



PRODUCT FEATURES



High Solids Epoxy Coating

The film thickness of High Solids Epoxy Coating can be greater than 100 μm. This heavy coating provides good resistance to salty sea water, industry wastewater and chemical fluid. The coating can form an anti-corrosion layer on metal surface, which reduce speed of corrosion.



Epoxy Cable Base

An epoxy resin seal cable base prevents moisture from entering the motor through the core wires.



Mechanical Seal

A double mechanical seal consists of two seals arranged in a series. Superior abrasion resistant mechanical seal manufactured with silicon carbide to ensure the best seal effect.



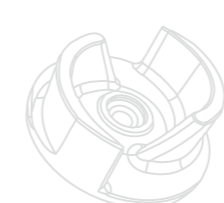
Auto-cut Protector

The Auto-cut Protector will be activated and cut the power off automatically if motor run in abnormal electric current or temperature. The Protector can revert when the motor temperature returns to normal. Auto-cut Protector is a regular component for pump which power is below 10HP.



High Efficiency Dry Motor

All stator coils need to be treated with insulating varnish procedure to achieving the best insulation, efficiency and durability.



AF **50Hz**
SERIES
SUBMERSIBLE SEWAGE
WASTEWATER PUMPS



Professionalism • Innovation • Service • Commitment
HCP PUMP MANUFACTURER CO., LTD.
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Distributor:

DAFEN5-1912



FEATURES

- Pump body is made of casting iron and with high solids epoxy coating which make pump firm, reliable, durable and long service life.
- Triangular handle is designed for easy handling on guide rail system (model above 7.5HP).
- An oil lifter is located in the oil chamber, which ensure the lubrication of mechanical and extend the service life of pump.
- A Food Grade Lubricant is filled in mechanical seal chamber. The Lubricant meets standards, such as FDA, REACH and so on. This lubricant is toxicant free, eco-friendly, and low impact on agriculture & aquaculture farming.
- Non-clogging impeller designs :

U Type Vortex Impeller	P Type Open Impeller	E Type Channel Impeller
		
The U type non-clogging impeller produces a vortex (whirlpool effect) which allow slurry, long fibrous materials and solid waste to pass through, without contact with the impeller.	The P type impeller is a semi-open impeller which come with single or two vanes. The impeller is excellent to use with waste materials to prevent from clogging.	Enclosed channel impeller features high efficiency, large capacity, large solid passage and non-clogging.

APPLICATIONS

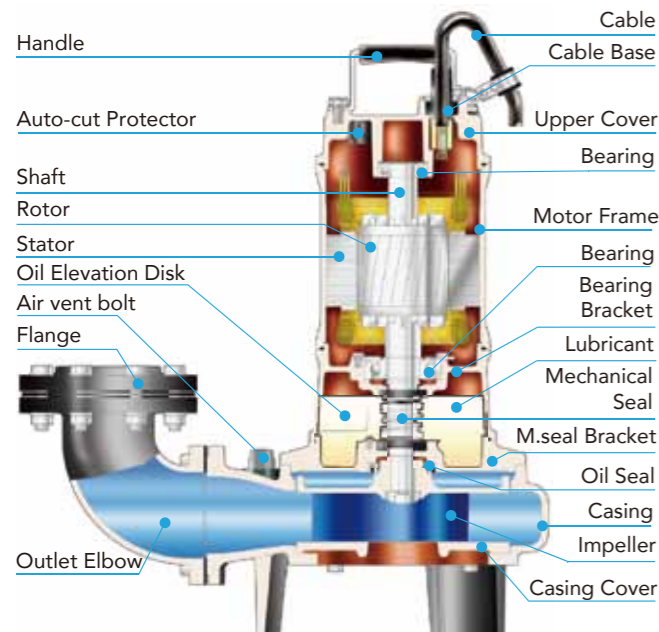
- Residential building, hospital, commercial building and household usage.
- Livestock farming, pig farming, dairy farming and sewage treatment.
- Food industry, pulp and paper industry, mining, dyeing and finishing factory, leather factory, steel manufacturer, electronics industry and wastewater treatment.
- Hydraulic engineering and flood control.
- Sanitary sewer pumping.

