



Products presentation

Vossloh Group

Vossloh group

Workforce : 4,717

Rail Infrastructure

Workforce : 2,710



Fastening Systems



Vossloh Cogifer

Motive Power&Components

Workforce : 1,956



Locomotives



Electrical Systems



Vossloh Cogifer

Vossloh Cogifer

Sales : € 425 million Workforce : 2,263



Points & Crossings

France



Sales: € 125 million
Workforce : 386



Affiliated companies

Sales: € 262 million
Workforce : 1,710

Signalling

Products



Sales: € 18 million
Workforce : 89



Systems

Sales: € 13 million
Workforce : 41



Siema Applications

Sales: € 6 million
Workforce : 37

Vossloh Cogifer

Signalling products for switches & crossings



► Safety products :

- Clamp lock – VCC
- Movable point lock – VPM
- Paulve detector
- Traffic detector
- Switch mechanisms
- Integrated mechanisms
- Level crossing mechanisms

Switch actuation system



Metro solution

Viaduct and tunnel



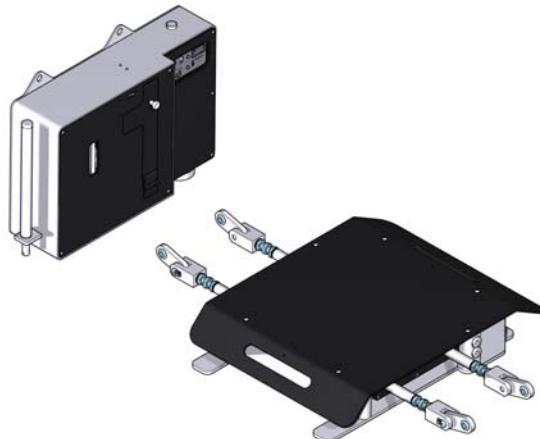
- ▶ MCEM91 locked point machine
- ▶ Adaptable stroke
- ▶ VCC locking device
- ▶ KV detector

Metro solution

Viaduct and tunnel



- ▶ R62 In-track point machine
- ▶ Internal locking
- ▶ Switch position detection
- ▶ Locking detection
- ▶ Command unit can be fitted outside the track or between the track
- ▶ Adaptable stroke



Metro solution

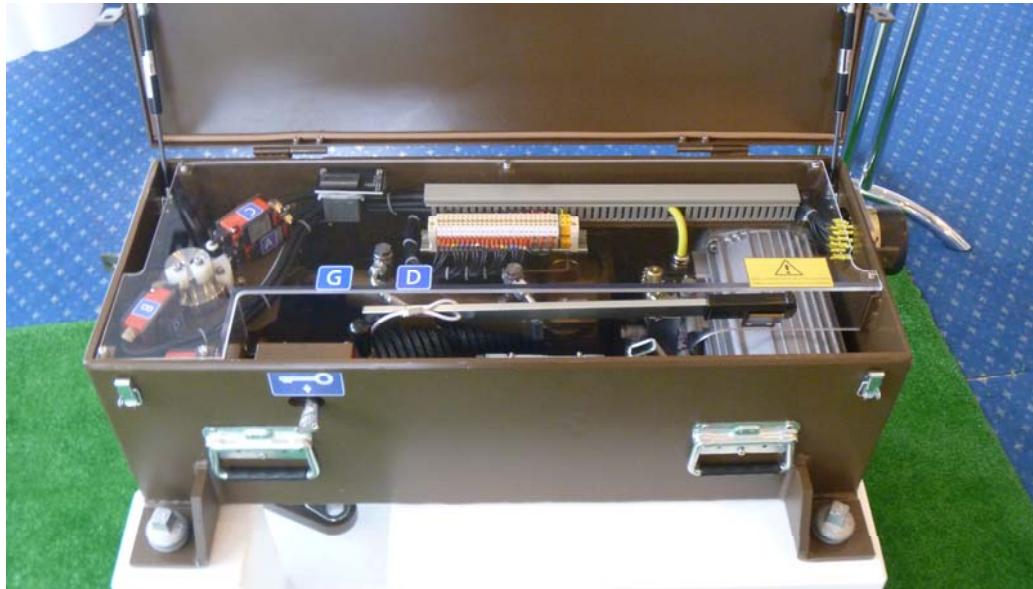
Depot



- ▶ MCEM91 trailable point machine
- ▶ Adaptable stroke
- ▶ Trailing detection available
- ▶ Improved clamping device
- ▶ Paulvé detectors

Metro solution

Depot



- ▶ MTEH50 series point machine
- ▶ Electro-hydraulical
- ▶ Reversible hydraulic unit
- ▶ Settable stroke and retention force
- ▶ Reversed when trailed

Switch actuation system

General introduction



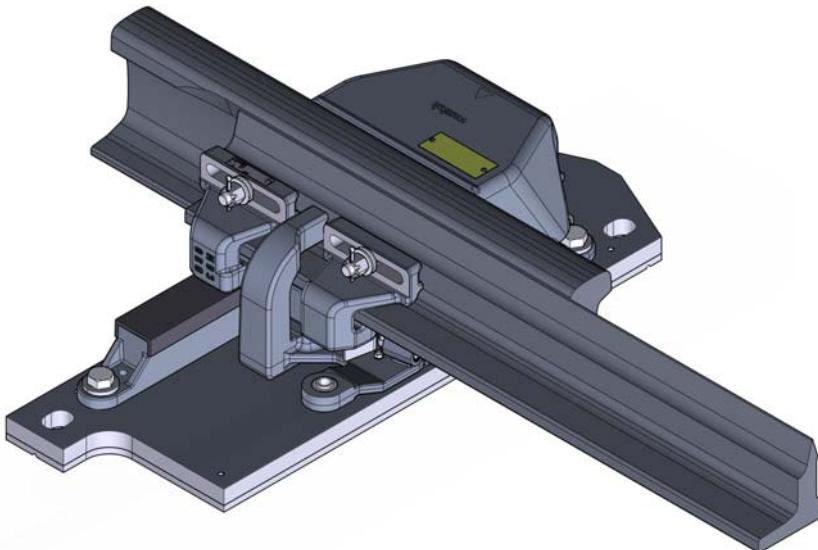
Mono-motor solution



Multi-motor solution

Switch actuation system

Slide chair lock system : VCC (*Verrou Carter Coussinet*)

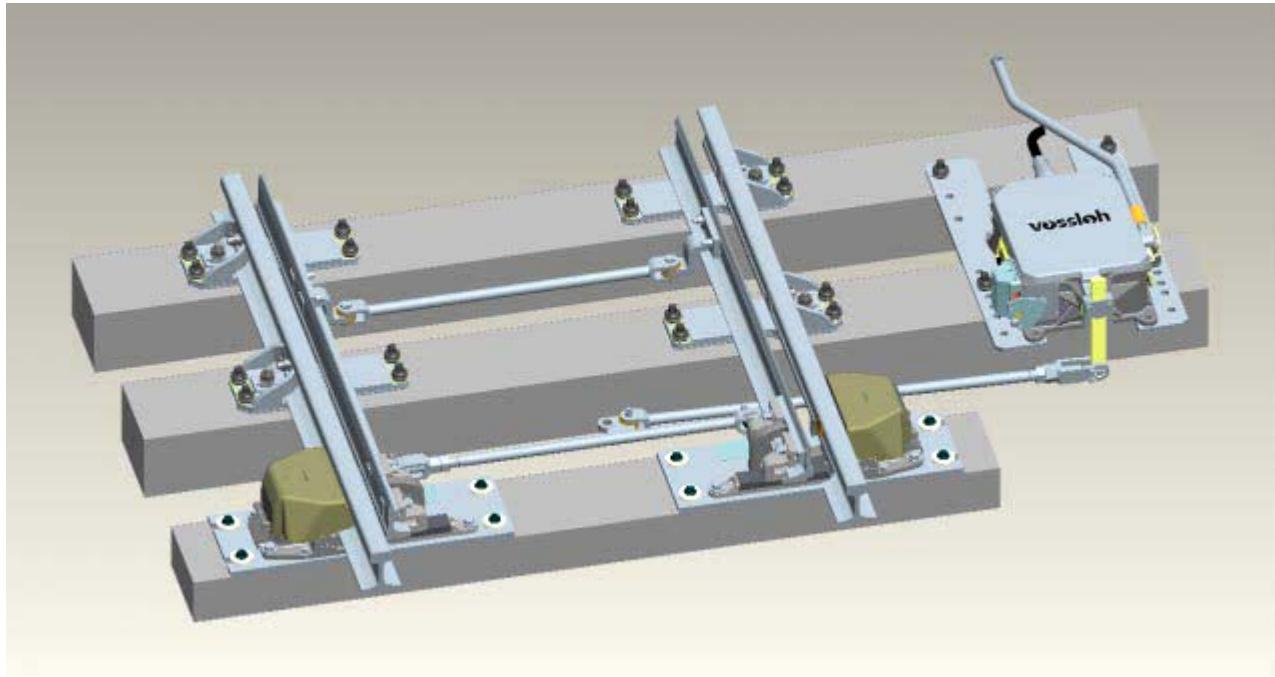


- ▶ Type
 - + Positive clamp lock
- ▶ Applications
 - + Very high speed high speed lines (350km/h)
 - + Classical lines
 - + Yards, depot & catch points
 - + Metros
- ▶ Features
 - + Locked (non-trailable)
 - + Reliable
 - + Excellent thermal expansion compensation
 - + Sandy-environment version available

RECOMMENDED BY UIC 734R

Switch actuation system

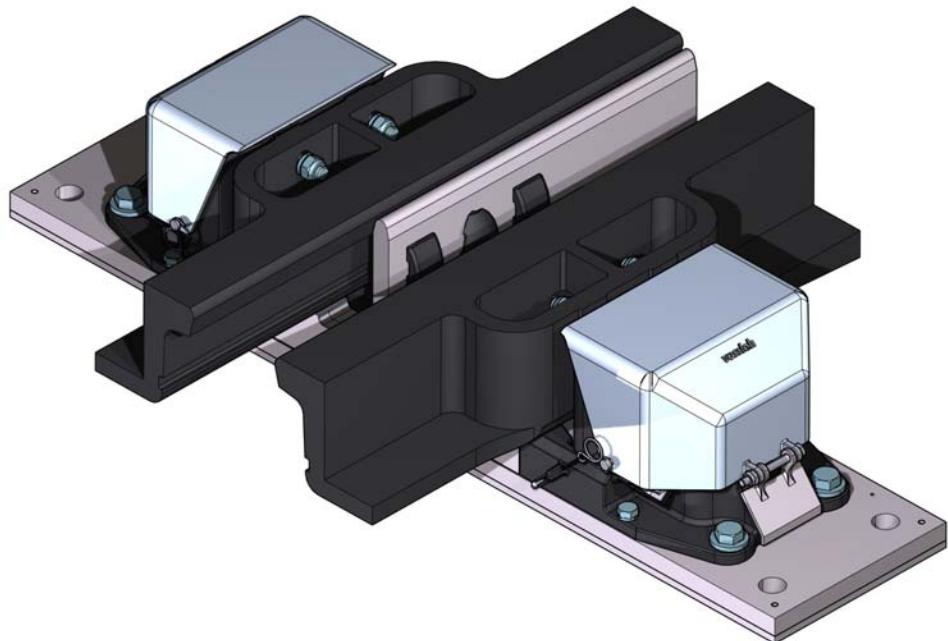
Slide chair lock system : VCC (*Verrou Carter Coussinet*)



