

WAFER CHECK VALVE SIZE COMPARISON

Nominal Wafer Outer Diameters (mm)

Size		Pressure Rating													
NPS	DN	PN6	PN10	PN16	PN25	PN40	Tab D†	Tab E†	CL125	CL150	CL300	CL600	CL900	CL1500	CL2500
2	50	98	109	109	109	109	98	98	105	105	111	111	143	143	146
2 1/2	65	118	129	129	129	129	111	111	124	124	130	130	165	165	168
3	80	134	144	144	144	144	130	130	137	137	149	149	168	174	197
4	100	154	164	164	170	170	162	162	175	175	181	193	206	209	235
5	125	184	194	194	196	196	194	194	197	197	216	241	247	254	279
6	150	209	220	220	226	226	217	213	222	222	251	266	289	282	317
8	200	264	275	275	286	293	275	272	279	279	308	320	359	352	387
10	250	319	330	331	343	355	335	333	339	339	362	400	435	435	476
12	300	375	380	386	403	420	386	381	409	409	422	457	498	520	549
14	350	425	440	446	460	477	445	445	451	451	486	492	521	578	-
16	400	475	491	498	517	549	496	496	514	514	540	565	575	641	-
18	450	-	541	558	567	574	560	560	549	549	597	613	638	705	-
20	500	580	596	620	627	631	617	617	606	606	654	683	699	756	-
24	600	681	698	737	734	747	726	726	718	718	775	791	838	902	-

Nominal Wafer Face to Face (mm)

Size		Pressure Rating													
NPS	DN	PN6	PN10	PN16	PN25	PN40	Tab D ²	Tab E ²	CL125*	CL150	CL300	CL600	CL900	CL1500	CL2500
2	50	60	60	60	60	60	43	43	54	60	60	60	70	70	70
2 1/2	65	67	67	67	67	67	46	46	60	67	67	67	83	83	83
3	80	73	73	73	73	73	57/64	57/64	67	73	73	73	83	83	86
4	100	73	73	73	73	73	64	64	67	73	73	79	102	102	105
5	125	-	-	-	-	-	70	70	83	-	-	-	-	-	-
6	150	98	98	98	98	98	76	76	95	98	98	136	159	159	159
8	200	127	127	127	127	127	89	89	127	127	127	165	206	206	206
10	250	146	146	146	146	146	108	108	140	146	146	213	241	248	254
12	300	181	181	181	181	181	114	114	181	181	181	229	292	305	305
14	350	184	184	184	222	222	127	127	184	184	222	273	356	356	-
16	400	191	191	191	232	232	140	140	191	191	232	305	384	384	-
18	450	203	203	203	264	264	152	152	203	203	264	362	451	468	-
20	500	219	219	219	292	292	152	152	213	219	292	368	451	553	-
24	600	222	222	222	218	318	178	178	222	222	318	438	495	559	-

Notes:

PN represents ISO 7005-1/2 and EN 1092-1/2/3 and BS 4504 and AS 4331.1 (AS 4087 PN16 is not the same, refer to AS 2129-D/E which multi-fits).

ASME Class 150 to 2500 face to face dimensions shown are in compliance with API 594 and ASME B16.10.

Values shown are nominal and subject to ASME B16.10 tolerances:

±2mm for valves DN250 (10") and smaller.

±3mm for valves DN300 (12") and larger.

² PN16 face to face optionally used for Table D/E.

[†] AS 2129 Table E OD shown, will multi fit AS 2129 Table D and AS 4087 PN14 & PN16. Will also multi fit BS Table D/E (BS 10D, BS 10E) (BS dimensions can vary by 1mm due to imperial bolt sizes versus AS metric bolt sizes).

*API 594 & ANSI AWWA C518 face to face.

Click [here](#) to view our flange slide rule comparison chart.