PRODUCT NOMENCLATURE

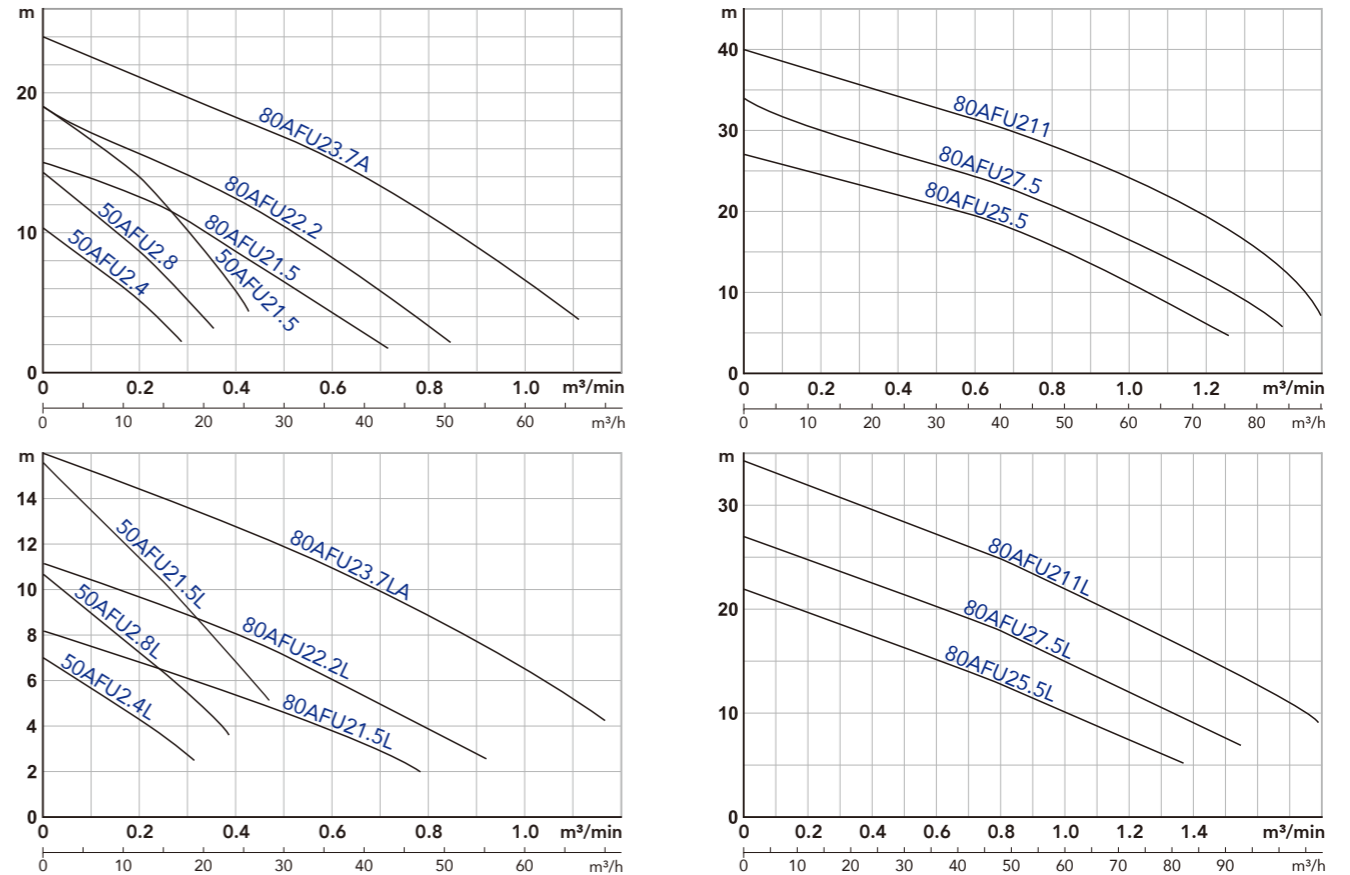
80	AF	P	2	1.5
Discharge mm	Type	Impeller type (U/P/E)	Pole	kW
AF	16	50		
Type	Discharge inch	HP		

SPECIFICATIONS (Discharge 50~100mm)

Item	Description
Limits of Use	Liquid Temp.: 0~40°C (32~104°F) Applications: Wastewater • Sewage • Industrial Wastewater
Type	Frequency: 50Hz
	Motor: 2P (3000rpm) / 4P (1500rpm) • Dry Motor
	Insulation: Class B (0.5~1HP) • Class F (2~5HP) • Class H (7.5~15HP)
	Protection: IP68
	Protector: Auto-cut (0.5~10HP) • MTS & MS (15HP)
	Bearing: Ball type
	M.seal: Double M.seals
	Impeller: Vortex (U) • Open (P) • Channel (E)
	Upper Cover: FC200
	Motor Frame: FC200
Material	Shaft: SUS410 (2P : 0.5~1HP) SUS403 (2P : 2~10HP • 4P : 0.5~5HP) SUS420J2 (2P : 15HP • 4P : 7.5~10HP)
	M.seal: CA/CE & SiC/SiC
	Casing: FC200
	Impeller: FC200
	Cable: VCT/H07RN-F/SJOW/SOW
Optional	Pumps can be customized to fit specifications Floating Switch (2P : 0.5~3HP • 4P : 0.5~2HP)



