

A perspective view of railway tracks receding into the distance. The tracks are laid on a bed of grey gravel ballast. The sleepers are flat, rectangular concrete slabs. The rails are dark brown metal. In the background, there are utility poles and some buildings.

THE INNOVATION FOR BALLASTED RAILWAY TRACKS

**FLAT SLEEPERS
FOR NORMAL AND
METER GAUGE TRACKS**



vigier rail
SOLUTIONS OUT OF PASSION



FLAT SLEEPERS FOR NORMAL AND METER GAUGE TRACKS

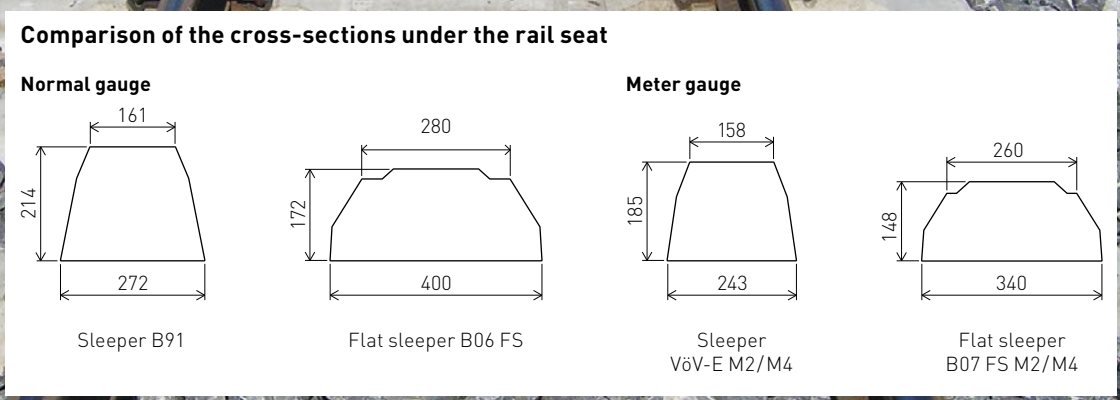
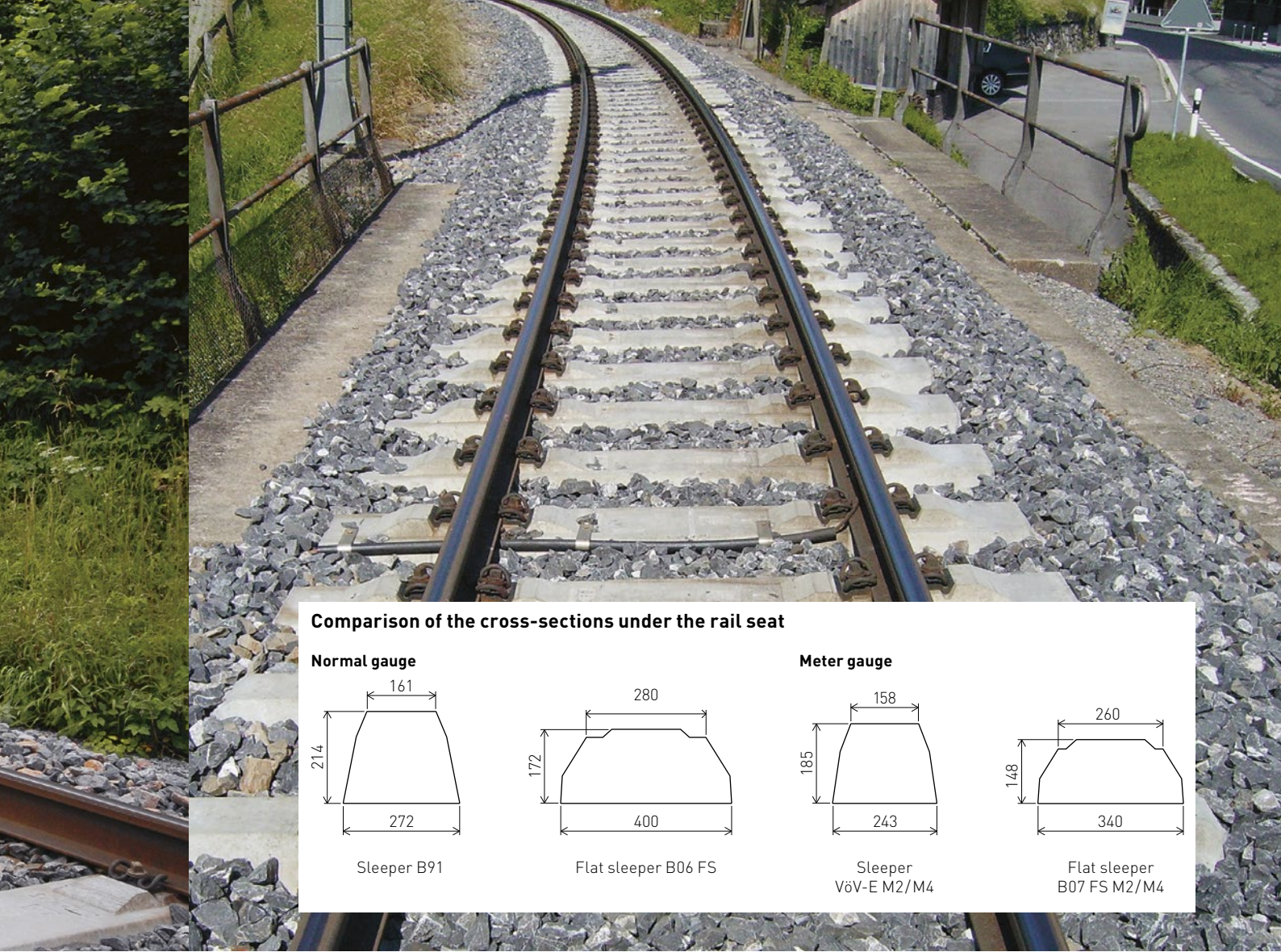
THE INNOVATION FOR BALLASTED RAILWAY TRACKS

