

Data sheet

# Pilot valves for pilot operated servo valves



The range of pilot valves consists of:

- Constant-pressure pilot valve, type CVP (LP) and CVP (HP)
- Differential-pressure pilot valve, type CVPP (LP) and CVPP (HP)
- High pressure pilot valve, type CVP (XP) ideal for CO<sub>2</sub> hot gas defrosting
- Pressure-operated pilot valve with reference pressure connection, type CVC
- Electronically operated constant-pressure pilot valve, type CVQ (pressure-dependent)
- Solenoid pilot valve, type EVM (NC)
- Solenoid pilot valve, type EVM (NO)
- Housing, type CVH for pilot valves, for mounting in external pilot lines

## Features

- Applicable to all common non flammable refrigerants including R 717 and non corrosive gases/liquids dependent on sealing material compatibility.
- The pilot valves can be screwed direct into the main valve, thus avoiding the necessity of welding, soldering and separate pilot lines.
- The pilot valves can be mounted direct in a ICS or PM main valve or be connected via an external pilot line and a CVH housing.
- All pilot valves can be used on all sizes of main valves.
- Extremely accurate pressure and temperature control.
- Several pilot valves can be connected in series or in parallel to provide many functions in the same ICS or PM main valve.
- All pilot valves are delivered with gaskets.
- Classification: DNV, CRN, BV, EAC etc.  
To get an updated list of certification on the products please contact your local Danfoss Sales Company.

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## Data sheet | Pilot valves for pilot operated servo valves

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### Design

Each pilot valve is designed to give the optimum control accuracy within the specific function range of the valve.

Several pilot valves can be mounted in series and/or in parallel on a ICS or PM main valve to give a very large number of functions.

Mounted in a CVH housing, the pilot valves can be used in external lines, either as independently operating valves or as external control valves for the main valve.

The pilot valves can be used for all sizes of ICS or PM main valves.

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### Technical data

#### *Refrigerants*

Applicable to all common non flammable refrigerants including R 717 and non corrosive gases/liquids dependent on sealing material compatability.

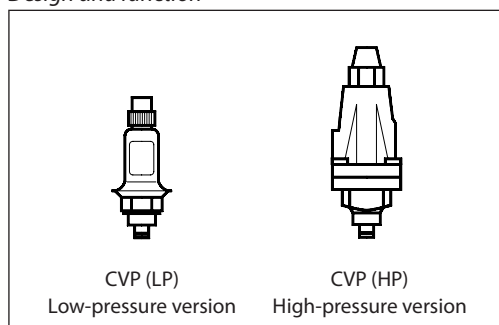
For further information please see installation instruction for ICS valves or PM valves.

Flammable hydrocarbons are not recommended. For further information please contact your local Danfoss Sales Company.

Temperature and pressure ranges are given separately for the specific pilot valve.

**Constant-pressure pilot valve, type CVP (LP) and CVP (HP)**

*Design and function*



CVP is a constant-pressure pilot valve available in low-pressure and high-pressure versions.

The pilot valve is used to maintain a constant pressure on the ICS or PM main valve inlet side. The low-pressure version (LP) must not be subjected to pulsation.

When a CVP is mounted in a CVH housing, it can be used as a separate constant-pressure valve or a pressure relief valve (e.g. to prevent hydraulic overpressure in an entrapped liquid).

MWP: Maximum working pressure.

The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines. The value can vary slightly, depending on the setting value.

When CVP (HP) is used at a temperature lower than  $-50^{\circ}\text{C}$  ( $-58^{\circ}\text{F}$ ) the bolts must be replaced with stainless steel bolts (type 4, quality 80).

The low-pressure version (LP) is not a serviceable type of pilot and it is recommended to be replaced after max. 7 years in operation.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Temperature range	Pressure range	Code no.
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*Low-pressure version*

CVP (LP)	17 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	0 bar g to 7 bar g	<b>027B1100</b>
CVP (LP)	17 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	-0.66 bar g to 2 bar g	<b>027B1101</b>

*High-pressure version*

CVP (HP)	28 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	4 bar g to 22 bar g	<b>027B1160</b>
CVP (HP)	28 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	4 bar g to 28 bar g	<b>027B1161</b>
CVP (HP)	28 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	-0.66 bar g to 7 bar g	<b>027B1164</b>
CVP (HP)	40 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	4 bar g to 28 bar g	<b>027B1261</b>

*Technical data, US units*

Valve type	MWP	$C_v$ -value	Temperature range	Pressure range	Code no.
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*Low-pressure version*

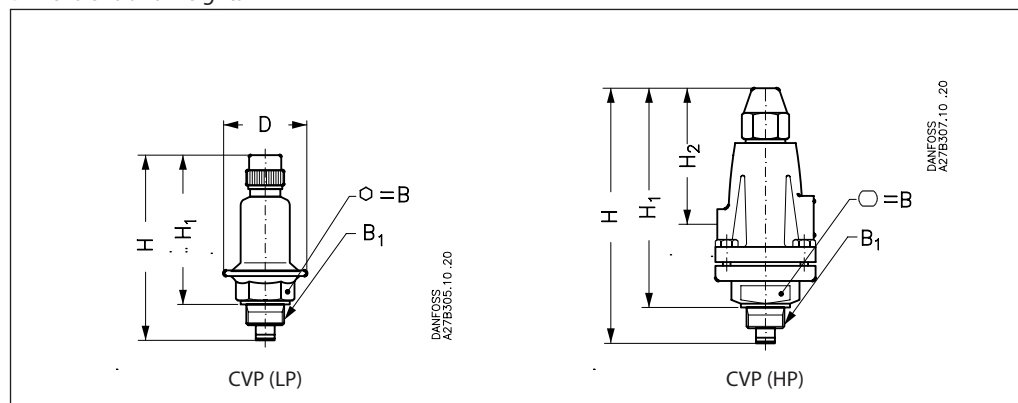
CVP (LP)	247 psi g	0.46 US gal/min	-58 to 248°F	0 psi g to 102 psi g	<b>027B1100</b>
CVP (LP)	247 psi g	0.46 US gal/min	-58 to 248°F	19.5 in. Hg to 29 psi g	<b>027B1101</b>

