As long as there’s been air conditioning, there’s been Robinair, the global leader in automotive and HVAC/R air conditioning (A/C) refrigerant recovery, recycling and recharge tools, equipment and accessories. Vehicle manufacturers (OEMs), dealership service departments, auto repair shops, industrial and commercial contractors have turned to Robinair for A/C service products since 1956.
Protect Your Investment

Robinair technical support, local service centers and flexible ToolGuard™ extended service coverage you can count on.

At Bosch Automotive Service Solutions Inc., we recognize that your purchase of Robinair tools and equipment is an important investment in your business.

Since 1956, Robinair has been and continues to be a world leader and trusted name in automotive A/C service equipment. We know you rely on the dependability of our products and the way we take care of you and your equipment after the sale. With a technical support team that is eager to help and hundreds of service centers throughout North America, we are able to quickly respond to your service needs.

Warranty Registration

Warranty registration is the most important step in helping us provide exceptional customer service for you. Registration is available online at www.robinair.com/support or call 1-800-822-5561 and follow the prompt for Robinair technical support.

ToolGuard™ Extended Service Contract

Robinair provides factory warranty coverage with your tool. However, we expect you will be using your tool well beyond your factory warranty. To continue protecting your investment and budget your maintenance costs, consider keeping your coverage with the ToolGuard™ Extended Service Contract.

To learn more about available coverage, visit us at robinair.com, e-mail us at toolguard@bosch-automotive.com or call us at 1-800-233-7055.

Warranty Replacement or Repair

RepairTrack offers you the ability to manage your warranty replacement or repair experience for the Robinair handheld products by providing you with an easy way to send your product in for replacement or repair and track it.

› From the moment it leaves your facility to the moment it returns, you will have the latest information
› Generate a Repair Return Authorization by printing out a UPS tracking number directly from this site
› Review and approve Repair Estimates online
› Make Credit Card payments for your Repairs online
› Up to date warranty and service information include any special programs that exist with your product
› Find out the latest repair policies and procedures, and where to go for additional information
› Don’t miss out on this valuable service

To learn more, log on to RepairTrack at repairtrack.bosch-automotive.com.

Robinair Technical Support - 1-800-822-5561
Office hours are M-F 8:00 am - 8:00 pm EST
### Quick Finder Index

<table>
<thead>
<tr>
<th>Category</th>
<th>Page Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery/Recycling Units</td>
<td>2 – 4</td>
</tr>
<tr>
<td>A/C Flushing and Accessories</td>
<td>5</td>
</tr>
<tr>
<td>Refrigerant Tanks Recycling Filters-Driers</td>
<td>6</td>
</tr>
<tr>
<td>Refrigerant Identifiers</td>
<td>7</td>
</tr>
<tr>
<td>Refrigerant Detectors</td>
<td>8 – 11</td>
</tr>
<tr>
<td>Combustible Gas Detectors</td>
<td>11 – 12</td>
</tr>
<tr>
<td>Ultrasonic Leak Detector</td>
<td>12</td>
</tr>
<tr>
<td>Digital Thermometer</td>
<td>12</td>
</tr>
<tr>
<td>A/C Fluorescent Dyes and UV Leak Detetecion</td>
<td>13</td>
</tr>
<tr>
<td>Thermometers</td>
<td>14</td>
</tr>
<tr>
<td>A/C Manifold Kits</td>
<td>15</td>
</tr>
<tr>
<td>Digital Manifold Gauges</td>
<td>15</td>
</tr>
<tr>
<td>Gauges and Service Couplers</td>
<td>16</td>
</tr>
<tr>
<td>Stem Replacement and Speical Hoses</td>
<td>17</td>
</tr>
<tr>
<td>Charging Hoses</td>
<td>18</td>
</tr>
<tr>
<td>Coolant and Transmission Exchangers</td>
<td>19</td>
</tr>
<tr>
<td>A/C Vacuum</td>
<td>20 – 23</td>
</tr>
<tr>
<td>A/C Scales</td>
<td>24</td>
</tr>
<tr>
<td>Tubing Cutters</td>
<td>25</td>
</tr>
<tr>
<td>A/C Clutch Tools, Disconnect Tools</td>
<td>26</td>
</tr>
<tr>
<td>Fin Straightener, Valve Core Tools</td>
<td>27 – 28</td>
</tr>
</tbody>
</table>
A/C Recovery & Recycling
R-134a automotive A/C systems

34288
Cool-Tech A/C Recover, Recycle, Recharge Machine

The 34288 combines simple operation with superior accuracy. It recovers, recycles, evacuates, and recharges R-134A quickly and accurately. Meets SAE J-2788 standards for accuracy: 95% refrigerant recovery and charging to +/- 1/2 oz.

34788NI
Premier R-134A Refrigerant Recovery, Recycling, and Recharging Machine

Recover, recycle, evacuate, leak-test and recharge R-134a vehicle A/C systems. Features a larger graphical display, leak testing, automatic refrigerant refill and automated oil drain/inject – putting A/C lubricant back into the system. 34788NI also boasts an ability to add a printer and refrigerant identifier. An optional refrigerant charge and oil capacities database is available for North American market vehicles.

Combining Simple Operation With Superior Accuracy:

These machines will test, recover, and recharge R-134a automotive A/C systems quickly and accurately.

<table>
<thead>
<tr>
<th>Features</th>
<th>34288</th>
<th>34788NI</th>
<th>34788NI-H</th>
<th>34988NI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully-Automatic Function: Program to recover, vacuum, leak test and charge without operating panel valves.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Automatic Dye Inject: Gives the user the ability to use the machine to inject UV dye into a vehicle's A/C system.</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic Oil Drain: A display reminds you to empty the graduated container to show the amount of oil to replace.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Oil Inject: Automatically inject oil back into the vehicle's A/C systems.</td>
<td>X</td>
<td></td>
<td>X**</td>
<td></td>
</tr>
<tr>
<td>Refrigerant &amp; Oil Database: A/C system capacities for North American market vehicles (Optional – not included with the machine)</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td>A/C System Flush: Flushes a vehicle’s A/C system with refrigerant, eliminating any residual oil or other liquid. (Flushing adapters not included)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Save &amp; print before and after service data: Allows the user to store before and after service information by vehicle and print this information to provide to a customer.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Visual &amp; Audible Alarm: Notifies the user when service is complete, or if a problem has occurred.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Vacuum Leak Test: Monitors level after evacuation, informs of possible leak.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Automatic Air Purge: Eliminates system-damaging air without monitoring gauges or opening valves.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Automatic Refrigerant Refill: Maintains a user-selectable amount of refrigerant in an internal vessel and signals when it’s time to change supply tank, no monitoring required.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Vacuum Feature: Defaults to 15 mins, programmable up to 99 mins. “Remaining time” is displayed.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Display: Multilingual.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Refrigerant Charging:</td>
<td>X</td>
<td>X***</td>
<td>X***</td>
<td>X***</td>
</tr>
<tr>
<td>Refrigerant Management System: Displays refrigerant use and monitors remaining filter life. Prompts appear when 1/3 of filter life remains.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Electric Vehicle: Capable of servicing high voltage electric compressor A/C systems.</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Printer</td>
<td>Optional</td>
<td>Optional</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

* One oil bottle. ** Two oil bottles and one UV dye bottle. *** Charge mode from high or low side, or use both sides.
34788NI-H

**Premier R-134A Refrigerant Recovery, Recycling, and Recharging Machine for Hybrid and Non-Hybrid Vehicles**

All of the same great features and functions included on the 34788NI, plus the added capability of servicing Hybrid vehicles that use high voltage electric compressors. Recover, recycle, evacuate, leak-test and recharge R-134a vehicle A/C systems. Features a larger graphical display, leak testing, automatic refrigerant refill and automated oil drain. An optional refrigerant charge and oil capacities database is available for North American market vehicles.

34988NI

**Premium Refrigerant Recover, Recycle, Recharge Machine**

Premium A/C Machine combines ease of use and superior accuracy. It recovers, recycles, evacuates, leak tests and recharges R-134a vehicle systems quickly and accurately. The fully automatic function will recover, vacuum, leak test and charge on its own without the need to stand and monitor the machine. The product is fully SAE J2788 compliant and exceeds the requirements for charge accuracy and recovery efficiency. (34988NI-230, 220V)

<table>
<thead>
<tr>
<th>Replacement / Accessories / Maintenance Kits</th>
<th>34288</th>
<th>34788NI</th>
<th>34788NI-H</th>
<th>34988NI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Replacement Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34724 – Filter (See page 6)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>18190A – Low Side (Blue) Coupler (See page 16)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>18191A – High Side (Red) Coupler (See page 16)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34412-A – Refrigerant Capacities DB (See page 5)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>16256 – Oil Injector (See page 5)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17492 – Dust Cover, fits 34288, 34788, 34788-H and 34988 models. (See page 5)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17499 – Dust Cover, fits 34788NI, 34788NI-H and 34988NI models. (See page 5)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Maintenance Kits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13172 – Maintenance Kit (See page 5)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
AC1234-6
Service R1234yf refrigerant vehicles with Robinair’s SAE-standard AC1234-6 ACS machine

The AC1234-6 was the first A/C machine in North America to fully meet SAE’s requirement for recovering, recycling and recharging vehicle A/C systems that use the new R1234yf refrigerant. The AC1234-6 is a fully automatic ACS machine that comes with an integrated refrigerant identifier that samples the refrigerant in the vehicle’s A/C system prior to recovery. A highly accurate and reliable machine, it can service both standard and hybrid vehicle A/C systems.

### Features
- **Fully automatic operation** Program for service, walk away and return when complete.
- **95% Recovery efficiency.**
- **Programmable vacuum** Operation helps get to the necessary vacuum level in any condition quickly.

### System leak
Test to identify gross leaks in a system.

### Charge
Accuracy within +/- 1/2 oz.

### Automatic oil drain
Shows how much oil was removed from the system during service.

### Automatic air purge
Removes the potential of air accumulating in the internal tank.

### Integrated refrigerant identifier
Meets SAE J2927

### Liquid refrigerant flushing function
Can flush A/C systems or individual components using liquid refrigerant instead of harsh chemicals.

### Automatic internal tank refill
No stopping to fill the internal tank during service, or before service.

### 1/4 Color VGA display
Large easy to read graphical display

### On-board printer
Capable of printing vehicle service report slips to present to customers.

### Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor</td>
<td>1/3HP</td>
</tr>
<tr>
<td>Dimensions</td>
<td>107 cm x 61 cm x 76 cm</td>
</tr>
<tr>
<td>Filter Capacity</td>
<td>150 kg</td>
</tr>
<tr>
<td>Humidity</td>
<td>90°F (32.2°C), 86% RH non-condensing</td>
</tr>
<tr>
<td>Pressure Gauges</td>
<td>Ø 100 mm</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>25 bar</td>
</tr>
<tr>
<td>Noise</td>
<td>&lt;70dB(A)</td>
</tr>
<tr>
<td>Nominal Voltage</td>
<td>103V–127V, 60 Hz</td>
</tr>
<tr>
<td>Oil Drain Bottle</td>
<td>355 ml</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>50°F to 122°F (10°C to 50°C)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>1100 VA</td>
</tr>
<tr>
<td>Pump Free-Air Displacement</td>
<td>1.5 CFM (35 l/m)</td>
</tr>
<tr>
<td>Service Hoses</td>
<td>250 cm / SAE J2888</td>
</tr>
<tr>
<td>Tank Capacity</td>
<td>9.09 kg (20.04 lb.)</td>
</tr>
<tr>
<td>Weight</td>
<td>107 kg (235 lbs.)</td>
</tr>
</tbody>
</table>

One piece of equipment is all you need for A/C and refrigeration service. Also great for in-plant maintenance!

### 17800B
Multiple Refrigerant Recovery, Recycling, and Recharging Machine

The 17800B recovers, recycles, evacuates and recharges — all in one fast, continuous operation through one hook-up. It’s ideal for refrigerated trailers, buses, RVs, and other vehicles that use more than one refrigerant. The Multi RRR machine is also great for fleet maintenance, covering a variety of makes and models since it has both R-12 and R-134a capabilities. In-plant maintenance departments will find it can handle the different types of refrigerants used in various systems.

