WEBTROL

There when you need us most

FC Series TC Series

Stainless Steel Centrifugal Pumps

Installation & Operating Manual

Congratulations on Your Choice in Purchasing this Webtrol Pump!

Its Quality is unsurpassed in material and workmanship and has been factory tested.
If properly installed, it will give many years of trouble free service.

FC/TC Series
3/25 Edition

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Introduction

This manual was prepared to assist the installer and/or operator in understanding the proper method of installing, operating and maintaining the SS series centrifugal pump. We recommend that you thoroughly understand the proper installation and start-up procedures, prior to starting the pump. If these procedures are followed, you will have years of trouble-free service.

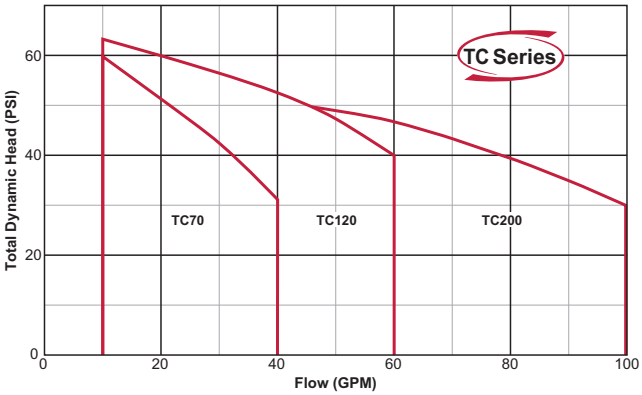
WARNING

Rules For Safe Installation And Operation

1. Read these rules and instructions carefully. Failure to follow them could cause serious bodily injury and/or property damage.
2. Check your local codes before installing.
3. For maximum safety, this product should be connected to a grounded circuit equipped with a ground fault interrupter device.
4. Before installing this product, have the electrical circuit checked by an electrician to make sure it is properly grounded.
5. Before installing or servicing your pump, BE CERTAIN pump power source is disconnected.
6. Make sure the line voltage and frequency of the electrical current supply agree with the motor wiring. If motor is dual voltage type, BE SURE it is wired correctly for your power supply.
7. Complete pump and piping system MUST be protected against below freezing temperature. Failure to do so could cause severe damage and voids the Warranty.
8. Do not run the pump dry. If it is, there will be damage to the pump seal.
9. Do not operate the pump in flammable and / or explosive atmosphere.

Performance And Specifications

TC Models



Size:	Suction	TC70	1-1/4” NPT
		TC120	1-1/4” NPT
		TC200	1-1/2” NPT
	Discharge	All TC Models	1” NPT

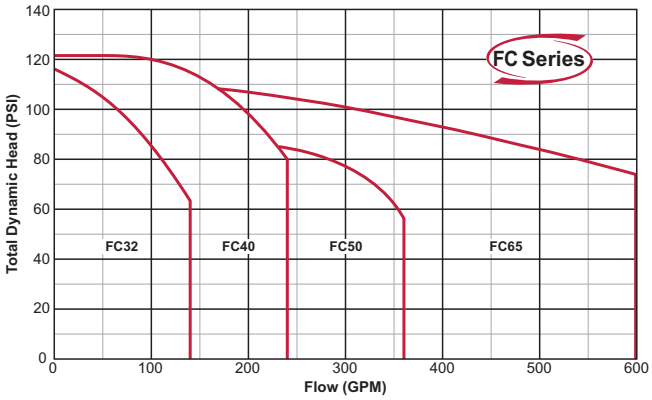
HP Range: 1/3 HP to 1-1/2 HP - 1750 RPM
3/4 HP to 3 HP - 3450 RPM

Performance: Capacity - 5.5 GPM to 100 GPM
Head - 23 to 144 feet
Liquid - clean water
Liquid Temp. - 212° F
(250°F opt.)
Working Pressure - 125 PSI

Materials: Casing - 304 Stainless
Impeller - 304 Stainless
Shaft - Stainless
Mechanical Seal - Carbon/Ceramic
Viton

Motor: Nema 56J frame / 60 Hz
Built in overload protection
(single phase models)

FC Models



Size:	Suction	FC32	2” ANSI
	150 lb. ANSI	FC40	2-1/2” ANSI
		FC50	2-1/2” ANSI
		FC65	3-1/4” ANSI
	Discharge	FC32	1-1/4” ANSI
	150 lb. ANSI	FC40	1-1/2” ANSI
		FC50	2” ANSI
		FC65	2-1/2” ANSI

HP Range: 1 HP to 2 HP - 1750 RPM
3 HP to 30 HP - 3450 RPM

Performance: Capacity - 13 GPM to 600 GPM
Head - 33 to 285 feet
Liquid Temp. - 212° F
(250°F opt.)
Working Pressure - 230 PSI

Materials: Casing - 304 Stainless
Impeller - 304 Stainless
Shaft - Stainless
Mechanical Seal - Carbon/Ceramic
Viton

