



# VFX Aerating Fountains

## Owners Manual

F2400/VFX, F3400/VFX, F3400H/VFX, 4400/VFX, & 4400H/VFX



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Made in the USA

# Thanks!

We at Kasco Marine, Inc. would like to both thank and congratulate you on your purchase of the VFX model aerating fountain. We appreciate you choosing Kasco and for your purchase. Your decision to purchase Kasco's VFX model Aerating Fountain will not disappoint you. The VFX model Aerating Fountain will be a great addition to your body of water. It will help improve the water quality by adding much needed oxygen and circulation. It will also enhance the aesthetics of the pond or lake with beautiful fountain pattern. The lighting package (if purchased) will illuminate your fountain for beauty at night. We thank you for choosing Kasco for your fountain needs and want you to be completely satisfied with your purchase.

## **IMPORTANT SAFETY & HANDLING INSTRUCTIONS**

Please read and follow these extremely important safety and handling instructions for your Kasco equipment. Following these instructions will help ensure your safety and the quality performance of your equipment.

- Under **NO** circumstances should anyone enter the water with the electrical equipment plugged in and/or in operation. All Kasco equipment is ETL approved to UL and CSA standards for safety in water and all fountain models include control panels with GFI protection. However, it is **NEVER** recommended to enter the water with the equipment in operation.
- Caution should be used when dealing with any electrical equipment with moving parts.
- **NEVER** run the unit out of water. It will damage the seals and create a dangerous situation for the operator.
- Extreme caution should be used around water, especially **cold water**, such as in Spring, Fall, and Winter, which poses a hazard in and of itself.
- **NEVER** lift or drag the fountain by the power or light cord. If you need to pull the unit to the side of the pond, use the anchoring ropes.
- **Do not** use waders in deep ponds/lakes or ponds/lakes with drop-offs, drastic slopes, or soft bottom material.
- **Do not** use boats that tip easily for fountain installation, such as a canoe, and follow all boating safety rules and regulations, including wearing a PFD. (Personal Flotation Device)
- The fountain is supplied with an internal grounding conductor and a grounding-type attachment plug. To reduce the risk of electrical shock, be certain that the fountain is plugged into the C-25 Control Box (120V) or C-75 Control Panel (240/208V) supplied by Kasco and that the C-25 is plugged into a properly grounded, grounding type receptacle or the C-75 is wired properly. The GFCI breakers should be tested upon each installation and every month thereafter to ensure proper operation.

## **INSPECT THE SHIPMENT**

Immediately inspect your Kasco Fountain shipment for any visible damages. Also cross reference the parts supplied with the Parts Included sheet to check for shortages. Shortages should be reported immediately to your Kasco Marine distributor or representative and damages reported to your carrier and Kasco Marine.

## **CAUTION**

***WARNING: Under NO circumstances should anyone enter the water with the unit in operation.***

Always operate the unit in the water and keep people and objects clear of the propeller. Do not lift or pull the unit by the electrical cord. Always use extreme caution around electrical equipment and water situations.

## **ASSEMBLY & INSTALLATION**

Please see the proper Assembly and Installation Instructions enclosed in this manual. Each is specific for your model and size of Fountain. **Note:** Use the nylon tie provided to help keep the power cords for the unit and lights free of the propeller by tying each cord to either side of the float. If you have a light kit, make sure that the unit cord is tied to one side of the float and the light cord to the other for balance. **Note:** It is extremely important to test the GFI breaker in the control panel upon each installation/reinstallation of the unit to ensure proper functioning.

## **WARRANTY**

Kasco Fountains are the result of over 35 years of design and engineering. Kasco products are built to withstand the toughest conditions. Kasco Marine backs each VFX model Fountain with a 2 Year Warranty. This warranty covers any and all manufacturers defects within 2 years from the date of purchase (See Warranty, Warranty Claim, & Return Policy on pages 4 & 5). Please fill out the enclosed, addressed Warranty Card and mail it to Kasco Marine to start your warranty coverage. You may also register your Fountain online at:

[www.kascomarine.com/solutions\\_warranty\\_registration.htm](http://www.kascomarine.com/solutions_warranty_registration.htm).

## **USE AND OPERATION**

Kasco Fountains are designed and engineered for continuous duty, such as on fish farms or other aquaculture applications, or on-demand use, as needed in a recreational water feature.

During flotation operation, the water is pulled from 360° around the unit and from below the unit. The water is pulled upward and thrust through the flotation collar into the air.

Your Kasco Marine Fountain is ready for immediate use (after installation). The motor and ball bearings are submerged in oil and no further lubrication is needed. ***Make sure to keep the motor housing clean from hard water deposits and/or algae. (See Maintenance Recommendations on page 6.)***

It is extremely important that proper and sufficient voltage (120V or 240/208V) is supplied to the Fountain motor. Each 120V Fountain is supplied with a UL and CSA approved C-25 GFI Protected Control Box. The Fountain is to be plugged into the C-25 outlet labeled "UNIT" and the C-25 plugged into a properly grounded receptacle (See C-25 Instructions on page 7). Each 240V Fountain is supplied with a UL and CSA approved C-75 GFCB Protected Control Panel. The Fountain is to be plugged into the external outlet on the C-75 or hardwired into the panel. The C-75 must have 4 wire (2 hot, ground, and neutral) power installed by a qualified electrician. (See Instructions on pages 8-9). It is extremely important to test the GFI breaker in the control panel upon each installation and reinstallation and every month thereafter to ensure proper operation.

Kasco Fountains are lightweight, energy efficient, and easy to install and operate. We strive to produce products that exceed customer expectations. We hope you enjoy your Kasco Fountain.

## WARRANTY, WARRANTY CLAIM, & RETURN POLICY

**2 Year Limited Warranty:** Kasco® Marine, Inc. warrants this Fountain to be free from defects in material or workmanship (except for the ropes, power cord, and propeller) under normal use and service. The Kasco Marine, Inc. obligation under this warranty is limited to replacing or repairing free of charge any defective part within two (2) years from the date of shipment. Customer shall pay shipping charges for returning the unit to Kasco or an Authorized Repair Center.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATEVER ON THE PART OF KASCO MARINE, INC. AND IN NO EVENT SHALL KASCO MARINE, INC. BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.

