QwikProducts® by Mainstream Engineering

Qwik System Flush®

QT1150
Starter Kit

QT1100
2lb Can



QT1130
1lb Can

OEM APPROVED

Air Conditioning & Refrigeration System Flush

QT1100, QT1130, & QT1150

Qwik System Flush® FORMULATED FOR FIGHTER JETS MODIFIED FOR HVAC SYSTEMS

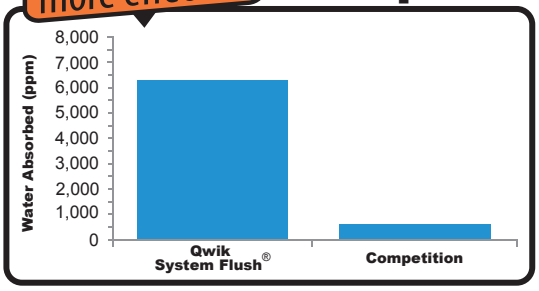
The original Qwik **System Flush** was developed by Mainstream Engineering Corporation for the U.S. Air Force in 2001. EPA regulations brought about the need to find alternatives for the R-11 & R-113 flushing agents originally used to clean the pilot's oxygen breathing systems. Qwik-**SF**® was developed as a superior, non-toxic flushing agent with no long-term environmental or health risks.

This same technology has been utilized to provide a flushing agent for today's HVAC systems that is still easy to use, ozone safe, non-toxic and non-flammable. Qwik **System Flush** effectively removes impurities, including oil, sludge, acid and moisture. Qwik-**SF** is a must for system clean ups, retrofits and system burnouts.

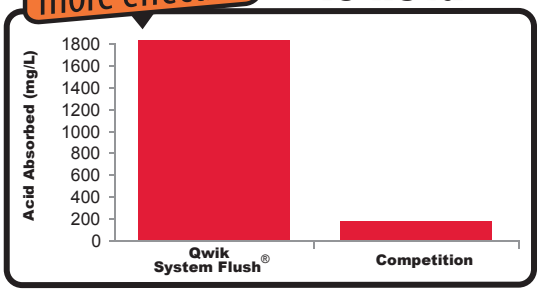
See how Qwik **System Flush** compares to the competition!

- **SUPERIOR FORMULATION**
- **NON-TOXIC**
- **NON-FLAMMABLE**
- **OZONE SAFE**
- **AEROSOL**
- **LEAVES NO RESIDUE**
- **PATENT PENDING**

9x more effective Moisture Absorption*



10x more effective Acid Removal*



*For any product evaluations, and independent test results proving product effectiveness, *visit* **www.qwik.com/test-results/flush/**

Qwik**Nozzle**™ is a trademark, and Qwik**Products**®, Qwik**Check**®, Qwik**Injector**®, Qwik**Shot**®, Qwik **System Flush**® and Qwik-**SF**® are registered trademarks of Mainstream Engineering Corporation, Rockledge, FL. 32955, (321) 631-3550 U.S. Patent Pending. All Qwik**Products**® are made in the USA

Solutions Through Advanced Technology
MAINSTREAM ENGINEERING®

MADE IN THE U.S.A.

Mainstream Engineering Corporation
1-800-866-3550
www.qwik.com

MKTG000045_REV-B / 100010802-B

Equipment Requirements

to flush an Air Conditioning or Refrigeration System using Qwik System Flush Aerosol.

The following equipment will be required for each flushing operation:

1. Qwik **System Flush.** As a general rule, one two pound aerosol canister will clean up to a 10-ton system. The amount needed will vary by size and level of contamination. See the chart below to estimate what you'll need to complete your task.

