

SERIES M52 WAFER M62 LUG



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FACTORY STANDARD

- Suitable for both gaseous and liquid service
- Phenolic Backed Seat for superior sealing and long term use
- Single-piece stem design assures even torque distribution
- Positive shutoff bi-directionally
- Direct mount automation

DESIGN

Concentric butterfly valve with an elastomer liner, available as wafer M52 and lug type M62. Engineered and manufactured for long-lasting use in highly demanding environments up to 16 bar.

The M52 Wafer / M62 Lug has a standard ductile iron (JS1030) body. The resistant body, the multiple disc combinations and the robust liner available in many different materials, make this M52 Wafer and M62 Lug a multi-purpose, modular and state-of-the-art valve with outstanding durability and resistance.

CARTRIDGE SEAT DESIGN

The cartridge-style seat is created by compression molding a layer of elastomer onto a rigid phenolic backing ring, which supports the elastomer in multiple directions. This compression molding process is much more consistent than the injection molding process used to create molded-style seats. It provides constant pressure to form the seat shape and maintains tighter control of the seat dimensions. Because of the tighter tolerances, cartridge seats offer the best torque consistency and highest wear resistance. This type of seat also improves upon the molded style by making the seat replaceable. In highly abrasive applications where valves need to be replaced on a regular basis, the cartridge seat could simply be replaced rather than the entire valve. Liner materials: EPDM, NBR, VITON, Silicone

DISC MATERIALS:

Aluminium bronze, Stainless steel 316 Rilsan®, Polyurethan, Halar coating Ductile Cast Iron, Nickel plated Ductile Cast Iron, Nickel.

Approved for drinking water according to DVGW, WRAS.

Grease-free, LABS-free and ATEX versions available.

Seals and O-rings are in correspondence with the liner material and shaft bushings PAP Stainless steel with PTFE.

DIMENSIONS DN 40 – DN 600

APPLICATIONS

Our valves are for open-close and regulation. M52 Wafer and M62 Lug valves are suitable for most industrial applications, heating and cooling, air condition systems, water and sewage systems, air, swimming pools.

PRESSURE RATING

DN 40-150 Wafer type M52 : PN16

DN 200-600 Wafer type M52 : PN10

DN50-DN150 LUG type M62 : PN16

DN200-DN600 LUG type M62 : PN10

Flange standard according

EN 1092 PN6/10/16 - ANSI150 - JIS5/JIS10K

TEST STANDARD EN 12266-1

FACE TO FACE EN 558-1-row 20

APPROVALS

CE/PED 97/23/EC category III module H

WRAS

DVGW

Marine body Casting Type Approvals

DNV/GL and LRS

TEMPERATURE RANGE

NBR 0°C / + 80°C

VITON -20°C / +180°C

EPDM -23°C / +120°C

Silicone -50 °C / +250°C

COATING

The valve body, handle and gearbox handwheels are powder coated with a 2-component Epoxy corrosion protection system with a minimum layer thickness of 200 Mu. The Gearbox has a two component wet coating system with a min. Layer thickness of 80-100 Mu and on special request a painting class C3 corrosion protection.

Valve body Color = Blue RAL 5015.

Gearbox / Handle and Gearbox Handwheel Color = Black RAL 9005.

TAG PLATE

The TAG plate is showing a serial number, PN, materials and manufacturer in accordance with EN19.

INSTALLATION

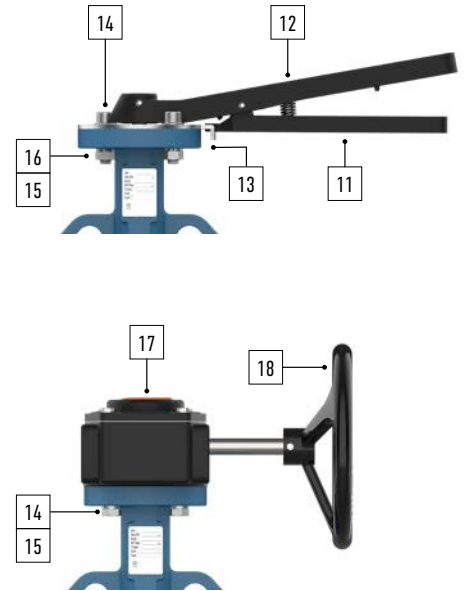
The valves can be fitted horizontally or vertically, it is preferable to have the shaft in a horizontal position. The M62 LUG type can be used as an end of line valve and for permanent use a counter flange must be used at all times.



