





# Chongqing Cummins Engine Co. Ltd.

## Propulsion Marine Engine Performance Data

Curve No.: M-629  
DS: DS-4983  
CPL: 0975  
DATE: 23-Nov-08

### General Engine Data

Engine Model.....	KT38-M
Rating Type .....	Continuous
Rated Engine Power..... hp [kW]	800 [ 596 ]
Rated Engine Speed.....rpm	1800
Peak Engine Torque @ 1500 rpm..... lb.·ft. [N·m]	2569 [ 3484 ]
Brake Mean Effective Pressure.....psi [kPa]	152 [ 1046 ]
Minimum Idle Speed Setting..... rpm	575-675
Normal Idle Speed Variation.....±rpm	50
High Idle Speed Range    Minimum..... rpm	1962
Maximum..... rpm	2200
Aspiration .....	Turbocharged
Compression Ratio .....	15.5:1
Piston Speed..... ft/min [m/sec]	1870 [ 9.5 ]
Weight (Dry) - Engine Only - Average.....lb. [kg]	7943 [ 3606 ]
Weight (Dry) - Engine With HeatexchangerSystem - Average .....	9817 [ 4457 ]
Installation Diagram No.....	4915140

### Fuel System<sup>1</sup>

Fuel Consumption at Rated Speed.....gal/hr [l/hr]	39 [ 147 ]
Approximate Fuel Flow to Pump.....gal/hr [l/hr]	117 [ 441 ]
Maximum Allowable Fuel Supply to Pump Temperature..... °F [ °C]	140 [ 60 ]
Approximate Fuel Return to Tank Temperature..... °F [ °C]	154 [ 68 ]
Maximum Heat Rejection to Drain Fuel.....BTU/min [kW]	N.A.
Fuel Pressure - Pump Out / Rail                      Mechanical Gauge.....psi [kPa]	119.0 [ 820 ]

### Air System<sup>1</sup>

Intake Manifold Pressure.....in. Hg [kPa]	30 [ 102 ]
Intake Air Flow.....cfm [l/sce]	1694 [ 800 ]
Heat Rejection to Ambient.....BTU/min [kW]	4440 [ 78 ]

### Exhaust System<sup>1</sup>

Exhaust Gas Flow.....cfm [l/sec]	4215 [ 1990 ]
Exhaust Gas Temperature (Turbine Out).....°F [ °C]	880 [ 471 ]
Exhaust Gas Temperature (Manifold).....°F [ °C]	1112 [ 600 ]

### Cooling System<sup>1</sup>

Sea Water Pump Specifications.....MAB 0.08.17-07/16/2001	
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.....gal/min [l/min]	400 [ 1513 ]
Standard Thermostat Operating Range (Start to Open).....°F [ °C]	180 [ 82 ]
Standard Thermostat Operating Range (Full Open).....°F [ °C]	203 [ 95 ]
Heat Rejection to Engine Coolant <sup>3</sup> .....BTU/min [kW]	29029 [ 510 ]

TBD = To Be Determined

N/A = Not Applicable

N.A. = Not Available

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).

## CHONGQING CUMMINS ENGINE CO. LTD.

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