

**AIQM**  
**Flow controller with integrated**  
**control valve**  
**IWKA: V63MK D55**



## Description / Application



Combined with an electric actuator the AIQM controller is a self-acting flow controller with integrated control valve. The pressure difference across the control valve is kept constantly at 0.2 bar.


The controller is primarily used in district heating systems for circulation water with a max. temperature of 150°C.

AIQM is used together with following actuators:

- AMV 113 / AME 113 with valve closing safety function, type tested acc. to DIN 32 730
- AME 110 / AMV 310 / AMV 330

Nominal diameter                    DN 40 and DN 50  
 Nominal pressure                    PN 25  
 Connection                            Flange  
 Flow and return mounting

## Ordering

	Type	DN	$k_{vs}$ m <sup>3</sup> /h	Code No.
	AIQM	40	16	003H0160
	50	20	003H0161	

## Technical data

## Valve

Nominal diameter	(DN)	40	50
$k_{vs}$ value	(m <sup>3</sup> /h)	16	20
Min. flow rate		1.5	1.5
Nominal flow		10	12
Max. flow rate <sup>1)</sup>		12	15
Nominal pressure	(PN)	25	
Max. pressure difference	(bar)	16	
z value acc. to VDMA 24 422 <sup>2)</sup>		0.6	
Flow medium		Circulation water	
Max. medium temperature	(°C)	150	
Type of connection		Flange, PN 25 DIN 2501	
Approx. valve weight	(kg)	9	10
Valve body material		Ductile iron GGG 40.3 M. No. EN-JS1025	
Seat material		Stainless steel M. No. 1.4571	
Cone material		Brass, stainless steel M. No. 1.4404	
Cone seal material		EPDM	

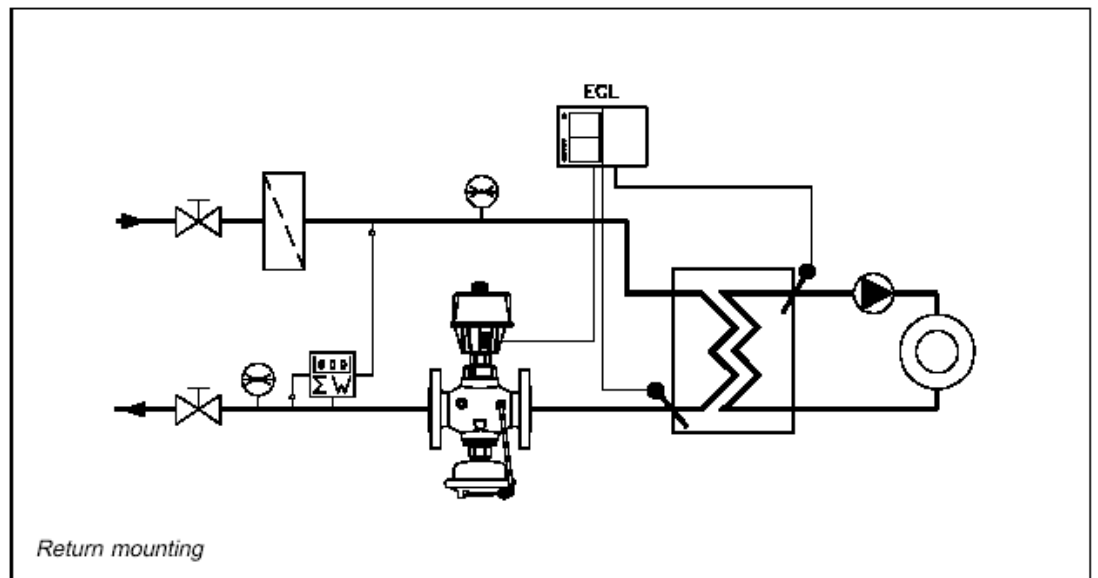
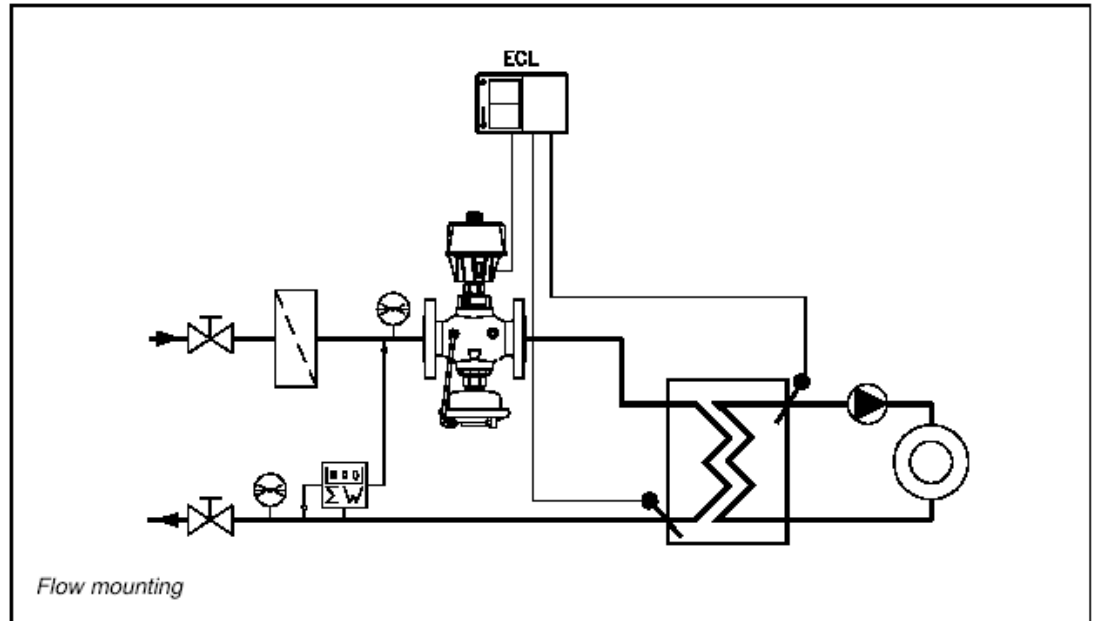
<sup>1)</sup> Because of the higher valve opening factor (Y), the noise level can be insignificantly higher, depending on the pressure ratio (X<sub>r</sub>)

