

Electric submersible pumps for waste water containing solids. Single channel impeller, spherical clearance 50 mm.

TP 50 M

Application

HOMA TP 50 series pumps are suitable for pumping drainage water or waste water. With 50 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 medium level in the sump.

Pumped medium: Clear water and drainage water, sewage containing soft solids. Max. medium 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" F.

Impeller: M = Closed single channel impeller for liquids containing impurities and sludge with solid particles. Spherical clearance 50 mm.

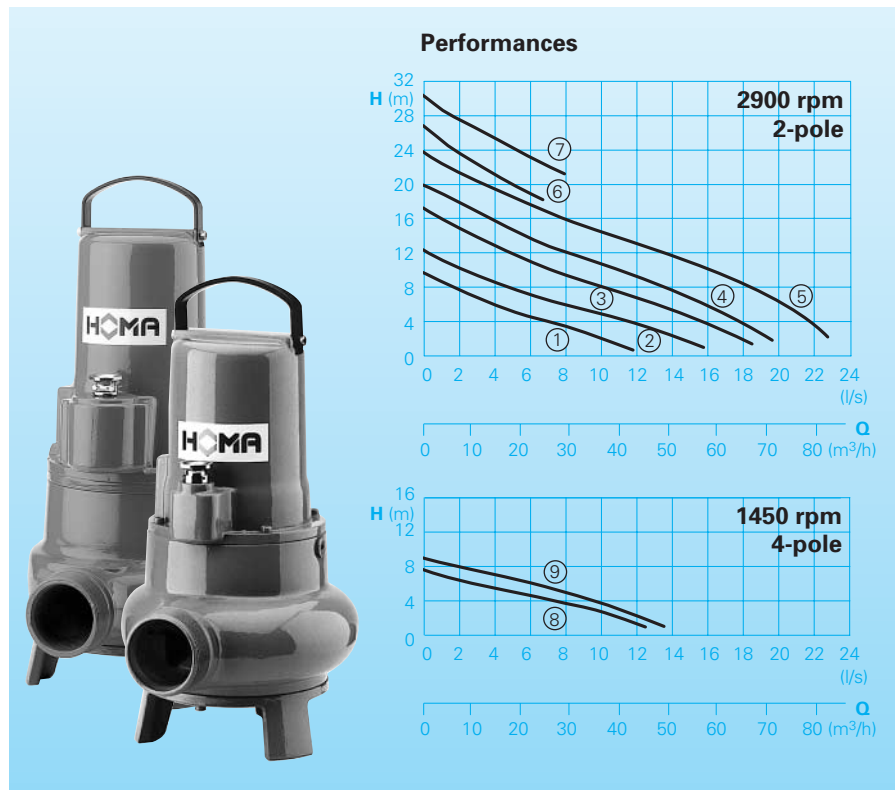
Motor: Fully submersible, pressure tight electric motor. Insulation class F. Degree of protection IP 68. Thermal sensors embedded in the winding on request (standard with model Ex).

Cable: H07 RN - F4 G 1,5
Model Ex.: H07 RN - F(Plus) 7 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 $\text{Ex II 2 G EEx d [ib] IIBT4}$.



Technical Data

| Curve No. | Pump type | Motor- input P ₁ (kW) | Motor- output P ₂ (kW) | Voltage 50 Hz (V) | Speed (rpm) | Nominal current (A) | Spherical clearance (mm) | Weight (kg) Standard model | Weight (kg) Model Ex |
|-----------|----------------------|----------------------------------|-----------------------------------|-------------------|-------------|---------------------|--------------------------|----------------------------|----------------------|
| ① | TP50 M12/2W(A)(Ex) | 1,1 | 0,8 | 230-240/1Ph | 2900 | 4,8 | 50 | 26 | 31 |
| ② | TP50 M17/2W(A)(Ex) | 1,6 | 1,2 | 230-240/1Ph | 2900 | 7,6 | 50 | 27 | 32 |
| ① | TP50 M11/2D (A)(Ex) | 1,0 | 0,8 | 400-415/3Ph | 2900 | 1,9 | 50 | 26 | 31 |
| ② | TP50 M14/2D (A)(Ex) | 1,3 | 1,0 | 400-415/3Ph | 2900 | 2,5 | 50 | 27 | 32 |
| ③ | TP50 M23/2D (A)(Ex) | 2,3 | 1,8 | 400-415/3Ph | 2900 | 3,8 | 50 | 40 | 40 |
| ④ | TP50 M26/2D (A)(Ex) | 2,6 | 2,1 | 400-415/3Ph | 2900 | 4,5 | 50 | 40 | 40 |
| ⑤ | TP50 M37/2D (A)(Ex) | 3,7 | 3,2 | 400-415/3Ph | 2900 | 6,5 | 50 | 45 | 45 |
| ⑥ | TP50 M26/2HD (A)(Ex) | 2,6 | 2,1 | 400-415/3Ph | 2900 | 4,5 | 50 | 40 | 40 |
| ⑦ | TP50 M37/2HD (A)(Ex) | 3,7 | 3,2 | 400-415/3Ph | 2900 | 6,5 | 50 | 45 | 45 |
| ⑧ | TP50 M12/4W (A) | 1,2 | 0,9 | 230-240/1Ph | 1450 | 5,8 | 50 | 40 | 40 |
| ⑨ | TP50 M13/4D (A) (Ex) | 1,3 | 1,0 | 400-415/3Ph | 1450 | 2,6 | 50 | 40 | 40 |

