

Time to change.

Prime is here to help you navigate
the best refrigerant alternative.



In October 2016 the Parties to the Montreal Protocol agreed to a phase-down of production and imports of HFCs. Australia fully supported the phase down and played a key role in the agreement.

What does this mean?

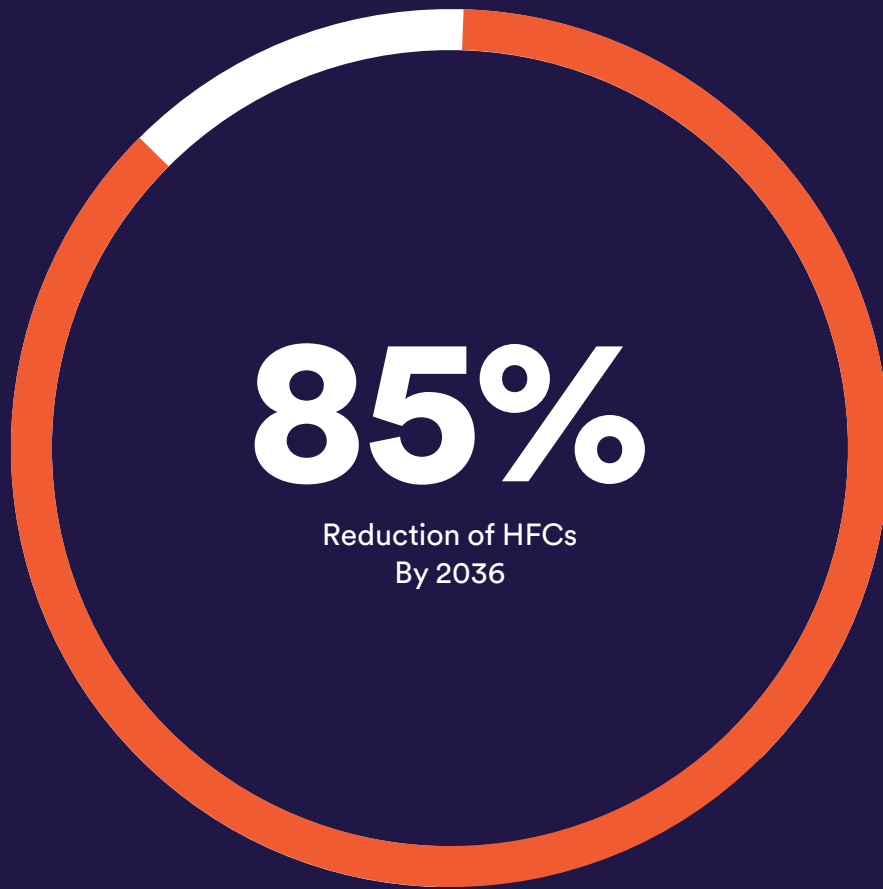
This agreement enforces a reduction in the amount of HFCs imported into Australia by 85% over two decades.

How does that affect you?

While not as harmful as CFCs, Hydrofluorocarbons (HFCs) commonly used in refrigeration systems and air-conditioners are thousands of times more likely to cause a global warming effect than your common greenhouse gases like carbon dioxide or methane. Because of this, it is predicted that HFCs will become highly scarce in the future.



High Global
Warming Potential



What should you do?

You'll need to begin transitioning to refrigerants with lower GWP. Prime are here help you navigate these industry changes by providing information you can trust and clear guidance when retrofitting or commissioning new systems. We'll recommend the best alternative refrigerants so you can do the job with total confidence.



Guidance on the best alternative refrigerant

Welcome to a new world of refrigerants.

In 1989, governments around the world agreed to phase out Ozone Depleting Substances from the atmosphere. Recently, this agreement was extended to include the phase down of substances with high Global Warming Potential. As a party to this agreement, Australia has now begun the phase down of HFCs.

