

Data Sheet

Shut-off valves Type **SSTC**

Designed referring European standards to meet the challenges in industrial refrigeration application requirements in Asia



SSTC shut-off valves are available in angleway and straightway versions.

The shut-off valves are designed to meet all industrial refrigeration application requirements and are designed to give favorable flow characteristics and are easy to dismantle and repair when necessary.

The valve cone is designed to ensure perfect closing and withstand a high system pulsation and vibration, which can be present specifically in the discharge line.

Features

- Available with:
 - Heavy duty industrial handwheel for frequent operation
 - Vented cap for infrequent operation
- Available in angle and straight versions with standard bonnet for installation in normal insulated systems
- Internal metal backseating
- Easy to dismantle and repair
- Can accept flow in both directions
- Max. working pressure: 40 bar (580 psig)
- Temperature range: -50 °C to 150 °C (-58 °F to +302 °F)

Media

Refrigerants

Applicable to HCFC, HFC and R717 (Ammonia). Flammable hydrocarbons are not recommended. The valve is only recommended for use in closed circuits.

For further information please contact Danfoss.

New refrigerants

Danfoss products are continually evaluated for use with new refrigerants depending on market requirements.

When a refrigerant is approved for use by Danfoss, it is added to the relevant portfolio, and the R number of the refrigerant (e.g. R513A) will be added to the technical data of the code number. Therefore, products for specific refrigerants are best checked at store.danfoss.com/en/, or by contacting your local Danfoss representative.

Product specification

Pressure and temperature data

Table 1: Pressure and temperature data

Description	Values
Temperature range	-50 °C /+150 °C (-58 °F/+302 °F).
Max. working pressure	40 bar (580 psig)

Design

Valve cone

The valve cone can be turned on the spindle, thus there will be no friction between the cone and the seat when the valve is opened and closed. A teflon tightening ring provides perfect sealing with minimum closing force.

Spindle

Made of polished stainless steel, ideal for teflon seal sealing.

Packing Gland

The low temperature packing gland ensures a perfect tightness in the range: -50/+150 °C (-58/+302 °F).

Installation

It is recommended that the valves be installed in the direction of flow indicated by the arrow on the valve body. The valve can be installed in the opposite direction but this slightly reduces the k_v -value (C_v -value).

The valve is designed to withstand high internal pressure. However, the piping system in general should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion.

For further information refer to installation guide.

