



## How Proper Mounting Prevents Premature Cylinder Wear

How you mount your cylinder affects both cylinder performance and cylinder life expectancy. That's because the wrong mounting or incorrect installation can result in side load. Side load occurs when a load is placed on the piston rod without guidance or support, or when the mounting and piston rod connection are misaligned. Side load creates excessive wear on the piston, piston rod, rod bearing and seals. Excessive wear leads to leakage and ultimately cylinder failure.

By selecting the right cylinder mounting, you optimize cylinder strength, efficiency and alignment. Let's look at the two major types of mounts -- pivot and rigid -- and how they help avoid side load problems.

### **Pivot type mountings eliminate side loads when properly installed**

There are several types of pivot mountings including clevis, pivot and trunnion. To realize the benefit of a pivot type mounting, it's essential that a rod eye or rod clevis be used on the piston rod. Otherwise, it becomes a "rigid" mount cylinder, negating the benefit of the pivot. It's also important that the axis of all the pivot pins in a set are parallel, or binding and side loading will occur. Long stroke pivot mount cylinders require stop tubes and dual pistons to spread out the distance between the rod bearing and piston to reduce the load at these two points. Trunnion mounted cylinders require that pillow blocks or mated bearings be fitted as close to the head of the cylinder as possible to minimize bending stresses in the head.

### **Get maximum cylinder life with proper rigid mount cylinders**

There are a number of rigid mounts available: side-mounted, nose-mounted, flange-mounted and face-mounted cylinders. Each must be carefully aligned with the direction of the load travel to avoid side loads. If, for some reason, proper alignment cannot be achieved, a rod end connection that allows for some lateral misalignment should be used.

Proper mounting is just one factor to consider when specifying and installing a cylinder. To learn more, contact Bimba Manufacturing Company, P.O. Box 68, Monee, Illinois 60449. Phone 708/534-8544, FAX 708/534-7473, Technical Assistance 800-44-BIMBA (800-442-4622).

The information presented is in Bimba's best engineering opinion and should be used for reference only. Recommendations derived should be verified under actual operating conditions. Bimba reserves the right to change specifications without prior notice.

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