



## Fields of Application

- In industrial plants, power stations, process and marine engineering
- For water, steam, gas, oil and other non-aggressive fluids
- Other fluids on request

## Operating Data

- Maximum permissible pressure 40 bar
- Maximum permissible temperature 400 °C
- Selection as per pressure-temperature ratings (see overleaf)

## Materials

- DN 50-200 P 250 GH <sup>1)</sup> 1.0460
- DN 250-800 P 265 GH <sup>2)</sup> 1.0425

## Design

- Body forged or of welded steel construction
- Bolted bonnet
- Non-rotating stem with external screw
- Wedge-type
- Yoke head designed for mounting electrical actuators and gearing (DIN ISO 5210)

The valves meet the safety requirements of the Pressure Equipment Directive 97/23/EC (PED) of Annex I for fluids of the groups 1 and 2.

<sup>1)</sup> previously: C 22.8

<sup>2)</sup> previously: H II

The valves meet the safety requirements of the Pressure Equipment Directive 97/23/EC (PED) of annex I for fluids of the groups 1 and 2.

## Standard Variants

- Stem protecting tube
- Stem protecting tube with position indicator
- Stem protecting tube with position switch
- Bypass with shut-off valve
- Drain branch
- Electrical actuators
- Installation kit for actuators and gearing
- Stellite sealing surfaces
- TA-Luft (German Clean Air Act) compliant model (spring-loaded or non-spring-loaded packing)
- Other flange or butt weld end designs
- Inspections to technical codes such as TRD/TRB/AD2000 – German Steam Boiler / Pressure Vessel Regulations – or to customer specification
- From DN 900 on request

## Additional Information

- STAAL® 40 swing check valves with bolted cover see type series booklet: 7365.1
- Operating instructions: 7364.8

## Purchase Order Data

1 Type	7 Material
2 PN	8 Fluid
3 DN	9 Flow rate
4 Operating pressure	10 Pipe connection
5 Differential pressure	11 Variants
6 Operating temperature	12 Type series booklet number

When ordering spare parts, please indicate original works number and year of manufacture.

The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, group II, category 2 (zones 1+21) and category 3 (zones 2+22) according to ATEX 94/9/EC.



### Pressure-Temperature Ratings

Nominal pressure PN	Material	Permissible operating pressures in bar at temperatures in °C 1)							
		to 50	100	150	200	250	300	350	400
10	P 250 GH 2) / P 265 GH 3)	10	9,3	8,7	7,8	7,1	6,4	6,0	5,8
16		16	14,9	13,9	12,4	11,4	10,3	9,6	9,2
25		25	23,3	21,7	19,4	17,8	16,1	15,0	14,4
40		40	37,3	34,7	30,2	28,4	25,8	24,0	23,1

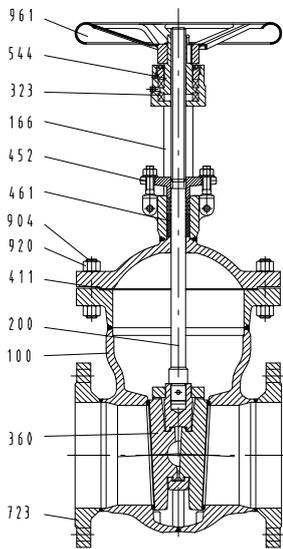
Operating pressures to DIN 2401 are also permitted

