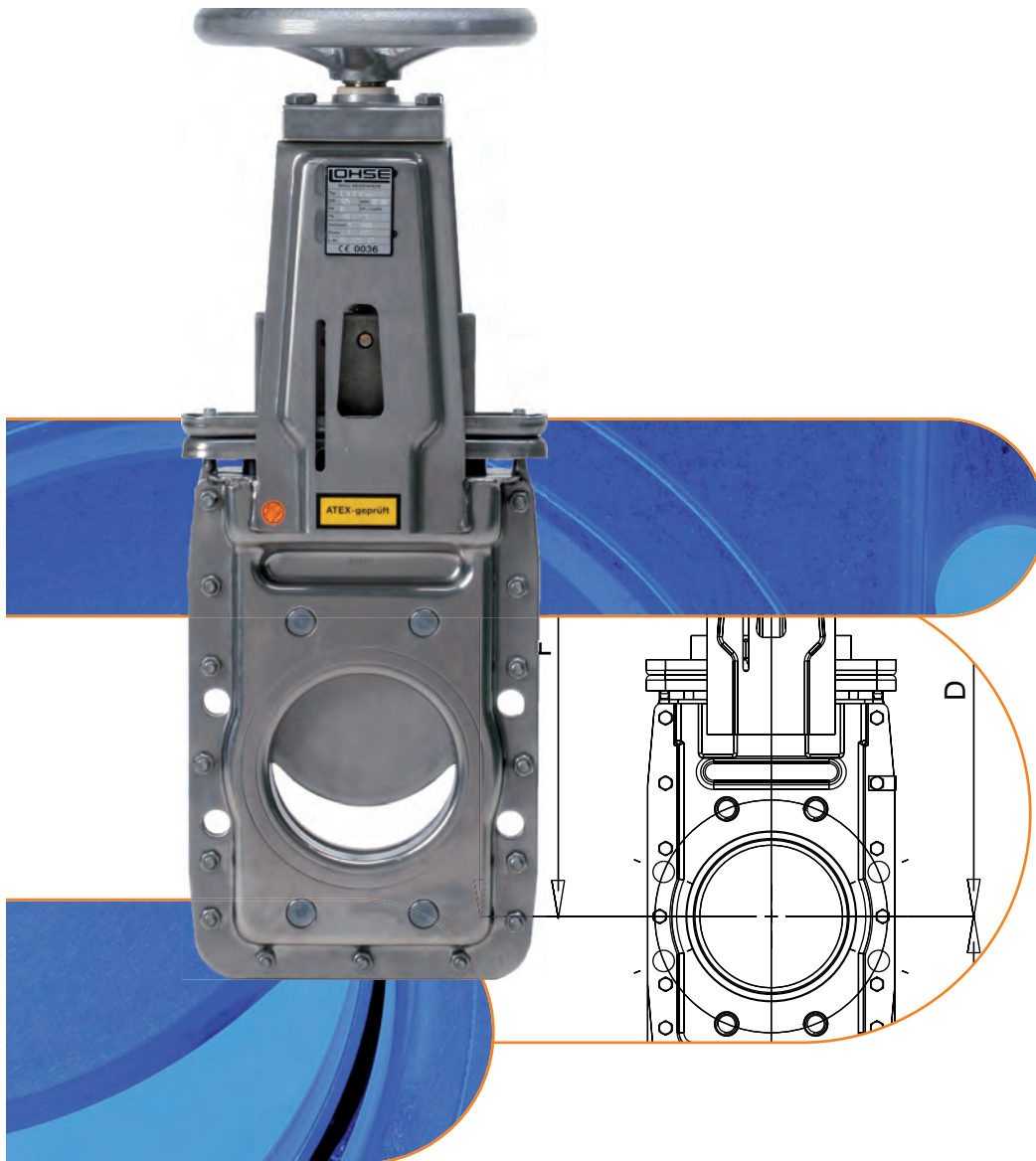


Valves of stainless steel · COMPACT-Program

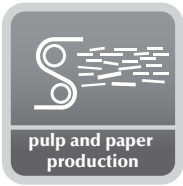
# Shut-Off-Valves

## 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. This 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

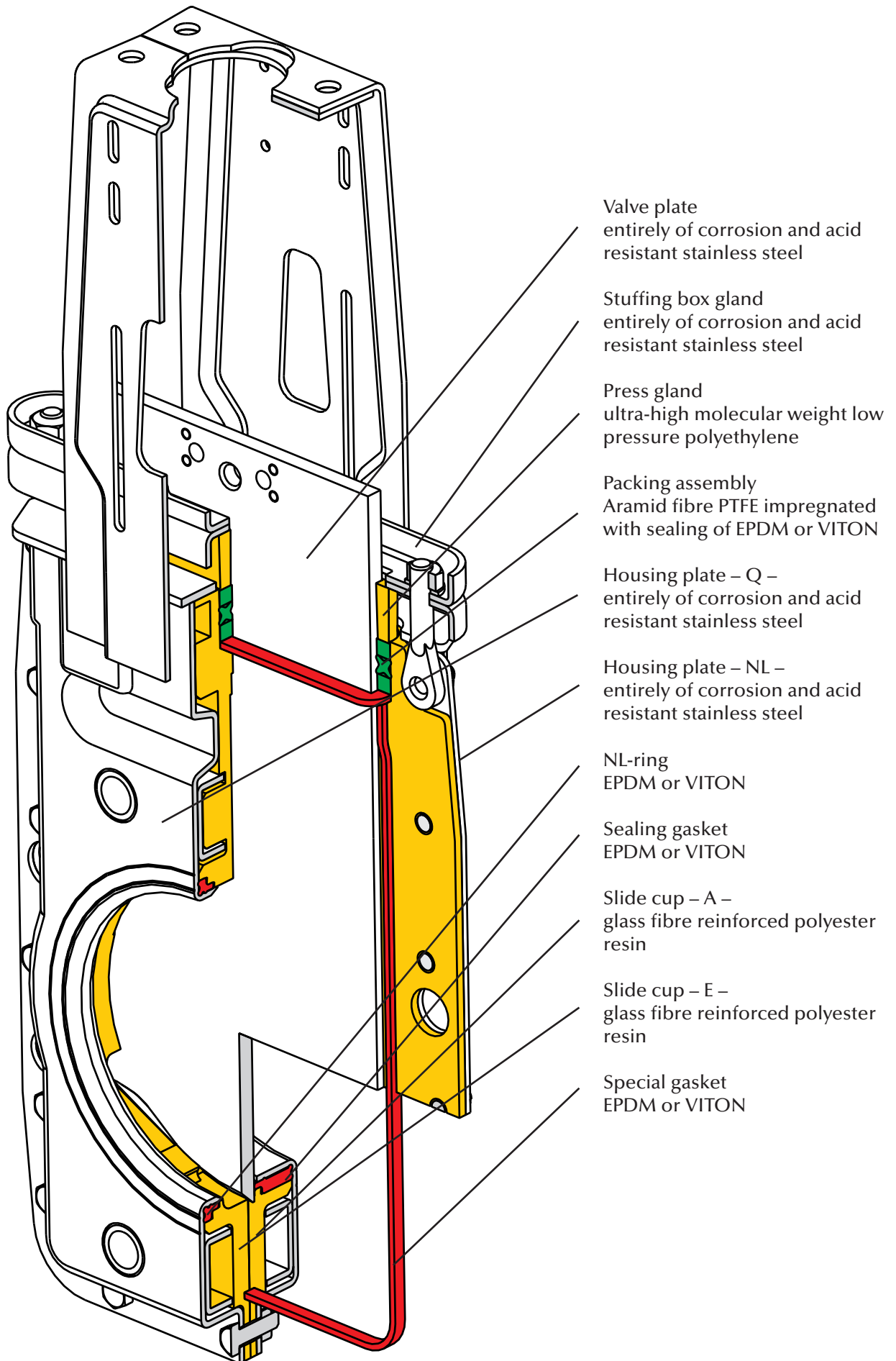
- no stringing of fibres is possible

### 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	8 bar
DN 300 – 400	6 bar
DN 450 – 600	4 bar
DN 700 – 800	2.5 bar
