



**High performance valve
with PTFE or fire safe seat**

DN 150 to 400 (6 to 16")

Pressure class: Class 300

Design in accordance with ASME B16.34

Applications

- Marine, chemical tankers,
- Oil and gas, chemicals, petrochemicals
- L.P. steam, vacuum, and any application requiring the use of an off-set disc valve.

Working conditions

- Temperature:
from -50 °C min. up to +150 °C
The working temperature depends on the media and on the material of the body and seat.
- Operating under differential pressure ΔP limited to 25 bar.
- Vacuum service down to 0 absolute bar.

Materials

Refer to page 2.

Design

- One-piece wafer type body (type 1)
- Two interchangeable seats: virgin PTFE or virgin PTFE fire safe.
- Double-eccentric kinematics.
- Upstream/downstream sealing: refer to page 5.
- Face-to-face in accordance with API 609 Category B Cl.300.

- Actuation mounting plate in accordance with ISO 5211 and NF E 29-402 standards.
- Flange facing: stock finish.
- Connection according to ASME B 16.5 class 300. For other connections, please consult us.
- Stainless steel body: pickling and passivation.
- Marking in accordance with EN 19 standard.
- Fire safe according to API 607.

Standard variants

- Manual actuator MR
- Hydraulic actuator ACTO, DYNACTO, ENNACTO
- Limit switches AMTROBOX R

Remarks

- Actuator selection 8460.XX/.-90
- Operating instructions 8460.XX/.-10

Data to be supplied when ordering

- DANAIS 300T valve, in accordance with leaflet no. 8460.1216/1-10
- Size, materials for body and seat.
- Working conditions : nature of fluid, pressure, temperature.
- Actuation

Materials

Body	Temperature	Code KSB
Stainless steel ASTM A 351 gr. CF 8M / 1.4408	-50 °C to +150° C	6
Stainless steel ASTM A 351 gr. CF 3M / 1.4409	-50 °C to +150° C	6t
Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75	-50 °C to +150° C	6m
Shaft		Code KSB
Stainless steel ASTM A 564 gr. 630 (ΔP limited = 25 Bar)	-50 °C to +150° C	6e
Stainless steel 1.4462 (ΔP limited = 16 Bar)	-50 °C to +150° C	7e
Disc		Code KSB
Stainless steel ASTM A 351 gr. CF 8M / 1.4408	-50 °C to +150° C	6
Stainless steel ASTM A 351 gr. CF 3M / 1.4409	-50 °C to +150° C	6t
Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75	-50 °C to +150° C	6m
AMRING® seat		Code KSB
Virgin PTFE	-50 °C to +150° C	FB
Virgin PTFE fire-safe	-50 °C to +150° C	FF

Possible configurations: 6m body with 6m disc and 7e shaft
 6 body with 6 disc and 6e shaft
 6t body with 6t disc and 7e shaft

