



## ▶▶ Propeller pumps



-RITZ- **ATRO**

# Operative ranges / Application areas

Rainwater pump installations, polder pump installations, sewage treatment plants, sluice pump installations, supply of cooling water to power plants and industrial installations, agricultural irrigation, sectors of municipal or industrial drinking water and process water.

## Types of construction

Vertical, axial or semi-axial, single-stage tube housing propeller pump with a suspended design. Delivery end discharge above or under the floor, drive by means of a standard commercial electrical or diesel motor.

### Model description

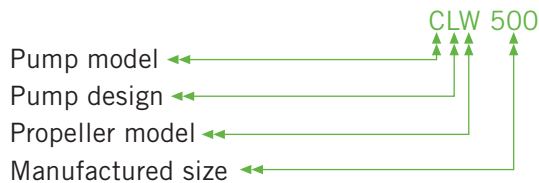
#### Pump models:

- C axial propeller pump
- K axial propeller pump with a blading that can be adjusted during operation
- M semi-axial propeller pump

#### Design:

- L Feedpipe made of steel plate
- K Inner part that can be removed
- N Feedpipe made of cast iron
- U Submersible motor

#### Example:



### Propeller

Unilaterally arranged, multi-blade propeller, the blades have a fixed setting, and can optionally be adjusted when idle.

Upon request a design with propeller blades that can be adjusted when in operation is possible.

### Pumping medium

Rainwater, surface water, river water, pre-purified sewage water and return sludge (free of coarse components and components that have long fibres) as well as process water and cooling water.

### Storage

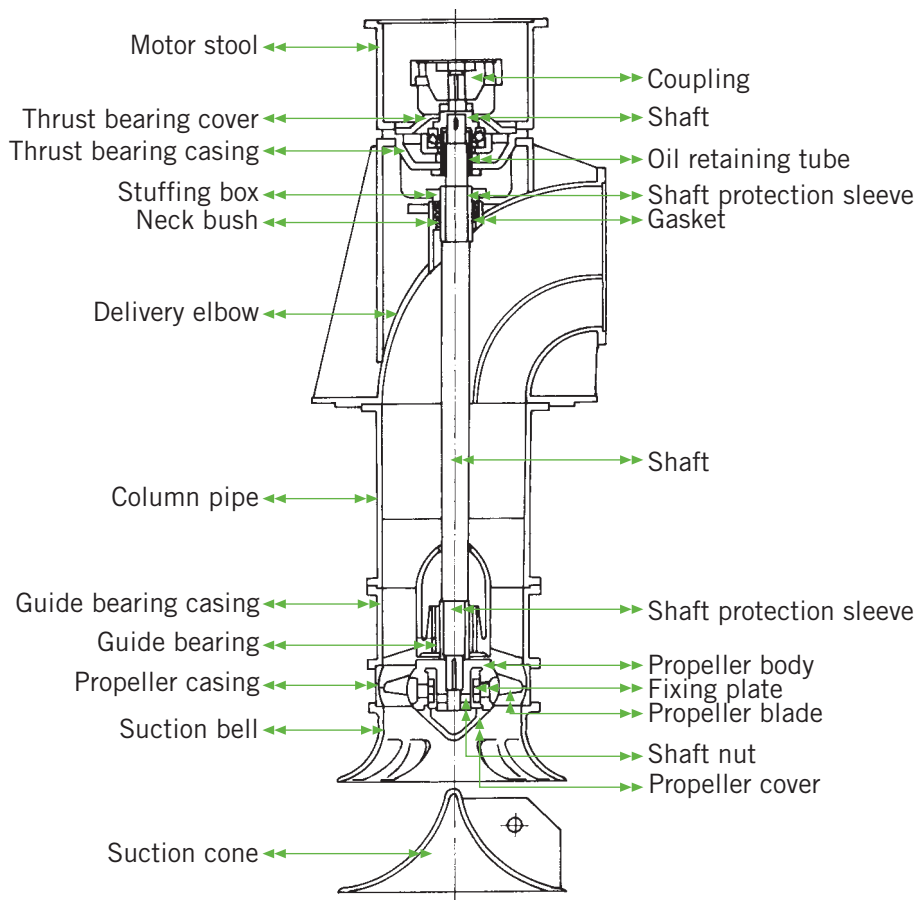
Supporting bearing: Self-aligning ball bearing that runs in an oil bath with water cooling, optionally grease lubricated antifriction bearing. Shafting bearing: Sliding bearing made of bronze. Grease supply by means of an electric grease lubrication pump attached to the pump. Special design: Sliding bearing made of rubber or ceramics that is lubricated by the material to be pumped.

