



APEC-SUN

Submersible Pump

SC-Series

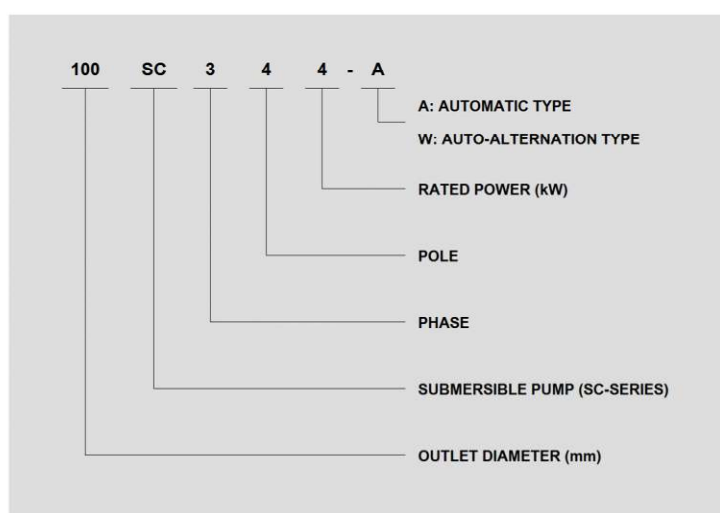


The SC-Series incorporates a cutter mechanism consisting of a tungsten carbide tipped channel impeller and a saw-tooth suction cover surface hardened. The cutter mechanism cuts fibrous materials to small pieces permitting clog-free pumping.

APPLICATIONS:

- Sewage pump stations.
- Waste water treatments.
- Septic systems.
- Campgrounds.
- Basements.
- Construction drainage.
- Other applications requiring shredding solids into small pieces.

TYPE DESCRIPTION:



AUTOMATIC

The APEC-SUN automatic type pump has an integral control circuit and two float switches operated at a low voltage. As the pump has a Circle Thermal Protector (CTP) integrated 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

We recommend using the APEC-SUN guide rail fitting system with pumps. This 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.

FEATURES:

MOTOR

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

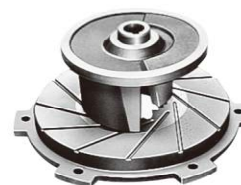
MOTOR PROTECTOR

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 circuit if excessive heat builds up or an overcurrent caused by an electrical or mechanical failure occurs.

A Miniature Thermal Protector (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 & SUCTION COVER

A sintered tungsten carbide alloy tip is brazed onto the impeller vane, and it rotates on the serrated part of the suction cover. Incoming fibrous matters are cut up by this mechanism, and this prevents clogging in the pump discharge pipes or valves.



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.

