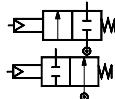


Externally operated valves  
2/2-way straight-seat  
Type HP230N

## Externally operated 2/2-way straight-seat valves



Unpressurized  
closed/ open

**Type HP230N**  
**For neutral liquids, gases and steam**  
**DN 2.5 - 13 B**

G 1/4 - G 1/2

### Features



- For robust industrial application
- For hot water, oil, compressed air, steam and similar neutral media
- Differential pressure: up to 40 bar
- Viscosity: up to 400 cSt
- Media temperature: up to +180 °C
- Ambient temperature: up to +50°C
- Thread connections from G 1/4 to G 1/2
- Control connections NC: G 1/8 NO: M5
- Unpressurized closed (NC) and unpressurized opened (NO) versions
- Closing against flow direction
- Stainless steel versions for aggressive fluids: Please contact Danfoss.

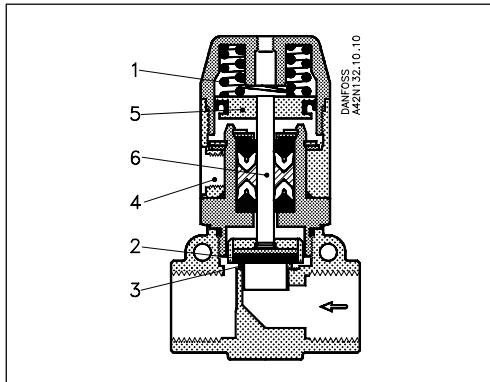
### Technical data

Design	Piston operated; straight-seated
Installation	Optional
Nominal pressure	PN 40
Pressure range	See ordering
Max. test pressure	Valve body: 1.5 x max. differential pressure Control head: 10 bar
Ambient temperature	-30 to +50°C
Media temperature	-30 to +180°C
Viscosity	max. 400 cSt
Control medium	Neutral liquids and gases up to 40 cSt.
Materials	Valve body: Brass Internal parts: Stainless steel/ brass Seal material: PTFE (Teflon) <sup>1)</sup>

<sup>1)</sup> Also available with EPDM- or FKM seal material - please contact Danfoss

### Function

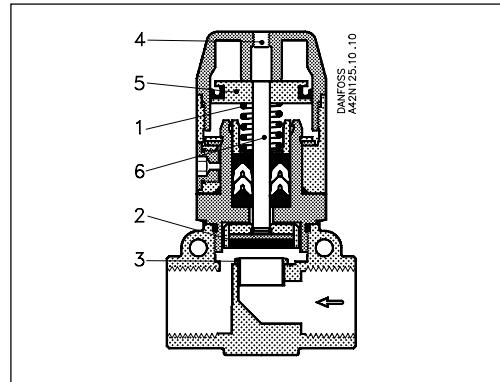
*HP230N normally closed version (NC)*



1. Spring
2. Seat gasket
3. Valve seat
4. Control connection
5. Control piston
6. Spindle

The valve is kept closed by the spring (1), which presses the seat gasket (2) against the valve seat (3). When pressure is applied to the control connection (4), the control piston (5), the spindle(6) and thus the seat gasket (2) are raised, and the valve opens.

*HP230N normally open version (NO)*



The valve is kept open by the spring (1), which keeps the seat gasket (2) away from the valve seat (3). When pressure is applied to the control connection (4), the control piston (5), the spindle (6) and thus the seat gasket (2) are lowered, and the valve closes against the pressure of the medium.

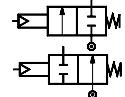
### Externally operated 2/2-way straight-seat valves