Motor: Nema JM frame / 60 Hz

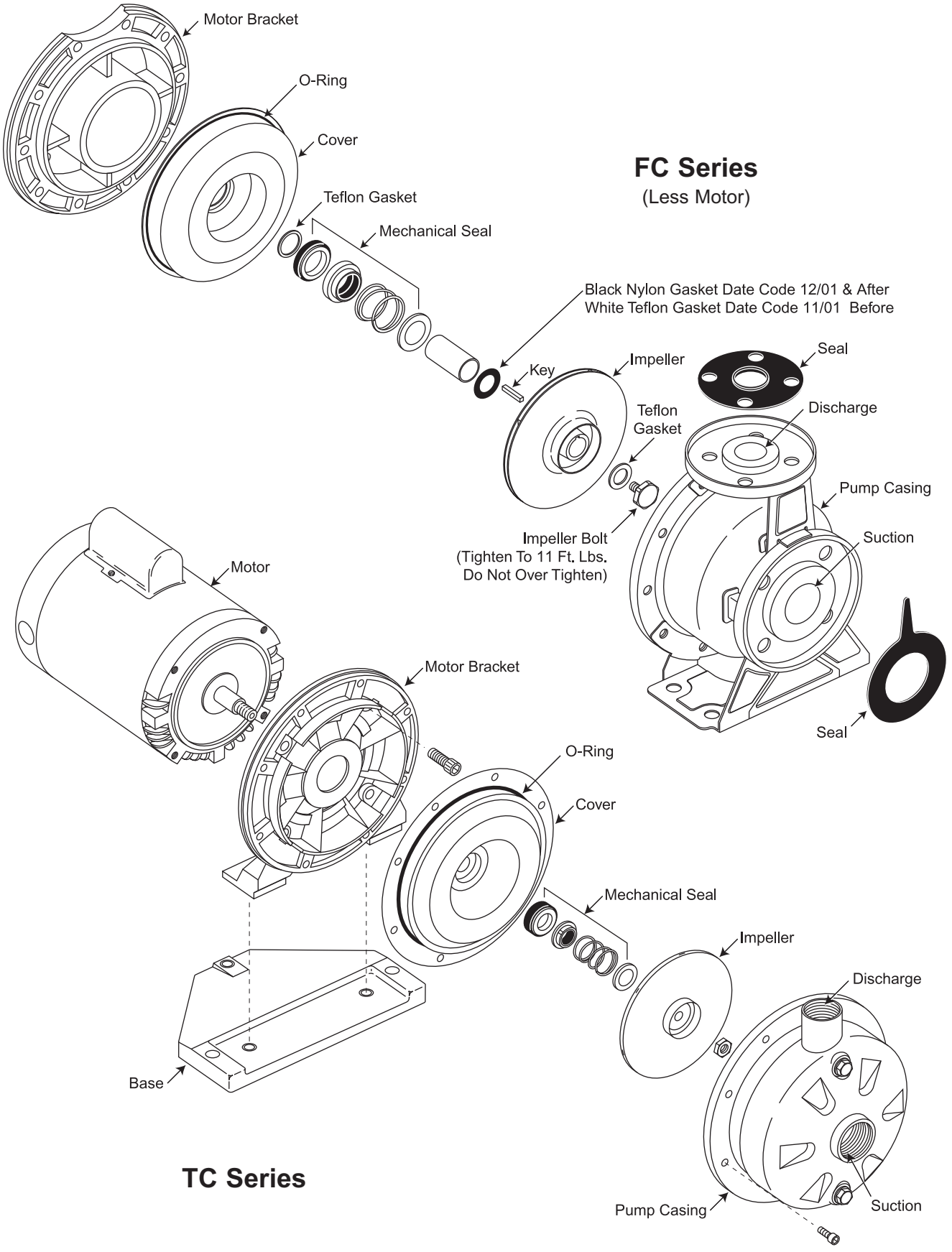
Pump Inspection and Handling

When receiving your pump, check to see if the shipment has been damaged in any way or if any parts seem to be missing. If so, note the damage or shortage on the bill of lading and the freight bill. Make any claims to the transportation company immediately. Keep all packaging materials until the claim is resolved.

The Webtrol Stainless Steel Centrifugal pump should remain in the shipping carton until it is ready to be installed.

Do not drop or mishandle the pump prior to installation.

Exploded Views



Pre-Installation

Pump is non-submersible. Keep motor dry at all times. Do not wash or immerse the motor.

Warning: Never run the pump dry. The internal running surfaces of the pump and mechanical seal require water lubrication for consistent operation. Allowing the pump to run dry will severely damage pump and mechanical seal.

Do not pump chemicals or corrosive liquids with the pump unless they are compatible with the pump component materials. Consult the chemical compatibility chart on page 15 of this manual or call Webtrol at (314) 631-9200 for verification. Use with nonflammable liquids.

To avoid internal damage to the pump, do not operate with the water temperature above 212° F.

Pump must be full of liquid before operating. Do not pump dirty water or abrasive liquids. To do so, will cause the carbon seal face, and elastomers in the mechanical seal to wear and leak. Mechanical seal materials, compatible with liquids containing abrasives, are available upon request.

Avoid air pockets in suction piping or air will accumulate at the high points, making priming difficult.

Do not allow the pump or any system component to freeze. To do so may damage the pump and void the warranty.

Installation

Locate the pump as close to the liquid source as possible, so that a short, direct suction pipe may be used. Place the unit so that it is readily accessible for service, maintenance and allows air to circulate freely around the motor.

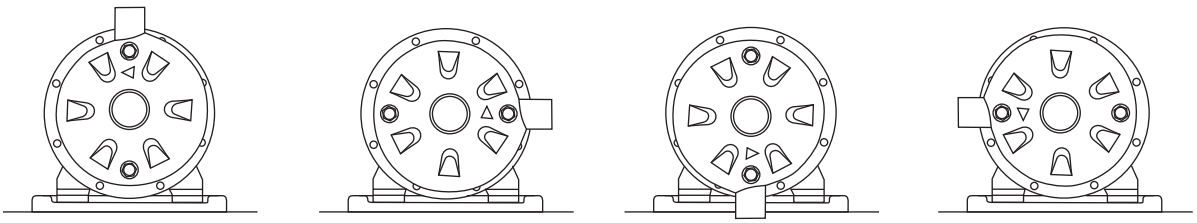
Mount pump in a dry location, on a secure base or foundation. This will prevent noise and vibration.

Piping should be stainless steel, rigid plastic or other suitable pipe that will not collapse or burst when exposed to suction and discharge pressure. The piping should be as free from turns and bends as possible, as elbows and fittings greatly increase friction losses.

Pipes must line up and not be forced into position by unions. The suction pipe should be at least one size larger than the suction inlet tapping, and have a minimum number of elbows and fittings to reduce friction losses. Also, the discharge piping should never be smaller than the pump tapping and should preferably be one size larger.

Piping should be independently supported near the pump so that no strain will be placed on the pump casing. Where any noise is objectionable, the pump should be insulated from the piping with rubber connections.

Figure 1 - The normal position of the TC Series discharge is top vertical.



Normal Position of Discharge | Discharge Rotated 90° Clockwise | Discharge Rotated 180° Clockwise | Discharge Rotated 270° Clockwise

Figure 1

Note: The FC Series discharge can only be used in the normal position.

Figure 2 - Connection to a water tank which provides a gravity flow - flooded suction.

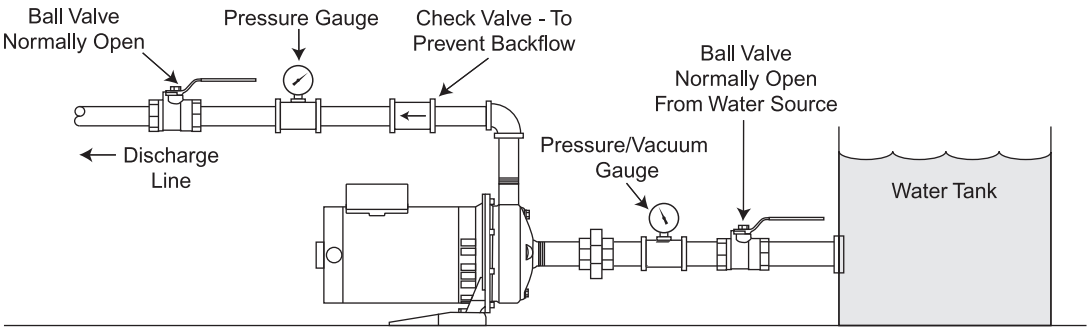


Figure 2

Figure 3 - Connection to a pressurized water system.

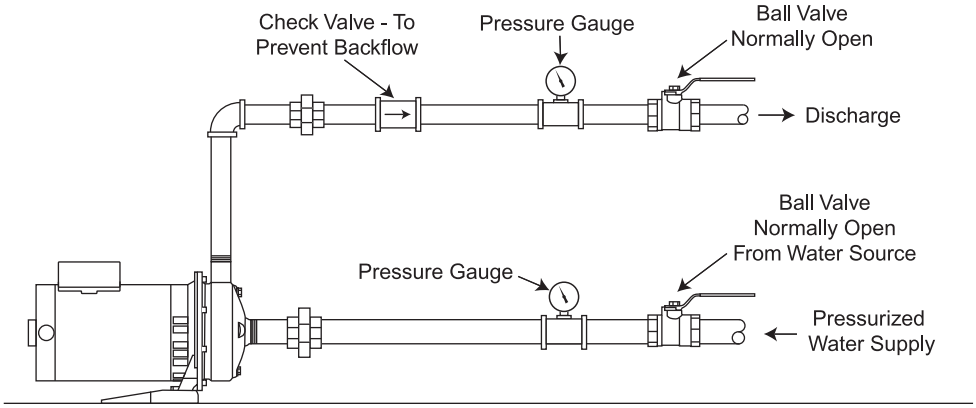


Figure 3

Figure 4 - Pump used on a suction lift application from a pond, cistern or container.

