UNIQA® Series

UNIQA series pumps, designed for heavy-duty professional applications, are used in industrial and other wastewater treatment plants and for lifting sewage and pumping wastewater which contains solids.

Motors are designed with the aim of achieving the Premium (IE3) efficiency class according to the EN 60034-30 standard and guarantee high performance with low energy use.

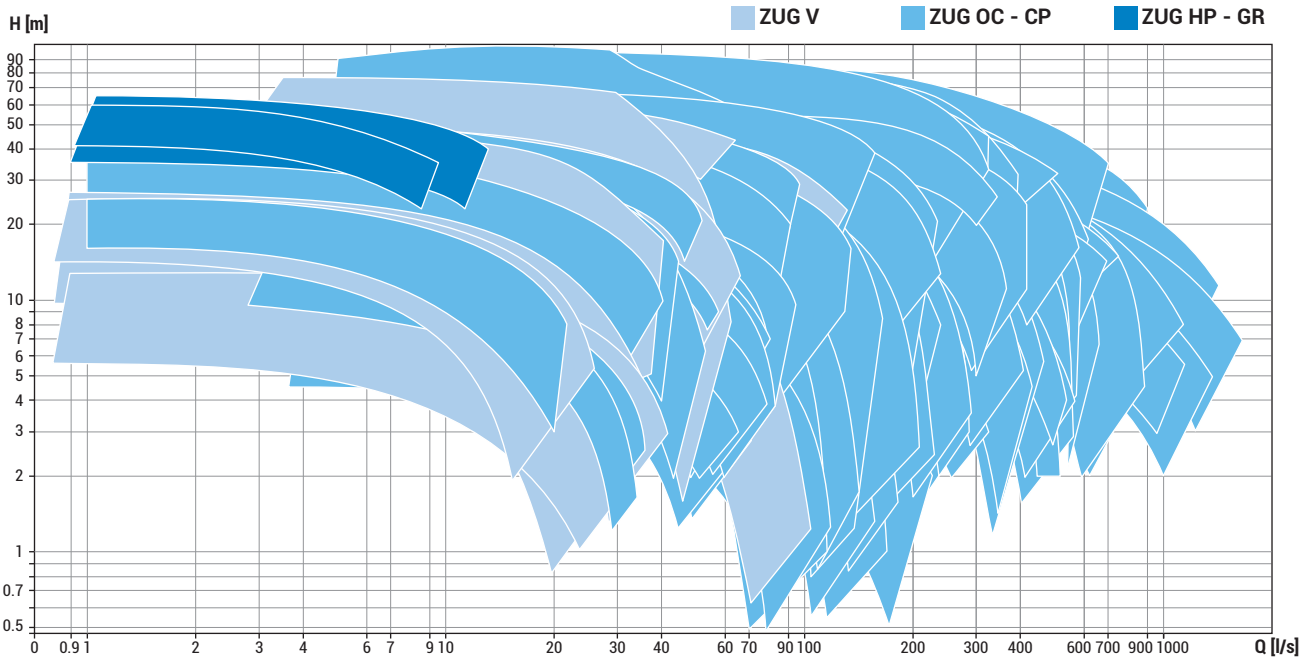
There are various types of hydraulics, to adapt perfectly to any type of application.

The range includes models with vortex impeller (**ZUG V**) with full free passage, with channel impeller (**ZUG OC**) with anti-clogging and anti-fouling systems, chopper (**ZUG CP**) equipped with cutting sistem able to grind particles of any shape or proportion, with high head (**ZUG HP**), capable of delivering high hydraulic performances, and with grinding system (**ZUG GR**) for use with soiled liquids and where filaments are present.

Depending on the service required, each model comprises a motor-hydraulics combination chosen to provide optimal performance at the duty point, low energy use, and high reliability, thanks to the use of the materials best suited to the type of application.

The entire range is available in the DRY version, which requires no external liquid inputs and allows the electric pump to operate continually (S1 duty) even if partially submerged or installed in a dry chamber.

Operating ranges



Construction materials

Motor casing	Cast iron EN-GJL-250
Impeller	Cast iron EN-GJL-250
Nuts and bolts	Stainless steel - Class A2-70
Standard gaskets	NBR rubber
Drive shaft	AISI 431 stainless steel
Cutting knife	Chromium steel [ZUG GR only]
Painting	Bicomponent epoxy paint with high resistance to corrosion

Operating specifications

Max operating temperature	40°C
pH of treated liquid	6 ÷ 14
Viscosity of treated liquid	1 mm^2/s
Max immersion depth	20 m
Density of treated liquid	max 1.1 Kg/dm^3
Max acoustic pressure	<70 dB
Max starts per hour	20 [0 ÷ 10 kW], 15 [10 ÷ 160 kW] , 10 [≥ 160 kW]

Range characteristics

ZUG **V**

VORTEX

- Cast iron vortex impeller
- Full free passage

- Biological liquids and wastewater
- Suitable for civil pumping stations and lifting wastewaters in livestock farms and industrial plants

