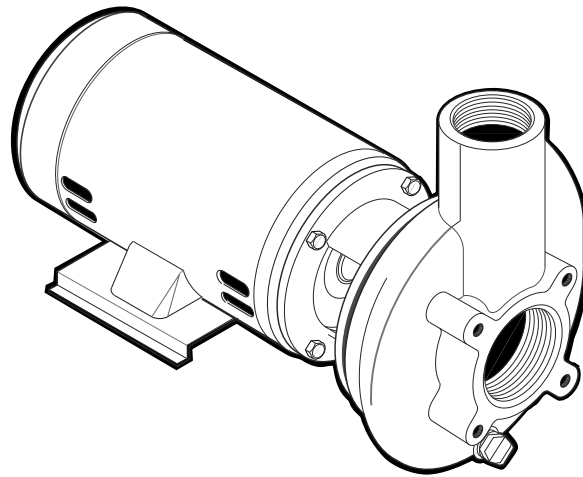


STA-RITE®

60 CYCLE "C" AND "CC" SERIES CENTRIFUGAL PUMPS FOR SWIMMING POOL USE

O W N E R ' S M A N U A L



INSTALLATION, OPERATION & PARTS

MODELS

HP	230/460V		200V	
	Medium Head	High Head	Medium Head	High Head
3	CMH-136	CHH-137	CM2H-136	CH2H-137
	CMH3-136	CHH3-137	CM2H3-136	CH2H3-137
	CCMH-136S	CCHH-137S	CCM2H-136	CH2H3-137
	CCMH3-136S	CCHH3-137S	CCM2H3-136	CCH2H3-137
5		CHJ-138		
		CCHJ-138		
		CHJ3-138		CH2J3-138
		CCHJ3-138		CCH2J3-138

This manual should be furnished to the end user of this pump; its use will reduce service calls and chance of injury and will lengthen pump life.

Sta-Rite Pool/Spa Group

293 Wright Street, Delavan, WI 53115

International: 262-728-5551, FAX: 262-728-7550

www.starite.com

Union City, TN • Delavan, WI • Mississauga, Ont. • Murrieta, CA

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S408 (Rev. 12/15/03)

'C' and 'CC' SERIES CENTRIFUGAL PUMP and TRAP

To avoid unneeded service calls, prevent possible injuries, and get the most out of your pump, READ THIS MANUAL CAREFULLY!

The Sta-Rite 'C' and 'CC' Series Centrifugal pump:

- Is designed for use with commercial swimming pools or as a centrifugal pump.
- Is an excellent performer; durable, reliable.

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Installation.....	4-6
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IMPORTANT SAFETY INSTRUCTIONS

Always follow basic safety precautions with this equipment, including the following.

▲ WARNING To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

▲ CAUTION This pump is for use with permanently installed pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.

SAVE THESE INSTRUCTIONS

READ AND FOLLOW SAFETY INSTRUCTIONS!

▲ This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

▲ DANGER warns about hazards that **will** cause death, serious personal injury, or major property damage if ignored.

▲ WARNING warns about hazards that **can** cause death, serious personal injury, or major property damage if ignored.

▲ CAUTION warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

NOTICE indicates special instructions not related to hazards.

Carefully read and follow all safety instructions in this manual and on equipment. Keep safety labels in good condition; replace if missing or damaged.

▲ WARNING **Incorrectly installed or tested equipment may fail, causing severe injury or property damage.**
Hazardous pressure Read and follow instructions in owner's manual when installing and operating equipment. Have a trained pool professional perform all pressure tests.

1. Do not connect system to a high pressure or city water system.
2. Use equipment only in a pool or spa installation.
3. Install pump with at least 2 hydraulically balanced main drains equipped with correctly installed, screw-fastened, anti-entrapment certified covers. See Page 4.
4. Trapped air in system can cause explosion. BE SURE all air is out of system before operating or testing equipment.

Before pressure testing, make the following safety checks:

- Check all clamps, bolts, lids, and system accessories before testing.
- Release all air in system before testing.
- Tighten Sta-Rite trap lids to 25 ft. lbs. (3.5 kg-m) torque for testing.
- Water pressure for test must be less than 25 PSI (7.5 kg/cm²).
- Water Temperature for test must be less than 100° F. (38° C).
- Limit test to 24 hours. After test, visually check system to be sure it is ready for operation. Remove trap lid and retighten hand tight only.

NOTICE: These parameters apply to Sta-Rite equipment only. For non-Sta-Rite equipment, consult manufacturer.

UNCRATING AND INSPECTION

Handle with care.

Check items received against packing list to be sure that all equipment has been received.

Inspect for shipping damage. If found, file claim with carrier immediately.

Cleanup

Clean up all trash and other materials which will interfere with installation from foundation and surrounding area.

For easy assembly, make sure all threaded joints and mating surfaces are clean. If necessary, clean with wire brush and solvent.

▲ WARNING To reduce danger of explosion and fire, do not use gasoline as a cleaning solvent.

Remove all foreign material (packing, etc.) from pump and strainer.

INSTALLATION

Only qualified, licensed personnel should install pump and wiring.

Foundation

Foundation must:

Be Solid - Level - Rigid - Vibration free.

Be provided with necessary hold-down bolts, washers, and shims.

Allow pump inlet to be as close to water level as possible.

Use short, direct suction pipe (to reduce friction losses).

Locate pump below pool water level (pump is not self priming).

Allow for shutoff valves in suction and discharge piping.

Have adequate floor drainage to prevent flooding.

Be protected from excess moisture.

Allow adequate access and include suction and discharge (isolation) valves for servicing pump and piping.

