

ENGINEERING  
TOMORROW

*Danfoss*

STC Shut-off valves for India

# Engineering a **reliable** and **safe** industrial refrigeration plant for **tomorrow**

Shut-off valves ensuring optimum performance.  
Manufactured in India.

## Optimized design

New packing gland, gasket and cone to enhance valve lifetime and ensure easy maintenance



[www.danfoss.com/IR](http://www.danfoss.com/IR)



STC angleway and straightway Shut-off valve family ranges from DN 15-150 with cap or handwheel option. The new Shut-off valves are designed referring European standards to meet the challenges in industrial refrigeration application requirements in Asia.

The valves ensure favourable flow characteristics and are easy to dismantle and repair if required.

The new packing gland design is implemented across the family. It is an improvised version of the proven high strength design and customers are sure to get benefited by the enhanced safety and long life.

The aluminum gaskets added to the DN 15-40 act as a primary sealing and ensures that the O-ring seal does not come in direct contact with the refrigerant, which is used as a backup to enhance the sealing performance.

Non asbestos flat gasket is introduced for DN 50-150. This is same as high strength valves which increases the contact area and improves the effectiveness of the sealing.

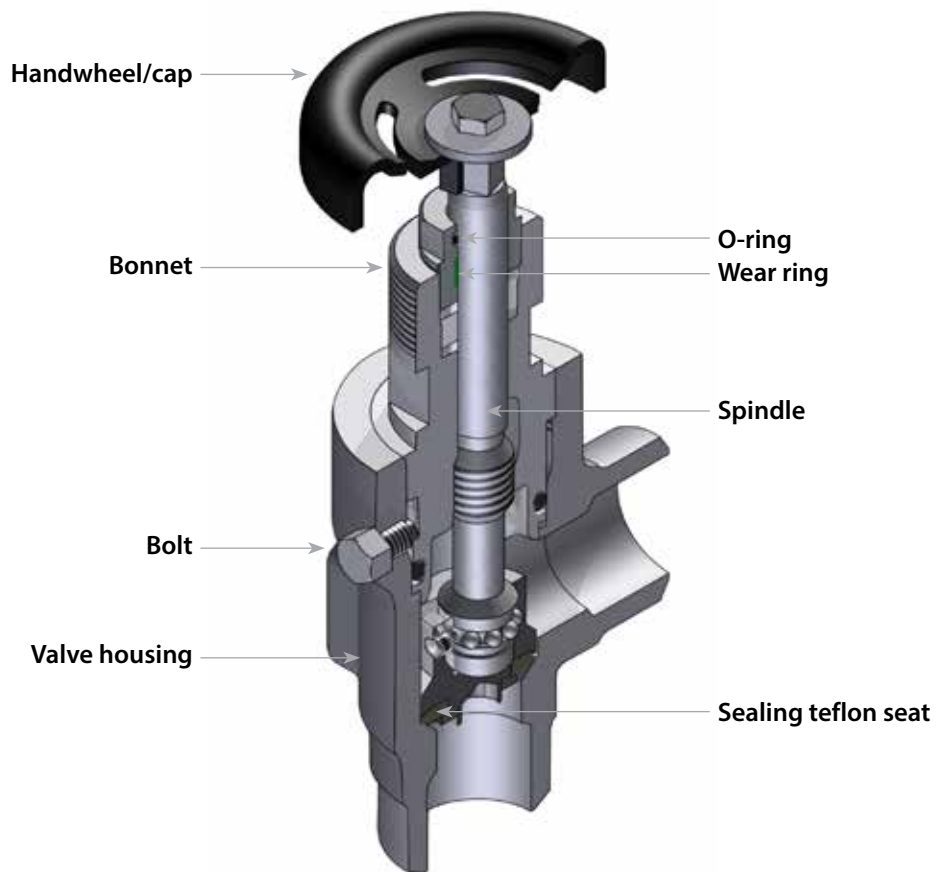
The cone teflon is made up of 25% carbon filled teflon to assure long life through high resistance to wear and tear.

Valves are 100% tested for leak and strength.

