

Engine Specification Sheet



Model	Ratings HP (kW) @ Rated speed rpm	
	1470 (UL)/1460(FM)	1760 (UL)/1740 (FM)
CH12-128-EB	805 (600)	878 (655)

ENGINE SPECIFICATIONS		
Basic Engine	DOOSAN	
Type	4 Cycle; V-type; water cooled; 12 Cylinder	
Aspiration	Turbocharged +Water Cooled	
Bore and Stroke	mm×mm	128x142
Displacement	L	21.927
Compression Ratio	15:1	
Rotation Viewed from flywheel	Counter Clockwise	
Dry Weight Approx.	kg	2150
Dimension Approx.(L*W*H)	mm	2290*1440*1760
Crankshaft Centerline Height	mm	565
Oil Capacity	L	40
Coolant Capacity - Engine + Heat Exchanger	L	70



MODEL
CH12-128-EB

Engine Equipment	Standard	Optional
Air Cleaner	Drip proof	N/A
Alternator	24V-DC, 45Amps with Belt Guard	N/A
Coupling	Bare Flywheel	N/A
Engine Heater	220V-AC	110V-AC
Exhaust Flex Connection	2*DN100	N/A
Exhaust Protection	Metal Guard	N/A
Flywheel Housing	SAE 1	N/A
Flywheel Power Take Off	SAE 14	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, 7KW	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	CH12-128-EB	Date	2020/10/22
Drawing No.	CH12-128-EC.00	Performance Curve No.	C12128B
Rated Power	878 HP @ 1760 RPM	Reference No.	14DS001E
	655 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	128x142
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet	<input type="checkbox"/> Dry
Displacement		L	21.927
Compression Ratio		15:01	
Firing Order		1-12-5-8-3-10-6-7-2-11-4-9	
Combustion System		Direct Injection	
Rotation Viewed from front of engine		CW	
Valves Per Cylinder		Intake :1 Exhaust :1	
Valves lashes at cold	Intake	mm (inch)	0.25
	Exhaust	mm (inch)	0.35
Ignition Type		Compression(Diesel)	
Charge Air Cooling Type		Raw Water	
Dry Weight Approx.		kg	2150
Dimension Approx. (L*W*H)		mm	2290*1440*1760
Flywheel/ Flywheel House Dimension		14"/ SAE 1	
Torque at rated RPM		N.m	3557
EXHAUST SYSTEM			
Exhaust Gas Temp. at max. rating/power		°C	475
Exhaust Gas Flow at Max. output		m³/h	8940
Max. Allowable Back Pressure		kpa	6
Minimum Exhaust Pipe Diameter		DN	150
AIR INTAKE SYSTEM			
Air Cleaner Type		Dry Type	
Air Flow at Max. output		m³/h	3264
Air Inlet Restriction Dirty		kpa	6
Air Inlet Restriction Clean		kpa	2
LUBRICATION SYSTEM			
Oil Capacity		L	40
Max. Sump Oil Temp.		°C	120
Normal Operating Oil Pressure Range		bars	2.5~6
Oil Pressure at Idle		bar	>1
COOLING SYSTEM			
Coolant Capacity - Engine + Heat Exchanger		L	70
Thermostat Range	Start Open	°C	71
	Full Open	°C	85
Coolant Pressure Cap		bar	0.9
Max. Engine Coolant Temp.		°C	98
Engine Coolant Flow at Full Load		m³/h	40
Raw Water Cooling Capacity		m³/h	40