1) In acc. with EN 1092/1 temperature range down to -10 °C

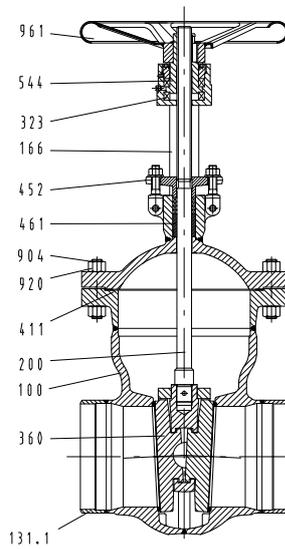
2) previously: C 22.8

3) previously: H II

**PN 10-40:**  
DN 50-200

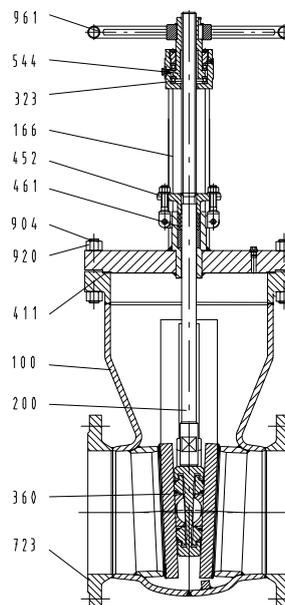


AKD

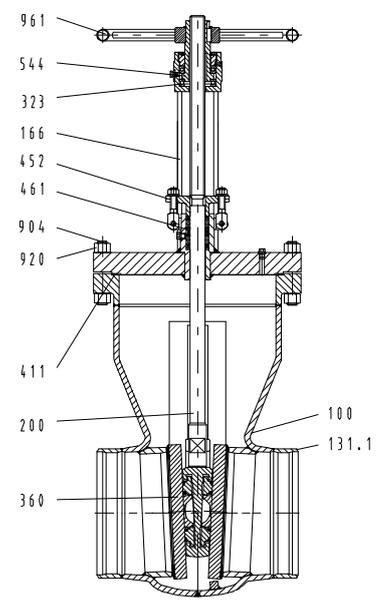


AKDS

**PN 10-25:**  
DN 250-400

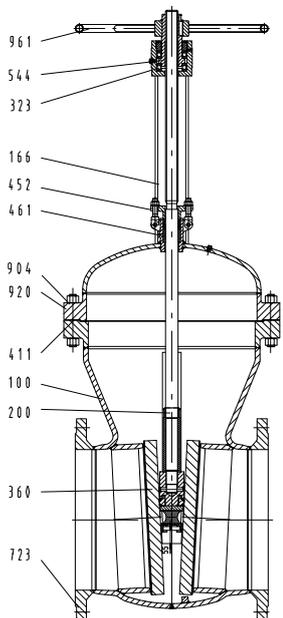


AKD

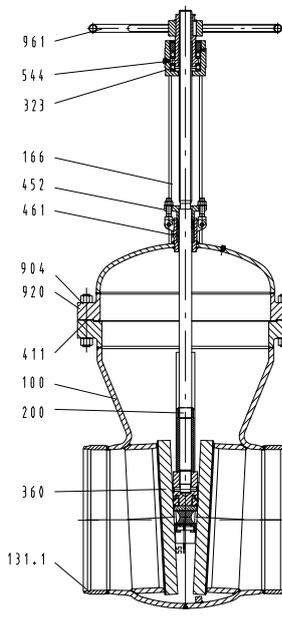


AKDS

**PN 10-25:**  
DN 450-800

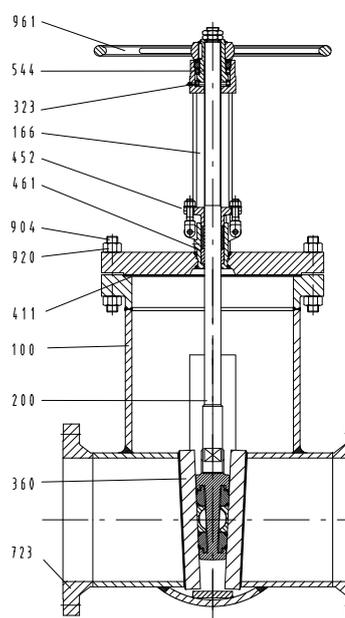


AKD

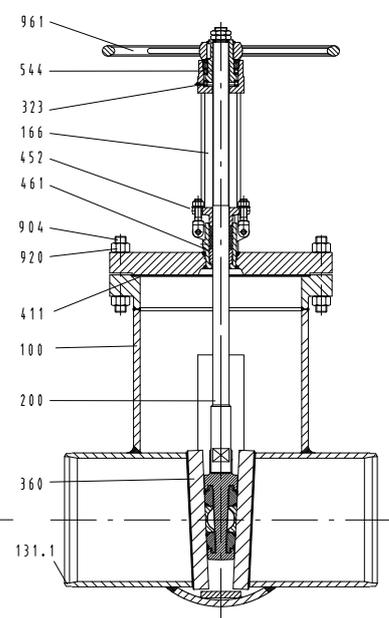


AKDS

**PN 40:**  
DN 250-800



AKD



AKDS

## Materials

Part No.	Description	Materials	Notes
100	Body	P 250 GH 1.0460	
		P 265 GH 1.0425	≥ DN 250
131.1	Connecting branch	P 235 GH 1.0305	
		P 265 GH 1.4250	≥ DN 500
166	Yoke	P 250 GH 1.0460	
		P 265 GH 1.0425	≥ DN 250
200 *)	Stem	X 20 Cr13	
323 *)	Thrust bearing	St	
360 *)	Wedges	P 250 GH 1.0460	
		P 265 GH 1.0425	≥ DN 250
367 *)	Wedge holder	P 250 GH 1.0460	
		P 265 GH 1.0425	≥ DN 250
Sealing surfaces	Body	X 8 CrTi 18	
