

1. How energy efficiency is improved

Absolutely no losses through leakage, therefore energy consumption is minimised.

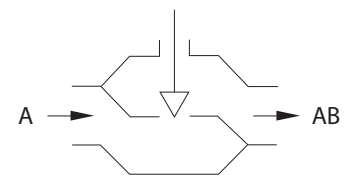
2. Areas of application

Control valve for regulating heating zones, air secondary treatment appliances and fan-coil units in combination with thermal unit valve drive AXT 211 and TA2 .. , continuous drive AXS 215S or motorised unit valve drive AXM 117(S).



3. Features

- Nominal pressure 16 bar
- Nominal diameter DN10 to DN25
- Linear characteristic
- Fixed Kvs
- Standard version with Female BSP thread
- If the spindle is depressed, the valve is closed
- Closes against the pressure



4. Technical description

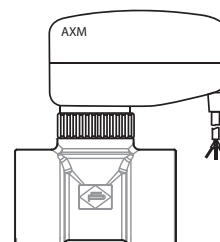
- Valve with female thread according to DIN EN ISO 228-1, Class B
- Valve body made of brass EN12165-CW617N
- Stainless steel spindle
- Plug with soft seal made of EPDM
- Stuffing box with O-ring seal

TYPE	DIAMETER DN	K _{vs} -VALUE m ³ /h	CONNECTION	STROKE	WEIGHT kg
VUA 015 F200	15	1.7	G1/2B	2.5 mm	0.20
VUA 020 F200	20	2.6	G3/4B	2.0 mm	0.26
VUA 025 F200	25	4.9	G1B	2.0 mm	0.51

Nominal pressure	PN16
Max. operating pressure	upto 110 °C 16 bar
Operating temperature	4...110 °C
Characteristic	linear
Leakage rate	0,0001% of kvs
Max. glycol solution	30%

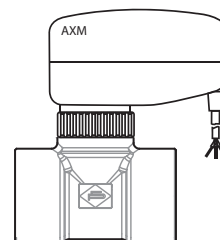
Combined with a 24V electric drive

ACTUATOR	CLOSES AGAINST THE PRESSURE			AXM217F202	AXM217SF.0.
Valve	ΔP_{max}	ΔP_s	close off pressure		
VUA 015 F200	1.1	-	1.1		
VUA 020 F200	1.1	-	1.1		
VUA 025 F200	0.8	-	0.8		



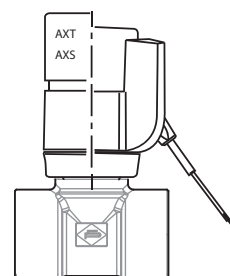
Combined with a 230V electric drive

ACTUATOR	CLOSES AGAINST THE PRESSURE			AXM217F202
Valve	ΔP_{max}	ΔP_s	close off pressure	
VUA 015 F200	1.5	-	1.5	
VUA 020 F200	1.5	-	1.5	
VUA 025 F200	1.0	-	1.0	



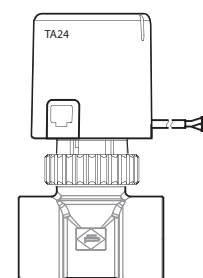
Combined with a thermal and continuous drive

ACTUATOR	CLOSES AGAINST THE PRESSURE			AXT211F ...	AXS215SF ...
Valve	ΔP_{max}	ΔP_s 1)	close off pressure		
VUA 015 F200	1.1	1.1	1.1		
VUA 020 F200	1.1	1.1	1.1		
VUA 025 F200	0.8	0.8	0.8		



Combined with a thermal drive

ACTUATOR	CLOSES AGAINST THE PRESSURE			AXT211F ...	TA2 ..
Valve	ΔP_{max}	ΔP_s 1)	close off pressure		
VUA 015 F200	1.1	1.1	1.1		
VUA 020 F200	1.1	1.1	1.1		
VUA 025 F200	0.8	0.8	0.8		



NOTES

- ΔP_{max} [bar]= Max. permissible pressure difference across the valve at which the valve and actuator can still firmly open and close the valve. Figures stated are for a static pressure of 6 bar, at a static pressure of 16 bar, the values are reduced by 15%.
- ΔP_s [bar]= Max. Permissible pressure difference across the valve at which in the event of a malfunction, the actuator can close the valve.
- Close/off pressure The pressure difference across the valve in control mode that the force of the drive can overcome. In this mode, a reduced serviceable life can be expected. Cavitation, erosion and pressure surges may damage the valve. The values stated apply only when the valve is fitted to the actuator.
- 1) Only for NC versions

5. Operation

The through valve (passage A-AB) is closed by pressing the spindle in; it is returned by spring pressure (the spring is in the valve). The thermal drive can be used to move the valve to the OPEN or CLOSE position. Used in combination with the normally closed drive version, the control passage closes in the event of power failure.

Used with the AXS 215S actuator, the valve can be moved to any position. Depending on the settings of the DIP switches, the valve is moved continuously with a control voltage of 0...10 V / 10...0 V or 2...10 V / 10...2 V. The control signal is then assigned linearly to the valve stroke and provides the equal percentage characteristic in the valve. The positioner integrated within the actuator controls the actuator in relation to the settings of the DIP switches and the positioning signal y. The actuator positions the valve and, as soon as the position is reached, it stops.

