

CHECK VALVES

CAST SWING CHECK VALVES

Series 70 (API 594) & 71 (API 603) ⁽¹⁾



FEATURES

- BOLTED BONNET
- END CONNECTIONS RF, RTJ, RING JOING, LARGE AND SMALL TONGUE AND GROOVE
- CAST & STAINLESS STEEL
- SIZES 2" - 24" CLASS 150 - 2500
- BASIC DESIGN API 594 & API 603
- SHELL WALL THICKNESS API 594, API 603 & ANSI B 16.34
- FACE TO FACE DIMENSION ANSI B16.10
- FLANGE END DIMENSION ANSI B 16.5 (2" TO 24") MSS SP - 44 (26" & UP)
- BUTT - WELD END DIMENSION ANSI B 16.25
- INSPECTION & TESTING API 598 / API 6D

TRIM MATERIAL

Trim No.	Seat ring surface	Disc seat surface	Hinge Pin
1	BM ⁽²⁾ +STL6	BM ⁽²⁾ +13%Cr	A276 410
2	SS304	BM ⁽²⁾ +S304	A276 304
5	BM ⁽²⁾ +STL6	BM ⁽²⁾ +STL6	A276 410
6	Cu-Ni	BM ⁽²⁾ +13%Cr	A276 410
8	BM ⁽²⁾ +STL6	BM ⁽²⁾ +13%Cr	A276 410
9	MONEL	MONEL	MONEL
10	SS316	BM ⁽²⁾ +SS316	A276 316
13	Alloy20	BM ⁽²⁾ +Alloy20	B473

GENERAL NOTES:

Integral: Seat Ring is not renewable, is body's part.
STL6: Hard Face on Surface (AWS A5.13 ECoCr-a or AWS A5.21 ERCoCr-A).
13%Cr.: Material applied by Welding (AWS A5.9 ER410).
SS316: Material applied by Welding (AWS A5.9 ER316).

Note 1: The Integral and Body Material only applies when the Trim materials are different from Body Material.

Note 2: The Disc and Body Seat Ring material are least equal in corrosion resistance to that of the body material according Table 5 from API 594.

(1) Wall Thickness.

(2) Body Material.

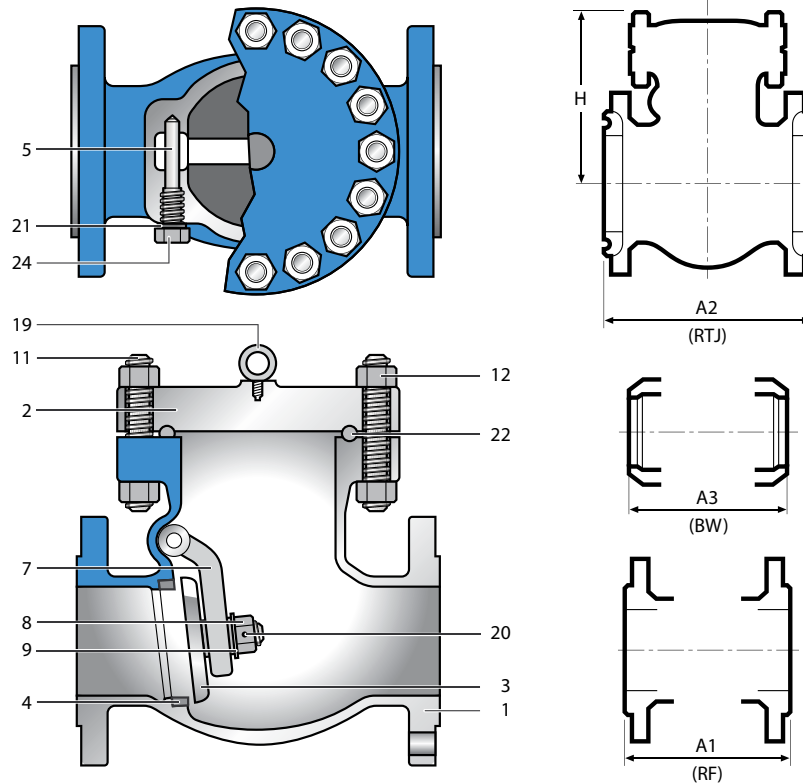
Note 3: TFV Trims are according to API 594 valid options. If you require any specific material, please contact us.

