DiscMaster 4TD

Deburring and Edge Rounding Machine for sheet metal

- for laser-cut, plasma-cut and punched sheet metal

- for foiled, zinc-plated and 3D-parts

- for steel, stainless steel, aluminium...

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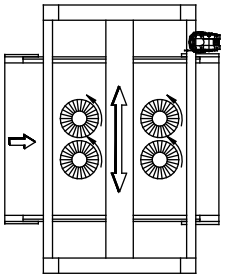
LOEWER DiscMaster 4TD

Through-feed Deburring and Edge Rounding

The Discmaster 4TD is equipped with four disc units which oscillate continuously over the full width of the feed belt. This unique technology offers greater advantages compared to conventional deburring machines.

- Deburring and edge rounding in one pass
- Removal of spatters and reflections
- All inside and outside edges are processed from all angles and directions
- Adjustable grade of edge rounding
- For laser-cut, plasma-cut, water-cut and punched parts
- For steel, stainless steel, aluminium...



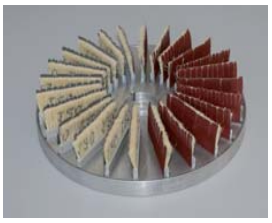
How it works: The 360° processing principle

The workpieces are placed on a conveyor belt. Two rotating deburring discs and two rotating edge-rounding discs oscillate continuously over the full width of the workpiece during the through-feed. All 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.

Our Range of Tools:

The **Soft-Disc** is used for deburring using a standard abrasive disc with velcro backing. The soft backing ensures an aggressive grinding at the edges of the workpiece without applying too much pressure on the surface.

For rounding the edges the **Medium-Disc** is used with abrasive cloth and nylon abrasive backing. This disc gives a nice rounding of all inside and outside edges.



The very flexible **Smart-Flex** Disc is used for edge rounding of foiled or zinc-plated parts and for 3D-parts with stamped or drawn forms.

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The Advantages:

Deburring
The flexible pad on the Soft-Disc leads to an aggressive grinding action at the edges of the workpiece while applying very little pressure to the surface. The Soft-Discs will remove burrs and spatters.

Edge rounding
The large 250mm diameter Medium-Discs offer thorough edge rounding. Due to the 360° processing principle very uniform results are achieved on all inside and outside edges of the workpiece.

Small parts
The workpieces are placed on a high-friction feed belt. The disc tools are parallel to the workpiece and push the workpiece against the feed belt during operation. As a result it is possible with a disc-only machine to process even very small workpieces starting from 20 x 20mm. For small parts the oscillation stroke can be reduced.

Larger parts
The DiscMaster 4TD is available in working widths of 1000mm or 1500mm. Spring-loaded hold down rollers are applied pneumatically when running larger parts.

3-dimensional parts
Parts with stamped or drawn forms can be processed with the Smart-Flex discs. raised and lower parts of the workpiece.

Foil-laminated/zinc-plated parts
These parts are processed with the Medium-Discs or the Smart-Flex discs. By reducing the spindle rpm (optional extra) the tools work very gently without destroying the foil or taking off too much zinc.

Material mix
When processing mixed materials (i.e. steel/stainless steel) the tools must be changed. As the DiscMaster 4TD works with only four discs these can be changed quickly within a few minutes. All four disc units are inidividually adjustable in height in order to compensate for different tool thicknesses.

Uniform wearing of tools
As the discs oscillate over the full width of the feed belt the abrasive tools wear
evenly irrespective of the size of the workpiece or where it is placed on the conveyor belt. The machine can therefore process wider parts without having to calibrate any tools.

Costs
This “disc only” concept makes it possible to dispense with expensive vacuum or magnetic hold down features and thus allows the machine to be priced competitively. Low energy consumption and inexpensive abrasive costs ensure a speedy return on investment.

Four rotating discs with full-width-oscillation for uniform 360° processing

separate height adjustment of each individual disc for quick compensation of tool wear

Height adjustment by handwheel or motorized (option)

Rotating cleaning brush for feed belt (option)

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Aluminium

Steel

Stainless steel

Small parts

Technical Data

Standard Features DiscMaster 4TD-1000 (4TD-1500):

- Max. working width 1000mm (1500mm)
- Two disc units at infeed, two disc units at outfeed, for disc diameter 250mm
- Height adjustment using handwheel with digital counter
- Separate height adjustment of each individual disc, each with digital counter
- Oscillation by gear motor and tooth belt, variable oscillation speed using frequency inverter
- Oscillation with two strokes (full width or small parts)
- Conveyor belt feed using gear motor, variable feed speed 1-5m/min using frequency inverter
- Automatic tracking of conveyor belt, pneumatically controlled
- Four spring-loaded hold down rollers with pneumatic lifting
- Brush strip under conveyor belt for removing loose dust
- Dust extraction connection outlet 1 x 150mm diameter
- 400V, 50Hz, 3P, 11.5kW, connection for compressed air
- Length 1600mm, width 1900mm (2400mm)
- CE

Optional Extras:

- Variable rpm of disc units using two frequency inverters (separately for infeed and outfeed discs)
- Integrated rotating brush for cleaning conveyor belt
- Motorized height adjustment with push buttons up/down
- Suitable dust extraction units for steel, stainless steel or aluminium
- Surface conditioning abrasives: D=250mm , grit size 100, 180 and 240 (deburring)
- Ceramic abrasive discs:grit size 60/80/120 (deburring))
- Medium-Disc: D=250mm, grit size 40/80/120 (edge rounding)
- Nylon-coated abrasives: D=250mm, medium, very fine (finish)
- Smart-Flex-Disc: abrasive grit size 80/100/120/150/180 (edge rounding))

Jakob LÖWER
Inh. von Schumann GmbH & Co. KG
D-34576 Homberg (Germany)

LOEWER

Tel. + 49 (0) 5681 99040
info@loewer-online.com
www.loewer-online.com