

ABS SUBMERSIBLE SEWAGE PUMPS

AFP-ME4 to ME6

50 Hz

Introduction

ABS submersible sewage pumps, series AFP-ME are suitable for clear and wastewater, for sewage with sludge containing solids and fibrous material.

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
- Blockage- and maintenance-free internal closed looped cooling system. Cooling medium: Glycol - water mixture
- Double shaft sealing
- Lower sealing by means of a silicon carbide mechanical seal, independent of the direction of rotation
- Upper mechanical seal (silicon carbide) in case of motor size ME4 and (carbon/chrome steel) in case of motor size ME5 and ME6, independent of direction of rotation
- Separation chamber with sensor for moisture protection to indicate water leakage through mechanical seal
- Hydraulic parts with various impeller options: 2- or 3-channel, open or closed, Contrablock or Vortex
- These pumps are available both in standard and explosion-proof versions in accordance with international standards e.g. EEx dII BT4/ATEX II 2Gk



Hydraulics

You have the choice of the following hydraulics in the range of DN 100 to DN 600 discharge:

Hydraulics / Impeller type

AFP 1001	2	AFP 2571	3 (Contrabl.)
AFP 1036	6	AFP 3001	2
AFP 1077	3 (Contrablock)	AFP 3002	2
AFP 1501	2	AFP 3003	2
AFP 1552	3 (Contrablock)	AFP 3071	5 (Contrabl.)
AFP 1575	3 (Contrablock)	AFP 3501	4
AFP 2001	2	AFP 3502	4
AFP 2002	2	AFP 4001	2
AFP 2073	5 (Contrablock)	AFP 4004	4
AFP 2501	2	AFP 5001	5
		AFP 6003	5

1 = 1-channel, closed; 2 = 2-channel, closed; 3 = 2-channel, open, 4 = 3-channel, closed; 5 = 3-channel, open; 6 = Vortex

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

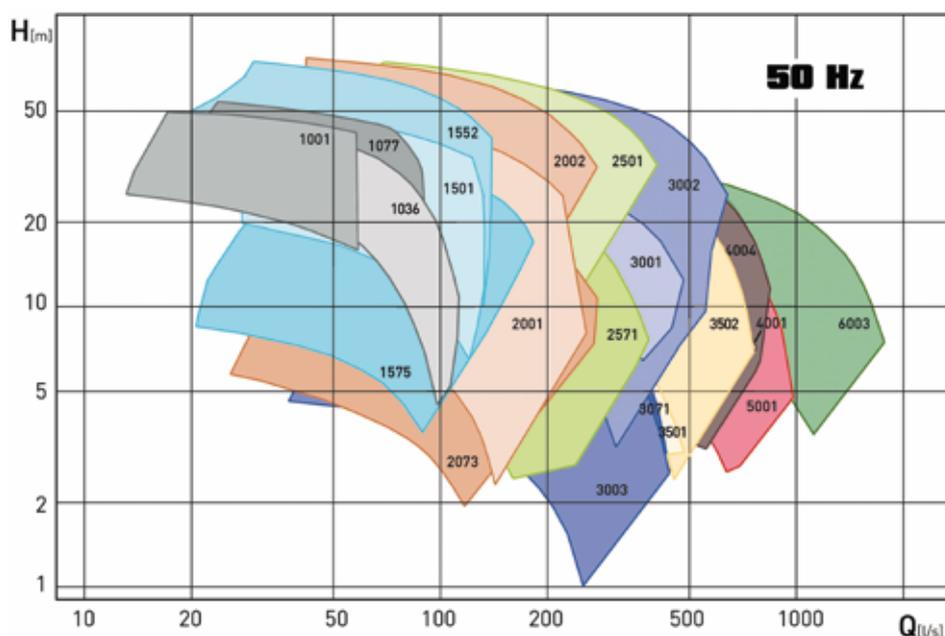
Voltage: 400 V3~, 50 Hz (other voltages on request)

Insulation class: F (stator wound and impregnated according to class H)

Protection type: IP68

Start-up: direct on line (DOL), soft starter or star-delta

Performance fields



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.

Standard and options

Description	Standard	Option
Max. ambient temperature	40 °C	
Max. submergence depth	20 m	
Mains voltage	380...420 V/50 Hz	230 V (not all versions), 690 V/50 Hz
Voltage tolerance	± 5% (± 10% ME6)	
Insulation class	F (stator wound and impregnated to class H)	
Start-up	DOL, star-delta or soft starter	
Approval		EEx/ATEX
Cables	H07RN-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	Dry-well vertical/horizontal
Motor cooling	Internal closed looped cooling system	
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 EEx	External DI for EEx ¹

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

Motor protection

ME4 to ME6		Standard	EEx	FM
Winding	Bi-metallic switch	X	X	X
	Thermistor (PTC)	0	0	0
	PT 100	0	0	-
Seal protection	Separation chamber	X	0	X
	Motor housing	0 (X only ME6)	X	0 (X only ME6)
	Connection box	0 (X only ME6)	0 (X only ME6)	0 (X only ME6)
Temperature bearing upper/lower	Bi-metallic switch	0 (X only ME6)	0 (X only ME6)	0 (X only ME6)
	Thermistor (PTC)	0	0	0
	PT 100	0	0	0

X = Standard; 0 = Option; - = not possible

Materials

Motor	Standard	Option	Hydraulics	Standard	Option
Connection chamber	EN-GJL-250	1.4460	Volute	EN-GJL-250	1.4460
Cooling chamber	EN-GJL-250	1.4460	Impeller	EN-GJL-250	1.4460
Cooling jacket	1.0036		Bottom plate (not for all vers.)*	EN-GJL-250	1.4460
Motor housing	EN-GJL-250		Shroud (only AFP 5001/6003)	EN-GJL-250	1.4460
Motor shaft	1.4021	1.4462	Wear ring (not for all vers.)**	EN-GJL-300	1.4581
Fasteners (med. contacted)	1.4401				
Lifting hoop	EN-GJS-400-18	1.4460			
Connection sys. (wet)	Standard	Option	Connection sys. (dry)	Standard	Option
Pedestal	EN-GJL-250	Non sparking	Support frame	1.0036	Galv. steel
Fastening elements	Galv. steel	St. steel			
Protective coating	Epoxy resin based				
Guide rail	Galv. steel	St. steel			
Pipe retainer	EN-GJS-400-18	1.4460			

* Hydraulic version: AFP-ME 1077, 1552, 1575, 2073, 2571, 3071

** Hydraulic version: AFP-ME 1001, 1501, 2001, 2002, 2501, 3001, 3002, 3003, 4001

