

MARINE ENGINE SELECTION GUIDE



CATERPILLAR MARINE POWER SYSTEMS
SEPTEMBER 2013

MAK

CAT[®]

Caterpillar Marine Power Systems

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For more information about Caterpillar Marine Power Systems
and current products, as well as legacy products, please visit:

MARINE.CAT.COM

BUILT FOR IT.™

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Visit MARINE.CAT.COM for detailed specification sheets and product information.

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Caterpillar follows a policy of continual product improvement. For this reason, some material and specifications could change without notice. Please reference TMI Web for most current information.

Abbreviations

API — American Petroleum Institute

bhp — Brake Horsepower

bkW — Brake Kilowatts

BS — British Standards

CC — Combined Circuit

DIN — German Standards Organization

DF — Dual Fuel

ekW — Electrical Kilowatts

EPA — Environmental Protection Agency

EU — European Union

EUI — Electronic Unit Injectors

g/bkW-hr — Grams per Brake Kilowatt Hour

H — Height of Engine

HE — Heat Exchanger Cooled

IMO — International Maritime Organization

ISO — International Standards Organization

JW — Jacket Water Aftercooled

KC — Keel Cooled

kVA — Kilovolt-Ampere

L — Overall Engine Length

LE — Length of Engine from Front of Engine to Rear Face of Flywheel Housing

LG — Length of Engine with Gear/Generator

mhp — Metric Horsepower

NA — Naturally Aspirated

R — Radiator Cooled

regs — Regulations

SAE — Society of Automotive Engineers

SCAC — Separate Circuit Aftercooled

SWAC — Seawater Aftercooled

T — Turbocharged

TA — Turbocharged Aftercooled

TTA — Twin Turbo Aftercooled

U.S. g/h — U.S. Gallons per Hour

WE — Width of Engine

Note: For Engine Emissions Information abbreviations see page 14-15.

Customer Support Programs for Cat Marine Products

Protect your investment, minimize owning and operating costs, and maximize up-time. Contact your local Cat dealer to hear about a variety of support solutions.

Extended Service Coverage (ESC)

ESC mirrors the standard warranty coverage, is available for both propulsion and auxiliary marine engines, and is transferable at no cost.

New ESC is available in annual increments for vessels still under standard warranty, with a maximum of 5 years of coverage.

New ESC for Pleasure Craft Applications is available in 300-, 500- or unlimited-hour increments per year along with varying deductible options. **Platinum Plus** covers additional Cat engine controls and pilot house displays. **Platinum Plus Three60** includes all Three60 system components except the Quickshift transmission.

New ESC for Commercial Applications is available in various levels of component coverage (Silver, Gold, Platinum, and Platinum Plus), multiple deductible options, and 500-hour increments with a minimum of 500 hours per year. Hour and age limitations apply.

Advantage ESC is available for both pleasure craft and commercial vessels less than 10 years old and requires the successful completion of an Advantage Inspection and Sea Trial to qualify for coverage.

Pleasure Craft Preventive Maintenance Agreements (PMA)

PMAs lock in maintenance costs at today's rates for the term of the contract, protecting your engine and helping you avoid unbudgeted repair costs. Available worldwide with no restrictions and fully transferable, PMAs also provide documented engine maintenance history, potentially increasing the resale value of your vessel.

Commercial Customer Support Agreements (CSA)

CSAs ensure maintenance and repairs by highly skilled technicians with genuine Cat and MaK parts. Three flexible options are customized to fit your needs: Inspection, Preventive Maintenance, and Total Maintenance and Repair. The more comprehensive the CSA, the greater the increase in operating time.

Cat Financial

You specify Cat or MaK power solutions because you know Caterpillar engines keep you and your vessel safely on course. Cat Financial has the same commitment to your success with construction, term, or repower financing.

Global Coverage, Local Presence

We've been lending to marine customers for more than 25 years. We know how to support customers in one country, construction in a second country, and registration in a third. Our customers do business around the world so the Cat dealer network has you covered wherever you go.

Need a local expert? With offices in the Americas, Europe, and Asia, and financing representatives all over the world, we know local markets and how to navigate the legal and regulatory environments.

Exceeding Customer Expectations

Strong relationships are the key to our success. Your dedicated marine account manager will guide your financing request through the process. We begin with understanding your critical requirements and developing a tailored solution. We then document, close, and fund the deal.

Get your project moving anywhere in the world with Cat Financial.

Visit us online at **CatPowerFinance.com**

email us at **CatPowerFinance@cat.com**, or your regional office today.

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Europe, Africa and the Middle East

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Commercial Account

Cat Financial Commercial Account is a payment method that enables you to buy parts and pay for service, repairs, or rentals at any participating Cat Marine Dealer or Cat Rental Store in the United States or participating dealers in Canada.

Exclusive Commercial Account Features & Benefits

Manage Your Cash Flow.

Pay now or pay later. Commercial Account offers two billing methods to let you customize by selecting the one that best fits your business needs.

Best-in-Class Interest Rate.

Commercial Account's best-in-class interest rate makes it less expensive for you to pay for parts, services, and purchases over time.

Peace of Mind.

No matter where your jobs take you, Commercial Account is a quick and easy way to pay for your expenses. Use your account to pay for anything offered at any Cat dealer or Cat Rental Store in the U.S. or participating dealers in Canada (with the exception of purchases of new Cat construction equipment).

Special Zero Percent Financing Options.

Your Cat Dealer may offer special financing options that you can take advantage of only with your Commercial Account. Ask your dealer about the Marine Engine Rebuild program currently being offered.

One-time Credit Approval.

Once approved, your account remains open as long as it is in good standing.

Online Account Information 24/7.

Whether you require instant access to accounts, expenses, statements or reports, our website will provide you higher levels of self-service, flexibility and convenience. You can make payments; view your available credit, last payment, balance due, payment due date, minimum payment amount, and transaction details; and download expenses into your accounting system. If you have Cat Financial lease/loan contracts, you can now combine them with your Commercial Account for a single sign-on to service all your needs.

No Collateral/Security Required.

Apply Today: In the U.S. visit www.CatFinancial.com/CommercialAccount or call 1-888-CAT-8811. In Canada visit <http://CatFinance.cat.com/CommercialAccount> or call 1-866-686-5024.

Controls and Displays

Specifically Designed for Cat Electronic Marine Propulsion Engines

Three60 Precision Control

Three60 Precision Control is an integrated propulsion and maneuvering solution that revolutionizes slow speed control of traditional shaft and propeller drive line vessels. It simultaneously actuates and controls engines, transmissions, thrusters, and propellers with intuitive easy movements for instantaneous control of vessel direction and speed.



Multi-Station Control System (MSCS)



MSCS provides engine and transmission control for single or dual engine applications with up to eight control stations. Control can be easily transferred from one station to another and the fully redundant backup system ensures propulsion system operation if the primary control system fails. Transmission shift logic prevents stalling the engine during quick shifting maneuvers.

gplink

gplink is a satellite/cellular-based tracking, monitoring, and notification system that protects Cat powered vessels by monitoring engine operating parameters, engine diagnostic codes, and on-board critical systems such as bilge levels, fire alarms, low batteries, and power interruption.

gplink provides immediate notification via e-mail, SMS and/or phone of any critical alarm or event. Trained Caterpillar technical experts can remotely access fault codes, and operating conditions, review a vessel's alarm status, troubleshoot engine conditions, and could defer a visit to the vessel. The vessel owner can also view the status of the engines remotely on a phone, tablet, or computer.



Color Marine Power Display (CMPD)



CMPD can monitor and display operating parameters for two engines and transmissions including diagnostics, visual alarms, and streaming video from up to four camera inputs. The user can select from seven languages, two gauge types, and daylight or night mode screens.

Marine Analog Power Display (MAPD)

MAPD is an innovative system of electronically controlled analog gauges that monitor engine operation, offering accuracy and dependability with

visual simplicity. All gauges are LED backlit, automatically calibrated, and available in two sizes.



MCS Controls for Marine Propulsion Engines and Generator Sets

MCS controls provide complete propulsion engine and generator set control and monitoring from local and remote locations, including engine start/stop capability, alarm and protection, and user interface and communication. System modularity allows expansion of remote monitoring, input/output capabilities and programmable relays. With the Shutdown Unit (SDU), the system meets marine classification society requirements for separation of alarm and shutdown systems.

Digital Control Unit (DCU)

The DCU provides local start/stop control, engine and generator set alarm and protection, and Modbus communications to the ship. The 5.7" display can be set for automatic or night mode and can display multiple instrument views and alarm and event lists. The user can switch on the fly between nine languages and English or metric units.



Various modules integrate directly with the DCU, such as the Shutdown Unit (SDU), required for MCS classed applications. Up to four Remote I/O (RIO) modules can be added for additional sensors and relays, the Power Analyzer Module (PAM) for generator monitoring, and the RTD and TC modules for temperature monitoring.

Remote Panel (RP)

Multiple RPs can be mounted where needed, such as the engine control room or bridge. Each RP can control and monitor eight DCUs and four cameras. The 8.4" touch-screen display can be set for automatic or night mode and can show one, two, or four engines at a time.



New Diagnostic System for On-Line Engine Data Transmission

Based on several years of Caterpillar experience, Caterpillar Motoren will launch a new diagnostic system in early 2015.

The new system will be based on data transfer via internet to a central Caterpillar warehouse and offers intensive diagnostics by Caterpillar engine specialists and use of a common data base. The DICARE system has been discontinued and will not be offered due to lack of ability to support the software platform in the future.

For detailed information please contact Caterpillar Motoren, application and installation department, (49) 431-39 95 01.

Marine Propulsion Engine Rating Definitions

A Rating (Unrestricted Continuous)

Typical applications: For vessels operating at rated load and rated speed up to 100% of the time without interruption or load cycling (80% to 100% load factor).

Typical applications could include but are not limited to vessels such as freighters, tugboats, bottom trawlers, or deep river tugboats. Typical operation ranges from 5000 to 8000 hours per year.

For 3516B Engines Only:

- ◆ **Ahp** – Fast commercial vessels with high load factors. Requires CF-4 or superior lube oil and 30° C or colder aftercooler water.

For C280-6, C280-8, C280-12, and C280-16 Engines Only:

- ◆ **Continuous Service (CS) Rating** is suitable for continuous duty applications, including dredges, for operation without interruption or load cycling.

B Rating (Heavy Duty)

Typical applications: For vessels operating at rated load and rated speed up to 80% of the time with some load cycling (40% to 80% load factor). **Typical applications could include but are not limited to vessels such as mid-water trawlers, purse seiner, crew and supply boats, ferries, or towboats.** Typical operation ranges from 3000 to 5000 hours per year.

- ◆ **For 3508B, 3512B, and 3516B Engines Only:**
- ◆ **Bhp** – Fast commercial and passenger vessels including catamarans and SWATH vessels with high load factors.

Marine Propulsion Engine Rating Definitions

C Rating (Maximum Continuous)

Typical applications: For vessels operating at rated load and rated speed up to 50% of the time with cyclical load and speed (20% to 80% load factor). **Typical applications could include but are not limited to vessels such as ferries, harbor tugs, fishing boats, offshore service boats, displacement hull yachts, or short trip coastal freighters.** Typical operation ranges from 2000 to 4000 hours per year.

For 3508B, 3512B, and 3516B Engines Only:

- ◆ **Chp** – Fast commercial and passenger vessels and cruising yachts with moderate load factors.

For C280-6, C280-8, C280-12, and C280-16 Engines Only:

- ◆ **Maximum Continuous (MC) Rating** is generally used for vessel applications involving varying loads. The engine power actually produced is limited by application guidelines, leaving a power reserve for unusual operating conditions. Operating time at loads above the Continuous Service Rating for a given rpm is limited to one hour in 12 or 8.3% of total operating hours.
- ◆ **FCVR – Fast Commercial Vessel Rating:** 85% of operating hours at rated speed, 15% of hours at less than 50% rated power. TBO approximately 20,000-25,000 hours. The propulsion system design should consider heavy ship condition, sea state, hull fouling and propulsion system power losses for proper match between engine and prop/jet.

Marine Propulsion Engine Rating Definitions

D Rating (Intermittent Duty)

Typical applications: For vessels operating at rated load and rated speed up to 16% of the time (up to 50% load factor).

Typical applications could include but are not limited to vessels such as offshore patrol boats, customs boats, police boats, some fishing boats, fireboats, or harbor tugs. Typical operation ranges from 1000 to 3000 hours per year.

For 3508B, 3512B, and 3516B Engines Only:

- ◆ **Dhp** – Patrol craft, fast passenger vessels, and cruising yachts with low load factors.

E Rating (High Performance)

Typical applications: For vessels operating at rated load and rated speed up to 8% of the time (up to 30% load factor). **Typical applications could include but are not limited to vessels such as pleasure craft, harbor patrol boats, harbor master boats, some fishing or patrol boats.** Typical operation ranges from 250 to 1000 hours per year.

For 3508B, 3512B, and 3516B Engines Only:

- ◆ **Ehp** – Fast patrol craft and fast yachts with low load factors.

DEP Ratings (Diesel Electric Propulsion, Electric Drive)

Typical applications: For all vessels operating with generator sets that provide power to the propulsion systems. All ratings are Prime Ratings according to ISO 8528-1 for unlimited usage per year at a load factor of $\leq 70\%$. 10% overload capability is required for a maximum of 1 hour out of every 12 and a maximum of 25 hours total per year. **Typical applications could include but are not limited to supply vessels, cruise vessels, research vessels, or any other ship using diesel electric drive systems.**

Emissions Information

U.S. EPA Standards

Recreational Marine

Platform	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
C7, C9, C12	EPA Tier 2					EPA Tier 3					
C18-C32											

Commercial Marine

Platform	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
C1.5, C2.2											
C4.4, C6.6, C7.1											
C7, C9, C12	EPA Tier 2					EPA Tier 3					
C18 (<600 kW)											
C18 (≥600 kW) - C32	EPA Tier 2										
C32 (≥1400 kW)											
3500 (600-1399 kW)											
3500 (1400-1999 kW)											
3500, C175 (2000-3699 kW)											
C280 (>2000 kW)											

EPA Regulations

T2C — Meets U.S. EPA Marine Tier 2 Commercial standards.

T2R — Meets U.S. EPA Marine Tier 2 Recreational standards.

T2CR — Meets U.S. EPA Marine Tier 2 Commercial and Recreational standards.

NRT2 — Meets U.S. EPA Non-Road Mobile Tier 2 standards. (Small generator sets are often included as “portable auxiliary engines” under the EPA standards. Small generator sets can be certified as a “marine engine” if permanently installed in a vessel.)

NC — Not U.S. EPA Marine Certified for use in the U.S. or Canada.

T3C — Meets U.S. EPA Marine Tier 3 Commercial standards.

T3R — Meets U.S. EPA Marine Tier 3 Recreational standards.

T3CR — Meets U.S. EPA Marine Tier 3 Commercial standards and U.S. EPA Marine Tier 3 Recreational standards.

IMO/EU Certification

Tier	Date	NO _x Limit (g/kWh)		
		n < 130	130 ≤ n < 2000	n ≥ 2000
Tier I	2000	17.0	$45 \cdot n^{-0.2}$	9.8
Tier II	2011	14.4	$44 \cdot n^{-0.23}$	7.7
Tier III	2016*	3.4	$9 \cdot n^{-0.2}$	2.0

*In NO_x Emission Control Areas (Tier II standards apply outside ECAs).

IMO Certification

IMO I — Meet IMO emissions standards for the year 2000 as defined by Regulation 13 of Annex VI to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the protocol of 1997. Applies to specific engines in vessels with a keel lay date from Jan. 1, 2000 until Dec. 31, 2010; other rules may apply.

IMO II — Emissions data measurement is consistent with the procedures described in the NO_x Technical Code 2008. The engine exhaust emissions meet the International Maritime Organization's Regulation 13 of Revised Annex VI to the MARPOL Convention. Applies to specific engines in vessels with a keel lay date from Jan. 1, 2011 until Dec. 31, 2015 (subject to change, See IMO III).

IMO III — Emissions data measurement is consistent with the procedures described in the NO_x Technical Code 2008. The engine exhaust emissions meet the International Maritime Organization's Regulation 13 of Revised Annex VI to the MARPOL Convention. **Note:** Proposed delay of IMO III is being discussed, final decision is scheduled April 2014.

NST — Engines ≤ 130 kW are not subject to IMO regulations

EU Certification

Commercial Craft Directive 97/68/EC (EU Stage IIIA)

This directive is in effect and applies to all propulsion and auxiliary engines. Caterpillar has certified some engines with a rated power of greater than 560 kW to this standard. Most of these are to be used for inland waterway vessels. These engines also became effective by reciprocity agreement with CCNR Stage II, on July 1, 2007.

Central Commission for Navigation on the Rhine

Commercial Craft — CCNR Stage II diesel engine emissions limits became effective July 1, 2007; this Directive applies to engines with a rated power at or above 37 kW.

Engine Certification Descriptions

CC2 — Meets CCNR Stage II

IW — Meets EU Stage IIIA or referred to as, Inland Waterway Commercial Craft Directive, meaning the same as Commercial Craft Directive 97/68/EC (EU Stage IIIA)

NC — Not Certified for specific regulations.

NST — Engines < 37 kW are not subject to CCNR legislation or IMO regulation.

RCD — Recreational Craft Directive, meets EU 94/25/EC. This directive is in effect and applies to all recreational engines used in the European Union areas.

Cat Marine Propulsion Engines

Rating Conditions for C175 and Smaller Engines

Ratings are based on SAE J1228 standard conditions of 29.61 in Hg (100 kPa) and 77° F (25° C). These ratings also apply at ISO3046-1:2002E, ISO8665, DIN6271-3, and BS5514 conditions of 29.61 in Hg (100 kPa), 81° F (27° C), and 60% relative humidity.

Caterpillar maintains ISO9001:2000 certified quality management systems for engine test facilities to assure accurate calibration of test equipment. Electronically controlled engines are set at the factory at the advertised power corrected to standard ambient conditions. The published fuel consumption rates are in accordance with ISO3046-1:2002E.

Fuel rates are based on fuel oil of 35° API [60° F (16° C)] gravity having an LHV of 18,390 Btu/lb (42 780 kJ/kg) when used at 84.2° F (29° C) and weighing 7.001 lbs/U.S. gal (838.9 g/liter). Additional ratings may be available for specific customer requirements. Consult your Cat representative for additional information.

Rating Conditions for C280 Engines

Ratings are based on SAE J1349 standard conditions of 29.61 in Hg (100 kPa) and 77° F (25° C). These ratings also apply at ISO3046-1:2002E, ISO8665, DIN6271-3, and BS5514 standard reference conditions. Ratings also meet classification society maximum temperature requirements of 113° F (45° C) temperature to turbo and 90° F (32° C) seawater temperature without derate.

Fuel consumption is based on ISO3046/1 with +5% tolerance at rated power for fuel having an LHV of 18,390 Btu/lb (42 780 kJ/kg) and weighing 7.001 lbs/U.S. gal (838.9 g/liter). Includes engine mounted fresh water and lube oil pumps. BSFC without pumps, 2% less.

Additional ratings may be available for specific customer requirements. Consult your Cat representative for details.

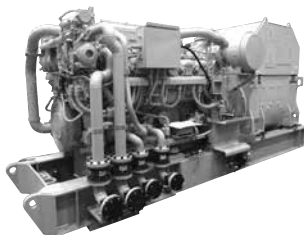
Performance Data

Performance along a typical fixed pitch propeller curve with a 3.0 exponent.

