



# E-Tech



Franklin Electric

**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 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

- Motor frequency
- Motor voltage
- Three phase version (empty for single phase)
- Nominal power
- Free-flow impeller (vortex)
- Pump model

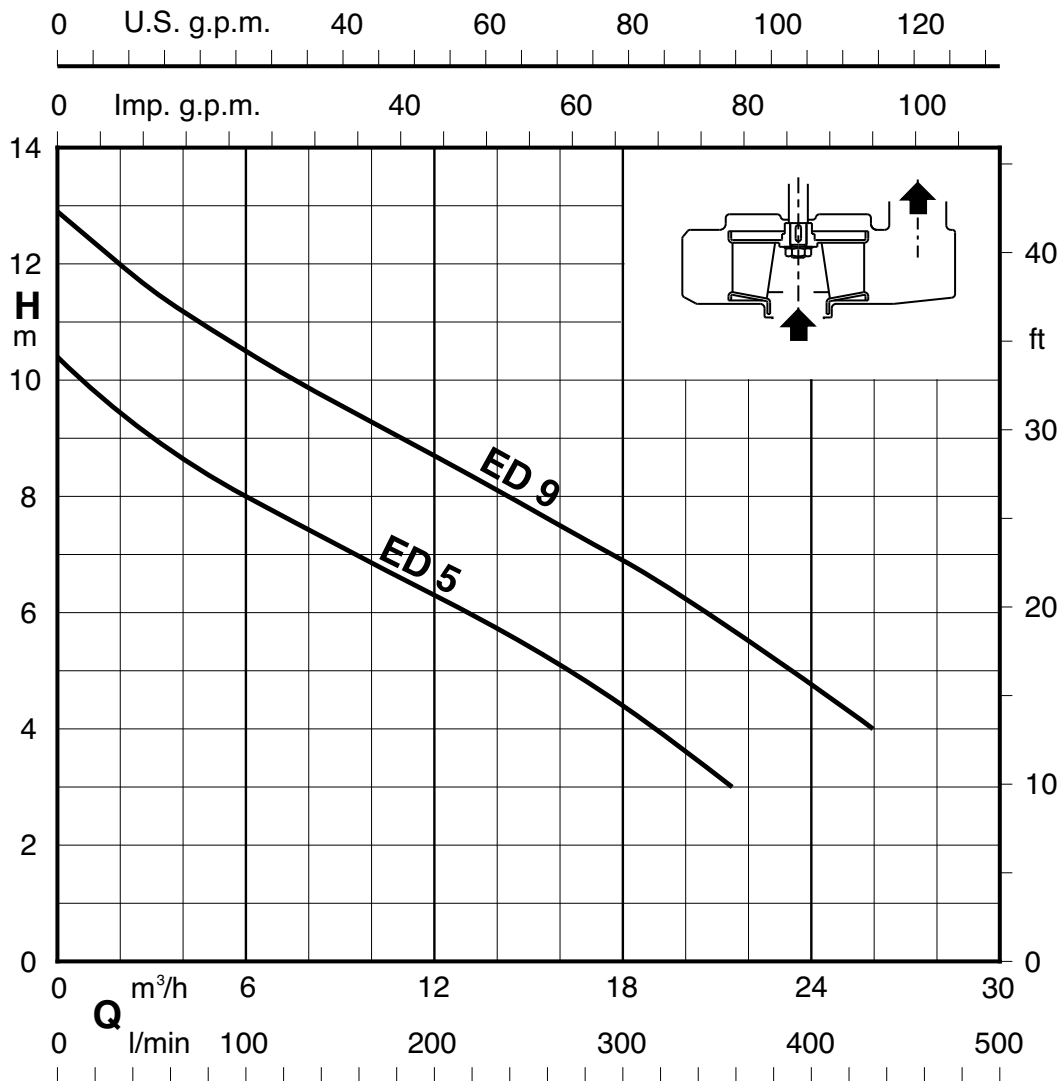
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# **Stainless steel drainage submersible pumps for dirty water**