### Features
- **Microprocessor** Controls functions; prompts you through programming and also signal when it’s time to change the filter-drier, vacuum pump oil, and compressor oil.
- **Float chamber** Automatically adjusts from liquid to vapor for most efficient recovery.
- **Electronic scale** Makes it simple to recharge to factory specifications; also weighs recovered refrigerant and provides tank overfill protection.
- **CoolTech vacuum pump** 6 CFM has the capacity to thoroughly evacuate the system, readying it for recharging.
- **Lockout panel** Prevents mixing of refrigerants; rotates to one side for 1/4” fittings and to the other for 1/2” Acme fittings.
- **Single-pass recycling** Makes an initial pass through the filter-drier; additional recycling can be programmed in case of compressor burn-out, or other conditions.
- **Heavy-duty filter-drier** Removes moisture and acid from the refrigerant; can handle up to 200 pounds between change-overs. Comes with two 50 pound tanks, one with 1/4” fittings and the other with 1/2” Acme fittings. Also three sets of charging hoses are included — one for R-12, one for automotive R-134a (with field service couplers), and one for other refrigerants using 1/4” SAE fittings.

### International Models

17801B – 220–240V 50 Hz, readout in kilograms.

### Replacement Parts

19776 – Recycling filter-drier.
17506 – 50 lb. (23 kg) refillable tank, 1/4” fittings.
34750 – 50 lb. (23 kg) refillable tank, 1/2” Acme fittings.

### Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>115V 60 Hz</td>
</tr>
<tr>
<td>Tanks</td>
<td>Two 50 lb. (23 kg) refillable</td>
</tr>
<tr>
<td>Operating Range</td>
<td>50° to 105° F (11° to 41° C)</td>
</tr>
<tr>
<td>Recovery Rate</td>
<td>Vapor – 1/2 lb/min. (2 kg/min.) Liquid – 1 lb/min. (4 kg/min.)</td>
</tr>
<tr>
<td>Recycling Rate</td>
<td>4 lbs/min. (1.8 kg/min.) flow rate</td>
</tr>
<tr>
<td>Recycling Filter-Drier</td>
<td>1150 g XH-9</td>
</tr>
<tr>
<td>Pump Free Air Displacement</td>
<td>6 cfm (142 l/m) at 50 Hz</td>
</tr>
<tr>
<td>Dimensions</td>
<td>47” H x 26” W x 30” D (119 cm x 66 cm x 77 cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>256 lbs. (116 kg) without tank</td>
</tr>
</tbody>
</table>
Maintenance Kits
Keep recovery and recycling units operating at peak efficiency with a convenient maintenance kit. Contains one Quick Change filter-drier to be used on both R-12 and R-134a stations, and one 16-ounce bottle of our Premium High Vacuum Pump Oil.


See your instruction manual if you have questions about which filter-drier to use.

Syringe-Type Injectors
Use these syringe-type injectors to add oil to a fully pressurized A/C system. Just fill the barrel with the amount of oil needed, connect the injector, and press the plunger.

16256 – R-134a oil injector, 1/2” Acme quick coupler.
18480 – R-134A oil injector, PAG labeled
18490 – R-134A oil injector, POE labeled
18460 – R1234YF oil injector, Generic
18465 – R1234YF oil injector, PAG labeled
18470 – R1234YF oil injector, POE labeled

Not recommended for UV dye injection.

Vinyl Dust Covers
Protect your investment with a heavy-duty vinyl cover. Features corded seams for durability; medium gray color with CoolTech logo.

17490 – Fits all 75700, 17800B, 34900, 34800-2K, series.

Dust Cover for A/C RRR Machines
17499 – Fits AC1234-6, 34788NI, 34788NI-H and 34988NI A/C RRR machines.

A/C Flushing and Accessories
Vehicle Database Screens
- Electronic capacities database that provides A/C charge and oil lubricant amounts by vehicle for model years 1995-2016.
- Provides capacity information right at your finger tips when needed using your A/C RRR machine.
- Can be used with the Robinair 34988, 34788 and 34788-H A/C RRR machines.

34411-F – Use with the Robinair 34788, 34988, and 34788-H A/C RRR machines.

A/C flushing part of your regular A/C service
Make flushing part of your regular A/C service. You know that not all A/C jobs are simple recharges — there are times when you need to flush a vehicle's air conditioning system to ensure that it operates satisfactorily. These circumstances fall into three categories:

Routine Maintenance — As an air conditioning system ages, oil, sludge, and particulates build up, plug screens, expansion valves, and capillary tubes. Periodically, you should flush the system components to remove these contaminants.

Repairs — To be sure the system will operate properly, you should flush it whenever you repair or replace components. Failed components may contain metal shavings, sludge, and other debris that damage the system or affect the operation.

R-134a Retrofits — In some cases, conversion procedures call for complete removal of existing oil in an A/C system before changing fittings and recharging with R-134a. Flushing is the most thorough means of removing the oil, and it will also pick up any refrigerant residue in the system. Flushing, combined with pulling a deep vacuum, is your assurance the system is ready for the new refrigerant.

A/C Component Flusher
The 17580 makes flushing of lines, evaporators, and condensers fast and easy.

Features
- Closed Loop Circulates solvent continuously through components (adapters are needed).
- Pulsing Action Loosens dirt, corrosion, and other debris; by switching the hoses, you can also back flush.
- Air Agitation Needle Valve Bubbles air into liquid stream to enhance cleaning action.
- Hose Adapters Contains adapters to mate with 1/4” flare and 3/8” quick disconnect fitting kits.
- Sight Glass To observe flow rates and cleaning process.

One gallon of solvent is needed for the flush procedure. The unit purges solvent from the component, collecting the used material in the collection tank. An activated charcoal filter limits emissions and odors during flushing and purging.

Adapter Kit
17607 – Universal A/C flushing adapter kit.
17581 – Adapter.

Specifications
- Dimensions 52" H x 33" W x 20" D
- Weight 110 lbs. (50 kg)
- Supply Pressure 80–150 psi.
Recycling Filter-Driers
Specially blended for maximum acid and moisture removal.
17630 – Inlet filter for 17625A, 34650.
17663 – Inlet filter for 17650A.
17677 – XH-9 filter drier for 17800A, 17800-2K series (not shown).
19776 – Quick change filter for 17800B.

Refrigerant Tanks
17121 – 30 lb. tank, 1/4” fittings (25150, 25175, 25200B, 34234, 34300-2K, 34800 series).
17506 – 50 lb. tank, 1/4” fittings (17800A, 17800-2K, 17700A, 25150, 25175, 25200B series).
17605 – 30 lb. tank with float switch (17650A series).
17572 – 50 lb. tank with float switch.
17686 – 50 lb. tank with 3/8” fitting, float assembly for 17680A series.
34579 – 30 lb. tank (34650 series).
34750 – 50 lb. tank for R-134a (34700 series).

10986
Orifice Tube Remover
Use this handy tool to remove the orifice tube before flushing. Speeds service by removing the build-up of particulates on the orifice screen and restrictions that slow flushing. The basic tool works on GM and Ford vehicles and comes with: an extender body for 1985 and newer Ford models; an adapter for 1989–91 GM “J”, “L”, and “N” cars; and an adapter for 1991 and newer GM “C” and “K” trucks with #3096068 orifices.

17595
Flush Gun Kit
An economical means of flushing contaminants and scale from A/C system components, the flush gun uses dry shop air to pressurize the solvent. The process thoroughly cleans the part, removing oil, any refrigerant contaminants, and residue. The attached nozzle directs the flow of solvent without spray-back.

175065
Power Flush Solvent
Gives you the cleaning power to flush particulates and system lubricant from A/C and refrigeration lines, evaporators, and condensers. An ideal substitute for CFC-113, it has excellent cleaning properties and good evaporation rate. Compatible with all CFC, HCFC, and HFC refrigerants. Meets ANSI/ASHRAE 97-1933.
17565 – Gallon, six per carton.
17609 – Quart, six per carton.
CoolTech ID Plus Refrigerant Identifier
Critical for today’s automotive A/C service
It’s been estimated that one in 10 vehicles on the road has an A/C system with contaminated refrigerant. The only way to know for sure if you can safely recover these charges is with a refrigerant identifier. You may also save hundreds of dollars by checking bulk tanks for purity before use.
Robinair’s CoolTech line shows you in just seconds if it’s safe to recover or recharge the refrigerant. There’s no guesswork, because a red light indicates “fail”, while a green light is your signal to continue with service. For R-12 and R-134a vehicles.

Fast and Accurate — Displays test results in less than a minute and passes the refrigerant only if it’s 98% pure. To ensure consistent, rapid results, the units are not pressure/temperature dependent.
Reliable Technology — The instruments use dependable infrared technology developed by Neutronics, Inc., to determine if the refrigerant is an acceptable type and is pure enough to be used.

Unique Case Design — Puts all the components up front where you can see them at a glance, including the filter. Contoured case can be held in either hand, and rubber feet protect the vehicle’s finish.

Identifies refrigerant type and purges damaging air
In addition to dependable refrigerant identification, the ID Plus measures non condensable gases (air) in the refrigerant and purges them directly from the tank or system.
- Displays the actual percentage of R-12, R-134a, R-22, and air in the system or tank.
- Gives you the option of purging air if significant concentration is found.
- Hydrocarbon alarm sounds if flammable substances are sensed.
- On-board printer port allows you to connect a printer for a hard copy of testing results.

Replacement Parts
16910 – Replacement filter.
19713 – R-12 replacement hose.
19714 – R-134a low-side coupler, 1/2” Acme internal adapter.
19716 – R-134a replacement hose.

Specifications
| Refrigerant | R134a |
| Input Power | 12 VDC |
| Accuracy | Pass/Fail - 95% pure R134a |
| Air Detection | Yes |
| Approvals | SAE J1771, UL/C |

DiscovR™ Refrigerant Identifier
How pure is your refrigerant?
Most technicians never question the purity of virgin refrigerant, and most assume the refrigerant in a vehicle is “pure enough” unless the A/C system has a mysterious cooling problem.
If a technician has no way of checking the refrigerant before they pull it out of a customer’s vehicle into their recovery equipment it may contaminate their service equipment as well as other vehicles that are serviced with the contaminated equipment.

The first line of defense
The best defense against unknown refrigerant and the risks associated with unknown refrigerant is a refrigerant identifier. With the new Robinair 16009 DiscovR™ 134a refrigerant identifier you can:

Protect your A/C service equipment — Know whether or not you have acceptable R134a refrigerant before servicing the vehicle with the DiscovR™ refrigerant identifier.

Guard against costly recovery equipment repairs — Contaminated refrigerant can wreak havoc on any R134a recovery, recycle and recharge machine. The average repair cost is $300, and in many cases contaminated refrigerant will void the product’s warranty. Shield your RRR machine from contaminated refrigerant by using the DiscovR™ refrigerant identifier before connecting to the vehicle.

Uncover hard to find air contamination — DiscovR™ refrigerant identifier notifies you when the system contains excessive air.

Fast and Accurate — “Pass” and “Fail” lights clearly show if refrigerant is pure enough to be recovered.

Replacement Parts
16109 – Replacement hose and filter (3 pack).

Specifications
| Refrigerant | R134a |
| Input Power | 12 VDC |
| Accuracy | Pass/Fail - 95% pure R134a |
| Air Detection | Yes |
| Approvals | SAE J1771, UL/C |
A/C Recovery & Recycling
Refrigerant Leak Detectors

22791
InfraRed Refrigerant Leak Detector
The InfraRed Refrigerant Leak Detector uses infrared optics to create a refrigerant leak detector that combines sensitivity, speed, battery life, portability, and ease of use.
- Advanced infrared sensor designed to last a minimum of 10 years.
- Three sensitivity levels down to 0.15 oz./year.
- Automatically recalibrates in highly contaminated areas to help pinpoint the exact location of the leak.
- Won’t trigger on oil or moisture.
- Senses CFC, HFC, HCFC blends and HFO-1234yf refrigerants.
- 8-hour lithium-ion battery lasts all day long and beyond.
- Visual alert and peak button make it easy to find leaks in noisy environments.
- Audible alert with mute button.
- Magnetic hanger to easily hang the unit during leak repair.
- Durable carrying case lets you easily store leak detector and accessories.
- Meets NEW SAE J2913 standard for 1234yf and previous SAE J2791 standard for 134A.

