Honeywell Genetron® ST-20™ Flush

AC & Refrigeration Flush

Genetron ST-20 Flush for Refrigeration and Air Conditioning Systems

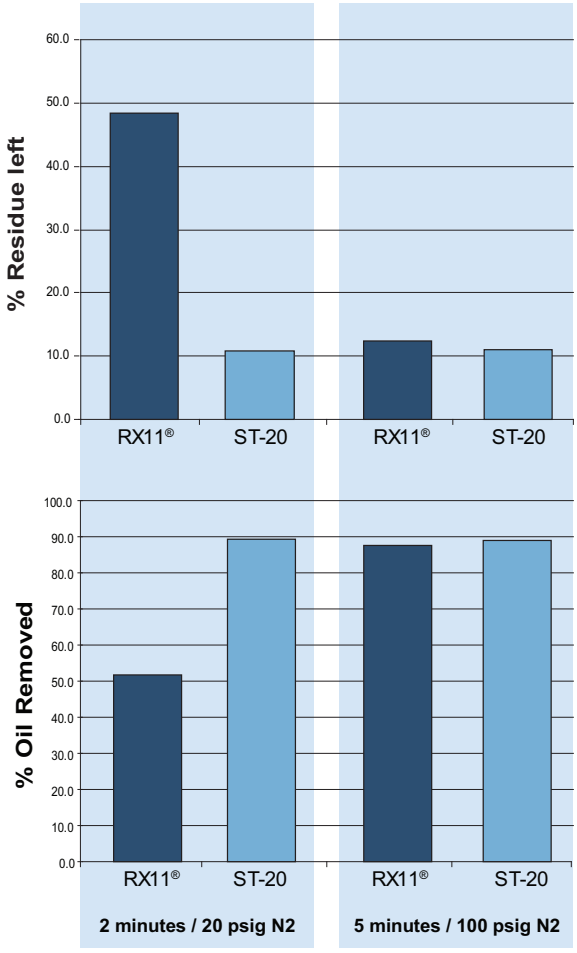
With the phase-out of R11, common service practice has been to purge systems with nitrogen and rely on filter driers to clean the system instead of flushing. Unfortunately, filter driers have limited acid removal capacity and recommended procedures such as acid testing and additional filter changes are not always followed. Additionally, contaminants downstream of the filter can cause component damage or blockage before filtration has sufficient cycles to remove the contaminants.

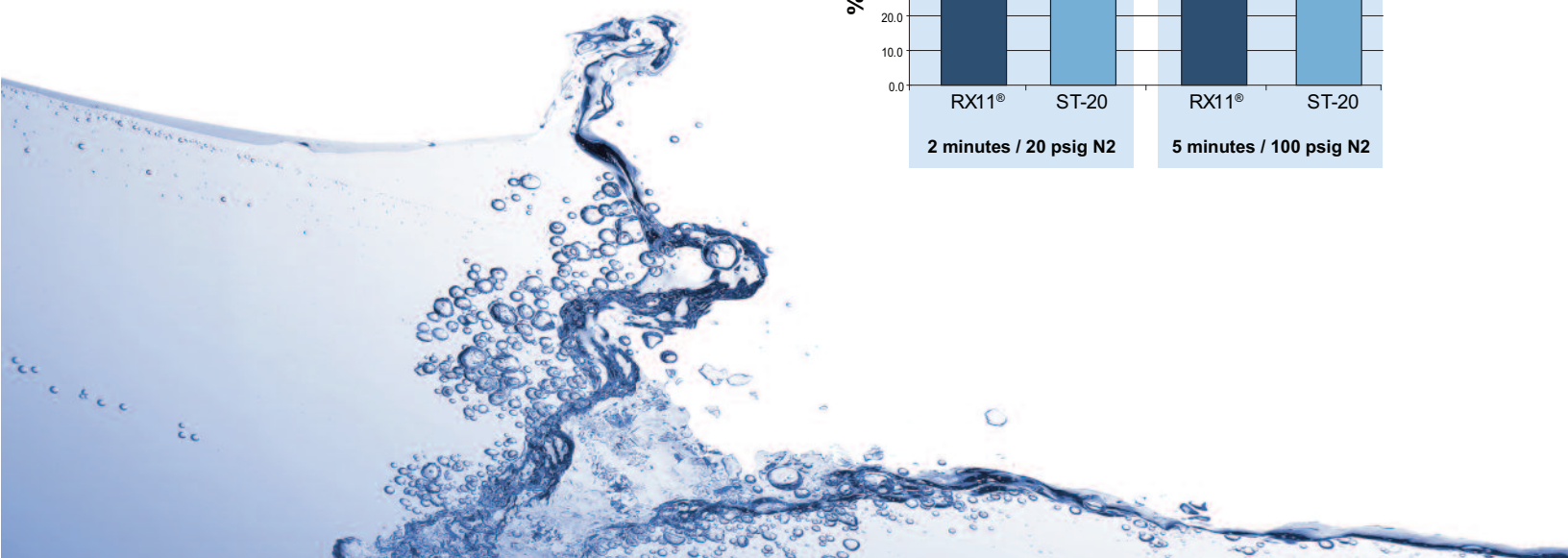
Genetron ST-20 Flush uses patented technology to provide excellent cleaning of refrigerant and A/C systems in a very efficient and cost effective manner. A carefully selected boiling point assures the solvent is easily removed from the system. Genetron ST-20 Flush is effective for use on all HCFC and HFC systems and is compatible with current materials of construction including common seals and gasket materials.

