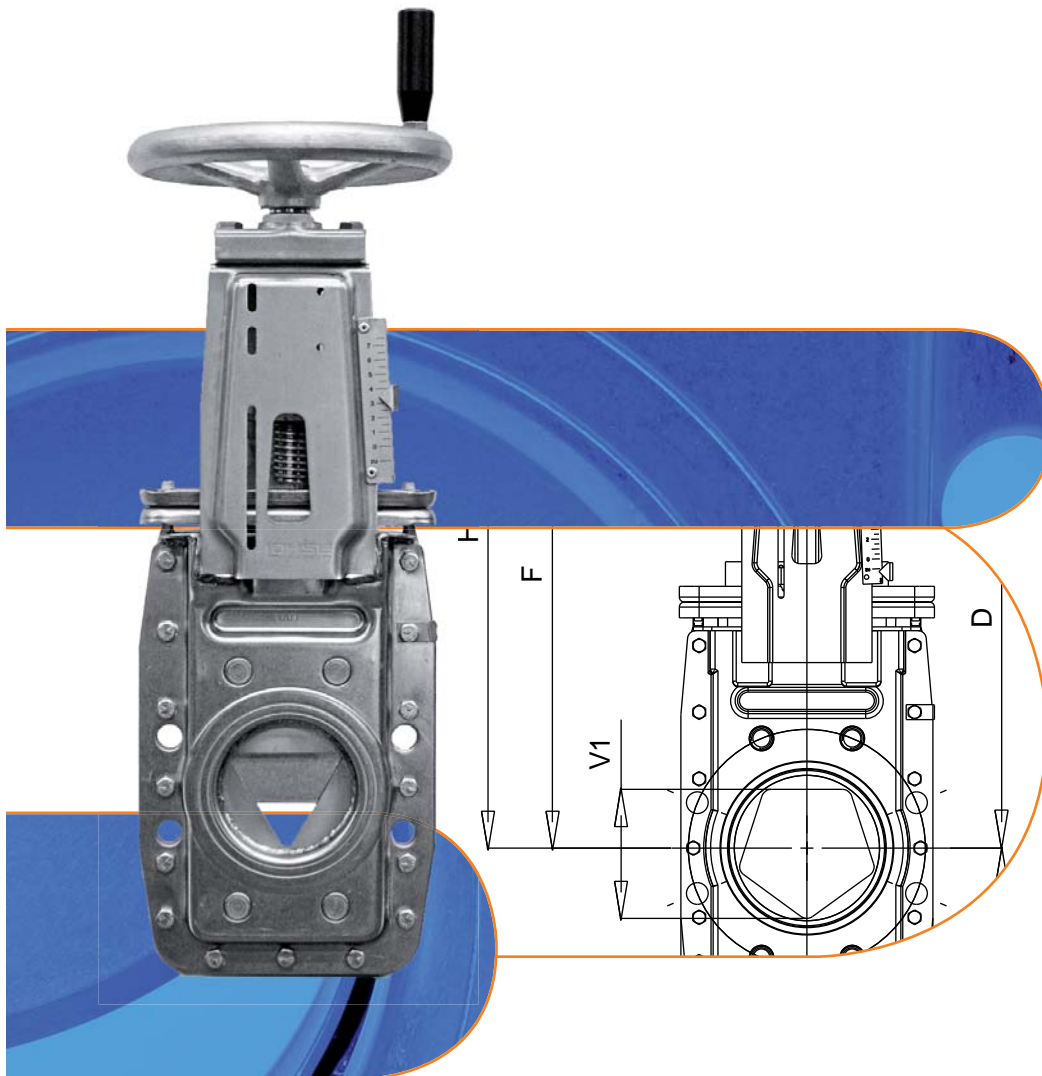


Valves of stainless steel · COMPACT-Program

# Regulating Valves

## CBS 50 – 400 mm



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 Internet: [www.lohse-gmbh.de](http://www.lohse-gmbh.de)

## Applications



### Paper industry and chemical industry

LOHSE COMPACT-gate valves have proved their value and reliability in all branches of ins paper and chemical industries. CNA-valves are regulating-type 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 with seals, suitable for food, are widely used as regulating valves for viscous and glutinous media as for instance in salt works, sugar mills, wine making industry, breweries etc.



