



E-Tech



Franklin Electric

DRAINAGE SUBMERSIBLE PUMPS

50Hz



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**Stainless steel
drainage submersible pumps
for dirty water**

ED - EDV

Series ED - EDV

Stainless steel drainage submersible pumps for dirty water



CONSTRUCTION

- Single-impeller submersible pumps in chrome-nickel stainless steel, with vertical delivery port.
- ED: with two-passage impeller.
- EDV: with free-flow (vortex) impeller.
- Double shaft seal with interposed oil chamber.

APPLICATIONS

- For clean and dirty water, also containing solids up to 35 mm grain size.
- The EDV free-flow impeller construction is particularly suitable for liquids with a high solid content or with filamentous particles.
- This construction (with smooth surfaces in rolled-stainless steel and easy access for cleaning) is also suitable for certain uses in the food industry.

OPERATING CONDITIONS

- Liquid temperature up to 35°C.
- Minimum immersion depth: 250 mm.
- Maximum immersion depth: 5 m.
- Continuous duty (with submerged motor).

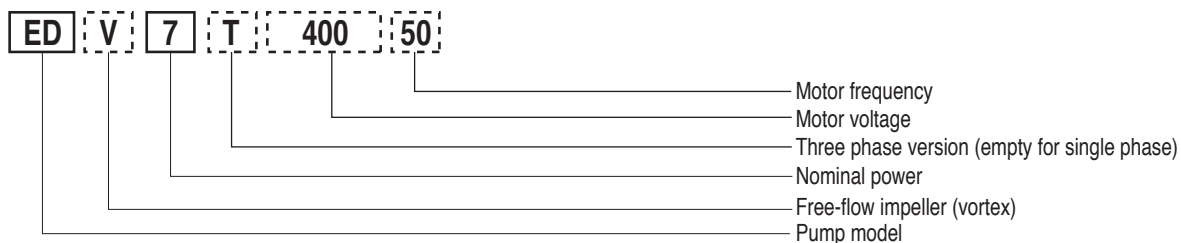
MOTOR

- 2-pole induction motor, 50 Hz ($n \approx 2900$ rpm).
- EDT, EDVT: three-phase 230 V \pm 10%;
- three-phase 400 V \pm 10%.
- Cable: H07Rn-F, 4G1 mm², length 10 m, without plug; 5 m for ED5T/EDV5T.
- ED, EDV: single-phase 230 V \pm 10%,
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07Rn-F, 3G1 mm², length 10 m, with plug Cel-UneL 47166; 5 m for ED5/EDV5.
- Insulation class F.
- protection Ip X8 (for continuous immersion)
- triple impregnation humidity-proof dry winding
- Constructed in accordance with: EN 60034-1; EN 60335-1, EN 60335-2-41

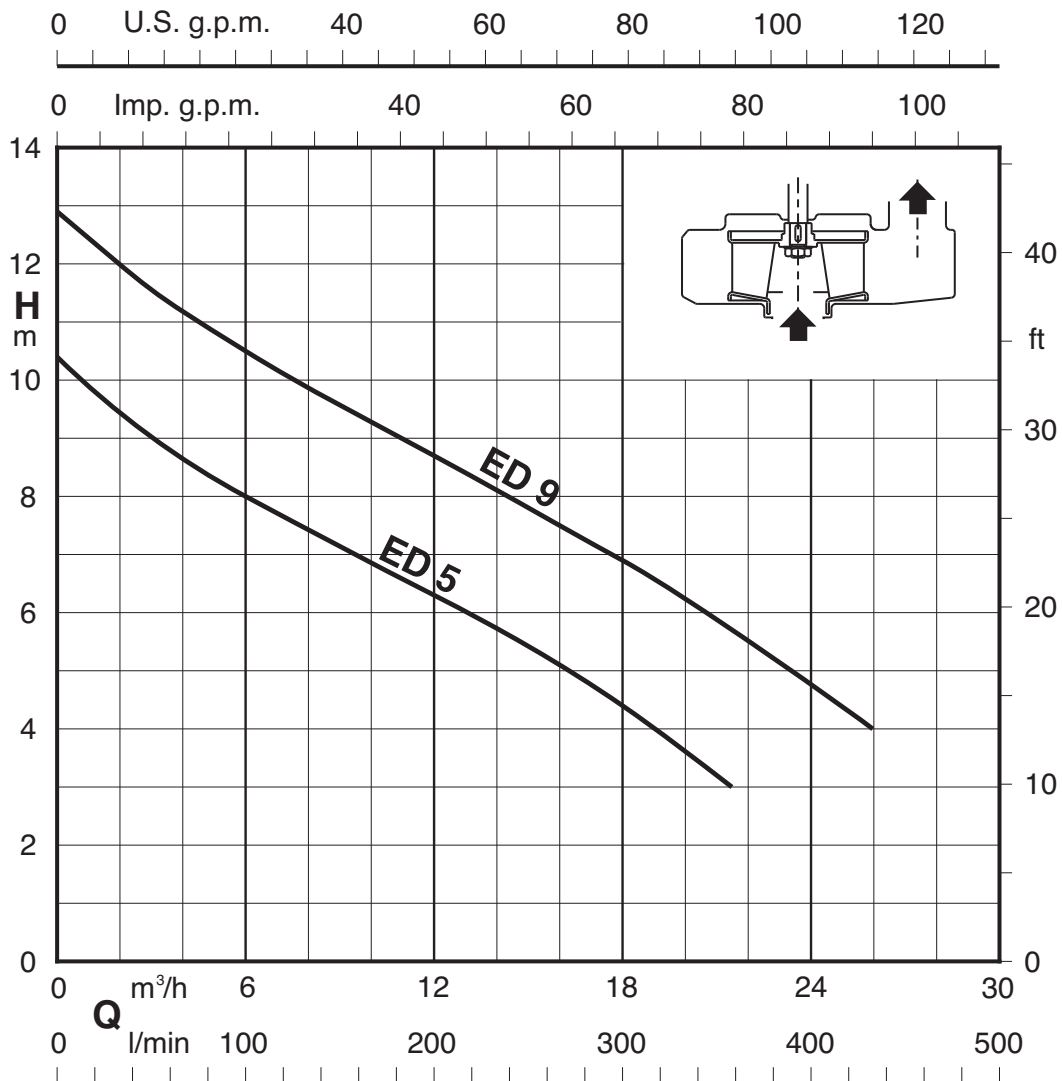
OTHER FEATURES ON REQUEST

- Other voltages
- Frequency 60 Hz
- Other mechanical seal.
- Cable length 20 m.
- Motor suitable for operation with frequency converter.
- three-phase pumps with incorporated float switch.

