

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



※ V Type: 3"(80mm) Vertical Discharge Model



# 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.
- F/FN V Type lightweight, portable and easy installation.
- 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.

## APPLICATIONS

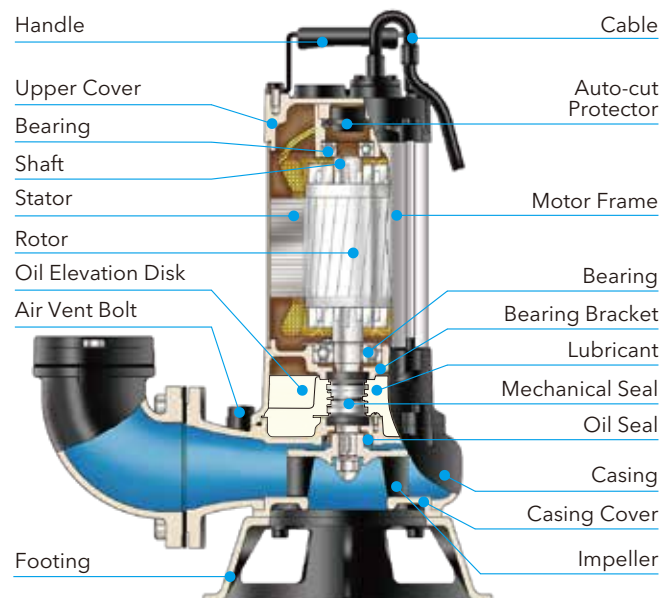
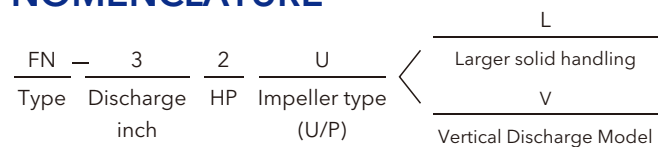
- Drainage of sewage from the building basements, hotel industry, and waste water from factories.
- Drainage of sewage from industrial process factories.
- Emptying of septic tanks, cesspits and sewage pump stations.
- Pumping surface and drainage water from garages and sprinkler systems.

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

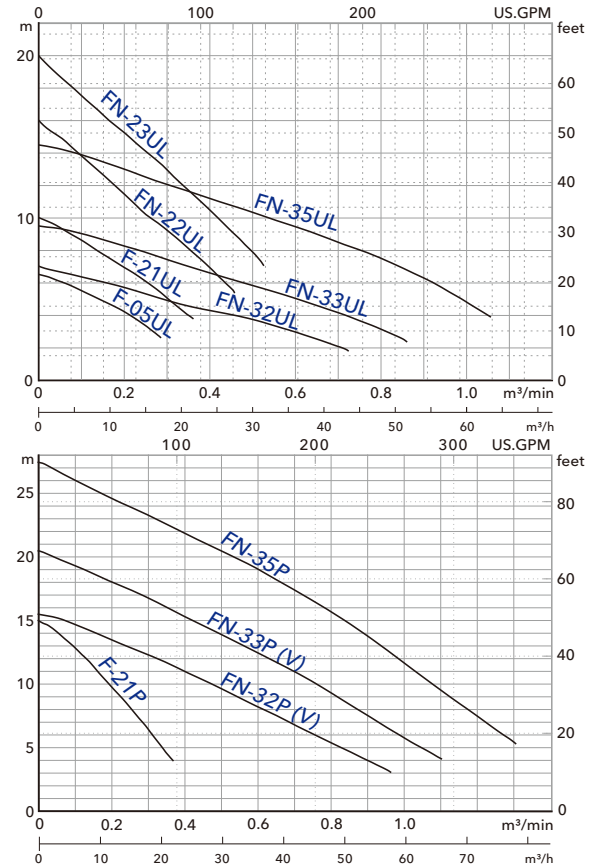
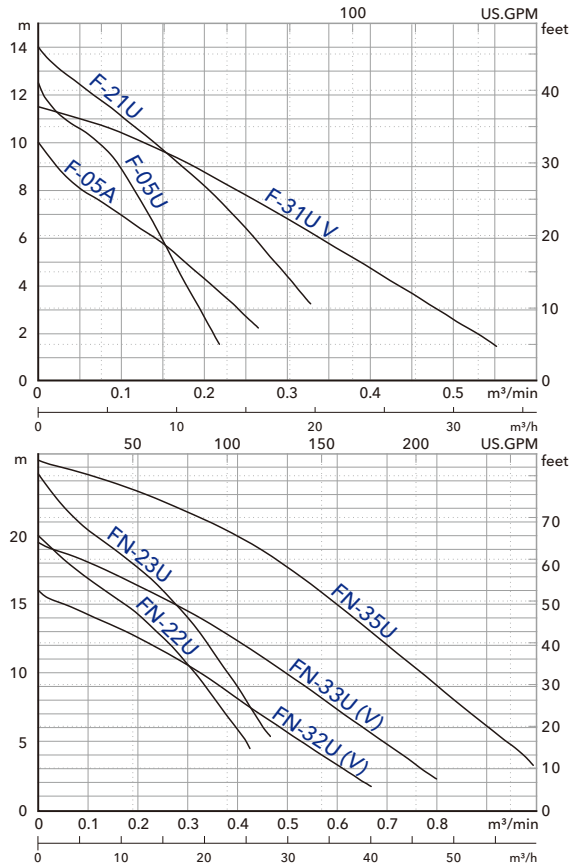
Item	Description	
Limits Of Use	Liquid Temp.	0~40°C (32~104°F)
	Applications	General wastewater • Sewage and Industrial water
Type	Frequency	60Hz
	Motor	2P ( 3600rpm) • Dry Motor (F- 05A : Oil Motor)
	Insulation	Class B (0.5~1HP) • Class F (2~5HP)
	Protection	IP68
	Protector	Auto-cut (0.5HP 1Ø : Thermal)
	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





