

# ■ Railway projects



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# ■ Railway projects



ZAUGG AG EGGIWIL

Our core business is the clearing of snow on roads, ski slopes and railway tracks.

We plan and implement demanding snow clearance projects with various railway companies all over the world.

Thanks to the comprehensive knowledge and experience of our design team, our snow clearance vehicles and attachments are designed and built to the customer's specifications.

Driven by the desire to find the best solutions for our customer, top quality and all-round service are matters of course for us.

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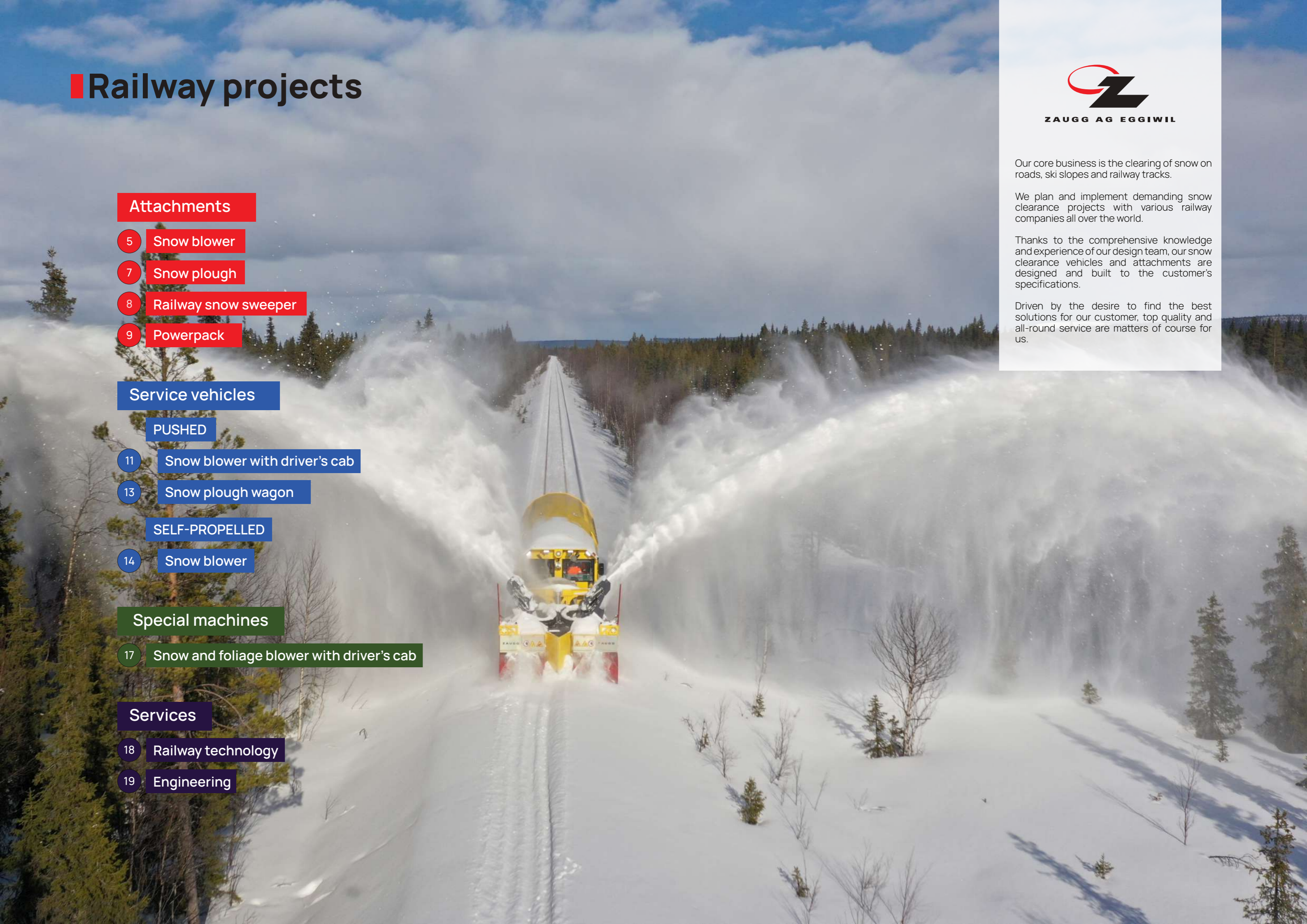
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# Attachments



ZAUGG AG EGGIWIL produces different versions of attachments that are tailored to individual needs and the customer's specific purpose of use. Different wishes and requirements are accommodated flexibly, from planning to manufacture.



