



# AF

SUBMERSIBLE SEWAGE  
WASTEWATER PUMPS

50Hz

make future flow

# FEATURES

- The cast iron AF Series Submersible Sewage/Wastewater Pumps are designed to transport sewage and wastewater reliably.
- The three types of non-clog impellers help the pump transport from fibrous liquid to liquid with solid particles without disruption.
- For models above 3.7kW, the triangular handle enhances safety and ease of installation.
- The AF series maintenance is made easier when paired with an elbow or Guide Rail System (GRS).

## PRODUCT NOMENCLATURE

$\frac{80}{\text{Discharge mm}}$	$\frac{\text{AF}}{\text{Type}}$	$\frac{\text{P}}{\text{Impeller type (U/P/E)}}$	$\frac{2}{\text{Pole}}$	$\frac{1.5}{\text{kW}}$
$\frac{\text{AF}}{\text{Type}}$	$\frac{16}{\text{Discharge inch}}$	$\frac{50}{\text{HP}}$		



## SPECIFICATIONS

(Discharge 50~150mm)

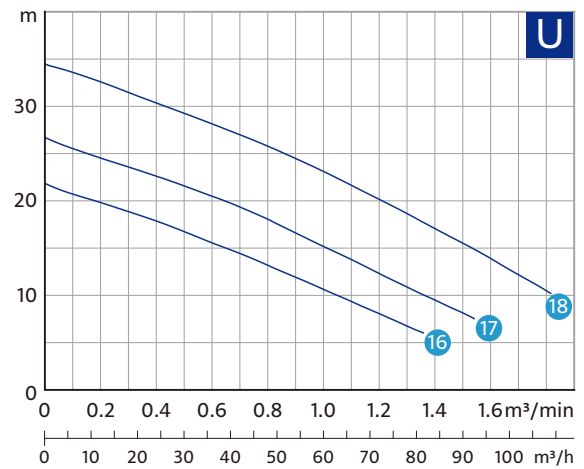
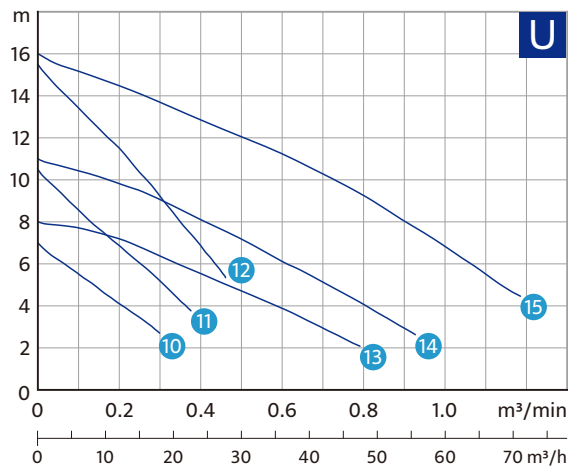
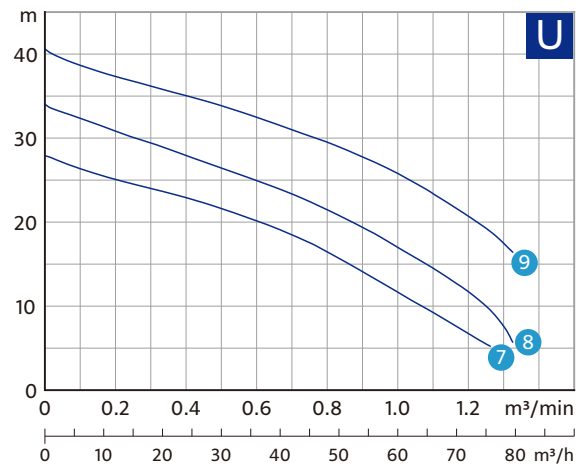
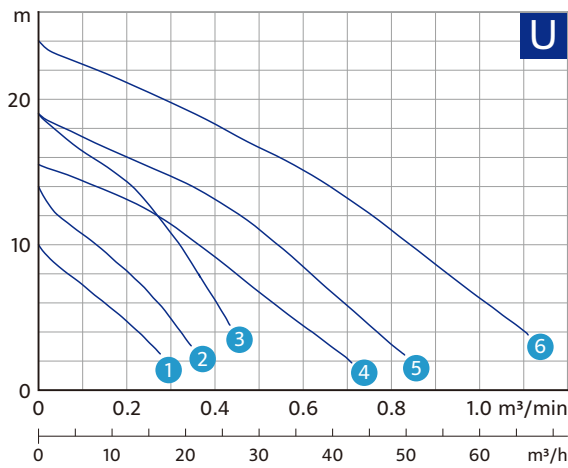
Spec.	Description
Liquid Temp.	0~40°C (32~104°F)
Motor	2P (3000rpm)/4P(1500rpm) • Dry Motor
Insulation	Class B • Class F • Class H
Protection	IP68
Protector	Auto-cut • MTS & MS
M.seal Type	Double M.seals
Impeller Type	Vortex (U) • Open (P) • Channel (E)
Item	Material
Upper Cover	FC200 / GG-20
Motor Frame	FC200 / GG-20
Shaft	SUS410 / X10Cr13 • SUS403 / X5Cr13 • SUS420J2 / X30Cr13
M.seal	CA/CE & SiC/SiC
Casing	FC200 / GG-20
Impeller	FC200 / GG-20 • SCS14 / G-X6CrNiMo1810
Cable	VCT/H07RN-F

