Dialysis Valve, Direct Acting, NC
Medium Separation by PTFE Bellow

Product Information

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

Series U9x.60x



Characteristics

- Special valve for haemodialysis machines
- Medium separated by PTFE bellow
- Function and leak tightness in both flow directions
- Plunger guided by PTFE
- High flow rate
- Various fixing options
- Suitable for pressure and vacuum operation
- Short cycle times
- High number of ON-OFF cycles
- Minimal dead areas in valve body
- Easy chemical disinfection
- Materials with worldwide approvals
- High operating safety by use of high quality materials
- Low power consumption
- CE - Marking
- UL and CSA certification on request

Description

This valve series has been specially developed for use in haemodialysis machines and other medical devices. The design recognizes the specific requirements of this market.

Used as an inlet or outlet valve for the balance chamber of a dialysis machine, the valve will work in both flow directions across the complete pressure range.

A variety of standard bodies are available to connect to the customer's balance chamber but customised versions can be produced.

The use of high quality plastics and sealing elements made of EPDM ensure durability even with aggressive media such as dialysate, cleaning agents and disinfectants.

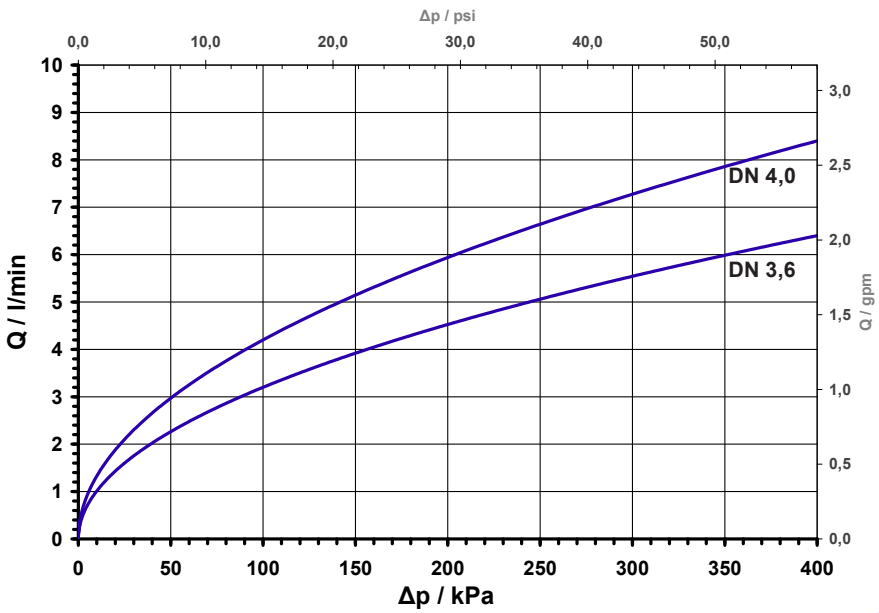
The PTFE Bellows ensure a longer lifetime than a rubber membrane as it is less likely to become brittle.

All materials meet EU, RoHS and REACH regulations.

Applications

- Haemodialysis machines
- Medical engineering
- Water treatment
- Disinfection equipment

Typical Performance Curve



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I 

II 

III 

IV 

V 

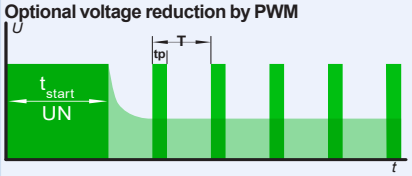
VI 

VII 

VIII 

IX 

Technical Data

Type	Solenoid valve for dialysis machines	
Construction	2/2- or 3/2-way single chamber straight valve, direct acting	
Function	NC (normally closed) NO (normally open) on request	
Fitting position	any	
Media	Water Dialysis fluid Disinfection solutions in the concentration for each application	
T-Medium	5 - 90	°C
T-Ambient	5 - 70 (5 - 60	°C °C on coils MS 24, MS 25)
DN	3,6 4,0	mm mm
p-Operating	10 - 400	ΔkPa (abs) both flow directions
Flow factor Kv **DN 3,6** **DN 4,0**	 3,2 4,2	 l/min l/min
Coil type	MS 06, MS 24, MS 25	
Nominal voltages	24	V DC
	other voltages on request	
Voltage tolerance	±10%	
Optional voltage reduction by PWM		
		
	t_{start}: 100 ms tp: 6 µs T:10 µs [100kHz] PWM	
Duty cycle	100%	
Nominal power	9,5	W
	by PWM power reduction to approx. 3,5 W	
Protection Type	IP 00, IP 65 according to EN 60529	
Coil connections	flat tabs 6,3 x 0,8 mm plug socket according to EN 175301-803 (IP65), several cable connections (IP65, IP68)	
Insulation class	F	according to EN 60730
Protection class	III	according to EN 60730 (for incorporation in class I)