Zentralbahn (SUI)  
Wolfenschiessen-Engelberg

## Snow blower SF 72-70

Attachments

Snow blower

The snow blower clears the snow above the track (from 10 mm above the ToR) with extended snow blowing units up to a width of 4.55 m or with retracted snow blowing units up to a width of 3.15 m and a height of approx. 1.3 m.

The two units can each be driven outwards by 700 mm, independently of each other. With the lifting device, each snow blower can be raised individually to 600 mm above ToR (measured from the lower edge of the snow blower).

The snow blower is equipped with a wearable steel blade. The distance of the wearable blade from the top of rail can be set by adjusting the vehicle's lifting device.

### Technical Data

Cutter reel diameter	Ø 720 mm
Centrifugal wheel diameter (incl. automatic safety clutch for the centrifugal wheel in case of overload)	Ø 700 mm
Clearing width, blower unit retracted	3'150 mm
Cutting/clearing width «1st cut»	3'150 mm
Clearing width, blower unit extended	4'550 mm
Clearing height (from ToR, unit fully lowered)	1'030 mm
Required output	170 kW
Clearing capacity	approx. 1'940 t/h
Weight (Snow blower incl. lifting device)	approx. 2'500 kg



 **SBB CFF FFS**

**SBB**  
Schweizerische  
Bundesbahnen

Country: Switzerland  
Commissioning of the 6  
machines: 2019 - 2022



## Snow blower SF 115-125

Attachments

Snow blower

The snow blower clears the snow above the track with extended snow blowing units up to a width of 4.80 m or with retracted snow blowing units up to a width of 3.12 m and a height of approx. 1.6 m.

The two units can each be driven outwards by 900 mm, independently of each other. With the lifting device, each snow blower can be raised to 500 mm above ToR.

### Technical Data

Cutter reel diameter	Ø 1'150 mm
Centrifugal wheel diameter (incl. automatic safety clutch for the centrifugal wheel in case of overload)	Ø 1'250 mm
Clearing width, blower unit retracted	3'000 mm
Clearing width, blower unit extended	4'800 mm
Clearing height (from ToR, unit fully lowered)	1'600 mm
Clearing height (from ToR, unit fully raised)	2'100 mm
Required output	300 kW
Clearing capacity	approx. 3'000 t/h
Weight (Snow blower incl. lifting device)	approx. 4'500 kg



**JBV**  
Jernbaneverket  
Country: Norway  
Commissioning:  
2009

## Wedge-shaped plough K10-Vario

Attachments

Snow plough

The wedge-shaped plough K10-Vario with its rounded plow shape is designed for variable clearing duty with two plough wings. The snow plough is fastened using Gjerstad mounting points.

By means of the hydraulically adjustable plough wings, the wedge-shaped plough can be adjusted so that the snow is shifted to the left or to the right. The snow can be transported in a V-shape (monitoring the intermediate positions is possible). The swivel cylinders are secured using pressure control valves.

Using the lifting/lowering device, the plough can be raised to approx. 160 mm above the top of rail. The wedge-shaped plough is equipped with PUR wearable blades and the distance from the front plough's blades to the ToR can be adjusted by means of adjustable castors.

The track plough is fitted directly behind the wedge-shaped plough. It is raised hydraulically while sensors monitor its position and indicate it on the display. The track plough's wearable blade is made of high-strength plastic, wherein the precise (optimal) shape is individually agreed upon. The track plough is equipped with an adjustable overload protection.

### Technical Data

Clearing width	2'920 mm
Clearing height, front	1'020 mm
Clearing height, rear	1'230 mm
Weight	1'620 kg



**SOB** SÜDOSTBAHN

**SOB**  
Schweizerische  
Südostbahn  
Country: Switzerland  
Commissioning of the  
2 machines: 2014



# Railway snow sweeper KM90

Attachments

Railway snow sweeper

The railway snow sweeper is equipped with a hydraulically driven brush roller with infinitely adjustable rotary speed and is driven by laterally mounted constant hydraulic pumps. The parallelogram with lifting cylinder allows the lifting and lowering of the railway snow sweeper. It is attached using the Gjerstad attachment points on the service vehicle.

