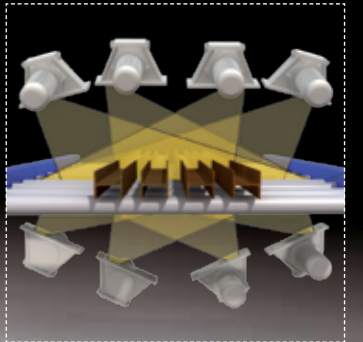


to technical alterations • 03/10 • © Wheelabrator Group



Roller Conveyor Type HD



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Noric Group is the parent company of DISA and Wheelabrator.

Roller Conveyor Type HD



Type HD

- 1 Light barrier
- 2 Turbine wheel
- 3 Abrasive control unit
- 4 Abrasive silo
- 5 Abrasive reclaimer
- 6 Impact separator
- 7 Bucket elevator
- 8 Fan for Air-Shoc Filter
- 9 Pre-separator
- 10 Safety filter
- 11 Dust bag
- 12 Abrasive removal unit

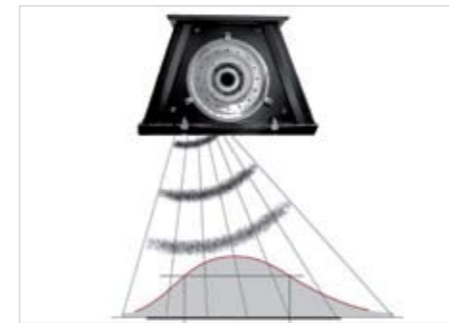
The HD roller conveyor range demonstrates the highest performance variants of this machine type for blasting sheet metal and profiles. The main difference of this machine to others offered in the marketplace is the angled arrangement of the shot blast wheels on the top of the machine. This arrangement reduces the build up of abrasive on the sections of longer profiles. By using this method a significantly larger percentage of the blasting energy is used on the main task, i.e. de-rusting and scale removal from sheet metal and profiles, and avoids creating mass piles of abrasive.

In practise, the HD roller conveyor machine with angled wheels blasts between 5 and 20% quicker than a roller conveyor with shot blast wheels that are installed straight. HD roller conveyors are used where high through feed speeds and longer maintenance intervals are necessary.

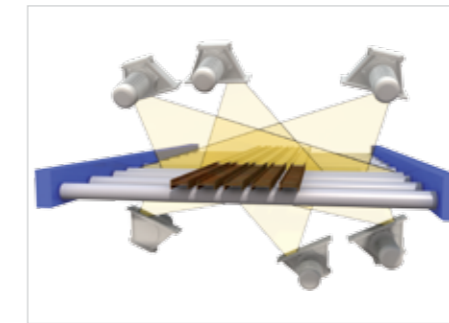
With these features, this machine is particularly useful for integration into fully automatic production lines. The HD roller conveyor range can be delivered with widths from 1,500 – 4,000mm. All of the machines in this range are suitable for shot blasting sheet metal as well as profiles.

HD roller conveyors are principally fitted with the latest version of the TITAN shot blast wheel. There are of course many options available for these roller conveyors, such as automatic blast wheel shut off for products that do not cover the full width of the machine, blasting pattern adjustment of the external blast wheels or automatic separation of bore and saw chips.

