

## CHONGQING CUMMINS ENGINE PERFORMANCE CURVE

Engine Model Curve No.

KT38-M M-631

Configuration CPL Code Date

D232007MX02 0975 18-Dec-08

Displacement: 38L [2300 in.3] Advertised Power: 671kW [900HP] @1800 r/min

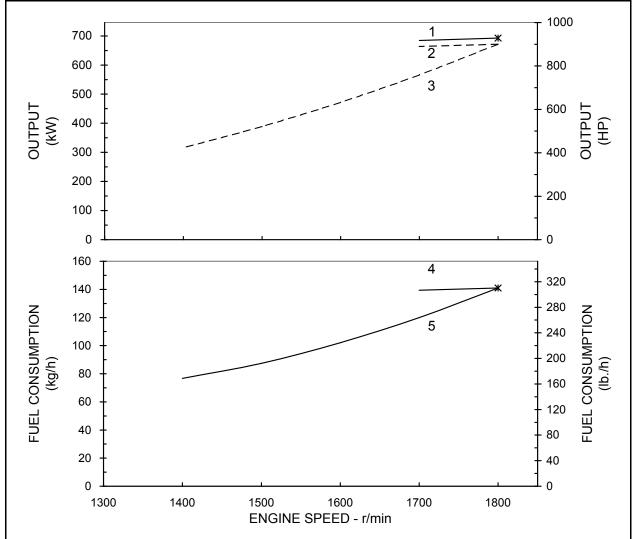
Bore: **159mm** [6.25 in.]

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-631
DS: DS-4983
CPL: 0975
DATE: 18-Dec-08

General Engine Data		
Engine Model	KT38-M	
Rating Type	Continuou	IS
Rated Engine Power	hp [kW] 900 [ 67 <sup>2</sup>	1]
Rated Engine Speed	rpm 1800	
Peak Engine Torque @ rpmlk	o.·ft. [N·m] N.A.	
Brake Mean Effective Pressure	psi [kPa] 171 [ 117	77 ]
Minimum Idle Speed Setting	rpm 575-675	
Normal Idle Speed Variation	±rpm 50	
High Idle Speed Range Minimum	rpm 1962	
Maximum	rpm 2200	
Aspiration	Turbocharg	ed
Compression Ratio		
Piston Speed ft/r	nin [m/sec] 1870 [ 9.5	]
Weight (Dry) - Engine Only - Average	lb. [kg] 7943 [ 360	06]
Weight (Dry) - Engine With HeatexchangerSystem - Average	lb. [kg] 9817 [ 445	57]
Installation Diagram No	4915140	1
1		
Fuel System <sup>1</sup>		_
Fuel Consumption at Rated Speed		-
Approximate Fuel Flow to Pump	•	_
Maximum Allowable Fuel Supply to Pump Temperature		
Approximate Fuel Return to Tank Temperature	°F [°C] 154 [68	]
Maximum Heat Rejection to Drain FuelBT	J/min [kW] N.A.	
Fuel Pressure - Pump Out / Rail Mechanical Gauge	psi [kPa] 134.0 [ 923	3]
Air System <sup>1</sup>		
Intake Manifold Pressureii	0	-
Intake Air Flow		-
Heat Rejection to AmbientBT	J/min [kW] 5009 [ 88	]
Exhaust System <sup>1</sup>		
Exhaust Gas Flow	cfm [l/sec] 4742 [ 223	RQ 1
Exhaust Gas Temperature (Turbine Out)		-
Exhaust Gas Temperature (Manifold)	• •	-
Exhaust Gas Temperature (Marillola)	1 [ 0]	, ]
Cooling System <sup>1</sup>		
Sea Water Pump SpecificationsMAB 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	/min [l/min] 400 [ 15 <sup>2</sup>	13 ]
Coolant Flow to Engine Heat Exchangergal Standard Thermostat Operating Range (Start to Open)		_
Standard Thermostat Operating Range (Start to Open)	°F [°C] 180 [82	]
	°F [°C] 180 [82 °F [°C] 203 [95	]

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).

## **CHONGQING CUMMINS ENGINE CO. LTD.**

CHONGQING, P.R.CHINA, 400031

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