CHESTER

MODEL

CH6-108-EE

Engine Specification Sheet

Model	Ratings HP (kW) @ Rated speed rpm
	2950
CH6-108-EE	335 (250)

ENGINE SPECIFICATIONS		
Type	4 Cycle; In-line; water cooled; 6 Cylinder	
Aspiration	Turbocharged +Water Cooled	
Bore and Stroke	mm×mm	108x125
Displacement	L	6.871
Compression Ratio	17.5:1	
Combustion System	Direct Injection	
Rotation Viewed from flywheel	Counter Clockwise	
Dry Weight Approx.	kg	930
Dimension Approx. (L*W*H)	mm	1620*1000*1465
Crankshaft Centerline Height	mm	400
Oil Capacity	L	24
Coolant Capacity - Engine + Heat Exchanger	L	30

Engine Equipment	Standard	Optional
Air Cleaner	Drip proof	N/A
Alternator	24V-DC, 55 Amps with BeltGuard	N/A
Coupling	Bare Flywheel	N/A
Engine Heater	220V-AC	110V-AC
Exhaust Flex Connection	DN100	N/A
Exhaust Protection	Metal Guard	N/A
Flywheel Housing	SAE 2	N/A
Flywheel Power Take Off	SAE 11.5	N/A
Fuel Connections	Flexible hoses according ISO 15540	N/A
Fuel Filter	Full flow, cartridge type	N/A
Governor, Speed	Constant speed, mechanical	N/A
Heat Exchanger	Shell and Tube Type	N/A
Instrument Panel	Build on Engine	N/A
Junction Box	Integrated in control panel	N/A
Lube Oil Cooler	Jacket Water Cooled	N/A
Lube Oil Filter	Full flow, cartridge type	N/A
Lube Oil Pump	Gear Driven, Gear Type	N/A
Manual Start Control	Dual Manual Start Contactors	N/A
Overspeed Control	Electronic instrument panel, test on instrument panel	N/A
Raw Water Cooling Loop w/ Alarms	Galvanized	Seawater (All 316 SS)
Raw Water Solenoid Operation	Automatic from Fire Pump Controller and from Engine Instrument Panel (for Horizontal Fire Pump Applications)	N/A
Run - Stop Control	On Instrument Panel with Control Position Warning Light	N/A
Starters	24V-DC, 6 KW	N/A
Throttle Control	Adjustable speed control	N/A
Water Pump	Centrifugal Type, Gear Driven	N/A

All data is based on the engine operating with fuel system, lubricating oil pump, air cleaner, and alternator; not included are compressor, fan, optional equipment, and driven components.;Data is based on operation at SAE standard J1394 conditions of 300ft (91,4m) altitude, 29.61 in.(752mm) Hg dry barometer, and 77°F (25°C) intake air temperature, using 0# diesel fuel follow the standard GB 252-2011.

Altitude above which output should be Limited	m (ft.)	91 (300)
Correction Factor per 305m.(1,000ft.) above Altitude Limit	3%	
Temperature above which output should be Limited	°C (°F)	25 (77)
Correction Factor per 5.6°C (10°F) above Temperature Limit	1%	

Remark:

1.All data certified within 5%;
2.TBD - To Be Determined;
3.N/A - Not Applicable;

Engine Data Sheet

Engine Model	**CH6-108-EE**	**Date**	**2020/6/18**
Drawing No.	**CH6-108-EE.00**	**Performance Curve No.**	**C06108E**
Rated Power	**335 HP @2950 RPM**	**Reference No.**	**14DS001E**
	250 KW @ 2950 RPM	**Version**	**A**