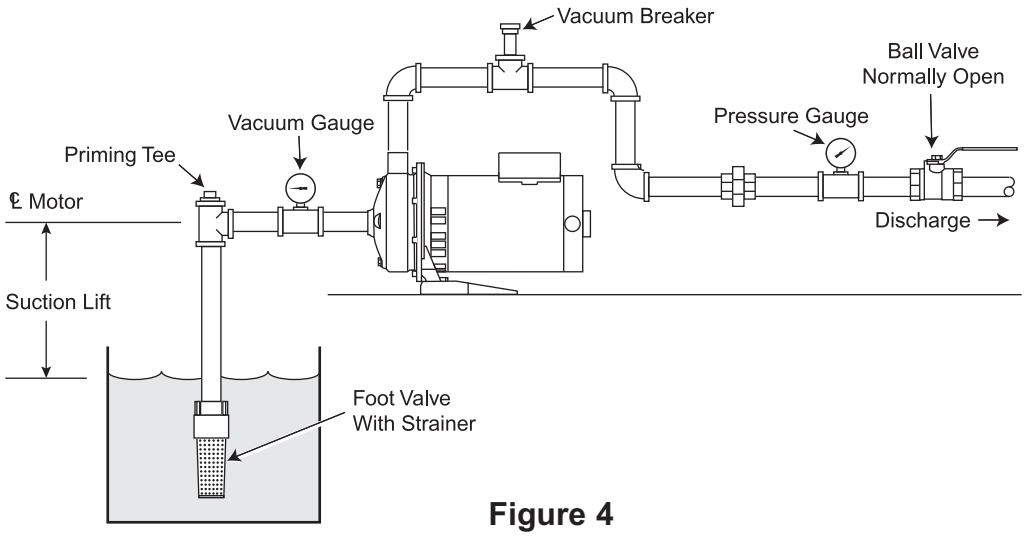


Figure 4

1. Install a service tee with a pipe plug, at the highest point in the suction line for initial priming
2. Install a foot valve at the end of the suction line.
3. Install a vacuum gauge in the suction line.
4. To retain water in the pump after turning the pump off, install a vacuum breaker in the discharge line. The horizontal run of pipe containing the vacuum breaker should be above the horizontal run of pipe containing the vacuum gauge.

Electrical Connections - **TC Pump**

TC Series

Before wiring the pump to the power source, verify that the voltage of the motor matches the voltage of the power supply. See motor nameplate. The supply voltage must be within ± 10% of nameplate voltage. Incorrect voltage can cause fire or seriously damage the motor and voids the warranty.

Wire motor according to the diagram shown on the motor nameplate. If the nameplate diagram differs from the wiring diagrams shown in this manual, follow the nameplate diagram.

Install ground wire and maintain this pump in compliance with the National Electrical Code (NEC) or the Canadian Electrical Code (CEC) and with all local codes and ordinances that apply. Consult your local building inspector for local code information.

The motors used on the TC Model pumps are commonly manufactured by Emerson, Baldor, or Bluffton. The motors used on the FC Models are manufactured by Baldor, U.S. Motor.

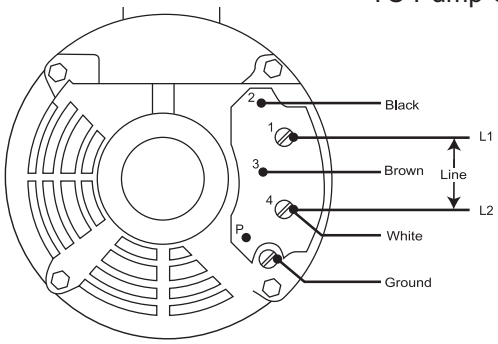
Both, 1 phase and 3 phase **TC pump motors are factory wired for 230 volts.** Motor frame is Nema 56J. If the supply voltage for a 1 phase motor is 115 volts, refer to the motor wiring connections shown below to properly rewire the motor.

U.S. Motors 1 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
EU0502	5	1/2
EU0752	5	3/4
EU1002	5	1
EU1502	5	1-1/2
EU2002	5	2
EU3002	6	3*

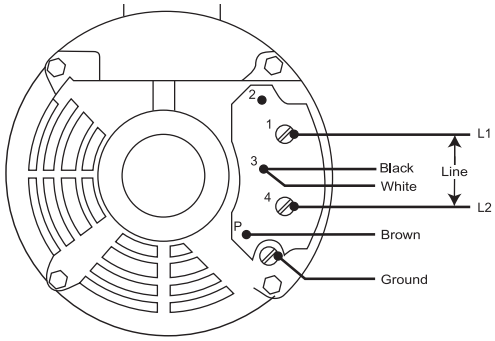
U.S. Motors 3 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
EE155	7	1/2
EE446	7	3/4
EE506	7	1
EE607	7	1-1/2
EE733	7	2
EE734	7	3

*The 3 HP - 1 Phase motor is dual voltage (208/230v) and cannot be connected to 115v.

U.S. Motors -
TC Pump Connection Diagrams



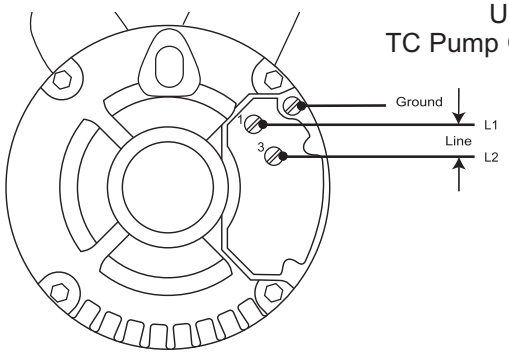
1 Phase, 1/2 - 2 HP
Wired 115v



1 Phase, 1/2 - 2 HP
Factory Wired 208/230v

Figure 5

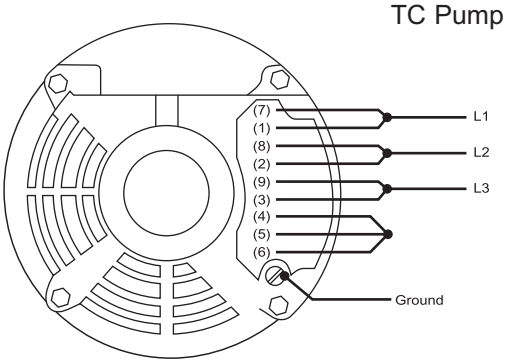
U.S. Motors -
TC Pump Connection Diagram



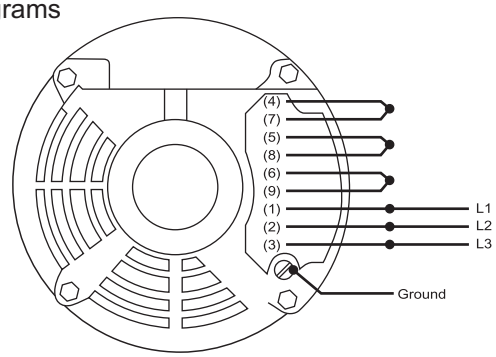
1 Phase, 3 - 10 HP
Factory Wired 208/230v