Materials

Valve body	PEI PPSU on request PEEK on request
Plunger guide	PTFE
Plunger and spring	stainless steel
Bellow	PTFE
Seal	EPDM FKM on request
Coil coating	PBT, PET or epoxy resin

92.60x	MS 06 (IP00)	
90.60x	MS 24 (IP65)	
93.60x	MS 25 (IP65, IP68)	

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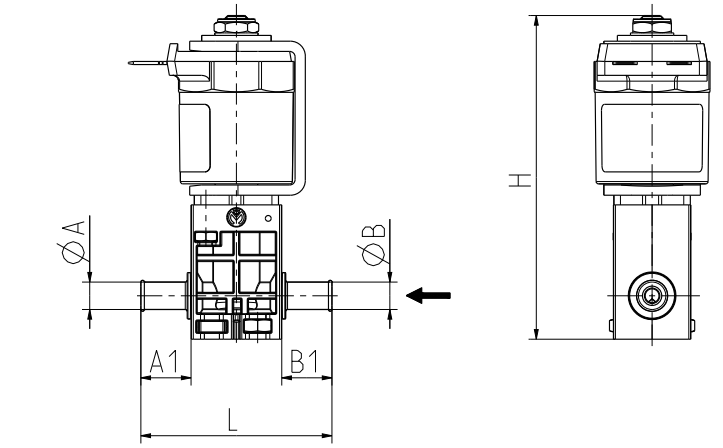
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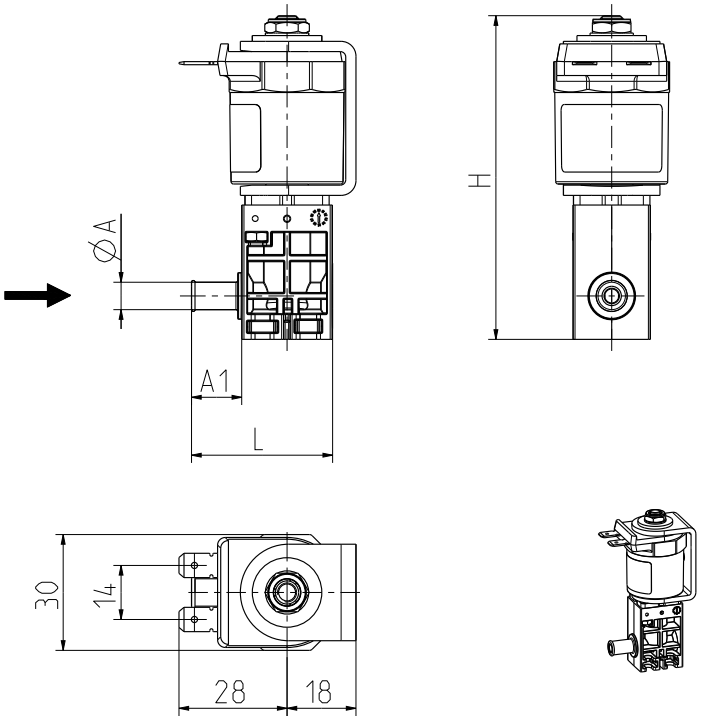


I





II



Options

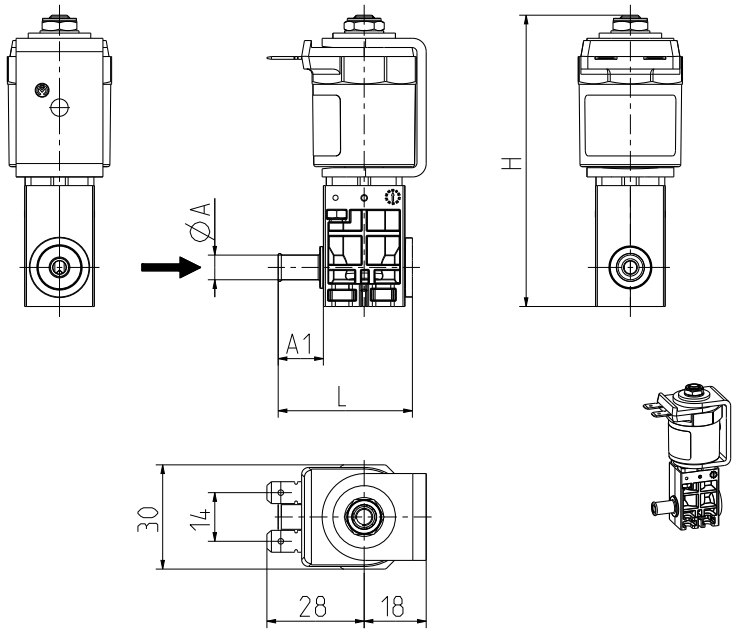
Variant						Length	Height	ID
	DN	øA	A1	øB	B1	L	H	
I	3,6	7,1 Nozzle	13,0	7,1 Nozzle	13,0	49.5	85,5	81050
II	3,6	7,1 Nozzle	13,0	-	-	37,0	85,5	81054

