

GEMÜ DD00_T1

PTFE/EPDM diaphragm



Features

- Extended service life and high process reliability thanks to optimised geometry
- Sintered bayonet pin for quick, intuitive and error-free installation
- Two-part design comprising a PTFE shield and a peroxide-cured EPDM backing
- Leak detection hole in the EPDM backing
- Precisely tailored to the diaphragm valves of the new product generation

Description

The GEMÜ diaphragm DD00_T1 is a two-piece design comprising a PTFE shield and a peroxide-cured EPDM backing. This design, together with the materials used, offers outstanding chemical and mechanical resistance. Thanks to its material and performance characteristics, the diaphragm is suitable for a wide range of industrial and hygiene-critical applications. Both the PTFE shield and the diaphragm backing are compound-formulated for GEMÜ and manufactured within the GEMÜ Group.

Technical specifications

- **Media temperature :** -10 to 100 °C
- **Sterilization temperature:** max. 150 °C
- **Diaphragm material:** PTFE/EPDM
- **Diaphragm sizes:** B | C
- **Conformities:** BSE/TSE | FDA | Ozone resistance | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | USP

Technical data depends on the respective configuration

Product comparison

		GEMÜ DD00_T1
Media temperature	-10 Up to 100 °C	
Sterilization temperature ¹⁾	max. 150 °C	
Diaphragm materials		
PTFE/EPDM	●	
Diaphragm sizes		
B	●	
C	●	
Conformities		
BSE/TSE	●	
FDA	●	
Ozone resistance	●	
Reg. (EU) No. 10/2011	●	
Regulation (EC) No. 1935/2004	●	
USP	●	

1) The duration of sterilization is limited for some diaphragms; see technical data.

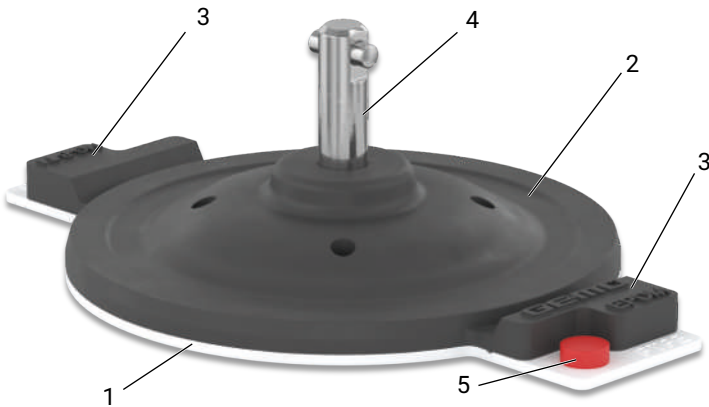
Each application must be analysed before the selection of the diaphragm material. Since the most varied operating conditions often prevail within a plant at different locations, it can be necessary to use different valves and materials. In particular, the chemical properties and the temperature of the working media often lead to different interactions. The suitability of the materials used must therefore always be examined individually with regard to the current resistance list or checked by an authorised specialist. Only this procedure guarantees that the application will operate safely and economically for a longer period.

Diaphragms are wearing parts. They need to be regularly inspected and replaced otherwise malfunctions can occur, possibly resulting in hazardous situations.

Please note: The maintenance intervals for inspecting and replacing diaphragms are application-dependent. In order to determine a suitable maintenance interval, the maintenance history and the stresses placed on the parts due to frequent sterilisation or frequent cycle duties must be taken into account.

Product description

Construction



Item	Name
1	PTFE face
2	EPDM backing
3	Tab with component identification
4	Sintered bayonet pin for quick installation
5	Optional CONEXO

GEMÜ CONEXO

The interaction of valve components that are equipped with RFID chips and an associated IT infrastructure actively increase process reliability.



The diaphragm is read out using an RFID reader, the CONEXO pen. The CONEXO app, which can be installed on mobile devices, not only facilitates and improves the “installation qualification” process, but also makes the maintenance process much more transparent and easier to document. The app actively guides the maintenance technician through the maintenance schedule and directly provides them with all the information assigned to the valve, such as test reports, testing documentation and maintenance histories. The CONEXO portal acts as a central element, helping to collect, manage and process all data.

You can find further information on GEMÜ CONEXO at:

www.gemu-group.com/conexo

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Order codes

1 Type	Code
Shut-off diaphragm	DD00

2 Diaphragm type	Code
Shut-off diaphragm	M

3 Diaphragm material	Code
PTFE/EPDM, two-piece	T1

4 Diaphragm size	Code
Diaphragm size B	B
Diaphragm size C	C

5 CONEXO	Code
Without	
Integrated RFID chip for electronic identification and traceability	C

Order example

Ordering option	Code	Description
1 Type	DD00	Shut-off diaphragm
2 Diaphragm type	M	Shut-off diaphragm
3 Diaphragm material	T1	PTFE/EPDM, two-piece
4 Diaphragm size	B	Diaphragm size B
5 CONEXO	C	Integrated RFID chip for electronic identification and traceability

Technical data

Medium

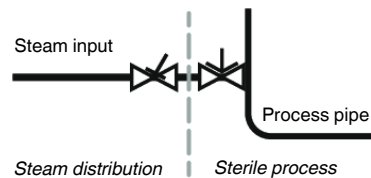
Working medium: Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the diaphragm material.

Temperature

Media temperature: -10 – 100 °C

Sterilization temperature: PTFE/EPDM (code T1): max. 150 °C¹⁾, maximum 180 min per cycle²⁾

- 1) The sterilization temperature is valid for steam (saturated steam) or superheated water (max. 6 bar).
- 2) PTFE diaphragms can also be used as moisture barriers; however, this will reduce their service life. It is not possible to retighten the connecting screws between the actuator and the valve body. This also applies to PTFE diaphragms exposed to high temperature fluctuations. The maintenance cycles must be adapted accordingly. The following valve arrangement has proven itself for interfaces between steam and process pipes: A globe valve for shutting off steam pipes and a diaphragm valve as an interface to the process pipes.



Storage temperature: -10 to 40 °C

Pressure

Operating pressure: 0–16 bar (depending on the diaphragm valve used)

Vacuum: Can be used up to a vacuum of 70 mbar (absolute)

Product conformities

Food: Regulation (EC) No. 1935/2004
Regulation (EC) No. 10/2011
FDA 21 CFR 177.1550
USP Class VI Title 87
USP Class VI Title 88 (50 °C and 121 °C)
USP Class VI 1665/665

Ozone resistance: Diaphragm material is resistant to a maximum concentration of ozone of 0.2 mg/l (dissolved in water)

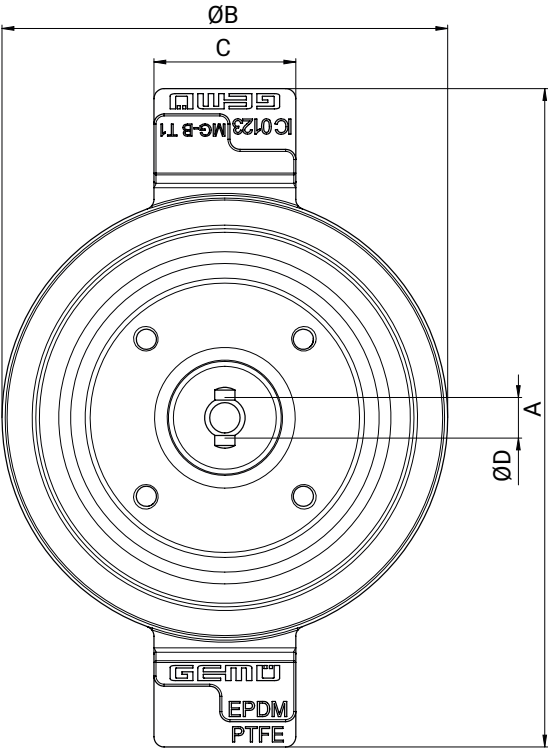
BSE/TSE: The product conforms to EMA/410/01 revision 3 and is free of animal substances

Unused components:	Asbestos
	Natural or synthetic latex
	PVC
	2-Mercaptobenzothiazole
	Benzophenone
	Bis(2-ethylhexyl) phthalate (DEHP)
	Bis(n-butyl) phthalate (DnBP, DBP)
	Bisphenol A (BPA)
	Butyl benzyl phthalate (BBP)
	Diethyl phthalate (DEP)
	Diisodecyl phthalate (DIDP)
	Diisononyl phthalate (DINP)
	Dimethyl phthalate (DMP)
	Di-n-octyl phthalate (DNOP)
	N-Nitrosamine

Mechanical data

Service life:	Max. recommended service life, 8 years
	The service life is the sum of the storage life and operating life.
	Note the Technical Information "Service life, storage and marking of GEMÜ diaphragms".

Dimensions



MG	DN	NPS	A	ØB	C	ØD
B	10-25	3/8" - 1"	65	44	14	4
C	20-40	3/4" - 1 1/2"	89	70	14	6

Dimensions in mm



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Gert-Müller-Platz 1, 74635 Kupferzell, Germany
Phone +49 (0) 7940 1230 · info@gemue.de
www.gemu-group.com