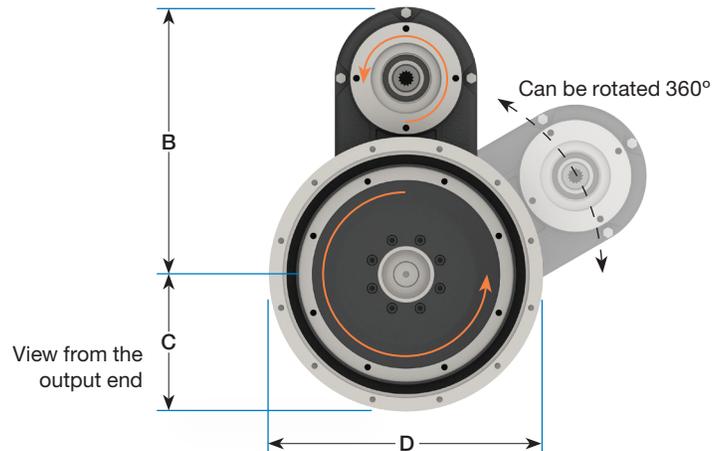
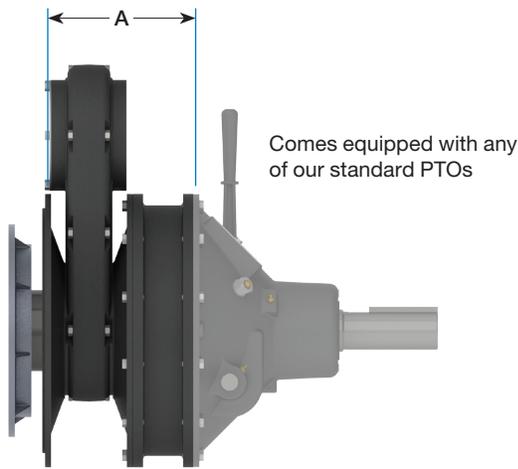


# Pump Drive



Mounted between the power take-off and the engine, the WPT® Power Pump Drive (PPD) is a rugged and versatile unit providing for multiple live or clutched pumps. As the PPD is self-contained, no external lubrication is required. Flexible couplings on the input side dampen torsional vibrations and are standard on all WPT PPDs.

The Power Pump Drive can be provided with a variety of SAE engine housings, power take-off clutches, SAE pump drives and accessories. All units mount to standard SAE flywheel housings and provide up to 8 pump mounting faces. An internal heat exchanger can be added as required.



## WPD-03

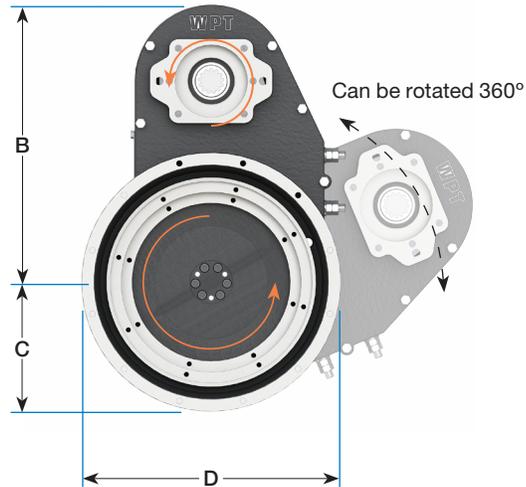
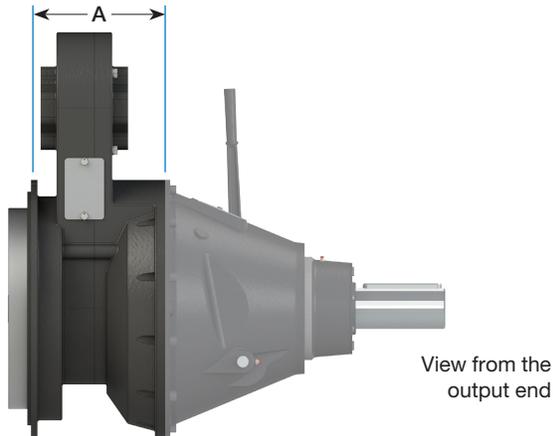
SAE Input	SAE Output	A	B	C	D
#5 - 7 1/2"				7 (178.0)	
#4 - 10"	#4M - 10"	8 5/8 (218.5)	15 1/2 (393.0)	7 15/16 (202.0)	15 7/8 (404.0)
#3 - 11 1/2"				8 7/8 (225.5)	

Available in SAE B (spline only)

Maximum Input Speed r/min	Maximum Input Torque lbf-ft (N·m)	Head hp (kW) <sup>1</sup>	Head Ratio	Weight lb (kg)
3000	230 (310)	58 (43)	1 : 1	110 (50)
	413 (560)			
	413 (560)			

<sup>1</sup> Rated at maximum input speed.

