

Submersible waste water pumps Discharge BSP 3" / DN 80. Single channel impeller, spherical clearance 50 mm.

TP 53 M

Application

HOMA TP 53 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.

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.

Betriebsart: Permanent (S1).

Design

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

Pump: Single stage centrifugal pump with horizontal discharge BSP3"M.

Impeller: 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 H. Degree of protection IP 68. Thermal sensors embedded in the winding on request (standard with TP53M50, TP53M12/2W, TP53M17/2W and model Ex).

Motor Start:

TP53M12-37: Direct-on-line

TP53M50: Direct-on-line or

Start-delta-start

Cable:

TP53M12-37: H07RN-F 4 G 1,5

TP53M12-37Ex: H07PLUS 6 G 1,5

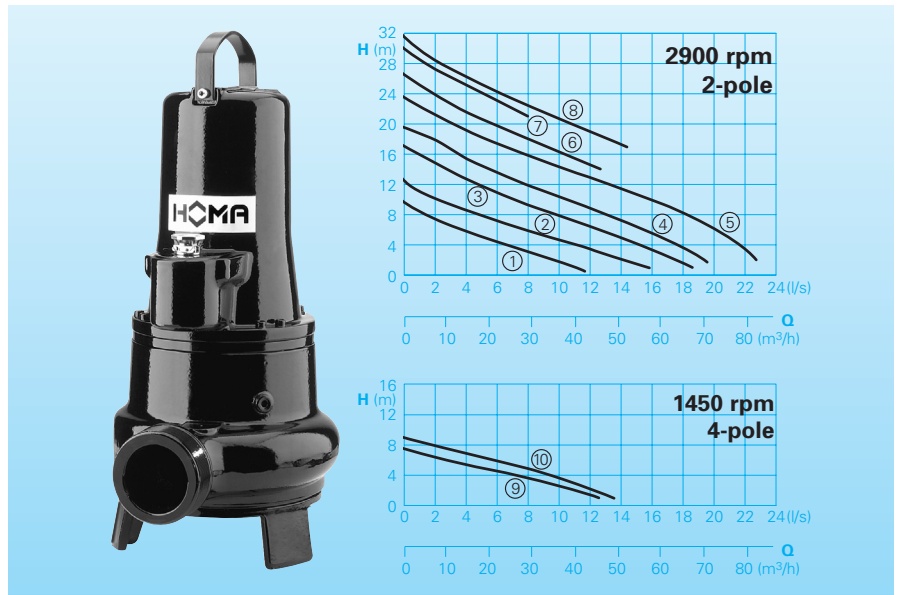
TP53M 50(Ex): H07RN-F(PLUS) 10 G 1,5

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 up to 1,6 kW/2-pole with mechanical seal and lip seal. Oil inspection from outside.

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

Performances



Technical Data

Curve No.	Pump type	Motor P ₁ (kW)	P ₂ (kW)	Capacitor* (μF)	Speed (rpm)	Nominal current (A)	Weight (kg)
①	TP 53M 12/2 W (A) (Ex)	1,1	0,8	25	2900	4,8	26,0**
②	TP 53M 17/2 W (A) (Ex)	1,6	1,2	30	2900	7,6	27,0**
①	TP 53M 11/2 D (A) (Ex)	1,0	0,8		2900	1,9	26,0**
②	TP 53M 14/2 D (A) (Ex)	1,3	1,0		2900	2,5	27,0**
③	TP 53M 23/2 D (A) (Ex)	2,3	1,8		2900	3,8	40,0
④	TP 53M 26/2 D (A) (Ex)	2,6	2,1		2900	4,5	40,0
⑤	TP 53M 37/2 D (A) (Ex)	3,7	3,1		2900	6,5	45,0
⑥	TP 53M 37/2 MD (A) (Ex)	4,0	3,4		2900	6,6	45,0
⑦	TP 53M 37/2 HD (A) (Ex)	3,7	3,1		2900	6,5	45,0
⑧	TP 53M 50/2 DT (Ex)	5,2	4,4		2840	8,7	56,0
⑨	TP 53M 12/4 W (A)	1,2	0,9	40	1450	5,8	40,0
⑩	TP 53M 13/4 D (A) (Ex)	1,3	1,0		1450	2,6	40,0