### 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

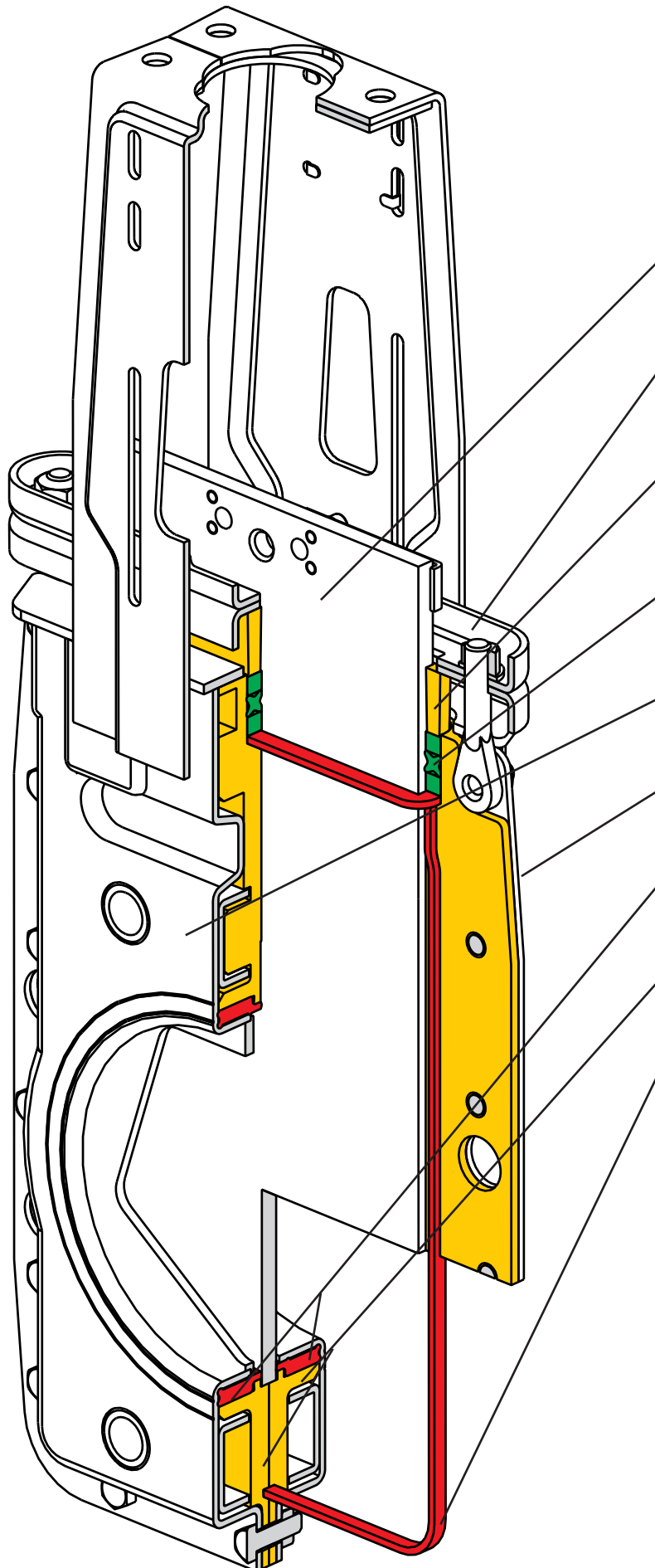
- through its special design in combination with triangle and pentagon orifice is a constant regulation possible
- built in strength to resist water pressure vibration

### 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



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 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 (RCH 500)
- bracket 1.4301
- screws / nuts A2
- max. operating pressure
  - DN 50 – 250 8 bar
  - DN 300 – 400 6 bar
  - DN 450 – 800 4 bar
  - DN 900 – 1000 1,5 bar
- max. operating temperature with sealing of
  - NBR 105° C
  - EPDM 120° 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).

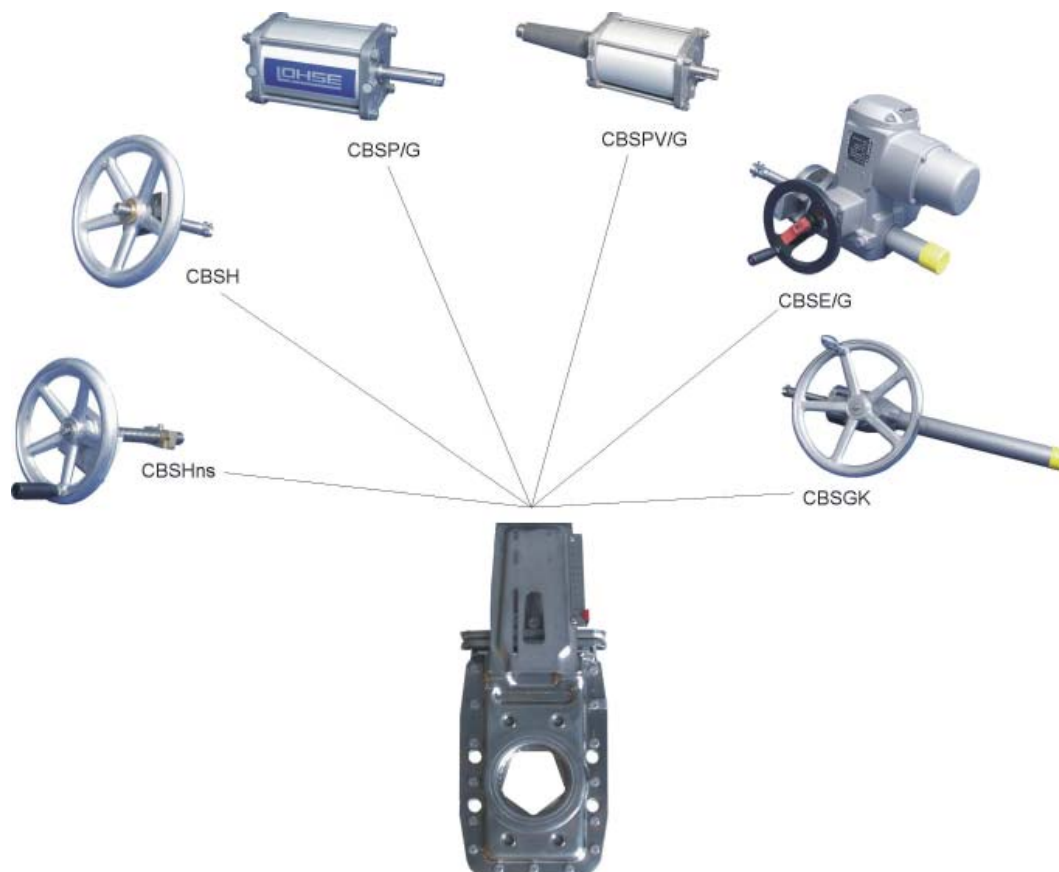
This facility is called the **LOHSE modular system** which offers the following advantages:

