

## Submersible motor pumps for waste water and feces. Free passage 70 mm.

### TP70

#### Application

Submersible motor pumps in the TP70 series are used for conveying domestic drainage-, waste water and feces. With their large free passage of 70 mm, they are particularly well suited for use with media containing coarse solids and fibers. Ideal for economical disposal in municipal, private, trade and industry applications.

**DIN EN 12050-1:** Conformity and design tested.

**Installation:** Stationary or mobile. Version with float switch for use as automatic water level controlled drainage pump.

**Pumped medium:** Clean water and waste water with solid and fibrous content and feces. Max. temperature of pumped medium: 40°C, for brief periods up to 60°C.

**Operating mode:** Continuous operation (S1).

#### Design

Fully submersible pump, consisting of:

**Pump:** Single-stage with horizontal discharge.

**Impellers:** M = Closed single channel impeller for sludgy media with solids or fibrous content. V = Vortex impeller for media containing gas or air, with coarse or long stringy components that are prone to clogging.

**Motor:** Fully submersible motor, sealed against pressurized water. Insulation class H, Protection rating IP 68. Thermal sensor for temperature monitoring in the winding.

Type of start: TP70...15-36: direct-on-line  
TP70V50: direct- or star-delta-start

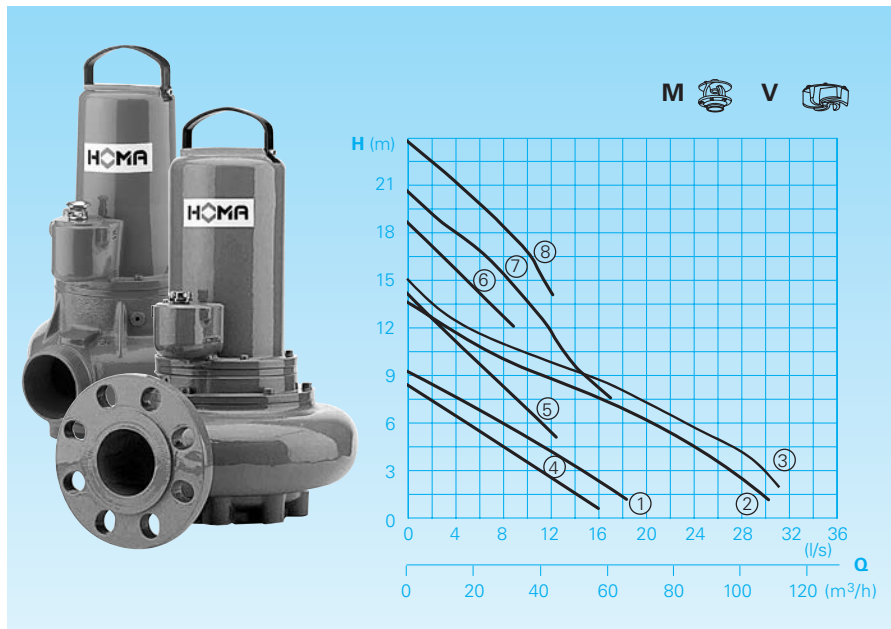
Connecting cable:

Model D: H07RN8-F Plus 6G1,5  
Model D/C: H07RN8-F Plus 10G1,5  
Model D/C Ex: H07..6G1,5+2x1,5  
TP70V50 (H)D: H07RN8-F Plus 10G1,5  
TP70V50 (H)D/C: H07RN8-F Plus 12G1,5  
TP70V50 (H)D Ex: H07RN8-F Plus 10G1,5  
TP70V50 (H)D/C Ex: H07...10G1,5+2x1,5

**Shaft/bearing:** strongly dimensioned chrome steel shaft, lifetime-lubricated roller bearings.

**Seal:** Combination of 2 mechanical seals (Silicon carbide) inside oil chamber that is independent of the direction of rotation. Oil control possible from the outside. On request with electronic seal control, model C.

