DelVal Series 44-49 High Performance Double Offset Butterfly Valve



The Series 44-49 is DelVal's double offset (high performance) butterfly valve family: three Class 150 and three Class 300 series in wafer, lug and double flanged bodies, with soft, fire safe and metal seat options.

Key data	
Size range	Series 44, 45 – 2" to 48" (DN 50 to 1200); Series 47, 48 – 2" to 24" (DN 50 to 600); Series 46 – 3" to 48" (DN 80 to 1200); Series 49 – 3" to 24" (DN 80 to 600)
Pressure rating	Series 44, 45, 46 – Class 150; Series 47, 48, 49 – Class 300
Body style	Wafer, Lug, Double Flanged
Seat	Ultra, PTFE, RTFE, Metal (SS, Inconel), Firesafe

Pressure and temperature ratings

Body and seat temperature limits

Group	Material	Lower limit (°C)	Upper limit (°C)
BODY	WCB	-29	425
BODY	LCB	-46	345
BODY	CF8	-196	538
BODY	CF8M	-196	538
SEAT	PTFE	-50	204
SEAT	ULTRA	-50	260
SEAT	UHMWPE	-29	93

*Pressure-temperature rating shall be lesser of the shall rating or the seat rating.

Standards and specifications

CL600 valves can be offered on request.
* Pressure-temperature rating shall be lesser of the shell rating or the seat rating.
** Consult UEC® for sizes not listed.

Design, testing and certification standards

Item	Detail
Reference Design Standards	API 609, BS EN 593, MSS SP-68
Face to Face	API 609, ISO 5752, BS EN 558, MSS SP- 68
Testing	API 598, ISO 5208, BS EN 12266, MSS SP-68 ANSI-FCI 70-2 Class IV for Metal Seat
Pressure Temperature	ASME B16.34
Flange Accommodation	ASME B16.5, ASME B16.47 and other international standards
NACE (optional)	ANSI/ NACE MR0175 / ISO 15156, ANSI/ NACE MR0103 / ISO 17945
Fire Safe Certified (optional)	API 607
Fugitive Emission (optional)	ISO 15848
Pressure Equipment Compliance	PED 2014 / 68 / EU
Body Style	Wafer, Lug, Double Flanged
Pressure Rating	CL150 to CL300
Temp. Range*	-50°C to 260°C (Soft Seat/ Fire Safe Seat) -50°C to 427°C (Metal Seat)
Size Range**	50 to 1500 (2" to 60")
UL/ULC 1091(optional)	DN50 TO DN300 (2" to 12") -25 bar (365psi)

Operating torque

Class 150, soft seat (Nm)

Valve size (inch)	DN	ΔP 3.5 bar	ΔP 7 bar	ΔP 10 bar	ΔP 16 bar	ΔP 20 bar
2	50	24	26	27	28	29
2 ½	65	27	28	29	31	32
3	80	16	20	23	25	28
4	100	25	30	33	36	48
5	125	59	65	70	78	83
6	150	62	72	78	87	94
8	200	148	162	175	199	214
10	250	175	190	220	260	290
12	300	207	234	270	322	410
14	350	389	482	579	735	836
16	400	496	618	744	936	1076
18	450	646	808	966	1224	1409
20	500	862	1087	1296	1663	1897
24	600	1305	1648	2008	2558	2958
26	650	1597	1950	2210	2610	3170
28	700	1755	2150	2490	2830	3360
30	750	2395	2912	3429	4256	4825
32	800	3099	3762	4529	5456	6325
36	900	3865	4762	5659	7094	8081
40	1000	6102	7601	9100	11499	13152
42	1050	6883	8272	9718	12280	14043
44	1100	7725	8960	10320	13040	14910
48	1200	9950	12450	14770	18806	21420

