Nitrogen generation based on pressure swing adsorption – NITROSWING

Mahler AGS nitrogen generation plants are based on pressure swing adsorption technology for capacities from about 200 to 4000 Nm³/h depending on the purity. Purities up to 99.99 vol.-% can be reached.

NITROSWING PSA units are designed for nitrogen generation from ambient air.

The pressure swing adsorption (PSA) technology employs the basic principle of air separation at ambient temperatures by using carbon molecular sieve (CMS; a material that adsorbs oxygen to leave a rich stream of nitrogen).

Individual plant concepts with respect to local situation (building available, etc.), admissible sound emission can be offered. Furthermore concepts with additional oxygen removal (DEOXO) can be considered in order to achieve oxygen contents < 3 vppm.

Plant features of the NITROSWING nitrogen generation plant

- Low cost on-site production
- Fast start-up, fully automatic and unattended operation
- Product flexibility regarding flow and purity
- Completely pre-manufactured skids
- High availability and reliability
- Design for long lifetime

Plant data

| Feedstock: | ambient air |
| Nitrogen capacity: | 200 to 4000 Nm³/h |
| Purity: | up to 99.99 vol.-% |
| Pressure*: | 6-9 bar(abs) |

* at exit nitrogen PSA unit; higher pressures on demand.

Typical applications for nitrogen plants

- Metallurgical / heat treatment
- Chemical and petrochemical industry
- Float glass
- Food industry
- Electronic industry
- Oil and gas

Additional/Optional features for nitrogen generation plants:

Our plants are used worldwide. Especially for Russia, Belarus and Kazakhstan we are able to provide our plants with all necessary TR certificates and declarations for the import and operation in the Custom Union. Our NITROSWING plants are equipped with a serial declaration according TR CU 010/2011 (MD), TR CU 004/2011 (LVD) and TR CU 020/2011 (EMC), valid until beginning of 2020. Certificates or declarations according TR CU 032/2013 for all pressure vessels as well as a TR CU 012/2011 certificate for the entire equipment placed inside areas with potentially explosive atmospheres are also part of our scope of supply.