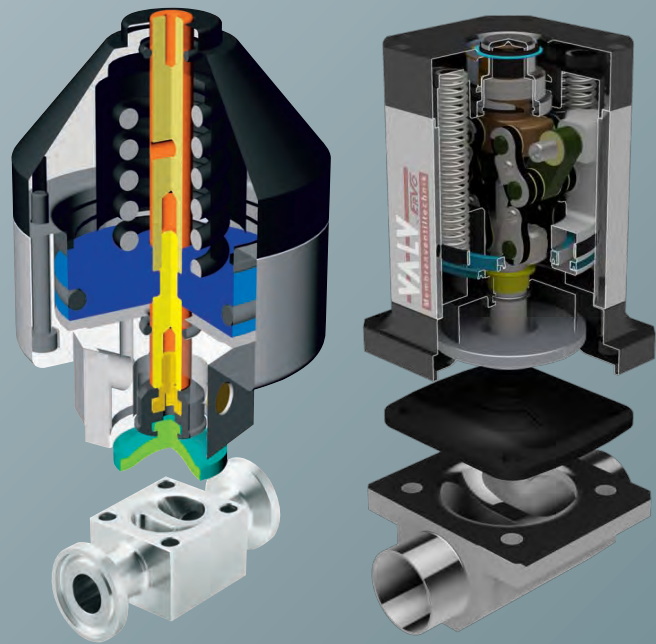




VALV Diaphragm Valves





VALV Diaphragm Valves

Benchmark for quality, precision and reliability



Flexibility, professionalism, quality - "High Mech" by VALV

A special feature of VALV **aseptic** valve bodies is the production of the complete body from solid material.

Results are a pore and crack-free surface and connecting ends without welds. This quality feature distinguishes VALV **aseptic** valve bodies from other products and leads to a number of advantages for the user: Highest surface quality without pores and micro-cracks, reduced costs for certification and documentation, less maintenance and longer lifetime.

In combination with the VALV actuators we provide you with a diaphragm valve system that complies with the strictest standards and that is unparalleled in terms of reliability and handling in operation, cleaning and maintenance.



"High Mech" by VALV pays off - particularly in continuous operation.



The advantages in a nutshell:

- 100% homogenous material
- Pore and crack-free, no internal material movement or varying density
- Self-draining, dead space free design
- Low documentation efforts (only one certificate needed)
- Totally closed design, easy to clean
- Optimized streamlined fluid flow, minimized swirlings

VALV Diaphragm Valves

"High Mech" made by ERVO



If mass products are not enough

Since 1990 VALV is the benchmark for diaphragm valves - to comply with the strictest standards in pharmaceuticals, biochemistry, medicine, chemistry and food production - and has since set standards in terms of product quality, precision and reliability.

Since 2013 VALV Membranventiltechnik is part of ERVO GmbH in Nueziders (Austria). ERVO is specialized on machining sophisticated products and the assembly of components and modules under clean room conditions - for global customers in vacuum and semiconductor industry, laser technology, mechanical engineering or medical technology.

Quality at competitive prices

The integration of VALV Membranventiltechnik in the manufacturing and quality processes of ERVO and the transfer of the production from Switzerland to Austria combines three aspects successfully:

Higher quality standards and more flexibility in production at more competitive costs.

"High Mech" pays off

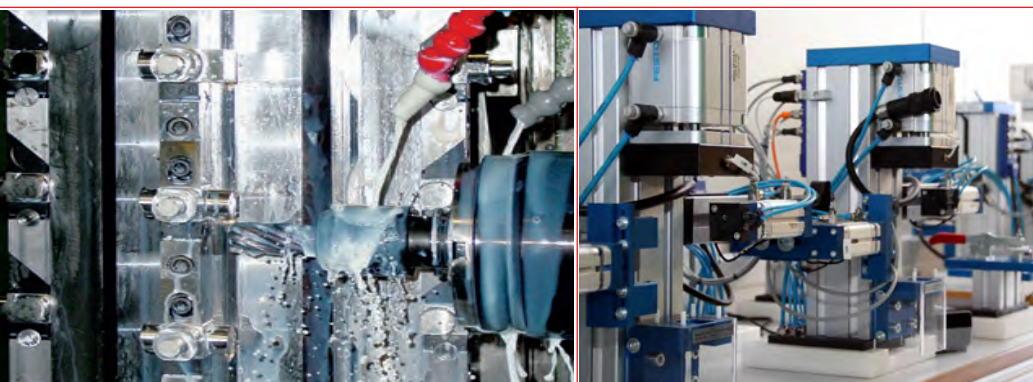
Compared with standard products from large-volume producers or from the Far East "High Mech" by VALV pays off - on purchase but particularly in continuous operation:

VALV **aseptic** valve bodies are made of solid material to ensure pore and crack-free surfaces, reduced costs for certification and documentation, less maintenance and longer lifetime.