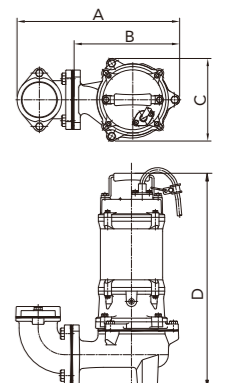
PERFORMANCE CURVES



PERFORMANCE SPECS.

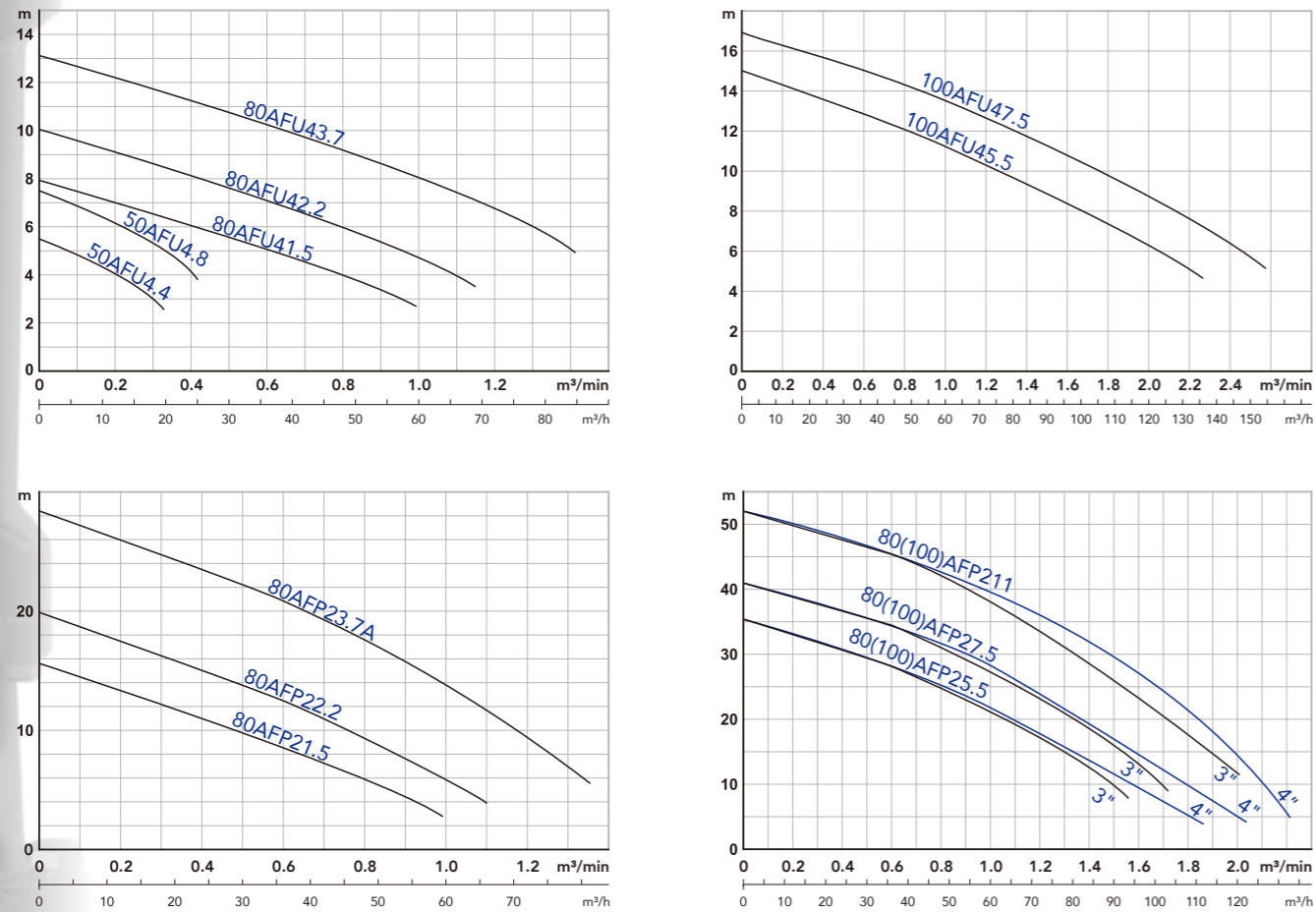
※Start Method : Y-D= STAR-DELTA.
The listed weight is not including cable and discharge.

Pole	Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Standard		Solid Passage mm	Weight kg		Dimensions mm				
							m³/min	m³/h		1Ø	3Ø	A	B	C	1Ø	3Ø
2P	50AFU2.4	0.5 (0.4)	2" (50)	1/3	Capacitor Direct	6	0.15	9	35	19	18	235	-	154	417	417
	50AFU2.8	1 (0.75)	2" (50)	1/3	Capacitor Direct	8	0.2	12	35	20	19	235	-	154	417	417
	50AFU21.5	2 (1.5)	2" (50)	1/3	Capacitor Direct	14	0.2	12	35	33	29	288	-	202	532	477
	80AFU21.5	2 (1.5)	3" (80)	1/3	Capacitor Direct	8.5	0.4	24	50	35	32	397	260	202	574	519
	80AFU22.2	3 (2.2)	3" (80)	1/3	Capacitor Direct	12.5	0.4	24	50	38	34	397	260	202	601	519
	80AFU23.7A	5 (3.7)	3" (80)	3	Direct	16.5	0.5	30	50	-	46	481	286	222	-	573
	80AFU25.5	7.5 (5.5)	3" (80)	3	Direct	19.5	0.6	36	50	-	68	501	309	258	-	665
	80AFU27.5	10 (7.5)	3" (80)	3	Direct	24	0.6	36	50	-	74	501	309	258	-	665
	80AFU211	15 (11)	3" (80)	3	Y-D	31.5	0.6	36	50	-	85	501	309	258	-	705
	50AFU2.4L	0.5 (0.4)	2" (50)	1/3	Capacitor Direct	4	0.2	13.2	50	20	19	307	201	164	447	447
	50AFU2.8L	1 (0.75)	2" (50)	1/3	Capacitor Direct	6	0.25	15	50	22	21	307	201	164	447	447
	50AFU21.5L	2 (1.5)	2" (50)	1/3	Capacitor Direct	10	0.25	15	50	34	30	288	-	202	562	507
	80AFU21.5L	2 (1.5)	3" (80)	1/3	Capacitor Direct	4.5	0.5	30	76	38	34	402	265	221	626	571
	80AFU22.2L	3 (2.2)	3" (80)	1/3	Capacitor Direct	7	0.5	30	76	40	36	402	265	221	653	571
	80AFU23.7LA	5 (3.7)	3" (80)	3	Direct	11	0.6	36	76	-	48	481	286	235	-	625
	80AFU25.5L	7.5 (5.5)	3" (80)	3	Direct	13	0.8	48	76	-	70	506	314	273	-	717
80AFU27.5L	10 (7.5)	3" (80)	3	Direct	17.5	0.8	48	76	-	76	506	314	273	-	717	
80AFU211L	15 (11)	3" (80)	3	Y-D	24.5	0.8	48	76	-	87	506	314	273	-	757	