Material specification

SSTC 15-25 ANG STR

Figure 1: SSTC 15-25

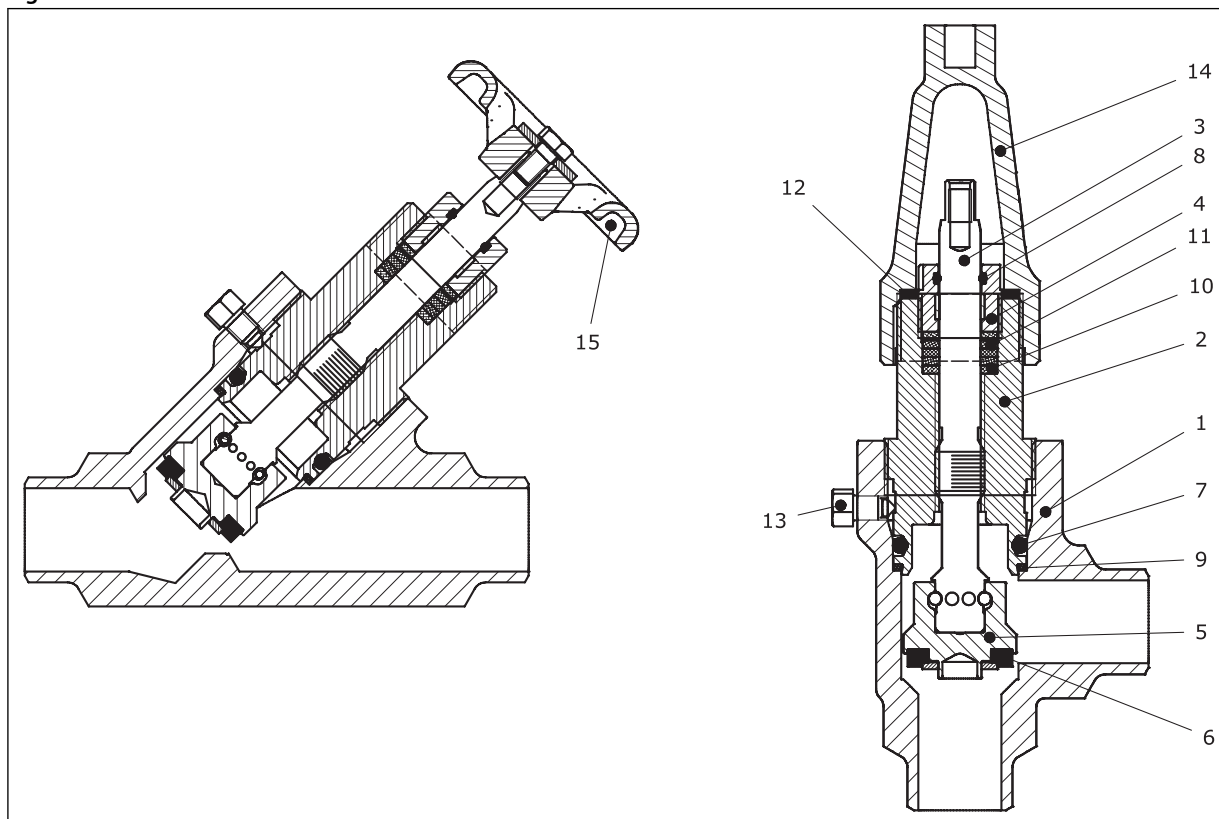


Table 2: SSTC 15-25

No.	Part	Material	EN	GB/T	ASTM	JIS
1	Housing	Steel	P285QH 10222-4	#20 QT 699		
2	Valve bonnet	Iron	EN-GJS-400- 15 1563	QT400-15 1348		
3	Spindle	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
4	Packing gland	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
5	Cone	Steel	11SMn30 10087			
6	Cone seal	Teflon(PTFE)				
7	O-ring	Chloroprene(Neoprene)				
8	O-ring	Chloroprene(Neoprene)				
9	Gasket for bonnet	Aluminium	EN AW-1050A 573			
10	Bushing for packing gland	Aluminium	EN AW-1050A 573		AL 6061-T6 B221	
11	Gasket in packing gland	Teflon(PTFE)				
12	Gasket for cap	Nylon(PA 6)				
13	Screw	Steel				
14	Al cap	Aluminium	EN AC-431002-70 1706			
15	Handwheel	Iron	EN-GJS-400- 15 1563	QT450-10 1348		

