



KIESELMANN

# Control valves



**KIESELMANN**

FLUID PROCESS GROUP



**MAXIMUM FLEXIBILITY**  
KIESELMANN control valve

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## CONTROL VALVES

# Control without exception

KIESELMANN control valves are based on the modular design system of the single seat valve range. Within a nominal diameter different flow coefficients as well as control characteristics and seal types can be implemented.



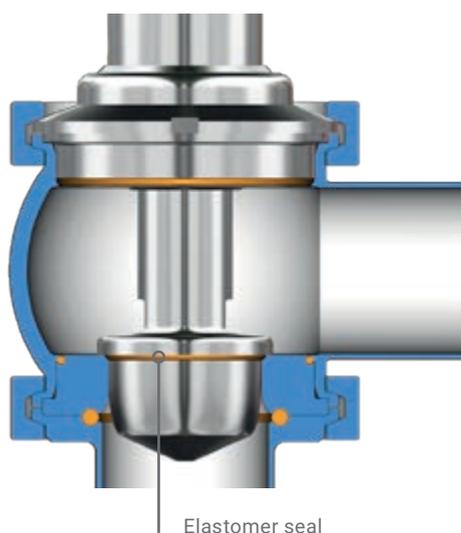
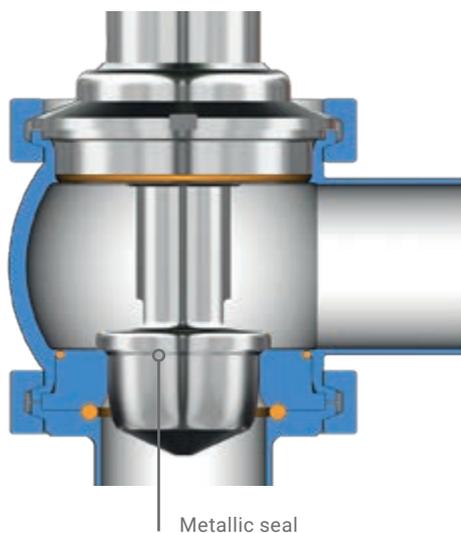
Control valve with membrane actuator.

With reciprocating actuator as standard.



## ADVANTAGES

- > Linear or equal-percentage control
- > Flexible cone & replacement seat concept
- > 3 actuator versions: manual actuator, reciprocating actuator (5 sizes), membrane actuator (4 sizes)



**Exact process control:** KIESELMANN control valves are available in a 1-, 2- and 3-stage version and in addition can also be configured as mixing and distribution valves. Single seat control valves are always available in linear and equal-percentage versions.

Their design is based on the proven, hygienic concept of the KI-DS valve range. This makes them especially suitable for sensitive production areas in the food and beverage industry.