The InfraRed Refrigerant Leak Detector includes, wall charge, car charger, 5 filters, 3 O-rings, lithium-ion battery and blow-molded carrying case.

Optional Accessories
74367 – Extension Probe (9 inch)
74368 – Rigid Extension Probe

Replacement Parts
74361 – 100–240 VAC Charger
74362 – 12V DC Charger
74363 – Filters (5) and O-rings (3)
74364 – Lithium-ion Battery

TIFZX
Heated Pentode® Refrigerant Detector
The TIFZX uses proven heated-pentode technology with an improved grip and easy-to-read display. The design of the TIFZX eliminates false alarms from moisture, solvents and cleaners. An improved, true mechanical pump allows for instant response and clearing.
- Heated Pentode® sensor technology
- Tri-color visual leak size indicator
- Detects all CFC, HFC, HCFC’s including R-12, R-22, R-123, R-134a, R-404a, R-407a, R-408a, and R-410a.
- Tactile keypad controls with one-touch reset and adjustable sensitivity
- True mechanical pump provides instant response and clearing
- Battery test function
- Sensor failure indication
- Rechargeable batteries
- Revolutionary design
- Three year warranty

Specifications
Sensor Technology
Heated Pentode® (advanced heated diode)

Electronic Technology
Microprocessor-controlled circuit, including constant battery and sensor condition detector

Refrigerants detected
Dflags all CFC, HFC, HCFC’s including R-12, R-22, R-123, R-134a, R-404a, R-407a, R-408a, and R-410a

Sensitivity
Less than 0.1 oz/yr (3 gr/yr); as low as 0.05 oz/yr (R-12)

Warm-up Period
20 seconds

Excessive Refrig. Tolerance
Sensor cannot be poisoned by excessive refrigerant

Battery Life
5 to 6 hours, depending on sensor age. Integral constant power indication

Battery Technology
Rechargeable NiMH

Battery Recharge Time
2 hours, integral charge status indicator

Failed Sensor Indication
All LEDs flash red, pump off

Sensor Life
Up to 150 hours

Operating Environment
0°C to 50°C (32°F to 122°F), 0 to 95% RH non-condensing

Dimensions
26 cm L x 6.5 cm Dia. (10.25” L X 2.5” Dia.)

Weight
Approximately 452 grams (16 ounces)

Specifications
Gases measured
CFC, HFC, HCFC blends and HFO-1234yf

Sensing element
Infrared

Response time
0.5 to 1 second

Sensitivity levels
HIGH 0.15 oz./year and higher
MEDIUM 0.25 oz./year and higher
LOW 0.5 oz./year and higher

Accuracy
Meets current SAE J2791 and J2913 standards

Calibration
Automatic

Warm up time
30 seconds

Probe length
15 inches

Battery type
3.7VDC(nominal) rechargeable lithium-ion battery

Battery life
Approximately 8 hours when fully charged
Heated Pentode® Refrigerant Detector Kits

TIFZX includes:
(1) ZX Refrigerant Leak Detector
(1) Battery charger
(1) Battery pack, nickel metal hydride (NiMH)

International Models
TIFZX-E  Same as TIFZX (220-240V)
TIFZX-J  Same as TIFZX (90-110V)

TIFZXKIT includes:
(1) ZX Refrigerant Leak Detector
(2) Replacement sensors
(5) Replacement filters
(2) Battery pack, nickel metal hydride (NiMH)
(1) Charging base
(1) Battery charger
(1) Soft carrying case
(1) Owner’s manual
(1) Owner’s manual

International Models
TIFZXKIT-E  Same as TIFZXKIT (220-240V)
TIFZXKITJ  Same as TIFZXKIT (90-110V)

Replacement Parts & Accessories
TIFZX-2  Replacement Heated Pentode® Sensor
TIFZX-3  110V-60 Hz Battery charger (North and South America)
TIFZX-3E  230V-50 Hz Battery charger (Europe, Asia)
TIFZX-6  Remote Battery charging base, 110V-60 Hz (Optional)
TIFZX-7  Nickel-Metal hydride (NiMH) battery pack
TIFZX-10  Flexible probe (includes probe tip)
TIFZX-11  12V DC battery charger
TIFZX-14  Filter and O-ring
TIFZX-15  Filter elements (5 pack)
TIFZX-55  Soft carrying case
TIFXL-1A, TIFRX-1A, TIFXP-1A Leak Detectors

The revolutionary new “Generation X” line of TIF refrigerant leak detectors brings you tomorrow’s technology today. We not only changed the way our leak detectors look, but the way to look at leak detectors. Innovative MPC circuitry and Advanced Digital Signal Processing monitor the sensing tip up to 2000 times per second. Automatic reset, true mechanical pump, and visual indicators (TIF XP-1 and TIF RX-1) speed and simplify leak searches.

A completely re-designed sensing tip increases sensitivity, improves reliability, and lasts twice as long as its predecessor. This results in fewer comebacks, less hassle, and lower maintenance costs. We are so confident in the design and quality of these detectors that they are backed by a warranty of up to 3 years.

All Models Feature
- Microprocessor controlled circuit with Advanced Digital Signal Processing.
- Detects ALL halogenated refrigerants.
- Certified to SAE J1627.
- Variable frequency audible alarm.
- CE approval.
- UL classified.
- Constant power indication.
- Cordless and portable; operates on two C-cell batteries.
- 14” (35.5 cm) flexible stainless steel probe with liner.
- Carrying case included, optional holster.
- Optional reference leak source.

Additional Features
- TIFXL-1A
  - Single switch control.
  - Two-year warranty.
- TIFRX-1A
  - Six-segment visual leak size indicator.
  - True mechanical pump provides positive airflow through sensing tip.
  - High and low sensitivity levels.
  - One touch reset.
  - Tactile keypad controls.
  - Two-year warranty.
- TIFXP-1A
  - Tri-color, six-segment visual leak size indicator displays 18 alarm levels.
  - Seven levels of sensitivity adjustment provide an increase of up to 64x.
  - Battery test function with true voltage indication.
  - Mute feature silences audible alarm.
  - True mechanical pump provides positive airflow through sensing tip.
  - One touch reset.
  - Tactile keypad controls.
  - Three-year warranty.

Replacement Parts (all models)
- TIFXP-2 – Maintenance kit (3 tips, 3 protectors).
- TIFXP-5A – Battery cover.

Specifications

<table>
<thead>
<tr>
<th>Power Source</th>
<th>3V DC; 2 “C” cell alkaline batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Sensitivity</td>
<td>TIFXL-1A - Less than 0.4 oz./yr. (11g/yr.)</td>
</tr>
<tr>
<td></td>
<td>TIFRX-1A - Less than 0.25 oz./yr. (7g/yr.)</td>
</tr>
<tr>
<td></td>
<td>TIFXP-1A - Less than 0.1 oz./yr. (3 g/yr.)</td>
</tr>
<tr>
<td>Sensing Tip Life</td>
<td>Approx. 20 hours</td>
</tr>
<tr>
<td>Operating Range</td>
<td>30° to 125° F (0° to 52° C)</td>
</tr>
<tr>
<td>Battery Life</td>
<td>TIFRX-1A and TIFXP-1A – Approx. 30 hrs.</td>
</tr>
<tr>
<td></td>
<td>TIFXL-1A – Approx. 40 hrs.</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>Continuous</td>
</tr>
<tr>
<td>Response Time</td>
<td>Instantaneous</td>
</tr>
<tr>
<td>Reset Time</td>
<td>One second</td>
</tr>
<tr>
<td>Warm-up Time</td>
<td>Approx. 2 seconds</td>
</tr>
<tr>
<td>Unit Weight</td>
<td>1.2 lbs. (560 grams)</td>
</tr>
<tr>
<td>Unit Dimensions</td>
<td>9” x 2.25” x 2.25” (22.9 cm x 5.7 cm x 5.7 cm)</td>
</tr>
<tr>
<td>Fixed Probe Length</td>
<td>14” (35.5 cm)</td>
</tr>
</tbody>
</table>
**Combustible Gas Detector**

The TIF8800X is a low maintenance, battery operated, combustible gas detector that provides a ticking signal that increases in frequency as the source of combustible gas or vapor is located. The TIF8800X is small enough to be operated with just one hand, yet loaded with the kind of advanced features service professionals demand. This tool allows you to pinpoint combustible gas leaks as small as 1 ppm quickly, while checking a relatively large area in a short amount of time with absolutely no calibration required.

**Applications**

The TIF8800X may be used in almost any situation where a combustible gas, vapor, or residue needs to be found. An ideal instrument for pinpointing combustible gas leaks in commercial, residential, and industrial applications.

- Audible "ticking" signal
- Leak strength indicating LEDs
- Adjustable sensitivity
- Cordless operation
- Fast warm-up
- Battery status indication
- 15 inch flexible probe for hard-to-reach areas
- One-year warranty

Kit includes: TIF8800X, battery, battery charger and soft case.

**International models**

TIF8800X-E – 220V

**Replacement Parts**

- TIF8801 – Sensor
- TIF8802 – A/C adapter
- TIF8802E – A/C adapter 220V
- TIF8808 – Battery cover
- TIF8809 – Ni Mh battery pack
- TIF8818 – Rubber boot

---

**16600**

**Electronic Leak Detector**

For all CFC, HCFC, and HFC Refrigerants

Robinair’s electronic leak detector is ergonomically designed to fit in your hand. Holding it is natural and comfortable, and it fits into tight spots, so you can thoroughly check for leaks. No. 16600 is packed with features that help you pinpoint leaks quickly.

**One-Hand Operation** — The 16” gooseneck probe holds its position so you can operate the detector with one hand.

**Audible and Visual Leak Indicators** — An alarm increases in frequency as the tip gets close to a high concentration of refrigerant. LEDs are especially helpful when you’re working in a noisy environment.

**Threshold Balancing Control** — Gives you infinite control for eliminating background contamination, so you can zero in on the leak site.

**Volume Control** — Adjust the audible leak signal to the volume that’s right for the background noise in the shop or at the job site.

**Reliable Technology = Dependable Leak Detecting**

No. 16600 uses proven corona discharge technology to sense leaks. It works by creating a high voltage corona in the sensing tip. When this field is interrupted by refrigerant, the alarm is triggered. All corona discharge leak detectors are not the same, however — the quality of key components is critical in providing an effective instrument.

**Transformer** — To create the high voltage corona, the unit must “pump up” from the battery output to 2000 volts. It takes a specialized transformer to consistently provide this voltage, and ours is the result of years of testing and field use to ensure operation you can rely on.

---

**16503**

**Sensing Tip**

The materials, shape, and finish of the sensor and surrounding shell are critical to the effectiveness and life of the tip. Specially engineered tip is built with a mirror finish for superior sensitivity and durability.

---

**Specifications**

<table>
<thead>
<tr>
<th>Power Source</th>
<th>4.8V NiMH rechargeable battery pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td>Continuous</td>
</tr>
<tr>
<td>Time</td>
<td>Approximately 4 hours</td>
</tr>
<tr>
<td>Battery Pack</td>
<td>Lifetime Approximately 500 charge cycles</td>
</tr>
<tr>
<td>Warm-up</td>
<td>30 seconds</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>Continuous; no limitation</td>
</tr>
<tr>
<td>Response Time</td>
<td>Instantaneous</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Variable; as low as 1 ppm (gasoline)</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>32°F to 104°F (0°F to 40°C)</td>
</tr>
<tr>
<td>Unit Weight</td>
<td>Approximately 16 ounces (454 grams)</td>
</tr>
<tr>
<td>Unit Dimensions</td>
<td>8 in. x 3 in. x 1.8 in. (20.3 x 7.6 x 4.6 cm)</td>
</tr>
<tr>
<td>Certifications</td>
<td>UL913 7th Edition (use in Class I, II, or III, Division 1 hazardous (classified) locations)</td>
</tr>
</tbody>
</table>
A/C Recovery & Recycling
Combustible Gas, Ultrasonic Detectors & Digital Thermometers

TIF8900
Combustible Gas Detector
The TIF8900 is a super-sensitive, cordless, combustible gas detector that detects a broad range of natural gases including propane, methanol, butane, and gasoline.
- Solid-state sensor technology.
- Long life, and precision.
- Adjustable sensitivity levels; as low as 5ppm.
- Audible “Geiger counter” signal.
- Rechargeable battery and charger included.

International models
TIF8900-E – 220V.

Replacement Parts
TIF8801 – Sensing tip.
TIF8803A – 115V battery charger.
TIF8805 – Cigarette lighter adapter.
TIF8806A – Rechargeable Ni-Cad batteries.
TIF8806B – 220V battery charger.

Specifications
- Power Source: Two 2.4V Ni-Cad batteries (included)
- Battery Life: Approx. 4 hours per charge
- Dimensions: 8-1/2” L x 2-1/2” W x 2” D (21.59 cm x 6.35 cm x 5.08 cm)
- Operating Range: 32° F to 105° F
- Probe Length: 16 inches, weights 12.3 oz.

16455
TruTrack Ultrasonic Leak Detector
Use TruTrack to identify:
- Refrigerant leaks
- Pressurized gas leaks
- Vacuum leaks
- Dry nitrogen gas leaks
- Steam leaks
- Failing solenoids, valves, bearings

Easy to Use — Just put on the headset, adjust the sensitivity level, and place the sensor near the suspected problem area; you can use the sensor alone or with one of the probes.

Positive Identification — You hear the sound of the leak in the headset with no beeps or squeals; the sound is loudest when you are near the leak.

Accurate — Wind, stray gases, or other contaminants will not trigger a false alarm; the unit suppresses most background noises.

Dependable — There are no clogged tips to clean, or sensors to replace, to get accurate readings.

Versatile — Ideal for a wide range of service and preventive maintenance applications. Taking regular readings of bearing or solenoid function, for instance, can show increased noise, which may be a sign the component is starting to fail.

16455 — Comes complete with padded carrying case, headset, solid contact probe, and flextube.

Replacement Parts
16956 – Contact probe.
16958 – Replacement headset.

43240
Digital Thermometer
- Sampling time is just one second;
- HOLD button freezes display for accuracy.
- Easy-to-read display can be read even in direct sunlight.
- Durable case includes a cover to protect the probe.
- Min/Max display for reading temperature ranges.

Specifications
- Range: -40° to 390° F (-40° to 200° C)
- Accuracy: ± 2° F between -14° and 212° F
- ± 1° C between -10° and 100° C, Otherwise: ± 3° F (±1° C)
- Display Resolution: 0.1° F (0.1° C) throughout range
- Battery: One 1.5V x 1, Size LR44

43230
Swivel Head Digital Thermometer
- 180° swivel head makes display easier to read in tight places.
- Reliable readings over the entire temperature range.
- Sampling time is just one second.
- Durable case includes a pocket clip.
- For surface, liquid, and air temperatures.

Specifications
- Range: -58° to 302° F (-50° to 150° C)
- Accuracy: ± 2° F between -4° and 248° F
- ± 1° C between -20° and 120° C, Otherwise: ± 4° F (±2° C)
- Display Resolution: 0.1° F (0.1° C) throughout range
- Battery: One 1.5V x 1, Size LR44
- Automatic Power OFF: After 10 minutes if ON/OFF is not pressed.

Dial Thermometers
All pocket thermometers come with a pocket-clip carrying case for protection and easy access. Easy-to-read faces are available in a variety of sizes and ranges.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Temperature</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10596</td>
<td>-40° to +160°F</td>
<td>1&quot; dial face</td>
</tr>
<tr>
<td>10597</td>
<td>0° to +220°F</td>
<td>1&quot; dial face</td>
</tr>
<tr>
<td>10945</td>
<td>0° to +220°F</td>
<td>1-3/4&quot; dial face</td>
</tr>
<tr>
<td>40859</td>
<td>-40° to +70°C</td>
<td>1&quot; dial face</td>
</tr>
</tbody>
</table>

16451
TruTrack Ultrasonic Sound Generator
An ideal accessory for Robinair’s Model 16455 Ultrasonic Leak Detector, the sound generator detects seal failure in refrigerators, microwaves, vehicle passenger compartments, trunks, and any other location where there should be a good seal. Battery-operated unit emits special frequency from inside the test area; where the sound can be heard, a leak exists.

Specifications
- Power Source: One 9V battery (included)
- Dimensions: 4-1/2” L x 3-3/8” W x 3/4” D (11.43 cm x 8.57 cm x 1.9 cm)
- Weight: 5 oz. (140 g)
A/C Fluorescent Dyes

- Exceeds all industry performance standards.
- Compatible with all materials found in a vehicle's A/C system.
- Meets the new SAE J2297 standard for use with both R134A and R1234YF.
- REACH and CLP compliant.

UV Leak Detection

- Meets the new SAE J2297 standard for use with both R134A and R1234YF.
- The easiest and most accurate gun available today.
- One squeeze injects a pre-measured amount (1/8 oz.) of dye. No more adding too much dye.
- Brightest dyes in the industry, exceeds all industry performance standards.
- Most powerful light in its class. Fluorescent dye from up to 50ft away. (Light is only used in 16235 kit)

16234 Injection gun. Fluorescent leak detection dye.

UV Leak Detection Kit includes:
- Powerful 50-watt/12-volt UV lamp with 15' cord and battery clips.
- Injection gun with R-134a hose and R-12 adapter. Four universal A/C dye twist-on cartridges (No. 16356).
- Enough dye for 20 applications (OEM-approved and SAE-certified dye).
- UV enhancing glasses with dye cleaner.

UV Lamps

- 12V UV lamp, UV shield/enhancer glasses, power cord with battery clips, CE approved.
- Replacement 50 watt bulb for 16345.
- On/Off switch for 16345.
- Replacement lens for UV lamp for 16345.
- 120V battery charger.
- 220V battery charger.
TIF7620, TIF7612, TIF7610 IR Thermometer PRO

- Complete IR design is incorporated inside of a single chip, reducing space and creating a compact and light weight product.
- Innovative optical lens – accurate measurements; wide temperature range.
- Laser pointer – Easy to define the target area to be measured.
- Extend temperature – TIF7612 and TIF7620 have a thermocouple interface that can extend the temperature up to 1999°F.
- Simple and easy to operate – Simply point at desired target and press the trigger button for a temperature reading.
- Set alarm temperatures (Low and High Temperatures) to receive alert information when the you are measured out of the range (TIF7612 and TIF7620 only).
- (MAX), (MIN), Difference between MAX and MIN (DIF), and average (AVG) modes are available in TIF7612 and TIF7620.
- The new TIF IR thermometers incorporate visual low battery indication and simple operation of two “AAA” batteries.

<table>
<thead>
<tr>
<th>Specification</th>
<th>TIF7610</th>
<th>TIF7612</th>
<th>TIF7620</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement Range</td>
<td>-76 to +932°F (-60 to +500°C)</td>
<td>-76 to +932°F (-60 to +500°C)</td>
<td>-76 to +1400°F (-60 to +760°C)</td>
</tr>
<tr>
<td>Thermocouple Measurement Range</td>
<td>N/A</td>
<td>83.2 to +1999°F (-64 to +1400°C)</td>
<td>83.2 to +1999°F (-64 to +1400°C)</td>
</tr>
<tr>
<td>Accuracy: Tobj = 59°-95°F (15-35°C) Tamb=77°F (25°C)</td>
<td>±1.8°F (1.0°C)</td>
<td>±1.8°F (1.0°C)</td>
<td>±1.8°F (1.0°C)</td>
</tr>
<tr>
<td>Accuracy: Tobj = -27-932°F (-33-500°C) Tamb= 73°F ±5°F (23 ± 3°C)</td>
<td>±2% of reading or 4°F (2°C) whichever is greater</td>
<td>±2% of reading or 4°F (2°C) whichever is greater</td>
<td>±2% of reading or 4°F (2°C) whichever is greater</td>
</tr>
<tr>
<td>Thermocouple Accuracy</td>
<td>N/A</td>
<td>±1% of reading or 1.8°F (1°C) whichever is greater (Test under Tamb=73±1°F[23±1°C])</td>
<td>±1% of reading or 1.8°F (1°C) whichever is greater (Test under Tamb=73±1°F[23±1°C])</td>
</tr>
<tr>
<td>Emissivity</td>
<td>0.95 fixed</td>
<td>Adjustable</td>
<td>Adjustable</td>
</tr>
<tr>
<td>Resolution: 14.2°F – 199.9°F (-9.9°C – 199.9°C)</td>
<td>0.1°F/0.1°C (1°F below 9.9°C and above 199.9°F)</td>
<td>0.1°F/0.1°C (1°F below 9.9°C and above 199.9°F)</td>
<td>0.1°F/0.1°C (1°F below 9.9°C and above 199.9°F)</td>
</tr>
<tr>
<td>Spectral Response</td>
<td>5 ~ 14μm</td>
<td>8 ~ 14μm</td>
<td>8 ~ 14μm</td>
</tr>
<tr>
<td>Response Time (90%)</td>
<td>.5 sec</td>
<td>.5 sec</td>
<td>.5 sec</td>
</tr>
<tr>
<td>Distance: Spot</td>
<td>10:1</td>
<td>12:1</td>
<td>20:1</td>
</tr>
<tr>
<td>Battery Life</td>
<td>Typ. 18 hours</td>
<td>Typ. 18 hours</td>
<td>Typ. 18 hours</td>
</tr>
<tr>
<td>Dimensions</td>
<td>175.2 x 39.0 x 71.9mm</td>
<td>175.2 x 39.0 x 71.9mm</td>
<td>175.2 x 39.0 x 71.9mm</td>
</tr>
<tr>
<td>Weight</td>
<td>179 grams including batteries (AAA*2pcs)</td>
<td>179 grams including batteries (AAA*2pcs)</td>
<td>179 grams including batteries (AAA*2pcs)</td>
</tr>
</tbody>
</table>

TIF7201

Pocket IR Thermometer

- System-on-a-chip SoC technology: compact and lightweight
- Backlit LCD display w/ dual readings
- °C / °F Switch and MAX function
- Auto power off after 15 sec.
- Battery level indication
- Distance to spot (D/S): 1:1

Applications:
- Automotive
- Electrical
- General home use
- HVAC/R

Available in 4pk. display.
TIF7201D
(Includes 4 of the TIF7201)
2-Way Aluminum Manifolds
Manifold bodies are constructed from solid aluminum for added durability needed for repeated, tough daily use. Contoured easy to grip hand wheels are color coded for quick and easy identification.

- Improved face seal valves. Better design provides a tighter seal, less wear and improved flow.
- Double O-ring piston for extra reliability and longer service life.

48150
Dual R12/134a Kit
- Brass manifold with easy-to-grip handles.
- R12/R134a gauges, PSI, and °F Temp.
- 1/2" ACME bottom ports.
- Rear R134a and 1/2" ACME fittings for holding hoses.
- 90° manual couplers.
- 72" R134a Hose Set (1/2" ACME x 14mm).
- 72" R12 Hose Set (1/2" ACME x 1/4" MFL).
- Blow molded carrying case.

48134A
R134 brass manifold, 90° manual couplers and 60" R134a hose set.

48134B
R12 and R134 brass manifold, 90° manual couplers and 60" R12/R134a hose sets.

48134A
R134 aluminum manifold, 90° manual couplers, 60" R134a hose set and blow-molded case.

48134B
R12 & R134 aluminum manifold, 90° manual couplers, 60" R12/R134a hose sets and Blow-molded case.