ISO 9001:2008
14001
13485





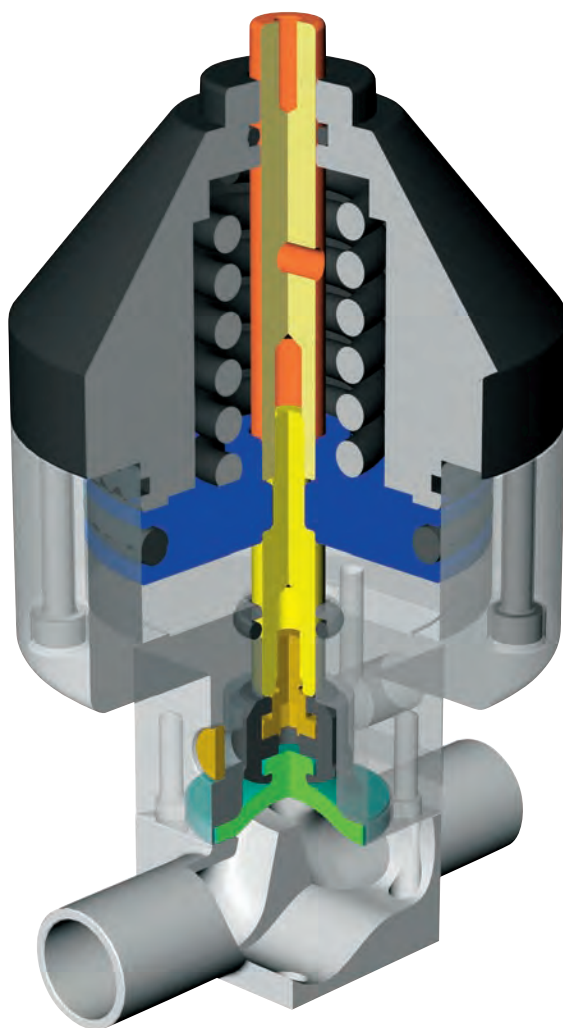
Valve bodies from the specialist

VALV *aseptic* valve bodies are manufactured from solid bar stock or block material on modern CNC machining centres.

Since 2013 VALV Membranventiltechnik is part of ERVO GmbH in Nueziders (Austria). ERVO is specialized on machining sophisticated products and the assembly of components and modules under clean room conditions - for global customers in vacuum and semiconductor industry, laser technology, mechanical engineering or medical technology.

Long experience in CNC machining and a broad in-house experience in engineering and design form the basis to meet customer requirements - even when it comes to special or customized solutions.

VALV *aseptic* valve bodies are available with surface finishes from $RA = 0,8 \mu m$ (standard) down to $RA = 0,2 \mu m$ with mechanical and/or additional electro polishing.



VALV *aseptic* Valve Bodies



Valve bodies with butt-welded connections

Integral valve body and butt-welded ends are manufactured from one solid block, no welding. Tube lengths are available to accommodate automatic (orbital) welding.



Valve bodies with Tri-Clamp ends

Tri-Clamp connections according to DIN 32676 and ISO 2852. Valve bodies made from one solid block, no welding. This prevents porosity, varying density and eliminates miniature cracks often common in cast or forged materials.



Valve bodies with screwed ends

Integral valve bodies made from one solid block with threaded ends according to DIN 11851 and SMS and BS 1864, with internal or external threadings.



