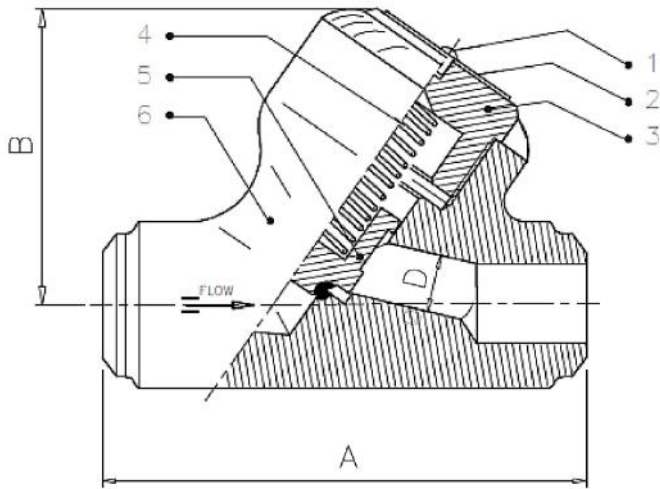


FORGED Y PISTON/BALL CHECK VALVES

800 - 1500 - 2500 - 4500 Lbs

DT-FYPCV-001



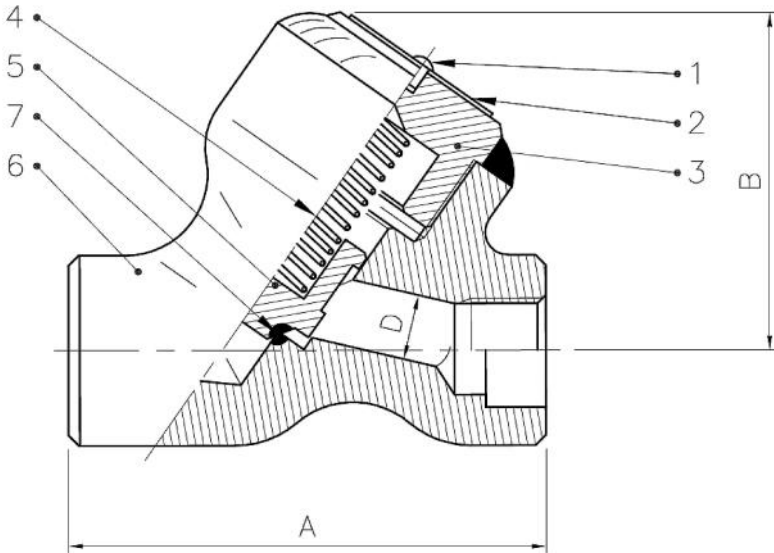
BASIC DESIGN STANDARDS

Basic Design BS5352

Wall Thickness / Pressure / Temperature According to ANSI B16.34

Ends Dimensions SW acc. to ANSI B16.11 / NPT-F acc. to ASME B1.20 / BW acc. To ANSI B16.25

Bore Full



TEST PRESSURE TO API 598 bar

Class	Shell (water)	Seat (water)	Seat (air)
800	204	150	6.0
1500	382	280	6.0
2500	638	468	6.0
4500	1150	843	6.0

****Also available BALL check valve type**

BILL OF MATERIALS STANDARD ACCORDING TO ASTM

No	Part Name	Carbon Steel		Alloy Steel	Stainless Steel
		A105/F6	A105/F6 HF	F11 (or F22) /F6 HF	SS316 (or ss304)
01	Rivet	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
02	Name Plate	Aluminium	Aluminium	Aluminium	INOX
03	Cover	ASTM A105N	ASTM A105N	ASTM A182 Gr. F11 (or F22)	ASTM A182 Gr. F316L (or F304L)
04	Spring	Inconel (or on request)	Inconel (or on request)	Inconel (or on request)	Inconel (or on request)
05	Piston / Ball	ASTM A479 TP410	ASTM A479 TP410 + st.6	ASTM A479 TP410 + st.6	ASTM A182 Gr. F316L (or F304L)
06	Body	ASTM A105N	ASTM A105N	ASTM A182 Gr. F11 (or F22)	ASTM A182 Gr. F316L (or F304L)
07	Integral Seat	ASTM A105 + ST.6	ASTM A105 + ST.6	Body material + ST.6	Body material + ST.6