POOL PUMP SUCTION REQUIREMENTS

▲ WARNING Pump suction is hazardous and can trap and drown or disembowel bathers. Do not use or allow anyone else to use a pool, spa, or hot tub unless it has at least two suction outlets to each pump suction line (see "Outlets Per Pump," Page 5). Do not use or operate swimming pools, spas, or hot tubs if a suction outlet cover is missing, broken, or loose. Follow the guidelines below for a pump installation which minimizes risk to users of pools, spas, and hot tubs.

Entrapment Protection

The pump suction system *must* provide protection against the hazard of suction entrapment or hair entrapment/entanglement.

Suction Outlet Covers

All suction outlet covers must be maintained. They must be replaced if cracked, broken, or missing.

See Page 5 for outlet cover certification requirements.

All suction outlets must have correctly installed, screw-fastened covers in place.

Outlets Per Pump

Provide at least two hydraulically balanced main drains, with covers (see above), for each swimming pool pump suction line. The centers of the main drains (suction fittings) must be at least three feet apart.

The system must be built so that it cannot operate with the pump drawing water from only *one* main drain (that is, there must be at least two main drains connected to the pump whenever it is running). (See Figure 1). However, if two main drains run into a single suction line, the single suction line may be equipped with a valve which will shutoff *both* main drains from the pump (see Figure 1).

More than one pump can be connected to a single suction line as long as the requirements above are met.

Water Velocity

If 100% of the pump's flow comes from the main drain system, the maximum water velocity in the pump suction hydraulic system must be seven feet per second or less even if one main drain (suction fitting) is completely blocked. The flow through the remaining main drain(s) must comply with the latest ASME/ANSI Specification for *Suction Fittings For Use in Swimming Pools, Spas, Hot Tubs, and Whirlpool Bathtub Applications*.

Piping – General

System piping must be at least equal to size of pump connections.

To prevent strain on the pump casing and foundation, pipe and fittings must be aligned to pump without forcing.

To avoid strains on the pump, support both suction and discharge pipes independently. Place these supports near the pump.

To avoid a strain left by a gap at the last connection, start all piping at the pump and run pipe **away** from the pump.

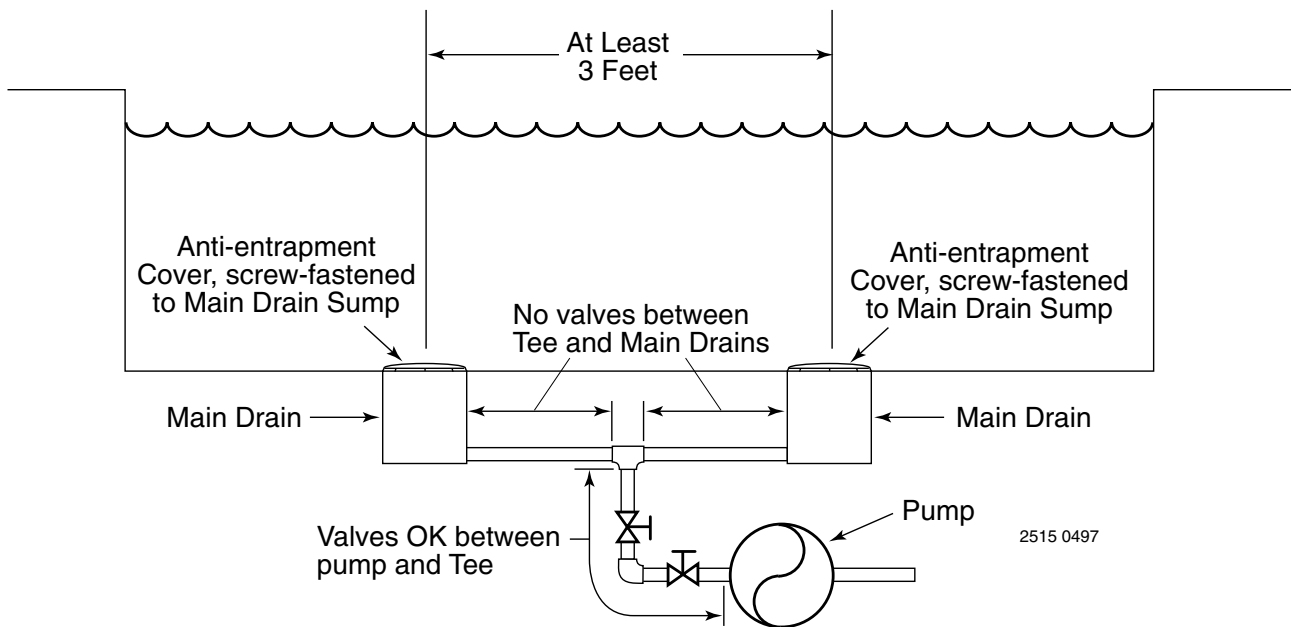


Figure 1 – Recommended pump suction layout.



Piping – Suction

WARNING Risk of severe injury or drowning from hair or body entrapment. To reduce risk of entrapment against pump suction opening, connect pump to multiple drains and skimmers of non-entrapment design. See “Pool Pump Suction Requirements,” Pages 4 and 5.

NOTICE: If pump suction becomes clogged, pump will cavitate, damaging pump internal parts. Keep suction pipe clear of debris, dirt, etc.

NOTICE: To prevent flooding when removing pump for service, all flooded suction systems **must** have valves in suction and discharge pipes.

Never use a suction pipe smaller than the pump suction connection.

Use larger pipe as required to keep water velocity below seven feet per second or local construction code limits, whichever is lower.

Pump must be installed in a positive suction system – it is not self priming and will not lift water if suction pipe is empty.

