

SPECIFICATION SHEET

Fuel	Rating	Power hp (kW) 2,400rpm	Power hp (kW) 2,800rpm
Diesel	Intermittent	33.0 (24.6)	49.0 (36.6)
	Continuous	29.7 (22.2)	44.1 (32.9)
	Torque: ft-lb (N-m)	81.1 (110)	121.7 (165)
	Torque: rpm	1600 rpm	1,800 rpm

Rating Definitions: Rated for 1200 - 2800 rpm. (Corrected per SAE J1349)
 Intermittent - For varying intermittent loads with no overload capability.
 Continuous - Continuous prime rating is applicable for supplying power to a varying load for an unlimited amount of running time, with 10% overload capacity available for 1 out of every 12 hours.

STANDARD FEATURES:

Tradewinds Power Corp open engine power units are designed, packaged, and tested to meet the power requirements of a wide range of equipment used in agricultural applications. All our systems and components are prototyped, assembled and tested within a purpose built packaging, manufacturing, and test facility.

The Hyundai Infracore's advanced, Eco-friendly, highly efficient, and compact diesel engines have been developed based on Hyundai's off-highway diesel engine R&D capabilities and mass-production experience.

Key System Features are:

- EPA Tier 4 Engine certified for Industrial applications
- Packaged with flywheel housing to SAE standards
- Flywheel machined to SAE J620 adaptation
- Compact design to adapt to multiple OEM applications
- Adds value to off-highway equipment
- No DPF (Diesel Particulate Filter)
- Strong power and high low-end torque for enhanced performance
- Low total cost of ownership

Engine:

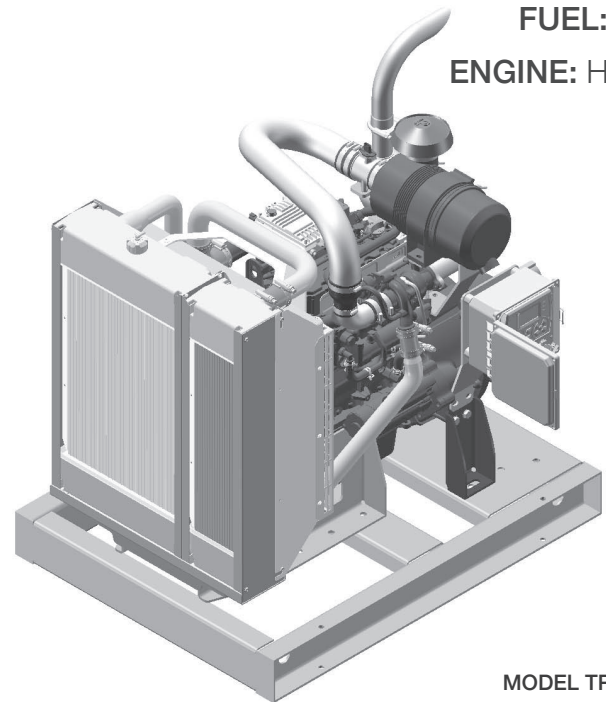
- Hyundai D18
- Rated for high intermittent power with high torque lower down the power curve for better performance
- Cooling system capable of operation at 120°F ambient
- Overhead valve assembly with 2-intake and 2-exhaust valves
- DELPHI DFP 4.4 injection pump for direct injection engine
- High Pressure Common Rail operating at 1800 bar
- Full electronic engine management with ECU governor control
- External cooled EGR
- Aspiration as waste gate type turbo-charged with intercooler
- DOC (Diesel Oxidation Catalyst) aftertreatment

Drive System:

- Clutch directly mounted to SAE #4 flywheel housing
- Twin Disc clutch

Maintenance:

- Oil filter change 500-hours
- Fuel filter change 500-hours
- Valve adjustment after 1000-hours



MODEL TPD18-1

Engine Power Unit Arrangement:

- Engine OPU assembly mounted on steel frame
- Mounted exhaust, radiator, and air cleaner
- All rotating surfaces protected with guards
- Oil and water drain lines.