SSTC 32-40 ANG STR

Figure 2: SSTC 32-40

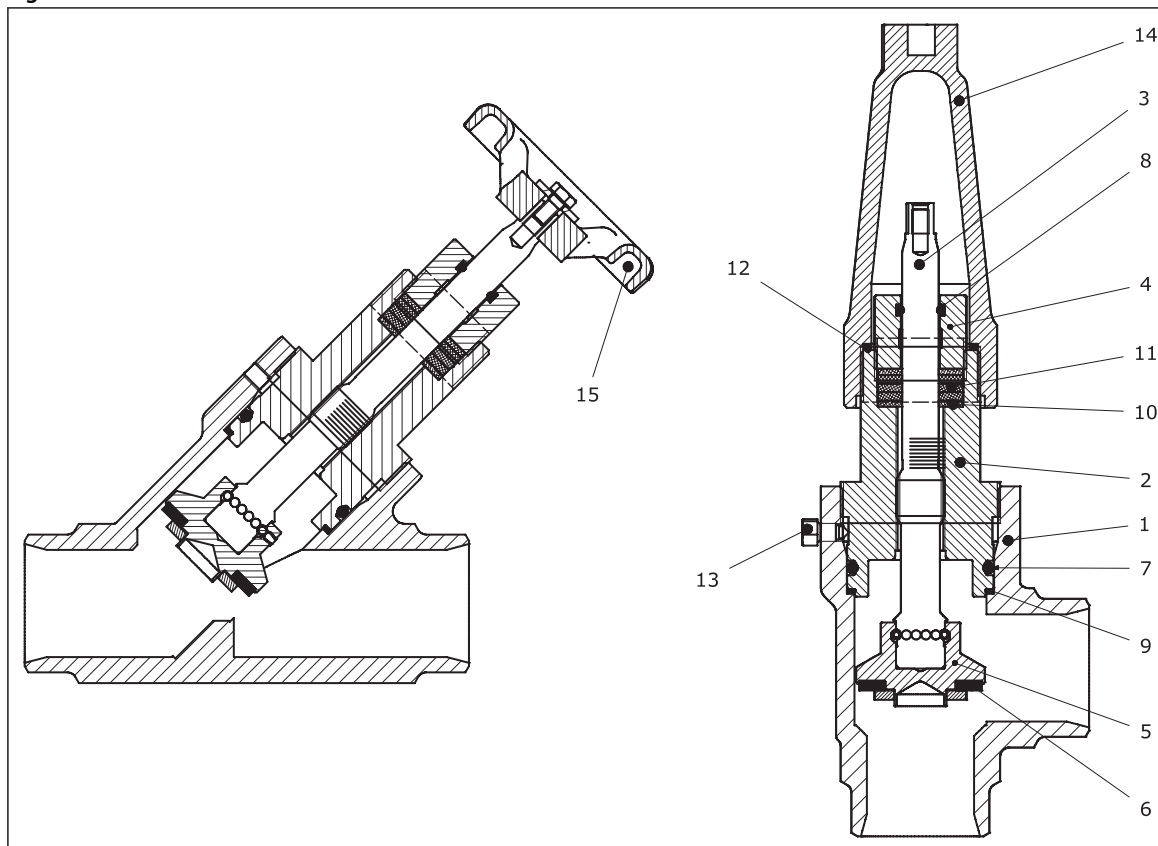


Table 3: SSTC 32-40

No.	Part	Material	EN	GB/T	ASTM	JIS
1	Housing	Steel	P285QH 10222-4	#20 QT 699		
2	Valve bonnet	Iron	EN-GJS-400- 15 1563	QT400-15 1348		
3	Spindle	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
4	Packing gland	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
5	Cone	Steel	11SMn30 10087			
6	Cone seal	Teflon(PTFE)				
7	O-ring	Chloroprene(Neoprene)				
8	O-ring	Chloroprene(Neoprene)				
9	Gasket for bonnet	Aluminium	EN AW-1050A 573			
10	Bushing for packing gland	Aluminium	EN AW-1050A 573		AL 6061-T6 B221	
11	Gasket in packing gland	Teflon(PTFE)				
12	Gasket for cap	Nylon(PA 6)				
13	Screw	Steel				
14	Al cap	Aluminium	EN AC-431002-70 1706			
15	Handwheel	Iron	EN-GJS-400- 15 1563	QT450-10 1348		