*High-pressure version*

CVP (HP)	406 psi g	0.46 US gal/min	-58 to 248°F	58 psi g to 319 psi g	<b>027B1160</b>
CVP (HP)	406 psi g	0.46 US gal/min	-58 to 248°F	58 psi g to 406 psi g	<b>027B1161</b>
CVP (HP)	406 psi g	0.46 US gal/min	-58 to 248°F	19.5 in. Hg to 102 psi g	<b>027B1164</b>
CVP (HP)	580 psi g	0.46 US gal/min	-58 to 248°F	58 psi g to 406 psi g	<b>027B1261</b>

P-band for a valve system regulated by CVP and ICS or PM main valve: < 0.2 bar g (2.9 psi g)

*Dimensions and weights*



Valve type	H	H <sub>1</sub>	H <sub>2</sub>	D	B	B <sub>1</sub>	Weight
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*Low-pressure version*

CVP (LP)	mm	122	98		53	32	M 24 × 1.5	0.4 kg
	in.	4.80	3.86		2.09			0.88 lb.

*High-pressure version*

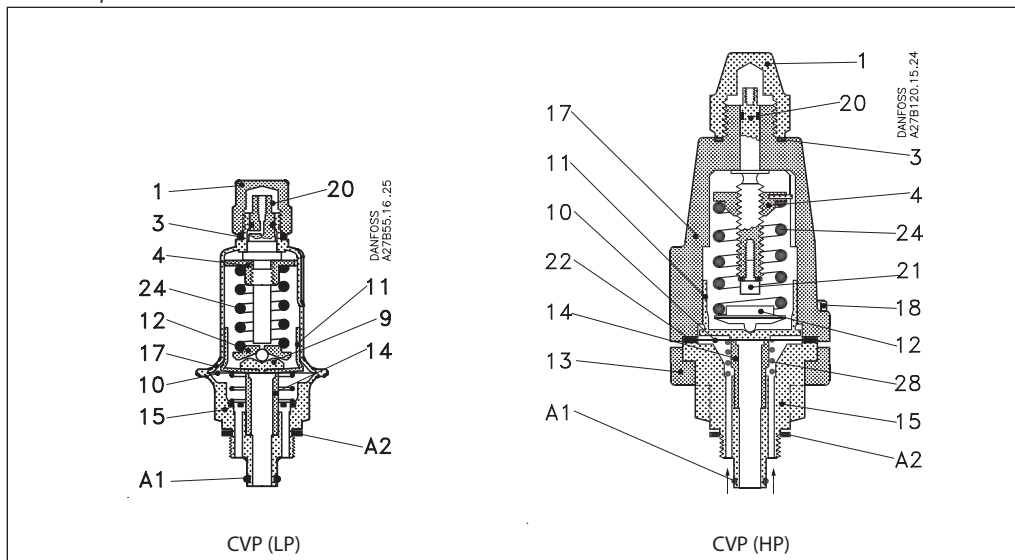
CVP (HP)	mm	170	146	90		32	M 24 × 1.5	1.7 kg
	in.	6.69	5.75	3.54				3.75 lb.

Weights are approximate values only

**Constant-pressure pilot valve, type CVP (LP) and CVP (HP)**

(continued)

Material specification



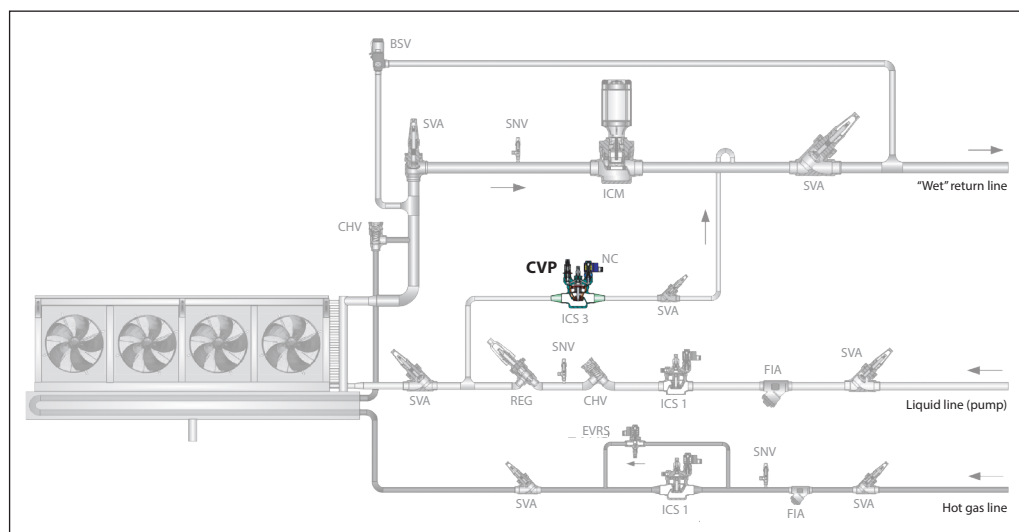
CVP (LP)

No.	Part	Material
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos
1	Protective cap	Steel
3	Seal	Cloroprene (Neoprene)
4	Nut	Stainless steel
9	Ball socket	Stainless steel
10	Diaphragm	Stainless steel
11	Thrust pad	Steel
12	Spring guide	Stainless steel
14	Orifice	Stainless steel
15	Base	Steel
17	Valve bonnet	Low temperature cast iron (spherical)
20	Setting spindle	Stainless steel
24	Spring	Steel

CVP (HP)

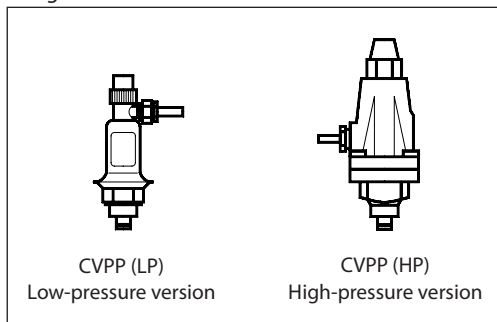
No.	Part	Material
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos
1	Protective cap	Steel
3	Seal	Non-asbestos
4	Nut	Stainless steel
10	Diaphragm	Stainless steel
11	Thrust pad	Stainless steel
12	Spring guide	Stainless steel
13	Flange	Low temperature cast iron (spherical)
14	Orifice	Stainless steel
15	Base	Steel
17	Valve bonnet	Low temperature cast iron (spherical)
18	Cover bolt	Steel
20	Setting spindle	Stainless steel
21	Screw (M6 × 10)	Steel
22	Cover gasket	Non-asbestos
24	Spring	Steel
28	Spring	Steel

**Please note!**  
 In hot gas relief systems Danfoss recommends the use of **CVP-HP** due to the robust design suitable for pulsations and temperature fluctuations. CVP-LP is not recommended.