* Recommended Spare Parts

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FORGED Y PISTON/BALL CHECK VALVES

800 - 1500 - 2500 - 4500 Lbs

FORGED STEEL Y PISTON CHECK VALVES CLASS 800

ANSI CLASS 800 PRESSURE – TEMPERATURE RATINGS TO ANSI B16.34

Temperature °C	WORKING PRESSURE (bar.g)		
	ASTM A105N (a)	ASTM A182 F11 (b)	ASTM A182 SS316 (c)
-29 to 38	136.2	137.9	132.4
93	124.1	137.9	114.1
149	120.7	132.8	103.1
204	116.5	127.6	94.5
260	110.0	122.4	87.9
316	100.7	111.4	83.1
343	98.6	108.3	81.7
371	97.9	104.5	80.0
399	92.7	97.9	78.6
427	75.8	93.4	77.6
454	49.3	89.7	76.9
482	31.7	82.8	76.2
510	19.0	58.6	71.0
538	9.7	39.7	64.5
566	-	26.6	63.1
593	-	17.6	56.2
621	-	11.4	43.4
649	-	6.9	34.1
677	-	-	26.9
704	-	-	21.4
732	-	-	17.6
760	-	-	13.8
788	-	-	10.7
816	-	-	7.6

(a) Permissible, but not recommended for prolonged usage above 427 °C
 (b) Permissible, but not recommended for prolonged usage above 594 °C
 (c) For welding end valves only: Flanged end ratings terminate at 538°C

SIZE (Full Bore)		DIMENSION in mm			
Inches	mm	A	B	D	Kg
1/4"	8	80	60	7	1.5
3/8"	10	80	60	9	1.5
1/2"	15	80	60	12	1.5
3/4"	20	100	75	17.5	2.5
1"	25	110	80	22.5	3
1-1/4"	32	150	115	30	5.5
1-1/2"	40	160	115	35	6
2"	50	190	140	46	9
2-1/2"	65	210	160	48	18
3"	80	280	200	65	30
**4"	100	368	260	70	41

**bw only

800 - 1500 - 2500 - 4500 Lbs

FORGED STEEL Y PISTON CHECK VALVES CLASS 1500

ANSI CLASS 1500

PRESSURE – TEMPERATURE RATINGS TO ANSI B16.34

Temperature °C	WORKING PRESSURE (bar.g)		
	ASTM A105N (a)	ASTM A182 F11 (b)	ASTM A182 SS316 (c)
-29 to 38	255.5	258.6	248.3
93	232.8	258.6	213.4
149	226.2	249.0	192.8
204	218.6	239.0	177.2
260	206.6	229.3	164.8
316	188.6	208.6	155.5
343	185.2	202.8	153.1
371	183.8	195.9	149.7
399	173.8	183.4	147.2
427	142.1	175.2	145.5
454	92.4	167.9	144.1
482	59.3	154.8	143.1
510	35.5	110.0	133.1
538	17.9	74.5	120.7
566	-	49.7	118.6
593	-	33.1	105.2
621	-	21.4	81.7
649	-	13.1	63.8
677	-	-	50.7
704	-	-	40.3
732	-	-	33.1
760	-	-	26.2
788	-	-	20.0
816	-	-	14.1

(d) Permissible, but not recommended for prolonged usage above 427 °C
(e) Permissible, but not recommended for prolonged usage above 594 °C
(f) For welding end valves only: Flanged end ratings terminate at 538°C

SIZE (Full Bore)		DIMENSION in mm			
Inches	mm	A	B	D	Kg
1/4"	8	100	75	7	2.5
3/8"	10	100	75	9	2.5
1/2"	15	100	75	13	2.5
3/4"	20	110	80	17.5	3
1"	25	125	85	22.5	4.5
1-1/4"	32	150	115	28	5.5
1-1/2"	40	160	115	35	6
2"	50	190	140	44	9
2-1/2"	65	216	160	46	18
3"	80	280	200	55	30
**4"	100	368	260	62	42

