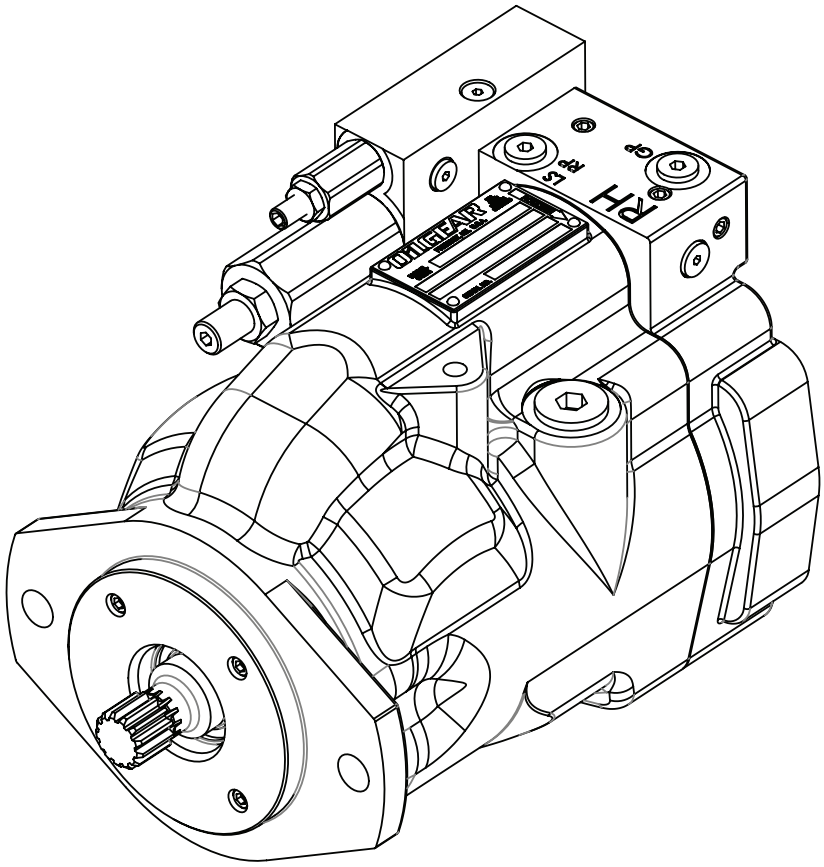
Installation Bulletin

XD5-050/065/075-A1

Variable Displacement Pump



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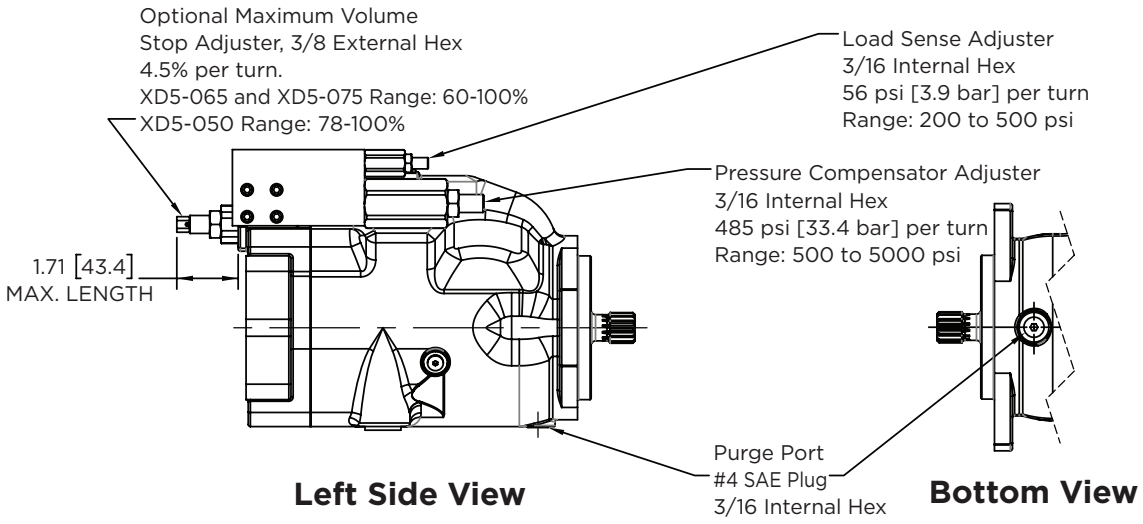
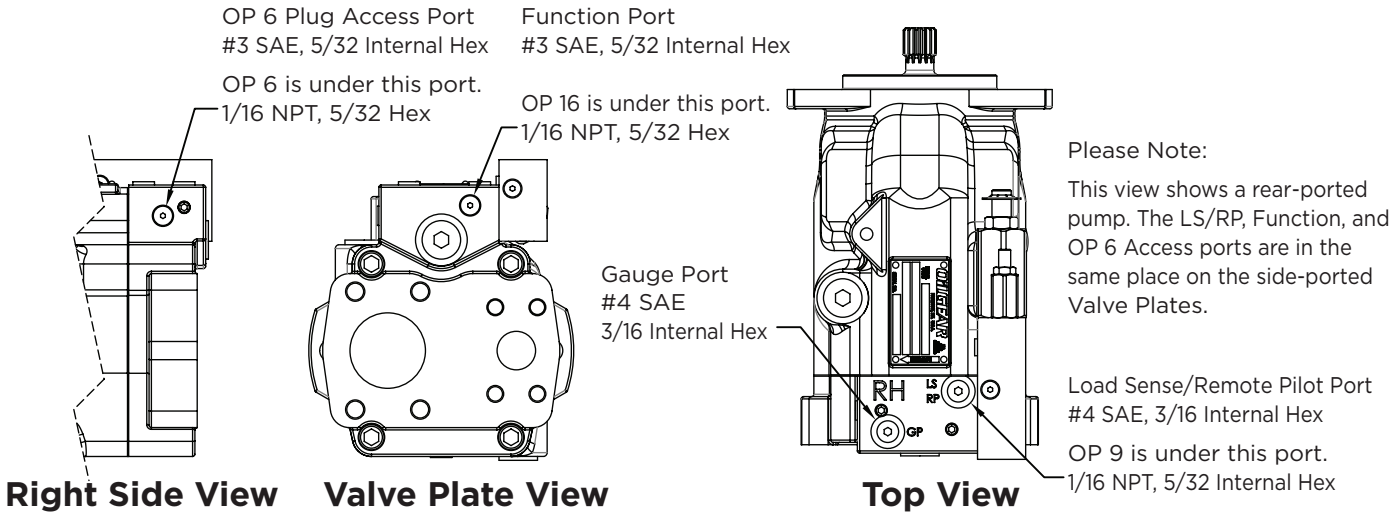
THE OILGEAR COMPANY
905 South Downing Street, Fremont, NE 68025 USA