### *Warranty is void if:*

- The Fountain is not maintained properly according to the Maintenance Recommendations supplied in this Owners Manual.
- The Fountain is returned for repair without the power cord or if the unit, control box, or power cord are altered in any way from original shipment. **Cuts in the power cord are not covered under warranty.**
- The Fountain is damaged by unauthorized tampering.
- The Sacrificial Zinc Anode around the propeller shaft shows significant deterioration. (The Anode must be inspected periodically and replaced if necessary.)

### *Warranty Claim Procedure:*

Check the nine-digit serial number printed either on the black cover of the motor or on the blue nameplate and determine the year of manufacture according to the serial number scheme below:

#### *Sample Serial #*

50 VX 2 1725

- The first two digits represent the reverse of the last two digits of the year of manufacture.  
Example: 50 = 2005 model year.
- The third and fourth digits represent the model. (Ex. "VX" for 2400VFX)
- The fifth digit represents the horsepower of the unit in fourths: 2 = 2/4 = 1/2HP, 3 = 3/4HP, 4 = 1HP
- The remaining four digits are sequential.

The best method for establishing warranty period is through the warranty card included with the unit at the time of purchase and/or the original receipt. If the customer has completed and returned the warranty card at the time of purchase or registered the Fountain online at:

[www.kascomarine.com/solutions\\_warranty\\_registration.htm](http://www.kascomarine.com/solutions_warranty_registration.htm) ,

Kasco Marine will have a record of the purchase and will be able to determine whether or not the unit still carries warranty coverage.

Once the warranty coverage has been established, the unit may be sent to any Kasco Authorized Repair Center

for evaluation and repair. Please call Kasco Marine at 715-262-4488 prior to shipping to receive a Return Authorization Number and/or Repair Form, then ship to:

Kasco Marine, Inc.  
800 Deere Rd.  
Prescott, WI 54021  
Attn: Repairs

Or call Kasco Marine at 715-262-4488 to locate your nearest Authorized Repair Center. You can also email Kasco at [service@kascomarine.com](mailto:service@kascomarine.com).

**Note:** Only complete motor assemblies will be accepted for warranty repair. The power cord and all other components must be returned with the motor as originally assembled. Any missing parts will be replaced at the customer's expense and, if determined to have caused the failure, could void the entire warranty. Some parts are essential for structural support during shipping and others, such as the power cord, are essential to properly diagnose potential causes of failure. It is not necessary to return the control box or float with the motor assembly.

Please include the Repair Form received from Kasco Marine or your local distributor with the shipment. If no Repair Form is available, include your name and physical address for return delivery of the repaired unit and a daytime phone number and/or e-mail address for correspondence regarding the warranty claim.

Any expedited shipping method for the return of the unit is at the customer's expense. Kasco Marine will return units repaired under warranty at our expense via ground freight within the continental United States.

### ***Other Repairs:***

Most failed equipment can be repaired at substantially lower costs than replacement with new. Please ship according to the instructions in the previous section. Again, it is best to call ahead for a Return Authorization Number and/or Repair Form so we know the repair is coming.

Kasco Marine offers *free estimates* on repairs at the request of the customer. The request for estimate should be included in the letter that accompanies the returned unit and must include a daytime phone number and/or e-mail address. ***Estimate options are as follows:***

- We will contact the customer with a total after the unit has been evaluated, but before the work is performed.
- We will repair the unit only if repair costs are under a stated dollar amount. Example: "Please repair if total is under \$150.00 before shipping charges."

All estimates that are rejected for repair will be destroyed unless otherwise directed by the customer. If the customer would like the unit returned, the unit will be restored as closely as possible to the condition in which it was received and shipped at the customer's expense for shipping and handling charges.

### ***Billing:***

All non-warranty repairs will be returned to the customer prepaid with Visa or Mastercard or shipped C.O.D. with C.O.D. charges unless otherwise directed. Kasco Marine will call for credit card information upon completion of the repair.

All other warranty and repair inquiries should be directed to Kasco Marine, Inc. at 715-262-4488 or [returns@kascomarine.com](mailto:returns@kascomarine.com).

## MAINTENANCE RECOMMENDATIONS

**\*\* Under No Circumstances should anyone enter the water while a fountain is operating. \*\***

**\*\* Please keep the original box for maintenance shipping. \*\***

The following maintenance procedures can be utilized to ensure many years of quality performance from your Kasco Fountain and reduce the need for more costly repair work.

- **PROPER INSTALLATION:** Proper installation of Kasco equipment will include a power source with ground fault interruption (GFI). For Fountain models, the C-25 control (120V) or C-75 (240/208V) included with the unit have built-in ground fault interruption that is sufficient. Ground fault interrupters are a safety feature that can also alert you to electrical leaks in the equipment. *It is extremely important to test the GFI upon installation, each reinstallation, and monthly thereafter to ensure proper operation.* If you have repeat, consistent trips on your ground fault, the equipment should be disconnected and removed from the water. The power cord should be inspected for damage and you should call Kasco Marine at 715-262-4488 for further instructions or email Kasco at [service@kascomarine.com](mailto:service@kascomarine.com).
- **OBSERVATION:** Operating equipment should be observed on a regular basis (daily, if possible) for any reduction or variation in performance. If a change in performance is observed, the equipment should be disconnected from power and inspected for any material that may have clogged the system or wrapped around the shaft of the motor, especially plastic bags and fishing line. Even though Kasco Aerators and Fountains are among the most clog-resistant on the market, it is impossible to protect against all items that can clog equipment and still maintain a flow of water. These materials can be very damaging to the equipment under continued operation and must be removed as soon as possible. **ALWAYS UNPLUG THE UNIT BEFORE ATTEMPTING TO REMOVE CLOGS.**
- **WINTER STORAGE:** In regions where there is significant freezing in the wintertime, the fountains should be removed from the water to protect them from the expansion pressure of the ice. In many areas, fountains will keep some amount of ice open through the winter. However, when the water is thrust into the air, it is exposed to the colder air temperatures longer and can actually make ice thicker on the pond/lake. Storage over winter is best in a location that is out of the sun and cool, but above 32°F. It is not necessary to store Kasco motors upside down. All internal seals are fully lubricated while stored in an upright position.
- **CLEANING:** Fountains should be removed from the water at least once per year (at the end of the season in cold climates) to clean the exterior of the system, especially the stainless steel motor housing (can). The motor housing is the surface that dissipates heat into the water and any algae, calcium, etc. build-up will become an insulator that blocks heat transfer. In warmer regions it is recommended that the motor is removed and cleaned at least two to three times per year depending on conditions. In most cases a power washer will be sufficient if the unit and algae are still wet.
- **SEAL AND OIL REPLACEMENT:** This is a sealed motor assembly and seals will wear out over time (similar to brake pads on a car). Replacement of the seals and a change of oil after three to five years may add longevity to the operation of the motor, saving you the cost of more expensive repairs. In warmer climates where the fountain runs most or all of the year, it is a good idea to replace seals more regularly than you would need to in colder climates where the unit is removed from the water for several months.
- **ZINC ANODE:** A Sacrificial Zinc Anode is supplied on the shaft of all VFX Model Fountains for protection of the equipment from corrosion and electrolysis. The zinc anode should be updated (replaced) if reduced to half the original size or if white in color. Corrosion from electrolysis is more commonly associated with saltwater or brackish water, but as a matter of precaution, it is important to periodically check the zinc anode in all installations (at least every two to three months).