- 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

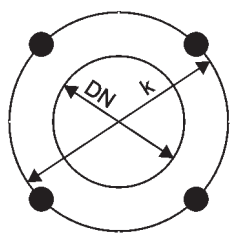
### Protection guards (G)

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

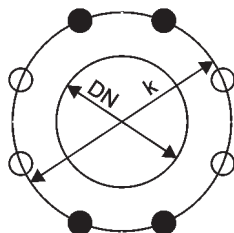
Protection guard of stainless steel.



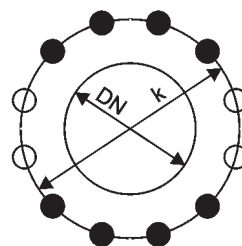
Flange dimensions for LOHSE COMPACT-valves according to DIN EN 1092-1, PN 10



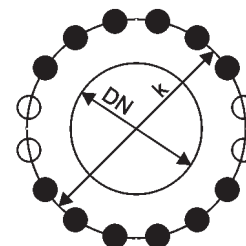
DN 50-65



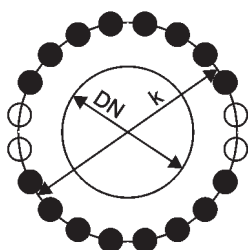
DN 80-200



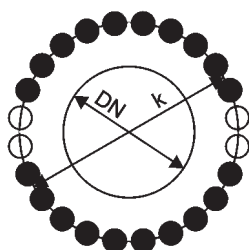
DN 250-300



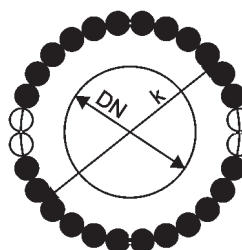
DN 350-400



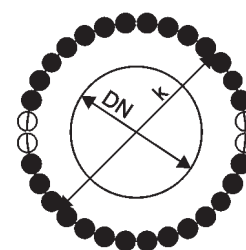
DN 450-600



DN 700-800

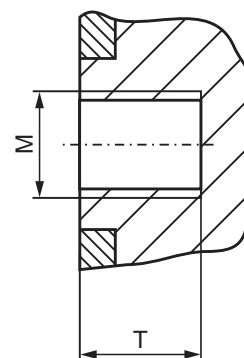


DN 900-1000



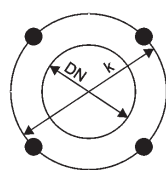
DN 1100-1200

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

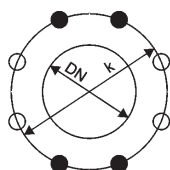


Z = total number of holes  
 Z1 = number of joint-holes  
 Z2 = number of through-going bores

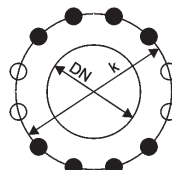
Flange dimensions for LOHSE COMPACT-valves  
according to ANSI B 16.5 Class 150 ≥ DN 700: ANSI B 16.47 Class 150