	Wedges	X 20 CrMo 17 1	17 % chrome steel
411 *)	Joint ring	Pure graphite	
452	Gland cover	P 250 GH / P 265 GH	1.0460 / 1.0345
461 *)	Gland packing	Pure graphite	
544 *)	Threaded bush	9SMnPb 28 K	1.0718
723	Flange	P 250 GH	1.0460
904	Screw bolt	24 CrMo 5	1.7258
920	Hex. nut	C 35 E	1.0501 / 1.1181
961	Handwheel	Steel	

\*) Recommended spare parts

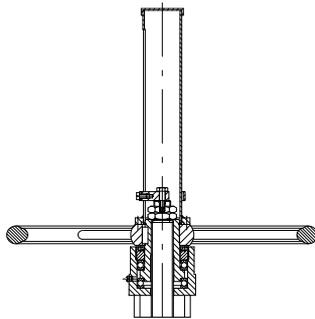
## Installation

The gate valves are designed for a max. differential pressure equal to the permissible operating pressure.

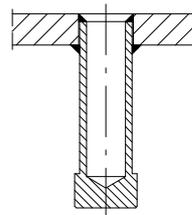
If a bypass line is required or requested for other reasons, a NORI 40 globe valve as per type leaflet 7621.1 should be used as bypass valve, depending on the nominal diameter of the gate valve:

Gate valve	Bypass
DN 150-200	DN 15
DN 250-350	DN 25
DN 400-600	DN 40
DN 700-800	DN 50

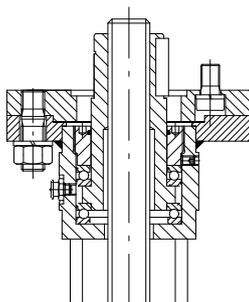
## Variants



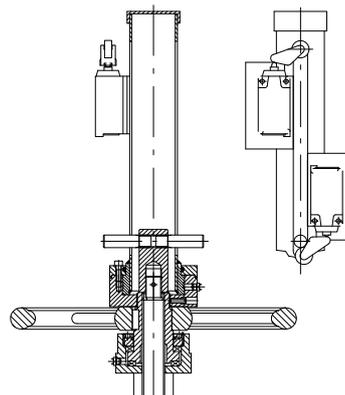
Stem protecting tube with position indicator