DN 900 – 1000	1.5 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).

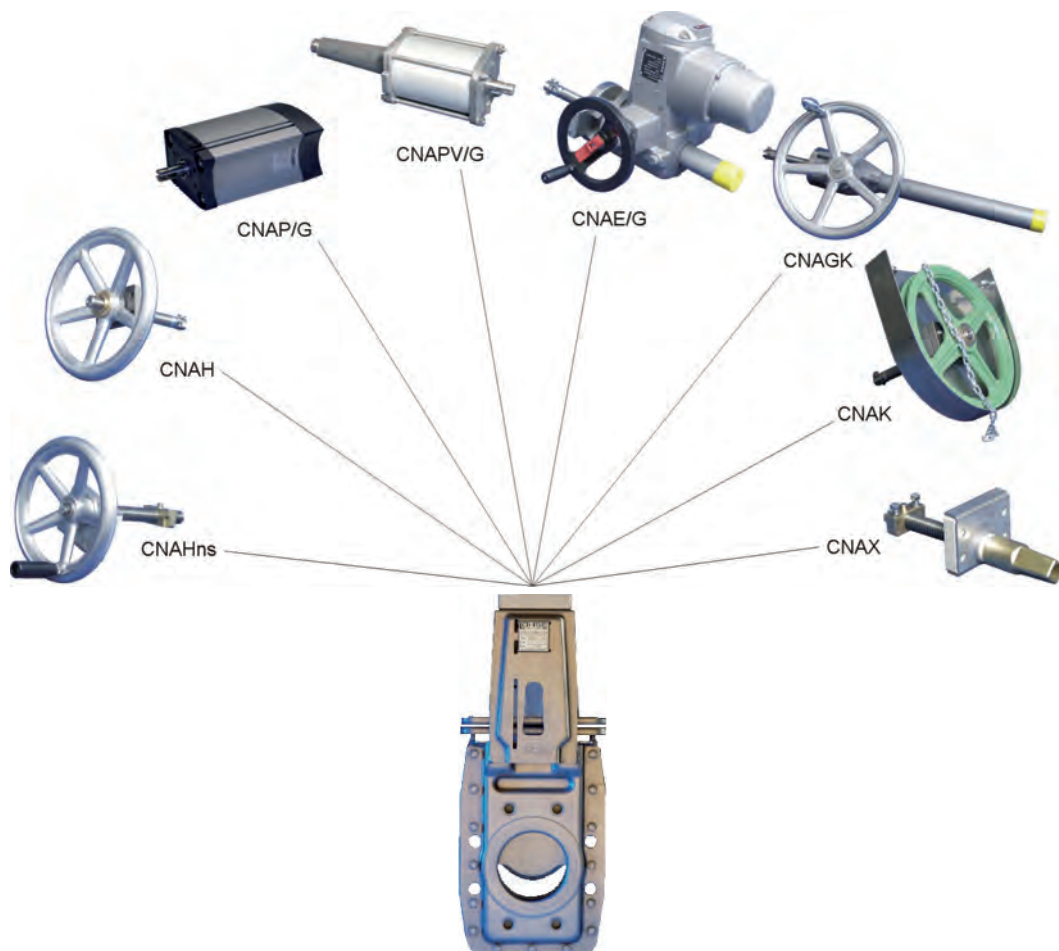
This facility is called the **LOHSE modular system** which offers the following advantages:

- 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

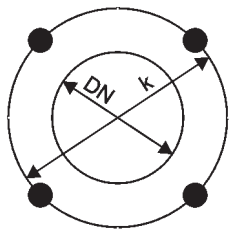
### Protection guards (G)

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

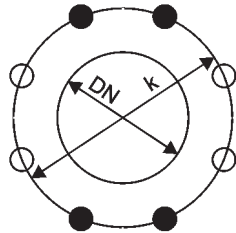
Protection guard of stainless steel.



