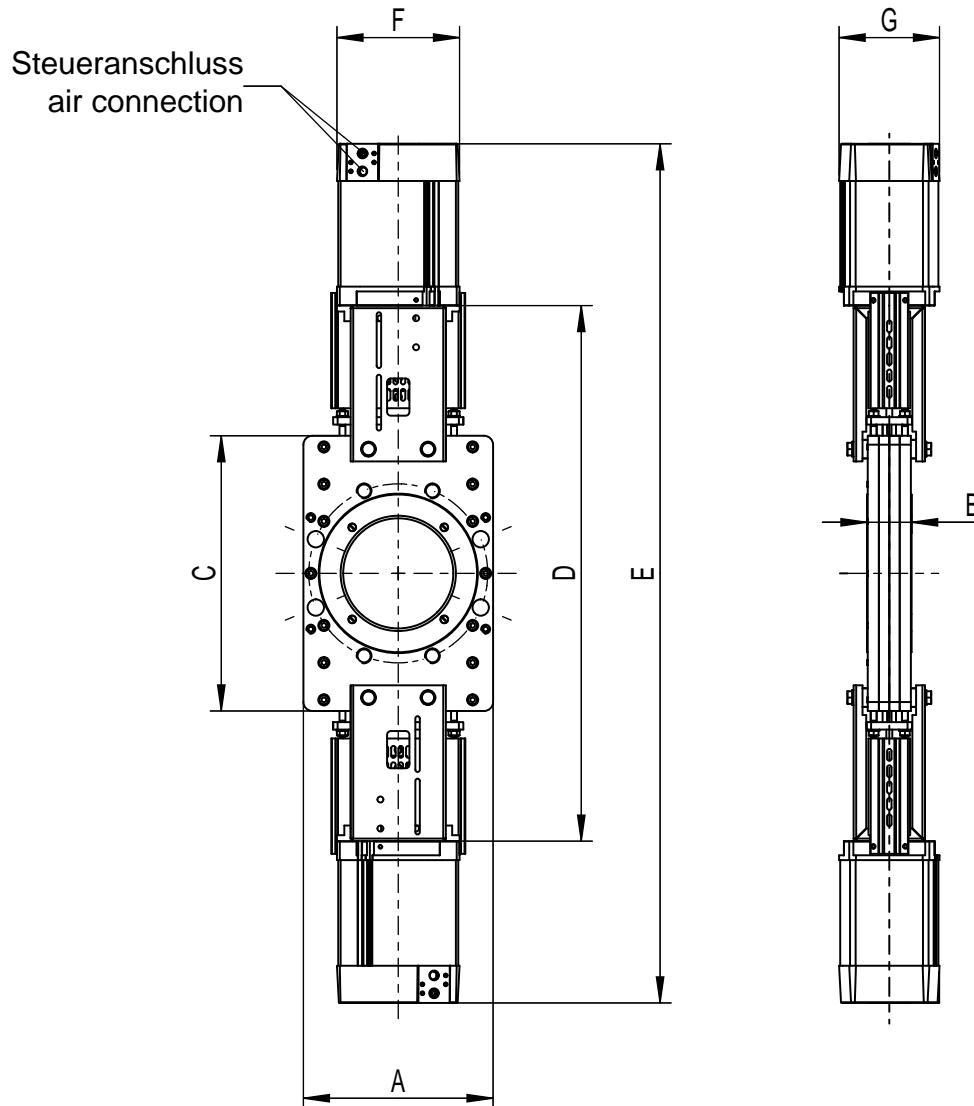


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

Reject-valve

two double-acting pneumatic cylinders and protection guard

Housing stainless steel or steel

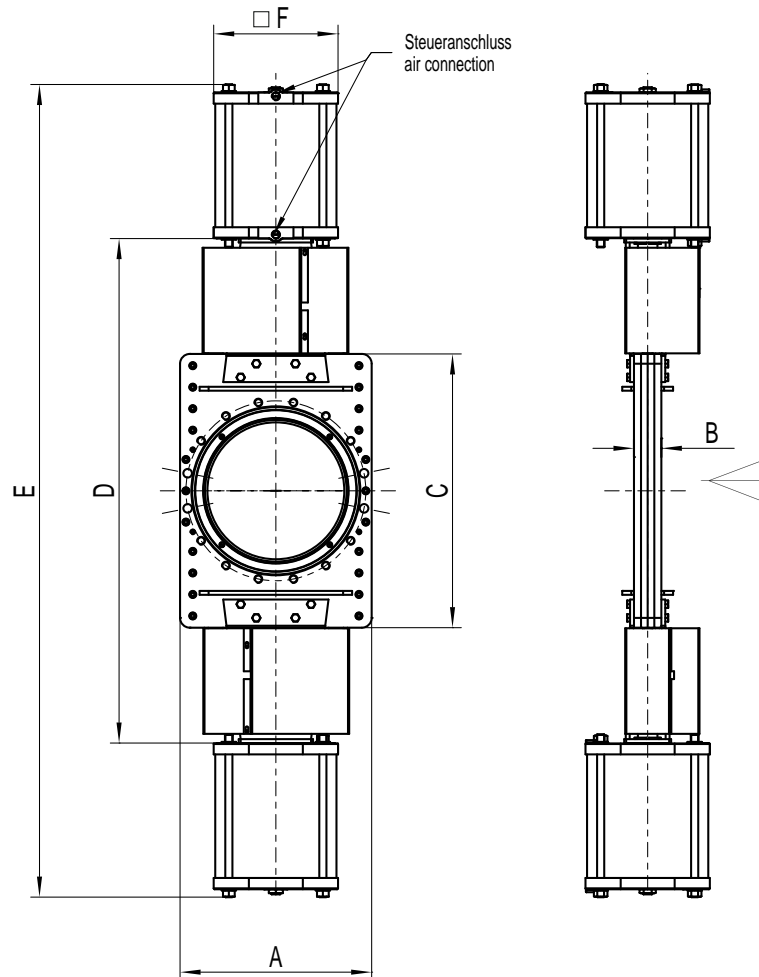


DN	PS [bar]	A	B	C	D	E	F	G	cyl Ø	air connection	weight ~[kg]
100	4	200	50	300	590	969	165	145	125	G 1/4"	33,9
125	4	230	50	325	640	1043	165	145	125	G 1/4"	37,2
150	4	255	60	370	720	1182	204	178	160	G 1/4"	53,5
200	4	310	60	460	870	1414	244	215	200	G 1/2"	84,6
250	4	380	70	550	1020	1614	244	215	200	G 1/2"	120,3
300	2	430	70	600	1126	1810	283	242	230	G 1/2"	159,2

Mounting only in vertical flow direction. Higher operating pressures on request.

Dimensions in mm, flange bores to DIN EN 1092-1, PN 10 or ANSI B 16.5 class 150; air connection acc. VDI/VDE 3845 (NAMUR).
Further sizes on request.

Reject-valve
 two double-acting pneumatic cylinders and protection guard
 Housing stainless steel or steel



DN	PS [bar]	A	B	C	D	E	F	cyl Ø	air connection	weight ~[kg]
350	2	490	70	700	1290	2078	318	300	G 1/2"	240
400	2	540	90	800	1578	2366	318	300	G 1/2"	300
450	2	600	110	900	1730	2574	318	300	G 1/2"	405
500	2	650	110	1100	2010	3060	425	400	G 3/4"	706
600	2	800	110	1300	2320	3482	425	400	G 1/2"	904
700	2	930	110	1500	2720	4007	645	500	G 3/4"	1370
800	2	1030	140	1750	3100	4382	645	500	G 3/4"	2335

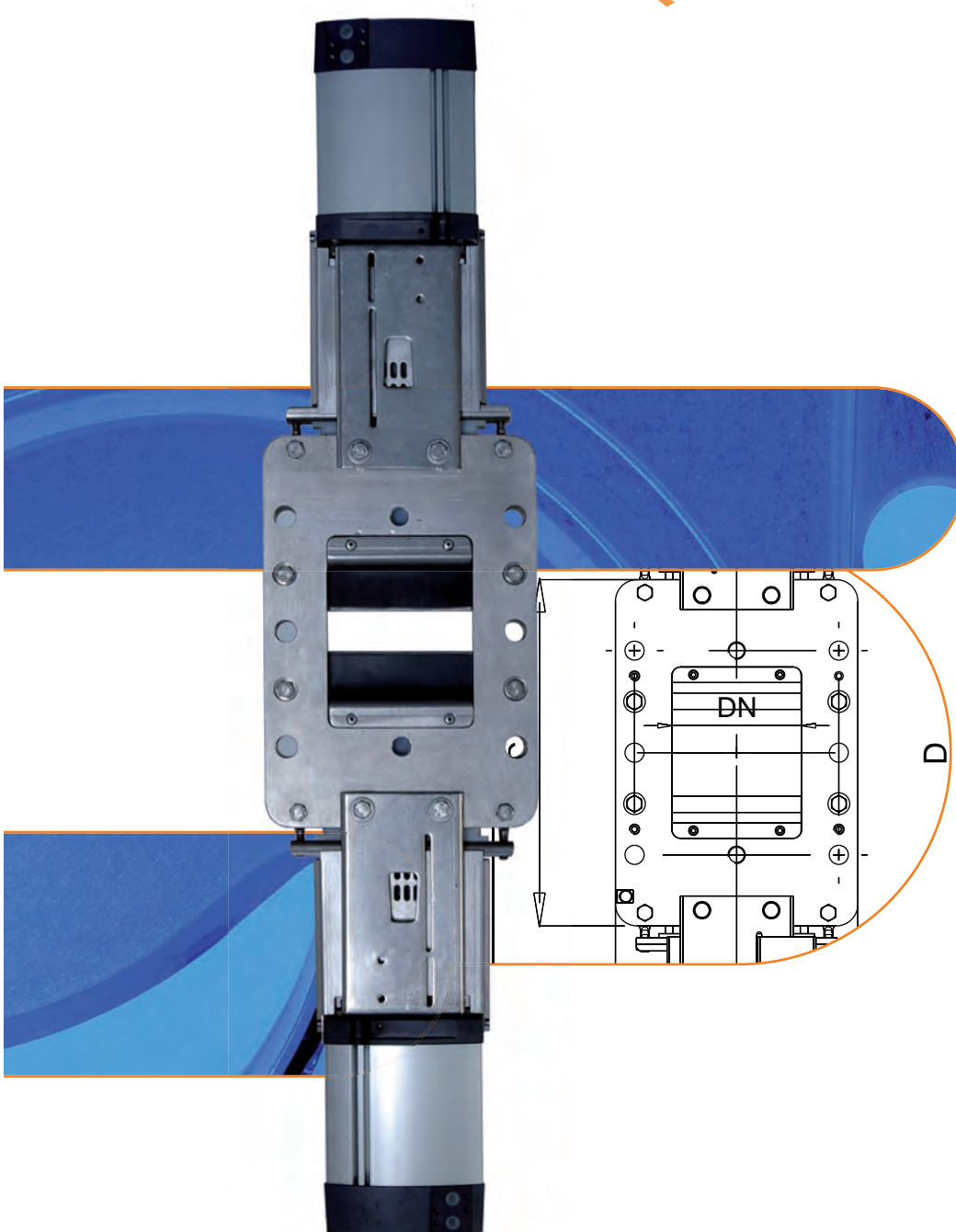
Mounting only in vertical flow direction. Higher operating pressures on request.

Dimensions in mm, flange bores to DIN EN 1092-1, PN 10 or ANSI B 16.5 class 150 (≥ DN 700: ANSI B 16.47 class 150).
 Further sizes on request.

Valves of stainless steel

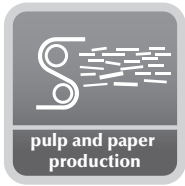
Reject-Valves

TAQP/G



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Applications



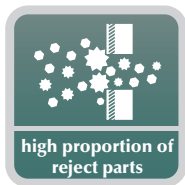
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media



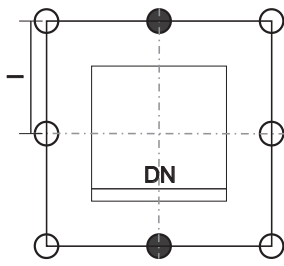
Materials

- housing 1.4571
- valve plate 1.4571 hardened
- slide cups

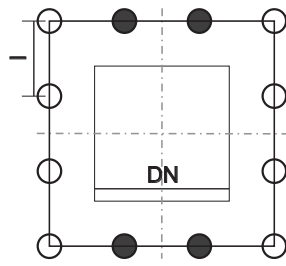
DN 150 – 400	PE-UHMW
DN 450 – 600	PP
- sealing EPDM
- rod wiper polyurethane caoutchouc
- stuffing box gland 1.4541
- bracket 1.4301
- max. operating pressure

DN 150 – 250	4 bar
DN 300 – 700	2 bar
- max. operating temperature 80° C

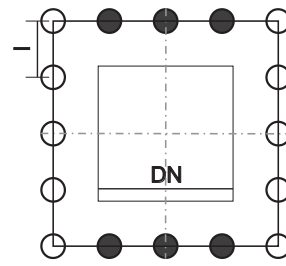
Flange bores for LOHSE TAQ valves according LOHSE standard



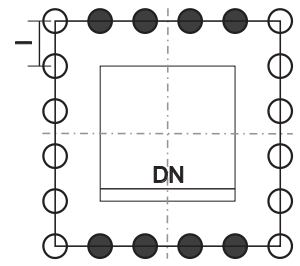
DN 150/200



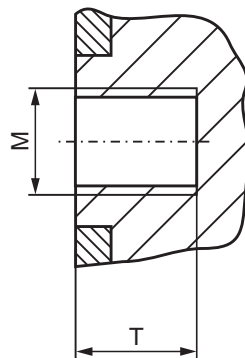
DN 250/300



DN 350/400



DN 500-700



Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

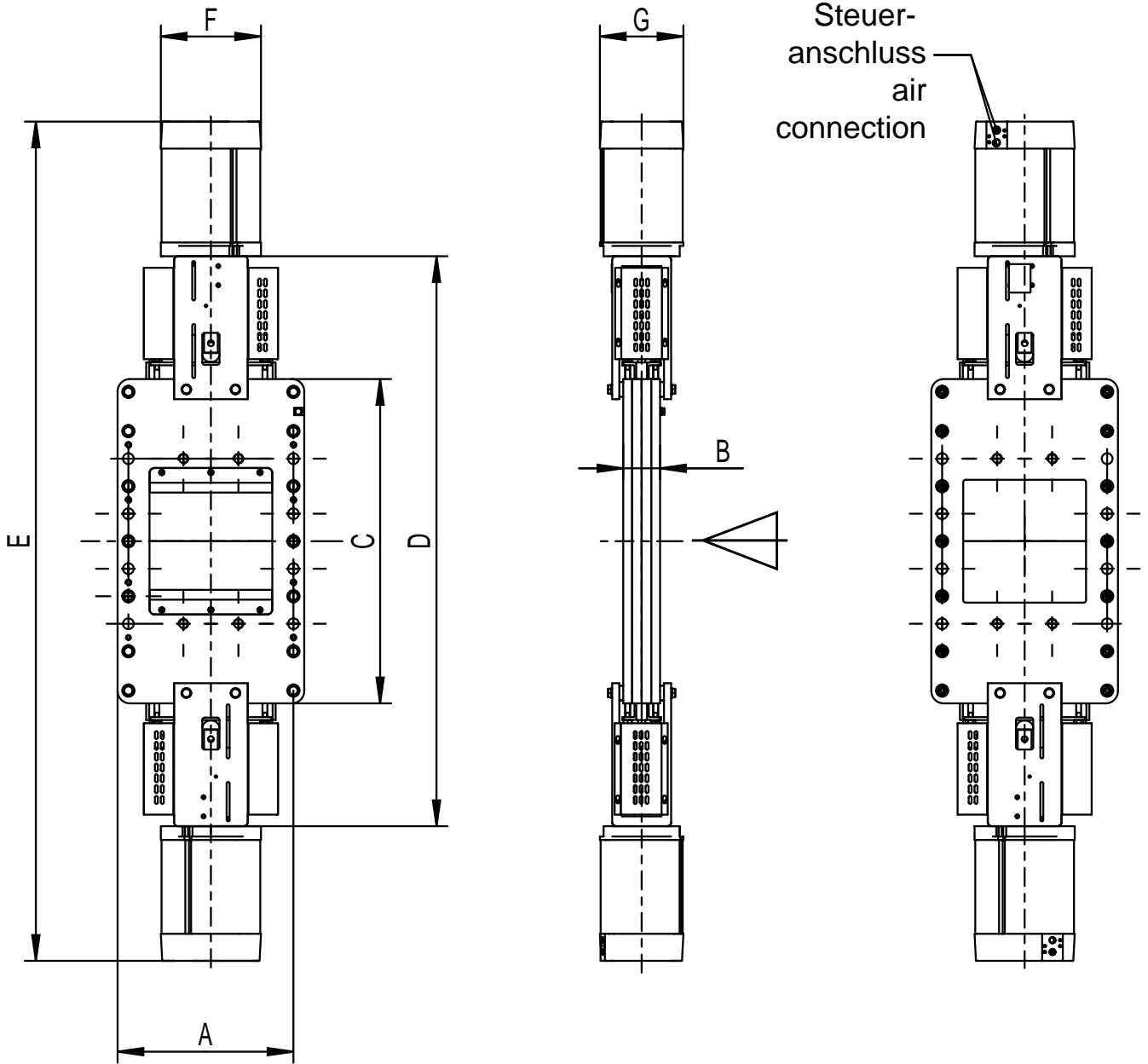
with metric tread

DN [mm]	Z	M	T [mm]	Z1	Z2	l [mm]
150	8	M20	18	2	6	118
200	8	M20	18	2	6	143
250	12	M20	18	4	8	112
300	12	M20	18	4	8	129
350	16	M20	20	6	10	110
400	16	M24	20	6	10	126.5
450	20	M24	20	8	12	112
500	20	M24	20	8	12	121
600	20	M27	23	8	12	143

Reject-valve

square

two double-acting pneumatic cylinders and protection guard



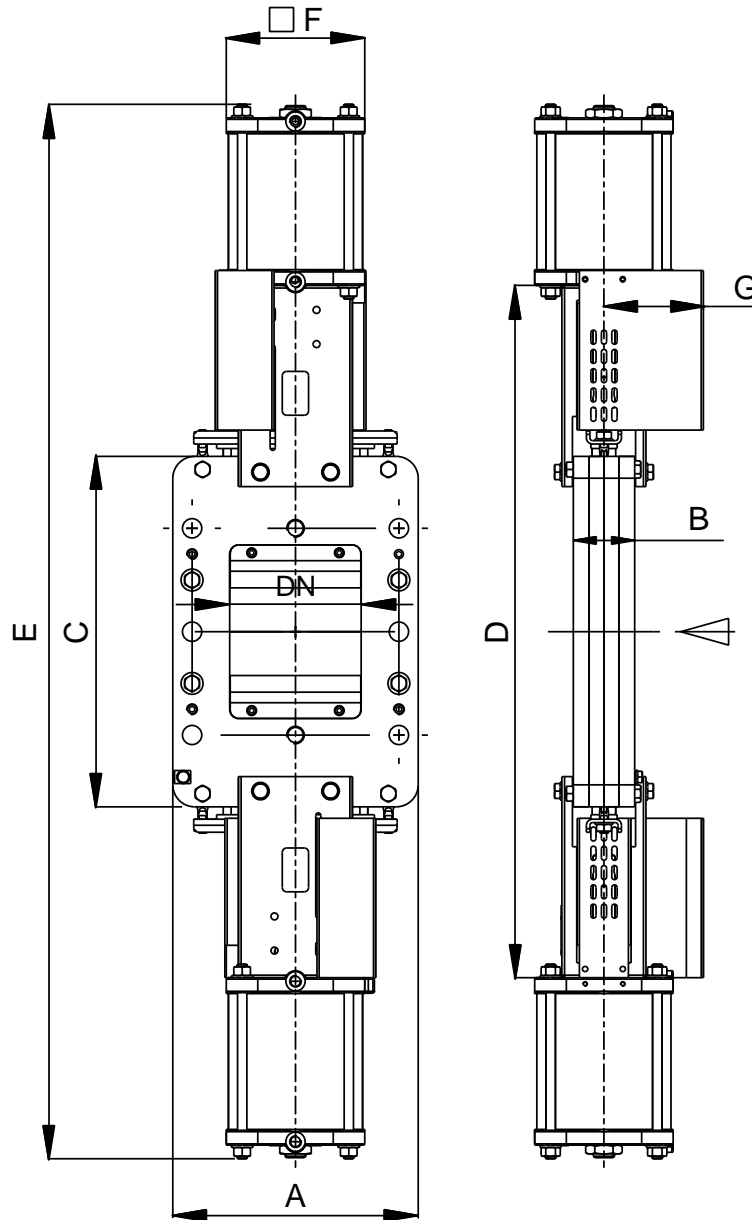
DN	PS [bar]	A	B	C	D	E	F	G	cyl Ø	air connection	weight ~[kg]
150	4	280	70	400	750	1212	204	178	160	G 1/4"	56.9
200	4	330	70	540	980	1524	244	215	200	G 1/2"	93.2
250	4	380	75	660	1160	1754	244	215	200	G 1/2"	123
300	2	430	75	780	1330	2014	283	242	230	G 1/2"	

Dimensions in mm, flange bores on request; air connection acc. VDI/VDE 3845 (NAMUR).
Further sizes on request.

Reject-valve

square

two double-acting pneumatic cylinders and protection guard



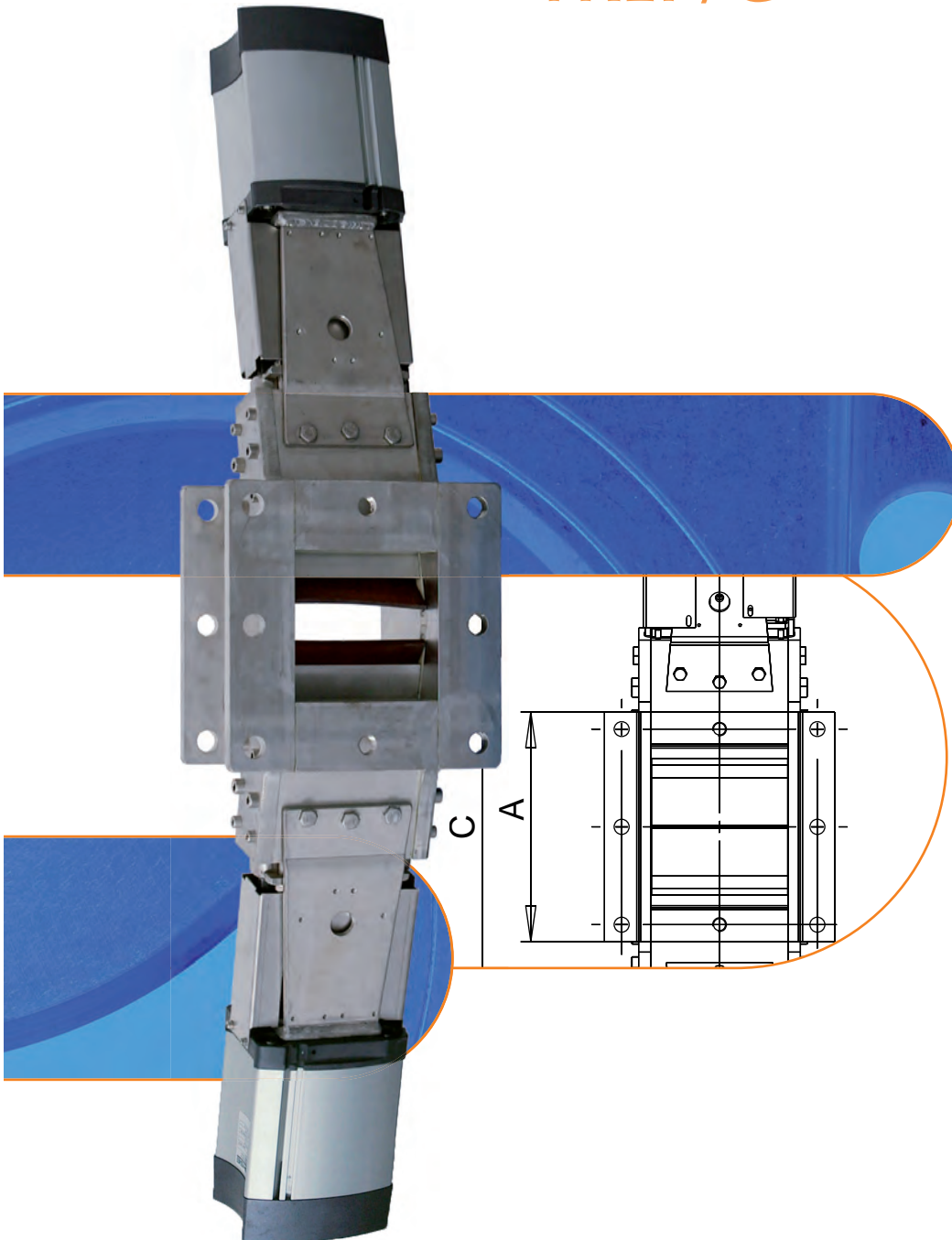
DN	PS [bar]	A	B	C	D	E	F	G	cyl Ø	air connection	weight ~[kg]
350	2	490	92	910	1552	2255	246	246	230	G 1/2"	219
400	2	550	92	1000	1810	2596	318	318	300	G 1/2"	320
450	2	600	95	1150	2030	2830	318	318	300	G 1/2"	464
500	2	650	96	1280	2220	3110	318	318	300	G 1/2"	610
600	2	770	120	1530	2590	3580	318	318	300	G 1/2"	1202

Dimensions in mm, flange bores on request.
Further sizes on request.

Valves of stainless steel

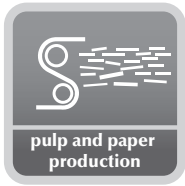
Reject-Valves

TREP/G



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Applications



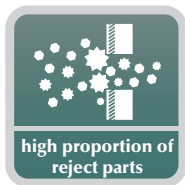
General usage

- media with reject fraction (e.g. nails and staples)
- coarse-grained media
- granulates
- powders
- temperature range to 80 °C
- see table for permitted operating pressure

Locations

- extraction devices for heavy soiling applications
- dumping and emptying devices for heavy soiling applications
- cleaning machines

Media

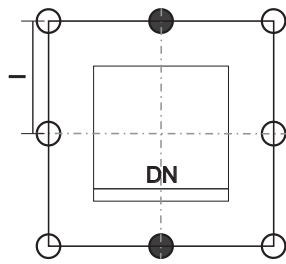


Materials

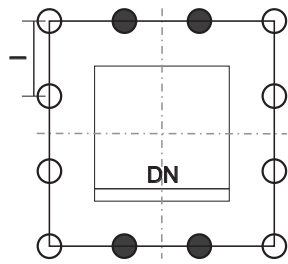
- housing 1.4571
- valve plate 1.4571
- slide cups PA 12 G
- rod wiper polyurethane caoutchouc
- stuffing box gland 1.4571
- bracktet 1.4571
- max. operating pressure

DN 150 – 250	4 bar
DN 300 – 700	2 bar
- max. operating temperature 80° C

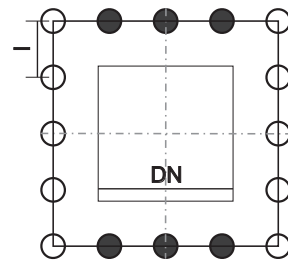
Flange bores for LOHSE TRE valves according LOHSE standard



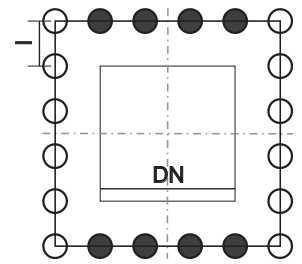
DN 150/200



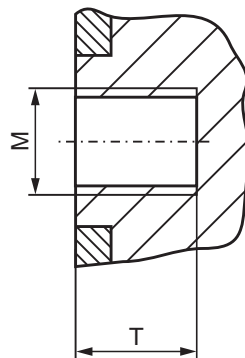
DN 250/300



DN 350/400



DN 500-700

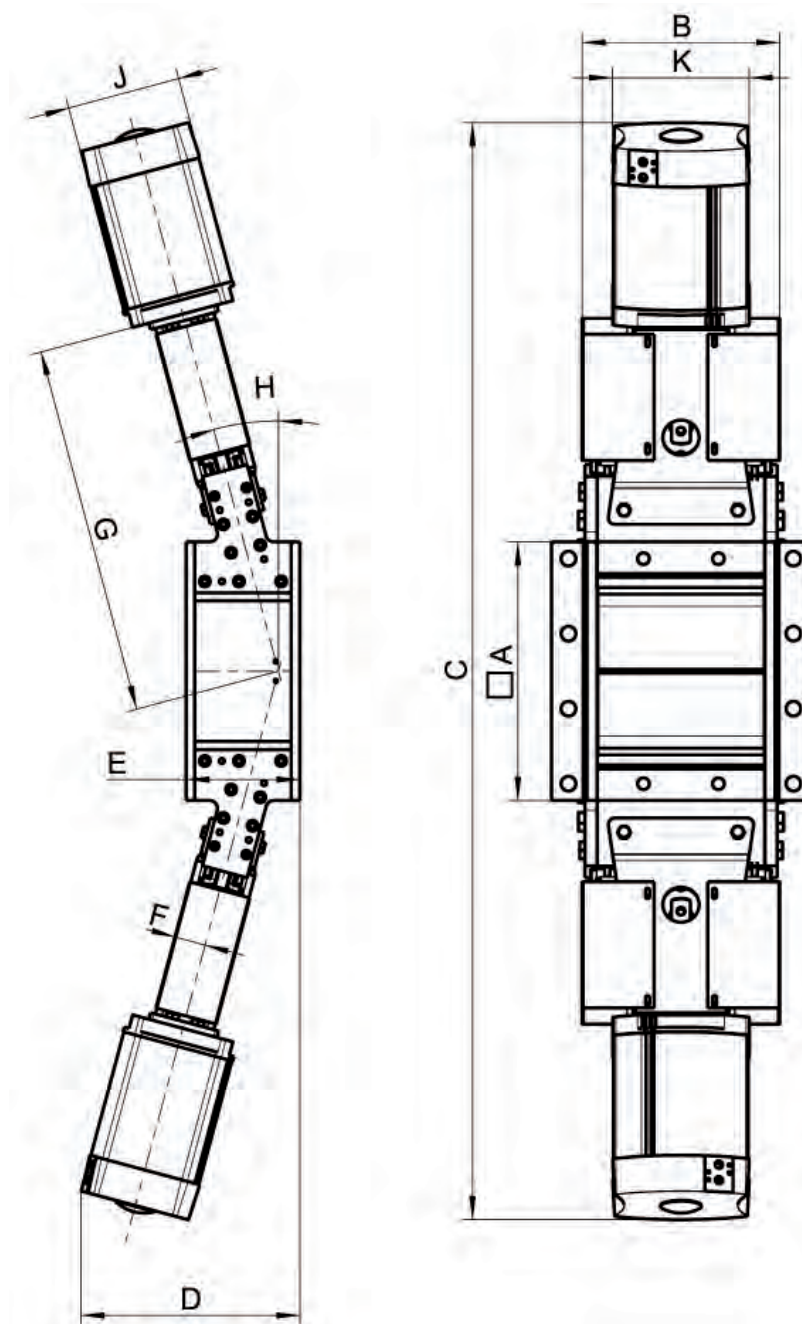


Z = total number of holes
 Z1 = number of joint-holes
 Z2 = number of through-going bores
 T = usable depth of thread

with metric tread

DN [mm]	Z	M	T [mm]	Z1	Z2	l [mm]
150	8	M20	18	2	6	118
200	8	M20	18	2	6	143
250	12	M20	18	4	8	112
300	12	M20	18	4	8	129
350	16	M20	20	6	10	110
400	16	M24	20	6	10	126.5
450	20	M24	20	8	12	112
500	20	M24	20	8	12	121
600	20	M27	23	8	12	143

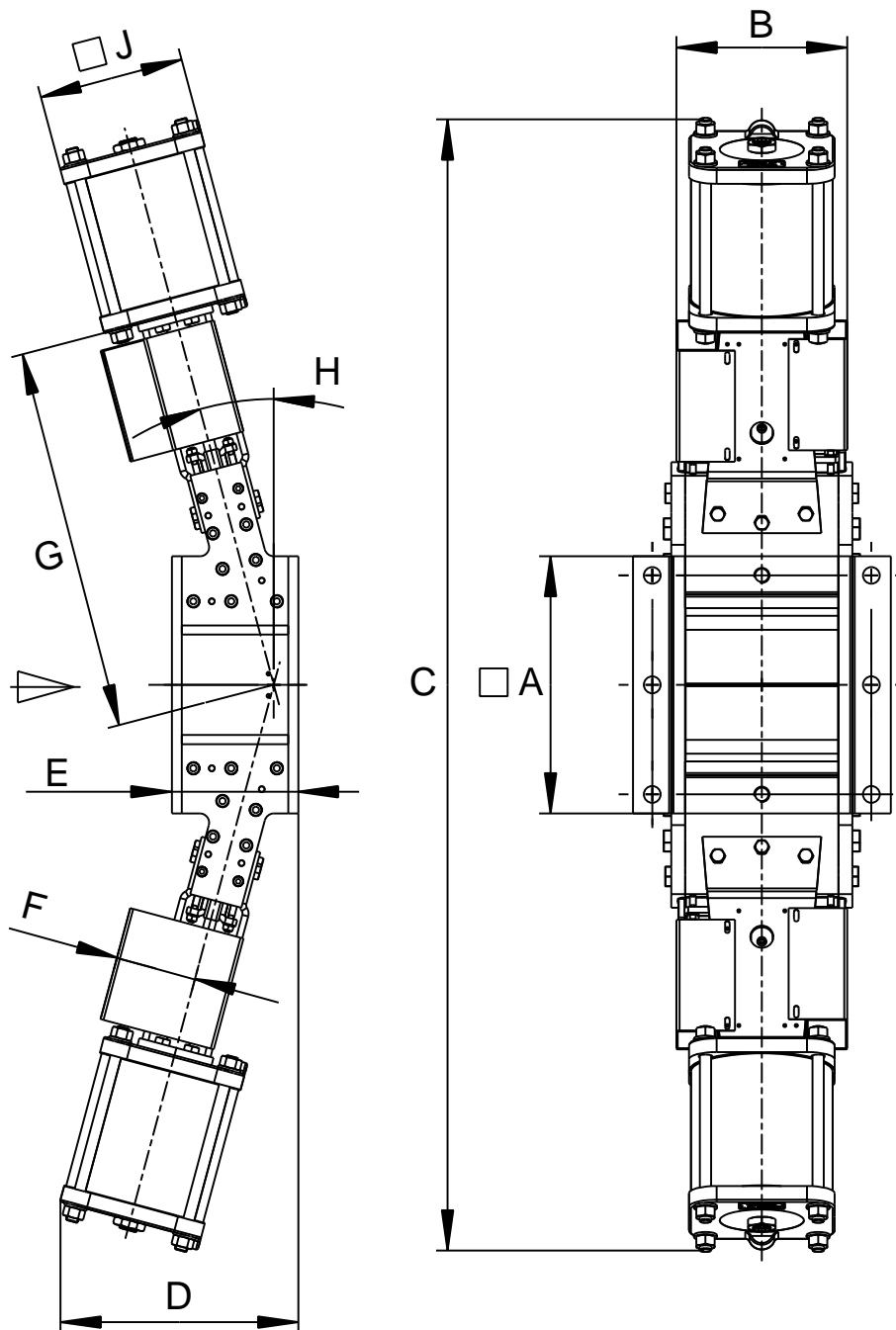
Reject-valve two double-acting pneumatic cylinders and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	J	K	cyl.Ø	air con- nection
150	4	286	175	1275	270	156	47	424	15°	145	165	125	G 1/4"
200	4	336	223	1485	293	165	47	501	15°	178	204	160	G 1/4"
250	4	386	295	1697	333	170	47	548	15°	215	244	200	G 1/2"
300	2	436	325	1931	421	190	47	649	15°	215	244	200	G 1/2"

Dimensions in mm, flange bores on request.
Further sizes on request.

Reject-valve
two double-acting pneumatic cylinders and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	H	J	cyl.Ø	air con- nection	weight ~[kg]
400	2	566	425	2540	478	215	118	906	15°	246	230	G 1/2"	319
500	2	666	525	3016	568	210	131	1080	15°	318	300	G 1/2"	586
600	2	786	625	3355	616	285	135	1203	15°	318	300	G 1/2"	846

Dimensions in mm, flange bores on request.
Further sizes on request.

Operating elements - the LOHSE modular system

Operating Elements for LOHSE Valves



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Bevel gear actuator 159

- Bevel gear actuator GK 159

Square head actuator 161

- Square head actuator X 161

Operating elements - the LOHSE modular system

All LOHSE COMPACT-valves comprise the following **main groups**:

- valve body type
- operating elements type Hns, H, P, E, K, GK or X

All elements are interchangeable for any given size. Thereby the connections of brackets as well as the coupling of actuator and valve plate will be removed and fixed again after the exchange. No removal of incorporated valve body (notice safety rules – pipes must be pressureless).

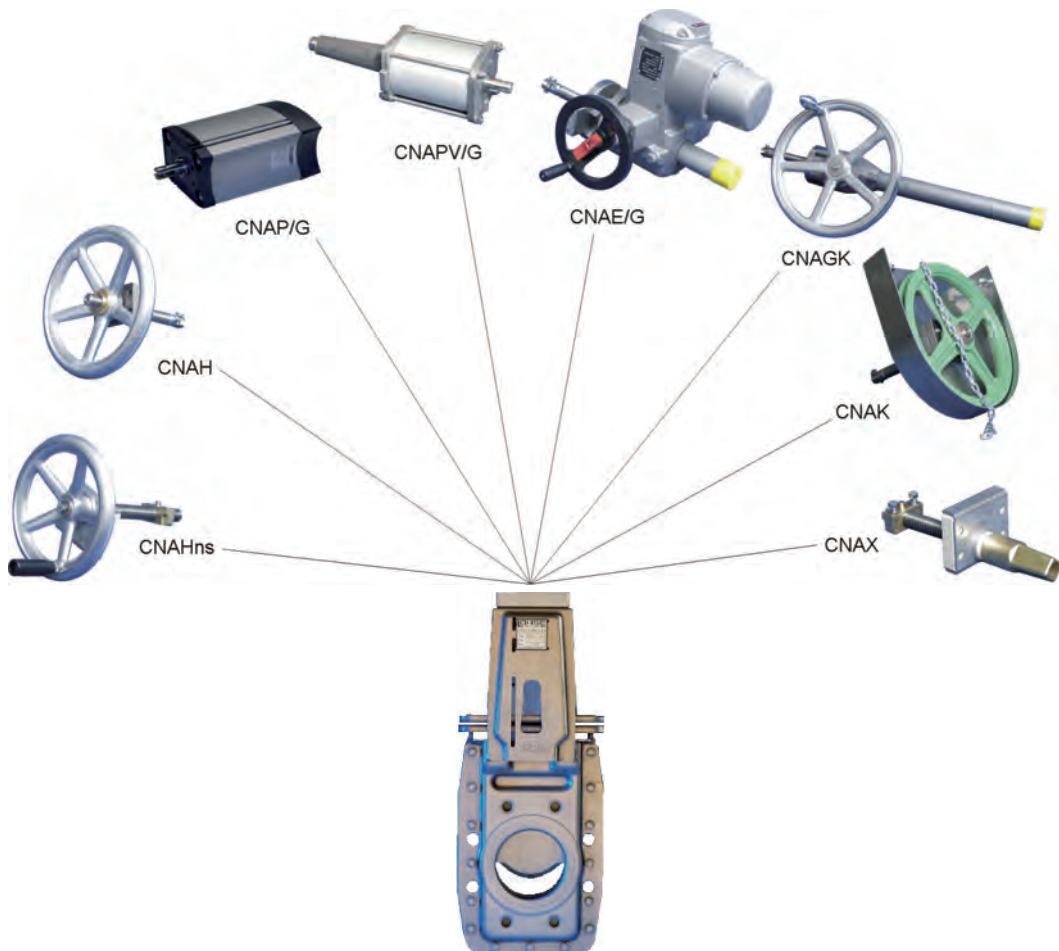
This facility is called the **LOHSE modular system** which offers the following advantages:

- simplified and less expensive holding of spare parts.
- in case of damage, actuating elements can be replaced inexpensively.
- if any valve drives have to be altered, replacement is easy and quick

Protection guards (G)

According to machinery directive 2006/42/EG guards are compulsory to shield all moving parts on automated gate valves.

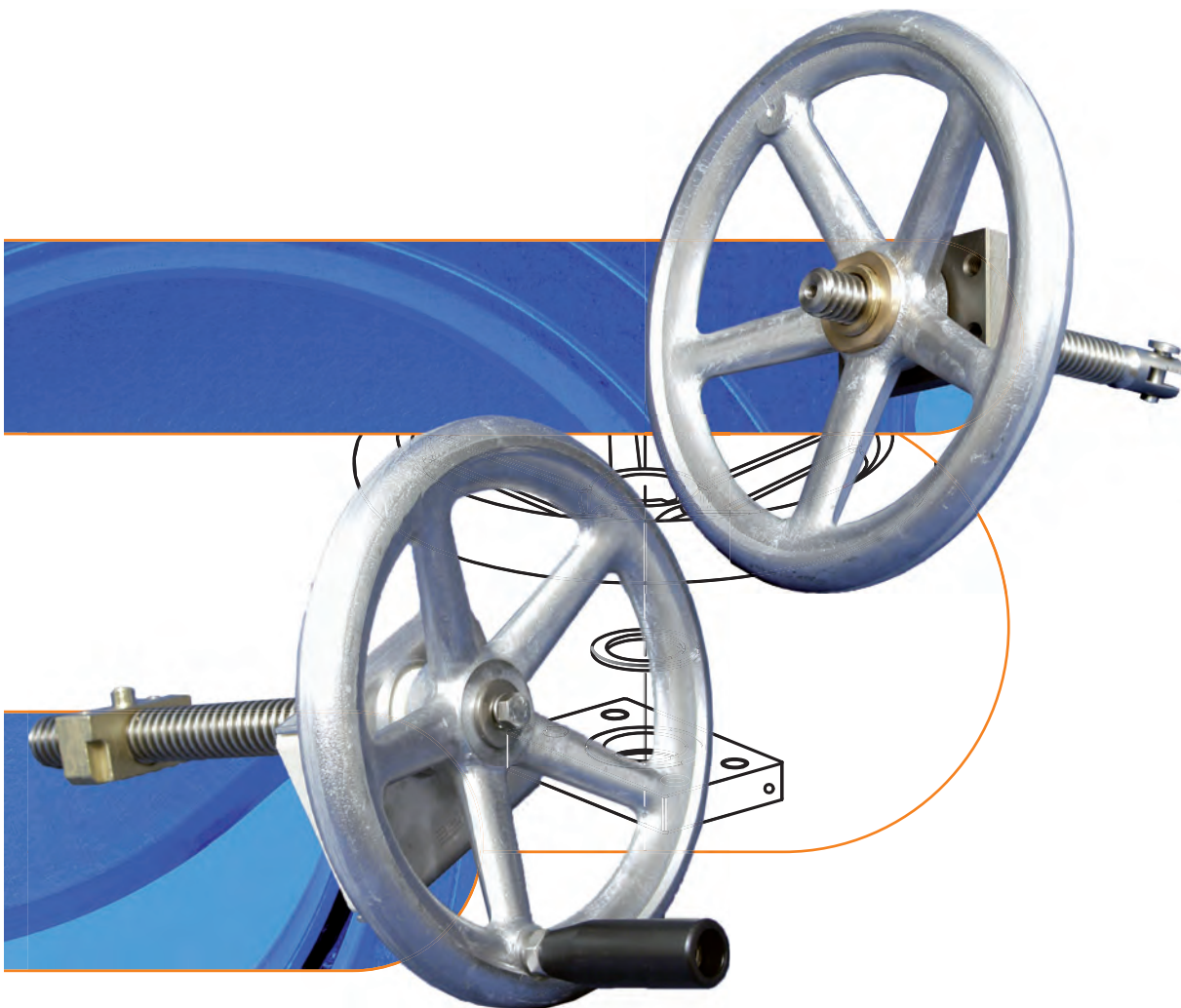
Protection guard of stainless steel.



Operating elements - the LOHSE modular system

Handwheels

Hns - not rising
H - rising



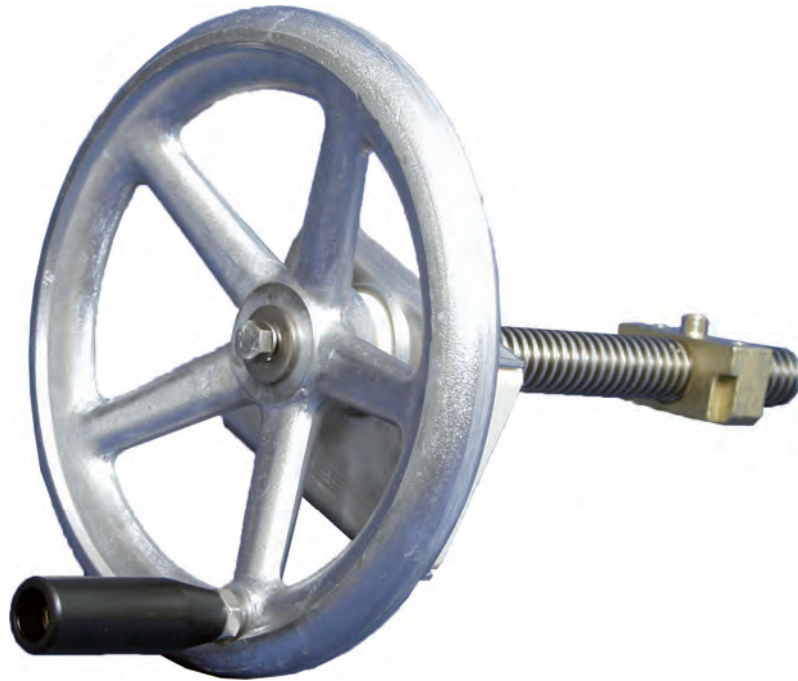
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Handwheel actuator type Hns with non-rising stem

Handwheel with non-rising stem, left-hand trapezoidal thread.
Attach a barrel handle to the handwheel of valves of type CNAHns, CBSHns and CAWHns up to DN 250.

Recommendation

for valves DN 50 – 300



Materials

- handwheel AlSi5Mg
- spindle 1.4301
- barrel handle Sustamid

Valid for types: CNA, CNAА, CNA-Bi, CAW, CBS, CBS, CBSA, CGNA, CGBS

Valid for types: CDS, CDSV, CDSA, CDSR, CGDS, NAQ, RQS, RQSV, AEQ

nominal diameter DN	handwheel-Ø [mm]	weight [kg]
50	180	1.8
65	180	1.8
80	180	1.8
100	225	2.6
125	225	2.7
150	225	2.7
200	280	4.7
250	280	4.9
300	360	5.8

nominal diameter DN	handwheel-Ø [mm]	weight [kg]
50	225	1.8
65	225	2.4
80	225	2.4
100	280	3.9
125	280	4.1
150	280	4.3
200	360	5.7
250	360	6.0
300	360	6.2

Handwheel actuator type H with rising stem

Handwheel with rising stem, left-hand trapezoidal thread, with stop sleeve.
Turn clockwise: valve „CLOSED“.
Turn anticlockwise: valve „OPEN“.

Recommendation

for valves DN 350 and more



Materials

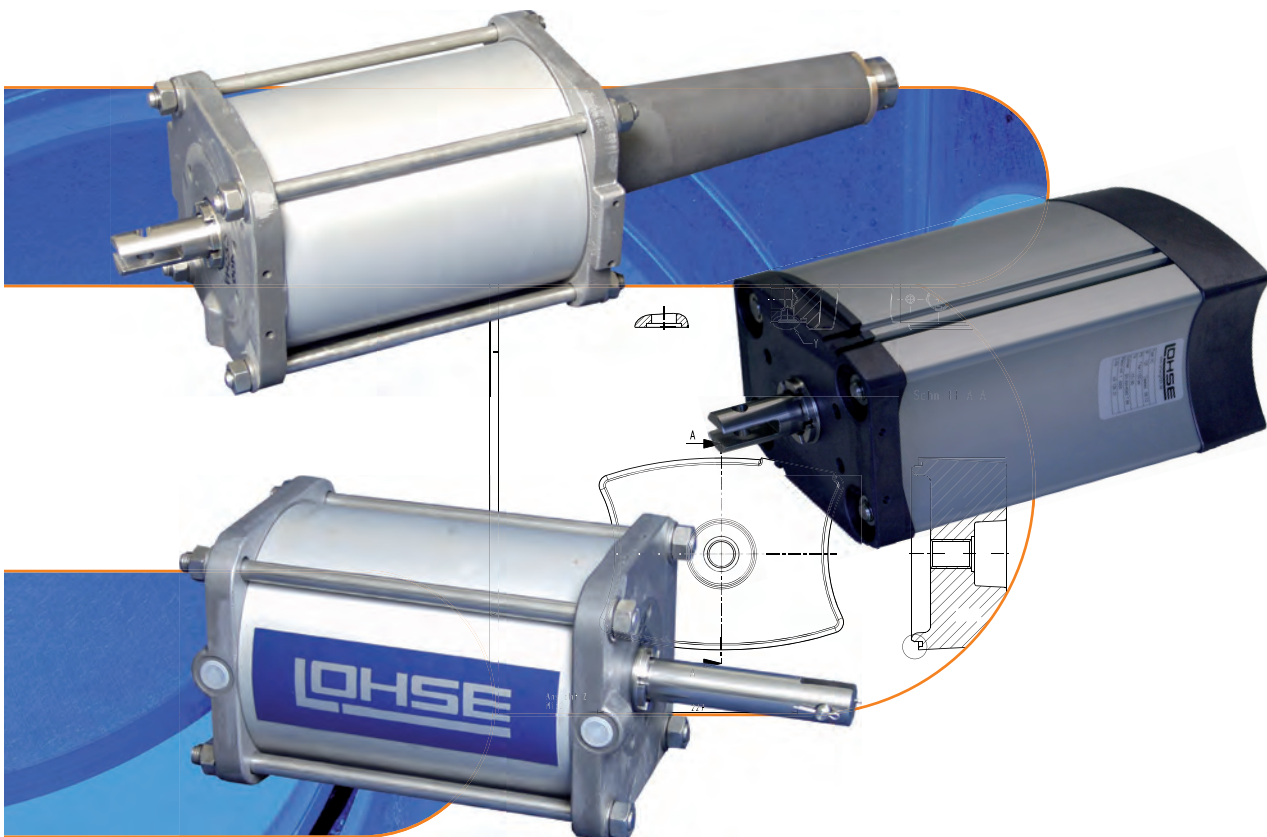
- handwheel AlSi5Mg
- spindle 1.4301

nominal diameter DN	handwheel-Ø [mm]	weight [kg]
50	225	1.9
65	225	1.9
80	225	1.9
100	280	3.3
125	280	3.3
150	280	3.4
200	360	6.0
250	360	6.2

nominal diameter DN	handwheel-Ø [mm]	weight [kg]
300	360	6.4
350	500	8.9
400	500	9.9
450	500	11.4
500	500	15.1
600	640	25.9
700	800	33.6
800	800	34.1

Operating elements - the LOHSE modular system

Pneumatic Cylinders



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General

Pressure

LOHSE pneumatic cylinders are controlled with compressed air at pressures of between 5 and 7 bar (6 bar*) through a multi-port valve. The control valve can be operated manually, electrically (solenoid valve) or pneumatically.

Optimum function at 6 bar. A minimum pressure of 5 bar is required to operate the valve under normal operating conditions. The maximum pressure of 7 bar (6 bar*) must not be exceeded.

* PC Ø 500 for max. 6 bar

Maintenance-free

LOHSE pneumatic cylinders are virtually maintenance-free. They are factory-lubricated.

LOHSE pneumatic cylinders are generally factory-adjusted to the particular valve type and valve size.

Accessories

- multi-port valve
- silencer
- flow control valve

Air consumption

Formula for the calculation of the air consumption in double-acting and single acting pneumatic cylinders (VC, VM, PZ, VMV, VMF).

$$Q \text{ [Nl/stroke]} = \frac{1,033 + P}{1,033} \times \text{piston surface [dm}^2\text{]} \times \text{stroke [dm]}$$

P = operating pressure [bar]

Q = air volume [normal litre / stroke]

CDSP / CDSVP / CDSAP /

CDSRP

CNAP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
50	100	56	3.0
65	100	73	3.9
80	100	89	4.8
100	100	106	5.7
125	125	132	11.0
150	125	156	13.0
200	160	210	28.7
250	160	260	35.6
300	160	312	42.7
350	200	362	77.4
400	200	412	88.1
450	230	462	130,6
500	230	512	144.8
600	300	612	294.5
700	400	712	598.9
800	400	812	694.7

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
50	100	58	3.1
65	100	73	4.0
80	100	88	4.7
100	125	109	9.1
125	125	134	11.2
150	160	159	21.8
200	200	210	44.9
250	200	260	55.6
300	230	310	87.7
350	300	360	173.2
400	300	410	197.3
450	300	460	221.4
500	400	512	437.8
600	400	612	523.4
700	500	715	955.3
800	500	815	1089.0

CBSP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
50	100	62	3.4
65	100	73	3.9
80	100	89	4.8
100	100	106	5.7
125	125	132	11.0
150	125	156	13.0
200	160	210	28.7
250	160	260	35.6
300	160	312	42.7
350	200	362	77.4
400	200	412	88.1
450	230	462	130.6
500	230	512	144.8

CAWP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
50	100	52	2.8
65	100	67	3.6
80	100	82	4.4
100	100	99	5.3
125	125	124	10.4
150	125	149	12.5
200	160	202	27.6
250	160	252	34.5
300	160	302	47.4
350	200	352	75.3
400	200	402	86.0
450	230	452	127.8
500	230	502	142.0
600	300	602	289.7

TAP / TAQP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
100	125	50	4.2
125	125	62.5	5.2
150	160	75	9.0
200	200	100	21.4
250	200	125	26.7
300	230	150	42.4
350	300	175	84.2
400	300	200	96.2
450	300	225	108.3
500	400	250	213.8
600	400	300	256.6
700	500	350	467.6
800	500	400	534.5

AEQP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
100	125	102	8.5
150	160	147	20.2
200	200	202	43.2
250	200	247	52.8
300	230	302	85.4
350	300	352	169.3
400	300	402	193.5
500	400	502	429.3
600	400	602	514.8

SAQP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
400	300	420	202.0
500	400	525	448.9
600	400	625	534.5
800	500	825	1102.3

TREP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
150	160	77.6	10.6
200	200	103.5	22.1
250	200	129.4	27.7
300	230	155.3	43.9
400	300	207.1	99.7
500	400	258.8	221.3
600	400	310.6	265.6

RQSP / NAQP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
100	125	114	9.5
150	160	164	22.5
200	200	214	45.8
250	200	275	58.8
300	230	325	91.9
350	300	375	180.4
400	300	425	204.5
500	400	530	453.3
600	400	630	538.7

CPDP

DN [mm]	cyl. Ø [mm]	stroke [mm]	Q [Nl/stroke] p=6 bar
80	100	85	4.5
100	100	105	5.6
125	100	130	7.0
150	100	155	8.3
200	125	205	17.1
250	125	255	21.3
300	160	305	41.7
350	160	355	48.6
400	160	405	55.5

Closing force, operating pressure 6 bar (60 N/cm²)

cyl. Ø [mm]	closing force [kN]
100	4.7
125	7.4
145	9.9
160	13.8
175	14.4
200	18.9
230	24.9
300	42.4
400	75.4
500	117.8

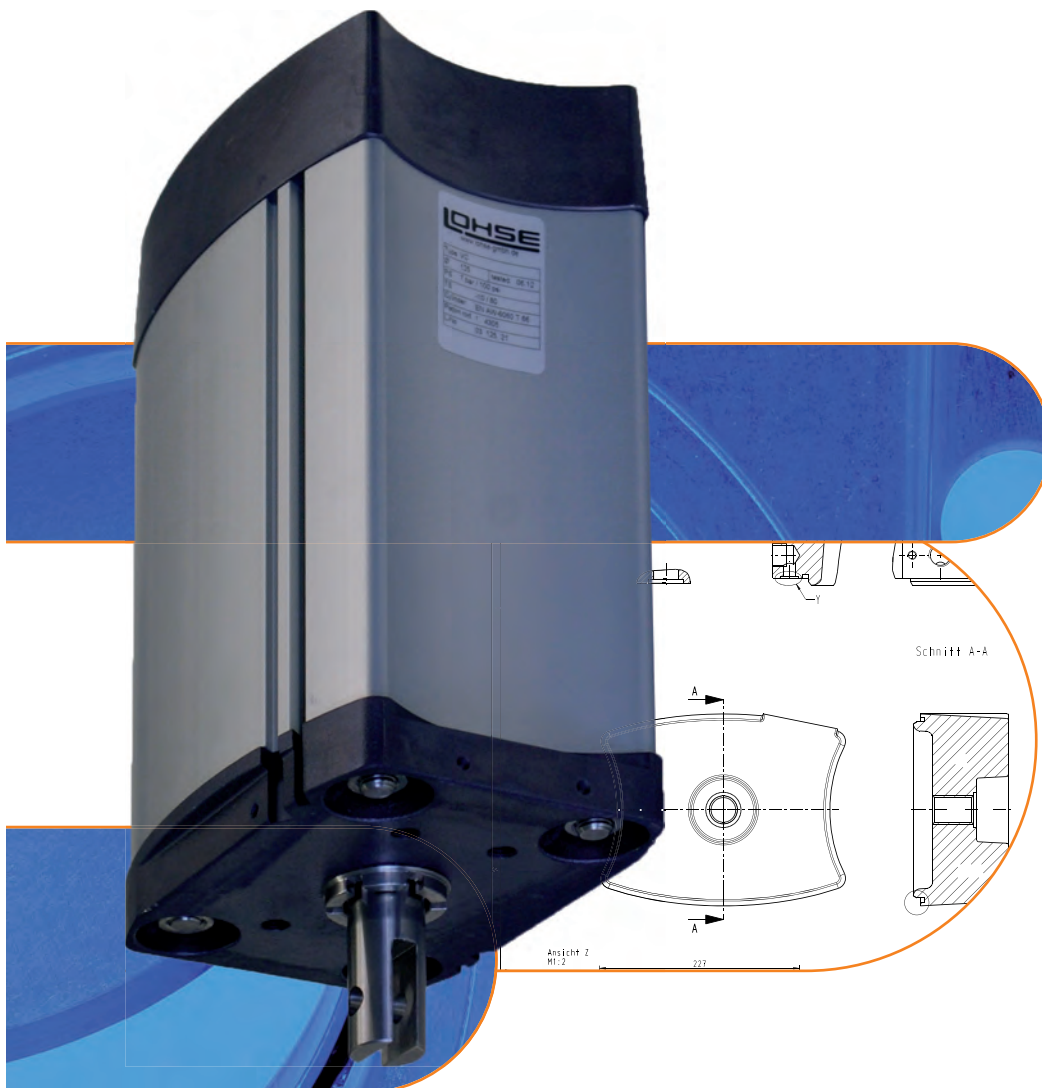
Compressed air connection

cyl. Ø [mm]	compressed air connection	min. line inside ø [mm]	min. pressure [bar]	max. pressure [bar]
100	G 1/4"	7	5	7
125	G 1/4"	7	5	7
145	G 1/4"	7	5	7
160	G 1/4"	7	5	7
175	G 1/2"	11	5	7
200	G 1/2"	11	5	7
230	G 1/2"	11	5	7
300	G 1/2"	11	5	7
400	G 3/4"	20	5	7
500	G 3/4"	20	5	7

Operating elements - the LOHSE modular system

Pneumatic Cylinder

Type VC



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A specially developed linear cylinder for corrosive media under the most demanding of operating conditions

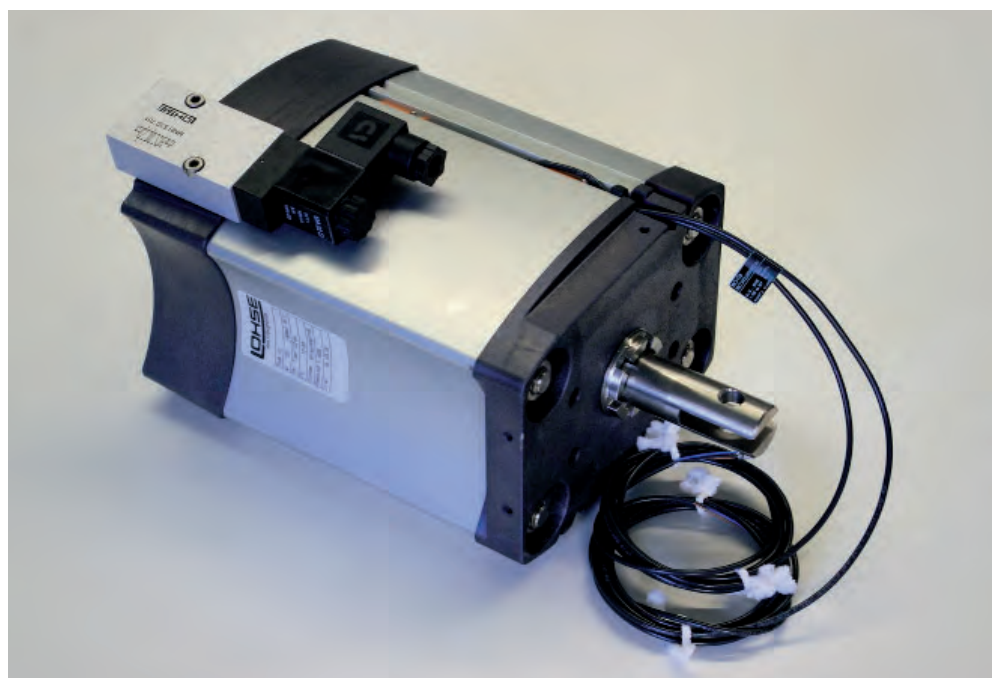
A compact construction according to the latest industrial design

- No external parts
 - dirt can be easily removed
- Stroke can be precisely adjusted in both directions and as a result can be used on a wide variety of valve types
- Light weight on account of its aluminium construction
- Low maintenance due to a life time cycle of lubrication
- Strong rods running the length of the cylinder barrel thus easy to remove
- Sturdy piston rod in stainless steel precisely guided

An integrated NAMUR interface according to VDI/VDE 3845 to enable the direct mounting of the solenoid valve

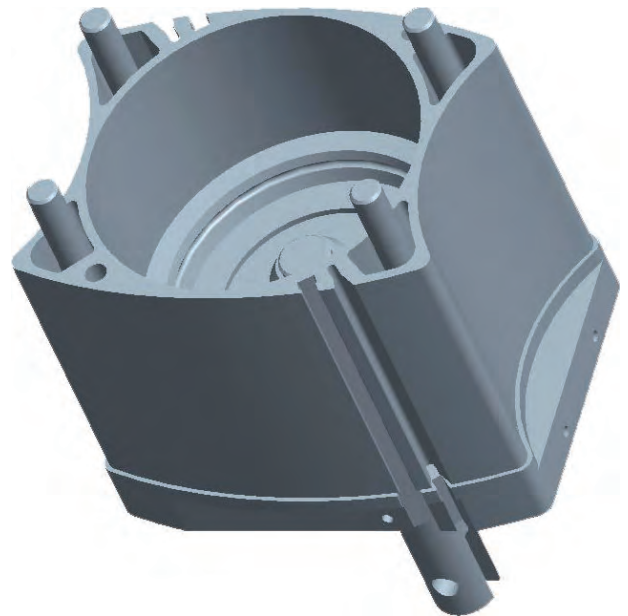
- No tubing is necessary from the solenoid valve to the cylinder
 - saving fixtures and air connections
 - reduction of leaks
- Straightforward mounting of the solenoid valve via two screws
 - mounting bracket no longer necessary
 - reduction of assembly time
- Direct connection of the solenoid to the main air line
 - expensive pneumatic control cabinets are thus eliminated
- Much improved air flow, the volume of flow is channelled internally in the piston area enabling a more direct response of cylinder piston and thus avoiding a jerking effect of the piston
- Lower stock-holding costs as identical solenoid valves suit all cylinders
- Connections:

	1/4"	1/2"
	Ø 100	Ø 200
	Ø 125	Ø 230
	Ø 160	



A Profiled Barrel with slots

- Made from anodized aluminium for optimum wear and slide characteristics
- Built-in T and C slots according to ISO 15552 for contactless position recognition
 - easy mounting of common cylinder proximity switches by insertion into the slots and fixing with sensor integrated clamping screws with combined slot or hexagon socket head
 - very clear visibility of the piston position even from a distance via integrated LED indicators on the proximity switches
 - Cost reduction
 - > via the elimination of expensive brackets to mount conventional proximity switches
 - > reduced installation time
 - Accessibility
 - > straightforward and practical adjustment is enabled
 - > in safety as guards do not need to be removed



Magnetic Piston

- Magnetic as standard
 - no retrofitting necessary
 - the change to a contactless position recognition is always possible

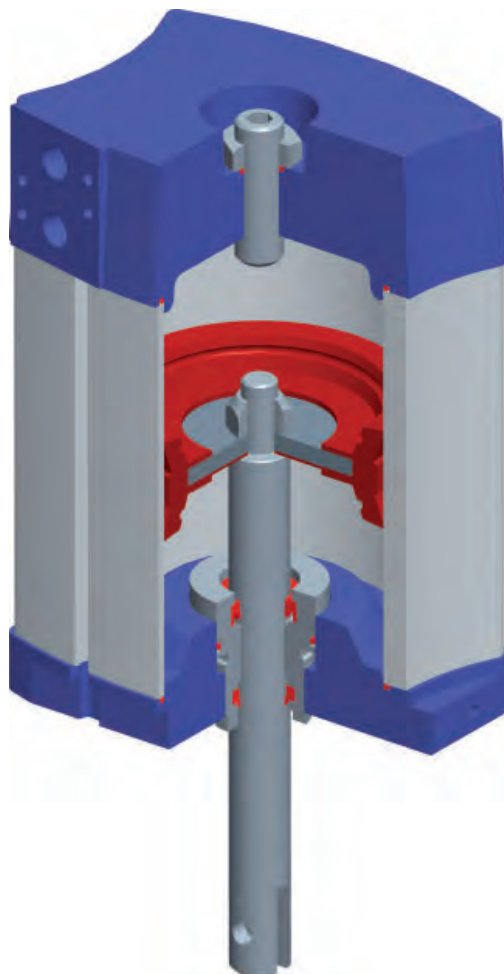
Materials

- cylinder bottom + cover AlSi5Mg
- profiled barrel AW-6060T66
- piston rod 1.4305
- piston head NBR
- hexagon bolts A2-70
- adjusting nut with bush 1.4305
- sealings NBR

Correlation between pneumatic cylinder VC and LOHSE-valves

DN	CNA	CAW	CBS	CDS	NAQ	RQS	AEQ	TA	TAQ	TRE	CPD
50	Ø 100	Ø 100	Ø 100	Ø 100	-	-	-	-	-	-	
65	Ø 100	Ø 100	Ø 100	Ø 100	-	-	-	-	-	-	
80	Ø 100	Ø 100	Ø 100	Ø 100	-	-	-	-	-	-	Ø 100
100	Ø 100	Ø 100	Ø 100	Ø 125	-	Ø 125	Ø 125	Ø 125	-	-	Ø 100
125	Ø 125	Ø 125	Ø 125	Ø 125	-	-	-	Ø 125	-	-	Ø 100
150	Ø 125	Ø 125	Ø 125	Ø 160	Ø 160	Ø 160	Ø 160	Ø 160	Ø 160	Ø 160	Ø 100
200	Ø 160	Ø 160	Ø 160	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 125
250	Ø 160	Ø 160	Ø 160	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 200	Ø 125
300	Ø 160	Ø 160	Ø 160	Ø 230	-	Ø 230	Ø 230	Ø 230	Ø 230	Ø 230	Ø 160
350	Ø 200	Ø 200	Ø 200	Ø 300 (*)	-	Ø 300 (*)	Ø 300 (*)	Ø 300 (*)	Ø 300 (*)	-	Ø 160
400	Ø 200	Ø 200	Ø 200	Ø 300 (*)	-	Ø 300 (*)	Ø 300 (*)	Ø 300 (*)	Ø 300 (*)	Ø 300 (*)	Ø 160
450	Ø 230	Ø 230	Ø 230	Ø 300 (*)	-	-	-	Ø 300 (*)	Ø 300 (*)	-	
500	Ø 230	Ø 230	Ø 230	Ø 400 (**)	-	Ø 400 (**)	Ø 400 (**)	Ø 400 (**)	Ø 400 (**)	Ø 400 (**)	

(*) pneumatic cylinder type VM
 (**) pneumatic cylinder type PZ



Operating elements - the LOHSE modular system

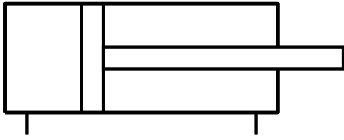
Pneumatic Cylinder

Type VM



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Pneumatic cylinder type VM, double-acting



LOHSE VM pneumatic cylinders are double-acting cylinders. In closing direction, the stroke can be adjusted with the adjusting nut. In opening direction, it can be adjusted with the adjusting screw.



Size: Ø 300 mm
Stroke: adjusted to suit valve type and size.

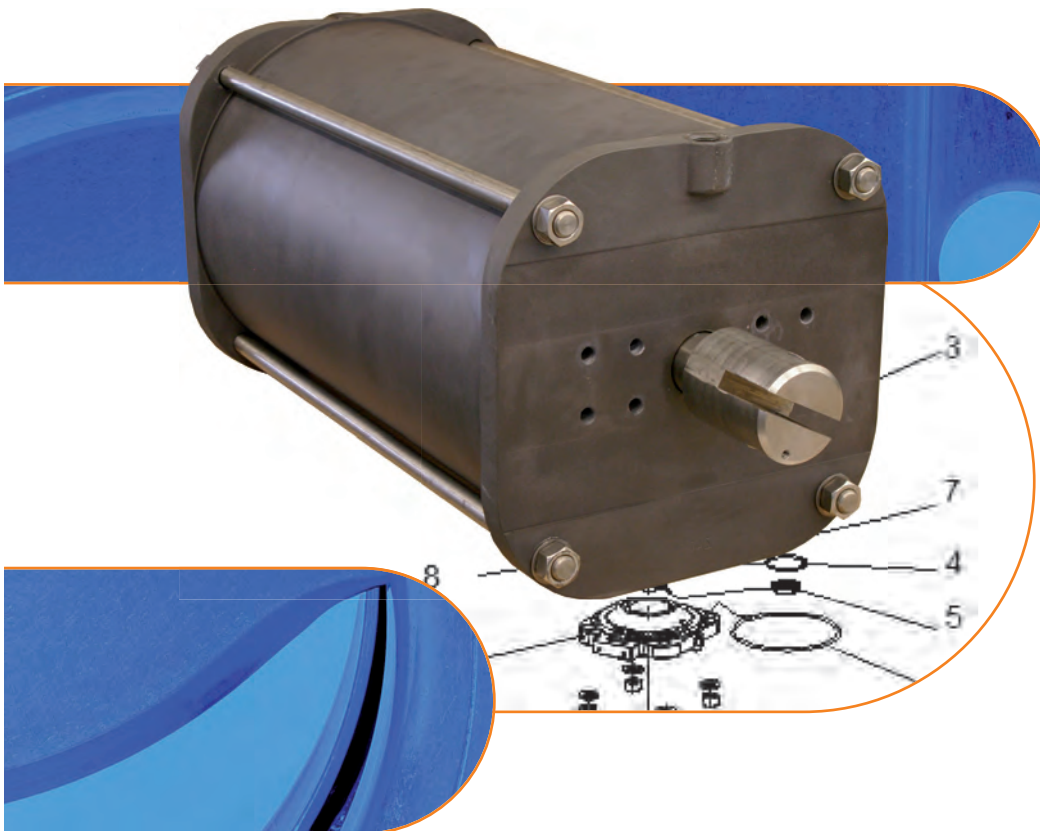
Materials

- cylinder bottom + cover AlSi5Mg
- cylinder barrel AlMgSi0.5
- piston rod 1.4305
- piston head NBR
- hexagon bolts A2-70
- adjusting nut with bush 1.4305
- sealings NBR

Operating elements - the LOHSE modular system

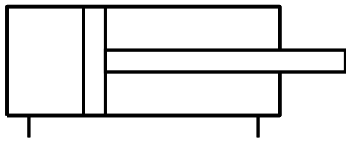
Pneumatic Cylinder

Type PZ



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Pneumatic cylinder type PZ, double acting



LOHSE PZ pneumatic cylinders are equipped with a fixed stop in closing direction (no adjusting nut). In opening direction, their stroke can be adjusted by means of the adjusting screw.



Sizes: Ø 400 and Ø 500 mm
Stroke: adjusted to suit valve type and size.

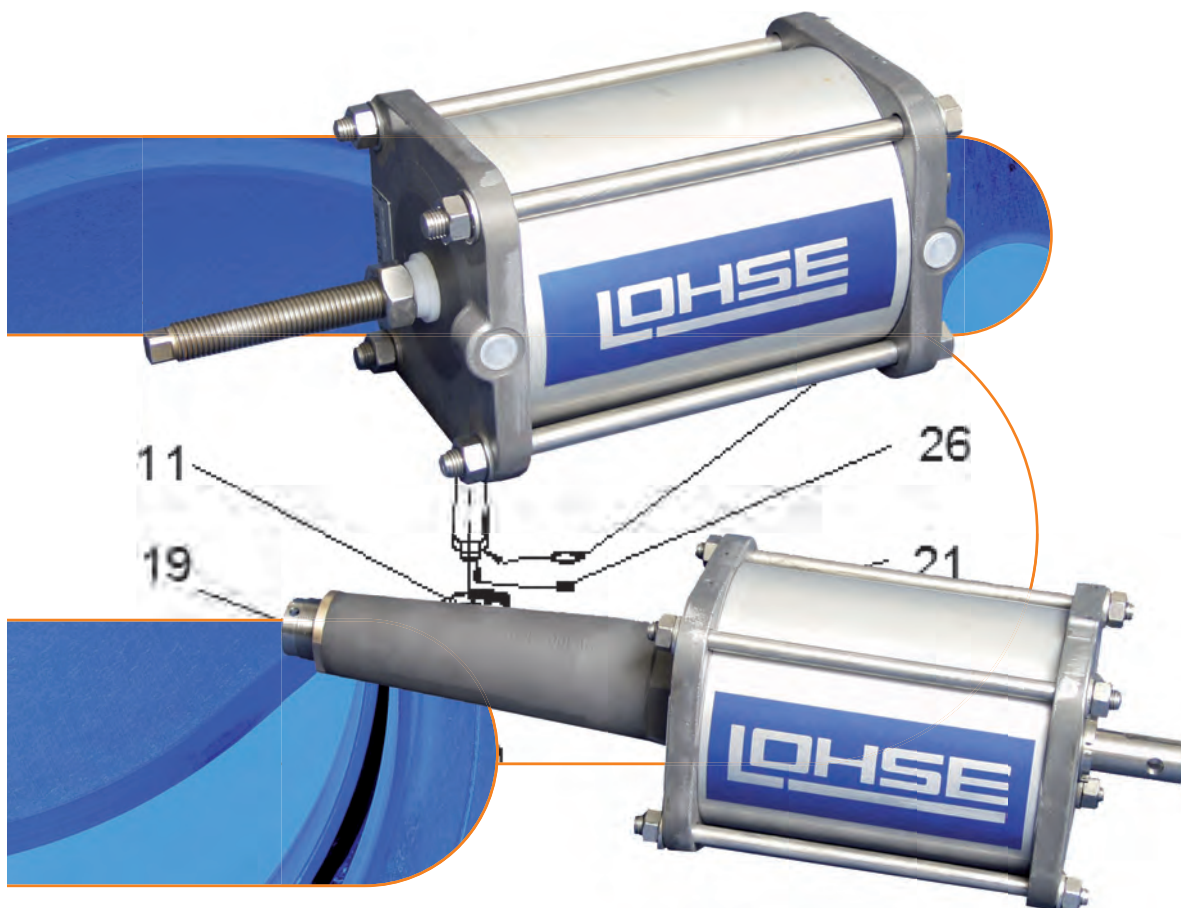
Materials

- cylinder bottom + cover Al
- cylinder barrel AlSi10Mg
- piston rod 1.4305
- piston PE
- hexagon bolts A2-70
- sealings NBR

Operating elements - the LOHSE modular system

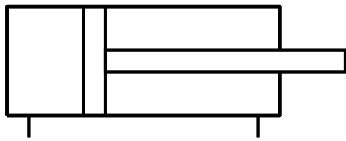
Pneumatic Cylinder

Type VMV



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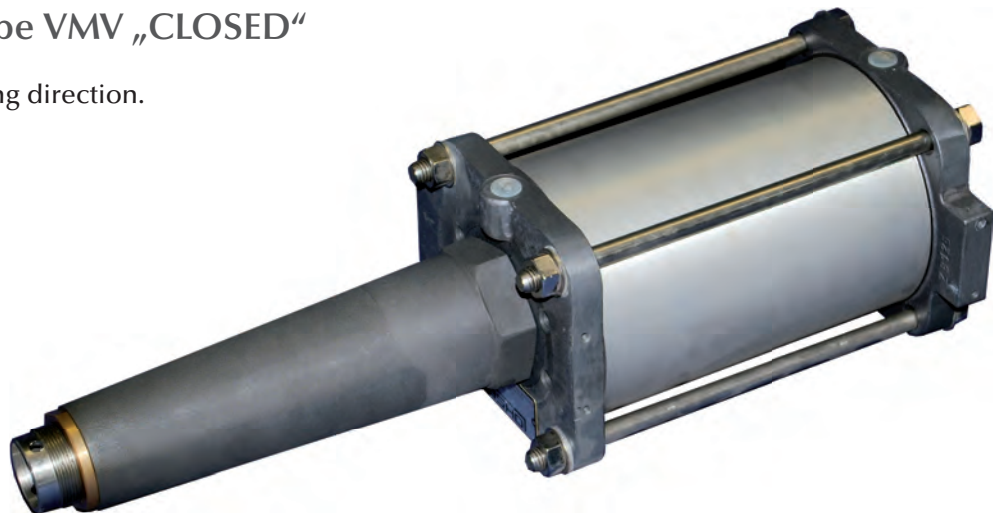
Pneumatic cylinder type VMV, double acting



LOHSE VMV pneumatic cylinders are cylinders with adjustable stroke limitation across the entire stroke length.

Pneumatic cylinder type VMV „CLOSED“

VMV „CLOSED“ - stop in closing direction.



Pneumatic cylinder type VMV „OPEN“

VMV „OPEN“ - stop in opening direction.



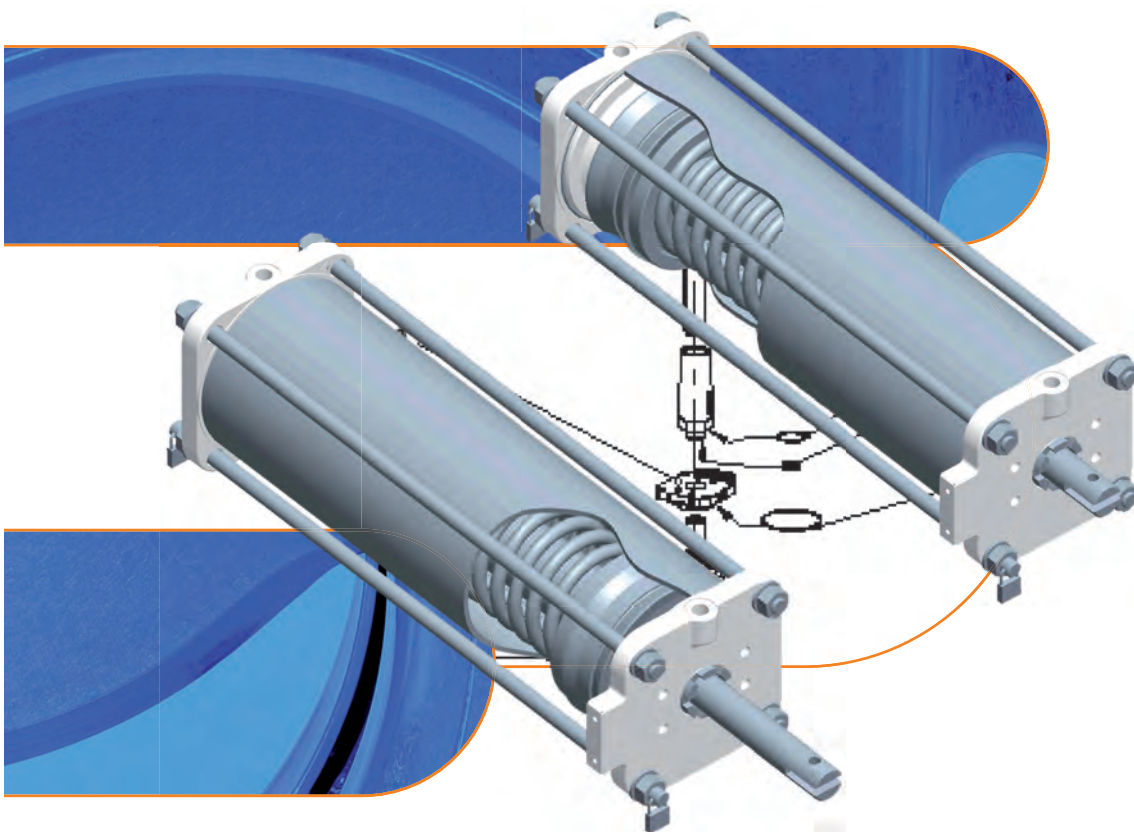
Materials

- cylinder bottom + cover AlSi5Mg
- cylinder barrel AlMgSi0.5
- piston rod 1.4305
- piston head NBR
- hexagon bolts A2-70
- adjusting nut with bush 1.4305
- sealings NBR

Operating elements - the LOHSE modular system

Pneumatic Cylinder

Type VMF

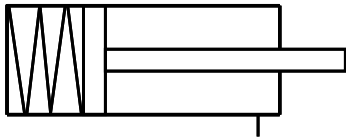


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Pneumatic cylinder type VMF, single acting

LOHSE VMF pneumatic cylinders are single-acting cylinders that are closed or opened by spring force.

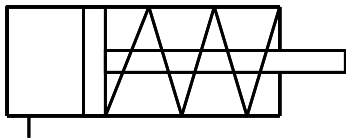
Pneumatic cylinder type VMF „spring-closing“



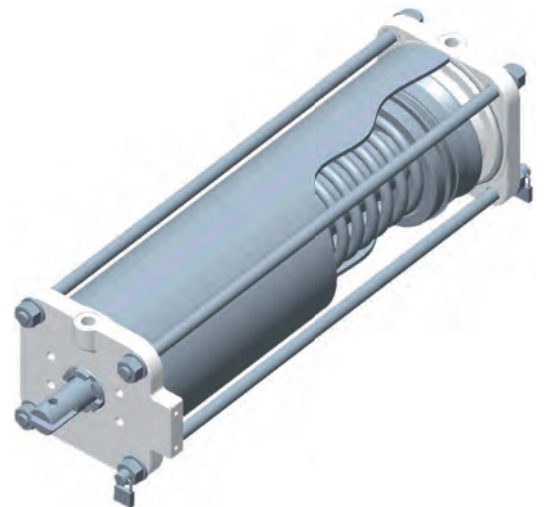
When not pressurised, the cylinder rod is fully extended.



Pneumatic cylinder Type VMF „spring-opening“



When not pressurised, the cylinder rod is fully retracted.



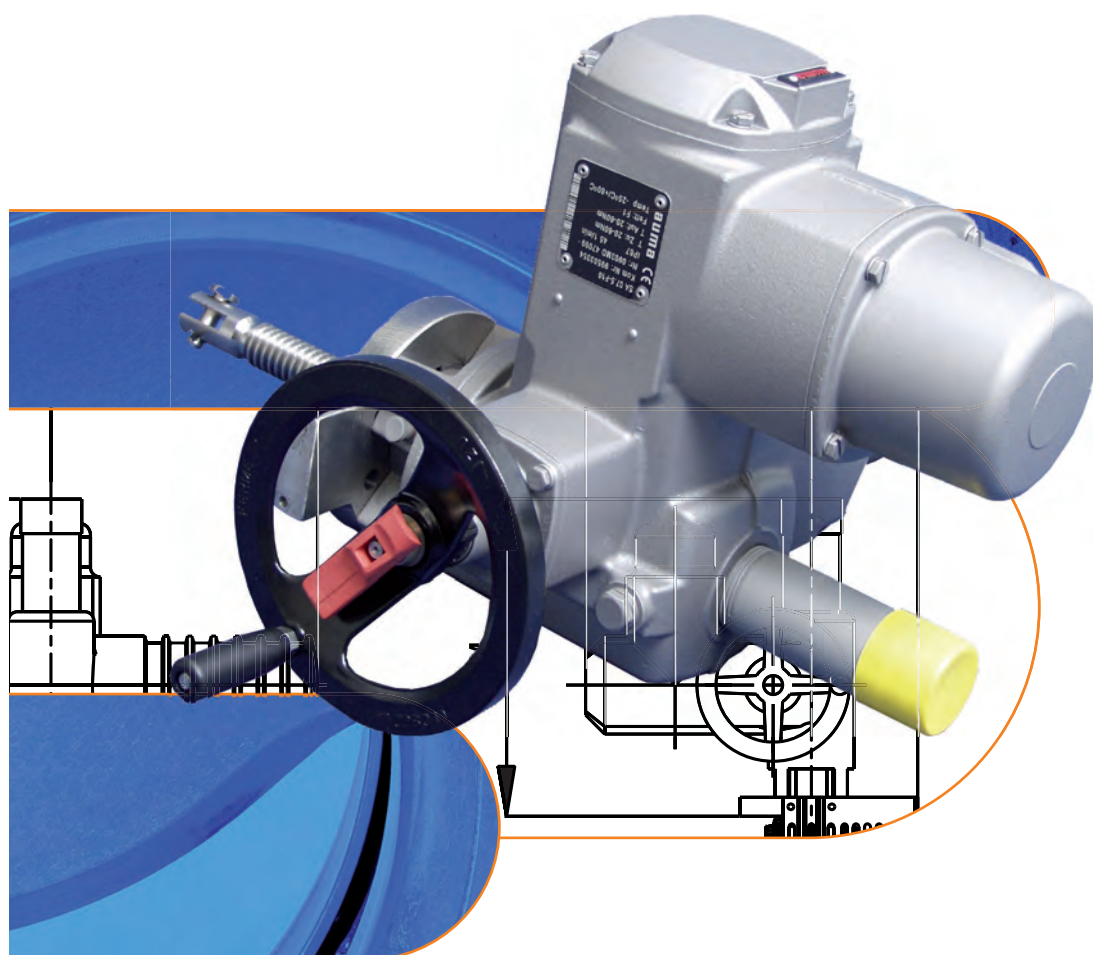
Materials

- cylinder bottom + cover AlSi5Mg
- cylinder barrel AlMgSi0.5
- piston rod 1.4305
- piston head NBR
- hexagon nuts A2-70
- adjusting nut with bush 1.4305
- sealings NBR

Operating elements - the LOHSE modular system

Electrical Actuator

Type E



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In principle, the valves can be operated with all conventional electrical actuators. The technical data in the tables below refer to AUMA actuators.



Adjustment

Incorrectly set travel and torque settings can cause damage to the valve.

- Adjust the settings as described in the operating manual of the actuator manufacturer and the details provided in the tables below.

for CNA, CNAА, CNA-Bi,
CGNA

DN [mm]	actuator type (AUMA)	torque [Nm]		actuating time [s]	power [kW]
		opening	closing		
50	SA 07.2 A45	30	20	17.3	0.18
65	SA 07.2 A45	30	20	24.4	0.18
80	SA 07.2 A45	30	20	29.7	0.18
100	SA 07.6 A45	30	20	28.3	0.37
125	SA 07.6 A45	40	30	35.2	0.37
150	SA 07.6 A45	40	30	41.6	0.37
200	SA 10.2 A45	80	60	46.7	0.75
250	SA 10.2 A45	80	60	57.8	0.75
300	SA 10.2 A45	80	60	68.9	0.75
350	SA 10.2 A45	120	80	78.0	0.75
400	SA 10.2 A45	120	80	90.0	0.75
450	SA 10.2 A45	120	80	101.0	0.75
500	SA 14.2 A45	250	200	112.0	1.50
600	SA 14.2 A63	250	200	83.0	3.00
700	SA 14.6 A63	500	400	97.0	5.50
800	SA 14.6 A63	500	400	110.0	5.50
900	SA 16.2 A63	800	600	108.4	7.50
1000	SA 16.2 A63	800	600	120.8	7.50
1400	SA 25.1 A63	1800	1400	136.2	15

for CAW

DN [mm]	actuator type (AUMA)	torque [Nm]		actuating time [s]	power [kW]
		opening	closing		
50	SA 07.2 A45	30	20	17.3	0.18
65	SA 07.2 A45	30	20	22.4	0.18
80	SA 07.2 A45	30	20	27.3	0.18
100	SA 07.6 A45	30	20	26.4	0.37
125	SA 07.6 A45	40	30	33.1	0.37
150	SA 07.6 A45	40	30	39.7	0.37
200	SA 10.2 A45	80	60	44.8	0.75
250	SA 10.2 A45	80	60	56.0	0.75
300	SA 10.2 A45	80	60	67.1	0.75
350	SA 10.2 A45	120	80	78.2	0.75
400	SA 10.2 A45	120	80	89.3	0.75
450	SA 10.2 A45	120	80	100.4	0.75
500	SA 14.2 A45	250	200	111.6	1.50
600	SA 14.2 A63	250	200	81.9	3.00
700	SA 14.6 A63	500	400	99.5	5.50
800	SA 14.6 A63	500	400	109.1	5.50
900	SA 16.2 A63	800	600	107.6	7.50
1000	SA 16.2 A63	800	600	119.5	7.50

for CBS, CBSA, CGBS
(triangular or pentagonal orifice)

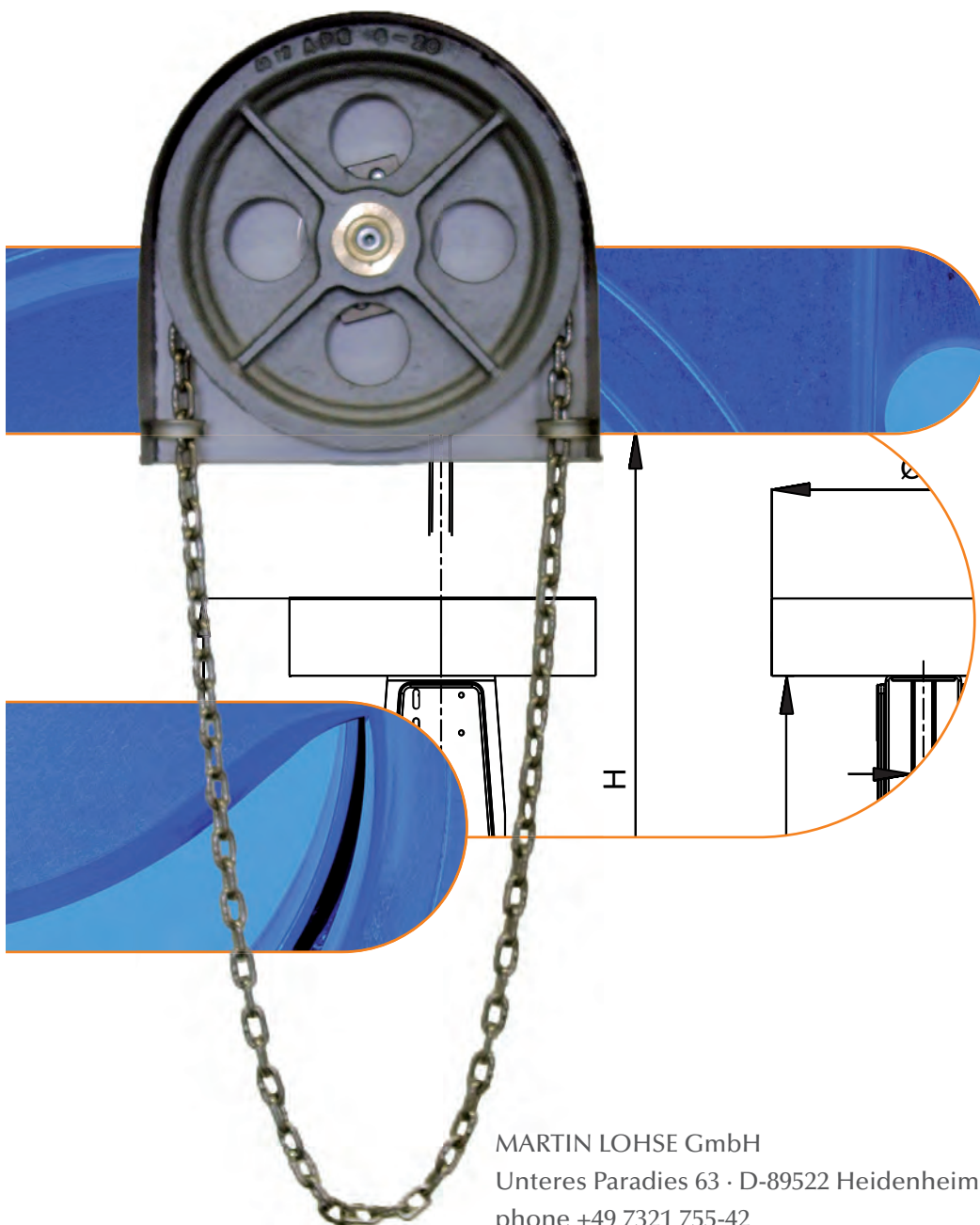
DN [mm]	actuator type (AUMA)	torque [Nm]		actuating time [s]		power [kW]
		opening	closing	triangular	pentagonal	
50	SA 07.2 A11	30	20	55.9	66.8	0.045
65	SA 07.2 A11	30	20	70.9	84.5	0.045
80	SA 07.2 A11	30	20	85.9	103.6	0.045
100	SA 07.6 A11	30	20	85.0	102.5	0.09
125	SA 07.6 A11	40	30	105.8	126.5	0.09
150	SA 07.6 A11	40	30	127.6	151.6	0.09
200	SA 10.2 A11	80	60	113.1	167.3	0.18
250	SA 10.2 A11	80	60	173.6	208.2	0.18
300	SA 10.2 A11	80	60	207.3	249.1	0.18
350	SA 10.2 A16	120	80	166.3	200.0	0.37
400	SA 10.2 A16	120	80	189.4	228.2	0.37
450	SA 10.2 A16	120	80	213.1	256.3	0.37
500	SA 14.2 A16	250	150	236.3	284.4	0.75
600	SA 14.2 A22	250	150	183.1	212.7	0.75
700	SA 14.6 A22	500	300	208.4	250.5	1.50
800	SA 14.6 A22	500	300	235.8	283.6	1.50

for CDS, CDSV, CDSA,
CDSR, CDSQ, CGDS

DN [mm]	actuator type (AUMA)	torque [Nm]		actuating time [s]	power [kW]
		opening	closing		
50	SA 07.6 A45	30	20	19.3	0.37
65	SA 07.6 A45	30	20	24.3	0.37
80	SA 07.6 A45	30	20	29.3	0.37
100	SA 07.6 A45	30	20	29.1	0.37
125	SA 07.6 A45	40	30	35.7	0.37
150	SA 07.6 A45	40	30	42.4	0.37
200	SA 10.2 A45	80	60	45.0	0.75
250	SA 10.2 A45	80	60	56.4	0.75
300	SA 10.2 A45	80	60	68.9	0.75
350	SA 14.2 A45	120	80	78.4	1.50
400	SA 14.2 A45	120	80	89.8	1.50
450	SA 14.2 A45	120	80	100.9	1.50
500	SA 14.6 A45	250	200	112.2	3.00
600	SA 14.6 A63	250	200	83.0	5.50
700	SA 14.6 A63	500	400	96.6	5.50
800	SA 14.6 A63	500	400	110.2	5.50
900	SA 16.2 A63	800	600	108.4	7.50
1000	SA 16.2 A63	800	600	120.8	7.50

Operating elements - the LOHSE modular system

Chain Wheel Actuator Type K



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Chain wheel actuator type K

- for manual operation of valves at a higher level
- sprocket wheel suitable for round steel chains acc. DIN 766 A
- chain length can be adjusted individually
- rising stem



nominal diameter of valve DN	sprocket wheel - \varnothing [mm]
50	260
65	260
80	260
100	300
125	300
150	300

nominal diameter of valve DN	sprocket wheel - \varnothing [mm]
200	380
250	380
300	380
350	500
400	500

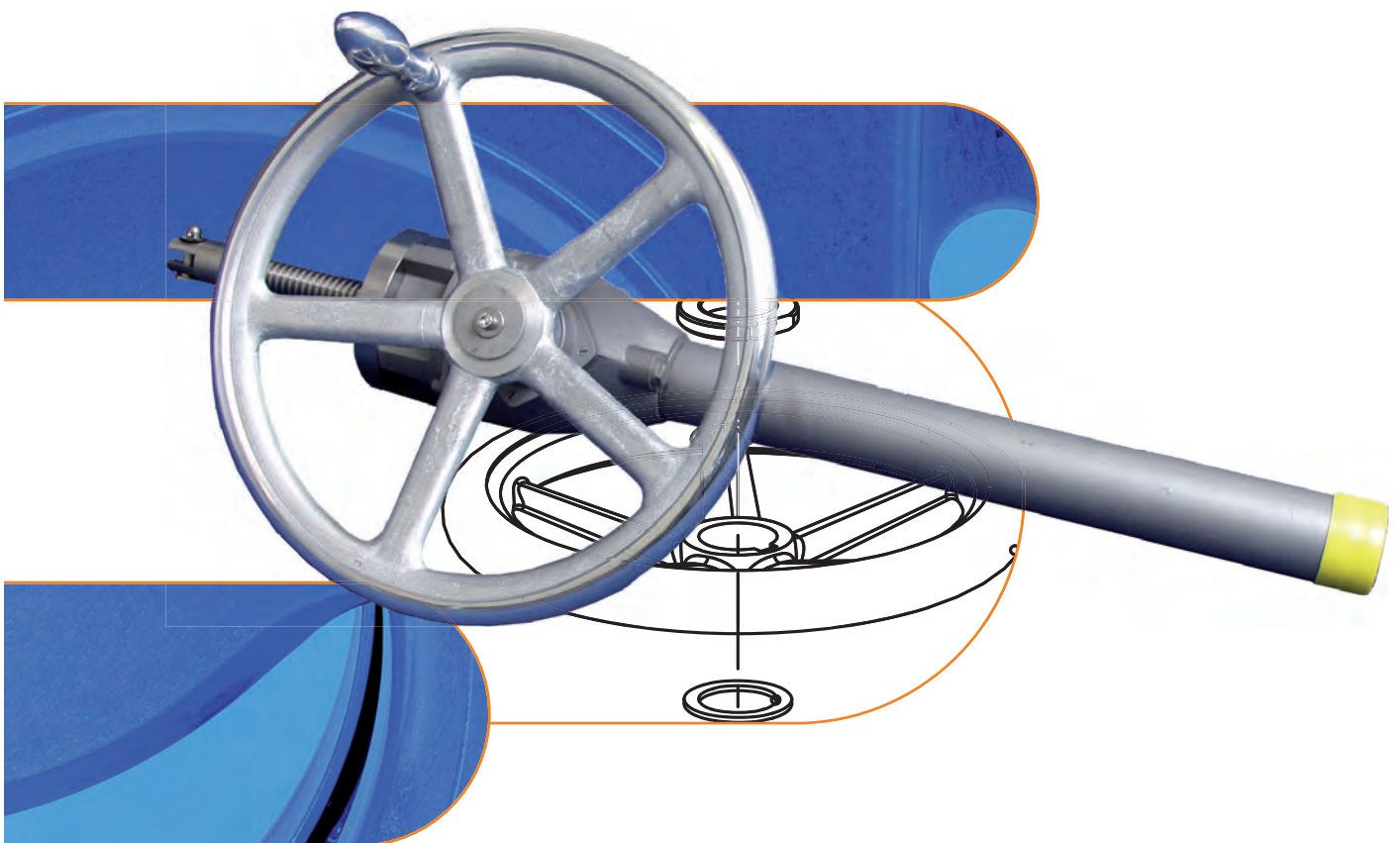
Function

- Turn clockwise: valve „CLOSED“.
- Turn anticlockwise: valve „OPEN“.