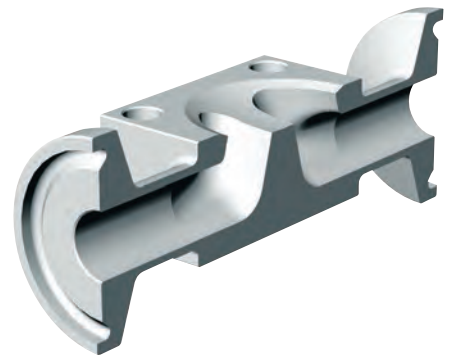


T-Pattern valve bodies

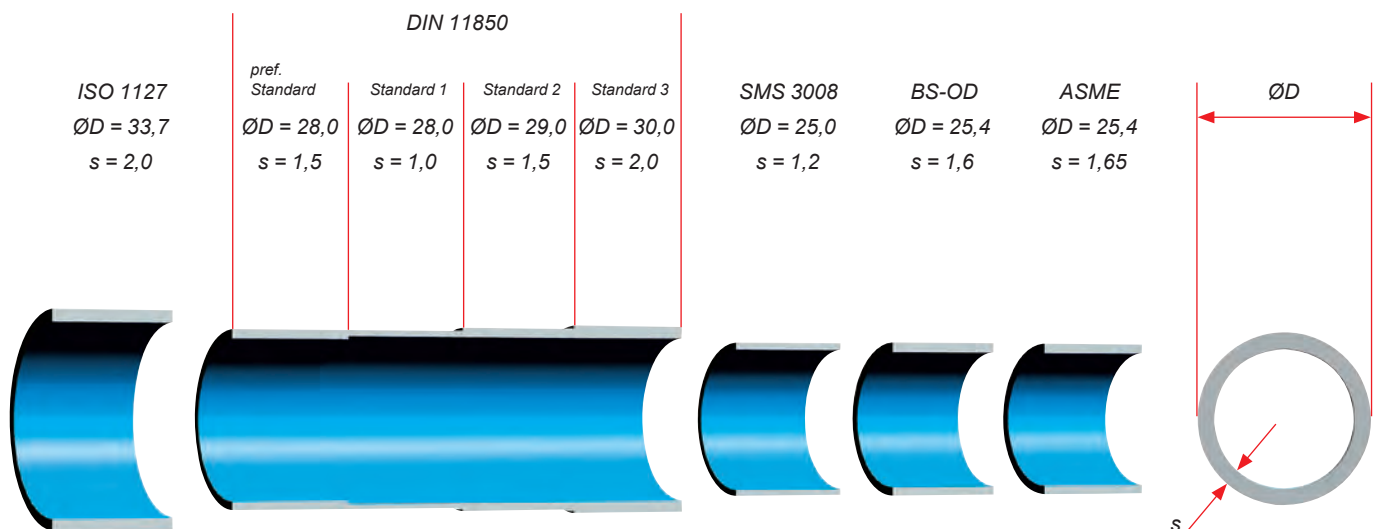
Ideal for sampling valves. Integral body with ends machined from a solid block. Available in a wide variety of port sizes and configurations. Delivered with buttweld, Tri-Clamp or threaded ends, standard manual or pneumatic activators.

Tank bottom valve bodies

Optimized drainability without any dead spaces. Delivered with buttweld, Tri-Clamp or threaded ends, standard manual or pneumatic activators.



International standard tube sizes (sample DN 25)



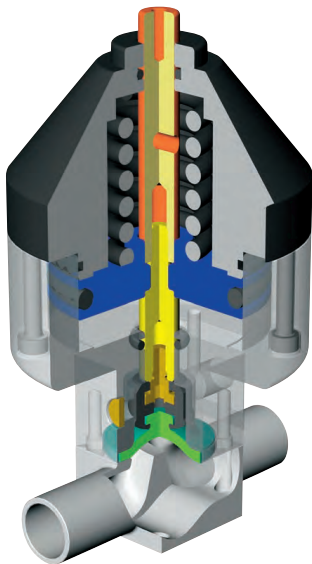
VALV Actuators

State of the art with uncompromising quality



Manual handwheels

Corrosion and wear resistant bonnets with four screws for easy assembly. Additional O-ring for perfect sealing. Bonnet material is hard anodised or PFA-coated aluminium, or a lower cost unit with PA66-GF. Autoclave temperature is 130° C.



Stainless steel bonnets

For optimum performance and wear resistance. Handwheel made of stainless steel or POM. Polished stainless steel bonnets are available for DN 08 to DN 25/32. Sizes above DN 40 have handwheels with stainless steel spindles.

Autoclave temperature is 130° C

Bonnets from DN 40 and up

PFA coated or hard anodised aluminium bonnets. Large size handwheels for easy operation. Handwheels are made of an epoxy coated light weight material with stainless steel spindle.

