Data sheet

# Pressure flow controllers

## AFPQ 2(4) / VFQ 2 / VFQ 22(1)

# Description

The controller is a self-acting differential pressure and flow controller primarily for use in district heating systems. Direct operated, reliable and high precise controller closes on rising differential pressure or when set max. flow is exceeded.

The controller has a control valve with adjustable flow restrictor, an actuator with two control diaphragms and spring for differential pressure setting. Differential pressure control and flow control are independent.

Further on two valve versions are available:

- VFQ 2 / VFQ 22 with metallic sealing cone
- VFQ 221 with soft sealing cone

Together with Danfoss intelligent electrical actuator AMEi 6 intelligent optimization functions are available:

- iSET-intelligent substation efficiency optimization
- iNET-intelligent network balancing

**Main data:**

- DN 15-250
- $k_{VS}$ 4.0-800 m³/h
- Flow range 0.1-500 $m^3$/h
- PN 16, 25, 40
- Setting range: 0.2-1 bar / 0.5-1.5 bar
- Flow restrictor Δpb: 0.2 bar or 0.5 bar
- Temperature: – Circulation water / glycolic water up to 30 %: 2 ... 150 °C (200°C)
- Connections: – Flange

## Features & benefits

- Direct-operated, high-precision control for district heating systems – closes on rising differential pressure or when max. flow is exceeded.
- Reliable & efficient – ensures stable system operation, protects equipment, and optimizes performance without external power.
- Flexible application – wide DN, flow, and pressure ranges; compatible with Danfoss AMEi 6 actuator for intelligent optimization functions.

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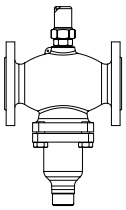
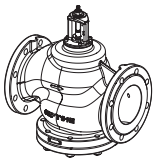
# Ordering

## Product code numbers

| Picture | DN (mm) | $k_{VS}$ ($m^3/h$) | Connections | $T_{max.}$ (°C) | Code No. | | |
|---|---|---|---|---|---|---|---|
| | | | | | PN 16 | PN 25 | PN 40 |
|  | 15[2] | 4.0 | Flanges acc. to EN 1092-1 | 150 (PN16) | **065B2654** | **065B2667** | **065B2677** |
| | 20[2] | 6.3 | | | **065B2655** | **065B2668** | **065B2678** |
| | 25[2] | 8.0 | | | **065B2656** | **065B2669** | **065B2679** |
| | 32[2] | 16 | | 200[1] (PN25, 40) | **065B2657** | **065B2670** | **065B2680** |
| | 40[2] | 20 | | | **065B2658** | **065B2671** | **065B2681** |
| | 50[2] | 32 | | | **065B2659** | **065B2672** | **065B2682** |
|  | 65 | 60 | | 150 | **065B5570** | **065B5577** | **065B5584** |
| | 80 | 80 | | | **065B5571** | **065B5578** | **065B5585** |
| | 100 | 160 | | | **065B5572** | **065B5579** | **065B5586** |
| | 125 | 250 | | | **065B5573** | **065B5580** | **065B5587** |
| | 150 | 380 | | | **065B5574** | **065B5581** | **065B5588** |
| | 200 | 650 | | | **065B5575** | **065B5582** | **065B5589** |
| | 250 | 800 | | | **065B5576** | **065B5583** | **065B5590** |

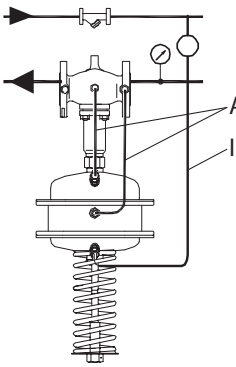
[1] At temperatures above 150°C only with seal pots (see Accessories)

[2] VFQ 2 valves require ordering of 003G1780 adapter for a combination with AFPQ 2(4) pressure actuators

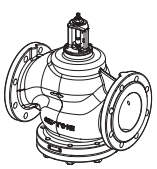
Example 1:
Differential pressure controller, return mounting, DN 65, $k_{VS}$ 60, PN 16, metallic sealing, setting range 0.5-1.5 bar, flow restrictor Δpb 0.2 bar, $T_{max}$ 150 °C, flange;

– 1× VFQ 22 DN 65 valve
Code no: **065B5570**
– 1× AFPQ 2 actuator
Code no: **003G5712**
– 1× AFPQ 2 DN 65 impulse tube set
Code no: **003G1838**
– 1× Impulse tube set AF
Code no: **003G1391**

Products will be delivered separately.



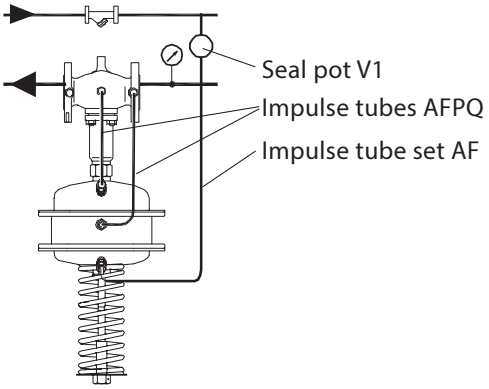

**VFQ 221** Valve (soft sealing cone)

| Picture | DN (mm) | $k_{VS}$ ($m^3/h$) | Connections | $T_{max.}$ (°C) | Code No. | | |
|---|---|---|---|---|---|---|---|
| | | | | | PN 16 | PN 25 | PN 40 |
|  | 65 | 60 | Flanges acc. to EN 1092-1 | 150 | **065B5600** | **065B5607** | **065B5614** |
| | 80 | 80 | | | **065B5601** | **065B5608** | **065B5615** |
| | 100 | 160 | | | **065B5602** | **065B5609** | **065B5616** |
| | 125 | 250 | | | **065B5603** | **065B5610** | **065B5617** |
| | 150 | 380 | | | **065B5604** | **065B5611** | **065B5618** |
| | 200 | 650 | | | **065B5605** | **065B5612** | **065B5619** |
| | 250 | 800 | | | **065B5606** | **065B5613** | **065B5620** |

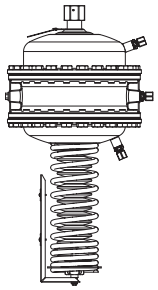
Example 2:
Differential pressure and flow controller; return mounting; DN 15; $k_{VS}$ 4.0; PN 25; metallic sealing; setting range 0.2 - 1 bar; flow restrictor Δpb 0.2 bar; $T_{max}$ 200 °C; flange;

– 1× VFQ 2 DN 15 valve
Code no: **065B2667**
– 1× AFPQ 2 actuator
Code no: **003G5710**
– 1× AFPQ DN 15 impulse tubes
Code no: **003G1828**
– 1× Impulse tube set AF
Code no: **003G1391**
– 1× Seal pot V1
Code no: **003G1392**
– 1× Adapter VFQ 2 - AFx 2
Code no: **003G1780**

Products will be delivered separately.



