

LOEWER

BeltMaster K4TD

GRINDING, DEBURRING AND EDGE-ROUNDING MACHINE



FOR LASER-CUT, PLASMA-CUT AND PUNCHED SHEET METAL
FOR FOILED, ZINC-PLATED AND 3D PARTS
FOR STEEL, STAINLESS STEEL, ALUMINIUM

The Allrounder for Graining, Deburring, Edge rounding, Oxide removal, Orbital finish

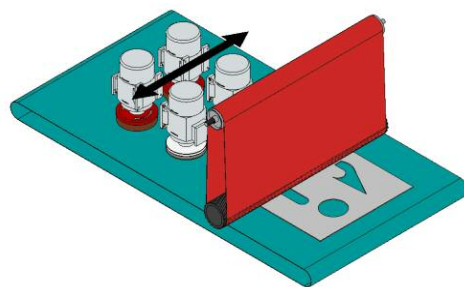
The BeltMaster K4TD is equipped with one abrasive belt unit followed by two oscillating disc units, each with two large rotating discs, making it ideal for grinding, deburring, edge rounding and oxide removal.



The 360° processing principle

The work pieces are placed on a conveyor belt. The abrasive belt unit will remove higher burrs. Two rotating discs in the centre of the machine followed by two rotating discs at the out feed side oscillate continuously over the full width of the work piece. Inside and outside edges are processed from all angles and directions. The result is uniform deburring and edge rounding independent of the orientation of the cutting contours.

It is possible to use different disc tools in the centre and on the outfeed discs, depending on the application.



The tools

The belt unit uses either abrasive belts or nylon abrasive belts. For the disc unit we offer a great variety of different disc tools. Depending on the application the disc unit will be equipped with the right combination of disc tools.



The **Softdisc** with surface conditioning abrasives for deburring aluminium or steel parts



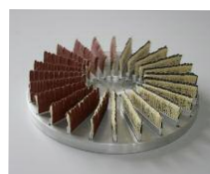
Our protected **Compactdisc** with ceramic abrasive removes high burrs and spatter on stainless steel



The **Mediumdisc** is the first choice for edge rounding and is available in different compressions and grit sizes



The **Orbitaldisc** for creating a non-directional finish with the Löwer Orbital device for which there is a patent pending



The **SmartFlexdisc** is very open and works well for edge rounding on zincplated, foiled or 3D-parts



The **Oxidisc** with angled wire brushes removes oxide on the side edges of lasercut steel parts

The abrasive belt unit

removes higher burrs or creates a grinding finish. A large variety of abrasive belts and nylon abrasive belts are available for different applications. The speed of the abrasive belt can be changed by frequency converter.

The floating head system

Processing bended parts or applying too much pressure can result in damaging the contact drum of the abrasive belt unit. With our optional floating head system the abrasive belt unit can move out of the way when the pressure gets too high. The pressure is adjustable pneumatically. This unique technology is a great safety feature when it comes to keep the contact drum in good shape.

The 4TD-Discstation

Four rotating discs oscillate continuously over the full width of the workpiece. This enables a uniform 360° edge rounding as well as a uniform wear of the tools. There is a large variety of disc tools for different applications. The motorized height adjustment of the disc station is independent of the abrasive belt adjustment.

Deburring and edge rounding

The abrasive belt will be used for deburring hard burrs. The CompactDiscs will be used for deburring small parts. The first choice for edge rounding are our MediumDiscs. The big diameter of 250mm and the unique kinematics of the machine result in a very uniform and strong edge rounding.

Various applications

The four discs can be exchanged very quickly in order to set the machine for a different application. The BeltMaster can be used for removing the oxide layer on the side edges or for deburring upformed parts, zinc coated parts or foil covered sheet metal. Abrasive belts or nylon abrasive belts will be used to achieve a straight graining finish. And the OrbitalDiscs will create a non directional orbital finish on stainless steel.

Possible one pass operations

For the standard application deburring + edge rounding the BeltMaster will be used with 4 MediumDiscs in different gritsizes which makes the machine very efficient.

Other possible one pass operations are:

- Deburring, oxide removal and edge rounding in one pass
- Deburring higher parts of burrs, additional disc-deburring and edge rounding in one pass
- Deburring and edge rounding of small parts with discs only
- Graining with abrasive belt only
- edge rounding and orbital finish with discs only

The Controls

The BeltMaster is equipped with a modern touch panel control. All parameters can be set with the touch panel and it is possible to store workpiece depending machine programs.



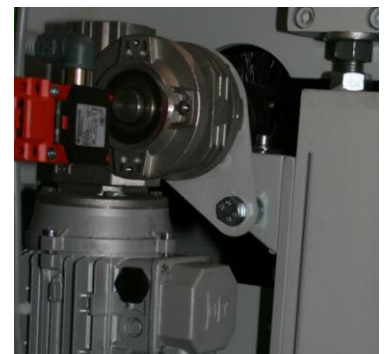
Abrasive belt unit with floating head system



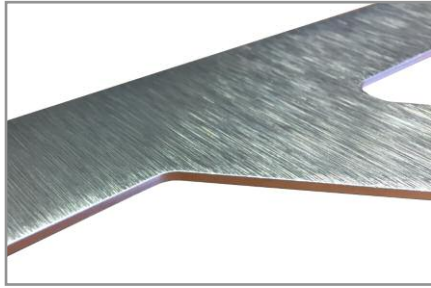
Disc station with four big discs



Touch panel control



Optional cleaning brush for feed belt



Graining



Steel



Stainless steel



Small parts

Technical Data

Standard features BeltMaster K4TD-1350

- abrasive belt size 1370mm x 1900mm, max. working width 1350mm
- abrasive belt motor 15kW, contact drum D=180mm, with spirally grooved rubber roller
- floating head system for abrasive belt unit
- variable abrasive belt speed 8-16m/s by 15kW frequency inverter
- excentric height adjustment for setting abrasive belt thickness
- pneumatically controlled oscillation of abrasive belt
- pneumatic tensioning of abrasive belt
- motorized height adjustment of abrasive belt unit
- emergency off switches left and right of abrasive belt and when belt tears
- two strong spring loaded rubber covered hold down rollers

- Two discs in the centre, two discs at the outfeed, disc diameter 250mm, 4 x 2,2kW
- Separate height adjustment with digital read-out of each individual disc for compensation of tool wear and different tool thickness
- Oscillation by gear motor and tooth belt drive, variable oscillation speed using frequency inverter
- Oscillation with two strokes (full width or small parts)
- Spring loaded hold down rollers, pneumatic lifting at disc area
- Motorized height adjustment of disc station using gear-motor

- Conveyor belt feed using gear motor, variable feed speed 1-8m/min using frequency inverter
- Automatic tracking of conveyor belt, pneumatically-controlled
- brush strip under conveyor belt for removing loose dust
- modern touch panel control, three main machine programs: 1: abrasive belt only, 2: discs only, 3: abrasive belt + discs. Setting of all machine parameters, storing of workpiece depending machine programs.
- Dust extraction connection 1 x 180mm, 1 x 200mm diameter
- 400V, 50Hz, 3P, 8 bar air supply
- Length 2650mm, width 2200mm, height 2100mm
- CE

Optional Extras

- Variable rpm of disc units using two frequency inverters (seperately for centre and outfeed discs)
- Integrated rotating brush for cleaning conveyor belt
- Magnetic track 250mm wide, (oxide removal of small parts)
- LED light inside machine
- sensor for measuring work piece thickness an automatic setting of thickness
- Suitable dust extraction units
- Abrasive belts and nylon abrasive belts
- Wide variety of disc tools