Autoclave temperature is 130° C.

Pneumatic actuators

For automatic operation, spring to close, spring to open and double action. With different springs for different diaphragm materials. Available with housing made of hard anodized aluminum or with PFA coated aluminum. Visual indication of valve position. On request available with stroke limitation – to open or to close.

Autoclave temperature is 130° C.

Pneumatic stainless steel actuators

Housing and components made of stainless steel. Spring to close, spring to open and double acting as standard or mini version available. Visual indication of valve position. On request available with stroke limitation – to open or to close.

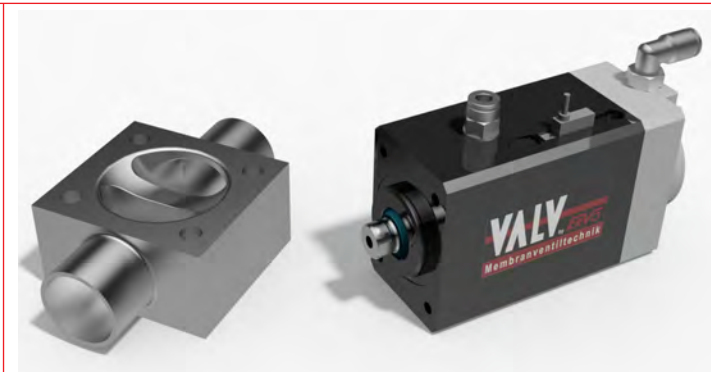
Autoclave temperature is 130° C.

The advantages in a nutshell:

- Optimized design, easy to clean
- Few parts, reliable operations
- Harmonized system, easy assembly
- Totally enclosed and leak proof - high safety
- Corrosion proof - long, trouble free life

VALV *Progressive Drive*

The next-generation actuator



The next-generation actuator

Progressive Drive by VALV is an innovative actuator beyond state of the art for pneumatic actuators for diaphragm valves - in several respects.

A progressive ratio maximizes the power where it is needed - at the end of the stroke. This means that - for the same size of valve bodies - much smaller actuator housings are required. This facilitates planning and configuration of plants and significantly lowers their energy use. Another novelty in addition to its space-, weight- and power-saving design is the self-inhibiting locking. Closed valves remain closed - protected against unwanted opening without permanent spring pressure.

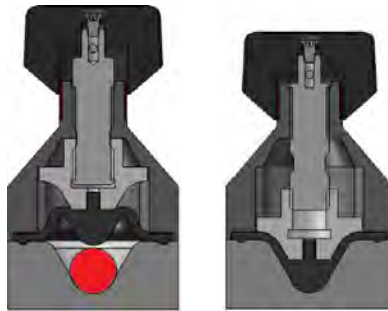
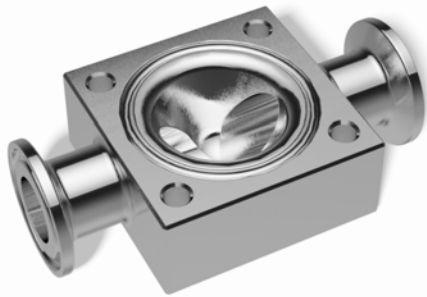
VALV *Progressive Drive*

