

# DWS4 G BUILD ENGINE

## DWS4

*Power ranges: 28.7–36.5 kW; 38.5–48.9 bhp  
Fixed speeds: 1500, 1800 r/min*

### HEAVY DUTY, INDIRECT INJECTION G BUILD DIESEL ENGINE

#### SPECIAL ATTRIBUTES

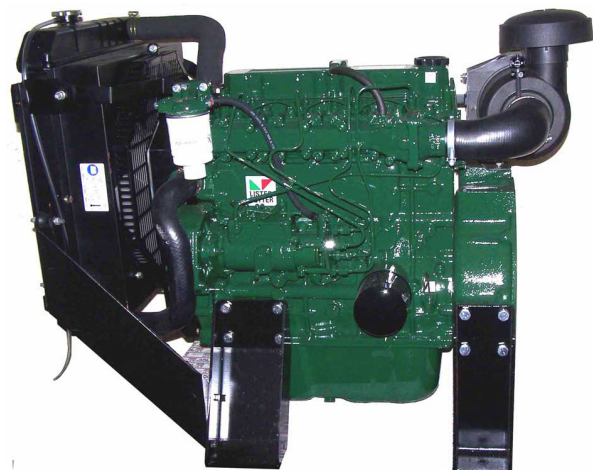
- designed for continuous operation in ambient temperatures up to 52°C (122°F)
- tropical radiator with pusher fan and full guarding

#### 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
- 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
- flywheel with ring gear
- SAE 3 flywheel housing
- engine temperature switch
- low oil pressure switch



**DWS4 G DRIVE ENGINE**

- standard skid base packing
- 250-hour service intervals
- operators' handbook

#### OPTIONAL ITEMS

- optional 5 year extended warranty
- A range of options enables you to select a specification that matches your requirements. Please consult your Lister Petter distributor.

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
		lbf	485.0
	Away from flywheel	N	1080
		lbf	242.5
Continuous end thrust (maximum)	Towards flywheel	N	1080
		lbf	242.5
	Away from flywheel	N	540
		lbf	121.3
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 <sup>1</sup>	1500 r/min	g/kWh	242
		litre/h	8.1
	1800 r/min	g/kWh	236
		litre/h	9.1

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

POWER OUTPUTS TO ISO 3046			
		1500	1800
Continuous Power <sup>1</sup>	kW	28.7	33.2
	bhp	38.5	44.5
Overload Power <sup>2</sup>	kW	31.6	36.5
	bhp	42.3	48.9

APPROXIMATE 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	

**RATING DEFINITIONS, TO ISO 3046**

*ISO Standard Conditions*  
 Barometric pressure 100 kPa  
 Relative humidity 30%  
 Ambient air temperature at air inlet 25°C

**1. 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 3046 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.

**2. 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 3046 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.

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