

# DUO-CHEK<sup>®</sup>

## TECHNICAL DATASHEET

### THE ORIGINAL DUAL PLATE CHECK VALVE

DUO-CHEK<sup>®</sup>  
High Performance  
Non-Slam Check Valves

**CRANE**

**v in** [www.cranecpe.com](http://www.cranecpe.com)

# Retainerless Check Valves

## Style H<sup>†</sup>

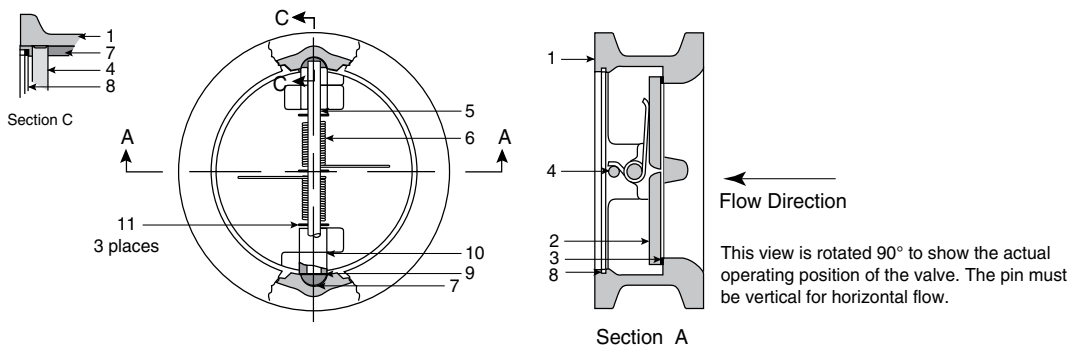
### High Performance Check Valve for Critical Applications



For critical applications, Duo-Chek<sup>®</sup> Retainerless Check valves Style H feature a one-piece body with no pin retainer penetration through the body.

These high performance valves utilize the same internal design as other Duo-Chek<sup>®</sup> valves with all the unique features and advantages built into them. The photo shown is a wafer valve however, the valve are also available in lug and double flanged.

Item No.	Part No.
1	Body
2	Plate
3	Seal
4	Stop Pin
5	Hinge Pin
6	Spring*
7	Pin Insert
8	Snap Ring
9	Body Bearing
10	Plate Bearing
11	Spring Bearing



\* Independent spring in valve sizes 6" and larger.

Because Duo-Chek<sup>®</sup> Retainerless Check valves have no body penetrations, potential leak paths through the valve are eliminated. This makes the Retainerless Check ideally suited to meet the following critical service applications:

- Hydrocarbon processing
- Chemical processing
- Any industry concerned with fire hazards or environmental safety

Key features of the Duo-Chek<sup>®</sup> Retainerless Check valve Style H include:

- A wide selection of body and plate materials
- A choice of metal-to-metal or resilient sealing
- A full range of pressure classes and sizes
- A variety of end connections
- Designs available include wafer, lug and double flange
- Internals easily removed for field replacement under normal inspections and maintenance procedures

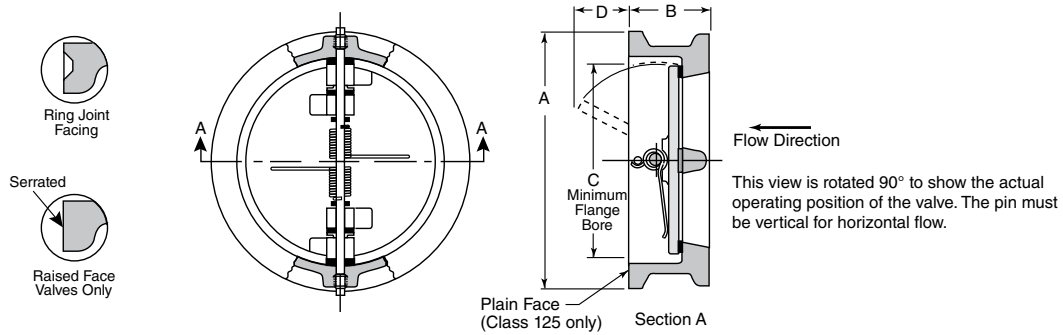
<sup>†</sup> Studs selection for these valves are as shown on pages 12-15.

The advanced design of the Duo-Chek<sup>®</sup> provides many operational benefits to the user, which combined with its more compact size and lower weight, make the Duo-Chek<sup>®</sup> Retainerless Check valve Style H an excellent alternative to a standard swing check valve.

Advantages include:

- Independent spring action (on 6" and larger) and plate suspension on larger valves
- Free release flat seats
- Springs provide superior response to flow reversal or deceleration
- Minimal water hammer
- Savings in purchase price and installation costs compared to a conventional swing check valve
- Single body design with no body cartridge

# Wafer Styles G (Retainered) and H (Retainerless)



Wafer body valves are designed with flangeless bodies with short face-to-face dimensions per API 594. They are clamped between mating flanges which are connected by studs and nuts.

### ASME Class 125 (Cast Iron valves only)

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 1/8	105	2 1/8	54	2 1/16	52	-	-	4	1.8
2 1/2"	65	4 7/8	124	2 1/8	54	2 15/32	63	-	-	6	2.7
3"	80	5 3/8	137	2 1/4	57	3 1/16	78	5/8	16	7	3.2
4"	100	6 7/8	175	2 1/2	64	4	102	1	25	12	5.4
5"	125	7 3/4	197	2 3/4	70	5	127	1 1/16	33	15	6.8
6"	150	8 3/4	222	3	76	6 1/16	154	1 15/16	35	20	9
8"	200	11	279	3 3/4	95	8	203	3 7/16	54	40	18
10"	250	13 3/8	340	4 1/4	108	10	254	3 3/8	70	65	29
12"	300	16 1/8	410	5 5/8	143	11 15/16	303	3 9/16	83	110	50
14"	350	17 3/4	451	7 1/4	184	12 1/2	318	3 1/16	83	183	83
16"	400	20 1/4	514	7 1/2	191	15	381	4 1/4	113	255	116
18"	450	21 3/8	549	8	203	16 7/8	429	5 3/8	137	315	143
20"	500	23 7/8	606	8 3/8	213	18 15/16	478	6 3/16	160	380	172
24"	600	28 1/4	718	8 3/4	222	22 5/8	575	8 1/4	210	575	261
30"	750	34 3/4	883	12	305	29 1/4	743	9 9/16	229	1070	486
36"	900	41 1/4	1048	14 1/2	368	35	889	12 3/16	303	1962	890
42"	1050	48	1219	17	432	41	1041	15	381	2800	1270
48"	1200	54 1/2	1384	20 5/8	524	47	1194	16 3/4	425	3920	1778
54"	1350	61	1549	21 1/4	540	51 1/2	1308	19 3/4	502	6172	2800
60"	1500	67 1/2	1715	26	660	56	1422	-	-	7800	3538
66"	1650	74 1/4	1886	31	787	65 1/4	1657	-	-	12000	5443
72"	1800	80 3/4	2051	36	914	68	1727	-	-	14000	6350
78"	1950	84	2133	39	991	74	1880	-	-	17160	7800
84"	2100	89 3/4	2280	42	1067	80	2032	-	-	20460	9300
88"	2200	94	2388	44	1118	84	2134	-	-	23100	10500

### ASME Class 150

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4.12	105	2.38	60	2.05	52	0.00	0	7	3
2 1/2"	65	4.88	124	2.62	67	2.50	64	0.00	0	11	5
3"	80	5.38	137	2.88	73	2.91	74	0.25	6	13	6
4"	100	6.88	175	2.88	73	3.82	97	0.63	16	18	8
5"	125	7.75	197	3.38	86	4.73	120	0.88	22	26	12
6"	150	8.75	222	3.88	99	5.75	146	1.38	35	35	16
8"	200	11.00	279	5.00	127	7.64	194	2.13	54	70	32
10"	250	13.38	340	5.75	146	9.57	243	2.75	70	106	48
12"	300	16.12	410	7.12	181	11.38	289	3.25	83	172	78
14"	350	17.75	451	7.25	184	12.52	318	3.13	83	200	91
16"	400	20.25	514	7.50	190	15.00	381	4.47	113	275	125
18"	450	21.63	549	8.00	203	16.89	429	5.38	137	315	143
20"	500	23.88	606	8.62	219	18.82	478	6.33	160	433	197
24"	600	28.25	718	8.75	222	22.64	575	8.25	210	618	281
26"	650	30.50	775	8.75	222	24.25	616	8.00	203	946	430
28"	700	32.75	832	12.00	305	25.75	655	9.31	236	1144	520
30"	750	34.75	883	12.00	305	27.51	699	9.66	245	1228	558
32"	800	37.00	940	14.00	356	29.05	738	10.49	266	1694	770
36"	900	41.25	1048	14.50	368	33.00	843	11.75	298	2013	915
40"	1000	45.75	1162	17.00	432	37.00	940	13.21	355	2541	1155
42"	1050	48.00	1219	17.00	432	41.00	1041	15.00	381	2794	1270
48"	1200	54.50	1384	20.62	524	47.00	1194	16.75	425	3960	1800
54"	1350	61.00	1549	21	540	51.50	1308	19.75	502	6160	2800
60"	1500	67.50	1715	26	660	56.00	1422	17.08	434	7784	3538

Duo-Chek valves are available in accordance with DIN, BS, JIS, AS and ISO Dimensions. For other sizes and pressure classes contact factory. Class 125 face-to-face dimensions 2-1/2"-12" are thinner than the requirements of API 594.