When using reducer to connect to pump flange, use an eccentric reducer with the straight side on top.

Piping – Discharge

Maximum water velocity should be 10 feet per second. To minimize friction losses, make piping one size larger than pump openings.

Fittings restrict flow; for best performance use fewest possible fittings.

Avoid fittings which could cause an air trap.

Pool fittings must conform to International Association of Plumbing and Mechanical Officials (IAPMO) standards.

Strainer

WARNING Maximum hydrostatic test pressure is 25 PSI (172 kPa) water pressure. To avoid explosion hazard, **DO NOT test strainer with air pressure.** Air pressure in strainer can blow cover off of strainer body, which can cause severe or fatal injury. Release

ALL air before hydrostatically testing strainer.

To avoid breaking pump or putting unnecessary strains on pump or strainer body, support pipe independently of pump/strainer.

Center the strainer cover when installing it (especially when pressure testing).

When installing cover, clean O-Ring groove in strainer body, and lubricate with petroleum jelly as follows:

- A. O-Ring;
- B. Sealing surfaces of strainer cover and body;
- C. Threads and faces of wing nuts.

This will prevent corrosion, improve seal, and ease maintenance.

If strainer is installed backwards, debris will collect in suction pipe instead of in strainer basket. Install strainer with cast-on flow arrows pointing in direction of water flow.

Basket will only go into strainer one way; don't force it.



ELECTRICAL

⚠ WARNING Disconnect power at service panel before connecting motor.

- ⚠** Ground motor before connecting to electrical power supply.
- ⚠** Failure to ground motor can cause severe or fatal electrical shock hazard.
- ⚠** Do not ground to a gas supply line.
- ⚠** To avoid dangerous or fatal electrical shock, turn OFF power to motor before working on electrical connections.
- ⚠** Supply voltage must be within $\pm 10\%$ of nameplate voltage. Incorrect voltage can cause fire or seriously damage motor and voids warranty. If in doubt consult a licensed electrician.
- ⚠** Use wire size specified in Wiring Chart. If possible, connect pump to a separate branch circuit with no other appliances on it.

Single phase motors come factory wired for 230 volt operation. Do not alter wiring in single phase motors. Match motor voltage to power supply voltage. Do not connect three phase motors to single phase power supply or single phase motors to three phase power supply.

All electrical wiring, grounding, and bonding must be done by a licensed electrical contractor who is familiar with commercial swimming pool installations and electrical codes and requirements. Wire sizing, wire type, branch circuit fuse protection, motor starter, control equipment, and related items must meet National Electrical Code and local code requirements.

Wiring

1. Install, ground, wire and maintain this pump in accordance with your local electrical code and all other codes and ordinances that apply. Consult your local building inspector for local code information.
2. Ground the pump permanently using a wire of size and type specified by local or National Electrical Code.

⚠ Do not ground to a gas supply line.

3. Connect ground wire first. Connect to ground first, then to green grounding terminal provided (identified as GRD or \oplus). Make ground connection to this terminal. Do not connect motor to electrical power supply until unit is permanently grounded; otherwise serious or fatal electrical shock hazard may be caused.
4. For best ground connection, connect ground wire to a grounded lead in the service panel.

Bond motor to pool structure according to local or National Electrical Code. Use a solid copper conductor, size No. 8 (6.0 mm²) AWG or larger.

⚠ CAUTION Fire Hazard. Before using pump, check your motor nameplate for voltage. Your electric supply voltage and the stamped nameplate voltage **must agree**. Motors stamped 200 volts or 230 volts, **must be used with that voltage only**. Motors stamped with two voltages (for example 230/460 volts), may be used with either supply voltage. For these motors check connections against wiring diagram on motor nameplate and make any changes necessary to agree with your supply voltage. If in doubt, call a licensed electrician. Incorrect voltage will cause serious damage to the motor.

Some models are equipped with three phase motors, which require magnetic starters.

Motors can run in either direction, depending on how they are connected to the power supply.

To check motors for proper rotation: Remove the motor end cover. This exposes the motor shaft. If hook-up is correct, the shaft will rotate clockwise. If rotation is not clockwise:

- 3 Phase motors: Reverse any two leads to the starter.
- 1 Phase motors: See wiring diagram on motor nameplate.

The rotation will now be correct. BE SURE power is off to the motor when working on electrical connections.

⚠ CAUTION Burn Hazard. Motor normally operates at high temperature and will be too hot to touch. Before handling pump or motor, stop motor and allow it to cool for 20 minutes.

TABLE I – ELECTRICAL DATA - FUSING AND WIRING REQUIREMENTS

Motor HP	Voltage/Hz/Phase	Max Load Amps	Branch Fuse Rating Amps*	Serv. to Motor - Dist. in Ft. (M)		
				0-100' (0-30M)	101-200' (30-60M)	201-300' (60-90M)
3	230/60/1	13.4	20	12(3)	12(3)	10(5.5)
3	230/460/60/3	8.6/4.3	15/15	14/14(2/2)	14/14(2/2)	14/14(2/2)
3	200/60/1	17.2	25	10(5.5)	10(5.5)	10(5.5)
3	200/60/3	8.4	15	14(2)	14(2)	14(2)
5	230/60/1	22.0	30	10(5.5)	10(5.5)	8(8.4)
5	230/460/60/3	13.2/6.6	20/15	12/14(3/2)	12/14(3/2)	12/14(3/2)
5	200/60/3	13.8	20	12(3)	12(3)	12(3)

OPERATION

⚠ DANGER Hazardous suction. Can trap hair or body parts, causing severe injury or death by drowning. Do not block pump or strainer suction with body. **Small children using pool must ALWAYS have close adult supervision!**

Hazardous suction.

