

# Line and System Flush Usage Instructions

The HVAC Guys Line and System Flush is designed for flushing out sludge, carbon residues, oils, acids, water, and particulates from air conditioners, refrigeration systems and line sets. It is non-flammable, non-toxic, non-ozone depleting, and causes no long term environmental or health risks. Line and System Flush is great for new installations, refrigerant conversions, compressor burnouts, and component changes.

**GENERAL GUIDELINES:** This product is meant to be used only BY INDUSTRY TRAINED PERSONNEL and in accordance to the following instructions. For any help or technical questions, please contact us at [info@hvacguysproducts.com](mailto:info@hvacguysproducts.com).

**DANGER: NEVER CONNECT THIS CAN TO A MANIFOLD SET, CHARGING HOSES, OR TO NITROGEN. FAILURE TO ENSURE SYSTEM IS DEPRESSURIZED (FREE OF PRESSURE) MAY CAUSE THE CAN TO BURST AND COULD RESULT IN INJURY.**

1. Do not inject the flush into the compressor itself. You should only flush the line set and supporting components.
2. Large systems should be disassembled and flushed in sections. This will prevent the flush from getting trapped.
3. The amount of flush needed will vary due to the line set configuration, contaminants, and oil load.
4. Use in a well ventilated area during the entire flushing procedure.

## REQUIRED EQUIPMENT

1. Line and System Flush Can - In typical applications, a 1lb canister will flush one 2-4 Ton system. The amount needed will vary due to line set configuration, contaminants, and oil load.
2. Injection Kit - To inject the flush, you will also need our Injection Valve (LSF-VLV), Flush Hose (LSF-HOSE), and Flush Gun (LSF-GUN)
3. Waste Container - A small resealable waste container will be needed to catch the used flush and inspect the flushing progress.
4. Nitrogen - A nitrogen tank (regulated to 120 psig) with its own dispensing hose and injector will be needed to purge the flush from the system. This should NEVER be connected to the flush canister.
5. HVACR Tools - You will need a vacuum pump with micron gauge and the appropriate hoses and fittings.
6. Safety Equipment - Always use gloves and full face protection when working with flush solvents.

## FLUSHING LINE SETS

1. Determine one end of the line set as the exit point and crimp or restrict it. This will increase the mass flow, solvent contact time, and aid in the cleaning process. Place a resealable waste container at the exit point to capture the flush and contaminant mixture. Wherever possible, flush from top to bottom.
2. Connect the injection valve, flush hose, and flush gun to the can. Open the valve when you are ready to inject the flush. Inject the flush using the injection gun. NOTE: The can will only spray in the upright position.
  - For tubing up to 1/2" use a 10-15 second burst of flush for each 50 feet of line set.
  - For tubing up to 7/8" use a 15-30 second burst of flush for each 50 feet of line set.
3. Each burst of flush should immediately be followed by a **SEPARATE** apparatus injecting compressed nitrogen at 100-120 psi. The nitrogen will agitate the flush through the entire system and expel the solvent and contaminates into the waste container. **DANGER: NEVER CONNECT NITROGEN OR MANIFOLD GAUGES TO THE FLUSH CANISTER.**
4. To ensure a proper flush, be sure the solvent flowing out of the exit point is clear and free of contaminates. If dirt remains, repeat the flushing process until it is clear. Typically, one can will flush 1-2x 50 foot line sets on systems of 2-4 Tons. The amount of flush needed will vary due to line configuration, amount of contaminants, and oil load. If the entire canister is not used, the remaining solvent can be saved for later. Simply close the valve fully counterclockwise and remove.
5. Once the equipment is verified to be clean, reconnect the components and evacuate the system with a vacuum pump to the appropriate low micron pressure range. This will boil off any residual solvent that may be trapped in the system.
6. Leak check, add any necessary oil and refrigerant, then return the system to operation.

## FLUSHING AFTER BURNOUTS

1. Review the system configuration. Consider cleaning the condenser, evaporator, and line sets separately. It is recommended to disassemble and clean in sections. Remove filter driers/cores, TXV and capillary tubes, compressor, accumulators, receivers, reversing valves, etc. NEVER inject into the compressor itself. Depending on the nature of the system, the degree of contamination, and the type of system failure, the amount of flush will vary.
2. If possible, crimp or restrict the exit points of each item to be flushed. This will increase mass flow and solvent contact time and aid in the cleaning process. Place a resealable waste container at that exit point to capture the flush and contaminant mixture. Wherever possible, flush from top to bottom.

3. Connect the injection valve, flush hose, and flush gun to the can. Open the valve when you are ready to inject the flush. Inject the flush using the injection gun. NOTE: The can will only spray in the upright position.
4. Each burst of flush should immediately be followed by a **SEPARATE** apparatus injecting compressed nitrogen at 100-120 psi. The nitrogen will agitate the flush through the entire system and expel the solvent and contaminates into the waste container. **DANGER: NEVER CONNECT NITROGEN OR MANIFOLD GAUGES TO THE FLUSH CANISTER.**
5. To ensure a proper flush, be sure the solvent flowing out of the exit point is clear and free of contaminates. If dirt remains, repeat the flushing process until it is clear. If the entire canister is not used, the remaining solvent can be saved for later. Simply close the valve fully counterclockwise and remove.
6. Once verified to be clean, reconnect the system components and evacuate the system with a vacuum pump to the adequate low micron pressure range. This will boil off any residual solvent that may be trapped in the system. Leak check, add any necessary oil and refrigerant, then return the system to operation.
7. For additional protection, inject Leak Saver Acid Scavenger into the system to prevent acid contamination.



**DANGER:** Contains gas under pressure; may explode if heated. Causes skin and serious eye irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

**PREVENTION:** Wash thoroughly after handling. Wear protective gloves and eye protection. Keep away from heat, sparks, open flames, and hot surfaces. -No smoking. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist, vapors or spray. Use only outdoors or in a well-ventilated place.

**RESPONSE:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting. **STORAGE:** Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. **DISPOSAL:** Dispose of contents/container in accordance with local, state and federal regulations. **ONLY FOR USE ON AIR CONDITIONING AND REFRIGERATION SYSTEMS - NOT FOR USE ON PNEUMATIC SYSTEMS - NON-FLAMMABLE.** Keep out of the reach of children. CONTAINS (CAS#): 1,2-Dichloroethylene (138495-42-8), Tetrafluoroethane (811-97-2), 1,1,1,2,2,3,3,4,5,5,5-Decafluoropentane (156-60-5), Ethanol (64-17-5).