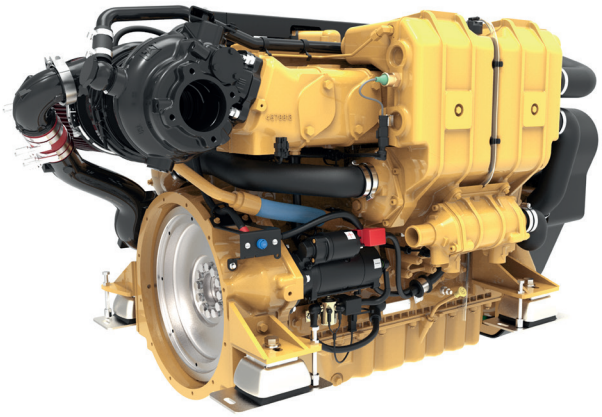
C7.1

MARINE PROPULSION ENGINE (U.S. EPA Tier 3 / IMO II)

209 bkW (280 bhp) @ 2300 rpm



C7.1 Marine Propulsion Engine (Commercial)
U.S. EPA Tier 3 / IMO II
Image may not reflect actual product.

ENGINE SPECIFICATIONS

Configuration
In-line 6, 4-stroke-cycle diesel

Emissions
U.S. EPA Tier 3 / IMO II emissions certified (commercial), RCD 2016 compliant

Rated Engine Speed
2300 rpm

Bore x Stroke
105 mm x 135 mm / 4.13 in x 5.31 in

Displacement
7.01 Liter
428 cu in

Aspiration
Turbocharged-aftercooled aspiration

Governor
Electronic (A5E2 V2 ECM)

Refill Capacity
Lube Oil System w/Oil filter change: 20 L (5.3 gal)

Oil Change Interval
500 hrs

Cooling
Heat exchanger or keel cooled

Flywheel Housing
SAE No. 03 with SAE 11.5 in flywheel

Rotation
Counterclockwise from flywheel end

FEATURES AND BENEFITS

- Superior response time and acceleration
- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- No visible smoke
- 12V or 24V electrical system
- Compatible with Cat® displays and electronics
- Closed crankcase ventilation system improves engine room cleaniness
- Gear driven jacket water pump and sea water pump for superior reliability
- Maintenance free valve train with hydraulic valve lash adjusters
- Self priming fuel system ensures a smooth start every time

STANDARD ENGINE EQUIPMENT

- Watercooled turbocharger and exhaust manifold
- Common rail fuel system
- Corrosion resistant sea water aftercooler
- Closed crankcase ventilation system
- Starter motors – 12V or 24V
- Fuel cooler
- Integral engine oil cooler
- Vibration damper and guard
- Electric fuel priming pump
- Self-tensioning multi-vee belt drive
- Gear driven jacket water pump
- Front and rear engine mounting brackets

OPTIONAL ATTACHMENTS

- Marine Classification Society (MCS) Approval
  ABS, BV, CCS, CRS, *DNV-GL, IRS, LR, ClassNK, PRS, RINA
  (*DNV-GL approval available for keel cooled engines only)
- SOLAS double wall high pressure fuel lines kit
- Engine mounted bilge pumps and auxiliary water pumps with electromagnetic clutch
- Engine mounted secondary alternator – 24V 55 amp or 12V 100 amp
- Analogue gauge displays
- Transmission gear oil cooler (engine mounted)
- Additional engine and transmission sensor packages for on or off vessel monitoring
- Glow plugs
- Jacket water heater
- Various 5" and 6" water cooled exhaust elbow configurations
- Cabin heater (calorifier) connections
- Right-hand and high level oil dipsticks
- Mechanical throttle converter for repower

B RATING (HEAVY DUTY) DEFINITION

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 operation ranges from 3000 to 5000 hours per year.

