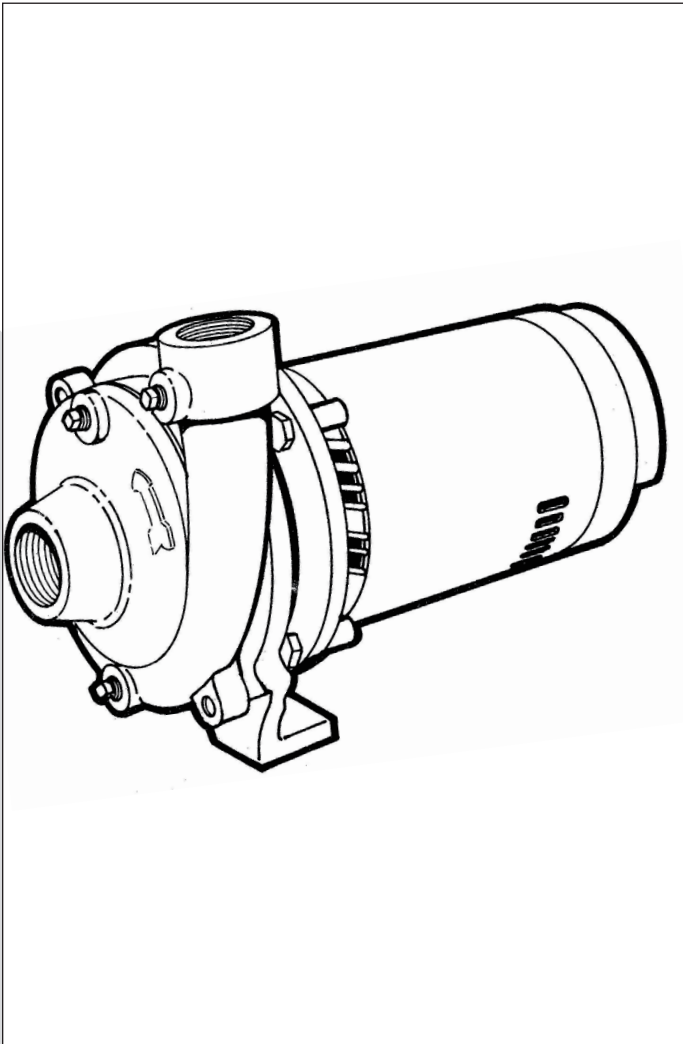


INSTALLATION AND SERVICE MANUAL

# CENTRI-THRIFT CENTRIFUGAL PUMPS

Models  
125M/B, 150M/B  
and 200M/B



ENGLISH: PAGES 2-8

## **Installation and Service Manual**

NOTE! To the installer: Please make sure you provide this manual to the owner of the equipment or to the responsible party who maintains the system.



Important safety instructions! Read carefully before installation.

California Proposition 65 Warning:

**▲ WARNING** This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Safe Drinking Water Act:

**▲ WARNING** This product is to be used exclusively for non-potable water services. This product is not anticipated to be used for human consumption so is not designed for the low lead levels stated in the Safe Drinking Water Act. It is illegal to use this product for potable water applications for human consumption, such as drinking water, oral hygiene, hand washing, food preparation and dishwashing.

Failure to follow these instructions and comply with all codes may cause serious bodily injury and/or property damage.

Before installing or servicing your pump, be certain the pump power source is turned off and disconnected.

All installation and electrical wiring must adhere to state and local codes. Check with appropriate community agencies or contact your local electrical and pump professionals for help.

Pump must be connected to a separate electrical circuit directly from the entrance box. There must be an appropriately sized fuse or circuit breaker in this line. Tying into existing circuits may cause circuit overloading, blown fuses, tripped circuit breakers or a burned-up motor.

Do not connect pump to a power supply until the pump is grounded. For maximum safety, a ground fault interrupter should be used. Failure to ground this unit properly may result in severe electrical shock.

Reduced risk of electric shock during operation of this pump requires acceptable grounding. If the means of connection to the supply-connection box is other than grounded metal conduit, ground the pump back to the service by connecting a copper conductor, at least the size of the circuit conductors supplying the pump, to the grounding screw provided within the wiring compartment.

This pump is provided with a means for grounding. To reduce the risk of electric shock from contact with adjacent metal parts, bond supply box to the pump-motor-grounding means and to all metal parts accessible including metal discharge pipes, by means of a clamp, a weld or both if necessary, secured to the equipment-grounding terminal.

