

# 100kVA (K120C) Rigsafe Diesel Generator

Based in Aberdeen, the oil capital of Europe, this Portable Power division can supply diesel driven generators for rental from 30kVA to 1500kVA. The generators are built to “rigsafe” specification, designed to work in the harsh offshore environment, either on oil platforms or wind turbines. These generators can also be used onshore in various industry sectors such as construction and entertainment.

The capital sales division can supply standard off the shelf generators or project specific custom built generators and offer the full spectrum of engineering from design, fabrication and assembly through to the FAT (Factory Acceptance Test).

The service division can provide a full health care package for diesel driven generators, comprising of installation, maintenance and repair of customer owned equipment.

### Generators supplied for rental have the following features:

- Spark arrestor on engine exhaust outlet
- Chalwyn valve or Amot valve inline with engine
- Aspiration
- External emergency stop
- Platform interface for ESD start and stop
- (24Volt or 110Volt)
- Unit alarms and shutdown on:
  - Low oil pressure
  - High engine temperature
  - Over speed
- Lifting certificates for unit, slings and shackles (MPI and tested)

### Optional fire detection, gas detection and extinguishing system. The generators can have a fire/gas detection system installed for certain applications:

- Heat detection
- Smoke detection
- Gas detection
- Fire/gas detection panel
- External controls and status indication
- Extinguishing system c/w internal and external pipework



Containerised Zone 2 200kVA generator



Rigsafe generators 30kVA up to 500kVA acoustic canopy c/w DNV shipping frame



Rigsafe generators 800kVA up to 1500kVA acoustic containers c/w 4 point DNV 2.7-1 lifting

The installation of a generator set must follow certain rules, which must be strictly adhered to in order to get the equipment to operate properly. Highly skilled generator engineers will carry out all works to ensure the safe installation and commissioning of your generator.

# Specification Sheet

## 100kVA (K120C) Rigsafe Diesel Generator

General			
<b>Drive-unit</b>	Diesel engine	<b>Unit type</b>	K 120C
<b>Driven equipment</b>	Alternator	<b>Rated speed</b>	1500/50 rpm/hz; 1800/60 rpm/hz
<b>Duty</b>	Prime power	<b>Operation/maint. manual</b>	Standard issue
<b>Drive</b>	Direct	<b>Enclosure:</b>	Sound-attenuated canopy-type
<b>Cooling</b>	Radiator	<b>Lifting specification</b>	In accordance with DNV 2.7-1 when in frame
<b>Unit is suitable for operating in</b>	SAFE-AREA OFFSHORE	<b>Noise attenuation</b>	80 dBA within 1 meter of skid enclosure

Generator set ratings			
<b>50 hz prime power</b>	kVA (kw) 105 (84)	<b>50 hz standby power</b>	kVA (kw) 110 (98)
<b>60 hz prime power</b>	kVA (kw) 117 (94)	<b>60 hz standby power</b>	kVA (kw) 125 (100)

Engine			
<b>Manufacturer</b>	Cummins	<b>Cylinders</b>	6 in line
<b>Disp.</b>	8.8 litre	<b>Bore</b>	102 mm
<b>Engine type</b>	6BT5.9-G6	<b>Stroke</b>	120 mm
<b>Aspiration</b>	Turbocharged	<b>Maximum allowable speed</b>	2000
<b>Classification</b>	ISO 8528/1, ISO 3046/1, BS 5514/1	<b>Compression Ratio</b>	16.5 : 1
<b>50 hz gross power</b>	kWm 97	<b>60 hz gross power</b>	kWm 115
<b>Start System</b>	Electric 12vDC	<b>Batteries</b>	1 x 12v DC

Alternator			
<b>Manufacturer</b>	Leroy Somer	<b>Type</b>	LSA 44.2VS4
<b>50 hz prime power</b>	105kVA @ 0.8 pf	<b>60 hz prime power</b>	117kVA @ 0.8 pf
<b>50 hz standby power</b>	110kVA @ 0.8 pf	<b>60 hz standby power</b>	125kVA @ 0.8 pf
<b>Sub-transient reactance</b>	X'd 10.00%	<b>Transient reactance</b>	X'd 12.80%
<b>Volts</b>	380 - 440V @ 50hz; 420 - 480V @ 60hz		

Instrumentation and controls			
<b>Instrument panel</b>	• Skid mounted	• Service hour meter	• Emergency stop
<b>Gauges</b>	• Water temperature	• Oil pressure	• Speed indicator
<b>Controls</b>	• Off/manual/auto (local and remote)	• E.S.D. interface	-
<b>Safety systems</b>	• High engine temperature	• Low oil pressure	• Overspeed
<b>Control system</b>	• Deepsea controls (DSE 5310)	-	-
<b>Output</b>	• M.C.C.B NR160F	• 4 Pole 160Amp	• TM160D adj. protection - long time/short time
<b>Earth leakage</b>	• Merlin Gerin VIGEREX RH99M (for main output MCB and the 3-phase socket outlet)		
<b>Operation modes</b>	• Suitable for AMF application	-	-
<b>Socket outlets</b>	• 415/440v 1 x 63amp 5 pin c/w 4 pole mcb 240v • 2 x 32amp 3 pin c/w 2 pole mcb		

Dimensions/weights			
<b>Enclosed gen-set dimensions</b>	L x W x H - 2550 mm x 1115 mm x 1645 mm	<b>Weight</b>	Dry - 1700 kg Wet - 1900 kg
<b>Enclosed gen-set in DNV frame dimensions</b>	L x W x H - 2850 mm x 1400 mm x 2425 mm	<b>Weight</b>	Dry - 3240 kg Wet - 3440 kg

Capacities/operations/service			
<b>Fuel tank cap</b>	200 lts	<b>Service intervals</b>	Type (A) oil and filter change - 400 hrs
<b>Oil</b>	14.2 lts		Type (B) Type (A) service plus injector
<b>Coolant</b>	10 lts		and tappet inspection/change - 2,500 hrs
<b>Fuel usage - 50 hz</b>	24 lts/hour @ 100% duty	<b>Fuel usage - 60 hz</b>	29 lts/hour @ 100% duty
	18 lts/hour @ 75% duty		22 lts/hour @ 75% duty
	13 lts/hour @ 50% duty		16 lts/hour @ 50% duty
	7 lts/hour @ 25% duty		9 lts/hour @ 25% duty

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