Figure 6

U.S. Motors -
TC Pump Connection Diagrams



3 Phase, 1 - 30 HP
Factory Wired 208/230v



3 Phase, 1 - 30 HP
Wired 460v

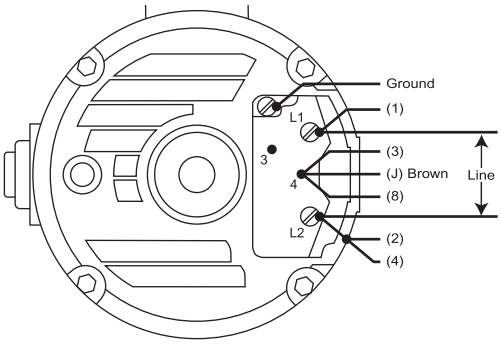
Figure 7

Baldor 1 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
JL1303A	8	1/2
JL1306A	8	3/4
JL1309A	8	1
JL1313A	8	1-1/2
JL1317A	8	2
JL1323A	9	3*
36J685-0190G1	9	5*

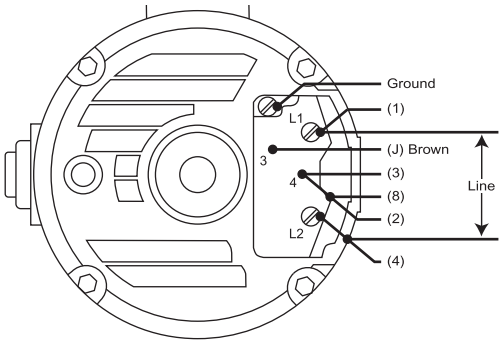
Baldor 3 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
JM3107	10	1/2
JM3111	10	3/4
JM3115	10	1
JM3120	10	1-1/2
JM3155	10	2
JM3158	10	3
36J642W243G1	10	5

*The 3 & 5 HP 1 Phase motor is single voltage (230v) and cannot be connected to 115v.

Baldor Motors - TC Pump Connection Diagrams



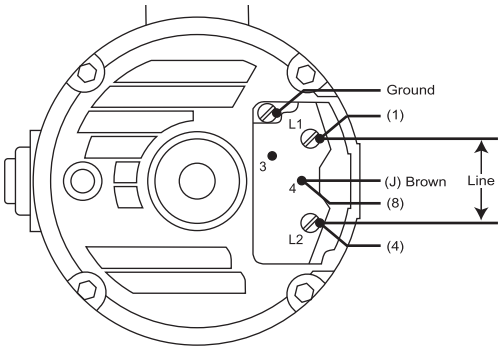
1 Phase, 1/2 - 2 HP
Wired 115v



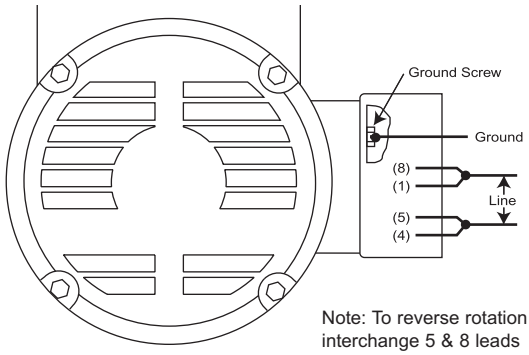
1 Phase, 1/2 - 2 HP
Factory Wired 230v

Figure 8

Baldor Motors - TC Pump Connection Diagrams



1 Phase, 3 HP
Factory Wired 230v

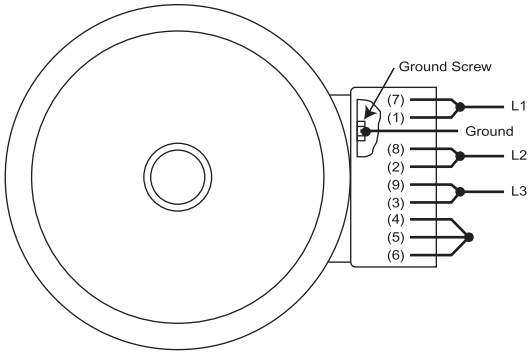


Note: To reverse rotation
interchange 5 & 8 leads

1 Phase, 5 HP
Factory Wired 230v

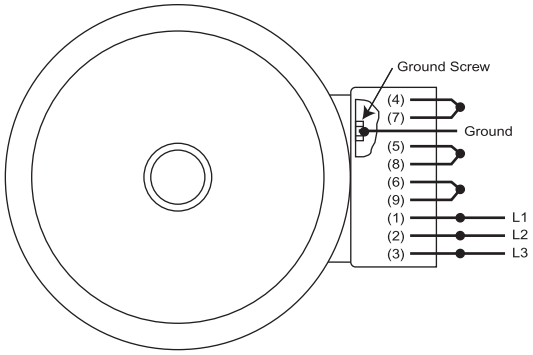
Figure 9

Baldor Motors - TC Pump Connection Diagrams



3 Phase, 1/2 - 5 HP
Factory Wired 230v

Figure 10



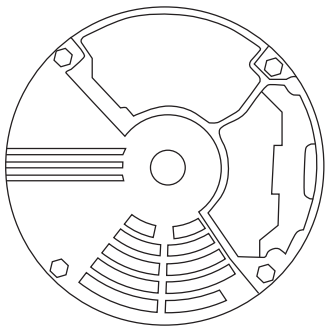
3 Phase, 1/2 - 5 HP
Wired 460v

If the supply voltage for a 1 phase motor is 115 volts, refer to the motor wiring connections shown below to properly rewire the motor.

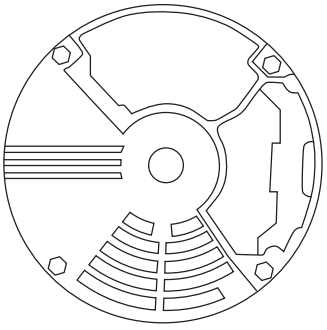
Century Electric 1 Phase ODP Motor		
Stock Number	**See Figure**	**HP**
T1052	11	1/2
T1072	11	3/4
T1102	11	1
T1152	11	1-1/2
T1202	11	2
ST1302VI	12	3

Century Electric 3 Phase ODP Motor		
Stock Number	**See Figure**	**HP**
T3052	13	1/2
T3072	13	3/4
T3102	13	1
T3152	13	1-1/2
T3202	13	2
H741	13	3

Century Motors - TC Pump Connection Diagrams



1 Phase, 1/2 - 2 HP
Wired 115v



1 Phase, 1/2 - 2 HP
Factory Wired 230v

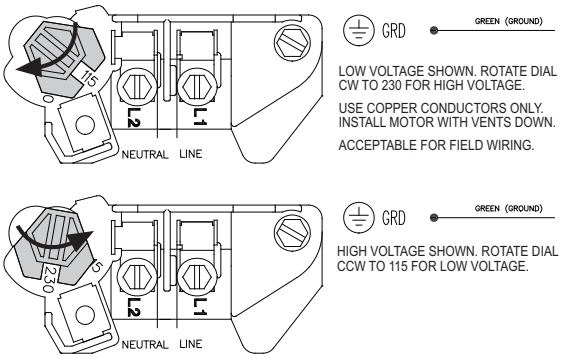
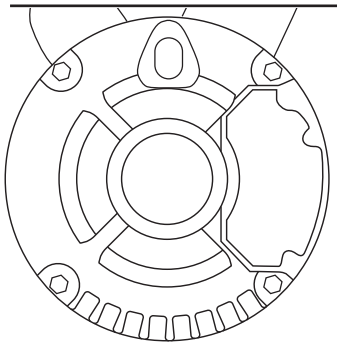


