

GEMU

LEAP INTO THE FUTURE

New product generation



01

Platform concept LEAP

02

Diaphragm Valve GEMÜ D40

03

Diaphragm Valve GEMÜ D41

04

Globe Valve GEMÜ S40

05

Tank bottom Valve GEMÜ P40

06

Position indicator GEMÜ 12A0

AGENDA

#LEAP

Platform concept LEAP

LEAP INTO THE FUTURE

WITH THE PRODUCT GENERATION FROM GEMÜ

A new generation of valves, precisely tailored to your needs. Experience the products of the future from GEMÜ.

Our innovative products have been designed to meet even the most specialized requirements and be used in the most demanding processes. At the same time, they are an expression of our new manufacturing strategy:
Lean. Effective. Agile. Platformized.



Product presentation

GEMÜ D40 diaphragm valve

GEMÜ D40 diaphragm valve with innovative sealing system

The high-performance valve of the future

FLEXIBLE to use
SIMPLE to handle
COMPACT to install
EFFECTIVE in processes



Product presentation

GEMÜ D40 diaphragm valve

GEMÜ D40 diaphragm valve with innovative sealing system

The pneumatically operated GEMÜ D40 diaphragm valve is designed for use in aseptic manufacturing processes. The sealing concept of the valve is based on the newly developed GEMÜ diaphragm, which also hermetically separates the actuator from the medium.



Construction

GEMÜ D40 diaphragm valve

GEMÜ AD40 actuator

- Modular linear actuator
- All actuator parts (except seals and design elements) made from stainless steel
- AG0 – AG6

Valve body

- Body material: 1.4435 (316L), forged material | 1.4435 (316L), block material
- Flow-optimized body geometry
- Up to 100% higher Kv values

GEMÜ DD00 diaphragm

- Diaphragm material: PTFE/EPDM
- New diaphragm design with bayonet pin
- MG-A – MG-E

GEMÜ D40

GEMÜ D40 diaphragm valve

”

GEMÜ D40

Innovative diaphragm technology

+

Optimized design

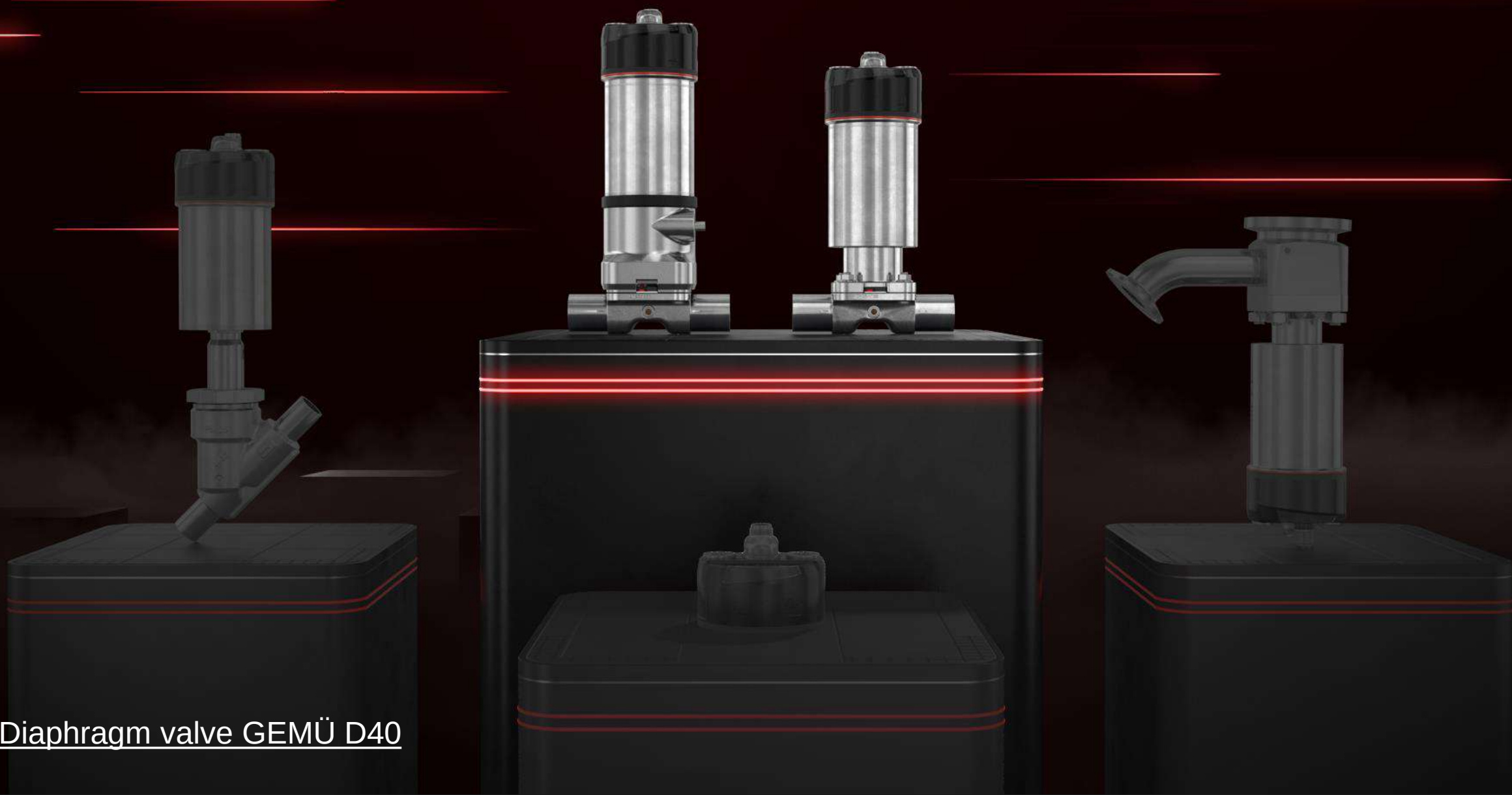
=

MORE POWERFUL RESULT

“



Diaphragm valve GEMÜ D40

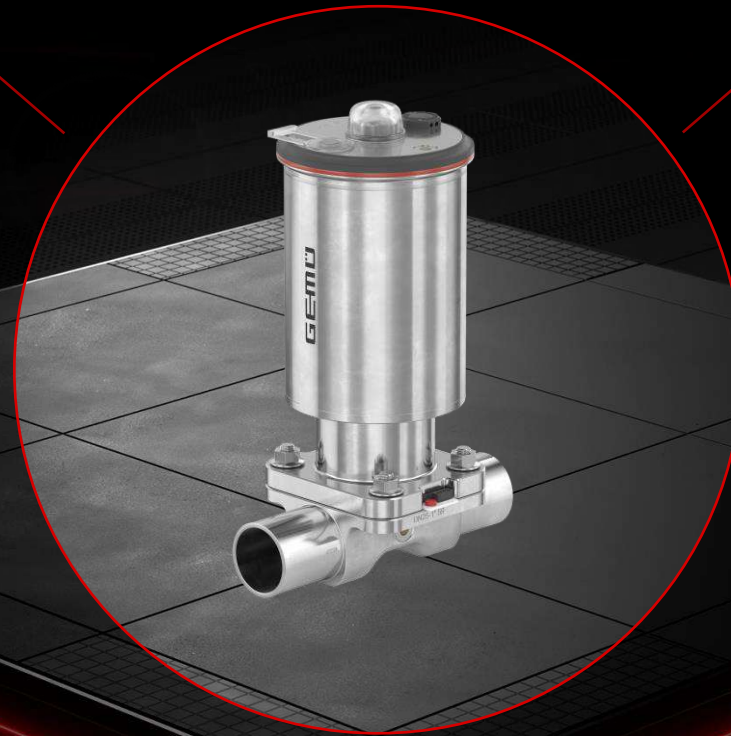


Customer benefits and added value (1 of 2)

Diaphragm valve GEMÜ D40

Simple & fast maintenance

- **Time saving:**
Shorter maintenance times due to innovative design with only a few and quick assembly steps
- **Cost reduction:**
Minimized maintenance costs and downtimes enable higher system availability
- **Safety:**
Reduced susceptibility to faults due to defined diaphragm compression and bayonet-pin diaphragm design



New membrane technology

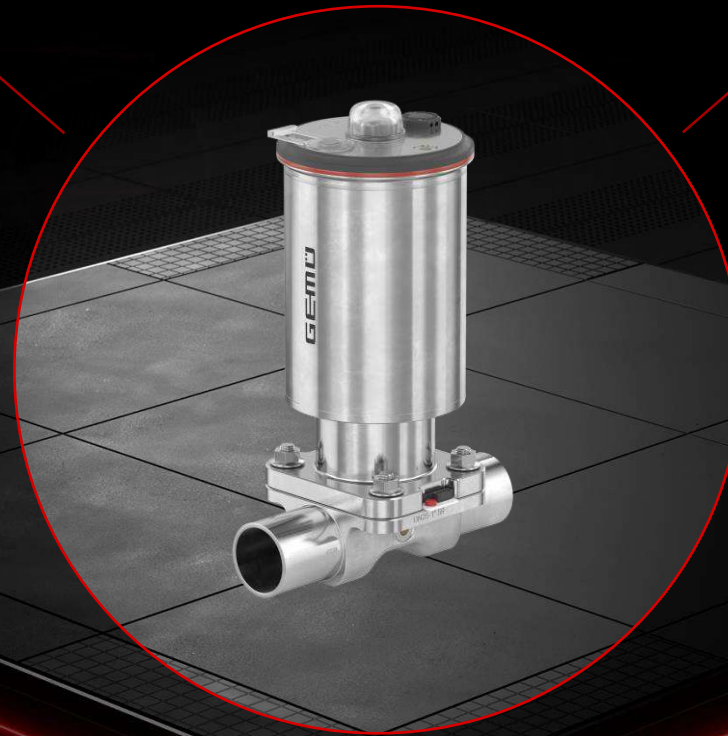
- **Safety:**
Increased system safety due to constant compression of the diaphragm without the need for retightening
- **Reliability:**
Longer maintenance cycles and consistent compression increase system availability
- **Precision:**
Improved control accuracy due to uniform Kv-stroke characteristic and optimized unrolling behavior
- **Cost optimization:**
Reduced TCO and OpEx due to low-maintenance diaphragms

Customer benefits and added value (2 of 2)

Diaphragm valve GEMÜ D40

Optimized body design

- **Energy efficiency:**
Lower energy requirement during sterilization due to weight-optimized design, shorter cooling times reduce downtimes
- **Gentle processing:**
Flow-optimized design protects shear force-sensitive media and increases the yield of living cells
- **Higher performance:**
Up to 100 % higher Kv values enable more compact valve solutions
- **Cost savings:**
Use of smaller valves reduces CapEx for ASME connections



High flexibility

- **Simple automation:**
Easy handling of the automation modules during installation, commissioning and use simplifies processes and reduces operating costs
- **Cost efficiency:**
Use of smaller and cheaper actuators with reduced pressure saves investment costs (CapEx)
- **Space saving:**
Compact design enables more efficient system planning
- **Extended application range:**
Ideal for demanding applications due to realization of up to 16 bar operating pressure