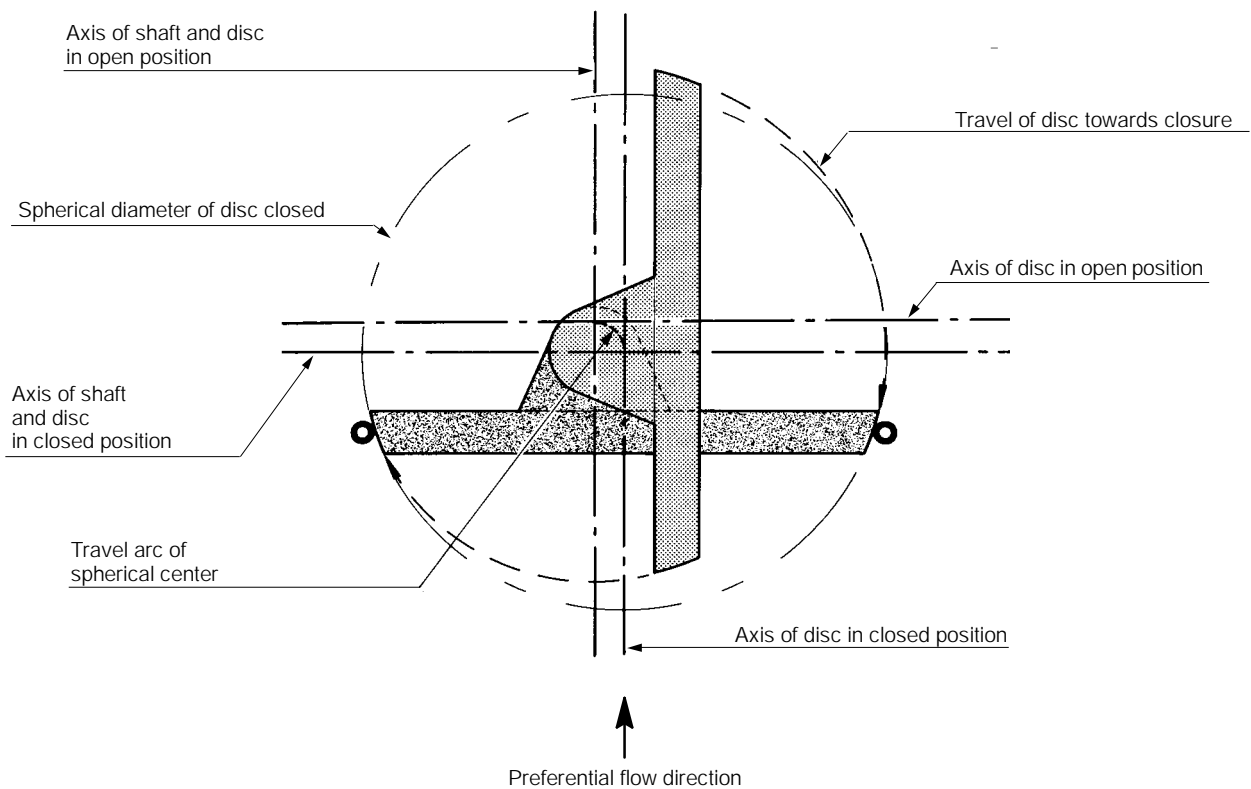
Pressure / temperature

In pressure class 300 (ASTM materials), DANAIS 300T valves meet ASME B 16-34 cl.300 "Standard class" requirements, according to the following table:

Pressure class	Material	Body	Seat	Working pressure in bar at temperature °C					
				-50	-29	38	50	100	150
Class 300	A 351 gr. CF8M A 351 gr. CF3M A 351 gr. CF3M Mo		PTFE / PTFE fire-safe	49,6	49,6	49,6	48,1	42,2	38,5

Kinematics

The compression of the seating disc edge onto the seat is achieved by double-eccentric kinematics. The axis of the shafts is off-set to valve axis and eccentric to pipe axis. This design eliminates the possibility of friction during operation and, as a result ensures long lasting service while maintaining tight shut-off characteristics. These tight shut-off characteristics conform to the most exacting requirements and standards.



