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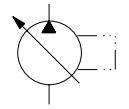
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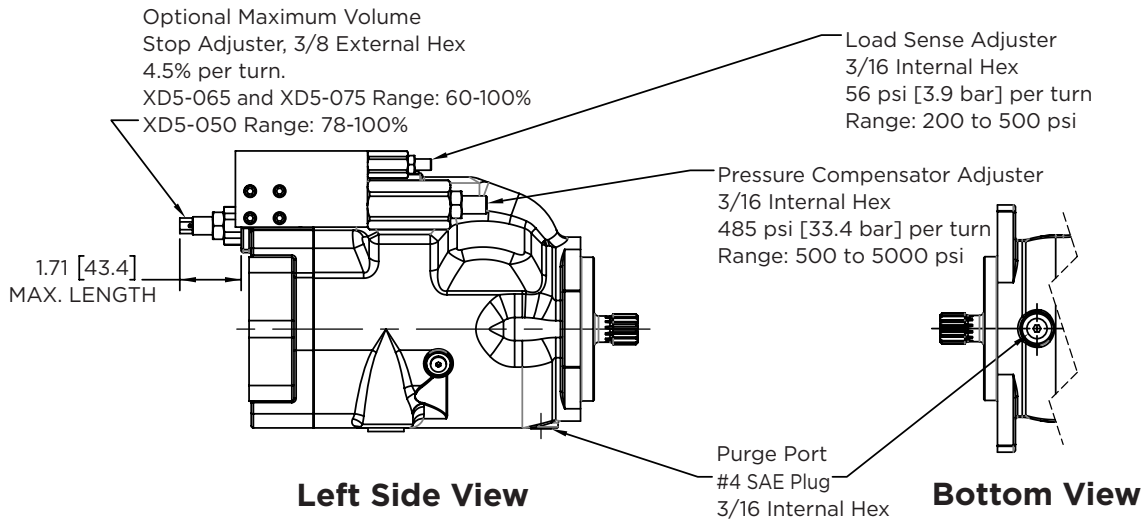
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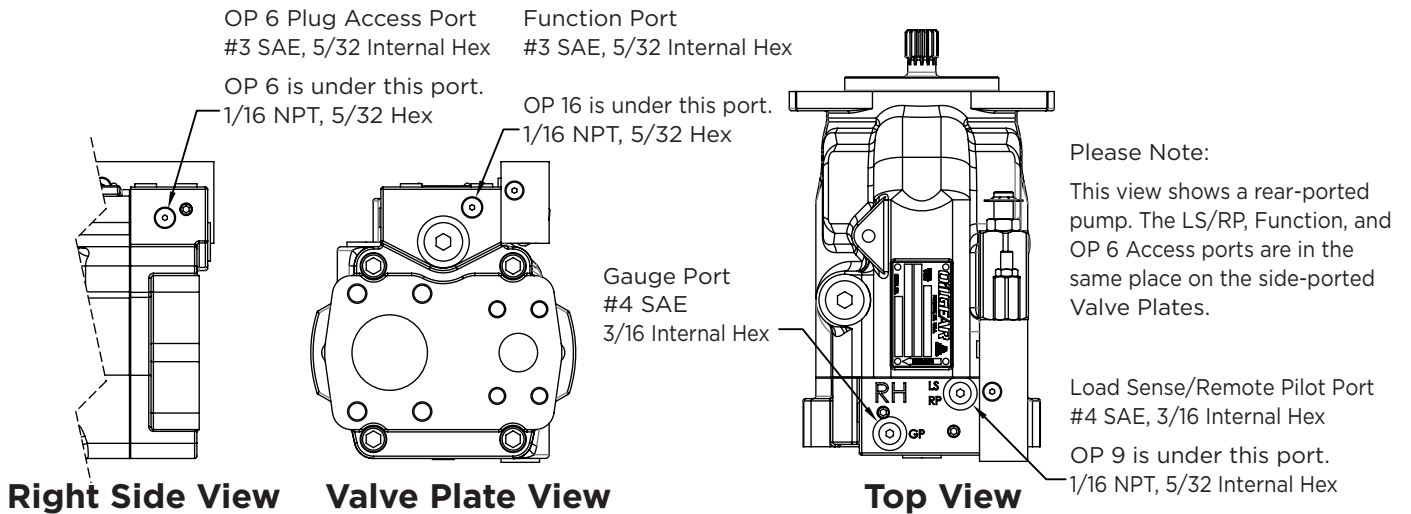
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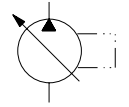


