APEC-SUN

Submersible Pump

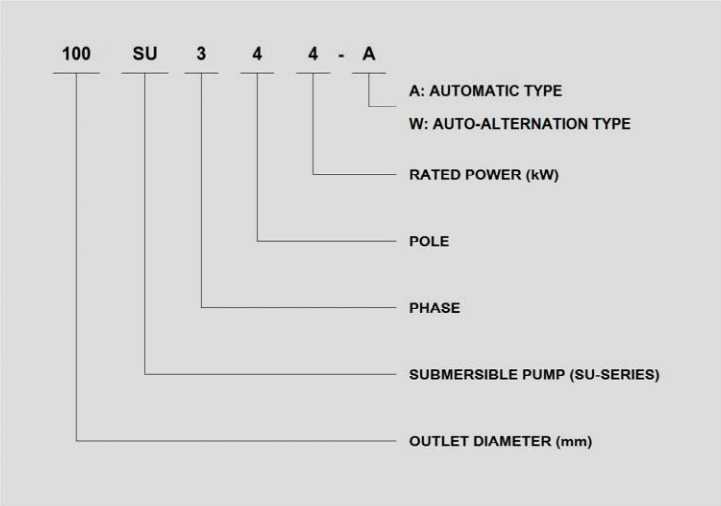
SU-Series

Featuring a vortex impeller recessed in the widely opened pump casing interior, the SU and SUZ pumps can handle sewage with large solids without clogging or winding.

APPLICATIONS:

- Use at relay pump stations or manholes to relay raw water.
- Use at food processing factories or livestock production facilities to discharge sewage and sludge.
- Discharging sludge and scum at industrial waste water treatment plants.
- Controlling flow rate and discharging at night soil treatment plants.
- Controlling flow rate and discharging at combined treatment plants.

TYPE DESCRIPTION:



AUTOMATIC

The APEC-SUN automatic type pump has an integral control circuit and two float switches operated at a low voltage. It operates automatically in response to the change in waer lovels. As it has a Circle Thermal Protector (CTP) interated into the motor to protect the motor from overload or overheating, it is not required to provide an extra motor protection circuit in the starter panel.

AUTO-ALTERNATION

In addition to standard automatic pumps, APEC-SUN offers auto-alternation type pumps. Automatic alternation operation is achieved by combining a parent pump (three floats) with a standard automatic pump (two floats). This enables each pump to operate alternately without the aid of a control panel.

GUIDE RAIL

The guide rail fitting system connects the pump to and from the piping easily just by lowering and hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. This system is made of cast iron and is compatible with cast iron pumps.

FEATURES:

MOTOR

The motor is dry-type, squirrel-cage induction motor, housed in a cast iron, watertight casing, and conforms to insulation class of E or F. In each of these insulation classes, all standard pumps can be used in ambient temperature up to 40°C.

MOTOR PROTECTOR

Each pump up to 7.5kW as standard has a built in auto-cut, self-resetting Circle Thermal Protector (CTP). Integrated in the motor housing, the CTP directly cuts the motor ciucuit if excessive heat builds up or an overcurrent caused by an electrical or mechanical failure occurs.

A Miniature Thermal Protectors (MTP) is embedded in each winding of the motor. These MTPs are connected in series, and their wires are led out of the motor. Should the winding temperature rise to the actuating temperature, the bimetal strip opens to cause the control panel to shut the power supply.

IMPELLER

The impeller is a vortex type. The rotation of the impeller produces a whirling, centrifugal action between the impeller and pump casing. Being coupled with a wide pump casing, even large solids and fibrous matters can be pumped out without obstruction.

MECHANICAL SEAL

The mechanical seal with two seal faces containing silicon carbide (SiC) is equipped with the oil chamber. The advantages of the seal are two-fold, it eliminates spring failure caused by corrosion, abrasion or fouling which prevents the seal faces from closing properly, and prevents loss of cooling to the lower seal faces during run-dry conditions which causes the lower seal faces to fail.

SHAFT

The high-tensile stainless steel shaft used on all pumps is designed to have adequate strength for the transmission of the full load. It is supported by C3 type, high-quality, deep-groove ball bearings.

