



Machines the  
entire turnout



Can also be used during short  
track possessions (fast off-railing)



Usable on all  
train systems



Exact  
machining



Flexible  
deployment

# Flexis System Full Switch and Crossing Maintenance

Technical Datasheet

**vossloh**  
enabling green mobility



## Benefits

- / Precise surface machining
- / Flexible handling
- / Additional measuring technology: material removal, longitudinal profile, cross profile and eddy-current
- / Welding repair of individual defects
- / Grinding out of point-blade break-outs
- / Short possession times – suitable for use during normal operations
- / Minimal preparation required

## Applications

- / Mainline switches and crossings
- / Light rail switches and crossings
- / Vignoles and grooved rails
- / Compatible with track gauges of 891 mm to 1,676 mm
- / Material removal from preventive to corrective



### Flexis System: the all-round, hassle-free package for switches and crossings

The Flexis System provides the best possible switch and crossing maintenance, improving reliability and helping to avoid the replacement of individual components. The Flexis machines can handle every aspect of the entire maintenance cycle – from the initial removal of mill-scale and preventive grinding to cyclic and corrective machining. Here an analysis of the switch's condition is done beforehand to determine the amount of material that is to be removed.

## System Flexis

### Technical data

Dimensions	
Flexis machine (gauge corner / cross profile)	
Tare weight	steel 95 kg
Length	1,650 mm
Width	1,450 mm
Height	1,120 mm
Motor	air-cooled single cylinder, two-stroke motor
Fuel	petrol
Output	5.0 kW
Inclination angle	up to 90°
Features	grinds the entire rail; cross profile

Corrugation machine (running surface / longitudinal profile)	
Tare weight	106 kg
Length	2,065 mm
Width	650 mm
Height	830 mm
Motor	air-cooled single cylinder, four-stroke motor
Fuel	petrol
Output	8.1 kW
Inclination angle	45°
Features	grinds the entire rail head and the running surface

Deburring machine (burr)	
Tare weight	87 kg
Length	2,145 mm
Width	1,110 mm
Height	1,075 mm
Motor	air-cooled single cylinder, four-stroke motor
Fuel	petrol
Output	4.05 kW
Inclination angle	± 30°
Features	flexible horizontal and vertical adjustment of rail

All machines	
Speed	
Operating speed	manual feed
Weather constraints	
Max./min. operating temperature	+40° C to -10° C
Basic set-up of each machine and special features	
Standards	DIN EB8:B53N 13231-2:2020 DB Ril 824.4010 or customer specifications
Machinable rail types	UIC60, UIC54, S54, S49, grooved rails, special profiles (prior inspection required) and all types of Vignoles rails
Track gauges	891–1,676 mm
Frame	sturdy steel or aluminium frame with 4 track wheels on the frame's suspension
Measuring equipment	DQM and Miniprof (cross profile), WPG (eddy current) RM1200 (longitudinal profile/corrugations) RM 150 and PS10 (roughness), Neppel rail height measurement device and SRQ gauge
Material removal	up to 1.5 mm (up to 3 mm with individual defects)
Trackside switching equipment	trackside switching equipment, sensors, sound absorbers, check rails within permitted tolerances do not require removal
Personnel required (number and qualifications)	1 operator per machine and 1 operator for measurements team comprising 5 people: 2 corrugations, 2 Flexis, 1 measurements (foreman)
Machining residue	operators remove the residue (grinding dust) from all of the important areas of the switch and crossing and from around the track-switching equipment
Noise emissions	105 dB(A)
Suitability in tunnels	working in tunnels is possible (electrically-powered machines are available)
Extraction system	no dust extraction system, swarf is dispersed using leaf-blowers. Area is cleaned with a high- pressure cleaner and compressor



