A. u. K. Müller

Medicine

Fascinating Valve Technology






Fascinated by Valve Technology

A. u. K. Müller has more than 70 years experience in the customer oriented development and manufacture of solenoid valves, control equipment and speciality valves.

Initially a family business, we have grown internationally into a respected leading manufacturer of valve technology thanks to our many years of experience and our process engineering quality solutions.

Our strength: the development and manufacture of your application-specific valve solution

Thanks to many years of experience in innovation and a very high level of vertical integration, we are able to respond precisely and efficiently to our customers' wishes. Our detailed knowledge of customer applications as well as the applicable standards and regulations helps us to do this. Our know-how is complemented by the use of state-of-the-art technologies in production and testing.

Our portfolio offers comprehensive approval options include:

NSF KTW SVGW SSIGE WRAS ACS

We have developed thousands of innovative, future-oriented product variants and systems for our customers and together with our customers. Our high-quality components are used wherever high reliability counts, people and machines need to be protected and resources need to be economised.

Our many years of experience in the field of valve and fluid technology extends to a wide variety of industries, in particular:

- **Sanitary**
- **Vending**
- **Medical Technology**
- **Industry**
- **Agriculture/Food**
- **Environmental Technology**

The name A. u. K. Müller stands for precision-fit valve solutions with a high level of continuous serviceability and functional reliability. Every valve is tested thoroughly before it leaves our factory. Low energy consumption values and noise emissions of our products support an efficient overall design of your equipment.

You too can profit from our cross-sector know-how and our development competence, which have been combined in our products and systems for many years.

From the initial design to series delivery, we support you with consistently high quality as befits a product carrying the words **"Made in Germany"**.

Solutions for medicine & Laboratory Technology

When it comes to life, in addition to the use of biocompatible materials, the highest reliability is required. We do not make any compromises here. Thanks to production in Germany, with a high level of vertical integration and using the latest technologies, you can rely on the high quality of our products. And because that is not enough for us, we put every single valve through its paces before it leaves our factory.

Valves Made of High Performance Synthetic Material

A. u. K. Müller valves made of high-performance synthetic material have extensive approvals for drinking water and foodstuffs. They are suitable for hot water and steam and due to their low thermal conductivity they have less influence on the medium temperature. In addition, the engeneering polymer valves are significantly lighter than metal valves, they do not contain any harmful heavy metals and are particularly cost-efficient, durable and robust.

Solutions for dialysis, sterilisation, disinfection and water treatment

In medical technology, we have been successfully producing valves and components for dialysis, sterilisation and disinfection for many years. Our products are also used in medical equipment manufacturing, analysis and laboratory technology as well as water treatment. These highly sensitive areas require products that meet the highest quality standards.

FitSys 18 - Push Fit System

To match the series of 18.00x valves, A. u. K. Müller offers the FitSys 18, a particularly intuitive, tool-free and, above all, safe fitting system including functional elements such as distributors, backflow preventers and pressure reducers.

Intuitive operating concepts & hygiene

Hygiene is a top priority in the health sector. A. u. K. Müller technology enables touch-free operation of taps and supports them with intuitive operating concepts. Regular stagnation flushing and innovative housing geometries ensure that drinking water hygiene is constantly maintained at the highest level.

Individual Solution

Based on many years of know-how and an innovative product portfolio of valve technology made of high-performance plastics, we offer our OEM customers the reliable realisation of customised components or system solutions from planning to 100% compliant medical products.

It‘s the inner values that count.

medium-seperated valve blocks
60.00x
further information on page 14

Servo-controlled solenoid valve
incl. dirt trap
44.007.126
further information on page 23

FitSys 18 Fitting System
further information on page 18

Safety for the most important working tool in dentistry

Water is probably the most essential work tool in every dental practice. It is used for cleaning, comes into contact with wounds, is swallowed and inhaled as an aerosol by patients and practice staff. Excellent drinking water quality is therefore a top priority.

With the knowledge gained from our research and development, we are innovation drivers for valve technology in hygienically sensitive areas. Careful material selection and optimised media guidance make A. u. K. Müller the industry leader for solenoid valves made of high-performance plastic.

