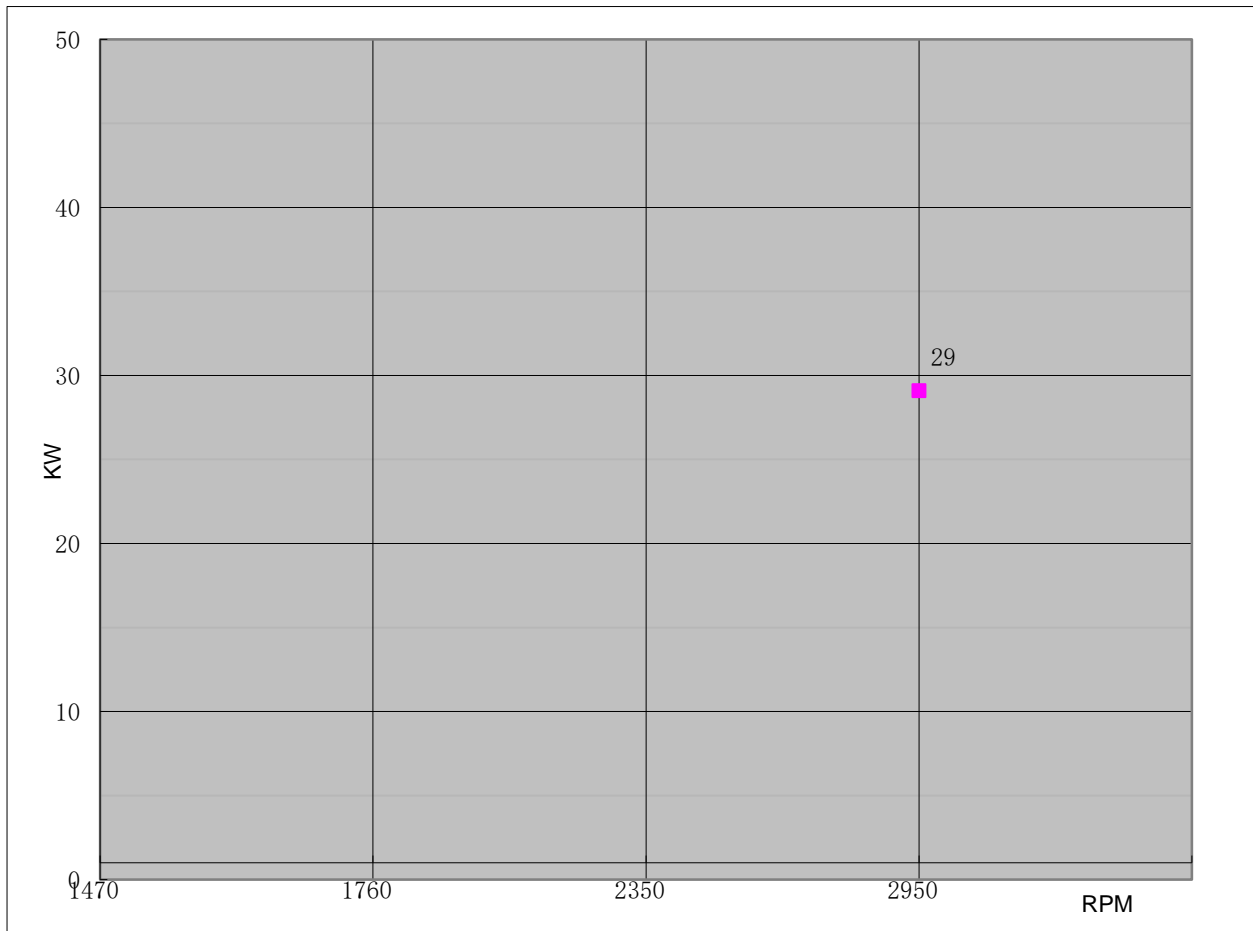




Performance Curve

Engine Model		CH4-90-EC		Curve No.		C0490CF	Date	2022/5/12
Displacement	2.54	L	Aspiration	Natural		Power Standard		UL/FM
Bore	90	mm	Cylinder Qty.	4, In-Line;		29	KW @ 2950 r/min	
Stroke	100	mm	Fuel System	Mechanical		39	HP @ 2950 r/min	



Torque		
Speed	Torque	
RPM	N-m	lb-ft.
1470		
1760		
2350		
2950	94	69

Output Power		
Speed	Output Power	
RPM	KW	HP
1470		
1760		
2350		
2950	29	39

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

REV: A



Engine Data Sheet

Engine Model	CH4-90-EC	Date	2022/5/12
Drawing No.	CH4-90-EC.00	Document No.	DS0490CF
Rated Power	39 HP @ 2950 RPM	Performance Curve No.	C0490CF
	29 KW @ 2950 RPM	Version	A

GENERAL ENGINE DATA

Type		4 Cycle; In-line; water cooled; 4 Cylinder	
Aspiration		Natural	
Bore and Stroke		mm×mm	90x100
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry
Displacement		L	2.54
Compression Ratio		17.5:1	
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	0.3
	Exhaust	mm	0.3
Charge Air Cooling Type		Raw Water	
Dry Weight Approx.		kg	400
Dimension Approx. (L*W*H)		mm	1205*790*1015
Flywheel/ Flywheel House Dimension		10"/ SAE 4	

EXHAUST SYSTEM

Exhaust Gas Temp.	°C	500 @ 2950rpm
Exhaust Gas Flow	m³/h	1060 @ 2950rpm
Max. Allowable Back Pressure	kpa	5
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	400 @2950rpm	
Max. Allowable Air Inlet Restriction	kpa	3 @2950rpm	

LUBRICATION SYSTEM

Oil Capacity	L	7	
Engine Normal Operating Sump Oil Temp.	°C	80-120	
Normal Operating Oil Pressure Range	bars	2~4.5	
Oil Pressure at Idle	bar	>1	

COOLING SYSTEM

Coolant Capacity - Engine + Heat Exchanger	L	15	
Thermostat Range	Start Open	°C	75
	Full Open	°C	85
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	4.8	

Engine Data Sheet

	Minimum Raw Water Flow @ Engine Speed (rpm)	2950	
	Raw Water Temperatures to 16 °C (m³/h)	2.4	
	Raw Water Temperatures to 38 °C (m³/h)	5.4	
	Raw Water Pipe Size	Raw Water Inlet	G3/4"
		Raw Water Outlet	G1"
HEATER SYSTEM			
	Wattage	W	2000
	Voltage AC	V	220
ELECTRICAL SYSTEM-DC			
	System Voltage(Nominal)	V	24
	Starter motor	Kw	4.5
	Recommended Battery Capacity	AH	150
	Cold Cranking Amperes @ -18°C (0°F)	CCA	900
	Charging Alternator Output	Amps	25
FUEL SYSTEM			
	Injection Pump		
	Injection Advance Angle	°	16±1
	Minimum Supply line Size	mm	8
	Minimum Return line Size	mm	8
	Fuel Management Control	Mechanical	
	Idle Speed	rpm	940±40
	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;			