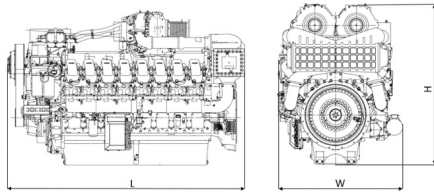


# SERIES 4000 CX3

for Mining applications



Optional equipment and finishing shown.  
Standard may vary.

Engine	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V	2694 x 1629 x 2066 (106.1 x 64.1 x 81.3)	7000 (15430)
16V	3164 x 1637 x 2065 (124.6 x 64.4 x 81.3)	8380 (18475)
20V	3845 x 1617 x 2065 (151.4 x 63.7 x 81.3)	10700 (23590)

All dimensions are approximate, for complete information refer to the installation drawing.















Engine		
Bore/stroke	mm (in)	170/210 (6.7/8.3)
Cylinder configuration		90° V
Displacement/cylinder	l (cu in)	4.77 (291)
Displacement, total	l (cu in)	12V: 57.2 (3491), 16V: 76.3 (4656), 20V: 95.4 (5822)
Fuel specification		Diesel fuel, biodiesel blends, synthetic fuels*

\* See fluids & lubricants specification A001061 for details

Application	Power definition	Operating profile
5A	Continuous operation with 100% load	Load factor: $\geq 60\%$ , operating hours: unrestricted, overload: fuel stop (ICFN)
5B	Continuous operation with variable load	Load factor: $< 60\%$ , operating hours: unrestricted, overload: fuel stop (ICFN)

All 5A ratings can be used in 5B applications but not vice versa.

ICFN = ISO standard (continuous) fuel stop power. For detailed information regarding engine performance under non-standard boundary conditions, please, contact your local **mtu** service partner.

Application	Vehicle Type	Rated power ICFN			Peak torque			Optimization
		kW	bhp	rpm	Nm	lb-ft	rpm	
<b>Heavy duty operation (5A)</b>								
12V 4000 C33R		1150	1542	1800	7845	5786	1400	Fuel consumption opt., non-cert.
12V 4000 C33		1450	1944	1800	9231	6808	1500	Fuel consumption opt., non-cert.
<b>Heavy duty operation (5A)   Medium duty operation (5B)</b>								
12V 4000 C13R		1193	1600	1800	7595	5600	1500	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
12V 4000 C13		1343	1801	1800	8550	6307	1500	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
12V 4000 C13L		1425	1911	1800	9070	6690	1500	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
16V 4000 C13R		1492	2001	1800	9520	7022	1400	Fuel consumption opt., non-cert.
16V 4000 C13		1750	2347	1800/1900	11141	8216	1500	Fuel consumption opt., non-cert.
16V 4000 C13L		1865	2501	1800/1900	11868	8753	1500	Fuel consumption opt., non-cert.
<b>Medium duty operation (5B)</b>								
12V 4000 C23R		1510	2025	1800/1900	8482	6255	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
12V 4000 C23		1680	2253	1800/1900	9435	6959	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
16V 4000 C23R		2013	2699	1800/1900	11310	8342	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
16V 4000 C23		2240	3004	1800	12566	9268	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
20V 4000 C23		2800	3755	1800	15728	11600	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)
20V 4000 C23L		3000	4023	1800	16852	12429	1700	Fuel consumption opt., non-cert.; EPA Nonroad T2 Comp (40CFR89); China NRMM St. III (GB20891-2014)

Power output within 5% tolerance at standard conditions. Power definition according to ISO 3046 (ratings also correspond to SAE J 1995 and SAE J 1349 standard conditions). Consult your **mtu** distributor/dealer for the rating that will apply to your specific application.

Standard equipment	
Base engine system	SAE 00 flywheel housing with SAE 21 isolated flywheel, 3-point engine mount (Trunnion)
Starting system	Dual electric starter
Lube oil system	Engine pre-lube system, automatic oil filter (maintenance-free), two oil centrifuges
Fuel system	Common rail injection system, double-walled fuel lines, 3-stage fuel filtration, hand pump
Cooling system	Separate high temperature (HTC) and low temperature (LTC) coolant circuits with separate pumps
Turbocharging system	Single-stage, two exhaust turbochargers, water-cooled exhaust manifold
Accessory drives (PTO)	Engine-mounted fan clutch
Electronics	Electronic engine control and management system, 4G/LTE data logger ( <i>mtu</i> Go!)
Documentation	FAT* protocol, performance diagram, emission compliance requirements, application guidebook, installation drawings, operation manual, fluids and lubricants specification, maintenance schedule, <i>mtu</i> Go! system documentation (* Factory Acceptance Test (FAT))

Optional equipment (including ship loose parts)	
Base engine system	Flywheel, flywheel housing and coupling options, vibration damper options, 4-point engine mounting (12V only), grounding device
Starting system	Pneumatic starter, without starter
Lube oil system	Oil pan and oil dipstick options
Fuel system	Booster pump (20V only), power output module (POM)
Cooling system	Winter package
Combustion air system	Air intake options (horizontal or vertical)
Exhaust system	Exhaust elbows, bellows, companion flanges
Accessory drives (PTO)	Battery charging alternators, air compressor, A/C compressor drives, fan drive options (clutches, drive ratios, spacers, cooling fans, no fan drive)
Electronics	CAN communication protocol options, customer-specific calibration settings, frequency converters, single exhaust temperature monitoring system, sensor options (coolant level, water in fuel, engine speed)
Miscellaneous	High altitude kit, paints, packing, certificates, multilingual documentation, torsional vibration calculation

The 12V4000C33/C33R scope of supply has a limited number of options. Please, contact application mining team for details.

Reference conditions:

- > Intake-air temperature: 25°C (77°F)
- > Altitude above sea level: 100 m (328 ft)
- > Ambient air pressure: 1000 mbar (14.5 psi)
- > Charge air coolant temperature: (dependent on ratings and emissions)

All information is subject to change. Errors, changes and typographical errors excepted. Engine illustrated in this document may feature optional equipment.