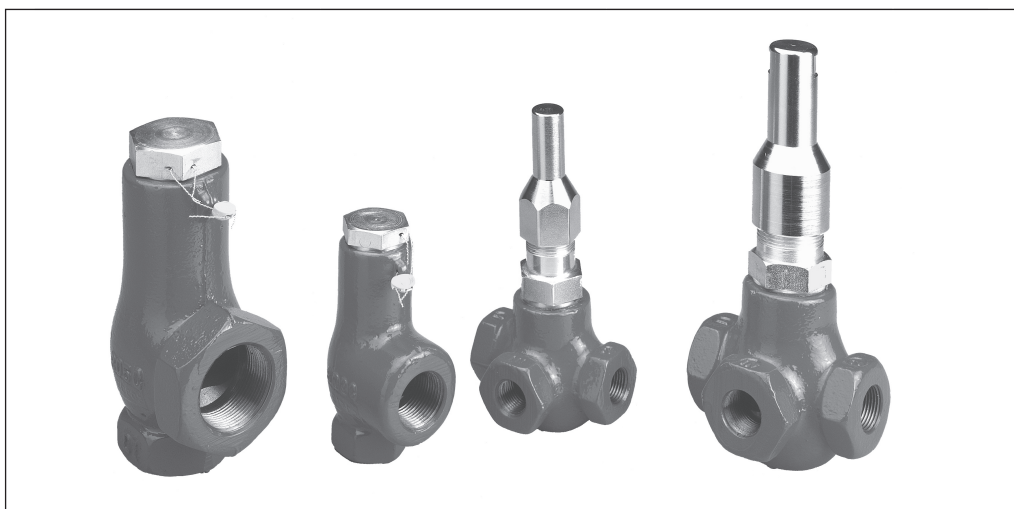


## **Safety relief valves and double stop valves, type SFVL and DSVL**



Introduction



The **SFVL** safety valves are backpressure dependent pressure relief valves. These are designed for protection of vessels and other components against excessive pressure. These valves are recommended as an external and internal safety relief valve in refrigeration plants.

These valves are manufactured according to strict quality demands and safety requirements for refrigeration installations, as specified in many markets and comply with ASHRAE Addendum 15C-2000. These valves are manufactured in accordance with the ASME Quality Control Procedures and stamped with the UV symbol. They are certified by the United States National Board of Boiler & Pressure Vessel Inspectors and are stamped with the NB symbol.

**DSVL** series 3-way valves are designed to meet all industrial refrigeration application requirements.

DSVL valves are designed specifically for use with double safety valve systems. When used in such applications, only one safety valve can be shut off or isolated at any one time. Complete shut off of one safety valve or the other can be obtained by front seating or back seating of the valve spindle.

The valves are designed to give favourable flow characteristics and are easy to dismantle for servicing. The valve cone is designed to ensure tight seal.

Features

SFVL

The 800 series safety relief valve:

- Teflon seats mated with the stainless steel multiple crown rings which provide a reliable sealing. The triple crown sealing rings are located at slightly different heights in order to provide compound sealing ability with the mating teflon ring.
- Special extra lift, pop-open feature in order to provide a high relief capacity.
- A four-wing guided, stainless steel upper seat provides an excellent guidance for the high lift and reseating action.
- A spring and seat design which provides for a concentric and axial spring force, loads the upper seat uniformly and maintains a tight seal.

- All relief valves come with an installation tag and cable wire. Each valve's identification tag has information regarding the catalogue number, month and year of manufacture, set pressure, inlet pipe size and capacity for AIR in units of SCFM. The tag is fastened with drive rivets for security.
- Relief valves are subject to 100% factory testing through three separate test sequences to verify quality and set pressure before being factory sealed for security.

DSVL

The 843, 844, and 845 series stop valves feature:

- A compact casted ductile iron valve body which is painted with corrosion inhibiting primer paint
- Full port pipe threaded connections for easy installation and disassembly. The connections are marked for easy identification.

