ABS submersible propeller pumps VUP-ME4 to ME6

50 Hz

ABS submersible propeller pumps of the VUP series are used where larger water volumes must be pumped up to relatively low heads (up to approx. 10 m).

They are ideal for storm water pumping stations, for polder dewatering, for storm water protection, for irrigation and dewatering, for cooling and process water and for a multitude of other applications.

Construction

- The water-tight fully flood-proof motor and the pump section form a compact and robust unit
- Water pressure sealed connection chamber, with two stage cable entry, protected against excessive cable tension and bending
- Bimetallic thermal sensors in the stator which open at 140 °C
- Rotor and rotor shaft dynamically balanced, upper and lower bearings lubricated-for-life, maintenance-free
- Optimum motor cooling by directing the medium being pumped over the motor
- Double shaft sealing
- Lower sealing by means of a silicon carbide mechanical seal, independent of the direction of rotation
- Upper mechanical seal in silicon carbide in case of motor size ME4 and in carbon/chrome steel in case of motor size ME5 and ME6, independant of direction of rotation
- Separation chamber for ME4 and ME5 and oil chamber in case of ME6 with seal monitor sensor to indicate water leakage through mechanical seal
- Hydraulic parts with axial propeller with 3 or 4 adjustable propeller blades or 3-blade propeller in the new Skew design and inlet diffuser on discharge side
- These pumps are available both in standard and explosion-proof versions in accordance with international standards e.g. Ex d IIB T4/ATEX II 2Gk

Motor

Water pressure sealed high efficiency motors, (3-phase, squirrel cage induction motors) with efficiency class II, from 15 to 250 kW and, depending on hydraulic requirements as 4- to 12-pole versions

Voltage: 400 V3~, 50 Hz (other voltages on request)
Insulation class: H (motor winding protected by temperature sensor 140 °C)
Protection type: IP68
Start-up: direct on line (DOL), soft starter or star-delta

Hydraulics

You have the choice of the following hydraulics for the nominal pipe diameter 600 to 1400 mm.

For power demand beyond available range ME4 to ME6 please refer to technical data sheet VUP M8 and M9.

Hydraulics / Propeller type

VUP 0401	3-blades, adj.	VUP 0602	4-blades, adj.
VUP 0402	4-blades, adj.	VUP 0801	3-blades, adj.
VUP 0403	3-blades, fix.	VUP 0802	4-blades, adj.
VUP 0501	3-blades, adj.	VUP 1001	3-blades, adj.
VUP 0502	4-blades, adj.	VUP 1002	4-blades, adj.
VUP 0503	3-blades, fix.	VUP 1201	3-blades, adj.
VUP 0601	3-blades, adj.	VUP 1202	4-blades, adj.

adj. = adjustable; fix. = fixed (Skew design)

