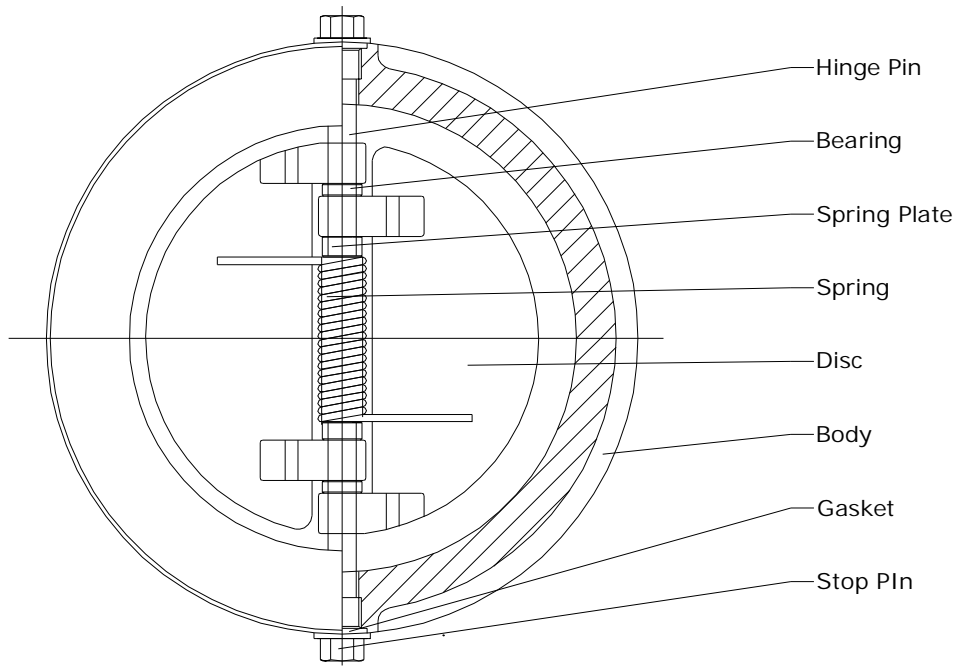


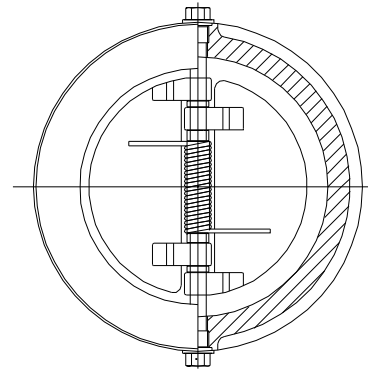


Steinbock valves



TYPICAL MATERIAL OF MAIN PARTS

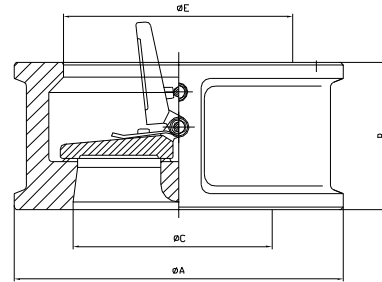
No.	Part Name	Carbon Steel		Stainless Steel	Alloy Steel
		ASTM A194 2H	ASTM A276 TYPE304	ASTM A276 TYPE304	ASTM A276 TYPE410
1	Stop Pin	ASTM A194 2H	ASTM A276 TYPE304	ASTM A276 TYPE304	ASTM A276 TYPE410
2	Gasket	Soft Graphite+SS304			
3	Body	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8M	ASTM A217 WC6
4	Disc	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8M	ASTM A217 WC6
5	Spring	INCONEL X750			
6	Spring Plate	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8M	ASTM A217 WC6
7	Bearing	ASTM A216 WCB	ASTM A352 LCB	ASTM A351 CF8	ASTM A217 WC6
8	Hinge Pin	ASTM A194 2H	ASTM A276 TYPE304	ASTM A276 TYPE316	ASTM A276 TYPE410



Wafer Type Check Valve

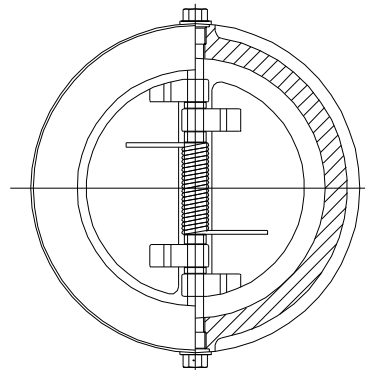
Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598



