



FLASH-BUTT RAIL WELDING

*Fast and high performance
electric rail welding heads range*



Welding of all types of rail

Automated system for single operator use

Welding head integrated in a standard size container + ISO 20' fastening





Flash-Butt Welding System range - Your benefits

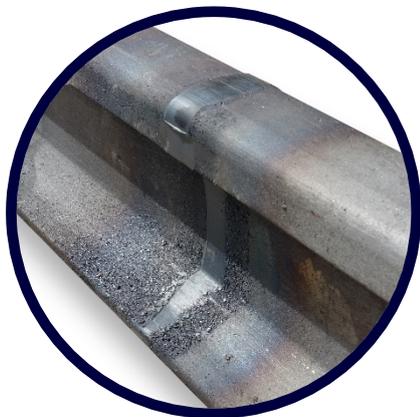
- Range of Geismar electric rail welding heads for:
 - welding **all types of rail** (Vignole rail and grooved rail for urban networks)
 - welding of **short rails to long welded rails** thanks to **powerful pulling and forging systems**
 - performing an **enclosure weld during de-stressing operations** to free up the traffic lane (FLASH1200)
 - performing **quick welds** (less than 200 seconds), with an efficient energy supply system
- **Automated process** allowing one single operator to perform welding operations
- Universal mount capable of holding **different types of electrodes** depending on the rails to be welded and equipped with a high-performance cooling circuit
- Electrodes designed **to prevent any rail core damage**
- **Welding heads with pulling forces adapted to the actual on-site needs.** These forces make it possible to move long bars that are not placed on rollers (see "Maximum bar pulling length" in the table on the next page)
- **Rail clamping device** designed to correctly hold the rails during pulling and forging operations, **without any risk of slipping** (up to 3,000 kN - FLASH1200)
- Specific software, WPS (Weld Process Software), ensuring the **automatic welding process** all along the different stages. **Parameters are recorded in real time** and can be transmitted via a modem
- Recording of welding parameters, allowing the **creation of a custom library of welding rails**
- Operation via an **ergonomic remote-controlled panel** fitted on the welding head



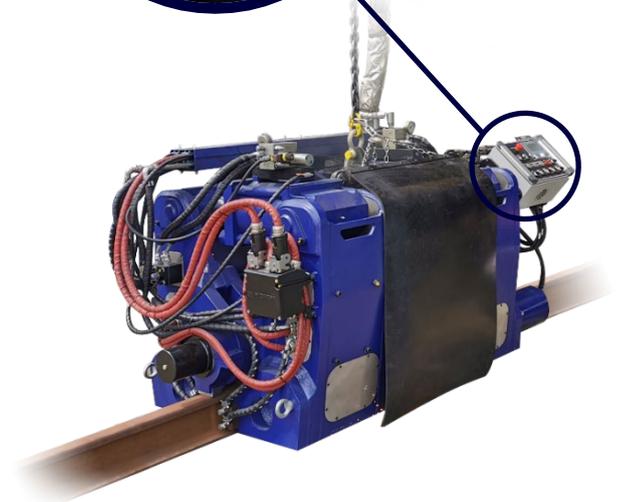
Welding electrodes and universal mount



Control panel



Result after welding and deburring





Flash-Butt Welding System range - Features

	FLASH600	FLASH850	FLASH1000	FLASH1200
Rated power at 50% DC	150 kVA	240 kVA	240 kVA	240 kVA
Transmission factor	1:60	1:60 & 1:54	1:60 & 1:54	1:60 & 1:54
Maximum forging force	600 kN	800 kN	1,000 kN	1,200 kN
Maximum clamping force	1,450 kN	1,650 kN	2,500 kN	3,000 kN
Maximum discharge speed at no load	35 mm/s	35 mm/s	40 mm/s	55 mm/s
Machine stroke	3.3 in (85 mm)	3.3 in (85 mm)	3.9 in (100 mm)	5.9 in (150 mm)
Head mass	7,055 lbs (3,200 kg)	7,385 lbs (3,350 kg)	8,818 lbs (4,000 kg)	9,920 lbs (4,500 kg)
Maximum length of bar pull*	820 ft (250 m)	1,148 ft (350 m)	1,640 ft (500 m)	2,625 ft (800 m)
Enclosure weld after stress release	-	-	-	✓
Deburring	integrated	integrated	integrated	Integrated and independent
Independent deburring stroke	-	-	-	3.3 in (85 mm)
Welding time	2.5 to 3 minutes			
Types of weld-on rails	Vignole and groove from 24 to 50 lbs/ft (36 to 75 kg/m)			
Technology	Flash-butt welding			
Connection between the head and the articulated arm	Adjustable and isolated suspension			
Welding parameters recording and analysis	Voltage / Welding current / Displacement / Force			
Standards	EN 14587-2 / 2006/42/EC			
Container dimensions (L x W x H)	238 x 100.4 x 94.5 in (6,038 x 2,550 x 2,400 mm)			
Weight of the container including welding head	Up to 36,376 lbs (16,500 kg), depending on the welding head			

Indicative values may vary according to site conditions



Welding container - Your benefits

- **20 ft ISO container type packaging** using a mechanical interface with the carrier vehicle (**twistlock standards**)
- **Radio-controlled handling arms** allowing to bring the welding head into working position over a wide area: 180° rotation with a range of 142 in (3,600 mm)
- Welding head suspension granting **easy rotation for rail welds across the welding container**
- **Powerful cooling unit** to optimize the welding cycle time

Container on road-rail truck

- **Recognized expertise** in the field of road-rail trucks with a 32-tonne carrier
- Specific provisions to ensure **safe road and rail travel**
- **Stabilizers for safe welding** in all working conditions



Container on rail trailer

- Motorized railway trailer, allowing **slow movement between each weld**
- Standard rail trailers **adapted to the applicable regulations** or motorized lorry systems
- **Radio-controlled travel**



Container on track motor car

- **Recognized expertise** in the field of track motor cars
- Fully self-contained unit **complying with the applicable regulation**



Container-based installation

- Installation of the container **on concrete blocks** or **on a secure structure that can be fastened with twistlocks**
- The welding rails can be arranged longitudinally to the container, passing underneath or transversely by orienting the welding head



Road-rail welding loader

- Welding head installed **at the end of a road-rail loader arm**
- A **generator towed by the road-rail loader** powers the welding head

