Materials

Body		KSB code
Type 1: Grey cast iron JL 1040	DN 40 to 600	3t
Spheroïdal graphite cast iron JS 1030 / ASTM A536 gr.60.40.18	DN 650 to 1000	3g
Type 2: Spheroïdal graphite cast iron JS 1030	DN 40 to 600	3g
Type 4: Spheroïdal graphite cast iron JS 1030	DN 40 to 600	3g
Type 5: Spheroïdal graphite cast iron JS 1030 / ASTM A536 gr.60.40.18	DN 150 to 1000	3g
Shafts		**Code KSB**
Stainless steel 1.4029 (13 % Cr)	DN 40 to 600	6k
Stainless steel 1.4028 (13 % Cr)	DN 650 to 1000	6k
Stainless steel 1.4057 (17 % Cr)	DN 40 to 600	6e
Disc		**Code KSB**
Spheroïdal graphite cast iron JS 1030	DN 40 to 600	3g
Spheroïdal graphite cast iron JS 1030 / ASTM A536 gr.60.40.18	DN 650 to 1000	3g
Spheroïdal graphite cast iron JS 1030, coated Halar®		3a
Spheroïdal graphite cast iron JS 1030, coated Ebonite®	DN 650 to 1000	3p
Spheroïdal graphite cast iron JS 1030, coated EPDM	DN 40 to 300	3x
Stainless steel Type 1.4401	DN 40 to 200	6
Stainless steel Type 1.4408 / ASTM A351 gr.CF8M	DN 250 to 1000	6
Stainless steel Type 1.4401 , polished	DN 40 to 200	6i
Stainless steel Type 1.4408 / ASTM A351 gr.CF8M polished	DN 250 to 600	6i
Aluminium-bronze CC333G/C95800	DN 40 to 1000	2
NORIDUR® (G-X3 CrNiMoCu 24-6)		5d
ASTM A351 gr. CD4MCu or equivalent NORIDUR		5a
Austenitic stainless steel URANUS B6		6u
HASTELLOY C		7c
AMRING® liner		**Code KSB**
E.P.D.M		XA
E.P.D.M drinking water		XC
Heat E.P.D.M		XV
High content nitrile		K
Carboxylated nitrile		CB
White carboxylated nitrile		CC
Chlorosulphoned polyethylene HYPALON®		Y
Fluorinated elastomer VITON® acid		VA
Fluorinated elastomer VITON® heat		VC
Epichlorhydrine		EG
High temperature silicone		SK
Natural rubber Polybutadiene		NB
Hydrogenated nitrile rubber HNBR		NH

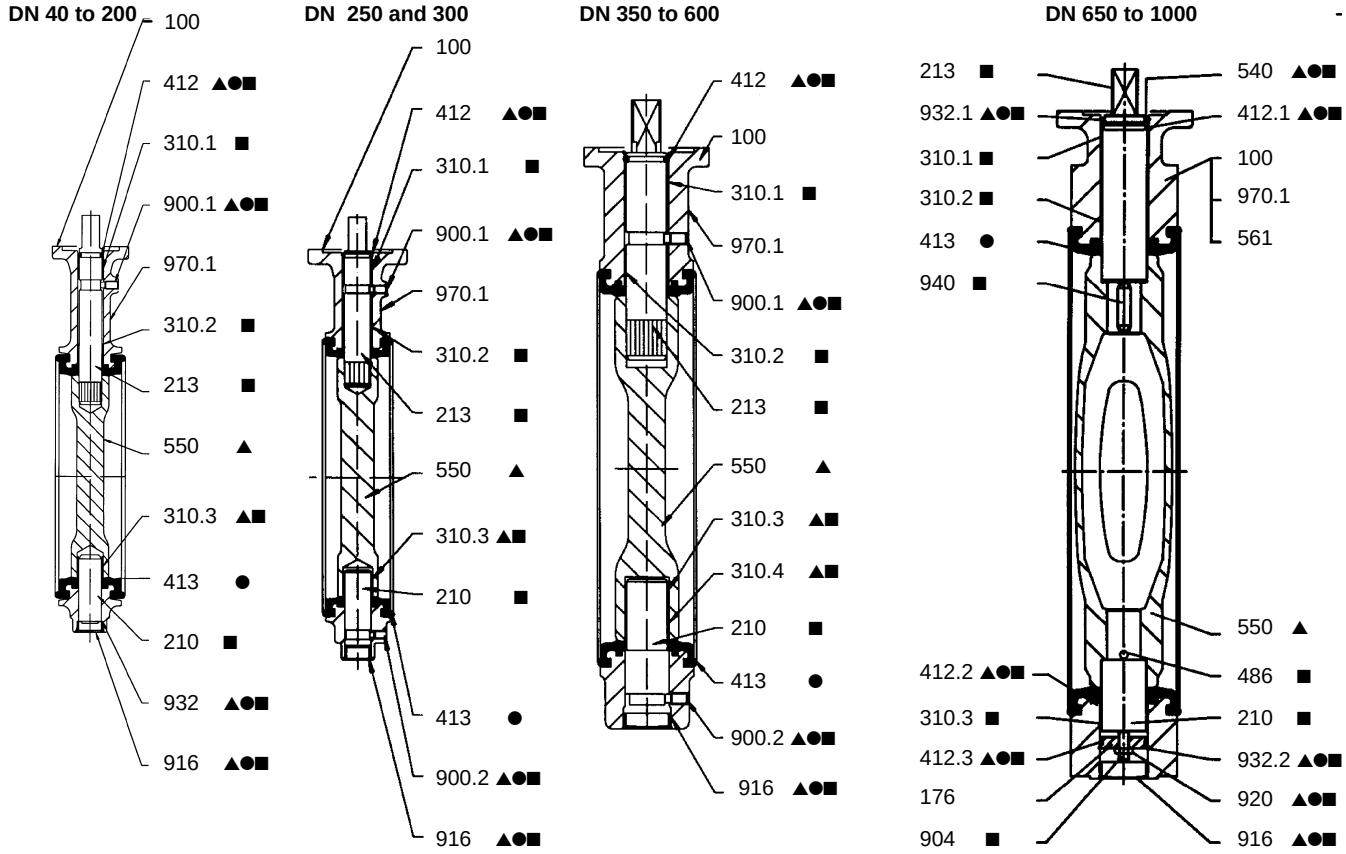
Working pressure limits of AMRING® liners

DN	NPS	Allowable pressure PS in bar - Standard liners			
		XA - XC - XV - K - Y - NH - CB	VA - VC	EG	CC - SK - NB
40 to 500	1 ½ to 20	10	10	10	6
550	22				
600	24			10	6
650	26			10	6
700	28		6	10	6
750	30			10	6
800 to 1000	32 to 40		6		

Vacuum limits

DN	NPS	Liner mounting	Vacuum limits		
			Minimum pressure (in absolute bar)	Maximum temperature	
				XV	Other liners
40-150	1 ½-6	Without sticking (Standard)	1,33 . 10^{-5} (10^{-2} torr)	130° C	80° C
200-1000	8-40	Without sticking (Standard)	0,3	130° C	80° C
		With stick (Option)	1,33 . 10^{-5} (10^{-2} torr)	80° C	80° C