Comparison of sealing technology

GEMÜ D40 diaphragm valve



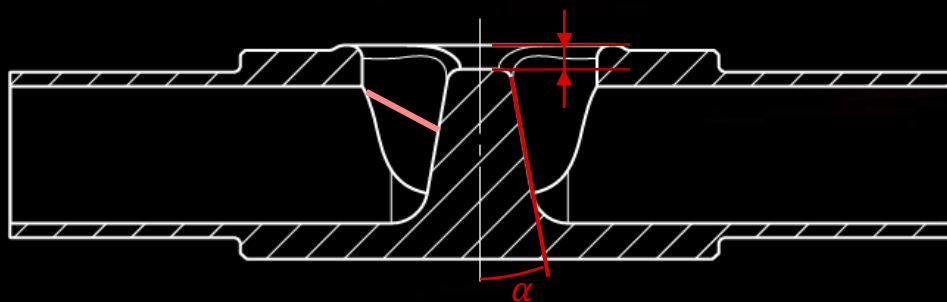
GEMÜ 650



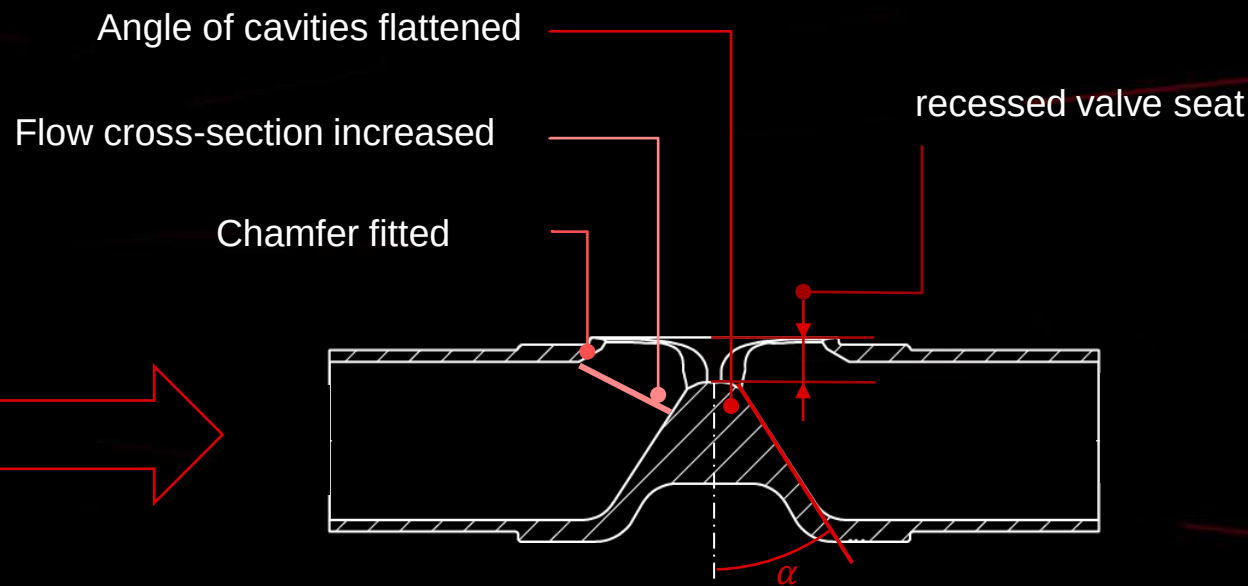
GEMÜ D40

Body geometry

GEMÜ D40 diaphragm valve



Current forged body



New forged body

Comparison of MG 50 and MG E

 27 % less weight

 21 % time saving when cooling down after sterilisation

Comparison of Kv values | ASME BPE

GEMÜ D40 diaphragm valve

GEMÜ 650 BioStar

Tried and tested GEMÜ diaphragm valve



VS.

GEMÜ D40

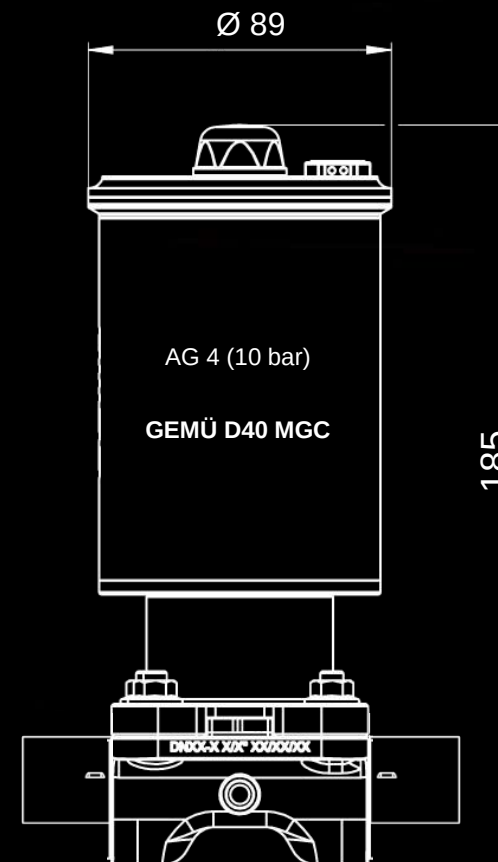
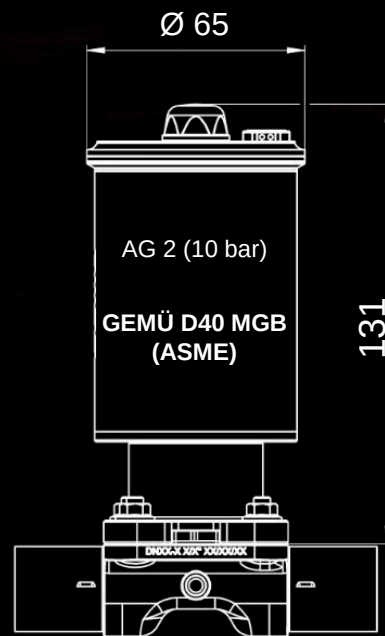
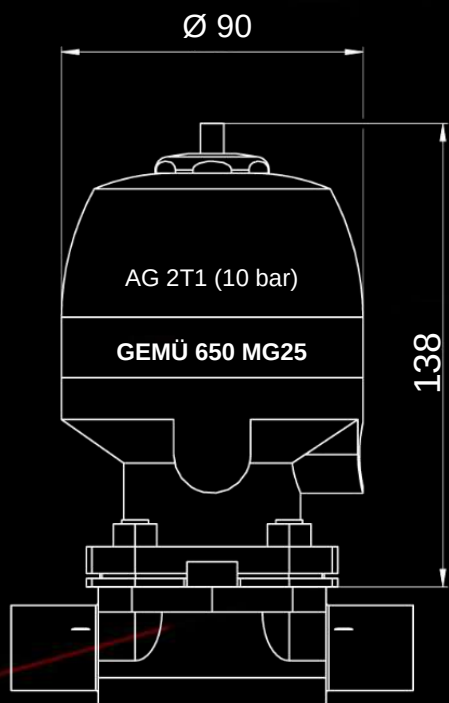
New GEMÜ diaphragm valve with optimized body geometry



GEMÜ 650				GEMÜ D40			
MG	DN	NPS	Kv value [m³/h]	MG	DN	NPS	Kv value [m³/h]
10	15	½"	2.2	B	15	½"	3.9
	20	¾"	3.8		20	¾"	10.0
25	25	1"	12.2	C	25	1"	10.0
							15.0

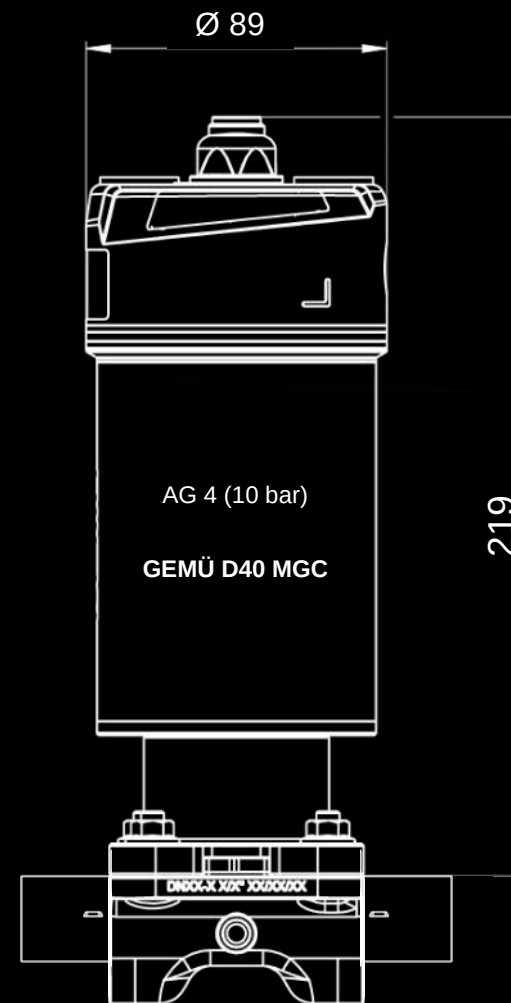
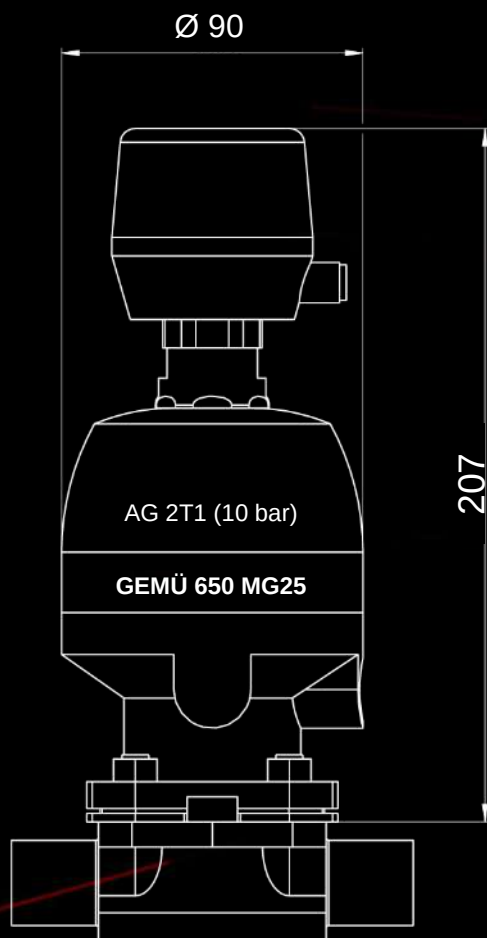
Comparison of actuator dimensions | DN 25