Discharge: BSP2 1/2" M

Model A: With automatic level control

HOMA-Nivomatik

Model Ex: Explosion proof

Materials:

| | |
|---|--------------------------------------|
| Motor housing, pump housing | Cast iron GG 25 |
| Impeller- up to 1,6 kW - other types | Polypropylene GFK Cast iron GG 25 |
| Wear ring | Bronze |
| Mechanical seal | Silicon-carbide |
| Rotor shaft, screws | Stainless steel |
| Seal kit | Perbonane |

Model W: (230-240 V/1 Ph): 10 m of cable. Attention: The pump requires a capacitor for operation, which is integrated in the control box (see accessories).

Model D: (400-415 V/3Ph): 10 m of cable.

Model A: With additional automatic level control, control box with overload protection, manual-auto switch and 10 m of cable. integrated capacitor. Model Ex with intrinsically safe relay.

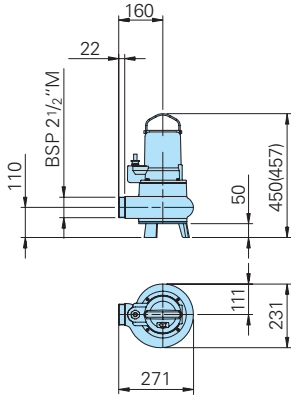
Equipment supplied

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

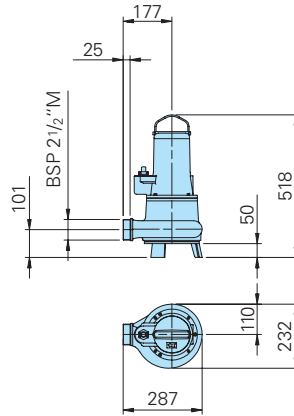
Installations and Dimensions

Free standing pump with base stand

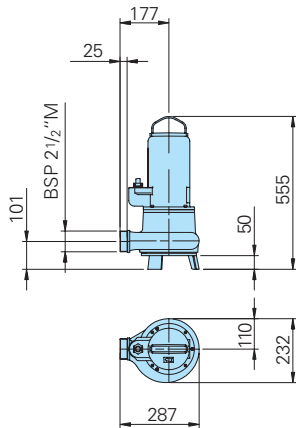
TP 50 M 12/2W(Ex), TP 50 M 17/2W(Ex)
TP 50 M 11/2D(Ex), TP 50 M 14/2D(Ex)



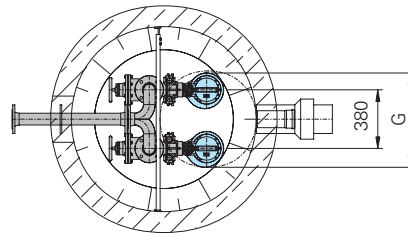
TP 50 M 12/4W, TP 50 M 13/4D(Ex)
TP 50 M 23/2D(Ex), TP 50 M 26/2(H)D(Ex)



