



AF

SUBMERSIBLE SEWAGE
WASTEWATER PUMPS

60Hz

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 (3600rpm)/4P(1800rpm) • Dry Motor
Insulation	Class B • Class F • Class H
Protection	IP68
Protector	Auto-cut / MTS / MTS & MS
M.seal Type	Double M.seals
Impeller Type	Vortex (U) • Open (P) • Channel (E)

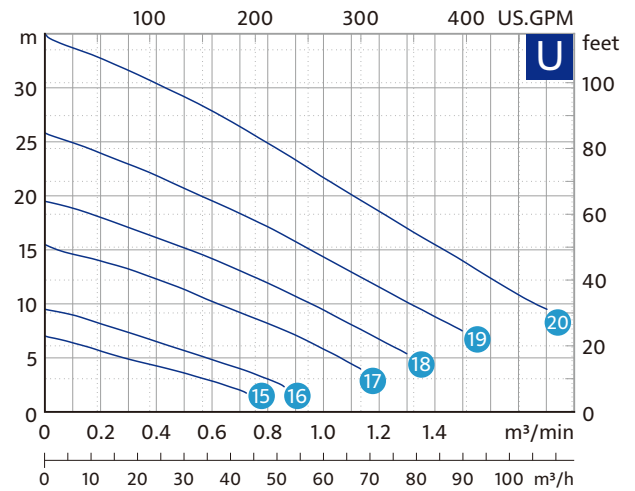
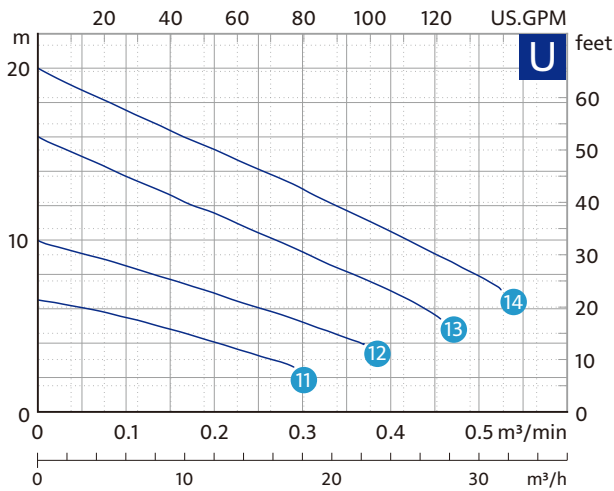
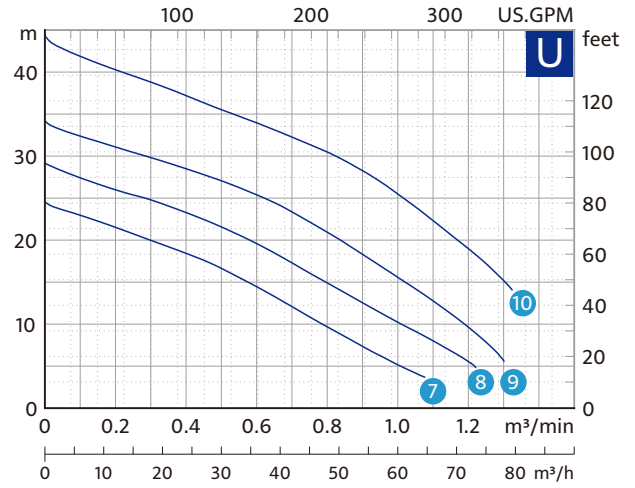
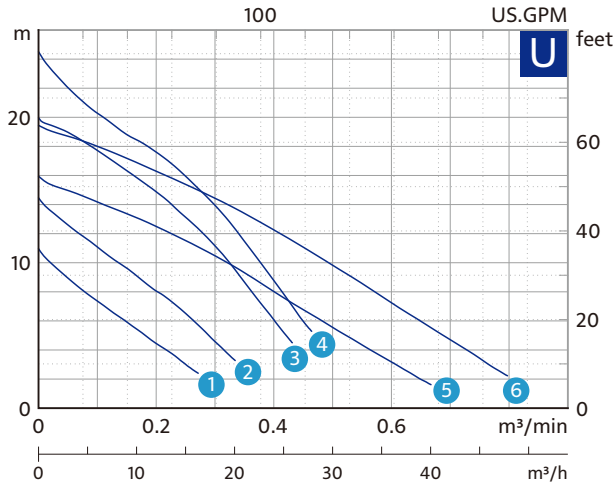
Item	Material
Upper Cover	FC200 / ASTM-30
Motor Frame	FC200 / ASTM-30
Shaft	SUS410 / ASTM 410 • SUS403 / ASTM 403 • SUS420J2/ASTM 420 F
M.seal	CA/CE & SiC/SiC
Casing	FC200 / ASTM-30
Impeller	FC200 / ASTM-30 • SCS14 / A744 CF-8M
Cable	VCT or SJOW/SOW/SOOW