Material Specifications

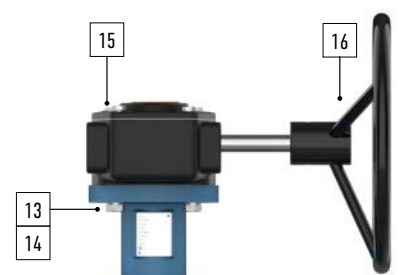
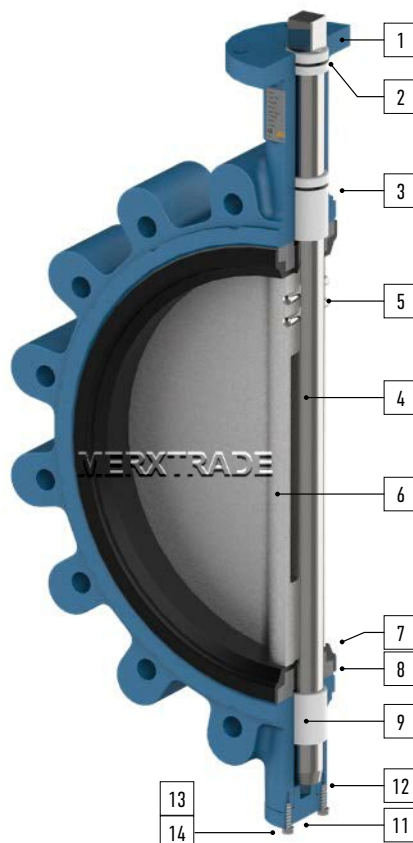
Wafer / Lug DN40 - DN300

No.	Description	Material
1	Body	Ductile Iron
2	Bushing	PTFE
3	O-ring	NBR / EPDM / Viton
4	Shaft	SS 410 / 416
5	Taper Pin	SS 316 / C63000
6	Disc	DI / C95400 / CF8M
7	Liner	NBR / EPDM / Viton
8	Backup Ring	Phenolic
9	Lower Bush	PTFE
10	Nameplate	Stainless Steel
11	Handlever	JS 1030
12	Spring	SS
13	Notch	Steel
14	Bolt	St. 88
15	Washer	Steel
16	Nut	Steel
17	Gearbox	Grey Cast Iron
18	Handwheel	Steel pressed

