



Diesel Generator Datasheet

CS RANGE

JEG1-20CS: 20/22 kVA

Technical Data

JEG1-20CS

Engine	Model	Phase	Type	Jubilee Model
Cummins	4BT3.9G1	Single	Enclosed	JEG1-20CS

RATINGS	PRIME POWER (PRP)			STANDBY POWER (ESP)		
Voltage	kVA	kWe	Amps	kVA	kWe	Amps
220	20	20	91	22	22	100
230	20	20	87	22	22	96
240	20	20	83	22	22	92
254	20	20	79	22	22	87

Power Definition

Prime Power (PRP) is the power continuously available at variable load in lieu of mains power. An overload of 10% is permitted for one hour in every 12 hours of operation.


Standby Power (ESP) is the maximum output available for up to a maximum of 500 hours per year. No overload is permitted.

Standard Conditions: air inlet temperature of 40°C, barometric pressure of 100 kPa (110 m.a.s.l.) relative humidity of 30%.

Note: All ratings data based on operation under ISO 8528-1 and ISO 3046-1. The above ratings may be subject to deration at different ambient temperatures or site altitude conditions.

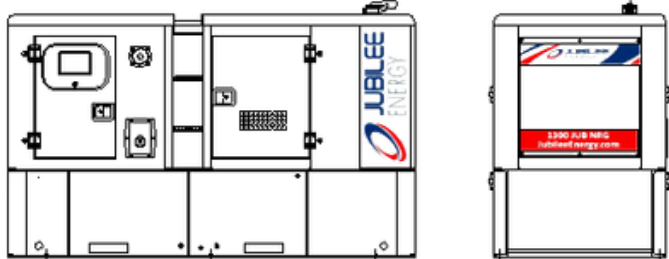
Scope of Supply

- Water cooled Cummins diesel engine
- Single bearing brushless alternator
- Radiator with coolant expansion bottle
- Fully guarded engine-driven fan
- Heavy Duty Anti-Vibration Mounts
- Starter Battery
- Battery Trays and connecting cables
- Battery Charger
- Battery Isolator Switch
- Main Line Circuit Breaker
- Automatic Mains Failure controller with protections
- Twin Skinned Fuel Tank
- Sound attenuated enclosure / fork pockets
- Spin on Oil and Fuel Filters and Dry Type Air Filters
- Emergency Stop buttons
- Pre-delivery service
- Industrial silencer with rain flap
- Full Load Test
- Operation Manual
- Factory Test Certificate



Typical Enclosed Generator Sound Pressure Level in Free Field Conditions

dB(A) @ 1m	70.7	dB(A) @ 7m	61.5
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Weights and Dimensions		
Length	(L)	2600 mm
Width	(W)	1100 mm
Height	(H)	1600 mm
Dry Weight	1500 kg	

Engine & Cooling Technical Data

JEG1-20CS

DESCRIPTION		VALUE	UNITS
GENERAL	Engine Speed	1500	rpm
	Number of Cylinders	4	Inline
	Aspiration	Turbocharged	-
	Bore / Stroke	102 / 120	mm
	Displacement	3.9	litres
	Governor	Electronic	-
FUEL	Fuel Consumption at 110% Power	10.3	litres/hr
	Fuel Consumption at 100% Power	9.3	litres/hr
	Fuel Consumption at 75% Power	7.3	litres/hr
	Fuel Consumption at 50% Power	5.3	litres/hr
	Fuel Consumption at 25% Power	3.4	litres/hr
	Standard Fuel Tank Capacity	520	litres
AIR	Max Air Intake Restriction (Clean Filter)	2.48	kPa
	Max Air Intake Restriction (Contaminated Filter)	6.21	kPa
	Engine Air Intake Flow	43.6	litres/sec
EXHAUST	Exhaust Gas Flow	101	litres/sec
	Exhaust Gas Temperature	463	°C
	Maximum Exhaust Back Pressure	10	kPa
	Recommended Exhaust Pipe Diameter	75	mm
COOLING	Maximum Restriction to Cooling Air Flow	28	kPa
	Maximum Coolant Temperature	100	°C
	Coolant Flow	2.2	litres/sec
	Coolant Capacity	7.2	litres
	Thermostat Adjusting Temperature Range	82 - 95	°C
OIL	Total Oil Capacity	9.5	litres
	Typical Oil Pressure at Rated Speed	345	kPa
	Maximum Oil Temperature in Oil Pan	121	°C
ELEC	Electrical System Voltage	24	V
	Battery Type	SLA	-
	Battery Capacity CCA	312	A