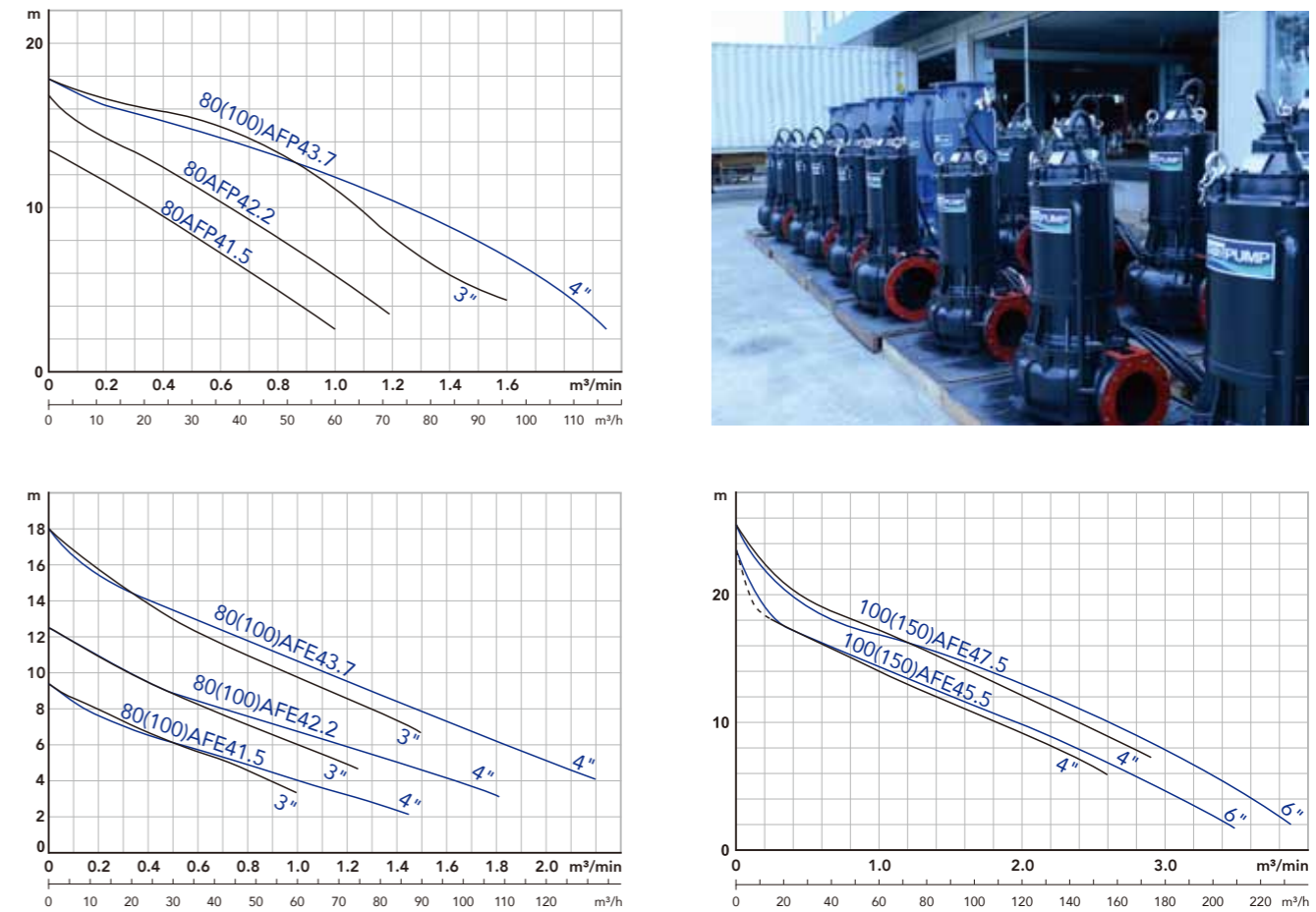




PERFORMANCE CURVES



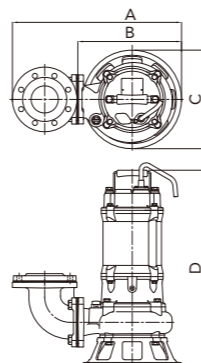
PERFORMANCE CURVES



PERFORMANCE SPECS.

※Start Method : Y-D= STAR-DELTA.
The listed weight is not including cable and discharge.

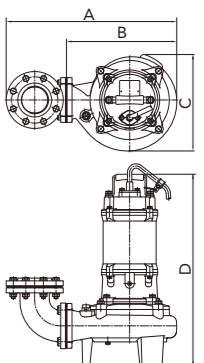
Pole	Model	Output HP(kW)	Discharge Inch(mm)	Phase	Start Method	Head m	Standard		Solid Passage mm	Weight kg		Dimensions mm					
							m³/min	m³/h		1Ø	3Ø	A	B	C	D		
4P	50AFU4.4	0.5 (0.4)	2" (50)	1/3	Capacitor Direct	3.5	0.25	15	50	30	28	347	241	204	526	526	
	50AFU4.8	1 (0.75)	2" (50)	1/3	Capacitor Direct	5	0.3	18	50	30	29	347	241	204	526	526	
	80AFU41.5	2 (1.5)	3" (80)	1/3	Capacitor Direct	5	0.6	36	76	46	46	447	305	260	697	620	
	80AFU42.2	3 (2.2)	3" (80)	3	Direct	7	0.6	36	76	-	55	532	340	288	-	653	
	80AFU43.7	5 (3.7)	3" (80)	3	Direct	10	0.6	36	76	-	65	532	340	288	-	693	
	100AFU45.5	7.5 (5.5)	4" (100)	3	Direct	11	1.0	60	100	-	96	615	393	337	-	813	
2P	100AFU47.5	10 (7.5)	4" (100)	3	Direct	13.5	1.0	60	100	-	105	615	393	337	-	853	
	80AFP21.5	2 (1.5)	3" (80)	1/3	Capacitor Direct	8.5	0.6	36	35	37	33	417	275	260	576	603	
	80AFP22.2	3 (2.2)	3" (80)	1/3	Capacitor Direct	12.5	0.6	36	35	40	35	417	275	260	521	521	
	80AFP23.7A	5 (3.7)	3" (80)	3	Direct	20.5	0.6	36	32	-	48	498	305	290	-	578	
	80(100)AFP25.5	7.5 (5.5)	3" (80) 4" (100)	3	Direct	28	0.6 1.0	36 60	30	-	75	565 596	373	345	-	689	
	80(100)AFP27.5	10 (7.5)	3" (80) 4" (100)	3	Direct	34.5	0.6 1.0	36 60	30	-	81	565 596	373	345	-	689	
	80(100)AFP211	15 (11)	3" (80) 4" (100)	3	Y-D	45	0.6 1.0	36 60	30	-	91	565 596	373	345	-	729	