CFCs

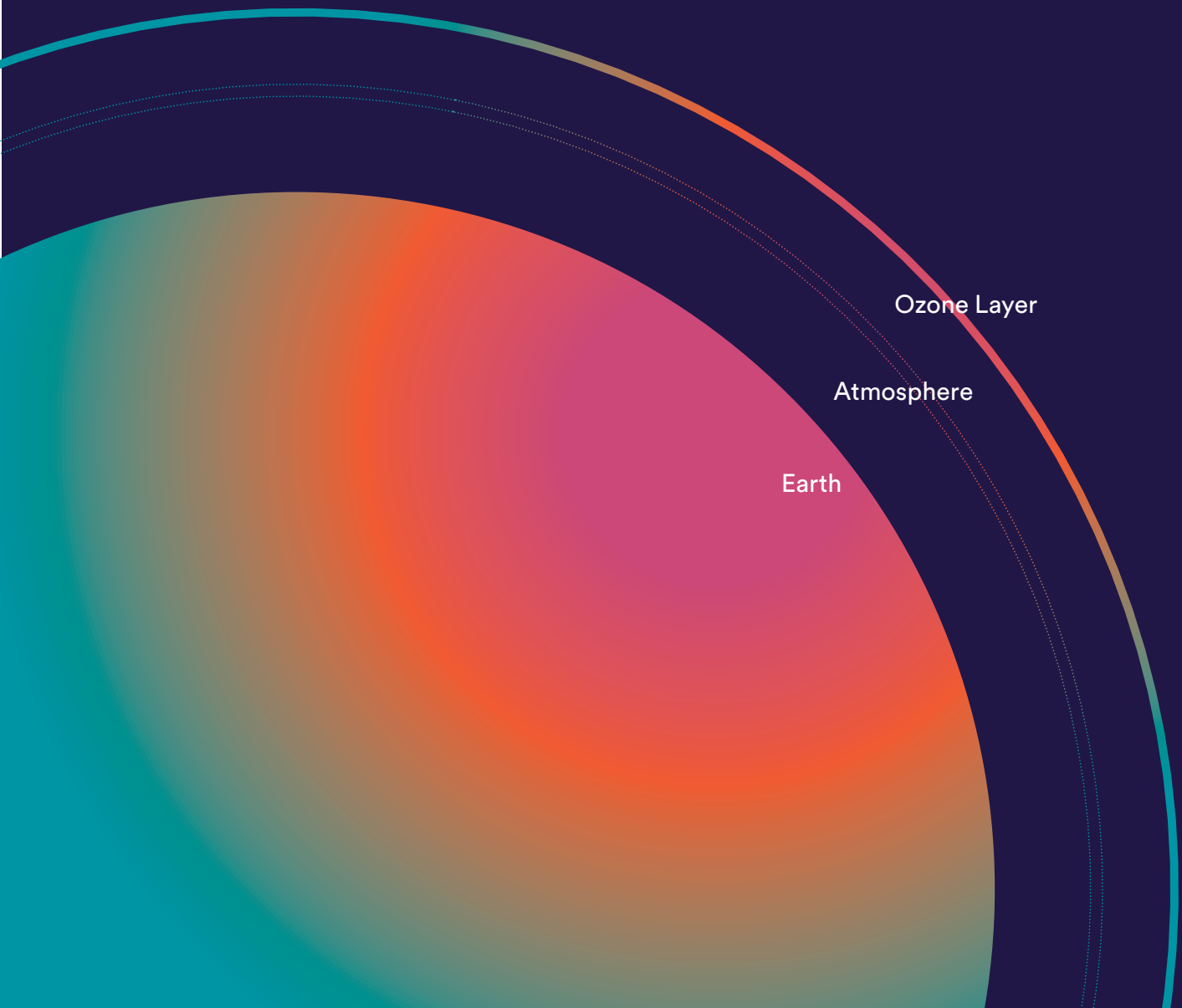
Deplete the ozone layer

- Harmful UV rays reach the Earth's surface
- The ozone layer and atmosphere absorb UV radiation

HFCs

Contribute to global warming (GWP)

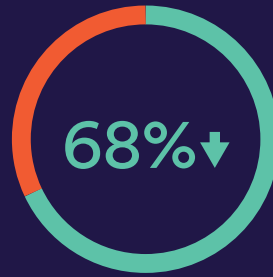
- Sunlight warms the planet
- Greenhouse gases like HFCs trap extra emitted heat warming the planet



The next phase of refrigerants.



R448A | can replace R404A



Lower Global Warming Potential than the current R404A

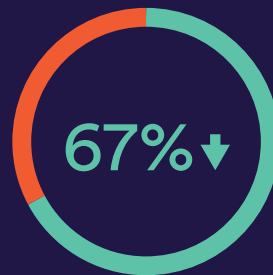
	Low	Medium
COP Cool	107.50%	106.30%
Compressor Power (kW)	93.10%	94.10%
Mass Flow (m3/h)	97.50%	95.50%
Discharge (C)	125.00%	117.40%
COP Heat	104.70%	104.50%
Refrigeration Capacity	102.60%	104.80%
Charge Size	106.80%	107.50%

GWP: 1273
Temperature: Low & Medium
Flammable: No
Toxic: Low Toxicity
ASHRAE Classification: A1