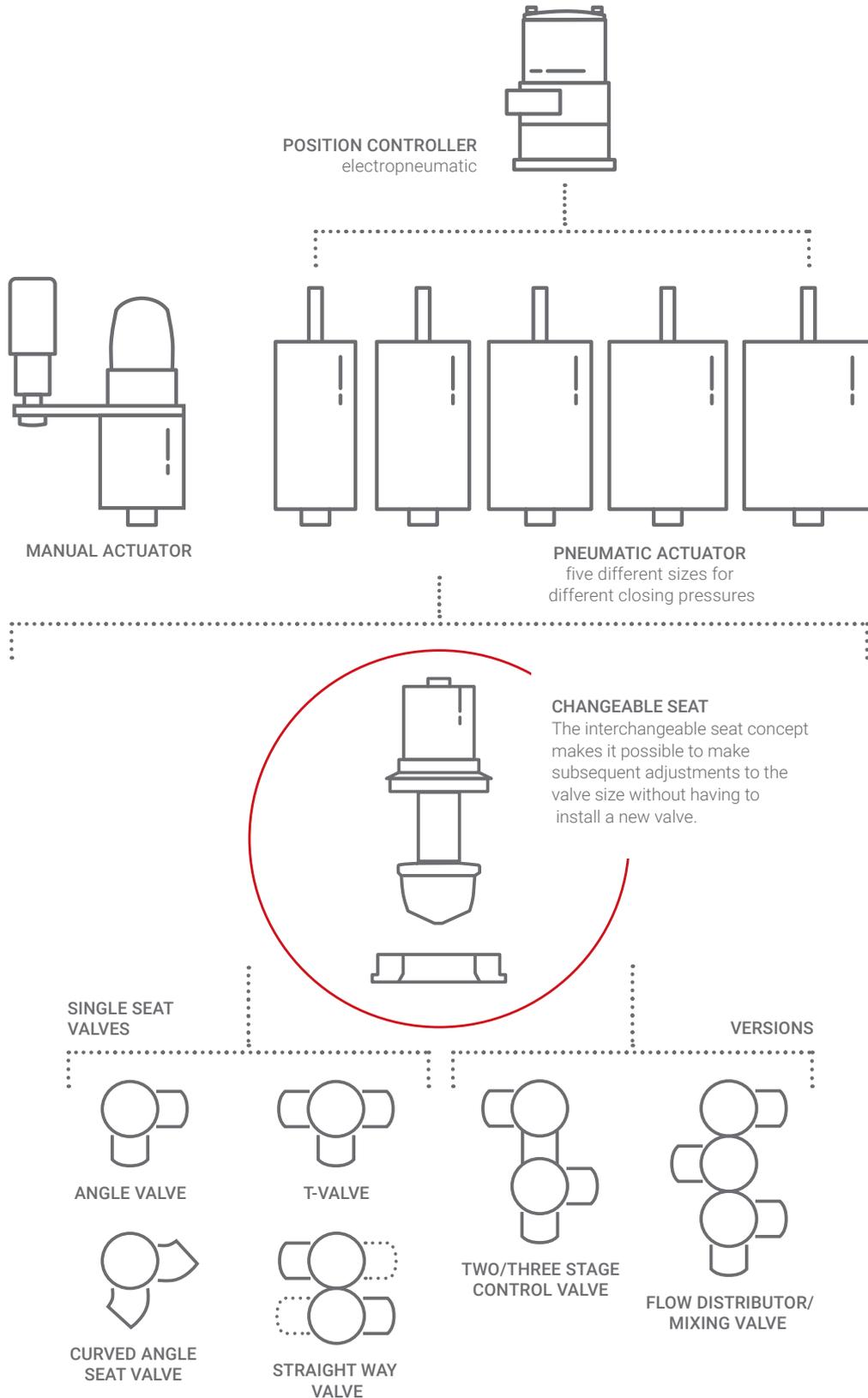
### Flexible due to replacement seat concept

The essential feature of this valve series is the hygienic changeable seat concept. Linear or equal-percentage control characteristics are available for selection. Plug and seat can be exchanged in a few simple steps. The seal variant can be easily exchanged from soft to metallic. We offer control valves with flow coefficients from 0.1 m<sup>3</sup>/h to 160 m<sup>3</sup>/h in nominal widths DN 20–125. Within the respective nominal width, various flow coefficients are possible without costly conversion measures.

The soft or metallic seal variants can be easily exchanged. The exchange of the sealing variant is possible without any problems thanks to the interchangeable seat concept.

# MODULAR SYSTEM

## The right valve for every need – control valve



## ACTUATORS & MODULARITY

# Retrofitting made easy

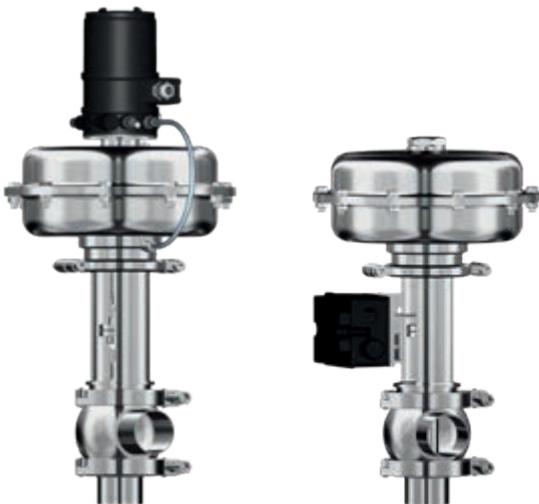
**Three actuator versions – manual, reciprocating and membrane –** are available in different sizes and complete the high degree of customisation of our control valves. This means that a manual actuator can be converted to a pneumatic actuator at any time in just a few steps. To increase closing pressures, it is possible to change to a next larger actuator.

