



FINISH THOMPSON INC.

PF SERIES PUMPS

PFS ATEX VERSION

(for use with M5XV, M5XV-HT, M6A, & M6XA MOTORS)

OPERATION & PARTS MANUAL

P/N: 105619 R21



Introduction

This manual pertains to the PF Series, specifically the ATEX version of the PFS stainless steel drum pump. 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.
Erie, PA 16501 U.S.A.
Tel. 1-814-455-4478; Fax 1-814-455-8518
www.finishthompson.com; fti@finishthompson.com

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Technical Service Hotline: 1-800-888-3743 or email techservice@finishthompson.com

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 e-mail techservice@finishthompson.com if you have any questions regarding product operation or repair.

Warranty Registration

Thank you for your purchase of this quality Finish Thompson product. Be sure to take a minute to register your pump at Finishthompson.com/warranty. Simply provide the model number, serial number and a few other pieces of information.

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

▲ **ALWAYS** use a model PFS ATEX pump tube with an appropriate Finish Thompson ATEX certified motor.

ALWAYS use a conductive grounded discharge hose and grounding wire according to these instructions under the section below titled "Static Protection Kit Assembly." The grounded discharge hose must comply with ISO 80079-36 and CLC/TR 60079-32-1, and must not exceed 10^6 ohms between each end. Certain fluid applications with the pump may lead to electrostatic discharges. Ensure the proper grounding and transferring methods are followed for the particular fluid.

ALWAYS ensure the pump, hose, and motor are bonded to ground, and the tanks/containers are separately bonded to ground.

ALWAYS inspect the integrity of the ground wire connections prior to each use.

ALWAYS ensure all components above the hose discharge of the pump (motor, bearing, coupling, etc) reside outside of the tank/container.

The operator must **ALWAYS** monitor the pump during operation to prevent rare faults such as bearing/seal/coupling failure, run-dry, & prolonged deadheading.

NEVER leave the pump unattended while in use.

NEVER run the pump dry without fluid.

NEVER run the pump with a closed valve (deadhead) for longer than 1 minute.

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

NEVER use in pressurized containers.

ALWAYS use a chemically compatible hose rated for the temperature of the product being pumped.

ALWAYS tighten and torque a stainless steel hose clamp to 25 in-lbs (2.8 N·m)

ALWAYS select the proper o-ring material. Improper material selection could lead to swelling and be a possible source of leaks. This is the responsibility of the end user.

ALWAYS check the pump for leaks on a regular basis. If leaks are noticed, the pump must be repaired or replaced immediately.

ALWAYS clean the pump on a regular basis to avoid any dust buildup greater than 5mm deep.

ALWAYS check compatibility and temperature range of pump with liquids used. A Chemical Resistance and Material Selection Guide can be downloaded from our website at www.finishthompson.com.

NEVER use with liquids containing solids that can damage the internals (i.e. metal chips) without optional strainer.

ALWAYS flush unit with water after each use.

ALWAYS store unit upright, i.e. motor above pump, and away from corrosive liquids and vapors.

Safety Continued

ALWAYS check bearings and coupling insert for signs of overheating, abnormal noise or other signs of premature failure on a daily basis. Bearings and coupling insert should be replaced at the first sign of failure.

ALWAYS when using an air motor, use an automatic airline lubricator, moisture trap, and filter in the airline before the motor (use SAE#10 oil in the lubricator). Adjust lubricator to feed one drop of oil per minute of continuous run time. Do not exceed 100 psi (6.9 bar) air pressure on all air motors. Maximum air consumption: M6A & M6XA = 32 cfm (15.1 lps)



DANGER: POWER SUPPLY

Refer to instructions in this manual.

4. Noise Level

90 db at a distance of 3 feet (approximately 1 meter).

