

Technical brochure

Quick closing oil drain valve QDV



QDV is a quick closing oil drain valve, designed particularly for draining oil from systems containing refrigerant (ammonia) under pressure.

The valve will close immediately on release of the handle, thus protecting user and environment against unnecessary refrigerant leaks. The valve should as a rule be installed as illustrated in fig. 1.

In order to prevent hydraulic pressure building up between the stop valve and the QDV an integral relief device is included as part of the cone arrangement, which will open at approx. 16 bar (232 psig).

QDV is designed to meet the safety demands specified by national and international authorities within industrial refrigeration.

Features

- Applicable to R717 (ammonia).
- Meets the safety demands within industrial refrigeration
- Handle can be positioned 360°
- Built-in integral relief device opening over 16 bar g (preventing hydraulic pressure building up between stop valve and QDV).
- Can be supplied together with a stop valve for quick on site mounting (fig. 1).
- Max. operating pressure: 40 bar g (580 psi g).
- Temperature range: -50/+150°C (-58/+302°F).
- Classification: To get an updated list of certification on the products please contact your local Danfoss Sales Company.

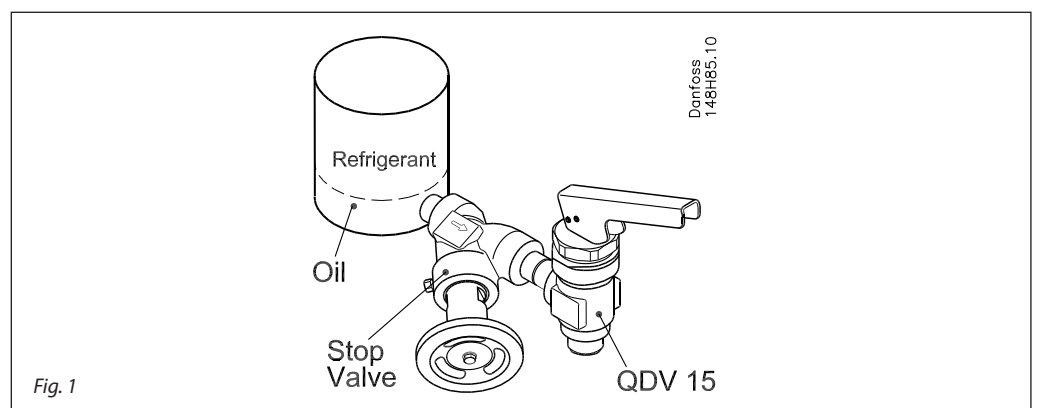


Fig. 1

Quick closing oil drain valve, type QDV 15

Design

Connections

Available with the following connections:

- Inlet: Welding DIN (EN 10220)
 - ½ in. FPT
 - ¾ in. FPT
- Outlet: G ¾ in. pipe thread (ISO 228/1)
 - ½ in. FPT
 - ¾ in. FPT

Optional extras for outlet:

- Welding nipple DIN (EN 10220)
- Hose connection

Other types of connection are available on request.

QDV - SVA combinations

Combinations of the QDV together with a dedicated SVA have been established for easy selection. Please study page 6 to find the code numbers for these combinations.

Installation

For further information refer to installation instruction for QDV.