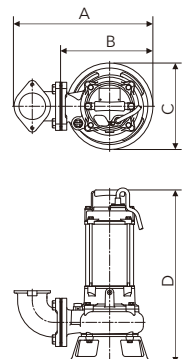
## PERFORMANCE CURVES

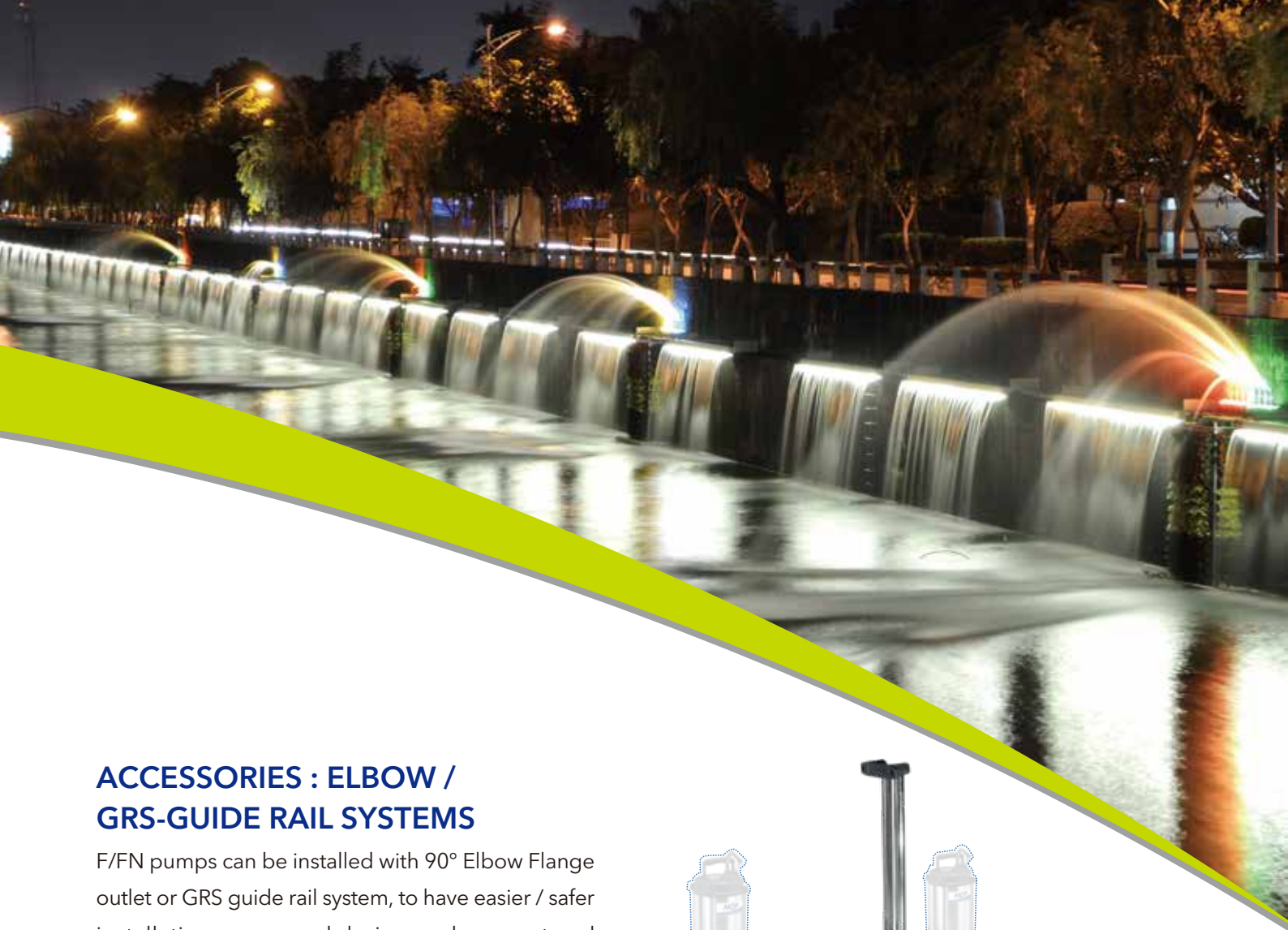


## PERFORMANCE SPECS.

※ Note : Weight Without Cable & Elbow Set.