The voltage and phase of the power supply must match the voltage and phase of the pump.

Do not use an extension cord. Above ground joints must be made in an approved junction box.

Never operate a pump with a frayed or brittle power cord, and always protect it from sharp objects, hot surfaces, oil and chemicals. Avoid kinking the cord.

Never service a motor or power cord with wet hands or

while standing in or near water or damp ground.

Do not use this pump in or near a swimming pool.

The three phase units must be wired by a qualified electrician, using an approved starter box and switching device.

Single phase motors are equipped with automatic resetting thermal protectors. The motor may restart unexpectedly, causing the leads to energize or pump to turn on. Three phase motors should be protected by proper thermal and amperage protection. (Check local codes.)

Check for nicks in the wire and pump insulation by using an ohmmeter and checking resistance to ground after installing the pump. If in doubt on the proper procedure, check with a qualified electrician.

Do not pump gasoline, chemicals, corrosives or flammable liquids; they could ignite, explode or damage the pump, causing injury and voiding the warranty.

Never work on the pump or system without relieving the internal pressure.

Do not pump water above 120° F.

Never exceed the pressure rating of any system component.

## **INSTALLATION**

### **Piping**

Pipes must line up and not be forced into position by unions. Piping should be independently supported near the pump so that no strain will be placed on the pump casing. Where any noise is objectionable, pump should be insulated from the piping with rubber connections. Always keep pipe size as large as possible and use a minimum of fittings to reduce friction losses.

### **Suction Piping**

Suction pipe should be direct and as short as possible. It should be at least one size larger than suction inlet tapping and should have a minimum of elbows and fittings. The piping should be laid out so that it slopes upward to pump without dips or high points to eliminate air pockets. The highest point in the suction piping should be the pump inlet except where liquid flows to the pump inlet under pressure. A foot valve must be used to keep pump primed. Where liquid flows to the pump, it may be desirable to use a check valve in the suction line or discharge line to keep pump primed.

To prevent air from being drawn into suction pipe due to a suction whirlpool, the foot valve should be submerged at least three feet below the low water level. The suction pipe must be tight and free of air leaks.

### **Discharge Piping**

Discharge piping should never be smaller than pump tapping and should preferably be one size larger. A gate valve should always be installed in discharge line to serve as a shut-off for throttling if capacity is not correct. To protect the pump and foot valve from water hammer and to prevent back flow, a check valve should be installed in the discharge line between the pump and gate valve.

### **Electrical Connections**

Be sure motor wiring is connected for voltage being used.

Unit should be connected to a separate circuit, direct from main switch. A fused disconnect switch or circuit breaker must be used in this circuit. Wire of sufficient size should be used to keep voltage drop to a maximum of 5%. All motors, unless provided with built-in overload protection, must be protected with an overload switch, either manual or magnetic. Three phase motors require overload protection. Single phase motors are equipped with built-in overload protection. Never install a pump without proper overload protection. A flexible metallic conduit should be used to protect the motor leads.

### **Priming**

The pump must be primed before starting. The pump casing and suction piping must be filled with water before starting motor. Remove vent plug in top of casing while pouring in priming water. A hand pump or ejector can be used for priming when desired. Use care to remove all air before starting motor. If pump does not start immediately, stop and reprime.

### **Starting**

Close the discharge valve when starting the pump as it puts less starting load on the motor. When the pump is up to operating speed, open the discharge valve to obtain desired capacity or pressure. Do not allow the pump to run for long periods with the discharge valve tightly closed. This will create superheated water, which could damage the seal and shorten the life of the motor. This superheated water could also cause severe burns. Always use a pressure relief valve, set below the rating of the tank system.

### **Rotation**

The pump must run in direction of arrow on pump case. All single phase motors are single rotation. Three phase motors may run either direction. If rotation is wrong when first starting motor, interchange any two line leads to change rotation.

### **Stopping**

Before stopping pump, close the discharge valve. This will prevent water hammer and is especially important on high head pumps.

### **Freezing**

Care should be taken to prevent the pump from freezing during cold weather. Drain the pump casing when not in operation. Drain by removing the pipe plug in the bottom of the casing.

### **Rotary Seal**

Centrifugal pumps are fitted with rotary seal. This seal is recommended for water free from abrasives. If liquid contains abrasives, the centrifugal pump should not be used.

