



**1 Cylinder**  
Applies hydraulic force.  
Page 7

**2 Cylinder Base Plate**  
For applications like lifting where additional cylinder stability is required.  
Page 12

**3 Pump**  
Provides hydraulic flow.  
Page 51

**4 Hose**  
Transports hydraulic fluid.  
Page 108-109

**5 Male Coupler**  
For quick connection of the hose to system components.  
Page 110-111

**6 Female Coupler**  
For quick connection of the hose end to the system components.  
Page 110-111

**7 Gauge**  
To monitor pressure of the hydraulic circuit.  
Page 114-120

**8 Gauge adaptor**  
For quick and easy gauge installation.  
Page 120

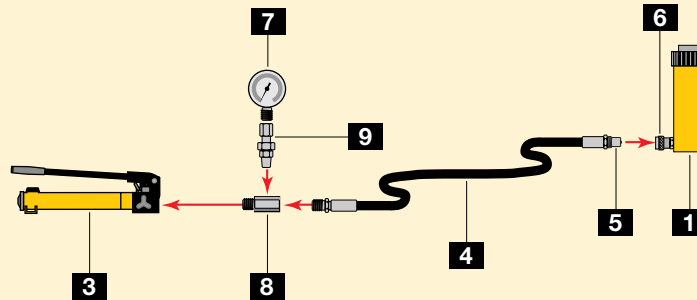
**9 Swivel connector**  
Allows proper alignment of valves and/or gauges. Used when units being connected cannot be rotated.  
Page 120

**10 Auto-Damper Valve V-10**  
Used to protect gauge from damage due to pressure sudden pulses in the system. Needs no adjustment and allows correct positioning of gauge, prior to tightening.  
Page 129

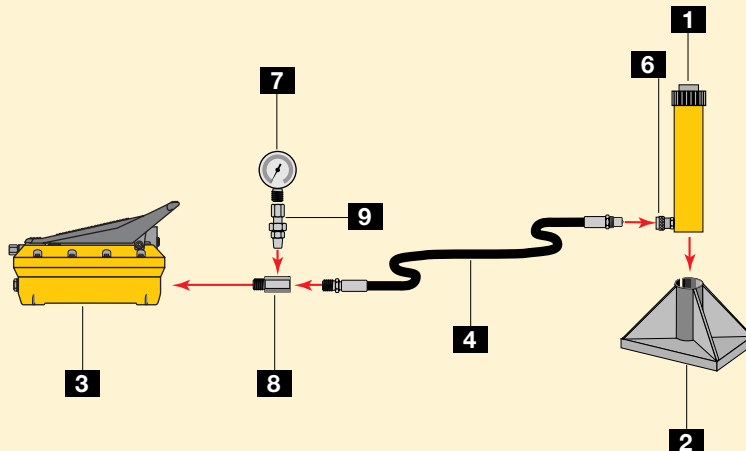
**11 4-Way Directional Control Valve**  
Controls the direction of hydraulic fluid in a double-acting system.  
Page 125

**Single-acting push application**, such as in a press. The handpump offers controlled cylinder advance, but may require many handpump strokes in longer stroke applications when the cylinder capacity is 25 ton or above.

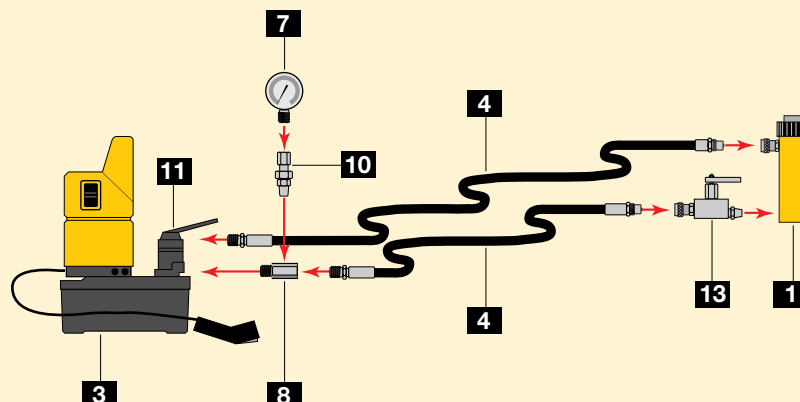
Examples of pump, hose and cylinder sets can be found on page 48.



**Single-acting cylinder with longer stroke** used for lifting applications.

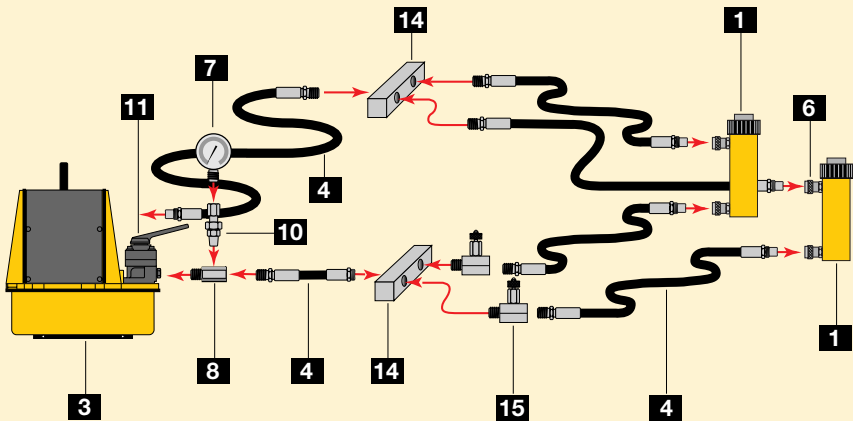


**Double-acting cylinder set-up** used for lifting applications where a slow controlled descent of the load must be maintained.





Double-acting cylinder set-up used in a push/pull application.



**12 3-Way Directional Control Valve**

Controls the direction of hydraulic fluid in a single-acting system.  
Page 122

**13 Safety Holding Valve**

Controls load descent in lifting applications.  
Page 128-129

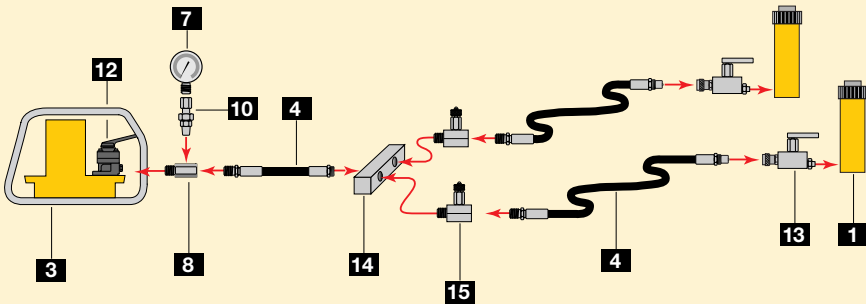
**14 Manifold**

Allows distribution of hydraulic fluid from one power source to several cylinders  
Page 112

**15 Needle valve**

Regulates the flow of hydraulic fluid to or from the cylinders.  
Page 128-129

Two point lifting set-up using single-acting cylinders.



Four point lifting set-up, using single-acting cylinders and directional control valves.