Upstream/downstream sealing

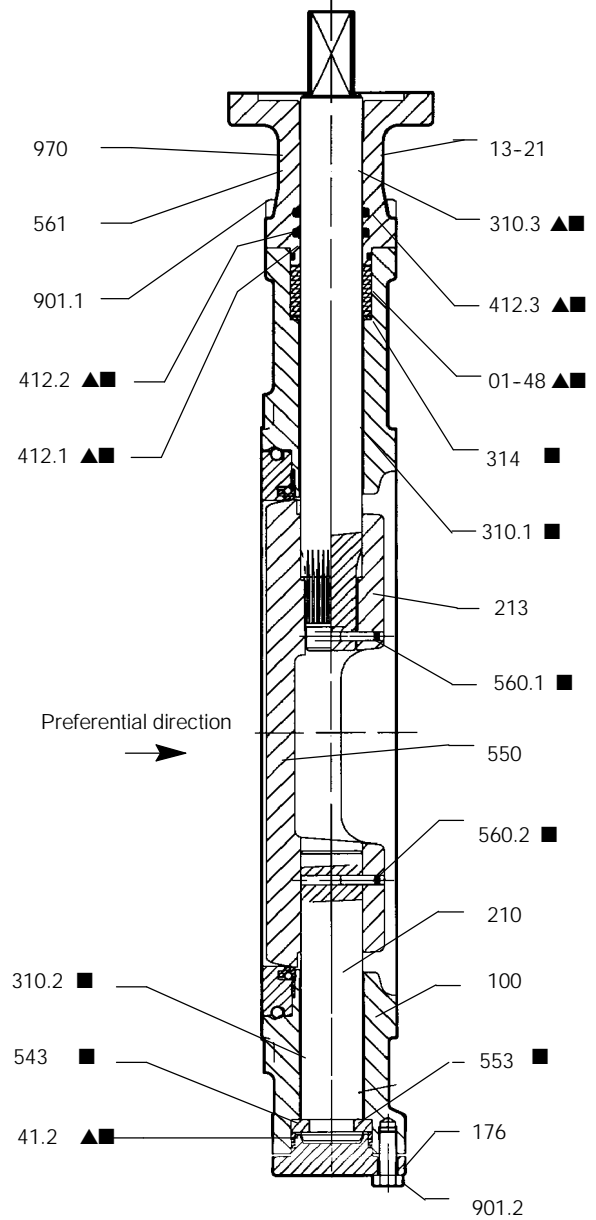
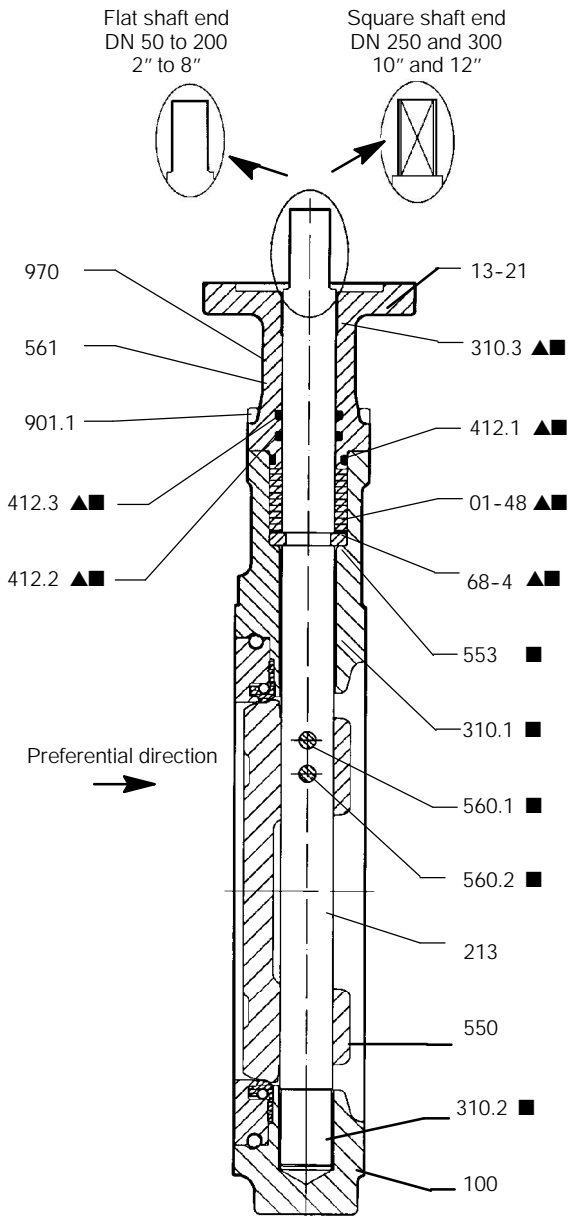
The DANAIS 300T valve conforms to the following sealing standards. The DANAIS 300T valve is a bi-directional valve with a preferential flow direction shown by an arrow (differential pressure direction on the disc).