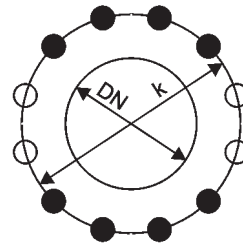
Flange bores for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



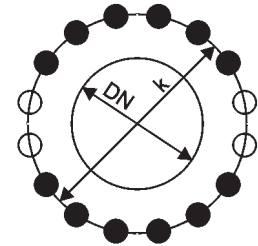
DN 50-65



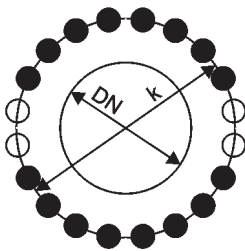
DN 80-200



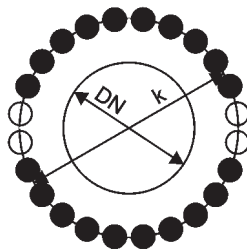
DN 250-300



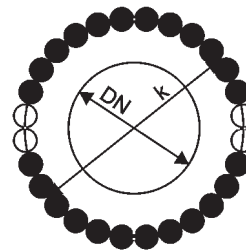
DN 350-400



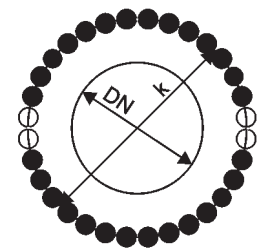
DN 450-600



DN 700-800

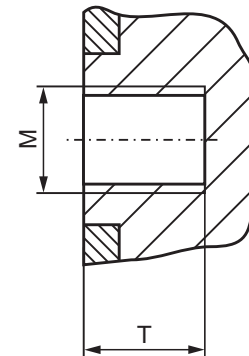


DN 900-1000



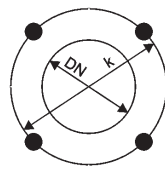
DN 1100-1200

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

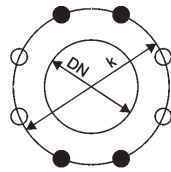


Z = total number of holes  
 Z1 = number of joint-holes  
 Z2 = number of through-going bores  
 T = usable depth of thread

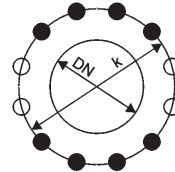
Flange bores for LOHSE COMPACT-valves  
according to ANSI B 16.5 Class 150 (≥ DN 700: ANSI B 16.47 Class 150)



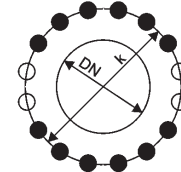
DN 50-80



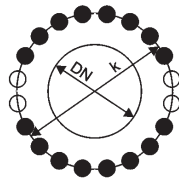
DN 100-200



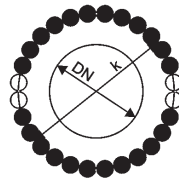
DN 250-350



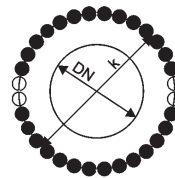
DN 400-450



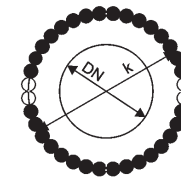
DN 500-600



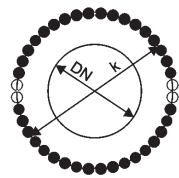
DN 700-800



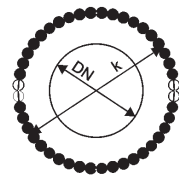
DN 900



DN 1000

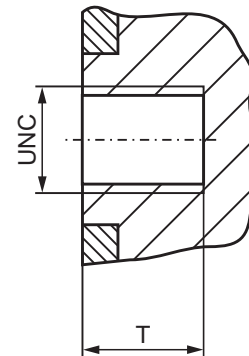


DN 1100



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

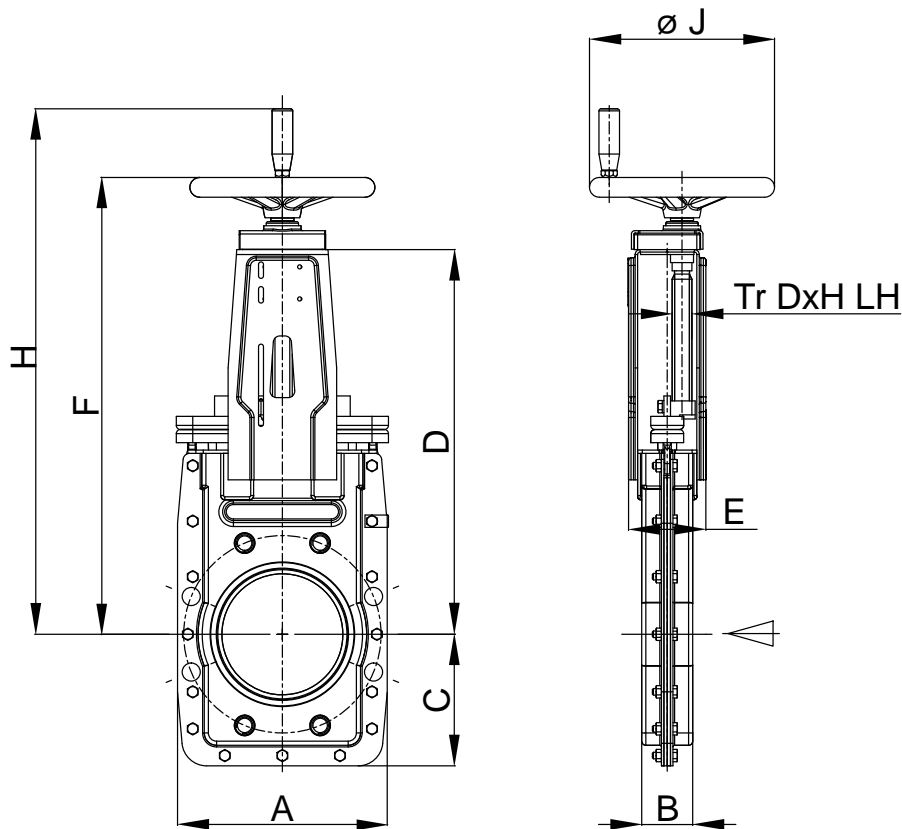


## Pressure ranges

DN	standard		options	
	flange connection *)	operating pressure [bar]	flange connection *)	operating pressure [bar]
50	PN 10	8	PN 16-25-40	40
65				
80				
100				
125		PN 16-25	25	
150				
200		PN 16	16	
250				
300				
350				
400		4	PN 10	10
450				
500		2.5	PN 10	10
600				
700				
800				

