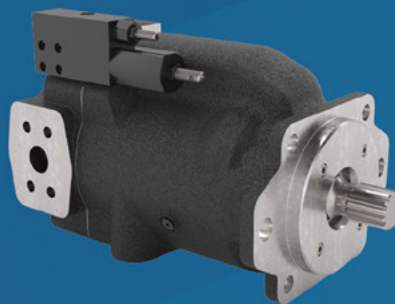


THE WORLD DEMANDS
OILGEAR

XD5 PUMPS

High-performance solution
for demanding mobile
applications



MAKING MACHINES GO AND PROBLEMS GO AWAY®

910004

OILGEAR

**MAKING MACHINES GO
AND PROBLEMS GO AWAY®**

THE WORLD DEMANDS OILGEAR

Oilgear has a rich legacy of more than 100 years manufacturing pumps and hydraulic equipment. We pride ourselves on **MAKING MACHINES GO AND PROBLEMS GO AWAY®**. For decades, Oilgear has developed hydraulic techniques to meet the unique needs for many equipment manufacturers and end users worldwide.



**OILGEAR
TRAVERSE CITY, MI USA**



**OILGEAR
FREMONT, NE USA**



**OILGEAR TOWLER
UK**



**OILGEAR
SOUTH KOREA**



**OILGEAR
CHINA**



**OILGEAR
SPAIN**

Global Service Network

No matter where you are, Oilgear can quickly and efficiently provide service to you.

Oilgear's large pump manufacturing centers are in Traverse City, Michigan and Leeds, England. Further domestic manufacturing capacity and product specialization are provided by our Fremont, Nebraska, pump manufacturing facility. We also have manufacturing and field service centers in Germany, France, Spain, China and Korea.

Engineering and Application Expertise

Oilgear's engineering capabilities are second to none. Our application and field engineers are factory-trained and have spent years, often decades, working in the market segments they service. Every Oilgear engineer brings this personal experience to the meeting table, plus the collective knowledge gained from Oilgear's more than 100 years of servicing the general industry with innovative fluid power solutions.



XD5 MORE PUMP WITH LESS "WAIT"

WHY CHOOSE THE XD5

The XD5 delivers durability, longevity and simplicity while providing leading power density to the mobile market with shorter lead times.

The combination of high pressure with high continuous shafts speeds enables XD5 to provide higher horsepower giving you the ability to maximize power density for applications to diesel PTO or hybrid powertrains.

MOBILE APPLICATIONS

Off-highway construction

Mining trucks, Haulers, Dozers
Excavators, Trenchers and
many more

On-highway vehicles

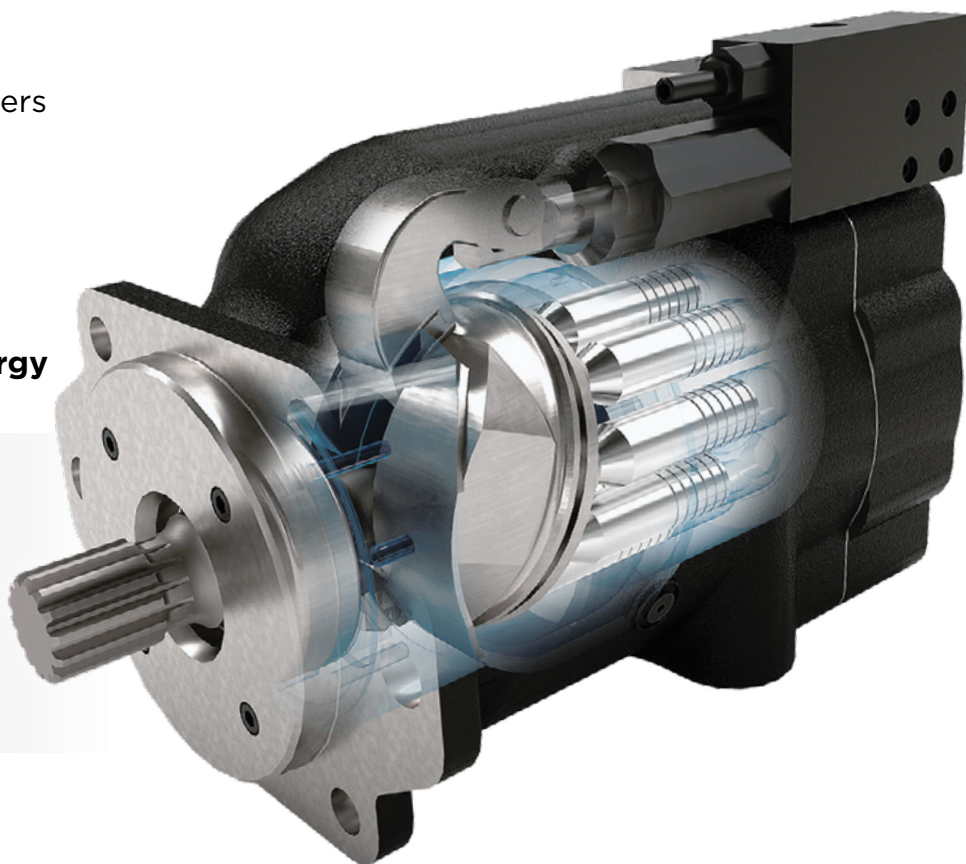
Municipal Service and
Construction Vehicles

Off-shore Marine and Energy

**XD5'S DELIVERS WITH
MORE SPEED
MORE FLOW
MORE POWER
MORE DURABLE
SHORTER LEAD TIMES**

OILGEAR "SECRET SAUCE"

The heart of all Oilgear pumps, including the XD5, is its proprietary Hard-On-Hard Technology. This process gives the Oilgear XD5 pumps Xtra Defense and Durability to withstand continuous medium to heavy duty cycles while mitigating contamination risks which can lead to premature or increased maintenance and costly downtime.



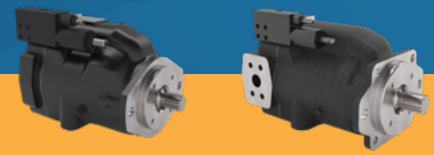
In This Brochure:

- ▶ Pump Features and Benefits
- ▶ Pump Specifications
- ▶ Model Ordering Information
- ▶ XD5-065 Performance, Connections, Torque, Sound and Dimensional Drawings
- ▶ XD5-100 Performance, Connections, Torque, Sound and Dimensional Drawings
- ▶ Control Options and Matrix

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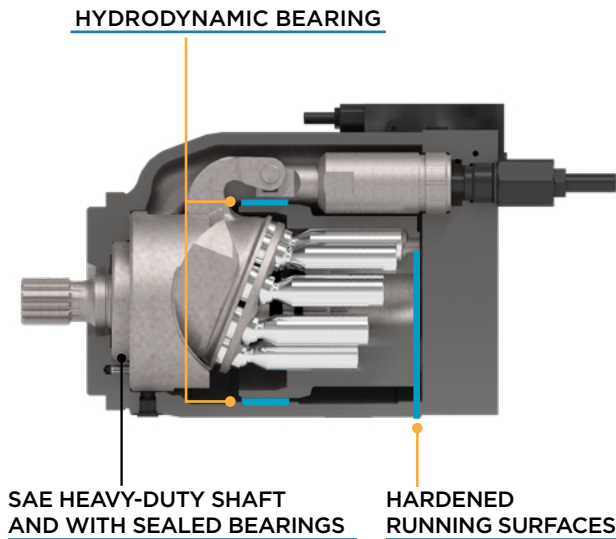
Pump Features and Benefits	5
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Oilgear's Best Ideas, in a Mobile Pump

XD5 takes Oilgear reliability and performance, and wraps it in a small mobile package. Like PVWJ and PVG, the XD5 series uses Hard-on-Hard and hydrobearing design philosophies, and combines those features into a small, light, mobile pump housing.