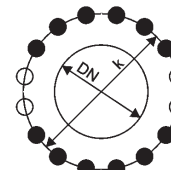
DN 50-80



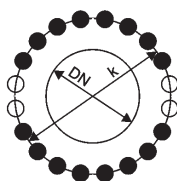
DN 100-200



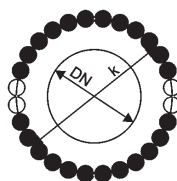
DN 250-350



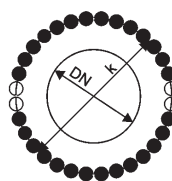
DN 400-450



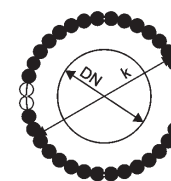
DN 500-600



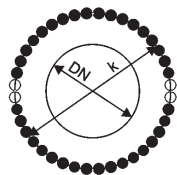
DN 700-800



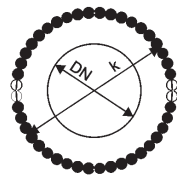
DN 900



DN 1000

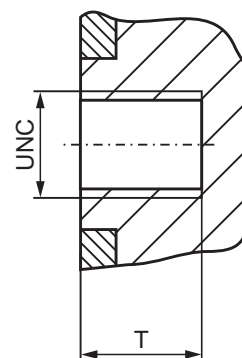


DN 1100



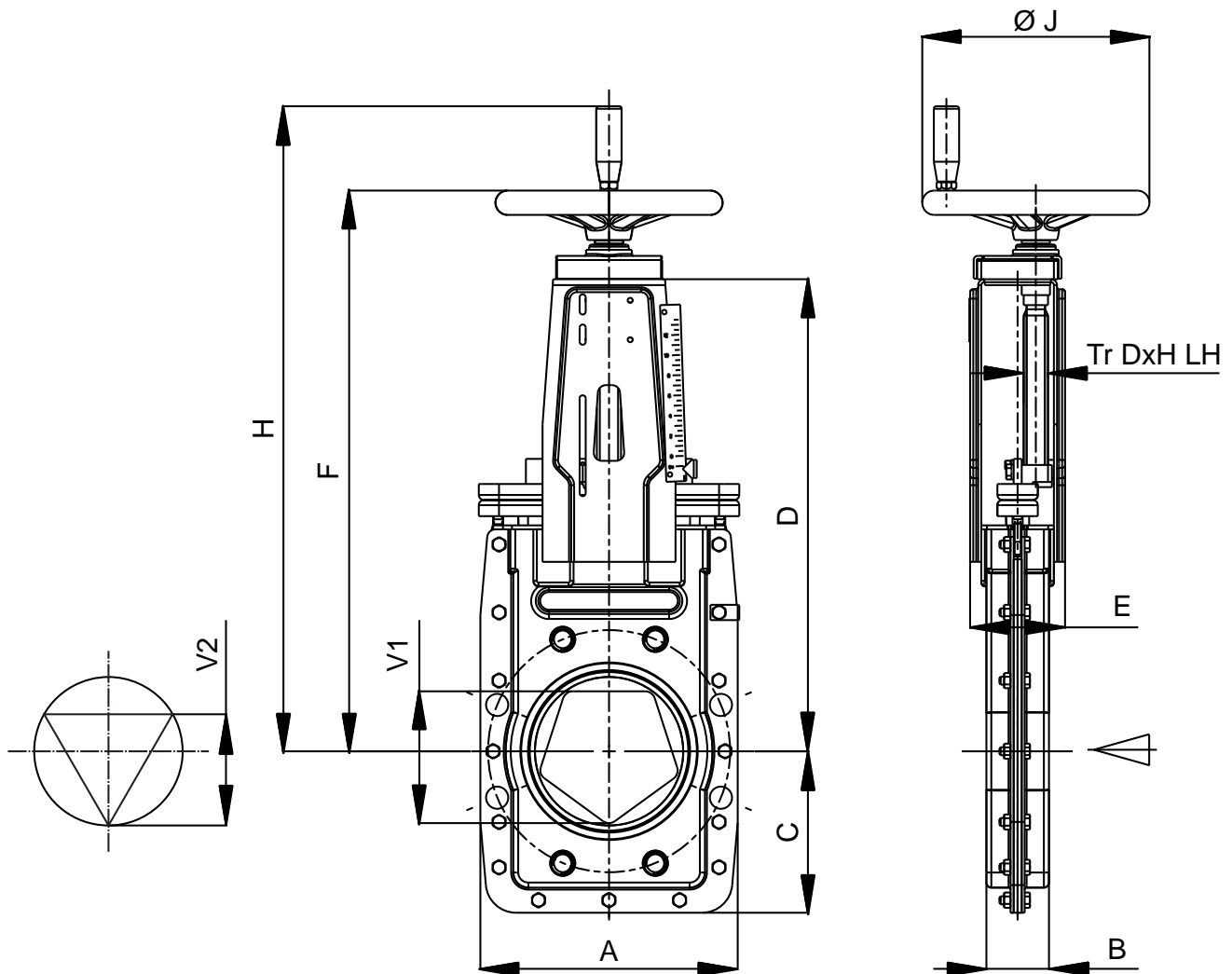
DN 1200

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

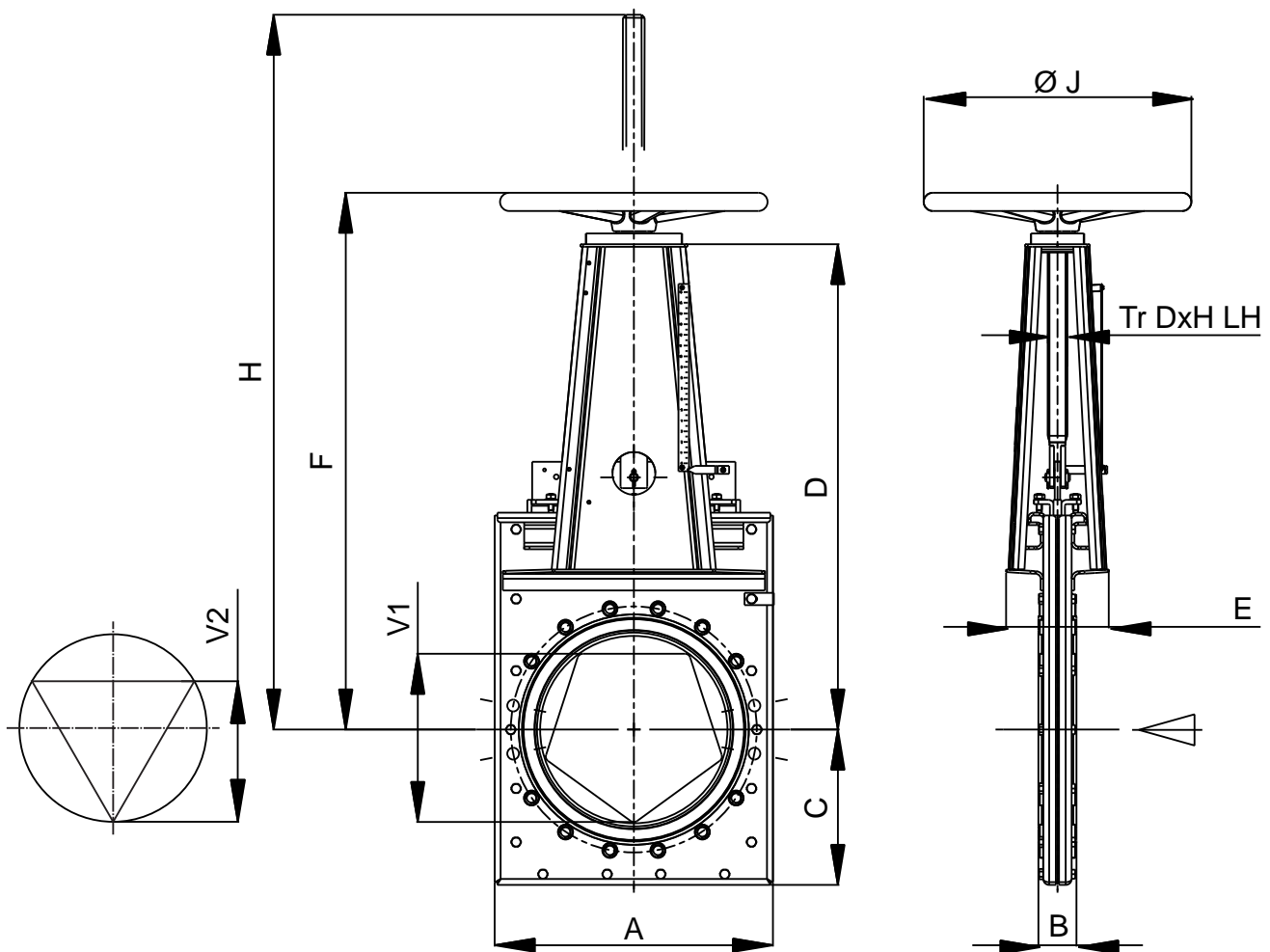
COMPACT-regulating valve with orifice  
handwheel drive with non-rising stem



DN	BD [bar]	A	B	C	D	E	F	H	Ø J	Tr D x H LH	V1	V2	weight ~[kg]
50	8	185	42	100	313	78	394	478	180	20 x 4	45	38	9
65	8	185	42	100	313	78	394	478	180	20 x 4	59	49	9
80	8	175	52	125	313	78	395	478	180	20 x 4	72	49	9
*)100	8	210	52	135	368	94	456	539	225	24 x 5	88	73	13
*)125	8	230	52	145	413	94	500	584	225	24 x 5	110	92	16
*)150	8	255	62	160	468	94	556	639	225	24 x 5	133	110	19
200	8	328	60	189	557	143	656	739	280	30 x 6	181	150	38
250	8	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

\*) Opening DN - 3mm, full opening on request.  
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10.  
Further sizes on request.

