



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-passange 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

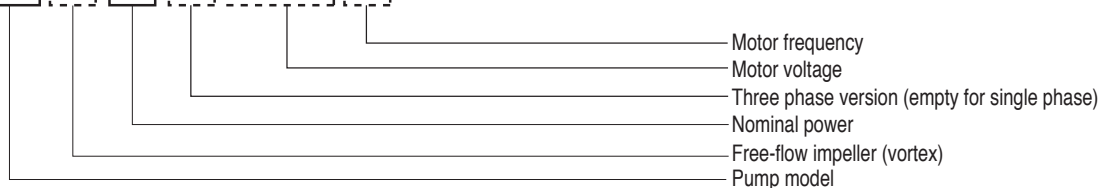
- 2-pole induction motor, 50 Hz ( $n \approx 2900$  rpm).
- **EDT, EDVT**: three-phase 230 V  $\pm 10\%$ ;
- three-phase 400 V  $\pm 10\%$ ;
- Cable: H07Rn-F, 4G1 mm<sup>2</sup>, length 10 m, without plug; 5 m for ED5T/EDV5T.
- **ED, EDV**: single-phase 230 V  $\pm 10\%$ ,
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07Rn-F, 3G1 mm<sup>2</sup>, length 10 m, with plug Cel-UnaL 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

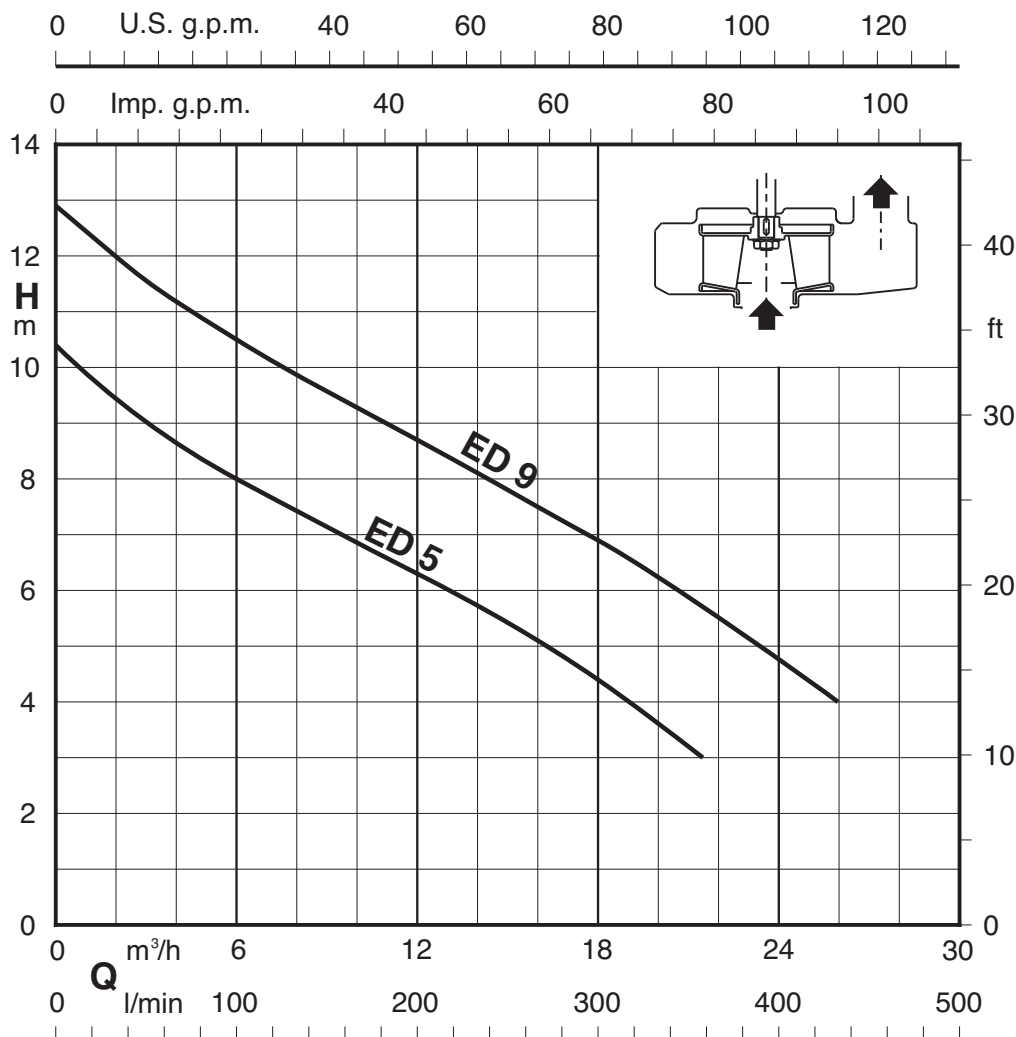
- Other voltages
- Frequency 60 Hz
- Other mechanical seal.
- Cable length 20 m.
- Motor suitable for operation with frequency converter.
- three-phase pumps with incorporated float switch.