Technical Specification

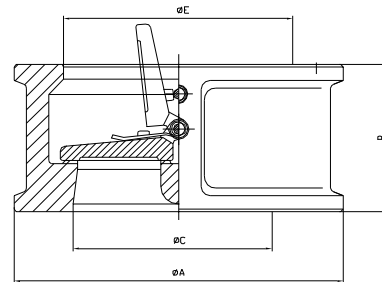
Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	105	60	-	57	4	16	152.4	7	3.2
3"	80	137	73	51	87	4	16	177.9	14	6.4
4"	100	175	73	89	113	8	16	177.9	21	9.5
6"	150	222	98	140	166	8	19	209.6	36	16
8"	200	279	127	171	207	8	19	247.6	80	36
10"	250	340	146	235	260	12	22	279.4	116	52
12"	300	410	181	260	300	12	22	311.2	215	97
14"	350	451	184	286	339	12	25	330.2	270	123
16"	400	514	191	332	387	16	25	342.9	295	133
18"	450	549	203	395	438	16	29	368.3	312	141
20"	500	606	219	438	487	20	29	384.2	472	215
24"	600	718	222	537	579	20	32	412.8	788	358



Wafer Type Check Valve

Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS ≤ 24") , ASME B16.47(NPS > 24")
5. Inspection and Test Standard: API 598

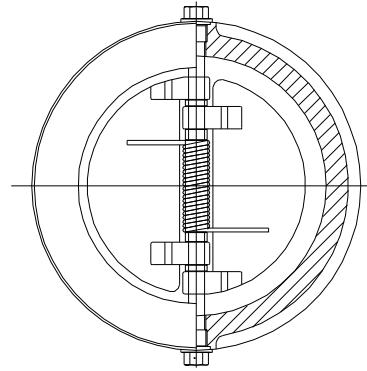


Technical Specification

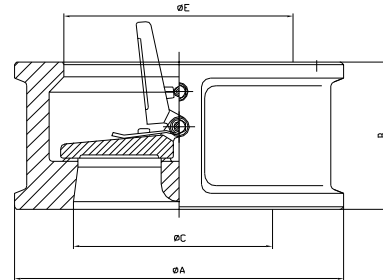
Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	111	60	-	57	8	16	174.6	8	3.2
3"	80	149	73	51	87	8	19	206.4	17	7.7
4"	100	181	73	89	113	8	19	206.4	23	10.5
6"	150	251	98	140	166	12	19	244.5	45	20
8"	200	308	127	171	207	12	22	282.6	88	40
10"	250	362	146	235	260	16	25	323.9	124	56
12"	300	422	181	260	300	16	29	371	217	98
14"	350	486	222	286	339	20	29	419.1	390	176
16"	400	540	232	330	387	20	32	441.3	458	207
18"	450	597	264	391	438	24	32	479.4	650	294
20"	500	654	292	438	487	24	32	520.7	801	363
24"	600	775	318	524	579	24	38	577.8	1150	1150

Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

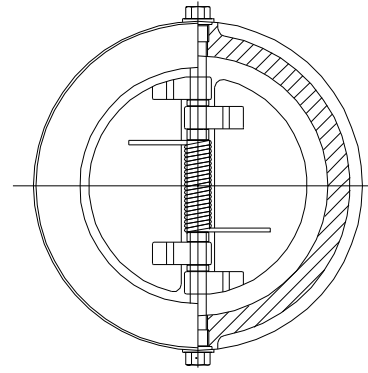


Wafer Type Check Valve



Technical Specification

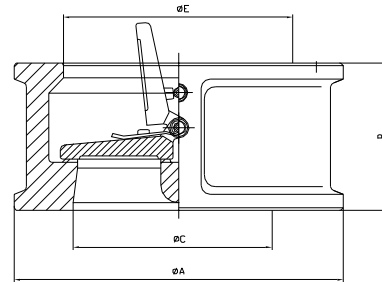
Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	111	60	-	57	8	16	174.6	8	3.2
3"	80	149	73	51	87	8	19	206.4	17	7.7
4"	100	194	79	89	113	8	22	241.3	28	12.7
6"	150	267	137	89	166	12	25	314.3	80	36
8"	200	321	165	168	207	12	29	368.3	160	72
10"	250	400	213	200	260	16	32	434.9	260	118
12"	300	457	229	232	300	20	32	457.2	360	164
14"	350	492	273	232	339	20	35	514.3	410	186
16"	400	565	305	330	387	20	38	565.1	728	331
18"	450	613	362	330	438	20	41	641.3	870	394
20"	500	683	368	432	487	24	41	666.8	1196	544
24"	600	791	438	510	579	24	48	781.1	1802	819