Valve	With PTFE seat or PTFE fire-safe
On liquid	EN 12266 category A ISO 5208 category A API 598
On gas	EN 12266 category A ISO 5208 category A API 598 ANSI / FCI 70.2 class VI

Construction

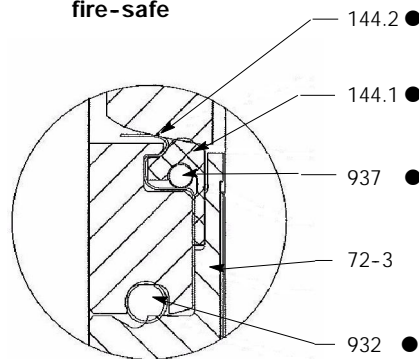
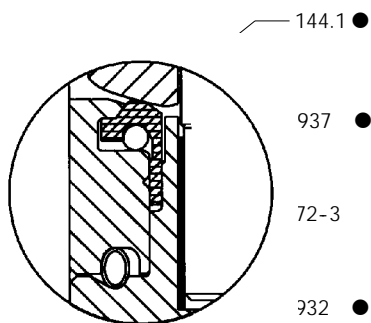
DN 150 to 300 (6" to 12")

DN 350 and 400 (14" to 16")



PTFE seat

PTFE seat fire-safe



- Spare parts kit for seat
- ▲ Spare parts kit for sealing packing
- Spare parts for guiding

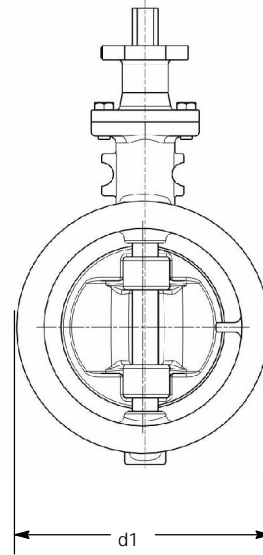
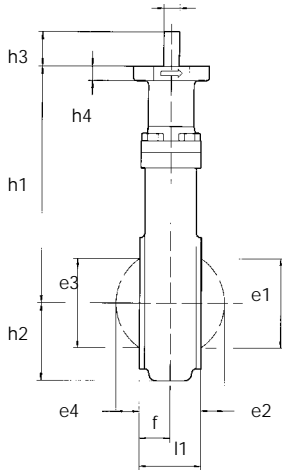
Parts list

Item	Designation	DN	Materials
Common parts			
100	Body	150 to 400	Stainless steel ASTM A 351 gr. CF 8M / 1.4408 Stainless steel ASTM A 351 gr. CF 3M / 1.4409 Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75
13-21	Extension	150 to 400	Stainless steel ASTM A 351 gr. CF 8M
176	Bottom	350 and 400	Stainless steel ASTM A 351 gr. CF 8M / 1.4408 Stainless steel ASTM A 351 gr. CF 3M / 1.4409 Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75
210	Shaft	350 and 400	Stainless steel ASTM A564 gr. 630 / 1.4542 Stainless steel 1.4462 (operating differential pressure limited to 16 bar)
213	Driving shaft	150 to 400	Stainless steel ASTM A564 gr. 630 / 1.4542 Stainless steel 1.4462 (operating differential pressure limited to 16 bar)
310.1	Upper plain bearing	150 to 400	Stainless steel + PTFE
310.2	Lower plain bearing	150 to 400	Stainless steel + PTFE
310.3	Plain bearing	150 and 400	Stainless steel +PTFE
314	Thrust washer	350 and 400	Stainless steel
412.1	O-Ring	150 to 400	Viton
412.2	O-Ring	150 to 400	Viton
412.3	O-Ring	150 to 400	Viton
543	Spacer bush	350 and 400	Stainless steel
553	Thrust insert	150 to 400	Stainless steel
560.1	Pin	150 to 400	Stainless steel 1.4944 for body 6m and 6t Stainless steel 1.4542 for body 6
560.2	Pin	150 to 400	Stainless steel 1.4944 for body 6m and 6t Stainless steel 1.4542 for body 6
561	Grooved nail	150 to 400	Stainless steel
68-4	Foil	150 to 300	Stainless steel
901.1	Hexagon-head screw	150 to 400	A4-70 stainless steel
901.2	Hexagon-head screw	350 and 400	A4-70 stainless steel
920	Hexagonal nut	150 to 400	A4-70 stainless steel
970	Identity plate	150 to 400	Stainless steel
Valve with PTFE seat			
01-48	Sealing packing	150 to 400	Expanded graphite
144.1	Seat	150 to 400	Virgin PTFE
41-2	Static joint	350 and 400	Expanded graphite
72-3	Tightening flange	150 to 400	Stainless steel
550	Disc	150 to 400	Stainless steel ASTM A 351 gr. CF 8M / 1.4408 Stainless steel ASTM A 351 gr. CF 3M / 1.4409 Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75
932	Inner ring	150 to 400	Stainless steel
937	Elastic wire	150 to 400	Stainless steel
Valve with PTFE seat fire safe			
01-48	Sealing packing	150 to 400	Expanded graphite
144.1	Seat	150 to 400	Virgin PTFE
144.2	Fire-safe sheet	150 to 400	Stainless steel ASTM A 240 gr. 316L
41-2	Static joint	350 and 400	Expanded graphite
72-3	Tightening flange	150 to 400	Stainless steel
550	Disc	150 to 400	Stainless steel ASTM A 351 gr. CF 8M / 1.4408 Stainless steel ASTM A 351 gr. CF 3M / 1.4409 Stainless steel ASTM A 351 gr. CF 3M Mo > 2.75
932	Inner ring	150 to 400	Stainless steel
937	Elastic ring	150 to 400	Stainless steel