## Technical Data

Blade width	2'300 mm
Brush diameter	910 mm
Blade angle	+/- 26°
Working width at 0°	2'265 mm
Working width at 26°	1'980 mm
Weight	1'350 kg



**SOB SÜDOSTBAHN**

**SOB**  
Schweizerische  
Südostbahn

Country: Switzerland  
Commissioning of the  
2 machines: 2014

# 170 kW powerpack

Attachments

Powerpack

The powerpack autonomously supplies device attachments with hydraulic power. The diesel engine drives the hydraulic pumps directly via the clutch. The pumps are connected at the connection panel, where the hydraulic power can be drawn from. The powerpack is operated by the control panel in the cab.

## Technical Data

Diesel engine type	MTU 4R1000C50 Stage V / Tier 4f
Engine output	170 kW / 231 HP at 1'800 rpm
Fuel capacity	Diesel 160 l / AdBlue 25 l
<b>Pumps</b>	
Working/operating hydraulics	triple variable displacement pump 78+78+45 cm <sup>3</sup>
Working hydraulics	max. 300 bar and 150 l/Min at 2'000 rpm
Operating hydraulics	max. 260 bar and 90 l/Min
Hydraulic oil tank	72 l
Length	2'600 mm
Width	1'600 mm
Height	1'500 mm
Weight	approx. 2'500 kg



**SBB CFF FFS**

**SBB**  
Schweizerische  
Bundesbahnen

Country: Switzerland  
Commissioning of the 6  
machines: 2019 - 2022



# Service vehicles



ZAUGG AG EGGIWIL produces different versions of vehicles that are tailored to individual needs and the customer's specific purpose of use. Different requirements and existing infrastructures are accommodated flexibly, from planning to manufacture. Examples of ideas:

- Blower
- Rotating stamp
- Hydraulically or mechanically driven
- With or without driver's cab
- Track widths of varying sizes
- With or without cog wheel



Rhaetian Railway RhB  
Canton of Graubünden (CH)

