



Type SCC

Swing Check Valve
Cast Steel, Pressure seal bonnet
Butt weld ends

2" - 24" (50-600 mm)
Class 900, 1500, 2500

Design in accordance with ASME B16.34

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-aggressive media
- Further applications on request

Operating Data

- Pressure up to 431 bar (6250 psi)
- Temperature up to +650°C/1200°F
- Minimum temperature is 0°C (less than 0°C on request)
- Pressure-temperature ratings as per ASME B 16.34, Standard class

Materials

- ASTM A 216 WCB from 0°C to 425°C
- ASTM A 217 WC6/WC9 from 0°C to 593°C
- ASTM A 217 C12A from 0°C to 650°C

Design

- As per ASME B 16.34
- Pressure Seal Bonnet Design
- Stellite hard-faced Seats & Disc surface
- Graphite gaskets

Variants on Request

- Special class execution
- Other Material of construction

Remarks :

(Type Series Booklet References)

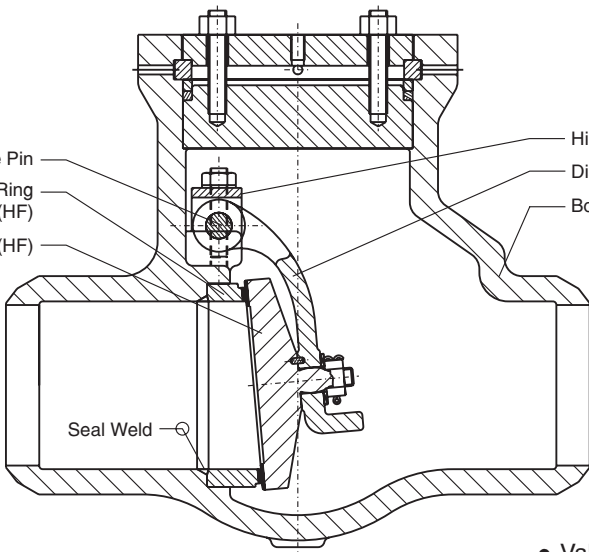
SICCA 800-2500 GTF / GLF / PCF	: 7240.1/12-11
SICCA 900-2500 GTC	: 7241.2/12-11
SICCA 900-2500 GLC	: 7242.2/12-11
SICCA 150-600 GTC	: 7244.2/12-11
SICCA 150-600 GLC	: 7245.2/12-11
SICCA 150-600 SCC	: 7246.2/12-11
Operating instructions no.	: 0500.80/05-18 G3

On all enquiries / orders please specify :

1. Type
2. ASME Pressure class
3. Size
4. Design pressure/temperature
5. Operating pressure
6. Operating temperature
7. Differential pressure
8. Material of construction
9. Flow medium
10. Flow rate Min. / Max.
11. Type of end connection
12. Pipe Schedule, ID / OD
13. Variants
14. Type Series Booklet no.
15. Valve data sheet (if applicable)

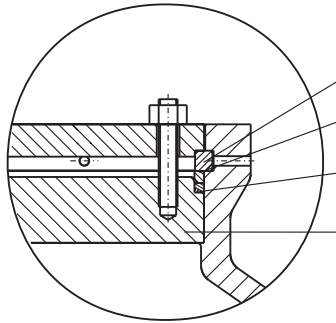
When ordering spares, indicate valve serial number.

Product features to our customer benefit



Inside Hinge Pin
Body Seat Ring St6 (HF)
Disc Seats St6 (HF)
Seal Weld
Hinge Bracket
Disc Carrier
Body

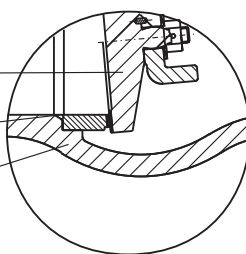
- Valves meets ASME 16.34 requirements
- Inside hinge pin mounted design - no leakage path to atmosphere
- Self aligning free floating and non-rotating disc
- Designed to open at low differential pressures



