



FINISH THOMPSON INC.

EF SERIES PUMPS

OPERATION & PARTS MANUAL





FINISH THOMPSON INC.

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EU Declaration of Conformity



Finish Thompson Inc. hereby declares that the following machine(s) fully comply with the applicable health and safety requirements as specified by the EC Directives listed. This declaration is valid provided that the devices are fully assembled and no modifications are made to these devices.

Type of Device:

Drum and Centrifugal Pumps

Models:

**PPF, PFS, PFM, TTS, TBS, STTS, TTC, TBP, TMS, BTS, HVDP, EP
KC, DB, SP, GP, MSKC, AP, UC, EF**

EC Directives:

Machinery Safety (98/37/EC)

Applied Harmonized Standards:

EN ISO 12100-1
EN ISO 12100-2

Manufacturer:

Finish Thompson Inc.
921 Greengarden Road
Erie, Pennsylvania 16501-1591 U.S.A

Signed,

CEO & President

October 8, 2009

Introduction

This manual pertains to the EF Series drum pumps. Finish Thompson Inc. thanks you for choosing our products. We believe the use of our products will be fully satisfactory. When properly installed and operated, your Finish Thompson motor and pump will provide long, trouble-free service; therefore, please read this manual carefully before carrying out any operations on the pump/motor unit. Any use other than that described herein is considered incorrect; and, consequently, Finish Thompson Inc. shall not be held responsible for any damages to people or property. In case of doubt or enquiries, please reply to our Technical Service department directly at the following address:

Finish Thompson, Inc.
921 Greengarden Rd.
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Note: Repair instructions can be downloaded from our website at www.finishthompson.com or contact Technical Service at 1-800-888-3743.

Warranty, General Terms & Conditions

1. The following terms and conditions apply to the sale of machinery, components and related services and products, of Finish Thompson Inc. (hereinafter “the products”)
2. Finish Thompson Inc. (the manufacturer) warrants only that:
 - a) its products are free of defects in material, design and workmanship at the time of original purchase;
 - b) its products will function in accordance with Finish Thompson Inc. operation manuals; Finish Thompson Inc. does not guarantee that the product will meet the precise needs of the Customer, except for those purposes set out in any invitation to render documents or other documents specifically made available to Finish Thompson Inc. before entering into this agreement;
 - c) high quality materials are used in the construction of the pumps and that machining and assembly are carried out to the highest standards. Except as expressly stated above, Finish Thompson Inc. makes no warranties, express or implied, concerning the products, including all warranties of fitness for a particular purpose.

This warranty shall not be applicable in circumstances other than defects in material, design, and workmanship. In particular warranty shall not cover the following:

- d) Periodic checks, maintenance, repair and replacement of parts due to normal wear and tear;
- e) Damage to the product resulting from:
 - i. Tampering with, abuse or misuse, including but not limited to failure to use the product for its normal purposes as stated at the time of purchase or in accordance with Finish Thompson, Inc. instructions for use and maintenance of the product, or the installation or improper ventilation or use of the product in a manner inconsistent with the technical or safety standard in force;
 - ii. Repairs performed by non-authorized service workshop, or opening of the unit by non-authorized personnel, or use of non genuine Finish Thompson Inc. parts;
 - iii. Accidents, force majeure or any cause beyond the control of Finish Thompson Inc., including but not limited to lightning, water, fire, earthquake, and public disturbances, etc.
3. The warranty shall cover the replacement or repair of any part, which is documented to be faulty due to construction or assembling, with new or repaired parts free of charge delivered by Finish Thompson, Inc. Parts subjected to normal wear and tear shall not be covered by the warranty. Finish Thompson, Inc. shall decide as to whether the defective or faulty part shall be replaced or repaired. Transportation charges are prepaid to Finish Thompson.
4. The warranty of the products shall be valid for a period of **12 months** from the date of delivery, under the condition that notice of the alleged defect to the products or parts thereof be given to Finish Thompson, Inc. within the term of 8 days from the discovery.
5. Repair or replacement under the terms of this warranty shall not give a right to an extension to, or a new commencement of, the period of warranty. Repair or replacement under the terms of this warranty may be fulfilled with functionally equivalent re-conditioned units. Finish Thompson Inc. qualified personnel shall be solely entitled to carry out repair or replacement of faulty parts after careful examination of the motor. Faulty parts or components when replaced by Finish Thompson Inc. will become the property of Finish Thompson Inc. If this warranty does not apply, the purchaser shall bear all cost for labor, material and transportation.
6. Finish Thompson Inc. will not be liable on any claim, whether in contract, tort, or otherwise, for any indirect, special, incidental, or consequential damages, caused to the customer or to third parties, including loss of profits, process down time, transportation costs, costs associated with replacement or substitution products, labor costs, installation or removal costs. In any and all events, manufacturer’s liability shall not exceed the purchase price of the product and/or accessories.
7. **Return Policy.** Should you have any problems with this product, please contact the distributor in your area. The distributor will determine if a return to the factory is necessary and will contact the factory for a Return Authorization Number. Otherwise, contact our Technical Service Hotline (1-800-888-3743) or email techservice@finishthompson.com if you have any questions regarding product operation or repair.