## Snow Blower SF 120-100

Service vehicles

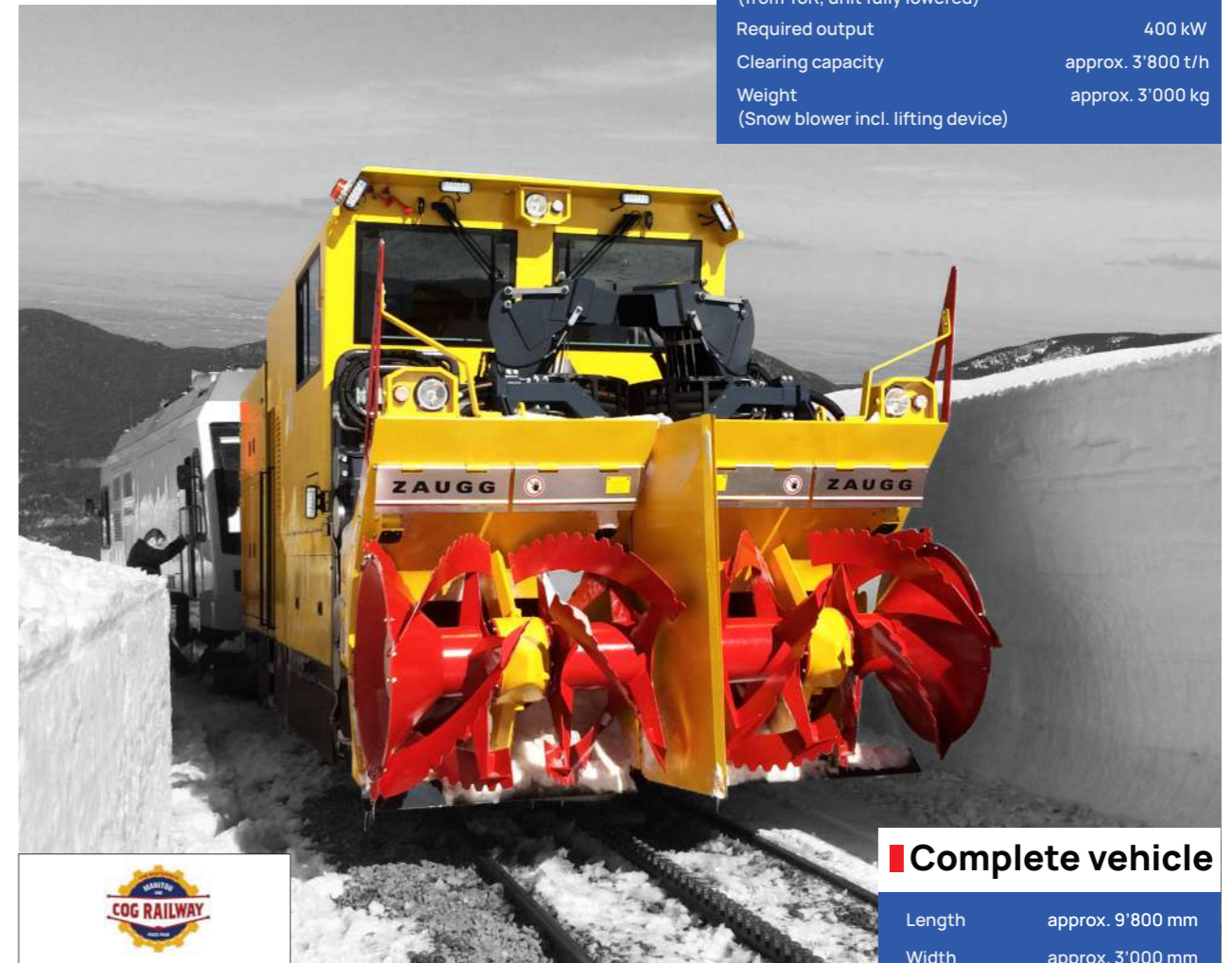
PUSHED

Snow blower  
with driver's cab

The snow blower is pushed by a locomotive and driven by a Cummins QSX15 internal combustion engine with an output of 447 kW. The travel control of the locomotive takes place from the control console in the cab of the snow clearance vehicle and the snow blower is driven hydraulically.

### Technical Data

Cutter reel diameter	Ø 1'200 mm
Centrifugal wheel diameter (incl. automatic safety clutch for the centrifugal wheel in case of overload)	Ø 1'000 mm
Clearing width, blower unit retracted	2'900 mm
Cutting/clearing width «1st cut»	3'500 mm
Clearing width, blower unit extended	5'900 mm
Clearing height (from ToR, unit fully lowered)	1'600 mm
Required output	400 kW
Clearing capacity	approx. 3'800 t/h
Weight (Snow blower incl. lifting device)	approx. 3'000 kg



### Complete vehicle

Length	approx. 9'800 mm
Width	approx. 3'000 mm
Height	3'900 mm
Axle distance	4'000 mm
Weight	approx. 23'000 kg



**MPPR**  
The Broadmoor Manitou  
and Pikes Peak Railway

Country: USA  
Commissioning:  
2021



## Snow blower SF90/120-125

The snow blower is pushed by a locomotive and driven by a 900 Volt rotary current motor with an output of 400 kW. The travel control of the locomotive takes place from the control console in the cab of the snow clearance vehicle and the snow blower is driven mechanically. The vehicle additionally has a railway switch cleaning device.

Service vehicles

PUSHED

Snow blower  
with driver's cab



**GGB**  
Gornergrat Bahn  
Country: Switzerland  
Commissioning:  
2018



### Technical Data

#### Complete vehicle

Length	8'110 mm
Width	3'100 mm
Height	3'770 mm
Axle distance	4'000 mm
Weight	approx. 18'800 kg

Cutter reel diameter, top	Ø 900 mm
Cutter reel diameter, bottom	Ø 1'200 mm
Centrifugal wheel diameter (incl. automatic safety clutch for the centrifugal wheel in case of overload)	Ø 1'250 mm
Clearing width, blower unit retracted	3'100 mm
Cutting/clearing width «1st cut»	3'600 mm
Clearing width, blower unit extended	4'100 mm
Clearing height from ToR, unit fully lowered	2'280 mm
Clearing height from ToR, unit fully raised	3'000 mm
Required output	300 kW
Clearing capacity	approx. 3'000 t/h
Weight (Snow blower incl. lifting device)	approx. 4'500 kg

## Snow plough K20-Vario

The snow plough waggon is pushed by a locomotive and all hydraulic functions are driven by an electric motor. The hydraulic functions are controlled via the portable control console in the locomotive cab. Directions changes of the snow plough waggon can be performed by means of a rotating stamp (rotation is possible up to 25 per mill).

Service vehicles

PUSHED

Snow plough waggon

### Technical Data

#### WAGON

Track	1'000 mm
Axle distance	3'500 mm

#### SNOW PLOUGH

Clearing width	3'300 mm
Clearing height	1'500 mm
Lifting height of plough	360 mm

A snow blower can also be mounted instead of a wedge-shaped plough.