Construction

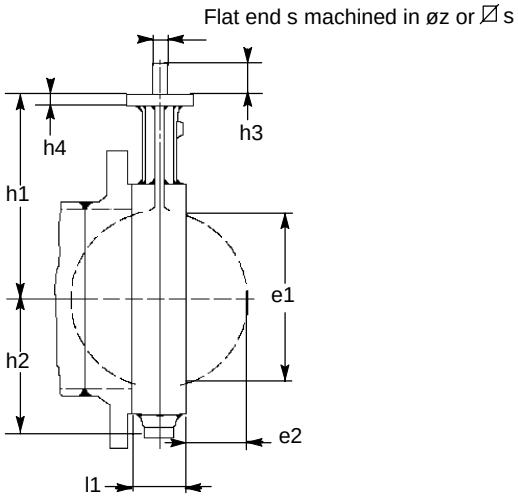


● Spare parts included in the liner kit ▲ Spare parts included in thedisc kit ■Spare parts included in the shaft kit

Item	Designation	DN	Materials
100	Body	40 to 1000	In accordance with the body type
176	Bottom	650 to 1000	Steel
210	Shaft	40 to 1000	Stainless steel
213	Operating shaft	40 to 1000	Stainless steel
310.1	Plain bearing	200 to 1000	PTFE filled on steel casing
310.2	Plain bearing	200 to 1000	PTFE filled on steel casing
310.3	Plain bearing	200 to 1000	PTFE filled on steel casing
310.4	Plain bearing	350 to 600	PTFE filled on steel casing
412	O-Ring	40 to 600	Nitrile
412.1	O-Ring	650 to 1000	Nitrile
412.2	O-Ring	650 to 1000	Nitrile
412.3	O-Ring	650 to 1000	Nitrile
413	Liner	40 to 1000	In accordance with fluid
486	Ball	650 to 1000	Steel
540	Split bush	650 to 1000	Acetal
550	Disc	40 to 1000	In accordance with fluid
561	Grooved nail	650 to 1000	Stainless steel
900.1	Anti blow-out screw	40 to 600	Stainless steel
900.2	Anti blow-out screw	250 to 600	Stainless steel
904	Adjusting screw	650 to 1000	Steel
916	Plug	40 to 1000	Polyethylene
920	Nut	650 to 1000	Steel
932	Self-locking	40 to 200	Steel
932.1	Spring retaining ring	650 to 1000	Steel
932.2	Spring retaining ring	650 to 1000	Steel
940	Key	650 to 1000	Steel
970.1	Identity plate	40 to 600 650 to 1000	Polyester + Adhesif Stainless steel

To order spare parts in the kit, it is necessary to valve codification mentionned on the identity plate.

Dimensions



mm

DN	NPS	Face to face			Mounting plate ISO 5211		Flat shaft end			Square shaft end		Disc clearance	
		l1	h1	h2	n°	h4	s	øz	h3	⍁ s	h3	e1	e2
40	1 ½	33	105	51	F05	10	11	14	24			32	4
50	2	43	109	55	F05	10	11	14	24			33	4
65	2 ½	46	136	67	F05	10	11	14	24			55	11
80	3	46	142	73	F05	10	11	14	24			71	17
100	4	52	163	92	F05	10	14	18	24			90	23
125	5	56	176	105	F05	10	14	18	30			119	35
150	6	56	194	120	F07	12	14	18	30			144	46
200	8	60	222	150	F07	12	19	25	35			196	69
250	10	68	255	194	F10	15	19	25	35			249	92
300	12	78	282	226	F12	18	22	28	40			297	111
350	14	78	335	269	F12	23				25	45	326	127
400	16	102	380	298	F14	23				36	55	370	140
450	18	114	410	329	F14	23				36	55	422	160
500	20	127	440	359	F14	27				36	55	470	178
550	22	154	475	406	F16	27				50	65	522	195
600	24	154	495	439	F16	27				50	65	566	215
650	26	165	535	451	F16	26				50	65	620	235
700	28	165	560	482	F16	26				50	65	671	260
750	30	190	590	513	F16	26				50	65	717	273
800	32	190	615	546	F16	26				50	65	769	298
900	36	203	665	588	F25	30				60	80	869	341
1000	40	216	735	646	F25	30				60	80	970	385

Hydraulic characteristics

DN	NPS	Flow coefficient valve in fully open position Kvo	Cvo	Zeta
40	1 ½	53	62	1,46
50	2	133	154	0,56
65	2 ½	240	280	0,49
80	3	410	475	0,39
100	4	655	760	0,37
125	5	900	1 044	0,48
150	6	1 800	2 090	0,25
200	8	3 550	4 120	0,20
250	10	7 350	8 453	0,12
300	12	9 100	10 465	0,16
350	14	11 200	12 880	0,19
400	16	14 800	17 020	0,19
450	18	19 700	22 655	0,17
500	20	25 000	28 750	0,16
550	22	31 700	36 455	0,15
600	24	36 400	41 860	0,16
650	26	37 700	43 730	0,20
700	28	47 500	55 100	0,17
750	30	51 500	59 740	0,19
800	32	63 500	73 660	0,16
900	36	84 700	98 250	0,15
1000	40	108 500	125 860	0,14

Operating torques

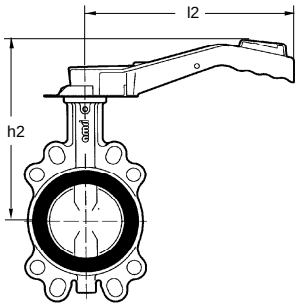
DN	NPS	Operating torque * in Nm for XA, XC, XV, K liners on lubricated medium	All liners on non lubricated medium All liners except XA, XC, XV, K on lubricated medium
40	1 ½	10	20
50	2	20	30
65	2 ½	30	40
80	3	40	50
100	4	60	70
125	5	80	100
150	6	130	140
200	8	170	210
250	10	220	330
300	12	380	520
350	14	500	720
400	16	650	980
450	18	800	1 200
500	20	1 000	1 500
550	22	1 200	1 800
600	24	1 400	2 100
650	26	1 700	2 600
700	28	2 000	3 000
750	30	2 300	3 500
800	32	2 600	4 000
900	36	3 400	5 000
1000	40	4 100	6 000

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

Manual control

The actuator selection for lubricated medium proposed in the table below are defined for the maximum fluid velocity mentioned. For valves on non lubricated medium, the maximum velocity is 50 m/s.
According to the working conditions and the hydraulic characteristics, upper fluid velocities can be admitted, therefore other actuators choice can be proposed: please consult us.

S, SR, SF and SFR handles

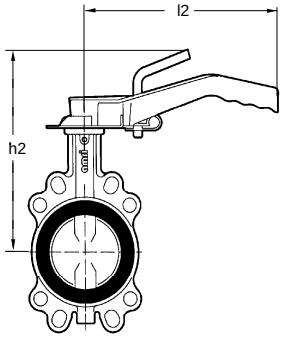


S and SF handles : Function for on or off positions

SR and SFR handles: Function locking in 9 intermediate positions

DN	NPS	Maxi fluid velocity (m/s)	S + SR handles on lubricated and non lubricated medium			SF + SFR handles on lubricated and non lubricated medium		
			l2 (mm)	h2 (mm)	Weight S/SR (kg)	l2 (mm)	h2 (mm)	Weight SF/SFR (kg)
40	1 ½	3,0	180	160	0,5			
50	2			165				
65	2 ½			191				
80	2 ½			197				
40	1 ½		260	180	0,6	260	180	1,4
50	2			185			185	
65	2 ½			211			211	
80	3			217			217	
100	4		330	248	0,7	330	248	1,8
125	5			262			262	
150	6			279			279	