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

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

Model A: With automatic level control HOMA-Nivomatik

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

Model Ex: Explosion proof

** **Weight Ex Model:** + 5 kg

Materials

Motor housing, Impeller, Pump housing	Cast iron EN-GJL-250
Rotor shaft, screws	stainless steel
Mechanical seal	Siliziumkarbid
Seal kit	NBR

Equipment supplied

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

Model W (230 V / 1 Ph):

10 m of cable. Control box W19; WT19 (Standardpump); WT19 (Ex-Pump) available as accessories.

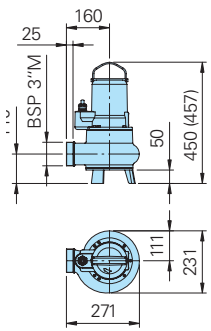
Model D (400 V / 3Ph):

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

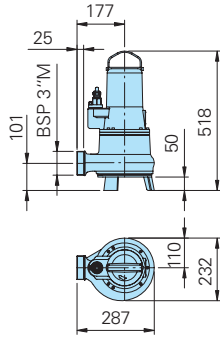
Model A: With additional automatic level control and control box DA10/32; DA10/12 with overload protection, manual-auto switch and 10-m of cable. 1Ph- model with integrated capacitor. Model Ex with intrinsically safe relay.

Dimensions and Installation / Free standing pump with base stand (all dimensions in mm)

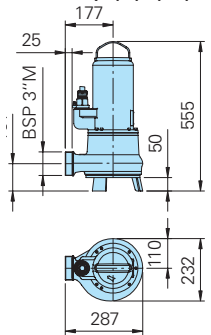
TP53M12/2W(Ex),
TP53M17/2W(Ex)
TP53M11/2D(Ex);
TP53M14/2D(Ex)



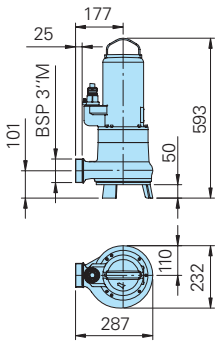
TP53M12/4W,
TP53M13/4D(Ex)
TP53M23/2D(Ex),
TP53M26/2D(Ex)



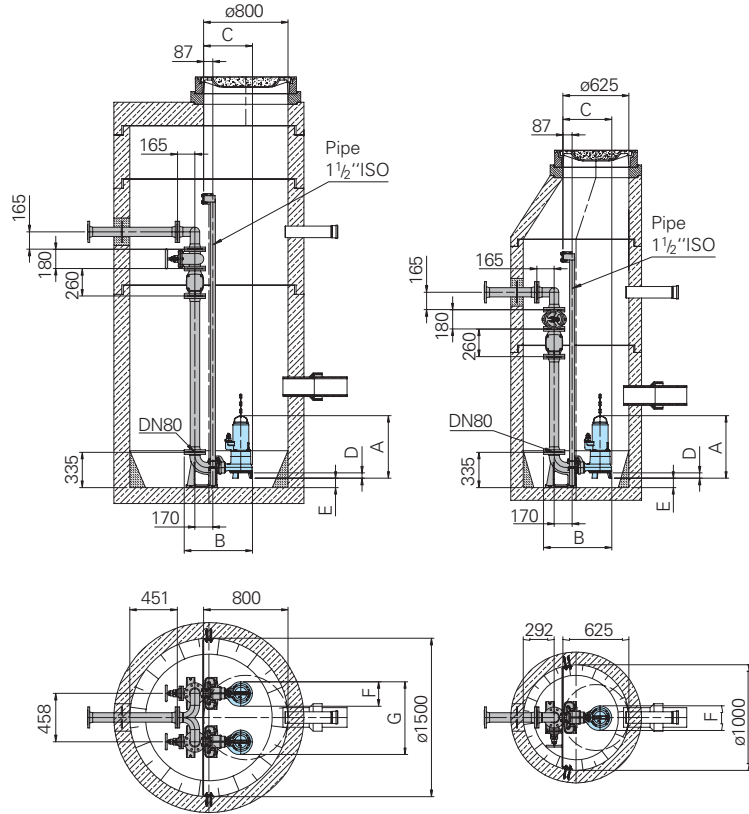
TP53M37/2MD(Ex),
TP53M37/2(H)D(Ex)