PUMP IDENTIFICATION CODE



Performance curves n ≈ 2900 rpm



Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V		Capacitor		P ₁	P ₂		Q = DELIVERY										
	A	A		A	μf	Vc	kW		kW	HP	l/min	50	100	150	200	250	300	350	400	433	
											m³/h	0	3	6	9	12	15	18	21	24	26
												H = TOTAL HEAD METERS COLUMN OF WATER									
ED5T	2,8	1,6	ED5	4,6	16	450	1	0,55	0,75	10,4	9	8	7,1	6,3	5,4	4,4	3,2	-	-	-	-
ED9T	4	2,3	ED9	6,6	25	450	1,45	0,9	1,2	12,9	11,6	10,5	9,5	8,7	7,8	6,9	5,9	4,7	4	-	-

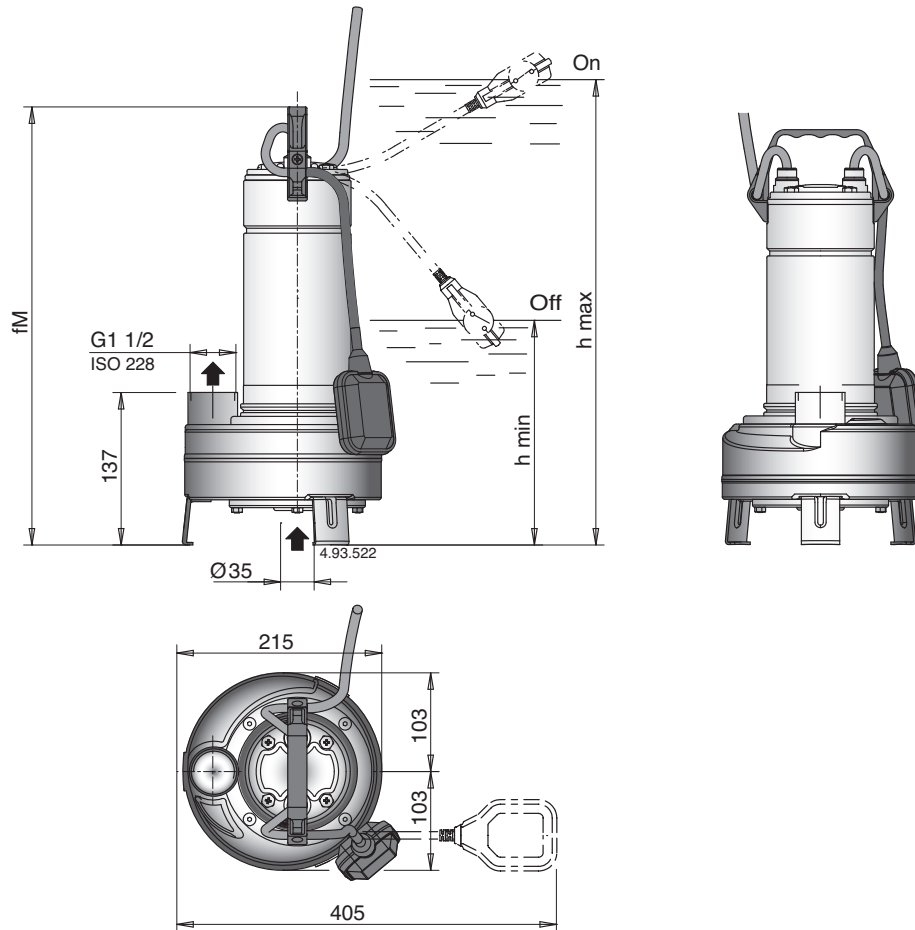
P₁ Max. power input.

P₂ Rated motor power output.

Density ρ = 1000 kg/m³.

Kinematic viscosity ν = max 20 mm²/sec.

Dimensions and weights

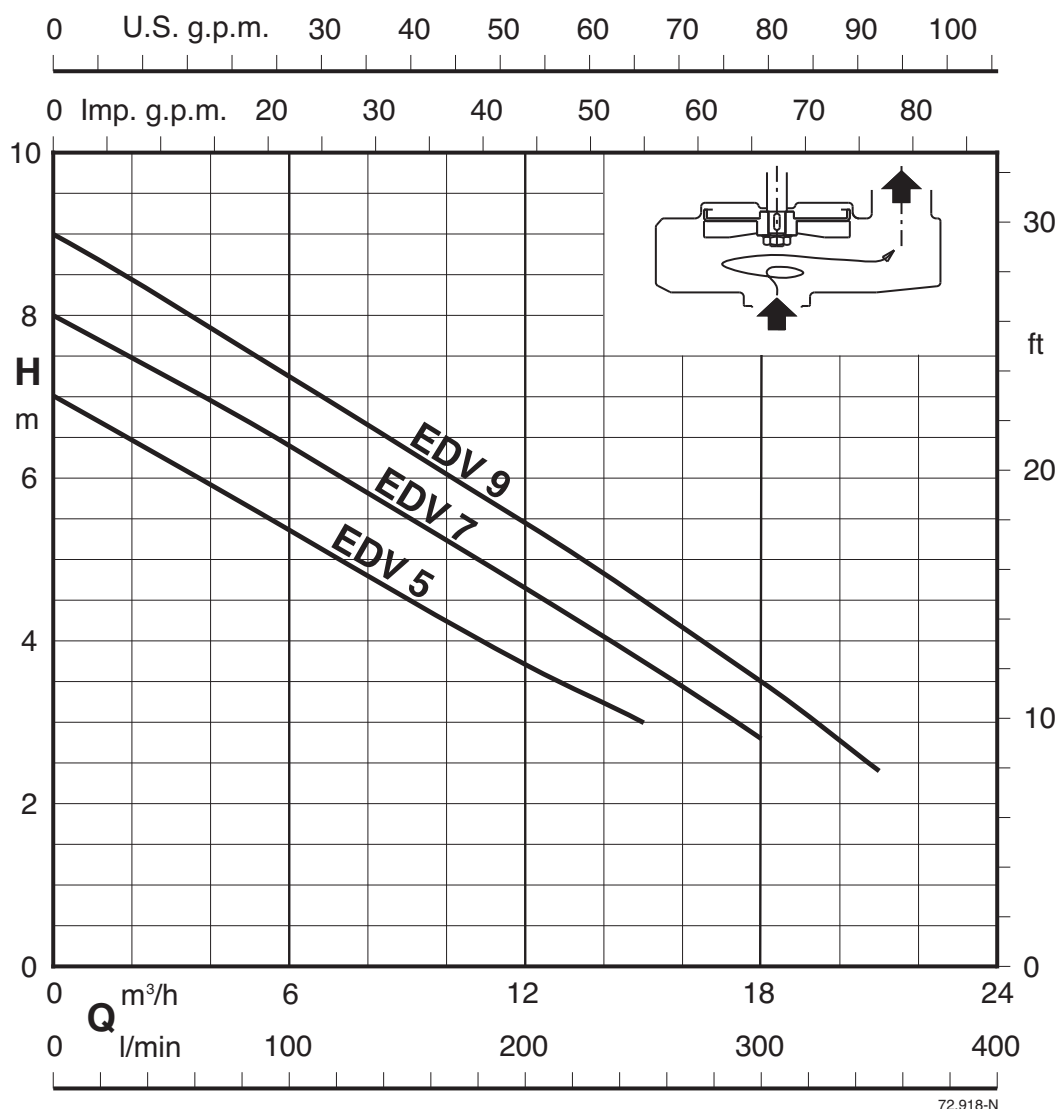


TYPE	fM	mm			kg	
		h max	h min	ED(T)	ED	
ED5(T)	433	508	248	10,3	12	
ED9(T)	458	533	273	12,5	14	

Materials

COMPONENT	MATERIAL
Pump casing	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Casing cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Impeller	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Motor jacket	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Jacket cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal upper	Ceramic alumina/Carbon/hBR
Mechanical seal lower	Ceramic alumina/Carbon/hBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

Performance curves n ≈ 2900 rpm



72.918-N

Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V	Capacitor		P ₁	P ₂		Q = DELIVERY													
	A	A			A	μf		Vc	kW	kW	HP	l/min 0	50	100	150	200	250	300	350	400	433		
										m³/h 0	3	6	9	12	15	18	21	24	26	H = TOTAL HEAD METERS COLUMN OF WATER			
EDV5T	2,8	1,6	EDV5	4,6	16	450	1	0,55	0,75	7	6,2	5,4	4,6	3,7	3	-	-	-	-				
EDV7T	3,8	2,2	EDV7	5,4	25	450	1,1	0,75	1	8	7,2	6,4	5,5	4,6	3,7	2,8	-	-	-				
EDV9T	4	2,3	EDV9	6	25	450	1,3	0,9	1,2	9	8,1	7,2	6,3	5,4	4,5	3,5	2,4	-	-				