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 SPECS AND CURVES



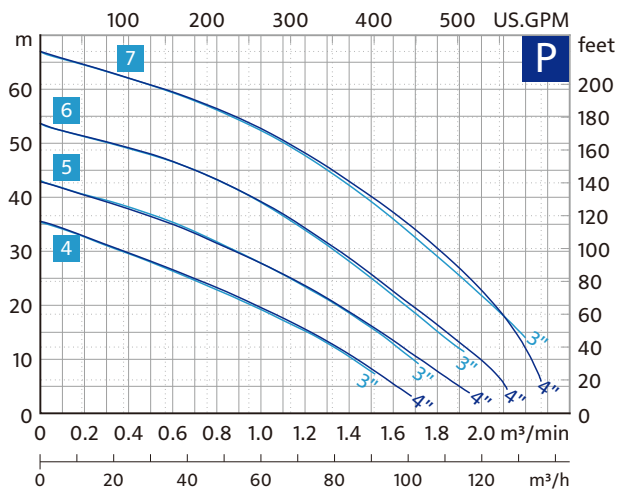
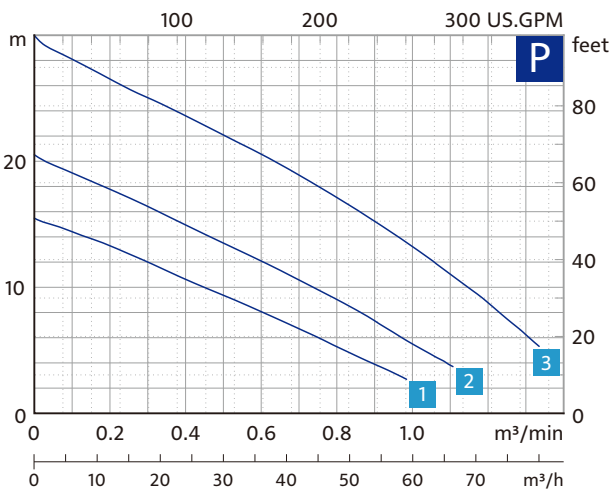
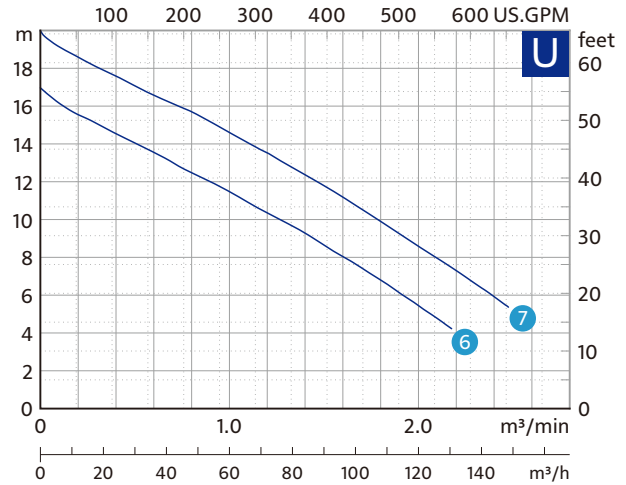
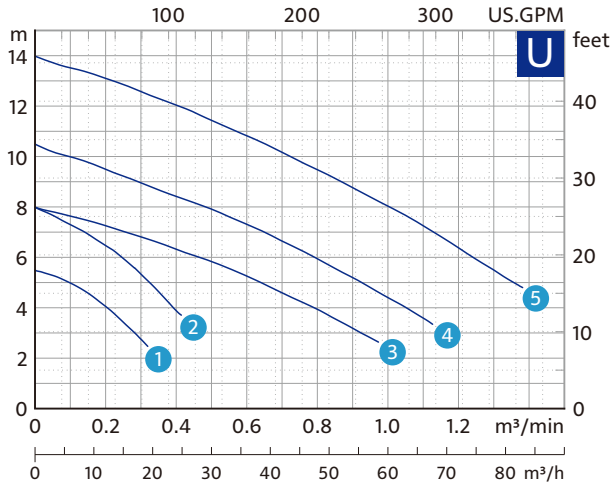
Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard	Max.	Solid Passage mm(inch)	Casing Type	Weight kg(lb)	
					ft-GPM				1Ø	3Ø
1 50AFU2.4	0.5(0.4)	2" (50)	1 3	Capacitor DOL	19.7-40	36.1-80	35(1⅜")	V	19(42)	18(40)
2 50AFU2.8	1(0.75)	2" (50)	1 3	Capacitor DOL	26.2-52	47.6-95	35(1⅜")	V	20(44)	19(42)
3 50AFU21.5	2(1.5)	2" (50)	1 3	Capacitor DOL	45.9-52	65.6-118	35(1⅜")	V	33(73)	29(64)
4 50AFU22.2	3(2.2)	2" (50)	1 3	Capacitor DOL	57.4-52	80.4-124	35(1⅜")	V	35(77)	31(68)
5 80AFU21.5	2(1.5)	3" (80)	1 3	Capacitor DOL	26.2-106	52.5-185	50(2")	H	35(77)	32(71)
6 80AFU22.2	3(2.2)	3" (80)	1 3	Capacitor DOL	39.4-106	64-212	50(2")	H	38(84)	34(75)
7 80AFU23.7A	5(3.7)	3" (80)	1 3	*External Capacitor DOL	54.1-132	80.4-290	50(2")	H	50(110)	45(99)
8 80AFU25.5	7.5(5.5)	3" (80)	3	DOL	62.3-158	96.8-330	50(2")	H	-	67(148)