Power rated in accordance with NMMA procedure as crankshaft power. For units equipped with Caterpillar supplied marine gears, reduce crankshaft power by 3% for propeller shaft power.

Cat Marine Custom Solutions

Find a custom solution for your operation that comes with full standard warranty and the worldwide Cat dealer support network. For a specific rating, option, or product configuration not currently available, talk to your local Caterpillar representative about your particular requirements, such as:



- Specific ratings
- Constant and variable Diesel Electric Propulsion (DEP) generator sets
- Custom auxiliary generator sets
- Alarm and protection systems
- 50 Hz auxiliary and DEP ratings that meet IMO II
- Guaranteed power 0/+3% power setting
- Custom witness tests

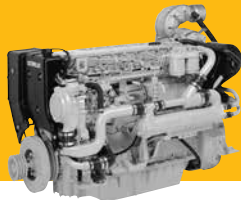
Related products also available for DEP include:

C175-16 Petroleum Generator Sets

	bkW	ekW	rpm	kVA	bhp	IMO
50 Hz	2418	2300	1500	2875	3243	II

3056

PROPULSION ENGINE



Mechanical
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C	127	125	93	2600	8.2	243.0	NC - NST - NC
C	188	185	138	2100	9.7	223.2	NC - I - RCD
C	208	205	153	2500	11.2	232.5	NC - I - RCD

	LE	H	WE
min.	42.05 in/1068 mm	31.5 in/801 mm	25.4 in/645 mm
max.	42.05 in/1068 mm	31.5 in/801 mm	30.6 in/779 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	NA, TA	
Bore x Stroke	3.94 x 5.0 in	100 x 127 mm
Displacement	365 cu in	6.0 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	1312 lb	595 kg

Electronic
Control
System



C7

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	255	250	187	2400	12.9	220.1	NC -	I -	RCD
B	280	275	205	2400	14.0	217.3	NC -	I -	RCD
C	320	315	235	2400	17.0	230.0	NC -	I -	RCD
D	375	370	276	2600	20.5	235.5	NC -	I -	RCD

Electronic
Control
System



C7 ACERT™

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
E	461	455	339	2800	25.1	230.5	T2CR -	II -	RCD

Contact local dealer for availability.

	LE	H	WE
min.	48.1 in/1221.8 mm	36.1 in/916.9 mm	36.2 in/919.6 mm
max.	48.1 in/1221.8 mm	36.1 in/916.9 mm	36.2 in/919.6 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.33 x 5.0 in	110 x 127 mm
Displacement	442 cu in	7.24 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	1760 lb	798 kg

C9 ACERT

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
D	510	503	375	2500	26.0	220.3	T2CR -	II -	IW
E	575	567	423	2500	29.2	221.9	T2CR -	II -	RCD

C9 ACERT E rating offered with optional attachments for use with Zeus Pod Drive System.

Contact local dealer for availability.

	LE	H	WE
min.	47.2 in/1198 mm	38.7 in/983 mm	38.3 in/974 mm
max.	47.2 in/1198 mm	38.7 in/983 mm	38.3 in/974 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.41 x 5.87 in	112 x 149 mm
Displacement	538 cu in	8.8 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	2086 lb	946 kg

Electronic
Control
System



C12

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	345	340	254	1800	16.6	208.3	T2C -	II -	IW
B	390	385	287	1800	18.6	205.7	T2C -	II -	IW
C	460	454	339	2100	22.0	205.9	T2C -	II -	IW
C	497	490	366	2300	24.0	208.8	NC -	I -	RCD
D	578	570	425	2300	27.9	208.8	NC -	I -	RCD
E	609	600	448	2300	29.3	208.1	NC -	I -	RCD

Electronic
Control
System



C12 ACERT

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
E	669	660	492	2300	34.1	220.0	T2CR -	II -	IW
E	715	705	526	2300	36.5	220.3	T2CR -	II -	RCD

Contact local dealer for availability.

	LE	H	WE
min.	62 in/1574 mm	39.5 in/1005 mm	38.1 in/969 mm
max.	62 in/1574 mm	39.5 in/1005 mm	38.1 in/969 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	5.1 x 5.9 in	130 x 150 mm
Displacement	732 cu in	12 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	2588 lb	1174 kg

C18 ACERT

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 and IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	460	454	339	1800	22.6	212.1	T2C -	II -	IW
A	485	479	357	1800	24.0	211.3	T2C -	II -	IW
A	608	600	447	1800	29.9	213.4	T2C -	II -	IW
B	560	553	412	2100	29.4	221.2	T2C -	II -	IW
B	680	670	500	2100	34.8	223.8	T2C -	II -	IW
C	725	715	533	2100	37.7	223.9	T2C -	II -	IW
D	885	873	651	2200	45.0	219.3	T2C -	II -	IW
E	930	918	685	2100	46.8	217.0	T2R -	II -	RCD
E	1015	1001	747	2300	53.6	227.9	T2R -	II -	RCD
E	1150	1136	847	2300	59.4	222.7	T2R -	II -	RCD

Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

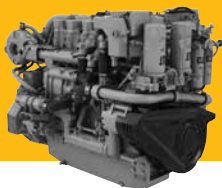
Contact local dealer for availability.

	LE	H	WE
min.	59.2 in/1505 mm	45.0 in/1144 mm	42.1 in/1068 mm
max.	62.6 in/1591 mm	46.5 in/1182 mm	44.0 in/1118 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	3700-4200 lb	1678-1905 kg

Electronic
Control
System



C18 ACERT

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	460	454	339	1800	22.6	212.1	NC	- II	- IW
A	485	479	357	1800	23.7	211.3	NC	- II	- IW
A	608	600	447	1800	30.0	213.1	NC	- II	- IW
B	560	553	412	2100	28.7	221.3	NC	- II	- IW
B	680	670	500	2100	35.2	223.8	NC	- II	- IW
C	725	715	533	2100	37.6	223.9	NC	- II	- IW

EPA Tier 3 and IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	475	469	350	1800	24.5	222.0	T3C	- II	- IW
A	608	600	447	1800	30.7	218.5	T3C	- II	- IW
B ¹	680	670	500	1800-2100	34.7	223.6	T3C	- II	- IW
C ¹	725	715	533	1800-2100	37.2	221.7	T3C	- II	- IW
D	814	803	599	2100	41.8	221.6	T3C	- II	- IW
E	1015	1001	747	2300	53.8	228.9	T3CR	- II	- IW
E	1150	1136	847	2300	58.6	219.8	T3R	- II	- IW

¹Wide Operating Speed Range (WOSR)

Heat Exchanger (32°C Sea Water Temp), Keel Cooled

(52°C SCAC Temp)

	LE	H	WE
min.	73.0 in/1854 mm	47.2 in/1198 mm	44.6 in/1134 mm
max.	76.0 in/1931 mm	51.2 in/1300 mm	47.4 in/1204 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	4000-4299 lb	1814-1950 kg

C32 ACERT

PROPULSION ENGINE



Electronic
Control
System

COMMERCIAL APPLICATIONS

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 and IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA	-IMO	-	EU
A ¹	669	660	492	1600-1800	32.3	208.4	T2CR	-	II	- IW
A ¹	760	750	559	1600-1800	36.2	205.8	T2CR	-	II	- IW
A ¹	862	850	634	1600-1800	41.0	205.3	T2CR	-	II	- IW
A	964	950	709	1600	45.2	202.7	T2CR	-	II	- IW
A ¹	1014	1000	746	1600-1800	48.1	204.9	T2CR	-	II	- IW
B ¹	1217	1200	895	1800-2000	59.3	210.5	NC	-	II	- IW
B	1319	1300	970	2100	64.1	211.2	T2CR	-	II	- IW
C	1319	1300	970	1800	62.5	204.6	T2CR	-	II	- IW
C ¹	1470	1450	1081	2100-2300	77.2	226.8	T2CR	-	II	- IW
D ¹	1622	1600	1193	2100-2300	82.1	218.2	T2CR	-	II	- IW

¹Wide Operating Speed Range (WOSR)

Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

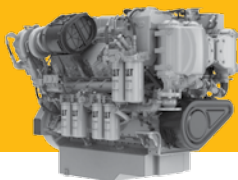
Contact local dealer for availability.

	LE	H	WE
min.	77.8 in/1976 mm	54.4 in/1381 mm	55.4 in/1408 mm
max.	81.6 in/2072 mm	59.9 in/1521 mm	56.8 in/1444 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.71 x 6.38 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	7100-7300 lb	3221-3311 kg

Electronic
Control
System



C32 ACERT

PROPULSION ENGINE

COMMERCIAL APPLICATIONS

RATINGS AND FUEL CONSUMPTION

IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA	-IMO	-	EU
A ¹	669	660	492	1600-1800	32.3	208.4	NC	-	II	- IW
A ¹	760	750	559	1600-1800	36.2	205.8	NC	-	II	- IW
A ¹	862	850	634	1600-1800	41.0	205.3	NC	-	II	- IW
A	964	950	709	1600	45.2	202.7	NC	-	II	- IW
A ¹	1014	1000	746	1600-1800	48.1	204.9	NC	-	II	- IW
B ¹	1217	1200	895	1800-2000	59.3	210.5	NC	-	II	- IW
B	1319	1300	970	2100	64.1	211.2	NC	-	II	- IW
C	1319	1300	970	1800	62.5	204.6	NC	-	II	- IW
C ¹	1470	1450	1081	2100-2300	77.2	226.8	NC	-	II	- IW

EPA Tier 3 & IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA	-IMO	-	EU
A ¹	760	750	559	1600-1800	37.5	213.2	T3CR	-	II	- IW
A ¹	862	850	634	1600-1800	42.8	214.2	T3CR	-	II	- IW
A ¹	862	850	634	1800-2100	45.4	227.9	T3CR	-	II	- IW
A ¹	1014	1000	746	1600-1800	49.8	212.1	T3CR	-	II	- IW
B ¹	1217	1200	895	1800-2100	62.6	222.2	T3CR	-	II	- IW
C ¹	1319	1300	970	1800-2100	67.9	222.7	T3CR	-	II	- IW
C ¹	1470	1450	1081	2100-2300	75.9	223.1	T3CR	-	II	- IW

¹Wide Operating Speed Range (WOSR)

Heat Exchanger (32°C Sea Water Temp), Keel Cooled (52°C SCAC Temp)

	LE	H	WE
min.	83.5 in/2121 mm	60.9 in/1547 mm	60.17 in/1528 mm
max.	89.9 in/2284 mm	62.5 in/1587 mm	60.17 in/1528 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.71 x 6.38 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	6950-7160 lb	3152-3248 kg

C32 ACERT

PROPULSION ENGINE



Electronic
Control
System

HIGH PERFORMANCE APPLICATIONS

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 and IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
C ¹	1470	1450	1081	2000-2300	76.7	226.8	T2R -	II -	IW
D ¹	1622	1600	1193	2000-2300	82.1	218.2	T2R -	II -	IW
E ¹	1723	1700	1267	2150-2300	88.8	220.8	T2R -	II -	IW
E	1825	1800	1342	2300	93.2	218.2	T2R -	II -	IW
E	1925	1900	1417	2300	101.4	224.7	T2R -	II -	IW

¹Wide Operating Speed Range (WOSR)

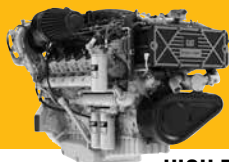
Contact local dealer for availability.

	LE	H	WE
min.	77.8 in/1976 mm	54.4 in/1381 mm	55.4 in/1408 mm
max.	81.6 in/2072 mm	59.9 in/1521 mm	58.9 in/1496 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.71 x 6.38 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	6600-6950 lb	2994-3152 kg

Electronic
Control
System



C32 ACERT

PROPULSION ENGINE

HIGH PERFORMANCE APPLICATIONS

RATINGS AND FUEL CONSUMPTION

EPA Tier 3 and IMO Tier II

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
D	1622	1600	1193	2300	82.1	218.2	T3C -	II -	IW
E	1825	1800	1342	2300	97.1	229.7	T3CR-	II -	IW
E	1925	1900	1417	2300	101.4	227.2	T3R -	II -	IW

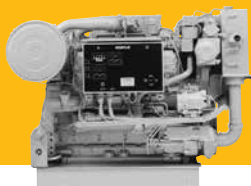
	LE	H	WE
min.	82.9 in/2106 mm	56.9 in/1445 mm	58.3 in/1482 mm
max.	82.9 in/2106 mm	56.9 in/1445 mm	58.3 in/1482 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.71 x 6.38 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	6780 lb	3075 kg

3508

PROPULSION ENGINE



Mechanical
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
A	715	705	526	1200	35.9	216.8	NC -	NC -	NC
A	867	855	637	1600	41.6	207.1	NC -	NC -	NC
A	867	855	637	1800	43.5	216.8	NC -	NC -	NC
B	816	805	600	1300	41.3	218.5	NC -	NC -	NC
B	918	905	675	1600	43.8	206.2	NC -	NC -	NC
B	973	960	716	1800	48.6	215.7	NC -	NC -	NC
C	831	820	611	1300	42.1	218.4	NC -	NC -	NC
C	1014	1000	746	1800	50.6	215.5	NC -	NC -	NC
D	1166	1150	857	1800	58.7	217.4	NC -	NC -	NC

	LE	H	WE
min.	81.8 in/2077 mm	71.0 in/1803 mm	67.1 in/1703 mm
max.	81.8 in/2077 mm	71.0 in/1803 mm	67.1 in/1703 mm

Vee 8, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	2105 cu in	34.5 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	11,499 lb	5216 kg



RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	786	775	578	1200	36.9	202.5	NC - I - NC
A	867	855	637	1600	40.8	203.2	NC - I - NC
A	867	855	637	1800	42.0	209.3	NC - I - NC
A	1014	1000	746	1600	47.3	201.8	NC - I - NC
A	1014	1000	746	1800	48.7	207.3	NC - I - NC
B	862	850	634	1200	40.7	204.1	NC - I - NC
B	973	960	716	1600	45.4	201.9	NC - I - NC
B	973	960	716	1800	46.7	207.3	NC - I - NC
B	1065	1050	783	1600	49.5	200.8	NC - I - NC
B	1065	1050	783	1800	50.9	206.5	NC - I - NC
C	913	900	671	1200	43.5	205.6	NC - I - NC
C	1014	1000	746	1600	47.3	201.8	NC - I - NC
C	1115	1100	820	1600	47.3	200.9	NC - I - NC
C	1115	1100	820	1800	53.3	206.3	NC - I - NC
Bhp	1217	1200	895	1785	58.7	208.2	NC - I - NC
Chp	1318	1300	969	1835	64.1	209.9	NC - I - NC
Dhp	1420	1400	1044	1880	69.6	211.6	NC - I - NC
Ehp	1521	1500	1118	1925	75.1	213.1	NC - I - NC

	LE	H	WE
min.	90.9 in/2310 mm	71.0 in/1803 mm	67.1 in/1703 mm
max.	90.9 in/2310 mm	71.0 in/1803 mm	67.1 in/1703 mm

Vee 8, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	2105 cu in	34.5 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx.)	10,181-11,499 lb	4618-5261 kg

3508C

PROPULSION ENGINE



Electronic
Control
System

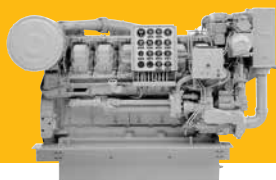
RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA	-	IMO	-	EU
A	786	775	578	1200	36.9	206.1	NC	-	II	-	IW
A	1015	1000	746	1600	48.9	208.3	NC	-	II	-	IW
B	862	850	634	1200	40.4	202.8	NC	-	II	-	IW
B	1065	1050	783	1600	51.6	209.4	NC	-	II	-	IW
C	913	900	671	1200	42.9	203.4	NC	-	II	-	IW
C	1115	1100	820	1600	54.2	210.1	NC	-	II	-	IW

	LE	H	WE
min.	83.4 in/2117 mm	72.0 in/1829 mm	67.0 in/1703 mm
max.	83.4 in/2117 mm	72.0 in/1829 mm	67.0 in/1703 mm

Vee 8, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	2107 cu in	34.5 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	10,935 lb	4960 kg



RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1224	1207	900	1200	58.1	204.9	NC - NC - NC
A	1298	1280	954	1600	64.2	213.7	NC - NC - NC
A	1298	1280	954	1800	64.7	215.3	NC - NC - NC
B	1318	1301	970	1200	62.8	205.5	NC - NC - NC
B	1379	1360	1014	1600	68.3	214.0	NC - NC - NC
B	1465	1445	1077	1800	72.2	212.8	NC - NC - NC
C	1428	1408	1050	1200	68.6	207.5	NC - NC - NC
C	1430	1410	1051	1600	73.1	220.8	NC - NC - NC
C	1521	1500	1118	1800	76.3	216.6	NC - NC - NC
D	1775	1750	1305	1800	92.8	225.9	NC - NC - NC

	LE	H	WE
min.	107 in/2715 mm	80.8 in/2053 mm	67.1 in/1703 mm
max.	107 in/2715 mm	80.8 in/2053 mm	67.1 in/1703 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	3158 cu in	51.8 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	14,398-14,411 lb	6531-6537 kg

3512B

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1115	1100	820	1200	52.0	201.5	NC - I - NC
A	1298	1280	954	1600	60.4	201.1	NC - I - NC
A	1318	1300	969	1200	62.2	203.8	NC - I - NC
A	1521	1500	1118	1600	69.8	198.3	NC - I - NC
A	1521	1500	1118	1800	72.6	205.1	NC - I - NC
A ¹	1521	1500	1118	1200	74.3	210.9	NC - I - NC
A ²	1521	1500	1118	1800	73.5	206.0	NC - I - NC
A ¹	1699	1675	1249	1600	75.8	192.8	NC - I - NC
A ¹	1835	1810	1350	1600	88.0	207.1	NC - I - NC
B	1171	1155	861	1200	54.5	201.1	NC - I - NC
B	1278	1260	939	1200	59.7	201.8	NC - I - NC
B	1369	1350	1007	1200	64.6	203.6	NC - I - NC
B	1379	1360	1014	1600	63.4	198.6	NC - I - NC
B	1379	1360	1014	1800	65.2	205.1	NC - I - NC
B	1597	1575	1174	1600	72.9	197.1	NC - I - NC
B	1597	1575	1174	1800	75.9	205.1	NC - I - NC
B ¹	1775	1750	1305	1600	78.9	192.1	NC - I - NC
B ¹	1938	1911	1425	1600	92.8	206.9	NC - I - NC
C	1227	1210	902	1200	57.6	201.3	NC - I - NC
C	1318	1300	969	1200	61.8	202.4	NC - I - NC
C	1430	1410	1051	1600	65.7	198.3	NC - I - NC
C	1430	1410	1051	1800	67.3	204.3	NC - I - NC
C	1496	1475	1100	1200	71.3	207.2	NC - I - NC
C	1673	1650	1230	1600	76.3	196.9	NC - I - NC
C	1673	1650	1230	1800	79.3	204.7	NC - I - NC
C ¹	1876	1850	1379	1600	83.4	192.0	NC - I - NC
C ¹	2040	2012	1500	1600	97.1	205.5	NC - I - NC
Bhp	1825	1800	1342	1785	87.2	206.4	NC - I - NC
Chp	1977	1950	1454	1835	96.0	209.7	NC - I - NC
Dhp	2129	2100	1566	1880	101.3	205.4	NC - I - NC
Ehp	2282	2250	1678	1925	109.6	207.4	NC - I - NC

¹High displacement engine (HD)

