Shotblast-Belt Deflasher (MSA)

The advantages of the belt system are:

- high volume throughput
- high deflashing quality
- short processing times
- ability to finish delicate and intricate parts
- low operating costs
- simple operation and maintenance
- capability of finishing parts with a variety of shapes and sizes

The deflashing range of the MSA is very comprehensive. It has the ability to finish parts ranging in diameter from as small as 6 mm (approx. 0.24“) to as large as 200 mm (approx. 8 “). Working temperatures down to -130 °C (-202 °F) are possible using liquid nitrogen to treat the parts.

The proven belt deflashing technology, provides a consistant, reliable, high quality deflashing process. The combination of a centrally located throw-wheel, consistant media flow, and precisely controlled nitrogen injection system allows for short cycle times. The stainless steel, well insulated deflashing chamber minimizes nitrogen consumption.

System characteristics:

The MSA basically consists of:

- Stainless steel insulated deflashing chamber
- Continous mill belt assembly
- Flash separation unit
- Media transport system
- Impeller unit
- Nitrogen supply
- Control cabinet
- PLC with interactive controls and a recipe database
- Loading and unloading station
- Chamber dehumidifier media drying system
- Sound insulation

Technical data:

Max. batch volume	100 dm^3 (3,5 ft^3)
Belt conveyor width	850 mm (33.5")
Belt diameter	600 mm (23.6")
Throw-wheel speed	400 - 5500 rpm
Throw-wheel power	7.5 kW
Operating temperature	down to -130 °C (-202° F)
Connection	13 kW
Operating voltage	400/230 V - 50 Hz (other on demand)
Compressed air	8 bar
Insulation thickness	100 mm (4")
Required floor space, machine body	1.4 m x 1.7 m (55.1" x 67")
– with loading and unloading station	2.8 x 1.7 m (110" x 67")
System height, max.	3.9 m (154")
Required floor space, control cabinet	1.2 m x 0.5 m (47" x 20")

System concept:

The MSA shotblast machine is known for it's compact design. The insulation cabinet encloses important assemblies, such as the blasting chamber, the media storage and most of the media transport system. The media remains in the cryogenic zone throughout the deflashing cycle minimizing system heat again. Most of the moving elements sensitive to cryogenic temperatures are installed outside the deflashing zone. Thereby, increasing the reliability, and life expectancy of these critical components.

Two service doors at the front and rear of the machine provide convenient access to the few assemblies inside the cold-box. This makes servicing and inspection just as easy as on the system parts located outside the housing.

The system consists almost exclusively of stainless steel. The majority of the components are manufactured from stainless steel. The PLC saves all required process data, like working temperature, throw-wheel speed, belt-speed, media flow and deflashing time. Each parameter may be adjusted during real time conditions at the control cabinet. The control cabinet provides operators with the flexibility of adjusting parameters in real time conditions.

Expert advice and tests can be carried out at the Linde application centre.

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