Switch actuation system

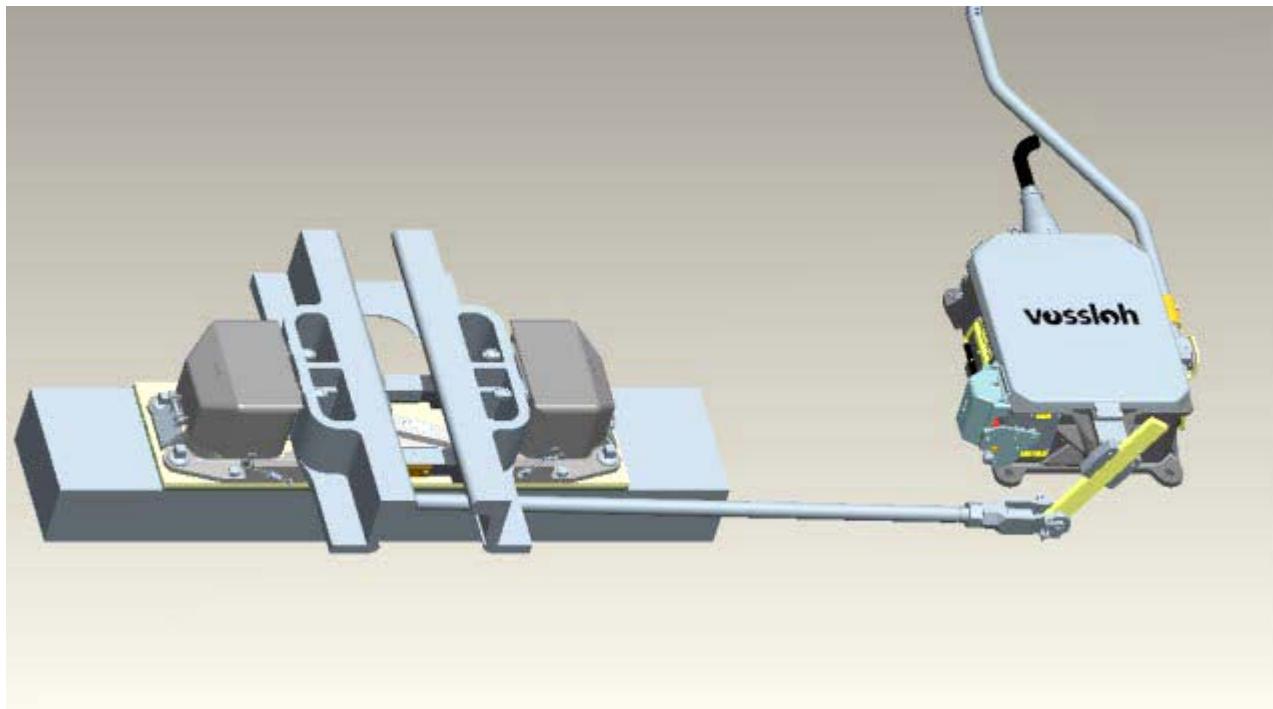
Movable point lock : VPM (*Verrou Pointe Mobile*)

- ▶ Type
 - + Positive lock
- ▶ Applications
 - + Very high speed high speed lines (350km/h)
 - + Classical lines
- ▶ Features
 - + Locked (non-trailable)
 - + Reliable
 - + Excellent thermal expansion compensation



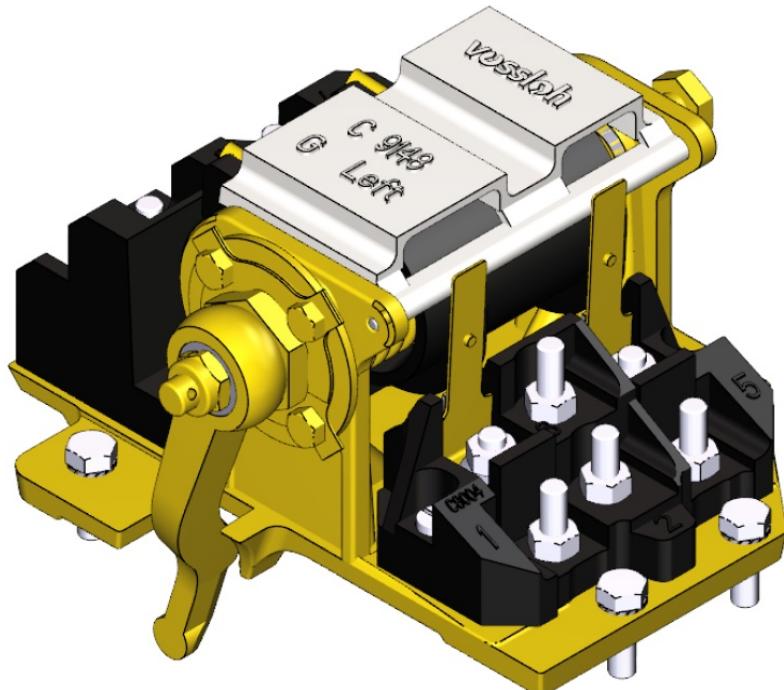
Switch actuation system

Movable point lock : VPM (*Verrou Pointe Mobile*)



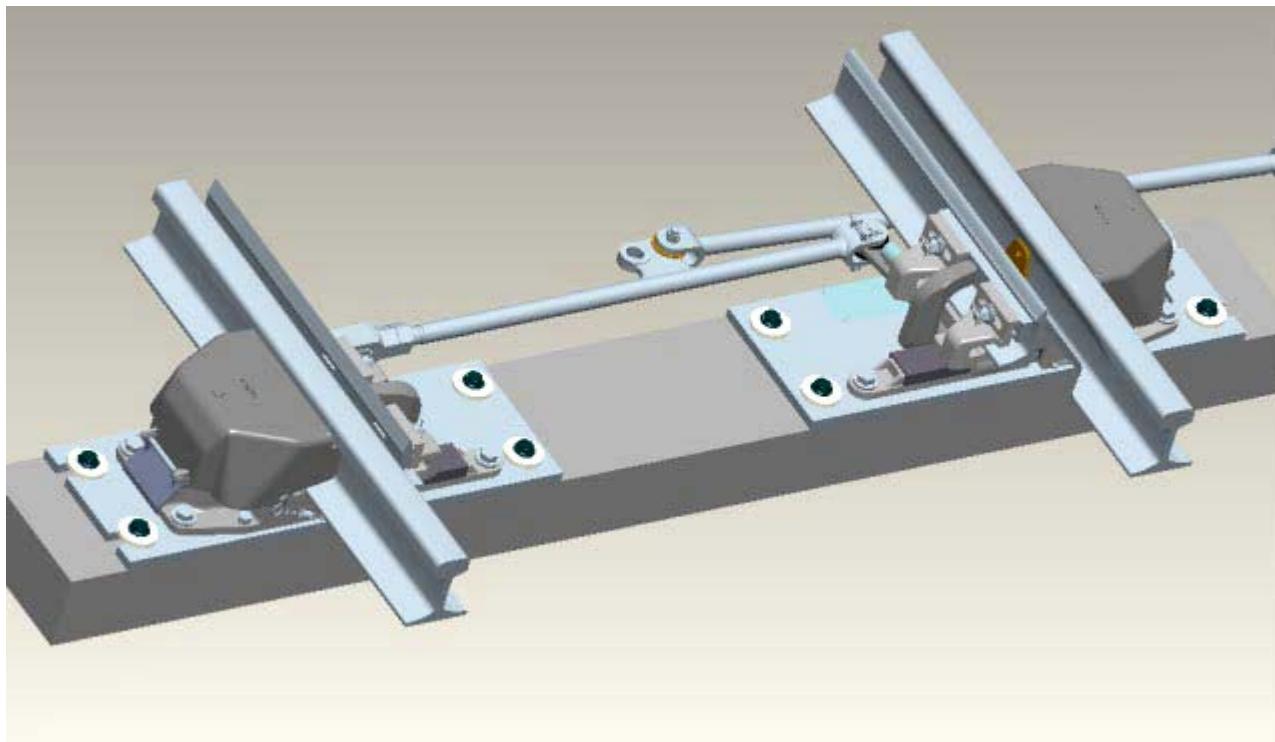
Switch actuation system

Slide chair lock detector

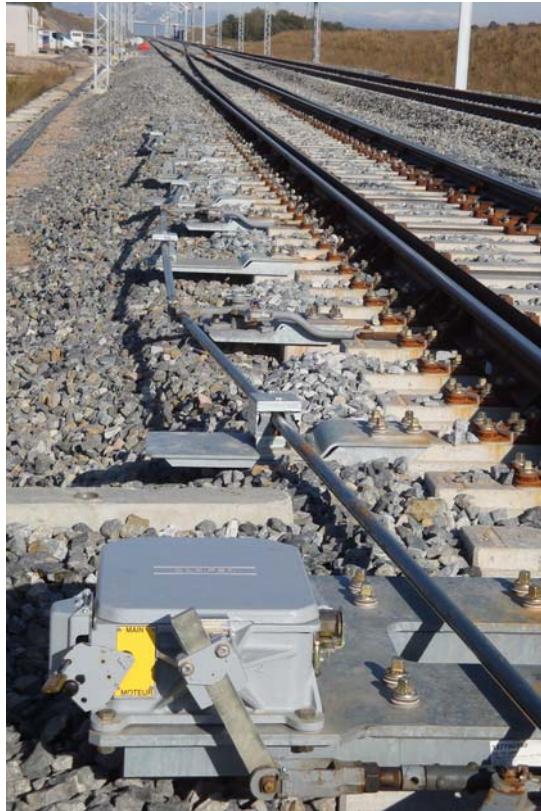


- ▶ Integrated controller
- ▶ Switch rail application and locking controller
- ▶ Classical, sand-proof and water-proof types