Issue Date: 9/30/2025
910007-A

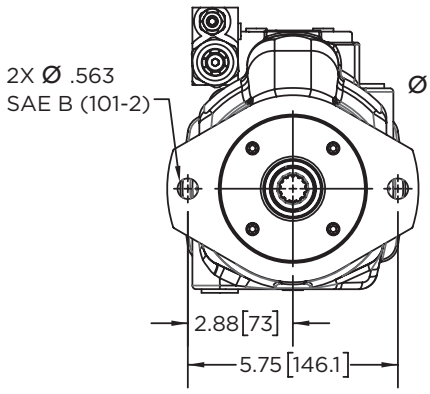
ADJUSTER AND PURGE PORT LOCATIONS



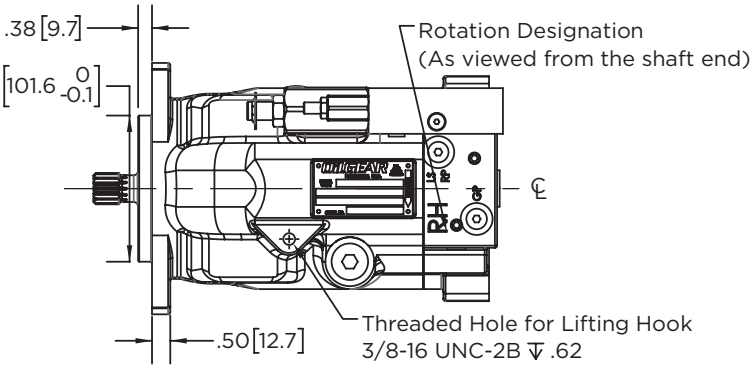
CONTROL PORT LOCATIONS



MOUNTING FLANGE, LIFTING HOOK, AND ROTATION DESIGNATION

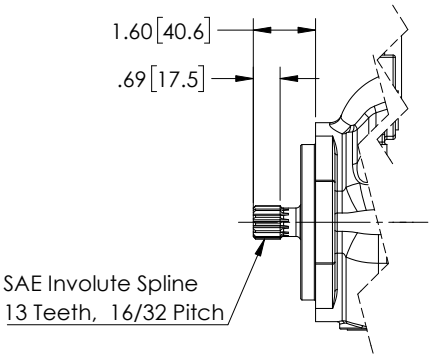


Mouting Flange View

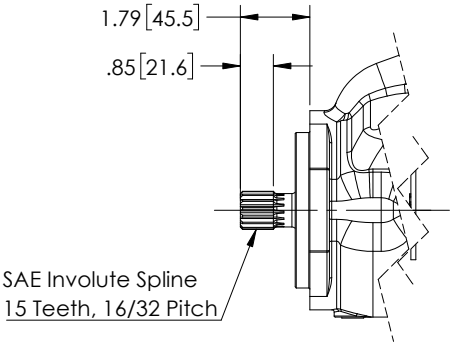


Top View

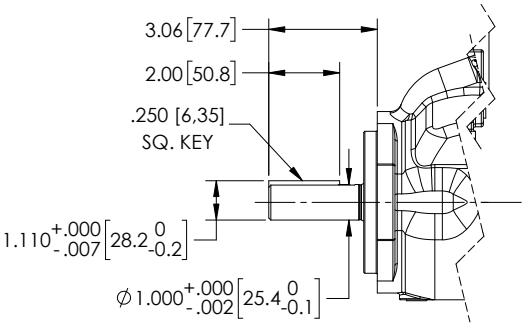
DRIVESHAFTS



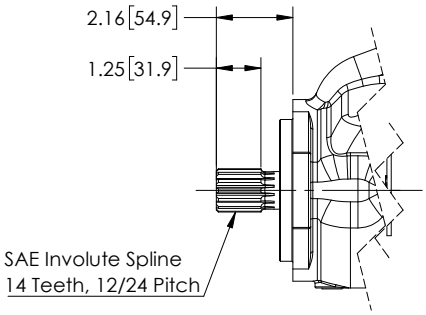
SAE B Spline
Model Code K
(SAE 22-4)



SAE B-B Spline
Model Code S
(SAE 25-4)