**ADJUSTER AND PURGE PORT LOCATIONS**

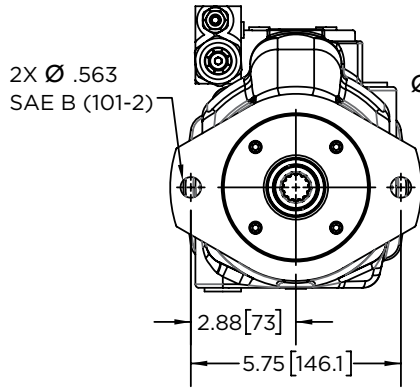


**CONTROL PORT LOCATIONS**

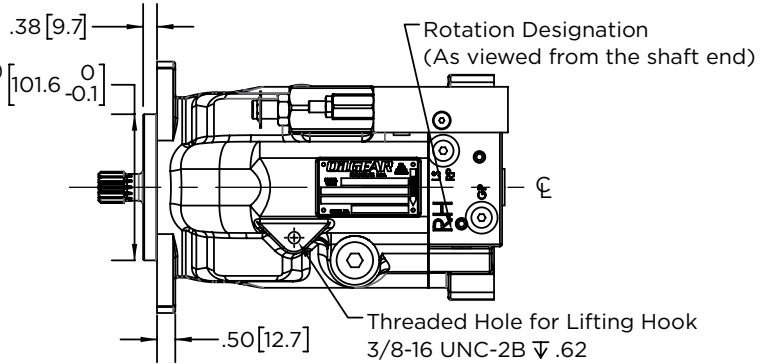




**MOUNTING FLANGE, LIFTING HOOK, AND ROTATION DESIGNATION**

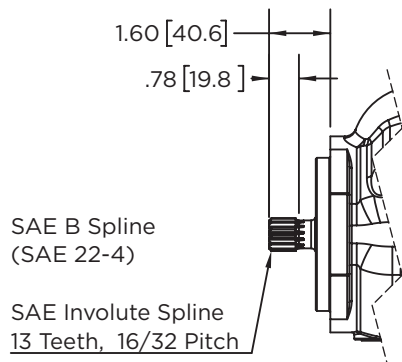


**Mounting Flange View**

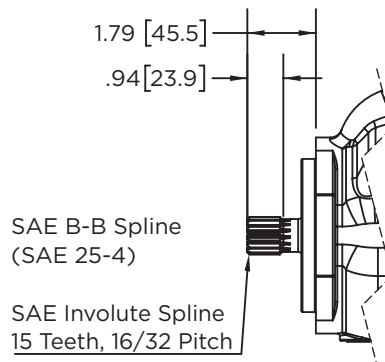