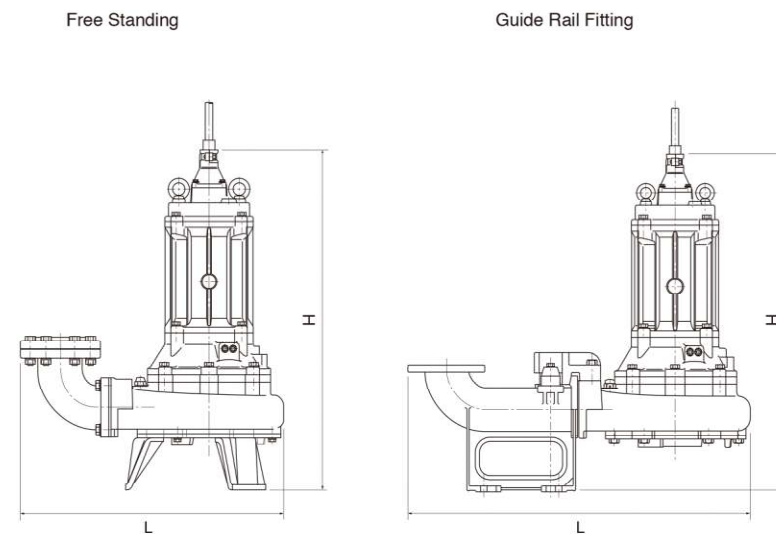
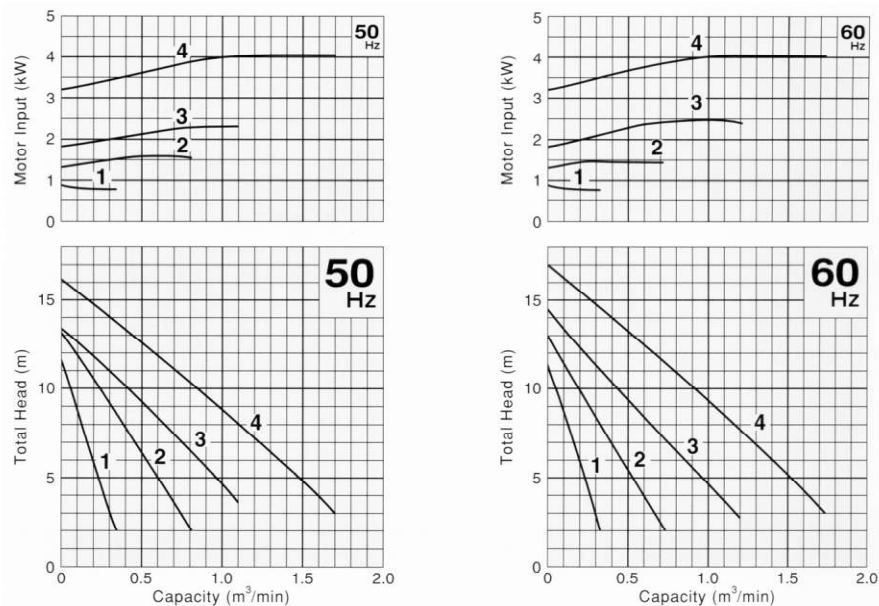
CABLE ENTRY

Every cable 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 centrifugal 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:



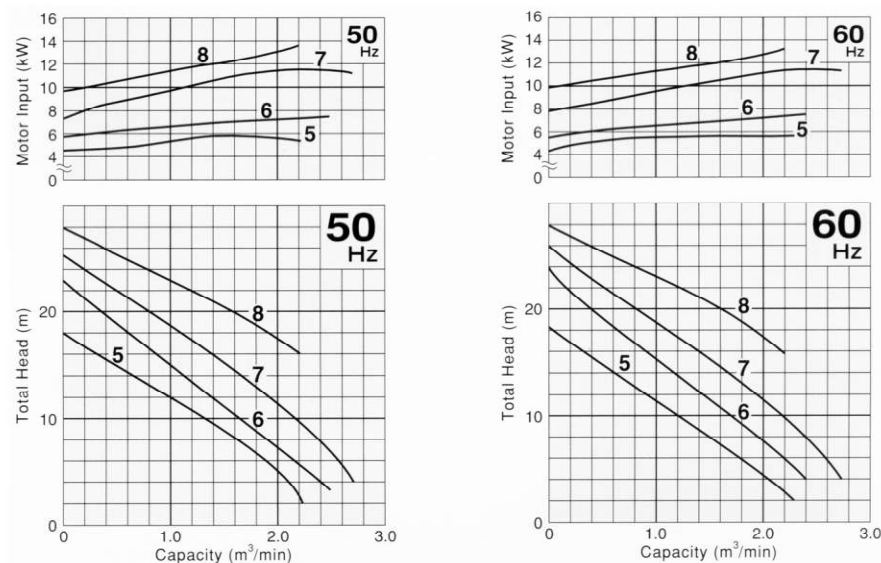
CURVE NO.	STANDARD		AUTOMATIC		AUTO-ALTERNATION		POWER (kW)	DIA (mm)	PHASE	REVOLUTION 50Hz / 60Hz (min ⁻¹)	STARTING METHOD	IMPELLER PASSAGE (mm)	CABLE LENGTH (m)	CABLE CODE
	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING	FREE STANDING	GUIDE RAIL FITTING								
1	50SC12.75	AT50	50SC12.75A	AT50			0.75	50	1	3000 / 3600	CAPACITOR	31x27 / 28x27	5	a(b ^{*1})
1	50SC32.75	AT50	50SC32.75A	AT50	50SC32.75W	AT50	0.75	50	3	3000 / 3600	D.O.L	31x27 / 28x27	6	A
2	80SC321.5	AT80	80SC321.5A	AT80	80SC321.5W	AT80	1.5	80	3	3000 / 3600	D.O.L	43x60 / 37x60	6	A
3	100SC342.2	AT100					2.2	100	3	1500 / 1800	D.O.L	67x56 / 62x56	6	A(C ^{*2})
4	100SC343.7	AT100					3.7	100	3	1500 / 1800	D.O.L	70x81 / 64x81	6	C(E ^{*2})

