

Diversitech PF-KIT

Diversitech PF-KIT Pro Flush Flushing Solvent Kit Instruction Manual

Model: PF-KIT | Brand: Diversitech

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of the Diversitech PF-KIT Pro Flush Flushing Solvent Kit. This kit is specifically designed for cleaning HVAC and refrigeration systems, formulated for applications such as R410A retrofits, refrigerant conversions, and compressor burnouts. It is compatible with all refrigerants and compressor coils, ensuring thorough system cleaning.

2. SAFETY INFORMATION

WARNING: Improper use of this kit can lead to serious injury or system damage. Always follow safety guidelines.

- **Overpressure Warning:** Do not exceed pressures of 200 PSI (pounds per square inch) with this injector tool. Exceeding this pressure can cause equipment failure or injury.
- **Child Safety:** Keep this product out of reach of children.
- **Professional Use:** This kit is intended for use by trained HVACR personnel only.
- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including safety glasses and chemical-resistant gloves, when handling flushing solvents and operating the kit.
- **Ventilation:** Ensure adequate ventilation in the work area to prevent inhalation of solvent fumes.
- **Disposal:** Dispose of used solvent and contaminants according to local environmental regulations.

3. PRODUCT OVERVIEW

The Diversitech PF-KIT Pro Flush Flushing Solvent Kit includes the following components:

- **PF-16 Flushing Solvent:** A 16 oz. can of flushing solvent for air conditioning and refrigeration systems.
- **Pro-Flush Injector Tool:** A refillable pressure tool with an injection nozzle.

- **Pressure Relief Valve:** Integrated for added safety.
- **Rubber Adapter:** Suitable for line sets up to 1-1/4 inches.
- **Service Hose:** For connecting the injector tool to the system.
- **Nozzles:** Five different sizes, ranging from 3/8 inch to 7/8 inch, to accommodate various line set diameters.
- **Foam Pigs:** Two foam pigs per nozzle size, designed to push contaminants through the line.
- **Catch Bag:** For collecting flushed contaminants.
- **Storage Case:** A durable case with an EVA foam tray for organized storage and transport.



Figure 1: Diversitech PF-KIT Pro Flush Flushing Solvent Kit. This image displays the main components of the kit, including the PF-16 flushing solvent can, the Pro-Flush injector tool, and the associated hose and adapter.

4. SETUP INSTRUCTIONS

1. **Prepare the System:** Ensure the HVAC or refrigeration system is depressurized and isolated before beginning the flushing process.
2. **Select Nozzle and Pig:** Choose the correct size nozzle and a corresponding foam pig for the line set you intend to clean. The kit includes nozzles from 3/8" to 7/8".
3. **Attach Nozzle:** Securely attach the selected nozzle to the Pro-Flush injector tool. Tighten the thumb

screw on the injector tool until it is thumb-tight.

4. **Add Solvent:** Open the chamber of the injector tool. Pour approximately 2 to 3 ounces of PF-16 flushing solvent into the chamber.
5. **Insert Foam Pig:** Carefully insert a foam pig into the chamber on top of the solvent.
6. **Close Chamber:** Close the injector tool chamber securely.
7. **Connect Nitrogen Source:** Connect the injector tool to a compressed nitrogen source. It is recommended to use a pressure of 70 PSI.
8. **Prepare Catch Bag:** Position the catch bag at the exit point of the line set to collect the expelled pig, solvent, and contaminants.

5. OPERATING INSTRUCTIONS

Once the kit is set up and connected, proceed with the flushing operation:

1. **Initiate Flush:** Firmly pull and hold the trigger on the Pro-Flush injector tool. The compressed nitrogen will propel the foam pig and solvent through the line set.
2. **Observe Pig Exit:** Monitor the exit point of the line set for the foam pig to emerge into the catch bag. The pig acts like a squeegee, pushing oils, contaminants, and the flushing solvent out of the line.
3. **Repeat if Necessary:** For heavily contaminated lines, you may need to repeat the process with a fresh foam pig and additional solvent until the expelled pig and solvent appear clean.
4. **Nitrogen Purge:** After flushing, continue to purge the line set with nitrogen to ensure all solvent residue is removed. The hydrophobic nature of the foam pigs helps to push out all liquids effectively.

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Video 1: Demonstration of a line set cleaning process. This video illustrates how a foam pig is propelled through a copper line set using a specialized tool, effectively cleaning out contaminants and liquids. The demonstration highlights the tool's ability to navigate bends and thoroughly clean the line.

6. MAINTENANCE

Proper maintenance of your Pro Flush kit components ensures longevity and effective performance:

- **Cleaning Foam Pigs:** Foam pigs are reusable. If they become dirty, clean them using dish soap or a detergent that effectively cuts grease and oil. Wash them with warm water and allow them to dry completely before reuse. Ensure they are in good condition before re-inserting them into the line.
- **Cleaning Injector Tool:** After each use, clean the injector tool to remove any solvent or contaminant residue.
- **Storage:** Store all components in the provided storage case to protect them from damage and keep them organized. The EVA foam tray is designed to hold all parts securely.

7. TROUBLESHOOTING

If you encounter issues during the flushing process, consider the following:

- **Pig Not Advancing:** If the foam pig does not advance through the line set, check the nitrogen pressure. Ensure it is at the recommended 70 PSI. Verify that the nozzle is correctly sized for the line and that there are no blockages in the injector tool.

- **Persistent Contamination:** If multiple flushes do not remove all contaminants, the line set may have severe internal damage or blockages that cannot be cleared by flushing. In such cases, replacement of the affected line section is recommended.
- **Kinked Lines:** While the foam pigs are designed to navigate bends, severely kinked or improperly brazed lines (e.g., sharp 90-degree bends) can impede the pig's movement. If a line is kinked, it indicates an efficiency problem and should ideally be repaired or replaced for optimal system performance.

8. SPECIFICATIONS

- **Brand:** Diversitech
- **Model:** PF-KIT
- **Manufacturer Part Number:** PFKIT
- **Item Weight:** 3.65 pounds
- **Solvent Included:** PF-16 (16 oz.)
- **Compatible Line Set Sizes:** Up to 1-1/4 inches (with included adapter)
- **Nozzle Sizes:** 3/8", 1/2", 5/8", 3/4", 7/8"
- **Recommended Nitrogen Pressure:** 70 PSI

9. WARRANTY AND SUPPORT

For specific warranty information or technical support regarding your Diversitech PF-KIT Pro Flush Flushing Solvent Kit, please refer to the product packaging or contact Diversitech customer service directly. Keep your purchase receipt for warranty claims.