API 594 - 2022

Table 2 - Face-to-Face Dimensions by Class Designation for Type “A” Wafer and Lug Valves
see C.1, C.2, C.3 attached

Valve Size DN (NPS)	Class							
	125	250	150	300	600	900	1500	2500
50 (2)	54 (2.12)	54 (2.12)	60 (2.38)	60 (2.38)	60 (2.38)	70 (2.75)	70 (2.75)	70 (2.75)
65 (2½)	60 (2.38)	60 (2.38)	67 (2.62)	67 (2.62)	67 (2.62)	83 (3.25)	83 (3.25)	83 (3.25)
80 (3)	67 (2.62)	67 (2.62)	73 (2.88)	73 (2.88)	73 (2.88)	83 (3.25)	83 (3.25)	86(3.38)
100 (4)	67 (2.62)	67 (2.62)	73 (2.88)	73 (2.88)	79 (3.12)	102 (4.00)	102 (4.00)	105 (4.12)
125 (5)	83 (3.25)	83 (3.25)	—	—	—	—	—	—
150 (6)	95 (3.75)	95 (3.75)	98 (3.88)	98 (3.88)	136 (5.38)	159 (6.25)	159 (6.25)	159 (6.25)
200 (8)	127 (5.00)	127 (5.00)	127 (5.00)	127 (5.00)	165 (6.50)	206 (8.12)	206 (8.12)	206 (8.12)
250 (10)	140 (5.50)	140 (5.50)	146 (5.75)	146 (5.75)	213 (8.38)	241 (9.50)	248 (9.75)	254 (10.00)
300 (12)	181 (7.12)	181 (7.12)	181 (7.12)	181 (7.12)	229 (9.00)	292 (11.50)	305 (12.00)	305 (12.00)
350 (14)	184 (7.25)	222 (8.75)	184 (7.25)	222 (8.75)	273 (10.75)	356 (14.00)	356 (14.00)	—
400 (16)	191 (7.50)	232 (9.12)	191 (7.50)	232 (9.12)	305 (12.00)	384 (15.12)	384 (15.12)	—
450 (18)	203 (8.00)	264 (10.38)	203 (8.00)	264 (10.38)	362 (14.25)	451 (17.75)	468 (18.44)	—
500 (20)	213 (8.38)	292 (11.50)	219 (8.62)	292 (11.50)	368 (14.50)	451 (17.75)	533 (21.00)	—
600 (24)	222 (8.75)	318 (12.50)	222 (8.75)	318 (12.50)	438 (17.25)	495 (19.50)	559 (22.00)	—

Valve Size DN (NPS)	Class							
	125	250	150	300	600	900	1500	2500
650 (26)	222 (8.75)	—	222 (8.75)	318 (12.50)	—	—	—	—
700 (28)	—	—	305 (12.00)	368 (14.50)	—	—	—	—
750 (30)	305 (12.00)	368 (14.50)	305 (12.00)	368 (14.50)	505 (19.88)	635 (25)—	—	—
800 (32)	—	—	356 (14.00)	368 (14.50)	—	—	—	—
850 (34)	—	—	—	—	—	—	—	—
900 (36)	368 (14.50)	483 (19.00)	368 (14.50)	483 (19.00)	635 (25.00)	—	—	—
950 (38)	—	—	—	—	—	—	—	—
1000 (40)	—	—	432 (17.00)	546 (21.50)	—	—	—	—
1050 (42)	432 (17.00)	568 (22.38)	432 (17.00)	568 (22.38)	702 (27.62)	—	—	—
1200 (48)	524 (20.62)	629 (24.75)	524 (20.62)	629 (24.75)	—	—	—	—

NOTE 1 Face-to-face dimensions that are not provided in Table 2 shall be the manufacturer's standard or by agreement between the purchaser and manufacturer.

NOTE 2 Dimensions in mm (in.)

API 594 - 2022

Table 3 - Face-to-Face Dimensions by Class Designation for Type "A" Double-flanged Valves
see C.4 attached

Valve Size DN (NPS)	Class					
	150	300	600	900	1500	2500
50 (2)	114 (4.50)	114 (4.50)	121 (4.75)	165 (6.50)	165 (6.50)	225 (8.87)
80 (3)	121 (4.75)	121 (4.75)	143 (5.63)	165 (6.50)	207 (8.12)	280 (11.00)
100 (4)	121 (4.75)	121 (4.75)	165 (6.50)	197 (7.75)	225 (8.87)	330 (13.00)
150 (6)	130 (5.12)	130 (5.12)	194 (7.63)	219 (8.63)	292 (11.37)	454 (17.87)
200 (8)	a	152 (6.00)	219 (8.63)	254 (10.00)	340 (13.37)	489 (19.25)
250 (10)	a	178 (7.00)	244 (9.63)	267 (10.50)	387 (15.25)	622 (24.50)
300 (12)	a	a	a	a	435 (17.12)	686 (27.00)
350 (14)	a	a	a	a	476 (18.75)	—
400 (16)	a	a	a	a	537 (21.15)	—