Wafer type body Type 1 - Dimensions

DN 150 to 400 (6" to 16")

DN 150 and 200: flat end "s" machined in ϕz
 DN ≥ 250 : square end "s"



mm

DN	NPS	Face to face l1					Mounting plate according to ISO 5211		Flat shaft end			Square shaft end		Disc clearance			
			d1	h1	h2	f	n°	h4	s	ϕz	h3	s	h3	e1	e2	e3	e4
150	6	59	218	240	120	28,5	F07	12	17	22	32			128	43	131	43
200	8	73	273	290	157	34,5	F10	15	19	25	35			170	58	175	59
250	10	83	326	335	183	38,0	F12	18				25	45	218	77	230	80
300	12	92	383	365	220	42,0	F12	18				27	45	259	92	266	98
350	14	117*	416	435	328	47,5	F14	22				30	55	293	97	311	116
400	16	133	467	465	358	56,5	F14	22				36	55	342	115	358	1320

* Face to face according to API 609 table 2 and EN 558 standards

Operating torques

DANAIS 300T valve with PTFE seat or PTFE fire safe seat

Nm

DN	NPS	Preferential direction				Non preferential direction			
		Differential pressure ΔP in bar				Differential pressure ΔP in bar			
		6	10	16	20	6	10	16	20
150	6	100	110	140	160	90	110	140	160
200	8	160	180	230	260	150	190	240	280
250	10	290	340	440	510	270	350	470	550
300	12	400	470	620	720	380	500	680	790
350	14	610	720	970	1 140	570	780	1 080	1 290
400	16	820	980	1 340	1 570	780	1 060	1 490	1 770

* The safety coefficient to define the adapted actuator is included in the torque value.