TECHNICAL DATA

C7.1 Marine Propulsion Engine (U.S. EPA Tier 3 / IMO II)

PROP DEMAND FUEL CONSUMPTION

	Brake Specific Fuel Consumption 209 bkW (280 bhp) @ 2300 rpm			
rpm	bhp	lb/bhp-hr	bkW	g/bkW-hr
2300	209	56.3	280	14.9
2200	183	49.5	245	13.1
2000	137	37.8	184	10
1800	100	27.7	134	7.3
1600	70.4	19.2	94.4	5.1
1400	47.2	12.8	63.2	3.4
1200	29.7	8.2	39.8	2.2
1000	17.2	5.1	23	1.4
800	8.8	3	11.8	0.8
600	3.7	1.7	5	0.4

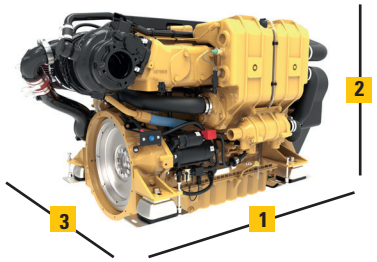
- ISO 3046/1 fluid consumption tolerance of -0/+5%

Note:
Consult your local Cat dealer to create a customized engine TCO (Total Cost of Ownership) analysis specific to your vessel.
Dealers (only): Please reference TMI Web for most current information.

DIMENSIONS & WEIGHT

	Length (1)	Height (2)	Width (3)	Engine dry weight
min.	1095 mm/43.1 in[1]	891 mm/35.1 in	798 mm/31.4 in[2]	730 kg/1609 lb[3]
max.			850 mm/33.5 in[3]	760 kg/1676 lb[2]

Note:
Do not use these dimensions for installation design. See general dimension drawings for detail.
[1] From rear face of flywheel housing to front of engine
[2] Heat Exchanger
[3] Keel Cooled



LEHM0284-02
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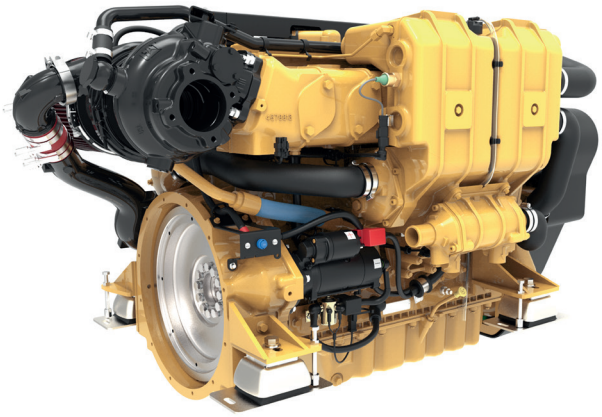
C7.1

MARINE PROPULSION ENGINE (U.S. EPA Tier 3 / IMO II)

261 bkW (350 bhp) @ 2500 rpm



C7.1 Marine Propulsion Engine (Commercial)
U.S. EPA Tier 3 / IMO II
Image may not reflect actual product.

ENGINE SPECIFICATIONS

Configuration
In-line 6, 4-stroke-cycle diesel

Emissions
U.S. EPA Tier 3 / IMO II emissions certified (commercial), RCD 2016 compliant

Rated Engine Speed
2500 rpm

Bore x Stroke
105 mm x 135 mm / 4.13 in x 5.31 in

Displacement
7.01 Liter
428 cu in

Aspiration
Turbocharged-aftercooled aspiration

Governor
Electronic (A5E2 V2 ECM)

Refill Capacity
Lube Oil System w/Oil filter change: 20 L (5.3 gal)

Oil Change Interval
500 hrs

Cooling
Heat exchanger or keel cooled

Flywheel Housing
SAE No. 03 with SAE 11.5 in flywheel

Rotation
Counterclockwise from flywheel end

FEATURES AND BENEFITS

- Superior response time and acceleration
- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- No visible smoke
- 12V or 24V electrical system
- Compatible with Cat® displays and electronics
- Closed crankcase ventilation system improves engine room cleaniness
- Gear driven jacket water pump and sea water pump for superior reliability
- Maintenance free valve train with hydraulic valve lash adjusters
- Self priming fuel system ensures a smooth start every time

STANDARD ENGINE EQUIPMENT

- Watercooled turbocharger and exhaust manifold
- Common rail fuel system
- Corrosion resistant sea water aftercooler
- Closed crankcase ventilation system
- Starter motors – 12V or 24V
- Fuel cooler
- Integral engine oil cooler
- Vibration damper and guard
- Electric fuel priming pump
- Self-tensioning multi-vee belt drive
- Gear driven jacket water pump
- Front and rear engine mounting brackets