## APPLICATIONS

- Commercial, industrial, and municipal water treatment including the food industry, pulp and paper industry, mining, dye and finishing factories, leather processing factories, steel manufacturing, and electronics industry
- Sewage and wastewater treatment plant
- Husbandry and poultry sewage management
- Flood control, hydraulic project, and pumping stations
- Residential and commercial buildings, hospitals, and household water use



# PERFORMANCE CURVES AND SPECS



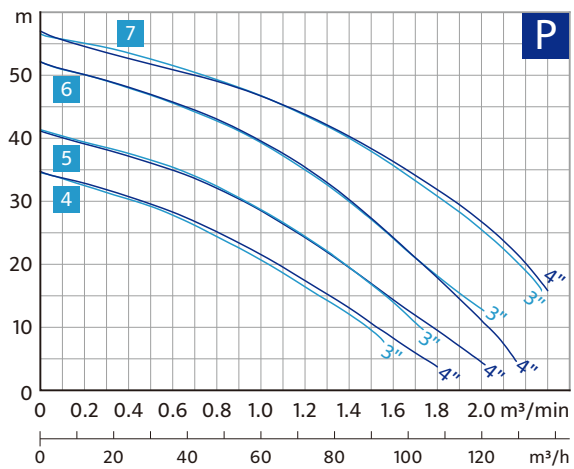
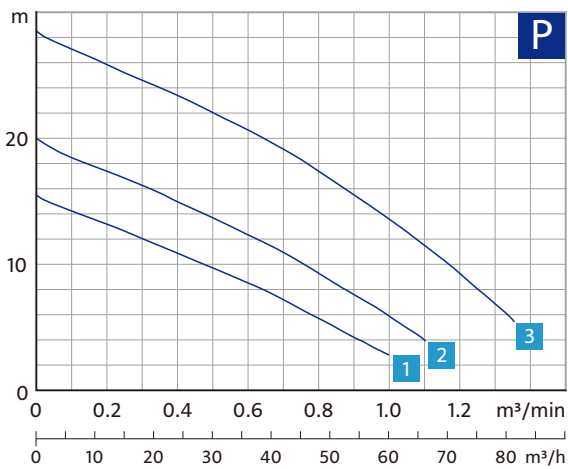
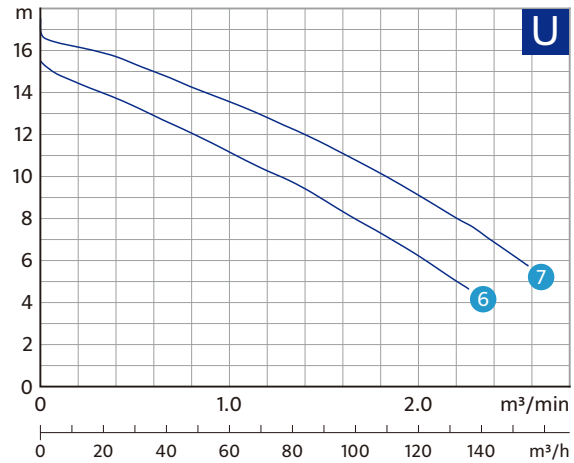
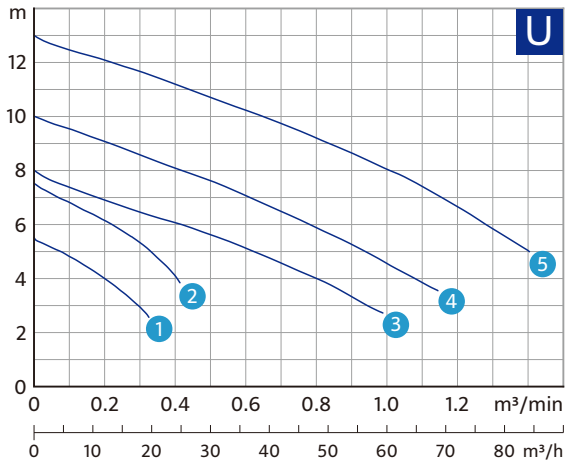
Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard	Max.	Solid Passage mm	Casing Type	Weight kg	
					m-m³/min				1Ø	3Ø
1 50AFU2.4	0.5(0.4)	2" (50)	1	Capacitor	6-0.15	10-0.3	35	V	19	18
			3	DOL						
2 50AFU2.8	1(0.75)	2" (50)	1	Capacitor	8-0.2	14-0.36	35	V	20	19
			3	DOL						
3 50AFU21.5	2(1.5)	2" (50)	1	Capacitor	14-0.2	19-0.45	35	V	33	29
			3	DOL						
4 80AFU21.5	2(1.5)	3" (80)	1	Capacitor	8.5-0.4	15.5-0.75	50	H	35	32
			3	DOL						
