

# Hydrogen pressure swing adsorption.

Reliable, cost effective recovery and purification.



A leader in adsorption technology, Linde Engineering has designed and supplied over 500 pressure swing adsorption (PSA) plants globally - including some of the world's largest. Our well-proven units are designed for the recovery and purification of hydrogen from hydrogen-rich streams, such as synthesis gases from hydrogen reforming processes, partial oxidation or gasification. PSA is also applied for recovery and purification from off-gases in refineries, petrochemicals, and ammonia purge gas.

Capacities range from a few hundred Nm<sup>3</sup>/h to large scale plants at over 400,000 Nm<sup>3</sup>/h. Hydrogen product meets purity requirements up to 99.9999 mol-% and is achieved at highest recovery rates.

Linde's experts help you select the right PSA system for your business needs, balancing your requirements with investment cost.

### Advantages

- Availability - with a reduced number of adsorbers, adsorber group isolation and redundant control system, our PSA units achieve virtually 100% on-stream performance and availability
- Flexibility to adjust to varying feed gas conditions and hydrogen demand
- Modular design and prefabricated equipment minimize schedule and cost
- Maintenance is simplified, with valves and instruments easily accessible
- High quality and reliability thanks to rigorous selection, testing and approval of components

### Scope of supply

Scope can be adjusted to best suit your needs. Feed gas or tail gas compressor systems can be supplied as an integrated PSA solution.

Linde's typical scope of supply includes:

- Prefabricated valve skid
- Adsorber vessels
- Specially selected adsorbent material
- Tail gas drum
- Process control system