ABS submersible sewage pump XFP 100J - 501U

ABS submersible sewage pumps, series XFP are suitable for clear water and wastewater, for sewage containing solids and fibrous material.

Construction

- Energy saving premium efficiency motor in accordance with IE3 of IEC 60034-30 and NEMA Premium Efficiency.
- The water-tight, fully flood-proof motor and the pump section form a compact and robust unit, easy to clean and easy to service.
- Water pressure sealed connection chamber, with two stage cable entry, protected against excessive cable tension and bending.
- Bimetallic thermal sensors in the stators which open at 284 °F.
- Rotor and rotor shaft dynamically balanced, upper and lower bearings lubricated-for-life, maintenance-free.
- Triple shaft sealing.
- Upper and lower sealing by means of silicon carbide mechanical seal, independent of the direction of rotation.
- Inspection chamber with sensor for moisture protection to indicate water leakage through mechanical seal, also standard for ex-version, according to FM and CSA approval.
- Optional: Maintenance-free internal looped cooling system. Cooling medium: non toxic Glycol - water mixture.
- 2 or 3-channel Contrablock or 2- or 3-channel closed impeller designs.
- Standard in explosion-proof construction in accordance with international standards such as 500 Class I, Division 1, Groups C and D hazardous (classified) locations.

Hydraulics

You have the choice of the following hydraulics in the range of 4 to 20 in discharge:

Hydraulics / Impeller size

XFP 100J	CB2	XFP 250J	CB2
XFP 100J	CH2	XFP 250M	CH2
XFP 150M	CB2	XFP 300J	CB3
XFP 150J	CH2	XFP 300J	CH2
XFP 151J	CB2	XFP 300M	CH2
XFP 200J	CB2	XFP 301M	CH2
XFP 200J	CH2	XFP 351M	CH3
XFP 200M	CH2	XFP 400M	CH2
XFP 201J	CB2	XFP 501U	SK3

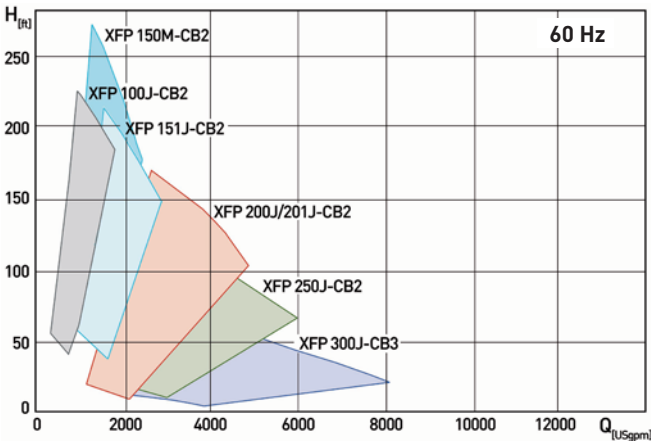
CB... = Contrablock, CH... = closed channel, SK = Skew;
last digit (2 or 3) = Number of impeller vanes

Motor

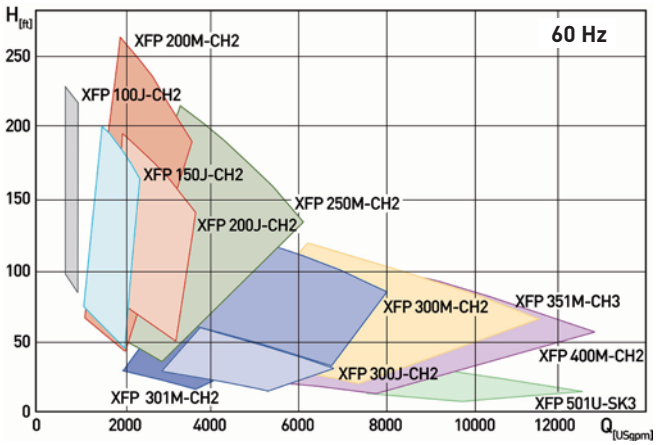
Water pressure sealed premium efficiency motors, (3-phase, squirrel cage induction motors), from 23 to 168 hp and, depending on hydraulic requirements as 4- to 10-pole versions.

Voltage: 460 V3~, 60 Hz (other voltages on request).
Insulation material: H (motor winding protected by temperature sensor 284 °F.
Temperature rise: According to class A.
Protection type: IP68.
Start-up: direct on line (DOL), soft starter or VFD.

Performance curves with Contrablock system



Performance curves with channel impeller



Standard and options

Description	Standard	Option
Max. ambient temperature	104 °F	140 °F
Max. submergence depth	65 ft	
Mains voltage	460 V/60 Hz	230 V, 380 V, 575 V, 600 V/60 Hz
Voltage tolerance	± 10 % at 460 V	
Insulation class	H (140)	H (160) (not for explosion-proof)
Start-up	DOL (direct on line), soft starter, or VFD	
Approval	NEC Class I, Division 1, Groups C and D	
Cables	S1BN8-F	EMC shielded cables
Cable length	33 ft	19 ft, 65 ft, other length on request
Mechanical seal (medium side)	SiC-SiC (NBR)	SiC-SiC (Viton execution)
Mechanical seal (motor side)	SiC-SiC	
O-rings	NBR	Viton
Preparation for lifting hoist	Lifting hoop	Lifting hoop in stainless steel
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	Cooling by surrounding medium	Closed loop cooling system
Moisture sensor motor housing		DI (sensor for moisture detection)
Moisture sensor inspection chamber	DI (sensor for moisture detection)	

Motor protection

X = Standard, O = Option

PE4 and PE5		Ex	Ex VFD drive
Winding	Bi-metallic switch	X	X
	Thermistor (PTC)	O	O
	PT 100	O	O
Seal protection	Inspection chamber	X	X
	Motor housing	O	O
	Connection box	O	O
Temperature bearing upper/lower	Bi-metallic switch	O	O
	Thermistor (PTC)	O	O
	PT 100	O	O

Materials

Motor	Standard	Option
Connection chamber	EN-GJL-250	
Cooling chamber	EN-GJL-250	
Cooling jacket	1.0036	
Motor housing	EN-GJL-250	
Motor shaft	1.4021	1.4462
Fasteners (medium contacted)	1.4401	
Lifting hoop	EN-GJS-400-18	1.4460
Hydraulics	**Standard**	**Option**
Volute	EN-GJL-250	
Impeller	EN-GJL-250	
Bottom plate (not all versions)	EN-GJL-250	
Shroud (only XFP 501)	EN-GJL-250	
Wear ring (not all versions)	EN-GJL-300	1.4581

Connection sys. (wet)	Standard	Option
Pedestal	EN-GJL-250	Non sparking
Fastening elements	Stainless steel	
Protective coating	Epoxy resin	
Guide rail	Galv. steel	Stainless steel
Pipe retainer	EN-GJS-400-18	1.4460
Connection sys. (dry)	**Standard**	**Option**
Support frame	1.0036	Galv. steel

Material comparison Europe	USA
EN 1561; EN-GJL-250	ASTM A48; Class 35 B
EN 1563; EN-GJS-400-18	ASTM A536; 60-40-18
1623-2; 1.0036; S235JRG1	ASTM / AISI A283 (C)
1.4021	ASTM / AISI 420
1.4401; 1.4460	ASTM / AISI 316; 329

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