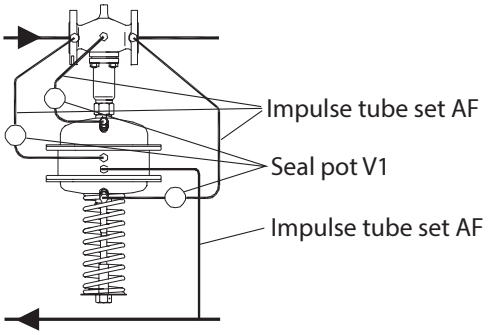

**AFPQ 2 / AFPQ 24** Actuators

| Picture | Actuator size ($cm^3$) | Δp setting range (bar) | Flow restrictor Δpb (bar) | for DN | Code No. | |
|---|---|---|---|---|---|---|
| | | | | | AFPQ 2 (return) | AFPQ 24 (flow) |
|  | 160 | 0.2 - 1 | 0.2 | 15-125 | **003G5710** | **003G5718** |
| | | | 0.5 | | **003G5711** | **003G5719** |
| | | 0.5 - 1.5 | 0.2 | | **003G5712** | **003G5720** |
| | | | 0.5 | | **003G5713** | **003G5721** |
| | 320 | 0.2 - 1 | 0.2 | 150-250 | **003G5714** | **003G5722** |
| | | | 0.5 | | **003G5715** | **003G5723** |
| | | 0.5 - 1.5 | 0.2 | | **003G5716** | **003G5724** |
| | | | 0.5 | | **003G5717** | **003G5725** |

Example 3:
Differential pressure and flow controller; flow mounting; DN 15; $k_{VS}$ 4.0; PN 25; metallic sealing;
setting range 0.2 - 1 bar; flow restrictor Δpb 0.2 bar; $T_{max}$ 200 °C; flange;

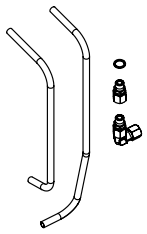
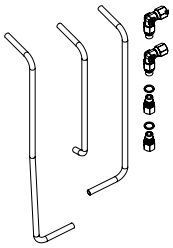
– 1× VFQ 2 DN 15 valve
Code no: **065B2667**
– 1× AFPQ 2 actuator
Code no: **003G5710**
– 4× Impulse tube set AF
Code no: **003G1391**
– 3× Seal pot V1
Code no: **003G1392**
– 1× Adapter VFQ 2 - AFx 2
Code no: **003G1780**

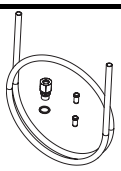
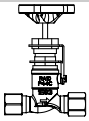
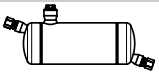
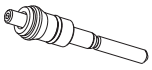
Products will be delivered separately.



## Accessories code numbers

### Impulse tubes

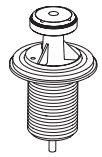
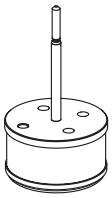
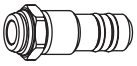
| Picture AFPQ 2 (return) | Picture AFPQ 24 (flow) | Actuator size ($cm^2$) | Valve (DN) | Code No. | |
|---|---|---|---|---|---|
| | | | | AFPQ 2 (return) | AFPQ 24 (flow) |
|  |  | 160 | 15 | **003G1828** | **003G1832** |
| | | | 20 | | |
| | | | 25 | **003G1829** | **003G1833** |
| | | | 32 | | |
| | | | 40 | **003G1830** | **003G1834** |
| | | | 50 | **003G1831** | **003G1835** |
| | | | 65 | **003G1838** | **003G1839** |
| | | | 80 | **003G1844** | **003G1847** |
| | | | 100 | **003G1845** | **003G1848** |
| | | | 125 | **003G1846** | **003G1849** |
| | | 320 | 150 | **003G1865** | **003G1871** |
| | | | 200 | **003G1866** | **003G1872** |
| | | | 250 | **003G1867** | **003G1873** |

| Picture | Type designation | Description | Connections | Code No. |
|---|---|---|---|---|
|  | Impulse tube set AF | – 1× Copper tube Ø10 × 1 × 1500 mm<br>– 1× compression fitting for imp. tube connection to pipe (G 1/4)<br>– 2× socket | – | **003G1391** |
|  | Compression fitting [1] | For impulse tube Ø10 connections to controller | G $^1/_4$ | **003G1468** |
|  | Shut off valve | For impulse tube Ø10 | – | **003G1401** |
|  | Static throttle valve | | | **065B2909** |
|  | Seal pot V1 | Capacity 1 liter; with compression fittings for | AFPQ 2 1x<br>AFPQ 24 3x | **003G1392** |
|  | Adapter DN15-50 | For combination of new Virtus pressure actuators AFx 2, with old generation of valves VFx 2 | – | **003G1780** |
|   | AMEi 6 **iSET** el. actuator 230 V | Intelligent Δp actuator with **iSET** function | – | **082G4300** |
| | AMEi 6 **iSET** el. actuator 24 V | | | **082G4301** |
| | AMEi 6 **iNET** el. actuator 230 V | Intelligent Δp actuator with **iNET** function | | **082G4302** |
| | AMEi 6 **iNET** el. actuator 24 V | | | **082G4303** |