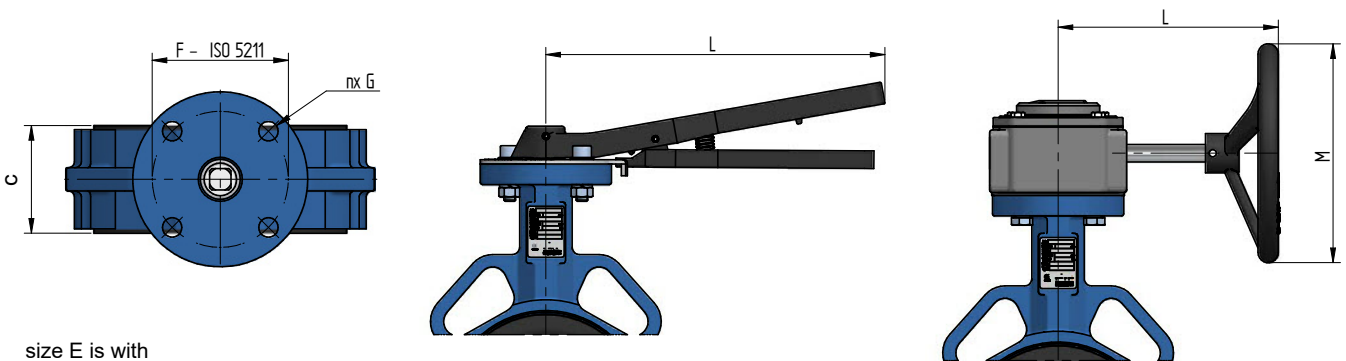
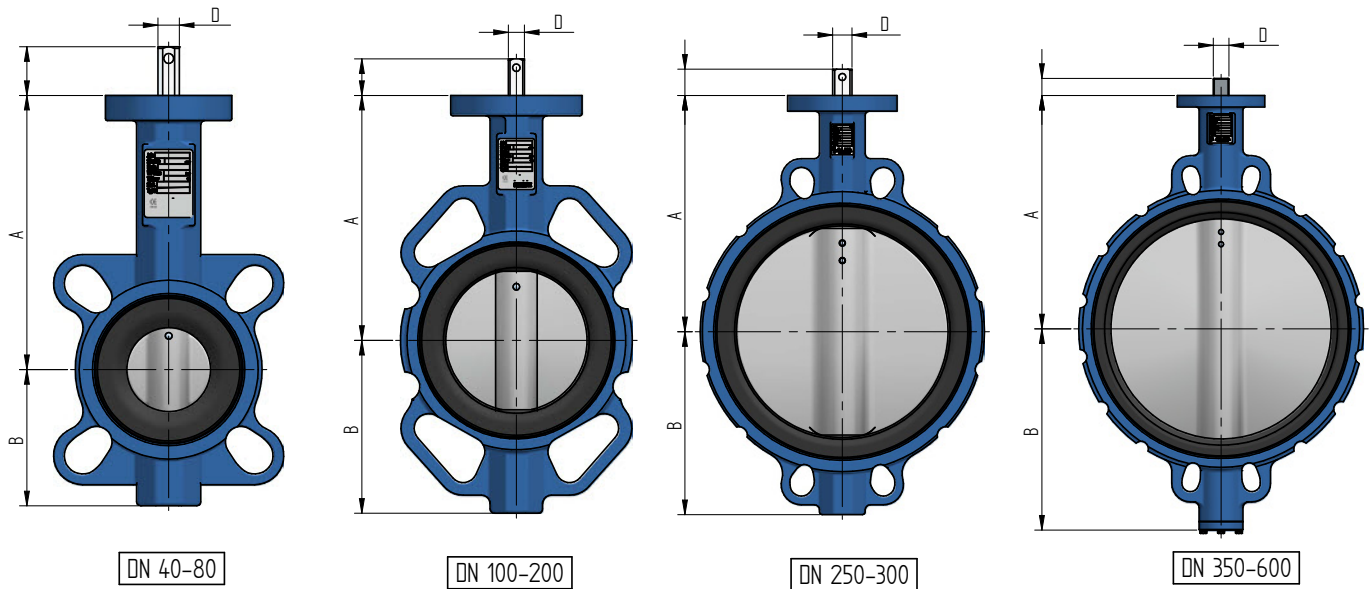


Wafer/Lug DN350 - DN600

No.	Description	Material
1	Body	Ductile Iron JS1030
2	Bushing	PTFE
3	O-ring	NBR / EPDM / Viton
4	Shaft	SS 410 / 416
5	Taper pin	SS 316 / C63000
6	Disc	DI / C95400 / CF8M
7	Liner	NBR / EPDM / Viton
8	Backup Ring	Phenolic
9	Lower Bush	PTFE
10	Nameplate	Stainless Steel
11	Cover	JS 1030
12	O-Ring	NBR / EPDM / Viton
13	Bolt	St.8.8
14	Washer	Steel
15	Gearbox	Grey Cast Iron
16	Handwheel	Steel welded