Valve Size DN (NPS)	Class					
	150	300	600	900	1500	2500
450 (18)	a	a	a	a	565 (22.25)	—
500 (20)	a	a	a	a	629 (24.75)	—
600 (24)	a	a	a	a	733 (28.87)	—

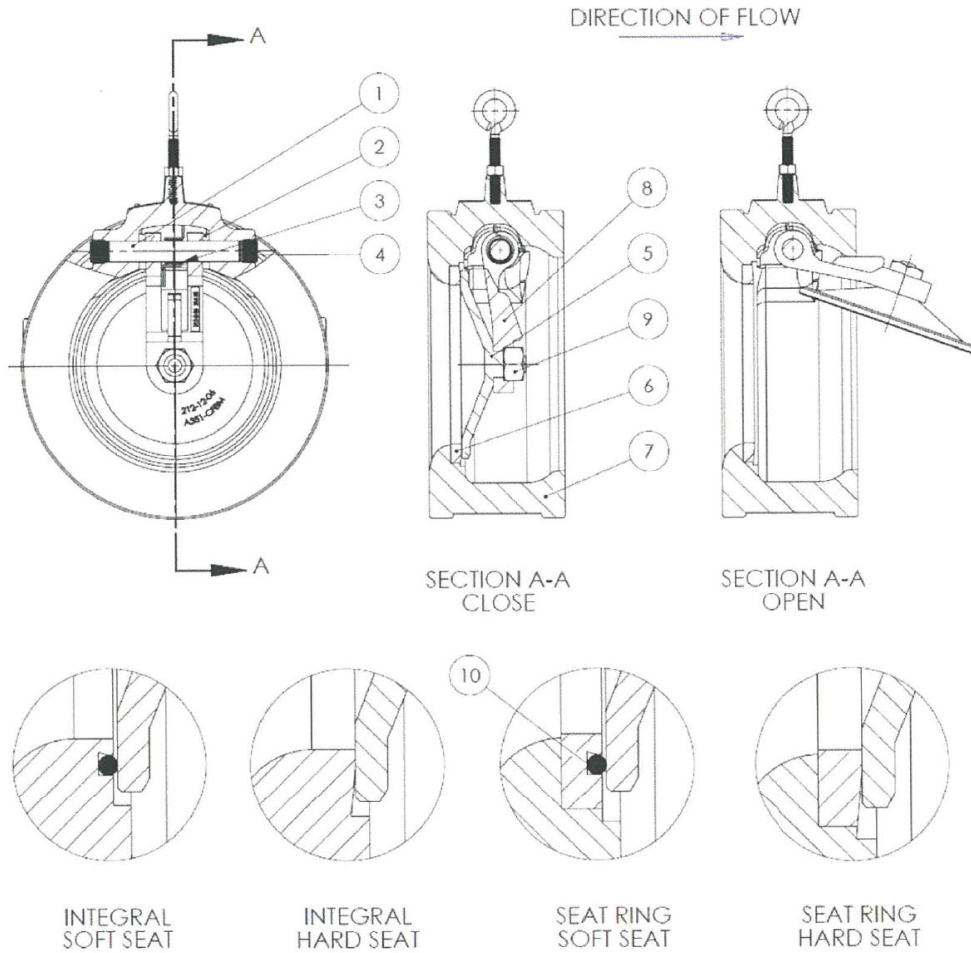
NOTE 1 Table 3 provides face-to-face dimensions that shall be used as an alternative to Table 2 for double-flanged valves if required to allow clearance for fastener assembly.
NOTE 2 Face-to-face dimensions that are not provided in Table 3 shall be the manufacturer's standard or by agreement between the purchaser and manufacturer.
NOTE 3 Dimensions in mm (in.)

^a Dimensions are the same as wafer and lug designs in Table 2.

API 594 - 2022

Annex C (informative)

Standard Nomenclature for Valve Parts



NOTE The optional configuration of a full flange or lug flange (like that shown in Figure C.3) and of a double-flanged type (like that of Figure C.4) will be the manufacturer's standard unless otherwise specified in the purchase order. All notes on Figure C.3 and Figure C.4 apply.

