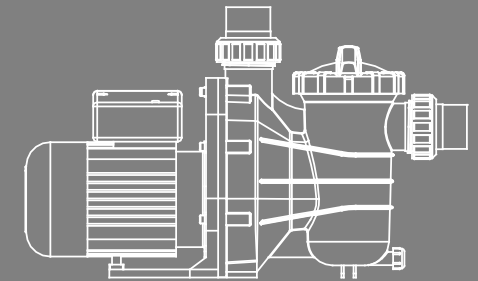




SS, SS-T SERIES CENTRIFUGAL PUMP

Installation and Operation Manual



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USER MANUAL

 **STRIVE FOR CLEAR WATER**

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This Limited Warranty extends only to products purchased from Emaux authorized reseller. This Limited Warranty does not extend to any product that has been damaged or rendered defective (a) as a result of accident, misuse or abuse;
(b) as a result of an act of God;
(c) by operation outside the usage parameters stated herein;
(d) by the use of parts not manufactured or sold by Emaux;
(e) by modification of the product;
(f) as a result of war or terrorist attack; or
(g) as a result of service by anyone other than Emaux authorized reseller or authorized agent.

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, EMAUX MAKES NO OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EMAUX EXPRESSLY DISCLAIMS ALL WARRANTIES NOT STATED IN THIS LIMITED WARRANTY. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS OF THIS EXPRESS LIMITED WARRANTY.

WARNINGS AND SAFETY INSTRUCTIONS

GENERAL WARNING

This instruction contain general caution information for use in Pool and SPA pump installation application. Specified Pump model function should be refer to particular manual. Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children.

This appliance should be installed by qualified electrical personnel in accordance with National Electrical Code and all applicable local codes and ordinances. Hazardous voltage can shock, burn, and cause death or serious property damage. DO NOT use an extension cord to connect unit to electric supply to reduce the risk of electric shock.



SUCTION ENTRAPMENT HAZARD

This pump produces high levels of suction and creates a strong vacuum at the main drain at the bottom of your pool and spa. This suction is so strong that it can trap adults or children under water if they come in close proximity to a pool or spa drain or a loose or broken drain cover or grate.

The Virginia Graeme Baker (VGB) Pool and Spa Safety Act creates new requirements for owners and operators of commercial swimming Pools and spas.

Commercial pools or spas constructed on or after December 19, 2008, shall utilize:

1. A multiple main drain system without isolation capability with suction outlet covers that meet ASME/ANSI A112.19.8a Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs and either:
 - 1.1 A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 Manufactured Safety Vacuum Release systems (SVRS)
For Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems and/or ASTM F2387 Standard
Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming pools, Spas and Hot Tubs or
 - 1.2 A properly designed and tested suction-limiting vent system or
 - 1.3 An automatic pump shut-off system.

Commercial pools and spas constructed prior to December 19, 2008, with a single submerged suction outlet shall use a suction outlet cover that meets ASME/ANSI A112.19.8a and either:

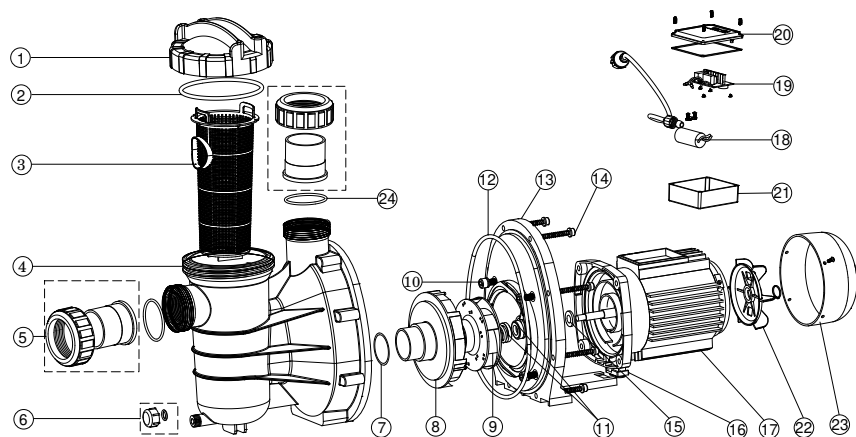
1. A SVRS meeting ASME/ANSI A112.19.17 and/or ASTM F2387, or
2. A properly designed and tested suction-limiting vent system, or
3. An automatic pump shut-off system, or
4. Disabled submerged outlets, or
5. Suction outlets shall be reconfigured into return inlets.