SSTC 50-65 ANG STR

Figure 3: SSTC 50-65

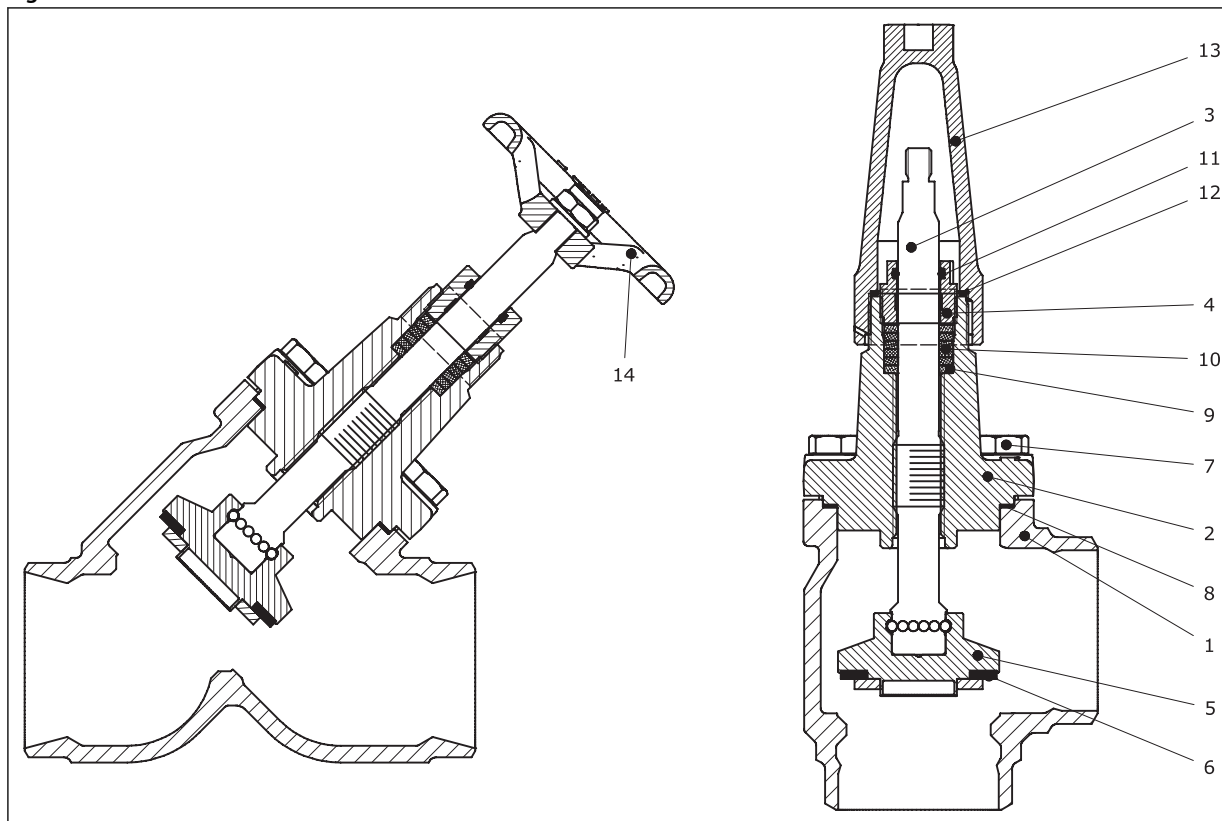


Table 4: SSTC 50-65

No.	Part	Material	EN	GB/T	ASTM	JIS
1	Housing	Steel			LF2, A350	
2	Valve bonnet	Iron	EN-GJS-400- 15 1563	QT400-15 1348		
3	Spindle	Stainless Steel	X8CrNiS18-9 10088		AISI 303/304 A276	SUS303 G4303
4	Packing gland	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
5	Cone	Steel	11SMn30 10087			
6	Cone seal	Teflon(PTFE)				
7	Bolts	Steel			10B21 F2282	
8	Flange gasket	Non-asbestos				
9	Bushing for packing gland	Aluminium	EN AW-1050A 573		AL 6061-T6 B221	
10	Gasket in packing gland	Teflon(PTFE)				
11	O ring	Chloroprene(Neoprene)				
12	Gasket for cap	Nylon(PA 6)				
13	Al cap	Aluminium	EN AC-431002-70 1706			
14	Handwheel	Iron	EN-GJS-400- 15 1563	QT450-10 1348		