Operating elements - the LOHSE modular system

Bevel Gear Actuator

Type GK



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Bevel gear actuator type GK



nominal diameter valve DN	bevel gear actuator type (AUMA)	hand wheel \varnothing [mm]
150 - 300	GK10.2	360
350 - 500	GK10.2	400
600 - 800	GK14.2	500
900 - 1000	GK14.6	640

Technical data

- bevel gear actuator types 10.2 and 14.2 are single-speed gear mechanisms
- speed reduction ratio $i = 2:1$
- max. torque:
 - GK 10.2 : 120 Nm
 - GK 14.2 : 250 Nm
 - GK 14.6 : 500 Nm

Function

- The actuators are operated manually.
- Turn clockwise: valve „CLOSED“.
 - Turn anticlockwise: valve „OPEN“.

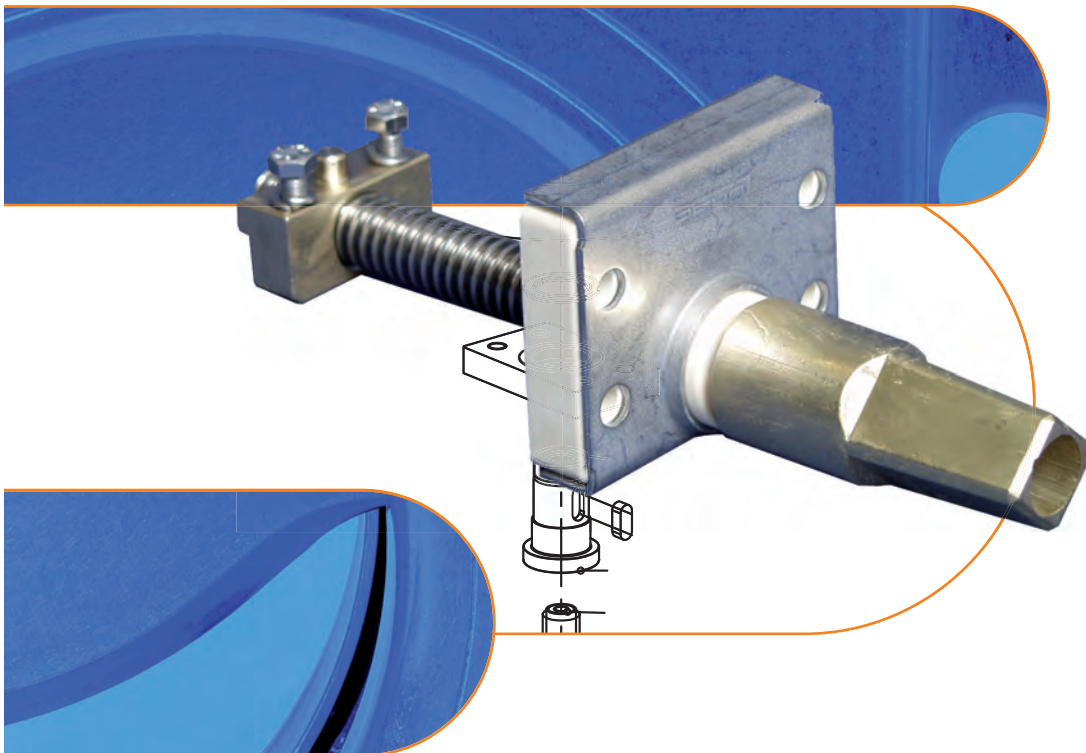
Recommendation

for valves DN 350 and more

Operating elements - the LOHSE modular system

Square Head Actuator

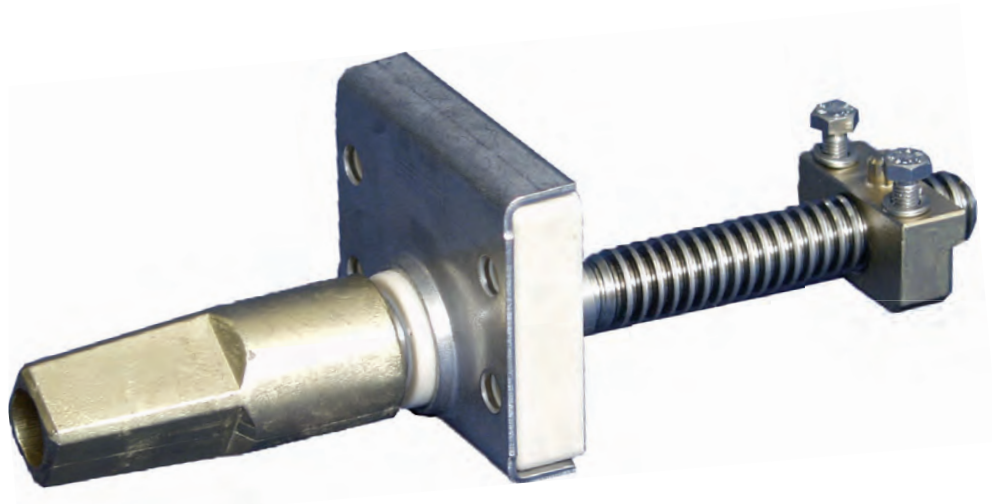
Type X



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Square head actuator type X for subsurface valves

Square head DIN 3223 „C“ with non-rising stem.



Function

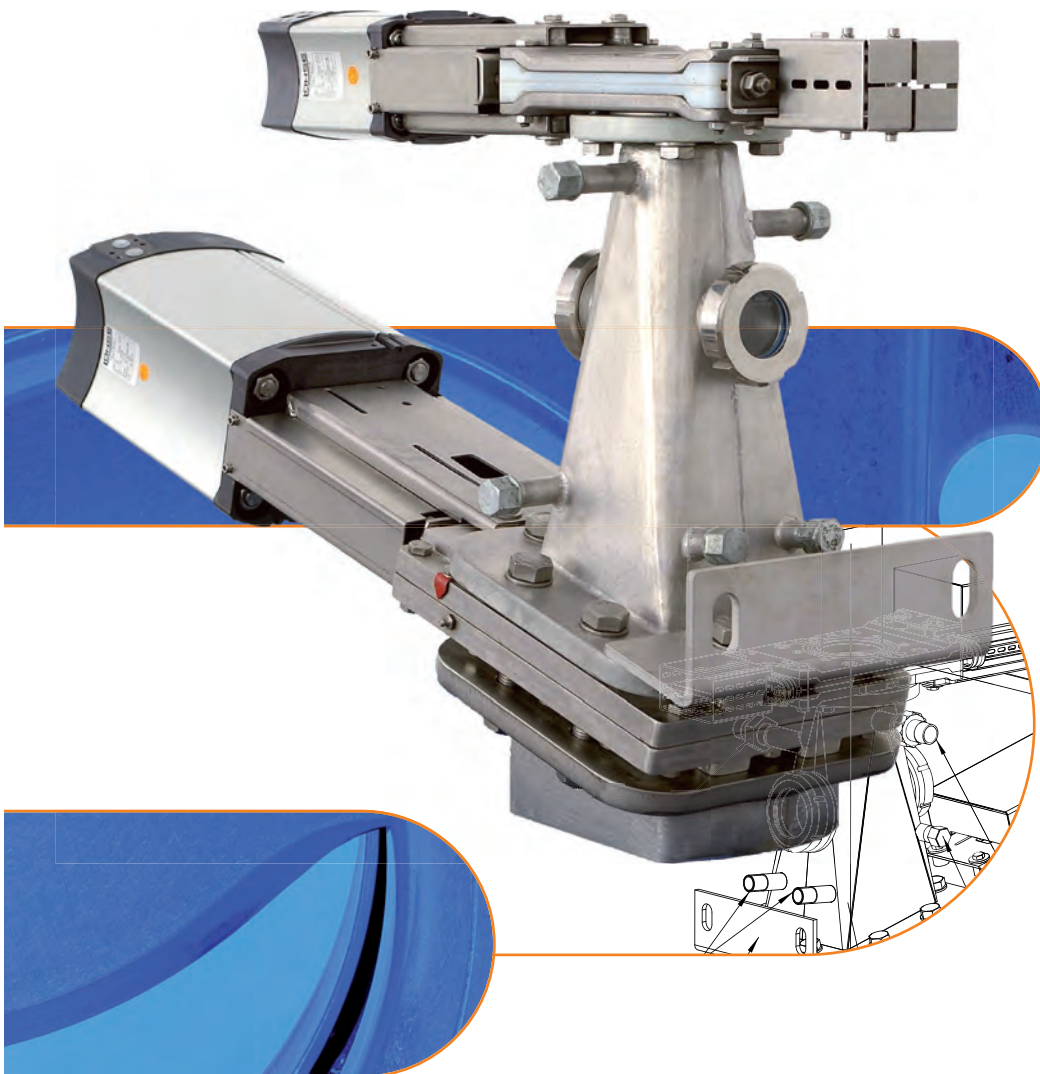
The square head actuator is operated by means of a DIN 3223 „C“ fitting wrench.

- Turn clockwise: valve „CLOSED“.
- Turn anticlockwise: valve „OPEN“.

Valves of stainless steel

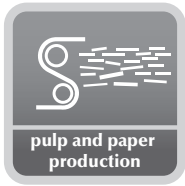
Dirt Traps RSL

of stainless steel



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Applications



The LOHSE dirt traps RSL have been specially designed for the removal of foreign particles from the cleaning process.

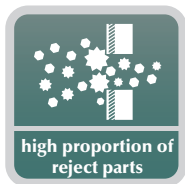
They are used to remove reject particles from fibrous media of various viscosity. They can be used in all types of cleaning machines, tanks and pipelines.

The maximum permissible operating temperature for LOHSE RSL dirt traps is 80 °C / 176° F (dirt traps for higher temperatures are available on request).

The maximum permissible operating pressure for LOHSE RSL dirt traps is 6 bar (dirt traps for higher pressures are available on request).



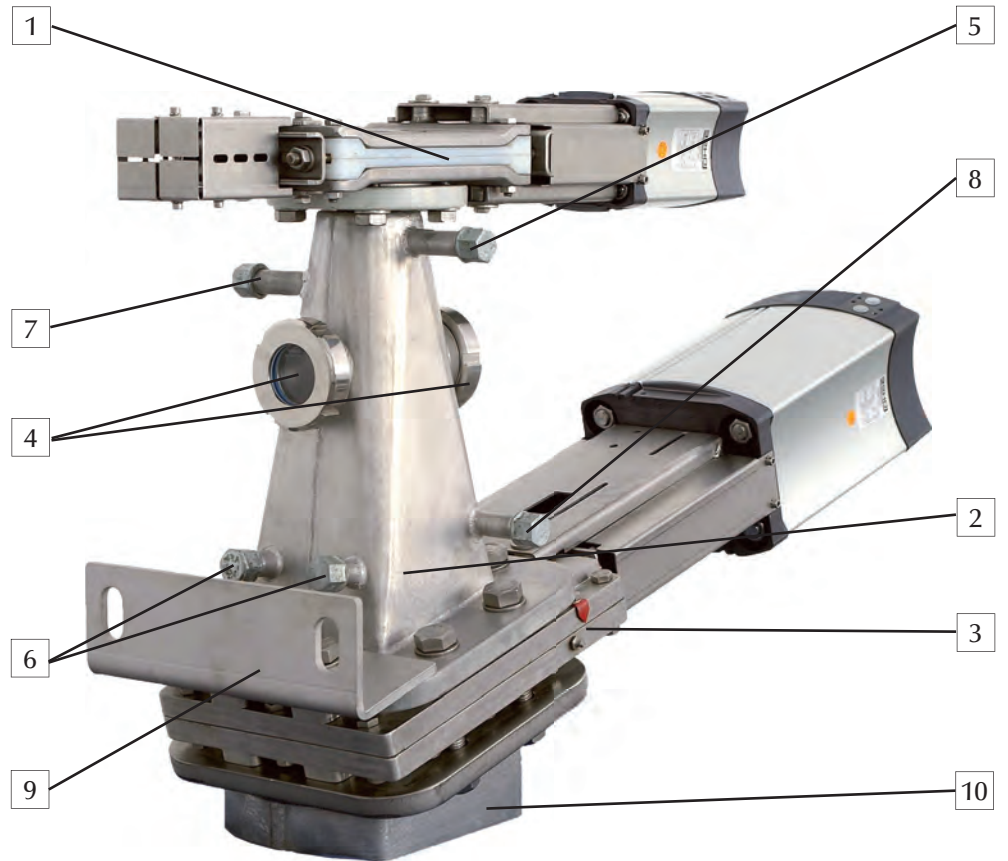
Media



Benefits

- the inclined positioning of the discharge valve prevents the build up of turbulence in the centre of the valve slide plate; as a result there is markedly less wear on the valve slide plate
- the right angular cross section of the discharge valve prevents small parts getting stuck between the valve body and the slide plate
- two back water connections prevent congestion in dead corners
- regulated heavy rejects removal: by means of 2 sight glasses an optimal adjustment of the back water level becomes possible
- pressure relief when at its highest level by means of an air extraction connection
- dirt trap volume can be selected (see list)

Construction



pos.	description	remark
1	inlet valve CDSVP/G	round cross-section
2	sluice chamber	round to rectangular
3	discharge valve AEQP/G	rectangular cross-section
4	sight glasses	
5	air relief C	periodical operating interval
6	cleaning/ filling connections A / B	periodical operating interval
7	flush water connection D	connection recommende by manufacturer
8	flush water connection E	connection recommende by manufacturer
9	attaching device	
10	outlet piece	

Process description

Start of dirt trap control

Power to solenoid valves	„on“
Water pressure	„ok“
Water	„supply ok“
Pump of cleaning machine	„off“
Compressed air for shut-off valve	„supply ok“
- Pressure	„ok“
- Flow control valve	„adjusted“

START – Flushing phase of dirt trap

The moment the pump in front of the cleaning machine is started, the timer relay of the cycle control system is started.

After the cycle time has lapsed:

- Timer relay cycle time	„0“
- Upper shut-off valve	„closed“
- Lower shut-off valve	„open“
- Filling water solenoid valve	„open“
- FILLING timer relay	„on“ (10 to 20 sec.)
- Signal lower valve	„closed“ via exhaust air restrictor
- VENTING timer relay	„on“ (10 to 20 sec.)
- Signal lower valve	„closed“
- FILLING timer relay after time has lapsed	„off“
- Filling water solenoid valve	„closed“
- VENTING timer relay after time has lapsed	„off“
- Air relief solenoid valve	„closed“
- Upper shut-off valve	„open“

If required:

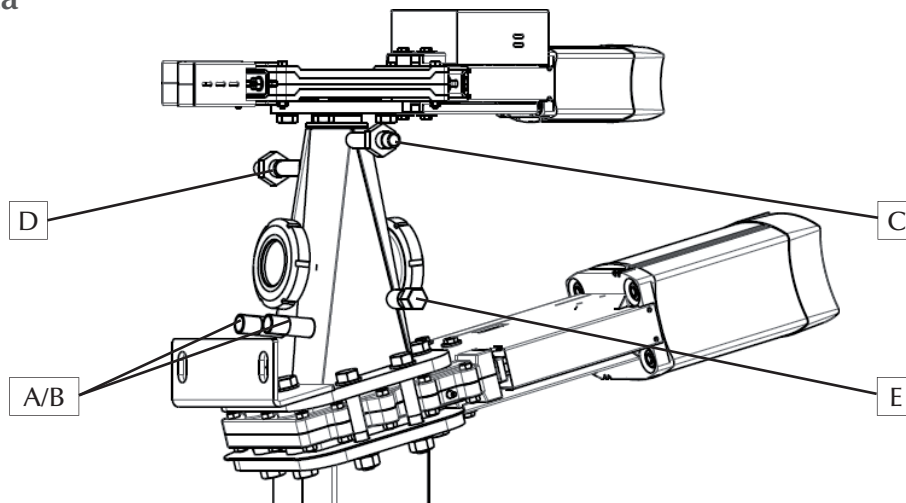
- Readjustment of dilution water by means of manually operated taps	
- Next cycle time started through timer relay	„on“ (5 to 120 minutes)

* All values are approximate and must be adapted to the specific system!

Interlocking:

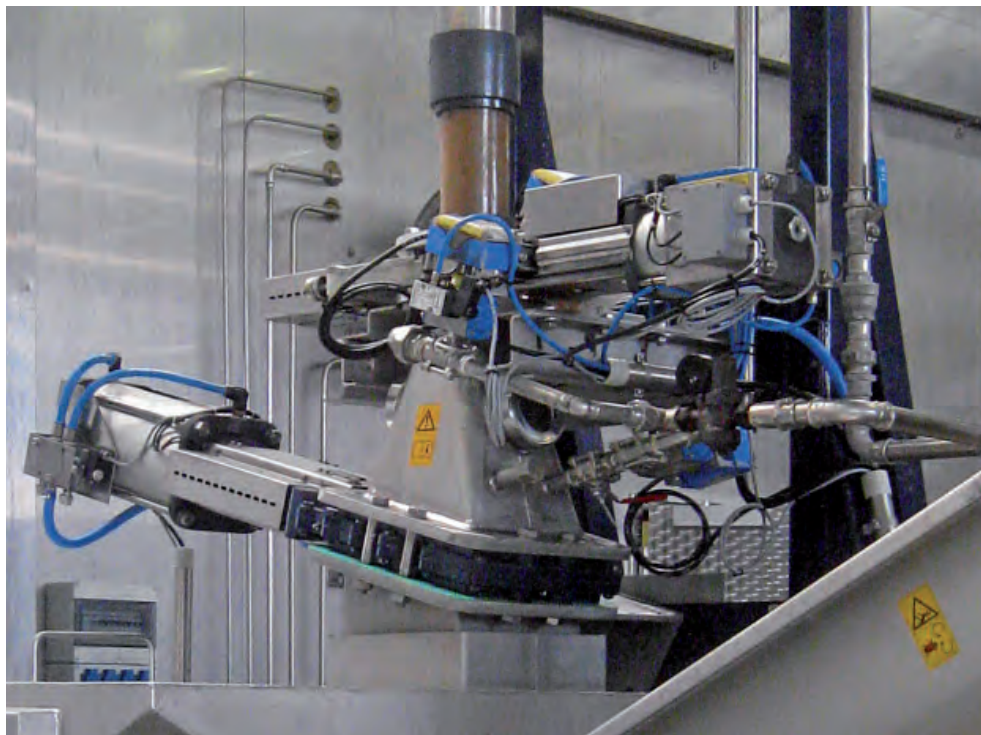
if there is no compressed air
 if there is no dilution water
 if there is no control voltage
 if there is no medium
 if the medium pressure drops in front of the cleaning machine

Technical data



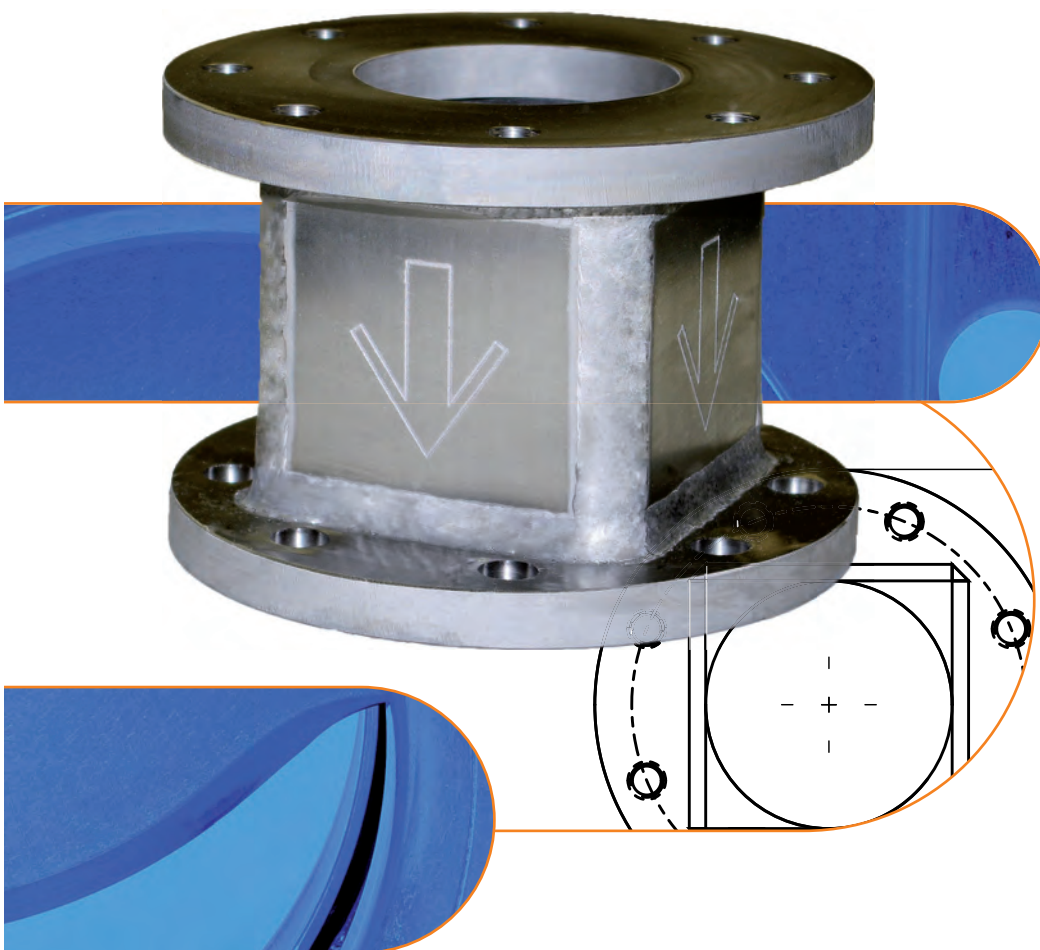
Type	Inlet valve Reject-valve type CDSVP/G	Outlet valve Reject-valve type AEQP/G	Volume ~ [l]	Overall height [mm]	Air relief C [inch]	cleaning/ filling connections A / B [inch]	flush water connect. D [inch]	flush water connect. E [inch]
RSL 50/150	DN 50	DN 150	5	682	1/2	3/4	1/2	3/4
RSL 65/150	DN 65	DN 150	5	682	1/2	3/4	1/2	3/4
RSL 80/150	DN 80	DN 150	5	695	1/2	3/4	1/2	3/4
RSL 100/150	DN 100	DN 150	8	635	1	3/4	1	3/4
RSL 100/200	DN 100	DN 200	11	650	1	3/4	1	3/4
RSL 100/250	DN 100	DN 250	15	634	1	3/4	1	3/4
RSL 125/250	DN 125	DN 250	15	635	1	3/4	1	3/4
RSL 150/200	DN 150	DN 200	13	660	1	3/4	1	3/4
RSL 150/250	DN 150	DN 250	17	662	1	3/4	1	3/4
RSL 200/250	DN 200	DN 250	22	745	1	3/4	1	3/4
RSL 250/300	DN 250	DN 300	40	823	1	3/4	1	3/4
RSL 300/400	DN 300	DN 400	~ 80	985	1	3/4	1	3/4

Outlet valve of grey cast iron (G) or stainless steel (E).



Vortex Breakers

RBrR and RBrQ



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

Vortex breakers for heavy component dirt traps

Ready-to-install intermediate component on cleaning machines

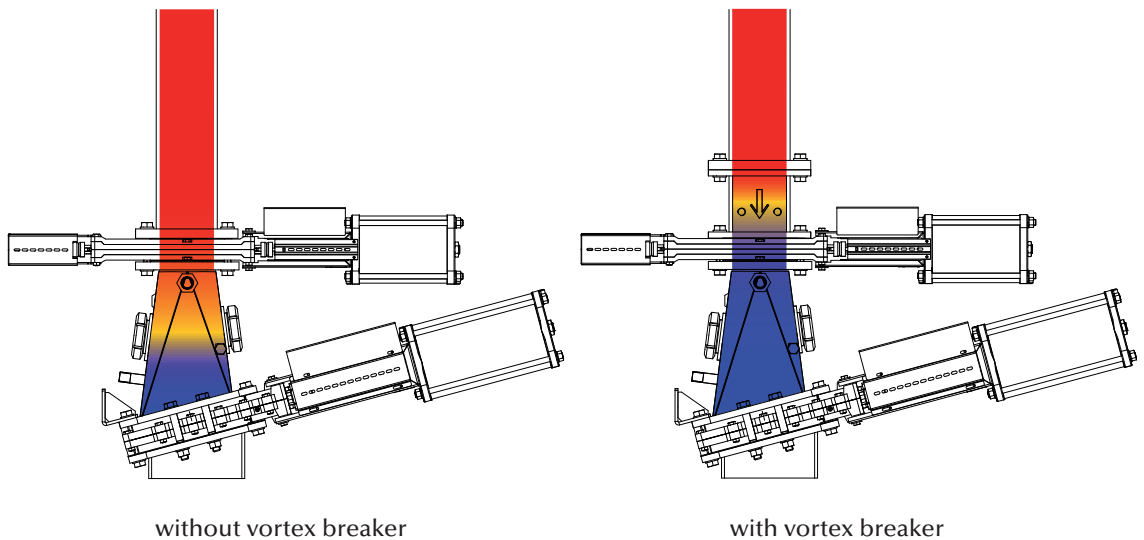
Applications

In case of extreme wear on reject valves / dirt traps, e.g. high density cleaners.

Function

The rectangular cross section slows down the rotation of the medium and the rotation does not penetrate to the valve.

Rotation intensity

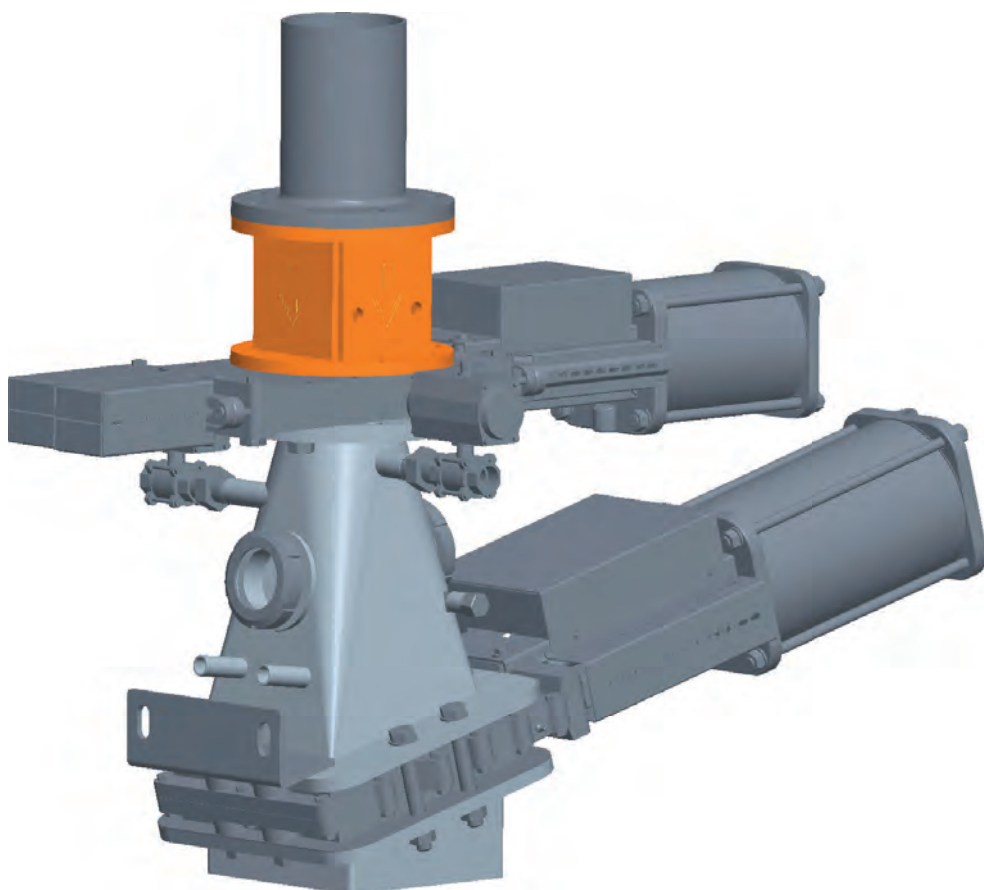


Benefits

Minimisation of wear on the valve and trap container increases the service life, reduces maintenance, lowers costs and increases operational reliability. The fibre recovery (high density cleaner) is not impaired.

Easy installation

The ready-to-install vortex breaker is integrated above the inlet valve of the dirt trap. It is adapted to different nominal diameters. Only the height of the overall machine changes – depending on the nominal diameter of the dirt trap – by the height of the respective rotary damper (see dimension sheet).



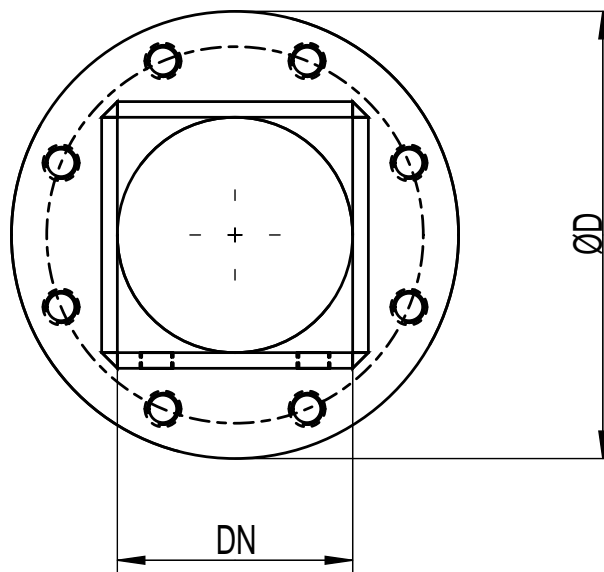
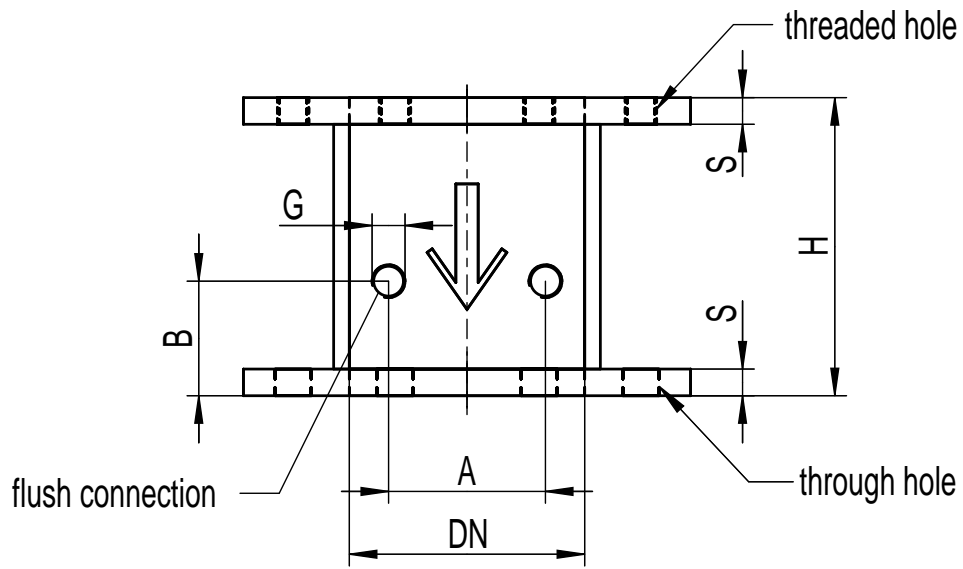
Versions:

Type RBrr

Round inlet and outlet of vortex breaker: suitable for round outlet of the cleaning machine and round inlet of the dirt trap / inlet valve..

Type RBrrq

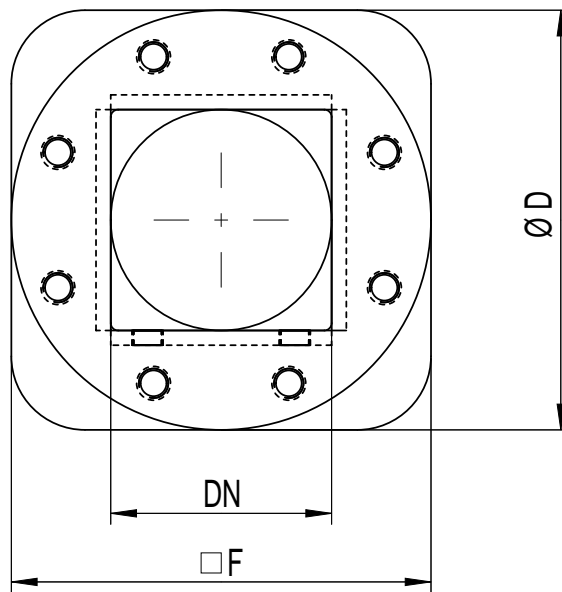
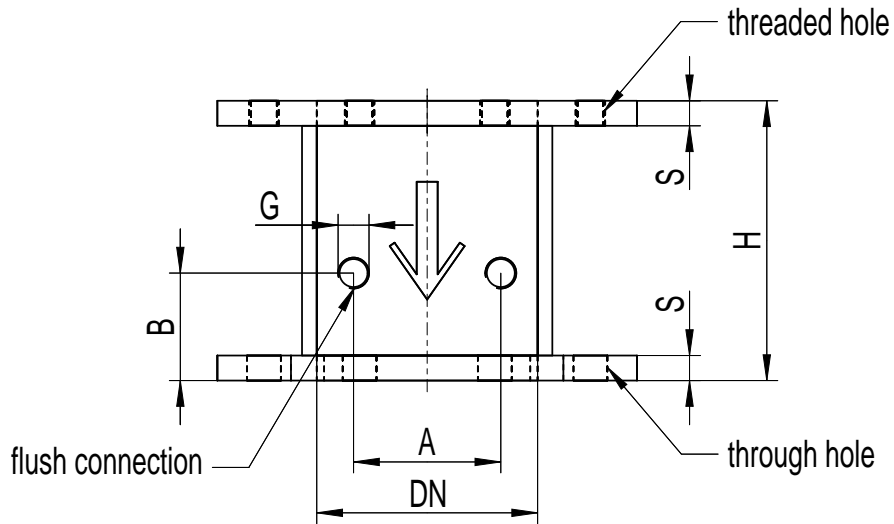
Round inlet and square outlet of vortex breaker: suitable for round outlet of the cleaning machine and square inlet of the dirt trap / inlet valve..



DN	A	B	G	S	H	ØD
50	25	43	1/4"	13	110	165
80	50	53	1/2"	13	120	200
100	60	63	1/2"	17	150	220
125	80	63	1/2"	17	175	250
150	100	73	1/2"	17	190	285
200	150	74	1/2"	18	220	340
250	200	74	1/2"	18	260	395
350	250	74	1/2"	23	350	505

Material: 1.4571

Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10.
Further sizes on request.



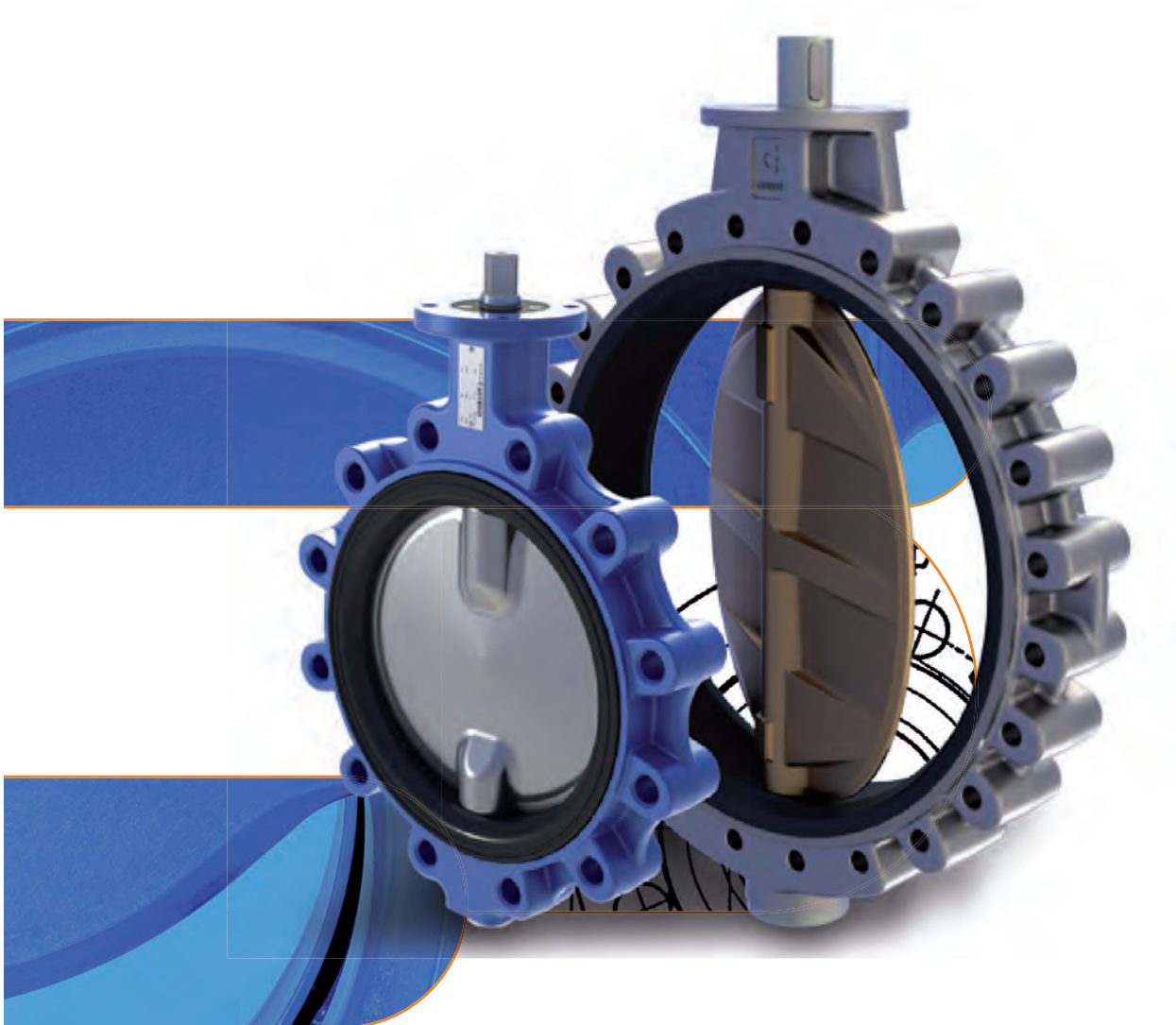
DN	A	B	G	S	H	ØD	□ F
50	25	43	1/4"	13	110	165	165
80	50	53	1/2"	13	120	200	200
100	60	63	1/2"	17	150	220	220
125	80	63	1/2"	17	175	250	250
150	100	73	1/2"	17	190	285	285
200	150	74	1/2"	18	220	340	340
250	200	74	1/2"	18	260	395	395
350	250	74	1/2"	23	350	505	505

Material: 1.4571

Dimensions in mm, flange dimensions inlet to DIN EN 1092-1, PN 10, outlet on request. Further sizes on request.

Valves

Butterfly Valves



MARTIN LOHSE GmbH
Unteres Paradies 63 · D-89522 Heidenheim
phone +49 7321 755-42
sales@lohse-gmbh.de
www.lohse-gmbh.de

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Butterfly Valves

Soft Seat



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BVPD - Wafer BLPD - Lug
DN 80 - 800 • 3" - 32"

BVKI - Wafer BLKI - Lug
DN 40 - 800 • 1 1/2" - 32"

Max working pressure:

BVPD/BLPD DN080÷500:	10 Bar
BVPD/BLPD DN800÷600:	6 Bar
<i>Flange: PN 6-10-16 • A150</i>	
BVKI/BLKI DN40÷500:	16 Bar
<i>Flange: PN 10-16 • A150</i>	
BVKI/BLKI DN600÷800:	10 Bar
<i>Flange: PN 10-16 • A150</i>	

KI series to be used also with vacuum

Design:

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092
ISO 5211 ~ DIN 3337 ~ API 609
PED 2014/68/EU - Mod. H

Face to face:

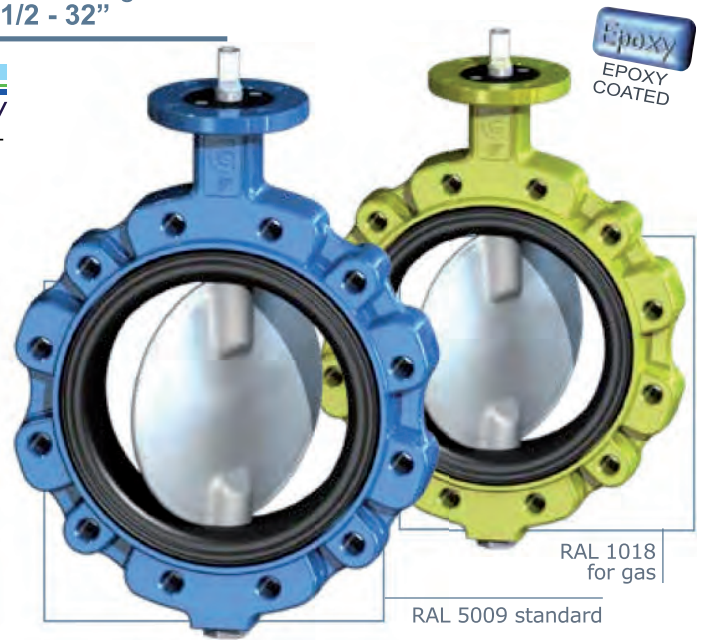
DIN EN 558 Series 20 ~ ISO 5752 Series 20
BS-5155 Series 4 ~ MSS-SP67
API609 cat.A ~ NFE 29305-1

Testing:

EN 12266-1 Rate A (supersedes DIN 3230)
ISO 5208 Rate A ~ API 598

Tag:

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.

BODY			BVPD	BVKI/BLKI
material	references	standard coating	DN	DN
Ductile iron	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	80-800	40-800
Carbon steel	ASTM A216-WCB	Epoxy RAL 9005	80-800	40-800
Stainless steel	ASTM A351 CF8M (A316)	-	80-800	40-800
Aluminium-bronze	ASTM B148-C958.00	-	80-800	40-800
Aluminium (P _{max} 10Bar)	EN AB 46400	Epoxy RAL 7024	80-500	40-500 only wafer

DISC			BVPD	BVKI/BLKI
material	references	standard coating	DN	DN
Steel	ASTM A105	Zinc	80-100	50-100
Ductile iron	EN-GJS 400-15 (GS400)	Zinc	125-500	125-500
Stainless steel	ASTM A351 CF8M (A316)	-	80-800	40-800
Aluminium-bronze	ASTM B148-C958.00	-	80-800	40-800
Hastelloy®	ASTM A494 CX2MW	-	80-800	40-800
Super Duplex	EN 1.4469 (A890 Gr. 5A)	-	80-800	40-800

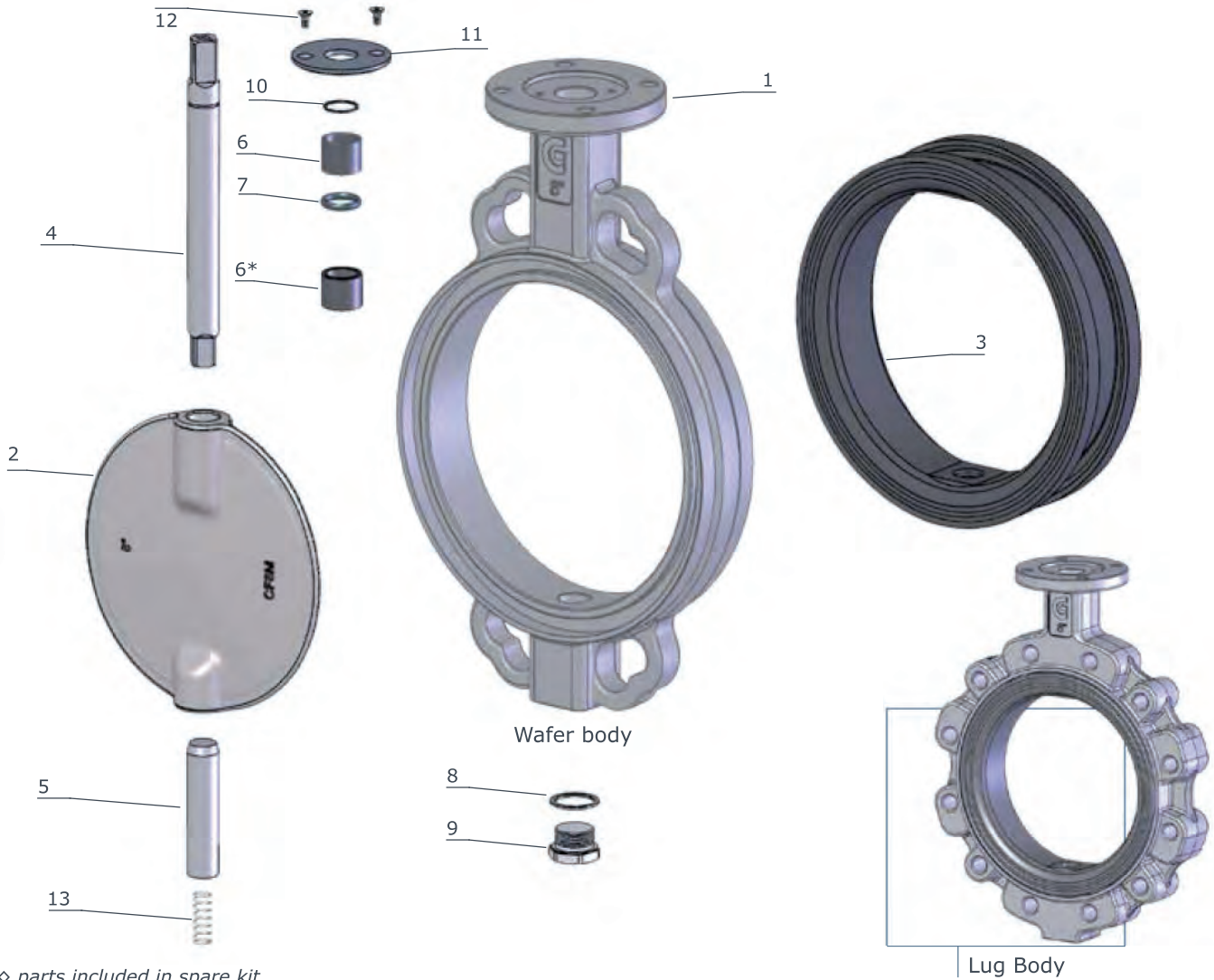
BODY RUBBER SEAT		DN 40/500 replaceable - DN 600/800 vulcanized not replaceable					
ref.	designation	PD 6bar	PD 10bar	KI	trade name	working temp.	applications
NBR	nitrile rubber	✓	✓	✓	BUNA®	-25°C / +100°C	oils, hydrocarbons, gas, air, water
EPDM	copolymer EPDM	✓	✓	✓	-	-35°C / +130°C	water, sea water, steam, diluted acids
EPDM HT	copolymer EPDM HT	✓	✓	✓	-	-45°C / +150°C	water, sea water, steam, diluted acids
CO	carboxide	✓	✗	✓	-	-25°C / +100°C	dust, air
FKM	fluoroelastomer	✓	✗	✓	VITON®	-20°C / +200°C	oils, acids, hydrocabons
CR	polychloroprene	✓	✗	✓	NEOPRENE®	-20°C / +100°C	alkali, bases, water
NR	natural rubber	✓	✗	✓	-	-40°C / + 80°C	glycols, abrasive media
MVQ	silicon rubber	✓	✗	✓	SILOPREN®	-60°C / +190°C	water, food, drinks
CSM	chlorosulfonated polyethylene	✓	✗	✓	HYPALON®	-20°C / +125°C	acids, mineral bases, alcohols, hydrocarbons
PU	poliuretane	✓	✓	✓	POLIURETANE®	-25°C / +90°C	abrasive media

On request can be supplied other materials as:
Coating on request:

LCB, Hastelloy, Uranus, Alloy, Super Duplex, Special steels, Special bronzes.
RILSAN®, Halar®, Chenisil®

BVPD-Wafer BLPD-Lug
 DN 80 - 300 • 3" - 12"
 PN 6-10-16 • ANSI 150

BVKI - Wafer BLKI - Lug
 DN 40 - 300 • 1"1/2 - 12"
 PN 10-16 • ANSI 150



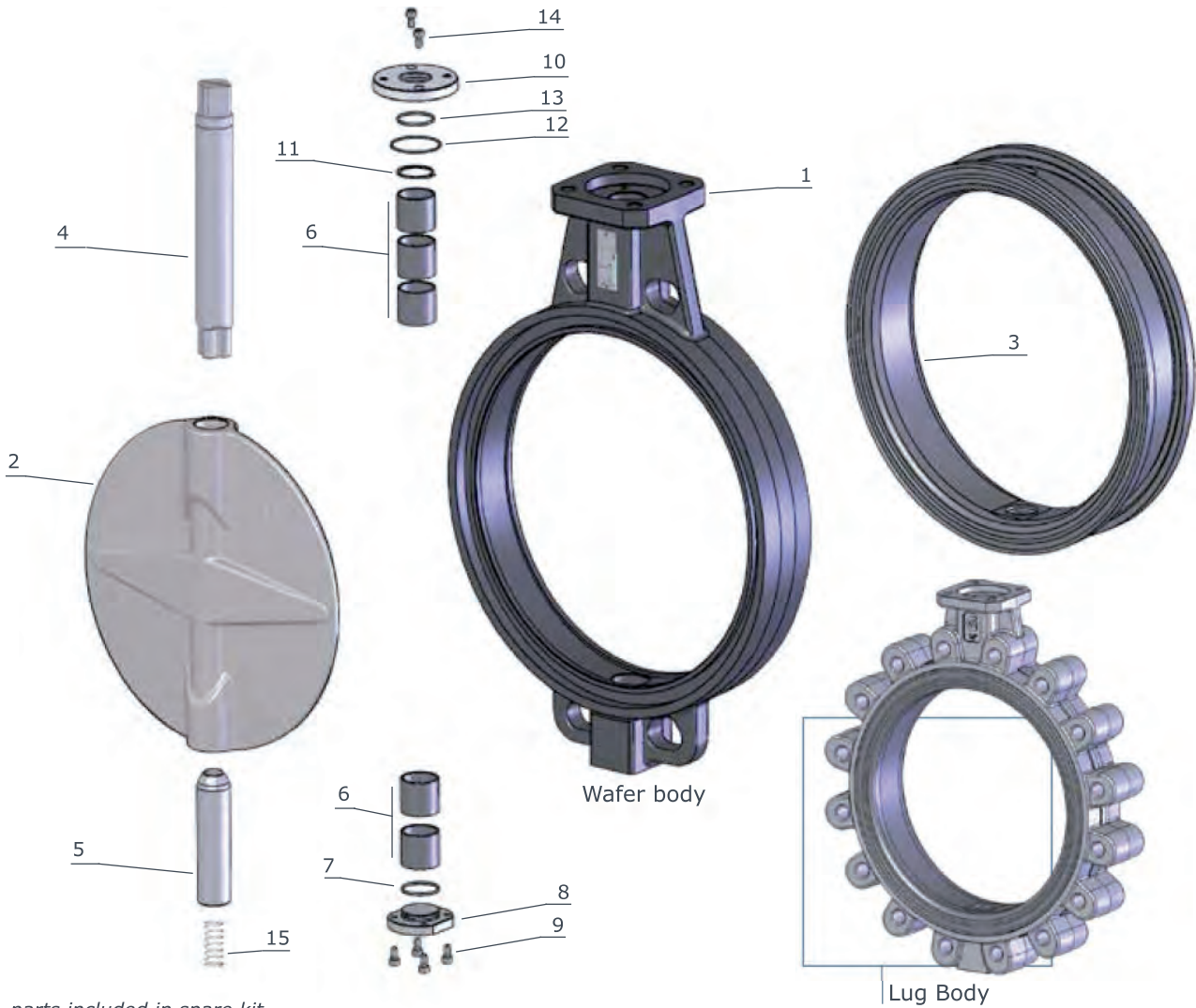
◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB 1.4408~ A351-CF8M (AISI 316) EN1982-CC333G~ASTM B148 -C958.00 EN AB 46400 (only WAFER)
2	1	disc	EN-GJS400-15 (GS400) EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
◇3	1	body seat (replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®) carboxide polychloroprene (NEOPRENE®) natural rubber silicon
4	1	upper shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
* only for DN300			

item	q.ty	part	material
5	1	lower shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
◇6	1	bush	bronze
◇6*	3	bush	A105+PTFE A316+PTFE (only Inox body)
◇7	1	shaft packing	NBR (BUNA®) FKM (VITON®) on request
8	1	plug packing	aluminium PTFE (CF8M body / ASTM B148)
9	1	threaded plug	zinc plated steel 1.4401~A316 (CF8M body / ASTM B148)
10	1	stop ring	steel
11	1	upper flange	IXEF (DN 40-150) aluminium (DN 200-300)
12	2	screw	10.9 zinc plated steel A4~A316 (CF8M body / ASTM B148)
13	1	spring	1.4401 ~ A316 (antistatic device)

BVPD-Wafer BLPD-Lug
 DN 350 - 500 • 14" - 20"
 PN 6-10-16 • ANSI 150

BVKI - Wafer BLKI - Lug
 DN 350 - 500 • 14" - 20"
 PN 10-16 • ANSI 150



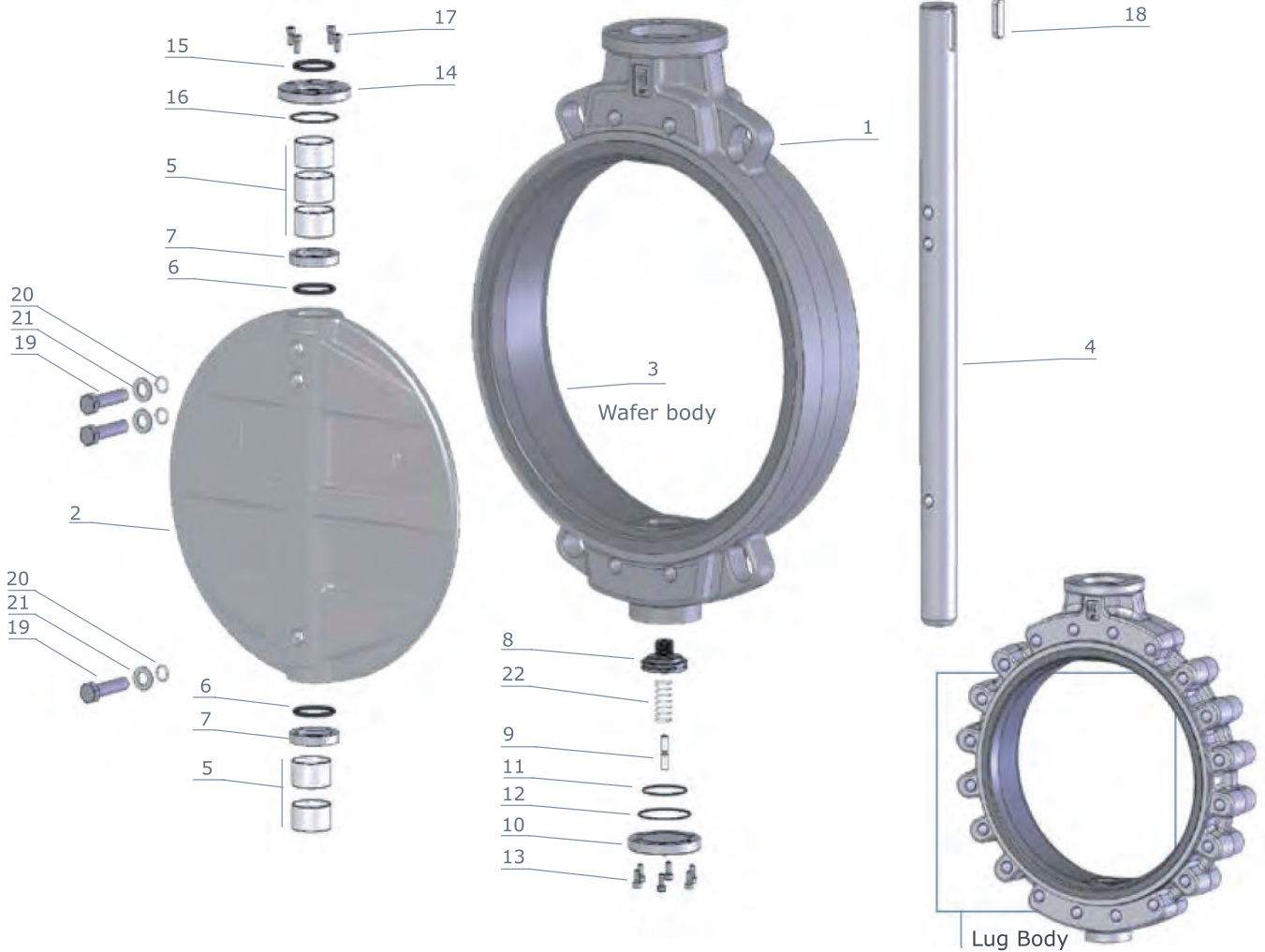
◇ parts included in spare kit

item	q.tà	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB 1.4408~ A351-CF8M (AISI 316) EN1982-CC333G~ASTM B148 - C958.00 EN AB 46400 (only WAFER)
2	1	disc	EN-GJS400-15 (GS400) EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
◇3	1	body seat (replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®) carboxide polychloroprene (NEOPRENE®) natural rubber silicon
4	1	upper shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)

item	q.tà	part	material
5	1	lower shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
◇6	5	bush	bronze steel+PTFE (DN 450-500)
◇7	1	packing lower flange	NBR (BUNA®)
8	1	lower flange	zinc plated steel 1.4401~A316 (CF8M body / ASTM B148)
9	4	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
10	1	upper flange	zinc plated steel 1.4401~A316 (CF8M body / ASTM B148)
11	1	stop ring	steel
◇12	1	O.Ring	NBR (BUNA®)
◇13	1	O.Ring	NBR (BUNA®)
14	2	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
15	1	spring	1.4401 ~ A316 (antistatic device)

BVPD-Wafer BLPD-Lug
 DN 600 - 800 • 24" - 32"
 PN 6-10-16 • ANSI 150

BVKI - Wafer BLKI - Lug
 DN 600 - 800 • 24" - 32"
 PN 10-16 • ANSI 150



◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB 1.4408~ A351-CF8M (AISI 316) EN1982-CC333G~ASTM B148 - C958.00
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4305~A303 EN 1.4401~A316 (on request)
◇5	5	bush	steel + PTFE
◇6	2	shaft O.ring	NBR (BUNA®) FKM (VITON®) on request
7	2	O.ring housing	A4~A316

item	q.ty	part	material
8	1	shaft support	Bronze
9	2	adjusting screw	A4~A316
10	1	lower flange	zinc plated steel 1.4401~A316 (CF8M body / ASTM B148)
◇11	1	O.ring	NBR (BUNA®)
◇12	1	O.ring	NBR (BUNA®)
13	6	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
14	1	upper flange	zinc plated steel 1.4401~A316 (CF8M body ASTM B148)
◇15	1	O.ring	NBR (BUNA®)
◇16	1	O.ring	NBR (BUNA®)
17	4	screw	8.8 zinc plated steel A4~A316 (CF8M body/ ASTM B148)
18	1	key	steel
19	3	screw	A4~A316
◇20	3	O.ring	PTFE
21	3	washer	A4~A316
22	1	spring	1.4401 ~ A316 (antistatic device)

BVKA - Wafer BLKA - Lug
DN 40 - 800 • 1"1/2 - 32"

BVKX - Wafer
DN 50 - 250 • 2" - 10"

BLKX - Lug
DN 50 - 200 • 2" - 8"

Max working pressure:

BVKA/BLKA DN 40÷800:	20 Bar
Flange: PN 10-16 • A150	
BVKX DN 50÷250:	25 Bar
Flange: PN 25 • A150	
BLKX DN 50÷200:	25 Bar
Flange: PN 25	

To be used also with vacuum

Design:

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092
ISO 5211 ~ DIN 3337 ~ API 609
PED 2014/68/EU - Mod. H

Face to face:

DIN EN 558 Series 20 ~ ISO 5752 Series 20
BS-5155 Series 4 ~ MSS-SP67
API609 cat.A ~ NFE 29305-1

Testing:

EN 12266-1 Rate A (supersedes DIN 3230)
ISO 5208 Rate A ~ API 598

Tag:

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.



BODY			BVKA/BLKA	BVKX	BLKX
material	references	standard coating	DN	DN	DN
Ductile iron	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	40-800	50-250	50-200
Carbon steel	ASTM A216-WCB	Epoxy RAL 9005	40-800	50-100	50-100
Stainless steel	ASTM A351 CF8M (A316)	-	40-800	50-100	50-100
Aluminium-bronze	ASTM B148-C958.00	-	40-800	50-100	50-100

DISCO			BVKA/BLKA	BVKX	BLKX
material	references	standard coating	DN	DN	DN
Stainless steel	ASTM A351 CF8M (A316)	-	40-800	50-250	50-200
Aluminium-bronze	ASTM B148-C958.00	-	40-800	50-250	50-200
Hastelloy®	ASTM A494 CX2MW	-	40-800	50-250	50-200
Super Duplex	EN 1.4469 (A890 Gr. 5A)	-	40-800	50-250	50-200

BODY RUBBER SEAT		KA DN 40/150 replaceable - DN 200/800 vulcanized not replaceable KX DN 50/250 vulcanized not replaceable		
ref.	designation	trade name	working temp.	applications
NBR	nitrile rubber	BUNA®	-25°C / +100°C	oils, hydrocarbons, gas, air, water
EPDM	copolymer EPDM	-	-35°C / +130°C	water, sea water, steam, diluted acids
EPDM HT	copolymer EPDM HT	-	-45°C / +150°C	water, sea water, steam, diluted acids
FKM	fluoroelastomer	VITON®	-20°C / +200°C	oils, acids, hydrocabons

On request can be supplied other materials as: LCB, Hastelloy, Uranus, Alloy, Super Duplex, Special steels, Special bronzes.
Coating on request: RILSAN®, Halar®, Chenisil®

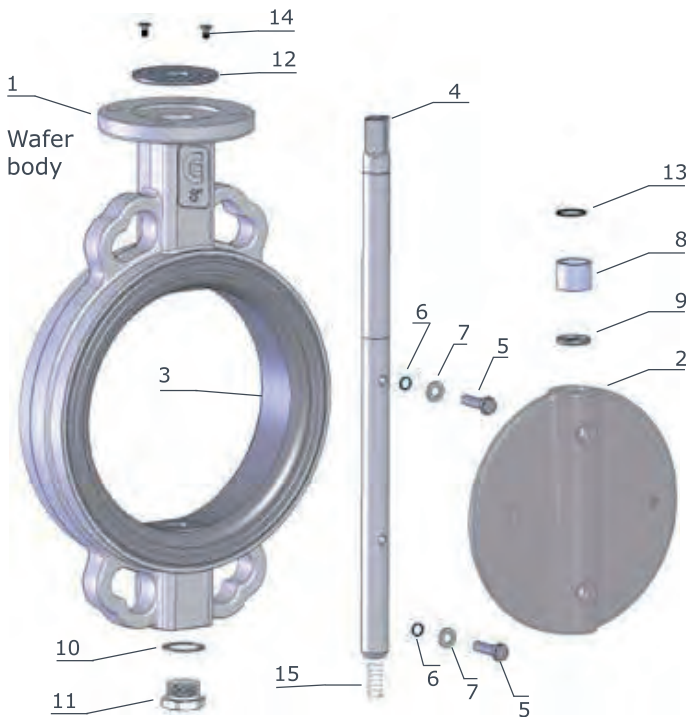
BVKA - Wafer BLKA - Lug
DN 40 - 150 • 1”1/2 - 6”
PN 10-16 • ANSI 150



◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB EN 1.4408~A351-CF8M
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
◇3	1	body seat (replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	upper shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
5	1	lower shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
◇6	1	bush	bronze
◇7	1	shaft packing	NBR (BUNA®) FKM (VITON®) (on request)
8	1	plug packing	aluminium PTFE (CF8M body / ASTM B148)
9	1	threaded plug	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
10	1	stop ring	steel
11	1	upper flange	IXEF (DN 40-150) aluminium (DN 200-300)
12	2	screw	10.9 zinc plated steel A4~A316 (CF8M body/ ASTM B148)
13	1	spring	1.4401 ~ A316 (antistatic device)

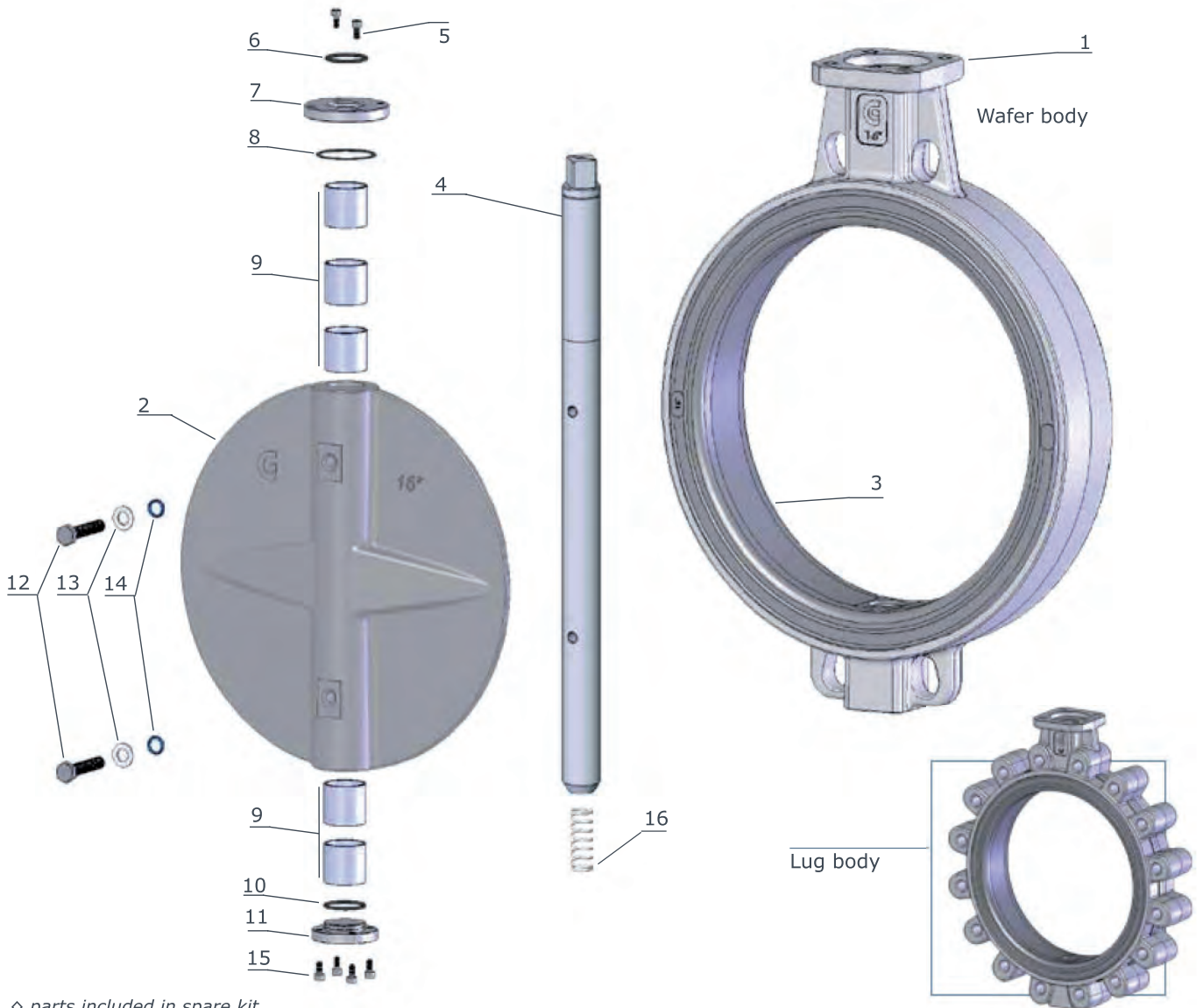
BVKA - Wafer BLKA - Lug
DN 200 - 300 • 8” - 12”
PN 10-16 • ANSI 150



◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB EN 1.4408~A351-CF8M EN1982-CC333G~ASTM B148 - C958.00
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
5	2	screw	10.9 zinc plated steel A4~A316 (CF8M body/ ASTM B148)
◇6	2	O.Ring	NBR (BUNA®)
7	2	washer	A4~A316
◇8	1	bush	bronze
◇9	1	shaft packing	NBR (BUNA®) FKM (VITON®) (on request)
10	1	plug packing	aluminium PTFE (CF8M body/ ASTM B148)
11	1	threaded plug	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
12	1	upper flange	aluminium
13	1	stop ring	steel
14	2	screw	zinc plated steel
15	1	spring	1.4401 ~ A316 (antistatic device)

BVKA - Wafer **BLKA** - Lug
 DN 350 - 400 • 14" - 16"
 PN 10-16 • ANSI 150

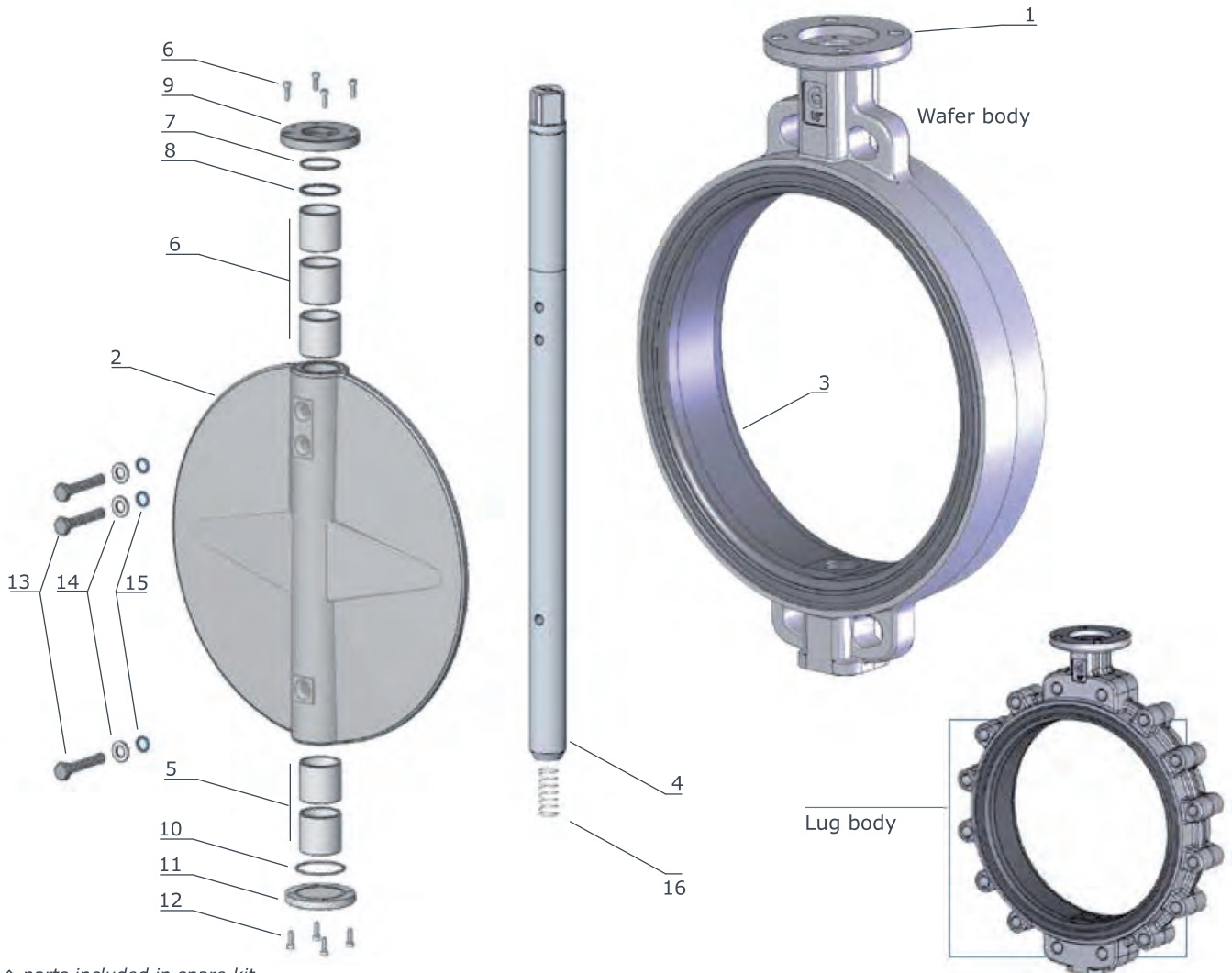


◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB EN 1.4408~A351-CF8M EN1982-CC333G~ASTM B148 - C958.00
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)

item	q.ty	part	material
5	2	screw	10.9 zinc plated steel
◇6	1	O.ring	NBR (BUNA®)
7	1	upper flange	10.9 zinc plated steel
◇8	1	O.ring	NBR (BUNA®)
◇9	5	bush	bronze
◇10	1	O.ring	NBR (BUNA®)
11	1	lower flange	IXEF (DN 40-150) aluminium (DN 200-300) aluminio (DN 200-300)
12	2	screw	10.9 zinc plated steel
13	2	washer	A4~A316
◇14	2	O. ring	NBR (BUNA®)
15	4	screw	10.9 zinc plated steel
16	1	spring	1.4401 ~ A316 (antistatic device)

BVKA - Wafer **BLKA** - Lug
 DN 450 - 500 • 18" - 20"
 PN 10-16 • ANSI 150

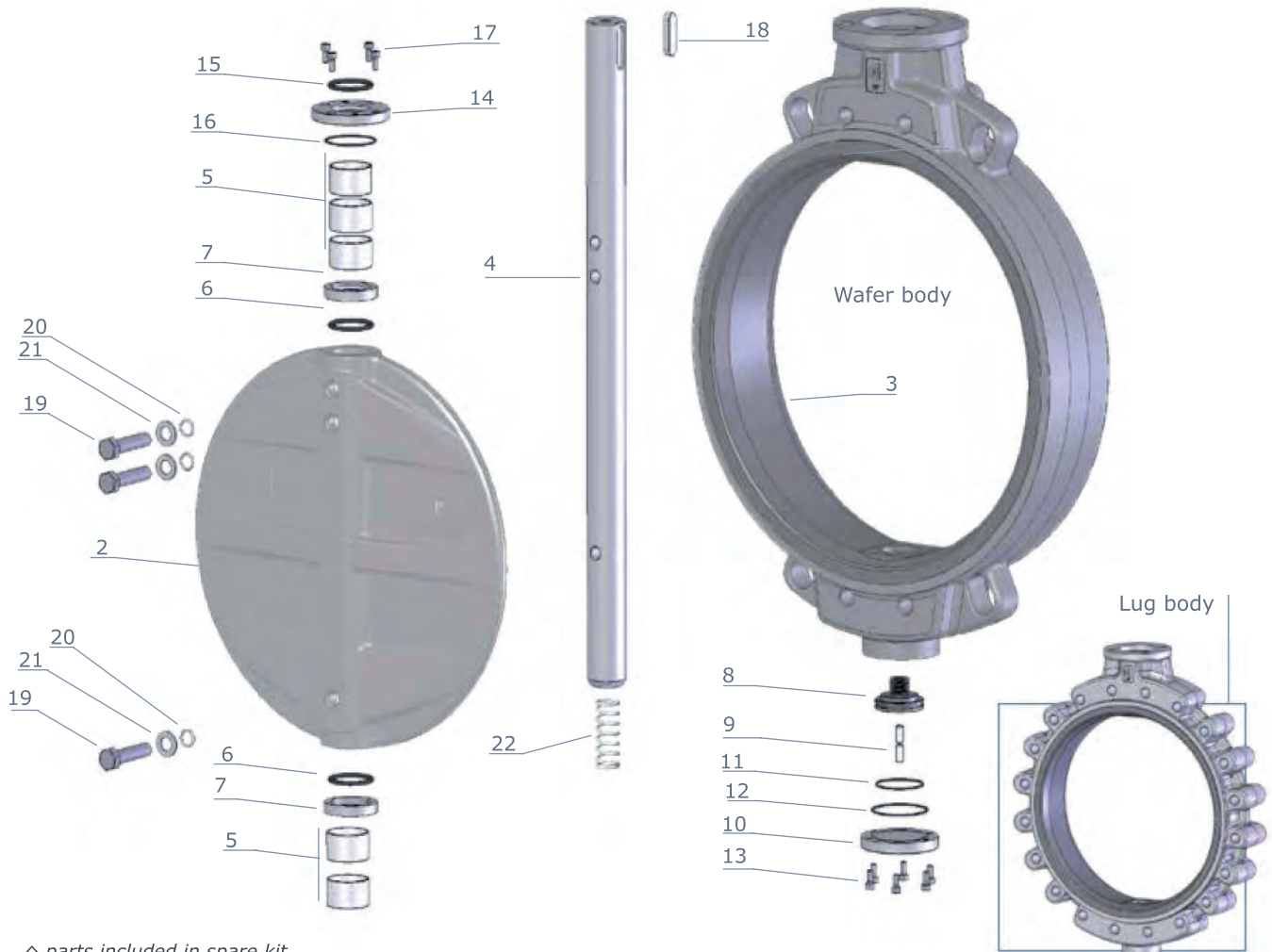


◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB 1.4408~ A351-CF8M (A316) EN1982-CC333G~ASTM B148-C958.00
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148-C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
◇5	5	bush	steel + PTFE

item	q.ty	part	material
6	4	screw	8.8 zinc plated steel A4~A316 (CF8M body/ ASTM B148)
◇7	1	O.ring	NBR (BUNA®)
8	5	stop ring	steel
9	1	upper flange	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
◇10	1	O.ring	NBR (BUNA®)
11	1	lower flange	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
12	4	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
13	2	screw	A4~A316
14	2	washer	A4~A316
◇15	2	O. ring	PTFE
16	1	spring	1.4401 ~ A316 (antistatic device)

BVKA - Wafer **BLKA** - Lug
 DN 600 - 800 • 24" - 32"
 PN 16 • ANSI 150



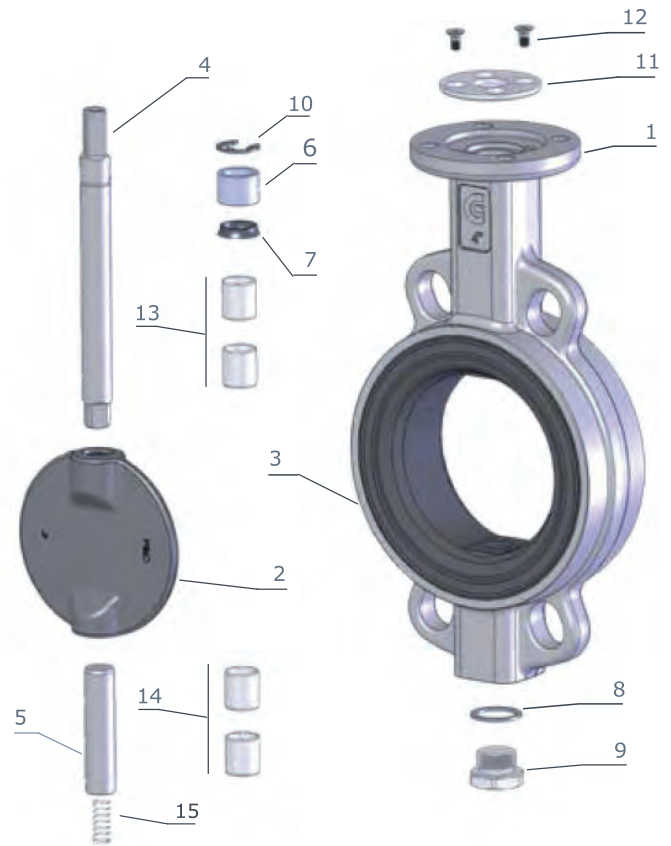
◇ parts included in spare kit

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB EN 1.4408~A351-CF8M EN1982-CC333G~ASTM B148 - C958.00
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4305~A303 EN 1.4401~A316 (on request)
◇5	5	bush	steel + PTFE
◇6	2	O.ring	NBR (BUNA®) FKM (VITON®) on request
7	2	O.ring housing	A4~A316

item	q.ty	part	material
8	1	shaft support	Bronze
9	2	adjusting screw	A4~A316
10	1	lower flange	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
◇11	1	O.ring	NBR (BUNA®)
◇12	1	O.ring	NBR (BUNA®)
13	6	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
14	1	upper flange	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
◇15	1	O.ring	NBR (BUNA®)
◇16	1	O.ring	NBR (BUNA®)
17	4	screw	8.8 zinc plated steel A4~A316 (CF8M body / ASTM B148)
18	1	key	steel
19	3	screw	A4~A316
◇20	3	O.ring	PTFE
21	3	washer	A4~A316
22	1	spring	1.4401 ~ A316 (antistatic device)

BVKX - Wafer BLKX - Lug
DN 50 - 100 • 2" - 4"
PN 25

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400) EN 1.069~ A216-WCB 1.1156~A352-LCB EN 1.4408~A351-CF8M
2	1	disc	EN 1.4408~ A351-CF8M (A316) EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replaceable)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4-5	1	upper shaft lower shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
◇6	1	bush	bronze
◇7	1	shaft packing	NBR (BUNA®) FKM (VITON®) (on request)
8	1	plug packing	aluminium PTFE (corpo CF8M / ASTM B148)
9	1	threaded plug	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
10	1	stop ring	steel
11	1	upper flange	IXEF (DN 40-150) aluminium (DN 200-300)
12	2	screw	zinc plated steel A4~A316 (CF8M body/ ASTM B148)
◇13	2	upper bush	A105+PTFE
◇14	2	lower bush	A105+PTFE
15	1	spring	1.4401 ~ A316 (antistatic device)



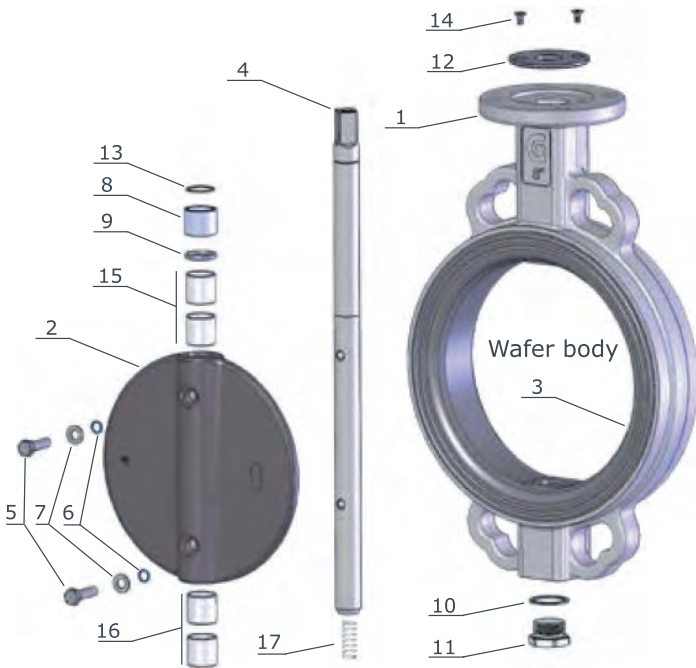
◇ parts included in spare kit

Wafer body

BVKX - Wafer
DN 125 - 250 • 5" - 10"
PN 25

BLKX - Lug
DN 125 - 200 • 5" - 8"
PN 25

item	q.ty	part	material
1	1	body	EN-GJS400-15 (GS400)
2	1	disc	EN 1.4408~ A351-CF8M EN1982-CC333G~ASTM B148 - C958.00 EN 2.4602~HASTELLOY-CX2MW EN 1.4469 (A890 Gr. 5A) SUPER DUPLEX
3	1	body seat (vulcanized not replace- able)	NBR (BUNA®) EPDM EPDM HT FKM (VITON®)
4	1	shaft	EN 1.4016~A430 EN 1.4401~A316 (on request)
5	2	screw	A4~A316
◇6	2	O.Ring	PTFE
7	2	washer	A4~A316
◇8	1	bush	bronze
◇9	1	shaft packing	NBR (BUNA®) FKM (VITON®) (on req.)
10	1	plug packing	aluminium PTFE (corpo CF8M / ASTM B148)
11	1	threaded plug	zinc plated steel 1.4401~A316 (CF8M body/ASTM B148)
12	1	upper flange	IXEF (DN 125-150) aluminium (DN 200-250)
13	1	stop ring	steel
14	2	screw	10.9 zinc plated steel A4~A316 (CF8M body/ ASTM B148))
◇15	2	upper bush	A105+PTFE
◇16	2	lower bush	A105+PTFE
17	1	spring	1.4401 ~ A316 (antistatic device)

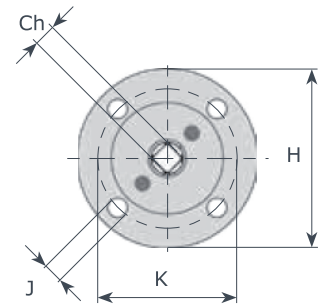
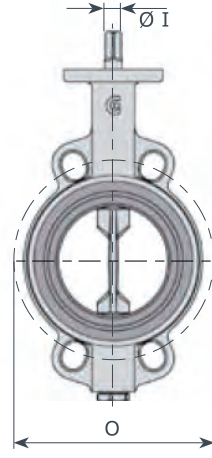
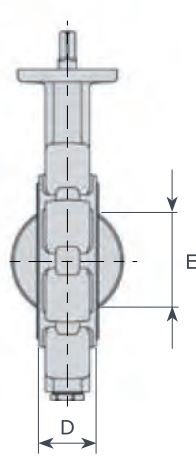
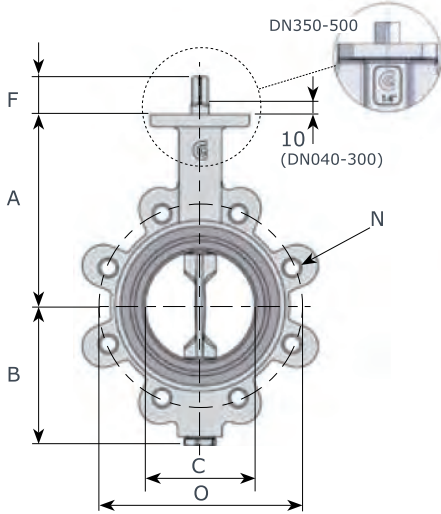


◇ parts included in spare kit

BVPD - Wafer **BLPD - Lug**

BVKI - Wafer **BLKI - Lug**

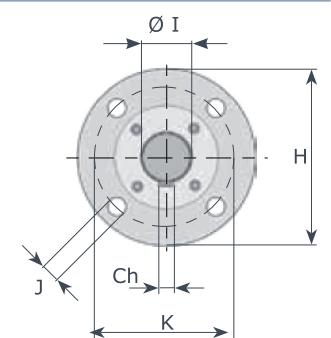
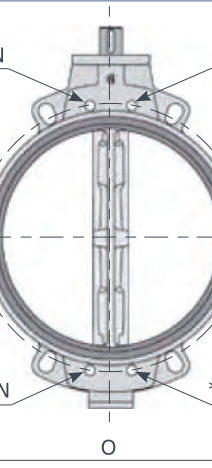
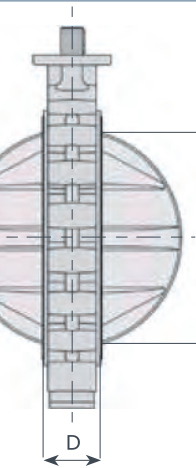
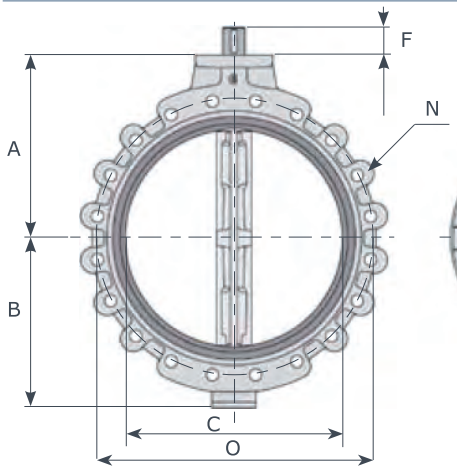
BVKA - Wafer **BLKA - Lug**



Upper flange - ISO 5211

DN 40 - 150	F07 - 4 holes
DN 200 - 300	F10 - 4 holes
DN 350 - 400	F12 - 4 holes
DN 450	F14 - 4 holes
DN 500	F14/16 - 4 holes

DN	A	B	C	D	E	F	Ø I	Ch	H	K	J	Kg															
												PN 6			PN 10			PN 16			ANSI 150			PD-KI		KA	
												N	n.	O	N	n.	O	N	n.	O	N	n.	O	W	L	W	L
40	130	75	49	33	36	34	14	11	90	70	9	-	-	-	M16	4	110	M16	4	110	M14	4	98.4	2.2	3	2.2	3
50	138	81	55	43	35	34	14	11	90	70	9	M12	4	110	M16	4	125	M16	4	125	M16	4	120.7	2.8	3.7	2.8	3.7
65	144	98	68	46	50	34	14	11	90	70	9	M12	4	130	M16	8	145	M16	8	145	M16	4	139.7	3.7	5.3	3.7	5.3
80	158	110	81	46	67	34	14	11	90	70	9	M16	4	150	M16	8	160	M16	8	160	M16	4	152.4	4	6.1	4	6.1
100	173	128	101	52	87	34	16	11	90	70	9	M16	4	170	M16	8	180	M16	8	180	M16	8	190.5	6	8.1	6	8.1
125	186	140	126	56	113	34	18	14	90	70	9	M16	8	200	M16	8	210	M16	8	210	M20	8	215.9	7.2	9.7	7.2	9.7
150	202	155	150	56	140	34	18	14	90	70	9	M16	8	225	M20	8	240	M20	8	240	M20	8	241.3	9.1	11.5	9.5	11.8
200	240	190	200	60	191	38	22	17	125	102	11	M16	8	280	M20	8	295	M20	12	295	M20	8	298.5	14	27	16	29
250	270	220	250	68	241	38	30	22	125	102	11	M16	12	335	M20	12	350	M24	12	355	M22	12	362.0	22	34	26	38
300	300	247	298	78	289	38	30	22	125	102	11	M20	12	395	M20	12	400	M24	12	410	M22	12	431.8	32	49	36	53
350	330	280	341	78	332	28	35	27	150	125	14	M20	12	445	M20	16	460	M24	16	470	M24	12	476.3	42	62	55	75
400	355	305	390	102	376	28	40	27	150	125	14	M20	16	495	M24	16	515	M27	16	525	M27	16	539.8	76	90	94	104
450	400	343	444	114	430	37	45	36	175	140	18	M20	16	550	M24	20	565	M27	20	585	M27	16	577.8	110	170	135	195
500	422	366	495	127	479	37	45	36	210	140/165	18/22	M20	20	600	M24	20	620	M30	20	650	M27	20	635.0	140	180	165	205



Upper flange - ISO 5211

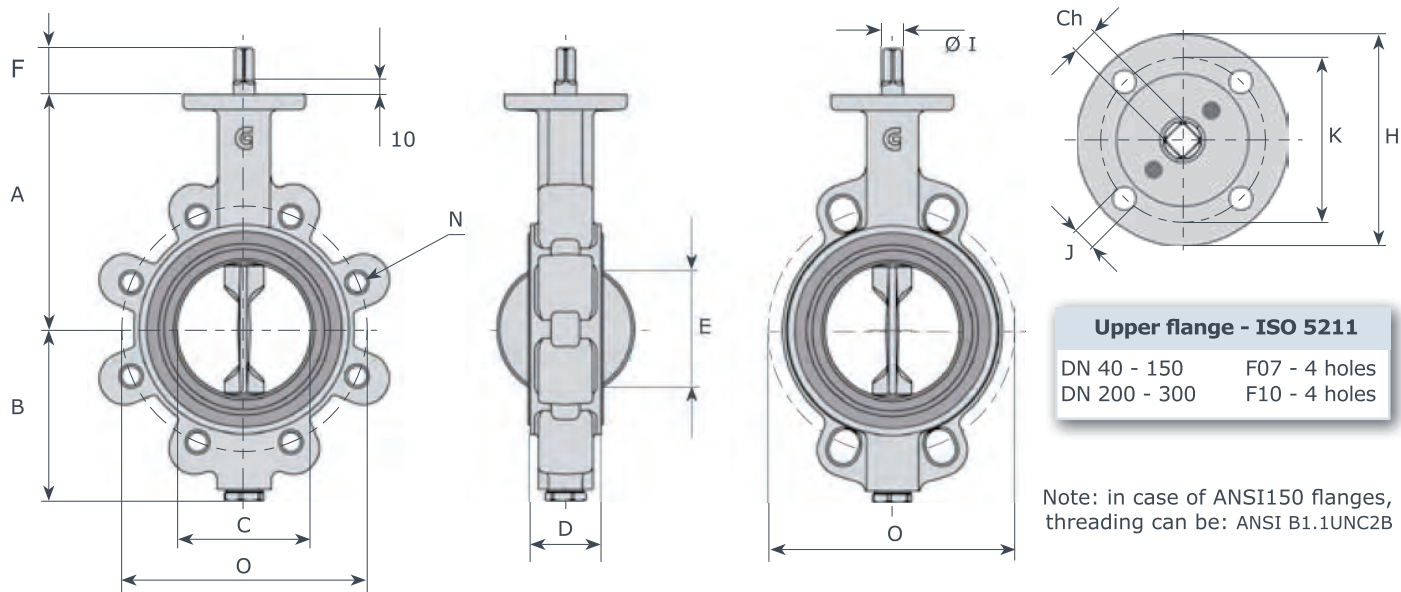
DN 600	F16 - 4 holes
DN 700 - 800	F25 - 8 holes

Note: in case of ANSI150 flanges, threading can be:
 14" ANSI B1.1UNC2B
 16" ÷ 32" ANSI B1.1-8 UNC2B

*Note: WAFER bodies DN 600 - 700 - 800 have 4 holes N threaded as relevant LUG version

DN	A	B	C	D	E	F	Ø I	Ch	H	K	J	Kg															
												PN 6			PN 10			PN 16			ANSI 150			PD-KI		KA	
												N	n.	O	N	n.	O	N	n.	O	N	n.	O	W	L	W	L
600	495	460	595	154	575	75	60	18	210	165	22	M24	20	705	M27	20	725	M33	20	770	M33	20	749.3	220	290	220	290
700	550	506	690	165	670	90	70	20	300	254	18	M24	24	810	M27	24	840	M33	24	840	M33	28	863.6	300	415	300	415
800	640	590	780	190	757	100	80	22	300	254	18	M27	24	920	M30	24	950	M36	24	950	M39	28	977.9	444	570	465	570

