

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 12050-1: Conformity and design approved and controlled by LGA.

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: 40°C, short term up to 60°C.

Operation: permanent (S1).

Design

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

Pump: Single stage centrifugal pump with horizontal discharge.

Impeller: 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 H.

Degree of protection IP 68. Thermal sensors embedded in the winding.

Motorstart: TP70...13-36: direct-on-line
TP70V50: Direct- or Star-delta-start

Cable:

TP70...13-36: H07RN-F 7 G 1,5

Model C: H 07RN-F 10 G 1,5

TP70...13-36(Ex): H07(PLUS) 6 G 1,5

Model C: H07(PLUS) 2 x 1,5

TP70V50...: H07RN-F 10 G 1,5

Model C: H07RN-F 12 G 1,5

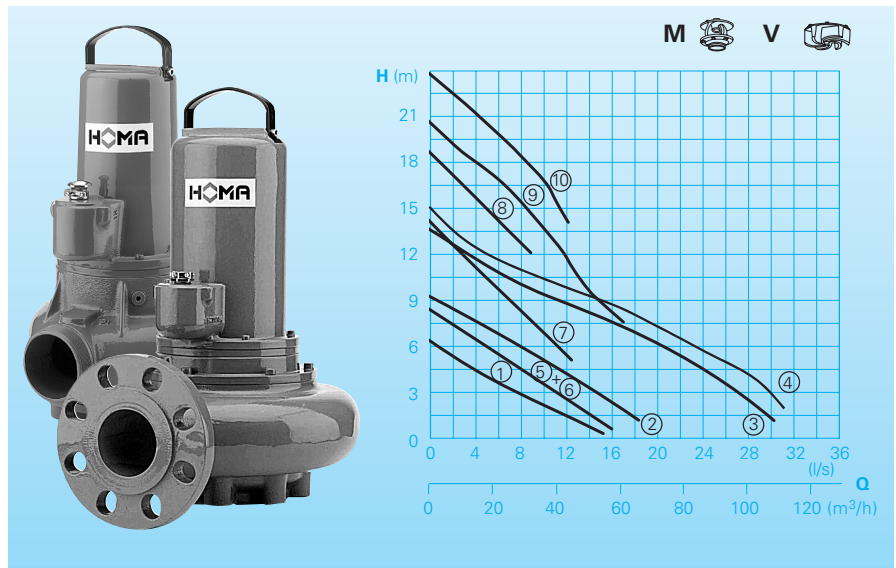
TP70V50...(Ex): H07(PLUS) 10 G 1,5

Model C: H07(PLUS) 2 x 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, Model C.

Performance



Technical Data

Curve No.	Pump type	Motor P ₁ (kW)	P ₂ (kW)	Capacitor* (µF)	Speed (rpm)	Nominal current (A)	Discharge	Weight (kg)
①	TP70 M13/4D (C)(A)(Ex)	1,2	0,9		1450	2,6	G3 AG	40
②	TP70 M16/4D (C)(A)(Ex)	1,7	1,3		1450	3,4	G3 AG	40
③	TP70 M26/4D (C)(A)(Ex)	2,5	1,9		1450	5,5	DN80	66
④	TP70 M31/4D (C)(A)(Ex)	3,0	2,4		1450	6,3	DN80	66
⑤	TP70 V16/4W (C)(A)	1,5	1,0	40	1450	7,5	G3 AG	40
⑥	TP70 V15/4D (C)(A)(Ex)	1,4	1,1		1450	3,1	G3 AG	40
⑦	TP70 V31/2D (C)(A)(Ex)	3,0	2,5		2900	5,7	G3 AG	56
⑧	TP70 V36/2D (C)(A)(Ex)	3,5	2,9		2900	6,3	G3 AG	56
⑨	TP70 V50/2D (C)(Ex)	5,2	4,4		2840	8,7	G3 AG	56
⑩	TP70 V50/2HD (C)(Ex)	5,2	4,4		2840	8,7	G3 AG	56

Model W: 230-240V/1Ph 50Hz

Model D: 400-415V/3Ph 50Hz

* **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

Explosion protection: All models are available with explosion proof motors according to $\text{Ex II 2 G Ex c d II B T4(T3)}$ on request.

Materials

Motor housing, pump housing, Impeller	Cast iron EN-GJL-250
Rotor shaft, screws	Stainless steel
O-Ringe	Nitrile Rubber
Mechanical seal	Silicon-carbide

Equipment supplied

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

Model W (230 V / 1 Ph):

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

Model D (400 V / 3 Ph):

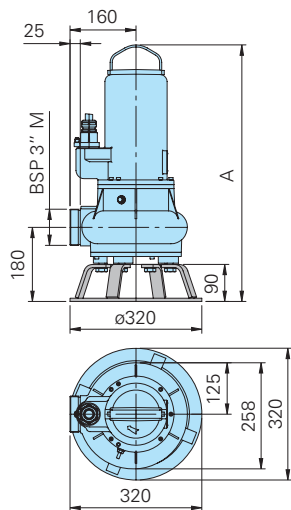
10 m of cable. Control box DT32 available as accessories.