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

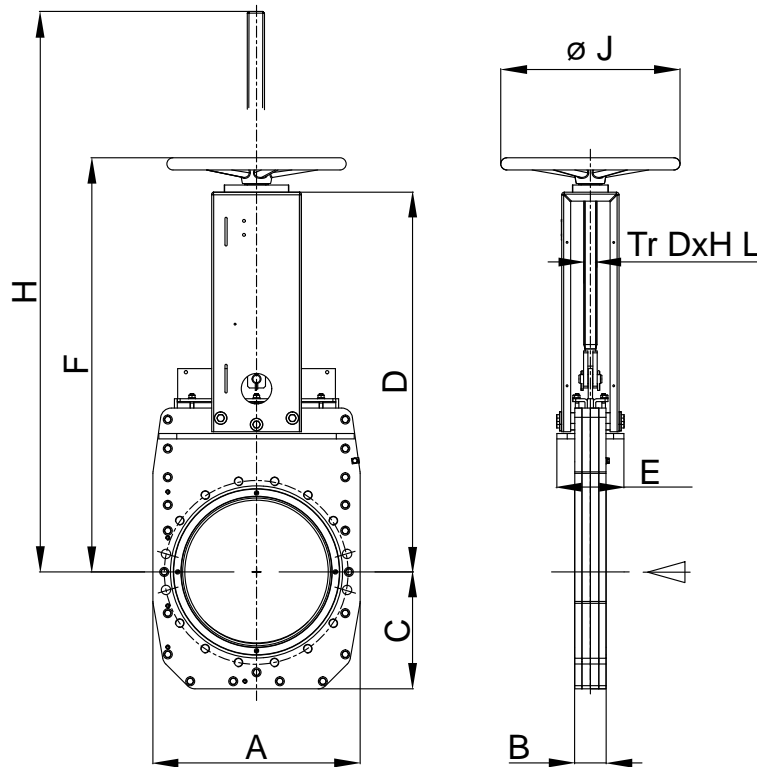
## COMPACT-valve handwheel drive with non-rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	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	8	210	54	135	368	94	456	539	225	24 x 5	13
*)125	8	230	52	145	413	94	500	584	225	24 x 5	15
*)150	8	255	62	160	468	94	556	639	225	24 x 5	18
200	8	328	60	189	557	143	656	739	280	30 x 6	39
250	8	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	4	630	110	315	1200	208	1304	-	500	30 x 6	262
500	4	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.

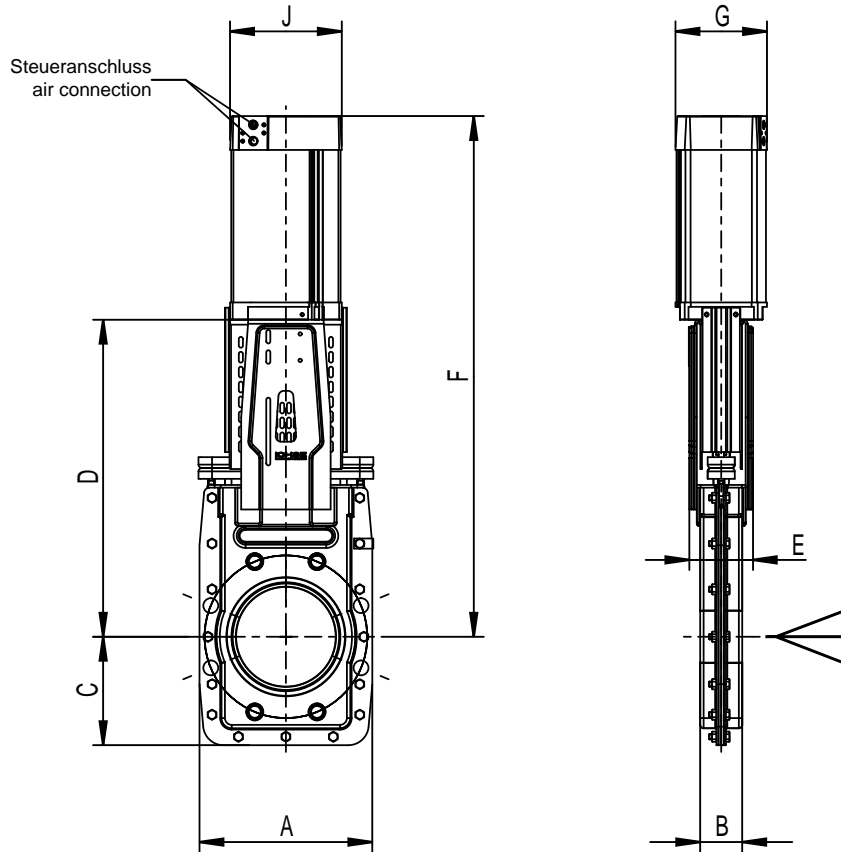
## COMPACT-valve handwheel drive with rising stem



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	8	185	42	100	313	78	378	425	225	20 x 4	8.3
65	8	185	42	100	313	78	378	440	225	20 x 4	8.8
80	8	175	52	125	313	78	378	455	225	20 x 4	9.1
*)100	8	210	54	135	368	94	437	540	280	24 x 5	13.5
*)125	8	230	52	145	413	94	482	610	280	24 x 5	15.3
*)150	8	255	62	160	468	94	537	690	280	24 x 5	18.4
200	8	328	60	189	557	143	637	840	360	30 x 6	39
250	8	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	4	630	110	315	1200	208	1296	1760	500	36 x 6	258
500	4	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	2.5	960	151	480	1756	307	1887	2610	800	44 x 7	1060
800	2.5	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.

