

## Engine Specification Sheet



Model	Ratings HP (kW) @ Rated speed rpm		
	1470	1760	2100
<b>CH8-128-E</b>	<b>447(333)</b>	<b>483(360)</b>	<b>496(370)</b>

ENGINE SPECIFICATIONS		
Basic Engine	DOOSAN	
Type	4 Cycle; V-type; water cooled; 8 Cylinder	
Aspiration	Turbocharged +Water Cooled	
Bore and Stroke	mm×mm	128x142
Displacement	L	14.618
Compression Ratio	14.6:1	
Rotation Viewed from flywheel	Counter Clockwise	
Dry Weight Approx.	kg	1452
Dimension Approx. (L*W*H)	mm	1695*1401*1735
Crankshaft Centerline Height	mm	565
Oil Capacity	L	28
Coolant Capacity - Engine + Heat Exchanger	L	46



# MODEL CH8-128-E

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	CH8-128-E	Date	2019/10/9	
Drawing No.	CH8-128-E.00	Performance Curve No.	C08128	
Rated Power	496 HP @2100 RPM	Reference No.	14DS001E	
	370 KW @2100 RPM	Version	A	
GENERAL ENGINE DATA				
Type		4 Cycle; V-type; water cooled; 8 Cylinder		
Aspiration		Turbocharged +Water Cooled		
Bore and Stroke		mmxmm	128x142	
Cylinder Liner Type		<input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry		
Displacement		L	14.618	
Compression Ratio		14.6:1		
Firing Order		1-5-7-2-6-3-4-8		
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	1452	
Dimension Approx. (L*W*H)		mm	1695*1401*1735	
Flywheel/ Flywheel House Dimension		14"/ SAE 1		
Torque at rated RPM		N.m	1683	
EXHAUST SYSTEM				
Exhaust Gas Temp. at max. rating/power		°C	572	
Exhaust Gas Flow at Max. output		m³/h	5622	
Max. Allowable Back Pressure		kpa	10	
Minimum Exhaust Pipe Diameter		DN	100	
AIR INTAKE SYSTEM				
Air Cleaner Type		Dry Type		
Air Flow at Max. output		m³/h	3156	
Air Inlet Restriction Dirty		kpa	6	
Air Inlet Restriction Clean		kpa	2	
LUBRICATION SYSTEM				
Oil Capacity		L	28	
Max. Sump Oil Temp.		°C	120	
Normal Operating Oil Pressure Range		bars	3~4	
Oil Pressure at Idle		bar	>1	
COOLING SYSTEM				
Coolant Capacity - Engine + Heat Exchanger		L	46	
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	26	



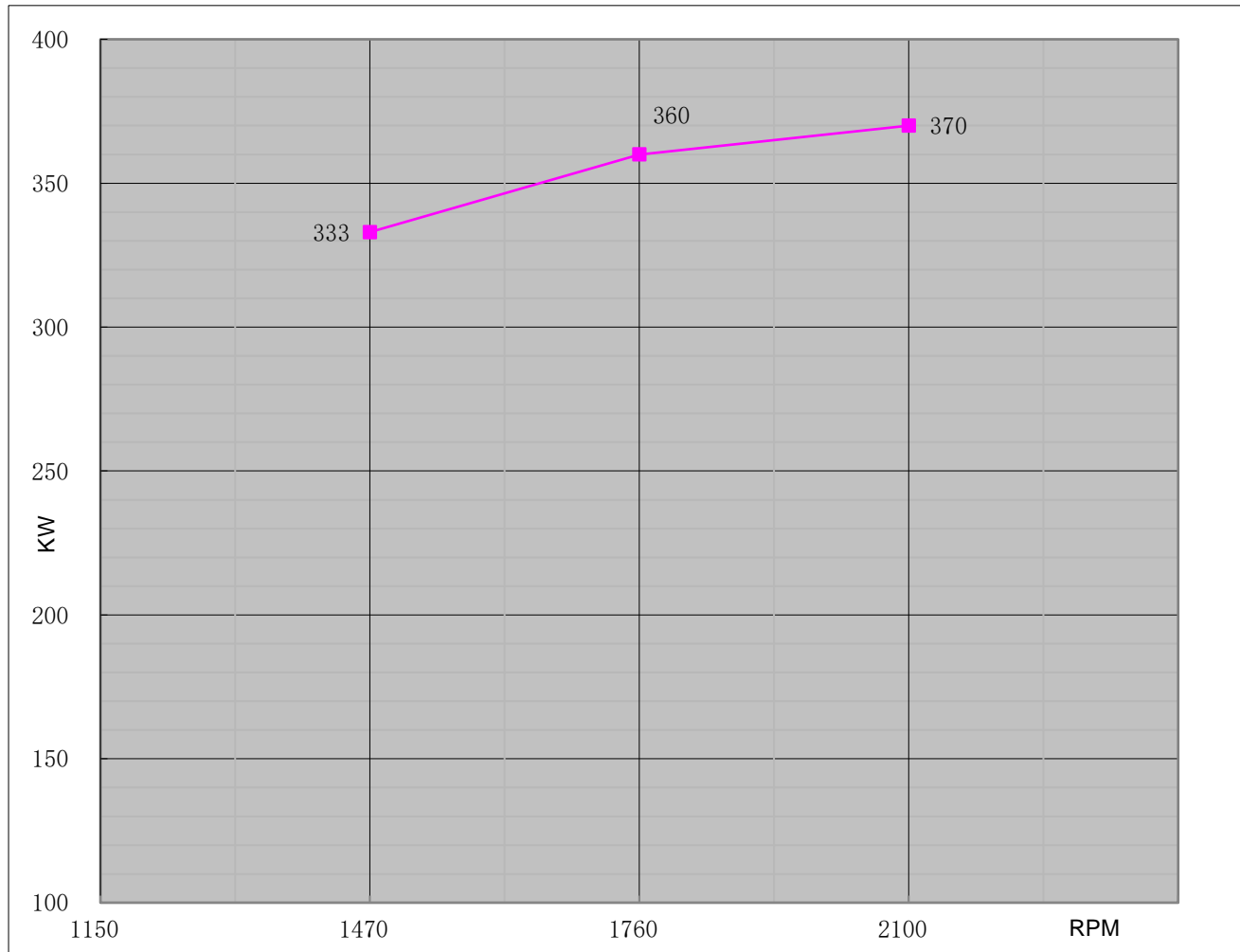
## Engine Data Sheet

Raw Water Pressure		bar	2
Min. Raw Water Temp.		°C	15.6
Raw Water Pipe Size	Raw Water Inlet	G1 1/2"	
	Raw Water Outlet	G2"	
HEATER SYSTEM			
Wattage		W	3000
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	400
Min. Cranking Speed Required for Unaided Cold Start		rpm	210
FUEL SYSTEM			
Injection Pump			
Injection Advance Angle		°	18
Minimum Supply line Size		mm	12
Minimum Return line Size		mm	12
Fuel Management Control		Mechanical	
Max. Fuel Consumption		g/kw,h	240
Idle Speed		rpm	750
Max. Governed Speed		rpm	2310
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		CH8-128-E		Curve No.		C08128	Date	2019/10/9
Displacement	14.62 L	Aspiration		Turbocharged+Water cooled		Power Standard		UL/FM
Bore	128 mm	Cylinder Qty.		8		370 KW @ 2100 r/min		
Stroke	142 mm	Fuel System		V-Type; Mechanical		496 HP @ 2100 r/min		



Torque		
Speed	Torque	
RPM	N-m	lb-ft.
1150		
1470	2162	1594
1760	1953	1441
2100	1683	1241

Output Power		
Speed	Output Power	
RPM	KW	HP
1150		
1470	333	447
1760	360	483
2100	370	496

Fuel Consumption		
Speed	Consumption	
RPM	g/KW-HR	lb/BHP-HR
1150		
1470	195	0.321
1760	200	0.329
2100	220	0.362

REV: A