⚠ WARNING Do not run pump against closed discharge valve. To do so can boil water in pump body, which cause pump to explode and can cause severe burns to people working on pump.

⚠ CAUTION NEVER run pump dry. Running pump dry may damage seals, causing leakage and flooding. Fill pump with water before starting motor.

⚠ Before removing strainer cover:

1. STOP PUMP before proceeding.
2. CLOSE SHUTOFF VALVES in suction and discharge pipes.
3. RELEASE ALL PRESSURE from pump and piping system.

⚠ After pressure test, release all pressure before removing strainer cover!

NOTICE: Provide adequate ventilation. Ambient air temperature should be 104°F (40°C) or less.

NOTICE: To prevent corrosion damage, store pool chemicals in another room away from pump.

Priming Pump

⚠ WARNING **Hazardous Pressure!** Before removing strainer cover, remove vent plug in cover or open filter tank air release valve and release all pressure from system.

In a flooded suction system open suction/discharge valves to prime. If pump is not in a flooded suction system, remove strainer cover; fill strainer and pump with water.

If necessary, use a wrench on flats when removing wing nuts.

When installing cover, clean O-Ring sealing surface on strainer body, and lubricate with petroleum jelly as follows:

- A. O-Ring;
- B. Sealing surfaces of strainer cover and body;
- C. Threads and faces of wing nuts.

This will prevent corrosion, improve seal, and ease maintenance.

Center strainer cover when installing it (especially when pressure testing).

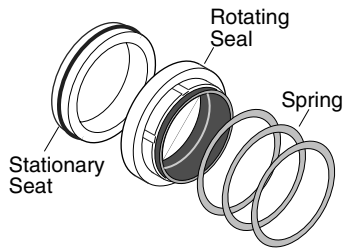
Hand tighten wing nuts. When tightening, alternate back and forth between nuts to compress O-Ring evenly.

Maximum wing nut torque is 25 ft.-lbs. (3.5 kg.-m).

Start pump; it should prime now.

If pump does not prime, make sure that all valves are open, suction pipe end is under water and that there are no leaks in suction pipe. See Troubleshooting Guide, Page 13.

NOTICE: To avoid corrosion damage to pump and strainer, do not add chemicals to system anywhere on suction side of pump (including into skimmers). Do not pour chemicals into strainer. Follow chemical manufacturer's instructions when mixing or adding chemicals to system.



1410 1294
Figure 2

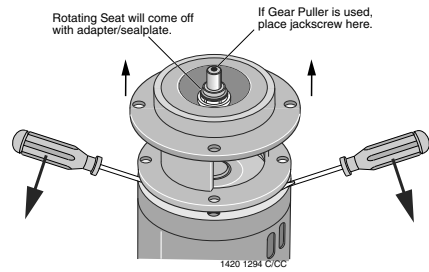


Figure 3

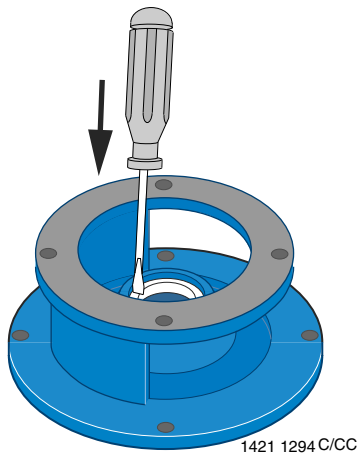


Figure 4

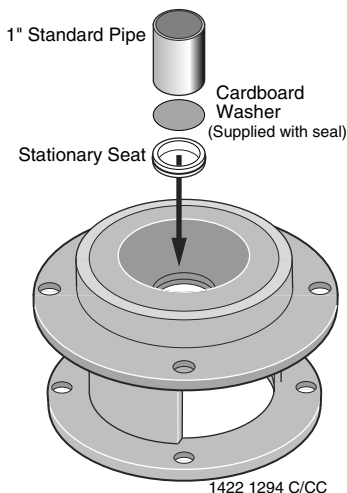


Figure 5

'C' and 'CC' SERIES COMMERCIAL POOL PUMP DISASSEMBLY/ ASSEMBLY

See Exploded View, Page 14.

Shaft Seal Replacement

NOTICE: The highly polished and lapped faces of the seal are easily damaged. **Follow instructions and handle the seal with care.**



Be sure unit is grounded and power disconnected before attempting any work on pump or motor.

Removal of Old Seal

Refer to Figure 2 for Mechanical Seal parts identification. Refer to exploded view, Page 14, for Key No. references.

1. Disconnect all power to pump.
2. Close suction and discharge valves to isolate pump from system.
3. Drain pump and strainer; be sure to vent pump before opening strainer cover.
4. Remove motor hold down bolts and the nuts (Key No. 21) holding adapter/seal plate (Key No. 5) to volute (Key No. 18). Slide motor, adapter/seal plate and impeller (Key Nos. 1, 5 and 12) backward to clear volute.
5. Remove impeller screw, washer and gaskets (Key Nos. 13-16) from end of shaft and slide impeller off of shaft.
6. Unbolt adapter/seal plate from motor.
7. Use two screwdrivers (Figure 3) or bearing puller to carefully separate motor from adapter/seal plate, bringing rotating half of seal off with adapter/seal plate. Shaft sleeve (Key No. 10) may come off with seal.
8. Use hammer, if necessary, to drive shaft sleeve out of seal. Clean up shaft sleeve with emery paper if necessary.
9. Place adapter/seal plate face down on bench and tap old stationary half of seal out of adapter/seal plate with a screwdriver and hammer (Figure 4).
10. Use a wire brush to thoroughly clean adapter/seal plate cavity. Be sure all dust and grime are out of seal cavity before installing new seal.

Installing New Seal

1. **NOTICE:** Seal faces are highly polished and lapped. **Handle with care.** Any mar, nick or scratch on seal face will cause it to leak. **BE SURE** to install with polished faces toward each other (see Figure 2).
2. Clean polished surface of ceramic seat with clean cloth.
3. Sparingly wet O-Ring around ceramic seat with liquid soap.
4. Press stationary (ceramic) half of seal cavity into cavity firmly and squarely with thumb pressure. If it does not seat properly, remove and place seal face up on bench. Re-clean adapter/seal plate cavity. Seal should now seat correctly.
5. If seal does not seat after re-cleaning adapter/seal plate cavity, place a cardboard washer over polished face of seal and **carefully** press into place using a piece of 1" standard pipe as a press (Figure 5).

NOTICE: BE SURE you do not scratch seal face.

6. Dispose of cardboard washer and recheck seal face to be sure it is free of dirt, foreign particles, scratches and grease.
7. Inspect shaft and shaft sleeve to be sure they are clean.
8. Re-install O-Ring, shaft sleeve and slinger (Key No. 2) on shaft.

NOTICE: A small amount of grease or Never-Seez under shaft sleeve will help prevent shaft and sleeve from freezing together when pump is in service.

9. Remount adapter/seal plate to motor, being careful not to scratch seal face.
10. Sparingly apply liquid soap to inside diameter and outside face of rubber drive ring on rotating half of seal.
11. Slide seal assembly onto shaft sleeve (sealing face first) far enough so that seal spring is located on shaft sleeve.

NOTICE: Be careful not to nick carbon seal face when passing it over end of shaft sleeve.

12. Slide impeller and gaskets (Key Nos. 12 and 11 in Exploded View, Page 14) onto shaft with key (Key No. 3) in position. Be sure to maintain proper order as shown on Page 14.
13. Install washer, gaskets, and impeller screw (Key Nos. 13, 14, 15, and 16) on end of shaft and tighten screw until it is snug. This should locate seal in place and bring seal faces together.
14. Reinstall motor, adapter and impeller assembly (Key Nos. 1, 5, and 12) on volute, using new gasket (Key No. 8).
15. Reinstall motor hold-down bolts.
16. Check all bolts for tightness.
17. Close drains; open system valves to fill pump.
18. When pump is full, close vent.
19. Reconnect power to pump and system is ready for operation.

MAINTENANCE - Strainer

▲ WARNING Hazardous pressure and risk of flooding	Before removing strainer cover, close isolation valves and open air release valve in filter and release all pressure.
---	--

NOTICE: Do not allow strainer to freeze.

Always close isolation valves before working on the system.

If system will be shut down for one day or more, close isolation valves and drain strainer and system to prevent corrosion.

Remove cover to allow interior to dry out when storing for the season. When interior is dry, replace cover.

Remove drain plug when storing for season. Leave plug out until system is restarted the following season.

To remove strainer cover, unscrew wing nuts. If necessary, use a wrench on flats when removing wing nuts.

NOTICE: A clogged basket will cause cavitation, which will damage strainer basket, impeller, and pump. Clean weekly or each time you vacuum pool, whichever comes first.

NOTICE: Basket is a close fit in body of strainer. When cleaning basket, do not deform.

Hose basket out well.

DO NOT hammer on basket or otherwise mistreat it.

When installing cover, clean O-Ring sealing surface on strainer body.

To prevent corrosion, improve seal, and ease maintenance, lubricate O-Ring, sealing surfaces of strainer cover and body, and threads and faces of wing nuts with petroleum jelly.

Center strainer cover when installing it (especially when pressure testing).

Hand tighten wing nuts. When tightening, alternate back and forth between nuts to compress O-Ring evenly.

Maximum wing nut torque is 25 ft.-lbs. (3.5 kg-m).

If possible, protect from weather at all times.

For storage of out door installation:

1. Drain system.
2. Dry as much as possible.
3. Lubricate with petroleum jelly.
4. Reassemble.
5. Leave drain plug out during storage.

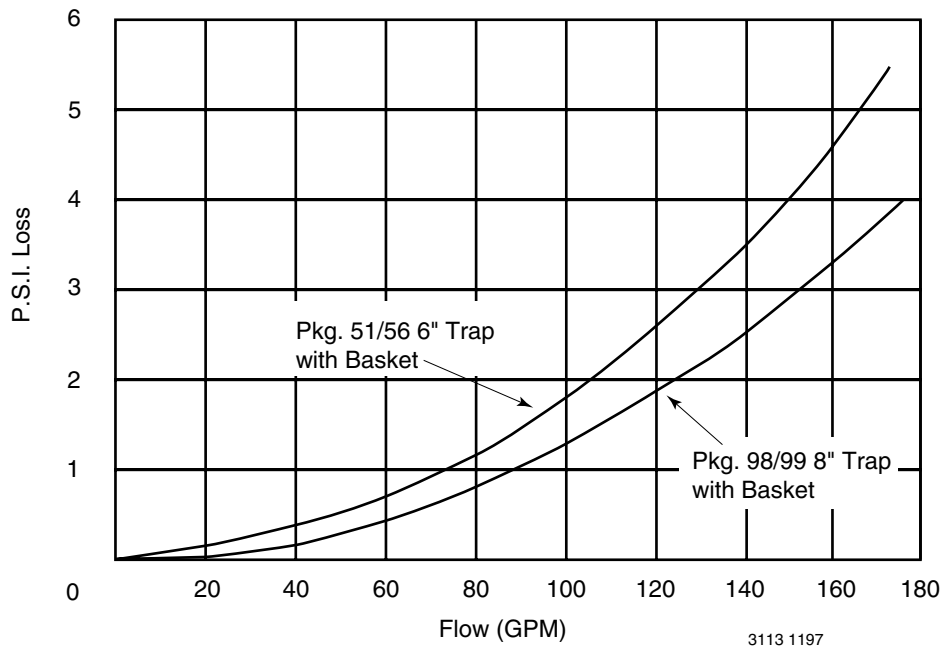


Figure 6 – Pressure drop curve for hair and lint strainers.