There are five types of suction entrapment according to The Virginia Graeme Baker (VGB) Pool and Spa Safety Act

Key No.	Part No.	Description	QTY
18	04016030	Capacitor for SS/ SD/ SQ/ ST020 AM U020P/ TP(50/ 60Hz)	1
18	04016031	Capacitor for SS/ SD/ SQ/ ST033 Pump	1
19	89022112	Cable Box for SD,SQ,SP,ST050- 120 Pump	1
20	89022111	Cable Box for SQ/ ST/ SD020- 033, SS020- SS030 Pump	1
21	89021505	Cable Box for SA/ ST/ SD 110V	1
22	01031027	Cooling Fan for SS/ SD/ SQ/ ST050- SS/ SD/ SQ/ ST120 Pump	1
22	01031026	Cooling Fan for SS/ SD/ SQ/ ST020- SS/ SD/ SQ/ ST030 Pump	1
23	01031011	Fan Cover for SS/ SD/ SQ/ ST020-SS/ SD/ SQ/ ST030 Pump	1
23	01031010	Fan Cover for SQ/ SP/ SS/ SD/ ST050- SQ/ SP/ SS/ SD/ ST120	1
24	02011104	O- Ring for 1.5" Union	2

Notes: 5* 89280105B is 1.5" Union in Black Colour
5* 89280105W is 1.5" Union in White Colour

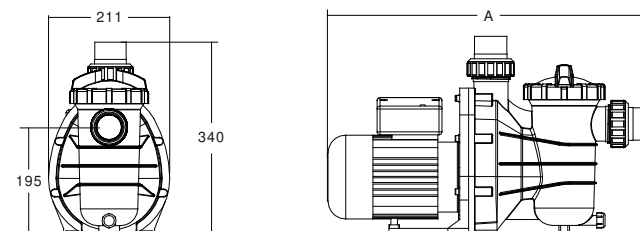
SS SERIES WITH TIM ER



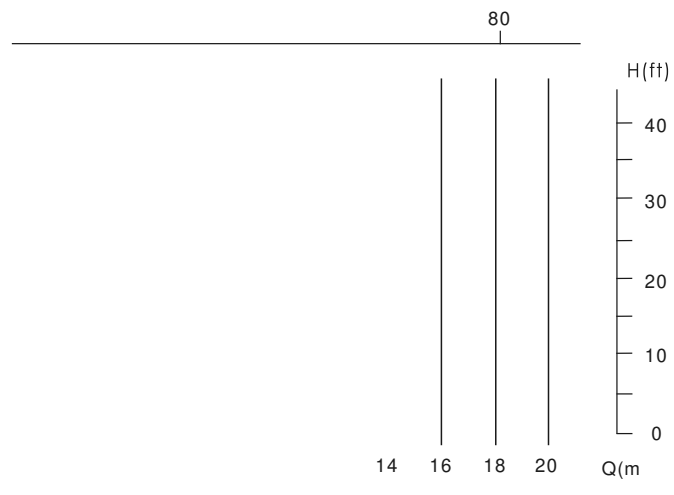
1. PRODUCT INFORMATION

Model 50Hz	Input (kW)	Current (AMP)	Noise (dB)	Head(m)			
				2	4	6	8
				FlowRate(m³/h)			
SS020 / SS020T	0.28	1.5	55	8.4	4	-	-
SS033 / SS033T	0.43	2	55	10.4	7	-	-
SS050 / SS050T	0.55	2.5	60	12.4	10	4	-
SS075 / SS075T	0.75	3.5	60	14.4	12.2	9.4	5
SS100 / SS100T	0.90	4.7	65	15.2	13.8	11.4	8.4
SS120 / SS120T	0.97	5.8	65	18	16	14	12