The flat sleeper increases the economic efficiency of ballasted track. It is available for normal and meter gauge railway tracks and offers all the advantages of standard concrete mainline sleepers. At the same time the superstructure requires less maintenance.

Flat sleepers reduce the contact pressure between sleeper and ballast. They are wider and less height than standard concrete mainline sleepers. As a result, loads are distributed better into the ground. The ballast is therefore put under less strain and the tamping intervals can be extended.

These benefits can be further enhanced if the flat sleeper is equipped with elastic footing.

TECHNICAL DATA	NORMAL GAUGE		METER GAUGE
Sleeper types	B06 FS	B21 FS	B07 FS M2 / M4
Admissible axle load	225 kN	225 kN	160 kN
Track gauge	1435 mm	1435 mm	999 mm/1000 mm/1002 mm
Mostly used rails	54 E 2, 60 E 1	54 E 2, 60 E 1	54 E 2/49 E 1/46 E 1
Inclinations of rail seat	1:40	1:40	1:20 (M2) / 1:40 (M4)
Fastenings	Vossloh W14	Vossloh W14	Vossloh W14
Sleeper length	2600 mm	2400 mm	2000 mm
Sleeper width	400 mm	400 mm	340 mm
Sleeper height under rail seat	172 mm	172 mm	148 mm
Weight with fastening	361 kg	334 kg	204 kg
Spacing	600 mm	600 mm	600 mm



Characteristics

- Cost savings in maintenance because of increased tamping intervals, as the ballast is put under less strain due to lower contact area pressure.
- The subsoil is protected.
- Under stable subsoil conditions, the ballast height can be reduced.
- The lower sleeper height permits a reduction of the superstructure profile. This means that the sleepers can be better applied for tunnel renovations and bridge areas.
- The lateral resistance is increased in comparison with standard concrete mainline sleepers.

Installation

You can install the flat sleepers using your tested machinery and techniques. To do so you merely need to make a few small adjustments in installation and construction-site logistics and in tamping technology.





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