

Media Release

Voith GmbH & Co. KGaA
Group Communication
St. Poeltener Strasse 43
89522 Heidenheim, Germany
Tel.: +49 7321 37-8303
Fax: +49 7321 37-7110
www.voith.com

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High performance with low emissions: the new Voith Rail Engine for rail vehicles

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- **Fuel consumption reduced by up to eight percent**
- **Up to 23 percent more power using the same installation space**
- **The lowest emission of its performance class**

Heidenheim, Germany. Thanks to an efficient exhaust aftertreatment system, the new diesel engine from Voith meets the most strict exhaust standards for rail vehicles and is thus the most advanced of its type in the range of horizontal engines. At the same time, the unit, which builds on existing robust construction machinery engines, has up to 23 percent more power than comparable drive systems. Long service intervals also reduce the life cycle costs for the engine, which was developed by the technology company in Heidenheim in cooperation with Liebherr.

High power in a small installation space

The Voith Rail Engine provides a power of up to 480 kW and a maximum torque of 2800 Nm. The power of the six-cylinder engine from the technology company in Heidenheim is about 23 percent higher than that of comparable engines. This reserve primarily takes effect when accelerating and when running at high speeds. Despite this, the drive system specially developed for use in rail vehicles does not need any more installation space than its competitors. "The exhaust aftertreatment system we developed to meet the European emission Stage V gives the engine the lowest emissions of its performance class. In combination with the highly developed, in engineering terms, basic unit from Liebherr, this created the most advanced engine for the rail vehicle market at this time," says Dr. Andreas Wegmann, manager of engine development at Voith Turbo.

Optimal combination: Voith Rail Engine and DHM transmission

The new Voith DHM transmission is the optimal addition to the Voith engine. Together with the engine in the RailPack, it forms one of the most efficient drive solutions. Combined with the new engine, Voith is offering different drive technologies in the RailPack DX. Besides diesel-electric (DE) and hydrodynamic (DH) systems, the RailPack DX will also soon be available with an efficient, hydro-mechanical transmission from Voith. This transmission, also specially developed for rail use, substantially increases the efficiency of railroad vehicles thanks to its high efficiency. Michael Gayer, product manager at Voith Turbo, mentions another benefit of the solution offered by Voith. "The reversing unit installed by Voith on the transmission and not in the bogie makes it possible to move in both directions, increases the availability and reduces the maintenance effort compared to alternative solutions. For all designs of the reversing transmission in the driveline patented by Voith, towing operation over long distances is possible because of a neutral position and the integrated secondary lubrication pump."

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Long service intervals and low operating costs

The robust construction of the Voith engine, which will be available in horizontal or vertical designs, allows use in all railroad applications without problems. With a consumption advantage of up to eight percent, the fuel consumption is considerably less than the values of current Stage IIIB engines of this performance class, a feature that significantly reduces the total cost of ownership. Another factor reducing costs is the long service cycles derived from experience in construction machinery. The engines will be available starting in 2021 when the European exhaust standard Stage V takes effect for rail vehicles.

About the company

Voith Turbo, a Group Division of Voith, is a specialist for intelligent drive solutions, systems and comprehensive services. Customers from highly diverse industries such as oil and gas, energy, rail and commercial vehicles, ship technology, mining and mechanical engineering rely on the advanced technologies and solutions-driven expertise of Voith Turbo.

Voith is a global technology group. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, Voith today has more than 19,000 employees, sales of € 4.2 billion and locations in over 60 countries

worldwide and is thus one of the largest family-owned companies in Europe.



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Contact:

Robin Wankerl

Global Market Communication Manager

Tel. +49 7321 37-8303

Robin.Wankerl@Voith.com

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