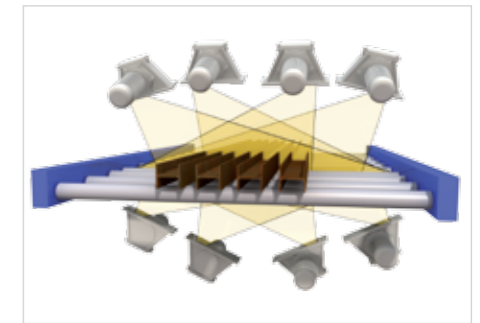
Technical data



TITAN blast wheel 15.3



6 wheel blasting



8 wheel blasting

| Type HD | | RB 1500HD | RB 2000HD | RB 2500HD | RB 3000HD | RB4000HD |
|---|----|-------------|-----------|----------------|----------------|-------------|
| Entrance | | | | | | |
| Width | mm | 1600 | 2100 | 2800 | 3300 | 4300 |
| Height | mm | 550 | 550 | 550 | 550 | 550 |
| Work speed to achieve a cleaning of B Sa 2.5 ISO 8501 | | 1.5 - 4.5 | 1.8 - 5.0 | 1.0 - 3.0 | 0.8 - 2.5 | 0.8 - 2.0 |
| Number of wheels x power | kW | 4 x 15/18.5 | 6 x 15 | 6 x 11/15/18.5 | 6 x 15/18.5 | 8 x 11/15 |
| Wheel optional | kW | 4 x 30 | 6 x 18.5 | 8 x 18.5/30 | 8 x 15/18.5/30 | 8 x 18.5/30 |
| Roller pitch | mm | 800 | 800 | 750 | 750 | 750 |
| Alternative pitch | mm | 400 | 400 | 500 | 500 | 500 |
| Upper edge roller conveyor variable | mm | 640 | 865 | 900 | 900 | 900 |
| Height of machine | mm | 5950 | 6600 | 7300 | 7300 | 7300 |
| Foundation pit required | | Yes | Yes | Yes | Yes | Yes |

Features



Shot blast wheel

The blast wheel is the heart of the blasting machine, as the choice of blast wheel determines the power output and the economics of the roller conveyor.

The **HD range** is fitted with **TITAN** shot blast wheels as standard, which are a further development from the shot blast Type 5 wheel. The **TITAN** wheel offers excellent blasting performance and **unbeatable service** life for the main blast components, which are made from hardened tool steel. In addition to this, the **TITAN** offers even **more wall strength** through its wear lining, which creates an airtight and completely insulated housing as well as **easing maintenance** and repairs. For the **TITAN** blast wheels, there is a full range of variations available, this ensures the chosen blast wheel is specific to the job in hand.

Shot blast cabinet

As with all Wheelabrator roller conveyors, the shot blasting cabinet is manufactured **completely from manganese**. Manganese has a property which is hard enough to deal with the shot blasting from 35HRC to more than 50HRC. Therefore manganese has **extremely good blasting properties**.

The HD machines, with their **angled blast wheels** on top, have a significantly bigger blast room area than those with straight blast wheels fitted. This ensures the abrasive is spread over a bigger area, which leads to **longer maintenance intervals**. To protect against blasting, the whole of the inside of the HD machines are fitted with interchangeable 10mm thick manganese plates. The attachment of these can be chosen individually (screws, hung or stapled).

When aggressive shot is used, additional lining of manganese, tool steel or cast material can be provided.

To avoid shot leakage, several rubber layers or Vulkolan curtains are fitted in areas of heavy wear. These are mounted in a **V-Track** and can be easily replaced.

Abrasive removal unit

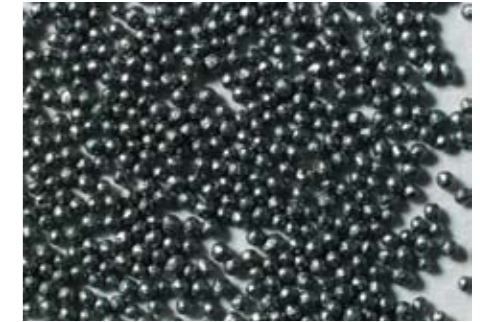
After the blasting process, the workpiece may still be covered in a lot of blast media, which must be cleaned off.

This task is carried out by a **rotating brush**, which is fitted with securely attached brush segments, which are interchangeable. To avoid blast media building up on long parts, the rotation brushes flick the spent abrasive from the work surface into a specially designed trough which has a **screw conveyor** taking the media back into circulation.

To keep the position between the brushes and the screw conveyor constant when blasting different sized workpieces, both are built with the same **adjustable framework**. The framework can be adjusted manually or automatically in intervals of less than 5mm at each required height.

Finally any remaining media on the work pieces will be removed by the blow off station, which is mounted on the same framework and uses high pressure ventilators to blow off any remaining media.

Features



Cartridge filter unit

During the workpiece blasting process, rust and scale, along with broken down media dust (or fines) will start to develop.

The fines are separated in the abrasive cleaner, which is **adjustable** to the different types and sizes of blast media. The cartridge filter that produces the necessary pressure is fitted on top of the machines for the RB1500 or next to the blasting machine for the bigger machines from RB2000 upwards.

The impact separator within the cartridge filter unit not only ensures that the broken down fines are separated (which protects the filter cartridge against unnecessary wear), but it is also certified as a spark extinguishing device and is one of the elements that contributes towards the fulfilment of **ATEX regulations**.

The cartridge filters clean the cartridge automatically using an air pressure pulse. The intensity and duration of the pulse can be adjusted according to the type and amount of dust. All processes of the cartridge filter are performed without ignition.