### PUMP IDENTIFICATION CODE

ED V 7 T 400 50



## Performance curves n ≈ 2900 rpm



## Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V	Capacitor		P <sub>1</sub>		P <sub>2</sub>		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																				
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	

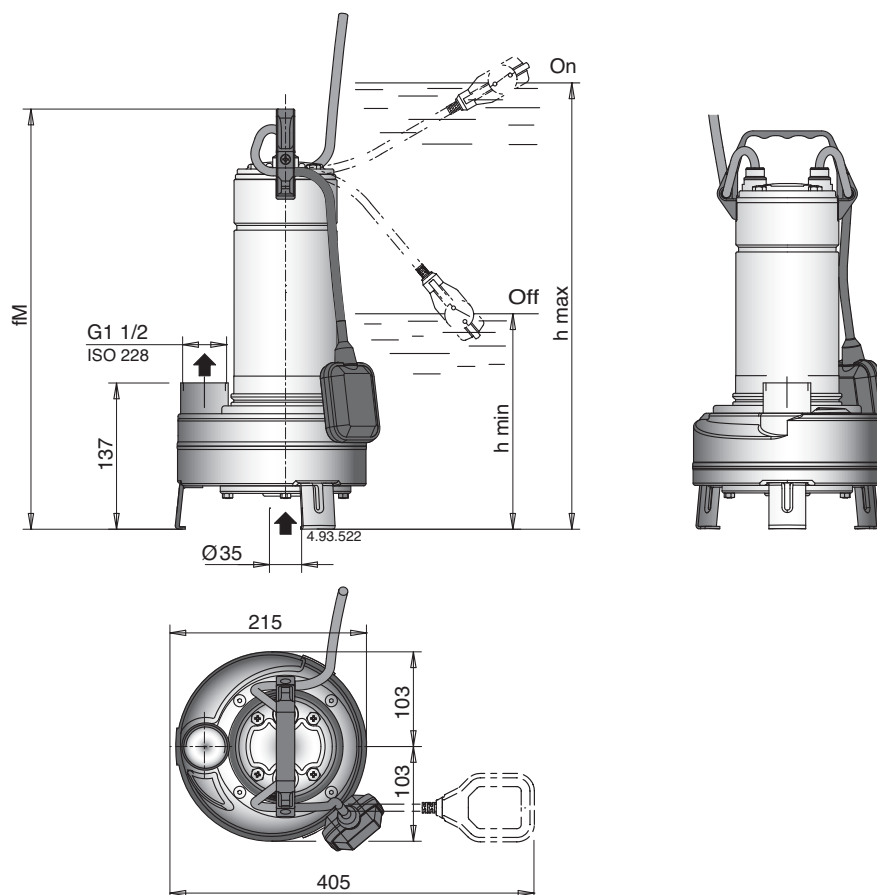
P<sub>1</sub> Max. power input.

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

Density ρ = 1000 kg/m<sup>3</sup>.

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

## Dimensions and weights

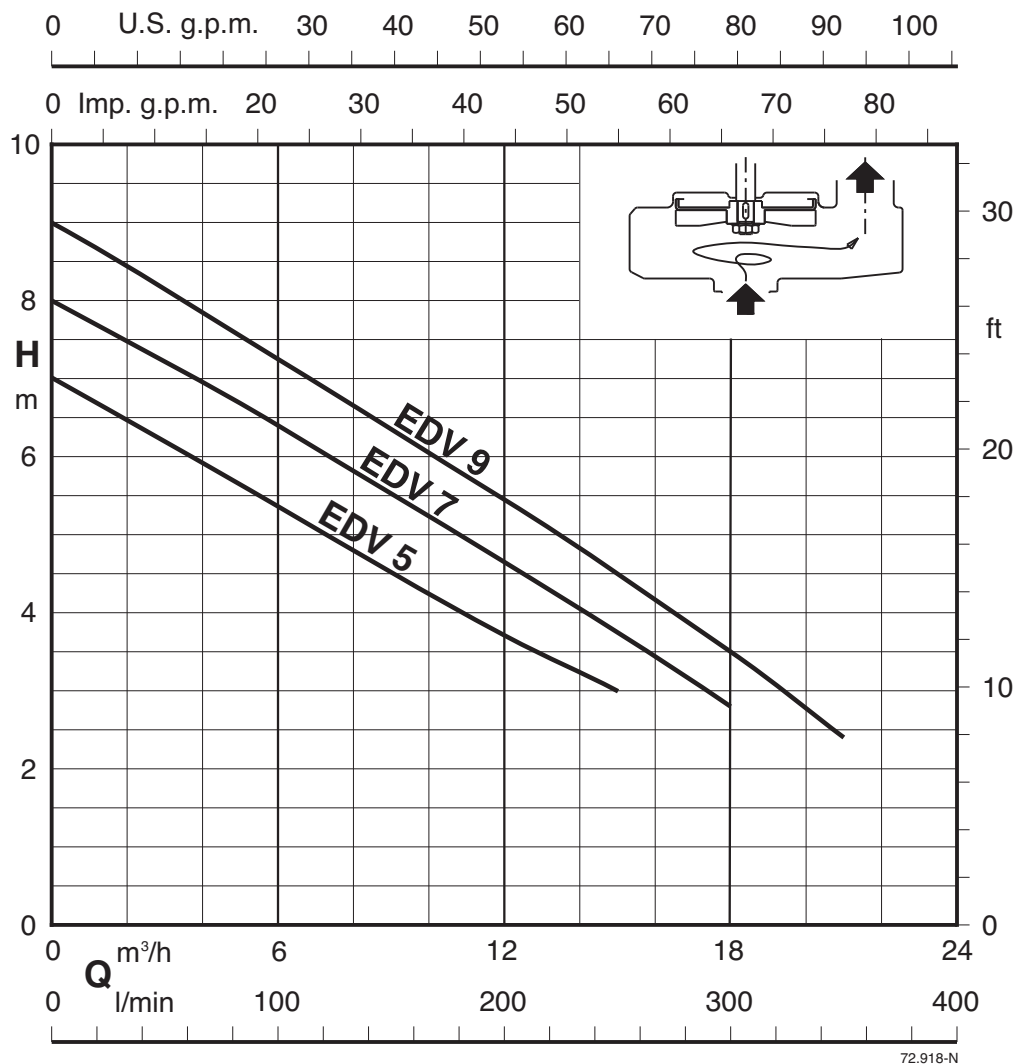


TYPE	mm			kg	
	fM	h max	h min	ED(T)	ED
ED5(T)	433	508	248	10,3	12
ED9(T)	458	533	273	12,5	14

## 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 <sub>1</sub>	P <sub>2</sub>		Q = DELIVERY									
					A	μf		Vc	kW	kW	HP	l/min 0	50	100	150	200	250	300	350
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	-	-

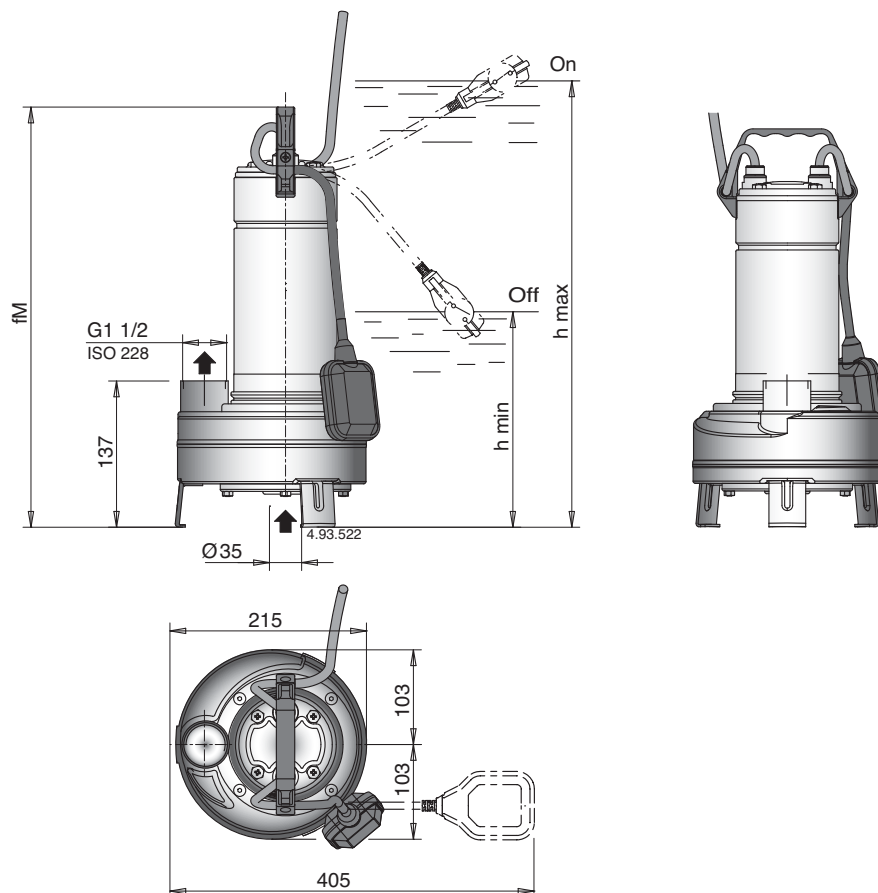
P<sub>1</sub> Max. power input.

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

Density ρ = 1000 kg/m<sup>3</sup>.