AUTOMATIC ENGINE CONTROLLER:

- Automatic engine controller with digital display of all functions
- Quick and easy to install
- Advanced, rugged, reliable microprocessor-based design
- Full engine monitoring and shut down protection
- Full autostart, manual start, and off controls
- 3.8" monochrome, transfective, white backlight LCD



**MPC1000
ENGINE CONTROLLER**
(Available on remote stand)

WARRANTY:

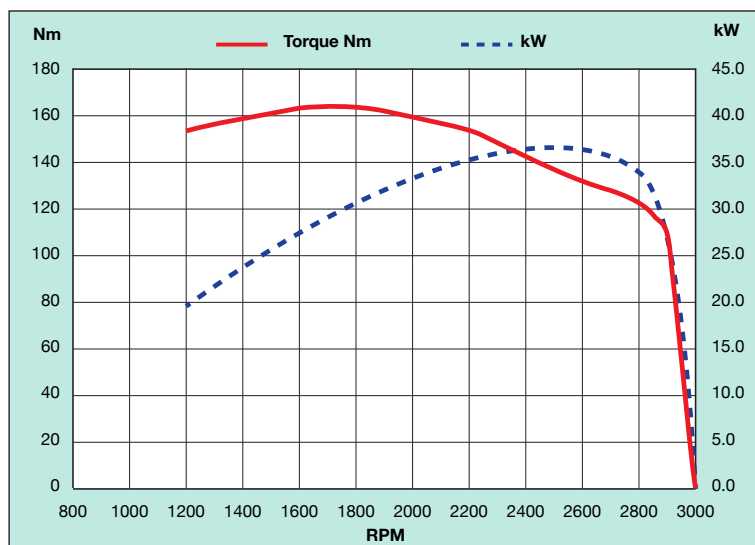
- Engine covered under the original equipment manufacturer's warranty - consult Tradewinds Power Corp for details
- Complete package supplied with one-year unlimited warranty

The manufacture reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

SINGLE ENGINE CLUTCH DRIVE OPU
ENGINE: Hyundai **FUEL:** Diesel

DRIVE ASSEMBLY:	
Configuration	Single engine clutch drive
Clutch manufacture	Twin Disc
Operation	Manual
Drive shaft speed rpm	up to 2,800 rpm
ENGINE SPECIFICATION:	
Manufacturer	Hyundai
Model	D18
Emissions	Tier 4 - Final & Stage IIIB
Crankshaft speed	2,800 rpm
Engine Type & Combustion	Diesel Direct Injection
Fuel Injection System	High Pressure Common Rail
Fuel Pressure	1800 bar
Aspiration	Turbo-Charged & Inter-cooled
Diesel fuel grade	EN590 : 2009 Diesel
Cylinder Arrangement	In-line 3
Displacement in³ (liters)	110 (1.794)
Bore and stroke ins (mm)	3.53 X 3.92 (90 X 94)
Peak power hp (kW) @ 2800 rpm	49.1 (36.6)
Cooling	Water Cooled
Engine Control	Full Electronic Engine Management
Compression ratio	17.0:1
Air cleaner type	Canister air cleaner
Aftertreatment	Diesel Oxidation Catalyst DOC
Ventilation System	Closed-Circuit Ventilation
Max. back pressure - ins H ₂ O (kPa)	21.70 (5.4)
Compression ratio	17.0:1
Flywheel housing	SAE No.4
Air cleaner type	Canister air cleaner
Sound at 1m from engine block dB(A)	87.2
Max. Exh. Temp at full load degrees °F (°C)	752 (400)
Exhaust Gas Flow - ft³/min (m³/min)	67.1 (1.9) Intermittent
COOLING SYSTEM FOR OPERATING AT 120°F AMBIENT:	
Water pump belt driven	Centrifugal type
Eng. Cooling air flow - ft³/min (m³/min)	N/A
Engine Coolant Capacity gallons (Liters)	0.87 (3.3)

FUEL CONSUMPTION	Continuous / {Intermittent}
100%	1.80 (6.8) / {2.09 (7.9)}
75%	1.43 (5.4) / {1.61 (6.1)}
50%	1.00 (3.8) / {1.14 (4.3)}
25%	0.66 (2.5) / {0.69 (2.6)}
LUBRICATION SYSTEM	
Oil pan capacity with filter - quarts	6.66 (6.31)
Recommended lubricating oil grade	15W 40
Oil pump	Gear type driven by crankshaft
Oil consumption at full load	< 0.1% of fuel consumption
Oil Filter	Full flow, cartridge type
Oil pressure min. - psi (kPa)	43.5 (300)
ELECTRICAL SYSTEM	
Battery charger	12 volt x 75A Alternator
Starting motor	12 volt x 2.7kW
Wet cell battery	Lead Acid
Battery Capacity recommended	100 AH, 950CCA
Starting Aid	Glow Plugs

36.6kW (49hp)
DTP18-I Power Curves

ARRANGEMENT DRAWING & DIMENSIONS MODEL: DTP18-I OPU Clutch Drive

KEY DIMENSIONS AND WEIGHT		
Description	Key	Inches
Height	H	44.40
Length	L	53.68
Width	W	35.00
Shaft Height	SH	15.05
Dry Weight lbs (Kg)		TBA
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