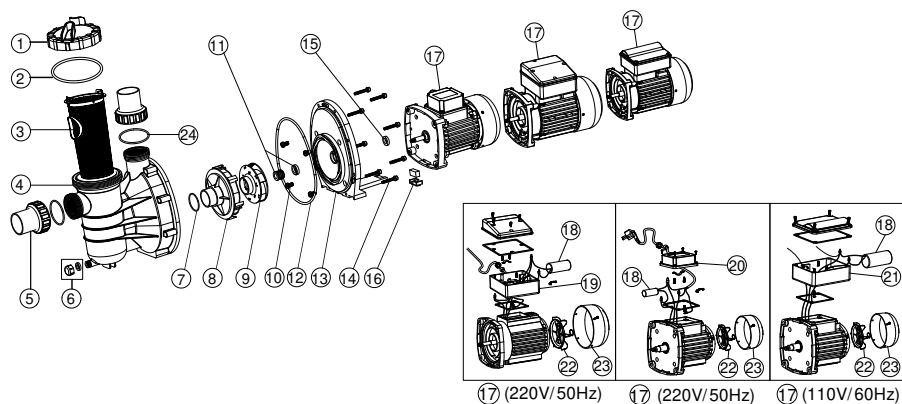
DIMENSIONS



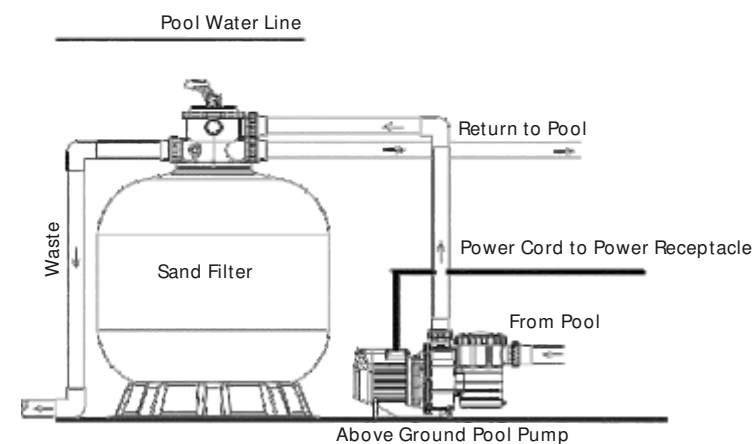
Code 220V/50Hz	Code 110V/60Hz	Model	Connection Size	Horsepower	Weight (kg)	Capacitance 220V	Capacitance 110V	A mm
88022401	88022601	SS020	1.5" / 50mm	0.2hp	6.20	5μF	20μF	507
88022402	88022602	SS033	1.5" / 50mm	0.33hp	6.50	6μF	24μF	507
88022403	88022603	SS050	1.5" / 50mm	0.5hp	8.03	8μF	30μF	552
88022404	88022604	SS075	1.5" / 50mm	0.75hp	9.01	14μF	40μF	552
88022405	88022605	SS100	1.5" / 50mm	1.0hp	9.09	20μF	60μF	552
88022406	88022606	SS120	1.5" / 50mm	1.2hp	11.00	20μF	60μF	552
9020329	/	SS020T	1.5" / 50mm	0.2hp	6.20	5μF	/	507
9020330	/	SS033T	1.5" / 50mm	0.33hp	6.50	6μF	/	507
9020331	/	SS050T	1.5" / 50mm	0.5hp	8.03	8μF	/	552
9020332	/	SS075T	1.5" / 50mm	0.75hp	9.01	14μF	/	552
9020333	/	SS100T	1.5" / 50mm	1.0hp	9.09	20μF	/	552
9020334	/	SS120T	1.5" / 50mm	1.2hp	11.00	20μF	/	552



8. REPLACEMENT PARTS



Key No.	Part No.	Description	QTY
1	01201031	Transparent Lid	1
2	02010247	O-Ring for Lid	1
3	01112051	Basket for SS Pump	1
4	01021064	SS Pump Pre-Filter	1
5*	89280105	1.5" Union (Black/ White Colour)	2
6	89022402	Drain Plug With O'Ring	1
7	02011004	O-Ring for Diffuser	1
8	01111014	Diffuser	1
9	01311014	Impeller SS120(220V/50Hz)	1
9	01311015	Impeller SD020/SD50/SQ20/SQ50/SS20/SS50/ST20/ST50	1
9	01311016	Impeller SD33/SD75/SQ33/SQ75/SS33/SS75/ST33/ST75	1
9	01311017	Impeller SD050/SD100/SQ050/SQ100/SS050/SS100/ST050	1
9	01311018	Impeller SD075/SD120/SQ075/SQ120/SS075/SS120/ST075	1
9	01311019	Impeller SD100/SQ100/SS100/ST100(220V/50Hz)	1
9	01311023	Impeller SD020/SQ020/SS020/ST020(220V,110V/60Hz)	1
9	01311024	Impeller SD033/SQ033/SS033/ST033(220V,110V/60Hz)	1
10	89022403	M8 x 16 Screw with Washer	4
11	04015033	1/2" Mechanical Seal	1
12	02011090	O-Ring for Flange	1



2.2 ELECTRICAL WIRING



This power pump demand licensed or certified electrician or qualified pool installer to ensure there is adequate protection between the pump motor and mains power supply according to individual countries safety code.

The pump has power cord with plug attached on the plug, plug it to a power socket with circuit breaker to isolate the motor from the mains power for over load protection. The circuit breaker rating should refer to the electrical specification of individual pump working voltage and power. The power has to be with a Residual Current Device (RCD) or Ground Fault Circuit Interrupt (GFCI) having a rated residual operating current not exceeding 30 mA.



WARNING:

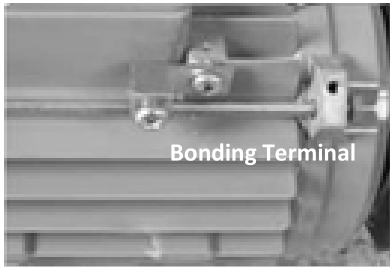
If the RCD/GFCI device trips, it means there is fault on the power line or motor. Do not use this pump. Disconnect the pump and have the problem corrected by a qualified service representative before using.

Press the reset button to reset the RDC/GFCI devices after fixed. It will keeps the circuit shut off and will not reset if the power line problem is not fixed. It is recommend to test the RCD/GFCI at least once a month.

Pumps should be shipped with Power cord with plug for corresponding countries



Bonding Instructions – Permanently wired units will need to include instructions for connecting the solid copper, equipotential bonding conductor. For SS020, SS033, SS050, SS07 and SS120 110V/60Hz version, the size of the bonding conductor should be No. 8 AWG. For Canada the size of the bonding conductor should be No. 6 AWG. Bonding Nut location is as photo.



