

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).

**If the recommendations in the manual are not followed, Danfoss reserves the right to void the warranty.**

## 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

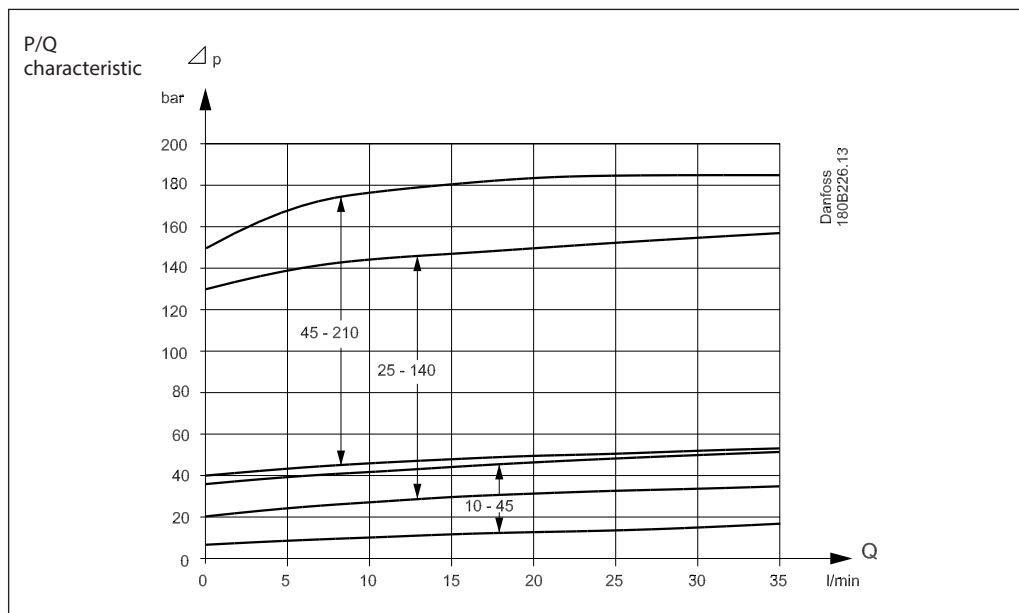
Adjustable pressure range	10-210 bar
Nom. flow	15 l/min
Max. flow	20 l/min
Max. fluid temperature	50°C
Opening time at nom. flow	90 ms
Closing time at nom. flow	350 ms
Pressure drop	see graph page 3
Weight	3 kg
Ambient temperature	0°C to +50°C
Fluid temperature <sup>1)</sup>	-30°C to +50°C
Storage temperature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

<sup>1)</sup> 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



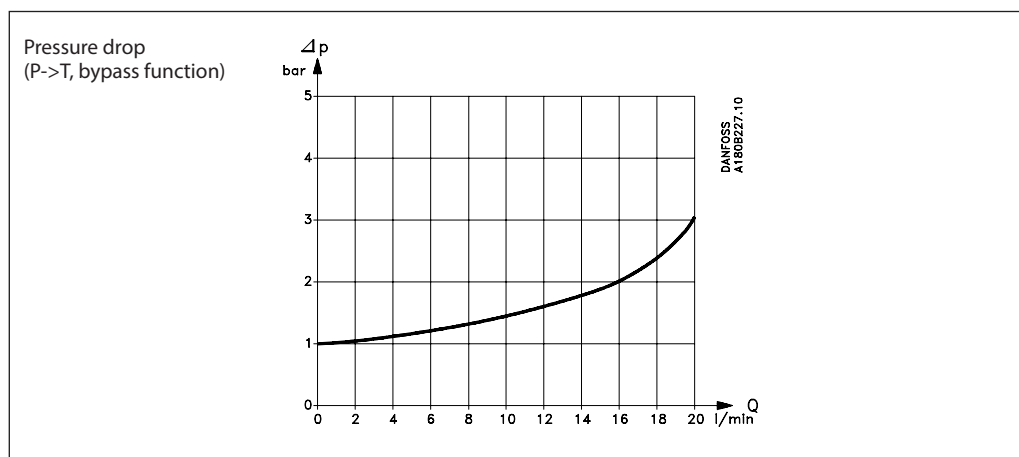
### 2/2-way valve

Max. flow: 20 l/min

Max. pressure for NO: 140 bar

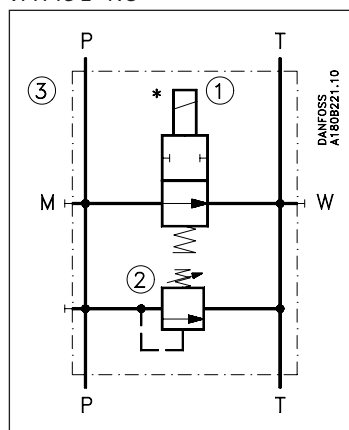
Max. pressure for NC: 210 bar

Static characteristic:

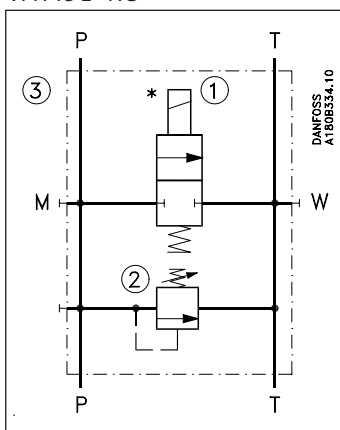


#### 4. Description

VPH 15 E - NO



VPH 15 E - NC



P: G  $\frac{3}{8}$  – pressure from pump or pressure line to system

T: G  $\frac{3}{8}$  – tank return line from system or return line to filter

M: G  $\frac{3}{8}$  (plugged) – pressure gauge

W: G  $\frac{1}{4}$  (plugged) – water inlet

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

#### 5. Filtration

The water supplied to the valve must be filtered:  
10  $\mu$ m abs.,  $\beta_{10}$ -value > 5000 filter is recommended.

