BPD200S3-P

200 KVA DIESEL GENERATOR

FEATURES & BENEFITS

- Maximum 220 kVA, 380V, 1500 RPM
- Constant voltage AVR (Automatic Voltage Regulator)
- 24V Electric Starter
- 350 Litre Fuel Tank, 10 Hours @ 75% load
- Silent Version (±72dBA)
- 6 Cylinder, vertical in-line, Water cooled, Turbocharged & Aftercooled
- Three Phase Output
- DeepSea DSE6120 Digital Control Panel
- Low oil pressure system
- Low water cut out engine protection

Perkins DSE DEEP SEA ELECTRONICS LEROY-SOMER

GENERAL DATA	
Model:	BPD200S3-P
Prime Power (P.R.P):	200 kVA
Stand-by Power (L.T.P):	220 kVA
Amps:	334 A
Power Factor / COS:	0.8
Frequency:	50 Hz
Voltage:	380 V
Phases:	Three Phase
Engine Speed:	1500 RPM
Length:	3150 mm
Width:	1100 mm
Height:	1680 mm
Weight:	2136 kg's
Tank Capacity:	350 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:	45.8
Fuel Cons. @ 75% Load:	34.7
Fuel Cons. @ 50% Load:	23.1

ENGINE DATA	
Brand:	Perkins
Model:	1106A-70TAG4
Type:	6 Cylinder, vertical in-line, Water cooled, Turbocharged & Aftercooled
Starting System:	24V Electric Starter
Auto-Decompression:	Yes
Cubic Capacity (l):	7.01
Compression Ratio:	16:1
Rated Power (kW/RPM):	176 / 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 - LSA 44.3 VL14
Pole Number:	4
Excitation Mode:	Self Excitation

Maputo, Moçambique

+258 85 176 3143 comercial@cobalt.co.mz **www.cobalt.co.mz**

1100 Series 1106A-70TAG4 Diesel Engine – ElectropaK

200 kVA Prime Power / 220 kVA Standby Power

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 1106A-70TAG 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 engines are assembled around optimal, efficient manufactuing processes with state-of-the-art technology. They are built to provide the exact power solution for customers who sell their applications into lesser regulated countries.

Focusing on our common platform theme, changes to engine envelope dimensions and connection points have been kept to a minimum.

Specification		
Number of cylinders	6 vertical in-line	
Bore and stroke	105 x 135 mm	4.13 x 5.31 in
Displacement	7.01 litres	428 in^3
Aspiration	Turbocharged aftercooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	16:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	16.5 litres	4.36 US gal
Cooling system	Liquid	
Total coolant capacity	21 litres	5.5 US gal

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Perkins®

THE HEART OF EVERY GREAT MACHINE

1100 Series 1106A-70TAG4 Diesel Engine – ElectropaK

200 kVA Prime Power / 220 kVA Standby Power

Features and benefits

Dependable power

- The Perkins® 1106A-70TAG delivers up to 220 kVA standby at 50 Hz, providing greater productivity through an improved power to weight ratio
- This world-class power density has been achieved in a 7 litre engine, using a mechanical fuel injection system; making this engine robust for all markets, with the ability to cope with the variation of fuel qualities around the world

  The 1106A has been designed for excellent load acceptance to ensure your facility is powered quickly at all conditions

Low operating costs

- Service intervals are set at 500 hours as standard
- 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
- Low usage warranty package is also available

World class product support

- 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 finger tips, covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Perkins actively pursues product support excellence by insisting our distribution network invest in their territory to provide you with a consistent quality of support across the globe
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts giving 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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THE HEART OF EVERY GREAT MACHINE

1100 Series 1106A-70TAG4 Diesel Engine – ElectropaK

200 kVA Prime Power / 220 kVA Standby Power

Technical information

- Tropical radiator pipes and guards
- Flywheel housing
- Flywheel and starter ring
- Oil filters
- Starter motor
- Air cleaners and brackets
- Lubricating oil sump
- Alternator
- Induction manifolds
- Exhaust manifolds
- Fuel filter
- Cold start aid
- Engine mountings

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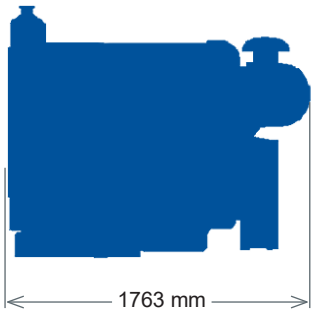
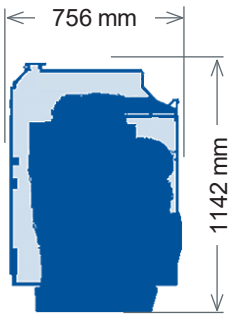
1100 Series 1106A-70TAG4 Diesel Engine – ElectropaK

200 kVA Prime Power / 220 kVA Standby Power





Engine package weights and dimensions		
Length with air cleaner	1763 mm	69.4 in
Width	756 mm	29.8 in
Height	1142 mm	45 in
Weight (dry)	788 kg	1737 lb

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THE HEART OF EVERY GREAT MACHINE

1100 Series 1106A-70TAG4 Diesel Engine – ElectropaK

200 kVA Prime Power / 220 kVA Standby Power

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500	Prime power	200	160	178.9	240	173.9	240
	Standby (maximum)	220	176	196.3	263	191.3	256

Percent of prime power	Fuel consumption at 1500 rpm g/kWh	Fuel consumption at 1500 rpm l/hr
110%	209	49.4
Prime power	213	45.8
75%	215	34.7
50%	215	23.1
25%	235	12.6

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Perkins®
THE HEART OF EVERY GREAT MACHINE

DSEGenset®

DSE6110/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

DSE**6120 MKII**

DSE**6110 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 to10 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

RELATED MATERIALS

TITLE	PART NO.
DSE6110/20 MKII Installation Instructions	053-173
DSE6110/20 MKII Operator Manual	057-226
DSE6110/20 MKII Configuration Suite PC Manual	057-224

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

DEEP SEA ELECTRONICS PLC UK
Highfield House, Hunmanby Industrial Estate, Hunmanby YO14 0PH
TELEPHONE +44 (0) 1723 890099 **FACSIMILE** +44 (0) 1723 893303
EMAIL sales@deepseaplc.com **WEBSITE** www.deepseaplc.com

DEEP SEA ELECTRONICS INC USA
3230 Williams Avenue, Rockford, IL 61101-2668 USA
TELEPHONE +1 (815) 316 8706 **FACSIMILE** +1 (815) 316 8708
EMAIL sales@deepseausa.com **WEBSITE** www.deepseausa.com

Registered in England & Wales No.01319649
VAT No.316923457

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DSEGenset®

DSE6110/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

The DSE6110 MKII Auto Start Control Module and the DSE6120 MKII Auto Mains (Utility) Failure Control Module are suitable for a wide variety of single gen-set applications.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

Electronic J1939 (CAN) and non-electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant. With a number of flexible inputs, outputs and protections, the modules can be easily adapted to suit a wide range of applications.

Through USB Communication both modules can be configured using the DSE Configuration Suite PC Software or through the module's front panel editor.

Using the DSE Configuration Suite PC Software the controller is easy to use and configure which allows alteration of operating parameters, sequences, timers and alarms.

AVAILABLE VARIANTS

6110-03	Auto Start with real time clock
6120-03	Auto Mains Failure with real time clock

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

ELECTRICAL SAFETY
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

TEMPERATURE
BS EN 60068-2-1
Ab/Ae Cold Test -30 ºC
BS EN 60068-2-2
Bb/Be Dry Heat +70 ºC

VIBRATION
BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz at +/-7.5 mm,
8 Hz to 500 Hz at 2 GN

HUMIDITY
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 ºC at 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 ºC at 93% RH 48 Hours

SHOCK
BS EN 60068-2-27
Three shocks in each of three major axes
15 GN in 11 mS

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES
BS EN 60529
IP65 - Front of module when installed into the control panel with the optional sealing gasket.

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS