

F/FN **60Hz** SERIES
SUBMERSIBLE SEWAGE
EFFLUENT PUMPS



F/FN



FEATURES

- U/P Type impellers are designed to meet the various different operating ranges in wastewater applications.
- F/FN UL Type Non-clog models, capable passing larger solid.
- Optional casing: The FN-32/33U and FN-32/33P models have vertical casing available.
- HCP's professional assembly line, complimented with a synthetic production test to ensure each IP68 motor with highest level of final pump quality.
- Oil Elevation Disk design in the oil chamber to ensure the mechanical seals lubrication and to extend the service life of pump.
- Standard accessories include : cable with an epoxy resin sealed waterresistant cable base, Auto-cut Protector, double mechanical seals, Food grade lubricant and oil seal design.

※ Optional : Vertical casing

APPLICATIONS

- Drainage of sewage from the building basements, hotel industry, and waste water from factories.
- Drainage of sewage from industrial process factories.
- Emptying of septic tanks, cesspits and sewage pump stations.
- Pumping surface and drainage water from garages and sprinkler systems.

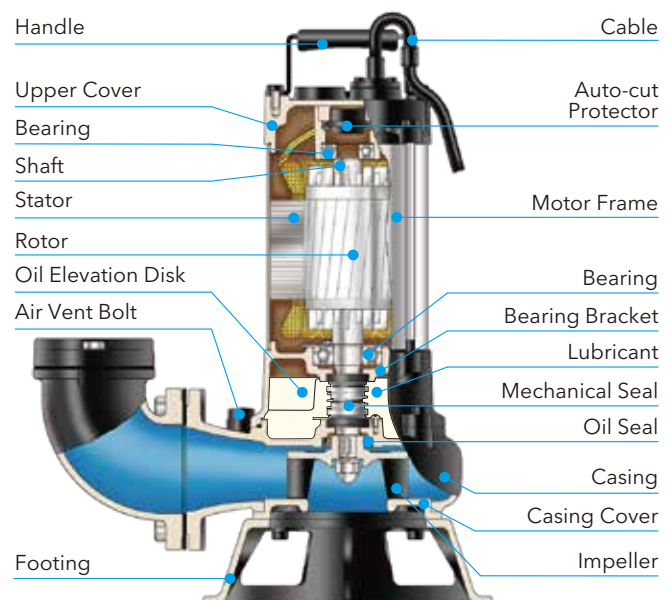
U Type Vortex Impeller	P Type Open Impeller
	
Vortex impeller produces a vortex (whirlpool effect) allowing long fibrous materials and solid waste to pass through, without contact with the impeller.	Open impeller (Single or Two Vanes) design. Impeller is excellent to use for waste materials to prevent clogging.

SPECIFICATIONS

Item	Description
Limits Of Use	Liquid Temp. 0~40°C (32~104°F)
	Applications General wastewater • Sewage and Industrial water
Type	Frequency 60Hz
	Motor 2P (3600rpm) • Dry Motor (F- 05A : Oil Motor)
	Insulation Class B (0.5~1HP) • Class F (2~5HP)
	Protection IP68
	Protector Auto-cut (0.5HP 1Ø : Thermal)
	Bearing Ball Type
	M.seal Double M.seals (F-05A : Single M.seals)
	Impeller Vortex • Open
Material	Upper Cover FC200 / ASTM-30
	Motor Frame SUS304 / AISI 304
	Shaft SUS410 / ASTM 410 (0.5~1HP) • SUS403 / ASTM 403 (2~5HP)
	M.seal CA/CE & SiC/SiC (F-05A : CA/CE)
	Casing FC200 / ASTM-30
	Impeller FC200 / ASTM-30 (F-05A : PA)
	Cable VCT or SJOW/SOW
Optional	Pumps can be customized to fit specifications Floating Switch (2P : 0.5~3HP)

