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## Low Noise Diesel Power Unit – ATEX Group II Cat. 3 (Zone 2) Hazardous Area

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### **General Description**

The Enmech variable displacement Low Noise Diesel Driven Hydraulic Power unit provides hydraulic power to run a wide variety of rig equipment.

The Diesel engine is fitted with safety systems, which satisfy the requirements of ATEX Directive 94/9/EC, EN 1834-1:2000 with maximum surface and exhaust gas temperatures limited to 200°C and automatic shutdown of the engine should high coolant water temperature, high exhaust temperature, low engine oil pressure, low hydraulic oil level in tank or engine over-speed occur.

### **Specification**

#### **Approximate Dimensions**

Length: 2995mm (9' – 10")  
Height: 1972mm (6' – 5 1/2")  
Width: 1460mm (4' – 9 1/2")  
Weight: 4250 Kg Operating

#### **Performance**

Max. Flow: 250 L/min. (55 Imp. gpm) @ 1800 RPM  
Max. Pressure: 3000 psi (207 Barg)

#### **Noise Level**

Max. Noise level at 1800 rpm engine speed: Max. 85 dBa

#### **Prime Mover**

Power is provided by a JCB444, 4-cylinder Diesel engine. Continuous power rating 57Kw at 2200 rpm fitted with inlet air shut down valve complete with manual emergency shutdown and automatic shutdown on: -

High coolant temperature (100°C), High exhaust temperature (200°C), Engine overspeed.  
Low engine oil pressure, Loss of control system pressure, Low hydraulic oil level in tank.  
Excessive engine vibration.

## **Hydraulic System**

### **Hydraulic Pump**

Oil pressure is generated by a Kawasaki KV3L140 variable displacement axial piston pump, incorporating constant horsepower control with adjustable pressure cut off, Flow limiter, and load sensing control. The unit is mounted on a bell housing to the engine flange and is coupled to the flywheel via a ATEX certified flexible coupling.

### **Flow Select Valve**

Control panel mounted valve for selecting full flow or reduced flow as required.

### **Reservoir**

Hydraulic fluid is stored in a minimum 360 Litre, (80 Imp. Gal) useful capacity reservoir. A filler/breather cap is provided at the top and a tank drain at the bottom. Indication of hydraulic fluid level is by means of a reservoir mounted sight gauge.

### **Hydraulic oil cooler**

Power unit incorporates integral hydraulic oil cooler connected into return line. The oil cooler is mounted in front of engine radiator and is cooled by the air driven by the engine cooling fan.

### **Hydraulic Termination Points**

Aeroquip (or equivalent) self-sealing couplings FD51 series:

Supply 1" (-16) male 5100

Return 1¼" (-20) male 5100

Equipment drain connection Snaptite 72 series ½" NPT.

## **Structure**

The power unit is mounted on a fabricated steel base skid. The skid design and construction conform to BS: EN12079 and DNV certification notes N° 2.7-1

## **Protective Coating**

Power Unit fabrications finished in shot blast and zinc rich epoxy primer and finished in a colour to suit customer.

For further information contact us at [sales@enmech.co.uk](mailto:sales@enmech.co.uk)