GEMÜ D40 diaphragm valve



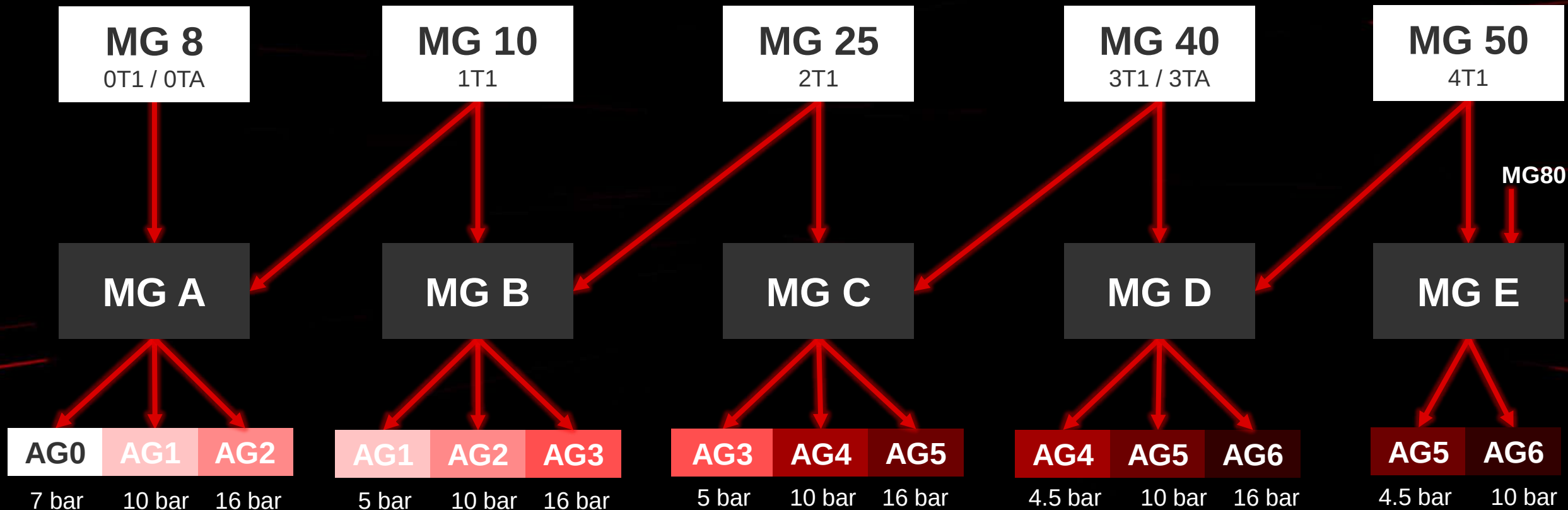
Comparison of actuator dimensions with electrical position indicators | DN25

GEMÜ D40 diaphragm valve



Selection options for diaphragm and actuator size

GEMÜ D40 diaphragm valve



Order code

GEMÜ D40 diaphragm valve

Order example	D40	25	D	59	40	T1	1	1B2	1537
Type									
Nominal size									
Housing configuration									
Connection type									
Valve body material									
Diaphragm material									
Control function									
Actuator version									
Surface finish									

T1 = Two-piece PTFE/EPDM
L1 = Laminated PTFE/EPDM

1 = Spring set (standard)
B = Diaphragm size
2 = Actuator size

Product features

GEMÜ D40 diaphragm valve



- For use in hygienic and aseptic applications (CIP/SIP capable and autoclavable)
- Valve can be configured for the respective process parameters
- Fast, safe and simple diaphragm and actuator mounting
- Low maintenance due to the firmly chambered diaphragm, no retightening required
- Very high Kv values due to the flow-optimized valve body
- Identification of the angle of rotation (hash mark), optical position indicator and transparent cap as standard
- Simple modular expansion possible due to future-oriented automation components

[Datasheet](#)

[Operating instructions](#)

Technical specifications

GEMÜ D40 diaphragm valve



- Media temperature: -20 to 100 °C
- Sterilization temperature: max. 150 °C
- Ambient temperature: -20 to 80 °C
- Operating pressure: 0 to 16 bar
- Control pressure: 4 to 8 bar
- Vacuum: 70 mbar (a)
- Control function: NC | NO | DA
- Nominal sizes: DN 6 to 65
- Body configurations: 2/2-way body | T body
- Connection types: Clamp | Spigot
- Connection standards: ASME | DIN | EN | ISO
- Body materials: 1.4435 (316L), forged material | 1.4435 (316L), block material
- Diaphragm materials: PTFE/EPDM
- Conformities: BSE/TSE | EAC | FDA | Oxygen | TA Luft (German Clean Air Act) | USP | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | Regulation (EU) No. 10/2011

Product presentation

GEMÜ D41 diaphragm valve

GEMÜ D41 diaphragm valve with EasyLock technology

The safe valve of the future

FAST during assembly
EASY to handle
SAFE when used
EFFECTIVE in processes



Product presentation

GEMÜ D41 diaphragm valve

GEMÜ D41 diaphragm valve with EasyLock technology

The pneumatically operated GEMÜ D41 diaphragm valve is an additional version of the GEMÜ D40 diaphragm valve. All the advantages and features of this product can also be found in the GEMÜ D41. The subtle difference between the valves lies in their installation: GEMÜ D41 with EasyLock technology is installed entirely without loose components using a central gearbox.



Construction

GEMÜ D41 diaphragm valve

GEMÜ AD41 actuator

- Modular linear actuator
- All actuator parts (except seals and design elements) made from stainless steel
- AG1 – AG6

EasyLock technology

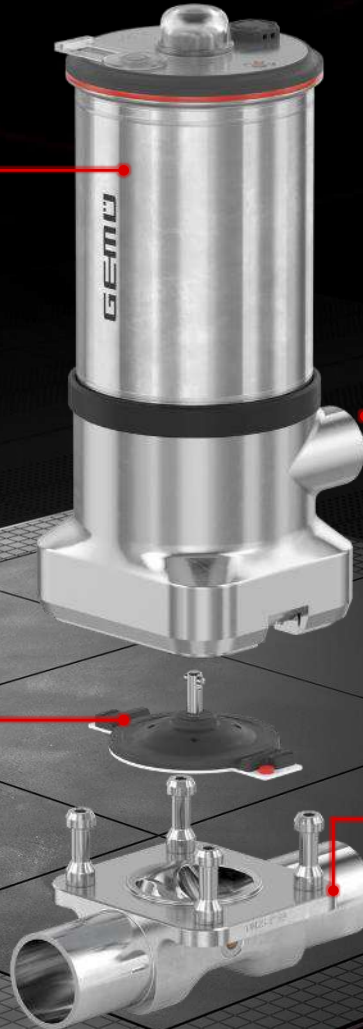
- More reliable installation due to the central gearbox
- Even compression of the diaphragm
- No loose components

GEMÜ DD00 diaphragm

- Diaphragm material: PTFE/EPDM
- New diaphragm design with bayonet pin
- MG-A – MG-E

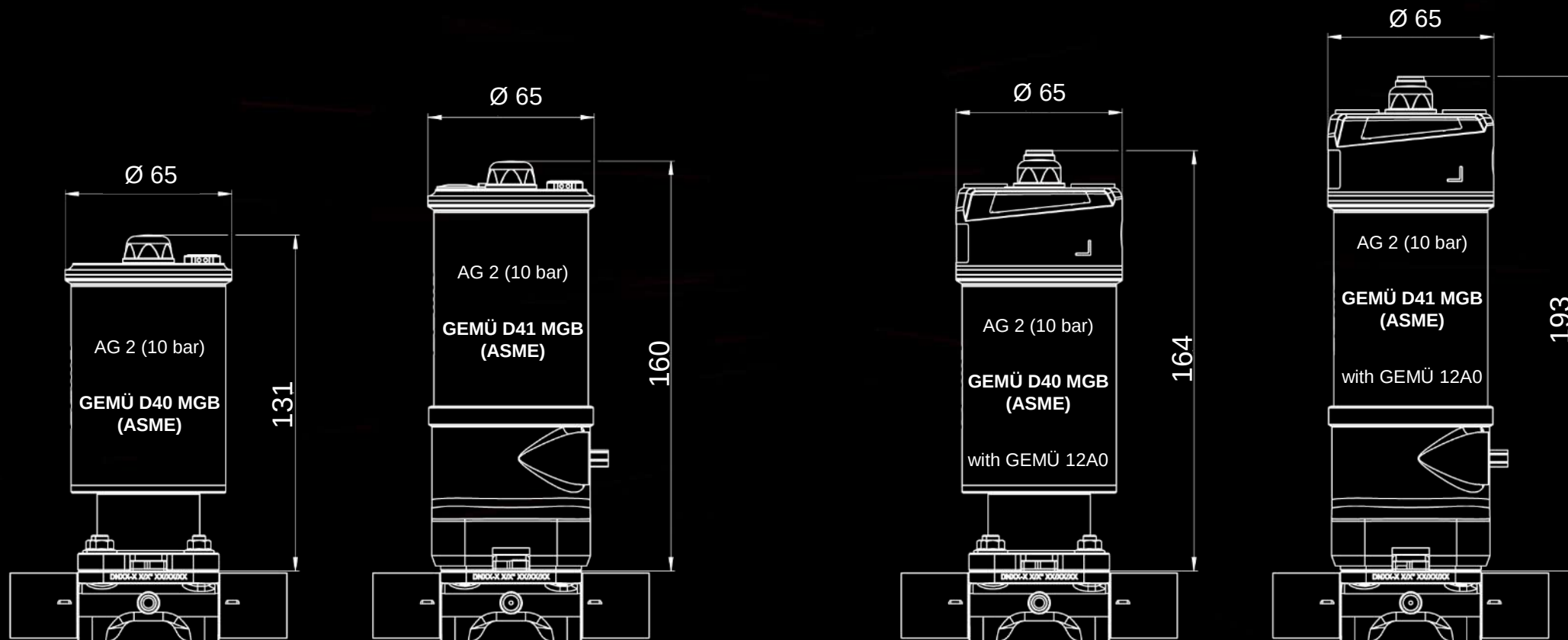
Valve body

- Body material: 1.4435 (316L), forged material | 1.4435 (316L), block material
- Flow-optimized body geometry
- Up to 100% higher Kv values



Comparison of actuator dimensions | DN25

GEMÜ D41 diaphragm valve



Without electrical position indicator

With electrical position indicator

GEMÜ D41

GEMÜ D41 diaphragm valve

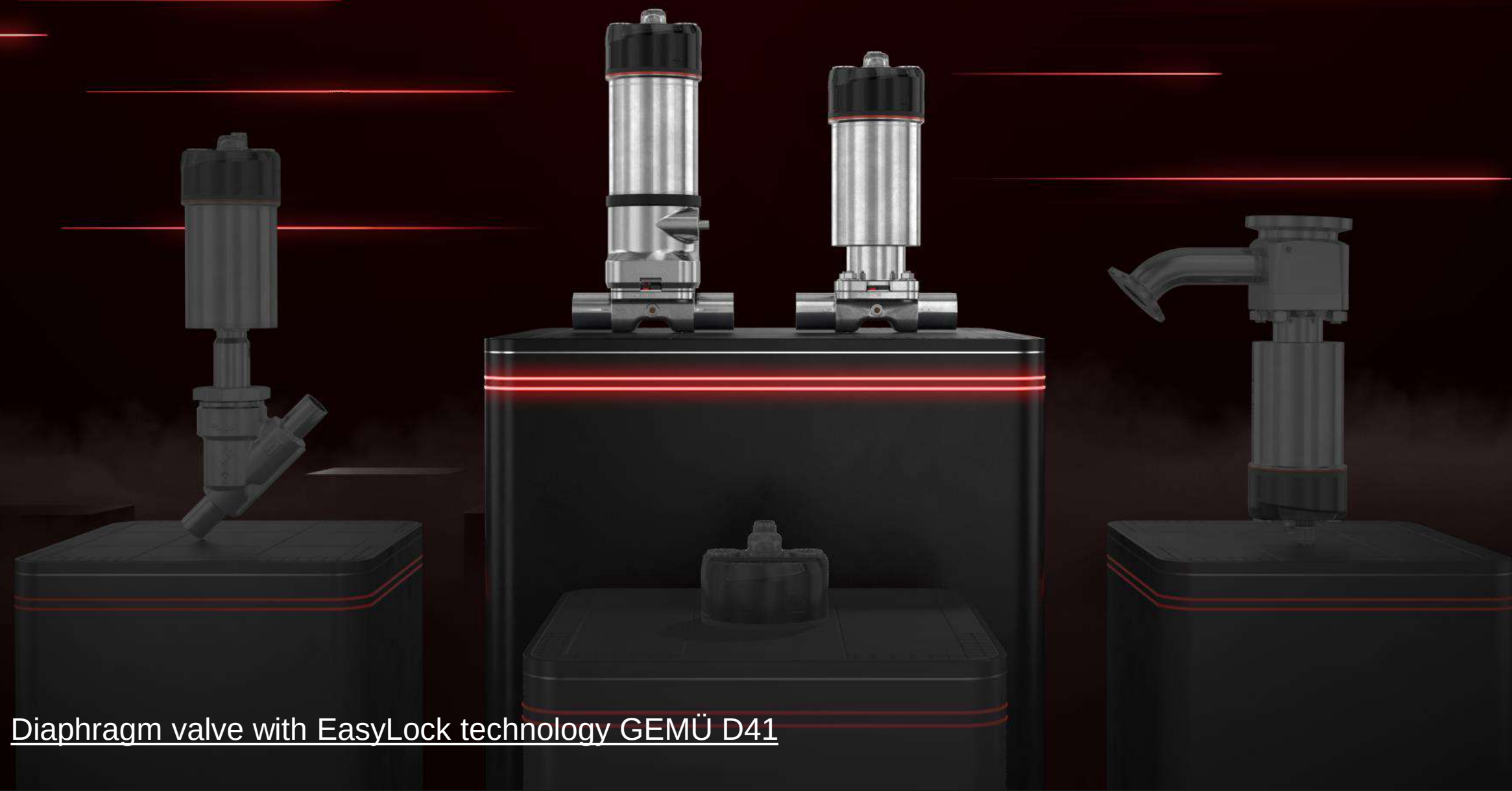
”

GEMÜ D41

Easy installation &
functional reliability due to
EasyLock technology

“





Diaphragm valve with EasyLock technology GEMÜ D41



Customer benefits and added value (1 of 2)

Diaphragm valve GEMÜ D41

Maintenance in seconds

- **Time saving:**
Shorter maintenance times due to innovative EasyLock technology (quick-locking system with central gearbox, installation without loose components)
- **Cost reduction:**
Minimized maintenance costs and downtimes enable higher system availability
- **Safety:**
Reduced susceptibility to faults due to defined diaphragm compression and bayonet-pin diaphragm design



New membrane technology

- **Safety:**
Increased system safety due to constant compression of the diaphragm without the need for retightening
- **Reliability:**
Longer maintenance cycles and consistent compression increase system availability
- **Precision:**
Improved control accuracy due to uniform Kv-stroke characteristic and optimized unrolling behaviour
- **Cost optimization:**
Reduced TCO and OpEx due to low-maintenance diaphragms

Customer benefits and added value (2 of 2)

Diaphragm valve GEMÜ D41

Optimized body design

- **Energy efficiency:**
Lower energy requirement during sterilization due to weight-optimized design, shorter cooling times reduce downtimes
- **Gentle processing:**
Flow-optimized design protects shear force-sensitive media and increases the yield of living cells
- **Higher performance:**
Up to 100 % higher Kv values enable compact valve solutions



High flexibility

- **Simple automation:**
Easy handling of the automation modules during installation, commissioning and use simplifies processes and reduces operating costs

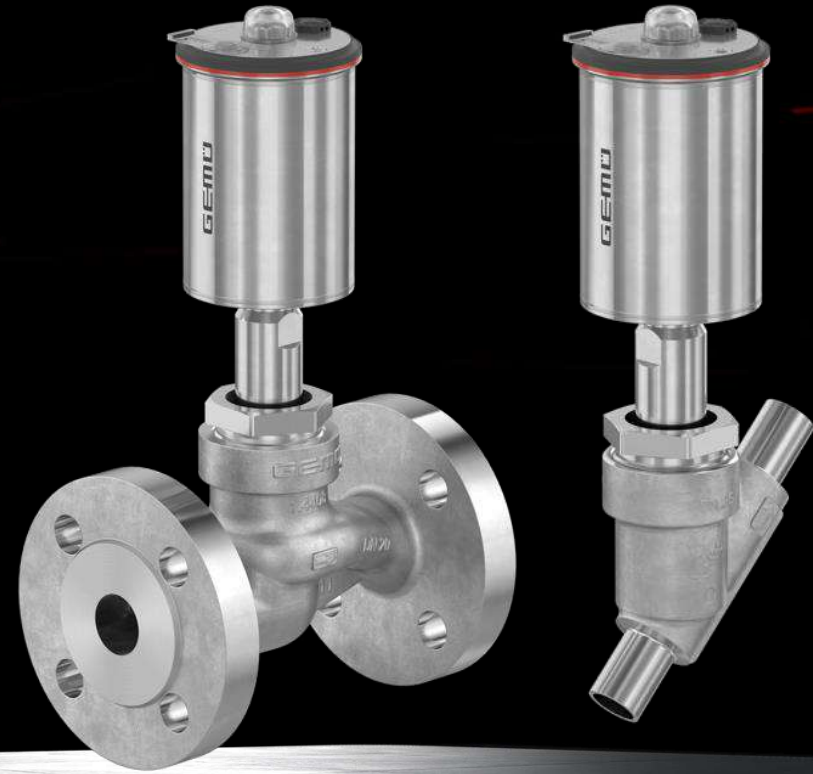
Product introduction

Globe Valve GEMÜ S40

GEMÜ S40 globe valve in angle seat and straight seat design

The multi-variant valve of the future

EASY to handle
VISIBLE for inspection
FAST to install
EFFECTIVE in the process



Product introduction

Globe Valve GEMÜ S40

A wide variety of GEMÜ S40 globe valves

The pneumatically operated GEMÜ S40 globe valve is suitable for use in industrial applications. Wear parts can be replaced easily using standard interfaces, and the control air connectors, which are accessible from above, mean that the actuator does not need to be aligned.



Construction

Globe Valve GEMÜ S40

Spindle and adapter

- All wetted components made of stainless steel and PTFE
- Leakage hole for quick leakage detection
- Proven seat and spindle sealing concept with PTFE seals

Actuator

- Material: 1.4408 investment casting, 1.4435 investment casting and EN-GJS-400-18-LT SG iron
- Functional surfaces with investment casting 1.4435 with surface qualities up to $Ra \leq 0.4\mu m$ possible
- Flow-optimized body geometry
- Straight or angled seat version available
- Large selection of connection types available

Valve body

- Material: 1.4408 investment casting, 1.4435 investment casting and EN-GJS-400-18-LT SG iron
- Functional surfaces with investment casting 1.4435 with surface qualities up to $Ra \leq 0.4\mu m$ possible
- Flow-optimized body geometry
- Straight or angled seat version available
- Large selection of connection types available

Control valves available from 2025

GEMÜ S40

Customer benefits

”

GEMÜ S40

A versatile and durable globe valve
for a wide range of applications.

“

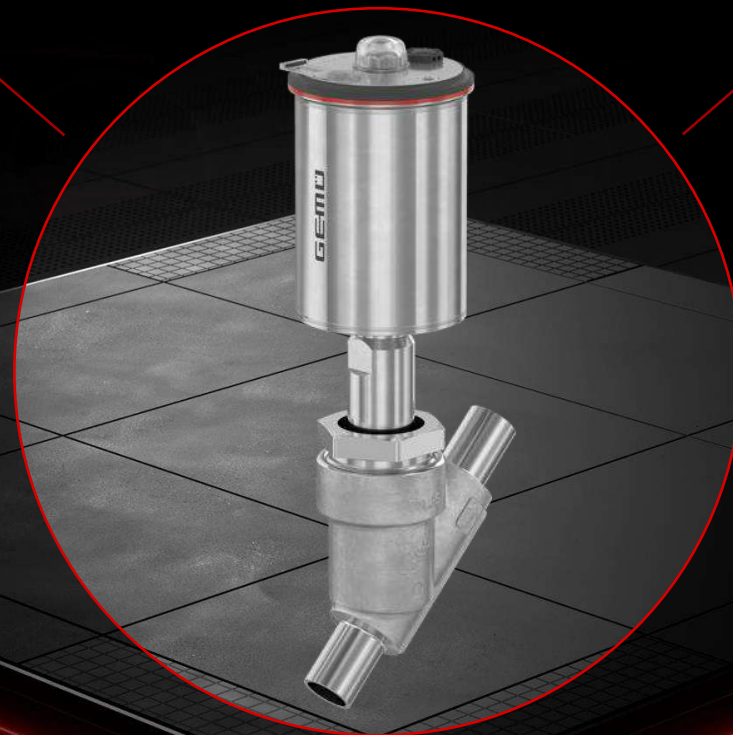


Customer benefits and added value (1 of 2)

Globe Valve GEMÜ S40

Precise drive gradation

- **Variable actuator selection:**
More actuator sizes available, allowing more precise selection depending on operating data.
- **Cost reduction:**
Use of smaller actuator sizes possible
- **Space saving:**
Compact design enables more efficient plant planning