Figure 11

Century Motors - TC Pump Connection Diagrams



1 Phase, 3 HP
Factory Wired
208/230v

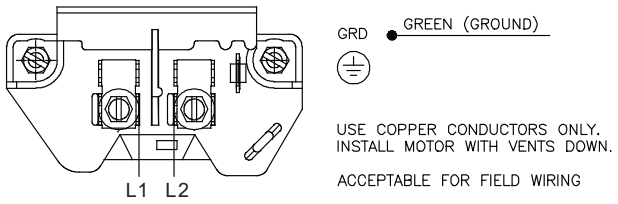
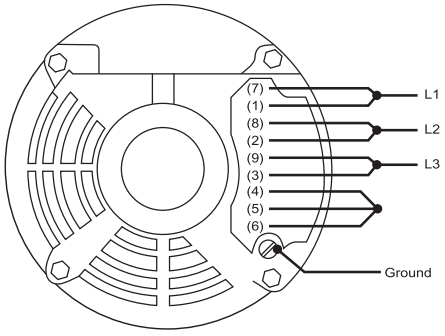
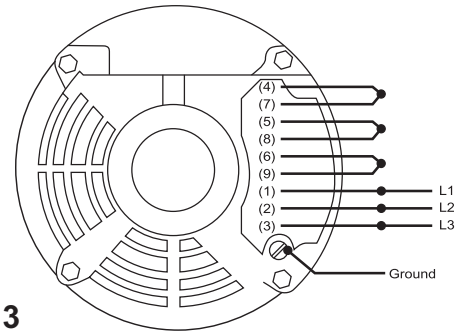


Figure 12

Century Motors - TC Pump Connection Diagrams



3 Phase,
1/2 - 3 HP
Factory Wired
208/230v



3 Phase,
1/2 - 3 HP
Wired 460v

Figure 13

If the supply voltage is 460 volts, refer to the motor wiring diagram show in (Figure 5) to properly rewire the motor.

Motor shaft rotation - 3 phase motors

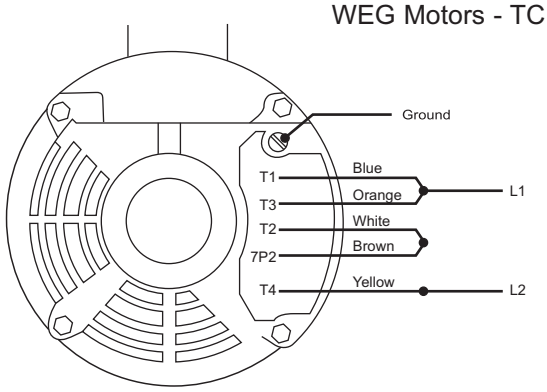
1. Turn the power off.
2. Remove the circular end cap located on the back of the motor. This will expose the motor shaft.
3. Momentarily start pump. If the connection is correct, the shaft will rotate clockwise. If not reverse any two incoming lines (Power Leads).

WEG 1 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
.5036OS1BJPRW56J-S	14	1/2
.7536OS1BJPRW56J-S	14	3/4
00136OS1BJPR56J-S	14	1
00156OS1BJPR56J-S	14	1 1/2
00236OS1BJPR56J-S	14	2
00336OS1DJPR56J	15	3*

WEG 3 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
.5036OS3EJPR56J-S	16	1/2
.7536OS3EJPR56J-S	16	3/4
00136OS3EJPR56J-S	16	1
00156OS3EJPR56J-S	16	1 1/2
00236OS3EJPR56J-S	16	2
00336OS3EJPR56J-S	16	3

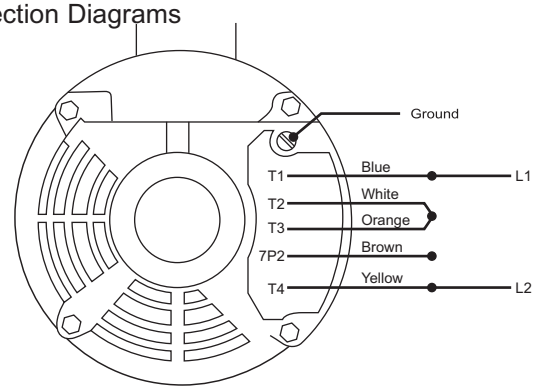
*The 3 HP - 1 Phase motor is single voltage (230v) and cannot be connected to 115v.
Please check motor nameplate before wiring.

WEG Motors - TC Pump Connection Diagrams



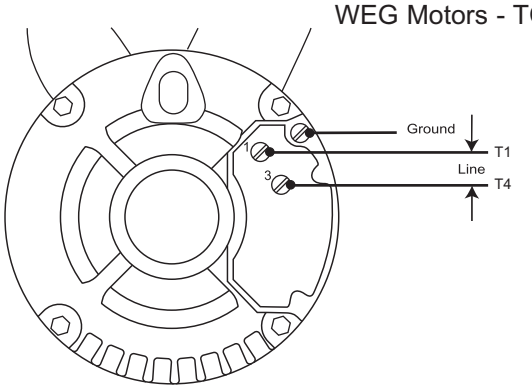
1 Phase, 2 HP
Wired 115v

Figure 14



1 Phase, 2 HP
Factory Wired 208/230v

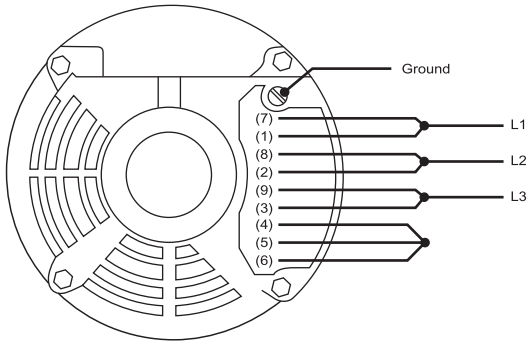
WEG Motors - TC Pump Connection Diagrams



1 Phase, 3 - 10 HP
Factory Wired 208/230v

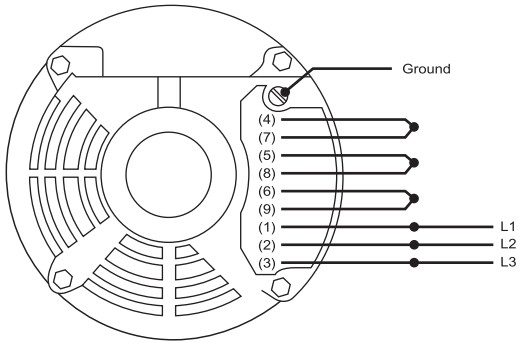
Figure 15

WEG Motors - TC Pump Connection Diagrams



3 Phase, 1 - 30 HP
Factory Wired 208/230v

Figure 16



3 Phase, 1 - 30 HP
Wired 460v

Electrical Connections - **FC Pump**

FC Series

FC Pump motors are factory wired for 230 volts. Motor is Nema JM frame. If the supply voltage for a 1 phase motor is 115 volts refer to the wiring diagrams shown below to properly rewire the motor.

Note: For 1 phase motors, Baldor has a wiring diagram on the motor for standard rotation. Standard rotation is counter clockwise facing the end opposite the shaft extension.

However, the **shaft must rotate clockwise for proper operation of the pump**. Instructions are shown on the wiring diagram for opposite standard rotation (clockwise facing end opposite shaft extension).

Since the pump has been factory tested, the motor is wired correctly for 230 volts. If the voltage is 115 volts, rewire the motor accordingly.

