



 ***V-Speed***

A full range of turnouts for high speed lines

# Vossloh Cogifer, the pioneer in the field of high speed turnouts

For nearly 40 years, Vossloh Cogifer has been an international leader in the design of high speed rail turnouts and equipment. The company has, from the beginning, been involved in all high speed rail projects in Europe and the world. The company therefore benefits from extensive experience in the study and manufacturing of turnouts and the associated safety devices. Because of the specific nature of high-speed rail, Vossloh Cogifer has been able to reinvent the turnout.

» 560 km/h

On April 3, 2007, when the world speed record on rail was set, a Vossloh Cogifer turnout was crossed at 560 km/h.

We have been a partner of the SNCF (Société Nationale des Chemins de Fer Français) since 1980. Together, we have developed a reliable and safe turnout, which now equips the majority of high speed networks throughout the world.

Today, thanks to this experience, Vossloh Cogifer designs and manufactures a range of products that continues to be innovative, meeting the specific needs of high-speed lines while limiting investment and maintenance costs.

To date, over 2,000 turnouts for very high speed tracks have been supplied by Vossloh Cogifer throughout the world.

#### France:

High speed lines: Europe North, Rhône-Alpes, Mediterranean, Atlantic, Paris South East, East, Perpignan-Figueras, Rhine-Rhone, line interconnection.

EUROPE: Belgium, Great Britain, Spain, Italy, Sweden, etc.

OTHER COUNTRIES: Korea, China, Morocco, Saudi Arabia, Turkey, etc.



Vossloh Cogifer achieved special distinction for its pioneering contribution to the field of Very High Speed: the first turnouts for the high speed line (over 250 km/h) were delivered in France for the Paris-Lyon line in 1980. This was a first in Europe!

# **V-Speed**, a range of high-performance and reliable high speed turnouts

## ► Exclusive state-of-the-art technology

### Swing nose crossing with manganese cradle

This technology developed by Vossloh Cogifer allows trains to run on direct track at 350 km/h at commercial speed and up to 230 km/h in diverging track, with perfect running continuity in complete safety.

### Inclined turnout to ensure running continuity

As a pioneer in this field, Vossloh Cogifer has been developing the 1/20 and 1/40 inclined running table for several years in perfect plain track continuity, by creating an innovative, patented switch rail profile. It reduces maintenance as well as dynamic interference to rolling stock, while improving passenger comfort.

### Turnouts for laying on ballasted or concrete slab track

The technology developed ensures the laying on ballast or concrete track while retaining the same components.

*Reliable, safe switches with low maintenance costs.*



## ► Fully secured equipment

The Clamp Lock (VCC), Swing Nose Clamp Lock (VPM) and Paulvé detector are all homologated signalling elements and are standardised for high speed rail.

### Clamp Lock (VCC)

It is an individual locking and switch rail control device. Both switch rails are locked and individually controlled in their final positions.



### Swing nose clamp lock (VPM)

It locks the swing nose and is fixed to the cradle, working on the same principle as the VCC.



### Paulvé detector,

It controls the application and opening of switch rails.



*Proven signalling systems for safe locking!*

## Turnouts that are adapted to your network



▶ Ballasted track



▶ Slab track

▶ **Turnouts for laying on ballasted or concrete slab track**

Vossloh Cogifer is the favoured service provider for the manufacturing and supply of turnouts for high-speed rails on ballasted or concrete slab track.

Our turnouts can be installed on all types of laying situations by modifying the design as required.

▶ **High-performance drive systems for improved track reliability, availability, maintainability and safety**

To meet the needs of railway infrastructures, Vossloh Cogifer has developed a range of drives that are adapted to the constraints of high-speed rail. The turnouts can be driven reliably in order to ensure safety on the network.

▶ **Integrated hydraulic drive**



▶ **Multiple drive system**



▶ **Integrated mechanical drive**



▶ **Single drive system**