BVKX - Wafer **BLKX** - Lug



DN	"	A	B	C	D	E	F	Ø I	Ch	H	K	J	PN 25			Kg.	
													N	n.	O	wafer	lug
50	2	138	81	55	43	35	34	14	11	90	70	9	M16	4	125	2.8	3.7
65	2 ^{1/2}	144	98	68	46	50	34	14	11	90	70	9	M16	8	145	3.7	5.3
80	3	158	110	81	46	67	34	14	11	90	70	9	M16	8	160	4	6.1
100	4	173	128	101	52	87	34	16	11	90	70	9	M20	8	190	6	8.1
125	5	186	140	126	56	113	34	18	14	90	70	9	M24	8	220	7.2	9.7
150	6	202	155	150	56	140	34	18	14	90	70	9	M24	8	250	9.5	11.8
200	8	240	190	200	60	191	38	22	17	125	102	11	M24	12	310	16	29
250	10	270	220	250	68	241	38	30	22	125	102	11	--	--	370	25	--

PD Series - Torque values - Nm - safety factor excluded

Seat body NBR/EPDM				fluid H ₂ O - 20°C			
working pressure BAR							
DN	0	6	10	DN	0	6	10
80	5	7	11	250	89	100	115
100	8	12	24	300	167	180	280
125	22	31	40	350	245	340	395
150	40	45	49	400	382	405	420
200	47	58	90	450	395	418	445

Seat body FKM/natural rubber				fluid H ₂ O - 20°C			
working pressure BAR							
DN	0	6	DN	0	6	DN	0
80	7	11	250	120	134	500	607
100	11	16	300	225	241	600	1795
125	29	42	350	465	495	700	2310
150	52	65	400	515	540	800	3376
200	62	78	450	578	627	-	-

KI Series - Torque values - Nm - safety factor excluded

Seat body NBR/EPDM				fluid H ₂ O - 20°C			
working pressure BAR				working pressure BAR			
DN	0	6	10	16	DN	0	6
40	11	11	13	14	150	55	60
50	11	12	13	15	200	100	107
65	11	16	16	18	250	160	175
80	20	30	36	40	300	260	270
100	40	43	45	48	350	410	450
125	48	52	52	70	400	450	480

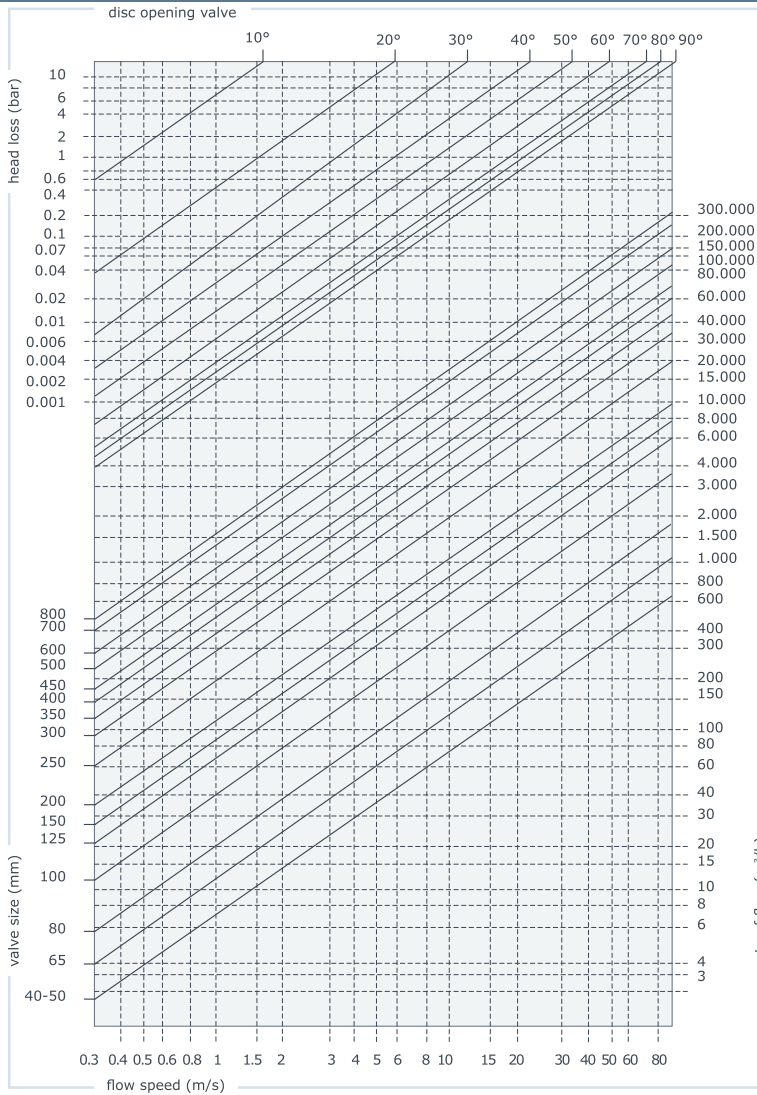
Seat body FKM/natural rubber				fluid H ₂ O - 20°C			
working pressure BAR				working pressure BAR			
DN	0	6	10	16	DN	0	6
40	14	14	16	17	150	66	72
50	14	15	16	18	200	120	129
65	14	20	20	22	250	192	210
80	24	36	44	48	300	312	330
100	48	52	54	58	350	498	545
125	60	62	64	84	400	550	584

KA/KX Series - Torque values - Nm - safety factor excluded

Seat body NBR/EPDM				fluid H ₂ O - 20°C			
working pressure BAR				working pressure BAR			
DN	0	6	10	16	20	25	DN
40	12	12	14	15	15	-	300
50	12	13	14	16	17	20	350
65	12	17	17	19	20	31	400
80	21	32	38	42	44	49	450
100	42	45	47	50	53	65	500
125	50	55	55	74	77	82	600
150	58	63	88	95	99	103	700
200	105	112	189	221	231	320	800
250	175	190	231	336	352	440	-

Head losses

NOTES: values indicated in this page is only for information



Formulae for calculation of rate flow

Liquids:
$$Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$$

Q rate of flow (m³/h)
 PS specific gravity (water=1)
 ΔP pressure drop (bar)

Gas:
$$Q = 28.5 \frac{KV}{\sqrt{P_2 \cdot \Delta P}} \cdot \frac{1}{\sqrt{PS}}$$

Q rate of flow (m³/h)
 PS specific gravity (air=1)
 ΔP pressure drop (bar) (less than 1/2 inlet pressure)
 P₂ outlet pressure

Steam:
$$Q = 22.5 \cdot KV \cdot \sqrt{P_2 \cdot \Delta P}$$

Q rate of flow (Kg/h)
 ΔP pressure drop (bar) (less than 1/2 inlet pressure)
 P₂ outlet pressure

Calculation of the rate of flow equivalent to H2O

$$Q_e = Q \sqrt{\frac{d}{1000}}$$







For different liquid, gas or steam head losses are determined by equivalent water of flow, as follows:

Q_e equivalent water flow (mc/l o l/s)
 Q fluid flow (mc/l o l/s)
 d fluid specific gravity (Kg/mc)

Values KV (CV = 1,16 KV)

angle	40/50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
5°	-	-	-	-	-	-	-	-	-	53	68	85	106	151	206	270
10°	-	-	-	-	-	-	-	21	49	123	161	199	246	354	482	629
15°	0,2	0,6	1,8	2,4	4,2	5,6	14	80	188	228	299	369	457	658	900	1168
20°	0,9	2,5	5,2	9,5	15	23	110	156	280	315	412	511	630	907	1234	2010
25°	3	6,1	12	22	38	61	125	225	354	457	597	740	914	1314	1789	2735
30°	6,1	11	21	39	69	112	211	310	381	661	863	1069	1320	1899	2585	5080
35°	9,9	18	33	60	105	166	303	433	521	890	1162	1440	1778	2560	3484	6254
40°	15	27	49	88	148	228	405	591	742	1184	1547	1916	2366	3407	4638	9700
45°	21	38	68	121	199	303	528	774	987	1552	2028	2512	3102	4466	6079	11581
50°	29	51	91	159	262	394	679	988	1252	2008	2620	3248	4010	5774	7860	15000
55°	39	68	119	207	338	505	863	1247	1571	2548	3318	4123	5090	7329	9976	17765
60°	53	90	156	269	434	641	1085	1591	2059	3225	4202	5218	6442	9277	12627	22200
65°	72	121	209	357	565	820	1364	2065	2807	3983	5196	6445	7957	11457	15595	26077
70°	92	161	283	487	768	1097	1788	2715	3744	5195	6775	8412	10377	14944	20341	34500
75°	109	209	381	662	1059	1507	2425	3625	4935	6964	9084	11269	13912	20032	27267	39546
80°	115	240	457	815	1303	1861	3043	4768	6831	9301	12142	15048	18578	26752	36413	47560
85°	115	253	502	906	1457	2008	3642	4890	8230	10280	13408	16632	20533	29568	40246	52566
90°	116	257	508	925	1492	2168	3838	5010	9233	10792	14082	17840	22024	31715	43166	56381

Flanges to be used

 <p>EN1092-1 Tipo 11</p> <p>UNI 2280/81 2282/67</p> <p>DIN 2631 2632 2633</p> <p>A150 B16.5 welding neck</p>	 <p>EN1092-1 Tipo 01</p> <p>UNI 2276/77 2278/67</p> <p>DIN 2575 2576 2577</p> <p>A150 B16.5 slip on</p>	 <p>EN1092-1 Tipo 02/32</p> <p>UNI 6088/89 6090</p> <p>DIN 2641 2642 2643</p>	 <p>EN1092-1 Tipo 04/34</p> <p>UNI 2289/90 2291</p> <p>DIN 2672 2673 2674</p>	 <p>EN1092-1 Tipo 02/33</p>	 <p>NOTE only valves with vulcanized seat (KA/KX) are recommended with these flanges</p>
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Compatibility flanges - body Wafer

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
40	☐	✓	✓	✓	✓	✓	✓	●	✓	✓	✓	✓	✓
50	☐	✓	✓	✓	✓	✓	✓	✗	●	●	●	☐	✗
65	☐	✓	✓	✓	✓	✓	✓	●	●	●	✓	✓	☐
80	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	✓
100	☐	✓	✓	●	●	✓	✓	✗	●	✓	✗	●	✓
125	☐	✓	✓	● (1)	● (1)	✓	✓	✗	✓	✓	☐	✓	● (1)
150	☐	✓	✓	● (1)	● (1)	✓	✓	✗	●	●	☐	✓	✗
200	☐	✓	✓	✓ (2)	✗	✓	✓	✗	✓	✓	●	●	✓ (2)
250	☐	✓	✓	●	✗	✓	✓	✗	✗	✓	●	✓	✗
300	☐	✓	✓	✓ (2)	✗	✓	✓	✗	✓	✓	●	●	✓ (2)
350	☐	✓	✓	●	✗	✓	✓	✗	✓	✓	●	●	●
400	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	●	✓
450	☐	✓	✓	●	✗	✓	✓	✗	✗	●	●	✓	✗
500	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✓	✓
600	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✗	✗
700	☐	✓	✓	✗	✗		✓	✗			●	✓	✗
800	☐	✓	✓	✗	✗		✓	✗			●	✓	✗

- ✓ standard
- on request
- ☐ only body PN 6 version
- ✗ not possible
- (1) only with ductile iron bodies
- (2) standard with ductile iron and steel bodies, on request with different materials

Compatibility flanges - body Lug

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
40	☐	✓	✓	✓	✓	✓	✓	●	☐	☐	●	●	●
50	☐	✓	✓	✓	✓	✓	✓	✗	●	●	●	●	✗
65	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	●
80	☐	✓	✓	✓	✓	✓	✓	●	●	●	●	●	✓
100	☐	✓	✓	●	●	✓	✓	✗	●	✓	✗	●	●
125	☐	✓	✓	● (1)	● (1)	✓	✓	✗	✓	✓ (PN6)	✓	●	● (1)
150	☐	✓	✓	● (1)	● (1)	✓	✓	✗	●	●	●	✓	✗
200	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	✗
250	☐	✓	✓	✗	✗	✓	✓	✗	✗	●	●	●	✗
300	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	✓ (1)	✗
350	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	✗
400	☐	✓	✓	✗	✗	✓	✓	✗	●	●	●	●	●
450	☐	✓	✓	✗	✗	✓	✓	✗	✗	●	●	✓	✗
500	☐	✓	✓	✗	✗	✓	✓	✗	✗	✗	●	✓	✗
600	☐	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✗	✗
700	☐	✓	✓	✗	✗		✓	✗			●	✓	✗
800	☐	✓	✓	✗	✗		✓	✗			●	✓	✗

- ✓ standard
- on request
- ☐ only body PN 6 version
- ✗ not possible
- (1) only with ductile iron bodies
- (2) standard with ductile iron and steel bodies, on request with different materials

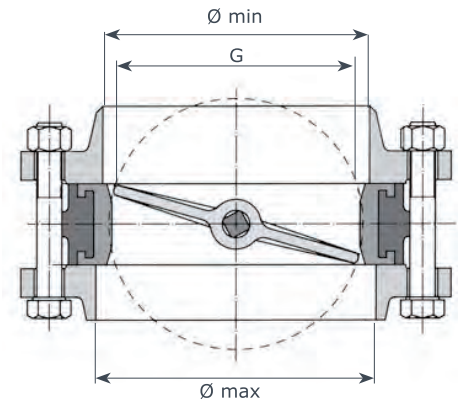
Bolts and rods dimensions

DN	Wafer valves											
	PN 6			PN 10			PN 16			ANSI 150		
	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°
40	M12x80	M12x90	4	M16x90	M16x100	4	M16x90	M16x100	4	M14x90	M14x110	4
50	M12x90	M12x100	4	M16x100	M16x120	4	M16x100	M16x120	4	M16x100	M16x130	4
65	M12x100	M12x110	4	M16x110	M16x130	8	M16x110	M16x130	8	M16x110	M16x140	4
80	M16x100	M16x120	4	M16x110	M16x130	8	M16x110	M16x130	8	M16x120	M16x150	4
100	M16x110	M16x120	4	M16x120	M16x140	8	M16x120	M16x140	8	M16x120	M16x150	8
125	M16x120	M16x140	8	M16x120	M16x150	8	M16x120	M16x150	8	M20x130	M20x160	8
150	M16x120	M16x140	8	M20x130	M20x160	8	M20x130	M20x160	8	M20x140	M20x160	8
200	M16x130	M16x150	8	M20x140	M20x170	8	M20x140	M20x170	12	M20x150	M20x170	8
250	M16x140	M16x160	12	M20x150	M20x180	12	M24x150	M24x180	12	M22x160	M22x190	12
300	M20x150	M20x180	12	M20x160	M20x190	12	M24x160	M24x190	12	M22x170	M22x210	12
350	M20x150	M20x180	12	M20x160	M20x190	16	M24x170	M24x200	16	M24x180	M24x220	12
400	M20x180	M20x210	16	M24x190	M24x220	16	M27x210	M27x240	16	M27x210	M27x250	16
450	M20x190	M20x220	16	M24x200	M24x230	20	M27x220	M27x250	20	M27x230	M27x270	16
500	M20x210	M20x240	20	M24x210	M24x240	20	M30x240	M30x280	20	M27x250	M27x290	20
600	M24x240	M24x270	20	M27x250	M27x290	20	M33x270	M33x320	20	M33x290	M33x340	20
700	M24x250	M24x280	24	M27x260	M27x310	24	M33x280	M33x330	24	M33x350	M33x400	28
800	M27x280	M27x320	24	M30x290	M30x350	24	M36x320	M36x360	24	M39x400	M33x460	28

DN	Lug valves							
	PN 6		PN 10		PN 16		ANSI 150	
	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°
40	M12x30	8	M16x30	8	M16x30	8	M14x30	8
50	M12x35	8	M16x35	8	M16x35	8	M16x35	8
65	M12x35	8	M16x40	16	M16x40	16	M16x40	8
80	M16x40	8	M16x40	16	M16x40	16	M16x40	8
100	M16x40	8	M16x40	16	M16x40	16	M16x45	16
125	M16x45	16	M16x45	16	M16x45	16	M20x50	16
150	M16x45	16	M20x45	16	M20x45	16	M20x50	16
200	M16x50	16	M20x50	16	M20x50	24	M20x55	16
250	M16x55	24	M20x55	24	M24x55	24	M22x60	24
300	M20x60	24	M20x60	24	M24x60	24	M22x60	24
350	M20x60	24	M20x60	32	M24x65	32	M24x65	24
400	M20x70	32	M24x70	32	M27x70	32	M27x80	32
450	M20x80	32	M24x80	40	M27x80	40	M27x80	32
500	M20x80	40	M24x80	40	M30x80	40	M27x90	40
600	M24x90	40	M27x90	40	M33x100	40	M33x100	40
700	M24x100	48	M27x100	48	M33x110	48	M33x130	56
800	M27x110	48	M30x120	48	M36x130	48	M39x150	56

NOTE 1 Screw and rod dimensions have been calculated with WELDING NECK flanges PN 6/10/16 (EN1092-1 Type 11) ANSI150 (ANSI B16.5)

NOTE 2 Number of nuts should be double when WAFER valves are assembled with threaded rods.



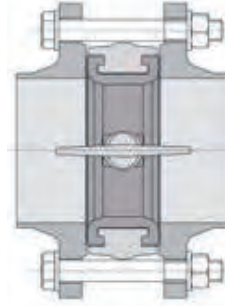
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800
G	36	35	50	67	87	113	140	191	241	289	332	376	430	475	575	670	757
Ø min	46	44	60	75	98	122	148	196	244	296	342	378	440	485	585	681	782
Ø max	49	62	80	93	118	146	175	225	275	330	372	422	450	500	600	717	815

Installation

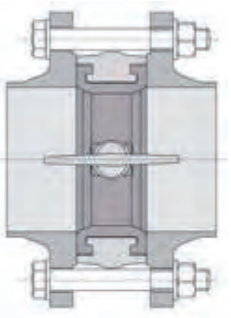
Assembly



1 - Leave a space between flanges so that valve can be easily inserted and removed.



2 - Open completely the valve before tightening flanges.



3 - Tighten bolts till flanges are in contact with valve body.

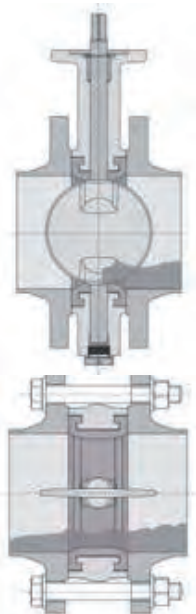


4 - **NOTE:** do not insert other packing between flange and valve.

NOTE: Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat. Clean carefully the welding to avoid that slags damage the seat.

Installation for powders and muddy fluids

In case of use with powders or muddy fluids, install the valve with horizontal rotation axis, to allow sediments to flow easily on opening.



Wrong
Vertical rotation axis

←
powders or muddy fluids

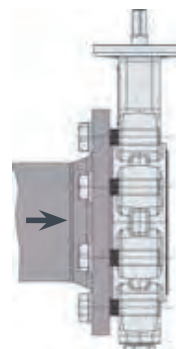
Right
Horizontal rotation axis

←
powders or muddy fluids

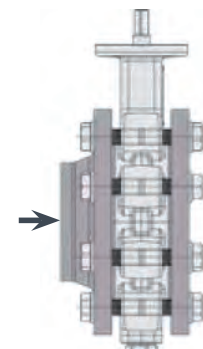
This type of installation is always advisable with valve diameters over DN 400.

End piping installation

When valves are installed end of piping, a counterflange as per dwg type B is needed to secure tightness at max pressure.



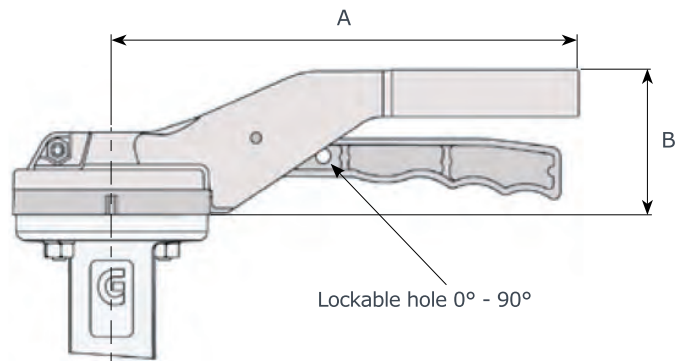
Type A installation without counterflange



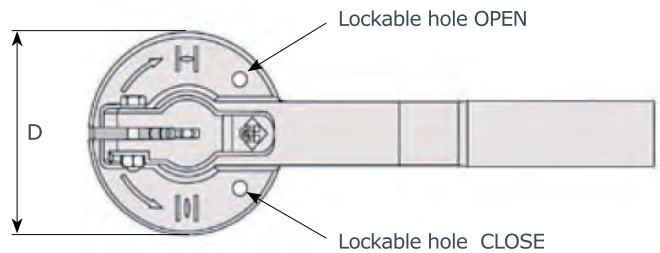
Type B installation with counterflange

valve type	P _{max} (Bar)	
	type A inst.	type B inst.
BLPD	4	6
BLKI	6	16
BLKA	16	20
BLKX	16	25

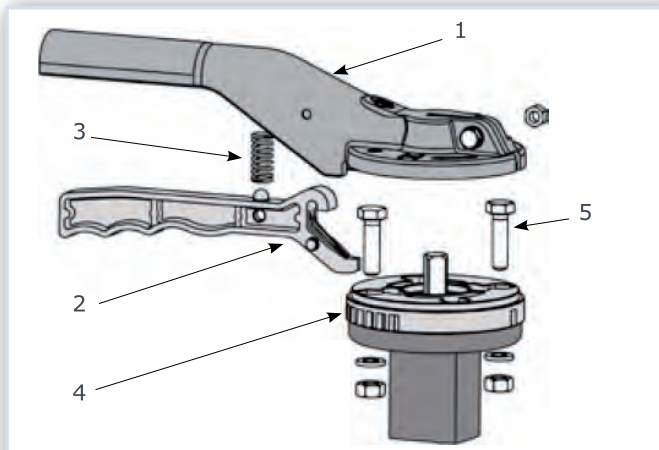
Handlevers



DN	A	B	D	Kg	
				aluminium	st. steel
40 - 100	220	67	93	0.60	1.80
125 - 150	275	67	93	0.65	2.05
200 - 300	340	76	125	1	--

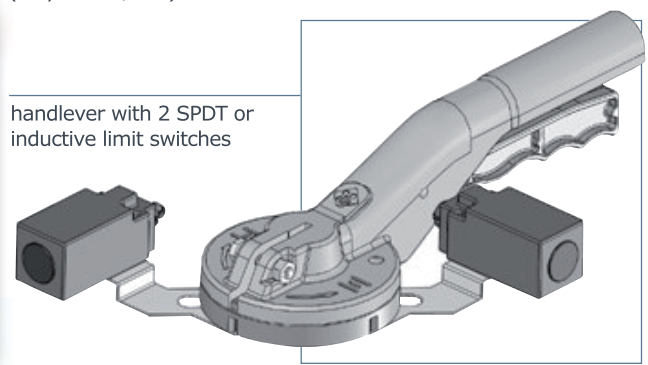
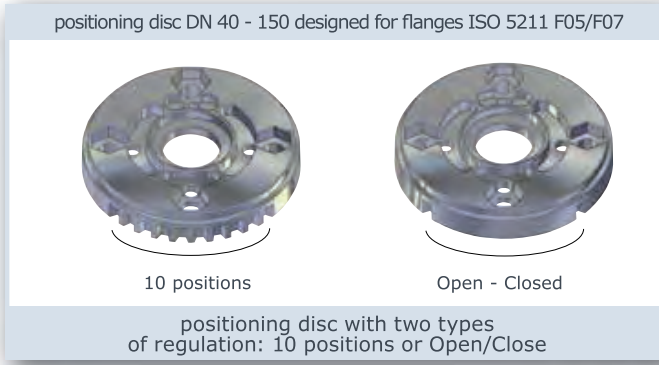
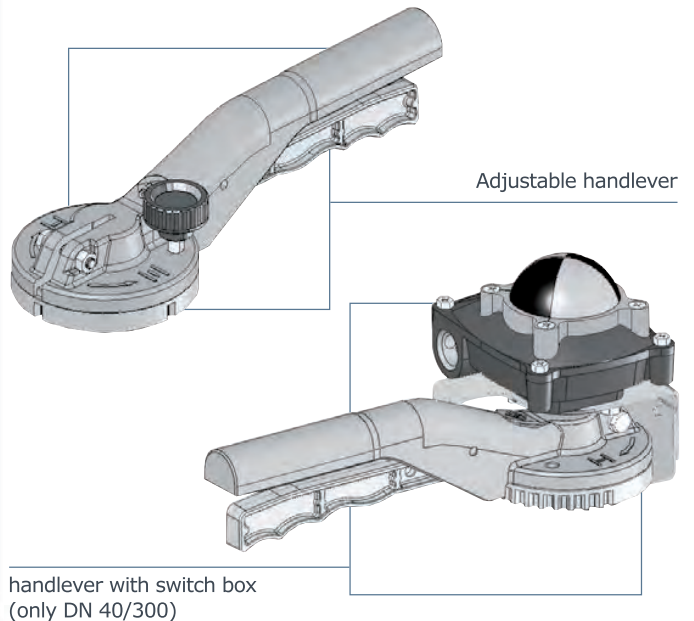


Note: DN 250 - 300 handlever not recommended (PD series excluded)



		DN40 - 300	DN40 - 150
1	lever	aluminium	A351 CF8M
2	trigger	aluminium	A351 CF8M
3	spring	stainless steel	stainless steel
4	disc positioning	aluminium	A351 CF8M
5	screws	stainless steel	stainless steel

OPTIONALS

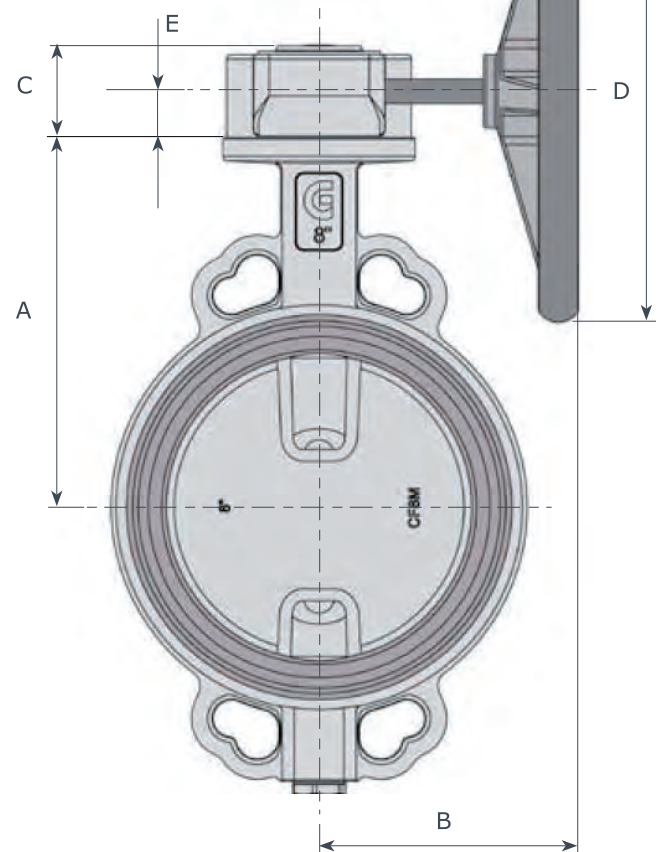
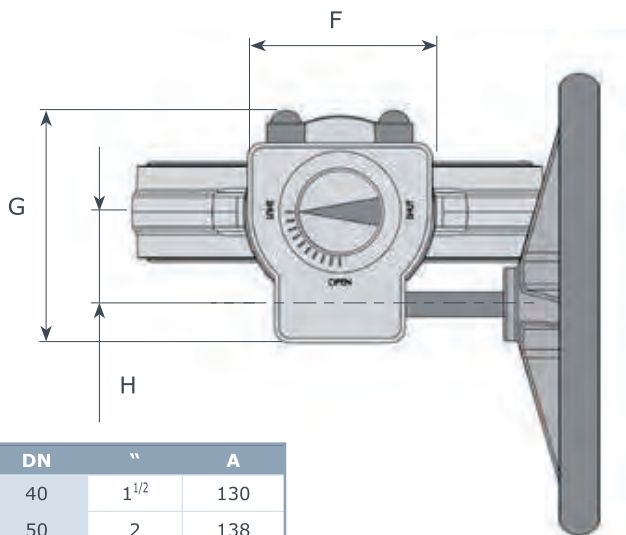


Gearboxes Aluminium body - HW Series

Coupling valve - actuators

DN	"	PD	KT			KA	KX
			p = 6 bar	p = 10 bar	p = 16 bar		
40	1 ^{1/2}	--	HW070	HW070	HW070	--	--
50	2	--	HW070	HW070	HW070	HW070	HW070
65	2 ^{1/2}	--	HW070	HW070	HW070	HW070	HW070
80	3	HW070	HW070	HW070	HW070	HW070	HW070
100	4	HW070	HW070	HW070	HW070	HW070	HW070
125	5	HW070	HW070	HW070	HW070	HW070	HW070
150	6	HW070	HW070	HW070	HW070	HW070	HW070
200	8	HW102	HW102	HW102	HW102	HW102	HW102
250	10	HW102	HW102	HW102	HW102	HW102	HW102
300	12	HW102	HW102	HW102	HW102	HW102	--
350	14	HW140	HW140	HW140	HW140	HW140	--
400	16	HW140	HW140	HW140	HW140	--	--

HW series	
body:	aluminium
worm gears:	steel
sector gear:	ductile iron
shaft:	stainless steel
handwheel:	steel
protection:	IP65
T:	-20 / +120 °C



DN	"	A
40	1 ^{1/2}	130
50	2	138
65	2 ^{1/2}	144
80	3	158
100	4	173
125	5	186
150	6	202
200	8	240
250	10	270
300	12	300
350	14	330
400	16	355
450	18	400
500	20	422
600	24	495
700	28	550
800	32	640

Mod.	B	C	D	E	F	G	H	Kg
HW070	165	48	140	27	80	115	42	1.6
HW102	240	56	300	33	120	150	60	3
HW140	250	95	400*	51	185	225	80	10

* for DN 350: D =350

Gearboxes Cast Iron body - GH/AB Series

Coupling valve - actuators

DN	"	PD	KI	KA	KX	DN	"	A
40	1 1/2	--	GH10	GH10	GH10	40	1 1/2	130
50	2	--	GH10	GH10	GH10	50	2	138
65	2 1/2	--	GH10	GH10	GH10	65	2 1/2	144
80	3	GH10	GH10	GH10	GH10	80	3	158
100	4	GH10	GH10	GH10	GH10	100	4	173
125	5	GH10	GH10	GH10	GH10	125	5	186
150	6	GH10	GH10	GH10	GH20	150	6	202
200	8	GH20	GH20	GH10	GH20	200	8	240
250	10	GH20	GH20	GH10	AB550	250	10	270
300	12	GH20	GH20	AB550	--	300	12	300
350	14	GH30	GH30	AB880	--	350	14	330
400	16	GH30	GH30	AB880	--	400	16	355
450	18	GH55	GH55	AB1250	--	450	18	400
500	20	GH55	GH55	AB1250	--	500	20	422
600	24	GH88	GH88	AB1954	--	600	24	495
700	28	GH99	GH99	AB6804	--	700	28	550
800	32	GH99	GH195	AB6806	--	800	32	640

GH/AB series

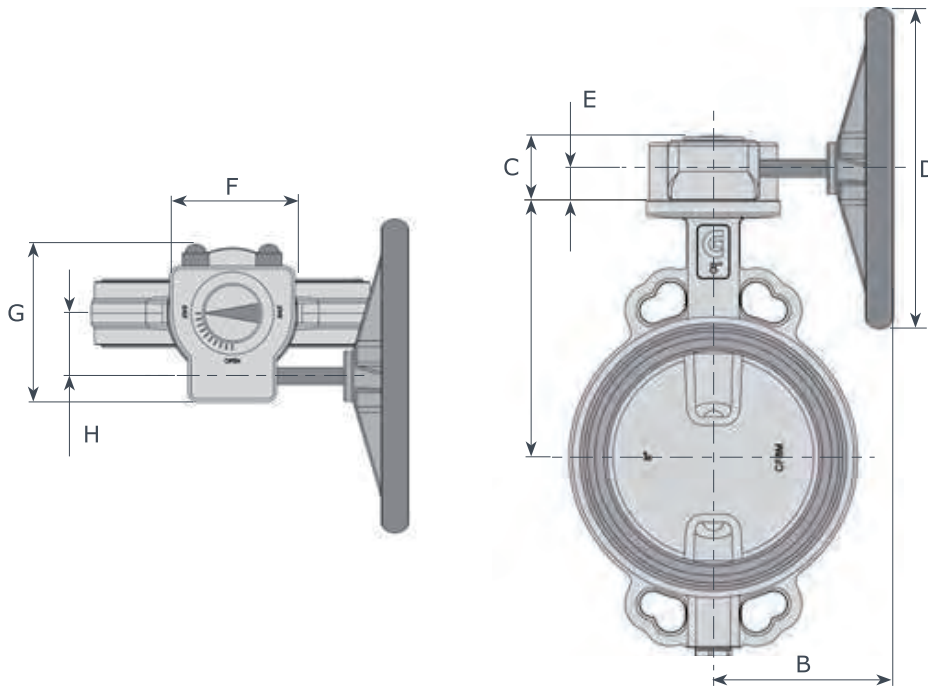
body:	ductile iron
worm gears:	steel
sector gear:	ductile iron
shaft:	steel
handwheel:	steel
protection:	IP67
T:	-20 / +80 °C

low/high temperature execution on request

Waterproof valve shaft extension

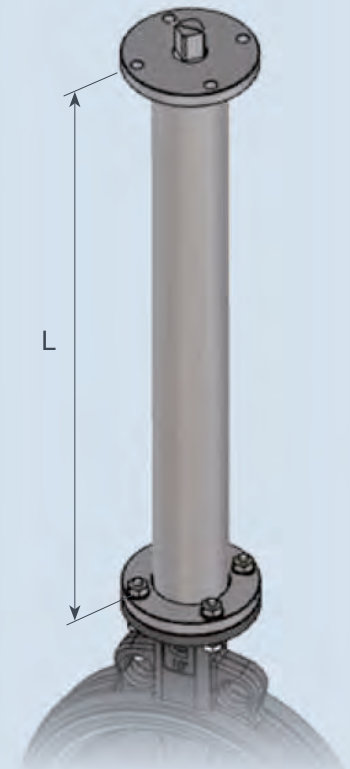
When necessary, it's possible to extend the valve shaft as indicated in the figure. Construction is in carbon steel with protective paint (on request stainless steel).

"L" measure should be indicated when ordering.



Mod. GH	B	C	D	E	F	G	H	I	Kg
GH10	170	64	200	29	90	122.5	44	52.5	2.2
GH20	179	65.5	200	29	125	144	52	65	3.6
GH21	214	73	300	36	125	162	62	74	4.8
GH30	265	89	350	46	150	202	79	89	12
GH55	300	99	400	49.5	210	229	89	105	13
GH88	350	350	500	55	225	267	112	112	20.1
GH99	374	374	500	55	300	317	124	150	28.5
GH195	430	430	600	63	300	350	129	150	37

Mod. AB	B	C	D	E	F	G	H	I	Kg
AB550	282	88	300	41	138	174	71	69	8.5
AB880	282	93	400	42	200	226	86	100	14
AB1250	322	102	500	48	220	258	105	110	22
AB1950	425	126	600	55	285	323	130	143	32
AB1954	398	126	600	55	285	323	130	143	39
AB6804	451	159	600	59	370	407	182	170	62.5
AB6806	451	159	600	59	370	407	182	170	64.2



Our technical department is available to solve special applications.

Pneumatic actuator DA / DOUBLE ACTING

Rack & Pinion Actuators

Max air pressure: 8 bar - 5,5 bar (AT series)
 Temperature: -20/+85°C
 -20/+80°C (AT series)

Torque range: 8/5059 Nm
 13,2/9173 Nm a 5,5 bar
 (AT series)

Double travel stop open/close: ±5°
 -5°/+15 close (serie AT)
 +5°/-15 open (serie AT)

valve seat: EPDM/NBR

fluid: H₂O

T: 20°C

operating air pressure: ≥5.5 bar

DN	"	M	PD				KI						KA		KX			
			P=6 B	G	P=10 B	G	P=6 B	G	P=10 B	G	P=16 B	G	mod.	G	mod.	G		
40	1½	130	≈	≈	≈	≈	VA 52	24	VA 52	24	VA 52	24	VA 52	24	VA 52	24	≈	≈
50	2	138	≈	≈	≈	≈	VA 52	24	VA 52	24	VA 52	24	VA 52	24	VA 63	24	VA 63	20
65	2½	144	≈	≈	≈	≈	VA 52	24	VA 52	24	VA 52	24	VA 63	20	VA 63	20	VA 75	16
80	3	158	VA 52	24	VA 52	24	VA 75	16	VA 75	16	VA 75	16	VA 75	16	VA 75	16	VA 75	16
100	4	173	VA 52	24	VA 63	20	VA 75	16	VA 75	16	VA 75	16	VA 75	16	VA 85	16	VA 85	16
125	5	186	VA 75	16	VA 75	16	VA 75	16	VA 75	16	VA 75	16	VA 85	16	VA 100	16	VA 100	16
150	6	202	VA 75	16	VA 75	16	VA 85	16	VA 100	16	VA 100	16	VA 100	16	VA 100	16	VA 100	16
200	8	240	VA 85	20	VA 100	20	VA 100	20	VA 115	20	VA 125	14	VA 125	14	VA 125	14	VA 140	14
250	10	270	VA 115	14	VA 115	14	VA 115	14	VA 125	14	VA 140	14	VA 140	14	VA 140	14	VA 160	14
300	12	300	VA 115	14	VA 140	14	VA 140	14	VA 140	14	VA 140	14	VA 160	14	VA 160	14	≈	≈
350	14	330	VA 140	0	VA 160	0	VA 160	0	VA 180	0	VA 200	0	VA 200	0	VA 230	100	≈	≈
400	16	355	VA 160	0	VA 160	0	VA 160	0	VA 180	0	VA 200	0	VA 200	0	VA 230	100	≈	≈
450	18	400	VA 180	0	VA 180	0	VA 180	0	VA 200	0	VA 200	0	VA 230	0	VA 270	100	≈	≈
500	20	422	VA 180	0	VA 180	0	VA 180	0	VA 200	0	VA 200	0	VA 270	0	VA 330	0	≈	≈
600	24	495	VA 270	100	≈	≈	VA 270	100	VA 330	100	≈	≈	AT 1001	100	≈	≈	≈	≈
700	28	550	VA 270	100	≈	≈	VA 330	150	VA 330	150	≈	≈	≈	≈	≈	≈	≈	≈
800	32	640	VA 330	150	≈	≈	VA 330	150	VA 330	150	≈	≈	≈	≈	≈	≈	≈	≈

valve seat: EPDM/NBR

fluid: Aria

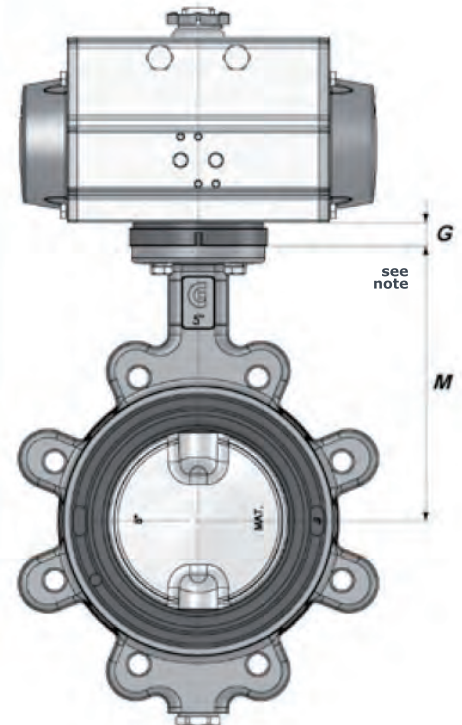
T: 20°C

operating air pressure: ≥5,5 bar

valve seat: FKM (n.a. for PD 10bar)

fluid: H₂O

DN	"	M	PD				KI							
			P=6 B	G	P=10 B	G	P=6 B	G	P=10 B	G	P=16 B	G		
40	1½	130	≈	≈	≈	≈	VA 52	16	VA 52	24	VA 63	20	VA 63	20
50	2	138	≈	≈	≈	≈	VA 52	24	VA 63	20	VA 63	20	VA 63	20
65	2½	144	≈	≈	≈	≈	VA 63	20	VA 63	20	VA 63	20	VA 63	20
80	3	158	VA 52	24	VA 52	24	VA 75	16	VA 75	16	VA 75	16	VA 75	16
100	4	173	VA 52	24	VA 75	20	VA 75	16	VA 85	16	VA 85	16	VA 85	16
125	5	186	VA 75	16	VA 75	16	VA 85	16	VA 85	16	VA 100	16	VA 100	16
150	6	202	VA 85	16	VA 85	16	VA 85	16	VA 100	16	VA 100	16	VA 100	16
200	8	240	VA 85	20	VA 100	29	VA 115	20	VA 125	14	VA 125	14	VA 125	14
250	10	270	VA 115	14	VA 115	14	VA 125	14	VA 140	14	VA 160	14	VA 160	14
300	12	300	VA 125	14	VA 140	14	VA 140	14	VA 160	14	VA 160	14	VA 160	14
350	14	330	VA 150	0	VA 180	0	VA 180	0	VA 200	0	VA 230	100	VA 230	100
400	16	355	VA 180	0	VA 180	0	VA 180	0	VA 200	0	VA 230	100	VA 230	100
450	18	400	VA 180	0	VA 180	0	VA 180	0	VA 200	0	VA 230	0	VA 230	0
500	20	422	VA 200	0	VA 200	0	VA 200	0	VA 230	0	VA 270	0	VA 270	0
600	24	495	VA 270	100	≈	≈	VA 330	100	VA 330	100	≈	≈	≈	≈
700	28	550	VA 330	100	≈	≈	VA 330	150	AT 1001	150	≈	≈	≈	≈
800	32	640	VA 330	150	≈	≈	VA 330	150	AT 1001	150	≈	≈	≈	≈



G dimension can change depending on valve/actuator coupling.

Pneumatic actuator SR / SPRING RETURN

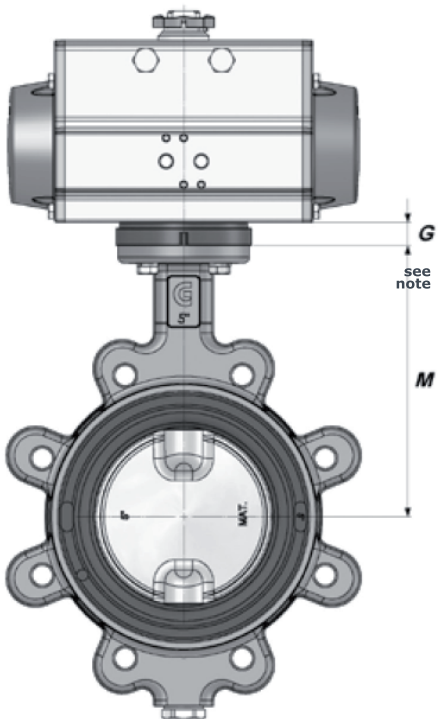
Rack & Pinion Actuators

Max air pressure: 8 bar - 5,5 bar (AT series) Torque range: 8/5059 Nm Double travel stop open/close: ±5°
 Temperature: -20/+85°C 13,2/9173 Nm a 5,5 bar -5°/+15 close (serie AT)
 -20/+80°C (AT series) (AT series) +5°/-15 open (serie AT)

valve seat: EPDM/NBR			fluid: H ₂ O				T: 20°C				operating air pressure: ≥5.5 bar					
DN	"	M	PD				KI						KA		KX	
			P=6 B	G	P=10 B	G	P=6 B	G	P=10 B	G	P=16 B	G	mod.	G	mod.	G
40	1½	130	≈	≈	≈	≈	VA 75 SR	16	VA 75 SR	16	VA 75 SR	24	VA 75 SR	16	≈	≈
50	2	138	≈	≈	≈	≈	VA 75 SR	16	VA 75 SR	16	VA 75 SR	24	VA 75 SR	16	VA 85 SR	16
65	2½	144	≈	≈	≈	≈	VA 75 SR	16	VA 75 SR	16	VA 75 SR	20	VA 85 SR	16	VA 100 SR	16
80	3	158	VA 63 SR	20	VA 75 SR	16	VA 85 SR	16	VA 100 SR	16	VA 100 SR	16	VA 100 SR	16	VA 115 SR	16
100	4	173	VA 75 SR	24	VA 85 SR	20	VA 100 SR	16	VA 115 SR	16	VA 115 SR	16	VA 115 SR	16	VA 115 SR	16
125	5	186	VA 100 SR	16	VA100 SR	16	VA 115 SR	16	VA 115 SR	16	VA 125 SR	16	VA 125 SR	16	VA 125 SR	16
150	6	202	VA 100 SR	16	VA 115 SR	16	VA 115 SR	16	VA 125 SR	16	VA 125 SR	16	VA 140 SR	16	VA 140 SR	16
200	8	240	VA 115 SR	14	VA 125 SR	14	VA 140 SR	14	VA 160 SR	14	VA 160 SR	14	VA 180 SR	14	VA 200 SR	14
250	10	270	VA 140 SR	14	VA 140 SR	14	VA 160 SR	14	VA 180 SR	50	VA 200 SR	50	VA 200 SR	50	VA 230 SR	50
300	12	300	VA 160 SR	14	VA 180 SR	50	VA 180 SR	50	VA 200 SR	50	VA 200 SR	50	VA 230 SR	50	≈	≈
350	14	330	VA 200 SR	0	VA 200 SR	0	VA 230 SR	100	VA 230 SR	100	VA 270 SR	100	VA 330 SR	100	≈	≈
400	16	355	VA 200 SR	0	VA 230 SR	100	VA 230 SR	100	VA 270 SR	100	VA 270 SR	100	VA 330 SR	100	≈	≈
450	18	400	VA 230 SR	0	VA 230 SR	0	VA 230 SR	0	VA 270 SR	100	VA 330 SR	100	AT 1001 SR	100	≈	≈
500	20	422	VA 230 SR	0	VA 230 SR	0	VA 230 SR	0	VA 270 SR	0	VA 330 SR	0	AT 1001 SR	0	≈	≈
600	24	495	VA 330 SR	100	≈	≈	AT 1001 SR	100	AT 1001 SR	100	≈	≈	≈	≈	≈	≈
700	28	550	AT 1001 SR	150	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈
800	32	640	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈

valve seat: EPDM/NBR fluid: Aria T: 20°C operating air pressure: ≥5,5 bar
 valve seat: FKM (n.a. for PD 10bar) fluid: H₂O

DN	"	M	PD				KI							
			P=6 B	G	P=10 B	G	P=6 B	G	P=10 B	G	P=16B	G		
40	1½	130	≈	≈	≈	≈	VA 75 SR	16	VA 75 SR	16	VA 75 SR	16		
50	2	138	≈	≈	≈	≈	VA 75 SR	16	VA 75 SR	16	VA 75 SR	16		
65	2½	144	≈	≈	≈	≈	VA 85 SR	16	VA 85 SR	16	VA 85 SR	16		
80	3	158	VA 75 SR	16	VA 75 SR	16	VA 100 SR	16	VA 115 SR	16	VA 115 SR	16		
100	4	173	VA 75 SR	16	VA 100 SR	16	VA 115 SR	16	VA 115 SR	16	VA 125 SR	16		
125	5	186	VA 100 SR	16	VA 115 SR	16	VA 115 SR	16	VA 115 SR	16	VA 125 SR	16		
150	6	202	VA 115 SR	16	VA 115 SR	16	VA 125 SR	16	VA 140 SR	16	VA 140 SR	14		
200	8	240	VA 125 SR	16	VA 140 SR	14	VA 160 SR	14	VA 180 SR	50	VA 180 SR	50		
250	10	270	VA 160 SR	14	VA 160 SR	14	VA 180 SR	50	VA 180 SR	50	VA 200 SR	50		
300	12	300	VA 180 SR	50	VA 200 SR	14	VA 200 SR	50	VA 200 SR	50	VA 230 SR	50		
350	14	330	VA 230 SR	100	VA 230 SR	100	VA 230 SR	100	VA 270 SR	100	VA 270 SR	100		
400	16	355	VA 230 SR	100	VA 230 SR	100	VA 230 SR	100	VA 270 SR	100	VA 330 SR	100		
450	18	400	VA 270 SR	100	VA 230 SR	0	VA 270 SR	100	VA 270 SR	100	VA 330 SR	100		
500	20	422	VA 270 SR	0	VA 230 SR	0	VA 270 SR	0	VA 330 SR	0	AT 1001 SR	0		
600	24	495	AT 1001 SR	150	≈	≈	≈	≈	≈	≈	≈	≈		
700	28	550	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈		
800	32	640	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈		

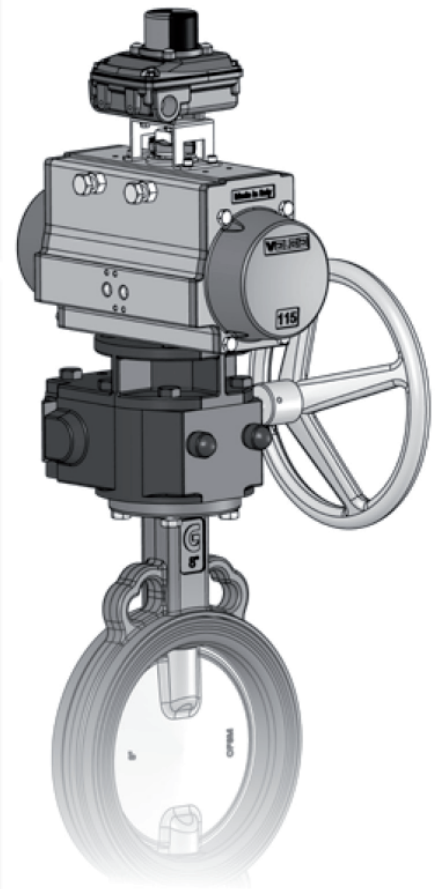


G dimension can change depending on valve/actuator coupling.

Declutchable manual gearboxes

GD Series			
body:	aluminium	shaft:	stainless steel
worm gears:	steel	handwheel:	steel
sector gear:	ductile iron	protection:	IP65
		T:	-20 / +120 °C
Ø valve	DA actuator double action	SR actuator spring return	emergency gearbox type
DN040-150	VA 63-100	VA 75-115	GD070
		VA 125	GD102
DN200	VA 85-100		GD070
DN200-300	VA 115-160	VA 115-160	GD102
		VA 180-200	GD140
DN350-500	VA 140-200	VA 200	GD140

ILGD Series			
body:	ductile iron GGG40	shaft:	steel
worm gears:	steel	handwheel:	steel
sector gear:	ductile iron	protection:	IP65 (IP67 on req.)
		T:	-20 / +120 °C
Ø valve	DA actuator double action	SR actuator spring return	emergency gearbox type
DN 40÷150	VA 63-100	VA 63-100	ILGD200
	VA 115-125	VA 115-160	ILGD600
		VA 180-200	ILGD900
DN 200÷300	VA 85-160	VA 115-160	ILGD600
	VA 180-200	VA 180-200	ILGD900
	VA 230	VA 230	ILGD1500
DN 350÷400	VA 140-200	VA 200	ILGD900
	VA 230	VA 230	ILGD1500
	VA 270	270	ILGD2400
DN 450	VA 180-230	VA 230	ILGD1500
	VA 270	VA 270-330	ILGD2400
DN 500	VA 180-230	VA 230	ILGD1500
	VA 270	VA 270	ILGD2400
	VA 330	VA 330	ILGD5000
DN 600	VA 270		ILGD2400
	VA 330	VA 330	ILGD5000
DN 700	VA 270-330-AT1001		ILGD5000
		AT1001	ILGD16000
DN 800	VA 330-AT1001		ILGD16000

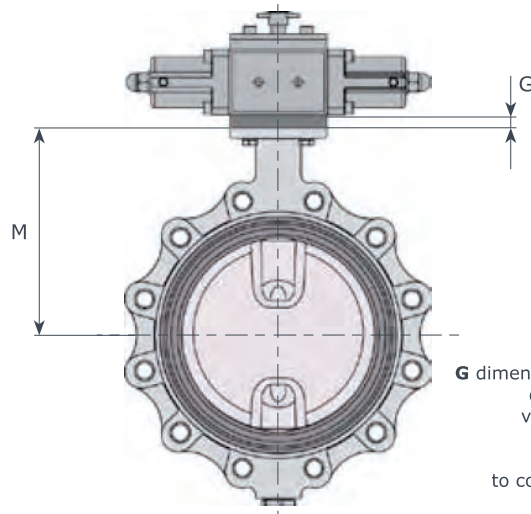


Hydraulic actuators ARES

- Technical features:
 - » ductile iron cast body
 - » steel rack and pinion
 - » NBR seats
- fluid material:
 - » hydraulic oil type : HPL DIN51524-2 / ISO 6743-4.
 - Viscosity 15/200 cst
- working pressure: 10 - 120 bar
- working temperature: -20°C / +80°C

Compact design, 90° rotation ±5°,
Travel adjustment in both direction
of rotation, Flange ISO 5211,
Double or single acting with spring return

DN	40	50	65	80	100	125	150	200	250
M	130	138	148	158	173	186	202	240	270
DN	300	350	400	450	500	600	700	800	
M	300	330	355	400	422	495	550	640	

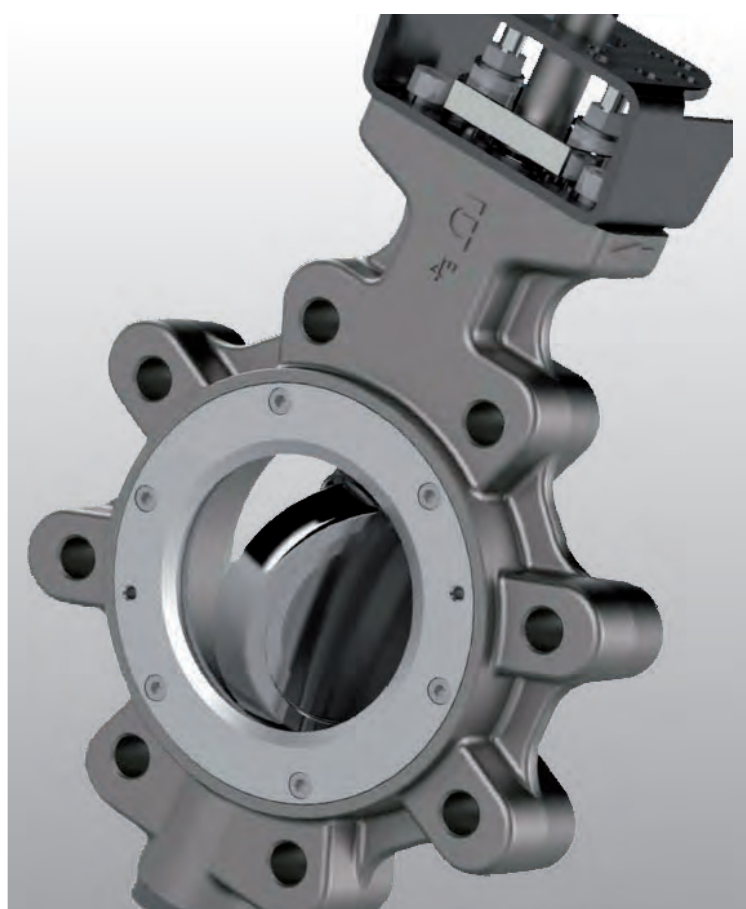


valve seat: NBR / EPDM - Fluid H ₂ O - T = 20°C - oil pressure: 60 Bar																	
DN	"	DA type - Double Acting								SR type - Spring close							
		PD series	G	KI series	G	KA series	G	KX series	G	PD series	G	KA series	G	KA series	G	KX series	G
40	1 ^{1/2}	≈	≈	H 28	0	H 28	0	≈	≈	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0	≈	≈
50	2	≈	≈	H 28	0	H 28	0	H 28	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0
65	2 ^{1/2}	≈	≈	H 28	0	H 28	0	H 28	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0
80	3	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0
100	4	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRA	0	H 40 SRA	0	H 40 SRA	0	H 50 SRA	14
125	5	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRA	0	H 50 SRA	14	H 50 SRA	14	H 50 SRA	14
150	6	H 28	0	H 28	0	H 40	0	H 40	0	H 40 SRA	0	H 50 SRA	14	H 50 SRA	14	H 50 SRA	14
200	8	H 50	0	H 50	0	H 50	0	H 63	50	H 50 SRA	0	H 63 SRA	50	H 63 SRA	50	H 80 SRA	100
250	10	H 50	0	H 50	0	H 50	0	H 63	50	H 50 SRA	0	H 80 SRA	100	H 80 SRA	100	H 80 SRA	100
300	12	H 50	0	H 63	50	H 63	50	≈	≈	H 63 SRA	50	H 80 SRA	100	H 80 SRA	100	≈	≈
350	14	H 63	100	H 80	100	H 80	100	≈	≈	H 80 SRA	100	≈	≈	≈	≈	≈	≈
400	16	H 80	100	H 80	100	≈	≈	≈	≈	H 80 SRA	100	≈	≈	≈	≈	≈	≈
450	18	H 80	100	H 80	100	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈
500	20	H 80	100	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈
600	24	a ric.	a ric.	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈

valve seat: NBR / EPDM - Fluid H ₂ O - T = 20°C - oil pressure: 120 Bar																	
DN	"	DA type - Double Acting								SR type - Spring close							
		PD series	G	KI series	G	KA series	G	KX series	G	PD series	G	KA series	G	KA series	G	KX series	G
40	1 ^{1/2}	≈	≈	H 28	0	H 28	0	≈		H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
50	2	≈	≈	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
65	2 ^{1/2}	≈	≈	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
80	3	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
100	4	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
125	5	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
150	6	H 28	0	H 28	0	H 28	0	H 28	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0	H 40 SRB	0
200	8	H 50	0	H 50	0	H 50	0	H 50	0	H 50 SRB	0	H 50 SRB	0	H 50 SRB	0	H 63 SRB	50
250	10	H 50	0	H 50	0	H 50	0	H 50	0	H 50 SRB	0	H 63 SRB	50	H 63 SRB	50	H 63 SRB	50
300	12	H 50	0	H 50	0	H 50	0	≈	≈	H 50 SRB	0	H 63 SRB	50	H 63 SRB	50	≈	≈
350	14	H 63	100	H 63	100	H 63	100	≈	≈	H 63 SRB	100	H 80 SRB	100	≈	≈	≈	≈
400	16	H 63	100	H 63	100	H 63	100	≈	≈	H 63 SRB	100	H 80 SRB	100	≈	≈	≈	≈
450	18	H 80	100	H 80	100	H 80	100	≈	≈	H 80 SRB	100	≈	≈	≈	≈	≈	≈
500	20	H 80	100	H 80	100	≈	≈	≈	≈	H 80 SRB	100	≈	≈	≈	≈	≈	≈
600	24	a ric.	a ric.	H 80	100	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈
700	28	H 80	100	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈	≈

Butterfly Valves

HD Series



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BVHD - Wafer DN 40 - 600 • 1"½ - 24"

BLHD - Lug DN 40 - 600 • 1"½ - 24"

Max working pressure:

BVHD/BLHD DN 40+600: **25 Bar**
Flange: **PN 10-16-25 • A150**

Design:

EN 593-EN 736
EN 12516-EN 1092-EN12266
ISO 5211-DIN 3337-API 609-ASME B16.34
PED 2014/68/EU - Mod. H

Face to face:

DIN EN 558 Series 20-ISO 5752 Series 20
BS-5155 Series 4-MSS-SP67
NFE 29305-1
API 609 cat.B
API 609 cat.A (DN 350 excluded)

Testing:

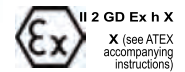
EN 12266-1 Rate A (supersedes DIN 3230)
ISO 5208 Rate A ~ API 598
FIRE TEST API 607 VI Ed. September
Class V - Met/Met

Tag:

EN 19 ~ MSS SP-25



All valves are supplied with a metallic label in compliance with PED directive.



BODY

material	references	standard coating	DN
Carbon steel (wafer, lug)	EN 1.0619 (ASTM A216-WCB)	High-temp coating - grey color	40-600
Stainless steel (wafer, lug)	EN 1.4408 (A351 CF8M)	-	40-600
Austenitic Stainless steel	EN 1.4547 (A351 CK3MCuN)	-	40-600
SUPERDUPLEX	EN 1.4469 (A890 Gr. 5A)	-	40-600

DISC

material	references	DN
Stainless steel	EN 1.4408 (A351 CF8M)	40-600
Austenitic Stainless steel	EN 1.4547 (A351 CK3MCuN)	40-600
SUPERDUPLEX	EN 1.4469 (A890 Gr. 5A)	40-600

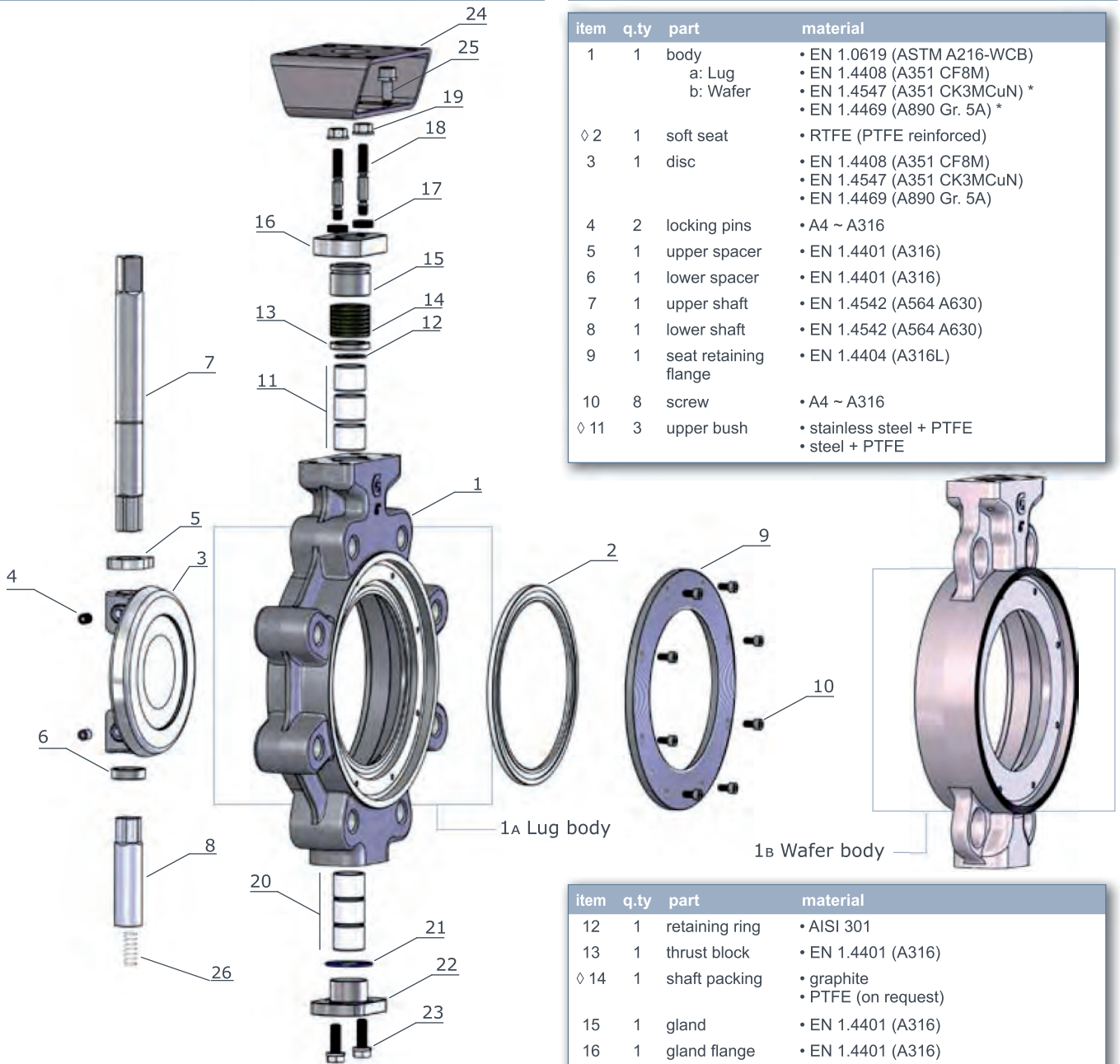
SEDE

ref.	material	working temp.
RT	RTFE (PTFE reinforced)	Min: -55°C - Max: +230°C
IN	Inconel 625	Min: -55°C - Max: +450°C
FS	RTFE + Inconel 625	Min: -55°C - Max: +230°C / +450°C

On request can be supplied other materials as: LCB, Hastelloy, Uranus, Alloy, Super Duplex, Special steels, Special bronzes.
Special coating on request.

BVHD - Wafer • RTFE seat
 DN 40 - 600 • 1”½ - 24”
 PN 10 - 16 - 25 • ANSI 150

BLHD - Lug • RTFE seat
 DN 40 - 600 • 1”½ - 24”
 PN 10 - 16 - 25 • ANSI 150



item	q.ty	part	material
1	1	body a: Lug b: Wafer	• EN 1.0619 (ASTM A216-WCB) • EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) * • EN 1.4469 (A890 Gr. 5A) *
◇ 2	1	soft seat	• RTFE (PTFE reinforced)
3	1	disc	• EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) • EN 1.4469 (A890 Gr. 5A)
4	2	locking pins	• A4 ~ A316
5	1	upper spacer	• EN 1.4401 (A316)
6	1	lower spacer	• EN 1.4401 (A316)
7	1	upper shaft	• EN 1.4542 (A564 A630)
8	1	lower shaft	• EN 1.4542 (A564 A630)
9	1	seat retaining flange	• EN 1.4404 (A316L)
10	8	screw	• A4 ~ A316
◇ 11	3	upper bush	• stainless steel + PTFE • steel + PTFE

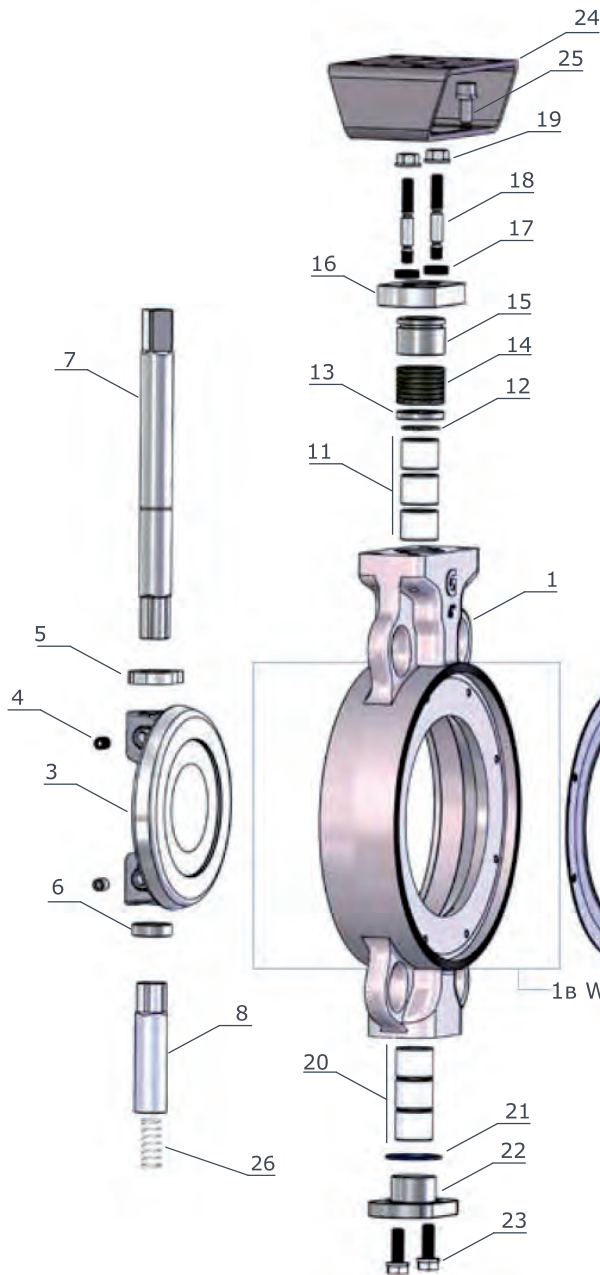
item	q.ty	part	material
12	1	retaining ring	• AISI 301
13	1	thrust block	• EN 1.4401 (A316)
◇ 14	1	shaft packing	• graphite • PTFE (on request)
15	1	gland	• EN 1.4401 (A316)
16	1	gland flange	• EN 1.4401 (A316)
17	2	springs set	• AISI 301
18	2	rods	• A4 ~ A316
19	2	nut	• A2 ~ A304
◇ 20	3	lower bush	• stainless steel + PTFE • steel + PTFE
◇ 21	1	O-ring	• PTFE
22	1	lower plug	• EN 1.4401 (A316)
23	2	screw	• A4 ~ A316
24	1	upper flange	• steel epoxy coated
25	4	screw	• A4 ~ A316
26	1	spring	• 1.4401 ~ A316 (antistatic device)

◇ parts included in spare kit

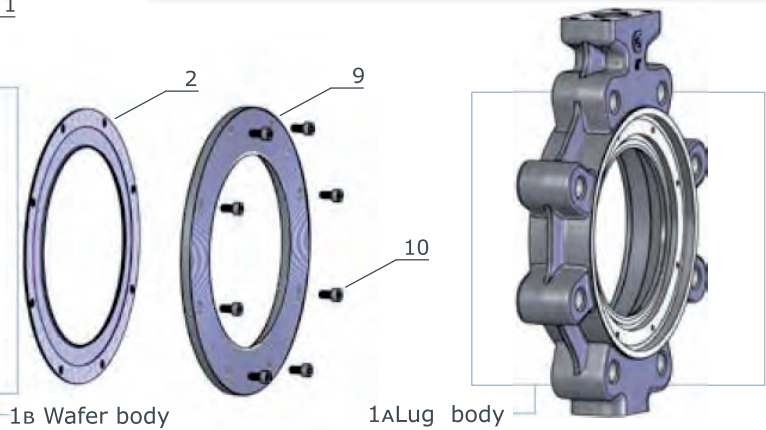
* with special material body the components in contact with the fluid will also be in a suitable material

BVHD - Wafer • Inconel seat
 DN 40 - 600 • 1”½ - 24”
 PN 10 - 16 - 25 • ANSI 150

BLHD - Lug • Inconel seat
 DN 40 - 600 • 1”½ - 24”
 PN 10 - 16 - 25 • ANSI 150



item	q.ty	part	material
1	1	body A: Lug B: Wafer	<ul style="list-style-type: none"> • EN 1.0619 (ASTM A216-WCB) • EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) * • EN 1.4469 (A890 Gr. 5A) *
◇ 2	1	metallic seat	• Inconel 625 + graphite
3	1	disc	<ul style="list-style-type: none"> • EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) • EN 1.4469 (A890 Gr. 5A)
4	2	locking pins	• A4 ~ A316
5	1	upper spacer	• EN 1.4401 (A316)
6	1	lower spacer	• EN 1.4401 (A316)
7	1	upper shaft	• EN 1.4542 (A564 A630)
8	1	lower shaft	• EN 1.4542 (A564 A630)
9	1	seat retaining flange	• EN 1.4404 (A316L)
10	8	screw	• A4 ~ A316
◇ 11	3	upper bush	<ul style="list-style-type: none"> • stainless steel + PTFE • steel + PTFE



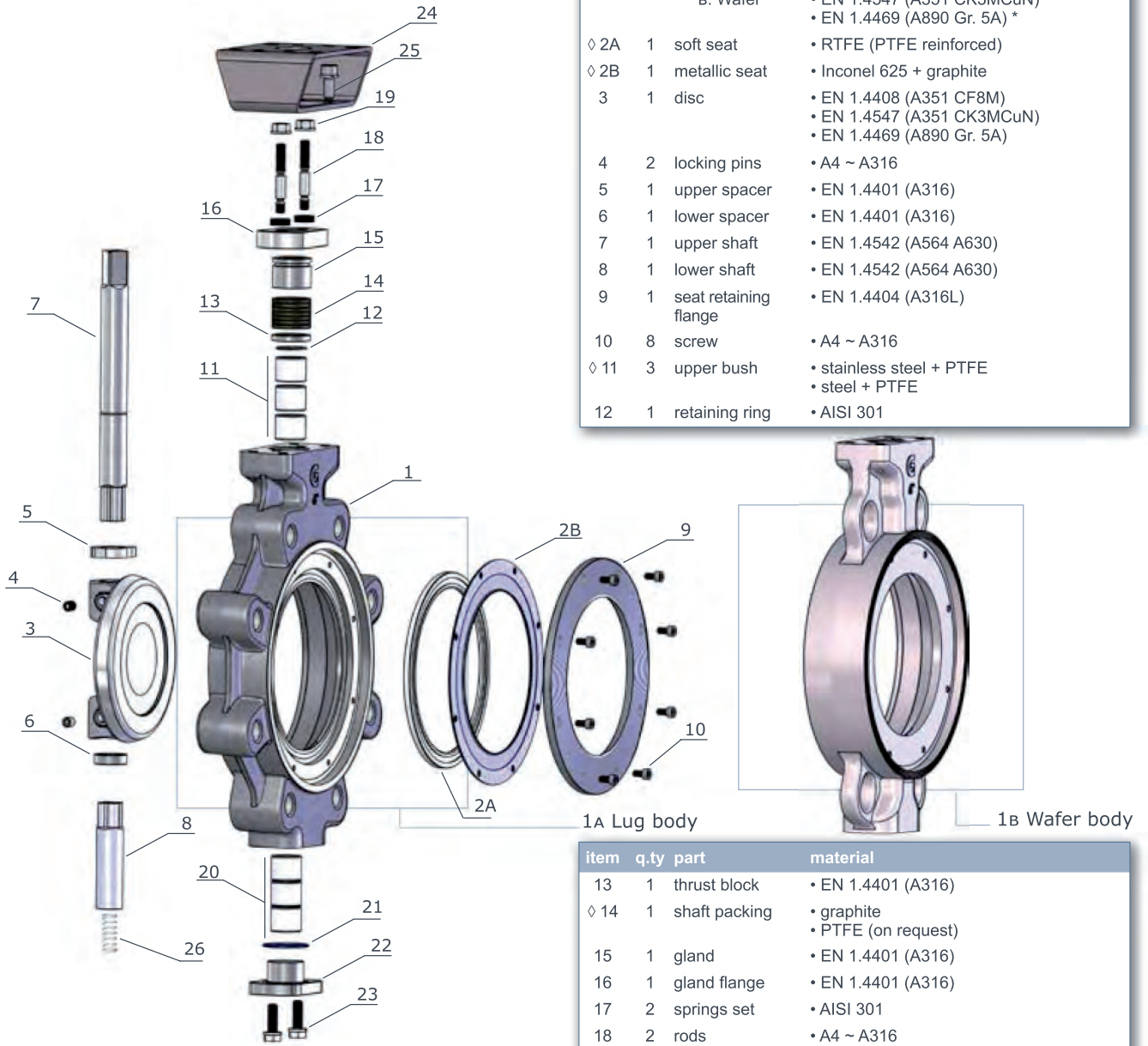
item	q.ty	part	material
12	1	retaining ring	• AISI 301
13	1	thrust block	• EN 1.4401 (A316)
◇ 14	1	shaft packing	<ul style="list-style-type: none"> • graphite • PTFE (on request)
15	1	gland	• EN 1.4401 (A316)
16	1	gland flange	• EN 1.4401 (A316)
17	2	springs set	• AISI 301
18	2	rods	• A4 ~ A316
19	2	nut	• A2 ~ A304
◇ 20	3	lower bush	<ul style="list-style-type: none"> • stainless steel + PTFE • steel + PTFE
◇ 21	1	packing	• graphite
22	1	lower plug	• EN 1.4401 (A316)
23	2	screw	• A4 ~ A316
24	1	upper flange	• steel epoxy coated
25	4	screw	• A4 ~ A316
26	1	spring	<ul style="list-style-type: none"> • 1.4401 ~ A316 (antistatic device)

◇ parts included in spare kit

* with special material body the components in contact with the fluid will also be in a suitable material

BVHD - Wafer • "FIRE SAFE" design
 DN 40 - 600 • 1"½ - 24"
 PN 10-16-25 • ANSI 150

BLHD - Lug • "FIRE SAFE" design
 DN 40 - 600 • 1"½ - 24"
 PN 10-16-25 • ANSI 150



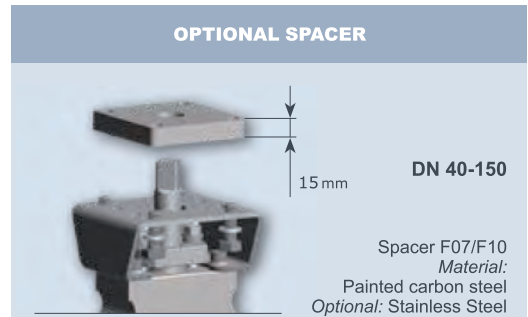
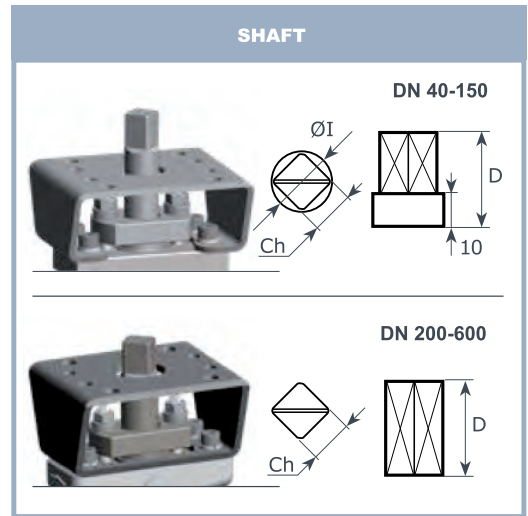
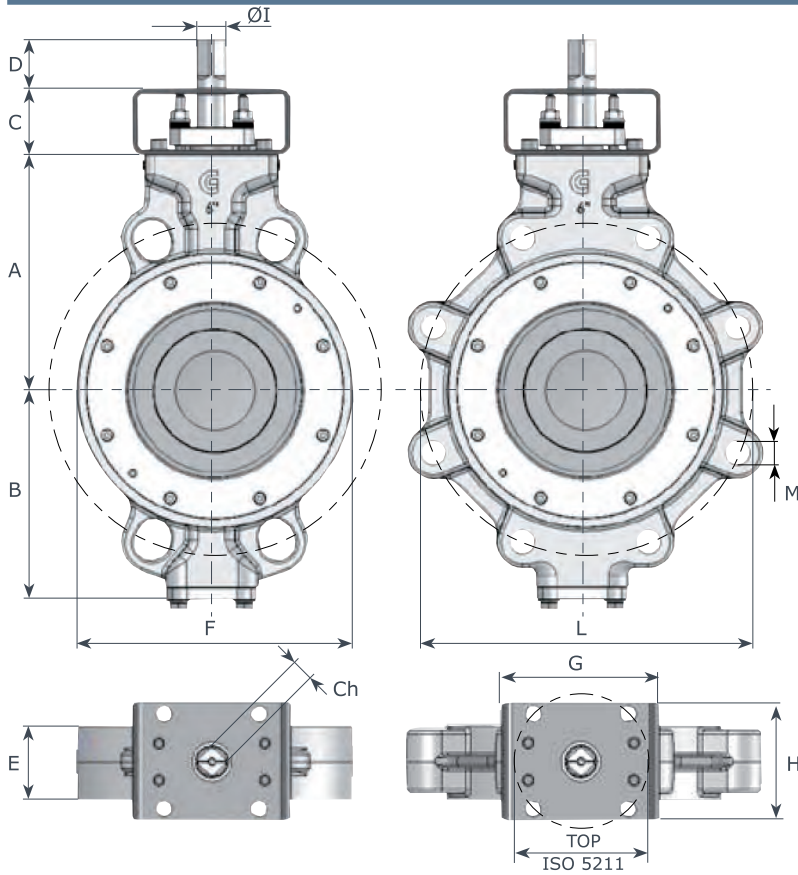
item	q.ty	part	material
1	1	body A: Lug B: Wafer	• EN 1.0619 (ASTM A216-WCB) • EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) * • EN 1.4469 (A890 Gr. 5A) *
◇ 2A	1	soft seat	• RTFE (PTFE reinforced)
◇ 2B	1	metallic seat	• Inconel 625 + graphite
3	1	disc	• EN 1.4408 (A351 CF8M) • EN 1.4547 (A351 CK3MCuN) • EN 1.4469 (A890 Gr. 5A)
4	2	locking pins	• A4 ~ A316
5	1	upper spacer	• EN 1.4401 (A316)
6	1	lower spacer	• EN 1.4401 (A316)
7	1	upper shaft	• EN 1.4542 (A564 A630)
8	1	lower shaft	• EN 1.4542 (A564 A630)
9	1	seat retaining flange	• EN 1.4404 (A316L)
10	8	screw	• A4 ~ A316
◇ 11	3	upper bush	• stainless steel + PTFE • steel + PTFE
12	1	retaining ring	• AISI 301

item	q.ty	part	material
13	1	thrust block	• EN 1.4401 (A316)
◇ 14	1	shaft packing	• graphite • PTFE (on request)
15	1	gland	• EN 1.4401 (A316)
16	1	gland flange	• EN 1.4401 (A316)
17	2	springs set	• AISI 301
18	2	rods	• A4 ~ A316
19	2	nut	• A2 ~ A304
◇ 20	3	lower bush	• stainless steel + PTFE • steel + PTFE
◇ 21	1	packing	• graphite
22	1	lower plug	• EN 1.4401 (A316)
23	2	screw	• A4 ~ A316
24	1	upper flange	• steel epoxy coated
25	4	screw	• A4 ~ A316
26	1	spring	• 1.4401 ~ A316 (antistatic device)

◇ parts included in spare kit

* with special material body the components in contact with the fluid will also be in a suitable material

BVHD/BLHD dimensions



DN	"	A	B	C	D	E	F	G	H	Ø I	Ch	TOP
40	1 1/2	113	76	50	34	39	85	100	70	14	11	F05/F07
50	2	117	81	50	34	43	95	100	70	14	11	F05/F07
65	2 1/2	120	93	50	34	46	105	100	70	14	11	F05/F07
80	3	129	101	50	34	46	127	100	70	14	11	F05/F07
100	4	160	128	50	34	52	150	100	70	18	14	F05/F07
125	5	170	159	50	38	56	174	120	90	22	17	F07/F10
150	6	179	168	50	38	56	210	120	90	22	17	F07/F10
200	8	218	207	60	23	61	270	120	90	28	22	F07/F10
250	10	257	232	80	23	69	325	160	130	30	22	F12/F14
300	12	300	270	80	28	78	378	160	130	35	27	F12/F14
350	14	328	304	100	28	92	432	200	140	40	27	F14
400	16	387	340	100	37	102	485	200	140	45	36	F16
500	20	451	427	100	47	127	580	200	165	60	46	F16
600	24	515	460	150	56	154	694	300	300	70	55	F25

DN	PN 10			PN 16			PN 25			ANSI 150			Kg.	
	M	n.	L	M	n.	L	M	n.	L	M ⁽¹⁾	n.	L	wafer	lug
40	M16	4	110	M16	4	110	M16	4	110	M14	4	98,4	4,0	4,0
50	M16	4	125	M16	4	125	M16	4	125	M16	4	120,7	3,5	5,7
65	M16	8	145	M16	8	145	M16	8	145	M16	4	139,7	4,0	7
80	M16	8	160	M16	8	160	M16	8	160	M16	4	152,4	4,8	7,6
100	M16	8	180	M16	8	180	M20	8	190	M16	8	190,5	8	9,7
125	M16	8	210	M16	8	210	M24	8	220	M20	8	215,9	10,1	14,8
150	M20	8	240	M20	8	240	M24	8	250	M20	8	241,3	13,5	17,6
200	M20	8	295	M20	12	295	M24	12	310	M20	8	298,5	22	32
250	M20	12	350	M24	12	355	M27	12	370	M22	12	362,0	35	46
300	M20	12	400	M24	12	410	M27	16	430	M22	12	431,8	50	62
350	M20	16	460	M24	16	470	M30	16	490	M24	12	476,3	83	110
400	M24	16	515	M27	16	525	M33	16	550	M27	16	539,8	107	140
500	M24	20	620	M30	20	650	M33	20	660	M27	20	635,0	200	250
600	M27	30	725	M33	20	770	M36	20	770	M33	20	749,3	280	350

NOTE ⁽¹⁾: in case of ANSI150 flanges, threading can be ANSI B1.1 UNC2B

Compatible flanges JIS B2220 :2004

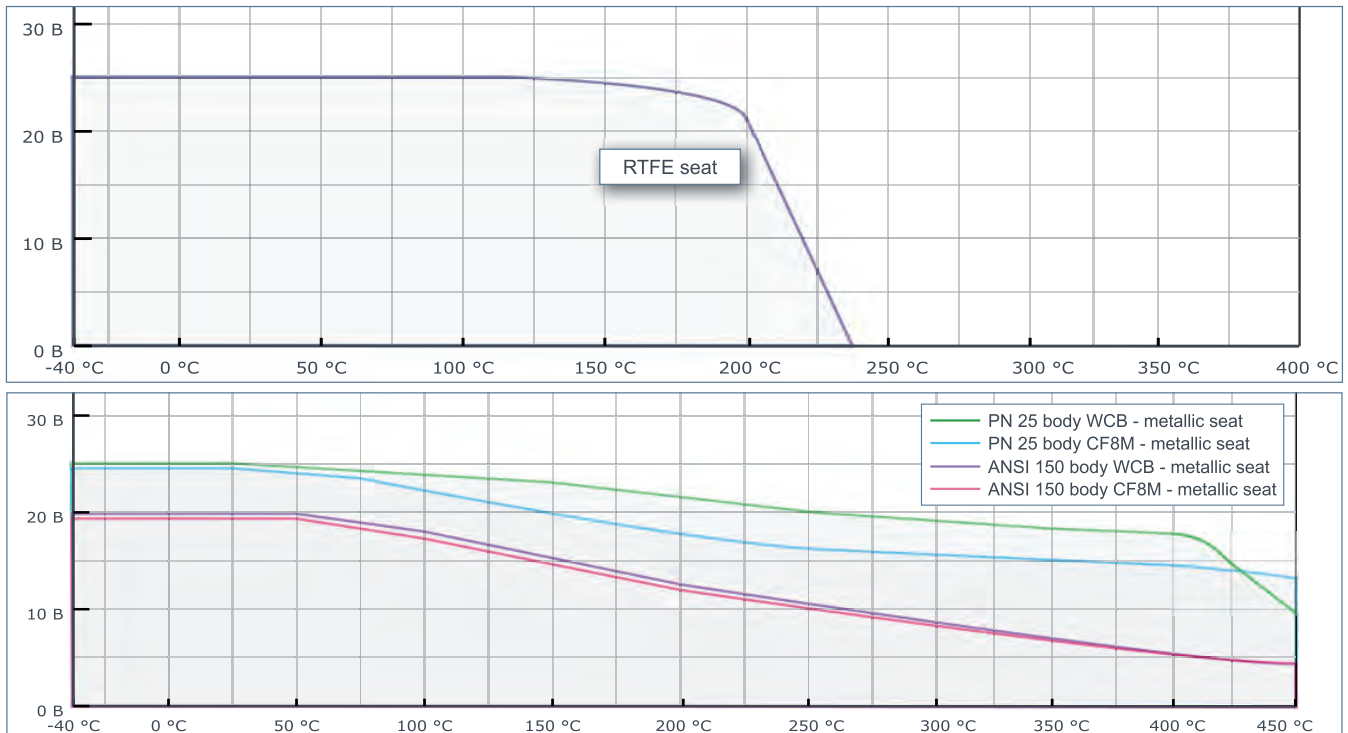
DN	BVHD - wafer (Pmax = 25bar)					BLHD - lug (Pmax = 25bar)				
	JIS 5K	JIS 10K	JIS 16K	JIS 20K	JIS 30K	JIS 5K	JIS 10K	JIS 16K	JIS 20K	JIS 30K
40	●	●	●	●	●	●	●	●	●	●
50	X	✓	●	●	●	X	●	●	●	X
65	●	✓	●	●	X	●	●	●	●	X
80	●	●	●	●	X	●	●	●	●	●
100	X	●	✓	✓	✓	X	●	●	●	●
125	●	●	✓	✓	✓	●	●	●	●	●
150	●	✓	X	X	X	●	✓	X	X	X
200	X	●	✓	✓	●	X	●	●	●	●
250	●	✓	X	X	X	●	●	X	X	X
300	X	X	X	X	X	X	X	X	X	X
350	X	X	●	●	●	X	X	●	●	●
400	X	●	●	●	X	X	●	●	●	X
500	please contact Technical Office									
600	please contact Technical Office									

✓ standard ● on request X not possible

Torque values - Nm | safety factor excluded

seat: RTFE - fluid: H ₂ O - 20°C					seat: INCONEL - fluid: H ₂ O - 20°C				
working pressure: BAR					working pressure: BAR				
DN	10	16	20	25	DN	10	16	20	25
40	21	27	36	42	40	32	40	52	61
50	24	30	40	47	50	36	44	58	68
65	34	38	48	60	65	51	56	70	86
80	38	45	54	68	80	57	67	78	97
100	45	56	62	81	100	68	83	89	114
125	85	90	105	120	125	124	133	154	168
150	130	145	170	210	150	186	212	248	302
200	155	251	326	423	200	261	350	392	570
250	330	450	520	580	250	480	668	765	848
300	580	640	740	850	300	848	941	1085	1244
350	780	1030	1190	1550	350	950	1250	1500	1850
400	850	1400	1750	2275	400	1750	2180	2470	2830
500	1925	2560	2980	3875	500	2740	3445	3910	4500
600	3550	4700	5600	6600	600	5000	6300	7450	8000

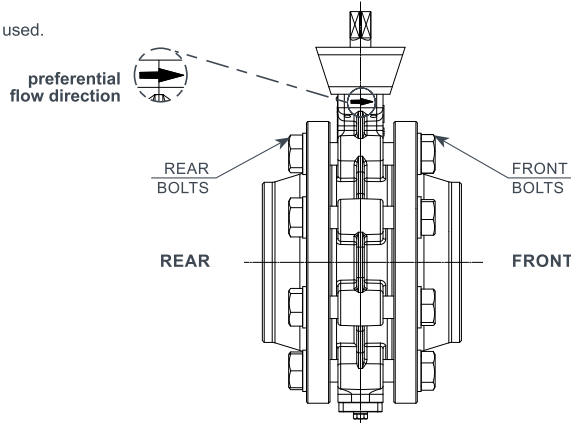
Pressure / Temperature



Bolts and rods dimensions

DN	Wafer valves											
	PN10			PN16			PN25			A150		
	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°
40	M16x100	M16x120	4	M16x100	M16x120	4	M16x100	M16x120	4	M14x100	M14x120	4
50	M16x110	M16x130	4	M16x110	M16x130	4	M16x120	M16x130	4	M16x120	M16x130	4
65	M16x120	M16x130	8	M16x120	M16x130	8	M16x120	M16x140	8	M16x130	M16x140	4
80	M16x120	M16x130	8	M16x120	M16x130	8	M16x130	M16x140	8	M16x130	M16x140	4
100	M16x130	M16x140	8	M16x130	M16x140	8	M20x140	M20x150	8	M16x130	M16x150	8
125	M16x130	M16x150	8	M16x140	M16x150	8	M24x150	M24x170	8	M20x140	M20x160	8
150	M20x140	M20x150	8	M20x140	M20x150	8	M24x150	M24x170	8	M20x140	M20x160	8
200	M20x150	M20x160	8	M20x150	M20x160	12	M24x160	M24x180	12	M20x160	M20x170	8
250	M20x160	M20x180	12	M24x160	M24x180	12	M27x180	M27x200	12	M22x170	M22x200	12
300	M20x170	M20x180	12	M24x180	M24x200	12	M27x200	M27x220	16	M22x180	M22x200	12
350	M24x180	M24x200	12	M24x200	M24x220	16	M30x220	M30x240	16	M24x220	M24x220	12
400	M24x200	M24x220	16	M27x220	M27x240	16	M33x240	M33x260	16	M27x220	M27x240	16
500	M24x220	M24x240	16	M30x240	M30x280	16	M33x260	M33x300	16	M27x260	M27x280	16
	* REAR: Bolts M24x60		4	* REAR: Bolts M30x70		4	* REAR: Bolts M33x80		4	* REAR: Bolts M27x80		4
	* FRONT: Bolts M24x70		4	* FRONT: Bolts M30x80		4	* FRONT: Bolts M33x90		4	* FRONT: Bolts M27x90		4
600	M27x300	M27x330	16	M33x310	M33x340	16	M36x320	M36x350	16	M33x320	M33x350	16
	* REAR: Bolts M27x70		4	* REAR: Bolts M33x80		4	* REAR: Bolts M36x90		4	* REAR: Bolts M33x90		4
	* FRONT: Bolts M27x80		4	* FRONT: Bolts M33x90		4	* FRONT: Bolts M36x100		4	* FRONT: Bolts M33x100		4

* Valves DN500 and DN600 (both LUG and WAFER execution) have 4 threaded blind holes each side, therefore screws marked with * are to be used.



NOTE 1

Screw and rod dimensions have been calculated with:

- spiralwound gasket ASME B16.20a (ex API 601)
- washer EN ISO 7089 (ex UNI 6592) - on both flanges
- welding neck flanges PN 10/16/25 (EN1092-1 Type 11)
- welding neck flanges ANSI150 (ANSI B16.5)

NOTE 2

Number of nuts should be double when WAFER valves are assembled with threaded rods.

DN	Lug valves															
	PN10				PN16				PN25				A150			
	Rear		Front		Rear		Front		Rear		Front		Rear		Front	
	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°	Bolts	N°
40	M16x35	4	M16x40	4	M16x35	4	M16x40	4	M16x40	4	M16x40	4	M14x35	4	M14x40	4
50	M16x45	4	M16x45	4	M16x45	4	M16x45	4	M16x45	4	M16x45	4	M16x45	4	M16x45	4
65	M16x40	8	M16x50	8	M16x40	8	M16x50	8	M16x45	8	M16x55	8	M16x45	4	M16x55	4
80	M16x45	8	M16x55	8	M16x45	8	M16x55	8	M16x50	8	M16x55	8	M16x45	4	M16x55	4
100	M16x50	8	M16x50	8	M16x50	8	M16x50	8	M20x55	8	M20x55	8	M16x55	8	M16x55	8
125	M16x55	8	M16x55	8	M16x55	8	M16x55	8	M24x55	8	M24x60	8	M20x55	8	M20x55	8
150	M20x55	8	M20x65	8	M20x55	8	M20x65	8	M24x60	8	M24x60	8	M20x55	8	M20x60	8
200	M20x55	8	M20x65	8	M20x55	8	M20x65	8	M24x60	12	M24x70	12	M20x60	8	M20x65	8
250	M20x60	12	M20x70	12	M24x60	12	M24x70	12	M27x65	12	M27x75	12	M22x65	12	M22x70	12
300	M20x65	12	M20x70	12	M24x70	12	M24x75	12	M27x75	16	M27x80	16	M22x70	12	M22x80	12
350	M20x70	12	M20x80	12	M24x70	16	M24x90	16	M30x80	16	M30x100	16	M24x80	12	M24x90	12
400	M24x75	16	M24x90	16	M27x80	16	M27x90	16	M33x90	16	M33x100	16	M27x80	16	M27x100	16
500	M24x90	16	M24x90	16	M30x100	16	M30x100	16	M33x110	16	M33x110	16	M27x110	16	M27x110	16
	* bolts M24x60	4	* bolts M24x70	4	* bolts M30x70	4	* bolts M30x80	4	* bolts M33x80	4	* bolts M33x90	4	* bolts M27x80	4	* bolts M27x90	4
600	M27x100	16	M27x110	16	M33x110	16	M33x120	16	M36x120	16	M36x130	16	M33x120	16	M33x130	16
	* bolts M27x70	4	* bolts M27x80	4	* bolts M33x80	4	* bolts M33x90	4	* bolts M36x90	4	* bolts M36x100	4	* bolts M33x90	4	* bolts M33x100	4

* Valves DN500 and DN600 (both LUG and WAFER execution) have 4 threaded blind holes each side, therefore screws marked with * are to be used.

Installation

Valve/pipe assembly

1. Leave a space between flanges to allow easy installation of the valve (see fig. 1). Insert two gaskets between flange and valve (not supplied).
2. HD butterfly valves are bi-directional and can be installed with the flow in both directions. There is however a preferential direction (see fig.2), which minimize turbulences when fluid is under pressure.
3. HD Butterfly valves can be installed with the shaft axis in any direction. It is however preferable to keep it vertical .
4. Center valve body between flanges, then tighten the bolts.
ATTENTION: Non correct centering of the valve may damage valve disc.
5. After start-up make sure that there are no leakings and that the valve is properly operating

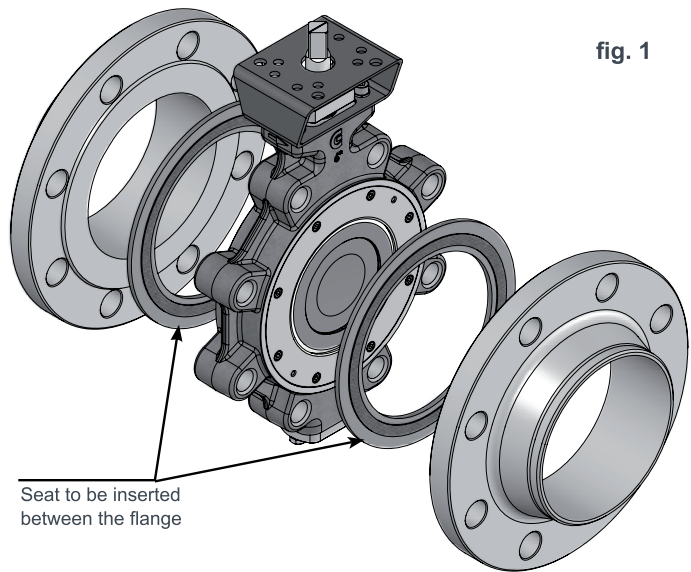


fig. 1

Remarks:

- Always remove the valve before any flange welding to avoid possible damages due to heat
- On top of upper shaft there is a notch parallel to disc indicating its position. (for valves DN>200 refer to the key).
- When actuator or gear box are assembled on the valve, please consider that there is a mechanical stop allowing only anti-clockwise rotation.
- Valve is closed when disc is against the stop.