**ZSSK**  
Železničná spoločnosť  
Slovensko  
Country: Slovakia  
Commissioning:  
2021



#### Complete vehicle

Length	9'180 mm
Width	2'200 mm
Height	2'600 mm
Weight	approx. 11'350 kg



# Snow Blower SF 120-125

Service vehicles

SELF-PROPELLED

Snow blower

The four-axle, self-propelled snow blower ZRR10000M (ZRR stands for "ZAUGG Rolba Railway"; M for "MATISA") is driven by two Caterpillar diesel engines C18 Stage V, each driven with 470 kW output. To change the working direction, the superstructure can be swivelled by 180° on the slewing ring.

The two snow blower units can be adjusted both in height and horizontally and the ejection chutes can also be adjusted individually. In running mode, the snow blower units are completely retracted and positioned above the top of rail so that they comply with the structure gauge. Various positions of the snow blower units can be directly called up using programmable pushbuttons. The adjustable snow blower unit allows faster track clearance and requires less driving force.

A hydraulically adjustable track plough is mounted at the rear of the superstructure. This can be adjusted in height from the driver's cab, slewed to the left and right in the clearing direction or aligned towards the front in a wedge shape.

## Technical Data

Cutter reel diameter	Ø 1'200 mm
Centrifugal wheel diameter (incl. automatic safety clutch for the centrifugal wheel in case of overload)	Ø 1'250 mm
Clearing width, blower unit retracted	3'000 mm
Cutting/clearing width «1st cut»	3'600 mm
Clearing width, blower unit extended	5'800 mm
Clearing height (from ToR, unit fully lowered)	1'800 mm
Required output	800 kW
Clearing capacity	approx. 8'000 t/h
Weight (Snow blower incl. lifter)	approx. 6'500 kg



**TRAFIKVERKET**  
**Trafikverket**  
 Swedish Transport Administration  
 Country: Sweden  
 Route: Malmbanan,  
 Mittbanan,  
 Haparandabanan  
 Delivery of the 3  
 machines: 2016 - 2021

## Complete vehicle

Length	approx. 16'500 mm
Width	approx. 3'100 mm
Height	4'300 mm
Distance between pivot pins	7'800 mm
Weight	approx. 71'100 kg



## From Eggiwil all over the world

ZAUGG AG EGGIWIL is one of the world's leading companies in the development and manufacture of high-end equipment for snow clearance on roads, railways and airports and the preparation of ski slopes. The range is complemented by special machines for municipal technology.