TP53M50/2DT(DEX)



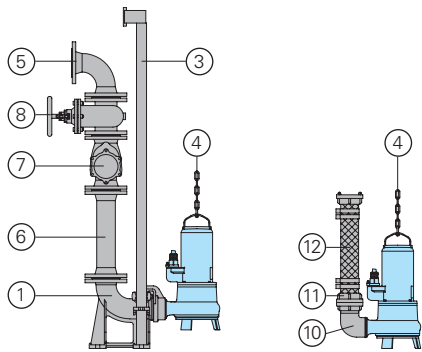
Permanent sump installation with auto-coupling system.



Typ

Typ	A	B	C	D	E	F	G
TP53M50/2DT(DEX)	593	645	462	50	89	232	690
TP53M37/2MD(Ex)+(H)D(Ex)	555	645	462	50	89	232	690
TP53M12/4W, TP53M13/4D(Ex), TP53M23-26/2D(Ex)	518	645	462	50	89	232	690
TP53M12-17/2W(Ex), TP53M11-14/2D(Ex)	450 (457)	629	446	50	81	231	689

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 KK80/R3" with flanged pump coupling	BSP 3" F	8604035
- Type KK80/80 with flanged pump coupling	DN 80	8604025
○ Auto-coupling system complete or partial in stainless steel	all types	on request

Part Description	Dimension	Part No.
○ Screw-kits for installation of coupling system		on request
Threaded flange	DN 80/BSP3" F	2215080
③ Guide rails, pair, per m steel galvanized	BSP 1 1/2"	2190155
stainless steel	BSP 1 1/2"	2190254
④ Pump chain sets, testet. With shackle, One- or Two-strand, different lengths and load capacities		on request
⑤ 90° flanged elbow	DN 80	2153302
	DN 100	2153303
Flanged Y-piece for twin pump arrangement, horizontal discharge (vertical discharge on request)	3x DN 80	2160006
	DN 80/80/100	2160008
	3x DN 100	2160010
⑥ Flanged discharge pipe with gasket and fixing bolts, per m	DN 80	2152081
	DN 100	2152201
Discharge pipe, per additional m	DN 80	2150080
	DN 100	2150100
Flanged reducer		on request
⑦ Flanged swing check valve with gasket and fixing bolts	DN 80	2212807
	DN 100	2212809

Part Description	Dimension	Part No.
⑧ Flanged gate valve with gasket and fixing bolts	DN 80	2216080
	DN 100	2216100
⑩ 90° elbow	BSP 3" F/M	2111805
Flanged 90° elbow	DN 80	2153302
Threaded flange	DN 80/BSP 3" 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	2161042
	length 3 m	2161043
	length 5 m	2161045
Flanged reinforced hose 90 mm dia., DN 80	length 2 m	2161032
	length 3 m	2161033
	length 5 m	2161035
Reinforced hose per m	75 mm dia.	2632075
	90 mm dia.	2632090
Flanged spigot DN 80	90 mm dia.	2171014
Hose band	85/20	2308520
	92/20	2309221
○ Control panel for single or twin pump stations for automatic operation		on request



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