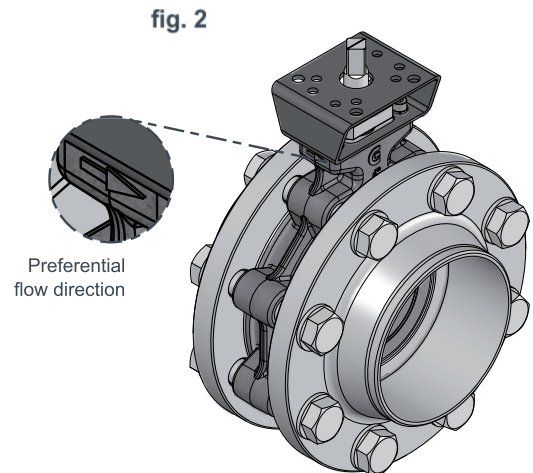
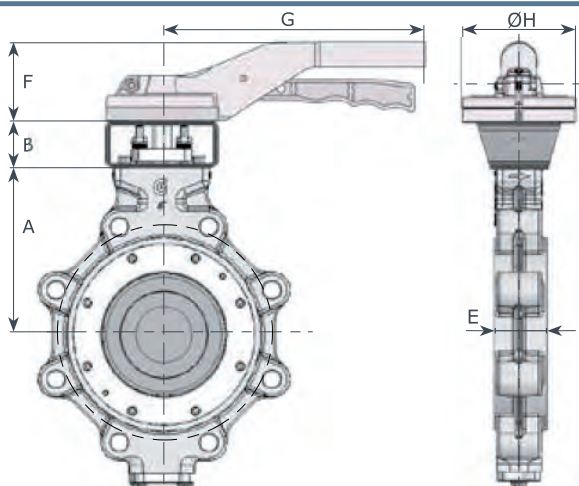


fig. 2

Valve/pipe disassembly

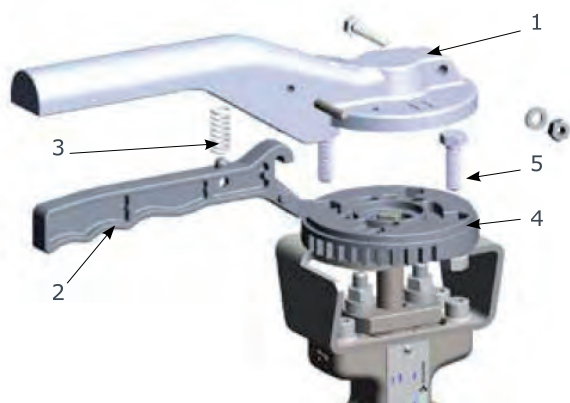
1. Make sure that there is no fluid under pressure upstream or downstream the valve. Disconnect any electronic as well as pneumatic device.
2. Make sure that valve disc is closed.
3. Loose bolts and widen piping flanges. While keeping the valve, remove bolts and disassemble the valve.

Handlever



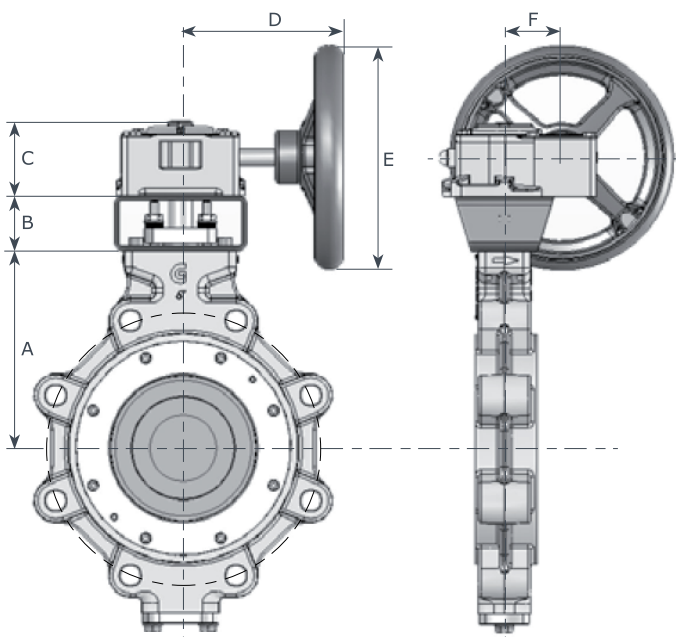
DN	"	A	B	E	F	G	ØH	aluminium Weight (Kg) wafer	lug	St. steel Weight (Kg) wafer	lug
40	1 1/2	113	50	39	67	220	93	4.6	4.6	5.7	5.7
50	2	117	50	43	67	220	93	4.1	6.3	5.2	7.4
65	2 1/2	120	50	46	67	220	93	4.6	7.6	5.7	8.7
80	3	129	50	46	67	220	93	5.4	8.2	6.5	9.3
100	4	160	50	52	67	275	93	8.7	10.4	10.0	11.7
125	5	170	50	56	76	340	125	11.1	15.8	-	-
150	6	179	50	56	76	340	125	14.5	18.6	-	-

COMPONENTS



		DN 40-150	DN 40-100
1	lever	aluminium	A351 CF8M
2	trigger	aluminium	A351 CF8M
3	spring	stainless steel	stainless steel
4	disc positioning	aluminium	A351 CF8M
5	screws	stainless steel	stainless steel

Gearboxes - coupling and dimensions



RTFE seated valve / fluid: H2O / T: 20°C

DN	"	A	B	C	D	E	F	type	Weight (Kg) wafer	lug
40	1 1/2	113	50	64	170	200	44	GH 10	6.3	6.3
50	2	117	50	64	170	200	44	GH 10	5.8	8
65	2 1/2	120	50	64	170	200	44	GH 10	6.3	9.3
80	3	129	50	64	170	200	44	GH 10	7.1	9.9
100	4	160	50	64	170	200	44	GH 10	10.3	12
125	5	170	50	66	179	200	52	GH 20	13.7	18.4
150	6	179	50	66	179	200	52	GH 20	17.1	21.2
200	8	218	60	73	214	300	62	GH 21	27	37
250	10	257	80	89	265	350	79	GH 30	47	58
300	12	300	80	99	300	400	89	GH 55	62	74
350	14	328	100	92	275	500	101	GH 66	97	124
400	16	387	100	115	350	500	112	GH 88	127	160
500	20	451	100	126	430	600	129	GH195 BR3.5	235	285
600	24	515	150	153	430	600	157	GH300 BR5	330	400

INCONEL seated valve / fluid: H2O / T: 20°C

DN	"	A	B	C	D	E	F	type	Weight (Kg) wafer	lug
40	1 1/2	113	50	64	170	200	44	GH 10	6.3	6.3
50	2	117	50	64	170	200	44	GH 10	5.8	8
65	2 1/2	120	50	64	170	200	44	GH 10	6.3	9.3
80	3	129	50	64	170	200	44	GH 10	7.1	9.9
100	4	160	50	64	170	200	44	GH 10	10.3	12
125	5	170	50	66	179	200	52	GH 20	13.7	18.4
150	6	179	50	66	179	200	52	GH 20	17.1	21.2
200	8	218	60	73	214	300	62	GH 21	27	37
250	10	257	80	89	265	350	79	GH 30	47	58
300	12	300	80	99	300	400	89	GH 55	62	74
350	14	328	100	92	275	500	101	GH 66	97	124
400	16	387	100	115	350	500	112	GH 88	127	160
500	20	451	100	126	430	600	129	GH195 BR3.5	235	285
600	24	515	150	153	430	600	157	GH300 BR6	340	410

GH series

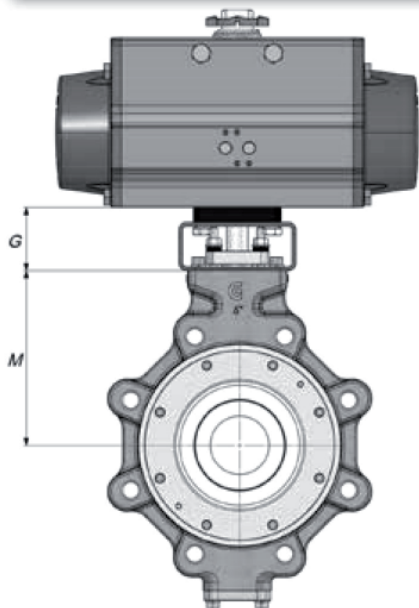
body: ductile iron GGG40
 worm gears: steel
 sector gear: ductile iron
 shaft: steel
 handwheel: steel
 protection: IP67
 T: -20 / +80 °C

*low/high
 temperature
 execution
 on request*

Pneumatic actuator

Rack & Pinion Actuators

Max air pressure: 8 bar
5,5 bar (AT series)
Temperature: -20°C / +85°C
-20°C / +80°C (AT series)
Torque range: 8/5059 Nm
13,2/9173 Nm a 5,5 Bar (AT series)
Double travel stop open/close: ± 5°
-5°/+15 close (AT series)
+5°/-15 open (AT series)



NOTE

G quote can change depending on valve/actuator coupling.

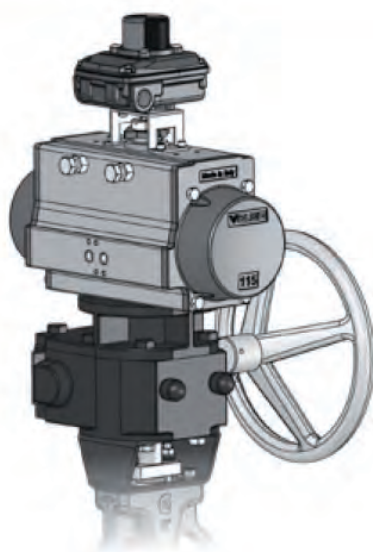
Fluid: H2O - T: 20° C - Air pressure: 5,5 Bar - Seat: RTFE

DN	M	PN 10				PN 16				PN 20 / PN 25			
		DA mod.		SR mod.		DA mod.		SR mod.		DA mod.		SR mod.	
40	113	VA 63	70	VA 85	SR 65	VA 75	65	VA 100	SR 65	VA 75	65	VA 115	SR 65
50	117	VA 63	70	VA 85	SR 65	VA 75	65	VA 100	SR 65	VA 75	65	VA 115	SR 65
65	120	VA 75	65	VA100	SR 65	VA 75	65	VA 100	SR 65	VA 85	65	VA 115	SR 65
80	129	VA 75	65	VA100	SR 65	VA 75	65	VA 115	SR 65	VA 85	65	VA 115	SR 65
100	160	VA 85	65	VA115	SR 65	VA 85	65	VA 115	SR 65	VA 100	65	VA 125	SR 65
125	170	VA100	65	VA125	SR 65	VA100	65	VA 125	SR 65	VA115	65	VA 140	SR 65
150	179	VA115	65	VA140	SR 65	VA115	65	VA 160	SR 65	VA125	65	VA 160	SR 65
200	218	VA115	60	VA160	SR 60	VA125	60	VA 180	SR 60	VA160	60	VA 200	SR 60
250	257	VA140	80	VA200	SR 80	VA160	80	VA 230	SR 80	VA180	80	VA 230	SR 80
300	300	VA180	80	VA230	SR 80	VA180	80	VA 270	SR 80	VA 200	80	VA 270	SR 80
350	328	VA200	100	VA270	SR 100	VA230	100	VA 330	SR 100	VA 230	100	VA 330	SR 100
400	387	VA200	100	VA270	SR 100	VA230	100	VA 330	SR 100	VA 270	100	on request	
500	451	VA270	100	AT1001	SR 100	VA330	100	AT1001	SR 100	VA 330	100	on request	
600	515	AT 801	150	on request		AT1001	150	on request		AT1001	150	on request	

Fluid: H2O - T: 20° C - Air pressure: 5,5 Bar - Seat: INCONEL

DN	M	PN 10				PN 16				PN 20 / PN 25			
		DA mod.		SR mod.		DA mod.		SR mod.		DA mod.		SR mod.	
40	113	VA 75	65	VA 100	SR 65	VA 75	65	VA 115SR	65	VA 85	65	VA 115	SR 65
50	117	VA 75	65	VA 100	SR 65	VA 75	65	VA 115SR	65	VA 85	65	VA 115	SR 65
65	120	VA 75	65	VA 115	SR 65	VA 85	65	VA115SR	65	VA 100	65	VA 125	SR 65
80	129	VA 85	65	VA 115	SR 65	VA 85	65	VA 125SR	65	VA 100	65	VA 140	SR 65
100	160	VA 85	65	VA 115	SR 65	VA 100	65	VA 125SR	65	VA 100	65	VA 140	SR 65
125	170	VA115	65	VA 140	SR 65	VA 115	65	VA 160SR	65	VA 115	65	VA 160	SR 65
150	179	VA115	65	VA 160	SR 65	VA 125	65	VA 180SR	65	VA 140	65	VA 200	SR 65
200	218	VA125	60	VA 180	SR 60	VA 140	60	VA 200SR	60	VA 180	60	VA 230	SR 60
250	257	VA160	80	VA 230	SR 80	VA 180	80	VA 270SR	180	VA 200	80	VA 270	SR 80
300	300	VA 200	80	VA 270	SR 180	VA 200	80	VA 330SR	180	VA 230	80	VA 330	SR 80
350	328	VA 200	100	VA 330	SR 100	VA 230	100	VA 330SR	100	VA 270	100	AT1001	SR 200
400	387	VA 270	100	AT 801	SR 100	VA 270	100	AT1001	SR 100	VA 300	100	AT1001	SR 100
500	451	VA 330	100	AT1001	SR 100	VA 330	100	on request		AT1001	100	on request	
600	515	AT1001	150	on request		AT1001	150	on request		on request		on request	

Declutchable manual gearboxes



ILGD Series

body: ductile iron GGG40 shaft: steel
worm gears: steel handwheel: steel
sector gear: ductile iron T: -20/+120°C protection: IP65
IP67 on req.

Ø valve	DA actuator double action	SR actuator spring return	emergency gearbox type
DN 40-150	VA 63-100	VA 85-100	ILGD200
	VA 115-140	VA 115-160	ILGD600
		VA 180-200	ILGD900
DN 200-300	VA 115-140		ILGD600
	VA 160-200	VA 160-200	ILGD900
	VA 230	VA 230	ILGD1500
		VA 270	ILGD2400
DN 350	VA 200-230		ILGD1500
	VA 270	VA 270-330	ILGD2400
DN 400	VA 200-230		ILGD1500
	VA 270		ILGD2400
	VA 330	VA 330	ILGD5000
DN 500	VA 270		ILGD2400
	VA 330	TBD	ILGD5000
DN 600	VA 330-AT1001	TBD	ILGD5000

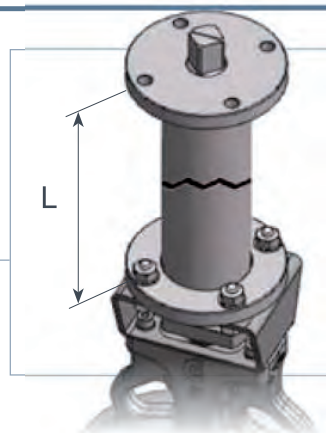
Waterproof valve shaft extension

When necessary, it's possible to extend the valve shaft as indicated in the figure. Construction is in carbon steel with protective paint (on request stainless steel).

NOTE

Our technical department is available to solve special applications.

"L" measure should be indicated when ordering.



Hydraulic actuator

- Technical features:
 - » ductile iron cast body
 - » steel rack and pinion
 - » NBR seats
- fluid type:
 - » hydraulic oil type : HPL
DIN51524-2 / ISO 6743-4.
Viscosity 15/200 cst
- working pressure: 10 - 120 bar
- working temperature: -20°C / +80°C

Fluid: H2O - T: 20° C - Seat: RTFE												
DN	Oil pressure: 60Bar						Oil pressure: 120Bar					
	PN 10		PN 16		PN 20 / PN 25		PN 10		PN 16		PN 20 / PN 25	
	DA	SR	DA	SR	DA	SR	DA	SR	DA	SR	DA	SR
40	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
50	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
65	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
80	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
100	H28DA	H40SRA	H28DA	H40SRA	H28DA	H50SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
125	H28DA	H50SRA	H40DA	H50SRA	H40DA	H50SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
150	H40DA	H50SRA	H40DA	H63SRA	H50DA	H63SRA	H28DA	H40SRB	H28DA	H50SRB	H40DA	H50SRB
200	H50DA	H63SRA	H50DA	H63SRA	H63DA	H80SRA	H40DA	H50SRB	H40DA	H50SRB	H50DA	H63SRB
250	H50DA	H80SRA	H63DA	H80SRA	H63DA	-	H50DA	H63SRB	H50DA	H63SRB	H50DA	H80SRB
300	H63DA	-	H63DA	-	H80DA	-	H50DA	H80SRB	H50DA	H80SRB	H63DA	H80SRB
350	H80DA	-	H80DA	-	-	-	H63DA	H80SRB	H63DA	-	H80DA	-
400	H80DA	-	-	-	-	-	H80DA	H80SRB	H80DA	-	H80DA	-
500	-	-	-	-	-	-	H80DA	-	H80DA	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-



Fluid: H2O - T: 20° C - Seat: INCONEL												
DN	Oil pressure: 60Bar						Oil pressure: 120Bar					
	PN 10		PN 16		PN 20 / PN 25		PN 10		PN 16		PN 20 / PN 25	
	DA	SR	DA	SR	DA	SR	DA	SR	DA	SR	DA	SR
40	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
50	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
65	H28DA	H40SRA	H28DA	H40SRA	H28DA	H50SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
80	H28DA	H40SRA	H28DA	H40SRA	H40DA	H50SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
100	H28DA	H40SRA	H28DA	H50SRA	H40DA	H50SRA	H28DA	H40SRB	H28DA	H40SRB	H28DA	H40SRB
125	H40DA	H50SRA	H40DA	H63SRA	H40DA	H63SRA	H28DA	H40SRB	H28DA	H50SRB	H28DA	H50SRB
150	H50DA	H63SRA	H50DA	H63SRA	H50DA	H80SRA	H40DA	H50SRB	H40DA	H50SRB	H40DA	H63SRB
200	H50DA	H80SRA	H50DA	H80SRA	H63DA	-	H40DA	H50SRB	H50DA	H63SRB	H50DA	H80SRB
250	H63DA	-	H63DA	-	H80DA	-	H50DA	H63SRB	H50DA	H80SRB	H63DA	H80SRB
300	H80DA	-	H80DA	-	-	-	H63DA	H80SRB	H63DA	-	H63DA	-
350	H80DA	-	-	-	-	-	H63DA	-	H63DA	-	H80DA	-
400	-	-	-	-	-	-	H80DA	-	H80DA	-	-	-
500	-	-	-	-	-	-	-	-	-	-	-	-
600	-	-	-	-	-	-	-	-	-	-	-	-

Butterfly Valves

PTFE Seat



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BVTT - Wafer
DN040-600 . 1" 1/2 -24"

BLTT - Lug
DN050-600 . 2"-24"

Max working pressure

type	DN	Pmax	disc	vacuum	Flanges
Wafer	DN040	16bar	inox	Y	PN 10-16 • A150
Wafer Lug	DN050÷200	16bar	inox	Y	PN 10-16 • A150
Wafer Lug	DN050÷200	16bar	inox+PTFE	N	PN 10-16 • A150
Wafer Lug	DN250÷300	10bar	inox	Y	PN 10-16 • A150
Wafer Lug	DN250÷300	10bar	inox+PTFE	N	PN 10-16 • A150
Wafer Lug	DN350÷400	10bar	inox	Y	PN 10-16 • A150
Wafer Lug	DN350÷400	10bar	inox+PTFE	N	PN 10-16 • A150
Wafer Lug	DN500÷600	6bar	inox	Y	PN 10-16 • A150
Wafer Lug	DN500÷600	6bar	inox+PTFE	N	PN 10-16 • A150

Design:

EN 593 ~ EN 736 ~ EN 12516 ~ EN 1092
ISO 5211 ~ DIN 3337 ~ API 609
PED 2014/68/EU - Mod. H

Face to face:

DIN EN 558 Series 20 ~ ISO 5752 Series 20
BS-5155 Series 4 ~ MSS-SP67
API 609 cat. A ~ NFE 29305-1

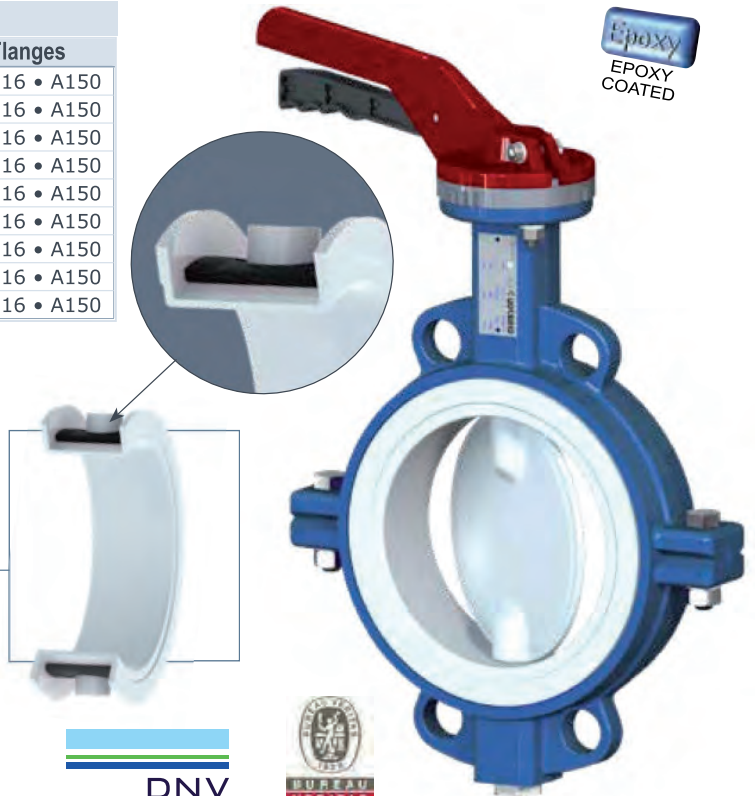
Testing:

EN 12266-1 Rate A (supersedes DIN 3230)
ISO 5208 Rate A ~ API 598

Tag:

EN 19 ~ MSS SP-25

The thickness of the PTFE body seat varies from 2,5 to 3 mm depending on the position



All valves are supplied with a metallic label in compliance with PED directive.

SIL safety integrity level

EAC

CE 0497 [PED]

Ex

II 2GD Ex h X (see ATEX accompanying instructions)

TÜV TA-Luft

BODY

material	references	standard coating	lug	wafer
Ductile iron (wafer, lug)	EN-GJS 400-15 (GS400)	Epoxy RAL 5009	50-600	40-600
Carbon steel (wafer only)	EN 1.0619 (ASTM A216-WCB)	Epoxy RAL 9005	-	50-600
Stainless steel (wafer only)	EN 1.4408 (ASTM A351 CF8M)	-	-	50-600

DISC

material	references	standard coating	coating on request	DN
Stainless steel	EN 1.4408 (ASTM A351 CF8M)	-	HALAR®	40-600
Stainless steel	A747 CB7Cu-1 + PTFE	PTFE	-	50-600
Hastelloy®	EN 2.4602 (ASTM A494 CX2MW)	-	-	40-600
Super Duplex	EN 1.4469 (A890 Gr. 5A)	-	-	40-600

BODY SEAT

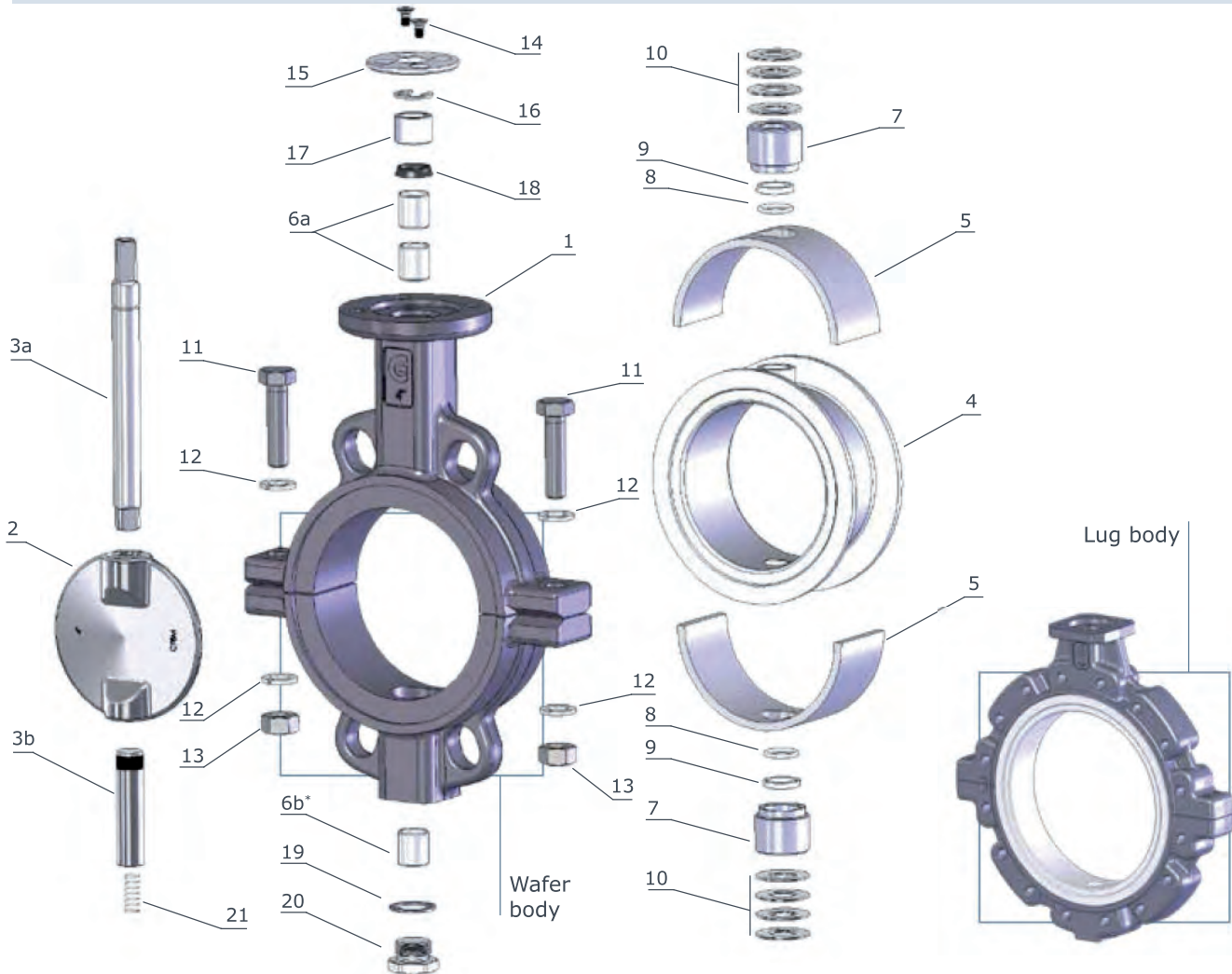
ref.	designation	trade name	working temp.	applications
PTFE	polytetrafluorethylene	TEFLON®	-55°C / +200°C	acids, foods, solvents

On request can be supplied other materials as:
Coating on request:

LCB, Hastelloy, Uranus, Alloy, SuperDuplex, Special steels.
Halar®, Chenisil®, PFA

BVTT DN040-300 . 1" 1/2 - 12"
BLTT DN050-300 . 2" - 12"
PN 10-16 • ANSI 150

Stainless steel EN 1.4408~CF8M (A316) disc



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> • EN-GJS400-15 (GS400) • EN 1.069~ A216-WCB (wafer only) • A351-CF8M (wafer only)
2	1	disc	<ul style="list-style-type: none"> • A351 - CF8M (AISI 316) • HALAR® (on request)
3a	1	upper shaft	• EN 1.4401~ AISI 316
3b	1	lower shaft	• EN 1.4401~ AISI 316
◇4	1	body seat	• PTFE
◇5	1	elastic support	• silicon
6a	2	bush upper shaft	• steel + PTFE
6b*	1*	bush lower shaft	• steel + PTFE
7	2	housing	• EN 1.4401~ AISI 316
◇8	2	O. Ring	• FEP + FKM (VITON®)
◇9	2	C. Ring	• PTFE
10	2	springs set	• steel

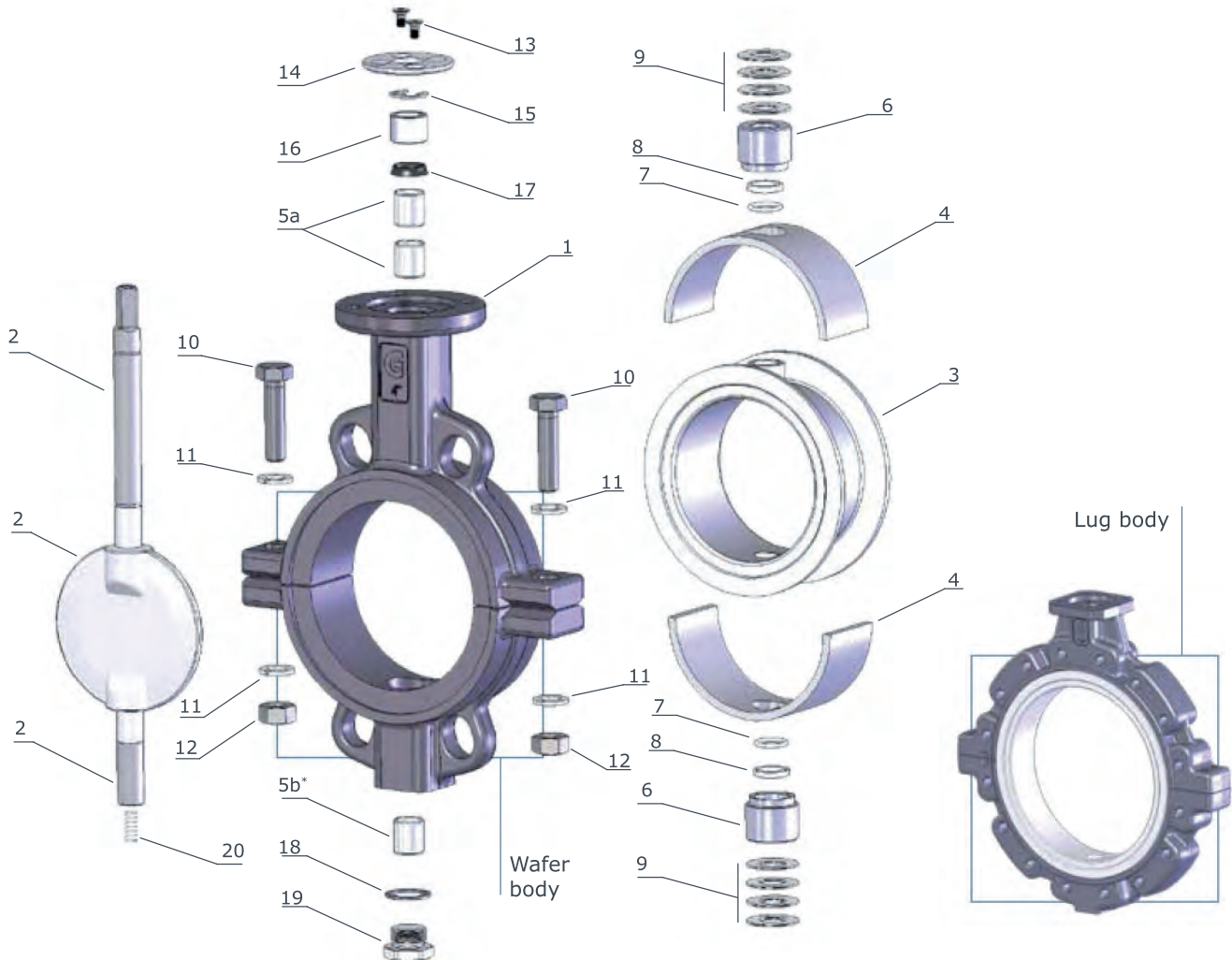
* only DN200/300

◇ parts included in spare kit

item	q.ty	part	material
11	2	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
12	4	washer	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
13	2	screw nut	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A2~304 (body CF8M)
14	2	screw	<ul style="list-style-type: none"> • 10.9 zinc plated steel • A4~A316 (body CF8M)
15	1	upper flange	<ul style="list-style-type: none"> • IXEF (DN 50/150) • aluminium (DN 200/300)
16	1	stop ring	• steel
◇17	1	upper bush	• PTFE
◇18	1	O. Ring	• FKM (VITON®)
19	1	plug packing	<ul style="list-style-type: none"> • aluminium • PTFE (body CF8M)
20	1	threaded plug	<ul style="list-style-type: none"> • zinc plated steel • 1.4401~A316 (body CF8M)
21	1	spring	<ul style="list-style-type: none"> • 1.4401~A316 (antistatic device)

BVTT - Wafer BLTT - Lug
DN 50 - 300 • 2" - 12"
PN 10-16 • ANSI 150

disc A747 CB7Cu-1 +PTFE



item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> • EN-GJS400-15 (GS400) • EN 1.069~ A216-WCB (wafer only) • A351-CF8M (wafer only)
◇2	1	disc - shafts	• A747 CB7Cu-1 + PTFE
◇3	1	body seat	• PTFE
◇4	1	elastic support	• silicon
5a	1	bush upper shaft	• steel + PTFE
5b *	1	bush lower shaft	• steel + PTFE
6	2	housing	• EN 1.4401~A316
◇7	1*	O. Ring	• FEP + FKM (VITON®)
◇8	2	C. Ring	• PTFE
9	2	springs set	• steel
10	2	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)

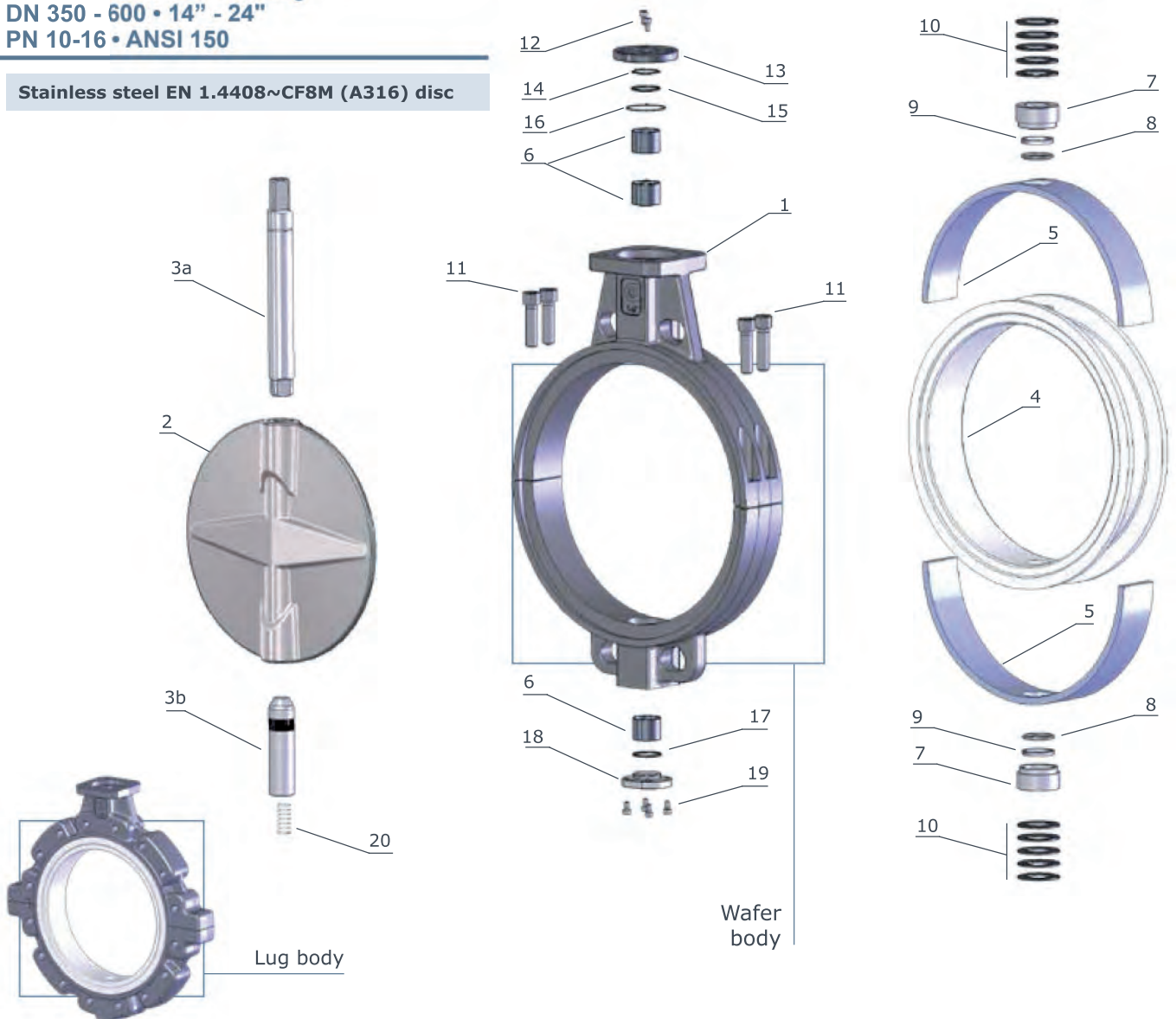
item	q.ty	part	material
11	2	washer	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
12	2	screw nut	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A2~304 (body CF8M)
13	4	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A2~316 (body CF8M)
14	2	upper flange	<ul style="list-style-type: none"> • IXEF (DN 50/150) • aluminium (DN 200/300)
15	2	stop ring	• steel
◇16	1	upper bush	• PTFE
◇17	1	O. Ring	• FKM (VITON®)
18	1	plug packing	<ul style="list-style-type: none"> • aluminium • PTFE (body CF8M)
19	1	threaded plug	<ul style="list-style-type: none"> • zinc plated steel • 1.4401~A316 (body CF8M)
20	1	spring	• 1.4401~A316 (antistatic device)

*only DN200/300

◇ parts included in spare kit

BVTT - Wafer **BLTT - Lug**
 DN 350 - 600 • 14" - 24"
 PN 10-16 • ANSI 150

Stainless steel EN 1.4408~CF8M (A316) disc



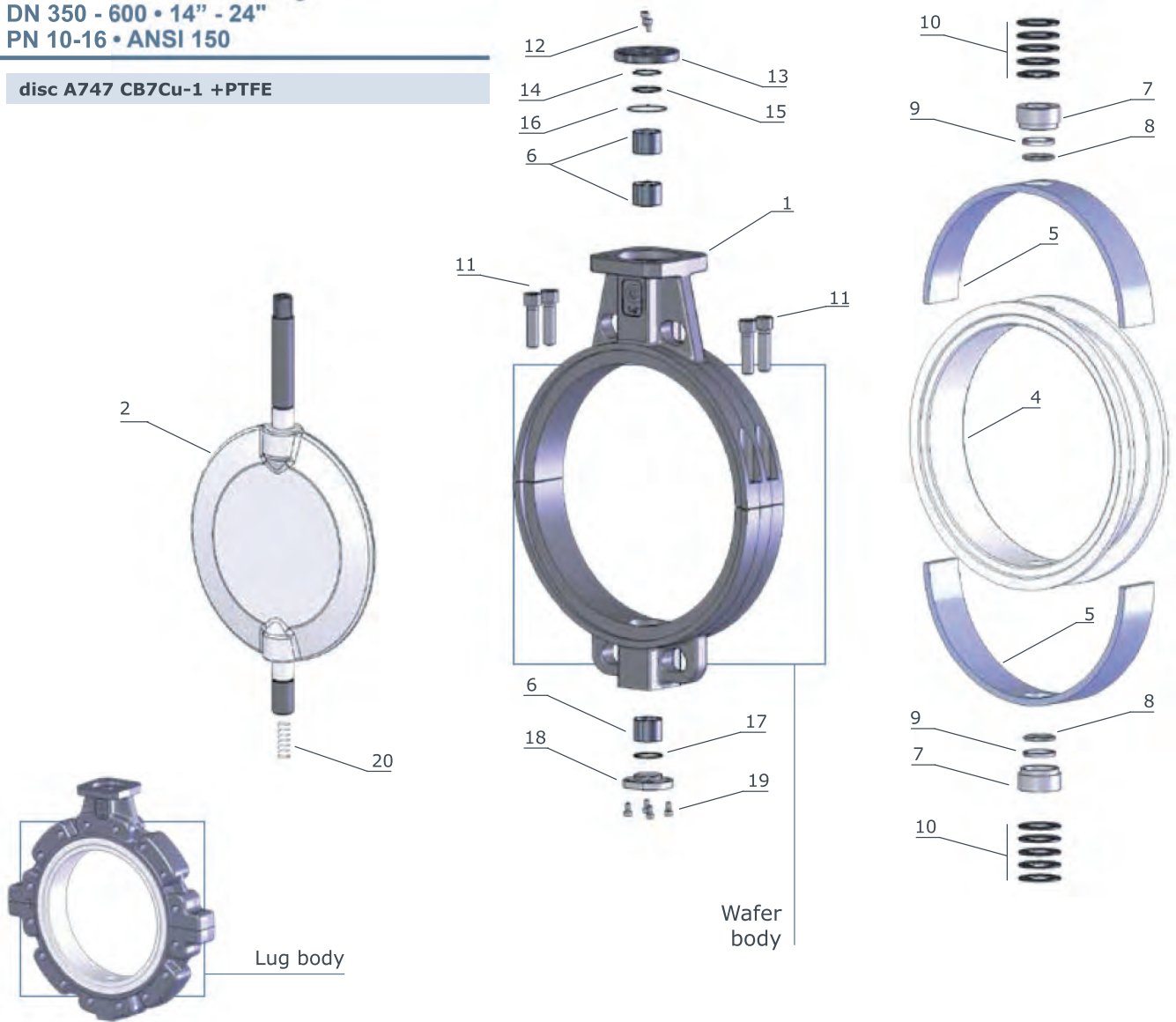
item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> • EN-GJS400-15 (GS400) • EN 1.069~ A216-WCB (wafer only) • EN 1.4408~CF8M (A316) wafer only
2	1	disc	<ul style="list-style-type: none"> • EN 1.4408~CF8M (A316) • HALAR® (on request)
3a	1	upper shafts	• EN 1.4401~AISI 316
3b	1	lower shafts	• EN 1.4401~AISI 316
◇4	1	body seat	• PTFE
◇5	1	elastic support	• silicon
6	3	bush shaft	• A105 + PTFE
7	2	housing	• EN 1.4401~ AISI 316
◇8	2	O. Ring	• FEP + FKM (VITON®)
◇9	2	C. Ring	• PTFE
10	2	springs set	• steel
11	4	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)

item	q.ty	part	material
12	2	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
13	1	upper flange	<ul style="list-style-type: none"> • zinc plated steell • 1.4401~A316 (body CF8M)
◇14	1	O.Ring	• FKM (VITON®)
15	1	stop ring	• steel
◇16	1	O.Ring	• FKM (VITON®)
◇17	1	O.Ring	• FKM (VITON®)
18	1	lower flange	<ul style="list-style-type: none"> • zinc plated steel • 1.4401~A316 (body CF8M)
19	4	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
20	1	spring	• 1.4401~A316 (antistatic device)

◇ parts included in spare kit

BVTT - Wafer BLTT - Lug
DN 350 - 600 • 14" - 24"
PN 10-16 • ANSI 150

disc A747 CB7Cu-1 +PTFE

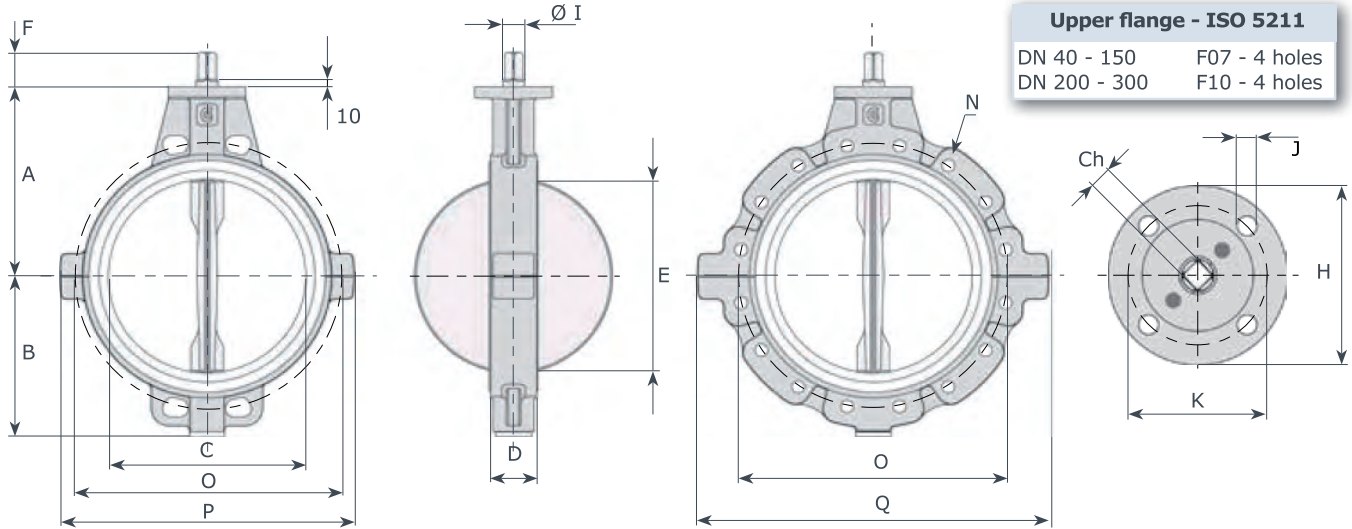


item	q.ty	part	material
1	1	body	<ul style="list-style-type: none"> • EN-GJS400-15 (GS400) • EN 1.069~ A216-WCB (wafer only) • EN 1.4408~CF8M (A316) wafer only
2	1	disc	• A747 CB7Cu-1 + PTFE
◇4	1	body seat	• PTFE
◇5	1	elastic support	• silicon
6	3	bush shaft	• A105 + PTFE
7	2	housing	• EN 1.4401~ AISI 316
◇8	2	O. Ring	• FEP + FKM (VITON®)
◇9	2	C. Ring	• PTFE
10	2	springs set	• steel
11	4	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)

item	q.ty	part	material
12	2	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
13	1	upper flange	<ul style="list-style-type: none"> • zinc plated steel • 1.4401~A316 (body CF8M)
◇14	1	O.Ring	• FKM (VITON®)
15	1	stop ring	• steel
◇16	1	O.Ring	• FKM (VITON®)
◇17	1	O.Ring	• FKM (VITON®)
18	1	lower flange=	<ul style="list-style-type: none"> • zinc plated steel • 1.4401~A316 (body CF8M)
19	4	screw	<ul style="list-style-type: none"> • 8.8 zinc plated steel • A4~A316 (body CF8M)
20	1	spring	<ul style="list-style-type: none"> • 1.4401~A316 (antistatic device)

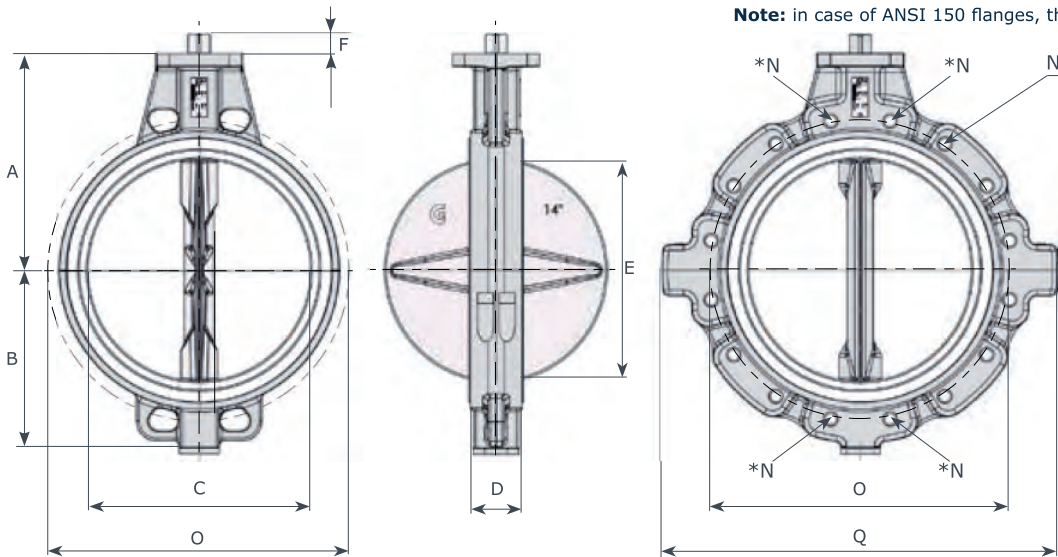
◇ parts included in spare kit

BVTT - Wafer **BLTT - Lug**



DN	"	A	B	C	D	E	F	Ø I	Ch	H	K	J	P	Q	PN 10			PN 16			ANSI 150			Kg.	
															N	n.	O	N	n.	O	N	n.	O	wafer	lug
40	1 1/2	130	75	49	33	36	34	14	11	90	70	9	-	-	M16	4	110	M16	4	110	M14	4	98.4	3	-
50	2	138	81	55	43	35	34	14	11	90	70	9	165	165	M16	4	125	M16	4	125	M16	4	120.7	3.4	3.9
65	2 1/2	144	98	68	46	50	34	14	11	90	70	9	186	186	M16	8	145	M16	8	145	M16	4	139.7	4.1	4.7
80	3	158	110	81	46	67	34	14	11	90	70	9	196	242	M16	8	160	M16	8	160	M16	4	152.4	4.4	7.6
100	4	173	128	101	52	87	34	16	11	90	70	9	220	270	M16	8	180	M16	8	180	M16	8	190.5	6.8	8.4
125	5	186	140	126	56	113	34	18	14	90	70	9	250	297	M16	8	210	M16	8	210	M20	8	215.9	8.8	11.2
150	6	202	155	150	56	140	34	18	14	90	70	9	278	321	M20	8	240	M20	8	240	M20	8	241.3	10.5	12.9
200	8	240	190	200	60	191	38	22	17	125	102	11	355	420	M20	8	295	M20	12	295	M20	8	298.5	15.2	25.0
250	10	270	220	250	68	241	38	30	22	125	102	11	398	472	M20	12	350	M24	12	355	M22	12	362.0	24.5	30.0
300	12	300	247	298	78	289	38	30	22	125	102	11	455	540	M20	12	400	M24	12	410	M22	12	431.8	32.0	45.0

Note: in case of ANSI 150 flanges, threading can be ANSI B1.1 UNC2B



***Note:** WAFER bodies DN 600 - 700 - 800 have 4 holes N threaded as relevant LUG version

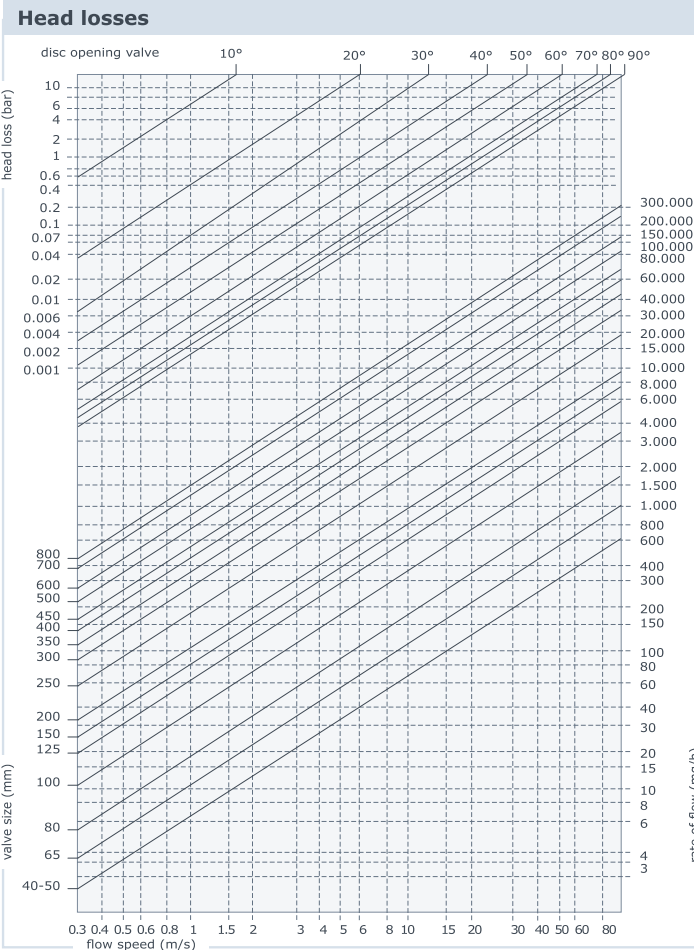
DN	"	A	B	C	D	E	F	Ø I	Ch	H	K	J	Q	PN10			PN16			ANSI150			kg.	
														N	n.	O	N	n.	O	N	n.	O	wafer	lug
350	14	330	280	341	78	332	28	35	27	150	125	14	600	M20	16	460	M24	16	470	M24	12	476.3	54	73
400	16	355	305	390	102	376	28	40	27	150	125	14	690	M24	16	515	M27	16	525	M27	16	539.8	68	104
500	20	422	366	485	127	479	37	45	36	210	140/165	18/22	820	M24	20	620	M30	20	650	M27	20	635.0	149	179
600	24	495	460	595	154	575	47	60	46	210	165	22	940	M27	20	725	M33	20	770	M33	20	749,3	215	310

TT Series - Torque values - Nm - safety factor excluded

disc: EN 1.4408~CF8M (A316)					fluid H ₂ O - 20°C				
working pressure BAR									
DN	0	6	10	16	DN	0	6	10	16
40	5	9	13	20	125	65	70	85	100
50	13	16	19	28	150	60	65	94	105
65	20	28	35	38	200	128	153	188	250
80	35	45	52	65	250	190	232	296	-
100	40	60	70	75	300	214	296	366	-

disc: St. Steel + PTFE					fluid H ₂ O - 20°C				
working pressure BAR									
DN	0	6	10	16	DN	0	6	10	16
40	-	-	-	-	125	50	60	75	85
50	14	16	18	25	150	60	70	90	100
65	16	20	23	28	200	122	145	180	219
80	26	40	49	55	250	180	220	280	-
100	35	51	62	66	300	205	280	350	-

Notes: values indicated in this page is only for information



Formulae for calculation of rate flow

Liquids:
$$Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$$

Q rate of flow (m³/h)
 PS specific gravity (water=1)
 ΔP pressure drop (bar)

Gas:
$$Q = 28.5 \cdot \frac{KV}{\sqrt{P_2 \cdot \Delta P}}$$

Q rate of flow (m³/h)
 PS specific gravity (air=1)
 ΔP pressure drop (bar) (less than 1/2 inlet pressure)
 P₂ outlet pressure

Steam:
$$Q = 22.5 \cdot KV \cdot \sqrt{P_2 \cdot \Delta P}$$

Q rate of flow (Kg/h)
 ΔP pressure drop (bar) (less than 1/2 inlet pressure)
 P₂ outlet pressure

Calculation of the rate of flow equivalent to H₂O:

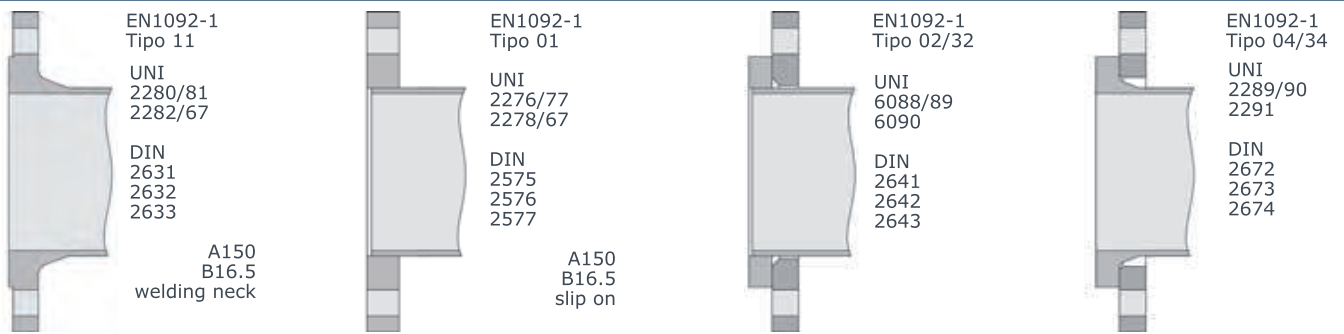
$$Q_e = Q \sqrt{\frac{d}{1000}}$$

For different liquid, gas or steam head losses are determined by equivalent water rate of flow, as follows:

- Q_e equivalent water flow (mc/l o l/s)
- Q fluid flow (mc/l o l/s)
- d fluid specific gravity (Kg/mc)

angle	Values KV (CV = 1,16 KV)												
	40/50	65	80	100	125	150	200	250	300	350	400	500	600
5°	-	-	-	-	-	-	-	-	-	53	68	106	207
10°	-	-	-	-	-	-	-	21	49	123	161	246	629
15°	0,2	0,6	1,8	2,4	4,2	5,6	14	80	188	228	299	457	1168
20°	0,9	2,5	5,2	9,5	15	23	110	156	280	315	412	630	2010
25°	3	6,1	12	22	38	61	125	225	354	457	597	914	2735
30°	6,1	11	21	39	69	112	211	310	381	661	863	1320	5080
35°	9,9	18	33	60	105	166	303	433	521	890	1162	1778	6254
40°	15	27	49	88	148	228	405	591	742	1184	1547	2366	9700
45°	21	38	68	121	199	303	528	774	987	1552	2028	3102	11581
50°	29	51	91	159	262	394	679	988	1252	2008	2620	4010	15000
55°	39	68	119	207	338	505	863	1247	1571	2548	3318	5090	17765
60°	53	90	156	269	434	641	1085	1591	2059	3225	4202	6442	22200
65°	72	121	209	357	565	820	1364	2065	2807	3983	5196	7957	26077
70°	92	161	283	487	768	1097	1788	2715	3744	5195	6775	10377	34500
75°	109	209	381	662	1059	1507	2425	3625	4935	6964	9084	13912	39546
80°	115	240	457	815	1303	1861	3043	4768	6831	9301	12142	18578	47560
85°	115	253	502	906	1457	2008	3642	4890	8230	10280	13408	20533	52566
90°	116	257	508	925	1492	2168	3838	5010	9233	10792	14082	22024	56381

Flanges to be used



Compatibility flanges - body Wafer

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
40	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
50	●	✓	✓	✓	✓	✓	✓	✗	●	●	●	✓	✗
65	●	✓	✓	✓	✓	✓	✓	●	●	●	●	✓	●
80	●	✓	✓	✓	✓	✓	✓	✗	●	●	●	●	✓
100	●	✓	✓	✗	✗	✓	✓	✗	●	✗	●	●	✓
125	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	●	✓
150	●	✓	✓	●	●	✓	✓	✗	●	●	●	✓	✗
200	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	●	✓
250	●	✓	✓	●	●	✓	✓	✗	✗	✓	✓	✓	●
300	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	●	✗
350	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	✗	✗	●
400	✗	✓	✓	✗	✗	✓	✓	✗	✗	✗	✗	●	●
500	✗	✓	✓	●	●	✓	✓	✗	✗	✗	✗	✓	●
600	●	✓	✓	●	✗	✓	✓	✗	✗	✗	●	●	✗

✓ standard ● on request
✗ not possible

Compatibility flanges - body Lug

DN	EN 1092-1 / EN 1092-2					ASME/ANSI			BS 10		JIS B2220		
	PN 6	PN 10	PN 16	PN 25	PN 40	class 125	class 150	class 300	tab D	tab E	5K	10K	16K
50	●	✓	✓	✓	✓	✓	✓	✗	●	●	●	●	✗
65	●	✓	✓	✓	✓	✓	✓	✗	●	●	●	✓	●
80	●	✓	✓	✓	✓	✓	✓	✗	●	●	●	●	●
100	✗	✓	✓	●	●	✓	✓	✗	✗	●	●	●	●
125	●	✓	✓	●	●	✓	✓	✗	✓	✓	●	●	●
150	●	✓	✓	●	●	✓	✓	✗	●	●	●	✓	✗
200	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	●	●
250	●	✓	✓	●	✗	✓	✓	✗	✗	✓	●	●	✗
300	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	✗	✗
350	●	✓	✓	✗	✗	✓	✓	✗	✓	✓	●	●	●
400	●	✓	✓	●	✓	✓	✓	✗	✗	✗	●	●	●
500	●	✓	✓	●	✓	✓	✓	✗	✗	✗	●	●	●
600	●	✓	✓	●	✗	✓	✓	✗	✗	✗	●	✗	✗

✓ standard ● on request
✗ not possible

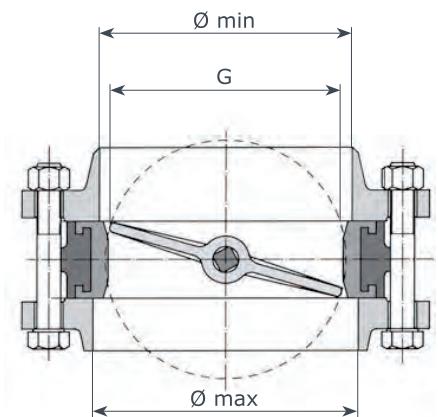
Bolts and rods dimensions

DN	Wafer valves								
	PN 10			PN 16			ANSI 150		
	Bolts	Rods	N°	Bolts	Rods	N°	Bolts	Rods	N°
40	M16x90	M16x100	4	M16x90	M16x100	4	M14x90	M14x110	4
50	M16x100	M16x120	4	M16x100	M16x120	4	M16x100	M16x130	4
65	M16x110	M16x130	8	M16x110	M16x130	8	M16x110	M16x140	4
80	M16x110	M16x130	8	M16x110	M16x130	8	M16x120	M16x150	4
100	M16x120	M16x140	8	M16x120	M16x140	8	M16x120	M16x150	8
125	M16x120	M16x150	8	M16x120	M16x150	8	M20x130	M20x160	8
150	M20x130	M20x160	8	M20x130	M20x160	8	M20x140	M20x160	8
200	M20x140	M20x170	8	M20x140	M20x170	12	M20x150	M20x170	8
250	M20x150	M20x180	12	M24x150	M24x180	12	M22x160	M22x190	12
300	M20x160	M20x190	12	M24x160	M24x190	12	M22x170	M22x210	12
350	M20x160	M20x190	16	M24x170	M24x200	16	M24x180	M24x220	12
400	M24x190	M24x220	16	M27x210	M27x240	16	M27x210	M27x250	16
500	M24x210	M24x240	20	M30x240	M30x280	20	M27x250	M27x290	20
600	M27x250	M27x290	20	M33x270	M33x320	20	M33x290	M33x340	20
	M27x75	-	8	M33x85	-	8	M33x95	-	8

DN	Lug valves					
	PN 10		PN 16		ANSI 150	
	Bolts	N°	Bolts	N°	Bolts	N°
50	M16x35	8	M16x35	8	M16x35	8
65	M16x40	16	M16x40	16	M16x40	8
80	M16x40	16	M16x40	16	M16x40	8
100	M16x40	16	M16x40	16	M16x45	16
125	M16x45	16	M16x45	16	M20x50	16
150	M20x45	16	M20x45	16	M20x50	16
200	M20x50	16	M20x50	24	M20x55	16
250	M20x55	24	M24x55	24	M22x60	24
300	M20x60	24	M24x60	24	M22x60	24
350	M20x60	32	M24x65	32	M24x65	24
400	M24x70	32	M27x70	32	M27x80	32
500	M24x80	40	M30x80	40	M27x90	40
600	M27x90	40	M33x100	40	M33x100	40

NOTE 1: Screw and rod dimensions have been calculated with WELDING NECK flanges PN 10/16 (EN1092-1 Tipe 11) ANSI150 (ANSI B16.5)

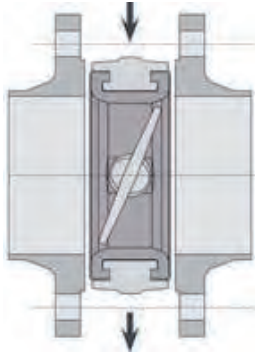
NOTE 2: Number of nMTS should be double when WAFER valves are assembled with threaded rods.



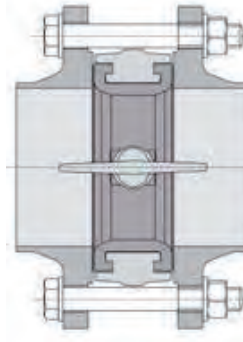
DN	40	50	65	80	100	125	150	200	250	DN	300	350	400	500	600
G	36	35	50	67	87	113	140	191	241	5°	289	332	376	479	575
Ø min	29	44	60	75	98	122	148	196	244	10°	296	332	378	478	566
Ø max	49	62	80	93	118	146	175	225	275	15°	330	372	422	500	600

Installation

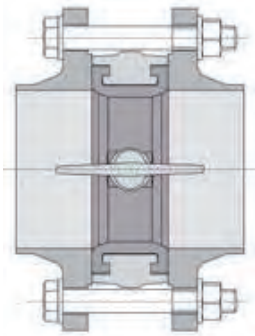
Assembly



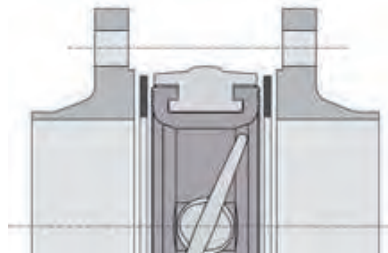
1 - Leave a space between flanges so that valve can be easily inserted and removed.



2 - Open completely the valve before tightening flanges.



3 - Tighten bolts till flanges are in contact with valve body.

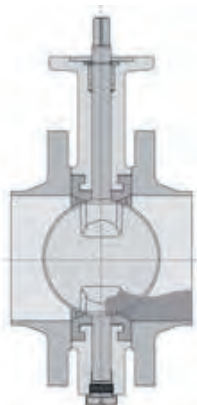


4 - **NOTE:** do not insert other packing between flange and valve.

NOTE: Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat. Clean carefully the welding to avoid that slags damage the seat.

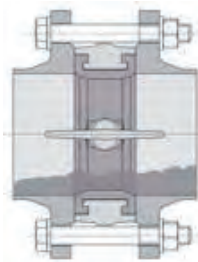
Installation for powders and muddy fluids

In case of use with powders or muddy fluids, install the valve with horizontal rotation axis, to allow sediments to flow easily on opening.



Wrong

Vertical rotation axis



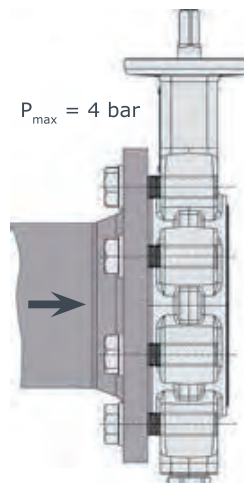
Right

Horizontal rotation axis

This type of installation is always advisable with valve diameters over DN 400.

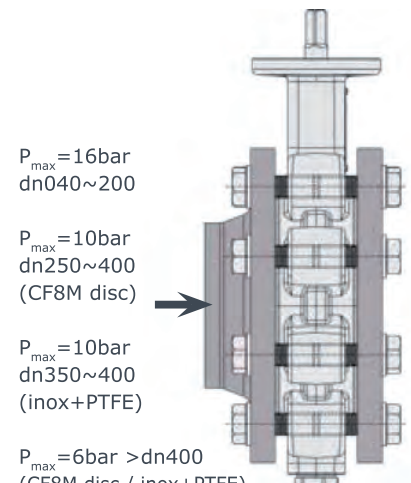
End piping installation

When valves are installed end of piping, a counterflange as per dwg type B is needed to secure tightness at max pressure.



$P_{max} = 4 \text{ bar}$

Type A installation with MT end piping



$P_{max} = 16 \text{ bar}$
dn040~200

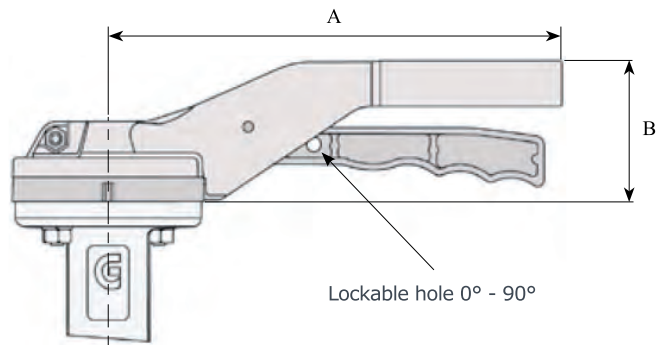
$P_{max} = 10 \text{ bar}$
dn250~400
(CF8M disc)

$P_{max} = 10 \text{ bar}$
dn350~400
(inox+PTFE)

$P_{max} = 6 \text{ bar} > \text{dn}400$
(CF8M disc / inox+PTFE)

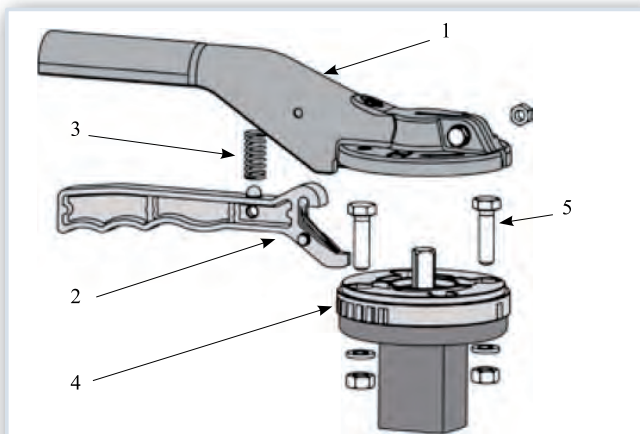
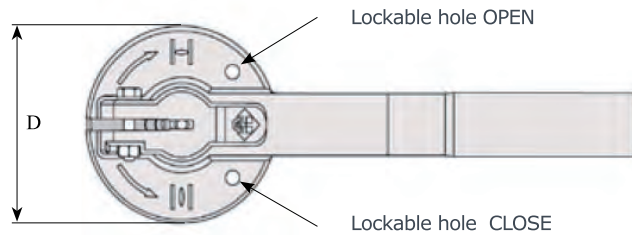
Type B installation with end piping

Handlevers



DN	A	B	D	Kg	
				aluminium	st. steel
40 - 100	220	67	93	0.60	1.80
125 - 150	275	67	93	0.65	2.05
200 - 300	340	76	125	1	-

Note: DN 250 - 300 handlever not recommended



		DN40 - 300	DN40 - 150
1	lever	aluminium	EN 1.408~A351
2	trigger	aluminium	EN 1.408~A351
3	spring	stainless steel	stainless steel
4	disc positioning	aluminium	EN 1.408~A351
5	screws	stainless steel	stainless steel

positioning disc DN 40 - 150 designed for flanges ISO 5211 F05/F07



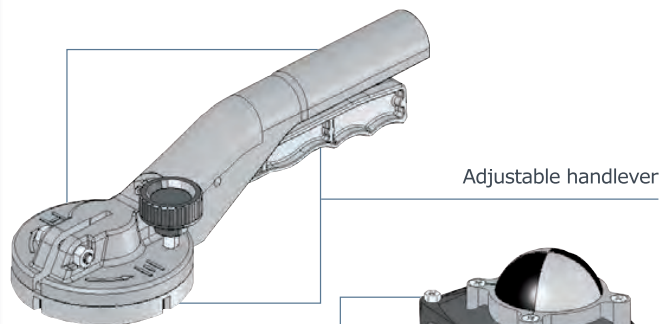
10 positions



Open - Closed

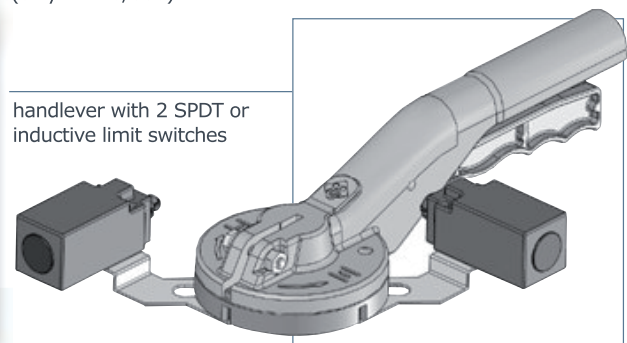
positioning disc with two types of regulation: 10 positions or Open/Close

OPTIONALS



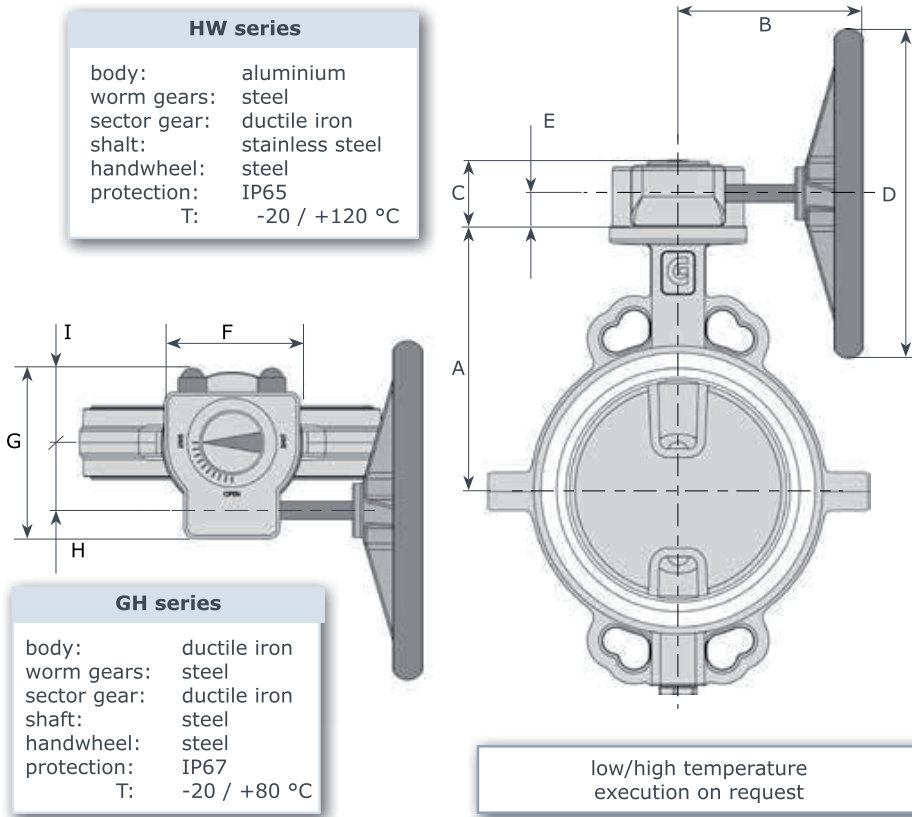
Adjustable handlever

handlever with switch box (only DN 40/300)



handlever with 2 SPDT or inductive limit switches

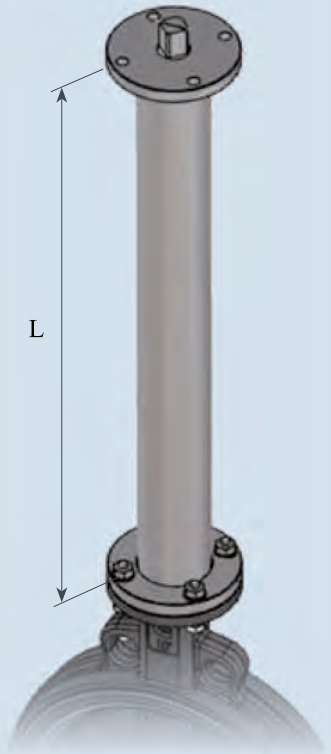
Gearboxes - Aluminium body - HW Series - Cast Iron body - GH Series



Waterproof valve shaft extension

When necessary, it's possible to extend the valve shaft as indicated in the figure. Construction is in carbon steel with protective paint (on request stainless steel).

"L" measure should be indicated when ordering.



Our technical department is available to solve special applications.

Dimensions

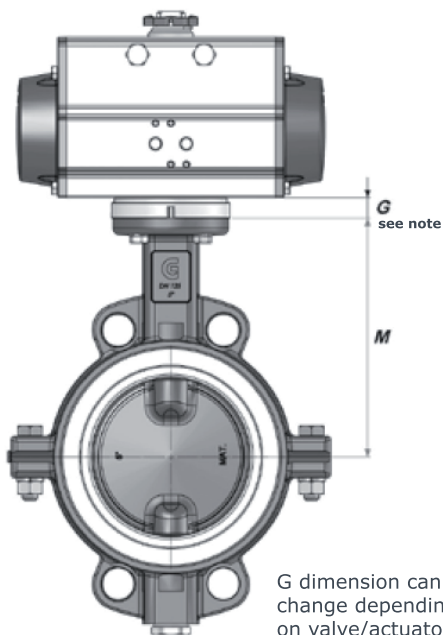
Mod. HW	B	C	D	E	F	G	H		Kg
HW 070	160	48	140	27	80	115	42		1.6
HW 102	215	56	250	33	120	150	60		3
HW 140	325	95	400	51	185	225	80		10
Mod. GH	B	C	D	E	F	G	H	I	Kg
GH10	170	64	200	29	90	122.5	44	52.5	2.2
GH20	179	65.5	200	29	125	144	52	65	3.6
GH21	214	73	300	36	125	162	62	74	4.8
GH30	265	89	350	46	150	202	79	89	12
GH55	300	99	400	49.5	210	229	89	105	13
GH88	350	350	500	55	225	267	112	112	20.1

Coupling valve - actuators

DN	"	mod. HW	mod. GH	A
40	1 ^{1/2}	HW070	GH10	138
50	2	HW070	GH10	138
65	2 ^{1/2}	HW070	GH10	144
80	3	HW070	GH10	158
100	4	HW070	GH10	173
125	5	HW070	GH10	186
150	6	HW070	GH10	202
200	8	HW102	GH20	202

DN	"	mod. HW	mod. GH	A
250	10	HW102	GH20	270
300	12	HW102	GH20	300
350	14	HW140	GH30	330
400	16	HW140	GH30	355
DN	"	mod. HW	mod. GH	A
500	20	-	GH55	422
DN	"	mod. HW	mod. AB	A
600	24	-	GH88	495

Pneumatic actuators: double action / spring return



G dimension can change depending on valve/actuator coupling.

Valve seat: PTFE - Fluid: H2O - T: 20° C air: 5,5 Bar

DN	M	PN 6						PN 10				PN 16					
		DA		SR		mod.	G	DA		SR		DA		SR			
		mod.	G	mod.	G			mod.	G	mod.	G	mod.	G	mod.	G		
40	130	VA 52	24	VA 75 SR	16	VA 52	24	VA 75 SR	16	VA 63	20	VA 85 SR	16	VA 63	20	VA 85 SR	16
50	138	VA 63	20	VA 85 SR	16	VA 63	20	VA 85 SR	16	VA 63	20	VA 85 SR	16	VA 63	20	VA 100 SR	16
65	144	VA 63	20	VA 85 SR	16	VA 75	20	VA 100 SR	16	VA 75	16	VA 100 SR	16	VA 75	16	VA 100 SR	16
80	158	VA 75	16	VA 115 SR	16	VA 85	16	VA 115 SR	16	VA 85	16	VA 125 SR	16	VA 85	16	VA 125 SR	16
100	173	VA 85	16	VA 125 SR	16	VA 85	16	VA 125 SR	16	VA 85	16	VA 125 SR	16	VA 85	16	VA 125 SR	16
125	186	VA 85	16	VA 125 SR	16	VA 100	16	VA 125 SR	16	VA 100	16	VA 140 SR	14	VA 100	16	VA 140 SR	14
150	202	VA 85	16	VA 125 SR	16	VA 100	16	VA 140 SR	14	VA 100	16	VA 140 SR	14	VA 100	16	VA 140 SR	14
200	240	VA 115	14	VA 160 SR	14	VA 125	14	VA 180 SR	14	VA 125	16	VA 200 SR	50	VA 125	16	VA 200 SR	50
250	270	VA 125	14	VA 200 SR	50	VA 140	14	VA 200 SR	50	-	-	-	-	-	-	-	-
300	300	VA 140	14	VA 200 SR	50	VA 160	14	VA 230 SR	50	-	-	-	-	-	-	-	-
350	330	VA 160	0	VA 230 SR	100	VA 180	0	VA 270 SR	100	-	-	-	-	-	-	-	-
400	355	VA 200	0	VA 270 SR	100	VA 230	100	VA 330 SR	100	-	-	-	-	-	-	-	-
500	422	VA 230	0	VA 330 SR	0	-	-	-	-	-	-	-	-	-	-	-	-
600	495	VA 330	100	AT 1001 SR	0	-	-	-	-	-	-	-	-	-	-	-	-

Rack & Pinion Actuators

Max air pressure: 8 bar
5,5 bar (AT series)
Temperature: -20°C / +85°C
-20°C / +80°C (AT series)

Torque range: 8/5059 Nm
13,2/9173 Nm a 5,5Bar (AT series)
Double travel stop open/close: ±5°
-5°/+15 close (AT series)
+5°/-15 open(AT series)

Declutchable manual gearboxes

GD Series
body: aluminium
worm gears: steel
sector gear: ductile iron

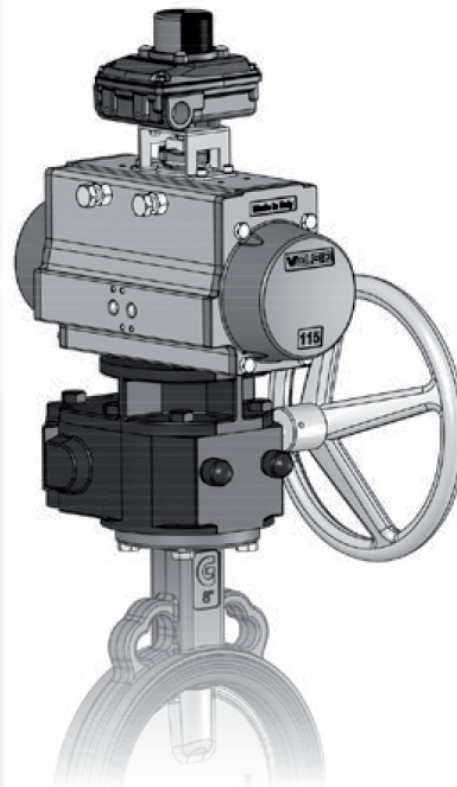
shaft: stainless steel
handwheel: steel
protection: IP65
T: -20 / +120 °C

∅ valve	DA actuator double action	SR actuator spring return	emergency gearbox type
DN 40÷150	VA 63-100	VA 75-115	GD070
		VA 125	GD102
DN200	VA 85-100		GD070
DN200-300	VA 115-160	VA 115-160	GD102
		VA 180-200	GD140
DN350-500	VA 140-200	VA 200	GD140

ILGD Series
body: ductile iron GGG40
worm gears: steel
sector gear: ductile iron

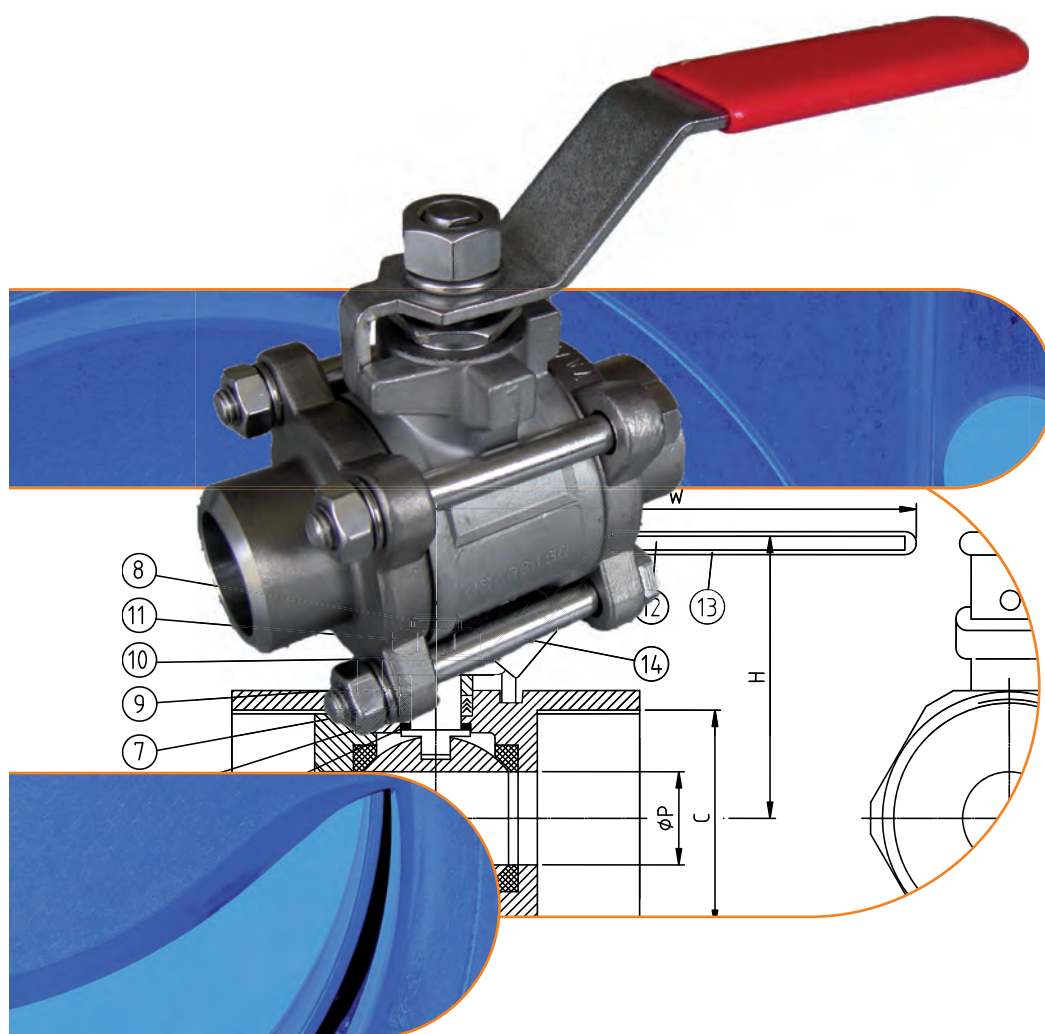
shaft: steel
handwheel: steel
protection: IP65 (IP67 on req.)
T: -20 / +120 °C

∅ valve	DA actuator double action	SR actuator spring return	emergency gearbox type
DN040-150	VA 63-100	VA 63-100	ILGD200
	VA 115-125	VA 115-160	ILGD600
		VA 180-200	ILGD900
DN200-300	VA 85-160	VA 115-160	ILGD600
	VA 180-200	VA 180-200	ILGD900
	VA 230	VA 230	ILGD1500
DN350-400	VA 140-200	VA 200	ILGD2400
	VA 230	VA 230	ILGD1500
	VA 270	VA 270	ILGD2400
DN450	VA 180-230	VA 230	ILGD1500
	VA 270	VA 270-330	ILGD2400
DN500	VA 180-230	VA 230	ILGD5000
	VA 270	VA 270	ILGD2400
	VA 330	VA 330	ILGD5000
DN600	VA 270		ILGD2400
	VA 330	VA 330	ILGD5000



Ball Valves

of stainless steel



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 phone +49 7321 755-42
 sales@lohse-gmbh.de
 www.lohse-gmbh.de

1-part ball valves

- VL-201T
hand lever, thread end (T), reduced opening 231

2-part ball valves

- VL-K451T
hand lever, thread end (T), full opening, PN 63 233
- VL-402
hand lever, thread end (T), full opening, PN 100 235
- VL-815-PD
pneumatic part turn actuator, flange connection, full opening 237
- VL-830-PD
pneumatic part turn actuator, flange connection, full opening 238
- VL-816 / VL-840
hand lever, flange connection, full opening 240
- VL-816/-840-PD
pneumatic part turn actuator, flange connection, full opening 242
- VL-815F
hand lever, flange connection (F), full opening 246
- VL-421T-PD / -PE
pneumatic part turn actuator, thread end (T), full opening, DIN/ISO 5211 top flange 248

3-part ball valves

- VL-K551T / B
hand lever, thread end (T) or welding end (B), optionally with locking device (Hv), full opening 250
- PA176_H3EB-STD-Hv
lockable hand lever, long welding ends, full opening 252
- PA176_H3EB-ISO-Hv
lockable hand lever, long welding ends, full opening 254
- PA176-172_H3TEB-STD-Hv
lockable hand lever, 1x thread end, 1x long welding end 256
- PA176-172_H3TEB-ISO-Hv
lockable hand lever, 1x thread end, 1x long welding end 258
- VL-521T-PD / -PE
pneumatic part turn actuator, DIN/ISO 5211 top flange, thread end (T) 260
- VL-521B-PD / -PE
pneumatic part turn actuator, DIN/ISO 5211 top flange, welding end (B) 262

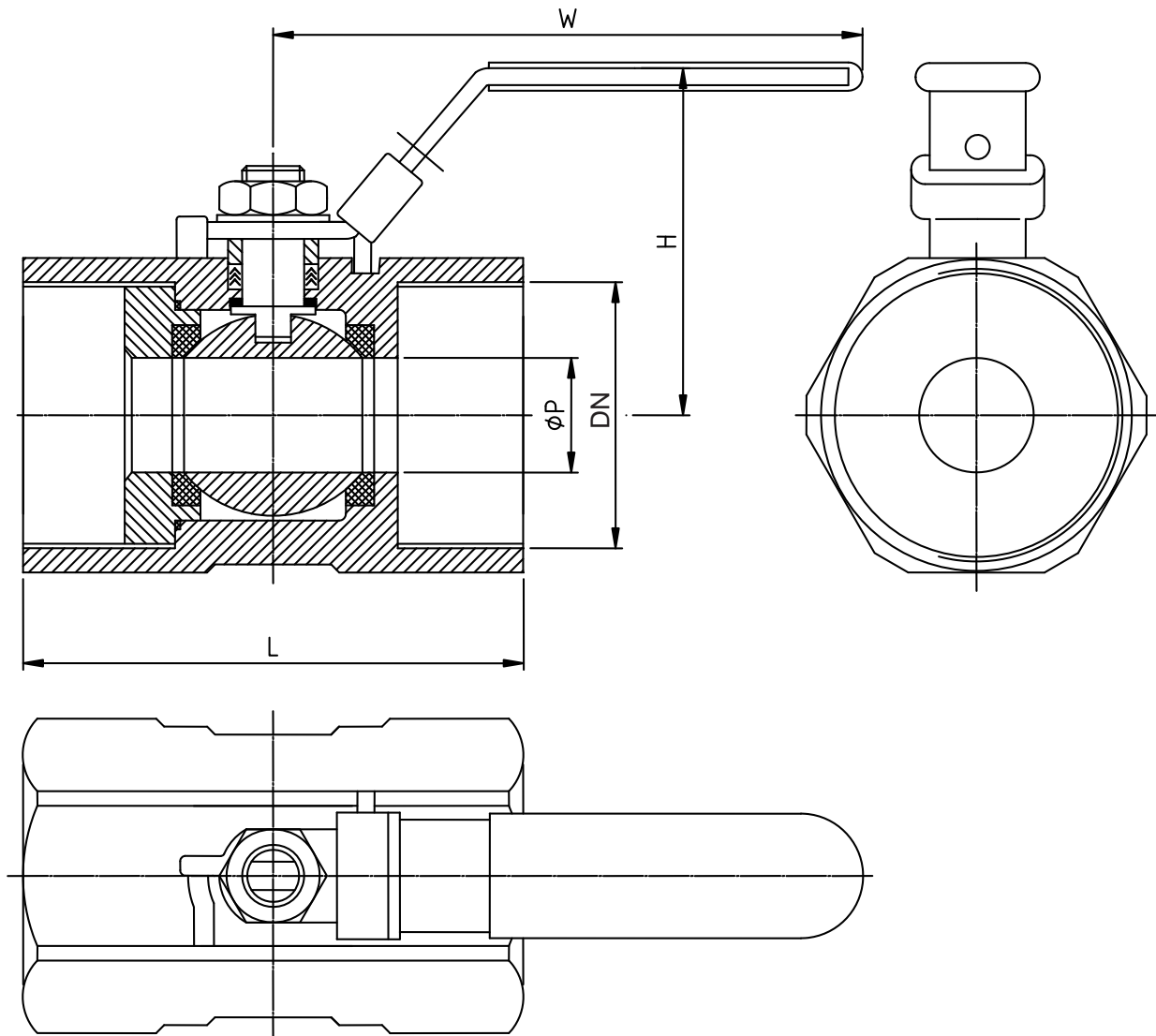
compact flange ball valves

- VL-160F
hand lever, full opening 264
- VL-140F
hand lever, DIN/ISO 5211 top flange, full opening, DN 15–100 266
- VL-140F-PD/-PE
pneumatic part turn actuator, DIN/ISO 5211 top flange, full opening, DN 15–100 267
- VL-140F
hand lever, DIN/ISO 5211 top flange, reduced opening, DN 125–200 269
- VL-140F-PD/-PE
pneumatic part turn actuator, DIN/ISO 5211 top flange, reduced opening, DN 125–200 270

spring return handle 273

pressure-temperature curve 276

1-part ball valve of stainless steel
hand lever, thread end (T), reduced opening
PN 63 DN 8–50

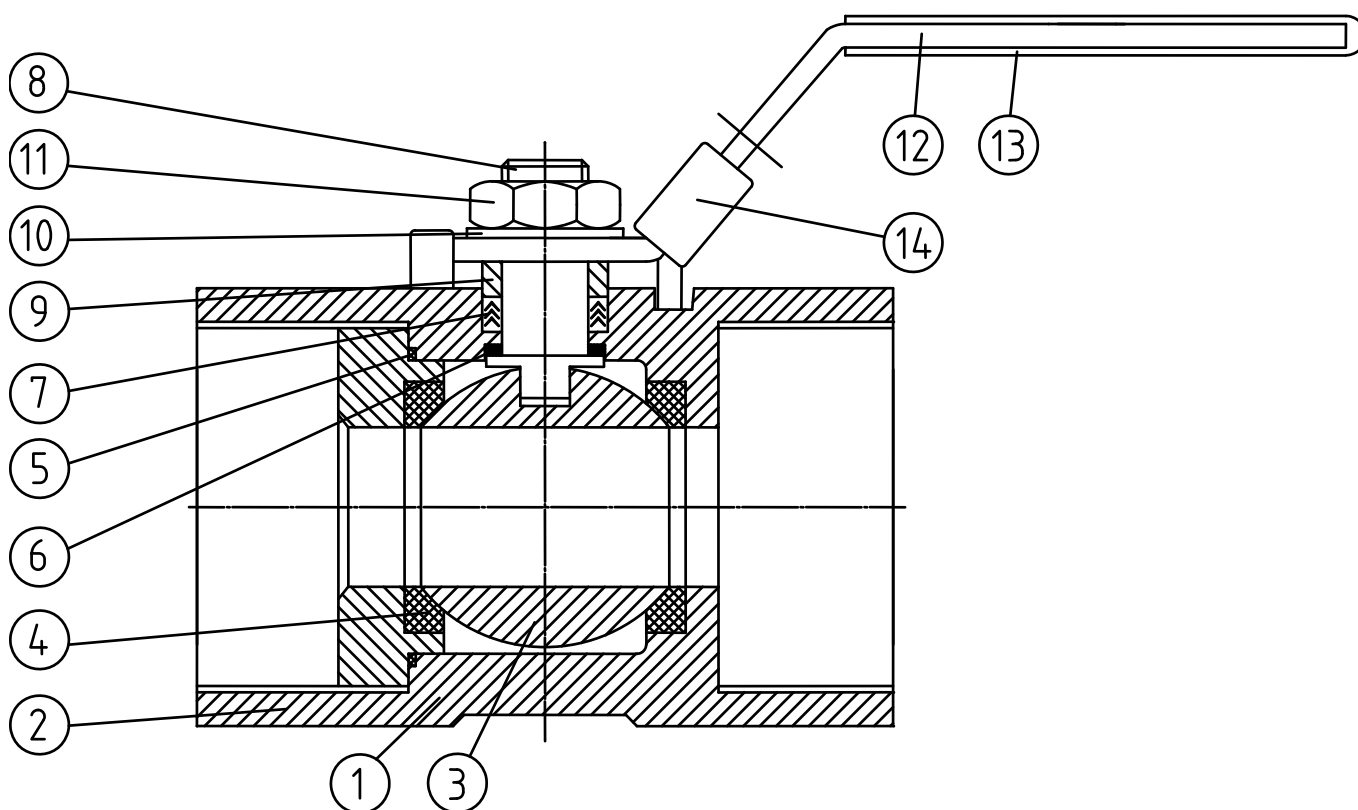


DN	Ø P	L	H	W	weight ~[kg]	
8	1/4"	5	39	32.5	70	0.065
10	3/8"	7	44	34.5	70	0.1
15	1/2"	9.2	56.5	43.5	90	0.15
20	3/4"	12.5	58	47	90	0.3
25	1"	16	71	55	110	0.4
32	1 1/4"	20	78	60.5	110	0.7
40	1 1/2"	25.4	83	74.5	140	0.8
50	2"	32	100	80.5	140	1.3

Thread according to DIN 2999, dimensions in mm.
Temperature range -10°C to 200°C
(see pressure-temperature curve).