Wafer Type Check Valve

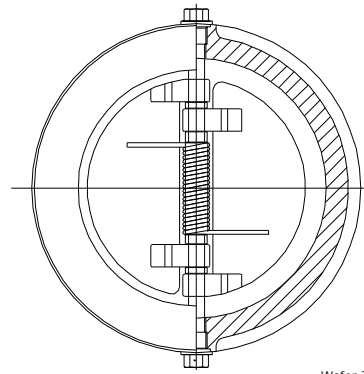
Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598



Technical Specification

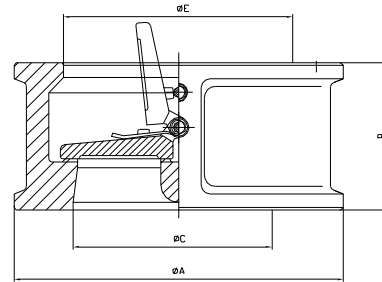
Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	143	70	-	57	8	22	222.2	18	8.2
3"	80	168	83	60	87	8	22	241.3	26	11.8
4"	100	206	102	83	113	8	29	279.4	42	19.1
6"	150	289	159	89	166	12	29	355.6	119	54
8"	200	359	206	130	207	12	35	434.9	271	122
10"	250	435	241	195	260	16	35	482.6	434	196
12"	300	498	292	206	300	20	35	552.4	644	293
14"	350	521	356	-	339	20	38	647.7	872	396
16"	400	575	384	162	387	20	41	688.9	1174	532
18"	450	638	451	244	438	20	48	876.3	1344	611
20"	500	699	451	406	487	20	51	825.5	1406	637
24"	600	838	495	444.5	579	20	63.5	965.2	2713	1230



Wafer Type Check Valve

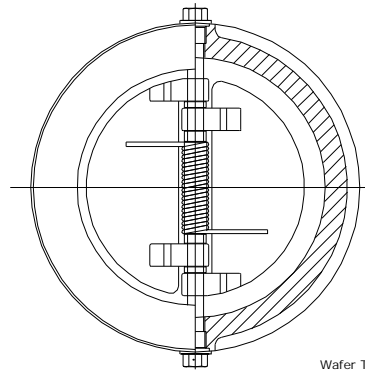
Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598



Technical Specification

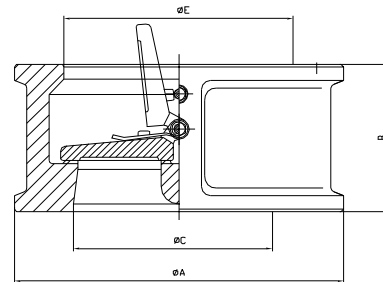
Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	143	70	-	57	8	22	222.2	18	8.2
3"	80	175	83	60	87	8	29	266.7	28	12.7
4"	100	210	102	83	113	8	32	304.8	45	20.5
6"	150	283	159	89	166	12	35	425.4	116	52
8"	200	352	206	130	207	12	41	514.3	257	116
10"	250	435	248	184	260	12	48	596.9	449	203
12"	300	521	305	210	300	16	51	698.5	824	373
14"	350	578	356	-	339	16	57	800.1	1068	484
16"	400	641	384	162	387	16	63.5	869.9	1295	587
18"	450	705	468	184	438	16	70	1009.6	1745	791
20"	500	756	533	210	487	16	76	1123.9	2812	1275
24"	600	902	559	390	579	16	89	1231.9	5968	2713



Wafer Type Check Valve

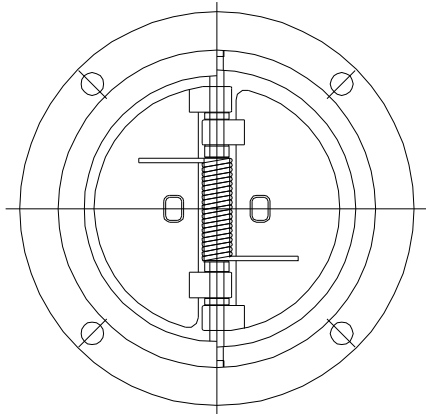
Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