Thrust ring (Segmental)
Spacer ring
Graphite gasket
Bonnet

Pressure seal

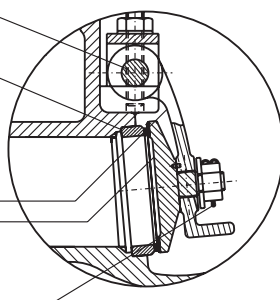
- Die-moulded graphite gasket
- Segmental ring arrangement with knock out holes provides for easy disassembly



Disc
Seal weld
Body

Flow Seal

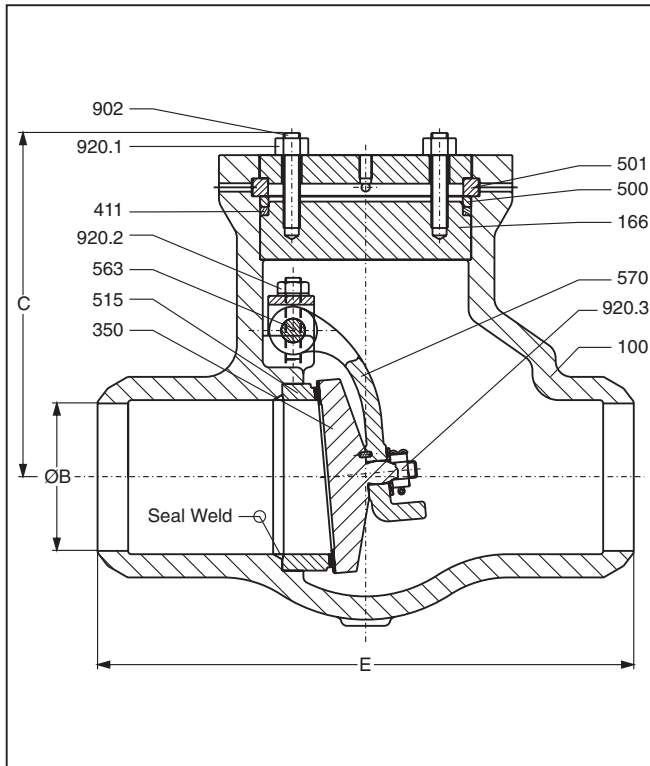
- Fully stellited, body & Disc seat
- Seat rings - seal welded to body
- Lapped Seat & Disc faces for leak tightness



Hinge pin
Seat ring
Disc Carrier
Disc
Cotter pin

Disc Design

- Self aligning disc ensures perfect seating
- Designed to open at low differential pressure



Design Specifications

General valve design & pressure, temperature rating : ASME B 16.34
 Butt weld end design : ASME B 16.25
 End to end dimension : ASME B 16.10
 Testing : API 598

Dimensions in mm

Class 900

	2"	3"	4"	6"	8"	10"	12"
E	215.9	304.8	355.6	508.0	660.4	787.4	914.4
ØB*	49.2	73.5	92.0	140.0	182.5	230.0	273.0
C_(max)	180.0	240.0	290.0	320.0	375.0	440.0	500.0

* Schedule 80 up to 3". Schedule 120 for 4" and above.
 Alternate schedule on request.

Class 1500

	2"	3"	4"	6"	8"	10"	12"	14"	16"
E	215.9	304.8	406.4	558.8	711.2	863.6	990.6	1066.8	1194.0
ØB*	43.0	66.5	87.5	132.0	173.0	216.0	257.0	284.0	325.5
C_(max)	230.0	270.0	315.0	400.0	440.0	475.0	630.0	700.0	770.0

* Schedule 160. Alternate schedule on request.

Class 2500

	2"	3"	4"	6"	8"	10"	12"
E	279.4	368.3	457.2	609.4	762.0	914.4	1041.4
ØB*	38.0	58.5	80.0	124.5	173.0	216.0	257.0
C_(max)	225.0	270.0	315.0	390.0	425.0	500.0	630.0

* Schedule XXS up to 6". Schedule 160 for 8" and above.
 Alternate schedule on request.