## Dimensions

### Wafer Styles G (Retainered) and H (Retainerless)

ASME Class 250 (Cast Iron valves only)

Size		A		B		C		D		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 <sup>3</sup> / <sub>8</sub>	111	2 <sup>1</sup> / <sub>8</sub>	54	1 <sup>15</sup> / <sub>16</sub>	49	3 <sup>3</sup> / <sub>32</sub>	2	5	3
2 <sup>1</sup> / <sub>2</sub> "	65	5 <sup>1</sup> / <sub>8</sub>	130	2 <sup>3</sup> / <sub>8</sub>	60	2 <sup>11</sup> / <sub>32</sub>	60	3 <sup>3</sup> / <sub>8</sub>	10	11	5
3"	80	5 <sup>7</sup> / <sub>8</sub>	149	2 <sup>5</sup> / <sub>8</sub>	67	2 <sup>29</sup> / <sub>32</sub>	74	9 <sup>9</sup> / <sub>16</sub>	14	11	5
4"	100	7 <sup>1</sup> / <sub>8</sub>	181	2 <sup>5</sup> / <sub>8</sub>	67	3 <sup>53</sup> / <sub>64</sub>	97	9 <sup>9</sup> / <sub>16</sub>	14	14	7
5"	125	8 <sup>1</sup> / <sub>2</sub>	216	3 <sup>1</sup> / <sub>4</sub>	83	4 <sup>13</sup> / <sub>16</sub>	122	1	25	29	14
6"	150	9 <sup>1</sup> / <sub>8</sub>	251	3 <sup>3</sup> / <sub>4</sub>	95	5 <sup>49</sup> / <sub>64</sub>	146	1 <sup>1</sup> / <sub>2</sub>	38	35	16
8"	200	12 <sup>1</sup> / <sub>8</sub>	308	5	127	7 <sup>5</sup> / <sub>8</sub>	194	2 <sup>1</sup> / <sub>8</sub>	54	75	34
10"	250	14 <sup>1</sup> / <sub>4</sub>	362	5 <sup>1</sup> / <sub>2</sub>	140	9 <sup>9</sup> / <sub>16</sub>	243	3 <sup>1</sup> / <sub>16</sub>	80	113	51
12"	300	16 <sup>3</sup> / <sub>8</sub>	422	7 <sup>1</sup> / <sub>8</sub>	181	11 <sup>3</sup> / <sub>8</sub>	289	3 <sup>1</sup> / <sub>4</sub>	83	174	79
14"	350	19 <sup>1</sup> / <sub>8</sub>	486	8 <sup>3</sup> / <sub>4</sub>	222	12 <sup>1</sup> / <sub>2</sub>	318	3 <sup>3</sup> / <sub>16</sub>	81	299	136
16"	400	21 <sup>1</sup> / <sub>4</sub>	540	9 <sup>1</sup> / <sub>8</sub>	232	14 <sup>5</sup> / <sub>16</sub>	364	4 <sup>1</sup> / <sub>8</sub>	105	380	172
18"	450	23 <sup>1</sup> / <sub>2</sub>	597	10 <sup>3</sup> / <sub>8</sub>	264	16 <sup>7</sup> / <sub>8</sub>	429	4 <sup>13</sup> / <sub>16</sub>	122	510	231
20"	500	25 <sup>3</sup> / <sub>4</sub>	654	11 <sup>1</sup> / <sub>2</sub>	292	17 <sup>15</sup> / <sub>16</sub>	456	5 <sup>3</sup> / <sub>8</sub>	136	593	269
24"	600	30 <sup>1</sup> / <sub>2</sub>	775	14 <sup>1</sup> / <sub>2</sub>	318	21 <sup>9</sup> / <sub>16</sub>	548	7 <sup>1</sup> / <sub>16</sub>	179	1010	458
30"	750	37 <sup>1</sup> / <sub>2</sub>	953	17 <sup>1</sup> / <sub>2</sub>	368	28 <sup>3</sup> / <sub>4</sub>	730	8 <sup>13</sup> / <sub>16</sub>	224	1880	853
36"	900	44	1118	19	483	35	889	11 <sup>9</sup> / <sub>16</sub>	294	3573	1608
42"	1050	50 <sup>3</sup> / <sub>4</sub>	1289	22 <sup>3</sup> / <sub>8</sub>	568	41	1041	14 <sup>3</sup> / <sub>4</sub>	375	5780	2622
48"	1200	58 <sup>3</sup> / <sub>4</sub>	1492	24 <sup>3</sup> / <sub>4</sub>	629	47	1194	16 <sup>1</sup> / <sub>2</sub>	419	6572	2981

ASME Class 600

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4.38	111	2.38	60	1.93	49	7	3
2 <sup>1</sup> / <sub>2</sub> "	65	5.12	130	2.62	67	2.50	64	11	5
3"	80	5.88	149	2.88	73	2.91	74	15	7
4"	100	7.63	194	3.12	79	3.82	97	26	12
6"	150	10.50	267	5.38	137	5.75	146	79	36
8"	200	12.63	321	6.50	165	7.64	194	134	61
10"	250	15.75	400	8.38	213	9.57	243	238	108
12"	300	18.00	457	9.00	229	11.38	289	332	151
14"	350	19.38	492	10.75	273	12.52	318	453	206
16"	400	22.25	565	12.00	305	14.33	364	638	290
18"	450	24.13	613	14.25	362	16.14	410	889	404
20"	500	26.88	683	14.50	368	17.95	456	1118	508
24"	600	31.13	791	17.25	438	21.57	548	2035	925
26"	650	34.12	867	18.00	457	24.78	629	1771	805
30"	750	38.25	972	19.88	505	29.16	741	3368	1531
36"	900	44.50	1130	25.00	635	34.62	880	6288	2858
42"	1050	48.00	1219	27.62	702	34.76	883	8430	3832

ASME Class 1500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	5.63	143	2.75	70	1.69	43	13	6
2 <sup>1</sup> / <sub>2</sub> "	65	6.50	165	3.25	83	2.50	64	15	7
3"	80	6.88	175	3.25	83	2.64	67	24	11
4"	100	8.25	210	4.00	102	3.43	87	44	20
6"	150	11.12	282	6.25	159	5.20	132	110	50
8"	200	13.88	352	8.12	206	6.81	173	218	99
10"	250	17.12	435	9.75	248	8.50	216	396	180
12"	300	20.50	521	12.00	305	10.12	257	724	329
14"	350	22.75	578	14.00	356	11.50	292	946	430
16"	400	25.25	641	15.12	384	12.80	325	1379	627
18"	450	27.75	705	18.44	468	13.74	349	1899	863
20"	500	29.75	756	21.00	533	19.02	483	2743	1247
24"	600	35.50	902	22.00	559	18.27	464	4400	2000

ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4.38	111	2.38	60	1.93	49	7	3
2 <sup>1</sup> / <sub>2</sub> "	65	5.12	130	2.62	67	2.50	64	11	5
3"	80	5.88	149	2.88	73	2.91	74	15	7
4"	100	7.13	181	2.88	73	3.82	97	18	8
5"	125	8.50	216	3.38	99	4.27	108	35	16
6"	150	9.88	251	3.88	99	5.75	146	44	20
8"	200	12.13	308	5.00	127	7.64	194	81	37
10"	250	14.25	362	5.75	146	9.57	243	125	57
12"	300	16.63	422	7.12	181	11.38	289	200	91
14"	350	19.13	486	8.75	222	12.52	318	323	147
16"	400	21.25	540	9.12	232	14.33	364	414	188
18"	450	23.50	597	10.38	264	16.89	429	554	252
20"	500	25.75	654	11.50	292	17.95	456	724	329
24"	600	30.50	775	12.50	318	21.57	548	1098	499
26"	650	32.88	835	12.50	318	-	-	1602	728
28"	700	35.38	899	14.50	368	28.58	726	1857	844
30"	750	37.50	953	14.50	368	30.18	767	2046	930
32"	800	39.63	1007	14.50	368	30.18	767	2818	1281
36"	900	44.00	1118	19.00	483	33.64	854	3566	1621
40"	1000	43.88	1114	21.50	546	-	-	4774	2170
42"	1050	45.88	1165	22.38	568	38.97	990	5768	2622
48"	1200	52.12	1324	24.75	629	44.26	1124	6558	2981

ASME Class 900

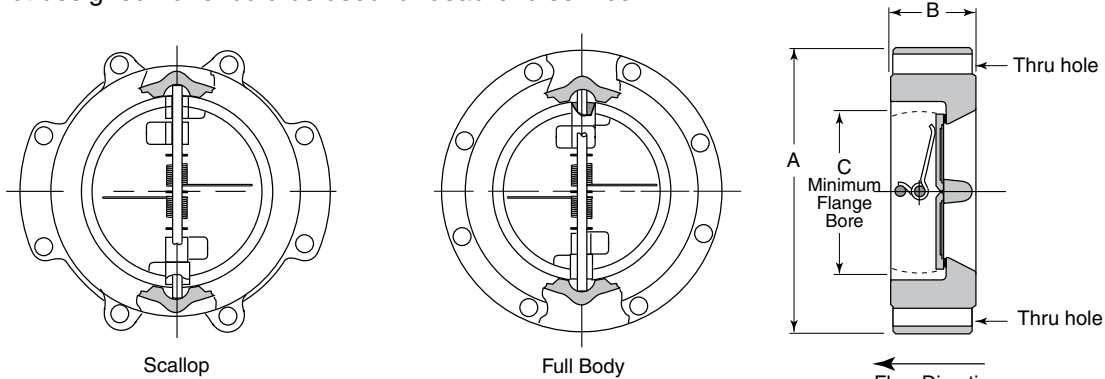
Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	5.63	143	2.75	70	1.69	43	13	6
2 <sup>1</sup> / <sub>2</sub> "	65	6.50	165	3.25	83	2.50	64	15	7
3"	80	6.63	168	3.25	83	2.64	67	24	11
4"	100	8.12	206	4.00	102	3.43	87	40	18
6"	150	11.38	289	6.25	159	5.20	132	114	52
8"	200	14.12	359	8.12	206	6.81	173	229	104
10"	250	17.12	435	9.50	241	8.50	216	387	176
12"	300	19.63	498	11.50	292	10.12	257	539	245
14"	350	20.50	521	14.00	356	11.50	292	924	420
16"	400	22.63	575	15.12	384	12.80	325	1151	523
18"	450	25.12	638	17.75	451	14.45	367	1316	598
20"	500	27.50	699	17.75	451	17.95	456	1423	647
24"	600	33.00	838	19.50	495	21.50	546	2724	1238

ASME Class 2500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	5.75	146	2.75	70	1.69	43	15	7
2 <sup>1</sup> / <sub>2</sub> "	65	6.50	165	3.25	83	2.50	64	22	10
3"	80	7.75	197	3.38	86	2.64	67	31	14
4"	100	9.25	235	4.12	105	3.43	87	55	25
6"	150	12.50	318	6.25	159	5.20	132	189	86
8"	200	15.25	387	8.12	206	6.81	173	284	129
10"	250	18.75	476	10	254	8.50	216	502	228
12"	300	21.62	549	12	305	10.12	257	961	437

## Style H Lug Retainerless

**Lug Style valves** cover the bolting the entire length of the body. Lug valves are furnished in scallop and full body designs. Scallop is furnished whenever possible to keep weight to a minimum. These valves are standard retainerless design. Lug valves are furnished with thru-hole bolting in accordance with API 594. Threaded bolt holes are available but non standard as valve is not designed nor should be used for dead-end service.



