



▶▶ Submersible  
propeller pumps



RITZ **ATRO**

# Submersible axial flow/mixed flow pumps

Wet-well installation single-stage submersible propeller pump with impeller 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

We are able to select the best combination of hydraulic and motor with regard to output, speed, voltage and frequency in order to suit the particular application. Variable blade design and a motor range from 15 to 800 kW enable us to make a choice which fulfills both economical and technical criteria.

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 IP 68. The motor is cooled by the liquid to be pumped, which flows around the motor during operation. Corresponding flow guides at the inlet and after the impeller 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.

## Impeller

Unilaterally arranged, multi-blade impeller; variable blade design for optimum running conditions.

## Fields of application

- ▶▶ Raw and clean water pumps in waterworks and wastewater treatment plants
- ▶▶ Industrial water supply
- ▶▶ Irrigation and drainage pumping stations
- ▶▶ Storm water pumping stations
- ▶▶ Flood control and agriculture
- ▶▶ Cooling water pumps in power plants and industry

## Material

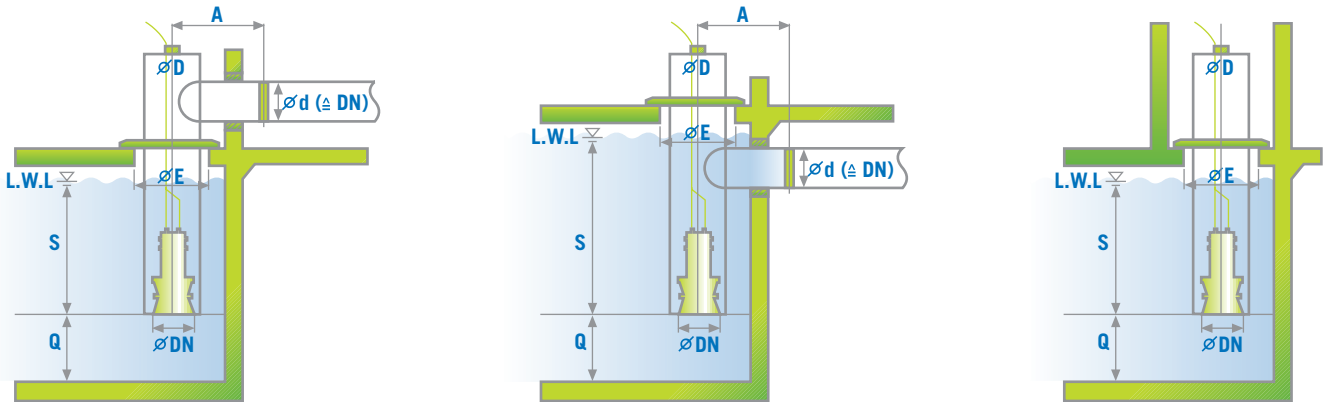
<b>Diffuser casing:</b>	Cast iron
<b>Motor housing:</b>	Cast iron
<b>Shaft:</b>	1.4006
<b>Impeller:</b>	Albronze/duplex stainless steel
<b>Casing wear ring:</b>	Stainless steel
<b>Screws, nuts and bolts:</b>	Stainless steel

Other materials are available upon request.

## Technical data

Type	Axial flow pump (AF)	Mixed flow pump (MF)
Max. head:	8 m	20 m
Max. capacity:	10 m <sup>3</sup> /s	11.6 m <sup>3</sup> /s
Max. power rating:	800 kW	800 kW
Nom. pipe diameter:	400 - 2000 mm	500 - 2000 mm
Max. fluid temperature:	40° C	40° C

# Outline dimensions



## Axial flow pump (Type AF)

Type	DN	D	A	E	Q	S
AF 400	400	600	450	700	250	600
AF 500	500	700	500	800	300	750
AF 600	600	800	550	950	350	900
AF 700	700	900	650	1050	400	1050
AF 800	800	1000	850	1150	450	1200
AF 900	900	1100	900	1300	500	1350
AF 1000	1000	1200	900	1400	550	1500
AF 1100	1100	1300	1000	1500	600	1650
AF 1200	1200	1400	1000	1600	600	1800
AF 1350	1350	1550	1150	1750	700	2000
AF 1500	1500	1700	1250	1950	750	2200
AF 1600	1600	1800	1300	2100	800	2400
AF 1800	1800	2000	1500	2300	900	2700
AF 2000	2000	2200	1600	2500	1000	3000

Dimensions in mm

## Mixed flow pump (Type MF)

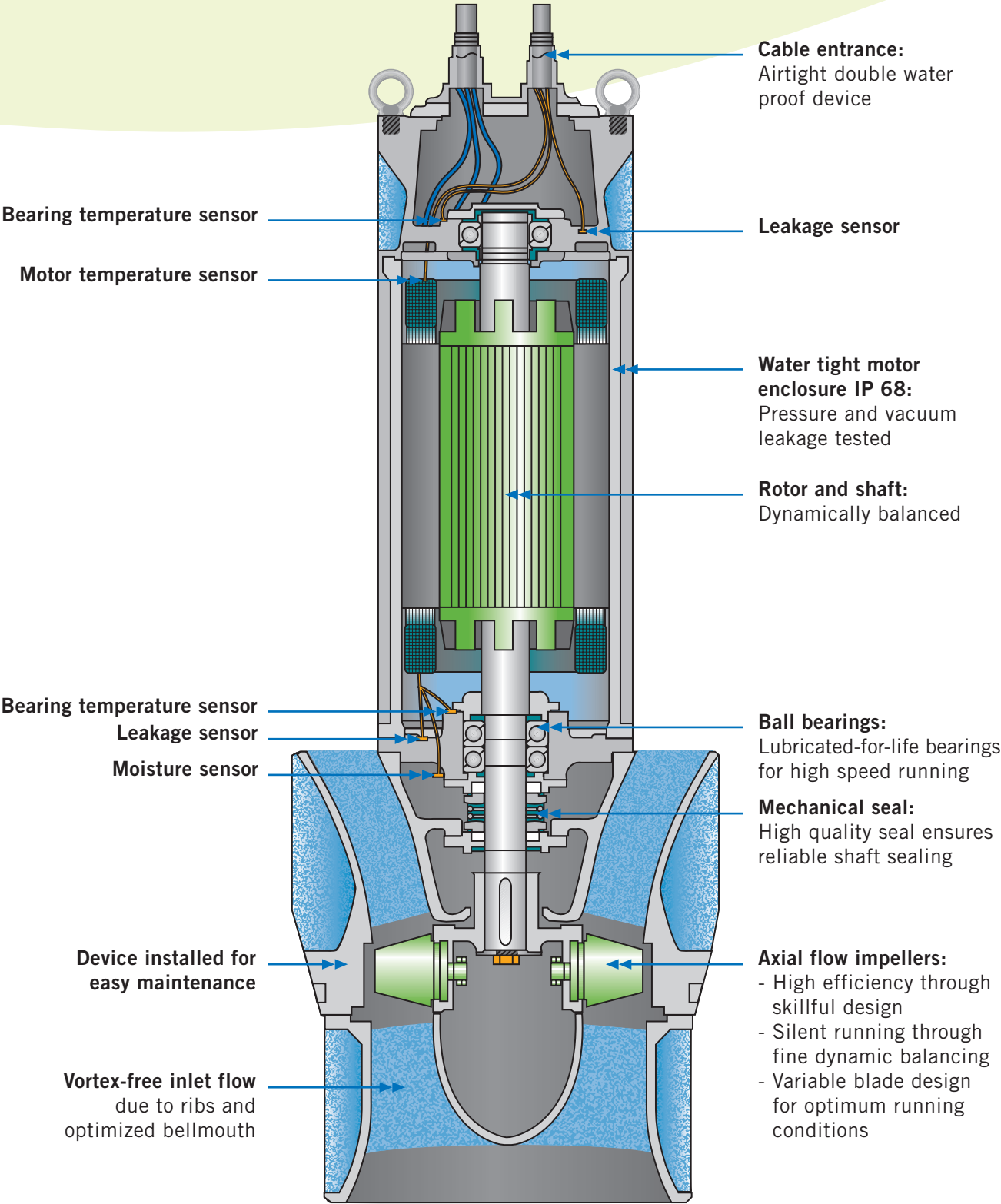
Type	DN	D	A	E	Q	S
MF 500	500	700	500	800	300	750
MF 600	600	800	550	950	350	900
MF 700	700	900	650	1050	400	1050
MF 800	800	1000	750	1150	450	1200
MF 900	900	1100	850	1300	500	1350
MF 1000	1000	1200	900	1400	550	1500
MF 1200	1200	1400	1000	1600	600	1800
MF 1350	1350	1550	1150	1800	700	2000
MF 1500	1500	1700	1250	1950	750	2250
MF 1600	1600	1800	1300	2100	800	2400
MF 1800	1800	2000	1500	2300	900	2700
MF 2000	2000	2200	1600	2500	1000	3000

Dimensions in mm



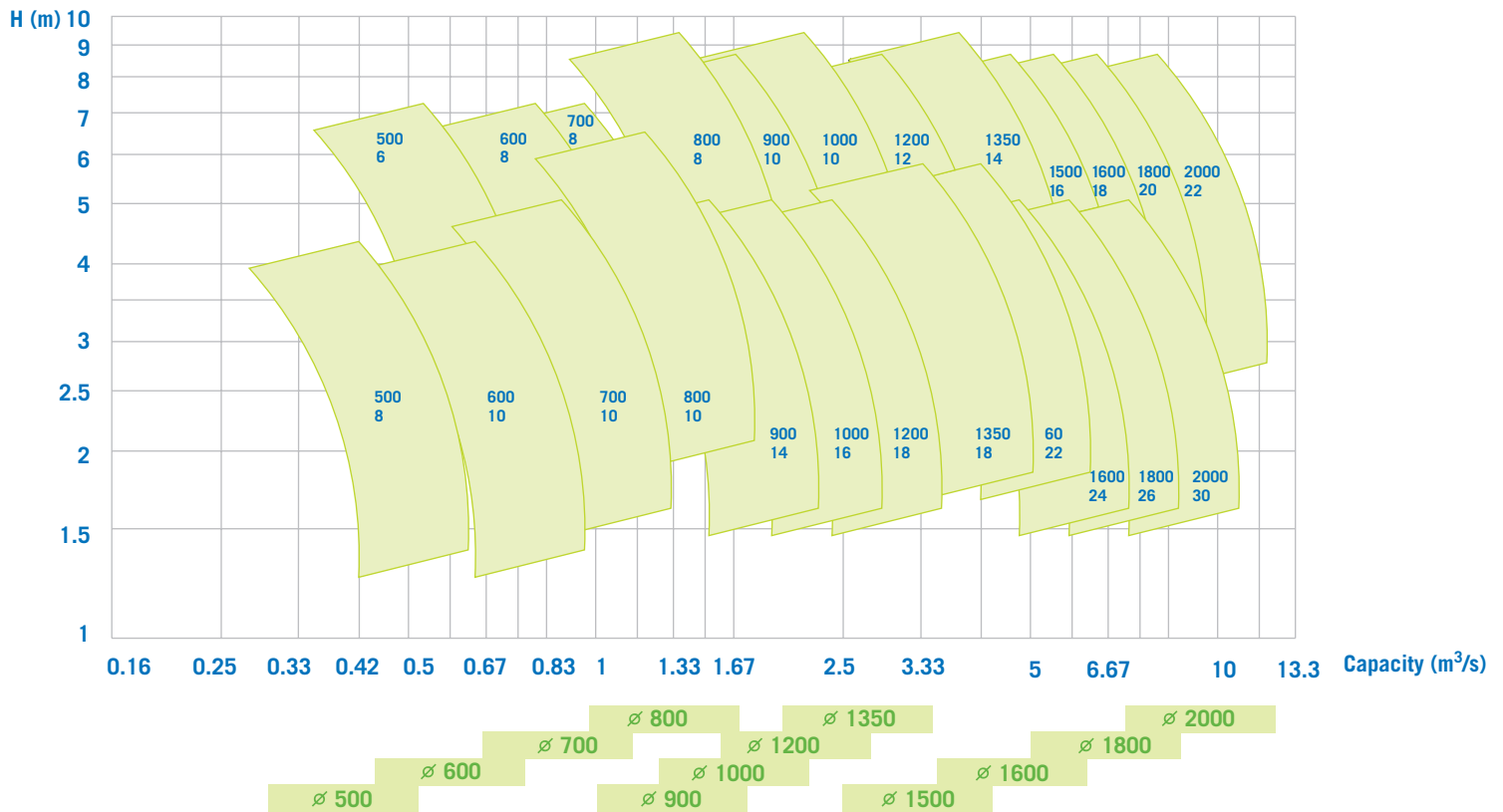
# Axial flow pump

Type AF

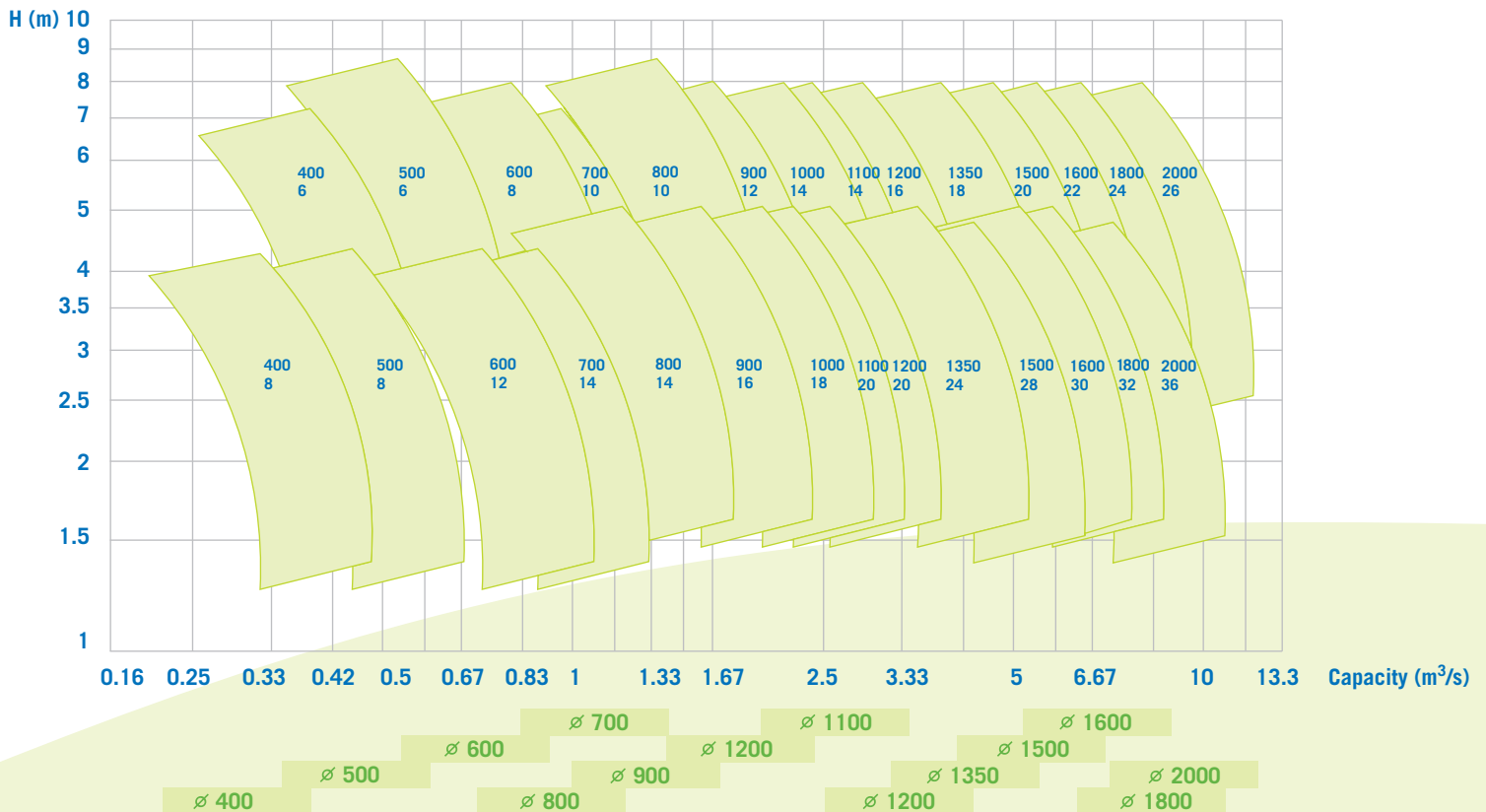


# Axial flow pump general performance

## 50 Hz

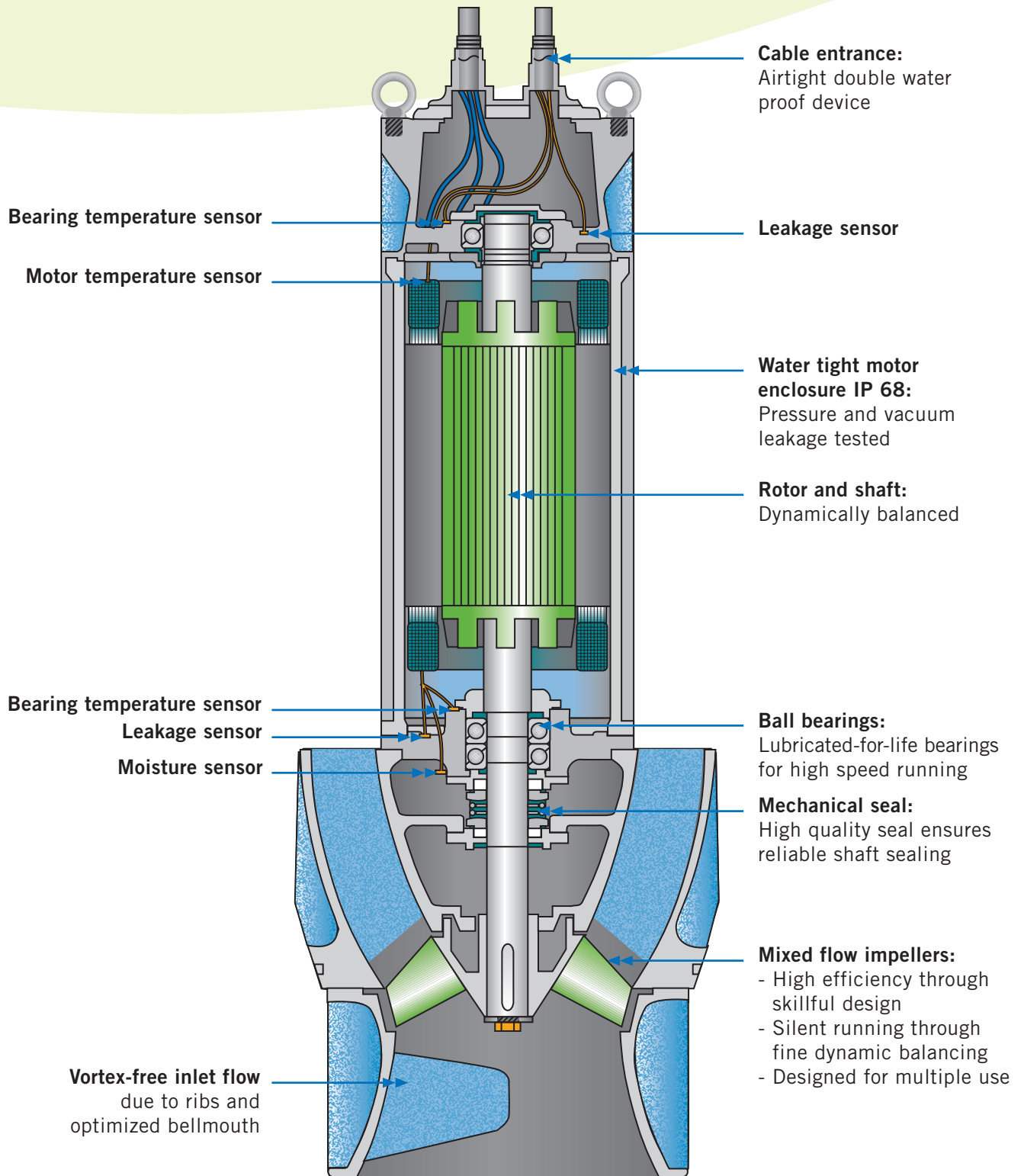