Durable, robust and easy to maintain

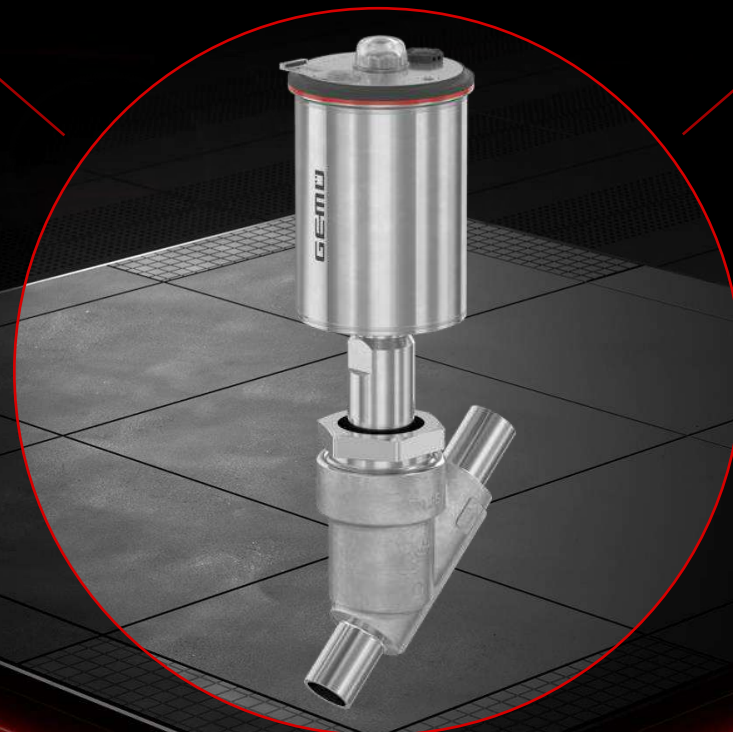
- **Easy replacement of wearing parts:**
Cost savings and sustainability *through* easy replacement of the sealing elements in contact with the media
- **Easy component replacement:**
Shorter maintenance and downtimes *through* faster replacement of pre-assembled components
- **Cost reduction:**
Due to longer operating times and shorter maintenance times
- **Effective protection:**
Optical position indicator with transparent cap to prevent the ingress of dust and dirt

Customer benefits and added value (2 of 2)

Globe Valve GEMÜ S40

Compatible

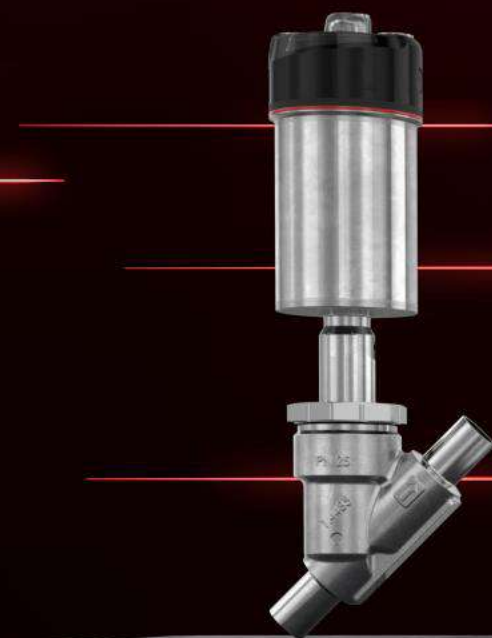
- **Reverse congruent:**
Existing valve bodies in the plant can be equipped with the new actuator technology
- **Expandability:**
Easy mounting of additional components due to standardised interface
- **Cost /variant reduction:**
Standardised add-on modules can be used for the entire product generation
- **Variable actuator selection:**
Different actuator technologies adaptable to the same valve bodies for best fulfilment of the requirements



Ideal solution for control applications

- **Optimal control characteristics:**
Process optimization through better sliding properties due to the plastic piston liner
- **Standardised interfaces:**
Quick and easy setting up of innovative automation modules
- **Process flexibility:**
Various control characteristics adapted to the individual process available
- **Cost savings:**
Due to optimized process, low wear and lower process costs

Globe valve GEMÜ S40



Sectional model view

Globe Valve GEMÜ S40

Interface of the automation modules

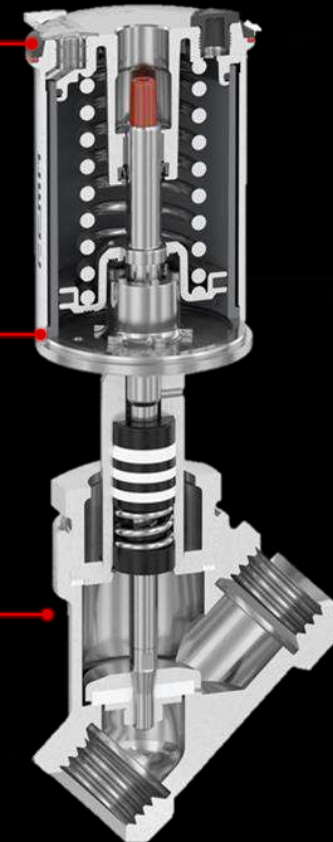
- Simple construction of electrical position indicators and controllers
- Control air connectors accessible on one side

Piston liner made from PPS

- Internal air supply
- Improved sliding properties of the piston

Standardized interfaces

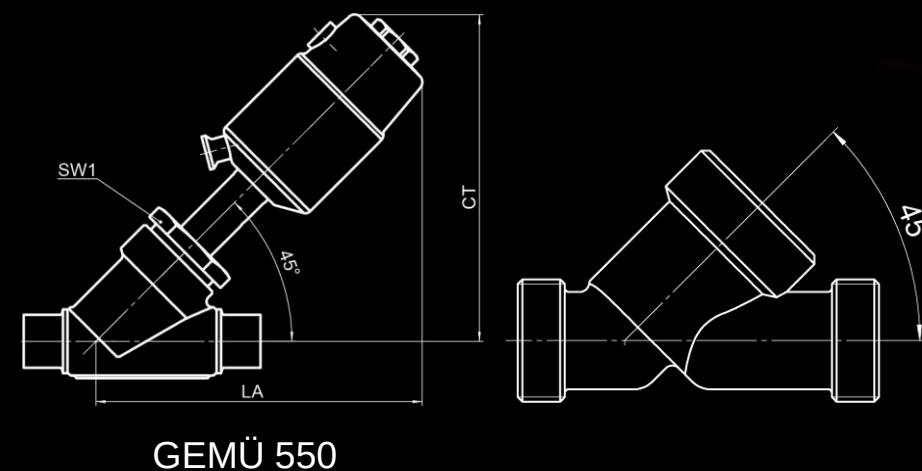
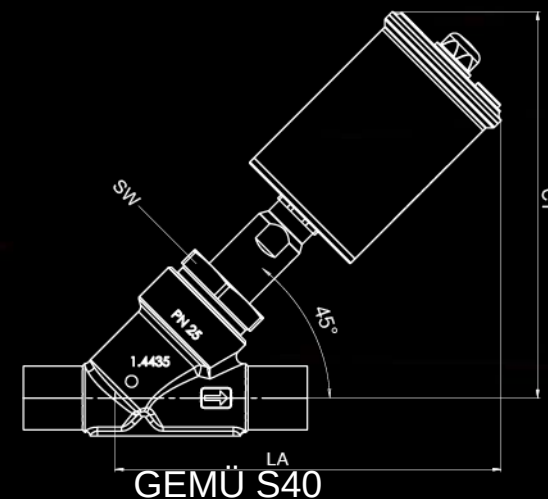
- Simple replacement of wear parts thanks to the modular construction
- Replacement of actuators
- Compatible with current valve bodies



Dimensions comparison

Installation dimensions angled seat globe version S40 vs. 550

	Actuator size 1		Actuator size 2		Actuator size 3	
CT/LA in mm	GEMÜ S40	GEMÜ 550	GEMÜ S40	GEMÜ 550	GEMÜ S40	GEMÜ 550
DN 8		134,0		171,0		
DN 10	138,0	134,0	155,0	171,0	160,5	
DN 15	142,0	137,0	158,5	174,0	163,6	
DN 20	146,5	143,0	164,0	180,0	196,5	198,0
DN 25	151,3		168,2	184,0	173,3	202,0
DN 32			175,7	192,0	180,7	210,0
DN 40				187,0	186,4	215,0
DN 50					194,7	223,0



GEMÜ S40

Actuator size comparison GEMÜ 550 vs. GEMÜ S40



GEMÜ 550	GEMÜ S40
1G1	1G1
-	1G2
2G1	1G3
3G1	1G4
4G1	1G5
5G1	1G6

- More variation options to be able to respond better to customer requirements
- We will be happy to support you with the conversion from GEMÜ 550 or GEMÜ 530 to the GEMÜ S40 and help you with the actuator selection.

Order code

Globe Valve GEMÜ S40

Order example	S40	25	S	59	C2	5	1	1G2	1903
Type									
Nominal size									
Housing configuration									
Connection type									
Valve body material									
Seat seal material									
Control function									
Actuator version									
Execution type									

S = Angle seat globe valve
G = Straight seat globe valve

1 = Spring set (standard)
G = Flow direction under the seat
2 = Actuator size

Features

Globe Valve GEMÜ S40



- Suitable as a shut-off function for gaseous, liquid and viscous media
- Robust stainless steel actuator resistant to corrosive ambient conditions
- No alignment of the actuator needed as the control air connectors are at the top
- Replaceable medium wetted sealing components
- Transparent cap and optical position indicator as standard
- Suitable for vacuum up to 10 mbar (a) as standard

[Datasheet](#)

[Operating instructions](#)

Technical data & facts

Globe Valve GEMÜ S40



- Media temperature: -10 to 185 °C
- Ambient temperature: -10 to 80 °C
- Operating pressure: 0 to 40 bar
- Nominal sizes: DN 8 to 50
- Body configurations: Straight seat | Angle seat
- Connection standards: ANSI | ASME | BS | DIN | EN | ISO | JIS | NPT | SMS
- Connection types: Clamp | Flange | Threaded connection | Spigot
- Body materials: 1.4408 investment casting material | 1.4435 investment casting material | 1.4435 block material | EN-GJS-400-18-LT SG iron material
- Seat seal material: PTFE
- Conformities: ATEX | FDA | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | Regulation (EU) No. 10/2011

Product introduction

Tank bottom valve GEMÜ P40

Tank bottom valve GEMÜ P40 with PD-technology

The efficient valve of the future

FLEXIBLE in use
RELIABLE in use
SAFE in process
OPTIMAL in design



Product introduction

Tank bottom valve GEMÜ P40

Tank bottom valve GEMÜ P40 with PD-technology

The pneumatically actuated GEMÜ P40 PD tank bottom valve is designed for use in sterile applications. The sealing concept of the valve is based on the GEMÜ PD technology consisting of a radial sealing PTFE diaphragm, whereby the actuator is hermetically separated from the medium.