- + compact
- + lightweight
- + powerful
- + safe
- + energy saving



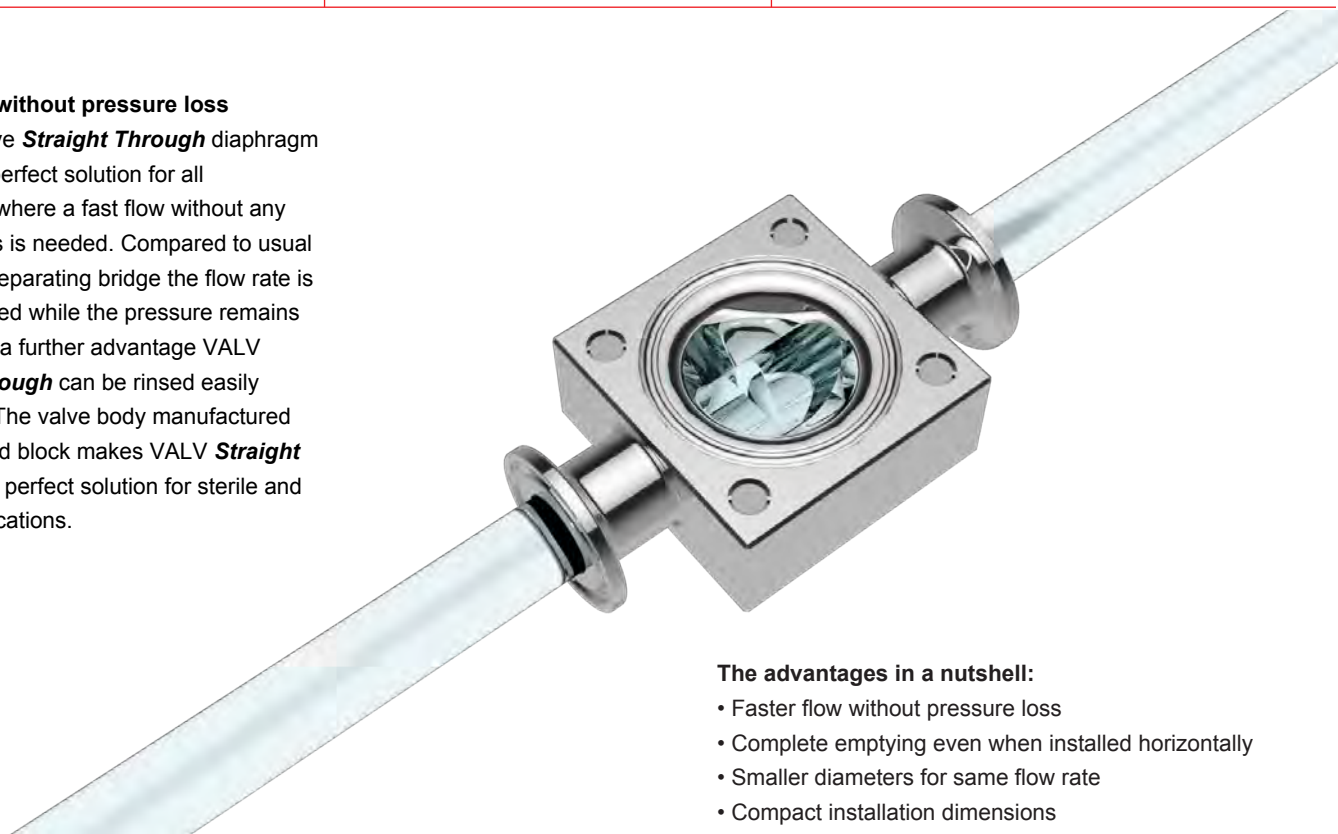
VALV *Straight Through*

Faster flow without pressure loss



Faster flow without pressure loss

Our innovative ***Straight Through*** diaphragm valve is the perfect solution for all applications where a fast flow without any pressure loss is needed. Compared to usual valves with separating bridge the flow rate is almost doubled while the pressure remains constant. As a further advantage VALV ***Straight Through*** can be rinsed easily when open. The valve body manufactured from one solid block makes VALV ***Straight Through*** the perfect solution for sterile and aseptic applications.



The advantages in a nutshell:

- Faster flow without pressure loss
- Complete emptying even when installed horizontally
- Smaller diameters for same flow rate
- Compact installation dimensions

VALV *aseptic PNSYS*

Sterile sampling made easy



VALV *aseptic* Sampling System *PNSYS*

VALV *aseptic PNSYS* is a special system for taking sterile samples from product lines, particularly in biotechnology, chemistry, pharmacy or food and beverage production. The special manufacturing technology of VALV *aseptic* valve bodies ensures void-free and absolutely homogeneous surfaces.

In conjunction with the self-cleaning, dead-space-free design residue-free emptying and easy cleaning are guaranteed.

According to customer requirements and the area of applications VALV *aseptic PNSYS* can be variably configured for various facilities and pipeline sections.



VALV Diaphragms



Elastomer diaphragms

Soft elastomer diaphragms consist of a mixture of vulcanised rubber, reinforced with a net of a special material. This process offers higher wear resistance, increased dimensional stability and increased temperature range. And as a result more flexibility and a longer service life. Standard materials of rubber diaphragms are as follows:

- EPDM reinforced peroxide
- FPM (Viton)

TFM/PTFE diaphragms

PTFE diaphragms offer the highest possible degree of chemical resistance and last considerably longer than soft elastomer diaphragms. Sizes DN 08/10 have a sandwich construction (TFM and EDPM combined). All other sizes offer a two-piece construction with higher flexibility. This permits the closing force to be minimal, enhances reliability and increases service life of the diaphragms, in particular if exposed to steam.

