VOITH

# Better Braking Made Easy.
## The New Magnetarder






# Braking Wear-Free and Arriving Faster at Your Destination.

Thanks to its sensationally low weight of just 39 kg and its enormously high braking power, the new Voith Magnetarder not only reduces wear on the service brake but also allows higher average speeds. The integration of the Magnetarder into the propshaft is a completely new way of installation, which is unique in the world market. Fitting or retrofitting trucks and coaches between 7.5 and 16 t has never been easier or more practical.

# Simple, but Extremely Effective: The Voith Magnetarder.

**Fuel-optimized, with higher braking power and sensationally light**

Within only two years, Voith Turbo SMI Technologies has developed a completely new version of the permanent-magnet retarder: The revolutionary concept is braking vehicles with the world's mostpowerful permanent magnets.

1 cm²/4 in 2 of these magnets can carry a weight of more than 10 kg / 22 lbs. The result: Braking torques of up to 650 Nm / 480 ft lbs and up to 60 % less wear on the service brakes.

**The strengths of the Magnetarder**

A choice of installation variants makes fitting and retrofitting easy In situations where lack of space, high weight and high energy consumption spoke against the installation of an additional brake, the Voith Magnetarder makes fitting or retrofitting such a unit very easy.

Especially through the integration into the propshaft without any frame-holding devices, operators now have a retrofit opportunity that definitely pays off.

## Your advantages

**Higher economy**

- Wear-free braking
- Higher average speeds
- Extremely easy installation
- Low weight
- No need for auxiliary energy
- Maintenance-free throughout the entire service life
- Fast payback

**Higher safety**

- Shorter braking distances
- Significantly higher braking output
- Protection of service brakes
- Cold brakes in an emergency

**Higher driving comfort**

- Fewer gearshifts
- Stress-free driving

**Higher eco-friendliness**

- Lower braking dust emissions

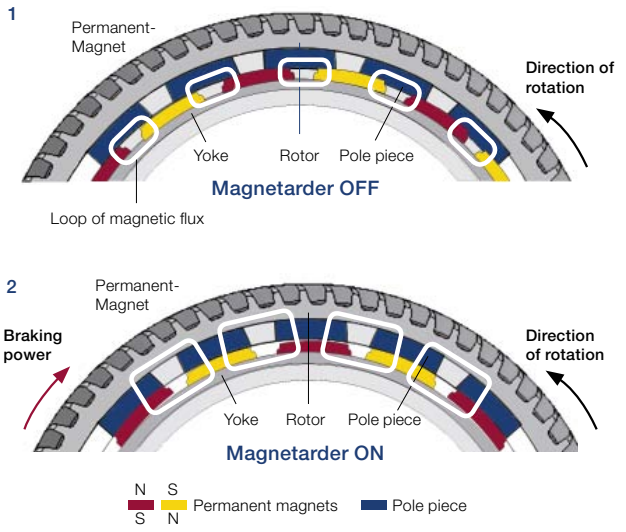


Propshaft integration

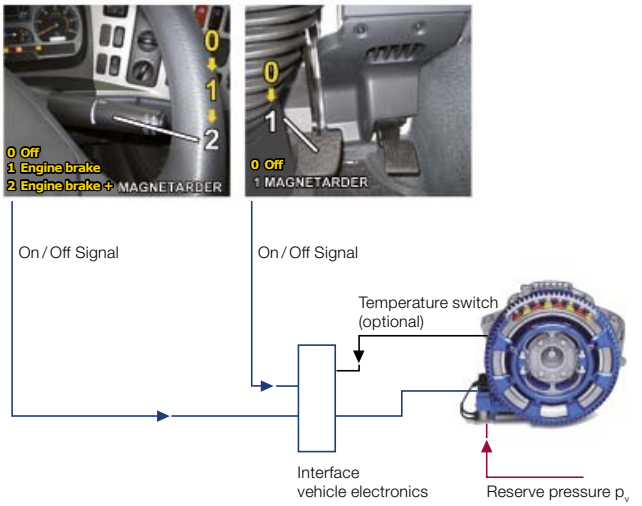


Transmission installation

## Operating modus




## Hand and foot operation of the Magnetarder




### Function

The operation of the Magnetarder is based on the eddy-current principle without any additional energy. The permanent magnets in the stator are arranged in such a way that their opposing poles are situated next to each other. When the retarder is switched off, the magnets are bridged and the magnetic field lines flow through the poles. When the retarder is switched on, they are directed by compressed air via positioning cylinders. Result: The field lines flow through the rotor and generate strong eddy currents. These currents act on the direction of rotation of the rotor – and brake the vehicle via the propshaft.

### Operation by hand or foot

The Magnetarder can be activated comfortably via the lever “Continuous Brake” at the steering column or via the brake pedal. A combination of both modes is also possible.

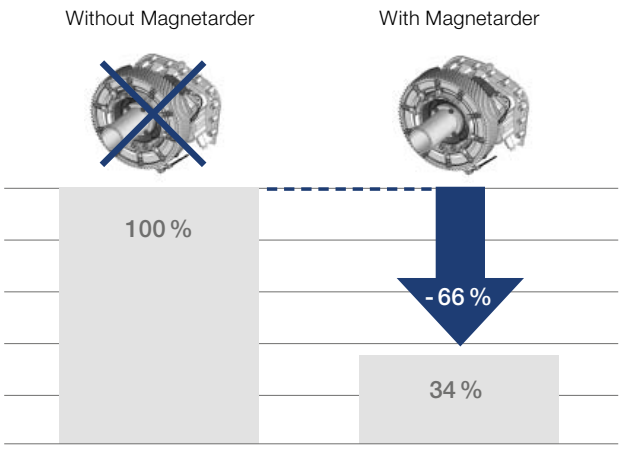






# Practical Tests Confirm: The Magnetarder Reduces the Application of the Service Brake by Over 60 %

**Relief of service brake**




**The Magnetarder reduces the application of the service brake by 66 %**

During test drives in the Swiss Alps with a 7.5-ton truck and a fully laden trailer, the Magnetarder proved its worth. It also convinced in practical haulage operation or in the Atego customer vehicles of Nestlé (Switzerland). Even in the Appenzell region, where the topography normally causes extremely high brake wear, the Voith Magnetarder got an enthusiastic reception from drivers and operators.

Because even after 10 000 test km/6215 miles, the front brake pads still had the same thickness as a new original set. The Magnetarder relieved the service brake by a proven 66 %. Brake repair costs were reduced by more than 60 %. Particularly positive marks were given by the test drivers for: Excellent braking power, increased safety and higher comfort. In future, Nestlé will order all new Ategos with the Voith Magnetarder.

G 2196 e ak/WA 1000 2012-08 Dimensions, weights and illustrations without obligation. Subject to modifications.

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