# Pump Drive



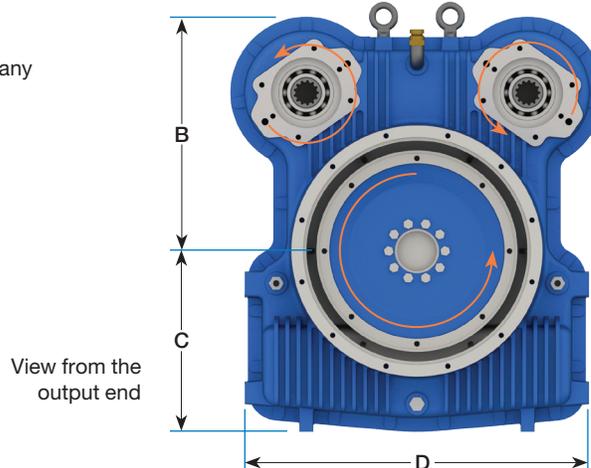
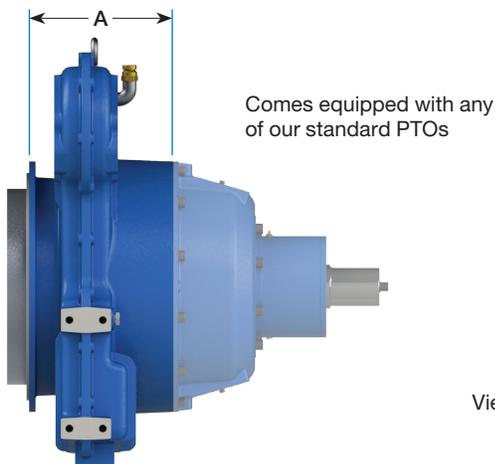
## WPD-03 HD

SAE Input	SAE Output	A	B	C	D
#3 - 11 1/2"	#3M - 11 1/2"	9 1/4 (235.0)	19 (483.9)	8 7/8 (225.5)	17 3/4 (450.9)

Maximum Input Speed r/min	Maximum Input Torque lbf-ft (N·m)	Head hp (kW) <sup>1</sup>	Head Ratio	Weight lb (kg)
2500	1475 (2000)	210 (157)	1 : 1	260 (117)

Available in SAE B, B-B, C, D, E (spline only)

<sup>1</sup> Rated at maximum input speed.



## WPD-00

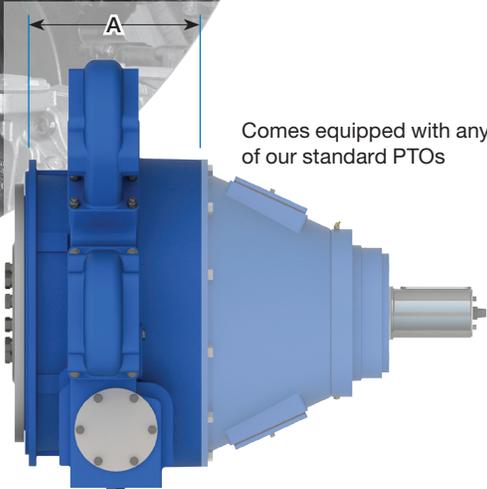
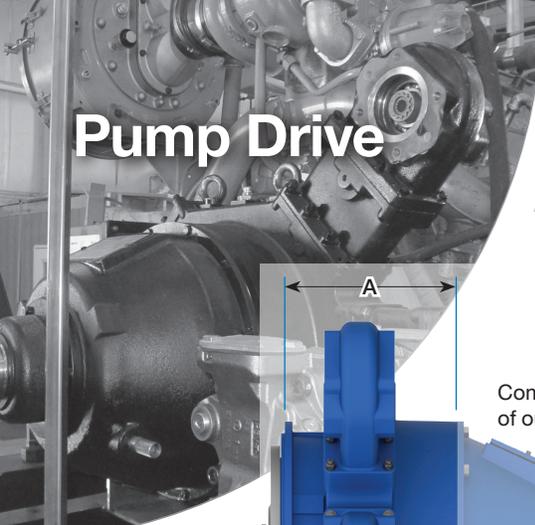
SAE Input	SAE Output	A	B	C	D
#3, 2# - 11 1/2"	#3M - 11 1/2"	10 1/8 (257.0)	16 5/8 (422.0)	12 13/16 (325.0)	24 7/16 (620.0)
#1 - 14"		11 1/8 (282.0)			