Loading and unloading

In standard format the roller conveyor inlets and outlets are powered by the central drive of the blasting machine. To increase efficiency they can be fitted with a separate drive unit. The affiliated frequency converter is automatically synchronised.

If bowed work pieces are being blasted that cannot be cleaned properly by the brush and blow stations, then a longer **collection track** with a reclamation conveyor is recommended, to help ensure that the blast media goes back into the machine.

Through the installation of a cross feeding system, many efficiencies can be achieved. Also with a cross feeding system incorporated, the blasting machine can be integrated into a sawmill/bore production line.

Abrasive blast media

For most roller conveyor installations the blast media would normally be round (cast or rounded cut wire shot). The blast media travels around the machine in a circle and is continually cleaned of contamination.

For a **good blasting result**, a balanced mix of new and used blast media is imperative. The finer used media in this mixture is important for equal coverage of the surface being blasted, and the coarser media is important to break up any scale.

The use of the correct media is of particular importance for the blasting process to ensure a good blasting result.

The following is a useful guide:

- For coarse workpieces (e.g. heavy plate profiles), use a coarse abrasive media mix (steel ball shot size S390 and over)
- For delicate workpieces (e.g. thin metal plates), use a fine abrasive media mix (steel ball shot size S330 and below)

About Wheelabrator



As the world's leading surface preparation company, Wheelabrator offers a complete range of equipment, services and parts.

Leading companies in the foundry, automotive, aerospace, energy, marine, rail, construction and many other industries have used Wheelabrator Group's products and services to improve productivity and profitability for over 100 years.

With approximately 15,000 active customers in nearly 100 countries and an estimated 50,000 machines in the field, Wheelabrator continues to use the experience of having the largest installed base in the industry to deliver the best solution for the customer.

Wheelabrator's approach to solving customers' operating challenges is unique in the industry.

Using insight gained from thousands of different applications across a variety of different industries, Wheelabrator's technical experts work closely with customers to design specific solutions to meet their operating needs. This approach has been so well received by the market that approximately two-thirds of Wheelabrator's surface preparation equipment sales are custom-engineered to the precise specifications of the customer. The remaining third are standard items which incorporate the same level of Wheelabrator quality and reliability, but can be delivered more quickly at a competitive price.

Wheelabrator is part of the Norican Group, which includes DISA, together we offer a global service of parts forming (moulding), preparation (shot blast) and coating solutions.

We have:

- 5 technology centres, based in Canada, France, Germany, Denmark and Switzerland,
- 5 manufacturing plants in India, China, USA, Czech Republic and Poland
- A local service support network globally.
- Over 100 years experience in both moulding and shot blasting equipment
- More than 50,000 surface preparation machines in the global marketplace
- Broadest range of surface preparation products available in the marketplace
- Quality products that deliver flexible solutions with consistent performance
- All round service from product development through installation to servicing and maintenance from a Wheelabrator dedicated global team: Wheelabrator Plus.

Wheelabrator Plus



Wheelabrator Plus is the after-market service, support and supply division of Wheelabrator Group.

With its **Equipment Modernisation Programmes**, Wheelabrator Plus is focussed on using the latest surface preparation technology to ensure maximum performance of blast machines to drive for maximum profit whilst keeping your costs down.

To meet product specifications within agreed timescales and budget requirements is key for a successful relationship with you. The **Wheelabrator Plus service and maintenance programme** enables you to increase machine performance and to minimise costs by reducing downtimes. Wheelabrator Plus offers varying levels of maintenance contracts which are exactly customised to your needs. The contract is dependent on your production requirements and the effect of machine downtimes. From periodic inspections with status reports including maintenance recommendations up to the complete service package - Wheelabrator Plus always has the right solution for you.

The international presence of Wheelabrator Plus ensures the provision of a tailored service to meet your needs worldwide and thus guarantees best possible performance in surface preparation technology. Wheelabrator Plus offers its service in different modules:

Standard: Bi-monthly, quarterly or six-monthly visits with full inspection of machinery.

Premium services: Weekly, monthly, bi-monthly or quarterly visits, full inspection of machinery, adjustment and same day parts fitting with a detailed follow-up report.

Machine check/inspection: Flexible visits as and when necessary, full inspection of machinery and LEV checks followed by a detailed report and quotation for recommended maintenance works.

Safety and environment check: Visits according to individual agreement, to include LEV checks to ensure machinery complies with the current legislation.

All inclusive: Wheelabrator Plus engineers produce and review maintenance schedules tailored to the individual company, with a fixed price contract inclusive of all parts and labour.

