



Proton Gases India Pvt Ltd

Product Catalog 2023

We take this opportunity to introduce ourselves as one of the largest manufactures and suppliers of Industrial / special gases, calibration gases and gas Handling System in India. Proton Gases began operations in 2006 and within 2 years of operation in the country, has gained a reputation for supplying safety incorporated Quality products & Services to our customers. With state-of-the art technology, abundant experience, technical expertise and nation-wide presence, we meet the various needs of our customers ranging from supply of gases in cylinders, Liquid Gas Cylinders, Cryogenic Tanks, tonner/Drums, Banks and Pallets and Gas handling Equipments. As a specialty & Industrial Gas leader, Proton Gas remains committed to meeting the demanding quality specification of our customers, With Proton, you also have the benefit of choosing from a wide portfolio of pure gases and mixtures. From 2010 Proton Started Venturing out in to Pure Green HC refrigerants as well as other major product in Refrigerants.

Major Products

1. R600A
2. R290
3. HC BLEND
4. R134a
5. R22
6. R404A
7. R407C
8. R410A
9. R32

R600a (ISOBUTANE)

R600a (Iso-Butane) is refrigerant grade Iso-Butane used as a replacement for R12 and R134a in a variety of high temperature refrigeration applications. R600a (Iso-Butane) is a hydrocarbon that is becoming increasingly popular due to its low Global Warming Potential (GWP).

Packing Info

200 GM

455 KG

11 Tons

Applications

Domestic
Refrigeration

Commercial
Refrigeration



Product Features

- GWP : 3
- Refrigerant can be charged from either the liquid and vapors phase
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Flammable and non-toxic with a safety classification of A3
- Compressors can be charged with a variety of oils, contact the compressor manufacturer for more information.
- Low GWP of 3
- Excellent thermodynamic properties resulting in high energy efficiency
- Not for use as a retrofit replacement and requires a specific R600a compressor.
- Due to its flammable nature R600a (Iso-Butane) requires different charging and recovery procedures.
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly

R290 (PROPANE)

R290 (Propane) is refrigerant grade propane, used as an alternative to R404A and R407 series refrigerants in new refrigeration and air conditioning systems. R290 (Propane) is a Hydrocarbon and although highly flammable it is an efficient refrigerant that has a low Global Warming Potential (GWP).

Packing Info

150 GM

50 KG

399 KG

Applications

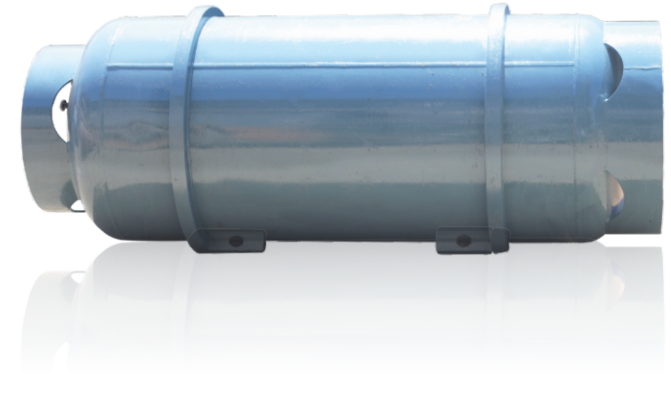
Commercial
Air-
Conditioning

Commercial
Refrigeration

Domestic
Air-
Conditioning

Industrial
Refrigeration

Industrial
Air-Conditioning



Product Features

- GWP : 3
- Refrigerant can be charged from either the liquid and vapour phase
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Flammable and low toxicity with a safety classification of A3
- Compressors can be charged with a variety of oils, contact the compressor manufacturer for more information
- Low GWP of 3
- Excellent thermodynamic properties leading to high energy efficiency
- Due to its flammable nature R290 (Propane) requires different charging, recovery procedures and equipment
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly

HC BLEND

Hc blend is a refrigerant consisting of a blend of isobutane (R-600a) and propane (R-290) developed to replace dichlorodifluoromethane (R-12) and It is primarily for use in small commercial refrigeration and air-conditioning systems that have traditionally used R-12. It operates at similar pressures and possesses similar volumetric refrigerating effect to R-12 and R-134a. It can be used in a R 12 or R1 34A compressor or a specific Hc blend compressor. It can be used with R-12 or R-134a heat exchangers and expansion devices. It is compatible with most common refrigeration materials and lubricants.