Key			
1 hinge pin	4 hinge pin retainers	7 body	10 resilient "o" ring
2 bearing spacers	5 disc or plate	8 arm	
3 spring	6 seat ring	9 disc nut	

Figure C.1 - Single-plate Wafer Check Valve

API 594 - 2022

Annex C cont'd (informative)

Standard Nomenclature for Valve Parts

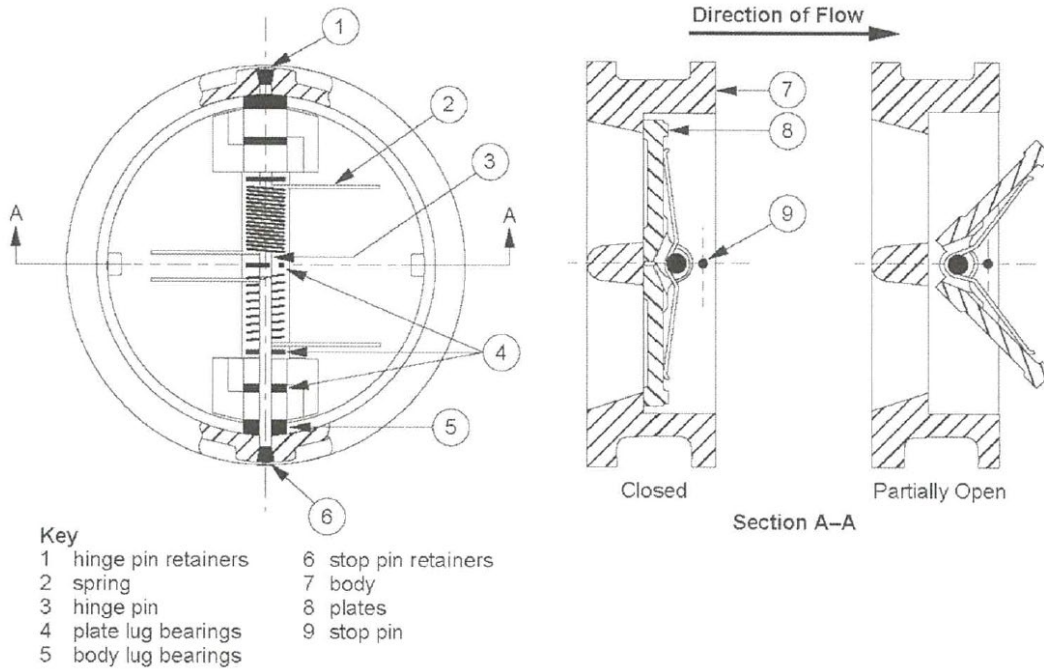
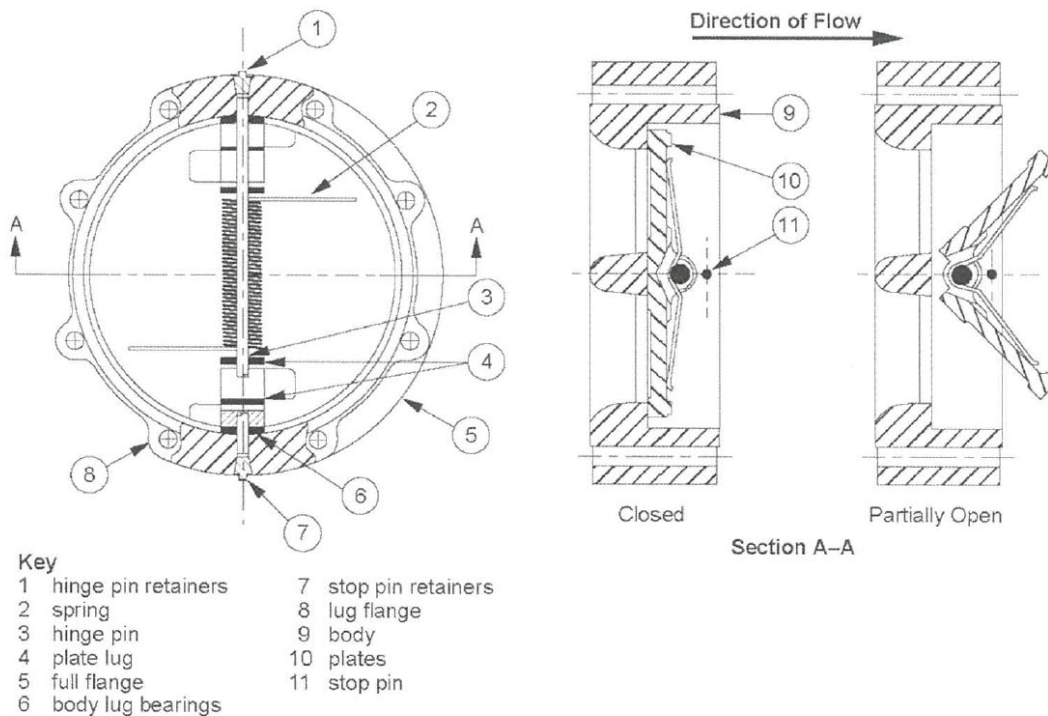