Safety

1. Introduction

This manual contains all the information needed for the correct installation, use and maintenance of your new Finish Thompson pump. It should be read and understood by all the personnel involved in installation, operating and servicing of the pump before it is started.

2. Operator Qualification and Training

The personnel in charge of the installation, the operation, and the maintenance of the pump must be qualified and able to perform the operations described in this manual. Finish Thompson, Inc. shall not be held responsible for the training level of personnel and for the fact that they are not fully aware of the contents of this manual.

3. Safety Instructions

FOR YOUR OWN SAFETY

BEFORE using or servicing your pump, please make sure to wear the proper clothing, eye protection and follow standard safety procedures when handling corrosive or personally harmful materials.

GENERAL DANGER

NEVER use a plastic pump or an open, splash-proof, TEFC or non-ATEX motor when pumping or mixing flammable or combustible material.

ALWAYS use a Model EFS 316SS pump tube with Model S4 air motor and static protection kit with grounded discharge hose, P/N 107429, when pumping or mixing flammable or combustible material. Follow Assembly, Installation & Operating Instructions from manual, P/N J102721, included with the static protection kit or it can be accessed online at www.finishthompson.com/downloads.

ALWAYS use and store the pump and motor in an upright position.

DANGER: POWER SUPPLY

NEVER perform any maintenance operation on the motor while it is running or before it has been disconnected from the power supply. Avoid any possible hazard that might be caused by electric power.

ALWAYS check the electrical specifications on the motor data plate and make sure they correspond to the power supply to which it will be connected.

ALWAYS place motor in the OFF position prior to connecting the power source.

NEVER immerse the motor in liquid.

4. Noise Level

S1, S2, and S3 electric motors in normal operating conditions produce a sound level equal to or less than 74 dBA at a distance of three feet (~ one meter). S4 Air motor produces a sound level equal to or less than 78 dBA at a distance of three feet (~ one meter).