1-part ball valve of stainless steel
hand lever, thread end (T), reduced opening
PN 63 DN 8–50

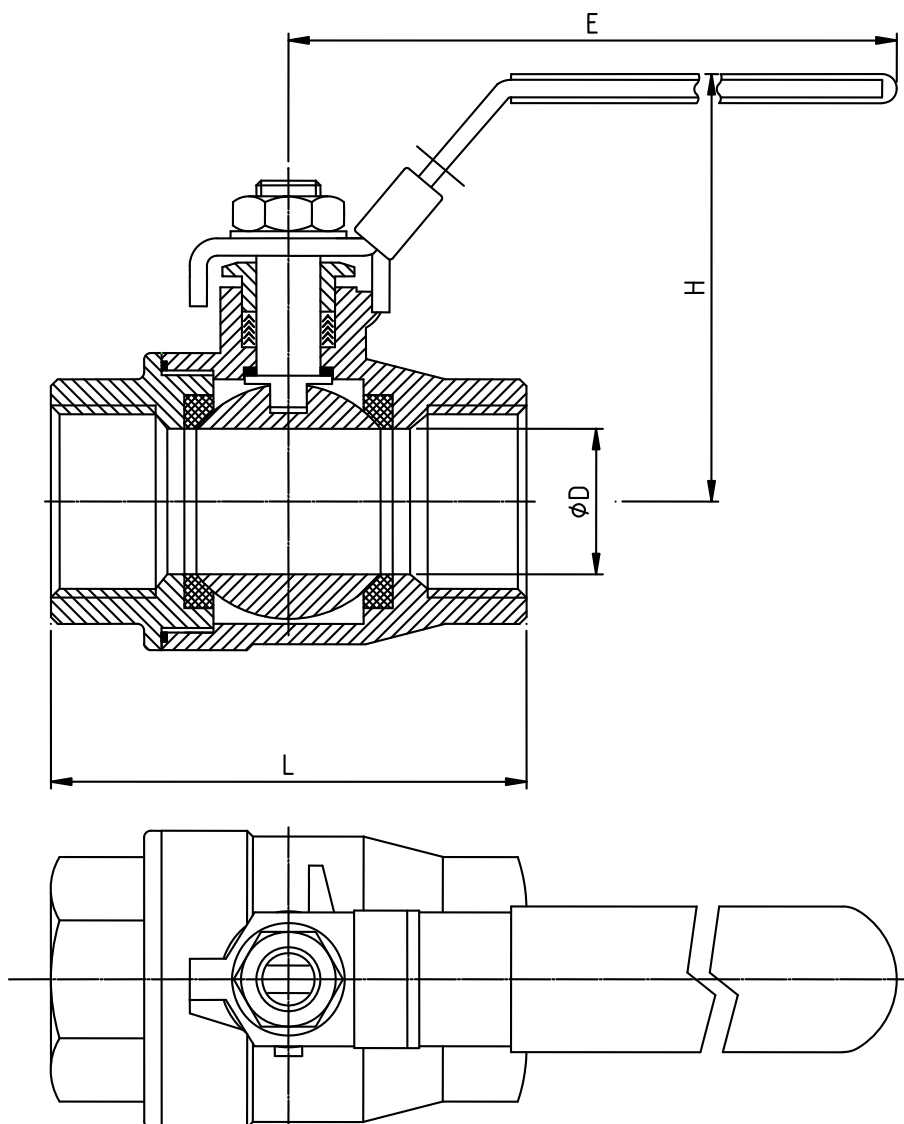
materials



pos.	description	amount	material
1	housing	1	1.4408
2	end piece	1	1.4408
3	ball	1	1.4401
4	ball seal	2	PTFE
5	housing seal	1	PTFE
6	clamping ring	1	PTFE
7	operating shaft seal	1 set	PTFE

pos.	description	amount	material
8	operating shaft	1	1.4401
9	stuffing box	1	1.4301
10	washer	1	1.4301
11	nut	1	1.4301
12	handle	1	1.4301
13	handle coat	1	plastics
14	locking device	1	1.4301 (optional)

2-part ball valve of stainless steel
hand lever, thread end (T), full opening
PN 63 DN 8–50 (1/4" – 2")



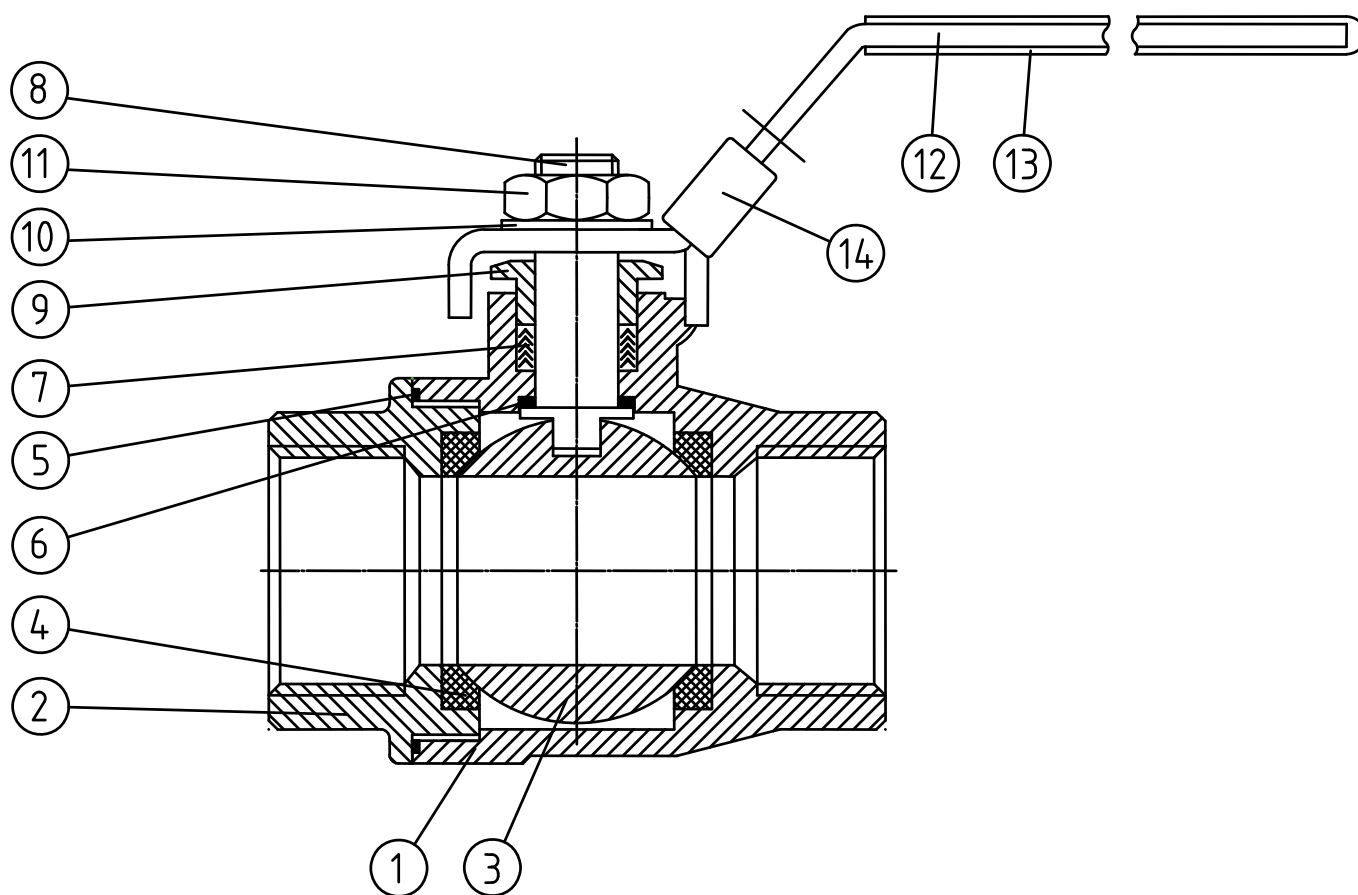
DN		Ø D	L	H	E
8	1/4"	11.5	50	57	96
10	3/8"	12.5	60	57	96
15	1/2"	15	75	57	96
20	3/4"	20	80	63	110
25	1"	25.4	90	70	113
32	1 1/4"	32	110	75	132
40	1 1/2"	38	120	93	156
50	2"	50	140	100	156

Overall length according to DIN 3202 M3, thread according to DIN 2999, dimensions in mm.

Temperature range -10°C to 200°C
(see pressure-temperature curve).

2-part ball valve of stainless steel
hand lever, thread end (T), full opening
PN 63 DN 8–50 (1/4" – 2")

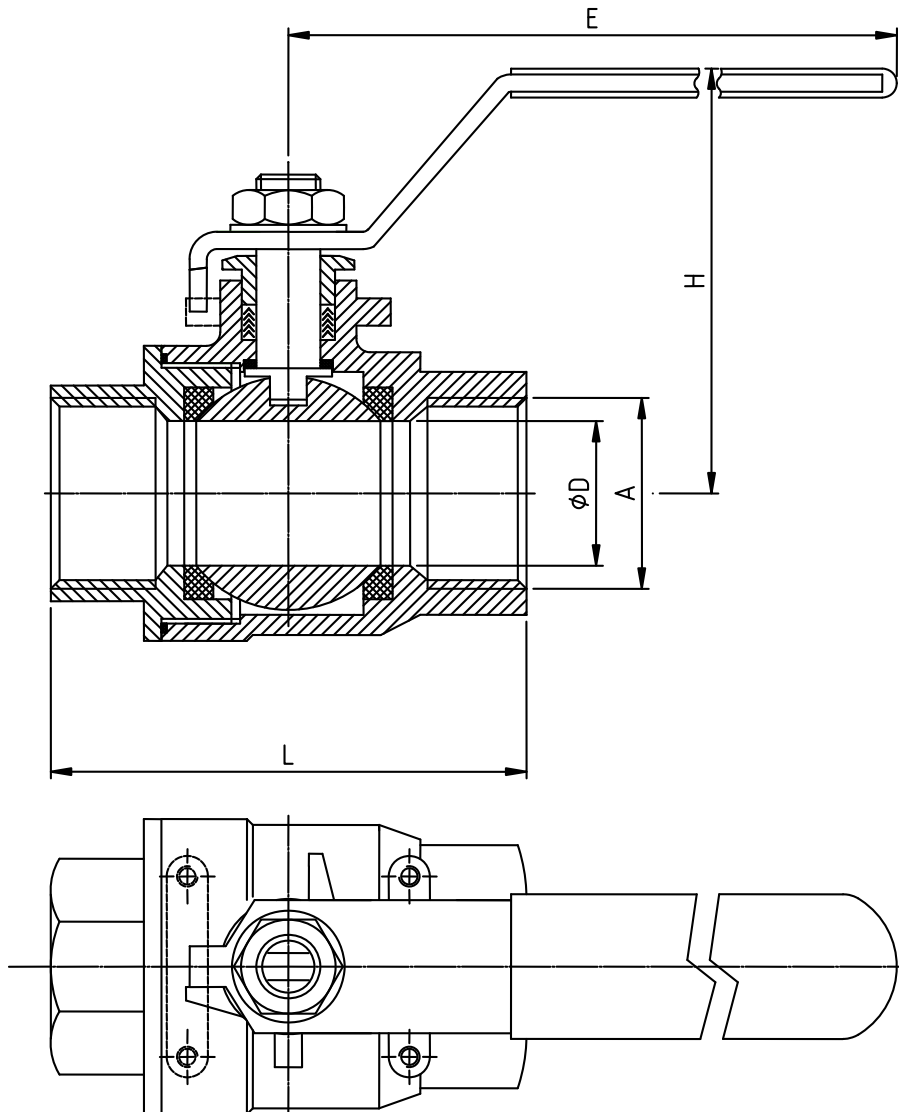
materials



pos.	description	amount	material
1	housing	1	1.4408
2	end piece	1	1.4408
3	ball	1	1.4401
4	ball seal	2	PTFE
5	housing seal	1	PTFE
6	clamping ring	1	PTFE
7	operating shaft seal	1 set	PTFE

pos.	description	amount	material
8	operating shaft	1	1.4401
9	stuffing box	1	1.4301
10	washer	1	1.4301
11	nut	1	1.4301
12	handle	1	1.4301
13	handle coat	1	plastics
14	locking device	1	1.4301 (optional)

2-part ball valve of stainless steel
hand lever, thread end (T), full opening
PN 100 DN 8–50 (1/4" – 2")



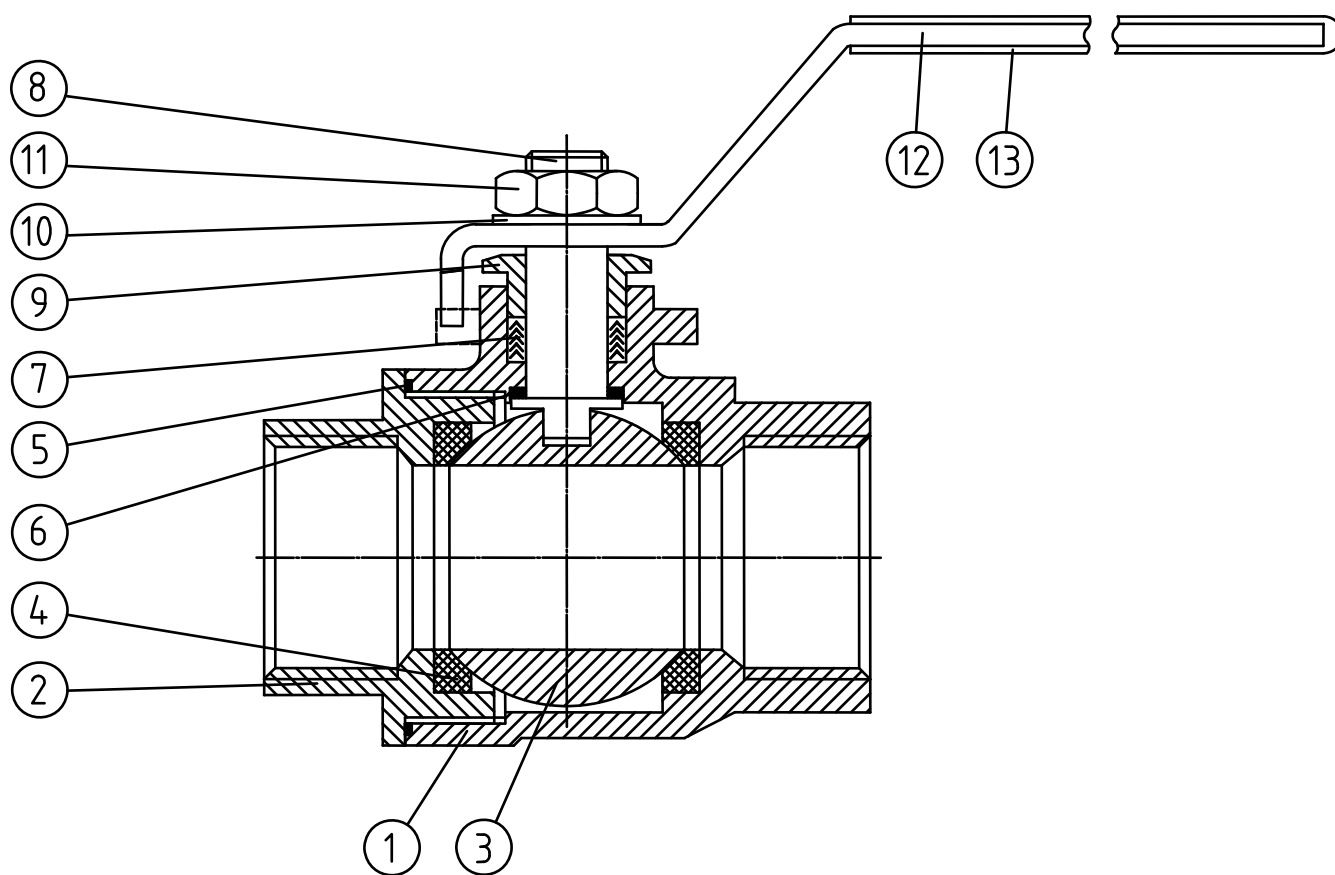
DN	Ø D	L	H	E	weight ~[kg]	
8	1/4"	11.6	55	50	96	0.25
10	3/8"	12.7	60	50	96	0.25
15	1/2"	15	75	53	96	0.4
20	3/4"	20	80	64	125	0.5
25	1"	25	90	66	125	0.9
32	1 1/4"	32	110	79	170	1.6
40	1 1/2"	38	120	83	170	2.3
50	2"	50	140	94	190	3.6

Overall length according to DIN 3202 M3, thread according to DIN 2999, dimensions in mm.

Temperature range -10°C to 200°C
(see pressure-temperature curve).

2-part ball valve of stainless steel
 hand lever, thread end (T), full opening
 PN 100 DN 8–50 (1/4" – 2")

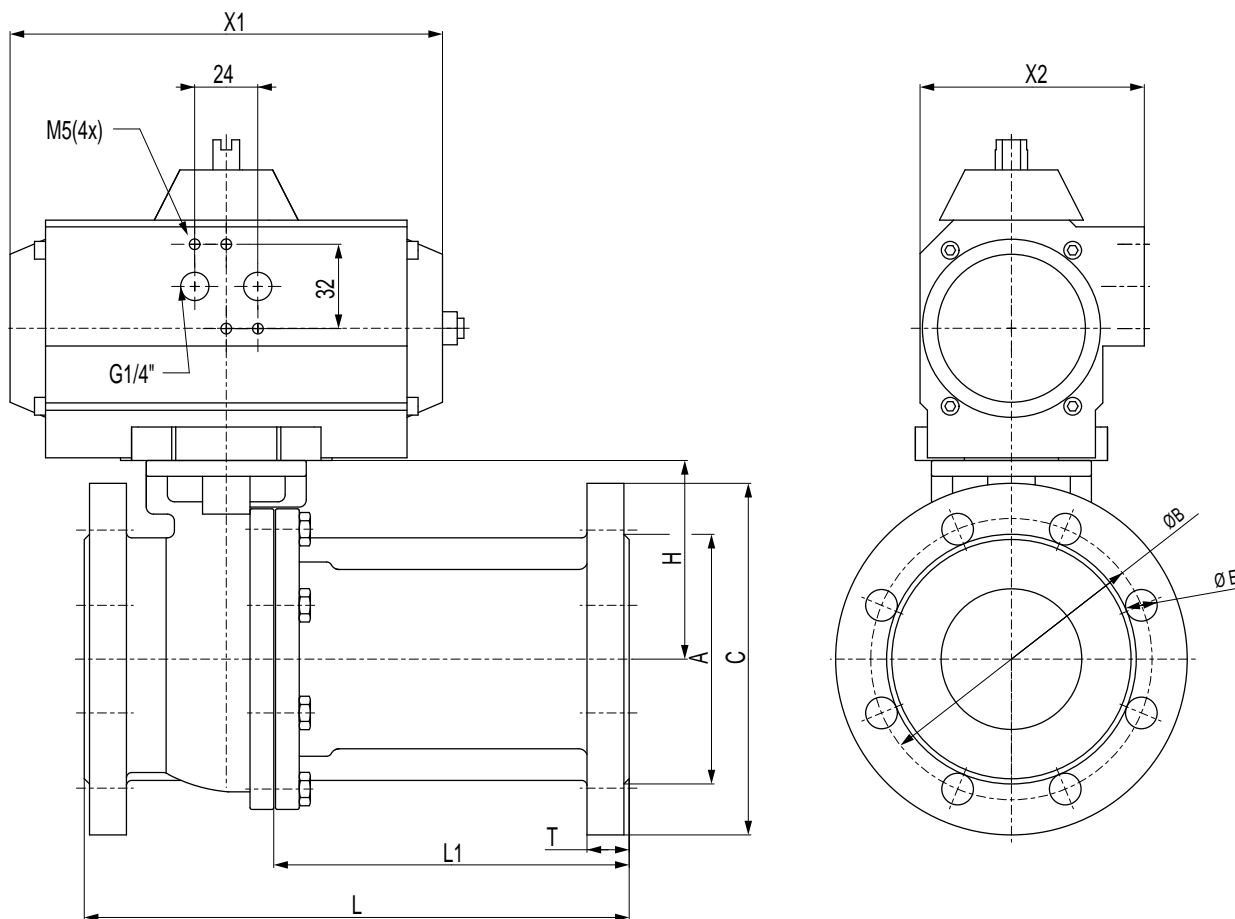
materials



pos.	description	amount	material
1	housing	1	1.4408
2	end piece	1	1.4408
3	ball	1	1.4401
4	ball seal	2	PTFE
5	housing seal	1	PTFE
6	clamping ring	1	PTFE
7	operating shaft seal	1 set	PTFE

pos.	description	amount	material
8	operating shaft	1	1.4401
9	stuffing box	1	1.4301
10	washer	1	1.4301
11	nut	1	1.4301
12	handle	1	1.4301
13	handle coat	1	plastics
14	locking device	1	1.4301 (optional)

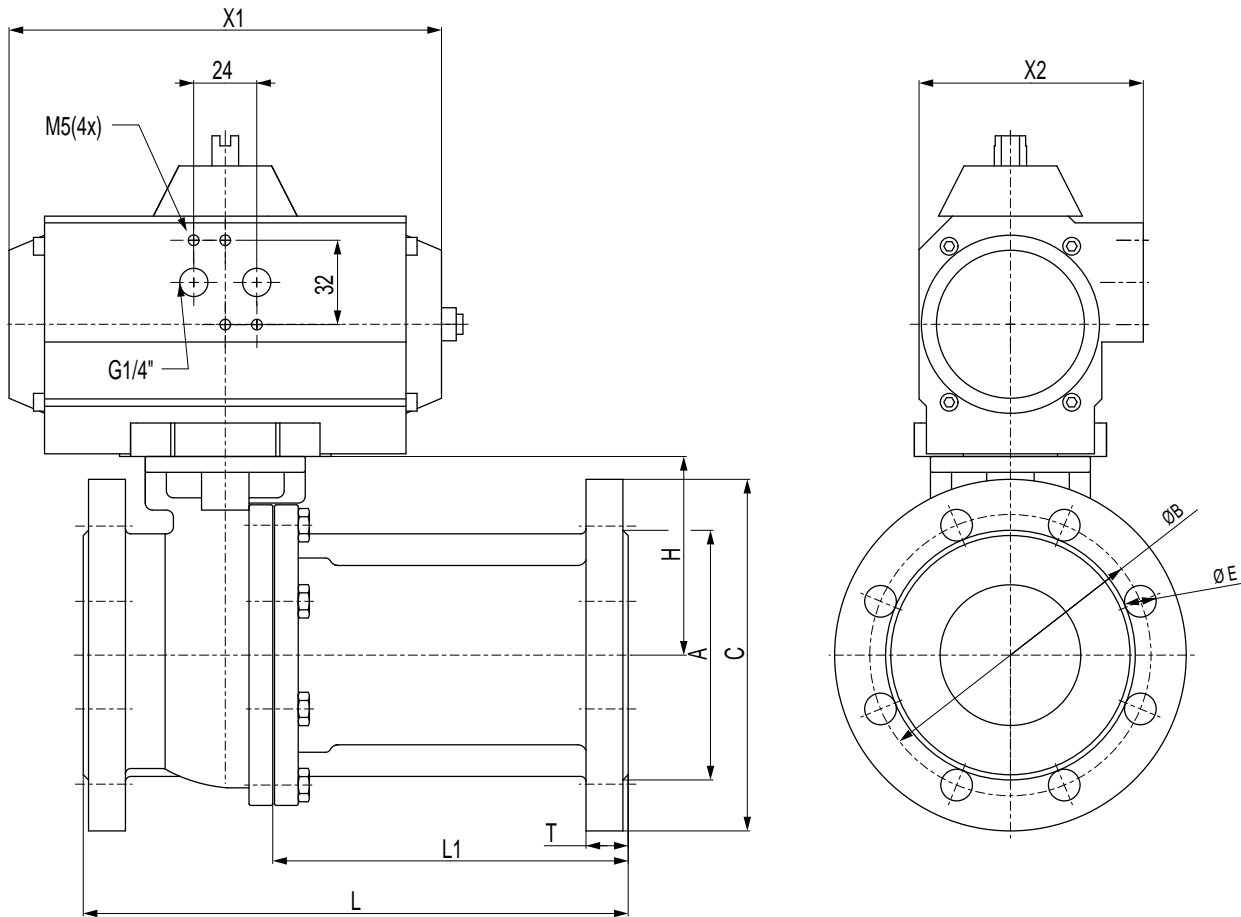
2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft and pneumatic
 double-acting part turn actuator
 ANSI Class 150 DN 1/2" – DN4"



DN	A	B	C	E	H	L	L1	T	X1	X2	rotating drive	
15	1/2"	35	60.5	89	16	50	108	41.5	11.1	119	67	UT 05
20	3/4"	43	70	98	16	53.5	117	48.5	12.7	165	85	UT 15
25	1"	51	79.5	108	16	58.5	127	54	14.3	165	85	UT 15
32	1 1/4"	64	89	117	16	71	140	67	15.9	165	85	UT 15
40	1 1/2"	73	98.5	127	16	76	165	84	17.5	197	85	UT 17
50	2"	92	120.5	152	19	83.5	178	90	19.1	177	96	UT 20
65	2 1/2"	105	139.5	178	19	95	190.5	92.5	22.3	230	113	UT 30
80	3"	127	152.5	190	19	113	203	94.2	23.9	246	138	UT 35
100	4"	157	190.5	229	19	131	229	114.5	23.9	246	138	UT 35

Dimensions in mm. With integrated mounting pad acc. to DIN/ISO 5211 for direct actuator mounting.
 Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft and pneumatic
 double-acting part turn actuator
 ANSI Class 300 DN 1/2" – DN4"

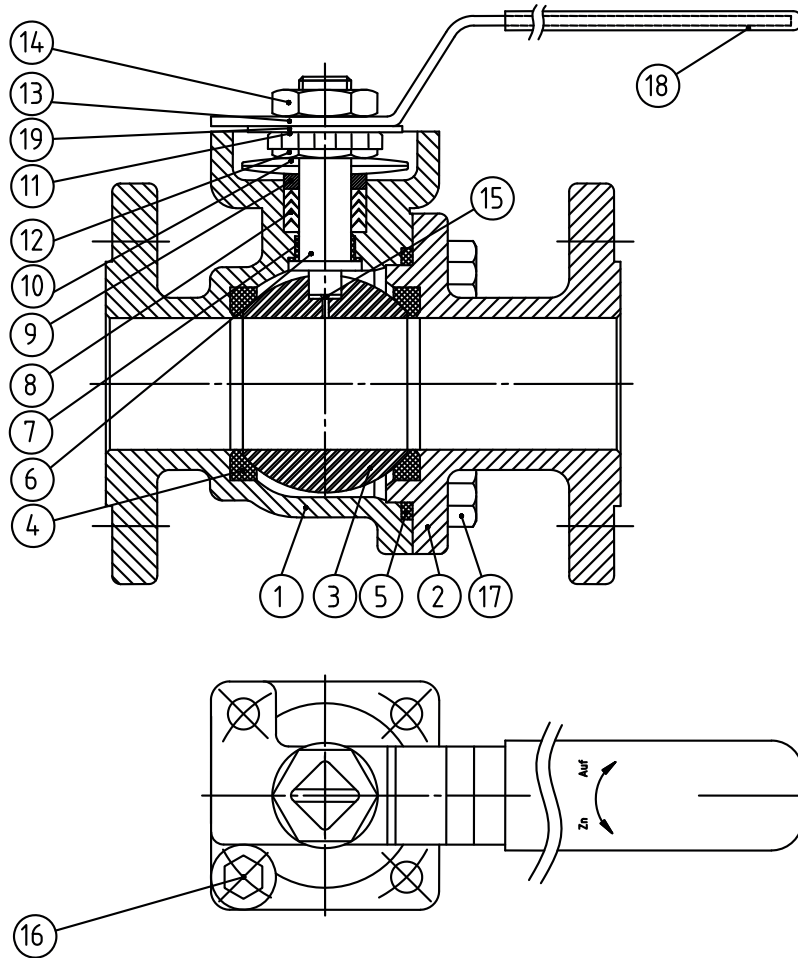


DN	A	B	C	E	H	L	L1	T	X1	X2	rotating drive	
15	1/2"	35	66.5	95	16	–	140	73.5	14.3	119	67	UT 05
20	3/4"	43	82.5	117	19	58.7	152	83.5	15.9	165	85	UT 15
25	1"	51	89	124	19	62	165	92	17.5	165	85	UT 15
32	1 1/4"	64	98.5	133	19	–	178	105	19.1	165	85	UT 15
40	1 1/2"	73	114.5	156	22	78	190	109	20.7	197	85	UT 17
50	2"	92	127	165	19	–	216	128	22.3	177	96	UT 20
65	2 1/2"	105	149	190	22	95.5	241	143	25.4	230	113	UT 30
80	3"	127	168	210	22	–	282.5	173.7	28.6	246	138	UT 35
100	4"	157	200	254	22	–	305	196.5	31.8	246	138	UT 35

Dimensions in mm. With integrated mounting pad acc. to DIN/ISO 5211 for direct actuator mounting.
 Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft
 ANSI Class 150/300 DN 1/2" – DN4"

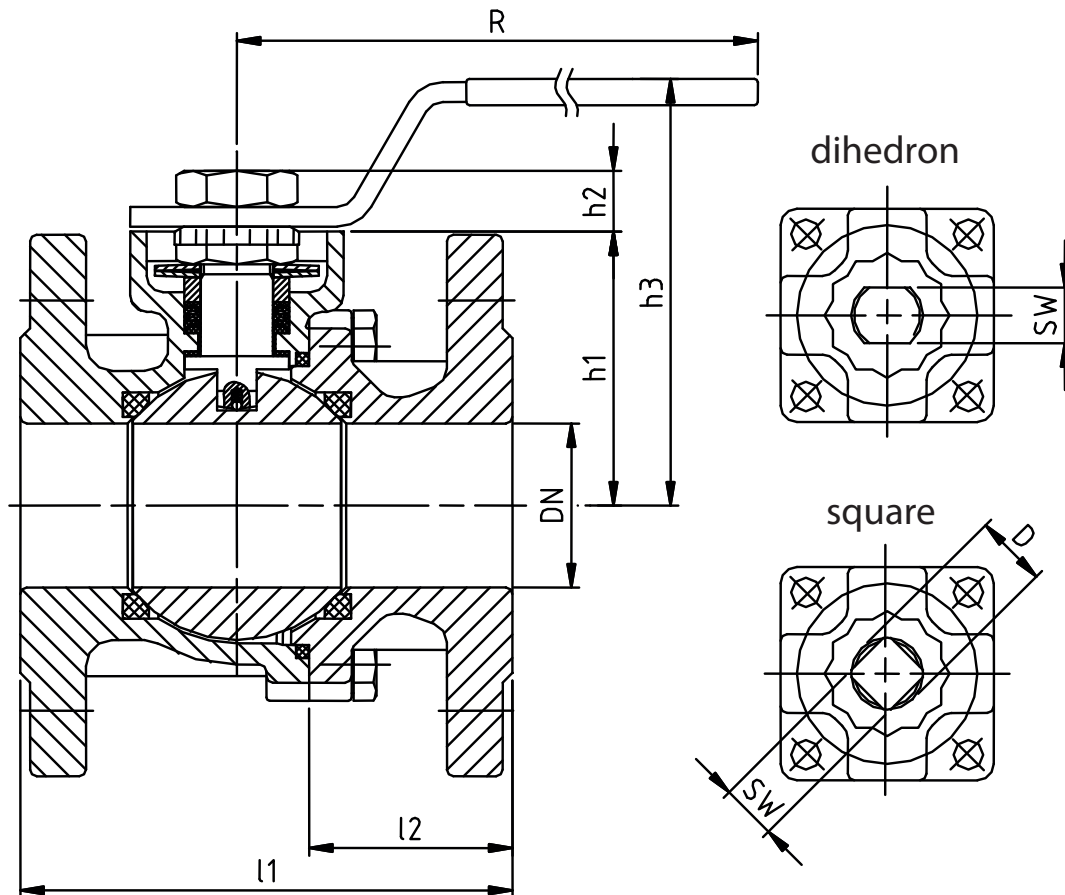
materials



pos.	description	amount	material
1	body	1	1.4408
2	end cap	1	1.4408
3	ball	1	CF8 / SUS 304
4	seat	2	RPTFE
5	body gasket	1	PTFE
6	stem	1	SUS 316
7	thrust washer	1	PTFE
8	gland packing	1	RPTFE
9	gland	1	SUS 316
10	disc spring	2	SUS 301

pos.	description	amount	material
11	tab washer	1	SUS 304
12	stem nut	1	SUS 304
13	handle	1	carbon steel
14	handle nut	1	carbon steel
15	anti-static	1	SUS 316
16	stopper	1 set	SUS 304
17	hex bolt		A4-70
18	cover	1	plastic
19	ring	1	PTFE

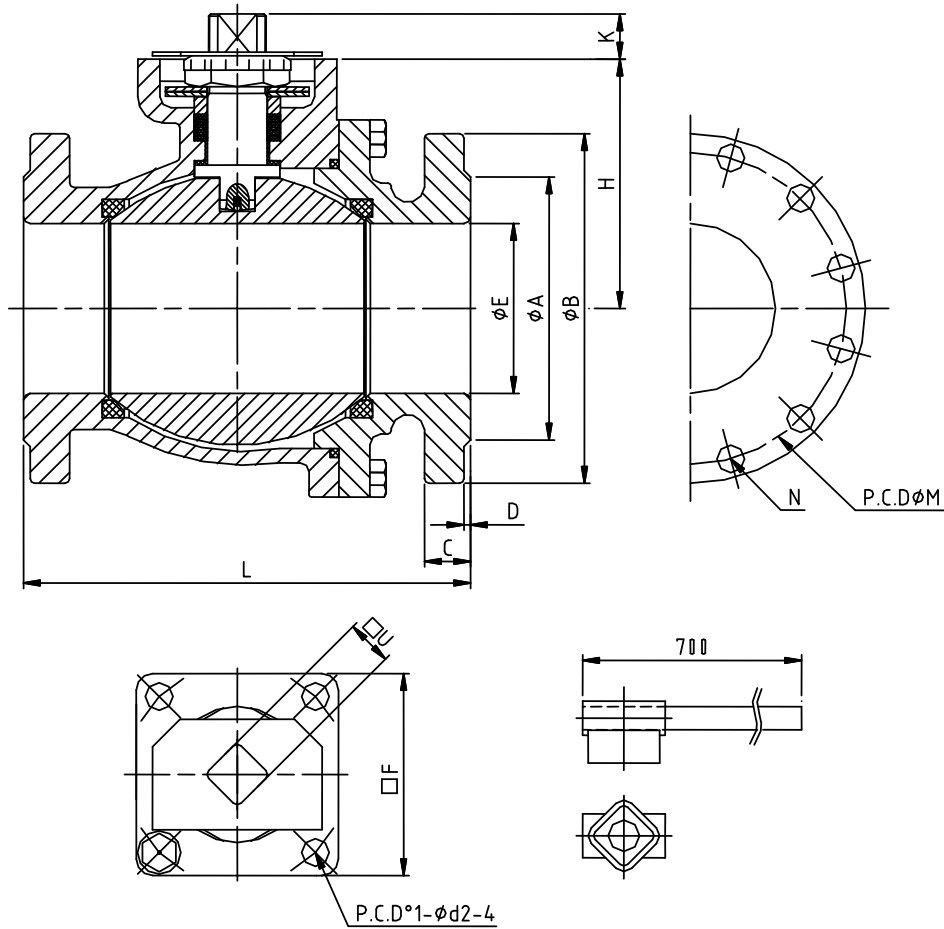
2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange for direct mounting of the actuator
 PN 16 / 40 DN 15–100 (1/2"–4")



DN		l1		l2		h1	h2		h3	R	ISO 5211	SW		D
[mm]	[inch]	F1	F4	F1	F4		square	dihedron				square	dihedron	
15	1/2	130	115	63.5	48.5	50	11	12	92	180	F05	11	11	14
20	3/4	150	120	81.5	51.5	53.5	11	12	95.5	180	F05	11	11	14
25	1	160	125	87	52	58.5	14	15.5	100.5	180	F05	14	14	18
32	1 1/4	180	130	107	57	71	14	15.5	113	180	F05	14	14	18
40	1 1/2	200	140	119	59	76	17	18.5	122.5	300	F07	18	17	22
50	2	230	150	142	62	83.5	17	18.5	130	300	F07	18	17	22
65	2 1/2	290	170	192	72	95	17	18.5	141.5	300	F07	18	17	22
80	3	310	180	201.2	71.2	113	22	20.5	194.5	400	F10	22	19	26
100	4	350	190	235.5	75.5	131	22	20.5	212.5	400	F10	22	19	26

Overall length acc. DIN 3202 F1, F4. Dimensions in mm. Integrated top flange acc. DIN/ISO 5211 for direct mounting of the actuator. Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft
 PN 16 / 40 DN 125–200 (5"–8")

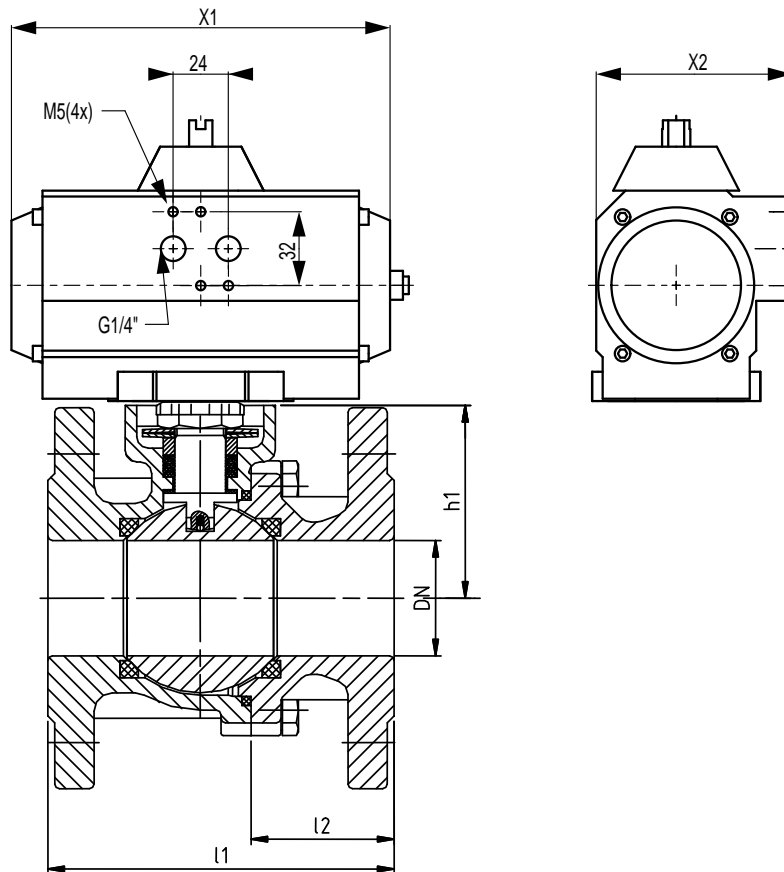


PN 16															
DN	A	B	C	D	M	K	N	L	d1	d2	E	F	H	U	
125	5"	188	250	22	3	210	22	Ø18-8	325	102	F10	125	90	151.5	22
150	6"	212	285	22	3	240	37	Ø22-8	350	140	F14	152	128	217	36
300	8"	268	340	24	3	295	37	Ø22-12	400	140	F15	203	128	252	36

PN 40															
DN	A	B	C	D	M	K	N	L	d1	d2	E	F	H	U	
125	5"	188	270	26	3	220	22	Ø26-8	325	102	F10	125	90	151.5	22
150	6"	218	300	28	3	250	37	Ø26-8	350	140	F14	152	128	217	36
300	8"	285	375	34	3	320	37	Ø30-12	400	140	F15	203	128	252	36

Dimensions in mm. Integrated top flange acc. DIN/ISO 5211 for direct mounting of the actuator.
 Temperature range -10°C to 200°C (see pressure-temperature curve).

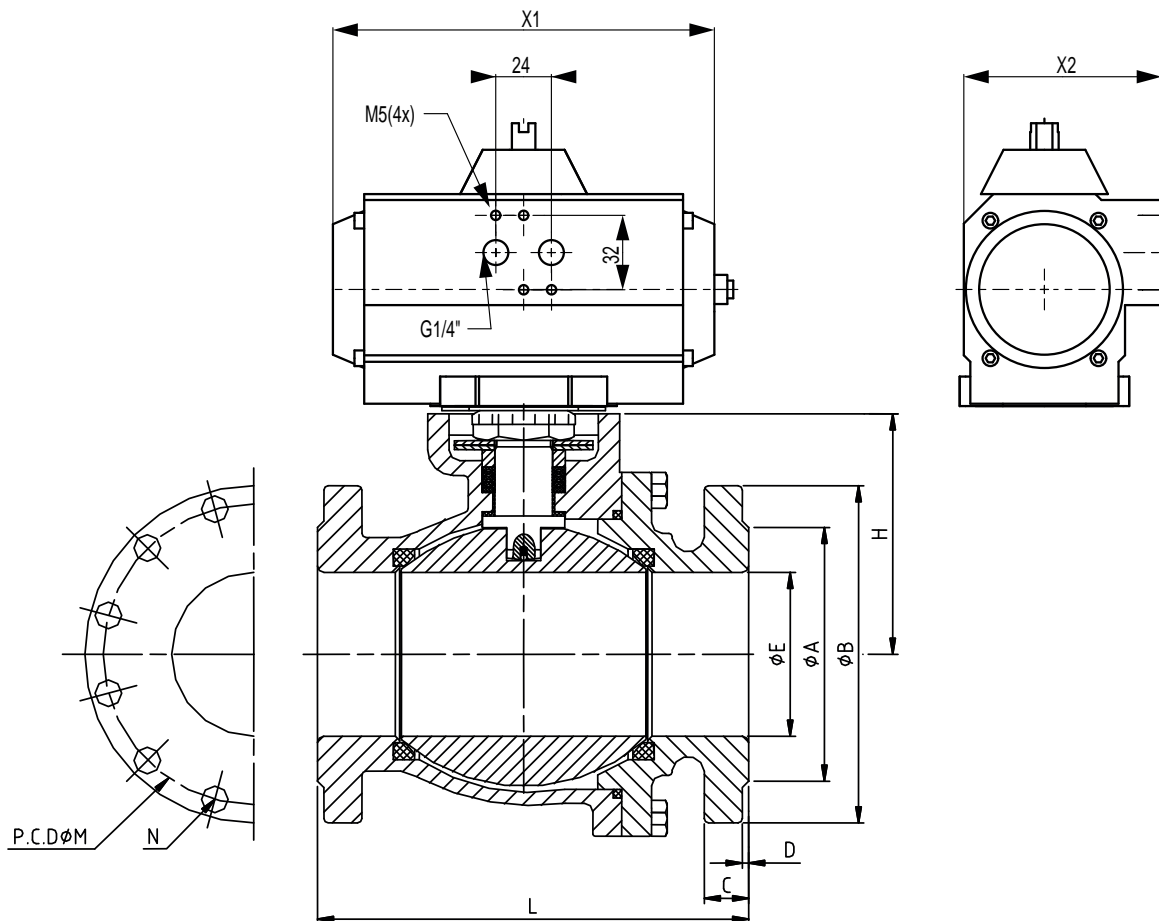
2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft and pneumatic
 double-acting actuator
 PN 16 / 40 DN 15–100 (1/2"–4")



DN		l1		l2		h1	ISO 5211	X1	X2	rotating drive
[mm]	[inch]	F1	F4	F1	F4					
15	1/2	130	115	63.5	48.5	50	F05	119	67	UT 05
20	3/4	150	120	81.5	51.5	53.5	F05	165	85	UT 15
25	1	160	125	87	52	58.5	F05	165	85	UT 15
32	1 1/4	180	130	107	57	71	F05	165	85	UT 15
40	1 1/2	200	140	119	59	76	F07	197	85	UT 17
50	2	230	150	142	62	83.5	F07	177	96	UT 20
65	2 1/2	290	170	192	72	95	F07	230	113	UT 30
80	3	310	180	201.2	71.2	113	F10	246	138	UT 35
100	4	350	190	235.5	75.5	131	F10	246	138	UT 35

Overall length acc. DIN 3202 F1, F4. Dimensions in mm. Integrated top flange acc. DIN/ISO 5211 for direct mounting of the actuator. Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft and pneumatic
 double-acting actuator
 PN 16 / 40 DN 125–200 (5"–8")



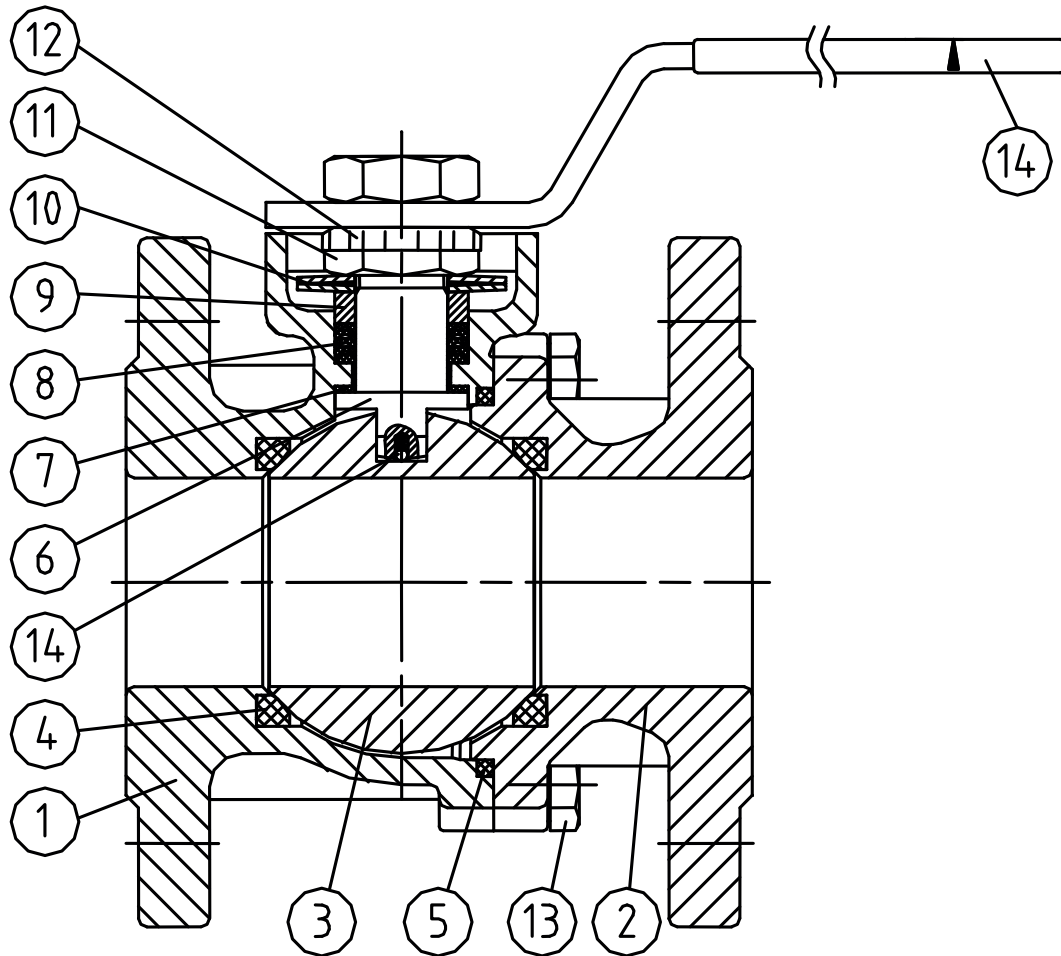
PN 16																
DN	A	B	C	D	M	K	N	L	d1	d2	E	H	X1	X2	rotating drive	
125	5"	188	250	22	3	210	22	Ø18-8	325	102	F10	125	151.5	351	151	UT45
150	6"	212	285	22	3	240	37	Ø22-8	350	140	F14	152	217	391	185	UT50
300	8"	268	340	24	3	295	37	Ø22-12	400	140	F15	203	252	418	185	UT55

PN 40																
DN	A	B	C	D	M	K	N	L	d1	d2	E	H	X1	X2	rotating drive	
125	5"	188	270	26	3	220	22	Ø26-8	325	102	F10	125	151,5	351	151	UT45
150	6"	218	300	28	3	250	37	Ø26-8	350	140	F14	152	217	391	185	UT50
300	8"	285	375	34	3	320	37	Ø30-12	400	140	F15	203	252	418	185	UT55

Dimensions in mm. Integrated top flange acc. DIN/ISO 5211 for direct mounting of the actuator.
 Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange for direct mounting of the actuator
 PN 16 / 40 DN 15–100 (1/2"–4")

materials

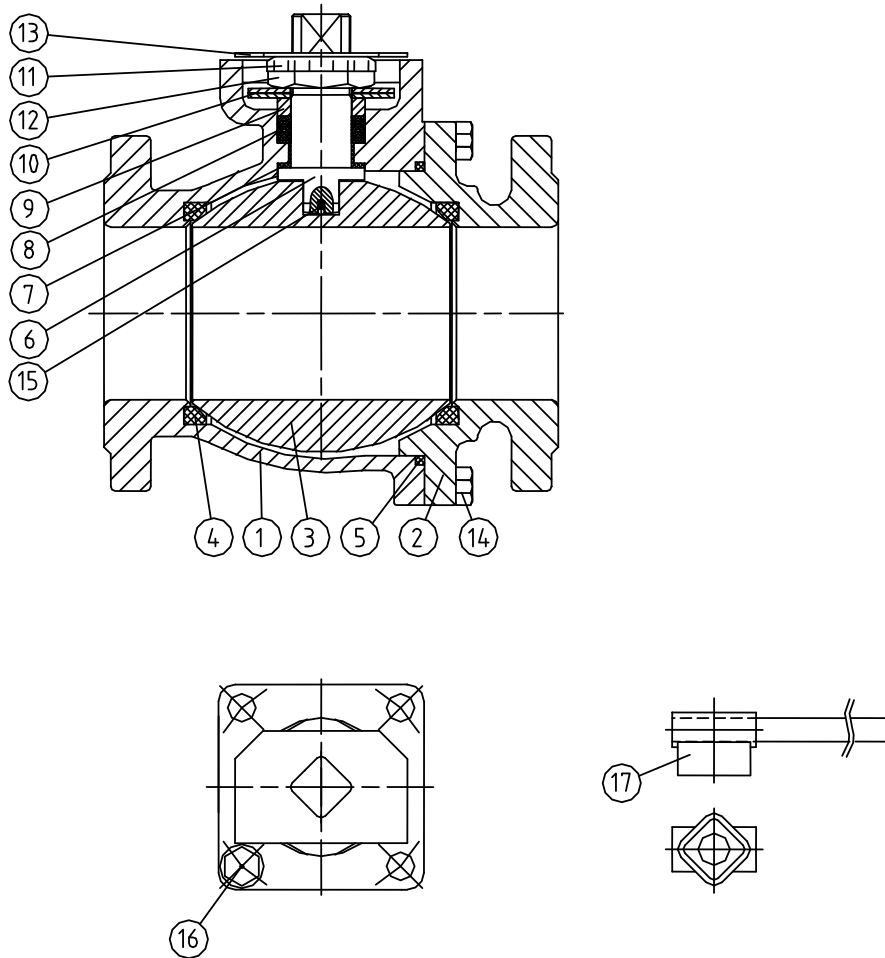


pos.	description	amount	material
1	body	1	1.4408
2	part of body	1	1.4408
3	ball	1	1.4401/1.4408
4	spherical seat	2	RPTFE
5	body gasket	1	PTFE
6	stem	1	1.4401
7	lower bearing	1	RPTFE
8	V-ring packing	1	PTFE / conductive PTFE

pos.	description	amount	material
9	clamping ring	1	1.4401
10	disc spring	2	1.4310
11	hexagon nut	1	A2-70
12	locking plate	1	1.4301
13	stop plate	1	1.4308
14	hexagon screw		A4-70
15	anti-static ball	1	1.4401
16	handle	1	1.4301

2-part flange ball valve of stainless steel
 full opening, DIN/ISO 5211 top flange, square operating shaft
 PN 16 / 40 DN 125–200 (5"–8")

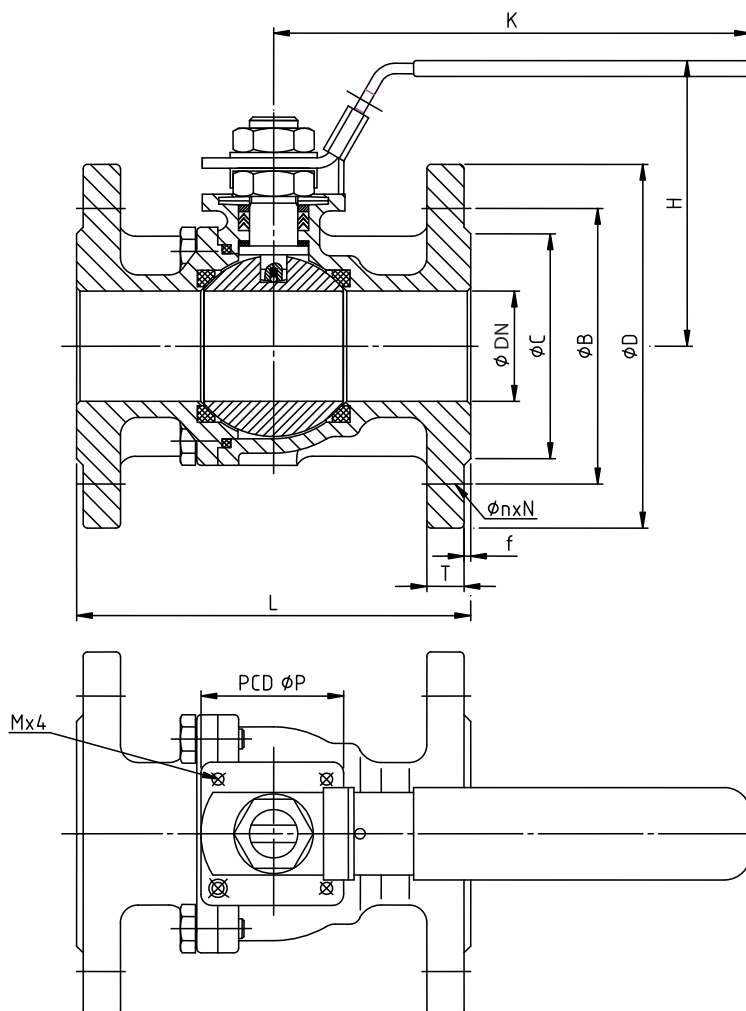
materials



pos.	description	amount	material
1	body	1	1.4408
2	screwed socket	1	1.4408
3	ball	1	1.4401
4	seat	2	RPTFE
5	body gasket	1	PTFE
6	stem	1	1.4401
7	clamping ring	1	RPTFE
8	gland packing	1 set	PTFE / conductive PTFE
9	gland	1	1.4301

pos.	description	amount	material
10	disc spring	2	1.4310
11	locking plate	1	1.4301
12	hexagon nut	1	A2-70
13	stop plate	1	1.4308
14	hexagon screw		A2-70
15	anti-static ball	1	1.4401
16	Anschlag	1	A2-70
17	handle		1.4308

2-part flange ball valve (F) of stainless steel
hand lever, full opening
PN 40 / DN 15–50, PN 16 / DN 65–100



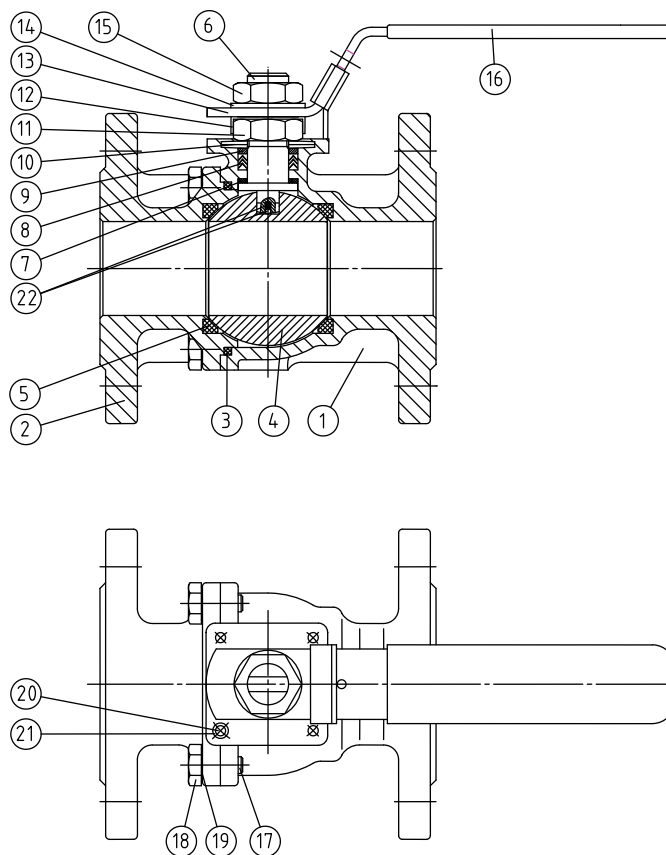
DN	Ø B	Ø C	Ø D	E	Ø F	H	K	L	T	f	Ø n	N	M	Ø P
15	65	45	95	8	12	72	145	115	16	2	14	4	5	42/F04
20	75	58	105	8	12	74	145	120	18	2	14	4	5	42/F04
25	85	68	115	8.7	14	81	178	125	18	2	14	4	6	50/F05
32	100	78	140	8.7	14	87	178	130	18	2	18	4	6	50/F05
40	110	88	150	15	22	126	255	140	18	3	18	4	8	70/F07
50	125	102	165	15	22	136	255	150	20	3	18	4	8	70/F07
65	145	122	185	15	22	155	255	170	18	3	18	4	8	70/F07
80	160	138	200	17	25.8	167	350	180	20	3	18	8	10	102/F10
100	180	158	220	17	25.8	179	400	190	20	3	18	8	10	102/F10

Overall length according to DIN 3202 F4/short.

Dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part flange ball valve (F) of stainless steel
 hand lever, full opening
 PN 40 / DN 15–50, PN 16 / DN 65–100

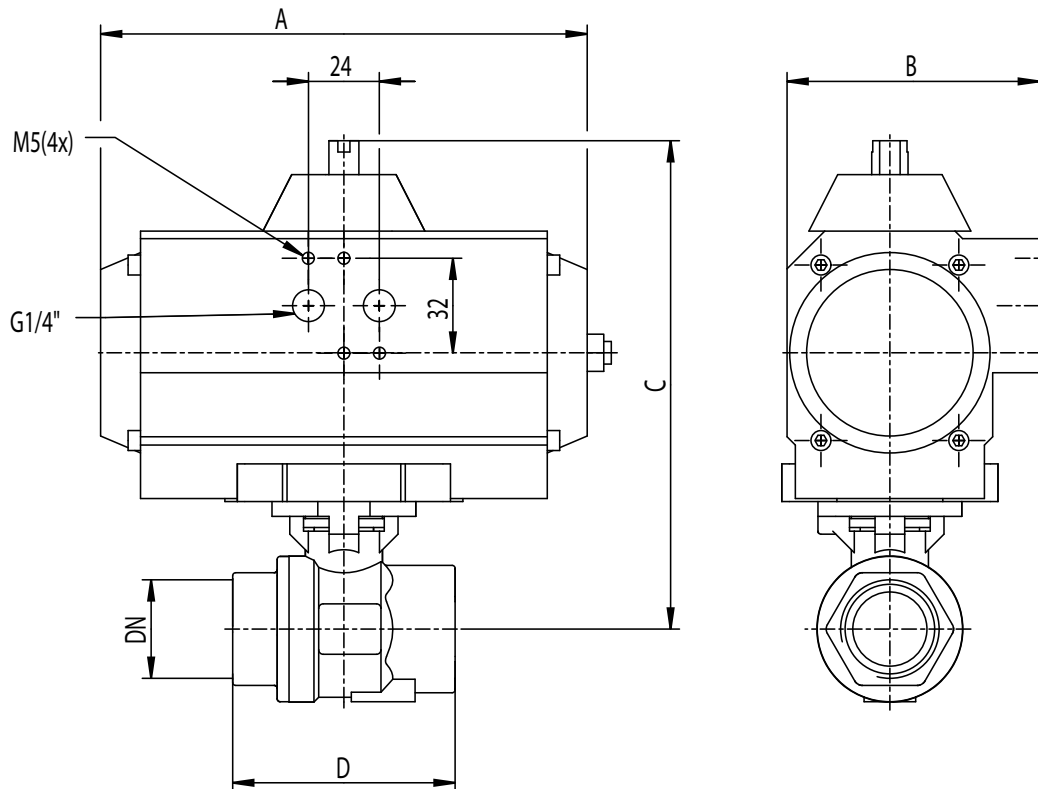
materials



pos.	description	amount	material
1	housing	1	1.4408
2	end piece	1	1.4408
3	housing seal	1	PTFE
4	ball	1	1.4401
5	ball seal	2	reinforced PTFE
6	operating shaft	1	1.4401
7	clamping ring	1	PTFE
8	operating shaft seal	2	PTFE
9	stuffing box	1	1.4301
10	disc spring	2	1.4301
11	operating shaft nut	1	1.4301

pos.	description	amount	material
12	circlip	1	1.4301
13	body stop	1	1.4301
14	washer	1	1.4301
15	nut	1	1.4301
16	handle	1	1.4301
17	screw	4-8	1.4301
18	nut	4-8	1.4301
19	washer	4-8	1.4301
20	screw	1	1.4301
21	washer	1	1.4301
22	antistatic spring	2	1.4301

2-part ball valve of stainless steel
 thread end (T), full opening, DIN/ISO 5211 top flange, square operating shaft and
 pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic
 single-acting)
 PN 63 DN 8 (1/4") – DN 80 (3")



ball valve with rotating drive - PD = pneumatic double-acting

DN	A	B	C	D	rotating drive
8	119	67		51	UT 05
10	119	67		51	UT 05
15	119	67	156	63	UT 05
20	165	85	162	65	UT 15
25	165	85	165	75	UT 15
32	165	85	193	87	UT 15
40	197	85	197	95	UT 17
50	177	96	227	111	UT 20
65	230	113	287	185	UT 30
80	246	138	296	205	UT 35

ball valve with rotating drive - PE = pneumatic single-acting

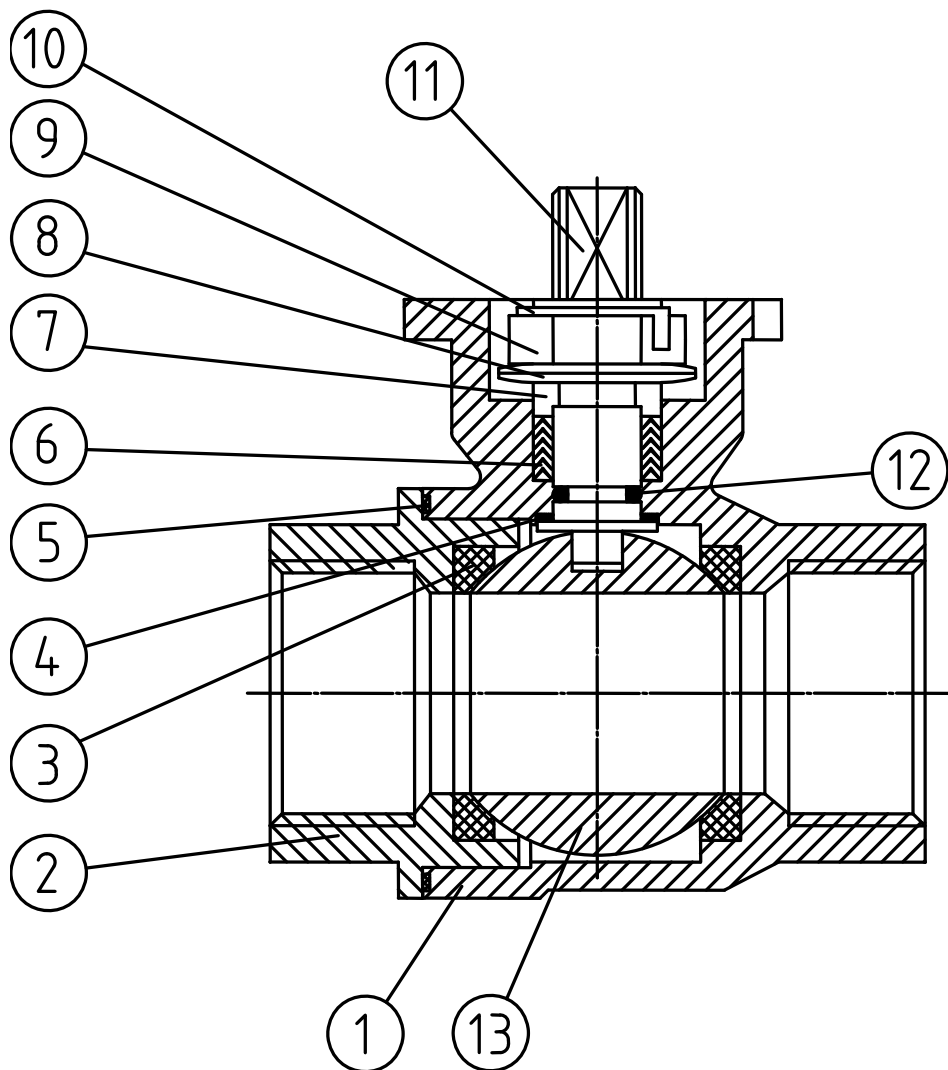
DN	A	B	C	D	rotating drive
8	119	67		51	UT 05s2
10	119	67		51	UT 05s2
15	119	67	156	63	UT 15s4
20	165	85	162	65	UT 15s4
25	165	85	165	75	UT 17s4
32	197	85	193	87	UT 20s4
40	177	96	197	95	UT 25s4
50	230	113	227	111	UT 30s4
65	246	138	287	185	UT 35s4
80	290	138	296	205	UT 40s4

Actuator design 5 bar control pressure.

Thread according to DIN 2999, dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

2-part ball valve of stainless steel
 thread end (T), full opening, DIN/ISO 5211 top flange
 PN 63 DN 8 (1/4") – DN 80 (3")

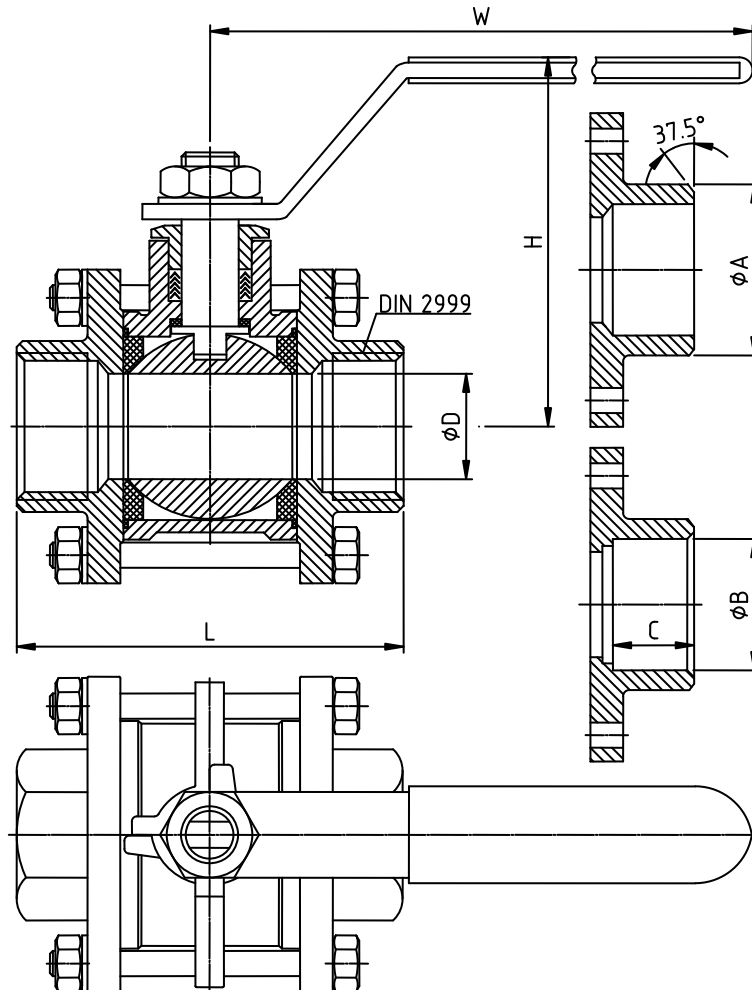
materials



pos.	description	amount	material
1	housing	1	1.4408
2	end piece	1	1.4408
3	ball seal	2	PTFE
4	clamping ring	1	PTFE
5	housing seal	1	PTFE
6	operating shaft seal	2	PTFE
7	stuffing box nut	1	1.4401

pos.	description	amount	material
8	disc spring	2	1.4301
9	nut	1	1.4301
10	circlip	1	1.4301
11	operating shaft	1	1.4401
12	O-ring	1	Viton
13	ball	1	1.4401

3-part ball valve of stainless steel
 hand lever, thread end (T) or welding end (B), full opening
 PN 63 DN 8–100 (1/4" – 4")
 optional: type VL-K551T/B-Hv with lockable hand lever

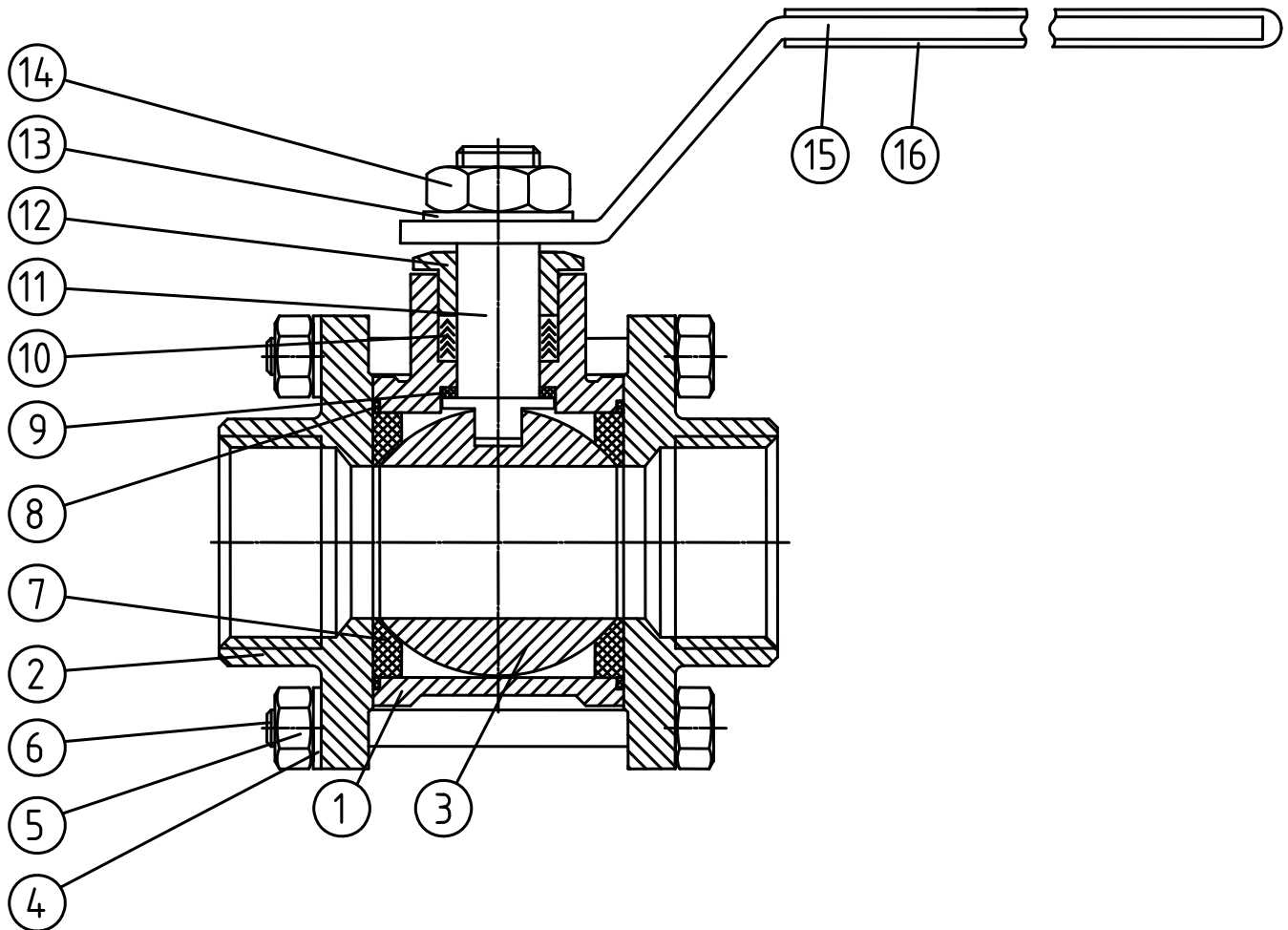


DN	Ø D	L	H	W	Ø A	Ø B	C
8	11	50	56	90	18.5	14.2	10
10	12,5	60	56	90	18.5	17.6	10
15	15	75	61	100	22.5	21.8	13
20	20	80	64	100	28.5	27.2	13
25	25.4	90	73	135	34.5	33.9	15
32	32	110	78	135	43.5	42.7	15
40	38	120	87	170	50	48.8	16
50	50	140	96	170	63	61.2	16
65	65	185	145	260	84	73.9	17
80	80	205	155	260	98	89.8	17
100	100	240	181	280	117	115.3	20

Thread according to DIN 2999,
 dimensions in mm.
 Temperature range -10°C to 200°C
 (see pressure-temperature curve).

3-part ball valve of stainless steel
 hand lever, thread end (T) or welding end (B), full opening
 PN 63 DN 8–100 (1/4" – 4")
 optional: type VL-K551T/B-Hv with lockable hand lever

materials



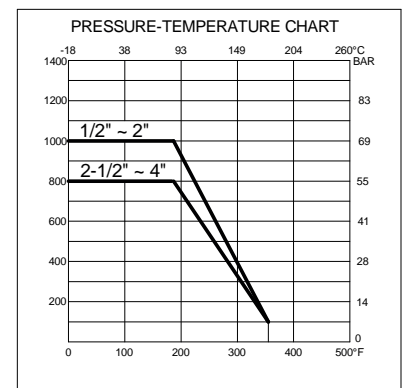
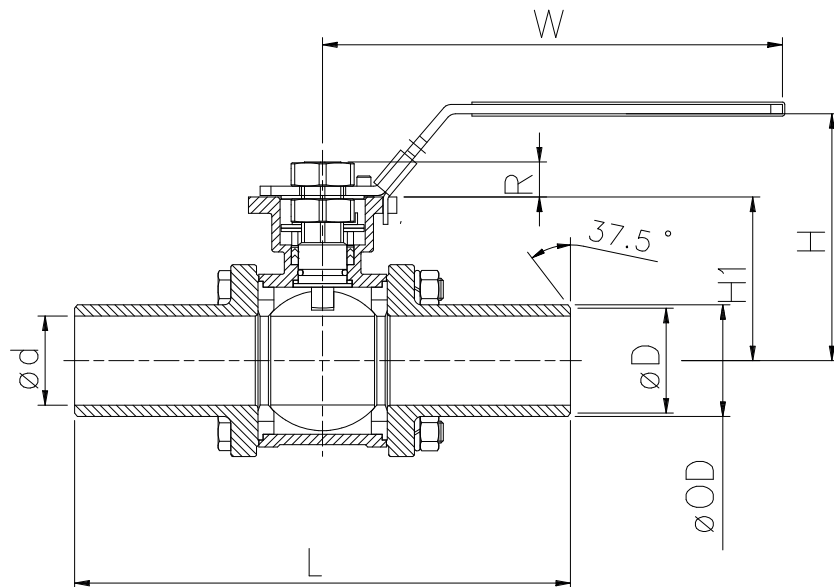
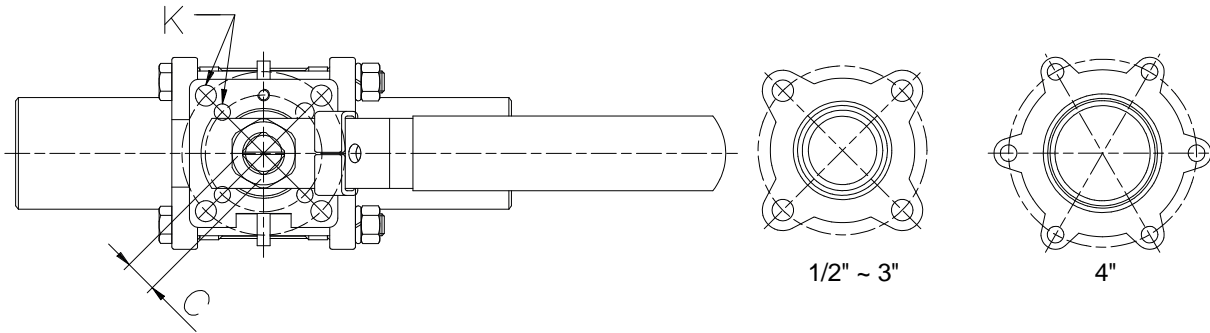
pos.	description	amount	material
1	housing	1	1.4408
2	end piece	2	1.4408
3	ball	1	1.4401
4	washer	4	1.4301
5	nut	4	1.4301
6	screw	4	1.4301
7	ball seal	2	PTFE
8	housing seal	2	PTFE
9	clamping ring	1	PTFE

pos.	description	amount	material
10	operating shaft seal	1 set	PTFE
11	operating shaft	1	1.4401
12	stuffing box	1	1.4301
13	washer	1	1.4301
14	nut	1	1.4301
15	handle	1	1.4301
16	handle coat	1	plastics
–	locking device	1	1.4301 (optional)

3-part ball valve of stainless steel

lockable hand lever, long welding ends, full opening

PN 63 DN 15–50 (1/2"–2") resp. PN 40 DN 65–100 (2"–4")



DN	C	Ø d	Ø D	Ø OD	H	H1	K	L	R	W	
15	1/2"	9	15	18.2	22.8	73	36	F03/F04	220	9	111
20	3/4"	9	20	23.3	28.4	78	41	F03/F04	220	9	111
25	1"	11	25	28.2	35.2	87.5	49.5	F04/F05	240	11	186
32	1 1/4"	11	32	35.2	44.4	94	56	F04/F05	254	11	186
40	1 1/2"	14	38	41.2	50.3	109	70	F05/F07	260	14	200
50	2"	14	50	53.2	63	117	78	F05/F07	270	14	200
65	2 1/2"	17	65	69	79.5	139	98	F07/F010	338	17	265.5
80	3"	17	80	84	92.5	149.5	109.5	F07/F010	350	17	265.5
100	4"	22	100	107	117.5	195	140	F010/F012	350	22	321

Dimensions in mm.

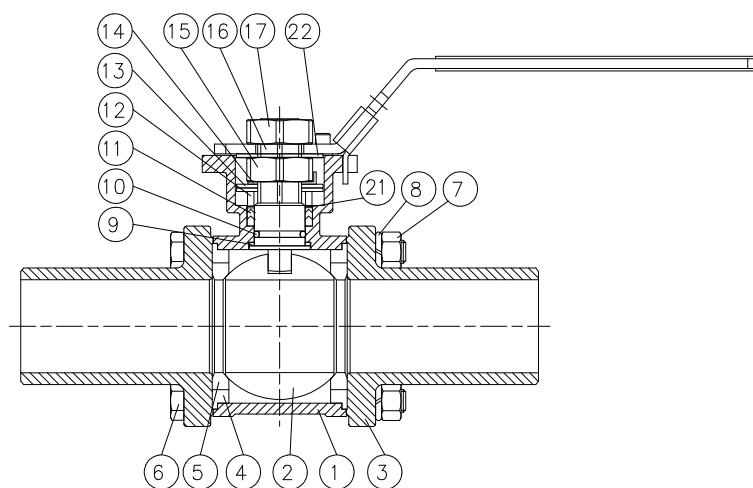
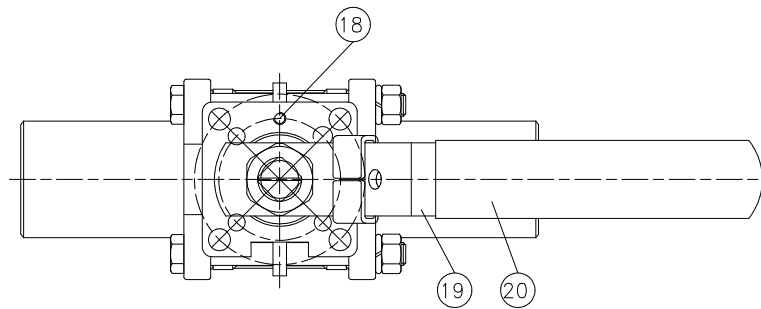
Temperature range -18°C to 177°C (see pressure-temperature curve).

3-part ball valve of stainless steel

lockable hand lever, long welding ends, full opening

PN 63 DN 15–50 (1/2"–2") resp. PN 40 DN 65–100 (2"–4")

materials



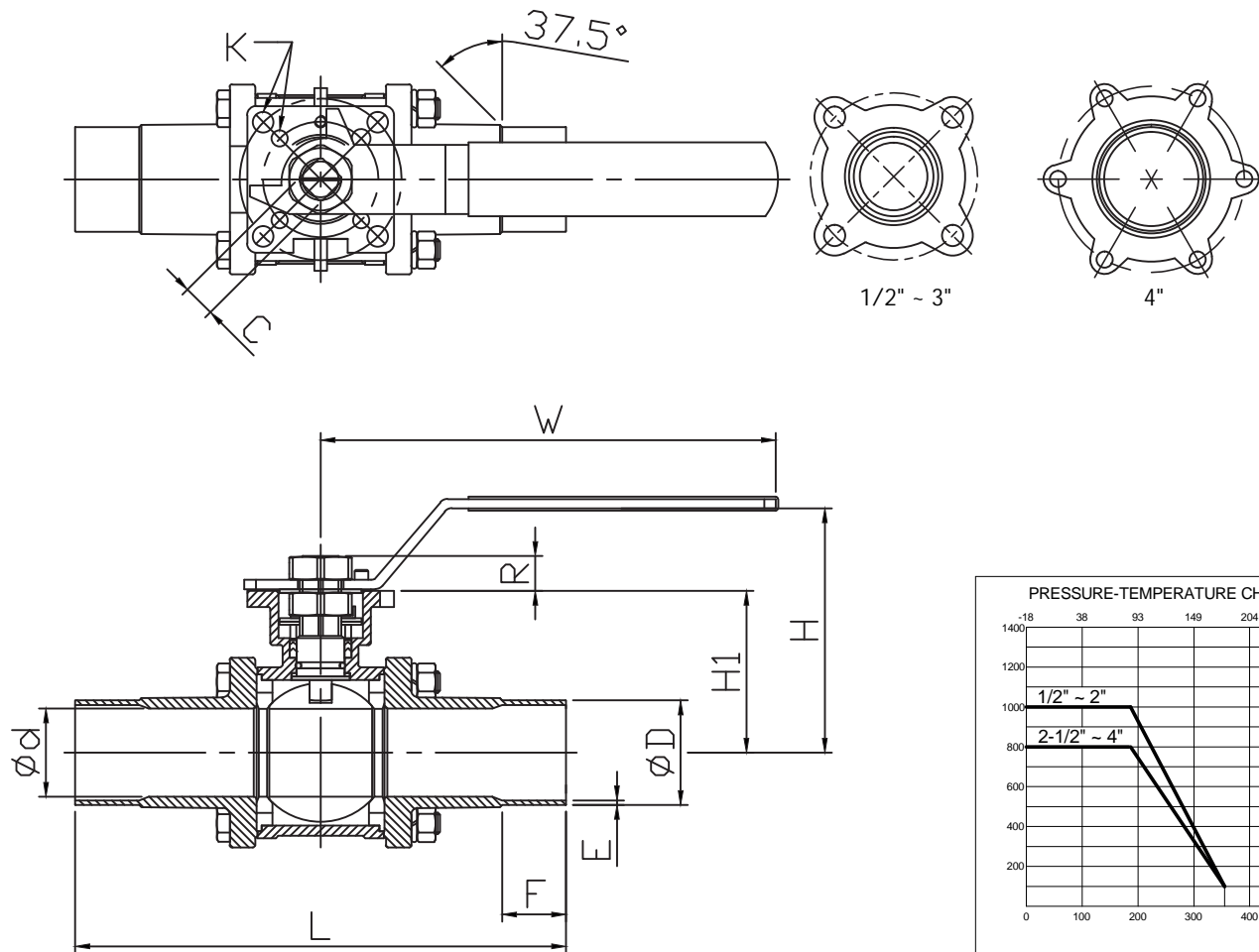
pos.	description	amount	material
1	body	1	ASTM-A351-CF8M
2	ball	1	ASTM-A351-CF8M
3	cap	2	ASTM-A351-CF8M
4	seat	2	PTFE
5	joint gasket	2	PTFE
6	bolt	4-6	SUS 304
7	nut	4-12	SUS 304
8	spring washer	4-12	SUS 304
9	thrust washer	1	PTFE
10	O-ring	1	VITON
11	stem packing	1	PTFE

pos.	description	amount	material
12	glant bush	1	SUS 304
13	belleville washer	2	SUS 301
14	stop washer	1	SUS 304
15	stem nut	1	SUS 304
16	stem	1	SUS 316
17	handle nut	1	SUS 304
18	stop pin	1	SUS 304
19	handle	1	SUS 304
20	handle cover	1	plastic
21	thrust washer	1	PTFE 15%
22	square washer	1	SUS 304

3-part ball valve of stainless steel

lockable hand lever, long welding ends, full opening

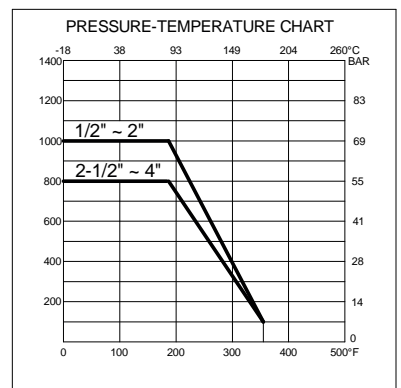
PN 63 DN 15–50 (1/2"–2") resp. PN 40 DN 65–100 (2"–4")



DN	C	Ø d	ISO Standard		F	H	H1	K	L	R	W	
			Ø D	E								
15	1/2"	9	15	21.3	2	20	73	36	F03/F04	218	9	111
20	3/4"	9	20	26.9	2	20	78	41	F03/F04	218	9	111
25	1"	11	25	33.7	2	20	87.5	49,5	F04/F05	236	11	186
32	1 1/4"	11	32	42.4	2	20	94	56	F04/F05	250	11	186
40	1 1/2"	14	38	48.3	2	20	109	70	F05/F07	256	14	200
50	2"	14	50	60.3	2	20	117	78	F05/F07	266	14	200
65	2 1/2"	17	65	76.1	2	20	139	98	F07/F010	334	17	265.5
80	3"	17	80	88.9	2	20	149.5	109,5	F07/F010	346	17	265.5
100	4"	22	100	114.3	2	20	195	140	F010/F012	346	22	321

Dimensions in mm.

Temperature range -18°C to 177°C (see pressure-temperature curve).

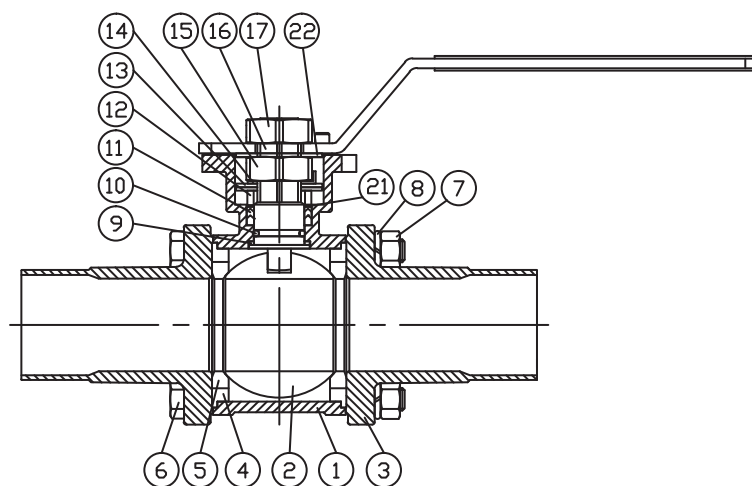
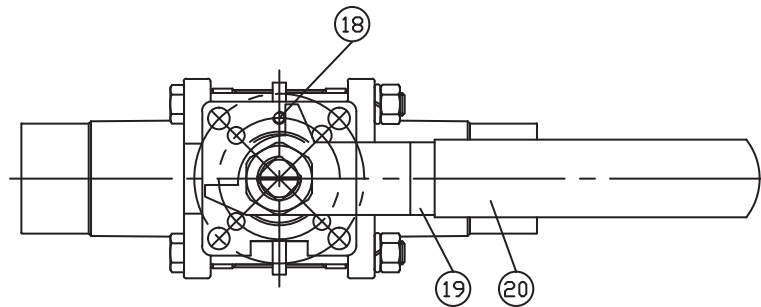


3-part ball valve of stainless steel

lockable hand lever, long welding ends, full opening

PN 63 DN 15–50 (1/2"–2") resp. PN 40 DN 65–100 (2"–4")

materials

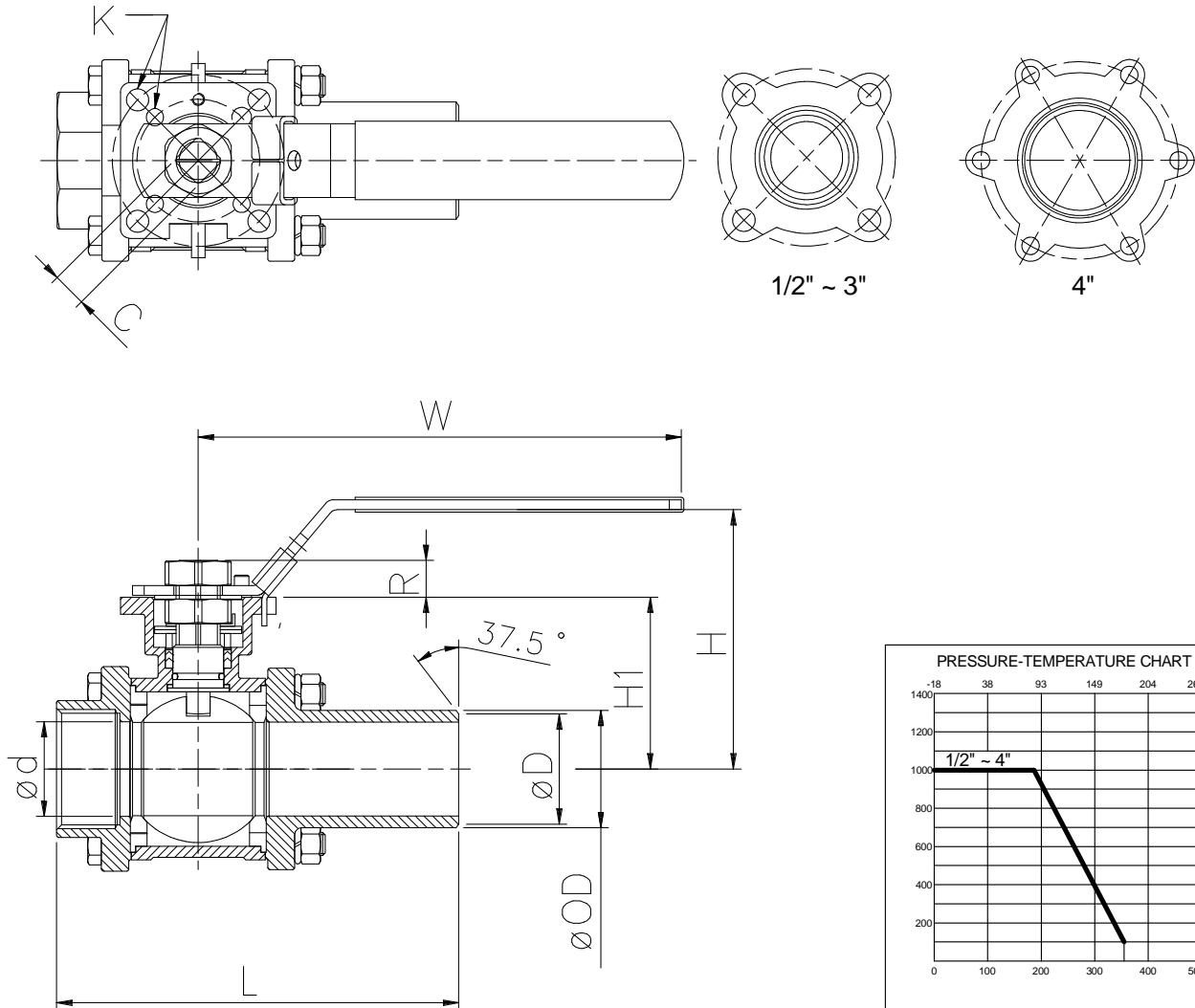


pos.	description	amount	material
1	body	1	ASTM-A351-CF8M
2	ball	1	ASTM-A351-CF8M
3	cap	2	ASTM-A351-CF8M
4	seat	2	PTFE
5	joint gasket	2	PTFE
6	bolt	4-6	SUS 304
7	nut	4-12	SUS 304
8	spring washer	4-12	SUS 304
9	thrust washer	1	PTFE
10	O-ring	1	VITON
11	stem packing	1	PTFE

pos.	description	amount	material
12	glant bush	1	SUS 304
13	belleville washer	2	SUS 301
14	stop washer	1	SUS 304
15	stem nut	1	SUS 304
16	stem	1	SUS 316
17	handle nut	1	SUS 304
18	stop pin	1	SUS 304
19	handle	1	SUS 304
20	handle cover	1	plastic
21	thrust washer	1	PTFE 15%
22	square washer	1	SUS 304

3-part ball valve of stainless steel

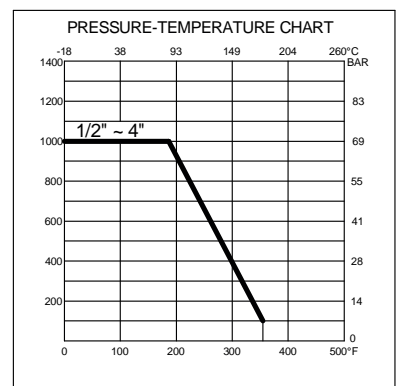
lockable hand lever, 1x thread end, 1x long welding end



DN	C	Ø d	Ø D	Ø OD	H	H1	K	L	R	W
15	1/2"	9	15	18.2	22.8	73	36	F03/F04	143	111
20	3/4"	9	20	23.3	28.4	78	41	F03/F04	145.3	111
25	1"	11	25	28.2	35.2	87.5	49.5	F04/F05	163.5	186
32	1 1/4"	11	32	35.2	44.4	94	56	F04/F05	178	186
40	1 1/2"	14	38	41.2	50.3	109	70	F05/F07	186.8	200
50	2"	14	50	53.2	63	117	78	F05/F07	199.5	200
65	2 1/2"	17	65	69	79.5	139	98	F07/F010	246.8	265.5
80	3"	17	80	84	92.5	149.5	109.5	F07/F010	266	265.5
100	4"	22	100	107	117.5	195	140	F010/F012	288	321

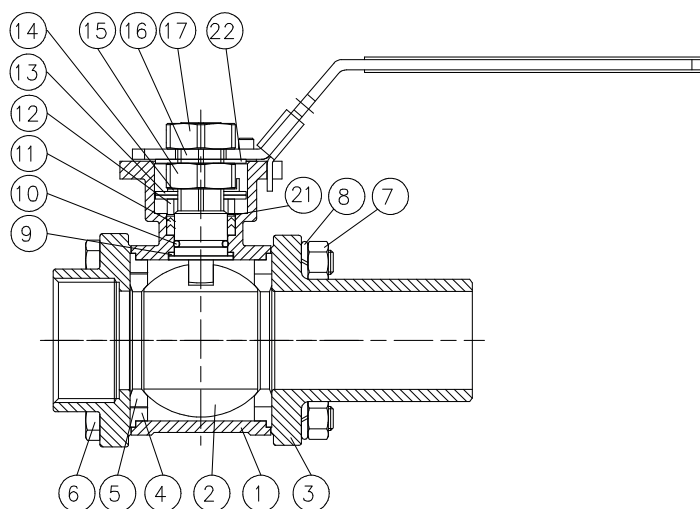
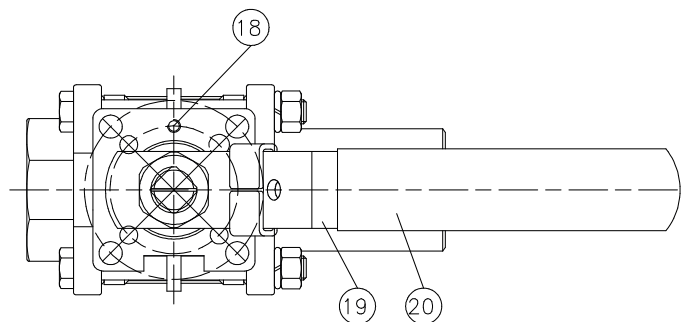
Dimensions in mm.

Temperature range -18°C to 177°C (see pressure-temperature curve).



