Product Information

Direct Acting Stepper Motor Controlled Valve

Series 10.00x.126 - ds

A. u. K. Müller

Solenoid valves
Control valves
Special valves and systems

A. u. K. Müller GmbH & Co. KG
Dresdener Str. 162
D-40595 Düsseldorf/Germany

Tel.: +49(0)211-7391-0
Fax: +49(0)211-7391-281

e-mail: info@akmueller.de
Internet: www.akmueller.de



Characteristics

- Direct acting valve
- Drive: stepper motor; media-separated by PTFE bellows
- Long term performance capability
- Medium temperature up to 80 °C
- Continuous operation
- No water hammer
- High operating safety by usage of high quality material and 100% final testing

Description

This valve is a 2/2-way valve of nominal width DN 4.4 with continuously variable stroke.

It is suitable for setting up controlled systems, for small flow values without a complete shut-off function.

This valve has been specifically developed for applications that require continuous adjustment of the flow rate. Thus, the flow rate can easily be controlled depending on the required amount withdrawal quantity.

It can also be used as a line regulationvalve in heading system, which automatically regulates the under floor heating depending on the room air temperature, measured at any point in the room.

The stepper motor drive part of the valve is completely separated from the medium by means of special PTFE bellows.

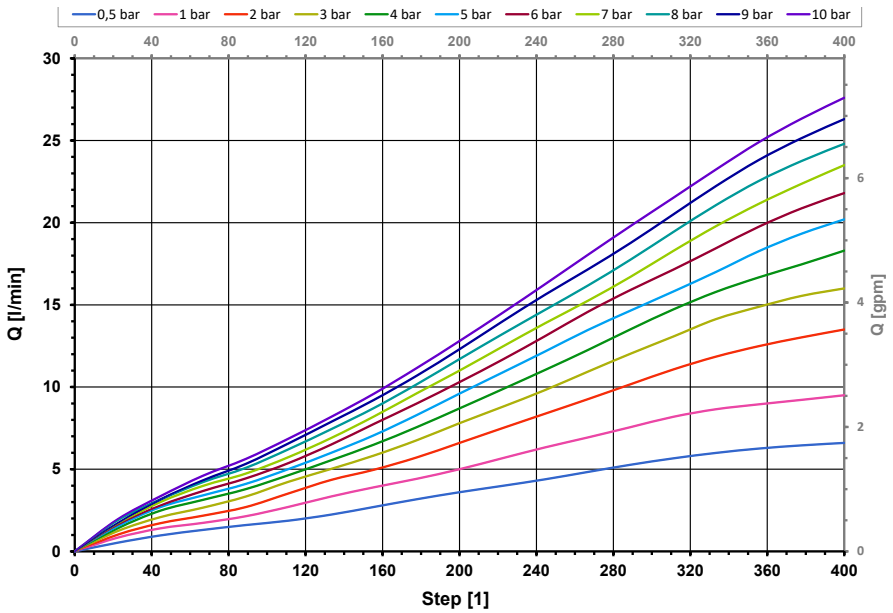
Applications

- Line regulation in heating systems
- Instant flash heater
- Hot and cold vending machines
- Industrial equipment
- Air conditioning
- Agriculture equipment
- Cleaning equipment
- Temperature equalizers
- Dishwashers
- Washing machines
- Water treatment equipment

Approvals

- KTW - BWGL
- Other approved versions available on request

Typical Performance Curve (deviation ± 5 %)

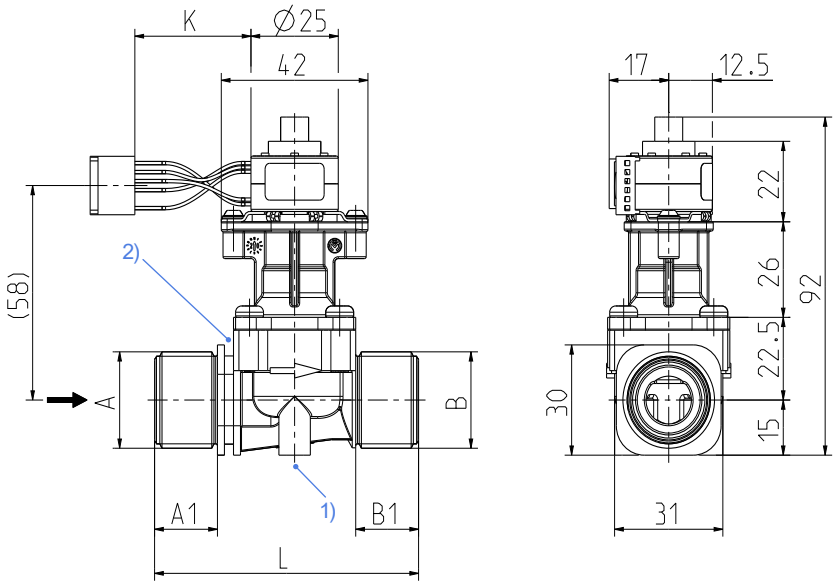


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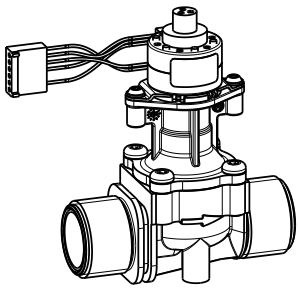
1) Fixing possibility for self tapping screw Ø 4,2
2) Fixing groove

Technical Data

type	stepper motorized valve		
construction	2/2-way single chamber straight valve, direct acting		
function	continuously adjustable stroke		
fitting position	any, preferably actor upwards		
media	potable water and physically and chemically similar media		
T-Medium	5 - 80	°C	
T-Ambient	5 - 60	°C	
DN	4,4	mm	
p-Operating	0 - 10	bar	
flow factor Kv	9,5	l/min @ 1 bar (completely open)	
actuator type	stepper motor unipolar		
steps (open - closed)	400	max.	
nominal voltage	12 18 24	V DC V DC V DC	 on request
Voltage tolerance	± 1 V		
duty cycle	100%		
Protection Type	IP 00		
Motor connection leads	5 x AWG26		
plug	Type: Molex Housing: 2695 (22-01-3067) Contact: 2759 (08-50-0113)		
Insulation class	B	according to EN 60730	

Materials

Valve body	PA 66 glass fibre reinforced PPE on request
Retention gland	PPE
Nozzle	stainless steel
Bellow and sealing cone	PTFE
Seal	EPDM
Filter (inlet)	stainless steel POM on request



Options

Material	Inlet		Fixing Groove	Outlet		Length	Strand
	Ø A	A1	2)	Ø B	B1	L	K
PA 66	G 3/8	13	yes	G 3/8	13	66	440 other cable lengths on request
PA 66	G 3/8	13	yes	G 1/2	15	68	
PA 66	G 3/8	13	yes	G 3/4	18	71	
PA 66	G 1/2	15	yes	G 3/8	13	68	
PA 66	G 1/2	15	yes	G 1/2	15	70	
PA 66	G 1/2	15	yes	G 3/4	18	73	
PA 66	G 3/4	18	yes	G 3/8	13	71	
PA 66	G 3/4	18	yes	G 1/2	15	73	
PA 66	G 3/4	18	yes	G 3/4	18	76	

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Connections and Lead Colours of the Stepper Motor

PIN	Colour	Motor
1	red	A1
2	white	A2, B2
3	black	A3
4	green	B1
5	-	-
6	blue	B3

Pulse Scheme

		Red	Black	Green	Blue	White	
close	1	-			-	+	open
	2	-		-		+	
	3		-	-		+	
	4		-		-	+	

Step frequency≤ 50 Hz

Optional: Stepper motor control SMC-001

A. u. K. Müller will be happy to provide you with the EMC-tested SMC-001 stepper motor controller for initial initialisation or for test purposes.

Short description

The SMC (**S**tepper **M**otor **C**ontrol) is an evaluation electronics for the control of the stepper motor controlled valve series.

To bring the unit into operation the stepper motor has to be plugged to the control electronics as well as the supply voltage (12 - 24 VDC) and the control voltage (0 - 10 VDC). The supply voltage must be applied according to the required motor voltage as the input voltage corresponds to the output voltage.



Technical Data		
T-ambient **Operation** **Storing**	 -5 - +60 (23 - 140) -5 - +80 (23 - 176)	 °C (°F) °C (°F)
Stepper motor	bi-, unipolar	
Nominal voltage	12 - 24	V DC
Voltage tolerance	+10% -15%	
Duty cycle	100%	
Protection type	IP 00	
Electrical conncections	Screw terminals for power supply and control voltage Plug contact for stepper motor of the valve	
Protection class	III	

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