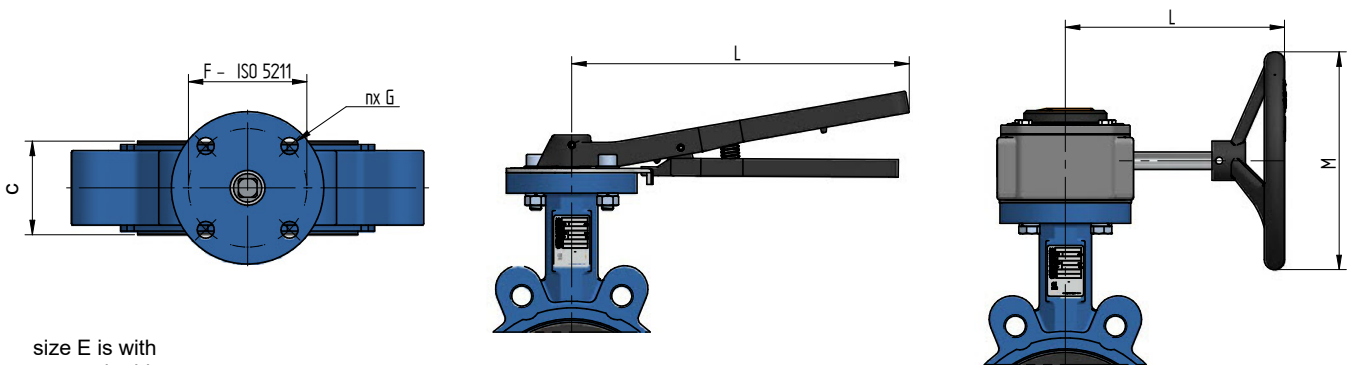
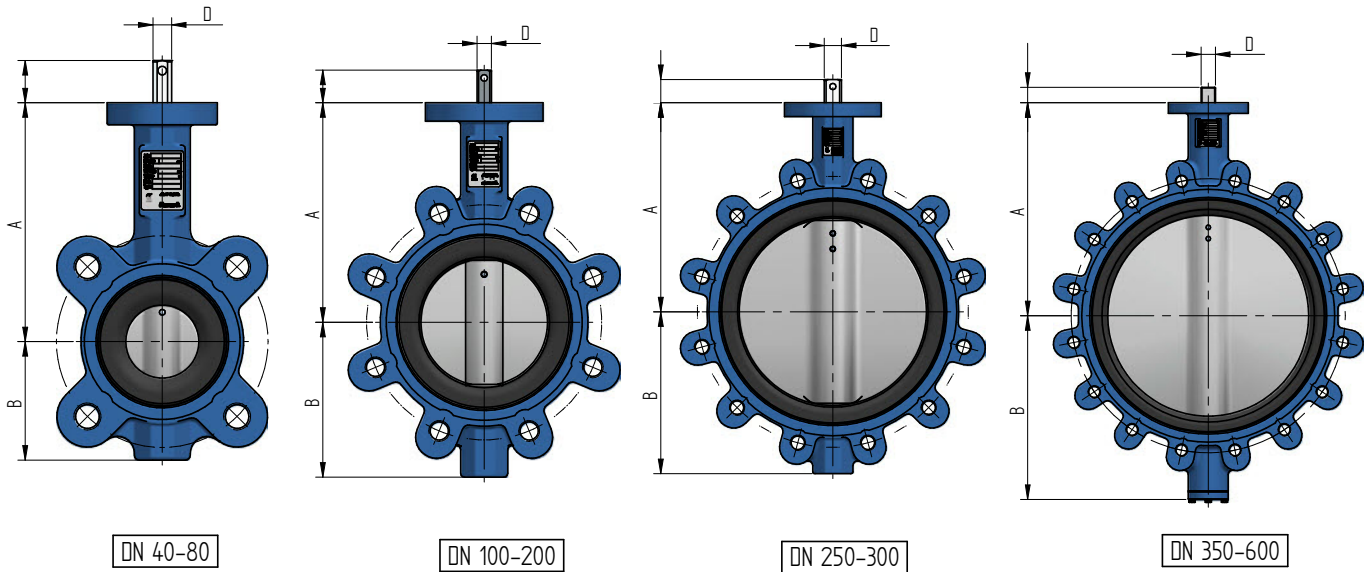
Dimensions Wafer Type S52 DN40 - DN600



