

SELF-GENERATED NITROGEN REDUCES COSTS

FALCON TECHNOLOGIES INTERNATIONAL ENSURES QUALITY IN THE PRODUCTION OF OPTICAL STORAGE MEDIA WITH SELF-GENERATED NITROGEN

United Arab Emirates. Sensitive data that must be protected from access by third parties is not usually stored by companies on what is referred to as the cloud. Due to potential security risks, such as data loss and misuse of user data, this data is often stored and archived on local optical storage media. Falcon Technologies is a leading manufacturer of optical storage media and archiving solutions.



Image: The IMT PN 4420 Eco Tube is located in the utility building and supplies production with high-purity nitrogen, which is sent at 2.5 bar pressure to the production hall more than 100 m away. Thanks to the latest remote control technology, all functions and parameters can be monitored and controlled online.

End customers use the products to store sensitive data and image information. At the same time, they place great importance on the highest quality in order to avoid data loss. Falcon Technologies provides suitable solutions to this end. The company's range of offers includes storage and archiving solutions that „preserve“

data for up to 300 years. In order to be able to keep this promise, the company relies on excellence in the production process. This company, which attaches great importance to research and development, is therefore able to offer high-quality products with maximum safety and consistent product quality.

Falcon Technologies manufactures CDR-R (Compact Disc Recordable) and DVD±R (Digital Versatile Disc Recordable) memories under special production conditions. In particular, it is imperative that contact with oxygen be avoided during various process steps to prevent contamination. The coating of the data carrier with a silver or gold layer, which subsequently reflects the laser beam of a CD or DVD player, is carried out under a closed protective hood in a special nitrogen atmosphere. Especially before and after the coating, high-purity nitrogen is blown onto the data carrier. In this regard, if the specifications for the inert gas atmosphere are not adhered to exactly, the goods are defective and need to be destroyed.

Nitrogen is an important component of Falcon Technologies' production. There were repeated supply problems in the past and production was often jeopardised. This explains the company's decision to produce nitrogen on-site. To this end, an air and gas audit was initially carried out in collaboration with Inmatec, a manufacturer of nitrogen generators from Germa-



ny. Sensors were attached to the existing nitrogen liquid tank and the nitrogen supply lines to the production hall. All relevant parameters were also measured. The data was recorded and evaluated over a one week period. The IMT PN 4420 Eco Tube nitrogen generator, supplied by Inmatec on the basis of the audit, now generates up to 6 m³ of nitrogen per hour at Falcon Technologies with a purity

of 5.0 (99.999 % nitrogen content) and a very low humidity of 0.008 g/m³, which is achieved by means of an integrated membrane dryer. The air separation is based on the adsorption principle with a carbon molecular sieve. By using the innovative block valve technology, oxygen is effectively adsorbed in the adsorption tubes. This allows compressed air savings of up to 45%. According to its own

statements, the company was able to optimise its logistics and save 75% of its nitrogen supply costs by switching to nitrogen produced on-site. Moreover, nitrogen supply is now secured at all times.

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