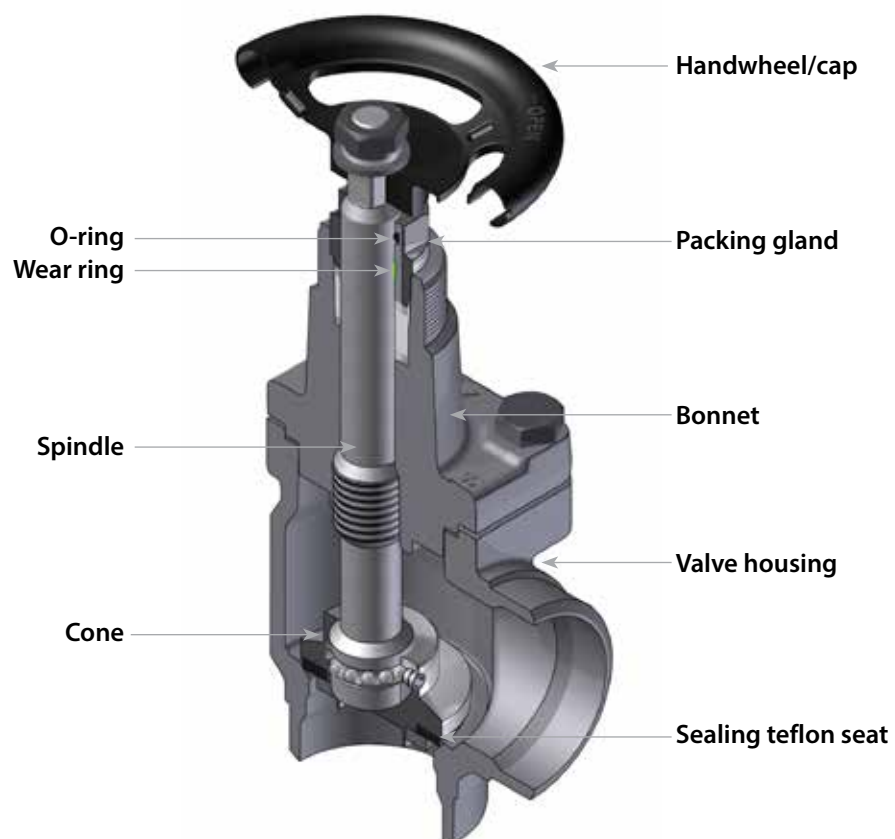
All these valves are manufactured in the state-of-the-art Indian factory with high quality consciousness and focused continual improvement in compliance with the best in industry standard TS16949.

## Cut sections

### DN 15-40



### DN 50-150



## New features

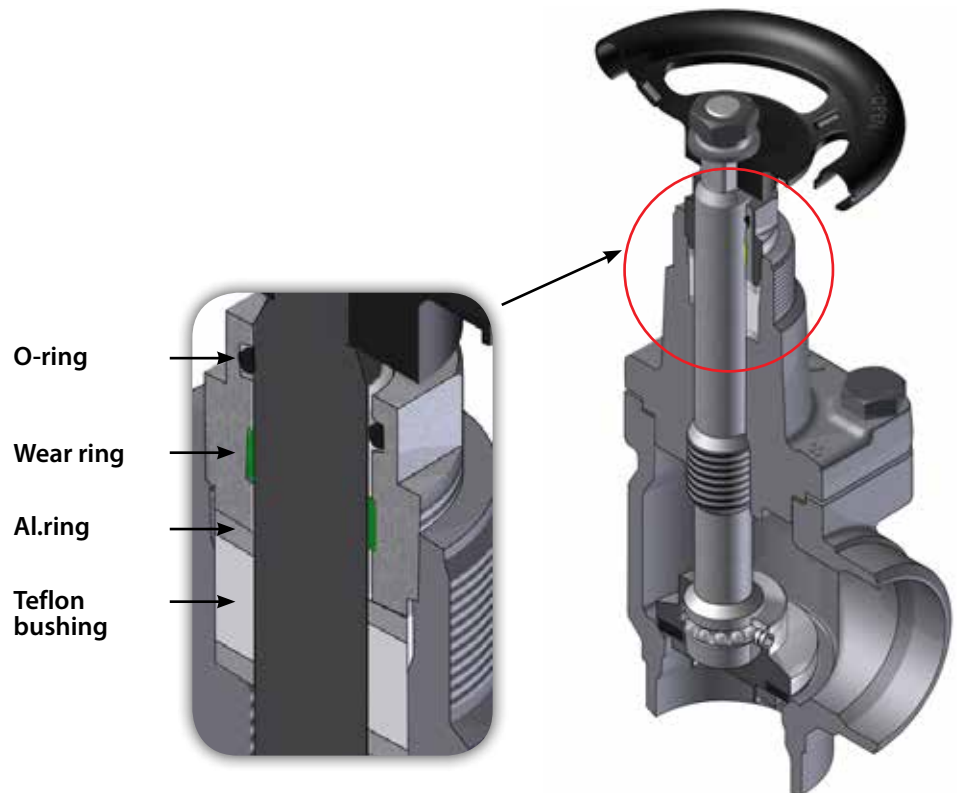
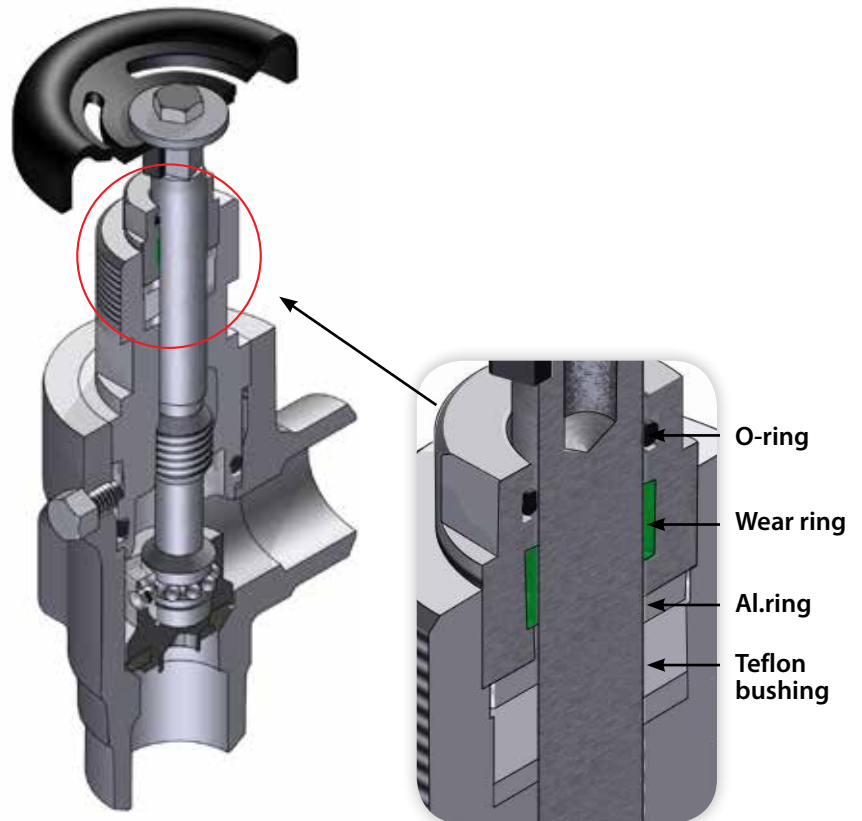
### DN 15-40 & DN 50-150

