

CHONGQING CUMMINS ENGINE PERFORMANCE CURVE

 Engine Model
 Curve No.

 KT38-M
 M-628

 Configuration
 CPL Code
 Date

 D232007MX02
 0975
 19-Nov-08

Displacement: 38L [2300 in.3] Advertised Power: 448kW [600HP] @1800 r/min

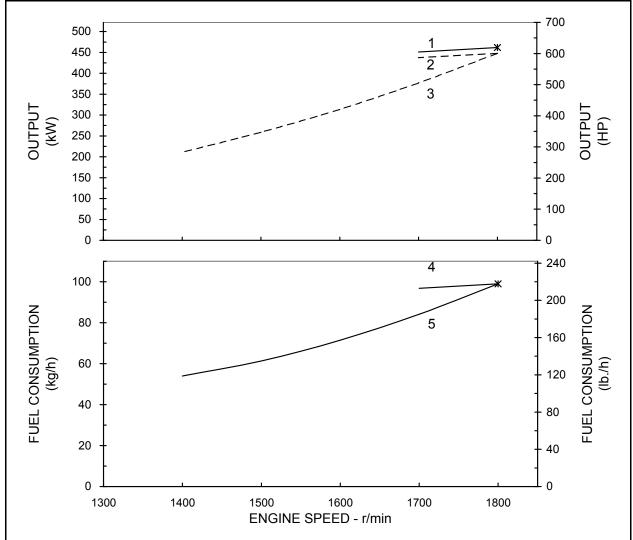
Bore: **159mm** [6.25 in.]

Stroke: 159mm [6.25 in.] Aspiration: Turbocharged Fuel System: PT Rating Type: Continuous

Cylinders: 12

CERTIFIED: This marine diesel engine complies with or is certified to the:

IMO-NOx requirements of the International Maritime Organization (IMO), MARPOL 73/78 Annex VI, Regulation 13



Rating Conditions:Ratings are based upon ISO 8665 and SAE J1228 reference conditions;air pressure of 100kPa [29.612 in.Hg] air temperature 25°C [77°F] and 30% relative humidity.Power is rated in accordance with IMCI prodedures.

Fuel consumption is based on fuel of 35° API gravity at 16°C (60°F) having LHV of 42,780 kj/kg (18,390 Btu/lb) and weighing 838.9 g/liter (7.001 lb/U.S.gal).

Propeller Shaft Power represents the net power available after typical reverse/reduction gear losses and is 97% of rated power.

1. Brake power

- 4. Fuel Consumption for Brake and Shaft power.
- 2. Shaft power with Reverse / Reduction Gear
- 5. Fuel Consumption for Typical Propeller.
- 3. Typical Propeller Power Curve (3.0 exponent)

Continuous Rating: This power rating is intended for continuous use in applications requiring uninterrupted service at full power. This rating is an ISO3046 Standard Power Rating.



Chongqing Cummins Engine Co. Ltd.

Propulsion Marine Engine Performance Data

Curve No.: M-628
DS: DS-4983
CPL: 0975
DATE: 19-Nov-08

General Engine Data	
Engine Model	KT38-M
Rating Type	Continuous
Rated Engine Power hp [kW]	600 [448]
Rated Engine Speedrpm	1800
Peak Engine Torque @ 1500 rpmlb.·ft. [N·m]	1926 [2612]
Brake Mean Effective Pressurepsi [kPa]	114 [786]
Minimum Idle Speed Settingrpm	575-675
Normal Idle Speed Variation±rpm	50
High Idle Speed Range Minimumrpm	1962
Maximumrpm	2200
Aspiration	Turbocharged
Compression Ratio	15.5:1
Piston Speed ft/min [m/sec]	1870 [9.5]
Weight (Dry) - Engine Only - Averagelb. [kg]	7943 [3606]
Weight (Dry) - Engine With HeatexchangerSystem - Average	9817 [4457]
Installation Diagram No	4915140
Fuel System ¹	04 54401
Fuel Consumption at Rated Speedgal/hr [l/hr]	31 [116]
Approximate Fuel Flow to Pumpgal/hr [l/hr]	92 [348]
Maximum Allowable Fuel Supply to Pump Temperature	140 [60]
Approximate Fuel Return to Tank Temperature°F [°C]	154 [68]
Maximum Heat Rejection to Drain FuelBTU/min [kW]	N.A.
Fuel Pressure - Pump Out / Rail Mechanical Gaugepsi [kPa]	81.5 [562]
Air System ¹	
Intake Manifold Pressurein. Hg [kPa]	21 [71]
Intake Air Flow	1504 [710]
Heat Rejection to Ambient	3415 [60]
Trout No journal of Ambienta	0410 [00]
Exhaust System ¹	
Exhaust Gas Flow	3431 [1620]
Exhaust Gas Temperature (Turbine Out)°F [°C]	781 [416]
Exhaust Gas Temperature (Manifold)°F [°C]	1040 [560]
Casling System ¹	
Cooling System ¹	
Sea Water Pump Specifications	7.501
Pressure Cap Rating (With Heat Exchanger Option)psi [kPa]	7 [50]
Engines without Low Temperature Aftercooler (LTA)	
Jacket Water Aftercooled Engine (JWAC)	
Coolant Flow to Engine Heat Exchanger	200 [756]
Standard Thermostat Operating Range (Start to Open)	180 [82]
Standard Thermostat Operating Range (Full Open)°F [°C]	203 [95]
Heat Rejection to Engine Coolant ³ BTU/min [kW]	22313 [392]

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Avaliable

- 1. All Data at Rated Conditions.
- 2. Consult Installation Direction Booklet for Limitations.
- 3. Heat rejection to coolant values are based on 50% water/50% ethylene glycol mix.
- 4. Consult option notes for flow specifications of optional Cummins seawater pumps (if applicable).

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All Data is Subject to Change Without Notice - contact CCEC for most recent data .