

# SPECIFICATIONS 4 INCH SOUND ATTENUATED, DRY PRIME

Premier Pump Model 4x4CS2L-VP-3TNV88-E4 Vacuum Assisted, Engine Driven, Heavy Duty Solids Handling Pump

### **Pump Specifications:**

- Pump size: 4"X 4" AISI 150# flanges standard
- Suction Cover: ASTM A48 class 30 gray iron
- Wear Ring: ASTM A48 class 30 gray iron
- Volute Casing: ASTM A48 class 30 gray iron
- Volute Cleanout: Handhole type, ASTM A48 class30 gray iron
- Backplate: ASTM A48 class 30 gray iron
- Bracket: ASTM A48 class 30 gray iron
- Mechanical Seal: Tungsten vs. Silicon Carbide seal faces, Viton elastomers, 300 series stainless steel hardware & spring, seal system designed for dry running
- Impeller: Enclosed type, two port, non clog, w/3 inch spherical solids handling capability. ASTM A48 class 30 gray iron
- Bearing Housing: ASTM A48 class 30 gray iron
- Pump-end Bearing: Single row ball 6313-C3
- Drive-end Bearing: Single row ball 6313-C3
- Shaft: 1144 Stressproof steel (Other metals available including: 17-4 PH corrosion resistant)
- Lip Seals: CR type, single lip: Bearings, SAE cover -Buna-N, Seal gland – Viton
- Midland 1300 series compressor. Lubricated by engine oil and cooled by engine water
- Separator Spool: Standard steel
- Air/Water chamber: Chamber designed to separate air and water before entering the pump case
- Venturi: Constructed of non-corrosive bronze
- Discharge check valve: Swing type, cast iron w/Buna-N disc (Viton optional)

Optional Equipment and Materials: Stainless Steel, CD4MCU & Ductile Iron

## **Engine Specification:**

- Model: Yanmar model 3TNV88
- 36 intermittent horsepower @ 3000 RPM
- Three cylinder, four cycle, water cooled diesel engine
- Governor: Mechanical
- Lubrication: Force Feed
- Air Cleaner: Filter element
- Fuel Tank: 52 US gallons
- Run time: Full load (1800 RPM) > 24 hours
- Starter: 12 volt electric



Standard engine features: Safety shutdown switches for low oil pressure and high temperature. Instrument panel with temperature and oil pressure gauge, ampmeter, hourmeter and tachometer. Muffler with rain cap. Engine to pump coupling: SAE5 housing with 7.5" rubber disc drive.

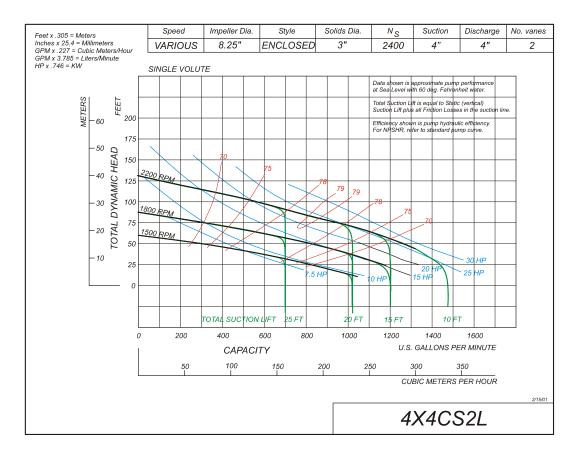
Standard Skid: Heavy duty fabricated steel frame. Integral fuel tank, lifting bale, lockable fuel tank, and one 1<sup>1</sup>/<sub>2</sub>" clean-out/drain plug

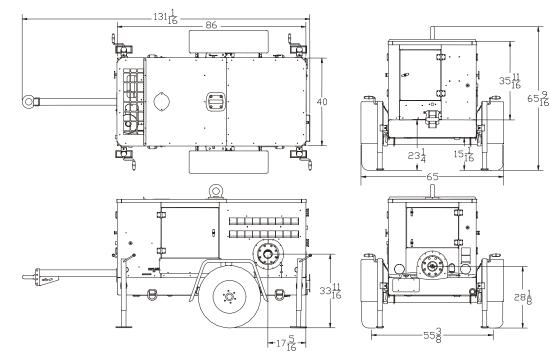
Standard Trailer: Heavy duty fabricated steel frame, integral fuel tank, fenders, lifting bail, lockable fuel cap, 3500# Anti-torsional axle, two (2) front adjustable leveling jacks and two (2) rear adjustable leveling jacks, one 1½" clean-out plug, fuel gauge, adjustable height tongue with easy conversion from ball hitch to Lunette eye

Trailer Options: DOT light package, work lights, special tires & wheels, dual axles, diamond plate fenders, surge brakes, lockable enclosed instrument panel, lockable enclosed engine housing, storage box, hose rack and more

Enclosure: The entire unit, including the pump and engine shall be fully enclosed in a lockable enclosure made of steel panels. A 14 gauge solid steel outer shell containing acoustical fill encapsulated in a moisture barrier shall be furnished. The enclosure shall provide access to the working parts of the engine, pump and controls without having to remove the access panels for inspection, cleaning and servicing of the aforementioned equipment. All access panels shall be hinged for easy opening and closing, and shall be lockable. Unit capable of sound levels as low as 61 Dba at 23 feet.