Packing Info

170 GM

Applications

Domestic
Refrigeration

ProGas

Product Features

- GWP : 3
- Refrigerant can be charged from either the liquid or vapour phase
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- It is compatible with most common refrigeration materials and lubricants.
- Non-flammable with a safety classification of A1
- The information contained within this website is for guidance only, for further system specific advice please call Progas directly

R134a (1,1,1,2 - Tetrafluoroethane)

R134a is a HFC, used in automotive air conditioning and as a replacement for R12 and R22 in medium and high temperature refrigeration applications, such as commercial and domestic refrigeration and chillers.

Packing Info

450 GM

62 KG

760 KG

Applications

Domestic
Refrigeration

Commercial
Refrigeration

Transport
Refrigeration



Product Features

- GWP : 1430
- Substitute for R12, with comparable physical and thermodynamic properties
- Refrigerant can be charged from either the liquid or vapor phase
- A-Gas refrigerant cylinders have dual port valves, making liquid offtake easier
- Non-flammable with a safety classification of A1
- Compressors must be charged with polyolester oils, contact the compressor manufacturer for more information
- Reduction of capacity compared to R12
- Existing R12 equipment can be retrofitted with R134a
- High critical temperature which ensures good coefficient of performance
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly

R22 (Chlorodifluoromethane)

R22 has been the dominant refrigerant in residential and commercial air conditioning and some very large centrifugal chillers for air conditioning and industrial process cooling. It has also been used in refrigeration since the phase-out of CFCs, both as a pure refrigerant and in blends. R22 is subject to reduced production and restriction in new equipment since 2010, and production ends in 2020. The use of R22 is allowed until the R22 supply has been depleted.

Packing Info

61 KG

Applications

Commercial
Refrigeration

Commercial
AC

Auto AC

Residential
AC

ProGas



Product Features

- GWP : 1700
- Refrigerant can be charged from either the liquid or vapour phase
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Eventually, domestic and commercial AC systems will need an R-22 replacement
- refrigerant, as will medium- and low-temperature commercial refrigeration systems.
- Non-flammable with a safety classification of A1
- The information contained within this website is for guidance only, for further system specific advice please call Progas directly

R404a

R404A is a HFC blend, used as a replacement for R502 and R22 in low and medium temperature refrigeration applications. Although it is a popular refrigerant, with a GWP above 2500, the use of R404A is now prohibited in new equipment and restricted in pre-existing equipment. Reclaimed R404A is still permitted until 2030 for servicing equipment already running on R404A and is an option for those with systems above 40T CO₂ Equivalent (approximately 10kgs of R404A).

Packing Info

45 KG

Applications

Industrial
Refrigeration

Commercial
Refrigeration

Transport
Refrigeration

ProGas



Product Features

- GWP : 3922
- Substitute for R502, with comparable physical and thermodynamic properties
- Near azeotropic refrigerant blend containing R125, R143a, and R134a
- Refrigerant must be charged from the liquid phase to ensure accurate composition
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Non-flammable with a safety classification of A1
- Compressors must be charged with polyester oils, contact the compressor manufacturer for more information
- With a GWP above 2500, virgin R404A can no longer be used in new equipment or to service existing equipment where the charge size is greater than 40T CO₂ Equivalent (approximately 10kgs of R404A). The use of Reclaimed R404A is allowable until 2030 to service existing equipment.
- The information contained within this website is for guidance only, for further system specific advice please call Progas directly

R407c

R407C is a HFC blend, used as a replacement for R22 in air conditioning systems and medium temperature refrigeration applications.