**bw only

FORGED Y PISTON/BALL CHECK VALVES

800 - 1500 - 2500 - 4500 Lbs

ANSI CLASS 2500 PRESSURE – TEMPERATURE RATINGS TO ANSI B16.34

Temperature °C	WORKING PRESSURE (bar.g)		
	ASTM A105N (a)	ASTM A182 F11 (b)	ASTM A182 SS316 (c)
-29 to 38	425.5	431.0	413.8
93	387.9	431.0	355.9
149	377.2	414.8	321.4
204	364.1	398.3	295.2
260	344.1	382.1	274.5
316	314.5	347.6	259.3
343	308.6	338.3	255.2
371	306.2	326.2	249.7
399	289.7	305.5	245.5
427	236.6	291.7	242.8
454	153.8	280.0	240.0
482	98.6	258.3	238.6
510	59.3	183.1	222.1
538	29.7	124.1	201.0
566	-	82.8	197.6
593	-	55.2	175.5
621	-	35.5	135.9
649	-	21.7	106.6
677	-	-	84.8
704	-	-	66.9
732	-	-	55.2
760	-	-	43.4
788	-	-	33.4
816	-	-	23.8

(g) Permissible, but not recommended for prolonged usage above 427 °C
(h) Permissible, but not recommended for prolonged usage above 594 °C
(i) For welding end valves only: Flanged end ratings terminate at 538°C

FORGED STEEL Y PISTON CHECK VALVES CLASS 2500

SIZE (Full Bore)		DIMENSION in mm			
Inches	mm	A	B	D	Kg
1/4"	8	110	80	7	3
3/8"	10	110	80	10	3
1/2"	15	110	80	12	3
3/4"	20	125	85	15	4.5
1"	25	160	115	20	5.5
1-1/4"	32	160	115	25	6
1-1/2"	40	190	140	31	9
2"	50	210	150	38	12
2-1/2"	65	280	200	44	31
**3"	80	280	200	48	31
**4"	100	368	260	52	42

**bw only

FORGED Y PISTON/BALL CHECK VALVES

800 - 1500 - 2500 - 4500 Lbs

ANSI CLASS 2500 PRESSURE – TEMPERATURE RATINGS TO ANSI B16.34

Temperature °C	WORKING PRESSURE (bar.g)		
	ASTM A105N (a)	ASTM A182 F11 (b)	ASTM A182 SS316 (c)
-29 to 38	766.2	775.9	744.8
93	697.9	775.9	640.7
149	679.0	746.9	578.6
204	655.5	717.2	531.4
260	619.3	687.2	494.1
316	566.2	625.5	466.9
343	555.5	608.6	459.3
371	551.0	587.2	449.3
399	521.4	549.7	442.1
427	425.5	524.8	436.9
454	276.6	503.8	432.1
482	177.2	464.8	429.7
510	106.6	330.0	399.7
538	53.1	223.4	361.7
566	-	149.0	355.5
593	-	99.3	315.5
621	-	63.8	244.8
649	-	39.0	191.4
677	-	-	152.4
704	-	-	120.7
732	-	-	99.3
760	-	-	77.9
788	-	-	60.3
816	-	-	42.8

(j) Permissible, but not recommended for prolonged usage above 427 °C
(k) Permissible, but not recommended for prolonged usage above 594 °C
(l) For welding end valves only: Flanged end ratings terminate at 538°C

FORGED STEEL Y PISTON CHECK VALVES CLASS 4500

SIZE (Full Bore)		DIMENSION in mm			
Inches	mm	A	B	D	Kg
1/4"	8	110	85	7	4
3/8"	10	110	85	7	4
1/2"	15	125	100	8	5
3/4"	20	160	125	11	7
1"	25	190	140	15	9
1-1/4"	32	190	140	18	9
1-1/2"	40	210	150	20	9
2"	50	280	200	25	31
**2-1/2"	65	280	200	28	32
**3"	80	368	260	35	43
**4"	100	410	260	40	48

** bw only