Our modular valve concept allows the use of actuator and positioner brands outside our standard range.



Manual actuator

Reciprocating actuator



Membrane actuator

with attached I/P positioner

with side-mounted positioner on NAMUR interface

### TECHNICAL DATA

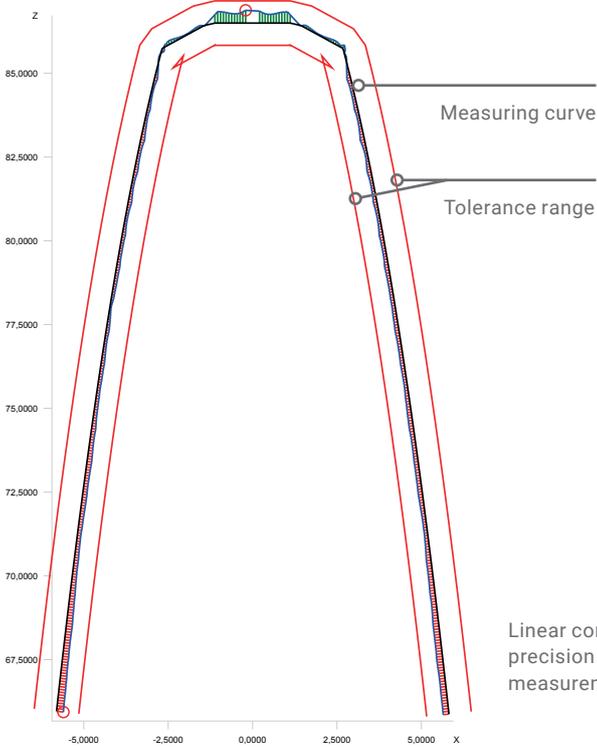
Nominal diameters	DN 20 – 125/1"-4"
Nominal pressure	PN 16
all. Temperatures Media Cleaning (CIP) Sterilisation (SIP)	0°–100° C max. 100°C max. 140° C
Control air pressure	min. 5.5 bar
Characteristic curve type	linear, equal-percentage
Control ratio	50:1
Housing profile	Angle, T, curved angle seat, straight way
Housing connections Weld-on end*	EN 10357, Series B DIN 11866, Series C
Flanged connection	DIN 11853-2 DIN 11864-2
Clamped connection	DIN 11853-3 DIN 11864-3
Aseptic	KIESELMANN aseptic smooth flange KIESELMANN aseptic grooved flange  Further connection types possible
Pipe classes	DN according to EN 10357, Series A OD according to DIN 11866, Series C
Surfaces in product contact	Ra ≤ 0.8 µm e-polished
Materials in product contact	1.4404/AISI 316L
Cone profile	Parabolic cone
Sealing material	HNBR (max. 120 °C, SIP 30 min) EPDM (max. 140 °C, SIP 30 min) FKM (max. 110 °C, SIP 30 min)
Leakage classes soft sealing metallic sealing	EN 60534-4, KI.VI / FCI 70-2, Class VI EN 60534-4, KI.VI / FCI 70-2, Class IV
Actuators	Manual, membrane and reciprocating actuator

\* We recommend flange connections for ease of maintenance. Multi-stage control valves are only offered with flange connections for this reason.

# CONTROL VALVES SINGLE-STAGE

## Setting standards

The single-stage control valve is the standard for all tasks that require flow regulation or where pressure must be regulated or pressure reduced. The vertical range of manufacture of KIESELMANN control cones guarantees consistent quality.



Linear control contour whose precision is checked with the measurement technology.



