

# CRYSTEEL MFG. INC. HYCO CYLINDER TROUBLE SHOOTING GUIDE (CYLINDER MIS-STAGES)

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*This document describes the steps to take to diagnose a warranty problem if the customer says that the cylinder mis-stages.*

## **What to do if the customer says:** *The cylinder mis-stages*

- First check that all of the air has been removed from the cylinder. Cylinders with the internal auto-bleed design should bleed the air out automatically by cycling the cylinder several times. If equipped with a manual air bleed valve, follow the air bleed procedure to remove entrapped air.
- Mechanical frictional force is another cause of cylinder mis-staging. Because of the seal design used, there is no adjustment required to the seal. Therefore, should mis-staging occur adjusting the retaining glands would not have any affect. Inspect the cylinder stage sleeve for straightness. A bent tube will cause added friction between moving parts. If any parts are bent, replace the cylinder.
- Check to see what pressure rating the system is running at. The system pressure may be or was too high and caused the cylinder to swell in the seal area. Upon retracting the cylinder, the swelled area will be forced into the next larger stage. These two stages may, then, be stuck together and not be able to extend. Inspect the sleeves for swelled areas and, if found, replace the cylinder.