Economy Manifolds

41234
R1234yf Aluminum Manifolds and Hose Set
- Easy-to-read 3-1/8" adjustable gauges.
- Durable aluminum manifold block with fittings.
- Improved face seal valves provide a tight seal, less wear and improved flow.
- Easy-to-grip control knobs.

Digital Manifold Gauges
The low side gauge has a pressure scale of 30 inHg VAC to 250 psig and the high side gauge has a pressure scale of 0 to 800 psig. Gauges come with a backlight to enhance the view and make the gauges easy to see in low light conditions.

- Includes profiles for 17 common refrigerants.
- Detects vacuums in "Hg.
- Selectable temperature and pressure units of measure.
- Easy-to-read LCD screen with large digits.
- Automatic shutdown after 15 minutes of inactivity.
- Low battery indicator.

Part No.  Description
11910  Low side digital gauge
11920  High side digital gauge
43180  2-Way Manifold with Digital Gauges - No hoses
43186  2-Way Manifold with Digital Gauges - and 60" Enviro-Guard hoses
A/C Recovery & Recycling
A/C Gauges, Service Couplers & Accessories

Service Couplers for Automotive R-134a
Field service couplers connect to our special Enviro-Guard hoses to allow access to service ports on automotive R-134a A/C systems. The quick-connect design has an integral safety sleeve, which protects against injury and refrigerant loss if the coupler is disconnected under pressure. The compact design easily fits into tight quarters, which is especially handy for retrofits. Six-ball couplers provide a more stable grip on the fitting than do couplers with four balls.

18190A — Low-side manual coupler, blue actuator.
18191A — High-side manual coupler, red actuator.
18192 — Set of manual service couplers.
18341 — High- and low-side automatic couplers.
19150 — O-ring kit for field service couplers.

R-1234yf Service Couplers

- Integrated safety sleeve, protects against refrigerant loss.
- Compact design.
- Provides a stable grip on the fitting.

18122 — R-1234yf Low side service coupler.
18123 — R-1234yf High side service coupler.
18124 — R-1234yf High- and low-side service coupler set.

Replacement Gauges
11780 — Replacement gauge. Blue/Low side - 3-1/4 in. PSI pressure readings and R-1234yf temperature readings in degrees F.
11781 — Replacement gauge. Red/High side - 3-1/4 in. PSI pressure readings and R-1234yf temperature readings in degrees F.
11784 — Replacement gauge. Blue/Low side - 3-1/4 in. PSI pressure readings and R12/ R134A temperature readings in degrees F.
11785 — Replacement gauge. Red/High side - 3-1/4 in. PSI pressure readings and R12/ R134A temperature readings in degrees F.
11794 — Replacement gauge (replaces 11692). Universal compound replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Fahrenheit.
11797 — Replacement gauge.
Universal compound replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Fahrenheit.
11795 — Replaces 11693.
Universal pressure replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Fahrenheit.
11798 — Replacement gauge.
Universal pressure replacement gauge, psi/kPa pressure readings, R-22 and R-134a temperature readings in degrees Celsius.
11796 — Replacement gauge lens.
Replacement gauge lens, quarter turn on-off.

Side-Wheel Manifolds with 1/4" Fittings
Our popular side-wheel manifold is easy to use and designed for accuracy.

Bar — Solid forged brass for long life; handwheels are durable, color-coded Lexan™.

Universal Gauges — Clearly marked so they’re easy to read and protected with Lexan™ lenses.

Field-Proven Face Seal Valve — Prevents leakage past the stem.

Models
40152 — Standard side-wheel manifold, color-coded gauges, Fahrenheit scale, brass bar, handwheels, and hanging hook— no hoses.
40151 — Standard side-wheel manifold, color-coded gauges, Celsius scale, brass bar, handwheels, and hanging hook— no hoses.
40153 — Standard side-wheel manifold set, includes three 36” standard hoses with 1/4” fittings.
40169 — Standard side wheel manifold set, includes three 60” standard hoses with 1/4” fittings.

Replacement Parts Kit for R-134a Manifold Gauges and Hoses

- 4 manifold stems.
- 6 o-rings, 14 mm.
- 12 valve core depressors.
- 12 hose gaskets, 1/4”.
- 12 manifold stem o-rings.
- 6 Quick Seal™ o-rings for R-134a.
- 2 caps with straps, 1/2" Acme.
- O-ring lubricant (high vacuum grease).
- Valve core remover/installer with 6 valve cores.
- 4 color-coded Lexan™ handwheels & screws.
- Set of R-134a coupler o-rings, high- and low-side.
### Stem Replacement Assembly Kit
Kits include all necessary parts to service one manifold valve. To replace stems on both valves, order two kits.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40232</td>
<td>Stem assembly kit for manifolds with conical seal design.</td>
</tr>
<tr>
<td>13148</td>
<td>Face seal kit for side-wheel manifolds, includes stem with o-rings, spring, and screw. Will not fit sight glass manifold.</td>
</tr>
<tr>
<td>19695</td>
<td>Face seal kit for sight glass manifolds.</td>
</tr>
<tr>
<td>13067</td>
<td>High vacuum grease.</td>
</tr>
</tbody>
</table>

### Replacement Handwheels

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40449</td>
<td>Set of one red and one blue with 1/4” drive.</td>
</tr>
<tr>
<td>41698</td>
<td>Set of one red and one blue with 1/4” drive (barrel style).</td>
</tr>
</tbody>
</table>

### Replacement Parts for Hoses and Adapters
Help’s you keep your charging hoses and adapters in top working condition.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18180</td>
<td>O-rings for Quick Seal™ 1/4” fittings and adapters, package of six.</td>
</tr>
<tr>
<td>40531</td>
<td>O-rings for 10293 adapters, package of six.</td>
</tr>
<tr>
<td>40082</td>
<td>1/4” valve core depressors, package of six.</td>
</tr>
<tr>
<td>40083</td>
<td>1/4” gaskets, package of six.</td>
</tr>
<tr>
<td>40084</td>
<td>3/8” gaskets, package of six.</td>
</tr>
<tr>
<td>40677</td>
<td>3/16” gaskets, package of six.</td>
</tr>
<tr>
<td>40653B</td>
<td>3/16” valve core depressors, package of six.</td>
</tr>
</tbody>
</table>

### Hoses

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30072</td>
<td>Standard hose (500/2500 psi) – 72”, 1/4” SAE internal fitting x 1/4” SAE internal.</td>
</tr>
</tbody>
</table>

### Special Hoses for Special Jobs
**Enviro-Guard™ Hoses with Ball Valves**
In-line ball valves control refrigerant flow, open and close in a quarter turn.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>65060</td>
<td>Set of three 60” hoses with ball valves.</td>
</tr>
<tr>
<td>65160</td>
<td>60” Enviro-Guard™ hose with ball valve, yellow.</td>
</tr>
<tr>
<td>65260</td>
<td>60” Enviro-Guard™ hose with ball valve, blue.</td>
</tr>
<tr>
<td>65360</td>
<td>60” Enviro-Guard™ hose with ball valve, red.</td>
</tr>
</tbody>
</table>

### Hose Extension Coupler
Connect any number of hoses to get the extra length you need — there’s no need to order special hose lengths.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40333</td>
<td>1/4” MFL x 1/4” MFL, no valve core.</td>
</tr>
<tr>
<td>10328</td>
<td>1/2” Acme external x 14 mm internal (for automotive R-134a).</td>
</tr>
</tbody>
</table>

### 20’ Charging Hoses

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>68020</td>
<td>Set of 20’ Enviro-Guard™ red and blue, 1/4” fittings.</td>
</tr>
<tr>
<td>68420</td>
<td>Set of 20’ Enviro-Guard™ red and blue, Quick Seal™ fittings.</td>
</tr>
</tbody>
</table>
Charging Hoses

Robinair premium refrigerant charging hoses are built for long life and dependability. A strong, six-sided crimp provides a reliable connection between the hose and barb, even at maximum pressure. The coupler nuts are deeply knurled for quick finger-tightening. Enviro-Guard™ hoses are ideal for high pressure applications, including R-410a systems.

### Hose Selection Charts

<table>
<thead>
<tr>
<th>1/4&quot; Standard Hoses with Standard Fittings</th>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neoprene-coated for flexibility and wear resistance, with a valve core depressor and a 45° bend on one end for convenient access to the system. 500 psi working pressure; 2500 psi burst pressure.</td>
<td>36</td>
<td>31036</td>
<td>32036</td>
<td>33036</td>
<td>30036</td>
</tr>
<tr>
<td>60</td>
<td>31060</td>
<td>32060</td>
<td>33060</td>
<td>30060</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>31078</td>
<td>32072</td>
<td>31079</td>
<td>30072</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>31096</td>
<td>32096</td>
<td>33096</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1/4&quot; Standard Hoses with Quick Seal™ Fittings</th>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 psi working pressure; 2500 psi burst pressure.</td>
<td>72</td>
<td>38172A</td>
<td>38272A</td>
<td>38372A</td>
<td>39072A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1/4&quot; Enviro-Guard™ Hoses with Quick Seal™ Fittings</th>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special barrier material prevents virtually any permeation of refrigerant, yet remains flexible. With 45° Quick Seal™ fittings. 740 psi working pressure; 3700 psi burst pressure.</td>
<td>36</td>
<td>68136A</td>
<td>68236A</td>
<td>68336A</td>
<td>69036A</td>
</tr>
<tr>
<td>60</td>
<td>68160A</td>
<td>68260A</td>
<td>68360A</td>
<td>69060A</td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>68172A</td>
<td>68272A</td>
<td>68372A</td>
<td>69072A</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>68196A</td>
<td>68296A</td>
<td>68396A</td>
<td>69096A</td>
<td></td>
</tr>
</tbody>
</table>

### Enviro-Guard™ Hoses for Automotive R-134a

Meets all specifications for low permeation construction. Clearly marked for R-134a. See page 16 for service couplers.

<table>
<thead>
<tr>
<th>Length (inches)</th>
<th>Yellow</th>
<th>Blue</th>
<th>Red</th>
<th>Pkg. Set (Blue, Red, Yellow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>61060</td>
<td>62060</td>
<td>62243</td>
<td>60060</td>
</tr>
<tr>
<td>72</td>
<td>61072</td>
<td>62072</td>
<td>62244</td>
<td>60072</td>
</tr>
<tr>
<td>96</td>
<td>61096</td>
<td>62121</td>
<td>63096</td>
<td>60096</td>
</tr>
<tr>
<td>240</td>
<td>NA</td>
<td>NA</td>
<td>62246</td>
<td>NA</td>
</tr>
<tr>
<td>240</td>
<td>NA</td>
<td>NA</td>
<td>62246</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multi-purpose Dye and Coolant Fluorescent Dye</th>
</tr>
</thead>
<tbody>
<tr>
<td>brightest dyes in the industry to help find leaks faster.</td>
</tr>
<tr>
<td>Exceeds all industry performance standards.</td>
</tr>
<tr>
<td>OEM backed and approved.</td>
</tr>
<tr>
<td>Solvent-free formula.</td>
</tr>
<tr>
<td>REACH and CLP compliant.</td>
</tr>
</tbody>
</table>

### Coolant and Battery Refractometer

This can be used for measuring the freezing point of either propylene and ethylene glycol based cooling systems. It can also be used for checking the strength of electrolyte solution in batteries. This precision instrument features high quality optics with ultra smooth focusing on the body. Coolant scale range: 32° F/0° C to -60° F/-51° C.

### Econo-Clean Coolant Service Accessories

To ensure coolant will provide adequate protection to the vehicle, the coolant should be adjusted to the manufacturer’s specifications. These accessories will help you quickly test coolant.

- **75240** – Coolant test strips — Just dip a strip in coolant and it shows the freeze point and the pH; bottle of 50 strips.
- **75134** – 3-way heavy-duty truck coolant test strips – shows pH, freeze point, and nitrite (0–4000 ppm), pH <7.5–11+, glycol 0–60%.