Common Application
Commercial
Industrial



R449A | can replace R404A



Lower Global Warming Potential than the current R404A

	Low	Medium
COP Cool	107.5%	106.3%
Compressor Power (kW)	93.0%	94.1%
Mass Flow (m3/h)	98.1%	96.3%
Discharge (C)	125.0%	116.0%
COP Heat	104.7%	104.5%
Refrigeration Capacity	101.9%	103.9%
Charge Size	107.4%	108.2%

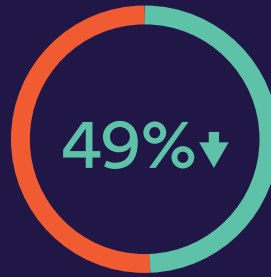
GWP: 1282
Temperature: Low & Medium
Flammable: No
Toxic: Low Toxicity
ASHRAE Classification: A1

Common Application
Commercial
Industrial

The next phase of refrigerants.



R452A I can replace **R404A**



Lower Global Warming Potential than the current R404A

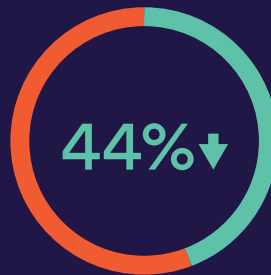
	Low	Medium
COP Cool	100.4%	106.6%
Compressor Power (kW)	99.6%	93.8%
Mass Flow (m3/h)	97.1%	103.2%
Discharge (C)	100.4%	100.4%
COP Heat	100.3%	104.7%
Refrigeration Capacity	103.0%	96.9%
Charge Size	108.9%	109.3%

GWP: 1945
Temperature: Low & Medium
Flammable: No
Toxic: Low Toxicity
ASHRAE Classification: A1

Common Application
 Commercial
 Transport DX



R513A I can replace **R134a**



Lower Global Warming Potential than the current R134a

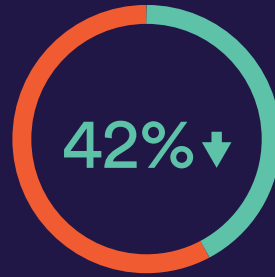
	Medium
COP Cool	95.5%
Compressor Power (kW)	104.8%
Mass Flow (m3/h)	93.0%
Discharge (C)	88.7%
COP Heat	96.6%
Refrigeration Capacity	107.6%
Charge Size	94.2%

GWP: 573
Temperature: Medium
Flammable: No
Toxic: Low Toxicity
ASHRAE Classification: A1

Common Application
 Room A/C Split Systems
 Ducted Split Systems/Rooftop Package
 VRF
 Chiller without Flooded Evaporator
 Light Industrial



R450A I can
replace **R134a**



**Lower Global
Warming Potential
than the current
R134a**

	Medium
COP Cool	99.2%
Compressor Power (kW)	100.9%
Mass Flow (m³/h)	111.4%
Discharge (C)	92.4%
COP Heat	99.4%
Refrigeration Capacity	89.7%
Charge Size	97.0%

GWP: 547
Temperature: Medium
Flammable: No
Toxic: Low Toxicity
ASHRAE Classification: A1

Common Application
Commercial
Cold Rooms

**Our nation wide network
will ensure you have access
to refrigerant alternatives
– where you need it, when
you need it.**

For more information speak to an
branch member or find out more at
actrol.com.au/brands/prime

How to choose

These options will replace **R404A**

What is the application?	Commercial		
What is the application temperature?	Low		Medium
Is additional compressor cooling available?	No	Yes	–
Recommended Alternative Refrigerant	R452A	R448A	R448A

What is the application?	Light Industrial		
What is the application temperature?	Low		Medium
Is additional compressor cooling available?	No	Yes	–
Recommended Alternative Refrigerant	R452A	R448A	R448A

What is the application?	Transport	
What is the application temperature?	Medium	Low
Is additional compressor cooling available?	–	–
Recommended Alternative Refrigerant	R448A	R452A

These options will replace **R134a**

What is the application?	Commercial	
What is the application temperature?	Medium	High
Recommended Alternative Refrigerant	R513A / R450A	

What is the application?	Light Industrial	
What is the application temperature?	Medium	High
Recommended Alternative Refrigerant	R513A	



Leading the way in the refrigerant industry.



Disclaimer: GWP based on AR5. Import of HFCs in Australia is limited by a quota system relative to the GWP of the imported refrigerants. Higher GWP refrigerants reduce total available quota volume so are likely to be higher priced. *mineral oil is only suitable for some applications. Oil changes are sometime quoted as "not required" but well-maintained systems are likely to perform better and with longer life if POE is used. The data in these charts was derived using CYCLE_D (NIST) software. Parameters used: Medium Temperature SST=-5, SCT=45, SC=3 Low Temperature SST=-25, SCT=40, SC=3.