

# Maintenance

## Butterfly Valve Series 10e



Fig. 1 - Series 10e Control Butterfly valve



The equipment may only be dismantled and disassembled by skilled staff who are familiar with the assembly, the start-up and the operation of this product.

Skilled staff in the sense of these repair and assembly instructions are persons who, as a result of their training, their knowledge and their experience, as well as their knowledge of the relevant standards, are able to judge the tasks assigned to them and are able to recognize possible dangers.

### 1. Design, operation, and dimensions

Design, operation, and dimensions as well as all further details and technical data can be found in **Data Sheet <TB 10e\_EN>**.

### 2. Installation, start-up and maintenance

Instructions for the installation, start-up and maintenance are to be found in **Operating Instructions**

< **BA 10a-01\_EN** > for automated butterfly valves,

< **BA 10a-02\_EN** > for manually operated butterfly valves.

### 0. Introduction

These instructions are intended to support the user in the assembly and repair of butterfly valves of the Series 10e.

Technical details, as a result of the further development of the valves mentioned in these instructions, are subject to alteration. The text and illustrations do not necessarily display the scope of supply or an eventual order of spare parts. Drawings and graphics are not to scale.

Customer-related special designs, which are not in accordance with our standard offer, are not shown.

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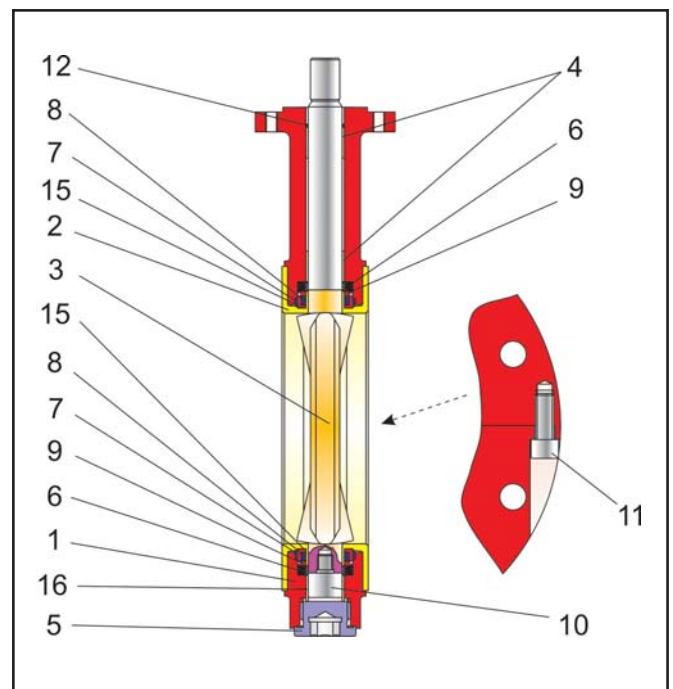


Fig. 2 – Sectional drawing of Series 10e Butterfly Valve => See list of parts on page 2