size E is with pressed rubber

DN	A	B	C	D	E	F	G	Valve weight in Kg	L handle	L gear	M	Gearbox type
40	130	66	33	11	33	F05	4x $\varnothing 7$	2.0	200	115	$\varnothing 100$	E12
50	141.2	68.6	43	11	42	F05	4x $\varnothing 7$	2.3	200	115	$\varnothing 100$	E12
65	150.4	76	46	11	44.5	F05	4x $\varnothing 7$	3.8	200	115	$\varnothing 100$	E12
80	156.4	95	46	11	44.5	F05	4x $\varnothing 7$	4.2	200	115	$\varnothing 100$	E12
100	167.9	110	52	11	51	F07	4x $\varnothing 10$	4.7	232	150	$\varnothing 125$	E12
125	186.5	129.4	56	14	54.5	F07	4x $\varnothing 10$	6.4	325	150	$\varnothing 125$	E12
150	205.7	142	56	14	54.5	F07	4x $\varnothing 10$	8.0	325	150	$\varnothing 125$	E12
200	230.6	176	60	17	59.6	F07	4x $\varnothing 10$	11.5	325	146	$\varnothing 150$	E25
250	269.9	212	68	22	67	F10	4x $\varnothing 12$	18.2	400	192	$\varnothing 250$	E55
300	327.8	248.5	78	22	75.5	F10	4x $\varnothing 12$	27.7	400	192	$\varnothing 250$	E55
350	368	272	78	27	75.5	F12	4x $\varnothing 14$	36.3	-	272	$\varnothing 300$	E100
400	400	333	102	27	102	F12	4x $\varnothing 14$	52.2	-	272	$\varnothing 300$	E100
450	422	364	114	36	114	F14	4x $\varnothing 18$	64.4	-	332	$\varnothing 500$	E200
500	480	389	127	36	127	F14	4x $\varnothing 18$	95.1	-	332	$\varnothing 500$	E200
600	562	459	154	46	151	F16	4x $\varnothing 22$	156.1	-	336	$\varnothing 500$	E350

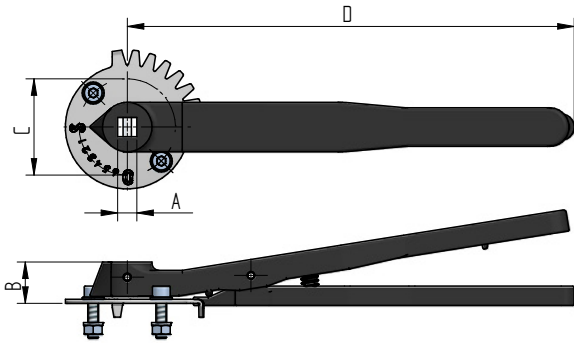
Dimensions Lug Type S62 DN40 - DN600



size E is with pressed rubber

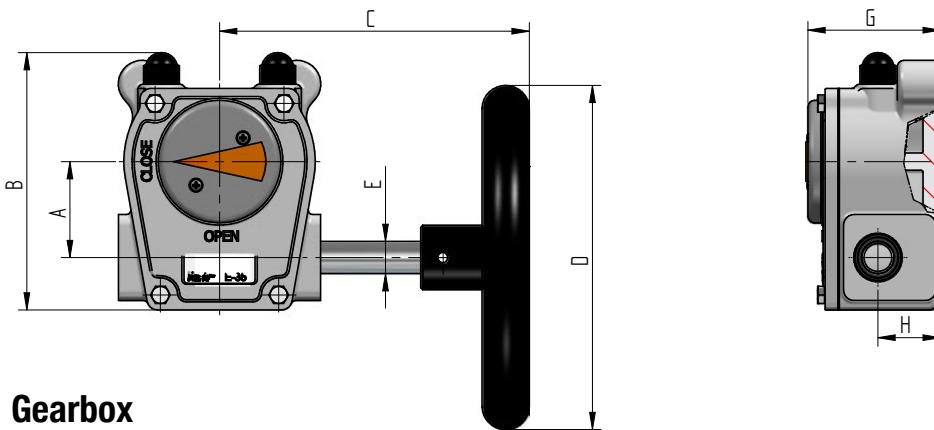
DN	A	B	C	D	E	F	G	Valve weight in Kg	L handle	L gear	M	Gearbox type
40	130	66	33	11	33	F05	4x \varnothing 7	2.5	200	115	\varnothing 100	E12
50	141.2	68.6	43	11	42	F05	4x \varnothing 7	2.7	200	115	\varnothing 100	E12
65	150.4	76	46	11	44.5	F05	4x \varnothing 7	3.0	200	115	\varnothing 100	E12
80	156.4	95	46	11	44.5	F05	4x \varnothing 7	4.2	200	115	\varnothing 100	E12
100	167.9	110	52	11	51	F07	4x \varnothing 10	5.4	232	150	\varnothing 125	E12
125	186.5	129.4	56	14	54.5	F07	4x \varnothing 10	7.9	325	150	\varnothing 125	E12
150	205.7	142	56	14	54.5	F07	4x \varnothing 10	8.8	325	150	\varnothing 125	E12
200	230.6	176	60	17	59.6	F07	4x \varnothing 10	16.4	325	146	\varnothing 150	E25
250	269.9	212	68	22	67	F10	4x \varnothing 12	29.9	400	192	\varnothing 250	E55
300	327.8	248.5	78	22	75.5	F10	4x \varnothing 12	35.0	400	192	\varnothing 250	E55
350	368	272	78	27	75.5	F12	4x \varnothing 14	56.0	-	272	\varnothing 300	E100
400	400	333	102	27	102	F12	4x \varnothing 14	79.6	-	272	\varnothing 300	E100
450	422	364	114	36	114	F14	4x \varnothing 18	111.0	-	332	\varnothing 500	E200
500	480	389	127	36	127	F14	4x \varnothing 18	156.0	-	332	\varnothing 500	E200
600	562	459	154	46	151	F16	4x \varnothing 22	187.1	-	336	\varnothing 500	E350