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CLASS 150 - 2500

2" - 24"


BILL OF MATERIAL

NO	NAME OF PART	API SPECIFICATION							
		CARBON STEEL	HIGH TEMPERATURE SERVICE			LOW TEMPERATURE SERVICE	STAINLESS STEEL		
1	BODY	A216 WCB	A217 WC6	A217 WC9	A217 C5	A352-LCB/LC2/LC3	A351 CF8M	A351 CF8C	
2	COVER	A216 WCB	A217 WC6	A217 WC9	A217 C5	A352-LCB/LC2/LC3	A351 CF8M	A351 CF8C	
3	DISC	A105+13%Cr Or A216 WCB+13%Cr	A182 F11 +13%Cr Or A217 WC6 +13%Cr	A182 F22 +13%Cr Or A217 WC9 +13%Cr	A182 F5a +13%Cr Or A217 C5 +13%Cr	A352-LCB/LC2/LC3	A351 CF8M	A351 CF8C	
4	BODY SEAT RING	A105+STL6 Or A216 WCB+STL6	A182 F11 +STL6 Or A217 WC6 +STL6	A182 F22 +STL6 Or A217 WC9 +STL6	A182 F5a +STL6 Or A217 C5 +STL6	A182 F304	A182 F316	A182 F347	
5	HINGE PIN	A276 410	A276 410	A276 410	A276 410	A276 304	A182 F316	A182 F347	
7	ARM	A216 WCB	A217 WC6	A217 WC9	A217 C5	A352-LCB/LC2/LC3	A351 CF8M	A182 F347	
8	DISC NUT	304 SS						A182 F316	A182 F347
9	DISC WASHER	304 SS						A182 F316	A182 F347
11	BONNET BOLT	A193 B7	A193 B16	A193 B16	A193 B16	A320-L7	A193 B8	A193 B8	
12	BONNET NUT	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8	A194 8	
19	EYE BOLT	A105						SS	SS
20	SPLIT PIN	304 SS						A182 F316	A182 F347
21	PLUG GASKET	COMMERCIAL							
22	GASKET	COMMERCIAL							
24	PLUG	A105						A182 F316	A182 F316

HARD FACE STANDARD STELLITE 6 (OTHER OPTIONS AVAILABLE UPON REQUEST)



CAST SWING CHECK VALVES

CLASS 150 - CAST & STAINLESS STEEL CHECK VALVES

DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36
A1 (RF)	in	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0	38.5	38.5	51.0	57.0	60.0	77.0
A2 (RTJ)	in	5.8	6.4	6.9	8.3	11.3	13.6	16.7	19.5	23.8	25.6	27.9	29.6	38.5	40.0	45.2	53.1
A3 (BW)	in mm	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0	38.5	38.5	51.0	57.0	60.0	77.0
H2	in mm																
WGT (RF)	lb kg	35.2	48.5	66.1	97.0	172.0	260.2	520.4	757.8	929.7	1398	1799	2165	3925	4520.3	4643.9	7386.8
WGT (BW)	lb kg	26.4	33.0	46.3	57.3	136.7	200.7	449.8	645.5	775.5	1195.0	1579.0	1879.0	3528.0	4300.0	4423.6	6945.8

CLASS 300 - CAST & STAINLESS STEEL CHECK VALVES

DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36
A1 (RF)		10.5	11.5	12.5	14.0	17.5	21.0	24.5	28.0	33.0	34.0	38.5	40.0	53.0	59.0	62.75	82.0
A2 (RTJ)	in mm	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	60.0	63.75	83.12
A3 (BW)	in mm	10.5	11.5	12.5	14.0	17.5	21.0	24.5	28.0	33.0	34.0	38.5	40.0		59.0	62.75	82.0
H2	in mm	6.4	7.1	7.8	8.7	12.8	14.5	18.6	20.9	22.8	27.4	31.4	30.6	39.6	45.2	50.0	60.6
WGT (RF)	lb kg	52.9	81.5	99.1	149.8	301.8	485.1	595.4	1091.5	1498.0	2094.8	2646.0	3304.5	4851.0	6174.0	7497.0	11025.0
WGT (BW)	lb kg	46.3	77.1	77.1	112.4	242.3	401.3	463.1	1014.3	1156.6	1764.0	2138.9	2687.7	3924.9	5292.0	6504.8	9481.5

CLASS 600 - CAST & STAINLESS STEEL CHECK VALVES

DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30
A1 (RF)	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	63.0	65.0
A2 (RTJ)	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	63.5	65.5
A3 (BW)	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	63.0	65.0
H2	in	8.0	8.6	10.0	12.5	15.6	20.8	24.6	23.8	26.1	32.0	37.8	40.5	47.3	53.1	56.3
WGT (RF)	lb	88.2	121.2	158.6	253.6	550.8	926.1	1349	1786.1	2425.5	3638	3969.0	6168.4	7197	9040.5	11025.0
WGT (BW)	lb	68.4	99.1	132.2	176.4	451.6	804.6	1085	1576.6	1940.4	2955	3197.3	5177.1	5654	7717.5	9481.5





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CLASS 900 - CAST & STAINLESS STEEL CHECK VALVES

DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30
A1 (RF)	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	69.0	73.0
A2 (RTJ)	in	14.62	16.62	15.12	18.12	21.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75	69.9	73.9
A3 (BW)	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	69.0	73.0
H2	in	13.1	13.7	12.6	16.7	18.9	22.2	28.3	30.7	31.8	33.0	36.3	41.4	47.2	55.1	61.8
WGT (RF)	lb	154.4	242.6	242.6	471.4	837.9	1374.7	2535.8	3197.3	3858.8	5336.1	7166.3	8820.0	12789.0	17309.3	19955.3
WGT (BW)	lb	110.3	191.8	187.4	383.3	661.5	1088.3	2094.8	2602.0	3197.3	4520.3	5953.5	7275.1	9922.5	14663.3	16868.3

