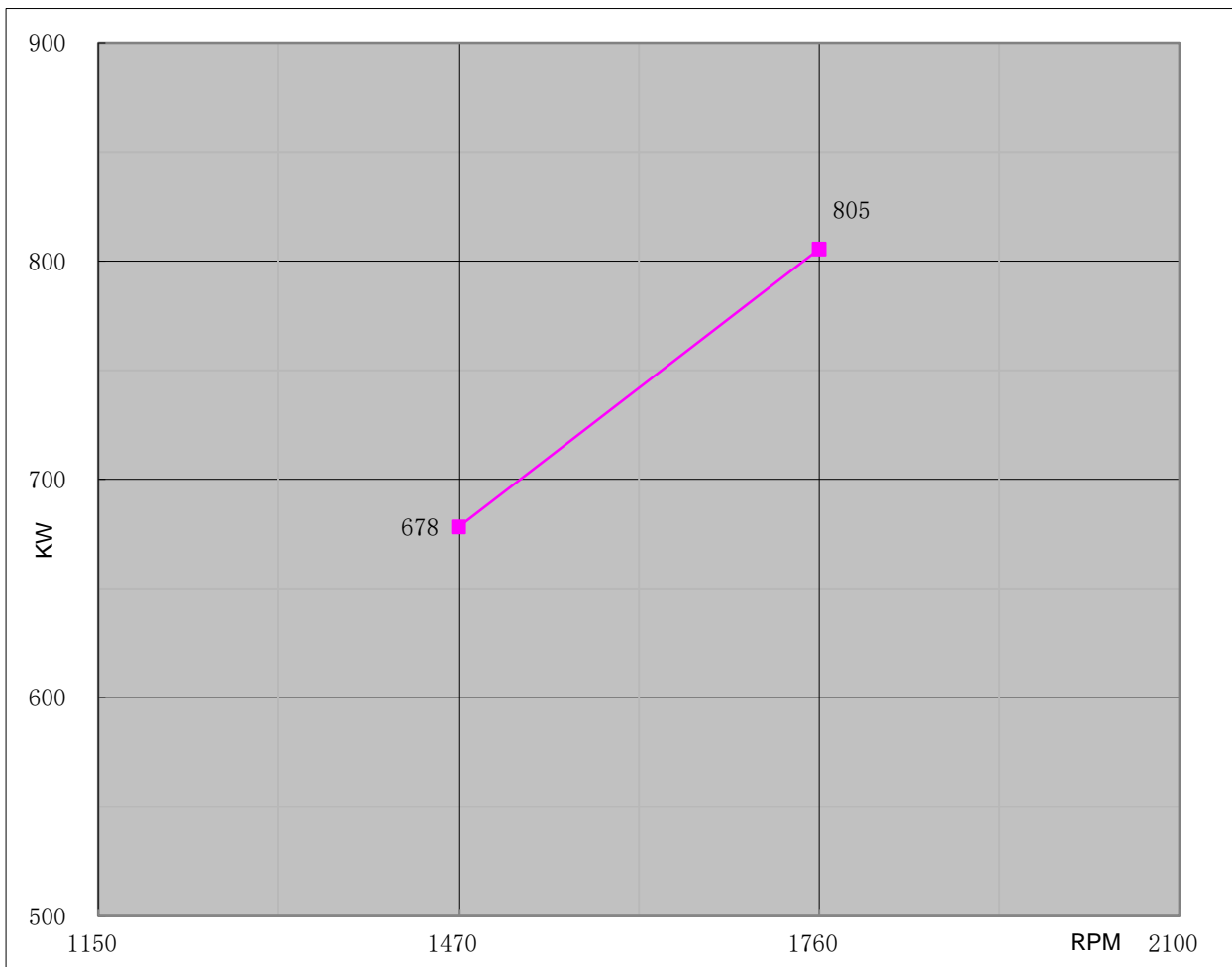




Performance Curve

Engine Model		CH12-159-EB		Curve No.		C12159BF	Date	2021/12/10
Displacement	38.00	L	Aspiration	Turbocharged+Water cooled		Power Standard		UL/FM
Bore	159	mm	Cylinder Qty.	12,V-Type		805 KW @ 1760 r/min		
Stroke	159	mm	Fuel System	Mechanical		1080 HP @ 1760 r/min		