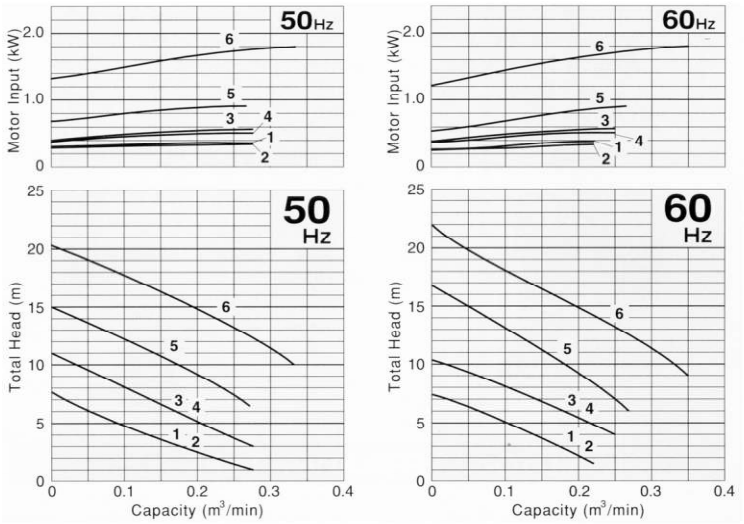
CABLE ENTRY

Every cabtyre calbe has an anti-wicking block at the cable entry section of the pump. This mechanism is such that a part of each conductor is stripped back and the part is sealed by molded rubber or epoxy potting which has flowed in between each strand of the conductor. This unique feature prevents wicking along the strands of the conductor itself.

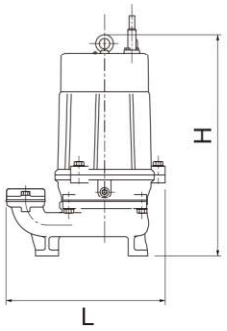
OIL LIFTER (PATENTED)

The Oil Lifter was developed as a lubricating device for the mechanical seal. Utilizing the contrifugal force of the shaft seal, the Oil Lifter forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume. This amazingly simple device is not only reliably lubricates and cools down, but also retains the stable shaft seal effect and extends the inspection term.

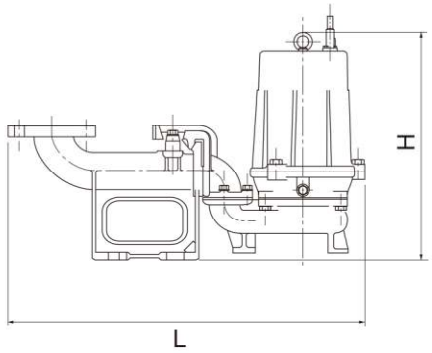
SPECIFICATIONS & DIMENSIONS:



