

# 2015M

210–500 kW (280–670 bhp) at 1500–2100 rpm

The engine company.



## Superiority is the sum of all the details.

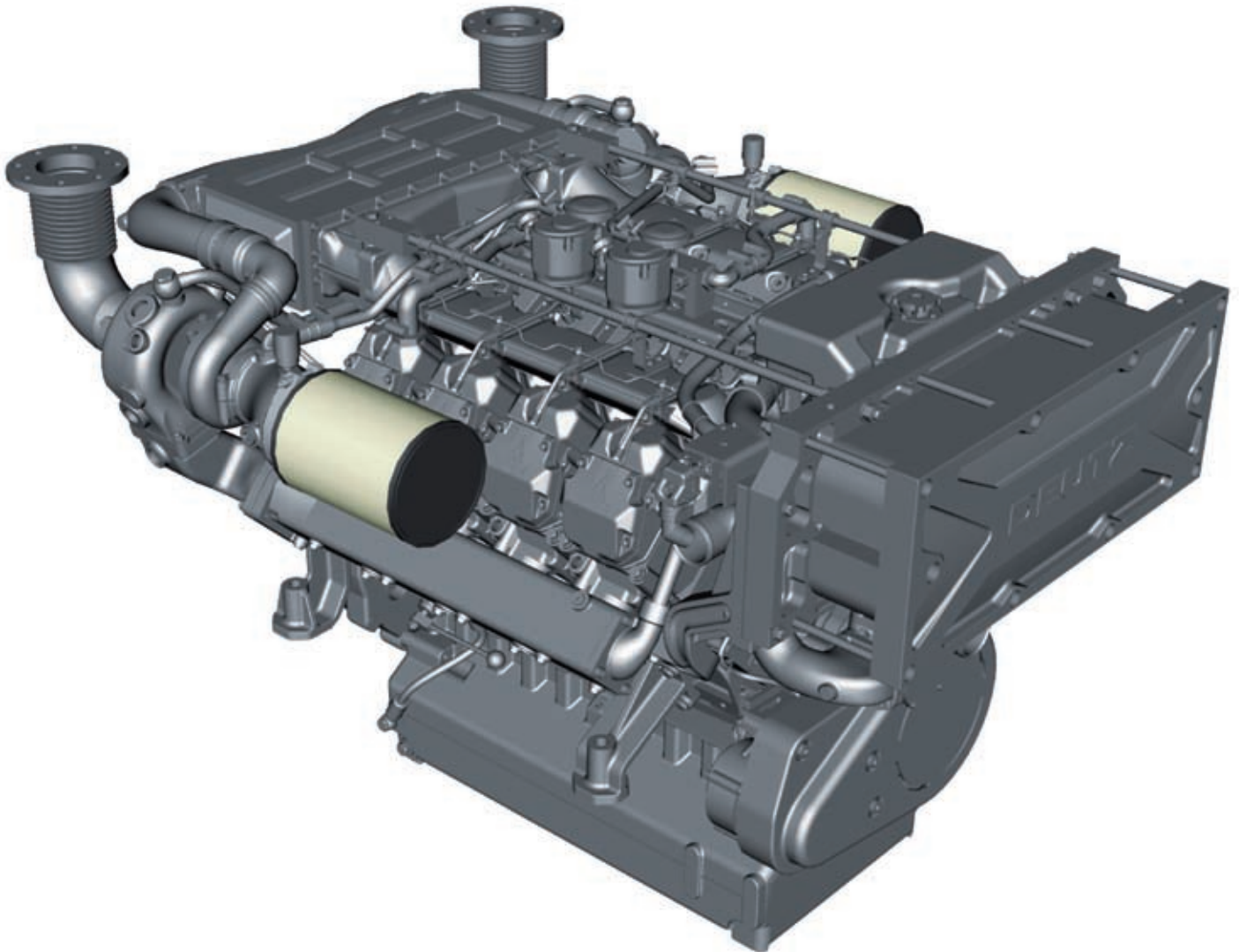
With a long maritime tradition and the sound basis of a leading engine manufacturer DEUTZ engines have an international reputation as reliable, durable and efficient propulsion units for work boats as well as commercial vessels and their auxiliary drives.

The requirements of the engines for the main and auxiliary drives of ships vary. But the key expectations are quite simple: Economy and availability are of the most important for every application.

To the benefit of our customers DEUTZ has focused their long term experience in compact engines combined with the special marine know-how. The result are the compact DEUTZ marine engines.

Technically mature and state-of-the-art in engine development, our engines offer the security and reliability in everyday use that our customers demand.

DEUTZ drives also set high standards where economy is concerned. Because in addition to state-of-the-art engine technology and a practical design our drives also feature an exemplary cost/benefit ratio. Great economic values and excellent exhaust gas emissions for the benefit of the environment are all part of the DEUTZ standard.



## Features

Modern water-cooled 6- and 8-cylinder engines in V-configuration with 90° angle | Water-cooled turbocharger and exhaust manifold | Modern injection system controlled by electronic solenoid valves | **Charge air cooling with engine coolant** | **Approved multi-parallel cooling system®** | Compact dimensions | Front and rear end power take-off | Additional gear driven power take-off options for hydraulic pumps and compressors | Classified marine engine including modern control system | In compliance with marine emission standards IMO Tier 2, CCNR Stage II, EU Stage II (2004/26/EG) and US EPA Tier 2 | The particulate matter (PM) emissions are 30% lower than the required limit value

## Your benefits

- The modern injection system ensures low fuel consumption and therefore a high level efficiency
- The approved cooling system reduces the fuel consumption and is a further example of the high reliability
- Low maintenance costs due to heat exchanger as plate cooler
- Space-saving design and low noise emissions reduce installation costs
- High reliability and durability due to integrated pipes
- Independently approved safety and quality
- The low PM emission level qualifies the engine for incentive programmes

## Engine description

<b>Type of cooling:</b>	Single-circuit mixture cooling as indirect cooling (DEUTZ Multi-parallel cooling system®) at raw water cooling with built-on plate heat exchanger, circulation coolant pump, compensation tank, thermostat and raw water pump. At keel cooling with coolant circulation pump and integrated thermostat. Integrated compensation tank
<b>Crankcase:</b>	Cast iron crankcase with wet liners
<b>Crankcase breather:</b>	Closed-circuit system, vacuum-controlled
<b>Cylinder head:</b>	Individual cross-flow cylinder heads made of grey cast iron
<b>Valve control:</b>	Overhead valves in the cylinder head, four-valve technology, actuated by tappets, pushrods and rockers. Control is driven by a central camshaft
<b>Piston:</b>	3-ring pistons, cooled by cooling oil jets
<b>Connecting rod:</b>	Drop-forged steel
<b>Crankshaft:</b>	Drop-forged steel, with bolted counterweights, V6 with 30° split pins
<b>Crankshaft and big end bearing:</b>	Tri-metal friction shell bearings/sputter shell bearings
<b>Camshaft:</b>	Steel camshaft, driven by gear
<b>Lubrication:</b>	Forced-feed lubrication with gear pump, with integrated oil cooler and oil filter cartridge in the main lubricating oil flow; duplex change over filter optional
<b>Turbocharging:</b>	Two water-cooled turbochargers with charge air cooler on the flywheel side; water-cooled exhaust manifold
<b>Fuel injection system:</b>	DEUTZ MV-system. Single injection pumps (pump-line-nozzle, PLN) with electronic control. Double walled injection lines for high pressure lines as an option
<b>Fuel system:</b>	Mechanical gear pump, exchangeable cartridge for fuel filter, optional duplex change over filter
<b>Alternator:</b>	Three-phase alternator 28 V / 55, 80 or 140 Ampere
<b>Starter:</b>	24 V/5.5 kW
<b>Heating system:</b>	Optional connection possibility for heater or hot water boiler
<b>Range of variants:</b>	Hydraulic pumps, flywheels, SAE connecting housing, oil pans, air filters, engine feet with elastic mounts, starters, alternators, engine control system

# Technical data

Engine type		TCD 2015 M V6	TCD 2015 M V8
Number of cylinders		6	8
Bore/stroke	mm   in	132/145   5.2/5.7	132/145   5.2/5.7
Capacity	l   cuin	11.9   726.2	15.9   970.3
Compression ratio		17.5	17.5

Powers for ship engines		TCD 2015 M V6	TCD 2015 M V8
<b>acc. to power group A*</b>			
at 1800 rpm	kW   bhp	315   422	440   590
at 1900 rpm	kW   bhp	327   439	450   604
at 2100 rpm	kW   bhp	327   439	450   604
<b>acc. to power group B</b>			
at 1800 rpm	kW   bhp	350   469	490   657
at 1900 rpm	kW   bhp	360   483	500   670
at 2100 rpm	kW   bhp	360   483	500   670

Powers for on-board units		TCD 2015 M V6	TCD 2015 M V8
at 1500 rpm – G* (“N”)	kW   bhp	280 (300)   375 (402)	382 (420)   512 (563)
at 1800 rpm – G* (“N”)	kW   bhp	300 (330)   402 (443)	420 (450)   563 (604)

\* classifiable

1 kW = 1.341 bhp

**Power group A:** Blocked useful power for unlimited continuous operation, SCFN or MCFN according to ISO 3046-1. Utilisation > 80%, operating time > 3000 hours.

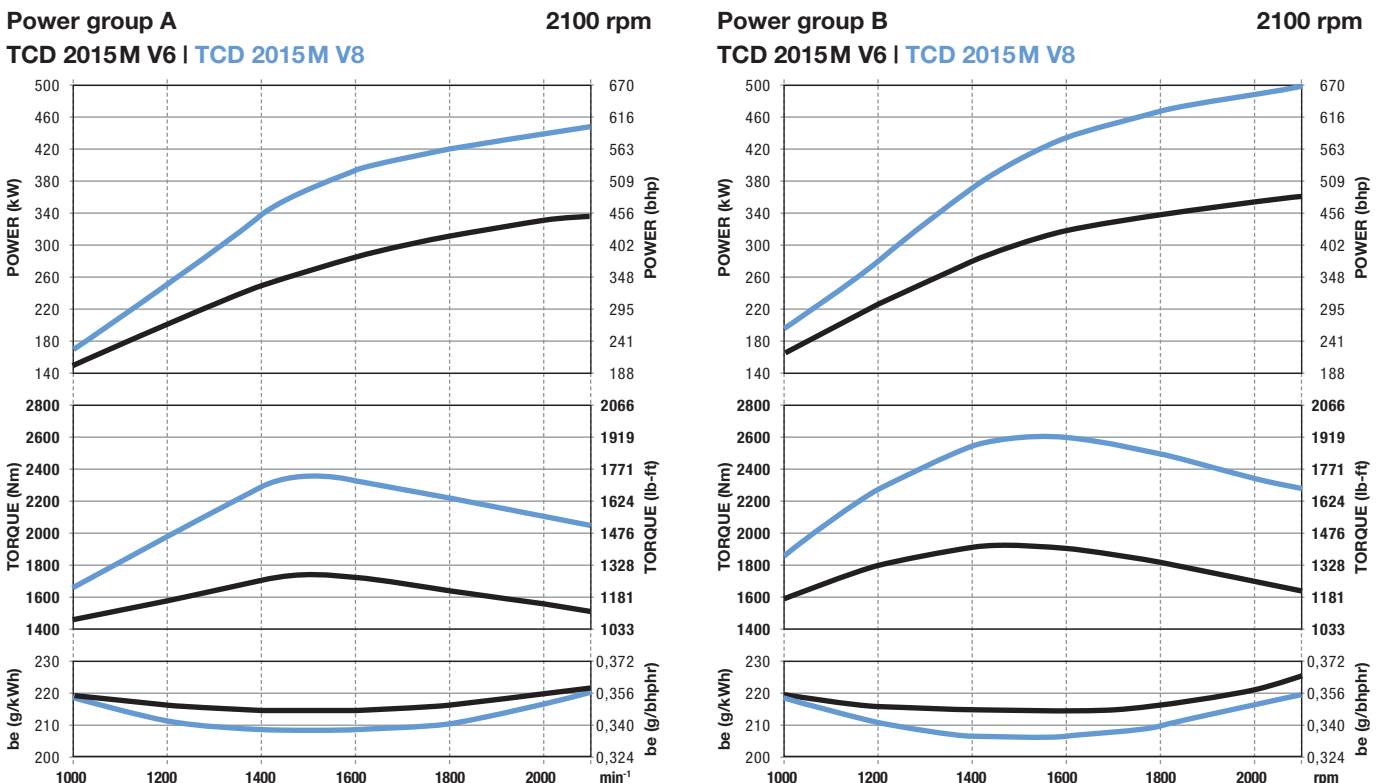
**Power group B:** Blocked useful power for unlimited continuous operation, SCFN according to ISO 3046-1. Utilisation < 70%, operating time < 3000 hours per year.

**Powers for on-board units:** “G” continuous power, SCXN or MCXN according to ISO 3046-1. Overloadable by 10% for 1 hour within 12 hour operation.

“N” continuous power, SCXN according to ISO 3046-1. Overloadable by 10% for 1 hour within 12 hour operation. Perm. av. utilisation ≤ 80%.

The data on this data sheet are for information purpose only and are not binding values. The data in the offer is decisive.

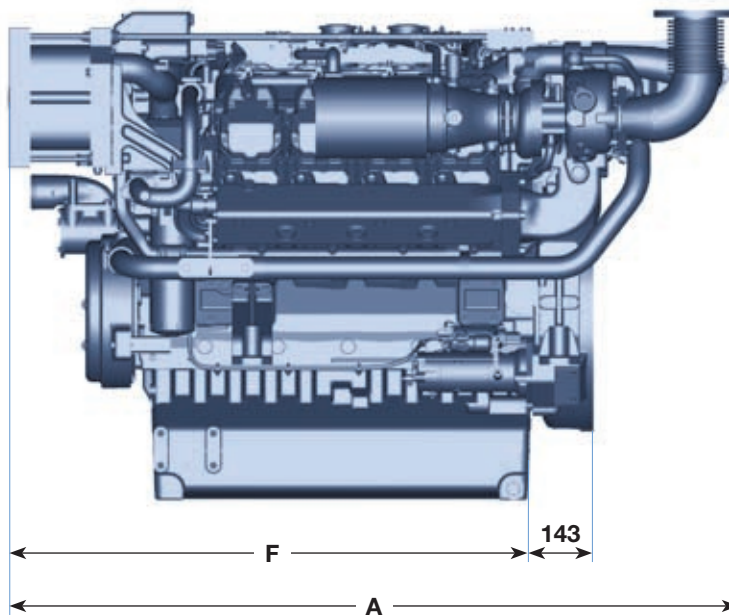
## Standard torque curves



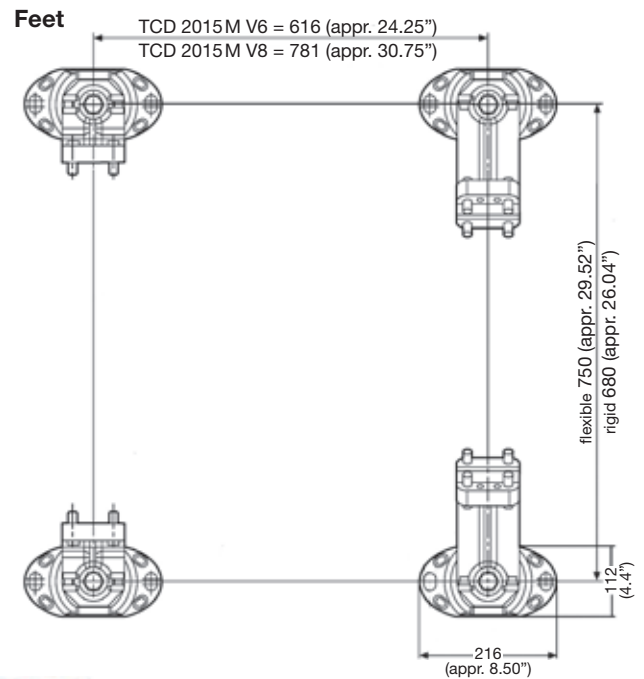
# Raw water cooling

Dimensions		TCD 2015M V6	TCD 2015M V8
A	mm   in	1510   59.45	1705   67.13
B	mm   in	1315   51.77	1330   52.36
C	mm   in	1140   44.88	1140   44.88
D	mm   in	440   17.32	440   17.32
E	mm   in	700   27.56	700   27.56
F	mm   in	1035   40.75	1225   48.23

Weight		TCD 2015M V6	TCD 2015M V8
Weight dry incl. heat exchanger	kg   lbs	1320   2909	1540   3394



Exhaust flange diam.		6-cyl.	8-cyl.
inside	mm   in	ø 68   2.68	ø 105   4.13
outside	mm   in	ø 138   5.43	ø 196   7.72
bolt holes	mm   in	4x ø 14   0.55	8x ø 14   0.55

