

## Media Release

Voith Group

Mailing address:  
Voith GmbH & Co. KGaA  
Group Communications  
St. Pöltener Str, 43  
89522 Heidenheim, Germany  
Tel. +49 7321 37-9517  
Fax +49 7321 37-7000  
www.voith.com

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### Voith to supply wear-free Turbo Retarder Clutch for new Tadano Demag AC 450-7 all-terrain crane

- Voith supplies wear-free integrated acceleration and braking system (VIAB) for the new AC 450-7.
- The system enables sensitive starting and maneuvering even with particularly heavy loads and on difficult terrain.
- The integrated primary retarder ensures maximum braking power even at low speeds and protects the brake pads.

**HEIDENHEIM/ZWEIBRÜCKEN, GERMANY.** In November 2020, crane manufacturer Tadano Demag presented its new AC 450-7 all-terrain crane. Voith is going to supply the wear-free integrated acceleration and braking system (VIAB) for the seven-axle vehicle. The system combines turbo coupling and retarder in one hydrodynamic circuit and thus ensures wear-free starting and braking. This allows highly sensitive maneuvering and starting of the vehicle even with particularly heavy loads and on difficult terrain.

This is made possible by the unique design of the VIAB. The pump impeller and turbine wheel face each other in a non-contact configuration in the Turbo Retarder Clutch. The moving pump impeller is at the engine end, while the turbine wheel is installed at the transmission input. The power is transmitted hydrodynamically. This form of power transmission offers the benefit of fast yet gentle and wear-free transmission at full engine torque. In addition to starting, the Turbo Retarder Clutch also acts as a primary retarder. Even in difficult situations, the full braking power is always available because the service brake doesn't run hot. This significantly extends the service life of the brake pads.

“The heavier the vehicle and the rougher the terrain, the greater the load on the clutch and brakes. With our VIAB, even heavy cranes can start up powerfully, accurately within millimeters, and brake safely. Efficiency,

sustainability and fuel economy were always in the foreground during the development of the system,” says Hans-Günter Böhm, Senior Global Key Account Manager at Voith.

The first vehicles will be delivered in mid-2021. With a total length of 17.62 m and an outrigger base of 8.45 m, the AC 450-7 is not larger than a six-axle crane, but allows significantly higher lifting capacities. All seven axles steer while four are driven. It is powered by a powerful 460 kW Mercedes-Benz engine that meets the emission requirements of EU Stage V and Tier 4 Final. In combination with the wear-free Turbo Retarder Clutch it ensures maximum performance and dynamics.

## About the Voith Group

The Voith Group is a global technology company. 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, the company today has more than 19,000 employees, sales of € 4.3 billion and locations in over 60 countries worldwide and is thus one of the larger family-owned companies in Europe.

The Group Division Voith Turbo is part of the Voith Group and a specialist for intelligent drive technology, systems as well as tailor-made services. With its innovative and smart products, Voith offers highest efficiency and reliability. Customers from highly diverse industries such as oil and gas, energy, mining and mechanical engineering, ship technology, rail and commercial vehicles rely on the advanced technologies and digital applications of Voith.



The AC 450-7 is equipped with a Mercedes-Benz driveline with a wear-free Turbo Retarder Clutch from Voith.

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## Contact

Philip Bäuerle  
Market Communication Manager EMEA  
Voith GmbH & Co. KGaA  
Tel. +49 7321 37-9517  
[Philip.Baeuerle@voith.com](mailto:Philip.Baeuerle@voith.com)

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

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