

# OPTIMIZE WITH OPTEON™



## Opteon™ XP40 (R-449A)

Up to 12%  
higher energy  
efficiency than  
R-404A

Significant  
GWP reduction:  
67% lower GWP  
than R-404A

Compatible  
with existing  
equipment  
and POE  
lubricant

Replaces  
R-22,  
R-407A,  
R-404A and  
R-507A

ASHRAE A1  
No Flame  
Propagation,  
Lower Toxicity

Approved  
by major  
equipment and  
component  
OEMs



The Tech2Tech team at Chemours can provide a free audit and propose a refrigerant management solution to save you time and money, so you can be prepared for the future.



call **866-433-8324**

or email **tech2tech@chemours.com**

# Guidance for Conversion to Opteon™ XP40 (R-449A)

This document is only intended to be used as an overview. Please read and follow the complete Opteon™ XP40 retrofit guidelines using the QR codes below, or by visiting [opteon.com](http://opteon.com).



Opteon™ XP40  
Retrofit Guidelines R-22



Opteon™ XP40  
Retrofit Guidelines - R-404A / R-507

## R-404A/R-507A to XP40 (R-449A)

<b>Lubricant</b>	No change
<b>Elastomeric Seals</b>	No change
<b>Expansion Valves</b>	Adjustment required. The TXV will need to be closed to raise the superheat post retrofit. Also, it is recommended to change to R-22 or equivalent power element.
<b>Filter Driers</b>	Change driers. This is a routine system maintenance practice.
<b>Discharge Temperature</b>	Review guidelines from compressor manufacturer. For low temp refrigeration, some form of discharge temperature management (head fan/liquid injection) might be recommended.
<b>Control</b>	Adjust set points. Many refrigeration control systems and methodologies rely on pressure-temperature relationship of specific refrigerant for proper operation.

## R-22 to XP40 (R-449A)

<b>Lubricant</b>	Lubricant needs to be changed to POE. Most compressor manufacturers recommend flushing to a maximum of 5 wt% residual mineral oil in the system for effective performance. If system performance is not compromised, residual mineral oil in the range of 5 to 10% is acceptable.
<b>Elastomeric Seals</b>	Change critical elastomeric seals. R-22 and, to a lesser extent, R-22-containing refrigerant blends, interact relatively strongly with many elastomers, causing significant swelling and often, over time, a measurable increase in hardness. Opteon™ XP40, like other HFO or HFC refrigerants, does not have as strong of an effect on elastomers commonly used as seals in refrigeration systems. Without replacement, the seals can deform which will result in leaks.
<b>Expansion Valves</b>	Properly sized R-22 valve bodies and power elements are compatible with R-449A. Post retrofit, minor adjustments to the spring pressure of the valve will likely be needed to reach target evaporator superheat.
<b>Filter Driers</b>	Change driers. This is a routine system maintenance practice.
<b>Discharge Temperature</b>	No change
<b>Control</b>	Adjust set points. Many refrigeration control systems and methodologies rely on pressure-temperature relationship of specific refrigerant for proper operation.

## R-407A to XP40 (R-449A)

<b>Lubricant</b>	No change
<b>Elastomeric Seals</b>	No change
<b>Expansion Valves</b>	Minor adjustment to TXVs likely required post retrofit
<b>Filter Driers</b>	Change driers. This is a routine system maintenance practice.
<b>Discharge Temperature</b>	No change
<b>Control</b>	Adjust set points. Many refrigeration control systems and methodologies rely on pressure-temperature relationship of specific refrigerant for proper operation.