



Submersible Sludge & Sewage Pumps

50-GFHU

Application

Submersible sludge & sewage pump 50-GFHU-105-70 is destined for pumping polluted wastewater, faeces and sludge of max. 10 % of gross content of non-abrasive solids containing small fragmentary and fibrous stuffs as paper, street washoffs or a lesser amount of dirt, ash, sand, small pieces of wood, and so on.

Max. temperature of a pumped liquid 40°C

Max. temperature of working environment 40°C

Permissible scope of pH of a pumped liquid from 6.5 to 7.5 pH

Max. density of a pumped liquid 1,050 kg.m⁻³

Max. submersion of a pump set at density of 1,000 kg.m⁻³ ... 10 m

Thanks to its dimensions, service simplicity and easy handling it is advantageous for using in one-family houses, gardens, weekend houses, and so on. However, they are of use in industrial installations, in wastewater treatment plants, and so on.

These pumps cannot be operated in explosion hazard environments!

Supply electric cable cannot come in contact with water containing oils and hydrocarbons!

Design

Vertical single stage pump 50-GFHU is attached to an electric motor through the common shaft, so that they form only one close-coupled unit. The electric motor rotor is supported on oil-lubricated rolling-contact bearings.

Built-in electric motor is of asynchronous, AC type. Supply cable is thoroughly tightened from penetration of a pumped liquid in a special cable entry bush. From penetration of a pumped liquid from the hydraulic part the electric motor is protected by a mechanical seal with permanent flameproof oil enclosure and lubricated from an oil pan.

Material Versions

Main parts of the pump are of the following construction materials:

Impeller	- grey cast iron
Pump casing (Volute)	- grey cast iron
Stator body	- aluminium alloy
Shaft	- stainless steel
Mechanical seal	- sintered carbide
Wear o-rings	- rubber

Accessoi

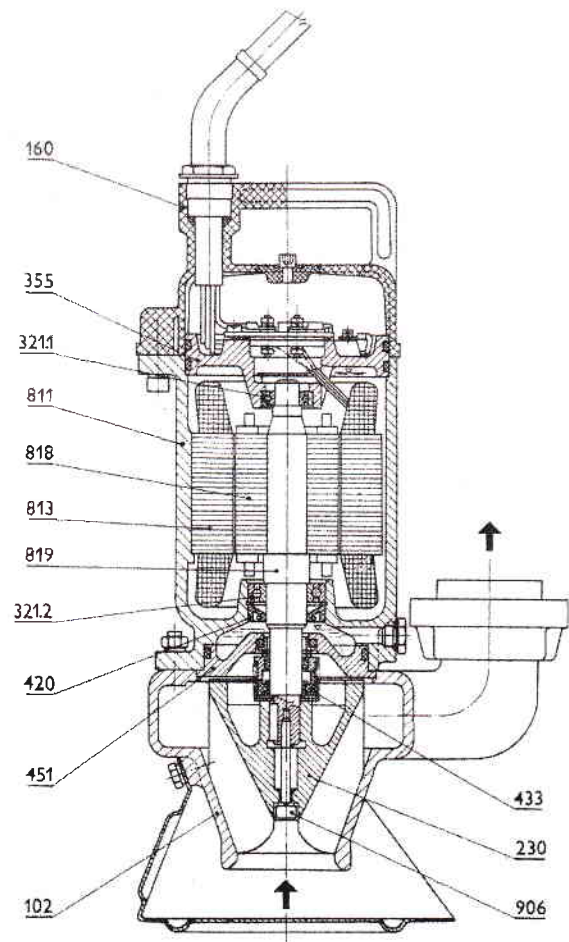
For single-phase version

1. Connecting cable (motor – circuit breaker) in length of 10 m.
2. Open-phase circuit breaker (6 –10A)
3. Cable (circuit breaker – network) in length of 3 m.
4. Float-type switchgear
5. Plug of the type Cv 1632
6. Quick-acting coupling, size 52.

For three-phase version

1. Connecting cable (motor – circuit breaker) in length of 10 m.
2. Open-phase circuit breaker (2.5 –4A)
3. Cable (circuit breaker – network) in length of 3 m.
4. Plug of the type Cv 1643
5. Quick-acting coupling, size 52.

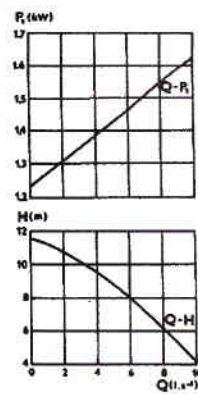
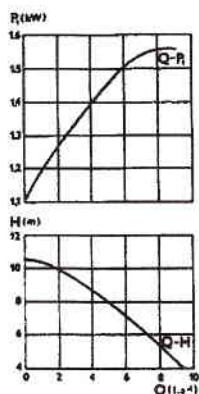
Numbering positions according to the DIN 24 250



102	- Volute
160	- Terminal board cover
230	- Impeller
321.1	- Bearing
321.2	- Bearing
355	- Bearing housing
420	- Radial shaft lip seal "gufero"
433	- Mechanical seal
451	- Oil pan
811	- Stator body
813	- Electric motor stator
818	- Electric motor rotor
819	- Shaft
906	- Impeller screw

Single-phase version

Three-phase version

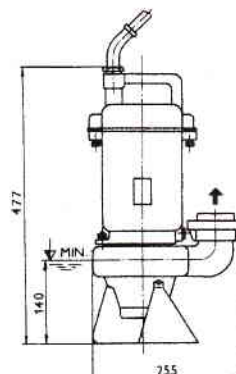
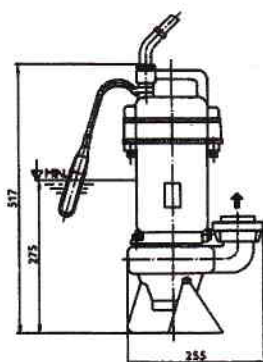


Technical Data

Pump model			50-GFHU-105-70	
Workmanship version			Single-phase	Three-phase
Impeller			Two-vane screw	
Pump clearness /throughput rate		(mm)	20 x 40	
Discharge branch			Thread G2" + quick-acting coupling 52	
Electric motor			Definite-purpose	Definite-purpose
Rated power output	P_2	(kW)	1.1	1.1
Insulation and protection			Class F: IP68 10m	Class F: IP68 10m
Condenser	C	μF	25 \varnothing	- \varnothing
Voltage	U	(V)	230	400
Frequency	f	(Hz)	50	50
Max. breaking current	I	(A)	7	3
Speed	n	(min ⁻¹)	2,840	2,800
Connecting cable (motor - circuit-breaker)	HO7 RN-F		3x1.5	4x1.5
Connecting cable (circuit-breaker – network)	CGSG		3x0.75	4x0.75
Weight without accessories	m		21	20

Single-phase version

Three-phase version



Minimal depth of submersion with **the three-phase** version applies to a condition of a sump final repumping for the period of 20 min., at the most. During a regular operation, it is necessary to hold the same minimal depth of submersion as with the single-phase version.



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