GENERAL ENGINE DATA				
	Type		4 Cycle; In-line; water cooled; 6 Cylinder	
	Aspiration		Turbocharged +Water Cooled	
	Bore and Stroke		mm×mm	108x125
	Cylinder Liner Type		☑ Wet	☐ Dry
	Displacement		L	6.871
	Compression Ratio		17.5:1	
	Firing Order		1-5-3-6-2-4	
	Combustion System		Direct Injection	
	Rotation Viewed from front of engine		CW	
	Valves Per Cylinder		Intake :1 Exhuast :1	
	Valves lashes at cold	Intake	mm (inch)	0.40～0.45
		Exhaust	mm (inch)	0.46～0.52
	Ignition Type		Compression(Diesel)	
	Charge Air Cooling Type		Raw Water	
	Dry Weight Approx.		kg	930
	Dimension Approx. (L*W*H)		mm	1620*1000*1465
	Flywheel/ Flywheel House Dimension		11.5"/ SAE 2	
	Torque at rated RPM		N.m	824
EXHAUST SYSTEM				
	Exhaust Gas Temp. at max. rating/power		℃	600
	Exhaust Gas Flow at Max. output		m^3/h	3510
	Max. Allowable Back Pressure		kpa	10
	Minimum Exhaust Pipe Diameter		DN	100
AIR INTAKE SYSTEM				
	Air Cleaner Type		Dry Type	
	Air Flow at Max. output		m^3/h	1284
	Air Inlet Restriction Dirty		kpa	6
	Air Inlet Restriction Clean		kpa	3
LUBRICATION SYSTEM				
	Oil Capacity		L	24
	Max. Sump Oil Temp.		℃	120
	Normal Operating Oil Pressure Range		bars	2.5~6.0
	Oil Pressure at Idle		bar	>1
COOLING SYSTEM				
	Coolant Capacity - Engine + Heat Exchanger		L	30
	Thermostat Range	Start Open	℃	75
		Full Open	℃	85
	Coolant Pressure Cap		bar	0.9
	Max. Engine Coolant Temp.		℃	98
	Engine Coolant Flow at Full Load		m^3/h	23
	Raw Water Cooling Capacity		m^3/h	10

Engine Data Sheet

Raw Water Pressure		bar	2
Min. Raw Water Temp.		℃	15.6
Raw Water Pipe Size	Raw Water Inlet	G1"	
	Raw Water Outlet	G1 1/4"	
HEATER SYSTEM			
Wattage		W	3000
Voltage AC		V	220
ELECTRICAL SYSTEM-DC			
System Voltage(Nominal)		V	24
Starter motor		Kw	6
Recommended Battery Capacity		AH	180
Cold Cranking Amperes @ -18℃ (0ºF)		CCA	900
Reserve Capacity (RC)		Min	360
Charging Alternator Output		Amps	55
Max. Starter Cranking Amps @4.5℃（0°F）		Amps	370
Min. Cranking Speed Required for Unaided Cold Start		rpm	260
FUEL SYSTEM			
Injection Pump			
Injection Advance Angle		°	16
Minimum Supply line Size		mm	10
Minimum Return line Size		mm	10
Fuel Management Control		Mechanical	
Max. Fuel Consumption		g/kw,h	256
Idle Speed		rpm	750
Max. Governed Speed		rpm	3245
Maximum allowable fuel height above fuel pump		m	3
Governed Speed Rate		%	<10
Engine Performance Data			
Estimated free field soud pressure level at 1 meter with full-load governed speed(Includes Noise from: exhaust;: Cooling System and Driven Components)		dBa	108
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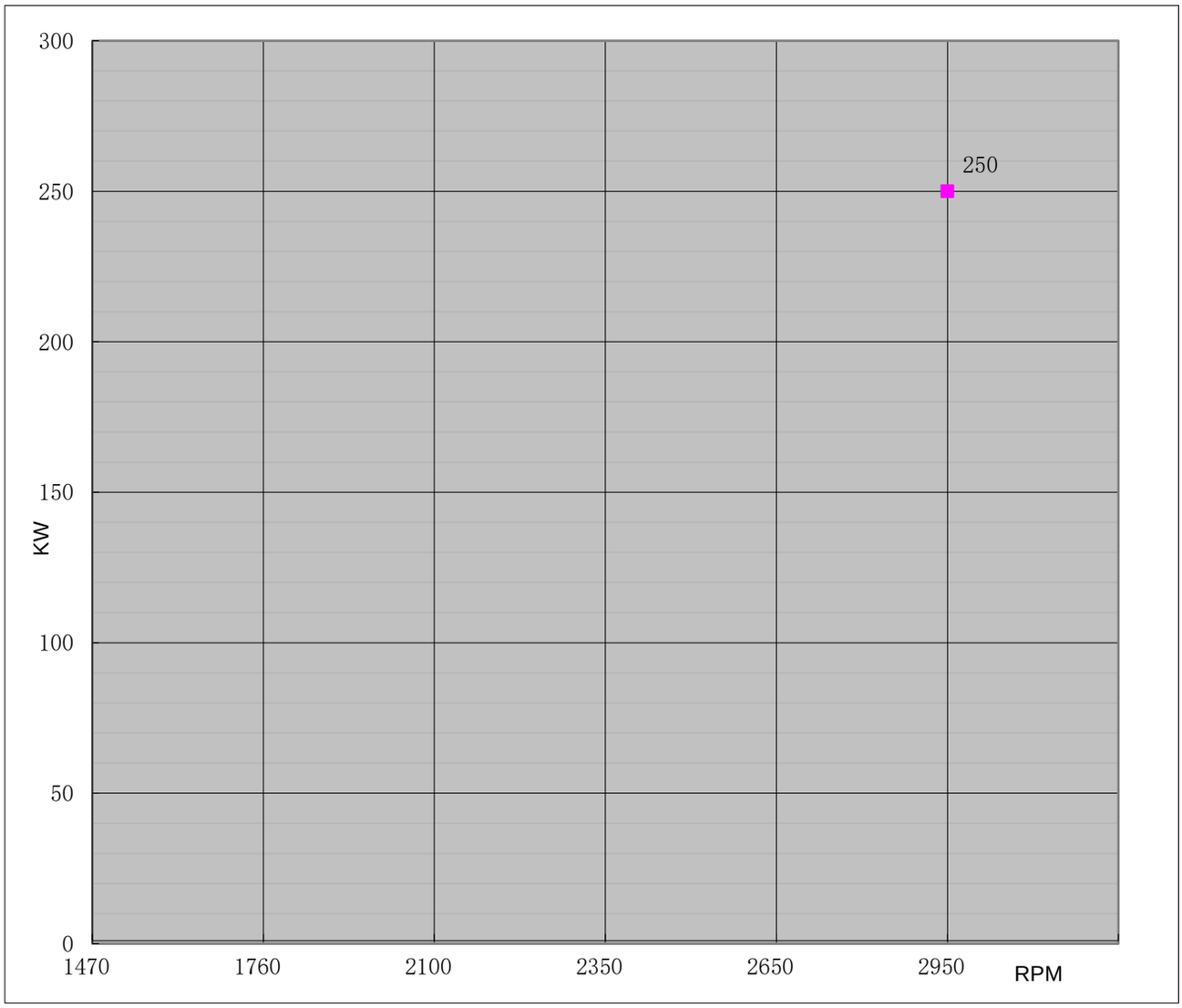
DIESEL ENGINE

Engine Model	CH6-108-EE	Curve No.	C06108E	Date	2020/6/18

Displacement	6.87 L	Aspiration	Turbocharged+Water cooled	Power Standard	UL/FM
Bore	108 mm	Cylinder Qty.	6	250 KW @ 2950 r/min	
Stroke	125 mm	Fuel System	In-Line; Mechanical	335 HP @ 2950 r/min	



Torque

Speed	Torque	
RPM	N-m	lb-ft.
1470		
1760		
2100		
2350		
2650		
2950	809	597

Output Power

Speed	Output Power	
RPM	KW	HP
1470		
1760		
2100		
2350		
2650		
2950	250	335

Fuel Consumption

Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1470		
1760		
2100		
2350		
2650		
2950	256	0.421

REV: A