For details of higher size valves refer to P & A Coimbatore

Materials

Part No.	Description	Material			
100	Body	A 216-WCB	A 217-WC9	A 217-WC6	A217-C12A
166	Bonnet	A 216-WCB	A 217-WC9	A 217-WC6	A217-C12A+ST6
350	Disc	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC9+ST6	A182-F91+ST6 / A217-C12A+ST6
411	Gasket	Graphite	Graphite	Graphite	Graphite
500	Spacer Ring	A 217-CA15/A 182-F22	A 217-CA15/A 182-F22	A 217-CA15/A 182-F22	A217-CA15/A182-F22
501	Trust Ring	A 182-F22/A 217-WC9	A 182-F22/A 217-WC9	A 182-F22/ A 217-WC9	A182-F22
515	Seat Ring	A 105+ST6	A 182-F22+ST6	A 182-F22+ST6	A217-C12A / A182-F91+ST6
563	Hinge Pin	A 479 410 - 2	A 479 410 - 2	A 479 410 - 2	A 479 410 - 2
570	Disc Carrier	A 216-WCB	A 217-WC9	A 217-WC9	A217-C12A
902	Stud	A 193-B7	A 193-B16	A 193-B16	A193-B16
920.1/2/3	Hex. Nut	A 194-2H	A 194-4 / 7	A 194-4 / 7	A194-4/7

Testing

Test / Test pressure	#900		#1500		#2500		Testing medium
	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	
Shell	238	3375	396	5625	660	9375	Water
Seat	174	2475	291	4125	484	6875	

Pressure Temperature Rating - Standard Class
Rating for Group 1.1 Material : A 216 Gr. WCB ⁽¹⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2220.0	156.1	3705.0	260.5	6170.0	433.8
200	93.3	2035.0	143.1	3395.0	238.7	5655.0	397.6
300	148.9	1965.0	138.2	3270.0	229.9	5450.0	383.2
400	204.4	1900.0	133.6	3170.0	222.9	5280.0	371.2
500	260.0	1810.0	127.3	3015.0	212.0	5025.0	353.3
600	315.6	1705.0	119.9	2840.0	199.7	4730.0	332.6
650	343.3	1650.0	116.0	2745.0	193.0	4575.0	321.7
700	371.1	1590.0	111.8	2665.0	187.4	4425.0	311.1
750	398.9	1520.0	106.9	2535.0	178.2	4230.0	297.4
800	426.7	1235.0	86.8	2055.0	144.5	3430.0	241.2
850	454.4	955.0	67.1	1595.0	112.1	2655.0	186.7
900	482.2	690.0	48.5	1150.0	80.9	1915.0	134.6
950	510.0	410.0	28.8	685.0	48.2	1145.0	80.5
1000	537.8	255.0	17.9	430.0	30.2	715.0	50.3

1) Permissible, but not recommended for prolonged use above 800°F

Rating for Group 1.9 Material : A 217 Gr. WC6 ⁽¹⁾⁽²⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2165.0	152.2	3610.0	253.8	6015.0	422.9
400	204.4	2080.0	146.2	3465.0	243.6	5775.0	406.0
500	260.0	1995.0	140.3	3325.0	233.8	5540.0	389.5
600	315.6	1815.0	127.6	3025.0	212.7	5040.0	354.3
650	343.3	1765.0	124.1	2940.0	206.7	4905.0	344.9
700	371.1	1705.0	119.9	2840.0	199.7	4730.0	332.6
750	398.9	1595.0	112.1	2660.0	187.0	4430.0	311.5
800	426.7	1525.0	107.2	2540.0	178.6	4230.0	297.4
850	454.4	1460.0	102.6	2435.0	171.2	4060.0	285.4
900	482.2	1350.0	94.9	2245.0	157.8	3745.0	263.3
950	510.0	955.0	67.1	1595.0	112.1	2655.0	186.7
1000	537.8	650.0	45.7	1080.0	75.9	1800.0	126.6
1050	565.6	430.0	30.2	720.0	50.6	1200.0	84.4
1100	593.3	290.0	20.4	480.0	33.7	800.0	56.2
1150	621.1	195.0	13.7	325.0	22.8	545.0	38.3
1200	648.9	125.0	8.8	205.0	14.4	345.0	24.3