[1] Consist of a nipple, compression ring and nut

## Spare parts code numbers

### Service kits

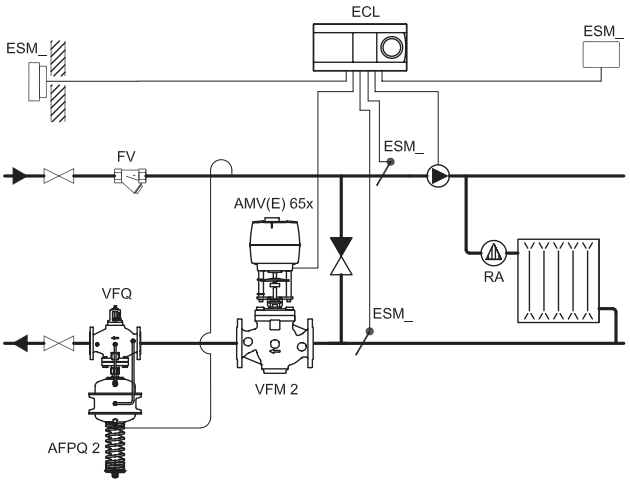
| Picture | Type designation | DN | $k_{VS}$ ($m^3/h$) | Code No. |
|---|---|---|---|---|
|  | Valve insert for VFQ 2 | 15 | 4 | **065B2796** |
| | | 20 | 6.3 | **065B2797** |
| | | 25 | 8 | **065B2798** |
| | | 32 | 16 | |
| | | 40 | 20 | **065B2799** |
| | | 50 | 32 | |
|  | Pressure control insert VFG/Q 22 | 65 | 60 | **003G1800** |
| | | 80 | 80 | **003G1801** |
| | | 100 | 160 | **003G1802** |
| | | 125 | 250 | **003G1803** |
| | | 150 | 380 | **003G1804*** |
| | | 200 | 650 | **003G1805*** |
| | | 250 | 800 | **003G1806*** |
| | Pressure control insert VFG/Q 221 | 65 | 60 | **003G1807** |
| | | 80 | 80 | **003G1808** |
| | | 100 | 160 | **003G1809** |
| | | 125 | 250 | **003G1810** |
| | | 150 | 380 | **003G1811*** |
| | | 200 | 650 | **003G1812*** |
| | | 250 | 800 | **003G1813*** |
|  | Stuffing cone (with EPDM O-rings) | 15-50 | – | **003G1464** |
|  | Pressure stuffing box VFG/Q 22(1) | 65-125 | – | **003G1730** |
| | | 150-200 | | **003G1731** |
| | | 250 | | **003G1732** |