Pin must be vertical for horizontal flow.

### ASME Class 150

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6	152	2 <sup>3</sup> / <sub>8</sub>	60	1 <sup>15</sup> / <sub>16</sub>	49	17	8
2 1/2"	65	7	178	2 <sup>3</sup> / <sub>8</sub>	67	2 <sup>11</sup> / <sub>32</sub>	60	17	8
3"	80	7 1/2	191	2 <sup>3</sup> / <sub>8</sub>	73	2 <sup>29</sup> / <sub>32</sub>	74	44	20
4"	100	9	229	2 <sup>7</sup> / <sub>8</sub>	73	3 <sup>53</sup> / <sub>64</sub>	97	44	20
5"	125	10	254	3 <sup>3</sup> / <sub>8</sub>	86	4 <sup>13</sup> / <sub>16</sub>	122	48 1/2	22
6"	150	11	279	3 <sup>7</sup> / <sub>8</sub>	98	5 <sup>49</sup> / <sub>64</sub>	146	77	35

### ASME Class 600

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6 1/2	165	2 <sup>3</sup> / <sub>8</sub>	60	1 <sup>15</sup> / <sub>16</sub>	49	18	8
2 1/2"	65	7 1/2	191	2 <sup>3</sup> / <sub>8</sub>	67	2 <sup>11</sup> / <sub>32</sub>	60	22	10
3"	80	8 1/4	210	2 <sup>7</sup> / <sub>8</sub>	73	2 <sup>29</sup> / <sub>32</sub>	74	30	14
4"	100	10 3/4	273	3 <sup>1</sup> / <sub>8</sub>	79	3 <sup>53</sup> / <sub>64</sub>	97	60	27
6"	150	14	356	5 <sup>3</sup> / <sub>8</sub>	136	5 <sup>49</sup> / <sub>64</sub>	146	183	83
8"	200	16 1/2	419	6 1/2	165	7 <sup>5</sup> / <sub>8</sub>	194	295	134
10"	250	20	508	8 1/8	213	9 <sup>9</sup> / <sub>16</sub>	243	540	245

### ASME Class 1500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	8 1/2	216	2 <sup>3</sup> / <sub>4</sub>	70	1 <sup>11</sup> / <sub>16</sub>	43	37	17
3"	80	10 1/2	267	3 1/4	83	2 <sup>5</sup> / <sub>8</sub>	67	70	32
4"	100	12 1/4	311	4	102	3 <sup>7</sup> / <sub>16</sub>	87	112	51
6"	150	15 1/2	394	6 1/4	159	5 <sup>3</sup> / <sub>16</sub>	132	262	119
8"	200	19	483	8 1/8	206	6 <sup>13</sup> / <sub>16</sub>	173	488	221
10"	250	23	584	9 3/4	248	8 1/2	216	917	416
12"	300	26 1/2	673	12	305	10 1/8	257	1425	646
14"	350	29 1/2	749	14	356	11 1/2	292	2045	928
16"	400	32 1/2	826	15 1/8	384	12 <sup>13</sup> / <sub>16</sub>	325	2600	1179
18"	450	36	914	18 1/16	468	13 3/4	349	3883	1761
20"	500	38 3/4	984	21	533	14 3/4	348	5700	2580
24"	600	46	1168	22	559	15 1/8	384	7150	3236

### ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6 1/2	165	2 <sup>3</sup> / <sub>8</sub>	60	1 <sup>15</sup> / <sub>16</sub>	49	18	8
2 1/2"	65	7 1/2	191	2 <sup>5</sup> / <sub>8</sub>	67	2 <sup>11</sup> / <sub>32</sub>	60	22	10
3"	80	8 1/4	210	2 <sup>7</sup> / <sub>8</sub>	73	2 <sup>29</sup> / <sub>32</sub>	74	30	14
4"	100	10	254	2 <sup>7</sup> / <sub>8</sub>	73	3 <sup>53</sup> / <sub>64</sub>	97	44	20
5"	125	11	279	3 <sup>3</sup> / <sub>8</sub>	86	4 <sup>13</sup> / <sub>16</sub>	122	51	23
6"	150	12 1/2	318	3 <sup>7</sup> / <sub>8</sub>	98	5 <sup>49</sup> / <sub>64</sub>	146	84	38
8"	200	15	381	5	127	7 <sup>5</sup> / <sub>8</sub>	194	163	74
10"	250	17 1/2	445	5 3/4	146	9 <sup>9</sup> / <sub>16</sub>	243	270	123

### ASME Class 900

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	8 1/2	216	2 <sup>3</sup> / <sub>4</sub>	70	1 <sup>11</sup> / <sub>16</sub>	43	37	17
3"	80	9 1/2	241	3 1/4	83	2 <sup>5</sup> / <sub>8</sub>	67	57	26
4"	100	11 1/2	292	4	102	3 <sup>7</sup> / <sub>16</sub>	87	98	45
6"	150	15	381	6 1/4	159	5 <sup>3</sup> / <sub>16</sub>	132	252	114
8"	200	18 1/2	470	8 1/8	206	6 <sup>13</sup> / <sub>16</sub>	173	441	200
10"	250	21 1/2	546	9 1/2	241	8 1/2	216	787	357

### ASME Class 2500

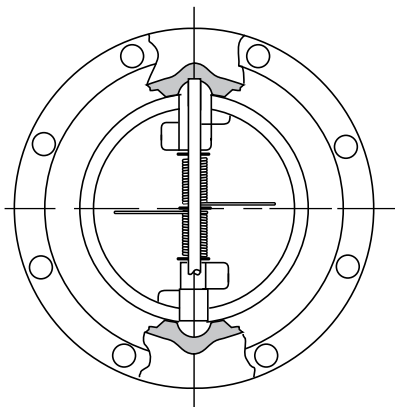
Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	9 1/4	235	2 <sup>3</sup> / <sub>4</sub>	70	1 <sup>11</sup> / <sub>16</sub>	43	48	22
3"	80	12	305	3 <sup>3</sup> / <sub>8</sub>	86	2 <sup>5</sup> / <sub>8</sub>	67	93	42
4"	100	14	356	4 1/8	105	3 <sup>7</sup> / <sub>16</sub>	87	152	69
6"	150	19	483	6 1/4	159	5 <sup>3</sup> / <sub>16</sub>	132	386	175
8"	200	21 3/4	552	8 1/8	206	6 <sup>13</sup> / <sub>16</sub>	173	682	309
10"	250	26 1/2	673	10	254	8 1/2	216	1421	645
12"	300	30	762	12	305	10 1/8	257	2248	1020

• Consult factory for additional sizes and pressure classes.

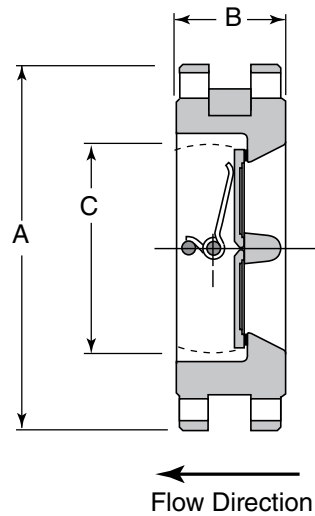
## Dimensions

### Style H Double-Flanged Retainerless

**Double-Flanged Style Valves** bolt up similar to a bolted cap swing check or gate valve. Double-Flanged versions are offered as standard on larger size valves where the lay length of the body permits installation of two heavy nuts between the flanges. These valves are standard retainerless design.



Pin must be vertical for horizontal flow.