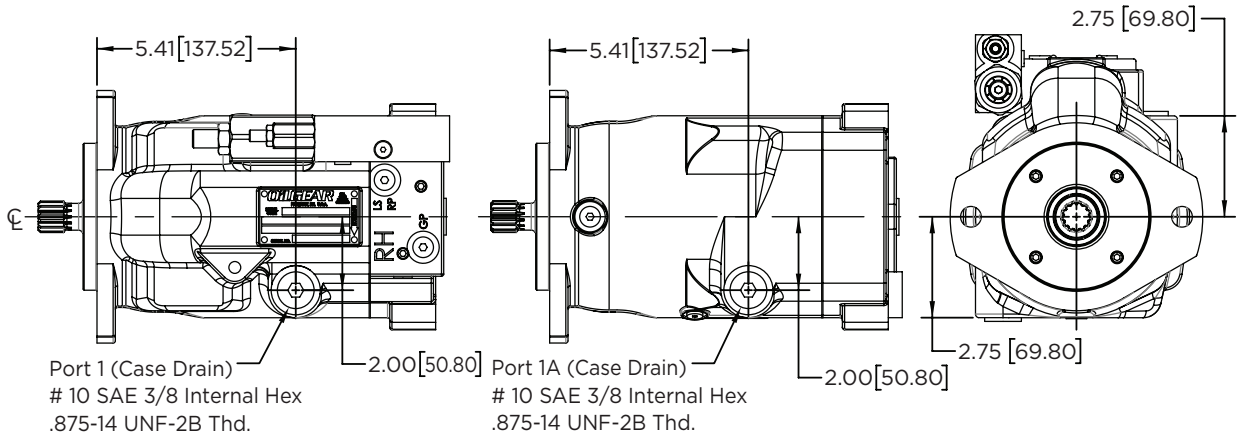


SAE B-B Keyed
Model Code Y
(SAE 25-1)



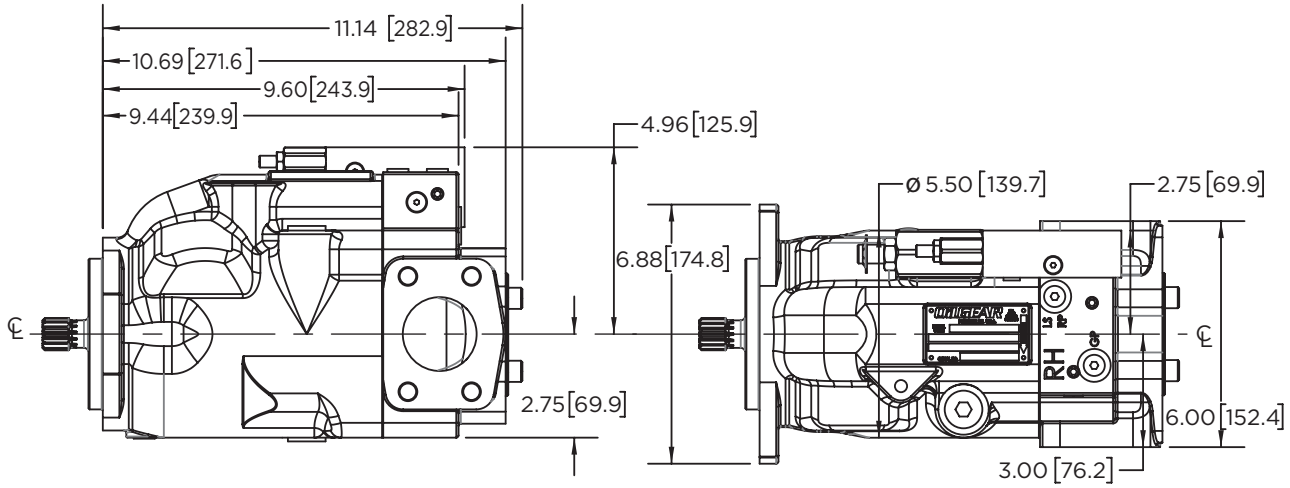
SAE C Spline
Model Code R
(SAE 32-4)