Switch actuation system Slide chair lock detector

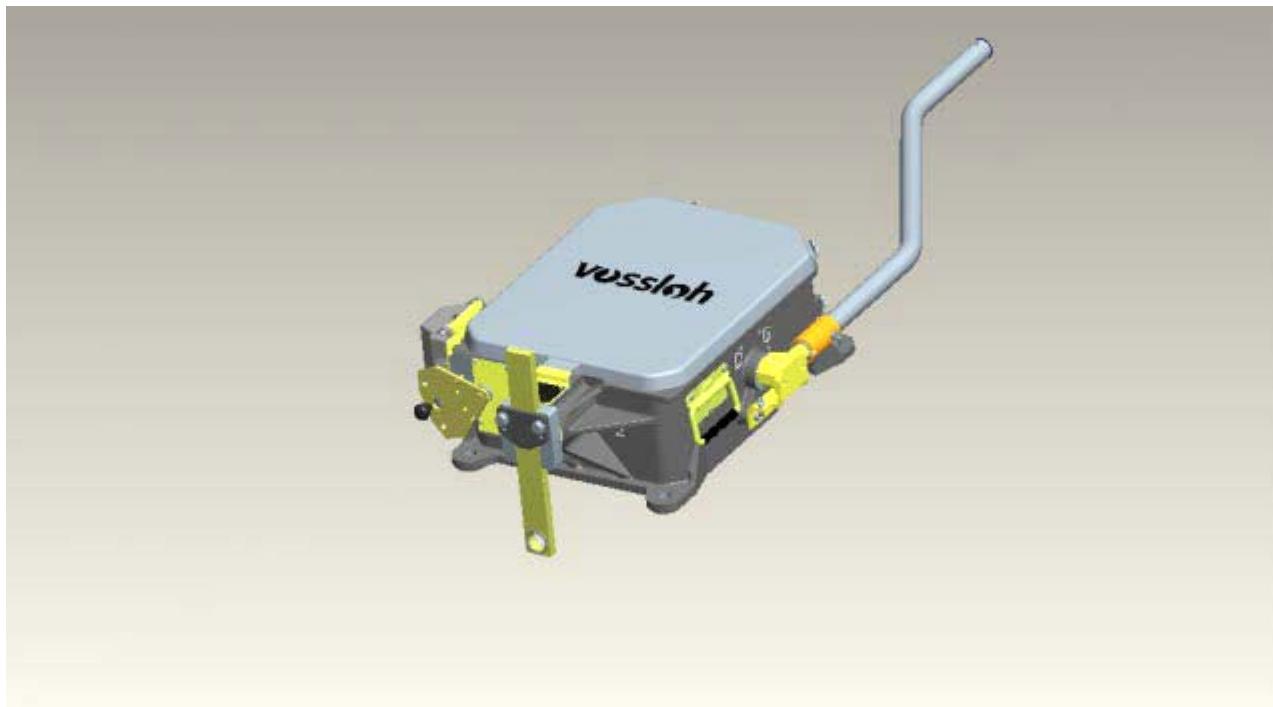


Switch actuation system MCEM91 point machine



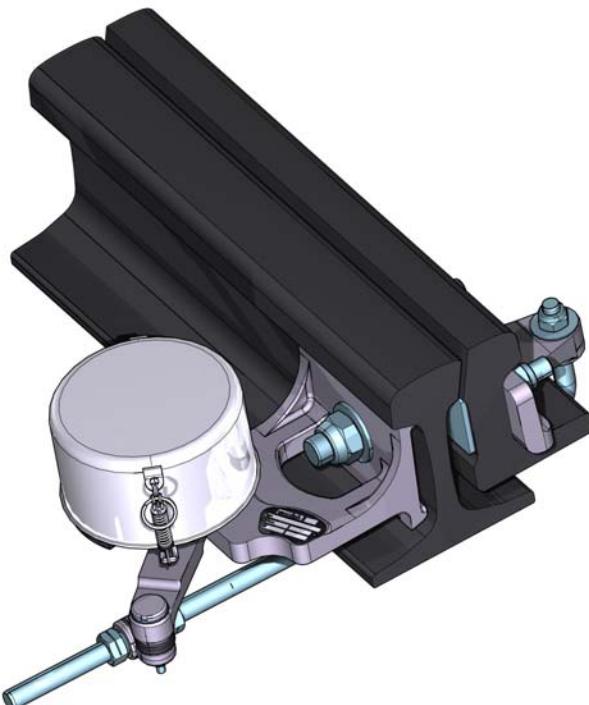
- ▶ Type
 - + Electro-mechanical
- ▶ Applications
 - + Very high speed high speed lines (350km/h)
 - + Classical lines
 - + Yards, depot & catch points
 - + Metros
- ▶ Features
 - + Locked (non-trailable)
 - + Reliable

Switch actuation system MCEM91 point machine



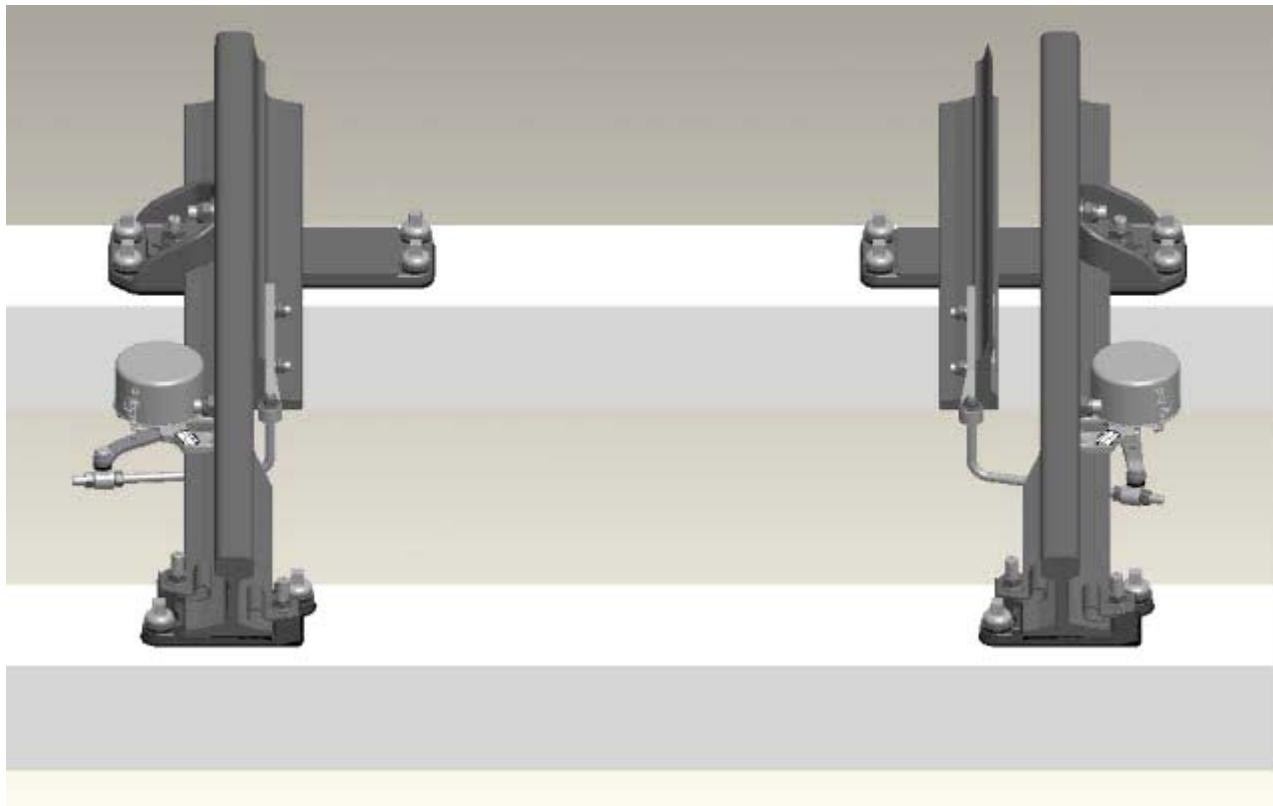
Switch actuation system

Paulvé rod driven detector



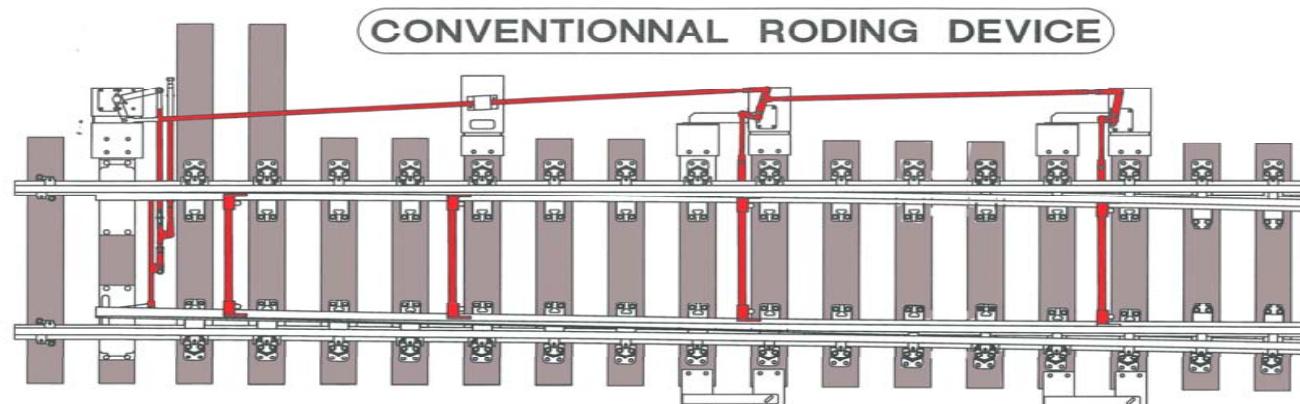
- ▶ Type
 - + Electro-mechanical
- ▶ Creation date
 - + 1951
- ▶ Applications
 - + Very high speed high speed lines (350km/h)
 - + Classical lines
 - + Yards, depot & catch points
 - + Metros
- ▶ Features
 - + Stock-switch rail relative position