**Differential-pressure pilot valve, type CVPP (LP) and CVPP (HP)**

*Design and function*



CVPP is a differential-pressure pilot valve available in low-pressure and high-pressure versions.

The pilot valve is used to maintain a constant differential pressure between the CVPP valve reference pressure connection and the ICS or PM main valve inlet pressure.

CVPP incorporates a diaphragm so that the reference pressure and the refrigerant in the valve are physically separated. The pilot valve can therefore also be used as a pneumatic control valve either to control a ICS or PM main valve or as a separate pneumatic valve mounted in a CVH housing.

MWP: Maximum working pressure.

The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines. The value can vary slightly, depending on the setting value.

When CVPP (HP) is used at a temperature lower than  $-50^{\circ}\text{C}$  ( $-58^{\circ}\text{F}$ ) the bolts must be replaced with stainless steel bolts (type 4, quality 80).

The low-pressure version (LP) is not a serviceable type of pilot and it is recommended to be replaced after max. 7 years in operation.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Temperature range	Pressure range ( $\Delta p$ )	Code no.
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*Low-pressure version*

CVPP (LP)	17 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	$\Delta p = 0$ to 7 bar g	<b>027B1102</b>
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*High-pressure version*

CVPP (HP)	28 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	$\Delta p = 0$ to 7 bar g	<b>027B1162</b>
CVPP (HP)	40 bar g	0.40 m <sup>3</sup> /h	-50 to 120°C	$\Delta p = 4$ to 22 bar g	<b>027B1268</b>

*Technical data, US units*

Valve type	MWP	$C_v$ -value	Temperature range	Pressure range ( $\Delta p$ )	Code no.
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*Low-pressure version*

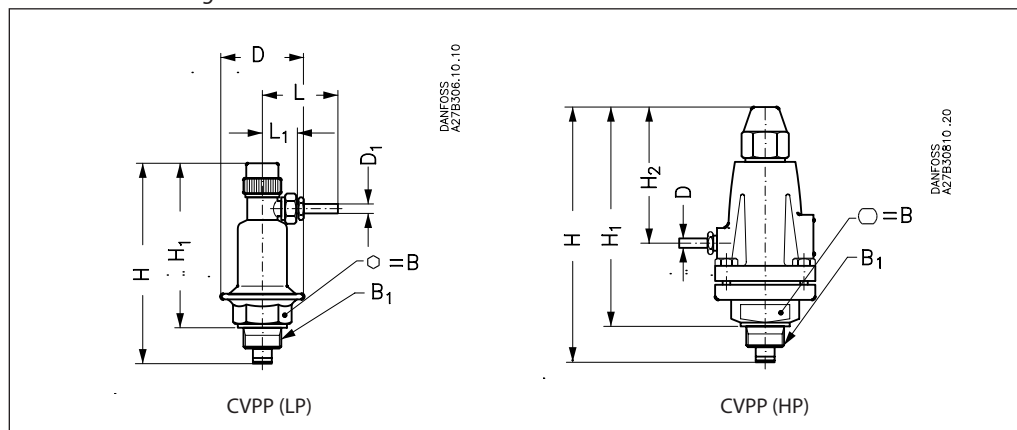
CVPP (LP)	247 psi g	0.46 USgal/min	-58 to 248°F	$\Delta p = 0$ to 102 psi g	<b>027B1102</b>
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*High-pressure version*

CVPP (HP)	406 psi g	0.46 USgal/min	-58 to 248°F	$\Delta p = 0$ to 102 psi g	<b>027B1162</b>
CVPP (HP)	580 psi g	0.46 USgal/min	-58 to 248°F	$\Delta p = 58$ to 319 psi g	<b>027B1268</b>

P-band for a valve system regulated by CVPP and ICS or PM main valve:  $<0.2$  bar g (2.9 psi g).

*Dimensions and weights*



Valve type	H	H <sub>1</sub>	H <sub>2</sub>	L	L <sub>1</sub>	D	B	B <sub>1</sub>	Weight
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*Low-pressure version*

CVPP (LP)	mm	136	112		53	26	53	32	M 24 × 1.5	0.5 kg
	in.	5.35	4.41		2.09	1.02	2.09			1.1 lb.

*High-pressure version*

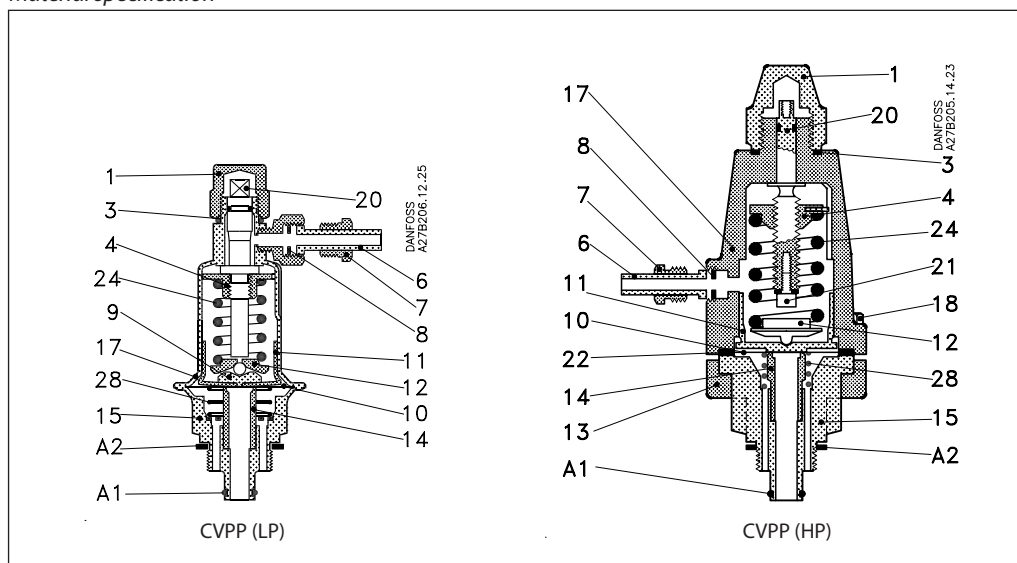
CVPP (HP)	mm	170	146	90		6	32	M 24 × 1.5	1.7 kg
	in.	6.69	5.75	3.54		0.24			3.7 lb.