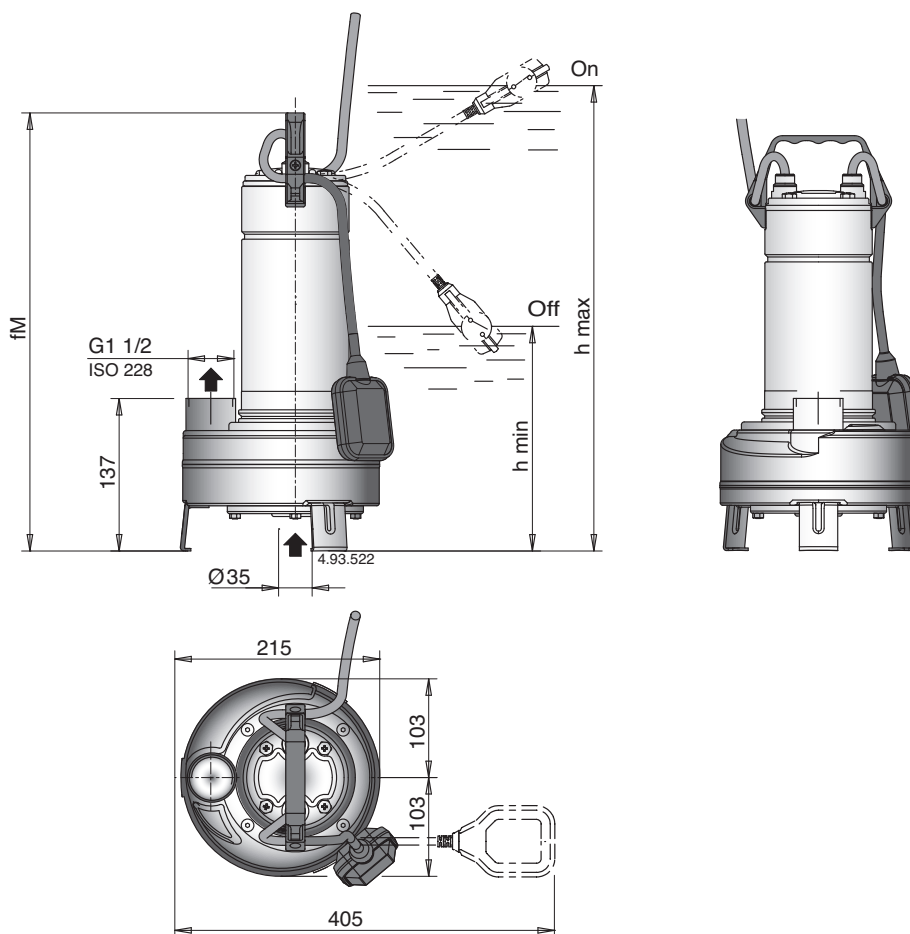
P₁ Max. power input.

P₂ Rated motor power output.

Density ρ = 1000 kg/m³.

Kinematic viscosity ν = max 20 mm²/sec.

Dimensions and weights



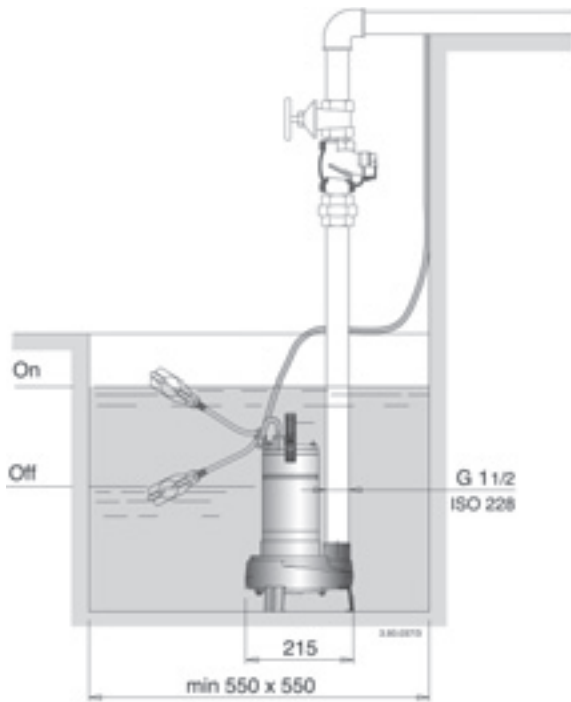
TYPE	mm			kg	
	fM	h max	h min	EDV(T)	EDV
EDV5(T)	433	508	248	10,3	12
EDV7(T)	458	533	273	12,5	14
EDV9(T)	458	533	273	12,5	14

Materials

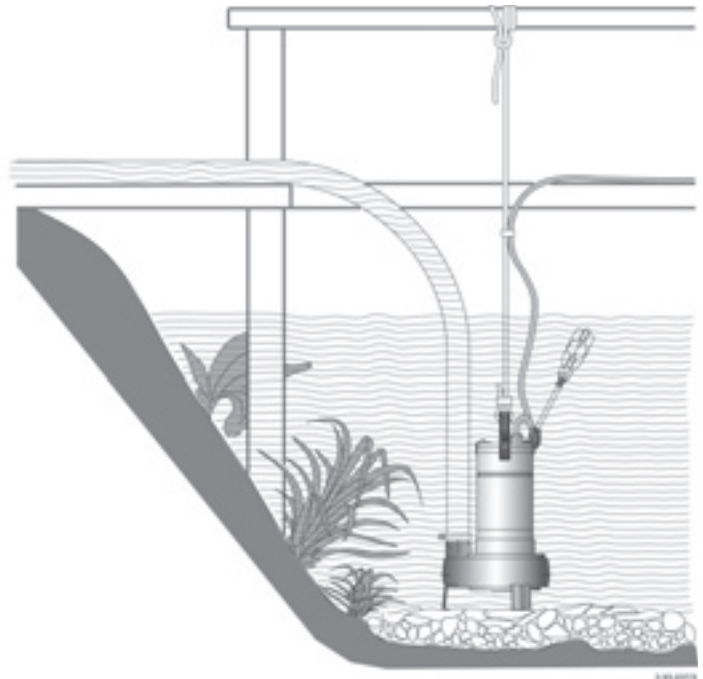
COMPONENT	MATERIAL
Pump casing	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Casing cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Impeller	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Motor jacket	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Jacket cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal upper	Ceramic alumina/Carbon/hBR
Mechanical seal lower	Ceramic alumina/Carbon/hBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

Installation examples and dimensions

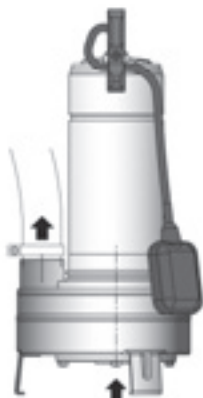
Stationary installation



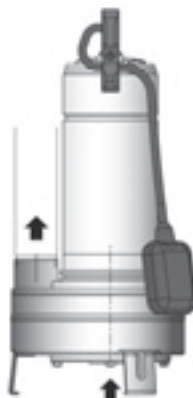
Transportable installation



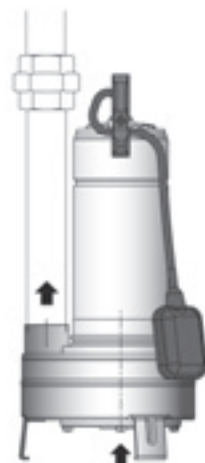
Connection examples



Pump with hosetail seat and clamp
(locally available)