Seal replacement and all other repair services should be performed by Kasco Marine or a Kasco trained Authorized Repair Center. Any alterations or changes made to Kasco units by an unauthorized source will void the warranty. This includes tampering with the unit, power cord, and/or control box. Please contact Kasco Marine, Inc. at 715-262-4488 for your nearest Authorized Repair Center.

# **C-25 TIMER CONTROL INSTRUCTIONS**

Portable Timer with Ground Fault Interrupter  
(Unit: 9.8 FLA, 58.8 LRA 120 VAC  
Light: 300 W, 120 VAC)

## **IMPORTANT**

This portable timer is designed for CONTROLLING the connected equipment only. Unplug timer before servicing the unit or the equipment it controls. **THE MANUAL OVERRIDE KNOB IS NOT TO BE USED AS A POWER DISCONNECT!** For maximum protection against electrical shock hazard, perform test procedure on G.F.C.I. at least once a month. Mount at least 5 ft. from open water.

## **G.F.C.I. TEST PROCEDURE**

The G.F.C.I. should be checked every month to make sure that it is operating properly. Just follow the simple instructions below. It is recommended to maintain a maintenance diary of your monthly safety check.

1. Push TEST button, RESET button should pop out from inner surface. This should result in power being OFF at the outlet protected by the G.F.C.I. Verify by plugging a test lamp into the outlet. Be sure the timer is in the ON position.
2. If the G.F.C.I. tests okay, restore power by pushing the RESET button back in. THE RESET BUTTON MUST BE PUSHED FIRMLY AND FULLY INTO PLACE UNTIL IT LOCKS AND REMAINS DEPRESSED AFTER PRESSURE HAS BEEN REMOVED.

**DANGER: IF RESET BUTTON DOES NOT POP OUT, IF TEST LAMP REMAINS LIT WHEN RESET BUTTON DOES POP OUT, OR IF THE G.F.C.I. FAILS TO RESET PROPERLY, DO NOT USE TIMER! CONTACT A QUALIFIED SERVICE TECHNICIAN!**

Failure to use the C-25 with Kasco Fountains will void the warranty and cause the Fountain to not be listed to UL and CSA standards via ETL.

**UNDER NO CIRCUMSTANCES SHOULD ANYONE ENTER THE WATER WHEN A UNIT IS IN OPERATION!**

## **TIMER-OPERATION INSTRUCTIONS**

C-25 Control Box will turn the aerator/fountain **ON & OFF** with the TIMER. Kasco lights will turn **ON** with the PHOTO EYE and **OFF** with TIMER. **C-25 Control Box is to be used with Kasco Approved Lights ONLY!**

1. Insert "ON" (GREEN) and "OFF" (RED) trippers into dial at desired **ON** and **OFF** times.
2. Turn dial clockwise one or more revolutions until correct time-of-day (AM or PM) in window is aligned with the arrow.
3. Plug aerator/fountain cord into the **RIGHT** hand outlet (labeled **UNIT**).
4. Plug transformer light cord into **LEFT** hand outlet (labeled **LIGHT**).

## **FOR TEMPORARY MANUAL OPERATION**

Rotate **MANUAL** knob counter-clockwise (←) to desired **ON** or **OFF** position. Timer will follow next automatic operation.

# MODEL: C75

## DISPLAY AERATOR CONTROL WITH TIME SWITCH, GFCB, LIGHTENING ARRESTOR AND LOW VOLTAGE TRANSFORMER SUITABLE FOR USE WITH SUBMERSIBLE LIGHTS

IN RAINPROOF (TYPE 3R) ENCLOSURE SUITABLE FOR INDOOR OR OUT-  
DOOR USE

PUMP CIRCUIT: 2hp max, 240 Vac, LIGHT CIRCUIT: 300 Watt max, 12, 13, or 14 Vac.  
43 Amp MAX. 120/240 Vac SINGLE PHASE

**NOTE: The short circuit current rating of this panel is 5000 symmetrical amperes.**



**IMPORTANT:** This control panel must be installed according to the National Electric Code (including article 680) and local code requirements. The main lugs and neutral main are suitable for No. 14 to 2 AWG **COPPER** conductors. Follow gauge selection table and corresponding terminal screw tightening torque requirements below. An additional branch circuit protector (20 Amp max) may be installed in the unused position for use as an auxiliary circuit. Use only Square D HOM Series circuit breakers for additional or replacement. **Follow manufacturers instructions for testing of ground fault circuit breakers (GFCB).**

After wiring, install front panel over wiring compartment and close unused breaker openings.

**KEEP DOOR CLOSED AT ALL TIMES TO MAINTAIN NEMA 3R RAIN TIGHT RATING.**

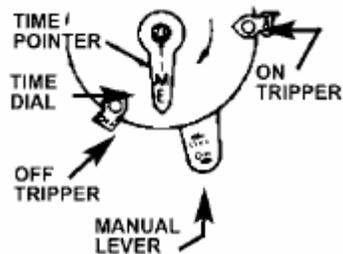
Wiring information-Copper Conductors	
Wire Size	Terminal Tightening Torque
AWG	Lb-In
14	20
12	20
10	20
8	25
6	35
4	45
3	50

### Low Voltage Lighting Connections

White	Neutral
Black	12 Vac
Yellow	13 Vac
Blue	14 Vac

This panel is low voltage lighting ready. For Canadian installations, power to the transformer must be supplied through a ground fault circuit breaker. The low voltage transformer is controlled by a timer/photoelectric circuit. For low voltage lighting connections, please refer to the instructions enclosed with the lights and/or on page 9 of this manual. If lights will **not** be installed, **all** transformer wires and the red wire leading from the photoelectric switch should be **individually** capped.

### TIME SWITCH OPERATING INSTRUCTIONS

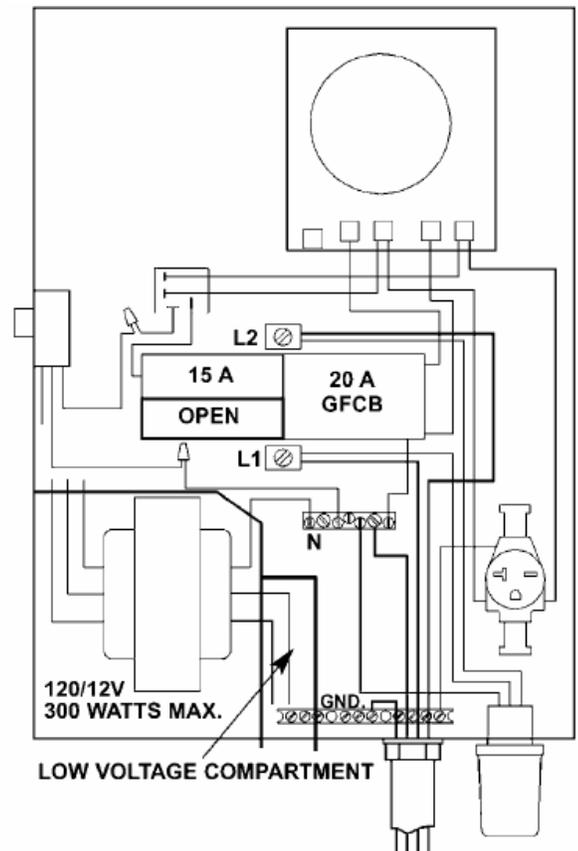


**1. TO SET "ON" AND "OFF" TIMES:** Hold TRIPPERS against edge of CLOCK-DIAL, pointing to time (AM or PM) when ON and OFF operations are desired. Tighten tripper screws firmly.

**2. TO SET TIME-OF-DAY:** Pull CLOCK-DIAL outward. Turn in either direction and align the exact time-of-day on the CLOCK-DIAL (the time now, when switch is being put into operation) to the pointer.

-DO NOT MOVE POINTER-

- **TO OPERATE SWITCH MANUALLY:** Move MANUAL-LEVER below left or right as indicated by arrows. This will not affect the next operation.
- **FOR MORE THAN ONE DAILY ON-OFF OPERATION:** Place additional tripper pairs on CLOCK-DIAL (order 156T1978A or Kasco Part Number 984500).
- **IN CASE OF POWER FAILURE:** Reset CLOCK-DIAL to proper time of day. See step 2 above.



## Supplemental Instructions for C-75 Control Panel Wiring (Light Circuit)

### IMPORTANT:

**Four** leads must be supplied from the main power source: 2 hot, 1 neutral, and 1 ground. Please refer to wiring diagram inside panel door. All connections must be made with power from the main breaker off.

*If lights will not be used*, all unconnected leads should remain unconnected and should be capped individually. This includes the red lead from the photocell, the three (black, blue, and yellow) leads on the primary side of the transformer, and the two black leads in the low voltage compartment (secondary side of transformer).

*Note: For Canadian installations, the 15 amp breaker needs to be wired to a 15 amp GFCI breaker.*

*If lights will be used, connections for the transformer should be made as follows:*

**For 12V output**, connect the red lead from the photocell with the black lead on the primary side of the transformer. Individually cap the yellow and blue leads on the primary side of the transformer.

**For 13V output**, connect the red lead from the photocell with the yellow lead on the primary side of the transformer. Individually cap the black and blue leads on the primary side of the transformer.

**For 14V output**, connect the red lead from the photocell with the blue lead from the primary side of the transformer (as shown). Individually cap the black and yellow leads on the primary side of the transformer.

### Primary Side (120V)

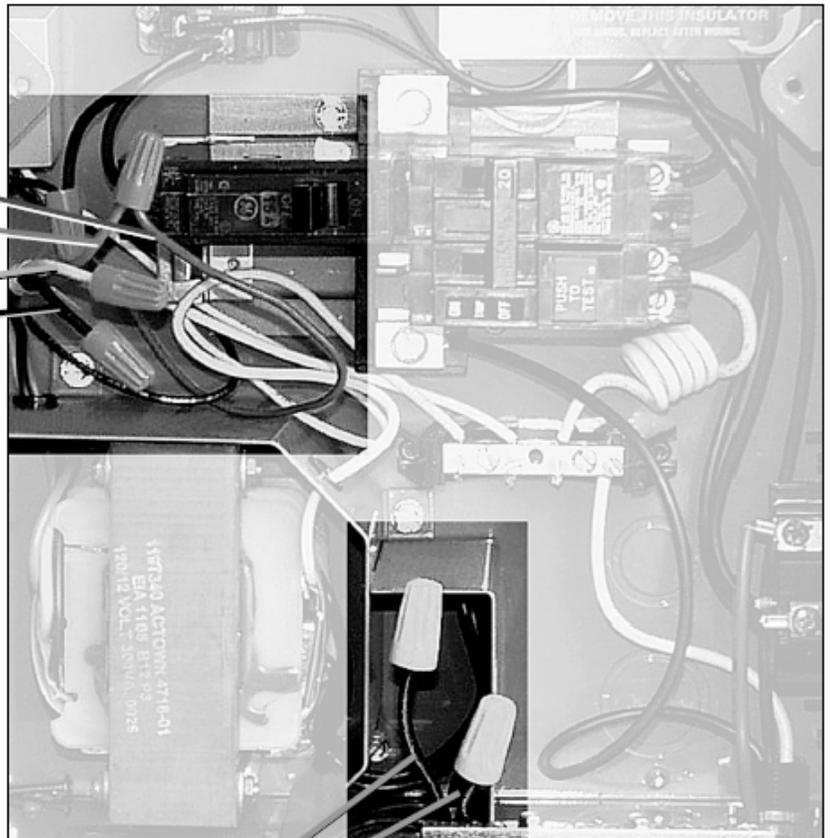
*Example: For 14V Output*

#### CONNECT

Red lead  
and  
Blue lead

#### CAP Separately

Yellow lead  
Black lead



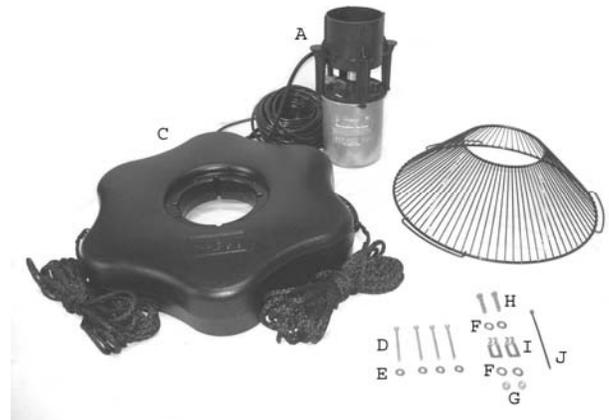
### Secondary Side (Low Voltage)

Use a strain relief on the knockout hole entering the low voltage compartment from the bottom of the C-75 control box. Wires from L-350 or L-375 light kit are black, white and green. Connect the black and white wires from the light kit to the 2 black wires from the transformer. One black lead to the black lead on the light package, and one black lead to the white lead on the light package. Connect the green wire to the grounding strip in the low voltage compartment.

**Low Voltage Compartment**  
2 Black leads

## PARTS INCLUDED

- A. VFX Aerating Fountain (Unit with cord) (1)
- B. Control Box (C-25 for 120V units in Float box or C-75 for 240V units in separate box) (1) (Not Pictured)
- C. VFX Float (with two 50' mooring ropes attached) (1)
- D. 1/4-20 x 3 1/4" Phillips Pan Head Screw (4)
- E. 1/4" (3/4" outer diameter) Flat Washer (4)
- F. 3/8" Flat Washer (4)
- G. 3/8"-16 Nylon Lock Nut (2)
- H. 3/8"-16 x 1-3/8" Hex Head Bolt (2)
- I. Bottom Screen Clips (2)
- J. Nylon Cable Tie



## TOOLS & SUPPLIES NEEDED

- A. Anchors or stakes for installing unit (2)
- B. # 2 Phillips head screw driver
- C. 120V or 240V Electrical Supply near pond on a post with room for mounting the C-25 or C-75
- D. Two 12" pieces of 1" galvanized pipe for weighting ropes (optional)
- G. #10 x 1" long or longer screw(s) for mounting the C-25 (3) or C-75 (4)
- H. 9/16" Socket and Ratchet
- I. 9/16" Wrench

Power Cords				Used On				
Part Number	Length	Voltage	Gauge	F2400/VFX	F3400/VFX	F3400H/VFX	4400/VFX	4400H/VFX
9116027	25	120	16	X	X		X	
9116052	50	120	16	X	X			
9114052	50	120	14				X	
9211052	50	240	14			X		X
9114102	100	120	14	X	X			
6121001	100	120	12				X	
9214102	100	240	14			X		X
6100121	100	240	12					
6150121	150	120	12	X	X			
6101501	150	120	10				X	
6150101	150	240	10			X		X
6200121	200	120	12	X	X			
6102001	200	120	10				X	
6200101	200	240	10			X		X

## UNIT SPECS.

Model	Voltage	Operating Amps	Lock Rotor Amps	Control Box Connection	Fountain Power Connection
F2400VFX	110-120	5.6 @ 120V	12 @ 120V	C-25 Plugs In	Plug into C-25
F3400VFX	110-120	7.3 @ 120V	18 @ 120V	C-25 Plugs In	Plug into C-25
F3400HVFX	208-240	3.7 @ 240V	9 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75
4400VFX	110-120	11.3 @ 120V	40 @ 120V	C-25 Plugs In	Plug into C-25
4400HVFX	208-240	5.7 @ 240V	20 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75

# VFX MODEL FOUNTAIN PATTERN SIZES

*NOTE:* Pattern sizes listed are approximate. Variations in voltage caused by regional electrical differences or voltage drop due to long power cords may result in reduced pattern sizes.

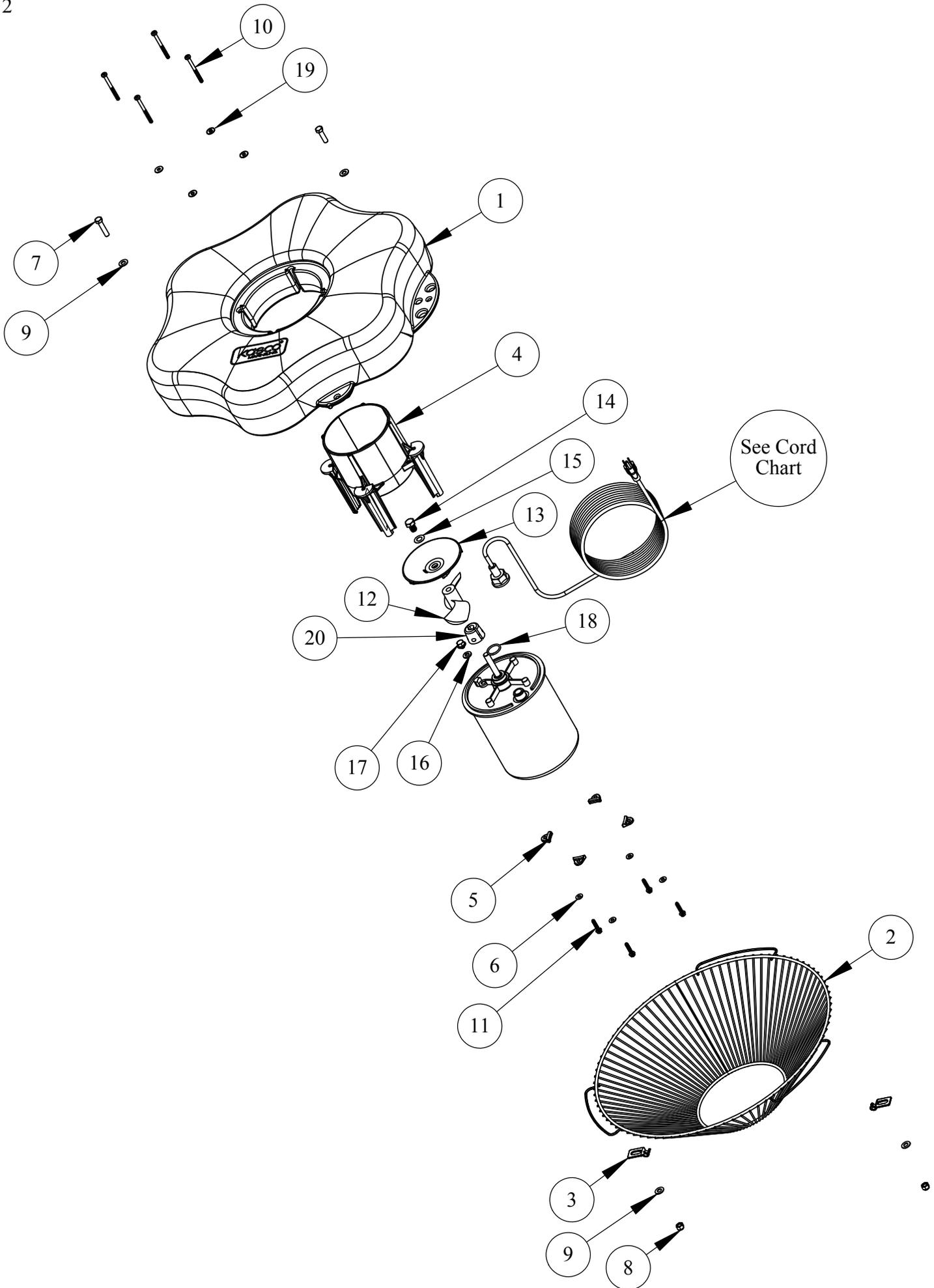


From Left to Right: 4400/VF, F3400/VF, F2400/VF, and 1400JF (not included in this manual.)

<b>Model</b>	<b>Voltage</b>	<b>Pattern Height</b>	<b>Pattern Diameter</b>
F2400/VF	120V	5'	15'
F3400/VF	120V	6'	21'
F3400H/VF	240V	6'	21'
4400/VF	120V	8'	26'
4400H/VF	240V	8'	26'

	<b>F2400/VFX</b>	<b>F3400/VFX or F3400H/VFX</b>	<b>4400/VFX or 4400h/VFX</b>	<b>Part Name</b>	<b>Qty</b>
1	241000	241000	241000	XF Float	1
2	990162	990162	990162	Bottom Screen	1
3	223240	223240	223240	Bottom Screen Clips	2
4	241005	241005	241005	X Tube	1
5	140312	140312	140312	Retainer Clip	4
6	258476	258476	258476	1/4" Flat Washer	4
7	462210	462210	462210	3/8"x1 3/4" Bolt	2
8	462214	462214	462214	3/8" Nylon Locking Nut	2
9	462216	462216	462216	3/8" Washer	4
10	251200	251200	251200	1/4"x3 1/4" Machine Screw	4
11	251250	251250	251250	#14x1 1/4 Self tapping Screw	4
12	240594	340594	440600	VX-Props	1
13	241025	241035	251045	VX-Disc	1
14	243405	243405	243405	1/2"x3/4" V-Disc Bolt	1
15	475642	475642	475642	1/2" Flat Washer	1
16	990285	990285	990285	Sealing Washer	1
17	990280	990280	990280	Sealing Plug	1
18	990275	990275	990275	Cord O-Ring	1
19	251300	251300	251300	1/4 Washer .75 O.D.	4
20	243475	243475	840475	Sacrificial Zinc Anode	1

Chart corresponds with Parts Diagram on page 12.



# ASSEMBLY AND INSTALLATION INSTRUCTIONS

## STEP ONE

Remove all contents from package and place on a clean, flat surface. Inspect the shipment for any damages. If damages are found, immediately notify your carrier and your Kasco Marine, Inc. representative. Next, cross reference the parts included in the shipment with the Parts Included sheet in this manual on page 10. Make sure you have all the parts needed. If any shortages are found, contact your Kasco representative immediately.

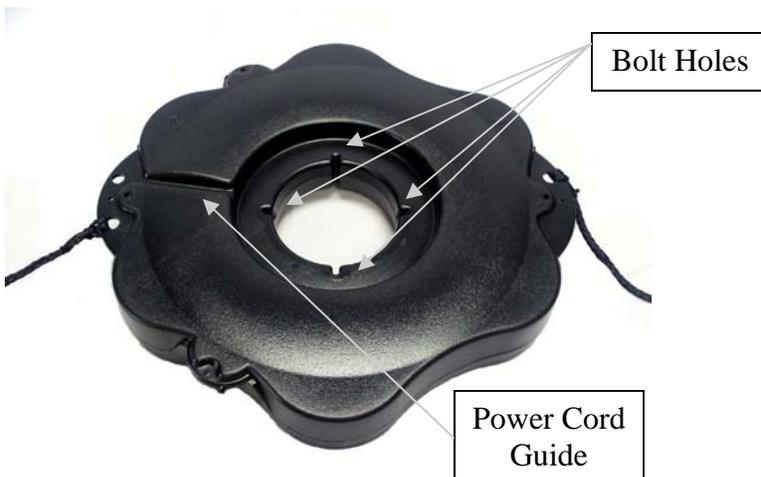
## STEP TWO

Set motor housing upright (stainless steel can down) on a flat surface. With motor housing upright, slide float over pump housing making sure the surface with the Kasco logo is up.



## STEP THREE

Ensure correct alignment by twisting the float gently around the motor housing until the float “locks” into place, the bolt holes in float line up with bolt receptacles on unit and power cord guide lining up with the cord. See diagram below of bottom side of float.



## STEP FOUR

With float “locked” into place, use one of the 1/4”-20 x 3-1/4” Phillips Pan Head Screws and a 1/4” Flat Washer to secure the float to the motor housing. Insert screw with washer through bolt hole in float and into receptacle on the unit. Tighten until snug with a Phillips Head screw driver and repeat for 3 remaining screws.



## STEP FIVE

Turn secured assembly upside down so the top of the float (logo side) is face down on the flat surface. Place screen onto the bottom side of the float. Make sure the wide opening of the screen is against the float and the 3 handles on the screen do not interfere with the rope placements. Using a stainless steel Bottom Screen Clip, 3/8”-16 x 1-3/8” Bolt, two 3/8” Flat Washer, and 3/8”-16 Nylon Lock Nut to secure the screen to the float. Align a clip so the two prongs straddle a wire on the screen. Insert bolt with washer so the top of the bolt is facing the top of float (now in down position). Place the second washer and the locking nut with nylon insert on the end of the bolt and tighten using the 9/16” Socket and Ratchet on the nut end and the 9/16” Wrench on the bolt end. Tighten until snug and repeat with remaining clip. (See diagrams on next page)



Pictures correspond with Step Five from previous page

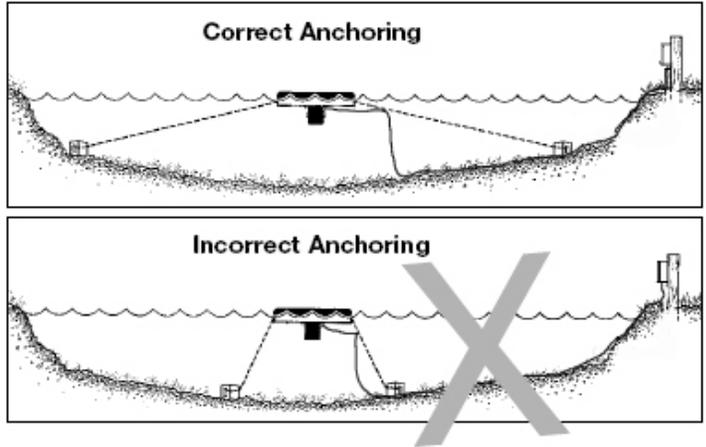
**STEP SIX**

Turn the assembly upright again. At this time, if the cord contains a metal strain relief, you can use the chain connector and attach it in one of the opening at the rope placement. The chain connector will easily fit if installed from the bottom or top side of the opening. It will not fit if installed from side of opening. Use the Nylon Cable Tie included to secure the power cord to a molded hole in the float to prevent cord damage if there is no strain relief on the cord. If a Strain Relief is present on the cord, you may disregard the Nylon Tie. On cords with a Quick Disconnect, the disconnect should be tightened properly to avoid leaking. If installing a new Quick Disconnect, refer to Quick Disconnect Instructions. Lights can also be installed at this time. Refer to Light Kit Instructions.



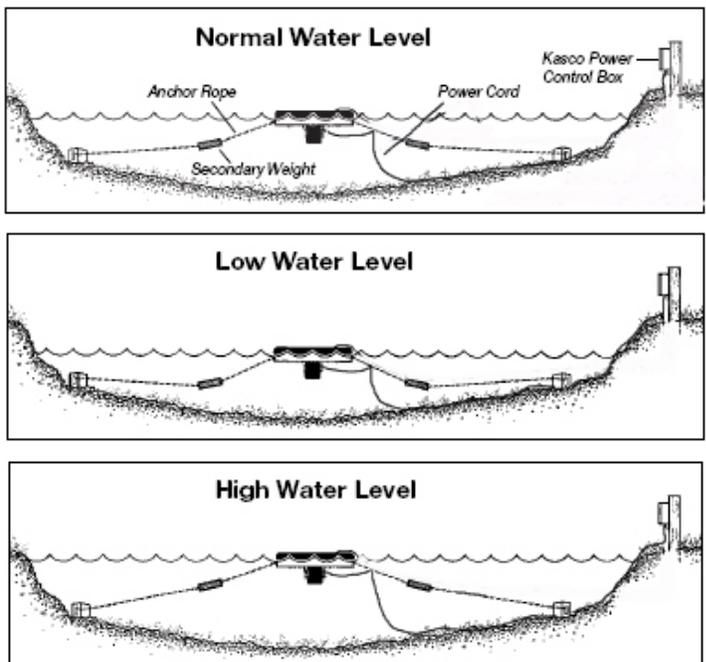
**STEP SEVEN**

Use the ropes to position the Fountain in the desired location in the pond/lake. Anchor the ropes or secure them to the shoreline so the ropes are free of slack, but not tight. To prevent twisting of the unit due to torque, you should place the anchor at least 3 feet from the float for each foot of depth (Ex. A 6 foot deep pond would require an anchor 18 feet horizontally from the float.) For ease of removal, you may choose to keep at least one anchor within reach from shore, just below the water's surface.



**STEP EIGHT (ALTERNATE INSTALLATION)**

In ponds where the water level fluctuates significantly, you may need to suspend a small weight (12" of 1" galvanize pipe works well) at the mid-point of the rope to take up any slack as the water level drops. The weight should be light enough so the Fountain can rise as the water level rises. This can also help hide ropes by sinking them further below the surface.



**STEP NINE**

Install the control panel (C-25 for 120V and C-75 for 240/208V) on the post with the power supply. Use the #10 x 1" long or longer screws and the screw placements on the control panel to secure the panel to the post. **NOTE:** The control panel must be hung upright in order to be rain tight.

**STEP TEN**

Set Timer in the control panel to desired ON and OFF times per the Instructions on page 7 for the C-25 or page 7 for the C-75. **Make sure to test the GFI using the Test Button located on the outlet before turning the equipment on and every 30 days thereafter.**

**STEP ELEVEN (For 120V Installations)**

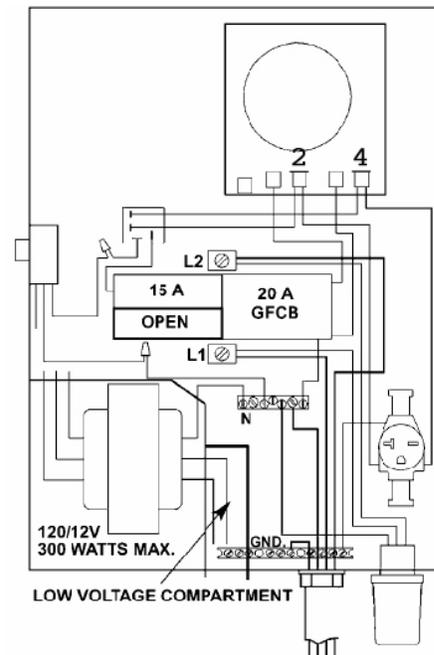
Plug the aerating fountain cord into the C-25 outlet labeled "UNIT". If lights are included, plug the Transformer cord into the C-25 outlet labeled "LIGHT". Now you are ready to plug the C-25 into the 120V power supply on the post and **ENJOY YOUR NEW KASCO AERATING FOUNTAIN!**

**STEP ELEVEN (For 240/208V Installations)**

Hardwire the 240/208V, 4 wire power into the C-75 control panel per the Instructions on page 8 of this manual. It is essential that each leg is equal and no more than 120V for the equipment to work properly. The aerating fountain can either be plugged into the 240V outlet on the right hand side of the C-75 panel or hardwired into the panel.