Part Number	Description
Qwik **System Flush**	
QT1100	2 lb Aerosol can for up to 10 ton systems
QT1130	1 lb Aerosol can for up to 5 ton systems
QT1150	2 - 1 lb Aerosol cans for up to 10 ton systems

2. Qwik-**SF®** ***Access Valve***, part number QT1105, or equivalent tool with a pressure relief valve.
3. Refrigerant charging hose.
4. A flare fitting for access to section to be flushed - either a flare fitting that you can braze onto the pipe, a ***Line Set Tool*** (QT1110), or our ***Squeeze-Type*** Qwik**Nozzle**™ (QT1106 - available separately as pictured or included with QT1150).
5. An empty sealable waste container to capture waste as it exits the HVAC system. *Dispose of waste contents/container in accordance with local/regional/national regulations.*
6. Compressed nitrogen.
7. Safety glasses
8. Protective gloves



Qwik-SF Starter Kit
P/N QT1150

Qwik-SF 2lb.
P/N QT1100



Qwik-SF 1lb.
P/N QT1130



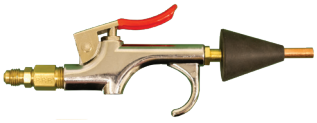
Qwik-SF Can Access Valve
with Built-In Pressure Relief Valve
P/N QT1105



Charging Hose



Qwik-SF Line Set Tool
P/N QT1110

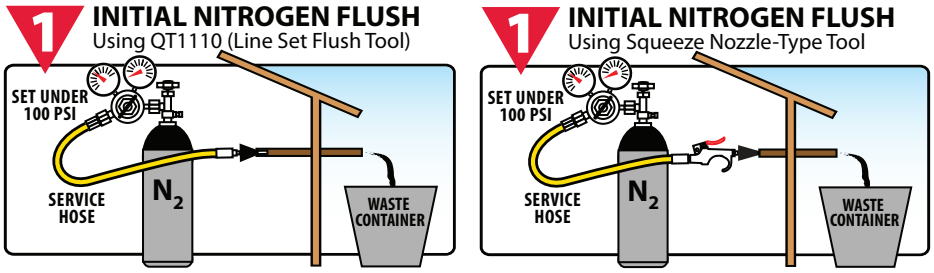


Squeeze-Type QwikNozzle
Lineset Flush Tool
P/N QT1106

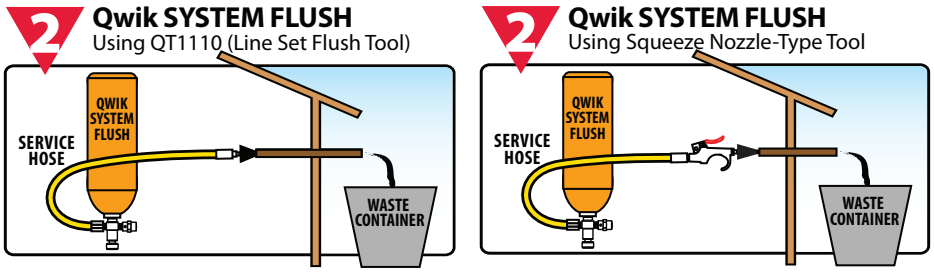
Simplified Flushing Procedures

3 Basic Steps to Flush an Air Conditioning or Refrigeration System using Qwik System Flush (QT1100, 1130 & 1150).

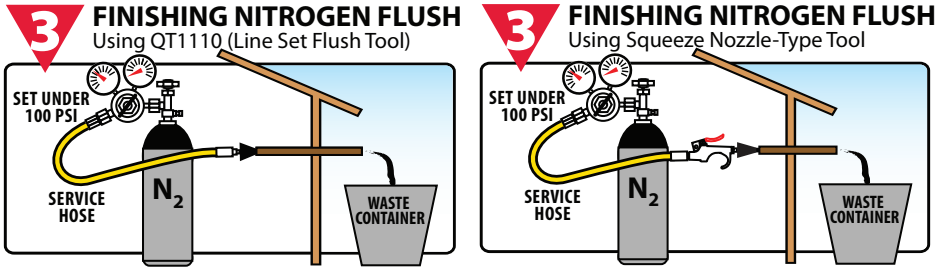
1 A nitrogen flush is required **before** flushing any system with Qwik System Flush



