

N67 Tier4b / StageIV

Engine Performance Data Sheet



Industrial Market

Number Cylinders: 6
Displacement: 6.7 L

Aspiration: Turbocharged Charge Air Cooled
Fuel System: Bosch HPCR

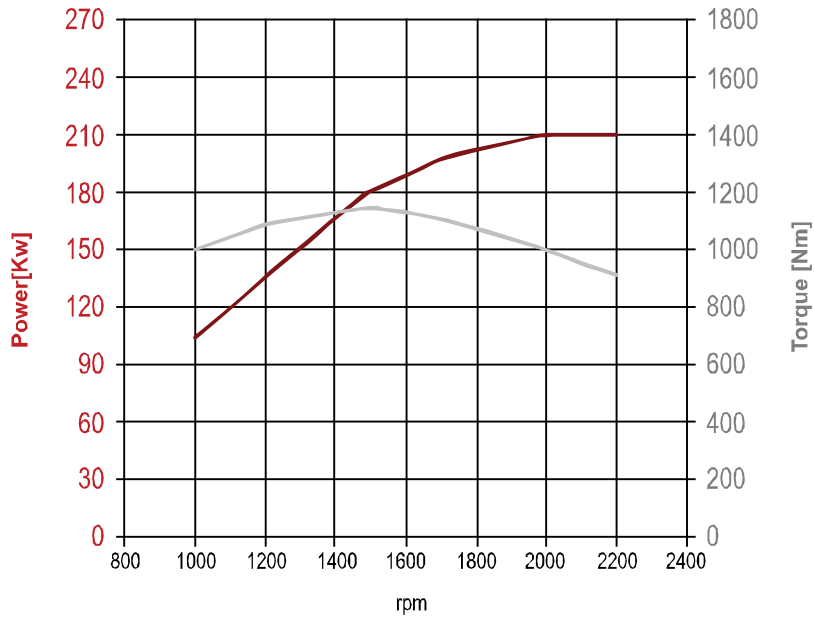
Revision: 39
Data : 30/09/2014

Power : 210 kW @ 2200 rpm

Torque : 1150 Nm @ 1500 rpm

Status for curves and data: Approved

Tolerance on values: ± 5% (N/A for Alpha/Beta/Preliminary Engines)

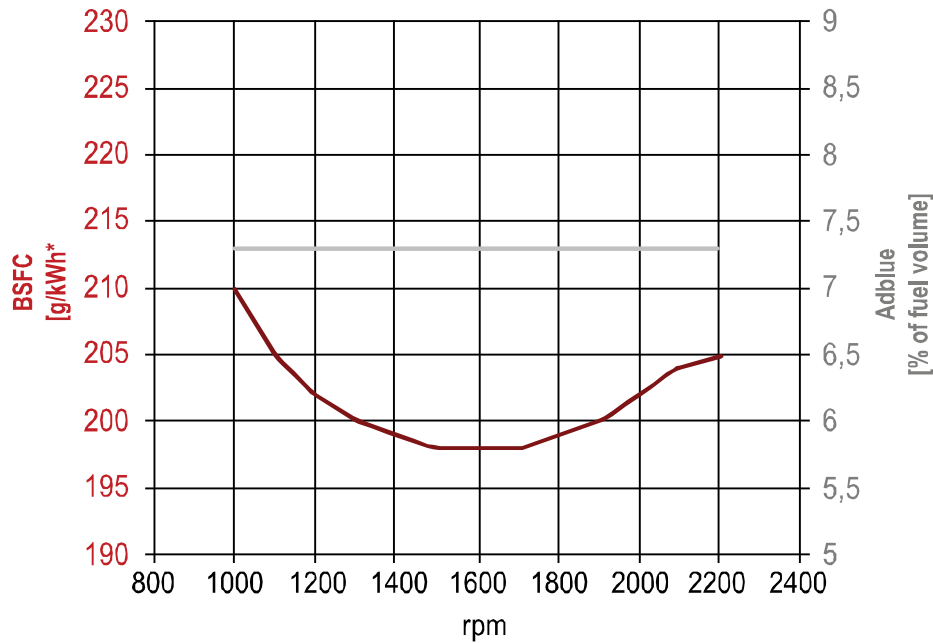


rpm	Power Output (kW)	Torque Output (Nm)
1000	105	1000
1100	120	1040
1200	136	1085
1300	151	1110
1400	166	1133
1500	181	1150
1600	189	1130
1700	197	1108
1800	202	1070
1900	207	1040
2000	210	1005
2100	210	955
2200	210	913

Engine Performance data

Rated Power (*)	kW (CV)	210
Rated speed	rpm	2200
Specific Power (rated)	kW/l	31.2
Max Power (peak)	kW (CV)	210
Power speed (peak)	rpm	2200
Specific Power (peak)	kW/l	31.2
BMEP @max Power	bar	17
Mean Piston Speed	m/s	9.68
Max Torque	Nm	1150
Max Torque speed	rpm	1500
Specific Torque	Nm/l	170.9
BMEP @ max Torque	bar	21.5
Torque rise	%	26
Torque @ 1000 rpm	Nm	1000
Max no load governor speed	rpm	2375±50
Nominal idling speed	rpm	750±100
Best Point BSFC	g/kWh	198
Oil consumption @ rated speed	g/kWh	0.14
Engine brake power @ rated speed	kW	28
Engine brake power in over speed	kW	56

BSFC



Lubrication System

Min oil pressure @ low idle (engine oil temp at 120°C)	kPa (bar)	60
Min oil pressure @ rated speed (engine oil temp at 120°C)	kPa (bar)	200
Max oil pressure @ rated speed (engine oil temp at 120°C)	kPa (bar)	350

Cooling System

Maximum coolant temperature (engine out) with 100 kPa pressure cap	°C	106
Engine out coolant to ambient @ rated speed	delta °C	na
Engine out coolant to ambient @ torque speed	delta °C	na
Charge air cooler outlet to ambient @ max rpm - CAC dT	delta °C	25
Maximum Air intake Manifold Temperature	°C	75-90

Engine Noise

Full load @ Rated Speed (top rating)	dBA	94.7
No load @ Low Idle	dBA	88.6

Maximum Rating Performance Data (*)

		Rated speed	Max power	Peak Torque
Power output	kW	210	210	181
Torque	Nm	913	913	1150
Speed	rpm	2200	1800	1500
Ambient Temperature	°C	25	25	25
EGR Rate	%	na	na	na
Frictional torque	Nm	tbd	tbd	tbd
Fuel Flow	g/s	13.1	11.1	9.8
Fuel consumption (BSFC)	g/kWh	205	199	198
AdBlue consumption	% fuel Volume	7.3	7.3	7.3
Charge Air Flow	g/s	297	286	217
Exhaust Gas Flow	g/s	309	288	228
EGR flow	g/s	na	na	na
EGR Pressure	kPa	na	na	na
Boost Pressure (compressor outlet)	kPa	170	175	170
Temperature after HP-Compressor	°C	na	na	na
Boost Temperature (includes EGR effect)	°C	170	175	260
Exhaust Gas Temp between HP-TC	°C	na	na	na
Exhaust Gas Temp (after TC)	°C	510	510	530
Power engine coolant without EGR & CAC	kW	na	na	na
Power high Temperature EGR Cooler (engine water)	kW	na	na	na
Power LP-CAC (engine water)	kW	na	na	na
Total Water cooling power of engine	kW	91	91	82.5
Total Pump water flow	l/s	3.7	3.0	2.5
Radiator Coolant Flow (**)	l/min	na	na	na
EGR Cooler water flow (for $\Delta T=6^{\circ}C$)	l/s	na	na	na
LP-CAC water flow (for $\Delta T=6^{\circ}C$)	l/s	na	na	na
Power of HP CAC	kW	na	na	na
Total CAC power (air to air)	kW	34.5	35.5	25.5

(*) Power at flywheel according dir. 97/68 EC (w/o fan), after 50 hours of run-in, tolerance $\pm 3\%$, fuel EN 590; Test according ISO 3046/1, turbo air inlet temperature $25^{\circ}C$, atmospheric pressure 100 kPa, humidity 30 % - According also to DIN 6271, BS 5514, SAE J1349. All data is based on the engine operating with fuel system, water pump, lubricating oil pump with inlet and exhaust restriction at or below Datasheet limits. Accessory loads assumed at 20 N-m across from idle to rated rpm. Fan duty cycle must be lower than 20% Radiator Coolant Flow is approximately 5% less with a continuously deaerating system. Coolant: 50/50 - Ethylene Glycol/Water by volume.

(**) Radiator Coolant Flow is approximately 5% less with a continuously deaerating system. Coolant: 50/50 - Ethylene Glycol/Water by volume.

All data is subject to change without notice

Revision	Description	Date
33	First document release	31/01/2014
34		28/02/2014
35		31/03/2014
37		30/04/2014
38		30/06/2014
38.1		31/07/2014
39		30/09/2014