OILGEAR

# NEW XD5 NOW MORE - FROM A SMALLER PACKAGE.



learn more at www.oilgear.com





# XD5-100 CONTINUOUS PERFORMANCE ADVANTAGE

The XD5-100 pump delivers more speed, more flow and more power for mobile applications. A variabledisplacement, axial-piston pump with fast control response, the XD5-100 excels in applications using standard mineral oil or low viscosity fluids, providing durability in challenging environments and is available in a variety of control and porting options. Engineered to be a robust highperformance solution for demanding mobile applications.

# UP TO 54% MORE POWER DENSITY

Pound for pound, XD5-100 delivers the best power density

# MORE FLOW 63.8 GPM

Delivering up to 63.8 GPM, XD5-100 provides the flow you need for primary and auxiliary applications

# MORE SPEED 2,450 RPMS AT FULL STROKE

Rated 2,450 RPM. For higher RPM applications, please seek factory guidance

# **■ UP TO 32% SMALLER SPACE CLAIM**

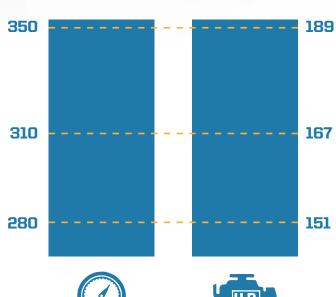
Smaller dimensional space claim makes first fit design and aftermarket drop-in-place easier

### OILGEAR TECHNOLOGY INSIDE

Our reputation for long-lasting pump technology packaged for mobile applications

# **YOU SET THE BAR** XD5 SETS **ESTANDARD**











# MAKING MACHINES GO AND PROBLEMS GO AWAY.<sup>®</sup>



# NEW XD5 NOW MORE FROM A SMALLER PACKAGE

	UNITS	XD5-100
THEORETICAL DISPLACEMENT	CU/REV [IN3/REV]	98.4 [6.00]
RATED PRESSURE - CONTINUOUS	BAR [PSI]	350 [5,076]
RATED PRESSURE - PEAK	BAR [PSI]	400 [5,800]
SHAFT SPEED - MAXIMUM FULL STROKE	RPM	2,450
SHAFT SPEED - MAXIMUM CONTINUOUS, MINIMUM STROKE	RPM	2,700
SHAFT SPEED - MAXIMUM INTERMITTENT, MINIMUM STROKE	RPM	3,000
CASE PRESSURE - STANDARD	BAR [PSI]	1.7 [25]
FLUID TEMPERATURE - OPERATING RANGE	Cº [Fº]	-10 TO 88 [14 TO 190]
FLUID TEMPERATURE - MINIMUM STARTING	Cº [Fº]	-40 [-40]
FLUID TEMPERATURE - MAXIMUM AT CASE DRAIN PORT	Cº [Fº]	110 [230]
FLUID VISCOSITY RANGE	SSU	65 TO 2,000
FLUID CLEANLINESS FOR NORMAL LIFE	ISO CODE	21/19/16
WEIGHT - REAR PORTED PUMP	KG [LBS]	33.1 [73]
ROTATIONAL MOMENT OF INERTIA - REAR PORTED PUMP	KG* M² [LB•FT²]	0.0131 [0.31]
WEIGHT - THROUGH SHAFT PUMP	KG [LBS]	37.6 [83]
ROTATIONAL MOMENT OF INERTIA - THROUGH SHAFT PUMP	KG* M <sup>2</sup> [LB•FT <sup>2</sup> ]	0.0131 [0.31]

# PROVEN ROBUSTNESS, BETTER RELIABILITY!

Improved speed and flow performance backed by Oilgear robust and reliable design. That's what you're getting with the new XD5 family. Our technology is known for delivering long pump life in even the harshest conditions. Our lasting success comes from proprietary hardened surfaces, hydrodynamic bearing and SAE heavy-duty shaft.

