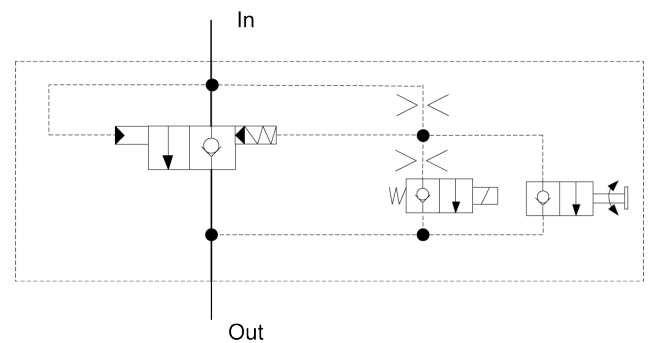
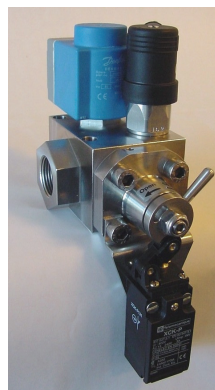
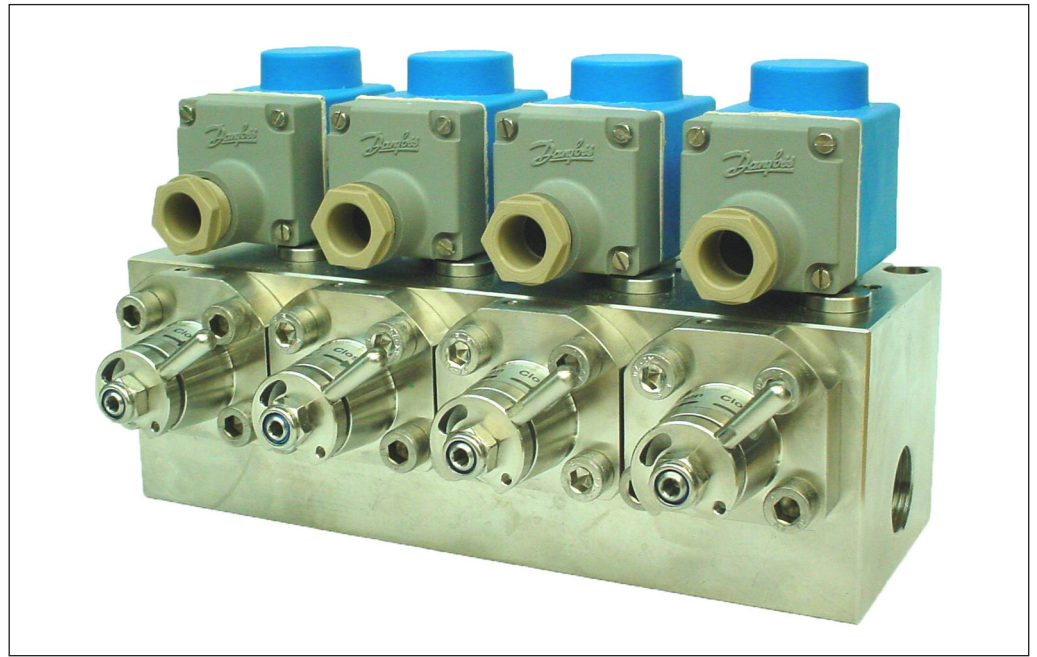


## VDHT valve with manual bypass



### Introduction

The valves are used in High Pressure Water Mist Firefighting applications for opening individual protection areas either electrical or manually. All the necessary features are integrated in the valves for using the valves within the marine industry.

The valves are based upon existing solenoid valve programme used for water, cleaning fluids, neutral gases and light heating oil.

The directional valves are pilot operated ON/OFF function either as electric solenoid operated or by manual activation.

The valves are prepared for optional mounting of a switch so an electrical indication of manual open valve is possible. In addition there is a 1/4" pressure and/or pressure switch at the out port for indication of open valve.