Used with the AXM 217 motorised drive, the valve can be moved to any position. On the AXM 217S (with positioner), the valve is moved continuously by a control voltage of 0...10 V.

6. Engineering and fitting notes

The final control element can be fitted in any position except facing downwards. The ingress of condensate, dripping water etc. into the drive should be prevented.

In order to prevent cavitation noise affecting rooms where quietness is essential, the pressure difference across the valve should not exceed 0.6 bar.

In order to restrain contaminants in the water (eg. welding beads, rust particles etc.) and to prevent the spindle from being damaged, we recommend the employment of collective filters, eg. for each floor or feed pipe. The composition of the water should be in accordance with VDI 2035.

The replacement of the gland can only be carried out when the valve is not pressurised. The stuffing box is sealed with regard to the medium. Medium with coolant such as glycol max. 30%.

When insulating the unit valve, the insulation should not extend beyond the nut or the bayonet ring on the drive.

7. Additional technical data

Valve body made of brass and internal threads to ISO 228/1 Class B. Stuffing box with O ring made of ethylene-propylene. A cap is supplied for manual adjustment.

8. Material numbers as per DIN

	DIN MATERIAL NO.	EN-DIN CODE
Valve body	CW617N	Cu Zn 40 Pb2 as per EN12164
Valve seat	CW617N	Cu Zn 40 Pb2 as per EN12164
Spindle	1.4310	X10 Cr Ni18-8 as per EN188-1

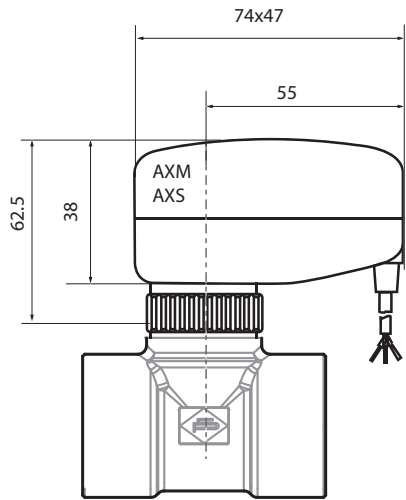
TECHNICAL INFORMATION

Pressure and temperature specifications	EN764, EN1333
Flow parameters	VDI/VDE 2173
CE-conformity: Directive on pressure Equipment 97/23/EC Article 3.3 (Fluid group II)	

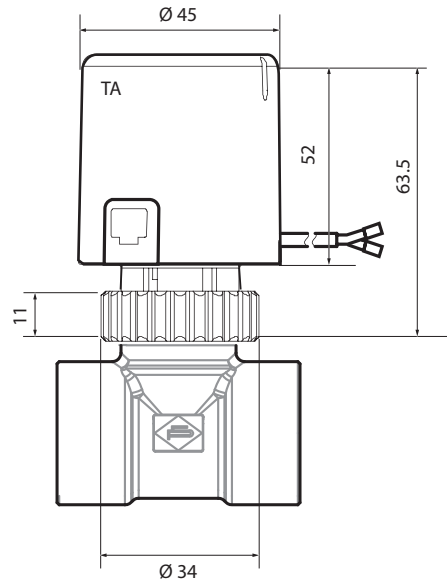
9. Dimension drawing and Assembly

Combination with AXM motorised drive, TA and AXT/S Thermal drive.

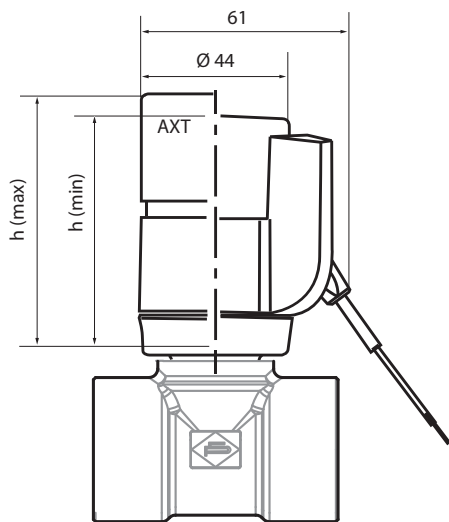
VUA with AXM



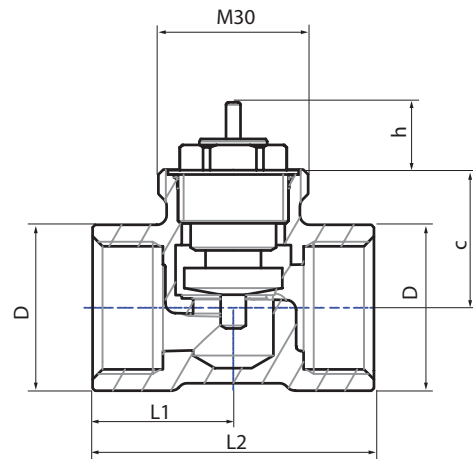
VUA with TA



VUA with AXT



VUA



TYPE	h (min)	h (max)
NC	59	66
NO	59	64

DN	D	L1	L2	c	h
15	G1/2"	26	52	42	14
20	G3/4"	28	56	39.4	13.4
25	G1"	41	82	49.9	13.8