SSTC 80-150 ANG STR

Figure 4: SSTC 80-150

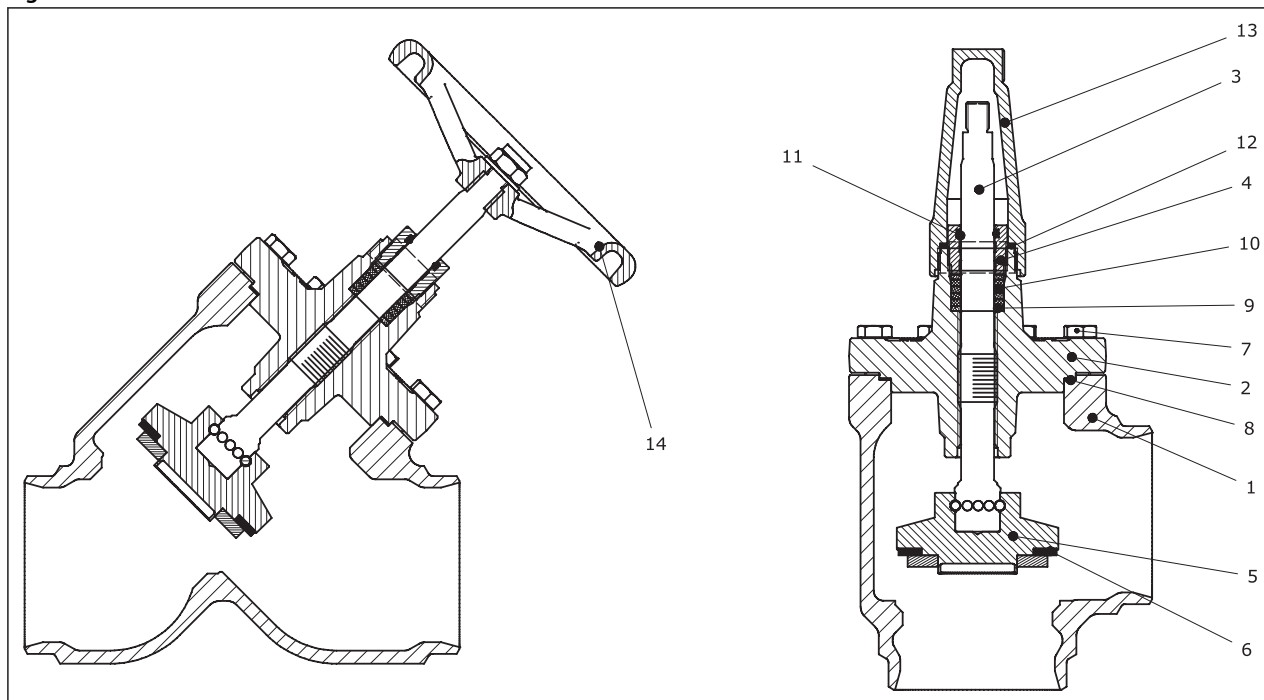


Table 5: SSTC 80-150

No.	Part	Material	EN	GB/T	ASTM	JIS
1	Housing	Steel	G20Mn5QT, 10213-3		WCB-QT A216	
2	Valve bonnet	Iron	EN-GJS-400- 15 1563	QT400-15 1348		
3	Spindle	Stainless Steel	X5CrNiS18-10 10088		AISI 304 A276	SUS304 G4303
4	Packing gland	Stainless Steel	X8CrNiS18-9 10088		AISI 303 A276	SUS303 G4303
5	Cone	Steel	11SMn30 10087			
6	Cone seal	Teflon(PTFE)				
7	Bolts	Steel			10B21 F2282	
8	Flange gasket	Non-asbestos				
9	Bushing for packing gland	Aluminium	EN AW-1050A 573		AL 6061-T6 B221	
10	Gasket in packing gland	Teflon(PTFE)				
11	O ring	Chloroprene(Neoprene)				
12	Gasket for cap	Nylon(PA 6)				
13	Al cap	Aluminium	EN AC-431002-70 1706			
14	Handwheel	Iron	EN-GJS-400- 15 1563	QT450-10 1348		

Connections

Figure 5: ANSI

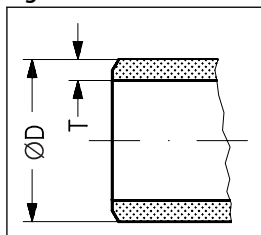


Figure 6: SOC

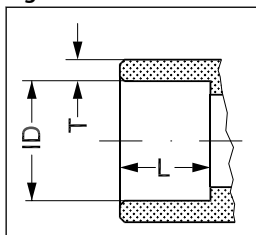


Table 6: Connections

Size		Connections ANSI				Connections SOC					
		ØD		T		ID		T		L	
[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]
15	1/2	21.3	0.84	3.7	0.147	21.9	0.862	7.3	0.287	13.25	0.52
20	3/4	26.9	1.05	3.9	0.154	27.4	1.078	4.6	0.181	13	0.51
25	1	33.7	1.33	4.5	0.179	34.2	1.346	8.9	0.35	13.25	0.52
32	1 1/4	42.4	1.67	4.9	0.191	42.9	1.689	4.55	0.179	14.75	0.58
40	1 1/2	48.3	1.9	5.1	0.2						
50	2	60.3	2.37	3.9	0.154						
65	2 1/2	73	2.87	5.2	0.203						
80	3	88.9	3.5	5.5	0.216						
100	4	114	4.5	6	0.237						
125	5	141.3	5.56	6.6	0.259						
150	6	168.3	6.63	7.1	0.280						