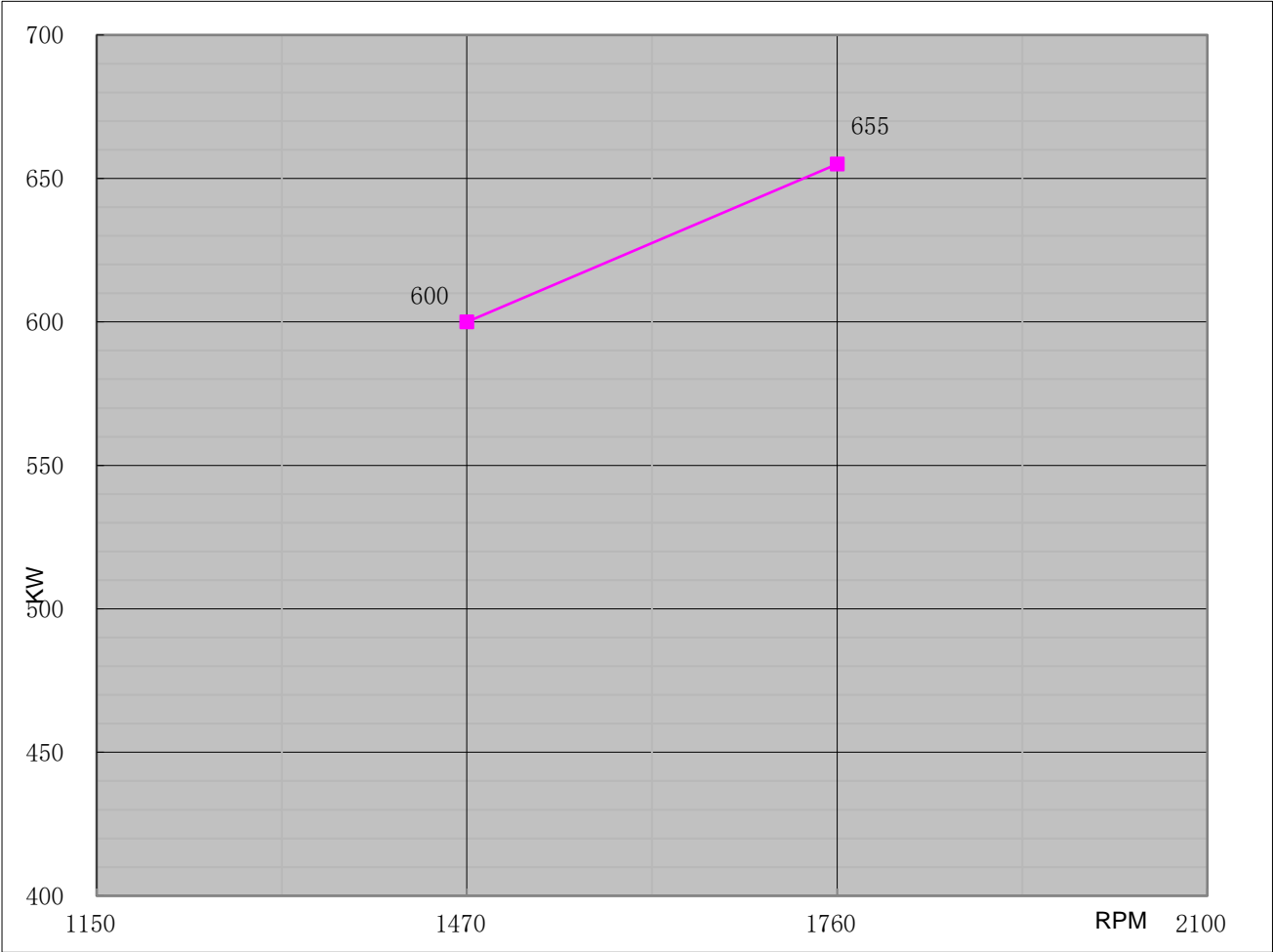
Engine Data Sheet

	Raw Water Pressure	bar	2
	Min. Raw Water Temp.	°C	15.6
	Raw Water Pipe Size	Raw Water Inlet	G2"
		Raw Water Outlet	G2 1/2"
HEATER SYSTEM			
	Wattage	W	4500
	Voltage AC	V	220
ELECTRICAL SYSTEM-DC			
	System Voltage(Nominal)	V	24
	Starter motor	Kw	7
	Recommended Battery Capacity	AH	200
	Cold Cranking Amperes @ -18°C (0°F)	CCA	1000
	Reserve Capacity (RC)	Min	407
	Charging Alternator Output	Amps	45
	Max. Starter Cranking Amps @4.5°C (0°F)	Amps	550
	Min. Cranking Speed Required for Unaided Cold Start	rpm	165
FUEL SYSTEM			
	Injection Pump		
	Injection Advance Angle	°	21±1
	Minimum Supply line Size	mm	12
	Minimum Return line Size	mm	12
	Fuel Management Control	Mechanical	
	Max. Fuel Consumption	g/kw,h	210
	Idle Speed	rpm	800
	Max. Governed Speed	rpm	1980
	Maximum allowable fuel height above fuel pump	m	3
	Governed Speed Rate	%	<10
Engine Performance Data			
	Estimated free field sound pressure level at 1 meter with full-load governed speed(Includes Noise from: exhaust; Cooling System and Driven Components)	dBa	105
	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.		
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DIESEL ENGINE

Engine Model		CH12-128-EB		Curve No.		C12128B	Date	2020/10/22
Displacement	21.93	L	Aspiration	Turbocharged+Water cooled		Power Standard		UL/FM
Bore	128	mm	Cylinder Qty.	V-Type, 12		655	KW @ 1760	r/min
Stroke	142	mm	Fuel System	Mechanical		878	HP @ 1760	r/min



Torque		
Speed	Torque	
	N-m	lb-ft.
RPM		
1150		
1470	3898	2875
1760	3557	2623

Output Power		
Speed	Output Power	
	KW	HP
RPM		
1150		
1470	600	805
1760	655	878

Fuel Consumption		
Speed	Consumption	
	g/KW-HR	lb/BHP-HR
RPM		
1150		
1470	203	0.334
1760	208	0.342