TROUBLESHOOTING GUIDE

Read symptom describing problem below at left. Causes for problems (bottom) are keyed to numbers at right. Check pump for causes listed at right and correct those that apply.

⚠ WARNING Hazardous voltage. Can shock, burn or kill.

SYMPTOM

Pump does not deliver liquid

Pump delivers too little flow

Delivery pressure too low

Pump needs too much power

Seal leaks

Pump vibrates or is noisy

Motor bearings have short life

Pump overheats and/or seizes

KEY NUMBERS FOR CAUSES

1, 2, 3, 4, 6, 8, 10, 11, 14, 15, 16, 17

2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 16, 17, 23, 24

5, 8, 9, 10, 11, 14, 16, 23, 24

9, 10, 11, 12, 13, 14, 17, 18, 20, 21, 23

18, 20, 25, 26

2, 3, 4, 6, 7, 15, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27,
28, 29, 30

18, 20, 21, 22, 25, 26, 27, 28, 29, 30

1, 4, 15, 16, 18, 21, 22, 25, 26

CAUSES

1. Pump not primed.

2. Pump or suction pipe not completely full of liquid

3. Suction lift rather than positive head installation.

4. Pump cavitating; increase suction pressure.

5. Excessive amount of air or gas in liquid.

6. Suction pipe inlet not sufficiently submerged.

7. Impeller, suction or strainer partially or
completely plugged.

8. Speed too low.

9. Voltage wrong or too low.

10. Wrong direction of rotation.

11. System head too high for pump design.

12. System head too low for pump design.

13. Specific gravity of liquid different than design.

14. Viscosity of liquid different than design.

15. Pump operating at very low capacity.

16. Parallel operation of pumps unsuited for such operation.

17. Foreign matter in impeller.

18. Misalignment of pump or piping.

19. Foundations not rigid.

20. Shaft bent.

21. Rotating part rubbing on stationary part.

22. Bearings worn.

23. Wear ring worn.

24. Impeller damaged.

25. Shaft running off center due to worn bearings or
misalignment.

26. Impeller out of balance resulting in vibration.

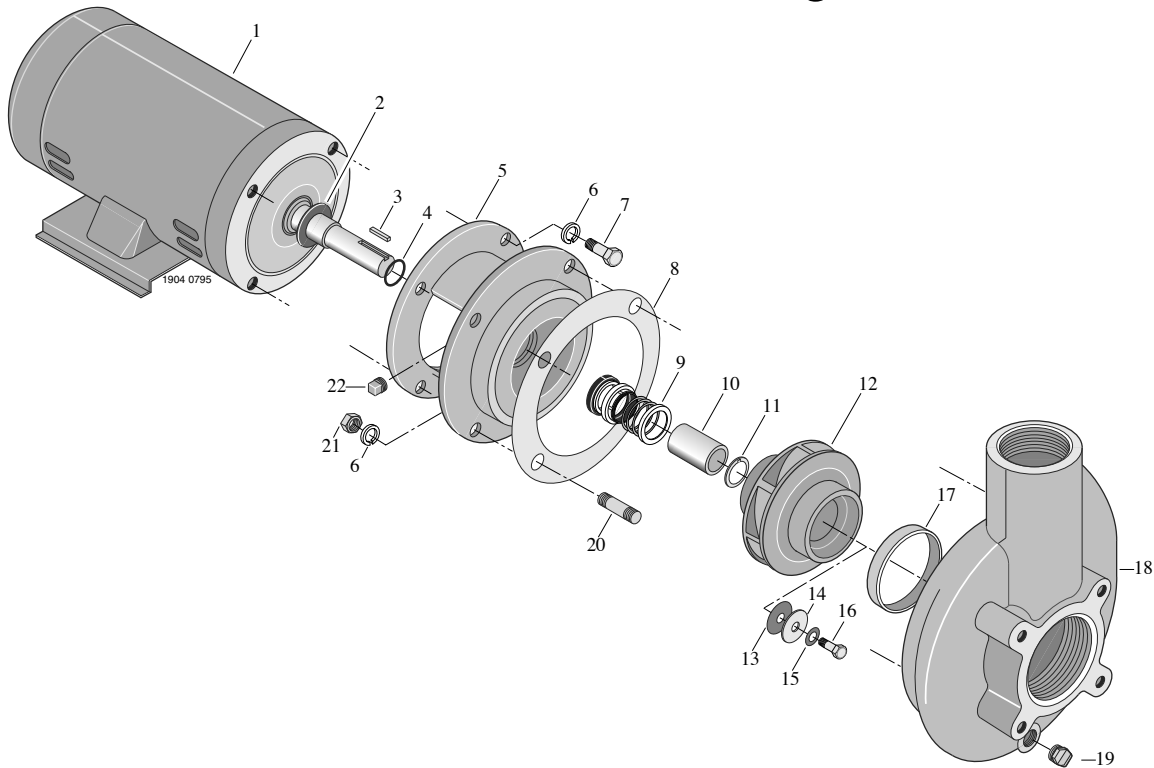
27. Excessive grease in bearing causing high bearing temperature.