Pneumatic version with reciprocating actuator



Pneumatic version with membrane actuator



Manual version with hand crank

### Housing types

Angle valve (L)



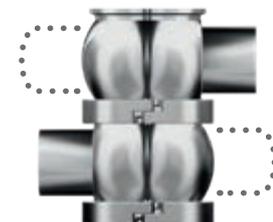
T-valve (T)



Angle seat valve (S)



Straight way valve (LL, LT, TL, TT)



## KVS VALUES, NOMINAL DIAMETERS AND ACTUATOR SIZES

Pneumatic actuator					Reciprocating actuator					Membrane actuator						
Size					H104	H129	H167	H190	H230	M02	M2	M4	M10			
Control air pressure [bar]					5.5	5.5	5.5	5.5	5.5	4	3	3	3			
Kvs [m³/h]	DN	OD	Seat-Ø [mm]	Stroke [mm]	all. closing pressures											
0.1	20	—	4	16												
0.2	20	—	4	16												
0.4	20	—	6	16	16					16						
	25	1"	6	20												
1.0	25	1"	6	20												
1.6	25	1"	12	20												
2.5	25	1"	12	20												
4	25	1"	12	20		16						16				
	40	1½"														
7	25	1"	22	20	16					16						
	40	1½"														
10	25	1"	22	20	16	16				16	16					
	40	1½"														
	50	2"														
18	40	1½"	34	20	14	16				7	16					
	50	2"														
	65	2½"														
26	50	2"	46	20	7.5	11	16				16					
	65	2½"														
	80	3"														
40	50	2"	46	27		10	16				16					
	65	2½"														
	80	3"														
	100	4"														
52	65	2½"	60	27			12	16				12	16			
	80	3"														
	100	4"														
68	65	2½"	60	27			12	16	16			12	16			
	80	3"														
	100	4"														
85	80	3"	72	27			8	14	14			8.5	16			
	100	4"														
100	80	3"	81	27			6.5	11	11			7	16			
	100	4"														
	125	—														
120	100	4"	95	27				7.5	7.5				13			
	125	—														
160	125	—	125	27				4.5	4.5				8			



### CLICK HERE FOR YOUR CONTROL VALVE

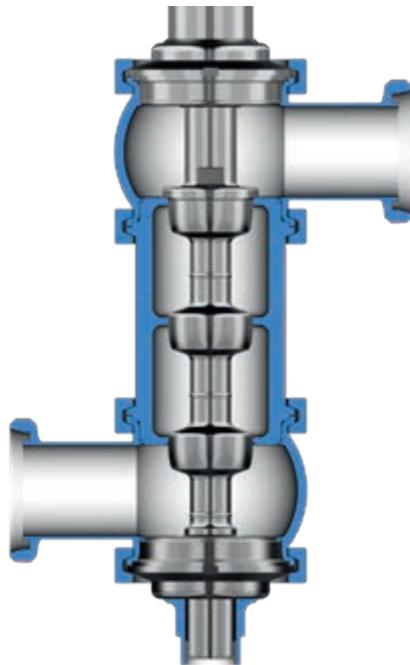
Simply scan the QR code, fill in the online form and send it off. From the information you provide we will calculate your optimum control valve. Perfectly matched. We'll take care of it for you.

## CONTROL VALVES TWO-/THREE-STAGE

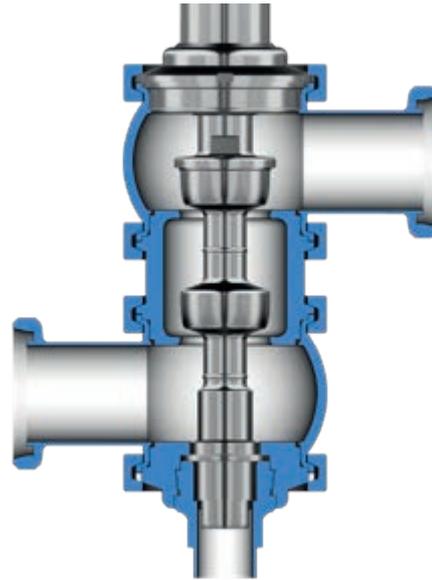
# Stages of success

Generally, an attempt is made to solve the control task with a single-stage control valve. However, there are also process conditions where this is not possible and cavitation occurs.

As with the single-stage control valves, the modular possibilities of the system are available here.