Maximum Input Speed r/min	Maximum Input Torque lbf-ft (N·m)	Total Head hp (kW) <sup>1</sup>	Single Head hp (kW) <sup>1</sup>	Head Ratio	Weight lb (kg)
2600	1475 (2000)	235 (175)	160 (120)	1 : 1	430 (195)

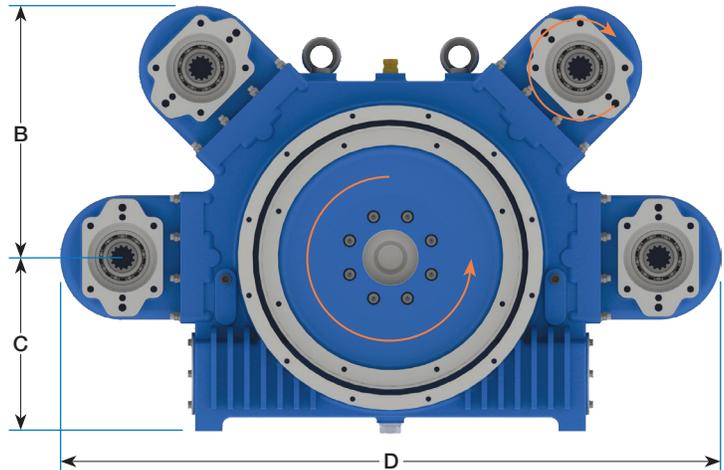
Available in SAE B, B-B, C, D, E (spline only)

<sup>1</sup> Rated at maximum input speed.

# Pump Drive



Comes equipped with any of our standard PTOs



View from the output end

WPD-01					
SAE Input	SAE Output	A	B	C	D
#1 - 14"	#1M - 14"	12 3/16 (310.0)	18 (456.5)	12 7/16 (315.0)	47 1/8 (1197.0)

Available in SAE B, B-B, C, D, E (spline only)

Maximum Input Speed r/min	Maximum Input Torque lbf-ft (N-m)	Total Head hp (kW) <sup>1</sup>	Single Head hp (kW) <sup>1</sup>	Head Ratio <sup>2</sup>	Weight lb (kg)
2200	2470 (3350)	400 (300)	160 (120)	1 : 1 1 : 0.88	770 (350)

<sup>1</sup> Rated at maximum input speed.

<sup>2</sup> Head ratios other than 1:1 are speed increasing

WPD-02					
SAE Input	SAE Output	A	B	C	D
#1 - 14"	#0M - 18"	14 3/4 (374.0)	19 3/4 (502.0)	16 3/8 (415.0)	52 3/16 (1326.0)
#0 - 18"		14 5/16 (363.0)			

Available in SAE B, B-B, C, D, E (spline only)

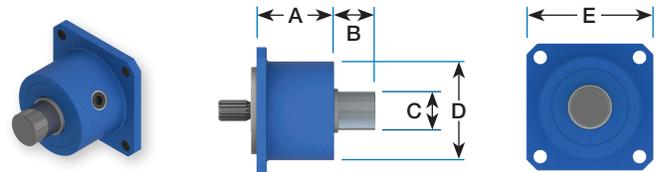
Maximum Input Speed r/min	Maximum Input Torque lbf-ft (N-m)	Total Head hp (kW) <sup>1</sup>	Single Head hp (kW) <sup>1</sup>	Head Ratio <sup>2</sup>	Weight lb (kg)
2100	4650 (6300)	535 (400)	235 (175)	1 : 0.95	1170 (530)

<sup>1</sup> Rated at maximum input speed.

