

Engine Specification Sheet



Model	Ratings HP (kW) @ Rated speed rpm	
	1470 (UL) / 1465 (FM)	1760 (UL) / 1770 (FM)
CH12-150-E	980 (731)	1100 (820)

ENGINE SPECIFICATIONS		
Type	4 Cycle; V-Type; water cooled; 12 Cylinder	
Aspiration	Turbocharged +Water Cooled	
Bore and Stroke	mm×mm	150×150
Displacement	L	31.8
Compression Ratio	15.7:1	
Combustion System	Direct Injection	
Rotation Viewed from flywheel	Counter Clockwise	
Dry Weight Approx.	kg	4050
Dimension Approx. (L*W*H)	mm	2950*1730*2070
Crankshaft Centerline Height	mm	650
Oil Capacity Approx.	L	109
Coolant Capacity - Engine + Heat Exchanger Approx.	L	180



MODEL
CH12-150-E

Engine Equipment	Standard	Optional	
Air Cleaner	Drip proof	N/A	
Alternator	24V-DC, 55Amps with Belt Guard	N/A	
Coupling	Bare Flywheel	N/A	
Engine Heater	220V-AC	110V-AC	
Exhaust Flex Connection	2xDN200	N/A	
Exhaust Protection	Metal Guard	N/A	
Flywheel Housing	SAE 0	N/A	
Flywheel Power Take Off	SAE 18	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 (SS316 or Bronze)	
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, 10KW	N/A	
Throttle Control	Adjustable speed control	N/A	
Water Pump	Centrifugal Type, Belt 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	CH12-150-E	Date	2024/3/6	
Drawing No.	CH12-150-E.00	Performance Curve No.	C12150	
Rated Power	1100 HP @ 1760 RPM	Reference No.	14DS001E	
	820KW @ 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	150×150	
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry	
Displacement		L	31.8	
Compression Ratio		15.7:1		
Firing Order		A1-B2-A5-B4-A3-B1-A6-B5-A2-B3-A4-B6		
Combustion System		Direct Injection		
Rotation Viewed from front of engine		CW		
Valves Per Cylinder		Intake :2 Exhaust :2		
Valves lashes at cold	Intake	mm	0.3	
	Exhaust	mm	0.4	
Ignition Type		Compression(Diesel)		
Charge Air Cooling Type		Raw Water		
Dry Weight Approx.		kg	4050	
Dimension Approx. (L*W*H)		mm	2950*1730*2070	
Flywheel/ Flywheel House Dimension		18"/ SAE 0		
EXHAUST SYSTEM				
Exhaust Gas Temp. at max. rating/power		℃	550	
Exhaust Gas Flow at Max. output		kg/h	5534	
Max. Allowable Back Pressure		kpa	7.5	
Minimum Exhaust Pipe Diameter		DN	2x200	
AIR INTAKE SYSTEM				
Air Cleaner Type		Dry Type		
Air Flow at Max. output		kg/h	5344	
Air Inlet Restriction Dirty		kpa	6	
Air Inlet Restriction Clean		kpa	3	
LUBRICATION SYSTEM				
Oil Capacity		L	109	
Max. Sump Oil Temp.		℃	105	
Normal Operating Oil Pressure Range		bars	4~6	
Oil Pressure at Idle		bar	>2	
COOLING SYSTEM				
Coolant Capacity - Engine + Heat Exchanger		L	180	
Thermostat Range	Start Open	℃	77	
	Full Open	℃	87	
Coolant Pressure Cap		bar	0.9	
Max. Engine Coolant Temp.		℃	96	
Engine Coolant Flow at Full Load		m³/h	29	
Raw Water Cooling Capacity		m³/h	25	
Raw Water Pressure		bar	2	
Min. Raw Water Temp.		℃	15.6	



