

Blast cleaning of wheel sets

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A fully automated drive through blasting cabinet for blast cleaning of the rolling stock wheel sets.

Contents of delivery:

- isolated blasting cabinet
- pneumatic lifting doors
- CNC controlled nozzle movement in 3 D with servo motors and CNC controls
- rotating devices of the wheel set
- loading and unloading devices of the wheel set
- recycling of the blasting media (cyclone and filter)
- PLC-controls with a touch screen

Advantages:

- replaces heavy manual blast cleaning work
- uniform surface quality and exact blasting results are achieved by CNC-controlled nozzle movements
- ease of operation is characterized through fast and easy programming
- quiet and dust free operation, noise level less than 80 dB (A)
- robust structure guarantee a reliable and secure production
- high productivity and flexible in production
- possibility to use various blasting media: steel grit, aluminium oxide, glass beads and plastic media



The machine works dust free because of the effective ventilation of the cabinet. When opening the lifting doors no dust comes out from cabinet to environment.



The wheel sets with brake discs can be blast cleaned partially or completely according the actual need.

There are different models available according the layout and the needed capacity, like the drive through model or cabinet which is loaded and unloaded on one side.



A wheelset on a wagon in the cabinet



A wheelset in a drive through cabinet

Model FB-4200-3D-1

Blasting nozzles	1 pc.
Cycle time	18-20 min
Max. weight of wheel set	1500/3500 kg
Noise level	under 80 dB(A)
Diameter of the wheel	590-1500 mm
Dust content in outcoming air	Under 1 mg/m3

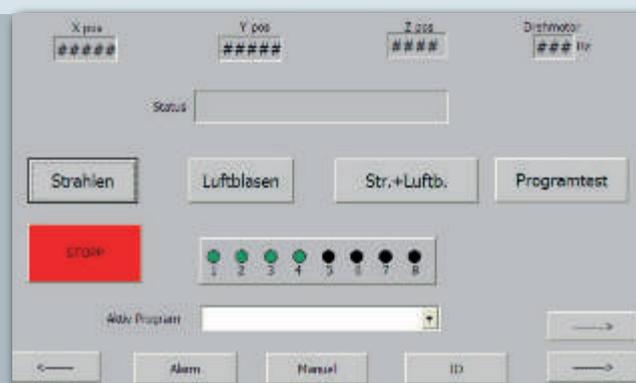
Model FB-4200-3D-2

Blasting nozzles	2 pcs.
Cycle time	9--10 min
Max. weight of wheel set	1500/3500 kg
Noise level	under 80 dB(A)
Diameter of the wheel	590-1500 mm
Dust content in outcoming air	Under 1 mg/m3

The machines are designed to clean the wheel set before the crack initiation test. They are reliable in work. They remove all old paint, rust and other contaminants. The produced surface is uniform and even day after day. The produced surface roughness fulfills the requirements of the VPI. Custom made options are offered by request.



The control box has switches to run the motors in manual mode and a touch screen for starting the blasting process in automated mode.



The touch screen is very user-friendly. The programming of the nozzle path is easy and saved blasting programs can be loaded from the memory.

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Finnblast is a Finnish, private owned company and we have nearly 30 years experience in the blasting technology. During the years we have delivered over 400 automated applications to more than 20 countries. In quality You can rely on!

Our product range covers:

- automated, compressed air driven blast cleaning machines
- blast cleaning rooms with manipulators or robotic blasting devices
- wheel blast machines
- filters and cyclones for dust separation
- drying ovens for blast cleaning machines



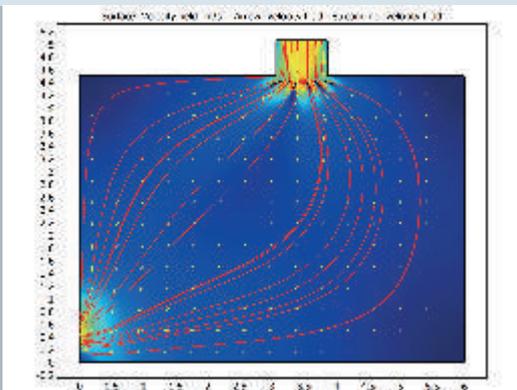
A blasting cabinet with a robotic blasting device. Blasting media is ceramic beads and dry ice.



A blasting room with a fully automated blasting device for large rolls.



An overhead conveyor wheel blast machine with 3 blast wheels.



Simulation of the dedusting of the blast cleaning machines

The blasting process produces a lot of dust, which is not allowed to spread to the environment. In designing the de-dusting and the ventilation, we use a simulation software (CFD, Computational fluid dynamics). With the help of this software we are able to build the blasting machine so, that dust will be removed fast and in a most effective way from the machine.

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