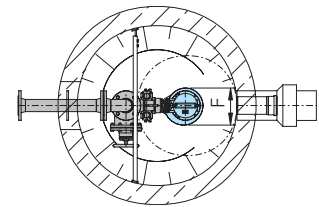
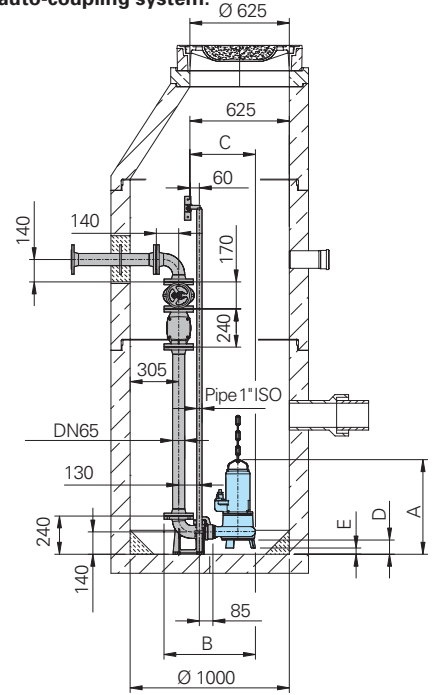
TP 50 M 37/2(H)D(Ex)



| Typ | A | B | C | D | E | F | G |
|-------------------|-------|-----|-----|----|----|-----|-----|
| TP 50 M 12/2W(Ex) | 481 | 559 | 396 | 81 | 16 | 231 | 611 |
| TP 50 M 17...(Ex) | (487) | | | | | | |
| TP 50 M 11...(Ex) | | | | | | | |
| TP 50 M 14...(Ex) | | | | | | | |
| TP 50 M 12/4W | 557 | 575 | 412 | 39 | 39 | 232 | 612 |
| TP 50 M 13 | | | | | | | |
| TP 50 M 23 | | | | | | | |
| TP 50 M 26 | | | | | | | |
| TP 50 M 37 | 594 | 575 | 412 | 89 | 39 | 232 | 612 |

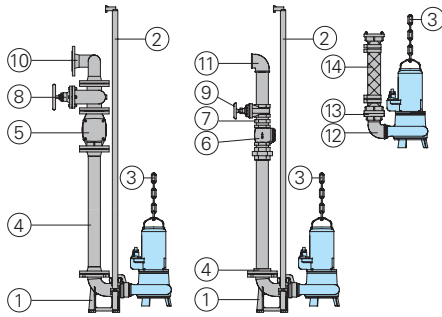


Wet well installation with auto-coupling system.



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 Steel galvanized guide rails, pair, per m | BSP 1" | 2190135 |
| ③ Steel galvanized lifting chain | 5 mm dia. | 2800350 |
| Steel galvanized shackle | Size 5/16" | 2801450 |
| ④ Threaded flange | DN 65/ 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 DN 65/65/80 | 2160002 2160004 |
| ⑪ 90° galvanized elbow | BSP 2 1/2" F | 2113610 |
| T-piece for twin-pump arrangement | BSP 2 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 |

| Part Description | Dimension | Part No. |
|--|---|--|
| ○ Synthetic pressure hose with rubber lining and couplings, B-75 mm dia. | length 10 m length 15 m length 20 m length 30 m | 2611210 2611215 2611220 2611230 |
| Reinforced hose, per m | 75 mm dia. | 2632075 |
| Hose bands | 85/20 | 2308520 |
| ○ Control box for pumps without level control, with overload protection, on-off switch | | |
| - for 1 Ph-pumps (incl. capacitor) stand. model | | |
| TP50M12/4W | | 1923111 |
| TP50M12/2W | | 1918108 |
| TP50M17/2W | | 1918113 |
| - for 1 Ph-pumps (incl. capacitor) Model Ex | | |
| TP50M12/4WEx | | 1912425 |
| TP50M12/2WEx | | 1945020 |
| TP50M17/2WEx | | 1945030 |
| - for 3 Ph-pumps standard | | |
| Nominal current | 1,7 up to 2,4 A 2,5 up to 4,0 A 4,1 up to 6,3 A 6,4 up to 10,0 A | 1926085 1926090 1926095 1926100 |
| - for 3 Ph-pumps Model Ex | | |
| Nominal current | 1,7 up to 2,4 A 2,5 up to 4,0 A 4,1 up to 6,0 A 6,1 up to 9,0 A | 1926215 1926220 1926225 1926230 |
| ○ Control panel for single or twin pump stations for automatic operation | | On request |



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