²Wide operating speed range

LE

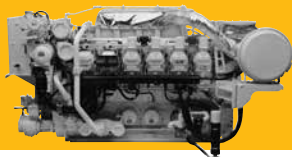
H

WE

min.	111 in/2819 mm	71.1 in/1806 mm	67.1 in/1703 mm
max.	121 in/3067 mm	82.3 in/2091 mm	70.2 in/1785 mm
HD	120 in/3039 mm	81.7 in/2074 mm	78.3 in/1988 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Bore x Stroke ²	6.7 x 8.5 in	170 x 215 mm
Displacement	3158 cu in	51.8 liter
Displacement ²	3576 cu in	58.6 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx.)	14,398-14,411 lb	6531-6537 kg



RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1298	1280	955	1600	61.3	204.0	NC - II - IW
A	1318	1300	969	1200	64.3	201.6	NC - II - IW
A	1420	1400	1044	1600	66.6	202.5	NC - II - IW
A	1520	1500	1118	1800	70.3	200.1	NC - II - IW
A ¹	1521	1500	1118	1200	71.5	203.0	NC - II - IW
A ¹	1699	1676	1250	1600	79.7	202.6	NC - II - IW
A ¹	1836	1810	1350	1600	84.7	207.1	NC - II - IW
B	1378	1359	1014	1600	64.8	203.0	NC - II - IW
B	1420	1400	1044	1200	69.1	210.1	NC - II - IW
B	1521	1500	1118	1600	71.1	201.9	NC - II - IW
B	1597	1575	1174	1800	73.8	199.9	NC - II - IW
B ¹	1622	1600	1194	1200	76.2	202.8	NC - II - IW
B ¹	1774	1749	1305	1600	82.5	200.7	NC - II - IW
B ¹	1938	1911	1425	1600	89.0	208.5	NC - II - IW
B ¹	2282	2250	1678	1800	111.0	209.9	NC - II - IW
C	1429	1409	1051	1600	67.0	202.4	NC - II - IW
C	1521	1500	1118	1200	74.1	210.3	NC - II - IW
C	1622	1600	1194	1600	70.4	201.7	NC - II - IW
C	1673	1650	1230	1800	77.2	199.6	NC - II - IW
C ¹	1723	1700	1268	1200	83.4	204.0	NC - II - IW
C ¹	1876	1851	1380	1600	86.4	199.0	NC - II - NC
C ¹	2040	2012	1500	1600	93.7	208.8	NC - II - IW
C ¹	2400	2365	1765	1800	116.5	214.5	NC - II - IW
C ¹	2400	2365	1765	1800	119.2	214.5	NC - I - NC
D ¹	2577 ²	2541	1895	1800	128.4	215.2	NC - I - NC
D ¹	2587	2551	1902	1800	124.4	207.7	NC - II - IW

¹High Displacement engine (HD)

²B Series uprate

LE

H

WE

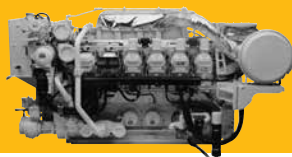
min.	102.0 in/2590 mm	75.0 in/1904 mm	80.2 in/2037 mm
max.	105.1 in/2669 mm	88.3 in/2242 mm	87.9 in/2232 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.69 x 7.48 in	170 x 190 mm
Bore x Stroke¹	6.69 x 8.46 in	170 x 215 mm
Displacement	3161 cu in	51.8 liter
Displacement¹	3574 cu in	58.6 liter
Rotation (from flywheel end)	Counterclockwise or Clockwise	
Engine dry weight (approx)	14,400-16,340 lb	6532-7411 kg

3512C

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

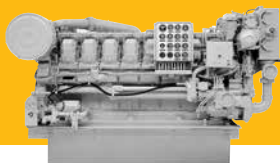
EPA Tier 3 Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A 1359	1340	1000	1600	67.0	212.8	T3C - II - NC	
A 1522	1501	1120	1600	74.6	211.5	T3C - II - NC	
A 1522	1501	1120	1800	75.4	213.7	T3C - II - NC	
A 1835	1810	1350	1600	88.7	208.6	T3C - II - NC	
B 1597	1575	1175	1600	77.9	210.6	T3C - II - NC	
B 1597	1575	1175	1800	79.0	213.6	T3C - II - NC	
B 1937	1910	1425	1600	93.5	208.5	T3C - II - NC	
B 2280	2249	1678	1800	114.8	217.3	T3C - II - NC	
C 1672	1649	1230	1600	81.3	209.8	T3C - II - NC	
C 1672	1649	1230	1800	83.0	214.3	T3C - II - NC	
C 2039	2011	1500	1600	98.6	208.8	T3C - II - NC	
C 2399	2366	1765	1800	120.8	217.4	T3C - II - NC	

	LE	H	WE
min.	104.2 in/2645 mm	87.5 in/2222.6 mm	80.2 in/2037 mm
max.	104.2 in/2645 mm	87.5 in/2222.6 mm	80.2 in/2037 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.69 x 8.46 in	170 x 215 mm
Displacement	3574 cu in	58.6 liter
Rotation (from flywheel end)	Counterclockwise or	Clockwise
Engine dry weight (approx)	16,508 lb	7488 kg



RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1622	1603	1195	1200	76.1	201.2	NC - NC - NC
A	1734	1710	1275	1600	85.9	214.0	NC - NC - NC
A	1734	1710	1275	1800	86.5	215.5	NC - NC - NC
B	1698	1676	1250	1200	79.5	202.0	NC - NC - NC
B	1835	1810	1350	1600	91.0	214.1	NC - NC - NC
B	1947	1920	1432	1800	96.5	214.1	NC - NC - NC
C	1774	1750	1305	1200	83.3	202.8	NC - NC - NC
C	2028	2000	1491	1800	103.2	219.8	NC - NC - NC
D	2231	2200	1640	1800	113.8	220.3	NC - NC - NC

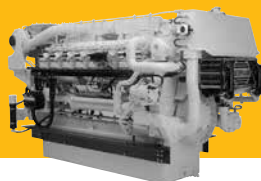
	LE	H	WE
min.	145.3 in/3690 mm	80.8 in/2053 mm	67.1 in/1703 mm
max.	145.3 in/3690 mm	80.8 in/2053 mm	67.1 in/1703 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	4210 cu in	69 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	17,699 lb	8028 kg

3516B

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1673	1650	1230	1200	77.1	198.9	NC - I - NC
A ¹	1901	1875	1398	1200	87.9	199.8	NC - I - NC
A	2028	2000	1491	1600	95.0	200.1	NC - I - NC
A	2028	2000	1491	1800	94.0	200.1	NC - I - NC
A ²	2028	2000	1491	1800	103.9	202.2	NC - I - NC
A ¹	2292	2260	1685	1600	102.6	193.2	NC - I - NC
A ¹	2481	2447	1825	1600	112.8	195.5	NC - I - NC
B	1775	1750	1305	1200	81.7	198.8	NC - I - NC
B	2129	2100	1566	1600	99.5	201.7	NC - I - NC
B	2129	2100	1566	1800	98.6	200.0	NC - I - NC
B ¹	2408	2375	1771	1600	106.9	191.6	NC - I - NC
B ¹	2611	2575	1920	1600	112.8	195.2	NC - I - NC
C	1876	1850	1379	1200	86.6	207.0	NC - I - NC
C	2231	2200	1640	1600	104.4	202.1	NC - I - NC
C	2231	2200	1640	1800	103.4	200.4	NC - I - NC
C ¹	2535	2500	1864	1600	111.9	190.5	NC - I - NC
C ¹	2718	2682	2000	1600	122.8	194.9	NC - I - NC
Ahp	2718	2682	2000	1925	128.9	204.7	NC - I - NC
Bhp	2434	2400	1790	1785	110.4	196.4	NC - I - NC
Chp	2636	2600	1939	1835	120.2	196.8	NC - I - NC
Dhp	2839	2800	2088	1880	132.7	201.8	NC - I - NC
Ehp	3042	3000	2237	1925	143.3	203.4	NC - I - NC

¹High displacement engine (HD)

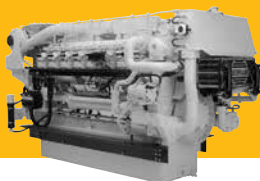
²Wide operating speed range

	LE	H	WE
min.	131.9 in/3349 mm	69.0 in/1753 mm	67.0 in/1703 mm
max.	146.7 in/3725 mm	82.3 in/2091 mm	80.8 in/2053 mm
HD	141.1 in/3584 mm	81.9 in/2082 mm	84.4 in/2144 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Bore x Stroke ²	6.7 x 8.5 in	170 x 215 mm
Displacement	4210 cu in	69 liter
Displacement ²	4766 cu in	78 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	17,185-17,699 lb	7795-8028 kg

Electronic
Control
System



3516C

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
A	1673	1650	1230	1200	78.9	206.2	NC - II - IW
A	2028	2000	1492	1600	96.3	202.8	NC - II - IW
A ¹	2292	2260	1686	1600	107.5	202.4	NC - II - IW
A ¹	2482	2448	1825	1600	113.2	206.9	NC - II - IW
B	1775	1750	1305	1200	84.2	206.2	NC - II - IW
B	2130	2100	1566	1600	100.4	201.8	NC - II - IW
B ¹	2407	2375	1771	1600	112	200.8	NC - II - IW
B ¹	2611	2575	1920	1600	118.6	206.7	NC - II - IW
B ¹	3046	3004	2240	1800	148.3	210.3	NC - II - IW
C	1876	1850	1379	1200	90.0	207.0	NC - II - IW
C	2231	2200	1641	1600	104.5	201.9	NC - II - IW
C ¹	2534	2500	1864	1600	117.0	199.3	NC - II - NC
C ¹	2720	2682	2000	1600	123.4	198.5	NC - II - IW
C ¹	3196	3151	2350	1800	148.6	209.2	NC - I - NC
C ¹	3196	3151	2350	1800	154.7	200.9	NC - II - IW
D ¹	2855	2816	2100	1600	114.9	199.0	NC - II - IW
D ¹	3434	3386	2525	1800	159.8	201.0	NC - I - NC
D ¹	3434	3386	2525	1800	165.0	207.6	NC - II - IW

¹High Displacement engine (HD)

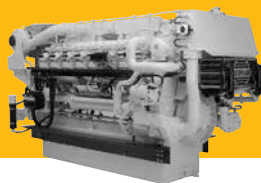
	LE	H	WE
min.	143.1 in/3637 mm	77.4 in/1967 mm	80.2 in/2037 mm
max.	148.0 in/3761 mm	84.6 in/2150 mm	84.3 in/2142 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.69 x 7.48 in	170 x 190 mm
Bore x Stroke ¹	6.69 x 8.46 in	170 x 215 mm
Displacement	4211 cu in	69 liter
Displacement ¹	4765 cu in	78 liter
Rotation (from flywheel end)	Counterclockwise or Clockwise	
Engine dry weight (approx)	17,550-19,025 lb	7961-8629 kg

3516C

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

EPA Tier 3 Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO- EU
A	2161	2131	1590	1600	103.6	207.0	T3C - II - NC
A	2480	2446	1825	1600	118.9	206.9	T3C - II - NC
B	2270	2239	1670	1600	108.9	207.0	T3C - II - NC
B	2610	2574	1920	1600	125.0	206.7	T3C - II - NC
B	3045	3003	2240	1800	147.6	209.2	T3C - II - NC
C	2379	2346	1750	1600	114.1	207.0	T3C - II - NC
C	2712	2675	1995	1600	129.8	206.6	T3C - II - NC
C	3194	3150	2350	1800	115.4	209.9	T3C - II - NC
D	3432	3385	2525	1800	167.4	210.9	T3C - II - NC

Preliminary EPA Tier 4 Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO- EU
B	3045	3003	2240	1800			T4C
C	3194	3150	2350	1800			T4C

	LE	H	WE
min.	125.7 in/3192 mm	87.6 in/2225 mm	89.9 in/2284 mm
max.	125.7 in/3192 mm	87.6 in/2225 mm	89.9 in/2284 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.69 x 8.46 in	170 x 215 mm
Displacement	4765 cu in	78 liter
Rotation (from flywheel end)	Counterclockwise or Clockwise	
Engine dry weight (approx)	21,164 lb	9600 kg

Electronic
Control
System



C175-16

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO- EU
A	2721	2683	2001	1600	129.9	206.2	T3C - II - NC
A	2832	2792	2082	1600	140.6	214.5	T3C - II - NC
B	2948	2907	2168	1600	146.1	214.1	T3C - II - NC

Preliminary IMO Tier II Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO- EU
A	3045	3003	2239	1800			NC - II
A	3302	3256	2428	1800			NC - II
B	3468	3420	2550	1800			NC - II

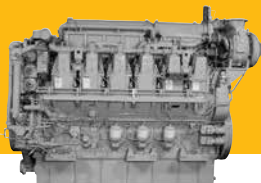
	LE	H	WE
min.	177.8 in/4515 mm	97.6 in/2478 mm	72.6 in/1845 mm
max.	177.8 in/4515 mm	97.6 in/2478 mm	72.6 in/1845 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	6.88 x 8.66	175 x 220 mm
Displacement	5166.88 cu in	84.67 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	28,750 lb	13 041 kg

C280-6

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

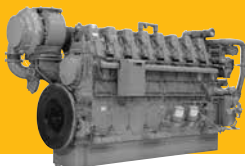
	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
CS 2352	2320	1730	900	106	194.7	T2C - II - NC	
CS 2515	2481	1850	1000	118	202.7	T2C - II - NC	
MC 2583	2548	1900	900	116	194.0	T2C - II - NC	
MC 2760	2722	2030	1000	128	200.4	T2C - II - NC	

C280-6 propulsion ratings listed above are also available in Tier 1 configurations.

	LE	H	WE
min.	158 in/4013 mm	108 in/2743 mm	71 in/1803 mm
max.	158 in/4013 mm	108 in/2743 mm	71 in/1803 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	6773 cu in	111 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	34,496 lb	15 680 kg



C280-8

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -IMO - EU
CS	3127	3084	2300	900	136	187.9	T2C - II - NC
CS	3345	3299	2460	1000	153	197.7	T2C - II - NC
MC	3440	3393	2530	900	150	188.4	T2C - II - NC
MC	3684	3634	2710	1000	168	197.0	T2C - II - NC

C280-8 propulsion ratings listed above are also available in Tier 1 configurations.

Preliminary EPA Tier 4 Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -IMO - EU
CS	3345	3299	2460	1000			T4C - II - NC
MC	3685	3634	2710	1000			T4C - II - NC

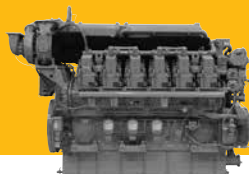
	LE	H	WE
min.	195 in/4953 mm	104 in/2642 mm	71 in/1803 mm
max.	195 in/4953 mm	104 in/2642 mm	71 in/1803 mm

In-line 8, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	9031 cu in	148 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	41,800 lb	19 000 kg

C280-12

PROPULSION ENGINE



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
CS	4704	4640	3460	900	211	193.8	T2C -	II -	NC
CS	5031	4962	3700	1000	236	202.7	T2C -	II -	NC
MC	5167	5096	3800	900	232	194.0	T2C -	II -	NC
MC	5520	5444	4060	1000	255	199.6	T2C -	II -	NC

C280-12 propulsion ratings listed above are also available in Tier 1 configurations.

Preliminary EPA Tier 4 Ratings

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
CS	5031	4962	3700	1000			T4C -	II -	NC
MC	5520	5444	4060	1000			T4C -	II -	NC

	LE	H	WE
min.	182 in/4623 mm	134 in/3404 mm	80 in/2032 mm
max.	182 in/4623 mm	134 in/3404 mm	80 in/2032 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	13,546 cu in	222 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	57,276 lb	25 980 kg

Electronic
Control
System



C280-16

PROPULSION ENGINE

RATINGS AND FUEL CONSUMPTION

	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
CS	6255	6169	4600	900	272	187.9	T2C - II - NC
CS	6690	6598	4920	1000	305	197.0	T2C - II - NC
MC	6879	6785	5060	900	300	188.4	T2C - II - NC
MC	7369	7268	5420	1000	336	197.0	T2C - II - NC
FCVR	7682	7577	5650	1000	365	205.3	T2C - II - NC

Arrangements are available with front mounted turbochargers or rear mounted turbochargers.

C280-16 propulsion ratings listed above are also available in Tier 1 configurations.

	LE	H	WE
min.	224 in/5690 mm	134 in/3403 mm	80 in/2032 mm
max.	224 in/5690 mm	134 in/3403 mm	80 in/2032 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	18,062 cu in	296 liter
Rotation (from flywheel end)	Counterclockwise or clockwise	
Engine dry weight (approx)	68,343 lb	31 000 kg

DEP

DIESEL ELECTRIC PROPULSION – 50 HZ

RATINGS AND FUEL CONSUMPTION

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C9	253	189	1500	10.9	183.3	T2C - II - NC
C9	288	215	1500	14.2	209.9	T2C - II - NC
C18 ACERT	404	301	1500	19.9	210.1	NC - II - CC2
C18 ACERT	514	383	1500	25.2	209.1	NC - II - CC2
C18 ACERT	587	438	1500	28.7	208.2	NC - II - CC2
C18 ACERT	660	492	1500	32.3	208.6	NC - II - CC2
C32 ACERT	791	590	1500	37.9	203.8	NC - II - IW
C32 ACERT	923	688	1500	44.0	203.0	NC - II - IW
C32 ACERT	1172	874	1500	57.0	207.0	NC - II - IW
3512B	1686	1257	1500	77.4	195.7	NC - II - NC
3516B	2303	1717	1500	108.9	201.6	NC - II - NC
C280-6	2481	1850	1000	118.9	204.3	T2C - II - NC
C280-6	2722	2030	1000	131.7	206.2	T2C - II - NC
C280-8	3299	2460	1000	153.2	197.9	T2C - II - NC
C280-8	3634	2710	1000	170.3	199.7	T2C - II - NC
C280-12	4962	3700	1000	237.7	204.2	T2C - II - NC
C280-12	5445	4060	1000	263.4	206.2	T2C - II - NC
C280-16	6598	4920	1000	306.4	197.9	T2C - II - NC
C280-16	7268	5420	1000	340.6	199.7	T2C - II - NC

RATINGS AND FUEL CONSUMPTION

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C9	253	189	1800	13.7	230.4	T2C - II - CC2
C9	311	232	1800	16.9	231.5	T2C - II - CC2
C9	361	269	1800	17.9	211.5	T2C - II - CC2
C18 ACERT	624	465	1800	32.8	224.0	T3C - II - NC
C18 ACERT	803	599	1800	25.4	217.0	NC - II - NC
C32 ACERT	916	683	1800	45.3	210.8	NC - II - IW
C32 ACERT	1047	781	1800	57.8	210.4	NC - II - IW
C32 ACERT	1047	781	1800	54.3	220.8	T3C - II - IW
C32 ACERT	1333	994	1800	64.9	207.2	NC - II - IW
C32 ACERT	1333	994	1800	68.0	217.3	T3C - II - IW
3512C	1920	1432	1800	91.9	204.0	NC - II - IW
3512C	2183	1628	1800	110.2	215.1	NC - II - IW
3512C	2400	1790	1800	119.7		NC - II - IW
3512C	2442	1821	1800	119.2	208.0	T3C - II - IW
3516C	2576	1921	1800	127.4	210.8	T3C - II - NC
3516C	2809	2095	1800	132.0	200.2	NC - II - IW
3516C	2962	2211	1800	145.5	209.1	T3C - II - NC
3516C	2984	2225	1800	140.6	200.1	NC - II - IW
3516C	3176	2368	1800	154.4	207.2	T3C - II - NC
3516C	3151	2350	1800	148.9	201.4	NC - II - IW
C280-6	2320	1730	900	107.4	197.3	T2C - II - NC
C280-6	2548	1900	900	118.6	198.4	T2C - II - NC
C280-8	3084	2300	900	143.7	198.6	T2C - II - NC
C280-8	3393	2530	900	159.4	200.2	T2C - II - NC
C280-12	4640	3460	900	214.9	197.4	T2C - II - NC
C280-12	5096	3800	900	237.2	198.4	T2C - II - NC
C280-16	6169	4600	900	287.4	198.6	T2C - II - NC
C280-16	6786	5060	900	318.7	200.1	T2C - II - NC

Preliminary EPA Tier 4 Ratings

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C280-12	4640	3460	900			T4C - II - NC
C280-12	5096	3800	900			T4C - II - NC

Cat Marine Generator Sets and Auxiliary Engines

Caterpillar has offered packaged power systems for over 70 years. We assure power and performance ratings, as advertised, through extensive factory testing.

