



# composite-tube cylinders

lighter, stronger, longer life



## APPLICATIONS

Caption composite-tube cylinders can be used in a wide variety of applications, with operating pressures up to 2970 PSI (depending on tube diameter), in temperatures between  $-70^{\circ}\text{C}$  and  $+110^{\circ}\text{C}$ . They particularly excel in pneumatic applications where corrosion and weight are a concern.

## FEATURES

### QUALITY COMPONENTS

Only the highest quality components are used. Cylinder tubes are available with the patented Aeroslide composite tubes. These vary significantly from traditional composite tubing in that the resin used to manufacture the tube contains self-lubricating properties. The same self-lubricating properties are found in the rod guide bushings, which are standard on all Caption composite cylinders.

### LIGHTWEIGHT

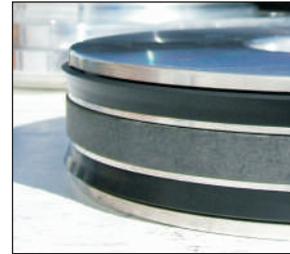
Composite tubes are 75% lighter than steel per volume. Our composite tube cylinders are typically 25-40% lighter than an equivalent steel tube cylinder.

### LONGER LIFE

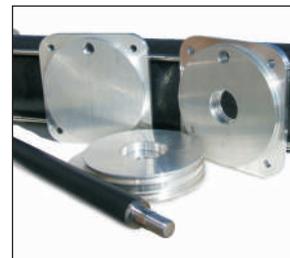
The smooth bore offers decreased friction and increased seal life. Consequently, there is more power transmitted to the load and less to friction. Additionally, composite tubes do not corrode, greatly increasing the life of the cylinder.

### HIGH STRENGTH, LOW MAINTENANCE

Composite tubes offer excellent resistance to impingement and provide more than twice the strength to weight ratio for internal pressure than steel tubes. And since both the tube and the rod guide bushing are self-lubricating, no tube oiler is required.



U-cup seals, which are standard on our composite tube cylinders, provide less friction than traditional o-ring seals. Lip design removes contamination versus o-ring seals that tend to rub particles into the cylinder wall. U-cup seals offer improved sealing properties and increased seal life.



All processed parts, with the exception of some rod end mounts, are precision CNC machined. Piston and aluminum ends are made of aerospace grade 6061 T6 aluminum. The rod material is 304 stainless steel. Nitrided steel, which has excellent dent and corrosion resistance, is used for the main rod (shaft). Hard chrome plated is also available.



Caption composite tube cylinders come ready to install. All corrodible steel surfaces are painted. The base end mount is painted on both sides preventing corrosion between mount and aluminum base.



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