HIGH OPERATING PRESSURE

XD5 offers 5,000 psi continuous rated pressure across the entire pump family.

MORE FLOW

XD5 design prioritizes inlet condition, meaning users can reach higher shaft speeds with only atmospheric pressure at the inlet.

PEAK POWER

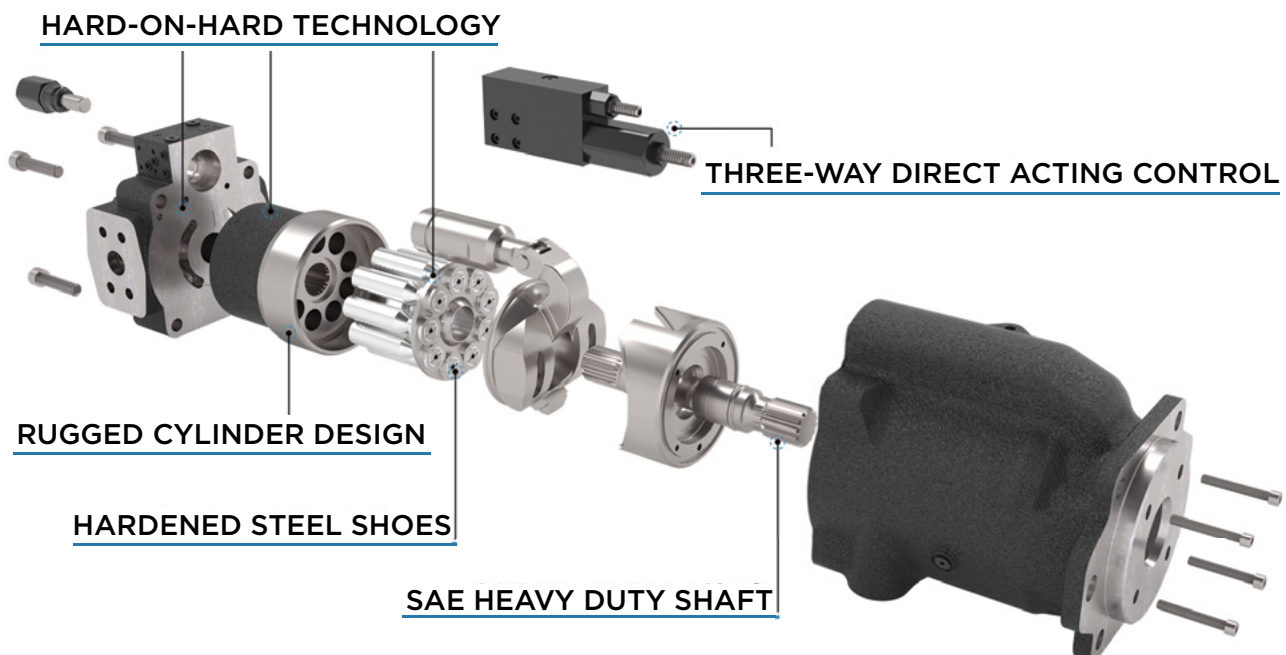
Combining 5,000 psi continuous rated pressure with high shaft speeds enables XD5 to maximize power.

UP TO 32% SMALLER SPACE CLAIM

Smaller dimensional space claim makes first fit design and aftermarket drop-in-place easier.

CLASS-LEADING POWER DENSITY

Combining a high power pump with a small overall package gives XD5 class-leading power density.



XD5 FAMILY | OILGEAR RELIABILITY, MOBILE PACKAGE

XD5 FAMILY SPECIFICATIONS

FRAME SIZE			B-FRAME	C-FRAME
MODEL			XD5-065	XD5-100
DRIVE	Maximum (RPM)		2700	2600
	Minimum (RPM)		600	600
	Rotational Moment of Inertia (lbs.-in ²)		23	47
OUTPUT	Pressure (PSIA)	Peak	5800	5800
		Continuous	5000	5000
		Minimum	100	100
		Minimum Volume (GPM) at 1800 RPM & rated pressure for full displacement	29	39
CASE	Maximum Pressure (PSI) w/ Standard Shaft Seal		25	25
	Case Drain Port Size		#10 SAE	#12 SAE
CONTROLS	Pressure Compensator	Pressure Controls (PSI) - Minimum Compensator Setting	500	500
		On-Stroke Time (ms) Simulating a step function at 1800 RPM, Continuous Rated Pressure, 500 psi P _Δ	60	80
		Off-Stroke Time (ms) Simulating a step function at 1800 RPM, Continuous Rated Pressure, 500 psi P _Δ	40	40
	Load Sense	Minimum Setting (PSI)	200	200
		Maximum Setting (PSI)	500	500
FLUID	Viscosity (SSU)	Minimum	65	65
		Maximum	2000	2000
TEMPERATURE	Fluid Operating Range (F°)		14 to 190	14 to 190
	Fluid Minimum Starting (F°)		-40	-40
	Fluid Maximum at Case Drain Port (F°)		230	230

XD5 | MODEL ORDERING INFORMATION



VARIABLE PUMP EXAMPLE XD5 — 100 — A1 U V — L S F K — P — 1NN/F SN — AN — 10

BLOCK NUMBER 1 — 2 — 3 4 5 — 6 7 8 9 — 10 — 11 12 — 13 — 14

11a 11b 11c /11d

11 = CONTROL MODIFIER

1 = UNIT, TYPE & DESIGN SERIES	
XD5	XD5 Variable Displacement Pump

2 = UNIT TYPE	
065	65 ml/rev. (3.97 cipr)
100	98.4 ml/rev. (6.00 cipr)

3 = DESIGN SERIES	
A1	Current for all displacement

4 = DESIGN SERIES MODIFIER	
U	SAE Connections & Mounting

5 = SEALS	
V	Viton (Standard)
B	Buna Nitrile
P	EPR

6 = ROTATION	
L	Left Hand (CCW)
R	Right Hand (CW)

7 = VALVE PLATE TYPE	
D	Side Ported (thru-shaft)
S	Rear Ported

8 = CONNECTION TYPE	
F	SAE Flange

9 = INPUT SHAFT TYPE, XD5-065	
K	Splined SAE B, 13 Tooth, 16/32 Pitch
S	Splined SAE B-B, 15 Tooth, 16/32 Pitch
R	Splined SAE C, 14 Tooth, 12/24 Pitch

9 = INPUT SHAFT TYPE, XD5-100	
K	Splined SAE C, 14 Tooth, 12/24 Pitch
S	Splined SAE C-C, 17 Tooth, 12/24 Pitch
Z	Keyed (SAE C-C, 1.50" DIA.)