- Stainless steel stems and seal caps
- Teflon packing gland
- Teflon valve seat

**Technical data**
**SFVL**

- The SFVL series relief valves are available with pressure settings from 75 to 400 psi and a maximum working pressure of 500 psi. Common set pressures of 150, 250 and 300 psi are available from stock or with short lead-time. Other special pressure settings may be ordered (see capacity charts in technical information section.)
- The SFVL series relief valves are suitable for refrigerants R717 (ammonia NH<sub>3</sub>), HFC and HCFC refrigerants.
- The temperature range is -20°F to +275°F (-29°C to 135°C).
- The valve body is made from ductile iron that meets the ASME SA-395 specification grade 60-40-18.
- All upper and lower valve seats, springs, and spring guides are constructed from 304-grade stainless steel.
- Valve bodies are painted with a corrosion inhibiting primer paint
- The SFVL series relief valves are designed for use with 800 series DSVL (843, 844, or 845).

**DSVL**

- The series relief valves are suitable for refrigerants R717 (ammonia NH<sub>3</sub>), HFC and HCFC refrigerants.
- The 843, 844, and 845 DSVL valves are approved:
  - Maximum working pressure of 400 psig.
  - Temperature range: -20°F to +300°F (-29°C to +149°C)
- To receive an updated list of certification on the products please contact your local Danfoss Sales Company.

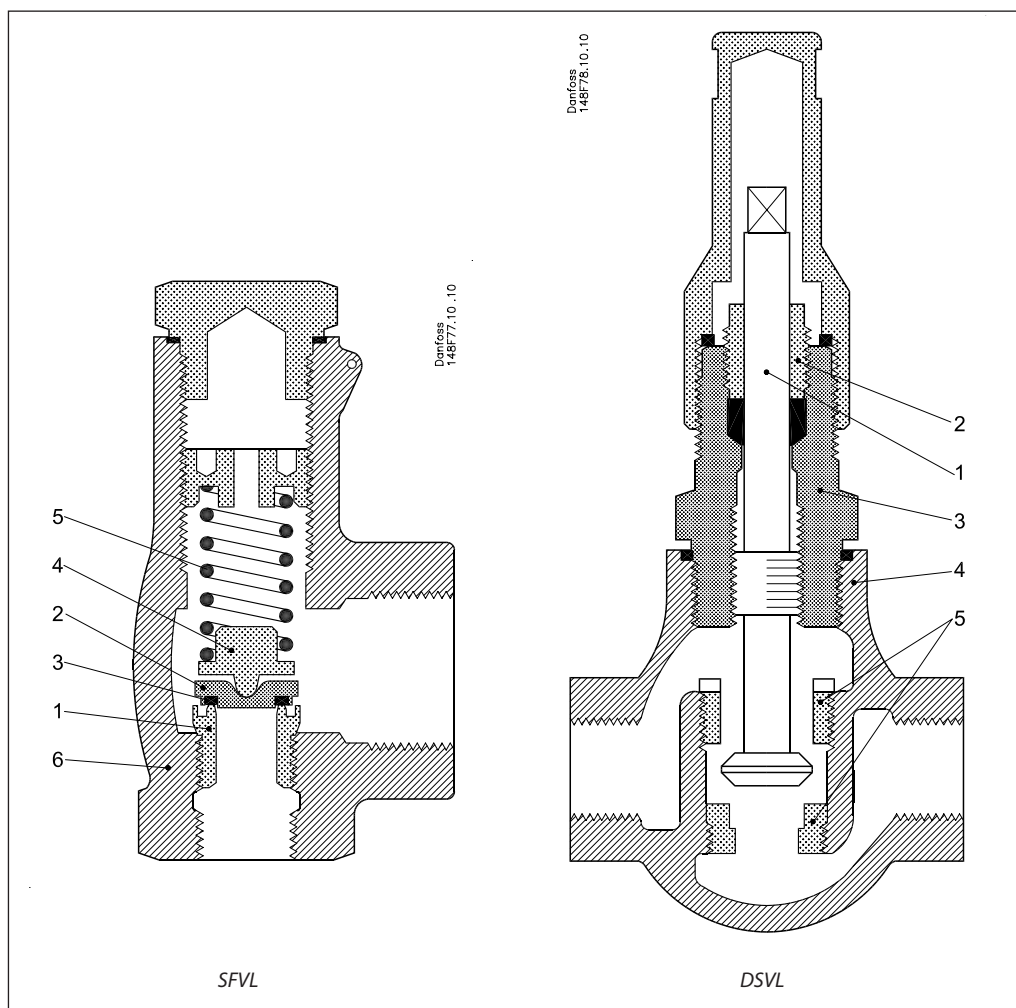
**Design**
*Connections:*

The valves are offered with threaded (NPT) connections.