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

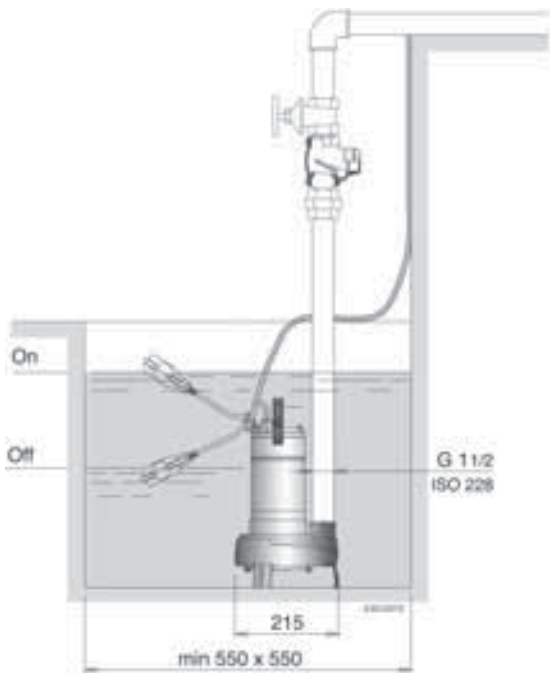
## Materials

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

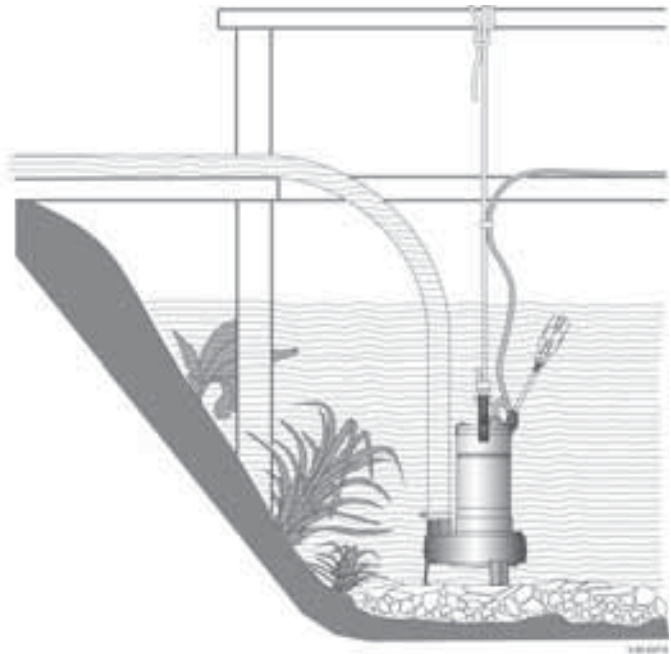


## Installation examples and dimensions

### 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

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

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

Shaft in chrome-nickel  
stainless steel

**ED** the two-passange  
impeller costruction is  
particulary suitable for  
liquids containing solids  
up to 35mm grain size

**EDV** the free-fow impeller (vortex)  
costruction 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

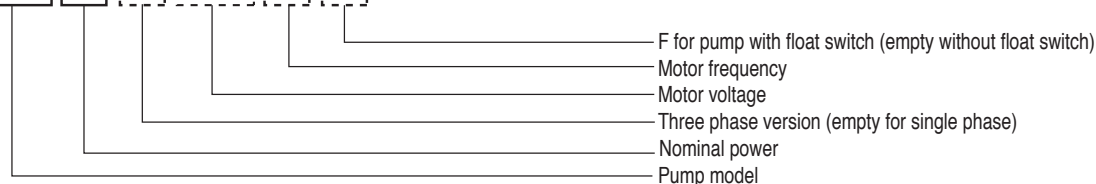
- 2-pole induction motor, 50 Hz (n ≈ 2900 rpm).
- **EGNT:** three-phase 230 V ± 10%;
- three-phase 400 V ± 10%.
- Cable: H07RN-F, 4G1 mm2, length 10 m, without plug.
- **EGN:** single-phase 230 V ± 10%;
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07RN-F, 3G1 mm2, length 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.