5 80AFU22.2	3(2.2)	3" (80)	1	Capacitor	12.5-0.4	19-0.85	50	H	38	34
			3	DOL						
6 80AFU23.7A	5(3.7)	3" (80)	3	DOL	16.5-0.5	24-1.15	50	H	-	46
7 80AFU25.5	7.5(5.5)	3" (80)	3	DOL	20-0.6	27.5-1.3	50	H	-	68
8 80AFU27.5	10(7.5)	3" (80)	3	DOL	24.5-0.6	34-1.35	50	H	-	74
9 80AFU211	15(11)	3" (80)	3	Y-D/DOL	32-0.6	40.5-1.5	50	H	-	85
10 50AFU2.4L	0.5(0.4)	2" (50)	1	Capacitor	4-0.2	7-0.38	50	H	20	19
			3	DOL						
11 50AFU2.8L	1(0.75)	2" (50)	1	Capacitor	6-0.25	10.5-0.42	50	H	22	21
			3	DOL						
12 50AFU21.5L	2(1.5)	2" (50)	1	Capacitor	10-0.25	15.5-0.47	50	V	34	30
			3	DOL						
13 80AFU21.5L	2(1.5)	3" (80)	1	Capacitor	4.5-0.5	8-0.85	76	H	38	34
			3	DOL						
14 80AFU22.2L	3(2.2)	3" (80)	1	Capacitor	7-0.5	11-0.95	76	H	40	36
			3	DOL						
15 80AFU23.7LA	5(3.7)	3" (80)	3	DOL	11-0.6	16-1.2	76	H	-	48
16 80AFU25.5L	7.5(5.5)	3" (80)	3	DOL	13-0.8	21.5-1.4	76	H	-	70
17 80AFU27.5L	10(7.5)	3" (80)	3	DOL	17.5-0.8	27-1.6	76	H	-	76
18 80AFU211L	15(11)	3" (80)	3	Y-D/DOL	25.5-0.8	34.5-1.85	76	H	-	87

※ Excludes Cable & Elbow Weight.

※ Casing type : V stands for Vertical and H for Horizontal.