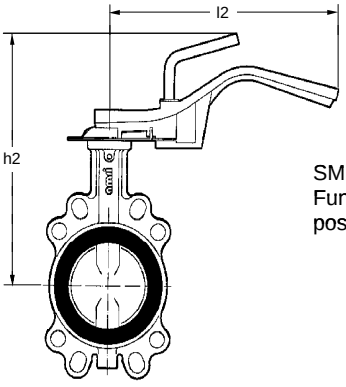
SP handle



SP Handle: Function locking in any position

DN	NPS	Maxi fluid velocity (m/s)	SP handle on lubricated and non lubricated medium		
			l2 (mm)	h2 (mm)	Weight SP (kg)
40	1 ½	3,0	260	205	0,7
50	2			210	
65	2 ½			236	
80	3			242	
100	4		330	263	0,8
125	5			277	
150	6			294	

SM handle

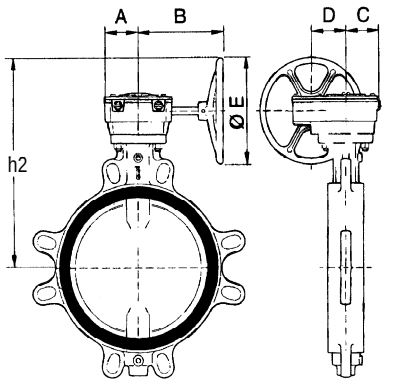


SM handle: Function for on or off positions

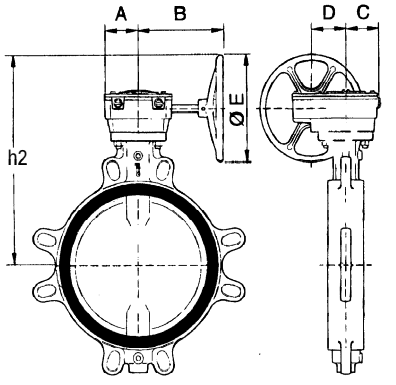
DN	NPS	Maxi fluid velocity (m/s)	SM handle on lubricated medium with XA, XC, XV and K liners			SM handle on lubricated medium all liners except XA, XC, XV, K, and all liners on non lubricated medium		
			l2 (mm)	h2 (mm)	Weight SM (kg)	l2 (mm)	h2 (mm)	Weight SM (kg)
40	1 ½	3,0	260	215	1,3	260	215	1,3
50	2			220			220	
65	2 ½			246			246	
80	3			252			252	
100	4		330	273	1,6	330	273	1,6
125	5			287			287	
150	6			304			304	
200	8		530	322	3,3	530	322	3,3
250	10			355		530*	355	
300	12		530*	388				

* important effort to be exerted, recommended reducers

MR reducers



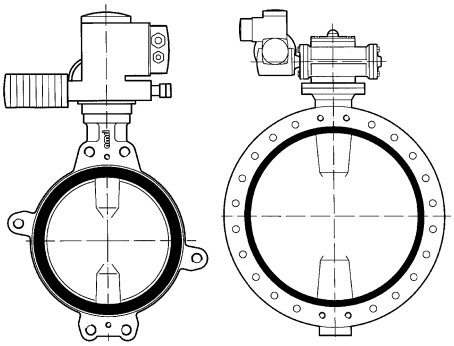
DN	NPS	Maxi velocity m/s	On lubricated medium with XA, XC, XV and K liners							
			Actuator	A (mm)	B (mm)	C (mm)	D (mm)	Ø E (mm)	h2 (mm)	Weight MR (kg)
40	1 ½	3,0	MR 25	62	184	66	64	225	256	7
50	2								261	
65	2 ½								287	
80	3								293	
100	4								314	
125	5								328	
150	6								345	
200	8								373	
250	10								406	
300	12		MR 50	74	184	77	76	225	445	10
350	14								498	
400	16		MR 100	86	233	88	88	350	617	15
450	18	2,5							647	
500	20								677	
550	22	2,0	MR 200	120	270	108	117	350	723	24
600	24	2,5							743	
650	26	2,0							783	
700	28								808	
750	30		MR 400	229	332	115	125	350	860	58
800	32								885	
900	36	1,5							898	
1000	40								1 005	



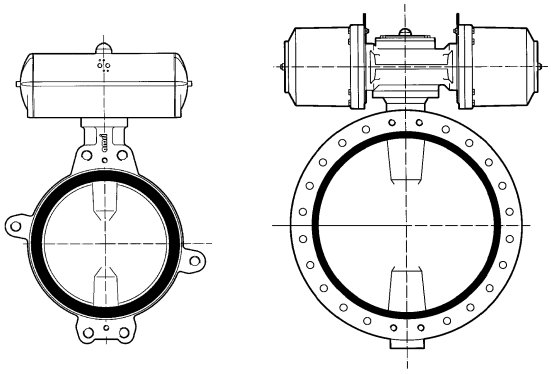
DN	NPS	Maxi velocity (m/s)	Medium non lubricated with all liners Medium lubricated wih liners except XA, XV, K and XC (See velocity table underhere)							
			Actuator	A (mm)	B (mm)	C (mm)	D (mm)	Ø E (mm)	h2 (mm)	Weight MR (kg)
40	1 ½	50 non lubricated medium: Gas	MR 25	62	184	66	64	225	256	7
50	2								261	
65	2 ½								287	
80	3								293	
100	4								314	
125	5								328	
150	6								345	
200	8								373	
250	10		MR 50	74	184	77	76	225	418	10
300	12								445	
350	14		MR 100	86	233	88	88	350	572	15
400	16								617	
450	18		MR 200	120	270	108	117	350	658	24
500	20								688	
550	22								723	
600	24								743	
650	26		MR 400	229	332	115	125	350	805	58
700	28								830	
750	30								860	
800	32								885	
900	36		MR 600	271	511	155	140	600	1 074	105
1000	40								1 144	

Standard variants

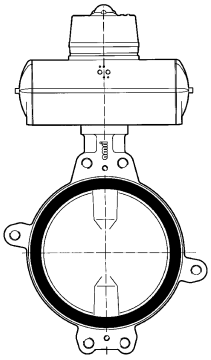
Electric actuator ACTELEC



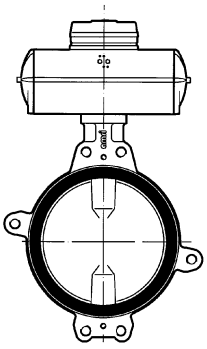
Pneumatic actuator ACTAIR / DYNACTAIR



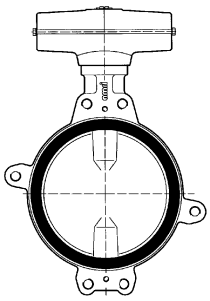
Positioner AMTRONIC/SMARTRONIC



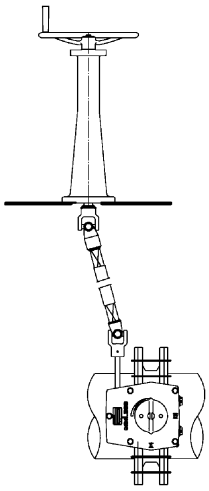
Limit switches AMTROBOX



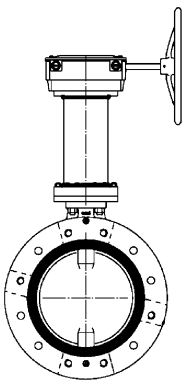
Hydraulic actuator ACTO



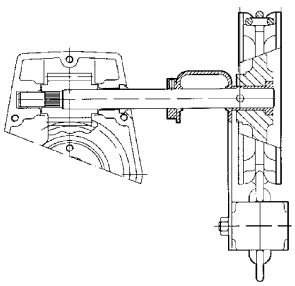
Deck stand



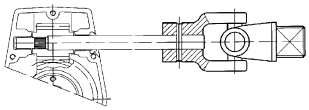
Valve neck extension



Chain wheel



Cardan joint



Connections

The ISORIA 10 valves can be fitted between all the connections defined hereafter (others connections on request):