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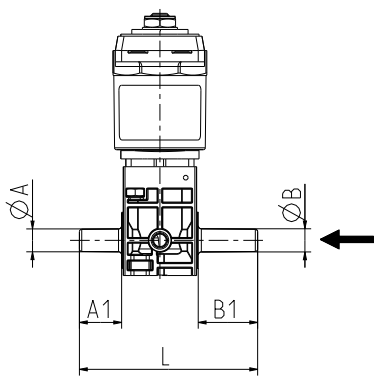
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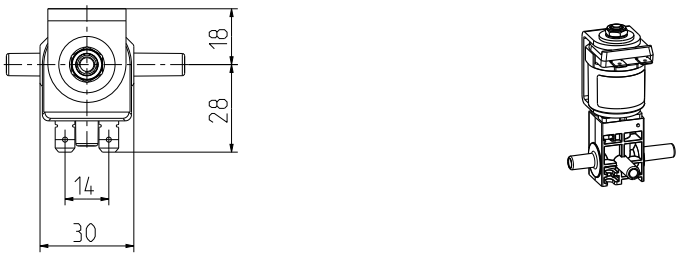


III





IV



Options

Variant								Length	Height	ID
	DN	øA	A1	øB	B1	øC	C1	L	H	
III	3,6	7,1 Nozzle	13,0	-	-	-	-	39,0	85,5	81055
IV	3,6	7,3 Nozzle	13,5	7,3 Nozzle	19,0	7,5 Nozzle	16,0	57,0	85,5	81066

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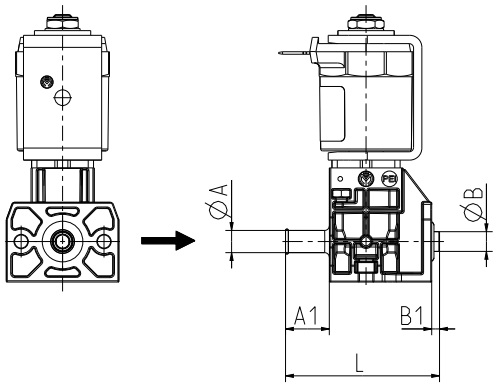
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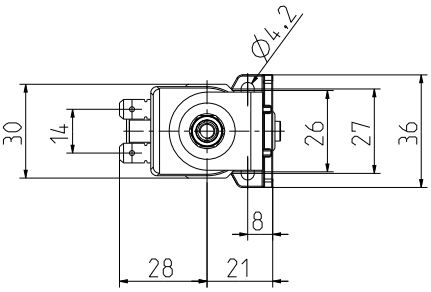
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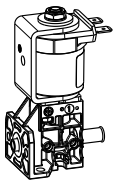
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V