CASE DRAIN LOCATIONS

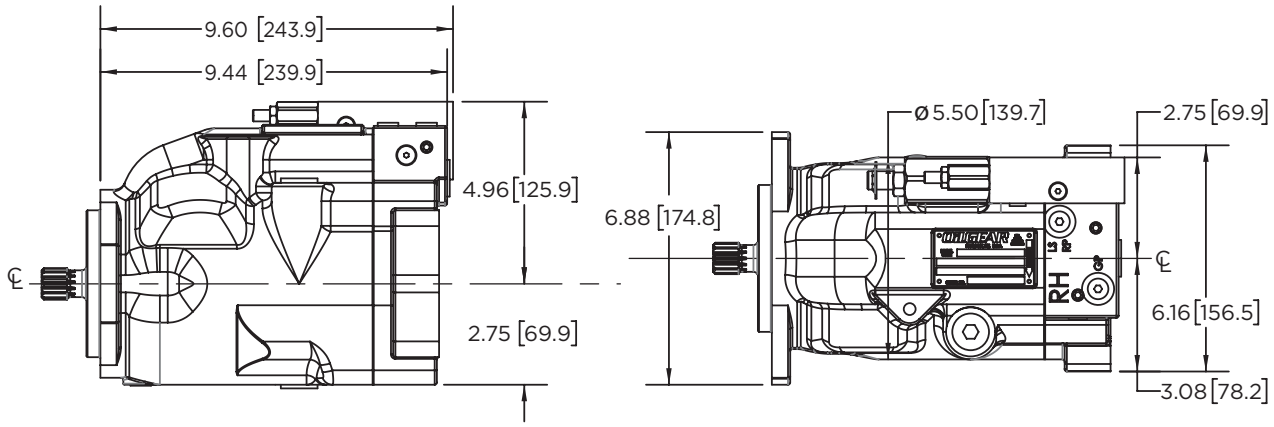


Top View **Bottom View** **Mounting Flange View**

CLEARANCE DIMENSIONS - PRESSURE COMP. & LOAD SENSE CONTROL

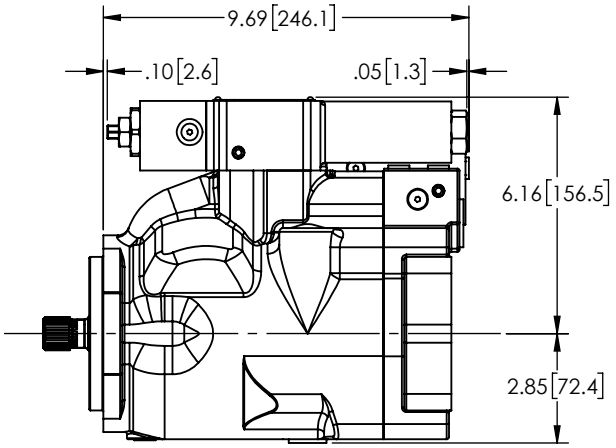


Right Side View, Side Ported Valve Plate **Top View, Side Port Valve Plate**

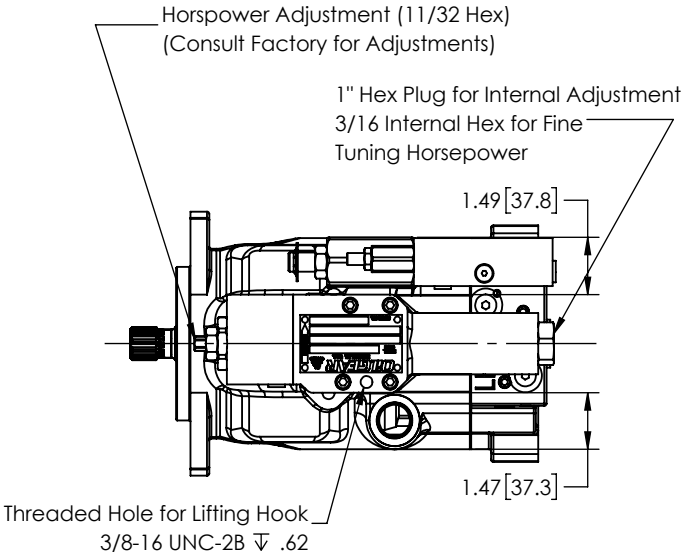


Right Side View, Rear Ported Valve Plate **Top View, Rear Port Valve Plate**

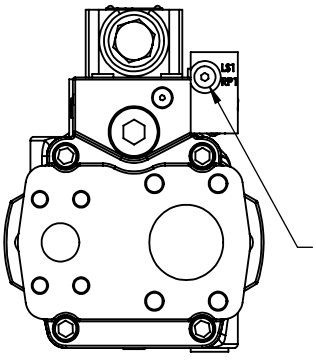
CLEARANCE DIMENSIONS - HORSEPOWER LIMITER CONTROL



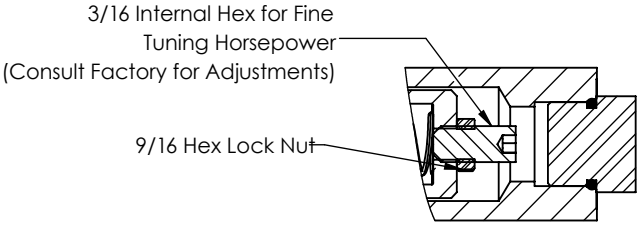
Right Side View, Rear Ported Valve Plate
(Reference Previous Views for all other Dimensions)



Top View, Rear Ported Valve Plate
(Reference Previous Views for all other Dimensions)



Rear View, Rear Ported Valve Plate
(Reference Previous Views for all other Notes)

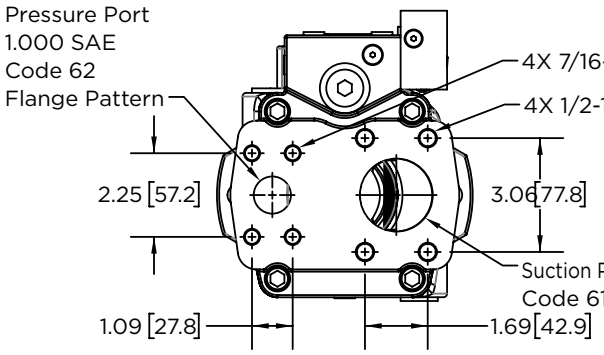


Section View, Internal Fine Tuning Horsepower Adjustment

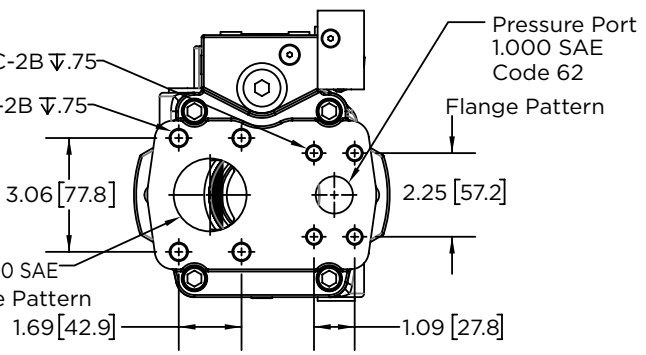
Please Note

These views show a rear-ported pump. These dimensions and descriptions apply to all Horsepower pumps of this size.