- EN 1092 PN 6, 10 and 16
- ASME B16-1 cl.125 and B16-5 cl.150
- MSS SP 44 cl.150
- AWWA C207 cl. B, D and E
- AS 2129 tables D and E
- BS 10 tables D and E
- JIS B2238 et B2239 5K, 10K and 16K

Wafer type body - Type 1: can be fitted between all the connections defined above

Semi-lug type body - Type 2

DN	NPS	Connection in accordance with standards												
		EN 1092			ASME		MSS SP 44	JIS B2238-B2239			AWWA C 207	BS 10		AS 2129	
		PN 6	PN 10	PN 16	B16.1 cl. 125	B 16.5 cl. 150	cl. 150	5 K	10 K	16 K	B, D and E	Table D	Table E	Table D	Table E
40	1 ½	✓▲	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
50	2	✓	✓	✓	✓	✓		✓	✓	✓■		✓	✓	✓	✓
65	2 ½	✓	✓	✓	✓	✓		✓	✓	✓■		✓	✓	✓	✓
80	3	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
100	4	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓■	✓	✓■	✓
125	5	✓	✓	✓	✓	✓		✓	✓	✓■	✓	✓	✓	✓	✓
150	6	✓	✓	✓	✓	✓		✓	✓	✓■	✓	✓▲	✓	✓▲	✓
200	8	✓	✓▲	✓	✓▲	✓▲		✓	✓▲	✓■	✓▲	✓▲	✓▲	✓▲	✓▲
250	10	✓	✓▲	✓	✓	✓		✓	✓	✓■	✓	✓■	✓▲	✓■	✓▲
300	12	✓	✓	✓	✓	✓	✓	✓	✓■	✓■	✓	✓▲	✓	✓▲	✓
350	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
450	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
500	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
550	22						✓	✓	✓	✓	✓	✓	✓	✓	✓
600	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ Allowed fitting

■ Downstream dismantling not allowed

Connection not defined by this standard

▲ Insert a washer between the nut and the rib of the valve

Full-lug body with raised faces - Type 4

DN	NPS	Connection in accordance with standards												
		EN 1092			ASME		MSS SP 44	JIS B2238-B2239			AWWA C 207	BS 10		AS 2129	
		PN 6	PN 10	PN 16	B16.1 cl. 125	B 16.5 cl. 150	cl. 150	5 K	10 K	16 K	B, D and E	Table D	Table E	Table D	Table E
40	1 ½	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
50	2	✓	✓	✓	✓	✓		✓	✓	-		✓	✓	✓	✓
65	2 ½	✓	✓	✓	✓	✓		✓	✓	-		✓	✓	✓	✓
80	3	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
100	4	-	✓	✓	✓	✓		✓	✓	✓	✓	-	✓	-	✓
125	5	✓	✓	✓	✓	✓		✓	✓	-	✓	✓	✓	✓	✓
150	6	✓	✓	✓	✓	✓		✓	✓	-	✓	✓	✓	✓	✓
200	8	✓	✓	✓	✓	✓		✓	✓	-	✓	✓	✓	✓	✓
250	10	✓	✓	✓	✓	✓		✓	✓	-	✓	-	✓	-	✓
300	12	✓	✓	✓	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓
350	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
450	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	✓
500	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-
550	22						✓	✓	✓	✓	✓	-	-	-	-
600	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-

✓ Allowed fitting

- Downstream dismantling not allowed

Connection not defined by this standard

Flanged body with flat faces – Type 5

DN	NPS	Connection in accordance with standards												
		EN 1092			ASME		MSS SP 44	JIS B2238-B2239			AWWA C 207	BS 10		AS 2129	
		PN 6	PN 10	PN 16	B16.1 cl. 125	B 16.5 cl. 150	cl. 150	5 K	10 K	16 K	B, D and E	Table D	Table E	Table D	Table E
150	6	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
200	8	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
250	10	✓	✓	✓	✓	✓		✓	✓	✓■	✓	-	✓	-	✓
300	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
350	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
450	18	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓
500	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
550	22						✓	✓	✓	-	✓	✓	✓	✓	✓
600	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
650	26						✓●	✓●	✓●	☎	✓●				
700	28	✓●	✓●	✓●			✓●	✓●	✓●	☎	✓●	✓●	✓●	✓●	✓●
750	30				✓●		✓●	✓●	✓●	☎	✓●	✓●	✓●	✓●	✓●
800	32	✓●	✓●	✓●			✓●	✓●	✓●	☎	✓●			✓●	✓●
900	36	✓●	✓●	✓●	✓●		✓●	✓●	✓●	-	✓●	✓●	✓●	✓●	✓●
1000	40	✓■	✓●	✓●			✓●	✓■	✓●	-	✓●	✓●	✓●	✓●	✓●

✓ Allowed fitting

\- Fitting not allowed

■ Downstream dismantling not allowed

● Flange fitting allowed

Connection not defined by this standard

☎ Please consult us

End of line and downstream dismantling

Use as end of line and downstream dismantling of the standard valves at room temperature for DN and the differential pressure (ΔPS) defined hereafter:

For liners: XA, XV, K, XC, Y, NH, VA, VC, CB, EG			
Gas or liquids		Liquids *	
hazardous**	non hazardous**	hazardous**	non hazardous**
all DN: not allowed	DN ≤ 500: ΔPS = 7 bar max. Upper DN: on request	all DN: ΔPS = 7 bar max.	all DN: ΔPS = 7 bar max.

For liners: CC, SK, NB			
Gas or liquids		Liquids *	
hazardous**	non hazardous**	hazardous**	non hazardous**
all DN: not allowed	DN ≤ 500: ΔPS = 4,5 bar max.	all DN: ΔPS = 4,5 bar max.	all DN: ΔPS = 4,5 bar max.

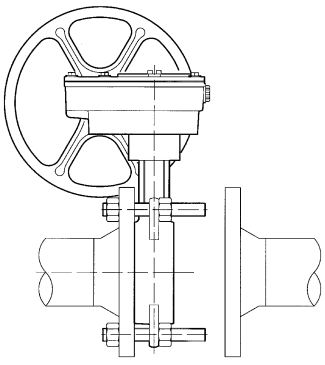
* Liquids having a vapour pressure at the maximum allowable temperature of not more than 0,5 bar above normal atmospheric pressure 1013 mbar.

** Fluids hazardous and not hazardous according to PED.

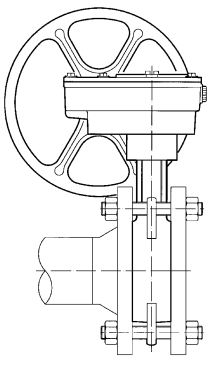
Nota : A valve fitted at the end of a pipe with a blind flange downstream is not to be considered as an end of pipe service.

