

## Electric submersible pumps for waste water containing solids. Vortex impeller, spherical clearance 50 – 65 mm.

### TP 50 V

#### Application

HOMA TP 50 series pumps are suitable for pumping drainage water or waste water. With 50 and 65 mm spherical clearance they are able to pump liquids with larger suspended solids like fibres, textiles etc. They are used for various applications in public and private sector, trade and industry.

DIN EN 12050-2: Conformity and design approved and controlled by LGA, certificate No. 0220119.

Installation: Transportable or permanent. Models with float switch control for automatic pump operation, depending on liquid level in the sump.

Pumped liquid: Clear water and drainage water, sewage containing soft solids. Max. liquid temperature: 35°C short term up to 60°C.

Operation: Intermittent.

#### Design

Fully submersible, compact integrated motor-pump unit consisting of:

Pump: Single stage centrifugal pump with horizontal discharge BSP 2 1/2" M.

Impeller: V = Vortex impeller for liquids containing a high level of impurities or fibrous matter and containing gas. Spherical clearance 50 up to 65 mm.

Motor: Fully submersible, pressure tight electric motor. Insulation class F. Degree of protection IP 68. Thermal sensors embedded in the winding on request (standard with TP50V50 and model Ex).

Motor Start:


TP50V13-40: Direct-on-line  
TP50V50: Direct-on-line or Start-delta-start

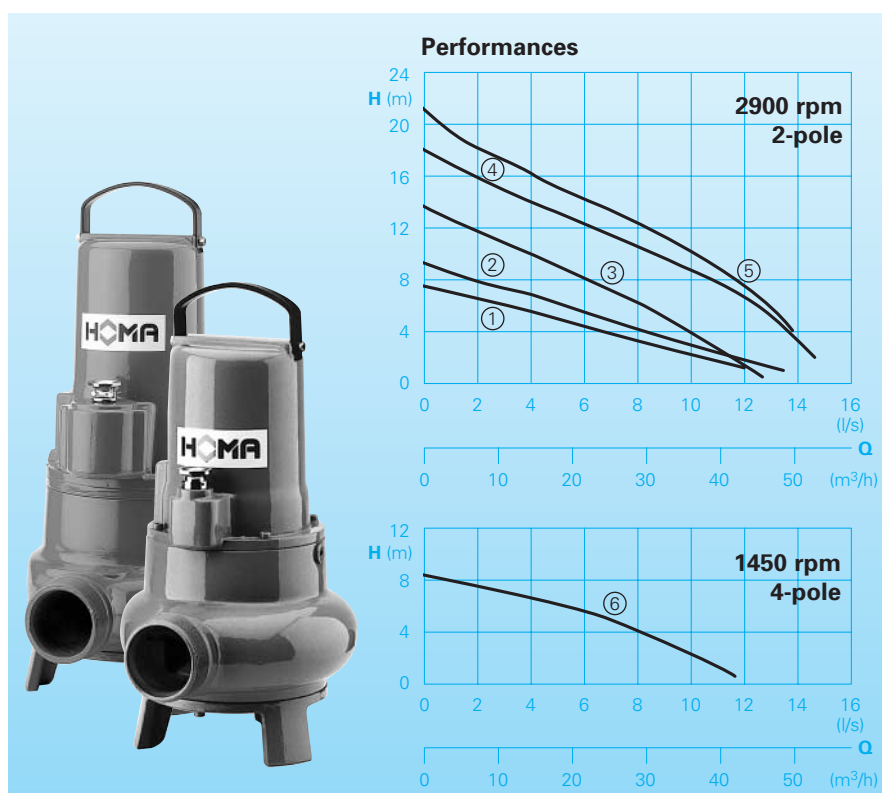
Cable:

TP50V13-40: H07RN-F 4 G 1,5  
TP50V13-40Ex: H07PLUS 6 G 1,5  
TP50V50(Ex): H07RN-F(PLUS) 10 G 1,5

Shaft/Bearing: Large diameter stainless steel rotor shaft, pre-lubricated bearings.

Seals: Combination of mechanical seals (silicon-carbide/silicon-carbide) in a separate oil chamber (models above 1,8 kW). Models up to 1,6 kW with mechanical seal and lip seal. Oil inspection from outside.

Explosion protection: All models available with explosion proof motors according to  II 2 G EEx d [ib] IIBT4.