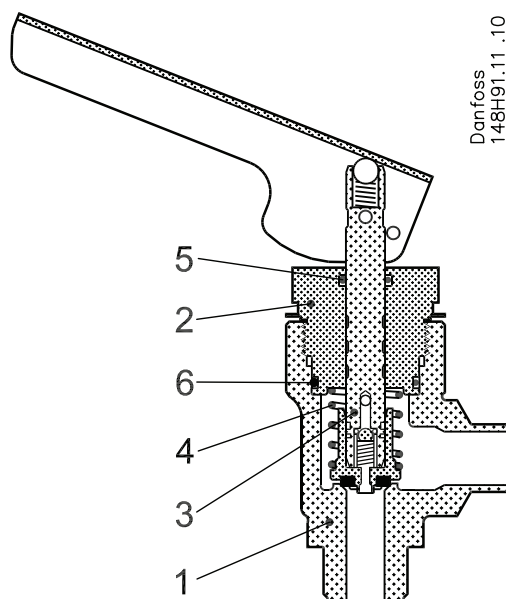
Technical data

- Refrigerants
Applicable to R717 (ammonia).
- QDV is a backpressure dependent valve. If any tube or hose is mounted on the outlet of the QDV it has to be calculated to prevent backpressure building up when relieving.
- For further information please see installation instruction for QDV.
Flammable hydrocarbons are not recommended, for further information please contact your local Danfoss Sales Company.
- Temperature range
-50/+150°C (-58/+302°F).
- Pressure
The valve is designed for:
Maximum operating pressure of 40 bar g (580 psi g)

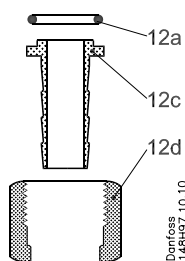
Quick closing oil drain valve, type QDV 15

Material specification

QDV 15

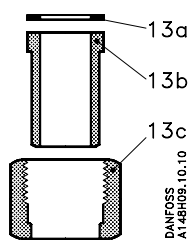


No.	Part	Material	DIN/EN	ASTM
1	Housing	Steel	G20Mn5QT EN10213-3	LCC A352
2	Bonnet	Steel St37-2	S235JR EN 10025	AISI 1015
3	Spindle/Cone	Stainless steel X10CrNiS18-9	S189 EN 10088-3	AISI 303
4	Spring	Steel		
5	O-ring	Cloroprene		
6	O-ring	Cloroprene		



Hose connection for outlet

No.	Part	Material
12a	O-rings	Cloroprene (Neoprene)
12c	Stub for hose - OD Ø15 mm	Steel
12d	Union nut - G 3/4"	Steel

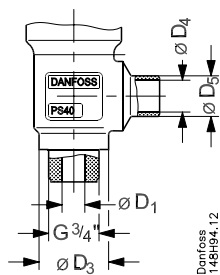


Welding nipple connection for outlet

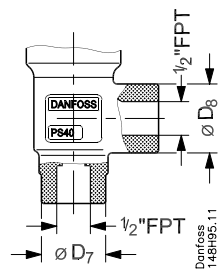
No.	Part	Material
13a	Al-packing	Aluminium
13b	Welding nipple - OD Ø21.3 mm	Steel (S235JR)
13c	Union nut - G 3/4"	Steel

Quick closing oil drain valve, type QDV 15

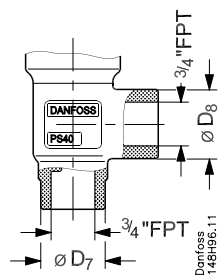
Connections



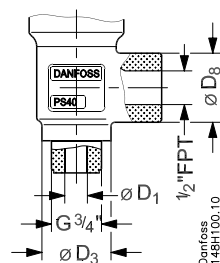
		$\varnothing D_1$	$\varnothing D_3$	$\varnothing D_4$	$\varnothing D_5$
QDV 15 DIN 15	mm	12	36.5	16.7	21.3
	in.	0.47	1.44	0.66	0.84



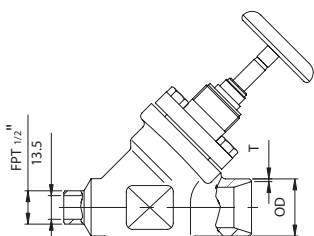
		$\varnothing D_7$	$\varnothing D_8$
QDV 15 1/2" FPT	mm	34	36.5
	in.	1.34	1.44



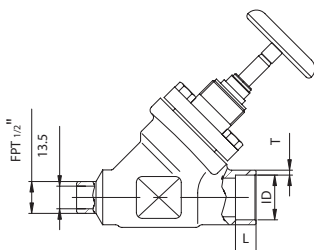
		$\varnothing D_7$	$\varnothing D_8$
QDV 15 3/4" FPT	mm	34	36.5
	in.	1.34	1.44



		$\varnothing D_1$	$\varnothing D_3$	$\varnothing D_8$
QDV 15 DIN 15	mm	12	36.5	34
	in.	0.47	1.44	1.34



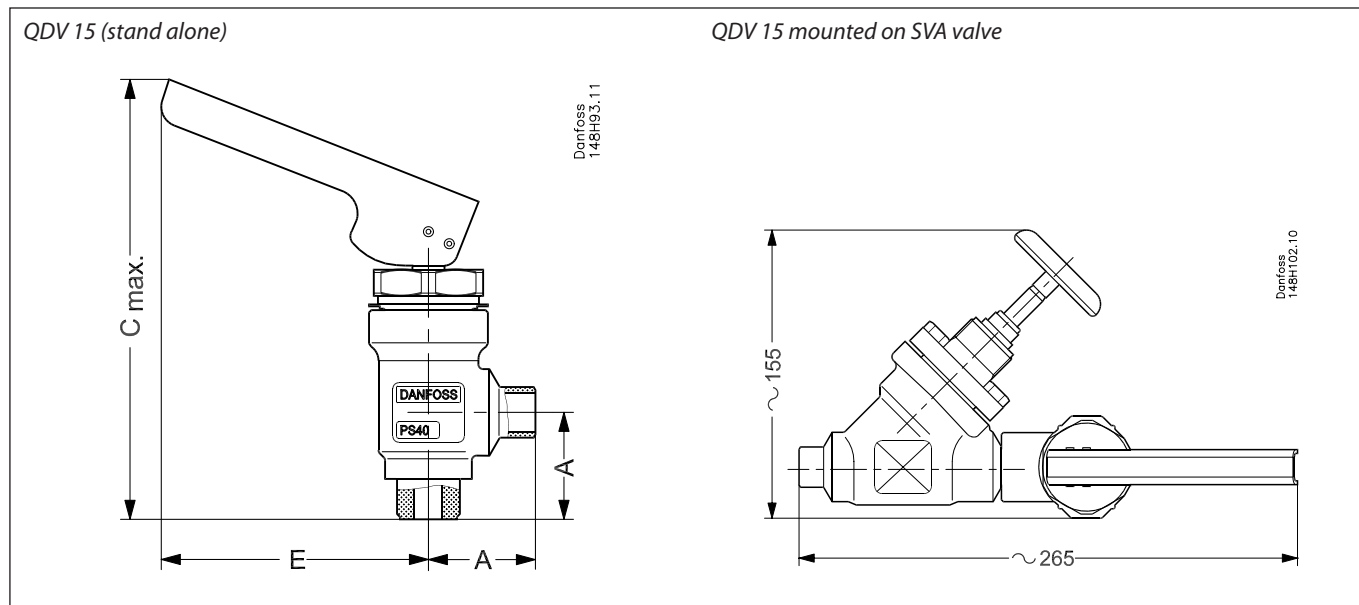
		OD	T	k_v -straight m ³ /h	C_v -straight USgal/min
SVA-ST DIN 15	mm	21.3	2.3	4.9	5.7
	in.	0.839	0.091		



		ID	T	L	k_v -straight m ³ /h	C_v -straight USgal/min
SVA-ST SOC 1/2 in.	mm	21.8	6.0	10	4.9	5.7
	in.	0.858	0.235	0.39		

Quick closing oil drain valve, type QDV 15

Dimensions



Valve size		A	C _{max}	E
QDV 15	mm	45	185	109
	in.	1.77	7.28	4.29

Ordering

How to order

The table below is used to identify the valve required.

Type	Inlet	Outlet	Code no.
QDV 15 DN 15	DN 15	G ¾ in.	148H3272
QDV 15 ½ in. FPT	½ in. FPT	½ in. FPT	148H3273
QDV 15 ¾ in. FPT	¾ in. FPT	¾ in. FPT	148H3274
QDV 15 DN 15 + SVA-ST DN 15 H-WHEEL*	DN 15	G ¾ in.	148H3310
QDV 15 ½ in. FPT + SVA-ST SOC ½ in. H-WHEEL*	½ in. SOC	½ in. FPT	148H3311
Fittings for hose connection - G ¾"			148H3451
Fittings for welding connection - G ¾"			148H3452

* Two valves are supplied in one box and should be mounted on site.
The indicated inlet is for the stop valve - The indicated outlet is for the oil drain valve.

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.

