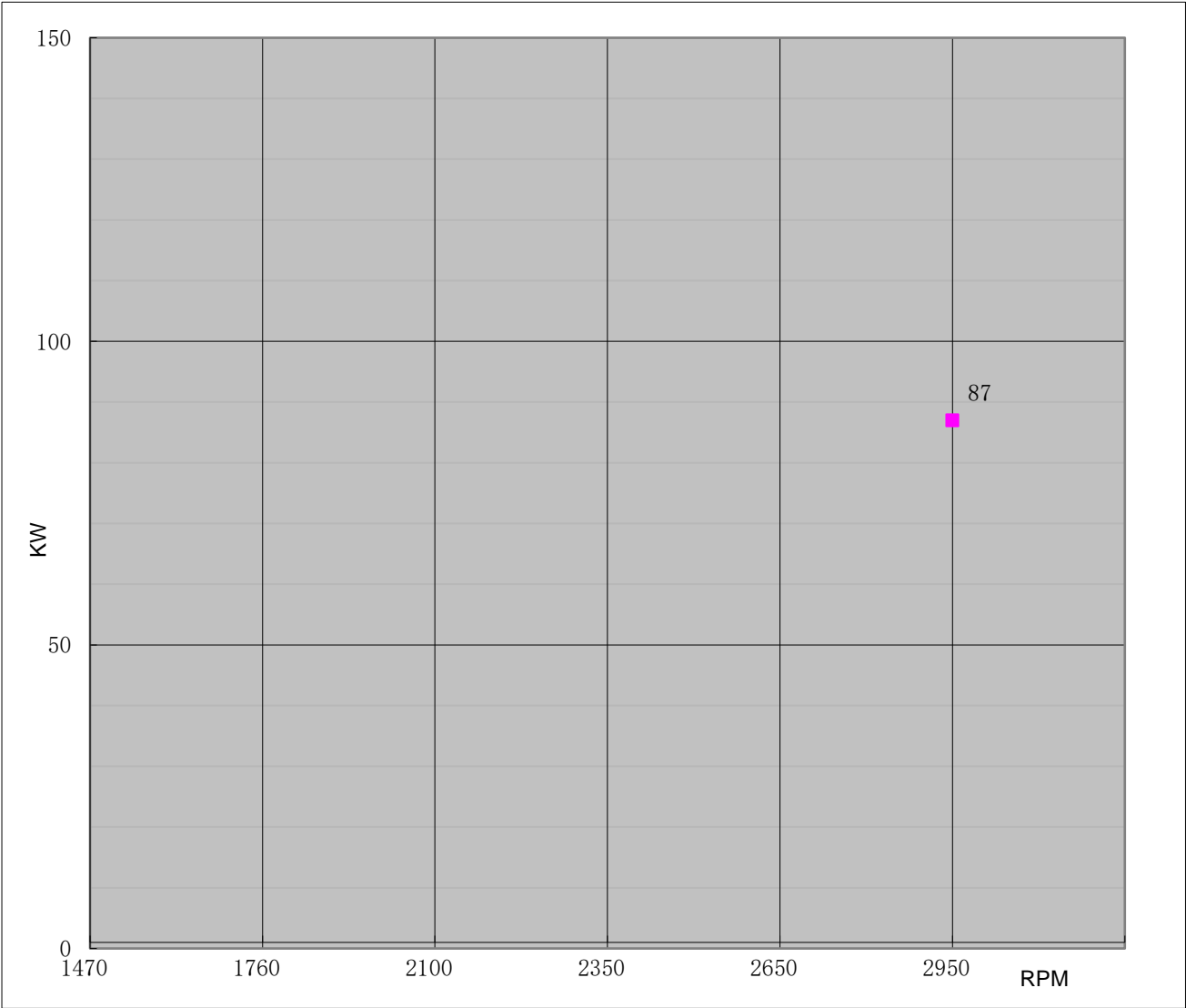




DIESEL ENGINE

Engine Model		CH4-108-EB		Curve No.		C04108BF	Date	2020/3/13
Displacement	4.21	L	Aspiration	Turbocharged		Power Standard		UL/FM
Bore	108	mm	Cylinder Qty.	4		87	KW @ 2950	r/min
Stroke	115	mm	Fuel System	In-Line; Mechanical		117	HP @ 2950	r/min