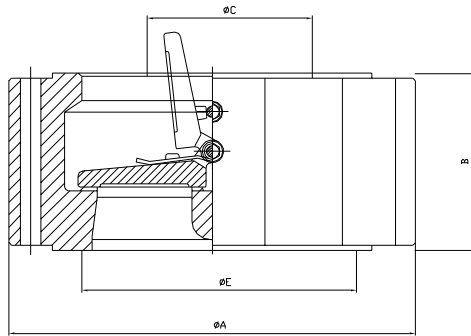


Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	STUD SELECTION (mm)			APPROX WT.	
Inch	mm					No.	Dia.	Length	Lbs	Kg
2"	50	146	70	-	57	8	25	254.0	29	13.1
3"	80	197	86	60.33	87	8	32	311.2	35	15.9
4"	100	235	105	83	113	8	38	371.5	64	29.1
6"	150	317	159	89	166	8	51	520.7	154	70
8"	200	387	206	143	207	12	51	609.9	296	132
10"	250	476	254	190	260	12	63	774.7	480	217
12"	300	549	305	225	300	12	70	876.3	870	394



SOLID LUG TYPE BSR

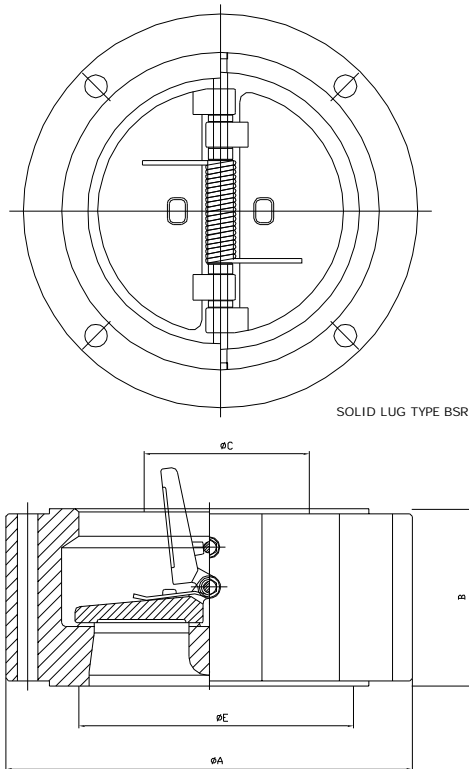


Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	152	60	-	57	120.7	19.1	4	16	165	7
3"	80	191	73	51	87	152.4	19.1	4	16	185	12
4"	100	229	73	89	113	190.5	19.1	8	16	185	19
6"	150	279	98	140	166	241.3	22.2	8	19	220	32
8"	200	343	127	171	207	298.5	22.2	8	19	255	63
10"	250	406	146	235	260	362	25.4	12	22	285	93
12"	300	483	181	260	300	431.8	25.4	12	22	325	170
14"	350	533	184	286	339	476.3	28.6	12	25	340	199
16"	400	597	191	332	387	539.8	28.6	16	25	350	246
18"	450	635	203	395	438	577.9	31.8	16	29	375	290
20"	500	699	219	438	487	635	31.8	20	29	400	348
24"	600	813	222	537	579	749.3	34.9	20	32	420	396

