

Types: TWZ 1" and TWZ 1¼"

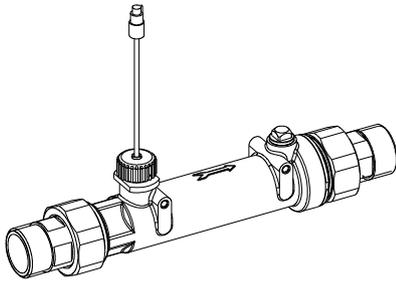


Fig. 1: Turbine flow meter  
GENODOS version

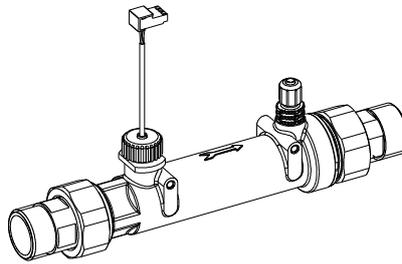


Fig. 2: Turbine flow meter  
EXADOS version

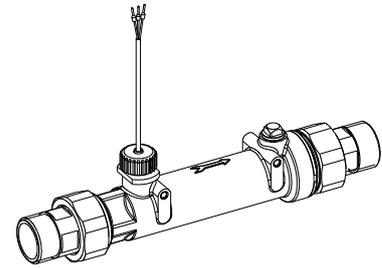


Fig. 3: Turbine flow mete  
Softener version

### Design

Housing and water meter screw connection made of brass. The interior parts are made of high-quality plastic.

### Characteristics

- Non-contacting pulse emission by means of hall sensor.
- Extraordinary measuring accuracy and service life due to high resistance to wear and tear of the materials used.
- Low pressure loss at nominal load.
- Very low start-up limit and low-noise operation.
- Can be installed vertically and horizontally.

### Fields of application

 **Note:** In combination with dosing, horizontal installation only.

- To control dosing systems and water softeners as well as flow-controlled systems

### Scope of supply

- Water meter complete, including screw connection and seal
- Pulse cable with connecting plug (except water softener).
- Injection point with pre-assembled closing plug.
- Non-return valve, dosing bushing, strainer for coarse impurities.

### Technical specifications

Connection thread		1"/DN 25		1 1/4"/DN 32	
Installation length without screw connection	[mm]	190			
Installation length with screw connection	[mm]	272		280	
Nominal flow (Q <sub>n</sub> )	[m <sup>3</sup> /h]	3		5	
Min. flow (Q <sub>min</sub> )	[m <sup>3</sup> /h]	0.060			
Max. flow (Q <sub>max</sub> )	[m <sup>3</sup> /h]	6		10	
Pulse division included		yes	no	yes	no
Pulse sequence	[l/pulse]	0.33	0.03	0.5	0.03
Max. operating pressure	[bar]	10			
Max. operating temperature	[°C]	30			
Pressure loss at nominal flow	[bar]	0.09		0.14	
Type of contactor		Hall sensor			
Weight incl. screw connection	[kg]	1.2		1.5	
Order no. water meter for GENODOS		119 711	119 712	119 714	119 715
Order no. water meter for EXADOS		119 717	119 713	119 718	119 716
Order no. water meter for softener		119 719	119 727	119 728	119 729



**Attention!** Protect turbine from running dry

### Installation

#### Pressure loss curve - TWZ

In order to protect the turbine flow meter, a water fine filter must be installed upstream.

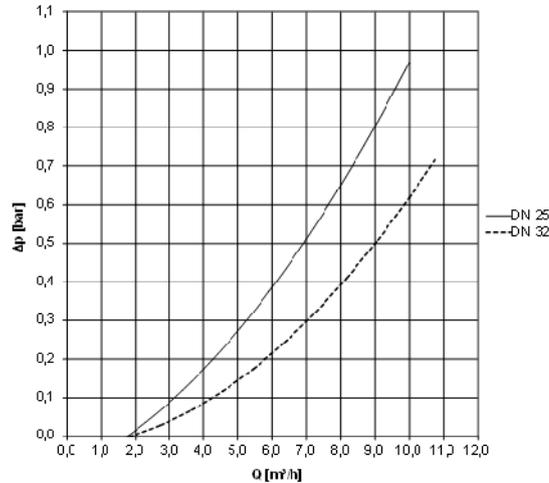


Fig. 2: Pressure loss curve TWZ

#### Connection - pulse cable

(Should you require a different kind of connection, you may proceed according to the following wiring diagram without any difficulties).



**Attention!** No pulse transmission in case of improper clamping

#### Technical specifications (sensor)

Vc: 4.5.....24 V DC (24.5 V is destruction limit!)  
Output: 24 V DC/20 mA NPN transistor  
Polarity: south

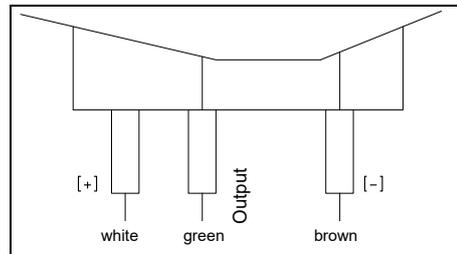


Fig. 3: Terminal plan

### Warranty

- If goods are supplied which are obviously defective, the Customer must report such defects within 8 (eight) days after receipt of such goods.
- The warranty period for GENO-TWZ is 12 months after installation, wearing parts, however, are exempt from this warranty period. In case of warranty claims, the devices must be returned carriage paid. Grünbeck shall not be liable for defects and damage resulting from inept handling or operation.
- Grünbeck shall only be liable if the Customer performs the maintenance work as stated in our operation manuals or has the maintenance work performed in such a way and if the Customer uses spare parts supplied or recommended by Grünbeck.
- Warranty claims do not apply in case of frost or water damage and wearing parts.
- In order to protect the turbine from impurities, a fine filter must be installed upstream.