10 = CONTROL TYPE	
P	Pressure Compensating

11a = CONTROL OPTIONS	
1	Single Setting
R	Remote Control

11b = SOLENOID VOLTAGE	
N	Non-Electrical Control

11c = CONNECTOR	
N	Non-electrical Control

11d = MODULE	
Blank unless required option	
F	Load Sense
B	Load Sense w/ Bleed Orifice

12 = VOLUME STOPS	
NN	No Volume Stop
SN	Adjustable Maximum Volume Stop

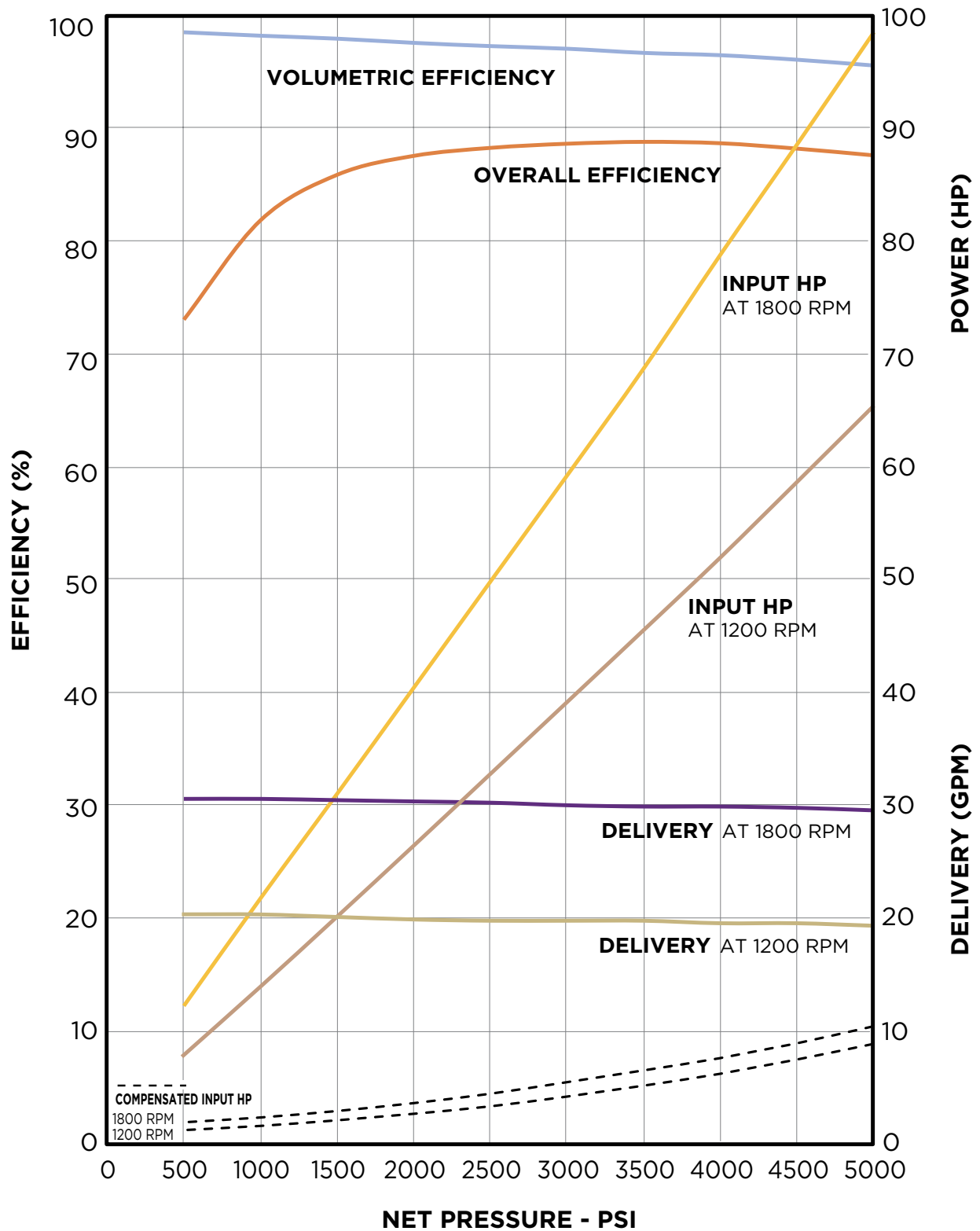
13 = AUXILIARY ADAPTERS	
Required for Valve Plate Option "D." Blank for Valve Plate Option "S."	
NN	None
CP	Cover Plate
A2	SAE A, 2-Bolt Adapter SAE A Splined Coupling, 9 Tooth
B2	SAE B, 2-Bolt Adapter SAE B Splined Coupling, 13 Tooth
C2*	SAE C 2-Bolt Adapter SAE C Splined Coupling, 14 Tooth
C4*	SAE C 4-Bolt Adapter SAE C Splined Coupling, 14 Tooth

*Available in only XD5-100

14 = GEAR PUMPS	
Blank unless required option Requires A2 Adapter	
05	8 ml/rev. (0.488 cipr)
07	11 ml/rev. (0.671 cipr)
10	16 ml/rev. (0.976 cipr)
14	23 ml/rev. (1.404 cipr)
20	33 ml/rev. (2.014 cipr)

For non-standard requests, please contact technical sales. Subject to change without notice.

PERFORMANCE DATA



**XD5-065**

CONNECTION TABLE

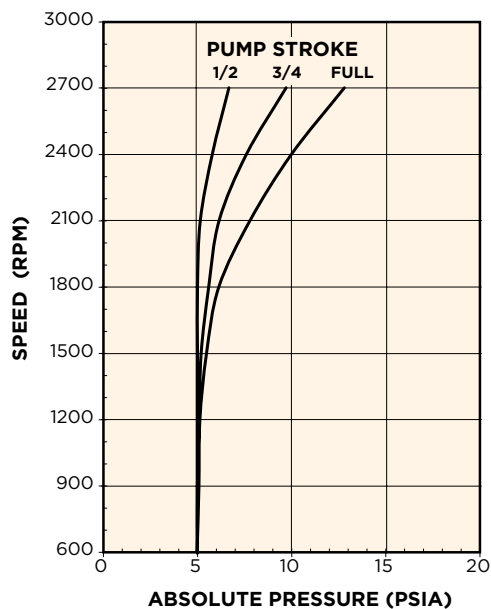
PORT	FITTING
INLET	2" SAE Code 61 Flange
OUTLET	1" SAE Code 62 Flange
CASE DRAIN (2 LOCATIONS)	#10 SAE Port