#### New packing gland:

Replacing old packing gland with new packing gland.

#### Advantages

1. Proven high strength concept adopted from SVA valves
2. Stainless steel gland nut to avoid rust
3. Re-tighten packing gland in case of external leak
4. O-ring to prevent the dust entry
5. More contact area between spindle and teflon gasket for improved sealing
6. Special wear ring for improved spindle movement



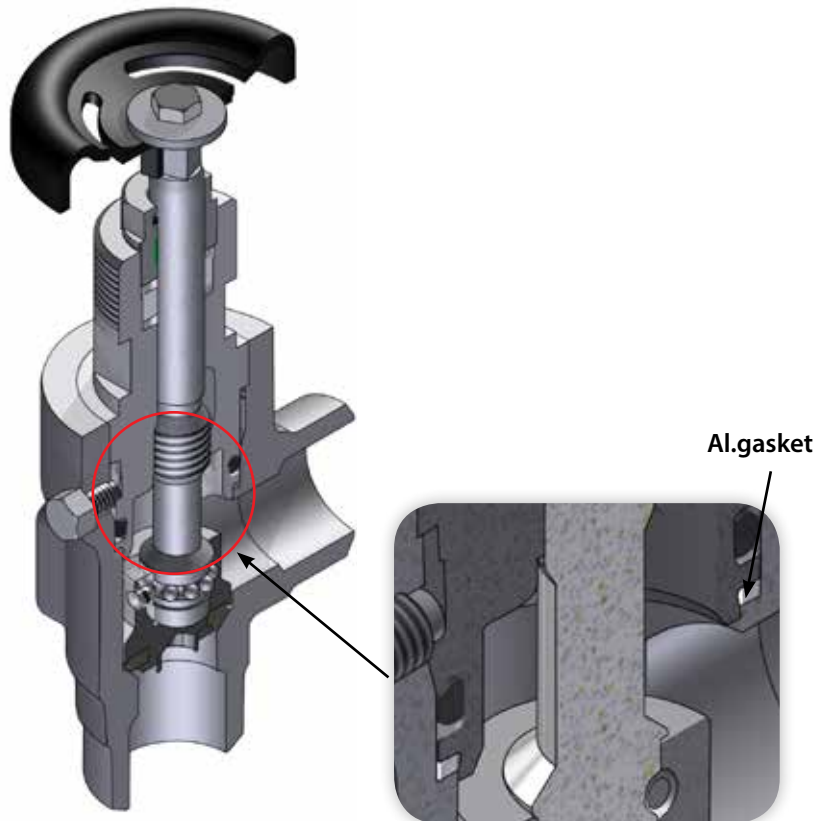
## DN 15-40

### Al.gasket:

Added new Al.gasket as primary seal. O-ring seal is used as backup sealing.