Downstream dismantling

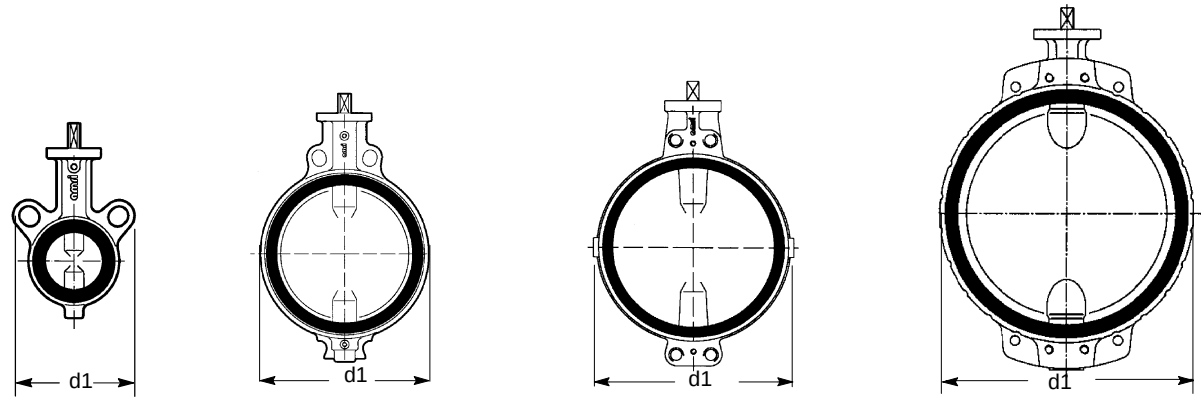
Dismantling phase: working successively on diametrically opposite tie-rods.



End of line mounting



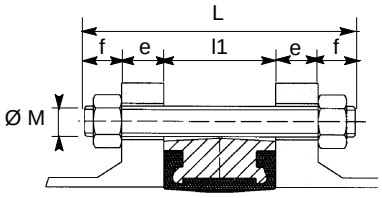
Bolting and weight for wafer type body type 1



The drawings are not the correct representation concerning our manufacture (quantities for semi lug and plain holes)

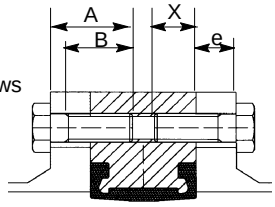
L = l1 + 2e + 2f

L : Mini length of tie-rods
l1 : Face to face of the valve
e : Flange thickness (customer specification)
f : Nut thickness + overlength of the tie-rod



A = e + X

A : Mini length of screws
X : Maxi implantation of screws
B : Threaded length > A-e
e : Flange thickness (customer specification)



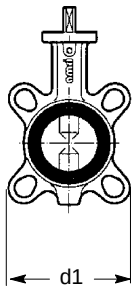
NB: We do not supply the bolting.

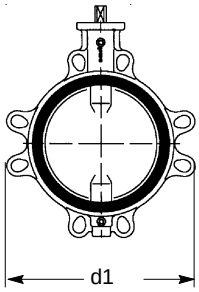
mm

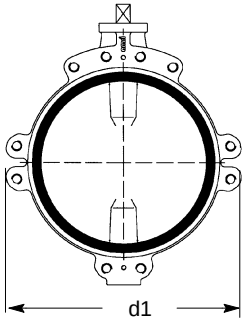
DN	NPS	d1	l1	PN 10					PN 16					ASME B16-5 cl 150					JIS B2238-B2239 10K					Weight kg
					Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw		
				ØM	f	Qty	X	Qty**	ØM	f	Qty	X	Qty**	UNC	f	Qty	X	Qty**	Ø M	f	Qty	X	Qty**	
40	1 ½	108	33	M16	20	4			M16	20	4			1/2”	17	4			M16	20	4			1,1
50	2	118	43	M16	20	4			M16	20	4			5/8”	20	4			M16	20	4			1,3
65	2 ½	133	46	M16	20	4			M16	20	4			5/8”	20	4			M16	20	4			1,9
80	3	138	46	M16	20	8			M16	20	8			5/8”	20	4			M16	20	8			2,5
100	4	144	52	M16	20	8			M16	20	8			5/8”	20	8			M16	20	8			3,9
125	5	174	56	M16	20	8			M16	20	8			3/4”	24	8			M20	24	8			4,7
150	6	198	56	M20	24	8			M20	24	8			3/4”	24	8			M20	24	8			6,9
200	8	252	60	M20	24	8			M20	24	12			3/4”	24	8			M20	24	12			10,5
250	10	310	68	M20	24	12			M24	29	12			7/8”	29	12			M22	26	12			16,4
300	12	362	78	M20	24	12			M24	29	12			7/8”	29	12			M22	26	16			30
350	14	433	78	M20	24	16			M24	29	16			1”	32	12			M22	26	16			50
400	16	490	102	M24	29	16			M27	32	16			1”	32	16			M24	29	16			72
450	18	546	114	M24	29	16	24	4	M27	32	16	27	4	1”1/8	35	16			M24	29	16	24	4	96
500	20	600	127	M24	29	20			M30	35	20			1”1/8	35	16	30	4	M24	29	20			130
550	22	645	154											1”1/4	38	16	33	4	M30	35	16	30	4	160
600	24	714	154	M27	32	20			M33	38	20			1”1/4	38	20			M30	35	20	30	4	190
650	26	745	165											1”1/4	38	20	25	4	M30	35	20	37	4	270
700	28	795	165	M27	32	20	30	4	M33	38	20	25	4	1”1/4	38	24	25	4	M30	35	20	37	4	315
750	30	853	190											1”1/4	38	24	33	4	M30	35	20	37	4	380
800	32	903	190	M30	35	20	33	4	M36	42	20	36	4	1”1/2	45	24	29	4	M30	35	24	37	4	475
900	36	1111	203	M30	35	24	33	4	M36	42	24	36	4	1”1/2	45	28	29	4	M30	35	24	37	4	545
1000	40	1118	216	M33	38	24	36	4	M39	45	24	29	4	1”1/2	45	32	35	4	M36	42	24	37	4	670

* Quantity nuts = quantity tie-rods x 2 ** Quantity of screws by face

Bolting and weight for semi-lug type body type 2



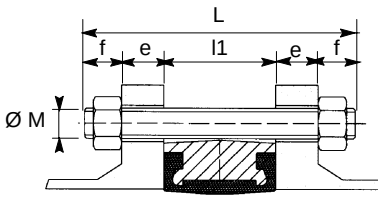




The drawings are not the correct representation concerning our manufacture (quantities for semi lug and plain holes)

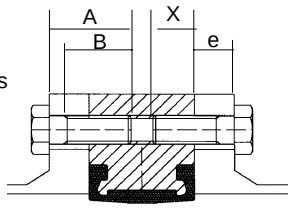
L = l1 + 2e + 2f

L : Mini length of tie-rods
l1 : Face to face of the valve
e : Flange thickness
(customer specification)
f : Nut thickness
+ overlength of the tie-rod



A = e + X

A : Mini length of screws
X : Maxi implantation of screws
B : Threaded length > A-e
e : Flange thickness
(customer specification)



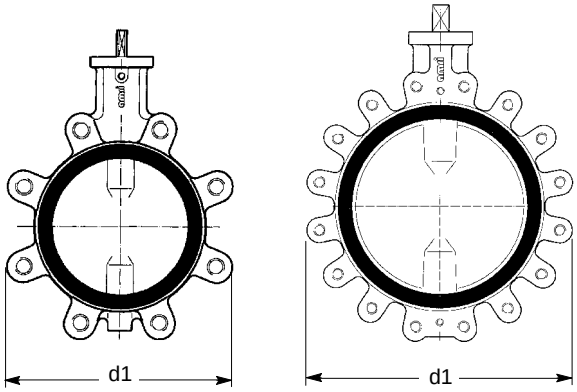
NB: We do not supply the bolting.

