

Submersible motor pumps with cutter system for conveying domestic waste water outside of Ex-zones.

TGR15

Application

Sewage disposal with small pipe cross-sections, high head at relatively low flow rates, pressure drainage systems in topographically difficult areas. The TGRs break up solids carried along in fractions of a second, so that plastic pipes with cross-sections from 1 1/2" are sufficient. In this way, the costs for the use of materials and the installation of wastewater systems can be reduced considerably.

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. Max. temperature of pumped medium: 40°C.

Operating mode: Motor submerged: continuous operation (S1). Motor surfaced: short term (S2) or intermittent operation (S3), see technical data.

Design

Fully submersible pump, consisting of:

Pump: Single stage centrifugal pump with horizontal discharge G2.

Impeller: Open multi-blade impeller with upstream cutting device for breaking up solids.

Motor: Fully submersible electric motor, sealed against pressurized water, single phase or three phase version. Thermal sensor for temperature monitoring in the winding. Insulation class F, protection rating IP 68.

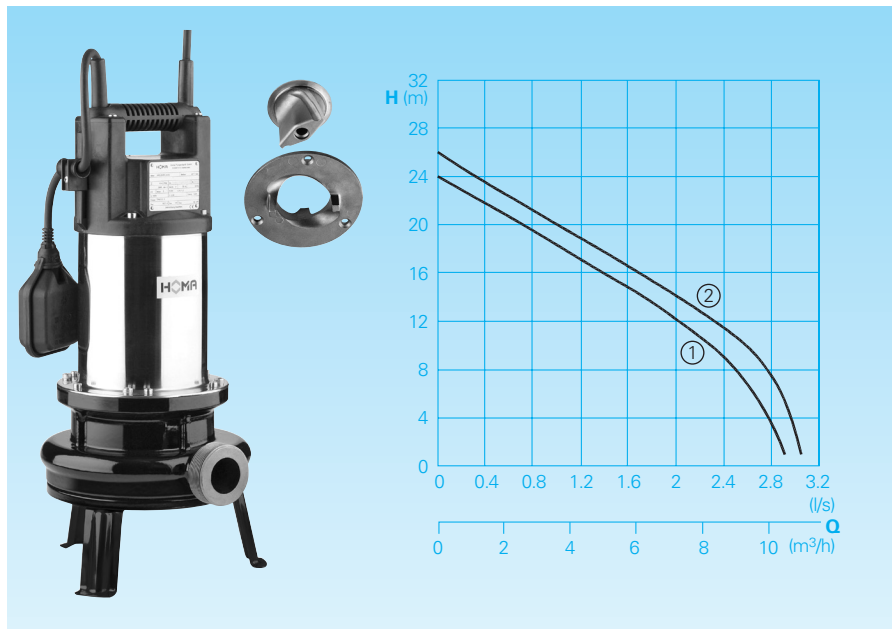
Connecting cable:
Model W: H07RN-F 3G1
Model D: H07RN-F 4G1

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

Seal: Combination of mechanical seal (silicon carbide/silicon carbide) and radial seal that is independent of the direction of rotation.

For explosion-proof cutter pumps, with ATEX certification, please refer to the GRP series.

Conveying capacities



Technical data

Curve No.	Pump type	Motor input		Nominal current (A)	Discharge	Operating mode		Weight (kg)
		P ₁ (kW)	P ₂ (kW)			S2 (min)	S3* (%)	
①	TGR15 W (A)	1,5	1,2	7,0	G2	20	40	19
②	TGR15 D (A)	1,5	1,2	2,5	G2	30	50	19

*Example: 40% = 4 min operation + 6 min break (cycle time 10 min)

Model W: 230V/1Ph 50Hz

Rotational speed: 2900 rpm

Model D: 400V/3Ph 50Hz

Materials

Pump housing	Cast iron EN-GJL250
Cutter system	Stainless steel 1.4122 50-55 HRC
Impeller	Stainless steel 1.4308
Motor housing	Stainless steel 1.4301
Motor shaft	Stainless steel 1.4104
Motor housing cover	Plastic GFK30
Mechanical seal	Silicon carbide
Mechanical connection parts	Stainless steel
Elastomers	NBR

Scope of supply

Pump with screw-on support feet, 10 m of connecting cable.

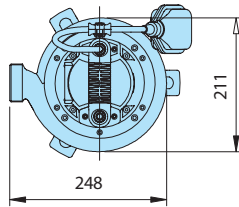
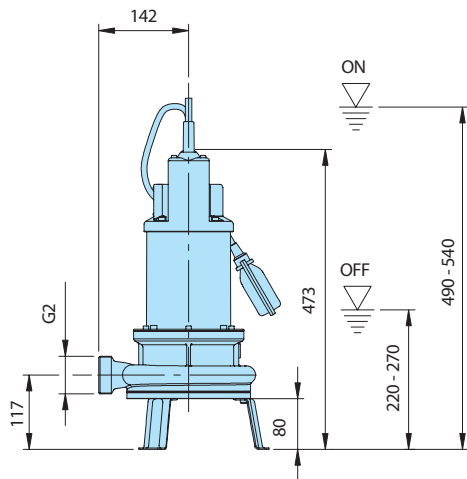
Model W: with Schuko plug type F

Model D: with CEE-phase inverter

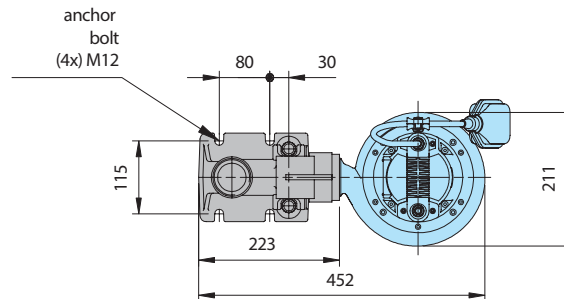
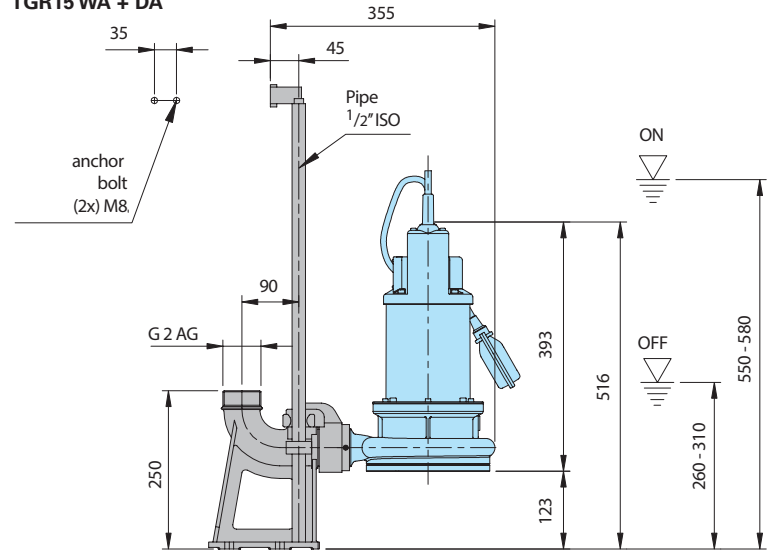
Model A: with automatic float switch HOMA-Nivomatik.

Dimensions and installation example (all dimensions in mm)

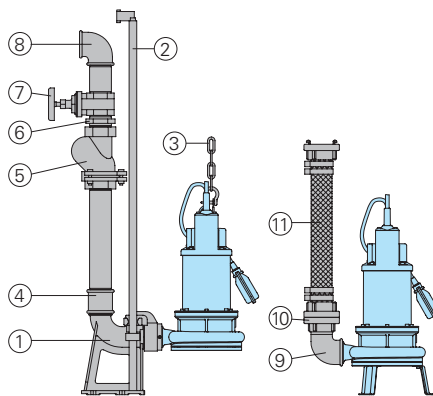
Floorstanding installation with base stand



Wet installation with coupling system
KK 50 / 2"
TGR15 WA + DA



Accessories



Description	Size	Part no.
① Automatic coupling system with coupling base elbow and pipe console – mating flange BSP 2 KK50/BSP2		8604005
○ Coupling system completely or partly in stainless steel	all	on request
○ Screw-Kits for fastening coupling systems		on request

Description	Size	Part no.
② Guide rails, in pairs, per m galvanized steel	Ø 1/2	2190085
	stainless steel	2190250
③ Pump chain sets, tested. With shackle, single or dual row, different lengths and load bearing capacities		on request
④ Double socket, galvanized	BSP 2 F	2109102
	BSP 2 F /	2102210
	BSP 1 1/2 F	
⑤ Non-return valve GG	BSP 1 1/2 F	2212902
	BSP 2 F	2212903
⑥ Double nipple, galvanized	BSP 1 1/2 M	2009020
	BSP 2 M	2009018
⑦ Shut-off gate valve MS	BSP 1 1/2 F	2216015
	BSP 2 F	2216020
⑧ 90° Bend, galvanized	BSP 1 1/2 F	2113605
	BSP 2IG	2113606
T-piece for merging the pressure pipe in double pump stations	BSP 1 1/2 F	2114302
	BSP 2 F	2114306

Description	Size	Part no.
⑨ 90° Bend, galvanized	BSP 2 F/M	2111506
⑩ STORZ-fixed coupling	C-G2 F	2010005
STORZ-hose-coupling	C-38 mm Ø	2013002
	C-52 mm Ø	2013003
⑪ Synthetic-pressure-hose, rubberized on the inside, with couplings	C-38 mm Ø	
	10 m long	2611311
	20 m long	2611312
	C-52 mm Ø	
	10 m long	2611310
	15 m long	2611315
	20 m long	2611320
	30 m long	2611330
Plastic spiral hose, per m	Ø 38 mm	2632042
	Ø 50 mm	2632050
Hose clamp	1 1/2"	2304854
	2"	2306009
○ For pump controllers and switchgears for mobile and stationary applications, measuring systems and monitoring devices, see HOMA accessories		



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