Switch actuation system Paulvé rod driven detector



Switch actuation system

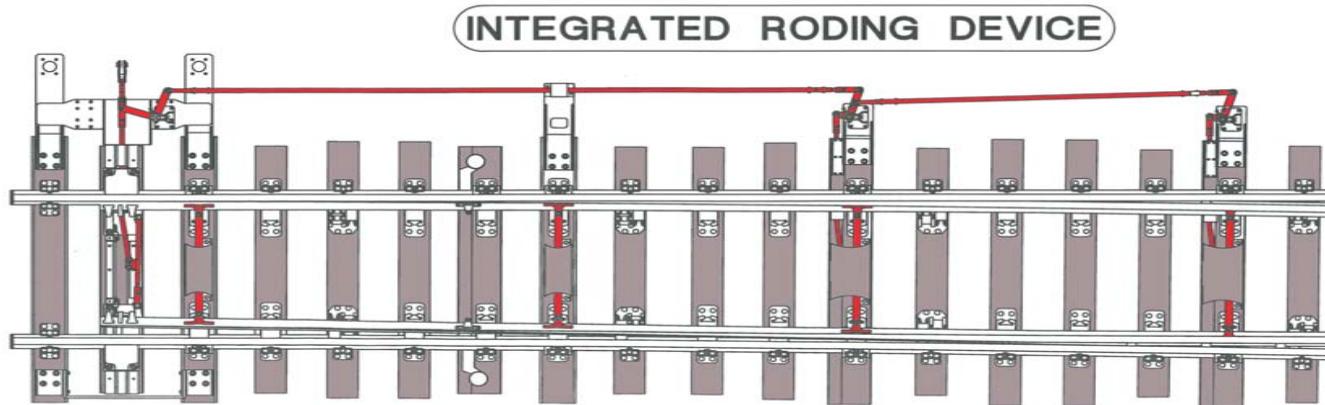
Conventional application



- ▶ Conventional
- ▶ Automatic tamping after removal of bars
- ▶ Well proven (French very high speed technology)

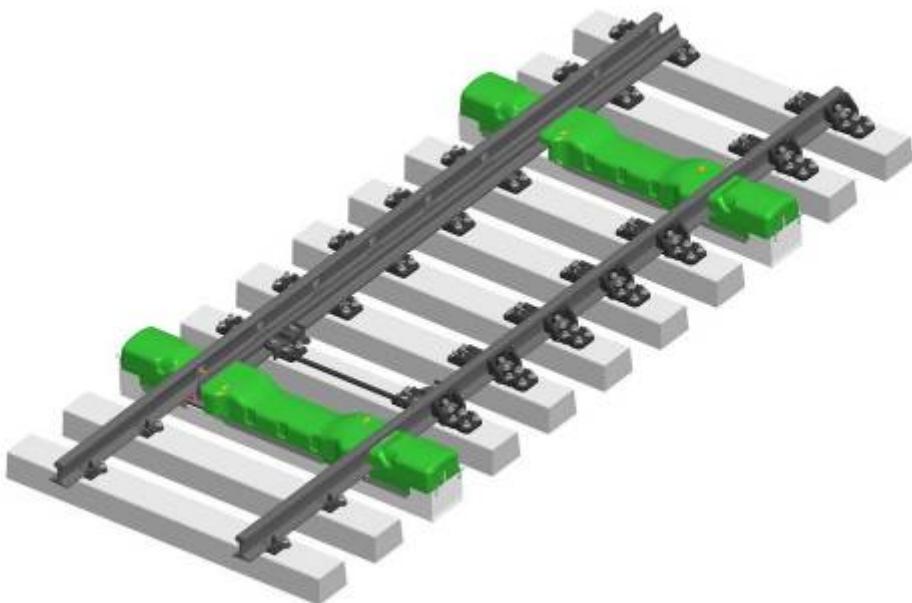
Switch actuation system

Integrated solution



- ▶ Rodding integrated in sleeper
- ▶ Heel controllers integrated in sleeper
- ▶ Automatic tamping possible
- ▶ High speed references
- ▶ Easy maintenance

Switch actuation system Easyswitch



Switch actuation system

Easyswitch – An advanced technology

- ▶ All the safety functions of Easyswitch are assured by existing service proven products.
 - Locking is assured by VCC (slide chair lock)
 - Detection is assured by VCC detector
- ▶ Modular with plug & play approach
- ▶ Automatic tamping possible
- ▶ Individual power unit
- ▶ Lubrication free

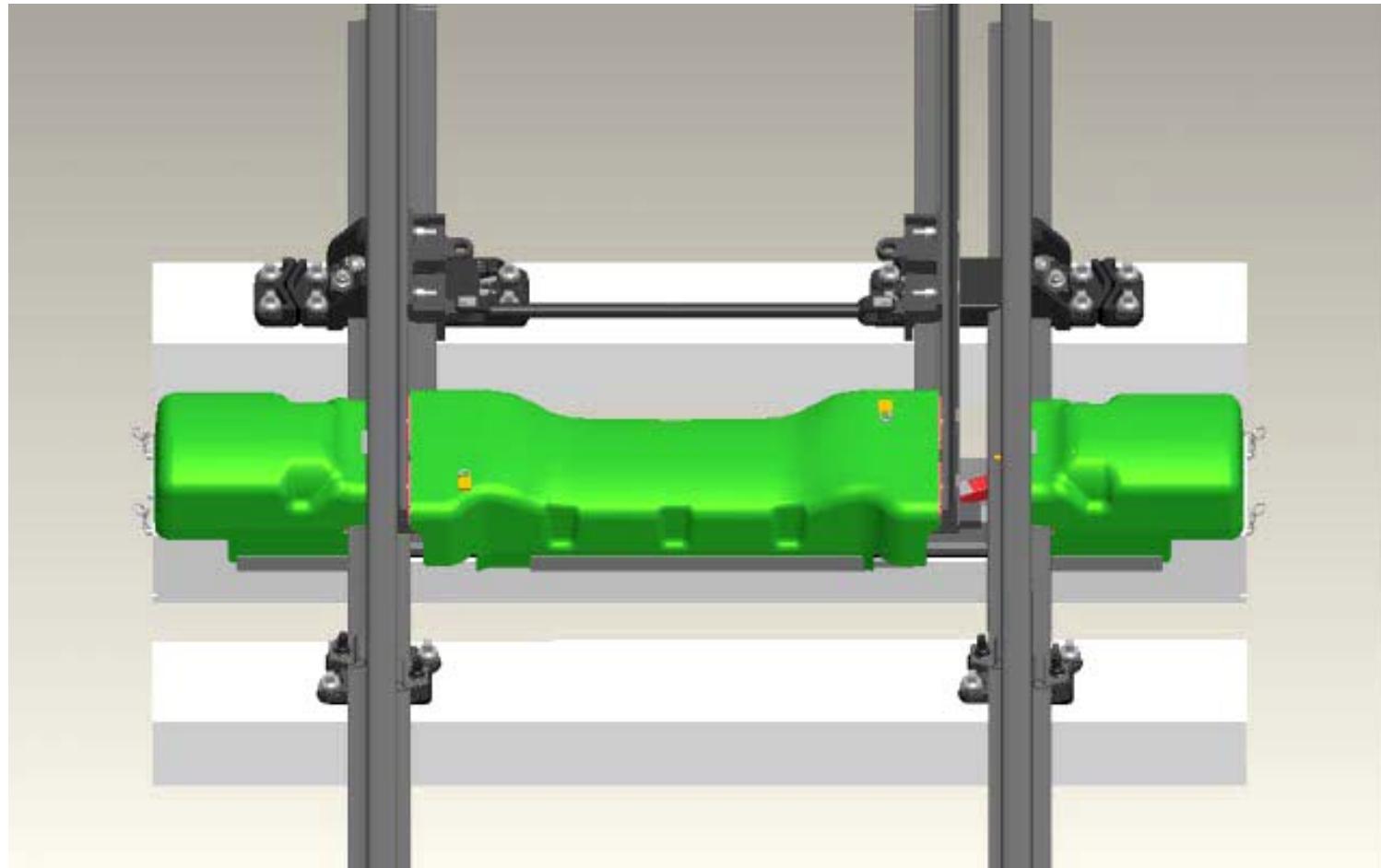


Switch actuation system

Easyswitch – Solution for all

- ▶ Safety is priority
- ▶ Derived from existing well proven products, Easyswitch can fit to any rail profile and can be wired to any kind of interlocking.
- ▶ Suitable for conventional, subways in tunnel, heavy haul or high speed lines, Easyswitch provides the best value for money and rapid return on investment

Switch actuation system Easyswitch

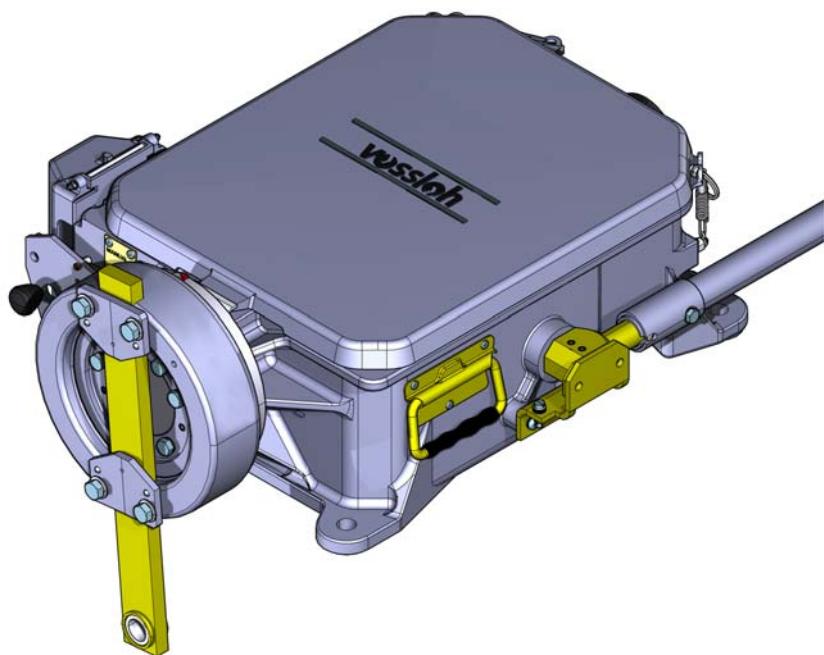






Switch actuation system MCEM91T point machine

- ▶ Type
 - + Electro-mechanical
- ▶ Applications
 - + Classical lines
 - + Yards, depot & catch points
- ▶ Features
 - + Trailable
 - + Reliable