Drain branch



Actuator installation kit



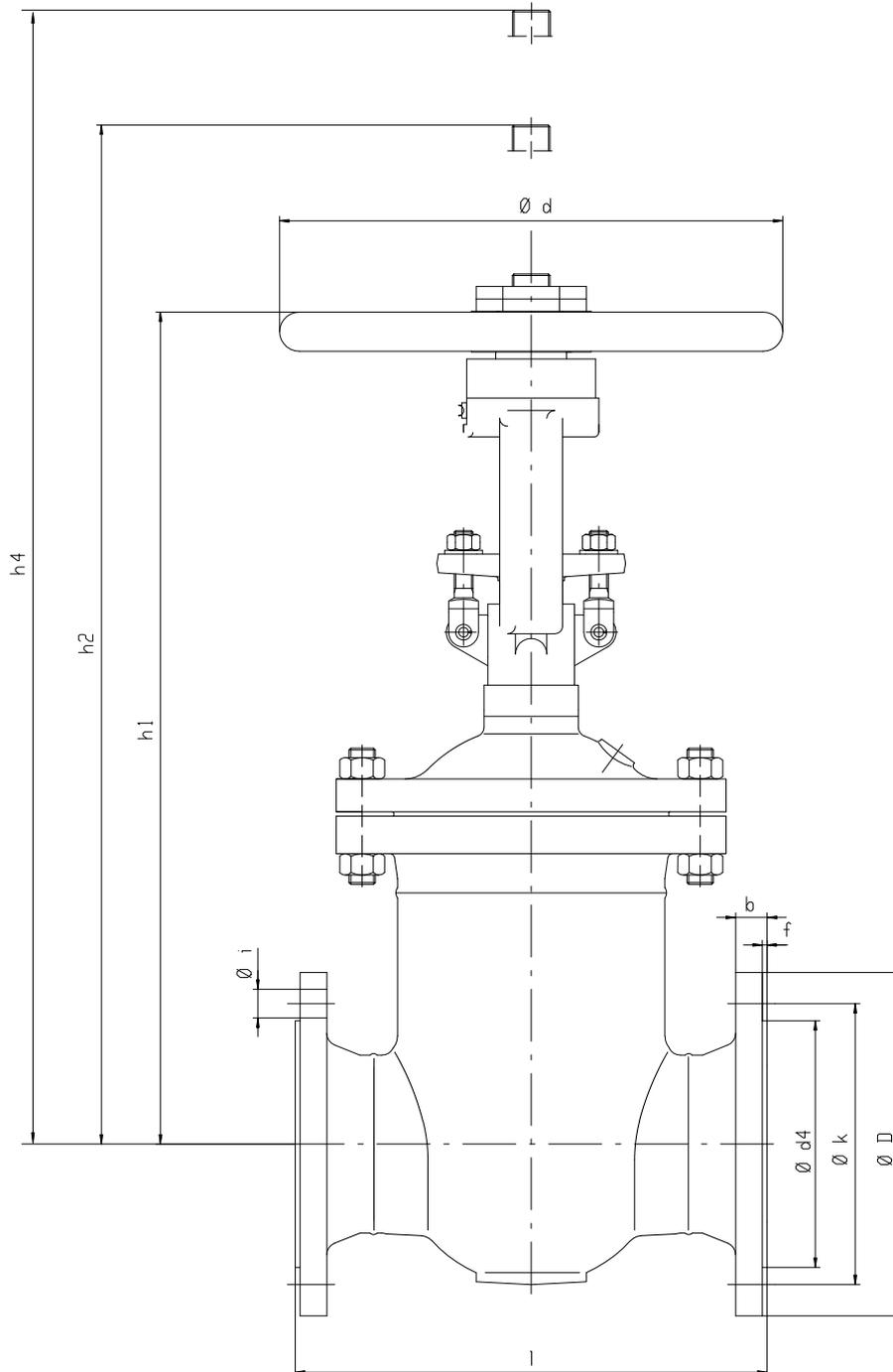
Stem protecting tube with position switch

### Connecting dimensions, type AKD

Face-to-face length: - PN 10-25, EN 558-15/1  
 (previously: DIN 3202/1-F5)  
 - PN 40, EN 558-1/26  
 (previously: DIN 3202/1-F7)  
 - ISO 5752/T1

Flange: - Mating dimensions to DIN 2501,  
 ISO 2084, BS 4504  
 - Raised face type C DIN 2526

Other flange designs:  
 e.g. grooved both ends type N, tongue type F DIN 2512,  
 recessed (female face) type R 13, spigot (male face) type V 13  
 DIN 2513,  
 raised face type D or E DIN 2526  
 Flanges to EN 1092/1  
 Other flange designs on request.