**Top View**

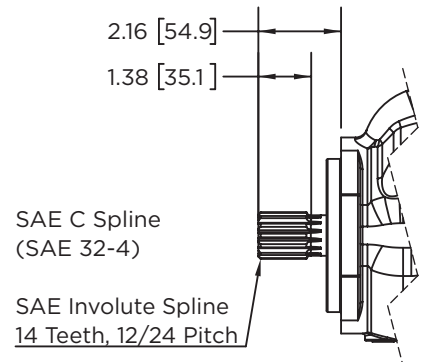
**DRIVESHAFTS**



**SAE B Spline  
Model Code K**

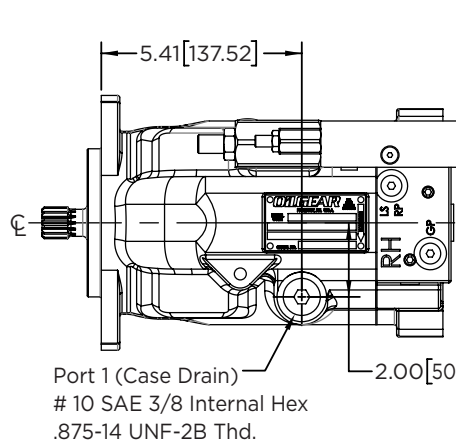


**SAE B-B Spline  
Model Code S**

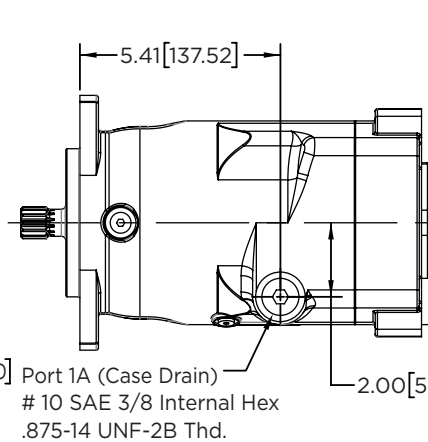


**SAE C Spline  
Model Code R**

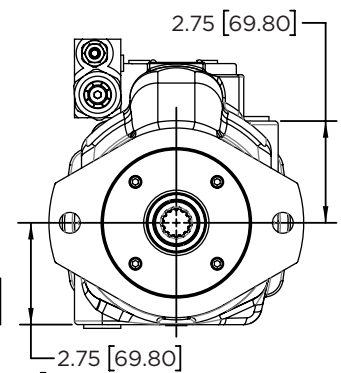
**CASE DRAIN LOCATIONS**



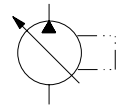
