

**REPLACEMENT  
COMPONENTS**

## **2025 R-454B COMPATIBLE HVAC TOOLS**

*Replacement Components has the products and expertise to support you and your customers as the industry transitions to a new class of refrigerants per 2025 EPA regulations.*

BACKGROUND

In 2025, EPA regulations will mandate a change to refrigerants that have a lower global warming potential (GWP). For Carrier and its associated brands, that means a transition from R-410A to R-454B, which has one fourth the GWP of R-410A\*.

R-454B is in a specific class of refrigerants known as A2L, whereas R-410A is a class A1 refrigerant. Without going into all the technical details, R-454B offers similar operating temperatures, pressures, and oil compatibility as R-410A - reducing the learning curve associated with the new refrigerant. However, there are two key precautions that must be taken into account:

- R-454B and R-410A (or any refrigerant for that matter) cannot be mixed or cross-contaminated
- R-454B, as with all A2L refrigerants (including R-32), has a mildly flammable characteristic - meaning:
  - (1) a direct flame source and a high concentration of refrigerant is required to create a flame
  - (2) that if it were to ignite, the flame would likely be unsustainable and
  - (3) the spread rate would be less than half a mile per hour - slower than a typical walking speed.

These differences do require that additional measures be taken from a servicing perspective to avoid cross contamination and/or make certain no sparks are inadvertently generated.

Service technicians use a variety of equipment on the job - vacuum pumps & recovery machines, recovery cylinders, gauges/manifolds, leak detectors, scales, hoses, etc. This document will guide you through the changes needed to support these new refrigerants being introduced.

*\*Puron® and Puron Advance™ are trade names for R-410A and R-454B and are used exclusively with Carrier and Bryant branded products.*

RECOVERY MACHINES

**Used for:** removal of refrigerant from the system, during repair or end of life.

**R-454B/R-32 Implications:** because R-454B and R-32 refrigerants have a mildly flammable characteristic, a non-sparking recovery machine is required. The model below is non-sparking and has a purge feature (purged into recovery tank) that allows it to be used with both A2L refrigerants (R-454B & R-32) and A1 refrigerants (R-410A) without cross-contamination.



P/N	F6-BOOST
Compressor	1.25 HP, Brushless & Oilless Motor
Compatible Refrigerants	R-410A, R-454B, R-32
Purge Feature	Yes
High Visibility Gauges	Yes, 2 ¼" (6 cm) diameter
Auto-shutoff w/ recovery complete	Yes
Dimensions (WxLxH)	14.5" x 9.5" x 12" (37 x 24 x 30 cm)
Weight	24 lbs. (10.9 kg)
Datasheet	<a href="#">&lt;click here&gt;</a>

## RECOVERY CYLINDERS

**Used for:** recovery of refrigerant from the HVAC system for recycling or reclamation.

**R-454B/R-32 Implications:** because R-454B and R-32 have a mildly flammable characteristic, there are several key changes to the recovery cylinder. The tops will be red for identification purposes, there will be two warning labels (compressed gas and flammability), cylinders will utilize a pressure relief valve for safety instead of a rupture disc, and the threads will be reversed (left-handed instead of right-handed for R-410A refrigerants). A R-454B / R-32 refrigerant recovery cylinder can only be used for R-454B/R-32 refrigerant; R-410A refrigerant recovery cylinders will still be required for R-410A refrigerants. Note that because the threads are reversed, a reverse thread adapter is required to connect the hoses (see “gauges, manifolds, hoses, and adapters” section).



R-410A RECOVERY CYLINDERS			R-454B, R-32 RECOVERY CYLINDERS	
P/N	P706-9002	P706-9004	P706-9006	P706-9008
Description	30 lbs.	50 lbs.	30 lbs.	50 lbs.
Float Switch	No	No	No	No
Pressure release	Rupture Disc		Pressure Release Valve	
Nom. Tare Weight	16.9 lbs. / 7.7 kg	29.3 lbs. / 13.3 kg	16.9 lbs. / 7.7 kg	29.3 lbs. / 13.3 kg
Cylinder Diameter	9.2" (23 cm)	12.2" (31 cm)	9.2" (23 cm)	12.2" (31 cm)
Collar Diameter	7.2" (18 cm)			
Collar Height	5.1" (13 cm)			
Footring Diameter	8" (20 cm)			

COMING  
Q1 2024

## VACUUM PUMPS

**Used for:** removing air, moisture, and any residual refrigerant from the system.

**R-454B/R-32 Implications:** because R-454B and R-32 have a mildly flammable characteristic, a non-sparking vacuum pump is required. All the models below are non-sparking, and because purging occurs through normal operation, they can be used with R-410A, R-454B, and R-32 refrigerants without risk of cross-contamination.