### Advantages

1. Impermeable to gases
2. High strength-to-weight ratio
3. Ductile at low temperatures
4. Non-toxic



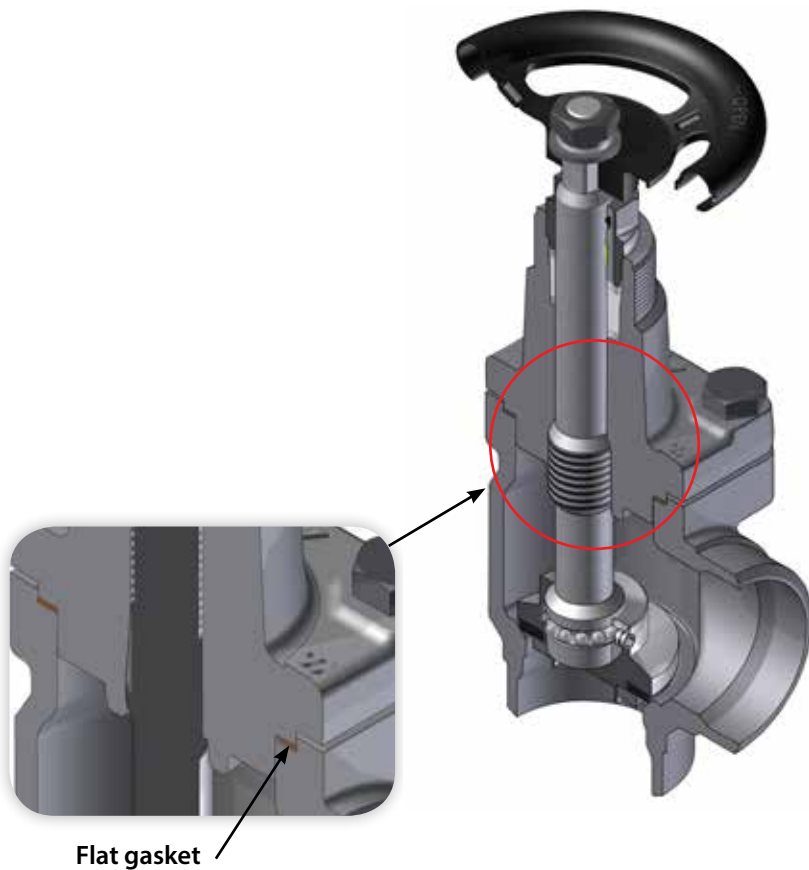
## DN 50-150

### Flat gasket:

Replacing O-ring with new flat gasket

### Advantages

1. Proven concept adopted from SVA/SVL
2. Increased sealing contact area
3. Proven high strength design adopted from SVA/SVL



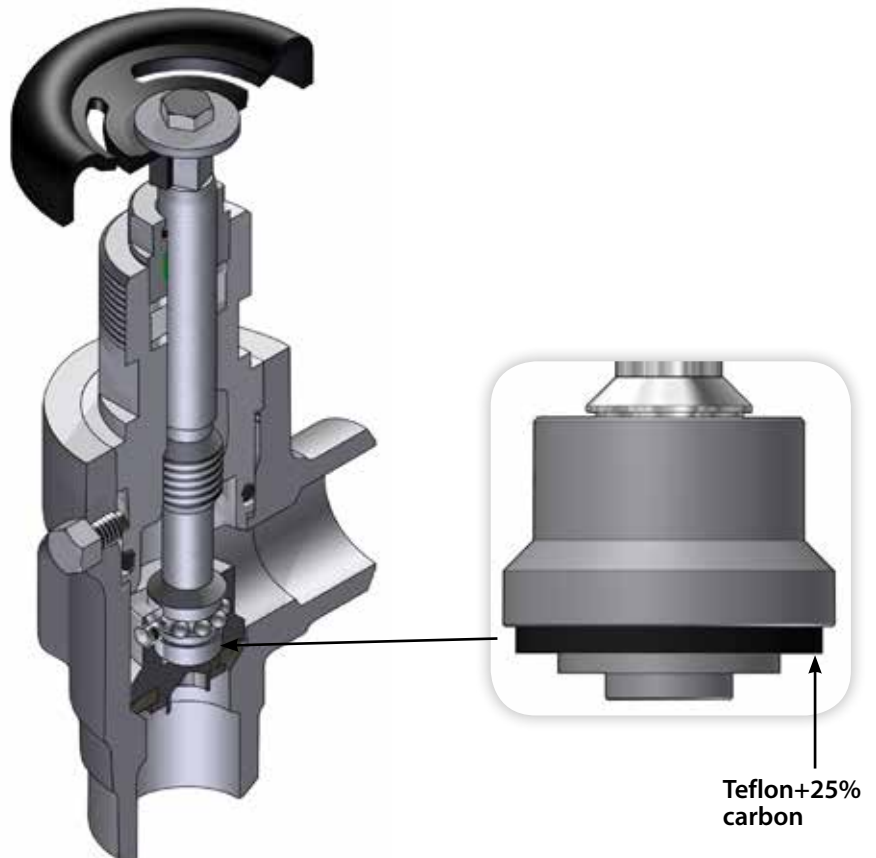
## DN 15-40

### Cone+teflon:

Replacing cone teflon+25% glass to  
teflon+25% carbon

#### Advantage of teflon+25% carbon :

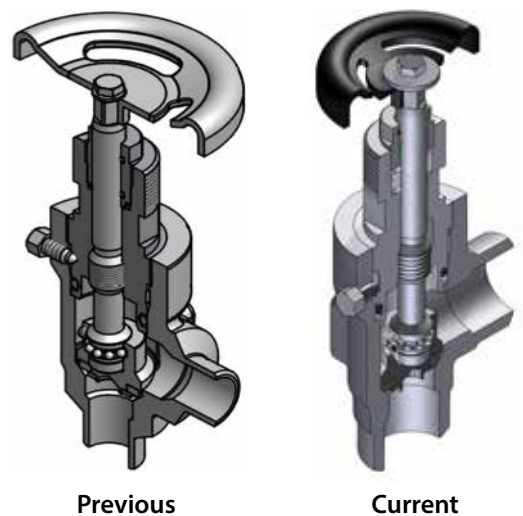
1. Extended wear resistance
2. Good chemical resistance against refrigerants
3. Improved dimensional stability
4. Improved creep resistance
5. Teflon life increases