Dimensions and weights

Angle version

Figure 7: SSTC 15-40

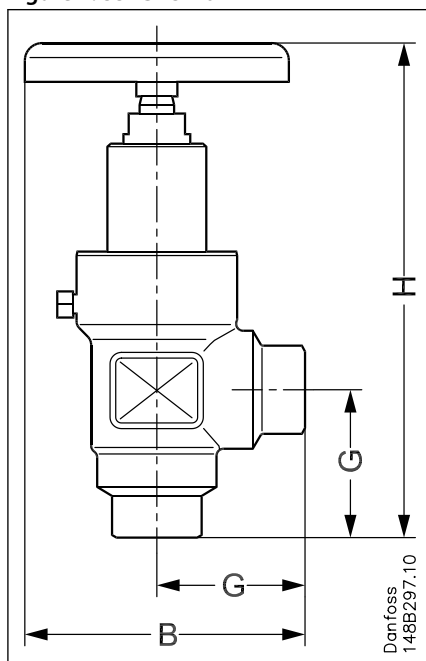
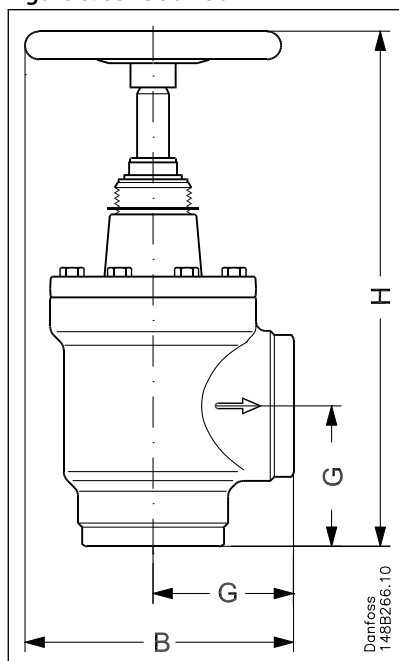


Figure 8: SSTC 50-150



Shut-off valves, Type SSTC

Table 7: Angle version

Version	Size		Angle						Weight	
			H		B		G			
	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[kg]	[lb]
Handwheel	15	½	152	5.98	85	3.35	45	1.77	1.5	3.3
Cap	15	½	186	7.32	64	2.52	45	1.77	1.5	3.3
Handwheel	20	¾	152	5.98	85	3.35	45	1.77	1.6	3.5
Cap	20	¾	186	7.32	64	2.52	45	1.77	1.6	3.5
Handwheel	25	1	152	5.98	85	3.35	45	1.77	1.7	3.7
Cap	25	1	186	7.32	64	2.52	45	1.77	1.7	3.7
Handwheel	32	1 ¼	201	7.91	95	3.74	55	2.17	1.8	4
Cap	32	1 ¼	266	10.47	80	3.15	55	2.17	1.8	4
Handwheel	40	1 ½	201	7.91	95	3.74	55	2.17	1.9	4
Cap	40	1 ½	266	10.47	80	3.15	55	2.17	1.9	4.2
Handwheel	50	2	219	8.62	110	4.33	60	2.36	3.2	7.1
Cap	50	2	281	11.06	85	3.35	60	2.36	3.2	7.1
Handwheel	65	2 ½	243	9.57	120	4.72	70	2.76	4.8	10.6
Cap	65	2 ½	306	12.05	95	3.74	70	2.76	4.8	10.6
Handwheel	80	3	301	11.85	200	7.87	90	3.54	9.2	20.3
Cap	80	3	351	13.82	155	6.1	90	3.54	9.2	20.3
Handwheel	100	4	328	12.91	250	9.84	106	4.17	14.8	32.6
Cap	100	4	386	15.2	184	7.24	106	4.17	14.8	32.6
Handwheel	125	5	442	17.4	315	12.4	128	5.04	28.1	61.9
Cap	125	5	531	20.91	224	8.82	128	5.04	28.1	61.9
Handwheel	150	6	482	18.98	315	12.4	145	5.71	39.7	87.5
Cap	150	6	566	22.28	255	10.04	145	5.71	39.7	87.5

NOTE:

Specified weights are approximate values only.