Pump with pipe screwed into the delivery port



Pump with pipe and union
(locally available)

Features

Power cable with plug on single-phase pumps

Handle in polypropylene, with frame in stainless steel

Easy inspection of the capacitor area

Easy adjustment of the float switch: to allow the adjustment of start/stop pump levels

Ring against accidental extraction of the cable

G 1 1/2 vertical, upward delivery port for installation in small pits, without the need for an elbow on the pump

The double shaft seal with oil chamber separates the motor from the water and provides further protection against accidental operation when dry

Totally in stainless steel all parts in contact with the pumped liquid both internal and external are in stainless steel AISI 304

Shaft in chrome-nickel stainless steel

ED the two-passage impeller construction is particularly suitable for liquids containing solids up to 35mm grain size

EDV the free-flow impeller (vortex) construction is particularly suitable for liquids with a high solid content up to 35 mm grain size or with filamentous particles

ED

EDV

Submersible Drainage Pumps for clean water

EGN

Series EGN

Submersible Drainage Pumps for clear water



CONSTRUCTION

- Single-impeller submersible drainage pump, with open impeller with vertical threaded delivery port (G 1 1/2).
- Double mechanical shaft seal with interposed oil chamber, to protect against dry-running.

APPLICATIONS

- For clean water containing solids up to 10 mm grain size.
- For draining rooms or emptying tanks.
- Extraction of water from ponds, streams or pits and for rainwater collection.

OPERATING CONDITIONS

- Liquid temperature up to 35° C.
- Maximum immersion depth: 5 m.
- Minimum immersion depth: 205 mm.
- Continuous duty (with submerged motor).

MOTOR

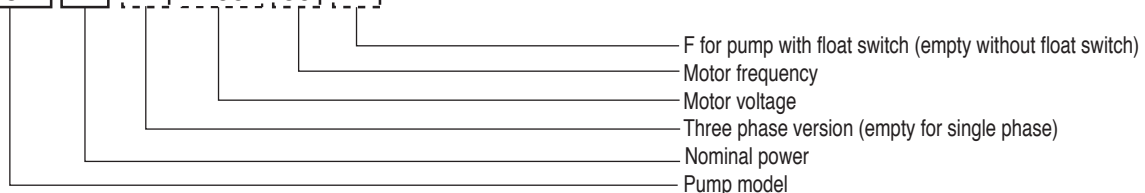
- 2-pole induction motor, 50 Hz ($n \approx 2900$ rpm).
- **EGNT:** three-phase 230 V \pm 10%;
- three-phase 400 V \pm 10%.
- Cable: H07RN-F, 4G1 mm², length 10 m, without plug.
- **EGN:** single-phase 230 V \pm 10%;
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07RN-F, 3G1 mm², length 10 m, with plug CEI-UNEL 47166.
- Insulation class F.
- Protection IP X8 (for continuous immersion).
- Triple impregnation humidity-proof dry winding.
- Constructed in accordance with: EN 60034-1; EN 60335-1, EN 60335-2-41.

OTHER FEATURES ON REQUEST

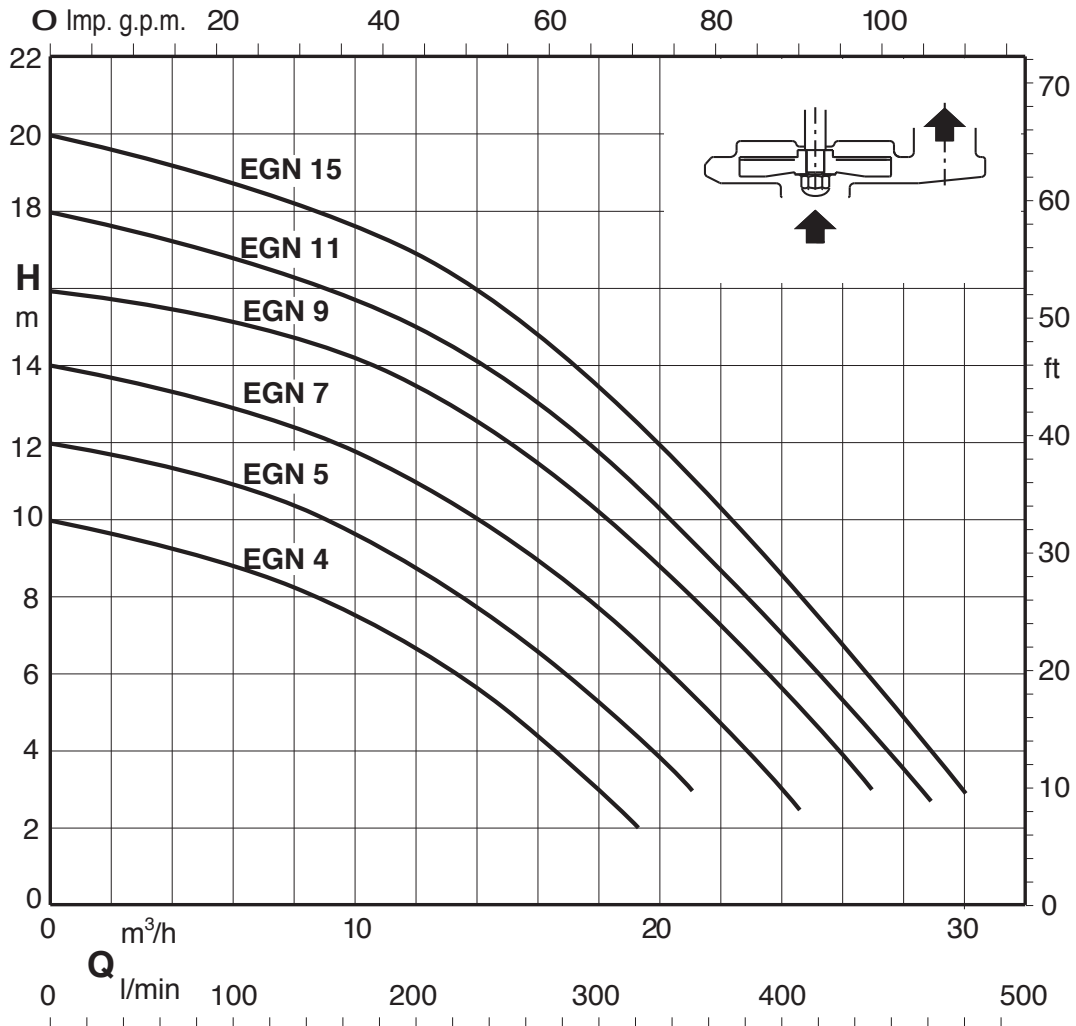
- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Other mechanical seal.
- Cable length 20 m.
- Vertical magnetic float switch.
- Motor suitable for operation with frequency converter.
- Three-phase pumps with incorporated float switch.