Switch actuation system

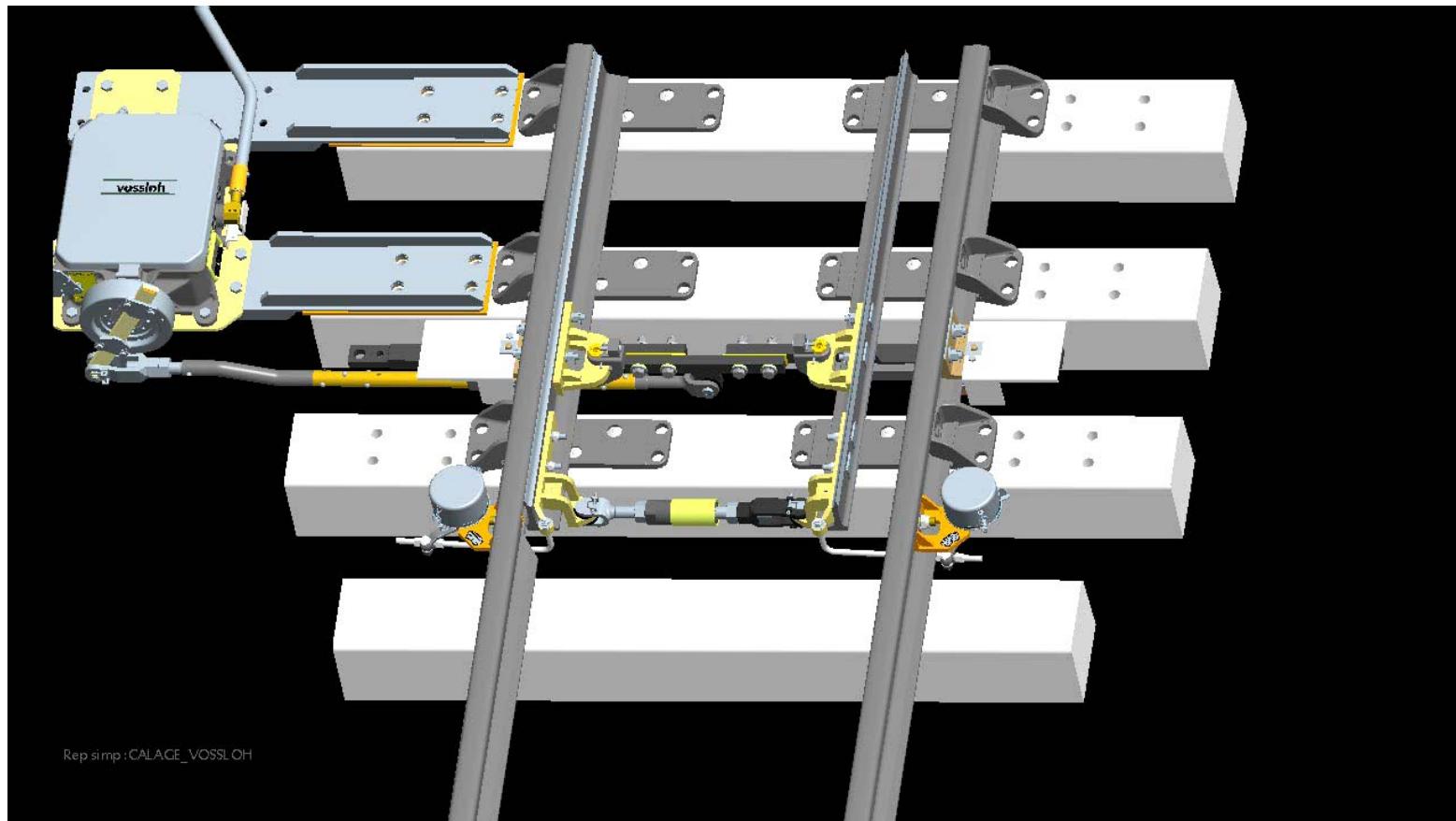
Clamping device

- ▶ Type
 - + Horizontal Clamping device
- ▶ Applications
 - + Classical lines
 - + Yards, depot & catch points
- ▶ Features
 - + Trailable
 - + Clamping