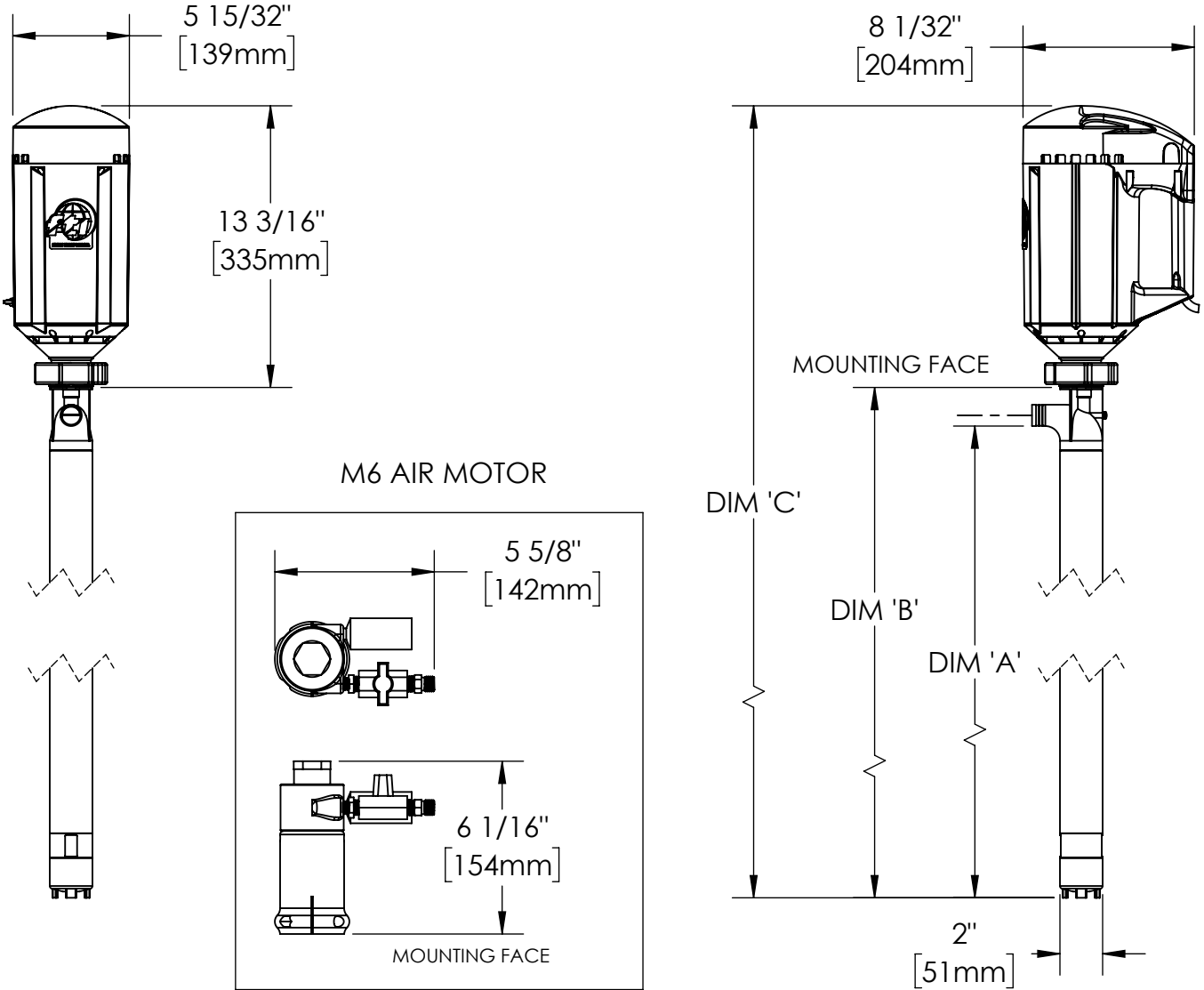
5. Modifications and Spare Parts

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.

6. Cleaning

It is highly recommended to flush pumps with clean water or some other neutralizing fluid compatible with pump materials when done pumping or when switching chemicals.

PUMP SPECIFICATIONS		
	MODEL PFS ATEX	MODEL PFS ATEX FKM
Outer Tube Diameter	2" (51 mm)	
Discharge Type	1" hose barb	
Max. Specific Gravity	1.83	
Max. Viscosity	500 cP	
Min./ Max. Fluid Temperature	5°F Min. to 220°F Max.	
	21°C Min. to 105°C Max.	
Wetted Materials	316 SS, Perlast, PTFE, ETFE	316 SS, ETFE, FKM
ATEX Certification	PFS ATEX models: Ex II 1/2G Ex h IIB T5...T4 Ga/Gb PFS HT ATEX models: Ex II 1/2G Ex h IIB T4...T3 Ga/Gb Type of Protection constructional safety "c" according to ISO 80079-37	



MODEL	DIM 'A'	DIM 'B'	DIM 'C'
PFS-27	$27 \frac{1}{8}$ " (689mm)	$28 \frac{15}{16}$ " (735mm)	$40 \frac{11}{32}$ " (1025mm)
PFS-40	$40 \frac{1}{8}$ " (1019mm)	$41 \frac{15}{16}$ " (1065mm)	$53 \frac{11}{32}$ " (1355mm)
PFS-48	$48 \frac{1}{8}$ " (1222mm)	$49 \frac{15}{16}$ " (1268mm)	$61 \frac{11}{32}$ " (1558mm)
PFS-60	$59 \frac{9}{16}$ " (1513mm)	$61 \frac{3}{8}$ " (1559mm)	$72 \frac{3}{4}$ " (1848mm)
PFS-72	$72 \frac{1}{8}$ " (1832mm)	$73 \frac{15}{16}$ " (1878mm)	$85 \frac{11}{32}$ " (2168mm)

ATEX COMPLIANCE

The FTI PFS drum pump has been designed for use in hazardous environments. It meets the requirements set forth by EU directive 2014/34/EU. This pump is designed to operate in zone 0 where explosive atmospheres are present. All three components (drum pump tube, motor and Static Protection Kit) must be properly installed.

TEMPERATURE CLASSIFICATION

The surface temperature of the PFS pump depends upon the temperature of the fluid being pumped. Below is a chart showing the temperature class that the pump falls in for various fluid temperatures. The PFS, when used in hazardous locations, should only be used on products that allow for safe operation within these classes.

PFS ATEX Models DPFS035 to 039, DPFS117 to 121, DPFS147 to 149, & DPFS152 to 154 (104°F (40°C) Max Ambient Air Temperature)

Fluid Temperature	Maximum Surface Temperature	Temperature Class	Maximum Allowable Surface Temperature
75°F (24°C)	171°F (77°C)	T5	212°F (100°C)
135°F (57°C)	185°F (85°C)	T4	275°F (135°C)
190°F (88°C)	200°F (93°C)	T4	275°F (135°C)
220°F (104°C)	208°F (97°C)	T4	275°F (135°C)

PFS HT ATEX Models DPFS125 to 129 & DPFS130 to 134 (140°F (60°C) Max Ambient Air Temperature)

Fluid Temperature	Maximum Surface Temperature	Temperature Class	Maximum Allowable Surface Temperature
75°F (24°C)	207°F (97°C)	T4	275°F (135°C)
135°F (57°C)	221°F (105°C)	T4	275°F (135°C)
190°F (88°C)	235°F (113°C)	T3	392°F (200°C)
220°F (104°C)	243°F (117°C)	T3	392°F (200°C)

ATEX MOTOR INFORMATION (for additional ATEX motor information, reference the manual shipped with the motor.)