Free Standing



Guide Rail Fitting

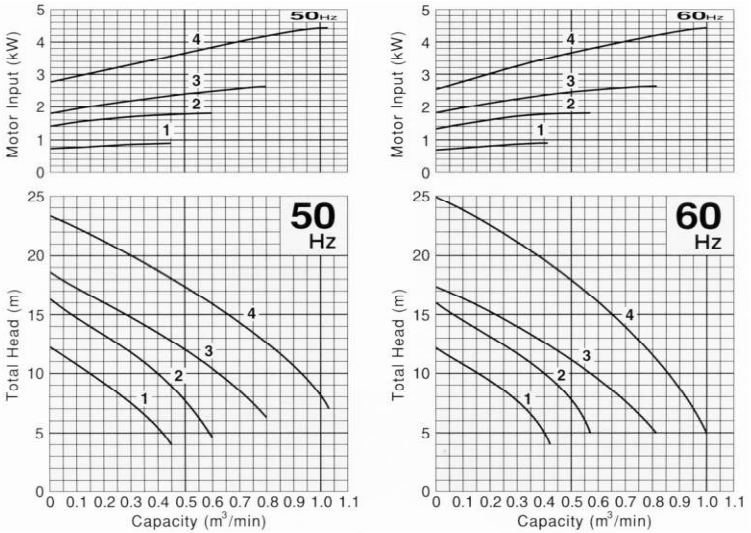


CURVE NO.	STANDARD		AUTOMATIC		AUTO-ALTERNATION		POWER (kW)	DIA (mm)	PHASE	REVOLUTION 50Hz / 60Hz (min^{-1})	STARTING METHOD	IMPELLER PASSAGE (mm)	CABLE LENGTH (m)	CABLE CODE
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING								
1	40SU12.25		40SU12.25A		40SU12.25W		0.25	40	1	3000 / 3600	SPLIT-PHASE	35	5	a
2	40SU32.25		40SU32.25A		40SU32.25W		0.25	40	3	3000 / 3600	D.O.L.	35	6	A
3	50SU12.4		50SU12.4A		50SU12.4W		0.4	50	1	3000 / 3600	CAPACITOR	35	5	a
4	50SU32.4		50SU32.4A		50SU32.4W		0.4	50	3	3000 / 3600	D.O.L.	35	6	A
5	50SU32.75		50SU32.75A		50SU32.75W		0.75	50	3	3000 / 3600	D.O.L.	35	6	A
6	50SU321.5	AT50	50SU321.5A	AT50	50SU321.5W	AT50	1.5	50	3	3000 / 3600	D.O.L.	35	6	A

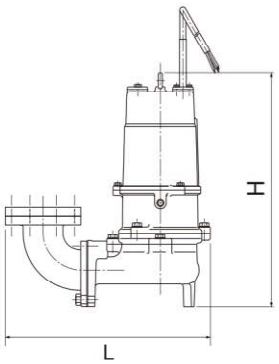
CURVE NO.	DIMENSION L x H (mm)				DRY WEIGHT (kg)			
	STANDARD		AUTO & AUTO-ALTERNATION		STANDARD		AUTO & AUTO-ALTERNATION	
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING
1	241 x 383		241 x 433		14.0		15.5	
2	241 x 383		241 x 433		13.5		15.0	
3	236 x 433		236 x 450		20.0		21.0	
4	236 x 400		236 x 450		19.2		21.0	
5	249 x 395		310 x 476		23.0		24.0	
6	297 x 466	658 x 478	347 x 560	708 x 572	30.0	35.0	31.0	36.0

* Weights without cable and duckfoot bend.

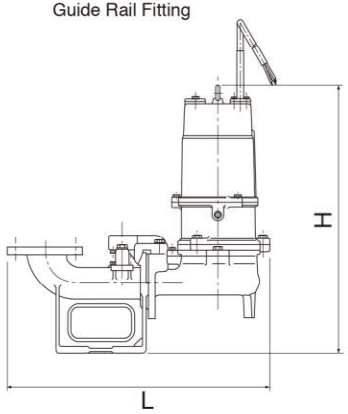
SPECIFICATIONS & DIMENSIONS:



Free Standing



Guide Rail Fitting



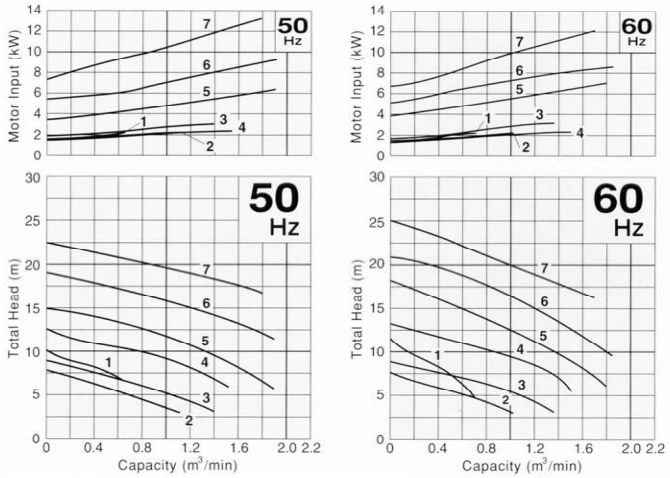
CURVE NO.	STANDARD		AUTOMATIC		AUTO-ALTERNATION		POWER (kW)	DIA (mm)	PHASE	REVOLUTION 50Hz / 60Hz (min^{-1})	STARTING METHOD	IMPELLER PASSAGE (mm)	CABLE LENGTH (m)	CABLE CODE
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING								
1	80SU32.75	AT80	80SU32.75A	AT80	80SU32.75W	AT80	0.75	80	3	3000 / 3600	D.O.L.	46	6	A
2	80SU321.5	AT80	80SU321.5A	AT80	80SU321.5W	AT80	1.5	80	3	3000 / 3600	D.O.L.	46	6	A
3	80SU322.2	AT80	80SU322.2A	AT80	80SU322.2W	AT80	2.2	80	3	3000 / 3600	D.O.L.	56	6	A(B*2)
4	80SU323.7	AT80	80SU323.7A	AT80	80SU323.7W	AT80	3.7	80	3	3000 / 3600	D.O.L.	56	6	B(C*2)