Cat Generator Sets typically exceed NEMA and IEEE standards for load acceptance. All rotor designs have been type tested at 150% overspeed for two hours at 338° F (170° C) ambient temperature.

Rating Definition

All Caterpillar Marine Auxiliary engines and generator sets are rated for prime power for continuous electric service according to ISO 8528-1.

Hours per Year Unlimited

Load Factor $\leq 70\%$

Overload Capacity + 10%
maximum of 1 hour in 12
maximum of 25 hours per year

Rating Conditions

Ratings are based on SAE J3046 and J1349 standard conditions of 29.61 in. Hg (100 kPa) and 77° F (25° C). These ratings also apply at ISO8665, ISO3046-1:2002E, DIN6271-3, and BS5514 standard conditions of 29.61 in. Hg (100 kPa), 81° F (27° C), and 60% relative humidity.

Fuel rates are based on fuel oil of 35° API [60° F (16° C)] gravity having an LHV of 18,390 Btu/lb (42 780 kJ/kg) when used at 85° F (29° C) and weighing 7.001 lbs/U.S. gal. (838.9 g/liter).

Marine Auxiliary Engines are mainly used as generator set engines; however, they can be used for electrically driven pumps, winches, conveyors, thrusters, when it is specified. Engines can be radiator cooled or heat exchanger/keel cooled.



C1.5

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

Generator Set

	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	13.0	16.5	1800	1.2	268.2	T3C - NST - IW
50 Hertz	11.0	13.5	1500	1.0	264.1	T3C - NST - IW

Generator Set – Single Phase

	ekW @ 1.0pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	12.0	12.0	1800	1.2	290.5	T3C - NST - IW
50 Hertz	10.0	10.0	1500	1.0	290.5	T3C - NST - IW

	L	H	WE
Open Set	41.9 in/1065 mm	28.7 in/733 mm	19.8 in/504 mm
Enclosed Set	46 in/1170 mm	30.8 in/783 mm	24 in/608 mm

In-line 3, 4-Stroke-Cycle Diesel

Aspiration	NA	
Bore x Stroke	3.31 x 3.5 in	84 x 90 mm
Displacement	91 cu in	1.5 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	703/908 lb	319/412 kg

C2.2

GENERATOR SET



Mechanical
Control
System

RATINGS AND FUEL CONSUMPTION

Generator Set

	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	19.5	24.0	1800	1.63	242.9	T3C - NST - IW
60 Hertz	27.0	34.0	1800	2.24	241.0	T3C - NST - IW
50 Hertz	16.0	20.0	1500	1.37	248.8	T3C - NST - IW
50 Hertz	22.5	28.0	1500	1.88	242.8	T3C - NST - IW

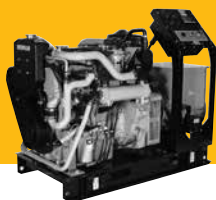
Generator Set – Single Phase

	ekW @ 1.0pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	19.0	19.0	1800	1.63	249.3	T3C - NST - IW
60 Hertz	27.0	27.0	1800	2.24	241.0	T3C - NST - IW
50 Hertz	16.0	16.0	1500	1.37	248.8	T3C - NST - IW
50 Hertz	22.5	22.5	1500	1.88	242.8	T3C - NST - IW

	L	H	WE
Open Set	45 in/1147 mm	32 in/825 mm	20.5 in/521 mm
Enclosed Set	46 in/1170 mm	31 in/775 mm	24 in/608 mm

In-line 4, 4-Stroke-Cycle Diesel

Aspiration	NA, T	
Bore x Stroke	3.31 x 3.94 in	84 x 100 mm
Displacement	135 cu in	2.2 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	857/1027 lb	389/466 kg



C4.4

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

Generator Set							
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA-IMO -	EU
60 Hertz	42.0R ¹	53.0	1800	3.4	235.2	T2C-NST-	NC
60 Hertz	44.0 ¹	55.0	1800	3.4	224.5	T2C-NST-	NC
60 Hertz	56.0R ¹	70.0	1800	4.5	233.5	T2C-NST-	NC
60 Hertz	58.5 ¹	73.0	1800	4.2	208.6	T2C-NST-	NC
60 Hertz	72.0R ¹	90.0	1800	5.8	234.0	T2C-NST-	NC
60 Hertz	76.0 ¹	95.0	1800	5.8	221.7	T2C-NST-	NC
60 Hertz	95.0R ¹	119.0	1800	7.3	223.3	T2C-NST-	NC
60 Hertz	99.0 ¹	123.0	1800	7.3	214.2	T2C-NST-	NC
50 Hertz	36.0R ¹	45.0	1500	2.9	234.0	NC-NST-CCNR2	
50 Hertz	38.0 ¹	47.5	1500	2.9	221.7	NC-NST-CCNR2	
50 Hertz	49.0R ¹	61.0	1500	3.9	231.2	NC-NST-CCNR2	
50 Hertz	51.5 ¹	64.5	1500	3.9	220.0	NC-NST-CCNR2	
50 Hertz	65.0R ¹	81.0	1500	4.9	219.0	NC-NST-CCNR2	
50 Hertz	69.0 ¹	86.0	1500	4.9	206.3	NC-NST-CCNR2	
50 Hertz	82.0R ¹	103.0	1500	6.5	230.3	NC-NST-	NC
50 Hertz	86.0 ¹	107.0	1500	6.5	219.6	NC-NST-	NC

R – Radiator cooled only.

¹ABS, BV, DnV, GL, LR, RINA, CCS approved generator set packages available.

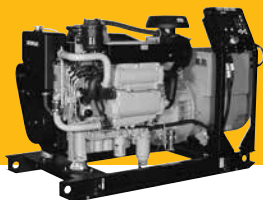
Contact local dealer for availability.

	L	H	WE
Open Min.	55.5 in/1409 mm	51.9 in/1318 mm	28.5 in/724 mm
Open Max.	62.6 in/1590 mm	55.3 in/1405 mm	28.5 in/724 mm
Enclosed	68.9 in/1750 mm	39.4 in/1000 mm	47.8 in/1215 mm

In-line 4, 4-Stroke-Cycle Diesel

Aspiration	NA, T, TA	
Bore x Stroke	4.13 x 5.0 in	105 x 127 mm
Displacement	269 cu in	4.4 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	1775-2238 lb	805-1015 kg

Electronic
Control
System



C6.6 ACERT GENERATOR SET

RATINGS AND FUEL CONSUMPTION

	Generator Set						EPA - IMO - EU		
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr				
60 Hertz	113R	141	1800	8.7	223.7	T2C - II	-IW		
60 Hertz	125	156	1800	8.74	203.1	T2C - II	-IW		
60 Hertz	138R	173	1800	11.0	231.6	T2C - II	-IW		
60 Hertz	150	187	1800	11.0	213.1	T2C - II	-IW		
60 Hertz	158R	198	1800	12.0	220.7	T2C - II	-IW		
60 Hertz	170	212	1800	12.0	205.1	T2C - II	-IW		
50 Hertz	93R	116	1500	7.1	221.8	T2C - II	-IW		
50 Hertz	100	125	1500	7.1	206.3	T2C - II	-IW		
50 Hertz	118R	148	1500	9.1	224.1	T2C - II	-IW		
50 Hertz	125	156	1500	9.1	211.5	T2C - II	-IW		
50 Hertz	136R	170	1500	10.7	228.6	T2C - II	-IW		
50 Hertz	143	178	1500	10.7	217.4	T2C - II	-IW		

R – Radiator cooled only.

MCS approved packages available.

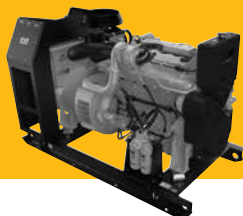
Contact local dealer for availability.

	LG	H	WE
min.	75.0-1905.0 mm	37.8 in/961 mm	51.8 in/1315 mm
max.	104.7 in/2660 mm	37.8 in/961 mm	55.7 in/1416 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.13 x 5.0 in	105 x 127 mm
Displacement	402.7 cu in	6.6 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	2972-3675 lb	1348-1667 kg

Electronic
Control
System



C7.1

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

EPA Tier 3 & IMO Tier II

	Generator Set			U.S. g/h	g/bkW-hr	EPA - IMO - EU
	ekW @ .8pf	kVA	rpm			
60 Hertz	118	148	1800	9.5	233.6	T3C - II - CC2
60 Hertz	150	188	1800	11.3	219.4	T3C - II - CC2
60 Hertz	175	219	1800	13.2	219.5	T3C - II - CC2
60 Hertz	200	250	1800	14.9	216.4	T3C - II - CC2
50 Hertz	100	125	1500	7.9	229.6	T3C - II - CC2
50 Hertz	118	148	1500	9.2	227.5	T3C - II - CC2
50 Hertz	150	188	1500	11.2	216.5	T3C - II - CC2

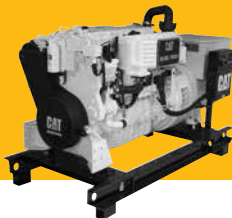
	LE	H	WE
min.	76.2 in/1935 mm	49.7 in/1263 mm	37.6 in/956 mm
max.	83.3 in/2116 mm	49.7 in/1263 mm	37.6 in/956 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.13 x 5.3 in	105 x 135 mm
Displacement	433.3 cu in	7.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	3634-4026 lb	1652-1840 kg

C9

GENERATOR SET



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

Generator Set						
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	163R	204	1800	13.6	228.8	T2C - II - CC2
60 Hertz	175	219	1800	13.7	228.8	T2C - II - CC2
60 Hertz	203R	254	1800	16.8	229.5	T2C - II - CC2
60 Hertz	215	269	1800	16.9	229.5	T2C - II - CC2
60 Hertz	238R	298	1800	17.9	211.7	T2C - II - CC2
60 Hertz	250	313	1800	17.9	213.9	T2C - II - CC2
50 Hertz	142R	178	1500	10.8	212.2	T2C - II - NC
50 Hertz	150	188	1500	10.9	212.1	T2C - II - NC
50 Hertz	167R	208	1500	12.4	209.0	T2C - II - NC
50 Hertz	175	219	1500	12.9	209.0	T2C - II - NC
50 Hertz	192R	240	1500	14.2	206.6	T2C - II - NC
50 Hertz	200	250	1500	14.2	206.6	T2C - II - NC

R – Radiator cooled only.

Contact local dealer for availability.

	LG	H	WE
min.	82.9 in/2106 mm	46.0 in/1169 mm	39.2 in/996.8 mm
max.	87.2 in/2216 mm	46.0 in/1169 mm	39.2 in/996.8 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.41 x 5.87 in	112 x 149 mm
Displacement	538 cu in	8.8 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	3865-4195 lb	1753-1903 kg

Electronic
Control
System

HEAT EXCHANGER/KEEL COOLED



C18 ACERT GENERATOR SET

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 & IMO Tier II

	Generator Set						
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU	
60 Hertz	340	425	1800	25.4	217.0	T2C - II	- CC2
60 Hertz	425	531	1800	31.5	215.2	T2C - II	- CC2
60 Hertz	500 ¹	625	1800	35.2	205.1	T2C - II	- CC2
60 Hertz	550 ¹	688	1800	38.3	203.7	T2C - II	- CC2
50 Hertz	275	344	1500	19.9	209.5	T2C - II	- CC2
50 Hertz	350	438	1500	25.2	209.0	T2C - II	- CC2
50 Hertz	400	500	1500	28.7	208.0	T2C - II	- CC2
50 Hertz	450	563	1500	32.3	208.8	T2C - II	- CC2

¹Keel cooling not available.

Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

Contact local dealer for availability.

	LG	H	W
min.	119.7 in/3040 mm	61.3 in/1557.5 mm	45.3 in/1150.9 mm
max.	121.1 in/3075.5 mm	61.3 in/1557.5 mm	51.2 in/1300.9 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	9280-10,275 lb	4209-4661 kg

C18 ACERT

GENERATOR SET

HEAT EXCHANGER/KEEL COOLED

Electronic
Control
System



RATINGS AND FUEL CONSUMPTION

IMO Tier II

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	425	531	1800	31.5	215.0	NC - II - IW
50 Hertz	350	438	1500	25.2	209.0	NC - II - IW
50 Hertz	400	500	1500	28.7	208.0	NC - II - IW
50 Hertz	450	563	1500	32.3	209.0	NC - II - IW

EPA Tier 3 & IMO Tier II

	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	425	531	1800	32.3	220.0	T3C - II - IW
60 Hertz	550	688	1800	40.2	213.3	T3C - II - IW

Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

	LE	H	WE
min.	119.7 in/3040 mm	66.3 in/1684 mm	60.9 in/1547 mm
max.	119.7 in/3040 mm	66.3 in/1684 mm	60.9 in/1547 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	4406 lb	9713 kg

Electronic
Control
System

HEAT EXCHANGER/KEEL COOLED



C32 ACERT
GENERATOR SET

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 & IMO Tier II

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	715	894	1800	51.8	210.4	T2C - II - IW
60 Hertz	910	1138	1800	64.9	207.2	T2C - II - IW
50 Hertz	540	675	1500	37.9	203.8	T2C - II - IW
50 Hertz	800	1000	1500	57.0	207.0	T2C - II - IW

Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

Contact local dealer for availability.

	LG	H	W
min.	168.34 in/4275.9 mm	86.83 in/2205.7 mm	65.79 in/1671.1 mm
max.	169.7 in/4309.3 mm	86.83 in/2205.7 mm	65.79 in/1671.1 mm

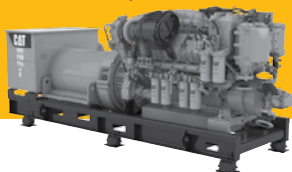
Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.7 x 6.4 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	15,721 lb	7131 kg

C32 ACERT GENERATOR SET

HEAT EXCHANGER/KEEL COOLED

Electronic
Control
System



RATINGS AND FUEL CONSUMPTION

IMO Tier II

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	730	913	1800	51.8	210.4	NC - II - IW
60 Hertz	940	1175	1800	64.9	207.2	NC - II - IW
50 Hertz	550	688	1500	37.9	203.8	NC - II - IW
50 Hertz	830	1038	1500	57.0	207.0	NC - II - IW

EPA Tier 3 & IMO Tier II

	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	730	913	1800	54.3	220.8	T3C - II - IW
60 Hertz	940	1175	1800	68.0	217.3	T3C - II - IW

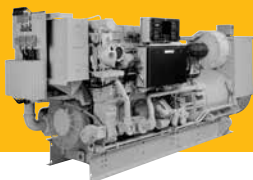
Heat Exchanger (32°C Sea Water Temp), Keel Cooled
(52°C SCAC Temp)

	LG	H	W
min.	168.2 in/4271 mm	65.6 in/1667 mm	60.2 in/1528 mm
max.	175.3 in/4452 mm	65.6 in/1667 mm	60.2 in/1528 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.7 x 6.4 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	15,721 lb	7131 kg

Electronic
Control
System



3508B

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

	Generator Set							
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA -	IMO -	EU
60 Hertz	600	750	1200	42.6	213.2	NC -	I -	NC
60 Hertz	715	894	1800	49.3	208.7	NC -	I -	NC
60 Hertz	910* ¹	1138	1800	66.9	204.4	NC -	I -	NC
50 Hertz	590	738	1000	41.9	206.4	NC -	I -	NC
50 Hertz	630	788	1500	44.2	202.0	NC -	I -	NC
50 Hertz	800 ¹	1000	1500	57.4	195.8	NC -	I -	NC

*Only certified for D2 standard generator set operation.

¹ABS, BV, DnV, GL, LR approved generator set packages available.

	LE	LG	H	WE
min.	82.7 in/2101 mm	145.8 in/3704 mm	71.1 in/1806 mm	67.1 in/1703 mm
max.	82.7 in/2101 mm	167.5 in/4256 mm	71.9 in/1826 mm	67.1 in/1703 mm

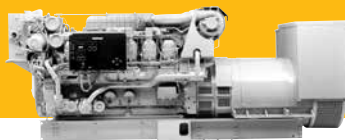
Vee 8, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	2105 cu in	34.5 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	16,940-19,640 lb	7684-8909 kg

3512B

GENERATOR SET

Electronic
Control
System



RATINGS AND FUEL CONSUMPTION

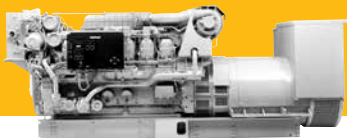
	Generator Set						
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU	
60 Hertz	1030	1287	1200	69.2	205.2	NC - I	-NC
60 Hertz	1070	1338	1800	73.4	208.3	NC - I	-NC
60 Hertz	1360	1700	1800	90.9	202.5	NC - I	-NC
50 Hertz	880	1000	1000	60.3	208.0	NC - I	-NC
50 Hertz	965	1212	1500	64.2	200.7	NC - I	-NC
50 Hertz	1200	1500	1500	77.6	195.6	NC - II	-NC

	LE	LG	H	WE
min.	104.0 in/2641 mm	178.6 in/4536 mm	80.8 in/2053 mm	67.1 in/1703 mm
max.	104.0 in/2641 mm	189.1 in/4804 mm	81.6 in/2072 mm	84.4 in/2144 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	3158 cu in	51.8 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	22,120-24,661 lb	10 034-11 186 kg

Electronic
Control
System



3512C

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz¹	1550	1937	1800	102.2	199.0	NC - II - NC
60 Hertz¹	1700	2125	1800	113.0	200.3	NC - II - NC

¹High Displacement engine (HD)

	LG	H	W
min.	200.2 in/5085.3 mm	83.9 in/2131.1 mm	84.3 in/2142.1 mm
max.	200.2 in/5085.3 mm	83.9 in/2131.1 mm	84.3 in/2142.1 mm

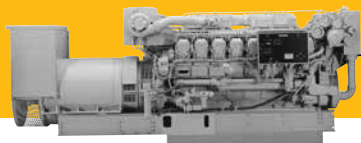
Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 x 8.46 in	170 x 215 mm
Displacement	3574 cu in	58.56 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	28,136 lb	12,762 kg

3516B

GENERATOR SET

Electronic
Control
System



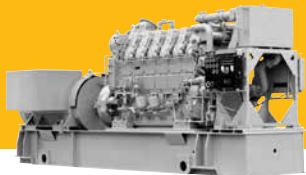
RATINGS AND FUEL CONSUMPTION

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	1285	1606	1200	80.5	208.6	NC - I - NC
60 Hertz	1825	2281	1800	125.3	198.8	NC - I - NC
50 Hertz	1180	1475	1000	80.6	203.1	NC - I - NC
50 Hertz	1460	1825	1500	102.2	203.4	NC - I - NC
50 Hertz	1600	2000	1500	111.9	208.4	NC - II - NC

	LE	LG	H	WE
min.	125.2 in/3181 mm	199.8 in/5076 mm	80.8 in/2053 mm	67.1 in/1703 mm
max.	125.2 in/3181 mm	220.9 in/5611 mm	82.7 in/2100 mm	84.4 in/2144 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	6.7 X 7.5 in	170 x 190 mm
Displacement	4210 cu in	69.0 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	25,030-29,845 lb	11 354-13 538 kg



C280-6

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	1650	2063	900	106.4	195.5	T2C - II - NC
60 Hertz	1820	2275	900	116.9	195.5	T2C - II - NC
50 Hertz	1760	2200	1000	116.4	200.0	T2C - II - NC
50 Hertz	1940	2425	1000	127.7	200.0	T2C - II - NC

C280-6 ratings listed above are also available in Tier 1 configurations.

