

# R-421A

- Air Conditioning Split Systems
- Cold Stores
- Supermarket Pak Systems
- Dairy Chillers
- Reach-In Storage
- Bakery Applications
- Refrigerated Transport
- Self-Contained Display Cabinets
- Walk-In Coolers

## “The Easy Choice” Choice™ R-421A

Replaces R22 in Multiple Applications  
Save Time & Save Money. Quick & Easy Conversion.

- Unique non-ozone depleting, long-term replacement for R22 refrigerant
- Environmentally **GREEN** refrigerant
- Replace R22 without unit modification
- Does not contain hydrocarbons, such as Butane, Isopentane or Isobutane
- Replaces R22 with no change of oil
- Usable in compressors designed for R22
- Usable with Mineral, AB or POE oils
- Only 2-component blend to replace R22
- Non-flammable; Rated A1 by ASHRAE
- Comparable to R22 performance temperature range
- Usable in a wide variety of applications

REFRIGERANT FOR TOMORROW

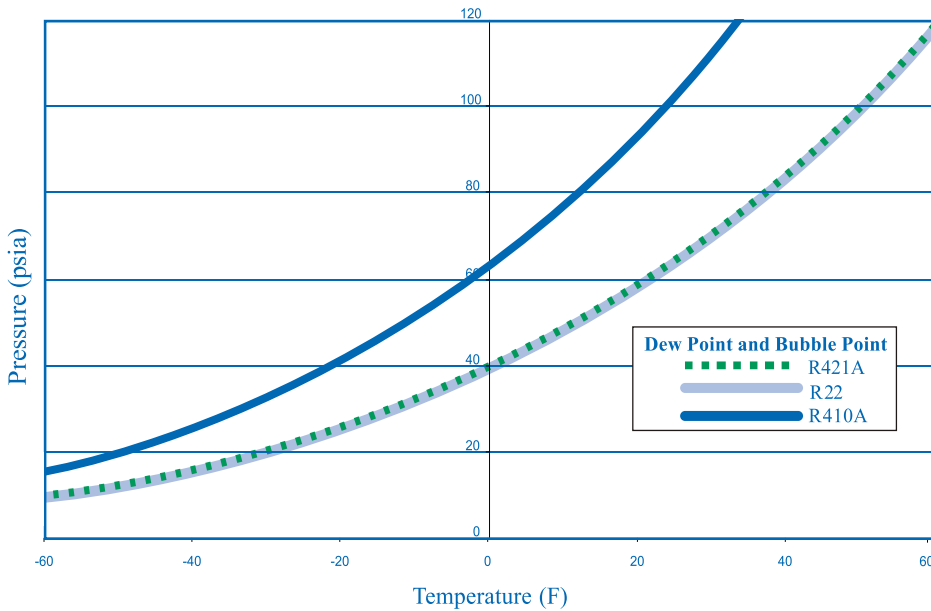
**Choice**  
Refrigerants

“The Easy Choice”



Call our HOTLINE: 1-855-GET-421A or  
visit [www.dynatempintl.com](http://www.dynatempintl.com) to learn more.

# Pressure/Temperature Choice™ R-421A Refrigerant



PRESSURE/TEMPERATURE COMPARISON  
PSIG/ VACUUM IN INCH WATER

Temp (F)	R421A	R22	R410A
-60	-12.5	-12.4	0.4
-55	-9.8	-9.7	2.6
-50	-6.7	-6.6	5.1
-45	-3.2	-3.2	7.8
-40	0.5	0.6	10.9
-35	2.6	2.6	14.2
-30	4.9	4.9	17.9
-25	7.4	7.4	22.0
-20	10.2	10.2	26.4
-15	13.2	13.2	31.3
-10	16.5	16.5	36.5
-5	20.1	20.1	42.2
0	24.0	24.0	48.4
5	28.3	28.3	55.1
10	32.9	32.8	62.4
15	37.8	37.8	70.2
20	43.2	43.1	78.5
25	48.9	48.8	87.5
30	55.0	55.0	97.2
35	61.6	61.5	107.5
40	68.7	68.6	118.5
45	76.2	76.1	130.2
50	84.2	84.1	142.7
55	92.8	92.6	156.0
60	101.9	101.6	170.1
65	111.5	111.2	185.1
70	121.8	121.4	201.0
75	132.6	132.2	217.8
80	144.1	143.6	235.6
85	156.2	155.7	254.4
90	169.0	168.4	274.3
100	196.7	195.9	317.3
105	211.7	210.8	340.6
110	227.5	226.4	365.1
115	244.0	242.8	390.9
120	261.4	260.0	418.0
125	279.7	278.0	446.5
130	298.9	296.9	476.5
135	319.0	316.7	508.0
140	340.1	337.4	541.2
145	362.1	359.0	576.0
150	385.3	381.7	612.8

**R421A** is a HFC blend replacement with zero ODP and is compatible with both synthetic and mineral oils.

**R421A** is a two - component blend packaged with a proprietary lubricant, which we recommend, be transferred from the cylinder in the liquid phase.