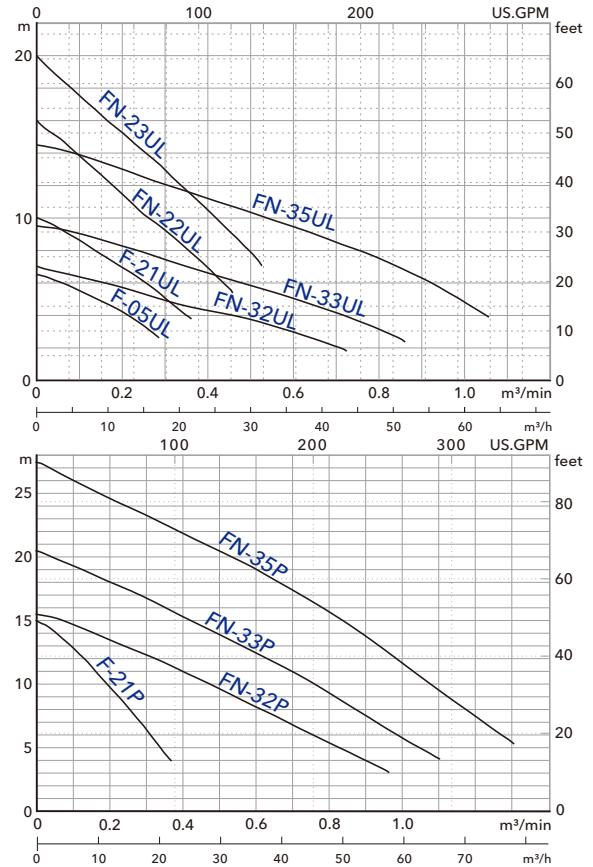
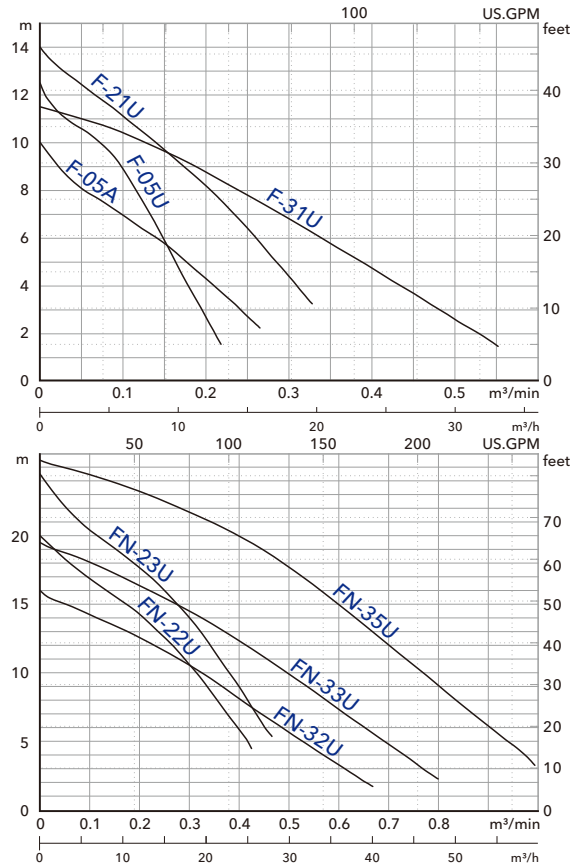
PRODUCT NOMENCLATURE

FN — 3 2 U L
 Type Discharge HP Impeller type Larger solid handling
 inch (U/P)