7. TROUBLE SHOOTING

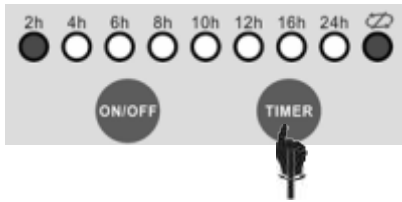
Pump delivers no water	
Leakage of water at the shaft	1
Low pump capacity	1. Valve in the suction or discharge line partly closed 2. Suction or discharge line partly plugged 3. Suction or discharge line too small 4. Plugged basket in skimmer or hair and lint pre-filter 5. Dirty filter 6. Impeller clogged



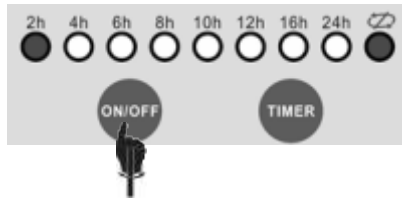
- WARNING:**
1. Verify the pump shaft turn freely.
 2. Check the mains voltage, current and frequency are accordingly to the name plate.
 3. Never run pump dry! Running pump dry may cause damage to the mechanical seal causing leakage and flooding. Fill the pre-filter with water before starting motor.
 4. Before removing the pre-filter Lid, STOP PUMP, CLOSE GATE VALVES in suction and discharge pipes.
 5. Always STOP THE PUMP before when RELEASE ALL PRESSURE from the pump and the piping system before proceeding.
 6. Never tighten or loosen screw while the pump is in operation.
 7. The suction pipe and the suction inlet in the pool must be free from obstruction.

WARNING: Tighten / untighten the pump Lid by hand only.

6.3 Single Cycle Mode



To switch to Single Cycle Mode, press [timer] for about 3 seconds (the Single Cycle Indicator will come on). To change cycle time, press the [timer] button again. It works in a sequence and will change from 2h



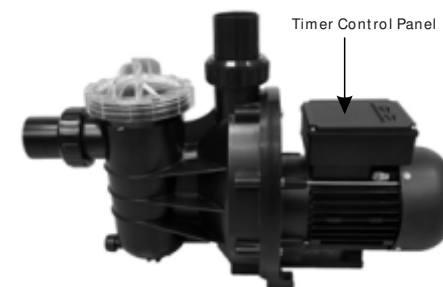
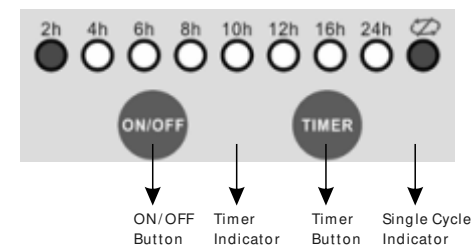
WARNING:

Before start-up, the alignment of the pump should be checked. The tubing should be inspected to ensure that they are properly fitted and tightened and that they do not exert pressure or tension on the pump's suction or discharge connection. The pump should never be operated.

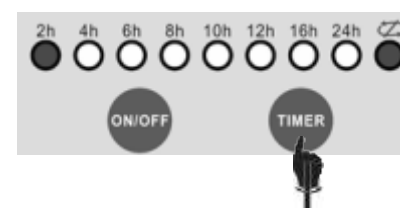
1. Clear all piping of construction debris and verify that the piping has passed a proper pressure test.
2. Check the filter and other equipment for proper installation, verifying all clamps and connections are properly installed as per the manufacturer's instructions.
3. Open any shut off valves on the suction and discharge lines.
4. Open the filter pressure relief valve and release all pressure from the system.
5. If the pump is located below the water level of the pool, opening the pressure relief valve will fill the pump with water.
6. If the pump is located above the pool water level, remove the Lid from the pre-filter and fill with water before starting the pump.
7. Check to see that the Lid O-ring and seat areas are clean and lubricated. Debris in the sealing area can cause air to leak into the system and make it difficult to prime the pump.
8. Close/tighten the Lid to make an airtight seal.
9. Turn on the pump.
10. If the pump does not prime within 15 minutes. Ensure all instructions to this point have been followed. Stop the pump! Check for suction leaks and repeat steps (I) through (VIII).

6. TIMER SETTING(FOR TIMER VERSION)

6.1 CONTROL PANEL



6.2 Continuous Mode



After turn on the pump, the default setting is 24 hours continuous operation. To set the desired operation period, this can be done by pressing the timer button (2h