## **ED - EDV**



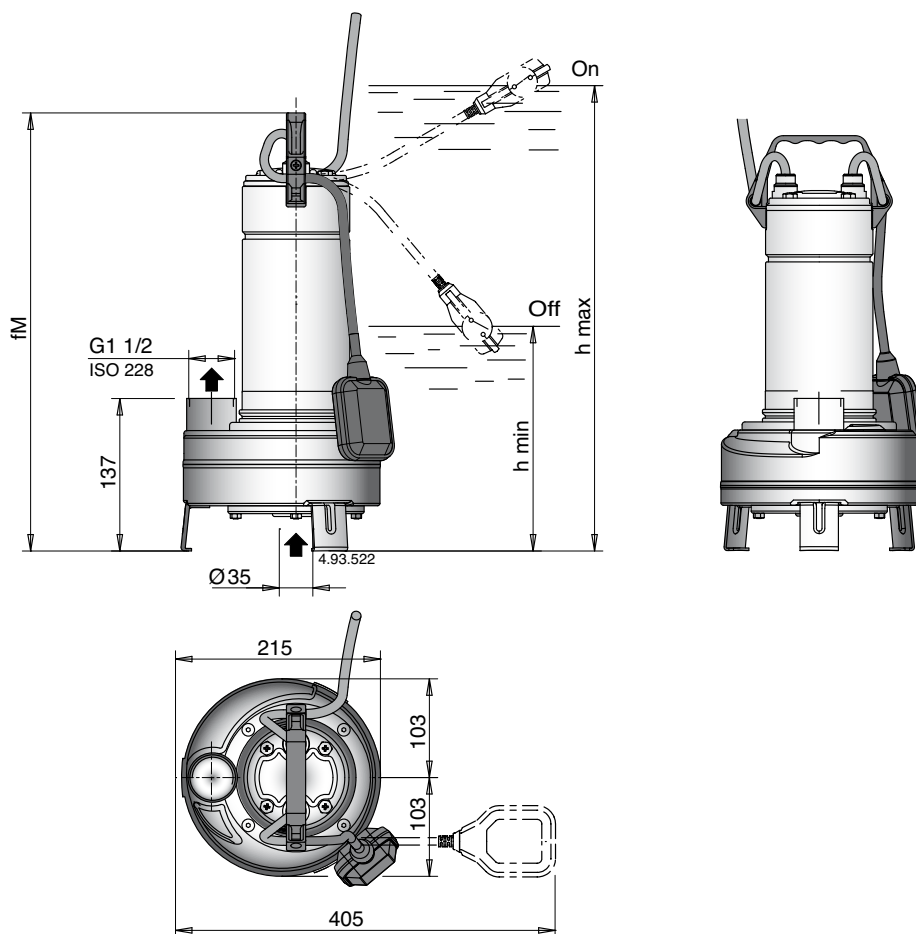
**Performance curves n ≈ 2900 rpm**



**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/nBR
Mechanical seal lower	Ceramic alumina/Carbon/nBR
Seal lubrication oil	Oil for food/pharmaceutical machinery

## 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

## 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
											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