3-part ball valve of stainless steel
lockable hand lever, 1x thread end, 1x long welding end

materials

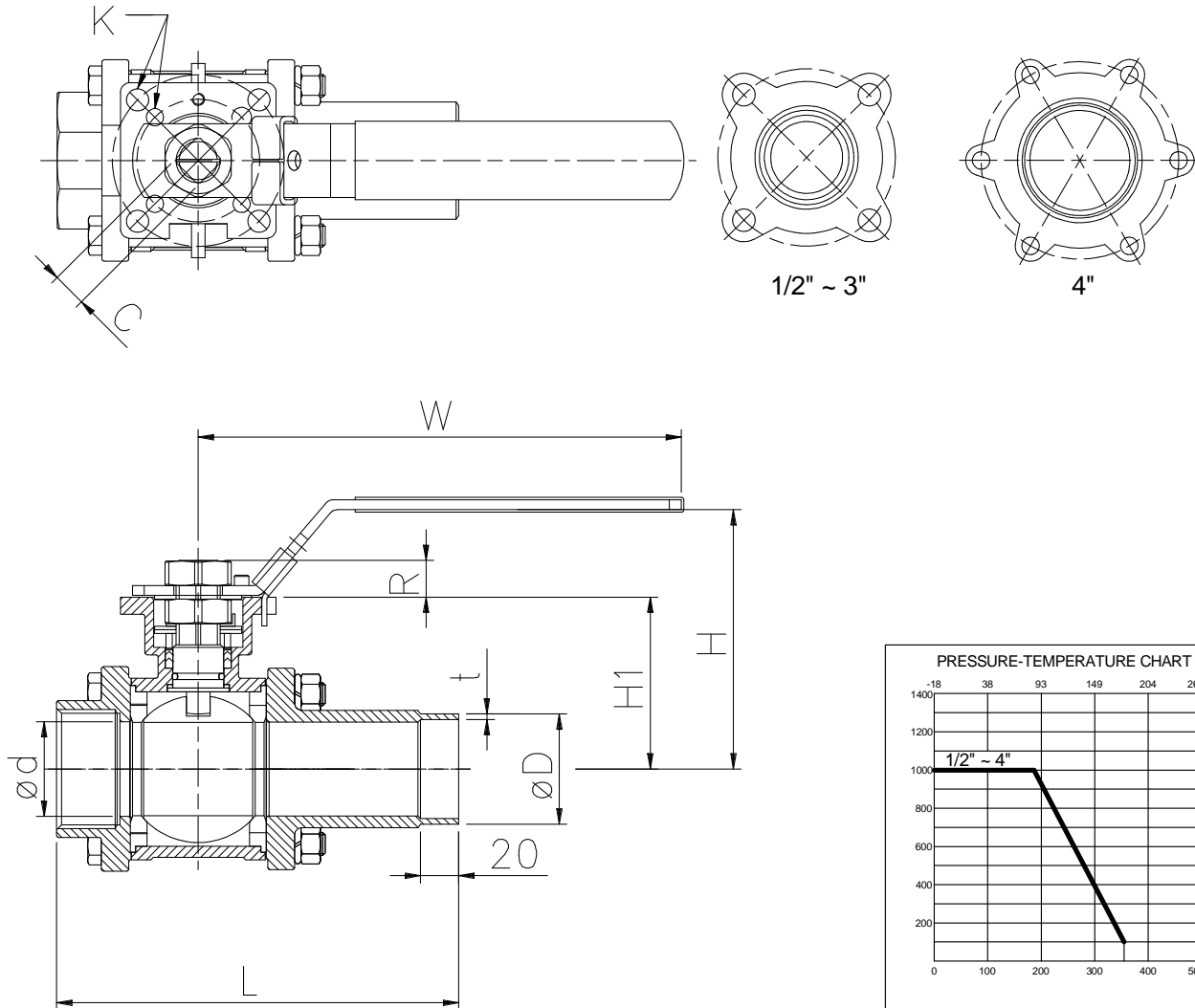


pos.	description	amount	material
1	body	1	ASTM-A351-CF8M
2	ball	1	ASTM-A351-CF8M
3	cap	2	ASTM-A351-CF8M
4	seat	2	PTFE
5	joint gasket	2	PTFE
6	bolt	4-6	SUS 304
7	nut	4-12	SUS 304
8	spring washer	4-12	SUS 304
9	thrust washer	1	PTFE
10	O-ring	1	VITON
11	stem packing	1	PTFE

pos.	description	amount	material
12	glant bush	1	SUS 304
13	belleville washer	2	SUS 301
14	stop washer	1	SUS 304
15	stem nut	1	SUS 304
16	stem	1	SUS 316
17	handle nut	1	SUS 304
18	stop pin	1	SUS 304
19	handle	1	SUS 304
20	handle cover	1	plastic
21	thrust washer	1	PTFE 15%
22	square washer	1	SUS 304

3-part ball valve of stainless steel

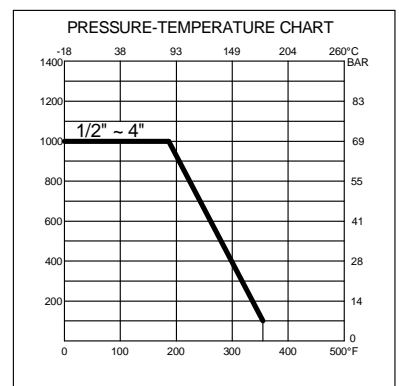
lockable hand lever, 1x thread end, 1x long welding end



DN	C	Ø d	Ø D	t	H	H1	K	L	R	W
15	1/2"	9	15	21.3	2	73	36	F03/F04	142	111
20	3/4"	9	20	26.9	2	78	41	F03/F04	144.3	111
25	1"	11	25	33.7	2	87.5	49.5	F04/F05	161.5	186
32	1 1/4"	11	32	42.4	2	94	56	F04/F05	173	186
40	1 1/2"	14	38	48.3	2	109	70	F05/F07	184.8	200
50	2"	14	50	60.3	2	117	78	F05/F07	197.5	200
65	2 1/2"	17	65	76.1	2	139	98	F07/F010	244.8	265.5
80	3"	17	80	88.9	2	149.5	109.5	F07/F010	264	265.5
100	4"	22	100	114.3	2	195	140	F010/F012	286	321

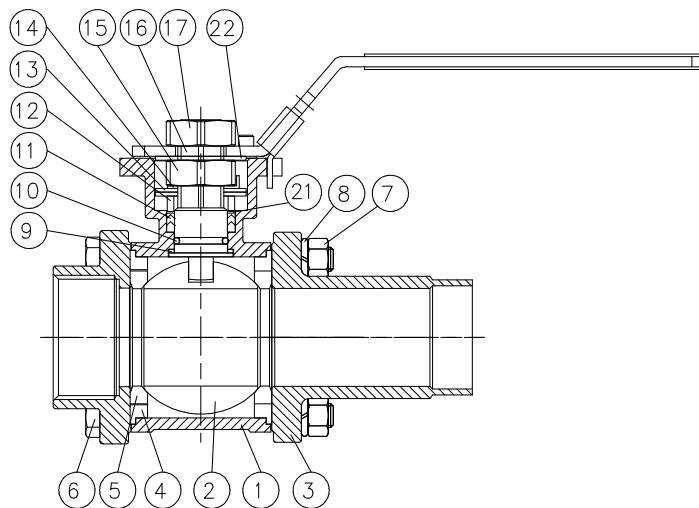
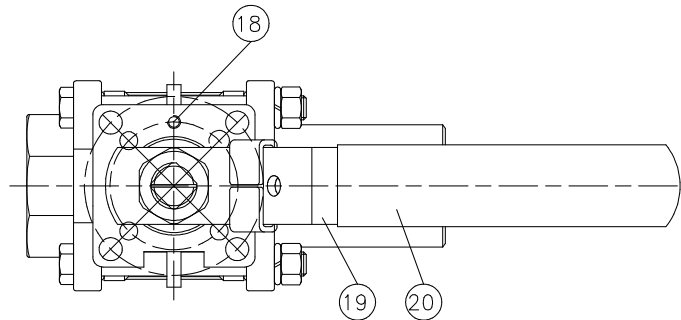
Dimensions in mm.

Temperature range -18°C to 177°C (see pressure-temperature curve).



3-part ball valve of stainless steel
lockable hand lever, 1x thread end, 1x long welding end

materials



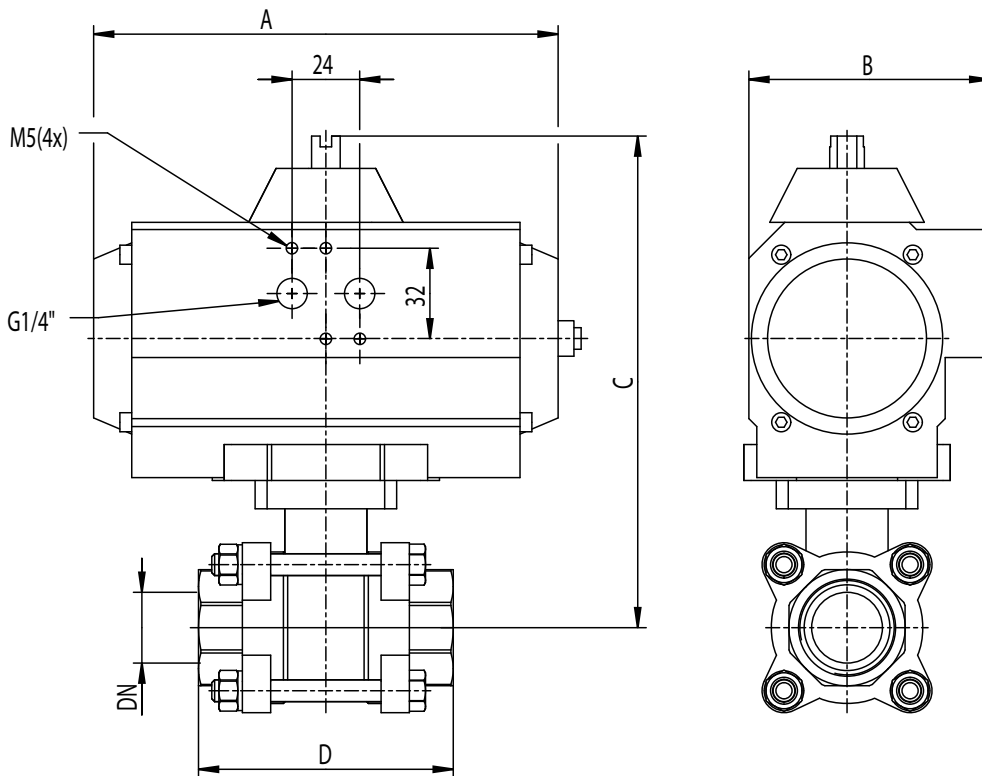
pos.	description	amount	material
1	body	1	ASTM-A351-CF8M
2	ball	1	ASTM-A351-CF8M
3	cap	2	ASTM-A351-CF8M
4	seat	2	PTFE
5	joint gasket	2	PTFE
6	bolt	4-6	SUS 304
7	nut	4-12	SUS 304
8	spring washer	4-12	SUS 304
9	thrust washer	1	PTFE
10	O-ring	1	VITON
11	stem packing	1	PTFE

pos.	description	amount	material
12	glant bush	1	SUS 304
13	belleville washer	2	SUS 301
14	stop washer	1	SUS 304
15	stem nut	1	SUS 304
16	stem	1	SUS 316
17	handle nut	1	SUS 304
18	stop pin	1	SUS 304
19	handle	1	SUS 304
20	handle cover	1	Kunststoff
21	thrust washer	1	PTFE 15%
22	square washer	1	SUS 304

3-part ball valve of stainless steel

DIN/ISO 5211 top flange, thread end (T), pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic single-acting)

PN 63 DN 10–100



ball valve with rotating drive - PD = pneumatic double-acting

DN	A	B	C	D	rotating drive	
8	1/4"	119	67	141	65	UT 05
10	3/8"	119	67	141	65	UT 05
15	1/2"	119	67	141	75	UT 05
20	3/4"	119	67	145	80	UT 05
25	1"	165	85	174	90	UT 15
32	1 1/4"	165	85	179	110	UT 15
40	1 1/2"	165	85	189	120	UT 15
50	2"	177	96	220	140	UT 20
65	2 1/2"	239	96	241	185	UT 25
80	3"	246	138	306	205	UT 35
100	4"	246	138	334	240	UT 35

ball valve with rotating drive - PE = pneumatic single-acting

DN	A	B	C	D	rotating drive	
8	1/4"	165	85	161	65	UT 15s4
10	3/8"	165	85	161	65	UT 15s4
15	1/2"	165	85	161	75	UT 15s4
20	3/4"	197	85	165	80	UT 17s4
25	1"	197	85	173	90	UT 17s4
32	1 1/4"	177	96	201	110	UT 20s4
40	1 1/2"	239	96	211	120	UT 25s4
50	2"	230	113	239	140	UT 30s4
65	2 1/2"	246	138	294	185	UT 35s4
80	3"	391	185	358	205	UT 50s4
100	4"	391	185	385	240	UT 50s4

Actuator design 5 bar control pressure. Overall length according to DIN 3202 M3.

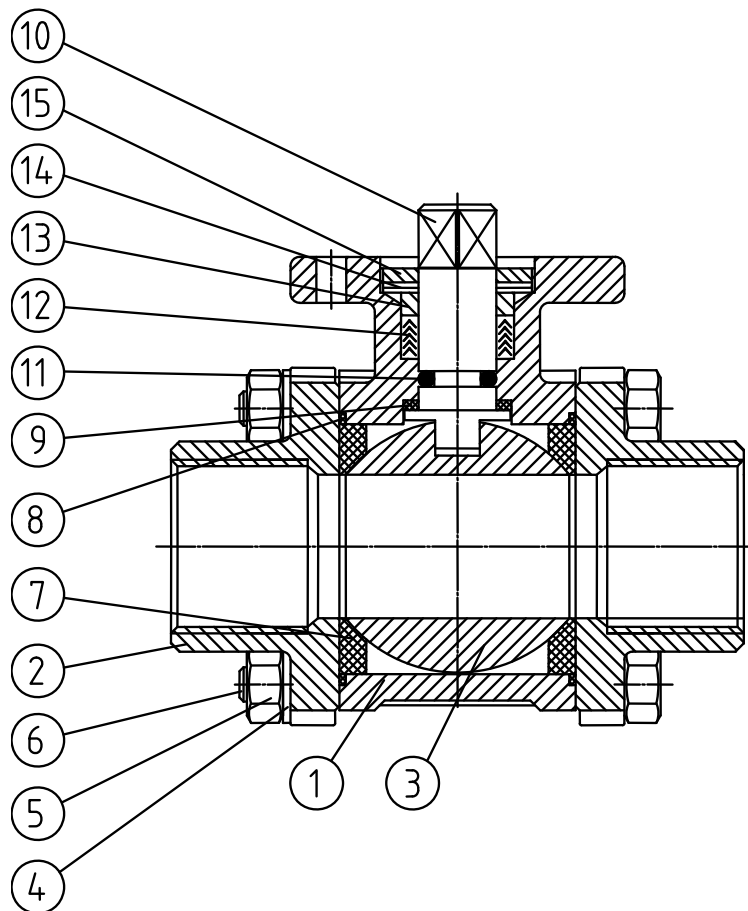
Thread according to DIN 2999, dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

3-part ball valve of stainless steel

DIN/ISO 5211 top flange, thread end (T), pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic single-acting)

PN 63 DN 10–100

materials



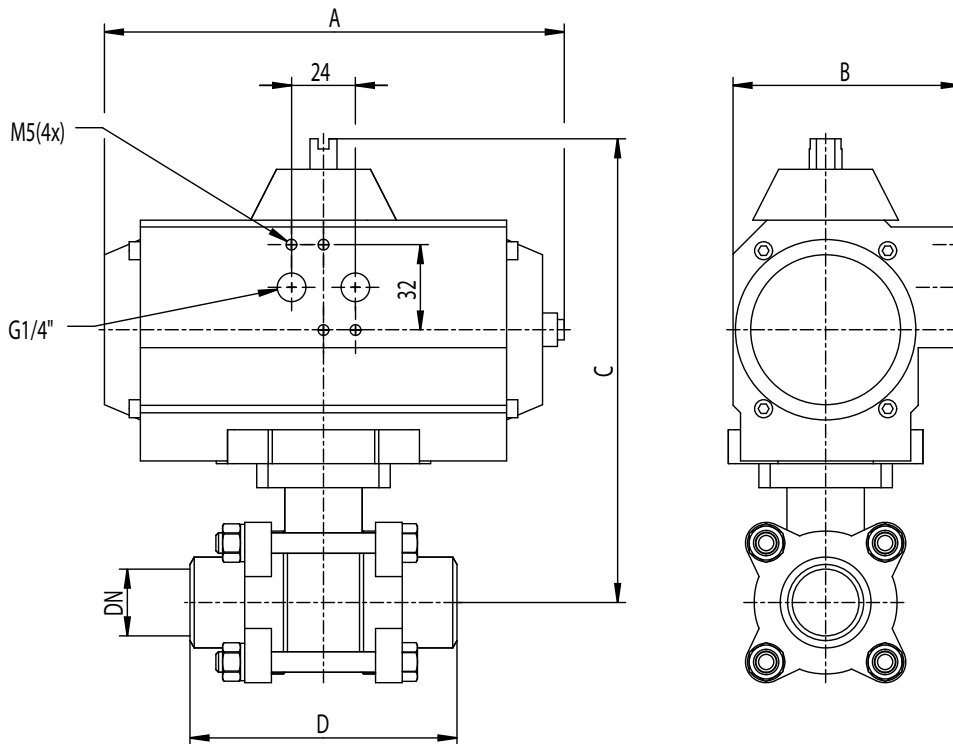
pos.	description	amount	material
1	housing	1	1.4408
2	end piece	2	1.4408
3	ball	1	1.4401
4	washer	4-12	1.4301
5	nut	4-12	1.4301
6	screw	4-12	1.4301
7	ball seal	2	reinforced PTFE
8	housing seal	2	PTFE

pos.	description	amount	material
9	clamping ring	1	PTFE
10	operating shaft	1	1.4401
11	O-ring	1	Viton
12	operating shaft seal	1 set	PTFE
13	stuffing box	1	1.4301
14	spring	2	spring steel
15	nut	1	1.4301

3-part ball valve of stainless steel

DIN/ISO 5211 top flange, welding end (B), pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic single-acting)

PN 63 DN 10–100



ball valve with rotating drive - PD = pneumatic double-acting

DN	A	B	C	D	rotating drive	
8	1/4"	119	67	141	70	UT 05
10	3/8"	119	67	141	70	UT 05
15	1/2"	119	67	141	75	UT 05
20	3/4"	119	67	145	90	UT 05
25	1"	165	85	174	100	UT 15
32	1 1/4"	165	85	179	110	UT 15
40	1 1/2"	165	85	189	125	UT 15
50	2"	177	96	220	150	UT 20
65	2 1/2"	239	96	241	190	UT 25
80	3"	246	138	306	220	UT 35
100	4"	246	138	334	270	UT 35

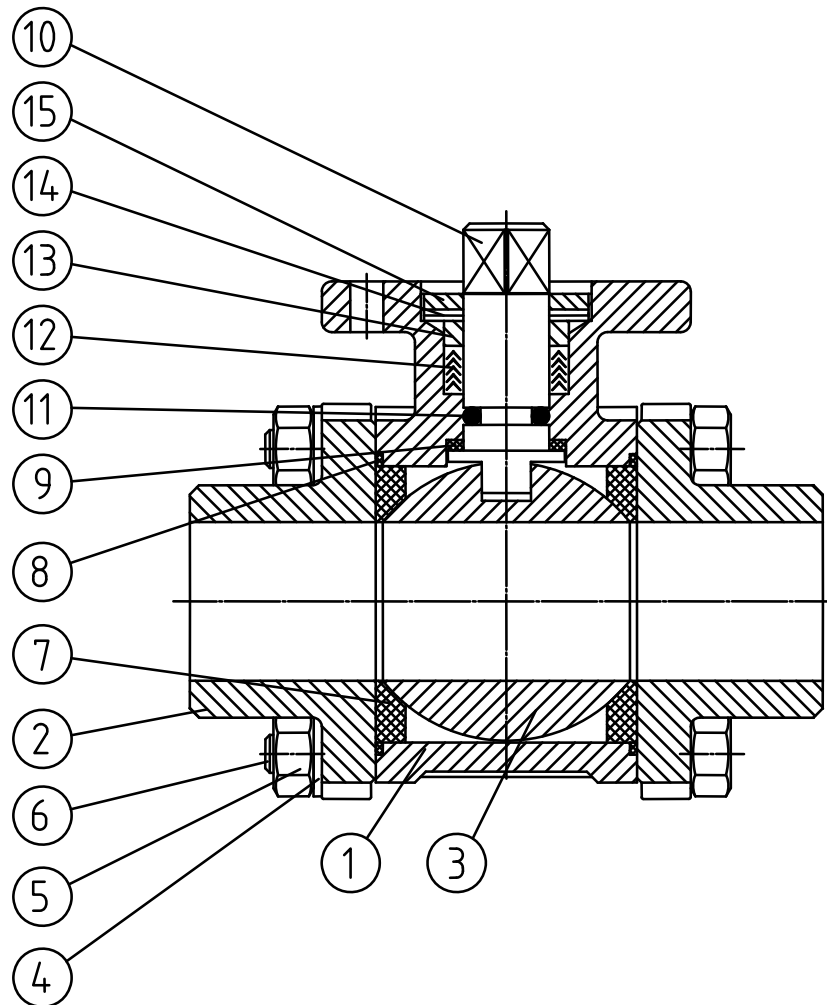
ball valve with rotating drive - PE = pneumatic single-acting

DN	A	B	C	D	rotating drive	
8	1/4"	165	85	161	70	UT 15s4
10	3/8"	165	85	161	70	UT 15s4
15	1/2"	165	85	161	75	UT 15s4
20	3/4"	197	85	165	90	UT 17s4
25	1"	197	85	173	100	UT 17s4
32	1 1/4"	177	96	201	110	UT 20s4
40	1 1/2"	239	96	211	125	UT 25s4
50	2"	230	113	239	150	UT 30s4
65	2 1/2"	246	138	294	190	UT 35s4
80	3"	391	185	358	220	UT 50s4
100	4"	391	185	385	270	UT 50s4

Actuator design 5 bar control pressure. Overall length according to DIN 3202 M3, dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

3-part ball valve of stainless steel
 DIN/ISO top flange, welding end (B)
 PN 63 DN 10–100

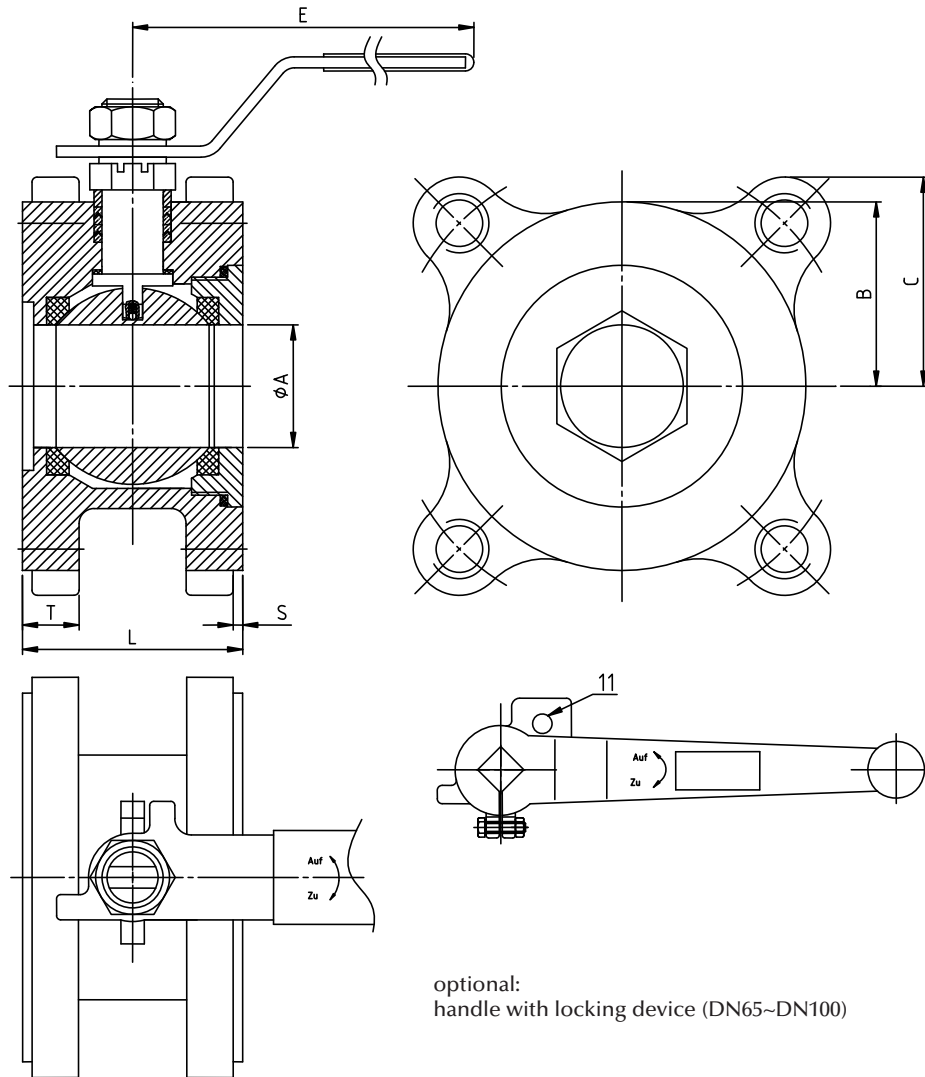
materials



pos.	description	amount	materials
1	housing	1	1.4408
2	ens piece	2	1.4408
3	ball	1	1.4401
4	washer	4-12	1.4301
5	nut	4-12	1.4301
6	screw	4-12	1.4301
7	ball seal	2	reinforced PTFE
8	housing seal	2	PTFE

pos.	description	amount	materials
9	clamping ring	1	PTFE
10	operating shaft	1	1.4401
11	O-ring	1	Viton
12	operating shaft seal	1 set	PTFE
13	stuffing box	1	1.4301
14	spring	2	spring steel
15	nut	1	1.4301

compact flange ball valve (F) or stainless steel
hand lever, full opening
PN 40/PN 16 DN 15–100



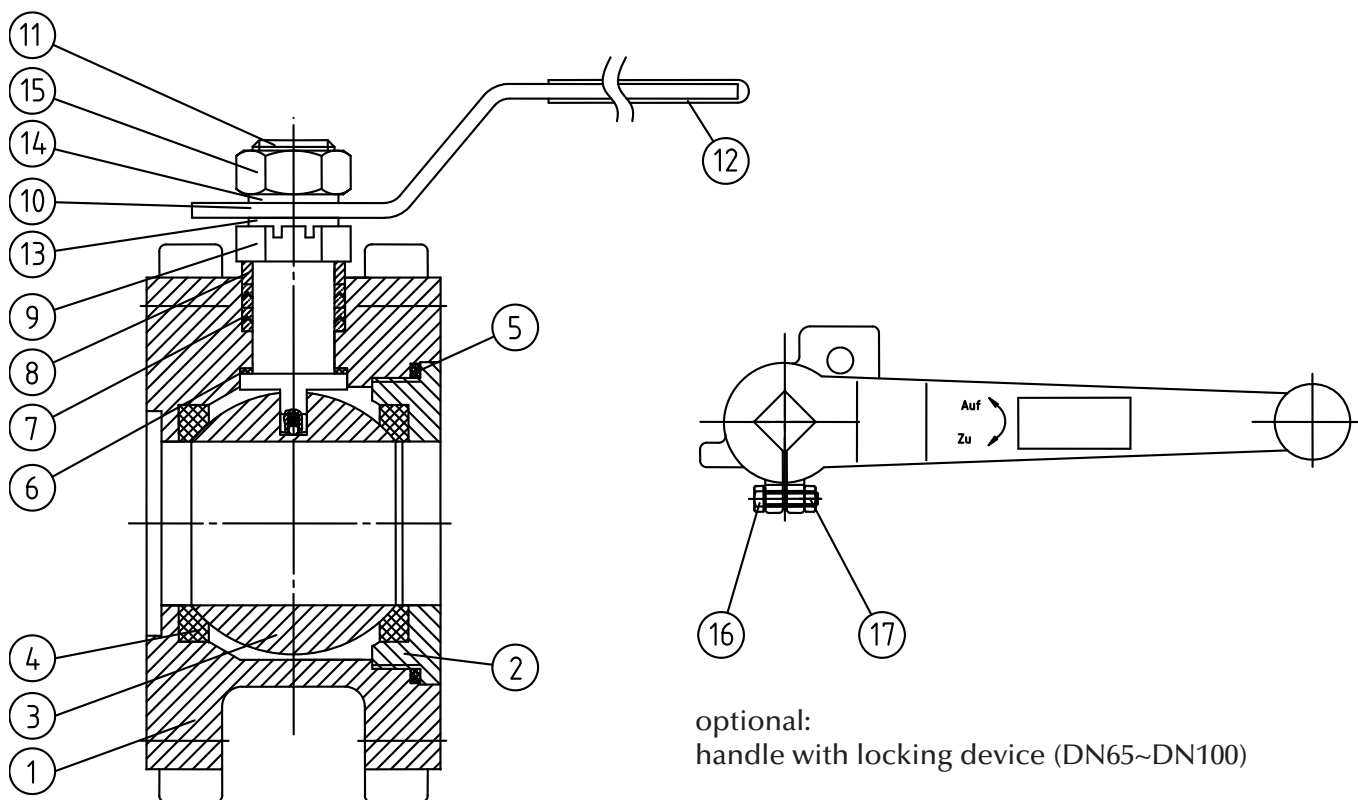
optional:
handle with locking device (DN65~DN100)

DN	Ø A	B	C	E	L	S	T	M
15	1/2"	15	23.6	36.93	133	40.0	2	M12
20	3/4"	20	32.0	40.47	133	44.0	2	M12
25	1"	25	35.0	40.55	133	53.0	2	M12
32	1 1/4"	32	42.3	53.69	228	58.4	2	M16
40	1 1/2"	38	47.3	57.33	228	62.0	3	M16
50	2"	50	52.55	64.19	228	78.0	3	M16
65	2 1/2"	64	80.0	71.27	315	100.0	3	M16
80	3"	76	90.0	87.16	315	120.0	3	M16
100	4"	96	111.0	103.15	315	152.0	3	M16

Dimensions in mm.
Temperature range -10°C to 200°C
(see pressure-temperature curve).

compact flange ball valve (F) or stainless steel
hand lever, full opening
PN 40/PN 16 DN 15–100

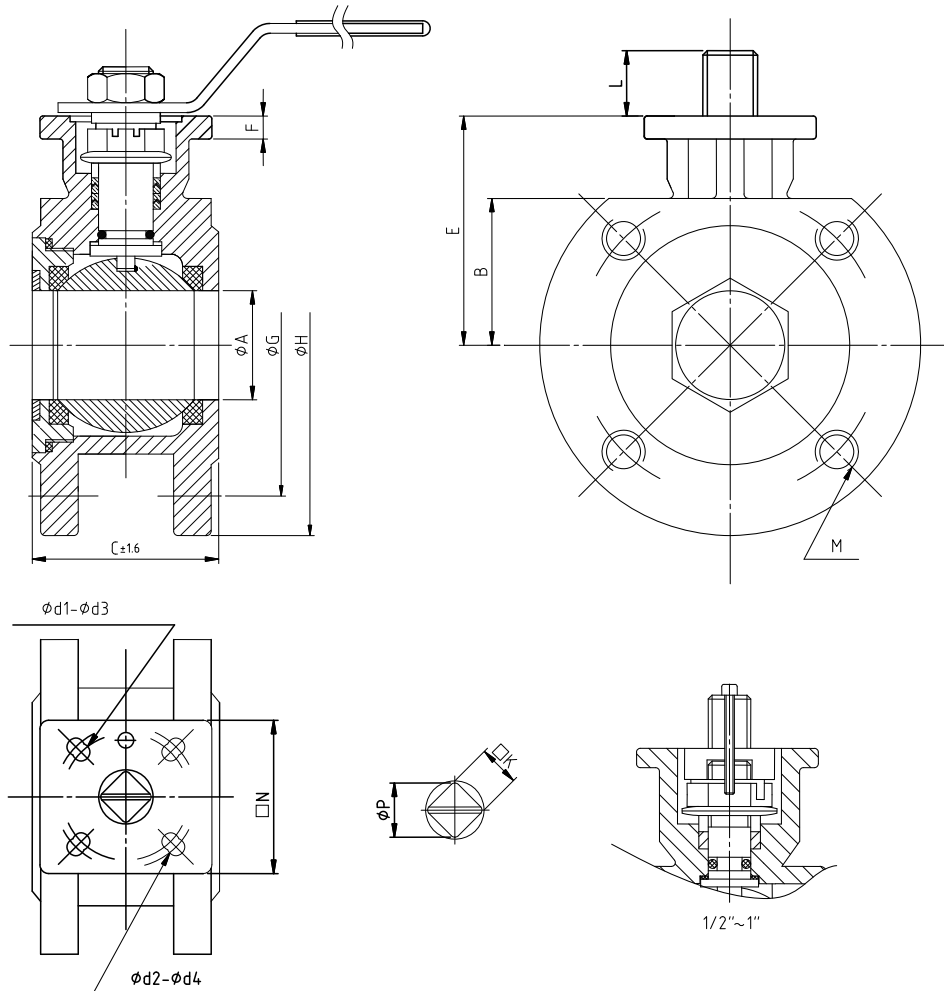
materials



pos.	description	amount	materials
1	housing	1	1.4408
2	end piece	2	1.4408
3	ball	1	1.4401
4	ball seal	2	reinforced PTFE
5	housing seal	2	PTFE
6	clamping ring	1	PTFE
7	operating shaft seal	1 set	PTFE
8	stuffing box ring	1	1.4301
9	stuffing box	1	1.4301

pos.	description	amount	materials
10	handle	1	1.4301
11	operating shaft	1	1.4401
12	handle coat	1	plastics
13	locking ring	1	1.4301
14	washer	1	1.4301
15	nut	1	1.4301
16	screw	1	1.4301
17	nut	1	1.4301

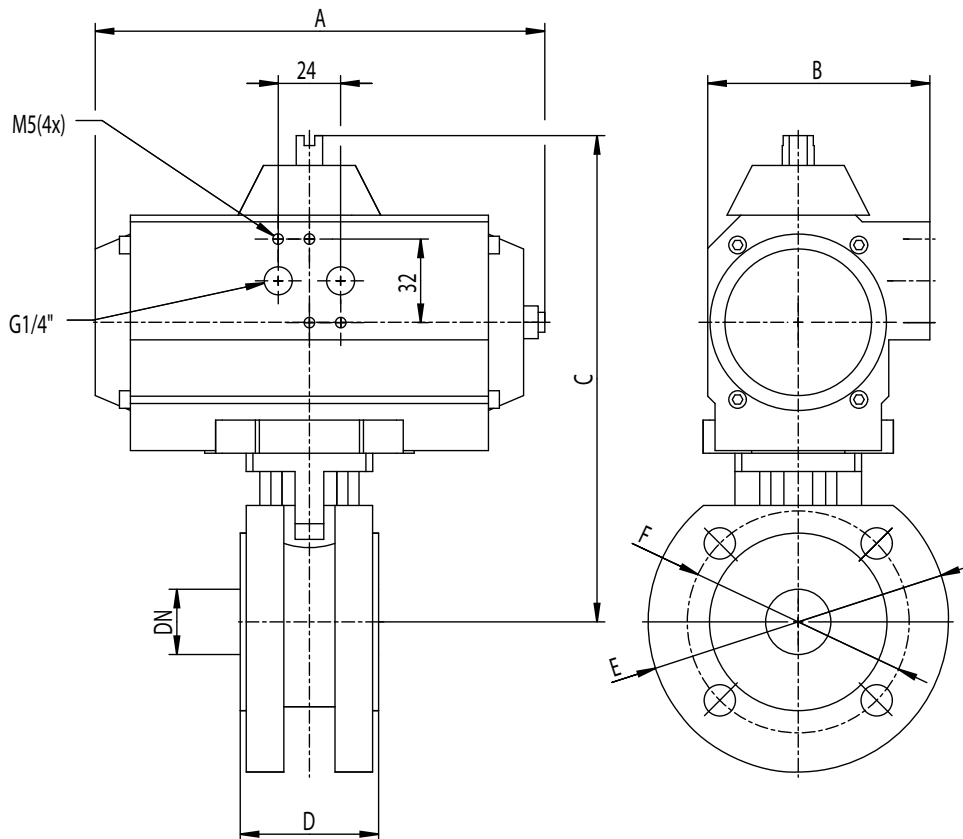
compact flange ball valve (F) of stainless steel
hand lever, DIN/ISO 5211 top flange, full opening
PN 16 / 40 DN 15–100



DN	C	Ø G	Ø H	Ø A	B	E	F	□ N	ISO 5211	Ø d1	Ø d2	Ø d3	Ø d4	□ K	Ø P	L	M	
1/2"	15	40	65	95	15	34.5	60.0	6.3	43.5	F03/F04	36	42	6.0	5.5	9	11.11	8	M12x1,75
3/4"	20	44	75	105	20	38.5	64.3	7.0	43.5	F03/F04	36	42	6.0	5.5	9	11.11	11	M12x1,75
1"	25	53	85	115	25	44.6	64.6	7.0	48.5	F04/F05	42	50	5.5	7.0	11	11.11	11	M12x1,75
1 1/4"	32	58.4	100	135	32	51	70.2	7.0	48.5	F04/F05	42	50	5.5	7.0	11	11.11	11	M16x2
1 1/2"	40	62	110	145	38	55	76.3	7.2	70.0	F05/F07	50	70	7.0	8.5	14	19.05	17	M16x2
2"	50	78	125	155	50	63	85.5	7.2	70.0	F05/F07	50	70	7.0	8.5	14	19.05	15	M16x2
2 1/2"	65	100	145	185	65	73.5	105	10.6	-	F07	-	70	-	9.0	17	22.22	14	M16x2
3"	80	120	160	200	76	94	123	10.6	-	F07	-	70	-	9.0	17	22.22	18	M16x2
4"	100	152	180	220	96	105	132	12.6	-	F07/F10	70	102	9.0	10.5	17	22.22	15	M16x2

DN 15 – DN 50 flanges according to PN 40, DN 65 – DN 100 flanges according to PN 16.
Integrated top flange according DIN/ISO 5211 for direct mounting of the actuation.
Dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

compact flange ball valve (F) of stainless steel
 pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic single-acting), DIN/ISO 5211 top flange, full opening
 PN 16 / 40 DN 15–100



ball valve with rotating drive - PD = pneumatic double-acting

DN		A	B	C	D	E	F	rotating drive
15	G 1/2"	119	67	161	40	95	65	UT 05
20	G 3/4"	119	67	165	44	105	75	UT 05
25	G 1"	165	85	186	53	115	85	UT 15
32	G 1 1/4"	165	85	191	58	135	100	UT 15
40	G 1 1/2"	165	85	219	62	145	110	UT 15
50	G 2"	177	96	229	78	155	125	UT 20
65	G 2 1/2"	239	96	248	100	185	145	UT 25
80	G 3"	246	138	285	120	200	160	UT 30
100	G 4"	246	138	328	152	220	180	UT 35

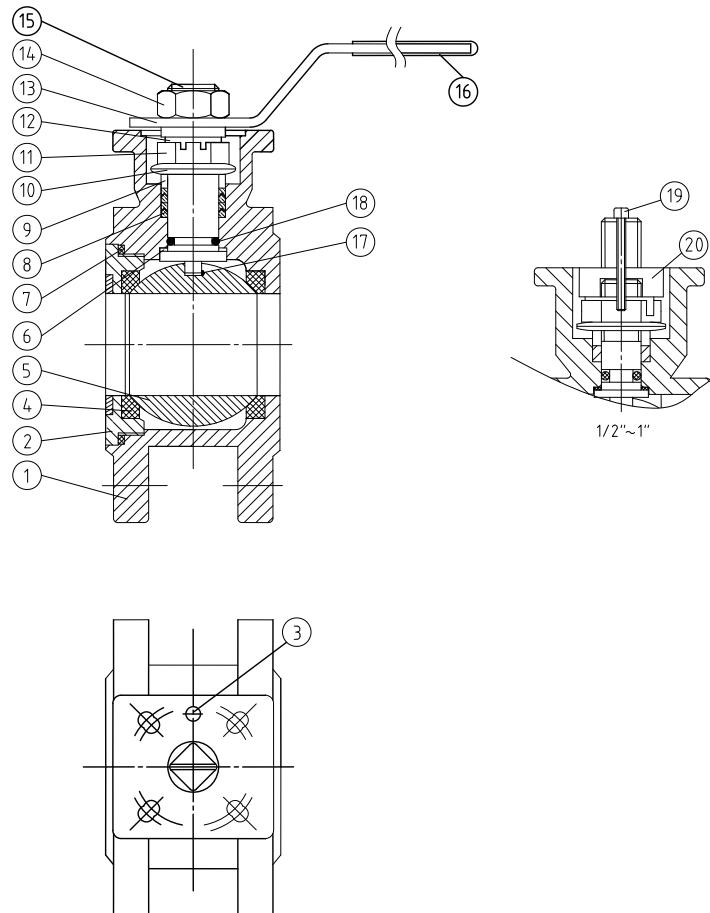
ball valve with rotating drive - PE = pneumatic single-acting

DN		A	B	C	D	E	F	rotating drive
15	G 1/2"	165	85	181	40	95	65	UT 15s4
20	G 3/4"	197	85	185	44	105	75	UT 17s4
25	G 1"	197	85	186	53	115	85	UT 17s4
32	G 1 1/4"	177	96	213	58	135	100	UT 20s4
40	G 1 1/2"	239	96	219	62	145	110	UT 25s4
50	G 2"	230	113	248	78	155	125	UT 30s4
65	G 2 1/2"	246	138	313	100	185	145	UT 35s4
80	G 3"	391	185	331	120	200	160	UT 50s4
100	G 4"	391	185	380	152	220	180	UT 50s4

Actuator design 5 bar control pressure.
 Dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

compact flange ball valve (F) of stainless steel
 hand lever or pneumatic part turn actuator, DIN/ISO 5211 top flange, full opening
 PN 16 / 40 DN 15–100

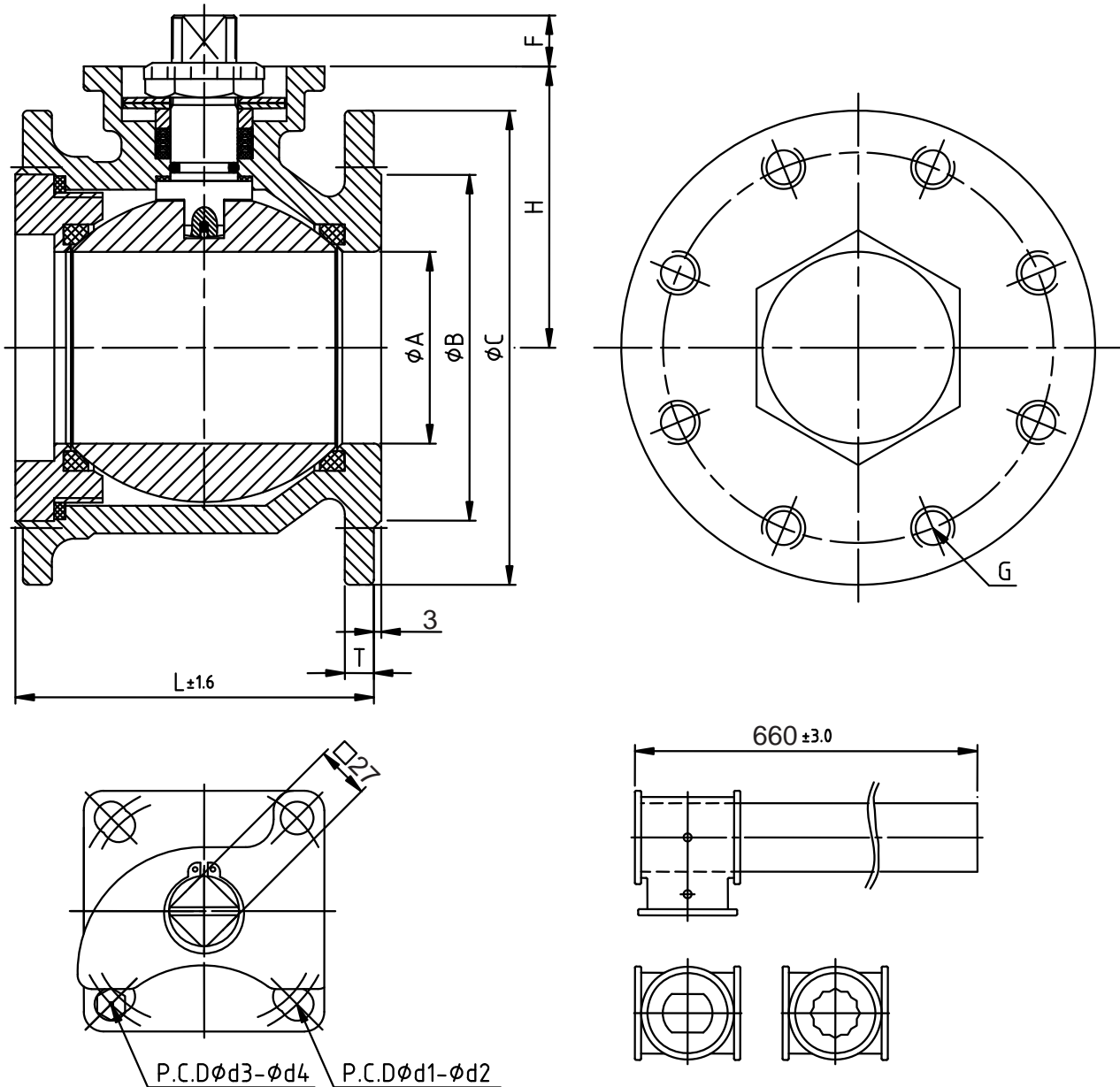
materials



pos.	description	amount	material
1	housing	1	1.4408
2	screw-in fitting	1	1.4408
3	body stop	1	1.4301
4	ball seal	2	reinforced PTFE
5	ball	1	1.4401
6	clamping ring	1	PTFE
7	housing seal	1	PTFE
8	operating shaft seal	1 set	PTFE
9	stuffing box	2	1.4301
10	disc spring	2	1.4310

pos.	description	amount	material
11	stuffing box	1	1.4301
12	circlip	1	1.4301
13	handle	1	1.4301
14	nut	1	1.4301
15	operating shaft	1	1.4401
16	handle coat	1	plastics
17	antistatic (optional)	1	1.4301
18	O-ring	1	VITON
19	pin	1	1.4301
20	pusher dog	1	1.4301

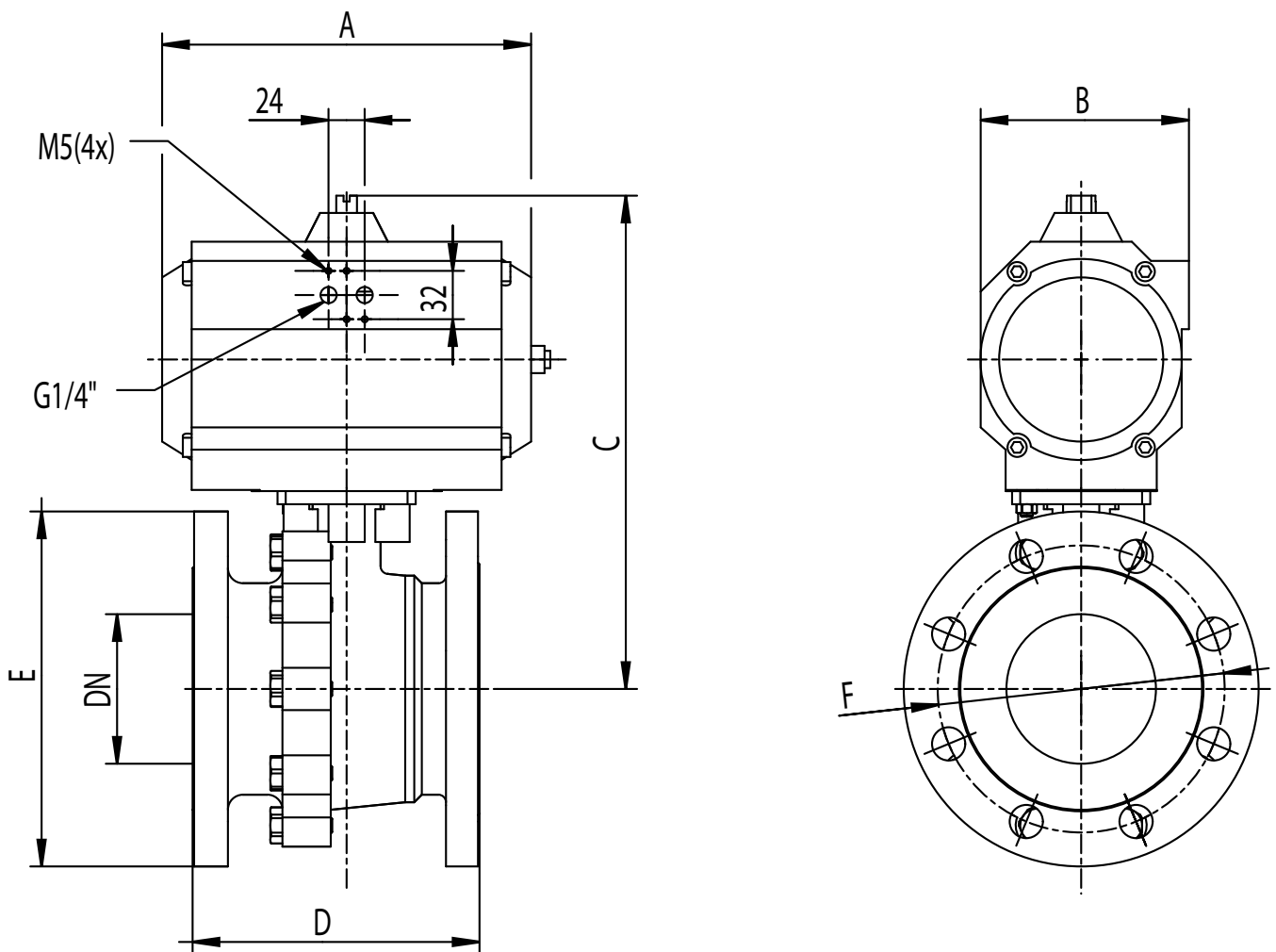
compact flange ball valve (F) of stainless steel
 hand lever, DIN/ISO 5211 top flange, reduced opening
 PN 16 DN 125–200



DN	Ø A	Ø B	Ø C	T	L	G	H	Ø d1	Ø d2	Ø d3	Ø d4	ISO 5211	F	
5"	125	114	188	250	22	180	M16x2	157.5	102	10.5	125	12.5	F10/F12	36
6"	150	135	212	285	22	215	M16x2	172.5	102	10.5	125	12.5	F10/F12	36
8"	200	152	268	340	24	236	M20x2,5	185.0	-	-	125	13.0	F12	37.5

Integrated top flange according DIN/ISO 5211 for direct mounting of the actuation.
 Dimenstions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).
 min. control air pressure 5 bar

compact flange ball valve (F) of stainless steel
 pneumatic part turn actuator (PD = pneumatic double-acting; PE = pneumatic single-acting), DIN/ISO 5211 top flange, reduced opening
 PN 16 DN 125–200



ball valve with rotating drive - PD = pneumatic double-acting

DN	A	B	C	D	E	F	rotating drive
125 5"	351	151	366	183	250	210	UT 45
150 6"	391	185	405	218	385	240	UT 50
200 8"	418	185	427	239	340	295	UT 55

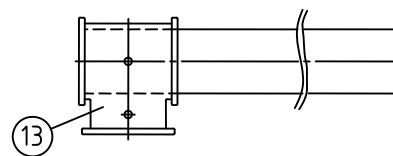
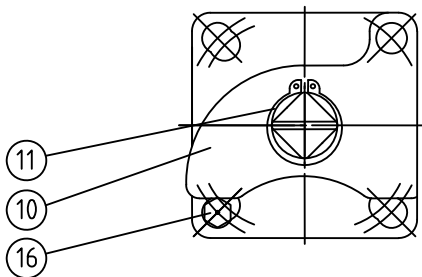
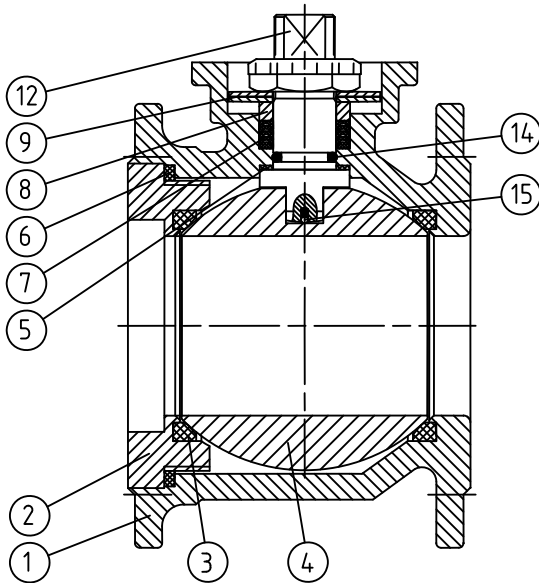
ball valve with rotating drive - PE = pneumatic single-acting

DN	A	B	C	D	E	F	rotating drive
125 5"	418	185	400	183	250	210	UT 55s4
150 6"	444	235	487	218	385	240	UT 60s4
200 8"	502	235	489	239	340	295	UT 65s4

Integrated top flange according DIN/ISO 5211 for direct mounting of the actuation.
 Actuator design 5 bar control pressure.
 Dimensions in mm. Temperature range -10°C to 200°C (see pressure-temperature curve).

compact flange ball valve (F) of stainless steel
 hand lever or pneumatic part turn actuator, reduced opening
 PN 16 DN 125–200

materials



pos.	description	amount	material
1	housing	1	1.4408
2	screw-in fitting	1	1.4408
3	ball seal	2	reinforced PTFE
4	ball	1	1.4401
5	clamping ring	1	PTFE
6	housing seal	1	PTFE
7	operating shaft seal	1 set	PTFE
8	stuffing box	1	1.4301

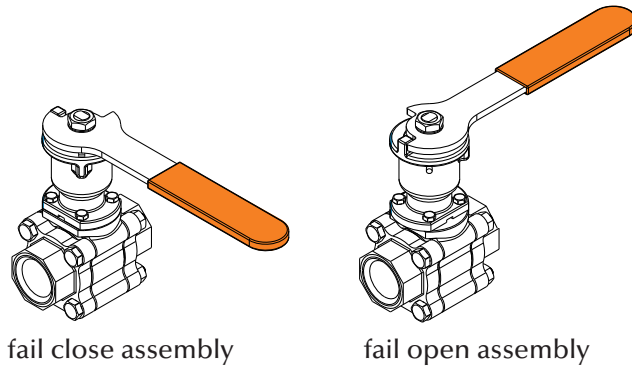
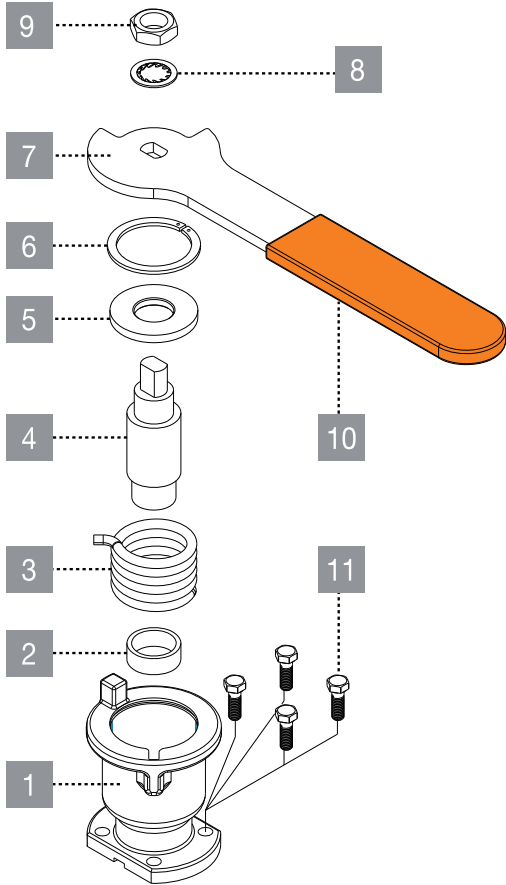
pos.	description	amount	material
9	disc spring	2	1.4310
10	body stop plate	1	1.4408
11	circlip	1	1.4301
12	operating shaft	1	1.4401
13	handle	1	1.4301
14	O-ring	1	Viton
15	antistatic ball	1	1.4301
16	body stop	1	A2-70

Description

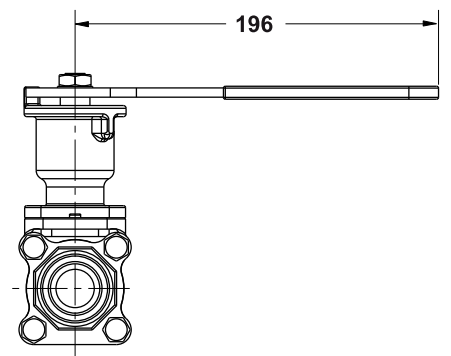
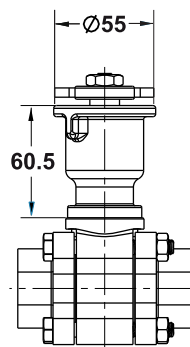
- size range:
1/2" – 1 1/4" (DN 15 – 32)
- features:
provides dependable automatic closing or opening of manual valves
- applications:
sampling, by-pass, steam letdown, draining, pressure relief
- stroke end output torque:
11 Nm (97 in-lb)
- materials:
stainless steel
- connection:
direct mounting acc. to ISO 5211
- safety features:
tamper proof spring loaded unit for direct assembly to valve
- other features:
fail to close or fail to open mountable
locking device



can easily locked with a padlock



item	description	material specifications	qty.
1	body housing	stainless steel ASTM A351 CF8M	1
2	bottom bearing	PTFE	1
3	spring	spring steel ASTM A401	1
4	stern	stainless steel 17-4 PH	1
5	top bearing	BRASS ASTM B121	1
6	locking clip	spring steel DIN 472	1
7	handle	stainless steel AISI 430	1
8	serrated washer	stainless steel	1
9	handle nut	stainless steel 316 ASTM A194	1
10	handle sleeve	VINYL PLASTISOL	1
11	housing screws	stainless steel A2-70 ISO 4014	4

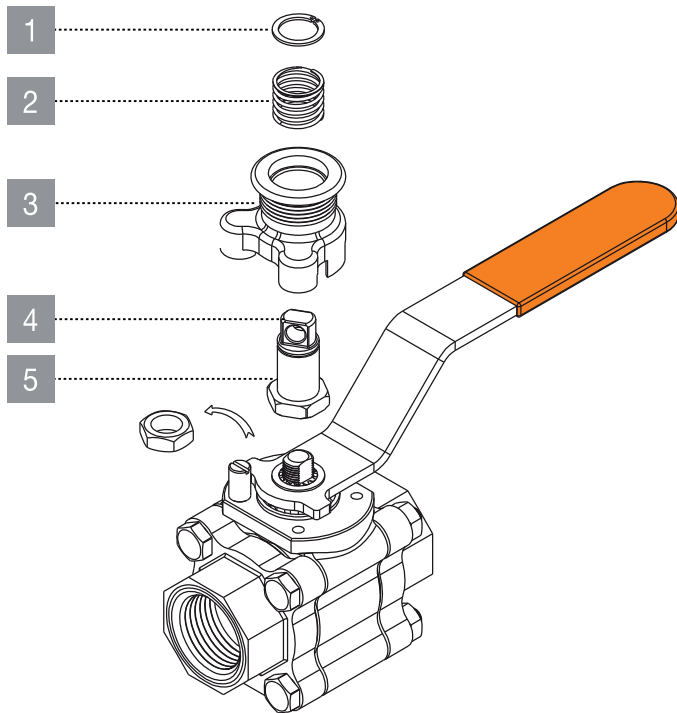


CAUTION!

While operating the spring loaded device, hold lever firmly and release gently. Slamming the unit might cause human injuries or handle deformation.

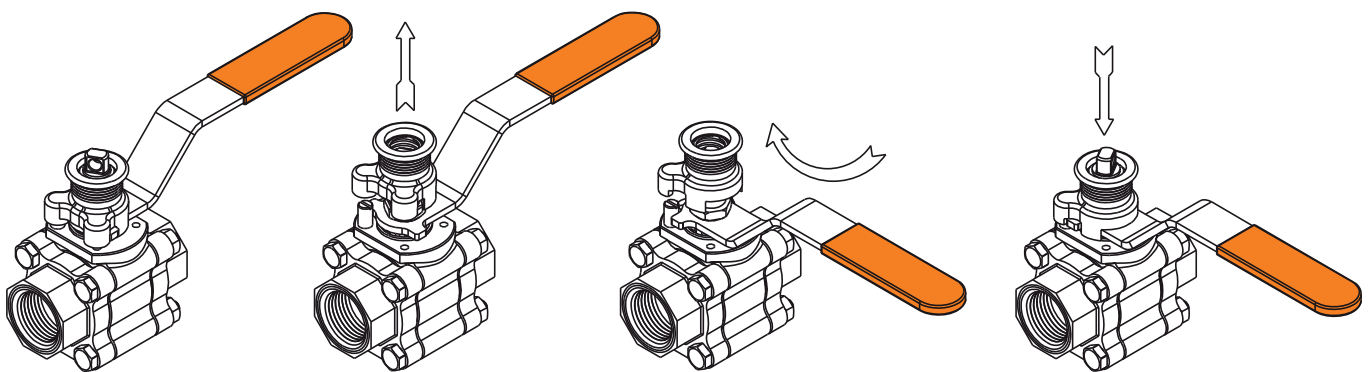
Locking device

The robust device locks the valve handleat open or close position and allow to add a pad lock (up to 6 mm) for misuse prevention. The spring-load construction ensure handle is lock in position at all valve installation orientations and under vibrating conditions. An accidentally push / pull / turn of the handle is prevented.



item	description
1	retaining ring
2	spring
3	housing
4	shaft groove
5	shaft

Locking device operation



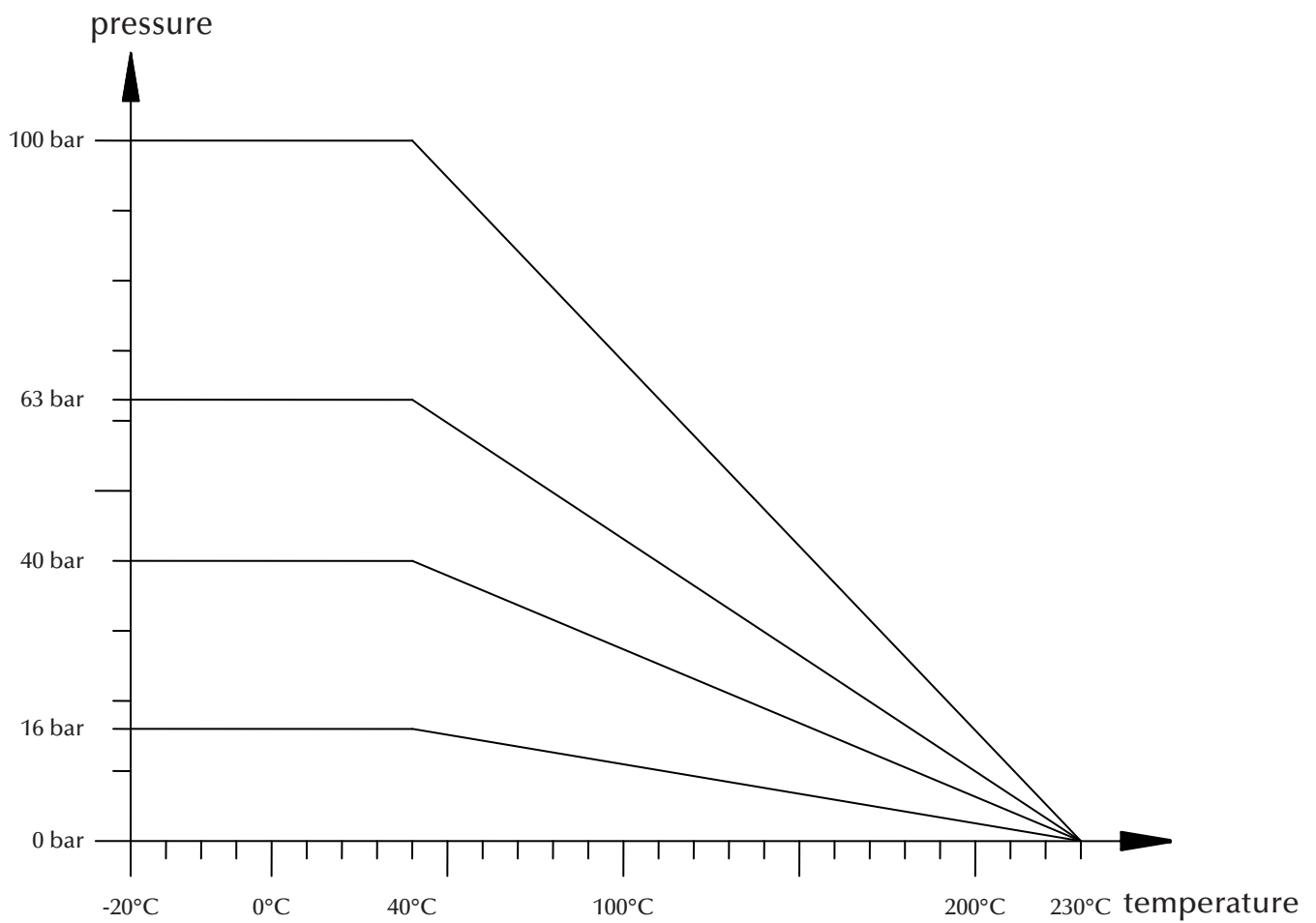
valve locked in open position

lift locking device housing above valve stop

turn the valve handle 90° locking device housing to the close position

release the locking device housing down to lock

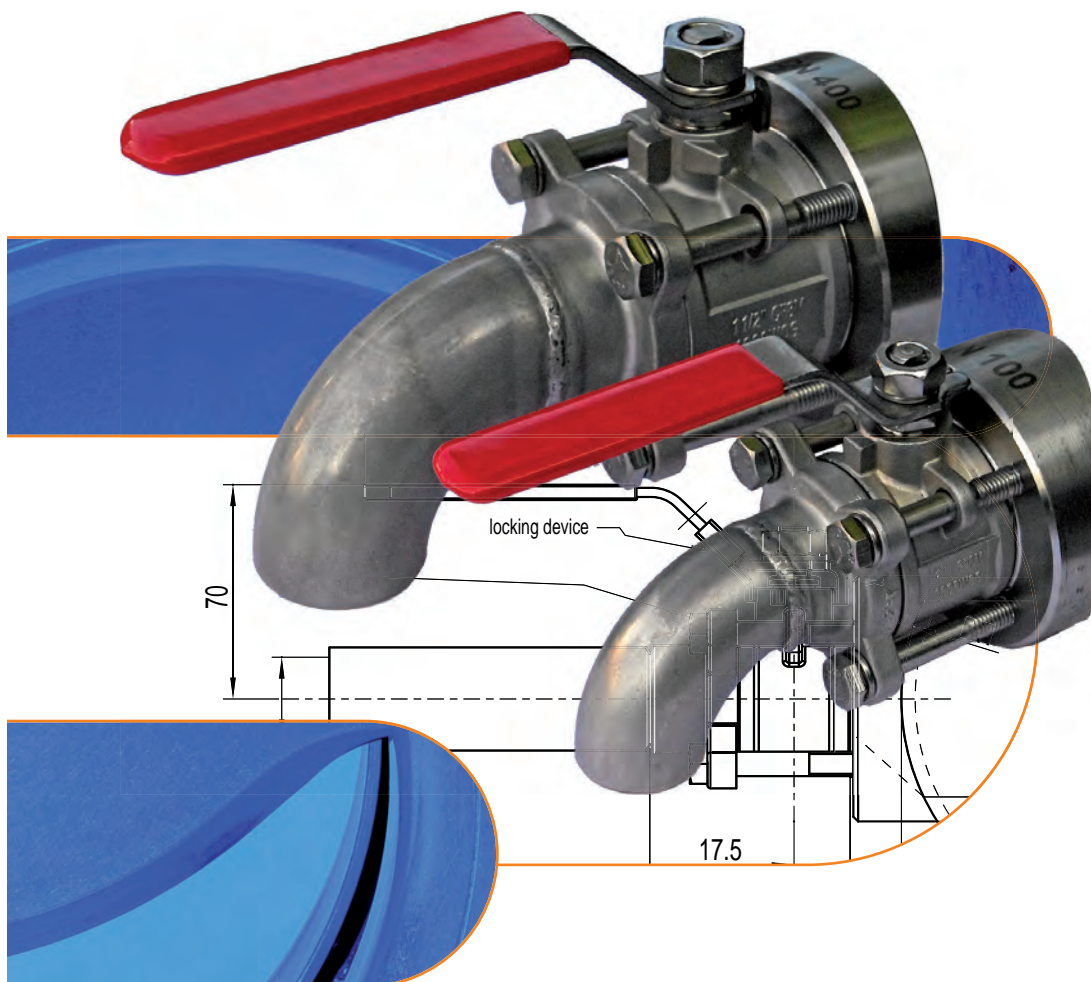
pressure-temperature curve



Please notice: These values do not apply for medium steam!
For steam application please confer with our sales team.

Sampling Valves

of stainless steel



MARTIN LOHSE GmbH
 Unteres Paradies 63 · D-89522 Heidenheim
 phone +49 7321 755-42
 sales@lohse-gmbh.de
 www.lohse-gmbh.de

Sampling Valves of stainless steel

with blockflange

- **curved sampling valve with lockable hand lever**

PHB25k Hv DN 25 (1")	279
PHB40k Hv DN 40 (1 1/2")	280
PHB50k Hv DN 50 (2")	281
- **straight sampling valve with lockable hand lever**

PHB25g Hv DN 25 (1")	282
PHB40g Hv DN 40 (1 1/2")	283
PHB50g Hv DN 50 (2")	284

with weld-on nipple

- **curved sampling valve with lockable hand lever**

PHG25k Hv DN 25 (1")	285
PHG40k Hv DN 40 (1 1/2")	286
PHG50k H DN 50 (2")	287
- **straight sampling valve with lockable hand lever**

PHG25g Hv DN 25 (1")	288
PHG40g Hv DN 40 (1 1/2")	289
PHG50g H DN 50 (2")	290

spring return handle 291

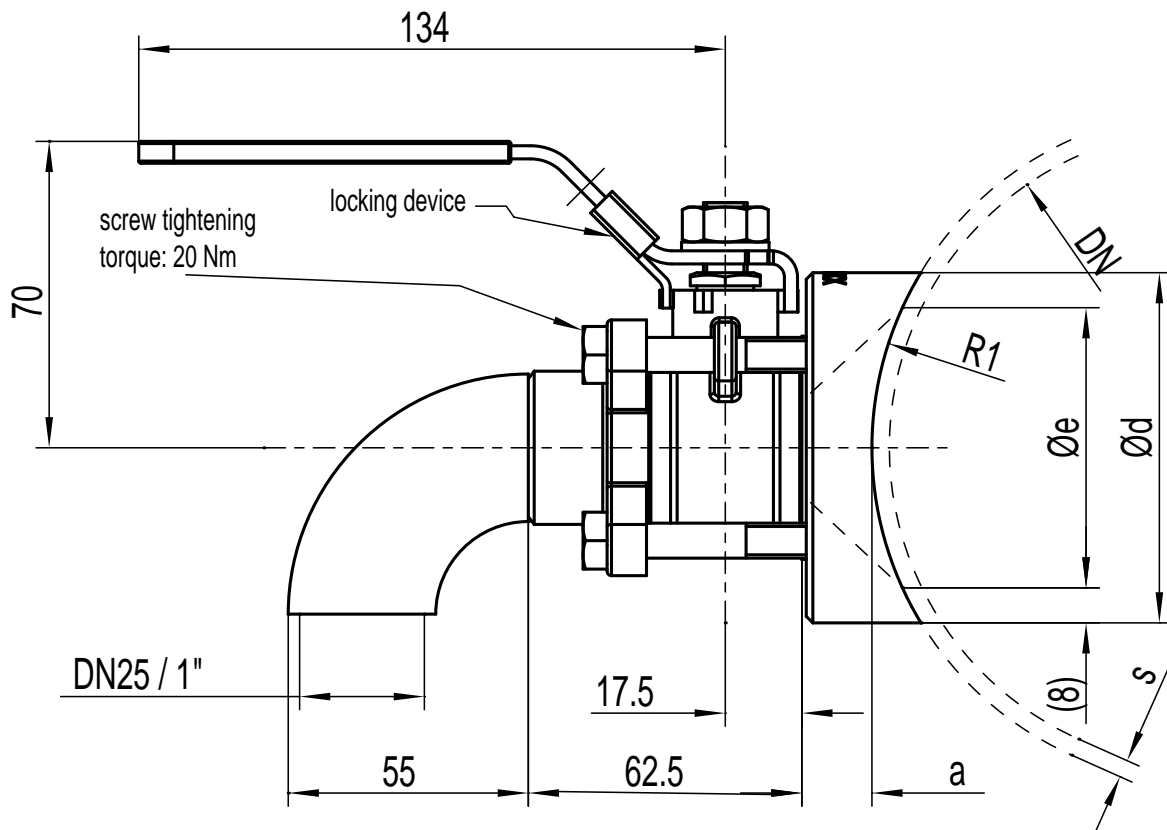
Legend

PH	= sampling valve
B	= block flange
G	= weld-on nipple
25 (z.B.)	= nominal size in mm
/100 (z.B.)	= pipe diameter in mm
k	= bent
g	= straight
Hv	= lockable hand lever
HFv	= lockable spring return handle
PD	= rotary actuator, pneumatic, double-acting

curved sampling valve DN 25 (1"), PN 40*

lockable hand lever

block flange for welding and grinding



DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
65	PHB25/65k Hv	34,5	2	39	55	24
80	PHB25/80k Hv	42	2	54	70	24
100	PHB25/100k Hv	52	2	64	80	14
125	PHB25/125k Hv	64.5	2	64	80	15
150	PHB25/150k Hv	77	2	64	80	16
200	PHB25/200k Hv	102.5	2.5	64	80	17
250	PHB25/250k Hv	128	3	64	80	18
300	PHB25/300k Hv	153	3	64	80	19
350	PHB25/350k Hv	178	3	64	80	20
400	PHB25/400k Hv	203	3	64	80	20
450 – 1200	PHB25/450–1200k Hv	300	4	64	80	20

Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

- flow box
- accepted stock line

* welding in pipeline must comply with PN 40

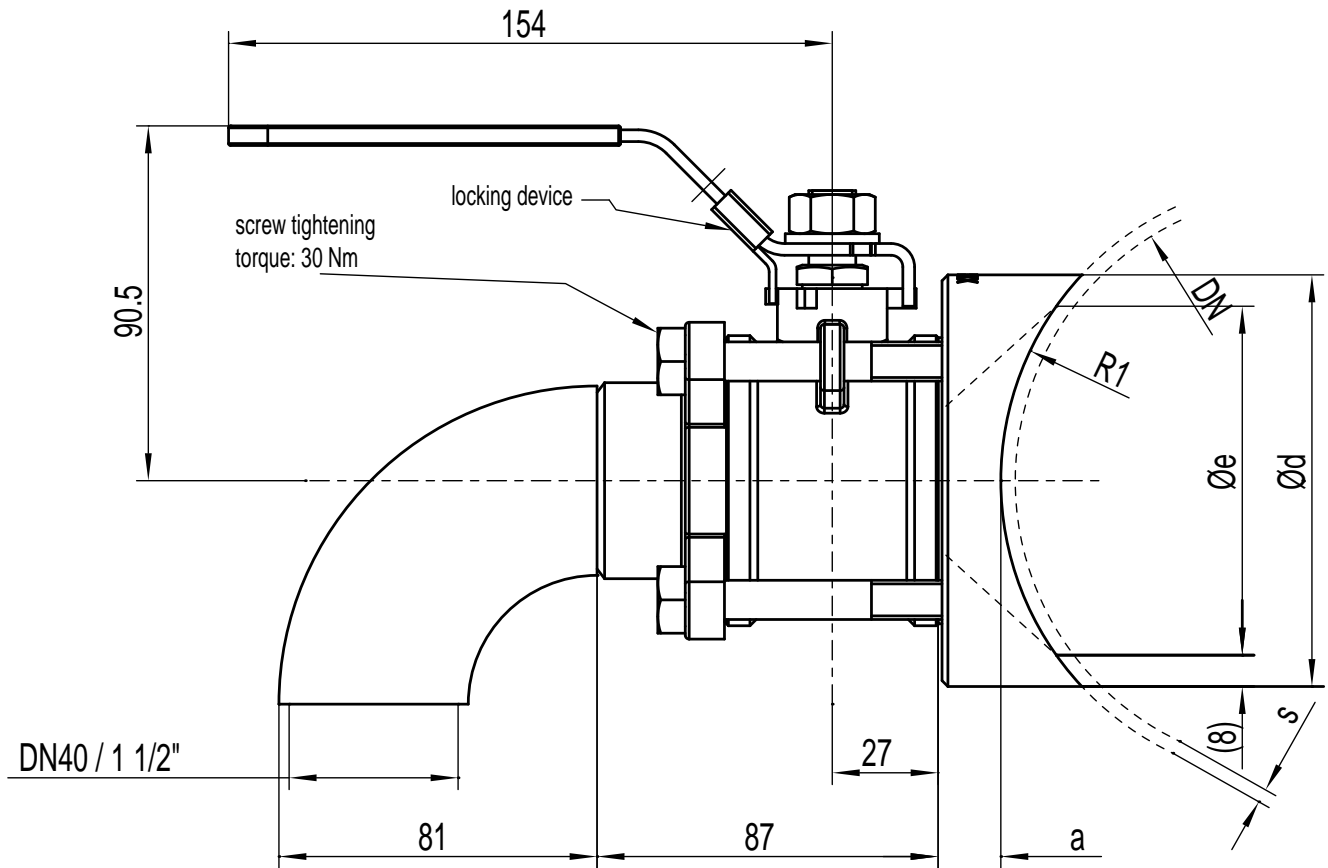
** DN pipe must be specified

s = material thickness of pipe

curved sampling valve DN 40 (1 1/2"), PN 40*

lockable hand lever

block flange for welding and grinding



DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
80	PHB40/80k Hv	42	2	54	70	28
100	PHB40/100k Hv	52	2	74	90	28
125	PHB40/125k Hv	64.5	2	89	105	15
150	PHB40/150k Hv	77	2	89	105	16
200	PHB40/200k Hv	102.5	2,5	89	105	17
250	PHB40/250k Hv	128	3	89	105	18
300	PHB40/300k Hv	153	3	89	105	19
350	PHB40/350k Hv	178	3	89	105	20
400	PHB40/400k Hv	203	3	89	105	20
450 – 1200	PHB40/450–1200k Hv	300	4	89	105	20

Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

- flow box
- accepted stock line

* welding in pipeline must comply with PN 40

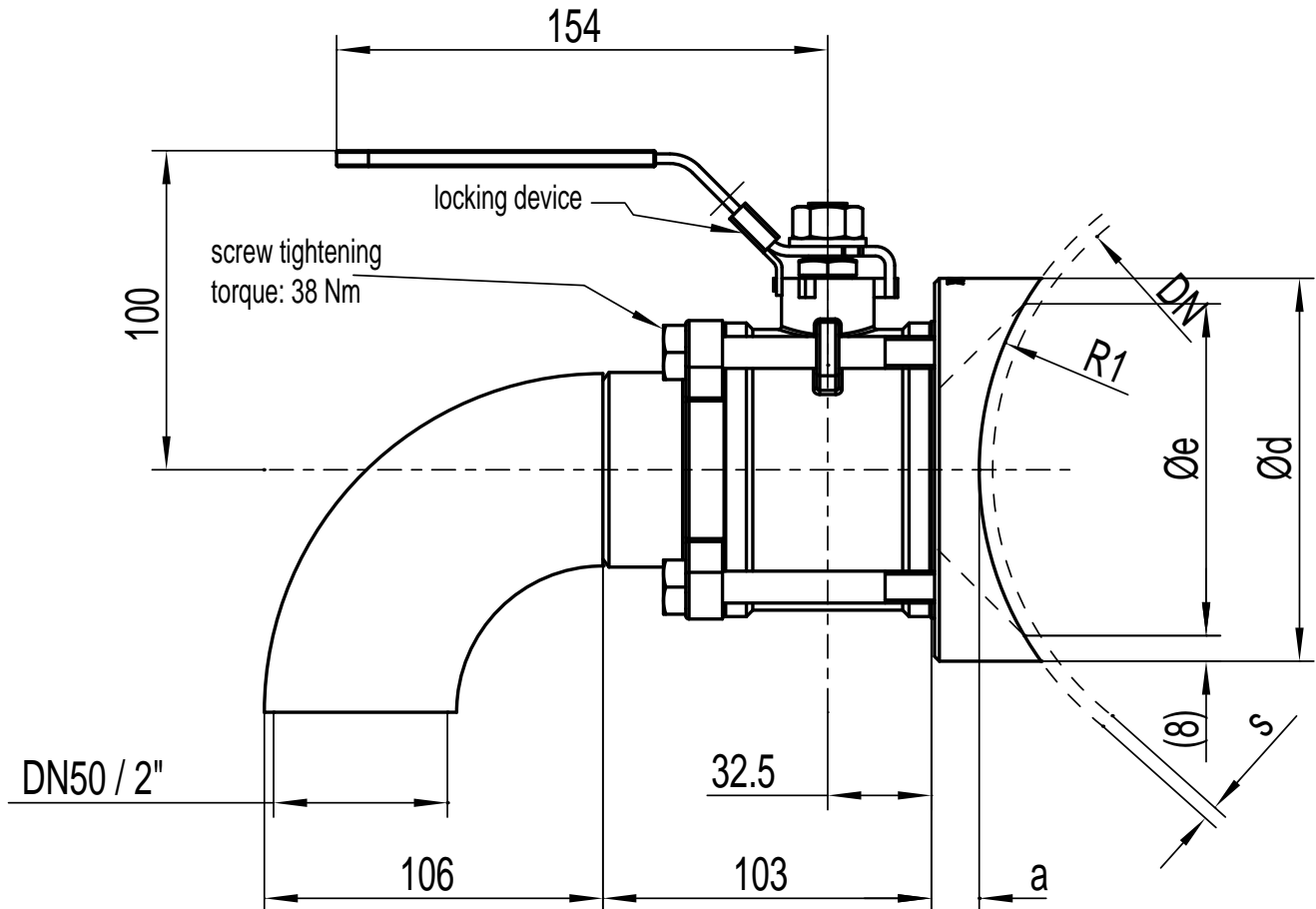
** DN pipe must be specified

s = material thickness of pipe

curved sampling valve DN 50 (2"), PN 40*

lockabe hand lever

block flange for welding and grinding



DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
100	PHB50/100k Hv	52	2	74	90	30
125	PHB50/125k Hv	64.5	2	99	115	30
150	PHB50/150k Hv	77	2	104	120	14
200	PHB50/200k Hv	102.5	2.5	104	120	15
250	PHB50/250k Hv	128	3	104	120	16
300	PHB50/300k Hv	153	3	104	120	17
350	PHB50/350k Hv	178	3	104	120	18
400	PHB50/400k Hv	203	3	104	120	18
450 – 1200	PHB50/450–1200k Hv	300	4	104	120	18

* welding in pipeline must comply with PN 40

** DN pipe must be specified

s = material thickness of pipe

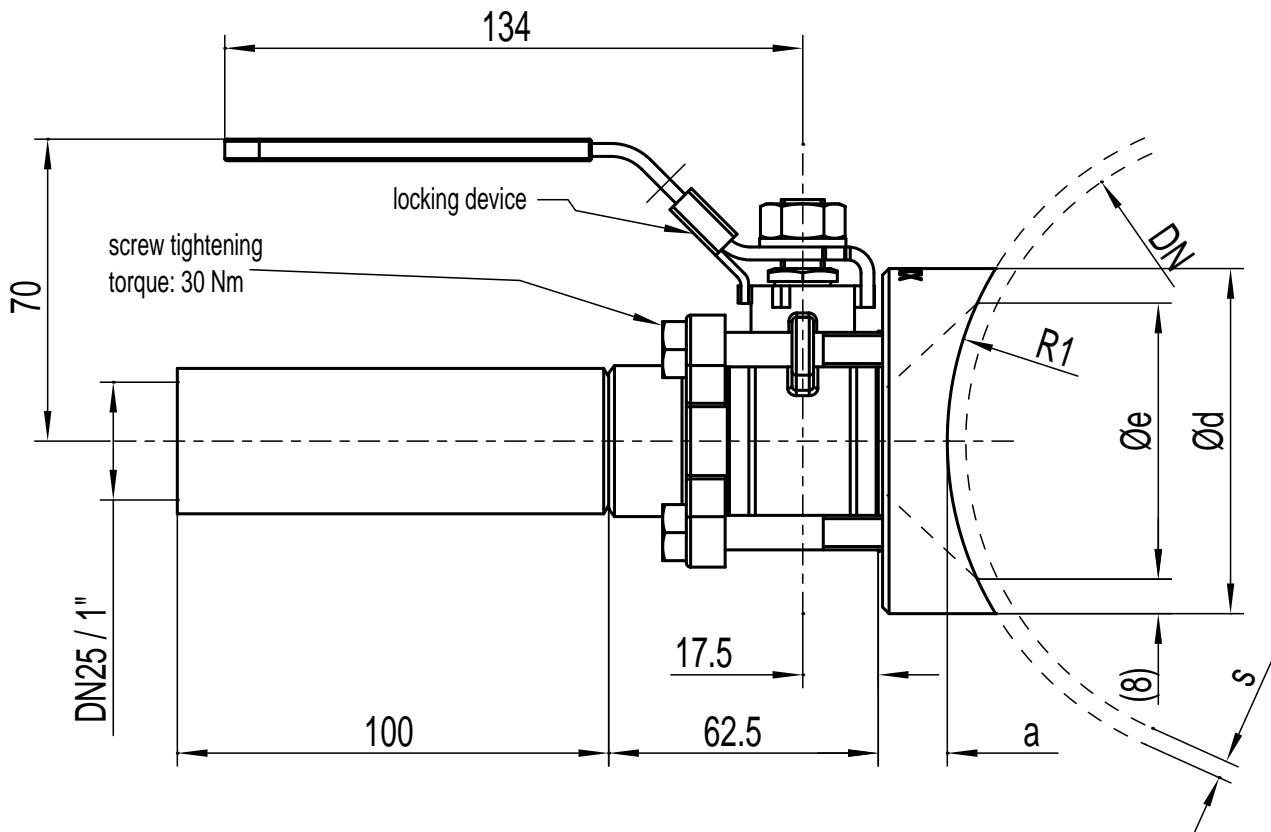
Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

- flow box
- accepted stock line

straight sampling valve DN 25 (1"), PN 40*
 lockable hand lever
 block flange for welding and grinding



DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
65	PHB25/65g Hv	34.5	2	39	55	24
80	PHB25/80g Hv	42	2	54	70	24
100	PHB25/100g Hv	52	2	64	80	14
125	PHB25/125g Hv	64.5	2	64	80	15
150	PHB25/150g Hv	77	2	64	80	16
200	PHB25/200g Hv	102.5	2.5	64	80	17
250	PHB25/250g Hv	128	3	64	80	18
300	PHB25/300g Hv	153	3	64	80	19
350	PHB25/350g Hv	178	3	64	80	20
400	PHB25/400g Hv	203	3	64	80	20
450 – 1200	PHB25/450–1200g Hv	300	4	64	80	20

Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

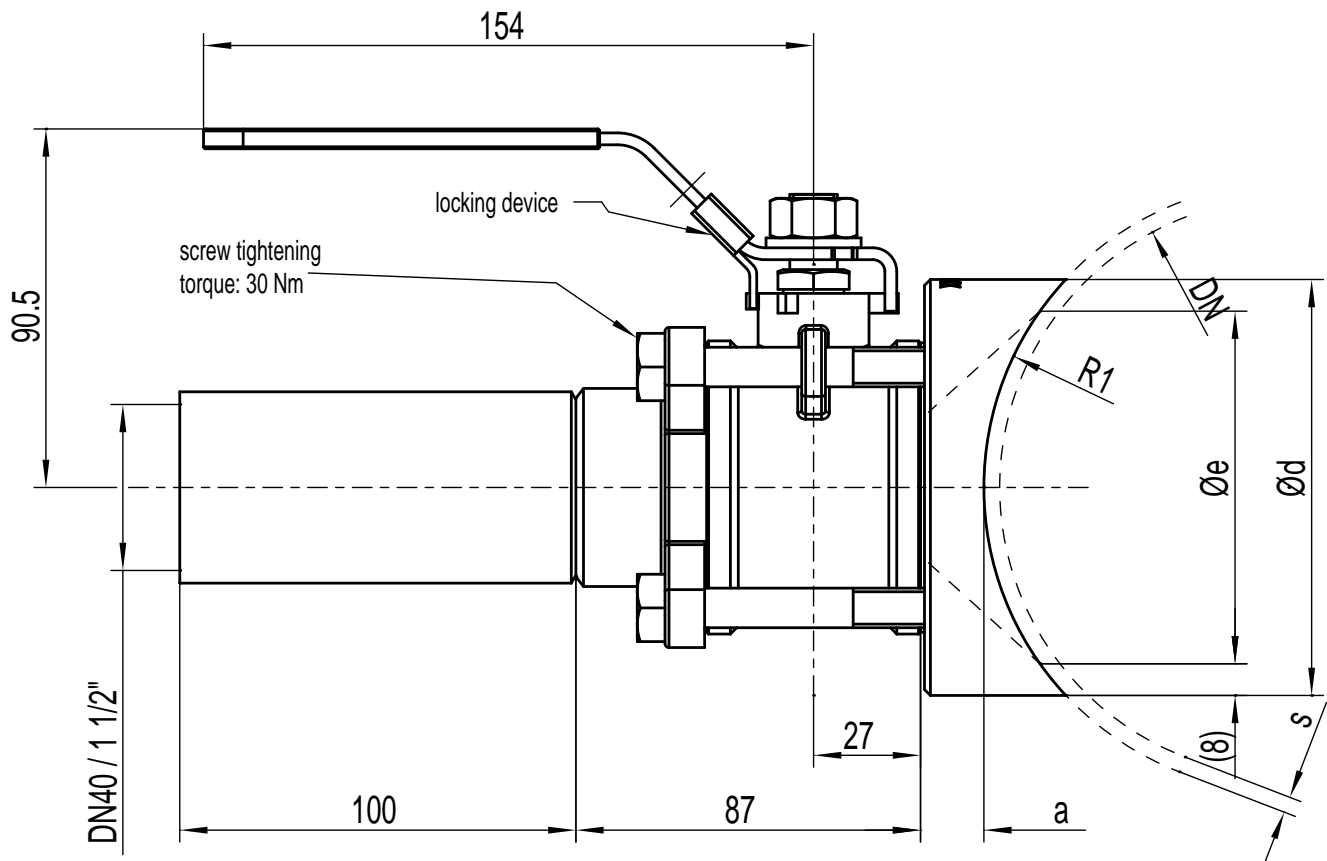
- flow box
- accepted stock line

* welding in pipeline must comply with PN 40

** DN pipe must be specified

s = material thickness of pipe

straight sampling valve DN 40 (1 1/2"), PN 40*
 lockable hand lever
 block flange for welding and grinding



Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

- flow box
- accepted stock line

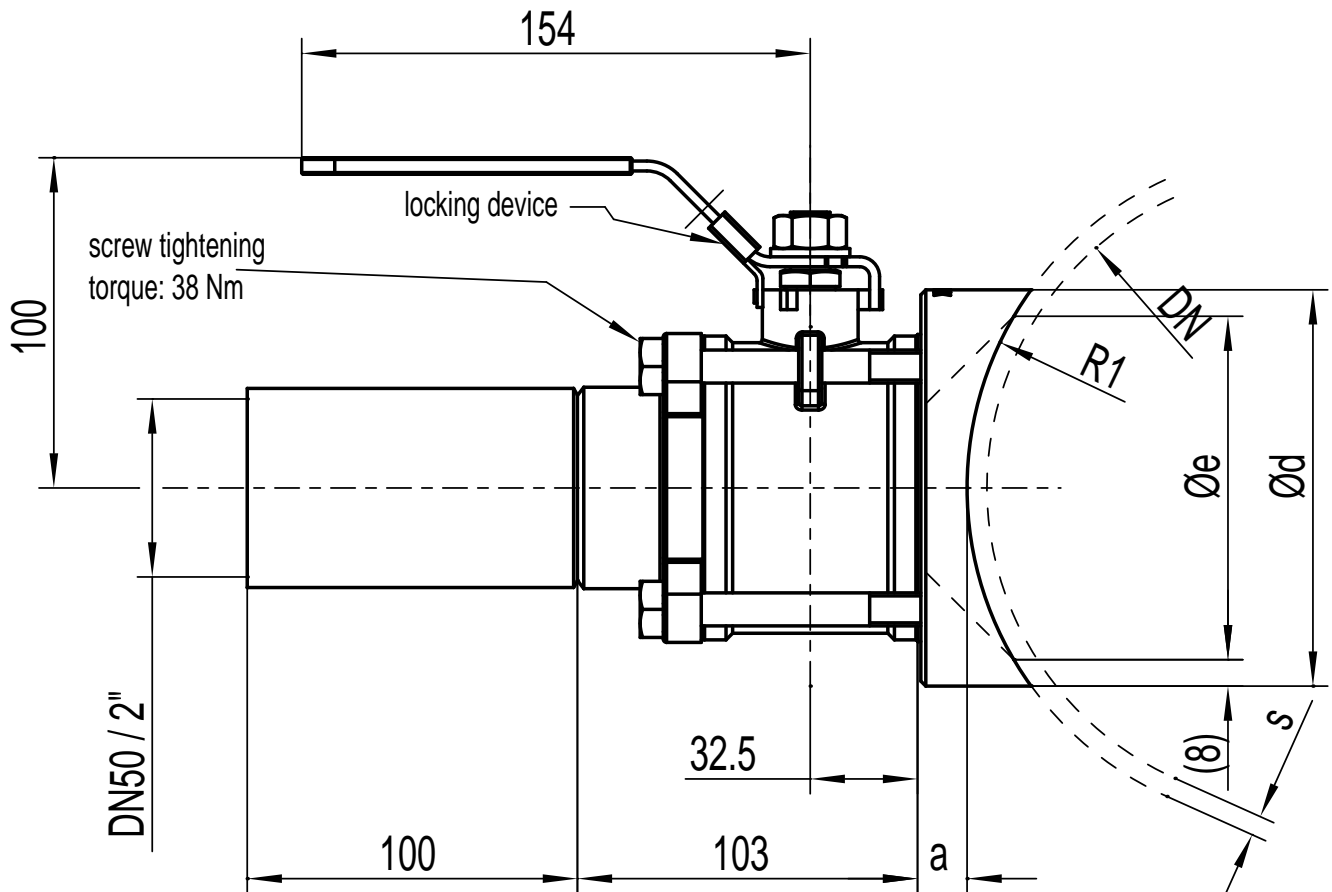
DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
80	PHB40/80g Hv	42	2	54	70	28
100	PHB40/100g Hv	52	2	74	90	28
125	PHB40/125g Hv	64.5	2	89	105	15
150	PHB40/150g Hv	77	2	89	105	16
200	PHB40/200g Hv	102.5	2.5	89	105	17
250	PHB40/250g Hv	128	3	89	105	18
300	PHB40/300g Hv	153	3	89	105	19
350	PHB40/350g Hv	178	3	89	105	20
400	PHB40/400g Hv	203	3	89	105	20
450 – 1200	PHB40/450–1200g Hv	300	4	89	105	20

* welding in pipeline must comply with PN 40

** DN pipe must be specified

s = material thickness of pipe

straight sampling valve DN 50 (2"), PN 40*
 lockable hand lever,
 block flange for welding and grinding



DN pipe **	Typ	R1 [mm]	s [mm]	Ø e [mm]	Ø d [mm]	a [mm]
100	PHB50/100k Hv	52	2	74	90	30
125	PHB50/125k Hv	64.5	2	99	115	30
150	PHB50/150k Hv	77	2	104	120	14
200	PHB50/200k Hv	102.5	2.5	104	120	15
250	PHB50/250k Hv	128	3	104	120	16
300	PHB50/300k Hv	153	3	104	120	17
350	PHB50/350k Hv	178	3	104	120	18
400	PHB50/400k Hv	203	3	104	120	18
450 – 1200	PHB50/450–1200k Hv	300	4	104	120	18