Construction

Tank bottom valve GEMÜ P40

Valve body

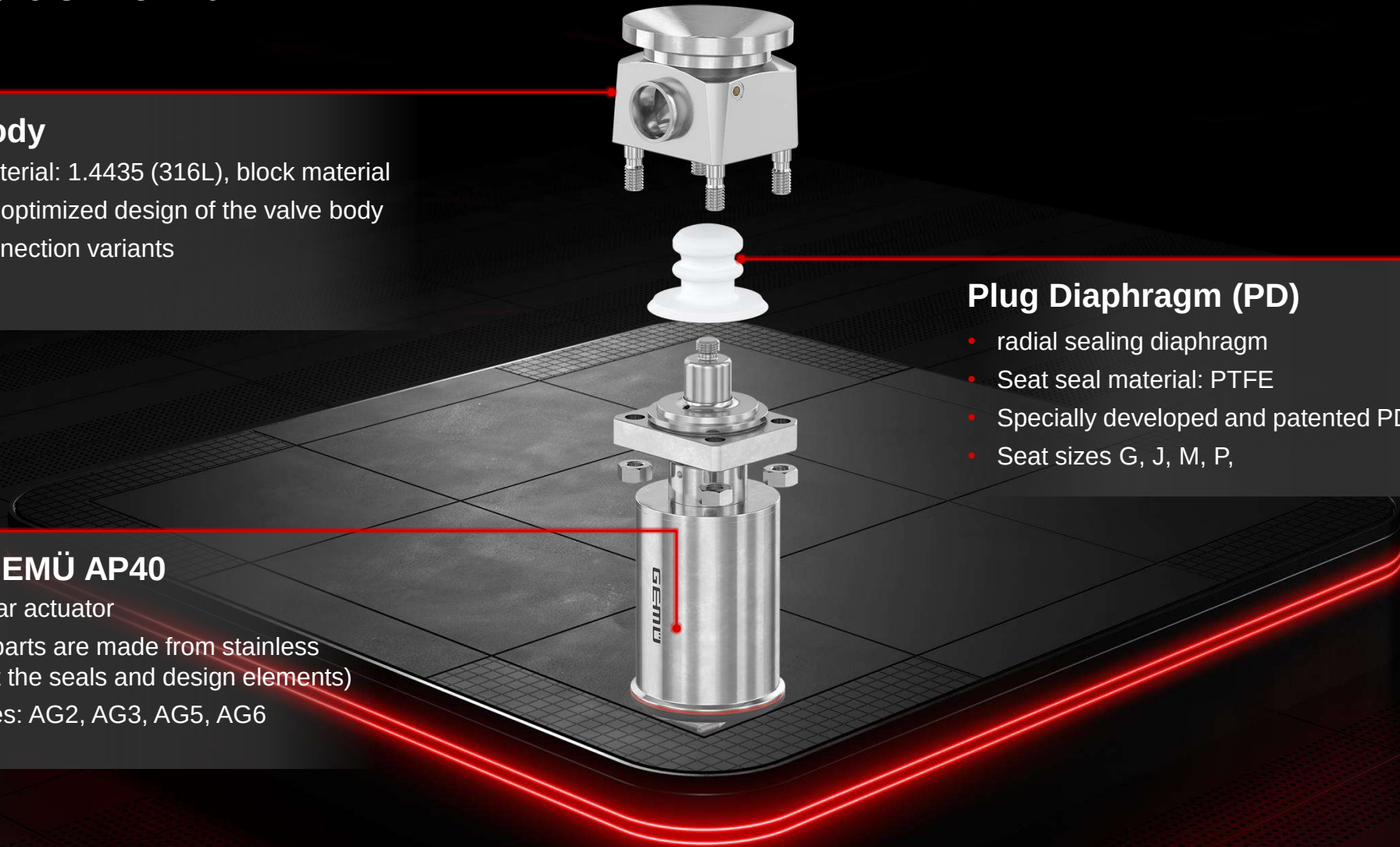
- Body material: 1.4435 (316L), block material
- Draining optimized design of the valve body
- Four connection variants

Plug Diaphragm (PD)

- radial sealing diaphragm
- Seat seal material: PTFE
- Specially developed and patented PD
- Seat sizes G, J, M, P,

Actuator GEMÜ AP40

- Modular linear actuator
- All actuator parts are made from stainless steel (except the seals and design elements)
- Actuator sizes: AG2, AG3, AG5, AG6



GEMÜ P40

Tank bottom valve GEMÜ P40

”

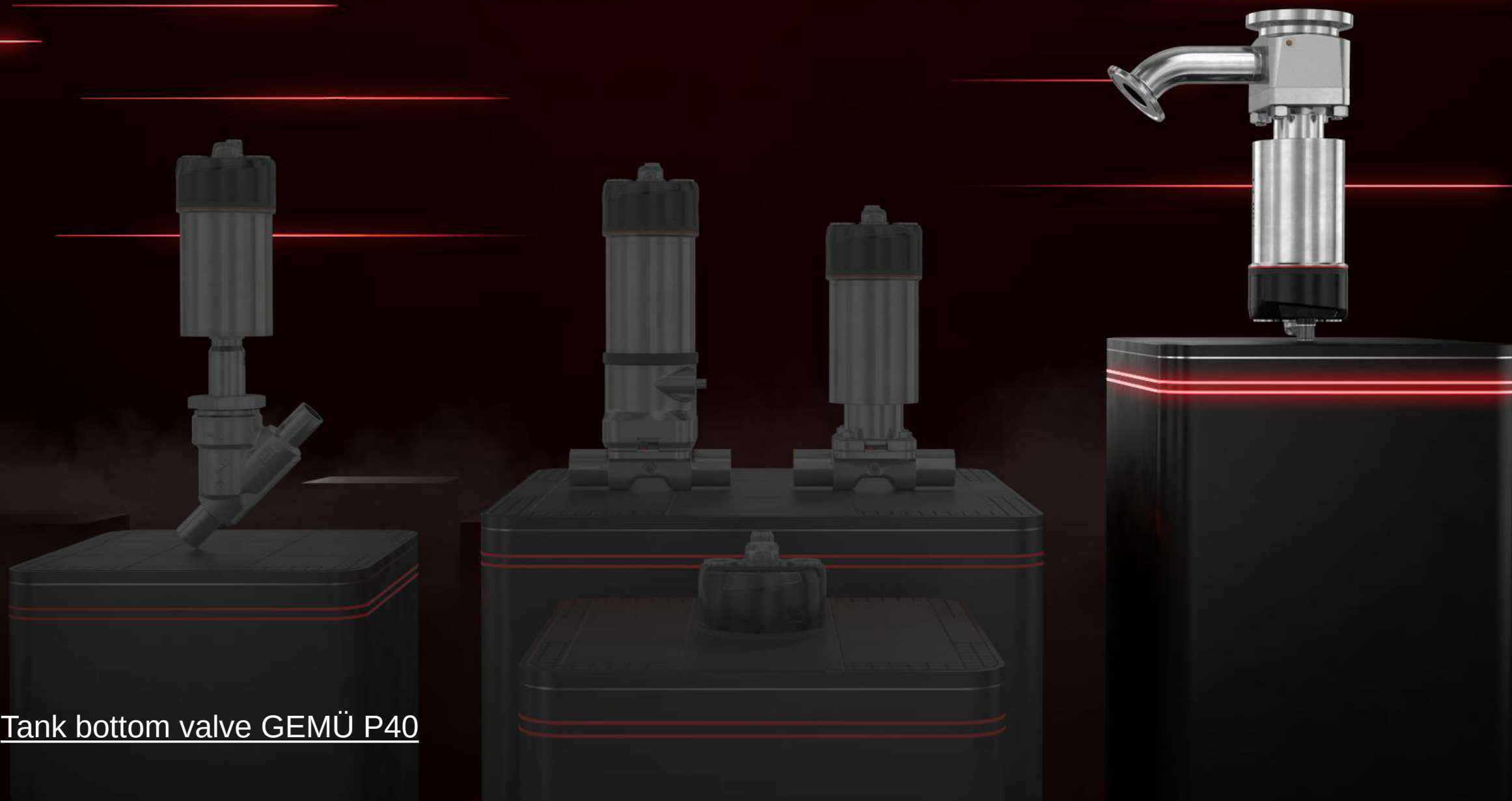
GEMÜ P40

Maximum efficiency
& safety in
your application

“



Tank bottom valve GEMÜ P40

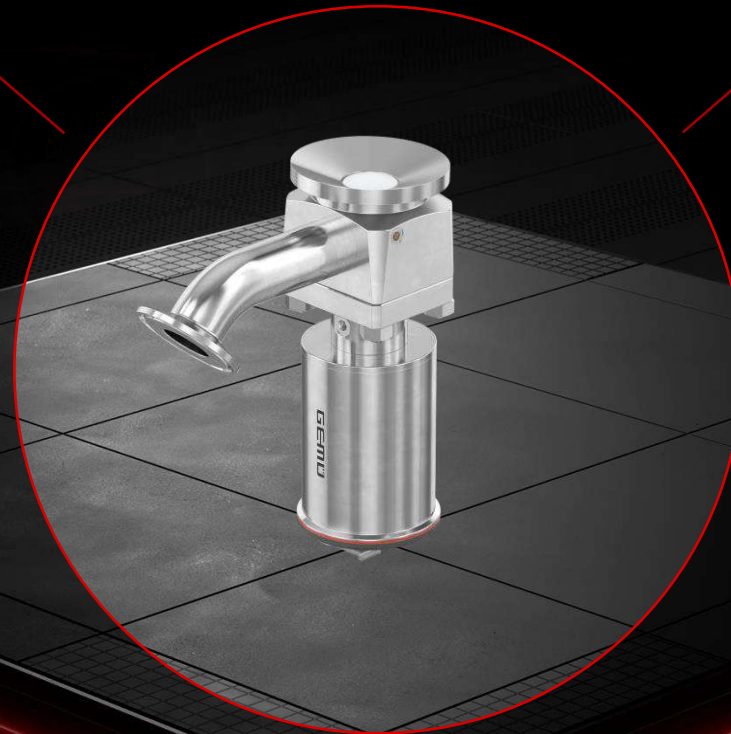


Customer benefits and added value (1 of 2)

Tank bottom valve GEMÜ P40

Process-safe design

- **Product safety:**
Homogeneous mixing of the product by avoiding sediment deposits at the bottom of the tank due to the optimized design
- **Residue-free operation:**
Optimized drainage design of the valve body and PD minimizes the risk of contamination and promotes efficient product discharge
- **Hygienic safety:**
PD design enables good cleanability regardless of the valve position



Innovative sealing concept

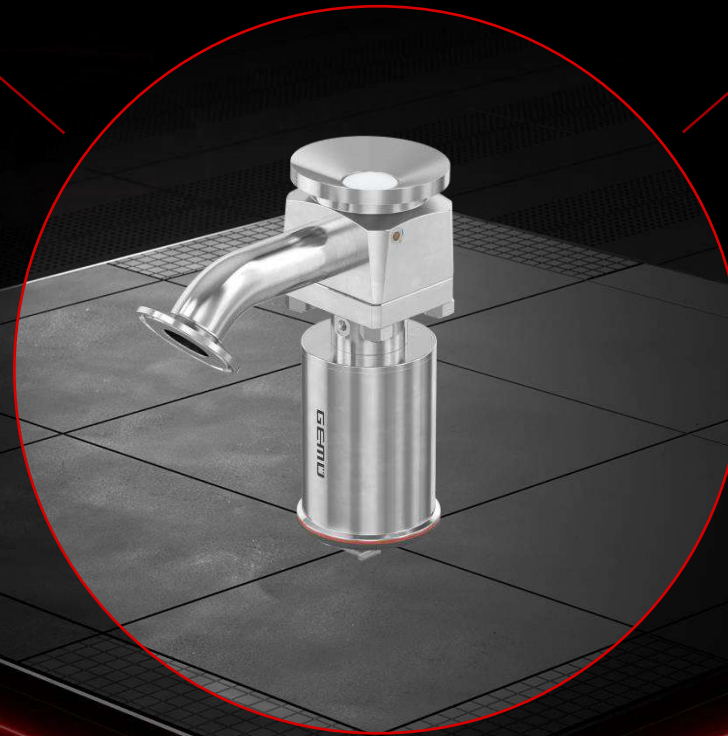
- **Reliability:**
Low-maintenance valve operation due to the patented PD developed specifically for tank bottom valves
- **Time saving:**
No time-consuming retightening of the valve required due to the dynamic sealing concept
- **Cost optimization:**
Reduced TCO and OpEx due to low-maintenance and design-optimized sealing concept

