Removing greasy residues

Technical Datasheet

vossloh
enabling green mobility

Benefits

/ Maintains operational reliability
/ Improves traction during starting and stopping
/ Improves passenger comfort and significantly reduces noise emissions
/ Minimal operational complication costs (de ployable during train service, removal of switching equipment not required and no sub sequent clean-up required)
/ Extension of the rail service life

Applications

/ All types of rail networks
/ Vignoles and grooved rails (HSG-city)
/ Track gauge: 1,435 mm

HSG: Special autumn program for safe and reliable operations

In autumn, damp and leaves that have fallen from the trees are ground under the wheels of rail vehicles and mix with other substances to form a greasy film on the rails. This causes numerous problems for rail transport operations. The reduced friction due to insufficient wheel-rail contact makes braking distances longer, and when accelerating from a standstill – especially on sloping track – the wheels on traction vehicles can slip and cause flat spots or wheel burn on the rails. Furthermore, greasy residues can also have a negative impact on switching equipment, which disrupts railway operations. Regular HSG deployments remove this greasy residue in 1 to 3 passes and rule out any adverse effects, and network operators profit from improved traction and a lightly roughened surface finish. And thanks to its high operating speed, High Speed Grinding technology can also be used during normal railway operations.

Vossloh Rail Services GmbH • Hannoversche Str. 10 • D-21079 Hamburg
Phone +49 (0) 40 430931-0 • sales.ls@vossloh.com • vossloh.com

HSG-city
Technical Data

Main dimensions	
Length over buffers (without coupling)	5,720 mm
Height	2,112 mm
Width	2,113 mm
Number of bogies, number of axles	2
Wheelbase between bogie pins	no bogies
Distance between axles on bogie	2,600 mm
Loading gauge / structure gauge	narrow tram, e.g. Berlin's "tight" metro, e.g. London's Deep Tube

Speed	
Hauling speed as part of train set	must not be placed inside train set; end vehicle only
Hauling speed	60 km/h
Operating speed	between 8 and 60 km/h

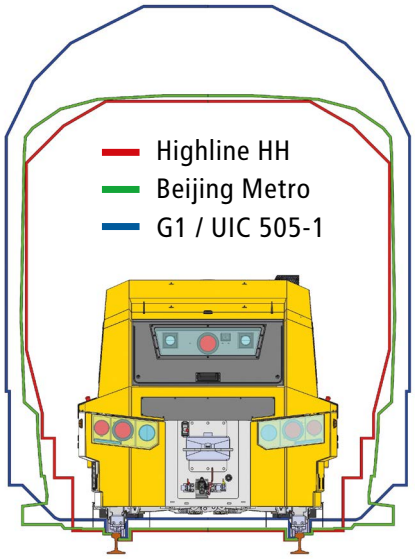
Weight	
Tare weight Max. permitted overall weight	approx. 10 t approx. 12 t
Maximum weight per meter	4.8 t
Maximum axle load	6.5 t

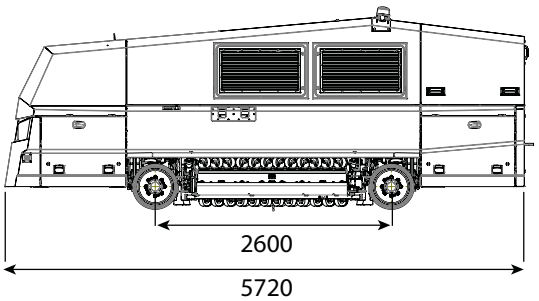
Brake system	
Brake system type	HSG-city 12: Truck and railcar, II71414/V control valve and 9710021500 tractor/trailer brake valve HSG-city 13: Railcar II71414/V control valve and dual circuit brake truck as well as manual parking brake on HSG-city 12 and HSG-city 13
Braked weight	8 t
Braked weight percentage (calculated using the braked weight and weight of the railcar)	80