Switch actuation system

Clamping device

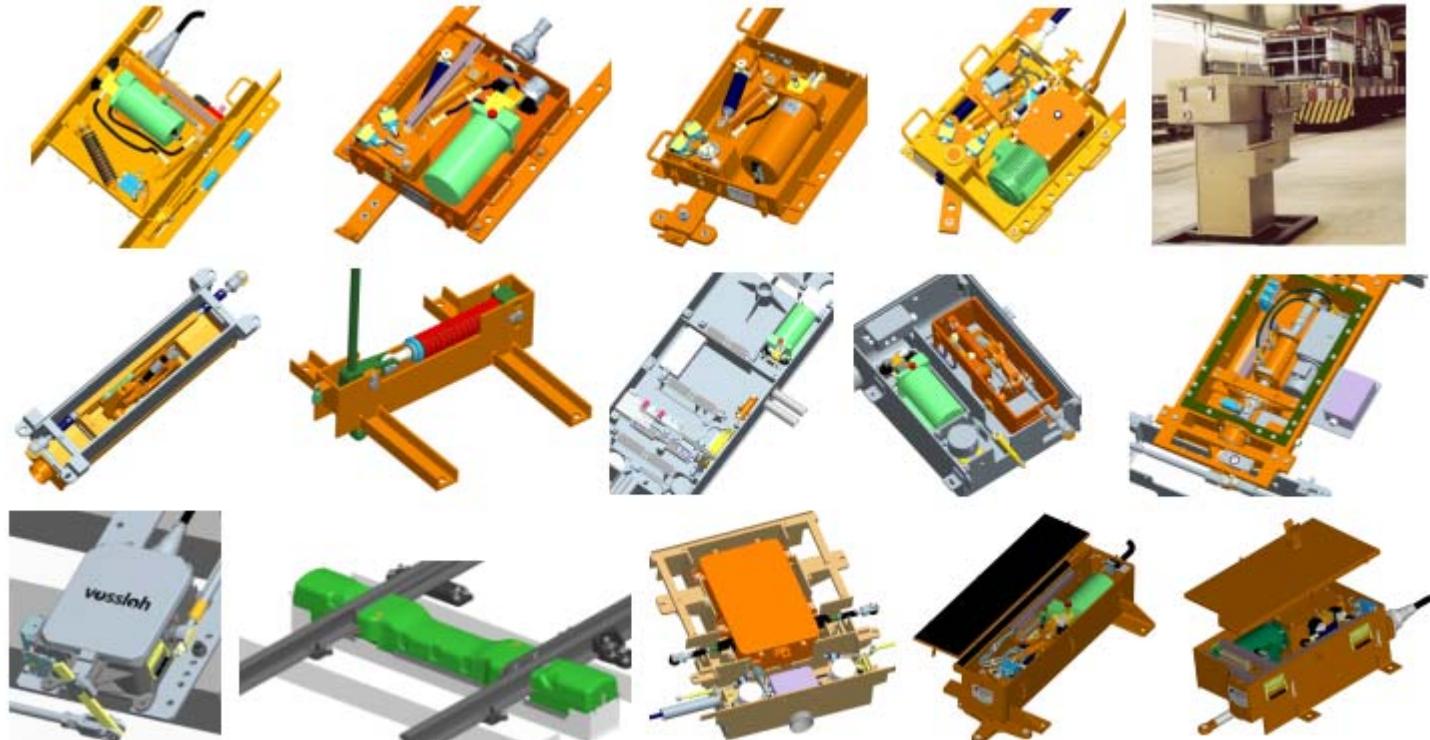




Switch actuation system

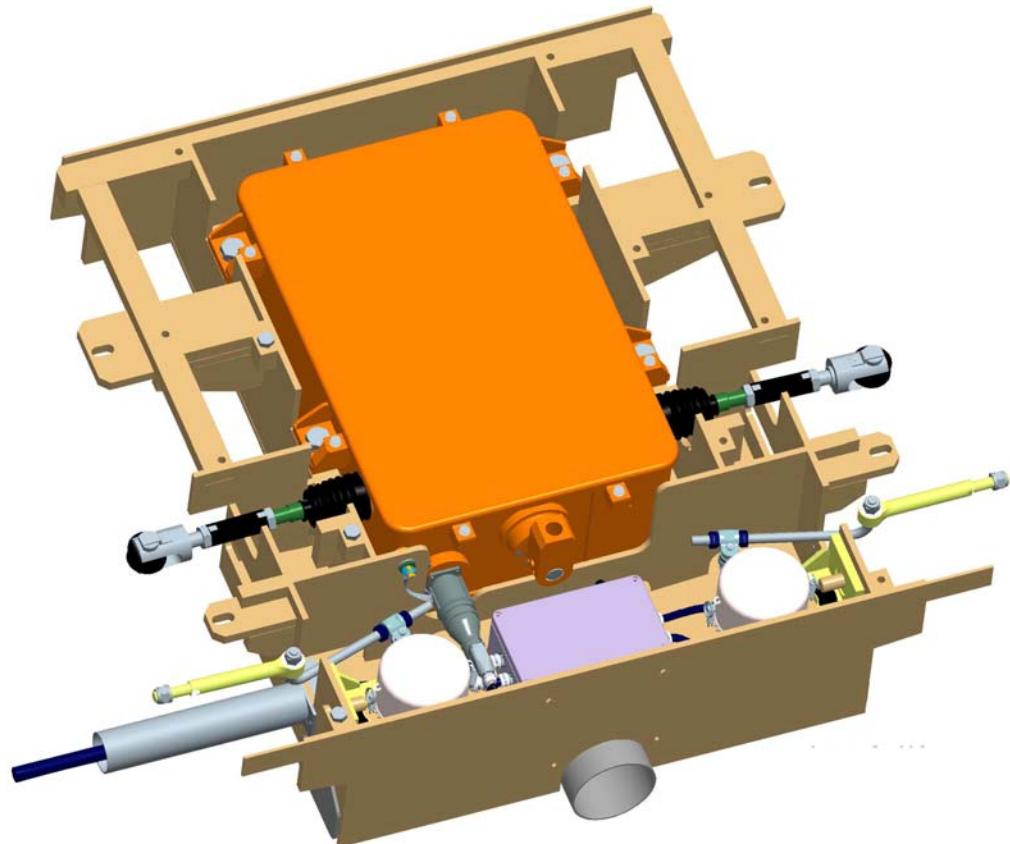
Tramway and other metro solution

MORE THAN 16 DIFFERENT TYPES OF POINT MACHINE

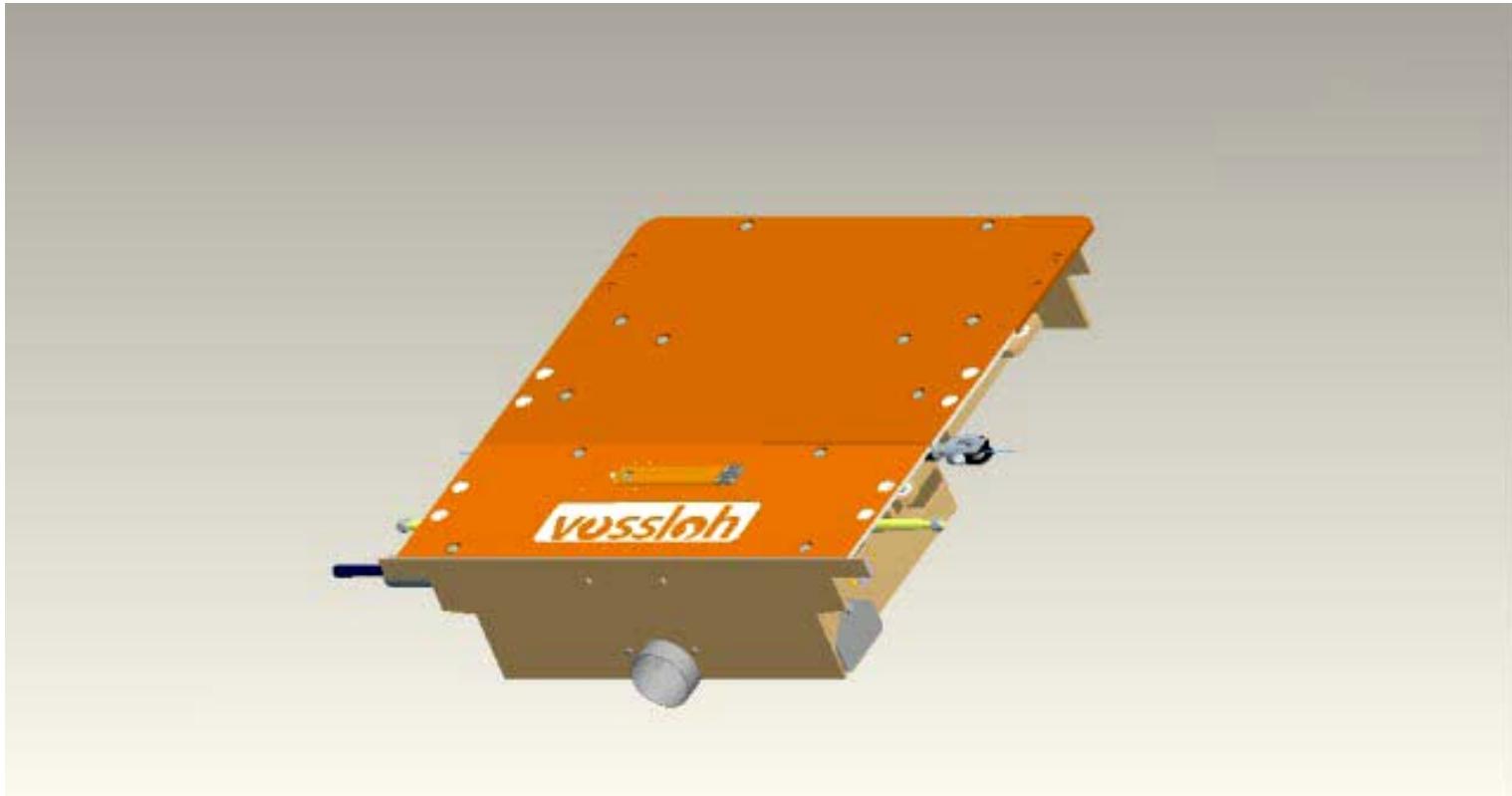


Switch actuation system EH61 point machine

- ▶ Type
 - + Electro-hydraulical
- ▶ Applications
 - + Tramway
- ▶ Features
 - + Wedged or Trailable
 - + Extractable
 - + IP67 sealing
 - + Reliable



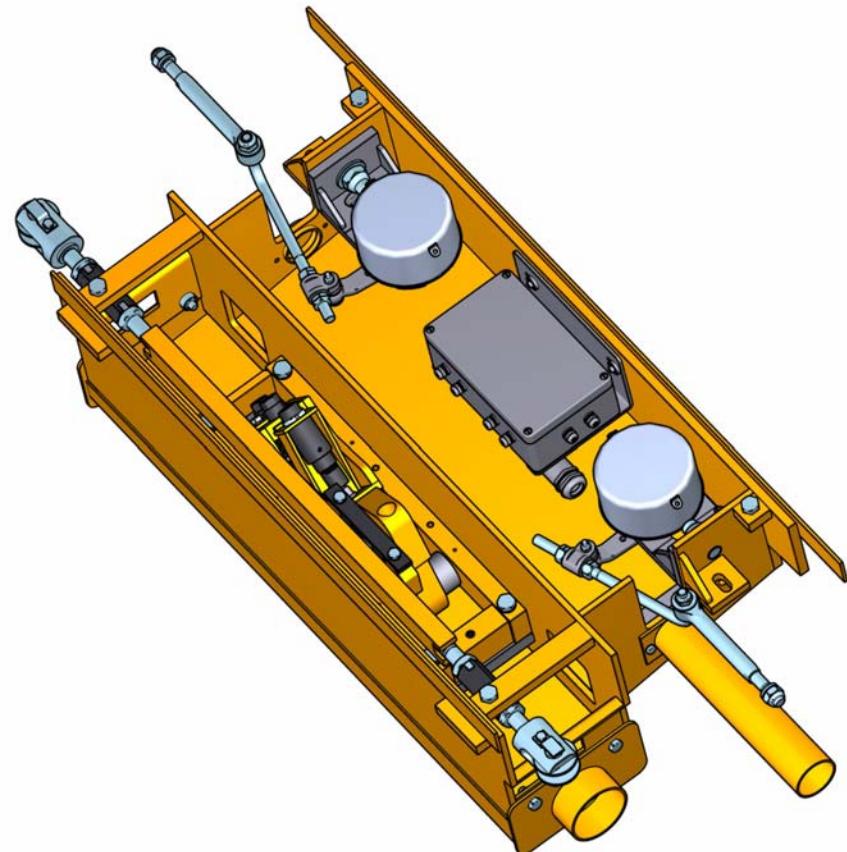
Switch actuation system EH61 point machine



Switch actuation system

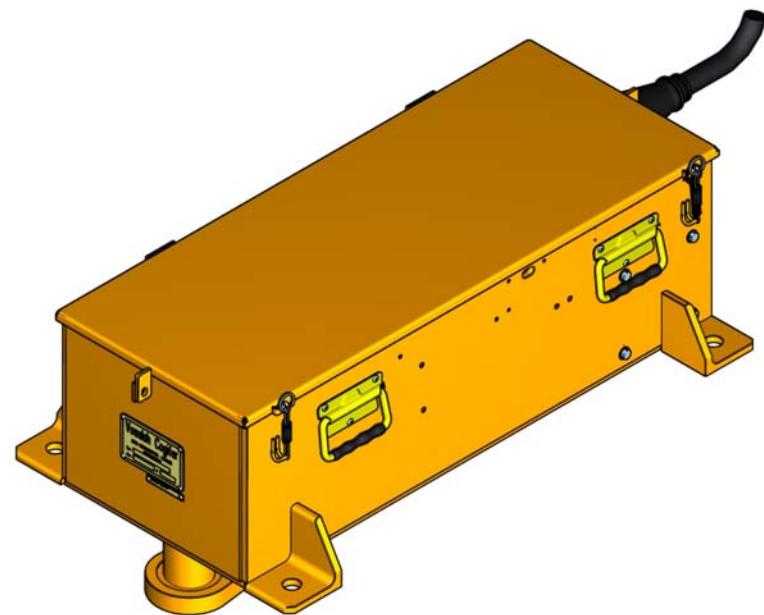
Manual box

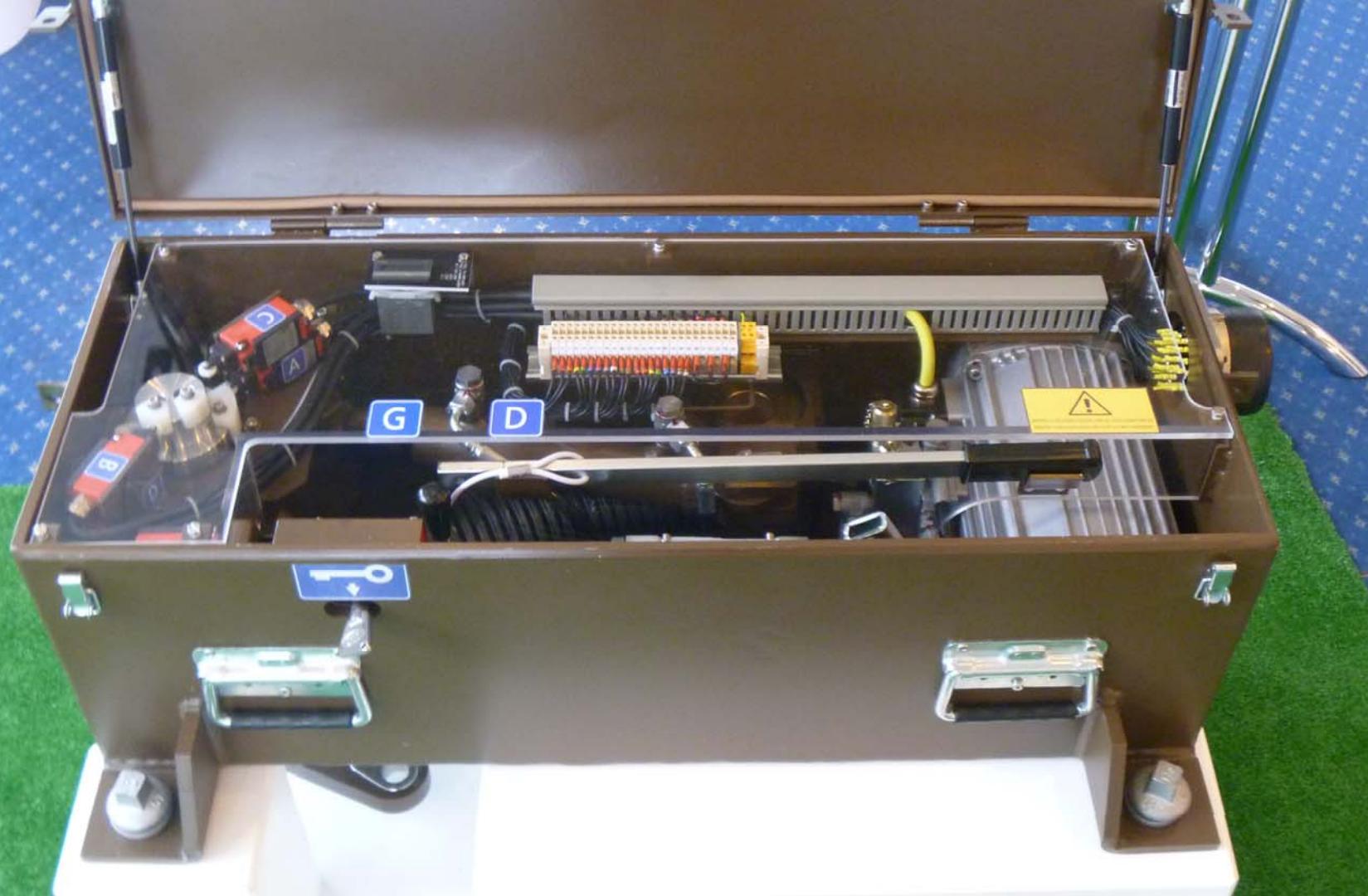
- ▶ Type
 - + Trailable manual box
- ▶ Applications
 - + Tramway
- ▶ Features
 - + Trailable
 - + Extractable
 - + RT - NRT
 - + Reliable