	ELIMINATOR	PLATINUM	BEAST	RAPID EVAC. KIT
P/N	DV-6E-250SP	DV-200N-250SP	DV-340N	VL-200
CFM	6	7	12	Removes restrictive valve cores & enables evacuation up to 20x faster. Includes: <ul style="list-style-type: none"><li>• ½” &amp; 3/8” Y connectors</li><li>• Two core removal tools</li><li>• Evacuation hoses</li><li>• Storage bag</li></ul>
Max Equipment Tonnage	36	49	144	
Compatible Refrigerants	R410A, R454B, R32			
Blank-off Valve*	No	Yes	Yes	
Vacuum level**	25 microns	15 microns	15 microns	
Weight	33 lbs. (15.0 kg)	33 lbs. (15.0 kg)	34 lbs. (15.4 kg)	
Dimensions (WxLxH)	14”x18”x13” (36 x 46 x33 cm)	14”x18”x13” (36 x 46 x 33 cm)	14” x 17” x 11” (36 x 43 x 28 cm)	
Vacuum Pump Oil	P903-0632			
Datasheet	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>

\*Blank-off valve enables oil change without breaking vacuum

\*\*<500 micron level needed for tight, dry system

## GAUGES, MANIFOLDS, HOSES, ADAPTERS, AND SWAGE KITS

**Used for:** measuring the refrigerant pressure in the HVAC system. Using a manifold with gauges allows monitoring of both high-side and low-side pressure while connected to a recovery machine or refrigerant cylinder.

**R-454B/R-32 Implications:** while the new R-454B and R-32 refrigerants have similar operating pressures as R-410A, the saturation temperatures are different for each refrigerant. As a result, new R-454B/R-32 Pressure and Control Gauges are needed if using the gauge saturation temperature guidance. To minimize the risk the accidental cross-contamination, separate gauges, manifolds, and hoses are recommended for each refrigerant.

Because the new R-454B and R-32 refrigerant and recovery cylinders are reverse threaded, adapters are needed to connect the hoses. Additionally, swage kits are available to assist with soldering linesets (when no refrigerant is present).



	COMPOUND GAUGE	PRESSURE GAUGE	PATRIOT MANIFOLD*	ZEPELIN®	REVOLVER®
P/N	M2-861	M2-862	22633	DM4-ZW	DM4-RW
Type	Analog			Digital w/ app connectivity	
Compatible refrigerant	R-410A, R-454B, R-32			60+, updateable thru app	
Display size	3 1/8" (7.9 cm) dia.			3.5" x 2.75" (9 x 7 cm)	
Visibility	Glow-in-dark			Transflective display	
Manifold Type			2-valve brass	4-valve aluminum	4-valve brass
Thermocouples				K-type clamp	
Included Hose Length			60" (152 cm)	60" (152 cm)	
Replacement Hoses			CCL-48 (48" (122 cm)) CCL-60 (60" (152 cm))	CCLE4-48 (48" (122 cm)) CCLE4-60 (60" (152 cm))	
Datasheet	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>

\*Manifold includes manifold, compound and pressure gauge, and 60" (152 cm) hoses



	REVERSE THREAD ADAPTER, 1/4"	REVERSE THREAD ADAPTER, 1"	MULTI-SWAGE TOOL SET
P/N	QC-A2L-LH	CGA-670	T21000
Detail	Used for connected to reverse-thread R-454B and R-32 refrigerant and recovery tanks		Three piece pack works with common OD sizes to form solder cups OD: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8" Nominal: 1/8", 1/4", 3/8", 1/2", 5/8", 3/4"

## FIRE EXTINGUISHER

**Used for:** extinguishing fires.

**R-454B/R-32 Implications:** because R-454B and R-32 have a mild flammability characteristic, a fire extinguisher is highly recommended for all service personnel. The Kidde fire extinguisher model below is a large-capacity single use / low maintenance (no hydrostatic test required) while still being low-weight and portable.



MULTIPURPOSE FIRE EXTINGUISHER	
P/N	21006204P
UL-Rating	3-A:40-B:C
Unit Weight	8.25 lbs. (3.7 kg)
Diameter x Height	4.5" x 16.8" (11 x 43 cm)
Discharge Range	12'-18' (3.7 - 5.5 m)

## LEAK DETECTORS

**Used for:** detecting refrigerant leaks. Typically, two types of detectors are used – a “sniffer” (electronic unit) to detect the presence of a leak, and a spray-on “bubble” leak detector to find the exact location.

**R-454B/R-32 Implications:** because R-454B and R-32 have a mildly flammable characteristic, “sniffer” (electronic) style leak detectors should be fully sealed to prevent electrical spark exposure, such as with the units below. “Bubble” leak detectors have no spark risk and thus are safe to use around any refrigerant.