Note:
1. Flow from retainer side is the preferred flow direction. Flow from stem side is non-preferred flow direction. Arrow on valve body indicates the preferred flow direction.
2. BTO-Break to Open; RTO-Run to Open; ETO-End to Open; BTC-Break to Close; RTC-Run to Close; ETC-End to Close.
3. Above mention tabulated torque values are BTO & ETC for preferred flow direction.
4. RTO, ETO, BTC & RTC = 40% of the above tabulated values for preferred direction.
5. For non-preferred flow direction torque values of soft seat, 2" to 6" - multiply preferred values by 1.24; 8" - multiply preferred values by 1.120; 10" to 12" - multiply preferred values by1.20, 14" to 24" - multiply preferred values by 1.24, 26" to 48" - multiply preferred values by 1.30
6. For non-preferred flow direction torque values of fire safe seat & metal seat , multiply preferred values by 1.25
7. For actuator sizing, the minimum valve differential pressure shall be 4 bar. For differential pressures above 4 bar the intermediated values to be interpolated. For gear operator sizing, the full rated torque to be considered.
8. The published torque values are without factor of safety. The following factor of safety shall be considered for operator sizing: Clean service (liquid, steam, clean gas and non-abrasive)= 1.3 High solids slurry= 1.5 Dry gas= 1.7

Class 150, fire-safe seat (Nm)

Valve size (inch)	DN	ΔP 3.5 bar	ΔP 7 bar	ΔP 10 bar	ΔP 16 bar	ΔP 20 bar
2	50	46	48	50	53	54
2 ½	65	48	51	52	54	56
3	80	62	63	65	69	71
4	100	76	80	84	90	96
5	125	86	93	101	113	122
6	150	144	156	170	190	202
8	200	236	262	281	317	346
10	250	332	369	412	477	523
12	300	494	568	640	747	831
14	350	568	651	730	871	960
16	400	655	761	882	1059	1190
18	450	834	1040	1267	1597	1843

Valve size (inch)	DN	ΔP 3.5 bar	ΔP 7 bar	ΔP 10 bar	ΔP 16 bar	ΔP 20 bar
20	500	1180	1498	1806	2335	2674
22	550	1409	1773	2161	2752	3181
24	600	1858	2197	2558	3134	3485
26	650	2015	2460	2788	3293	3999
28	700	2214	2712	3141	3570	4239
30	750	3021	3674	4326	5369	6087
32	800	3910	4746	5714	6883	7979
34	850	4433	5461	6490	8136	9268
36	900	4876	6007	7139	8949	10194
38	950	6998	8717	10436	13188	15083
40	1000	7698	9589	11480	14506	16592
42	1050	8683	10435	12260	15492	on request
44	1100	9745	11303	13019	16450	18810
48	1200	12552	15706	18633	23724	27022

Class 150, metal seat (Nm)

Valve size (inch)	DN	ΔP 3.5 bar	ΔP 7 bar	ΔP 10 bar	ΔP 16 bar	ΔP 20 bar
2	50	58	60	63	66	70
2 ½	65	68	70	73	76	79
3	80	84	89	91	94	99
4	100	107	113	117	125	134
5	125	119	129	143	159	171
6	150	201	219	236	265	280
8	200	333	369	394	446	482
10	250	490	554	624	707	795
12	300	747	846	964	1118	1254
14	350	880	1021	1132	1347	1485
16	400	1015	1184	1365	1654	1839
18	450	1302	1637	1944	2506	2829
20	500	1814	2304	2789	3638	4149
24	600	2880	3432	3957	4876	5388

Class 300, soft seat (Nm)

Valve size (inch)	DN	ΔP 10 bar	ΔP 20 bar	ΔP 25 bar	ΔP 40 bar	ΔP 50 bar
2	50	27	29	32	40	42
2½	65	29	32	34	42	47
3	80	34	40	44	54	60
4	100	49	68	74	95	108
5	125	88	111	123	161	186
6	150	120	154	175	234	275
8	200	228	300	341	459	545
10	250	338	461	530	731	876
12	300	473	639	726	1002	1189
14	350	724	1058	1258	1807	2194
16	400	879	1270	1492	2181	2645
18	450	1136	1652	1935	2786	3371
20	500	1501	2191	2605	3761	4589
24	600	2047	2979	3485	5101	6158

Note:
1. Flow from retainer side is the preferred flow direction. Flow from stem side is non-preferred flow direction. Arrow on valve body indicates the preferred flow direction.
2. BTO-Break to Open; RTO-Run to Open; ETO-End to Open; BTC-Break to Close; RTC-Run to Close; ETC-End to Close.
3. Above mention tabulated torque values are BTO & ETC for preferred flow direction.
4. RTO, ETO, BTC & RTC = 40% of the above tabulated values for preferred direction.
5. For non-preferred flow direction torque values of soft seat, fire safe seat & metal seat, multiply preferred values by 1.25
6. For actuator sizing, the minimum valve differential pressure shall be 10 bar. For differential pressures above 10 bar the intermediated values to be interpolated. For gear operator sizing, the full rated torque to be considered.
7. The published torque values are without factor of safety. The following factor of safety shall be considered for operator sizing: Clean service (liquid, steam, clean gas and non-abrasive)= 1.3 High solids slurry= 1.5 Dry gas= 1.7

