

FST NITROGEN GENERATORS

FST GmbH - There is always a solution

FST GmbH Filtrations-Separations-Technik has specialized in the field of industrial treatment of compressed air and technical gases, a market segment with a growing demand for innovative, efficient, economical as well as resource and environmentally friendly technical solutions. With the extension of the delivery program by the product group GNA nitrogen generators, FST responds to the demand in the field of laser cutting as well as 3D printing.



GNA nitrogen generators

Nitrogen generators of the GPS series are designed for the generation of gaseous nitrogen from compressed air from 0.6 to 330 m³/h at purities between 95 % and 99.995 %. The generators operate in a pressure range from 5 to 9 bar g.

Function

To generate nitrogen, a quantity of compressed air defined in terms of quantity, pressure and quality is fed into a tank of the generator filled with activated carbon. In the process, the clean material in the compressed air is absorbed. The activated carbon, enriched with oxygen molecules, must then be regenerated before it can be used again for another adsorption process.

Therefore, for continuous operation of a nitrogen generator, two tanks are required which are operated alternately - one tank for taking up the oxygen from the compressed air (adsorption), the other tank with the regeneration of the activated carbon. The alternating interval between adsorption and regeneration in the GNA series is 40 - 180 seconds. In this mode of operation, for the regeneration of the activated carbon, a part of the produced quantity of nitrogen is taken from the outlet of the generator, expanded to ambient pressure and passed through the vessel to be regenerated. The expanded and extremely dry nitrogen extracts the stored oxygen from the activated carbon and releases it into the environment via a silencer.



GNA-Stickstoffgeneratoren
Bildmaterial: FST GmbH

Features

The molecular sieve used (CMS activated carbon) has a high absorption capacity of oxygen molecules and a lifetime service life. As a result, continuous delivery rates with specified purity are achieved during operation. The container chambers are switched over via external, individually controlled valves that are freely accessible for maintenance. The flow cross-sections are dimensioned to ensure the lowest possible pressure loss over the entire unit. The valves and all other necessary components are controlled by a Siemens S7 touch control system.

GNA nitrogen generators are flexible in use, economical and reliable. They convince with high performance and service life as well as safe operation.