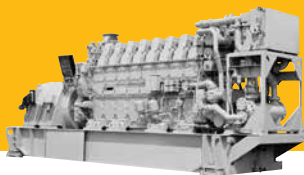
	LE	LG	H	WE
min.	145 in/3691 mm	280.3 in/7120 mm	154.9 in/3934 mm	77.2 in/1961 mm
max.	145 in/3691 mm	280.3 in/7120 mm	154.9 in/3934 mm	77.2 in/1961 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	6773 cu in	111 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	34,500 lb	15 680 kg
Generator weight (approx)	18,000 lb	8165 kg

C280-8

GENERATOR SET



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

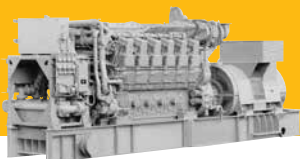
	Generator Set					EPA - IMO - EU		
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr			
60 Hertz	2200	2750	900	136.5	188.6	T2C - II	-NC	
60 Hertz	2420	3025	900	150.1	188.5	T2C - II	-NC	
50 Hertz	2350	2938	1000	148.2	191.5	T2C - II	-NC	
50 Hertz	2600	3250	1000	161.4	189.3	T2C - II	-NC	

C280-8 ratings listed above are also available in Tier 1 configurations.

	LE	LG	H	WE
min.	178 in/4511 mm	316.5 in/8040 mm	155.0 in/3937 mm	77.2 in/1961 mm
max.	178 in/4511 mm	316.5 in/8040 mm	155.0 in/3937 mm	77.2 in/1961 mm

In-line 8, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	9031 cu in	148 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	41,800 lb	19 000 kg
Generator weight (approx)	25,000 lb	11 340 kg



C280-12

GENERATOR SET

RATINGS AND FUEL CONSUMPTION

	Generator Set					
	ekW @ .8pf	kVA	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
60 Hertz	3300	4125	900	212.7	195.4	T2C - II - NC
60 Hertz	3640	4550	900	233.8	195.5	T2C - II - NC
50 Hertz	3520	4400	1000	232.7	199.9	T2C - II - NC
50 Hertz	3880	4850	1000	255.5	200.0	T2C - II - NC

C280-12 ratings listed above are also available in Tier 1 configurations.

	LE	LG	H	WE
min.	161 in/4087 mm	316.5 in/8040 mm	160.8 in/4085 mm	78.7 in/2000 mm
max.	161 in/4087 mm	316.5 in/8040 mm	160.8 in/4085 mm	78.7 in/2000 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	13,546 cu in	222 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	57,276 lb	25 980 kg
Generator weight (approx)	33,000 lb	14 970 kg

C280-16

GENERATOR SET



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

	Generator Set			U.S. g/h	g/bkW-hr	EPA - IMO - EU		
	ekW @ .8pf	kVA	rpm					
60 Hertz	4400	5500	900	272.9	188.5	T2C - II	-NC	
60 Hertz	4840	6050	900	300.2	188.6	T2C - II	-NC	
50 Hertz	4700	5875	1000	296.4	191.5	T2C - II	-NC	
50 Hertz	5200	6500	1000	322.8	189.3	T2C - II	-NC	

C280-16 ratings listed above are also available in Tier 1 configurations.

	LE	LG	H	WE
min.	197 in/5007 mm	366.7 in/9314 mm	164.1 in/4167 mm	78.3 in/1990 mm
max.	197 in/5007 mm	366.7 in/9314 mm	164.1 in/4167 mm	78.3 in/1990 mm

Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	18,062 cu in	296 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	68,343 lb	31 000 kg
Generator weight (approx)	40,000 lb	18 145 kg

Electronic
Control
System



HEAT EXCHANGER/
KEEL COOLED

C9

GENERATOR SET ENGINE

RATINGS AND FUEL CONSUMPTION

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C9	253	189	1800	13.7	228.8	T2C - II - CC2
C9	311	232	1800	16.9	229.5	T2C - II - CC2
C9	361	269	1800	17.9	211.7	T2C - II - CC2
C9	217	162	1500	10.9	212.1	T2C - II - NC
C9	253	189	1500	12.9	209.0	T2C - II - NC
C9	288	215	1500	14.2	206.6	T2C - II - NC

	LE	H	WE
min.	43.9 in/1116.5 mm	43.8 in/1113.7 mm	38.3 in/973.5 mm
max.	43.9 in/1116.5 mm	43.8 in/1113.7 mm	38.3 in/973.5 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	4.41 x 5.87 in	112 x 149 mm
Displacement	538 cu in	8.8 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	2088 lb	947 kg

C18 HEAT EXCHANGER

GENERATOR SET ENGINE /AUXILIARY



Electronic
Control
System

RATINGS AND FUEL CONSUMPTION

EPA Tier 2 & IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C18	499	372	1800	25.4	217.0	T2C - II - CC2
C18	624	465	1800	31.5	215.2	T2C - II - CC2
C18	733*	547	1800	35.2	205.1	T2C - II - NC
C18	806*	601	1800	38.3	203.7	T2C - II - NC
C18	404	301	1500	19.9	209.5	T2C - II - CC2
C18	514	383	1500	25.2	209.0	T2C - II - CC2
C18	587	438	1500	28.7	208.0	T2C - II - CC2
C18	660	492	1500	32.3	208.8	T2C - II - CC2

*Keel cooling not available, limited product availability.

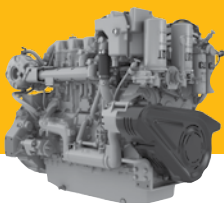
Contact local dealer for availability.

	LE	H	WE
min.	59.23 in/1506 mm	45.08 in/1145 mm	41.2 in/1047 mm
max.	81.03 in/2058 mm	47.2 in/1273 mm	42.9 in/1090 mm

In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	3900-4200 lb	1769-1905 kg

Electronic
Control
System



HEAT EXCHANGER

C18

GENERATOR SET ENGINE
/AUXILIARY

RATINGS AND FUEL CONSUMPTION

IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C18	404	301	1500	19.9	210.0	NC - II - IW
C18	514	383	1500	25.2	209.0	NC - II - IW
C18	587	438	1500	28.7	208.0	NC - II - IW
C18	660	492	1500	32.3	209.0	NC - II - IW
C18	499	372	1800	25.4	217.0	NC - II - IW
C18	624	465	1800	31.5	215.0	NC - II - IW

EPA Tier 3 & IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C18	624	465	1800	32.2	220.2	T3C - II - IW
C18	803	599	1800	40.2	213.3	T3C - II - IW

	LE	H	WE
min.	73.0 in/1854 mm	51.2 in/1300 mm	44.6 in/1134 mm
max.	73.0 in/1854 mm	51.2 in/1300 mm	44.6 in/1134 mm

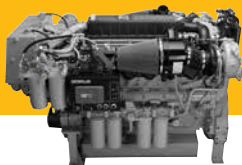
In-line 6, 4-Stroke-Cycle Diesel

Aspiration	TA, TTA	
Bore x Stroke	5.7 x 7.2 in	145 x 183 mm
Displacement	1106 cu in	18.1 liter
Rotation (from flywheel end)	Counterclockwise	
Generator set weight (approx)	1950 lb	4299 kg

C32 HEAT EXCHANGER/KEEL COOLED

Electronic
Control
System

GENERATOR SET ENGINE /AUXILIARY



RATINGS AND FUEL CONSUMPTION

EPA Tier 2 & IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C32	791	590	1500	37.9	203.8	T2C - II - IW
C32	923	688	1500	44.0	203.0	T2C - II - IW
C32	1172	874	1500	57.0	207.0	T2C - II - IW
C32	916	683	1800	45.3	210.8	T2C - II - IW
C32	1047	781	1800	51.8	210.4	T2C - II - IW
C32	1333	994	1800	64.9	207.2	T2C - II - IW

Contact local dealer for availability.

	LE	H	WE
min.	81.6 in/2073 mm	59.9 in/1522 mm	56.8 in/1443 mm
max.	81.6 in/2073 mm	59.9 in/1522 mm	58.9 in/1496 mm

Vee 12, 4-Stroke-Cycle Diesel

Aspiration	TTA	
Bore x Stroke	5.7 x 6.4 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	7100-7300 lb	3221-3311 kg

Electronic
Control
System

HEAT EXCHANGER/KEEL COOLED

C32

**GENERATOR SET ENGINE
/AUXILIARY**



RATINGS AND FUEL CONSUMPTION

IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C32	791	590	1500	37.9	203.8	NC - II - IW
C32	923	688	1500	44.0	203.0	NC - II - IW
C32	1172	874	1500	57.0	207.0	NC - II - IW
C32	916	683	1800	45.3	210.8	NC - II - IW
C32	1047	781	1800	51.8	210.4	NC - II - IW
C32	1333	994	1800	64.9	207.2	NC - II - IW

EPA Tier 3 & IMO Tier II

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C32	1047	781	1800	54.3	220.8	T3C - II - IW
C32	1333	994	1800	68.0	217.3	T3C - II - IW

	LE	H	WE
min.	83.5 in/2121 mm	60.9 in/1547 mm	60.2 in/1528 mm
max.	89.9 in/2284 mm	62.5 in/1587 mm	60.2 in/1528 mm

Vee 12, 4-Stroke-Cycle Diesel

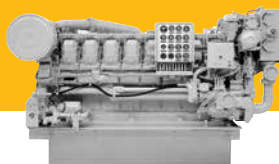
Aspiration	TTA	
Bore x Stroke	5.7 x 6.4 in	145 x 162 mm
Displacement	1959 cu in	32.1 liter
Rotation (from flywheel end)	Counterclockwise	
Engine dry weight (approx)	6950-7160 lb	3152-3248 kg

HEAT EXCHANGER COOLED

Mechanical Control System

3500 Series

AUXILIARY



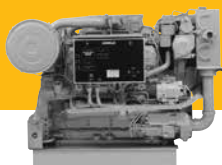
RATINGS

	bhp	bkW	ekW	rpm	EPA - IMO - EU
3508	804	599	560	1200	NC - NC - NC
3508	1019	760	715	1800	NC - NC - NC
3512	1281	955	910	1200	NC - NC - NC
3512	1509	1125	1070	1800	NC - NC - NC
3516	1650	1230	1170	1200	NC - NC - NC
3516	2026	1511	1440	1800	NC - NC - NC
3508	598	446	415	1000	NC - NC - NC
3508	903	673	630	1500	NC - NC - NC
3512	1153	860	815	1000	NC - NC - NC
3512	1368	1020	965	1500	NC - NC - NC
3516	1475	1100	1040	1000	NC - NC - NC
3516	1817	1355	1285	1500	NC - NC - NC

		LE	H	WE
3508	min.	92.2 in/2350 mm	71.9 in/1826 mm	67.1 in/1703 mm
	max.	92.2 in/2350 mm	71.9 in/1826 mm	67.1 in/1703 mm
3512	min.	113.8 in/2890 mm	81.6 in/2072 mm	67.1 in/1703 mm
	max.	113.8 in/2890 mm	81.6 in/2072 mm	67.1 in/1703 mm
3516	min.	146.9 in/3730 mm	81.8 in/2078 mm	67.1 in/1703 mm
	max.	146.9 in/3730 mm	81.8 in/2078 mm	67.1 in/1703 mm

Vee 8, Vee 12, Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	3508 — 2105 cu in	34.5 liter
	3512 — 3158 cu in	51.8 liter
	3516 — 4210 cu in	69 liter
Engine dry weight (approx)	3508 — 11,350 lb	5148 kg
	3512 — 14,250 lb	6464 kg
	3516 — 17,550 lb	7961 kg



3500B Series

GENERATOR SET ENGINE/AUXILIARY

RATINGS

	bhp	bkW	ekW	rpm	EPA - IMO - EU
3508B	915	682	600	1200	NC - I - NC
3508B	1019	760	715	1800	NC - I - NC
3508B	1298	968	910	1800	NC - I - NC
3512B	1478	1102	1030	1200	NC - I - NC
3512B	1509	1125	1070	1800	NC - I - NC
3512B	1910	1424	1360	1800	NC - I - NC
3516B	1855	1383	1285	1200	NC - I - NC
3516B	2549	1901	1825	1800	NC - II - NC
3508B	870	649	590	1000	NC - I - NC
3508B	903	673	630	1500	NC - I - NC
3508B	1148	856	800	1500	NC - I - NC
3512B	1251	933	880	1000	NC - I - NC
3512B	1368	1020	965	1500	NC - I - NC
3512B	1686	1257	1200	1500	NC - II - NC
3516B	1726	1287	1180	1000	NC - I - NC
3516B	2100	1566	1460	1500	NC - I - NC
3516B	2303	1717	1600	1500	NC - II - NC

LE

H

WE

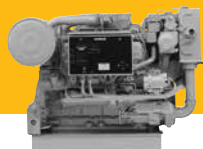
3508B	min.	90.9 in/2310 mm	71.1 in/1806 mm	67.1 in/1703 mm
	max.	92.5 in/2350 mm	71.9 in/1826 mm	67.1 in/1703 mm
3512B	min.	114 in/2890 mm	80.8 in/2053 mm	67.1 in/1703 mm
	max.	120 in/3038 mm	81.7 in/2073 mm	78.3 in/1988 mm
3516B	min.	125.2 in/3181 mm	80.8 in/2053 mm	67.1 in/1703 mm
	max.	125.2 in/3181 mm	82.7 in/2100 mm	84.4 in/2144 mm

Vee 8, Vee 12, Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	6.7 x 7.5 in	170 x 190 mm
Displacement	3508B — 2105 cu in	34.5 liter
	3512B — 3158 cu in	51.8 liter
	3516B — 4210 cu in	69 liter
Engine dry weight (approx)	3508B — 11,276-11,500 lb	5115-5216 kg
	3512B — 14,250-15,345 lb	6464-6960 kg
	3516B — 17,537-17,700 lb	7955-8029 kg

3500C Series

GENERATOR SET ENGINE/AUXILIARY



RATINGS

IMO Tier II

	bhp	bkW	ekW*	rpm	EPA - IMO - EU
3512C	1920	1432	1360	1800	NC - II - NC
3512C ¹	2183	1628	1550	1800	NC - II - NC
3512C ¹	2394	1786	1700	1800	NC - II - NC
3516C ¹	3151	2350	2250	1800	NC - II - NC

EPA Tier 3 & IMO Tier II

	bhp	bkW	ekW*	rpm	EPA - IMO - EU
3512C	2442	1821	1730	1800	T3C - II - NC
3516C	2576	1921	1825	1800	T3C - II - NC
3516C	2965	2211	2100	1800	T3C - II - NC
3516C	3176	2368	2250	1800	T3C - II - NC

¹Ratings are high displacement (HD)

*ekW is based on a 95% generator efficiency.

Preliminary EPA Tier 4

	bhp	bkW	ekW*	rpm	EPA - IMO - EU
3516C	3176	2368	2250	1800	T4C

(DEP cycle meets EPA Tier 4)

		LE	H	WE
3512C	min.	104.1 in/2644 mm	83.2 in/2113 mm	80.2 in/2036 mm
	max.	128.8 in/3272 mm	84.8 in/2154 mm	85.0 in/2160 mm
3516C	min.	125.4 in/3185 mm	83.9 in/2130 mm	84.3 in/2142 mm
	max.	125.4 in/3185 mm	83.9 in/2130 mm	84.3 in/2142 mm

Vee 12, Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	6.69 x 8.46 in	170 x 215 mm
Displacement	3512C — 3574 cu in	58.57 liter
	3516C — 4765 cu in	78.09 liter
Engine dry weight (approx)	3512C — 17,261-17,386 lb	7829-7886 kg
	3516C — 17,550-21,164 lb	7961-9600 kg



C280 Series

AUXILIARY

RATINGS AND FUEL CONSUMPTION

	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	EPA - IMO - EU
C280-6	2320	1730	900	107.4	197.3	T2C - II - NC
C280-6	2481	1850	1000	118.9	204.4	T2C - II - NC
C280-6	2548	1900	900	118.6	198.4	T2C - II - NC
C280-6	2722	2030	1000	131.7	206.2	T2C - II - NC
C280-8	3084	2300	900	143.7	198.6	T2C - II - NC
C280-8	3299	2460	1000	153.2	197.9	T2C - II - NC
C280-8	3393	2530	900	159.4	200.2	T2C - II - NC
C280-8	3634	2710	1000	170.3	199.7	T2C - II - NC
C280-12	4640	3460	900	214.9	197.5	T2C - II - NC
C280-12	4962	3700	1000	237.7	204.2	T2C - II - NC
C280-12	5096	3800	900	237.2	198.2	T2C - II - NC
C280-12	5444	4060	1000	263.4	206.2	T2C - II - NC
C280-16	6169	4600	900	287.4	198.6	T2C - II - NC
C280-16	6598	4920	1000	306.4	197.9	T2C - II - NC
C280-16	6785	5060	900	318.7	200.2	T2C - II - NC
C280-16	7268	5420	1000	340.6	199.7	T2C - II - NC

	L	LE	H	WE
C280-6 min.	168 in/4276 mm	145 in/3691 mm	108 in/2733 mm	68 in/1722 mm
max.	168 in/4276 mm	145 in/3691 mm	108 in/2733 mm	68 in/1722 mm
C280-8 min.	219 in/5561 mm	178 in/4511 mm	104 in/2641 mm	68 in/1722 mm
max.	219 in/5561 mm	178 in/4511 mm	104 in/2641 mm	68 in/1722 mm
C280-12 min.	191 in/4861 mm	161 in/4087 mm	140 in/3550 mm	69 in/1741 mm
max.	191 in/4861 mm	161 in/4087 mm	140 in/3550 mm	69 in/1741 mm
C280-16 min.	216 in/5482 mm	197 in/5007 mm	125 in/3171 mm	67 in/1704 mm
max.	216 in/5482 mm	197 in/5007 mm	125 in/3171 mm	67 in/1704 mm

In-line 6, In-line 8, Vee 12, Vee 16, 4-Stroke-Cycle Diesel

Aspiration	TA	
Bore x Stroke	11.0 x 11.8 in	280 x 300 mm
Displacement	C280-6 — 6773 cu in	111 liter
	C280-8 — 9031 cu in	148 liter
	C280-12 — 13,546 cu in	222 liter
	C280-16 — 18,062 cu in	296 liter
Engine dry weight (approx)	C280-6 — 34,496 lb	15 680 kg
	C280-8 — 41,800 lb	19 000 kg
	C280-12 — 57,276 lb	25 980 kg
	C280-16 — 62,832 lb	28 500 kg

Power



MaK Marine Propulsion Engines

Caterpillar Motoren GmbH & Co. KG and the excellent reputation of the MaK brand is based on more than 90 years of experience in the development, manufacture, and service of gas engines, diesel engines, and dual fuel engines.