※ Start Method : Y-D = STAR-DELTA

# PERFORMANCE CURVES AND SPECS



Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard	Max.	Solid Passage mm	Casing Type	Weight kg	
					m-m³/min				1Ø	3Ø
1 50AFU4.4	0.5(0.4)	2" (50)	1	Capacitor	3.5-0.25	5.5-0.4	50	H	30	28
			3	DOL						
2 50AFU4.8	1(0.75)	2" (50)	1	Capacitor	5-0.3	7.5-0.5	50	H	30	29
			3	DOL						
3 80AFU41.5	2(1.5)	3" (80)	1	Capacitor	5-0.6	8-1.1	76	H	46	46
			3	DOL						
4 80AFU42.2	3(2.2)	3" (80)	3	DOL	7-0.6	10-1.2	76	H	-	57
5 80AFU43.7	5(3.7)	3" (80)	3	DOL	10-0.6	13-1.5	76	H	-	66
6 100AFU45.5	7.5(5.5)	4" (100)	3	DOL	11-1.0	15.5-2.3	100	H	-	96
7 100AFU47.5	10(7.5)	4" (100)	3	DOL	13.5-1.0	17.5-2.6	100	H	-	105
1 80AFP21.5	2(1.5)	3" (80)	1	Capacitor	8.5-0.6	15.5-1.05	35	H	37	33
			3	DOL						
2 80AFP22.2	3(2.2)	3" (80)	1	Capacitor	12-0.6	20-1.15	35	H	40	35
			3	DOL						
3 80AFP23.7A	5(3.7)	3" (80)	3	DOL	20.5-0.6	28.5-1.4	32	H	-	48
4 80(100)AFP25.5	7.5(5.5)	3" (80)	3	DOL	28-0.6	35-1.6	30	H	-	75
		4" (100)			21.5-1.0	35-1.9				
5 80(100)AFP27.5	10(7.5)	3" (80)	3	DOL	35-0.6	41.5-1.75	30	H	-	81
		4" (100)			28-1.0	41.5-2.05				
6 80(100)AFP211	15(11)	3" (80)	3	Y-D/DOL	45-0.6	52.5-2.05	30	H	-	91
		4" (100)			39-1.0	52.5-2.2				
7 80(100)AFP215	20(15)	3" (80)	3	Y-D/DOL	49-0.8	57-2.25	30	H	-	101
		4" (100)			43.5-1.2	57-2.3				

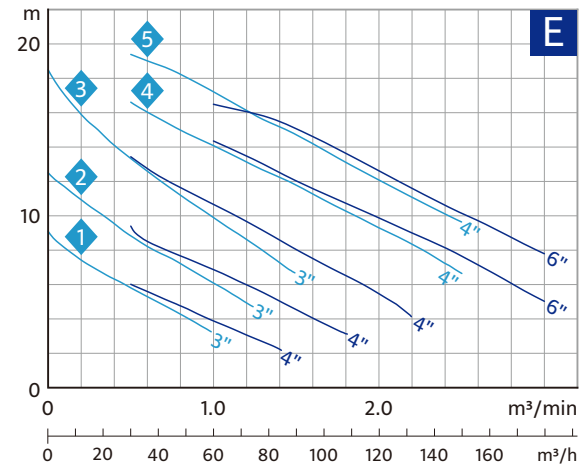
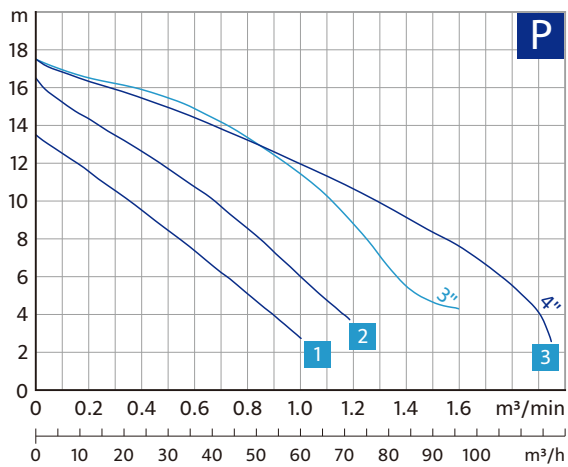
※ Excludes Cable & Elbow Weight.

※ Casing type : V stands for Vertical and H for Horizontal.