### Material

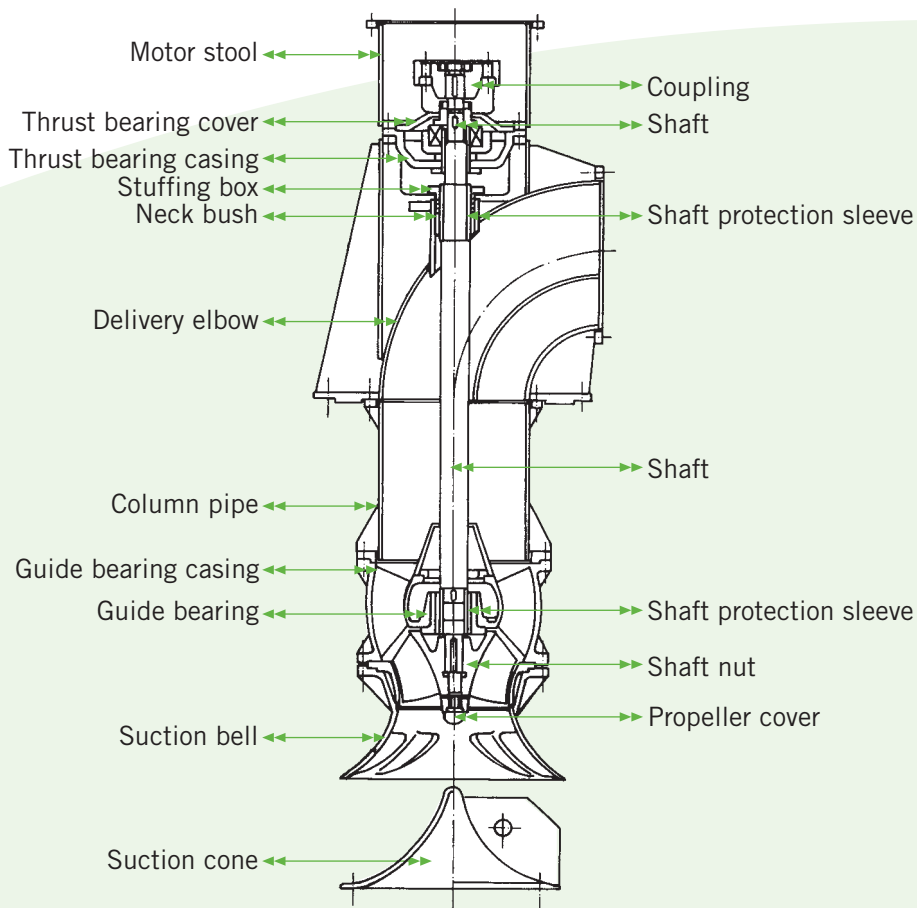
Suction cone/-bell	GG-25
Propeller	G Cu Al Fe 4 Ni 4
Shaft	Stainless steel
Feedpipe	RSt 37-2
Outflow bent pipe	RSt 37-2
Supporting bearing housing	GG-25
Motor Stool	RSt 37-2