### Coolant Refiller

- 26" Hg vacuum refills cooling system without air lock.
- Eliminates the need for “bleeding.”
- Checks for system leaks and utilizes OEM approved technology.
- Universal “fits all” cone adapter.
- Built-in gauge protector.
Works on both pressurized and non-pressurized cooling systems.

75700
Coolant Exchange Unit
Designed with the user in mind.
Safety First
- Our "engine off" feature removes pulleys, belts, and fan blades from the safety equation.
- No additional ventilation required.
- Vacuum mode creates a "push/pull" exchange process allowing the technician to safely remove high pressure in a hot system.
- "Hands-off" transfer of used coolant to a bulk tank prevents spills and helps protect the technician.

Simple to Operate
- Two clearly marked valves and an easy-to-read gaugemake this machine very simple to use.
- Sight glass clearly shows the amount of coolant in the waste tank.
- One valve controls the flow of coolant; process is easy to understand—no special training needed.
- No electricity required. 90 psi shop air drives the exchange process, as well as the 2 gpm pump on the waste tank.

Designed to Survive
- Impact-resistant polypropylene cabinet will not scratch or dent vehicle.
- Cabinet is impervious to chemicals commonly used in the shop.
- Large, inflatable tires carry a well-balanced platform easily across any shop floor.
- Easy to maneuver between bays and vehicles.

Extra Design Features
- Two external new coolant supply tanks allow on-board storage of two different coolant types.
- Graduations on tanks show user the amount of new coolant on board.
- On-board storage of step adapters.
- Adapter kit included.
- No hoses to cut.
- 96" hoses can be neatly stored on unit.
- One-year warranty.

Replacement Parts and Accessories
75369 – Replacement coolant 5-gallon tank.
75360 – Heavy-duty adapter kit. Links the two tanks for 14 gal. capacity to service class A vehicles. (Note: must have 7-gallon tank No. 75370).
75370 – Replacement coolant 7-gallon tank.
17490 – Protect your investment with a heavy-duty vinyl dust cover.

Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>90 psi shop air</td>
</tr>
<tr>
<td>Tanks</td>
<td>Internal waste – 15-gallon capacity</td>
</tr>
<tr>
<td></td>
<td>External supply (2) 7-gallon capacity (removable)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>47” H x 26” W x 33” D (119 cm x 66 cm x 84 cm)</td>
</tr>
<tr>
<td>Medium Step Adapter</td>
<td>Two included; fits hose size 1-1/4&quot;, 1-3/8&quot;, and 1-1/2&quot;</td>
</tr>
<tr>
<td>Large Step Adapter</td>
<td>Two included; fits hose size 1-3/4&quot;, 2&quot;, and 2-1/4&quot;</td>
</tr>
</tbody>
</table>

92500
Transmission Fluid Exchanger
- Top-off feature. Add or subtract in 1/10 qt. increments.
- "Low Fluid Alarm" and "Indicator Light" to alert operator.
- "Drain Waste" feature automatically pumps used fluid from the machine into a waste oil container.
- "Drain Pan" feature drains the pan for easy filter replacement. No mess.

Three modes of operations:
- Unprecedented one-tenth quart flow metering for adding or subtracting fluid from the pan.
- Complete set of cooler line adapters for most foreign and domestic vehicles.
- Works with all types of automatic transmission fluid.
- Integral performance designed hose and tool compartment with drain.

529734 – Replacement nylon tube.

Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical</td>
<td>12V DC</td>
</tr>
<tr>
<td>Exchange Accuracy</td>
<td>+/- 1/4 qt.</td>
</tr>
<tr>
<td>Controls</td>
<td>Microprocessor with digital keypad and LEDs</td>
</tr>
<tr>
<td>Fluid Tanks</td>
<td>32 quarts supply (24.6 liters), 34 quarts waste (26.6 liters)</td>
</tr>
<tr>
<td>Hoses</td>
<td>91” black &amp; red (Exchange); 76” white transfer tube (Straw)</td>
</tr>
<tr>
<td>Fluid Types</td>
<td>Multiple fluid capability.</td>
</tr>
<tr>
<td>Adapter Set</td>
<td>Complete set for most applications.</td>
</tr>
<tr>
<td></td>
<td>Standard adapters for Ford, GM, Chrysler, European, and Universal (covering most Asian imports).</td>
</tr>
<tr>
<td>Pump</td>
<td>Positive displacement gear pump, 2 gallons per minute</td>
</tr>
<tr>
<td>Weight</td>
<td>158 lbs. (72 kg)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>52” H x 33” W x 20” D (132 cm x 84 cm x 51 cm)</td>
</tr>
<tr>
<td>Process Time</td>
<td>Depends on mode</td>
</tr>
<tr>
<td>Warranty</td>
<td>1 year parts and labor</td>
</tr>
</tbody>
</table>

92001
Automatic Transmission
Fluid Diagnostic Pads
Easy, quick way to test automatic transmission fluid to determine when service is necessary. Simply place a few drops of transmission fluid from transmission dipstick onto test pad. Pad will change color indicating condition of transmission fluid. Package contains 100 pads.

92000
Transflow Transmission
Oil Cooler Flusher
Fix it right the first time... designed to measure oil flow capacity within the transmission oil cooler, and also has the capability to flush contaminated oil from the TOC after repairs.
- Only unit in the industry that performs a flow rate test.
- Flush and flow test time is 5 to 8 minutes.
- 32-quart supply tank; 34-quart waste tank.
- Supply and waste hoses each 10’ long.
- 10’ long, 12V DC power cables with battery lead clips.
- Requires shop air (90 psi, min.) and 12V DC source.
Premium High Vacuum Pump Oil
The performance of your pump depends largely on the quality and purity of the vacuum pump oil. Robinair’s oil is engineered to maintain maximum viscosity at high running temperatures and to improve cold weather starts.

To keep the pump operating at peak efficiency, change the oil frequently. Moisture and other contaminants can quickly deteriorate the purity of the oil, thinning it, and reducing the pump’s ability to reach deep vacuum conditions.

Thermally Stable
Laboratory tests prove that Robinair oil is more thermally stable in comparison to other leading brands, which means it resists breaking down due to heat for a longer period of time.

Lower Moisture Content
Robinair oil has a lower moisture content than other oils, thanks to our special packaging and handling procedures. Moisture degrades the oil’s purity, thinning it, and reducing the pump’s ability to reach a deep vacuum.

### Change Your Vacuum Pump Oil Frequently

Clean oil is important for peak vacuum pump performance. When the oil is contaminated, it reduces the pump’s ability to remove moisture from a system. You should change the pump oil frequently, and especially in the following situations:

- You have just evacuated a system that you suspect was overly moisture-laden.
- You have just evacuated a system with a compressor burnout.
- The pump oil looks cloudy or milky.
- The pump will not pull to factory specifications when blanked off to an electronic thermistor vacuum gauge.
- Every 10 hours of operation.

The Importance of Deep Vacuum
The purpose of a vacuum pump is to remove moisture and air from an A/C-R system. Modern systems are built tighter and charges are more critical. That means these systems have a greater sensitivity to moisture and other contaminants, making thorough evacuation more important than ever before.

Moisture in a refrigeration system, directly or indirectly, is the cause of most problems and complaints. First, moisture can cause freeze-up in a system. Moisture is picked up by the refrigerant and transported through the refrigerant line in a fine mist, with ice crystals forming at the point of expansion.

“Freeze-up” is not the only problem caused by moisture. It can also result in corrosion, the effects of which are not apparent until the real damage has occurred. Moisture alone is bad enough, but combined with refrigerants containing chlorine, hydrochloric acids can form. These greatly increase the corrosion of metals.

Also, refrigerant oil rapidly absorbs moisture. Water-formed acids combine with the refrigerant, forming a closely bonded mixture of fine globules. The effect is called sludging and it greatly reduces the lubricating ability of the oil.

A vacuum pump removes troublesome moisture by lowering the pressure within the system and vaporizing (or boiling off) the moisture, then exhausting it along with air.

### CoolTech™ – The Inside Story

A vacuum pump that’s fast and thorough saves you not only time, but also the expense of callbacks and dissatisfied customers. Robinair pumps perform better than other pumps in the industry, ensuring you complete dehydration before recharging.

Robinair pumps are engineered specifically to meet the needs of the kind of A/C work you're doing today, and to give you trouble-free operation. We've put our years of experience and know-how into developing pumps that help you do the job faster and better.

All Robinair pumps are backed by our exclusive “No Hassle” over-the-counter replacement warranty. You can return a pump to your Robinair distributor for an immediate exchange — with no hassle! (In U.S. and Canada only; in other locations, see your Robinair distributor.)

Robinair CoolTech vacuum pumps are designed for use on A/C-R systems using CFCs, HCFCs, and HFCs in conjunction with mineral oil, ester oil, alkylbenzene oil, and PAG oil as lubricants. Do not use them with ammonia or lithium bromide systems; not for use with flammable refrigerants.


<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brand A</td>
</tr>
<tr>
<td>3 Min</td>
<td>Red</td>
</tr>
<tr>
<td>30 Min</td>
<td>Red</td>
</tr>
<tr>
<td>4 Hr</td>
<td>Red</td>
</tr>
<tr>
<td>7 Hr</td>
<td>Red</td>
</tr>
</tbody>
</table>

- **Oil Fill Port**
  - Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.

- **Heavy Duty Motor**
  - High torque design for easy startup and efficient operation.

- **Molded Base**
  - Durable polycarbonate base improves pump balance and minimizes vibration during operation.

- **Iso-Valve™**
  - Isolates the pump from the system with just a quarter-turn.

- **Two-stage Design**
  - Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper ultimate vacuum.

- **Die-Cast Aluminum Housing**
  - Cast aluminum housings make the pumps lightweight but durable.

- **Oil Drain Valve**
  - Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

- **Offset Rotary Vanes**
  - Our proven design builds a powerful compression within the pumping chamber to reduce system pressure and vaporize moisture, so it can be exhausted along with air.
Selecting the right size pump
The more air a pump moves, the faster it can reach an acceptable vacuum. A smaller pump takes more time to evacuate a system than one that’s the correct size for the job.

Use this Chart as a Guide to Selecting the Right Size Pump.

<table>
<thead>
<tr>
<th>System</th>
<th>Recommended Pump Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>15400</td>
<td>Robinair® Pump 4 CFM</td>
</tr>
<tr>
<td>15434</td>
<td>Robinair® Pump 4 CFM</td>
</tr>
<tr>
<td>15600</td>
<td>Robinair® Pump 6 CFM</td>
</tr>
</tbody>
</table>

All Robinair pumps are backed by our exclusive “No Hassle” over-the-counter replacement warranty. You can return a pump to your Robinair distributor for an immediate exchange — with no hassle! (In U.S. and Canada only; in other locations, see your Robinair distributor.)

Robinair Vacuum Pumps
• Power and capacity for a wide range of service applications.
• High CFM rating for fast, thorough evacuation.
• Two-stage rotary vane design.