### Features

- Compact design and reduced installation cost.
- Corrosion proof housing.
- Reduced pressure drop.
- Angle output on all valves.
- 2-4 valves in one block to reduce fittings and installation cost.
- Comprehensive standard coil program with IP 67 enclosure.
- Valve also available as an ATEX version
- Service friendly

**Data sheet**
**VDHT valve with manual bypass**
**Technical data**

Maximum inlet pressure	140 bar
Test pressure for external leaks	210 bar
Maximum flow 1"	150 l/min
Maximum flow 3/4"	120 l/min
Opening pressure	1.5 bar
Pressure drop at max. flow	3.5 bar
Opening time at max. flow NC (Solenoid operated)	Max. 1000 ms
Closing time at max flow NC (Solenoid operated)	Max. 2000 ms
Internal leakage at pressure >10 bar	0 ml/min (drip proof)
Max. Viscosity	45 cSt.
Enclosure (coil)	IP 67

**Standard version**

Valve housing	Stainless steel AISI 304 (W. No. 1.4301) with NBR O-rings
Main piston	Stainless steel AISI 316 (W. No. 1.4401) with PTFE sealing
Ports	Single valves: 3/4" & 1" BSP threaded
	Block valves: Inlet ports: 3/4" & 1" BSP threaded Outlet ports: 3/4" & 1" BSP threaded

**Variants**

The valve is available as Normally Closed (NC).

On request the valves are available in the following options:

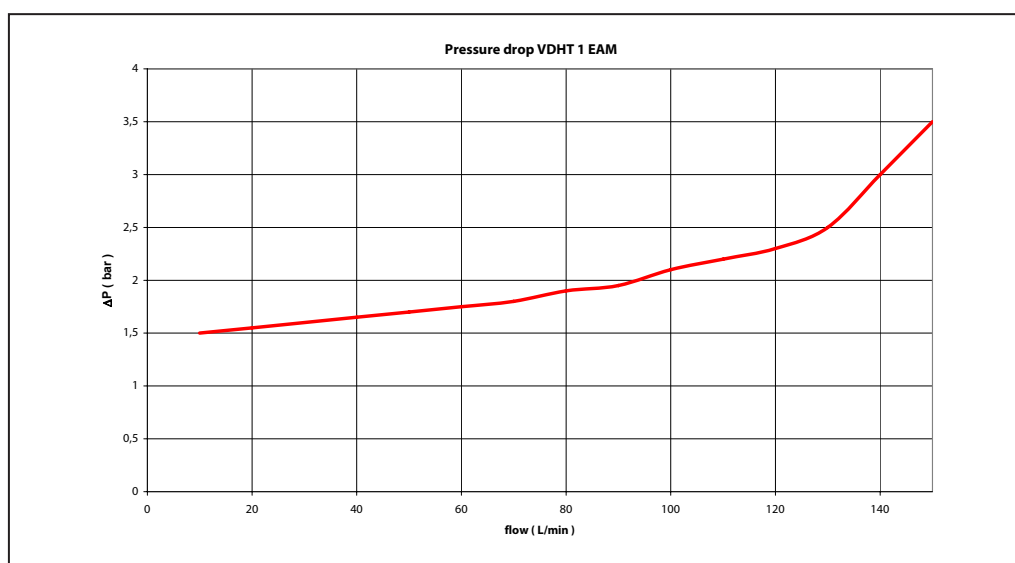
- Normally Open version (NO).
- FPM (Viton) O-rings.
- Valve housing in stainless steel AISI 316 (W. No. 1.4401)
- NPT Thread

**Temperature**

Media temperature	+2°C to +80°C for standard valves +2°C to +90°C for valves with FPM (Viton) O-rings
Ambient temperature	+2°C to +80°C
Storage temperature	-40°C to +80°C, provided the water is drained from the valve

**Pressure Drop**

Pressure drop versus flow for VDHT 1" EAM 2/2.