## 60 Hz



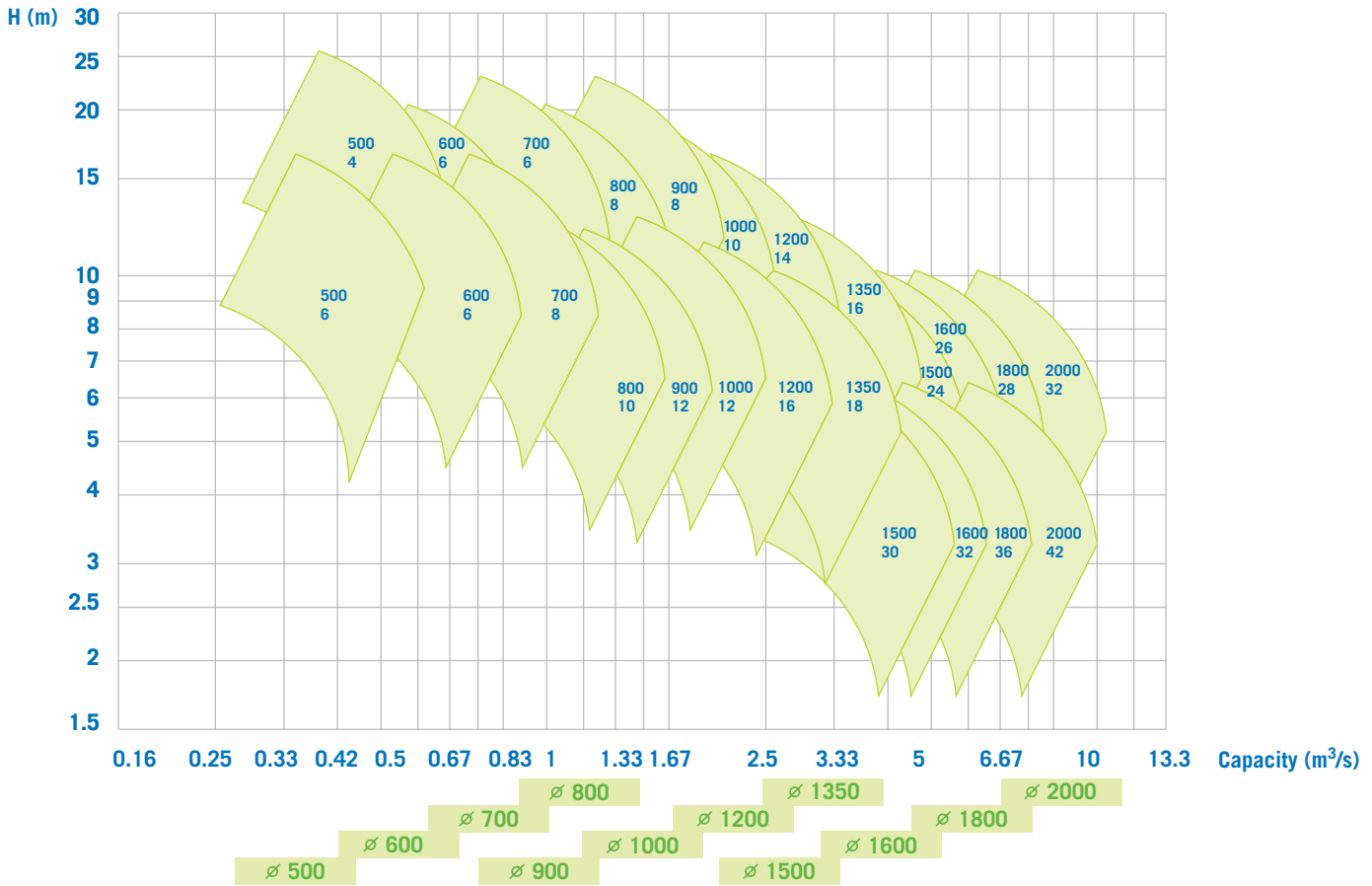
# Mixed flow pump

Type MF