#### ASME Class 150

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6.00	150	4.50	114	1.69	43	22	10
3"	80	7.50	190	4.75	121	2.01	51	37	17
4"	100	9.00	230	4.75	121	3.82	97	44	20
6"	150	11.00	280	5.13	130	4.72	120	77	35
8"	200	13.50	345	5.00	127	7.32	186	92	42
10"	250	16.00	405	5.75	146	9.17	233	189	86
12"	300	19.00	485	7.12	181	10.83	275	308	140
14"	350	21.00	535	7.25	184	11.89	302	352	160
16"	400	23.50	595	7.50	190	13.58	345	495	225
18"	450	25.00	635	8.00	203	15.28	388	550	250
20"	500	27.50	700	8.62	219	17.01	432	660	300
24"	600	32.00	815	8.75	222	20.39	518	856	389
26"	650	34.25	870	8.75	222	20.40	518	1232	560
28"	700	36.50	925	12.00	305	26.50	673	1386	630
30"	750	38.75	985	12.00	305	29.25	743	1628	740
32"	800	41.75	1060	14.00	356	29.13	740	2270	1032
36"	900	46.00	1170	14.50	368	32.83	834	2519	1145
40"	1000	50.75	1290	17.00	432	33.54	852	3637	1653
42"	1050	53.00	1345	17.00	432	35.67	906	4154	1888
48"	1200	59.50	1510	20.62	524	36.18	919	5867	2667

#### ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
2"	50	6.50	165	4.50	114	1.54	39	22	10
3"	80	8.25	210	4.75	121	2.99	76	46	21
4"	100	10.00	255	4.75	121	3.82	97	68	31
6"	150	12.50	320	5.12	130	5.63	143	112	51
8"	200	15.00	380	6.00	152	7.32	186	167	76
10"	250	17.50	445	7.00	178	7.62	194	308	140
12"	300	20.50	520	7.12	181	10.83	275	464	211
14"	350	23.00	585	8.75	222	11.89	302	592	269
16"	400	25.50	650	9.12	232	13.58	345	770	350
18"	450	28.00	710	10.38	264	15.31	389	968	440
20"	500	30.50	775	11.50	292	17.01	432	1074	488
24"	600	36.00	915	12.50	318	20.39	518	1509	686
26"	650	38.25	970	12.50	318	22.10	561	1151	523
28"	700	40.75	1035	14.50	368	26.50	673	2009	913
30"	750	43.00	1090	14.50	368	28.74	730	3093	1406
32"	800	45.25	1150	14.50	368	30.51	775	3703	1683
36"	900	50.00	1270	19.00	483	30.60	777	4640	2109
40"	1000	48.75	1240	21.50	546	34.00	864	7022	3192
42"	1050	50.75	1290	22.38	568	35.70	907	8650	3932
48"	1200	57.75	1465	24.75	629	40.80	1036	9929	4513



**ASME Class 600**

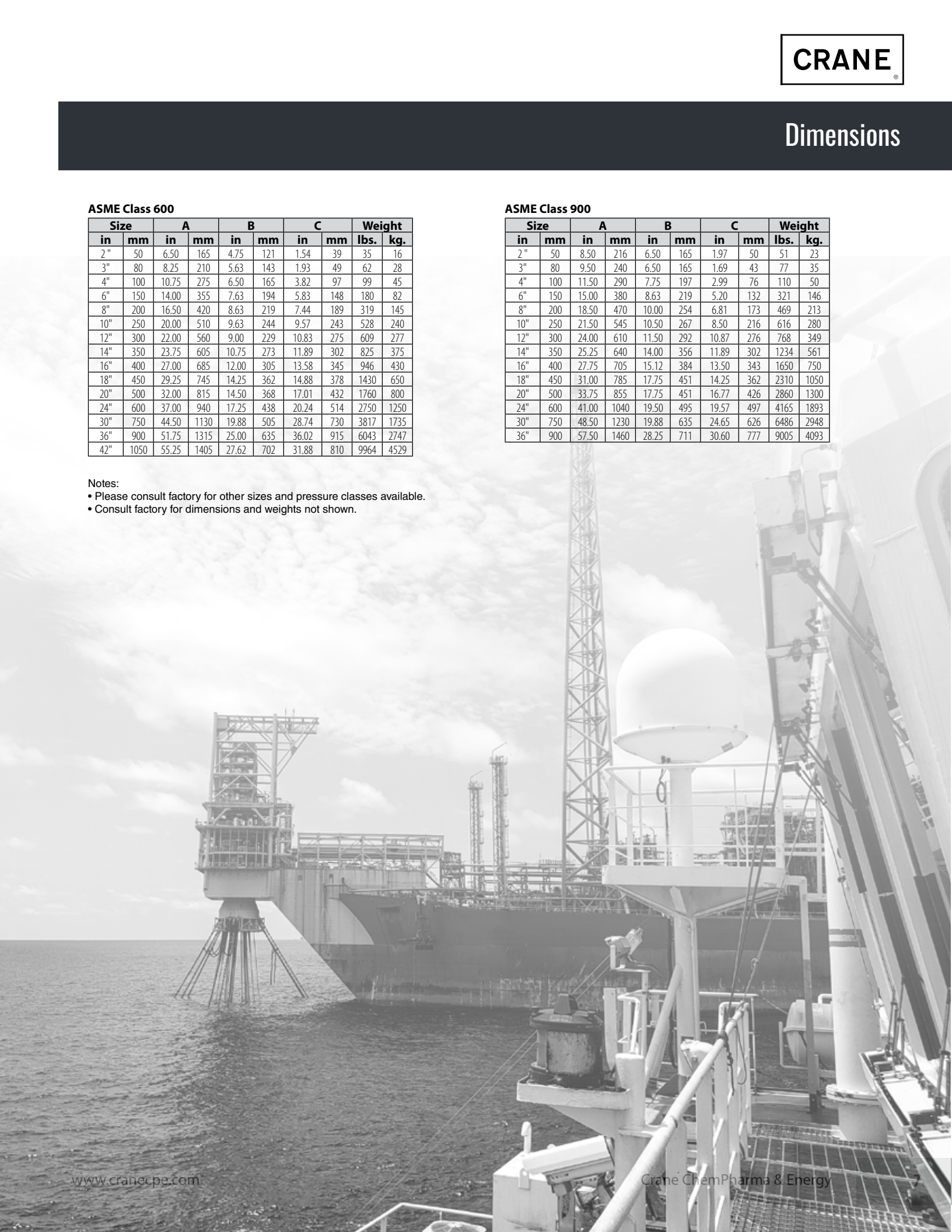
Size	A		B		C		Weight		
	in	mm	in	mm	in	mm	lbs.	kg.	
2"	50	6.50	165	4.75	121	1.54	39	35	16
3"	80	8.25	210	5.63	143	1.93	49	62	28
4"	100	10.75	275	6.50	165	3.82	97	99	45
6"	150	14.00	355	7.63	194	5.83	148	180	82
8"	200	16.50	420	8.63	219	7.44	189	319	145
10"	250	20.00	510	9.63	244	9.57	243	528	240
12"	300	22.00	560	9.00	229	10.83	275	609	277
14"	350	23.75	605	10.75	273	11.89	302	825	375
16"	400	27.00	685	12.00	305	13.58	345	946	430
18"	450	29.25	745	14.25	362	14.88	378	1430	650
20"	500	32.00	815	14.50	368	17.01	432	1760	800
24"	600	37.00	940	17.25	438	20.24	514	2750	1250
30"	750	44.50	1130	19.88	505	28.74	730	3817	1735
36"	900	51.75	1315	25.00	635	36.02	915	6043	2747
42"	1050	55.25	1405	27.62	702	31.88	810	9964	4529

**ASME Class 900**

Size	A		B		C		Weight		
	in	mm	in	mm	in	mm	lbs.	kg.	
2"	50	8.50	216	6.50	165	1.97	50	51	23
3"	80	9.50	240	6.50	165	1.69	43	77	35
4"	100	11.50	290	7.75	197	2.99	76	110	50
6"	150	15.00	380	8.63	219	5.20	132	321	146
8"	200	18.50	470	10.00	254	6.81	173	469	213
10"	250	21.50	545	10.50	267	8.50	216	616	280
12"	300	24.00	610	11.50	292	10.87	276	768	349
14"	350	25.25	640	14.00	356	11.89	302	1234	561
16"	400	27.75	705	15.12	384	13.50	343	1650	750
18"	450	31.00	785	17.75	451	14.25	362	2310	1050
20"	500	33.75	855	17.75	451	16.77	426	2860	1300
24"	600	41.00	1040	19.50	495	19.57	497	4165	1893
30"	750	48.50	1230	19.88	635	24.65	626	6486	2948
36"	900	57.50	1460	28.25	711	30.60	777	9005	4093

**Notes:**

- Please consult factory for other sizes and pressure classes available.
- Consult factory for dimensions and weights not shown.



## Dimensions

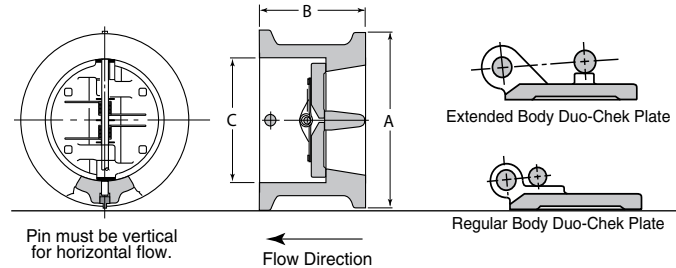
### Style X Extended Body Wafer Check

The "Extended Body" version of the Duo-Chek® was designed for extremely fast opening conditions. These types of applications are generally associated with compressed gas or steam that causes damage from the explosive opening effect on the closure mechanism. This damage can render them inoperative. This is especially true with slow response valves such as swing and tilting disc check valves.



The Style X body design has special geometry and plate configuration to allow each plate to strike the stop pin in its center of percussion. To absorb high impacts, the stop pin and hinge lugs are oversized.

Typical applications include centrifugal compressor discharge where compressors are subject to "surging", air separation plants, pipelines where compressors are mounted in parallel, and steam extraction. Style X Duo-Chek® valves are generally not required for liquid applications.



### Installation Dimensions Pressure Classes 150 – 2500

#### ASME Class 150

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	13 3/8	340	7 1/4	184	10 3/4	273	166	75
12"	300	16 1/8	410	9	229	12 3/4	324	244	111
14"	350	17 3/4	451	8 3/8	213	14	356	260	118
16"	400	20 1/4	514	9 1/2	241	16	406	345	157
18"	450	21 5/8	549	10 3/8	264	18	457	427	194
20"	500	23 7/8	606	11 3/4	298	20	508	548	249
24"	600	28 1/4	718	13 3/4	349	24	610	874	396
26"	650	30 1/2	775	18	457	26	660	1741	790
30"	750	34 3/4	883	18	457	30	762	1544	700
32"	800	37	940	20 7/8	530	32	813	1638	743
36"	900	41 1/4	1048	21 7/8	556	36	914	2750	1247
42"	1050	48	1219	25 3/4	654	42	1067	3862	1752
48"	1200	54 1/2	1384	30 7/8	784	48	1219	6000	2722
54"	1350	61	1550	32 3/4	832	54	1372	7462	3385

#### ASME Class 300

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	14 1/4	362	7 1/4	184	10 3/4	273	166	75
12"	300	16 5/8	422	9	229	12 3/4	324	244	111
14"	350	19 1/8	486	10 1/4	260	14	356	407	185
16"	400	21 1/4	540	11 1/8	283	16	406	533	242
18"	450	23 1/2	597	12 1/2	318	18	457	698	317
20"	500	25 3/4	654	13 3/4	349	20	508	900	408
24"	600	30 1/2	775	16	406	24	610	1446	656
28"	700	35 7/8	911	20 1/4	514	28	711	1992	904
30"	750	37 1/2	953	20 5/8	524	30	762	2457	1115
36"	900	44	1118	25	635	36	914	3947	1790
42"	1050	50 3/4	1289	31 7/8	810	42	1067	6523	2959
48"	1200	58 3/4	1492	35	889	48	1219	7483	3394

Consult factory for additional sizes and pressure classes.