#### Conveying capacities



#### Technical data

Curve No.	Pump type	Motor input P <sub>1</sub> (kW)	Motor input P <sub>2</sub> (kW)	Rotational speed (rpm)	Nominal current (A)	Discharge	Weight (kg)
①	TP70 M16/4D (V/C)(A)(Ex)	1,7	1,3	1450	3,4	G3	40
②	TP70 M26/4D (V/C)(A)(Ex)	2,5	1,9	1450	5,5	DN80	66
③	TP70 M31/4D (V/C)(A)(Ex)	3,3	2,6	1450	6,0	DN80	66
④	TP70 V15/4D (V/C)(A)(Ex)	1,4	1,1	1450	3,1	G3	40
⑤	TP70 V31/2D (V/C)(A)(Ex)	3,0	2,5	2900	5,5	G3	56
⑥	TP70 V36/2D (V/C)(A)(Ex)	3,5	2,9	2900	6,1	G3	56
⑦	TP70 V50/2D (V/C)(Ex)	5,2	4,4	2840	8,4	G3	56
⑧	TP70 V50/2HD (V/C)(Ex)	5,2	4,4	2840	8,4	G3	56

**Model W:** 230V/1Ph 50Hz

**Model D:** 400V/3Ph 50Hz

\* **Capacitor:** for the operation it is necessary to install a capacitor into the switchgear.

**Model A:** with automatic

HOMA-Nivomatik float switch

**Model Ex:** Explosion-proof

**Explosion protection:** All single phase models also available with explosion protection according to  $\text{Ex II 2 G Ex c d II B T4(T3)}$ .

#### Materials

Motor housing, pump housing, impeller	Cast iron EN-GJL250
Motor shaft, screws	Stainless steel
Mechanical seal	Silicon carbide
Wear ring	Bronze
Elastomers	NBR

#### Scope of supply

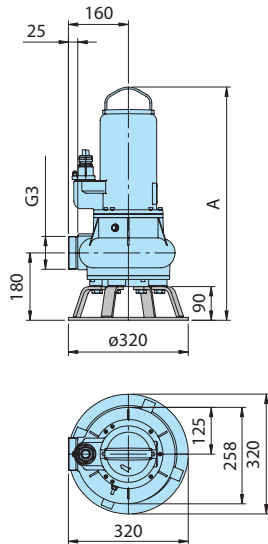
All pumps without base stand or auto coupling (see accessories). With 10 m of loose cable end. Switchgear DT32 available as accessory.

**Model A:** With automatic float switch, switchgear DA10/32; DA10/12 with motor protection, manual-auto-switch. Built in operating capacitor (just BSP 1 Ph-models), mains plug. Ex model with intrinsically safe control circuit relay.

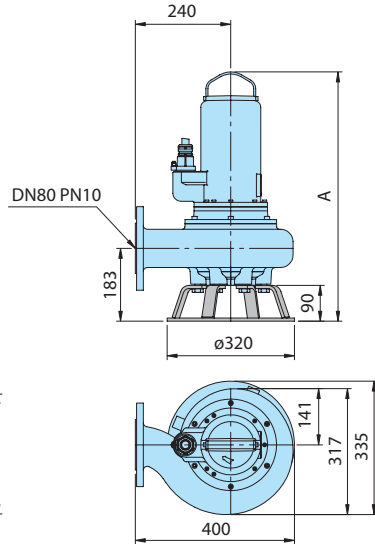
**Dimensions and installation example** (all dimensions in mm)