## Design enhancements

Serial no.	Description	Sizes	New solutions	Remark
1	Packing gland	DN 15-150	New design	
2	Cone assembly	DN 15-40 DN 50-150	Yes No*	25% glass filled teflon changed to 25% carbon filled teflon
3	Bonnet	DN 15-150	Yes	1. O-ring design modified to flat gasket 2. Packing gland mounting
4	Spindle	DN 15-150	No change	
5	Valve body	DN 15-150	No change	-

\* DN 50-150 25% carbon filled teflon exists in previous design



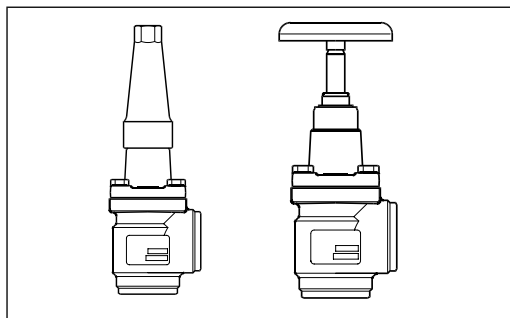
## Features

- Applicable to all common refrigerants including R717 and non-corrosive gases/liquids dependent on sealing material compatibility
- 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
- The valves and caps are prepared for sealing, to prevent operation by unauthorized persons
- Internal metal backseating
- DN 15 - 150 (½ - 6 in.)
- Can accept flow in both directions
- Max. working pressure: 25 bar g (365 psi g)
- Temperature range: -50/+150°C (-58/+302°F)
- Design specification according to DIN 3158

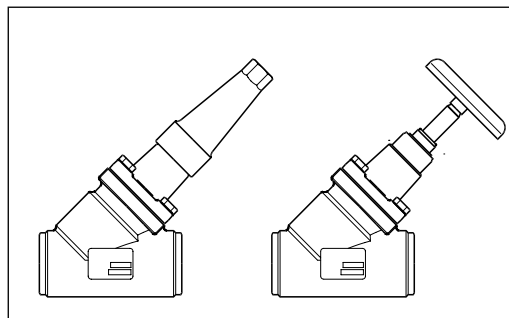


## Ordering valves with ANSI connections

Angle version



Straight version



Type	New code no.
STC 15 A Ang Shut-off valve cap	148B4600
STC 15 A Ang Shut-off valve handwheel	148B4601
STC 20 A Ang Shut-off valve cap	148B4602
STC 20 A Ang Shut-off valve handwheel	148B4603
STC 25 A Ang Shut-off valve cap	148B4604
STC 25 A Ang Shut-off valve handwheel	148B4605
STC 32 A Ang Shut-off valve cap	148B4606
STC 32 A Ang Shut-off valve handwheel	148B4607
STC 40 A Ang Shut-off valve cap	148B4608
STC 40 A Ang Shut-off valve handwheel	148B4609
STC 50 A Ang Shut-off valve cap	148B4610
STC 50 A Ang Shut-off valve handwheel	148B4611
STC 65 A Ang Shut-off valve cap	148B4612
STC 65 A Ang Shut-off valve handwheel	148B4613
STC 80 A Ang Shut-off valve cap	148B4614
STC 80 A Ang Shut-off valve handwheel	148B4615
STC 100 A Ang Shut-off valve cap	148B4616
STC 100 A Ang Shut-off valve handwheel	148B4617
STC 125 A Ang Shut-off valve cap	148B4618
STC 125 A Ang Shut-off valve handwheel	148B4619
STC 150 A Ang Shut-off valve cap	148B4620
STC 150 A Ang Shut-off valve handwheel	148B4621

Type	New code no.
STC 15 A Str Shut-off valve cap	148B4622
STC 15 A Str Shut-off valve handwheel	148B4623
STC 20 A Str Shut-off valve cap	148B4624
STC 20 A Str Shut-off valve handwheel	148B4625
STC 25 A Str Shut-off valve cap	148B4626
STC 25 A Str Shut-off valve handwheel	148B4627
STC 32 A Str Shut-off valve cap	148B4628
STC 32 A Str Shut-off valve handwheel	148B4629
STC 40 A Str Shut-off valve cap	148B4630
STC 40 A Str Shut-off valve handwheel	148B4631
STC 50 A Str Shut-off valve cap	148B4632
STC 50 A Str Shut-off valve handwheel	148B4633
STC 65 A Str Shut-off valve cap	148B4634
STC 65 A Str Shut-off valve handwheel	148B4635
STC 80 A Str Shut-off valve cap	148B4636
STC 80 A Str Shut-off valve handwheel	148B4637
STC 100 A Str Shut-off valve cap	148B4638
STC 100 A Str Shut-off valve handwheel	148B4639
STC 125 A Str Shut-off valve cap	148B4640
STC 125 A Str Shut-off valve handwheel	148B4641
STC 150 A Str Shut-off valve cap	148B4642
STC 150 A Str Shut-off valve handwheel	148B4643