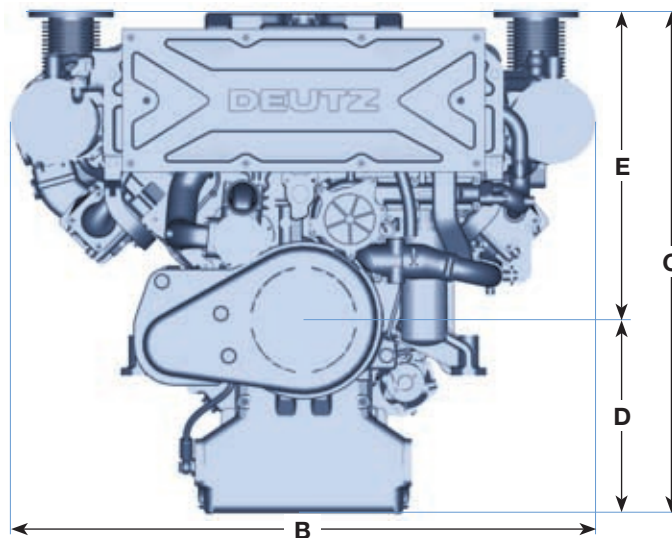


**Fuel return tank**  
internal thread union nut  
**M18 x1.5**

**Fuel inlet**  
internal thread union nut  
**M18 x1.5**

**Raw water outlet**  
ø 70 (appr. 2.76")

**Raw water inlet**  
ø 80 (appr. 3.16")



# Keel cooling

Dimensions		TCD 2015M V6	TCD 2015M V8
A	mm   in	1520   59.84	1680   66.14
B	mm   in	1315   51.77	1330   52.36
C	mm   in	1230   48.43	1230   48.43
D	mm   in	440   17.32	440   17.32
E	mm   in	790   31.10	790   31.10
F	mm   in	1045   41.14	1210   47.64

Weight		TCD 2015M V6	TCD 2015M V8
Weight incl. keel cooling	kg   lbs	1260   2777	1480   3262

**Coolant in**  
ø 50  
(appr. 1.97")

**Exhaust flange diam.**

		6-cyl.	8-cyl.
inside	mm	ø 68	ø 105
	in	ø 2.68	ø 4.13
outside	mm	ø 138	ø 196
	in	ø 5.43	ø 7.72
bolt holes	mm	4x ø 14	8x ø 14
	in	4x ø 0.55	8x ø 0.55

**Fuel supply**  
internal thread union nut  
**M18 x 1.5**

**Coolant out**  
ø 50 (appr. 1.97")

**Fuel return**  
internal thread union nut  
**M18 x 1.5**

Good service is not a question but the answer.



Our customers demand highest product quality and a clearly predictable performance of our engines economically and ecologically. Everywhere in the world and under all conditions. We are well prepared for this because our service and after-sales departments have a broad, technically sound basis.

More than 800 sales and service partners in 130 countries serve our customers day and night supported by three Logistics Centres in which about 160,000 spare parts items ensure fast repair of the engine in all cases.

This guarantees optimum support of all DEUTZ engines throughout their lifecycle. Our intensively trained and highly motivated service personnel ensures competent consulting and fast assistance for all types of problems.

Individual service and maintenance contracts, quick delivery of spare parts and excellent training offers round off this convincing offer because at DEUTZ you buy more than just the engine.

Rely exclusively on genuine DEUTZ parts because they are specially designed and manufactured for DEUTZ engines as the components upon delivery.

Our parts are tested and optimised continuously and have been designed for your special application in many cases and are not available in this form on the "grey" market by independent third party suppliers. Protect your warranty claims and the performance and life of your DEUTZ engine. Because your DEUTZ only stays a DEUTZ with genuine parts.

DEUTZ worldwide:

[www.deutz.com](http://www.deutz.com)



**DEUTZ AG**

Ottostr. 1  
51149 Cologne, Germany  
Phone: +49 (0) 221 822-0  
Telefax: +49 (0) 221 822-3525  
E-Mail: [info@deutz.com](mailto:info@deutz.com)  
[www.deutz.com](http://www.deutz.com)

**DEUTZ Corporation**

3883 Steve Reynolds Blvd.  
Norcross, GA 30093, USA  
Phone: +1 770 564 7100  
Telefax: +1 770 564 7222  
E-Mail: [engines@deutzusa.com](mailto:engines@deutzusa.com)  
[www.deutzusa.com](http://www.deutzusa.com)

**DEUTZ AG Beijing Office**

207 CITIC Building  
Jian Guo Men Wai Dajie,  
100004 Beijing, P.R. China  
Phone: +86 10 65 00 64 44  
Telefax: +86 10 65 12 00 42  
E-Mail: [dbj@deutz.com.cn](mailto:dbj@deutz.com.cn)  
[www.deutz.com.cn](http://www.deutz.com.cn)

**DEUTZ Asia-Pacific (Pte) Ltd.**

11 Kian Teck Road  
628768 Singapur  
Phone: +65 62 68 53 11  
Telefax: +65 62 64 17 79  
E-Mail: [dap@deutz.com](mailto:dap@deutz.com)  
[www.deutz.com](http://www.deutz.com)

**DEUTZ Australia Pty. Ltd.**

41 Woodlands Drive  
3195 Braeside Vic, Australia  
Phone: +61 3 9586 9600  
Telefax: +61 3 9580 4090  
E-Mail: [deutzoz@deutz.com](mailto:deutzoz@deutz.com)  
[www.deutz.com](http://www.deutz.com)

The engine company. 