### Sectional drawing of an axial propeller pump

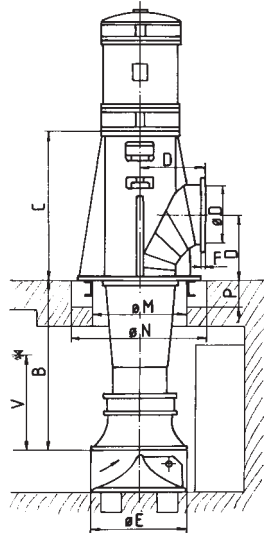


### Sectional drawing of a semi-axial propeller pump

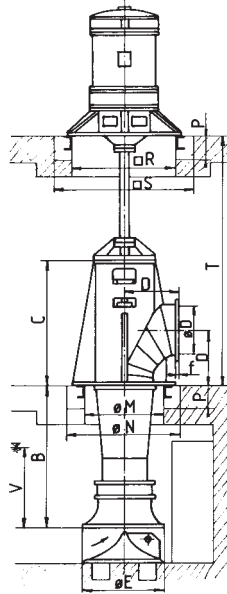


# Dimensions

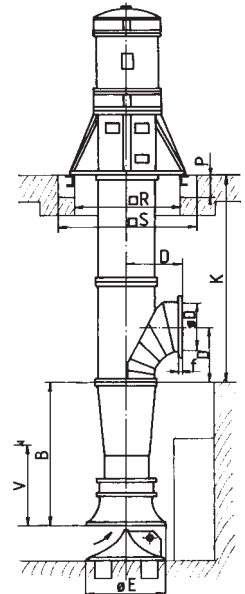
Version A



Version B



Version C

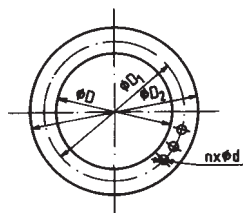


\*changeable dimensions

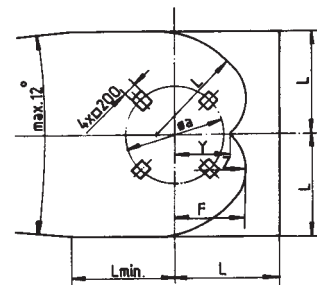
Dimensions in mm  
Flanges to PN 10

D (DN)	Pump						Delivery flange PN 10					
	A	B <sub>min</sub>	C	E	T <sub>min</sub>	V <sub>min</sub>	D	D <sub>1</sub>	D <sub>2</sub>	n	d	f
400	300	700	1400	600	1400	700	400	515	565	16	27	25
500	400	700	1550	800	1550	800	500	620	670	20	27	20
600	450	1000	1750	900	1750	900	600	725	780	20	30	27
700	500	1200	1900	1000	1900	1000	700	840	895	24	30	30
800	600	1400	2100	1200	2100	1200	800	950	1015	24	33	28
1000	750	1600	2450	1500	2450	1500	1000	1160	1230	28	36	38
1200	900	1900	2800	1800	2800	1800	1200	1380	1455	32	39	45