G 1/4 - G 1/2

Type HP230N

For neutral liquids, gases and steam

DN 2.5 - 13 B



**Ordering - NC function:**

Closing against the flow direction

**Ordering - Options:** Please contact Danfoss.

Connection ISO 228/1	Orifice DN	k <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure range [bar]	Control pressure [bar]	Type designation		Code no.
					Main type	Specification	
G 1/4	2.5	0.2	0 - 40	3.5 - 10	HP230N 2.5 B	G 14T NC000	042N4100
G 1/4	3.5	0.3	0 - 23	3.5 - 10	HP230N 3.5 B	G 14T NC000	042N4101
G 1/4	4.5	0.5	0 - 40	3.5 - 10	HP230N 4.5 B	G 14T NC000	042N4102
G 1/4	5.5	0.6	0 - 40	3.5 - 10	HP230N 5.5 B	G 14T NC000	042N1018
G 3/8	8.5	1.4	0 - 19	3.5 - 10	HP230N 8.5 B	G 38T NC000	042N1019
G 3/8	8.5	1.4	0 - 40	6.3 - 10	HP230N 8.5 B	G 38T NC101	Option
G 3/8	11	1.7	0 - 11	3.5 - 10	HP230N 11 B	G 38T NC000	042N4103
G 3/8	11	1.7	0 - 25	6.3 - 10	HP230N 11 B	G 38T NC101	Option
G 3/8	13	2.0	0 - 7	3.5 - 10	HP230N 13 B	G 38T NC000	042N4104
G 3/8	13	2.0	0 - 18	6.3 - 10	HP230N 13 B	G 38T NC101	Option
G 1/2	8.5	1.8	0 - 19	3.5 - 10	HP230N 8.5 B	G 12T NC000	042N4105
G 1/2	8.5	1.8	0 - 40	6.3 - 10	HP230N 8.5 B	G 12T NC101	Option
G 1/2	11	2.3	0 - 11	3.5 - 10	HP230N 11 B	G 12T NC000	042N1015
G 1/2	11	2.3	0 - 25	6.3 - 10	HP230N 11 B	G 12T NC101	Option
G 1/2	13	2.6	0 - 7	3.5 - 10	HP230N 13 B	G 12T NC000	042N1017
G 1/2	13	2.6	0 - 18	6.3 - 10	HP230N 13 B	G 12T NC101	Option

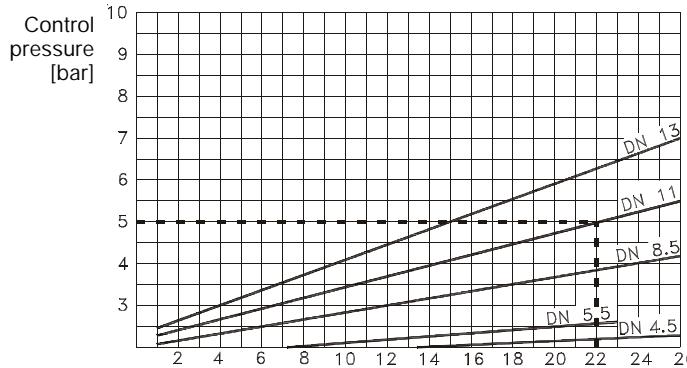
**Ordering - NO function:**

Closing against the flow direction

**Ordering - Options:** Please contact Danfoss

Connection ISO 228/1	Orifice DN	k <sub>v</sub> - value [m <sup>3</sup> /h]	Diagram	Type designation		Code no.
				Main type	Specification	
G 1/4	2.5	0.2	See below	HP230N 2.5 B	G 14T NO000	Option
G 1/4	3.5	0.3	See below	HP230N 3.5 B	G 14T NO000	Option
G 1/4	4.5	0.5	See below	HP230N 4.5 B	G 14T NO000	Option
G 1/4	5.5	0.6	See below	HP230N 5.5 B	G 14T NO000	Option
G 3/8	8.5	1.4	See below	HP230N 8.5 B	G 38T NO000	Option
G 3/8	11	1.7	See below	HP230N 11 B	G 38T NO000	Option
G 3/8	13	2.0	See below	HP230N 13 B	G 38T NO000	Option
G 1/2	8.5	1.8	See below	HP230N 8.5 B	G 12T NO000	Option
G 1/2	11	2.3	See below	HP230N 11 B	G 12T NO000	Option
G 1/2	13	2.6	See below	HP230N 13 B	G 12T NO000	Option

#### HP 230 N (NO)



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AEG1145.10

Example:  
G 3/8, DN 11 HP 230 N 11B (NO)

Differential pressure = 22 bar  
Necessary control pressure = 5 bar

Differential pressure  
[bar]

