

# GMC, GMV Submersible Sewage and Drainage Pumps



## Construction

Close coupled electric submersible pumps.

**GMC:** with single-channel impeller.

**GMV:** with free-flow (vortex) impeller.

Double mechanical shaft seal with interposed oil chamber, to protect against dry-running.

## Applications

For domestic or industrial waste water, dirty water with solids up to 45 mm grain size for GMC and 50 mm for GMV, for liquids which are compatible with the pump materials.

## Operating conditions

Liquid temperature up to 35 °C.

pH value: 6-11.

Maximum immersion depth: 10 m (with suitable cable length).

Continuous duty (with submerged motor).

## Motor

2-pole induction, 50 Hz ( $n \approx 2900$  rpm).

**GMC, GMV:** three-phase 230 V  $\pm$  10%;  
three-phase 400 V  $\pm$  10%;  
2 built-in thermal protectors to be connected to a control box.

Cable: 4G1,5 mm<sup>2</sup>+ 2x0,5 mm<sup>2</sup>, length 10 m.

**GMCM, GMVM:** single-phase 230 V  $\pm$  10%.

With float switch, built-in thermal protector and built-in capacitor.

Cable: H07RN8-F, 3G1,5 mm<sup>2</sup>, length 10 m, with plug (CEI - UNEL 47166).

Insulation class F.

Protection IP X8.

Triple impregnation, humidity-proof winding.

Constructed in accordance with: EN 60335-2-41.

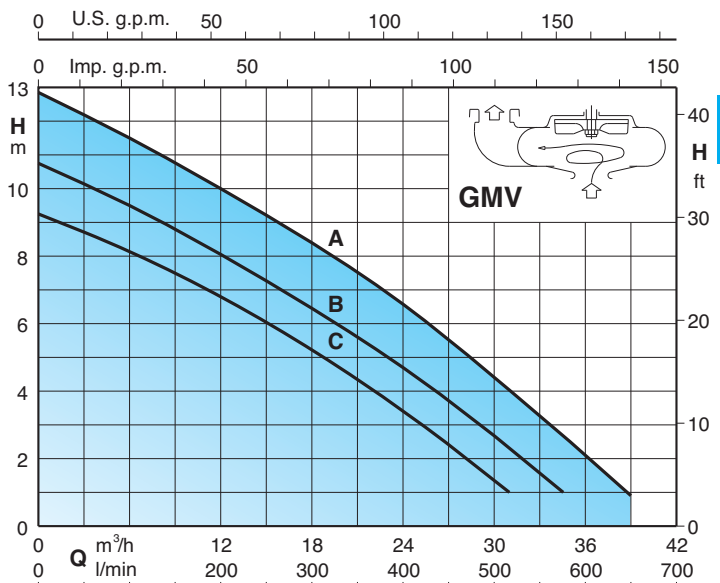
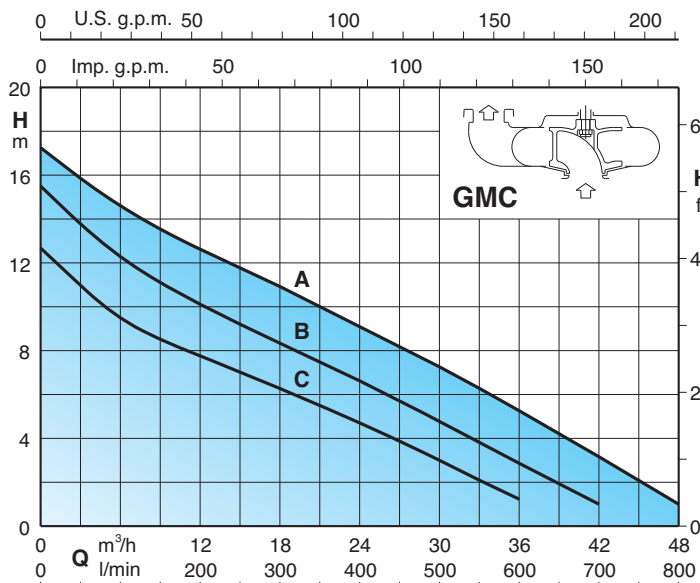
## Other features on request

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Motor suitable for operation with frequency converter.