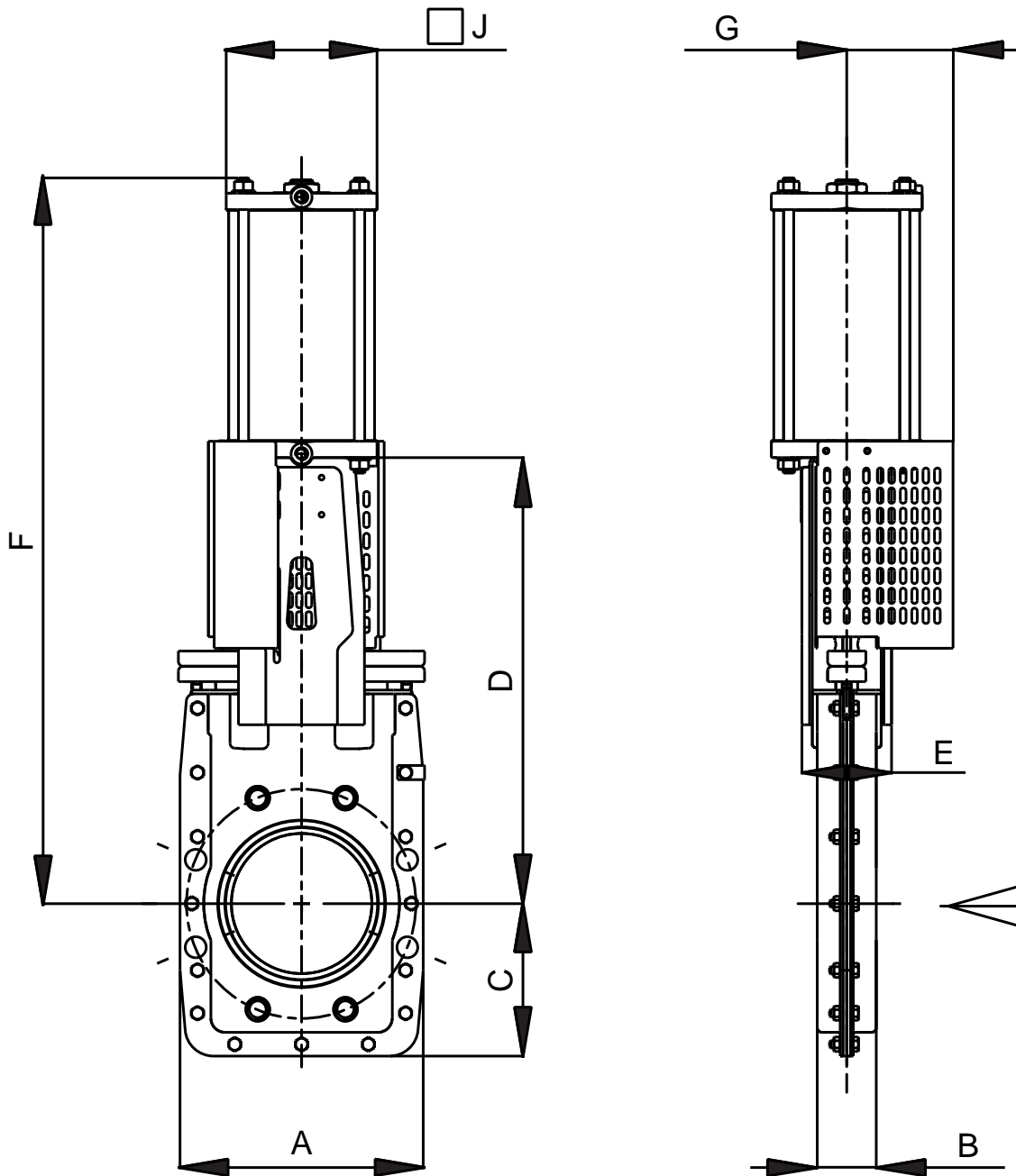
COMPACT-valve  
pneumatic cylinder and protection guard



DN	PS [bar]	A	B	C	D	E	F	G	J	cyl Ø	air connection	control pressure [bar]	weight ~[kg]
50	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	12.6
*)100	8	210	54	135	368	94	596	118	139	100	G 1/4"	6	15.4
*)125	8	255	52	145	413	94	691	145	162	125	G 1/4"	6	21.4
*)150	8	255	62	160	468	94	768	145	165	125	G 1/4"	6	25.3
200	8	328	60	190	557	143	917	178	204	160	G 1/4"	6	48.5
250	8	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	4	630	110	315	1200	208	1870	242	283	230	G 1/2"	6	310
500	4	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.

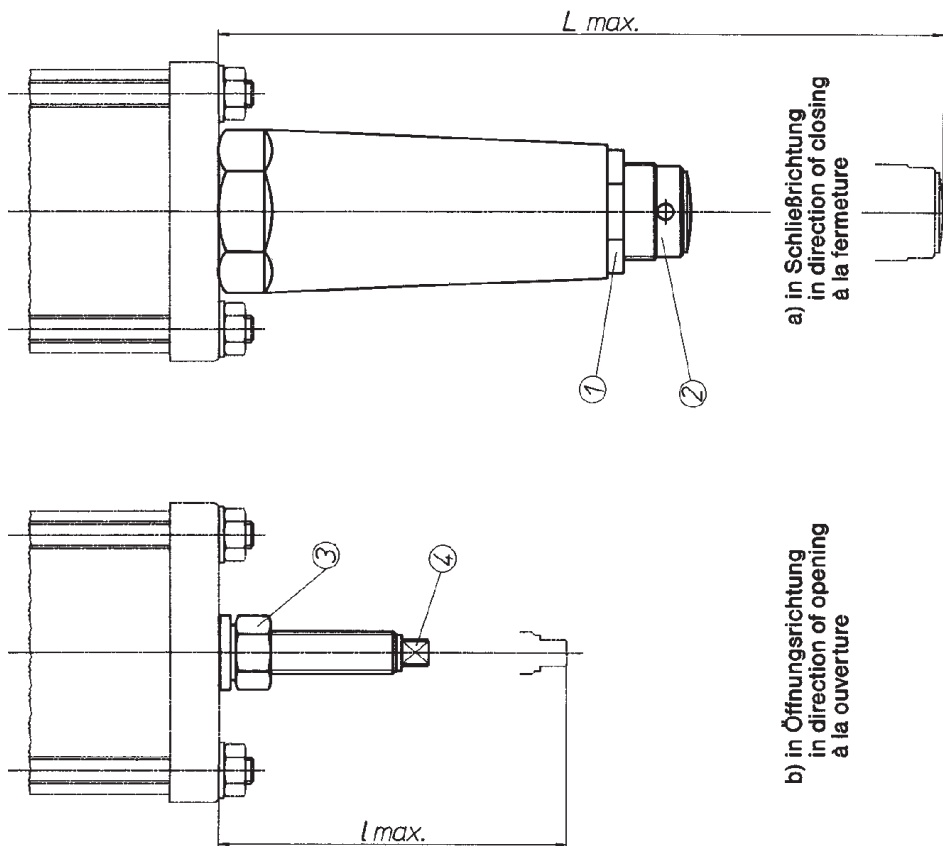
COMPACT-valve  
pneumatic cylinder and protection guard