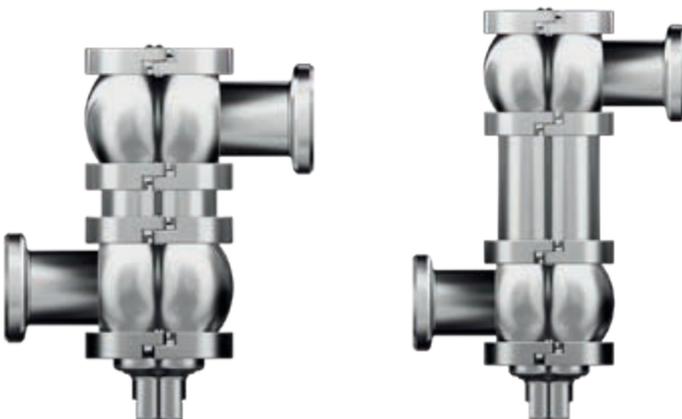
Three-stage control valve



Two-stage control valve

### Housing types

Angle valve (LL, LT, TL, TT)



"The KIESELMANN control valves convince with their process reliability and durability. They are absolutely maintenance-friendly. The very good price-performance ratio and the rapid availability further increase the attractiveness of our control valves."

*Jens Schabinger,  
Group Manager Sales  
KIESELMANN*

## KVS VALUES, NOMINAL DIAMETERS AND ACTUATOR SIZES TWO-/THREE-STAGE

Pneumatic actuator						Reciprocating actuator					Membrane actuator			
Size						H104	H129	H167	H190	H230	M02	M2	M4	M10
Control air pressure [bar]						5.5	5.5	5.5	5.5	5.5	4	3	3	3
K <sub>VS</sub> [m <sup>3</sup> /h] 2-stage	K <sub>VS</sub> [m <sup>3</sup> /h] 3-stage	DN	OD	Seat-Ø [mm]	Stroke [mm]	all. closing pressures								
1.1	0.9	25	1"	12	20									
1.8	1.4	25	1"	12	20									
2.8	2.3	25	1"	12	20	16					16			
		40	1½"											
5	4	25	1"	22	20									
		40	1½"											
7	6	25	1"	22	20	16	16				16	16		
		40	1½"											
		50	2"											
13	10	40	1½"	34	20	14	16				7	16		
		50	2"											
		65	2½"											
18	15	50	2"	46	20	7.5	11	16				16		
		65	2½"											
		80	3"											
28	23	50	2"	46	27		10	16					16	
		65	2½"											
		80	3"											
		100	4"											
37	30	65	2½"	60	27			12	16				12	16
		80	3"											
		100	4"											
48	39	65	2½"	60	27			12	16	16			12	16
		80	3"											
		100	4"											
60	49	80	3"	72	27			8	14	14			8.5	16
		100	4"											
71	58	80	3"	81	27			6.5	11	11			7	16
		100	4"											
		125	–											
85	69	100	4"	95	27				7.5	7.5				13
		125	–											
113	92	125	–	125					4.5	4.5				8



## DISTRIBUTION AND MIXING CONTROL VALVES

# 3-way flow distribution/ Mixing valve

### Precise distribution

Distribution and mixing control valves are used to **distribute a medium in a specific ratio to two process lines**. And that with only one instead of two valves.

### Precise mixing

Mixing in the product line instead of in the tank is possible with the mixing valve. Two different media can be mixed in an exact ratio with this valve. Both types of valve have two interchangeable seats with the advantages of **easy retrofitting**.

The clamp connections simplify the conversion.

### Housing types

Straight way valve (LL, LT, TL, TT)



## KVS VALUES, NOMINAL DIAMETERS AND ACTUATOR SIZES

Pneumatic actuator						Reciprocating actuator					Membrane actuator					
Size						H104	H129	H167	H190	H230	M02	M2	M4	M10		
Control air pressure [bar]						5.5	5.5	5.5	5.5	5.5	4	3	3	3		
Kvs [m³/h] Distribution	Kvs [m³/h] Mixing	DN	OD	Seat-Ø [mm]	Stroke [mm]	all. closing pressures										
	0.4	25	1"	6	20											
	1.0	25	1"	6	20	16					16					
	1.6	25	1"	12	20											
	2.5	25	1"	12	20											
	4	25	1"	12	20	16					16					
		40	1½"													
7	7	25	1"	22	20	16					16					
		40	1½"													
10	10	25	1"	22	20	16	16				16	16				
		40	1½"													
		50	2"													
18	18	40	1½"	34	20	14	16				7	16				
		50	2"													
		65	2½"													
26	26	50	2"	46	20	7.5	11	16				16				
		65	2½"													
		80	3"													
40	40	50	2"	46	27		10	16					16			
		65	2½"													
		80	3"													
		100	4"													
52	52	65	2½"	60	27			12	16				12	16		
		80	3"													
		100	4"													
68	68	65	2½"	60	27			12	16	16			12	16		
		80	3"													
		100	4"													
85	85	80	3"	72	27			8	14	14			8.5	16		
		100	4"													
100	100	80	3"	81	27			6.5	11	11			7	16		
		100	4"													
		125	—													
120	120	100	4"	95	27				7.5	7.5				13		
		125	—													
160	160	125	—	125	27				4.5	4.5				8		