9 80AFU27.5	10(7.5)	3" (80)	3	DOL	82-158	113.2-345	50(2")	H	-	73(163)
10 80AFU211	15(11)	3" (80)	3	Y-D/DOL	109.9-158	144.4-370	50(2")	H	-	84(185)
11 50AFU2.4L	0.5(0.4)	2" (50)	1 3	Capacitor DOL	13.1-52	21.3-95	50(2")	H	20(44)	19(42)
12 50AFU2.8L	1(0.75)	2" (50)	1 3	Capacitor DOL	18-66	32.8-118	50(2")	H	22(49)	21(46)
13 50AFU21.5L	2(1.5)	2" (50)	1 3	Capacitor DOL	32.8-66	52.5-122	50(2")	V	34(75)	30(66)
14 50AFU22.2L	3(2.2)	2" (50)	1 3	Capacitor DOL	45.9-66	65.6-140	50(2")	V	36(79)	32(71)
15 80AFU21.5L	2(1.5)	3" (80)	1 3	Capacitor DOL	11.5-132	23-198	76(3")	H	38(84)	34(75)
16 80AFU22.2L	3(2.2)	3" (80)	1 3	Capacitor DOL	18-132	31.2-238	76(3")	H	40(88)	36(79)
17 80AFU23.7LA	5(3.7)	3" (80)	1 3	*External Capacitor DOL	32.8-158	50.9-305	76(3")	H	53(117)	48(106)
18 80AFU25.5L	7.5(5.5)	3" (80)	3	DOL	37.7-212	64-345	76(3")	H	-	69(152)
19 80AFU27.5L	10(7.5)	3" (80)	3	DOL	54.1-212	85.3-410	76(3")	H	-	75(165)
20 80AFU211L	15(11)	3" (80)	3	Y-D/DOL	80.4-212	114.8-475	76(3")	H	-	86(190)

※ Excludes Cable & Elbow Weight.

※ Start Method : Y-D = STAR-DELTA

※ Casing type : V stands for Vertical and H for Horizontal. ※ *External Capacitor : Required external capacitors & start relay.

PERFORMANCE SPECS AND CURVES



Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	ft-GPM		Solid Passage mm(inch)	Casing Type	Weight kg(lb)	
					Standard	Max.			1Ø	3Ø
1 50AFU4.4	0.5(0.4)	2" (50)	1	Capacitor	11.5-66	18-106	50(2")	H	30(66)	28(62)
			3	DOL						
2 50AFU4.8	1(0.75)	2" (50)	1	Capacitor	16.4-80	26.2-132	50(2")	H	30(66)	29(64)
			3	DOL						
3 80AFU41.5	2(1.5)	3" (80)	1	Capacitor	16.4-158	26.2-290	76(3")	H	46(101)	46(101)
			3	DOL						
4 80AFU42.2	3(2.2)	3" (80)	1	*External Capacitor	23-158	34.5-315	76(3")	H	67(148)	56(123)
			3	DOL						
5 80AFU43.7	5(3.7)	3" (80)	1	*External Capacitor	34.5-158	45.9-395	76(3")	H	70(154)	64(141)
			3	DOL						
6 100AFU45.5	7.5(5.5)	4" (100)	3	DOL	36.1-264	55.8-580	100(4")	H	-	95(209)
7 100AFU47.5	10(7.5)	4" (100)	3	DOL	47.6-264	65.6-660	100(4")	H	-	104(229)
1 80AFP21.5	2(1.5)	3" (80)	1	Capacitor	26.2-158	50.9-264	35(1 3/8")	H	37(82)	33(73)
			3	DOL						
2 80AFP22.2	3(2.2)	3" (80)	1	Capacitor	39.4-158	67.3-290	35(1 3/8")	H	40(88)	35(77)
			3	DOL						
3 80AFP23.7A	5(3.7)	3" (80)	1	*External Capacitor	67.3-158	98.4-355	32(1 1/4")	H	53(117)	48(106)
			3	DOL						
4 80(100)AFP25.5	7.5(5.5)	3" (80) 4" (100)	3	DOL	86.9-158 65.6-264	118.1-410 118.1-475	30(1 1/8")	H	-	74(163)
5 80(100)AFP27.5	10(7.5)	3" (80) 4" (100)	3	DOL	114.8-158 88.6-264	141.1-450 141.1-530	30(1 1/8")	H	-	80(176)
6 80(100)AFP211	15(11)	3" (80) 4" (100)	3	Y-D/DOL	150.9-158 128-264	177.2-530 177.2-570	30(1 1/8")	H	-	90(198)
7 80(100)AFP215	20(15)	3" (80) 4" (100)	3	Y-D/DOL	187-185 154.2-315	219.8-580 219.8-595	30(1 1/8")	H	-	100(220)

※ Excludes Cable & Elbow Weight.

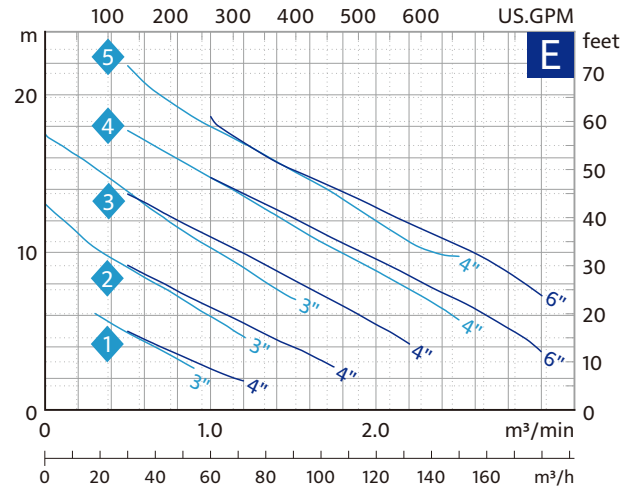
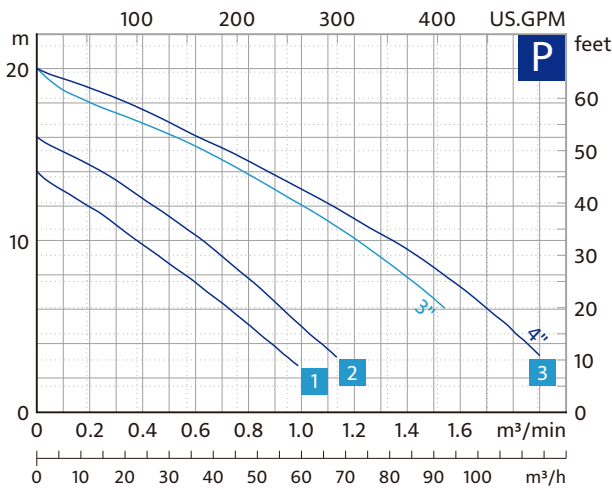
※ Start Method : Y-D = STAR-DELTA

※ Casing type : V stands for Vertical and H for Horizontal. ※ *External Capacitor : Required external capacitors & start relay.



PERFORMANCE SPECS AND CURVES

- ※ 100AFE41.5 Performance curves is equivalent to 80(100)AFE41.5 4"
- ※ 100AFE42.2 Performance curves is equivalent to 80(100)AFE42.2 4"
- ※ 100AFE43.7 Performance curves is equivalent to 80(100)AFE43.7 4"

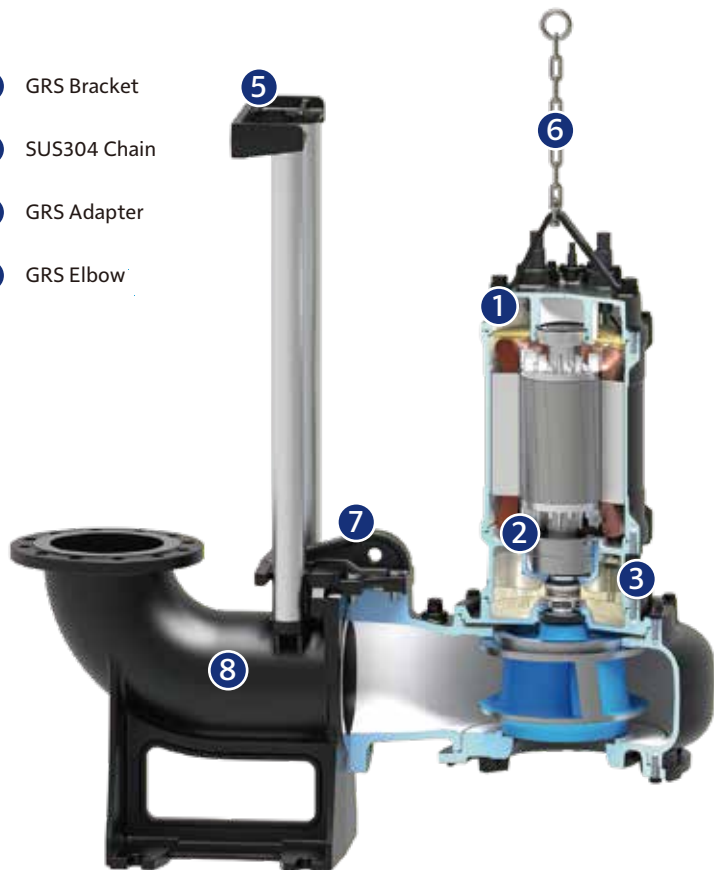


Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard	Max.	Solid Passage mm(inch)	Casing Type	Weight kg(lb)	
					ft-GPM				1Ø	3Ø
1 80AFP41.5	2(1.5)	3"(80)	1	Capacitor	26.2-132	45.9-275	50(2")	H	46(101)	47(104)
			3	DOL						
2 80AFP42.2	3(2.2)	3"(80)	1	*External Capacitor	32.8-158	52.5-315	50(2")	H	71(157)	60(132)
			3	DOL						
3 80(100)AFP43.7	5(3.7)	3"(80)	1	*External Capacitor	49.2-158	65.6-420	50(2")	H	75(165)	69(152)
		4"(100)	3	DOL	41-264	65.6-500				
1 80(100)AFE41.5	2(1.5)	3"(80)	1	*External Capacitor	13.1-172	27.9-238	76(3")	H	66(146)	61(134)
		4"(100)	3	DOL	11.5-212	27.9-315				
2 80(100)AFE42.2	3(2.2)	3"(80)	1	*External Capacitor	23-212	42.7-315	76(3")	H	77(170)	66(146)
		4"(100)	3	DOL	21.3-264	42.7-460				
3 80(100)AFE43.7	5(3.7)	3"(80)	1	*External Capacitor	37.7-212	57.4-395	76(3")	H	79(174)	73(161)
		4"(100)	3	DOL	34.5-264	57.4-580				
1 100AFE41.5	2(1.5)	4"(100)	1	*External Capacitor	11.5-212	27.9-315	76(3")	H	69(152)	64(141)
			3	DOL						
2 100AFE42.2	3(2.2)	4"(100)	1	*External Capacitor	21.3-264	42.7-460	76(3")	H	77(170)	68(150)
			3	DOL						
3 100AFE43.7	5(3.7)	4"(100)	1	*External Capacitor	34.5-264	57.4-580	76(3")	H	78(172)	75(165)
			3	DOL						
4 100(150)AFE45.5	7.5(5.5)	4"(100)	3	DOL	47.6-264	77.1-660	76(3")	H	-	104(229)
		6"(150)			39.4-395	77.1-790				
5 100(150)AFE47.5	10(7.5)	4"(100)	3	DOL	57.4-264	88.6-660	76(3")	H	-	113(249)
		6"(150)			49.2-395	88.6-790				

- ※ Excludes Cable & Elbow Weight.
- ※ Casing type : V stands for Vertical and H for Horizontal.
- ※ *External Capacitor : Required external capacitors & start relay.

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)

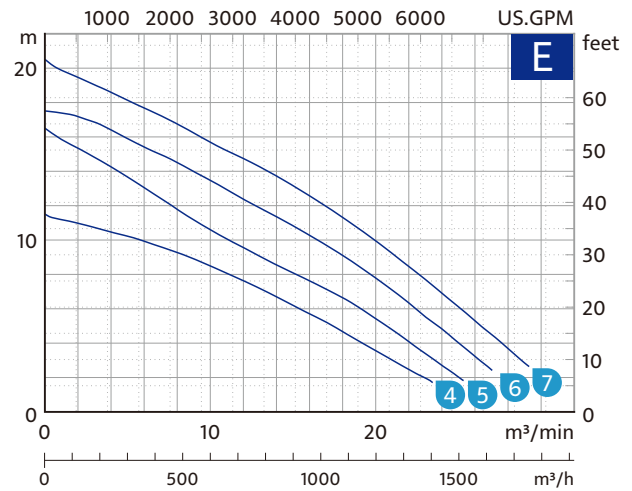
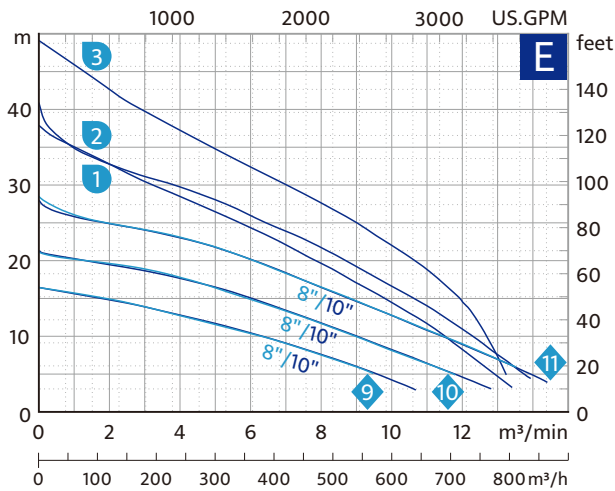
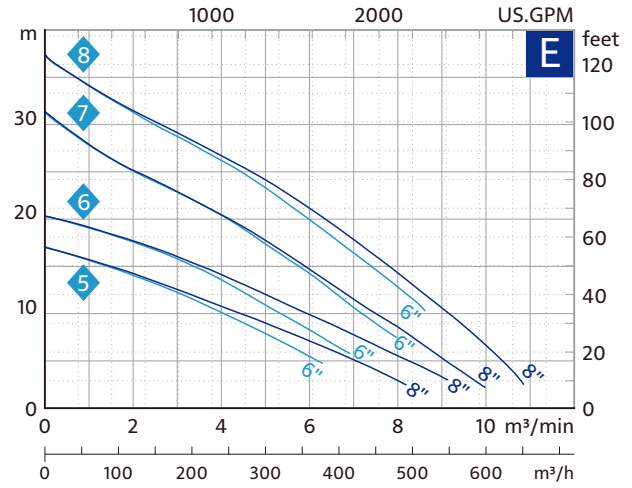
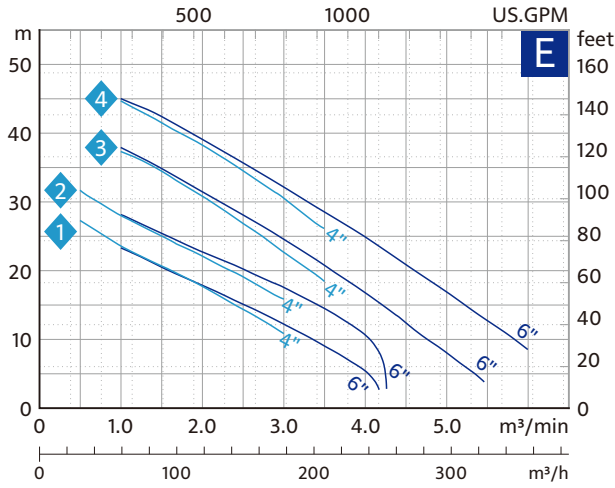
Spec.	Description
Liquid Temp.	0~40°C (32~104°F)
Motor	4P(1800rpm)/6P(1200rpm)/8P(900rpm) • Dry Motor
Insulation	Class H
Protection	IP68
Protector	MTS & MS
M.seal Type	Double M.seals
Impeller Type	Channel (E)
Item	Material
Upper Cover	FC200 / ASTM-30
Motor Frame	FC200 / ASTM-30
Shaft	SUS420J2/ASTM 420 F
M.seal	CA/CE & SiC/SiC • SiC/SiC & SiC/SiC
Casing	FC200 / ASTM-30
Impeller	FC200 / ASTM-30 • FCD500 / Gr.65-45-12
Cable	VCT/PNCT or SOOW