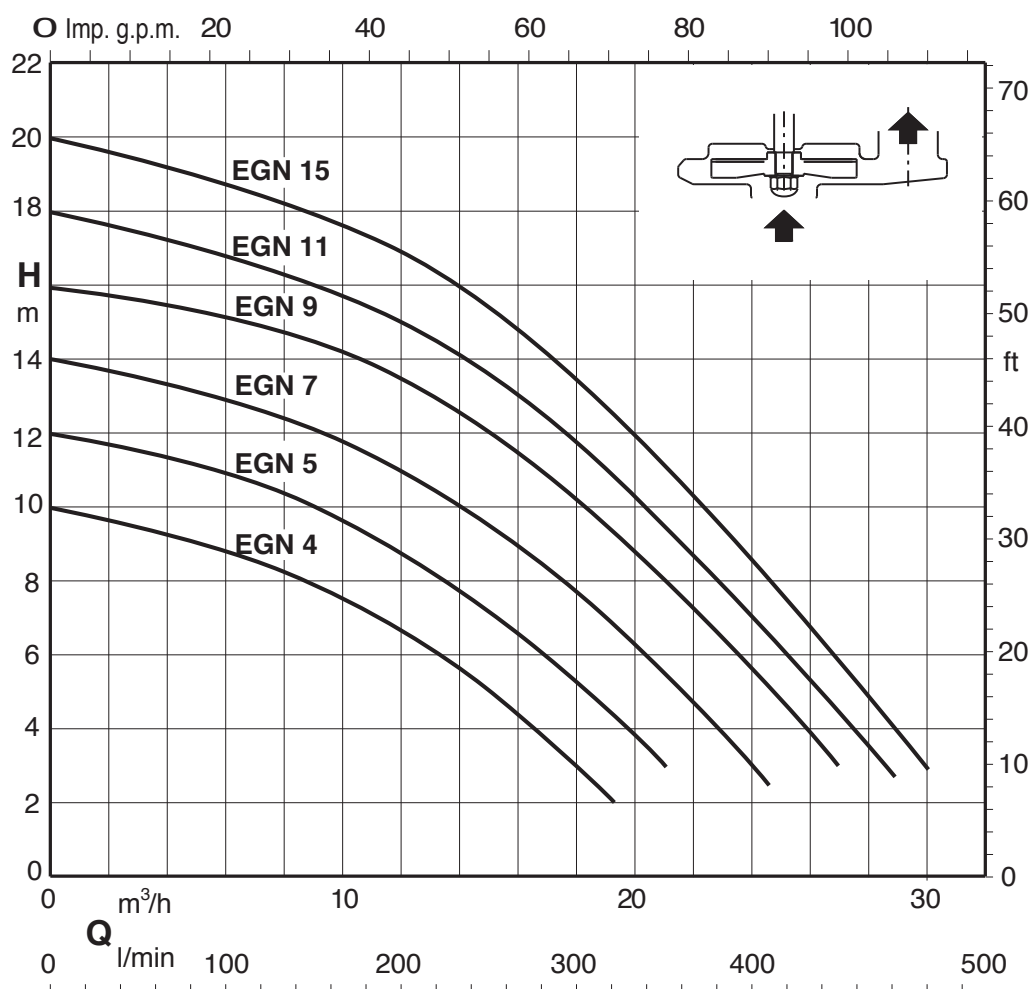
#### PUMP IDENTIFICATION CODE

EGN 7 T 400 50 F



00117048EGN 04/2015

## Performance curves n ≈ 2900 rpm



## Performances n ≈ 2900 rpm

3~	230V - 400V		1~	230V	Capacitor		P <sub>1</sub>	P <sub>2</sub>		Q = DELIVERY													
	A	A			A	μf		Vc	kW	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER											
												l/min 0	50	100	150	200	250	300	350	400	450	500	
										m³/h 0	3	6	9	12	15	18	21	24	27	30			
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			

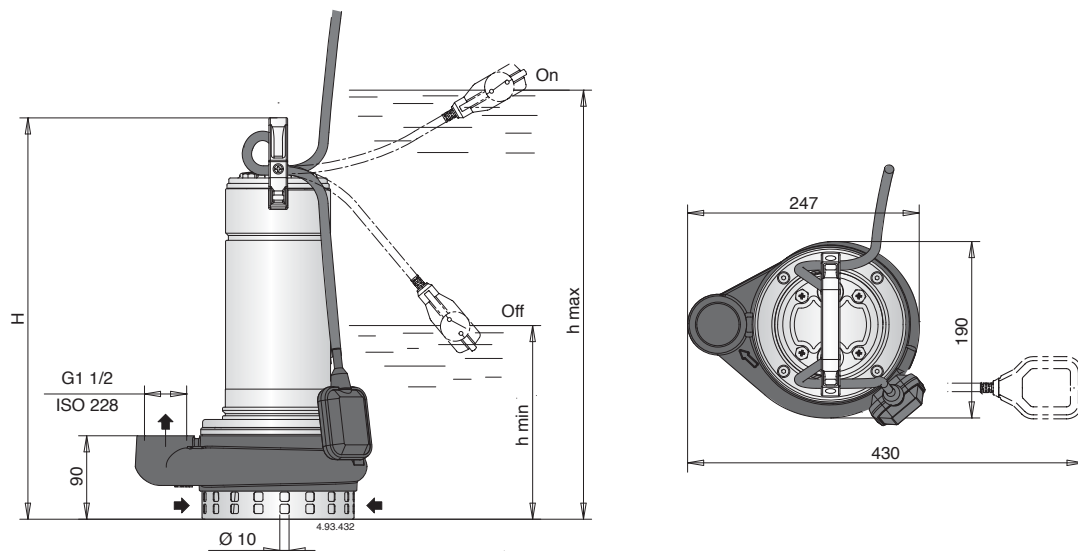
P<sub>1</sub> Max. power input.

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

Density ρ = 1000 kg/m³.

Kinematic viscosity ν = max 20 mm²/sec.

## Dimensions and weights

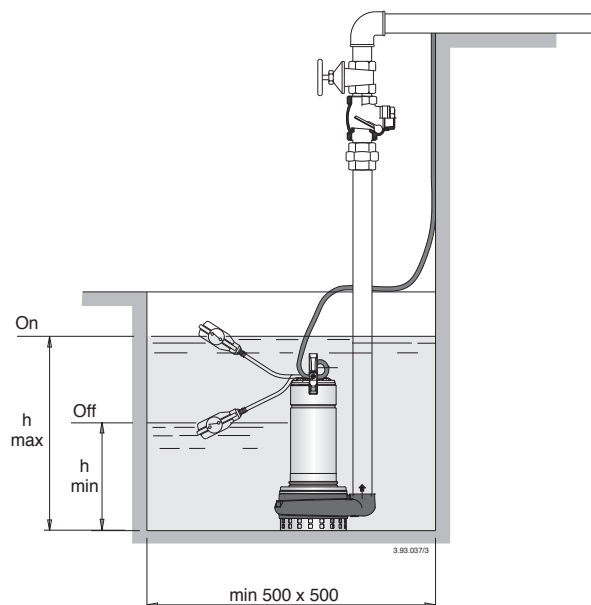


TYPE	mm			kg	
	H	h max	h min	EGN(T)	EGN
EGN4(T)	390	410	205	14	15
EGN5(T)	405	425	220	14,5	15,5
EGN7(T)	405	425	220	14,5	15,5
EGN9(T)	430	450	245	16	18
EGN11(T)	450	470	265	17,5	19
EGN15T	450	470	265	19	-
EGN15	480	500	295	-	20,5

## Materials

COMPONENT	MATERIAL
Pump casing Impeller	Cast iron GJL 200 EN 1561
Strainer	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Motor jacket	
Jacket cover	
Casing cover	
Handle	Polypropylene (with frame in AISI 304)
Shaft	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Mechanical seal upper	Ceramic alumina/Carbon/NBR
Mechanical seal lower	
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 ≈ 2900 rpm).
- **EGT.T - EGF.T:** three-phase 230 V ± 10%;
- three-phase 400 V ± 10%.
- Cable: H07RN-F, 4G1 mm<sup>2</sup>, length 10 m, without plug.
- **EGT - EGF:** single-phase 230 V ± 10%,
- with float switch and thermal protector.
- Incorporated capacitor.
- Cable: H07RN-F, 3G1 mm<sup>2</sup>, 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