*Housing and internal materials:*

- The valve body is made from cast ductile iron that meets the ASME SA-395 specification grade 60-40-18.
- All upper and lower valve seats, springs, and spring guides are constructed from 304-grade stainless steel.
- The upper valve seat is teflon.

Material specification



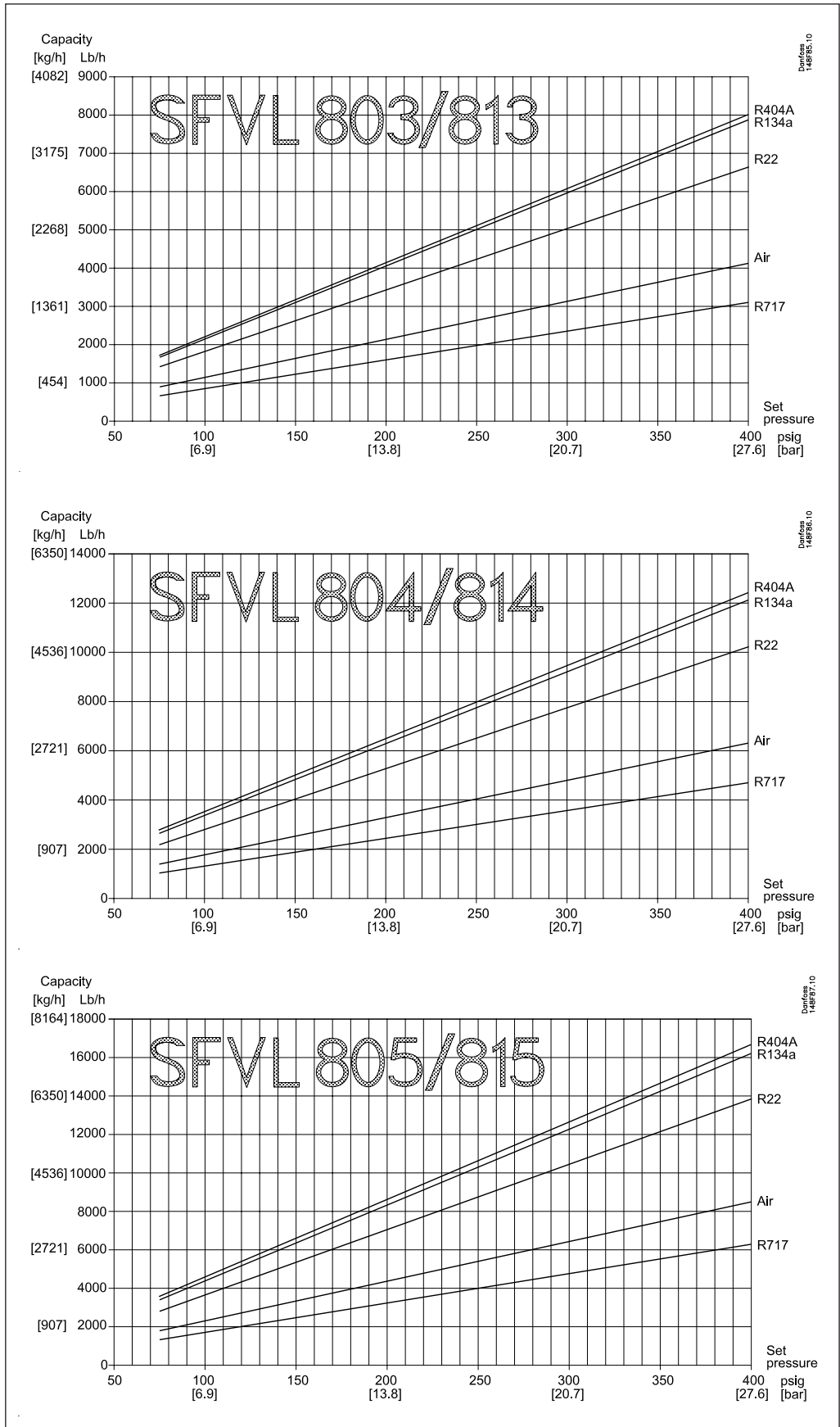
SFVL

No.	Part	Material
1	Lower seat	Stainless steel
2	Upper seat	Stainless steel
3	Teflon ring	Teflon
4	Uniform load spring guide	Stainless steel
5	Spring	Stainless steel
6	Housing	Ductile iron

