



Dongfeng Cummins Technical Operations

Engine Model: QSZ13-G3

Curve and Datasheet: FR20322

Rev01

Date of Issue: 2010/03



Dongfeng Cummins Engine Co.,Ltd

Generator Engine Performance Data

Engine Model

QSZ13-G3

FR20322

@

1500RPM & 1800RPM

Engine Model: QSZ13-G3

CPL: 36□□

Compression Ratio: 17:1

Engine Configuration: D0C3004GX03

Bore: 130 mm

Displacement: 13.0 L

Stroke: 163 mm

Cylinders: 6

Governor Regulation: ≤1%

Aspiration: Turbocharged & Charge Air Cooled

Emission Certification: MEP STAGE II

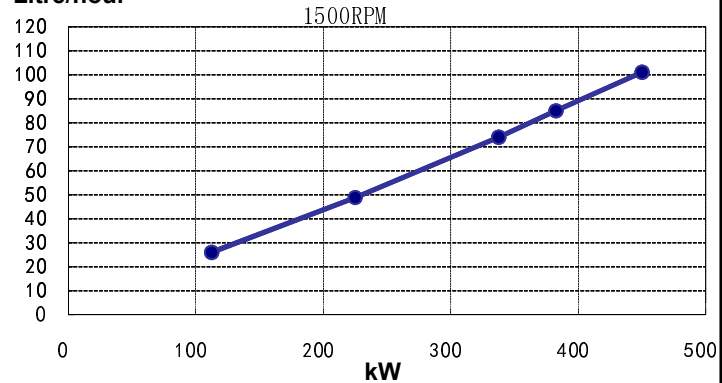
Fuel System: XPI

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kW	HP	Kw	HP	kW	HP
1500	—	—	450	603	383	513

Engine Performance Data @ 1500 RPM

OUTPUT POWER			FUEL CONSUMPTION	
%	Kw	HP	g/kW.h	L/h
STANDBY POWER				
100	—	—	—	—
PRIME POWER				
100	450	603	193	101
75	338	452	189	74.0
50	225	302	187	48.8
25	113	151	199	26.0
Continuous Power				
100	383	513	191	85.0

Litre/hour



Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with GB/T18297 conditions of 100kPa (29.61 in. Hg) barometric pressure [80 m (263 ft.) altitude], 25°C (77°F) inlet air temperature, and 1 kPa (0.30 in. Hg) water vapor pressure with No.0 diesel fuel. The engine may be operated without changing the fuel setting up to 5200 m (8200ft.) altitude.



Dongfeng Cummins Engine Co.,Ltd

Generator Engine Performance Data

Engine Model

QSZ13-G3

FR20322 @ 1500RPM

GENERAL ENGINE DATA

Approximate Engine Weight - Dry:	- kg	1195
Approximate Engine Weight - Wet:	- kg	1260
Engine Idle Speed:	- RPM	700
Compression Ratio:		17:1
Fire Order:		1-5-3-6-2-4
Center of Gravity		
from front face of block:	- mm	519
above crankshaft centerline:	- mm	201

ENGINE MOUNTING

Maximum static mounting surface bending moment		
Rear face of block:	- N.m	1356

LUBRICATION SYSTEM

Oil pressure @ idle - minimum:	- kPa	89.6
Total system capacity (standard pan):	- L	45.42
Maximum lube oil flow to all accessories:	- L/min	7.57
Typical oil pressure range - warm engine:	- kPa	207 - 345

AIR INTAKE SYSTEM

Maximum temperature rise between ambient air and engine air inlet:	- °C	11.1
Maximum intake air restriction (heavy duty air cleaner):		
dirty filter:	- kPa	6.2
clean filter:	- kPa	2.5

Exhaust System

Max. back pressure imposed by complete exhaust system:	- kPa	21
Maximum allowable static bending moment at exhaust outlet flange:	- N-m	27
Exhaust pipe size normally acceptable:.....	- mm	130

FUEL SYSTEM

Maximum fuel drain restriction (total head) before (or without) check valve:		
.....	- kPa	27
Minimum fuel tank venting requirement:	- L/s	0.2
Maximum fuel inlet temperature:	- °C	71
Maximum heat rejection to return fuel.....	- kW	5.36
Maximum design fuel flow:	- kg/hr	204



Dongfeng Cummins Engine Co.,Ltd

Generator Engine Performance Data

Engine Model

QSZ13-G3

FR20322 @ 1500RPM

Cold Start Performance

Minimum ambient temperature for unaided cold start: - °C -15
 Minimum ambient temperature for aided cold start: - °C -30

Cooling System

Coolant Capacity..... - L 23.1
 Engine coolant circuit thermostat opening temperature: - °C 82
 Engine coolant circuit thermostat fully open temperature: - °C 94
 Maximum coolant pressure(exclusive of pressure cap; closed thermostat at maximum no load speed): - kPa 407
 Maximum coolant temperature - engine out - °C 102
 Maximum deaeration time: - mins 25
 Minimum operating block coolant temperature: - °C 71
 Minimum fill rate (low level alarm required for most engines) - litre/mi 19
 Maximum coolant expansion space (% total system capacity) - % 10
 Minimum coolant expansion space (% total system capacity) - % 6
 Minimum pressure cap rating at sea level: - kPa 103
 Maximum coolant temperature for engine protection controls - °C 107
 Full-ON Fan engine coolant outlet temperature: - °C 95
 Maximum allowable pressure drop across charge air cooler and OEM CAC piping (CACDP): - kPa 10.1

Electrical System

System voltage: - V 24
 Minimum battery capacity-cold soak at -18 C (0 F) or above
 Engine only (de-clutched load) cold cranking amperes: - CCA 900

EMISSIONS

Gaseous Emissions per GB 20891-2007, at 1500rpm:

- Weight-Specific Nox: - g/kW.h 5.341
 - Weight-Specific HC: - g/kW.h 0.124
 - Weight-Specific CO: - g/kW.h 0.393
 - Weight-Specific Particulates: - g/kW.h 0.026



Dongfeng Cummins Engine Co.,Ltd

Generator Engine Performance Data

Engine Model

QSZ13-G3

FR20322 @ 1500RPM

Fuel Rating Option used for these Data: FR20322

Governed Engine Speed:-RPM
 Gross Engine Power Output-kW
 Torque:-N.m
 Engine Idle Speed:-RPM
 Friction Horsepower:-kW
 Piston Speed:-m/s
 Engine Water Flow to Engine:-litre/sec
 Intake Air Flow:-litre/sec.
 Exhaust Gas Temperature:-litre/sec
 Exhaust Gas Flow: °C
 Radiated Heat to Ambien:-kW
 Heat Rejection to Coolant:-kW
 Heat Rejection to Fuel:-kW
 Turbocharger Compressor Outlet Pressure:-kPa
 Turbocharger Compressor Outlet Temperature:-°C

Prime Power
1500
450
2865
37
8.15
6.5
35
36.45
530
104
155
250
198

ALL DATA CERTIFIED WITHIN 5%

TBD = To Be Decided N/A = Not Applicable N.A. = Not Available

All data is subject to change without notice, sorry for inform.

Dongfeng Cummins Engine Co., Ltd.