Power supply	380/400 V ~3
Frequency	50 Hz
Power	3 ÷ 45 kW
Poles	2 / 4
Discharge vertical	-
horizontal	DN65 ÷ DN150
Free passage	max 125 mm
Max flow rate	110.0 l/s
Max head	75.0 m

ZUG **OC**

OPEN CHANNEL

- Channel impeller in cast iron
- Large free passage

- Liquids containing suspended solids
- Suitable for sewage and drainage systems and first rainfall tanks

Power supply	380/400 V ~3
Frequency	50 Hz
Power	3 ÷ 355 kW
Poles	2 / 4 / 6 / 8 / 10 / 12
Discharge vertical	-
horizontal	DN80 ÷ DN600
Free passage	max 220 x 110 mm
Max flow rate	1600.0 l/s
Max head	100.0 m

ZUG **CP**

CHOPPER

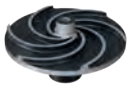
- Multi-Channel Impeller in cast-iton with special Molib-Tech™ treatment
- Chopper sistem able to cut particles of any shape of proportion

- Liquids containing solid parts and fibres
- Suitable for sewage, lifting of not strained black water

Power supply	380/400 V ~3
Frequency	50 Hz
Power	3 ÷ 355 kW
Poles	2 / 4 / 6 / 8 / 10 / 12
Discharge vertical	-
horizontal	DN80 ÷ DN600
Free passage	max 220 x 110 mm
Max flow rate	1600.0 l/s
Max head	100.0 m

ZUG **GR**

GRINDER



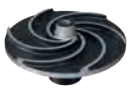
- Cast iron multi-channel open impeller
- Grinding system with rotary knife

- Soiled liquids containing fibres and filaments
- Suitable for professional and heavy-duty applications

Power supply	380/400 V ~3
Frequency	50 Hz
Power	4 ÷ 11 kW
Poles	2
Discharge vertical	-
horizontal	DN50 ÷ G 2"
Free passage	-
Max flow rate	8.0 l/s
Max head	57.0 m

ZUG **HP**

ALTA PREVALENZA

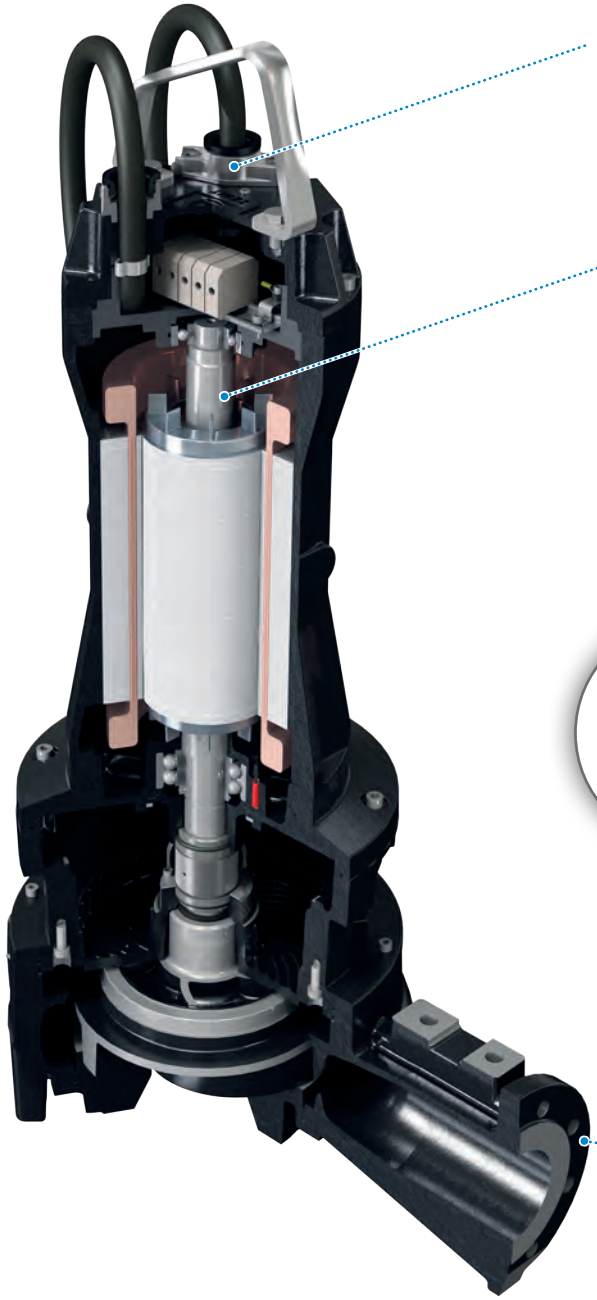


- Cast iron multi-channel open impeller
- High manometric head

- Clean, rain and seepage water
- Suitable for applications in agriculture, irrigation and fish farming

Power supply	380/400 V ~3
Frequency	50 Hz
Power	4 ÷ 11 kW
Poles	2
Discharge vertical	-
horizontal	DN50 ÷ G 2"
Free passage	max 10 mm
Max flow rate	11.0 l/s
Max head	61.0 m

UNIQA® Series



CABLE GLAND

On request the cable entry point can be sealed with resin, preventing all possibility of water seeping inside the motor cover even if the cable's outer sheath is torn.

