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FLUX F 457 EL

FLUX F 457 EL Commutator Motor Instruction Manual

MODEL: F 457 EL



Image: The FLUX F 457 EL Commutator Motor, featuring a black handle and motor housing with a red lower section, and a green power switch.

1. Introduction

This manual provides essential information for the safe and effective operation, installation, and maintenance of the FLUX F 457 EL Commutator Motor. This motor is designed for professional use with FLUX barrel and container pumps, offering 800 watts of power, variable speed control, and a no-volt release mechanism for enhanced safety. Please read all instructions carefully before use.

2. Safety Information

Legal Disclaimer: This item, component, package, or system is intended for professional use only, by persons knowledgeable of how to determine if it is chemically compatible with the liquid(s) to be pumped, the safe installation, use, and maintenance of pressure-generating and pressure-containing devices, and the safe installation, use, and maintenance of electrically, pneumatically, and hydraulically powered equipment.

- Always ensure the motor is disconnected from the power supply before performing any maintenance or installation procedures.
- Verify chemical compatibility between the motor components and the pumped media.
- Operate the motor only in well-ventilated areas.
- The no-volt release feature prevents accidental startup after a power interruption, enhancing user safety. Do not bypass this safety mechanism.

3. Product Features

- **Power Output:** 800 watts, providing robust performance for various pumping tasks.
- **Voltage:** 120 Volts, 60 Hz.
- **Protection Rating:** IP 24 splash-proof, suitable for industrial environments.
- **Variable Speed:** Electronic speed setting for precise control over pumping volume.
- **No-Volt Release:** Integrated safety feature to prevent uncontrolled restarts after power loss.
- **Cooling System:** Excellent air cooling for extended service life and low noise levels.
- **Compatibility:** Designed to work seamlessly with all FLUX barrel and container pumps.

4. Setup

1. **Unpacking:** Carefully remove the motor from its packaging and inspect for any signs of damage.
2. **Mounting:** Attach the F 457 EL motor securely to the appropriate FLUX barrel or container pump. Ensure a firm connection to prevent dislodgement during operation.
3. **Power Connection:** Connect the motor's power supply cable (16' long, 2-pole plug) to a compatible 120V, 60Hz power outlet. Ensure the outlet is properly grounded.
4. **Pre-Operation Check:** Before starting, confirm all connections are secure and the pump is correctly positioned in the liquid to be transferred.

5. Operation

1. **Starting the Motor:** Press the green 'ON' switch located on the handle. The motor should start immediately.
2. **Adjusting Speed:** Use the electronic speed setting dial (if applicable) to control the motor's RPM and thus the pumping volume. Turn the dial clockwise to increase speed and counter-clockwise to decrease it.
3. **Stopping the Motor:** Press the red 'OFF' switch or release the 'ON' switch (if it's a momentary switch).
4. **No-Volt Release:** In the event of a power interruption, the motor will automatically shut off and will not restart until the 'ON' switch is manually pressed again after power is restored. This is a critical safety feature.

6. Maintenance

- **Regular Cleaning:** Keep the motor housing clean and free from dust and debris to ensure optimal air cooling. Use a dry cloth for cleaning.
- **Inspection:** Periodically inspect the power cable for any signs of damage, fraying, or wear. Replace immediately if damage is found.
- **Ventilation:** Ensure the motor's ventilation openings are not obstructed during operation.
- **Professional Service:** For internal maintenance or repairs, contact authorized FLUX service personnel. Do not attempt to open the motor housing yourself.

7. Troubleshooting

- **Motor Does Not Start:**
 - Check power supply and connections.
 - Ensure the 'ON' switch is fully engaged.
 - Verify that the no-volt release has been reset by pressing the 'ON' switch after a power interruption.
- **Reduced Pumping Performance:**
 - Check the speed setting; adjust if necessary.
 - Inspect the pump for blockages or wear (refer to pump manual).
- **Unusual Noise or Vibration:**
 - Stop the motor immediately.
 - Inspect for loose connections or foreign objects.
 - If the issue persists, contact FLUX service.

8. Technical Specifications

Specification	Value
Model Number	F 457 EL
Power Output	800 Watts
Operating Voltage	120 Volts
Frequency	60 Hz
International Protection Rating	IP24 (Splash-proof)
Product Dimensions (L x W x H)	5.5 x 8.5 x 8.88 inches
Item Weight	8.82 Pounds
Connector Type	Plug In
Manufacturer	FLUX Pumps Corporation

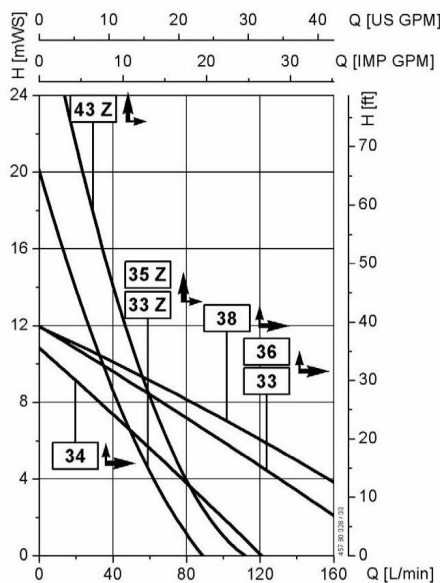
9. Performance Curves

The following charts illustrate the performance characteristics of the FLUX F 457 EL motor when paired with different pump tube sets. These curves show the relationship between head (H) and flow rate (Q) for various configurations.