Straight version

Figure 9: SSTC 15-40

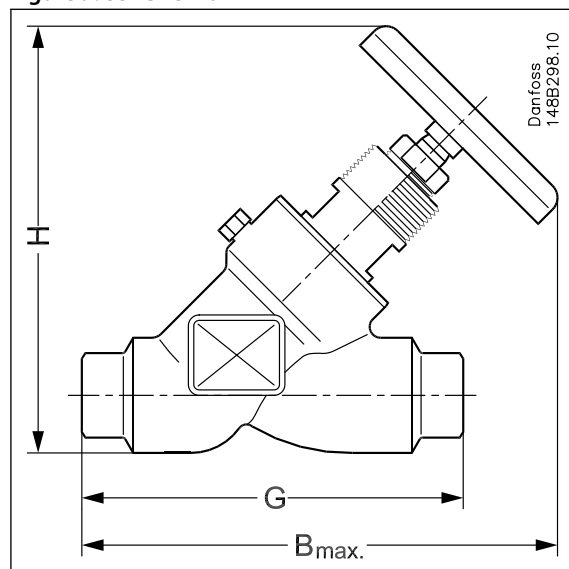


Figure 10: SSTC 50-150

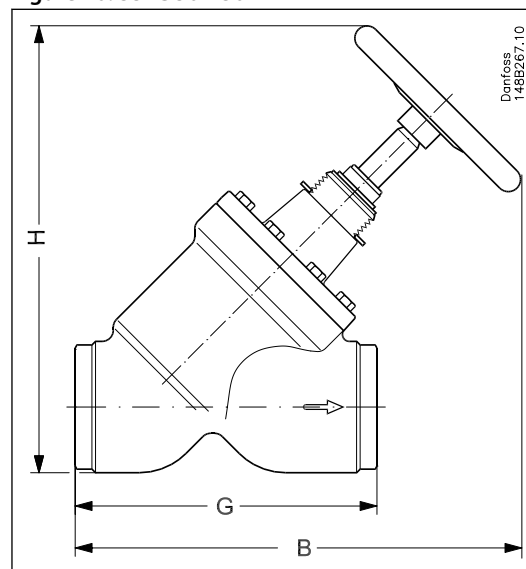


Table 8: Straight version

Version	Size		Straight						Weight	
			H		B		G			
	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[kg]	[lb]
Handwheel	15	½	135	5.31	151	5.94	120	4.72	1.8	4
Cap	15	½	140	5.51	156	6.14	120	4.72	1.8	4
Handwheel	20	¾	135	5.31	151	5.94	120	4.72	2	4.4
Cap	20	¾	140	5.51	156	6.14	120	4.72	2	4.4

Shut-off valves, Type SSTC

Version	Size		Straight						Weight	
			H		B		G			
	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[kg]	[lb]
Handwheel	25	1	135	5.31	151	5.94	120	4.72	2.1	4.6
Cap	25	1	140	5.51	156	6.14	120	4.72	2.1	4.6
Handwheel	32	1¼	178	7.01	194	7.64	145	5.71	2.5	5.5
Cap	32	1¼	204	8.03	221	8.7	145	5.71	2.5	5.5
Handwheel	40	1 ½	178	7.01	194	7.64	145	5.71	2.6	5.7
Cap	40	1 ½	204	8.03	221	8.7	145	5.71	2.6	5.7
Handwheel	50	2	210	8.27	211	8.31	148	5.83	4.2	9.3
Cap	50	2	232	9.13	233	9.17	148	5.83	4.2	9.3
Handwheel	65	2 ½	235	9.25	235	9.25	176	6.93	6.3	13.9
Cap	65	2 ½	257	10.12	257	10.12	176	6.93	6.3	13.9
Handwheel	80	3	316	12.44	314	12.36	216	8.5	10.4	22.9
Cap	80	3	295	11.61	293	11.54	216	8.5	10.4	22.9
Handwheel	100	4	373	14.69	362	14.25	264	10.39	17.7	39
Cap	100	4	337	13.27	329	12.95	264	10.39	17.7	39
Handwheel	125	5	491	19.33	478	18.82	322	12.68	32.8	72.3
Cap	125	5	452	17.8	440	17.32	322	12.68	32.8	72.3
Handwheel	150	6	539	21.22	515	20.28	370	14.57	60	132.3
Cap	150	6	500	19.69	478	18.82	370	14.57	60	132.3

NOTE:

Specified weights are approximate values only.

Ordering

Ordering complete valves

How to order

The table below is used to identify the valve required.

Please note that the type codes only serve to identify the valves, some of which may not form part of the standard product range.

For further information please contact your local Danfoss Sales Company.

Example: SSTC 20 ANSI angleway with cap = **148B0908**

❗ IMPORTANT:

Where products need to be certified according to specific certification societies or where higher pressures are required, the relevant information should be included at the time of order.