### **Bearings**

Lubricate motor bearings in accordance with motor manufacturer's instructions.

Single seal ball bearings are used on 125B, 150B and 200B bearing bracket units. Proper amount of grease has been provided in the bracket cavity between the bearings. This should be sufficient grease for 4,000 hours of operation. After 4,000 hours of operation the old grease should be cleaned out and new grease added. Use only best grade ball bearing greases

## **DISASSEMBLY INSTRUCTIONS**

Open the power supply switch contacts and remove fuses. Disconnect the electrical wiring from the motor. Then drain pump case by removing drain plugs.

Remove the bolts securing volute case to pump bracket, and pry components apart. Then remove impeller.

Always replace both rotating assembly and stationary ceramic seat. Do not use old stationary seat with new rotating seal assembly. Pry out rotating assembly of shaft seal and remove ceramic ring from housing. A new shaft seal should always be used when rebuilding a pump. All pump parts should be cleaned thoroughly before being reassembled.

Remove four bolts holding bracket to motor and remove motor. Then remove set screw in stub shaft coupling to disconnect motor pump shaft.

## **ASSEMBLY INSTRUCTIONS**

Place rubber deflector over motor shaft, slide shaft extension into position and tighten set screws. Assemble motor and shaft onto bracket.

Insert seal seat in position by using finger pressure to press firmly and squarely until it bottoms. The use of light oil on the rubber element will facilitate assembly. Care must be taken to keep oil, grease and dirt off face areas of seal. Be sure the seal faces are not damaged during assembly or the seal will leak during operation.

Check dimension from face of ceramic seat to shaft shoulder. This distance should be within a tolerance of  $\pm 1/64$ . Install rotating element of seal on shaft. Be sure the lapped sealing surface is toward seal seat and assemble impeller. Check diameter of impeller against motor horsepower rating to ensure proper performance.

Secure impeller using key, impeller retainer washer, 5/16 stainless steel helical spring lockwasher and socket head cap screw, 1" long. Then rotate pump shaft with fingers, making sure there is uniform drag of the seal faces.

# Centri-Thrift Centrifugal Pump Parts List

Pump Nameplate Catalog Number Horsepower	No. Req.	1-1/2" Suction - 1-1/4" Discharge		2" Suction - 1-1/2" Discharge		
		125M-2 2	125M-3 3	150M-2 2	150M-3 3	150M-5 5
Description	No. Req.	Part No.	Part No.	Part No.	Part No.	Part No.
Motor - See Chart Below.	1					
Pump Shaft Assembly - See Chart Below	1					
Bracket - See Chart Below	1					
Set Screw for Shaft Assembly, Single Phase Motor	2	05013A015	06024A001	05013A015	06024A001	06024A001
Set Screw for Shaft Assembly, Three Phase Motor	2	05013A015	05013A015	05013A015	05013A015	05013A015
Cap Screw - Bracket to Motor, 3/8"-16NC x 1-1/8"	4	19101A016	19101A016	19101A016	19101A016	-
Cap Screw - Bracket to Motor, 1/2"-13NC x 1-1/4"	4	-	19103A004	-	-	19103A004
Cap Screw - Bracket to Motor, 3/8"-16 NC x 1"	4	-	19101A013	-	19101A013	-
Cap Screw - Bracket to Case, 3/8"-16NC x 1-1/8"	8	19101A016	19101A016	19101A016	19101A016	19101A016
Lockwasher - 3/8"	12	05454A007	05454A007	05454A007	05454A007	05454A007
Lockwasher - 3/8"	8	-	-	-	-	05454A007
Lockwasher - 1/2"	4	-	05454A004	-	05454A004	05454A004
Shaft Seal	1	11716A001K	11716A001K	RTF	RTF	RTF
Impeller	1	11725B002	11725B003	12935B003	12935B001	12935B003
Key for Impeller	1	05818A025	05818A025	05818A025	05818A025	05818A025
Washer - Special	1	11718A000	11718A000	12933A000	12933A000	12933A000
Lockwasher - 5/16"	1	05454A014	05454A014	05454A014	05454A014	05454A014
Cap Screw - Stainless Steel	1	19100A004	19100A004	06106A008	06106A008	06106A008
Gasket - Case to Bracket	1	05863A013	05863A013	-	-	-
Volute Case	1	11726D001	11726D001	12937D001	12937D001	12937D001
Wearing Ring - For Units w/Wearing Ring	1	-	-	12934A000	12934A000	12934A000
Pipe Plug - 1/8"	4	05022A004	05022A004	05022A004	05022A004	05022A004
Pipe Plug - 1/4"	1	05022A009	05022A009	05022A009	05022A009	05022A009
Deflector - Rubber, for 5/8" Shaft	1	05059A318	05059A318	05059A318	-	-
Deflector - Rubber, for 7/8" Shaft	1	05059A320	05059A320	-	05059A320	-
Deflector - Rubber, for 1-1/8" Shaft	1	-	05059A321	-	05059A321	05059A321