Dental units belong to the highest risk category according to DIN 1717.
A. u. K. Müller offers solutions that fully support the drinking water ordinance, VDI/DVGW 6023, as well as the DIN EN 1717 standard.

A. u. K. Müller valves and fitting systems are used to control water and air. Their reliability creates safety in everyday use and ensures economic usability in dental practices.

For the highest demands and beyond.

Dialysis valve
92.609.xxx
further information on page 15

pressure reducer
42.004.126
further information on page 18

Hose clamp valve
made of high performance plastic
16.003.525
further information on page 17

High-performance valves for dialysis put through their paces

A. u. K. Müller manufactures high-precision components for controlling the dialysate in dialysis machines.

Due to the highest demands on the reliability of these components, renowned manufacturers rely on quality valves from A. u. K. Müller.

The use of biocompatible and physiologically suitable high-performance plastics, with sealing elements made of EPDM or FKM, ensures a long service life when using dialysate, cleaning and disinfection solutions and fully meets the requirements of a medical product.
More than 20 A. u. K. Müller valves can be used in a dialysis machine.

As inlet and outlet valves on balance chambers of dialysis machines, the valves ensure reliable function and tightness in both flow directions over the entire pressure range.

Quality for safety in stressful applications.

Impeller pump
41.007.400
further information on page 18

Backflow preventer
according to DIN 1717
49.0xx.x26
further information on page 20

Modular compact valve system
43.00x.xx6
further information on page 14

Works best even under pressure: valves from A. u. K. Müller

When needed the instruments should be fully sterilised. Use in professional sterilisation and disinfection equipment means pure stress for the components, as they have to withstand high pressures and temperatures (up to 143 °C saturated steam).
We have developed valves and fittings especially for use in autoclaves. This means that germs don't stand a chance and the usability of required instruments is always ensured.

Intuitive operation and maximum hygiene.

Valves , sensors and accessories for electronic fittings

Compared to single-lever or classic taps, electronic taps have advantages in the areas of hygiene, economy and operational safety.
They are operated without contact by a sensor, so that the transfer of germs to the user through the operating lever is excluded. In this way, up to 80 % of infections spread via the hands can be prevented. In addition, they offer the advantage of automatic usage recognition and subsequent hygiene flushing to effectively reduce excessive bacterial proliferation in drinking water through regular water exchange via the tap and thus also in the piping system.

From the power supply to the sensors and valves, A. u. K. Müller offers comprehensive solutions for the design of electronic fittings. Due to their bistable design, our electronic cartridge valves are extremely economical and can also be operated in battery mode for years. This allows for easy retrofitting even in existing sanitary rooms.

HyGenic hygiene valve DN 5 - world innovation for the highest hygiene standards

- HyGenic hygiene valve for up to 10x less germ formation due to patented volume compensation
- Suitable for thermal as well as chemical disinfection
- Miniaturised design
- Reduction of the area in contact with the medium / reduction of stagnation areas

The new A. u. K. Müller HyGenic hygiene valve sets new standards for preventing germ formation within a valve.

The valve is available in two variants. The HyGenic is interface-compatible with DN 7 screw-in contours, while the HyGenic Max reduces the area in contact with the medium to a minimum.

Series Nominal width	Ways	Function	Kv (l/min @ 1 bar)	p-Funct. (bar)	T-Medium (°C)	T-Environment (°C)	Connection
50.005.110	2/2	NC	7,5 l/min	0,5 - 10	70	60	M28 x 1

DIRECT OPERATED VALVES

Directly controlled compact valves are suitable for controlling fluids in a wide range of applications. Due to their high temperature range, the optional media separation and the biocompatible choice of materials, they are particularly interesting for hygienically sensitive areas of application, such as medical applications.

The modular design of the 43.00x. xx6 and 60.00x driveable valve series allows any combination of several valves and thus the control of complex media paths and connections within an application..

DIRECT OPERATED COMPACT VALVES

	Series Nominal width	Ways	Function	Kv (l/min @ 1 bar)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)	Connection
	43.00x.102 media-separated DN 3 DN 4 DN 5	2/2	NC	3,5 - 6,0	0 - 3	98 (65 °C max. John Guest)	70 (65 °C max. John Guest)	Hose Push-fit Ø 6 mm / 8 mm
	43.00x.142 DN 1 DN 2 DN 3 DN 4 DN 5	2/2	NC	0,5 - 5,5	0 - 10	98 (65 °C max. John Guest)	70 (65 °C max. John Guest)	Hose, Push-fit Ø 6 mm / 8 mm
 NEW: also with FitSys plug-in connectors	43.00x.122 media-separated via PTFE bellows DN 3 DN 4 DN 5	2/2	NC	3,3 - 5,5	0 - 5	98	70	Hose, Push-fit Ø 6 mm / 8 mm
	43.00x.182 media-separated DN 2 DN 4	2/2	NO	1,8 - 5,3	0 - 3,5	98 (65 °C max. John Guest on request)	70 (65 °C max. John Guest)	Hose, Push-fit Ø 6 mm / 8 mm
 combinable and individualisable	43.00x.xx6 media-separated DN 1,5 DN 2 DN 3 DN 4 DN 5	2/2 3/2 (on request)	NC	1,0 - 5,5	0 - 8	98 (65 °C max. John Guest on request)	70	

HIGH PRESSURE VALVES

	Series Nominal width	Ways	Function	Kv (l/min)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)	Connection
	18.00x.000 DN 1,5 DN 2 DN 2,5	2/2	NC	0,9 - 2,5	0 - 16	98 (143 °C (3 bar) Saturated steam)	60	Hose clamp or push-fit connections
	18.00x.001 DN 1,5 DN 2,5	2/2	NO	0,75 - 2,25	0 - 10	98 (143 °C (3 bar) Saturated steam)	60	Hose clamp or push-fit connections
	18.00x.032 DN 1,2 DN 1,5 DN 2,5	3/2	r - a = NC p - a = NO	0,6	0 - 16	98 (143 °C (3 bar) Saturated steam)	60	Hose clamp or push-fit connections

MINIATURE VALVES

	Series Nominal width	Ways	Function	Kv (l/min)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)
	19.00x.287 bi DN 0,5 DN 0,8	2/2	bistable, pulse controlled	0,13 l/min 0,31 l/min	0 - 10	5 - 70	5 - 60
	19.00x.287 mono DN 0,5 DN 0,8	2/2	NC	0,13 l/min 0,31 l/min	0 - 10	5 - 70	5 - 60

DIALYSIS SOLENOID VALVE, NC

- Media separation through PTFE bellows
- special hygienic advantage
- resistant to external influences
- 20% more compact than the previous version
- also available with cable
- optional IP00 and IP65 version

This valve was specially developed to control the dialysate in the balance chamber in haemodialysis machines. The latest version is more compact and offers an even greater hygiene advantage.

Series Nominal width	Ways	Function	Kv (l/min @ 1 bar)	p-Operation (kPa)	T-Medium (°C)	T-Environment (°C)	Connection
92.609.xxx	2/2	NC	3,6 l/min	10 - 400	5- 90	5 - 70	Hose

LEVER VALVES

	Series Nominal width	Ways	Function	Kv (l/min)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)	Connection
	47.00x.202 DN 2 DN 3 DN 4	2/2	NC	2,0 - 4,3	0 - 8	98	70	Push-fit Ø 6 mm / 8 mm
	47.00x.282 DN 2 DN 4	2/2	NO	1,8 - 3,8	0 - 8	98	60	Push-fit Ø 6 mm / 8 mm
	47.00x.203 DN 3 DN 4	3/2	P - A = NC R - A = NO	1,6 - 3,8	0 - 3	98	60	Push-fit Ø 4 mm / 6 mm / 8 mm
	47.00x.103 DN 4	3/2	P - A = NC R - A = NO	3,5	0 - 2,5	98	70	Hose nozzle
	47.009.302 DN 9	2/2	NC		0 - 0,6	90	60	G 1/2”
	47.009.382 DN 9	2/2	NO		0 - 0,6	90	60	G 1/2”
	47.009.303 DN 9	3/2	P - A = NC R - A = NO		0 - 0,6	90	60	G 1/2”
	60.00x DN 1,3 / 2,5	4/2	NC	0,8 / 1,7	0 - 5 (3 bar) (Saturated steam)	PA12 5 - 40 PPSU 5- 98 (143 Saturated steam)		Push-fit Ø 6 mm

INDIVIDUAL MEDIA GUIDANCE - SCALED TO YOUR APPLICATION

Controlling liquids and gases in any application is not a trivial task. With increasing demands on the functionality of the application, the number of media paths is also growing.
In addition to uncompromising quality, we take into account your requirements for economy and efficiency in development, assembly and tool-free maintenance.

That is why we customise your your specific solution individually
modular, scalable, media-resistant and easy to maintain.

HOSE CLAMP VALVES / HOSE PINCH VALVES

Where a special degree of hygiene is required, hose clamp valves are suitable - up to a pressure range of 1.5 bar.

The media-carrying hose can be exchanged in no time at all. There is no need for a valve seat or diaphragm. A flow direction is not specified and the formation of eddies and dead spaces through the valve is excluded.

The chemical resistance depends on the nature of the hose used.

	Series	Ways	Function	p-Funct. (bar) depending on the hose	T-Medium (°C)	T-Environment (°C)	Hose diameter	
	16.003.525	2/2	NC	0 - 1,5	90	-10 - +50	max Ø 5,2 mm	
	16.003.625	2/2	NO	0 - 1,5	90	-10 - +50	max Ø 5,2 mm	
	16.002.116	2/2	NC	0 - 1	90	-10 - +60	max. Ø 3,2 mm	
	16.002.216	2/2	NO	0 - 1	90	-10 - +60	max. Ø 3,2 mm	
	16.002.316	3/2	NO o. NC selectable	0 - 1	90	-10 - +60	max. Ø 3,2 mm	
	16.006.130	2/2	NC	0 - 1	90	-10 - +60	max. Ø 9,2 mm	
	16.006.230	2/2	NO	0 - 1	90	-10 - +60	max. Ø 9,2 mm	
	16.006.330	3/2	NO o. NC selectable	0 - 1	90	-10 - +60	max. Ø 9 mm	

PUMPS

	Series Nominal width	p-max	Q-max	T-Medium (°C)	T-Environment (°C)	
	41.005.300 DN 5	102 mbar (16 V DC) 71 mbar (24 V DC)	3,6 l/min (16 V DC) 3,0 l/min (26 V DC)	95 max.	70	
	41.008.20x DN 8	430 mbar	12 l/min	95 max.	70	
	41.007.400 DN 7	280 mbar	5,8 l/min	96 max.	60	NEW: compact and maintenance-friendly

PRESSURE REDUCER (OPTIONALLY WITH PRESSURE GAUGE CONNECTION)

		Series Nominal width	p-Input (bar)	p-Output (bar)	T-Medium (°C)
	Pressure reducer suitable for drinking water & suitable for food (no non-ferrous metals)	42.004.126 DN 4	5	0,2 - 1	80
	Pressure reducer suitable for drinking water & suitable for food (no non-ferrous metals)	42.008.126 DN 8	16	1,2 - 8	85

FITSYS 18 PUSHFIT SYSTEM

	Series	DN	Pressure range (bar)	T-Medium (°C)	T-Environment (°C)
1	FitSys 18 Connector system	4	0 - 16 (98 °C) 0 - 3 (143 °C)	98 143 (Saturated steam at 3 bar)	60 max.
2	FitSys 18 Pressure relief valve				
3	FitSys 18 Pressure relief valve with backflow preventer				
4	FitSys 18 Control valve				
5	FitSys 18 Backflow preventer				

DRAIN VALVES

- EC 1935 compliant variants
- optional flushing nozzle
- optional manual override
- Washing and rinsing liquids, diluted and slightly aggressive cleaning and disinfecting liquids

A. u. K. Müller drain valves in nominal sizes DN 40 and DN 50 meet the requirements of the European Directive EC 1935 for contact with foodstuffs.