Class 300, fire-safe seat (Nm)

Valve size (inch)	DN	ΔP 10 bar	ΔP 20 bar	ΔP 25 bar	ΔP 40 bar	ΔP 50 bar
2	50	45	49	50	54	56
2½	65	46	50	53	56	59
3	80	58	64	66	70	74
4	100	75	86	on request	115	130
5	125	99	116	on request	155	174
6	150	164	198	on request	272	311
8	200	270	330	on request	461	527
10	250	405	488	on request	670	771
12	300	660	862	on request	1293	1520
14	350	741	966	on request	1462	1718
16	400	898	1212	on request	1925	2296
18	450	1382	2042	on request	3508	4287
20	500	1924	2895	on request	5027	6064
22	550	2144	3155	on request	6526	7909
24	600	3091	4564	on request	7766	9412

Class 300, metal seat (Nm)

Valve size (inch)	DN	ΔP 10 bar	ΔP 20 bar	ΔP 25 bar	ΔP 40 bar	ΔP 50 bar
2	50	63	70	75	79	83
2.5	65	73	79	83	89	91
3	80	91	99	102	108	115
4	100	117	134	150	179	202
5	125	156	180	196	241	269
6	150	255	309	340	426	488
8	200	422	511	573	721	818
10	250	627	760	828	1039	1200
12	300	1040	1334	1511	2012	2394
14	350	1146	1508	1703	2303	2686
16	400	1392	1890	2162	3009	3588
18	450	2159	3217	3745	5435	6648
20	500	3032	4511	5351	7893	9456
24	600	4812	7189	8384	12122	14712

Materials of construction

*Other materials are available on request.
**Recommended spares.
Gland Packing/Cover Gasket MOC is dependent on application service.
#CL 150 only.

Parts and materials, wafer and lug 2" to 12"

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
1	Body	ASTM A 216 WCB/WCC ASTM A 352 LCC	ASTM A 351 CF8M/CF3M
2	Disc	ASTM A 351 CF8M/CF3M	ASTM A 351 CF8M/CF3M
3**	Seat (Soft)	PTFE#/ULTRA/RPTFE/UHMWPE	PTFE#/ULTRA/RPTFE UHMWPE
3a**	Seat (Fire Safe)	ASTM A 240 SS316 + ULTRA	ASTM A 240 SS316 + ULTRA
3b**	Seat (Metal)	ASTM A 240 SS316	ASTM A 240 SS316
4	Stem (Soft Seat)	ASTM A 322 4130 + ENP ASTM A 479 SS410 –cond.3 ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19 ASTM A 479 SS316 Strain Hardened Level 2
4	Stem (Fire-Safe Seat)	ASTM A 479 SS410 –cond. 3 ASTM A 564 Type 630(17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
4	Stem (Metal Seat)	ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
5	Seat Retaining Ring	ASTM A 516 Gr. 70 Steel	ASTM A 240 SS316/SS316L ASTM A 240 SS304
6	Disc Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
7**	Bearing (Soft Seat)	Bear-X	Bear-X
7**	Bearing(Fire Safe Seat and Metal Seat)	Fireproof DFP-D1	Fireproof DFP-D1
8**	Wedge Key	ASTM A564 Type 630(17- 4PH)	ASTM A 564 Type630 (17-4PH) ASTM A 479 XM19 ASTM A 479 SS316
9	Retainer Screw	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M
10	Packing Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
11**	Gland Packing	PTFE (CHEVRON V-RING)/ Graphite	PTFE (CHEVRON V-RING)/ Graphite
12	Gland	ASTM A 479 SS316/ SS316L	ASTM A 479 SS316/ SS316L
13**	Stem Retainer	ASTM A 313 SS302	ASTM A 313 SS302
14	Gland Flange	ASTM A 516 Gr. 70 ASTM A105 ASTM A216 WCB Steel	ASTM A 240 SS316 ASTM A 351 CF8M ASTM A182 F316
15	Stud	ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ASTM A 193 Gr. B8M ASTM A 1082 TYPE 630 (17-4PH)
16**	Belleville Spring	ASTM A 666 SS 304	ASTM A 666 SS 316
17	Hex Nut	ASTM A 194 Gr. 8M ASTM A 194 Gr. 2H ASTM A 194 Gr. 2HM	ASTM A 194 Gr. 8M ASTM A 1082 TYPE 630 (17-4PH)
18**	Cover Gasket	PTFE#/Graphite	PTFE#/Graphite
19	Bottom Cover	ASTM A 516 Gr. 70 ASTM A 240 SS304 Steel	ASTM A 240 SS316/ SS316L
20	Spring Washer	ASTM A 580 SS304	ASTM A 580 SS304