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

Rating for Group 1.10 Material : A 217 Gr. WC9 ⁽¹⁾⁽²⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2185.0	153.6	3640.0	255.9	6070.0	426.8
400	204.4	2115.0	148.7	3530.0	248.2	5880.0	413.4
500	260.0	1995.0	140.3	3325.0	233.8	5540.0	389.5
600	315.6	1815.0	127.6	3025.0	212.7	5040.0	354.3
650	343.3	1765.0	124.1	2940.0	206.7	4905.0	344.9
700	371.1	1705.0	119.9	2840.0	199.7	4730.0	332.6
750	398.9	1595.0	112.1	2660.0	187.0	4430.0	311.5
800	426.7	1525.0	107.2	2540.0	178.6	4230.0	297.4
850	454.4	1460.0	102.6	2435.0	171.2	4060.0	285.4
900	482.2	1350.0	94.9	2245.0	157.8	3745.0	263.3
950	510.0	1160.0	81.6	1930.0	135.7	3220.0	226.4
1000	537.8	800.0	56.2	1335.0	93.9	2230.0	156.8
1050	565.6	525.0	36.9	875.0	61.5	1454.0	102.2
1100	593.3	330.0	23.2	550.0	38.7	915.0	64.3
1150	621.1	205.0	14.4	345.0	24.3	570.0	40.1
1200	648.9	125.0	8.8	205.0	14.4	345.0	24.3

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

Rating for Group 1.15 Material : A 217 Gr. C12A

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2185.0	153.6	3640.0	255.9	6070.0	426.8
400	204.4	2115.0	148.7	3530.0	248.2	5880.0	413.4
500	260.0	1995.0	140.3	3325.0	233.8	5540.0	389.5
600	315.6	1815.0	127.6	3025.0	212.7	5040.0	354.3
650	343.3	1765.0	124.1	2940.0	206.7	4905.0	344.9
700	371.1	1705.0	119.9	2840.0	199.7	4730.0	332.6
750	398.9	1595.0	112.1	2660.0	187.0	4430.0	311.5
800	426.7	1525.0	107.2	2540.0	178.6	4230.0	297.4
850	454.4	1460.0	102.6	2435.0	171.2	4060.0	285.4
900	482.2	1350.0	94.9	2245.0	157.8	3745.0	263.3
950	510.0	1160.0	81.6	1930.0	135.7	3220.0	226.4
1000	537.8	1090.0	76.6	1820.0	128.0	3030.0	213.0
1050	565.6	1080.0	75.9	1800.0	126.6	3000.0	210.9
1100	593.3	905.0	63.6	1510.0	106.2	2515.0	176.8
1150	621.1	670.0	47.1	1115.0	78.4	1855.0	130.4
1200	648.9	430.0	30.2	720.0	50.6	1200.0	84.4

Pressure Temperature Rating - Special Class

Rating for Group 1.1 Material : A 216 Gr. WCB ⁽¹⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2220.0	156.1	3700.0	260.1	6170.0	439.4
400	204.4	2200.0	154.7	3665.0	257.7	6105.0	429.2
500	260.0	2200.0	154.7	3665.0	257.7	6105.0	429.2
600	315.6	2200.0	154.7	3665.0	257.7	6105.0	429.2
650	343.3	2145.0	150.8	3575.0	251.3	5960.0	419.0
700	371.1	2075.0	145.9	3455.0	242.9	5760.0	405.0
750	398.9	1905.0	133.9	3170.0	222.9	5285.0	371.6
800	426.7	1545.0	108.6	2570.0	180.7	4285.0	301.3
850	454.4	1195.0	84.0	1995.0	140.3	3320.0	233.4
900	482.2	860.0	60.5	1435.0	100.9	2395.0	168.4
950	510.0	515.0	36.2	855.0	60.1	1430.0	100.5
1000	537.8	320.0	22.5	535.0	37.6	895.0	62.9