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	2.5	960	151	480	1756	307	2745	425	425	400	G 3/4"	6	1220
800	2.5	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



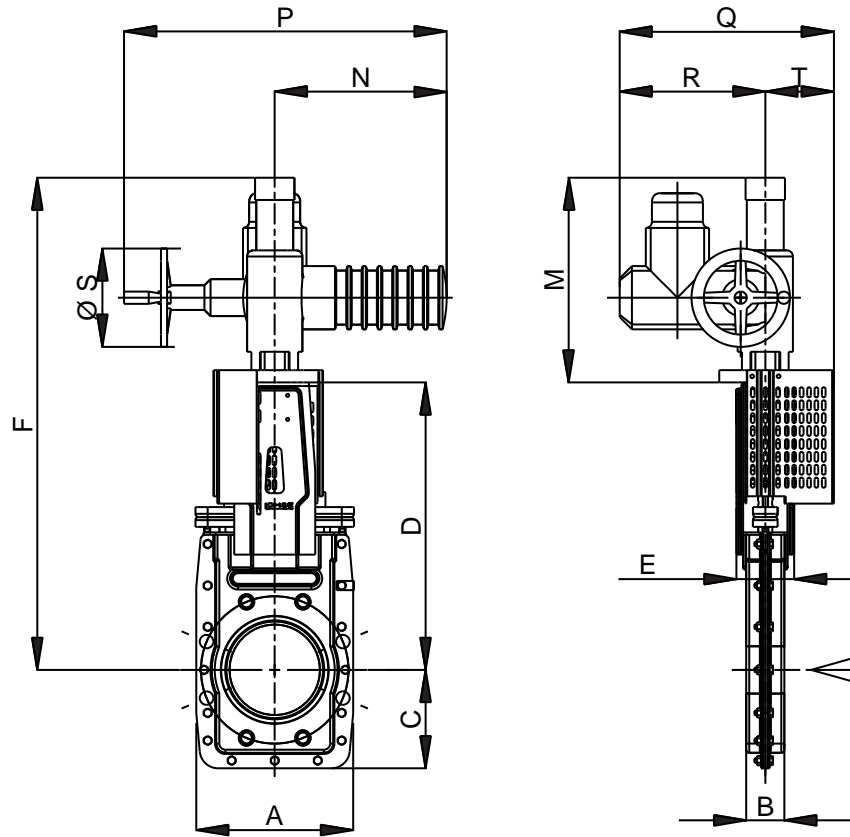
Variable stroke limiter

- 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.

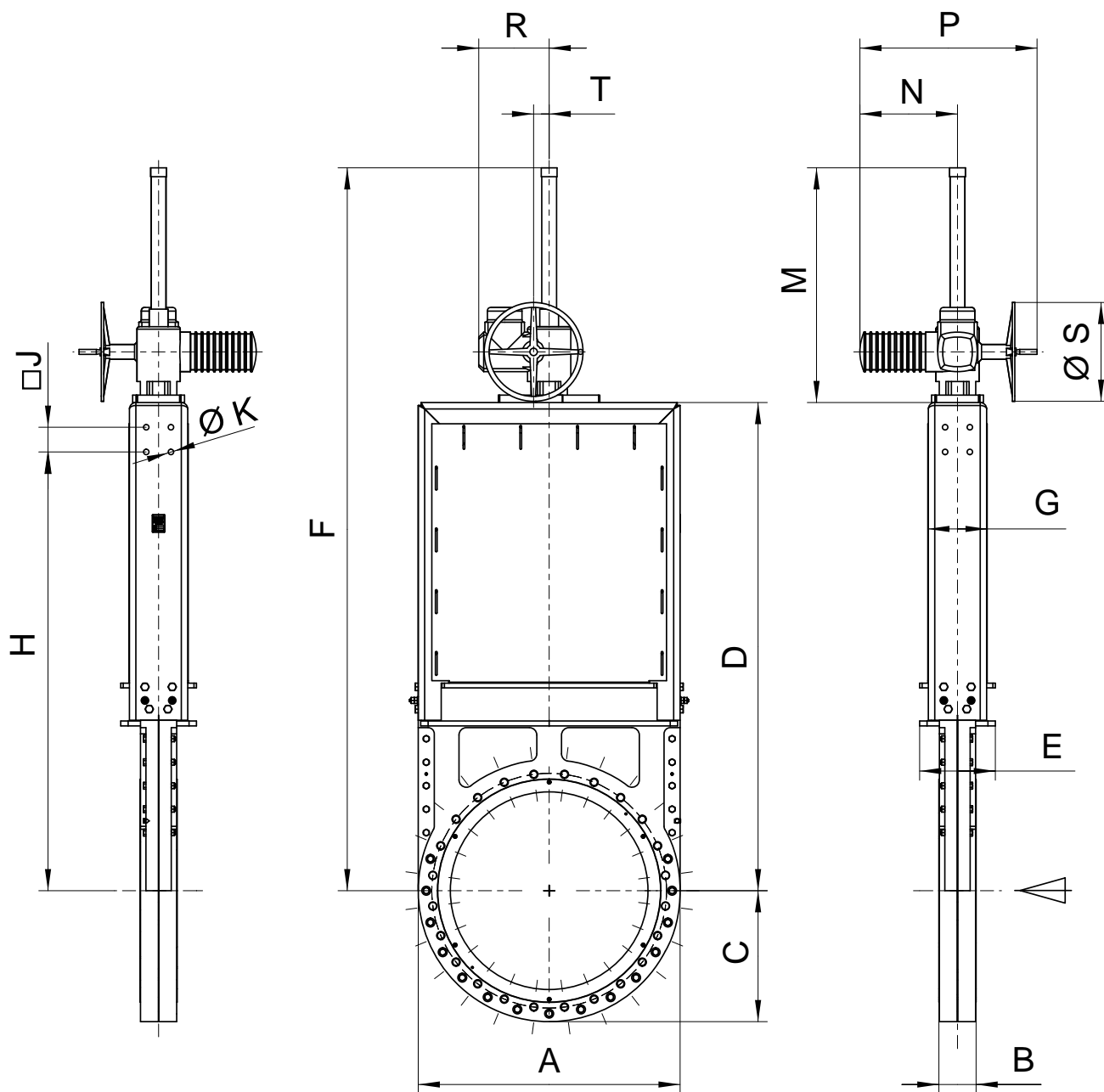
COMPACT-valve  
electric drive and protection guard