* welding in pipeline must comply with PN 40

** DN pipe must be specified

s = material thickness of pipe

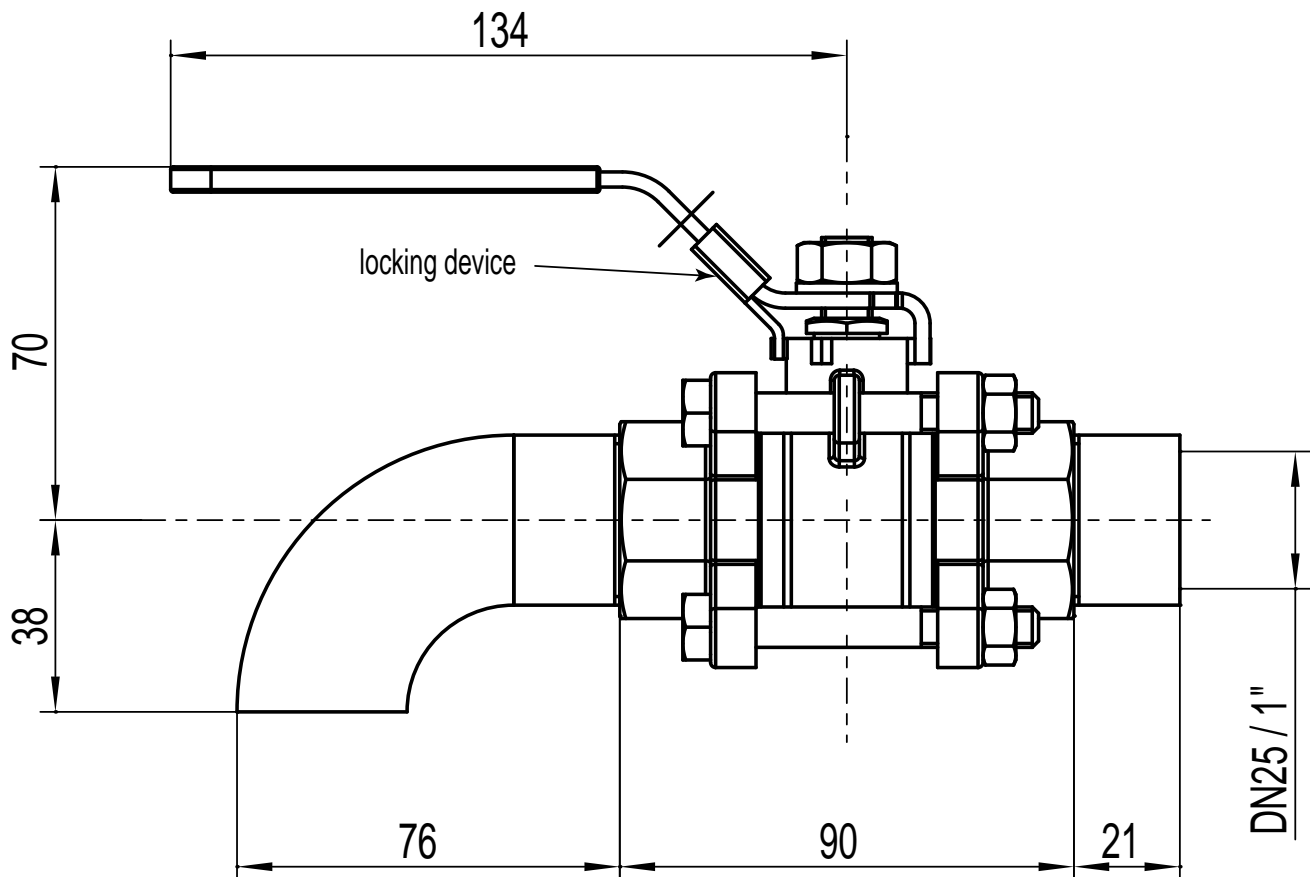
Application:

Wherever no projecting edges or hollow spaces are allowed in pipes.

e.g. paper production:

- flow box
- accepted stock line

curved sampling valve DN 25 (1"), PN 40*
lockable hand lever,
weld-on nipple



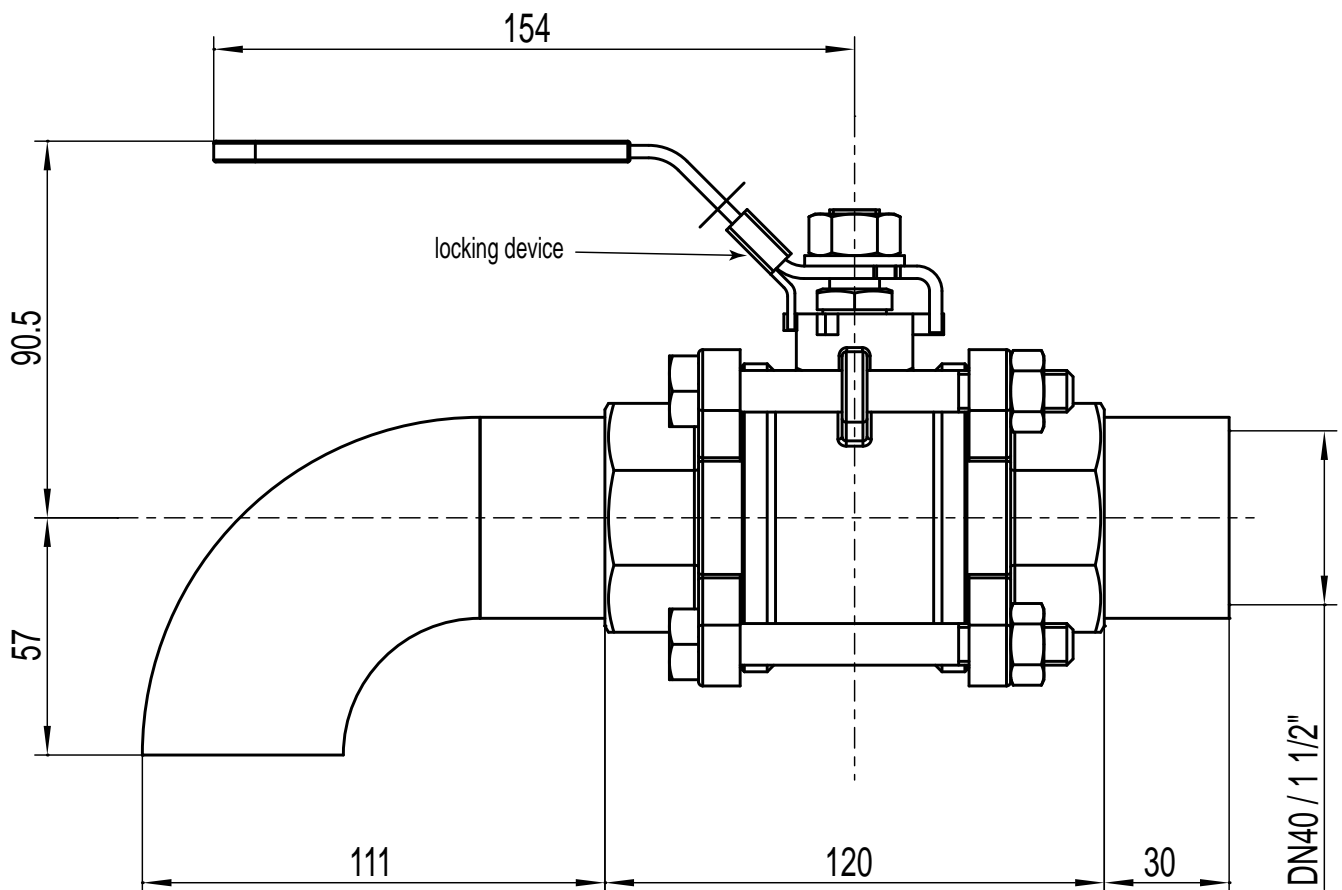
Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

weight: 1.4 kg

* welding in pipeline must comply with PN 40

curved sampling valve DN 40 (1 1/2"), PN 40*
lockable hand lever,
weld-on nipple

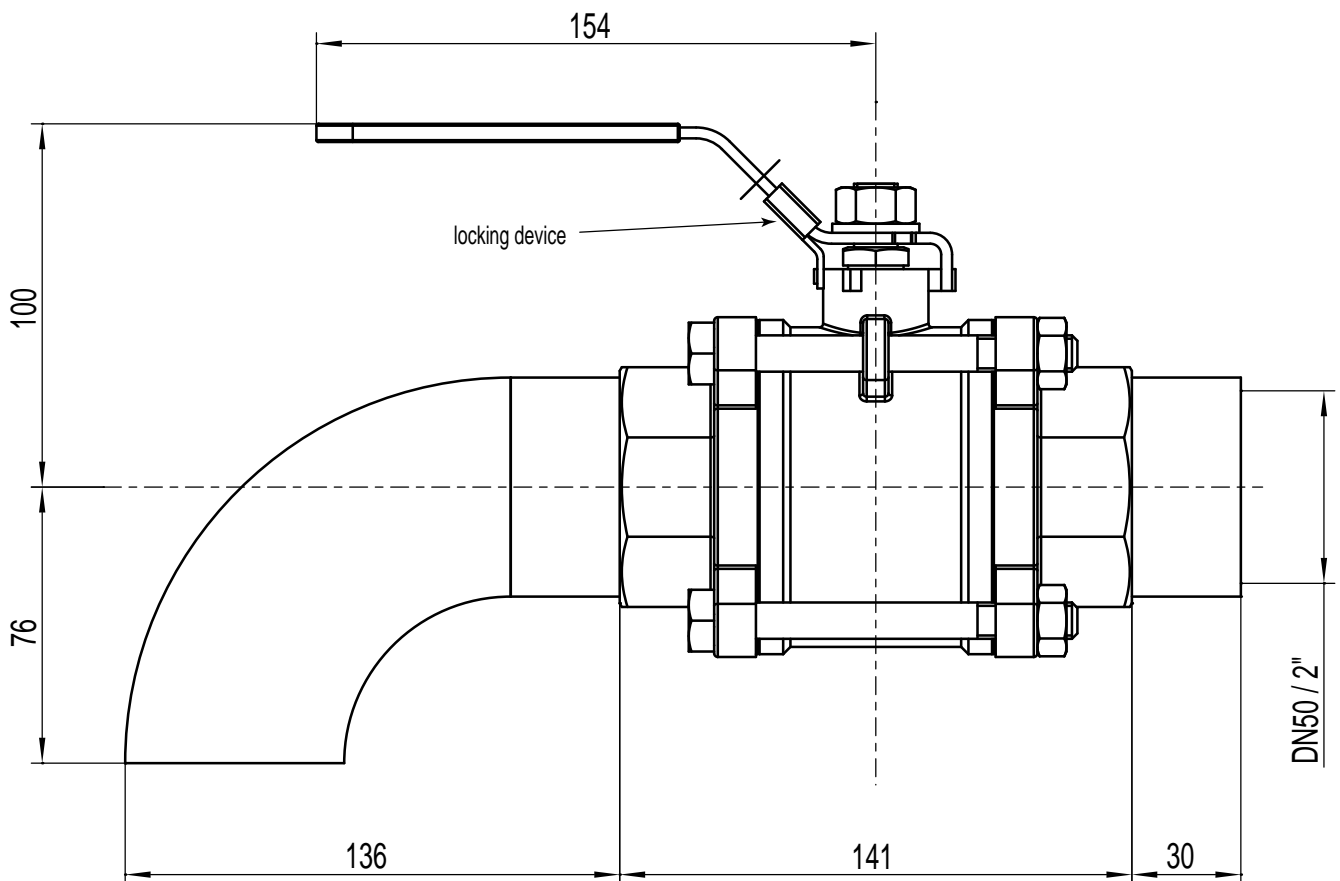


Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

* welding in pipeline must comply with PN 40

curved sampling valve DN 50 (2"), PN 40*
lockable hand lever,
weld-on nipple



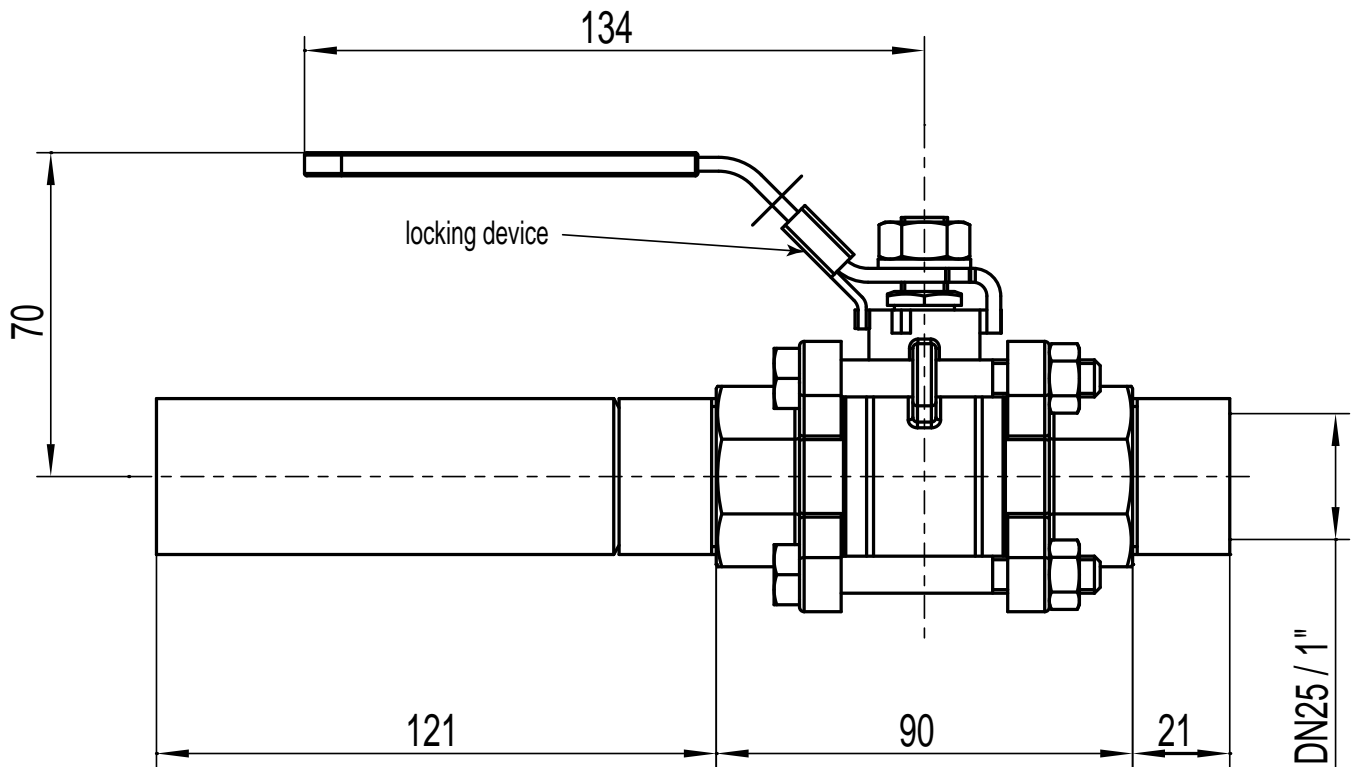
Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

weight: 4.1 kg

* welding in pipeline must comply with PN 40

straight sampling valve DN 25 (1"), PN 40*
lockable hand lever,
weld-on nipple



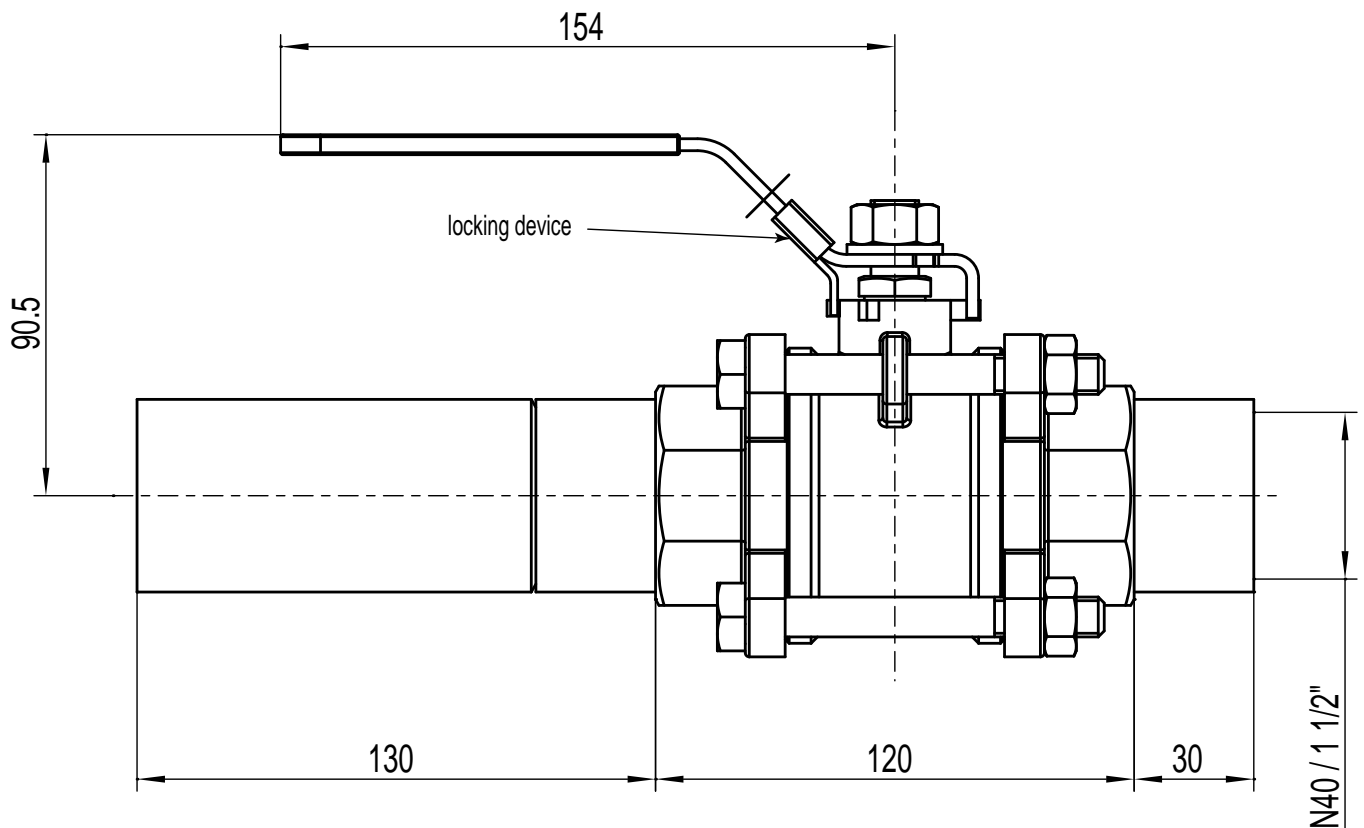
Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

weight: 1.5 kg

* welding in pipeline must comply with PN 40

straight sampling valve DN 40 (1 1/2"), PN 40*
lockable hand lever,
weld-on nipple

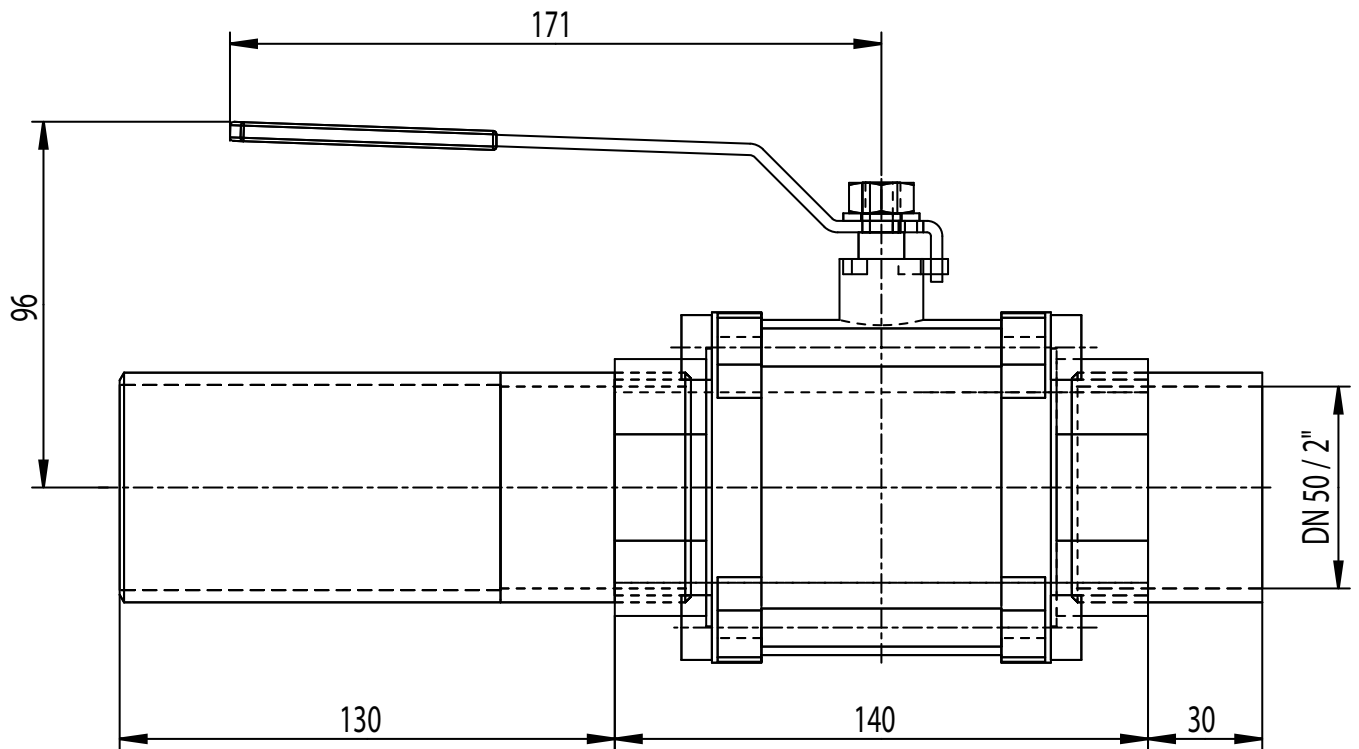


Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

* welding in pipeline must comply with PN 40

straight sampling valve DN 50 (2"), PN 40*
hand lever,
weld-on nipple



Application:

Wherever samples of media have to be taken and hollow spaces are negligible.

weight: 4.2 kg

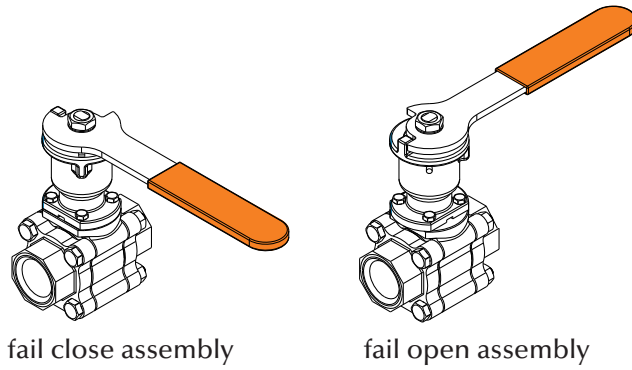
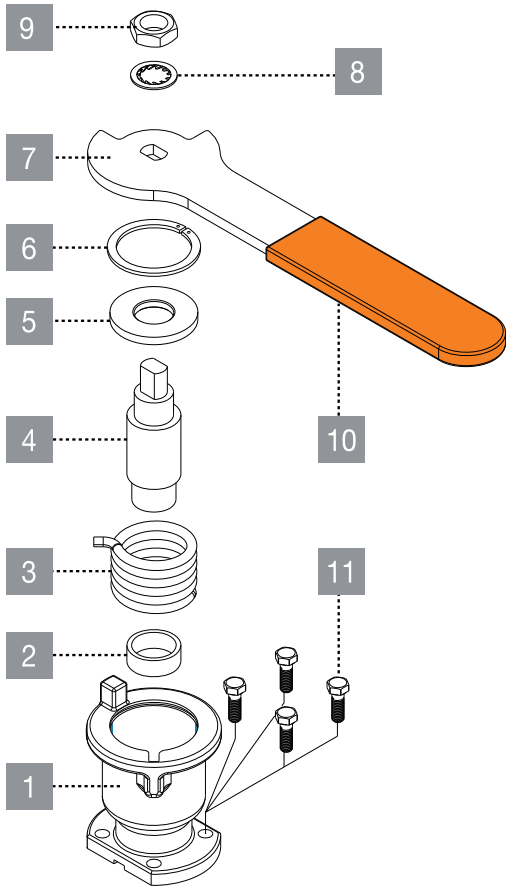
* welding in pipeline must comply with PN 40

Description

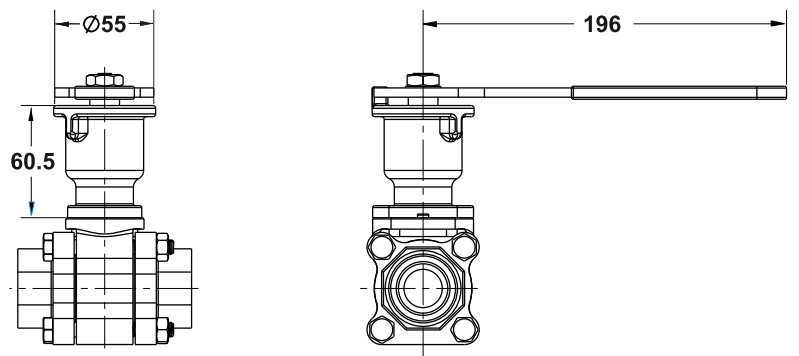
- size range:
1/2" – 1 1/4" (DN 15 – 32)
- features:
provides dependable automatic closing or opening of manual valves
- applications:
sampling, by-pass, steam letdown, draining, pressure relief
- stroke end output torque:
11 Nm (97 in-lb)
- materials:
stainless steel
- connection:
direct mounting acc. to ISO 5211
- safety features:
tamper proof spring loaded unit for direct assembly to valve
- other features:
fail to close or fail to open mountable
locking device



can easily locked with a padlock



item	description	material specifications	qty.
1	body housing	stainless steel ASTM A351 CF8M	1
2	bottom bearing	PTFE	1
3	spring	spring steel ASTM A401	1
4	stern	stainless steel 17-4 PH	1
5	top bearing	BRASS ASTM B121	1
6	locking clip	spring steel DIN 472	1
7	handle	stainless steel AISI 430	1
8	serrated washer	stainless steel	1
9	handle nut	stainless steel 316 ASTM A194	1
10	handle sleeve	VINYL PLASTISOL	1
11	housing screws	stainless steel A2-70 ISO 4014	4

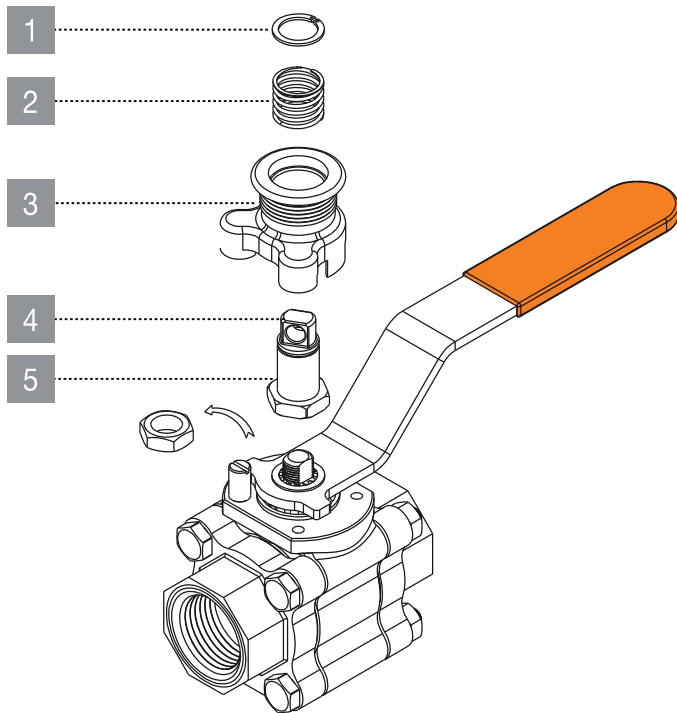


CAUTION!

While operating the spring loaded device, hold lever firmly and release gently. Slamming the unit might cause human injuries or handle deformation.

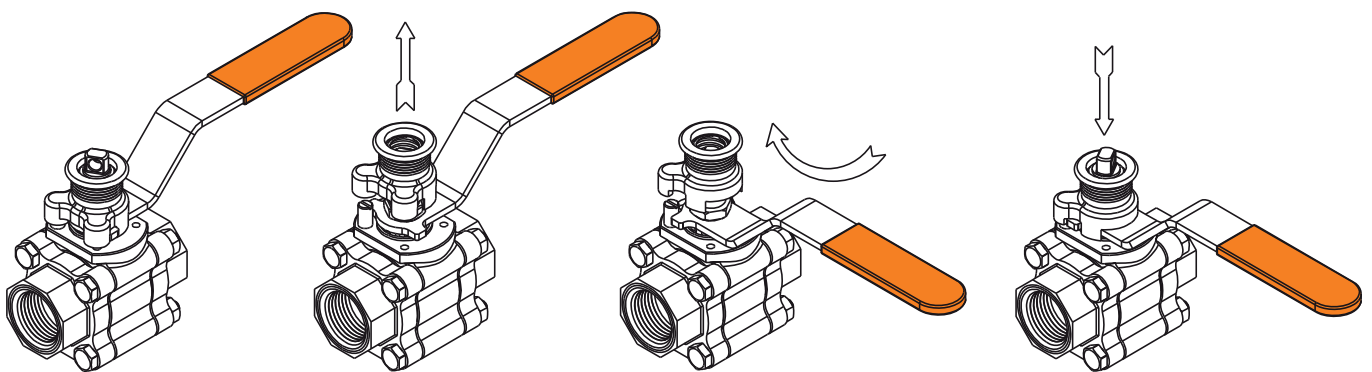
Locking device

The robust device locks the valve handleat open or close position and allow to add a pad lock (up to 6 mm) for misuse prevention. The spring-load construction ensure handle is lock in position at all valve installation orientations and under vibrating conditions. An accidentally push / pull / turn of the handle is prevented.



item	description
1	retaining ring
2	spring
3	housing
4	shaft groove
5	shaft

Locking device operation



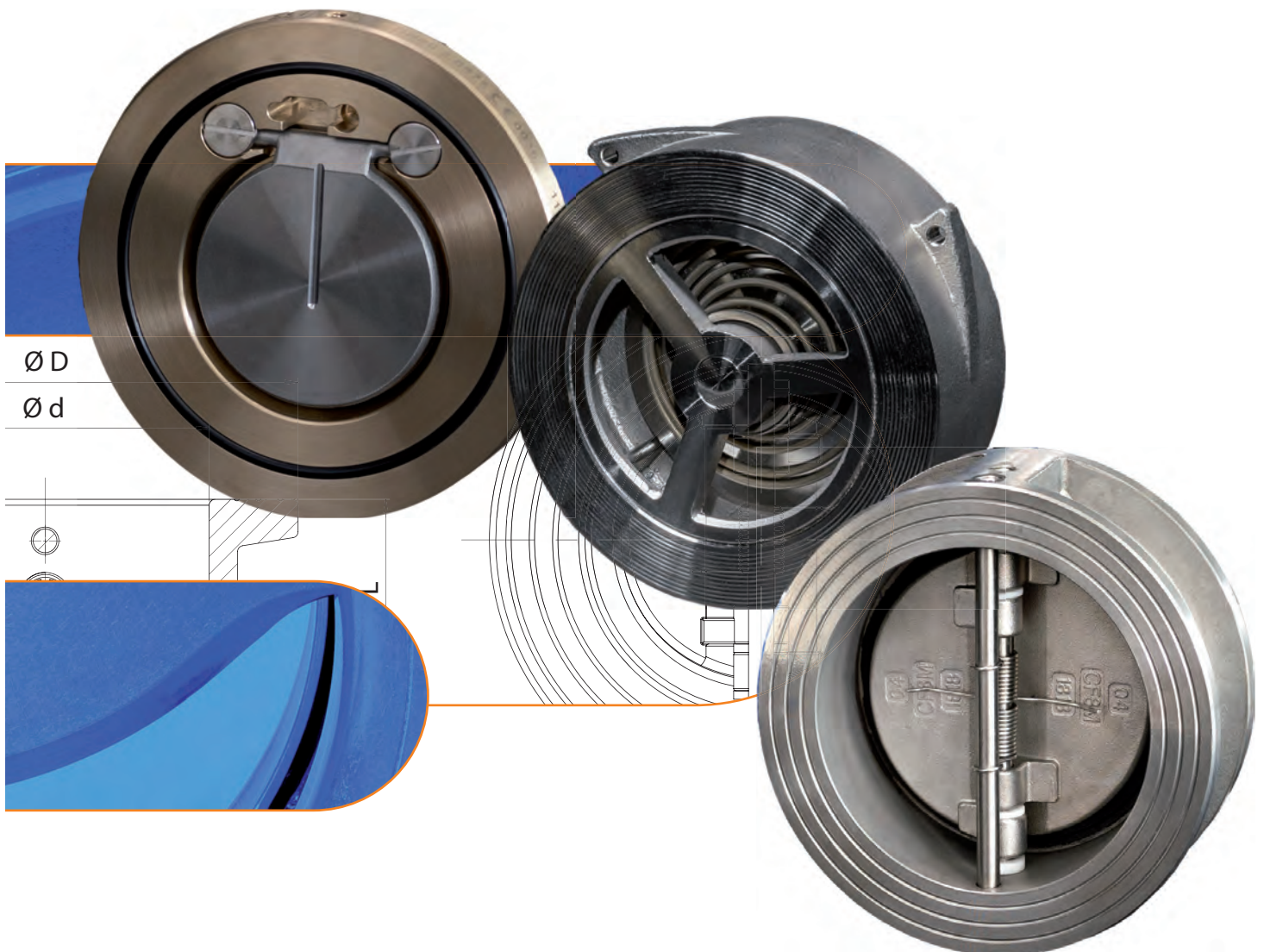
valve locked in open position

lift locking device housing above valve stop

turn the valve handle 90° locking device housing to the close position

release the locking device housing down to lock

Check Valves

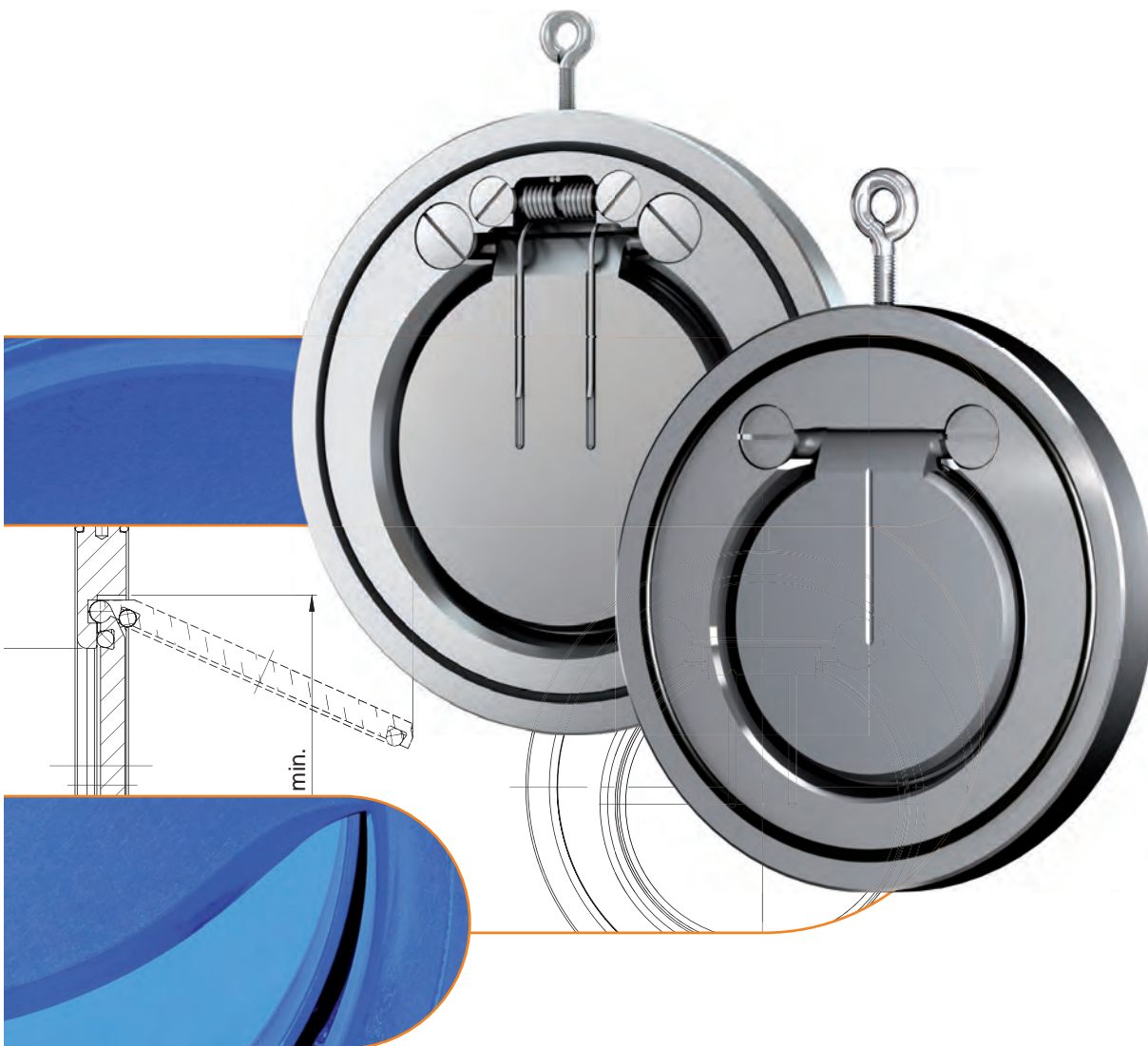


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Swing Check Valves Type ZRK / ZRKF	297
Dual Plate Check Valves Type 915	307
Disco Check Valves Type 930 / 932	315

Swing Check Valves

Type ZRK / ZRKF



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ZRKF – technical data	303
ZRKF – dimensions	304
ZRKF – pressure-loss diagram	305
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General description

Description and intended purpose

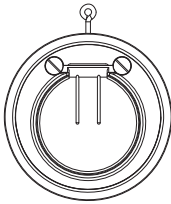
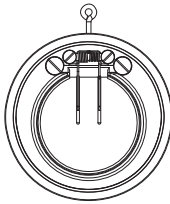
Swing check valves wafer type are characterized by their simple and robust design. A key feature is their particular narrow FTF length – a major advantage compared to other designs in many installation situations in piping systems in industrial and building services. They can be installed directly between flanges (PN 6 – PN 40 or Class 150 – Class 399).

Swing check valves wafer type are maintenance-free.

Function

Swing check valves wafer type require a low opening pressure. The resulting opening force pushes the disc against its self-weight and, if necessary, also an additional spring, so that the medium can flow. If the pressure drops or if the backpressure exceeds the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

Overview matrix

	ZRK	ZRKF
		
nominal sizes ^{*1}	DN 32 – DN 1000	DN 32 – DN 400
flange connection ^{*2}	PN 6 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300 JIS 10K	
max. pressure	16 to 50 bar ^{*3}	
temperature ranges	-273 °C to +500 °C	-200 °C to +450 °C
materials available ^{*4}	steel / stainless steel / alu-bronze / superduplex	
seals available	metal / NBR / EPDM / FKM / PTFE	

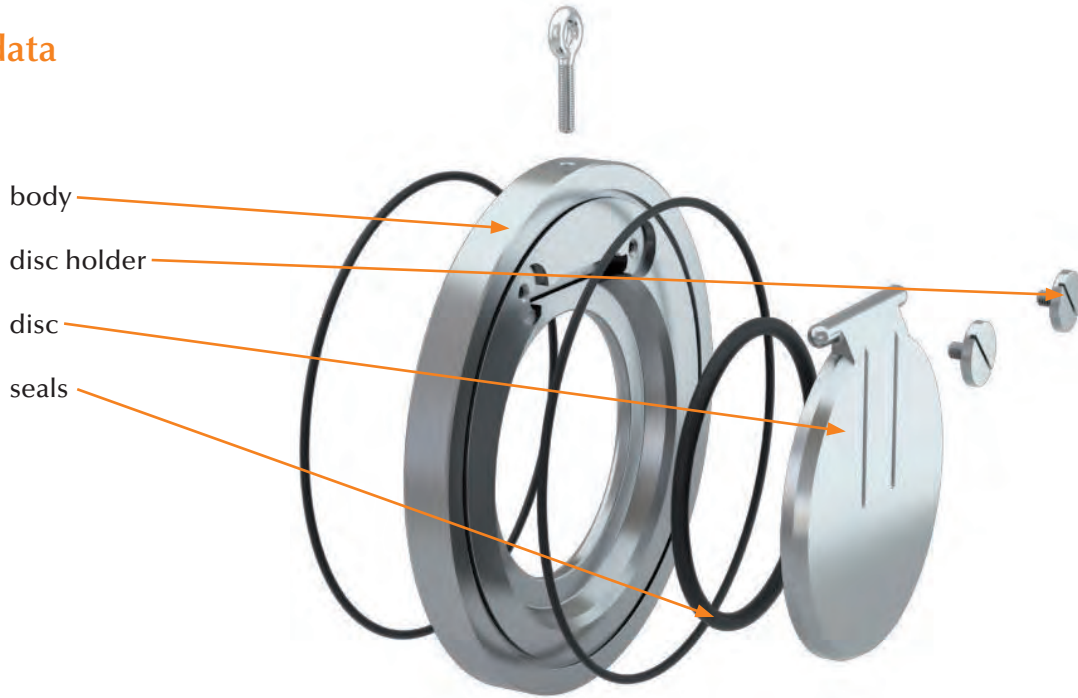
^{*1} other nominal sizes on request

^{*2} other flange connections on request

^{*3} depending on nominal size and design

^{*4} other materials on request

Technical data



Design	Body	Disc	Max. allowable pressure*1				
ST-ST	1.0460, zinc plated	1.0619 / 1.0460, zinc plated	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 1000 16 bar	
ST-VA	1.0460, zinc plated	1.4408	DN 32 - 40 40 bar		DN 50 25 bar	DN 65 - 1000 16 bar	
VA-VA	1.4408	1.4408	DN 32 - 50 40 bar	DN 65 30 bar	DN 80 -100 20 bar	DN 125 - 1000 16 bar	
VA1-VA1	1.4571	1.4571	DN 32 - 50 50 bar	DN 65 40 bar	DN 80 30 bar	DN 100 -150 25 bar	DN 200 - 1000 20 bar
AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	DN 32 - 50 40 bar	DN 65 - 125 30 bar	DN 150 - 300 20 bar	DN 350 - 1000 10 bar	
DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	DN 32 - 65 50 bar	DN 80 - 100 40 bar	DN 125 - 150 30 bar	DN 200 - 1000 20 bar	

*1 max. allowable pressure is dependent on the temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated*3	ST-VA VA-VA VA1-VA1 AB-DU DU-DU	-10 °C to +400 °C -196 °C to +400 °C -273 °C to +500 °C -10 °C to +250 °C -10 °C to +250 °C	G
NBR*4	-	-30 °C to +100 °C	A
EPDM*4	-	-65 °C to +150 °C	A
FKM*4	-	-30 °C to +230 °C	A
PTFE*4	-	-200 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 metal seated valves are supplied without O-rings in body as standard

*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

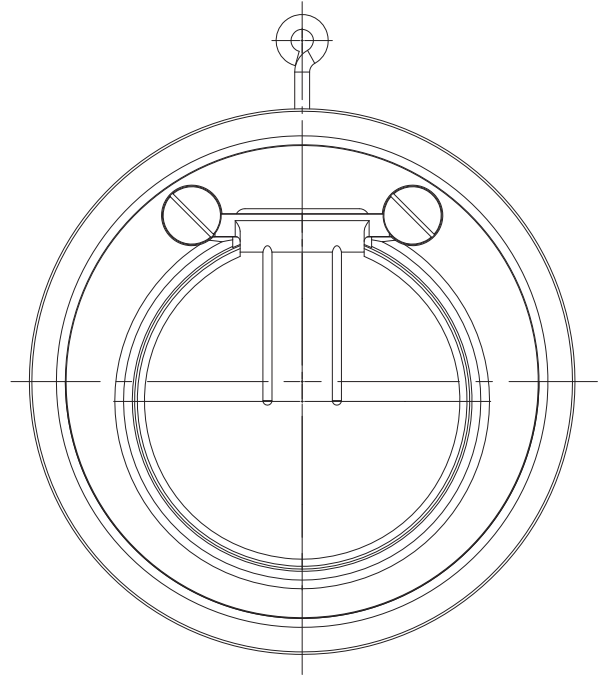
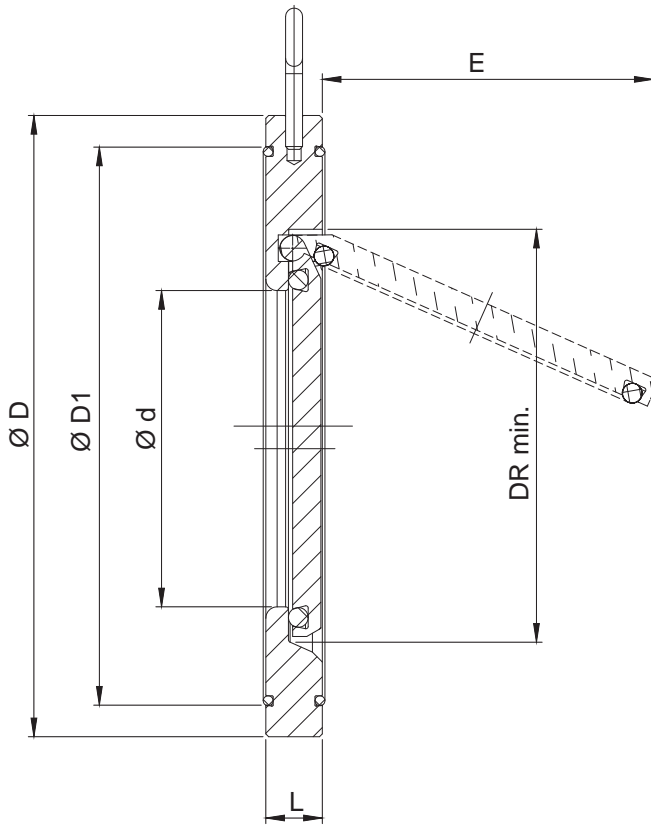
Seals for valves up to and including DN 300 comply with the following approvals / conformities:

NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-free, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

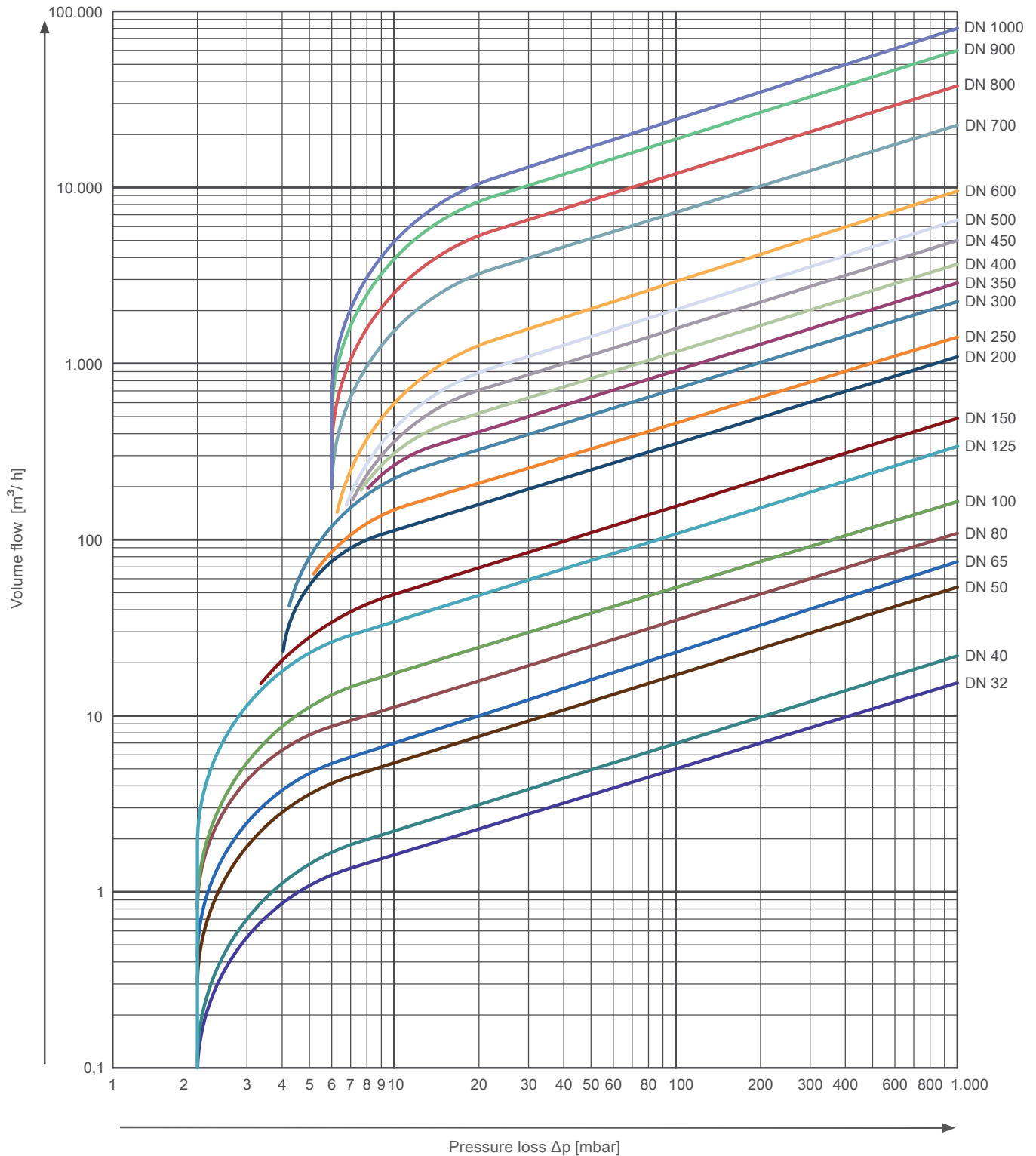


Nominal size	Ø D*5								L	Ø d	Ø D1	E	DR	Kv value [m³/h]	Opening pressure [mbar]		Weight** [kg]
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150	ANSI 300	JIS 10K							↔	↑	
DN 32	79	85	85	85	85	74	85	85	15	18	59	22	37	16,2	~ 2	~ 10	0,67
DN 40	89	95	95	95	95	83	95	91	16	22	72	25	43	22,2	~ 2	~ 10	0,85
DN 50	98	109	109	109	109	105	112	105	14	32	86	37	54	54	~ 2	~ 10	0,91
DN 65	118	129	129	129	129	124	129	124	14	40	109	50	70	75	~ 2	~ 10	1,2
DN 80	134	144	144	144	144	137	150	135	14	54	119	61	82	112	~ 2	~ 10	1,5
DN 100	154	164	164	170	170	175	181,5	160	18	70	146	77	106	172	~ 2	~ 10	2,4
DN 125	184	195	195	196	196	197	216,5	191	18	92	173	98	131	342	~ 2	~ 10	3,4
DN 150	209	220	220	226	226	222	251,5	220	20	112	197	120	159	490	~ 2	~ 10	4,7
DN 200	264	275	275	286	294	279	308	271	22	154	255	160	207	1128	~ 4	~ 14	7,7
DN 250	319	330	331	344	356	340	362	330	26	192	312	190	260	1500	~ 4	~ 14	13
DN 300	375	380	386	404	421	410	423	380	32	227	363	220	309	2290	~ 4	~ 14	21
DN 350	425	440	446	461	478	451	487	424	38	266	416	250	341	2890	~ 6	~ 18	33
DN 400	475	491	499	518	550	514	541	487	44	310	467	290	392	3700	~ 6	~ 18	46
DN 450	530	541	558	568	575	549	598	541	52	350	520	340	442	5000	~ 6	~ 18	67
DN 500	580	596	621	628	632	606	655	596	58	400	550	390	493	6550	~ 6	~ 24	89
DN 600	681	698	738	735	751	718	775	698	62	486	660	470	594	9550	~ 6	~ 26	128
DN 700	785	813	807	836	-	-	-	-	67	588	770	563	693	23000	~ 6	~ 26	190
DN 800	893	920	914	945	-	-	-	-	78	622	-	680	795	38000	~ 6	~ 30	292
DN 900	993	1020	1014	1045	-	-	-	-	95	720	-	750	889	60000	~ 6	~ 32	412
DN 1000	1093	1127	1131	1159	-	-	-	-	105	810	-	840	991	80000	~ 6	~ 36	550

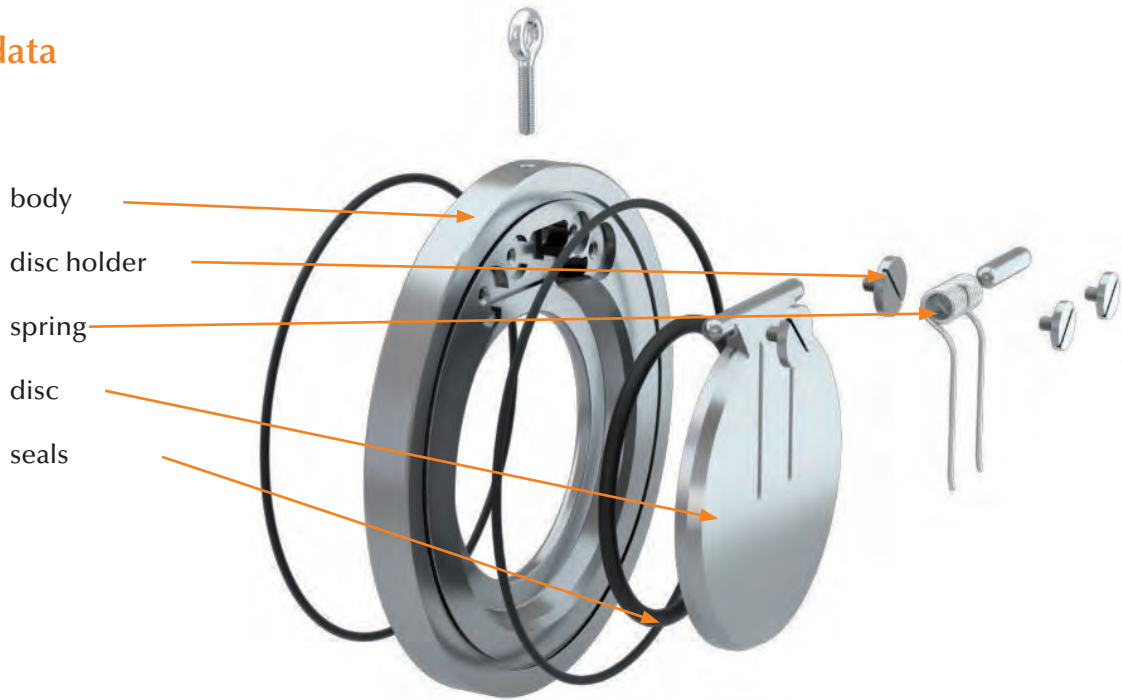
*5 in order to realise the flange connection diameters, flange center-rings may be used

** weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

Pressure-loss diagram The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Technical data



Design	Body	Disc	Spring	Max. allowable pressure*1			
ST-ST	1.0460, zinc plated	1.0619 / 1.0460, zinc plated	1.4571	DN 32 - 40 40 bar	DN 50 25 bar	DN 65 - 400 16 bar	
ST-VA	1.0460, zinc plated	1.4408	1.4571	DN 32 - 40 40 bar	DN 50 25 bar	DN 65 - 400 16 bar	
VA-VA	1.4408	1.4408	1.4571	DN 32 - 50 40 bar	DN 65 30 bar	DN 80 - 100 20 bar	DN 125 - 400 16 bar
VA1-VA1	1.4571	1.4571	1.4571	DN 32 - 50 50 bar	DN 65 40 bar	DN 80 30 bar	DN 100 - 150 25 bar DN 200 - 400 20 bar
AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	DN 32 - 50 40 bar	DN 65 - 125 30 bar	DN 150 - 300 20 bar	DN 350 - 400 10 bar
DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	DN 32 - 65 50 bar	DN 80 - 100 40 bar	DN 125 - 150 30 bar	DN 200 - 400 20 bar

*1 max. allowable pressure is dependent on the temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated*3	ST-VA	-10 °C to +300 °C*4	G
	VA-VA	-196 °C to +300 °C*5	
	VA1-VA1	-200 °C to +300 °C*6	
	AB-DU	-10 °C to +250 °C	
	DU-DU	-10 °C to +250 °C	
NBR*7	-	-30 °C to +100 °C	A
EPDM*7	-	-65 °C to +150 °C	A
FKM*7	-	-30 °C to +230 °C	A
PTFE*7	-	-200 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 metal seated valves are supplied without O-rings in body as standard

*4 optional with spring made of Hastelloy C4: -10 °C to +450 °C

*5 optional with spring made of Hastelloy C4: -100 °C to +400 °C

*6 optional with spring made of Hastelloy C4: -100 °C to +450 °C

*7 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

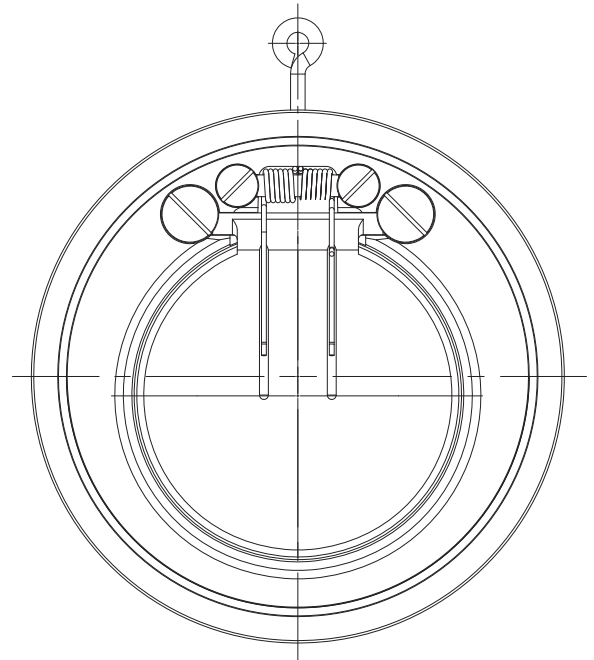
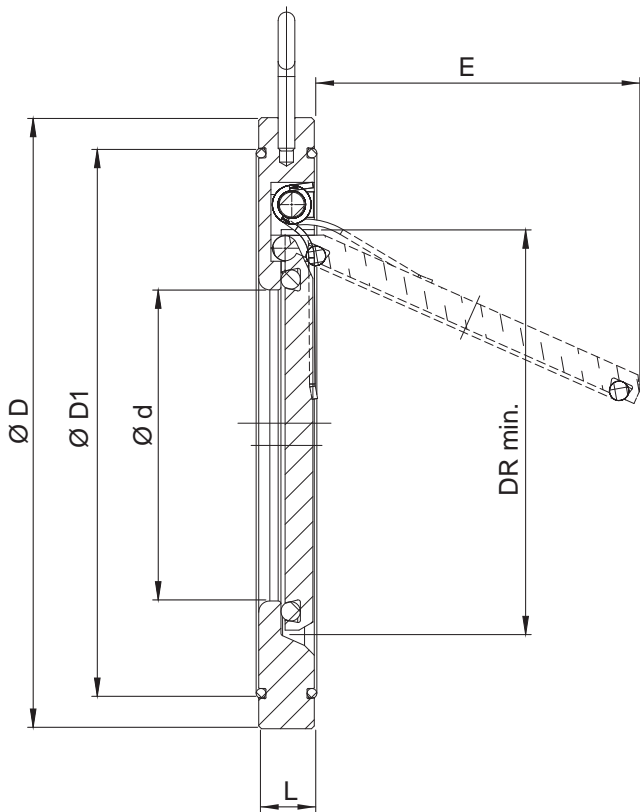
Seals for valves up to and including DN 300 comply with the following approvals / conformities:

NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-free, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

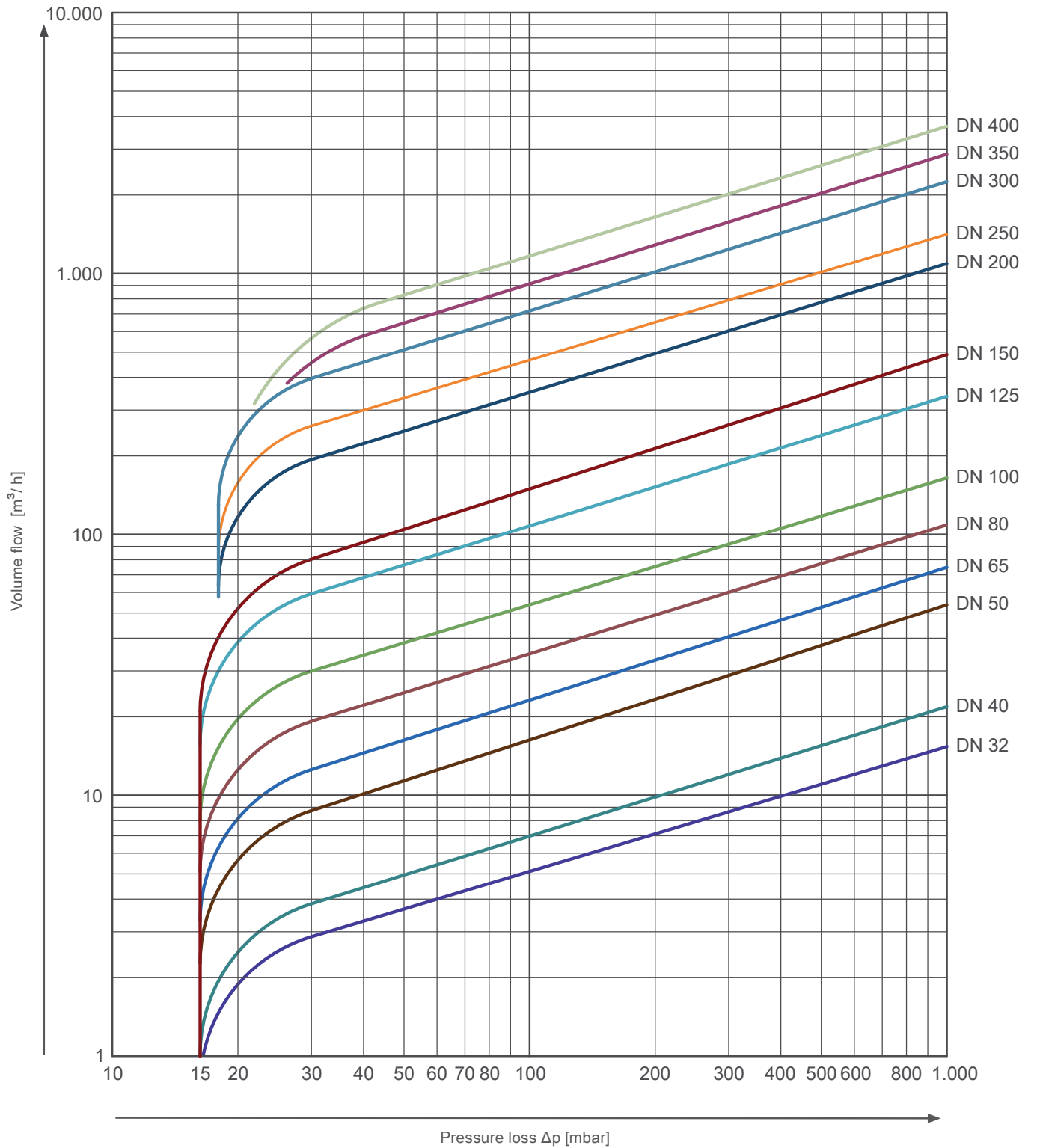


Nominal size	Ø D* ⁸								L	Ø d	Ø D1	E	DR	Kv value [m ³ /h]	Opening pressure [mbar]		Weight* ⁹ [kg]
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150	ANSI 300	JIS 10K							↔	↑	
DN 32	79	85	85	85	85	74	85	85	15	18	59	22	37	16,2	~ 15	~ 25	0,67
DN 40	89	95	95	95	95	83	95	91	16	22	72	25	43	22,2	~ 15	~ 25	0,85
DN 50	98	109	109	109	109	105	112	105	14	32	86	37	54	54	~ 15	~ 25	0,91
DN 65	118	129	129	129	129	124	129	124	14	40	109	50	70	75	~ 15	~ 25	1,2
DN 80	134	144	144	144	144	137	150	135	14	54	119	61	82	112	~ 15	~ 25	1,5
DN 100	154	164	164	170	170	175	181,5	160	18	70	146	77	106	172	~ 15	~ 25	2,4
DN 125	184	195	195	196	196	197	216,5	191	18	92	173	98	131	342	~ 15	~ 25	3,4
DN 150	209	220	220	226	226	222	251,5	220	20	112	197	120	159	490	~ 15	~ 25	4,7
DN 200	264	275	275	286	294	279	308	271	22	154	255	160	207	1128	~ 17	~ 25	7,7
DN 250	319	330	331	344	356	340	362	330	26	192	312	190	260	1500	~ 17	~ 25	13
DN 300	375	380	386	404	421	410	423	380	32	227	363	220	309	2290	~ 17	~ 25	21
DN 350	425	440	446	461	478	451	487	424	38	266	416	250	341	2890	~ 18	~ 27	33
DN 400	475	491	499	518	550	514	541	487	44	310	467	290	392	3700	~ 18	~ 28	46

*⁸ in order to realise the flange connection diameters, flange center-rings may be used

*⁹ weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

Pressure-loss diagram The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Type code

type	DN		Material			
	DN	design	body	disc	spring	seal
ZRK	32 - 1200	ST-ST	1.0460, galvanized	1.0619 / 1.0460, galvanized		Metal seated (M) NBR (N) EPDM (E) FKM (F) PTFE (Teflon) (T)
		ST-VA	1.0460, galvanized	1.4408		
		VA-VA	1.4408	1.4408		
		VA1-VA1	1.4571	1.4571		
		AB-DU	CC333G (2.0975)	1.4469 (Superduplex)		
		DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)		
ZRKF	32 - 400	ST-ST	1.0460, galvanized	1.0619 / 1.0460, galvanized	1.4571 (F1)*1	
		ST-VA	1.0460, galvanized	1.4408	1.4571 (F1)*1	
		VA-VA	1.4408	1.4408	1.4571 (F1)*1	
		VA1-VA1	1.4571	1.4571	1.4571 (F1)*1	
		AB-DU	CC333G (2.0975)	1.4469 (Superduplex)	Hastelloy C4 (F2)	
		DU-DU	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	

1* For temperatures above 300 °C, a compression spring made of Hastelloy (F2) is required for metal-seated fittings.

Order example

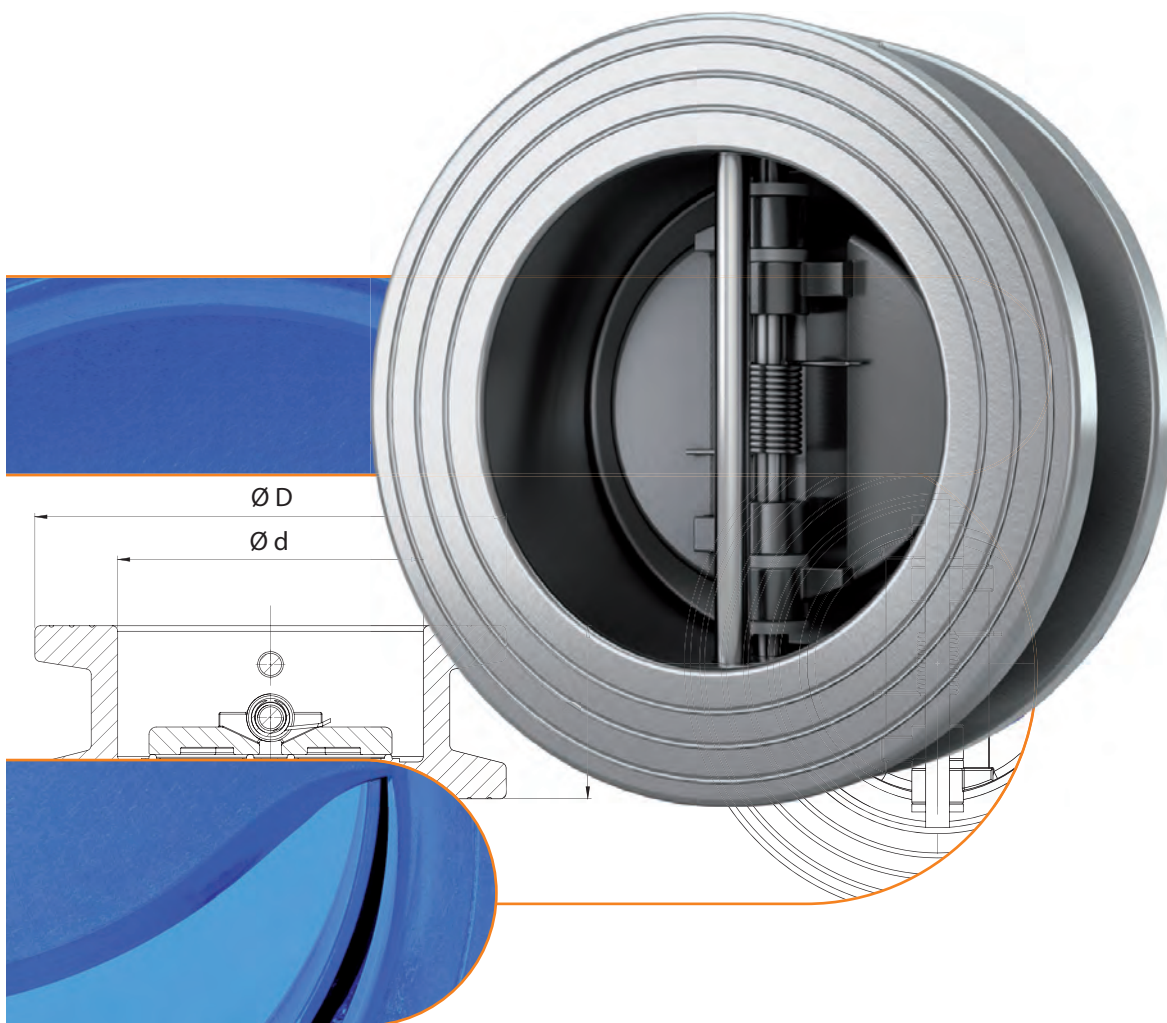
ZRKF - VA - VA - 100 - N - F1

Type of valve	Wafer check valve
Type	ZRKF
Nominal size	DN 100
Body / disc	1.4408
Seal	NBR
Spring	Stainless steel 1.4571 (F1)



Dual Plate Check Valves

Type 915



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General description

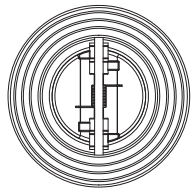
Description and intended purpose

Dual plate check valves impress with their simple design and short overall lengths (in accordance with DIN EN 558 series 16 or API 594). They also feature particularly high flow rates thanks to their low flow resistance. They can be installed directly between flanges (PN 10 – PN 40 oder Class 150 – Class 600). Dual plate check valves are maintenance-free.

Function

Dual plate check valves require only a low opening pressure. The resulting operating pressure and, if necessary the weight of the plates (depending on the installation position), forces the plates against a spring, thus releasing the medium. If the inlet pressure drops or the outlet pressure exceeds the inlet pressure, the valve closes and seals against the medium by means of a vulcanised seal in the body or by means of the metal seat.

Overview matrix

	915
	
nominal sizes ^{*1}	DN 50 – DN 900 / 2" – 36"
flange connection ^{*2}	PN 10 / PN 16 / PN 25 / PN 40 Class 150
max. pressure ^{*3}	FTF dimensions in acc. with DIN EN 558: max. 16 bar FTF dimensions in acc. with API 594: max. 20 bar
temperature ranges	-10 °C bis +200 °C
materials available ^{*4}	ductile iron / stainless steel / Duplex / Aluminium bronze
seals available	NBR / EPDM / FKM

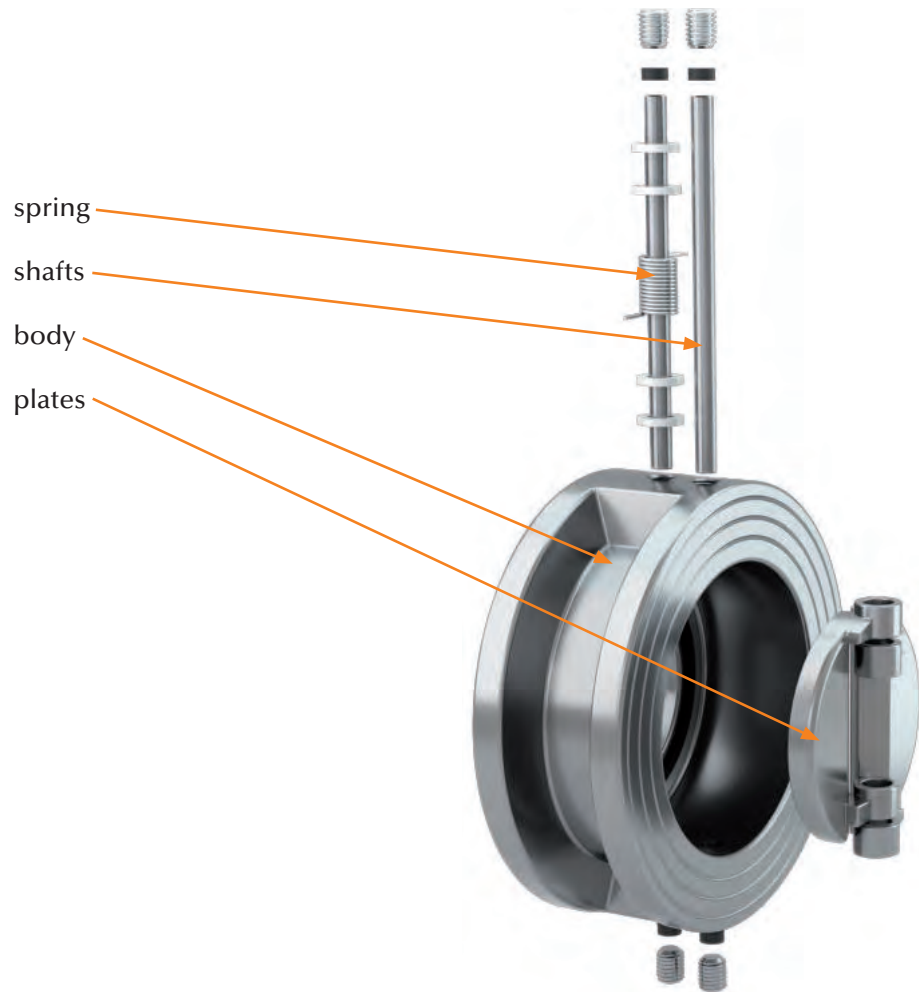
*1 larger nominal sizes on request

*2 other flange connections on request

*3 higher pressures on request

*4 other materials on request

Technical data



Design	Body	Plates	Shafts	Spring	Pressure range*1
1	EN-GJS-400-15*2	EN-GJS-400-15*3	1.4401	1.4571	ETF acc. to DIN EN 558: DN 50 - DN 250: 0 to max. 16 bar DN 300 - DN 900: 0 to max. 10 bar
2	EN-GJS-400-15*2	Aluminium bronze	1.4401	1.4571	
3	EN-GJS-400-15*2	1.4408	1.4401	1.4571	
4	1.4408	1.4408	1.4401	1.4571	0 to max. 10 bar
6	Aluminium bronze	Aluminium bronze	Aluminium bronze	Inconel 600	ETF acc. to API 594: 0 to max. 20 bar
7	1.4469	1.4469	Inconel 600	Inconel 600	

*1 max. allowable pressure is dependent on the temperature

*2 Epoxy-resin coated, with DVGW approval for coating

*3 nickel-plated

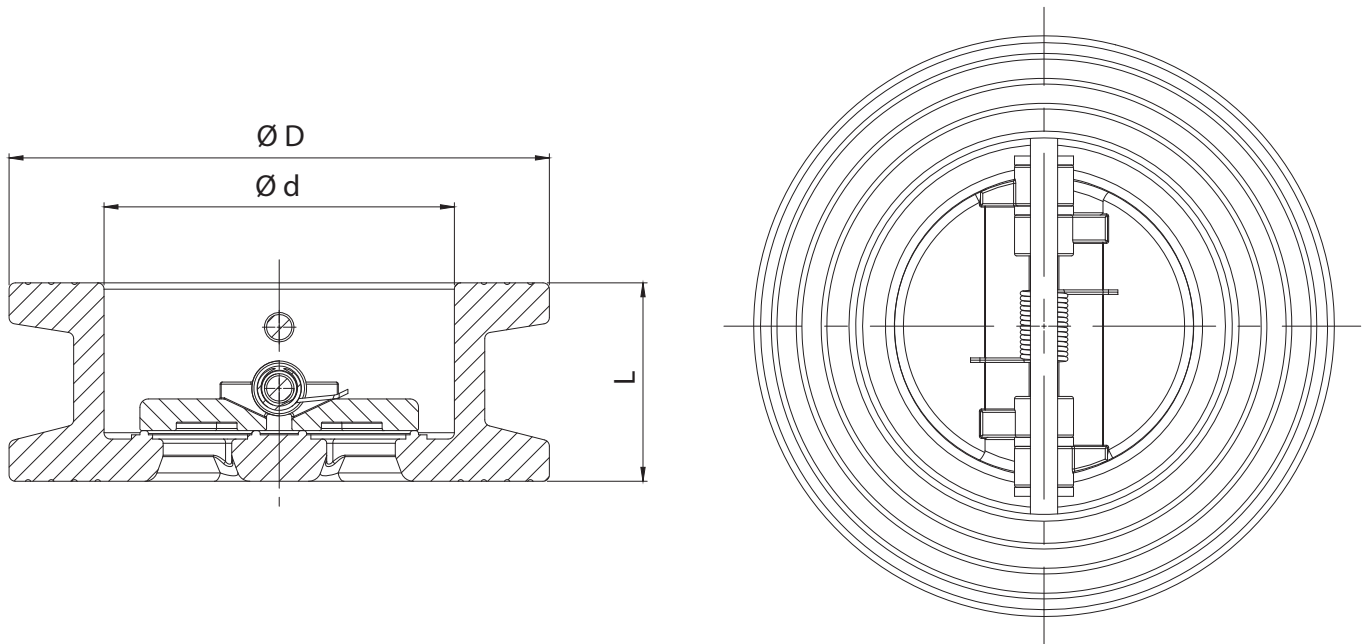
Seal	Temperature	Leakage rate*4
NBR	-10 °C to +90 °C	A
EPDM*5	-10 °C to +120 °C	A
FKM	-10 °C to +200 °C	A

*4 acc. to EN 12266-1 / in order to achieve the specified leakage rate, a back pressure of at least 1 bar is required

*5 approval for drinking water up to +85 °C

Additional quality features:

- Approval for drinking water in accordance with WRAS for EPDM seal
- DVGW approval for epoxy coating (design 1 – 3)



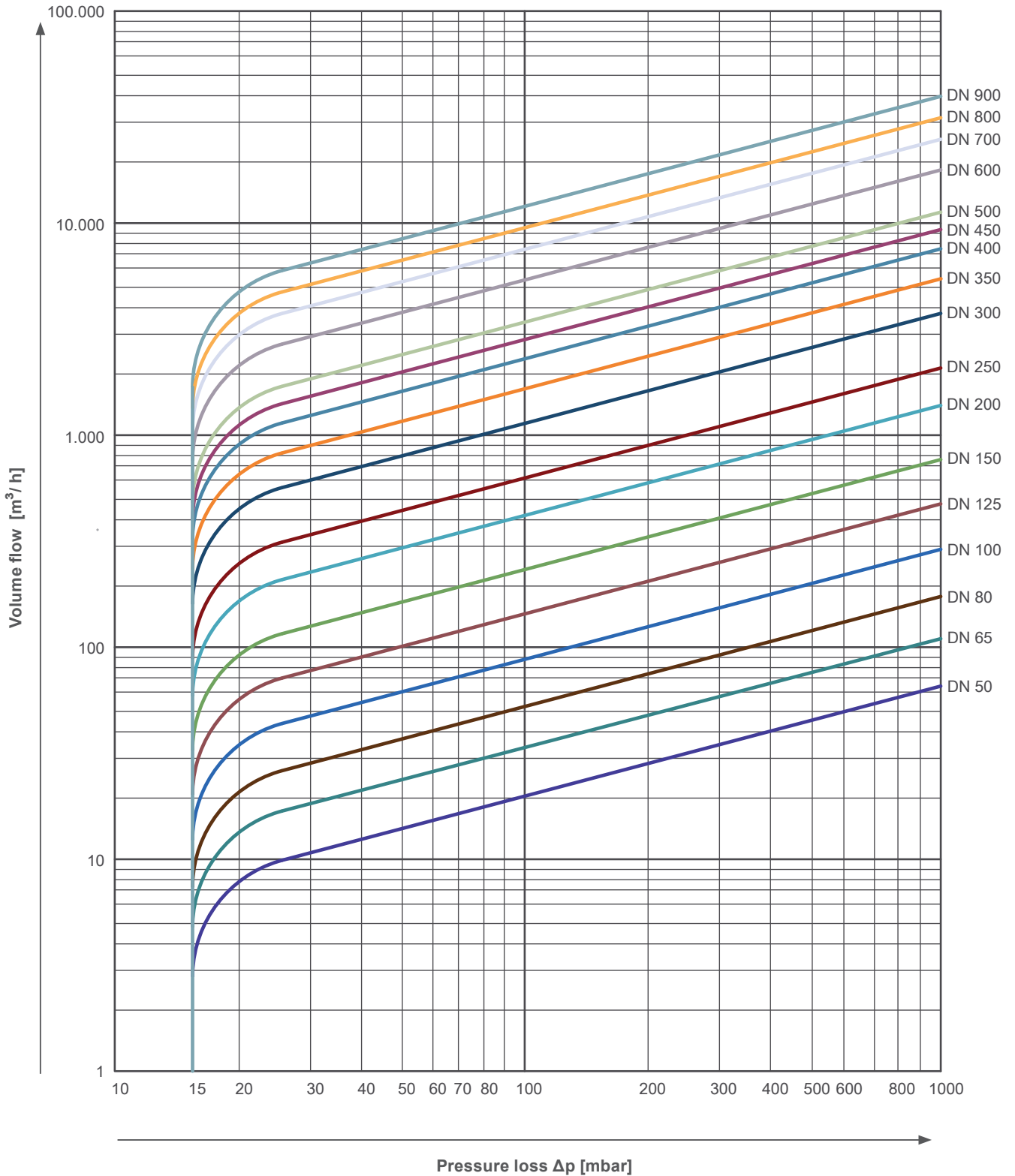
Nominal size		Ø D ⁶					Ø d	L	Kv value [m³/h]	Opening pressure [mbar]			Weight ⁷ [kg]
		PN 10	PN 16	PN 25	PN 40	Class 150				←→	↑	↓	
DN 50	2"	107				101	70,5	43	63	~ 15	~ 20	~ 10	1.5
DN 65	2 1/2"	127				121	80	46	109	~ 15	~ 20	~ 10	2.3
DN 80	3"	142				134	98	64	172	~ 15	~ 20	~ 10	3.6
DN 100	4"	162		170		171	117	64	289	~ 15	~ 20	~ 10	4.4
DN 125	5"	192				192	145	70	476	~ 15	~ 20	~ 10	6.0
DN 150	6"	218		226		218	172	76	750	~ 15	~ 20	~ 10	8.6
DN 200	8"	273		285		273	221	89	1330	~ 15	~ 20	~ 10	15
DN 250	10"	328		345		340	275.5	114	2080	~ 15	~ 20	-	24
DN 300	12"	378	383	404		406	325.5	114	3676	~ 15	~ 20	-	35
DN 350	14"	438	444	458		448	361	127	5274	~ 15	~ 20	-	58
DN 400	16"	489	495	516		514	412	140	7306	~ 15	~ 30	-	75
DN 450	18"	539	555	566		546	468	152	9246	~ 15	~ 30	-	98
DN 500	20"	594	617	626		603	515	152	11410	~ 15	~ 30	-	125
DN 600	24"	695	734	734	-	714	624	178	17570	~ 15	~ 30	-	170
DN 700	28"	807	802	-	-	828	722	229	23920	~ 15	~ 40	-	250
DN 800	32"	917	912	-	-	936	824	241	31250	~ 15	~ 40	-	366
DN 900	36"	1016	1012	-	-	1044 ⁹	924	241	39540	~ 15	~ 40	-	513

*6 flange centering rings can be used to achieve the flange connection dimensions

*7 weight refers to valve suitable for PN 10 flanges and may vary slightly, depending on the design

*9 DN 900 with flange connection dimension and FTF dimension in accordance with Class 125

Pressure-loss diagram The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Type code

type	DN	design	body	plates	shafts	spring	seal
915	50-900	1	EN-GJS-400-15 *1	EN-GJS-400-15 *2	1.4401	1.4571 (F1)	NBR (N) EPDM (E) FKM (F)
		2	EN-GJS-400-15 *1	Aluminium bronze	1.4401	1.4571 (F1)	
		3	EN-GJS-400-15 *1	1.4408	1.4401	1.4571 (F1)	
		4	1.4408	1.4408	1.4401	1.4571 (F1)	
		6	Aluminium bronze	Aluminium bronze	Aluminium bronze	Inconel 600 (F4)	
		7	1.4469	1.4469	Inconel 600	Inconel 600 (F4)	

*1 Epoxy resin-coated

*2 nickel-plated

Order example

DF-RSK 915 / 100 / 1 / N / F1

Type of valve	Dual plate check valve
Type	915
Nominal size	DN 100
Body / disc	EN-GJS-400-15
Seal	NBR
Spring	stainless steel 1.4571 (F1)



Disco Check Valves

Type 930 / 932



MARTIN LOHSE GmbH
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 phone +49 7321 755-42
 sales@lohse-gmbh.de
 www.lohse-gmbh.de

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930 – dimensions	319
930 – Pressure-loss diagram	320
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General description

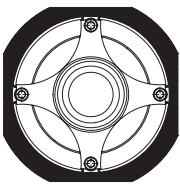
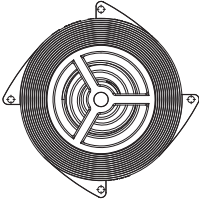
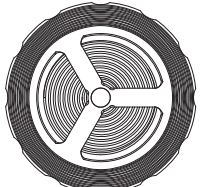
Description and intended purpose

Disco check valves are suitable for universal use in piping systems for the transport of liquid and gaseous substances as well as in plants or environments in which particularly high demands are placed on the material. They can be installed directly between flanges (PN 6 – PN 160 or Class 150 – Class 900). Disco check valves are maintenance-free.

Function

Disco check valves require a low opening pressure. The resulting opening force pushes the disc against a spring and, if necessary, also the weight force of the disc (depending on the installation position), so that the medium can flow. If the inlet pressure, the valve closes and seals against the medium by means of the soft seat or the metal seat.

Overview matrix

	930	932	
			
nominal sizes	DN 15 – DN 100	DN 15 – DN 100	DN 125 – DN 300
flange connection ^{*1}	PN 6 ^{*2} / PN 10 / PN 16 / PN 25 / PN 40 Class 150 ^{*2}	PN 6 / PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300	PN 10 / PN 16 / PN 25 / PN 40 Class 150 / Class 300 ^{*2}
max. pressure	40 bar	50 bar	
temperature ranges	-20 °C to +300 °C	-196 °C to +400 °C ^{*3}	
materials available ^{*4}	stainless steel	stainless steel / alu bronze / carbon steel / superduplex	stainless steel / carbon steel / superduplex
seals available	metal / NBR / EPDM / FKM / PTFE	metal / NBR / EPDM / FKM / PTFE	
special options	–	different opening pressures available	

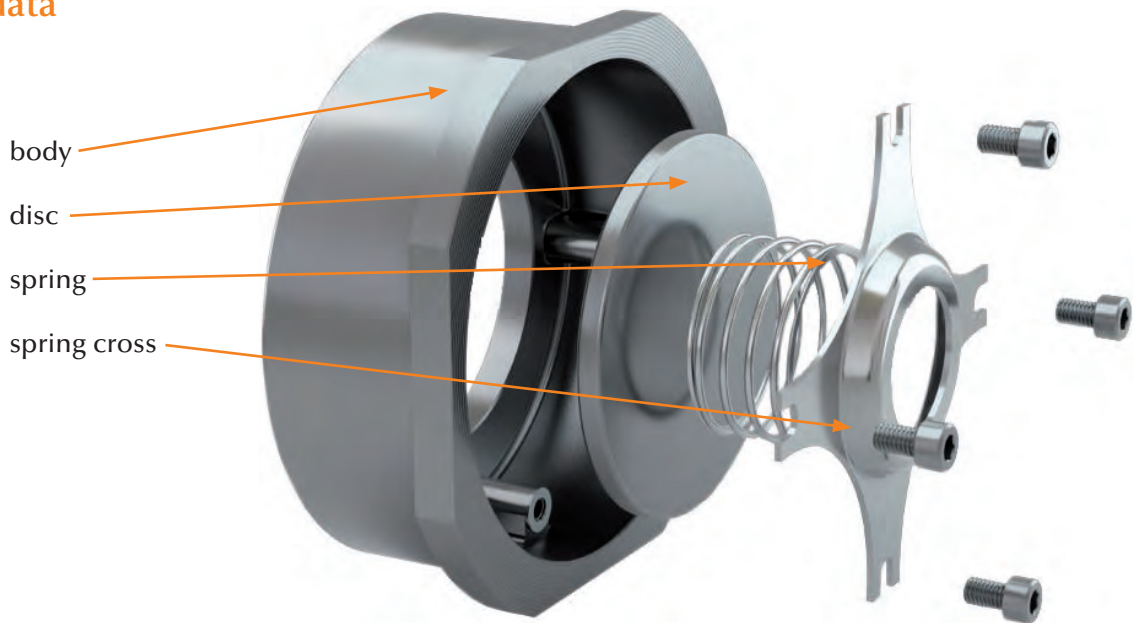
^{*1} other flange connections on request

^{*2} not for all nominal sizes

^{*3} higher or lower temperatures on request

^{*4} other materials on request

Technical data



Design	Body	Disc	Spring cross	Spring	Pressure range* ¹
1	1.4408	1.4408 * ²	1.4436	1.4436	0 to max. 40 bar

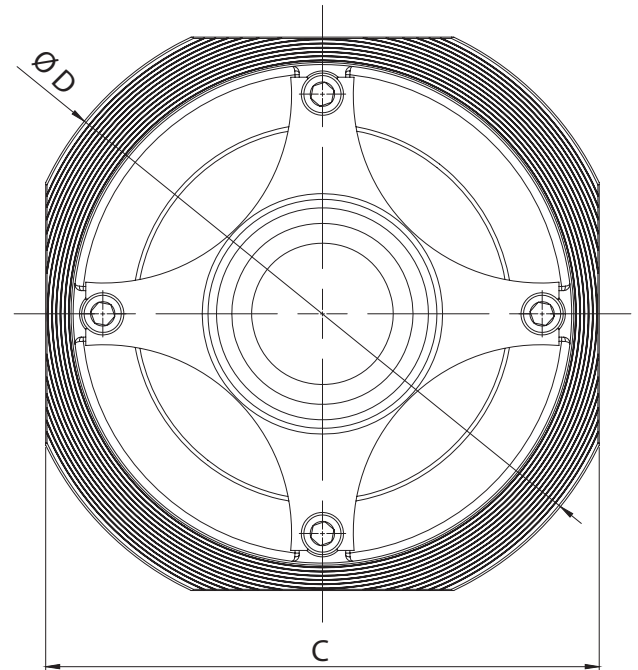
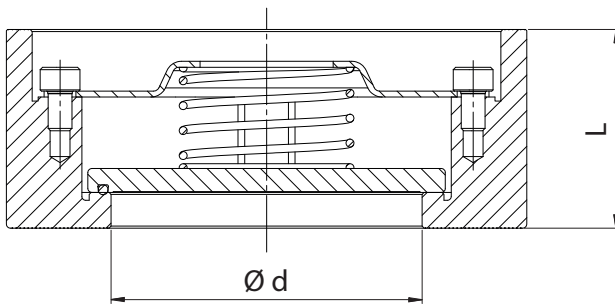
*¹ max. allowable pressure is dependent on the temperature

*² soft sealing valve with disc made of 1.4571

Seal	Temperature	Leakage rate* ³
Metal seated	-20 °C to +300 °C	≥G
NBR	-20 °C to +100 °C	A
EPDM	-20 °C to +150 °C	A
FKM	-15 °C to +200 °C	A
PTFE	-20 °C to +250 °C	A

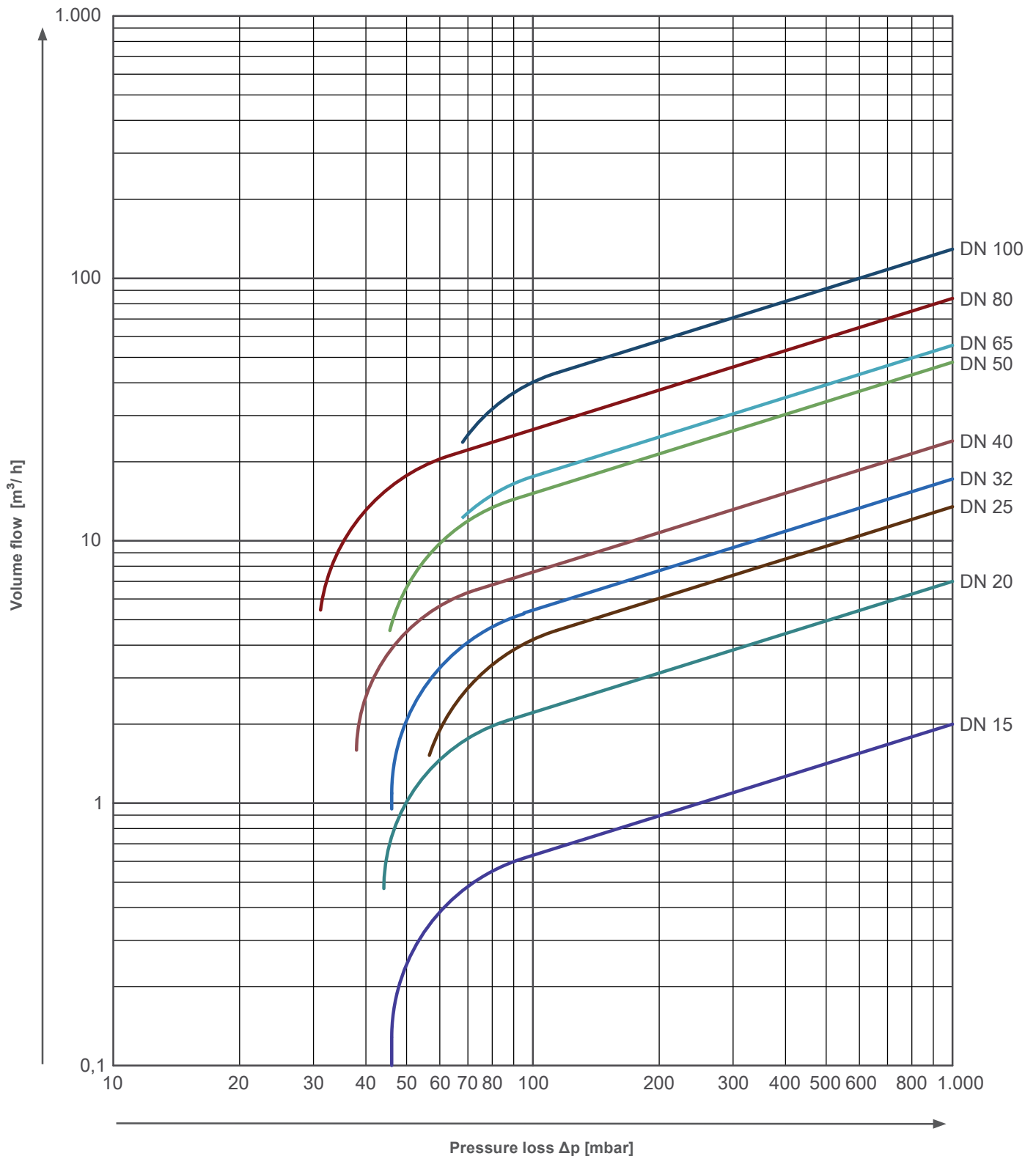
*³ acc. to EN 12266-1

Nominal size	Suitable flanges					
	PN 6	PN 10	PN 16	PN 25	PN 40	ANSI 150
DN 15	-	x	x	x	x	-
DN 20	x	x	x	x	x	-
DN 25	x	x	x	x	x	-
DN 32	-	x	x	x	x	-
DN 40	x	x	x	x	x	-
DN 50	x	x	x	x	x	x
DN 65	x	x	x	x	x	-
DN 80	x	x	x	x	x	x
DN 100	x	x	x	x	x	x



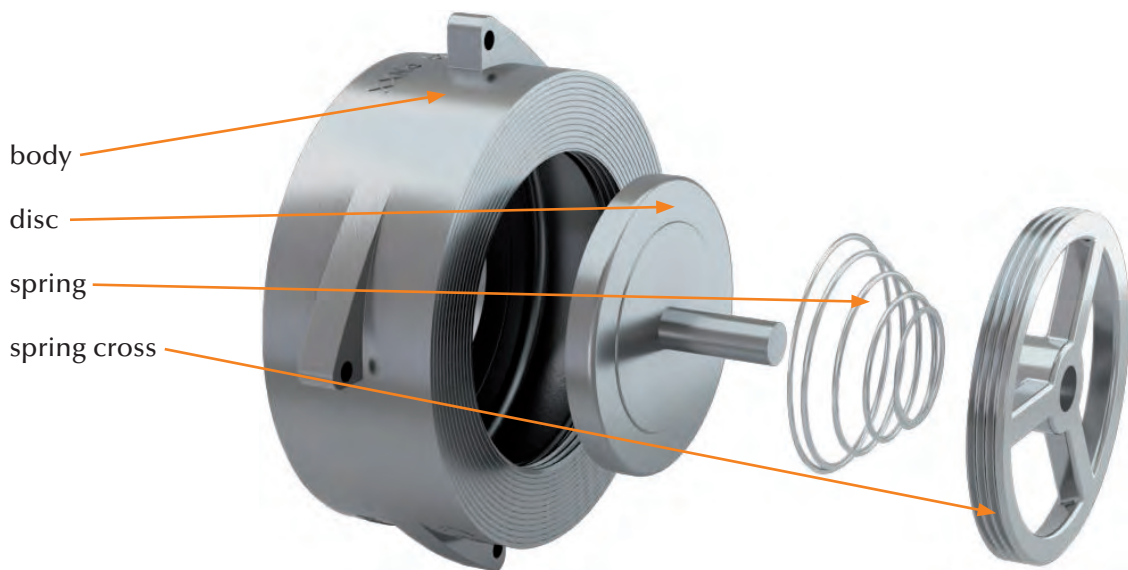
Nominal size	Ø D	Ø d	C	L	Kv value [m³/h]	Opening pressure [mbar]			w/o spring	Weight
						↔	↑	↓	↑	[kg]
DN 15	53	15	43	16	2	~ 47	~ 51	~ 43	~ 4	0.10
DN 20	63	20	53	19	7	~ 44	~ 48	~ 40	~ 4	0.16
DN 25	73	25	63	22	13	~ 57	~ 61	~ 53	~ 4	0.28
DN 32	84	30	75	28	17	~ 47	~ 52	~ 42	~ 5	0.52
DN 40	94	38	86	31.5	23	~ 38	~ 43	~ 33	~ 5	0.70
DN 50	107	47	95	40	48	~ 45	~ 52	~ 38	~ 7	1.10
DN 65	126	62	115	46	55	~ 50	~ 55	~ 45	~ 5	1.58
DN 80	145	77	131	50	83	~ 31	~ 38	~ 24	~ 7	1.78
DN 100	164	96	150	60	127	~ 55	~ 65	~ 45	~ 10	3.30

Pressure-loss diagram The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.