Figure C.2 - Dual-plate Wafer Check Valve



NOTE 1 The optional configuration of a full flange or lug flange shall be the manufacturer's standard unless otherwise specified by the purchaser.

NOTE 2 Unless otherwise specified in the purchase order, the bolt holes will be through-drilled.

Figure C.3 - Dual-plate Lug Check Valve

API 594 - 2022

Annex C cont'd
(informative)

Standard Nomenclature for Valve Parts

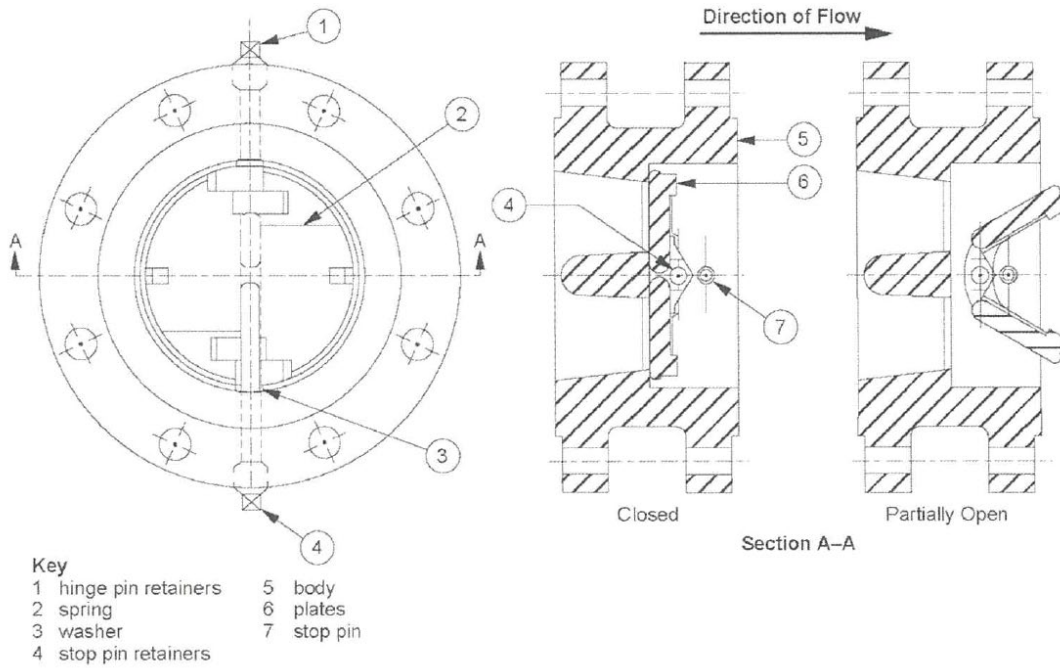


Figure C.4 - Dual-plate Double-flanged Check Valve

EN 558

Face-to-Face Dimensions

Check Valves - Wafer Type								
PN / Class	FTF Series							
	16	49	50	51	52	95	96	97
PN 6 - PN 10 - PN 16	X	X	X	X		X	X	X
PN 25 - PN 40	X	X	X	X		X	X	X ^a
Class 125 - Class 150	X		X	X	X			X
Class 300	X		X	X	X			

^a Only for PN 25.