**Top View**



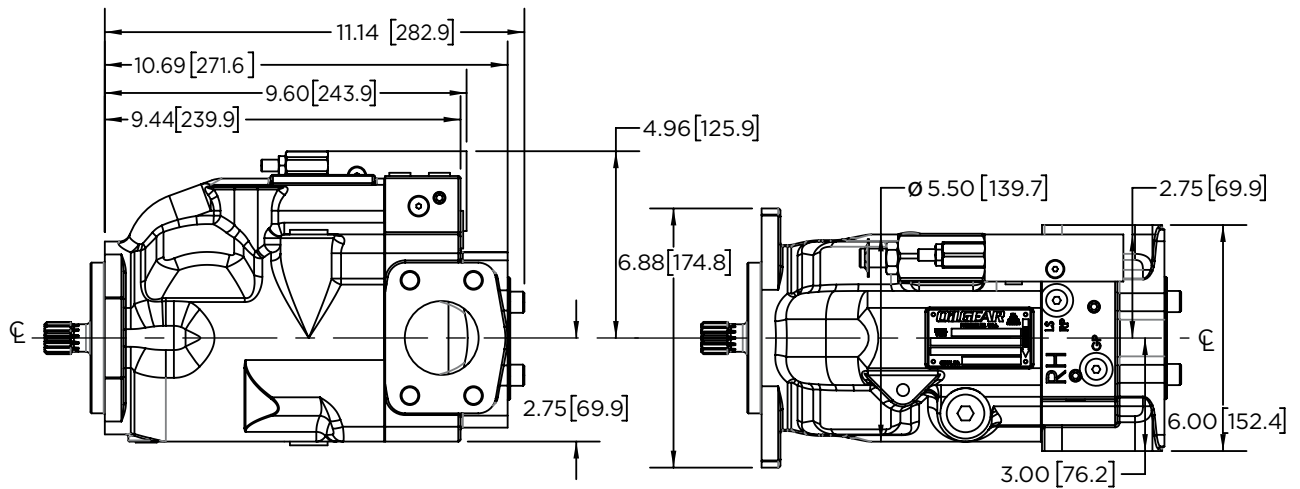
**Bottom View**



**Mounting Flange View**

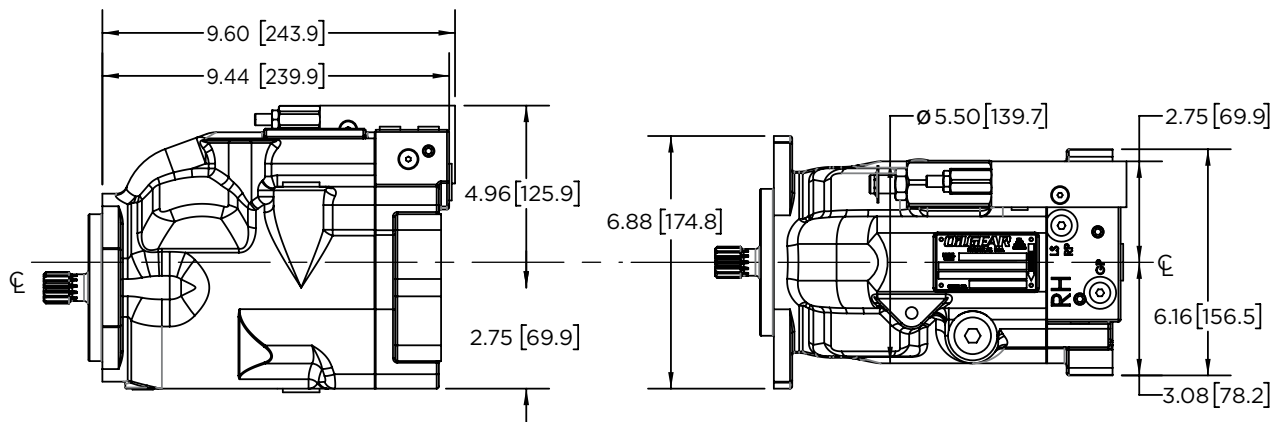


**CLEARANCE DIMENSIONS**



**Right Side View, Side Ported Valve Plate**

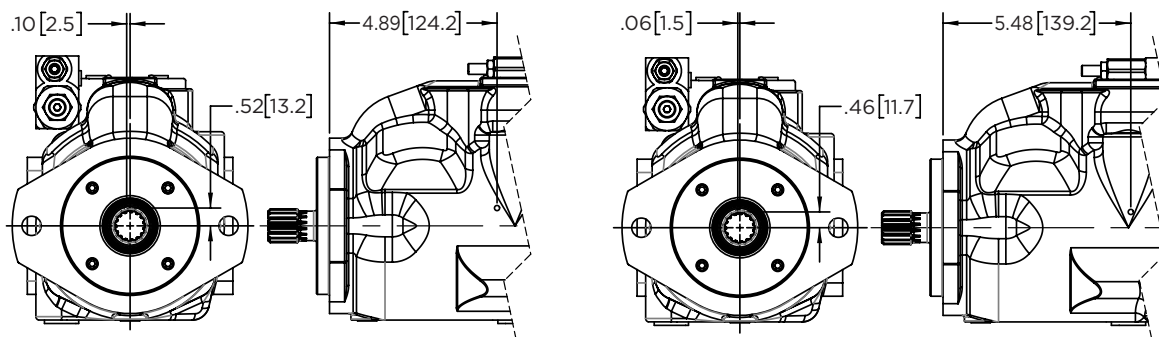