Weights are approximate values only

Differential-pressure pilot valve, type CVPP (LP) and CVPP (HP)

(continued)

Material specification



CVPP (LP)

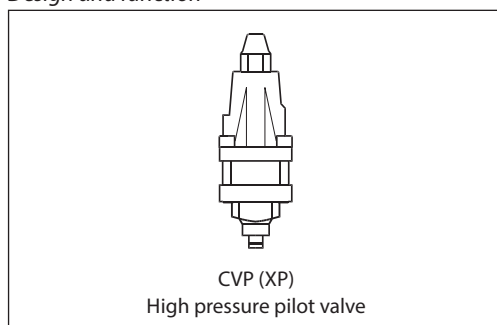
No.	Part	Material
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos
1	Protective cap	Steel
3	Seal	Cloroprene (Neoprene)
4	Nut	Stainless steel
6	Nipple	Steel
7	Union nut	Steel
8	Seal	Aluminium
9	Ball socket	Stainless steel
10	Diaphragm	Stainless steel
11	Thrust pad	Steel
12	Spring guide	Stainless steel
14	Orifice	Stainless steel
15	Base	Steel
17	Valve bonnet	Low temperature cast iron (spherical)
20	Setting spindle	Stainless steel
24	Spring	Steel
28	Spring	Steel

CVPP (HP)

No.	Part	Material
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos
1	Protective cap	Steel
3	Seal	Non-asbestos
4	Nut	Stainless steel
6	Nipple	Steel
7	Union nut	Steel
8	Seal	Aluminium
10	Diaphragm	Stainless steel
11	Thrust pad	Stainless steel
12	Spring guide	Stainless steel
13	Flange	Low temperature cast iron (spherical)
14	Orifice	Stainless steel
15	Base	Steel
17	Valve bonnet	Low temperature cast iron (spherical)
18	Cover bolt	Steel (8.8)
20	Setting spindle	Stainless steel
21	Screw (M6 × 10)	Steel
22	Cover gasket	Non-asbestos
24	Spring	Steel
28	Spring	Steel

**High pressure pilot valve, type CVP (XP)**

*Design and function*



CVP (XP) is a constant-pressure pilot valve available in high-pressure version. The CVP (XP) ensures an efficient and stable CO<sub>2</sub> hot gas defrost process.

The pilot valve is used to maintain a constant pressure on the ICS or PM main valve inlet side.

When a CVP is mounted in a CVH housing, it can be used as a separate constant-pressure valve or a pressure relief valve (e.g. to prevent hydraulic overpressure in an entrapped liquid).

MWP: Maximum working pressure.

The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines. The value can vary slightly, depending on the setting value.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Temperature range	Pressure range	Code no.
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*High-pressure version*

CVP (XP)	52 bar g	0.45 m <sup>3</sup> /h	-50 to 120°C	25 bar g to 52 bar g	<b>027B0080</b>
CVP (XP)	52 bar g	0.45 m <sup>3</sup> /h	-50 to 120°C	10 bar g to 40 bar g	<b>027B0090</b>

*Technical data, US units*

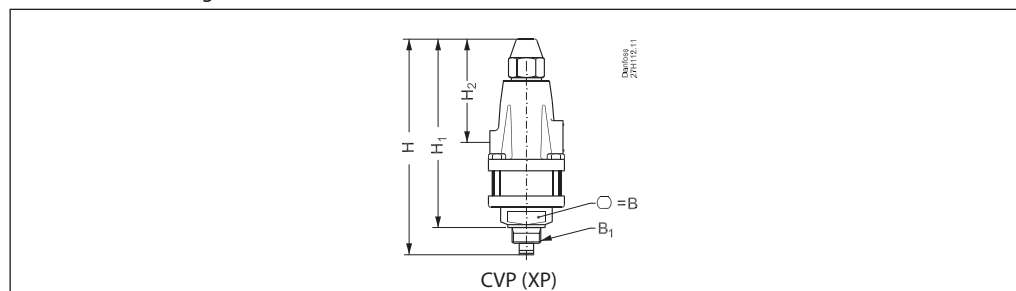
Valve type	MWP	$C_v$ -value	Temperature range	Pressure range	Code no.
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*High-pressure version*

CVP (XP)	754 psi g	0.52 USgal/min	-58 to 248°F	363 psi g to 754 psi g	<b>027B0080</b>
CVP (XP)	754 psi g	0.52 USgal/min	-58 to 248°F	145 psi g to 580 psi g	<b>027B0090</b>

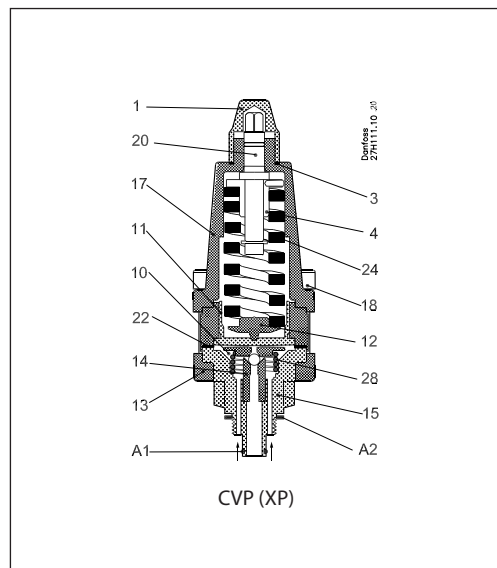
P-band for a valve system regulated by CVP and ICS or PM main valve: < 1.6 bar g (23.2 psi g)