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	8	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	18.7	32
65	8	185	42	100	313	78	646	333	280	515	349	237	160	112	20 x 4	24.4	32
80	8	175	52	125	313	78	646	333	280	515	349	237	160	112	20 x 4	29.7	32
*)100	8	210	54	135	368	94	701	333	280	515	349	237	160	112	24 x 5	28.3	37
*)125	8	230	52	145	413	94	746	333	280	515	349	237	160	112	24 x 5	35.2	38
*)150	8	255	62	160	468	94	801	333	280	515	349	237	160	112	24 x 5	41.6	42
200	8	328	60	190	557	143	902	345	355	536	373	247	200	126	30 x 6	46.7	58
250	8	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	4	630	110	315	1200	208	1808	608	285	713	436	285	315	151	36 x 6	101.0	291
500	4	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

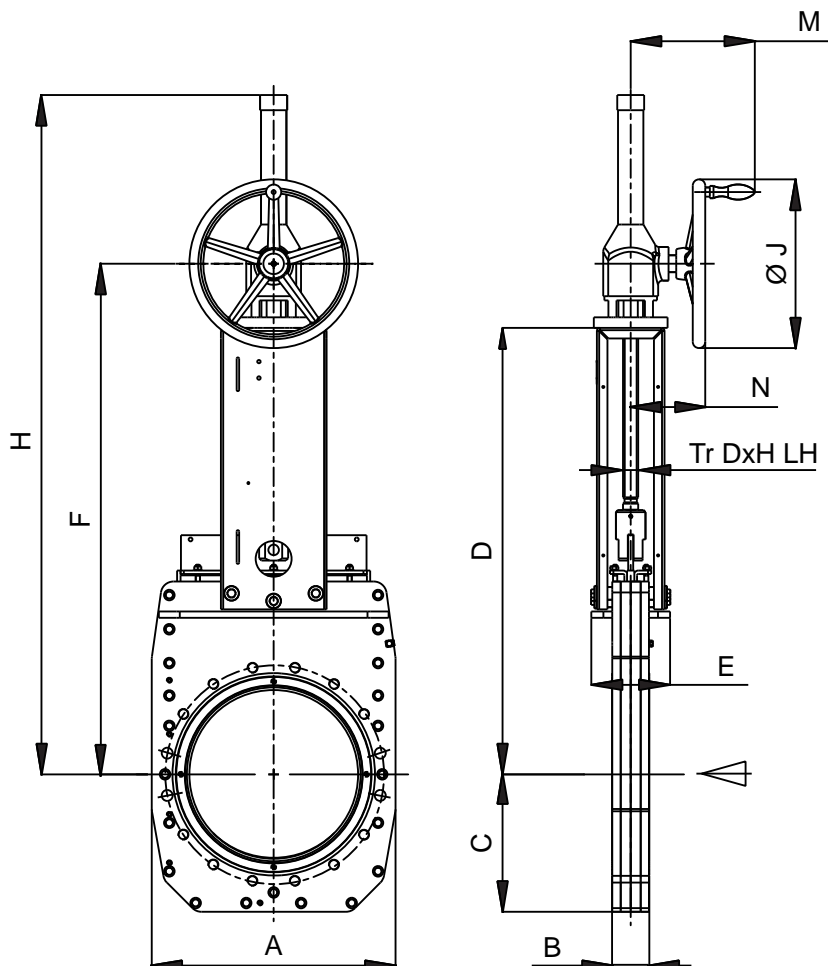


DN	PS [bar]	A	B	C	D	E	F	G	H	J	ØK	M	N	P	R	ØS	T	stem Tr DxH	closing time [s]	weight ~[kg]
700	2.5	960	151	480	1756	307	2606	240	1550	100	22	850	395	717	285	400	63	44 x 7	96.6	1099
800	2.5	1060	151	530	1976	446	2926	240	1776	100	22	950	395	717	285	400	63	44 x 7	110.2	1285
900	1.5	1170	160	585	2108	311	3253	240	1790	100	22	1145	510	860	330	500	80	44 x 7	108.9	1536
1000	1.5	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.