ANSI/AWWA C518-08 (First Edition)

Table 1 - End-to-end Dimensions for Wafer and Threaded-lug Valves

Valve Size NPS		End-to-End Dimensions Wafer & Threaded-Lug		Valve Size NPS		End-to-End Dimensions Wafer and Threaded-Lug	
<i>in.</i>	<i>(mm)</i>	<i>in.</i>	<i>(mm)</i>	<i>in.</i>	<i>(mm)</i>	<i>in.</i>	<i>(mm)</i>
2	(50)	2½	(54.0)	14	(350)	7¼	(184)
2½	(65)	2¾	(60.3)	16	(400)	7½	(191)
3	(75)	2¾	(66.7)	18	(450)	8	(203)
4	(100)	2¾	(66.7)	20	(500)	8¾	(213)
5	(125)	3¼	(82.6)	24	(600)	8¾	(222)
6	(150)	3¼	(95.3)	30	(750)	12	(305)
8	(200)	5	(127.0)	36	(900)	14½	(368)
10	(250)	5½	(140.0)	42	(1,050)	17	(432)
12	(300)	7½	(181.0)	48	(1,200)	20¾	(524)

NOTE: End-to-end tolerances
 2-in. (50-mm) to 12-in. (250-mm) NPS: ± 1/16 in. (1.6 mm)
 14-in. (350-mm) to 48-in. (1,200-mm) NPS: ± 1/8 in. (3.2 mm)

outside diameter of the wafer flange shall be designed for installation within the diameter formed by the bolts located in accordance with ASME B16.1 Class 125 cast-iron flanges.

4.4.1.4.3 Threaded-lug flanges shall extend to the full mating flange diameter and contain tapped holes to accept bolts in conformance with ASME B16.1, Class 125. The lugs shall be of sufficient thickness to retain and seal a blind flange against a hydrostatic pressure load equal to twice the design pressure rating of the valve. The lugs can be either scalloped or form a continuous flange.

4.4.1.4.4 Groove dimensions shall conform to ANSI/AWWA Standard C606, Table 4 for IPS cut groove dimensions.

4.4.1.5 Flow resistance. At a fluid velocity of 8 ft/sec, the valve shall exhibit a head loss less than 3 ft (0.91 m) water column pressure.

4.4.1.6 Materials. Unless otherwise specifically required by the purchaser, bodies of valves shall be of gray iron, ductile iron, or stainless steel.

4.4.2 Torsion spring.

4.4.2.1 Design. Valves shall be equipped with a torsion spring to effect rapid closure of the valve during flow reversal. The design shall provide for bending stresses not to exceed 80 percent of the tensile strength of the material at the full open valve position. The spring legs shall contact the disc within one fourth of the disc diameter to provide lift and pivot action.

4.4.2.2 Material. Unless otherwise specifically required by the purchaser,



Dimensions of Basic Series

DN	1	2	3	4	5	7	8 ^a	9 ^a	10	11 ^a	12	13	14	15	16	18	19	20	21	22 ^a	23 ^a	24 ^a	25	DN
10	130	210	102	-	-	108	90	105	-	-	130	-	115	-	-	80	-	-	-	65	70	-	-	10
15	130	210	108	140	165	108	90	105	108	57	130	-	115	-	-	80	140	-	152	65	70	83	-	15
20	150	210	117	152	190	117	95	115	117	64	130	-	120	-	-	90	152	-	178	70	75	95	-	20
25	160	230	127	165	216	127	100	115	127	70	140	-	125	120	-	100	165	-	216	80	85	108	-	25
32	180	230	140	178	229	146	105	130	140	76	165	-	130	140	-	110	178	-	229	90	95	114	-	32
40	200	260	165	190	241	159	115	130	165	83	165	106	140	240	33	120	190	33	241	95	100	151	-	40
50	230	260	178	216	292	190	125	150	203	102	203	108	150	250	43	135	216	43	267	105	115	146	-	50
65	290	300	190	241	330	216	145	170	216	108	222	112	170	270	46	165	241	46	292	115	125	165	-	65
80	310	340	203	283	356	254	155	190	241	121	241	114	180	280	64	185	283	46	318	125	135	178	49	80
100	350	380	229	305	432	305	175	215	292	146	305	127	190	300	64	229	305	52	356	135	146	216	56	100
125	400	430	254	381	508	356	200	250	330	178	356	140	200	325	70	-	381	56	400	-	-	254	64	125
150	480	500	267	403	559	406	225	275	356	203	394	140	210	350	76	-	403	56	444	-	-	279	70	150
200	600	550	292	419	660	521	275	325	495	248	457	152	230	400	89	-	419	60	533	-	-	330	71	200
250	730	650	330	457	787	635	325	390	622	311	533	165	250	450	114	-	457	68	622	-	-	394	76	250
300	850	775	356	502	838	749	375	450	698	349	610	178	270	500	114	-	502	78	711	-	-	419	83	300
350	980	900	381	762	889	-	425	515	787	394	686	190	290	550	127	-	572	78	838	-	-	-	92	350
400	1100	1025	406	838	991	-	475	575	914	457	762	216	310	600	140	-	610	102	864	-	-	-	102	400
450	1200	1150	432	914	1092	-	500	-	978	483	864	222	330	650	152	-	660	114	978	-	-	-	114	450
500	1250	1275	457	991	1194	-	-	700	978	-	914	229	350	700	152	-	711	127	1016	-	-	-	127	500
600	1450	1400	508	1143	1397	-	-	-	1295	-	1067	267	390	800	178	-	787	154	1346	-	-	-	154	600
700	1650	1600	610	-	1549	-	-	-	1448	-	-	292	430	900	229	-	-	165	1499	-	-	-	-	700
750	-	-	610	1397	1651	-	-	-	1524	-	-	-	-	-	-	-	-	165	190	1594	-	-	-	750
800	1850	-	660	-	1651	-	-	-	1676	-	-	318	470	1000	241	-	-	190	1778	-	-	-	-	800
900	2050	-	711	-	2083	-	-	-	1956	-	-	330	510	1100	241	-	-	200	203	208	-	-	-	900
1000	2250	-	813	-	-	-	-	-	-	-	-	410	550	1200	300	-	-	251	216	-	-	-	-	1000
1200	-	-	-	-	-	-	-	-	-	-	-	470	630	-	350	-	-	276	254	-	-	-	-	1200
1400	-	-	-	-	-	-	-	-	-	-	-	530	710	-	390	-	-	279	-	-	-	-	-	1400
1600	-	-	-	-	-	-	-	-	-	-	-	600	790	-	440	-	-	318	-	-	-	-	-	1600
1800	-	-	-	-	-	-	-	-	-	-	-	670	870	-	490	-	-	356	-	-	-	-	-	1800
2000	-	-	-	-	-	-	-	-	-	-	-	760	950	-	540	-	-	406	-	-	-	-	-	2000

^a CTF dimensions for angle pattern valves

Dimensions in millimeters

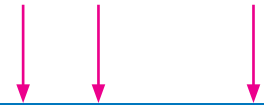


TABLE 2 - Dimensions of Basic Series cont'd

DN	26	27	28	29	30	32 ^a	33	36	37	38	39	40 ^a	41 ^a	42 ^a	43	45	46	47	48	49	50	51	52	53	54	DN
10	-	115	130	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
15	-	115	130	108	150	76	-	-	-	-	-	-	-	-	90	140	165	-	-	16	-	-	25	-	-	15
20	-	120	150	117.5	160	89	-	76	-	-	-	-	-	-	100	152	250	75	-	19	-	-	31.5	-	229	20
25	-	125	160	127	160	102	-	102	184	197	210	92	98	105	115	210	255	80	-	22	-	-	35.5	-	254	25
32	-	130	180	127	180	108	-	-	-	-	-	-	-	-	130	230	265	90	-	28	-	-	40	-	279	32
40	240	140	200	136	190	114	152	114	222	235	251	111	117	125	150	240	280	100	180	31.5	-	-	45	38	305	40
50	250	150	230	142	200	133	178	124	254	267	286	127	133	143	170	250	300	110	200	40	54	54	56	40	368	50
65	290	170	290	154	215	146	216	-	-	-	-	-	-	-	-	270	340	130	240	46	54	60	63	42	419	65
80	310	180	310	160	230	159	254	165	298	317	337	149	159	168	-	280	360	150	260	50	57	67	71	44	381	80
100	350	190	350	172	250	178	305	194	352	368	394	176	184	197	-	300	400	160	300	60	64	67	80	46	457	100
125	400	325	400	186	275	200	381	-	-	-	-	-	-	-	-	350	450	200	350	90	70	83	110	48	551	125
150	450	350	450	200	300	222	457	229	451	473	408	225	236	254	-	375	500	210	400	106	76	95	125	50	610	150
200	550	400	550	228	350	279	584	243	543	568	610	272	284	305	-	425	600	-	500	140	95	127	160	60	757	200
250	650	450	650	255	400	311	711	297	673	708	752	337	354	376	-	450	700	-	600	-	108	140	200	65	838	250
300	750	500	750	285	425	356	813	338	737	775	819	368	387	410	-	500	800	-	700	-	143	181	250	75	965	300
350	850	550	850	315	475	-	889	-	889	927	972	445	464	486	-	550	-	-	800	-	184	222	280	80	1029	350
400	950	762	950	340	525	-	991	400	1016	1057	1108	508	529	554	-	600	-	-	900	-	191	232	-	95	1130	400
450	1050	-	-	360	575	-	1092	457	-	-	-	-	-	-	-	-	-	-	1000	-	203	264	-	107	1219	450
500	1150	914	1150	380	625	-	1194	508	-	-	-	-	-	-	-	-	-	-	1100	-	213	292	-	120	1321	500
600	1350	-	-	425	725	-	1397	610	-	-	-	-	-	-	-	-	-	-	1300	-	222	318	-	144	1549	600
700	1550	-	-	470	825	-	1546	-	-	-	-	-	-	-	-	-	-	-	1500	-	321	381	-	160	-	700
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	750
800	1750	-	-	510	925	-	-	-	-	-	-	-	-	-	-	-	-	-	1700	-	356	489	-	195	-	800
900	1950	-	-	555	1025	-	-	-	-	-	-	-	-	-	-	-	-	-	1900	-	368	-	-	210	-	900
1000	2150	-	-	600	1125	-	-	-	-	-	-	-	-	-	-	-	-	-	2100	-	419	-	-	-	-	1000
1200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000