Switch actuation system MTEH58 point machine

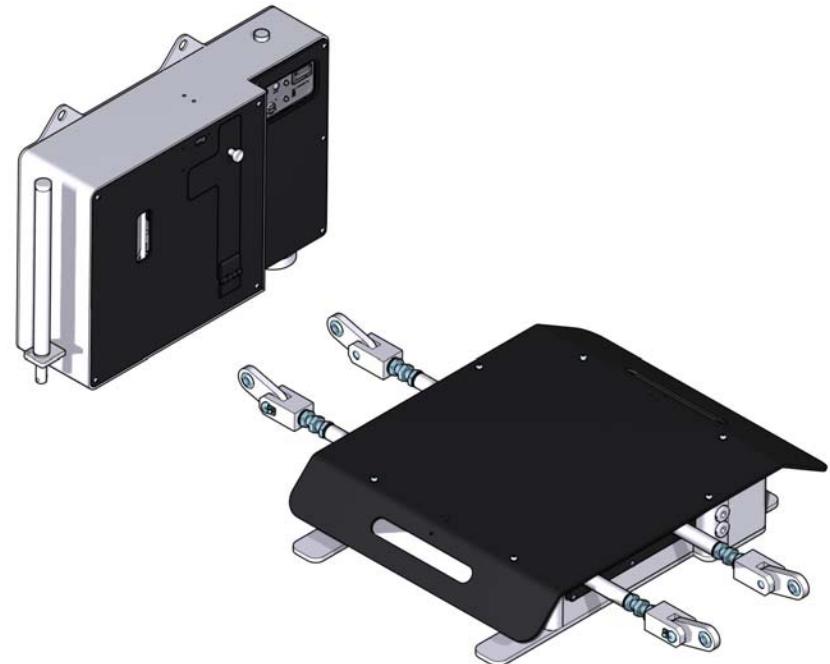
- ▶ Type
 - + Electro-hydraulical point machine
- ▶ Applications
 - + Metro
- ▶ Features
 - + Tailable
 - + Reversible hydraulic unit
 - + Reliable
 - + Hydraulical manual command





Switch actuation system R62 point machine

- ▶ Type
 - + Electro-hydraulic point machine
- ▶ Applications
 - + Metro
- ▶ Features
 - + Tearable
 - + External command



Switch actuation system

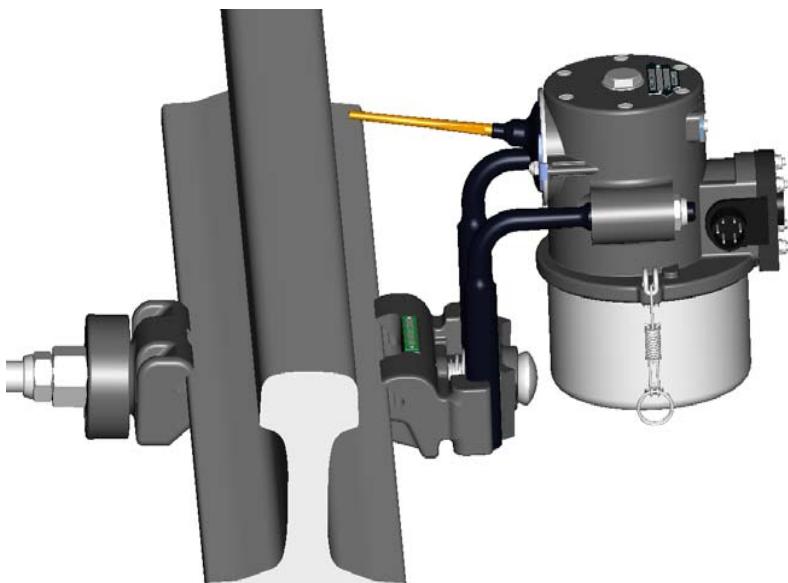
R62 point machine



vossloh

Detection

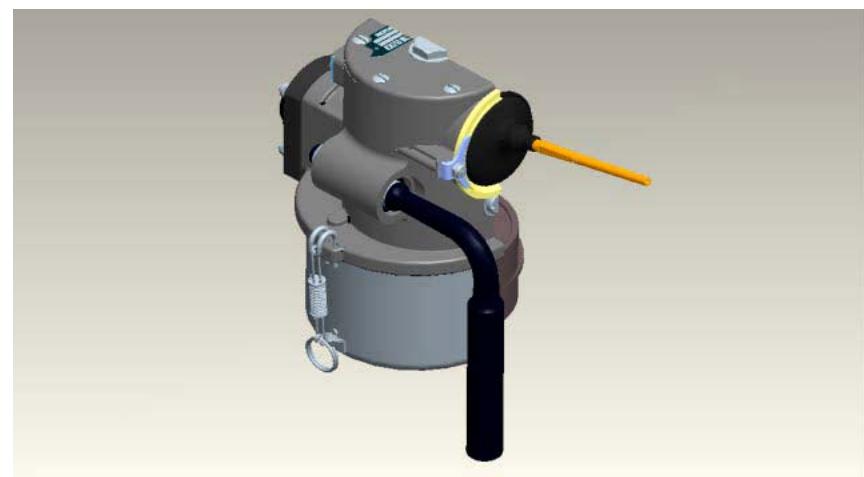
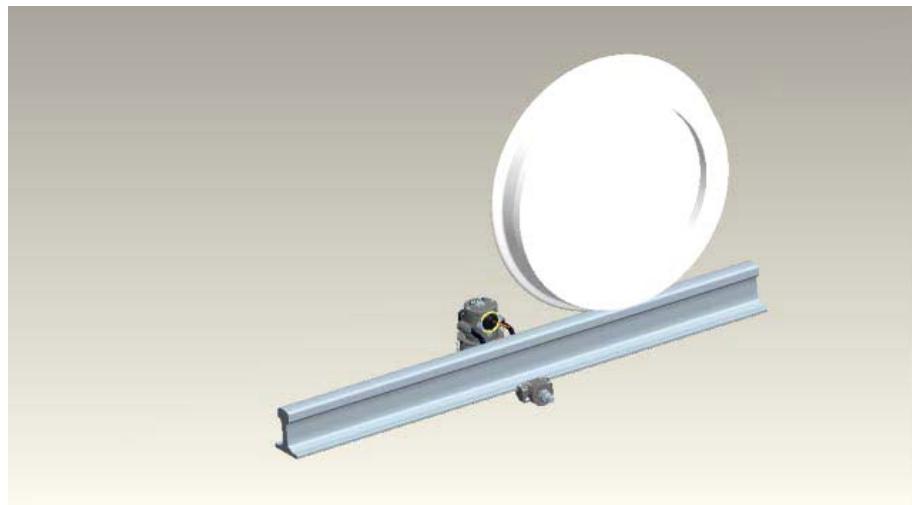
Traffic detector



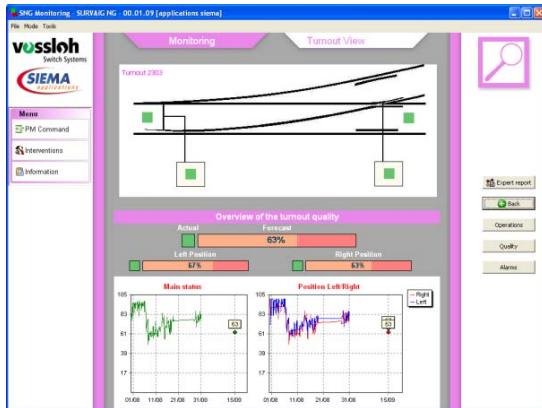
- ▶ Type
 - + Electro-mechanical detector
- ▶ Application
 - + Various
- ▶ Features :
 - + Mounting on an universal support, no rail drilling
 - + Uni-directionnal or bi-directionnal
 - + Independant
 - + Auto-regulated, temperature-free functionning
 - + Enhance safety

Signalling products

- ▶ Operation : Traffic detector



Switch actuation system SURVAIG monitoring system



- ▶ Type
 - + Monitoring system
- ▶ Application
 - + Various
- ▶ Features :
 - + Predictive analysis
 - + Turnout, track circuit and point machine monitoring
 - + Internet access for real-time monitoring



A solution for every needs

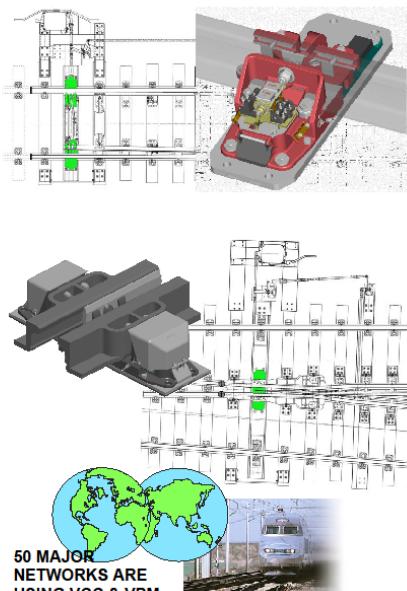
- ▶ Configurations : high-speed, mainline, freight, metro, yards & depots, tramway, light transport
- ▶ Extreme conditions : - 55°C to 70 °C, sandy environments, enhanced IP sealings
- ▶ State of the art : 360 km/h, 50 tons/axle
- ▶ Safety and reliability : MTBF > 2 millions maneuvers, lifecycle > 20 years
- ▶ Track type : ballasted, slab
- ▶ Rodding : integrated, conventionnal
- ▶ Point machine configuration : in-track, out-of-track, in-sleeper
- ▶ Point machine type : electro-mechanical, electro-hydraulical
- ▶ Our whole point machine line is available in reversible mode making it easier for the Signalling contractor to implement it and helping save money.
- ▶ Adaptation to various signalling configurations : wiring principle, voltage, frequency, AC/DC