## TNV DI Series Industrial Diesel Engine



Image shown may not be actual engine

## Features

### **Clean Emissions**

Building off the proven TNE design, Yanmar has achieved superior exhaust emissions by improving the combustion chamber and fuel injection equipment design. Engines are compliant with 2008 EPA Tier 4 and EU stage III A exhaust emissions regulations.

### **Reliable and Durable**

The TNV engines now proudly take up the running as Yanmar's premium small industrial diesel. They offer even more enhanced durability due to better block cooling, a stiffer crank and pistons, finer tolerance in the journal, and more. CAE analysis has brought lower vibrations and higher strength to the mounting structure for even better reliability in heavy-duty jobs.

### **Fuel Delivery and Economy**

A newly designed, in-line MP type fuel injector pump is utilized to assure more precise fuel delivery and control. The result is reduced emissions, improved performance over a wide range of applications and good fuel economy which assures that Yanmar's reputation for superior starting characteristics continues.

## **Noise Level Reduction**

Yanmar's original CAE techniques have optimized the stiffness, minimized transformation, and reduced radiant noise in the cylinder block. Gear noise reduction is achieved through an improved gear tooth profile resulting in less mechanical noise.

## Additional Information

Yanmar America Corp 951 Corporate Grove Drive Buffalo Grove, IL 60089 www.yanmar.com Distributed By:

## 3TNV88-BDSA General Specification 36.0 HP (26.9 kW) @ 3000 rated rpm\*

| Type• • • 3 Cylinder, 4-Cycle, Liquid Cooled Diesel        | Engine  |
|------------------------------------------------------------|---------|
| Bore · · · · · · · · · · · · · · · · · · ·                 |         |
| Stroke • • • • • • • • • • • • • • • • • • •               |         |
| Displacement • • • • • • • • • • • • • • • • • • •         |         |
| Aspiration • • • • • • • • • • • Naturally As              | pirated |
| Combustion System • • • • • • • • • • • Direct In          | jection |
| Rotation (from flywheel end) · · · · · Counterclo          |         |
| <b>Dry Weight</b> • • • • • • • • • • • • • • • 341 lbs (1 | 154 kg) |

## **Standard Engine Equipment**

#### General

Intake & Exhaust Manifold Exhaust Manifold Gasket (shipped loose)

#### Lubrication System

2.8 L Capacity Shallow Oil Pan Trochoid Oil Pump Paper Element Oil Filter Oil Pressure Switch Crankcase Breather, Closed Type

#### Electrical System

12V, 40 Amp Alternator 12V Starter Motor 12V, 400W Air Heater Preheat Relay (shipped loose) Preheat Timer, 15 second (shipped loose) Stop Solenoid Timer, 1 second (shipped loose)

### Fuel System

In-line MP2 Fuel Injection Pump 12V Electric Fuel Pump (shipped loose) Paper Element Fuel Filter Water Separator (shipped loose) Stop Solenoid, Integral to Fuel Injection Pump (shipped loose)

## Cooling System

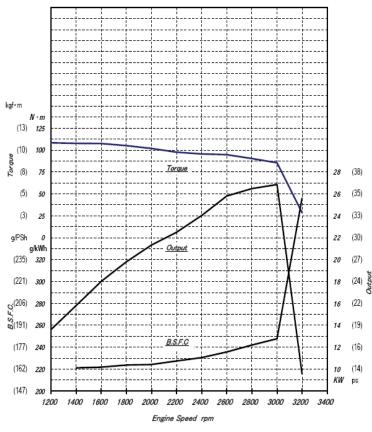
Water Pump, Belt Driven 7-Blade, 360mm Cooling Fan—Puller Type 70° F (21° C) Thermostat Temperature Switch Fan Belt

## **Power Take Off**

Flywheel, SAE 7 1/2" Flywheel Housing, SAE #5 Aux Drive, 9-tooth w/SAE 2 bolt "A" Flange



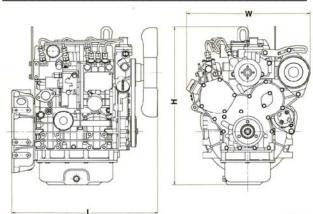
## Performance Data



3TNV88-BDSA

Industrial Diesel Engine

### Dimensions



Unit: mm

| Length | 24.0 in (610 mm) |  |  |
|--------|------------------|--|--|
| Width  | 19.7 in (502 mm) |  |  |
| Height | 25.7 in (654 mm) |  |  |

Note: Dimensions depend on final specifications.

kW to Hp conversion used is expressed as: HP = (kW value) x 1.34

| Rated Speed (rpm) | Net rated kW | Net rated HP | Max. Torque (ft-lb) |
|-------------------|--------------|--------------|---------------------|
| 3000              | 26.9         | 36.0         | 79.5 @ 1800 rpm     |

## **Ratings Definitions and Conditions**

\*Rated power listed is NET engine output. The engine operating environment and driven machine conditions must be studied carefully when selecting an engine in order to ensure correct engine selection, maximize engine performance, extend engine service life and improve machine capacity.

Consult the TNV Application Manual for additional engine ratings and engine application information. Application standards for Yanmar industrial engines: Inlet air standard conditions with a total barometric pressure of 100kPa (29.5 in. Hg), with a vapor pressure of 1 kPa (.295 in. Hg), and 25°C (77°F).

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