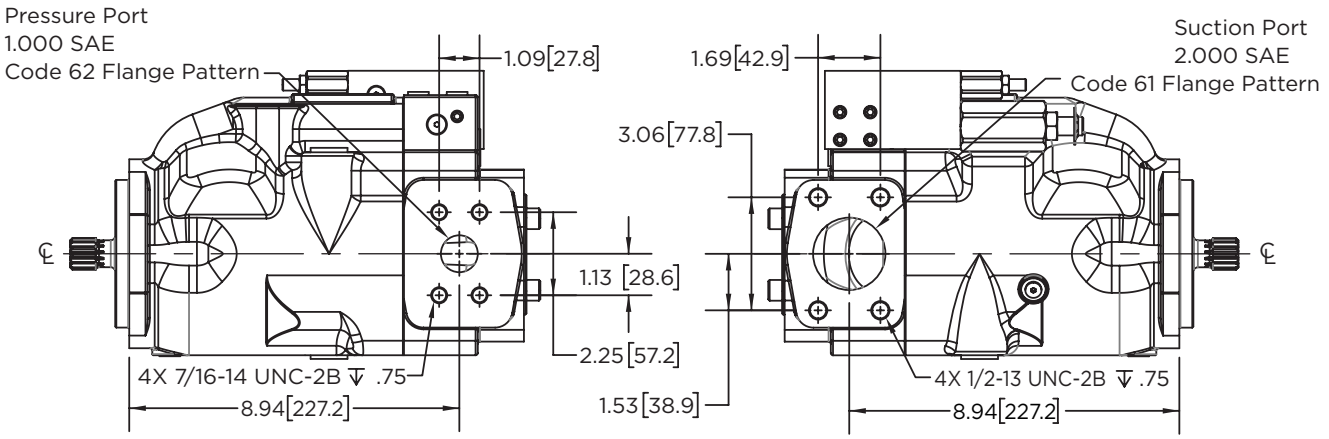
VALVE PLATE VIEWS



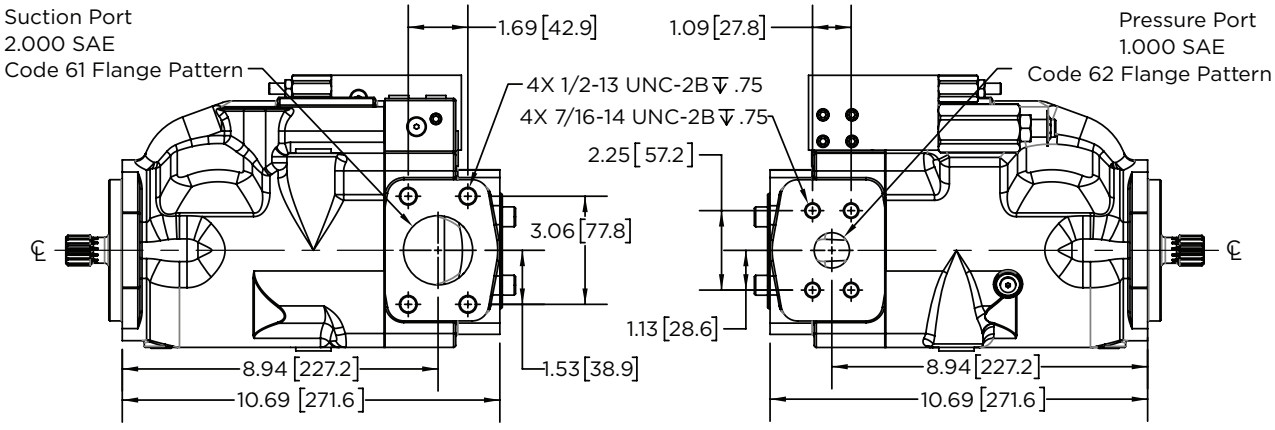
Rear Port Valve Plate
LH Rotation (CCW)



Rear Port Valve Plate
RH Rotation (CW)

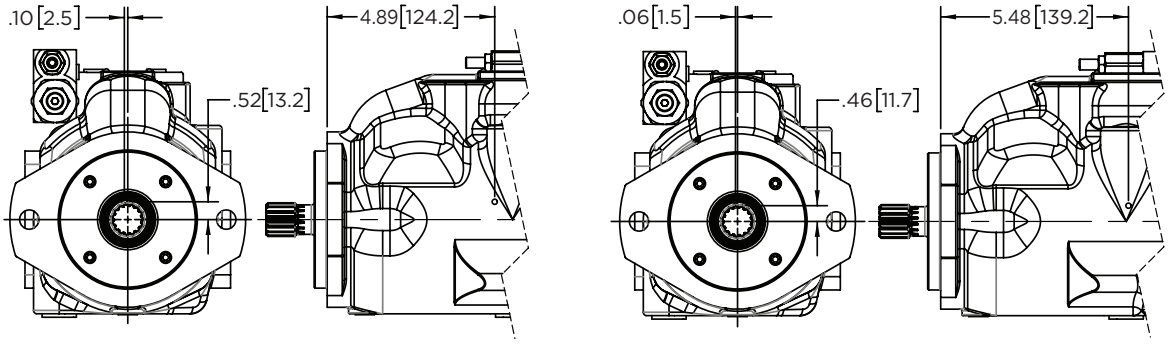


Side Port Valve Plate, Left Hand Rotation (CCW)



Side Port Valve Plate, Right Hand Rotation (CW)

