

Carbon Steel

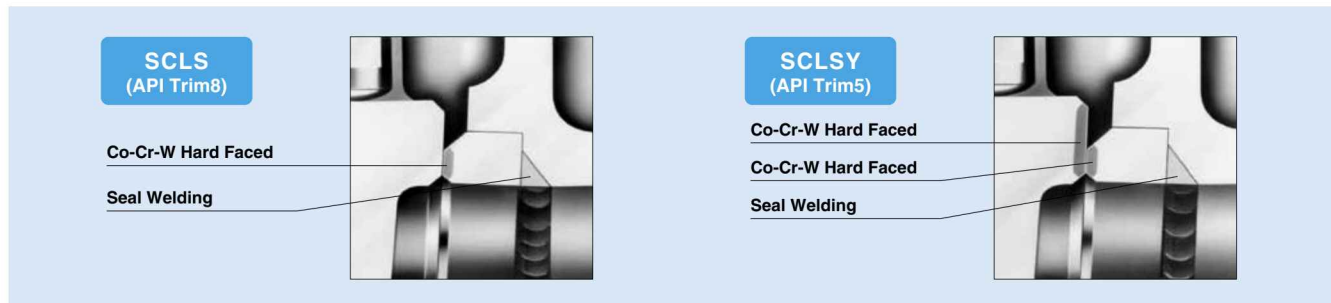
General Design Specifications

Items	American Std.	British Std.
Shell wall thickness and general valve design	API 600	BS 1414 (Gate valve) BS 1873 (Globe valve) BS 1868 (Check valve)
Pressure-temperature ratings	ASME B16.34	BS 1560
Face to face dimensions End to end dimensions	ASME B16.10	BS 2080
End flange dimensions Gasket contact facing	ASME B16.5*	BS 1560
Welding end dimensions	ASME B16.25	BS 1414 (Gate valve) BS 1873 (Globe valve) BS 1868 (Check valve)

*MSS SP-44 for Nominal size 22⁹ and ASME B16.47 Series B for Nominal size 26⁹ and larger, for end flange dimensions.

Mounting of Body Seat Rings

Body seat rings of KITZ cast steel valves are mounted on the valve body by seal welding, as shown in the typical examples of gate valves illustrated below. Unless specifically requested in advance, mounting of body seat rings shall be performed at the manufacturer's discretion. Specify your own method of mounting, noting your purchase orders with the appropriate KITZ product code numbers.



For KITZ cast steel valves made of ASTM A216 WCB, the standard shell material, disc seats, and body seat rings shall be provided as follows. (Refer to Page 47 for Product Coding)

KITZ Product Code	Standard Disc Seat	Standard Body Seat	Mounting of Body Seat Rings
SCLS (Gate) SCJS (Globe) SCOS (Check)	F6a or WCB + 13Cr or A105 + 13Cr or CA15	A105 + HF* or A106 Gr. B + HF* or AISI 1022 + HF* or Direct HF**	Seal Welded or Direct HF**
SCLSY (Gate) SCJSY (Globe) SCOSY (Check)	A105 + HF* or WCB + HF* or CA15 + HF*	A105 + HF* or A106 Gr. B + HF* or AISI 1022 + HF* or Direct HF**	Seal Welded or Direct HF**

* Co-Cr-W Alloy deposited for hard facing.

** Co-Cr-W Alloy is directly deposited on valve body for hard facing.

KITZ Product Code 900SCJS, 900SCJSY, 1500SCJS, 1500SCJSY, 2500SCJS and 2500SCJSY globe valves employ this hard facing.

Bonnet Gasket Materials

Depending on the class ratings and servicing conditions, the following gasket materials are available for the body/bonnet flange gaskets of KITZ cast steel valves. Specify your gasket material in the purchase order.

Gasket Material	Class					
	150	300	600	900	1500	2500
Corrugated metal with flexible graphite	●					
Ring joint metal			●	●	●	●
Spiral wound metal, flexible graphite filled		●				
Stainless steel inserted flexible graphite	●					

Please refer to our website (www.kitz.co.jp) or contact KITZ for details.