#### ASME Class 600

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	15 3/4	400	9 7/8	251	10 3/4	273	285	130
12"	300	18	457	11 5/8	295	12 3/4	324	366	166
14"	350	19 3/8	492	12 3/4	324	14	356	485	220
16"	400	22 1/4	565	14 1/2	368	16	406	705	320
18"	450	24 1/8	613	16 3/4	425	18	457	1057	480
20"	500	26 7/8	683	17 1/2	445	20	508	1531	695
24"	600	31 1/8	791	21 1/4	540	24	610	2240	1016
28"	700	36	914	23	584	28	711	3277	1486
30"	750	38 1/4	972	26 3/4	680	30	762	3746	1699
36"	900	44 1/2	1130	31	787	36	914	7000	3175
48"	1200	54 3/4	1391	40 1/8	1019	48	1219	9972	4523

#### ASME Class 900

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	17 1/8	435	10 1/4	260	10 3/4	273	462	210
12"	300	19 5/8	498	12 13/16	325	12 3/4	324	605	274
14"	350	20 1/2	521	14 5/8	371	14	356	1030	467
16"	400	22 5/8	575	15 1/2	394	16	406	1553	705
20"	500	27 1/2	699	19 1/2	495	20	508	1583	718
24"	600	33	838	22 1/4	565	24	610	3029	1374
30"	750	39 3/4	1010	28 7/8	734	30	762	6310	2862

#### ASME Class 1500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	17 1/8	435	11 1/2	292	10 3/4	273	476	216
12"	300	20 1/2	521	13 7/8	353	12 3/4	324	805	365
14"	350	22 3/4	578	14 5/8	371	14	356	1080	490
16"	400	25 1/4	641	16 1/2	419	16	406	1530	694
18"	450	27 3/4	705	20 1/4	514	18	457	2109	957
20"	500	29 3/4	756	21 7/8	556	20	508	2376	1077
24"	600	35 1/2	902	24 7/8	632	24	610	4329	1964

#### ASME Class 2500

Size		A		B		C		Weight	
in	mm	in	mm	in	mm	in	mm	lbs.	kg.
10"	250	18 3/4	476	11 1/2	292	10 3/4	273	577	262
12"	300	21 5/8	549	13 7/8	352	12 3/4	324	598	271



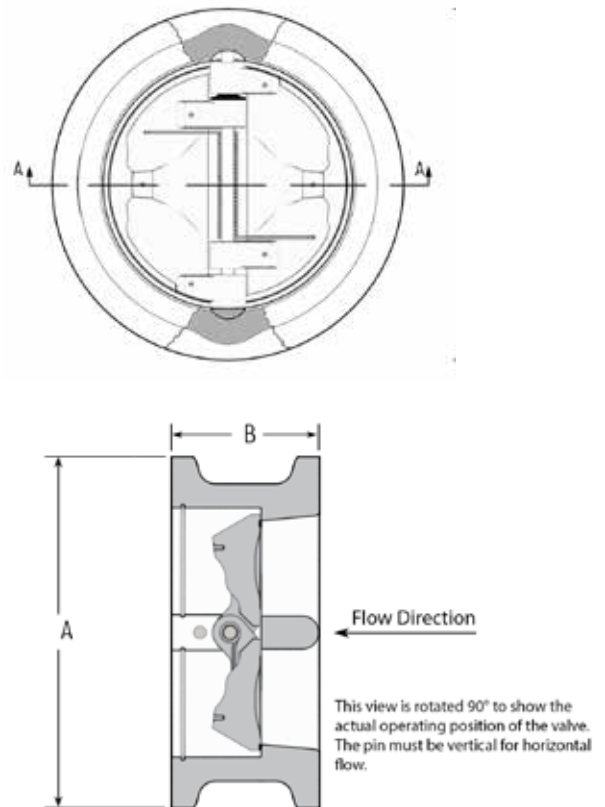
## Style P Retainerless Valve for Low Leak / Cryogenic Service

The advanced design of the Duo-Chek Cryogenic Valves provides many operational benefits to the user. Its' light weight compact design combined with the redesigned plates enable this valve to perform at a wide range of low temperatures and pressures. Style P valves are achieving less than 50% of API 598 in HPGT. Available in wafer, lug and double flange designs.

### Installation Dimensions - Wafer type

AMSE Class 150

Size		A		B		Weight	
in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 1/8	105	2 5/8	60	6	3
2 1/2"	65	4 7/8	124	2 5/8	67	10	5
3"	80	5 3/8	137	2 7/8	73	13	6
4"	100	6 7/8	175	2 7/8	73	17	8
5"	125	7 3/4	197	3 1/8	86	27	12
6"	150	8 3/4	222	3 1/8	98	35	16
8"	200	11	279	5	127	70	32
10"	250	13 5/8	340	5 3/4	146	106	48
12"	300	16 1/8	410	7 1/8	181	172	78
14"	350	17 3/4	451	7 1/4	184	200	91
16"	400	20 1/4	514	7 1/2	191	275	125
18"	450	21 5/8	549	8	203	315	143
20"	500	23 7/8	606	8 5/8	219	435	197
24"	600	28 1/4	718	8 3/4	222	620	281
26"	650	30 1/2	755	8 3/4	222	1047	476
28"	700	32 3/4	832	12	305	964	438
30"	750	34 3/4	883	12	305	719	327
32"	800	37	939	14	356	1111	505
36"	900	41 1/4	1048	14 1/2	368	1489	677



The Duo-Chek P-Style valves are a retainerless design with no body penetrations, eliminating potential leak paths to the atmosphere.

# Dimensions

**AMSE Class 300**

Size		A		B		Weight	
in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 <sup>3</sup> / <sub>8</sub>	111	2 <sup>3</sup> / <sub>8</sub>	60	7	3
2 1/2 "	65	5 <sup>1</sup> / <sub>8</sub>	130	2 <sup>5</sup> / <sub>8</sub>	67	11	5
3"	80	5 <sup>7</sup> / <sub>8</sub>	149	2 <sup>7</sup> / <sub>8</sub>	73	15	7
4"	100	7 <sup>1</sup> / <sub>8</sub>	181	2 <sup>7</sup> / <sub>8</sub>	73	18	8
5"	125	8 1/2	216	3 3/8	86	35	16
6"	150	9 <sup>7</sup> / <sub>8</sub>	251	3 <sup>7</sup> / <sub>8</sub>	98	45	20
8"	200	12 <sup>1</sup> / <sub>8</sub>	308	5	127	82	37
10"	250	14 1/4	362	5 3/4	146	125	57
12"	300	16 <sup>5</sup> / <sub>8</sub>	422	7 <sup>1</sup> / <sub>8</sub>	181	200	91
14"	350	19 <sup>1</sup> / <sub>8</sub>	486	8 3/4	222	325	147
16"	400	21 1/4	540	9 <sup>1</sup> / <sub>8</sub>	232	415	188
18"	450	23 1/2	597	10 <sup>3</sup> / <sub>8</sub>	264	555	252
20"	500	25 3/4	654	11 1/2	292	725	329
24"	600	30 1/2	755	12 1/2	318	1100	499
26"	650	32 <sup>7</sup> / <sub>8</sub>	835	14	356	1605	728
30"	750	37 1/2	953	15 <sup>11</sup> / <sub>16</sub>	368	2050	930
36"	900	44	1118	19 1/4	483	3573	1621

**AMSE Class 600**

Size		A		B		Weight	
in	mm	in	mm	in	mm	lbs.	kg.
2"	50	4 <sup>3</sup> / <sub>8</sub>	111	2 <sup>3</sup> / <sub>8</sub>	60	7	3
2 1/2 "	65	5 <sup>1</sup> / <sub>8</sub>	130	2 <sup>5</sup> / <sub>8</sub>	67	11	5
3"	80	5 <sup>7</sup> / <sub>8</sub>	149	2 <sup>7</sup> / <sub>8</sub>	73	15	7
4"	100	7 <sup>5</sup> / <sub>8</sub>	194	3 <sup>1</sup> / <sub>8</sub>	79	26	12
5"	125	9 1/2	241	4 <sup>1</sup> / <sub>8</sub>	105	50	23
6"	150	10 1/2	267	5 <sup>3</sup> / <sub>8</sub>	136	80	36
8"	200	12 <sup>5</sup> / <sub>8</sub>	321	6 1/2	165	135	61
10"	250	15 3/4	400	8 <sup>3</sup> / <sub>8</sub>	213	238	108
12"	300	18	457	9	229	333	151
14"	350	19 <sup>3</sup> / <sub>8</sub>	492	10 3/4	273	455	206
16"	400	22 1/4	565	12	305	640	290
18"	450	24 <sup>1</sup> / <sub>8</sub>	613	14 1/4	362	890	404
20"	500	26 <sup>7</sup> / <sub>8</sub>	683	14 1/2	368	1120	508
24"	600	31 <sup>1</sup> / <sub>8</sub>	791	17 1/4	438	2040	925
26"	650	34 <sup>1</sup> / <sub>8</sub>	867	18	547	2530	1148
30"	750	38 1/4	972	18 <sup>7</sup> / <sub>8</sub>	398	3375	1531
36"	900	44 1/2	1130	25	635	6300	2858