Model A: With additional automatic level control, control box WA10/19, DA10/32; DA10/12 with overload protection, manual-auto switch. Model WA with integrated capacitor. Model Ex with intrinsically safe relay.

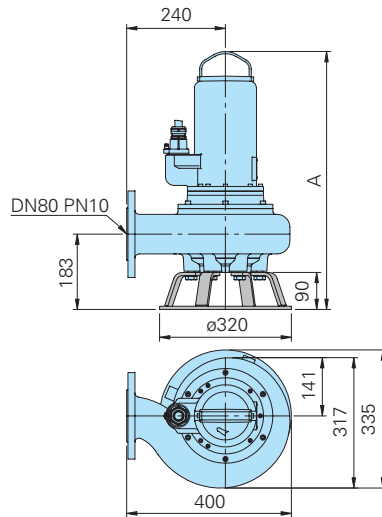
Dimensions and Installations (all dimensions in mm)

Free standing pump with ringbase stand

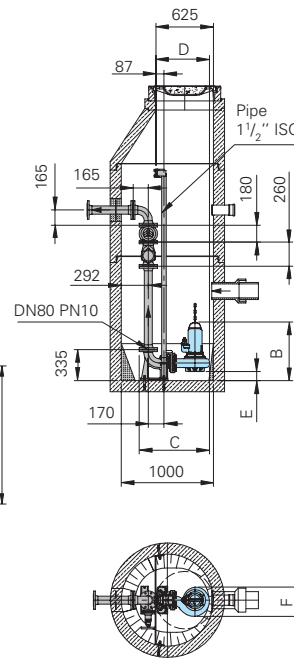
Models with discharge BSP3" M



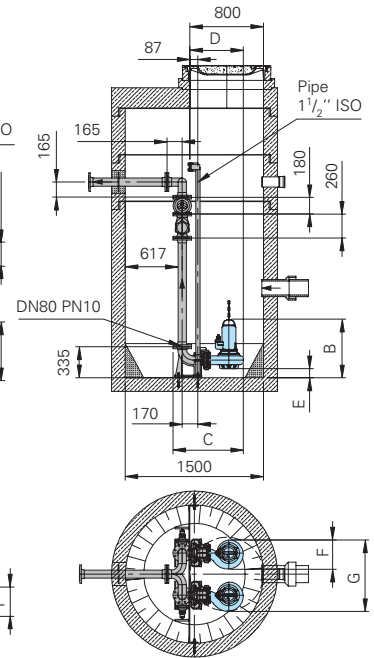
Models with discharge DN80



Single pump station

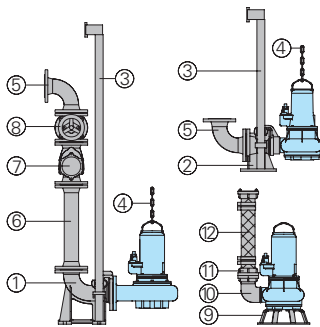


Twin pump station



Pump type	A	B	C	D	E	F	G
TP70V(15-16)/4(C)W(D)(Ex)	586	596	643	460	100	258	716
TP70M(13-16)/4(C)D(Ex)	586	596	643	460	100	258	716
TP70M(26-31)/4(C)D(Ex)	626	633	764	581	97	317	775
TP70V(31-36)/2(C)D(Ex)	623	633	643	460	100	258	716
TP70V50/2(C)D(H)(Ex)	661	671	643	460	100	258	716

Accessories



Description	Dimension	Part.-No.
① Cast iron autocoupling system with autocoupling with flange DN 80 and upper slide rail bracket BSP 1 1/2" – Type KK80/BSP 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 autocoupling (horizontal discharge) DN 80 and upper slide rail bracket BSP 1 1/2" – Type KS 80/BSP 3" with flanged pump coupling	BSP 3" F	8604050
○ Auto-coupling system complete or partial in stainless steel	all types	on request

Description	Dimension	Part.-No.
○ Screw-kits for installation of coupling system		on request
○ Zwischenkonsole zur Führungsrohrverlängerung	Ø 1 1/2" für KK80 und KS80	7322901
③ Guide rails, pair, per m steel galvanized stainless steel	1 1/2" dia. 1 1/2" dia.	2190155 2190254
④ Lifting chain, proved capacity up 200 kg division 984 mm, 4x12 with eyelet 2m long		2800371
special lengths		on request
Shackle stainless steel	load capacity 400 kg	2801360
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

Description	Dimension	Part.-No.
⑧ Flanged gate valve with gasket and fixing bolts	DN 80 DN 100	2216080 2216100
⑨ Ring base stand		7321345
⑩ 90° elbow	BSP3" F/M	2111805
Flanged 90° elbow	DN 80	2153302
Threaded flange	DN 80/BSP3" F	2215080
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 panels for single and multipump stations with automatic level control		On request

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

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