

Electric Submersible pumps for sewage and effluent. Spherical clearance 70 mm.

TP 70

Application

HOMA TP 70 series pumps are suitable for pumping waste water, sewage or effluent. With their 70 mm spherical clearance they are especially 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.

Impellers: M = Closed single channel impeller for liquids containing impurities and sludge with solid particles. V = Vortex impeller for liquids containing a high level of impurities or fibrous matter and containing gas.

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-F4G 1,5

Model Ex: H07 RN-F(Plus)7G 1,5

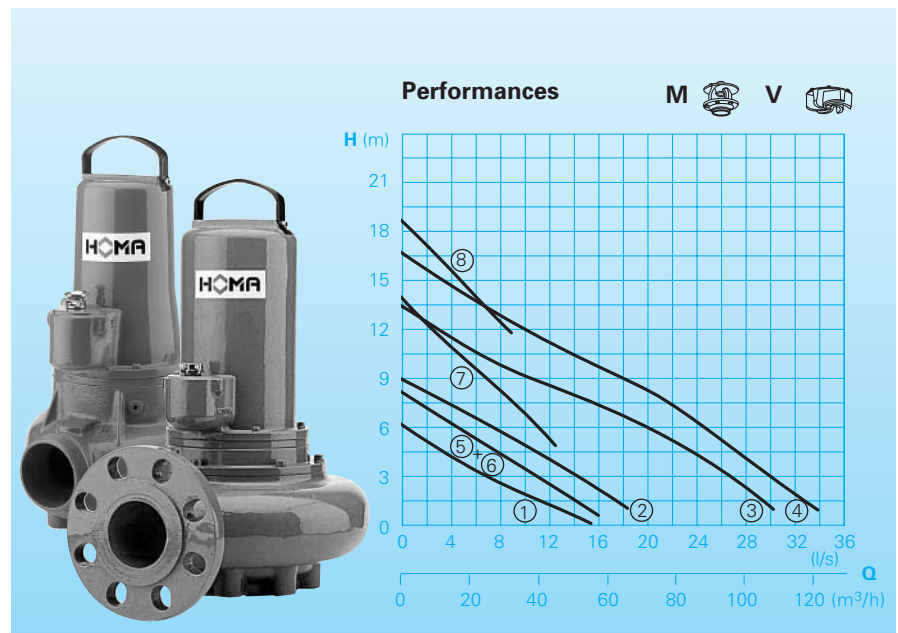
Shaft/Bearing: Large diameter stainless steel rotor shaft, pre-lubricated bearings.

Seals: Combination of mechanical seals (silicon-carbide) in a separate oil chamber. Oil inspection from outside. Electronic seal probe fitted into the oil chamber optional.

Explosion protection:

All models are available with explosion proof motors according to

Ⓜ II 2GEx d [ib] IIB T4 on request.



Technical Data

| Curve No. | Pump type | Motor output P ₁ (kW) | Motor output P ₂ (kW) | Voltage 50 Hz (V) | Speed (rpm) | Nominal current (A) | Discharge | Weight (kg) |
|-----------|---------------------|----------------------------------|----------------------------------|-------------------|-------------|---------------------|-----------|-------------|
| ① | TP70 M13/4D (A)(Ex) | 1,2 | 0,9 | 400/3Ph | 1450 | 2,6 | BSP3*M | 40 |
| ② | TP70 M16/4D (A)(Ex) | 1,7 | 1,3 | 400/3Ph | 1450 | 3,4 | BSP3*M | 40 |
| ③ | TP70 M26/4D (A)(Ex) | 2,5 | 1,9 | 400/3Ph | 1450 | 5,5 | DN80 | 66 |
| ④ | TP70 M31/4D (A)(Ex) | 3,0 | 2,4 | 400/3Ph | 1450 | 6,3 | DN80 | 66 |
| ⑤ | TP70 V16/4W (A)(Ex) | 1,5 | 1,1 | 230/1Ph | 1450 | 7,5 | BSP3*M | 40 |
| ⑥ | TP70 V15/4D (A)(Ex) | 1,4 | 1,1 | 400/3Ph | 1450 | 3,1 | BSP3*M | 40 |
| ⑦ | TP70 V31/2D (A)(Ex) | 3,0 | 2,6 | 400/3Ph | 2900 | 5,7 | BSP3*M | 56 |
| ⑧ | TP70 V36/2D (A)(Ex) | 3,5 | 2,9 | 400/3Ph | 2900 | 6,3 | BSP3*M | 56 |

