



Strukton Rail Machines & Logistics

Flexible deployment of machinery throughout Europe

Strukton Rail has been investing in modern machinery ever since it was established. Strukton Rail currently manages, leases, operates and maintains a large and highly advanced machine pool, which is deployed internationally. This affords the company the flexibility to deploy its machinery and staff at the appropriate moment in those countries where it operates.

International profile

We perform construction and renovation activities and maintain railways in various European countries, though primarily in the Netherlands, Sweden, Norway, Denmark, Germany, Belgium and Italy. We possess the machinery required to carry out such operations. The fact that we also organise our own logistics, enables us to flexibly deploy this machinery throughout Europe. We primarily deploy several of our larger machines, such as the track renewal train and ballast cleaning machines, at a European level. Others, such as tamping machines, are available both internationally and locally.

Transport & logistics

We are also an internationally accredited rail operator, and have our own locomotives. This enables us to convey our machinery using our own locomotives and drivers. Our ability to carry out most of our own rail logistic activities renders us both independence and flexibility. We can basically transport a machine to any location where it is required. Furthermore, our own planning system enables us to reserve the required train paths in the Dutch rail network. We supply these logistic solutions to third parties throughout Europe, too.

Maintenance

Wherever possible, we carry out the maintenance of rail maintenance machinery ourselves, at sites including our workshops in the Netherlands, Germany and Sweden. These ensure that the equipment remains in perfect working order. However, a great deal of specific high-tech knowledge is required to perform the necessary checks and regular maintenance work. Our engineers therefore attend extensive training courses, some of which are organised by the manufacturers of the machinery in question.

Our workshop in the Netherlands (Zutphen) serves not only Strukton, but also various fellow rail contractors and operators. Test runs departing from the workshop are also organised in cooperation with third parties.

Innovation & quality

We regularly invest in new machinery and innovative developments, such as GPS, monitoring and safety systems like ETCS. Our operations focus on demonstrable quality. The measurement equipment accurately records work executed on the track.

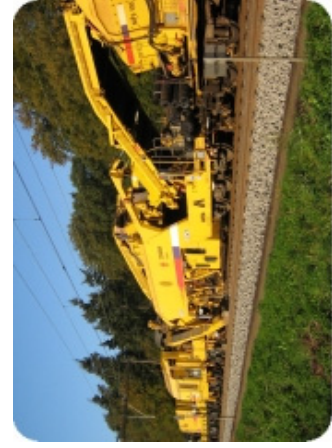


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Track & points renewal

Strukton has a type P95 track renewal train. This machine replaces both sleepers and rails in a simultaneous process at a rate of 350 m/h. Strukton also has two sets of Donelli PTH350 gantry cranes for the renewal and construction of tracks, while it has access through the MGW machine pool to thirteen UWGs for the transport and laying of points and track sections. Strukton has a tandem set of Gottwald GS 25.04T cranes for the mobile lifting and slewing of points and track components, as well as access to a Kirrow KRC 810 T and a Gottwald GS 40.08T through the MGW machine pool.



Ballast renewal

A ballast cleaning machine removes used ballast from beneath the sleepers and conveys it to a screen. The screen separates reusable ballast from the spoil. The reclaimed ballast is returned to the track, while the spoil is deposited in MFS wagons by means of conveyor belts.

Ballast cleaning machines

Strukton has its own C750 ballast cleaning machine, which has a maximum operating rate of 300 m/h and a screening capacity of 750 m³/h. It also has two RM80 ballast cleaning machines. Furthermore, Strukton has access to an RM860 ballast cleaning machine through its Italian partner CLF, as well as an RM95-700 and a ZRM79 ballast cleaning machine through the MGW machine pool. From 2010 onwards, Strukton's participation in the MGW machine pool will also provide it with accessibility to a RM95-800W. This machine is capable of washing ballast on-track, which means that highly contaminated ballast no longer needs to be disposed of completely.