FDA acceptance

All diaphragms meet FDA standards, with the exception of standard FPM (Viton). A certificate of conformity is available upon request.

Marking

All diaphragms are marked on the reverse side for identification of material and production date.

Special diaphragms

Contact us if you need solutions apart the standard diaphragm program.



VALV Accessories for Actuators



Digital position indicator

Inductive positioning indicator for open or closed position. With digital position indicators, diaphragm valves from VALV can be considered as automatic control valves.



Proximity switches in four types

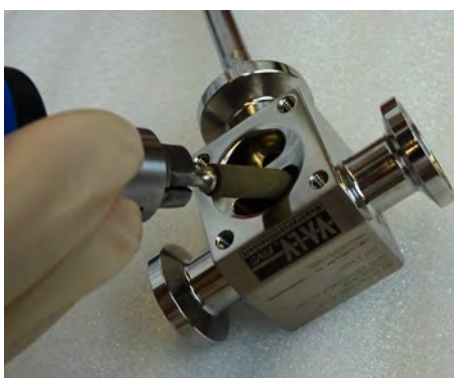
- 1: open - closed
- 2: open - closed, side mounting
- 3: open - closed, with sensor
- 4: open - closed, with adjustable sensor



Solenoid valves

in two types

- 1: with integrated solenoid valve
- 2: with solenoid valve to be added to the air supply inlet



Highest surface quality








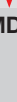
Special care is taken to ensure a high-grade surface finish of the valve body. For standard types the finish is $Ra \leq 0,8 \mu m$. For special requirements we can produce surface finishes of all grades down to $Ra \leq 0,2 \mu m$. These finishes can be achieved because VALV **aseptic** bodies are machined from solid block material.

Quality assurance

ERVO maintains a high standard of quality backed by different quality management certificates, e.g. ISO 9001, 14001 and 13485. Every valve delivered is clearly marked with an order number and a reference, to trace material according to certificate 3.1.B.

Finishing Level	Method
Ra 0,8 μm	Standard, grinding
Ra 0,8 μm	Standard, electro polishing
Ra 0,6 μm	Grinding, polishing
Ra 0,6 μm	plus electro polishing
Ra 0,4 μm	Grinding, polishing
Ra 0,4 μm	plus electro polishing
Ra 0,2 μm	Fine polishing
Ra 0,2 μm	plus electro polishing

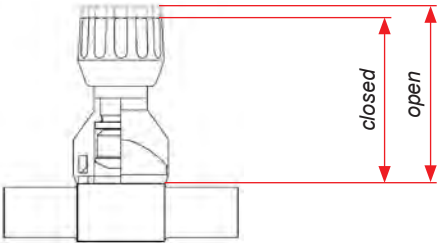
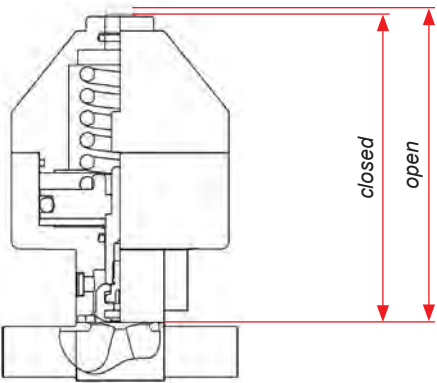
VALV Diaphragm Valves: Order Information