<sup>2)</sup> Reference: 0.75 x max. flow

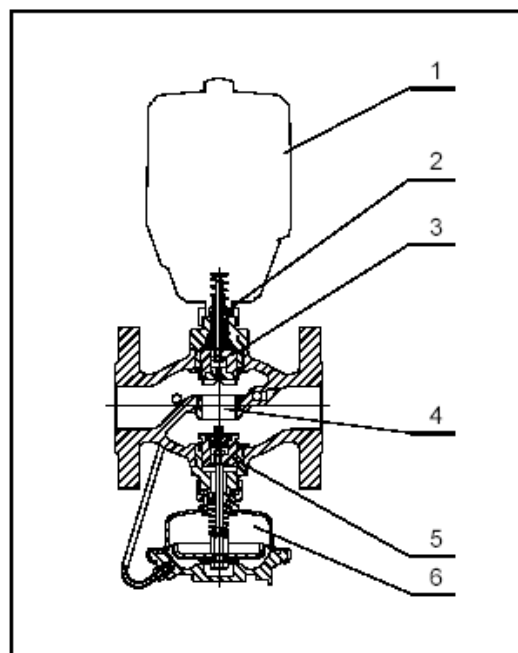
## Actuator

Effective surface	(cm <sup>2</sup> )	54
Nominal pressure	(PN)	25
Diff. pressure across restrictor	(bar)	0.2
Max pressure difference between (+) chamber and (-) chamber	(bar)	14
Material	Body	Stainless steel M. No. 1.4301 Brass, resistant to dezincification
	Diaphragm	EPDM
Impulse tubes		Copper tube Ø 5x1
Approx. weight	(kg)	1.5

## Application examples



## Design and operation

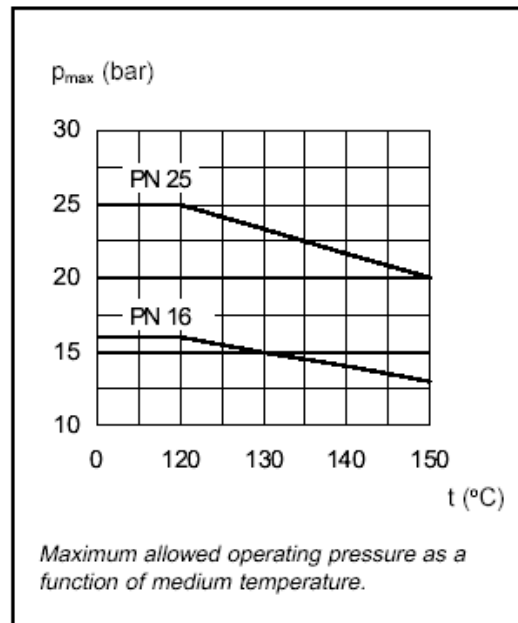


- 1 Electric actuator
- 2 Stroke adjustment
- 3 Cone, control valve
- 4 Seat
- 5 Cone, flow controller
- 6 Pressure actuator

This controller acts as flow limiter as well as control valve. The pressure actuator keeps a constant differential pressure across the control valve of 0.2 bar. The flow limitation is set by adjusting the stroke of the control valve's cone.