Hydraulic characteristics

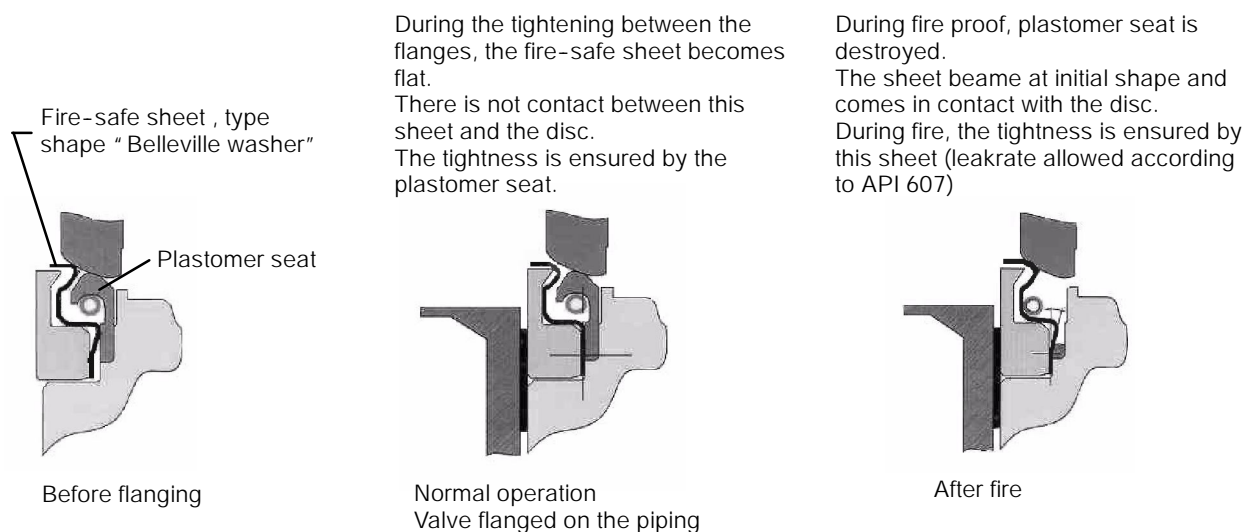
DN	NPS	Flow coefficient in fully open position		Zeta
		Kv_0	Cv_0	
150	6	980	1 150	0,84
200	8	1 850	2 150	0,75
250	10	3 350	3 880	0,56
300	12	4 870	5 650	0,55
350	14	7 070	8 200	0,48
400	16	10 350	12 000	0,38

Fire safe version

Version approved by Lloyd's Register in accordance with the API 607 standard.

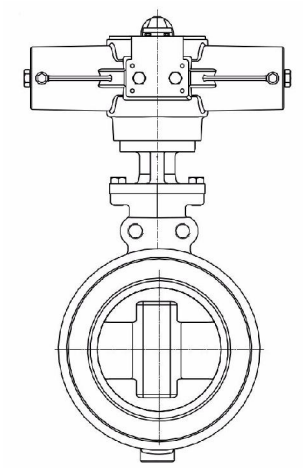
Construction (see pages 4 and 5):

- plastomer seat and fire-safe sheet in inox,
- sealing packing in expanded graphite.

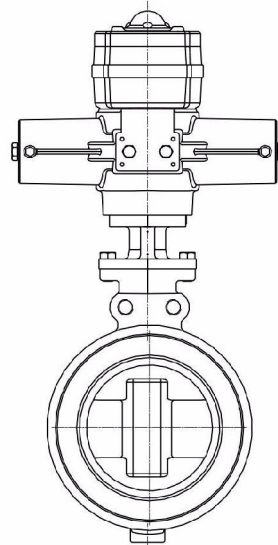


Standard variants

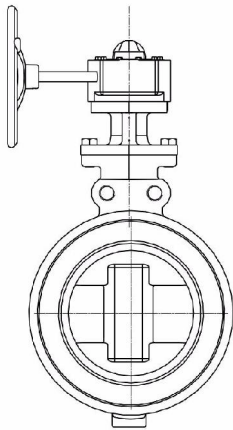
ACTO hydraulical actuator



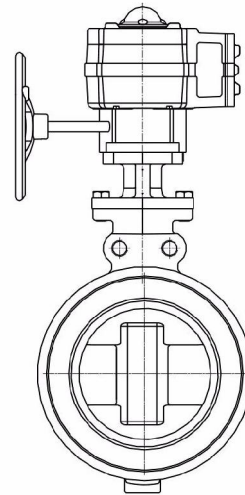
ACTO hydraulical actuator
+ AMTROBOX R



MR manual actuator



MR manual actuator
+ AMTROBOX R



Connections

The table below defines the possible connections. Please consult us for other connections.

