

Motor Mounting Kits

311605J
EN

To install electric motors on E-Flo[®] 4-Ball Piston Pumps. For professional use only.
(Kits do not include motors.)

16C487 Motor Coupler Kit

includes 2.25 in. (57.2 mm) key★

For NEMA 182/184 TC Frame ATEX Electric Motors

15H880 and 16C487 Kits for
NEMA 182/184 TC Frame Motors

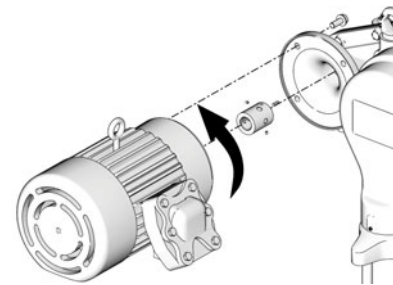
15H880 Motor Coupler Kit

includes 1.75 in. (44.5 mm) key★

For NEMA 182/184 TC Frame FM Electric Motors

24E453 Motor Mounting Kit★

For IEC 112M/B5 and 100L/B5 Frame Electric Motors;
Includes motor adapter plate



ti8726b

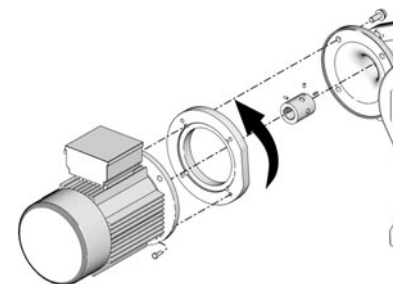
24M676 Motor Coupler Kit★

For IEC 112M/B5 and 100L/B5 Frame Electric Motors;
Does not include motor adapter plate

24E453 and 24M676 Kits for IEC 112M/B5
and IEC 100L/B5 Frame Motors

★NOTE: All kits include the 0.62 in. (15.7 mm) key (120376).
Kits 16C487 and 15H880 include an additional motor shaft
key, as listed above. Measure the length of the motor keyway
to determine the correct key length. Key length should be at
least 90% of keyway length.

15J827 Motor Coupler Removal Tool






ti9007b



Important Safety Instructions

Read all warnings and instructions in this manual
and in E-Flo Repair-Parts manual 311594. Save
these instructions.

Pressure Relief Procedure

						
System pressure can cause the pump to cycle unexpectedly, which could result in serious injury from splashing or moving parts.						

1. Set START/STOP switch to STOP.
2. Push in SECURE DISABLE switch.
3. Open the back pressure regulator and all fluid drain valves in the system, having a waste container ready to catch drainage. Leave open until you are ready to pressurize system again.
4. Check that pressure gauges on fluid supply and return lines read zero. If gauges do not read zero, determine cause and carefully relieve pressure by VERY SLOWLY loosening a fitting. Clear obstruction before pressurizing system again.

Kit Parts


NOTE: Parts included in the kits are marked with an asterisk, for example (20*). Use all the new parts in the kit.

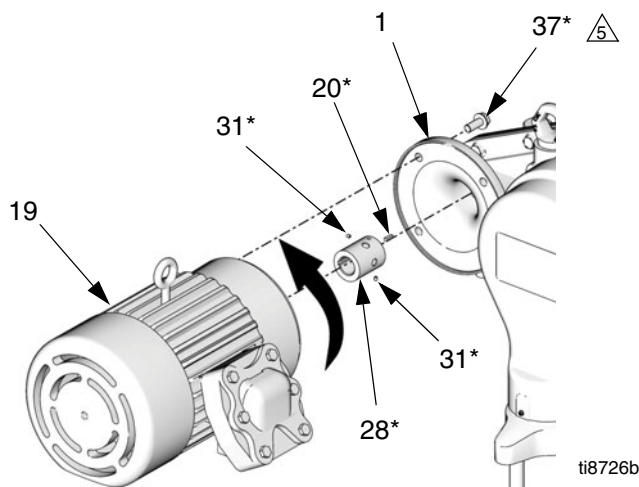
- Motor Coupler Kits 15H880 and 16C487 include parts to install a NEMA 182/184 TC Frame electric motor on the E-Flo Pump. See FIG. 1.
- Motor Mounting Kit 24E453 includes parts to install an IEC 112M/B5 or 100L/B5 Frame electric motor on the E-Flo Pump. See FIG. 2.
- Motor Coupler Kit 24M676 includes parts to install an IEC 112M/B5 or 100L/B5 Frame electric motor on the E-Flo Pump where a motor adapter plate is already available. See FIG. 2.

