

# CYLINDER SELECTION

Choosing The  
Right Cylinder

**Step 1** Select the hydraulic cylinder that best suits the application.

See page 7, 12-13.

**Step 2** Select the hydraulic pump, with valve option, that best matches the cylinder and application. See pages 6, 42-45, 120-121.

**Step 3** Select the hydraulic accessories you need. See pages 34-39.

## WHAT TYPE OF CYLINDER DO YOU NEED?

**1. To determine a cylinder's force capacity:**

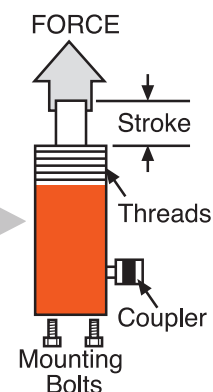
Force pounds  $\times$  Cylinder Effective Area (sq. in.) = PSI from Pump

**2. To determine oil capacity of a cylinder:**

Oil Capacity (cu. in.)  $\times$  Cylinder Effective Area (sq. in.) = Cylinder Stroke (in.)

**3. To determine reservoir capacity needed for a multiple cylinder system:**

Usable Oil  $\times$  Oil Cap. of Cyl. (cu. in.) = Number of Cyl. in System



## CONSIDERATIONS:

1. What push or pull tonnage is required per cylinder in your application? (Rule of thumb; Always choose a cylinder with a tonnage rating of 20% or more than what is required to lift the load.)
2. What is the push or pull stroke length required?
3. Does the cylinder need to push, pull or both? (Single-acting cylinders extend the piston under hydraulic pressure; double-acting cylinders extend and retract the piston under pressure.)
4. Does the application require multiple cylinders?
5. Is the application stationary, or must the components be light in weight for easy portability?
6. Do you need to extend a rod or cable through the center of the cylinder for the application, as in a tensioning operation?
7. Does the application require that the cylinder fit within limited-clearance work areas?
8. Does the application require that the cylinder be "dead-ended" at the end of its work stroke?
9. Will the cylinder need to withstand off-center loads? Cylinders with swivel caps are available.
10. Does the application require that the lifted load be supported for extended periods of time? Locking collars are ideal for such jobs, as are cribbing blocks.
11. Is corrosion resistance required? Our unique "Power Tech" surface treatment is standard on many Power Team cylinders, and optional on many of our cylinders which feature steel construction.
12. Will the application involve high cycles (over 2,500 in the cylinder's lifetime)? Our "RD," "RH," "RP" and "C" series cylinders are ideal choices. Please refer to pages 12-13 for the capabilities of each cylinder.