**Dimensions**

Dimensions in mm

Nominal pressure PN	Nominal diameter DN	Face-to-face length l	Flange ø D	Bolt circle ø k	Number of bolt holes z	Bolt hole ø i	Raised face d4 x f	Flange thickness b	Centre-to-top height			Hand-wheel ø d	Weight approx. kg	
									h <sub>1</sub>	h <sub>2</sub> <sup>2)</sup>	h <sub>4</sub> (ca.) <sup>3)</sup>			
10	50	250	165	125	4	18	102 x 3	18	367	435	507	175	18	
	65/50	270	185	145	8	18	122 x 3	18	367	435	507	175	20	
	80	280	200	160	8	18	138 x 3	20	471	570	685	280	44	
	100	300	220	180	8	18	158 x 3	20	560	670	810	315	66	
	125/100	325	250	210	8	18	188 x 3	22	560	670	810	315	77	
	150	350	285	240	8	22	212 x 3	22	710	870	1060	400	107	
	200	400	340	295	8	22	268 x 3	24	845	1064	1280	400	149	
	250	450	395	350	12	22	320 x 3	26	1060	1320	1565	500	198	
	300	500	445	400	12	22	370 x 4	26	1246	1610	2010	500	375	
	350	550	505	460	16	22	430 x 4	26	1340	1720	2010	560	360	
	400	600	565	515	16	26	482 x 4	26	1514	1970	2490	640	680	
	500	700	670	620	20	26	585 x 4	28	1800	2305	2710	800	915	
	600	800	780	725	20	30	685 x 5	28	2130	2780	3280	800	1350	
	700	900	895	840	24	30	800 x 5	30	2385	3130	3700	800	1800	
	800	1000	1015	950	24	33	905 x 5	32	2685	3525	4020	800	2325	
16	50	250	165	125	4	18	102 x 3	18	367	435	507	175	18	
	65/50	270	185	145	8	18	122 x 3	18	367	435	507	175	20	
	80	280	200	160	8	18	138 x 3	20	471	570	685	280	44	
	100	300	220	180	8	18	158 x 3	20	560	670	810	315	66	
	125/100	325	250	210	8	18	188 x 3	22	560	670	810	320	77	
	150	350	285	240	8	22	212 x 3	22	710	870	1060	400	107	
	200	400	340	295	12	22	268 x 3	24	845	1064	1280	400	149	
	250	450	405	355	12	26	320 x 3	26	1060	1320	1565	500	220	
	300	500	460	410	12	26	378 x 4	28	1246	1610	2010	500	375	
	350	550	520	470	16	26	438 x 4	30	1340	1720	2010	560	360	
	400	600	580	525	16	30	490 x 4	32	1514	1970	2490	640	700	
	500	700	715	650	20	33	610 x 4	34	1800	2305	2710	800	915	
	600	800	840	770	20	36	725 x 5	36	2130	2780	3280	800	1405	
	700	900	910	840	24	36	795 x 5	36	2385	3130	3700	800	1050	
	800	1000	1025	950	24	39	900 x 5	39	2685	3525	4020	800	2430	
25	50	250	165	125	4	18	102 x 3	20	367	435	507	175	18	
	65/50	270	185	145	8	18	122 x 3	22	367	435	507	175	20	
	80	280	200	160	8	18	138 x 3	24	471	570	685	280	44	
	100	300	235	190	8	22	162 x 3	24	560	670	810	315	66	
	125/100	325	270	220	8	26	188 x 3	26	560	670	810	315	77	
	150	350	300	250	8	26	218 x 3	28	710	870	1060	400	107	
	200	400	360	310	12	26	278 x 3	30	845	1064	1280	400	149	
	250	450	425	370	12	30	335 x 3	32	1060	1320	1565	500	233	
	300	500	485	430	16	30	395 x 4	34	1246	1610	2010	500	395	
	350	550	555	490	16	33	450 x 4	38	1370	1740	2040	640	435	
	400	600	620	550	16	36	505 x 4	40	1514	1970	2490	640	730	
	500	700	730	660	20	36	615 x 4	44	1800	2355	2710	800	990	
	600	800	845	770	20	39	720 x 5	46	2130	2780	3280	800	1460	
	700	900	960	875	24	42	820 x 5	46	2385	3180	3700	800	1795	
	800	1000	1085	990	24	48	930 x 5	50	2765	3590	4100	1000	2700	
40	50	250	165	125	4	18	102 x 3	20	367	435	507	175	18	
	65/50	290	185	145	8	18	122 x 3	22	3667	435	507	175	21	
	80	310	200	160	8	18	138 x 3	24	471	570	685	280	45	
	100	350	235	190	8	22	162 x 3	24	560	670	810	315	68	
	125/100	400	270	220	8	26	188 x 3	26	560	670	810	315	79	
	150	450	300	250	8	26	218 x 3	28	710	870	1060	400	110	
	200	550	375	320	12	30	285 x 3	34	845	1064	1280	400	155	
	250	650	450	385	12	33	345 x 3	38	1100	1375	1765	560	370	
	300	750	515	450	16	33	410 x 4	42	1245	1575	2020	640	525	
	350	850	580	510	16	36	465 x 4	46	1360	1720	2220	640	710	
	400	950	660	585	16	39	535 x 4	50	1510	1925	2475	720	950	
	500	1150	755	670	20	42	615 x 4	52	1830	2345	2020	800	1605	
	600 <sup>1)</sup>	1350		890	795	20	48	735 x 2	72	2170	2790	3590	1000	2710
	700	1550	No applicable flange standard							2465	3200	3590	1000	-
	800	1750								2800	3740	4150	1000	-