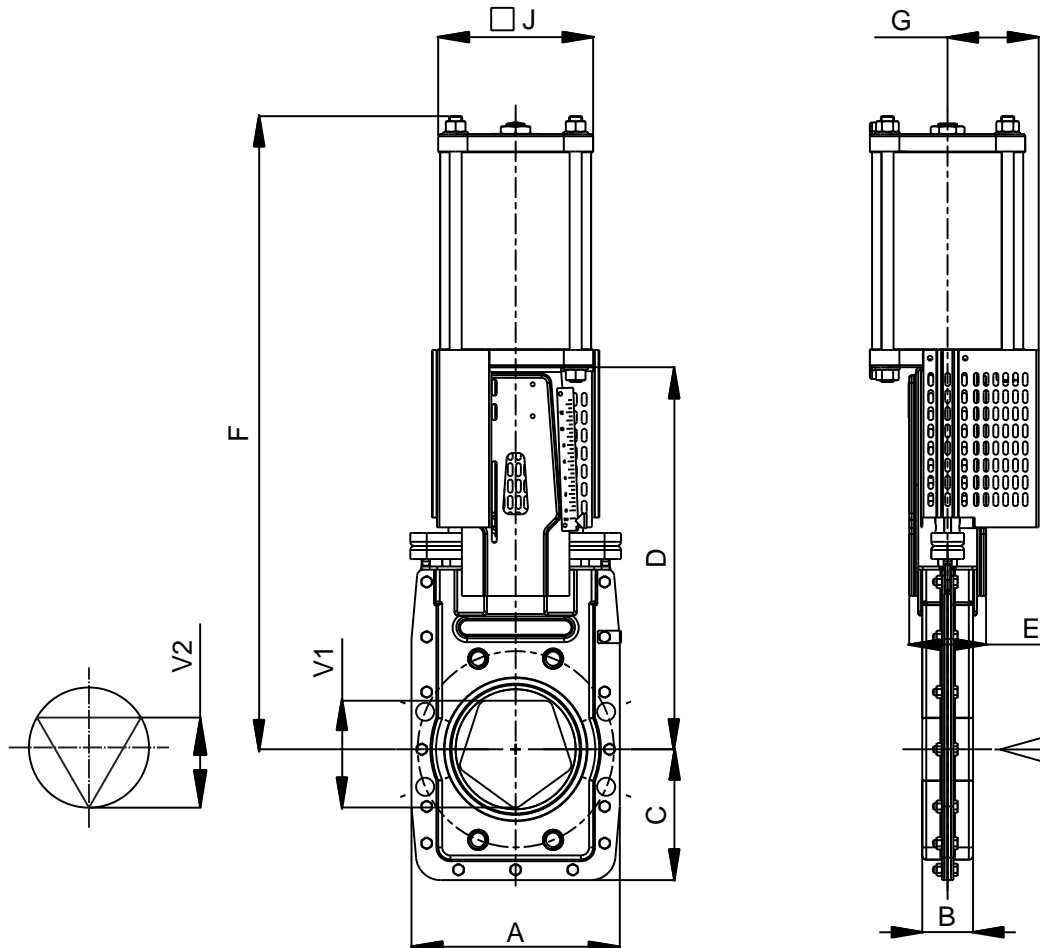
COMPACT-regulating valve with orifice  
handwheel drive with rising stem



DN	BD [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

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

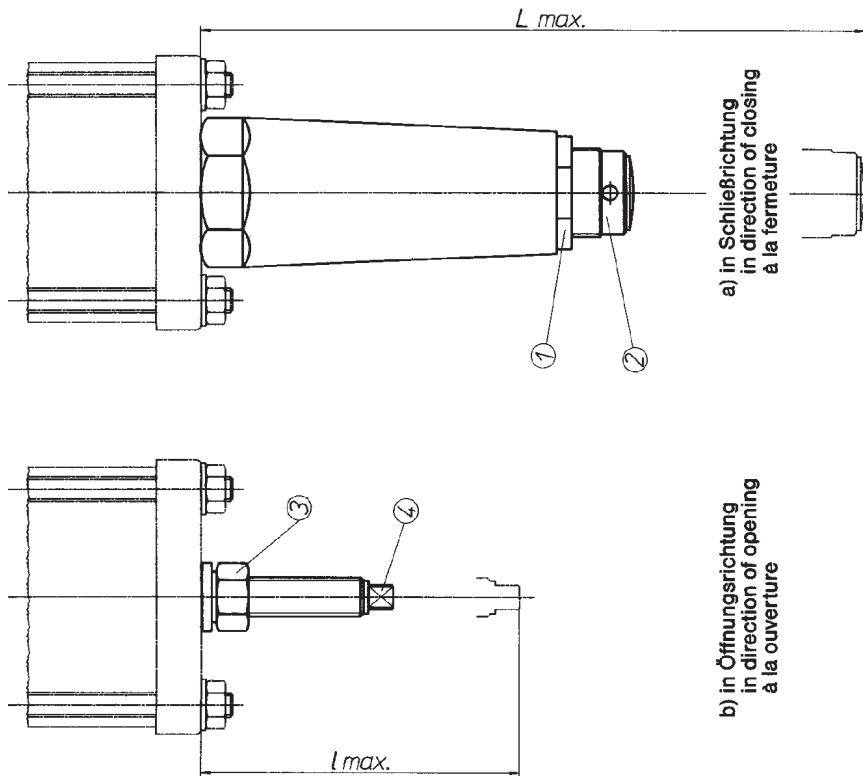
COMPACT-regulating valve with orifice  
pneumatic-cylinder and protection guard