Customer benefits and added value (2 of 2)

Tank bottom valve GEMÜ P40

Flexible interfaces

- **Simple system integration:**
Wide range of pipe adaptation options ensure uncomplicated integration into existing system structures
- **Simple automation:**
Easy handling of the automation modules during installation, commissioning and use simplifies processes and reduces operating costs
- **Individual adaptation:**
Application-specific configurations depending on the application and operating parameters guarantee optimum function and maximum efficiency



Convenient assembly

- **Time saving:**
Shorter maintenance times and downtimes due to proven screw connection concept with only 4 nuts
- **Cost reduction:**
Minimized maintenance and downtime costs due to fast system availability
- **Safety:**
Reduced susceptibility to faults during maintenance and installation due to a defined stop and simple replacement of the fastening elements if necessary

Special features of the construction

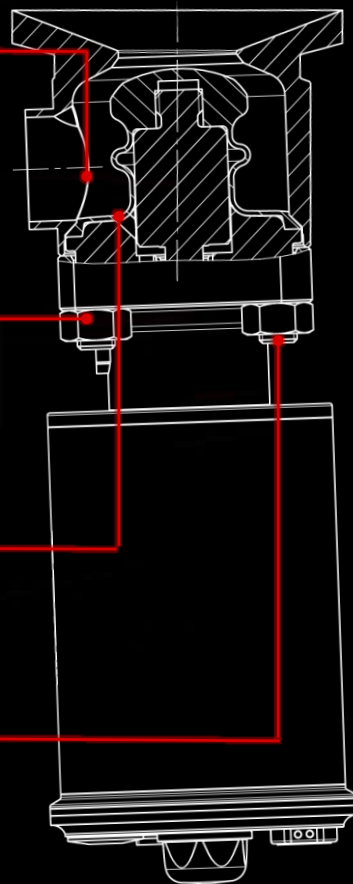
Tank bottom valve GEMÜ P40

Draining optimized design of the valve body
(with integrated slopw)

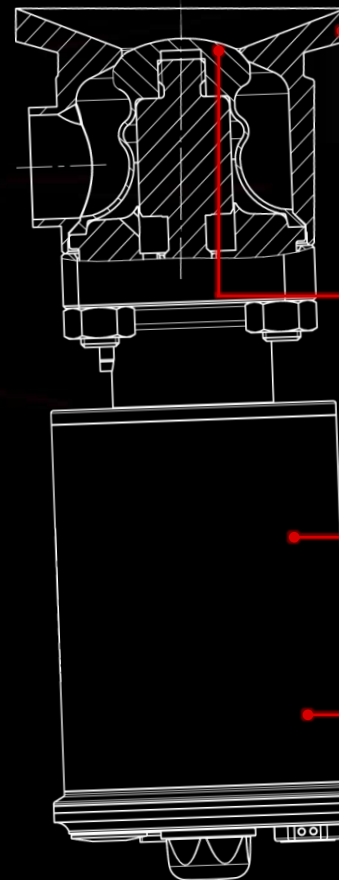
Reliable screw connection concept
(simple replacement of the fastening elements)

Draining optimized design of the PD
(without hold-up volume in open and in closed position)

Simple actuator mounting on block
(no retightening required)



Open position



Closed position

Compact construction of the valve body

Optimized construction of the tank-side
(to avoid possible sediment settling)

CIP/SIP-capable and autoclavable

All outer surfaces $Ra \leq 0.8 \mu m$
(valve body and actuator)

Connection types

Tank bottom valve GEMÜ P40



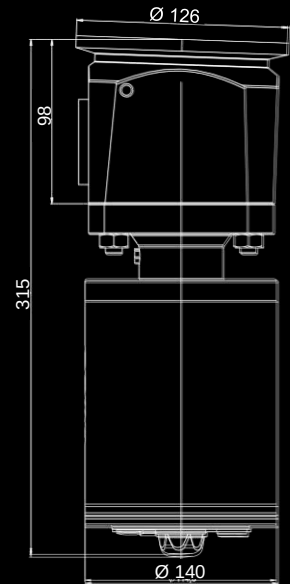
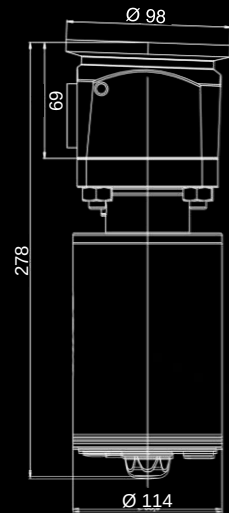
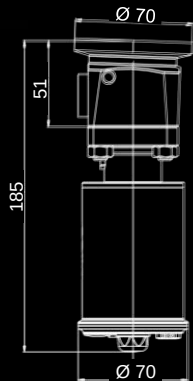
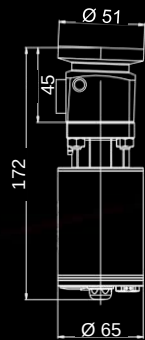
Possible connection types

spigot with clamp bend, spigot without adaption, spigot with pipe, spigot with pipe bend (suitable for orbital welding)

Dimensions

Tank bottom valve GEMÜ P40

GEMÜ P40				
Seat size	G	J	M	P
Actuator size	2	3	5	6
Nominal size*	DN 06 - DN 20	DN 15 - DN 25	DN 25 - DN 40	DN 40 - DN 65



*Allocation of nominal diameter to seat size depending on pipe standard

Comparison

Tank bottom valve GEMÜ P40

GEMÜ P40

New GEM
tank bottom valve with
PD-technology



VS.

GEMÜ 650 BAV

Proven GEMÜ tank
bottom valve with
diaphragm as sealing
technology



Order code

Tank bottom valve GEMÜ P40

Ordering example	P40	25	B	88	41	5	1	1	J	3	B	45	W	1536
Type														
Nominal size														
Housing shape														
Connection type														
Valve body material														
Seat seal														
Control function														
Actuator springs														
Seat size														
Actuator Size														
Adaption outlet														
Adaption anle														
Connection Tank														
Surface quality														

B = Pipe bend
P = Pipe

Angle of
pipe bend

Weld-in
version

Features

Tank bottom valve GEMÜ P40



- Suitable for use in hygienic and aseptic processes (CIP/SIP-capable and autoclavable)
- Quick, safe and easy actuator installation
- Low maintenance thanks to PD sealing technology, no retightening required
- Draining-optimized design of the PD and compact design of the valve body
- Converging design of the tank-side to prevent potential sediment deposits
- Visual position indicator and sight glass as standard
- Simple modular expansion possible with future-oriented automation components
- Vacuum-compatible up to 70 mbar (a) as standard

Data sheet

Operating
instructions

Technical specifications

Tank bottom valve GEMÜ P40



- Media temperature: -20 to 160 °C
- Ambient temperature: -20 to 80 °C
- System pressure: 0 to 6 bar
- Control pressure: 5 to 8 bar
- Vacuum: 70mbar (a)
- Control function: NC | NO | DA
- Nominal sizes: DN 15 to 65
- Body configurations: Tank bottom valve body
- Connection types: Clamp | Pipe bend | spigot
- Connection standards: ASME | DIN | EN | ISO | SMS
- Body materials: 1.4435 (316L), block material
- Seat seal materials: PTFE
- Conformities: 3A | ATEX | FDA | USP | VO (EG) Nr. 1935/2004 | VO (EG) Nr. 2023/2006 | VO (EU) Nr. 10/2011

Product introduction

GEMÜ 12A0 position indicator

Position indicator GEMÜ 12A0

The intelligent position indicator

DIGITAL networking
AUTOMATED in use
ELECTRICAL control
INTELLIGENT process management



Product introduction

Position indicator GEMÜ 12A0

Position indicator GEMÜ 12A0

As an automation module, the GEMÜ 12A0 electrical position indicator is compatible with all pneumatically operated process valves with linear actuator of the new platform generation, regardless of actuator size and control function.



Construction

Position indicator GEMÜ 12A0

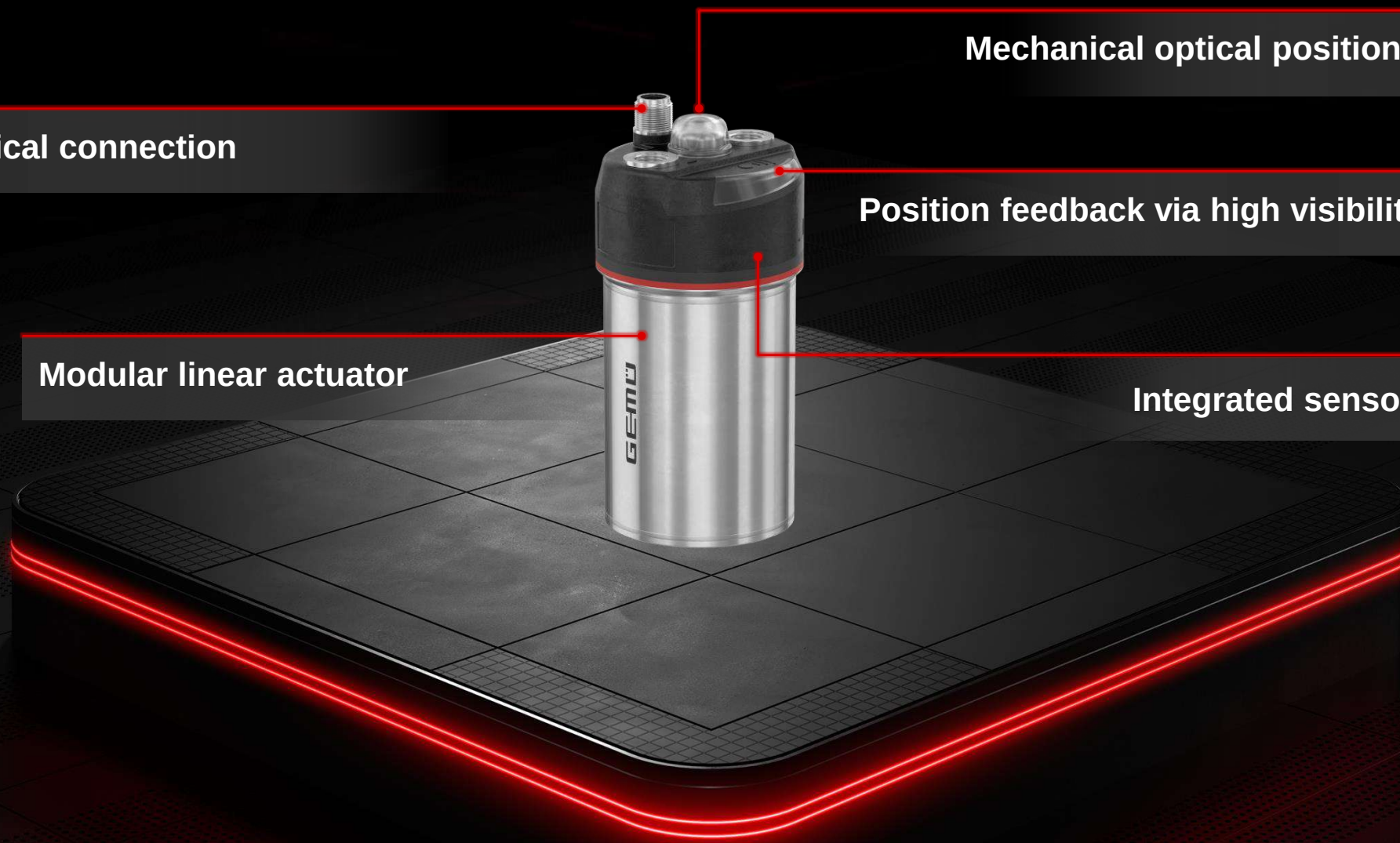
Electrical connection

Mechanical optical position indicator

Position feedback via high visibility LED

Modular linear actuator

Integrated sensor technology



<https://youtu.be/PDUJ1IsO3W0>



Customer benefits and added values (1 of 2)