PUMP IDENTIFICATION CODE

EGN 7 T 400 50 F



Performance curves n ≈ 2900 rpm



Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V		Capacitor	P ₁			P ₂			Q = DELIVERY														
	A	A		A	μf		Vc	kW	kW	HP	l/min	50	100	150	200	250	300	350	400	450	500						
													m³/h	3	6	9	12	15	18	21	24	27	30	H = TOTAL HEAD METERS COLUMN OF WATER			
EGN4T	2	1,2	EGN4	3,1	12,5	450	0,7	0,45	0,6	10	9,5	8,8	8	6,7	5	3	-	-	-	-							
EGN5T	2,4	1,4	EGN5	3,6	16	450	1	0,55	0,75	12	11,6	11	10,2	9	7,5	5,5	3,2	-	-	-							
EGN7T	2,8	1,6	EGN7	4,6	16	450	1	0,75	1	14	13,5	12,8	12	10,8	9,3	7,5	5,5	3	-	-							
EGN9T	4	2,3	EGN9	6	25	450	1,3	0,9	1,2	16	15,5	15	14,2	13,2	11,8	10,2	8	5,5	2,3	-							
EGN11T	4,8	2,8	EGN11	8	30	450	1,7	1,1	1,5	18	17,5	17	16,2	15	13,7	11,8	9	7	4,3	1,5							
EGN15T	6,6	3,8	EGN15	12	35	450	2,2	1,5	2	20	19,5	18,8	18	16,8	15,2	13,2	10,8	8,4	5,7	3							

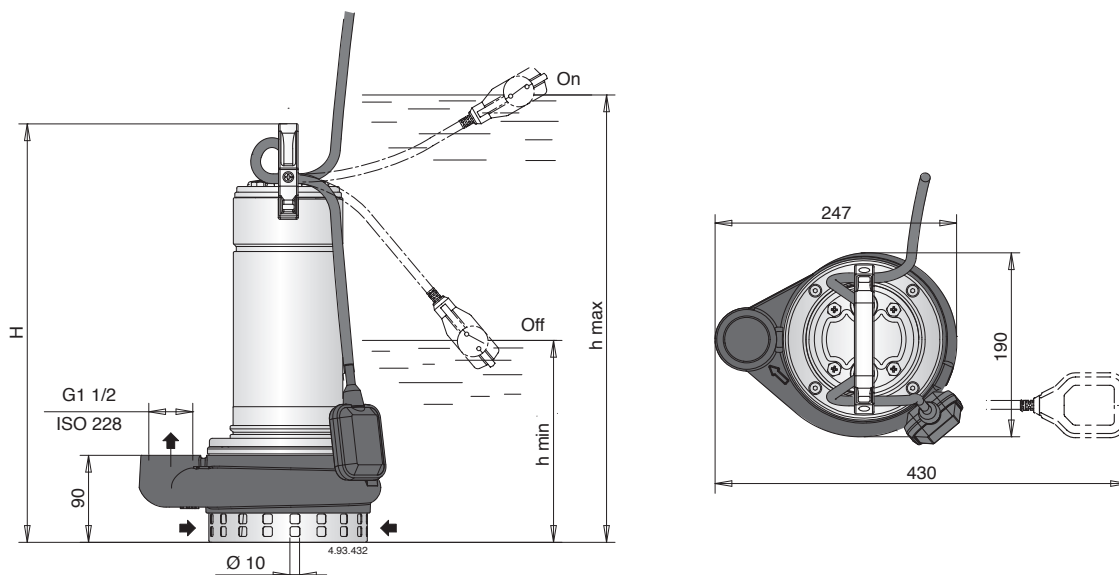
P₁ Max. power input.

P₂ Rated motor power output.

Density ρ = 1000 kg/m³.

Kinematic viscosity ν = max 20 mm²/sec.

Dimensions and weights

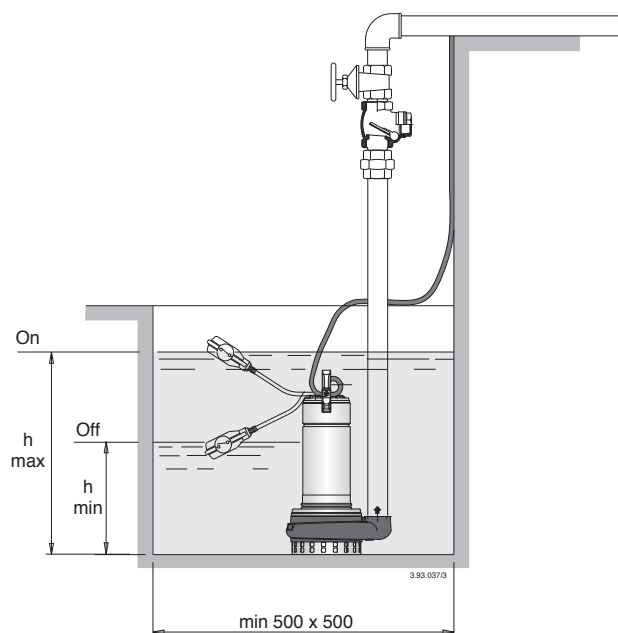


TYPE	mm			kg	
	H	h max	h min	EGN(T)	EGN
EGN4(T)	390	410	205	14	15
EGN5(T)	405	425	220	14,5	15,5
EGN7(T)	405	425	220	14,5	15,5
EGN9(T)	430	450	245	16	18
EGN11(T)	450	470	265	17,5	19
EGN15T	450	470	265	19	-
EGN15	480	500	295	-	20,5

Materials

COMPONENT	MATERIAL
Pump casing Impeller	Cast iron GJL 200 EN 1561
Strainer Motor jacket Jacket cover Casing cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal upper Mechanical seal lower	Ceramic alumina/Carbon/NBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

Installation dimensions



TYPE	mm	
	h min	h max
EGN4(T)	205	410
EGN5(T)	220	425
EGN7(T)	220	425
EGN9(T)	245	450
EGN11(T)	265	470
EGN15T	265	470
EGN15	295	500

Features

Cable length 10 m, pump single-phase with plug

Handle in polypropylene, with frame in stainless steel

Easy inspection of the capacitor area

Easy adjustment of the float switch: to allow the adjustment of start/stop pump levels

Ring against accidental extraction of the cable

Relief valve: the pump is fitted to a relief valve for air release around the impeller granting a proper pump priming also after long standstill periods

The double shaft seal with oil chamber separates the motor from the water and provides further protection against accidental operation when dry

G 1 1/2 vertical, upward delivery port for installation in small pits, without the need for an elbow on the pump