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
21	Hex HD Screw	ISO 3506 A4-70 ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M
22**	Seat Gasket (Fire-Safe Seat and Metal Seat)	Graphite	Graphite

Item 18,19, 20 & 21 are not applicable for 2"/DN50 CL150

Parts and materials, wafer and lug 14" to 48"

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
1	Body	ASTM A 216 WCB/WCC ASTM A 352 LCC	ASTM A 351 CF8M/CF3M
2	Disc	ASTM A 351 CF8M/CF3M	ASTM A 351 CF8M/CF3M
3**	Seat (Soft)	PTFE#/ULTRA/RPTFE/UHMWPE	PTFE#/ULTRA/RPTFE/UHMWPE
3a**	Seat (Fire Safe)	ASTM A 240 SS316 + ULTRA	ASTM A 240 SS316 + ULTRA
3b**	Seat (Metal)	ASTM A 240 SS316	ASTM A 240 SS316
4	Stem (Soft Seat)	ASTM A 322 4130 + ENP ASTM A 479 SS410 –cond. 3 ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19 ASTM A 479 SS316 Strain Hardened Level 2
4	Stem (Fire-Safe Seat)	ASTM A 479 SS410 –cond. 3 ASTM A 564 Type 630(17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
4	Stem (Metal Seat)	ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
5	Seat Retaining Ring	ASTM A 516 Gr. 70 Steel	ASTM A 240 SS316/SS316L ASTM A 240 SS304
6	Disc Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
7**	Bearing (Soft Seat)	Bear-X	Bear-X
7**	Bearing(Fire Safe Seat and Metal Seat)	Fireproof DFP-D1	Fireproof DFP-D1
8**	Wedge Key	ASTM A564 Type 630(17- 4PH)	ASTM A 564 Type630(17-4PH) ASTM A 479 XM19 ASTM A 479 SS316
9	Retainer Screw	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M
10	Packing Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
11**	Gland Packing	PTFE (CHEVRON V-RING)/ Graphite	PTFE (CHEVRON V-RING)/ Graphite
12	Gland	ASTM A 479 SS316/ SS316L	ASTM A 479 SS316/ SS316L
13**	Stem Retainer	ASTM A 313 SS302	ASTM A 313 SS302
14	Gland Flange	ASTM A 516 Gr. 70 ASTM A105 ASTM A216 WCB Steel	ASTM A 240 SS316 ASTM A 351 CF8M ASTM A182 F316
15	Stud	ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ASTM A 193 Gr. B8M ASTM A 1082 TYPE 630 (17-4PH)
16**	Belleville Spring	ASTM A 666 SS 304	ASTM A 666 SS 316
17	Hex Nut	ASTM A 194 Gr. 8M ASTM A 194 Gr. 2H ASTM A 194 Gr. 2HM	ASTM A 194 Gr. 8M ASTM A 1082 TYPE 630 (17-4PH)
18**	Cover Gasket	PTFE#/Graphite	PTFE#/Graphite
19	Bottom Cover	ASTM A 516 Gr. 70 ASTM A 240 SS304 Steel	ASTM A 240 SS316/ SS316L
20	Spring Washer	ASTM A 580 SS304	ASTM A 580 SS304
21	Hex HD Screw	ISO 3506 A4-70 ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
22**	Seat Gasket (Fire-Safe Seat and Metal Seat)	Graphite	Graphite
23	Mounting Plate	ASTM A516 Gr. 70 ASTM A240 SS304 Steel	ASTM A240 SS316/ SS316L
24	Counter Sunk Screw	ISO 3506 A4-70	ISO 3506 A4-70

Parts and materials, double flanged 2" to 48"