The current MaK product line is comprised of six medium-speed four-stroke diesel and dual fuel engine models ranging in power from 1,020 to 16,800 kW. MaK engines feature a high level of reliability, low operating costs, simple installation and maintenance, and meet engine exhaust emission standards.

Caterpillar Technology for Emissions Reduction in Medium-Speed Marine Engines

In addition to the right technology to meet emissions standards for IMO Tier II and EPA Tier 2, Caterpillar offers options for further performance improvement of medium-speed marine engines:

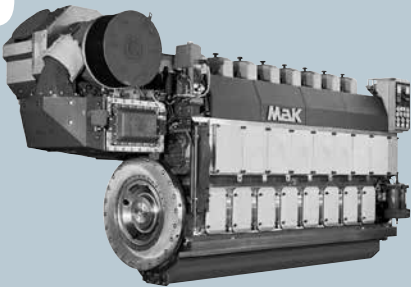
FCT achieves synergy between flexible fuel systems and advanced air systems while leveraging current MaK engine design to the fullest. At part load, visible smoke is eliminated and performance and load pick-up are improved. Invisible smoke is a clear advantage for all applications.

Cat Common Rail (Cat CR) has the capability to meet future regulations. Building on the ACERT system integration concept, Cat CR is a fully flexible fuel system offering the potential to achieve strict Particulate Matter (PM) reduction requirements. Cat CR uses injection mapping, a technology to fine-tune injection characteristics, for every single engine operating point. Injection mapping guarantees optimum injection pressure and timing at a given load even in transient operation. As a result, both PM and NOx emissions are significantly reduced.

Cat CR allows vessel operation without visible PM through the entire operating range. Furthermore, during normal load, fuel consumption can be reduced without sacrificing NOx emissions. Cat CR is suitable for Heavy Fuel Oil (HFO), Marine Diesel Oil (MDO) and Diesel Oil (DO) operations. IMO II technology, Flexible Camshaft Technology and Cat CR can be retrofit to MaK C-engine series.

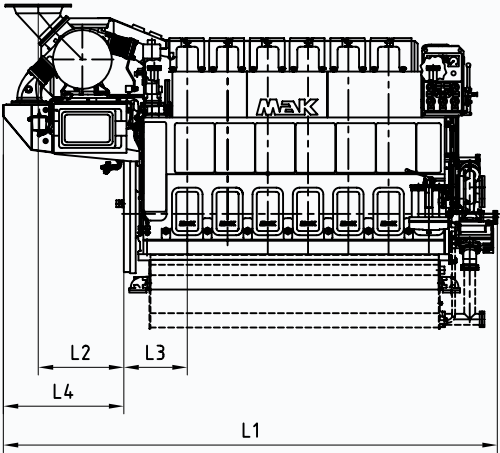
M 20 C

Propulsion Engine



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	H4	W1	W2	Weight	
											Wet sump	Dry sump
6 M 20 C	4049	702	520	988	1714	630	330	941	1558	627	11.5	10.9
8 M 20 C	4846	802	520	1125	1856	630	330	941	1693	710	14.5	13.8
9 M 20 C	5176	802	520	1125	1856	630	330	941	1693	710	16.0	15.0

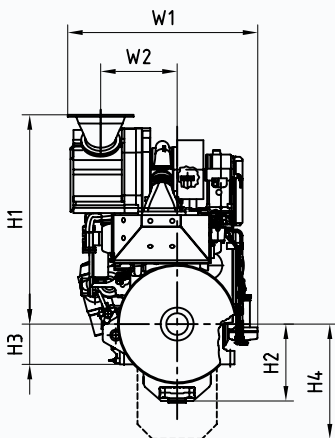


TECHNICAL DATA

Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
						100%	85%
	kW	mhp	rpm	bar	m/s	g/kWh	g/kWh
6 M 20 C	1020	1390	900	24.1	9.0	189	188
	1080	1469	900	25.5	9.0	190	189
	1140	1550	1000	24.2	10.0	190	189
	1200	1632	1000	25.5	10.0	191	189
8 M 20 C	1360	1850	900	24.1	9.0	189	188
	1440	1958	900	25.5	9.0	190	189
	1520	2070	1000	24.2	10.0	190	189
	1600	2176	1000	25.5	10.0	191	189
9 M 20 C	1530	2082	900	24.1	9.0	189	188
	1620	2203	900	25.5	9.0	190	189
	1710	2326	1000	24.2	10.0	190	189
	1800	2448	1000	25.5	10.0	191	189

Stroke: 300 mm
Bore: 200 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh
LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



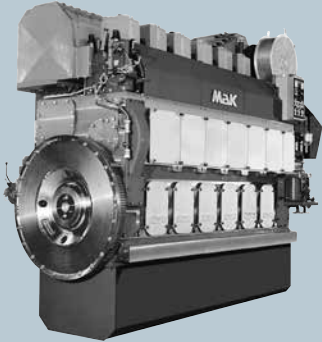
Engine centre distance: 2010 mm

Removal of cylinder liner:
in transverse direction 1910 mm
in longitudinal direction 2085 mm

Nozzle position: ask for availability

Engine with turbocharger at free end
available, ask for dimensions

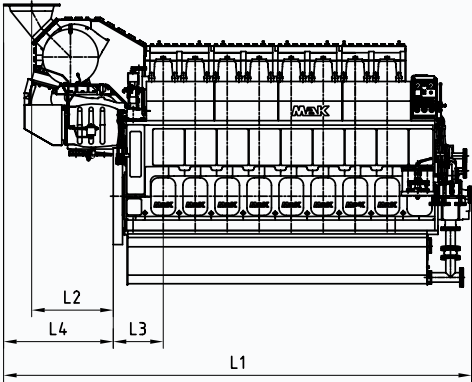
M 25 C



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	H4	W1	W2	Weight	
											Wet sump	Dry sump
6 M 25 C	5345	1068	672	1390	2526	861	460	1191	2261	977	23.5	21.2
8 M 25 C	6289	1097	672	1474	2578	861	460	1191	2316	977	30.0	28.5
9 M 25 C	6719	1097	672	1474	2578	861	460	1191	2316	977	32.0	30.0



TECHNICAL DATA

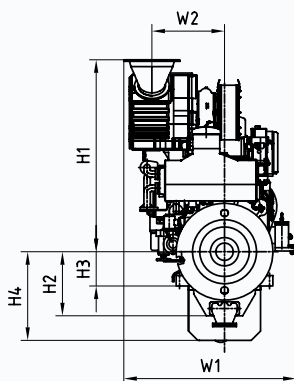
Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
						100 %	85 %
	kW	mhp	rpm	bar	m/s	g/kWh	g/kWh
6 M 25 C	1740	2370	720	23.6	9.6	185	184
	1800	2450	750	23.5	10.0	185	184
	2000	2720	720	27.2	9.6	188	185
	2000	2720	750	26.1	10.0	186	184
	2100	2856	720	28.5	9.6	187	186
	2100	2856	750	27.4	10.0	187	186
8 M 25 C	2320	3160	720	23.6	9.6	185	184
	2400	3260	750	23.5	10.0	185	184
	2666	3630	720	27.2	9.6	189	185
	2666	3630	750	26.1	10.0	187	184
	2800	3808	720	28.5	9.6	189	187
	2800	3808	750	27.4	10.0	189	187
9 M 25 C	2610	3550	720	23.6	9.6	185	184
	2700	3670	750	23.5	10.0	185	184
	3000	4080	720	27.2	9.6	189	185
	3000	4080	750	26.1	10.0	187	184
	3150	4284	720	28.5	9.6	189	187
	3150	4284	750	27.4	10.0	189	187

Stroke: 400 mm

Bore: 255 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



Engine centre distance: 2500 mm

Removal of cylinder liner:

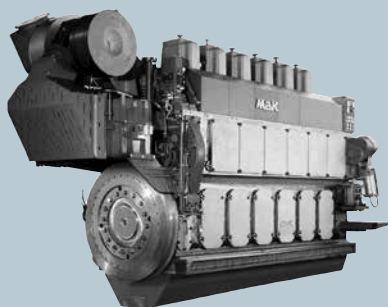
in transverse direction 2510 mm

in longitudinal direction 2735 mm

Nozzle position: ask for availability

Engine with turbocharger at free end available, ask for dimensions

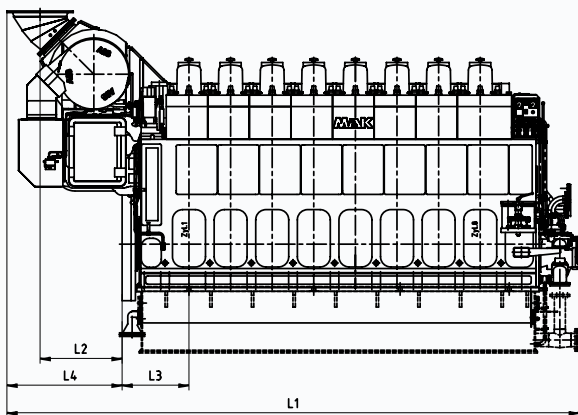
M 32 C



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	H4	W1	W2	W3	Weight	
												Wet sump	Dry sump
6 M 32 C	5936	788	852	1170	2784	1052	550	1220	2368	962	2140	41.6	39.5
8 M 32 C	7293	1044	852	1467	2969	1052	550	1220	2182	962	2140	51.7	49.0
9 M 32 C	7823	1044	852	1467	2969	1052	550	1220	2182	962	2140	55.0	52.0



TECHNICAL DATA

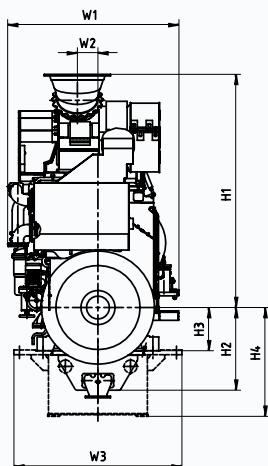
Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
						100 %	85 %
	kW	mhp	rpm	bar	m/s	g/kWh	g/kWh
6 M 32 C	2880	3920	600	24.9	9.6	177	176
	3000	4080	600	25.9	9.6	177	176
8 M 32 C	3840	5220	600	24.9	9.6	177	176
	4000	5440	600	25.9	9.6	177	176
9 M 32 C	4320	5880	600	24.9	9.6	177	176
	4500	6120	600	25.9	9.6	177	176

Stroke: 480 mm

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



Engine centre distance: 2800 mm *

* If turbocharger is located on opposite coupling side, the water cover of the charge air cooler must be dismantled.

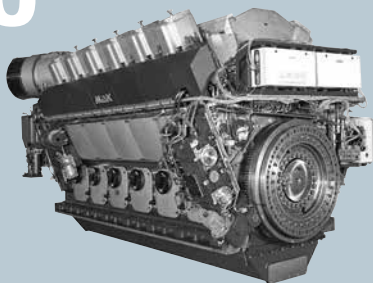
Removal of cylinder liner:
in transverse direction 3040 mm
in longitudinal direction 3405 mm

Nozzle position: ask for availability

Engine with turbocharger at free end
available, ask for dimensions

Cat Common Rail: ask for availability

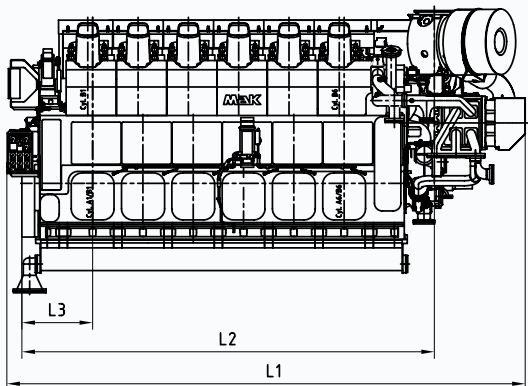
VM 32 C



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	H1	H2	H3	W1	W2	Weight
12 M 32 C	6956	5535	949	2319	1205	750	2985	1133	65.0
16 M 32 C	8328	6885	949	2319	1205	750	2985	1133	82.0

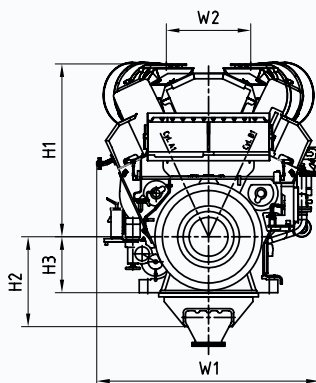


TECHNICAL DATA

Type	Output range		Speed	Stroke	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
							100 %	85 %
	kW	mhp	rpm	mm	bar	m/s	g/kWh	g/kWh
12 M 32 C	5760	7830	720	420	23.7	10.0	181	180
	6000	8160	750	420	23.7	10.5	182	181
	6000	8160	720	460	22.5	11.0	178	177
	6000	8160	750	460	21.6	11.5	179	179
	6360	8650	720	460	23.8	11.0	178	177
	6360	8650	750	460	22.9	11.5	179	179
	6720	9139	720	460	25.2	11.0	178	177
	6720	9139	750	460	24.2	11.5	179	179
16 M 32 C	7680	10445	720	420	23.7	10.1	182	181
	8000	10880	750	420	23.7	10.5	184	183
	8000	10880	720	460	22.5	11.0	178	177
	8000	10880	750	460	21.6	11.5	181	180
	8480	11533	720	460	23.8	11.0	178	177
	8480	11533	750	460	22.9	11.5	179	179
	8960	12186	720	460	25.2	11.0	181	177
	8960	12186	750	460	24.2	11.5	182	179

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh
LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



Engine centre distance: 3500 mm

Removal of cylinder liner:
in transverse direction 2836 mm

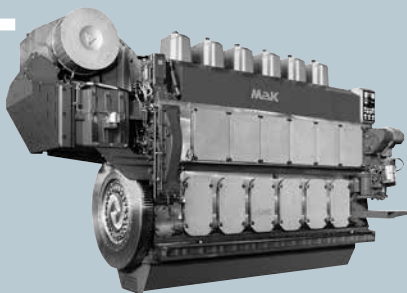
Nozzle position: ask for availability

This engine is only available with dry oil sump.

Engine with turbocharger at driving end available, ask for dimensions

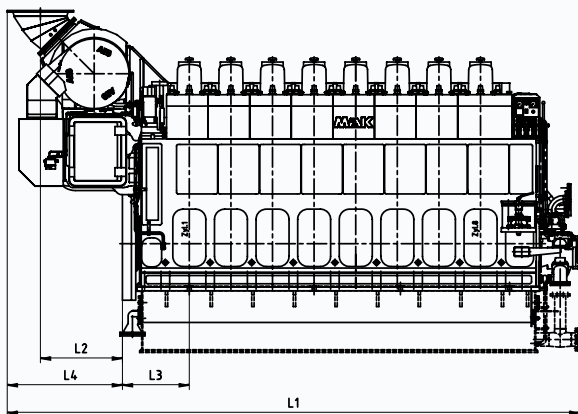
M 32 E

Propulsion Engine



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	H4	W1	W2	W3	Weight	
												Wet sump	Dry sump
6 M 32 E	5936	788	852	1170	2784	1052	550	1220	2368	962	2140	41.6	39.5
8 M 32 E	7293	1044	852	1467	2969	1052	550	1220	2182	962	2140	51.7	49.0
9 M 32 E	7823	1044	852	1467	2969	1052	550	1220	2182	962	2140	55.0	52.0



TECHNICAL DATA

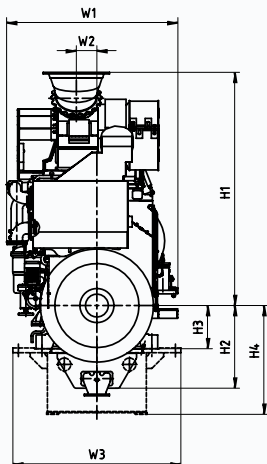
Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
						100 %	85 %
	kW	mhp	rpm	bar	m/s	g/kWh	g/kWh
6 M 32 E	3300	4488	720	23.7	11.0	179	179
	3300	4488	750	22.7	11.5	179	179
8 M 32 E	4400	5984	720	23.7	11.0	179	179
	4400	5984	750	22.7	11.5	179	179
9 M 32 E	4950	6732	720	23.7	11.0	179	179
	4950	6732	750	22.7	11.5	179	179

Stroke: 460 mm

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



Engine centre distance: 2800 mm *

* If turbocharger is located on opposite coupling side, the water cover of the charge air cooler must be dismantled.

Removal of cylinder liner:

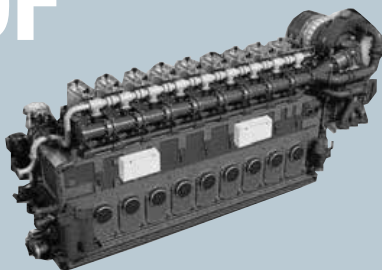
in transverse direction 3040 mm

in longitudinal direction 3405 mm

Nozzle position: ask for availability

Engine with turbocharger at free end available, ask for dimensions

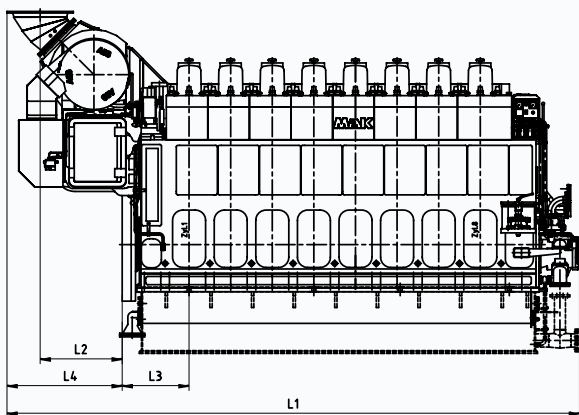
M 34 DF



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	H4	W1	W2	W3	Weight	
												Wet sump	Dry sump
6 M 34 DF	5936	788	852	1170	2784	1052	550	1220	2368	962	2140	41.6	39.5
8 M 34 DF	7293	1044	852	1467	2969	1052	550	1220	2182	962	2140	51.7	49.0
9 M 34 DF	7823	1044	852	1467	2969	1052	550	1220	2182	962	2140	55.0	52.0



TECHNICAL DATA

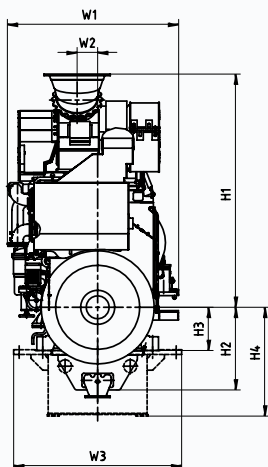
Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Liquid fuel oil consumption 100 %	Gas consumption 100 %
	kW	mhp	rpm	bar	m/s	g/kWh	kJ/kWh
6 M 34 DF	3000	4080	720	19.9	11.0	188	7708
	3000	4080	750	19.1	11.5	188	7708
8 M 34 DF	4000	5440	720	19.9	11.0	188	7708
	4000	5440	750	19.1	11.5	188	7708
9 M 34 DF	4500	6120	720	19.9	11.0	188	7708
	4500	6120	750	19.1	11.5	188	7708

Stroke: 460 mm

Bore: 340 mm

Without engine driven pumps. Tolerance for SFOC and efficiency +/- 5 %.

Maximum continuous rating according to ISO 3046/1.