28. lack of lubrication.

29. Dirt in bearings.

30. Rust in bearings due to water getting into motor.

'C' / 'CC' Series Centrifugal Pumps 3 and 5 HP Medium and High Head



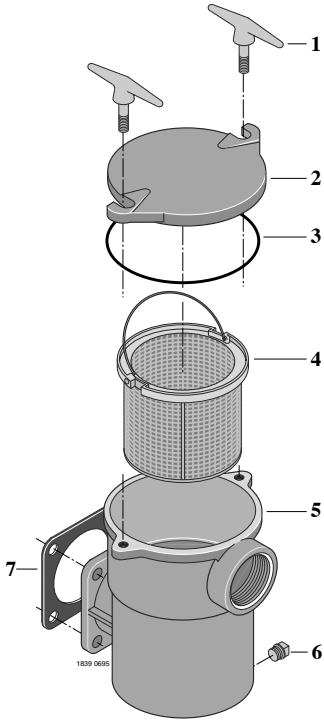
Key No.	Description	Qty.	Model Number					
			CCMH-136S CCMJ3-136S CCM2H-136 CCM2H3-136 3 HP	CMH-136 CMH3-136 CM2H-136 CM2H3-136 3 HP	CCHH-137S CCHH3-137S CCH2H-137 CCH2H3-137 3 HP	CHH-137 CHH3-137 CH2H-137 CH2H3-137 3 HP	CCHJ-138 CCHJ3-138 CCH2J3-138 - 5 HP	CHJ-138 CHJ3-138 CH2J3-138 - 5 HP
1	Motor 230V/60H/1 Ph.	1	C218-177	C218-177	C218-177	C218-177	C218-180	C218-180
1	Motor 230/460V/60H/3 Ph.	1	C218-179	C218-179	C218-179	C218-179	C218-182	C218-182
1	Motor 200V/60H/1 Ph.	1	C218-191	C218-191	C218-191	C218-191	-	-
1	Motor 200V/60H/3 Ph.	1	C218-178	C218-178	C218-178	C218-178	C218-181	C218-181
2	Water Slinger-1 Ph.	1	C69-15	C69-15	C69-15	C69-15	-	-
2	Water Slinger-3 Ph.	1	C69-16	C69-16	C69-16	C69-16	C69-16	C69-16
3	Key, Square	1	U65-42A	U65-42A	U65-42A	U65-42A	U65-42A	U65-42A
4	O-Ring	1	U9-265	U9-265	U9-265	U9-265	U9-265	U9-265
5	Adapter	1	C2-81	C2-81D	C2-81	C2-81	C2-81	C2-81D
6	Lockwasher, 3/8"	8	U43-12ZP	U43-12ZP	U43-12ZP	U43-12ZP	U43-12ZP	U43-12ZP
7	Capscrew, 3/8-16x1 1/8"	4	U30-73ZP	U30-73ZP	U30-73ZP	U30-73ZP	U30-73ZP	U30-73ZP
8	Gasket	1	C20-77	C20-77	C20-77	C20-77	C20-77	C20-77
9	Shaft Seal	1	U109-433SS	U109-433SS	U109-433SS	U109-433SS	U109-433SS	U109-433SS
10	Sleeve	1	C23-58	C23-58	C23-58	C23-58	C23-58	C23-58
11	Gasket, Sleeve	1	C20-101	C20-101	C20-101	C20-101	C20-101	C20-101
12	Impeller (-136, -137, -138)	1	C105-224DD	C105-224DD	C105-224DB	C105-224DB	C105-224DE	C105-224DE
12	Impeller (-136S)	1	C105-224DG	-	-	-	-	-
13	Gasket	1	C20-100	C20-100	C20-100	C20-100	C20-100	C20-100
14	Washer, Impeller	1	C43-45SS	C43-45SS	C43-45SS	C43-45SS	C43-45SS	C43-45SS
15	Gasket	1	C43-46	C43-46	C43-46	C43-46	C43-46	C43-46
16	Screw, Impeller 3/8-16x3/4"	1	U30-72SS	U30-72SS	U30-72SS	U30-72SS	U30-72SS	U30-72SS
17	Wear Ring Only	1	C23-40	C23-40	C23-40	C23-40	C23-40	C23-40
18	Volute Assembly (incl. #20 & 21)	1	C201-174	C201-174D	C201-174	C201-174D	C201-174	C201-174D
18A	Volute Assembly(Incl. #20 Only)	1	C101-167	C101-167D	C101-167	C101-167D	C101-167	C101-167D
19	Pipe Plug, 1/4" NPT	1	U78-941ZPV	U78-941ZPV	U78-941ZPV	U78-941ZPV	U78-941ZPV	U78-941ZPV
20	Stud, 3/8-16x1 1/4"	4	U30-22SS	U30-22SS	U30-22SS	U30-22SS	U30-22SS	U30-22SS
21	Nut, Hex 3/8x16	4	U36-38C	U36-38SS	U36-38C	U36-38SS	U36-38C	U36-38SS
22	Pipe Plug, 1/4" NPT	1	U78-57SSS	U78-57SSS	U78-57SSS	U78-57SSS	U78-57SSS	U78-57SSS
•	Capscrew 3/8-16x3/4"	4	U30-60SS	U30-60SS	U30-60SS	U30-60SS	U30-60SS	U30-60SS

• Not illustrated.

