

## 1. Intended use / product description

**Medium:** Potable water

**Max. operating temperature:** 0°-40°

**Max. operating pressure:** 10/16 bar

**Material:** Body/loose flanges: GJS-400, Hawle epoxy powder coated

Valve disc/bearing shafts: stainless steel

Seat seal: EPDM (reinforced with a stainless-steel ring) according to DVGW W 270

Retaining ring: DN150 - DN300: POM, from DN400: stainless steel

Collar seal: EPDM acc. to UBA-KTW-BWGL

UBA-BWGL metals\*

The Hawle PRO butterfly valve is provided with a proportional action sealing system.

The sealing is accommodated in the body of the butterfly valve. When open, the same pressure is admitted to the butterfly valve from all sides, thus reliably preventing unintended deformations of the gasket. As soon as the PRO butterfly valve is moved to closed position, the valve seal is pressed against the valve disc. The contact pressure depends on the water pressure.

The proportional action sealing system ensures reliable sealing, on the one hand, and a long service life due to low wear of the sealing, on the other hand.

The Hawle PRO butterfly valve is provided with the same loose flange system as the exchange gate valve. Therefore, apart from being used in new constructions, the butterfly valve is mainly suitable for exchanging existing valves. The flat gaskets are already included in the barrel gaskets. Therefore, no keying is required between the flanges. Moreover, the loose flange system has some advantages in terms of storage. The flanges can be quickly and easily changed from PN 10 to PN 16 or vice versa.

Apart from its real function as shut-off valve, the Hawle PRO butterfly valve can also be used as dismantling piece because of the integral loose flange system (no additional dismantling piece required).

Face-to-face length: Basic series 14 according to DIN EN 558-1

Flange connection dimensions: according to EN 1092-2





During installation and maintenance operations, the applicable standards and guidelines, accident prevention regulations and the regulations of professional associations are to be observed and complied with.

Installation and maintenance operations may be performed by qualified personnel only.

### Accessories:

- Support bearing for Hawle PRO butterfly valve, Ord.No. 500-01 ( see point 2.1 )
- Loose flanges for butterfly valves, Ord.No. 709-00 ( see point 2.2 )
  
- Surface box rigid version, Ord.No. 200-00
- Surface box for gate valves with cover, height adjustable, Ord.No. 200-02
- Screw-type surface box for gate valve, height adjustable, with locking bolt, Ord.No. 207-00
- Surface box for gate valves with cover, for rolling in, Ord.No. 207-01
- Surface box with cover, round, Ord.No. 211-00
- Base plate of concrete for surface box Ord.No. 211-00, (Ord.No. 211-00), Ord.No. 204-04
- Handwheel for gate valves and butterfly valves, Ord.No. 780-00
- Rigid extension spindle for Hawle PRO butterfly valve, Ord.No. 900-01
- Telescopic extension spindle, Ord.No. 950-00
- Telescopic extension spindle of stainless steel, Ord.No. 952-00

## 1.1 Drive variants


underground installation	Plant/Chamber installation		
			
Extension spindle	handwheel	electric actuator *	pneumatic actuator

\* butterfly valves with electric actuator are delivered as standard in the position shown. If the position of the actuator deviates, please consult the application engineering department for the nominal sizes DN150, DN200, DN300 and DN350.

## 1.2 Pressure loss coefficients

Nominal diameter DN [mm]	150	200	250	300	350	400	500	600
Zeta-value [-]	1,25	0,89	0,61	0,58	0,58	0,63	0,46	0,53

## 2. Assembly

	for each nominal diameter 2 open-end spanners with AF see table
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### 2.1 Support bearing for butterfly valve / installation position

The Hawle PRO butterfly valve is intended for horizontal installation. If the installation position deviates from the standard situation, the vertical support bearing must be used in combination with the Hawle PRO butterfly valve.

If the installation situation is known before ordering, the support bearing is mounted on the Hawle PRO butterfly valve at the factory. Retrofitting of already installed Hawle PRO butterfly valves is also possible (see separate operating instructions).



### 2.2 General

The PRO butterfly valve must be installed so that the shafts of the butterfly valve are arranged horizontally (special version for vertical installation)!

When installing in the pipeline system, ensure that the hole pattern of the counter-flange is covered by turning the loose flanges and that the pipe axes and butterfly valve longitudinal axis are aligned. Angulations of the butterfly valve tip ends of up to 3° within the movable loose flange are permissible.

Install stainless screws, nuts, washers through flange holes. By crosswise offset tightening of the screw connection an even compression between collar seal and flange is created.