<sup>1)</sup> to EN 1092-1

<sup>2)</sup> h<sub>2</sub> = open

<sup>3)</sup> h<sub>4</sub> = vertical clearance for removal

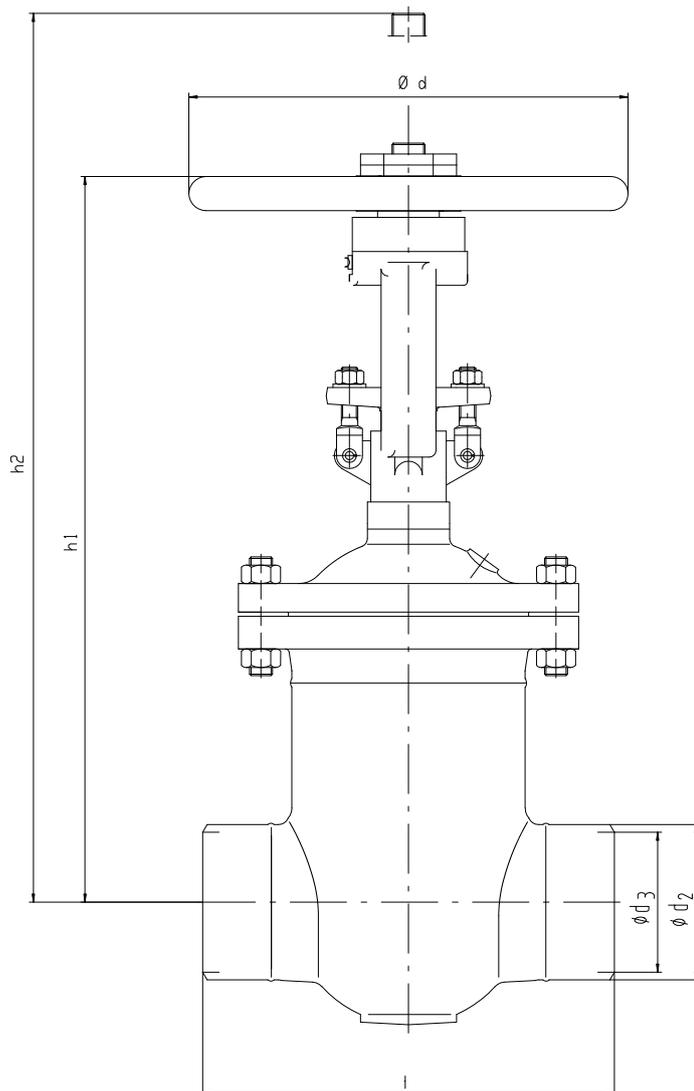
### Connecting dimensions, type AKDS

Face-to-face length: - PN 10-25 to EN 12982 Series 15 (previously: DIN 3202/T2 Series S8)  
 - PN 40 to EN 12982 Series 26 (previously: DIN 3202/T2 Series S9)

Welding groove types to DIN 2559-21

Different butt weld end designs and/or welding groove types are possible. This does not apply to valves taken from stock.