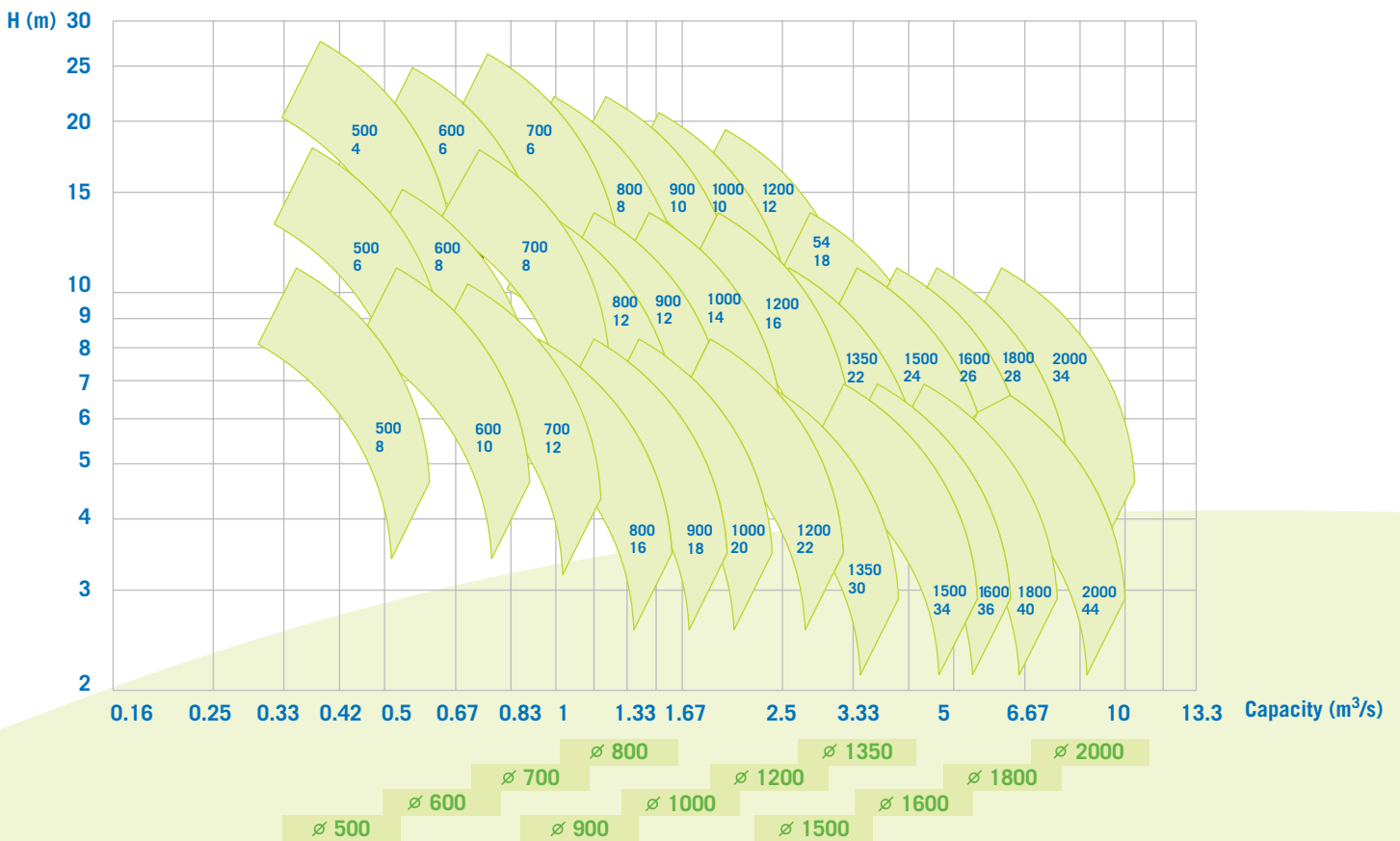


# Mixed flow pump general performance

## 50 Hz



## 60 Hz



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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