Our references include:

France: SNCF Reseau (conventional lines and high speed lines), Montenvers, RATP - Paris Metro, Eurotunnel, Lyon Metro, RTM - Marseille Metro, TRANSPOLE - Lille Metro
Belgium: Infrabel
Great Britain: Network Rail (high speed line)
Turkey: TCDD (Turkish State Railways), Ankara - Konya (high speed lines), Mersin - Toprakkale Line
Tunisia: SNCFT (Tunisian Railways)
Algeria: ANESRIF/SNTF (Algerian Railways)
Morocco: ONCF (Moroccan Railways)

Canada: STM - Montreal Metro
Brazil: Rio de Janeiro (Metro)

South Korea: KR (National Railways)
Singapore: SMRT, SBST (Metro)
Hong Kong: MTR (Hong Kong Metro), KCRC (conventional line)
India: Various metros in India
Dubai: Dubai Metro
Australia: ARTC
China: Chinese high speed line
Guinea: Boké
Taiwan: Taichung (Metro)

Multiple drive integrated into a 1/46 turnout – High Speed Line, Turkey

MCEM91
Point machine

"Point machine in its simplest form,
robust and well-proven all over the world..."

Vossloh Cogifer SA
21, avenue de Colmar
92 500 Rueil-Malmaison - FRANCE
Tel.: +33 (0) 1 55 47 73 00
Fax: +33 (0) 1 41 29 19 18
info@vossloh.com

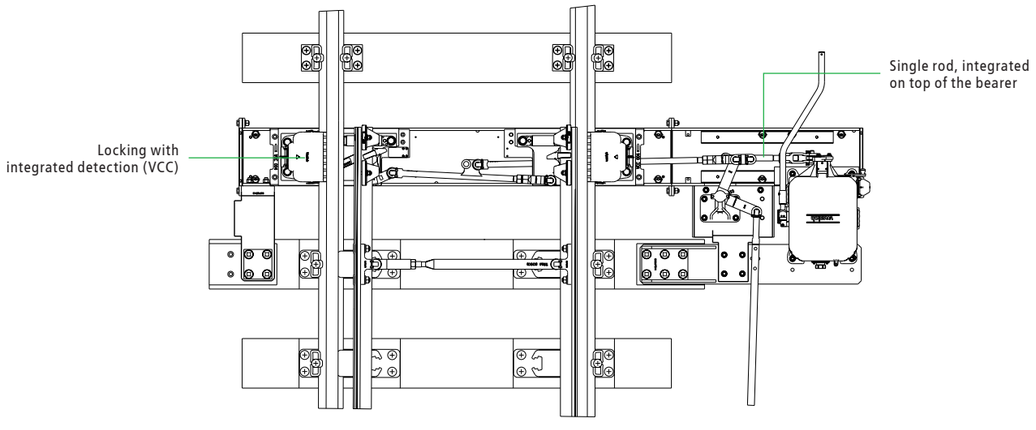
www.vossloh.com

5000-201-001-rev5

'Light, robust and reliable, the MCEM91 point machine is suitable to drive switches of any rail guided transport.'

The electromechanical point machine provides the electrical drive of the switch, its locking, and detection in end positions. It can be used on all track types, from service tracks to high speed (TGV) lines.

These configurations have well-proven record in more than 30 countries: on High Speed networks, on conventional lines, subway/metro lines and lines with heavy traffic.

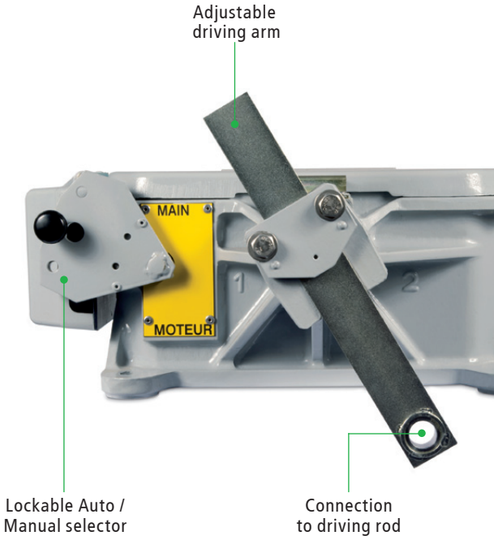


This MCEM91 point machine with a single rod provides the drive function.
This rod can be integrated into a bearer and thus allowing mechanised tamping.

Description

MECM91 point machine is made up of various components:

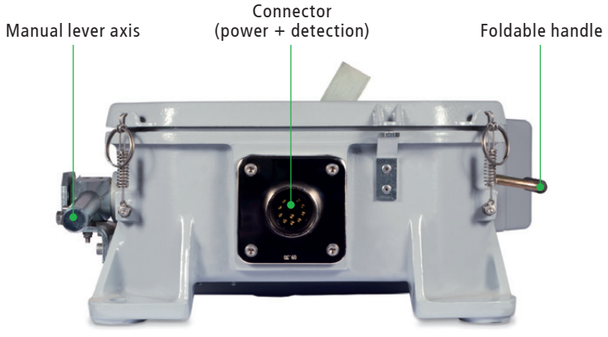
- An electric motor (voltage as required - AC or DC)
- An internal torque limiter device
- A gear box
- A locking mechanism in end positions
- A driving arm connected to the driving arm head
- A switch equipped with control and power contacts
- A manual emergency command with lever or cranck
- An electrical watertight connector (optional)
- A locked cover



Installation and application

In terms of application, the MCEM91 point machine offers unequalled flexibility:

- Adaptable to any type of railway and to metro tracks with steel or rubber tyres
- Compatible with all bearers including timber and concrete bearers, metallic bearers, concrete slab track, etc.
- Accepts all types of fixations: coachscrews, bolting, etc.
- Designed for mixed traffic, high speed and heavy loads
- Stroke can be adjusted simply by moving the driving arm
- Reduced maintenance



Technical characteristics

- Protection index: IP55 or IP67 (option)
- Weigh: < 100 Kg
- Adjustable stroke: 100 to 260 mm
- Maximum load during drive: 400 to 1 040 daN
- Switch time: 3.5 to 4.8 s
- Anti-vandalism protection: included
- MTBF: over 30 years
- MTTR : 0,61 hours

Operation

MCEM91 point machine belongs to the family of locked electromechanical switch mechanisms. Due to its pendular movement, the throw is given by the driving arm length. While throwing, the point machine driving arm moves on a 60° angle with locking in end positions.

In addition to the internal locking and to ensure safety, the point machine is equipped with an internal "anti-veering" device designed to counter vibration effect caused by passing rolling stock.

Simple and robust, the point machine can be easily adapted to any network or interlocking.