On-track operability	
Shunting maneuvers not permitted (e.g. hump-shunting or loose shunting)	not permitted
Smallest traversable curve radius (transport / operating mode)	transport mode Ra 18 operating mode Ra 30
Max. uphill and downhill gradients / cant	40 ‰ uphill and downhill
Transport inside train set/ end vehicle	non-powered auxiliary vehicle according to DIN EN 14033

Weather constraints	
Ambient temperature (operating mode)	grinding mode: -10 °C to +40 °C snow: only driving is permitted, grinding work is only permitted when there is no snow

Equipment and features	
Performance data	1 grinding beam per rail, 24 grindstones per beam (12 in use, 12 as replacements)
Material removal	max. material removal per pass 0.01 mm
Applicable standards	DB Ril 824, EU Norm 13231:2-2020
Personnel / machine operators / assistants (number and qualifications)	2 personnel for operation
Non-powered auxiliary vehicle	DIN EN 14033
Dust container	4 integrated containers





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HSG-2
Technical data

Main dimensions (machining vehicle / support vehicle)	
Length over buffers (LoB)	44.28 m (24.64 m / 19.64 m)
Height	4,248 mm
Width	2,982 mm
Number of bogies | Number of axles	4|8 4|16 (operating mode)
Wheelbase between bogie pins	18,500 mm / 14,600 mm
Distance between axles on bogie	1,800 mm
Loading gauge / Structure gauge	G 1 / UIC 505-1

Speed	
Self-propelled	no
Transport speed	120 km/h
Max. speed when hauled	120 km/h
Operating speed	60–80 km/h

Weight (machining vehicle / support vehicle)	
Tare weight Max. permitted overall weight	120 t (75 t / 45 t) 152 t (80 t / 72 t)
Maximum wheelset load	21 t

Brake system	
Brake system type	KE GP-A disc brakes
Braked weight	G 139 t / P 139 t
Braked weight percentage (calculated using the braked weight and weight of the railcar)	91

On-track operability	
Shunting maneuvers not permitted (e.g. hump-shunting or loose shunting)	not permitted
Smallest traversable curve radius (transport / operating mode)	transport mode – Ra 150 operating mode – Ra 180
Max. uphill and downhill gradients (transport / operating mode)	40 ‰ uphill and downhill – depending on traction type
Transport inside train set	end vehicle only
Max./min. Ambient temperature (operating mode)	not dependent on weather conditions

Equipment and features	
Automatic Train Control	none

Operating parameters	
Applicable standards	DB Ril. 824.4015 A02 DIN EN 13231-5:2018-08 B6
Transverse profile grinding zone possible	Z-8 to Y+14
Personnel / machine operators / assistants (number and qualifications)	4 personnel for operating shift and 2 personnel for maintenance shift

Applications	
Preventive grinding for DB Netz AG	
Max. rail length	35 km
No. of passes	3
Grinding wheel configuration	course / course / medium-fine
Material removal	0.1 mm measuring points at Y-10 / Y-20
Other applications	
Customized operation available on request	

Traction requirements	
Up to 12.5 ‰	1,500 kw
Up to 20 ‰	2,200 kw
Up to 40 ‰	5,300 kw

Line-side watering system	
Length over buffers (LoB)	14,190 / 20,220 / 14,190 mm
Width	3,140 mm
Number of bogies | Number of axles	2|4 2|4 2|4
Wheelbase between bogie pins	9,150 / 14,600 / 9,150 mm
Distance between axles on bogie	1,800 / 2,000 / 1,800 mm
Loading gauge / Structure gauge	G 1
Max. transport speed inside train set	100 km/h
Max. speed when hauled	100 km/h
Tare weight Max. permitted overall weight	21|90 / 23|80 / 21|90 t
Brake system type	KE-GP-A 12"/ KE-GP-16"/ KE-GP-A 12"
Braked weight	58 / 53 / 58 t
Shunting maneuvers not permitted (e.g. hump-shunting or loose shunting)	not permitted
Transport inside train set or as end vehicle	not permitted
Automatic Train Control	none

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