* On demand

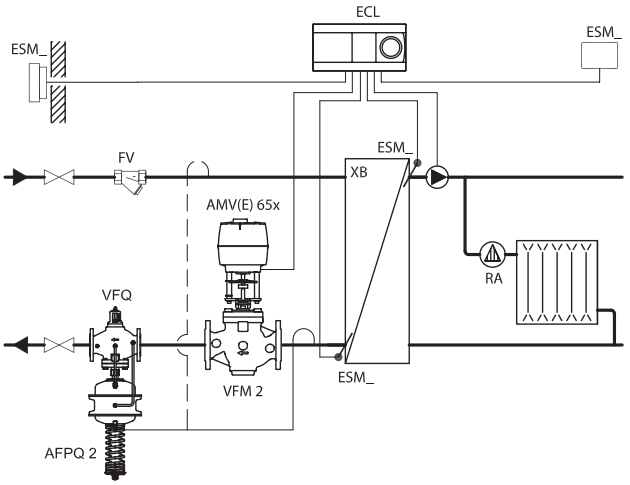
# Overview

## Application examples

### Return mounting

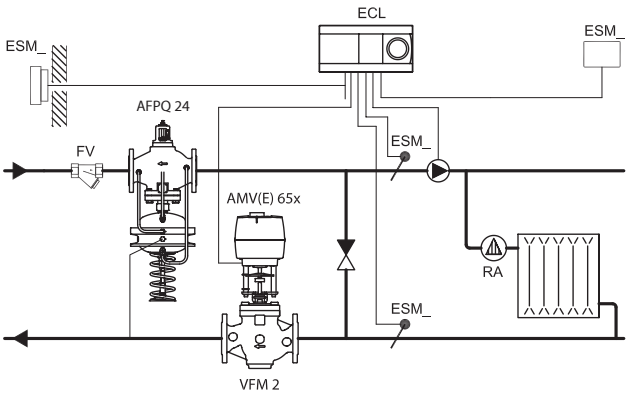



Direct-connected heating system

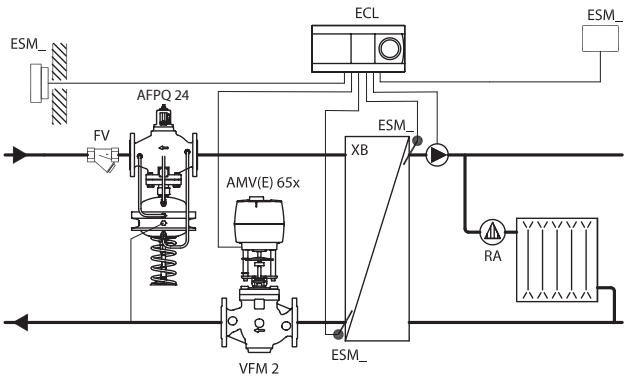



Indirectly connected heating system

### Flow mounting




Direct-connected heating system




Indirectly connected heating system

# Product details

## General data

### VFQ 22 (1) Valve

| Nominal diameter | | | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $k_{VS}$ value of Δp controller | | | | 4.0 | 6.3 | 8.0 | 16 | 20 | 32 | 60 | 80 | 160 | 250 | 380 | 650 | 800 |
| Range of max. flow setting | Δpb [1] = 0.2 bar | from | $m^3/h$ | 0.1 | 0.2 | 0.2 | 0.4 | 0.6 | 0.8 | 3 | 4 | 8 | 12 | 19 | 27 | 36 |
| | | to | | 2 | 3 | 4 | 7 | 11 | 16 | 3 | 40 | 63 | 100 | 160 | 270 | 360 |
| | Δpb [1] = 0.5 bar | from | | 0.2 | 0.3 | 0.3 | 0.5 | 0.8 | 1.2 | 3 | 6 | 11 | 18 | 24 | 31 | 45 |
| | | to | | 3 | 4.5 | 6 | 10 | 16 | 24 | 42 | 60 | 95 | 150 | 240 | 340 | 500 |
| Cavitation factor z | | | | 0.6 | 0.6 | 0.6 | 0.55 | 0.55 | 0.5 | 0.65 | 0.55 | 0.4 | 0.4 | 0.4 | 0.35 | 0.3 |
| Leakage acc. to standard IEC 534 (% of $k_{VS}$) | VFQ 2 / VFQ 22 | | | ≤ 0.03 | | | | | | | | | | ≤ 0.05 | | |
| | VFQ 221 | | | ≤ 0.01 | | | | | | | | | | | | |
| Nominal pressure | | | PN | 16, 25, 40 | | | | | | | | | | | | |
| Min. differential pressure | | | bar | see remark [2] | | | | | | | | | | | | |
| Max. differential pressure PN 16 | | | | 16 | | | | | | 16 | | 15 | 15 | 12 | 10 | 10 |
| Max. differential pressure PN 25/40 | | | | 20 | | | | | | 20 | | | | | | |
| Pressure relieve system | | | | Bellows (Stainless steel 1.4571) | | | | | | Chamber relieved | | | | | | |
| Pressure relieve system | | | | Circulation water / glycolic water up to 30% | | | | | | | | | | | | |
| Media pH | | | | Min. 7, max. 10 | | | | | | | | | | | | |
| Media temperature | | | °C | VFQ 2 : 2 ... 150 (200°C)<br>VFQ 22(1) : 2 ... 150°C | | | | | | | | | | | | |
| Connections | | | | Flange | | | | | | | | | | | | |
| **Materials** | | | | | | | | | | | | | | | | |
| Valve body | PN 16 | | | Grey cast iron EN-GJL-250 (GG-25) | | | | | | | | | | | | |
| | PN 25 | | | Ductile iron EN-GJS-400 (GGG-40.3) | | | | | | | | | | | | |
| | PN 40 | | | Cast steel GP240GH (GS-C 25) | | | | | | | | | | | | |
| Valve seat | | | | Stainless steel, mat. No. 1.4021 | | | | | | | | | | | | |
| Valve cone | | | | Stainless steel, mat. No. 14404 | | | | | | Stainless steel, mat. No. 14021 | | | | | | |
| Sealing | VFQ 2 | | | Metal | | | | | | | | | | | | |
| | VFQ 22 | | | | | | | | | | | | | | | |
| | VFQ 21 | | | EPDM | | | | | | | | | | | | |
| | VFQ 221 | | | | | | | | | | | | | | | |

[1] $\Delta p_b$ – differential pressure over flow restrictor

[2] For flows smaller than $Q_{maks.}$ → $\Delta p_{min} = (\frac{Q}{k_{vs}})^2 + \Delta p_b$

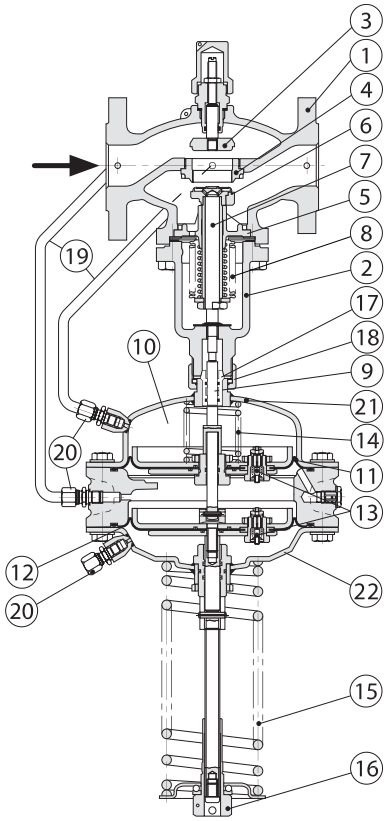
### AFPQ 2(4) Actuator

| Actuator size | $cm^2$ | 160 | | 320 | |
|---|---|---|---|---|---|
| Max. operating pressure | bar | 40 | | | |
| Flow restrictor differential pressure $\Delta p_b$ | bar | 0.2/0.5 | | | |
| Diff. pressure setting ranges and spring colours | | 0.2-1 | 0.5-1.5 | 0.2-1 | 0.5-1.5 |
| | | blue | yellow | orange | red |
| For valve DN | | 65-125 | | 150-250 | |
| **Materials** | | | | | |
| Actuator housing | | Steel, mat. No. 1.0345, zinc plated | | | |
| Control diaphragm | | EPDM (Rolling; fibre enforced) | | | |
| Impulse tube set AFPQ 2(4) | | Stainless steel, mat. No. 1.4571 | | | |

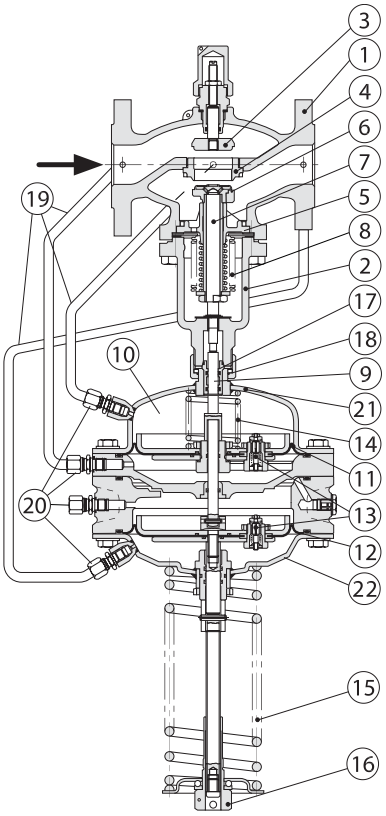
# Design

## DN 15-50

**1.** Valve body
**2.** Cover
**3.** Adjustable flow restrictor
**4.** Valve seat
**5.** Valve insert
**6.** Pressure relieved valve cone
**7.** Valve stem
**8.** Bellows for pressure relief of valve cone
**9.** Diaphragm for pressure relief of valve cone
**10.** Actuator
**11.** Control diaphragm for flow control
**12.** Control diaphragm for diff. pressure control
**13.** Excess pressure safety valve
**14.** Built-in spring for flow control
**15.** Setting spring for diff. pressure control
**16.** Adjuster for diff. pressure setting, prepared for sealing
**17.** Stuffing cone
**18.** Union nut
**19.** Impulse tube
**20.** Compression fitting for impulse tube
**21.** Upper casing of diaphragm
**22.** Lower casing of diaphragm
**23.** Valve body extension
**24.** Shut off valve for water filling
**25.** Closing plug