Motor / Moteur **F 457 / F 457 EL**
mit Fasspumpen / with barrel pumps / avec pompes vide-fûts
PP / PVDF



FOR FLUX PUMPS WITH POLYPROPYLENE AND POLYVINYLIDENE FLUORIDE TUBESETS.
SEE MODEL NUMBERS ON RIGHT FOR CURVE NUMBERS.



Typ / Type

F 424 PP-41/**36**
F 424 PP-41/**35 Z**
F 424 PP-50/**38**
F 424 PP-50/**43 Z**
F 425 PP-50/**34**
F 426 PP-50/**33**
F 430 PP-40/**33**
F 430 PP-40/**33 Z**
F 430 PP-50/**43 Z**
F 430 PP-50/**38**

F 424 PVDF-41/**36**
F 424 PVDF-41/**35 Z**
F 424 PVDF-50/**38**
F 430 PVDF-40/**33**
F 430 PVDF-40/**33 Z**
F 430 PVDF-50/**43 Z**
F 430 PVDF-50/**38**

Messwerte / Values / Valeurs $\pm 10\%$
gemessen mit Wasser bei 20°C am Druckstutzen der Pumpe
obtained with water at 20°C at the outlet nozzle of the pump
mesurées avec de l'eau à 20°C au refoulement de la pompe

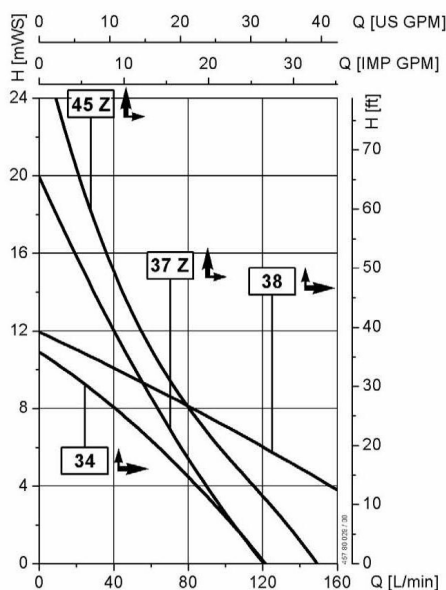
457 80 028

Image: Performance curve for FLUX F 457 EL motor with PP/PVDF barrel pump tube sets. The graph displays head (H in mWS) versus flow rate (Q in US GPM, IMP GPM, and L/min) for various 'Z' values (e.g., 43 Z, 35 Z, 33 Z, 38, 36, 34).

Motor / Moteur **F 457 / F 457 EL**
mit Fasspumpen / with barrel pumps / avec pompes vide-fûts
S / AL / HC



FOR FLUX PUMPS WITH STAINLESS STEEL, ALUMINUM AND HASTELLOY C TUBESETS.
SEE MODEL NUMBERS ON RIGHT FOR CURVE NUMBERS.



Typ / Type

F 424 S-43/**38**
F 424 S-43/**37 Z**
F 424 S-50/**45 Z**
F 425 S-41/**34**
F 426 S-41/**38**
F 427 S3-43/**38**
F 430 S-41/**38**
F 430 S-41/**37 Z**
F 430 S-50/**45 Z**
F 430 S-50/**38**

F 430 AL-41/**38**
F 430 AL-41/**37 Z**
F 430 AL-50/**38**

F 430 HC-40/**38**

Messwerte / Values / Valeurs $\pm 10\%$
gemessen mit Wasser bei 20°C am Druckstutzen der Pumpe
obtained with water at 20°C at the outlet nozzle of the pump
mesurées avec de l'eau à 20°C au refoulement de la pompe

457 80 029

Image: Performance curve for FLUX F 457 EL motor with Stainless Steel (S), Aluminum (AL), and Hastelloy C (HC) barrel pump tube sets. The graph displays head (H in mWS) versus flow rate (Q in US GPM, IMP GPM, and L/min) for various 'Z' values (e.g., 45 Z, 37 Z, 38, 34).

10. Compatibility

The FLUX F 457 EL Commutator Motor is engineered for optimal performance and compatibility with all FLUX barrel and container pumps. Ensure that the specific pump model you intend to use is compatible with the F 457 EL motor for safe and efficient operation.