**Filtration**

The recommended filtration level is a 200 micron or better.

It is always recommended to use as high level of filtration as possible because this increases the reliability of the valves.

**Code numbers**
**Valves**

Type	Description	Number of valve stations	Port connection	O-rings material	Weight	Max. inlet pressure	Kv value	Code number
VDHT 3/4 EAM	Single valve with 3/4" IN & 3/4" OUT	1 valve	BSP 3/4" in BSP 3/4" out	NBR	2.2 kg (4.85 lb)	140 bar (2030 psi)	6.6 m <sup>3</sup> /h	180L0122
VDHT 1 EAM	Single valve with 1" IN & 1" OUT	1 valve	BSP 1" in BSP 1" out	NBR	2.2 kg (4.85 lb)	140 bar (2030 psi)	7.2 m <sup>3</sup> /h	180L0110
VDHT BLM 1	1' Block valve with 3/4" IN & 3/4" OUT	1 valve in a block	BSP 3/4" in BSP 3/4" out	NBR	4.0 kg (8.82 lb)	140 bar (2030 psi)	6.6 m <sup>3</sup> /h	180L0196
VDHT BLM 2	2' Block valve with 3/4" IN & 3/4" OUT	2 valves in a block	BSP 3/4" in BSP 3/4" out	NBR	5.6 kg (12.3 lb)	140 bar (2030 psi)	6.6 m <sup>3</sup> /h	180L0167
VDHT BLM 2	2' Block valve with 1" IN & 1" OUT	2 valves in a block	BSP 1" in BSP 1" out	NBR	5.6 kg (12.3 lb)	140 bar (2030 psi)	7.2 m <sup>3</sup> /h	180L0199
VDHT BLM 3	3' Block valve with 3/4" IN & 3/4" OUT	3 valves in a block	BSP 3/4" in BSP 3/4" out	NBR	8.2 kg (18.1 lb)	140 bar (2030 psi)	6.6 m <sup>3</sup> /h	180L0168
VDHT BLM 4	4' Block valve with 3/4" IN & 3/4" OUT	4 valves in a block	BSP 3/4" in BSP 3/4" out	NBR	10.8 kg (23.8 lb)	140 bar (2030 psi)	6.6 m <sup>3</sup> /h	180L0169

The integrated valve blocks are delivered without coils. Coils must be ordered separately.  
For other port sizes or types please contact Danfoss Sales Organisation.

**Accessories (ordered separately)**

Type	Description	Weight	Code number
Mounting bracket for micro switch (Telemecanique XCK-P121)	Bracket kit VDHT M	0.2 kg (0.44 lb)	*

