

## Submersible waste water pumps Discharge R 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, certificate No. 0220119.

**Installation:** Transportable or permanent. Models with float switch control for automatic pump operation, depending on medium level in the sump.

**Pumped liquid:** Clear water and drainage water, sewage containing soft solids. Max. liquid 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 BSP3" M.

**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 TP53M50 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

TP53M50(Ex): H07RN-F(PLUS) 10 G 1,5

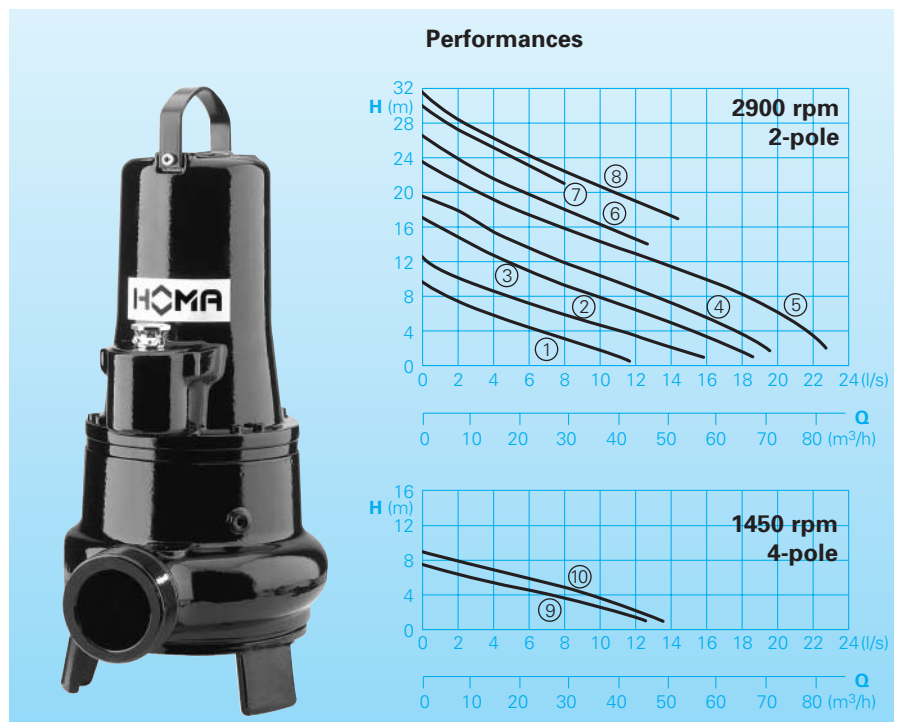
**Shaft/Bearing:** Large diameter stainless steel rotor shaft, pre-lubricated bearings.

**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 II 2 G EEx d [ib] IIBT4.

#### Equipment supplied

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



#### Technical Data

Curve No.	Pump type	Motor input P <sub>1</sub> (kW)	Motor output P <sub>2</sub> (kW)	Capacitor* (μF)	Speed (rpm)	Nominal current (A)	Spherical clearance (mm)	Weight (kg) Standard model	Weight (kg) Model Ex
①	TP53 M12/2W(A)(Ex)	1,1	0,8	25	2900	4,8	50	26	31
②	TP53 M17/2W(A)(Ex)	1,6	1,2	30	2900	7,6	50	27	32
①	TP53 M11/2D (A)(Ex)	1,0	0,8		2900	1,9	50	26	31
②	TP53 M14/2D (A)(Ex)	1,3	1,0		2900	2,5	50	27	32
③	TP53 M23/2D (A)(Ex)	2,3	1,8		2900	3,8	50	40	40
④	TP53 M26/2D (A)(Ex)	2,6	2,1		2900	4,5	50	40	40
⑤	TP53 M37/2D (A)(Ex)	3,7	3,2		2900	6,5	50	45	45
⑥	TP53 M37/2MD (Ex)	4,0	3,4		2900	6,6	50	45	45
⑦	TP53 M37/2HD (A)(Ex)	3,7	3,2		2900	6,5	50	45	45
⑧	TP53 M50/2 DT (DEx)	5,2	4,4		2840	8,7	50	56	56
⑨	TP53 M12/4W(A)	1,2	0,9	40	1450	5,8	50	40	40
⑩	TP53 M13/4D(A)(Ex)	1,3	1,0		1450	2,6	50	40	40

Model W: 230-240 V / 1 Ph

Model D: 400-415 V / 3 Ph

\* 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

**Model W (230-240 V / 1 Ph):**  
10 m of cable. Control box W19; WT19 available as accessories.

**Model D (400-415 V / 3Ph):**  
10 m of cable. Control box D32; DT32 available as accessories.

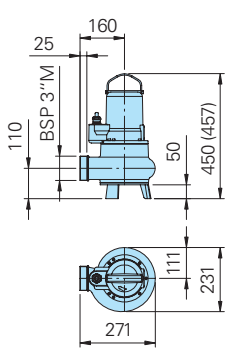
**Model A:** With additional automatic level control and control box WA10/19; DA10/32; DA10/12 with overload protection, manual-auto switch and 10 m of cable. 1Ph-model with integrated capacitor. Model Ex with intrinsically safe relay.