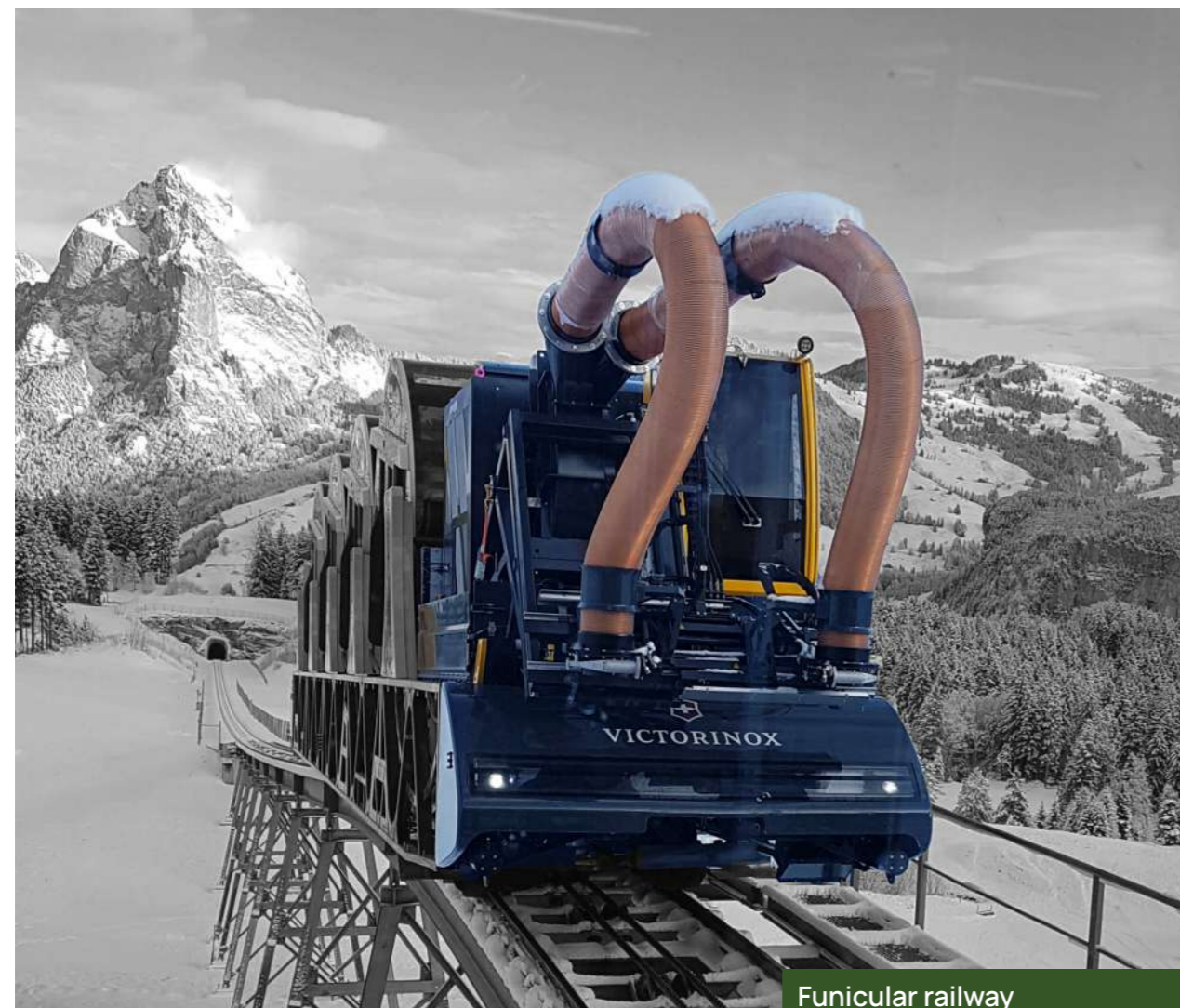


# Special machines



On request, ZAUGG AG EGGIWIL produces different versions of railway vehicles and special device attachments for the customer's specific purpose of use. These can be built individually both with and without a driver's cab.

Different requirements and existing infrastructures such as cable cars, people movers, monorails, etc. are accommodated flexibly, from planning to manufacture.



Funicular railway  
Schwyz-Stoos (SUI)

## Snow and foliage blower

The snow and foliage blower clears the snow above the track and between the retaining rollers. The two nozzles can be adjusted in width independently of each other. The maximum width adjustment is 4'700 mm.

The height adjustment of the nozzles is continuously variable. The maximum nozzle height adjustment is 1'160 mm. The slewing range of each individual nozzle can be adjusted.