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
1	Body	ASTM A 216 WCB/WCC ASTM A 352 LCC	ASTM A 351 CF8M/CF3M
2	Disc	ASTM A 351 CF8M/CF3M	ASTM A 351 CF8M/CF3M
3**	Seat (Soft)	PTFE#/ULTRA/RPTFE/ UHMWPE	PTFE#/ULTRA/RPTFE/UHMWPE
3a**	Seat (Fire Safe)	ASTM A 240 SS316 + ULTRA	ASTM A 240 SS316 + ULTRA
3b**	Seat (Metal)	ASTM A 240 SS316	ASTM A 240 SS316
4	Stem (Soft Seat)	ASTM A 322 4130 + ENP ASTM A 479 SS410 –cond. 3 ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19 ASTM A 479 SS316 Strain Hardened Level 2
4	Stem (Fire Safe Seat)	ASTM A 479 SS410 –cond. 3 ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
4	Stem (Metal Seat)	ASTM A 564 Type 630 (17-4PH)	ASTM A 564 Type 630 (17-4PH) ASTM A 479 XM19
5	Seat Retaining Ring	ASTM A 516 Gr. 70 Steel	ASTM A 240 SS316/SS316L ASTM A 240 SS304
6	Disc Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
7**	Bearing (Soft Seat)	Bear-X	Bear-X
7**	Bearing (Fire Safe Seat and Metal Seat)	Fireproof DFP-D1	Fireproof DFP-D1
8**	Wedge Key	ASTM A 564 Type 630 (17-4PH)	ASTM A564 Type 630(17-4PH) ASTM A 479 XM19 ASTM A 479 SS316
9	Retainer Screw	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M
10	Packing Spacer	ASTM A 479 SS316/SS316L	ASTM A 479 SS316/SS316L
11**	Gland Packing	PTFE (CHEVRON V-RING)/ Graphite	PTFE (CHEVRON V-RING)/ Graphite
12	Gland	ASTM A 479 SS316/ SS316L	ASTM A 479 SS316/ SS316L
13**	Stem Retainer	ASTM A 313 SS302	ASTM A 313 SS302
14	Gland Flange	ASTM A 516 Gr. 70 ASTM A105 ASTM A216 WCB Steel	ASTM A 240 SS316 ASTM A 351 CF8M ASTM A182 F316
15	Stud	ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ASTM A 193 Gr. B8M ASTM A 1082 TYPE 630 (17-4PH)
16**	Belleville Spring	ASTM A 666 SS 304	ASTM A 666 SS 316
17	Hex Nut	ASTM A 194 Gr. 8M ASTM A 194 Gr. 2H ASTM A 194 Gr. 2HM	ASTM A 194 Gr. 8M ASTM A 1082 TYPE 630 (17-4PH)
18**	Cover Gasket	PTFE/Graphite	PTFE/Graphite
19	Bottom Cover	ASTM A 516 Gr. 70 ASTM A 240 SS304 Steel	ASTM A 240 SS316/ SS316L
20	Spring Washer	ASTM A 580 SS304	ASTM A 580 SS304
21	Hex HD Screw	ISO 3506 A4-70 ASTM A 193 Gr. B7 ASTM A 193 Gr. B7M ASTM A 193 Gr. B8M	ISO 3506 A4-70 ASTM A 1082 TYPE 630 (17-4PH) ASTM A 193 Gr. B8M

Item	Description	Standard material* (carbon steel)	Standard material* (stainless steel)
22**	Seat Gasket (Fire-Safe Seat and Metal Seat)	Graphite	Graphite
23	Bracket	Steel ASTM A240 SS304	ASTM A 240 SS316/ SS316L
24	Spring Washer	ASTM A240 SS304	ASTM A240 SS304
25	Hex HD Screw	ISO 3506 A4-70	ISO 3506 A4-70

Other technical data

Special applications

Item	Detail
Vacuum	Standard soft seat and fire safe seat valves are rated for tight shut-off of vacuum to 1 mbar.
Oxygen	Valves for critical gaseous oxygen service are specially prepared, cleaned, inspected, assembled and tested to ensure removal of all burrs, sharp edges, dirt, hydrocarbon oil or grease and other contaminants.
NACE Service	Valves conforming to NACE MR0175 and MR0103 are available. These valves are well suited for oil and gas industry applications requiring resistant materials to sulfide stress cracking.
Steam	Valves are suitable for steam up to 14 bar for CL150 and up to 31 bar for CL300 (Consult UEC for seat configuration).