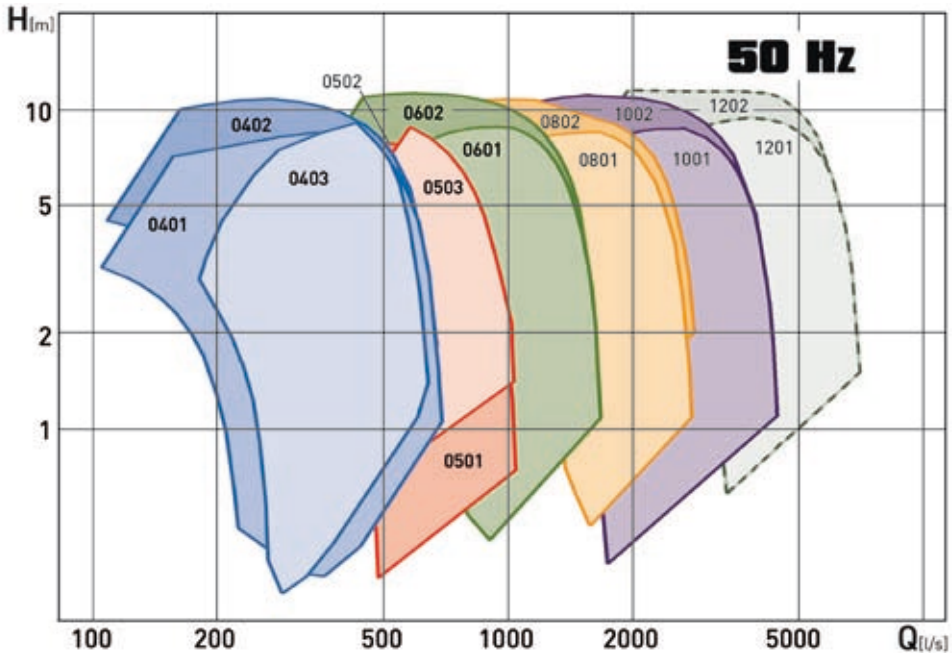
Pump selection

For pump selection please use our ABSEL programme
Duty point -→ Selection of hydraulics -→ Choice of motor

Hint

More detailed information like dimension drawings, electrical data, etc. is also available from the ABSEL CD.

Performance fields



Standard and options

Description	Standard	Option
Max. ambient temperature	40 °C	
Max. submergence depth	20 m	
Mains voltage	380...420 V/50 Hz (400 V/50 Hz ME6)	230 V (not all versions), 690 V/50 Hz
Voltage tolerance	± 10 % on 400 V	
Insulation class	H (140)	H (160)
Start-up	DOL, star-delta or soft starter	
Approval		Ex/ATEX
Cables	S1BN8-F	EMC shielded cables
Cable length	10 m	15 m, 20 m, other length on request
Mechanical seal (medium side)	ME4 to ME6 SiC-SiC (NBR)	SiC-SiC (Viton execution)
Mechanical seal (motor side)	ME4 SiC-SiC, ME5/6 carbon chrome steel	
O-rings	NBR	Viton
Preparation for lifting hoist	Lifting hoop	Eyelet bolts
Protective coating	Two component coating epoxy resin	Special coatings on request
Cathodic protection		Zinc anodes on request
Installation	Wet-well in steel pipe or concrete sump	
Motor cooling	By surrounding medium	
Moisture sensor motor housing	DI (sensor for moisture detection) (only ME6)	DI (sensor for moisture detection)
Moisture sensor separation chamber	DI (sensor for moisture detection) not for Ex	External DI for Ex(1

(1 Upon request for motors with Ex approbation the DI must be ordered additionally

Motor protection

X = Standard; O = Option; - = not possible

ME4 to ME6		Standard	Ex	FM
Winding	Bi-metallic switch	X	X	X
	Thermistor (PTC)	O	O	O
	PT 100	O	-	-
Seal protection	Separation chamber	X	O	X
	Motor housing	O (X only ME6)	X	O (X only ME6)
	Connection box	O (X only ME6)	O (X only ME6)	O (X only ME6)
Temperature	Bi-metallic switch	O (X only ME6)	O (X only ME6)	O (X only ME6)
bearing	Thermistor (PTC)	O	O	O
upper/lower	PT 100	O	O	O

Materials

Motor	Standard	Option
Connection chamber	EN-GJL-250	1.4470
Cooling/oil chamber	EN-GJL-250	1.4470
Motor housing	EN-GJL-250	1.4470
Motor shaft	1.4021	1.4462
Lifting gear		
Lifting hoop	EN-GJS-400-18	1.4470
Connection system		
Coupling ring	1.0446	1.4408

Hydraulics	Standard	Option
Diffuser	EN-GJL-250	1.4470
Inlet diffuser	EN-GJL-250	1.4470
Wear ring	1.4008	
Propeller hub	EN-GJS-400-18	1.4581
Propeller blades	1.4340	1.4581
Propeller cap	PUR	1.4581
Propeller (VUP 403/503)	2.0975.01	1.4581
Fasteners (med. contacted)	1.4401	