*Dimensions and weights*



Valve type	H	H <sub>1</sub>	H <sub>2</sub>	B	B <sub>1</sub>	Weight	
CVP-XP	mm	190	166	90	32	M24 × 1.5	1.9 kg
	in.	7.48	6.54	3.54			4.2 lb

*Material specification*



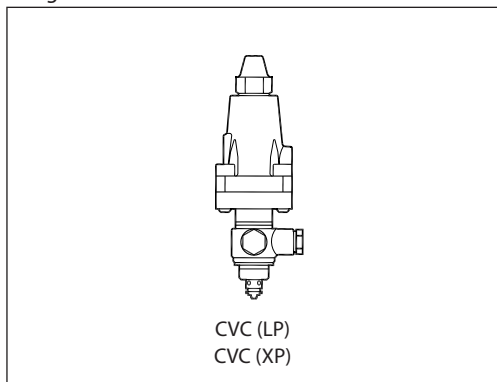
*CVP (XP)*

No.	Part	Material
1	Protective cap	Steel
3	Seal	Cloroprene (Neoprene)
4	Nut	Stainless steel
10	Diaphragm	Stainless steel
11	Thrust pad	Steel
12	Spring guide	Stainless steel
13	Flange	Low temperature cast iron (spherical)
14	Orifice	Stainless steel
15	Base	Steel
17	Valve bonnet	Low temperature cast iron (spherical)
18	Cover bolt	Stainless steel
20	Setting spindle	Stainless steel
22	Cover gasket	Non-asbestos
24	Spring	Steel
28	Spring	Steel
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos



**Pressure-operated pilot valve with reference pressure connection, type CVC**

*Design and function*



CVC is a pressure-operated pilot valve with a connection that can be used to obtain an indication of the system reference pressure. CVC valves are used:

- together with a PMC main valve to regulate capacity using hot gas bypass;
- together with a ICS or PM main valve to regulate max. suction pressure, e.g. as a compressor crankcase pressure regulator;
- together with a ICS or PM main valve as a pressure limiter, e.g. for hot gas defrost of hot gas lines.

The reference pressure must be connected to the low-pressure side of the system.

The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines. The value can vary slightly, depending on the setting value.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Temperature range	Pressure range	Code no.
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*Low-pressure version*

CVC (LP)	28 bar g	0.20 m <sup>3</sup> /h	-50 to 120°C	-0.5 bar g to 9 bar g	<b>027B1080</b>
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*High-pressure version*

CVC (XP)	52 bar g	0.20 m <sup>3</sup> /h	-50 to 120°C	4 bar g to 28 bar g	<b>027B0087</b>
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*Technical data, US units*

Valve type	MWP	$C_v$ -value	Temperature range	Pressure range	Code no.
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*Low-pressure version*

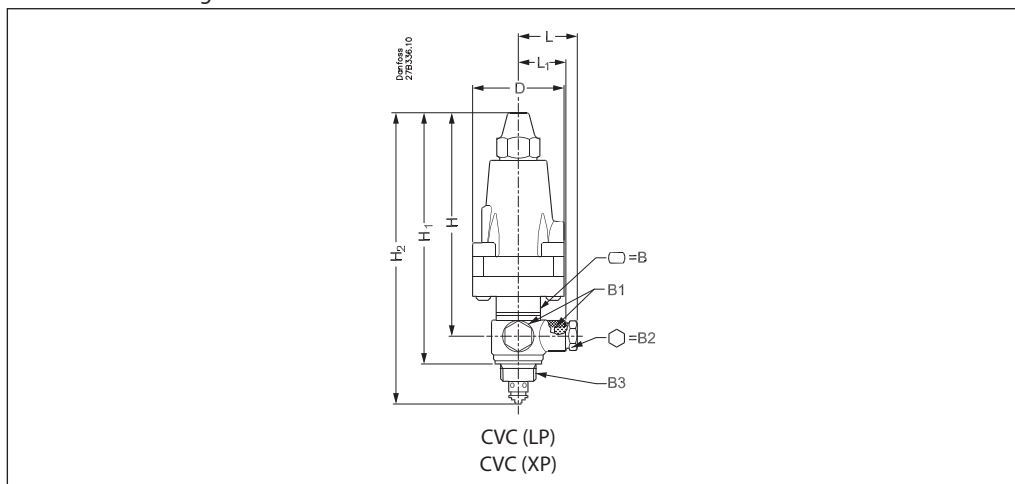
CVC (LP)	406 psi g	0.23 USgal/min	-58 to 248°F	14.8 in. Hg to 131 psi g	<b>027B1080</b>
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*High-pressure version*

CVC (XP)	754 psi g	0.23 USgal/min	-58 to 248°F	58 psi g to 406 psi g	<b>027B0087</b>
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P-band for a valve system regulated by CVC and ICS/PM/PMC: < 0.3 bar g (4.4 psi g)

*Dimensions and weights*



Valve type	H	H <sub>1</sub>	H <sub>2</sub>	L	L <sub>1</sub>	D	B	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	Weight
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*CVC (LP) and CVC (XP)*