SHAFT TORQUE RATINGS

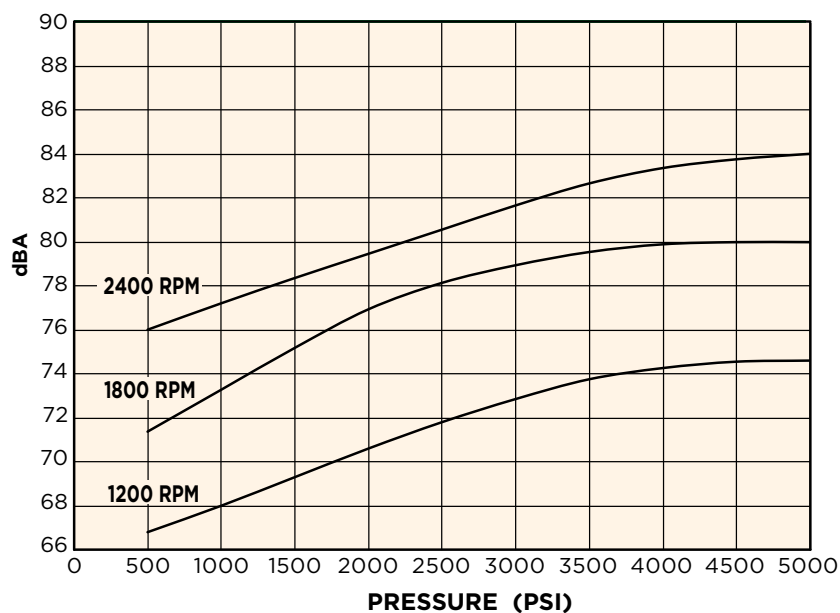
MODEL CODE DESIGNATOR	SHAFT SIZE	ALLOWANCE INPUT TORQUE, IN - LBS
K	SAE B Spline - 13 tooth, 16/32 Pitch	3,500
S	SAE B-B Spline - 15 Tooth, 16/32 Pitch	7,000
R	SAE C Spline - 14 Tooth, 12/24 Pitch	7,000

3,500 IN-LBS = MAXIMUM ALLOWABLE TORQUE APPLIED TO REAR OUTPUT

INLET DATA

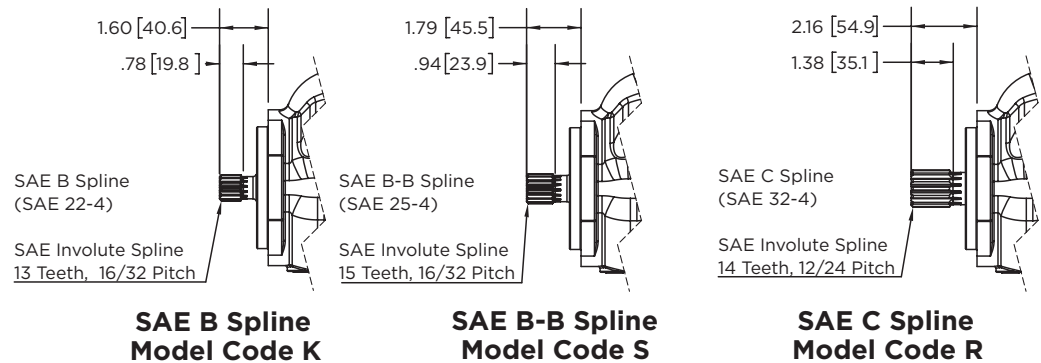


SOUND DATA

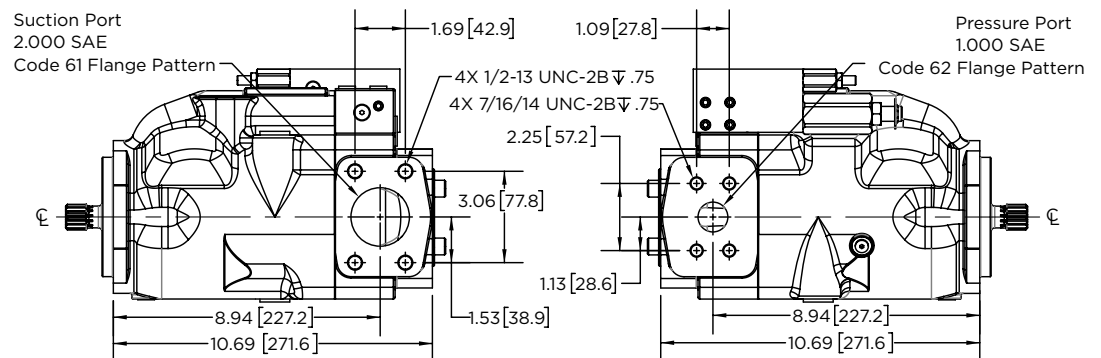


INSTALLATION DRAWING: BASIC PUMP • SIDE PORTED - THRU SHAFT

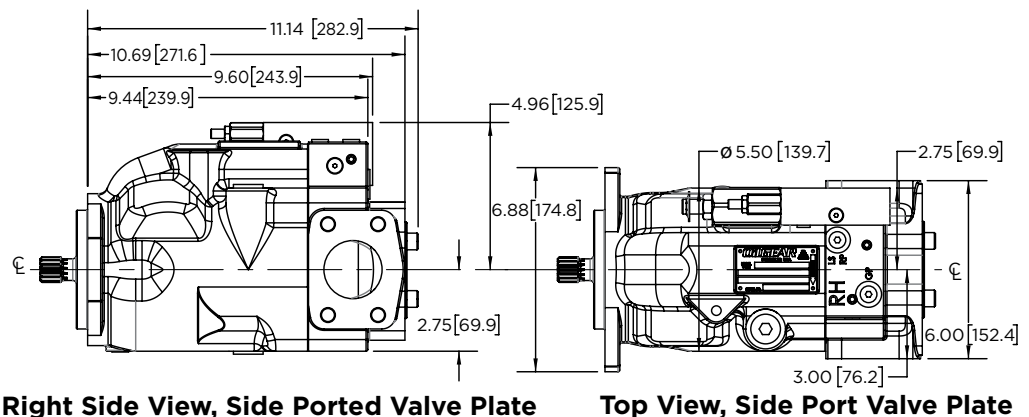
Driveshaft Drawing



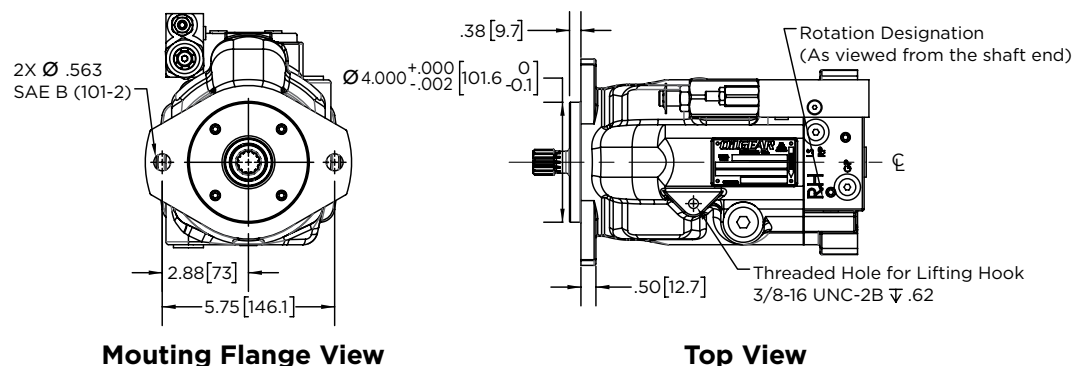
Valve Plate Views - Side Ported, Right Hand Rotation (CW)



Clearance Dimensions



Mounting Flange, Lifting Hook, and Rotation

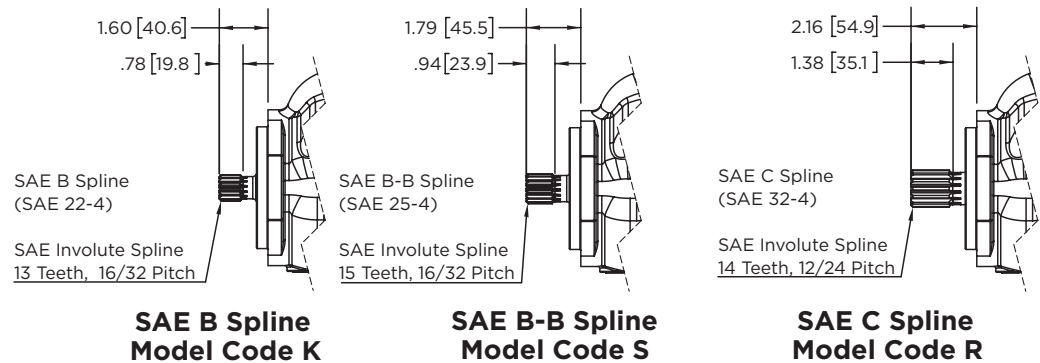




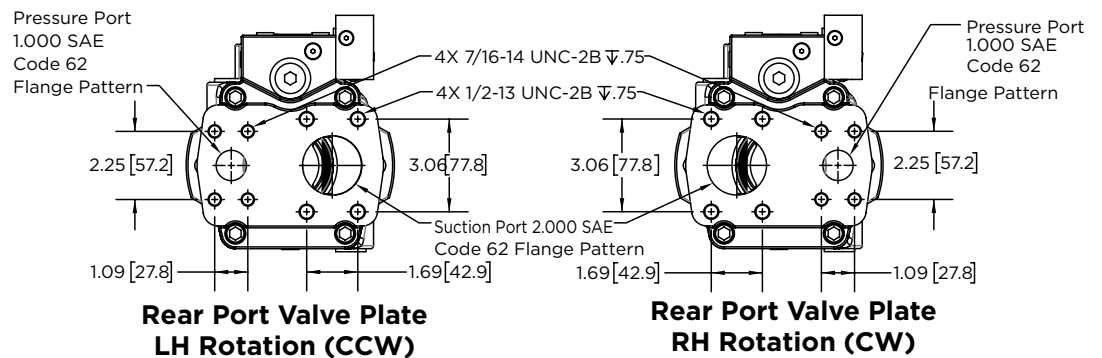
XD5-065

INSTALLATION DRAWING: BASIC PUMP • REAR PORTED

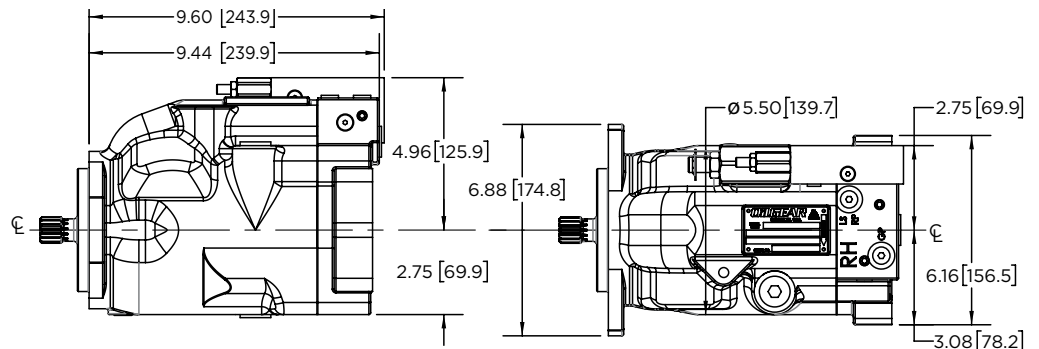
Driveshaft Drawing



Valve Plate Views - Rear Ported



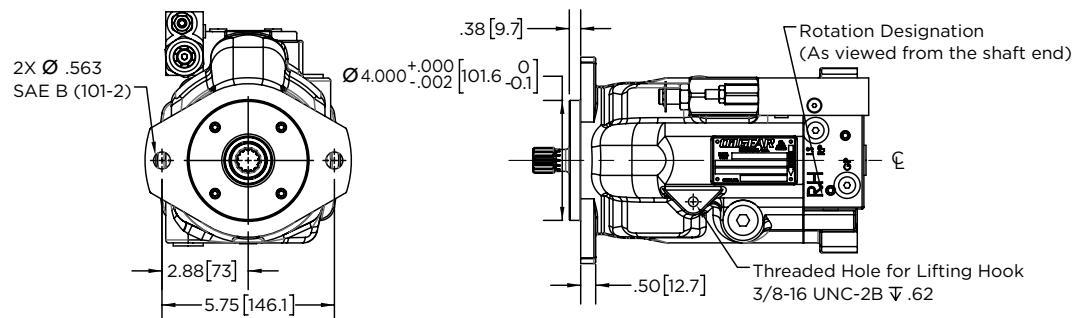
Clearance Dimensions



Right Side View, Rear Ported Valve Plate

Top View, Rear Port Valve Plate

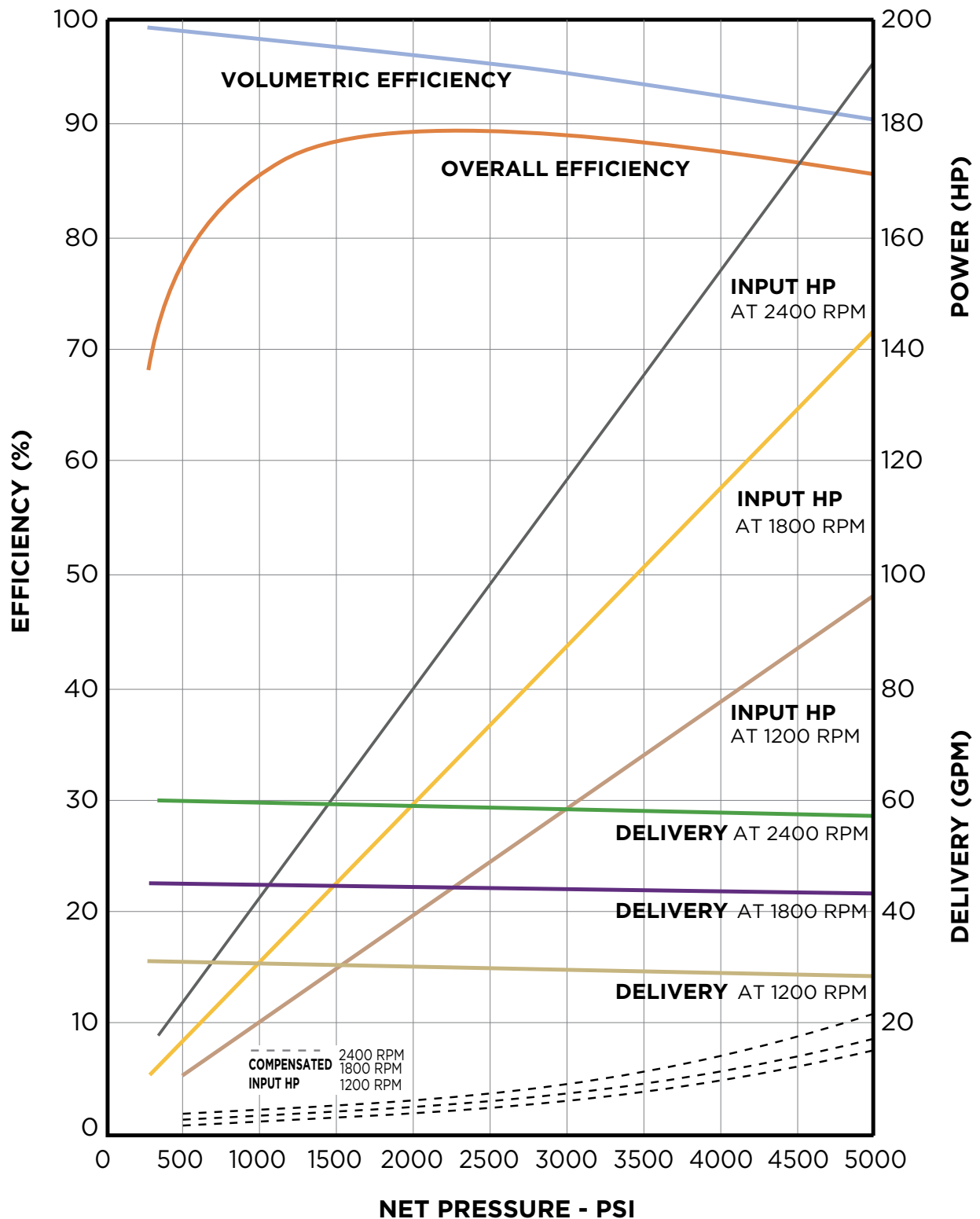
Mounting Flange, Lifting Hook, and Rotation