Wafer type body - Type 1 -

DN	NPS	ASME B16.5 cl.300
150	6	✓
200	8	✓
250	10	✓
300	12	✓
350	14	✓
400	16	✓



Connection allowed



Connection allowed (re-machined body)

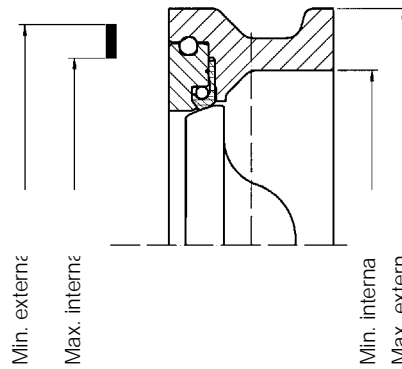
Face-to-face dimensions

The face-to-face dimensions of DANAİS 300T valve are in accordance with the following standards.

DN	Standards
150 (6") to 300 (12"), 400 (16")	API 609 table 2 class 300
350 (14")	API 609 table 2 class 300
150 (6") to 400 (16")	API 609 table 3

Flange sealing

Wafer type body



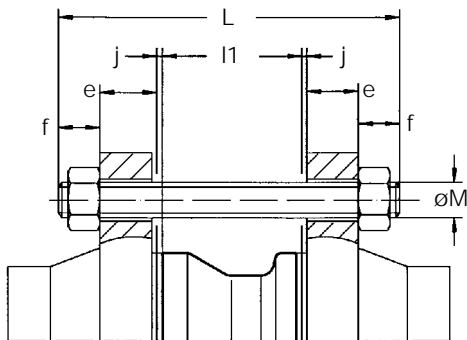
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DN NPS		Flange sealing				Connections
		Min. area		Max. area		
		Max. internal dia.	Min. ext. dia.	Min int. dia.	Max. external dia. Wafer type	
50	2	69,6	84,6	62	90,5	B16.5 Class 300
65	2 ½	83,6	98,6	75	108	
80	3	101,2	116,6	91	125	
100	4	126,6	142,6	117	154	
125	5	153,6	169,6	144	183	
150	6	180,6	199,1	171	214	
200	8	231,5	253,5	222	267	
250	10	286,9	305,5	275	321,5	
300	12	339,3	358,5	327	377	
350	14	374,6	400	359	411,5	
400	16	425,9	452	410	467,5	
450	18	478,5	510	461	530,5	

Note: the use of spiral-wound gaskets according to ISO 7483 - PN 10 to 25 is recommended.

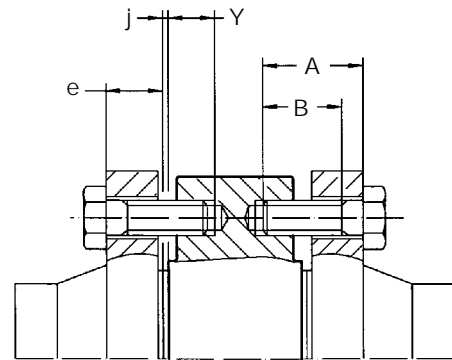
Wafer type body - Type 1 - Bolting

The bolting is not supplied



$$L = l1 + 2e + 2f + 2j$$

L : tie-rod length
 l1 : valve face-to-face
 e : flange thickness
 f : tie-rod overlength
 j : flange gasket thickness



Screws at shaft passages (DN 450)

