

## Submersible drainage pumps for chemically polluted drainage water. Spherical clearance 10 mm.

### CH 413

#### Application

Pumps used for pumping drainage water which is polluted with alkaline or acid chemicals. With the advantage of thick wall casting and viton seals, they are the ideal solution to pump mediums with pH-value between 5-14. They are suitable for laundries, car washes, food industries and many other applications.

**DIN EN 12050-2:** Conformity and type-tested and monitored by the LGA.

**Installation:** Stationary or mobile.

**Conveying medium:** Clear water and domestic waste water, pH-value 5-14. Max. temperature of conveying medium: 40°C, briefly up to 60°C.

**Operating mode:** Motor submerged: continuous operation (S1). Motor not submerged or medium temperature 41 to 60 °C: Intermittent operation (S3 30%)

#### Construction

Fully submersible pump, consisting of:

**Pump:** Single stage centrifugal pump with horizontal discharge.

**Impeller:** Open multi-channel impeller, spherical clearance 10 mm.

**Motor:** Fully submersible, pressure tight electric motor, oil filled. Insulation class H. Degree of protection IP 68. Alternating current version with thermal sensor in the winding for temperature monitoring. Electrical compartment is separate from motor.

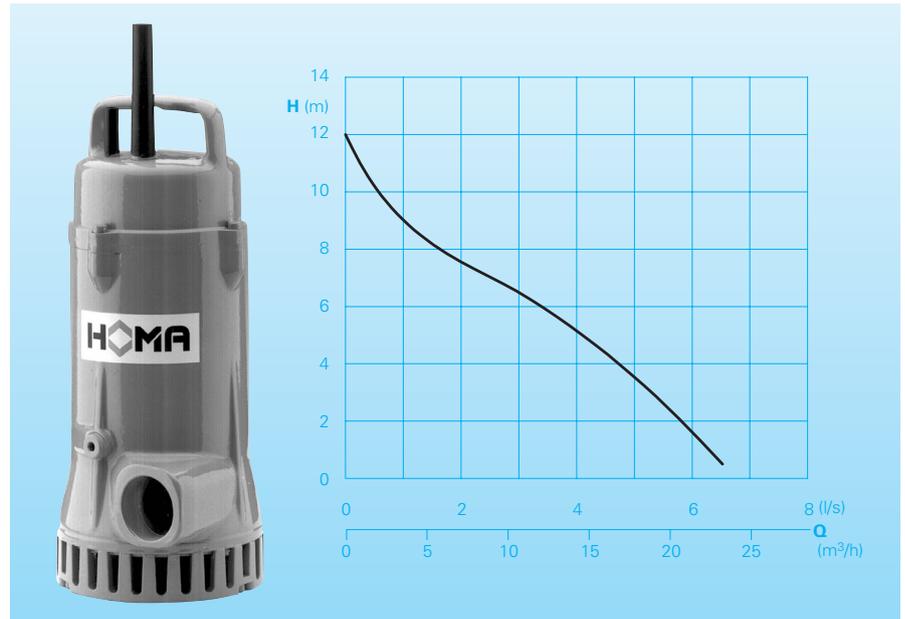
Connection cable W: H07RN-F 3G1

Connection cable D: H07RN-F 4G1,5 with protection hose (polyolefine).

**Shaft/Bearing:** Generously-proportioned chromium steel motor shaft, permanently-lubricated roller bearing.

**Seal:** Combination of mechanical seal and radial seal that is independent of the direction of rotation.

#### Performances



#### Technical Data

Pump type	Motor power		Voltage 50 Hz (V)	Nominal current (A)	Weight (kg)
	P <sub>1</sub> (kW)	P <sub>2</sub> (kW)			
CH 413 W(L)	1,1	0,7	230/1Ph	4,7	20,0
CH 413 D(L)	1,2	0,8	400/3Ph	2,2	20,0

**Speed:** 2900 rpm

**Pressure connection:** R 1½ F

**Type L:** without switching device and loose cable end

#### Materials

Pump housing, impeller, motor housing	Cast iron EN-GJL-250
Rotor shaft	Stainless steel
Mechanical seal	Silicon-carbide
Elastomere	Viton
Mechanical connection parts	Stainless steel

#### Scope of supply

Pump with 10 m of connection cable.

**Type W (230 V / 1 Ph):**

With control unit W1 with motor protection, ON/OFF switch and mains plug.

**Type D (400 V / 3Ph):**

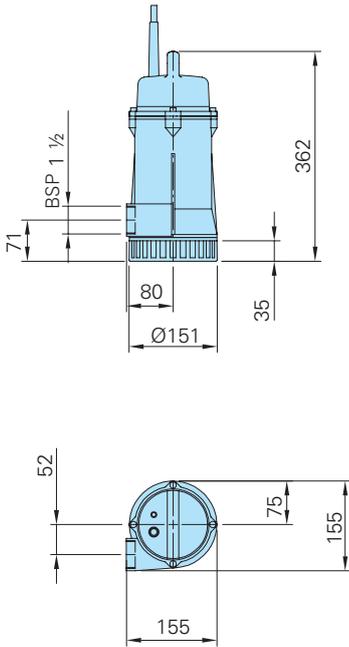
Control unit D32 with motor protection, ON/OFF switch and direction reversal plug.