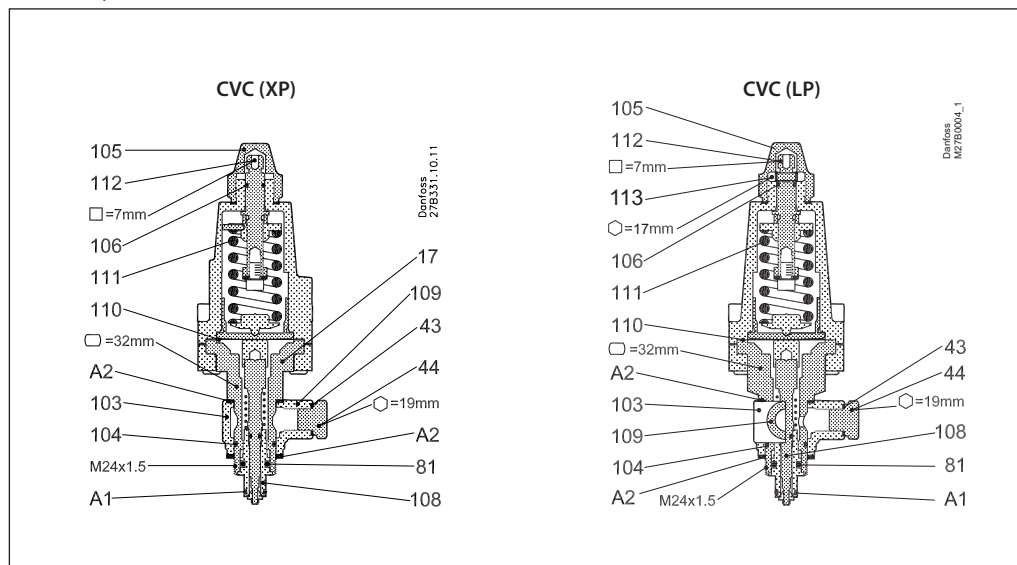
CVC	mm	158	178	206	41	33	65	32	G 1/4	19	M 24 × 1.5	2.0 kg
	in	6.22	7.00	8.11	1.61	1.30	2.56					4.4 lb.

Weights are approximate values only

**Pressure-operated pilot valve with reference pressure connection, type CVC**

(continued)

Material specification



CVC (XP)

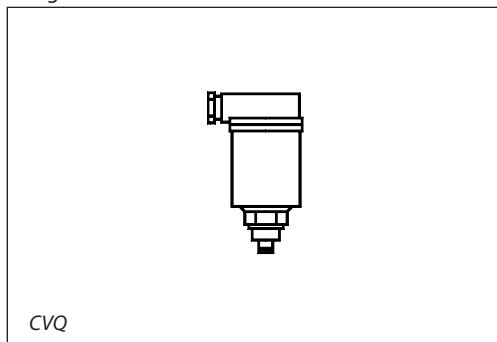
No.	Part	Material
43	Seal	Aluminium
44	Blanking plug for pressure gauge connection	Stainless steel
81	O-ring	Cloroprene (Neoprene)
103	Banjo fitting	Steel
104	O-ring	Cloroprene (Neoprene)
105	Protective cap	Steel
106	O-ring	Cloroprene (Neoprene)
108	Pilot orifice	Stainless steel
109	Connector on banjo fitting 103	Steel
110	Diaphragm	Stainless steel
111	Spring	Steel
112	Setting spindle	Stainless steel
17	Valve body	Steel
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos

CVC (LP)

No.	Part	Material
43	Seal	Aluminium
44	Blanking plug for pressure gauge connection	Steel
81	O-ring	Cloroprene (Neoprene)
103	Banjo fitting	Steel
104	O-ring	Cloroprene (Neoprene)
105	Protective cap	Steel
106	O-ring	Cloroprene (Neoprene)
108	Pilot orifice	Stainless steel
109	Connector on banjo fitting 103	Steel
110	Diaphragm	Stainless steel
111	Spring	Steel
112	Setting spindle	Steel
113	Nut (M10, HEX 17)	Steel
17	Valve body	Steel
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Graphite

**Electronically operated constant-pressure pilot valve, type CVQ (pressure-dependent)**

*Design and function*



CVQ is an electronically operated constant-pressure pilot valve that functions together with the EKC 361 electronic system or an EKC 366 controller.

CVQ enables the electronic (and thus the remote) control of a ICS or PM main valve.

The CVQ valve is used to maintain a constant pressure at the ICS or PM main valve inlet side and can, via suction pressure regulation, very accurately control the temperature of a medium from an air or liquid cooler, etc.

MWP: Maximum working pressure.

The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines. The value can vary slightly, depending on the setting value.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Pressure range	Code no.
CVQ	17 bar g	0.45 m <sup>3</sup> /h	-1 bar g to 5 bar g	<b>027B1139</b>
CVQ	17 bar g	0.45 m <sup>3</sup> /h	0 bar g to 6 bar g	<b>027B1140</b>
CVQ	17 bar g	0.45 m <sup>3</sup> /h	1.7 bar g to 8 bar g	<b>027B1141</b>

*Technical data, US units*

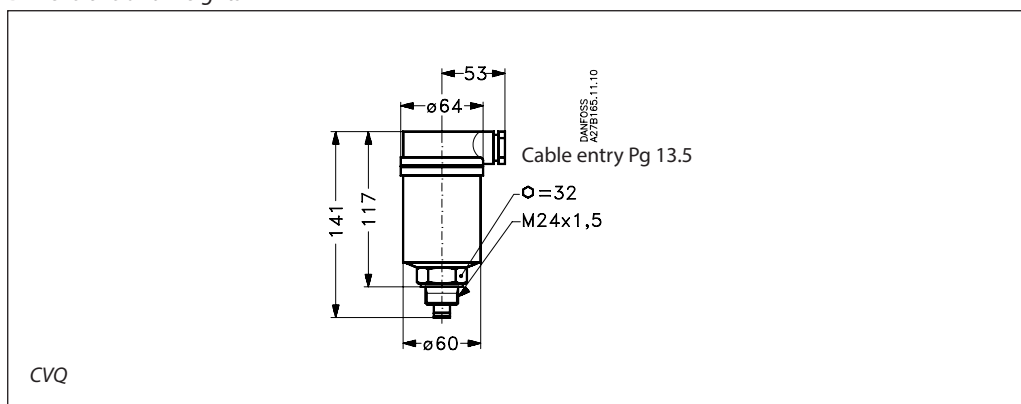
Valve type	MWP	$C_v$ -value	Pressure range	Code no.
CVQ	246 psi g	0.52 USgal/min	-29.5 in. Hg to 72.5 psi g	<b>027B1139</b>
CVQ	246 psi g	0.52 USgal/min	0 psi g to 87 psi g	<b>027B1140</b>
CVQ	246 psi g	0.52 USgal/min	24.7 psi g to 116 psi g	<b>027B1141</b>

The P-band for a valve system regulated by CVQ and ICS or PM depends on the control parameters of the EKC 361 or EKC 366.