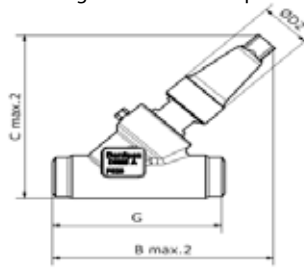


Old code no.	Description	New code no.
148B4337	STC 15 A Ang Shut-off valve cap	148B4600
148B4338	STC 15 A Ang Shut-off valve handwheel	148B4601
148B4339	STC 15 A Str Shut-off valve cap	148B4622
148B4340	STC 15 A Str Shut-off valve handwheel	148B4623
148B4341	STC 20 A Ang Shut-off valve cap	148B4602
148B4342	STC 20 A Ang Shut-off valve handwheel	148B4603
148B4343	STC 20 A Str Shut-off valve cap	148B4624
148B4344	STC 20 A Str Shut-off valve handwheel	148B4625
148B4345	STC 25 A Ang Shut-off valve cap	148B4604
148B4346	STC 25 A Ang Shut-off valve handwheel	148B4605
148B4347	STC 25 A Str Shut-off valve cap	148B4626
148B4348	STC 25 A Str Shut-off valve handwheel	148B4627
148B4349	STC 32 A Ang Shut-off valve cap	148B4606
148B4350	STC 32 A Ang Shut-off valve handwheel	148B4607
148B4351	STC 32 A Str Shut-off valve cap	148B4628
148B4352	STC 32 A Str Shut-off valve handwheel	148B4629
148B4353	STC 40 A Ang Shut-off valve cap	148B4608
148B4354	STC 40 A Ang Shut-off valve handwheel	148B4609
148B4355	STC 40 A Str Shut-off valve cap	148B4630
148B4356	STC 40 A Str Shut-off valve handwheel	148B4631
148B4357	STC 50 A Ang Shut-off valve cap	148B4610
148B4358	STC 50 A Ang Shut-off valve handwheel	148B4611
148B4359	STC 50 A Str Shut-off valve cap	148B4632
148B4360	STC 50 A Str Shut-off valve handwheel	148B4633
148B4361	STC 65 A Ang Shut-off valve cap	148B4612
148B4362	STC 65 A Ang Shut-off valve handwheel	148B4613
148B4363	STC 65 A Str Shut-off valve cap	148B4634
148B4364	STC 65 A Str Shut-off valve handwheel	148B4635
148B4365	STC 80 A Ang Shut-off valve cap	148B4614
148B4366	STC 80 A Ang Shut-off valve handwheel	148B4615
148B4367	STC 80 A Str Shut-off valve cap	148B4636
148B4368	STC 80 A Str Shut-off valve handwheel	148B4637
148B4369	STC 100 A Ang Shut-off valve cap	148B4616
148B4370	STC 100 A Ang Shut-off valve handwheel	148B4617
148B4371	STC 100 A Str Shut-off valve cap	148B4638
148B4372	STC 100 A Str Shut-off valve handwheel	148B4639
148B4373	STC 125 A Ang Shut-off valve cap	148B4618
148B4374	STC 125 A Ang Shut-off valve handwheel	148B4619
148B4375	STC 125 A Str Shut-off valve cap	148B4640
148B4376	STC 125 A Str Shut-off valve handwheel	148B4641
148B4377	STC 150 A Ang Shut-off valve cap	148B4620
148B4378	STC 150 A Ang Shut-off valve handwheel	148B4621
148B4379	STC 150 A Str Shut-off valve cap	148B4642
148B4380	STC 150 A Str Shut-off valve handwheel	148B4643

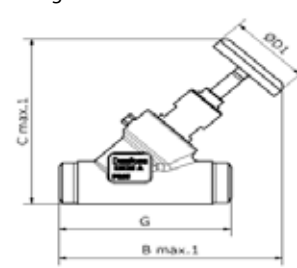


## Dimensions and weights

STC 15-40 (½ - 1½ in)  
straight version with cap

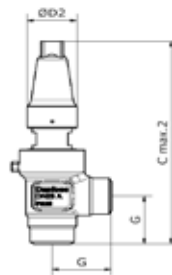


STC 15-40 (½ - 1½ in)  
straight version with handwheel

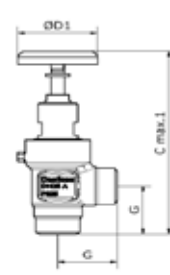


Valve Size		Cmax1	Cmax2	Bmax1	Bmax2	ØD1	ØD2	G	Weight
STC 15-25	[mm]	135	140	151	156	60	38	120	2.1 Kg
STC (½ - 1)	[in]	5.31	5.51	5.94	6.14	2.36	1.5	4.72	4.6 lb
STC 32-40	[mm]	178	204	194	221	80	50	145	2.6 Kg
STC (1¼-1½)	[in]	7.01	8.03	7.64	8.7	3.15	1.97	5.71	5.7 lb