Alternator Technical Data

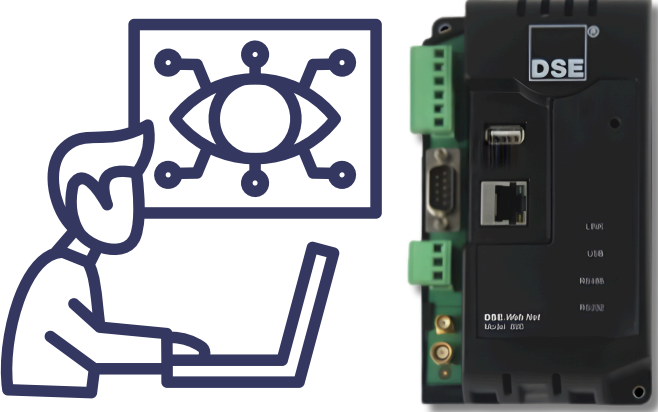
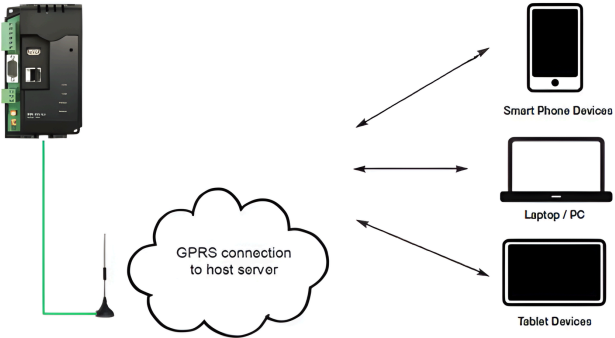

JEG1-20CS


DESCRIPTION		VALUE
GENERAL	Operating Temperature	40 °C
	Coupling	Direct
	Number of Bearings	Single
	Phase / Poles	1 Phase
	Power Factor	Cos ϕ = 0.8
	Excitation	Self Excited
	Insulation System	Class H
	AVR Type	AS440
	Voltage Regulation	\pm 1%

Controller Options

JEG1-20CS

<p>DSE4510</p>	<p>AUTO START CONTROL MODULE</p>
	<p>The DSE4510 is an Auto Start Control Module suitable for a wide variety of single genset applications. Whilst maintaining functions included within higher end controllers, such as generator or load power monitoring, this compact controller provides the user with the ultimate size to feature ratio. Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules will give comprehensive engine and alternator protection.</p>
<p>DSE6020 MKII</p>	<p>AUTO MAINS FAILURE CONTROL MODULE</p>
	<p>The DSE6120 MKIII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, genset applications. Monitoring an extensive number of engine parameters, the module will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs and remote PC.</p>
<p>DSE7420 MKII</p>	<p>AUTO MAINS FAILURE CONTROL MODULE (STANDARD FITMENT)</p>
	<p>The DSE7420 MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications. Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs and remote PC. The DSE7420 MKII will also monitor the mains (utility) supply. The module include USB, RS232, RS485 and Ethernet ports as well as dedicated DSENet® terminals for system expansion.</p>
<p>DSE8610</p>	<p>AMF/ SYNCHRONISING / LOAD SHARE / SET TO SET</p>
	<p>The DSE8610 is an easy to use multi-generator loadshare system, designed to synchronise up to 32 generators including electronic and non-electronic engines. The DSE8610 monitors the generator and indicates operational status and fault conditions, automatically starting or stopping the engine on load demand or fault condition.</p>
<p>DSE8620 MKII</p>	<p>AMF/ SYNCHRONISING / LOAD SHARE / SET TO MAINS</p>
	<p>The DSE8620 MKII represents the latest in complex load sharing & synchronising control technology. Designed to synchronise a single genset with a mains (utility) supply, the DSE8620 MKII control module is packed with multiple features and benefits that are unrivalled across the generator control industry.</p>

Remote Monitoring	Description
	<p>The DSEWebNet Gateway Modules are used in conjunction with supported DSE controllers to provide monitoring and communications data via the DSEWebNet® advanced communications system. Gateway modules available are the DSE890 (3G/GSM/GPS/Ethernet), DSE891 (Ethernet only) and DSE892 (SNMP). The Gateway communicates to the connected DSE controller(s), monitoring the instrumentation and operating state. When this data changes, the new data is logged in the internal memory. At regular intervals the logged data is transmitted to the DSE host server. The DSE host server is then integrated into the DSEWebNet® which can be accessed via an internet connected device and web browser to allow remote monitoring and control of multiple DSE controllers around the globe. GSM, GPS and GSM/GPS antennas are available as accessories.</p>
	

Automatic Transfer Switch	Description
	<p>Jubilee Transfer Switches combine reliability and flexibility in a small, economical package for transferring loads between a utility and a generator set, or between two generators. Jubilee Transfer Switches and the control mechanisms are mounted in a key-locking enclosure. Enclosures meet IEC 60947-6-1 standard. Our 63-630 Amp switches are front-connected. The microprocessor control monitors the utility and the standby generator power. When utility power fails, or is unsatisfactory, the control starts the generator. When stable utility power returns, the switch automatically transfers the load back to the utility. A variety of Transfer Switches are available to suit multiple applications.</p>

All specifications are subject to change without prior notice
V26.03