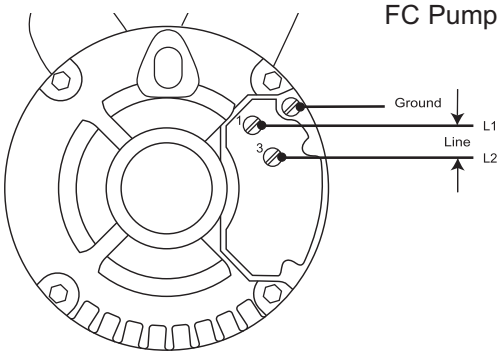
The information stated above also applies to the U.S. Motors.

U.S. Motors 1 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
JML1406T	17	3
JML1409T	17	5
JML1509T	17	7-1/2
JML1511T	17	10

*The 3 HP - 1 Phase motor is dual voltage (208/230v) and cannot be connected to 115v.

U.S. Motors 3 Phase ODP Motor		
Catalog Number	**See Figure**	**HP**
EJMM3155T	18	2
EJMM3158T	18	3
EJMM3212T	18	5
EJMM3219T	18	7-1/2
EJMM3312T	18	10
EJMM3314T	18	15
EJMM2514T	18	20
EJMM2516T	18	25
EJMM2534T	18	30

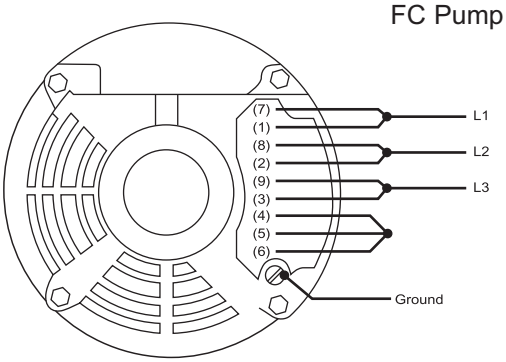
U.S. Motors -
FC Pump Connection Diagram



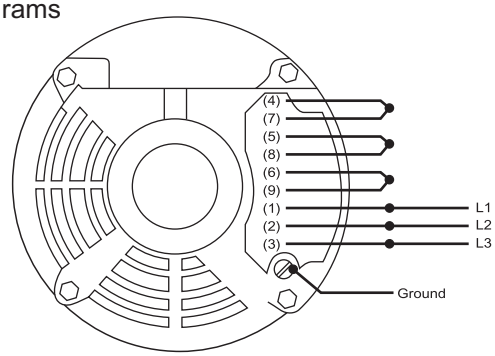
1 Phase, 3 -10 HP
Factory Wired 208/230v

Figure 17

U.S. Motors -
FC Pump Connection Diagrams



3 Phase, 1 - 30 HP
Factory Wired 208/230v



3 Phase, 1 - 30 HP
Wired 460v

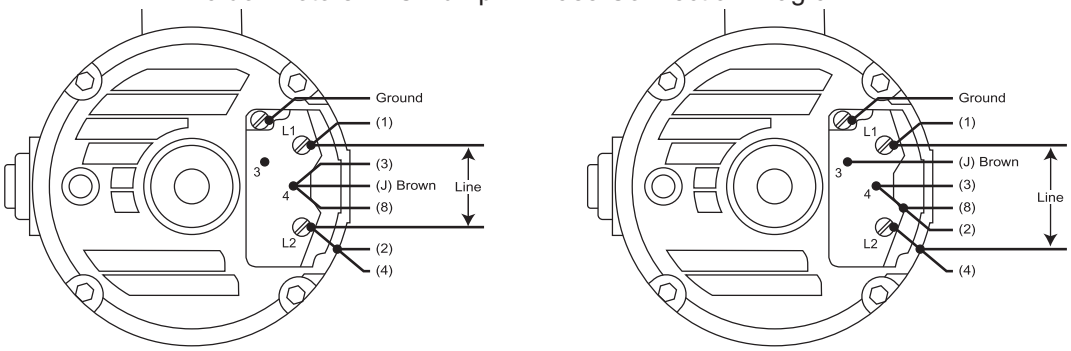
Figure 18

Baldor 1 Phase ODP FC Motor		
Catalog Number	**See Figure**	**HP**
JML3606T	19	3
JML3608T	20	5
JML1509T	20	7.5
JML1511T	20	10

*Motor rated for 230v and cannot be connected to 115v.

Baldor 3 Phase ODP FC Motor		
Catalog Number	**See Figure**	**HP**
EJMM3555T	21	2
EJMM3610T	21	3
EJMM3613T	21	5
EJMM3709T	21	7.5
EJMM3711T	21	10
EJMM2394T	21	15
EJMM2514T	21	20
EJMM2516T	21	25
EJMM2534T	21	30

Baldor Motors - FC Pump 1 Phase Connection Diagram

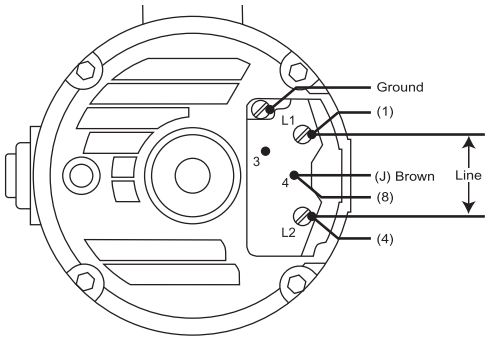


1 Phase, 2 HP
Wired 115v

1 Phase, 2 HP
Factory Wired 230v

Figure 19

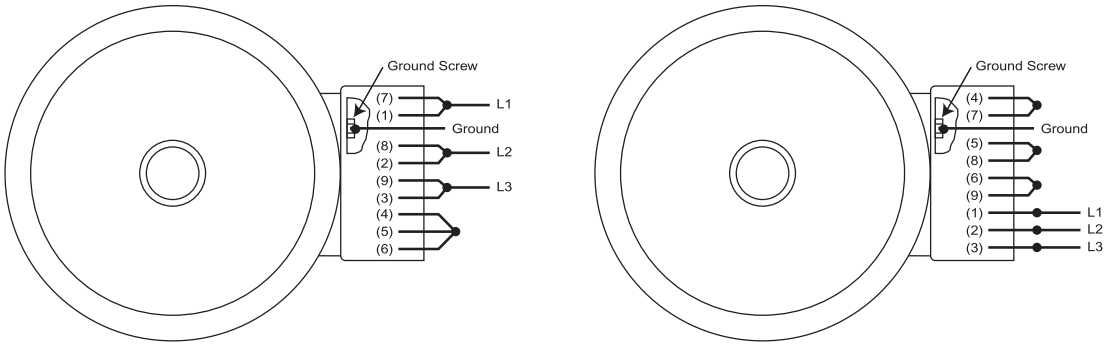
Baldor Motors - FC Pump 1 Phase Connection Diagram



1 Phase, 3 - 10 HP
Factory Wired 230v

Figure 20

Baldor Motors - FC Pump 3 Phase Connection Diagrams



3 Phase, 2 - 30 HP
Factory Wired 230v

Figure 21

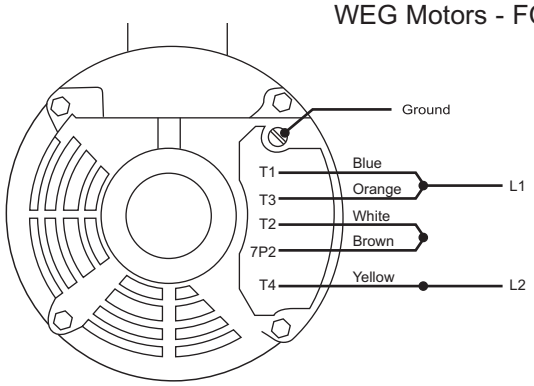
3 Phase, 2 - 30 HP
Wired 460v

WEG 1 Phase TEFC Motor		
Catalog Number	**See Figure**	**HP**
00336ES1E145JM-W22	22	3
00536ES1E184JM-W22	22	5
00736ES1E213JM-W22	22	7 1/2
01036ES1E215JM-W22	22	10