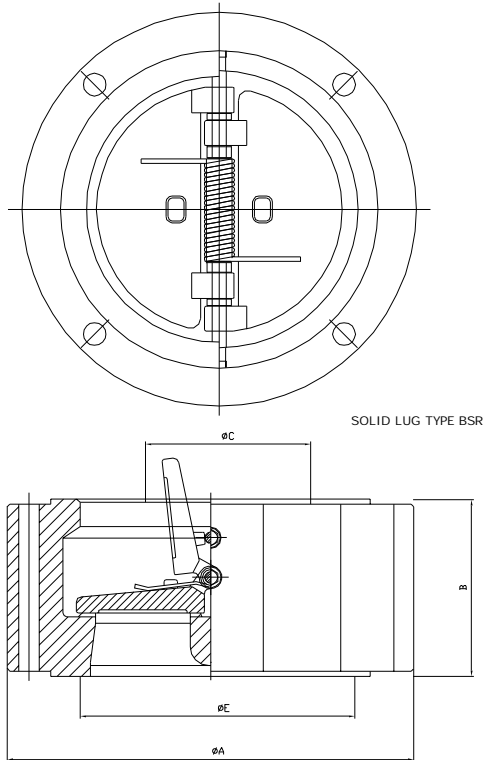


Design Standard

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2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	165	60	-	57	127	19.1	8	16	170	8
3"	80	210	73	51	87	168.3	22.2	8	19	205	14
4"	100	254	73	89	113	200	22.2	8	19	210	23
6"	150	318	98	140	166	269.9	22.2	12	19	245	45
8"	200	381	127	171	207	330.2	25.4	12	22	290	78
10"	250	445	146	235	260	387.4	28.6	16	25	325	115
12"	300	521	181	260	300	450.8	31.8	16	29	375	242
14"	350	584	222	286	339	514.4	31.8	20	29	420	313
16"	400	648	232	330	387	571.5	34.9	20	32	445	489
18"	450	711	264	391	438	628.6	34.9	24	32	485	558
20"	500	775	292	438	487	685.8	34.9	24	32	520	766
24"	600	914	318	524	579	812.8	41.3	24	38	570	1190

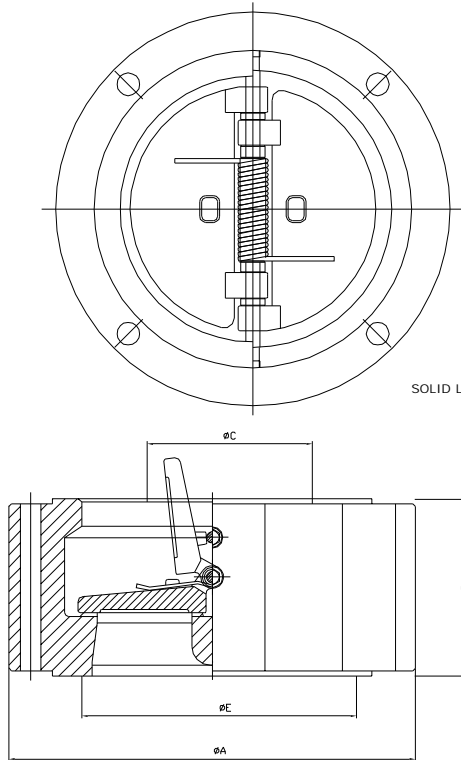


Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	165	60	-	57	127	19.1	8	16	195	8
3"	80	210	73	51	87	168.3	22.2	8	19	230	14
4"	100	273	79	89	113	215.9	25.4	8	22	255	30
6"	150	356	137	89	166	292.1	28.6	12	25	340	81
8"	200	419	165	168	207	349.2	31.8	12	29	385	134
10"	250	508	213	200	260	431.8	34.9	16	32	460	234
12"	300	559	229	232	300	489	34.9	20	32	480	304
14"	350	603	273	232	339	527	38.1	20	35	535	440
16"	400	686	305	330	387	603.2	41.3	20	38	590	660
18"	450	743	362	330	438	654	44.5	20	41	665	1078
20"	500	813	368	432	487	723.9	44.5	24	41	685	995
24"	600	940	438	510	579	838.2	50.8	24	48	800	1554



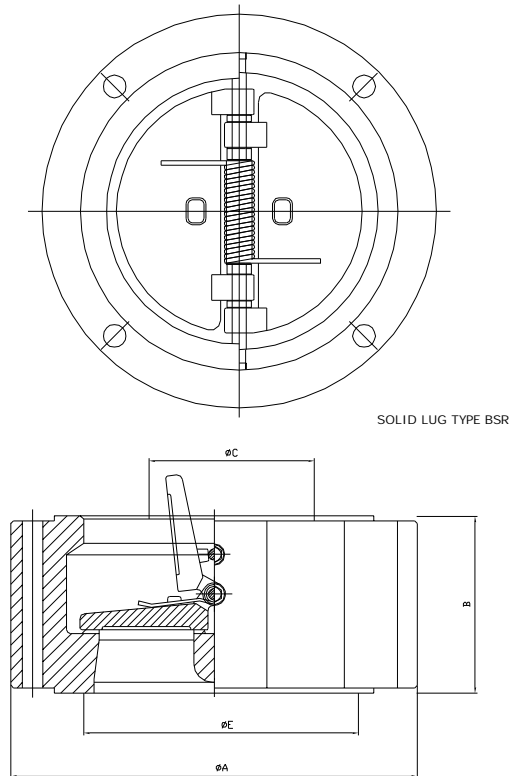
SOLID LUG TYPE BSR

Design Standard

1. Design and Manufacture Standard: API594
2. Material Pressure-Temp Standard: ANSI B16.34
3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
5. Inspection and Test Standard: API 598

Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	216	70	-	57	165.1	25.4	8	22	240	16
3"	80	241	83	60	87	190.5	25.4	8	22	255	25
4"	100	292	102	83	113	235	31.8	8	29	300	45
6"	150	381	159	89	166	317.5	31.8	12	29	380	115
8"	200	470	206	130	207	393.7	38.1	12	35	455	217
10"	250	546	241	195	260	469.9	38.1	16	35	505	330
12"	300	610	292	206	300	533.4	38.1	20	35	575	509
14"	350	641	356	-	339	558.8	41.3	20	38	660	775
16"	400	705	384	162	387	616	44.5	20	41	705	850
18"	450	787	451	244	438	685.8	50.8	20	48	815	1450
20"	500	857	451	406	487	749.3	54	20	51	835	1960
24"	600	1041	495	445	579	901.7	66.7	20	63.5	975	2351

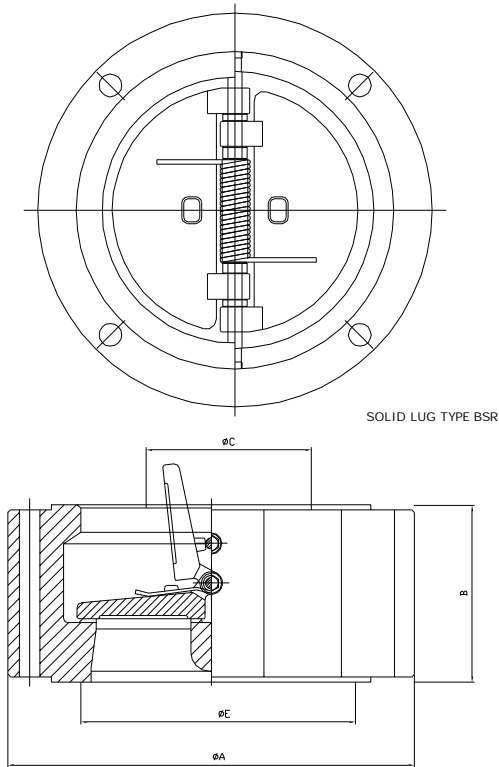


Design Standard

1. Design and Manufacture Standard: API594
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3. End to End Standard: API594
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5. Inspection and Test Standard: API 598

Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	216	70	-	57	165.1	25.4	8	22	240	16
3"	80	267	83	60	87	203.2	31.8	8	29	285	29
4"	100	311	102	83	113	241.3	34.9	8	32	325	51
6"	150	394	159	89	166	317.5	38.1	12	35	455	119
8"	200	483	206	130	207	393.7	44.5	12	41	530	230
10"	250	584	248	184	260	482.6	50.8	12	48	620	378
12"	300	673	305	210	300	571.5	54	16	51	720	650
14"	350	749	356	-	339	635	60.3	16	57	810	905
16"	400	826	384	162	387	704.8	66.7	16	63.5	885	1120
18"	450	914	468	184	438	774.7	73	16	70	1010	1775
20"	500	984	533	210	487	831.8	79.4	16	76	1125	2200
24"	600	1168	559	391	579	990.6	92.1	16	90	1235	3325



Design Standard

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3. End to End Standard: API594
4. Flange End Dimension Standard: ANSI B16.5(NPS<=24") , ASME B16.47(NPS>24")
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Technical Specification

Size		A Ø (mm)	B (mm)	C Ø (mm)	E Ø (mm)	HOLE P.C.D. (mm)	HOLE DIA. (mm)	STUD SELECTION (mm)			APPROX WEIGHT(Kg)
Inch	mm							No.	Dia.	Length	
2"	50	235	70	-	57	171.4	28.6	8	25	275	19
3"	80	305	86	60	87	228.6	34.9	8	29	335	38
4"	100	356	105	83	113	273	41.3	8	38	395	69
6"	150	483	159	89	166	368.3	54	8	51	540	184
8"	200	552	206	143	207	438.2	54	12	51	630	300
10"	250	673	254	191	260	539.8	66.7	12	63.5	790	489
12"	300	762	305	225	300	619.1	73	12	70	895	747

ASME B16.34 PRESSURE / TEMPERATURE RATINGS

ASME B16.34 PRESSURE / TEMPERATURE RATINGS

MAXIMUM NON-SHAKE WORKING PRESSURES (Standard Class), BAR.