OPTIONAL ATTACHMENTS

- Marine Classification Society (MCS) Approval
  ABS, BV, CCS, CRS, *DNV-GL, IRS, LR, ClassNK, PRS, RINA
  (*DNV-GL approval available for keel cooled engines only)
- SOLAS double wall high pressure fuel lines kit
- Engine mounted bilge pumps and auxiliary water pumps with electromagnetic clutch
- Engine mounted secondary alternator – 24V 55 amp or 12V 100 amp
- Analogue gauge displays
- Transmission gear oil cooler (engine mounted)
- Additional engine and transmission sensor packages for on or off vessel monitoring
- Glow plugs
- Jacket water heater
- Various 5" and 6" water cooled exhaust elbow configurations
- Cabin heater (calorifier) connections
- Right-hand and high level oil dipsticks
- Mechanical throttle converter for repower

C RATING (MAXIMUM CONTINUOUS) DEFINITION

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 operation ranges from 2000 to 4000 hours per year.

TECHNICAL DATA

C7.1 Marine Propulsion Engine (U.S. EPA Tier 3 / IMO II)

PROP DEMAND FUEL CONSUMPTION

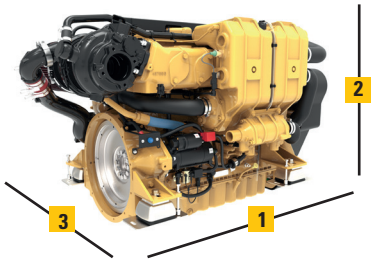
	Brake Specific Fuel Consumption 261 bkW (350 bhp) @ 2500 rpm			
rpm	bkW	L/hr	bhp	Gal/hr
2500	261	69.2	350	18.3
2400	231	60.9	310	16.1
2200	178	46.8	239	12.4
2000	134	36.5	179	9.6
1800	97.5	26.6	131	7
1600	68.5	19	91.9	5
1400	45.9	12.5	61.5	3.3
1200	28.9	8	38.8	2.1
1000	16.7	5	22.4	1.3
800	8.6	3	11.5	0.8
600	3.6	1.7	4.8	0.4
• ISO 3046/1 fluid consumption tolerance of -0/+5%				

Note:
Consult your local Cat dealer to create a customized engine TCO (Total Cost of Ownership) analysis specific to your vessel.
Dealers (only): Please reference TMI Web for most current information.

DIMENSIONS & WEIGHT

	Length (1)	Height (2)	Width (3)	Engine dry weight
min.	1095 mm/43.1 in[1]	891 mm/35.1 in	798 mm/31.4 in[2]	730 kg/1609 lb[3]
max.			850 mm/33.5 in[3]	760 kg/1676 lb[2]

Note:
Do not use these dimensions for installation design. See general dimension drawings for detail.
[1] From rear face of flywheel housing to front of engine
[2] Heat Exchanger
[3] Keel Cooled



LEHM0283-02
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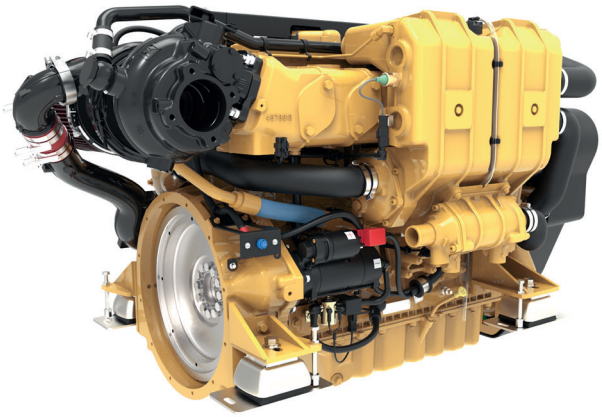
C7.1

MARINE PROPULSION ENGINE (U.S. EPA Tier 3 / IMO II)

317 bkW (425 bhp) @ 2700 rpm | **298 bkW (400 bhp) @ 2600 rpm**



C7.1 Marine Propulsion Engine (Commercial)
U.S. EPA Tier 3 / IMO II
Image may not reflect actual product.