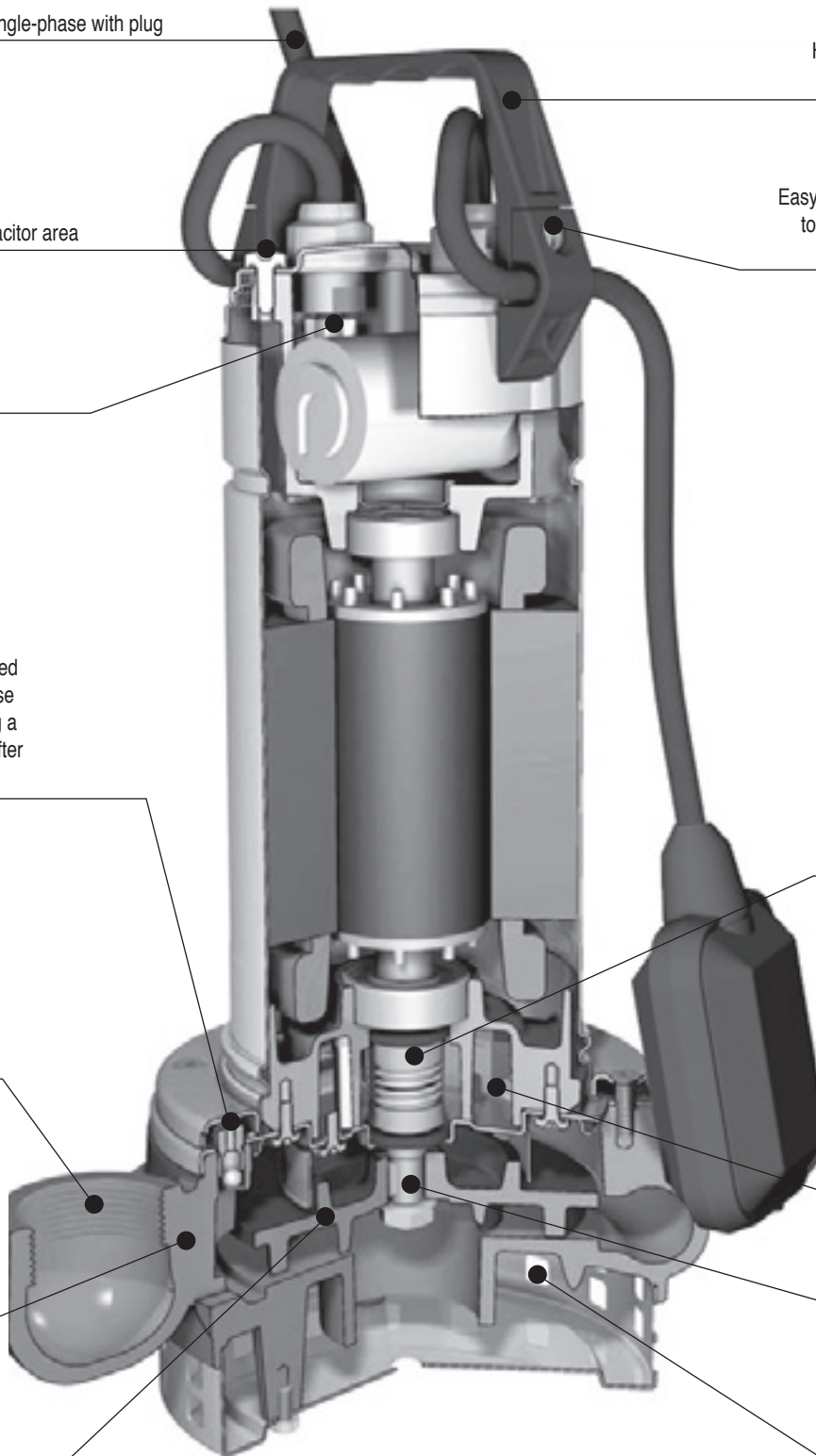
Chamber with food/ pharmaceutical machinery oil

Pump casing with epoxy cataphoresis treatment joined to the external paint for a greater protection against the rust

Shaft in chrome-nickel stainless steel

Impeller with epoxy cataphoresis treatment for a greater protection against the rust.

Suction strainer with a double row of holes, for extra safety against clogging: it allows the passage of solids up to 10 mm.



Submersible Drainage Pumps for dirty water

EGT EGF

Series EGT EGF

Submersible Drainage Pump

for dirty water



CONSTRUCTION

- Single-impeller submersible pumps, with free-flow (vortex) impeller.
- EGT: with vertical threaded delivery port (G 2").
- EGF: with horizontal flanged and threaded delivery port (DN 50 - G 2").
- 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 50 mm grain size, for liquids which are compatible with the pump materials.
- For draining rooms or emptying tanks.
- Extraction of water from ponds, streams or pits and for rainwater collection.

OPERATING CONDITIONS

- Liquid temperature up to 35° C.
- pH value: 6-11.
- Maximum immersion depth: 5 m.
- Minimum immersion depth: 275 mm.
- Continuous duty (with submerged motor).

MOTOR

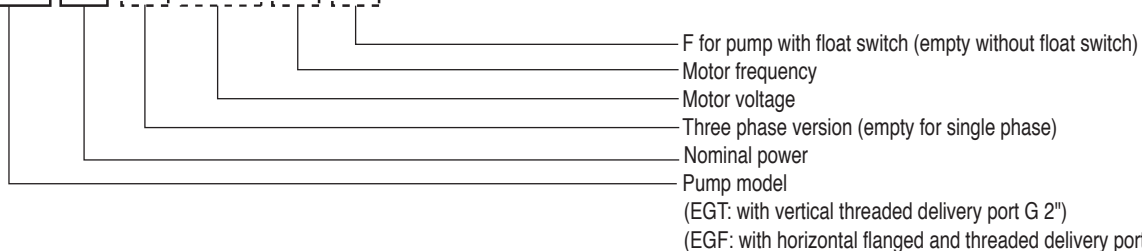
- 2-pole induction motor, 50 Hz ($n \approx 2900$ rpm).
- **EGT..T - EGF..T:** three-phase 230 V \pm 10%;
- three-phase 400 V \pm 10%.
- Cable: H07RN-F, 4G1 mm², length 10 m, without plug.
- **EGT - EGF:** single-phase 230 V \pm 10%;
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07RN-F, 3G1 mm², length 10 m, with plug CEI-UNEL 47166.
- Insulation class F.
- Protection IP X8 (for continuous immersion).
- Triple impregnation humidity-proof dry winding.
- Constructed in accordance with: EN 60034-1; EN 60335-1, EN 60335-2-41.

OTHER FEATURES ON REQUEST

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Other mechanical seal.
- Cable length 20 m.
- Motor suitable for operation with frequency converter.
- Three-phase pumps with incorporated float switch.