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 SPECS AND CURVES



Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard		Max.	Solid Passage mm(inch)	Casing Type	Weight kg(lb)
					ft-GPM					
1 100(150)AFE411	15(11)	4" (100)	3	Y-D/DOL	77.1-264	78.7-790	76(3")	H	160(353)	
2 100(150)AFE415	20(15)	4" (100)	3	Y-D/DOL	49.2-660	78.7-1060	76(3")	H	171(377)	
		6" (150)			91.9-264	121.4-790				
3 100(150)AFE422	30(22)	4" (100)	3	Y-D/DOL	65.6-660	121.4-1060	76(3")	H	223(492)	
		6" (150)			121.4-264	144.4-925				
4 100(150)AFE430	40(30)	4" (100)	3	Y-D/DOL	91.9-660	144.4-1450	76(3")	H	242(534)	
		6" (150)			146-264	170.6-925				
5 150(200)AFE411	15(11)	6" (150)	3	Y-D/DOL	116.5-660	170.6-1590	80(3½")	H	196(432)	
		8" (200)			42.7-660	57.4-1690				
6 150(200)AFE415	20(15)	6" (150)	3	Y-D/DOL	31.2-1190	57.4-2190	80(3½")	H	206(454)	
		8" (200)			52.5-660	65.6-1820				
7 150(200)AFE422	30(22)	6" (150)	3	Y-D/DOL	42.7-1190	65.6-2400	80(3½")	H	272(600)	
		8" (200)			78.7-660	103.4-2110				
8 150(200)AFE430	40(30)	6" (150)	3	Y-D/DOL	62.3-1190	103.4-2590	80(3½")	H	293(646)	
		8" (200)			98.4-660	124.7-2300				
9 200(250)AFE415	20(15)	8" (200)	3	Y-D/DOL	82-1190	124.7-2830	100x79(4"x3")	H	225(496)	
		10" (250)			39.4-1190	54.1-2510				
10 200(250)AFE422	30(22)	8" (200)	3	Y-D/DOL	29.5-1850	54.1-2770	100x82(4"x3¼")	H	292(644)	
		10" (250)			54.1-1190	68.9-3120				
11 200(250)AFE430	40(30)	8" (200)	3	Y-D/DOL	42.7-1850	68.9-3380	100x82(4"x3¼")	H	311(686)	
		10" (250)			72.2-1190	91.9-3570				
1 AF-1050	50(37)	10" (250)	3	Y-D/DOL	57.4-1850	91.9-3830	60(2⅜")	H	686(1512)	
2 AF-1060	60(45)	10" (250)	3	Y-D/DOL	72-1850	125-3700	60(2⅜")	H	691(1523)	
3 AF-1075	75(55)	10" (250)	3	Y-D/DOL	79-1850	135-3700	60(2⅜")	H	681(1501)	
4 AF-1430	30(22)	14" (350)	3	Y-D/DOL	98-1850	164-3560	120(4¾")	H	833(1836)	
5 AF-1440	40(30)	14" (350)	3	Y-D/DOL	21-3700	38-6340	120(4¾")	H	828(1825)	
6 AF-1650	50(37)	16" (400)	3	Y-D/DOL	28-3700	54-6870	120(4¾")	H	965(2127)	
7 AF-1660	60(45)	16" (400)	3	Y-D/DOL	25-4760	57-7130	120(4¾")	H	970(2138)	

※ 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