STC 15-40 (½ - 1½ in)  
angle version with cap

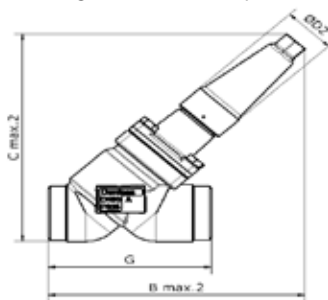


STC 15-40 (½ - 1½ in)  
angle version with handwheel

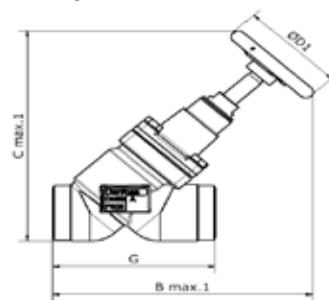


Valve Size		Cmax1	Cmax2	ØD1	ØD2	G	Weight
STC 15-25	[mm]	170	189	60	38	45	1.7 Kg
STC (½ - 1)	[in]	6.69	7.44	2.36	1.5	1.77	3.7 lb
STC 32-40	[mm]	201	266	80	50	55	1.9 Kg
STC (1¼-1½)	[in]	7.91	10.47	3.15	1.97	2.17	4.2 lb

STC 50-150 (2 - 6 in)  
straight version with cap

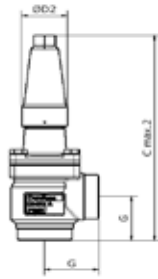


STC 50-150 (2 - 6 in)  
straight version with handwheel

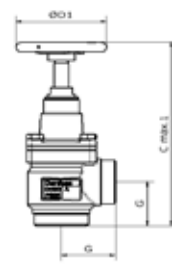


Valve Size		Cmax1	Cmax2	Bmax1	Bmax2	ØD1	ØD2	G	Weight
STC 50	[mm]	234	232	236	233	100	50	148	4.2 Kg
STC 50 (2)	[in]	9.21	9.13	9.29	9.17	3.94	1.97	5.83	9.3 lb
STC 65	[mm]	262	258	262	258	100	50	176	6.3 Kg
STC 65 (2½)	[in]	10.31	10.16	10.31	10.16	3.94	1.97	6.93	13.9 lb
STC 80	[mm]	342	298	340	296	200	58	216	10.4 Kg
STC 80(3)	[in]	13.46	11.73	13.39	11.65	7.87	2.28	8.5	22.9 lb
STC 100	[mm]	408	339	400	331	200	58	264	17.7 Kg
STC 100 (4)	[in]	16.06	13.35	15.75	13.03	7.87	2.28	10.39	39.0 lb
STC 125	[mm]	538	456	526	444	315	74	322	32.8 Kg
STC 125 (5)	[in]	21.18	17.95	20.71	17.48	12.40	2.91	12.68	72.3 lb
STC 150	[mm]	594	505	572	483	315	74	370	60 Kg
STC (6)	[in]	23.39	19.88	22.52	19.02	12.40	2.91	14.57	132.3 lb

STC 50-150 (2 - 6 in)  
angle version with cap



STC 50-150 (2 - 6 in)  
angle version with handwheel



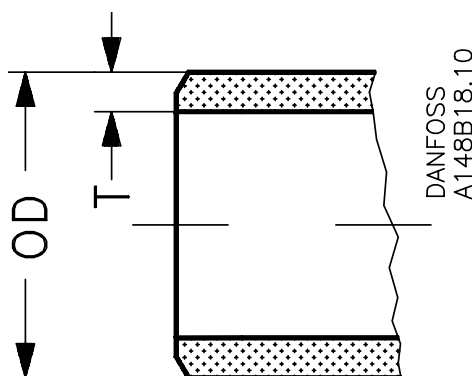
Valve Size		Cmax1	Cmax2	ØD1	ØD2	G	Weight
STC 50	[mm]	251	281	100	50	60	3.2 Kg
STC 50 (2)	[in]	9.88	11.06	3.94	1.97	2.36	7.1 lb
STC 65	[mm]	280	305	100	50	70	5.3 Kg
STC 65 (2½)	[in]	11.02	12.01	3.94	1.97	2.76	10.6 lb
STC 80	[mm]	373	388	200	58	90	9.2 Kg
STC 80(3)	[in]	14.69	15.28	7.87	2.28	3.54	20.3 lb
STC 100	[mm]	432	437	200	58	106	14.8 Kg
STC 100 (4)	[in]	17.01	17.20	7.87	2.28	4.17	32.6 lb
STC 125	[mm]	517	533	315	74	128	28.1 Kg
STC 125 (5)	[in]	20.35	20.98	12.40	2.91	5.04	61.9 lb
STC 150	[mm]	564	568	315	74	145	39.7 Kg
STC (6)	[in]	22.20	22.36	12.40	2.91	5.71	87.5 lb