Ballast removal system

Strukton has thirty MFS wagons of its own (16x MFSD33, 4x MFS33, 8x MFS100, 2x MFS100S) for the supply and disposal of (used) ballast and other superstructure materials. In addition, Strukton has a ULS3000D, which can be coupled between the MFS wagons to load high-sided wagons on the adjacent track as well as shifting loads up to a distance of 7.5 metres from the centre of the track. Strukton also has access to a type BLS2000 ballast transfer station and numerous MFS100 wagons through the MGW machine pool.



Catenary equipment

Strukton has an extensive machine pool for the construction, renewal and maintenance of catenary systems. The Gemma (FUM 100) catenary renewal and construction train is suitable for both the renewal and construction of catenary systems. This train can draw two wires simultaneously at a constant tension. Strukton also has three shuttle trains, four hydraulic platform wagons, a contact brush wagon, nine Rail-Road platform vehicles and 12 hydraulic platform vehicles (ten VRB 17 KL, one VRB 25 and one VRB 25 XL with a platform length of up to 15 metres and a maximum operating height of 10 metres).

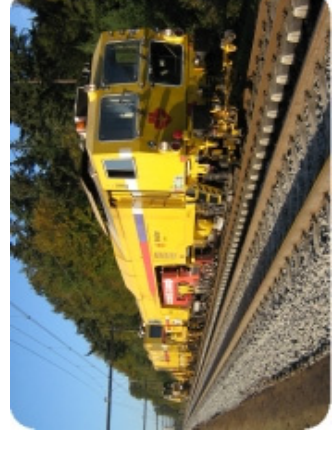


Tamping technology

Strukton has various types and sizes of tamping machines. Its largest tamping machine weighs 113 tonnes and is over 35 metres long. Its smallest weighs 7.6 tonnes and can be transported aboard a truck.

Large universal tamping machines

Strukton's large universal tamping machines are equipped with ALC and DAR systems and all have a broom housing for finishing of the tamped track. Strukton has four Unimat type 08-475/4S tamping machines, a Unimat 08-275/3s and a Unimat 08-275.



Continuous tamping machines

These tamping machines are used to raise, straighten and tamp the track. The continuous tamping machine (CSM) is equipped with a satellite, which enables it to tamp up to three sleepers simultaneously, depending on the type. A CSM propels itself forward gradually, while the tamping unit moves beneath it. Strukton has four CSM 09-3Xs, two CSM 09-32s and two CSM 09-16s.

Road-Rail tamping machines

These universal tamping machines can be transported either by rail or road aboard a low-loader, and are suitable for (points) tamping on heavy and light rail tracks, as well as tram and metro tracks. These four-axled machines have a maximum axle load of 12 tonnes. The 08-275 ZWY has an additional third arm, which is used to lift the third rail in points, as well as a Y-shift for squint sleepers. The machine is suitable for both 1,000 mm and 1,435 mm (grooved) rail. Strukton has one 08-275 ZWY and one 08-275/4ZW.



Small tamping machines

These tamping machines are transported by truck and can be flexibly deployed to tamp train, tram and metro tracks. Strukton has three Minima 2s for straight track, and one Unima GWS 75 for points.



Dynamic track stabilisers

Stabilisers can be deployed following the use of tamping machines. They increase both the lateral and longitudinal resistance of the ballast bed. The use of a dynamic track stabiliser helps minimise future subsidence of the ballast bed due to passing trains. Strukton has two dynamic track stabilisers: a DGS62N and a DGS42N.



Ballast regulators

Ballast regulators are deployed either before or after the track has been tamped. These machines distribute the ballast evenly and restore the ballast bed profile. With the exception of the SSPr21D, all of Strukton's ballast profilers are fitted with either a 5 or 10 m³ silo. Strukton has one USP2010SWS-2K, six SSPr10SWS, one SSPr21D (fitted with two brooms) and one R21LS (which can be transported aboard a low-loader).