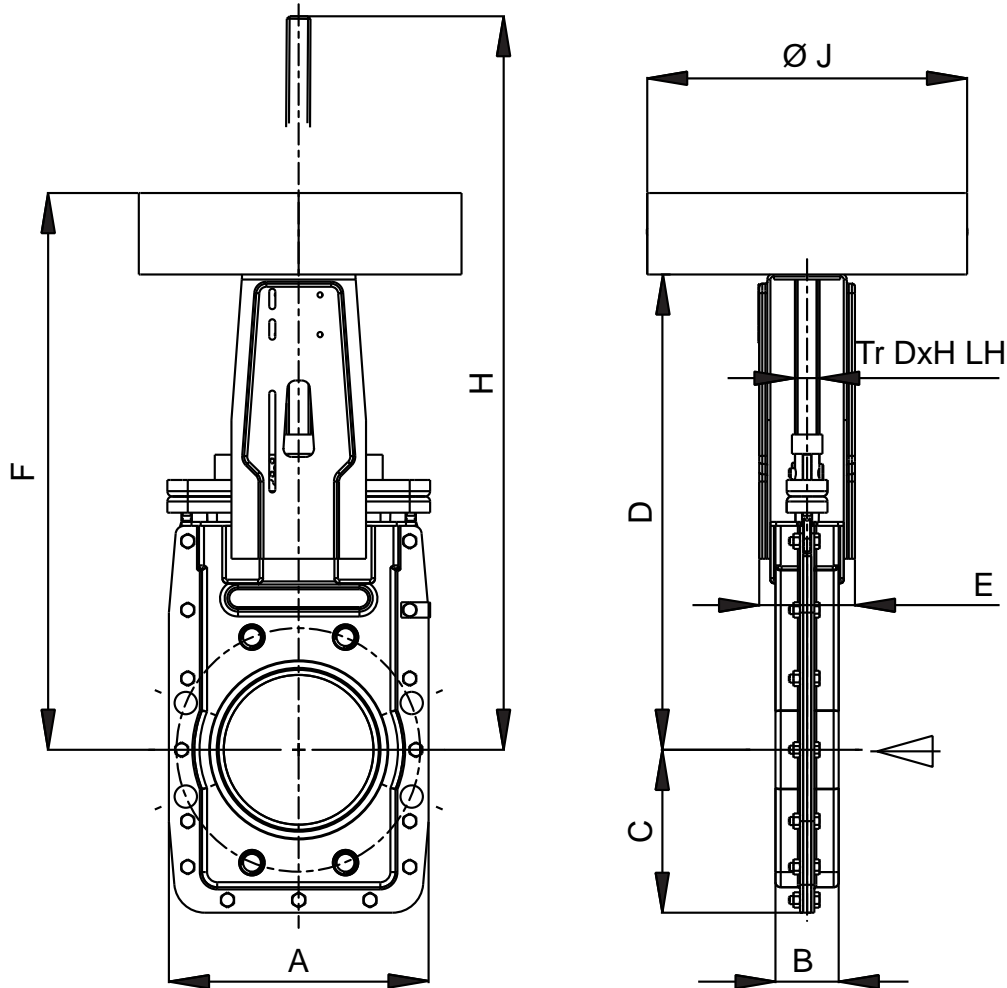
COMPACT-valve  
bevel gear box and handwheel



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	M	N	Tr D x H LH	weight ~[kg]
*)150	8	225	62	160	468	94	615	770	360	278	174	24 x 5	33
200	8	328	60	190	557	143	704	909	360	278	174	30 x 6	55
250	8	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	4	630	110	315	1200	208	1352	1802	400	295	185	36 x 6	274
500	4	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	2.5	960	151	480	1756	307	1946	2422	500	340	222	44 x 7	1075
800	2.5	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.

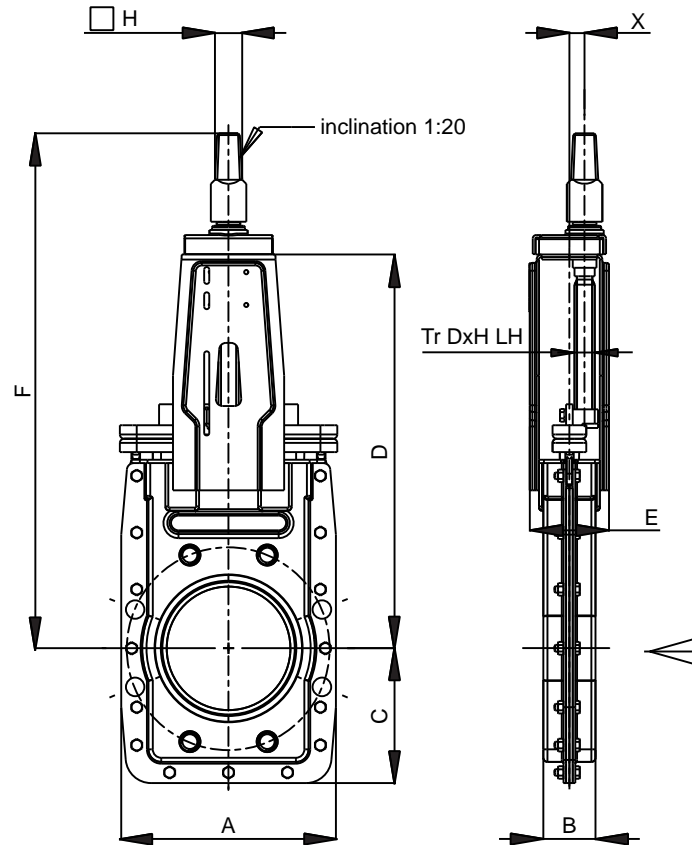
## COMPACT-valve sprocket drive



DN	PS [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	weight ~[kg]
50	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	8	210	54	135	368	94	447	520	314	24 x 5	18
*)125	8	230	52	145	413	94	492	595	314	24 x 5	21
*)150	8	255	62	160	468	94	547	665	314	24 x 5	25
200	8	328	60	190	557	143	636	821	394	30 x 6	50
250	8	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	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	8	210	54	135	368	94	512	32	18	24 x 5	12
*)125	8	230	52	145	413	94	557	32	18	24 x 5	15
*)150	8	255	62	160	468	94	612	32	18	24 x 5	18
200	8	328	60	190	557	143	707	32	22	30 x 6	38
250	8	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	4	630	110	315	1200	208	1336	32	28.5	36 x 6	261
500	4	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.

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