DCEC Cummins Engine Co.,Ltd

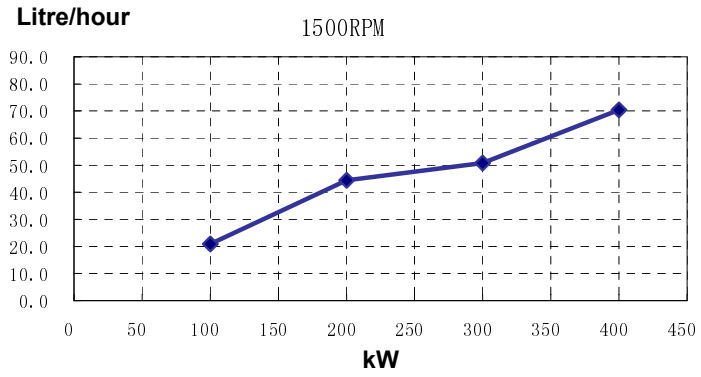
Generator Engine Performance Data | Engine Model | QSZ13-G2

FR20287 @ 1500RPM & 1800RPM

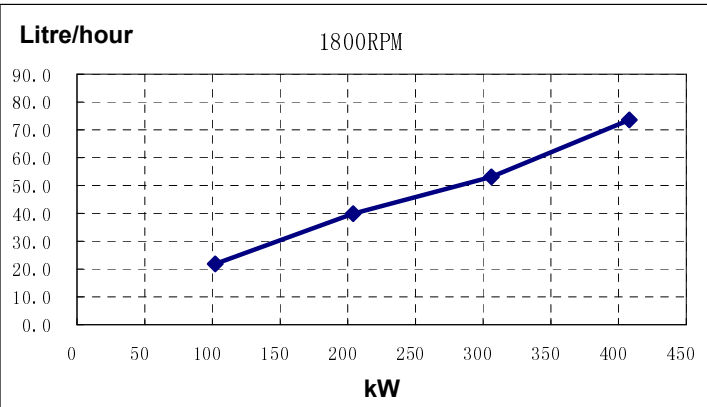
Engine Model: QSZ13-G2
CPL: 3354
Compression Ratio: 17:1
Engine Configuration: D0C3004GX03
Bore: 130 mm
Displacement: 13.0 L
Stroke: 163 mm
Cylinders: 6
Governor Regulation: ⩽3%
Aspiration: Turbocharged & Charge Air Cooled
Emission Certification: MEP STAGE II
Fuel System: XPI

Engine Speed	Standby Power		Prime Power		Continuous Power	
RPM	kW	HP	Kw	HP	kW	HP
1500	—	—	**400**	536	**340**	456
1800	—	—	**408**	547	**347**	465

Engine Performance Data @ 1500 RPM				
OUTPUT POWER			FUEL CONSUMPTION	
%	Kw	HP	g/kW.h	L/h
STANDBY POWER				
100	—	—	—	—
PRIME POWER				
100	**400**	536	212	70.4
75	**300**	402	204	50.8
50	**200**	268	268	44.5
25	**100**	134	252	20.9
Continuous Power				
100	**340**	456	207	58.5



Engine Performance Data @ 1800 RPM				
OUTPUT POWER			FUEL CONSUMPTION	
%	Kw	HP	g/kW.h	L/h
STANDBY POWER				
100	—	—	—	—
PRIME POWER				
100	**408**	547	217	73.6
75	**306**	410	209	53.1
50	**204**	273	235	39.9
25	**102**	137	258	21.8
Continuous Power				
100	**347**	465	213	61.3



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 2500 m (8200ft.) altitude.

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Generator Engine Performance Data			Engine Model	QSZ13-G2
FR20287	@	1500RPM & 1800RPM		

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:	- ℃	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	125

FUEL SYSTEM

Maximum fuel supply restriction as OEM connection point at 1,800 RPM		
and No load with clean fuel filter element(s) at maximum fuel flow:	- kPa	13.5
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:	- ℃	71
Maximum heat rejection to return fuel	- kW	5.36
Maximum design fuel flow:	- kg/hr	204

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Generator Engine Performance Data			Engine Model	QSZ13-G2
FR20287	@	1500RPM & 1800RPM		

Cold Start Performancee

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

Cooling System

Coolant Capacity	- L	23.1
Engine coolant circuit thermostat opening temperature:	- ℃	82
Engine coolant circuit thermostat fully open temperature:	- ℃	94
Maximum coolant pressure(exclusive of pressure cap; closed thermostat at maximum no load speed):	- kPa	407
Maximum coolant temperature - engine out	- ℃	102
Maximum deaeration time:	- mins	25
Minimum operating block coolant temperature:	- ℃	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:	- ℃	107
Full-ON Fan engine coolant outlet temperature:	- ℃	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	6
- Weight-Specific HC:	- g/kW.h	1
- Weight-Specific CO:	- g/kW.h	3.5
- Weight-Specific Particulates:	- g/kW.h	0.2

Gaseous Emissions per GB 20891-2007, at 1800rpm:

- Weight-Specific Nox:	- g/kW.h	6
- Weight-Specific HC:	- g/kW.h	1
- Weight-Specific CO:	- g/kW.h	3.5
- Weight-Specific Particulates:	- g/kW.h	0.2

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Generator Engine Performance Data			Engine Model	QSZ13-G2
FR20287	@	1500RPM & 1800RPM		

Fuel Rating Option used for these Data: FR20287

	Standby Power		Prime Power	
	1500	1800	1500	1800
Governed Engine Speed: .....-RPM	—	—	**400**	**408**
Gross Engine Power Output: ..... -kW	—	—	2547	2165
Torque: .....-N.m	—	—	700	700
Engine Idle Speed: .....-RPM	—	—	33	40
Friction Horsepower: .....-kW	—	—	8.15	9.78
Piston Speed: .....-m/s	—	—	12	13
Engine Water Flow to Engine: .....-litre/sec	—	—	480	550
Intake Air Flow: .....-litre/sec.	—	—	1085	1156
Exhaust Gas Temperature: ..... -litre/sec	—	—	535	535
Exhaust Gas Flow: ..... -℃	—	—	25	30
Radiated Heat to Ambien: ..... -kW	—	—	144	147
Heat Rejection to Coolant: ..... -kW	—	—	1.4	1.5
Heat Rejection to Fuel: .....-kW	—	—	268	248
Turbocharger Compressor Outlet Pressure: ..... -kPa	—	—	208	198
Turbocharger Compressor Outlet Temperature: ....-℃				

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.