# Control Butterfly valve Series 10e

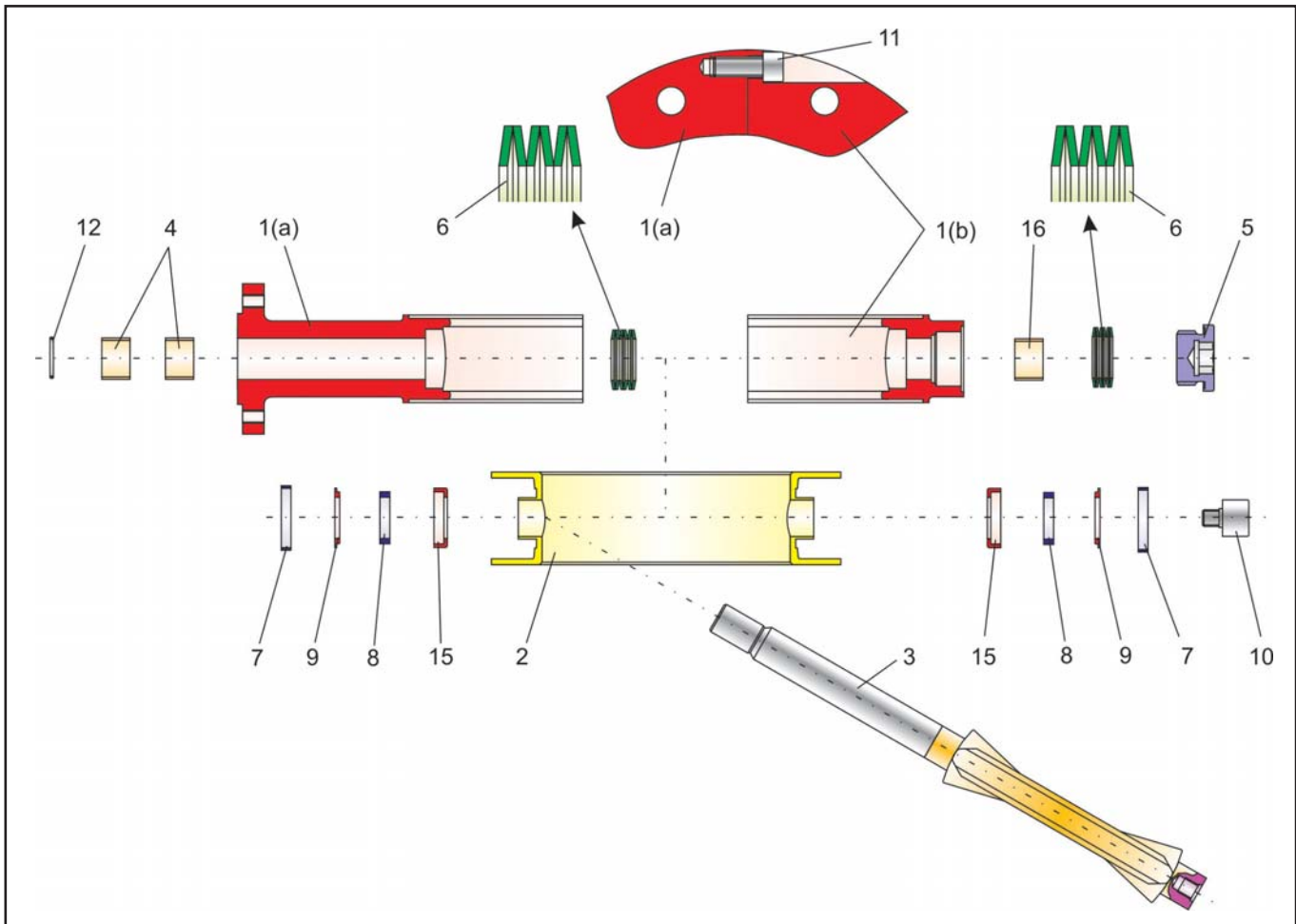


Fig. 3 - Exploded view of the Series 10e Control Butterfly Valve

Item	Description	Material
1	Valve body	GGG40.3 / A395
2	Liner	PTFE
3	Butterfly disc	St52.3 / PTFE
4	Bearing bushing	PTFE with glass
5	Screw plug	galvanized sheet steel
6	Belleville spring washer	1.8159 / Delta Tone
7	Washer	Viton
8	Packing washer	Viton
9	Thrust ring	1.4305
10	Bearing screw	A2-70
11	Screw	DIN 912, A2-70
12	O-ring	Viton
15	Bottom ring	1.4305
16	Bearing bushing	PTFE with glass

Table 1 - List of parts

## 3. Assembling the control butterfly valve

### 3.1 Preparation for assembly

Before assembling the control butterfly valve, all parts must be prepared, i.e. carefully clean the parts and place them on a soft surface (rubber mat or similar).

Please note that plastic parts are mostly soft and very sensitive. Take particular care when handling the sealing surfaces to ensure that they do not get damaged.



**Note!** A high-performance grease paste is used during manufacturing to prevent the screws from cold welding in the bodies (e.g. Gleitmo 805 by Fuchs).

Do not use this lubricant with valves intended for oxygen service. Use a lubricant suitable for valves that are free of grease, especially for oxygen service.



**Note!** The position and arrangement of the individual parts shown in the detail drawing (Fig. 3) are to be observed during assembly.

### 3.2 Pre-assembling the liner

Fit the one-pieced butterfly disc with the shaft (3) into the liner (2).



**Note!**

The liner may be slightly distorted in shape in order to insert the butterfly disc.

Place the bottom rings (15) over the shaft (3) and the bearing collar of the liner (2) from both ends.

Place the packing washers (8), thrust rings (9) and washers (7) over the bearing collar of the liner.

Screw the bearing screw (10) into the bearing pin of the disc (3).

### 3.3 Pre-assembling the body sections

Place the body sections (1a) and (1b) with the shaft guide facing upwards on a surface at a suitable working height.

Insert the bearing bushing (16) into the shaft guide of the bottom body section (1b).

Place the set of Belleville washers (6), consisting of six Belleville washers, into the appropriate place in the body section (1b). Refer to Fig. 3 for the arrangement of the Belleville washers.

Insert the bearing bushing (4) into the shaft guide of the top body section (1a).

Place the top body section (1a) on the DIN-ISO connecting flange.

Place the set of Belleville washers (6), consisting of six Belleville washers, into the appropriate place in the body section (1a). Refer to Fig. 3 for the arrangement of the Belleville washers.

### 3.4 Final assembly of the butterfly valve

Insert the shaft with liner (see section 3.2) into the ready-prepared top body section (1a).



**Note!**

Make sure that all the components are kept absolutely clean during assembly.

Place the bottom body section (1b) over the bearing pin of the shaft onto the liner.



**Note!**

Make sure that all the components are kept absolutely clean during assembly.

Clamp both body sections (1a) and (1b) between DIN-ISO connecting flange and the bottom bearing pin in a press.

Fasten both body sections together using the fillister screws (11).

Screw the screw plug (5) into the bottom body section (1b).

Place the O-ring (12) into the top body section.

## Assembly of the butterfly valve is now completed

## 4. Troubleshooting

Refer to section 7 of **Operating Instructions**

< BA 10a-01\_EN > for automated butterfly valves, or

< BA 10a-02\_EN > for manually operated butterfly valves.

## 5. Repair of the butterfly valve

### 5.1 Replacing the packing

If a leak is detected at the shaft of the butterfly valve, the packing consisting of the packing washers (8) and washers (7) may be defective.

We recommend checking the condition of the Viton packing washers und Viton washers.

We do not, however, recommend removing these parts because, as a rule, these key components cannot be repaired.

### 5.2 Replacing the liner and butterfly disc

If the butterfly valve does not shut off tightly, the liner (2) or encapsulated disc (3) may be defective.

We recommend checking the condition of the liner and disc

We do not, however, recommend removing these parts because, as a rule, these key components cannot be repaired.

### 5.3 Further repair work

In case of severe damage, we recommend the repair work to be carried out by Pfeiffer.

## 6. Customer inquiries

Should you have any inquiries, please submit the following details:

1. Order number (embossed on the nameplate)
2. Type, product number, nominal size, and version of the valve
3. Pressure and temperature of the process medium
4. Flow rate in m<sup>3</sup>/h
5. Installation sketch, if possible

For your special requirements please contact our technical sales department.

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