Iso-Valve™ — Isolates the pump from the system with just a quarter-turn.
Gas Ballast — Moisture laden air passing through the pump mixes with relatively dry air so compression does not cause condensation.
Two-stage Design — Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper, ultimate vacuum.
Oil Drain Valve — Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.
Oil Fill Port — Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.
Heavy-Duty Motor — High torque design for easy startup and efficient operation.
Offset Rotary Vanes — Our proven design builds a powerful compression within the pumping chamber to reduce system pressure and vaporize moisture so it can be exhausted along with air.
Molded Base — Durable polycarbonate base improves pump balance and minimizes vibration during operation.
Die-Cast Aluminum Housing — Cast aluminum housings make the pumps lightweight but durable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Free Air Displacement</th>
<th>Factory Micron Rating</th>
<th>No. of Stages</th>
<th>Intake Fitting</th>
<th>Oil Capacity</th>
<th>Motor Size</th>
<th>Voltage</th>
<th>Approvals</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Models</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15400</td>
<td>4 CFM</td>
<td>15 microns</td>
<td>2</td>
<td>1/4&quot; MFL &amp; 1/2&quot; MFL</td>
<td>15 oz. (445 ml)</td>
<td>1/2 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>27 lbs. (12.2 kg)</td>
<td>9.75&quot; H x 5.625&quot; W x 15.5&quot; L</td>
</tr>
<tr>
<td>15434</td>
<td>4 CFM</td>
<td>15 microns</td>
<td>2</td>
<td>1/4&quot; MFL &amp; 1/2&quot; MFL</td>
<td>13 oz. (384 ml)</td>
<td>1/3 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>29 lbs. (13 kg)</td>
<td>9.75&quot; H x 5.625&quot; W x 15.5&quot; L</td>
</tr>
<tr>
<td>15600</td>
<td>6 CFM</td>
<td>15 microns</td>
<td>2</td>
<td>1/4&quot; MFL, 3/8&quot; MFL, &amp; 1/2&quot; MFL</td>
<td>15 oz. (445 ml)</td>
<td>1/2 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>27 lbs. (12.2 kg)</td>
<td>9.75&quot; H x 5.625&quot; W x 15.5&quot; L</td>
</tr>
<tr>
<td>15120A</td>
<td>10 CFM</td>
<td>15 microns</td>
<td>2</td>
<td>1/4&quot; MFL, 3/8&quot; MFL, &amp; 1/2&quot; MFL</td>
<td>16.5 oz. (488 ml)</td>
<td>1/2 hp</td>
<td>115V 60 Hz</td>
<td>UL</td>
<td>38 lbs. (17.24 kg)</td>
<td>10.75&quot; H x 5.625&quot; W x 15.5&quot; L</td>
</tr>
</tbody>
</table>

| International Models |
| 15401   | 94 liters/minute      | 15 microns            | 2             | 1/4" MFL & 1/2" MFL | 13.5 oz. (400 ml) | 1/3 hp | 115V/220-250V 50/60 Hz | CE       | 29 lbs. (13 kg)  | 9.685" H x 5.625" W x 15.75" L | 246 mm x 143 mm x 400 mm |
| 15424   | 94 liters/minute      | 20 microns            | 2             | 1/4" MFL & 1/2" Acme | 13.5 oz. (400 ml) | 1/3 hp | 115V/220-250V 50/60 Hz | CE       | 32 lbs. (14.5 kg) | 9.763" H x 5.625" W x 15.75" L | 246 mm x 143 mm x 400 mm |
| 15601   | 142 liters/minute     | 15 microns            | 2             | 1/4" MFL, 3/8" MFL, & 1/2" MFL | 13.5 oz. (400 ml) | 1/3 hp | 115V/220-250V 50/60 Hz | CE       | 29 lbs. (13 kg)  | 9.685" H x 5.625" W x 15.75" L | 246 mm x 143 mm x 419 mm |
| 15121A  | 283 liters/minute     | 15 microns            | 2             | 1/4" MFL, 3/8" MFL, & 1/2" MFL | 16.5 oz. (488 ml) | 1/2 hp | 115V/220V 50/60 Hz | CE       | 41 lbs. (18.60 kg) | 10.75" H x 5.625" W x 17.5" L | 273 mm x 143 mm x 445 mm |
VacuMaster™

Economy Vacuum Pumps

- Performance tested to meet Robinair’s high standards
- Power and capacity for a wide range of service applications.
- High CFM rating for fast, thorough evacuation.
- Two-stage rotary vane design.

Features:

Two-stage Design – Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper, ultimate vacuum.

Oil Drain Valve – Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

Oil Fill Port – Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.

Heavy-Duty Motor – High torque design for easy startup and efficient operation.

Die-Cast Aluminum Housing – Cast aluminum housings make the pumps lightweight but durable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Free Air Displacement</th>
<th>Factory Micron Rating</th>
<th>No. of Stages</th>
<th>Intake Fitting</th>
<th>Oil Capacity</th>
<th>Motor Size</th>
<th>Voltage</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>15115</td>
<td>1.5 CFM</td>
<td>50 microns</td>
<td>2</td>
<td>1/4” MFL and 3/8” Acme 3/8” FFL x 1/2” Acme adapter</td>
<td>7.4 oz. (219 ml)</td>
<td>1/4 hp</td>
<td>115V 60Hz</td>
<td>22 lbs. (10 kg)</td>
<td>9.5” H x 4.75” W x 12.5” L</td>
</tr>
<tr>
<td>15300</td>
<td>3 CFM</td>
<td>35 microns</td>
<td>2</td>
<td>1/4” MFL and 3/8” MFL 3/8” FFL x 1/2” Acme adapter</td>
<td>7.5 oz. (220 ml)</td>
<td>1/3 hp</td>
<td>115V 60Hz</td>
<td>28 lbs. (12.5 kg)</td>
<td>10” H x 5” W x 13” L</td>
</tr>
<tr>
<td>15500</td>
<td>5 CFM</td>
<td>35 microns</td>
<td>2</td>
<td>1/4” MFL and 3/8” Acme 3/8” FFL x 1/2” Acme adapter</td>
<td>7.5 oz. (220 ml)</td>
<td>1/3 hp</td>
<td>115V 60Hz</td>
<td>28 lbs. (12.2 kg)</td>
<td>10” H x 5” W x 13” L</td>
</tr>
<tr>
<td>15800</td>
<td>8 CFM</td>
<td>35 microns</td>
<td>2</td>
<td>1/4” MFL and 3/8” MFL</td>
<td>18.6 oz. (550 ml)</td>
<td>1 hp</td>
<td>115V 60Hz</td>
<td>37 lbs. (16.8 kg)</td>
<td>16” H x 6” W x 10” L</td>
</tr>
</tbody>
</table>

VacuMaster™

Single-Stage Vacuum Pumps

- Performance tested to meet Robinair’s high standards
- High CFM rating for fast, thorough evacuation.

Features:

The one-stage rotary vane design – provides powerful, quiet, high vacuum capability and ensures moisture removal, while the high pumping capacity reduces evacuation time.

Oil Drain Valve – Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

Oil Fill Port – Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.

The intake screen – prevents foreign matter from entering the pumping chamber, and an internal exhaust filter separates oil vapor from the exhaust flow.

Aluminum housing and rotary vanes – keep the pump weight low, making it easy to carry.
34970
Air-Vac® for R-12 and R-134a
Economical Air-Vac uses shop air to pull the system into vacuum and includes inlet fittings with 1/4" and 1/2" Acme sizes.

Easy-to-use — Unique venturi design runs on shop air.
Rugged Lexan® Case — Both oil- and scratch-resistant and comes with a convenient handle.
Low Maintenance — There’s no oil or moving parts to replace.

34977 – Replacement inlet tee, 1/4" MFL and 1/2" acme.

14830A
Thermistor Vacuum Gauge
Solid-state instrument constantly monitors and visually indicates the vacuum level in 10 segments from atmosphere to 50 microns.
LCD screen can be read even in direct sunlight and minimizes battery consumption.
No adjustments to make, no calibrations for atmospheric pressure or altitude.
Durable carrying case protects the instrument and has a built-in compartment for storing the 24" charging hose (included).

Specifications
- Range: 25,000 to 50 microns in 10 segments
- Power Supply: Four "D" cell batteries (not included) or optional A/C adapter
- Display: Custom LCD, 10 segments
- Weight: 2.38 lbs. (1.08 kg) without batteries
- Dimensions: 10" H x 7.5" W x 3.375" D (25.4 cm x 19 cm x 8.6 cm)

Pump Intake Fittings
R-12/R-134a Dual Inlet Fittings Convert your pump to R-12 and R-134a. Solid brass tees replace inlet fittings on pump; includes a branch with a 1/4" MFL fitting for R-12 (and other refrigerants) and a branch with 1/2" Acme fittings for automotive R-134a.

Pump Intake Fitting Adapters:
13110 – Adapter, 3/8" FFL to 1/4" MFL
13066 – Adapter, 1/2" FFL to 3/8" MFL

Also Available:
15555 – Screw-on inlet adapter converts any pump, 1/4" FFL coupler x 1/4" MFL x 1/2" Acme.
15195 – 1/4" MFL/1/2" Acme combination inlet fitting for 15200 series vacuum pumps.
15495 – 1/4" MFL/1/2" Acme combination inlet fitting for 15400/15600 series vacuum pump.

14777
Compact Electronic Vacuum Gauge
Robinair’s 14777 electronic vacuum gauge is just 2-1/2" x 3" in size, but accurate enough to clearly indicate when the system is free from moisture and ready for recharging. Specifically designed for use with a high vacuum pump, the 14777 measures to 10 microns.

Clearly Shows Vacuum Level — The display is an easy-to-read LCD type with readout showing the current vacuum level.
6’ Lead for Service Flexibility — Hang the gauge in a location that’s convenient for you to monitor vacuum level.
Mounting Magnet — Position the 14777 where it’s easy-to-read the LCD.

14778 – Replacement thermistor tube.

RAVG-1
Digital Vacuum Gauge
Easy as 1 - 2 - 3
Connect, Measure, Test
The RAVG-1 employs a sophisticated MEMS Pirani type sensor that directly measures flow. Unlike all other field service gauges on the market, the RAVG-1 is NOT affected by temperature.
The RAVG-1 measures vacuum from Atmosphere to 10 microns in 6 different scales, and can withstand overpressure beyond 30 bar. The unit employs an industry first multi-color backlight that functions as an instant go/no go indicator of acceptable vacuum or leakage.

Specifications
- Operating Range: Atmosphere to 10 Microns
- Resolution: As low as 5 Microns/0.005mmHg/0.002inHg/0.007mBar/0.66Pa/0.005Torr
- Accuracy: As low as +/- 5 % of RDG
- Over pressure: ~ 31 Bar/450 psi
- Measuring Units: Microns/mmHg/inHg/mBar/Pa/Torr
- Display: 5 digit STN LCD, 50 x 30 mm with tricolor LED backlight
- Power Supply: 3 x size “AAA” 1.5 V Batteries
- Input Connection: 1/8”-27 NPT Male

Features
- High Resolution and unique backlight indicator make precision readings easy
- Patent Pending design, employs a sophisticated MEMS Pirani sensor
- Range from Atmosphere down to 10 microns
- Measure vacuum in Microns, mmHg, inHg, mBar, Pascals or Torr
- Extremely accurate at low micron levels
- Impact and water resistant case with protective Rubber boot
- Rapid response to changes in vacuum
- Large easy to read 5 digit display
- Auto shut off feature prolongs battery life
- Battery powered
- Integrated “magnetic” hook
- Includes carrying case and tee adapters or in-line connections (1/4” MFL x 1/4” MFL and 1/4” FFL x 1/4” MFL versions)
**A/C Recovery & Recycling**

**A/C Scales**

**Slimline Refrigerant Scales**

The TIF Slimline scales offered industry leading accuracy and performance with the choice of getting the familiar usability and quality in either a 110 pound/50 kg. or 200 pound/100 kg. capacity.

**Features**

- Touch Key controls.
- Three display modes – Lbs./oz.; Decimal Lbs.; Kilograms.
- Extremely Accurate.
- Auto Zero.
- Removable platform and control box with prop stand/hanging hook.
- Compact design, completely portable.
- Removable control box with prop stand/hanging hook.
- CE approved.
- Two year warranty.
- Blow molded case.

**Specifications**

<table>
<thead>
<tr>
<th>TIF9010A</th>
<th>TIF9020A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>15.8 oz., OR</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.1 oz./0.005 lbs./2 grams</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>± 0.5% of reading</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>32º to 120ºF (0º to 49ºC)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>9VDC</td>
</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>30 hours</td>
</tr>
<tr>
<td><strong>Coil Cord Length</strong></td>
<td>6 ft. (1.8m)</td>
</tr>
</tbody>
</table>

**Economy Digital Refrigerant Scale**

- Easy to carry and store.
- Capacity up to 220 lbs. (100 kg). Display shows lbs./oz. and kg.
- High accuracy (±0.5 oz.) and resolution (0.1oz).
- 9-volt battery power.
- Platform to adapt to most existing tanks (9” x 9”).
- Three control keys: On/Off, automatic zeroing, and measurement units.
- Charging and recovery capabilities
- CE approved.
- One-year warranty.

