



TONTEK POWER
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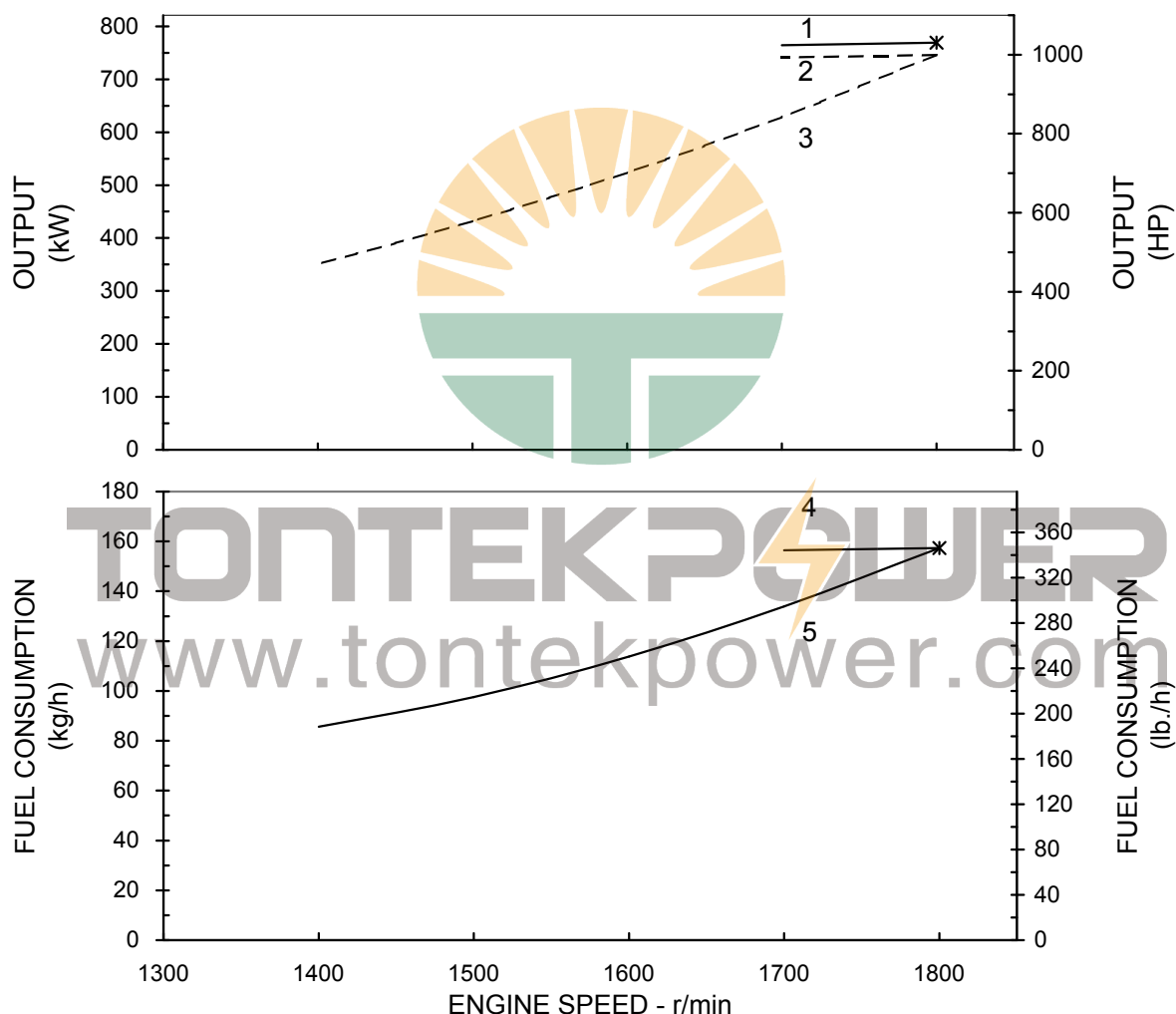
Engine Model
KTA38-M1

Advertised Power: **746kW [1000HP] @1800 r/min**

Displacement: **38L [2300 in.³]**
Bore: **159mm [6.25 in.]**
Stroke: **159mm [6.25 in.]**
Fuel System: **PT**
Cylinders: **12**

Aspiration: **Turbocharged/Aftercooled**
Rating Type: **Continuous**

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

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

2. Shaft power with Reverse / Reduction Gear

3. Typical Propeller Power Curve (3.0 exponent)

4. Fuel Consumption for Brake and Shaft power.

5. Fuel Consumption for Typical Propeller.

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.



General Engine Data

Engine Model.....	KTA38-M1
Rating Type	Continuous
Rated Engine Power..... hp [kW]	1000 [746]
Rated Engine Speed..... rpm	1800
Peak Engine Torque @ 1400 rpm..... lb.·ft. [N·m]	3088 [4188]
Brake Mean Effective Pressure..... psi [kPa]	190 [1309]
Minimum Idle Speed Setting..... rpm	575-675
Normal Idle Speed Variation..... ±rpm	50
High Idle Speed Range Minimum..... rpm	1815
Maximum..... rpm	2016
Aspiration	Turbocharged/Aftercooled
Compression Ratio	13.9:1
Piston Speed..... ft/min [m/sec]	1870 [9.5]
Weight (Dry) - Engine Only - Average..... lb. [kg]	9291 [4218]
Weight (Dry) - Engine With Heatexchanger System - Average..... lb. [kg]	9996 [4538]
Installation Diagram No.....	4061308

Fuel System¹

Fuel Consumption at Rated Speed..... gal/hr [l/hr]	49 [185]
Approximate Fuel Flow to Pump..... gal/hr [l/hr]	103 [390]
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]	171 [3]
Fuel Pressure - Pump Out / Rail Mechanical Gauge..... psi [kPa]	162.0 [1116]

Air System¹

Intake Manifold Pressure..... in. Hg [kPa]	49 [166]
Intake Air Flow..... cfm [l/sce]	2328 [1099]
Heat Rejection to Ambient..... BTU/min [kW]	4383 [77]

Exhaust System¹

Exhaust Gas Flow..... cfm [l/sec]	4727 [2232]
Exhaust Gas Temperature (Turbine Out)..... °F [°C]	736 [391]
Exhaust Gas Temperature (Manifold)..... °F [°C]	N.A.

Cooling System¹

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]	335 [1268]
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 ³ BTU/min [kW]	27322 [480]

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).

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