Motor Horsepower	2	2	2	2	2	2	3	3	3
Pump Serial Number	654	654	756	756	1056	1056	654	654	157
Motor Number	-	-	13229A000	20051A000	13229A000	20051A000	RTF	-	RTF
Voltage	115/230	220/440	115/230	220/440	115/230	220/440	230	220/440	220/440
Phase	Single	Three	Single	Three	Single	Three	Single	Three	Three
Motor Bolt Circle	5-7/8"	5-7/8"	5-7/8"	5-7/8"	5-7/8"	5-7/8"	7-1/4"	7-1/4"	5-7/8"
Motor Shaft Diameter	7/8"	7/8"	5/8"	5/8"	5/8"	5/8"	1-1/8"	7/8"	7/8"
Shaft - Rotary Seal	11723B001	11723B001	11714B001	11714B001	11714B001	11714B001	11914B001	RTF	RTF
Bracket - Rotary Seal	11715D000	11715D000	11715D000	11715D000	11715D000	11715D000	11912D000	11912D000	RTF

Motor Horsepower	3	3	3	3	5	5
Pump Serial Number	974	974	1056	1056	1056	1056
Motor Number	21206A000	21207A000	RTF	-	18939A000	18941A000
Voltage	208/230	230/460	230	220/440	230	220/440
Phase	Single	Three	Single	Three	Single	Three
Motor Bolt Circle	5-7/8"	5-7/8"	7-1/4"	7-1/4"	7-1/4"	7-1/4"
Motor Shaft Diameter	5/8"	5/8"	1-1/8"	7/8"	1-1/8"	1-1/8"
Shaft - Rotary Seal	11714B001	11714B001	11914B001	RTF	11914B001	11914B001
Bracket - Rotary Seal	11715D000	11715D000	11912D000	11912D000	11912D000	11912D000

# Centri-Thrift Centrifugal Pump Parts List

2-1/2" Suction -2" Discharge

Pump Nameplate Catalog Number Horsepower		200M-3 3	200M-5 5	200M-7-1/2 7-1/2
Description	No. Req.	Part No.	Part No.	Part No.
Motor - See Chart Below.	1			
Pump Shaft Assembly - See Chart Below	1			
Bracket - See Chart Below	1			
Set Screw for Shaft Assembly, Single Phase Motor	2	06024A001	06024A001	06024A001
Set Screw for Shaft Assembly, Three Phase Motor	2	05013A015	06024A001	06024A001
Cap Screw - Bracket to Motor, 3/8"-16NC x 1-1/8"	4	19101A016	-	-
Cap Screw - Bracket to Motor, 1/2"-13NC x 1-1/4"	4	19103A004	19103A004	19103A004
Cap Screw - Bracket to Motor, 3/8"-16 NC x 1"	4	19101A003	-	-
Cap Screw - Bracket to Case, 3/8"-16NC x 1-1/8"	8	19101A016	19101A016	19101A016
Lockwasher - 3/8"	12	05454A007	-	-
Lockwasher - 3/8"	8	-	05454A007	05454A007
Lockwasher - 1/2"	4	05454A004	05454A004	05454A004
Impeller	1	12936B002	12936B001	12936B003
Key for Impeller	1	05818A025	05818A025	05818A025
Washer - Special	1	12933A000	12933A000	12933A000
Lockwasher - 5/16"	1	05454A014	05454A014	05454A014
Gasket - Case to Bracket	1	05863A013	05863A013	05863A013
Volute Case	1	12938D001	12938D001	12938D001
Wearing Ring - For Units w/Wearing Ring	1	12934A000	12934A000	12934A000
Pipe Plug - 1/8"	4	05022A004	05022A004	05022A004
Pipe Plug - 1/4"	1	05022A009	05022A009	05022A009
Deflector - Rubber, for 5/8" Shaft	1	05059A318	-	-
Deflector - Rubber, for 7/8" Shaft	1	05059A320	-	-
Deflector - Rubber, for 1-1/8" Shaft	1	05059A321	05059A321	05059A321