## Materials

Component	Material
Pump casing	Cast iron GJL 200 EN 1561
Casing cover	
Impeller	
Motor housing	
Motor cover	
Shaft	Chrome steel 1.4016 EN 10088 (AISI 430)
Mechanical seal: Upper	Carbon, ceramic, NBR
Lower	
Seal lubrication oil	Oil for food machinery and pharmaceutical use

## Characteristic curves $n \approx 2900$ rpm



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## Performance n ≈ 2900 rpm

3~	230 V 400 V		1~	230 V			Capacitor	P <sub>1</sub>			P <sub>2</sub>			Q							
	A	A		A	µf	Vc		kW	kW	HP	m <sup>3</sup> /h	0	6	12	18	24	30	36	42	48	
<b>GMC 50CE</b> <b>GMC 50-65C</b>	3,3	1,9	<b>GMCM 50CE</b> <b>GMCM 50-65C</b>	4,5	16	450	1,1	0,75	1	H m	12,8	9,5	8	6,5	5	3	1				
<b>GMC 50BE</b> <b>GMC 50-65B</b>	4,8	2,7	<b>GMCM 50BE</b> <b>GMCM 50-65B</b>	6,5	12,5x2	450	1,5	1,1	1,5		15,5	12,5	10	8,5	6,5	5	3	1			
<b>GMC 50AE</b> <b>GMC 50-65A</b>	6,6	3,8							2		17,3	14,5	12,5	11	9	7,5	5,5	3	1		

3~	230 V 400 V		1~	230 V			Capacitor	P <sub>1</sub>			P <sub>2</sub>			Q							
	A	A		A	µf	Vc		kW	kW	HP	m <sup>3</sup> /h	0	6	12	18	24	30	31	35	39	
<b>GMV 50CE</b> <b>GMV 50-65C</b>	3,3	1,9	<b>GMVM 50CE</b> <b>GMVM 50-65C</b>	4,5	16	450	1,1	0,75	1	H m	9,2	8	7	5	3,5	1,5	1				
<b>GMV 50BE</b> <b>GMV 50-65B</b>	4,8	2,7	<b>GMVM 50BE</b> <b>GMVM 50-65B</b>	6,5	12,5x2	450	1,5	1,1	1,5		10,7	9,5	8	6,5	4,5	2,5	2,3	1			
<b>GMV 50AE</b> <b>GMV 50-65A</b>	6,6	3,8							2		12,9	11,5	10	8,5	6,5	4,3	4	2,5	1		

P<sub>1</sub> Max. power input.

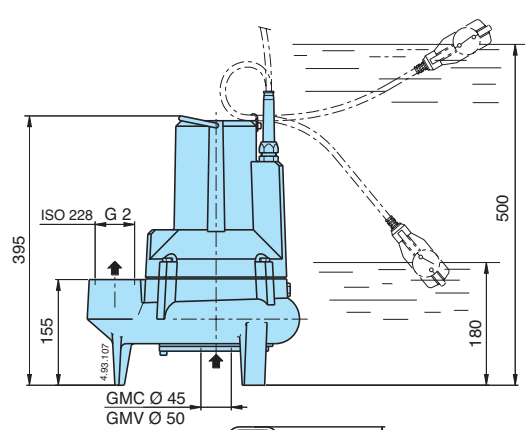
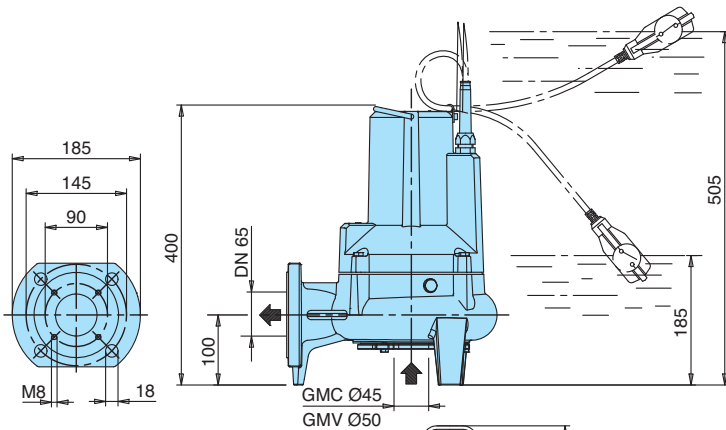
H Total head in m.

Density ρ = 1000 kg/m<sup>3</sup>.

Kinematic viscosity ν = max 20 mm<sup>2</sup>/sec.

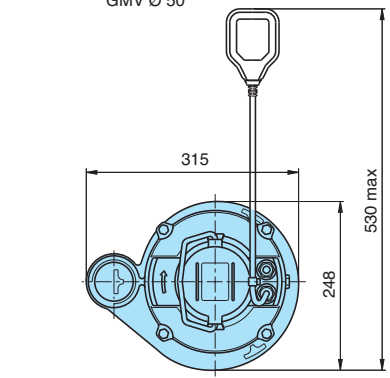
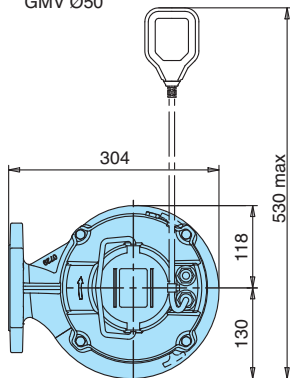
P<sub>2</sub> Rated motor power output.