※ Start Method : Y-D = STAR-DELTA



## PERFORMANCE CURVES AND SPECS



Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard	Max.	Solid Passage mm	Casing Type	Weight kg	
					m-m³/min				1Ø	3Ø
1 80AFP41.5	2(1.5)	3" (80)	1	Capacitor	8-0.5	13.5-1.1	50	H	47	47
			3	DOL						
2 80AFP42.2	3(2.2)	3" (80)	3	DOL	10-0.6	16.5-1.2	50	H	-	60
3 80(100)AFP43.7	5(3.7)	3" (80)	3	DOL	14.5-0.6	17.5-1.6	50	H	-	70
		4" (100)			11.5-1.0	17.5-2.0				
1 80(100)AFE41.5	2(1.5)	3" (80)	1	Capacitor	5-0.65	9-1.1	76	H	66	61
		4" (100)	3	DOL	4.5-0.8	9-1.5				
2 80(100)AFE42.2	3(2.2)	3" (80)	3	DOL	7-0.8	12.5-1.35	76	H	-	66
		4" (100)			6.5-1.0	12.5-1.9				
3 80(100)AFE43.7	5(3.7)	3" (80)	3	DOL	11-0.8	18.5-1.6	76	H	-	74
		4" (100)			10.5-1.0	18.5-2.3				
4 100(150)AFE45.5	7.5(5.5)	4" (100)	3	DOL	14-1.0	23.5-2.6	76	H	-	110
		6" (150)			12-1.5	23.5-3.5				
5 100(150)AFE47.5	10(7.5)	4" (100)	3	DOL	17-1.0	25.5-2.9	76	H	-	120
		6" (150)			15-1.5	25.5-3.9				

※ Excludes Cable & Elbow Weight.

※ Casing type : V stands for Vertical and H for Horizontal.

# HEAVY DUTY SUBMERSIBLE PUMPS

- 5 GRS Bracket
- 6 SUS304 Chain
- 7 GRS Adapter
- 8 GRS Elbow



## 1 Motor Thermal Sensor(MTS)

MTS is a bimetal strip sensor embedded in each phase of the stator winding to sense motor from overheating and cause of electrical motor failure. MTS must be connected to control panel, and circuit is Normal : closed; Abnormal : open. MTS is a standard on 15HP and above models, optional on 2~10HP AF models.



## 2 Bearing Temperature Sensor(BTS)

BTS is a Resistance temperature sensor to measure temperature for lower stationary bearing. BTS must be connected to indicator of temperature control panel, and when the temperature is higher than a pre-settled temperature (100°C recommended), the Control Panel need to cut off power to prevent bearing damage. BTS is an optional component for AF-10xx ~ AF-16xx models.

## 3 Moisture Sensor (MS)

MS is Electrode sensor installed in the Mechanical seal chamber to detect water entering cause seals failure, and to prevent water penetrates motor to cause of electrical motor failure. MS must be connected to control panel, and circuit is Normal : open; Abnormal: closed. MS is a standard on 15HP and above models, optional on 2~10HP AF models.



※Taiwanese Patent No. M613130. All Rights Reserved.

## 4 Cooling Jacket

A cooling jacket enables a portion of liquid flows through around the motor frame to reduce motor frame temperature during operating. The Cooling Jacket is a standard on component for AF-10xx~ AF-16xx models.



## SPECIFICATIONS

(Discharge 100~400mm)

Spec.	Description
Liquid Temp.	0~40°C (32~104°F)
Motor	4P(1500rpm)/6P(1000rpm) • Dry Motor
Insulation	Class H
Protection	IP68
Protector	MTS & MS
M.seal Type	Double M.seals
Impeller Type	Channel (E)
Item	Material
Upper Cover	FC200 / GG-20
Motor Frame	FC200 / GG-20
Shaft	SUS420J2/X30Cr13
M.seal	CA/CE & SiC/SiC • SiC/SiC & SiC/SiC
Casing	FC200 / GG-20
Impeller	FCD500 / GGG-50 • FC200 / GG-20
Cable	VCT/PNCT or H07RN-F