Torque		
Speed	Torque	
RPM	N-m	lb-ft.
1470		
1760		
2100		
2350		
2650		
2950	283	208

Output Power		
Speed	Output Power	
RPM	KW	HP
1470		
1760		
2100		
2350		
2650		
2950	87	117

Fuel Consumption		
Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1470		
1760		
2100		
2350		
2650		
2950	265	0.436



## Engine Data Sheet

Engine Model	CH4-108-EB	Date	2020/4/11
Drawing No.	CH4-108-EB-F-00	Document No.	DS04108BF
Rated Power	117 HP @ 2950 RPM	Performance Curve No.	C04108BF
	87 KW @ 2950 RPM	Version	A

### GENERAL ENGINE DATA

Type		4 Cycle; In-line; water cooled; 4 Cylinder	
Aspiration		Turbocharged	
Bore and Stroke		mm×mm	108x115
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry
Displacement		L	4.214
Compression Ratio		17:01	
Firing Order		1-3-4-2	
Combustion System		Direct Injection	
Rotation Viewed from flywheel		Counter Clockwise	
Valves Per Cylinder		Intake :1 Exhaust :1	
Valves lashes at cold	Intake	mm	0.40±0.05
	Exhaust	mm	0.45±0.05
Charge Air Cooling Type		Raw Water	
Dry Weight Approx.		kg	631
Dimension Approx. (L*W*H)		mm	1292*940*1210
Flywheel/ Flywheel House Dimension		11.5"/ SAE 2	

### EXHAUST SYSTEM

	Exhaust Gas Temp.	°C	600 @ 2950rpm
	Exhaust Gas Flow	m³/h	1404 @ 2950rpm
	Max. Allowable Back Pressure	kpa	7
	Minimum Exhaust Pipe Diameter	DN	80
	Minimum exhaust pipe diameter is based on 6 meter of pipe, one elbow, and a silencer. Pressure drop no greater than one half the max. allowable back pressure		

### AIR INTAKE SYSTEM

Air Cleaner Type	Dry Type		
Air Flow	m³/h	515 @2950rpm	
Max. Allowable Air Inlet Restriction	kpa	4	

### LUBRICATION SYSTEM

Oil Capacity	L	13	
Engine Normal Operating Sump Oil Temp.	°C	80-115	
Normal Operating Oil Pressure Range	bars	2.5~6.0	
Oil Pressure at Idle	bar	>1	

### COOLING SYSTEM

Coolant Capacity - Engine + Heat Exchanger	L	20	
Thermostat Range	Start Open	°C	70
	Full Open	°C	80
Coolant Pressure Cap	bar	0.9	
Raw Water Working Pressure Range at Heat Exchanger	bar	5	
Engine Normal Operating Coolant Temp.	°C	70-95	
Engine Coolant Flow at Full Load	m³/h	11.2	



## Engine Data Sheet

Minimum Raw Water Flow @ Engine Speed (rpm)		2950	
Raw Water Temperatures to 16 °C (m³/h)		5.5	
Raw Water Temperatures to 38 °C (m³/h)		7	
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	5
Recommended Battery Capacity		AH	150
Cold Cranking Amperes @ -18°C (0°F)		CCA	900
Charging Alternator Output		Amps	35
FUEL SYSTEM			
Injection Pump			
Injection Advance Angle		°	12±1
Minimum Supply line Size		mm	10
Minimum Return line Size		mm	10
Fuel Management Control		Mechanical	
Idle Speed		rpm	700~750
Governed Speed Rate		%	<10
Engine Performance Data			
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 daa certified within 5%;			
2.TBD - To Be Determined;			
3.N/A - Not Applicable;			