They are available as electrically or pneumatically operated variants. The valve can be operated up to a pressure of 180 mbar (electrically) or 200 mbar (pneumatically) and, depending on the version, allows a max. volume flow of up to 190 l/min, which makes it ideal for the rapid emptying of tanks in cleaning equipment or similar containers.

The solenoid coil of the electrically operated version is available for all common voltages from 12 to 400 volts as a DC and AC version and meets the requirements of protection classes IP65 or IP68, depending on the version.

		Series Nominal width	Ways	Function	Q-max	p-Operation (mbar)	T-Medium (°C)	T-Environment (°C)
	Drain valve, directly controlled	04.040.116 DN 40	2/2	NC	135 l/min	0 - 180	98	60
	Drain valve, directly controlled	04.040.916 DN 40	2/2	NO	115 l/min	0 - 120	98	60
	Drain valve, directly controlled	04.050.116 DN 50	2/2	NC	155 l/min	0 - 180	98	60
	Drain valve, directly controlled	04.050.916 DN 50	2/2	NO	130 l/min	0 - 120	98	60

ACCESSORIES

FLOW REGULATOR [P OPERATION 1 - 10 BAR]

	Series	Outer diameter (mm)	Flow range (l/min)	T-Medium (°C)	Setting	Rule star	Rule-element
	MR 04	19	5,0 - 20,0	65	PA	POM	EPDM
	MR 05	9,5	0,5 - 9,0	65	POM	POM	EPDM
	MR 06	19	0,5 - 9,0	65	POM	POM	EPDM
	MR 12	9,5	4,0 - 5,0	90	–	PA 6/6	NBR or FKM
	MR 19	19	3,5 - 22,0	98	PEI	PEI	EPDM or FKM

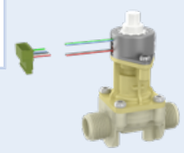
CONTROLLABLE BACKFLOW PREVENTER

according to DIN EN 1717

	Series Nominal width	Pressure range (bar)	T-Medium (°C)	T-Environment (°C)	Connection
	49.0xx.x26 DN 8 DN 10 DN 12	10	65 max. 95 max. for 1h	65 max.	G 3/4“ G 1/2“ G 3/8“ G 1/4“ (Control connection)

PROPORTIONAL VALVES

... if you want it to be more individual ...

		Series Nominal width	Ways	Function	T-Medium (°C)	T-Environment (°C)	
	Low-pressure outlet valve direct switching proportional valve	46.008.111prop DN 8	2/2	NC	98	70	
	Direct-continuous valve for continuous flow control	10.00x.126 - ds DN 4,2	2/2	Continuously adjustable stroke	80	60	

DIRT STRAINERS

	Series Nominal width	Kv (l/min @ 1 bar)	p-Operation (bar)	T-Medium (°C)	Mesh sizes / wire diameters
	12.010.300 DN 10 without auto shut-off 12.010.500 DN 10 with auto shut-off	20 (12.010.300) 17 (12.010.500)	0 - 10	90	0,16 mm / Ø 0,08 mm 0,25 mm / Ø 0,10 mm
	12.017.400 DN 17 without auto shut-off 12.017.500 DN 17 with auto shut-off	79 (12.017.400) 70 (12.017.500)	0 - 10	90	0,08 mm / Ø 0,06 mm 0,11 mm / Ø 0,06 mm 0,25 mm / Ø 0,10 mm
	12.017.800 DN 17	51	0 - 10	90	depending on version

FASTENING

	Type	Description
	Holding flange	Mounting support for most A. u. K. Müller solenoid and float valves as well as strainers with M5 threaded nut or for thread-cutting screws
	Halteflansch (Spule/Joch)	Holding flange (coil/yoke)