## Sizing diagram

Pressure temperature diagram according to DIN 4747 and DIN 2401



## Installation

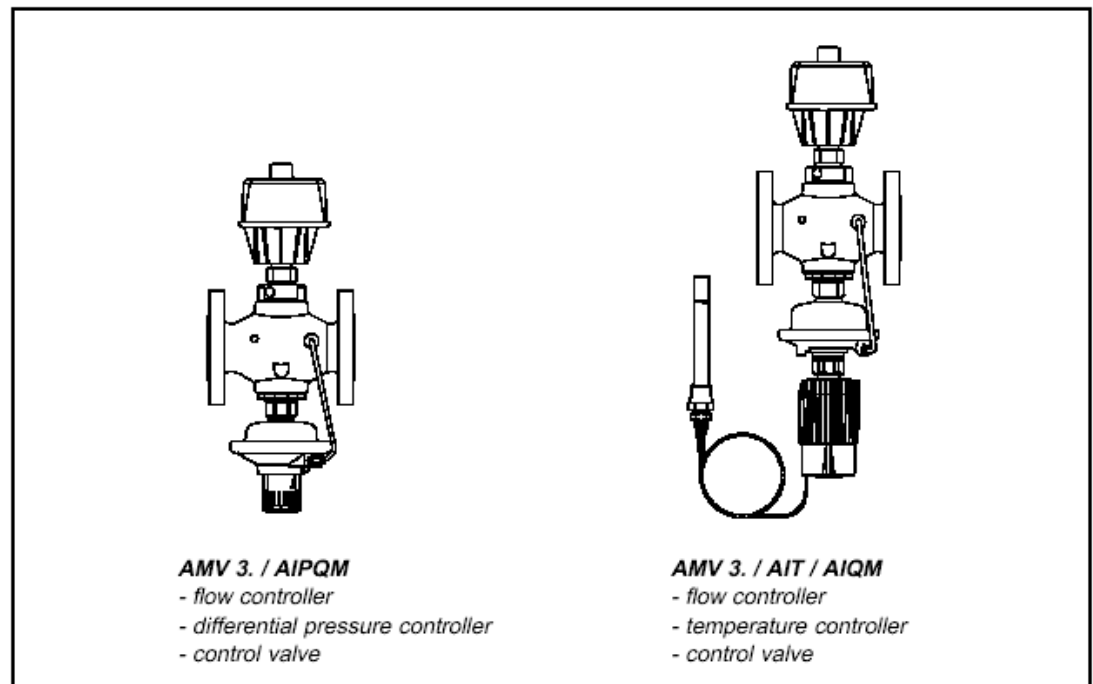
The controller AIQM can be installed in the flow and return of the system. The installation position can be freely chosen. If the controller is installed on the horizontal pipe, the electric actuator should be placed in an upward position.

If insulating against heat loss, ensure that only the valve is insulated. The electric actuator and the pressure actuator must not be insulated!

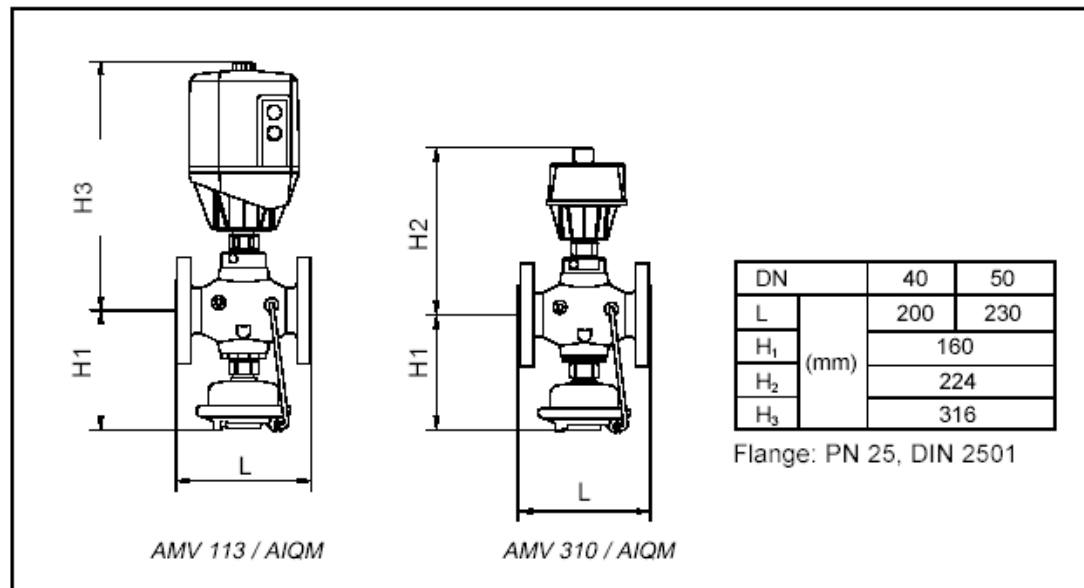
## Adjustment

The set-point for the flow limitation can be adjusted with the aid of adjustment characteristic curves (cf. the AIQM instruction) or by a flow meter.

**Possible combinations**  
(ordering on request)



## Dimensions



DODÁVÁ:

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