## Dimensions and weights



kg	
<b>GMV 50-65C</b>	29
<b>GMV 50-65B</b>	30
<b>GMV 50-65A</b>	31,5
<b>GMVM 50-65C</b>	29
<b>GMVM 50-65B</b>	30,5

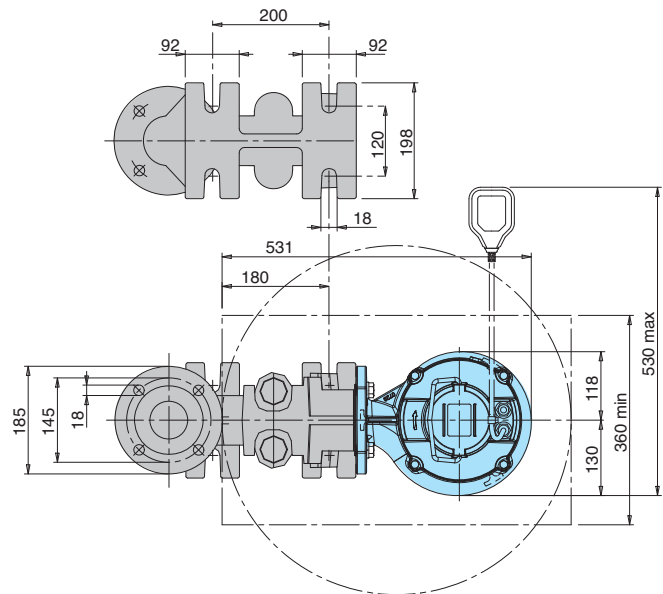
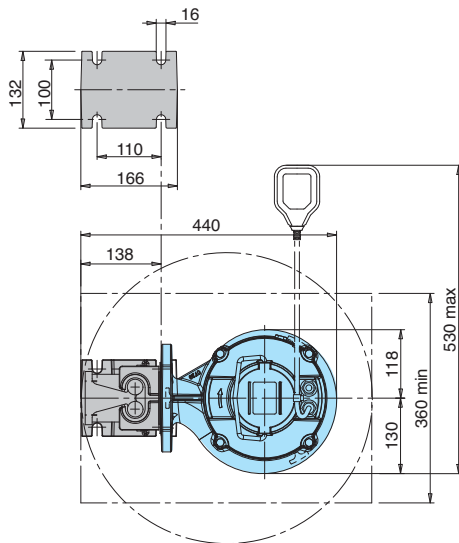
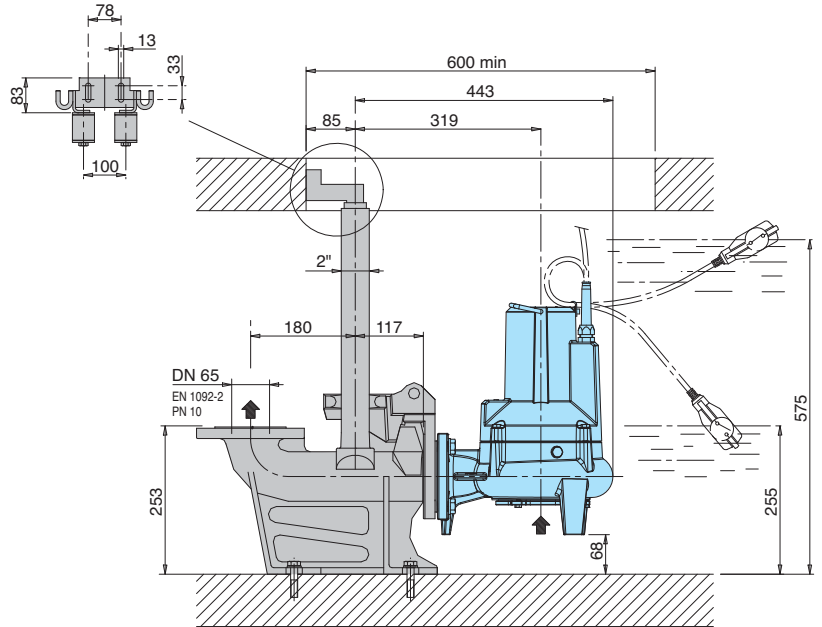
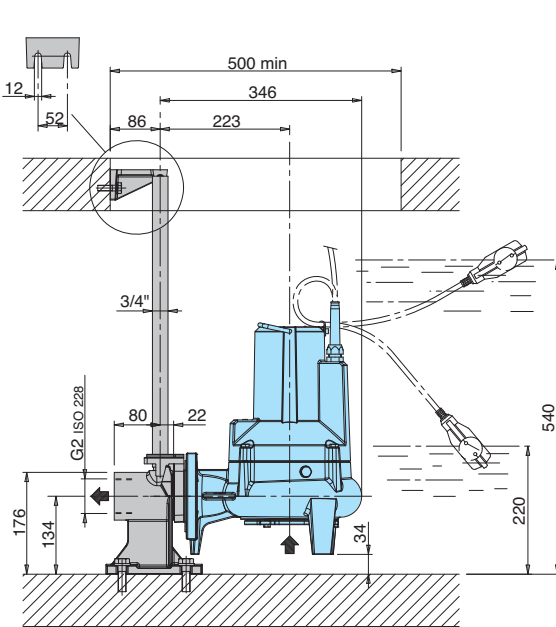
kg	
<b>GMC 50-65C</b>	30
<b>GMC 50-65B</b>	31
<b>GMC 50-65A</b>	32,5
<b>GMCM 50-65C</b>	30
<b>GMCM 50-65B</b>	31,5