*Electrical data*

Supply voltage	24V a.c. ±10%
Frequency	50 to 60 Hz
Power consumption, operation start	50 VA 75 VA
Enclosure	NEMA 3 / IP 55
Cable entry	Pg 13.5
Ambient temperature, operation transport	-30 to 50°C (-22 to 122°F) -50 to 70°C (-58 to 158°F)
-marking	EMC-Directive 89/336/EEC, EMC-Directiv 89/336/EN 50081-1 and EN 50082-1

*Dimensions and weights*

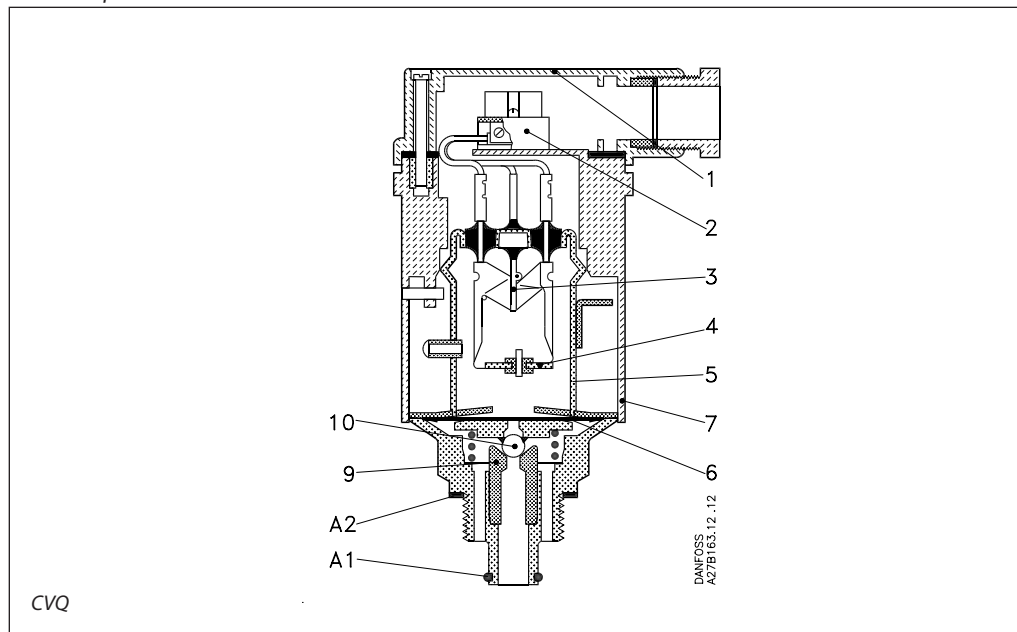


Valve type	H	H <sub>i</sub>	L	D	D <sub>i</sub>	B	B <sub>i</sub>	Weight	
CVQ	mm	141	117	53	64	60	32	M 24 × 1.5	0.4 kg
	in.	5.55	4.61	2.09	2.52	2.36			0.9 lb.

**Electronically operated constant-pressure pilot valve, type CVQ (pressure-dependent)**

(continued)

*Material specification*



*Design and function*

CVQ consists of a reservoir containing a charge at a given pressure, a heating element and a temperature sensor.

When the temperature in the container is regulated, the corresponding and precise pressure change created changes the degree of opening of the orifice (9 and 10) and thus the control pressure sent by the CVQ valve to the connected ICS or PM main valve.

If pressure in the container becomes too high, an internal protection system short-circuits the heating element and thus stops pressure build-up.

**CVQ**

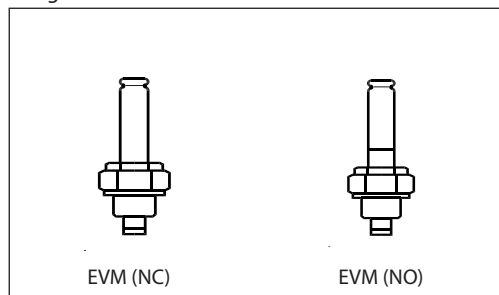
No.	Part	Material
1	Cover	Plastic
2	Connection terminals	
3	NTC resistor	
4	PTC resistor (heating element)	
5	Reservoir	Steel
6	Diaphragm	Stainless steel
7	Capsule	Plastic
9	Orifice	Stainless steel
10	Thrust pad with throttle ball	Stainless steel
A1	O-ring	Cloroprene (Neoprene)
A2	Seal	Non-asbestos

**Data sheet | Pilot valves for pilot operated servo valves**

**Solenoid pilot valve, type EVM (NC)**

**Solenoid pilot valve, type EVM (NO)**

*Design and function*



EVM is a solenoid pilot valve for use when on/off operation of the ICS or PM main valve is required. EVM valves are intended for use with Danfoss solenoid valve coils ("Coils for solenoid valves", datasheet RD3JB).

Together with CVH, an EVM can also be used as an independent solenoid valve.

*Technical data, SI units*

Valve type	MWP	$k_v$ -value	Pressure range	Code no.
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*Normally closed*

EVM (NC)	65 bar g	0.37 m <sup>3</sup> /h	MOPD: 21 bar g	<b>027B1120</b>
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*Normally open*

EVM (NO)	52 bar g	0.12 m <sup>3</sup> /h	MCPD: 19 bar g	<b>027B1130</b>
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*Technical data, US units*

Valve type	MWP	$C_v$ -value	Pressure range	Code no.
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*Normally closed*

EVM (NC)	943 psi g	0.43 USgal/min	MOPD: 305 psi g	<b>027B1120</b>
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*Normally open*

EVM (NO)	754 psi g	0.14 USgal/min	MCPD: 276 psi g	<b>027B1130</b>
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MWP: Maximum working pressure.