Motor Horsepower	3	3	3	3	3	5	5	7-1/2
Pump Serial Number	974	974	1056	1056	157	1056	1056	1056
Motor Number	21206A000	21207A000	RTF	-	RTF	18939A000	18941A000	18944A000
Voltage	208/230	230/460	230	220/440	220/440	230	220/440	220/440
Phase	Single	Three	Single	Three	Three	Single	Three	Three
Motor Bolt Circle	5-7/8"	5-7/8"	7-1/4"	7-1/4"	5-7/8"	7-1/4"	7-1/4"	7-1/4"
Motor Shaft Diameter	5/8"	5/8"	1-1/8"	7/8"	7/8"	1-1/8"	1-1/8"	1-1/8"
Shaft - Rotary Seal	11714B001	11714B001	11914B001	RTF	RTF	11914B001	11914B001	11914B001
Bracket - Rotary Seal	11715D000	11715D000	11912D000	11912D000	RTF	11912D000	11912D000	11912D000

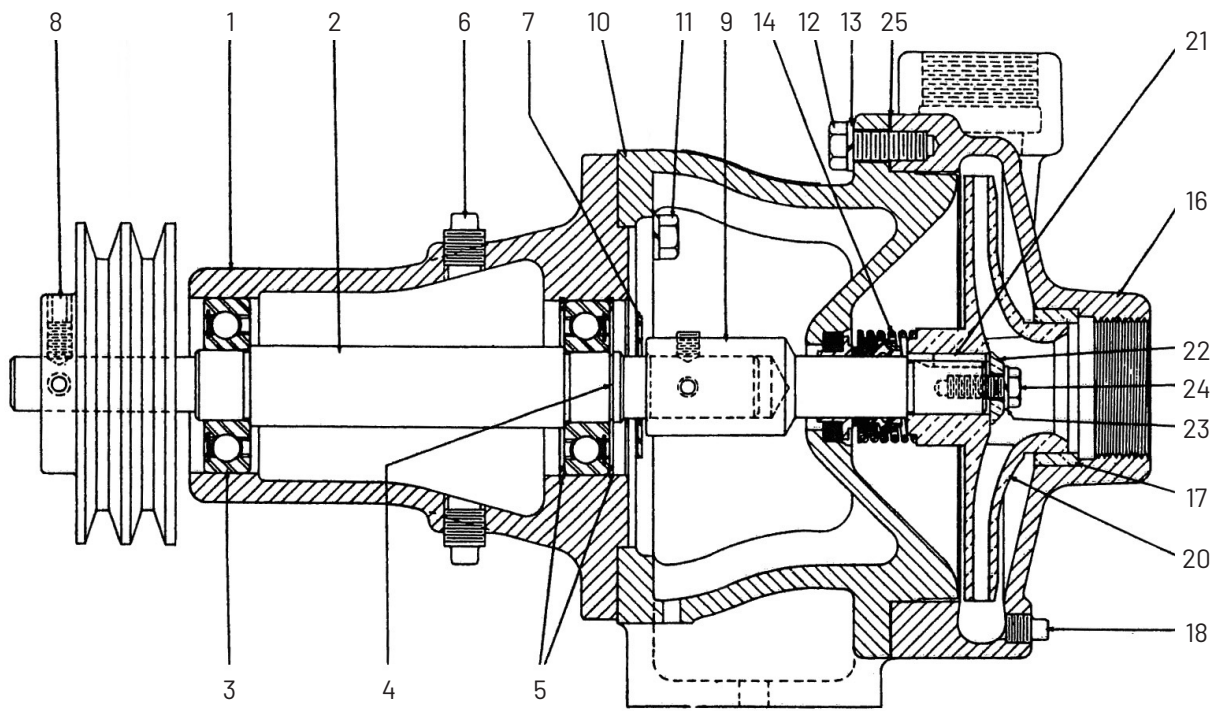
Part Number	Description
16837A002	Kit - Cat. No. 125M-2FA
16837A014	Kit - Cat. No. 125M-3FA
16837A005	Kit - Cat. No. 150M-2FA
16837A015	Kit - Cat. No. 150M-3FA