Product Coding

G- 150 SC LS6CY

5 4 1 2 3

- 1 ASME pressure class:**
150 through 2500

- 2 Shell material code:**
Carbon and low alloy steel are always identified as "SC"

- 3 Other valve specifications:**

L S 6C Y

a b c b

- a Valve type code:**
L... Gate valve
J... Globe valve
O... Swing check valve

- b Seat material/mounting:**

Code	Disc Seat Material	Body Seat Material	Type of Mounting
S□	13Cr	HF	Refer to Page 46
S□Y	HF	HF	

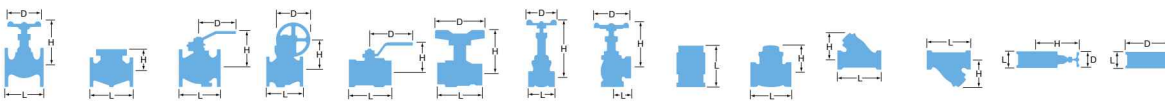
□: Special shell material code

- c Special shell material:**
No code is required for WCB.

- 4 Type of end connection:**
No code is required for RF-flanged ends
W... Butt-welding ends.

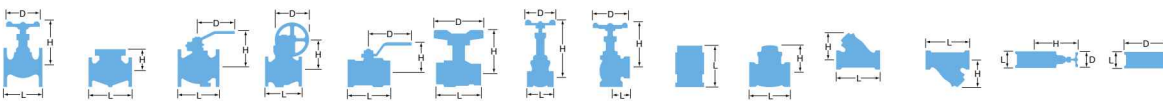
- 5 Type of valve operation:**
No code is required for manual handwheel operation.
G ... Gear operation.
E ... Electric actuator operation.



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TYPE		GATE			GATE			GATE			GATE			GLOBE			
Carbon Steel																	
FIG		10SCLS			20SCLS			150SCLS			300SCLS			10SCJS			
PRESSURE		10K			20K			Class 150			Class 300			10K			
END CONNECTION		JIS B2220			JIS B2220			ASME B16.5			ASME B16.5			JIS B2220			
DIMENSIONS	inch	mm	L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
	1½	40	—	—	—	—	—	—	165	385	200	190	413	200	—	—	—
	2	50	178	385	200	216	413	200	178	385	200	216	413	200	203	331	200
	2½	65	190	432	200	241	456	200	190	432	200	241	456	200	216	379	250
	3	80	203	509	250	283	530	250	203	509	250	283	530	250	241	389	250
	4	100	229	592	250	305	618	250	229	592	250	305	618	250	292	458	250
	5	125	254	658	300	381	694	300	254	658	300	381	694	300	356	484	300
	6	150	267	758	300	403	793	350	267	758	300	403	793	350	406	513	350
	8	200	292	958	350	419	1014	400	292	958	350	419	1014	400	—	—	—
	10	250	330	1162	400	457	1216	450	330	1162	400	457	1216	450	—	—	—
	12	300	356	1362	450	502	1458	600	356	1362	450	502	1458	600	—	—	—
	14	350	381	1572	600	762	1563	600	381	1572	600	762	1563	600	—	—	—
	16	400	406	1692	600	838	1766	680	406	1692	600	838	1766	680	—	—	—
	18	450	432	1888	600	914	1932	680	432	1888	600	914	1932	680	—	—	—
	20	500	457	2123	680	991	2137	760	457	2123	680	991	2137	760	—	—	—
	24	600	508	2497	760	1143	2542	910	508	2497	760	1143	2542	910	—	—	—
BODY		SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			
BONNET		SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			
STEM		A182 Gr.F6A			A182 Gr.F6A			A182 Gr.F6A			A182 Gr.F6A			A182 Gr.F6A			
DISC		A182 Gr.F6A / A216 Gr.WCB+13Cr			A182 Gr.F6A / A216 Gr.WCB+13Cr			A182 Gr.F6A / A216 Gr.WCB+13Cr			A182 Gr.F6A / A216 Gr.WCB+13Cr			A182 Gr.F6A / A216 Gr.WCB+13Cr			

