



Largest Turbocharger Enters Service

MAN Diesel Commissions First TCA88-25 Turbocharger

4th September 2008. The Business Unit Turbocharger at MAN Diesel has reported on the first shop test on its largest turbocharger, the axial type TCA88-25.

The TCA88-25 was launched in 2006 and MAN Diesel reports that it has already sold some 50 turbochargers.

It extends the application range of the TCA88 turbocharger family to 27,300 kW of engine power per turbocharger from the previous maximum of 23,400 kW for the TCA88-20, which it replaced as the largest TCA88 model. This increase makes it possible to supercharge larger engines with fewer turbochargers, MAN Diesel states.

The first two of the TCA88-25 turbochargers to reach the market have been installed on an MAN B&W brand 8K98MC engine built under licence by CMD in Shanghai. The engine is to power a 5,100 TEU container vessels for COSCO presently under construction at Jiangnan Shipyard in China. In total COSCO will receive 12 of these vessels, employing a total of 24 TCA88-25 turbochargers on their 8K98MC main engines. Five further vessels of same specification have been ordered by German shipowner BCH.

The shop tests consisted of the commissioning of the turbochargers and matching their performance characteristics to the foreseen load profiles of the 8K98MC engine. A major aspect of matching is verifying the choice of turbine nozzle ring

MAN Diesel Group

Group Marketing

Marketing Communications

Stadtbachstrasse 1

86224 Augsburg - Germany

Phone +49 (0) 821 – 322 41 79

Fax +49 (0) 821 – 322 42 30

Internet: www.mandiesel.com

For further information,

please contact:

Jonathan Walker

Technical Communications
Manager

Phone +49 (0) 821 – 322 41 79

jonathan.walker@man.eu

For graphics and images,

please contact:

Annelise Brincker

Tel.: +45 33 85 15 90



and compressor diffuser and exchanging these components if required. Emphasising the high level of application engineering expertise at MAN Diesel's turbocharger works in Augsburg, the technicians involved in the tests at CMD report that matching at the factory had been very precise and both the factory-fitted nozzle rings and the diffusers already achieved the best match between the TCA88-25's and the 8K98MC engine.

The TCA88-25's performance of 27,300 kW of engine output per turbocharger is based on an increase in volume flow to more than 58.6 m³/s in from 50.4 m³/s in the TCA88-20, which was previously the largest TCA 88 version. With this performance, only three TCA88-25 turbochargers are now required to supercharge one of the most powerful engines in the market, the MAN B&W brand 12K98ME two-stroke diesel.

The major technical measures on the TCA88-25 are a new compressor design with new wheel geometry which, nonetheless, can be readily accommodated in the casings of the TCA88-20. Thus, in spite of its increase in power density, the dimensional envelope and weight of the TCA88-25 remain very close to those of the TCA88-20. The TCA88-25 also retains well-proven benefits of the TCA88-20 model including efficiencies above 72%, low noise emissions, ease of maintenance and long times between overhauls, MAN Diesel notes.

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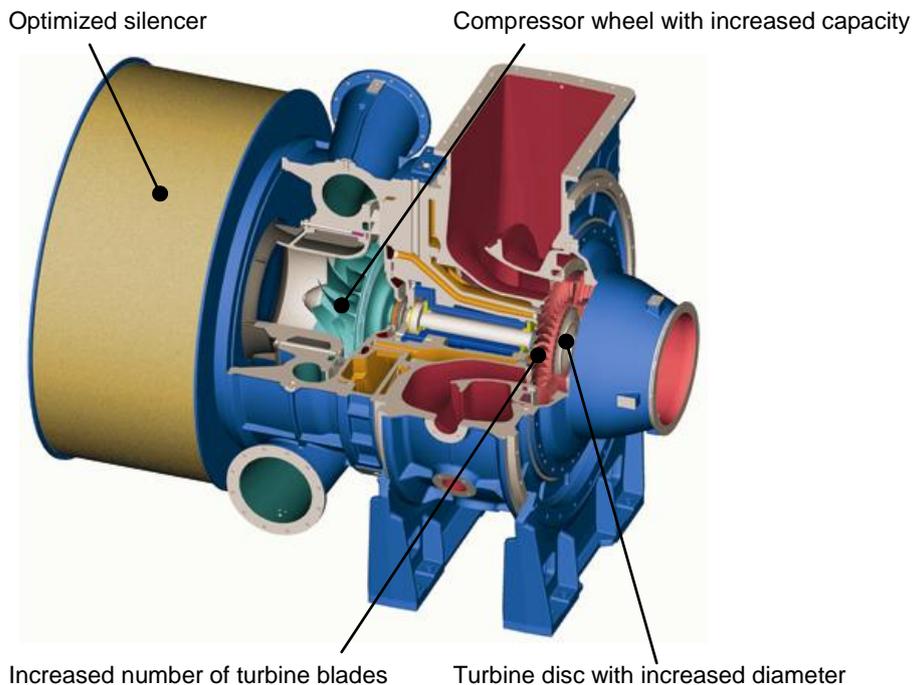
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Modifications from TCA88-20 to TCA88-25



MAN Diesel's new TCA88-25 turbocharger offers a maximum engine output per turbocharger of 27,300 kW compared to 23,400 kW with the earlier TCA88-20 model.



Two MAN Diesel TCA88-25 axial turbochargers mounted on a low speed two stroke of MAN B&W brand 8K98MC engine built under licence by CMD in Shanghai. The engine will power a 5,100 TEU container vessels presently under construction at Jiangnan Shipyard in China for COSCO.

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Engine type	Previous application	New application
8K98MC/ME (Mk 6)	3 x TCA88-20	2 x TCA88-25
8K98MC/ME (Mk 7)	3 x TCA88-20	2 x TCA88-25
8K98MC-C/ME-C (Mk 6)	3 x TCA88-20	2 x TCA88-25
8K98MC-C/ME-C (Mk 7)	3 x TCA88-20	2 x TCA88-25
12K98MC/ME (Mk 6)	4 x TCA88-20	3 x TCA88-25
12K98MC/ME (Mk 7)	4 x TCA88-20	3 x TCA88-25
12K98MC-C/ME-C (Mk 6)	4 x TCA88-20	3 x TCA88-25
12K98MC-C/ME-C (Mk 7)	4 x TCA88-20	3 x TCA88-25

The increased performance of the TCA88-25 compared to the TCA88-20 makes it possible to supercharge larger engines with fewer turbochargers, to the benefit of purchase and maintenance costs.

About MAN Diesel

MAN Diesel is the world's leading provider of large-bore diesel engines for marine and power plant applications. The company develops two-stroke and four-stroke engines, auxiliary engines, turbochargers and propulsion packages that are manufactured both by the MAN Diesel Group and its licensees and deliver between 450 kW and 97.3 MW of power. MAN Diesel employs over 6,400 staff, primarily in Germany, Denmark, France, the UK, the Czech Republic and China. The global after-sales organisation, MAN Diesel PrimeServ, comprises a network of the company's own service centres and authorised partners. MAN Diesel is a company of MAN AG, which is listed on the DAX share index of the 30 leading companies in Germany.

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