#### 6. Code numbers

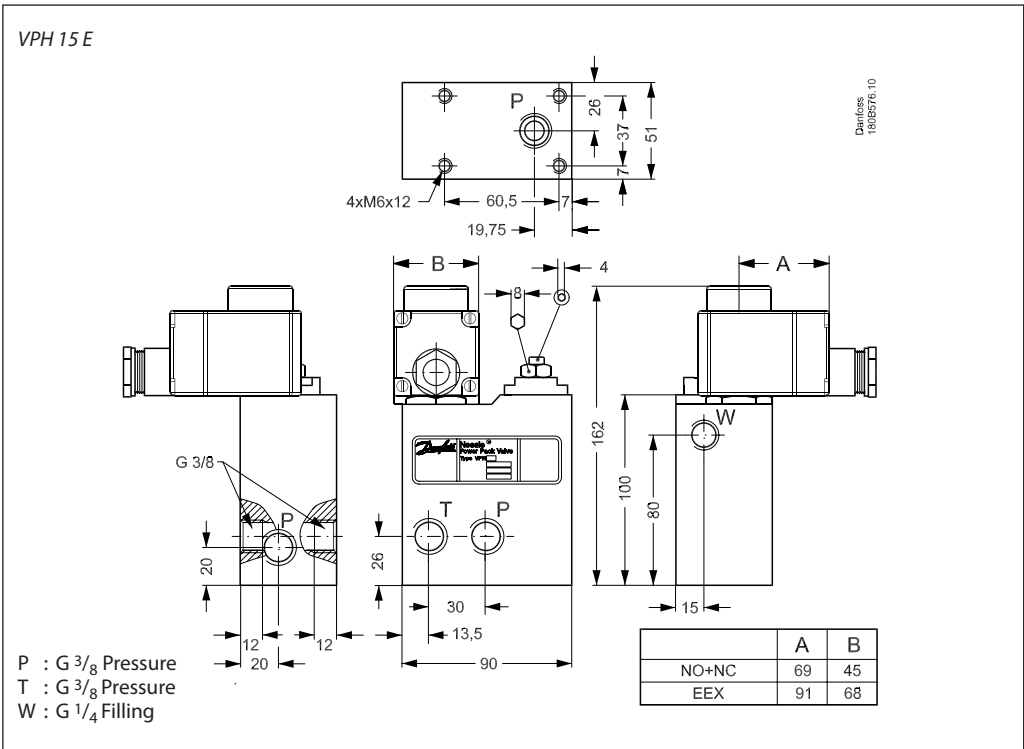
Power pack valve	Comments	Code No.
VPH 15 E - NO	Pressure range 25 to 140 bar	180G0040
VPH 15 E - NC	Pressure range 25 to 140 bar	180G0041
VPH 15 E - NC	Pressure range 45 to 210 bar	180G0044
VPH 15 E - NO	Pressure range 10 to 40 bar	180G0042

\* 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

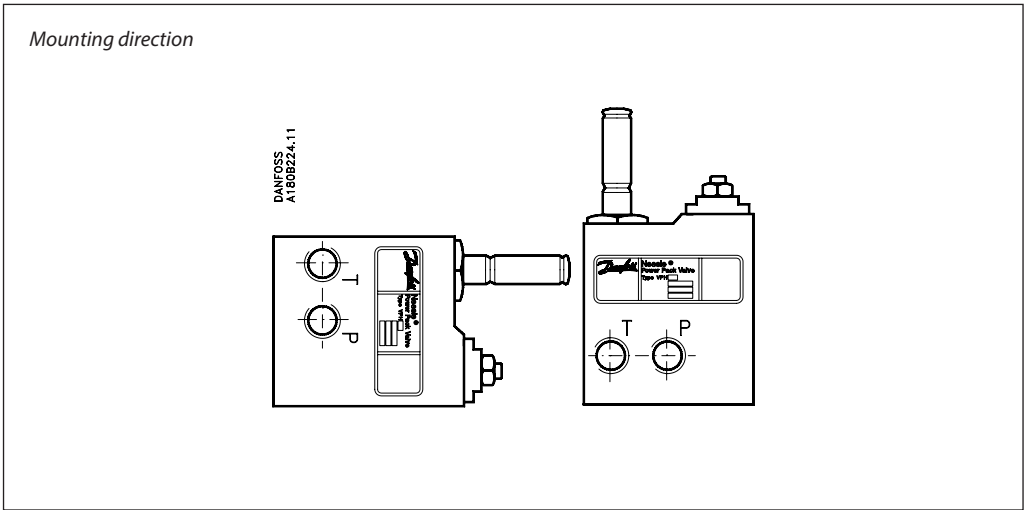
For other voltages, please contact Danfoss Sales Organisation for High-Pressure Pumps.

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

### Danfoss A/S

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