In any operational leak scenario, the system may be topped off with without significant effect on performance.

**R421A** is an effective refrigerant for process cooling and air-conditioning. **R421A** has demonstrated its effectiveness at higher temperatures, giving the added benefit of lower discharge temperatures. In many instances lower compressor discharge temperatures have been reported which can be a bonus where systems are running close to the recommended maximum.

Charge the equipment with **R421A** as a liquid. Do not charge liquid refrigerant directly into the compressor. The total charge of **R421A** will depend on the type of system. For those with liquid receiver(s), it is the same as with R22, for those without liquid receiver(s) it is recommended to add sufficient charge to achieve the required evaporator temperature while maintaining acceptable superheat. For optimum performance it may be necessary to use a larger expansion valve orifice. Capillary systems do not need to be changed. NOTE: It is not unusual for the occasional bubble to be seen in the liquid line sight glass. A small number of bubbles in the sight glass is not a reliable indication of an under-charged system.

E.P.A. regulations stipulate that the equipment converted is clearly labeled as containing **R421A**.



**Dynatemp International**  
1-855-GET-421A • [www.dynatempintl.com](http://www.dynatempintl.com)





# Choice<sup>TM</sup>

## Refrigerants

Retrofit Guidelines for  
Choice<sup>TM</sup> R-421A

# Procedures for Retrofitting R-22 systems for Choice™ R-421A

## Caution

Converting a system from an HCFC refrigerant to and HFC may cause a compression of elastomers and O-rings, which can result in a loss of refrigerant. After recovering the original refrigerant, it is recommended that the O-rings and elastomers be replaced.

- ✓ **Collect data from the pre-converted system**
  - Monitor operating conditions and record for post-converted reference (See chart on back page)
- ✓ **Recover the existing refrigerant**
  - By law\*, the system must be recovered of all existing refrigerant
  - Record the amount of refrigerant that is recovered, this will help determine the amount of Choice™ R-421A the system needs

\*For more information visit [epa.gov](http://epa.gov)
- ✓ **Determine Oil Composition**
  - Check the existing oil's moisture content, acidity
  - Also check for particulate matter such as metal shavings, or rust
  - If the system's oil does not meet desired specification perform a complete oil change prior to converting the refrigerant
- ✓ **Install new Oil Filter and Filter Drier**
  - If the system contains a compressor oil filter or coalescent oil separator, replace as needed
- ✓ **Determine if the System has a leak**
  - Determine the units designed pressure level
  - Conduct a pressure test using dry nitrogen to determine if the system contains a leak
- ✓ **Evacuate System**
  - In order to remove all non-condensables and moisture from the system, a minimum vacuum of 500 microns is required.

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Choice  
Refrigerants

# Procedures for Retrofitting R-22 systems for Choice™ R-421A

## ✓ Charge System

- The system should be charged with Choice™ R-421A in a liquid state only
- Choice™ R-421A can be applied to the high pressure side of the system
- The correct charge will vary for each system, though it is recommended that the initial charge be 90-95% of the original R-22 charge

## ✓ Start System

- Evaluate systems performance by checking the subcooling, superheat temperatures and pressures
- Reference the Choice™ PT chart as needed
- Choice™ R-421A can be topped off multiple time, or until desired performance is reached.

## ✓ Label, Monitor and Record

- Properly label the converted system and perform leak tests as needed
- Record the systems performance and compare to pre-conversion evaluation
- For additional information please Call 1-888-659-COLD

System Data	Pre	Post
Suction PSIG		
Suction Temp		
Discharge PSIG		
Discharge Temp		
Ambient Temp		
Compressor S.H.		
Evaporator S.H.		
Subcooling		
Refrigerant (lbs)		
Compressor Oil Level		
Compressor Oil Temp		
Compressor Motor Amps.	L1	
	L2	
	L3	

### Note

Choice™ R-421A should only be used in existing R-22, R-417A, R-407C and R-422B systems. Only trained technicians should perform conversions.

**For More Information**  
visit us at [rmsgas.com](http://rmsgas.com)