2 Introduction of Qwik System Flush® to flush the system



3 A nitrogen flush is required **after** flushing any system with Qwik System Flush



Preparation for Use

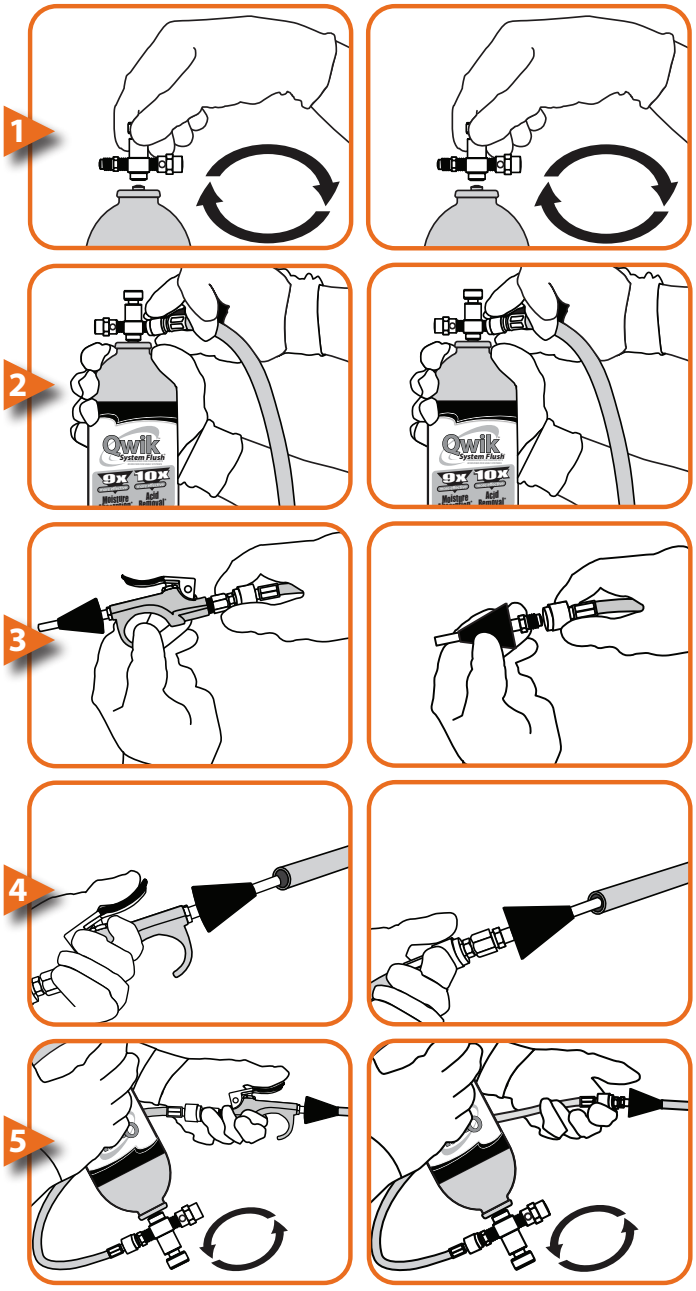
Instructions for preparing Qwik System Flush to Flush an Air Conditioning or Refrigeration System.

A nitrogen flush is required before and after flushing with Qwik System Flush

INSTRUCTIONS:

NOTE: Ensure backseat valve is in the fully closed position before attaching to a can of Qwik Sytem Flush by turning the access valve knob counterclockwise.

1. Thread *Can Access Valve* to top of Qwik **System Flush** can.
2. Attach hose to flare fitting on *Can Access Valve*.
3. Place other end of hose on flare fitting or attach to Line Set Flush Tool (QT1110) and set at point of injection should no fitting be present on the system.
4. Holding the Qwik **System Flush** upside down, twist knob of *Can Access Valve* clockwise to release product.
5. Twist knob counterclockwise to close valve and stop releasing. Close valve prior to disconnecting from system.



Product Application

Qwik **System Flush** is used in the same manner as R-11 except that Qwik-**SF**® requires the use of an aerosol can access valve (shown at right). Mainstream Engineering's Qwik-**SF** Can Access Valve, (QT1105), should be available at the location where you purchased Qwik-**SF**.