Torque		
Speed	Torque	
RPM	N-m	lb-ft.
1150		
1470	4406	3249
1760	4371	3223
2100		

Output Power		
Speed	Output Power	
RPM	KW	HP
1150		
1470	678	909
1760	805	1080
2100		

Fuel Consumption		
Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1150		
1470	205	0.337
1760	205	0.337
2100		

REV: A



Engine Data Sheet

Engine Model	CH12-159-EB	Date	2021/12/10
Drawing No.	CH12-159-EB-00	Document No.	DS12159BF
Rated Power	1080 HP @1760 RPM	Performance Curve No.	C12159BF
	805 KW @ 1760 RPM	Version	A

GENERAL ENGINE DATA

Type		4 Cycle;V-Type; water cooled; 12 Cylinder	
Aspiration		Turbocharged +Water Cooled	
Bore and Stroke		mm×mm	159x159
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry
Displacement		L	38
Compression Ratio		14.5:1	
Firing Order		1R-6L-5R-2L-3R-4L-6R-1L-2R-5L-4R-3L	
Combustion System		Direct Injection	
Rotation Viewed from flywheel		Counter Clockwise	
Valves Per Cylinder		Intake :2 Exhaust :2	
Valves lashes at cold	Intake	mm	0.36
	Exhaust	mm	0.69
Charge Air Cooling Type		Raw Water	
Dry Weight Approx.		kg	4575
Dimension Approx. (L*W*H)		mm	2550*1745*1756
Flywheel/ Flywheel House Dimension		18"/ SAE 0	

EXHAUST SYSTEM

Exhaust Gas Temp.	°C	487 @ 1760rpm
Exhaust Gas Flow	m³/h	12024 @ 1760rpm
Max. Allowable Back Pressure	kpa	9
Minimum Exhaust Pipe Diameter	DN	2x200
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	4558 @1760rpm	
Max. Allowable Air Inlet Restriction	kpa	5	

LUBRICATION SYSTEM

Oil Capacity	L	135	
Engine Normal Operating Sump Oil Temp.	°C	80-115	
Normal Operating Oil Pressure Range	bars	3~4.5	
Oil Pressure at Idle	bar	1.38	

COOLING SYSTEM

Coolant Capacity - Engine + Heat Exchanger	L	160	
Thermostat Range	Start Open	°C	82
	Full Open	°C	93
Coolant Pressure Cap	bar	0.9	
Raw Water Working Pressure Range at Heat Exchanger	bar	5	
Engine Normal Operating Coolant Temp.	°C	82-93	
Engine Coolant Flow at Full Load	m³/h	94	



Engine Data Sheet

Minimum Raw Water Flow @ Engine Speed (rpm)		1470	1760
Raw Water Temperatures to 16 °C (m³/h)		15	19
Raw Water Temperatures to 38 °C (m³/h)		18	23
Raw Water Pipe Size	Raw Water Inlet	G2"	
	Raw Water Outlet	G2 1/2"	
HEATER SYSTEM			
Wattage		W	2x4500
Voltage AC		V	220
ELECTRICAL SYSTEM-DC			
System Voltage(Nominal)		V	24
Starter motor		Kw	2x8.9
Recommended Battery Capacity		AH	200
Cold Cranking Amperes @ -18°C (0°F)		CCA	1000
Charging Alternator Output		Amps	70
FUEL SYSTEM			
Injection Pump			
Injection Advance Angle		°	IC (-4.67 ~ -4.78mm)
Minimum Supply line Size		mm	19
Minimum Return line Size		mm	16
Fuel Management Control		Mechanical	
Idle Speed		rpm	650
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;			