Actuation + Torque + Kv Values



Lever

Type	A	B	C ISO 5211	D	Weight in KG
1-11	11	25	∅50 - F05	200	0.7
2-11	11	25	∅70 - F07	232	0.8
2-14	14	28	∅70 - F07	325	1.3
2.17	17	28	∅70 - F07	325	1.3
2.22	22	30	∅102 - F10	400	2.0



Gearbox

Type	Torque	Ratio	A	B	C	D	E	G	H	SQUARE	ISO 5211	Weight in KG
E12	120 Nm	1 : 41	37	103	100	∅100/125	∅10	52	24	11-14	F05-F07	1.5
E25	250 Nm	1 : 42	45	120	124	∅150	∅12	64	29	17	F05-F07	2.5
E55	550 Nm	1 : 40	55	152	157	∅250	∅15	73	36	22	F07-F10-F12	5.0
E100	1.000 Nm	1 : 34	71	205	201	∅300	∅20	95	48	27	F10-F12-F14-F16	11.0
E200	2.000 Nm	1 : 38	86	230	229	∅500	∅20	103	51	36	F10-F12-F14-F16	17.0
E350	3.500 Nm	1 : 55	105	263	230	∅500	∅20	106	55	46	F10-F12-F14-F16	19.5

Torque Value Nm

DN	6 bar	10 bar	16 bar
40	10	12.5	13.6
50	13	13.9	15.1
65	13.8	15.4	17.2
80	21	21.7	23.1
100	34.9	37.1	39.8
125	53.8	57.9	61.9
150	84.5	93.9	102
200	154	173	192
250	249	286	323
300	371	429	490
350	466	550	625
400	632	755	846
450	831	1012	1131
500	1093	1350	1431
600	1679	2111	2301

Kv Values m³/h

DN	10°	20°	30°	40°	50°	60°	70°	8°	90°
40	0.2	0.6	2	9	22	36	56	81	110
50	0.4	0.9	3.4	14	35	57	88	126	172
65	0.6	1.4	5.1	21	53	86	132	189	258
80	1	1.9	7.8	31	78	128	197	283	388
100	1.7	3.5	14	55	138	228	352	504	690
125	2.7	5.3	22	86	216	355	549	786	1078
150	3.9	7.8	31	124	310	512	791	1133	1552
200	6.9	14	55	221	552	918	1407	2014	2759
250	10	22	86	345	862	1422	2198	3147	4310
300	15	31	124	497	1241	2048	3166	4531	6207
350	21	42	151	676	1513	2496	3858	5522	7565
400	27	55	200	883	2004	3307	5110	7316	10022
450	35	70	256	1117	2565	4231	6540	9360	12823
500	43	86	319	1379	3194	5270	8144	11658	15970
600	62	124	466	1986	4660	7688	11881	17054	23297

- Incl. 25% Safety factor.
- The above torque values (Nm) have included necessary safety factor from its normal application.
- In case of severe application, it's expected to contact mxt technical dept. for more details.
- The above torque values are based on wet-wet conditions with pressure.
- For Viton liner, please take next higher ΔP