If you have used another brand of access valve (i.e. , NuCalgon's 4300-99) in the past, then your access valve injection tool should be compatible with Qwik-**SF**.

Qwik **System Flush** is most commonly used to clean residual contamination after a compressor burnout or any time you install new system components with a previously used line set.

The instructions that follow describe using Qwik-**SF** in a proper compressor burnout/changeout procedure but are also applicable to any other Qwik-**SF** use, such as conversion of HCFC refrigeration components to HFC refrigeration components.

When a compressor burns out, highly acidic oil is formed. Although the majority of this oil remains in the compressor, some oil is always present in the plumbing and remaining components of the system. If you are changing the entire system, including any piping between components in a split system, then there are no issues. However, if you are not replacing the



piping between the components or other parts of the system, then perform the following steps:

1. Recover any refrigerant in the system.
2. Open the system and remove the following components:
    - Filter-Drier(s),
    - Expansion Valve(s),
    - Compressor(s).

    In a burnout / changeout, the filter-drier and compressor would need to be replaced anyway.
3. Place a waste container where both nitrogen and flush carrying waste will be exiting the system (*see Required Equipment #5, page 2*).

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Product Application

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4. Connect the nitrogen gas supply (*see Required Equipment #6, page 2*) to a flare fitting (*see equipment required #4, page 4*) and perform a nitrogen purge at each area that you intend to flush. Let the nitrogen flow for at least 5 minutes or longer if debris continues to exit.

5. The ideal use for the nitrogen is to physically blow as much contaminated oil out of the system that you can. Use your judgement to open the system anywhere you expect oil is trapped, and then use the nitrogen to blow this oil and other debris from the system. Never purge through an expansion device (capillary tube, orifice plate, TXV, etc.) as this will likely clog the device.

Qwik System Flush should never be used in a compressor, expansion device, or filter-drier.

6. After using nitrogen to purge the system, the most effective way to remove the remaining residual oil from the pipe lines is to use Mainstream's Qwik **System Flush** (*see page 3*). A nitrogen purge alone is not capable of removing all of the contaminated oil from the inside surface of a line set and should only be the beginning and end of a thorough cleaning process. The Qwik **System Flush** solvent has excellent absorption capacity (*see test results at* **www.qwik.com**); therefore, a relatively small amount of Qwik **System Flush** is needed. The more contamination that you remove with a nitrogen purge before, the less Qwik **System Flush** will be wasted removing contamination that does not require a solvent. Nitrogen is much less expensive than any flushing solvent and should be used liberally in comparison.

7. Repeat a nitrogen purge on all areas where Qwik **System Flush** was introduced into the line set. Do not exceed 100 psig. When you purge these areas, you will see the solvent exiting the line as a liquid. Continue purging the line for an additional minute after you no longer see Qwik **System Flush** exiting the system.

8. A flushing solvent cannot be used for components such as the compressor, filter/drier, or expansion device. Always remove filter-driers when performing a flush, and never try to flush through

...continued on page 7

Product Application

...continued from page 6

expansion devices. Once you have cleaned or replaced as much of the piping and components in the system as possible, continue to step 10.

9. Connect the new components, installing BOTH a new liquid-line filter-drier and a new suction line filter-drier into the system. The purpose of the suction line drier is to catch residual acidic oil remaining in the system before it can enter the suction line of the compressor and contaminate the compressor oil, leading to premature compressor failure.

10. Leak test, evacuate and charge the system with refrigerant.

11. As an option to further assure all acid and moisture has been removed, use Qwik**Injector**® to introduce Qwik**Shot**® Refrigerant & Oil Treatment into the operating system. One bottle will treat up to a 6 ton system.

12. Allow the system to operate for a minimum of 15 minutes, and then use Qwik**Check**® to test for acid. If acid is detected, wait an additional 30 minutes and retest for acid. If acid is still detected, you must recover the refrigerant in the system, then install new filter-driers again as discussed in step 10 and repeat steps 12-13.

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