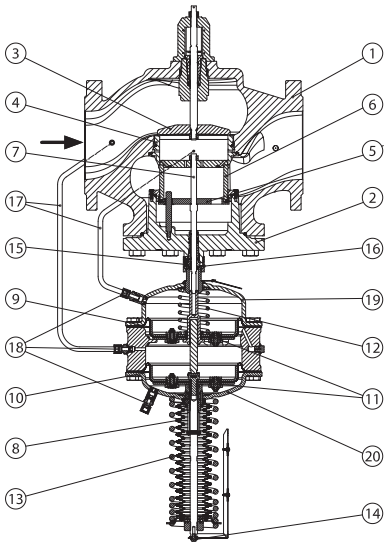

AFPQ 2 VFQ 2(1), DN 15-50



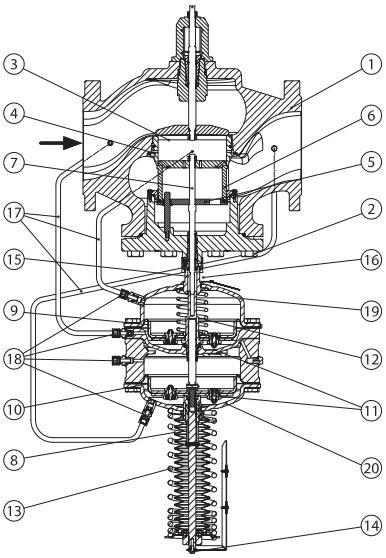

AFPQ 24 VFQ 2(1), DN 15-50

## DN 65-250

**1.** Valve body
**2.** Cover
**3.** Adjustable flow restrictor
**4.** Valve seat
**5.** Valve insert
**6.** Pressure relieved valve cone
**7.** Valve stem
**8.** Stem thread protection bellow
**9.** Control diaphragm for flow control
**10.** Control diaphragm for diff. pressure control
**11.** Excess pressure safety valve
**12.** Built-in spring for flow control
**13.** Setting spring for diff. pressure control
**14.** Adjuster for diff. pressure setting, prepared for sealing
**15.** Stuffing cone
**16.** Union nut
**17.** Impulse tube
**18.** Compression fitting for impulse tube
**19.** Upper casing of diaphragm
**20.** Lower casing of diaphragm




AFPQ 2 VFQ 22(1), DN 65-250




AFPQ 24 VFQ 22(1), DN 65-250

## Function

Flow volume causes pressure drop across the adjustable flow restrictor. Resulting pressures are being transferred through the impulse tubes to the actuator chambers and act on control diaphragm for flow control. The flow restrictor diff. pressure is controlled and limited by means of built-in spring for flow control. Control valve closes on rising differential pressure and opens on falling differential pressure to control max flow.

Pressure changes from flow and return pipes are being transferred through the impulse tubes to the actuator chambers and act on control diaphragm for diff. pressure control. The diff. pressure is controlled by means of setting spring for diff. pressure control. Control valve closes on rising differential pressure and opens on falling differential pressure to maintain constant differential pressure. Controller is equipped with two excess pressure safety valves, which protect control diaphragms for flow and diff. pressure control from too high differential pressure.

## Settings

*Differential pressure setting*

Differential pressure setting is being done by the adjustment of the setting spring for diff. pressure control. This is done by rotating the differential pressure setting nut. Set differential pressure should be checked by observing the pressure indicators.

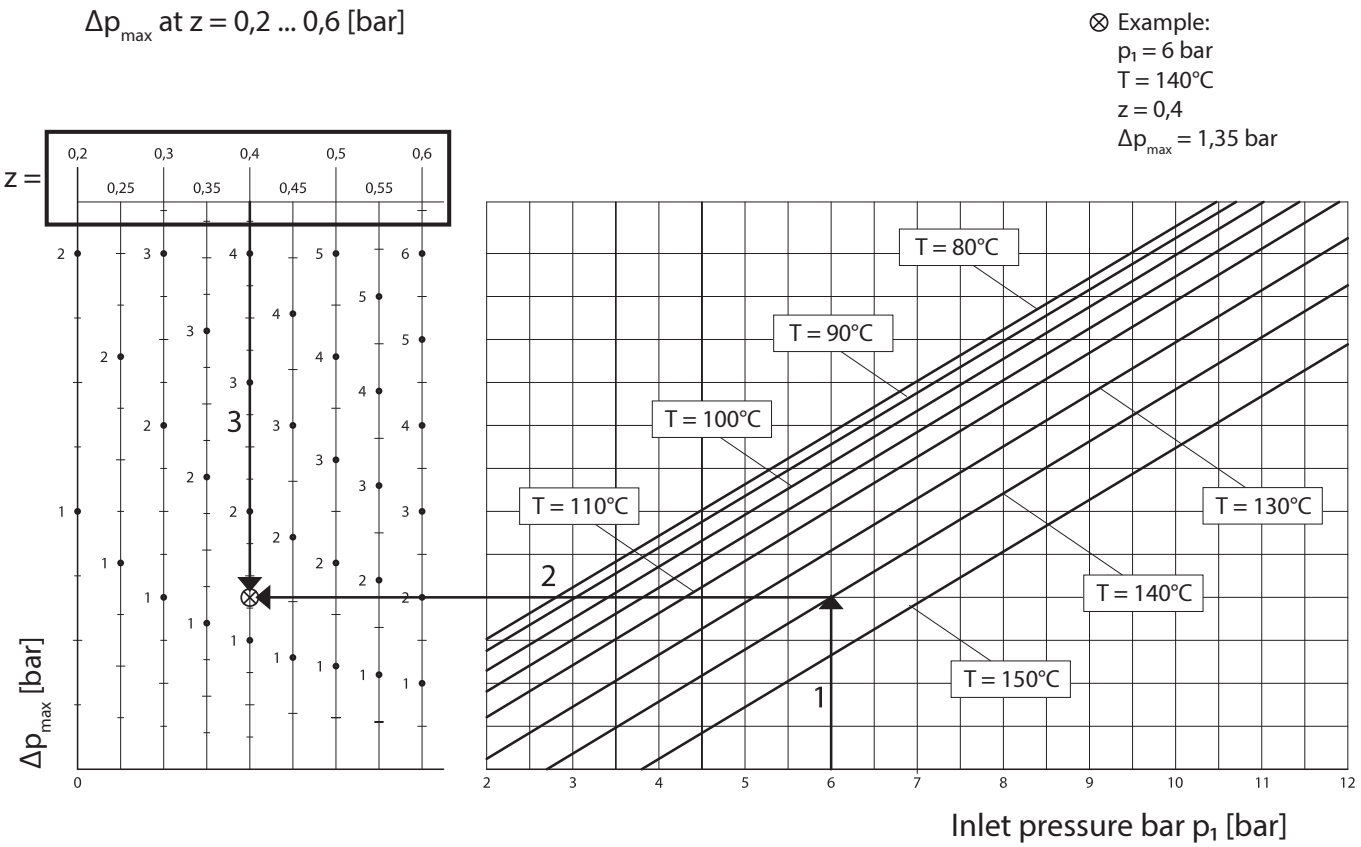
*Flow setting*

Flow setting is being done by the adjustment of the flow restrictor position. The adjustment can be performed on the basis of flow adjustment diagram (see relevant instructions) and/or by the means of heat meter.