PERFORMANCE SPECS.

※The listed weight is not including cable and discharge.

Pole	Model	Output HP(kW)	Discharge Inch(mm)	Phase	Start Method	Head m	Standard		Solid Passage mm	Weight kg		Dimensions mm					
							m³/min	m³/h		1Ø	3Ø	A	B	C	D		
4P	80AFP41.5	2 (1.5)	3" (80)	1/3	Capacitor Direct	8	0.5	30	50	47	47	474	332	288	645	567	
	80AFP42.2	3 (2.2)	3" (80)	3	Direct	10	0.6	36	50	-	58	550	358	313	-	603	
	80(100)AFP43.7	5 (3.7)	3" (80) 4" (100)	3	Direct	14.5 11.5	0.6 1.0	36 60	50	-	67	550 581	358	313	-	643	
	80(100)AFE41.5	2 (1.5)	3" (80) 4" (100)	3	Direct	5	0.7 1.0	42 60	76	-	60	521 551	328	287	-	660	
	80(100)AFE42.2	3 (2.2)	3" (80) 4" (100)	3	Direct	7	0.8 1.0	48 60	76	-	60	521 551	328	287	-	660	
	80(100)AFE43.7	5 (3.7)	3" (80) 4" (100)	3	Direct	11	0.8 1.0	48 60	76	-	71	539 569	346	304	-	700	
	100(150)AFE45.5	7.5 (5.5)	4" (100) 6" (150)	3	Direct	14	1.0 1.5	60 90	76	-	110	653 713	430	374	-	786	
	100(150)AFE47.5	10 (7.5)	4" (100) 6" (150)	3	Direct	17	1.0 1.5	60 90	76	-	120	653 713	430	374	-	826	





100(150)AFE411/415



100(150)AFE422/430



AF-815A/820A



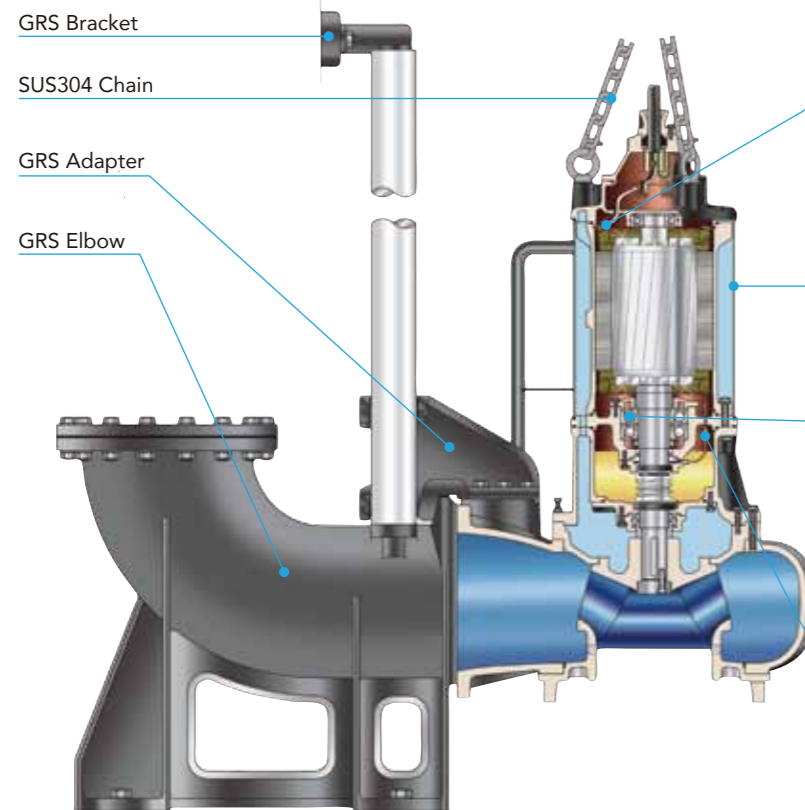
AF-1030S and above.