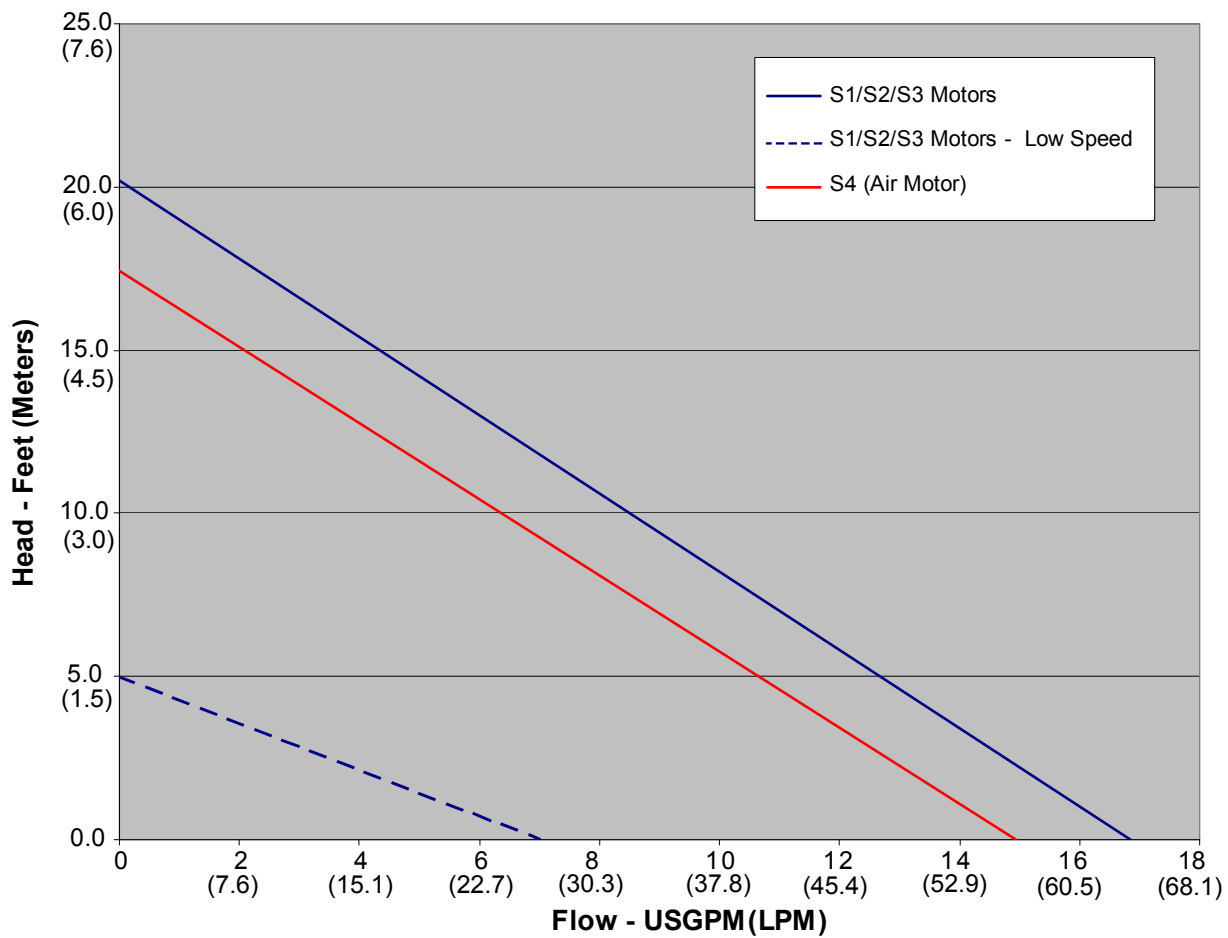
5. Modifications and Spare Parts

Any changes concerning the service of the pump as originally purchased can be executed only after written approval from Finish Thompson Inc. It is recommended to use only genuine Finish Thompson Inc. spare parts and approved accessories. The use of non-original spare parts or non-approved accessories will void warranty and removes any responsibility on the manufacturer's behalf for any damage caused to people or things.

Installation and Operation

Please refer to the EF Series motors manual, PN 107318, for installation and operation instructions.

PUMP SPECIFICATIONS			
	MODEL EFP	MODEL EFV	MODEL EFS
Outer Tube Diameter	1.27" (32 mm)	1.27" (32 mm)	1.25" (32 mm)
Discharge Spout	3/4" Barb	3/4" Barb	3/4" Barb
Discharge Thread	1" NPT	1" NPT	Optional
Max. Specific Gravity	1.2	1.2	1.2
Max. Viscosity	300 cP	300 cP	300 cP
Min./ Max. Fluid Temperature	0°F Min. to 150°F Max.	0°F Min. to 160°F Max.	0°F Min. to 212°F Max.
	(-18°C Min. to 66°C Max.)	(-18°C Min. to 71°C Max.)	(-18°C Min. to 100°C Max.)
Wetted Materials	Polypropylene, FKM, PTFE, ETFE, 316 SS	Pure Polypropylene, PVDF, FKM, PTFE, ETFE, Alloy 625	316 SS, FKM, PTFE, ETFE

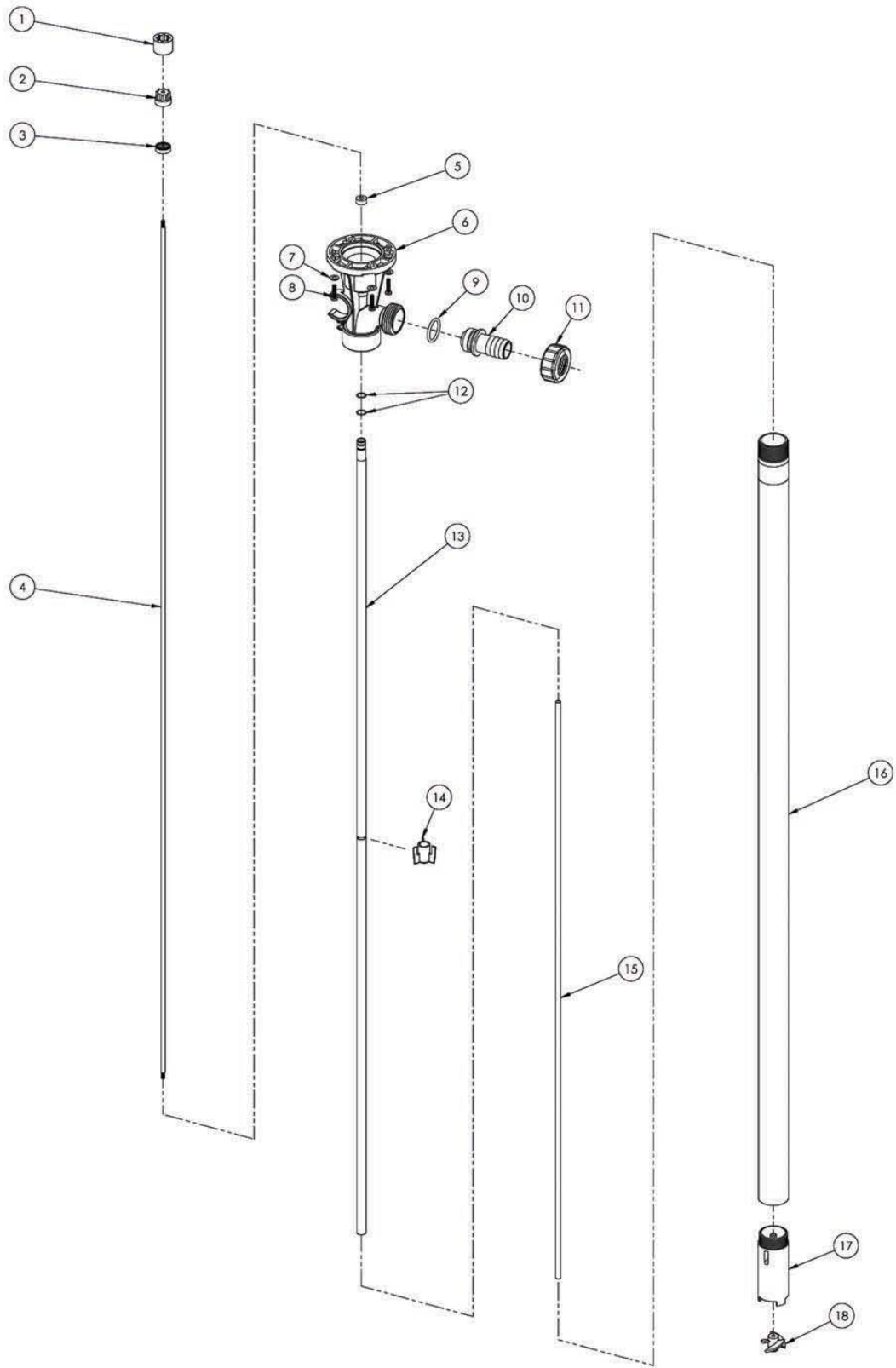


Note: All testing performed with water at 68°F. Actual performance can vary by +/-10%. Actual performance will decrease with increased fluid viscosity and specific gravity.

Viscosity	100 cP	200 cP	300 cP
Max Flow	7.0 GPM	5.0 GPM	3.7 GPM
Max Head	16 ft.	16 ft.	16 ft.

Performance is based on electric motor at high speed setting.