Butt weld ends see on table



**Dimensions**

Dimensions in mm

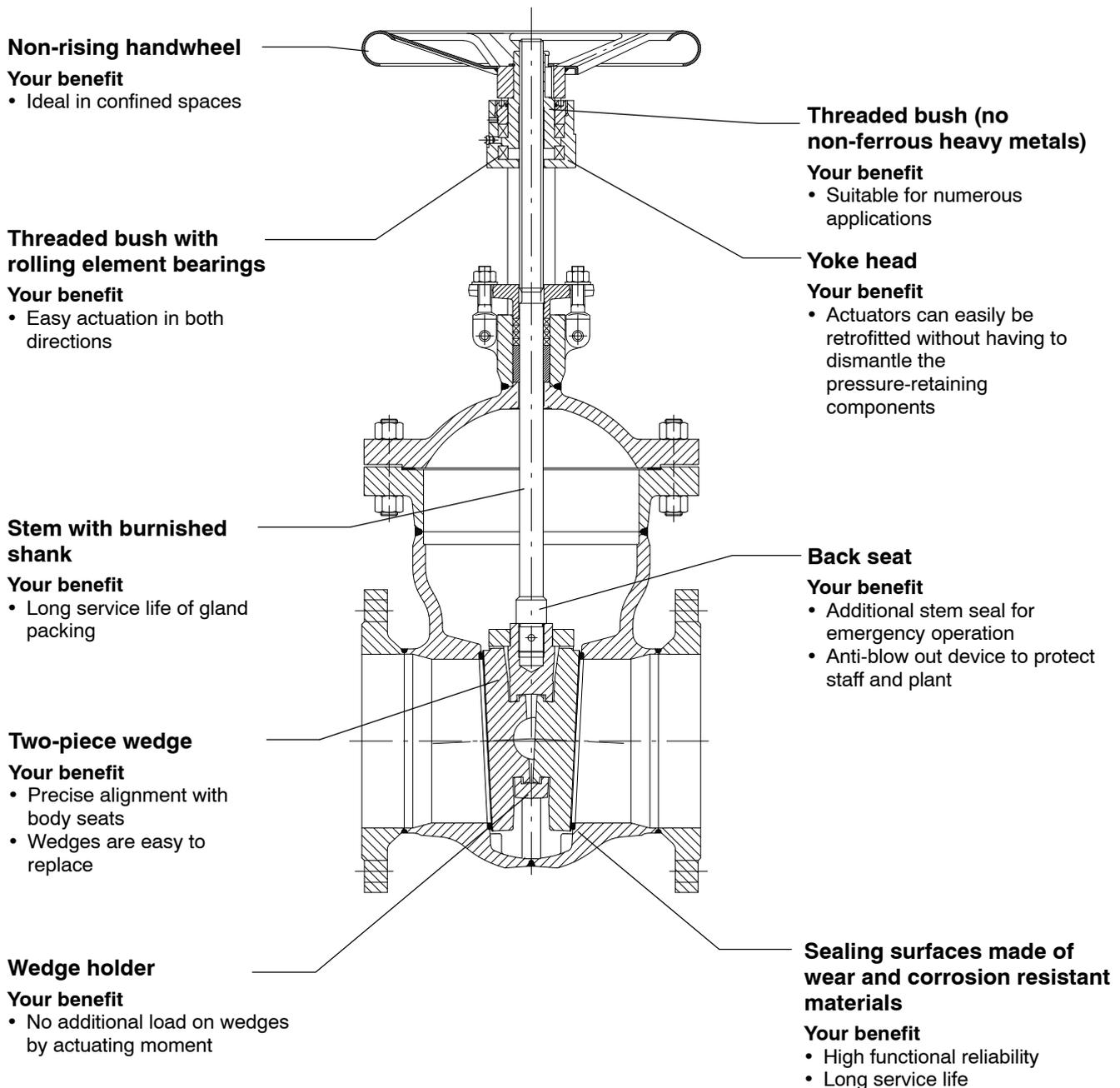
Nominal pressure PN	Nominal diameter DN	Face-to-face length l	Machined butt weld ends Groove type to DIN 2559-21		Associated pipe dimensions	Centre-to-top height			Handwheel ø d	Weight approx. kg
			ø d <sub>2</sub>	ø d <sub>3</sub> <sup>1)</sup>		h <sub>1</sub>	h <sub>2</sub> <sup>2)</sup>	h <sub>4</sub> (ca.) <sup>3)</sup>		
10 / 16	50	250	60,3	54,5	60,3 x 2,9	367	435	507	175	17
	65/50	270	76,1	70,0	76,1 x 2,9	367	435	507	175	19
	80	280	88,9	82,0	88,9 x 3,2	471	570	685	280	35
	100	300	114,3	106,5	114,3 x 3,6	560	670	810	315	50
	125/100	325	139,7	131,0	139,7 x 4,0	560	670	810	315	51
	150	350	168,3	158,5	168,3 x 4,5	710	870	1060	400	90
	200	400	219,1	206,0	219,1 x 6,3	845	1064	1280	400	148
	250	450	273,0	259,5	273,0 x 6,3	1060	1320	1565	500	192
	300	500	323,9	308,0	323,9 x 7,1	1246	1610	2010	500	345
	350	550	355,6	338,0	355,6 x 8,0	1340	1720	2010	560	320
	400	600	406,4	388,0	406,4 x 8,0	1514	1970	2490	640	620
	450/400	650	447,0	438,0	457,0 x 8,0	1515	1970	2490	640	660
	500	700	508,0	488,5	508,0 x 8,0	1800	2305	2710	800	880
	600	800	610,0	588,5	610,0 x 8,8	2130	2780	3280	800	1295
	700	900	711,0	688,5	711,0 x 8,8	2385	3130	3700	800	1760
	800	1000	813,0	787,0	813,0 x 10,0	2685	3525	4020	800	2310
25	50	250	60,3	54,5	60,3 x 2,9	367	435	507	175	17
	65/50	270	76,1	70,0	76,1 x 2,9	367	435	507	175	19
	80	280	88,9	82,0	88,9 x 3,2	471	570	685	280	35
	100	300	114,3	106,5	114,3 x 3,6	560	670	810	315	50
	125/100	325	139,7	131,0	139,7 x 4,0	560	670	810	315	51
	150	350	168,3	158,5	168,3 x 4,5	710	870	1060	400	90
	200	400	219,1	506,0	219,1 x 6,3	845	1064	1280	400	148