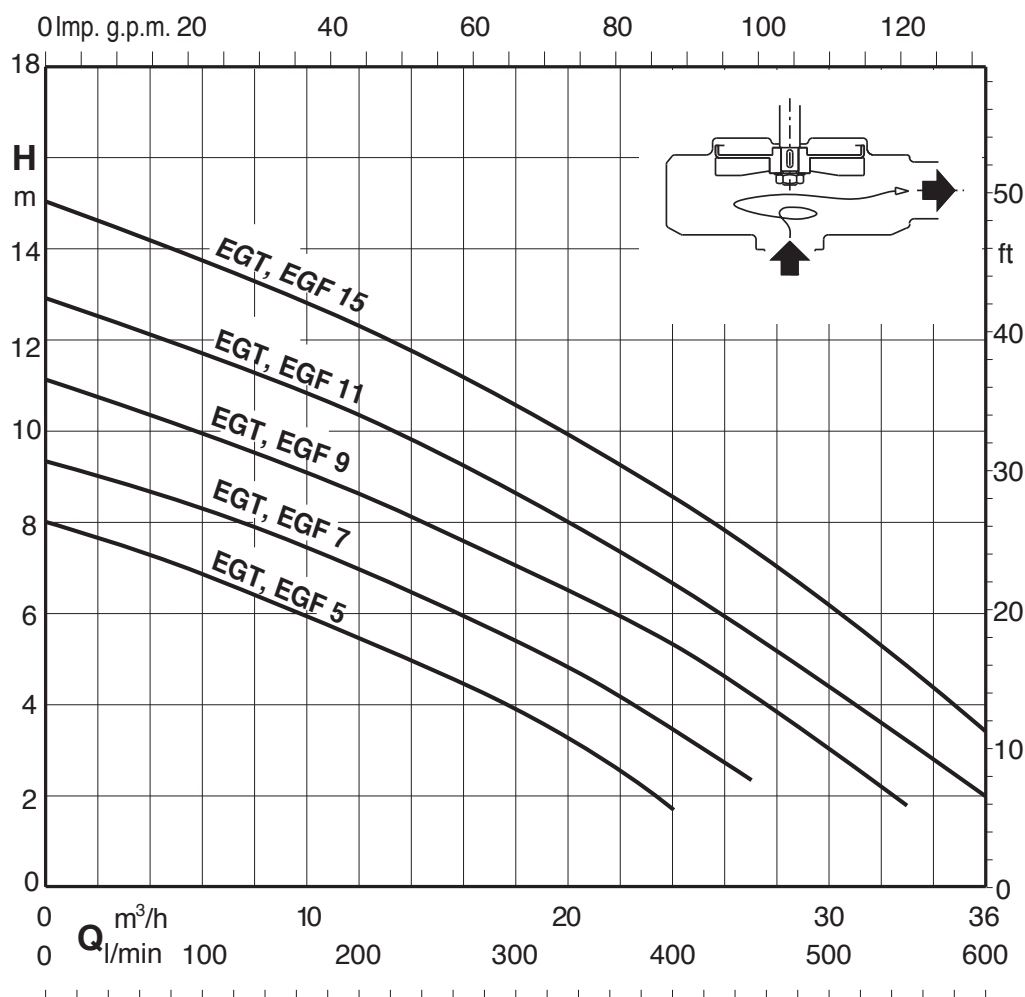
- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Other mechanical seal.
- Cable length 20 m.
- Motor suitable for operation with frequency converter.
- Three-phase pumps with incorporated float switch.

#### PUMP IDENTIFICATION CODE

EGT 7 T 400 50 F

- F for pump with float switch (empty without float switch)
- Motor frequency
- Motor voltage
- Three phase version (empty for single phase)
- Nominal power
- Pump model
- (EGT: with vertical threaded delivery port G 2")
- (EGF: with horizontal flanged and threaded delivery port G 2" - DN50)

## Performance curves $n \approx 2900$ rpm



## Performances $n \approx 2900$ rpm

3~  230V - 400V			1~	230V	Capacitor		P <sub>1</sub>	P <sub>2</sub>		Q = DELIVERY												
										l/min 0	50	100	150	200	250	300	350	400	450	500	550	600
				A	μf	Vc	kW	kW	HP	m³/h 0	3	6	9	12	15	18	21	24	27	30	33	36
H = TOTAL HEAD METERS COLUMN OF WATER																						
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

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

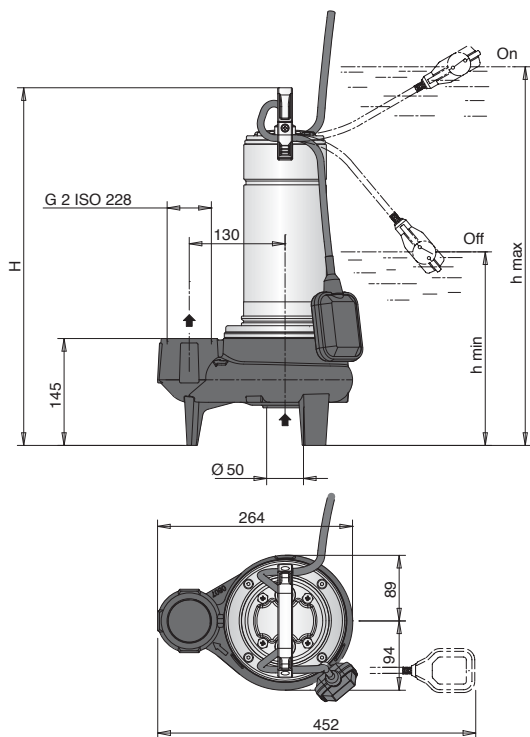
P<sub>2</sub> Rated motor power output.

