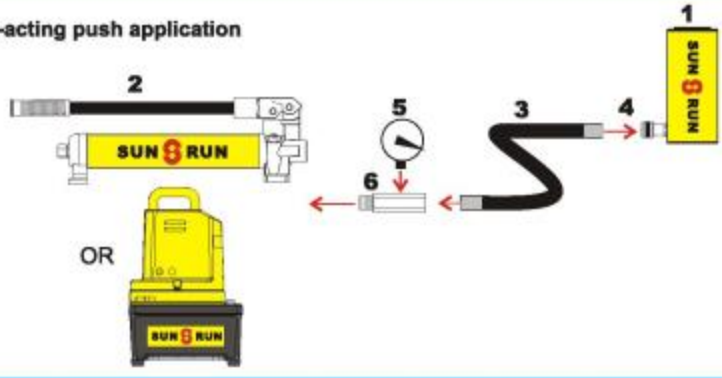
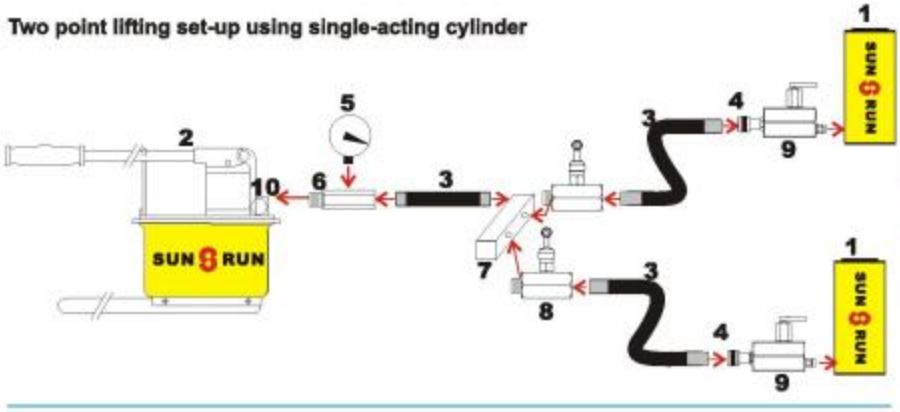
Basic System Set-up

These are just a few basic systems possible with SUN RUN hydraulic components.
Countless applications are possible: In presses, for lifting or jacking applications or in production or maintenance setups.
The pump shown is a typical hydraulic unit. Electric or air driven pumps are available.

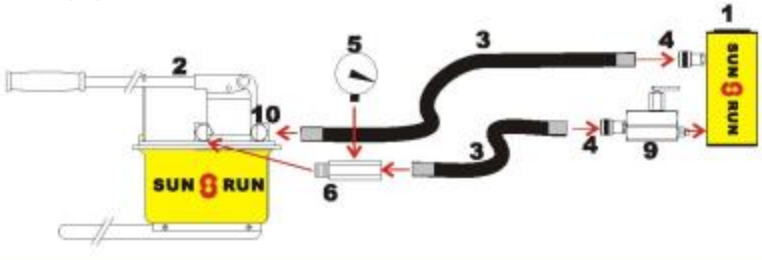
Single-acting push application



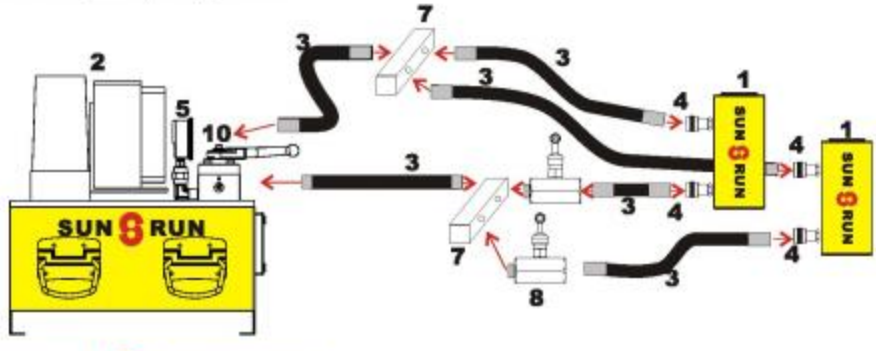
Two point lifting set-up using single-acting cylinder



Double-acting cylinder set-up



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



1 Cylinder
Applies hydraulic force.
Page 3~46

2 Pump
Provides hydraulic flow.
Page47~58,85,95~98

3 Hose
Transports hydraulic fluid.
Page 62

4 Quick Coupling
"hose half" and "cylinder half" couplings are used for quick connection and fluid flow check when separated.
Page 61