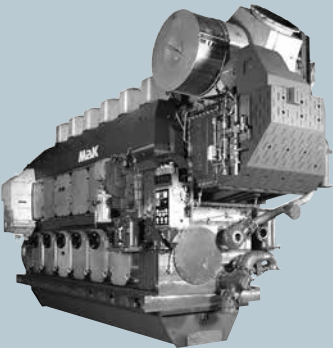


Global application and installation support for engine and gas system periphery.

Operator and technician training.

Strong, global dealer support network with marine focus.

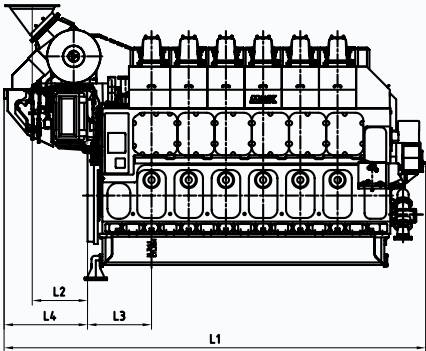
M 43 C



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	W1	W2	Weight
6 M 43 C	8271	1086	1255	1638	3734	1399	750	2878	215	94.0
7 M 43 C	9068	1119	1255	1704	4105	1399	750	2878	232	107.0
8 M 43 C	9798	1119	1255	1704	4105	1399	750	2878	232	114.0
9 M 43 C	10528	1119	1255	1704	4105	1399	750	2878	232	127.0



TECHNICAL DATA

Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
	kW	mhp	rpm	bar	m/s	100 %	85 %
6 M 43 C	5400	7344	500	24.4	10.2	175	175
	5400	7344	514	23.7	10.5	175	175
	6000	8160	500	27.1	10.2	176	175
	6000	8160	514	26.4	10.5	176	175
	6300	8568	500	28.4	10.2	177	176
	6300	8568	514	27.7	10.5	177	176
7 M 43 C	6300	8568	500	24.4	10.2	175	175
	6300	8568	514	23.7	10.5	175	175
	7000	9520	500	27.1	10.2	176	175
	7000	8520	514	26.4	10.5	176	175
	7350	9996	500	28.4	10.2	178	176
	7350	9996	514	27.7	10.5	178	176
8 M 43 C	7200	9792	500	24.4	10.2	175	175
	7200	9792	514	23.7	10.5	175	175
	8000	10880	500	27.1	10.2	176	175
	8000	10880	514	26.4	10.5	176	175
	8400	11424	500	28.4	10.2	178	176
	8400	11424	514	27.7	10.5	178	176
9 M 43 C	8100	11016	500	24.4	10.2	175	175
	8100	11016	514	23.7	10.5	175	175
	9000	12240	500	27.1	10.2	176	175
	9000	12240	514	26.4	10.5	176	175
	9450	12852	500	28.4	10.2	178	176
	9450	12852	514	27.7	10.5	178	176

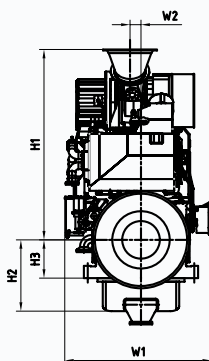
Stroke: 610 mm

Bore: 430 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Engine centre distance: 3400 mm



Removal of cylinder liner:

in transverse direction 4165 mm

in longitudinal direction 4610 mm

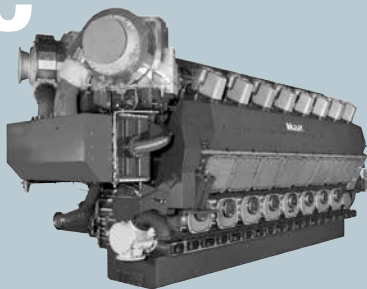
Nozzle position: ask for availability

This engine is only available with dry oil sump

Engine with turbocharger at free end available,
ask for dimensions

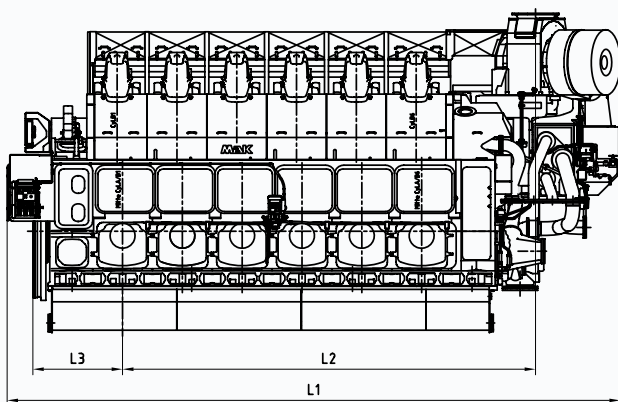
VM 43 C

Propulsion Engine



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	H1	H2	H3	W1	W2	Weight
12 M 43 C	9842	6628	1440	3497	1625	875	3890	1685	160.0
16 M 43 C	11943	8533	1440	3473	1625	875	4027	1670	220.0



TECHNICAL DATA

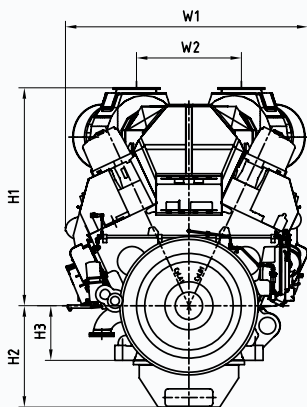
Type	Output range		Speed	Mean. eff pressure	Mean piston speed	Spec. fuel consumption	
	kW	mhp				100 %	85 %
12 M 43 C	10800	14688	500	24.4	10.2	175	175
	10800	14688	514	23.8	10.5	175	175
	12000	16320	500	27.1	10.2	176	175
	12000	16320	514	26.4	10.5	176	175
	12600	17136	500	28.4	10.2	177	176
	12600	17136	514	27.7	10.5	177	176
16 M 43 C	14400	19584	500	24.4	10.2	175	175
	14400	19584	514	23.8	10.5	175	175
	16000	21760	500	27.1	10.2	176	175
	16000	21760	514	26.4	10.5	176	175
	16800	22848	500	28.4	10.2	177	176
	16800	22848	514	27.7	10.5	177	176

Stroke: 610 mm

Bore: 430 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%



Engine centre distance: 4500 mm

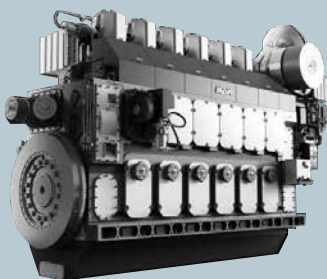
Removal of cylinder liner:
in transverse direction 3700 mm

Nozzle position: ask for availability

This engine is only available with dry oil sump

Engine with turbocharger at flywheel end
available, ask for dimensions

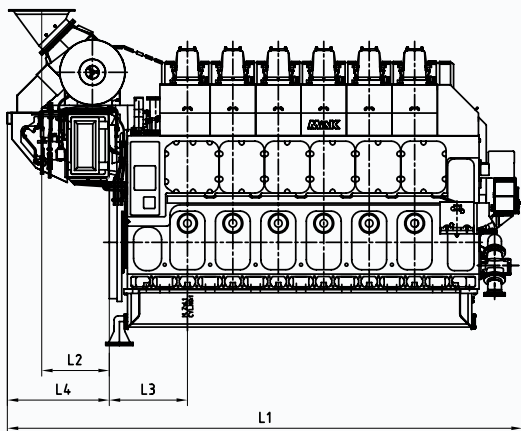
M 46 DF



Propulsion Engine

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	L4	H1	H2	H3	W1	W2	Weight
6 M 46 DF	8271	1086	1255	1638	3734	1399	750	2878	215	94.0
7 M 46 DF	9068	1119	1255	1704	4105	1399	750	2878	232	107.0
8 M 46 DF	9798	1119	1255	1704	4105	1399	750	2878	232	114.0
9 M 46 DF	10528	1119	1255	1704	4105	1399	750	2878	232	127.0



TECHNICAL DATA

Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec fuel oil consumption		Spec gas consumption
	kW	mhp				100%/85%	100%/85%	
6 M 46 DF	5400	7344	500	21.3	10.2	186/185	7200/7417	
	5400	7344	514	20.7	10.5	186/185	7200/7417	
7 M 46 DF	6300	8568	500	21.3	10.2	186/185	7200/7417	
	6300	8568	514	20.7	10.5	186/185	7200/7417	
8 M 46 DF	7200	9792	500	21.3	10.2	186/185	7200/7417	
	7200	9792	514	20.7	10.5	186/185	7200/7417	
9 M 46 DF	8100	11016	500	21.3	10.2	186/185	7200/7417	
	8100	11016	514	20.7	10.5	186/185	7200/7417	

Stroke: 610 mm

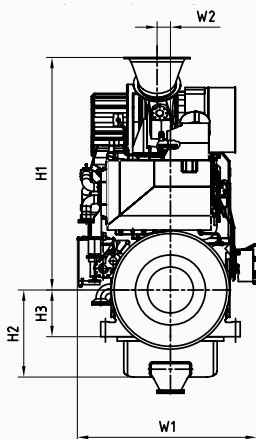
Bore: 460 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Note: 5% tolerance +1% per pump

In gas mode plus 1% ignition fuel oil consumption



Engine centre distance: 3400 mm

Removal of cylinder liner:

in transverse direction 4165 mm

in longitudinal direction 4610 mm

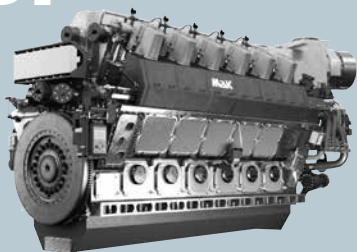
Nozzle position: ask for availability

This engine is only available with dry oil sump

Engine with turbocharger at free end available, ask for dimensions

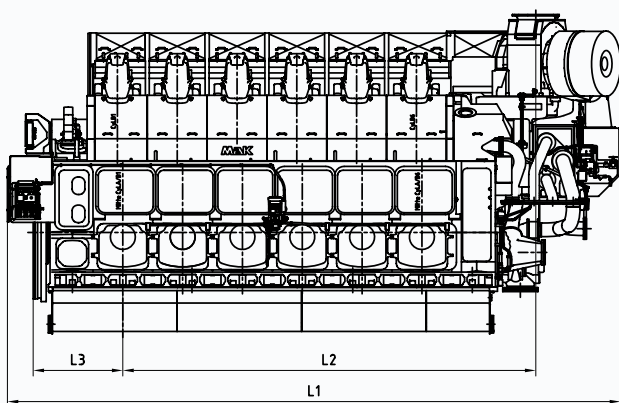
VM 46 DF

Propulsion Engine



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1	L2	L3	H1	H2	H3	W1	W2	Weight
12 M 46 DF	9842	6628	1440	3497	1625	875	3890	1685	160.0
16 M 46 DF	11943	8533	1440	3473	1625	875	4027	1670	220.0



TECHNICAL DATA

Type	Output range		Speed	Mean eff. pressure	Mean piston speed	Spec fuel oil consumption	Spec gas consumption
	kW	mhp	rpm	bar	m/s	100%/85%	100%/85%
12 M 46 DF	10800	14688	500	21.3	10.2	186/185	7200/7417
	10800	14688	514	20.7	10.5	186/185	7200/7417
16 M 46 DF	14400	19584	500	21.3	10.2	186/185	7200/7417
	14400	19584	514	20.7	10.5	186/185	7200/7417

Stroke: 610 mm

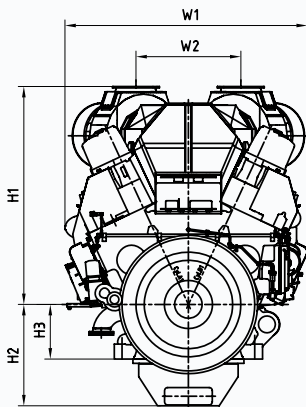
Bore: 460 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Note: 5% tolerance +1% per pump

In gas mode plus 1% ignition fuel oil consumption



Engine centre distance: 4500 mm

Removal of cylinder liner:
in transverse direction 3700 mm

Nozzle position: ask for availability

This engine is only available with dry oil sump

Engine with turbocharger at flywheel end
available, ask for dimensions.



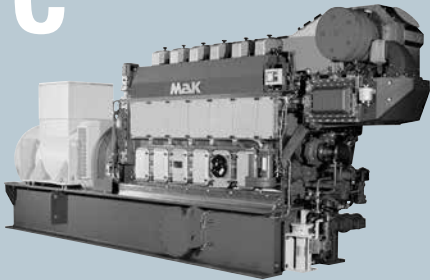
MaK Marine Generator Sets

The shipping industry today relies on dependable on-board electrical power generation. MaK auxiliary diesel engines ensure the availability of electrical power, wherever and whenever needed. For navigational equipment, monitoring installations, refrigerated containers, lighting, pumps, heating, or ventilation, MaK auxiliary engines are the right choice.

As with the MaK propulsion engines, these auxiliary engines can be operated with the economical Heavy Fuel Oil (HFO) option, and meet the NO_x limits according to IMO Code Revised MARPOL, Annex VI, NO_x Technical Code 2008, (IMO Tier II).

M 20 C

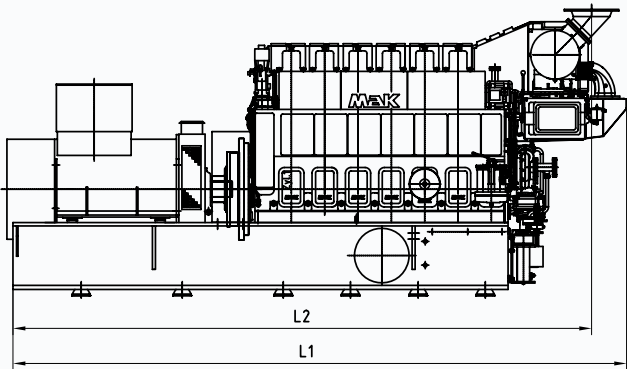
Generator Set



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 20 C	6073	5727	1779	1054	1680	627	18.8
8 M 20 C	6798	6475	1956	1054	1816	710	23.1
9 M 20 C	7125	6802	1956	1054	1816	710	26.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	g/kWh
6 M 20 C	1020	979	1224	60	900	24.1	9.0	189	188
	1080	1036	1296	60	900	25.5	9.0	190	189
	1140	1094	1368	50	1000	24.2	10.0	190	189
	1200	1151	1440	50	1000	25.5	10.0	189	191
8 M 20 C	1360	1306	1632	60	900	24.1	9.0	189	188
	1440	1381	1728	60	900	25.5	9.0	190	189
	1520	1459	1824	50	1000	24.2	10.0	190	189
	1600	1534	1920	50	1000	25.5	10.0	191	189
9 M 20 C	1530	1468	1836	60	900	24.1	9.0	189	188
	1620	1553	1944	60	900	25.5	9.0	190	189
	1710	1641	2052	50	1000	24.2	10.0	190	189
	1800	1726	2160	50	1000	25.5	10.0	191	189

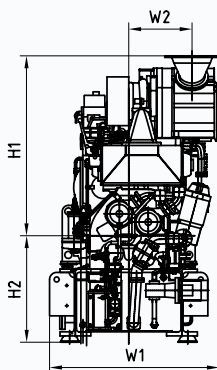
Stroke: 300 mm

Bore: 200 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, cos ϕ : 0.8



Genset centre distance: min. 2010 mm

Removal of cylinder liner:

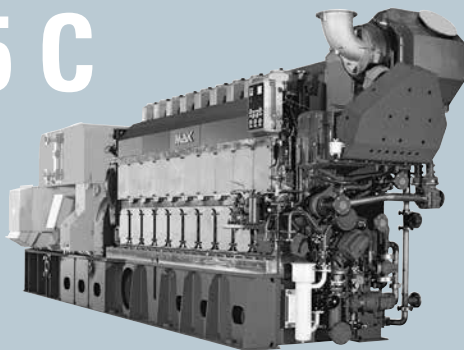
in transverse direction 2964 mm

in longitudinal direction 3139 mm

Nozzle position: ask for availability

Engine with turbocharger at driving end available, ask for dimensions

M 25 C

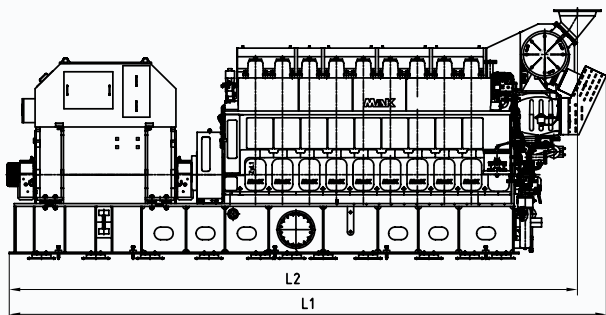


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 25 C	8070	7638	2571	1340	2479	977	43.0
8 M 25 C	9130	8727	2623	1340	2534	977	53.0
9 M 25 C	9516	9057	2623	1340	2534	977	56.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
		kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh
6 M 25 C	1740	1669	2088	60	720	23.6	9.6	185	184
	1800	1726	2160	50	750	23.5	10.0	185	184
	2000	1918	2400	60	720	27.2	9.6	188	185
	2000	1918	2400	50	750	26.1	10.0	186	184
	2100	2014	2520	60	720	28.5	9.6	187	186
	2100	2014	2520	50	750	27.4	10.0	187	186
8 M 25 C	2320	2225	2784	60	720	23.6	9.6	185	184
	2400	2302	2880	50	750	23.5	10.0	185	184
	2666	2557	3199	60	720	27.2	9.6	189	185
	2666	2557	3199	50	750	26.1	10.0	187	184
	2800	2685	3360	60	720	28.5	9.6	189	187
	2800	2685	3360	50	750	27.4	10.0	189	187
9 M 25 C	2610	2503	3132	60	720	23.6	9.6	185	184
	2700	2589	3240	50	750	23.5	10.0	185	184
	3000	2877	3600	60	720	27.2	9.6	189	185
	3000	2877	3600	50	750	26.1	10.0	187	184
	3150	3021	3780	60	720	28.5	9.6	189	187
	3150	3021	3780	50	750	27.4	10.0	189	187

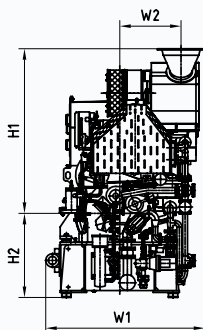
Bore: 255 mm

Stroke: 400 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, cos ϕ : 0.8



Genset centre distance: min. 2700 mm

Removal of cylinder liner:

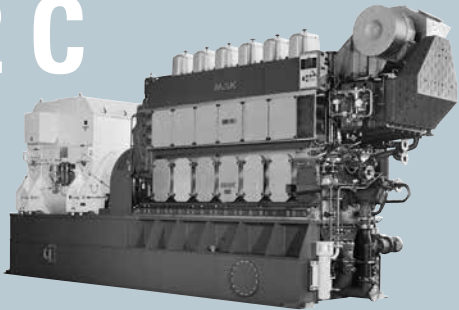
in transverse direction 3850 mm

in longitudinal direction 4075 mm

Nozzle position: ask for availability

Engine with turbocharger at driving end available, ask for dimensions

M 32 C

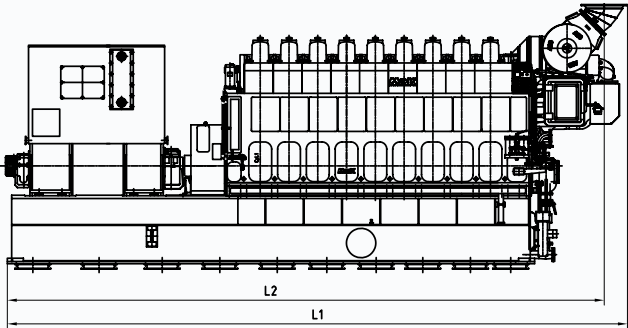


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 32 C	9302	8869	2901	1900	962	2639	73.0
8 M 32 C	10866	10461	2969	1900	962	2600	92.0
9 M 32 C	11419	10991	2969	1900	962	2600	98.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	g/kWh
6 M 32 C	2880	2762	3456	50/60	600	24.9	9.6	177	176
	3000	2877	3600	50/60	600	25.9	9.6	177	176
8 M 32 C	3840	3683	4608	50/60	600	24.9	9.6	177	176
	4000	3836	4800	50/60	600	25.9	9.6	177	176
9 M 32 C	4320	4143	5184	50/60	600	24.9	9.6	177	176
	4500	4316	5400	50/60	600	25.9	9.6	177	176