TYPE		GLOBE			GLOBE			GLOBE			SWING CHECK			SWING CHECK			
Carbon Steel																	
FIG		20SCJS / G-20SCJS			150SCJS / G-150SCJS			300SCJS / G-300SCJS			10SCOS			20SCOS			
PRESSURE		20K			Class 150			Class 300			10K			20K			
END CONNECTION		JIS B2220			JIS B2220			JIS B2220			JIS B2220			JIS B2220			
DIMENSIONS	inch	mm	L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
	1½	40	—	—	—	165	331	200	229	361	200	—	—	—	—	—	—
	2	50	267	361	200	203	331	200	267	361	200	203	156	155	267	164	155
	2½	65	292	428	250	216	379	250	292	428	250	216	168	175	292	190	175
	3	80	318	436	250	241	389	250	318	436	250	241	185	185	318	205	200
	4	100	356	509	350	292	458	250	356	509	350	292	210	210	356	230	225
	5	125	400	610	400	356	484	300	400	610	400	330	239	250	400	250	270
	6	150	444	989	500	406	513	350	444	989	500	356	250	280	444	280	305
	8	200	559	1064	500	495	929	500	559	1064	500	495	293	330	533	330	430
	10	250	622	1142	600	622	975	500	622	1142	600	622	340	400	622	370	480
	12	300	711	1187	600	698	1049	500	711	1187	600	698	375	445	711	415	540
	14	350	—	—	—	—	—	—	—	—	—	787	415	490	838	491	605
	16	400	—	—	—	—	—	—	—	—	—	864	455	560	864	543	675
	18	450	—	—	—	—	—	—	—	—	—	978	508	620	978	584	730
	20	500	—	—	—	—	—	—	—	—	—	978	585	675	1016	645	845
	24	600	—	—	—	—	—	—	—	—	—	1295	670	795	—	865	—
BODY		SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			
BONNET		SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			—			—			
COVER		—			—			—			SCPH2 / A216 Gr.WCB			SCPH2 / A216 Gr.WCB			
STEM		A182 Gr.F6A			A182 Gr.F6A			A182 Gr.F6A			—			—			
HINGE PIN		—			—			—			A276 TYPE403			A276 TYPE403			
DISC		A182 Gr.F6A / A216 Gr.WCB+13Cr SIZE.6 to 12 Gear operation type			A182 Gr.F6A / A216 Gr.WCB+13Cr / A105+13Cr SIZE.8 to 12 Gear operation type			A182 Gr.F6A / A216 Gr.WCB+13Cr / A105+13Cr SIZE.6 to 12 Gear operation type			A182 Gr.F6A / A216 Gr.WCB+13Cr			A182 Gr.F6 / WCB+13Cr			



TYPE		SWING CHECK				SWING CHECK			
Carbon Steel									
FIG		150SCOS				300SCOS			
PRESSURE		Class 150				Class 300			
END CONNECTION		JIS B2220				JIS B2220			
DIMENSIONS	inch	mm	L	H	D	L	H	D	
	1½	40	165	132	127	241	155	156	
	2	50	203	156	152	267	164	165	
	2½	65	216	168	178	292	190	190	
	3	80	241	185	190	318	205	210	
	4	100	292	210	229	356	230	254	
	5	125	330	239	254	400	250	279	
	6	150	356	250	279	444	280	318	
	8	200	495	293	343	533	330	381	
	10	250	622	340	406	622	370	444	
	12	300	698	375	483	711	415	521	
	14	350	787	415	533	838	491	584	
	16	400	864	455	597	864	543	648	
	18	450	978	508	635	978	584	711	
	20	500	978	585	698	1016	645	775	
	24	600	1295	670	813	—	865	—	
BODY		SCPH2 / A216 Gr.WCB				SCPH2 / A216 Gr.WCB			
COVER		SCPH2 / A216 Gr.WCB				SCPH2 / A216 Gr.WCB			
HINGE PIN		A276 TYPE403				A276 TYPE403			
DISC		A182 Gr.F6A / A216 Gr.WCB+13Cr				A182 Gr.F6 / WCB+13Cr			

Brass & Bronze

Cast Iron

Ductile Iron

Stainless Steel

Carbon Steel

Butterfly Valve

Ball Valve

Ball Valve Seat

Actuated Valve