Ref. No.	Part No.	Description	Qty
20*	120376	KEY, square; 0.62 in. (15.7 mm); included with all kits	1
	120710	KEY, square; 1.75 in. (44.5 mm); Kit 15H880 only	1
	16C282	KEY, square; 2.25 in. (57.2 mm); Kit 16C487 only	1
28a*	n/a	MOTOR COUPLER; for kit 15H880 only	1
	n/a	MOTOR COUPLER; for kits 24E453 and 24M676 only	1
	n/a	MOTOR COUPLER; for kit 16C487 only	1
31*	100664	SCREW, set, socket-head; 1/4-20 x 1/2 in. (13 mm)	2
37*	111195	SCREW, cap, flange-head; 1/2-13 x 1.25 in. (31 mm)	4
59*	n/a	PLATE, adapter; for kit 24E453 only	1
60*	105324	SCREW, cap, hex-head; M12 x 1.75 x 30 mm; for kit 24E453 only	4

Parts designated n/a are not available separately.

Coupler Removal

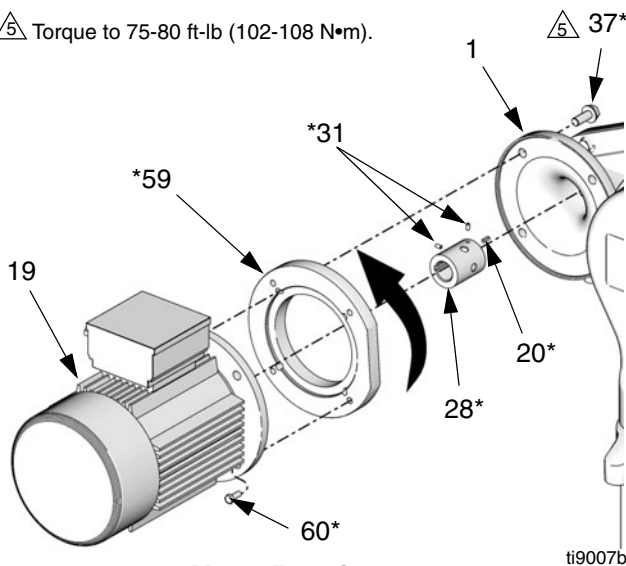
 Torque to 75-80 ft-lb (102-108 N•m).



Motor Rotation
(counter-clockwise as viewed from fan)

FIG. 1. NEMA 182/184 TC Frame Electric Motors

 Torque to 75-80 ft-lb (102-108 N•m).



Motor Rotation
(counter-clockwise as viewed from fan end)

FIG. 2. IEC 112M/B5 and 100L/B5 Frame Electric Motors



1. Relieve pressure, page 2.
2. Shut off electrical power to the unit.
3. See FIG. 1 for NEMA 182/184 TC Frame electric motors. See FIG. 2 for IEC 112M/B5 and 100L/B5 Frame electric motors. While one person supports the motor (19), remove the screws (37*). Pull the motor away from the gear reducer.

NOTE: If the motor does not come off the gear reducer easily, **stop immediately**. See **Motor/Coupler is Difficult to Remove**, in your E-Flo Repair-Parts manual.

4. See FIG. 3. Loosen both setscrews (31). Insert the coupler removal tool (T) into the coupler (28). Turn nut clockwise until tight, then pull the coupler off the gear reducer input shaft (105) by turning hex-head screw (HS) clockwise.

NOTE: A faint clicking may be heard while the motor is running. This is normal and is due to necessary clearances between the coupler (28), motor shaft, and motor key. If the intensity increases significantly over time, it could indicate the coupler is wearing and should be replaced. **Do not open the gear reducer. Opening the gear reducer voids the warranty.** The gear reducer is not field serviceable beyond the maintenance recommended in this manual.