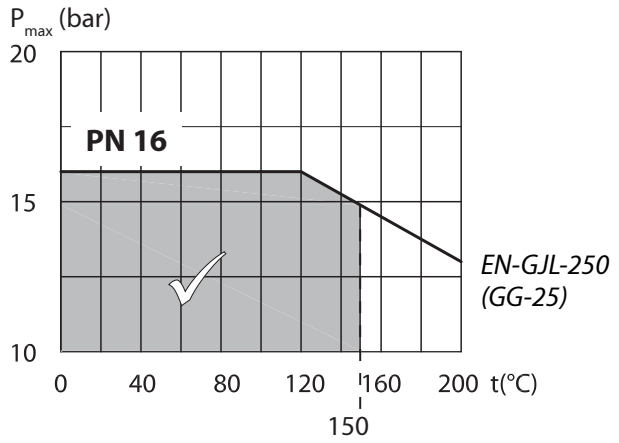
# Pressure and temperature data

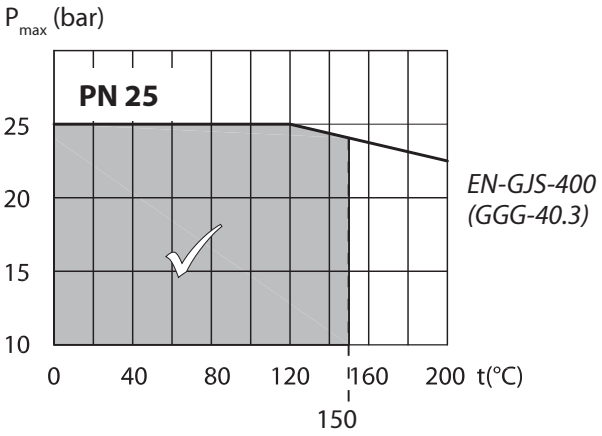
## Operating area

Maximum allowed differential pressure over the controller ($\Delta p_{max}$) at different cavitation factors (z)

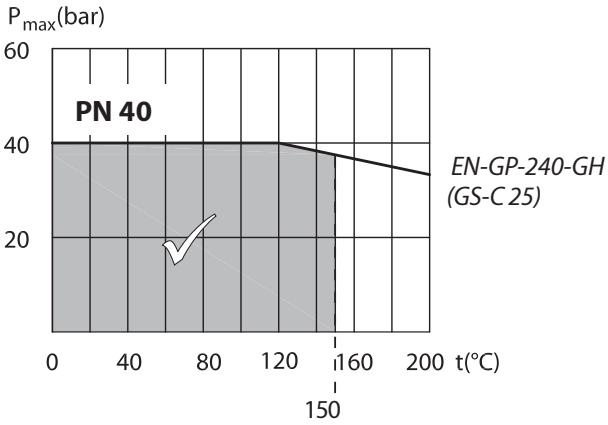


Working area is below P-T line and it ends at $T_{max}$ for each valve




Maximum allowed operating pressure as a function of media temperature (according to EN 1092-2)




Maximum allowed operating pressure as a function of media temperature (according to EN 1092-1)

## Sizing

### *Directly connected heating system*

**Example 1**
Motorised control valve (MCV) for mixing circuit in direct-connected heating system requires
differential pressure of 0.5 bar (50 kPa) and flow less than 25.000 l/h.

Given data:

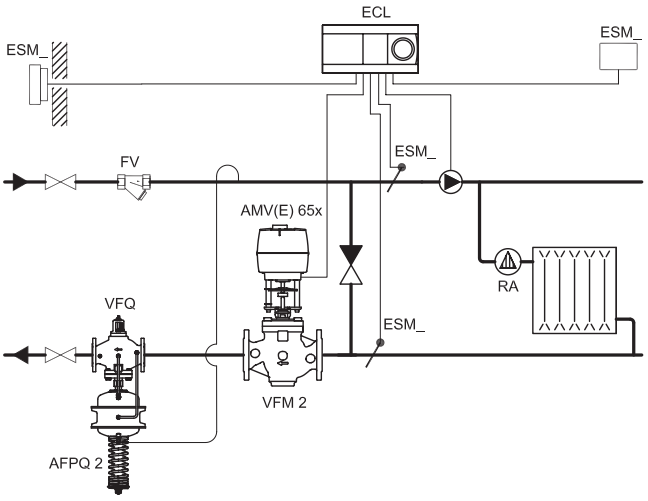
$Q_{max}$ = 25 $m^3$/h (25.000 l/h)
$\Delta p_{min}$ = 1 bar (100 kPa)
$\Delta p_{circuit}$ 1) = 0.1 bar (10 kPa)
$\Delta p_{MCV}$ = 0.5 bar (50 kPa) selected
$\Delta p_b$ 2) = 0.2 bar (20 kPa)

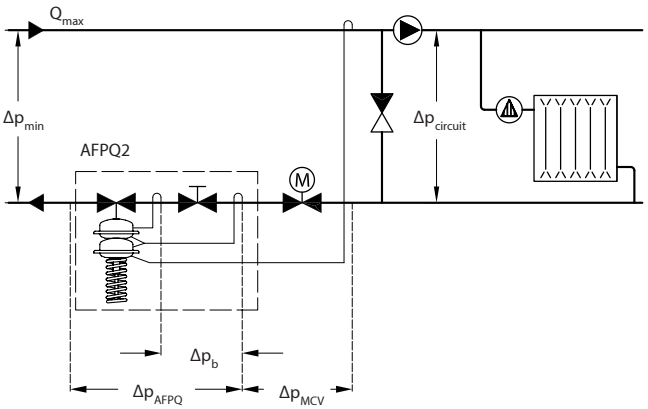
Remark:

1) $\Delta p_{circuit}$ corresponds to the required pump pressure in the heating circuit and is not to be considered when sizing the AFPQ(4).

2) $\Delta p_b$ is differential pressure over flow restrictor.

The differential pressure set value is:
$\Delta p_{set\ value} = \Delta p_{MCV}$
$\Delta p_{set\ value}$ = 0.5 bar (50 kPa)




The total pressure loss across the controller is:
$\Delta p_{AFPQ} = \Delta p_{min} - \Delta pMCV = 1 - 0.5$
$\Delta p_{AFPQ}$ = 0.5 bar (50 kPa)

Possible pipe pressure losses in tubes, shut-off fittings, heatmeters, etc. are not included.