Density  $\rho = 1000$  kg/m<sup>3</sup>.

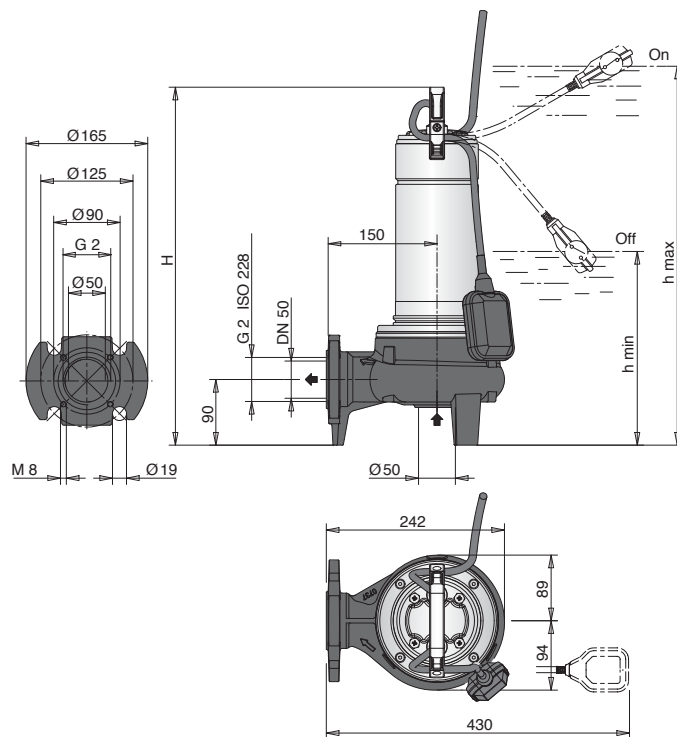
Kinematic viscosity  $\nu = \max 20$  mm<sup>2</sup>/sec.

## Dimensions and weights

### EGT



### EGF



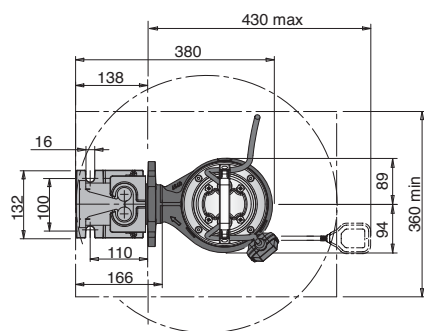
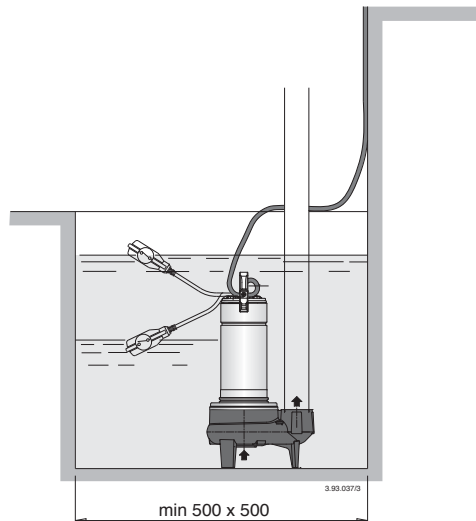
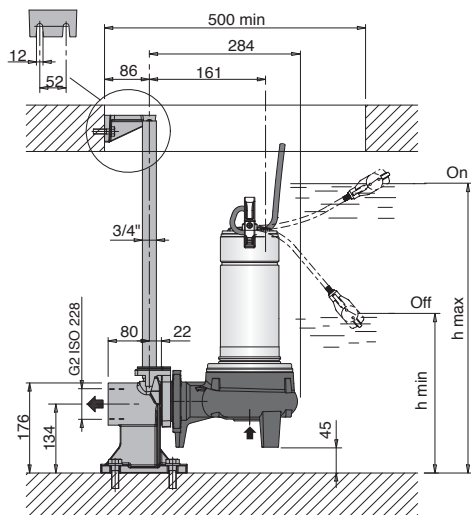
TYPE	mm			kg	
	H	h max	h min	EGT(T)	EGT
EGT 5 (T)	460	535	275	14,8	15,8
EGT 7 (T)	460	535	275	15	16
EGT 9 (T)	485	560	300	15,8	17,8
EGT 11 (T)	505	580	320	18,8	20,3
EGT 15 T	505	580	320	20,3	-
EGT 15	535	610	350	-	21,8