Technical data

DN 15 – 100



Design	Body	Disc	Spring cross	Spring	Pressure range* ¹
1	1.4408	1.4408	1.4408	1.4571	0 to max. 50 bar
4	CC333G (2.0975)	CC333G (2.0975)	CC333G (2.0975)	Hastelloy C4 (2.4610)	0 to max. 50 bar
4.1	CC333G (2.0975)	1.4408	1.4408	1.4571	0 to max. 50 bar
5	1.0619, zinc plated	1.4408	1.4408	1.4571	0 to max. 40 bar
6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	0 to max. 50 bar
6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571	0 to max. 50 bar

*¹ max. allowable pressure is dependent on size and temperature

Seal	Design	Temperature	Leakage rate* ²
Metal seated	1	-196 °C to +400 °C* ³	G
	4 / 4.1	-10 °C to +350 °C* ³	
	5	-10 °C to +400 °C* ³	
	6 / 6.1	-10 °C to +250 °C	
NBR* ⁴	–	-30 °C to +100 °C	A
EPDM* ⁴	–	-65 °C to +150 °C	A
FKM* ⁴	–	-30 °C to +230 °C	A
PTFE* ⁴	–	-196 °C to +250 °C	A

*² acc. to EN 12266-1

*³ temperatures above 300 °C require spring material Hastelloy C4 (low temperature limit for design 1: -100 °C)

*⁴ for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

Seals comply with the following approvals / conformities:

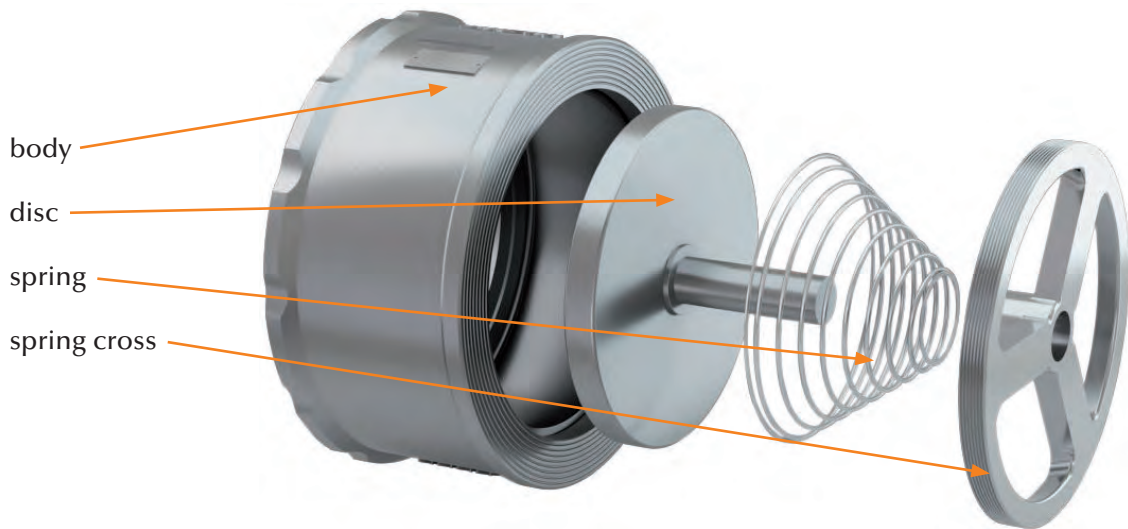
NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-frei, REACH, RoHS etc.

PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.

Technical data
DN 125 – 300



Design	Body	Disc	Spring cross	Spring	Pressure range*1
1	1.4408	1.4408	1.4408	1.4571	0 to max. 50 bar
5	1.0619, zinc plated	1.4408	1.4408	1.4571	0 to max. 50 bar
6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (2.4610)	0 to max. 50 bar
6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571	0 to max. 50 bar

*1 max. allowable pressure is dependent on size and temperature

Seal	Design	Temperature	Leakage rate*2
Metal seated	1	-196 °C to +400 °C*3	G
	5	-10 °C to +400 °C*3	
	6 / 6.1	-10 °C to +250 °C	
NBR*4	–	-30 °C to +100 °C	A
EPDM*4	–	-65 °C bis +150 °C	A
FKM*4	–	-30 °C to +230 °C	A
PTFE*4	–	-200 °C to +250 °C	A

*2 acc. to EN 12266-1

*3 temperatures above 300 °C require spring material Hastelloy C4 (low temperature limit for design 1: -100 °C)

*4 for some designs, the temperature range is additionally limited by the temperature range of the metallic parts (see temperature range for metal seated)

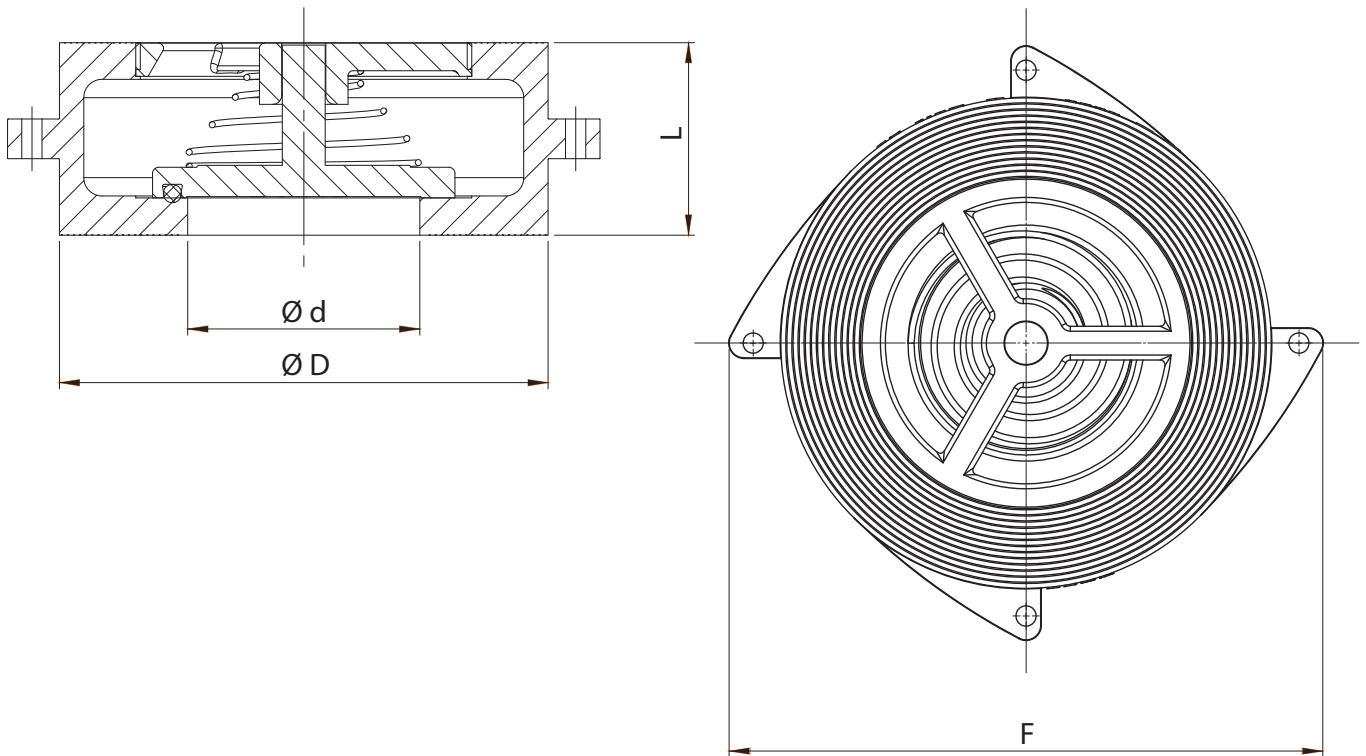
Seals comply with the following approvals / conformities:

NBR: DIN EN 549, BAM, REACH, RoHS etc.

EPDM: KTW UBA, DVGW W 270, WRAS, NSF, FDA, BfR XXI Kat. 4, ADI-free, 3A, USP Cl. 6, BAM, REACH, RohS etc.

FKM: DIN EN 549, ADI-frei, REACH, RoHS etc.

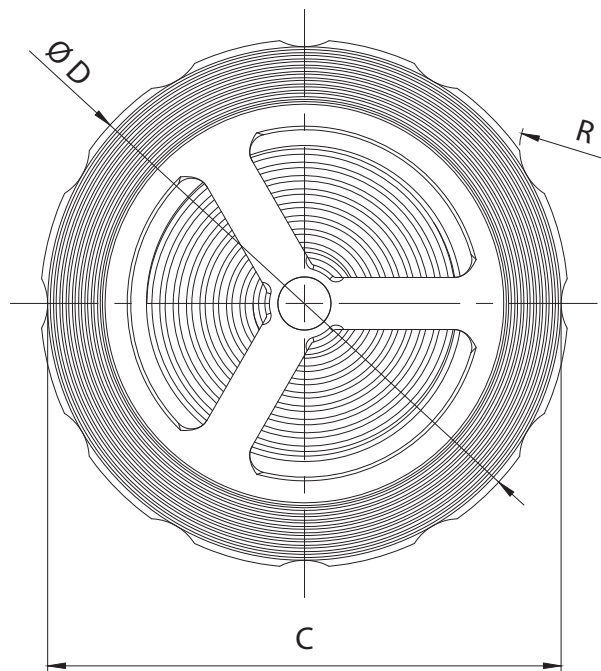
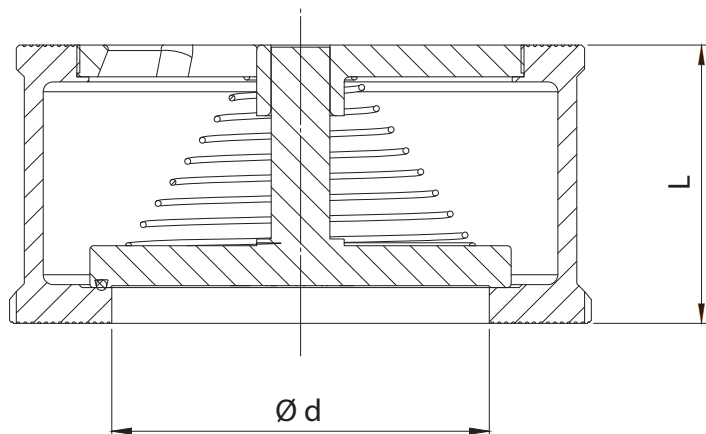
PTFE: KTW UBA, DVGW W 270, WRAS, FDA, BfR, ADI-free, EU 10/2011, 3A, USP Cl. 6, REACH, RoHS etc.



Nominal size	Ø D	Ø d	F	L	Kv value [m³/h]	Opening pressure* ⁵ [mbar]			w/o spring	Weight* ⁶
						↔	↑	↓	↑	[kg]
DN 15	43	15	57	16	4	~ 20	~ 24	~ 16	~ 4	0.12
DN 20	53	19	72	19	7	~ 20	~ 25	~ 15	~ 5	0.20
DN 25	63	25	79	22	10	~ 20	~ 25	~ 15	~ 5	0.32
DN 32	75	32	92	28	17	~ 20	~ 26	~ 14	~ 6	0.52
DN 40	80	38	97	31.5	24	~ 20	~ 27	~ 13	~ 7	0.62
DN 50	95	47	113	40	37	~ 20	~ 28	~ 12	~ 8	1.1
DN 65	115	63	137	46	61	~ 20	~ 29	~ 11	~ 9	1.7
DN 80	131	77	154	50	74	~ 20	~ 30	~ 10	~ 10	2.5
DN 100	150	97,5	186	60	115	~ 20	~ 33	~ 7	~ 13	4.0

*⁵ other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)

*⁶ weight may vary slightly, depending on the design



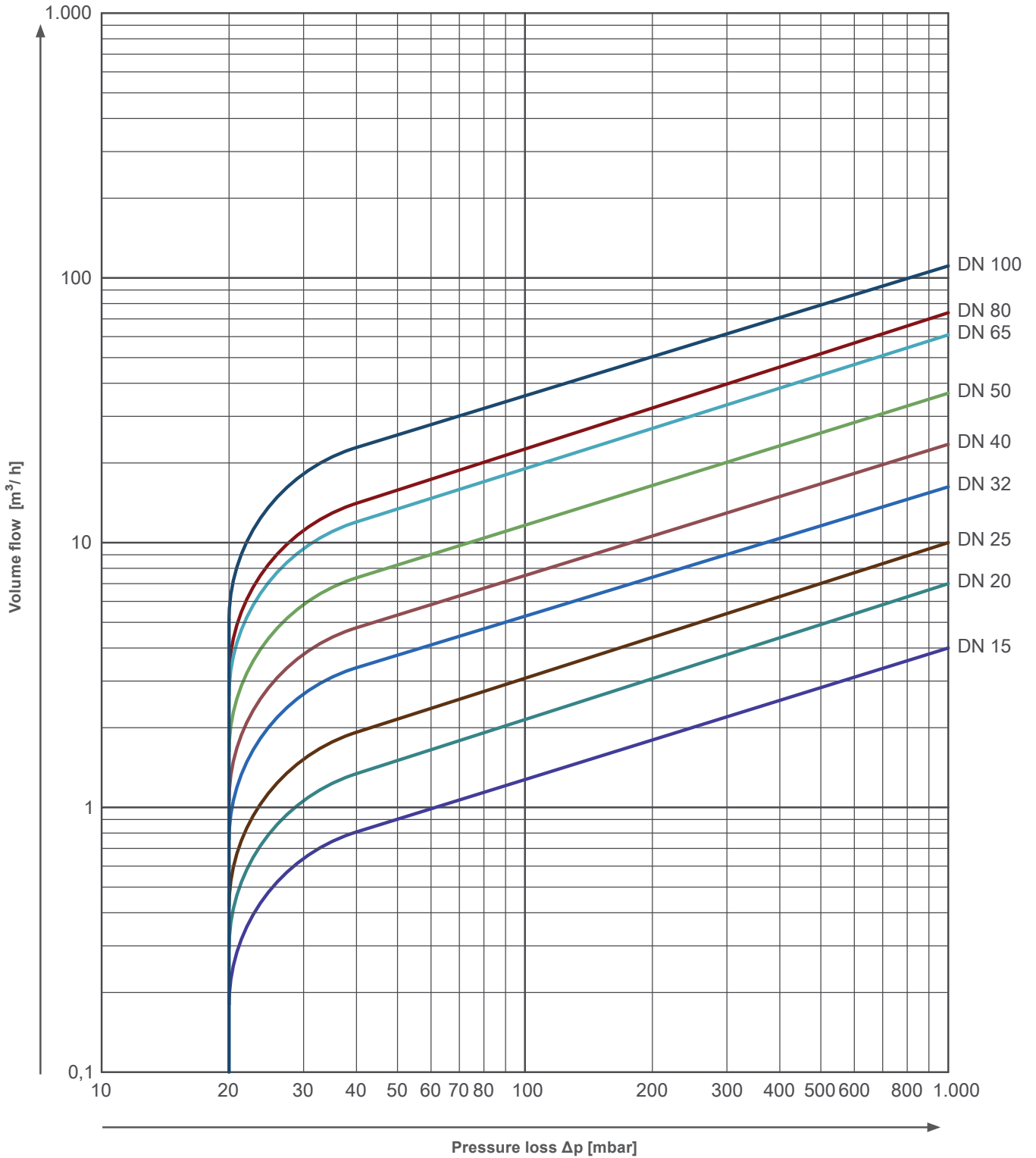
Nominal size	C		Ø D		R		Ø d	L	Kv value	Opening pressure*5 [mbar]			w/o spring	Weight*6	
	PN 10/16	PN 10/16	150 lbs	PN 25	PN 40	PN 10/16				PN 25	[m³/h]	↔			↑
DN 125	194	194	194	194	194	-	-	118.5	90	201	~ 30	~ 46	~ 14	~ 16	8.4
DN 150	220	220	220	220	220	-	-	141	106	286	~ 30	~ 47	~ 13	~ 17	12.4
DN 200	275	280	280	286	294	11	30	190	140	553	~ 30	~ 51	~ 9	~ 21	23.9
DN 250	331	340	340	344	356	13	33	229	145	643	~ 40	~ 64	~ 16	~ 24	39.2
DN 300	380	386	404	404	421	11	33	280	160	867	~ 40	~ 68	~ 12	~ 38	58.3

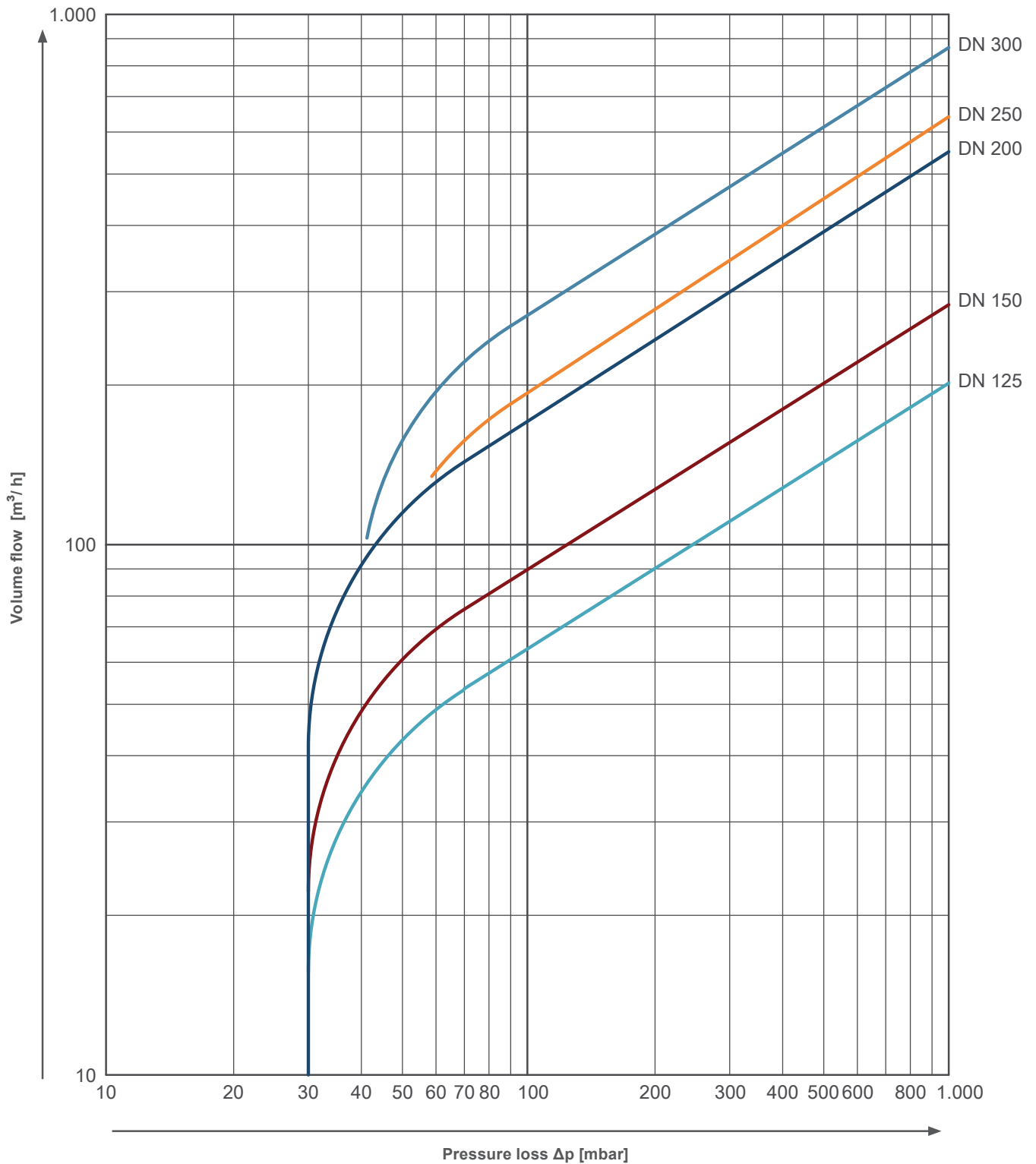
*5 other opening pressures on request (for high opening pressures the Kv value may be reduced if disc springs must be used)

*6 weight may vary slightly, depending on the design

Pressure-loss

The diagram values are valid for water at a temperature of 20 °C and for valves with face-to-face dimensions in accordance with DIN EN 558, suitable for flanges in accordance with PN 10 – PN 40. At the opening of the valve, the curves apply to operation in horizontal pipelines. For calculation for other fluids or temperatures, please contact us.





Type codes

Type	DN		Material				Seal
	Nominal size	Design	Body	Disc	Spring cross	Spring	
930	15 - 100	1	1.4408	1.4408	1.4436	1.4436 (F5)	
932	15 - 100	1	1.4408	1.4408	1.4408	1.4571 (F1)*1	Metal seated (M)
		4	CC333G (2.0975)	CC333G (2.0975)	CC333G (2.0975)	Hastelloy C4 (F2)	
		4.1	CC333G (2.0975)	1.4408	1.4408	1.4571 (F1)*1	NBR (N)
		5	1.0619, galvanized	1.4408	1.4408	1.4571 (F1)*1	EPDM (E)
		6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	
		6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571 (F1)	FKM (F)
	125 - 300	1	1.4408	1.4408	1.4408	1.4571 (F1)*1	PTFE (Teflon) (T)*3
		5	1.0619, zinc plated	1.4408	1.4408	1.4571 (F1)*1	
		6	1.4469 (Superduplex)	1.4469 (Superduplex)	1.4469 (Superduplex)	Hastelloy C4 (F2)	
		6.1	1.4469 (Superduplex)	1.4408	1.4408	1.4571 (F1)	

*1 metal seated valves require spring material Hastelloy C4 for temperatures above 300 °C

Order example

Disco-RSV 932 / 100 / 1 / M / F1

Type of valve	Disco check valve
Type	932
Nominal size	DN 100
Body / disc	1.4408
Seal	metal seated
Spring	1.4571 (F1)



Accessories



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phone +49 7321 755-42
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www.lohse-gmbh.de

Accessories

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Limit switches	335
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ND9000® INTELLIGENT VALVE CONTROLLER

ND9000 is a top class intelligent valve controller designed to operate on every control valve actuator and in all industry areas. It guarantees the end product quality in all operating conditions with unique diagnostics and incomparable performance features. ND9000 is a reliable and future-proof investment with FieldCare™ life-time support.



Key Features

- Benchmark control performance on rotary and linear valves
- Reliable and robust design
- Easy commissioning and operation
- Language selection: English, German and French
- Local / remote operation
- Expandable architecture
- Advanced device diagnostics including
 - Self-diagnostics
 - Online diagnostics
 - Performance diagnostics
 - Communication diagnostics
 - Extended off-line tests
 - Intelligent Valve Diamond

Options

- Interchangeable communication options:
 - HART
 - FOUNDATION fieldbus
 - Profibus PA
- Limit switches
- Position transmitter (in HART only)
- Full stainless steel enclosure
- Exhaust adapter

Total cost of ownership

- Low energy and air consumption
- Future proof design allows further options at a reduced cost
- Optimized spares program minimizes spare part inventory

- Retro-fit to existing installations

Minimised process variability

- Linearisation of the valve flow characteristics
- Excellent dynamic and static control performance
- Fast response to control signal change
- Accurate internal measurements

Easy installation and configuration

- Same device can be used for linear and rotary valves, double and single-acting actuators
- Simple fast calibration and configuration
 - using Local User Interface (LUI)
 - using FieldCare software in a remote location
 - using Distributed Control System (DCS) asset management tools
- Flush mounting capability to avoid tubing and mounting parts
- Low power consumption enables installation to all common control systems

Open solution

- Freely interface with software and hardware from a variety of manufacturers. This open architecture allows the ND9000 to be integrated with other field devices to give an unprecedented level of controllability.
- FDT and EDD based multi-vendor support configuration
- different drivers (gsd,DTM,DD,EDDL) available

SWITCHGUARD™ INTELLIGENT ON/OFF VALVE CONTROLLER

SwitchGuard™ SG9000 is a top class intelligent on/off valve controller designed to operate on any valve actuator. Unique embedded diagnostic features are integrated into its design and enables users to guarantee the availability of their switching valves in demanding processes. SwitchGuard can be easily fitted to the actuator and its controlled pneumatic capacity replaces any solenoid valve providing a simple, reliable interface with the process control system. Diagnostic information is presented in an easily understandable way using FDT technology, such as FieldCare™, to enable planned maintenance of potentially failing valve assemblies before they have a chance to impact on the process.



Key Features

- Reliable and robust design
- The rugged cover protects the unit from environmental hazards and external abuse
- Ease of use
- Language selection: English, German and French
- Local / remote operation
- Expandable architecture
- Advanced device diagnostics including
 - Self-diagnostics
 - Online diagnostics
 - Performance diagnostics
- Speed control for switching
- HART communication

Options

- Full stainless steel enclosure (SG9300)
- High pneumatic capacity (SG9200)
- Integrated limit switches
- Position transmitter
- U/I converter to support binary control

Total cost of ownership

- Low energy and air consumption
- Future proof design allows further options at a reduced cost
- Optimised spares program. Reduced number of spares



Designed to switch

- Several pre-selected opening and closing profiles
 - Opening and closing can be configured separately
 - Minimised pressure impacts in piping
- Excellent speed control performance
- Highly reliable pneumatics unit
- Wide pneumatics capacity

Easy installation and configuration

- Same unit for linear and rotary valves, double and single-acting actuators
- Simple calibration and configuration
 - Using Local User Interface (LUI)
 - Using FieldCare software in a remote location
- Low power design enables installation to all common control systems

Open solution

- Freely interface with software and hardware from a variety of manufacturers. This open architecture allows the SwitchGuard to be integrated with other field devices and systems.
- FDT and EDD based multi-vendor support configuration

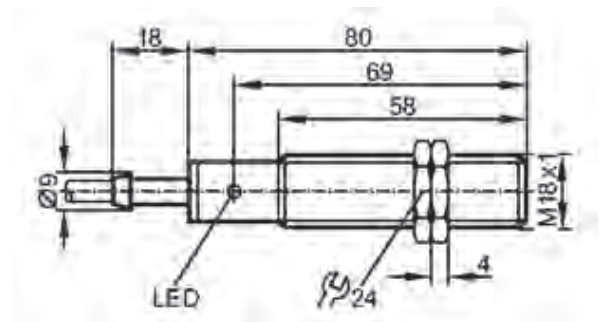
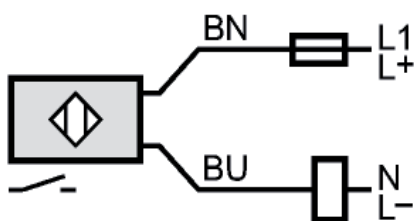
IG0006

IG-2008-ABOA
 Inductive sensor
 Plastic thread M18 x 1
 Cable
 Sensing range 8 mm
 non-flush mountable



Product characteristics		
Output function		normally open
Sensing range	[mm]	8
Housing		threded type
Dimensions	[mm]	M18 x 1 / L = 80
Electrical data		
Operating voltage	[V]	20...250 AC/DC
Prtection class		II
Revers polarity protection		no
Outputs		
Output function		normally open
Max. voltage drop switching output	[V]	6.5 AC / 6 DC
Minimum load current	[mA]	5
Max. leakage current	[mA]	2.5 (250 V AC) / 1,3 (110 V AC) / 0.8 (24 V DC)
Permanent current rating on switching output	[mA]	AC: 250; (350 (...50°C)) DC: 100
Short-time current rating on switching output	[mA]	2200; (20 ms / 0,5 Hz)
Switching frequency	[Hz]	AC: 25 / DC: 50
Short-circuit proof		no
Overload protection		no
Detection zone		
Sensing range	[mm]	8
Real sensing range Sr	[mm]	8 +/- 10%
Operating distance	[mm]	0..6.5
Accuracy / deviations		
Correction factor	[V]	steel = 1 / stainless steel: 0.7 / brass: 0.4 / aluminium: 0.3 / copper: 0.2
Hysteresis	[% of Sr]	1...15
Switch point drift	[% of Sr]	-10...10

Operating conditions		
EMC		EN 60947-5-2; EN 55011: class B
MTTF	[years]	604
UL approval		Ta: 0...40°C Enclosure type 1 power supply: Hazardous voltage File Number UL: E174191
Mechanical data		
Weight	[g]	68
Housing		threaded type
Mounting		non-flush mountable
Dimensions	[mm]	M18 x 1 / L = 80
Thread designation		M18 x 1
Materials		PBT
Displays / operating elements		
Display switching status		1 x LED, yellow
Electrical connection		
Required protection		miniature fuse to IEC6127-2 sheet 1; <= 2 A; fast acting
Accessories		
Items supplied		lock nuts: 2
Remarks		
Recommandation		Check the safe functioning of the unit after a short circuit.
Pack quantity		1 piece



Wiring

Core colors: BN – brown; BU – blue; BK – black

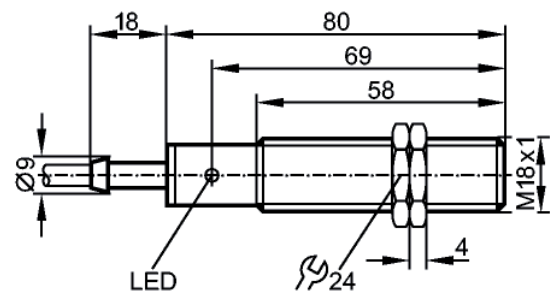
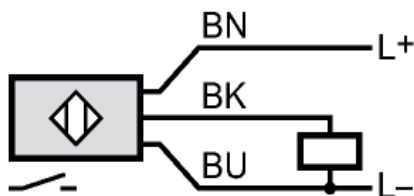
Cabel: 2m, PVC; 2 x 0,5 mm²

IG5401

IG-3008-BPKG
 Inductive sensor
 Plastic thread M18 x 1
 Cable
 Sensing range 8 mm [nf]
 non-flush mountable



Electrical design Output		DC PNP normally open
Operating voltage	[V]	10...36 DC
Current rating	[mA]	250
Short-circuit protection		yes (non-latching)
Reverse polarity protection / Overload protection		yes
Voltage drop	[V]	< 2,5
Current consumptio	[mA]	< 15 (24 V)
Real sensing range (Sr)	[mm]	8 ± 10 %
Operating distance	[mm]	0...6.5
Switch-point drift	[% of Sr]	-10...10
Hysteresis	[% of Sr]	1...15
Switching frequency	[Hz]	300
Correction factors		mild steel = 1 / stainless steel approx. 0.7 / brass approx. 0.4 / aluminium approx. 0.3 / copper approx. 0.2
Ambient temperature	[°C]	-25...80
Protection		IP 67, II
EMC		EN 60947-5-2
MTTF	[years]	1853
Housing materials		PBT
Function display Switching status	LED	yellow
Connection		PVC cable / 2 m; 3 x 0.5 mm ²
Weight	[kg]	0.117
Accessories (included)		2 lock nuts



Wiring

Core colors: BN – brown; BU – blue; BK – black

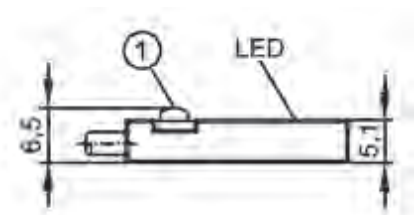
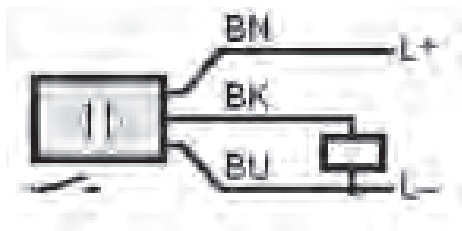
MK5100

cylinder sensor with GMR cell
 Plastic housing for T-slot cylinders
 Cable
 [f] flush mountable
 Magnetic sensitivity 2.8 mT
 Travel speed > 10 m/s



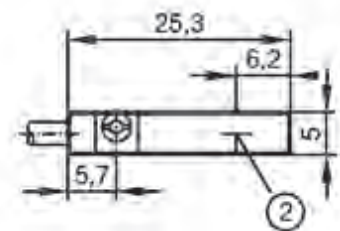
Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	10000
Range		
Magnetic sensitivity	[mT]	2.8
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	< 1.5
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	3694
Mechanical data		
Mounting		flush mountable
Housing materials		housing: PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.027

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PUR cable / 2 m; 3 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



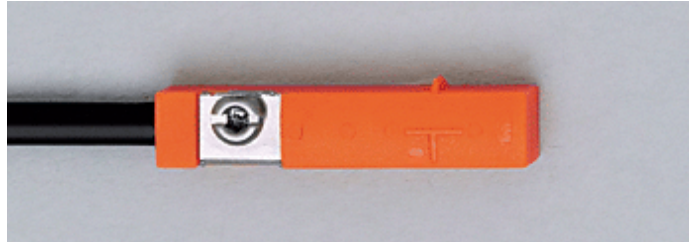
Wiring

Core colours: BK – black; BN – brown; BU – blue



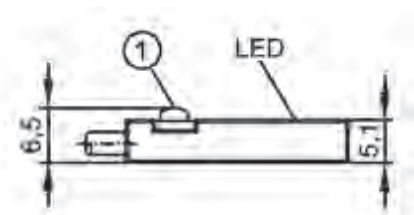
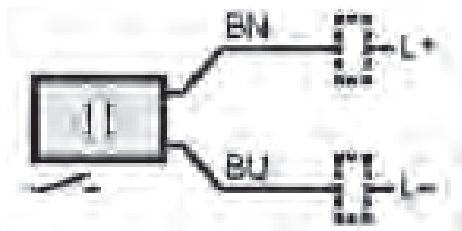
MK5103

cylinder sensor with GMR cell
 Plastic housing for T-slot cylinders
 Cable
 flush mountable
 Magnetic sensitivity 2.8 mT
 Travel speed > 10 m/s



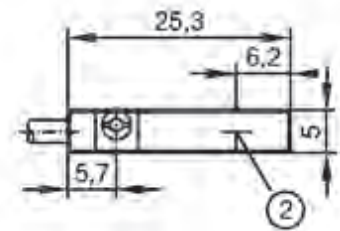
Electrical data		
Electrical design		DC PNP/NPN
Operating voltage	[V]	10...30 DC
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	30
Outputs		
Output function		normally open
Voltage drop	[V]	< 4.5
Minimum load current	[mA]	5
Leakage current	[mA]	< 0.8
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	4000
Range		
Magnetic sensitivity	[mT]	2.8
Travel speed	[m/s]	> 20
Accuracy / deviations		
Hysteresis	[mm]	1.5
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0,5 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	3145
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.026

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PUR cable / 2 m; 2 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



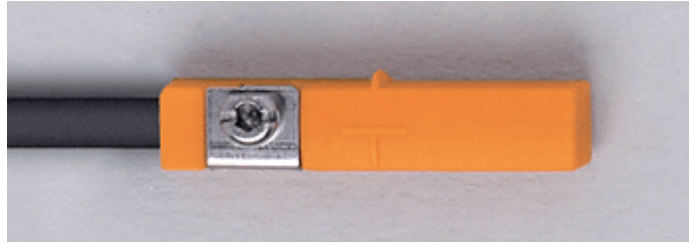
Wiring

Core colours: BN – brown; BU – blue



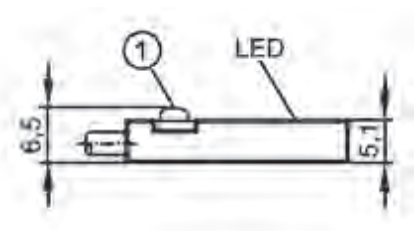
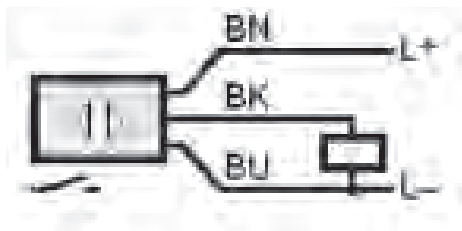
MK5158

cylinder sensor with AMR cell
 Plastic housing for T-slot cylinders
 Cable
 flush mountable
 Magnetic sensitivity 2.0 mT
 Travel speed > 10 m/s



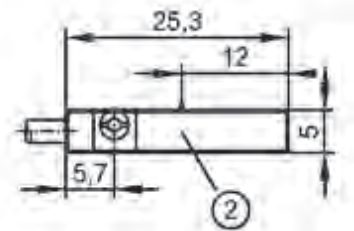
Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	6000
Range		
Magnetic sensitivity	[mT]	2.0
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	1.0
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67 / IP 69K
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	2064
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.031

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PVC cable / 2 m; 3 x 0.14 mm ²
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



Wiring

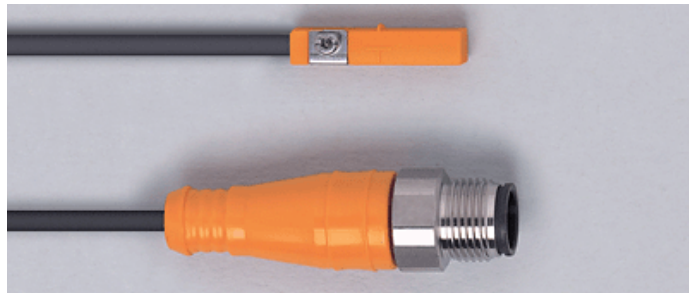
Core colours: BN – brown; BW – black; BU – blue



- 1: Fastening clamp
- 2: sensing face

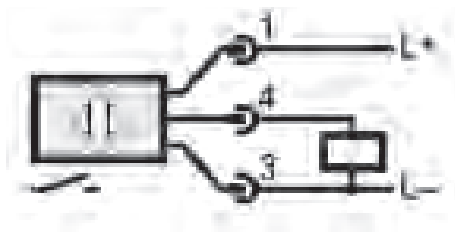
MK5157

cylinder sensor with AMR cell
 Plastic housing for T-slot cylinders
 Cable with connector
 flush mountable
 Magnetic sensitivity 2.0 mT
 Travel speed > 10 m/s

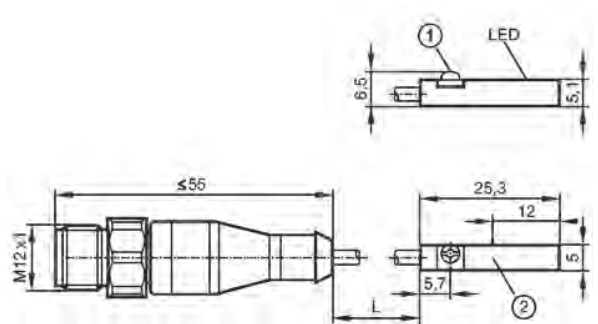


Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 10
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[ms]	< 30
Outputs		
Output function		normally open
Voltage drop	[V]	< 2.5
Current rating	[mA]	100
Short-circuit protection		yes
Overload protection		yes
Switching frequency	[Hz]	6000
Range		
Magnetic sensitivity	[mT]	2.0
Travel speed	[m/s]	> 10
Accuracy / deviations		
Hysteresis	[mm]	1.0
Repeatability	[mm]	< 0.2
Environment		
Ambient temperature	[°C]	-25...85
Protection		IP 65 / IP 67 / IP 69K
Tests / approvals		
EMC		EN 61000-4-2 ESD: - CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m (80...2000 MHz) EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V (0.15...80 MHz) EN 55011: class B
MTTF	[Years]	2064
Mechanical data		
Mounting		flush mountable
Housing materials		PA (polyamide); Fastening clamp: stainless steel
Weight	[kg]	0.021

Displays / operating elements		
Output status indication LED	LED	yellow
Electrical connection		
Connection		PVC cable / 0.3 m; with M12 connector, with rotatable stainless steel hexagon nut
Accessories		
Accessories (included)		rubber placeholder; cable clip
Remarks		
		cULus - Class 2 source required Clamping screw with combined slot/hexagon socket head AF 1.5
Pack quantity	[piece]	1



Wiring



- 1: Fastening clamp
- 2: sensing face

Flexible plastic limit switch box with plastic bracket

PA6 / PC / PA6GF30

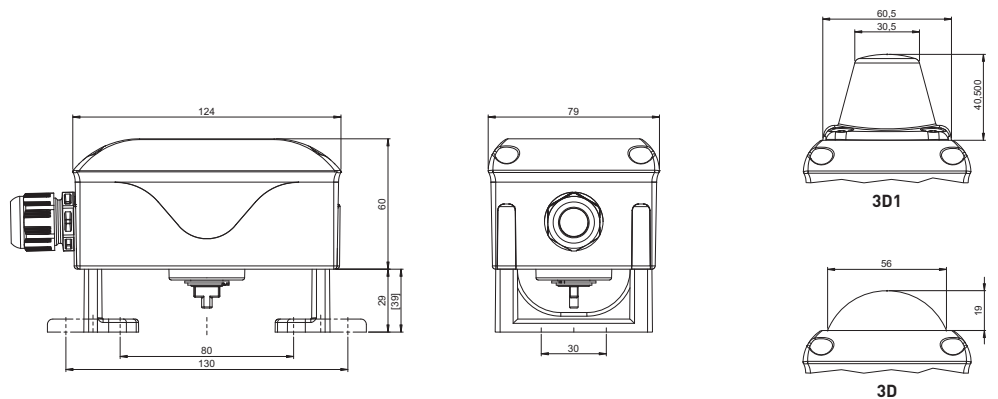
Model: EPP
IP67
-25°C bis +80°C



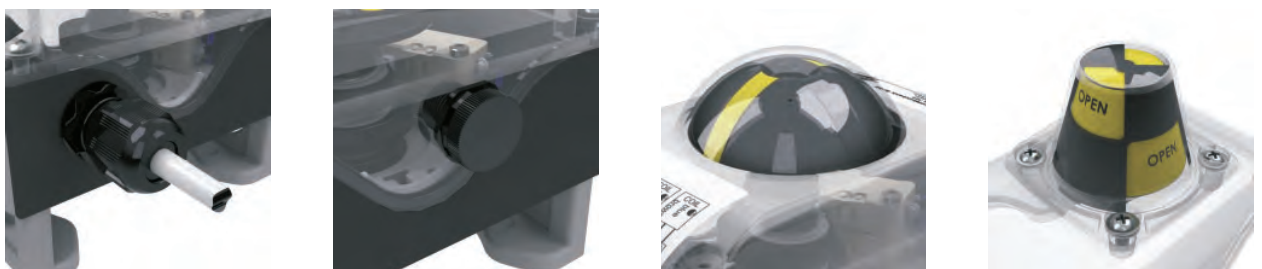
Description

- Compact and flexible limit switch box made of polyamide (PA6) with flat cover made of polycarbonate (PC) (Optional: 3D or 3D1 indicator)
- Adjustable polyamide mounting bracket (PA6) reinforced with 30% fiber glass for simple assembly on actuators according to VDI/VDE 3845: Hole spacings: 80x30mm and 130x30mm (optional: 50x25mm) Shaft heights: 20 and 30mm (IMPORTANT NOTE: As standard **no F05 interface** in the bottom. Optional available.)
- Enclosure IP67 according to DIN EN 60529
- Cable gland M20x1,5 black (for cable Ø 6-12mm)
- Sealings EPDM and NBR, Screws AISI 304, Shaft polyamide PA6
- Other colours of casing available on request
- Application: Standard applications without explosive atmosphere. 1-4 mechanical switches or proximity sensors in V3 design, 1-3 slot type sensors, 1-2 cylindrical sensors Ø 8-18mm

Dimensions



Optional executions



with inductive proximity switches

Versions

2-wire



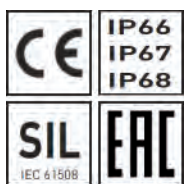
IFM
IS5026

3-wire



IFM
IS5001

Producer switch	IFM	IFM
Switch type	IS5026 (PNP/NPN, NO/NC)	IS5001 (PNP, NO)
Voltage	5–36 V DC	10–30 V DC
Operating current	4–200 mA	0–200 mA
Frequency	2000 Hz	800 Hz
No-load supply current I ₀		≤ 15 mA
Switching state indicator	LED yellow	LED yellow
SIL Level	SIL 1–3 (IEC 61508:2010)	SIL 1–3 (IEC 61508:2010)
Ambient temperature	-25°C ... +80°C	-25°C ... +80°C
Max. number of switches	4	4
Part number	EPP2102-020-19-ML1 / H647517	EPP2102-020-7-ML1 / H647527
Wiring diagram	<p>CLOSED OPEN</p> <p>I001:</p>	<p>CLOSED OPEN</p> <p>I001:</p>





technical data

material	glass fibre reinforced polyester
dimensions	75 x 110 x 55 mm
color	similar to RAL 7000, squirrel grey
ingress protection	IP 66 to EN 60529
impact resistance	>7 Joule, EN 50014
temperature range PUR (polyurethane) seal	-40°C to +90°C
surface resistances	>10 ¹² Ohm to DIN 53482
flammability	V0 / self-extinguishing, UL 94
insulation	fully insulated to VDE 0100
dielectric strength	18 KV / mm
toxicity	free from halogen

specification

Plastic enclosure consisting of

- lid
- seal, incl. captive +/- stainless steel screws
- base with earthing screws

connections

with DIN rail TS15 armed with 11 Phoenix terminals MBK 5/E

side A: 3 x M16x1.5, factory wired

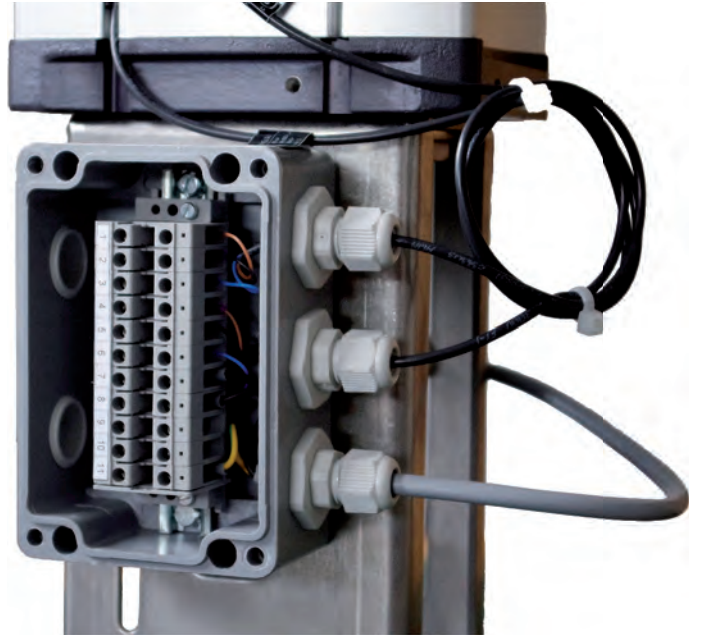
side B: 2 x M20x1.5, supplied with blind cover has to be wired by customer

bracket

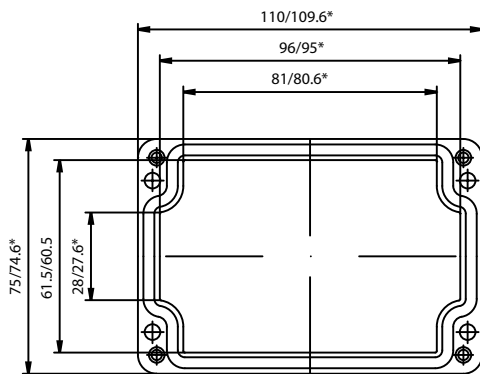
on pneumatic cylinder with stainless steel bracket

On request:

- box with housing of aluminium
- box with approval according to ATEX



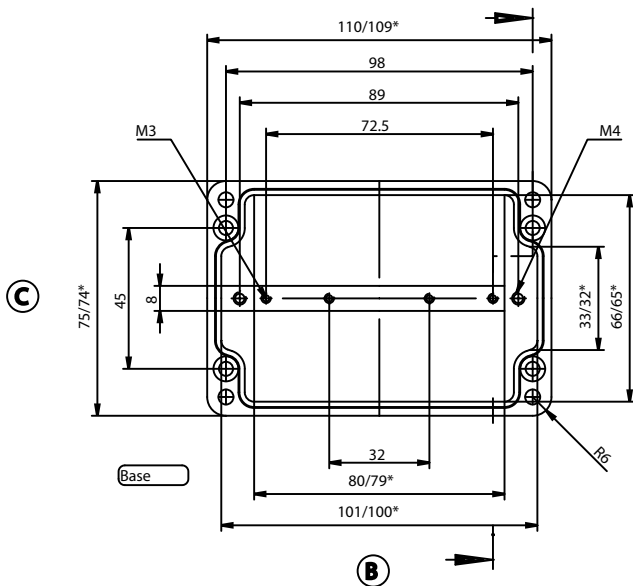
dimensions



* = Conical form tapering downwards.
Free dimensions-tolerance to DIN 16901-130

Lid

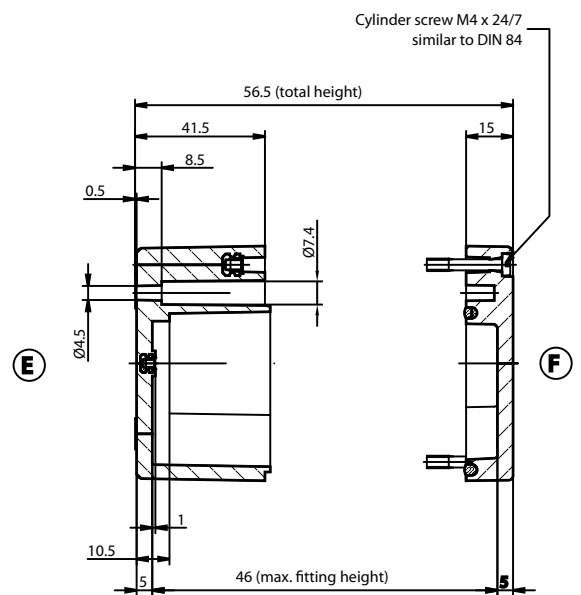
A



Base

B

D



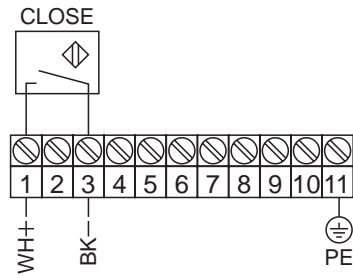
E

F

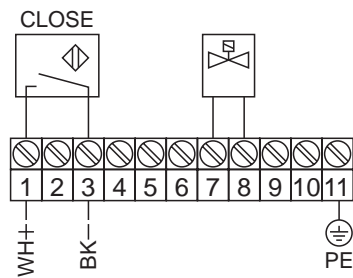
Connection diagrams

limit switches 2-wire

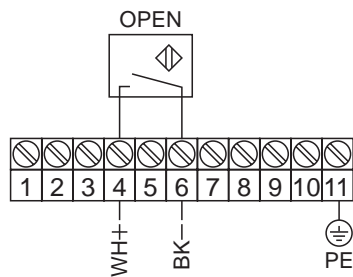
1 limit switch - position CLOSE / 2-wire



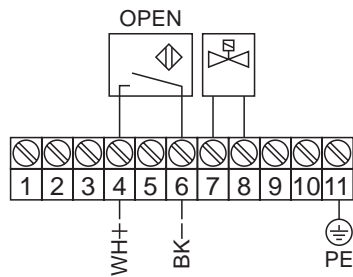
1 limit switch - position CLOSE / 2-wire
1 solenoid valve



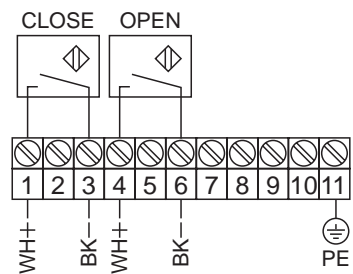
1 limit switch - position OPEN / 2-wire



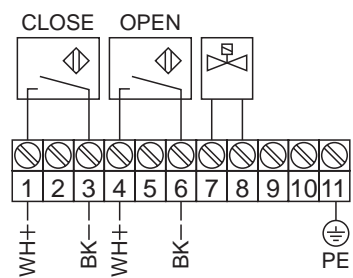
1 limit switch - position OPEN / 2-wire
1 solenoid valve



2 limit switches - position OPEN and CLOSE / 2-wire

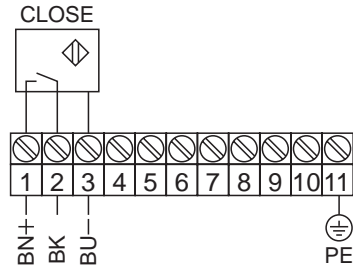


2 limit switches - position OPEN and CLOSE / 2-wire
1 solenoid valve

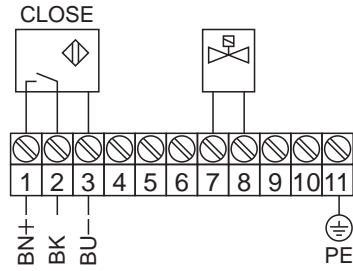


limit switches 3-wire

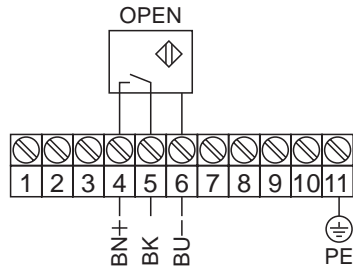
1 limit switch - position CLOSE / 3-wire



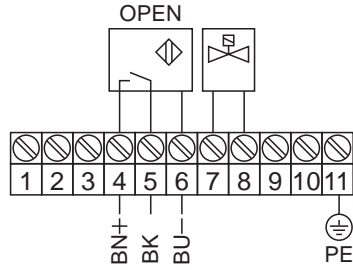
1 limit switch - position CLOSE / 3-wire
1 solenoid valve



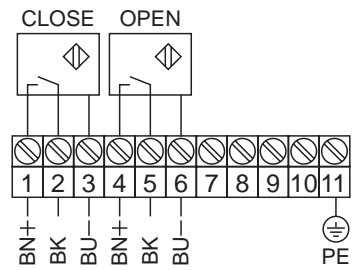
1 limit switch - position OPEN / 3-wire



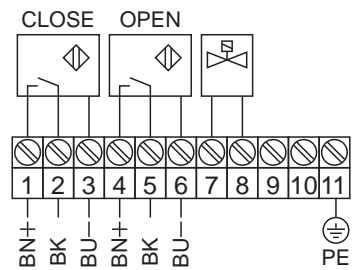
1 limit switch - position OPEN / 3-wire
1 solenoid valve



2 limit switches - position OPEN and CLOSE / 3-wire



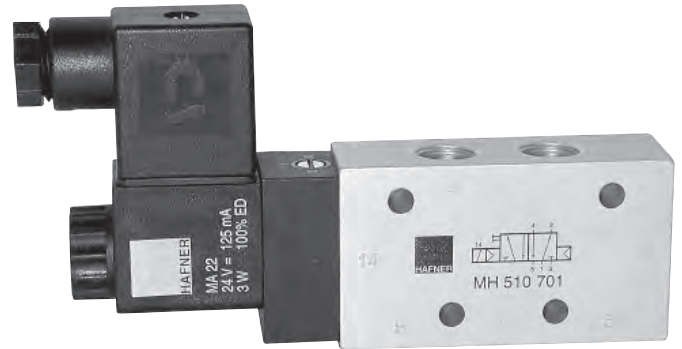
2 limit switches - position OPEN and CLOSE / 3-wire
1 solenoid valve



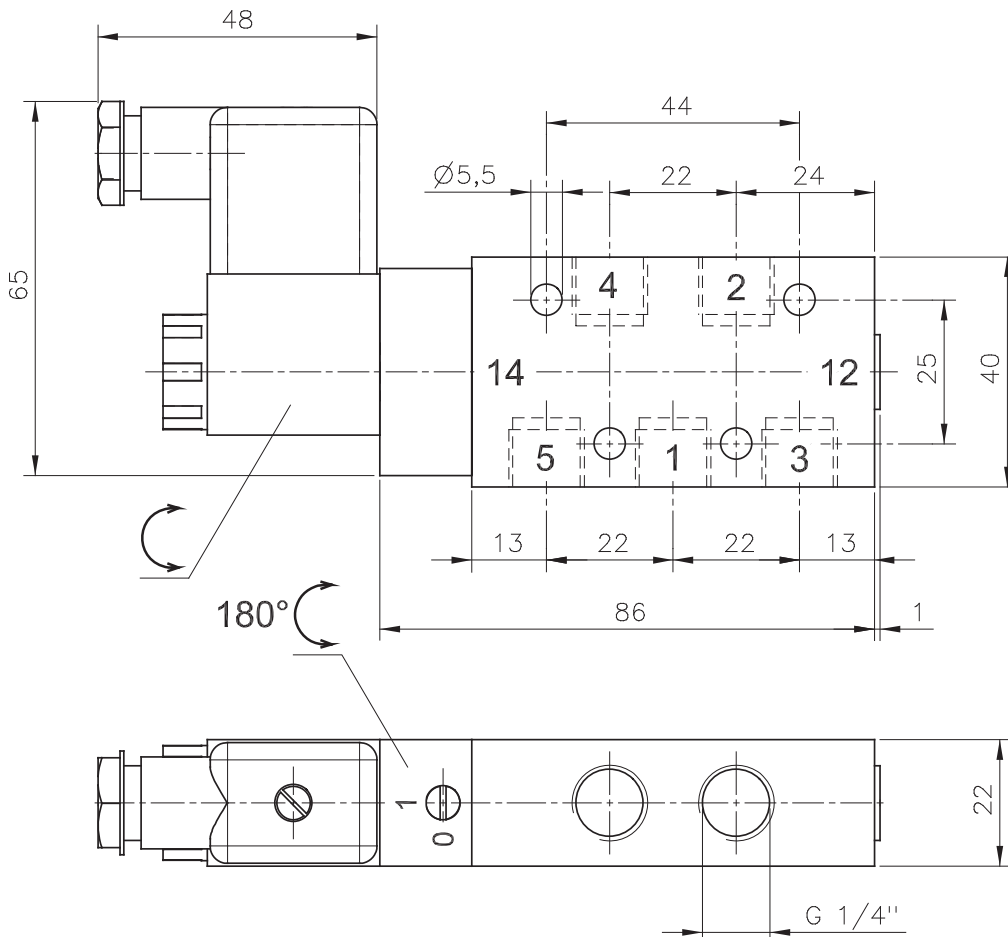
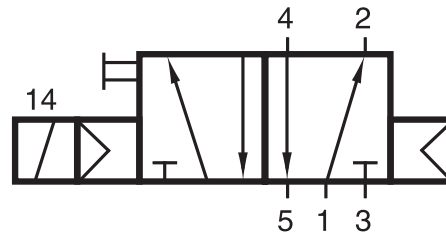
Standard Solenoid Valve, 5/2-way, G 1/4"

MH 510 701

5/2-way solenoid valve, actuated by permanent signal and equipped with air spring return. Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Port 14: M5.
 Minimum actuation pressure: 3 bar.
 Version for vacuum on request.
 Connector as shown on the photo is included.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.25 kg



Standard Solenoid Valve, 5/2-way, G 1/2"

MH 510 121

5/2-way solenoid valve actuated by permanent signal and equipped with air spring return.

Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 14: G 1/8".

Minimum actuation pressure: 3 bar.

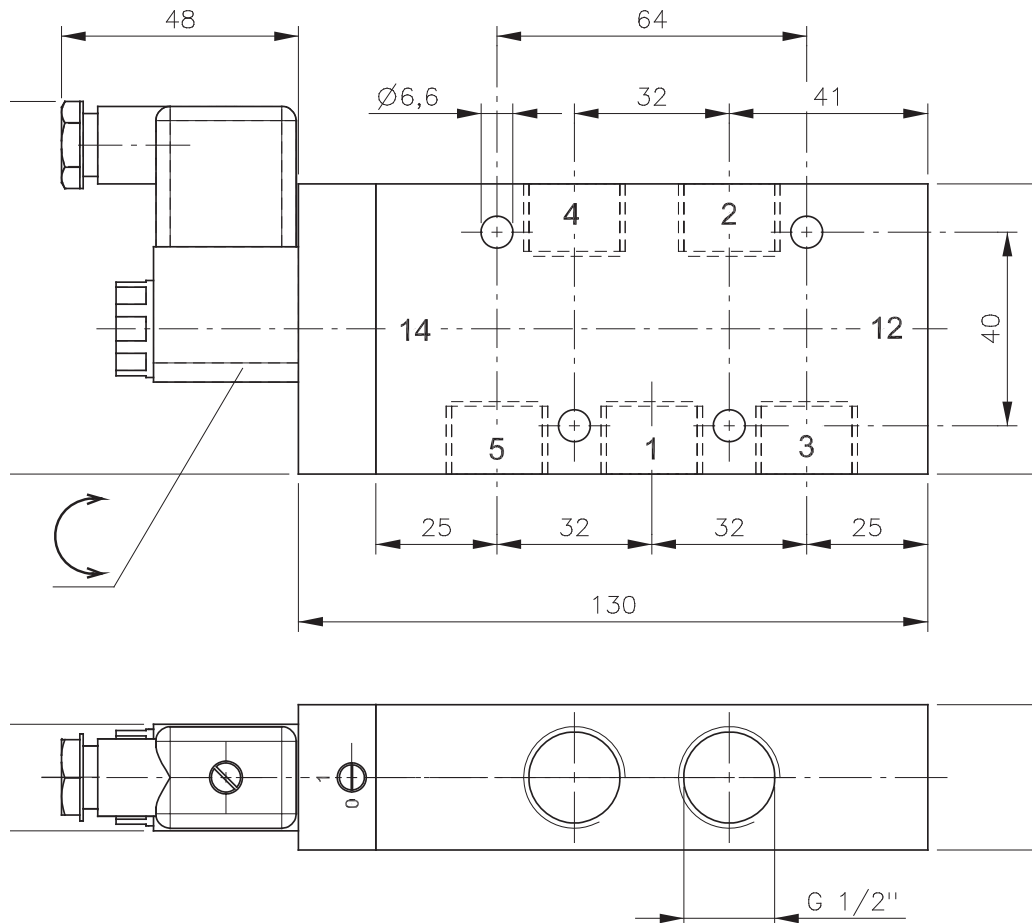
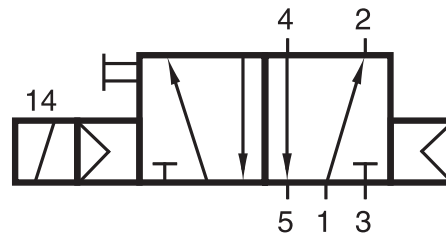
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C ≤ TA ≤ 50°C resp. II3G/Dc T5 – 10°C ≤ TA ≤ 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.67 kg



Standard Solenoid Valve, 3/2-way, G 1/4"

MH 310 701

3/2-way solenoid valve normally closed actuated by permanent signal and equipped with air spring return. Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 12: M5.

Minimum actuation pressure: 3 bar.

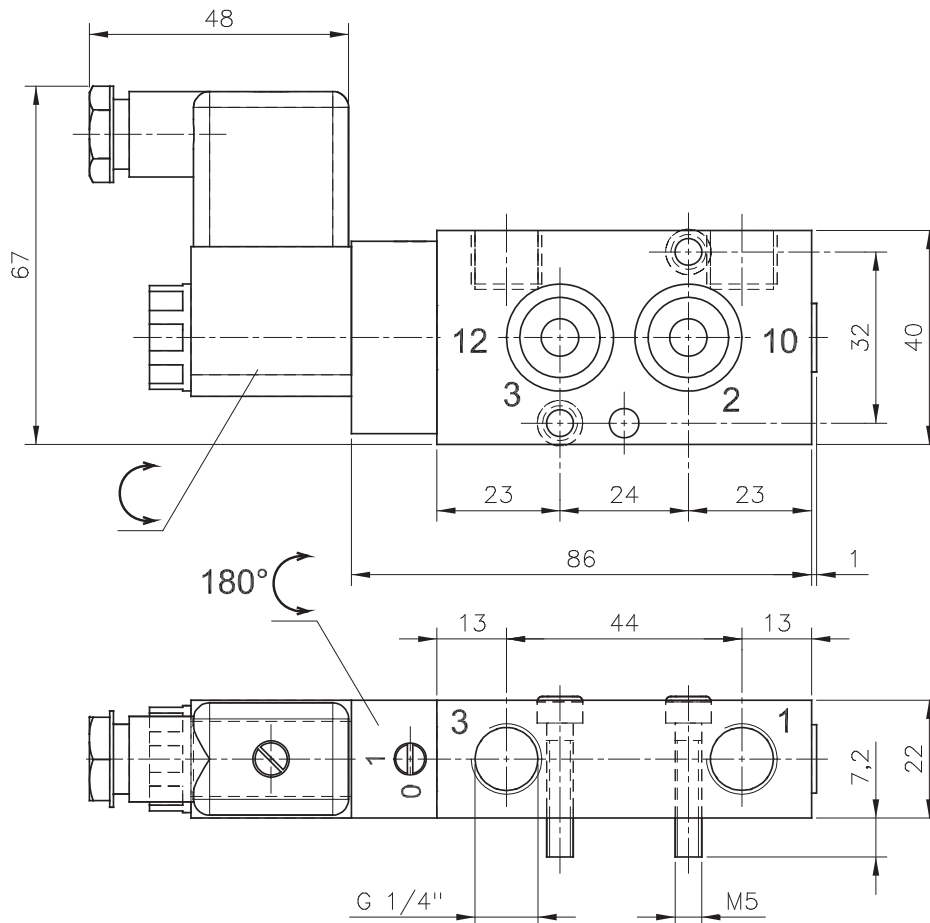
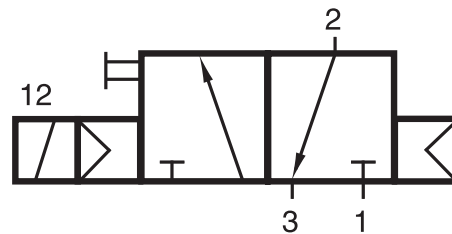
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.21 kg



Standard Solenoid Valve, 3/2-way, G 1/2"

MH 310 121

3/2-way solenoid valve normally closed actuated by permanent signal and equipped with air spring return. Mit pneumatischer Federrückstellung.

Generally with manual override.

Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Port 12: G 1/8".

Minimum actuation pressure: 3 bar.

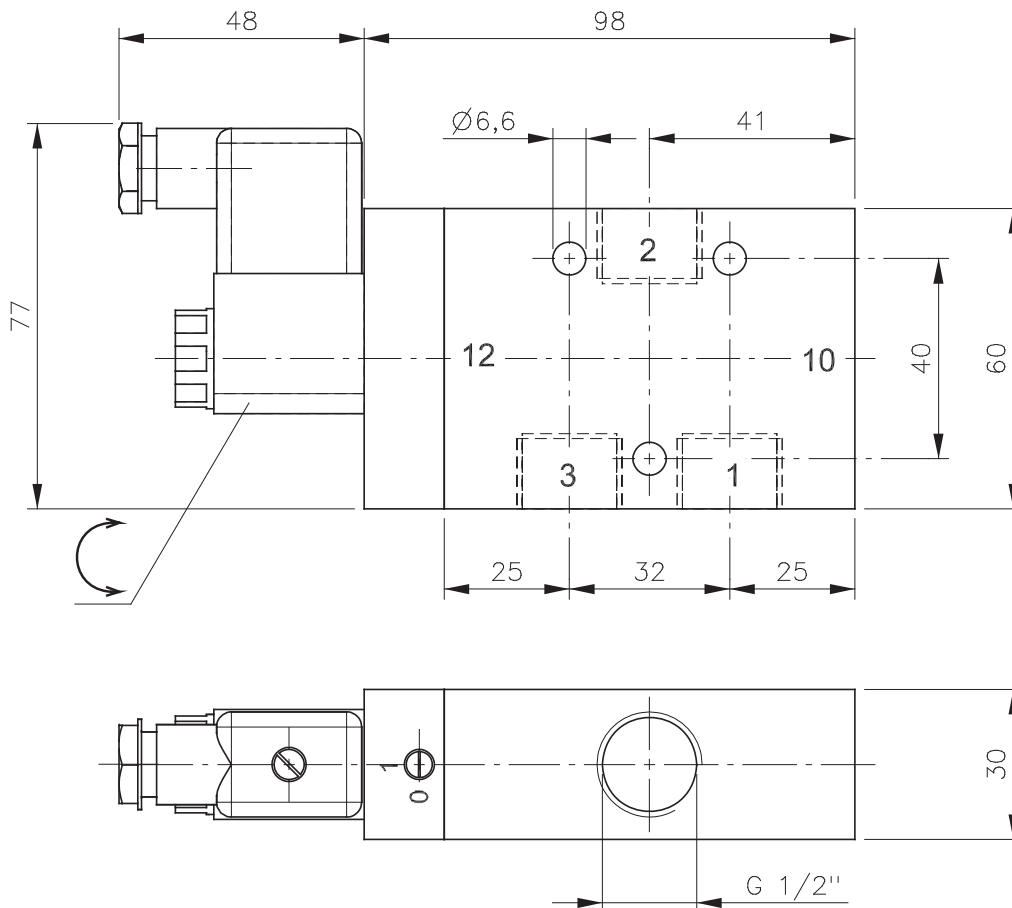
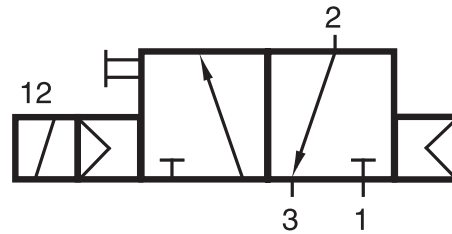
Version for vacuum on request.

Connector as shown on the photo is included.

Also available according ATEX (II2G/Dc T4 – 10°C ≤ TA ≤ 50°C resp. II3G/Dc T5 – 10°C ≤ TA ≤ 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.53 kg



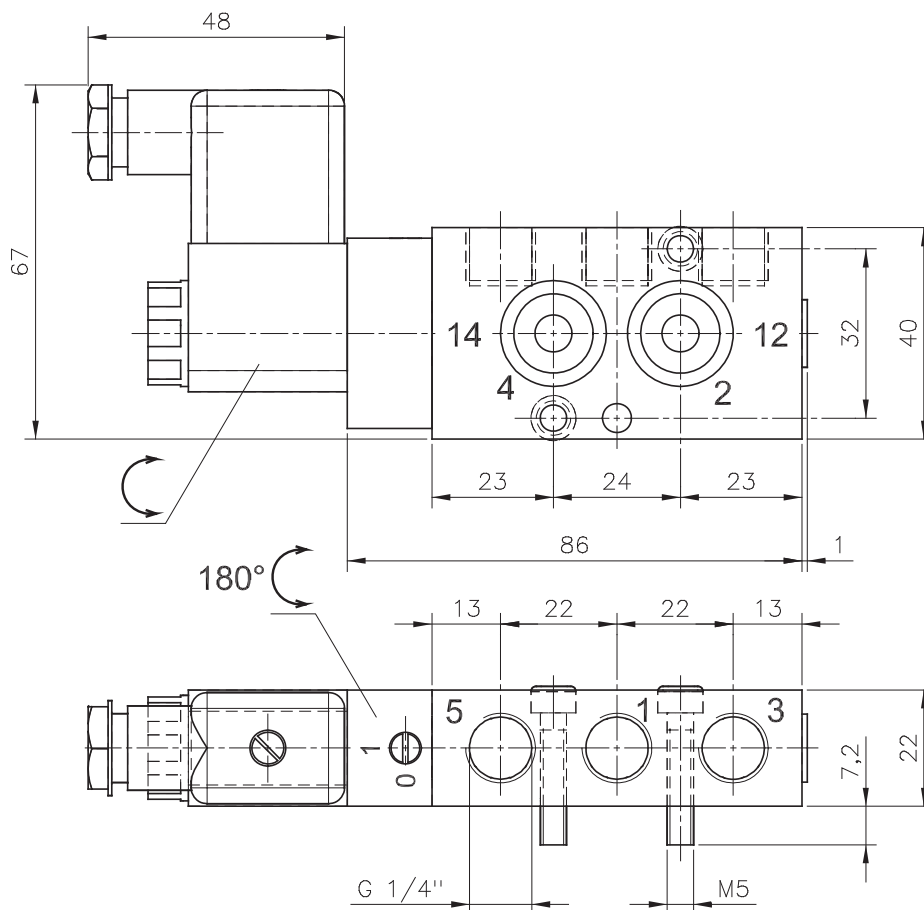
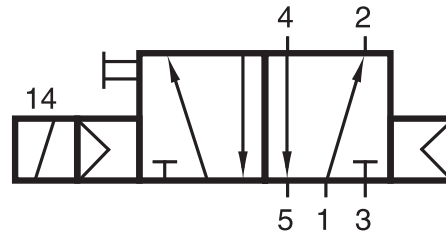
Namur Solenoid Valve, 5/2-way, G 1/4"

MNH 510 701

5/2-way solenoid valve, actuated by permanent signal.
 Interface according to 1/4" Namur standard.
 With pneumatic spring return.
 Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.26 kg



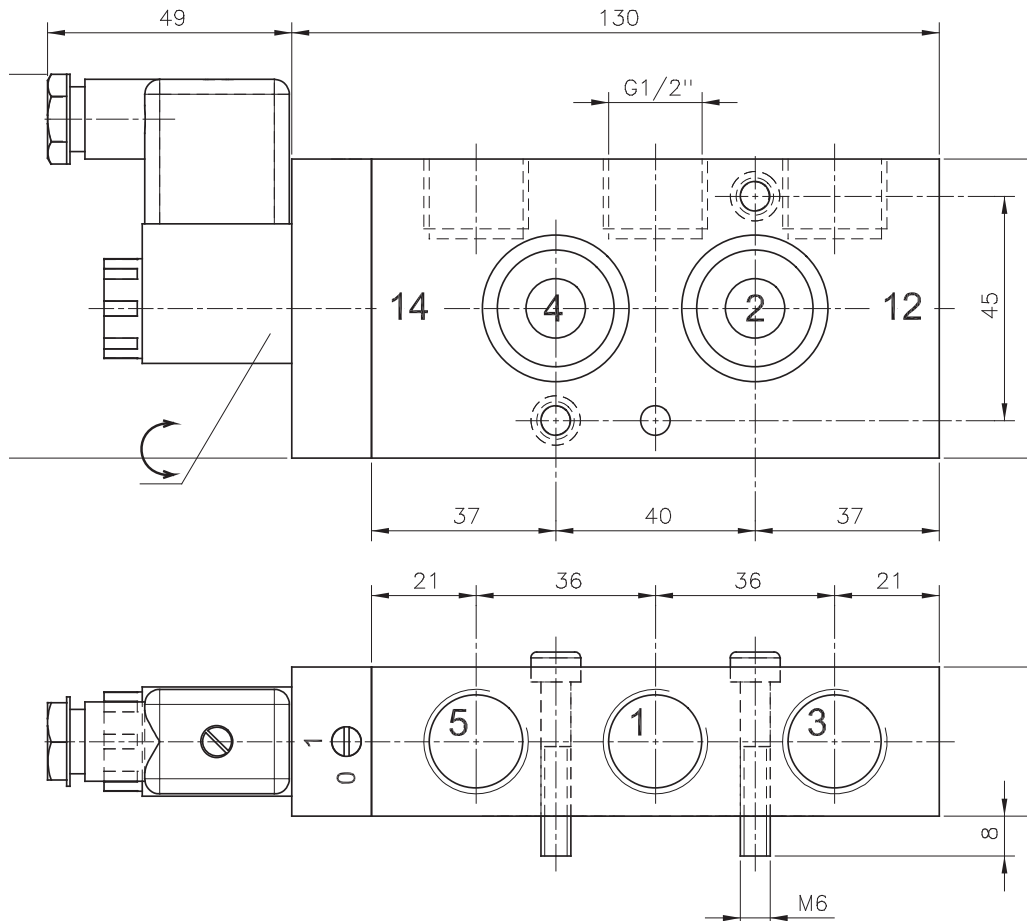
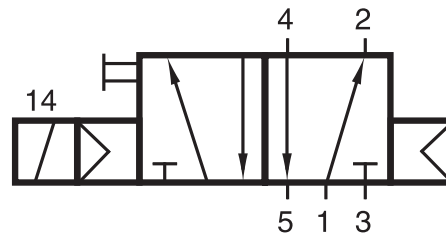
Namur Solenoid Valve, 5/2-way, G 1/2"

MNH 510 121

5/2-way solenoid valve, actuated by permanent signal.
 Interface according to 1/2" Namur standard.
 With pneumatic spring return.
 Generally with manual override.
 Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.
 Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.
 Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/2"
air flow	3000 l/min
operating pressure	1.0 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.70 kg



Namur Solenoid Valve, 3/2-way, G 1/4"

MNH 310 701

3/2-way solenoid valve, actuated by permanent signal. Interface according to 1/4" Namur standard, with exhaust air recirculation („purge“).

Normally closed.

With pneumatic spring return.

Generally with manual override.

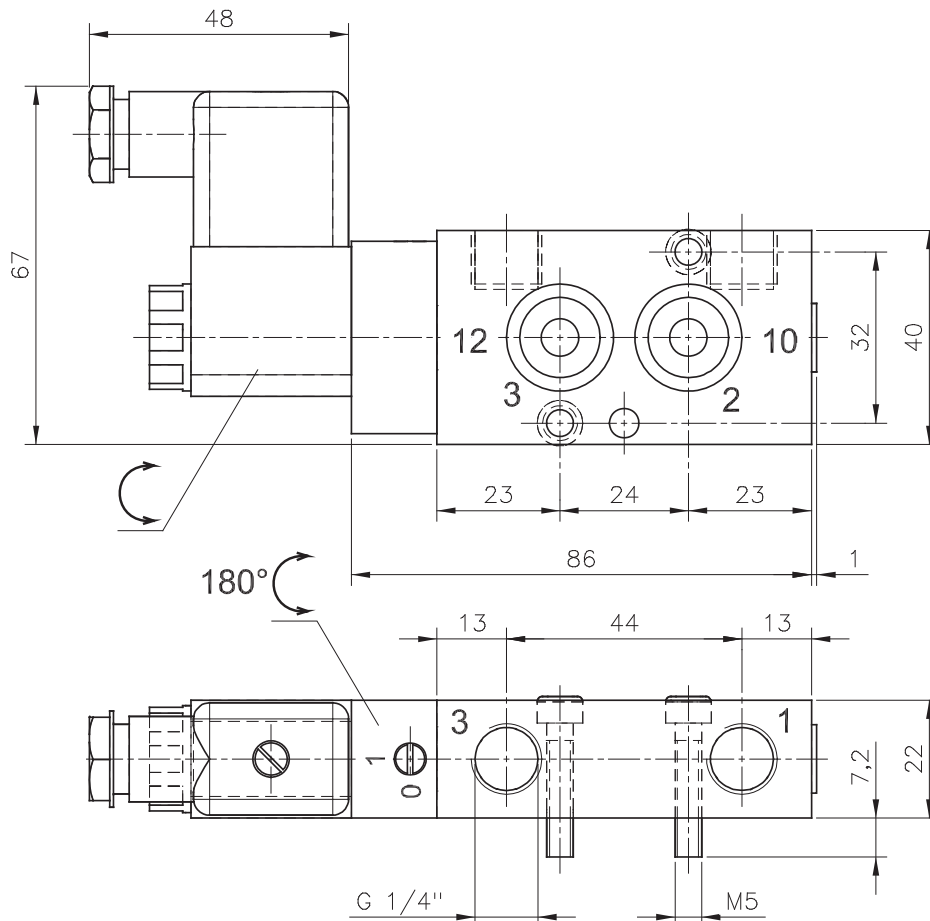
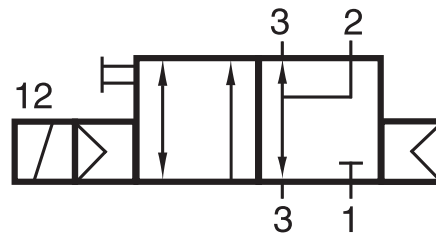
Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).



port size	G 1/4"
air flow	1250 l/min
operating pressure	2 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.26 kg



Namur Solenoid Valve, 3/2-way, G 1/2"

MNH 310 121

3/2-way solenoid valve, actuated by permanent signal. Interface according to 1/2" Namur standard, with exhaust air recirculation („purge“).

With pneumatic spring return.

Generally with manual override.

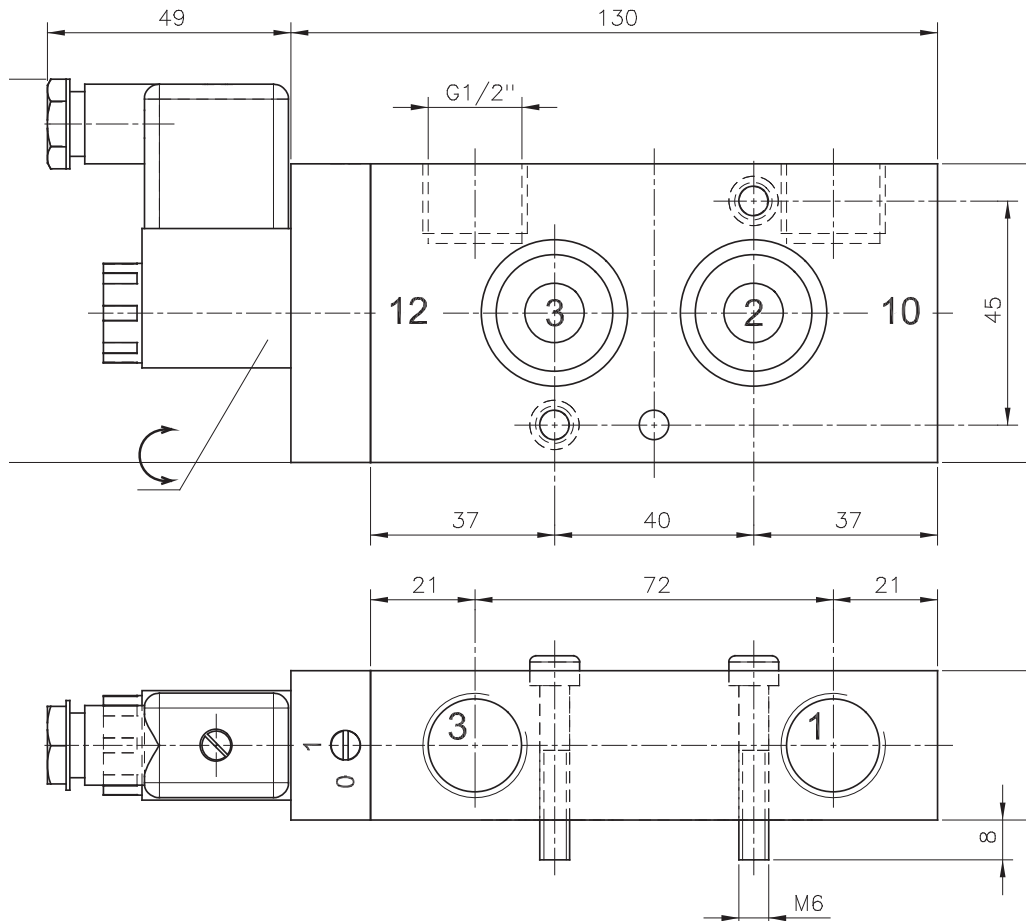
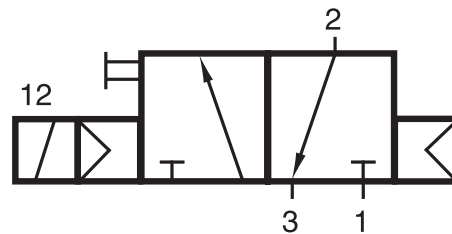
Available with solenoid operators: 230V / 50 Hz, 110 V / 50 Hz, 24 V / 50 Hz, 48 V =, 24 V =, 12 V =.

Delivery includes 1 pin, 2 screws, 2 O-rings and 1 connector.

Also available according ATEX (II2G/Dc T4 – 10°C <= TA <= 50°C resp. II3G/Dc T5 – 10°C <= TA <= 50°C): 230V / 50 Hz, 110 V / 50 Hz, 24 V =; with cable (3m).

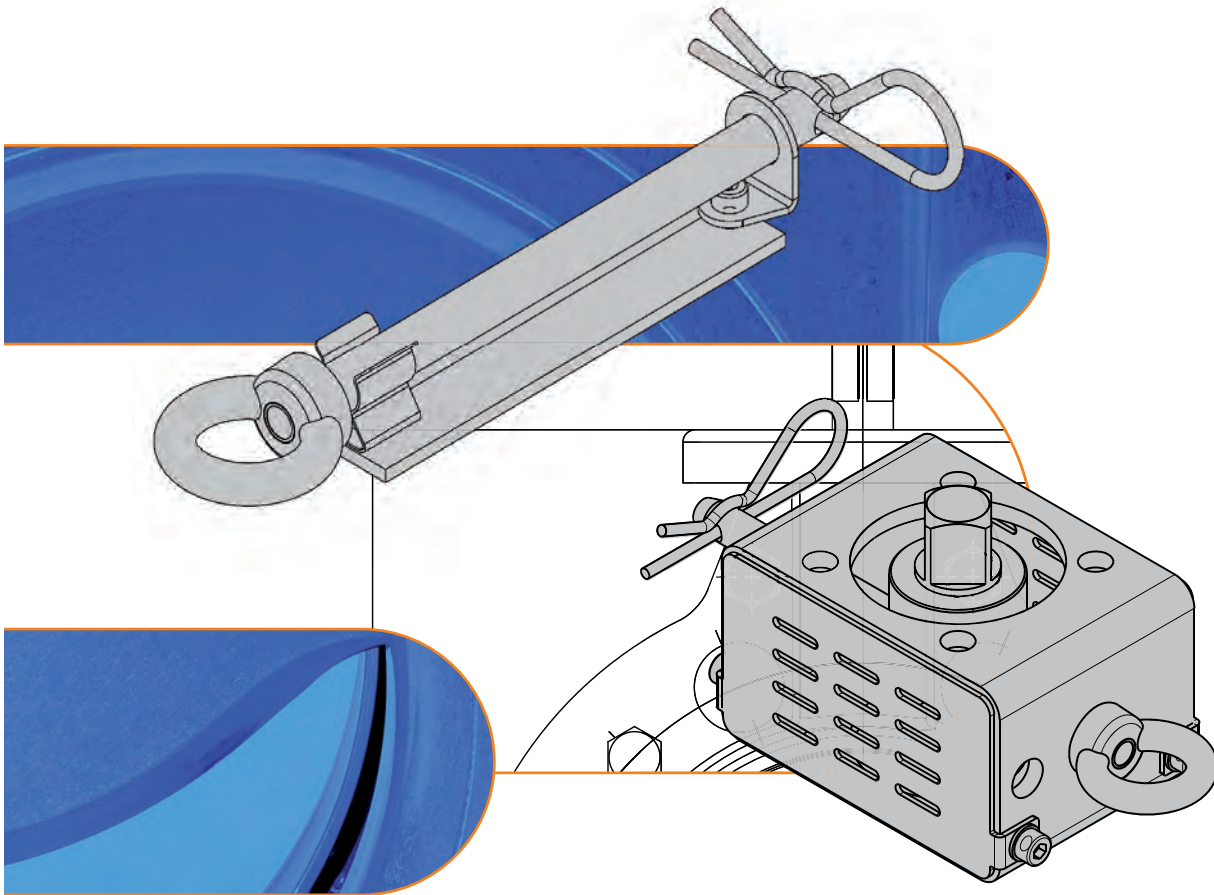


port size	G 1/2"
air flow	3000 l/min
operating pressure	1.0 - 10 bar
power cons.	3 W = / 5 VA ~
weight	0.70 kg



Locking devices

for valves and 90°-rotary valves



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Fixing valves reliably in end position

During shutdowns and maintenance work it is often necessary that valves are securely fixed in an end position. This is often particularly important for heavy or vertically running valves.

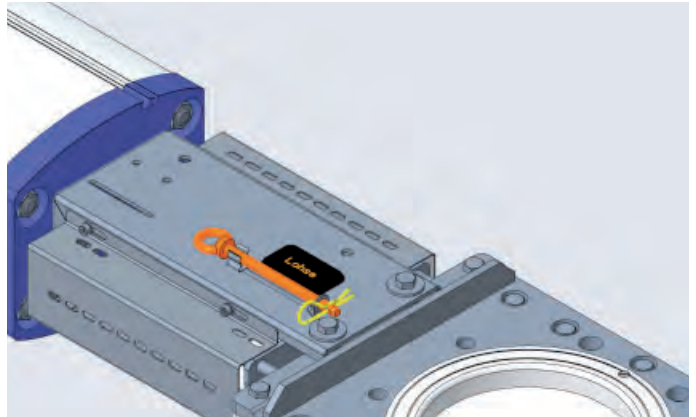
With LOHSE locking devices, a form-fit connection enables a safe positioning of the valves and ensures a reliable locking. Unwanted movements of the valve are thus prevented, unintentional or automatic movement is no longer possible in a secured state.

The valve can be locked in both the OPEN and CLOSE position. The locking pin can be secured during shutdown or maintenance work with the safety cotter pin supplied or, if required, with a padlock (not supplied). If a padlock is used, the locking pin cannot be removed without authorization.

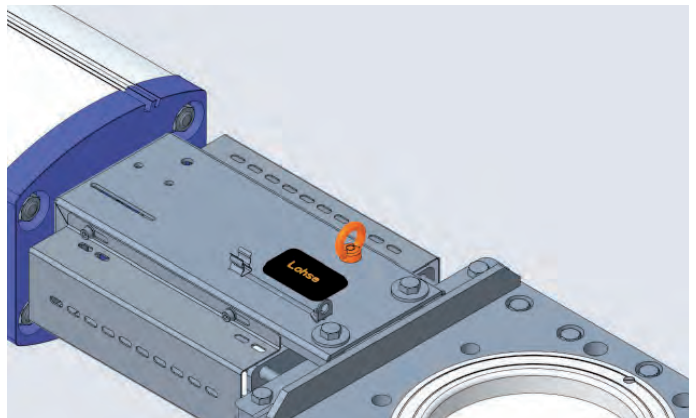
The locking pin is installed directly at the valve and is therefore always ready to hand. No special tools are required.

Locking devices for valves

locking device
in rest position



locked
valve

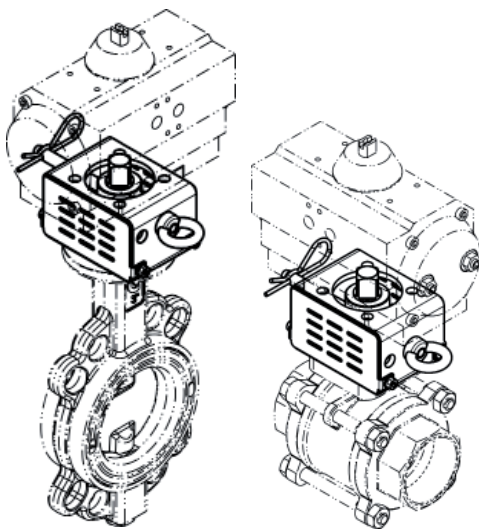


Locking device available in the following gradations:

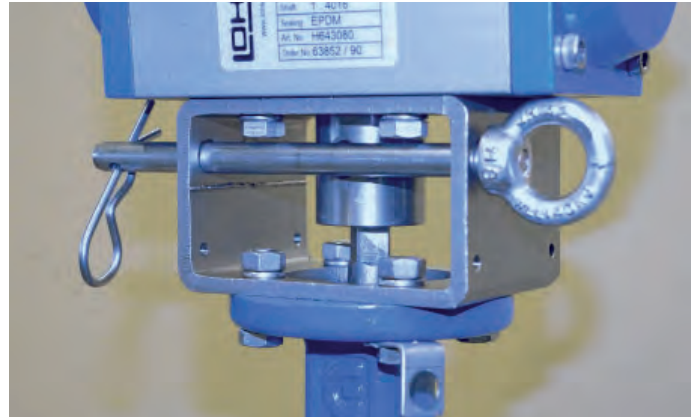
valve type	DN	
	from	to
CNA / CAW CBS / CDS RQS / NAQ AEQ	50	150
	200	300
	350	500
	600	
TA	100	125
	150	300
	350	500
	600	

Locking device for 90°-rotary valves

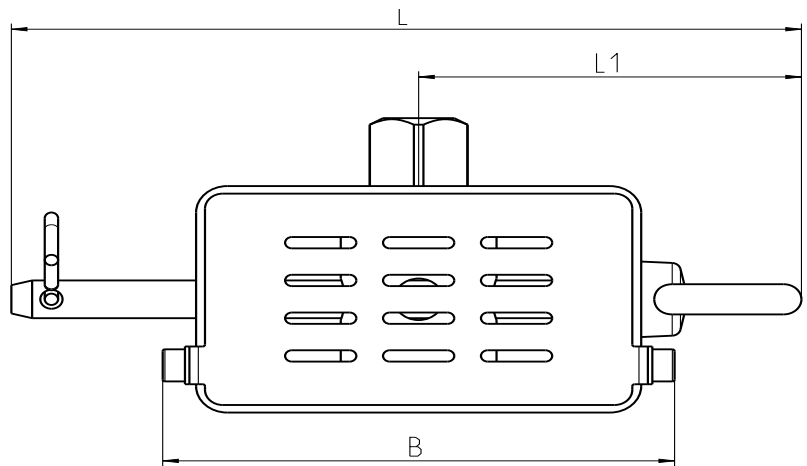
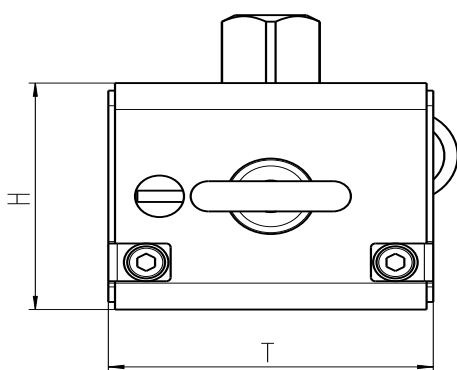
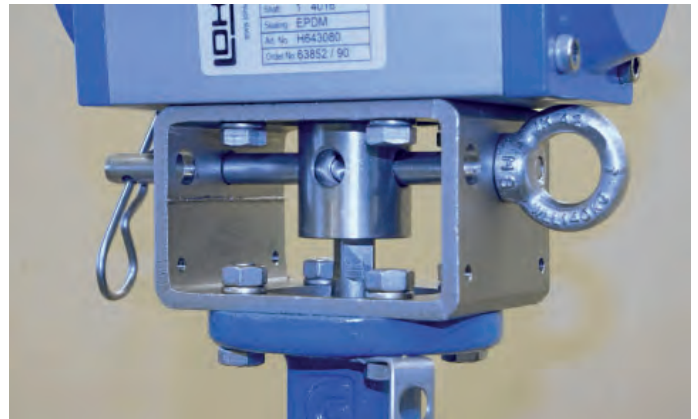
(e.g. butterfly valves, ball valves)



locking device
in rest position



locking device
locked



usage		B [mm]	H [mm]	T [mm]	L [mm]	L1 [mm]
ball valve	DN 10–20	95	50	48	~152	~76
	DN 25–40	115	60	53	~152	~86
	DN 50–65	115	60	73	~177	~86
	DN 80–100	135	80	93	~177	~96
butterfly valve	DN 40–150	115	60	73	~177	~86
	DN 200–300	135	80	93	~177	~96

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General approvals / Certificates

- QM-Managementsystem to DIN EN ISO 9001
- manufacturer to AD 2000
- certified to DIN EN ISO 3834-3 (quality requirements for welding methods)
- manufacturer's declaration according to directive 94/9 EC (ATEX)
- qualified welder to EN 287 material groups W01;W03, W11
- qualified welder to DIN EN ISO 15614 material group W01
- approved specialist factory to § 19 I WHG
- magnetic particle test (MT) to DIN EN 17638
- mobile spectral analysis with accuracy to laboratory standard (including C, P and S)
- noise level measurement
- authorisation to transfer stamp for certificates
- surface crack inspection (PT) to EN 473
- sealing test (Nekal)
- sealing test to DIN 25412 Part 2
- testing and acceptance acc. pressure vessel directive 97/23 EG
- layer thickness measurement
- wall thickness measurement
- temperature measurement (-50 to +1150 °C)



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