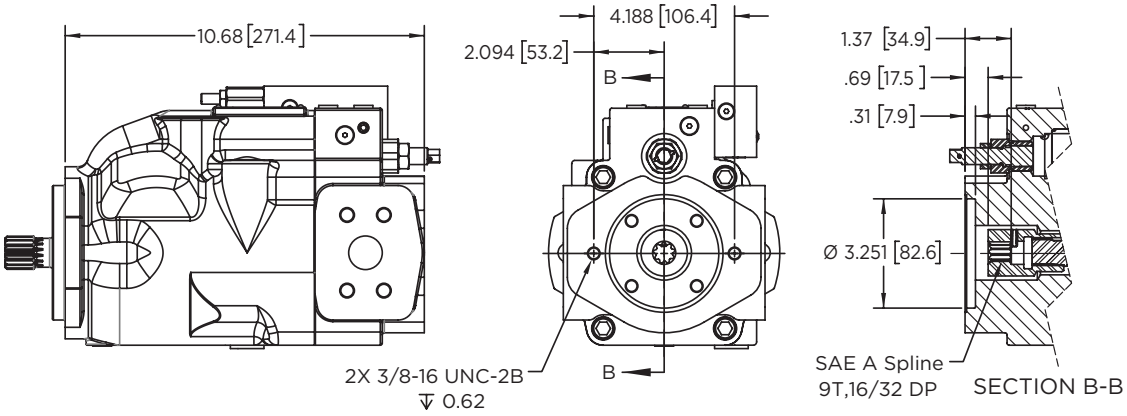
CENTER OF GRAVITY AND DRY WEIGHT



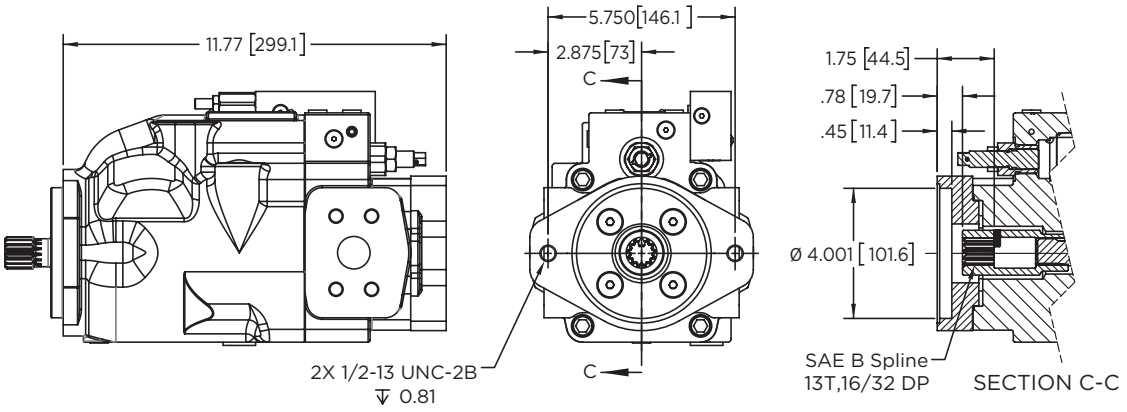
Rear Port Valve Plate - 55 lbs [24.9 kg] **Side Port Valve Plate - 63 lbs [28.6 kg]**

Rotational Moment of Inertia: 23 lb*in² [67.3 kg*cm²]

TANDEM PUMP ADAPTERS



SAE B to SAE A Adapter



SAE B to SAE B Adapter

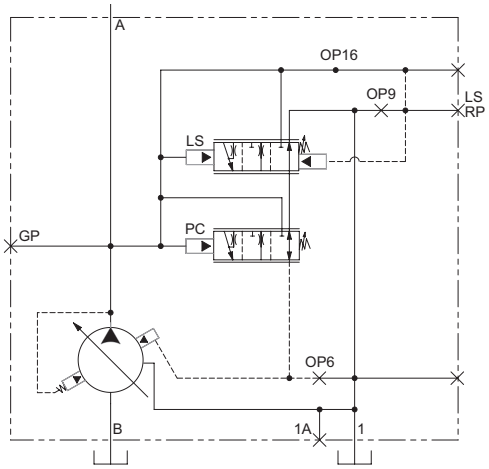
CIRCUIT DIAGRAMS

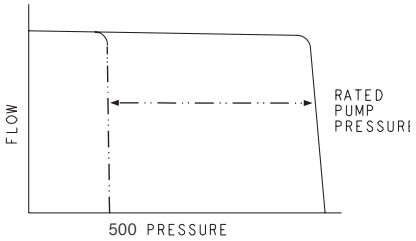
■ Pressure Compensator Only: **P-1NN**

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.



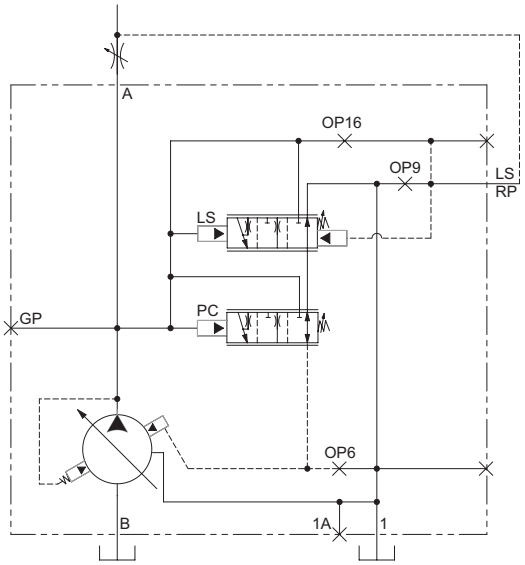


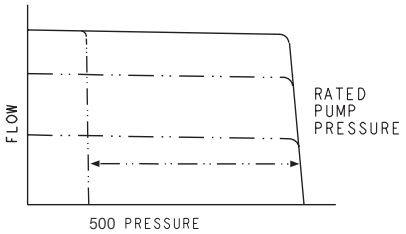
■ Pressure Compensator and Load Sense: **P-1NN/F or P-1NN/B**

