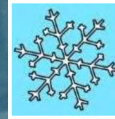




**RAK**  
Industrial Consulting

— AND —



Negative  
One-Eighty  
Cryogenic  
Solutions, LLC

# CRYO ADSORBER CA-60

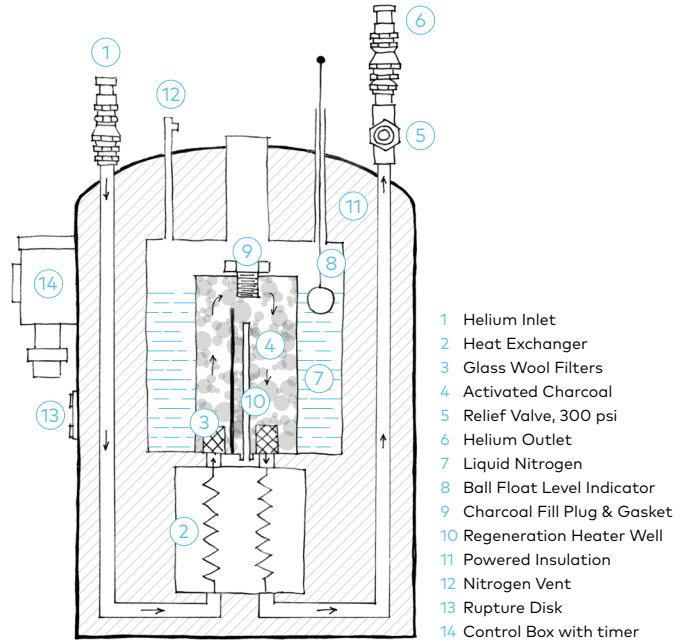
Is your Helium gas  
bill too high?

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Helium is a finite and non-renewable resource. The Helium scarcity and the resulting high prices have made the operating costs of scientific experiments often too high and unobtainable. There are many other uses of Helium in industry, so it is important to use helium economically and therefore reduce helium waste. Conserving natural resources makes good business sense.

# Model CA-60 He Cryogenic Adsorber

The CA-60 cryogenic adsorber is a medium pressure liquid-nitrogen-cooled helium gas purifier designed for use with helium liquefaction/refrigeration systems. Trace impurities from a helium gas stream are removed by cryo-trapping them inside the adsorbent. The key aspect is to minimize the helium waste and boost the reliability and availability of your system.



in plant failure and down time. During plant commissioning or after opening/exposure to air for maintenance, the system may be contaminated with gaseous N<sub>2</sub>. Furthermore, systems operating at sub atmospheric pressure particularly may suffer from air intrusion through small leaks from the equipment or compressor piping. Dubious, noncertified gas from the gas supplier or other sources should run through the cryo-adsorber prior to topping up the liquefier system.

The CA-60 cryogenic adsorber will be delivered as an all-in-one and ready for use device for mobile applications and manual operation. Flex high pressure metal hoses for in and outlet connection, appropriate connectors, an extension cable and suitable plug for regeneration heater are included. The straightforward operation of the adsorber after unpacking is possible in less than one hour.

On demand we can provide additional controls for LN<sub>2</sub> supply and regeneration for the unattended operation of the CA-60 adsorber. Ask for a quote.

## Features:

- To remove contaminants to below 50 vpm (volume parts per million) in closed helium systems prior to cool down therefore reducing start up time
- Remove contaminants in compressor only systems, e.g. after compressor maintenance, helium recovery gas station, industrial helium gas filling station, etc.

- Remove contaminants from make-up gas for the liquefier in continuous operation

Helium liquefaction/cooling process require high purity gas for reliable operation. Operating with unapproved gas quality will cause condensing or the solidification of impurities inside cold parts and consequently resulting