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

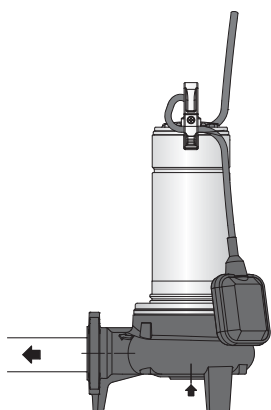
## Materials

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

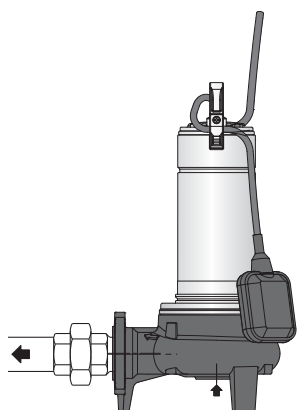
## Installation dimensions



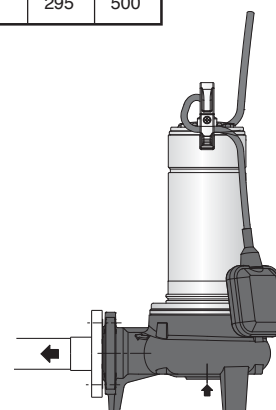
TYPE	mm	
	h min	h max
EGN4(T)	205	410
EGN5(T)	220	425
EGN7(T)	220	425
EGN9(T)	245	450
EGN11(T)	265	470
EGN15(T)	265	470
EGN15	295	500



Pump with threaded ports:  
pipes screwed into the ports

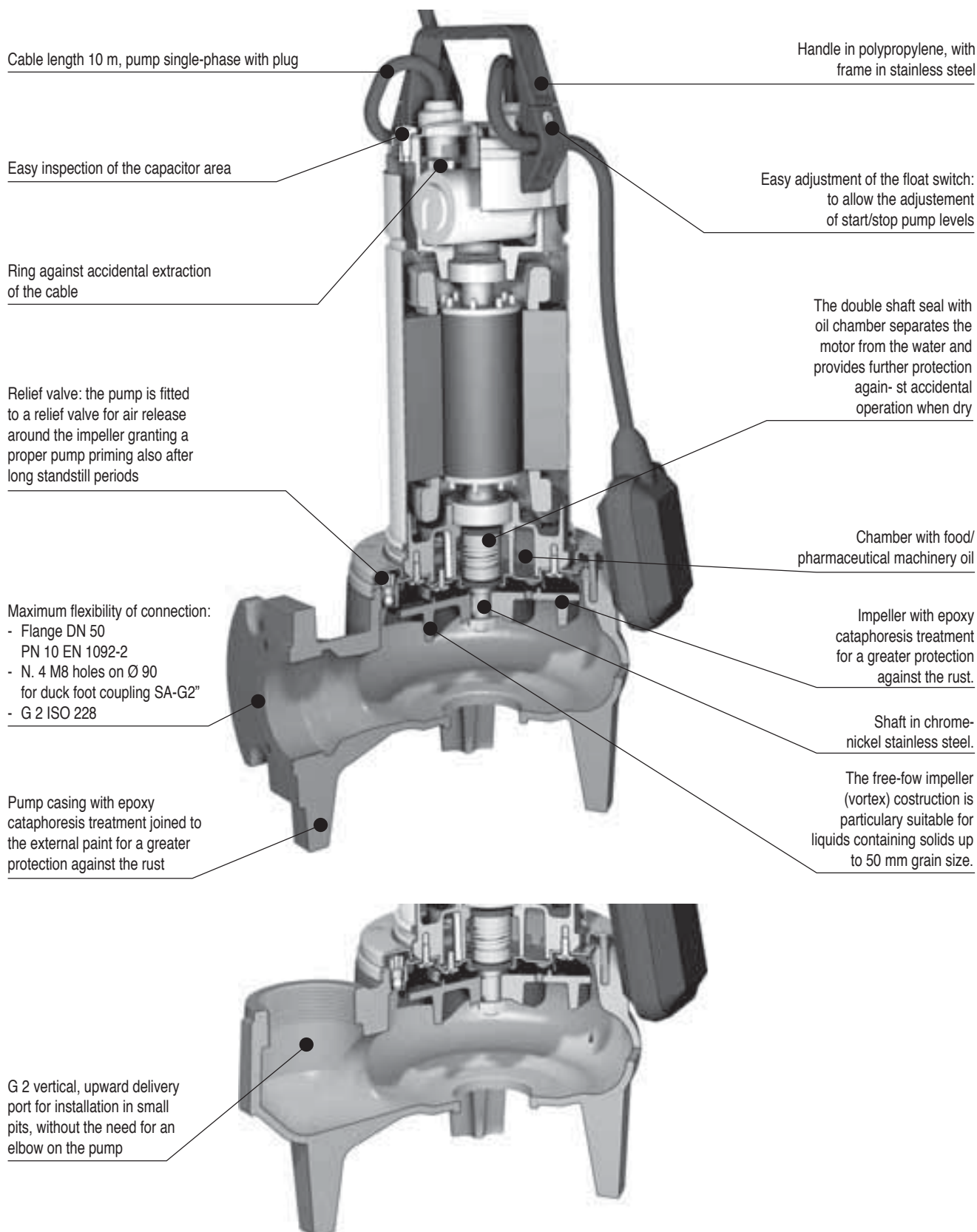


Pump with threaded ports:  
pipes with union couplings  
(locally available)



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

## Features



## Notes

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.



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This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.



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