DN	BD [bar]	A	B	C	D	E	F	G	□ J	cyl.Ø	air connection	control pressure [bar]	V1	V2	weight ~[kg]
50	8	185	42	100	313	78	495	112	138	125	G 1/8"	6	45	38	13
65	8	185	42	100	313	78	510	112	138	125	G 1/8"	6	59	49	13
80	8	175	52	123	313	78	525	112	138	125	G 1/8"	6	72	60	13
*)100	8	210	52	135	368	94	611	112	158	145	G 1/4"	6	88	73	18
*)125	8	255	52	145	413	94	685	112	158	145	G 1/4"	6	110	92	21
*)150	8	255	62	160	468	94	761	112	190	175	G 1/4"	6	133	110	29
200	8	328	60	190	557	143	910	126	215	200	G 1/2"	6	181	150	51
250	8	400	68	230	668	166	1071	126	215	200	G 1/2"	6	226	188	65
300	6	450	72	260	764	170	1218	126	246	230	G 1/2"	6	271	225	88
350	6	510	72	290	907	190	1442	142	318	300	G 1/2"	6	317	263	135
400	6	575	90	326	1059	190	1680	146	318	300	G 1/2"	6	362	300	221

\*) Opening DN - 3mm, full opening on request.  
Dimensions in mm, flange dimensions to DIN EN 1092-1, PN 10.  
Further sizes on request.

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



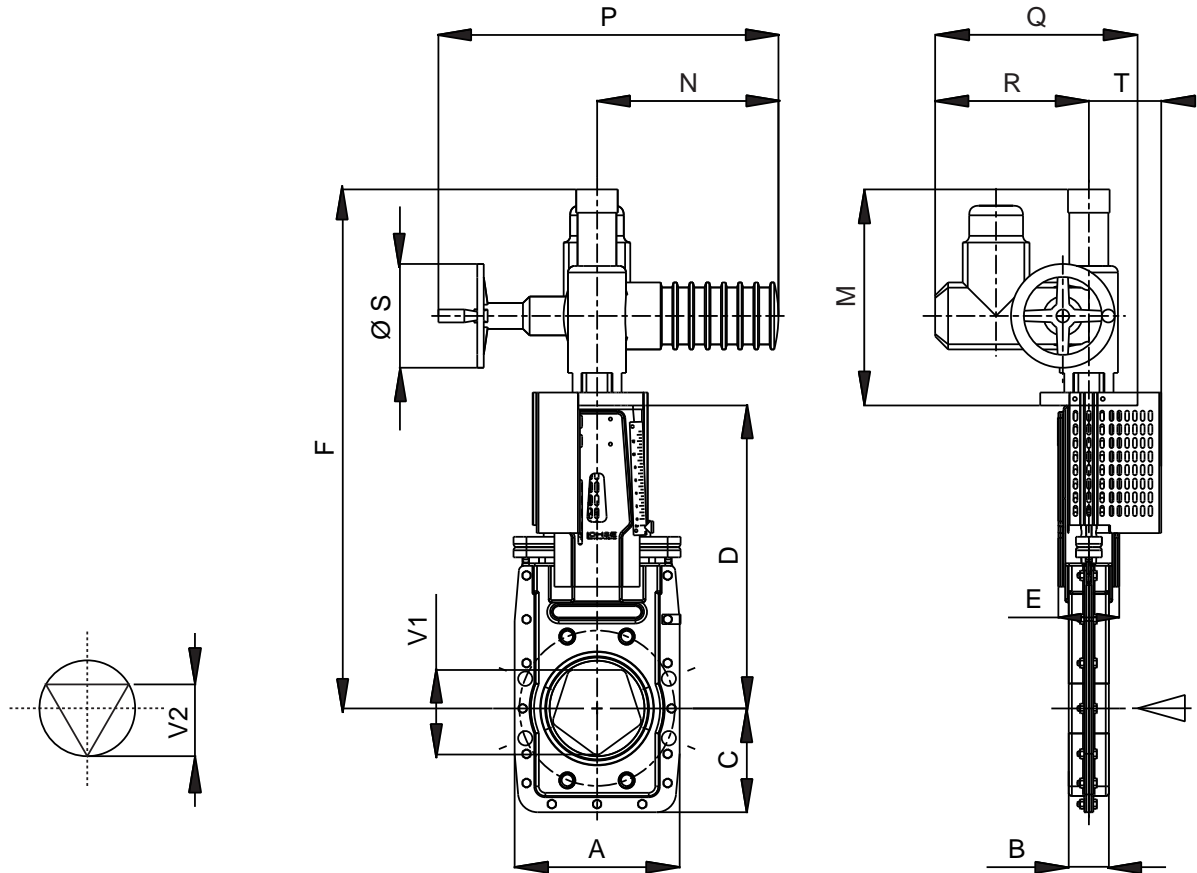
Variable stroke limiter

- In direction of closing: loosen the nut (1), adjust the adjustable pipe (2), 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	225	439
200	200	225	554

Further sizes on request.