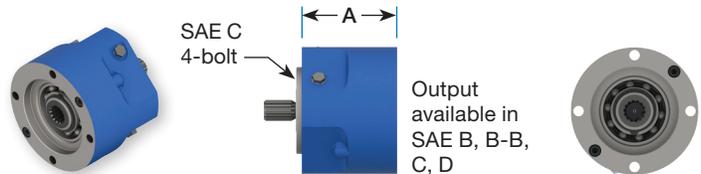
<sup>2</sup> Head ratios other than 1:1 are speed increasing

## Accessories

Head PTO						
A	B	C	D	E	Maximum Side Load lbf (kgf)	Maximum Input Torque lbf-ft (Nm)
3.52 (89.5)	1.87 (47.5)	1.772 (45.00)	3.54 (90.0)	5.79 (147.0)	1620 (734)	370 (500)

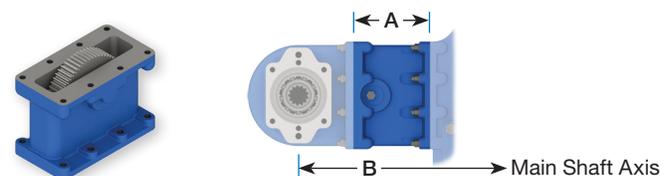


Oil Actuated Clutch	A	Operating Pressure lbf/in <sup>2</sup> (bar)	115 (8)	232 (16)
	5.47 (139.0)	Torque lbf-ft (Nm)	196 (266)	392 (531)



Head Extension	Model	A	B
	WPD-01	6.46 (164.0)	25.55 (649.2)
	WPD-02	7.48 (190.0)	29.42 (740.0)

**Attention!**  
Head rotation direction is reversed when extension is used.



# Pump Drive Product Selection Calculations

## Step One

Maximum Input Torque

$$T = \frac{\text{hp}}{\text{r/min}} \times 5,252 = \text{_____} \text{ lbf-ft}$$

$$T = \frac{\text{kW}}{\text{r/min}} \times 9,549 = \text{_____} \text{ N-m}$$

$$T = \text{Engine Torque [lbf-ft (N-m)]} \times \text{SF}$$

Conversions		
Multiply	By	To Obtain
lbf-ft	1.356	N-m
hp	0.746	kW
lbf	0.454	kgf
kg	9.807	N

## Step Two

### Hydraulic Pump Service Factor Guide

Pump Type	Service Factor (SF)
Piston Plunger	1.8
Vane Gear	1.5
Centrifugal	1.0

## Step Three

$$\text{Single Head } N^{\circ} 1^1 = P_1 \times SF_1 \times PU_1 + P_2 \times SF_2 \times PU_2 + \dots + P_n \times SF_n \times PU_n$$

$$\text{Single Head } N^{\circ} 2^1 = P_1 \times SF_1 \times PU_1 + P_2 \times SF_2 \times PU_2 + \dots + P_n \times SF_n \times PU_n$$

$$\text{Single Head } N^{\circ} 3^1 = P_1 \times SF_1 \times PU_1 + P_2 \times SF_2 \times PU_2 + \dots + P_n \times SF_n \times PU_n$$

$$\text{Single Head } N^{\circ} 4^1 = P_1 \times SF_1 \times PU_1 + P_2 \times SF_2 \times PU_2 + \dots + P_n \times SF_n \times PU_n$$

$$\text{Total Head}^1 = \text{Sum of All Heads from Step 3}$$

Note 1:

Single and Total Head calculations may exceed rating for Pump Drive depending on duty cycles or pump modes. Please contact WPT Power Applications Engineering for details.

### Definitions:

**P** = Hydraulic Pump Absorbed Power  
**SF** = Pump Service Factor  
**PU** = Percent of Power Used by Pump  
**n** = Number of Pumps on Head

## Step Four

See Pages 16, 17, 18 for Pump Drive Maximum Input Torque, r/min, and Head Ratings.

### Additional Notes:

Power Pump Drive calculations are for reference only. For full warranty consideration, a data sheet must be turned into WPT Power and complete review performed by WPT Power Applications Engineering.

Power Pump Drive models WPD-01 and WPD-02 may require Cooling Package and Circulation Kit. Please contact WPT Power Applications Engineering for details.