For installation dimensions of Lug and double flange type please refer style H on pages 5-7

# DIN Wafer Valve Outside Diameter of Body

**PN 6, 10, 16 (ASME Class 150)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	6	98	3 <sup>27</sup> / <sub>32</sub>
		10	109	4 <sup>9</sup> / <sub>32</sub>
		16	109	4 <sup>9</sup> / <sub>32</sub>
2 1/2"	65	6	118	4 <sup>5</sup> / <sub>8</sub>
		10	129	5 <sup>1</sup> / <sub>16</sub>
		16	129	5 <sup>1</sup> / <sub>16</sub>
3"	80	6	134	5 <sup>1</sup> / <sub>4</sub>
		10	144	5 <sup>21</sup> / <sub>32</sub>
		16	144	5 <sup>21</sup> / <sub>32</sub>
4"	100	6	154	6 <sup>1</sup> / <sub>16</sub>
		10	164	6 <sup>7</sup> / <sub>16</sub>
		16	164	6 <sup>7</sup> / <sub>16</sub>
5"	125	6	184	7 <sup>7</sup> / <sub>32</sub>
		10	194	7 <sup>5</sup> / <sub>8</sub>
		16	194	7 <sup>5</sup> / <sub>8</sub>
6"	150	6	209	8 <sup>7</sup> / <sub>32</sub>
		10	220	8 <sup>21</sup> / <sub>32</sub>
		16	220	8 <sup>21</sup> / <sub>32</sub>
8"	200	6	264	10 <sup>3</sup> / <sub>8</sub>
		10	275	10 <sup>13</sup> / <sub>16</sub>
		16	275	10 <sup>13</sup> / <sub>16</sub>
10"	250	6	319	12 <sup>17</sup> / <sub>32</sub>
		10	330	13
		16	331	13 <sup>1</sup> / <sub>32</sub>
12"	300	6	375	14 <sup>3</sup> / <sub>4</sub>
		10	380	14 <sup>15</sup> / <sub>16</sub>
		16	386	15 <sup>3</sup> / <sub>16</sub>
14"	350	6	425	16 <sup>23</sup> / <sub>32</sub>
		10	440	17 <sup>5</sup> / <sub>16</sub>
		16	446	17 <sup>17</sup> / <sub>32</sub>
16"	400	6	475	18 <sup>11</sup> / <sub>16</sub>
		10	491	19 <sup>5</sup> / <sub>16</sub>
		16	498	19 <sup>19</sup> / <sub>32</sub>
18"	450	10	541	21 <sup>9</sup> / <sub>32</sub>
		16	558	21
		20"	500	6
10	596			23 <sup>7</sup> / <sub>16</sub>
16	620			24 <sup>13</sup> / <sub>16</sub>
24"	600	6	681	26 <sup>25</sup> / <sub>32</sub>
		10	698	27 <sup>15</sup> / <sub>32</sub>
		16	737	29
28"	700	6	786	30 <sup>15</sup> / <sub>16</sub>
		10	813	32
		16	807	31 <sup>3</sup> / <sub>4</sub>
32"	800	6	893	35 <sup>5</sup> / <sub>32</sub>
		10	920	36 <sup>7</sup> / <sub>32</sub>
		16	914	35 <sup>15</sup> / <sub>16</sub>
36"	900	6	993	39 <sup>3</sup> / <sub>32</sub>
		10	1020	40 <sup>5</sup> / <sub>32</sub>
		16	1014	39 <sup>29</sup> / <sub>32</sub>
40"	1000	6	1093	43 <sup>1</sup> / <sub>32</sub>
		10	1127	44 <sup>3</sup> / <sub>8</sub>
		16	1131	44 <sup>1</sup> / <sub>2</sub>
48"	1200	6	1310	51 <sup>9</sup> / <sub>16</sub>
		10	1344	52 <sup>15</sup> / <sub>16</sub>
		16	1345	52 <sup>15</sup> / <sub>16</sub>

**PN 25, 40 (ASME Class 300)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	25	109	4 <sup>9</sup> / <sub>32</sub>
		40	109	4 <sup>9</sup> / <sub>32</sub>
2 1/2"	65	25	129	5 <sup>1</sup> / <sub>16</sub>
		40	129	5 <sup>1</sup> / <sub>16</sub>
3"	80	25	144	5 <sup>21</sup> / <sub>32</sub>
		40	144	5 <sup>21</sup> / <sub>32</sub>
4"	100	25	170	6 <sup>11</sup> / <sub>16</sub>
		40	170	6 <sup>11</sup> / <sub>16</sub>
5"	125	25	196	7 <sup>11</sup> / <sub>16</sub>
		40	196	7 <sup>11</sup> / <sub>16</sub>
6"	150	25	226	8 <sup>7</sup> / <sub>8</sub>
		40	226	8 <sup>7</sup> / <sub>8</sub>
8"	200	25	286	11 <sup>1</sup> / <sub>4</sub>
		40	293	11 <sup>17</sup> / <sub>32</sub>
10"	250	25	343	13 <sup>1</sup> / <sub>2</sub>
		40	355	13 <sup>31</sup> / <sub>32</sub>
12"	300	25	403	15 <sup>27</sup> / <sub>32</sub>
		40	420	16 <sup>17</sup> / <sub>32</sub>
14"	350	25	460	18 <sup>3</sup> / <sub>32</sub>
		40	477	18 <sup>3</sup> / <sub>4</sub>
16"	400	25	517	20 <sup>11</sup> / <sub>32</sub>
		40	549	21 <sup>19</sup> / <sub>32</sub>
18"	450	40	574	22 <sup>19</sup> / <sub>32</sub>
		25	627	24 <sup>1</sup> / <sub>16</sub>
20"	500	40	631	24 <sup>13</sup> / <sub>16</sub>
		25	734	28 <sup>7</sup> / <sub>8</sub>
24"	600	40	750	29 <sup>1</sup> / <sub>2</sub>

**PN 64, 100 (ASME Class 600)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	64	115	4 <sup>1</sup> / <sub>2</sub>
		100	121	4 <sup>3</sup> / <sub>4</sub>
2 1/2"	65	64	140	5 <sup>1</sup> / <sub>2</sub>
		100	146	5 <sup>3</sup> / <sub>4</sub>
3"	80	64	150	5 <sup>29</sup> / <sub>32</sub>
		100	156	6 <sup>1</sup> / <sub>8</sub>
4"	100	64	176	6 <sup>29</sup> / <sub>32</sub>
		100	183	7 <sup>3</sup> / <sub>16</sub>
5"	125	64	213	8 <sup>3</sup> / <sub>8</sub>
		100	220	8 <sup>27</sup> / <sub>32</sub>
6"	150	64	250	9 <sup>13</sup> / <sub>16</sub>
		100	260	10 <sup>7</sup> / <sub>32</sub>
8"	200	64	312	12 <sup>9</sup> / <sub>32</sub>
		100	327	12 <sup>27</sup> / <sub>32</sub>
10"	250	64	367	14 <sup>7</sup> / <sub>16</sub>
		100	394	15 <sup>1</sup> / <sub>2</sub>
12"	300	64	427	16 <sup>25</sup> / <sub>32</sub>
		100	461	18 <sup>1</sup> / <sub>8</sub>
14"	350	64	489	19 <sup>1</sup> / <sub>4</sub>
		100	515	20 <sup>1</sup> / <sub>4</sub>
16"	400	64	546	21 <sup>15</sup> / <sub>32</sub>
		100	575	22 <sup>5</sup> / <sub>8</sub>
20"	500	64	660	25 <sup>31</sup> / <sub>32</sub>
		100	708	27 <sup>27</sup> / <sub>32</sub>
24"	600	64	768	30 <sup>7</sup> / <sub>32</sub>
		100	819	32 <sup>7</sup> / <sub>32</sub>

**PN 160 (ASME Class 900)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	160	121	4 <sup>3</sup> / <sub>4</sub>
2 1/2"	65	160	146	5 <sup>3</sup> / <sub>4</sub>
3"	80	160	156	6 <sup>1</sup> / <sub>8</sub>
4"	100	160	183	7 <sup>3</sup> / <sub>16</sub>
5"	125	160	220	8 <sup>27</sup> / <sub>32</sub>
6"	150	160	260	10 <sup>7</sup> / <sub>32</sub>
8"	200	160	327	12 <sup>27</sup> / <sub>32</sub>
10"	250	160	391	15 <sup>3</sup> / <sub>8</sub>
12"	300	160	461	18 <sup>1</sup> / <sub>8</sub>

**PN 250 (ASME Class 1500)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	250	126	4 <sup>15</sup> / <sub>16</sub>
2 1/2"	65	250	156	6 <sup>1</sup> / <sub>8</sub>
3"	80	250	173	6 <sup>25</sup> / <sub>32</sub>
4"	100	250	205	8 <sup>1</sup> / <sub>16</sub>
5"	125	250	245	9 <sup>5</sup> / <sub>8</sub>
6"	150	250	287	11 <sup>9</sup> / <sub>32</sub>
8"	200	250	361	14 <sup>3</sup> / <sub>16</sub>
10"	250	250	445	17 <sup>1</sup> / <sub>2</sub>
12"	300	250	542	21 <sup>5</sup> / <sub>16</sub>

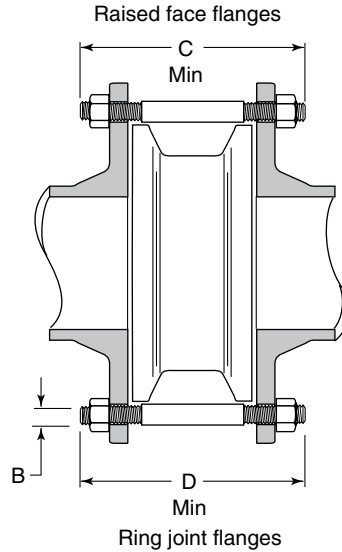
**PN 320 (ASME Class 2500)**

Size		PN	A (DIN)*	
in	mm		mm	in
2"	50	320	136	5 <sup>11</sup> / <sub>32</sub>
2 1/2"	65	320	173	6 <sup>25</sup> / <sub>32</sub>
3"	80	320	193	7 <sup>19</sup> / <sub>32</sub>
4"	100	320	232	9 <sup>1</sup> / <sub>8</sub>
5"	125	320	277	10 <sup>29</sup> / <sub>32</sub>
6"	150	320	314	12 <sup>11</sup> / <sub>32</sub>
8"	200	320	401	15 <sup>25</sup> / <sub>32</sub>
10"	250	320	492	19 <sup>11</sup> / <sub>32</sub>