Impeller: TP 70 M = Closed single channel impeller

Model A: With automatic level control HOMA-Nivomatik

TP 70 V = Vortex impeller

Model Ex: Explosion proof.

Other voltages are available upon request.

Materials:

| | |
|---------------------------------------|-----------------|
| Motor housing, pump housing, impeller | Cast iron GG 25 |
| Rotor shaft, screws | Stainless steel |
| Mechanical seal | Silicon-carbide |
| O-Rings | NBR |

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

10 m of cable.

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

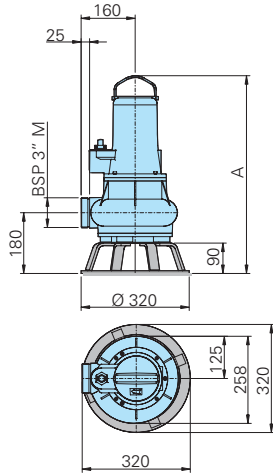
Equipment supplied

Pumps without ring base stand or auto-coupling unit (see accessories).

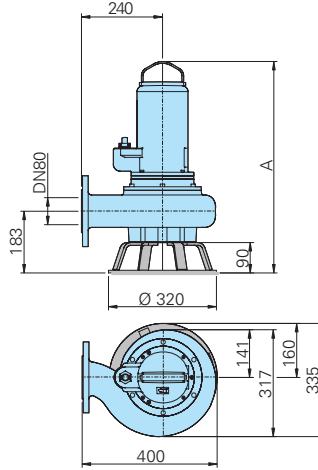
Model W (230-240 V/1 Ph): 10 m of cable. Attention: The pump requires a capacitor for operation, which is integrated in the control box (see accessories).

Installations and Dimensions

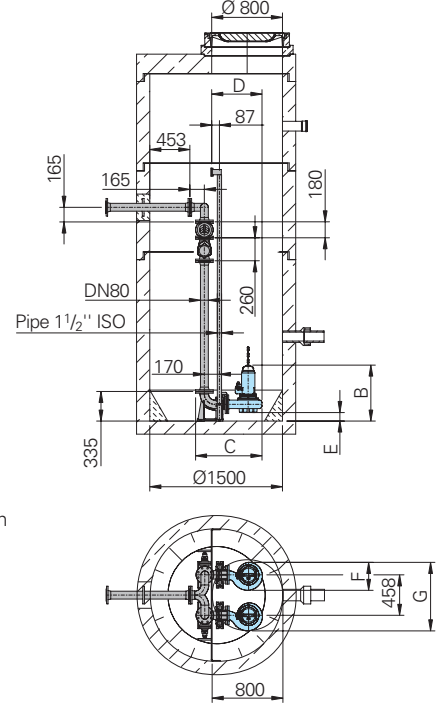
Free standing pump with ringbase stand Models with discharge BSP3"M



