



# DELTA Series

# DWS4 G-Build Engine

**DWS4**

Power ranges: 28.7–36.5 kW; 38.5–48.9 bhp

Fixed speeds: 1500, 1800 r/min

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**Heavy-duty, indirect-injection emission compliant G-Build diesel engine**

### Special Attributes

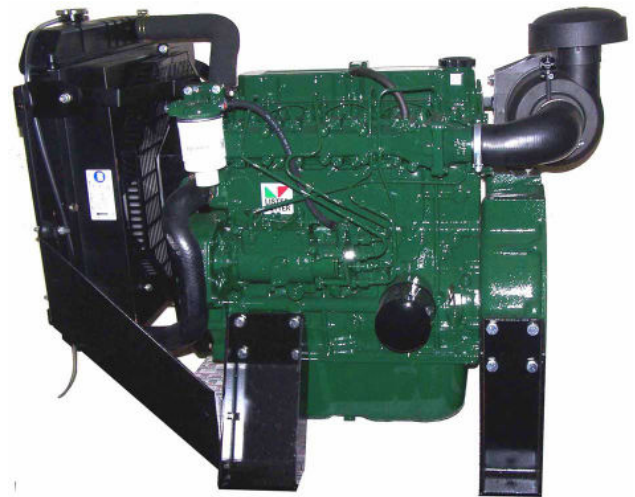
- ✓ designed for continuous operation in ambient temperatures up to 52°C (122°F)
- ✓ tropical radiator with pusher fan and full guarding

### Engine Characteristics

- four cylinders
- diesel-fuelled
- liquid-cooled
- indirect injection
- naturally aspirated

### Design Features and Equipment

- heavy-duty air cleaner
- inlet and exhaust manifolds
- combustion chamber glow plugs
- fuel lift pump
- self-vent fuel system with rotary fuel injection pump and integrated fuel control solenoid
- gear-driven positive displacement type lubricating oil pump
- standard oil and fuel filters
- 12V electric starting with a 55 Amp alternator
- 12V starter motor
- radiator with fan and belt guard
- flywheel with ring gear
- SAE 3 flywheel housing
- safety switches
- standard skid base packing
- 250-hour service intervals
- operators' handbook



### Emissions Compliance

- compliant to EU Stage 2 at 1500 r/min

### Optional Items

A range of options enables you to select a specification that matches your requirements. Please consult your Lister Petter distributor.

**DELTA Series: DWS4 G-Build Engine Technical Data Sheet**

Power Outputs			
		1500	1800
Continuous Power	kW	28.7	33.2
	bhp	38.5	44.5
Overload Power <sup>1</sup>	kW	31.6	36.5
	bhp	42.3	48.9

**Rating Definitions, to ISO 3046**

**ISO Standard Conditions**

Barometric pressure ..... 100 kPa  
 Relative humidity..... 30%  
 Ambient temperature at air inlet manifold..... 25°C

**Fixed speed power: continuous power (ICN)**

The power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under ISO standard conditions, measured at the flywheel without power-absorbing accessories, provided that the engine is overhauled and maintained in good operating condition and that fuel to BS EN 590 Class A1 or A2, and lubricating oils to the correct performance specification and viscosity classification as recommended by Lister Petter Limited, are used.

**Fixed speed power: overload power (ICXN)**

The maximum power in kW which the engine is capable of delivering intermittently at the stated crankshaft speed for a period not exceeding one hour in any period of twelve hours' continuous running, immediately after working at the continuous power, under ISO standard conditions and with the provisions specified for continuous power above.

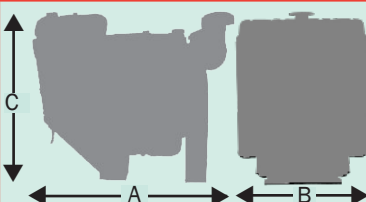
**De-rating**

For non-standard site conditions, reference should be made to relevant BS, ISO and DIN standards.

**Notes:** 1. Power ratings measured at the flywheel apply to a fully run-in, non derated engine without power absorbing accessories or transmission equipment. 2. The overload capability applies to a fully run-in engine. This is normally attained after a running period of about 50 hours. 3. Excluding radiator.

**Distributor's Address**

Lister Petter have made efforts to ensure that the information in this data sheet is accurate but reserve the right to amend specifications and information without notice and without obligation or liability.

Dimensions and Weight			
Dry weight	kg	285	
	lb	628	
Length (A)	mm	1060	
	in	41.7	
Width (B)	mm	635	
	in	25.0	
Height (C)	mm	872	
	in	34.3	

Technical Data			
Number of cylinders		4	
Type of fuel injection		Indirect	
Aspiration		Natural	
Direction of rotation (flywheel end)		Anticlockwise	
Nominal cylinder bore	mm	94.00	
	in	3.7	
Stroke	mm	120.00	
	in	4.7	
Total cylinder capacity	litre	3.33	
	in <sup>3</sup>	203.3	
Compression ratio		22:1	
Firing order (1 is at gear end)		1-3-4-2	
Number of flywheel ring gear teeth		122	
No. of starter motor pinion gear teeth		10	
Intermittent end thrust (maximum)	Towards flywheel	N	2160
	Away from flywheel	lbf	485.0
Continuous end thrust (maximum)	Towards flywheel	N	1080
	Away from flywheel	lbf	242.5
Intake restriction at full rated speed and load (max. permissible)	mbar	63.5	
	in H <sub>2</sub> O	25.0	
Exhaust back pressure (max. permissible)	mbar	68.0	
	in H <sub>2</sub> O	27.2	
Fuel consumption at full load, continuous	1500 r/min	g/kWh	235
	1800 r/min	g/kWh	242



**UK**

Lister Petter Ltd, Dursley, Gloucestershire GL11 4HS, UK  
 Tel: +44 (0)1453 544141; fax: +44 (0)1453 546732  
 E-mail: sales@lister-petter.co.uk <http://www.lister-petter.co.uk>