PN	ASME Table reference
"6	150
10	
16"	
"25	300
40"	
160	900
250	1500

# Stud Selection

## Wafer Styles G (Retainered) and H (Retainerless)



### ASME Class 125 (Cast Iron valves only)

Valve Size		No. of Studs	B		C	
in	mm		Bolt Diameter	Flat Face	in	mm
2"	50	4	5/8	16	5 1/4	133
2 1/2"	65	4	5/8	16	5 3/8	136
3"	80	4	5/8	16	5 5/8	143
4"	100	8	5/8	16	6 1/4	159
5"	125	8	3/4	19	6 3/4	171
6"	150	8	3/4	19	7	178
8"	200	8	3/4	19	8	203
10"	250	12	7/8	22	9	229
12"	300	12	7/8	22	10 1/2	267
14"	350	12	1	25	12 3/4	324
16"	400	16	1	25	13 1/4	337
18"	450	16	1 1/8	29	14 1/4	362
20"	500	20	1 1/8	29	15	381
24"	600	20	1 1/4	32	16	406
26"	650	24	1 1/4	32	22 3/4	578
30"	750	28	1 1/4	32	20	508
36"	900	32	1 1/2	38	23 1/2	597
42"	1050	36	1 1/2	38	26 1/2	673
48"	1200	44	1 1/2	38	30 1/2	775
54"	1350	44	1 3/4	44	32 1/4	819
60"	1500	52	1 3/4	44	—	—
66"	1650	52	1 3/4	44	—	—
72"	1800	60	1 7/8	29	—	—
78"	1950	56	2	51	—	—
84"	2100	64	2 1/8	54	—	—
88"	2200	64	2 1/4	57	—	—

Stud dimensions apply to styles G & H for Lug style thru-hole bolting design.

### ASME Class 150

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter	Raised Face	Ring Joint	in	mm	
2"	50	4	5/8	16	5 3/4	146	6 1/4	159
2 1/2"	65	4	5/8	16	6 1/4	159	7	178
3"	80	4	5/8	16	6 3/4	171	7 1/4	184
4"	100	8	5/8	16	6 3/4	171	7 1/4	184
5"	125	8	3/4	19	7 1/2	191	8	203
6"	150	8	3/4	19	8	203	8 1/2	216
8"	200	8	3/4	19	9 1/2	241	10	254
10"	250	12	7/8	22	10 1/2	267	11	279
12"	300	12	7/8	22	12	305	12 1/2	318
14"	350	12	1	25	12 3/4	324	13 1/4	337
16"	400	16	1	25	13 1/4	337	13 3/4	349
18"	450	16	1 1/8	29	14 1/4	362	14 3/4	375
20"	500	20	1 1/8	29	15	381	15 1/2	394
24"	600	20	1 1/4	32	15 3/4	400	16 1/4	413

### ASME Class 150 Series A Flange

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter	Raised Face	Ring Joint	in	mm	
26"	650	24	1 1/4	32	23 1/2	597	—	—
30"	750	28	1 1/4	32	23	584	—	—
36"	900	32	1 1/2	38	27	686	—	—
42"	1050	36	1 1/2	38	29 1/4	743	—	—
48"	1200	44	1 1/2	38	33 3/4	857	—	—
54"	1350	44	1 3/4	44	36	914	—	—
60"	1500	52	1 3/4	44	41 1/2	1054	—	—
66"	1650	52	1 3/4	44	—	—	—	—
72"	1800	60	1 7/8	29	—	—	—	—
78"	1950	56	2	51	—	—	—	—
84"	2100	64	2 1/8	54	—	—	—	—
88"	2200	64	2 1/4	57	—	—	—	—

# Wafer Styles G (Retainered) and H (Retainerless)

## ASME Classes 250 (Cast Iron Retainered valves only) & 300

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint*	
in	mm		in	mm	in	mm	in	mm
2"	50	8	5/8	16	6	152	6 3/4	171
2 1/2"	65	8	3/4	19	6 3/4	171	7 1/2	191
3"	80	8	3/4	19	7	178	8	203
4"	100	8	3/4	19	7 1/2	191	8 1/4	210
5"	125	8	3/4	19	8 1/4	210	9	229
6"	150	12	3/4	19	9	229	9 3/4	248
8"	200	12	7/8	22	10 1/2	267	11 1/4	286
10"	250	16	1	25	12 1/4	311	13	330
12"	300	16	1 1/8	29	14	356	14 3/4	375
14"	350	20	1 1/8	29	16	406	16 3/4	425
16"	400	20	1 1/4	32	17	432	17 3/4	451
18"	450	24	1 1/4	32	18 1/2	470	19 3/4	489
20"	500	24	1 1/4	32	19 3/4	502	20 1/2	521
24"	600	24	1 1/2	38	21 3/4	552	22 3/4	578

\*Available in Class 300 only.

## ASME Classes 250 300 Series A Flange (Cast Iron valves only) & 300

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint*	
in	mm		in	mm	in	mm	in	mm
26"	650	28	1 3/8	41	25 1/4	641	26	660
30"	750	28	1 3/4	44	28 1/4	718	29	737
36"	900	32	2	51	33 1/4	845	34 1/4	870
42"	1050	32	1 3/8	41	36 3/4	933	-	-
48"	1200	32	1 7/8	48	40 3/4	1035	-	-

## ASME Class 600

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint	
in	mm		in	mm	in	mm	in	mm
2"	50	8	5/8	16	6 3/4	171	7	178
2 1/2"	65	8	3/4	19	7 1/2	191	7 3/4	197
3"	80	8	3/4	19	8	203	8 1/4	210
4"	100	8	7/8	22	9 1/4	235	9 1/4	235
5"	125	8	1	25	10 3/4	273	11	279
6"	150	12	1	25	12 1/4	311	12 1/2	318
8"	200	12	1 1/8	29	14 1/4	362	14 1/2	368
10"	250	16	1 1/4	32	17	432	17 1/4	438
12"	300	20	1 1/4	32	18	457	18	457
14"	350	20	1 3/8	35	20 1/4	514	20 1/2	521
16"	400	20	1 1/2	38	22 1/4	565	22 1/2	572
18"	450	20	1 3/8	41	25 1/4	641	25 1/2	648
20"	500	24	1 3/8	41	26	660	26 1/4	667
24"	600	24	1 7/8	48	30 1/4	768	30 3/4	781

Stud dimensions apply to styles G & H for Lug style thru-hole bolting design.

## ASME Class 600 Series A Flange

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint	
in	mm		in	mm	in	mm	in	mm
26"	650	32	1 1/4	32	23 1/2	597	24 1/2	622
28"	700	36	1 1/4	32	25 1/2	648	26 1/2	673
30"	750	36	1 3/8	35	26 1/4	667	27	686
32"	800	32	1 1/2	38	27 1/4	692	28 1/4	718
34"	850	36	1 1/2	38	27 1/4	692	28 1/4	718
46"	900	32	1 3/8	41	32	813	33	838

## ASME Class 900

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint	
in	mm		in	mm	in	mm	in	mm
2"	50	8	7/8	22	8 3/4	222	8 3/4	222
2 1/2"	65	8	1	25	9 3/4	248	9 3/4	248
3"	80	8	7/8	22	9 1/4	235	9 1/4	235
4"	100	8	1 1/8	29	11	279	11	279
6"	150	12	1 1/8	29	14	356	14 1/4	362
8"	200	12	1 3/8	35	17	432	17 1/4	438
10"	250	16	1 3/8	35	19	483	19	483
12"	300	20	1 3/8	35	21 3/4	552	21 3/4	552
14"	350	20	1 1/2	38	25	635	25 1/2	648
16"	400	20	1 3/8	41	26 3/4	679	27	686
18"	450	20	1 7/8	48	30 3/4	781	31 1/2	800
20"	500	20	2	51	31 1/2	800	32 1/4	819
24"	600	20	2 1/2	64	36 3/4	933	37 1/4	946

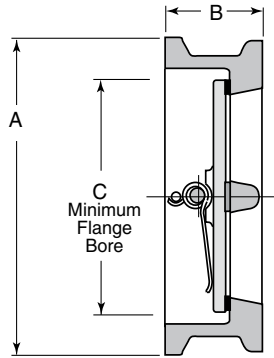
## ASME Class 1500

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint	
in	mm		in	mm	in	mm	in	mm
2"	50	8	7/8	22	8 3/4	222	8 3/4	222
2 1/2"	65	8	1	25	9 3/4	248	9 3/4	248
3"	80	8	1 1/8	29	10 1/2	267	10 1/2	267
4"	100	8	1 1/4	32	12	305	12	305
6"	150	12	1 3/8	35	16 3/4	425	16 3/4	425
8"	200	12	1 3/4	41	19 3/4	502	20 1/4	514
10"	250	12	1 7/8	48	23 1/4	591	23 1/2	597
12"	300	16	2	51	27	686	27 3/4	705
14"	350	16	2 1/4	57	30 1/4	768	31 1/4	794
16"	400	16	2 1/2	64	33	838	34	864
18"	450	16	2 3/4	70	38 3/4	965	39	900
20"	500	16	3	76	43 3/4	1111	44 3/4	1137
24"	600	16	3 1/2	89	48	1219	49 1/4	1251

## ASME Class 2500

Valve Size		No. of Studs	B		C		D	
			Bolt Diameter		Raised Face		Ring Joint	
in	mm		in	mm	in	mm	in	mm
2"	50	8	1	25	10	254	10	254
2 1/2"	65	8	1 1/8	29	11 1/4	286	11 1/4	286
3"	80	8	1 1/4	32	12 1/4	311	12 1/2	318
4"	100	8	1 1/2	38	14 1/4	362	14 3/4	375
6"	150	8	2	51	20	508	20 1/2	521
8"	200	12	2	51	23 3/4	603	24	610
10"	250	12	2 1/2	64	29 1/4	743	30 1/4	768
12"	300	12	2 3/4	70	33 1/4	845	34 1/4	870

## Installation & Stud Selection API 6A



### API Installation Dimensions - Class 2000

Size in	A		B		C		Weight	
	in	mm	in	mm	in	mm	lbs.	kg.
2 1/16"	4 3/8	143	2 3/4	70	1 11/16	43	14	6
2 9/16"	5 1/8	130	3 1/4	83	2 1/8	54	16	7
3 1/8"	5 7/8	149	3 1/4	83	2 5/8	67	24	11
4 1/16"	7 5/8	194	4	102	3 7/16	87	40	18
7 1/16"	10 1/2	267	6 1/4	159	5 3/16	132	115	52
9"	12 5/8	321	8 1/8	206	6 13/16	173	229	104
11"	15 3/4	400	9 1/2	241	8 1/2	216	388	176
13 5/8"	18	457	11 1/2	292	10 1/8	257	540	245

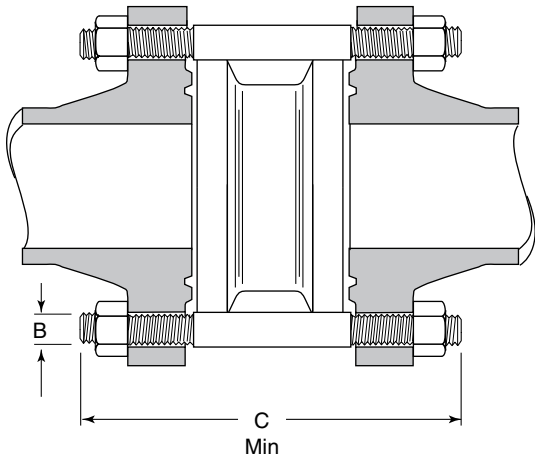
### API Installation Dimensions - Class 3000

Size in	A		B		C		Weight	
	in	mm	in	mm	in	mm	lbs.	kg.
2 1/16"	5 5/8	143	2 3/4	70	1 11/16	43	14	6
2 9/16"	6 1/2	165	3 1/4	83	2 1/8	54	16	7
3 1/8"	6 5/8	168	3 1/4	83	2 5/8	67	25	11
4 1/16"	8 1/8	206	4	102	3 7/16	87	43	20
7 1/16"	11 3/8	289	6 1/4	159	5 3/16	132	110	50
9"	14 1/8	359	8 1/8	206	6 13/16	173	219	99
11"	17 1/8	435	9 3/4	248	8 1/2	216	397	180
13 5/8"	19 5/8	498	12	305	10 1/8	257	725	329

### API Installation Dimensions - Class 5000

Size in	A		B		C		Weight	
	in	mm	in	mm	in	mm	lbs.	kg.
2 1/16"	5 3/8	143	2 3/4	70	1 11/16	43	15	7
2 9/16"	6 1/2	165	3 1/4	83	2 1/8	54	22	10
3 1/8"	6 7/8	175	3 3/8	86	2 5/8	67	31	14
4 1/16"	8 1/4	210	4 1/8	105	3 7/16	87	49	22
7 1/16"	11 1/8	283	6 1/4	159	5 3/16	132	190	86
9"	13 7/8	352	8 1/8	206	6 13/16	173	285	129
11"	17 1/8	435	10	254	8 1/2	216	502	228

NOTES: Dimensions for 10000 and 15000 ratings available on request.



### API Stud Selection - Class 2000

Size in	No. of Studs	B		C	
		in	mm	in	mm
2 1/16"	8	5/8	16	8	203
2 9/16"	8	3/4	19	9	229
3 1/8"	8	3/4	19	9 1/2	241
4 1/16"	8	7/8	22	11 1/2	292
7 1/16"	12	1	25	14	356
9"	12	1 1/8	29	17	432
11"	16	1 1/4	32	19	483
13 5/8"	20	1 1/4	32	23 3/4	546

### API Stud Selection - Class 3000

Size in	No. of Studs	B		C	
		in	mm	in	mm
2 1/16"	8	7/8	22	9 1/4	235
2 9/16"	8	1	25	11 1/4	286
3 1/8"	8	7/8	22	11 1/2	292
4 1/16"	8	1 1/8	29	12	305
7 1/16"	12	1 1/8	29	15 1/4	387
9"	12	1 3/8	35	18 3/4	476
11"	16	1 3/8	35	20	508
13 5/8"	20	1 3/8	35	21 1/2	591

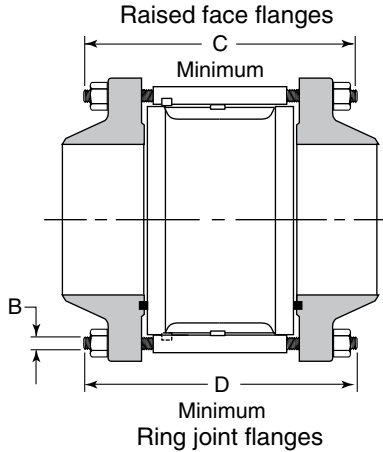
### API Stud Selection - Class 5000

Size in	No. of Studs	B		C	
		in	mm	in	mm
2 1/16"	8	7/8	22	9 1/4	235
2 9/16"	8	1	25	11 1/4	286
3 1/8"	8	1 1/8	29	12	305
4 1/16"	8	1 1/4	32	13	330
7 1/16"	12	1 3/8	35	18 3/4	476
9"	12	1 5/8	41	21	533
11"	12	1 7/8	48	24 1/2	622



# Stud Selection - Pressure Classes 150 - 2500

## Style X Extended Body Wafer Check



### ASME Stud Selection Class 600

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	16	1 1/4	32	18 1/4	464	18 3/4	476
12"	300	20	1 1/4	32	20 1/2	521	20 3/4	527
14"	350	20	1 3/8	35	22	559	22	559
16"	400	20	1 1/8	29	24 1/2	622	24 1/2	622
18"	450	20	1 5/8	41	30	762	30 1/4	768
20"	500	24	1 5/8	41	29	737	29 1/2	743
24"	600	24	1 7/8	48	34 1/4	870	34 3/4	883
28"	700	28	2	51	36 1/2	927	37	940
30"	750	28	2	51	42	1067	42 1/2	1080
36"	900	28	2 1/2	64	47	1194	-	-
48"	1050	32	2 3/4	70	62	1574	-	-

### ASME Stud Selection Class 150

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	12	7/8	22	12	305	12 1/2	318
12"	300	12	7/8	22	14	356	14 1/2	368
14"	350	12	1	25	14	356	14 1/2	368
16"	400	16	3/4	19	14 3/4	375	15 1/4	387
18"	450	16	1 1/8	29	16 3/4	425	17 1/4	438
20"	500	20	1 1/8	29	18 1/4	464	18 3/4	476
24"	600	20	1 1/4	29	20 3/4	527	21 1/4	540
26"	650	24	1 1/4	32	26 3/4	679	27 1/4	692
30"	750	28	1 1/4	32	27 1/4	692	27 3/4	705
32"	800	28	1 1/2	38	32	1690	32 3/4	832
36"	900	32	1 1/2	32	32 1/4	819	32 3/4	832
42"	1050	36	1 1/2	38	37 1/4	946	-	-
48"	1200	44	1 1/2	38	43 1/4	1099	-	-
54"	1350	44	1 3/4	44	43 1/2	1105	-	-

### ASME Stud Selection Class 900

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	16	1 3/8	35	19 1/2	495	19 3/4	502
12"	300	20	1 3/8	35	23	584	23 3/4	591
14"	350	20	1 1/2	38	25 3/4	654	26 1/4	667
16"	400	20	1 1/4	32	26 3/4	679	27	686
20"	500	20	2	51	33 1/4	844	34	864
24"	600	20	2 1/2	64	39 3/4	1010	40 3/4	1035
30"	750	20	3	76	48	1219	48 1/2	1232

### ASME Stud Selection Class 300

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	16	1	25	13 3/4	349	14 1/2	368
12"	300	16	1 1/8	29	16	406	16 3/4	425
14"	350	20	1 1/8	29	17 1/2	445	18 1/4	464
16"	400	20	7/8	22	18 1/2	470	19	483
18"	450	24	1 1/4	32	20 3/4	527	21 1/2	546
20"	500	24	1 1/4	32	22	641	22 3/4	578
24"	600	24	1 1/2	29	15 1/4	648	26 1/4	667
28"	700	28	1 5/8	41	31	787	31 1/2	800
30"	750	28	1 3/4	44	32 1/4	819	33 1/2	851
36"	900	32	2	51	38 1/2	978	-	-
42"	1050	32	2	51	47 1/2	1206	-	-
48"	1200	40	2	51	50 1/4	1276	-	-

### ASME Stud Selection Class 1500

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	12	1 7/8	48	25	635	25 1/4	641
12"	300	16	2	51	29	737	29 1/2	749
14"	350	16	2 1/4	57	31 1/4	794	32 1/4	819
16"	400	16	1 1/2	38	34	864	35	889
18"	450	16	2 3/4	70	39 3/4	1010	41	1041
20"	500	16	3	76	43	1092	44	1118
24"	600	16	3 1/2	89	49	1245	49 1/4	1251

### ASME Stud Selection Class 2500

Valve Size		No. of Studs	B		C		D	
in	mm		Bolt Diameter		Raised Face		Ring Joint	
			in	mm	in	mm	in	mm
10"	250	12	2 1/2	64	31	787	31 3/4	806
12"	300	12	2 3/4	70	35 1/2	902	36 1/2	927

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