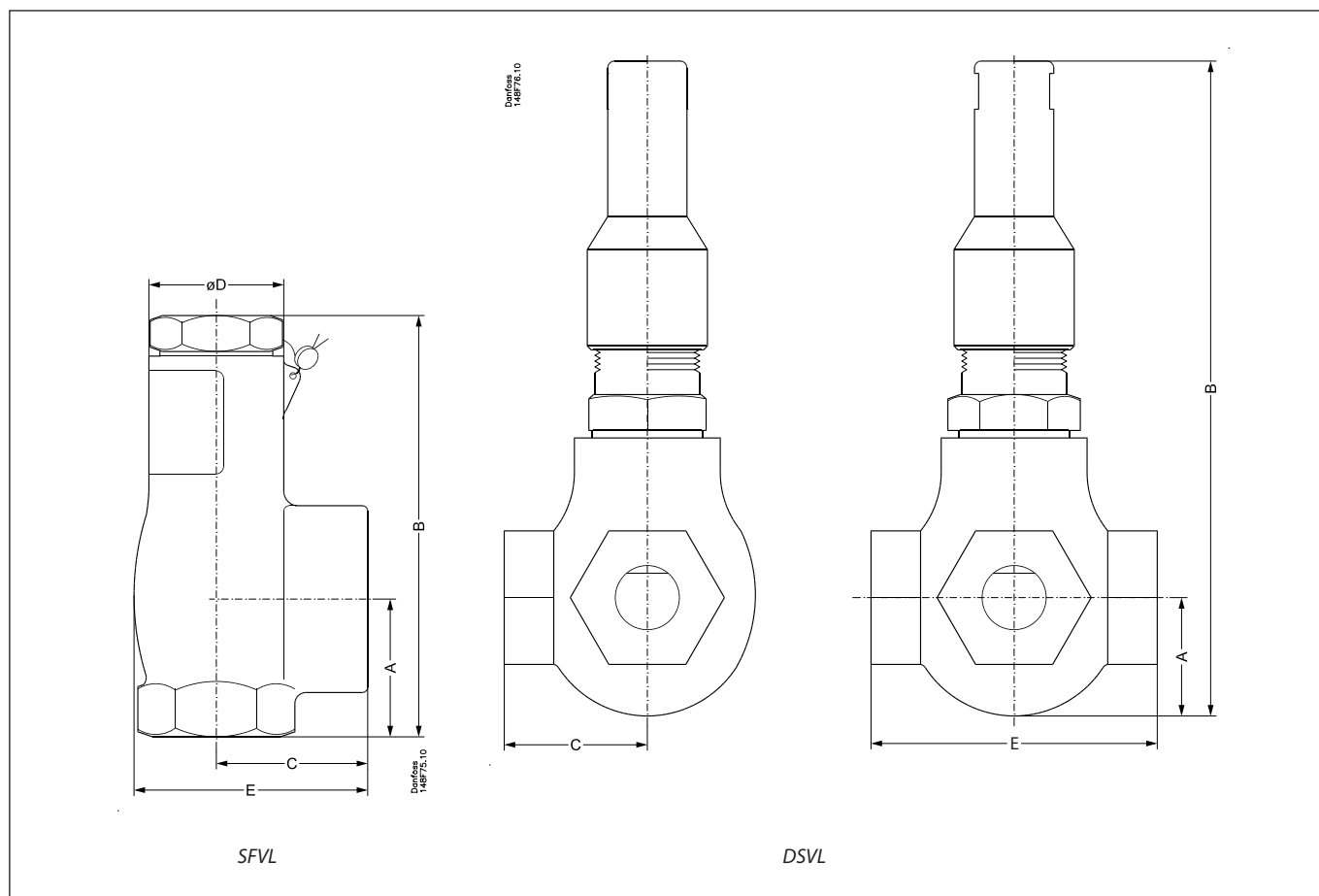
DSVL

No.	Part	Material
1	Stem / spindle	Stainless steel
2	Packing nut	Stainless steel
3	Bonnet	Steel
4	Housing	Ductile iron
5	Upper and lower seat	Steel