Mounting Flange View

Top View

PERFORMANCE DATA





XD5-100

CONNECTION TABLE

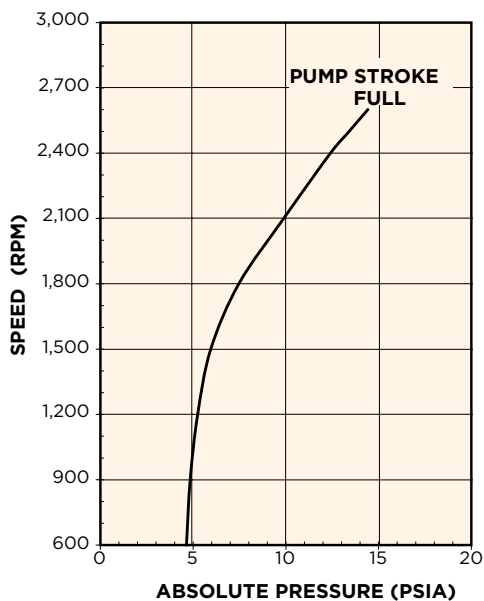
PORT	FITTING
INLET	2" SAE Code 61 Flange
OUTLET	1" SAE Code 62 Flange
CASE DRAIN (2 LOCATIONS)	#12 SAE Port

SHAFT TORQUE RATINGS

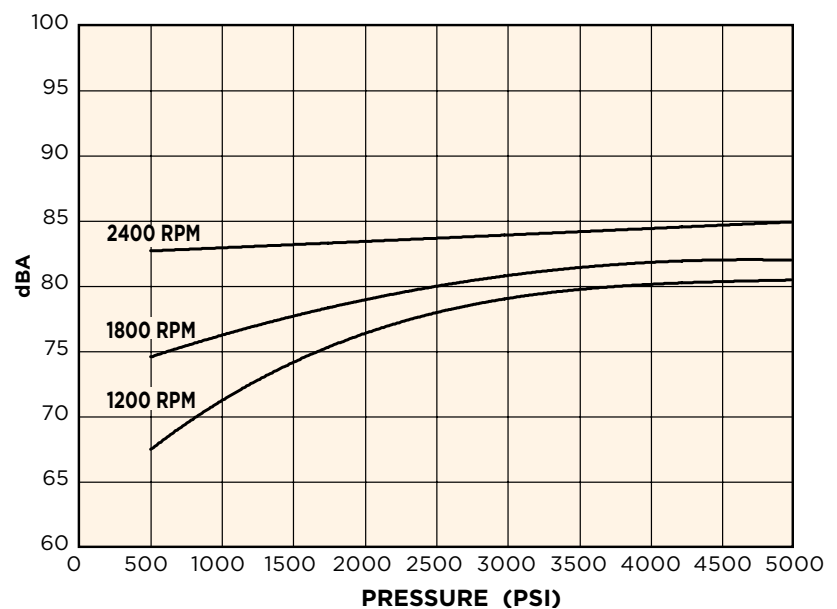
MODEL CODE DESIGNATOR	SHAFT SIZE	ALLOWANCE INPUT TORQUE, IN - LBS
K	SAE C Spline - 14 tooth, 12/24 Pitch	7,000
S	SAE C-C Spline - 17 Tooth, 12/24 Pitch	10,500
Z	SAE C-C Keyed - 1.50" Diameter	6,000