\*: Contact Danfoss for details regarding mounting bracket

**Coils (ordered separately)**

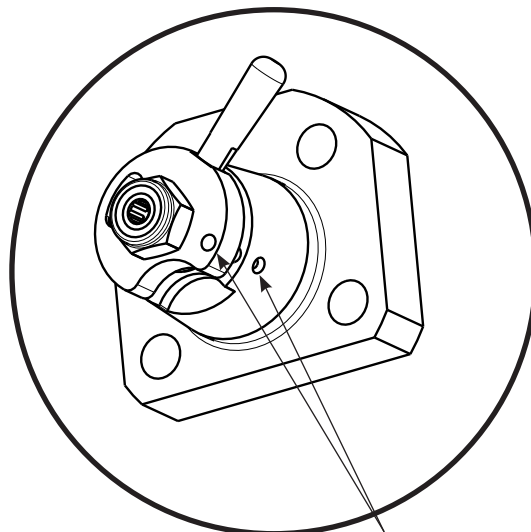
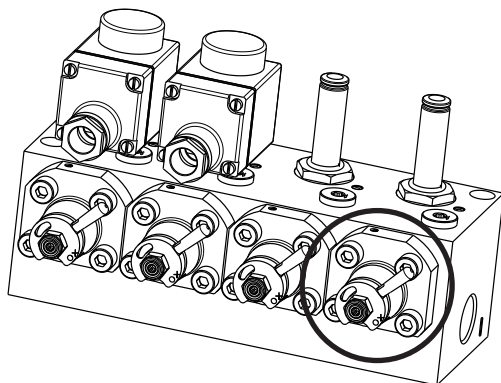
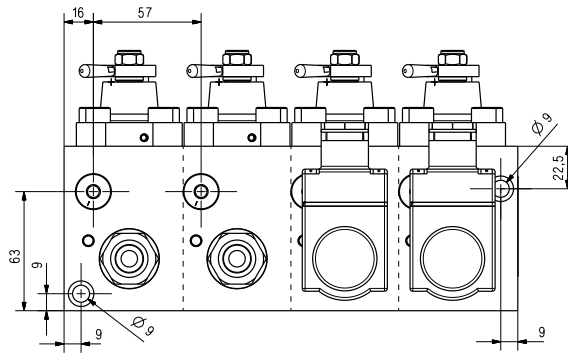
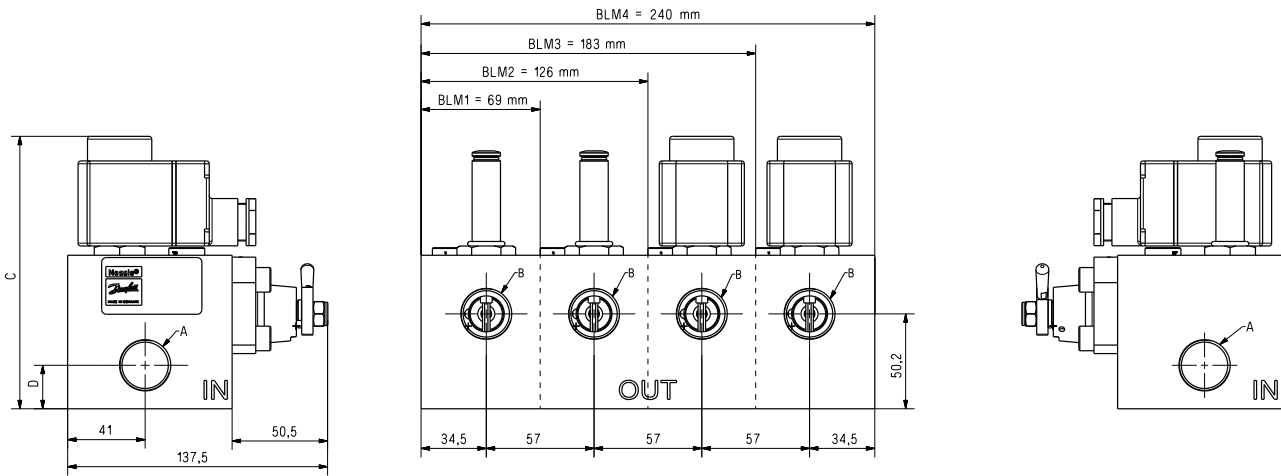
Coil voltage	Power consumption	Enclosure	Weight	Code number
24 Volt AC / 50 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7920
220/230 Volt AC / 50 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7921
240/250 Volt AC / 50 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7924
24 Volt AC / 60 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7922
110 Volt AC / 50/60 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7923
220/230 Volt AC / 60 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7925
240/250 Volt AC / 60 Hz	10 Watt	IP 67	0.3 kg (0.66 lb)	018F7926
12 Volt DC	18 Watt	IP 67	0.3 kg (0.66 lb)	018F7913
24 Volt DC	18 Watt	IP 67	0.3 kg (0.66 lb)	018F7914

ATEX - consult the document "Solenoid valves intended for use in ATEX classified areas" 521B1101