Packing Info

45 KG

Applications

Industrial
Refrigeration

Commercial
Refrigeration

Commercial
Air-Conditioning

Domestic
Air-Conditioning



Product Features

- GWP : 1774
- Substitute for R22 with comparable physical and thermodynamic properties
- Zeotropic refrigerant blend containing R32, R125 and R134a
- Refrigerant must be charged from the liquid phase to ensure accurate composition
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Non-flammable with a safety classification of A1
- Compressor must be charged with polyolester oils, contact compressor manufacturer for more information
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly

R410a

R410A is a HFC blend, used mainly in air conditioning systems; it may also be used as an alternative to R13B1 in low temperature refrigeration.



Packing Info

45 KG

Applications

Domestic
Air-
Conditioning

Product Features

- GWP : 2088
- Substitute for R22 and R13B1
- Near azeotropic refrigerant blend containing R32 and R125
- Refrigerant must be charged from the liquid phase to ensure accurate composition
- A-Gas refrigerant cylinders have dual port valves, making liquid offtake easier
- Non-flammable with a safety classification of A1
- Compressors must be charged with polyolester oils, contact the compressor manufacturer for more information
- Distinct higher efficiency in comparison with R22
- Not a retrofit replacement due to much higher operating pressures
- Higher pressures of this refrigerant are to be considered, especially with regards to system components
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly

R32

R32 is a HFC refrigerant, used as a replacement for R410A in low temperature refrigeration and air conditioning applications. This refrigerant is a preferred replacement for R410A in new equipment. R32 is not to be used as a retrofit.

Packing Info

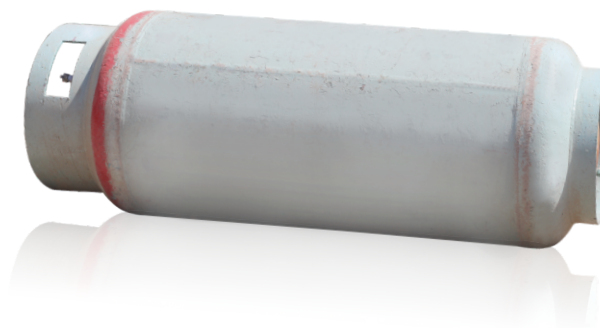
40 KG

710 KG

Applications

Domestic
Air-
Conditioning

Domestic
Refrigeration



Product Features

- GWP : 675
- Substitute for R410A in new equipment
- Refrigerant can be charged from either the liquid or vapour phase
- ProGas refrigerant cylinders have dual port valves, making liquid offtake easier
- Mildly flammable, non-toxic with a safety classification of A2L
- Compressors must be charged with polyolester oils, contact the compressor manufacturer for more information
- Lower GWP of 675, just 32% of R410A
- Smaller charge requirements mean exchangers and components can be smaller and more compact
- Slightly better energy efficiency than R410A
- Similar boiling temperature to R410A
- Meets EU F-Gas requirements for small single-split AC systems after 2025
- Due to its flammable nature R32 requires different charging and recovery procedures
- The information contained within this website is for guidance only, for further system specific advice please call ProGas directly



R600A



R290



R134A



R22



HCBLEND



R404A



R407C



R410A



R32

Product Name	ODP	GWP	Molecular weight kg/mol	Boiling Point @ 1bar C	Critical Temperature (C)	Critical Pressure bar	Safety Group Classification	Compatible Oils / Lubricants	Replacement for
R600A (ISO Butane)	0	4	58	-12	135	36	A3	MO,AB,POE	R12,R134a
R290 (Propane)	0	3	44	-42	97	43	A3	MO,AB,POE	R22,R502
R134a		1430	102	-26	101	41	A1	POE,PAG	R12,R22
R22		1700							
HC Blend		3							
R404A	0	3922	98	-46	72	37	A1	POE	R502,R22
R407C	0	2107	90	-45	82	45	A1	POE	R22,R404A
R410A	0	2088	73	-53	73	50	A1	POE	R22,R13B1
R32	0	675	52	-52	78	54	A2L	POE	R410A

Our Valuable Customers



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