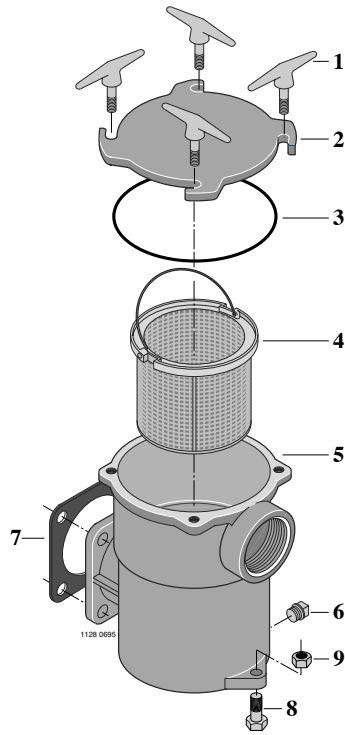
NOTE: C Series with different numbers (for example CCMH-93) use different parts. Consult factory for older models.

EXPLODED VIEWS

6" Hair and Lint Strainer



8" Hair and Lint Strainer



HAIR AND LINT STRAINER REPAIR PARTS LIST

Key No.	Part Description	Cast Iron	Bronze
1*	Lock Handle	C154-18D	C154-18D
2	Cover - 6"	C30-30	C3-78DZZ
2	Cover - 8"	C3-105	C3-105D
3	O-Ring - 6"	U9-46	U9-46
3	O-Ring - 8"	U9-171	U9-171
4	Strainer Basket - 6"	C108-11P	C108-11P
4	Strainer Basket - 8"	C108-34SS	C108-34SS
5	Suction Strainer Body - 6"	C53-5B	C53-5D
5	Suction Strainer Body - 8"	C53-21	C53-21D
6	Pipe Plug 1/4"	U78-57DT	U78-57DT
7	Gasket, Flange	C20-19	C20-19
8	Capscrew, 3/8-16x1-3/4"	-	U30-77C
9	Nut, Hex 3/8-16	-	U36-38C
•	Capscrew, 5/16-18x7/8"	U30-61C(4)	U30-61C(4)
	Suction Strainer Complete - 6"	Pkg. #51	Pkg. #56
	Suction Strainer Complete - 8"	Pkg. #98	Pkg. #99

Quantity 1 unless otherwise noted ().

• Not illustrated.

* 6" has 2 each; 8" has 4 each.

NOTICE: Strainers are not included with pumps.

STA-RITE LIMITED WARRANTY

Pumps, filters, skimmers, underwater lights (except bulbs), accessories and fittings manufactured by Sta-Rite are warranted to be free of defects in material and workmanship for one (1) year from date of installation.

Product specific warranties: **Year from date of installation**

<i>HRPB, DEPB, System 3, System 2 and Posi-Clear</i>	
Tanks	10 years
Internal filter components and valves	1 year
<i>Max-E-Therm - Pool/Spa Heaters</i>	
Heater Enclosure only (Upper RH & LH; lower enclosure; and control board enclosure)...	10 years
<i>Automatic Pool Cleaners including Hose</i>	
	2 years
<i>Cristal-Flo filters - Tanks</i>	
Valve and internal components.	1 year
<i>Posi-Flo II - Tanks</i>	
Elements	1 year
<i>PRC Cartridge -</i>	
Filter Tanks5 years pro-rated (1st 2 years full)
Elements	1 year
<i>System 2 Above Ground Systems - Tanks</i>	
Pumps / Platform and Internals	1 year
<i>Pumps</i>	
When equipped with A.O. Smith 2-compartment motors (Does not include pumps sold as part of a systems package)	2 years
<i>Traps / In-Line Strainers</i>	
	1 year
<i>Vertical Commercial Filter - Tanks</i>	
Internals	1 year
<i>Horizontal Commercial Filter</i>	
Tanks5 years (Years 6-9, Prorated declining 20%/year, Yr. 10 - 10%)
Internals	1 year

* Full warranty coverage is in effect for one year after installation. The pro-rated warranty covers the *tank only* during the 2nd through 10th year after installation. The amount covered decreases by 10% each year. (ie., 2nd year 90% covered, 3rd year 80% covered, etc.).

The foregoing warranties relate to the original consumer purchaser ("Purchaser") only. Sta-Rite shall have the option to repair or replace the defective product, at its sole discretion. Purchasers must pay all labor and shipping charges necessary to replace the product covered by this warranty. Requests for warranty service must be made through the installing dealer. This warranty shall not apply to any product that has been subject to negligence, misapplication, improper installation or maintenance, or other circumstances which are not in Sta-Rite's direct control.

This warranty sets forth Sta-Rite's sole obligation and Purchaser's exclusive remedy for defective products.

STA-RITE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE APPLICABLE EXPRESS WARRANTIES PROVIDED HEREIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Supersedes all previous publications.

Sta-Rite Industries
293 Wright St., Delavan, WI 53115

▲ Retain Warranty Certificate (upper portion) in a safe and convenient location for your records.

DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation to:

▼ Sta-Rite, Attn: Warranty Dept., 293 Wright St., Delavan, WI 53115

STA-RITE®



Warranty Registration Card

Name _____

Years pool has been in service less than 1 1-3 3-5 5-10

Address _____

Purchased from:
Company name _____

City _____ State _____ Zip _____

Address _____

Purchase Date _____

City _____ State _____ Zip _____

Product Purchased _____

New installation Replacement

Please send me more information on these other products from Sta-Rite.

Type of Pool Inground Vinyl Fiberglass Gunite

- Pumps Filters Automatic Pool Cleaners
- Maintenance Equipment Test Strips
- Heaters

Size of Pool _____