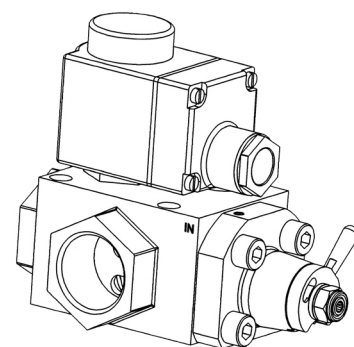
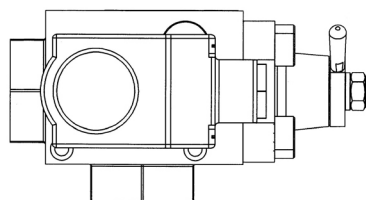
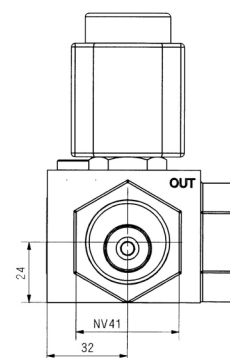
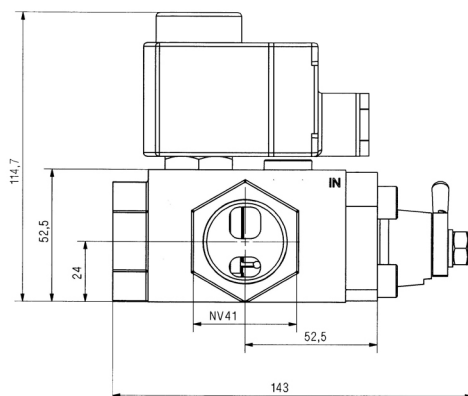
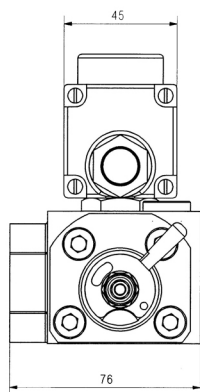
**Spare parts**

Spare parts	Weight	Code number
Armature kit (NC)	0.2 kg (0.44 lb)	180L5002
Poppet spare part VDHT	0.6 kg (1.32 lb)	180Z0025
Orifice kit VDHT BLM	0.075 kg (0.17 lb)	180L4015

Dimensions



Holes for sealing  
(sealing string not included)



Installation

The valve block must be mounted in-line, either connected direct in the pipeline or bolted in position using the fixing holes in the valve.

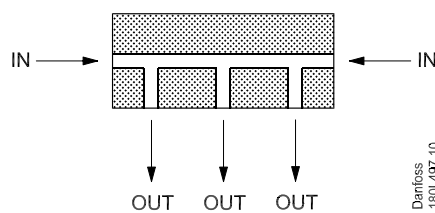
The valve block inlet side is installable in the "IN"-ports in one of the following ways:

- Use one of the two "IN"-ports. Plug the IN-port not in use.

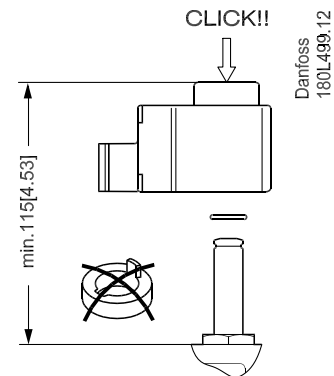
- When mounting several valve blocks or valves in series, one IN-port is used for the inlet side, and the other IN-port is used to connect an extra valve block or valve.
- If large flow volumes are required through the valve block, both IN-ports may be used for the inlet side.

The valve block outlet side is mounted in the "OUT"-ports.

Flow direction (example: 3-station block)



Mounting of coils (click-on coils)



Please note.  
When activating a valve the first couple of times, the adjacent valve functions will release a small unprovoked splash due to air in the valve block. The air is removed by activating the valve function one by one until the unprovoked splashes cease (approx. 5 activations)

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