#### Technical Data

| Curve No. | Pump type           | Motor-<br>input<br>P <sub>1</sub> (kW) | Motor-<br>output<br>P <sub>2</sub> (kW) | Capacitor*<br>(μF) | Speed<br>(rpm) | Nominal<br>current<br>(A) | Spherical<br>clearance<br>(mm) | Weight (kg)<br>Standard<br>Model | Weight (kg)<br>Ex |
|-----------|---------------------|--|---|--------------------|----------------|---------------------------|--------------------------------|----------------------------------|-------------------|
| ①         | TP50 V17/2W (A)(Ex) | 1,6                                    | 1,2                                     | 30                 | 2900           | 7,6                       | 65                             | 27                               | 32                |
| ②         | TP50 V17/2D (A)(Ex) | 1,6                                    | 1,2                                     |                    | 2900           | 2,9                       | 65                             | 27                               | 32                |
| ③         | TP50 V26/2D (A)(Ex) | 2,6                                    | 2,1                                     |                    | 2900           | 4,5                       | 50                             | 40                               | 40                |
| ④         | TP50 V40/2D (A)(Ex) | 4,0                                    | 3,4                                     |                    | 2900           | 6,6                       | 50                             | 45                               | 45                |
| ⑤         | TP50 V50/2DT (Ex)   | 5,2                                    | 4,4                                     |                    | 2840           | 8,7                       | 50                             | 56                               | 56                |
| ⑥         | TP50 V13/4D (A)(Ex) | 1,3                                    | 1,0                                     |                    | 1450           | 2,6                       | 50                             | 40                               | 40                |

Model W: 230-240 V / 1 Ph

Model D: 400-415 V / 3 Ph

\* Capacitor: For the operation it is necessary to install a capacitor in the control box.

Model A: With automatic level control HOMA-Nivomatik

Model Ex: Explosion proof

#### Materials:

|                     |                  |
|---------------------|------------------|
| Motor housing,      | Cast iron        |
| pump housing        | GG 25/EN-GJL-250 |
| Impeller            | Cast iron        |
|                     | GG 25/EN-GJL-250 |
| Mechanical seal     | Silicon-carbide  |
| Rotor shaft, screws | Stainless steel  |
| Seal kit            | Perbonane        |

#### Equipment supplied

Pumps with base stand, without auto-coupling (see accessories):

Model W (230-240 V/1 Ph):

10 m of cable. Control box W19; WT19 available as accessories.

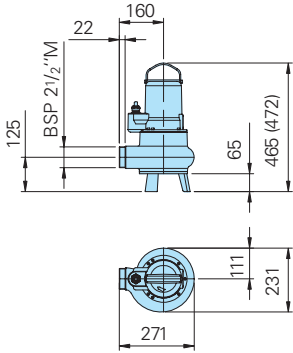
Model D (400-415 V/3Ph):

10 m of cable. Control box D32; DT32 available as accessories.

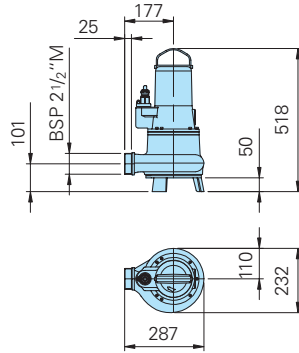
Model A: With additional automatic level control and control box DA10/32; DA10/12, WA10/19 with overload protection, manual-auto switch and 10 m of cable. Integrated capacitor. Model Ex with intrinsically safe relay.

## Dimensions and Installations / Free standing pump with base stand

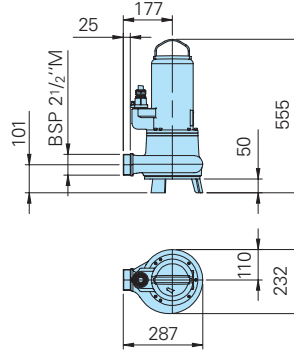
TP50V17/2W(Ex),  
TP50V17/2D(Ex)



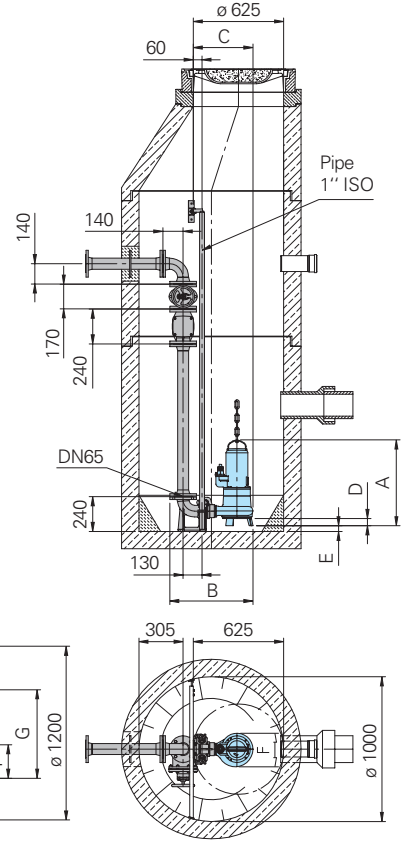
TP50V13/4D(Ex),  
TP50V26/2D(Ex)



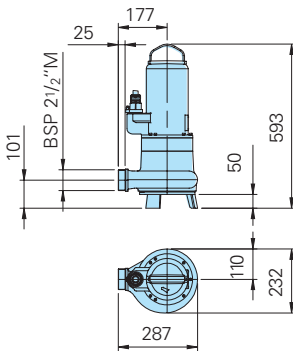
TP50V40/2D(Ex)



Permanent sump installation with  
auto-coupling system.