$$A \text{ max.} = e + Y + j$$

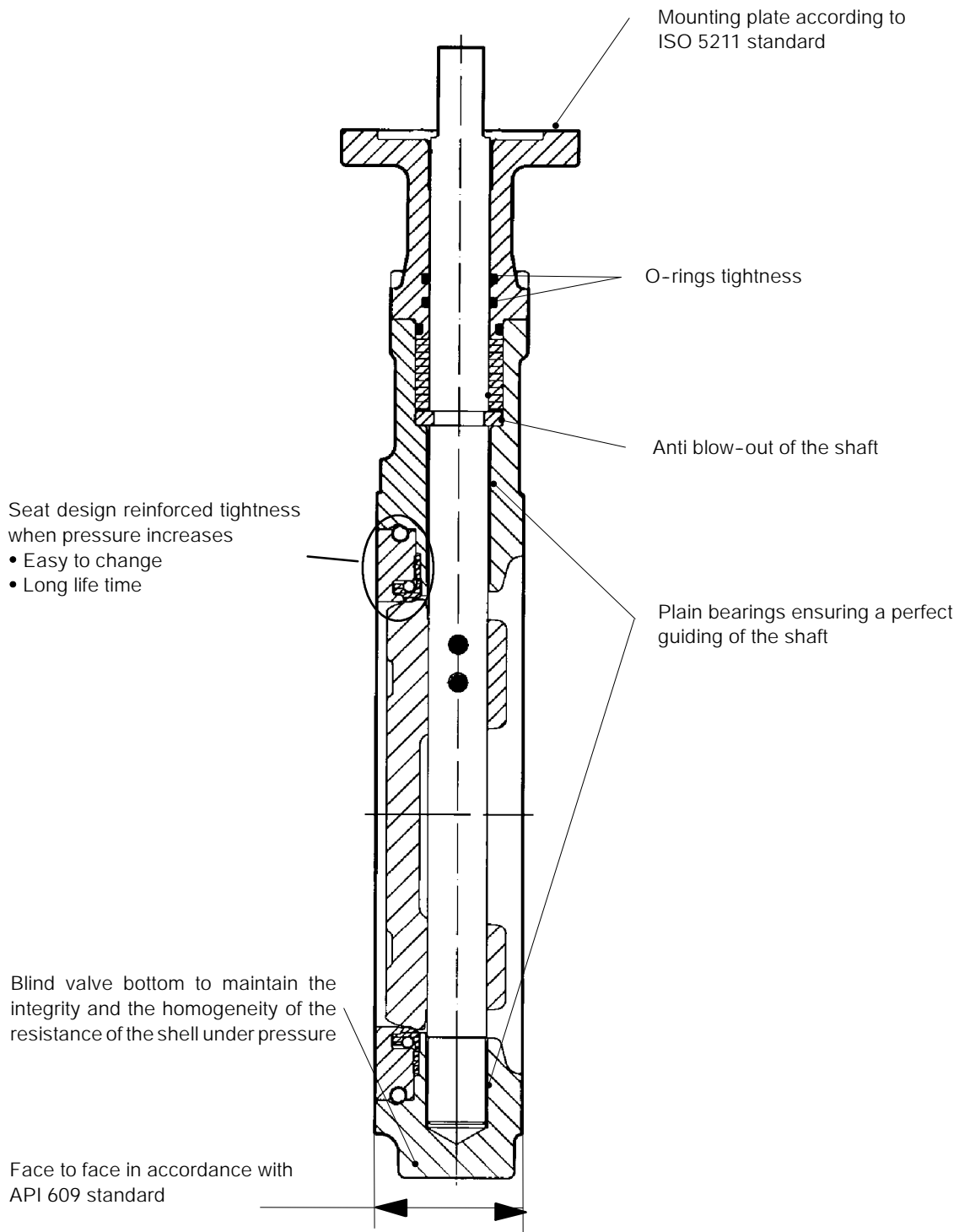
A max.: screw length
 e : flange thickness
 j : flange gasket thickness
 Y : screw max. implantation
 B : min. threaded length $B > A - e$

DN	NPS	l1	d1	ASME B 16-5 cl 150				Weight	
				UNC	Tie-rod*		Screw A2		
					f	Qty	Y		Qty*
50	2	43	104	5/8"	20	4		3,2	
65	2 1/2	46	123	5/8"	20	4		3,8	
80	3	46	140	5/8"	20	4		4,5	
100	4	54	180	5/8"	20	8		6,4	
125	5	57	210	3/4"	24	8		9,7	
150	6	57	235	3/4"	24	8		12,7	
200	8	62	271	3/4"	24	8		22,5	
250	10	70	323	7/8"	29	12		34,0	
300	12	80	380	7/8"	29	12		48,8	
350	14	92	449	1"	32	12		64,5	
400	16	102	505	1"	32	16		89,0	
450	18	114	570	1 1/8"	35	12	40	4	133,5

* Quantity of nuts = quantity of tie-rods x 2

** Quantity of screws by face

Product features - to our customer's benefit



This leaflet is not contractual and may be amended without notice.

16.05.11

8460.1216/1-10