(*1) 100 - 120V.
(*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 523	621 x 566	405 x 580	621 x 624	32.0	30.0	34.0	32.0
1	405 x 415	621 x 458	433 x 496	649 x 539	24.0	23.0	25.0	24.0
2	446 x 536	668 x 556	485 x 630	707 x 680	36.0	34.0	40.0	38.0
3	594 x 616	754 x 631			68.0	64.0		
4	599 x 690	759 x 700			84.0	80.0		

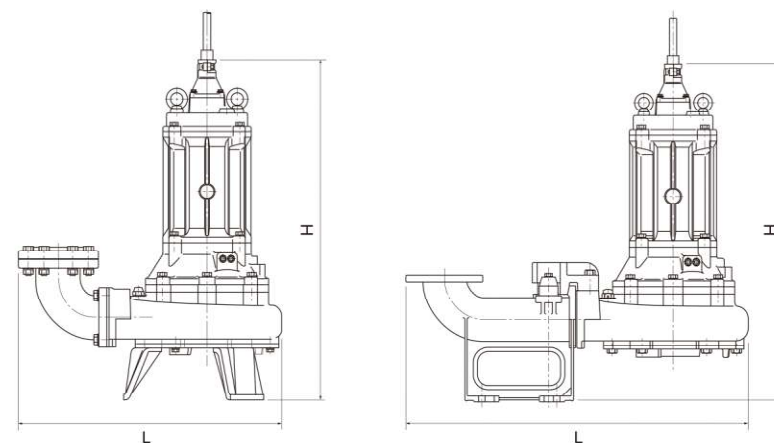
* Weights without cable and duckfoot bend.

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								
5	100SC345.5	AT100					5.5	100	3	1500 / 1800	D.O.L	82x68 / 68x68	8	H
6	100SC347.5	AT100					7.5	100	3	1500 / 1800	D.O.L	76x69 / 71x68	8	I
7	100SC3411	AT100					11	100	3	1500 / 1800	STAR-DELTA	82x75 / 87x75	8	L
8	100SC3415	AT100					15	100	3	1500 / 1800	STAR-DELTA	87x45 / 77x40	8	M

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
5	686 x 908	905 x 906			140.0	133.0		
6	686 x 929	905 x 927			159.0	152.0		
7	710 x 1000	928 x 998			164.0	177.0		
8	707 x 1080	926 x 1078			320.0	313.0		

* 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
b	1	3 x 2	10.9	

Three-Phase

CODE	PIECES PER UNIT	CORES x mm ²	DIA (mm)	MATERIAL
A	1	4 x 1.25	11.1	PVC
C	1	4 x 2	11.8	
E	1	4 x 3.5	13.9	
H	1	4 x 3.5	14.1	
I	1	4 x 5.5	16.8	Chloroprene Rubber
L	3	4 x 3.5	14.1	
		3 x 3.5	12.9	
		2 x 1.25	9.8	
M	3	4 x 5.5	16.8	
		3 x 5.5	15.2	
		2 x 1.25	9.8	