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ENGINEERING
TOMORROW



Data sheet

Power Pack Valve

VPH 15E



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1. Introduction

Power Pack valve VPH 15 E is multifunction unit which reduces the costs of connections and hoses/tubes by incorporating the functions of a pressure relief valve and a directional control valve to provide a bypass function.

The pressure relief function is designed to limit the system pressure by draining surplus water flow from the pressure side, and to protect system components against overload as a result of pressure peaks.

The valves are electrically-activated ON/OFF valves (closed (NC) or open (NO) when the coil is de-energized).

The VPH 15 E valve is designed for use with drinking water, i.e. water containing no additives of any kind. (See EU drinking water directive EU 98/83/EC).

2. Features

- High enclosure, IP 67
- Corrosion-proof materials (stainless steel, AISI 304/W.No. 1.4301 and plastic)
- The seat valve design ensures a tight seal
- Easy-to-clean surfaces.

3. Technical data

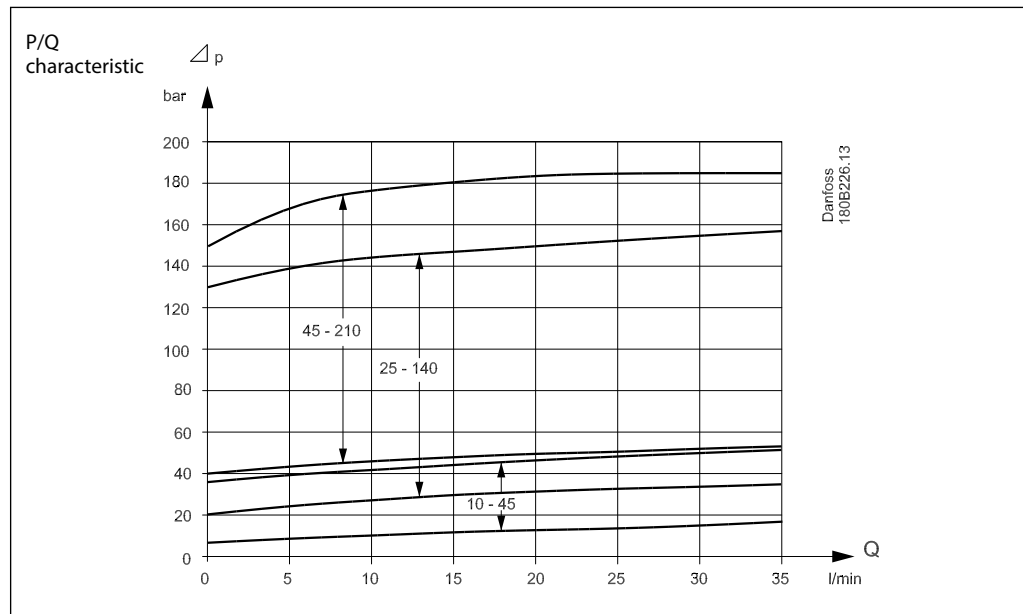
Adjustable pressure range	10-210 bar
Nom. flow	15 l/min
Max. flow	20 l/min
Max. fluid temperature	50°C
Opening time at nom. flow	90 ms
Closing time at nom. flow	350 ms
Pressure drop	see graph page 3
Weight	3 kg
Ambient temperature	0°C to +50°C
Fluid temperature ¹⁾	-30°C to +50°C
Storage temperature	-40°C to +70°C

¹⁾ At fluid temperature below +3°C, antifreeze additives must be added to fluid.

Relief valve

Max. flow: 20 l/min

Pressure setting range: 10 to 40 bar, 25 to 140 bar, 45 to 210 bar



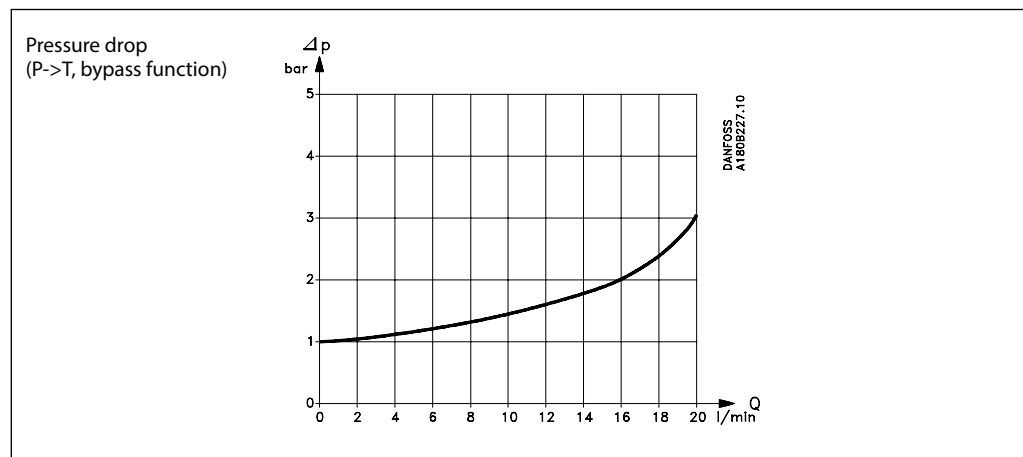
2/2-way valve

Max. flow: 20 l/min

Max. pressure for NO: 140 bar

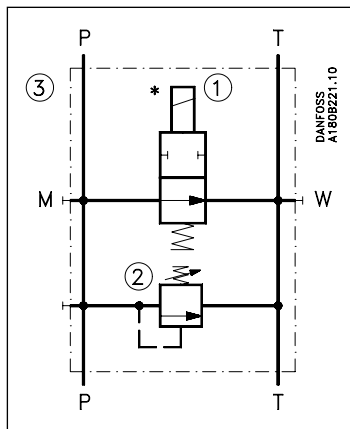
Max. pressure for NC: 210 bar

Static characteristic:

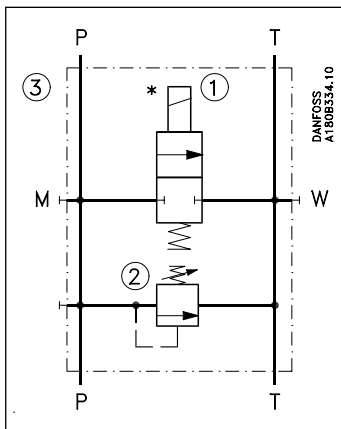


4. Description

VPH 15 E - NO



VPH 15 E - NC



- P: G^{3/8} – pressure from pump or pressure line to system
- T: G^{3/8} – tank return line from system or return line to filter
- M: G^{3/8} (plugged) – pressure gauge
- W: G^{1/4} (plugged) – water inlet

No.	Item	Description
1	Directional valve	2/2-way valve, electrically activated
2	Pressure relief valve	Manual setting
3	Power pack valve	Directional valve + relief valve

5. Filtration

The water supplied to the valve must be filtered:
10 µm abs., β₁₀-value > 5000 filter is recommended.

6. Code numbers

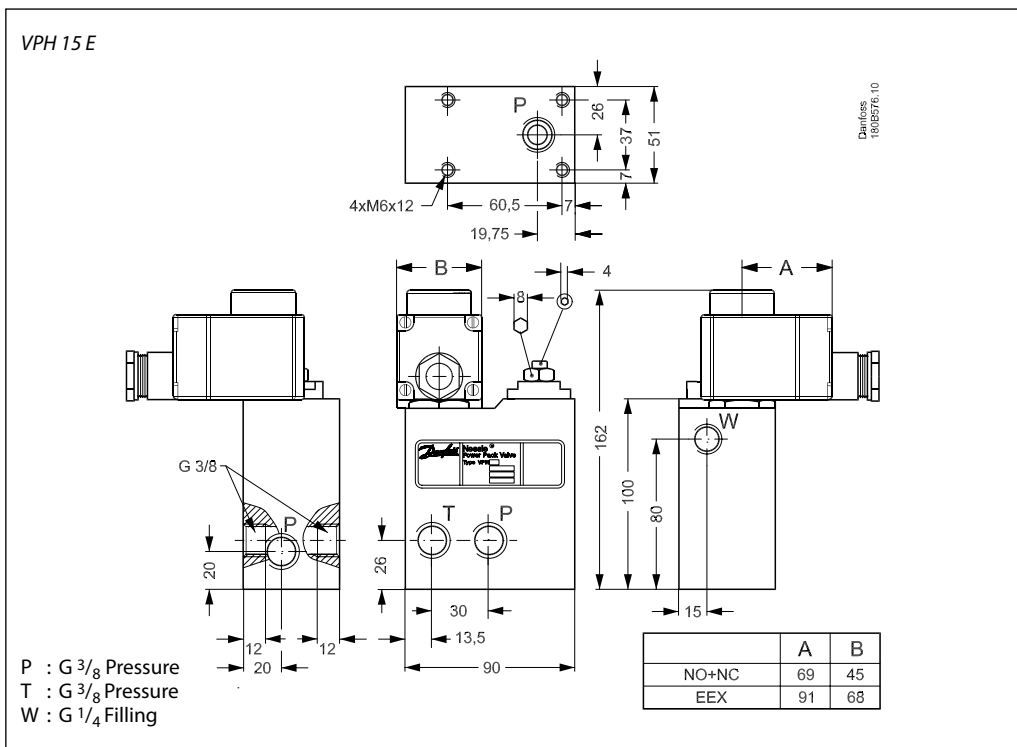
Power pack valve	Comments	Code No.
VPH 15 E - NO	Pressure range 25 to 140 bar	180G0040
VPH 15 E - NC	Pressure range 25 to 140 bar	180G0041
VPH 15 E - NC	Pressure range 45 to 210 bar	180G0044
VPH 15 E - NO	Pressure range 10 to 40 bar	180G0042

* Coils for bypass valve, please order separately

Coil	Coils (clip-on) (NC + NO)
24 V/50 Hz/12 W	018F7920
220 V/50 Hz/12 W	018F7921
240 V/50 Hz/11 W	018F7924
24 V/60 Hz/14 W	018F7922
220 V/60 Hz/13 W	018F7925
240 V/60 Hz/15 W	018F7926
110 V/50/60 Hz/15 W	018F7923
12 V d.c./15 W	018F7913
24 V d.c./16 W	018F7914

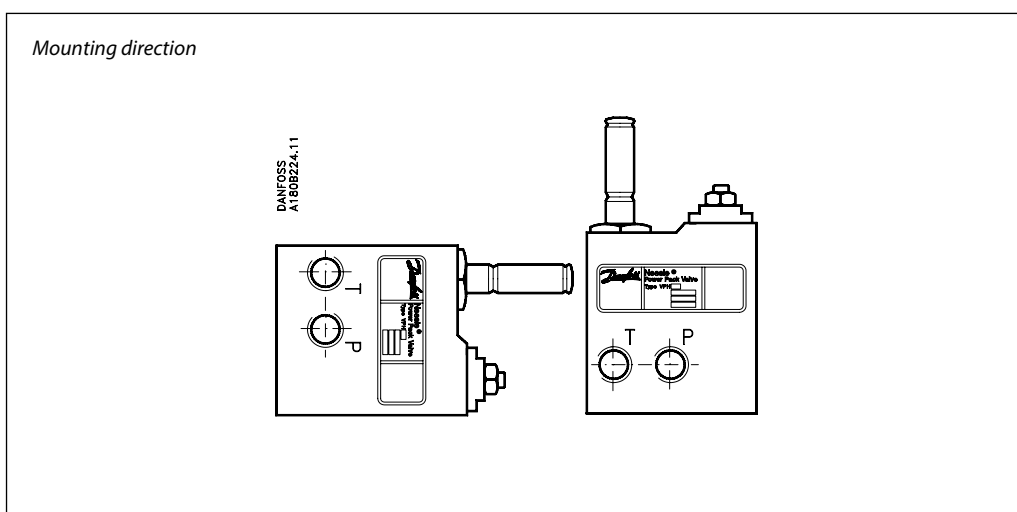
For other voltages, please contact Danfoss Sales Organisation for High-Pressure Pumps.

7. Dimensions [mm]



8. Installation

The valve must be installed as illustrated below.



9. Spare parts

For the directional valve function	Code number
Armature kit NC	180L5002
Armature kit NC (210 bar) (for 180G0044)	180L5011
Armature kit NO	180L5010
Orifice kit for VPH 15 E	180Z0099
Poppet kit for VPH 15 E	180L5005
For the relief valve function	
Valve seat and cone kit (10-40 bar) & (25-140 bar)	180G4000
Valve seat and cone kit (45-210 bar)	180G4005
Seal and spring kit (10-40 bar)	180G4002
Seal and spring kit (25-140 bar) & (45-210 bar)	180G4004
Guide and guide pin	180G4001
Tool for dismount guide	180G4003