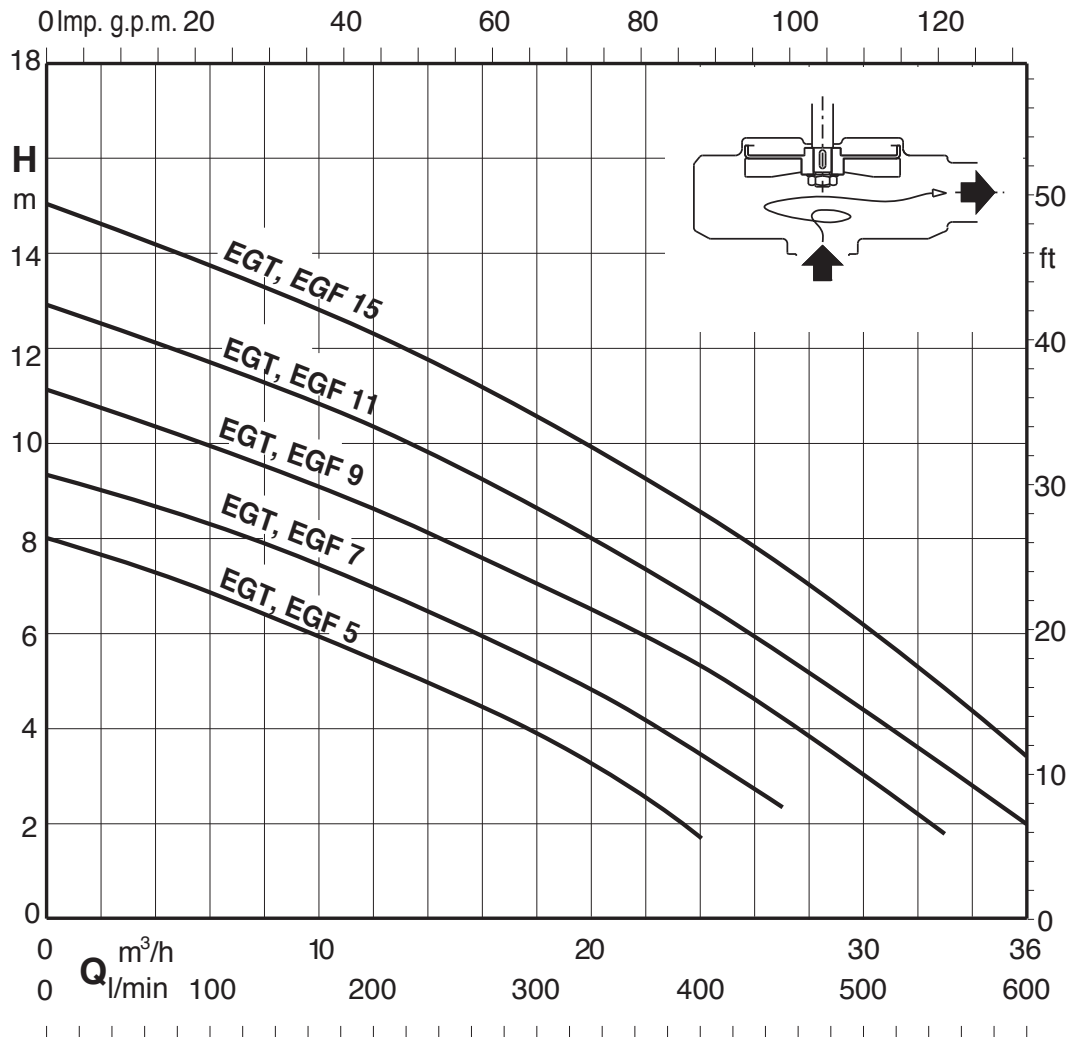
PUMP IDENTIFICATION CODE

EGT 7 T 400 50 F



EGT-EGF

Performance curves n ≈ 2900 rpm



Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V A	Capacitor		P ₁ kW	P ₂			Q = DELIVERY											
	A	A			μf	Vc		kW	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER											
											l/min	50	100	150	200	250	300	350	400	450	500	550
EGT5T EGF5T	2,6	1,5	EGT5 EGF5	4,3	16	450	0,95	0,55	0,75	8	7,4	6,9	6,3	5,6	4,8	4	3	1,8	-	-	-	-
EGT7T EGF7T	3,1	1,8	EGT7 EGF7	4,8	16	450	1,1	0,75	1	9,3	8,8	8,3	7,7	7	6,2	5,3	4,3	3,2	2,2	-	-	-
EGT9T EGF9T	4	2,3	EGT9 EGF9	6,6	25	450	1,45	0,9	1,2	11	10,5	10	9,3	8,6	7,8	7	6,2	5,2	4,2	3	1,8	-
EGT11T EGF11T	5,2	3	EGT11 EGF11	8,4	30	450	1,8	1,1	1,5	12,8	12,2	11,6	11	10,3	9,5	8,6	7,7	6,7	5,7	4,5	3,3	2
EGT15T EGF15T	6,9	4	EGT15 EGF15	12	35	450	2,2	1,5	2	15	14,4	13,7	13	12,2	11,3	10,4	9,5	8,5	7,4	6,2	4,8	3,5

P₁ Max. power input.

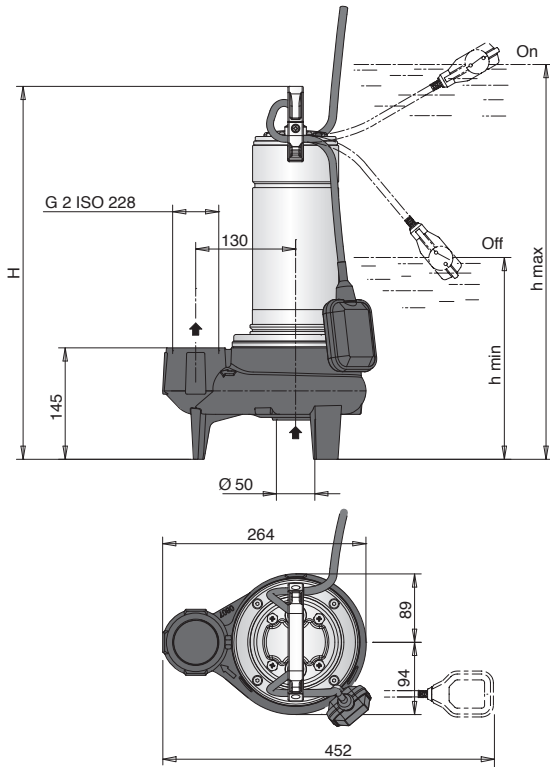
P₂ Rated motor power output.

Density ρ = 1000 kg/m³.

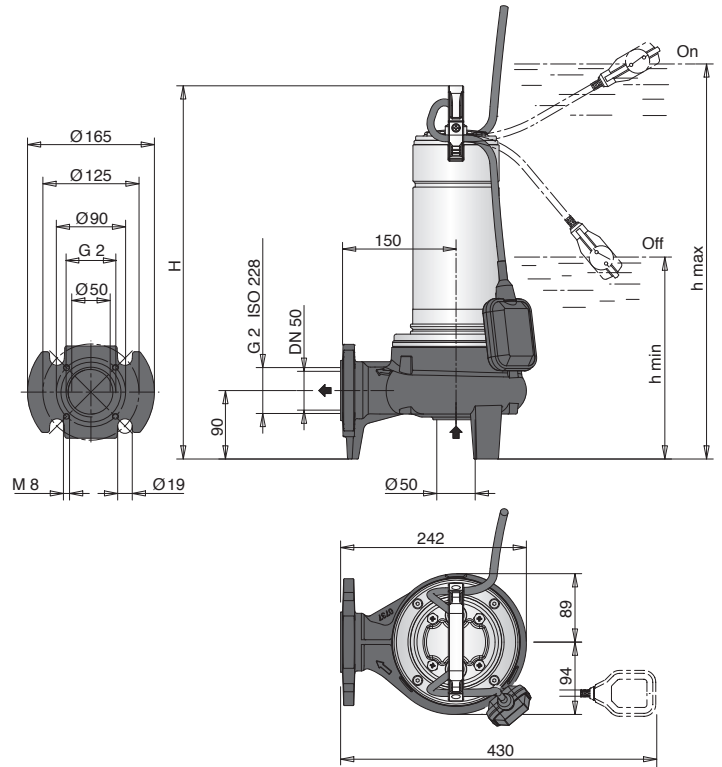
Kinematic viscosity ν = max 20 mm²/sec.

Dimensions and weights

EGT



EGF



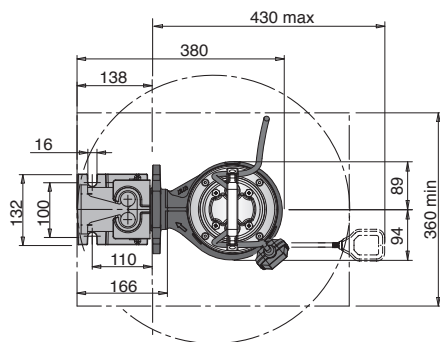
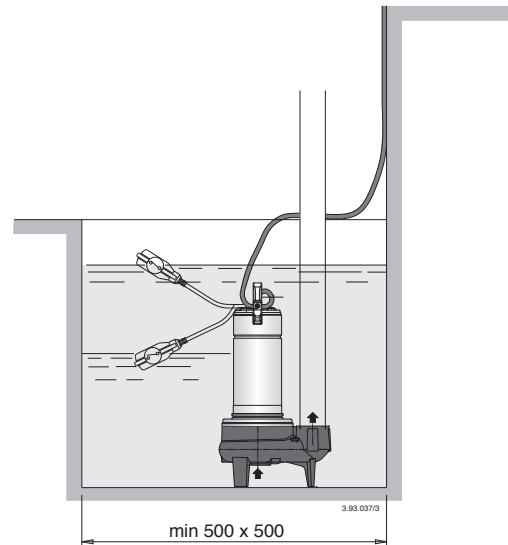
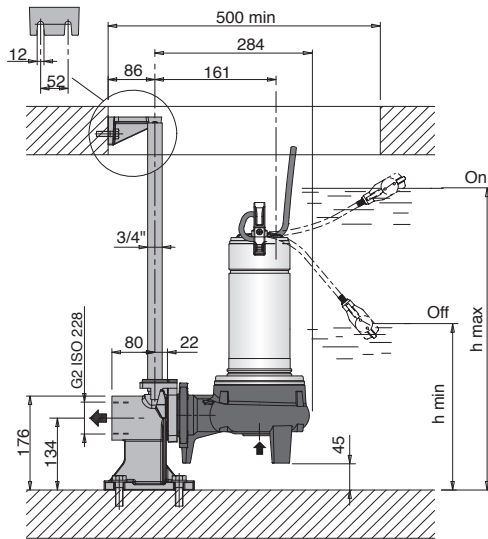
TYPE	mm			kg	
	H	h max	h min	EGT(T)	EGT
EGT 5 (T)	460	535	275	14,8	15,8
EGT 7 (T)	460	535	275	15	16
EGT 9 (T)	485	560	300	15,8	17,8
EGT 11 (T)	505	580	320	18,8	20,3
EGT 15 T	505	580	320	20,3	-
EGT 15	535	610	350	-	21,8