CLASS 1500 - CAST & STAINLESS STEEL CHECK VALVES

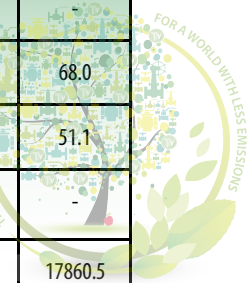
DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
A1 (RF)	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
A2 (RTJ)	in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62
A3 (BW)	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
H2	in	13.1	13.7	15.3	16.5	23.1	26.8	29.8	39.7	40.8	42.0	47.1	51.1	57.1
WGT (RF)	lb	154.4	242.6	374.9	661.5	1531.1	2624.0	4079.3	7336	7938.0	10804.5	14553.0	17970.8	25908.8
WGT (BW)	lb	110.3	191.8	297.7	540.2	1233.7	2127.8	3263.4	6080.3	6251.2	8599.5	11576.3	14222.3	19845.0

CLASS 2500 - CAST & STAINLESS STEEL CHECK VALVES

DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16
A1 (RF)	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0	62.0	68.0
A2 (RTJ)	in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88	-	-
A3 (BW)	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0	62.0	68.0
H2	in	16.4	16.5	17.4	18.9	20.1	28.0	33.5	39.4	47.2	51.1
WGT (RF)	lb	330.8	529.2	771.8	1433.3	3197.3	5622.8	8709.8	12568.5	-	-
WGT (BW)	lb	264.6	430.0	617.4	1190.7	2646.0	4851.0	6945.8	10032.8	13671.0	17860.5





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HOW TO ORDER

VALVE TYPE		FEATURES		MATERIAL		ENDS	CLASS	SIZE ⁽⁴⁾						
Body Design (SERIES)	Bonnet Design	Disc Design		BODY	TRIM ⁽⁵⁾ (Disc seat/Seat ring/Hinge Pin)									
70	Check Valve OS&Y API 594	B Bolted Bonnet	W Swing Check	NONE	NONE	20	A216 WCB	01	Obsolete	F Flanged RF	0	ANSI 150#	02	2"
				6D	API 6D	21	A216 WCC	02	Obsolete		3	ANSI 300#	02.5	2 1/2"
71	Check Valve OS&Y Wall Thickness API 603	W Welded Bonnet		N	NACE MR0175	22	A350 LCB ⁽¹⁾	05	BM+STL6/ BM+STL6/ 410SS or 13Cr	R Flanged RTJ	6	ANSI 600#	03	3"
				ND	API 6D AND NACE MR0175	23	A352 LC3 ⁽¹⁾	06	BM+13Cr/ Monel/ BM+13Cr		9	ANSI 900#	04	4"
				F	Fire Safe API 6FA	24	A217 WC1	08	BM+13Cr/ BM+STL6/ (410 or 13Cr)	B Butt Weld	1	ANSI 1500#	05	5"
			OX	Oxygen Service	25	A217 WC6 ⁽²⁾	09	Monel	2		ANSI 2500#	06	6"	
			SH	Hydraulic NonSlam	26	A217 WC9 ⁽²⁾	10	316SS			08	8"		
			SD	Dead Weight NonSlam	27	A217 C5 ⁽²⁾	11	Monel/ Monel+STL6/ Monel			10	10"		
					28	A217 C12 ⁽¹⁾	12	316SS/ 316SS+STL6/ 316SS			12	12"		
					30	A351 CF8M ⁽³⁾	13	CN7M/ CN7M/ B473			14	14"		
					31	A351 CF3M ⁽³⁾	14	CN7M/ CN7M+STL6/ B473			16	16"		
					32	A351 CF8 ⁽³⁾	15	304SS+STL6/ 304SS+STL6/ 304SS			18	18"		
					33	A351 CF3 ⁽³⁾	16	316SS+STL6/ 316SS+STL6/ 316SS			20	20"		
					40	Monel	17	347+STL6/ 347+STL6/ 347			24	24"		
					41	Alloy 20	18	CN7M+STL6/ CN7M+STL6/ B473						
					42	Hastelloy								
					43	A182 Gr321								
					44	A182 Gr347								
					45	Duplex								
					46	Triballoy 900								
					47	Triballoy 800								
					48	Triballoy 825								

Example
Swing Check Valve API 603, Bolted Bonnet, Body WCB, Trim 5, Flanged ANSI Class 150# Size 6"
71BW-2005-F006

- (1) Low Temperature Service
- (2) High Temperature Service
- (3) Stainless Steel
- (4) Available Sizes: ANSI Class 150# & 300# - from 2" to 36"
600# & 900# - from 2" to 30"
1500# - from 2" to 24"
2500# - from 2" to 16"
- (5) BM = Body Material

General Notes:

- *API 603 Light Wall ANSI / ASME B16.34
- ** API 600 Heavy Wall
- *** HF = Usually STL6, other available under request