	QUEST	PROWLER	SPRAY-ON LEAK DETECTOR
Part Number	LD-3000	LD-5000	P902-1432 (Quart) P902-1401 (Gallon)
Detector Type	Electronic	Electronic	Bubble
Probe type	18" (46 cm) flexible	17" (43 cm) flexible	
Indication	3 levels visual, audible with mute	10 level tilting visual display, audible with mute/vibration	
Case Included	Yes	Yes	
Replacement Filter	LD-RF5		
Replacement Sensor	LD-S101		
Replacement Leak Test Vial	LD-TV		
Datasheet	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>	<a href="#">&lt;click here&gt;</a>

DIGITAL SCALES

**Used for:** measuring the weight of a recovery cylinder to determine when full.

**R-454B/R-32 Implications:** there are no R-454B/R-32 implications for digital scales. The following model is available through Replacement Components.



ATLAS	
P/N	DS-20000
Capacity	220 lbs. (100 kg)
Accuracy	0.25 oz (10 gm)
Dimensions (L x W x H)	18" x 15.3" x 3" (46 x 39 x 8 cm)
Weight	8 lbs. (3.6 kg)
Datasheet	<a href="#">&lt;click here&gt;</a>

PRESS FIT FILTER-DRIERS

**Used for:** filter driers connect to the refrigerant line and “filters” out physical contaminants while “drying” liquid contaminants.

**R-454B/R-32 Implications:** all existing filter-driers will work with the R-454B/R-32 refrigerants, and as the refrigerant lines are evacuated prior to replacing there is no flamability risk. However, Replacement Components now offers “press fit” filter-driers that can be attached with a coupling - no brazing required.



	AC APPLICATIONS			HP APPLICATIONS	
Part Number	P502-C083P	P502-C163P	P502-C164P	P504-H083P	P504-H163P
Connection OD	3/8"	3/8"	1/2"	3/8"	3/8"
Dessicant Volume	8 in <sup>3</sup>	16 in <sup>3</sup>	16 in <sup>3</sup>	8 in <sup>3</sup>	16 in <sup>3</sup>
Type	Uni-Flow / Liquid Line / Solid Core			Bi-Flow / Solid Core	

## REFRIGERANTS

In addition to R-454B and R-410A, Replacement Components offers a full line of refrigerants to support all your HVAC needs.

R-410A	R-454B	R-32
25 lbs.	20 lbs.	20 lbs.
100 lbs. *	90 lbs. *	90 lbs. *

R-22	R-123	R-134A	R-404A	R-407A +	R-407C +
30 lbs.	100 lbs.	30 lbs.	24 lbs.	25 lbs.	25 lbs.
		125lbs. *	100 lbs. *	115 lbs. *	115 lbs. *

R-422D +	R-427A +	R-438A ++	R-507A	R422B +	R513A
25 lbs.	25 lbs.	25 lbs.	25 lbs.	25 lbs.	25 lbs.
110 lbs. *	110 lbs. *	110 lbs. *	100 lbs. *		115 lbs. *

\* - Cylinder deposit part number is required upon ordering.

+ - "Carrier Engineering has not approved the use of alternative refrigerant in place of R22 and as a result the warranty may be voided on the unit. If alternative refrigerants are used on out of warranty units, please follow the refrigerant manufactures guidelines for proper retrofitting procedures".

++ - The only R22 replacement Carrier has qualified for our 30 series chillers is R438A.

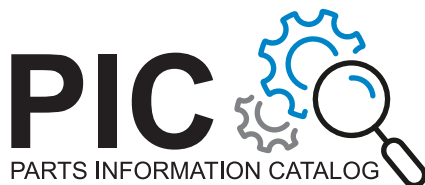
Note: All information contained herein is believed to be accurate. Carrier accepts no liability from any claims made because of the use or reliance on such information.

For other refrigerants and or additional sizes including 1/2 ton and ton cylinders please contact Replacement Components.



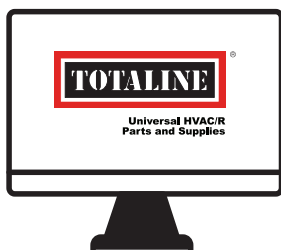
# REFRESHED DIGITAL TOOLS

Check out the latest refreshed digital tools from Replacement Components.  
Accessing the information you need to get the job done just got easier.



## PARTS INFORMATION CATALOG

- Enhanced part lookup
- Real time integrations
- Simplified and standard data



## WEBSITE

- New Totaline site
- Incorporated into HVAC Partners for a seamless user experience
- Updated Catalog Functionality
- Advanced Search Abilities
- Integrated Cross Reference Tool
- And Much More

