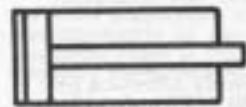


# Graphic Symbols

## For Use On Fluid Power Drawings

These are the more common ANSI graphic symbols from the American National Standards Institute for use on fluid power circuit drawings. A more complete list can be obtained from the National Fluid Power Association, 3333 N. Mayfair Rd., Milwaukee, WI 53222. Write for listing and prices.



Double-Acting Cylinder



D.A. Cylinder With Double End Rod



Single-Acting Cylinder

### HYDRAULIC PUMPS



Fixed Displ. 1-Rotation



Fixed Displ. Bi-Rotational



Variable Displ. 1-Rotation



Variable Displ. Over Center



Variable Displ., Pres. Compensator



Over Center w/Comp.

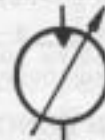
### HYDRAULIC AND ELECTRIC MOTORS



Fixed Displ. 1-Rotation



Fixed Displ. Reversible



Variable Displ. 1-Rotation



Over Center, Pres. Comp.

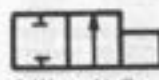


Partial Revolution Oscillator



Electric Motor

### 2-WAY AND 3-WAY VALVES



2-Way, N.O. 2-Position



2-Way, N.C. 2-Position

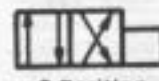


3-Way, Directional Control

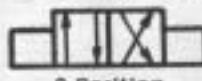


3-Way Selector

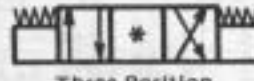
### 4-WAY VALVES



2-Position Single Actuator



2-Position Double Actuator



Three Position Spring Centered

### \*SPOOL CENTERS FOR 3-POSITION VALVES



Closed Center



Tandem Center



Float Center



Open Center



Proportional Solenoid Valve

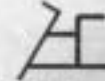
## ACTUATORS FOR VALVES



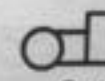
General Purpose



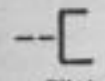
Manual Lever



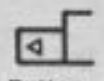
Foot Operated



Cam Operated



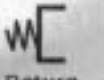
Pilot Operated



Button Bleeder



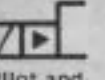
Solenoid Operated



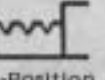
Return Spring



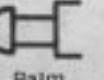
Pressure Compensated



Pilot and Solenoid



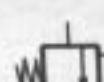
3-Position Detent



Palm Button



Relief Valve



Relief with Vent



Sequence Valve



Reducing Valve



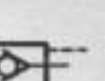
P. C. Flow Control



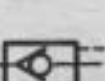
Accumulator



Check Valve



Pilot to Open Check



Pilot to Close Check



Fixed Orifice



Needle Valve



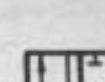
Flow Control Valve



P. C. Flow Control



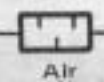
Heat Exchanger



4-Way Servo Valve



Pressure Gauge



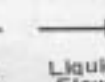
Air Muffler



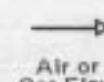
Shuttle Valve



Manual Shut-Off



Liquid Flow



Air or Gas Flow



Component Outline



Pilot Lines



Drain Lines



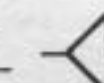
Lines Crossing



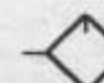
Lines Connecting



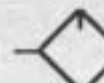
Air Trio Unit



Air or Oil Filter



Air Line Lubricator



Lubricator w/Drain



Air Filter w/Drain