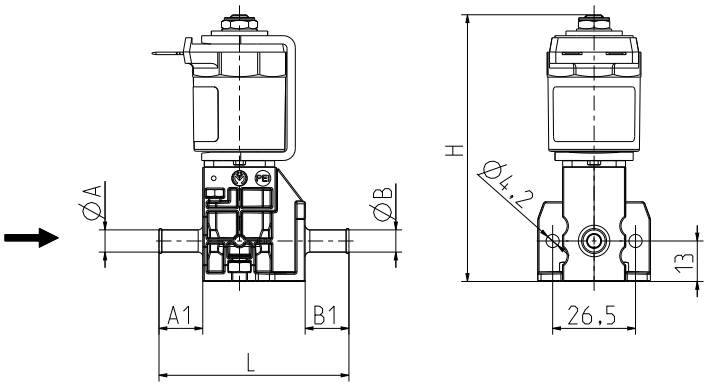


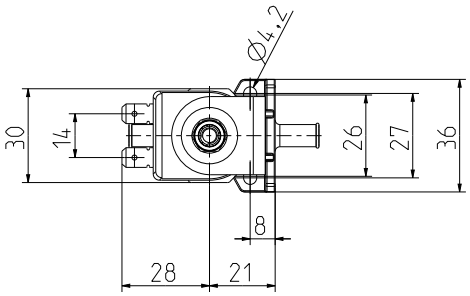


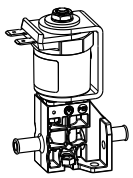




VI







Options

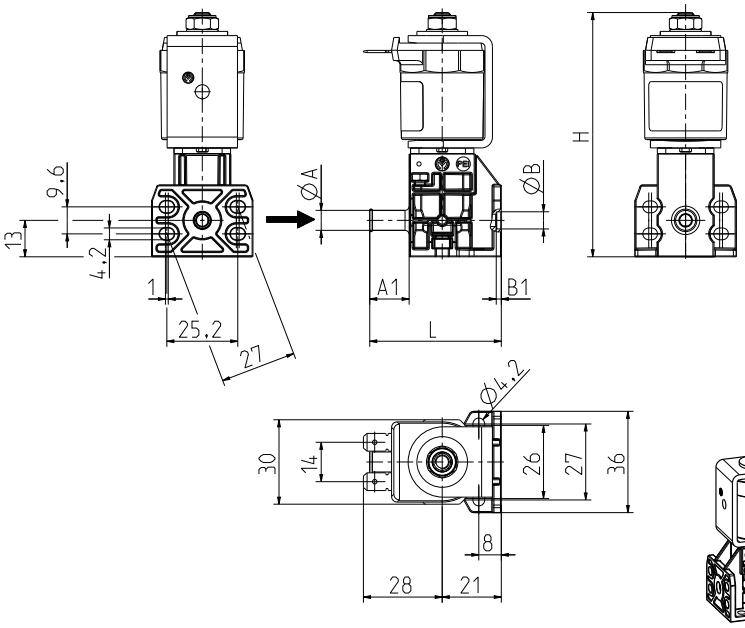
Variant						Length	Height	ID
	DN	øA	A1	øB	B1	L	H	
V	4,0	7,1 Nozzle	14,0	6,3	2,5	49,0	87,0	81070
VI	4,0	7,1 Nozzle	14,0	7,1 Nozzle	14,0	61,0	87,0	81071

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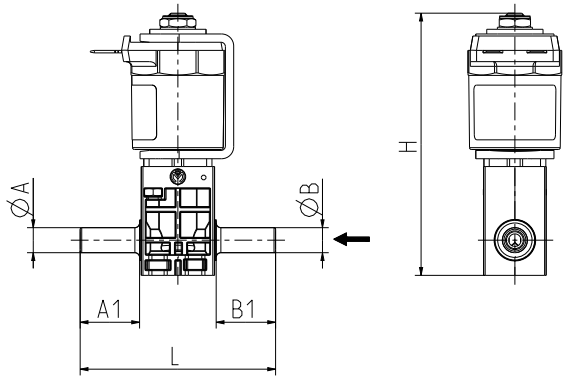
Series U9x.60x





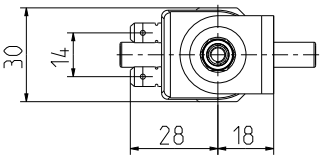
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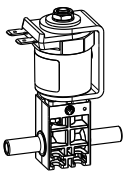
Other housing variants on request





VIII





Options								
Variant						**Length**	**Height**	**ID**
	DN	øA	A1	øB	B1	L	H	
VII	4,0	7,1 Nozzle	14,0	6,1	1,8	49,0	87,0	81072
VIII	3,6	8,0 Nozzle*	19,0	8,0 Nozzle*	19,0	62,5	85,5	on request

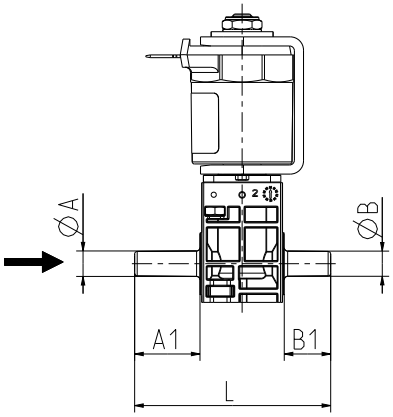
* applicable for John Guest connection

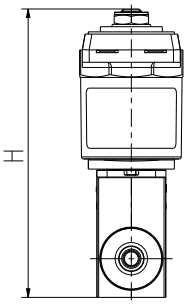
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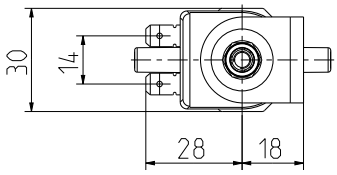
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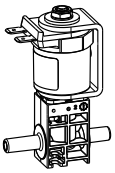


IX









Options

Variant						Length	Height	ID
	DN	øA	A1	øB	B1	L	H	
IX	3,6	7,3 Nozzle	19,0	7,3 Nozzle	13,5	57,0	85,5	on request

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