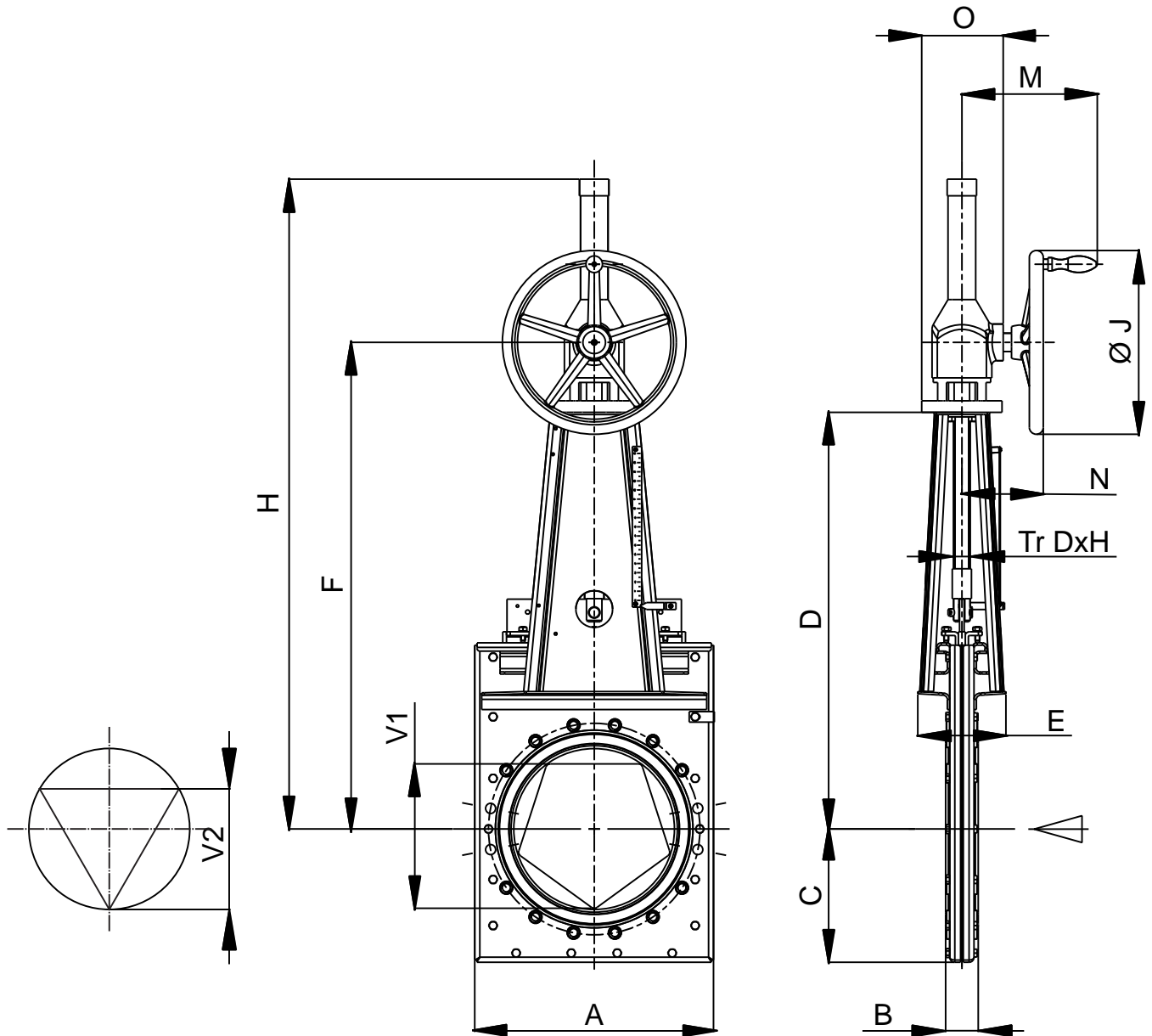
COMPACT-regulating valve with orifice  
electric-drive and protection guard



DN	BD [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	8	185	42	100	313	78	646	333	280	515	349	237	160	112	45	38	20 x 4	66,8	55,9	31
65	8	185	42	100	313	78	646	333	280	515	349	237	160	112	59	49	20 x 4	84,5	70,9	31
80	8	175	52	125	313	78	646	333	280	515	349	237	160	112	72	60	20 x 4	103,6	85,9	31
*)100	8	210	52	135	368	94	701	333	280	515	349	237	160	112	88	73	24 x 5	102,5	85,0	35
*)125	8	230	52	145	413	94	746	333	280	515	349	237	160	112	110	92	24 x 5	126,5	105,8	37
*)150	8	255	62	160	468	94	801	333	280	515	349	237	160	112	133	110	24 x 5	151,6	127,6	41
200	8	328	60	190	557	143	902	345	355	536	373	247	200	126	181	150	30 x 6	167,3	113,1	65
250	8	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	4	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.  
Further sizes on request.

COMPACT-regulating valve with orifice  
bevel gear box and handwheel



DN	BD [bar]	A	B	C	D	E	F	H	ØJ	N	M	ØO	V1	V2	Tr D x H LH	weight ~[kg]
350	6	520	72	290	907	190	1059	1414	400	177	295	178	317	263	36 x 6	115
400	6	578	90	326	1059	190	1211	1611	400	177	295	178	362	300	36 x 6	155

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

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