$k_v$ value is calculated according to formula:

$$k_v = \frac{Q_{max}}{\sqrt{\Delta p_{AFPQ} - \Delta p_b}} = \frac{25}{\sqrt{0.5-0.2}}$$

$k_v$ = 45.6 $m^3$/h

*Solution:*
The example selects AFPQ 2 (return mounting) or AFPQ 24 (flow mounting) DN 65, $k_{VS}$ value 60, with differential pressure setting range 0.2-1 bar, flow setting range 5.6-28 $m^3$/h.

*Indirectly connected heating system*

**Example 2**

Motorised control valve (MCV) for indirectly connected heating system requires differential pressure of 0.5 (50 kPa) bar and flow less than 24.000 l/h.

Given data:

$Q_{max}$ = 24 $m^3$/h (24.000 l/h)
$\Delta p_{min}$ = 1.0 bar (100 kPa)
$\Delta p_{exchanger}$ = 0.1 bar (10 kPa)
$\Delta p_{MCV}$ = 0.5 bar (50 kPa) selected
$\Delta p_b$ [1)] = 0.2 bar (20 kPa)

Remark:

[1)] $\Delta p_b$ is differential pressure over flow restrictor

The differential pressure set value is:

$\Delta p_{set\ value} = \Delta p_{exchanger} + \Delta p_{MCV}$
$\Delta p_{set\ value} = 0.1 + 0.5$
$\Delta p_{set\ value} = 0.6$ bar (60 kPa)

The total pressure loss across the controller is:

$\Delta p_{AFPQ} = \Delta p_{min} - \Delta p_{exchanger} - \Delta p_{MCV}$
$\Delta p_{AFPQ} = 1.0 - 0.1 - 0.5$
$\Delta p_{AFPQ} = 0.4$ bar (40 kPa)

Possible pipe pressure losses in tubes, shut-off fittings, heatmeters, etc. are not included.

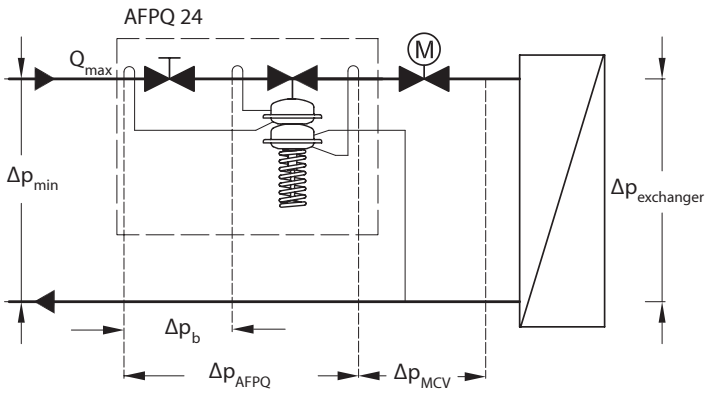
$k_v$ value is calculated according to formula:

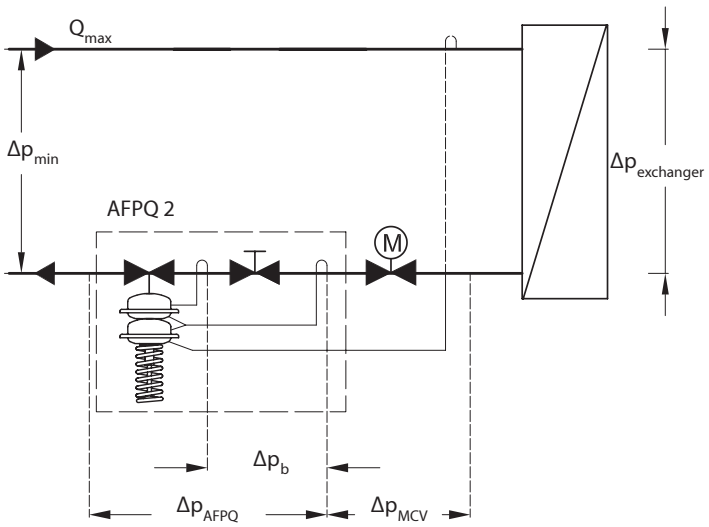
$$k_v = \frac{Q_{max}}{\sqrt{\Delta p_{AFPQ} - \Delta p_b}} = \frac{24}{\sqrt{0.4-0.2}}$$

$k_v$ = 53.7 $m^3$/h

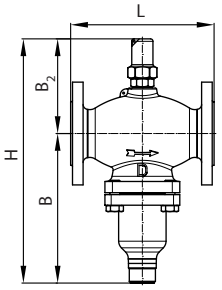
*Solution:*

The example selects AFPQ 2 (return mounting) or AFPQ 24 (flow mounting) DN 65, $k_{VS}$ value 60, with differential pressure setting range 0.2-1 bar, flow setting range 5.6-28 $m^3$/h.