Delivery flange



Suction well

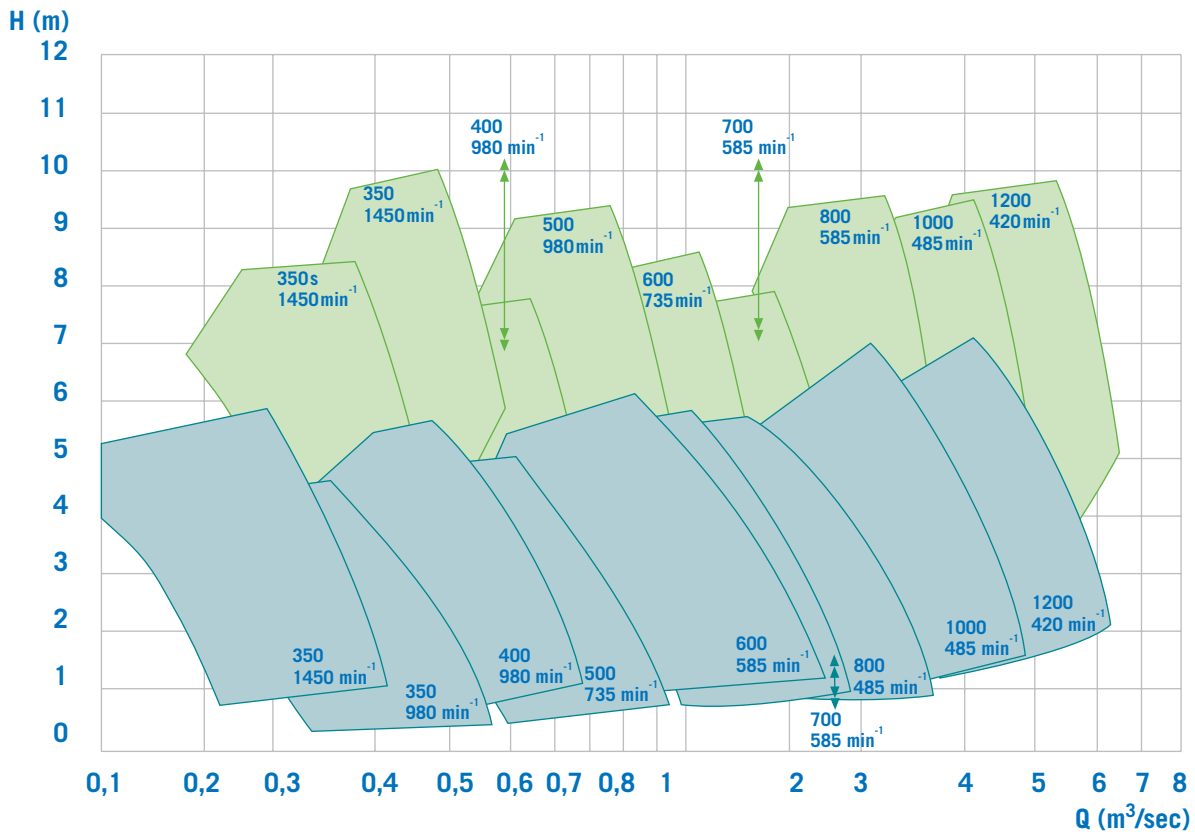


Dimensions in mm  
Flanges to PN 10

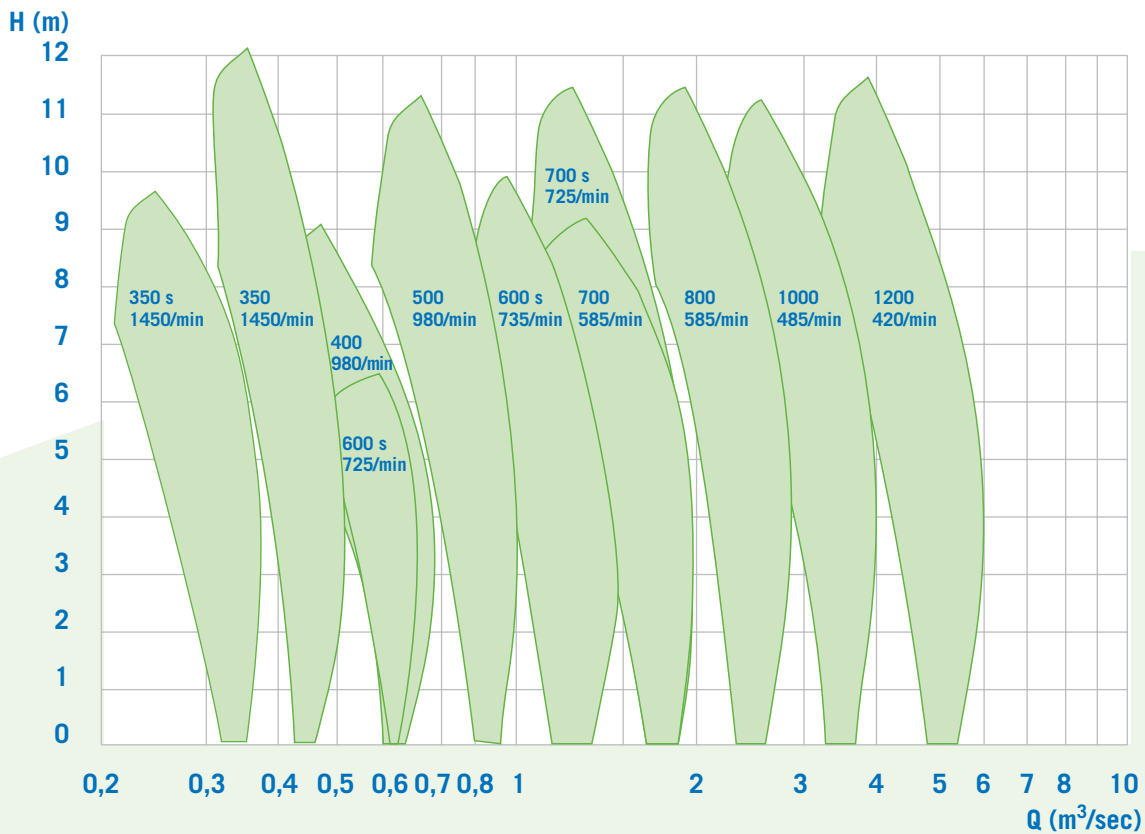
D (DN)	Floor dimensions						Suction well					
	M	N	P	R	S	a	b	F	Y	L	Z	W
400	650	1100	200	900	1300	450	200	400	350	600	300	1000
500	850	1300	200	1100	1500	650	200	520	450	800	400	1200
600	1000	1400	200	1300	1700	750	200	600	500	900	450	1400
700	1100	1500	250	1400	1800	850	250	650	550	1000	500	1500
800	1300	1700	250	1600	2000	1050	250	800	650	1200	600	1800
1000	1600	2000	300	2000	2400	1350	300	1000	800	1500	750	2300
1200	1900	2300	300	2300	2700	1650	300	1200	950	1800	900	2700

