Helium Recovery and Purification System

CAPABILITY SHEET · CATCH IT BEFORE THE AIR DOES. · A BAG, A COMPRESSOR, A DRYER, A PURIFIER AND AN

THE ONE IDEA

PRINCIPLE	Catch it before the air does.
WHY IT MATTERS	Air drawn into the collection has to be removed later. A purifier holds only so much, so more air means more regeneration and more helium vented with it.

THE SYSTEM

CAPTURE	Closed couplings and non-return valves into one header, with a monitor at the inlet that diverts poor gas.
GAS BAG	A flexible bag in a frame that takes each burst near room pressure, with level sensing and a relief.
COMPRESS AND DRY	A recovery compressor that draws from the bag into cylinders through coalescers, an activated carbon filter and a dryer.
PURIFY AND CHECK	A purifier with regeneration that takes out the air, and an analyser that keeps poor gas apart.

THE METHOD

ORDER	Sources, capture, buffer, compress and dry, purify and check, return and account. The capture and the balance are the two that a quick job skips.
LIMITS	The purity and the amount come from the process that uses the gas, and are not printed here.

CONFIGURATIONS

STORE	Collect and store: gas is kept dry in cylinders, to be purified here or elsewhere.
REUSE	Recover and reuse: filtered and dry gas returns to a process that accepts the collected purity.
PURIFY	Recover and purify: a purifier and a second check return gas at the purity the process asks for.

SCOPE

SCOPE BOUNDARY	It is the helium recovery system: not a leak detector, not a charging station and not a liquefier.
STATUS	Neometrix engineers helium recovery and purification systems to order, and no delivered helium recovery and purification system is claimed.

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