**PLUG:** *Test the GFCB with the test button now and every 30 days.* Insert the plug on the unit into the outlet and securely close the outlet cover until it snaps into place.

**HARDWIRE:** The bottom of the C-75 control panel has several knock-outs for hardwiring the unit and lights. Remove a knock-out that is not used for the main power or lights (secondary side wires). Remove the plug from the power cord on the unit and strip back 12" of cord jacket to expose the wires (2 hot and 1 ground). With the main power disconnected, connect the bare wire (stripped) portion of the GREEN ground wire to the grounding strip at the bottom of the panel and secure tightly. Locate and remove the plastic shield under the yellow timer (black or clear depending on model). Under shield, lug #2 and #4 are LOAD lugs. Loosen the screws and insert the bare wire (stripped) portion of the WHITE wire into #2 and the bare wire (stripped) portion of the BLACK wire into #4. Tighten both lugs securely. **Test the GFCB with the test button now and every 30 days.** If lights are installed, they can now be wired per Instructions on page 9 of this manual.



Once completed, power can be restored to the panel. **ENJOY YOUR NEW KASCO AERATING FOUNTAIN!**

## TROUBLESHOOTING TIPS

Below are some helpful troubleshooting tips. If a problem occurs, please double check the assembly and installation instructions as well as the instructions for the proper control panel. More troubleshooting tips can be found at [www.kascomarine.com/solutions\\_troubleshooting.htm](http://www.kascomarine.com/solutions_troubleshooting.htm) . Contact Kasco Marine at 715-262-4488 for further diagnosis if these fail.

### **“My Fountain trips the ground fault interrupter in the C-25 or C-75.”**

This is the most common symptom of several possible problems. To correctly diagnose the problem, you will need to collect more information. A Ground Fault Interrupter (GFI) breaker that trips can indicate an electrical service problem, water contamination in the unit and/or cord, bad breaker, control box problems, motor problems, etc. Try to find out the answers to these questions before you contact Kasco to narrow down the problem.

- \* How long does it take to trip the breaker?
- \* Does it always take the same amount of time to trip?
- \* How many times has it tripped?
- \* Has there been any electrical problems in the area recently?

### **“My Fountain seems to run slowly.”**

This can also be a symptom of several possible problems. There could be an electrical problem where the unit is not getting the proper voltage. This could also indicate a problem with the motor of the unit, which needs to be looked at by an Authorized Repair Center. Check that the unit is receiving the proper voltage, and, if so, contact Kasco for further steps.

### **“My Fountain hums, but will not start. When I spin the prop with a stick, it starts up.”**

This indicated a problem with the Starting Capacitor. Each Kasco Fountain is equipped with a Starting Capacitor to get the unit going when it is first plugged in. If it is operating, but not spinning and can be started by spinning the prop with a stick, the Starting capacitor needs to be replaced by an Authorized Repair Center.

### **“My Fountain turns itself off and back on without the timer and without tripping the GFI breaker.”**

Each Kasco Fountain has a Thermal Overload built in that will turn the unit off when it overheats. Once the unit has cooled down, it will start back up. If you are noticing these symptoms, the unit should be unplugged immediately because the Thermal Overload will continue to turn on and off until it burns out and damages the motor. The unit should be unplugged and taken out of the water to find the cause of the problem. The problem could be one of many, such as, low water levels, build-up on the unit to prevent heat dissipation, something inhibiting the free rotation of the shaft, etc. If something is caught in the unit or there is a build-up of algae, calcium or organic matter on the unit, remove the debris and, if caught early enough, the unit should be fine. Contact a Kasco representative before re-starting the unit.

### **“My Fountain flow seems to fluctuate and/or be less than usual.”**

This can occur because of a few different reasons. Most of the time, this symptom is caused from unit being clogged with debris. A mat of weeds, many leaves, plastic bags, etc. can clog up the unit and cause it to be starved of water. If the unit does not have the proper amount of water, the flow or pattern will fluctuate up and down and look sporadic. If you are seeing these symptoms, unplug the unit and clean away the debris that is clogging up the screen. Another possibility if these symptoms are noticed, is a chipped or damaged prop that is causing the unit to wobble and not pump properly. When the unit is unplugged, check the prop for damages and replace if damage is found.

### **“The GFI breaker trips randomly and sporadically. Sometimes it is a few hours of operation, other times it can be days or weeks.”**

This is referred to as a Nuisance Trip. This usually occurs where the unit is installed a great distance from the initial electric service on the property where the ground stake is placed. It is caused by either induced current in the ground wire or a base voltage difference due to soil pH levels. To resolve the problem, contact an electrician and install a local grounding stake. This will eliminate the induced current and any base voltage differences. This problem can also be caused by a bad breaker or receptacle or having unbalanced incoming voltage lines.

## Fountain Warranty Information

Please fill out the enclosed, addressed warranty card and mail to Kasco Marine, Inc. or register your fountain online at [www.kascomarine.com/solutions\\_warranty\\_registration.htm](http://www.kascomarine.com/solutions_warranty_registration.htm). Also fill in the information below and keep for your records.

**Model # (Ex. 2400VFX)** \_\_\_\_\_

**Serial # (Ex. 50VX21725)** \_\_\_\_\_

**Purchase Date:** \_\_\_\_\_

**Purchased From:** \_\_\_\_\_

**How Registered? — Mailed Card — or — Registered Online**

**Registration Date (Date card sent in or registered online)** \_\_\_\_\_



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