Part Number	Description
16837A008	Kit - Cat. No. 150M-5FA
16837A016	Kit - Cat. No. 200M-3FA
16837A011	Kit - Cat. No. 200M-5FA
16837A012	Kit - Cat. No. 200M-7-1/2FA

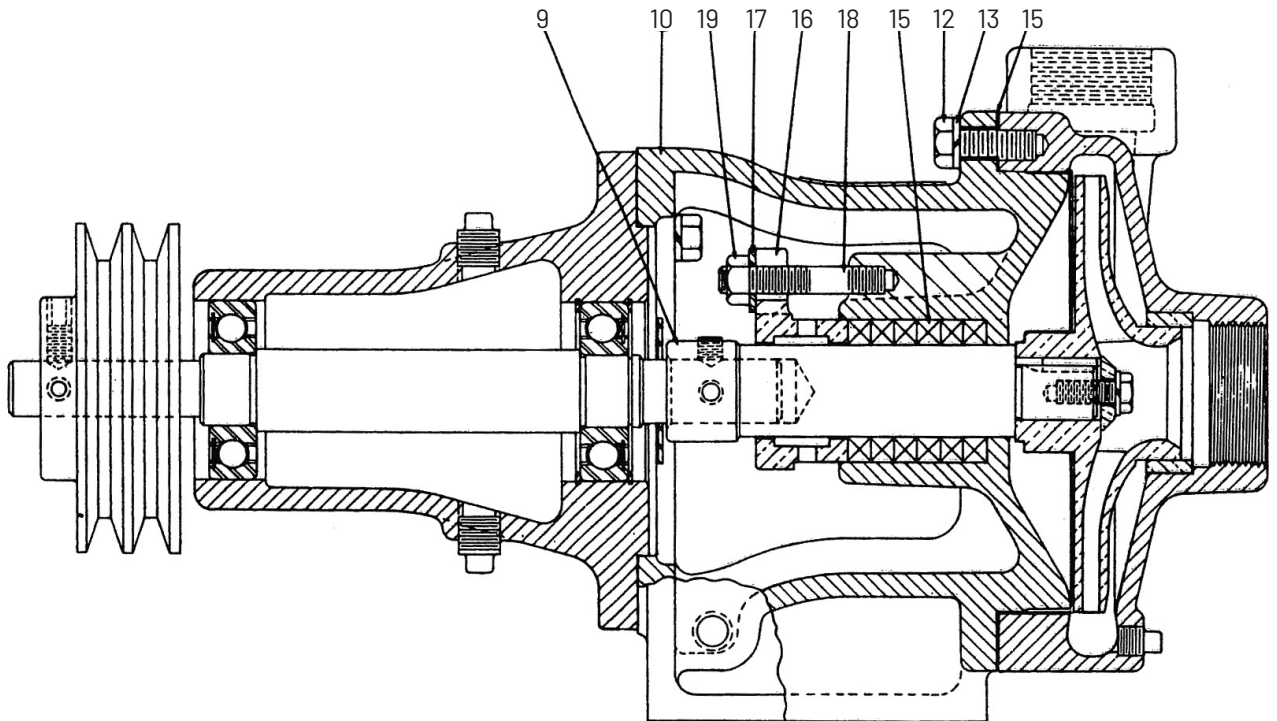
# Centri-Thrift Centrifugal Pump Parts List