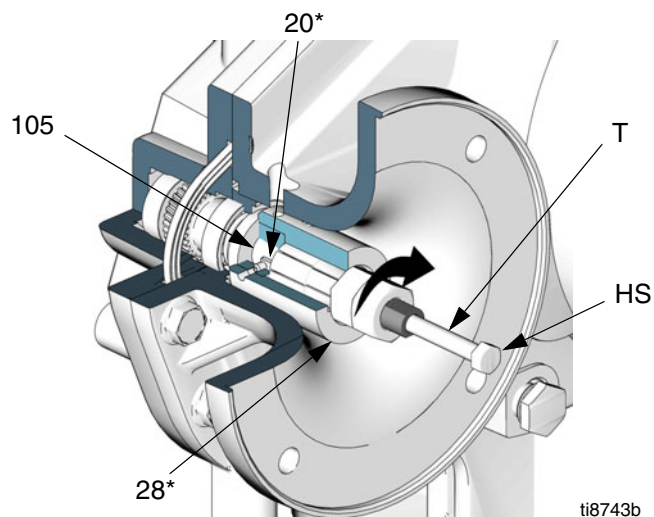


FIG. 3. Motor Coupler Removal

Installation

NOTE: A NEMA 182/184 TC Frame is required to mate with the gear reducer. See your E-Flo Repair-Parts manual for information about coupler kits and mounting kits which are required for other motor configurations.

1. After removing the old coupler, thoroughly clean the input shaft and motor shaft, removing any debris. This ensures proper clearance and fit for the coupler.

NOTE: Do not reuse the old keys or setscrews. Use only the parts supplied with the new coupler kit.

2. See FIG. 4. Assemble the key (20*) in the input shaft (105) keyway. Assemble the two setscrews (31*) in the coupler (28*), ensuring that they do not encroach on the keyway or the input shaft bore of the coupler.
3. Slide the coupler into the gear reducer so the key and input shaft mate with the coupler. Slide on until coupler bottoms out on the tapered step of the shaft.

NOTICE

Ensure that neither the input key (20) or the end of the coupler (28) motor shaft bore extend past the end of the input shaft (105). This could cause the motor shaft to bottom out on the coupler, causing excessive heat and bearing damage.


4. Tighten setscrews to 66-78 in-lb (7.4-8.8 N•m). Apply antiseize lubricant (LPS®-04110 or equivalent) to bore of coupling.

NOTE: When installing an IEC 112M/B5 or 100L/B5 Frame electric motor, ensure that the motor adapter (59) and screws (60) are in place before mounting the motor on the gear reducer. See FIG. 2.

NOTICE

When installing the electric motor, always ensure that the motor shaft key cannot move out of position. If the key works loose it could cause excessive heat and equipment damage.

5. Lift the motor (19) into position. Align the key on the motor shaft with the mating slot of the motor coupler, and the four mounting holes with the holes in the gear reducer (1). Slide the motor into place.
6. While one person supports the motor (19), install the screws (37*). Torque to 75-80 ft-lb (102-108 N•m).

 Apply antiseize lubricant (LPS®-04110 or equivalent) to bore of coupling (28).

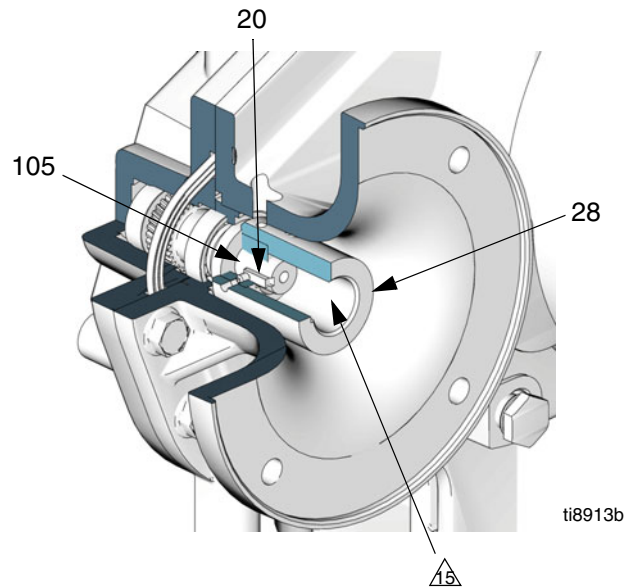


FIG. 4. Motor Coupler Installation

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 311605

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS, MN • 55440-1441

Copyright 2007, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com
Revised 02/2012