Models with discharge DN80

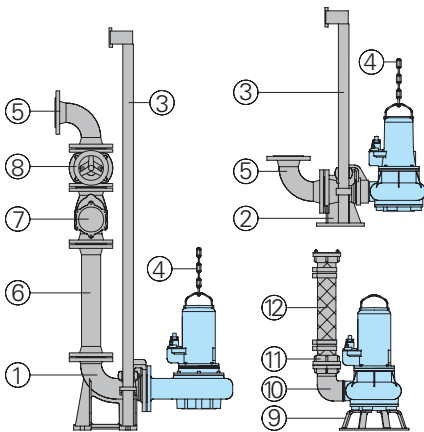


Wet well installation with auto-coupling system



| Pump type | A | B | C | D | E | F | G | all dimensions in mm |
|--------------------|-----|-----|-----|-----|-----|-----|-----|----------------------|
| TP70M to 1,7 kW | 586 | 596 | 643 | 460 | 100 | 258 | 716 | |
| TP70M above 1,8 kW | 626 | 633 | 752 | 569 | 97 | 317 | 775 | |
| TP70V to 1,4 kW | 586 | 596 | 643 | 460 | 100 | 258 | 716 | |
| TP70V above 1,5 kW | 623 | 596 | 643 | 460 | 100 | 258 | 716 | |

Accessories



| Part Description | Dimension | Part No. |
|---|-----------|----------|
| ① Cast iron autocoupling system with auto-coupling with flange DN 80 and upper slide rail bracket BSP 1 1/2" – Type KK 80/R 3" with flanged pump coupling | BSP 3" F | 8604035 |
| – Type KK 80/80 with flanged pump coupling | DN 80 | 8604025 |
| ② Cast iron autocoupling with through auto-coupling (horizontal discharge) DN 80 and upper slide rail bracket BSP 1 1/2" – Type KS 80/R 3" with flanged pump coupling | BSP 3" F | 8604050 |

| Part Description | Dimension | Part No. |
|---|---------------------------------------|-------------------------------|
| ③ Steel galvanized guide rails, pair, per m | BSP 1 1/2" | 2190155 |
| ④ Steel galvanized lifting chain | 5 mm dia. | 2800350 |
| Steel galvanized shackle | Size 5/16" | 2801450 |
| ⑤ 90° flanged elbow | DN 80 DN 100 | 2153302 2153303 |
| Flanged Y-piece for twin pump arrangement, horizontal discharge (vertical discharge on request) | 3x DN 80 DN 80/80/100 3x DN 100 | 2160006 2160008 2160010 |
| ⑥ Flanged discharge pipe with gasket and fixing bolts, per m | DN 80 DN 100 | 2152081 2152201 |
| Discharge pipe, per additional m | DN 80 DN 100 | 2150080 2150100 |
| Flanged reducer | | On request |
| ⑦ Flanged swing check valve with gasket and fixing bolts | DN 80 DN 100 | 2212807 2212809 |
| ⑧ Flanged gate valve with gasket and fixing bolts | DN 80 DN 100 | 2216080 2216100 |
| ⑨ Ring base stand | | 7321345 |
| ⑩ 90° elbow | BSP 3"F/M | 2111805 |
| Flanged 90° elbow | DN 80 | 2153302 |
| Threaded flange | DN 80/BSP 3" F | 2215080 |

| Part Description | Dimension | Part No. |
|--|--|-------------------------------|
| ⑪ STORZ-fixed coupling | B-3"F | 2010602 |
| STORZ-hose coupling | B-75 mm dia. | 2013502 |
| ⑫ Reinforced hose with 2 B-size half couplings, 75 mm dia. | length 2 m length 3 m length 5 m | 2161042 2161043 2161045 |
| Flanged reinforced hose 90 mm dia., DN 80 | length 2 m length 3 m length 5 m | 2161032 2161033 2161035 |
| Reinforced hose, per m | 75 mm dia. 90 mm dia. | 2632075 2632090 |
| Flanged spigot DN 80 | 90 mm dia. | 2171014 |
| Hose band | 85/20 92/20 | 2308520 2309220 |
| ○ Control box for pumps without level control, with overload protection, on-off switch | | |
| – for 1 Ph-pumps (incl. capacitor) TP70 V16/4W | | 1917220 |
| – for 3 Ph-pumps standard model | | |
| Nominal current | 2,5-4,0 A 4,1-6,3 A | 1926130 1926135 |
| – for 3 Ph-pumps model Ex | | |
| Nominal current | 2,5-4,0 A 4,1-6,0 A 6,1-9,0 A | 1926250 1926255 1926260 |
| ○ Control panels for single and multipump stations with automatic level control | | On request |



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