## Belt Driven

Pump Name and Plate Catalog Number			125B	125B	150B	200B
Pump Nameplate Serial Number			654 Plus Year Made	856 Plus Year Made	1056 Plus Year Made	1056 Plus Year Made
Suction			1-1/2"	1-1/2"	2"	2-1/2"
Discharge			1-1/4"	1-1/4"	1-1/2"	2"
Ref. No.	Name of Part	No. Req.	Part No.		Part No.	Part No.
1	Bearing Housing Only	1	11727C000	11727C000	11727C000	11727C000
2	Shaft for Belt Driven Head	1	RTF	11728B001	11728B001	11728B001
3	Bearing for Housing - Belt Driven Head	2	11729A001	11729A001	11729A001	11729A001
4	Snap Ring - Belt Driven Head	1	10848A003	10848A003	10848A003	10848A003
5	Snap Ring - Belt Driven Head	2	10848A004	10848A004	10848A004	10848A004
6	Pipe Plug - 1/4", Belt Driven Head	3	05022A060	05022A060	05022A060	05022A060
7	Deflector - Rubber, for 7/8" Shaft	1	05059A320	05059A320	05059A320	05059A320
8	Set Screw - 5/16"-18NC, 5/8" Long, Headless	2	05013A007	05013A007	05013A007	05013A007
-	Key for Pulley - 3/16" x 3/16" x 1-3/4" Long	1	-	05818A015	05818A015	05818A015
9	Pump Shaft Assembly - Rotary Seal	1	11723B001	11723B001	11723B001	11723B001
-	Set Screw for Shaft Assembly- 5/16"-18NC, 5/16" Long	2	05013A015	05013A015	05013A015	05013A015
10	Bracket for Use with Rotary Seal	1	11715D000	11715D000	11715D000	11715D000
11	Cap Screw - 3/8"-16NC, 1-1/8" Long, Bracket to Bearing Housing	4	19101A016	19101A016	19101A016	19101A016
12	Cap Screw - 3/8"-16NC, 1-1/8" Long, Bracket to Case	8	19101A016	19101A016	19101A016	19101A016
13	Lockwasher - 3/8"	12	05454A007	05454A007	05454A007	05454A007
14	Shaft Seal	1	RTF	RTF	RTF	RTF
15	Gasket - Case to Bracket	1	05863A013	05863A013	05863A013	05863A013
16	Volute Case with Wearing Ring	1	11726D001	11726D001	12937D001	12938D001
17	Wearing Ring Only	1	RTF	RTF	12934A000	12934A000
18	Pipe Plug - 1/8"	4	05022A004	05022A004	05022A004	05022A004
19	Nut for Studs	2	19109A021	19109A021	19109A021	19109A021
20	Impeller	1	11725B003	11725B003	12935B003	12936B003
21	Key for Impeller - 3/16" x 3/16" x 3/4" Long	1	05818A025	05818A025	05818A025	05818A025
22	Washer - Special	1	11718A000	11718A000	12933A000	12933A000
23	Lockwasher - 5/16"	1	05454A014	05454A014	05454A014	05454A014
24	Cap Screw - Stainless Steel	1	19100A004	19100A004	06106A008	06106A008



**Belt Driven Head with Rotary Seal**



**Belt Driven Head with Stuffing Box**

## Limited Warranty

Myers warrants to the original consumer purchaser ("Purchaser" or "You") of the products listed below, that they will be free from defects in material and workmanship for the Warranty Period shown below.

<b>Product</b>	<b>Warranty Period</b> whichever occurs first:
Jet pumps, small centrifugal pumps, submersible pumps and related accessories	12 months from date of original installation, or 18 months from date of manufacture
Fibrewound Tanks	5 years from date of original installation
Steel Pressure Tanks	5 years from date of original installation
Sump/Sewage/Effluent Products	12 months from date of original installation, or 36 months from date of manufacture
Battery Backup Units MBSP-2, MBSP-2C	12 months from date of original installation, or 18 months from date of manufacture
MBSP-3, MBSP-3C	24 months from date of original installation, or 30 months from date of manufacture
Wastewater Solids Handling Pumps	12 months from date of shipment from factory or 18 months from date of manufacture

Our warranty applies only where such products are used in compliance with the requirements of the applicable product catalog and/or manuals. For additional information, please refer to the applicable standard limited warranty featured in the product manual.

Our warranty will not apply to any product that, in our sole judgement, has been subject to negligence, misapplication, improper installation, or improper maintenance. Without limiting the foregoing, operating a three phase motor with single phase power through a phase converter will void the warranty. Note also that three phase motors must be protected by three-leg, ambient compensated, extra-quick trip overload relays of the recommended size or the warranty is void.

Your only remedy, and MYERS's only duty, is that MYERS repair or replace defective products (at MYERS's choice). You must pay all labor and shipping charges associated with this warranty and must request warranty service through the installing dealer as soon as a problem is discovered. No request for service will be accepted if received after the Warranty Period has expired. This warranty is not transferable.

MYERS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER.

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

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on the duration of an implied warranty, so the above limitations or exclusions 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.

This Limited Warranty is effective April 1, 2014 and replaces all undated warranties and warranties dated before April 1, 2014.

### **F.E. MYERS**

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