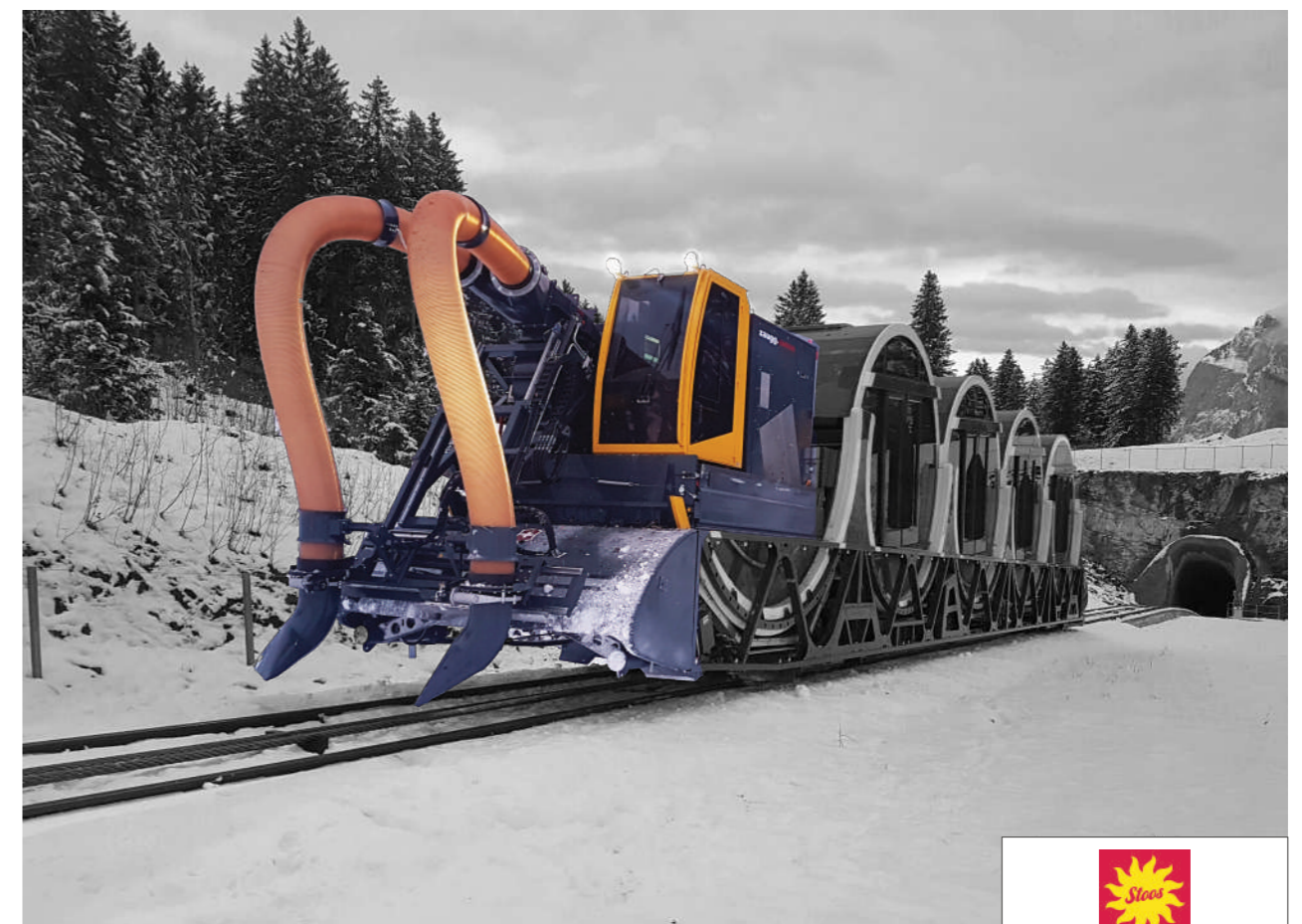
Service vehicles

Snow and foliage blower with driver's cab

### Technical Data

Fan speed	max. 3'700 rpm
Volumetric flow rate	20'000 m <sup>3</sup> /h
Air exit speed at the nozzle	400 km/h
Weight	4'800 kg

Machine can also be built without a cab.



Stoosbahnen

Country: Switzerland  
Commissioning:  
2019



# Services

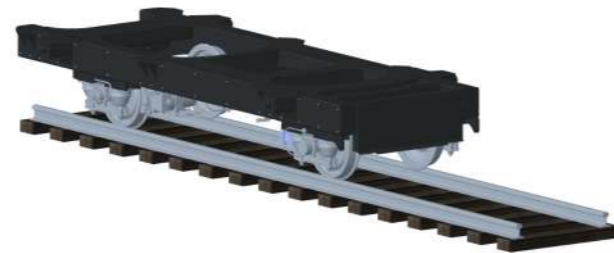
## Railway technology

Thanks to its competence, knowledge and experience, ZAUGG AG EGGIWIL has an international reputation as a renowned company with great experience in railway technology.

Customers benefit from the following services and advantages:

- Support for projects such as inspections/ refits, conversions, upgrades, etc.
- Advice and assistance with regard to applicable standards and laws
- Design and production according to individual customer needs
- Creation of detailed documentation
- Obtaining necessary approvals

3D drawings of customer-specific projects



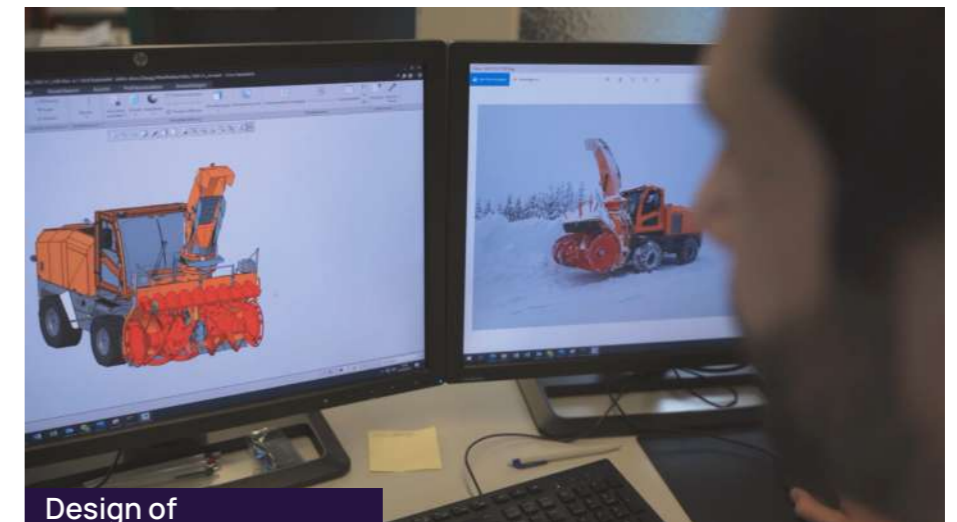
Track plough  
Stuttgarter Tram Plc.