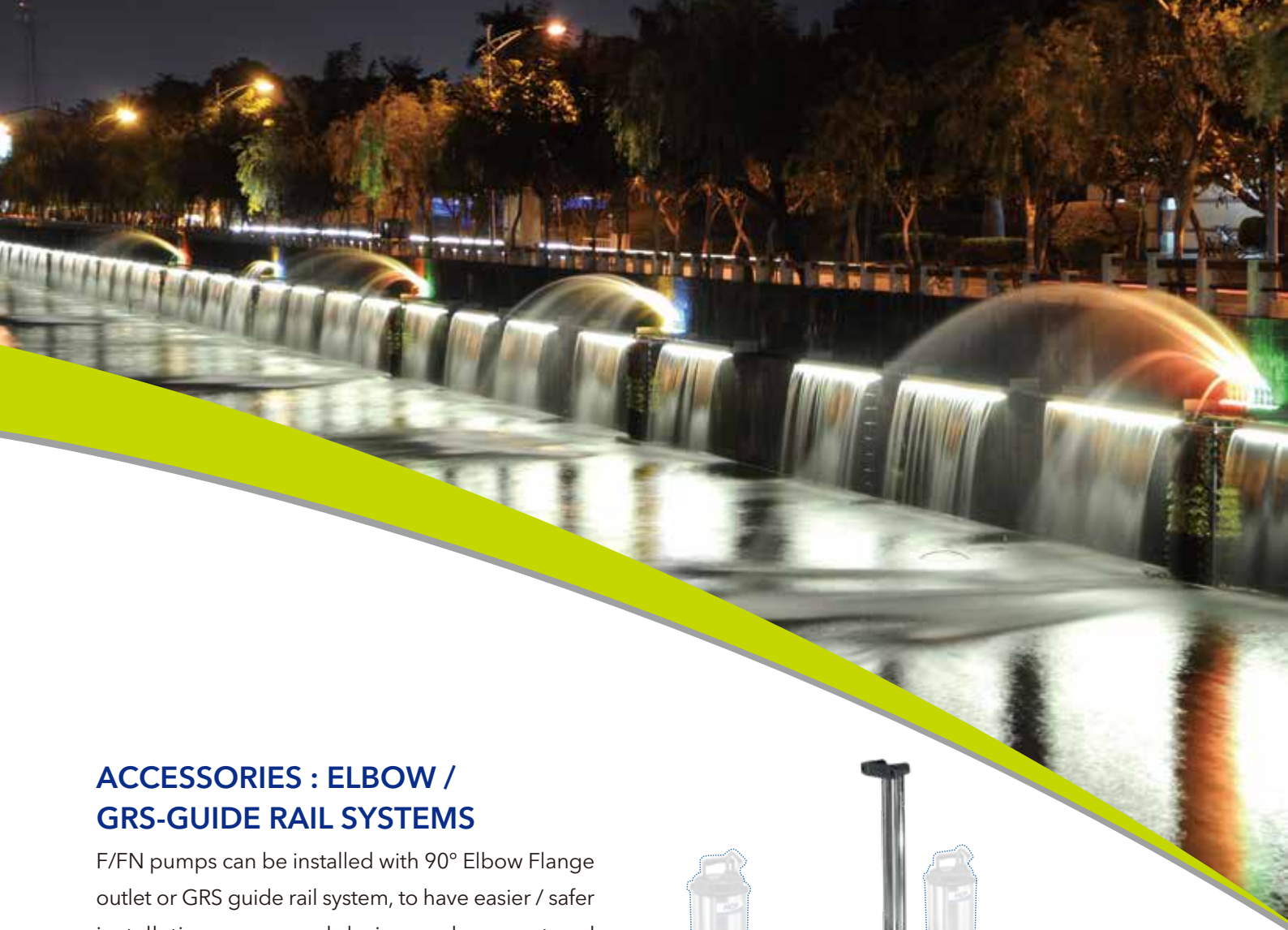
PERFORMANCE CURVES



PERFORMANCE SPECS.

* Note : Weight Without Cable & Elbow Set.
Casing type:V stands for Vertical and H for Horizontal.

	Model	Output HP(kW)	Discharge Inch(mm)	Phase Ø	Start Method	Standard		Solid Passage mm(inch)	Casing Type	Weight kg(lb)	
						m-m³/min	ft-GPM			1Ø	3Ø
U Type	F-05A	0.5 (0.4)	2" (50)	1	Capacitor	8-0.12	26.0-32	10(3/8")	V	12(26)	-
	F-05U	0.5 (0.4)	2" (50)	1 3	Capacitor DOL	5.5-0.15	18.0-40	35(1 3/8")	V	16(35)	15(33)
	F-21U	1 (0.75)	2" (50)	1 3	Capacitor DOL	8-0.2	26.2-52	35(1 3/8")	V	17(37)	16(35)
	F-31U	1 (0.75)	3" (80)	1 3	Capacitor DOL	6-0.3	19.7-80	30(1 1/8")	V	18(40)	17(37)
	F-05UL	0.5 (0.4)	2" (50)	1 3	Capacitor DOL	4-0.2	13.1-52	50(2")	V	17(37)	16(35)
	F-21UL	1 (0.75)	2" (50)	1 3	Capacitor DOL	6-0.25	19.7-66	50(2")	V	18(40)	17(37)
	FN-22U	2 (1.5)	2" (50)	1 3	Capacitor DOL	14-0.2	45.9-52	35(1 3/8")	V	30(66)	25(55)
	FN-23U	3 (2.2)	2" (50)	1 3	Capacitor DOL	17.5-0.2	57.4-52	35(1 3/8")	V	32(71)	27(60)
	FN-32U	2 (1.5)	3" (80)	1 3	Capacitor DOL	8-0.4	26.2-106	50(2")	H/V	32(71)	28(62)
	FN-33U	3 (2.2)	3" (80)	1 3	Capacitor DOL	12-0.4	39.4-106	50(2")	H/V	35(77)	30(66)
	FN-35U	5 (3.7)	3" (80)	3	DOL	17-0.5	55.8-132	50(2")	H	-	33(73)
	FN-22UL	2 (1.5)	2" (50)	1 3	Capacitor DOL	10-0.25	32.8-66	50(2")	V	31(68)	26(57)
	FN-23UL	3 (2.2)	2" (50)	1 3	Capacitor DOL	14-0.25	45.9-66	50(2")	V	33(73)	28(62)
	FN-32UL	2 (1.5)	3" (80)	1 3	Capacitor DOL	3.5-0.5	11.5-132	76(3")	H	35(77)	30(66)
	FN-33UL	3 (2.2)	3" (80)	1 3	Capacitor DOL	5.5-0.5	18.0-132	76(3")	H	37(82)	32(71)
FN-35UL	5 (3.7)	3" (80)	3	DOL	9.5-0.6	31.2-158	76(3")	H	-	35(77)	
P Type	F-21P	1 (0.75)	2" (50)	1 3	Capacitor DOL	9-0.2	29.5-52	22(7/8")	V	20(44)	19(42)
	FN-32P	2 (1.5)	3" (80)	1 3	Capacitor DOL	8-0.6	26.2-158	35(1 3/8")	H/V	34(75)	30(66)
	FN-33P	3 (2.2)	3" (80)	1 3	Capacitor DOL	12-0.6	39.4-158	35(1 3/8")	H/V	37(82)	32(71)
	FN-35P	5 (3.7)	3" (80)	3	DOL	18.5-0.6	60.7-158	35(1 3/8")	H	-	35(77)



ACCESSORIES : ELBOW / GRS-GUIDE RAIL SYSTEMS

F/FN 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. The GRS does not support the vertical casing models.



ELBOW



GRS

PRODUCT FEATURES



Epoxy Cable Base

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



Double Mechanical Seals

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



Auto-cut Protector

Automatic On / Off motor protector to prevent motor burn out due to high temperature and excess amperage draw.



High Efficiency Dry Motors

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



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