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 bleed 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

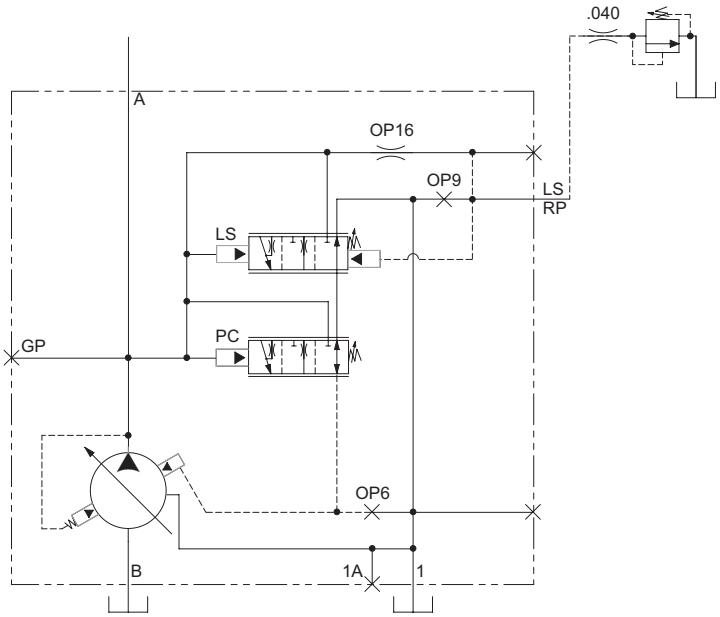
■ Remote Pressure Compensator: **P-RNN**

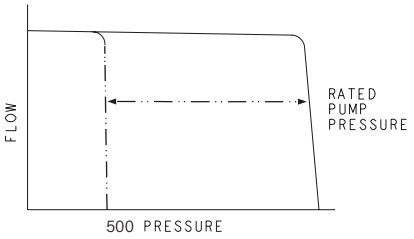
A customer-supplied remote compensator circuit is plumbed into the LS/RP port on the pump. If the remote compensator opens to vent fluid, then the pump will compensate as if the pump's integral compensator reached its pressure setting.

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

- OP 16 has a Ø 0.031" 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" stability orifice.
- If a 1/4" 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" 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

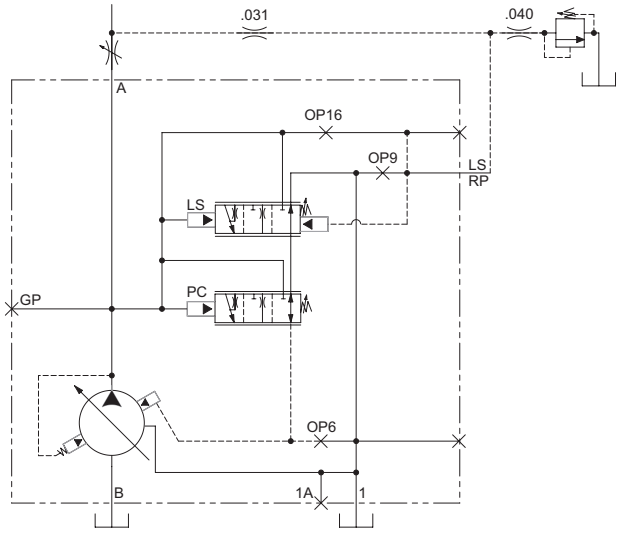
■ Remote Pressure Compensator and Load Sense: P-1NN/F

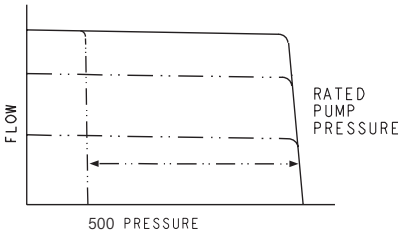
A customer-supplied remote compensator circuit is plumbed into the LS/RP port on the pump. If the remote compensator opens to vent fluid, then the pump will compensate.

The on-board pressure 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 Ø 0.031" 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" stability orifice.
- If a 1/4" 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" 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.





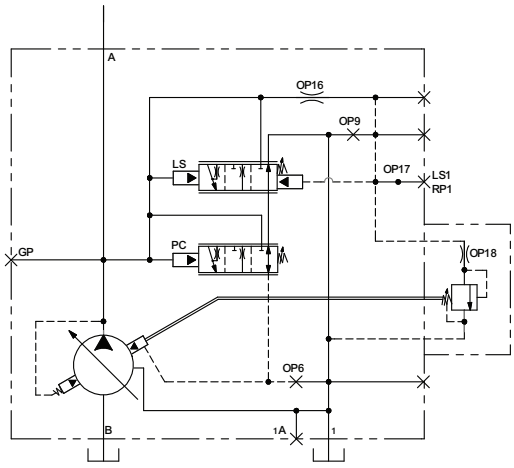
CIRCUIT DIAGRAMS

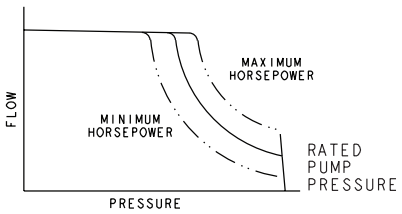
■ Horsepower Limiter w/Pressure Compensator: P-1NN/H

Automatically reduces delivery as unit pressure rises to limit horsepower consumption. The pressure compensator control over rides the horsepower control when the system pressure reaches the preset control pressure.