(*2) 200 - 240V.

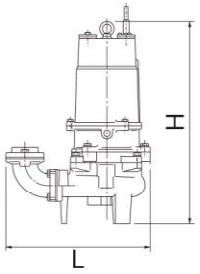
CURVE NO.	DIMENSION L x H (mm)				DRY WEIGHT (kg)			
	STANDARD		AUTO & AUTO-ALTERNATION		STANDARD		AUTO & AUTO-ALTERNATION	
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING
1	383 x 421	605 x 531	444 x 502	666 x 612	29.0	24.0	30.0	26.0
2	420 x 499	642 x 609	469 x 593	691 x 703	40.0	36.0	41.0	37.0
3	502 x 562	641 x 647	502 x 647	641 x 741	55.0	51.0	63.0	59.0
4	502 x 565	641 x 650	502 x 629	641 x 714	62.0	58.0	73.0	69.0

* Weights without cable and duckfoot bend.

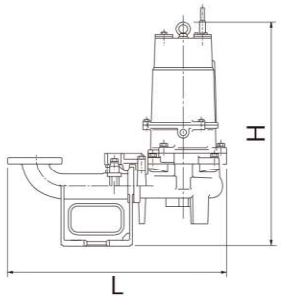
SPECIFICATIONS & DIMENSIONS:



Free Standing



Guide Rail Fitting



CURVE NO.	STANDARD		AUTOMATIC		AUTO-ALTERNATION		POWER (kW)	DIA (mm)	PHASE	REVOLUTION 50Hz / 60Hz (min^{-1})	STARTING METHOD	IMPELLER PASSAGE (mm)	CABLE LENGTH (m)	CABLE CODE
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING								
1	50SUZ341.5	AT50	50SUZ341.5	AT50	50SUZ341.5	AT50	1.5	50	3	1500 / 1800	D.O.L.	50	6	A
2	80SUZ341.5	AT80	80SUZ341.5	AT80	80SUZ341.5	AT80	1.5	80	3	1500 / 1800	D.O.L.	80	6	A
3	80SUZ342.2	AT80	80SUZ342.2	AT80	80SUZ342.2	AT80	2.2	80	3	1500 / 1800	D.O.L.	80	6	A(B*2)
4	80SUZ343.7	AT80	80SUZ343.7	AT80	80SUZ343.7	AT80	3.7	80	3	1500 / 1800	D.O.L.	80	6	B(C*2)
5	80SUZ345.5	AT80					5.5	80	3	1500 / 1800	D.O.L.	80	8	H
6	80SUZ347.5	AT80					7.5	80	3	1500 / 1800	D.O.L.	80	8	I
7	80SUZ3411	AT80					11	80	3	1500 / 1800	STAR-DELTA	80	8	L

(*2) 200 - 240V.

CURVE NO.	DIMENSION L x H (mm)				DRY WEIGHT (kg)			
	STANDARD		AUTO & AUTO-ALTERNATION		STANDARD		AUTO & AUTO-ALTERNATION	
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING
1	405 x 566	621 x 626	442 x 683	658 x 743	52.0	50.0	58.0	56.0
2	531 x 637	705 x 670	565 x 754	738 x 787	66.0	56.0	73.0	63.0
3	531 x 637	705 x 670	565 x 754	738 x 787	66.0	57.0	73.0	64.0
4	557 x 688	731 x 721	565 x 861	738 x 894	72.0	63.0	79.0	70.0
5	595 x 899	768 x 927			129.0	125.0		
6	595 x 920	768 x 948			147.0	142.0		
7	602 x 981	776 x 1007			178.0	173.0		

* Weights without cable and duckfoot bend.