This symbol appears on labels of motors that are designed for use in hazardous atmospheres. These motors comply with the applicable standards and specifications and meet the requirements of the guidelines of the EU directive 2014/34/EU. They are intended to be used in zones 1 and 2 where explosive atmospheres are likely to occur.

Complete the following checklist prior to starting installation in a hazardous area. All actions must be completed in accordance with ATEX directive 2014/34/EU. Only use Finish Thompson motors with the appropriate ATEX marking for the hazardous application, rated up to 970W output and 12,000 RPM.

Checklist for installation in hazardous areas:

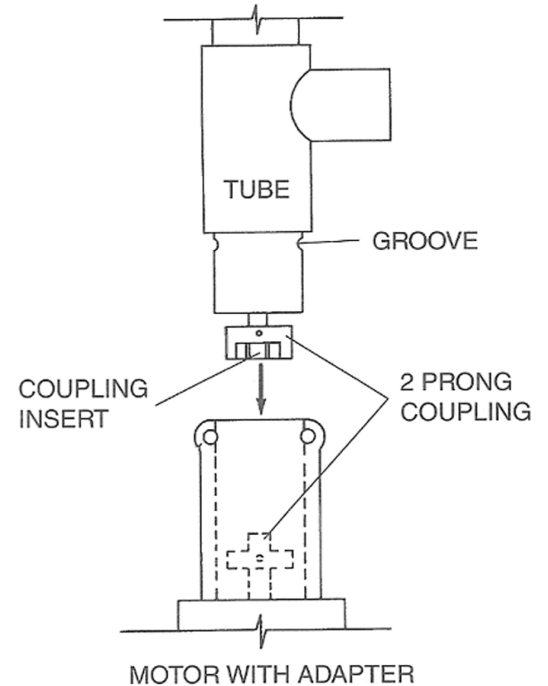
- Read motor label to check that motor has been designed for use in a hazardous application:
- Hazardous Zone
- Hazardous category
- Equipment group
- Temperature class
- Maximum surface temperatures
- Check the site environment for potentially explosive oils, acids, gases, vapors or radiation
- Check the site to make sure that the motor will be adequately ventilated and that there is no external heat input. The cooling air may not exceed 104°F/40°C for PFS ATEX models and 140°F (60°C) for PFS HT ATEX models.
- Check that the motor is not damaged.
- A motor protection device (zero voltage release) shall be used to prevent automatic restarting in the event of a power outage. MXV motor models inherently have zero voltage release.

Installation, Assembly & Maintenance Instructions

PFS Installation

Installation

1. Remove the drum pump and motor from its packaging and inspect for shipping damage.
2. Spin the pump coupling to verify there is no binding. Verify that the black rubber coupling insert is firmly seated in the metal pump coupling.
3. Verify that the housing cover (item 16) is on tight (it has left hand threads).
4. Remove the (2) socket head screws and nuts from the motor/motor mount.
5. Position the pump and motor couplings for proper alignment.
6. Slide the pump tube and motor together until the couplings mate and are completely seated.
7. Install the (2) socket head screws and nuts and tighten securely.
8. Connect Static protection kit per diagram located below.

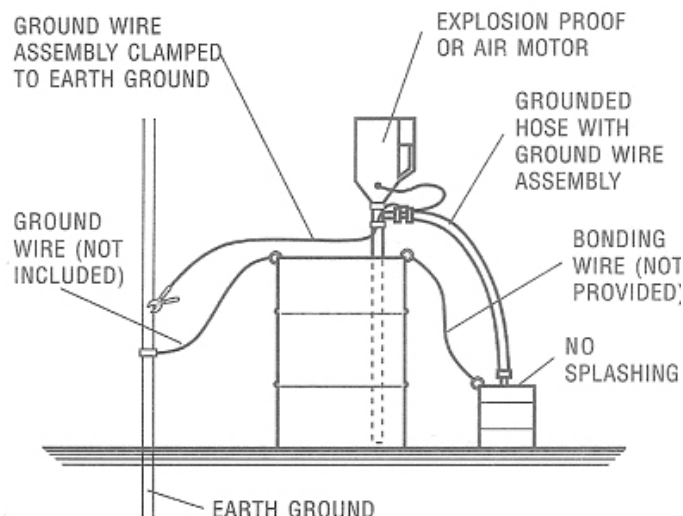


NOTE: When pumping flammable or combustible materials, **DO NOT** operate pump unless a static protection kit is properly connected; otherwise, the pump/motor will not comply with ATEX requirements.

Static Protection Kit Assembly

Hose attachment to pump:

1. Place the stainless steel hose clamp onto the short section of the grounded hose.
2. Slide the short section of the grounded hose assembly over the pump tubes discharge spout. Tighten and torque the SS clamp to 25 in-lbs (2.8 N·m).
3. Attach the ground wire assembly to the pump tube using the #8 ring terminal and supplied 8-32 x 1/4" brass screw and brass lock washer.
4. Attach the ground wire assembly to the motor (see instructions below).
5. Check electrical continuity between the clamp on the end of the ground wire assembly and the end of the grounded hose. The electrical resistance must be one (1) Ohm or less. If it is greater than one (1) Ohm, re-check all connections.



Ground wire attachment to motors:

Electric Explosion Proof:

1. Screw #10-32 plated nut onto exposed machine screw in motor housing.
2. Attach #10 ring terminal from the end of the ground wire assembly to exposed machine screw in motor housing using #10-32 plated nut and #10 lock washer.

Air Motor:

1. Remove one of the Allen head set screws from the motor mount.
2. Slide the ¼-20 x 5/8” long round head machine screw through the 1/4” ring terminal on ground wire assembly.
3. Thread ¼-20 plated nut onto the screw.
4. Insert the screw into the hole on the motor mount and tighten (do not over tighten).
5. Using a 7/16” wrench, tighten the ¼-20 nut against the ring terminal.

Drum Pump Installation

1. Install the pump and Static Protection Kit as described and shown in Figure 2.
2. Connect the ground wire assembly to an earth ground using the supplied clamp.
3. Connect the ground wire between the drum and the earth ground.
4. Connect the ground wire between the receiving container and earth ground (or use a bonding wire to connect to the drum).
5. Check electrical continuity of all components before pumping. All should be one (1) Ohm or less.
6. Avoid splashing when operating the pump. Splash filling can create static electricity.

PFS Maintenance

Disassembly

1. Remove the housing cover (item 16) by turning it clockwise (left hand thread) while gripping the impeller housing (item 13).
2. Turn the impeller (item 15) counterclockwise (right-hand thread) while holding the coupling half (item 2) with the other hand to prevent the shaft from turning and remove it.
3. Remove the impeller housing (item 13) by gripping the intake tube and turning the housing clockwise (left hand thread).
4. Place a wooden board or rubber mat on the floor (to protect the threads on the bottom of the shaft) and gently tap the shaft (item 14) on it until the inner tube (item 9), shaft sleeve (item 10), and bottom bearing (item 11) drops out. Continue to tap the shaft until both bearings (item 3) are exposed at the top of the pump.
5. Pull the bearings and shaft out through the top of the pump.

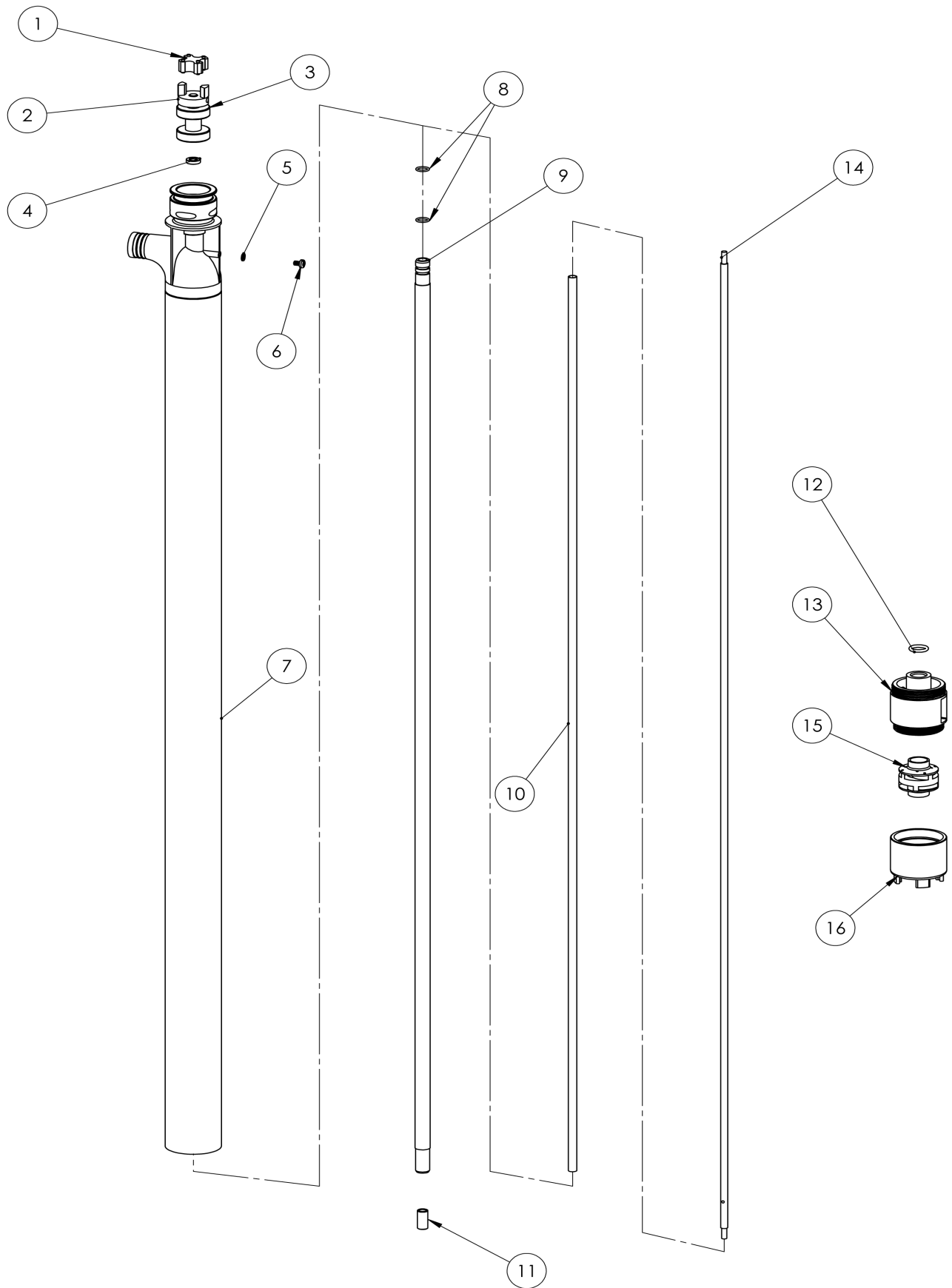
Inspection

1. Check the housing cover (item 16), the impeller (item 15), and the impeller housing (item 13) for wear, rubbing, or damage from foreign objects. Replace if damaged.
Note: The double impeller design of this pump is dependant on the impeller working correctly. Any damage to the impeller can cause pump failure.
2. Inspect the pump shaft (item 14) for wear in the bottom bearing (item 11) and the lip seal (item 4) areas. Replace the shaft if needed.
3. Inspect the bottom bearing (item 11) for internal wear. Inspect all o-rings (items 8 & 12) for nicks or chemical attack. Replace as needed.
4. Inspect the bearing assembly (item 3) for rust or corrosion.
5. If the bearing assembly needs to be replaced, unthread it from the shaft. Hold the bearing assembly by the half coupling. Turn the shaft counterclockwise (right hand thread) to loosen and remove. If corroded, then a penetrating fluid may be used on the threads to help loosen.
Note: Never reuse the lip seal.

Reassembly

1. Install new lip seal (item 4) into the pump head with the grooved side facing the bottom of the pump.
2. If bearing assembly is replaced -- thread the shaft (item 14) into the bearing assembly (item 3) with the longer threaded end. Carefully insert the shaft straight through the lip seal (to avoid seal damage) from the top and seat the bearing assembly (item 3) into the pump head.
3. If o-rings are replaced -- install 2 inner tube o-rings (item 8) in the grooves. Install the impeller housing o-ring (item 12) inside the top of the housing. Apply a small amount of Vaseline to the o-rings to aid in assembly.
4. With the pump on a bench, slide shaft liner (item 10) into the inner tube (item 9) assembly onto the shaft until it stops. Slide the shaft liner/inner tube/shaft assembly into the outer tube (item 7) using the shaft (item 14) as a guide.
5. Slide the impeller housing over the shaft, center the bottom of the lower inner tube into the counter bore in the top of the impeller housing, and push / thread into the intake tube bottom (left hand thread).
6. Gripping the coupling at the top of the pump, thread the impeller on (right hand thread). Install the housing cover (left hand thread). turn the coupling to verify there is no binding inside the pump.

PFS ATEX SPARE PARTS EXPLODED VIEW



PUMP SPARE PARTS LIST

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	COUPLING INSERT	
			J100014
2	1	COUPLING HALF	
		CAST ALUMINUM 1/4"-20 THREAD FOR S/N 211770 & UP	J100012-2
3*	1	BEARING ASSEMBLY (INCLUDES COUPLING HALF)	
			A101110
4*	1	LIP SEAL	
		1/4" PTFE	110982
		1/4" FKM	110983
5	1	LOCK WASHER	
		#8 BRASS	J100823
6	1	SCREW	
		#8-32 X 1/4 BRASS PAN HEAD	J100822
7	1	INTAKE TUBE ASSEMBLY	
		27" MODELS	110994
		27" MODELS WITH 1" MBSP DISCHARGE SPOUT	111105-1
		40" MODELS	110994-1
		40" MODELS WITH 1" MBSP DISCHARGE SPOUT	111105-2
		48" MODELS	110994-2
		48" MODELS WITH 1" MBSP DISCHARGE SPOUT	111105-3
		60" MODELS	110994-3
72" MODELS	110994-4		
8*	2	INNER TUBE O-RING	
		PERLAST	105620
		FKM	J100018
9	1	STAINLESS STEEL INNER TUBE	
		27" MODELS	107616-1
		40" MODELS	107616-2
		48" MODELS	107616-3
		60" MODELS	107616-4
72" MODELS	107616-5		
10*	1	PTFE SHAFT SLEEVE	
		27" MODELS	107615-1
		40" MODELS	107615-2
		48" MODELS	107615-3
		60" MODELS	107615-4
72" MODELS	107615-5		
11*	1	BOTTOM BEARING	
		PTFE, FDA (white)	110981
		PTFE (black)	111138
12*	1	IMPELLER HOUSING O-RING	
		PERLAST	107621
		FKM	J100132
13	1	IMPELLER HOUSING	
		Stainless steel	**
14	1	SHAFT	
		27" MODELS	110980
		40" MODELS	110980-1
		48" MODELS	110980-2
		60" MODELS	110980-3
72" MODELS	110980-4		