**Type L:**

With loose cable end. Possible switching devices available as accessories.

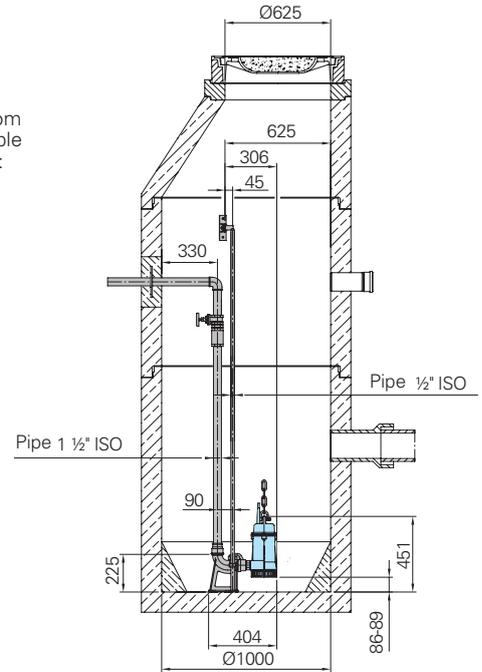
The capacitor required for operation is installed in the pump.

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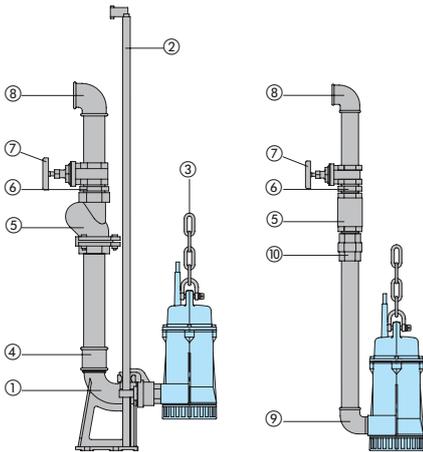


**Permanent sump installation with auto-coupling system.**

Permanent installation utilising a submerged auto-coupling guide rail system for automatic connection and disconnection of the pump from the pipework from outside the sump. Applicable for single or multi pump stations. Advantages: Little space requirement, easy pump service and maintenance.



**Accessories**



Part Description	Dimension	Part No.
① Auto-coupling system consisting of auto coupling with flange, flange pump coupling and upper slide rail bracket - KK50/R1 1/2"	BSP2"/BSP1 1/2"	8604000
○ Auto-coupling system complete or partial in stainless steel		all types on request
○ Screw-kits for installation of coupling system		on request
○ Supporting bracket for guide rail extension	Ø 1/2"	for KKC50 7320271

Part Description	Dimension	Part No.
② Guide rails, pair, per m steel galvanized	1/2" dia.	2190085
	1/2" dia.	2190250
③ Pump chain sets, tested. With shackle, One- or Two-strand, different lengths and load capacities		on request
④ Galvanized double socket	BSP 2" F	2109102
	BSP 2" Fx	2102210
	BSP 1 1/2" F	
⑤ Cast iron swing check valve	BSP 1 1/2" F	2212902
	BSP 2" F	2212903
⑥ Galvanized double nipple	BSP 1 1/2" M	2009020
	BSP 2" M	2009018
⑦ Bronze gate valve	BSP 1 1/2" F	2216015
	BSP 2" F	2216020
⑧ 90° galvanized elbow	BSP 1 1/2" F	2113605
	BSP 2" F	2113606
T-piece for twin pump arrangement	BSP 1 1/2" F	2114302
	BSP 2" F	2114306
⑨ 90° galvanized elbow	BSP 1 1/2" F/M	2111505
	BSP 2" F/M	2111506
⑩ Galvanized pipe union	BSP 1 1/2" F/M	2114305
○ Brass STA hose coupling	BSP 1 1/2" M	2001513
STORZ-fixed coupling	C-BSP 1 1/2" M	2010003

Part Description	Type	Part No.
○ PVC-hose, per m	1 1/2"	2621500
Reinforced hose, per m	50 mm dia.	2632050
STORZ-hose coupling with spigot	C-38 dia.	2013002
	C-52 dia.	2013003
Hose bands	1 1/2"	2304854
	2"	2306009
Synthetic pressure hose with rubber lining	10 m	2611310
	15 m	2611315
and couplings, C-52 dia.	20 m	2611320
	30 m	2611330
○ Pump control systems and switching gear for mobile and permanent usage, level recording and monitoring devices		See HOMA accessories

