TECHNICAL NEWS

90 BAR CO_2 REPLACEABLE CORE FILTER DRIERS

Increase the efficiency of your system by using the accessible filter driers, approved for 90 bar CO_2 applications.

Usually a CO_2 booster system consists of three different pressure lines:
- low pressure (about 50 bar)
- medium pressure (90 bar)
- high pressure (130 bar)

In this configuration the filter is installed in the low pressure line, being a component approved at 60 bar.

If it is necessary to increase the pressure in the low pressure side, or for some systems that do not have the low pressure side but the expansion takes place at 90 bar, it is essential to have an approved 90 bar filter, because installing a filter on the high pressure line (130bar) would require a very expensive component.

Applications

The market trend is to increase the pressure of the CO_2 systems and consequently it's necessary to find, in the supply chain, components suitable for higher pressures. This is because CO_2 is a high-pressure refrigerant and to guarantee the efficient operation, the system must work at high pressures.
When the machine is stopped, the ambient temperature can reach and exceed the critical temperature and consequently the pressure can exceed the critical pressure.
For this reason, systems are typically designed to withstand pressures up to 90 bar and consequently the components must be rated accordingly.

Why install a replaceable core filter drier?

Castel filters have the purpose of drying and deacidifying the refrigerant present in a refrigeration circuit, as well as eliminating any solid particles present within the system.
Some problems, even serious ones, can occur in the presence of moisture inside the system, such as the blockage of the expansion valves.

Main features

Castel has carried out a very in-depth study on the choice of materials and the sizing of the components using the most advanced analysis techniques.
These studies are necessary to place on the market more and more safe and reliable components.

- Filter body: high quality pipe suitable to withstand high pressures is employed
- Connections: made of steel
- Cover flange: aluminum
- Screws: stainless steel (A4-80)
- Double welded flange
- 100% Helium tested
- External leakage at PS
- Burst pressure: 270 bar (3xPS)
- Same cartridges as model 441# (62 bar)

CO_2 applications often create a highly corrosive environment by attacking the components most susceptible to oxidation, which is why the materials have been chosen to withstand the harshest conditions.

Technical data

PS = 90 bar
MWP = 1305 psi (according to **UL approval**)
TS = -40 +80 °C

Castel proposes a wide range of products suitable for CO_2, download the brand new 2022 General Catalogue from www.castel.it

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