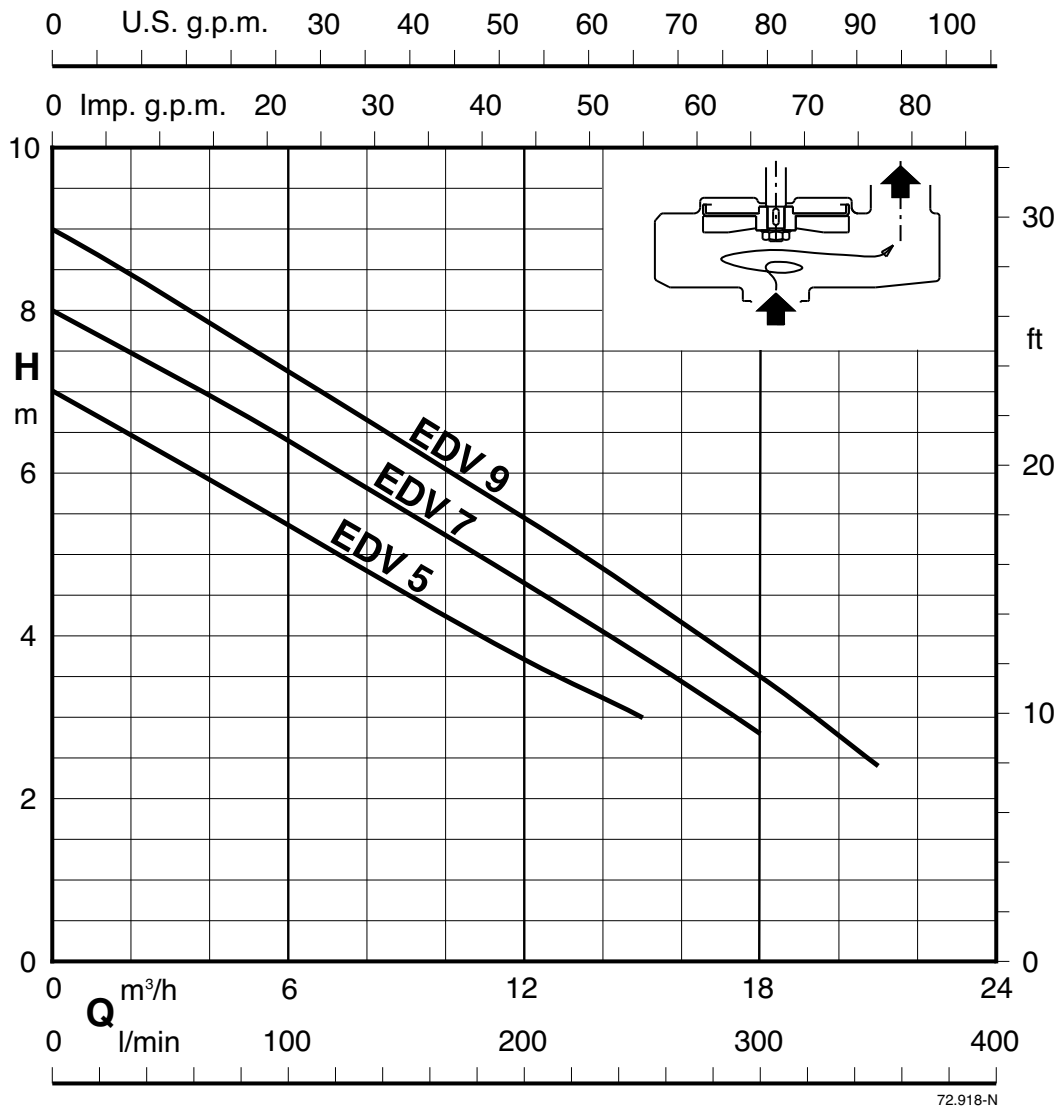
P<sub>1</sub> Max. power input.

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.

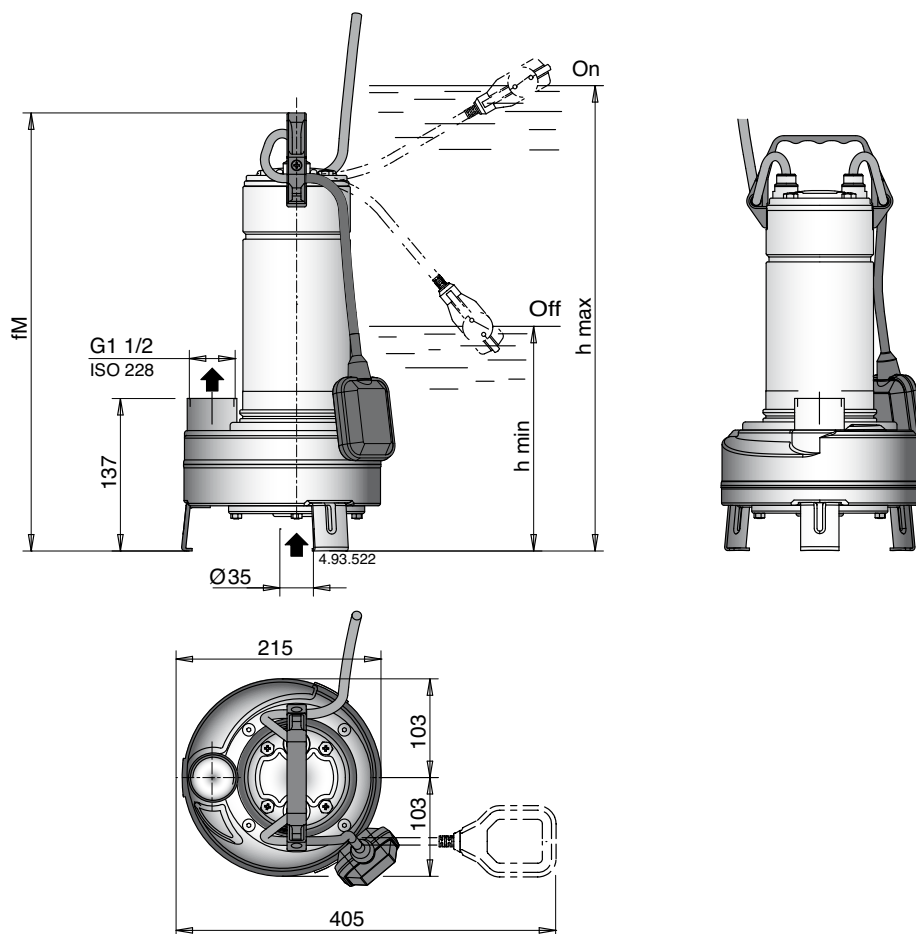
## Performance curves $n \approx 2900$ rpm