**Top View, Side Port Valve Plate**



**Right Side View, Rear Ported Valve Plate**

**Top View, Rear Port Valve Plate**

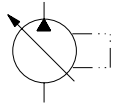
**CENTER OF GRAVITY AND DRY WEIGHT**



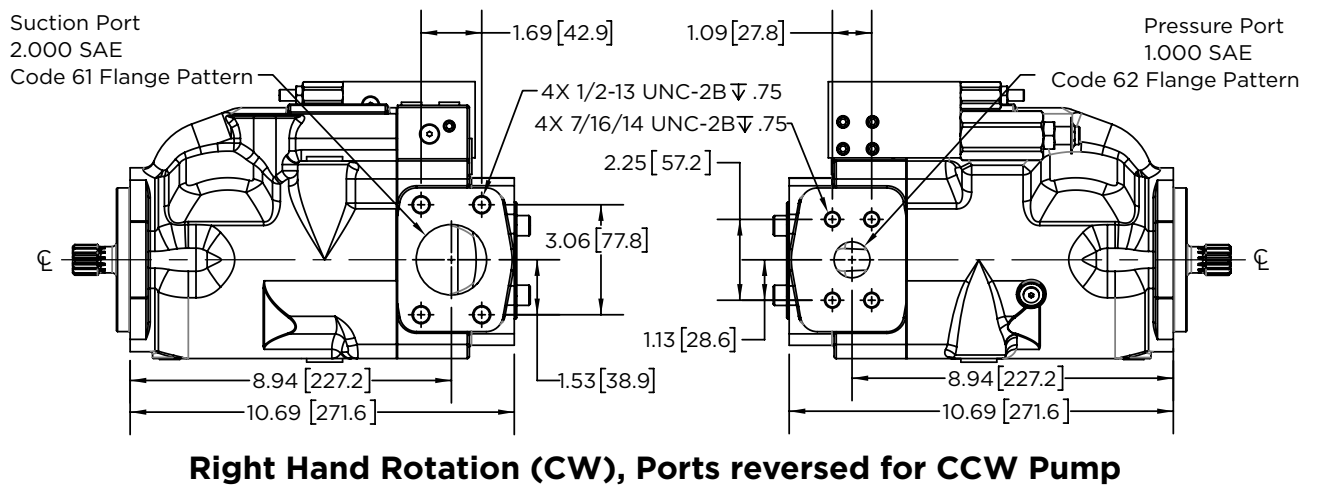
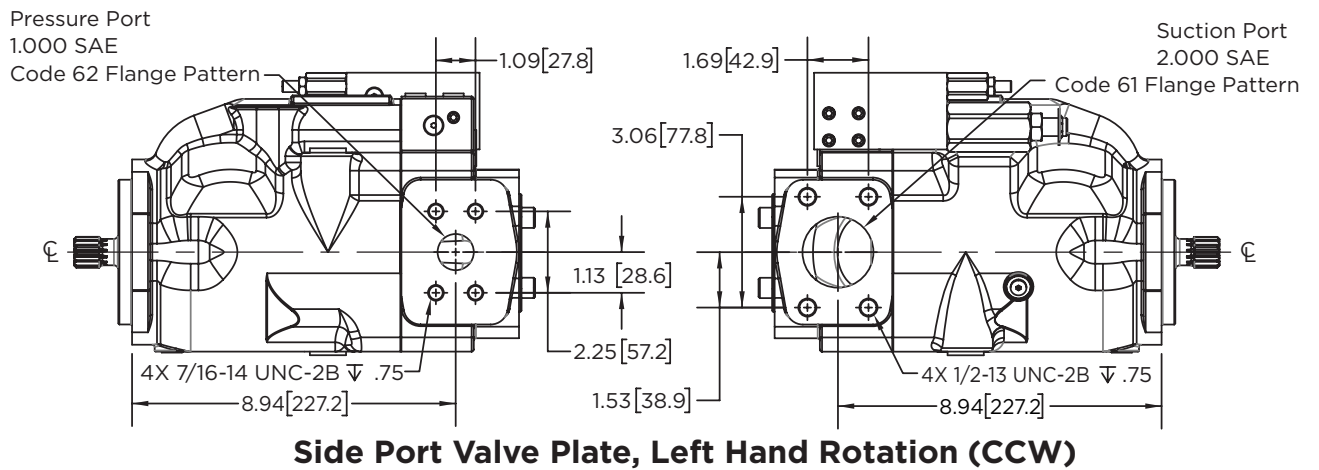
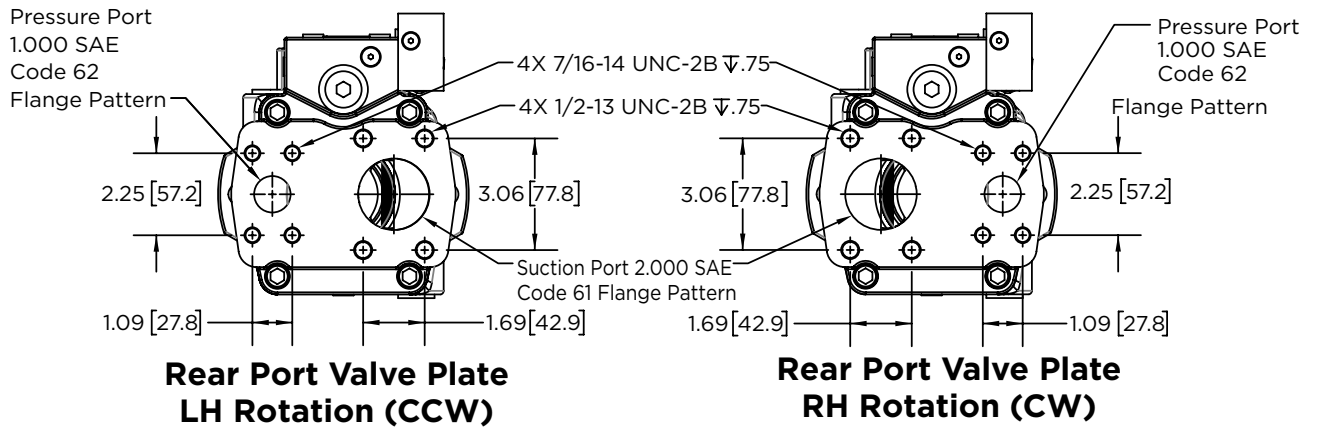
**Rear Port Valve Plate - 55 lbs [24.9 kg]**