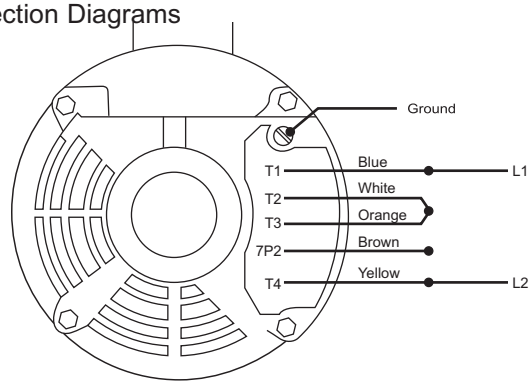
*The 3 HP - 1 Phase motor is single voltage (230v) and cannot be connected to 115v.
Please check motor nameplate before wiring.

WEG 3 Phase TEFC Motor		
Catalog Number	**See Figure**	**HP**
00236ET3E145JM-S	23	2
00336ET3E182JM-S	23	3
00536ET3E184JM-S	23	5
00736ET3E213JM-S	23	7 1/2
01036ET3E215JM-S	23	10
01536ET3E254JM-S	23	15
02036OT3E254JM-S	23	20
02536OT3E256JM-S	23	25
03036OT3E284JM	23	30

WEG Motors - FC Pump Connection Diagrams

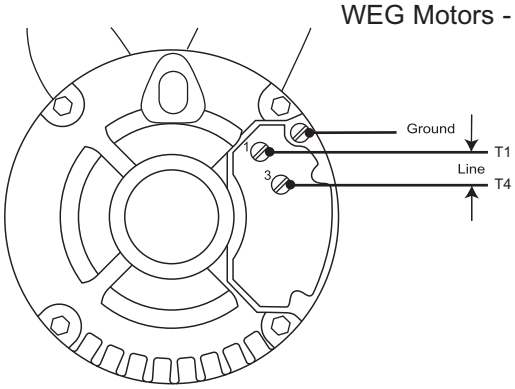


1 Phase, 2 HP
Wired 115v



1 Phase, 2 HP
Factory Wired 208/230v

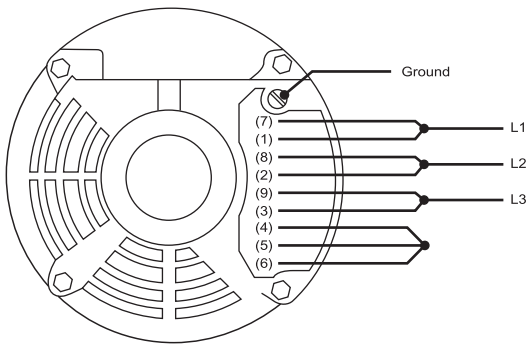
WEG Motors - FC Pump Connection Diagram



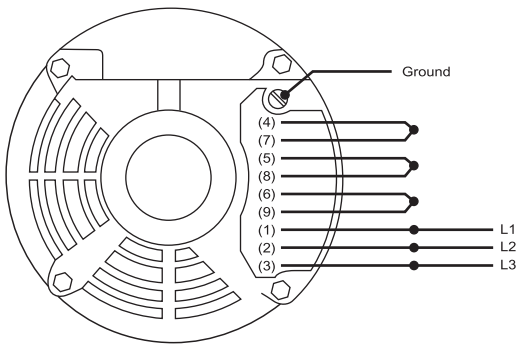
1 Phase, 3 - 10 HP
Factory Wired 208/230v

Figure 22

WEG Motors - FC Pump Connection Diagrams



3 Phase, 1 - 30 HP
Factory Wired 208/230v



3 Phase, 1 - 30 HP
Wired 460v

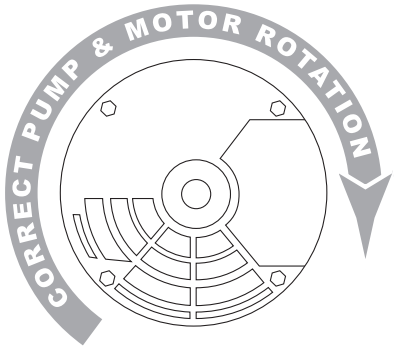
Figure 23

Start-Up Procedures

To check for a free turning pump turn the power off and rotate the pump shaft. On pumps (TC models) that use a 56J frame motor (3/4 - 3 HP), this can be done by removing the motor end cap located on the back of the motor. Rotate the motor shaft in a clockwise direction. *(See Warning 1)*

For FC pumps, use a 30mm deep well socket to rotate the impeller bolt clockwise when viewed from the pump end looking into the suction. Access to the bolt head is thru the suction inlet.

Shaft Rotation - 3 Phase Motors (3/4 - 3 HP) - After the preceding instructions have been completed, turn the motor on for 1 second. If the connection is correct, the shaft will rotate clockwise, when viewed from the end opposite the motor shaft extension. If the rotation is not correct, switch connections L1 and L2. The rotation will now be correct.



View facing end
opposite shaft extension

Warning: 1. Do not start the pump if the motor shaft cannot be rotated.

2. During operation, a minimum reading of 2 PSI is required at all times on the pressure gauge installed in the inlet line.

Valves - The suction inlet valve should be fully open and the discharge valve should be partially open. This will allow the pump to develop back pressure when it is started.

Priming - The pump must be primed before starting. The pump casing and suction piping must be filled with water before starting the motor. On TC models, remove the vent plug in the top of the casing while pouring in priming water. When water is poured into the pump to prime, remove all the air before starting the motor.

The pump will automatically fill with water when the pump is connected to a city main or hydrant. To relieve the trapped air inside the pump, allow the water supply to run a minimum of 1 minute before starting the pump. After filling the pump and inlet pipe with water, turn the motor on and off several times. Repeat this priming sequence several times to be sure that all the air has been removed from the pump.

Once the preceding instructions have been completed, the pump can be started. The pump should be pumping water and rapidly build pressure. If not repeat the priming instructions. During operation, a minimum reading of 2 PSI is required at all times on the pressure gauge installed in the inlet line.

Final Inspection - Once the proceeding instructions have been completed, the pump can be started. During the first few hours of operation, inspect the pump, piping and auxiliary equipment, used in conjunction with the pump. Check for leaks, vibration or noises.

If a problem arises, consult a Webtrol representative or call Webtrol at (314) 631-9200 for assistance.

Lubrication

On the TC SS Series Centrifugal, it is not necessary to lubricate the pump or motor. The motor is designed with sealed ball bearings.

The motors used on the FC SS Series Centrifugal pumps require periodic lubrication. Good results can be obtained if the following recommendations are used in your maintenance program.

A high grade ball or roller bearing grease should be used.

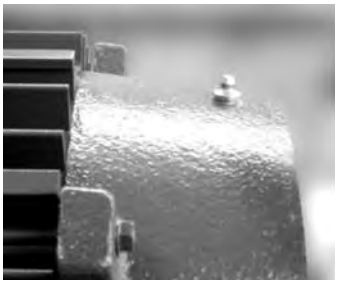
Recommended Greases	
Name	**Manufacturer**
SR1 (Factory Installed)	Chevron
Rykon Premium #2	American Oil Co.
Shell Dolium R	Shell Oil Co.