TYPE	mm			kg	
	H	h max	h min	EGF(T)	EGF
EGF 5 (T)	460	535	275	15	16
EGF 7 (T)	460	535	275	15,2	16,2
EGF 9 (T)	485	560	300	16	18
EGF 11 (T)	505	580	320	19	20,5
EGF 15 T	505	580	320	20,5	-
EGF 15	535	610	350	-	22

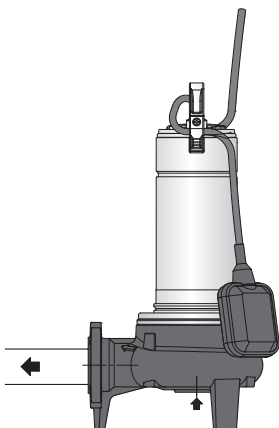
Materials

COMPONENT	MATERIAL
Pump casing Impeller	Cast iron GJL 200 EN 1561
Motor jacket Jacket cover Casing cover	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal upper Mechanical seal lower	Ceramic alumina/Carbon/NBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

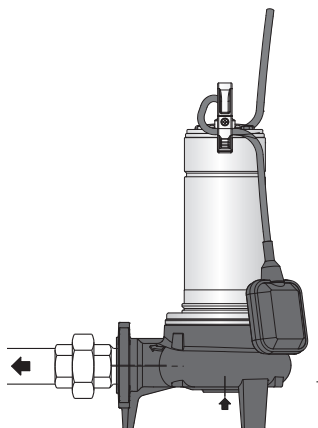
Installation dimensions



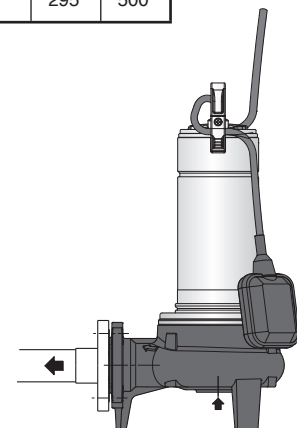
TYPE	mm	
	h min	h max
EGN4(T)	205	410
EGN5(T)	220	425
EGN7(T)	220	425
EGN9(T)	245	450
EGN11(T)	265	470
EGN15(T)	265	470
EGN15	295	500



Pump with threaded ports:
pipes screwed into the ports

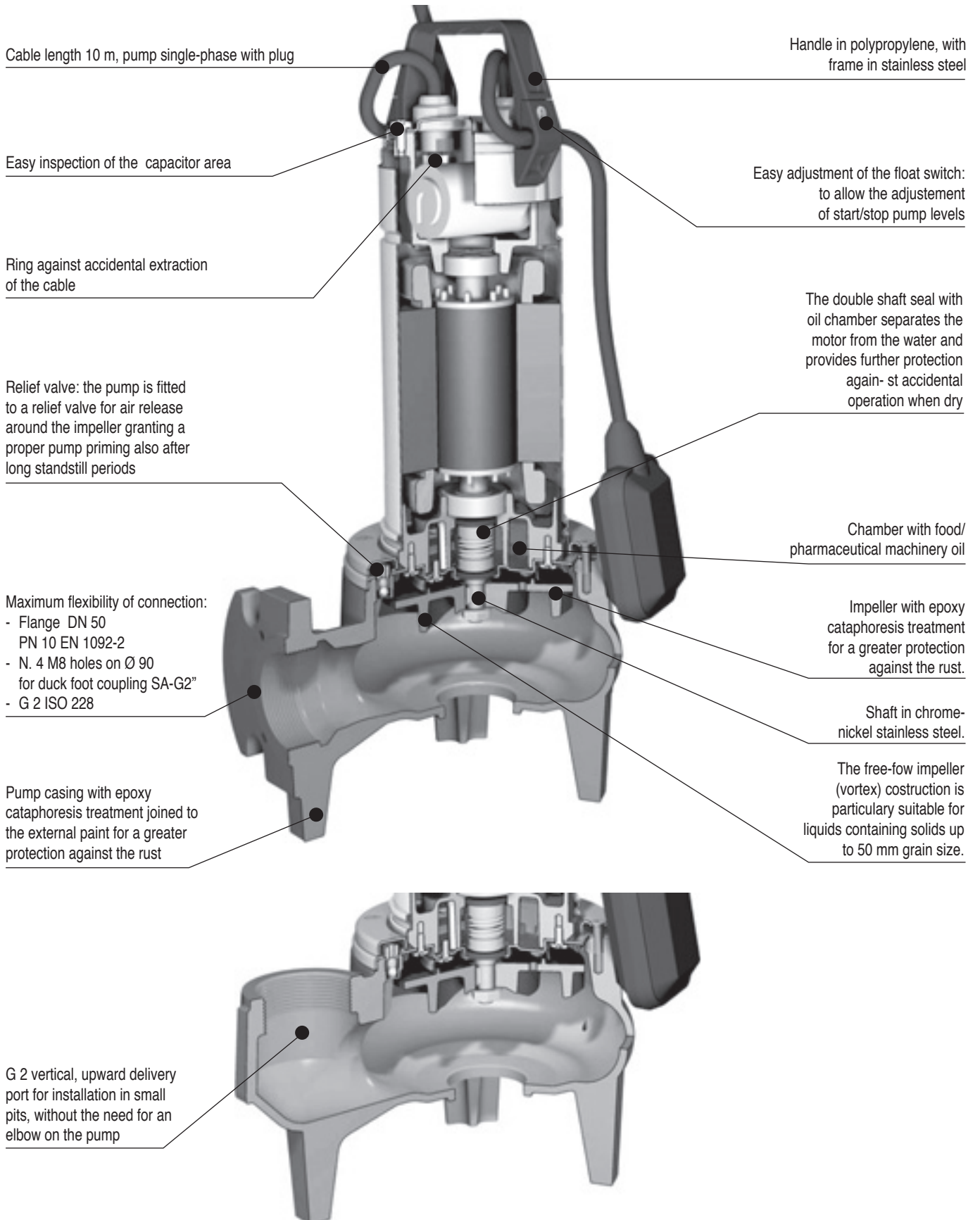


Pump with threaded ports:
pipes with union couplings
(locally available)



Pump with DN 50 flanged ports:
pipes with counter-flanges

Features



A large grid of graph paper for taking notes, consisting of 25 columns and 35 rows of small squares.



Vertical S.r.l.
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