	Description			Code	Sample
	Actuators Manually operated, plastic, turning knob (DN 08–DN 25) or handwheel (DN 25) Manually operated, aluminium (DN 40–DN 100) Manually operated, stainless steel 1.4301, turning knob or handwheel Lever control, aluminium Lever control, stainless steel 1.4301 Pneumatic drive, aluminium, spring power opened Pneumatic drive, aluminium, spring power closed Pneumatic drive, aluminium, double acting Pneumatic drive, stainless steel 1.4301, spring power opened Pneumatic drive, stainless steel 1.4301, spring power closed Pneumatic drive, stainless steel 1.4301, double acting			AMDK AMD AMDR AMK AMKR AMP AMPB AMPD AMPR AMPBR AMPDR	AMDK Manually operated, made of plastic, with turning knob 
	Nominal widths 08 / 10 / 15 / 20 / 25 / 32 / 40 / 50 / 65 / 80 / 100				08 Valve size DN08 
Above mentioned valve bodies are also available with Tri-Clamp ends. TC has to be added in the code after the initial coding. Bodies made of Hastelloy C22 on request	Standard valve bodies made of stainless steel 1.4435 / 1.4404 Valve body S -type (self draining) with buttweld ends Valve body V -type with buttweld ends Valve body S -type (self draining) with Tri-Clamp ends Valve body V -type with Tri-Clamp ends Special valve bodies made of stainless steel 1.4435 / 1.4404 T-valve bodies S -Type (self draining) with buttweld ends T-valve bodies V -Type with buttweld ends 2-way -star valve body S -type (self draining) with buttweld ends 2-way -star valve body V -type with buttweld ends 3-way -star valve body S -type (self draining) with buttweld ends 3-way -star valve body V -type with buttweld ends 4-way -star valve body S -type (self draining) with buttweld ends (Quadro) 4-way -star valve body V -type with buttweld ends (Quadro) Valve body SP -type (self draining) with sample bore Valve body VP -type with sample bore Floor-drain valve body S -type (self draining) with buttweld ends Valve body SG -type (self draining) with thread ends Valve body VG -type with thread ends valve body SRD -type (self draining) with round thread ends valve body VRD -type with round thread ends			S + D x s V + D x s STC + D x s VTC + D x s ST + D x s VT + D x s 2S + D x s 2V + D x s 3S + D x s 3V + D x s 4S + D x s 4V + D x s SP + D x s VP + D x s SB + D x s SG + D x s VG + D x s SRD + D x s VRD + D x s	 S12 x 1 S-type with buttweld ends diameter x wall thickness (D x s) 
	Surface finishes Ra 0.8 µm, polished Ra 0.8 µm, polished and completely electro-polished Ra 0.6 µm, polished Ra 0.6 µm, polished and completely electro-polished Ra 0.4 µm, polished Ra 0.4 µm, polished and completely electro-polished Ra 0.2 µm, finest polished Ra 0.2 µm, finest polished and completely electro-polished			0.8 0.8E 0.6 0.6E 0.4 0.4E 0.2 0.2E	 0.8E Ra 0.8 µm, polished and completely electro-polished 
Intermediate stages also available Other materials available on request	Diaphragms	Application	Temperature		
	EPDM	wide chemical durability for hot water	-30° – +150° C	VE	
	EPM	highest chemical durability	-40° – +140° C	E	VE Diaphragm EPDM 
	PTFE/EPDM	highest chemical durability	-20° – +150° C	PE	
	TFM/EPDM	wide chemical durability	-20° – +150° C	TE	
	Viton (R)		-30° – +200° C	V	
	Order sample: Manually operated valve with plastic drive and turning knob, valve size DN08, valve body S-type with buttweld ends 12 x 1 mm, surface finish Ra 0.8 µm polished and completely electro-polished, EPDM diaphragm.				AMDK-08-S12x1-0.8E-VE

VALV Diaphragm Valves: Technical Data

Butt weld connections								
Dimension mm DN	ISO1127 DIN 2462/63 ø D x s	DIN 11850 mod. pref. standard ø D x s	DIN 11850 standard 1 ø D x s	standard 2 ø D x s	standard 3 ø D x s	SMS 3008 ø D x s	BS O.D. Tubing ø D x s	ASTM 269 ASME BPE ø D x s
8	13,5 x 1,60	10,0 x 1,0					6,35 x 1,2	6,35 x 0,89
10	17,2 x 1,6		12,0 x 1,0	13,0 x 1,5	14,0 x 2,0		9,53 x 1,2	9,53 x 0,89
15	21,3 x 1,6	18,0 x 1,5	18,0 x 1,0	19,0 x 1,5	20,0 x 2,0		12,7 x 1,2	12,7 x 1,65
20	26,9 x 1,6	22,0 x 1,5	22,0 x 1,0	23,0 x 1,5	24,0 x 2,0		19,05 x 1,2	19,05 x 1,65
25	33,7 x 2,0	28,0 x 1,5	28,0 x 1,0	29,0 x 1,5	30,0 x 2,0	25,0 x 1,2	25,4 x 1,6	25,4 x 1,65
32	42,4 x 2,0	34,0 x 1,5	34,0 x 1,0	35,0 x 1,5	36,0 x 2,0	33,7 x 1,2	31,75 x 1,6	
40	48,0 x 2,0	40,0 x 1,5	40,0 x 1,0	41,0 x 1,5	42,0 x 2,0	38,0 x 1,2	38,1 x 1,6	38,1 x 1,65
50	60,3 x 2,0	52,0 x 1,5	52,0 x 1,0	53,0 x 1,5	54,0 x 2,0	51,0 x 1,2	50,8 x 1,6	50,8 x 1,65
65	76,1 x 2,3		70,0 x 2,0			63,5 x 1,6	63,5 x 1,6	63,5 x 1,65
80	88,9 x 2,3		85,0 x 2,0			76,1 x 1,6	76,2 x 1,6	76,2 x 1,65
100	114,3 x 2,6		104,0 x 2,0			101,6 x 2,0	101,6 x 2,0	101,6 x 2,11