	250	450	273,0	259,5	273,0 x 6,3	1060	1320	1565	500	197
	300	500	323,9	308,0	323,9 x 7,1	1246	1610	2010	500	345
	350	550	355,6	338,0	355,6 x 8,0	1370	1740	2040	640	360
	400	600	406,4	388,0	406,4 x 8,0	1514	1970	2490	640	620
	450/400	650	457,0	438,0	457,0 x 8,0	1514	1970	2490	640	660
	500	700	508,0	483,5	508,0 x 11,0	1800	2355	2710	800	890
	600	800	610,0	582,0	610,0 x 12,5	2130	2780	3280	800	1295
	700	900	711,0	682,0	711,0 x 12,5	2385	3130	3700	800	1550
	800	1000	813,0	780,0	813,0 x 14,2	2765	3590	4100	1000	2370
40	50	250	60,3	54,5	60,3 x 2,9	367	435	507	175	18
	65/50	290	76,1	70,0	76,1 x 2,9	3667	435	507	175	20
	80	310	88,9	82,0	88,9 x 3,2	471	570	685	280	36
	100	350	114,3	106,5	114,3 x 3,6	560	670	810	315	51
	125/100	400	139,7	131,0	139,7 x 4,0	560	670	810	315	52
	150	450	168,3	158,5	168,3 x 4,5	710	870	1060	400	115
	200	550	219,1	206,0	219,1 x 6,3	845	1064	1280	400	154
	250	650	273,0	259,5	273,0 x 6,3	1100	1375	1765	560	332
	300	75	323,9	308,0	323,9 x 7,1	1245	1575	2020	640	465
	350	850	355,6	336,5	355,6 x 8,8	1360	1720	2220	640	610
	400	950	406,4	386,5	406,4 x 8,8	1510	1925	2475	720	680
	450	1050	457,0	434,5	457,0 x 10,0	1830	2345	3020	800	1305
	500	1150	508,0	478,0	508,0 x 14,2	1830	2345	3020	800	1440
	600	1350	610,0	575,2	610,0 x 16,0	2170	2790	3590	1000	1870
	700	1550	711,0	675,5	711,0 x 16,0	2465	3200	3590	1000	2750
	800	1750	813,0	773,0	813,0 x 18,0	2800	3740	4150	1000	3600

 1) d<sub>3</sub> = d<sub>p</sub> as per DIN 2559 Part 2

 2) h<sub>2</sub> = open

 3) h<sub>4</sub> = vertical clearance for removal

**Product features - to our customers' benefit**



Subject to technical modification without prior notice.

01.01.2009

7364.1/6-10