Genetron ST-20 Flush is…

- A flushing agent with excellent solvency for mineral and new generation refrigerant oils.
- Saves you time – offers faster cycle times than other flushing agents.
- Made with the new HFC-245fa molecule which is fully compatible with HFCs and HCFCs.
- Safe, odorless, and non-flammable.
- Used in the same way as R141b and R11.
- Quick drying due to its low boiling point.
- Compatible with most common construction materials and commonly used plastics and elastomers.
- Especially valuable for systems which have experienced compressor burnouts, new system cleaning or retrofits.
- Formulated with SNAP approved components.
- Conveniently available in pressurized packaging.
- Easily purged from components when cleaning is complete.

Comparison of Flush Solvent Performance





Line Set Cleaning for Retrofitting Procedure

When installing a new R410A air-conditioning system to replace an existing R22 system, it may be possible to use the existing line set. Consult the OEM's installation manual and determine if the line sizing is correct and proceed as follows:

1. Before starting any work put on approved safety goggles and nitrile gloves and remember to work only in a properly ventilated area.

2. Recover the existing R22 charge; it is illegal to vent any refrigerant.

3. Disconnect any electrical power feeds to the system including any solenoids or reversing valves.

4. Using a tubing cutter cut the liquid and suction line at both the condensing unit and the evaporator.

5. Temporarily connect the liquid and suction lines at the evaporator using clear plastic tubing, suitable adapters and hose clamps.

6. Using an injection tool or a compression fitting and adapters, connect a refrigeration service hose to the suction line at the condensing unit location.

7. Position a clean container at the liquid line to catch solvent and contaminants as they are purged from the system. Purged material may include acids, oil and particulate debris which must be disposed of properly.

8. Connect the flush can valve as shown in Figure 1 and 2 or use a valve capable of connecting to 7/16" 28 thread. These valves are currently offered for sale at most refrigeration and air-conditioning wholesalers.

9. Connect the refrigeration service hose or refrigeration manifold set to the can valve and the suction line, invert the ST-20 can, open the valve and give a 15–20 second blast of ST-20 Flush. Inspect the clear tubing at the evaporator and look for liquid. If no liquid is present continue 15 second purges until it appears. Follow ST-20 with a regulated supply of dry nitrogen and push the solvent into the receiving container while observing the condition of the purged material. When the solvent runs clear with no oil or contaminants present the flushing operation is complete, follow with a dry nitrogen purge. Never pressurize the Genetron ST-20 container. Dispose of the waste material properly.

10. Connect the line set to the new evaporator and condensing unit and evacuate and leak check as per current guidelines.

Figure 1

Figure 2

System Repair and Cleanup Procedure

1. After a mechanical failure or hermetic motor burnout, use Genetron ST-20 Flush to remove contaminants by flushing interconnecting piping as per the directions for Line Set Cleaning.

2. Remember to disconnect all electrical connections to the system and obtain and use safety goggles and nitrile gloves.

4. Do not attempt to push ST-20 Flush through compressor bodies.

3. It will be necessary to cut the refrigeration or air conditioning system at several points to isolate large components such as receivers and condensers which must be cleaned separately. It may be impractical to clean large components with ST-20 Flush. Inspect these components and consider mechanical cleaning if large deposits are discovered. Remove any solenoid or reversing valves from the piping. It may become necessary to modify procedures for line set cleaning to completely flush these components, use dry nitrogen to completely purge the component.

5. After cleaning and purging, assemble the refrigeration or AC system. Remember to purge the system with low pressure nitrogen during brazing operations.

6. Replace the liquid line filter drier and consider installing a suction filter.

7. If the original compressor is being re-installed, change the lubricant. Use only lubricants specified by the compressor manufacturer.

8. Pressurize the system with nitrogen and leak check as per AHRI and EPA guidelines.

9. Evacuate the system and charge the proper refrigerant as per the system manufacturer's recommendations.

10. If a retrofit was accomplished during this repair, label the system indicating the refrigerant and lubricant used.

11. Properly dispose of contaminated Genetron ST-20 Flush.

Responsi l
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