**Floorstanding installation with base stand**

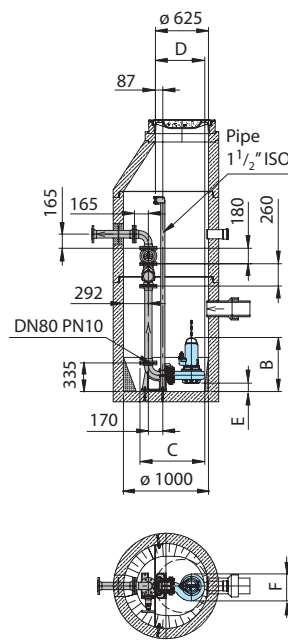
**Types with discharge G3**



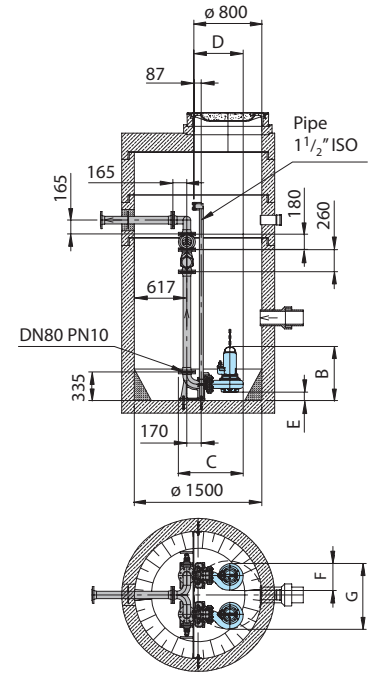
**Types with discharge DN80**



**Single pump station**

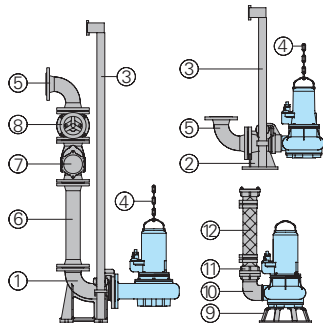


**Double pump station**



Pump type	A	B	C	D	E	F	G
TP70V15/4(C)D(Ex)	586	596	643	460	100	258	716
TP70M16/4(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	Size	Part no.
① Automatic coupling system GG, with clutch foot bend DN 80, mating flange and slide rail bracket BSP1 1/2"		
- Type KK80/R3"	R3" F	8604035
- Type KK80/80	DN 80	8604025
② Automatic coupling system GG, with clutch foot bend (horizontal discharge) DN 80, mating flange and slide rail bracket BSP1 1/2"		
- Type KS80/R3"	R3" F	8604050
○ Coupling system completely or partly in stainless steel	all	on request
○ Screw-Kits for fastening on coupling systems		on request
○ Intermediate bracket for slide rail bracket extension	Ø 1 1/2" for KK80 and KS80	7322901

Description	Size	Part no.
③ Guide rails, In pairs, per m galvanized steel	Ø 1 1/2"	2190155
Stainless steel	Ø 1 1/2"	2190254
④ Pump chain sets, tested. With shackle, single or dual row, different lengths and load bearing capacities		on request
⑤ 90° Pipe bend with 2 flanges	DN 80	2153302
	DN 100	2153303
Connection piece for pressure pipe in double pump stations 3 flanges, discharge horizontal (vertical discharge on request)	3x DN 80	2160006
	DN 80/80/100	2160008
	3x DN 100	2160010
⑥ Pressure pipe with 2 flanges (FF-piece) 1 m long, 1 set of screws and seal	DN 80	2152081
	DN 100	2152201
Pressure pipe extension, per m	DN 80	2150080
	DN 100	2150100
Reduction piece (FFR-piece) with 2 flanges		on request
⑦ Non-return valve with flanges	DN 80	2212807
	DN 100	2212809

Description	Size	Part no.
⑧ Flanged gate valve with flanges	DN 80	2216080
	DN 100	2216100
⑨ Ring base stand		7321345
⑩ 90° Connection bend R3" F/M		2111805
90° Pipe bend with 2 flanges	DN 80	2153302
Threaded flange	DN 80/R3" F	2215080
⑪ STORZ-fixed-coupling	B-G3" F	2010602
STORZ-hose-coupling	B-75 mm Ø	2013502
⑫ Plastic spiral-hose, 75 mm Ø, with 2-B-quick-couplings	2 m long	2161042
	3 m long	2161043
	5 m long	2161045
Plastic spiral-hose, 90 mm Ø, with 2 flange sockets, DN 80	2 m long	2161032
	3 m long	2161033
	5 m long	2161035
Plastic spiral-hose, per m	Ø 75 mm	2632075
	Ø 90 mm	2632090
Flange sockets DN 80	90 mm Ø	2171014
Hose clamps	85/20	2308520
	92/20	2309221

○ For pump controllers and switchgears for mobile and stationary applications, measuring systems and monitoring devices, see HOMA accessories



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