ENGINE SPECIFICATIONS

Configuration
In-line 6, 4-stroke-cycle diesel

Emissions
U.S. EPA Tier 3 / IMO II emissions certified (commercial), RCD 2016 compliant

Rated Engine Speed
2600 rpm - 2700 rpm

Bore x Stroke
105 mm x 135 mm / 4.13 in x 5.31 in

Displacement
7.01 Liter
428 cu in

Aspiration
Turbocharged-aftercooled aspiration

Governor
Electronic (A5E2 V2 ECM)

Refill Capacity
Lube Oil System w/Oil filter change: 20 L (5.3 gal)

Oil Change Interval
500 hrs

Cooling
Heat exchanger or keel cooled

Flywheel Housing
SAE No. 03 with SAE 11.5 in flywheel

Rotation
Counterclockwise from flywheel end

FEATURES AND BENEFITS

- Superior response time and acceleration
- Common rail fuel system enables optimum combustion and low emissions
- Reduced combustion noise through advanced electronic control
- No visible smoke
- 12V or 24V electrical system
- Compatible with Cat® displays and electronics
- Closed crankcase ventilation system improves engine room cleaniness
- Gear driven jacket water pump and sea water pump for superior reliability
- Maintenance free valve train with hydraulic valve lash adjusters
- Self priming fuel system ensures a smooth start every time

STANDARD ENGINE EQUIPMENT

- Watercooled turbocharger and exhaust manifold
- Common rail fuel system
- Corrosion resistant sea water aftercooler
- Closed crankcase ventilation system
- Starter motors – 12V or 24V
- Fuel cooler
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- Vibration damper and guard
- Electric fuel priming pump
- Self-tensioning multi-vee belt drive
- Gear driven jacket water pump
- Front and rear engine mounting brackets

OPTIONAL ATTACHMENTS

- Marine Classification Society (MCS) Approval
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  (*DNV-GL approval available for keel cooled engines only)
- SOLAS double wall high pressure fuel lines kit
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- Engine mounted secondary alternator – 24V 55 amp or 12V 100 amp
- Analogue gauge displays
- Transmission gear oil cooler (engine mounted)
- Additional engine and transmission sensor packages for on or off vessel monitoring
- Glow plugs
- Jacket water heater
- VVarious 5" and 6" water cooled exhaust elbow configurations
- Cabin heater (calorifier) connections
- Right-hand and high level oil dipsticks
- Mechanical throttle converter for repower

D RATING (INTERMITTENT DUTY) DEFINITION

Typical applications: For vessels operating at rated load and rated speed up to 16% of the time (up to 50%load factor). Typical operation ranges from 1000 to 3000 hours per year.

TECHNICAL DATA

C7.1 Marine Propulsion Engine (U.S. EPA Tier 3 / IMO II)

PROP DEMAND FUEL CONSUMPTION

	Brake Specific Fuel Consumption 317 bkW (425 bhp) @ 2700 rpm			
rpm	bkW	L/hr	bhp	Gal/hr
2700	317	86.5	425	22.9
2600	283	77.3	380	20.4
2400	223	60.1	299	15.9
2200	171	45.5	230	12
2000	129	34.5	173	9.1
1800	94	26.2	126	6.9
1600	66	18.6	88	4.9
1400	44	12.1	59	3.2
1200	28	7.9	37	2.1
1000	16	4.9	22	1.3
800	8	2.9	11	0.8
600	3	1.6	5	0.4

- ISO 3046/1 fluid consumption tolerance of -0/+5%

	Brake Specific Fuel Consumption 298 bkW (400 bhp) @ 2600 rpm			
rpm	bkW	L/hr	bhp	Gal/hr
2600	298	76.9	400	20.3
2400	234	61.5	314	16.2
2200	181	47.8	242	12.6
2000	136	36.7	182	9.7
1800	98.9	26.9	133	7.1
1600	69.4	19.1	93.1	5
1400	46.5	12.6	62.4	3.3
1200	29.3	8.1	39.3	2.1
1000	17	5.1	22.7	1.3
800	8.7	3	11.6	0.8
600	3.7	1.7	4.9	0.4

- ISO 3046/1 fluid consumption tolerance of -0/+5%

Note:
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DIMENSIONS & WEIGHT

	Length (1)	Height (2)	Width (3)	Engine dry weight
min.	1095 mm/43.1 in[1]	891 mm/35.1 in	798 mm/31.4 in[2]	730 kg/1609 lb[3]
max.			850 mm/33.5 in[3]	760 kg/1676 lb[2]

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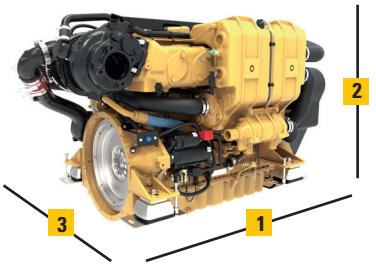

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