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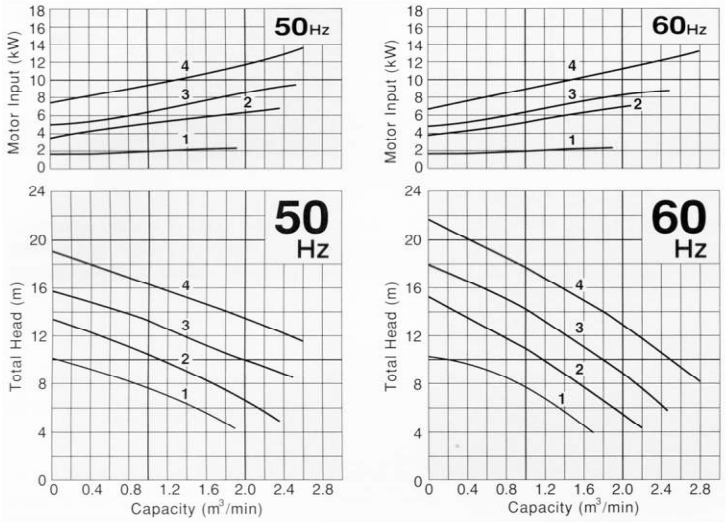
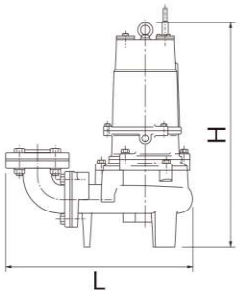
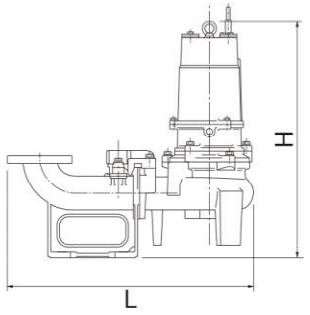


Free Standing



Guide Rail Fitting



CURVE NO.	STANDARD		AUTOMATIC		AUTO-ALTERNATION		POWER (kW)	DIA (mm)	PHASE	REVOLUTION 50Hz / 60Hz (min^{-1})	STARTING METHOD	IMPELLER PASSAGE (mm)	CABLE LENGTH (m)	CABLE CODE
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING								
1	100SUZ343.7	AT100	100SUZ343.7	AT100	100SUZ343.7	AT100	3.7	100	3	1500 / 1800	D.O.L.	100	6	B(C*2)
2	100SUZ345.5	AT100					5.5	100	3	1500 / 1800	D.O.L.	100	8	H
3	100SUZ347.5	AT100					7.5	100	3	1500 / 1800	D.O.L.	100	8	I
4	100SUZ3411	AT100					11	100	3	1500 / 1800	STAR-DELTA	100	8	L

(*2) 200 - 240V.

CURVE NO.	DIMENSION L x H (mm)				DRY WEIGHT (kg)			
	STANDARD		AUTO & AUTO-ALTERNATION		STANDARD		AUTO & AUTO-ALTERNATION	
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING
1	627 x 737	846 x 777	632 x 910	851 x 950	79.0	70.0	86.0	77.0
2	652 x 939	871 x 974			145.0	134.0		
3	652 x 960	871 x 995			159.0	148.0		
4	660 x 1021	879 x 1054			191.0	180.0		

* Weights without cable and duckfoot bend.

CABTYRE CABLE:

Single-Phase

CODE	PIECES per UNIT	CORES x mm^2	DIA (mm)	MATERIAL
a	1	3 x 1.25	10.1	PVC

Three-Phase

CODE	PIECES PER UNIT	CORES x mm^2	DIA (mm)	MATERIAL
A	1	4 x 1.25	11.1	PVC
B	1	4 x 2	11.8	
C	1	4 x 3.5	13.9	
H	1	4 x 3.5	14.1	Chloroprene Rubber
I	1	4 x 5.5	16.8	
L	3	4 x 3.5	14.1	
		3 x 3.5	12.9	
		2 x 1.25	9.8	