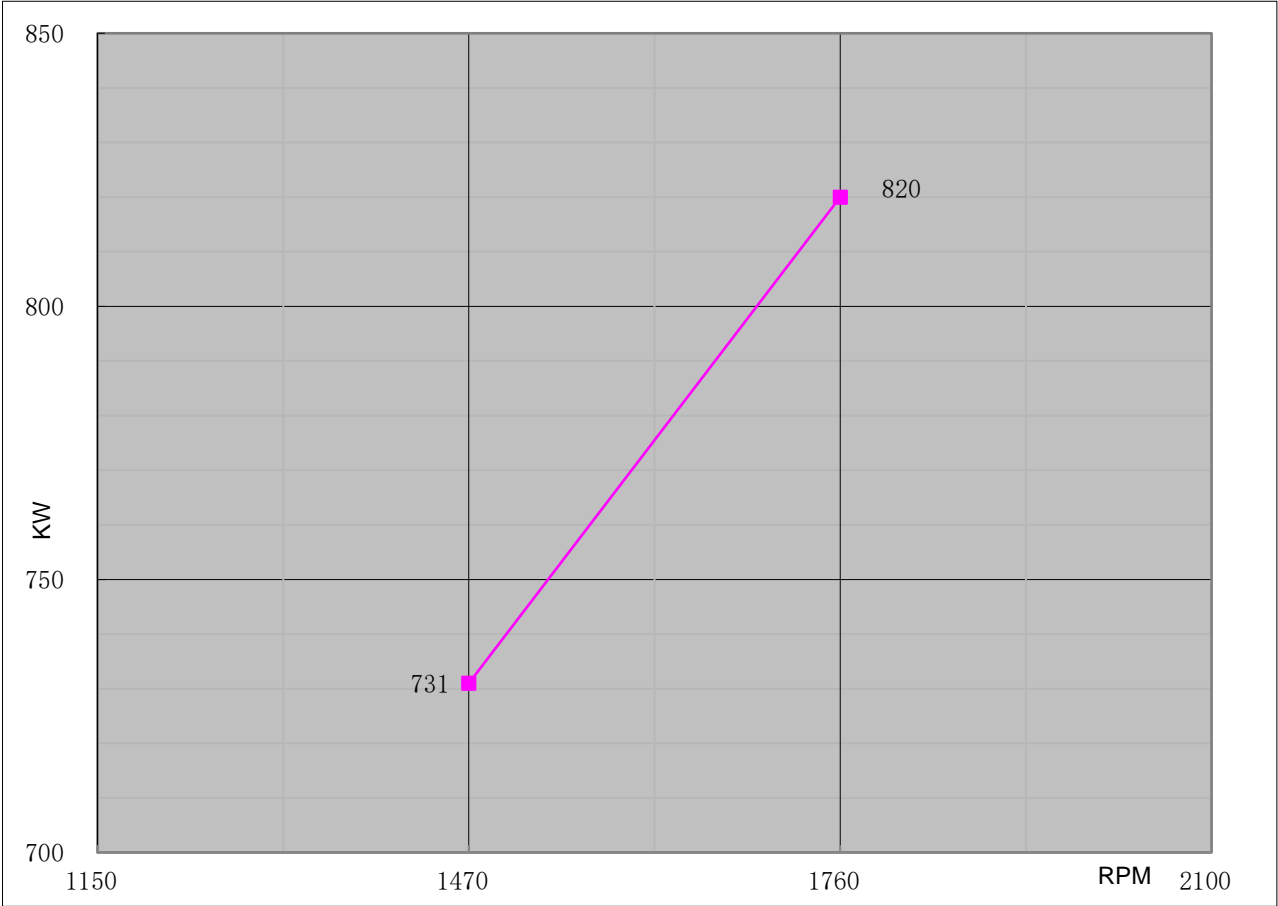
Engine Data Sheet

	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	10	
	Recommended Battery Capacity	AH	200	
	Cold Cranking Amperes @ -18°C (0°F)	CCA	1000	
	Reserve Capacity (RC)	Min	407	
	Charging Alternator Output	Amps	55	
	Max. Starter Cranking Amps @4.5°C (0°F)	Amps	480	
	Min. Cranking Speed Required for Unaided Cold Start	rpm	150	
FUEL SYSTEM				
	Injection Pump			
	Injection Advance Angle	°	21~22	
	Minimum Supply line Size	mm	12	
	Minimum Return line Size	mm	12	
	Fuel Management Control	Mechanical		
	Max. Fuel Consumption	g/kw,h	205	
	Idle Speed	rpm	700~750	
	Max. Governed Speed	rpm	1936	
	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	123.4	
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Performance Curve

Engine Model		CH12-150-E		Curve No.		C12150	Date	2024/3/6
Displacement	31.80	L	Aspiration	Turbocharged+Water cooled		Power Standard		UL/FM
Bore	150	mm	Cylinder Qty.	12, V-Type		820	KW @ 1760	r/min
Stroke	150	mm	Fuel System	Mechanical		1100	HP @ 1760	r/min



Torque		
Speed	Torque	
RPM	N-m	lb-ft.
1150		
1470	4748	3502
1760	4449	3281
2100		

Output Power		
Speed	Output Power	
RPM	KW	HP
1150		
1470	731	980
1760	820	1100
2100		

Fuel Consumption		
Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1150		
1470	185	0.304
1760	205	0.337
2100		

REV: A