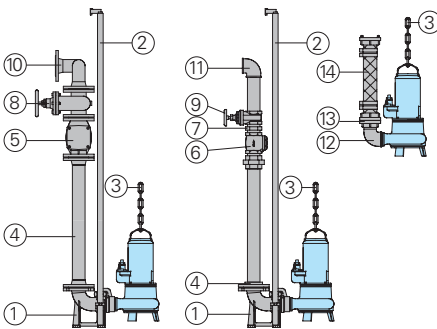
TP50V50/2DT(Ex)



| Type                           | A         | B   | C   | D  | E  | F   | G   |
|--------------------------------|-----------|-----|-----|----|----|-----|-----|
| TP50V50/2DT(Ex)                | 593       | 575 | 412 | 50 | 39 | 232 | 612 |
| TP50V40/2D(Ex)                 | 555       | 575 | 412 | 50 | 39 | 232 | 612 |
| TP50V13/4D(Ex), TP50V26/2D(Ex) | 518       | 575 | 412 | 50 | 39 | 232 | 612 |
| TP50V17/2W+D(Ex)               | 465 (472) | 559 | 396 | 65 | 16 | 231 | 611 |

all dimensions in mm

## Accessories



| Part Description                                | Dimension    | Part No. |
|---|--------------|----------|
| ① Auto-coupling system type KK65/R 2 1/2" with: |              | 8604015  |
| - Cast iron auto-coupling with flange           | DN 65        |          |
| - Cast iron flanged pump coupling               | BSP 2 1/2" F |          |
| - Cast iron upper slide rail bracket            | BSP 1"       |          |

| Part Description                             | Dimension                | Part No.           |
|--|--------------------------|--------------------|
| ② Guide rails, pair, per m steel galvanized  | 1" dia.                  | 2190135            |
| stainless steel                              | 1" dia.                  | 2190252            |
| ③ Lifting chain, per m steel galvanized      | 5 mm dia.                | 2800350            |
| stainless steel                              | 5 mm dia.                | 2800353            |
| Shackle steel galvanized for chain 5 mm dia. |                          | 2801450            |
| stainless steel for chain 5 mm dia.          |                          | 2801390            |
| ④ Threaded flange                            | DN 65/<br>BSP 2 1/2" F   | 2215060            |
| Flanged pipe                                 | DN 65                    | On request         |
| ⑤ Cast iron swing check                      | DN 65                    | 2212805            |
| ⑥ Cast iron swing check                      | BSP 2 1/2" F             | 2212513            |
| ⑦ Galvanized double nipple                   | BSP 2 1/2" M             | 2009025            |
| ⑧ Cast iron gate valve                       | DN 65                    | 2216065            |
| ⑨ Bronze gate valve                          | BSP 2 1/2" F             | 2216025            |
| ⑩ 90° flanged elbow                          | DN 65                    | 2153301            |
| Flanged Y-piece for twin-pump arrangement    | 3 x DN 65<br>DN 65/65/80 | 2160002<br>2160004 |

| Part Description   | Dimension  | Part No.                                 |
|--|--|--|
| ⑪ 90° galvanized elbow   | BSP2 1/2" F  | 2113610                                  |
| T-piece for twin-pump arrangement  | BSP2 1/2" F  | 2114308                                  |
| ⑫ 90° galvanized elbow   | BSP 2 1/2" F/M   | 2111705                                  |
| ⑬ STORZ-fixed coupling   | BSP 2 1/2" F   | 2010502                                  |
| STORZ-hose coupling  | B-75 mm dia.   | 2013502                                  |
| ⑭ Synthetic pressure hose with rubber lining and couplings, B-75 mm dia. | length 10 m<br>length 15 m<br>length 20 m<br>length 30 m | 2611210<br>2611215<br>2611220<br>2611230 |
| Reinforced hose, per m   | 75 mm dia.   | 2632075                                  |
| Hose bands   | 85/20  | 2308520                                  |
| ○ Control panel for single or twin pump stations for automatic operation |  | On request                               |

**HOMA**  
P U M P T E C H N O L O G Y

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