EXPLODED VIEW - EF SERIES PUMP



PUMP SPARE PARTS LIST

ITEM	QTY	DESCRIPTION	PART NUMBER		
			MODEL EFP	MODEL EFV	MODEL EFS
*1	1	COUPLING INSERT	J103422	J103422	J103422
2	1	COUPLING HALF	107300	107300	107300
*3	1	BEARING	107298	107298	107298
4	1	SHAFT - 316 SS - 16"	107296-1	N/A	107296-1
4	1	SHAFT - ALLOY 625 - 16"	N/A	107296-2	N/A
4	1	SHAFT - 316 SS - 27"	107296-3	N/A	107296-3
4	1	SHAFT - ALLOY 625 - 27"	N/A	107296-4	N/A
4	1	SHAFT - 316 SS - 40"	107296-5	N/A	107296-5
4	1	SHAFT - ALLOY 625 - 40"	N/A	107296-6	N/A
4	1	SHAFT - 316 SS - 48"	107296-7	N/A	107296-7
4	1	SHAFT - ALLOY 625 - 48"	N/A	107296-8	N/A
*5	1	SEAL - VITON®	107297	107297	107297
6	1	HEAD - PP	107071-1	N/A	N/A
6	1	HEAD - PVDF	N/A	107071-2	N/A
7	4	FLAT WASHER - SS	J103601	J103601	N/A
8	4	HI-LOW SCREW - SS	J101020	J101020	J101020
*9	1	SPOUT O-RING - VITON®	106155	106155	N/A
10	1	SPOUT - PP	107072-1	N/A	N/A
10	1	SPOUT - PVDF	N/A	107072-2	N/A
11	1	NUT - PP	107069-1	N/A	N/A
11	1	NUT - PVDF	N/A	107069-2	N/A
*12	2	O-RING - VITON®	107299	107299	107299
13	1	INNER TUBE - PURE PP or 316SS - 16"	107294-1	107294-1	
13	1	INNER TUBE - PURE PP or 316SS - 27"	107294-2	107294-2	
13	1	INNER TUBE - PURE PP or 316SS - 40"	107294-3	107294-3	
13	1	INNER TUBE - PURE PP or 316SS - 48"	107294-4	107294-4	
*14	1	CENTER SUPPORT - Tefzel® (ETFE) - 40" & 48" LENGTHS ONLY	107068	107068	N/A
*15	1	SHAFT SLEEVE - PTFE - 16"	107293-1	107293-1	107293-1
*15	1	SHAFT SLEEVE - PTFE - 27"	107293-2	107293-2	107293-2
*15	1	SHAFT SLEEVE - PTFE - 40"	107293-3	107293-3	107293-3
*15	1	SHAFT SLEEVE - PTFE - 48"	107293-4	107293-4	107293-4
16	1	OUTER TUBE - EFP - 16"	107295-1	N/A	N/A
16	1	OUTER TUBE - EFV - 16"	N/A	107295-2	N/A
16	1	OUTER TUBE w / HEAD - EPS - 16"	N/A	N/A	
16	1	OUTER TUBE - EFP - 27"	107295-3	N/A	N/A
16	1	OUTER TUBE - EPV - 27"	N/A	107295-4	N/A
16	1	OUTER TUBE w / HEAD - EPS - 27"	N/A	N/A	
16	1	OUTER TUBE - EFP - 40"	107295-5	N/A	N/A
16	1	OUTER TUBE - EPV - 40"	N/A	107295-6	N/A
16	1	OUTER TUBE w / HEAD - EPS - 40"	N/A	N/A	
16	1	OUTER TUBE - EFP - 48"	107295-7	N/A	N/A
16	1	OUTER TUBE - EPV - 48"	N/A	107295-8	N/A
16	1	OUTER TUBE w / HEAD - EPS - 48"	N/A	N/A	
*17	1	DIFFUSER - PP	107070-1	N/A	N/A
*17	1	DIFFUSER - PVDF	N/A	107070-2	N/A
*17	1	DIFFUSER - 316SS	N/A	N/A	
*18	1	IMPELLER - PP	107067-1	N/A	N/A
*18	1	IMPELLER - TEFLON® (ETFE)	N/A	107067-2	107067-2
* Recommended Spare Parts			N/A = Not Applicable		

Tefzel® is a registered trademark of the DuPont Company.

Viton® is a registered trademark of DuPont Performance Elastomers.



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Literature ID No. FT09-1102

P/N 107317