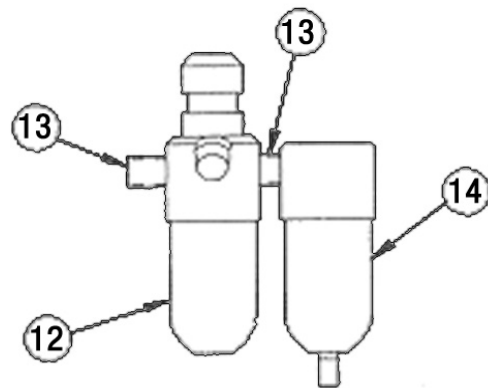
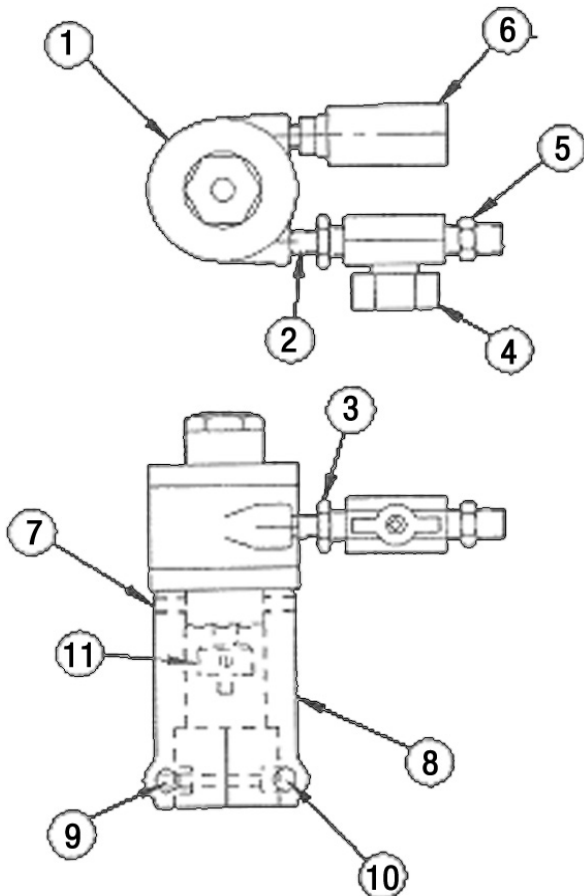
*Recommended Spare Parts

If either impeller housing or housing cover are being replaced, both **must be ordered to ensure proper fit. Part number for housing cover and impeller housing kit is 108130.

M6A AIR MOTOR SPARE PARTS LIST & VIEW

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	AIR MOTOR	M101717
2	1	PIPE NIPPLE	J100107
3	1	HEX REDUCER BUSHING	J100057
4	1	BALL VALVE	J100073
5	1	HOSE FITTING	J100036
6	1	MUFFLER	J100033
7	2	SET SCREW	J100040
8	1	AIR MOTOR MOUNT	M100013-3
9	2	CAP SCREW SOCKET HEAD	108392
10	2	NUT HEX	J100024
11	1	HALF COUPLING	J100013
12	1	LUBRICATOR	J100035
13	2	PIPE NIPPLE	J102463
14	1	FILTER	J100034

Not shown: Air Motor Repair Kit J100060

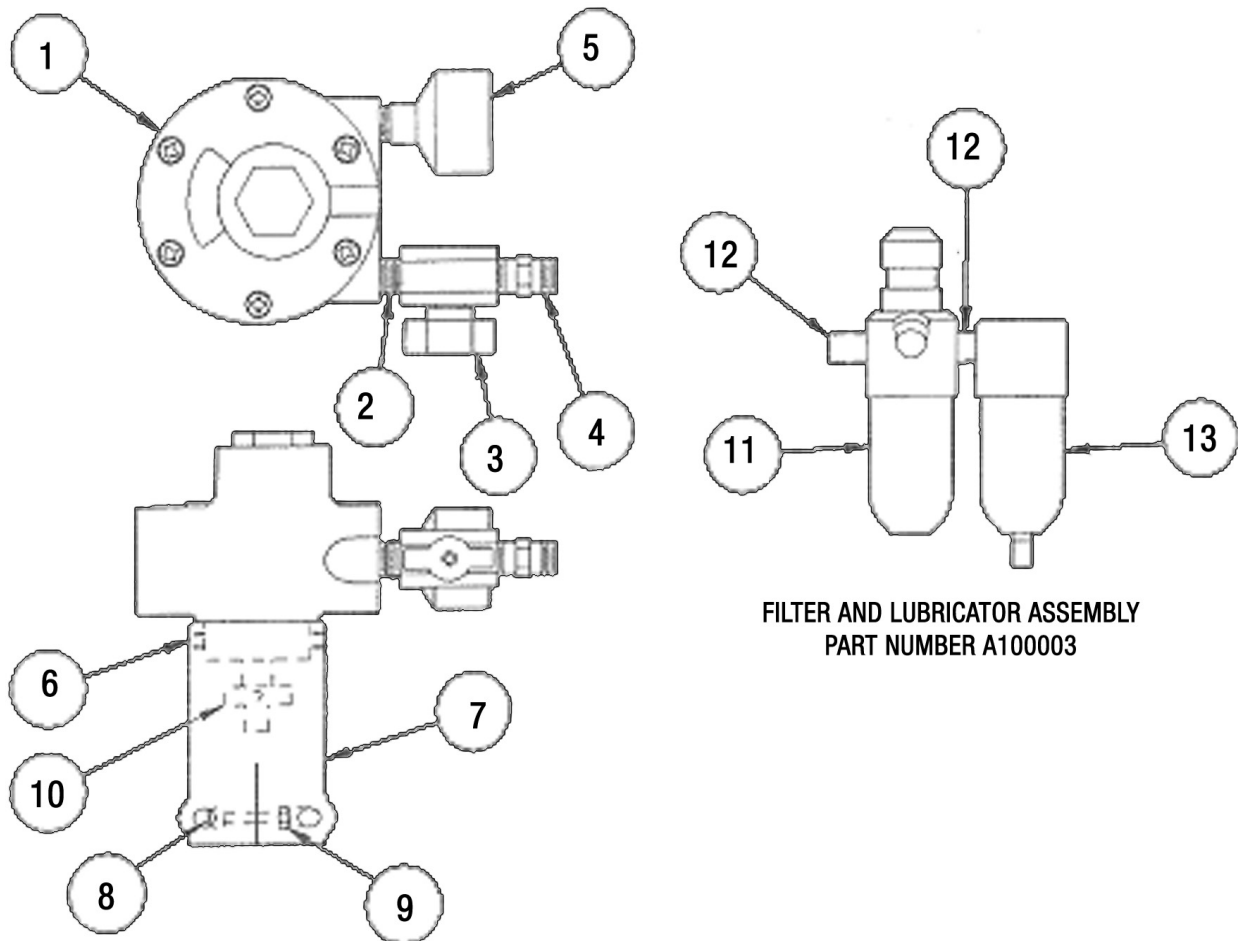


**FILTER AND LUBRICATOR ASSEMBLY
PART NUMBER A100003**

M6XA AIR MOTOR SPARE PARTS LIST & VIEW

ITEM	QTY	DESCRIPTION	PART NUMBER
1	1	AIR MOTOR	M101720
2	1	PIPE NIPPLE	J102463
3	1	BALL VALVE	J100073
4	1	HOSE FITTING	J100036
5	1	MUFFLER	J100074
6	2	SET SCREW	J100040
7	1	AIR MOTOR MOUNT	M100013-4
8	2	CAP SCREW SOCKET HEAD	108392
9	2	NUT HEX	J100024
10	1	HALF COUPLING	J101500
11	1	LUBRICATOR	J100035
12	2	PIPE NIPPLE	J102463
13	1	FILTER	J100034

Not shown: Air Motor Repair Kit J100075





(1) **Supplementary EU - Type Examination Certificate No.3**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 04 ATEX 0293X

(4) Product: **Drum pumps of type PFS ..**

(5) Manufacturer: **FINISH THOMPSON INC**

(6) Address: **921 Greengarden Road, Erie, PA 16501-1591, USA**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 04 ATEX 0293X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

(9) In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

(10) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN ISO 60079-0:2018 EN ISO 80079-36:2016 EN ISO 80079-37:2016

(11) The marking of the product shall include the following:

II 1/2G Ex h IIB T5 .. T4 Ga/Gb (Tamb: -20 °C to +40 °C)

II 1/2G Ex h IIB T4 .. T3 Ga/Gb (Tamb: -20 °C to +60 °C)

(12) This certificate is valid till: **31.07.2025**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 10.07.2020

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tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz



(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 3
to FTZÚ 04 ATEX 0293X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Evaluation according to the news standards: EN ISO 80079-36:2016, EN ISO 80079-37:2016.
- Change of subgroup from IIC to IIB.
- Prolongation of certificate validity.

A type PFS drum pump is used for transferring fluids from one container to another. There are five different lengths available for the PFS pump and they are as follows: 68, 101, 122, 152 and 183 cm. Each pump has the same construction materials and design, however a PTFE seal and Perlast o-rings are used to seal the fluid from the internal components, while the FKM models use a FKM seal and FKM o-rings. The pump consists of a carbon fiber filled impeller housed in a stainless steel impeller housing. A stainless steel shaft, is running through the pump tube and is supported by a bushing and a shaft sleeve, drives the impeller. PFS pump can handle fluids up to 104°C (220 °F) and 2000 cP. The pump is connected to earth ground by a FTI static protection kit.

The pump may be equipped by following types of air or electric drives:

Pneumatic drive		Electric drive				
M6	M6X	M5XV	M78	M8XV	M5XV-HT	M78-HT
300 - 6000 rpm	300 - 3000 rpm	0 - 12 000 rpm	0 - 6 000 rpm	0 - 6 000 rpm	0 - 12 000 rpm	
0.37 kW	0.56 kW	0.97 kW		0.53 kW	0.97 kW	
II 2G Ex h IIC T4 Gb	II 2G Ex h IIC T4 Gb	II 2G Ex db IIB T5 Gb		II 2G Ex db IIB T4 Gb		

(16) Report Number.: 04/0293/3

(17) Specific Conditions of Use:

Ambient temperature: +40°C		Ambient temperature: +60°C for HT versions	
Fluid temperature	Temperature class	Fluid temperature	Temperature class
up to 24 °C	T5	up to 57 °C	T4
up to 104 °C	T4	up to 104 °C	T3

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 10.07.2020

Page: 2/3

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Physical-Technical Testing Institute, s.p., Píkatřská 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz



(1) **Supplementary EU - Type Examination Certificate No.4**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 04 ATEX 0293X

(4) Product: **Drum pumps of type PFS ..**

(5) Manufacturer: **FINISH THOMPSON INC**

(6) Address: **921 Greengarden Road, Building B, South Loading Dock, Erie, PA 16501-1591, USA**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 04 ATEX 0293X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

(9) In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

(10) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN ISO 80079-36:2016 EN ISO 80079-37:2016

(11) The marking of the product shall include the following:

II 1/2G Ex h IIB T5 .. T4 Ga/Gb (Tamb: -20 °C to +40 °C)

II 1/2G Ex h IIB T4 .. T3 Ga/Gb (Tamb: -20 °C to +60 °C)

(12) This certificate is valid till: **31.07.2025**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 19.11.2020

Page: 1/2

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tel.: +420 595 223 111, +420 604 203 525, e-mail: ftzu@ftzu.cz, www.ftzu.cz



(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No.4
to FTZÚ 04 ATEX 0293X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- The subject of this supplement is the correction of the standard incorrectly stated in (9) of the Supplementary EU-Type Examination Certificate No. 3 - originally EN ISO 60079-0:2018 now EN IEC 60079-0:2018.
- Change connected to earth ground. The pump is connected to earth ground according to the user manual.
- Extension a new variant with discharge adapter 1".

(16) Report Number.: 04/0293/4

(17) Specific Conditions of Use:

Ambient temperature: +40°C		Ambient temperature: +60°C for HT versions	
Fluid temperature	Temperature class	Fluid temperature	Temperature class
up to 24 °C	T5	up to 57 °C	T4
up to 104 °C	T4	up to 104 °C	T3

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (10) of this supplementary certificate.

(19) Drawings and Documents:

Number	Issue	Sheets	Date
R100683	4	1	17.09.2020
111105	0	1	21.11.2011
A101554	6	1	26.06.2020
A100834S	11	1	26.06.2020
Operation & parts manual	20	18	--

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 19.11.2020

Page: 2/2

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FINISH THOMPSON INC.
921 Greengarden Road • Erie, PA 16501-1591 U.S.A.
Ph 814-455-4478 • Fax 814-455-8518
Email fti@finishthompson.com • www.finishthompson.com

EU DECLARATION OF CONFORMITY

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

Type of Device:
Drum or Container Pump

Pump Models:
PFS-27A, PFS-40A, PFS-48A, PFS-60A, PFS-72A
PFS-27A-FKM, PFS-40A-FKM, PFS-48A-FKM, PFS-60A-FKM, PFS-72A-FKM,
PFS-27A-HT, PFS-40A-HT, PFS-48A-HT, PFS-60A-HT, PFS-72A-HT,
PFS-27A-HT-FKM, PFS-40A-HT-FKM, PFS-48A-HT-FKM, PFS-60A-HT-FKM, PFS-72A-HT-FKM
PFS-27A-MT, PFS-40A-MT, PFS-48A-MT
PFS-27A-MT-FKM, PFS-40A-MT-FKM, PFS-48A-MT-FKM

EU Directives:
Equipment and protective systems intended for use in potentially
explosive atmospheres (2014/34/EU)

EU-Type Examination:
Physical Technical testing Institute 1026
Ostrava-Radvanice
FTZU 04 ATEX 0293X

Product Quality Assurance Notification:
Physical Technical Testing Institute 1026
Ostrava-Radanice
FTZU 08 ATEX Q 003

Applicable Harmonized Standards:
EN 1127-1: 2011
ISO 80079-36:2016
ISO 80079-37:2016

Casey D. Bowes
CEO and President
November 18, 2020

EU Declaration of Conformity



Finish Thompson Inc. hereby declares that the following electrical equipment fully complies with the applicable health and safety requirements as specified by the EU Directives listed. The product may not be taken into service until it has been established that the driven Drum and Container Pump complies with the provisions of all relevant EU Directives. The complete product complies with the provisions of the EU Directive on machinery safety provided pumps manufactured by Finish Thompson Inc. are used.

This declaration is valid provided that the devices are fully assembled and no modifications are made to these devices.

Type of Device:

Electric Motors for Driving Drum and Container Pumps

Models:

M5T, M74, M5TV, M76, M8TV, M5XV, M5XV-HT, M78, M78-HT M8XV

EU Directives:

Low Voltage Equipment (2014/35/EU)
Electromagnetic Compatibility (2014/30/EU)

Applied Harmonized Standards:

EN 60335-1 EN 60335-2-41 EN 60529 EN 55014-1 EN55014-2

Manufacturer:

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

Signed,



President

February 19, 2020

Person(s) Authorized to Compile Technical File: Finish Thompson GmbH
Otto-Hahn-Strasse 16
Maintal, D-63477 DEU
Telephone: 49 (0)6181-90878-0



EU DECLARATION OF CONFORMITY

Finish Thompson Inc. hereby declares that the following machines fully comply with the applicable health and safety requirements as specified by the EU Directives listed:

Type of Device:
Pump Motor

Pump Motor Models:
M6A, M6XA

EU Directives:
Equipment and Protective Systems Intended For Use In Potentially
Explosive Atmospheres (2014/34/EU)

Applicable Harmonized Standards:
DIN EN 1127-1:2011
DIN EN 13463-1:2009
DIN EN 13463-5: 2011

The products are marked with the following characteristics:

Model M6A: Ex II 2G Ex h IIC T4 Gb II 2D Ex h IIIC T135°C Db
Model M6XA: Ex II 2G Ex h IIC T4 Gb II 2D Ex h IIIC T135°C Db

Documentation archived in FTZÚ Ostrava Radviance, EU code 1026

This declaration is valid provided that the devices are fully assembled and no modifications are made to these machines.

Casey D. Bowes
CEO and President
February 19, 2020



FINISH THOMPSON INC.

Service 1-800-888-3743
P/N 105619 Rev. 21
2/4/2021