

**Mobile Flash Butt Welding Systems for Rails
Systems AMS60 and AMS100**



Mobile Schlatter Rail Welding Systems

Flash butt welding is the most reliable joining technology for track construction and it is a proven fact that it provides the lowest failure frequency. Schlatter offers two welding machines that run in different customized systems.

Welding machines and systems

Worldwide flash butt welding has become increasingly popular for production of continuous welded rails. The dedicated Schlatter rail welding systems are well known for their repeated high welding quality, the excellent alignment accuracy, for the short preparation time and for the short welding time, which is less than two minutes including deburring. The durability and the long life of the machines paired with the high productivity and high quality contribute to an economically attractive production.

The mobile rail welding machines AMS60 and AMS100 are offered in different configurations. For mobile welding of continuous welded rails, these machines are normally integrated into an autonomously operating rail welding system. These systems are equipped with diesel-generator set, hydraulic unit, cooling unit and lifting device. Often these systems are self-propelled, truck-based road/rail vehicles or container systems for use on a rail wagon on which they are moved from one welding position to the next.

Container systems are often used semi-stationary near the job site for preparation of long welded rails.

The welding machines AMS60 and AMS100 can also be incorporated into pure rail vehicles or they can be used as "stand-alone" machines for stationary use in the factory.



AMS60 for high-quality alignment

The development of the AMS60 focused on the exact alignment of the rail ends, laterally at the running edge and vertically at the running surface. Therefore the AMS60 is most suitable where exact alignment is essential - as it is for high-speed railway lines.

System AMS60

In the early 1990s, Schlatter developed the first mobile rail welding machine of this kind, with the most innovative feature of lateral alignment at the running edge. Lateral alignment at the running edge is easily selectable: left- or right-hand side. The running surface of the rail ends is also exactly aligned by pushing the rail head up to vertical stops before clamping the rail ends.

This principle of lateral and vertical alignment has proven its worth and thus the AMS60 is often the preferred machine for rail welding in high-speed lines. In numerous countries the necessary homologation processes have been completed successfully.



AMS100 for bigger rail profiles

In addition to the AMS60, Schlatter developed another mobile rail welder, the AMS100. It is simpler in design, but sturdy and it provides more force than the AMS60. Consequently its main purpose is welding of bigger rail cross sections that are used for higher axle loads at relatively slow running speeds.

System AMS100

A few years ago Schlatter developed the AMS100. Its special feature is a separate hydraulic lifting device that pushes the rail head to vertical stops for exact vertical alignment of the running surface. Thanks to a parallel guiding system of the two machine halves it aligns the two rail ends exactly in the middle axis of the rails. The AMS100 features a lot more welding force than the AMS60 and thus it allows welding of heavy rail pro-

files and even grooved rails. It is often used for welding of freight train track where heavy rails are used. Nevertheless the AMS100 has also welded in high-speed lines in various projects and passed the respective homologation processes successfully.



Control unit and Schlatter Weld Analyzer

The control systems of the mobile rail welding machines comprise the function control (PLC), the Schlatter Weld Processor (SWEP) and the Schlatter Weld Analyzer.

Control unit and Schlatter Weld Analyzer

The latest generation of the Schlatter Weld Analyzer contributes considerably to the achievement of constant high-quality welds. During the whole welding process the Weld Analyzer monitors the three main parameters force, current and travel, and displays them on the screen during welding.

Directly after welding its analysis shows if all parameters were within the preset tolerances; it then stores the weld file in the PC.



Supra Multiflex container-based rail welding system

Container systems are especially suitable for welding continuous welded rails directly in new railway track. They are also often used semi-stationary in the depot or near the job site for preparation of long welded rails for a section in a new railway line.

Supra Multiflex

Container systems are especially suitable for welding in new railway lines where a lot of new rails have to be placed and many welds have to be carried out. They are also often used semi-stationary either in the depot or close to the job site where they weld long welded rails for a certain section of new railway line before they are taken to another section. Schlatter offers a compact 30-foot container that contains all equipment in a space-saving manner. As an alternative a system is available where the equipment is incorporated into two 20-foot containers, the energy container and the welding container.

Energy container

- Diesel-generator set
- Diesel tank with high capacity
- Energy management control
- Connection cables to the welding container

Welding container

- Welding machine AMS60 or AMS100
- Control cabinet with the SWEP and Schlatter Weld Analyzer
- Swiveling lifting device for lowering and lifting of the welding machine
- Hydraulic unit
- Cooling unit



Supra Roadflex truck-based rail welding system

The truck-based system is highly flexible as it is self-propelled and can move from one job site to the next within a short time.

Supra Roadflex

Supra Roadflex systems are self-propelled, they can work completely autonomously and they are very flexible for moving from one job site to the next. For the AMS60 a four axle truck chassis is standard, for the AMS100 a three axle truck chassis is required.

Going into track is carried out on any level crossing that requires little space. Shortly afterwards the system is ready for welding at the job site.

Characteristics

Supra Roadflex systems consist of:

- Truck chassis with diesel engine used for traveling and also for actuating the generator set and the hydraulic unit
- Hi-rail system
- Generator set
- Energy management control
- Diesel tank with high capacity
- Rail welding machine AMS60 or AMS100
- Control cabinet with the SWEP and Schlatter Weld Analyzer
- Swiveling lifting device for lowering and lifting of the welding machine
- Central hydraulic unit
- Cooling unit



A reliable partner in plant construction

The Schlatter Group is a world leader in plant manufacturing for resistance welding systems and weaving machines for special applications. With long-standing expertise in industrial engineering, innovative flair and a reliable customer service, the Group which is listed in Switzerland, provides production systems offering high performance and quality.



Core competence

Schlatter has almost 100 years of expertise in plant construction, customer-oriented solutions, a world-wide presence and more than 400 dedicated employees. The combination of expertise in welding and systems technology makes Schlatter a reliable partner in plant construction.

Segment resistance welding

Schlatter has acquired unique experience in the development and production of reinforcing and industrial mesh welding systems, and mobile and stationary rail welding machines.

Weaving segment

Under the brand Jäger, the Schlatter Group provides state-of-the-art weaving and finishing machines for the paper machine fabric industry.

Contact

Professional contacts for sales, technical support, customer service and administration are available world-wide in the Group's companies and at selected representatives/agents of the Schlatter Group. You can find the relevant contact data on our Internet site www.schlattergroup.com.

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