## Connections

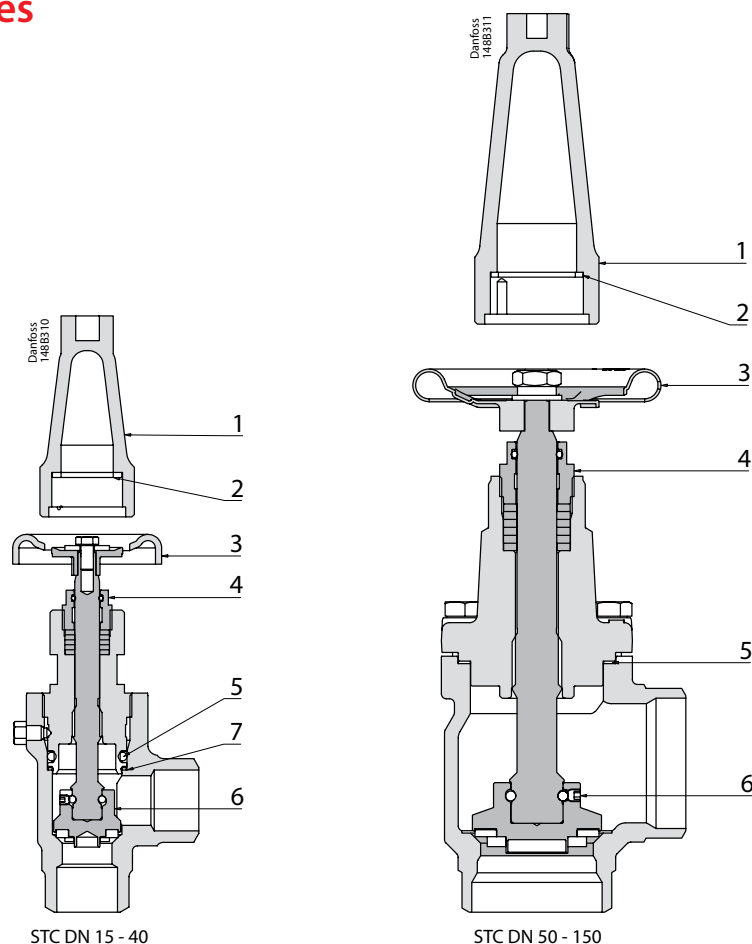
Size	Size	Version
[mm]	[in.]	
15	½	Handwheel
15	½	Cap
20	¾	Handwheel
20	¾	Cap
25	1	Handwheel
25	1	Cap
32	1¼	Handwheel
32	1¼	Cap
40	1½	Handwheel
40	1½	Cap
50	2	Handwheel
50	2	Cap
65	2½	Handwheel
65	2½	Cap
80	3	Handwheel
80	3	Cap
100	4	Handwheel
100	4	Cap
125	5	Handwheel
125	5	Cap
150	6	Handwheel
150	6	Cap

OD		T	
[mm]	[in.]	[mm]	[in.]
21.3	0.84	3.7	0.147
21.3	0.84	3.7	0.147
26.7	1.05	3.9	0.154
26.7	1.05	3.9	0.154
33.4	1.31	4.6	0.179
33.4	1.31	4.6	0.179
42.2	1.66	4.9	0.191
42.2	1.66	4.9	0.191
48.3	1.9	5.1	0.2
48.3	1.9	5.1	0.2
60.3	2.37	3.9	0.154
60.3	2.37	3.9	0.154
73	2.87	5.2	0.203
73	2.87	5.2	0.203
88.9	3.5	5.5	0.216
88.9	3.5	5.5	0.216
114	4.5	6	0.237
114	4.5	6	0.237
141	5.56	6.6	0.258
141	5.56	6.6	0.258
168	6.63	7.1	0.28
168	6.63	7.1	0.28

### ANSI connections



## Spare parts and accessories



STC DN 15 - 40

STC DN 50 - 150

			Size 15 - 25	Size 32 - 40	Size 50	Size 65	Size 80	Size 100	Size 125	Size 150
			Code no.							
Spare part kit, cone - Set B1										
Position	5	O-ring for housing/bonnet. Allen key	148B6456	148B6457	148B6448	148B6449	148B6450	148B6451	148B6452	148B6453
	6	Cone complete incl. steel balls and allen screw								
	7	Gasket for housing/bonnet								
Spare part kit, for bonnet and cap (dismounting set) - Set A										
Position	2	Gasket for cap	148B6454	148B6455	148B6463	148B6464	148B6465	148B6466	148B6467	148B6468
	5	O-ring for housing/bonnet								
	7	Gasket for housing/bonnet								
Packing gland incl. gaskets (with O-rings) - Set B2										
Position	4	Packing gland incl. gasket	148B6458	148B6459	148B6460	148B6460	148B6461	148B6461	148B6462	148B6462
Handwheel incl. screw and washer										
Position	3	Handwheel incl. nut and washer	148B4476	148B4477	148B4478	148B4478	148B4479	148B4479	148B4480	148B4480
Cap incl. gasket										
Position	1	Cap incl. gasket	148B4447	148B4448	148B4448	148B4448	148B4449	148B4449	148B4450	148B4450

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