Tri-Clamp connections								
Dimension in mm DN	ISO1127 DIN 2462/63 ø D	DIN 11850 mod. pref. standard ø D	DIN 11850 standard 1 ø D	standard 2 ø D	standard 3 ø D	SMS 3008 ø D	BS O.D. Tubing ø D	ASTM 269 ASME BPE ø D
8	25.0						25.0	
10			34.0				25.0	
15	34.0		34.0				25.0	25.0
20	50.5		34.0				25.0	25.0
25	50.5		50.5			50.5	50.5	50.5
32	50.5		50.5			50.5	50.5	
40	64.0		50.5			50.5	50.5	50.5
50	77.5		64.0			64.0	64.0	64.0
65	91.0		91.0			77.5	77.5	77.5
80			106.0			91.0	91.0	91.0
100			119.0			119.0	119.0	119.0



VALV pneumatic actuators

	closed AMPB	open AMPB
DN 08–10	106	111
DN 15–20	147	154
DN 25–32	155	165
DN 40	220	239
DN 50–65	222	243
DN 80	401	442

VALV manual handwheels

	closed AMD	open AMD
DN 08–10	52	58
DN 15–20	87	96
DN 25–32	125	139
DN 40	147	169
DN 50–65	147	169
DN 80	217	258

VALV Diaphragm Valves: Technical Data

Material	Size	Temperature in C°	Water	Acid	Base	Oil + Grease	Fuel	Ozone	Hydro-carbons			Over stretching	Abrasion resistance	Rebound elasticity	FDA
									aliphatic	aromatic	chlorinated				
EPDM	DN 08-100	-30 / +150	++	++	++	-	-	++	-	-	-	+	+	+	yes
TFM / EPDM	DN 08-100	-20 / +150	++	++	++	++	++	++	++	++	++	+	+	+	yes
FPM (Viton)	DN 08-100	-30 / +200	+	+	+	++	++	++	++	++	++	+	+	-	on request
VMQ (Silicon)	DN 08-100	-50 / +200	+	*	+	+	-	+	-	-	-	-	*	+	yes
NR (Rubber)	DN 08-100	-30 / +80	+	*	+	-	-	-	-	-	-	++	++	++	no
NBR (Perbunan)	DN 08-100	-40 / +110	+	+	+	+	+	*	++	-	-	+	++	+	no
HNBR (Therban)	DN 08-100	-40 / +150	+	+	+	+	+	*	++	-	-	+	++	+	no
CSM (Hypalon)	DN 08-100	-20 / +120	+	++	++	+	-	++	+	-	-	+	+	-	no
CR (Neoprene)	DN 08-100	-30 / +120	++	+	+	*	-	++	+	-	-	+	+	+	no

++ excellent; + very good; * good; – unacceptable

Authentication and Certificates

3.1.B certificates of compliance for the bodies and FDA declarations of conformity for the diaphragms are available upon request.

VALV Customized Solutions



Your demand is our benchmark

The areas of application for diaphragm valves and the demands of customers are different - but the most important things are always the same: The secure and trouble-free operating principle as well as the advantages of diaphragm valves in terms of hygiene and easy cleaning. VALV diaphragm valves meet the highest quality standards therefore our standard solutions are suitable for most applications. Nevertheless, special solutions may be necessary in order to

meet unusual requirements or to reduce costs for planning and design of facilities. Just contact us. With our expertise in design and manufacturing we will find the perfect customized solution for you.



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