Performance range axial - propeller T

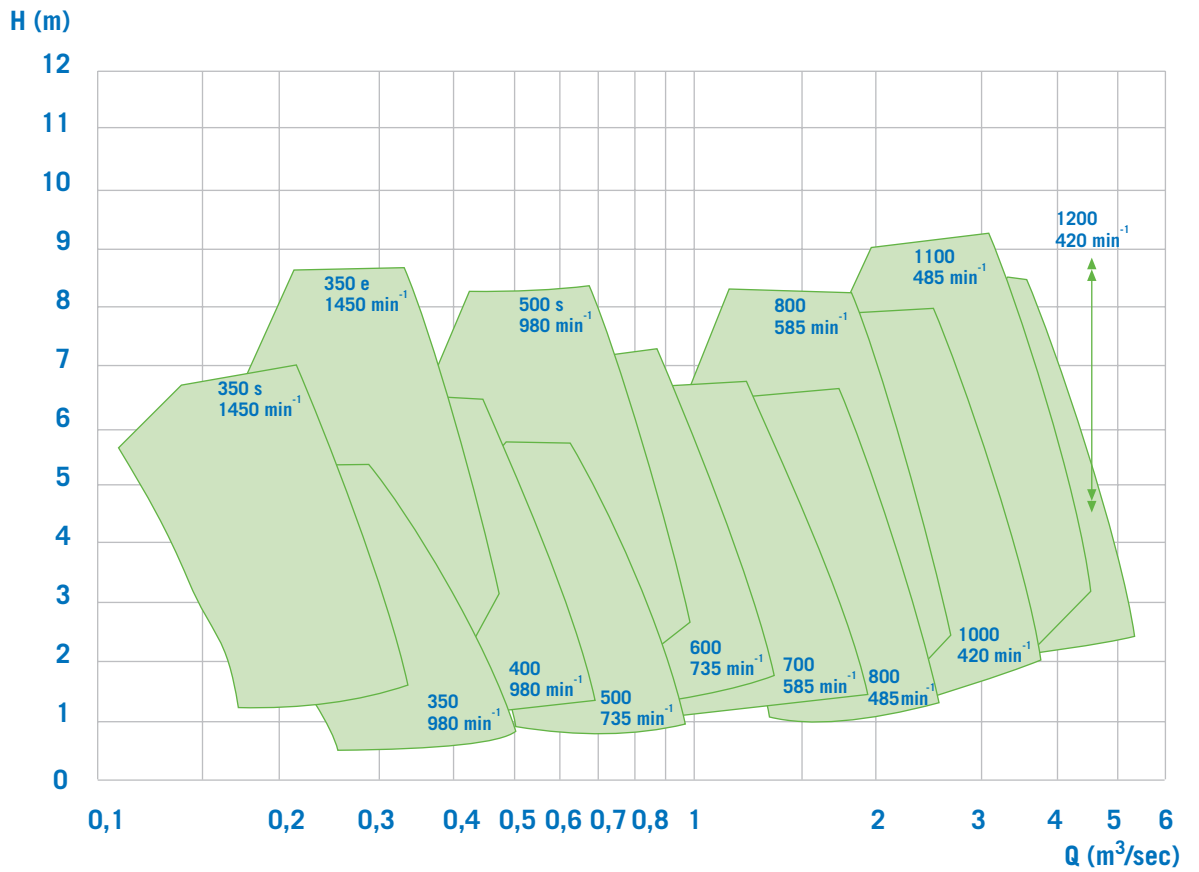
Performance range axial - propeller Z



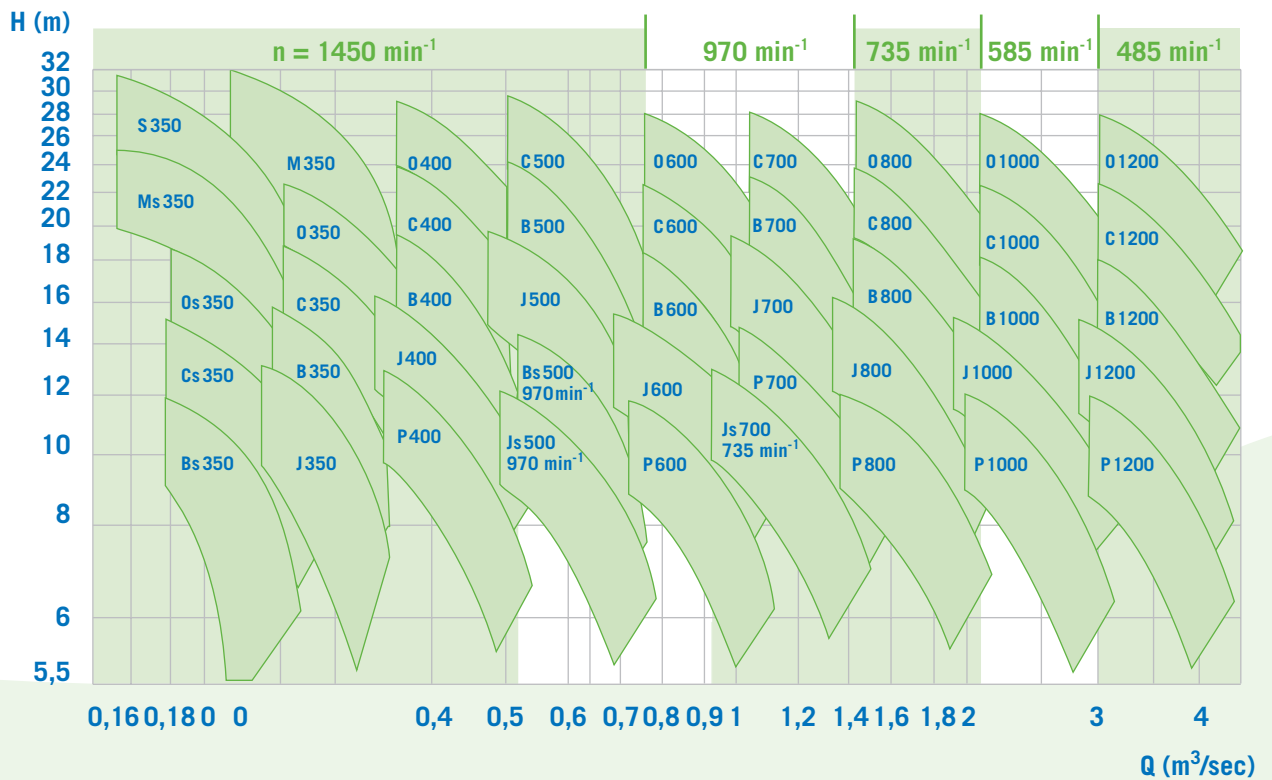
Performance range axial - propeller U



### Performance range axial - propeller W



### Performance range semi-axial propeller



## Submersible propeller pump

Wet-well installation single-stage submersible propeller pump with propeller blades with fixed settings for vertical installation in a shaft cylinder. It is also possible to install them in a slanted position upon request.

### Design features

The electric motor and the pump hydraulics in combination produce a completely submersible block aggregate that is impervious to pressure water for system of protection IP68 or Eex protection. The motor is cooled by the material to be pumped, which flows around the motor during operation. Corresponding flow guides at the inlet and after the propeller guarantee an optimum feed stream of the material to be pumped.

The sealing between the pump and the motor is achieved by means of high quality axial face seals. At the same time a monitoring system protects the motor against damage due to an excessively high temperature and leakages.

### Propeller

Unilaterally arranged, multi-blade propeller, the blades have a fixed setting, and can optionally be adjusted when idle.