Amount of Grease			
By Weight		**By Volume**	
Ounce	**Grams**	**In^3**	**Teaspoon**
0.30	8.4	0.6	2

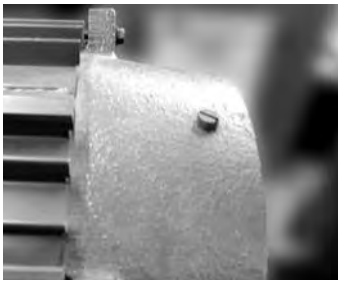
Service Conditions			
Severity Of Service	**Ambient Temperature**	**Atmospheric Contamination**	**Regreasing Interval**
Standard	104° F	Clean, Little Corrosion	5500 Hours
Severe	130° F	Moderate Dirt, Corrosion	2750 Hours

Lubrication Procedure

1. Stop motor
2. Clean grease fitting or remove outlet plug (See Photo)
3. Add the recommended amount of grease while motor is warm
4. Reinstall grease outlet plug



Grease Fitting



Outlet Plug

Chemical Compatibility Chart

Item No.	Pumpage Type	Conc. %	Temp. °F	Code Level
1	Acetic acid	10	68	B
2	Ammonium bicarbonate	10	68	B
3	Ammonium carbonate		140	C
4	Ammonium chloride	10	68	C
5	Ammonium hydroxide	10	<175	C
6	Ammonium nitrate	5		C
7	Beer			A
8	Benzilic acid	10	68	B
9	Boric acid	5	68	A
10	Boric acid	5	175	B
11	Brine			B
12	Butyric acid	Wat. Sol.		B
13	Calcium chloride		68	C
14	Calcium nitrate	10		B
15	Calcium phosphate	10	≤212	B
16	Citric acid	5	68	B
17	Coffee			A
18	Copper sulfate	5	68	B
19	Ethylene glycol			A
20	Fluosilicic acid	20	68	NR
21	Fruit juices			A
22	Hydrocyanic acid		68	B
23	Hydrogen peroxide		68	B
24	Lactic acid	5	≤150	C
25	Lactic acid	10	68	B
26	Magnesium chloride			C
27	Magnesium sulfate		68	B
28	Maleic acid	10	68	C
29	Milk			A
30	Nitric acid	20	68	NR
31	Nitric acid	20	155	NR
32	Oleic acid	20	68	C
33	Oxalic acid	≤10	≤68	B
34	Oxalic acid	10	155	NR
35	Phoshoric acid		≤175	C
36	Phthalic acid		68	B
37	Potassium bicarbonate	30	68	A
38	Potassium carbonate	40	68	A
39	Potassium chloride	10	68	B
40	Potassium hydroxide	10	<175	B
41	Potassium permanganate		68	B
42	Potassium phosphate	10	175	C
43	Potassium sulfate			B
44	Propionic acid	20	68	B
45	Propylene glycol	60	68	C
46	Salicyclic acid		68	B
47	Sodium bicarbonate	10	68	A
48	Sodium carbonate		<140	A
49	Sodium chloride			C
50	Sodium hydroxide	<10	140	B
51	Sodium nitrate	10		B
52	Sodium phosphate		≤212	A
53	Sodium sulfate	5	<140	B
54	Sulfuric acid	10	68	NR
55	Sulfurous acid	Sat	68	C
56	Sulfurous acid	10	68	B
57	Tannic acid	10	68	A
58	Tartaric acid	10	68	B
59	Tea			A
60	Vinegar		≤140	A
61	Water		≤230	A
62	Water, condensation			A
63	Water, de-cationized			C
64	Water, demineralized			A
65	Water, distilled			A
66	Water, mine			A
67	Water, sea			C
68	Water, thermal			A
69	Wine-Whiskey			A

Code Key: A = Good B = Fair C = Poor
NR = Not Recommended

Important-Pumpages coded C “poor” may result in reduced or unsatisfactory service life.

Where hot and aggressive liquids are to be pumped, in addition to checking the chemical compatibility, any deviations in temperature, density and viscosity from the reference data would bring about variations in terms of power input, hydraulic performance and suction capacity. Make sure, in all cases, that the power input is not higher than the rated power and the suction lift does not exceed the permissible values.

Motor Fails To Start Or Run At Full Speed

Possible Cause Of Trouble	Corrective Action
Start capacitor failed - 1 phase motor (motor hums)	Replace start capacitor
Power Loss	Replace bad fuse or reset circuit breaker (check for correct fuse/breaker size)
Incorrect voltage - voltage must be within ± 10% of motor rated voltage. Example: Rated voltage 230 volts Range: 207 - 253 volts	1. check incoming voltage, contact power company 2. Verify that the voltage of the motor matches the power supply voltage 3. Check wire size from main switch to motor.
Defective wire or connections	Replace defective wires, tighten and clean connections.
Grounded motor	Have motor rewound with new winding or replace motor.

Pump Leaks

Possible Cause Of Trouble	Corrective Action
Worn mechanical seal due to abrasive liquid/corrosion	1. Replace seal with materials compatible with liquid pumped. 2. Install filter on inlet line.
Lack of water - carbon seal on mechanical seal face overheats and wears rapidly	1. Replace seal 2. Verify inlet pressure, minimum pressure on inlet gauge is 2 PSIG
Inlet pressure to high	Reduce inlet pressure
Misalignment	Check for a bent motor shaft
Worn “O” ring seal	Replace O-ring seal
Teflon gasket leaks “bowed”	For FC Series only. Tighten bolt shown In exploded view sheet to 11 Ft. Lbs.

Pump Operates, But Delivers Little Or No Water

Possible Cause Of Trouble	Corrective Action
Incorrect rotation on 3 phase motor	Interchange any two incoming power leads to the motor.
Low line voltage	(See motor trouble shooting section above)
Air Locked Pump	Fill pump & inlet pipe with water - jog motor on and off several times. Refill with water. Repeat procedure several times to remove all air
Worn or plugged impeller	1. Replace impeller 2. Clean clogged impeller, install filter on Inlet
Inadequate inlet pressure	Minimum pressure on the inlet side of pump is 2 PSIG
Diameter of suction/discharge pipe is to small	1. Size of inlet pipe should be at least equal to the threaded inlet size in the pipe inlet housing 2. Calculate friction losses for the discharge pipe. Replace undersized piping. For assistance call Webtrol (314) 631-9200
Broken Shaft	If motor shaft is broken replace motor

Excessive Noise While Pump Is Operating

Possible Cause Of Trouble	Corrective Action
Cavitation (noise like gravel in pump)	1. Increase size of inlet line 2. Reduce flow rate - GPM 3. Too viscous (liquid is too thick) maximum viscosity is 80 centipoise (CPS)
Pump not secured to firm foundation	Bolt down to secure and rigid base
Noisy motor	1. Ensure that motor fan is clear 2. Remove motor from pump. If noise persists check for smooth bearing operation. Replace bad bearings/or motor

Thank You for Purchasing a Stainless Steel Centrifugal Pump

We at Webtrol are constantly working on new products to make your job easier, while making your systems more efficient, reliable and affordable.

Your opinion means a lot to us, so please let us know what you think about our FC or TC Series Pump.

WEBTROL

There when you need us most

8417 New Hampshire Ave. | St. Louis, MO 63123
Phone: (314) 631-9200 **Fax:** (314) 631-3738 **E-mail:** comments@webtrol.com