AF-1030S (come with GRS) and above.



Heavy Duty Submersible Pump



GRS Bracket

SUS304 Chain

GRS Adapter

GRS Elbow

PRODUCT NOMENCLATURE

AF	—	16	50
Type	Discharge	inch	HP

Motor Thermal Sensor(MTS)

MTS is a bimetal type motor protector, which is embedded in each phase of stator winding. When overheat is detected, the sensor (in winding) will trip and the rely switch (in control box) will cut off the power supply of pump. (MTS is a regular component of pump, 15HP and above).

Cooling Jacket

When pump is pumping, the water flow between cooling jacket and motor frame, and reduce temperature of motor frame. (Cooling Jacket is a regular component of pump model, AF-1030S and above)

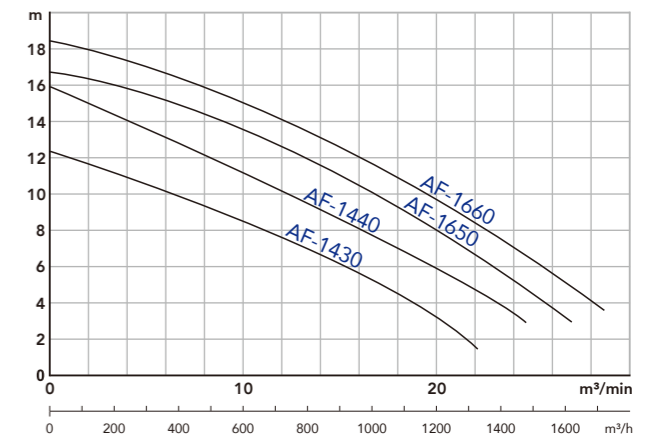
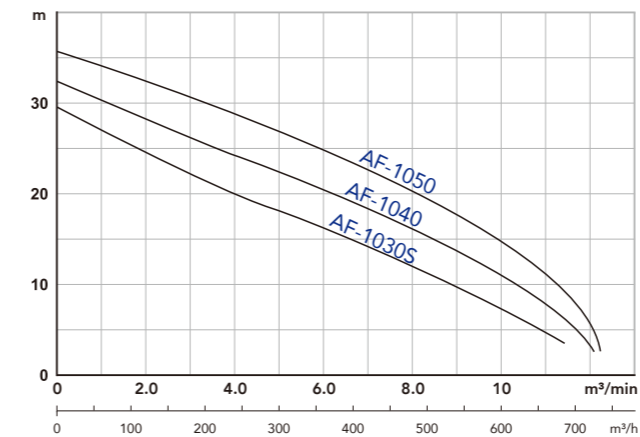
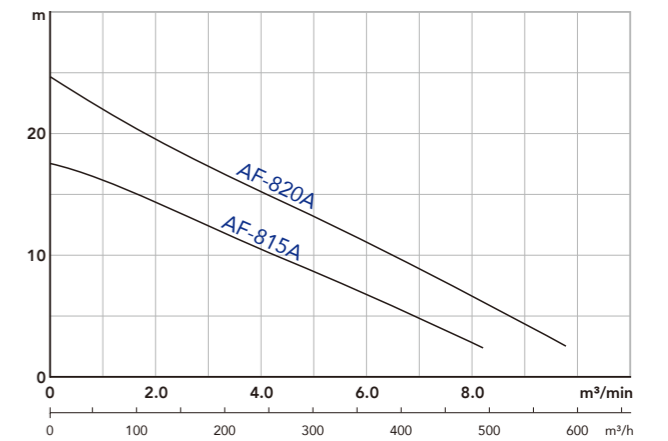
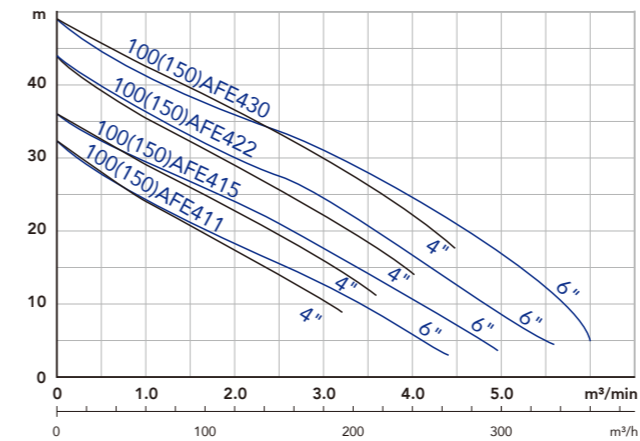
Bearing Temperature Sensor(BTS)

