GEFA

PROCESSTECHNIK GMBH

High performance butterfly valve (on/off- and control valve) type HG

Proven on/off- and control valve – significantly optimized

Since many years high performance butterfly valves have been part of our product range. Based on our wide experience in the use of high performance butterfly valves this »new« product was developed:

- optimized seat- and sealing system
- Automation with all actuator systems without interrupting the valve shaft

High performance butterfly valve type HG

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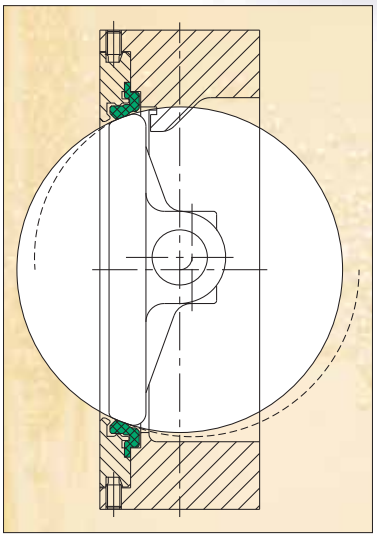
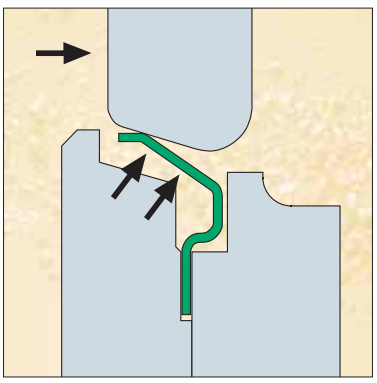
Proven technique – significantly optimized

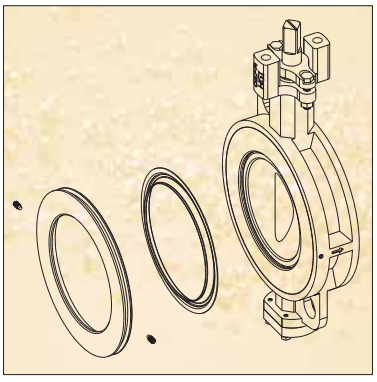


The double-eccentric principle

makes closing reliable as possible and nearly free from wear. Due to the double displacement of the shaft the valve disc is raised up from its seat at the beginning of the opening move. **The seat is then free from heavy pressure over the whole circumference, this means that 90° turning is frictionless at even reduced torques**. Due to these construction features an extremely high rate of operational functionality is achieved and maintained – also at a high frequency of operations.



The recommended flow direction (arrow on body) guarantees absolute tightness. The working pressure (differential pressure) of the medium also supports the function of sealing, pressing the seat against the sealing surface of the disc. The insert ring and the body protect the flexible seat with efficiency against negative flow conditions, even in case of flow and pressure changes the valve remains tight.



The seat is a functional part and very easy to reach and service, seat changing can be done on-site in a short space of time without the need of special tools.

Options

TA-LUFT

FIRESAFE

Quality requirements
EN 10204 / 3.1B
TÜV WO / TRD 100
TRB 801 - 45
TA-Luft
Permanent quality control

Automation

- Standard mounting flange acc. to DIN 3337
- Direct mounting of actuator without interrupting the shaft
- Variable and exchangeable acc. to the size of the actuator

Safety (Option: TA-Luft)

- Shaft sealing

The tension can be increased beneath the mounting flange, thus the shaft sealing is adjustable without dismounting the actuator

Long service life

- The insert ring of the body efficiently protects the seat from the direct medium flow and prevents wear such as erosion and abrasion when valve is installed in the recommended flow direction.

Reliability

- The double-eccentric principle with spherical sealing surface at the disc allows operation of the valve with a minimum of wear. The highest level of tightness and lowest torques are guaranteed. The valve is designed for a minimum of 1 million cycles.

Proper fitting and variable

Length: EN 558 T 1 - line 20 (25 / 16)
DIN 3202 / K 1 (K 2 / K 3)
Option: execution with groove/spring acc. to DIN 2512


bare shaft


hand lever


gear operator

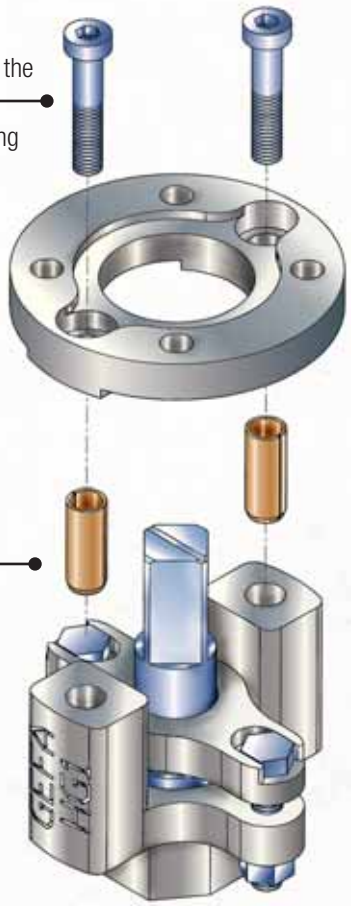

pneumatic actuator with travel stop adjustment position: open/closed

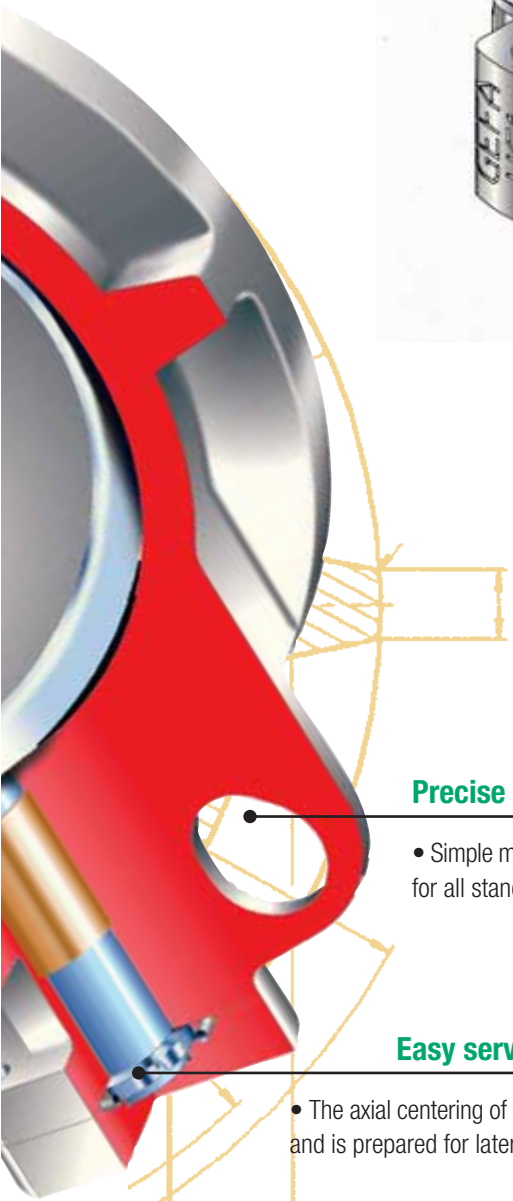

electric actuator

Rational and safe

The cylindric screws fix the mounting flange without transfering the torques (driving torques).

The clamping sleeves transfer the driving torques and guarantee a connection between the mounting flange and the body, which is free from backlash.





Precise mounting

• Simple mounting by center holes for all standard flanges

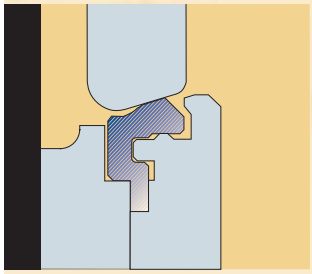
Easy service

• The axial centering of the shaft can be easily reached and is prepared for later service works.

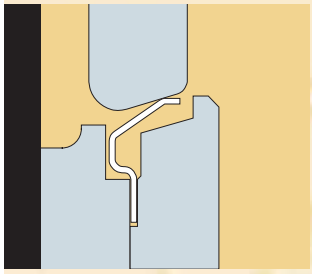
Subject to modifications without notice

Seat systems

Highly flexible with an optimized restoring force. If the installation is carried out in the recommended flow direction, the differential pressure efficiently supports the tight closing of the valve.



R-PTFE seat
Highly flexible designed – chemically speaking the seat has an almost permanent life. Remains stable with respect to pressure due to glass fiber content – even in case of high temperatures.
Tightness: EN 12266-1/PG 12-A (DIN 3230, T3/BO1/BN1)



Metal seat
Very good spring characteristics due to a special form. Resistant to high temperatures due to a seat construction consisting of:
• 1.4571 nitrated
Tightness: EN 12266-1/PG 12-B (DIN 3230, T3/BO2/BN2)

Options

- **Fire safe seat**
- **Seat for low temperature**
- **Special seat materials for extreme applications**

Automatic unit HG 1
with electro-pneumatic positioner
(control valve)

Technical data

Materials available

Part No.	Description	HG...4466 TG	HG...6666 TG	HG...4466 M	HG...6666 M	HG...4466 HM	HG...6666 HM
		Material					
max. working temperature		+ 220°C	+ 220°C	+ 220°C	+ 220°C	+ 450°C	+ 450°C
1	Body	GS-C 25	1.4408	GS-C 25	1.4408	GS-C 25	1.4408
2	Disc	1.4408	1.4408	1.4408/nitrated	1.4408/nitrated	1.4408/nitrated	1.4408/nitrated
3	Shaft	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571
4*	Seat	PTFE/Glass	PTFE/Glass	1.4571/nitrated	1.4571/nitrated	1.4571/nitrated	1.4571/nitrated
5	Bearing	1.4401/PTFE	1.4401/PTFE	1.4401/PTFE	1.4401/PTFE	1.4571/nitrated	1.4571/nitrated
6*	Gland packing	PTFE	PTFE	PTFE	PTFE	Graphite	Graphite
7	Insert ring	C-steel	1.4571	C-steel	1.4571	C-steel	1.4571

* Spare parts/wearing parts

Subject to changes

Pressure class/ max. working pressure

size	nominal pressure	max. working pressure
DN 50 - DN 300	PN 10 / 16 / 25 / 40 ANSI 150 / 300	25 bar
DN 350 - DN 500	PN 10 / 16 / 25 ANSI 150	16 bar
DN 600 - DN 1000	PN 10 / 16 ANSI 150	10 bar

The maximal working pressure is depending on the working temperature.

Subject to changes

Lugged body design

Valve with lugged body design for end of line service. Directly behind the valve the pipe can be flanged on one side (recommended pressure direction: please see arrow on the body)

Valve with lugged body design and pressure-tightly screwed insert ring, the valve can be flanged on both sides (HG7-...BK). The max. working pressure has to be observed!

Other executions

High performance butterfly valve as welded valve with double shell for heating – without interruption of the heating jacket in the pipe

Other Options

- Pressure ranges: PN 40 / PN 63
- Valve with heating-/cooling jacket
- Special materials
- Throttle valve without dead space
- O-ring sealing for bearings and shaft guidance
- 3-way combination

Low temperature execution
for cool media up to – 200 °C

Materials available

and example how to order the GEFA- High performance butterfly valve HG

HG... – 66 66 TG

Type
HG1 = Body wafer type
HG7 = Body lug type

Body
44 = Carbon steel
66 = Stainless steel 1.4408

Disc
Stainless steel 1.4408

Seat
TG = PTFE, glass fiber reinforced (+220 °C)
TK = PTFE-carbon (+250 °C)
P = PEEK (+270 °C)
M = metal, 1.4571/nitrated (+220 °C)
HM = high temperature execution, metal, 1.4571/nitrated (+450 °C)
D = Delrin (+60 °C)

The standard valve »with bare shaft« does not include the mounting plate.
The hand lever is directly mounted (without mounting plate).
A mounting plate has to be used when mounting gear operators or actuators.

TÜV CERT EN ISO 9001

GEFA PROCESSTECHNIK GMBH

Germany

Germaniastraße 28
D-44379 Dortmund

P.O. Box 70 01 10
D-44371 Dortmund

Phone 0049-2 31-610 09-0
Fax 0049-2 31-610 09 80

www.gefa.com
gefa@gefa.com