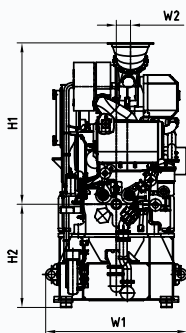
Stroke: 480 mm

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, $\pm$ 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, cos ϕ : 0.8



Genset centre distance: min. 3000 mm

Removal of cylinder liner:

in transverse direction 4940 mm

in longitudinal direction 5305 mm

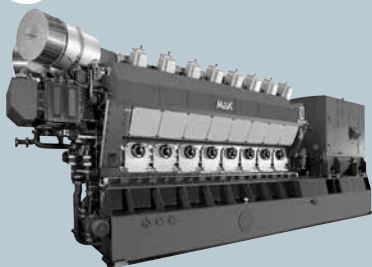
Nozzle position: ask for availability

Engine with turbocharger at driving end
available, ask for dimensions

Cat Common Rail : ask for availability

VM 32 C

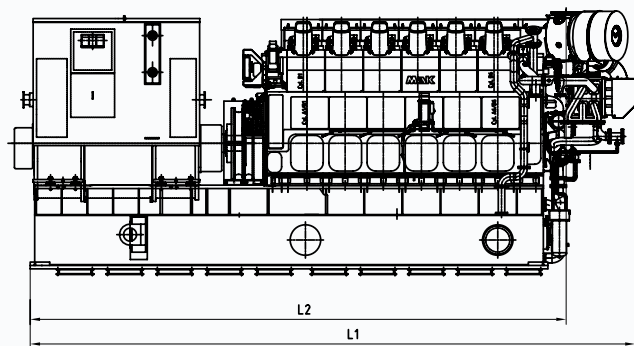
Generator Set



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight *
12 M 32 C	10703	9484	2319	2320	3526	1133	120.0
16 M 32 C	12149	10930	2319	2320	3526	1133	140.0

* Dependent on generator make/type

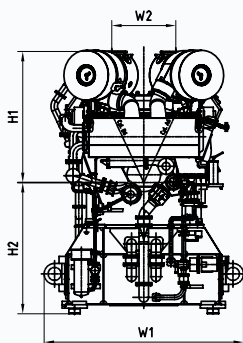


TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Stroke	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
									100 %	85 %
	kW	kWe	kVA	Hz	rpm	mm	bar	m/s	g/kWh	g/kWh
12 M 32 C	5760	5524	6912	60	720	420	23.7	10.0	181	180
	6000	5754	7200	50	750	420	23.7	10.5	182	181
	6000	5754	7200	60	720	460	22.5	11.0	178	177
	6000	5754	7200	50	750	460	21.6	11.5	179	179
	6360	6099	7632	60	720	460	23.8	11.0	178	177
	6360	6099	7632	50	750	460	22.9	11.5	179	179
	6720	6444	8064	60	720	460	25.2	11.0	178	177
	6720	6444	8064	50	750	460	24.2	11.5	179	179
16 M 32 C	7680	7365	9216	60	720	420	23.7	10.0	182	181
	8000	7672	9600	50	750	420	23.7	10.5	184	183
	8000	7672	9600	60	720	460	22.5	11.0	178	177
	8000	7672	9600	50	750	460	21.6	11.5	179	179
	8480	8132	10176	60	720	460	23.8	11.0	178	177
	8480	8132	10176	50	750	460	22.9	11.5	179	179
	8960	8593	10752	60	720	460	25.2	11.0	181	177
	8960	8593	10752	50	750	460	24.2	11.5	182	179

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh
 LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%
 Generator efficiency: 0.96, $\cos \phi$: 0.8



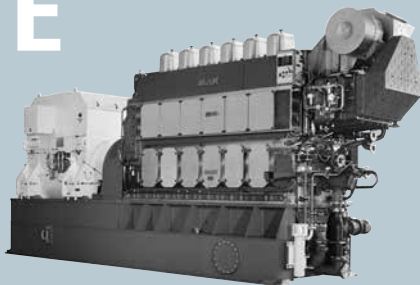
Genset centre distance: min. 3500 mm

Removal of cylinder liner:
 in transverse direction 5156 mm

Nozzle position: ask for availability

Engine with turbocharger at driving end
 available, ask for dimensions

M 32 E

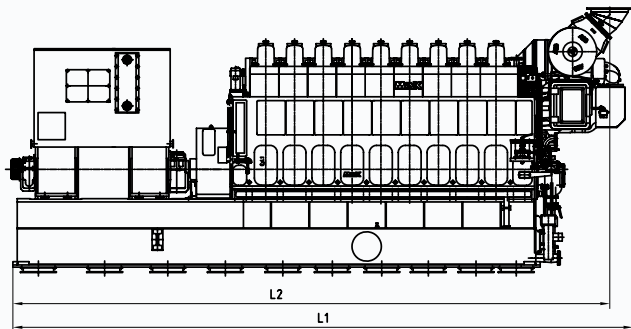


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 32 E	9302	8869	2901	1900	962	2639	73.0
8 M 32 E	10866	10461	2969	1900	962	2600	92.0
9 M 32 E	11419	10991	2969	1900	962	2600	98.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	g/kWh
6 M 32 E	3300	3165	3960	60	720	23.7	11.0	179	179
	3300	3165	3960	50	750	22.7	11.5	179	179
8 M 32 E	4400	4220	5280	60	720	23.7	11.0	179	179
	4400	4220	5280	50	750	22.7	11.5	179	179
9 M 32 E	4950	4747	5940	60	720	23.7	11.0	179	179
	4950	4747	5940	50	750	22.7	11.5	179	179

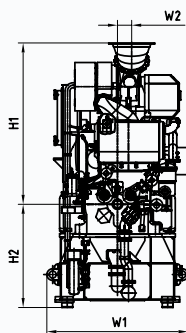
Stroke: 460 mm

Bore: 320 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, $\cos \varphi$: 0.8



Genset centre distance: min. 3000 mm

Removal of cylinder liner:

in transverse direction 4940 mm

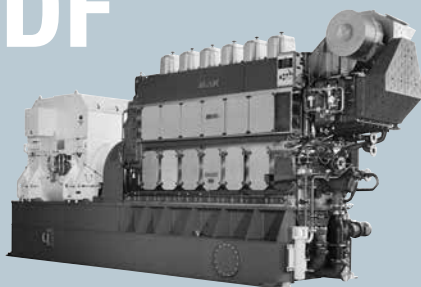
in longitudinal direction 5305 mm

Nozzle position: ask for availability

Engine with turbocharger at driving end available, ask for dimensions

M 34 DF

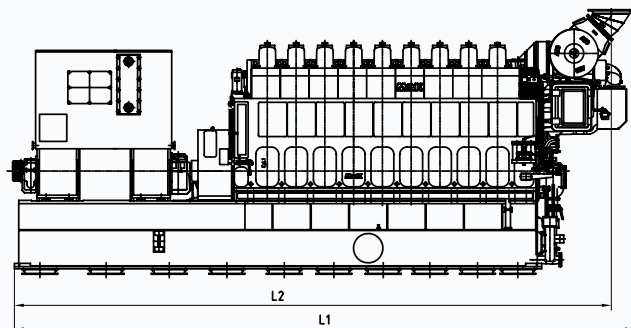
Generator Set



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 34 DF	9302	8869	2901	1900	962	2639	63.0
8 M 34 DF	10866	10461	2969	1900	962	2600	82.0
9 M 34 DF	11419	10991	2969	1900	962	2600	88.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel oil consumption	Spec. gas consumption
								100 %	100 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	kJ/kWh
6 M 34 DF	3000	2877	3600	60	720	19.9	11.0	188	7708
	3000	2877	3600	50	750	19.1	11.5	188	7708
8 M 34 DF	4000	2836	4800	60	720	19.9	11.0	188	7708
	4000	2836	4800	50	750	19.1	11.5	188	7708
9 M 34 DF	4500	4316	5400	60	720	19.9	11.0	188	7708
	4500	4316	5400	50	750	19.1	11.5	188	7708

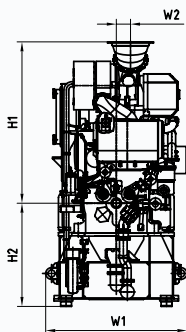
Stroke: 460 mm

Bore: 340 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, $\cos \varphi$: 0.8



Genset centre distance: min. 3000 mm

Removal of cylinder liner:

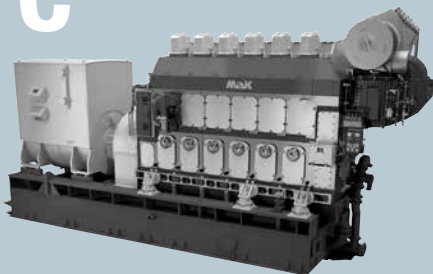
in transverse direction 4940 mm

in longitudinal direction 5305 mm

Nozzle position: ask for availability

Engine with turbocharger at driving end available, ask for dimensions

M 43 C

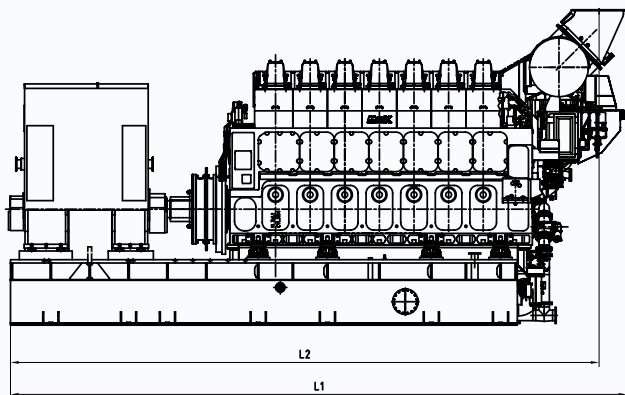


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 43 C	12202	11651	3834	2444	3400	215	178.0
7 M 43 C	12999	12414	4205	2444	3400	232	195.0
8 M 43 C	13729	13144	4205	2444	3400	232	210.0
9 M 43 C	14459	13874	4205	2444	3400	232	240.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	g/kWh
6 M 43 C	5400	5179	6480	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	6000	5754	7200	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	6300	6042	7560	50/60	500/514	28.4/27.7	10.2/10.5	177	176
7 M 43 C	6300	6042	7560	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	7000	6713	8400	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	7350	7049	8820	50/60	500/514	28.4/27.7	10.2/10.5	178	176
8 M 43 C	7200	6905	8640	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	8000	7672	9600	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	8400	8056	10080	50/60	500/514	28.4/27.7	10.2/10.5	178	176
9 M 43 C	8100	7768	9720	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	9000	8631	10800	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	9450	9063	11340	50/60	500/514	28.4/27.7	10.2/10.5	178	176

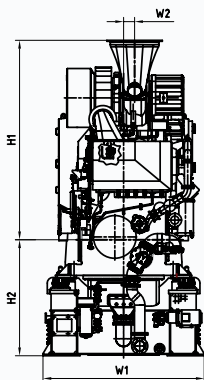
Stroke: 610 mm

Bore: 430 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, $\cos \phi$: 0.8

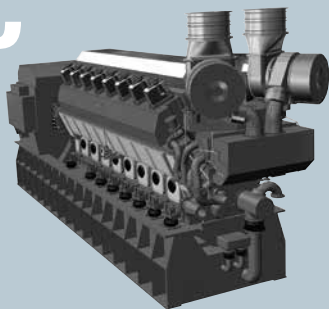


Genset centre distance: min. 3700 mm

Removal of cylinder liner:
in transverse direction 6609 mm

Nozzle position: ask for availability

VM 43 C

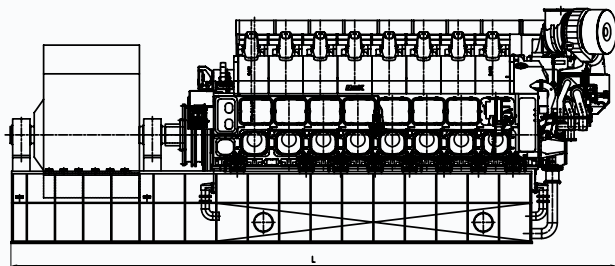


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	H1	H2	W1	W2	Weight
12 M 43 C	14740	3497	3020	3890	1685	275.0
16 M 43 C	16870	3473	3020	4027	1670	345.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel consumption	
								100 %	85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh	g/kWh
12 M 43 C	10800	10357	12960	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	12000	11508	14400	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	12600	12083	15120	50/60	500/514	28.4/27.7	10.2/10.5	177	176
16 M 43 C	14400	13810	17280	50/60	500/514	24.4/23.8	10.2/10.5	175	175
	16000	15344	19200	50/60	500/514	27.1/26.4	10.2/10.5	176	175
	16800	16111	20160	50/60	500/514	28.4/27.7	10.2/10.5	177	176

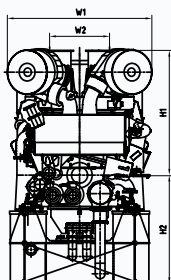
Stroke: 610 mm

Bore: 430 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, $\cos \varphi$: 0.8



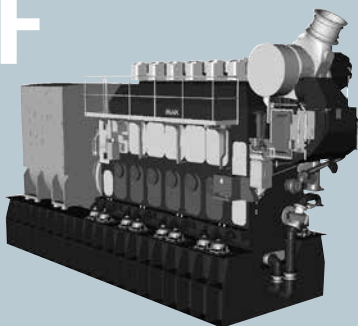
Genset centre distance: min. 4500 mm

Removal of cylinder liner: 6720 mm

Nozzle position: ask for availability

M 46 DF

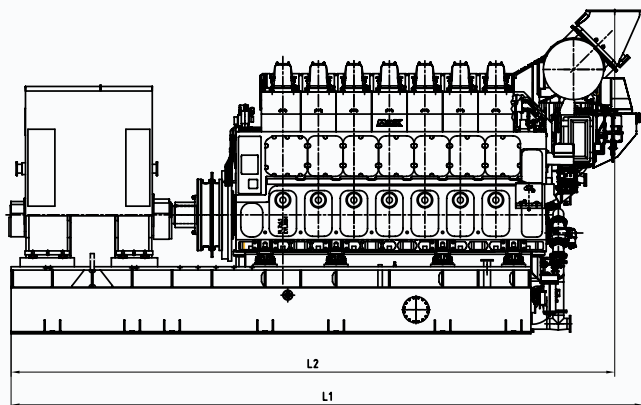
Generator Set



DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	L2	H1	H2	W1	W2	Weight
6 M 46 DF	12202	11651	3834	2444	3400	215	178.0
7 M 46 DF	12999	12414	4205	2444	3400	232	195.0
8 M 46 DF	13729	13144	4205	2444	3400	232	210.0
9 M 46 DF	14459	13874	4205	2444	3400	232	240.0

* Dependent on generator make/type



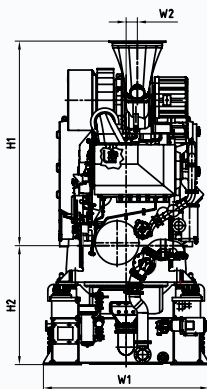
TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel oil consumption	Spec. gas consumption
	kW	kWe	kVA	Hz	rpm	bar	m/s	100%/85%	100%/85%
6 M 46 DF	5400	5179	6480	50/60	500/514	21.3/20.7	10.2/10.5	186/185	7200/7417
7 M 46 DF	6300	6042	7560	50/60	500/514	21.3/20.7	10.2/10.5	186/185	7200/7417
8 M 46 DF	7200	6905	8640	50/60	500/514	21.3/20.7	10.2/10.5	186/185	7200/7417
9 M 46 DF	8100	7768	9720	50/60	500/514	21.3/20.7	10.2/10.5	186/185	7200/7417

Stroke: 610 mm
Bore: 460 mm

Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh
LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%
Generator efficiency: 0.96, $\cos \varphi$: 0.8

Note: 5% tolerance +1% per pump
In gas mode plus 1% ignition fuel oil consumption

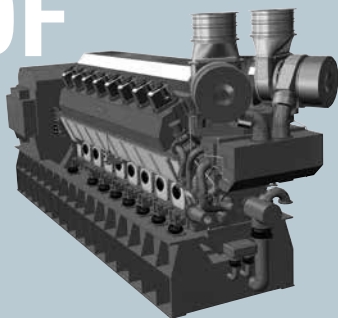


Genset centre distance: min. 3700 mm

Removal of cylinder liner:
in transverse direction 6609 mm

Nozzle position: ask for availability

VM 46 DF

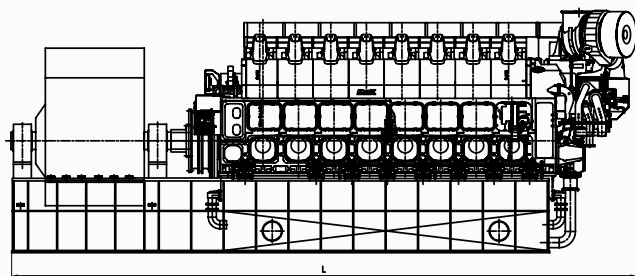


Generator Set

DIMENSIONS (mm) AND WEIGHTS (t)

Type	L1 *	H1	H2	W1	W2	Weight
12 M 46 DF	14740	3497	3020	3890	1685	275.0
16 M 46 DF	16870	3473	3020	4027	1670	345.0

* Dependent on generator make/type



TECHNICAL DATA

Type	Engine rating	Output range		Frequency	Speed	Mean eff. pressure	Mean piston speed	Spec. fuel oil consumption		Spec. gas consumption	
								100 % / 85 %	100 % / 85 %	100 % / 85 %	100 % / 85 %
	kW	kWe	kVA	Hz	rpm	bar	m/s	g/kWh		kJ/kWh	
12 M 46 DF	10800	10357	12960	50/60	500/514	21.3/20.7	10.2/10.5	186/185		7272/7417	
16 M 46 DF	14400	13810	17280	50/60	500/514	21.3/20.7	10.2/10.5	186/185		7272/7417	

Stroke: 610 mm

Bore: 460 mm

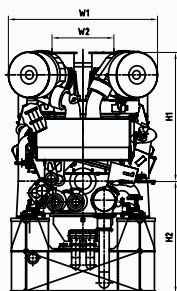
Specific lubricating oil consumption 0.6 g/kWh, ± 0.3 g/kWh

LCV = 42700 kJ/kg, without engine-driven pumps, tolerance 5%

Generator efficiency: 0.96, cos ϕ : 0.8

Note: 5% tolerance +1% per pump

In gas mode plus 1% ignition fuel oil consumption



Genset centre distance: min. 4500 mm

Removal of cylinder liner:
in transverse direction 6720mm

Nozzle position: ask for availability

Notes



For more information please visit:
MARINE.CAT.COM
E-mail: cat_power@cat.com

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