The BTS is a temperature sensor which is installed in the stationary of bearing. The BTS has to be connected to "indicator of temperature control" in control box. When the bearing temperature exceed the pre-setting temperature of "indicator of temperature control", the rely switch will cut off the power supply of pump. (BTS is an optional component of pump model, AF-1030S and above).

Moisture Sensor (MS)

MS is an electrode sensor of water intrusion in oil chamber. When water leakage is detected, the rely switch (in control box) will cut off the power supply of pump. (MS is a regular component of pump, 15HP and above). Thus, the damaged mechanical seal and lubricant can be replaced before water leakage occurs in motor housing. (MS is a regular component of pump, 15HP and above).

PERFORMANCE CURVES



SPECIFICATIONS (Discharge 150~400mm)

Item	Description
Limits of Use	Liquid Temp. 0~40°C (32~104°F)
Applications	Wastewater • Sewage • Industrial Wastewater
Frequency	50Hz
Motor	4P (1500rpm) /6P (1000rpm) • Dry Motor
Insulation	Class H
Protection	IP68
Protector	MTS & MS
Bearing	Ball type
M.seal	Double M.seals
Impeller	Channel (E)
Upper Cover	FC200
Motor Frame	FC200
Shaft	SUS420J2
M.seal	CA/CE & SiC/SiC • SiC/SiC & SiC/SiC
Casing	FC200
Impeller	FC200
Cable	VCT/PNCT/H07RN-F
Optional	Pumps can be customized to fit specifications

ACCESSORIES : ELBOW / GRS-GUIDE RAIL SYSTEMS



ELBOW

GRS

Pump can be installed with 90 ° Elbow with Flange outlet or GRS quick coupling system, for quick and safer for installation, removal, replacement and maintenance purpose.

PERFORMANCE SPECS.

※Start Method : Y-D= STAR-DELTA.

The listed weight is not including cable and discharge.

Pole	Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Head m	Standard		Solid Passage mm	Weight kg	Dimensions mm				
							m³/min	m³/h			A	B	C	D	
4P	100(150)AFE411	15 (11)	4" (100)	3	Y-D	24	1.0	60	76	164	702	458	400	908	
			6" (150)			15.5	2.5	150			741				
	100(150)AFE415	20 (15)	4" (100)	3	Y-D	29	1.0	60	76	176	702	458	400	908	
			6" (150)			21	2.5	150			741				
	100(150)AFE422	30(22)	4" (100)	3	Y-D	35.5	1.0	60	76	229	743	520	449	973	
			6" (150)			27.5	2.5	150			803				
	100(150)AFE430	40(30)	4" (100)	3	Y-D	42	1.0	60	76	250	743	520	449	1013	
			6" (150)			33.5	2.5	150			803				
	6P	AF-815A	15 (11)	8" (200)	3	Y-D	9.5	4.5	270	75	211	950	566	501	979
		AF-820A	20 (15)	8" (200)	3	Y-D	14	4.5	270	75	223	950	566	501	979
AF-1030S		30 (22)	10" (250)	3	Y-D	14	7.0	420	60	710	1273	786	676	1621	
AF-1040		40 (30)	10" (250)	3	Y-D	17	7.0	420	60	681	1273	786	676	1621	
AF-1050		50 (37)	10" (250)	3	Y-D	22	7.0	420	60	691	1273	786	676	1621	
6P	AF-1430	30 (22)	14" (350)	3	Y-D	6.5	14.0	840	120	828	1544	908	813	1763	
	AF-1440	40 (30)	14" (350)	3	Y-D	8.5	14.0	840	120	833	1544	908	813	1763	
	AF-1650	50 (37)	16" (400)	3	Y-D	7.5	20.0	1200	120	965	1558	908	813	1763	
	AF-1660	60 (45)	16" (400)	3	Y-D	9	20.0	1200	120	970	1558	908	813	1763	