	Model	Output HP(kw)	Discharge Inch(mm)	Phase Ø	Start Method	Standard		Solid Passage mm(inch)	Weight kg(lb)		Dimensions mm				
						m-m³/min	ft-GPM		1Ø	3Ø	A	B	C	D	
U Type	F-05A	0.5 (0.4)	2" (50)	1	Capacitor	8-0.12	26.0-32	10(3/8")	12(26)	-	225	-	161	349	-
	F-05U	0.5 (0.4)	2" (50)	1	Capacitor	5.5-0.15	18.0-40	35(1 3/8")	16(35)	15(33)	243	-	154	424	424
	F-21U	1 (0.75)	2" (50)	1	Capacitor	8-0.2	26.2-52	35(1 3/8")	17(37)	16(35)	243	-	154	424	424
	F-31U V	1 (0.75)	3" (80)	1	Capacitor	6-0.3	19.7-80	30(1 1/8")	18(40)	17(37)	276	-	173	445	445
	F-05UL	0.5 (0.4)	2" (50)	1	Capacitor	4-0.2	13.1-52	50(2")	17(37)	16(35)	243	-	164	449	449
	F-21UL	1 (0.75)	2" (50)	1	Capacitor	6-0.25	19.7-66	50(2")	18(40)	17(37)	243	-	164	449	449
	FN-22U	2 (1.5)	2" (50)	1	Capacitor	14-0.2	45.9-52	35(1 3/8")	30(66)	25(55)	288	-	202	546	477
	FN-23U	3 (2.2)	2" (50)	1	Capacitor	17.5-0.2	57.4-52	35(1 3/8")	32(71)	27(60)	288	-	202	546	477
	FN-32U	2 (1.5)	3" (80)	1	Capacitor	8-0.4	26.2-106	50(2")	32(71)	28(62)	402	260	202	588	519
	FN-33U	3 (2.2)	3" (80)	1	Capacitor	12-0.4	39.4-106	50(2")	35(77)	30(66)	402	260	202	600	519
	FN-35U	5 (3.7)	3" (80)	3	DOL	17-0.5	55.8-132	50(2")	-	33(73)	453	260	202	-	539
	FN-22UL	2 (1.5)	2" (50)	1	Capacitor	10-0.25	32.8-66	50(2")	31(68)	26(57)	288	-	202	576	507
	FN-23UL	3 (2.2)	2" (50)	1	Capacitor	14-0.25	45.9-66	50(2")	33(73)	28(62)	288	-	202	588	507
	FN-32UL	2 (1.5)	3" (80)	1	Capacitor	3.5-0.5	11.5-132	76(3")	35(77)	30(66)	407	265	221	640	571
	FN-33UL	3 (2.2)	3" (80)	1	Capacitor	5.5-0.5	18.0-132	76(3")	37(82)	32(71)	407	265	221	652	571
FN-35UL	5 (3.7)	3" (80)	3	DOL	9.5-0.6	31.2-158	76(3")	-	35(77)	458	265	221	-	591	
FN-32U V	2 (1.5)	3" (80)	1	Capacitor	8-0.4	26.2-106	50(2")	32(71)	28(62)	319	-	202	588	519	
FN-33U V	3 (2.2)	3" (80)	1	Capacitor	12-0.4	39.4-106	50(2")	35(77)	30(66)	319	-	202	600	519	
P Type	F-21P	1 (0.75)	2" (50)	1	Capacitor	9-0.2	29.5-52	22(7/8")	20(44)	19(42)	276	-	235	459	459
	FN-32P	2 (1.5)	3" (80)	1	Capacitor	8-0.6	26.2-158	35(1 3/8")	34(75)	30(66)	417	275	260	590	521
	FN-33P	3 (2.2)	3" (80)	1	Capacitor	12-0.6	39.4-158	35(1 3/8")	37(82)	32(71)	417	275	260	602	521
	FN-35P	5 (3.7)	3" (80)	3	DOL	18.5-0.6	60.7-158	35(1 3/8")	-	35(77)	468	275	260	-	541
	FN-32P V	2 (1.5)	3" (80)	1	Capacitor	8-0.6	26.2-158	35(1 3/8")	34(75)	30(66)	339	-	260	590	521
	FN-33P V	3 (2.2)	3" (80)	1	Capacitor	12-0.6	39.4-158	35(1 3/8")	37(82)	32(71)	339	-	260	602	521





## 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 V Type 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.



Professionalism · Innovation · Service · Commitment  
**HCP PUMP MANUFACTURER CO., LTD.**  
[www.hcppump.com](http://www.hcppump.com)



Distributor: