



High Speed Grinding Machine HSG-city

Technical Datasheet

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HSG-city - the solution for preventive rail maintenance in local traffic. With its revolutionary working speed of 8 to 60 km/h, the HSG-city resolves easy to medium rail defects, reduces noise emissions by up to 10 decibels and leaves adapt flexibly to the timetable, without any track closures.

General Data

Dimensions	
Length without coupling	5,720 mm
Maximum width	2,113 mm
Maximum height	2,112 mm
Track gauge	1,435 mm (standard gauge) or 1,520 mm (wide gauge)
Wheelbase	2,600 mm
Wheel diameter	ø ~ 430 mm

Speed

Grinding speed	8–60 km/h
Driving speed	max. 60 km/h

Weight

Tare weight	10 t
Overall weight	12 t
Axle load	≥ 5 t
Weight per meter	1.75 t/m

On-board systems

Diesel generator	24 kW
Diesel tank	180 l
Quality monitoring systems	4 kW (10,8 cm ³ /u)
Hydraulic fluid	biodegradable

Grinding Process

Required traction power	min. 170 kW
Brake system	railway or truck operating brake manual parking brake
Roughness after grinding	< 10 µm
Nonstop grinding	up to 30 km
Grinding stone renewal	15 minutes (48 pieces), from within the vehicle. Total on-board 186 pieces
Crew	1 grinding operator (plus 1 driver)

Infrastructure Data

Grindable rail type	flat bottom rail, grooved rail, all track categories, tunnel suitable for all track categories
Smallest traversable curve radius - grinding beam up	transport mode ≥ 18 m
Smallest traversable curve radius - grinding beam down	operating mode ≥ 30m
Traversable uphill/downhill gradient	≤ 90 ‰
Convex vertical curvature	≥ 500 m
Concave vertical curvature	≥ 300 m
Structure gauge	narrow tram, e.g. Berlin tight metro, e.g. London Tube
Shunting slopes	traversing not permitted
Homologations	BOStrab & EBO

Climatic Conditions

Ambient temperature grinding mode	-10 °C to +40 °C
Ambient temperature on sidings	-25 °C to +40 °C

Grinding Units

Length over grinding beams	1,687 mm
Number of grinding beams	2
Number of racks per grinding beam	2
Number of grinding stones per rack	12
Number of grinding stones per grinding beam	24
Grinding area flat-bottom rail	85° (at gauge corner) to 40° (field side)
Grinding area grooved rail	35° (at gauge corner) to 6° (field side)