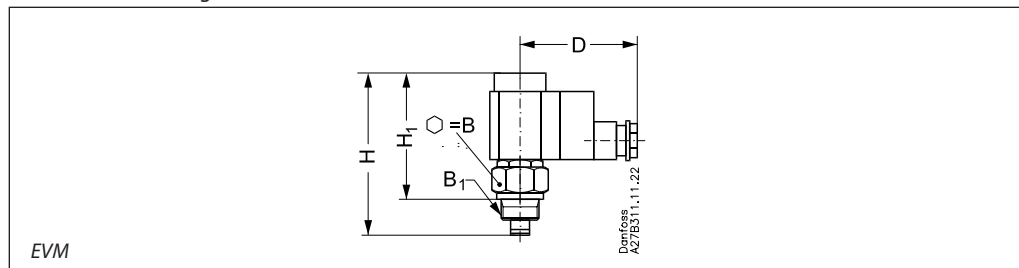
The  $k_v/C_v$  value is measured with the pilot valve mounted in a CVH housing for external pilot lines.

MOPD: Maximum opening differential pressure with a 10 W a.c. coil.

With:  
20 W a.c. coil: 40 bar (580 psi)  
20 W d.c. coil: 14 bar (203 psi)

MCPD: Maximum closing differential pressure with a 10/12 W a.c. coil or a 20 W d.c. coil.

*Dimensions and weights*

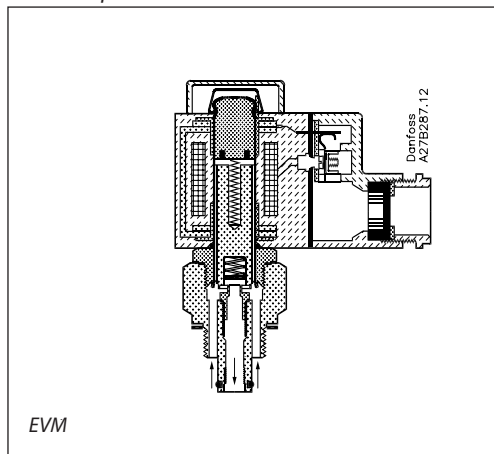


Valve type	H	H <sub>1</sub>	B	B <sub>1</sub>	D (12 Wa.c./d.c.)	D (10 Wa.c.)	Weight	
EVM	mm	107	83	32	M 24 × 1.5	82	72	0.5 kg
	in.	4.21	3.27					3.23

**Solenoid pilot valve, type EVM (NC)**

**Solenoid pilot valve, type EVM (NO)**

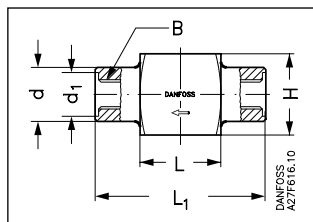
*Material specification*



*EVM*

No.	Part	Material
1	Coil	
2	Armature	Stainless steel
3	Armature tube	Stainless steel
A2	Seal	Non-asbestos
A1	O-ring	Cloroprene (Neoprene)
6	Seal	Aluminium
7	Spacing ring	
8	Nut	
9	Lock button	
10	Valve body	Steel
11	Valve seat	Teflon (PTFE)

Housing for pilot valves, type CVH, for mounting in external pilot lines

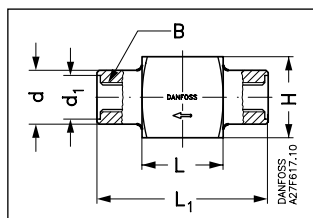


DN	d	d <sub>1</sub>	H	L	L <sub>1</sub>	B	Standard	Material	Code no.
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Internal pipe thread

6	mm	24	19.5	36	36	76	1/4 in. NPT	ANSI B1.20.1	DIN 9SMnPb 28 W no. 1.0718	027F1159
	in.	0.94	0.77	1.42	1.42	2.99				

Weight: 0.4 kg. (0.9 lb.)

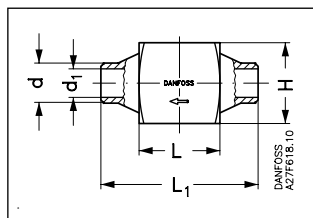


DN	d	d <sub>1</sub>	H	L	L <sub>1</sub>	B	Standard	Material	Code no.
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Internal pipe thread

6	mm	24	19.5	36	36	76	G 1/4 A	ISO 228-1	DIN 9SMnPb 28 W no. 1.0718	027F1160
	in.	0.94	0.77	1.42	1.42	2.99				

Weight: 0.4 kg. (0.9 lb.)

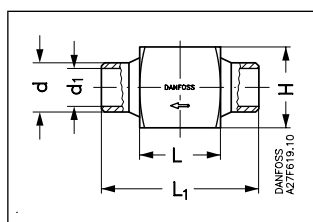


DN	d	d <sub>1</sub>	H	L	L <sub>1</sub>		Standard	Material	Code no.
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3/8 in. butt weld

10	mm	18	12.7	36	36	70	Weld connection DIN 2559 - 22	DIN. CK 15. W no. 1.1141	027F1047
	in.	0.71	0.5	1.42	1.42	2.76			

Weight: 0.4 kg. (0.9 lb.)

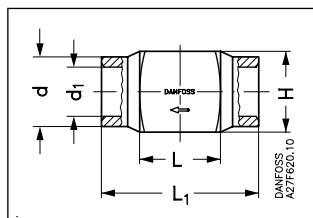


DN	d	d <sub>1</sub>	H	L	L <sub>1</sub>		Standard	Material	Code no.
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1/2 in. butt weld

15	mm	22	17	36	36	70	Weld connection DIN 2559 - 22	DIN. CK 15. W no. 1.1141	027F1090
	in.	0.87	0.67	1.42	1.42	2.76			

Weight: 0.4 kg. (0.9 lb.)



DN	d	d <sub>1</sub>	H	L	L <sub>1</sub>		Standard	Material	Code no.
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1/2 in. socket weld

15	mm	31	22	36	36	70	DIN 3259 - T2 ASME B.16.113M	DIN. CK 15. W no. 1.1141	027F1091
	in.	1.22	0.87	1.42	1.42	2.76			

Weight: 0.4 kg. (0.9 lb.)