G 1/4, G 3/8, G 1/2

**Type HP 230N  
For neutral liquids, gases and steam**
**Ordering - N.C. function**
*Control head with 1 spring*

Connection ISO 228/1	Orifice DN	k <sub>v</sub> -value [m <sup>3</sup> /h]	Differential pressure range [bar]	Control pressure [bar]	Type	Code no.
G 1/4	2.5	0.20	0 - 40	3.5 - 10	HP 230N2,5B G 14TNC	042N4100
G 1/4	3.5	0.32	0 - 40	3.5 - 10	HP 230N3,5B G 14TNC	042N4101
G 1/4	4.5	0.48	0 - 40	3.5 - 10	HP 230N4,5B G 14TNC	042N4102
G 1/4	5.5	0.60	0 - 30	3.5 - 10	HP 230N5,5B G 14TNC	042N1018
G 3/8	8.5	1.43	0 - 20	3.5 - 10	HP 230N8,5B G 38TNC	042N1019
G 3/8	11	1.73	0 - 14	3.5 - 10	HP 230N 11B G 38TNC	042N4103
G 3/8	13	1.96	0 - 8.5	3.5 - 10	HP 230N 13B G 38TNC	042N4104
G 1/2	8.5	1.79	0 - 20	3.5 - 10	HP 230N8,5B G 12TNC	042N4105
G 1/2	11	2.32	0 - 14	3.5 - 10	HP 230N 11B G 12TNC	042N1015
G 1/2	13	2.64	0 - 8.5	3.5 - 10	HP 230N 13B G 12TNC	042N1017

*Control head with 2 springs*

Connection ISO 228/1	Orifice DN	k <sub>v</sub> -value [m <sup>3</sup> /h]	Differential pressure range [bar]	Control pressure [bar]	Type	Code no.
G 3/8	8.5	1.79	0 - 20	6.3 - 10	HP 230N8,5B G 38TNCS01	042N4106
G 3/8	11	2.32	0 - 14	6.3 - 10	HP 230N 11B G 38TNCS01	042N4107
G 3/8	13	2.64	0 - 8.5	6.3 - 10	HP 230N 13B G 38TNCS01	042N4108
G 1/2	8.5	1.43	0 - 20	6.3 - 10	HP 230N8,5B G 12TNCS01	042N4109
G 1/2	11	1.73	0 - 14	6.3 - 10	HP 230N 11B G 12TNCS01	042N4110
G 1/2	13	1.96	0 - 8.5	6.3 - 10	HP 230N 13B G 12TNCS01	042N4111

**Ordering - N.O. function**

Connection ISO 228/1	Orifice DN	k <sub>v</sub> -value [m <sup>3</sup> /h]	Diagram	Type	Code no.
G 1/4	2.5	0.20	See below	HP 230N2,5B G 14TNO	042N4112
G 1/4	3.5	0.32	See below	HP 230N3,5B G 14TNO	042N4113
G 1/4	4.5	0.48	See below	HP 230N4,5B G 14TNO	042N4114
G 1/4	5.5	0.60	See below	HP 230N5,5B G 14TNO	042N4115
G 3/8	8.5	1.79	See below	HP 230N5,5B G 12TNO	042N4116
G 3/8	11	2.32	See below	HP 230N 11B G 12TNO	042N4117
G 3/8	13	2.64	See below	HP 230N 13B G 12TNO	042N4118
G 1/2	8.5	1.43	See below	HP 230N5,5B G 38TNO	042N4119
G 1/2	11	1.73	See below	HP 230N 11B G 38TNO	042N4120
G 1/2	13	1.96	See below	HP 230N 13B G 38TNO	042N4121

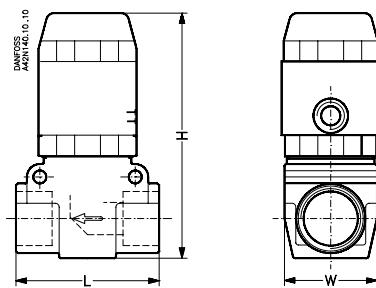
**Control pressure as a function of medium pressure**


## Externally operated 2/2-way straight-seat valves

Type HP230N  
For neutral liquids, gases and steam  
DN 2.5 - 13 B

### Dimensions and weight

Connec-tion	DN	L [mm]	W [mm]	H [mm]	Weight [kg]
1/4"	2.5 - 5.5	42	30	83	0.50
3/8"	8.5 - 13	55	36	95	0.50
1/2"	8.5 - 13	55	36	95	0.60



### Control valves, types EV310A and EV310B

#### Control valves, type EV310A



See separate data sheets DKACV.PD.100.E and DKACV.PD.200.J regarding code numbers, technical data and coil options for Danfoss EV310A and EV310B valves.

- Valves for industrial application, such as control
- Available in de-energized closed and de-energized open versions
- Available with or without manual operation

#### Control valves, type EV310B



- Valves for industrial application, such as control
- Available in de-energized closed and de-energized open versions
- Available with or without manual operation

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