Dimensions and weights

Class 150 wafer and lug, Series 44/45 (mm) (columns 1 of 2)

Valve size (inch)	DN	ØA	ØA1	*B	C	E	Top flange BC	Top flange no. of holes	Top flange hole dia.	ØG	H	J
2	50	97	97	43	68	125	70	4	10	14.0	10	32
2½	65	121	121	48	96	130	70	4	10	16.0	11	32
3	80	139	139	48	108	150	70	4	10	16.0	11	32
4	100	170	170	54	123	172	70	4	10	16.0	11	32
5	125	186	186	57	139	188	70/102	4	10/11	19.0	13	32
6	150	216	216	57	148	205	70/102	4	10/12	19.0	13	32
8	200	269	269	64	173	240	125	4	14	22.0	16	32
10	250	324	324	71	217	272	125	4	14	30.0	22	51
12	300	381	378	81	249	310	125	4	14	35.0	24	51
14	350	413	413	92	284	405	125/140	4	14/18	40.0	–	51
16	400	470	470	102	315	456	140/165	4	18/22	50.0	–	64
18	450	534	534	114	339	491	140/165	4	18/22	55.0	–	64
20	500	584	584	127	375	536	165	4	22	60.0	–	102
22	550	642	642	154	428	614	165/254	4/8	22/18	70.0	–	102
24	600	695	695	154	438	634	165/254	4/8	22/18	70.0	–	102
26	650	749	749	165	475	684	254	8	18	76.2	–	102
28	700	800	762	165	500	730	254/298	8	18/22	76.2	–	102
30	750	857	857	190	540	720	254/298	8	18/22	88.9	–	102
32	800	914	864	190	560	781	298	8	22	88.9	–	102
36	900	1022	965	203	650	860	298	8	22	101.6	–	134
40	1000	1124	1124	251	732	990	356	8	33	120.0	–	150
42	1050	1194	1194	254	766	1019	356	8	33	120.0	–	150
44	1100	1245	1245	254	785	1050	356	8	33	130.0	–	150
48	1200	1359	1359	276	810	1080	356	8	33	130.0	–	150

Class 150 wafer and lug, Series 44/45 (mm) (columns 2 of 2)

Valve size (inch)	DN	Key size	K	Lug bolting BC	Lug bolting no. of holes	Lug bolting tapping (UNC/UN-2B)	Approx. weight, wafer (kg)	Approx. weight, lug (kg)
2	50	–	39.80	120.7	4	5/8-11	3.3	4.3
2½	65	–	51.60	139.7	4	5/8-11	4.5	5.3
3	80	–	68.40	152.4	4	5/8-11	6.3	7.0
4	100	–	89.70	190.5	8	5/8-11	8.3	12.0
5	125	–	110.80	215.9	8	3/4-10	9.0	13.4
6	150	–	138.70	241.3	8	3/4-10	14.0	16.0
8	200	–	183.20	298.5	8	3/4-10	22.0	29.0
10	250	–	232.60	362.0	12	7/8-9	32.0	43.0
12	300	–	277.70	431.8	12	7/8-9	48.5	67.0
14	350	12.00 × 08.00	307.82	476.3	12	1-8	84.0	108.0
16	400	12.00 × 10.00	354.00	539.8	16	1-8	118.0	149.0
18	450	16.00 × 10.00	405.00	577.9	16	1 1/8-8	154.0	177.0
20	500	18.00 × 11.00	446.30	635.0	20	1 1/8-8	204.0	257.0
22	550	20.00 × 12.00	474.00	692.2	20	1 1/4-8	285.0	335.0
24	600	20.00 × 12.00	532.60	749.3	20	1 1/4-8	352.0	405.0
26	650	19.05 × 19.05	605.00	806.4	24	1 1/4-8	450.0	530.0
28	700	19.05 × 19.05	624.98	863.6	28	1 1/4-8	515.0	620.0
30	750	22.23 × 15.88	650.00	914.4	28	1 1/4-8	654.0	717.0
32	800	22.23 × 15.88	697.10	977.9	28	1 1/2-8	670.0	850.0
36	900	25.4 × 19.05	787.50	1085.8	32	1 1/2-8	865.0	1198.0
40	1000	32.00 × 18.00	870.00	1200.2	36	1 1/2-8	1500	1950.0
42	1050	32.00 × 18.00	920.00	1257.3	36	1 1/2-8	1850	2050.0
44	1100	32.00 × 18.00	1040.00	1314.4	40	1 1/2-8	1999	2550.0
48	1200	32.00 × 18.00	1118.00	1422.4	44	1 1/2-8	2250	2800.0