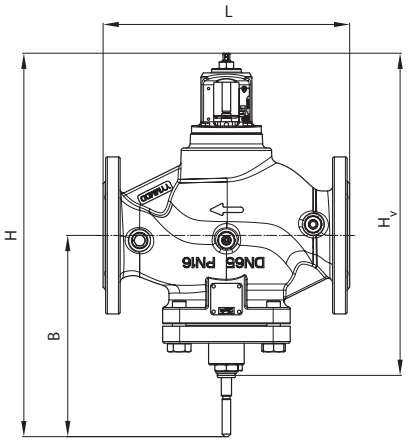


## Dimensions

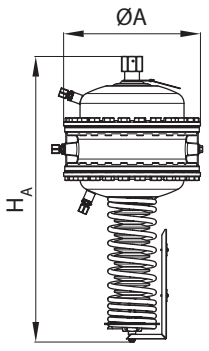



VFQ DN 15-50

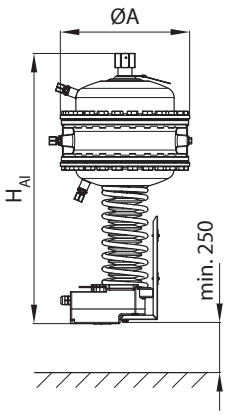



VFQ 22(1) DN 65-250

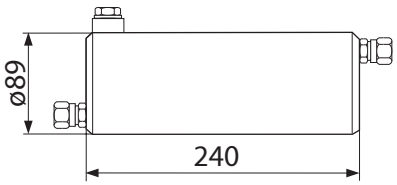
| DN | L | B | $B_2$ | H | $H_V$ | Weight | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | PN 16 | PN 25 | PN 40 |
| 15 | 130 | 213 | 124 | 337 | - | 8 | 8 | 8 |
| 20 | 150 | 213 | 124 | 337 | - | 9 | 9 | 9 |
| 25 | 160 | 239 | 135 | 374 | - | 10.5 | 10.5 | 10.5 |
| 32 | 180 | 239 | 135 | 374 | - | 12.5 | 12.5 | 12.5 |
| 40 | 200 | 241 | 152 | 393 | - | 15.5 | 15.5 | 15.5 |
| 50 | 230 | 241 | 152 | 393 | - | 18.5 | 18.5 | 18.5 |
| 65 | 290 | 237 | - | 473 | 396 | 28 | 29 | 31 |
| 80 | 310 | 237 | - | 473 | 396 | 33 | 34 | 36 |
| 100 | 350 | 272 | - | 547 | 472 | 52 | 53 | 57 |
| 125 | 400 | 268 | - | 582 | 514 | 71 | 72 | 79 |
| 150 | 480 | 326 | - | 670 | 610 | 123 | 126 | 135 |
| 200 | 600 | 361 | - | 773 | 713 | 230 | 236 | 286 |
| 250 | 730 | 419 | - | 843 | 783 | 382 | 392 | 441 |



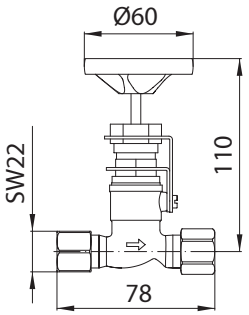

| Type | Size | | $H_A$ | | Weight (kg) | |
|---|---|---|---|---|---|---|
| | ($cm^2$) | ØA | mm | $H_{AI}$ | AFPQ 2(4) | + AMEi 6 |
| AFPQ 2 | 160 | 230 | 630 | 730 | 26 | 29 |
| | 320 | 300 | 630 | 730 | 38 | 41 |
| AFPQ 24 | 160 | 230 | 650 | 750 | 33 | 36 |
| | 320 | 300 | 650 | 750 | 45 | 48 |



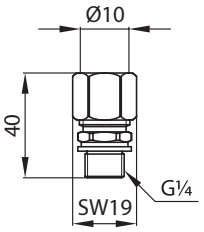

AMEi 6 intelligent actuator with iSET/ iNET functionality should be ordered separately




Seal pot V1




Shut off valve

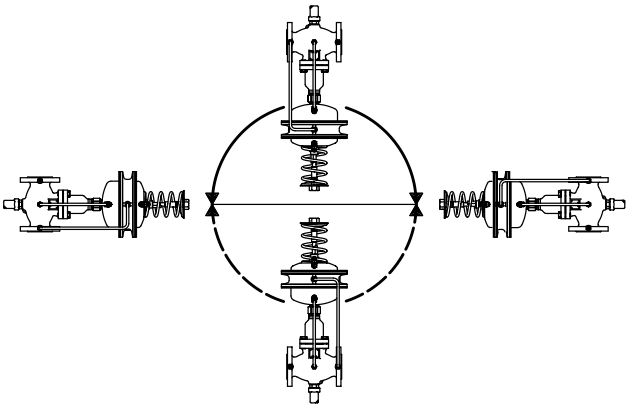



Compression fitting

## Installation

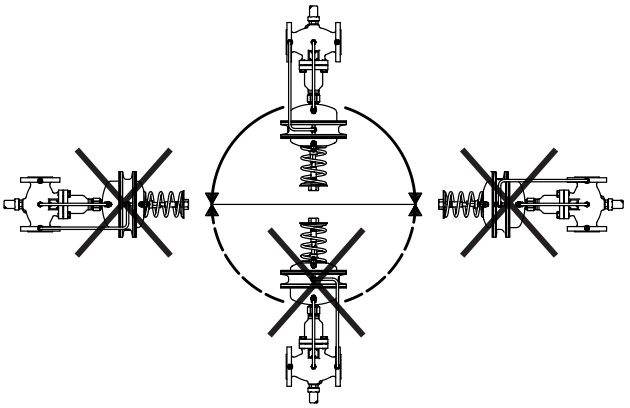
### Installation position

DN 15-50 $T_{max}$ ≤ 120 °C



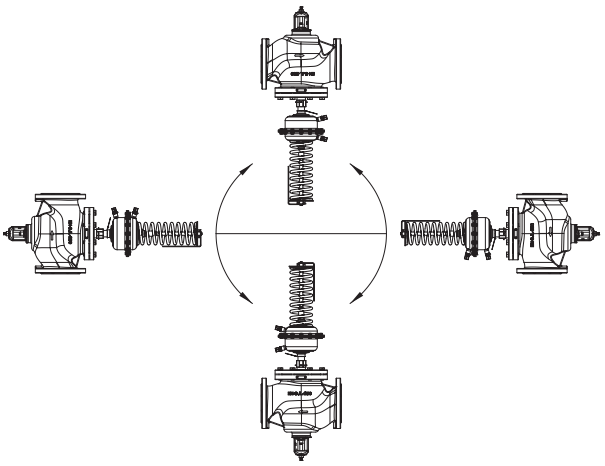
*The controllers can be installed in any position.*

DN 15-50 $T_{max}$ > 120 °C



*The controllers can be installed in horizontal pipes only, with a pressure actuator oriented downwards.*

DN 65 - 250



*The controllers can be installed in any position.*

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The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

| Approval type | Title | Certification body | Approval topic |
|---|---|---|---|
| EAC Declaration | EAC KZ 7100841.13.12.02339 | EAC - Eurasian Customs Union | MD |
| Export Control Declaration | Pressure flow controllers | Danfoss | |
| UA Declaration | Danfoss UA 10.01.23 Heat Control Valves | Danfoss | |
| EU Declaration | Danfoss EU 230530EN0858104.06 | Danfoss | PED, Pressure |
| EU Declaration | Danfoss EU 230612EN0854103.05 | Danfoss | PED, Pressure |
| Export Control Declaration | Actuators pressure flow and temperature | Danfoss | |
| Pressure Safety Certificate | CE-0062-PED-H-DAF 002-24-DNK-rev-A | BV - Bureau Veritas | PED, Pressure |

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