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## 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

## 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
											m <sup>3</sup> /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.

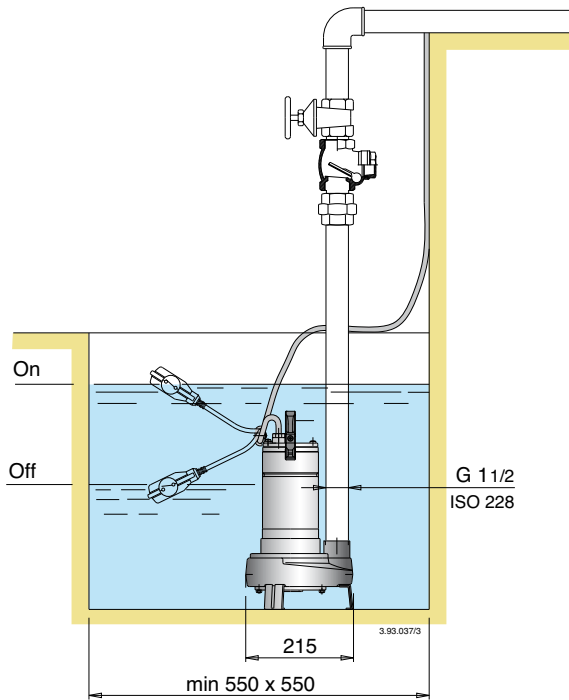
Density ρ = 1000 kg/m<sup>3</sup>.