5,250 IN-LBS = MAXIMUM ALLOWABLE TORQUE APPLIED TO REAR OUTPUT

INLET DATA

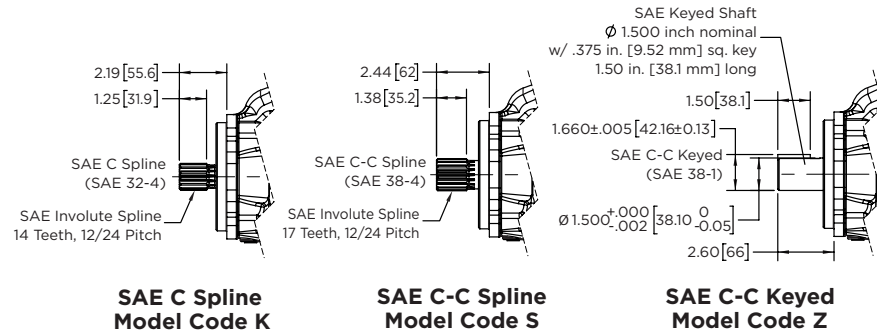


SOUND DATA

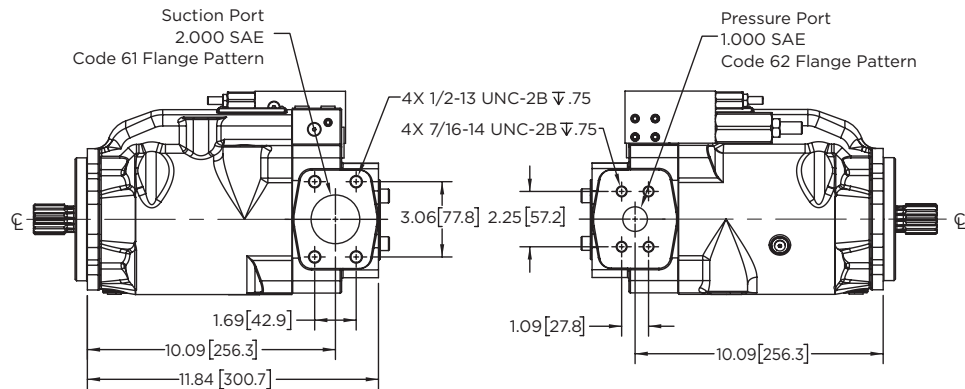


INSTALLATION DRAWING: BASIC PUMP • SIDE PORTED - THRU SHAFT

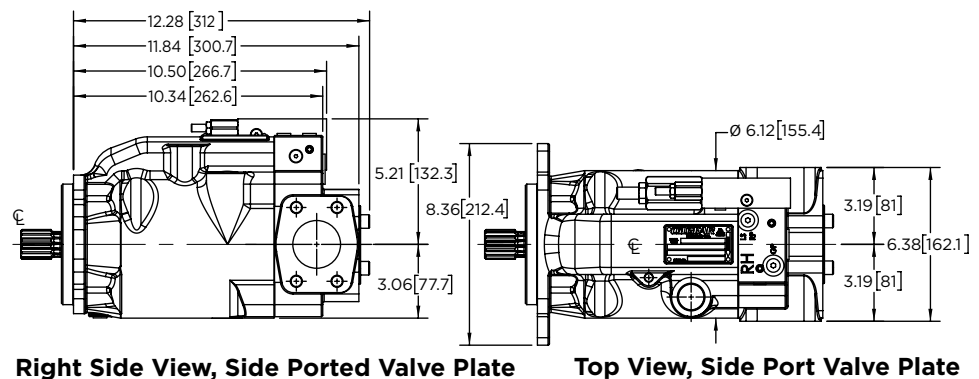
Driveshaft Drawing



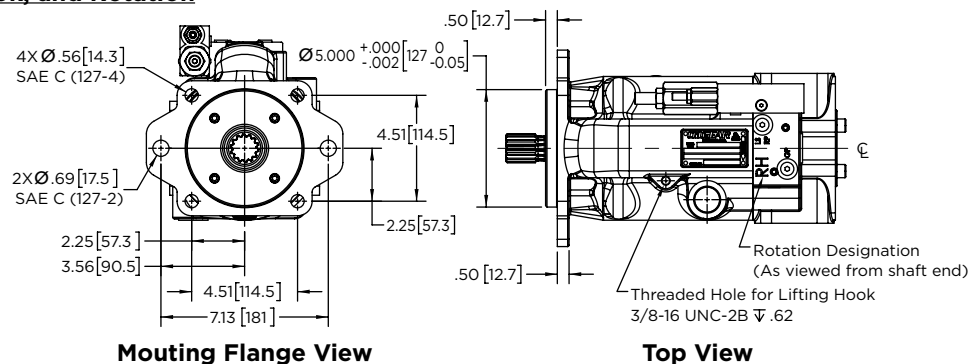
Valve Plate Views - Side Ported, Right Hand Rotation (CW)