- OP 18 has a Ø 0.040" ORIFICE
- OP 17 is OPEN
- OP 16 has a Ø 0.031" ORIFICE
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The LS1/RP1 Port is PLUGGED

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



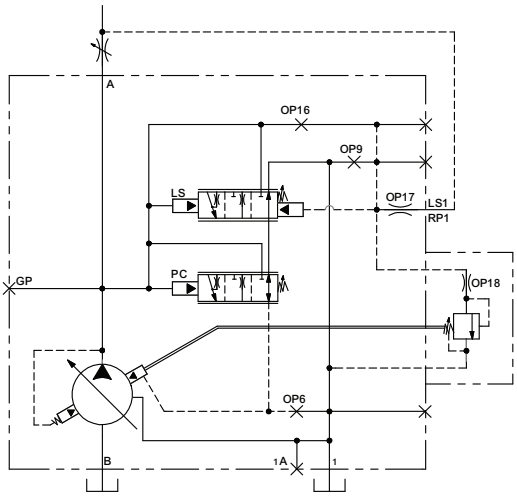


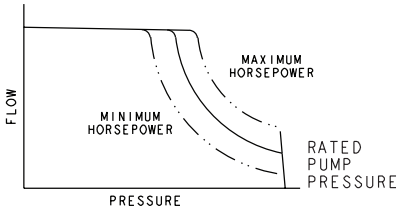
■ Horsepower Limiter w/Load Sense: P-1NN/G

A constant flow output is maintained for a given flow control valve setting, regardless of changes in drive speed and/or working pressure, until *(limited)* horsepower setting is reached. Control then automatically reduces delivery, as unit pressure rises, to limit horsepower consumption.

- OP 18 has a Ø 0.040" ORIFICE
- OP 17 has a Ø 0.031" ORIFICE
- OP 16 is PLUGGED
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The customer-supplied Load Sense circuit is plumbed into the LS1/RP1 PORT.

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





CIRCUIT DIAGRAMS

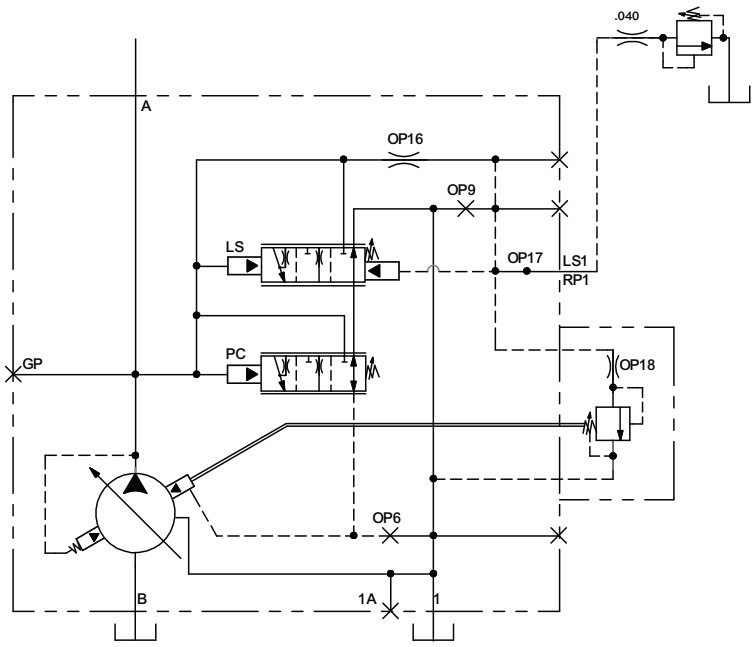
■ Horsepower Limiter w/Remote Pressure Compensator: P-RNN/H

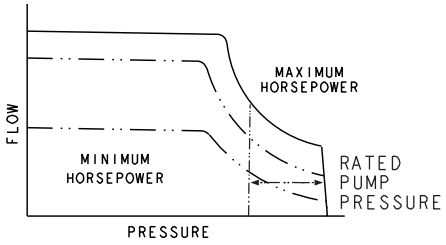
Automatically reduces delivery as unit pressure rises to limit horsepower consumption.

A customer-supplied remote compensator circuit is plumbed into the LS1/RP1 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.

- OP 18 has a Ø 0.040" ORIFICE
- OP 17 is OPEN
- OP 16 has a Ø 0.031" ORIFICE
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The customer-supplied Remote Compensator circuit is plumbed into the LS1/RP1 Port.
- The Remote Compensator requires a flow rate of approximately 0.25 GPM.
- The remote pilot relief valve requires a 0.040" stability orifice.
- If a 1/4" line is used to connect the remote compensator to the LS1/RP1 port, then the recommended line length is 6 to 30 feet.
- If a 3/8" line is used to connect the remote compensator to the LS1/RP1 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

■ Horsepower Limiter w/Load Sensing w/Remote Pressure Compensator: **P-RNN/G**

Load sensing control matches flow and pressure to load demand until *(limited)* horsepower setting is reached. Control then automatically reduces delivery as system pressure rises.

A customer-supplied remote compensator circuit is plumbed into the LS1/RP1 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.

- OP 18 has a Ø 0.040" ORIFICE
- OP 17 is OPEN
- OP 16 is PLUGGED
- OP 9 is PLUGGED
- OP 6 is PLUGGED
- The customer-supplied Remote Compensator/Load Sense circuit is plumbed into the LS1/RP1 Port. The circuit requires a Ø 0.031" 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" stability orifice.
- If a 1/4" line is used to connect the remote compensator to the LS1/RP1 port, then the recommended line length is 6 to 30 feet.
- If a 3/8" line is used to connect the remote compensator to the LS1/RP1 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.