5 Gauge
To monitor pressure of the cylinder circuit.
Page 65

6 Gauge Adaptor
For quick and easy gauge installation.
Page 66

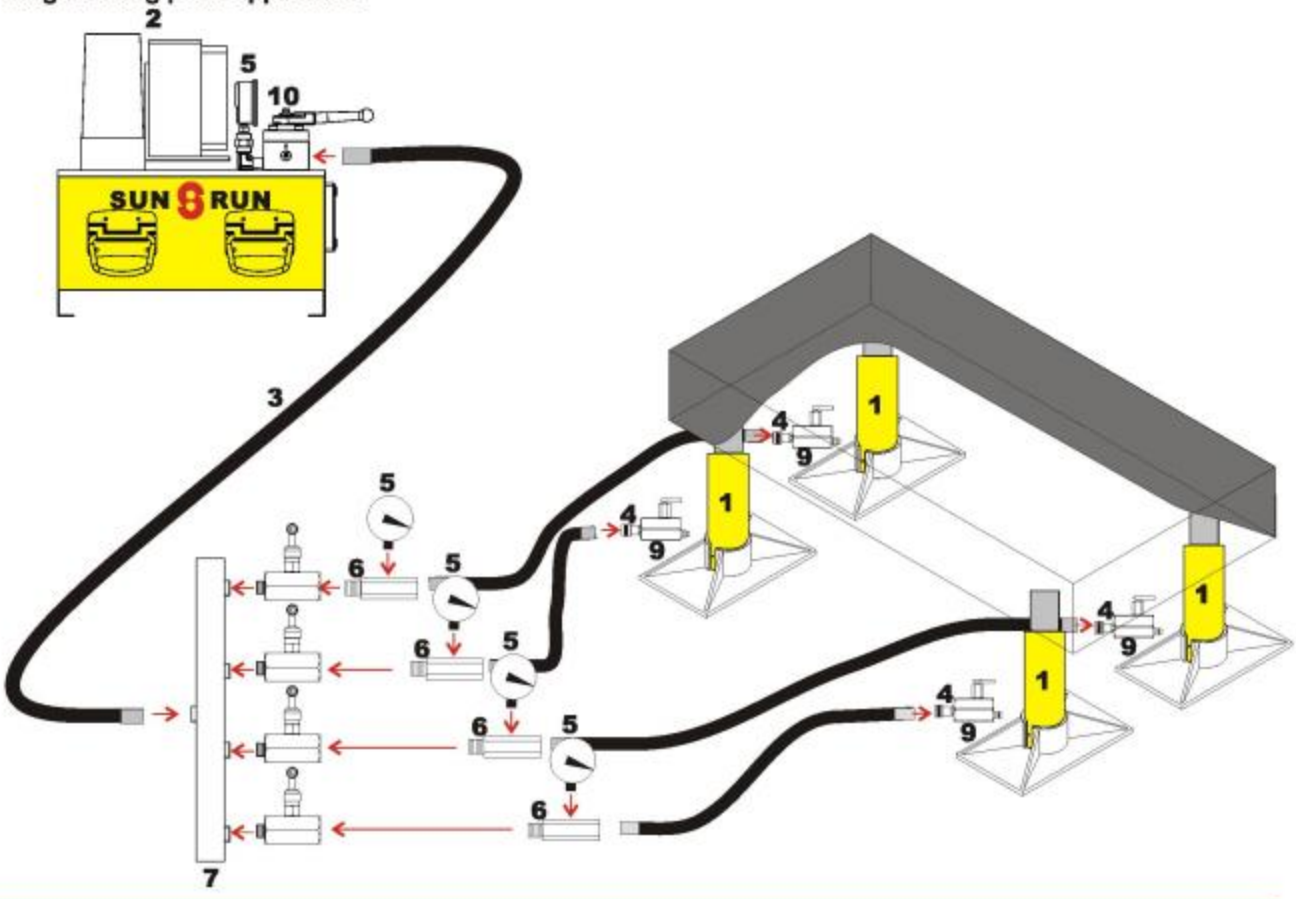
7 Manifold
Allows distribution of hydraulic fluid from one power source to several cylinder.
Page 63

8 Needle Valve
Regulates the flow of hydraulic fluid to or from the cylinder such as SV-82.
Page 67~68

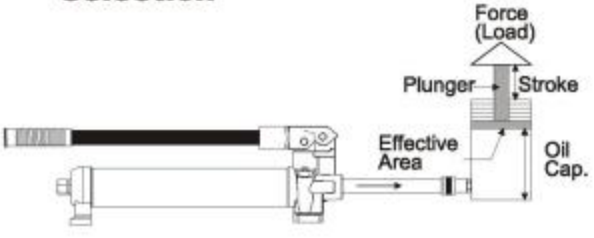
9 Safety Holding Valve
Controls load descent in lifting applications such as SV-66-3.
Page 67~68

10 Control Valve
4-way direction by double-action
3-way direction by songle-action
such as SW or SVM series.
Page 67~68

Single-acting push application



Selection



Flow = is created by the pump

Pressure = is created by resistance to flow.
This resistance is usually the result of a load.

$$\text{Force (metric tons)} = \frac{\text{Cyl. Eff. Area } (cm^2) \times \text{Working pressure (Hydraulic Pump) (bar/ kgf/cm}^2)}{1000\text{kg}}$$

$$\text{Extended Height (in)} = \text{Cyl.stroke (in)} + \text{Cyl. Collapsed height (in)}$$

$$\text{Cyl. oil Cap. } (in^3) = \text{Cyl. Eff. Area } (in^2) \times \text{Cyl. Stroke (in)}$$

$$\text{Usable oil (system) } (in^3) = \text{Cyl. Oil Cap. } (in^3) \times \text{Quantity of Cyl. In system}$$

$$\text{Speed (Cyl. Plg.) (Sec/in)} = \frac{\text{Cyl. Eff. Area } (in^2)}{\text{Pump flow per minute } (in^3/min)} \times 60\text{sec}$$