DRIVE SHAFT

Drive shaft in AISI 431 stainless steel.
DUPLEX steel shaft available as optional.

BEARINGS

Oversized bearings to guarantee 50000 working hours.

MECHANICAL SEALS

Two silicon carbide mechanical seals in the oil sump and V-rings. The oil can be checked and changed even with the pump vertical, using plugs on the outside of the mount.

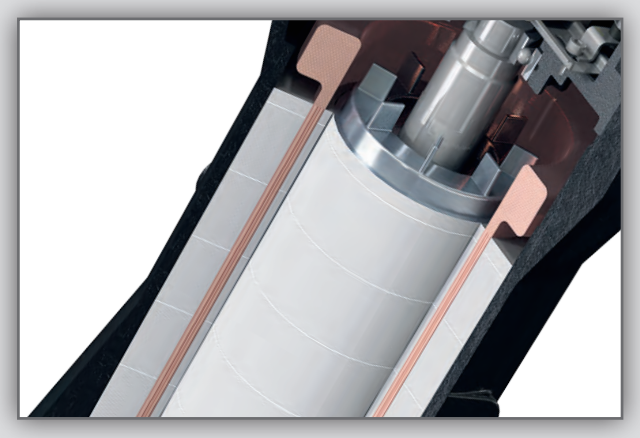
PROBE

Possibility to equip the pump with many different optional probes to detect any anomaly.
Humidity probe to detect water in the mechanical-seal oil-chamber standard also for ATEX version.

FLANGES

Various flange drilling are available, including ANSI and BS.

Highlight



HIGH EFFICIENCY MOTOR

Motor designed with the aim of achieving the PREMIUM (IE3) efficiency class according to EN 6034-30. Operation guaranteed in S1 mode even in water at a temperature of 60° C or above.
Generally, since energy costs are higher than other expenses, continuous duty provides higher savings compared to a conventional system and the initial investment in a high efficiency systems is soon recouped, without considering the considerable advantages in terms of environmental footprint.

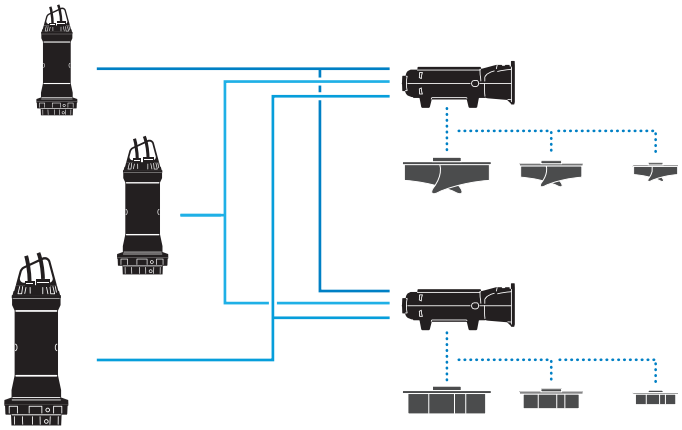
UNIQA® Series

CLOGGING-PROOF HYDRAULICS

All hydraulic components are designed for the highest efficiency and the best performance while still ensuring ample free passages.
Impellers are available in cast-iron, Stainless steel, bronze/alluminium and Molib-tech™, this last is an innovative treatment that assures a much longer life compared to traditional ceramic paint.
All models with channel hydraulics feature an axial adjustment system allowing the impeller clearance to be restored, to maintain performance even further to normal wear and tear.
The ACS (Anti-Clogging System) consists of a spiral groove of suitable depth cut into the diffuser plate.
This prevents clogging of the impeller even with highly fouled liquids, allows stringy items to be pulled out or unwound and renders the hydraulics clogging-proof.

MODULARITY

The UNIQA series features a modular design in which the motor and hydraulics are perfectly coupled to each other.
This characteristic allows the creation of particularly reliable units, thanks to the use of materials specific for the intended type of liquid and achievement of top performances, since every component is optimised for the duty point and of suitable size to guarantee minimal energy use.



PATENTED COOLING SYSTEM

The motor is cooled by means of a patented internal "closed circuit" system.
This ensures that there is no adulteration of the fluid used even if contaminated liquid accidentally enters the oil sump due to wear of the first mechanical seal.
Continuous duty is ensured even in dry and partially submerged working conditions.

ATEX

On request available ATEX version of the pump suitable for installation in potentially explosive atmosphere.
Humidity probe to detect water in the mechanical-seal oil-chamber is standard also for ATEX version.

II 2G Ex db k IIB T4 / II 2D Ex tb IIIC T135°C