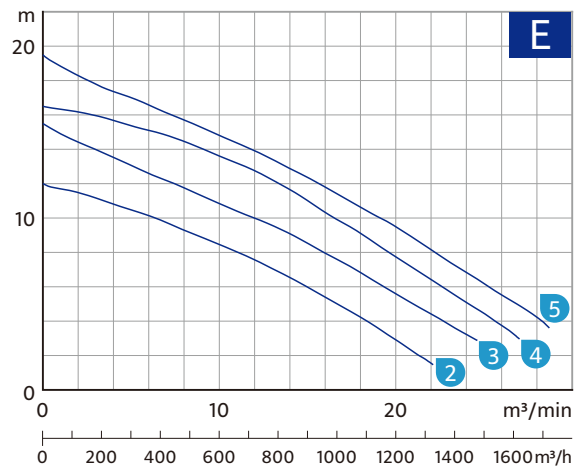
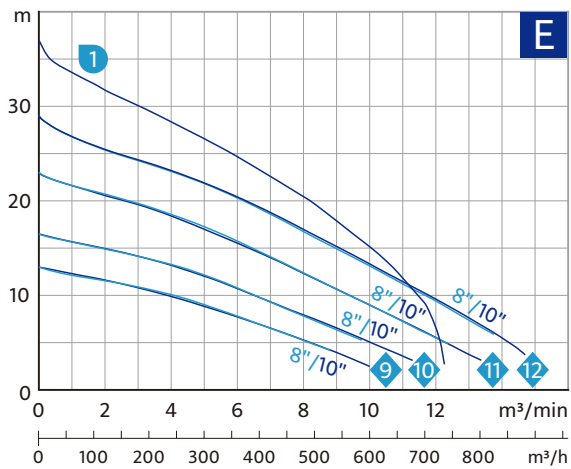
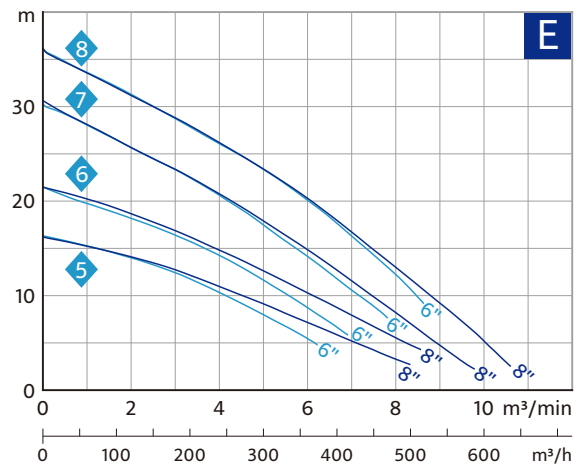
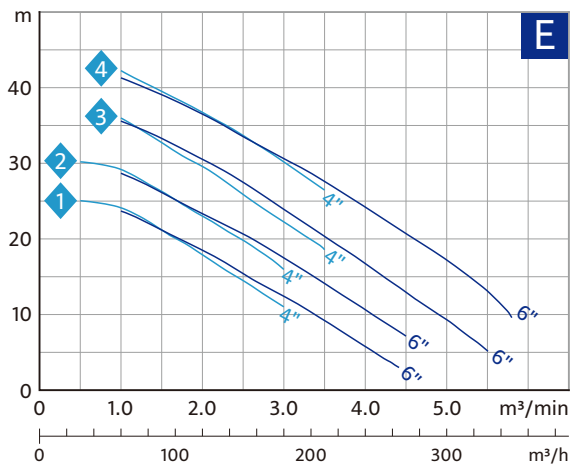
## ACCESSORIES :

### ELBOW / GRS-GUIDE RAIL SYSTEMS



AF pumps can be installed with 90° Elbow Flange outlet or GRS guide rail system, to have easier/safer installation or removal during replacement and maintenance.

# PERFORMANCE CURVES AND SPECS



Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard		Solid Passage mm	Casing Type	Weight kg
					m-m³/min				3Ø
1 100(150)AFE411	15(11)	4" (100)	3	Y-D/DOL	24-1.0	32-3.3	76	H	164
2 100(150)AFE415	20(15)	6" (150)			15.5-2.5	32-4.5			
3 100(150)AFE422	30(22)	4" (100)	3	Y-D/DOL	29-1.0	36-3.6	76	H	229
4 100(150)AFE430	40(30)	6" (150)			21-2.5	36-5.2			
5 150(200)AFE411	15(11)	6" (150)	3	Y-D/DOL	35.5-1.0	43-4.0	76	H	250
6 150(200)AFE415	20(15)	6" (150)			27.5-2.5	43-5.6			
7 150(200)AFE422	30(22)	4" (100)	3	Y-D/DOL	42-1.0	49-4.5	76	H	198
8 150(200)AFE430	40(30)	6" (150)			33.5-2.5	49-6.0			
9 200(250)AFE411	15(11)	8" (200)	3	Y-D/DOL	13-2.5	16-6.2	80	H	208
10 200(250)AFE415	20(15)	8" (200)			17-2.5	21-6.9			
11 200(250)AFE422	30(22)	8" (200)	3	Y-D/DOL	13.5-4.5	21.5-8.6	80	H	276
12 200(250)AFE430	40(30)	8" (200)			24-2.5	30.5-7.9			
1 100(150)AFE411	15(11)	8" (200)	3	Y-D/DOL	19-4.5	30.5-9.6	80	H	298
2 150(200)AFE411	15(11)	8" (200)			30-2.5	36.5-8.7			
3 150(200)AFE415	20(15)	8" (200)	3	Y-D/DOL	25-4.5	36.5-10.3	80	H	218
4 150(200)AFE422	30(22)	8" (200)			9.5-4.5	13-8.8			
5 150(200)AFE430	40(30)	8" (200)	3	Y-D/DOL	6.5-7.0	13-10.0	100x87	H	227
6 200(250)AFE411	15(11)	10" (250)			12.5-4.5	16.5-9.5			
7 200(250)AFE415	20(15)	10" (250)	3	Y-D/DOL	9-7.0	16.5-11.0	100x93	H	293
8 200(250)AFE422	30(22)	8" (200)			17.5-4.5	23-12.3			
9 200(250)AFE430	40(30)	8" (200)	3	Y-D/DOL	13.5-7.0	23-13.3	100x84	H	315
10 200(250)AFE411	15(11)	10" (250)			22.5-4.5	29-13.7			
11 200(250)AFE415	20(15)	10" (250)	3	Y-D/DOL	18.5-7.0	29-14.7	100x84	H	691
12 200(250)AFE422	30(22)	10" (250)			22-7.0	37-13			
1 100(150)AFE411	15(11)	10" (250)	3	Y-D/DOL	6.5-14	12-24	120	H	828
2 150(200)AFE411	15(11)	14" (350)			8.5-14	15.5-26			
3 150(200)AFE415	20(15)	14" (350)	3	Y-D/DOL	7.5-20	16.5-29	120	H	965
4 150(200)AFE422	30(22)	14" (350)			10.5-18	19.5-31			
5 150(200)AFE430	40(30)	16" (400)	3	Y-D/DOL			120	H	970
6 150(200)AFE411	15(11)	16" (400)							

※ Excludes Cable & Elbow Weight.  
 ※ Casing type : V stands for Vertical and H for Horizontal.  
 ※ Start Method : Y-D = STAR-DELTA



# PRODUCT FEATURES



## 1 Epoxy Cable Base

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



## 2 Auto-cut Protector

Automatic On / Off motor protector to prevent motor burn out due to high temperature and excess amperage draw. The Protector can revert when the motor temperature returns to normal. Auto-cut Protector is a standard component for pump 10HP or below.



## 3 High Efficiency Dry Motors

All stator coils are treated with insulating varnish procedures to achieve the best insulation, efficiency and durability.



## 4 Double Mechanical Seals

Superior abrasion resistant mechanical seal is manufactured with silicon carbide to ensure the best seal effect.



## 5 High Solids Epoxy Coating

High Solids Epoxy Coating greater than 100µm, provides resistance to salty sea water, industrial wastewater, and chemical fluids, creating an anti-corrosion layer on metal surface that prevents corrosion.



## U Type Vortex Impeller

Vortex impeller produces a vortex (whirlpool effect) allowing long fibrous materials and solid waste to pass through, without contact with the impeller.



## P Type Open Impeller

Open impeller (Single or Two Vanes) design. Impeller is excellent to use for waste materials to prevent clogging.



## E Type Channel Impeller

Enclosed channel impeller features high efficiency, large capacity, large solid passage and non-clogging.



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YouTube



Selection system



Catalog