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

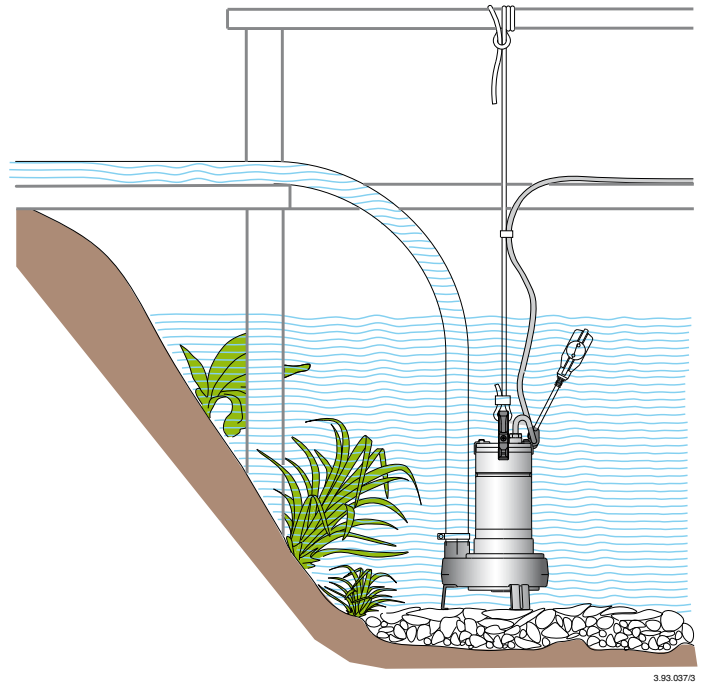


## Installation examples

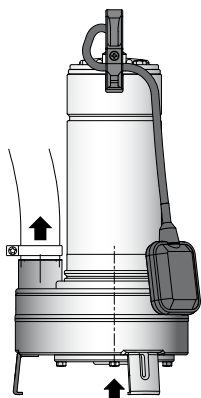
### Stationary installation



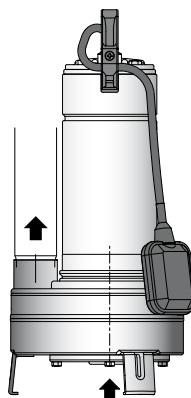
### Transportable installation



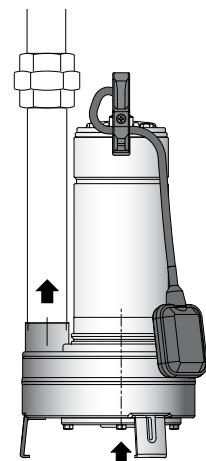
### Connection examples



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

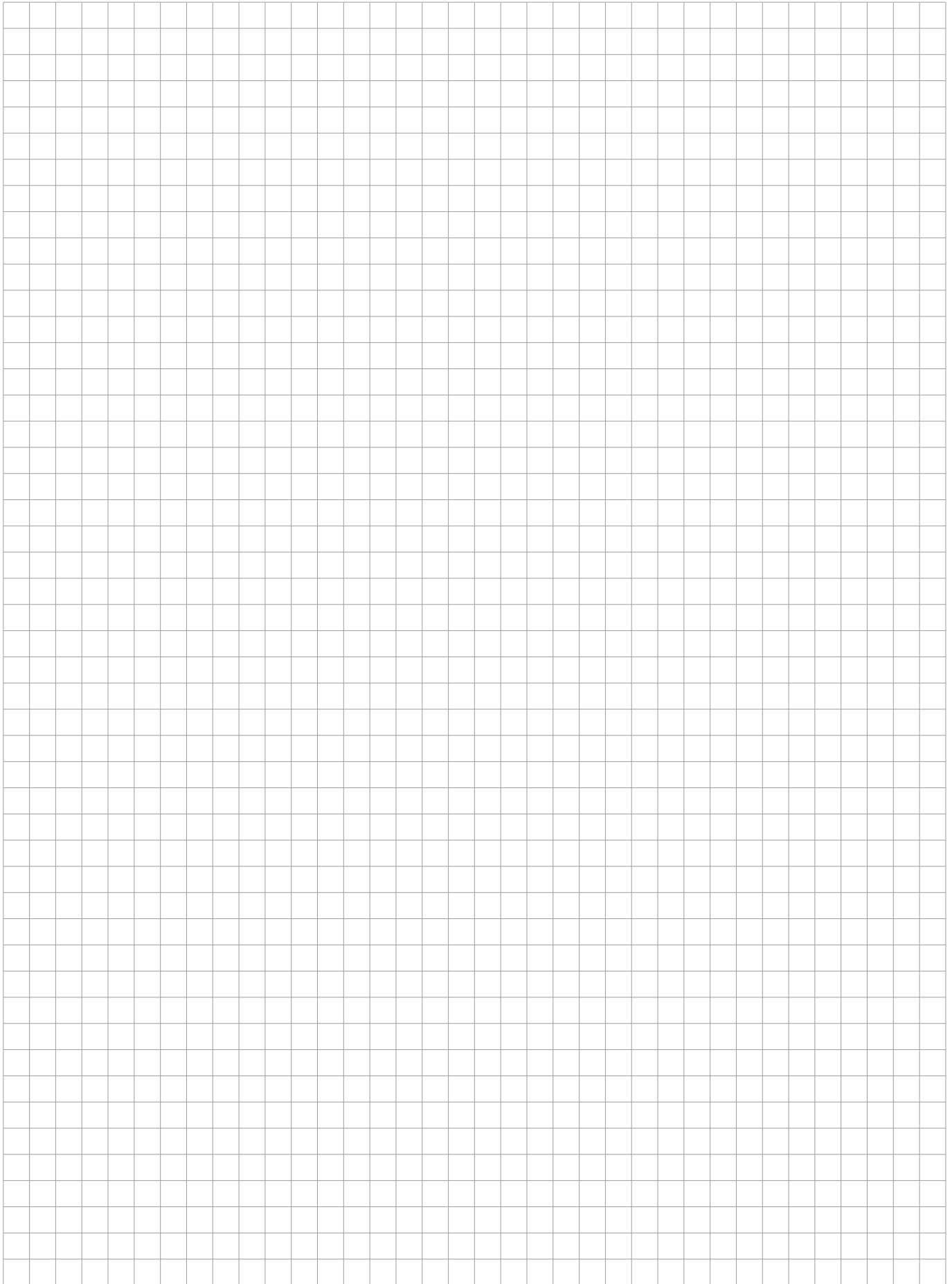
Shaft in chrome-nickel stainless steel

**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**





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