Switch actuation system

References

REF
ER
EN
CES

VCC & VPM : SWITCH & MOVABLE POINT LOCK



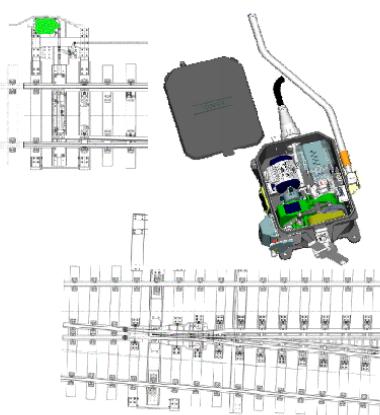
50 MAJOR
NETWORKS ARE
USING VCC & VPM

1

03/2010

REF
ER
EN
CES

MCEM91 LOCKED POINT MACHINE



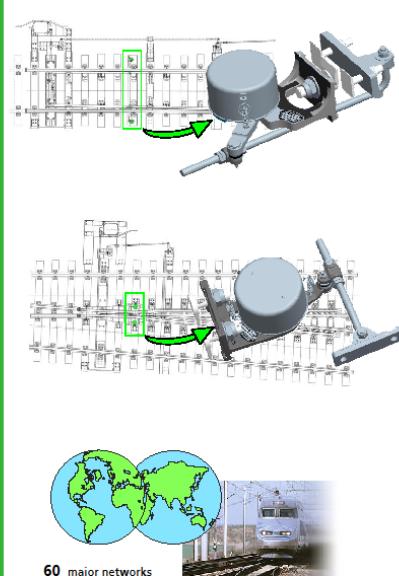
25 major networks are using
switch drive
mechanism MCEM 91

1

03/2010

REF
ER
EN
CES

PAULVE ROD DRIVEN CONTROLLER



60 major networks
are using PAULVE

1

03/2010



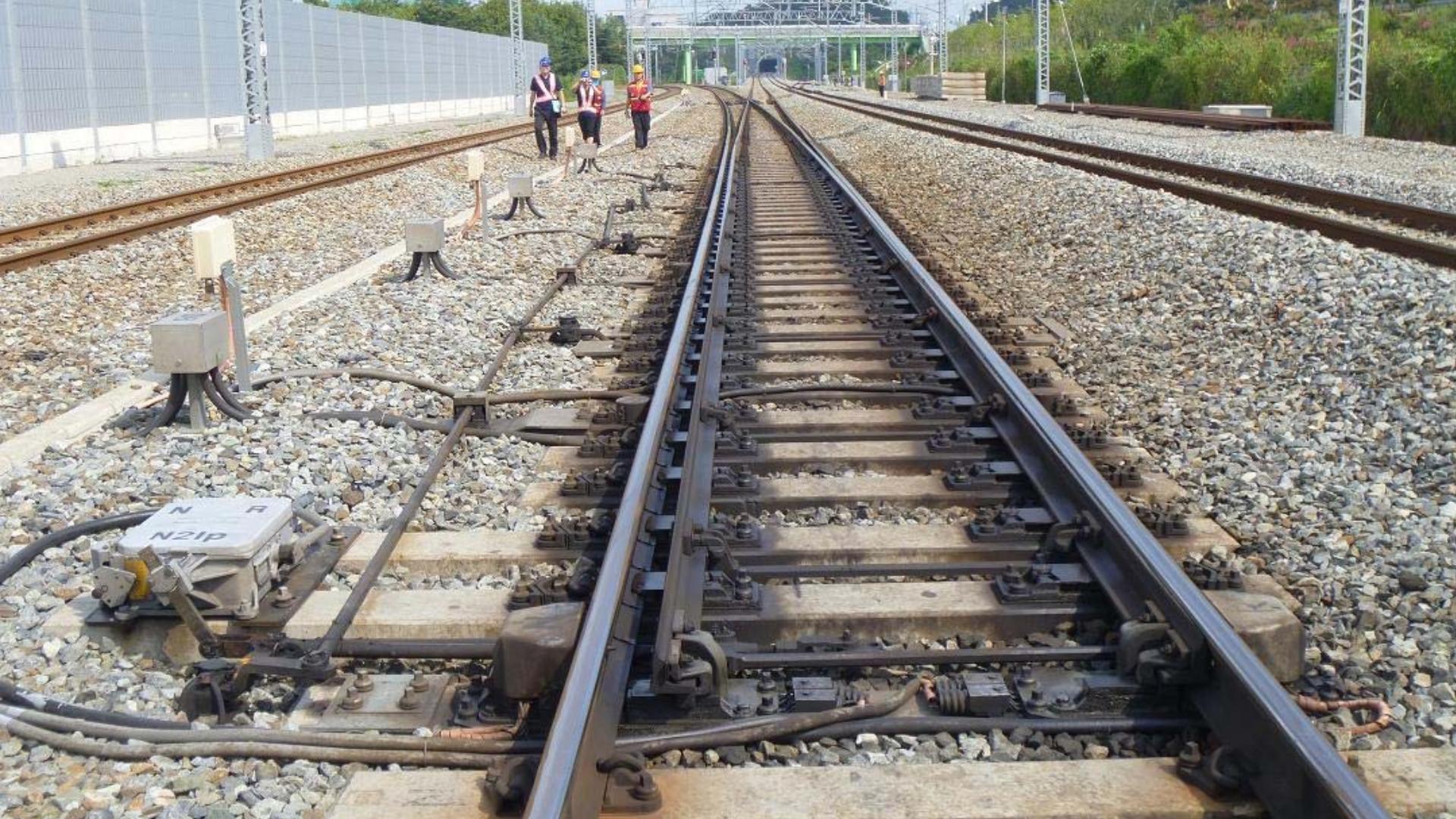
Dubai metro - United Arab Emirates



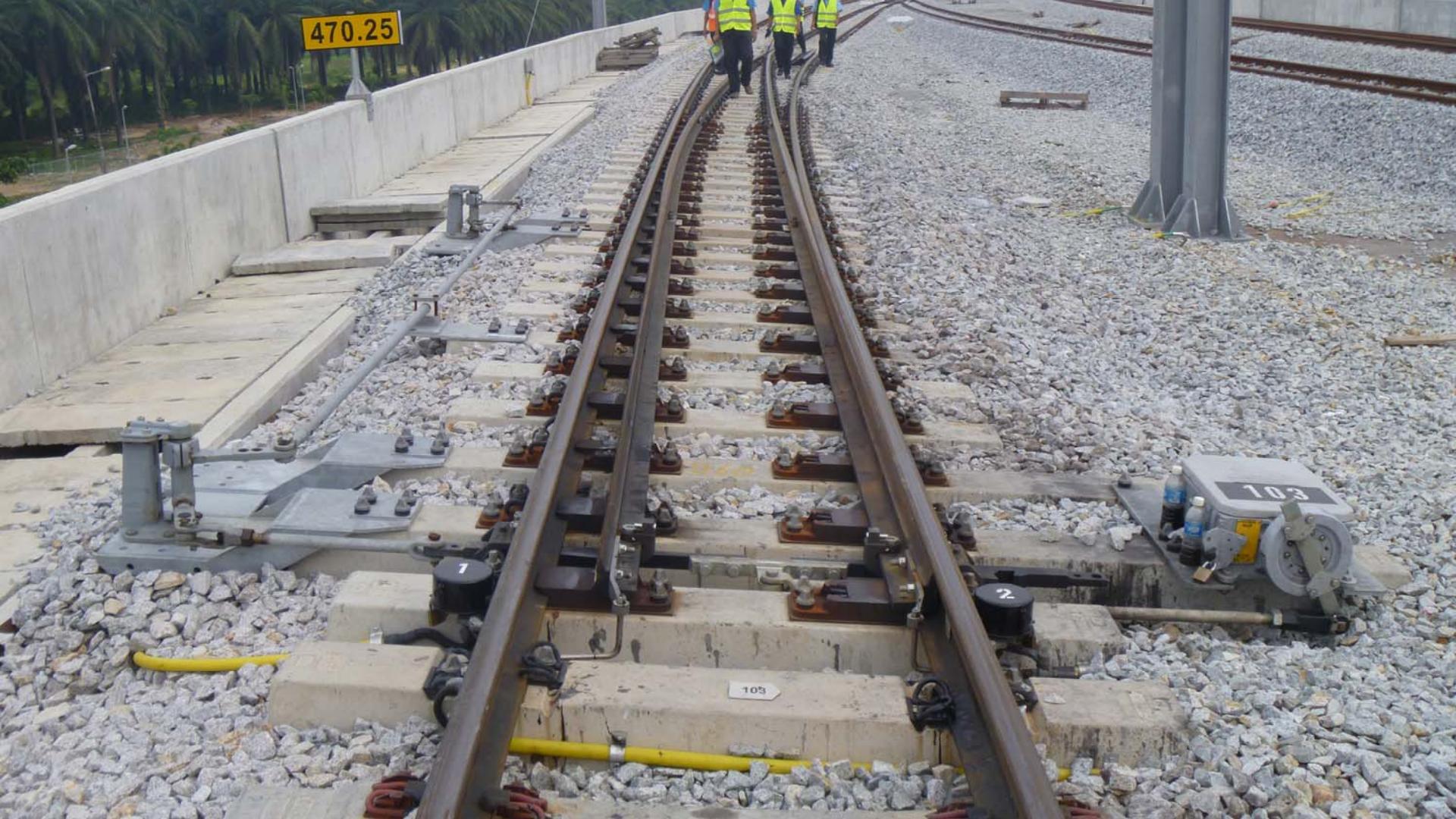
Ankara - Konya (HSL) - Turkey



Mersin-Topprakale (mainline) - Turkey



Seoul – Daegu (HSL) - South Korea



Kuala Lumpur - Seremban (mainline) - Malaysia