The following specified screw sizes, number of screws, screw lengths and tightening torques depending on diameter and pressure rating must be observed (in combination with flange according to EN 1092-2):

Nominal diameter DN [mm]	Pressure rating [PN]	Number / Size	AF	Length [mm]	Max. Tightening torque [Nm]
150	10/16	8 x M20	30	80	120
200	10	8 x M20	30	80	120
200	16	12 x M20	30	80	120
250	10	12 x M20	30	90	120
250	16	12 x M24	36	90	150
300	10	12 x M20	30	90	120

300	16	12 x M24	36	90	150
350	10	16 x M20	30	90	120
350	16	16 x M24	36	90	150
400	10	16 x M24	36	100	150
400	16	16 x M27	41	100	200
500	10	20 x M24	36	110	150
500	16	20 x M30	46	110	220
600	10	20 x M27	41	180	200
600	16	20 x M33	50	180	300

**Note:** For easier installation, we recommend using 2 - 3 screws slightly longer (min. 15 mm) during installation, as the loose flange must first be tightened to the counter-flange via the sealing sleeve. After attaching the remaining standard-length screws (see table), the longer screws can be replaced with standard length screws.

### 2.3 Exchange of flanges

**1** **DN150-300 and DN400-600**  
Pull off the collar seal.





**DN350**  
Pull off the intermediate ring with flange seal



**DN 350**  
Remove the profile seal with a screwdriver



**2** Sicherungsring demontieren.  
**Note:** The ring is slotted -> bend apart slightly and remove.  
up to DN200: locking ring POM  
from DN250: locking ring stainless steel

3

Take off the flange.




4

In umgekehrter Reihenfolge wieder montieren.  
Flansch auflegen



5

Assemble the locking ring.  
**Attention:** Locking ring POM  
( DN40 to DN200 ) has a slope  
in the contour.   
The slope must point to the flange.  
The locking ring must lie in the slot.



6

**DN150-300 and DN400-600**  
Push the collar seal on the spigot end.



**DN350**  
Insert profile seal



**DN350**  
Refit the intermediate ring with flange seal  
mount



## 2.4 Gate valve turning devices

The PRO butterfly valve is equipped with a gear with end stop. Gate valve turning devices are designed for a slow increase in torque, as is the case with resilient seated gate valves. With butterfly valves, on the other hand, the torque increases **abruptly** at the end of the closing operation, which can lead to damage to both the gate valve turning device and the gearbox if a slide valve turning device is used.

## 2.5 Hawle handwheel

If a Hawle handwheel is used, it is secured to the spindle outlet by means of a hexagonal bolt. When using a Hawle extension spindle, it must be completely screwed onto the round thread adapter of the PRO butterfly valve.

## 2.6 Operation

The Hawle PRO butterfly valve is equipped with a gear with end stops. A closing and opening torque higher than the actuating torque is without function.

After reaching the end stops, it is recommended to relieve the stop, especially in the open position, by turning it back slightly.

DN	Maximum input torque at the gearbox [Nm]	Strength torque in the Gearbox end stops [Nm]
150	30	250
200	30	
250	60	
300	60	
350	60	
400	110	
500	182	
600 PN 10 *	110	
600 PN 16 *	184	

\* For DN600, different gearboxes are used for PN10 and PN16.

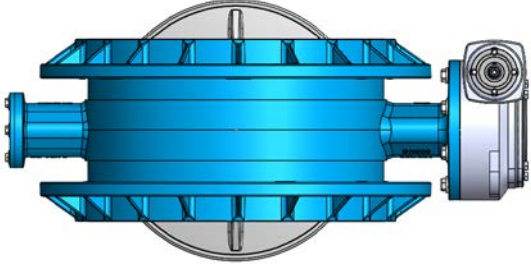
## 2.7 Default settings

Actuator and sealing system are preset for PRO butterfly valve. Any changes to the settings will void the warranty!

## 2.8 Actuators

In combination with an electric or pneumatic actuator, the relevant operating instructions and CE marking regulations must be observed.

When the Hawle PRO butterfly valve is in the open position, the butterfly valve disc extends slightly beyond the valve from nominal size 300 (see illustration)!

Nominal diameter DN [mm]	Plate overhang [mm]	Graphic
300	5	
350	5	
400	25	
500	56	
600	83	

## 3. Commissioning and pressure testing

After successful installation, a pressure test must be carried out in an open pipe trench (only underground installation), taking into consideration the maximum operating pressures in accordance with DVGW regulations.

Following the pressure testing, a functional check must be carried out.

#### 4. Service and maintenance

The Hawle PRO butterfly valve is maintenance-free. Test according to DVGW worksheet W400-3. To ensure trouble-free operation, we recommend that the butterfly valve is operated and monitored regularly.

##### 4.1 Spare parts



\* Brass/red brass components > 0.1% lead acc. to Regulation (EU) No. 1907/2006 (REACH Regulation)

[Should you have questions or need further information, please contact:](#)

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