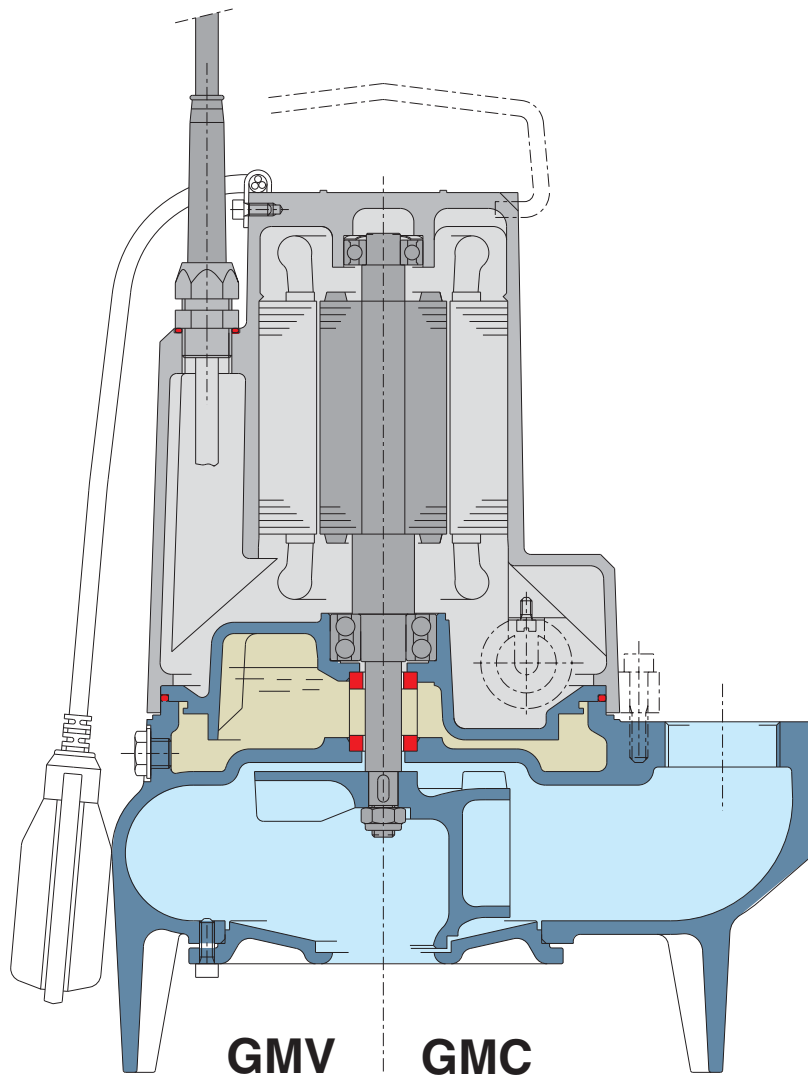
kg	
<b>GMV 50CE</b>	27
<b>GMV 50BE</b>	28
<b>GMV 50AE</b>	29,5
<b>GMVM 50CE</b>	27
<b>GMVM 50BE</b>	28,5

kg	
<b>GMC 50CE</b>	28
<b>GMC 50BE</b>	29
<b>GMC 50AE</b>	30,5
<b>GMCM 50CE</b>	28
<b>GMCM 50BE</b>	29,5

## Dimensions with duck foot coupling



## Features



### Safety

The double mechanical seal with oil chamber ensures safe separation separating the motor from water and providing further protection against accidental operation when dry.

### Reliable

The lower double ball bearing ensures high reliability under all operating conditions.

### Protection

The three-phase motors are equipped with integrated thermistors, which provide the motor with thermal protection. The motor cable is pre-wired to enable the user to connect directly to a control panel, providing easier installation.

### Flexible installation

The availability of the pump casing with horizontal or vertical flanged ports allows the installation of pumps in all pits and wells, both small and large sizes. Installation is also possible with a duck foot coupling.