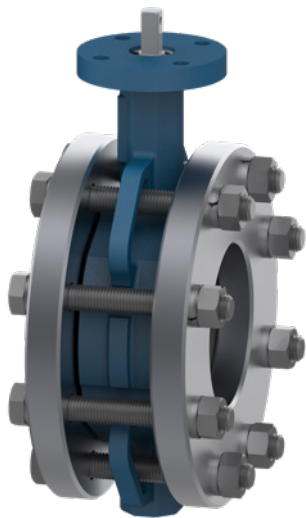
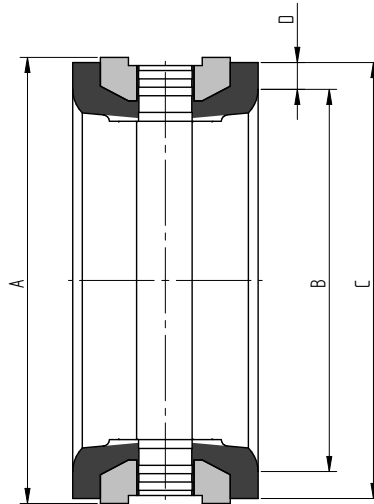
- Flow m³/h at 1 bar pressure drop across the valve Opening angle°

Seat Data + Bolt Length

M52 Wafer / M62 Lug Seat Dimensions

DN	A	B	C	D
40	72	55.2	69.2	7.01
50	76.3	58.9	73.5	7.27
65	89	71	86.2	7.61
80	103.9	85.5	101.1	7.79
100	135	111.5	132.2	9.27
125	159	130.9	156.2	12.66
150	188.4	163.6	185.6	10.99
200	238.2	212.6	235.4	10.23
250	292.4	260.3	289.6	13.36
300	344.2	307.8	341.4	15.59
350	375.1	341.5	372.3	15.39
400	439.2	395.6	436.4	20.39
450	490.1	444.3	487.3	21.49
500	535	495.7	532.2	18.24
600	654.2	595.3	651.4	28.07

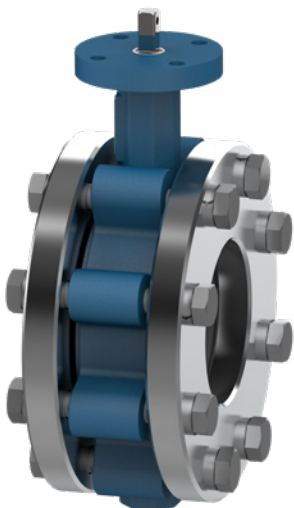
INSTALLATION



M52 Wafer Bolt length (Length by through-bolt by 2 flanges)

DN	Flange	No. of Bolts	Bolt length
40	EN1092-2	4	M16x100
50	EN1092-2	4	M16x110
65	EN1092-2	8	M16x110
80	EN1092-2	8	M16x120
100	EN1092-2	8	M16x120
125	EN1092-2	8	M16x130
150	EN1092-2	8	M20x140
200	EN1092-2	8	M20x150

DN	Flange	No. of Bolts	Bolt length
250	EN1092-2	12	M20x160
300	EN1092-2	12	M20x170
350	EN1092-2	16	M20x180
400	EN1092-2	16	M24x220
450	EN1092-2	20	M24x240
500	EN1092-2	20	M24x260
600	EN1092-2	20	M27x320



M62 Lug (Bolt Length with 1 bolt on each side)

DN	Flange	No. of Bolts	Bolt length
40	EN1092-2	2x 4	M16x45
50	EN1092-2	2x 4	M16x45
65	EN1092-2	2x 8	M16x45
80	EN1092-2	2x 8	M16x45
100	EN1092-2	2x 8	M16x45
125	EN1092-2	2x 8	M16x45
150	EN1092-2	2x 8	M20x50
200	EN1092-2	2x 8	M20x50

DN	Flange	No. of Bolts	Bolt length
250	EN1092-2	2x 12	M20x60
300	EN1092-2	2x 12	M20x60
350	EN1092-2	2x 16	M20x60
400	EN1092-2	2x 16	M24x70
450	EN1092-2	2x 20	M24x80
500	EN1092-2	2x 20	M24x80
600	EN1092-2	2x 20	M27x90