

INTERNAL INSPECTION OF PRESSURE VESSELS

Statement of design, manufacture and conformity assessment:

All Parker Hannifin Manufacturing Ltd, Gas Separation and Filtration Division, modular aluminium construction compressed air dryers and nitrogen gas generators have been designed, manufactured, and assessed as pressure vessels under the Pressure Equipment Directive, 2014/68/EU.

Recommendations for periodic inspection

The recommendation is that the following inspection periods are adopted when modular aluminium construction compressed air dryers and nitrogen gas generators are deemed to be pressure vessels under National Legislation.

Modular Aluminium Construction Compressed Air Dryers:

Modular aluminium construction compressed air dryers are manufactured from extruded aluminium alloy which is surface treated with Alochrom and coated externally with a dry powder epoxy coating. Consequently, when used for drying compressed air, and following the manufacturers recommended maintenance schedule which includes the desiccant change schedule, there should be no significant corrosion.

The design life of the modular aluminium construction compressed air dryer is 10 years. Lifetime of the adsorbent material is typically 60 months. It is recommended that the statutory inspection (should the dryer be included in this requirement) be carried out at this time.

Modular Aluminium Construction Nitrogen Gas Generators:

Modular aluminium construction nitrogen gas generators are manufactured from extruded aluminium alloy which is surface treated with Alochrom and coated externally with a dry powder epoxy coating. Consequently, when used for nitrogen generation, and following the manufacturers requirements relating to the pre-treatment of the compressed air supply, there should be no significant corrosion.

The design life of the modular aluminium construction nitrogen gas generator is 10 years. Lifetime of the adsorbent material is typically 10 years. There should be no need for an internal inspection to be carried out during this period.

Using Products Beyond 10 Years

Should the working life of the Modular Aluminium Construction Compressed Air Dryer and / or Modular Aluminium Construction Nitrogen Generator be extended beyond 10 years, the adsorbent material should be replaced. It is recommended that an internal inspection be carried out at the same time. Local legislation and codes should be followed in conjunction with a competent person.

Note:

The above recommendations are based on UK Legislative requirements: Pressure vessel inspection UK Legislation: Pressure Systems Safety Regulations (PSSR): S.1. 128-2000

For installations outside of the UK, it is recommended that local legislation is applied using the above information or guidance.

PSSR, Regulation 8, Approved Code of Practice – written scheme

The Owner/User in consultation with the Competent Person drawing up and certifying the written scheme shall include in the written scheme those items relevant for inclusion. Those inclusions shall follow the guidance given in the PSSR Code of Practice, L122, and in particular clause 110 and 111 as to which items are pressure vessels.