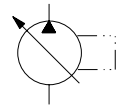
**Side Port Valve Plate - 63 lbs [28.6 kg]**

**Rotational Moment of Inertia: 23 lb\*in<sup>2</sup> [67.3 kg\*cm<sup>2</sup>]**

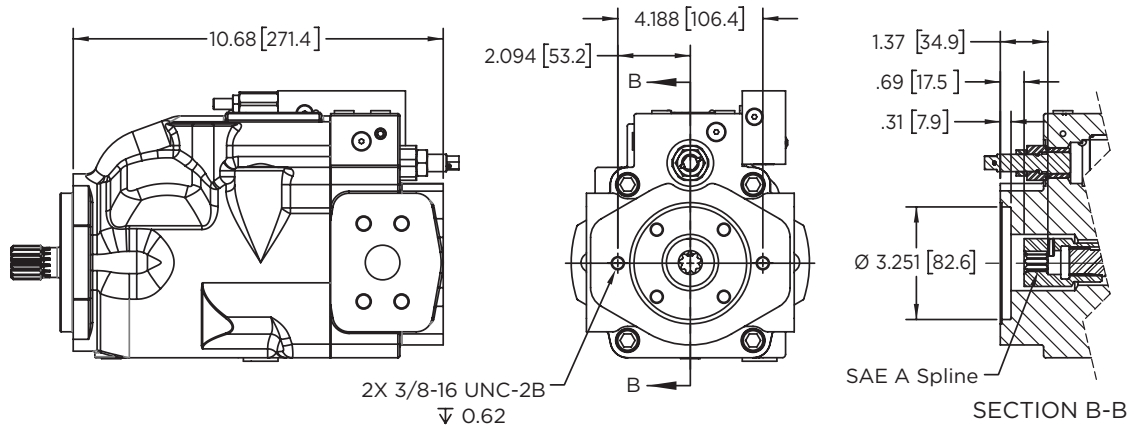


**VALVE PLATE VIEWS**

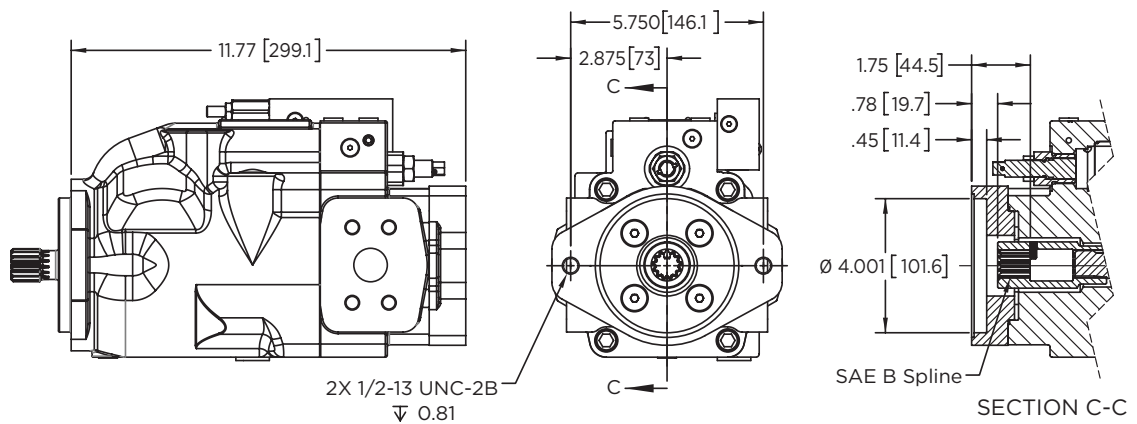




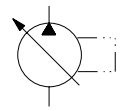
**TANDEM PUMP ADAPTERS**



**SAE B to SAE A Adapter**



**SAE B to SAE B Adapter**



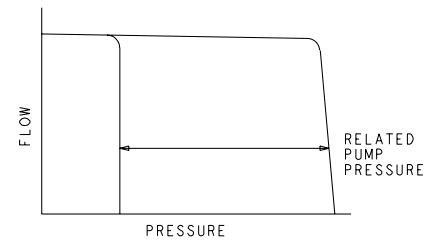
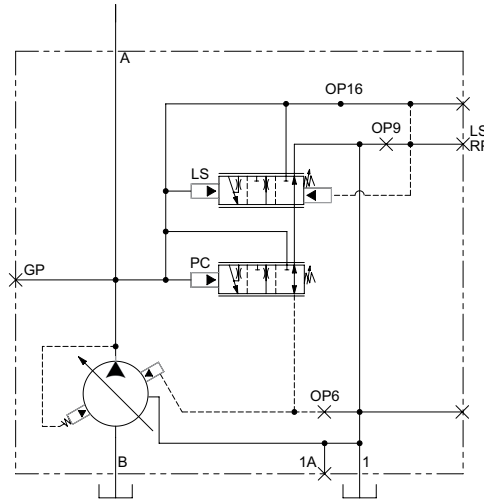
**CIRCUIT DIAGRAMS**

■ **Pressure Compensator Only: P-1NN**

Ensures maximum pump flow until outlet pressure reaches preset control pressure setting, then regulates output flow to match the requirements of the system while maintaining preset output pressure.

- OP 16 is OPEN