### Pumping medium

Rainwater, surface water, river water, pre-purified sewage water and return sludge (free of coarse components and components that have long fibres) as well as process water and cooling water.

### Range of application

Flood protection and irrigation, cooling water supply for industrial installations, waterworks and heating power stations.

The MU model can be used for larger delivery heads.

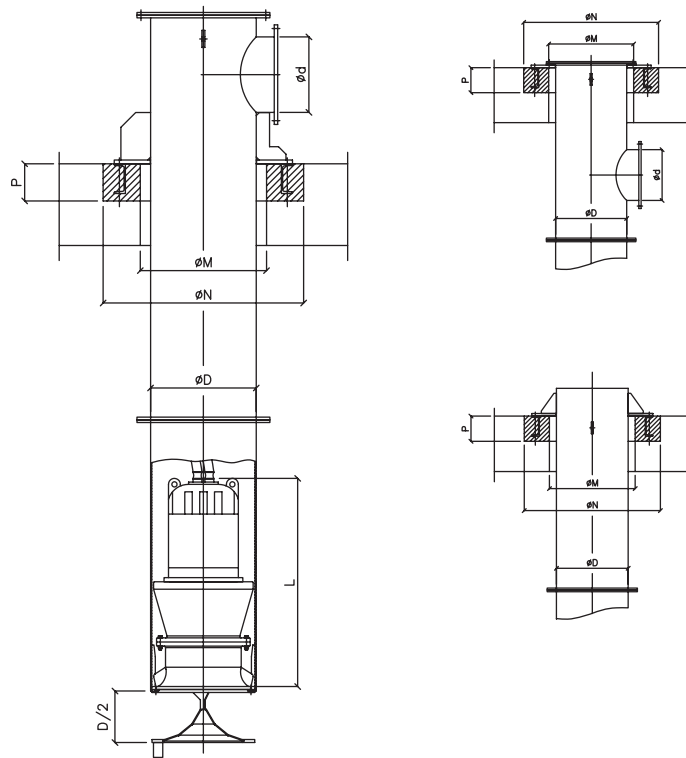
### Material

Propeller G Cu Al Fe 4 Ni 4  
 Pump housing GG-25  
 Feedpipe RSt 37 2 or stainless steel

### Performance range

Analogous to axial propeller pumps.

Dimensioned drawing of submersible propeller pump



Type	d	D	L <sub>max</sub>	M	N	P
CUU350	350	600	1740	650	1100	200
CUU400	400	600	1910	650	1100	200
CUU500	500	800	2150	850	1300	200
CUU600	600	900	2400	1000	1400	200
CUU700	700	1100	2930	1200	1600	250
CUT350	350	600	1740	650	1100	200
CUT400	400	600	1910	650	1100	200
CUT500	500	800	2150	850	1300	200
CUT600	600	900	2400	1000	1400	200
CUT700	700	1100	2930	1200	1600	250
CUW350	350	600	1080	650	1100	200
CUW400	400	700	1670	750	1200	200
CUW500	500	700	1910	750	1200	200
CUW600	600	900	2160	1000	1400	200
CUW700	700	1000	2550	1100	1500	250
CUW800	800	1200	3010	1300	1700	250
CUW1000	1000	1200	3150	1300	1700	250
CUZ350	350	600	1110	650	1100	200
CUZ400	400	700	1670	750	1200	200
CUZ500	500	700	1950	750	1200	200
CUZ600	600	900	2050	1000	1400	200
CUZ700	700	1000	2590	1100	1500	250
CUZ800	800	1200	3060	1300	1700	250
CUZ1000	1000	1200	3210	1300	1700	250

Dimensions in mm  
 Flanges to PN 10

Ritz-Atro, founded in 1969, is now one of the most significant companies in the area of effluent treatment and environmental protection – and indeed throughout the world. Innovative drive and pioneering spirit characterised the company from the very beginning.

Ritz-Atro sees itself as its customer's partner. Right from the phase of the initial planning the customer is supported by well qualified staff, who guarantee the secure and economic realisation of the construction project.

Ritz-Atro takes all conceivable measures to constantly further improve the high standard of quality of its products. A quality management system certified in accordance with DIN EN ISO 9001 is thus an important component part of the company philosophy.



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