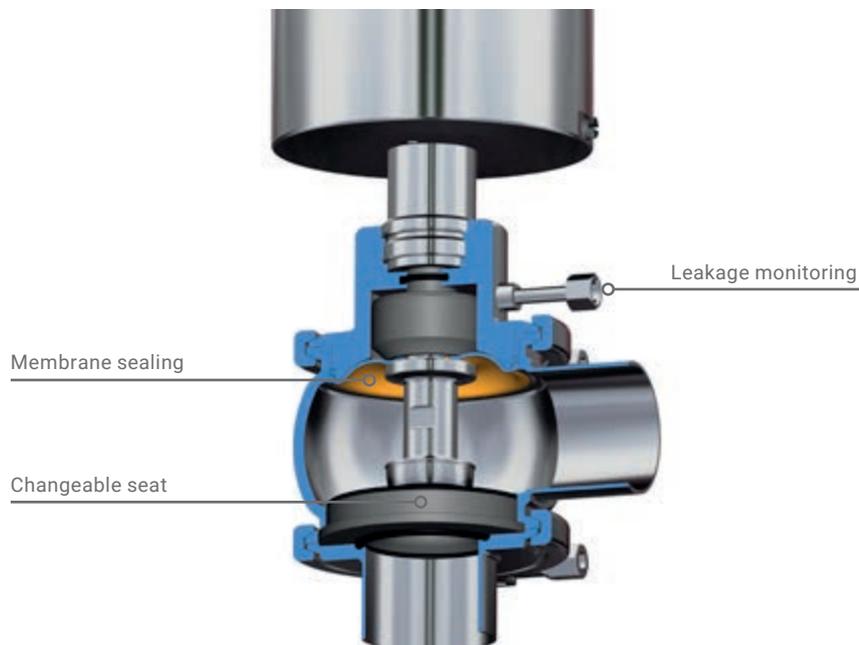
## ASEPTIC CONTROL VALVES

# The purest process control

The aseptic control valves are available with soft or metal sealing and with manual actuation, a pneumatic reciprocating actuator or a membrane actuator.



TECHNICAL DATA	
Nominal diameters	DN 25 –100/1"–4"
Nominal pressure	PN 10
Continuous operation temperature	max. 100 °C
CIP/SIP	max. 130 °C
Other	precise control behaviour, maintenance-friendly construction



## ELECTROPNEUMATIC POSITIONER

# Precisely put in position

For precise and safe process control we equip our control valves with digital, electropneumatic positioners as standard. We offer the right solution for every automation task.



The digital positioners are part of the standard equipment of KIESELMANN control valves with reciprocating and membrane actuators. They are characterised by high control accuracy. The positioners operate in the signal range from 4 to 20 mA. However, they also control in the partial range or split-range operation.

### DESIGN/CHARACTERISTICS

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- > Intelligent digital positioner for mounting on reciprocating and membrane actuators
- > Robust stainless steel design
- > Optimised for cleaning and use in the wet and use in the wet area of hygienic process plants
- > Non-contact and wear-free inductive displacement transducer
- > Integrated control air duct
- > Simple installation, easy operation
- > Linear, equal-percentage or special characteristic curves can be set via interface and software

### COMMUNICATION

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- > PROFIBUS DP-V1, DeviceNet, Ethernet/IP, PROFINET, Modbus TCP
  - > Optional: ATEX II Cat. 3GD, IECEx
- 



Positioner with large, illuminated display.





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