## Engineering

ZAUGG AG EGGIWIL has seen strong growth in the engineering area in the past years and has made a name for itself internationally here, too.

The following services are offered on request:

- Calculations of individual projects
- Development in the field of mechanical engineering, vehicle technology, railway technology, etc.
- Design of individual projects
- Creation of drawings

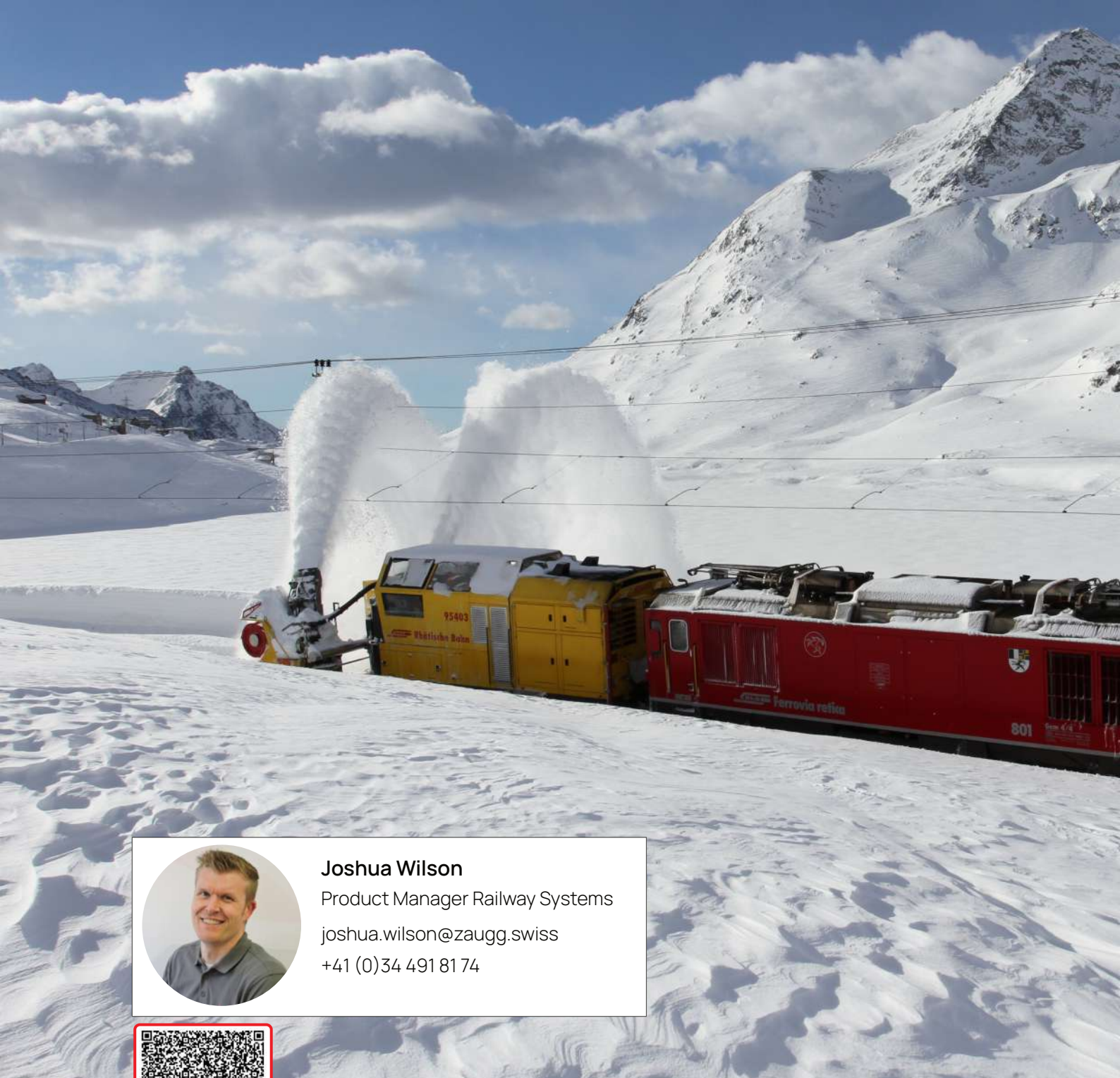


Design of individual projects



Creation of drawings





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