Class 300 wafer and lug, Series 47/48 (mm) (columns 1 of 2)

Valve size (inch)	DN	ØA	ØA1	*B	C	E	Top flange BC	Top flange no. of holes	Top flange hole dia.	ØG	H	J
2	50	102	102	43	86	133	70	4	10	14.0	10	32
2½	65	125	125	48	108	146	70	4	10	16.0	11	32
3	80	132	139	48	109	158	70	4	10	16.0	11	32
4	100	170	170	54	123	172	70	4	10	16.0	11	32
5	125	186	186	59	139	203	70/102	4	10/12	22.0	16	32
6	150	216	216	59	163	220	70/102	4	10/12	22.0	16	32
8	200	270	270	73	200	278	125	4	14	30.0	22	51
10	250	326	326	83	230	300	125	4	14	35.0	24	51
12	300	381	381	92	267	341	140/165	4	18/22	40.0	29	51
14	350	413	413	117	315	457	140/165	4	18/22	55.0	–	64
16	400	470	470	133	365	528	165	4	22	55.0	–	64
18	450	533	533	149	383	591	254	8	18	70.0	–	102
20	500	584	584	159	436	602	254/298	8	18/22	80.0	–	102
22	550	642	642	181	494	780	298	8	22	100.0	–	134
24	600	692	692	181	504	795	298	8	22	100.0	–	134

*Face to Face dimension 'B' conforms to API 609 Category B / BS EN 558 for sizes up to DN 600 (24"), CL150 and CL300.
Please consult UEC® for other dimensions.

Class 300 wafer and lug, Series 47/48 (mm) (columns 2 of 2)

Valve size (inch)	DN	Key size	K	Lug bolting BC	Lug bolting no. of holes	Lug bolting tapping (UNC/UN-2B)	Approx. weight, wafer (kg)	Approx. weight, lug (kg)
2	50	–	37.80	127.0	8	5/8-11	3.5	5.0
2½	65	–	50.60	149.2	8	3/4-10	5.3	6.5
3	80	–	67.80	168.3	8	3/4-10	6.1	8.5
4	100	–	90.10	200.0	8	3/4-10	8.6	12.0
5	125	–	106.00	235.0	8	3/4-10	9.2	16.7
6	150	–	137.60	269.9	12	3/4-10	18.0	25.0
8	200	–	181.80	330.2	12	7/8-9	32.0	43.0
10	250	–	225.30	387.4	16	1-8	45.0	61.0
12	300	–	273.00	450.8	16	1 1/8-8	78.2	100.0
14	350	16.00 × 10.00	289.06	514.4	20	1 1/8-8	130.0	173.0
16	400	16.00 × 10.00	339.60	571.5	20	1 1/4-8	178.0	224.0

Valve size (inch)	DN	Key size	K	Lug bolting BC	Lug bolting no. of holes	Lug bolting tapping (UNC/UN-2B)	Approx. weight, wafer (kg)	Approx. weight, lug (kg)
18	450	20.00 × 12.00	380.70	628.6	24	1 1/4-8	220.0	385.0
20	500	22.00 × 14.00	408.10	685.8	24	1 1/4-8	398.0	453.0
22	550	28.00 × 16.00	470.00	743.00	24	1 1/2-8	475.0	790.0
24	600	28.00 × 16.00	500.64	812.8	24	1 1/2-8	525.0	845.0

*Face to Face dimension 'B' conforms to API 609 Category B / BS EN 558 for sizes up to DN 600 (24"), CL150 and CL300.
Please consult UEC® for other dimensions.

