



Transforming transmission technology

News Release

For immediate release

Torotrak establishes joint venture with Rotrex to speed introduction of variable drive compressor technology

New company Rotrak combines two proven technologies to increase the efficiency of downsized engines

Variable drive specialist Torotrak has formed a 50-50 joint venture with centrifugal supercharger firm Rotrex. The company, which will be called "Rotrak", will address the automotive industry's need for affordable, effective engine downsizing technologies.

"Rotrex is the world leader in centrifugal supercharger technology and has for many years delivered their compact, efficient and near-silent products to some of the leading companies in the world," says Torotrak chief executive Dick Elsy. "Adding Torotrak's scalable variable speed traction drive to Rotrex's technology will overcome many of the compromises that affect current pressure-charging systems."

"Our joint studies indicate that the cost of volume-manufactured products which incorporate Rotrak technology will be very competitive, giving us the confidence to start prototype development," Elsy continues.

Vehicle manufacturers are moving aggressively to downsize their engines in order to achieve substantial efficiency gains with reductions in fuel consumption and CO₂ emissions. But as engines get smaller, the challenge becomes one of boosting performance across the entire speed-range to provide "large-engine" responsiveness and to make sure that driving remains enjoyable.

A conventional turbocharger struggles at low speed, particularly in these smaller engines. Better low-speed boost can be achieved but it is complex and costly. Supercharging is the main alternative, but the fixed ratio between engine and supercharger speeds means that if boost is optimised for low-end response, then energy is wasted at higher engine revs.

“Torotrak and Rotrex are ideally positioned as partners for the development of variable drive supercharging systems,” says Rotrex managing director Lars Kristiansen. “For some time we have been looking for a scalable, efficient and durable technology to provide a variable drive capability for our centrifugal compressors and our studies have confirmed that Torotrak is the clear leader in this field.”

Dick Elsy continues: “We are now looking forward to developing our partnership with Rotrex, and building on our combined systems know-how and development experience with OEMs and Tier One suppliers.”

Torotrak’s strategy makes progress

In the past three years Torotrak has undergone a period of intensive business and technology development in pursuit of its multi-market strategy. As a result, it has secured a number of world-class licensees and is working with them on programmes with the potential for volume manufacture, primarily in main-drive transmission applications. These include one of Europe’s most successful truck and bus manufacturers and Allison Transmission Inc.

“We’re focusing our operating and financial resources on these valuable relationships and routes to market,” says Dick Elsy. “By co-investing with partners on areas that expand our technology’s application outside of main-drive transmissions, we will bring further developments to market more cost-effectively.”

Torotrak’s joint venture with Rotrex is an early example of this strategy. As part of the agreement, Torotrak will acquire a 15 percent stake in Rotrex and a seat on the company’s board. This investment will help provide the Rotrak joint venture with an appropriate level of financial stability and provide the basis for potential further cooperation.

Editor's note

Independent analysts estimate that the market for pressure charged gasoline engines will grow from the current global level of 2.5 million units per year to 12 million by 2016. The more established market for diesel pressure charging is predicted to grow from 10.5 million to 16.1 million units in the same period.

About Torotrak

Torotrak is the world's foremost developer of full-toroidal traction drive technology. The company designs and develops Continuously Variable (CVT) and Infinitely Variable (IVT) transmissions which deliver outstanding levels of performance, functionality and refinement along with improved fuel economy and reduced emissions. Torotrak develops main drive transmissions as well as variable ratio transmissions for application in flywheel-based mechanical hybrid systems and for use as auxiliary drives.

Torotrak operates in the automotive, truck, bus, off-highway and agricultural markets, in motor sport and in outdoor power equipment. Its customers are widely spread across Europe, North America, India and Japan, and include major vehicle makers and tier one transmission manufacturers.

Torotrak plc is fully listed on the London Stock Exchange.

www.torotrak.com

About Rotrex

Rotrex is a technology-driven company focused on providing forced induction systems. Its patented traction drive enables the Rotrex centrifugal supercharger to achieve superior efficiency, reduced emissions and improved transient response.

The Rotrex system is smaller, lighter and quieter than competing products, making it particularly attractive for downsized engines and high-efficiency hybrid powertrains as well as high-performance applications.

In 2008 Frost & Sullivan recognised Rotrex's contribution to the gasoline and diesel engine boosting technologies market with the 2008 European Award for Product Innovation. The award cited a pioneering engine downsizing project for a German vehicle manufacturer.

Rotrex headquarters are in Copenhagen, Denmark.

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“Combining Torotrak’s proven variable speed traction drive with Rotrex’s centrifugal compressor technology will overcome the compromises that affect current pressure-charging systems,” says Torotrak chief executive Dick Elsy



Rotrak will develop a cost-effective variable drive compressor technology to support vehicle manufacturers’ engine downsizing strategies

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