Position indicator GEMÜ 12A0

Compact and robust design

- **Space-saving:**
Space-optimised and efficient plant planning due to compact device dimensions.
- **Optimised cleaning:**
Easier cleaning and guaranteed hygienic conditions due to low dead space design and integrated control air duct.
- **Increased product life:**
Guaranteed fail-safe operation due to robust design and wear-free, non-contact position detection.
- **Improved plant aesthetics:**
Attractive, professional and high-quality appearance due to integrated mounting parts and high-quality surfaces.



Intuitive operating concept

- **Clear valve status:**
Clear valve status due to mechanical position indicator and electronic status and position indicator.
- **Simple on-site operation:**
The GEMÜ App enables parameterisation and error diagnostics directly on the device.
- **Accessible documentation:**
The GEMÜ App makes it possible to retrieve required documents such as data sheets and operating instructions directly on site.
- **Efficient plant connection:**
Seamless integration into system control due to standardized, modern IO-Link and ASi-5 communication interfaces.

Customer benefits and added values (2 of 2)

Position indicator GEMÜ 12A0

Simple installation, commissioning and maintenance

- **Reduced assembly time:**
Fast and reliable assembly due to standardised mounting parts without a specific mounting kit.
- **Fast and reliable commissioning:**
Self-initialisation function ensures fast and reliable commissioning without special product know-how.
- **Fast error analysis:**
Simple error detection due to recommended actions in the GEMÜ App.
- **Increased process reliability:**
No re-initialisation required due to automatic readjustment of the end positions.



Condition Monitoring

- **Increased process reliability and cost efficiency:**
Avoidance of plant downtimes due to integrated sensor technology as the basis for predictive maintenance.
- **Reduction of maintenance cycles:**
Optimisation of maintenance cycles through predictive maintenance planning.
- **Increased product life:**
Increased product life by detecting anomalies that can lead to defects in the position transmitter and valve.
- **Reduction in device diversity:**
Reduction in additional, external sensors due to compact sensor integration in the position indicator.

Portfolio integration

Position indicator GEMÜ 12A0

GEMÜ 12A0



BG 2 + Adapter



BG 2



BG 3



Actuators



AG 1



AG 2



AG 3



AG 4



AG 5



AG 6

Valve adaption

GEMÜ D40

GEMÜ D41

GEMÜ P40

GEMÜ S40



Sensors

Position indicator GEMÜ 12A0

Control pressure sensor

- **Monitors:** Compressed air supply for the actuator
- **Benefits:** Quickly performs diagnostics as to whether there is sufficient compressed air and how high the pressure is
- **Advantage:** Warning if the pressure is too high or too low – ensures the plant's stability



Acceleration sensor

- **Monitors:** Installation position of the device
- **Benefits:** Verification that the installation position is correct and detects changes or deviations
- **Advantage:** Ensures the specified angle of rotation for self-draining, early detection of loose joints to the piping

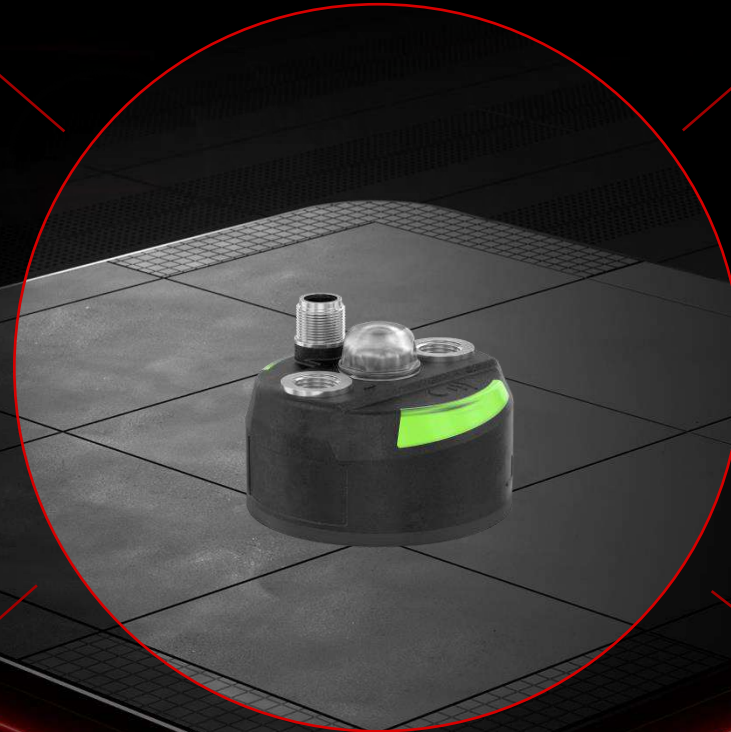
Temperature sensor

- **Monitors:** Internal temperature of the housing
- **Benefits:** Prevention of overheating by internal or external causes
- **Advantage:** Protection against overheating and icing, and premature fault detection.



Acceleration sensor

- **Monitors:** Vibrations and movements in all three axes
- **Benefits:** Performs diagnostics of vibrations or water hammers
- **Advantage:** Optimization of the plant by analyzing the motion data



Sensors

Position indicator GEMÜ 12A0

Sensor for internal pressure in the body

- **Monitors:** Ambient pressure in the body
- **Benefits:** Detects internal leaks, e.g. during air porting
- **Advantage:** Early warning of leaks that could lead to failures



Voltage monitor

- **Monitors:** Supply voltage
- **Benefits:** Ensure that the device is correctly supplied with power (24 V $\pm$ 10%)
- **Advantage:** Avoidance of operational interruptions due to voltage issues

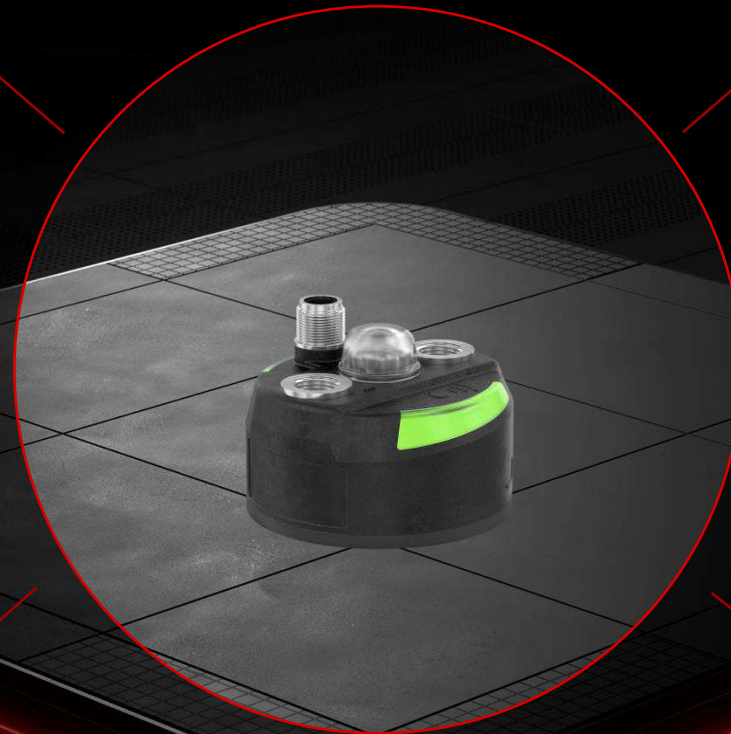
Current sensor

- **Monitors:** Current consumption
- **Benefits:** Detection of electrical faults due to increased current consumption
- **Advantage:** Early detection of component faults – to prevent failures



Air humidity sensor

- **Monitors:** Air pressure in the body
- **Benefits:** Prevention of damage due to condensation or moisture ingress
- **Advantage:** Early detection of the ingress of moisture due to the body not being closed correctly or damaged



Order code

Position indicator GEMÜ 12A0

Order example	12A0	OK	0	L	B	2	P	0	1	I	B	L	0
Type													
Electrical interface													
Operation mode													
Movement type													
Device design													
Construction size													
Housing material													
Options													
Electrical connection													
Control air duct													
Wireless interface													
LUI (local user interface)													
Mechanical option													

IO = IO-Link
A5 = ASi-5

L = linear
R = rotary

Size 1, 2 or 3

B = Bluetooth
D = deactivated

0 = without
1 = with stroke limiter

Product features

Position indicator GEMÜ 12A0



- IO-Link and ASi-5 communication and parameterisation interface
- Self-initialisation function through autonomous end position detection
- Condition monitoring through integrated sensors
- Local configuration and status diagnostics via GEMÜ App
- Contactless and wear-free position detection via Hall sensors
- Electrical and mechanical position indicator and extended diagnostic message via high visibility LED
- Standardized mounting kit with integrated pilot air duct and pilot pressure detection

Data sheet

Operating
instructions

Technical data of size 2

Position indicator GEMÜ 12A0



- Ambient temperature: -20 to 60 °C
- Supply voltage: 24 V DC / according to ASi bus voltage
- Electrical connection: 5pin M12
- Protection class: IP 65, IP 67, NEMA4X
- Communication: IO-Link inkl. SIO-Modus (24V), ASi-5, Bluetooth
- Planned conformities: ATEX (Zone 2) | IECEx (Zone 2) | NEC (C1D2) | UL
- Compatible actuators: Linear actuators | part-turn actuators
- Compatible mode: Single-acting | double-acting
- Control pressure: max. 10 bar



LEAP INTO THE FUTURE

Stay up to date &
sign up for the newsletter

Further information can be found at <https://leap.gemu-group.com/>