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The LS/RP Port is PLUGGED

*All internal plugs and orifices use 1/16 NPT plugs and 5/32 internal hex wrenches.*

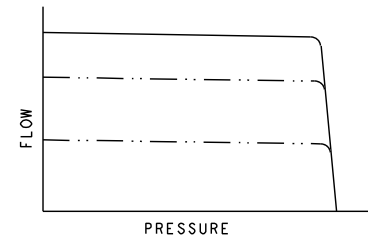
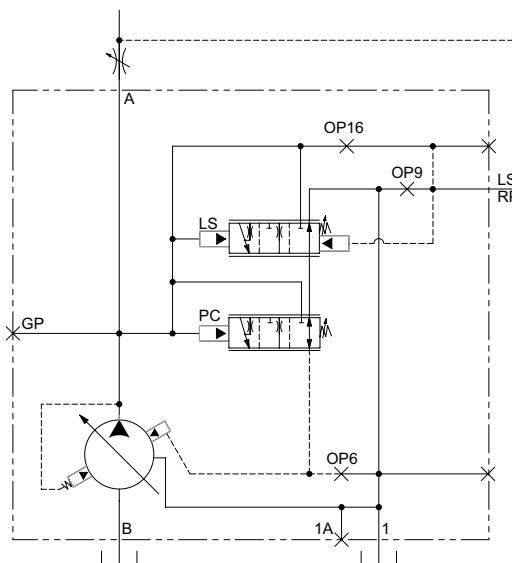


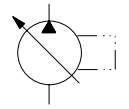
■ **Pressure Compensator and Load Sense: P-1NN/F or P-1NN/B**

A constant flow output is maintained for a given flow control valve setting regardless of changes in drive speed and/or working pressure.

- OP 16 is PLUGGED
- OP 9 is PLUGGED in P-1NN/F, or uses optional orifice in P-1NN/B
- OP 6 is PLUGGED
- The customer-supplied Load Sense circuit is plumbed into the LS/RP Port.

*All internal plugs and orifices use 1/16 NPT plugs and 5/32 internal hex wrenches.*