# SAE HEAVY-DUTY SHAFT AND WITH SEALED BEARINGS HYDRODYNAMIC BEARING HARDENED RUNNING SURFACES

# HARDENED RUNNING SURFACES

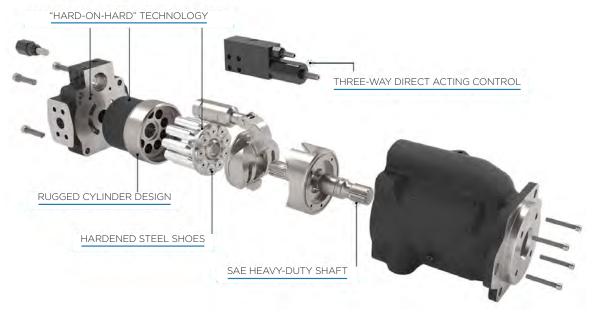
Oilgear's proprietary hardening formula for steel components extends pump life

### **HYDRODYNAMIC BEARING**

Polymerous (journal type) bearing that supports the rotating group assembly. Contains no rolling elements and is lubricated by system fluid

# SAE HEAVY-DUTY SHAFT AND WITH SEALED BEARINGS

Sealed front shaft bearings for operating with standard hydraulic oil and low-viscosity fluids



# **PERFORMANCE DATA XD5-100** 100 200 **VOLUMETRIC EFFICIENCY** 90 180 **OVERALL EFFICIENCY** POWER (HP) 80 160 **INPUT HP** AT 2400 RPM 70 140 60 120 **INPUT HP** EFFICIENCY (%) AT 1800 RPM 50 100 80 40 **INPUT HP** AT 1200 RPM 30 60 DELIVERY (GPM) **DELIVERY** AT 2400 RPM 20 40 **DELIVERY** AT 1800 RPM **DELIVERY** AT 1200 RPM 10 20 COMPENSATED INPUT HP 0 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

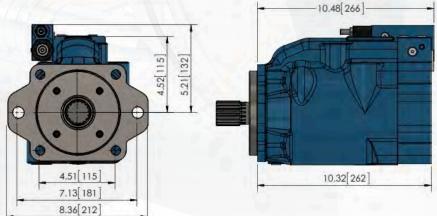
NET PRESSURE - PSI

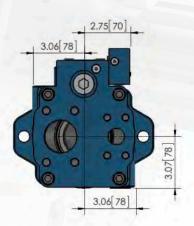
# SMALLER FOOTPRINT, ACCOMMODATING DESIGN CHANGES!

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

# REAR PORTED DIMENSIONS

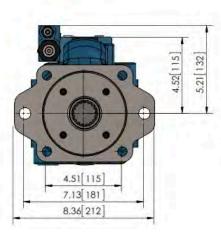
Imperial (metric)

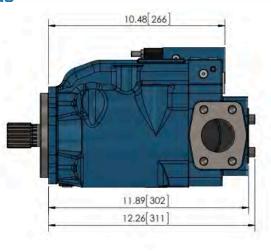


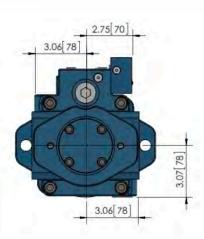


# **SIDE-PORTED DIMENSIONS**

Imperial (metric)

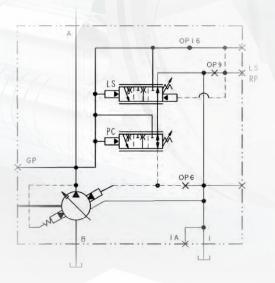






# **CONTROL SCHEMATICS**

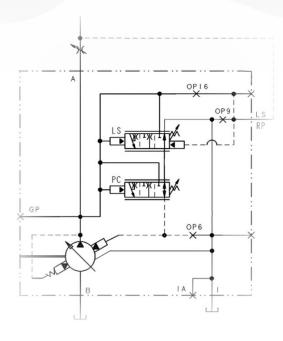
PRESSURE COMPENSATOR ONLY
PRESSURE COMPENSATOR AND LOAD SENSE



# PRESSURE COMPENSATOR ONLY. P-1NN

- 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

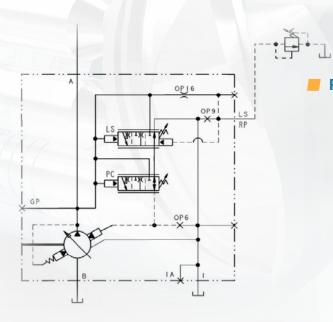
- OP 16 is PLUGGED
- OP 9 is PLUGGED in P-1NN/F, or uses optional orifice in P-1NN/B
- OP 6 is PLUGGED
- Customer-supplied LOAD SENSE

Circuit is plumbed into the LS/RP Port.