Temperature °C	MAXIMUM NON-SHOCK WORKING PRESSURES (Standard Class), BAR.																													
	150lb SERIES					300lb SERIES					600lb SERIES					900lb SERIES					1500lb SERIES					2500lb SERIES				
	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	ASTM	
	A216	A105	A352	A350	A217	A216	A105	A352	A350	A217	A216	A105	A352	A350	A217	A216	A105	A352	A350	A217	A216	A105	A352	A350	A217	A216	A105	A352	A350	A217
WCB		LCC	LF2	WCB	WCB		LCC	LF2	WCB	WCB		LCC	LF2	WCB	WCB		LCC	LF2	WCB	WCB		LCC	LF2	WCB	WCB		LCC	LF2	WCB	
-29 to 38	19.6	19.6	19.8	19.6	19.8	51.1	51.1	51.7	51.1	51.7	102.1	102.1	103.4	102.1	103.4	153.2	153.2	155.1	153.2	155.1	255.3	255.3	258.6	255.3	258.6	425.5	425.5	430.9	425.5	430.9
50	19.2	19.2	19.5	19.2	19.5	50.1	50.1	51.7	50.1	51.7	100.2	100.2	103.4	100.2	103.4	150.4	150.4	155.1	150.4	155.1	250.6	250.6	258.6	250.6	258.6	417.7	417.7	430.9	417.7	430.9
100	17.7	17.7	17.7	17.7	17.7	46.6	46.6	51.5	46.6	51.5	93.2	93.2	103.0	93.2	103.0	139.8	139.8	154.6	139.8	154.6	233.0	233.0	257.6	233.0	257.6	388.3	388.3	429.4	388.3	429.0
150	15.8	15.8	15.8	15.8	15.8	45.1	45.1	50.2	45.1	49.7	90.2	90.2	100.3	90.2	99.5	135.2	135.2	150.5	135.2	149.2	375.6	375.6	250.8	375.6	248.7	320.8	320.8	418.1	320.8	414.5
200	13.8	13.8	13.8	13.8	13.8	43.8	43.8	48.6	43.8	48.0	87.6	87.6	97.2	87.6	95.9	131.4	131.4	145.8	131.4	143.9	219.0	219.0	243.2	219.0	239.8	365.0	365.0	405.4	365.0	399.6
250	12.1	12.1	12.1	12.1	12.1	41.9	41.9	46.3	41.9	46.3	83.9	83.9	92.7	83.9	92.7	125.8	125.8	139.0	125.8	139	209.7	209.7	231.8	209.7	231.8	349.5	349.5	386.2	349.5	386.2
300	10.2	10.2	10.2	10.2	10.2	39.8	39.8	42.9	39.8	42.9	79.6	79.6	85.7	79.6	85.7	119.5	119.5	128.6	119.5	128.6	199.1	199.1	214.4	199.1	214.4	331.8	331.8	357.1	331.8	357.1
350	8.4	8.4	-	8.4	8.4	37.6	37.6	-	37.6	40.3	75.1	75.1	-	75.1	80.4	112.7	112.7	-	112.7	120.7	187.8	187.8	-	187.8	201.1	313.0	313.0	-	313.0	335.3
400	6.5	6.4	-	6.5	6.5	34.7	34.7	-	34.7	36.5	69.4	69.4	-	69.4	73.3	104.2	104.2	-	104.2	109.8	173.6	173.6	-	173.6	183.6	289.3	289.3	-	289.3	304.9
450	-	-	-	-	4.6	-	-	-	-	33.7	-	-	-	-	67.7	-	-	-	-	101.4	-	-	-	-	169.0	-	-	-	-	281.8
500	-	-	-	-	2.8	-	-	-	-	25.7	-	-	-	-	51.5	-	-	-	-	77.2	-	-	-	-	128.6	-	-	-	-	214.4
538	-	-	-	-	1.4	-	-	-	-	14.9	-	-	-	-	29.8	-	-	-	-	44.7	-	-	-	-	74.5	-	-	-	-	124.1

All valves are hydrostatically shell and seat pressure tested to API 598
 Shell test: 1.5 x CWP // Seat test: 1.1 x CWP.