^a CTF dimensions for angle pattern valves

Dimensions in millimeters



TABLE 2 - Dimensions of Basic Series cont'd

DN	55	56	57 ^a	58 ^a	59 ^a	69	70	71	77	82 ^a	91	92	93 ^a	94	95	96	97	98	99	100	101	105	106	DN
10	-	-	-	-	-	-	-	-	-	-	-	230	115	-	-	-	-	65	-	35	55	-	-	10
15	216	264	-	108	132	-	-	-	318	-	-	230	115	-	-	-	-	65	-	35	55	292	292	15
20	229	273	114	114	137	-	-	-	318	-	-	260	130	-	-	-	-	65	-	39	60	292	292	20
25	254	308	127	127	154	140	140	186	318	-	-	260	130	25	-	-	-	65	-	44	65	292	292	25
32	279	349	140	140	17	165	165	232	-	-	-	300	150	32	-	-	14	80	-	52	75	-	-	32
40	305	384	152	152	193	178	178	232	381	-	310	300	150	40	-	-	14	85	270	64	85	333	333	40
50	368	451	184	184	225	216	216	279	400	-	350	350	175	50	14	17	14	100	300	83	100	375	375	50
65	419	508	210	210	254	254	254	330	441	-	425	400	200	65	14	20	14	130	360	105	125	410	410	65
80	470	578	190	235	289	305	305	368	660	152	470	450	225	80	14	24	14	160	390	121	150	441	460	80
100	546	673	229	273	337	356	406	457	737	178	550	520	260	100	14	27	18	190	450	152	185	511	530	100
125	673	794	278	337	397	432	483	533	-	216	650	600	300	125	16	32	18	240	525	196	220	-	-	125
150	705	914	305	352	457	508	559	610	864	254	750	700	650	150	16	32	20	250	600	236	280	714	768	150
200	832	1022	368	416	511	660	711	762	1022	330	950	800	400	200	18	42	22	320	750	315	-	914	972	200
250	991	1270	419	495	635	787	864	914	1372	394	1150	900	-	-	35	47	26	-	900	-	-	991	1067	250
300	1130	1422	483	565	711	914	991	1041	1575	457	1350	1050	-	-	43	52	32	-	1050	-	-	1130	1219	300
350	1257	-	514	629	-	991	1067	1118	1803	495	1550	-	-	-	-	-	38	-	1200	-	-	1257	1257	350
400	1384	-	660	-	-	1092	1194	1245	-	-	1750	-	-	-	-	-	44	-	1350	-	-	1422	1422	400
450	1537	-	737	-	-	-	1346	1397	-	-	1950	-	-	-	-	-	50	-	1500	-	-	1727	1727	450
500	1664	-	825	-	-	-	1473	-	-	-	2150	-	-	-	-	-	56	-	1650	-	-	-	-	500
600	1943	-	991	-	-	-	-	-	-	-	-	-	-	-	-	-	62	-	-	-	-	-	-	600
700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	-	-	-	-	-	-	700
750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	750
800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	-	-	800
900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	-	-	-	-	-	-	900
1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
1200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200
1400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400
1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1600
1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000

^a CTF dimensions for angle pattern valves

Dimensions in millimeters