

80 KVA DIESEL GENERATOR

FEATURES & BENEFITS

- Maximum 88 kVA, 380V, 1500 RPM
- Constant voltage AVR (Automatic Voltage Regulator)
- 12 Volt Electric Starter
- 135 Litre Fuel Tank, 10 Hours @ 75% load
- Silent Version (± 72 dBa)
- 4 cylinder, Turbocharged, Water cooled Diesel Engine
- Three Phase Output
- DeepSea DSE6120 Digital Control Panel
- Low oil pressure system
- Low water cut out engine protection



 Perkins

 DEEP SEA ELECTRONICS

 LEROY-SOMER

GENERAL DATA	
Model:	BPD80S3-P
Prime Power (P.R.P):	80 kVA
Stand-by Power (L.T.P):	88 kVA
Amps:	133 A
Power Factor / COS:	0.8
Frequency:	50 Hz
Voltage:	380 V
Phases:	Three Phase
Engine Speed:	1500 RPM
Length:	2550 mm
Width:	950 mm
Height:	1200 mm
Weight:	1108 kg's
Tank Capacity:	135 l

ADDITIONAL	
Running Time:	10 Hours @ 75% load
Structure Type:	Silent
Noise Level (7m):	72 dBA
Auto Voltage Regulator:	Constant voltage AVR
ISO9001 Certified:	Yes
CE Certified:	Yes
Fuel Cons. @ 100% Load:	16.5
Fuel Cons. @ 75% Load:	12.4
Fuel Cons. @ 50% Load:	8.7

ENGINE DATA	
Brand:	Perkins
Model:	1104A-44TG2
Type:	4 cylinder, Turbocharged, Water cooled Diesel Engine
Starting System:	12 Volt Electric Starter
Auto-Decompression:	Yes
Cubic Capacity (l):	4.4
Compression Ratio:	17.25:1
Rated Power (kW/RPM):	80 / 1500
Fuel Type:	Diesel
Lube Oil:	15W40
Low Pressure Alert:	Yes
Low Fuel Cut Out:	Yes

CONTROL PANEL	
Model:	DeepSea DSE6120
Type:	Digital Control Panel
Analogue Inputs:	2
Mains Phase Voltage:	Yes
Mains Line Voltage:	Yes

ALTERNATOR	
Model:	Leroy Somer - TAL-A44-C
Pole Number:	4
Excitation Mode:	Self Excitation

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Pietermaritzburg
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Nelspruit
013 007 1753

Bloemfontein
051 001 1429

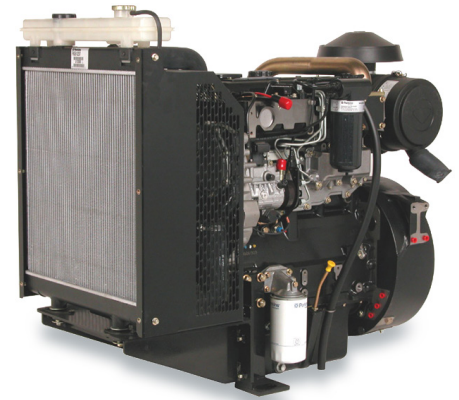
1100 Series 1104A-44TG2 Diesel Engine – Electropak

79.1 kWm / 106.1 hp @ 1500 rpm

Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of Electropak engines now fit even closer to customers needs.

In the world of power generation success is only gained by providing more for less. With the 1104A-44TG2 Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These units are able to meet TA luft legislation.



Specification		
Number of cylinders	4 vertical in-line	
Bore and stroke	105 x 127 mm	4.1 x 5 in
Displacement	4.4 litres	268.5 in ³
Aspiration	Turbocharged	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	17.25:1	
Rotation	Anti-clockwise, viewed from flywheel	
Total lubricating capacity	8.0 litres	2.1 US gal
Cooling system	Water-cooled	
Total coolant capacity	13.0 litres	3.4 US gal

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Photographs are for illustrative purposes only and may not reflect final specification. All information in this document is substantially correct at time of printing and may be altered subsequently. Final weight and dimensions will depend on completed specification.

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 **Perkins**[®]

THE HEART OF EVERY GREAT MACHINE

1100 Series 1104A-44TG2 Diesel Engine – ElectropaK

79.1 kWm / 106.1 hp @ 1500 rpm

Features and benefits

Compact, efficient power

- 1100 Series is the result of an intensive period of customer research that has guided the development of the range
- The new 4.4 litre cylinder block ensures bore roundness is maintained under the pressures of operation. It also ensures combustion and mechanical noise is lowered
- A new cylinder head has re-established Perkins mastery of air control

Quality by design

- Product design and Class A manufacturing improvements enhance product reliability while maintaining Perkins legendary reputation for durability

Cost effective power

- Compact size and low noise
- Lower fuel consumption and oil use
- 500 hour service intervals
- **Warranties and Service Contracts**

We provide one-year warranties for constant speed engines and two-year warranties for variable speed models, as standard. These are supported by multilevel Extended Service Contracts that can be bought additionally

Discover more: www.perkins.esc

Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world
- To find your local distributor: www.perkins.com/distributor

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Technical information

Air inlet

- Mounted air filter

Fuel system

- Rotary type pump
- Ecoplus fuel filter

Lubrication system

- Wet sump with filler and dipstick
- Spin-on oil filter

Cooling system

- Thermostatically controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping

Electrical equipment

- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run

Flywheel and housing

- High inertia flywheel to SAE J620 Size 10/11½
- SAE 3 flywheel housing

Mountings

- Front engine mounting bracket

Literature

- User's Handbook

Optional equipment

- Woodward electronic governor (LCG2)
- Workshop manual
- Parts book

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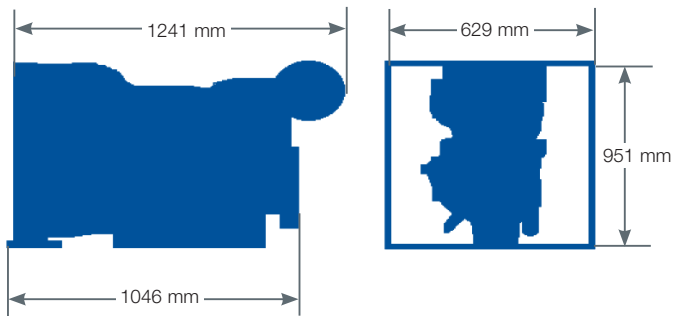
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THE HEART OF EVERY GREAT MACHINE

1100 Series 1104A-44TG2 Diesel Engine – Electropak

79.1 kWm / 106.1 hp @ 1500 rpm



Engine package weights and dimensions

Length	1241 mm	48.8 in
Width	629 mm	24.7 in
Height	951 mm	37.4 in
Weight (dry)	463 kg	1021 lb

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Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500	Prime power	80.0	64.0	73.4	98.4	71.9	96.4
	Standby power	88.0	70.4	80.7	108.2	79.1	106.1

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. Fuel specification: BS 2869: Part 2 1998 Class A2 or DIN EN 590. Lubricating oil: 15W40 to API CG4.

Rating definitions

Prime power: Variable load. Unlimited hours usage with an average load factor of 80% of the published prime power over each 24 hour period. A 10% overload is available for 1 hour in every 12 hours of operation. **Standby power:** Variable load. Limited to 500 hours annual usage, up to 300 hours of which may be continuous running. No overload is permitted.

Percent of prime power	Fuel consumption at 1500 rpm g/kWh	Fuel consumption at 1500 rpm l/hr
110%	4.5	20.5
100%	4.1	18.7
75%	3.0	14.0
50%	2.1	9.7

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THE HEART OF EVERY GREAT MACHINE

DSE6110/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

DSE6110 MKII

DSE6120 MKII

KEY FEATURES

- Large back-lit text display
- Multiple display languages
- Heated display option available
- DSENet® expansion compatible
- Data logging facility
- Fully configurable via PC using USB communication
- Front panel configuration
- Efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE6120 MKII only)
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator/load current monitoring and protection
- Generator overload protection (kW)
- Breaker control via fascia buttons
- Fuel and start outputs, configurable when using CAN
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 to 10 V &

- 4 to 20 mA oil pressure sensors
- 6 configurable digital inputs
- Configurable staged loading outputs
- CAN, MPU and alternator speed sensing in one variant
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel pump control
- Real time clock
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD and LED alarm indication
- Customisable information screens
- Configurable event log (100)
- Tier 4 ECO engine support including exhaust fluids & filters

- J1939-75 instrumentation output, configurable CAN instrumentation and alarms
- Start on low battery
- Enhanced alarm functionality
- Low load alarm

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6120 MKII only)
- Increased input and output expansion capability via DSENet®
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on a large back-lit text display via multiple languages
- The module can be configured to suit a wide range of applications
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

SPECIFICATIONS
DC SUPPLY

CONTINUOUS VOLTAGE RATING
8 V to 35 V Continuous

CRANKING DROPOUTS

Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

MAXIMUM OPERATING CURRENT

100 mA at 12 V, 105 mA at 24 V

MAXIMUM STANDBY CURRENT

60 mA at 12 V, 55 mA at 24 V

MAXIMUM SLEEP CURRENT

40 mA at 12 V, 35 mA at 24 V

GENERATOR & MAINS (UTILITY)

VOLTAGE RANGE
15 V to 415 V AC (Ph to N)
26 V to 719 V AC (Ph to Ph)

FREQUENCY RANGE

3.5 Hz to 75 Hz

INPUTS

DIGITAL INPUTS A to F
Negative switching

ANALOGUE INPUT A

Configurable as:
Negative switching digital input
0 V to 10 V
4 mA to 20 mA
0 Ω to 240 Ω

ANALOGUE INPUTS B TO D

Configurable as:
Negative switching digital input
0 Ω to 480 Ω

OUTPUTS
OUTPUT A (FUEL)

10 A short term, 5 A continuous, at supply voltage

OUTPUT B (START)

10 A short term, 5 A continuous, at supply voltage

AUXILIARY OUTPUTS C, D, E & F

2 A DC at supply voltage

DIMENSIONS

OVERALL
216 mm x 158 mm x 43 mm
8.5" x 6.2" x 1.5"

PANEL CUT-OUT

184 mm x 137 mm
7.2" x 5.3"

MAXIMUM PANEL THICKNESS

8 mm
0.3"

STORAGE TEMPERATURE RANGE

-40 °C to +85 °C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE

NON HEATED DISPLAY VARIANT
-30°C to +70°C
-22 °F to +158 °F

HEATED DISPLAY VARIANT

-40 °C to +70 °C
-40 °F to +158 °F

OPTIONAL PARTS

PART	PART NUMBER
IP65 Gasket	020-521

RELATED MATERIALS
TITLE

DSE6110/20 MKII Installation Instructions
DSE6110/20 MKII Operator Manual
DSE6110/20 MKII Configuration Suite PC Manual

PART NO.

053-173
057-226
057-224

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