1) Permissible, but not recommended for prolonged use above 800°F

Rating for Group 1.9 Material : A 217 Gr. WC6 ⁽¹⁾⁽²⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2250.0	158.2	3750.0	263.7	6250.0	439.4
400	204.4	2250.0	158.2	3750.0	263.7	6250.0	439.4
500	260.0	2250.0	158.2	3750.0	263.7	6250.0	439.4
600	315.6	2250.0	158.2	3750.0	263.7	6250.0	439.4
650	343.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
700	371.1	2200.0	154.7	3665.0	257.7	6110.0	429.6
750	398.9	2185.0	153.6	3645.0	256.3	6070.0	426.8
800	426.7	2160.0	151.9	3600.0	253.1	6000.0	421.8
850	454.4	2030.0	142.7	3385.0	238.0	5645.0	396.9
900	482.2	1760.0	123.7	2935.0	206.4	4895.0	344.2
950	510.0	1195.0	84.0	1995.0	140.3	3320.0	233.4
1000	537.8	810.0	56.9	1350.0	94.9	2250.0	158.2
1050	565.6	540.0	38.0	900.0	63.3	1500.0	105.5
1100	593.3	360.0	25.3	600.0	42.2	1000.0	70.3
1150	621.1	245.0	17.2	405.0	28.5	680.0	47.8
1200	648.9	155.0	10.9	255.0	17.9	430.0	30.2

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

Rating for Group 1.10 Material : A 217 Gr. WC9 ⁽¹⁾⁽²⁾

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2220.0	156.1	3695.0	259.8	6160.0	433.1
400	204.4	2185.0	153.6	3640.0	255.9	6065.0	426.4
500	260.0	2175.0	152.9	3620.0	254.5	6035.0	424.3
600	315.6	2165.0	152.2	3605.0	253.5	6010.0	422.5
650	343.3	2145.0	150.8	3580.0	251.7	5965.0	419.4
700	371.1	2120.0	149.1	3535.0	248.5	5895.0	414.5
750	398.9	2120.0	149.1	3535.0	248.5	5895.0	414.5
800	426.7	2120.0	149.1	3535.0	248.5	5895.0	414.5
850	454.4	2030.0	142.7	3385.0	238.0	5645.0	396.9
900	482.2	1800.0	126.6	3000.0	210.9	5000.0	351.5
950	510.0	1415.0	99.5	2360.0	165.9	3930.0	276.3
1000	537.8	1005.0	70.7	1670.0	117.4	2785.0	195.8
1050	565.6	655.0	46.1	1095.0	77.0	1820.0	128.0
1100	593.3	410.0	28.8	685.0	48.2	1145.0	80.5
1150	621.1	255.0	17.9	430.0	30.2	715.0	50.3
1200	648.9	155.0	10.9	255.0	17.9	430.0	30.2

1) Use Normalised and tempered material only.

2) Not to be used over 1100°F

Rating for Group 1.15 Material : A 217 Gr. C12A

Temperature		# 900		# 1500		# 2500	
°F	°C	PSI	Kg/cm ²	PSI	Kg/cm ²	PSI	Kg/cm ²
-20 to 100	-29 to 38	2250.0	158.2	3750.0	263.7	6250.0	439.4
200	93.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
300	148.9	2250.0	158.2	3750.0	263.7	6250.0	439.4
400	204.4	2250.0	158.2	3750.0	263.7	6250.0	439.4
500	260.0	2250.0	158.2	3750.0	263.7	6250.0	439.4
600	315.6	2250.0	158.2	3750.0	263.7	6250.0	439.4
650	343.3	2250.0	158.2	3750.0	263.7	6250.0	439.4
700	371.1	2200.0	154.7	3665.0	257.7	6110.0	429.6
750	398.9	2185.0	153.6	3645.0	256.3	6070.0	426.8
800	426.7	2160.0	151.9	3600.0	253.1	6000.0	421.8
850	454.4	2030.0	142.7	3385.0	238.0	5645.0	396.9
900	482.2	1800.0	126.6	3000.0	210.9	5000.0	351.5
950	510.0	1415.0	99.5	2360.0	165.9	3930.0	276.3
1000	537.8	1260.0	88.6	2105.0	148.0	3505.0	246.4
1050	565.6	1260.0	88.6	2105.0	148.0	3505.0	246.4
1100	593.3	1130.0	79.4	1885.0	132.5	3145.0	221.1
1150	621.1	835.0	58.7	1395.0	98.1	2320.0	163.1
1200	648.9	540.0	38.0	900.0	63.3	1500.0	105.5



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