A = Butt-weld ANSI

SOC = Socket weld

ANG = Angleway

STR = Straightway

Table 9: SSTC Angleway with CAP-Butt-weld ANSI

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 A ANG	148B0906
20	3/4	SSTC 20 A ANG	148B0908
25	1	SSTC 25 A ANG	148B0910
32	1 1/4	SSTC 32 A ANG	148B0912
40	1 1/2	SSTC 40 A ANG	148B0914
50	2	SSTC 50 A ANG	148B0916
65	2 1/2	SSTC 65 A ANG	148B0918
80	3	SSTC 80 A ANG	148B0920
100	4	SSTC 100 A ANG	148B0922
125	5	SSTC 125 A ANG	148B0924
150	6	SSTC 150 A ANG	148B0926

Table 10: SSTC Angleway with Handwheel-Butt-weld ANSI

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 A ANG	148B0907
20	3/4	SSTC 20 A ANG	148B0909
25	1	SSTC 25 A ANG	148B0911
32	1 1/4	SSTC 32 A ANG	148B0913
40	1 1/2	SSTC 40 A ANG	148B0915
50	2	SSTC 50 A ANG	148B0917
65	2 1/2	SSTC 65 A ANG	148B0919
80	3	SSTC 80 A ANG	148B0921
100	4	SSTC 100 A ANG	148B0923
125	5	SSTC 125 A ANG	148B0925
150	6	SSTC 150 A ANG	148B0927

Table 11: SSTC Straightway with CAP-Butt-weld ANSI

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 A STR	148B0928
20	3/4	SSTC 20 A STR	148B0930
25	1	SSTC 25 A STR	148B0932
32	1 1/4	SSTC 32 A STR	148B0934

Shut-off valves, Type SSTC

Size		Type	Code no.
mm	in.		
40	1 1/2	SSTC 40 A STR	148B0936
50	2	SSTC 50 A STR	148B0938
65	2 1/2	SSTC 65 A STR	148B0940
80	3	SSTC 80 A STR	148B0942
100	4	SSTC 100 A STR	148B0944
125	5	SSTC 125 A STR	148B0946
150	6	SSTC 150 A STR	148B0948

Table 12: SSTC Straightway with Handwheel-Butt-weld ANSI

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 A STR	148B0929
20	3/4	SSTC 20 A STR	148B0931
25	1	SSTC 25 A STR	148B0933
32	1 1/4	SSTC 32 A STR	148B0935
40	1 1/2	SSTC 40 A STR	148B0937
50	2	SSTC 50 A STR	148B0939
65	2 1/2	SSTC 65 A STR	148B0941
80	3	SSTC 80 A STR	148B0943
100	4	SSTC 100 A STR	148B0945
125	5	SSTC 125 A STR	148B0947
150	6	SSTC 150 A STR	148B0949

Table 13: SSTC Angleway with CAP-SOC

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 SOC ANG	148B0951
20	3/4	SSTC 20 SOC ANG	148B0953
25	1	SSTC 25 SOC ANG	148B0955
32	1 1/4	SSTC 32 SOC ANG	148B0957

Table 14: SSTC Angleway with Handwheel-SOC

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 SOC ANG	148B0950
20	3/4	SSTC 20 SOC ANG	148B0952
25	1	SSTC 25 SOC ANG	148B0954
32	1 1/4	SSTC 32 SOC ANG	148B0956

Table 15: SSTC Straightway with CAP-SOC

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 SOC STR	148B0959
20	3/4	SSTC 20 SOC STR	148B0961
25	1	SSTC 25 SOC STR	148B0963
32	1 1/4	SSTC 32 SOC STR	148B0965

Table 16: SSTC Straightway with Handwheel-SOC

Size		Type	Code no.
mm	in.		
15	1/2	SSTC 15 SOC STR	148B0958
20	3/4	SSTC 20 SOC STR	148B0960
25	1	SSTC 25 SOC STR	148B0962
32	1 1/4	SSTC 32 SOC STR	148B0964

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 17: Certificates and declarations

File name	Document type	Document topic	Approval authority
MD 033F0691	Manufacturers Declaration	RoHS	Danfoss

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Danfoss offers a wide range of support along with our products, including digital product information, software, mobile apps, and expert guidance. See the possibilities below.

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