Class 150 double flanged, Series 46 (mm)

Valve size (inch)	DN	ØA	*B	C	E	Top flange BC	Top flange no. of holes	Top flange hole dia.	ØG	H	J	Key size	K	Approx. weight (kg)
2	50	165	109	93	163	50/70	4	8/9	14.0	10	32	–	35.00	11.00
2 ½	65	178	112	101	162	70	4	9	16.0	11	32	–	35.08	12.00
3	80	202	114	118	190	70/102	4	9/11	16.0	11	32	–	54.70	15.50
4	100	230	127	139	220	70/102	4	9/11	16.0	11	32	–	79.67	21.50
5	125	255	140	139	220	70/102	4	9/11	19.0	13	32	–	95.71	30.00
6	150	285	140	151	220	70/102	4	9/11	19.0	13	32	–	130.04	33.00
8	200	345	152	183	277	102/125	4	11/13	22.0	–	32	06.00 × 06.00	179.09	53.00
10	250	405	165	217	304	102/125	4	11/13	30.0	–	51	08.00 × 07.00	224.40	73.00
12	300	485	178	265	380	125	4	13	35.0	–	51	10.00 × 08.00	270.22	106.00
14	350	535	190	284	405	125/140	4	14/18	40.0	–	51	12.00 × 08.00	296.19	170.00
16	400	595	216	315	484	140/165	4	18/22	50.0	–	64	12.00 × 10.00	346.34	198.00
18	450	635	222	339	491	140/165	4	18/22	55.0	–	64	16.00 × 10.00	397.01	280.00
20	500	700	229	390	577	165/254	4/8	22/18	60.0	–	102	18.00 × 11.00	439.62	349.00
22	550	754	267	428	615	254	8	18	70.0	–	102	20.00 × 12.00	460.00	395.00
24	600	815	267	438	634	254	8	18	70.0	–	102	20.00 × 12.00	523.02	482.00
26	650	870	292	475	684	254	8	18	76.2	–	102	19.05 ×19.05	605.00	528.00
28	700	925	292	500	730	254/298	8	18/22	76.2	–	102	19.05 ×19.05	612.92	621.00
30	750	985	318	540	745	254/298	8	18/22	88.9	–	102	22.23 × 15.88	645.21	865.00
32	800	1060	318	560	781	298	8	22	88.9	–	102	22.23 × 15.88	688.86	907.00
36	900	1170	330	650	860	298	8	22	101.6	–	134	25.4 × 19.05	775.19	1162.00
40	1000	1290	410	732	990	356	8	33	120.0	–	150	32.00 × 18.00	850.00	2430.00
42	1050	1345	410	766	1019	356	8	33	120.0	–	150	32.00 × 18.00	900.00	2874.00
44	1100	1405	470	775	1050	356	8	33	130.0	–	150	32.00 × 18.00	1040.00	3180.00

Valve size (inch)	DN	ØA	*B	C	E	Top flange BC	Top flange no. of holes	Top flange hole dia.	ØG	H	J	Key size	K	Approx. weight (kg)
48	1200	1510	470	810	1110	356	8	33	130.0	–	150	32.00 × 18.00	1107.22	3499.00

Class 300 double flanged, Series 49 (mm)

Valve size (inch)	DN	ØA	*B	C	E	Top flange BC	Top flange no. of holes	Top flange hole dia.	ØG	H	J	Key size	K	Approx. weight (kg)
2	50	165	108	98	167	50/70	4	8/10	14.0	10	32	–	26.00	12.0
2 ½	65	190	114	120	184	70	4	10	16.0	11	32	–	35.00	14.0
3	80	210	114	118	190	70	4	10	16.0	11	32	–	56.32	20.0
4	100	255	127	123	190	70	4	10	16.0	11	32	–	79.71	25.0
5	125	280	140	139	200	70/102	4	10/12	22.0	–	32	06.00 × 06.00	84.71	56.0
6	150	320	140	173	245	70/102	4	10/12	22.0	–	32	06.00 × 06.00	129.91	58.0
8	200	380	152	207	305	125	4	14	30.0	–	51	08.00 × 07.00	176.91	89.0
10	250	445	165	240	351	125	4	14	35.0	–	51	10.00 × 08.00	221.20	129.0
12	300	520	178	277	400	140/165	4	18/22	40.0	–	51	12.00 × 08.00	267.62	161.0
14	350	585	190	318	457	165	4	22	55.0	–	64	16.00 × 10.00	278.67	189.0
16	400	650	216	365	528	165	4	22	55.0	–	64	16.00 × 10.00	321.87	333.0
18	450	710	222	400	591	254	8	18	70.0	–	102	20.00 × 12.00	357.35	330.0
20	500	775	229	436	602	254	8	18	80.0	–	102	22.00 × 14.00	388.38	535.0
22	550	838	267	430	772	298	8	22	100.0	–	134	28.00 × 16.00	456.00	815.0
24	600	915	267	504	795	298	8	22	100.0	–	134	28.00 × 16.00	476.11	862.0

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