# Sanding Systems

**APPLICATIONS**
- High-Speed Trains
- Light Rail Vehicles
- Locomotives
- Metros
- Regional and Commuter Trains
- Special Vehicles

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## Sanding Systems Types

<table>
<thead>
<tr>
<th>Pressure (bar)</th>
<th>Systems</th>
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developments in this area. Systems are designed for the need for sand reduction whilst delivering higher requirements. Care for the environment has been a key consideration in the development of the latest sanding systems. Knorr-Bremse has combined experience with continuous investment in research and development to deliver sanding systems that can satisfy any requirements. Care for the environment is a key consideration in the development of the latest generation of sanding systems. Issues such as the need for sand reduction while delivering higher performance alongside and features such as function monitoring has led to some exciting new developments in this area. Systems have been designed and developed for individual customers by using a modular concept. Today at its facility in Moedling, Austria, Knorr-Bremse is producing a wide range of solutions for a huge variety of different applications. These systems are all subject to the highest quality standards from initial concept right through to delivery to the customer.

**DELIVERING FULL ADHESION UNDER ALL TRACK CONDITIONS.**

Controlled and safe stopping distances in the busy rail environment of today are essential. Difficult operating conditions such as moisture, foliage or even ice on the track can affect service performance and dealing with these issues requires a real understanding of the wheel and rail interface dynamics. Knorr-Bremse understands this dynamic and can offer solutions which efficiently and economically improve the friction between wheel and rail.

**FEATURES AND BENEFITS**

- **Speed controlled sand delivery rate**
- **Time controlled amount of sand**
- **Uni or bi-directional sanding**
- **Drying of grit by heating the lower area of sand box (option)**
- **Blow-out function**
- **Heating for warming up the drying air flow**
- **Heating of drying air flow and sand**
- **Blow-out function to clean delivery hose after sanding to avoid blockages**

All types of sanding units can be upgraded with optional sand level sensors (including monitoring devices), heated sand nozzles, functions for conveying the grit. Additional functionalities can fulfil most of the system’s operation and they range from standard up to high-end functionalities, even for very difficult operating conditions. The main advantage of this system is its separation of the dosing and conveying functionalities. The output sand quantity is independently of the sand velocu and can be set very precisely. The core functionalities are:

- **Maximum accuracy**
- **Sanding rates from 300 to 2,400 g/30s**
- **Maximized weight**
- **Minimized installation size by flexible nozzle mount**
- **Time controlled amount of sand or defined volume per meter of track**
- **Blow-out function**
- **Tight sand box**
- **High speed injection principle using a tailor-made injector**
- **Heating of air flow and sand**
- **Minimized installation size by flexible nozzle mount**
- **Maximized weight**
- **Time controlled sand delivery rate with defined volume per meter of track**

The unit is able to offer the entire range of functionalities even for very difficult operating conditions of the sand delivery hose. The main advantage of this system is its separation of the dosing and conveying functionalities. The output sand quantity is independently of the sand velocity and can be set very precisely. The core functionalities are:

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