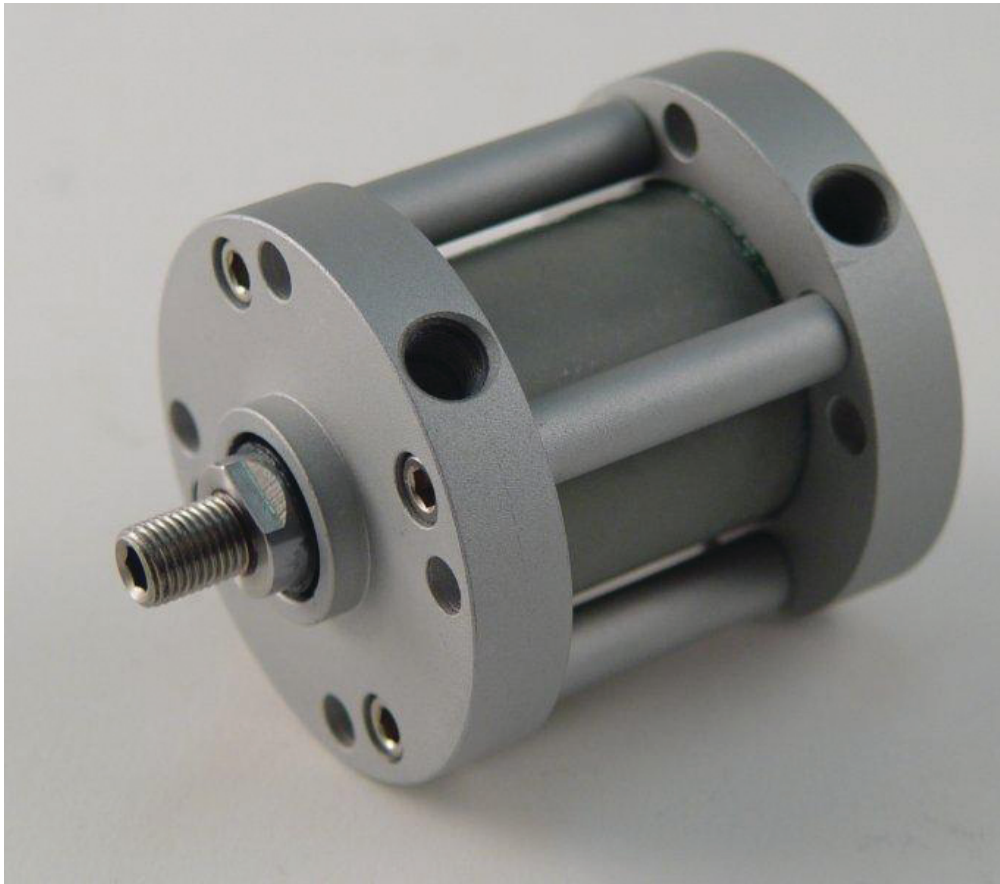


Coated aluminum air cylinders vie with their stainless steel counterparts for extended cycle life in hostile environments

FABCO-AIR, Inc., of Gainesville, Florida, now offers proprietary coatings for their aluminum air cylinder product lines, providing a cost effective alternative to stainless steel. In rigorous life-cycle testing, coated aluminum products were well protected against the effects of harsh environments. For a fraction of the cost of 303 or 304 stainless air cylinders, FABCO can deliver superior, corrosion-resistant aluminum cylinders within 14 to 20 days.



Pancake® II air cylinder with protective finish

For complete assurance that our products will meet or exceed your expectations, send us your application details. We welcome the opportunity to provide verification testing of performance in advance of any purchases.

Two Fabco-Air coating approaches are presented here for your consideration.

Fabcoat-1205™ - General Corrosion Resistance

FABCOAT-1205™ is designed to provide protection against galvanic corrosion that is caused by atmospheric and environmental conditions such as high humidity, acid rain, salt spray and salt air.

Galvanic Corrosion

In basic terms, galvanic corrosion occurs when dissimilar metals are in contact or near proximity to each other and are exposed to moisture or even high humidity. The less noble of the two metals will corrode preferentially while the more noble material will remain essentially undamaged. For example, an aluminum cylinder end cap will corrode while the steel fasteners that hold the assembly together do not.

The rate at which galvanic corrosion occurs increases greatly when the moisture contains salt or acid. Think of galvanic corrosion as a battery. The less noble material is the anode, the more noble material is the cathode and the water is the electrolyte. Water containing salt or acid, for example, is more conductive than tap water and is therefore a better electrolyte.

Barrier Protection

Fabcoat-1205™ provides a unique barrier film to prevent galvanic corrosion of dissimilar metals. It encapsulates the component to which it is applied and provides a non-conductive surface similar to the jacket on an electrical wire. Because it is chemically bonded to the substrate, it provides a highly durable, watertight shield against the elements.

Appearance

Fabcoat-1205™ provides a durable, smooth silver finish that is similar in appearance to natural stainless steel or aluminum.

Performance

- 500+ hours ASTM B-117 salt spray protection.
- Excellent protection against UV light degradation
- Will not blister or lose adhesion when exposed to intermittent or continuous humidity
- Provides excellent protection against detergents, solvents, lubricants and fluids

Fabcoat-327™ - Caustic and Oxidizer Protection

Unprotected steel, aluminum and even some grades of stainless steel can be damaged by cleaning solutions. Fabcoat-327™ is designed to protect components against the harmful effects of detergents, caustic cleaners, and oxidizers (bleach) that are commonly used in the food service industry.

Failure mechanisms of unprotected metals or common finishes

- Stress Corrosion:
 - Cleaning solutions can cause intergranular oxidation within the microstructure of metals. It may not be obvious to the naked eye. Components can fail when placed under load.
- General Corrosion:
 - Protective finishes such as plating or coating can be removed with repeated washing. Once removed, bare components are susceptible to general corrosion.
- Removal of Passive Oxide Surface:
 - Aluminum and stainless steel rely on a passive oxide layer on the surface of the component for corrosion protection. Cleaning solutions can penetrate or remove this layer drastically reducing corrosion resistance.

Appearance

Fabcoat-327™ provides a durable silver finish that is similar in appearance to natural stainless steel or aluminum.

Performance

- 500+ hours ASTM B-117 salt spray protection.
- 28 Hours 5% sodium chloride immersion with no stress corrosion cracking.
- Will not blister or lose adhesion when exposed to intermittent or continuous humidity.
- Provides excellent protection against detergents, solvents, lubricants and fluids.