Capacities



## Dimensions and weights



Valve size		A	B	C	øD	E	Weight
SFVL 803/813	in.	1.77	5.24	1.77	1.65	2.83	3.2 lb
	mm	45	133	45	42	72	1.4 kg
SFVL 804/814	in.	1.97	6.06	1.97	1.97	3.31	5.3 lb
	mm	50	154	50	50	84	2.4 kg
SFVL 805/815	in.	2.36	7.09	2.36	2.36	3.94	7.9 lb
	mm	60	180	60	60	100	3.5 kg

Valve size		A	B	C	E	Weight
DSVL 843	in.	1.38	7.40	1.77	3.54	3.75 lb
	mm	35	188	45	90	1.7 kg
DSVL 844	in.	1.73	9.37	2.01	4.13	6.5 lb
	mm	44	238	51	105	2.9 kg
DSVL 845	in.	1.97	11.34	2.20	4.72	10.25 lb
	mm	50	288	56	120	4.6 kg

**Ordering**
*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.

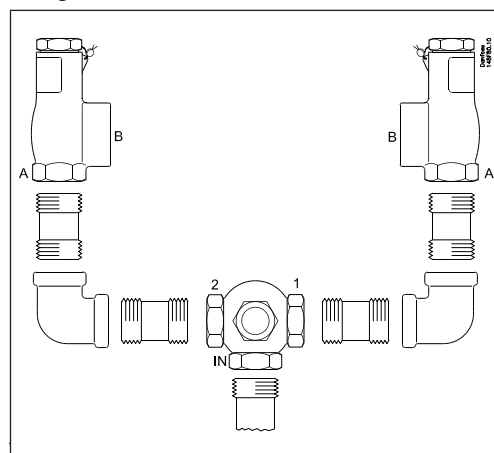
*Safety valves, type: SFVL*

Type	Connections	Pressure setting [psig]	Code no.
SFVL 803	½ NFPT x ¾ NFPT	150	<b>148F8000</b>
		175	<b>148F8035</b>
		250	<b>148F8001</b>
		260	<b>148F8036</b>
		300	<b>148F8002</b>
SFVL 813	½ NFPT x 1 NFPT	150	<b>148F8003</b>
		175	<b>148F8037</b>
		250	<b>148F8004</b>
		260	<b>148F8038</b>
		300	<b>148F8005</b>
SFVL 804	¾ NFPT x 1 NFPT	150	<b>148F8006</b>
		175	<b>148F8039</b>
		250	<b>148F8007</b>
		260	<b>148F8040</b>
		300	<b>148F8008</b>

Type	Connections	Pressure setting [psig]	Code no.
SFVL 814	¾ NFPT x 1-¼ NFPT	150	<b>148F8009</b>
		175	<b>148F8041</b>
		250	<b>148F8010</b>
		260	<b>148F8042</b>
		300	<b>148F8011</b>
SFVL 805	1 NFPT x 1-¼ NFPT	150	<b>148F8012</b>
		175	<b>148F8030</b>
		235	<b>148F8031</b>
		250	<b>148F8013</b>
		260	<b>148F8043</b>
SFVL 815	1 NFPT x 1-½ NFPT	150	<b>148F8015</b>
		175	<b>148F8044</b>
		250	<b>148F8016</b>
		260	<b>148F8045</b>
		300	<b>148F8017</b>

*Double stop valves, type: DSVL*

Type	Connections	Code no.
DSVL 843	½ x ½ x ½ NFPT	<b>148F8018</b>
DSVL 844	¾ x ¾ x ¾ NFPT	<b>148F8019</b>
DSVL 845	1 x 1 x 1 NFPT	<b>148F8020</b>

*Fittings*


Description	Connections	Code no.
Accessory fitting kit for DSVL 843	½ in.	<b>148F8032</b>
Accessory fitting kit for DSVL 844	¾ in.	<b>148F8033</b>
Accessory fitting kit for DSVL 845	1 in.	<b>148F8034</b>