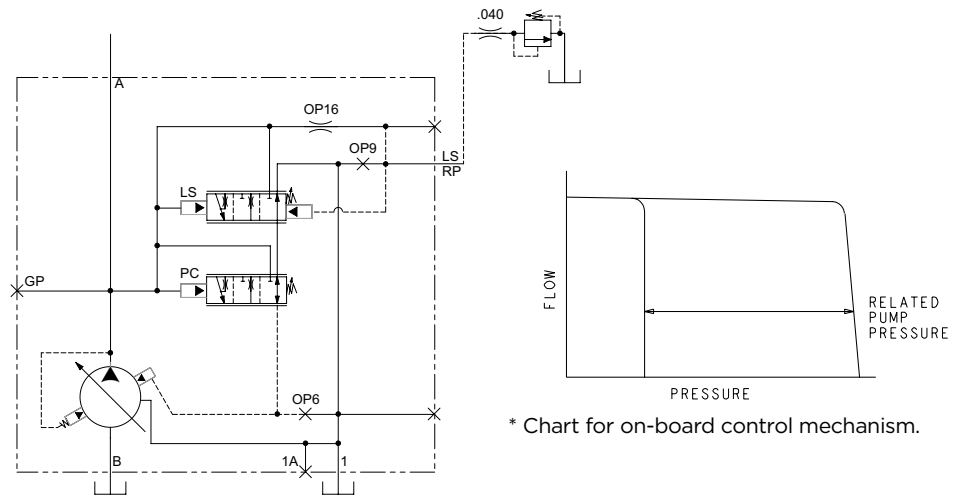
**CIRCUIT DIAGRAMS**

■ **Remote Pressure Compensator: P-RNN**

A customer-supplied remote compensator circuit is plumbed into the LS/RP port on the pump. If the remote compensator opens to vent fluid, then the pump will compensate as if the pump's integral compensator reached its pressure setting.

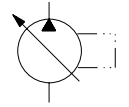
The on-board compensator is still active, and will independently respond to compensate.

- OP 16 has a Ø 0.031 in ORIFICE
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The customer-supplied Remote Compensator circuit is plumbed into the LS/RP Port.
- The Remote Compensator requires a flow rate of approximately 0.25 GPM.
- The remote pilot relief valve requires a 0.040 inch stability orifice.
- If a 1/4 inch line is used to connect the remote compensator to the LS/RP port, then the recommended line length is 6 to 30 feet.
- If a 3/8 inch line is used to connect the remote compensator to the LS/RP port, then the recommended line length is 3 to 30 feet.



*All internal plugs and orifices use 1/16 NPT plugs and 5/32 internal hex wrenches.*





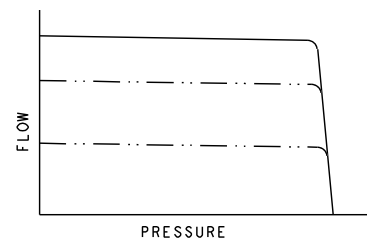
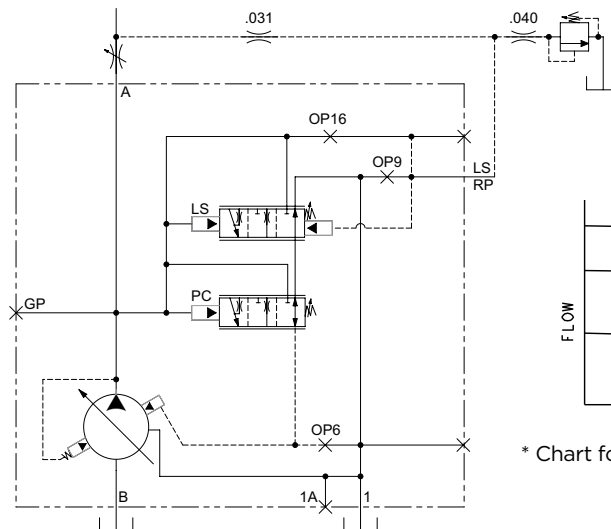
**CIRCUIT DIAGRAMS**

■ **Remote Pressure Compensator and Load Sense: P-1NN/F**

A customer-supplied remote compensator circuit is plumbed into the LS/RP port on the pump. If the remote compensator opens to vent fluid, then the pump will compensate.

The on-board compensator and load sense functions are still active, and will independently respond to regulate flow.

- OP 16 is PLUGGED
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The customer-supplied Remote Compensator/Load Sense circuit is plumbed into the LS/RP Port. The circuit requires a  $\varnothing$  0.031 in. orifice between the Remote Compensator and Load Sense components.
- The Remote Compensator requires a flow rate of approximately 0.25 GPM.
- The remote pilot relief valve requires a 0.040 inch stability orifice.
- If a 1/4 inch line is used to connect the remote compensator to the LS/RP port, then the recommended line length is 6 to 30 feet.
- If a 3/8 inch line is used to connect the remote compensator to the LS/RP port, then the recommended line length is 3 to 30 feet.



\* Chart for on-board control mechanism.

*All internal plugs and orifices use 1/16 NPT plugs and 5/32 internal hex wrenches.*