mm

DN	NPS	d1	l1	EN 1092 PN 10					EN 1092 PN 16					ASME B16-5 cl 150					JIS B2238-B2239 10K					weight kg
					Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw		
				ØM	f	Qty	X	Qty**	ØM	f	Qty	X	Qty**	UNC	f	Qty	X	Qty**	Ø M	f	Qty	X	Qty**	
40	1 ½	108	33	M16	20	4			M16	20	4			1/2”	17	4			M16	20	4			1 ,1
50	2	118	43	M16	20	4			M16	20	4			5/8”	20	4			M16	20	4			1 ,3
65	2 ½	132	46	M16	20	4			M16	20	4			5/8”	20	4			M16	20	4			1 ,9
80	3	138	46	M16	20	8			M16	20	8			5/8”	20	4			M16	20	8			2 ,5
100	4	150	52	M16	20	8			M16	20	8			5/8”	20	8			M16	20	8			3 ,9
125	5	234	56	M16	20	8			M16	20	8			3/4”	24	8			M20	24	8			4 ,7
150	6	260	56	M20	24	8			M20	24	8			3/4”	24	8			M20	24	8			6 ,9
200	8	322	60	M20	24	8			M20	24	12			3/4”	24	8			M20	24	12			10 ,5
250	10	394	68	M20	24	12			M24	29	12			7/8”	29	12			M22	26	12			16 ,4
300	12	462	78	M20	24	12			M24	29	12			7/8”	29	12			M22	26	16			30
350	14	538	78	M20	24	10	20	6	M24	29	10	24	6	1”	32	6	27	6	M22	26	10	22	6	60
400	16	604	102	M24	29	10	24	6	M27	32	10	27	6	1”	32	10	27	6	M24	29	10	24	6	80
450	18	656	114	M24	29	14	24	6	M27	32	14	27	6	1”1/8	35	10	30	6	M24	29	12	24	6	110
500	20	716	127	M24	29	12	24	8	M30	35	12	30	8	1”1/8	35	12	30	8	M24	29	12	24	8	145
550	22	804	154											1”1/4	38	12	32	8	M30	35	12	30	8	180
600	24	836	154	M27	32	10	27	10	M33	38	10	33	10	1”1/4	38	10	32	10	M30	35	14	30	10	220

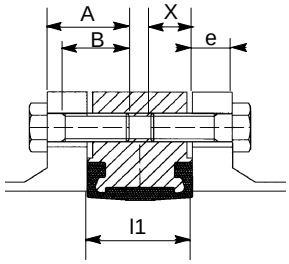
* Quantity nuts = quantity tie-rods x 2 ** Quantity of screws by face

Bolting and weight for lug type body with raised faces type 4



A = e + X

A : Mini length of screws
X : Maxi implantation of screws
B : Threaded length > A-e
e : Flange thickness
(customer specification)



The drawings are not the correct representation concerning our manufacture (quantities of holes)

NB: We do not supply the bolting.

mm

DN	NPS	d1	l1	EN 1092 PN 10					EN 1092 PN 16					ASME B16-5 cl. 150					JIS B2238-B2239 10K					Weight kg
					Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod *		Screw			Tie-rod *		Screw		
				ØM	f	Qty	X	Qty**	ØM	f	Qty	X	Qty**	UNC	f	Qty	X	Qty**	Ø M	f	Qty	X	Qty**	
40	1 ½	108	33	M16			14	4	M16			14	4	1/2"			14	4	M16			14	4	2,0
50	2	120	43	M16			18	4	M16			18	4	5/8"			18	4	M16			18	4	2,5
65	2 ½	134	46	M16			20	4	M16			20	4	5/8"			20	4	M16			20	4	3,0
80 (1)	3	140	46											5/8"			20	4						4,0
80 (2)	3	178	46	M16			20	8	M16			20	8						M16			20	8	4,5
100	4	210	52	M16			22	8	M16			22	8	5/8"			22	8	M16			22	8	5,5
125	5	236	56	M16			22	8	M16			22	8	3/4"			23	8	M20			23	8	9
150	6	260	56	M20			26	8	M20			26	8	3/4"			26	8	M20			26	8	11
200 (3)	8	312	60	M20			26	8						3/4"			26	8						24
200 (4)	8	322	60						M20			26	12						M20			26	12	25
250	10	396	68	M20			26	12	M24			29	12	7/8"			28	12	M22			28	12	39
300	12	466	78	M20			26	12	M24			30	12	7/8"			28	12	M22			28	16	46
350 (1)	14	510	78											1"			30	12						62
350 (2)	14	530	78	M20			26	16	M24			30	16						M22			28	16	70
400	16	598	102	M24			31	16	M27			34	16	1"			34	16	M24			31	16	101
450 (1)	18	622	114											1"1/8			37	16						122
450 (2)	18	654	114	M24			31	20	M27			34	20						M24			31	20	139
500	20	708	127	M24			31	20	M30			37	20	1"1/8			37	20	M24			31	20	179
550	22	774	154											1"1/4			39	20	M30			39	20	233
600 (5)	24	822	154	M27			36	20	M33			42	20	1"1/4			42	20						256
600 (6)	24	830	154																M30			32	24	283

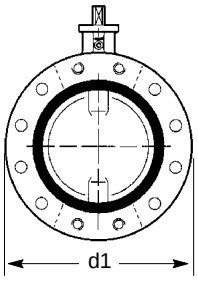
* Quantity nuts = quantity tie-rods x 2 ** Quantity of screws by face

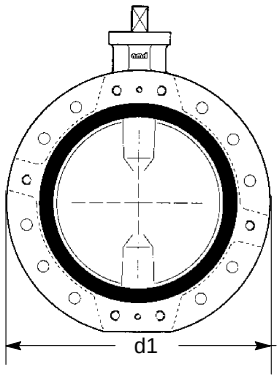
(1) Connection between EN 1092 PN 6, ASME B16-5 class 150, JIS B2238 and B2239-5K, BS 10 tables D and E and AS 2129 tables D and E flanges.
(2) Connection between EN 1092 PN 10, PN 16 and JIS B2238 and B2239 -10K and 16K flanges.
(3) Connection between EN 1092 PN 6 and 10, ASME B16-5 class 150, AWWA C 207 B, D and E, BS 10 tables D and E, AS 2129 tables D J and E and JIS B2238 and B2239-5K flanges.
(4) Connection between EN 1092 PN 16 and JIS B2238 and B2239-10K flanges.
(5) Connection between EN 1092 PN 10, PN 16, ASME B16-5 class 150 and JIS B2238 and B2239-5K flanges.
(6) Connection between JIS B2238 and B2239-10K flanges.

Bolting and weight for flanged type body type 5

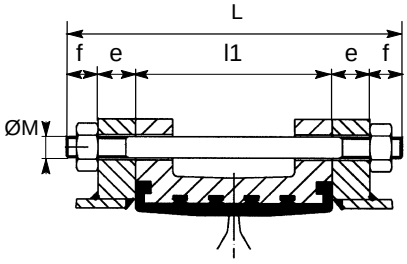
DN 150 to 600

Flanged mounting not authorized



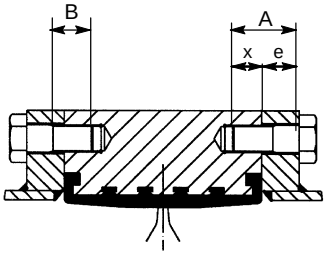


Mounting between flanges DN 150 to 600



L = l1 + 2e + 2f

L : Mini length of tie-rods
l1 : Face to face of the valve
e : Flange thickness
(customer specification)
f : Nut thickness
+ overlength of the tie-rod



A = e + X

A : Mini length of screws
X : Maxi implantation of screws
Threaded length B > A-e
e : Flange thickness
(customer specification)

The drawings are not the correct representation concerning our manufacture (quantities for semi lug and plain holes)

NB: We do not supply the bolting.

mm

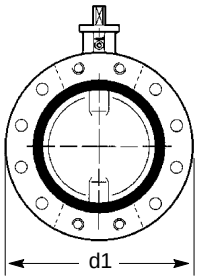
DN	NPS	ød1	l1	EN 1092 PN 10					EN 1092 PN 16					ASME B16-5 cl 150					JIS B2238-B2239 10K					Weight kg
					Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw		
				ØM	f	Qty	X	Qty**	ØM	f	Qty	X	Qty**	UNC	f	Qty	X	Qty**	Ø M	f	Qty	X	Qty**	
150	6	298	56	M20	24	4	20	4	M20	24	4	16	4	3/4"	24	4	20	4	M20	24	4	20	4	11
200	8	343	60	M20	24	4	20	4	M20	24	8	16	4	3/4"	24	4	20	4	M20	24	8	20	4	23
250	10	406	68	M20	24	8	20	4	M24	29	8	24	4	7/8"	29	8	24	4	M22	26	8	22	4	40
300	12	483	78	M20	24	6	20	6	M24	29	6	24	6	7/8"	29	6	24	6	M22	26	10	22	6	60
350	14	533	78	M20	24	10	20	6	M24	29	10	24	6	1"	32	6	27	6	M22	26	10	22	6	80
400	16	597	102	M24	29	10	24	6	M27	32	10	27	6	1"	32	10	27	6	M24	29	10	24	6	105
450	18	640	114	M24	29	14	24	6	M27	32	14	27	6	1"1/8	35	10	30	6	M24	29	12	24	6	130
500	20	715	127	M24	29	12	24	8	M30	35	12	30	8	1"1/8	35	12	30	8	M24	29	12	24	8	180
550	22	749	154											1"1/4	38	12	32	8	M30	35	12	30	8	230
600	24	840	154	M27	32	10	27	10	M33	38	10	33	10	1"1/4	38	10	32	10	M30	35	14	30	10	260

* Quantity nuts = quantity tie-rods x 2 ** Quantity of screws by face

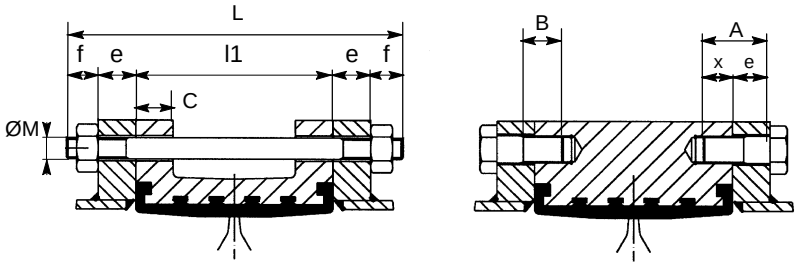
Bolting and weight for flanged type body type 5

DN 650 to 1000

Flanged mounting authorized for the differential maximum pressure for 10 bar



Mounting between flanges - DN 650 to 1000

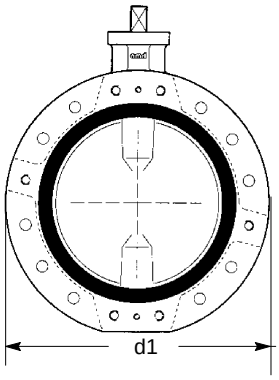


L = l1 + 2e + 2f

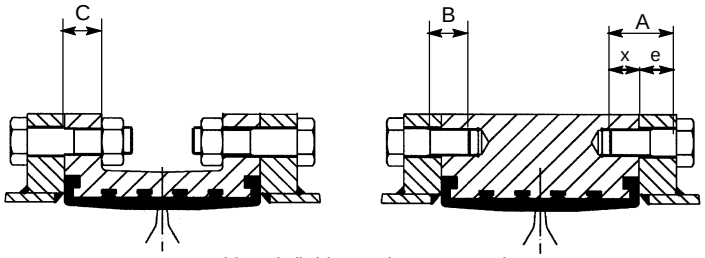
L : Mini length of tie-rods
l1 : Face to face of the valve
e : Flange thickness (customer specification)
f : Nut thickness + overlength of the tie-rod

A = e + X

A : Mini length of screws
X : Maxi implantation of screws
Threaded length B > A-e
e : Flange thickness (customer specification)



Flanged mounting - DN 650 to 1000



The drawings are not the correct representation concerning our manufacture (quantities for semi lug and plain holes)
NB: We do not supply the bolting.

Bolting definition : Please consult us

mm

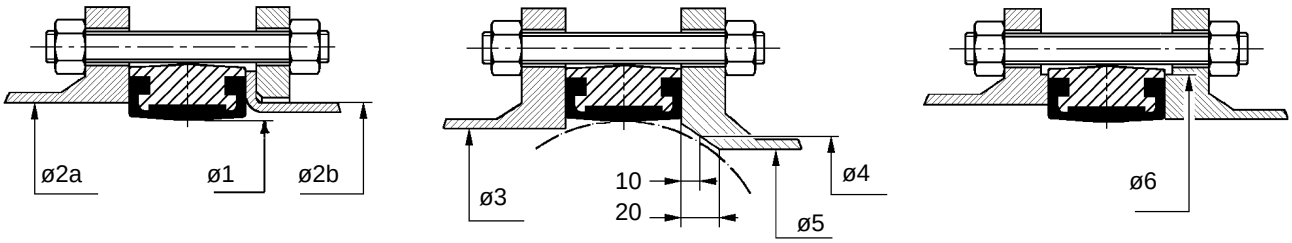
DN	NPS	ød1	l1	C	EN 1092 PN 10					EN 1092 PN 16					ASME B16-5 cl. 150					JIS B2238-B2239 10K					Weight kg
						Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw			Tie-rod*		Screw		
					ØM	f	Qty	X	Qty**	ØM	f	Qty	X	Qty**	UNC	f	Qty	X	Qty**	Ø M	f	Qty	X	Qty**	
650	26	835 (1)	165	31																M30	35	20	37	4	285
650	26	869 (2)	165	31											1"1/4	38	20	25	4						305
700	28	895 (1)	165	32.5	M27	32	20	27	4											M30	35	20	37	4	330
700	28	925 (3)	165	32.5						M33	38	20	25	4	1"1/4	38	24	25	4						350
750	30	965 (1)	190	33.5																M30	35	20	37	4	405
750	30	985 (3)	190	33.5											1"1/4	38	24	33	4						425
800	32	1 015 (1)	190	35	M30	35	20	30	4											M30	35	24	37	4	505
800	32	1 075 (3)	190	35						M36	42	20	36	4	1"1/2	45	28	29	4						525
900	36	1 115 (1)	203	37.5	M30	35	24	30	4											M30	35	24	37	4	590
900	36	1 160 (3)	203	37.5						M36	42	24	36	4	1"1/2	45	28	29	4						620
1000	40	1 230 (1)	216	40	M33	38	24	33	4											M36	42	24	37	4	740
1000	40	1 275 (3)	216	40						M39	45	24	29	4	1"1/2	45	32	35	4						780

* Quantity nuts = quantity tie-rods x 2 ** Quantity of screws by face

(1) Connection between EN 1092 PN 6, 10, JIS B2238 et B2239-5K and 10K flanges.
(2) Connection between EN 1092 PN 16, MSS SP 44 cl. 150, ASME B 16-1 cl. 125 flanges.
(3) Connection between EN 1092 PN 16, MSS SP 44 cl. 150, ASME B 16-1 cl. 125, AS 2129 cl.D and E et BS 10 cl. D and E flanges.