#### Materials:

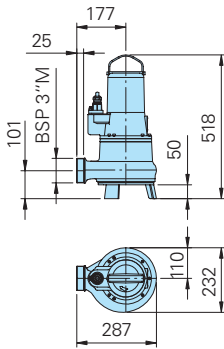
Motor housing, pump housing	Cast iron GG 25
Impeller	
- up to 1,6 kW/2-pole	Polypropylene GFK
- other types	Cast iron GG 25
Wear ring	Bronze
Mechanical seal	Silicon-carbide
Rotor shaft, screws	Stainless steel
Seal kit	Perbonane

## Installations and Dimensions / Free standing pump with base stand

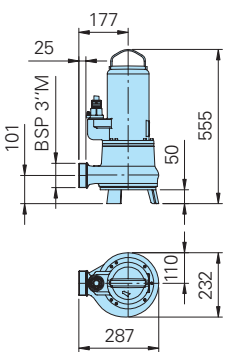
TP53M12/2W(Ex),  
TP53M17/2W(Ex)  
TP53M11/2D(Ex);  
TP53M14/2D(Ex)



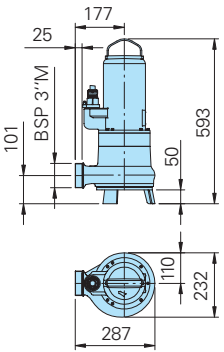
TP53M12/4W,  
TP53M13/4D(Ex)  
TP53M23/2D(Ex),  
TP53M26/2D(Ex)



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

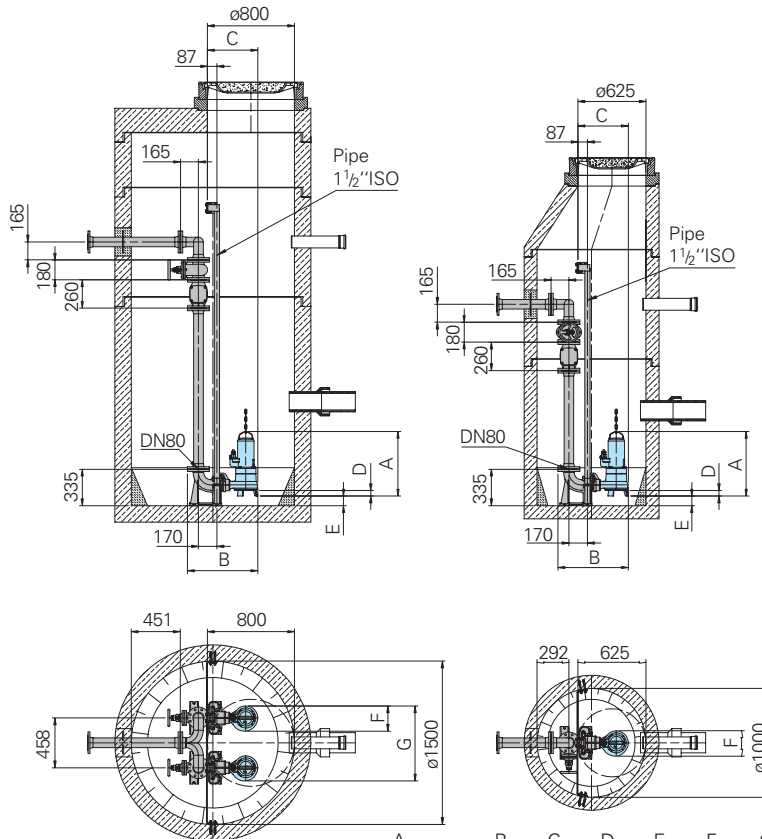


TP53M50/2DT(Ex)



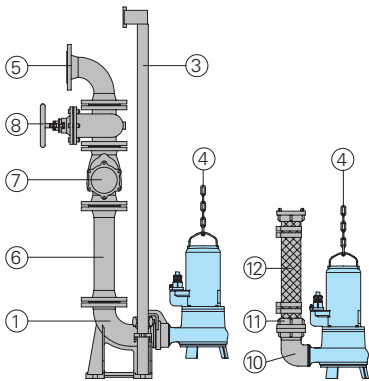
all dimensions in mm

### Wet well installation with auto-coupling system.



Typ	A	B	C	D	E	F	G
TP53M50/2DT(Ex)	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
Threaded flange	DN 80/BSP3"F	2215080

Part Description	Dimension	Part No.
③ Guide rails, pair, per m steel galvanized	BSP 1 1/2"	2190155
stainless steel	BSP 1 1/2"	2190254
④ Lifting chain, per m steel galvanized	5 mm dia.	2800350
stainless steel	5 mm dia.	2800353
Shackle steel galvanized	5 mm dia.	2801450
stainless steel	5 mm dia.	2801390
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
⑧ Flanged gate valve with gasket and fixing bolts	DN 80	2216080
	DN 100	2216100

Part Description	Dimension	Part No.
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	2309220

○ Control panel for single or twin pump stations for automatic operation On request



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