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

# **CONTROL SCHEMATICS**

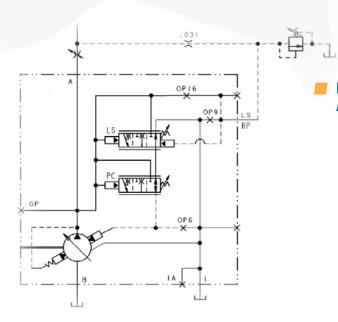
REMOTE PRESSURE COMPENSATOR
REMOTE COMPENSATOR AND LOAD SENSE



# **REMOTE PRESSURE COMPENSATOR, P-RNN**

- 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.

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

- 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 Ø 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.

# **NOTES NEXT STEPS**

<ul> <li>KEY TAKEAWAYS</li> <li>□ XD5 meets max continuous flow requirements</li> <li>□ XD5 meets max continuous power requirements</li> <li>□ XD5 high RPM at Full Stroke meets requirements</li> <li>□ XD5 space claim will fit within available design package</li> <li>□ XD5 weight meets requirements</li> <li>□ XD5 will run application using</li> </ul>	
PROJECTS TO INSTALL XD5 ON	
NOTES/NEXT STEPS	

1		2		3	4	5		6	7	8	9		10		11A	11B	11C	11D	12		13		14
XD5	-	XXX	-	A1	X	X	-	X	X	X	X	-	Х	-	X	X	Х	XX	XX	-	ХХ		ХХ
XD5	-	100	-	A1	U	V	-	L	S	F	K	-	Р	-	1	N	N	/F	SN	-	AN	-	10

# <u> 1 Unit</u>

**XD5** = Pump Family

### 2 Unit Size

**100** = 100 cc/rev (6.00 cipr)

# **3 Design Series**

A1 = Design Series

# **4 Design Series Modifier**

U = SAE Connections & Mounting

## **5 Shaft & O-Ring Seals**

**V** = Viton

 $\mathbf{P} = \mathsf{EPR}$ 

**B** = Buna Nitrile

### **6 Rotation**

**L** = Left Hand (CCW)

**R** = Right Hand (CW)

### **7 Valve Plate Type**

**S** = Rear Ported

**D** = Side Ported (thru-shaft)

# **8 Connection Type**

F = SAE Flange

### 9 Shaft Type

**K** = 32-4 (SAE C Spline)

**S** = 38-4 (SAE C-C Spline)

# **10 Control Type**

**P** = Pressure Compensating

# **11a Control Options**

1 = Single Setting (standard)

**R** = Remote Control

# 11b Solenoid Voltage

N for non-electrical control

# **11c Connector**

**N** for non-electrical control

# 11d Module

omit = None

/F = Load Sense without bleed

**/B** = Load Sense with bleed<sup>1</sup>

### **12 Volume Stops**

NN = No Volume Stop

**SN** = Adjustable Max. Vol. Stop

# 13 Auxiliary Adapter

Required for all thru-shaft units Blank for all non thru-shaft units

NN = None

**CP** = Coverplate

**A2** = 82-2 (SAE A 2-Bolt) Adapter 16-4 (SAE A) Coupling

**B2** = 101-2 (SAE B 2-Bolt) Adapter 22-4 (SAE B) Coupling

**C2** = 127-2 (SAE C 2-Bolt) Adapter 32-4 (SAE C) Coupling

**C4** = 127-4 (SAE C 4-Bolt) Adapter 32-4 (SAE C) Coupling

# 14 Gear Pumps<sup>2</sup>

### Blank unless required option

**05** = 8 ml/rev (0.488 cipr)

**07** = 11 ml/rev (0.672 cipr)

**10** = 16 ml/rev (0.976 cipr)

**14** = 23 ml/rev (1.403 cipr)

**20** = 33 ml/rev (2.015 cipr)

1 - Unavailable with Control Option "R"

2 - Unavailable with Seal Type "P"

# **SHAFT TORQUE TABLE**

SHAFT DESIGNATOR	SHAFT SIZE	ALLOWABLE INPUT TORQUE (IN-LB)
к	SAE C Spline - 14 tooth, 12/24 Pitch	7,000
s	SAE C-C Spline - 17 Tooth, 12/24 Pitch	10,500



YEARS
MAKING
MACHINES GO.
AND PROBLEMS
GO AWAY.

Oilgear has a rich 100-year legacy in 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 manufactures and end users worldwide.



# **The Oilgear Company**

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