Flanging dimensions

ISORIA 10 valves are designed for assembly between any type of flanges and connection standards currently used.
The liner allows directly the tightness concerning the flanges.
It is necessary to verify the general compatibility of the connection by checking against the dimensions shown in the table below.
The following drawings show the valve Type 1 mounted between flanges. The flanging dimensions mentioned in this table are the same for all types.



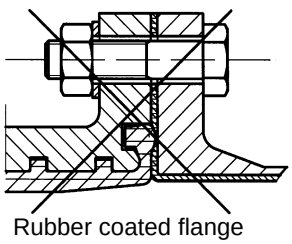
ø2a and ø3: dia. on the supporting area of the flange face.
ø2b: external dia. of the butt-weld ends with lapped pipe end according to standards DIN 2642 and NF E 29-251

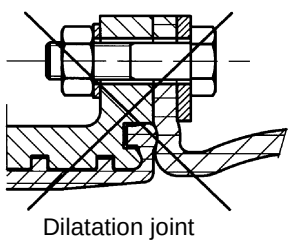
mm

DN	NPS	Opti-mum dia.	Max. dia tolerated		Min. dia. tolerated face of flange	Min. dia. 10 mm from face of flange	Min. dia. 20 mm fromface of flange	Min. dia. tolerated of shoulder of raised face flange
		ø1	ø2a	ø2b	ø3	ø4	ø5	ø6
40	1 ½	40	54	49	32	---	---	77
50	2	49	63	61	33	---	---	86
65	2 ½	65	80	77	55	13	---	107
80	3	77	93	89	71	50	---	121
100	4	96	116	115	90	74	40	141
125	5	123	141,5	140	119	107	87	171
150	6	146	170,5 *	169	144	134	120	196
200	8	196	222 *	220	196	189	178	250
250	10	249	276,5 *	273	249	243	234	306
300	12	298	327,5 *	324	297	291	283	358
350	14	330	361	356	326	321	314	399
400	16	380	412	407	370	366	358	452
450	18	430	463	457	422	416	409	505
500	20	480	515	508	470	464	457	558
550	22	540	568	561	522	516	509	625
600	24	580	617	610	566	560	554	664
650	26	630	668		620	614	608	723
700	28	680	718		671	666	660	773
750	30	730	770		717	711	705	830
800	32	780	820		769	764	758	880
900	36	880	924		869	864	859	987
1000	40	980	1 027		970	965	960	1 094

* Please check the body is well centred between the tie-rods.

NB:
Direct fitting on rubber coated flange and with dilatation joint is not authorized.
Please, consult us.


Rubber coated flange


Dilatation joint

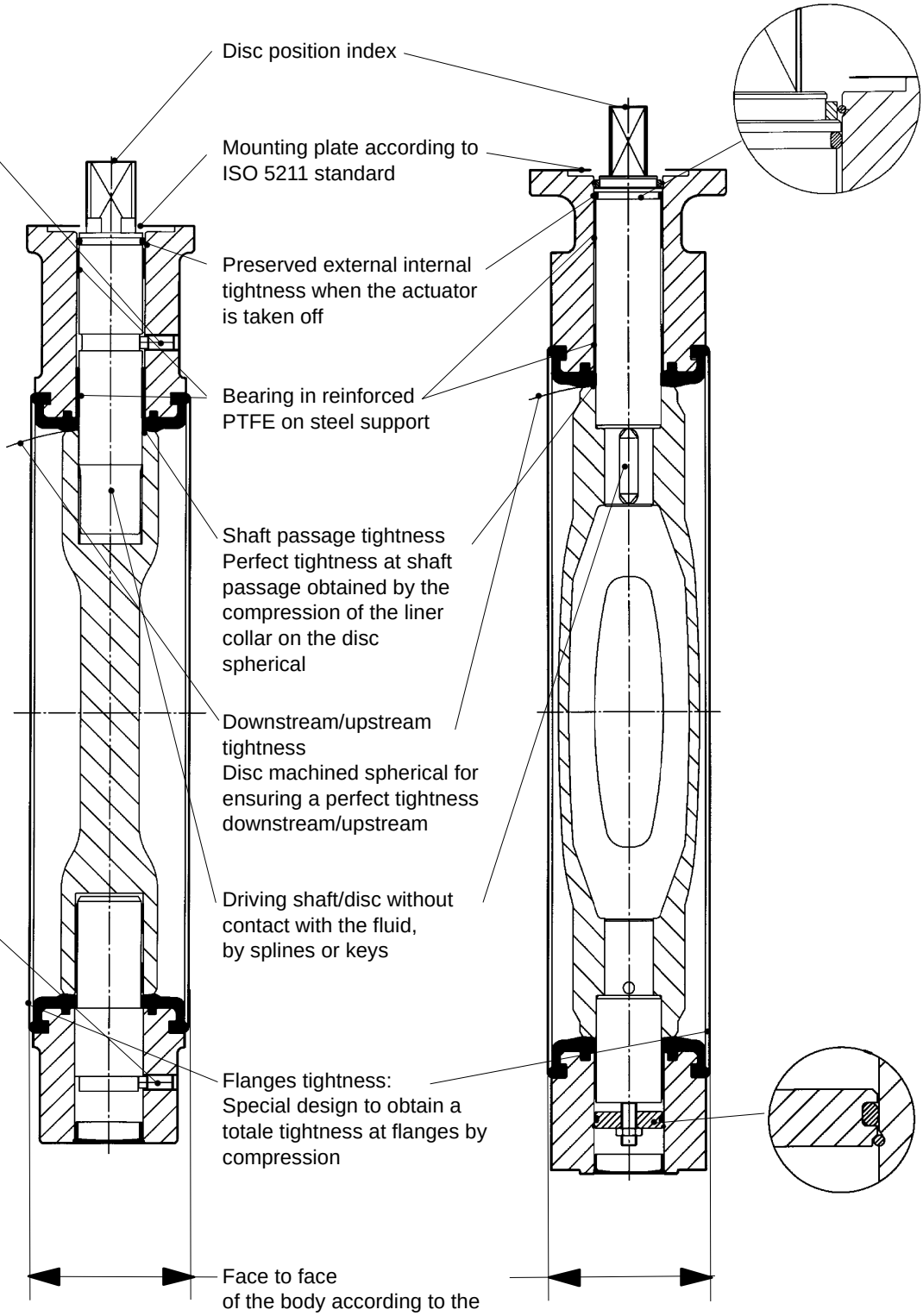
Notes

Notes

Notes

Product features – to our customers' benefit

DN 40 to 600 **DN 650 to 1000**



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