



**Gas2GO<sup>®</sup>**

**GAS DOCTOR  
TESTING SERVICE**

## REFRIGERANT GAS ANALYSIS

### Importance of operating at optimum capacity

Maintaining your refrigeration system at peak performance is important to protect valuable business assets. At the first sign of poor performance, an accurate diagnosis of the problem can help avoid costly repairs or system failure.



### Why Test Refrigerant?

- Performance/capacity loss, could be due to partial loss of refrigerant charge in a system (fractionation)
- High head pressures, typically relate to the presence of non-condensables
- Compressor burn outs, may result in high acidity and particulate matter which may cause premature failure of motor windings and damage to copper piping
- A preventative measure as part of your routine annual maintenance

### How to ensure you are operating at optimum capacity

The Gas2Go® Gas Doctor Testing Service provides laboratory analysis of the contaminant levels in used refrigerant to ensure your refrigeration equipment is operating at optimum capacity. This enables decision making on corrective actions to prevent damage and/or improve system performance.

The Gas2Go® Gas Doctor Testing Service offers testing on CO<sub>2</sub>, HFC, HCFC & HFO gases. Laboratory testing is able to identify any unknown gas component against the NIST data library.

Results are expressed against the AHRI 700 standard composition and maximum contaminant limits which are the internationally recognised 'optimum limits' for refrigerant in a HVAC and refrigeration system. All product is tested in house at the Gas2Go® laboratory facility certified to ISO 9001 quality system.





# GAS DOCTOR TESTING

The Gas2Go® Gas Doctor Testing Service is able to provide testing on:



## Example of refrigerant properties table from analysis: R410A

Characteristic	Sample Type	Test Method	AHRI 700 Limits Specification	Test Results	
Non Condensable Gas (% v/v)	Vapour	GC-TCD	≤1.5%	0.05%	Pass
Moisture (ppm)	Liquid	Titrametric	≤10ppm	118.8ppm	Fail
High Boiling Residues (% w/w)	Liquid	Gravimetric	0.01%	0.07%	Fail
Acidity as HCl (ppm)	Liquid	Titrametric	≤1ppm	<1ppm	Pass
Composition HFC-125 (%w/w)	Liquid	GC-FID	49.5% - 51.5%	51.4%	Pass
Composition HFC-32 (%w/w)	Liquid	GC-FID	48.5% - 50.5%	48.6%	Pass



Environmentally friendly reusable sample cylinders



World class laboratory



Refrigerant sample analysis



Quick and efficient service



Expert local team

### Does your business suffer from:

- Inconsistencies in current oil sample tests
- The unnecessary cost of replacing refrigerant driers and oil
- The increased cost of parts and labour due to invalid information

### Let Gas2Go® Help:

- Proven test accuracy with ISO9001 accredited lab
- Oil test kits available
- Low volume samples required
- Track annual testing requirements by site
- Track post commissioning results by site

The Gas2Go® Gas Doctor Testing Service has been valuable in testing CO<sub>2</sub> refrigeration systems. Due to the water absorbing nature of PAG and POE oils, oil tests may provide inconsistent results, causing the unnecessary changing of the driers and possibly the oil.

Gas2Go® Gas Doctor Testing Service provides an accurate analysis of the true contaminant levels in the system.

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## **GAS DOCTOR TESTING SERVICE**