**TIF9030** – Economy digital refrigerant scale.

**TIF9031** – Economy digital refrigerant scale carrying case.

**TIF9055**

**Certified Refrigerant Scale**

- 220 pound / 100 kg capacity.
- Allows automatic charging or recovery operations.
- Color-coded keypad controls.
- Three display modes – lbs./oz.; decimal lbs.; kilograms.
- Very high resolution – 0.2 oz./0.010 lbs./4 grams.
- Can be used with all refrigerants.
- Advanced charge and recovery modes – uses tare weight and maximum capacity of cylinder to calculate maximum charge/recovery available.
- User programmable memory for up to 99 different stored values.
- “Repeat” charge feature.
- Removable platform and control box with prop stand/hanging hook.
- Compact design – completely portable, battery powered.
- Low battery indicators.
- Five-year warranty.

**Specifications**

<table>
<thead>
<tr>
<th>TIF9055</th>
<th>TIF9020A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
<td>0 lbs. 0.0 oz. to 219.99 lbs. 0.000 lbs. to 100.000 kg</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>0.2 oz./0.010 lbs./4 grams</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>± 0.5% of reading</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>Four AA batteries &amp; one 9V battery</td>
</tr>
<tr>
<td><strong>Battery Life</strong></td>
<td>30 hours</td>
</tr>
<tr>
<td><strong>Max. Solenoid Operating Pressure</strong></td>
<td>500 psi</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>32ºF to 120ºF (0ºC to 49ºC)</td>
</tr>
<tr>
<td><strong>Inlet/Outlet Ports</strong></td>
<td>1/4&quot; MFL fittings with 1/2&quot; ACME adapters</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 7 lbs.</td>
</tr>
</tbody>
</table>
Replacement Cutter Wheels

These top quality replacement cutter wheels are thinner for cleaner cuts with less effort. Made of high quality, shock-resistant, tool steel, the cutters are also heat treated to resist breakage and last longer. Cutter wheels are available to fit Robinair cutters, and can be used as replacements in nearly all other brands.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Fits Cutter No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>42062</td>
<td>42028</td>
</tr>
<tr>
<td>42073</td>
<td>42071</td>
</tr>
<tr>
<td>42083</td>
<td>42080, 42090</td>
</tr>
</tbody>
</table>

6514
Mini Tubing Cutter
- Works on tubing sizes 1/8” to 5/8” O.D. (3 mm to 16 mm).
- Easily cuts copper, brass, aluminum, and steel brake lines in hard-to-reach places.
- Ream folds onto cutter body for storage.
- Extra cutting wheel stored under ream.

A/C Recovery & Recycling

A/C Tools and Accessories
42040
Single Blade Deburring Tool
This handy tool removes internal burrs in copper tubing. It features a high-speed steel, blade, aluminum handle, and pocket clip. Tubing size is unlimited.

13162
Deburring Tool
Quickly deburrs aluminum, copper, and steel tubing, and can work on any size tubing. It’s made with a high-speed, steel blade and a durable aluminum handle. Three spare blades store in the handle.

4536
A/C Clutch Pulley Puller Set
For removal of stubborn air conditioning clutch pulleys. Also used on many alternator, generator, power steering, and crankshaft pulleys, harmonic balancers, and fiber timing gears.
Set includes drop-forged components: one 3/4”-16 x 5” live-center forcing screw, 5-1/2” crossbar with three spread settings, two pairs of jaws, and a clamp bolt.
Spread: 3” to 5”; Reach: 1” to 5”.
Includes blow-molded plastic case.

4535
A/C Clutch Hub Remover/Installer Set
For damage-free removal and installation of the clutch hubs on these air conditioning compressors: GM-Harrison DA-6, HR-5, V-5, A-6, and early R4; Nippondenso Ford/Chrysler A590, C171, FS-6, 6P148A (new style); Sanden & Sankyo; York/Tecumseh HR980; Zexel/Mitsubishi CH series.
Set includes a removing flange, plus forcing screws and adapter assemblies to remove and install virtually all clutch hubs.
Includes blow-molded plastic case.

4537
A/C Clutch Holding Tool
This three-stud spanner wrench keeps the A/C clutch from turning when loosening or tightening the retaining nut. Adjusts quickly with brass thumbscrews to fit various styles of A/C compressors used on GM, Ford, and Chrysler vehicles. Also fits a variety of other pulleys.

7238
Spring Lock Coupler Disconnect Set
Set includes four sizes for use on 3/8”, 1/2”, 5/8”, and 3/4” tubes. Allows quick, safe disconnect of spring lock couplers on late model Ford systems and Tecumseh HR980 compressors.

6511
Fuel Line Disconnect Tool
Special low-profile design works in close quarters on GM, Ford, and Chrysler vehicles where there is limited clearance between the fuel line fittings and fuel filters, fuel rails, or sending units. This tool is designed to access the center port on the GM fuel tank sending unit. For 3/8” and 1/2” applications; will also service 2001 thru current 3/4- and 1-ton trucks with the Duramax Diesel engine.

4504
Bubble (I.S.O.) Flaring Tool Kit
Designed for crack-free bubble flares on soft steel tubing used in automotive brake systems.
Includes four dies: 4.75, 6, 8, and 10 mm adapters.
Forged steel yoke, flaring bar, and all the adapters needed for ISO bubble flaring.
The most economical “Bubble” flare tool to date. Housed in a blow-molded storage case.
**18410**
Hydraulic Flaring Kit
- Fabricates a variety of fuel, brake and A/C line flares.
- Push connect 1/4, 5/16 and 3/8”.
- GM fuel line, brake line and transmission 5/16 and 3/8”.
- Flare and double flare.
- Metric bubble flare.
- Comes in a custom blow molded case.

**18706**
Eccentric flaring tool

**18548**
Four-In-One Tube Bender
Effortlessly bends four different sizes of soft or annealed tubing without crimping, flattening, or scratching. Calibration allows duplication of any angle. Handles are 8-1/2” long, so extensions are not needed, and glass/plastic construction combines strength with lightweight durability.

**18403**
Fin Straightener
- Clean and straighten condenser and evaporator coils.
- Compact design for confined spaces: the straightener head is 3-1/8” in diameter; the handle is 3-1/2” long.
- Includes 12 clearly marked combs
  - Wheel 1: 8, 9, 10, 12, 14, & 16 fins per inch
  - Wheel 2: 10, 11, 13, 18, 20, & 22 fins per inch

**18560**
Valve Core Remover / Installer
Remove and install the valve core from a 1/4” male flare access fitting without the loss of refrigerant. Durable, solid brass tool has a ball valve that can be opened and closed in just a quarter-turn, rather than a stem-type valve. Designed with a stainless steel ball and brazed side fitting for durability and long life.

**18561**
Valve Core Remover / Installer
Replace leaking valve cores quickly and easily, or remove the valve core and hold it out of place for evacuation or charging. The 18561 features a solid brass body with convenient handle that opens and closes in a quarter-turn to speed service. The compact design easily fits most installations.

**14774**
Pick Extractor
For use with No. 18560 or 18561, value core remover/installer, this extractor lets you remove damaged cores in the service line while the system is fully charged. There’s no release of refrigerant into the atmosphere.

**Access Valve Core Removers
Save Service Time**
These handy tools remove valve cores without losing the system charge. They’re designed specifically for use during evacuation or recharging on any system with valve core-type access ports. Removing the core restriction results in maximum flow, greatly reducing the time required for evacuation and charging.

**11014**
R-12 Valve Core Remover
Services late model GM cars with deeper valve cores.

**10588**
R-134a Valve Core Remover
Our popular valve core remover/installer has been engineered for use when servicing deeper core R-134a A/C systems.

**13145**
1/4” Valve Core Remover, pkg/6
Robinair’s standard valve core remover includes six replacement valve cores which store in the tool’s body.
Access Adapters
Robinair offers a complete selection of access adapters for hooking up A/C systems for evacuation and recharging. These adapters fit most systems, and sizes are available to fit most passenger cars. “A” models have longer valve core depressors to work on both standard and the deeper-set valve cores in some vehicles. Check manufacturer’s specifications for specific applications.

90° Style Adapters
Solid brass fitting is ideal for tight spots or locations where making connections is difficult.
- 10469A – 1/4” MFL x 3/16” FFL.
- 40563A – 1/4” MFL x 1/4” FFL.

Straight Style Adapters
Straight adapter is versatile and easy to use. Made of solid brass.
- 10468A – 1/4” MFL x 3/16” FFL.
- 40560A – 1/4” MFL x 1/4” FFL.

Flexible Adapters
Flexible adapters feature brass fittings and a durable neoprene-coated hose, 6” long.
- 10293 – 1/4” MFL x 1/8” FFL, blue.
- 10470A – 1/4” MFL x 3/16” FFL, red.
- 10778 – 1/4” MFL x 1/4” FFL, yellow.
- 40531 – Replacement o-rings for 10293, pkg/6.
- 40677 – 3/16” gasket.
- 40653B – 3/16” valve core depressors.
- 40082 – 1/4” valve core depressors.
- 40083 – 1/4” hose gaskets.

Heat Gun
A lightweight source of directed heat offering 500°F and 750°F settings, and also has a "cold" setting. This handy heat gun is ideal for many applications, including:
- Fast heating/drying of materials.
- Quick curing/drying of epoxies.
- Applying shrink tubing.
- Softening tubing for bending.
- Speed-drying of touch-up paint to eliminate "haze."
- Drying out condensation in motors, clutches, controls, etc. Shock-proof and cool-running with a tough Lexan® housing, the unit weighs just 2-1/2 lbs.
- 115V 50/60 Hz.

Replacement parts
- 44996 – Carbon brush.
- 44997 – Switch assembly.

18340
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.

10237A
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4” fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions below for specifications.

18143
Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4” MFL x 3/16” FFL.

14450
Heat Gun
- 18451 – 45° 1/4” Quick Seal™ kit.
- 40302 – 1/2” Acme Quick Seal™ kit.
- 18180 – 1/4” Quick Seal™ o-rings.

18340
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.

10237A
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4” fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions below for specifications.

18143
Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4” MFL x 3/16” FFL.

14450
Heat Gun
- 18451 – 45° 1/4” Quick Seal™ kit.
- 40302 – 1/2” Acme Quick Seal™ kit.
- 18180 – 1/4” Quick Seal™ o-rings.

18340
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.

10237A
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4” fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions below for specifications.

18143
Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4” MFL x 3/16” FFL.

14450
Heat Gun
- 18451 – 45° 1/4” Quick Seal™ kit.
- 40302 – 1/2” Acme Quick Seal™ kit.
- 18180 – 1/4” Quick Seal™ o-rings.

18340
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.

10237A
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4” fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions below for specifications.

18143
Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4” MFL x 3/16” FFL.

14450
Heat Gun
- 18451 – 45° 1/4” Quick Seal™ kit.
- 40302 – 1/2” Acme Quick Seal™ kit.
- 18180 – 1/4” Quick Seal™ o-rings.

18340
Valve Core Remover Kit
- Standard valve core extractor.
- 8 mm valve core extractor.
- 10 mm valve core extractor.
- GM high flow valve core extractor.
- JRA valve core extractor.
- R-134a low- and high-side body assemblies with side ports.
- R-134a low- and high-side port adapters.
- Plastic carrying case.
- Usage chart.

10237A
Fits-All Adapter Kit
Our access adapters have been combined into a kit that’s ideal for accessing R-12 vehicle A/C systems, as well as other types of systems. Five different adapters are included with 1/4” fittings: three flexible adapters (part numbers 10293, 10470A, 10778) and two 90° brass adapters (part numbers 10469A and 40563A). See descriptions below for specifications.

18143
Straight Adapter
This straight adapter is designed specifically for General Motors vehicles with R-12 air conditioning systems featuring “Positive Seal” high-side charge valves. The adapter is made of brass with an easy-to-grip coupler nut, 1/4” MFL x 3/16” FFL.