MANUALLY OPERATED VALVES

	Series Nominal width	Kv (l/min)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)	Connection thread	
	50.005.801 DN 5	7,9	0,5 - 10	75	75	M22 x 2	
	50.007.801 DN 7	17,3	0,5 - 10	75	75	M28 x 1 M29 x 1,5	
	50.009.801 DN 9	21,5	0,5 - 10	75	75	M29 x 1,5	
	62.005.826 DN 5	7,5	0,3 - 10	90	60	G3/8 on grommet Ø 11,5 mm	

TOUCHLESS OPERATION

- All-round carefree solutions for electronic fittings
- Battery-operated for easy retro-fitting

A. u. K. Müller is the industry leader in the market for electronic sanitary valves. In this way, we make a major contribution to greater hygiene, safety and ease of use. In our comprehensive range, manufacturers will find the right solution for every fitting - from the power supply to the sensor system to the valve.

Please take a look at our brochure for the sanitary industry

CARTRIDGE VALVES MONO- / BI-STABLE

	Series Nominal width	Kv (l/min)	p-Funct. (bar)	T-Medium (°C)	T-Environment (°C)	Connection-thread	
	50.005.102 DN 5	10	0,5 - 10	70	60	M20 x 1 (Stainless steel)	
	50.005.101 DN 5	11	0,5 - 10	70	60	M22 x 2	
	50.005.110 DN 5 HyGenic Hygiene valve	7,5	0,5 - 10	70	60	M28 x 1	
	50.005.850 DN 5	7,5	0,5 - 10	70	60	Screw/clamp fastening	
	50.007.101 DN 7	22,3	0,5 - 10	70	60	M28 x 1	
	50.009.101 DN 9	24	0,5 - 10	70	60	M29 x 1,5	

ACCESSORIES

	Type	Description
	Battery compartments	Mains-free power supply via battery for easy retrofitting of A. u. K. Müller sensors and solenoid valves.
	Power supplies	Plug-in and flush-mounted power supply units for the power supply of A. u. K. Müller sensors and solenoid valves
	IRS-WT-MSx-x	Optoelectronic sensor unit for contactless operation

You will find many more valves, cables and sensors in our brochure for the sanitary industry.

WATER INLET VALVES / SERVO-CONTROLLED VALVES

- Suitable for dental equipment, cleaning systems, water treatment etc.
- optimised pressure surge properties
- Deionised water suitable variants possible

Servo-controlled valves are used in various medical applications - e.g. in dental chairs.
As the opening and closing of the valve is only initiated by the solenoid and essentially carried out by the medium pressure, these valves are suitable for pressures of up to 10 bar and are extremely energy-efficient.

		Series Nominal width	Ways	Function	Kv (l/min @ 1 bar)	p-Operation (bar)	T-Medium (°C)	T-Environment (°C)
	Servo-controlled solenoid valve	01.010.126 DN 10 01.013.126 DN 13	2/2	NC	21 30	0,2 - 10	90	70
	Servo-controlled solenoid angle valve	01.010.115 DN 10 01.013.115 DN 13	2/2	NC	21 33	0,2 - 10	90	70
	Servo-controlled solenoid valve Integrated dirt filter	44.007.126 DN 7	2/2	NC	10	0,2 - 10	90	70
	Servo-controlled Valve (bistable) with horizontal pilot and optional pressure relief diaphragm	50.007.806 DN 7 50.013.806 DN 13	2/2	NC	14 36	0,5 - 10	70	60
	Servo-controlled solenoid valve	62.005.126 DN 5	2/2	NC	6	0,2 - 10	90	70
	Servo-controlled solenoid angle valve	62.005.115 DN 5	2/2	NC	7	0,2 - 10	90	70
	2-chamber Angle valve, Outlet below	01.010.215 DN 10	2/2	NC	17 per valve chamber	0,2 - 10	90	70
	3-chamber Angle valve	01.010.315 DN 10	2/2	NC	18 per valve chamber	0,2 - 10	90	70
	4-chamber Angle valve	01.010.415 DN 10	2/2	NC	17 per valve chamber	0,2 - 10	90	70
	Servo-controlled solenoid valve	36.010.126 DN 10	2/2	NO	20	0,5 - 10	90	70

Further variants of servo-controlled valves can be found in our product overview or www.akmueller.de/servoventile.

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EN2239