Clearance Dimensions



Mounting Flange, Lifting Hook, and Rotation

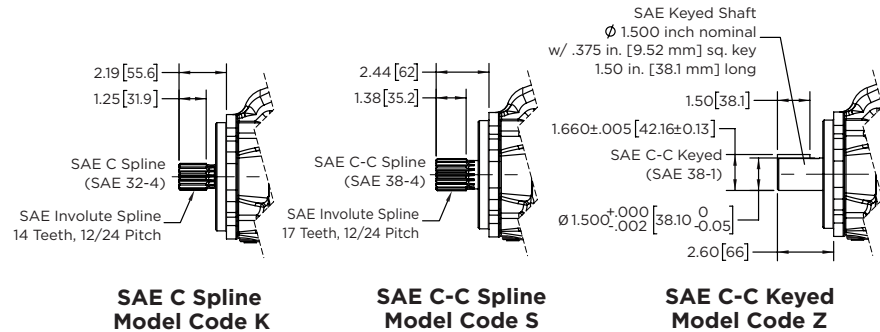




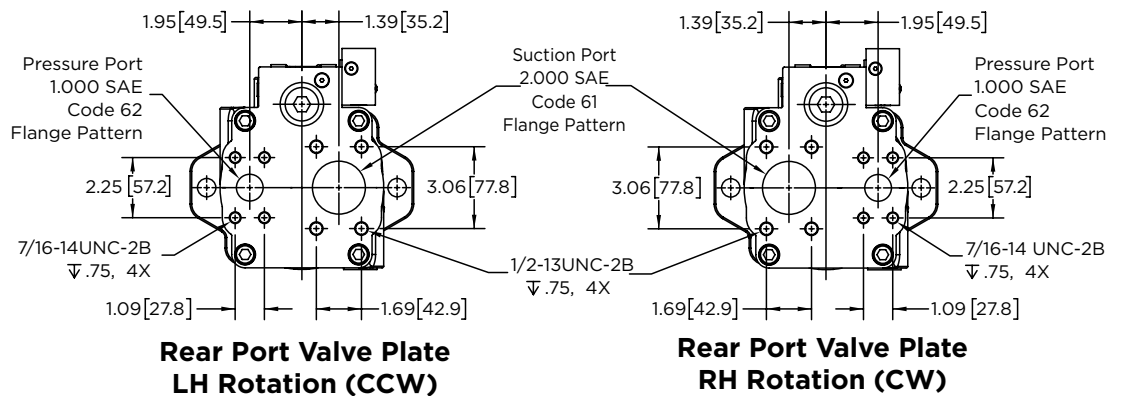
XD5-100

INSTALLATION DRAWING: BASIC PUMP • REAR PORTED

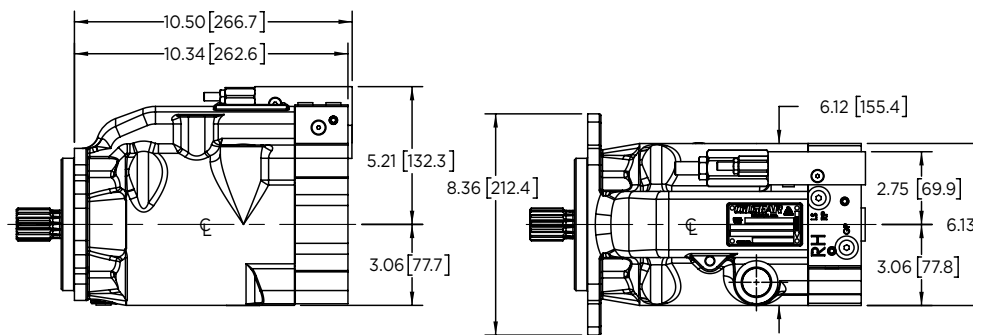
Driveshaft Drawing



Valve Plate Views - Rear Ported



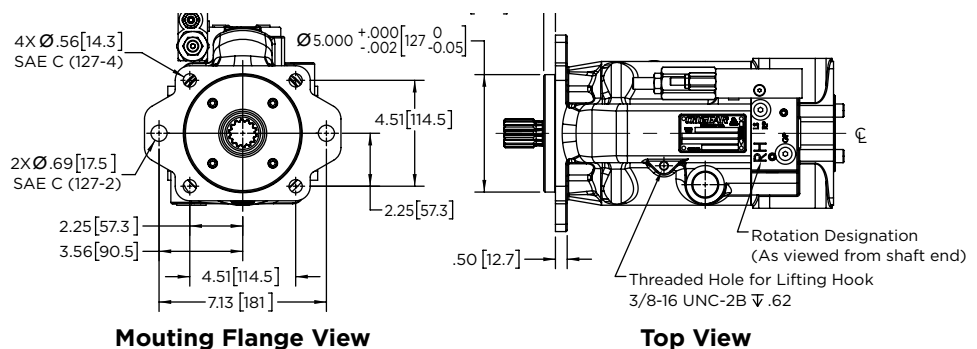
Clearance Dimensions



Right Side View, Rear Ported Valve Plate

Top View, Rear Port Valve Plate

Mounting Flange, Lifting Hook, and Rotation



XD5 | CONTROL OPTIONS

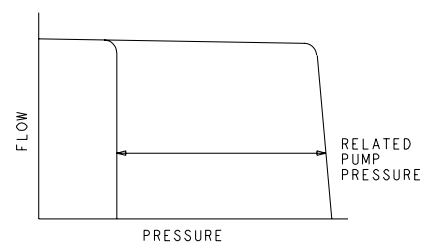
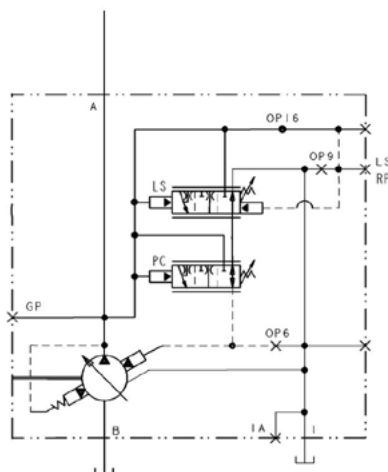
PRESSURE COMPENSATOR ONLY P-1NN

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.

Can be adjusted from 100 psi working pressure up to the maximum pressure rating of pump.

- 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.



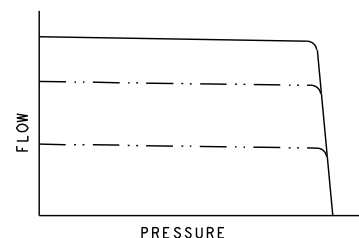
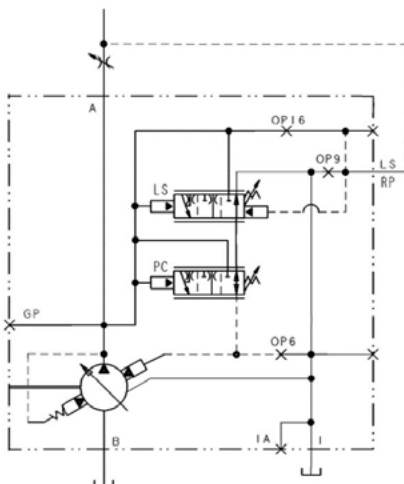
PRESSURE COMPENSATOR AND LOAD SENSE P-1NN/F OR P-1NN/B

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
- 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.

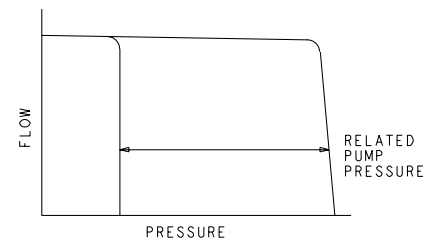
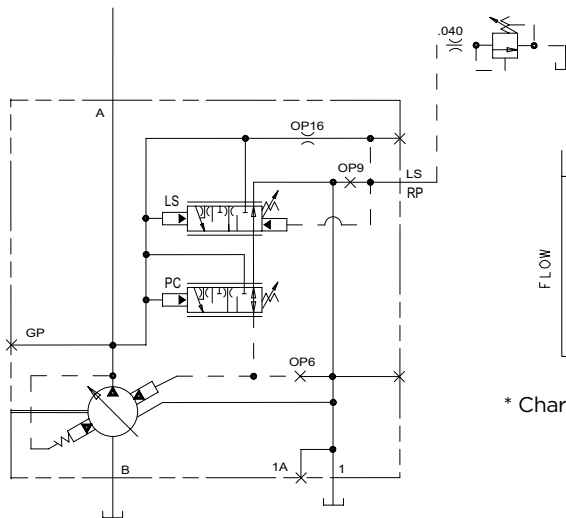


REMOTE PRESSURE COMPENSATOR P-RNN

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 the pump if outlet pressure reaches the compensator setting.

- OP 16 has a $\varnothing$ 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.



* Chart for on-board control mechanism.

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

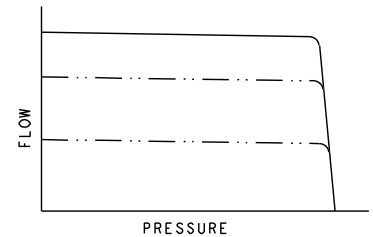
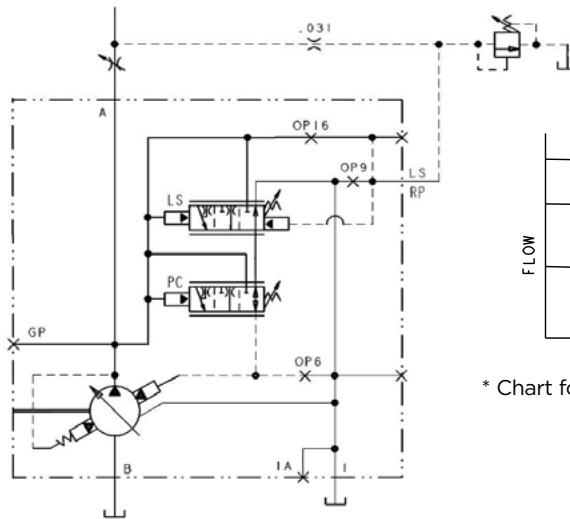
REMOTE PRESSURE COMPENSATOR AND LOAD SENSE P-1NN/F

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 as if the pump's integral compensator reached its pressure setting.

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, with the Load Sense Signal. 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.

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



* Chart for on-board control mechanism.

THE WORLD DEMANDS

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🌐 **www.oilgear.com**

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