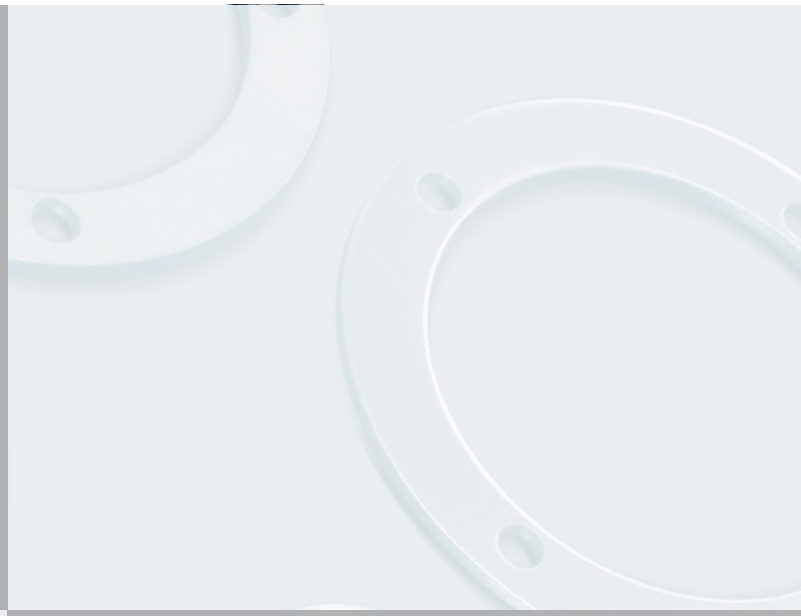
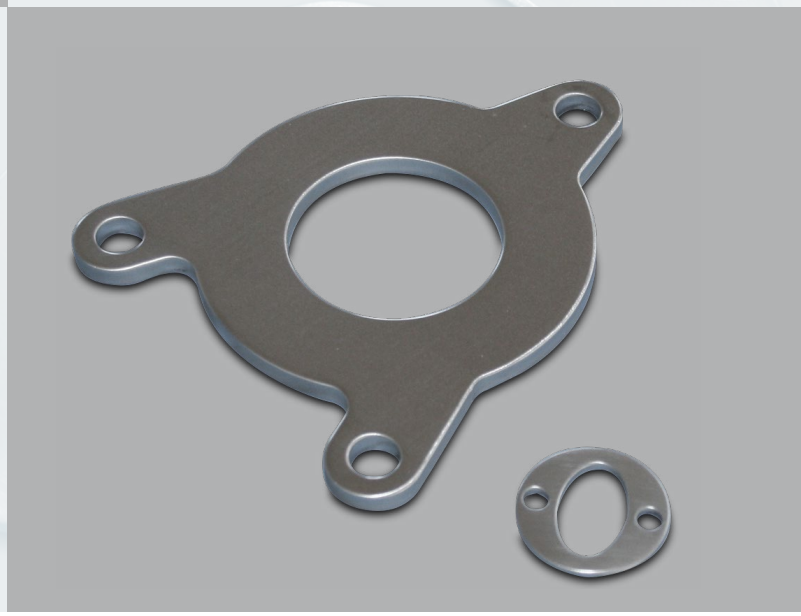
LOEWER

# DiscMaster 4TD

## DEBURRING AND EDGE ROUNDING MACHINE FOR SHEET METAL PARTS



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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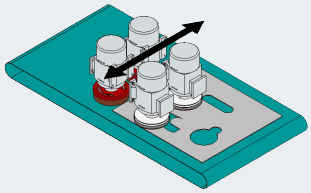
# LOEWER DiscMaster 4TD
# Through-feed deburring and edge rounding

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 the 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.

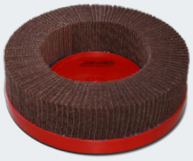


## Our tools

Laser job shops have to contend with numerous different finishing tasks. The DiscMaster 4TD addresses this by offering a large variety of disc tools and abrasives which can be replaced easily and quickly thus making the machine very versatile and efficient.

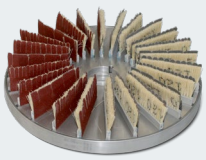
The SoftDisc with surface conditioning abrasives for deburring aluminium or steel parts.

Our protected CombiDisc 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 creates a non-directional orbital finish on stainless steel or aluminium (patent pending).



The SmartflexDisc is very open and works well for edge rounding on zinc-plated, foiled or 3D-parts.

The OxideDisc with angled wire brushes removes oxide on the side edges of laser-cut steel parts.

# Our advantages

**Deburring**
The flexible pad on the SoftDisc leads to an aggressive grinding action at the edges of the workpiece while applying very little pressure to the surface. The SoftDisc is the first choice for deburring steel or aluminium parts. The CombiDisc is more aggressive and works well removing higher burrs and spatter on stainless steel parts.

**Edge rounding**
The large 250 mm diameter MediumDisc offers comprehensive edge rounding. Due to the 360° processing principle uniform results are achieved on all the inside and outside edges of the workpiece.

**Small and large 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 20 mm. The maximum working width is 1000 mm (1500 mm).

**Orbital Finish**
The OrbitalDisc creates a non-directional orbital finish. If MediumDiscs are used at the infeed it is possible to achieve edge rounding and orbital finish in one pass.

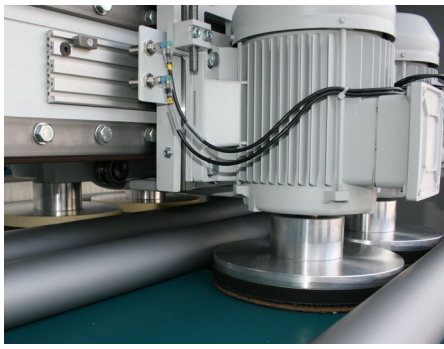
**Three-dimensional parts**
Parts with stamped or drawn forms can be processed with the open and flexible SmartflexDiscs.

**Foil-laminated/zinc-plated parts**
These parts are processed with the MediumDiscs or Smartflex disc. By reducing the spindle rpm (optional extra) the tools work very gently without destroying the foil or removing 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.

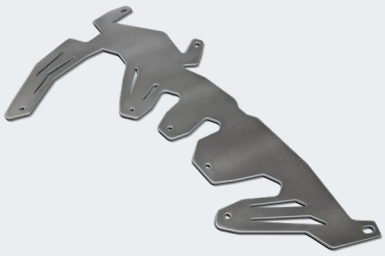


Four rotating discs with full-width oscillation for uniform 360° processing

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

Motorized height adjustment, automatic setting of thickness using a limit switch (optional)

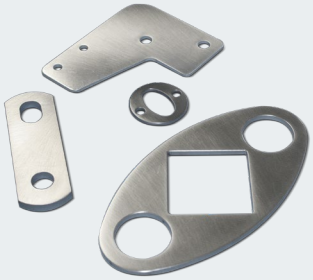
Rotating cleaning brush for feed belt (optional)



Aluminium

Steel

Stainless steel



Small parts

# Technical data

## Standard features DiscMaster 4TD-1000 (4TD-1500)

- Max. working width 1000 mm (1500 mm)
- Two disc units at infeed, two disc units at outfeed, for disc diameter 250 mm
- Motorized height adjustment with electronic digital display
- 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 1-5 m/min using frequency inverter
- Constant height of feed table, easy to connect to roller conveyors
- 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 200 mm diameter
- 400V, 50Hz, 3P, 11.5 kW, connection for compressed air
- Length 1900 mm, width 1900 mm (2400 mm)
- CE

## Optional extras

- Variable rpm of disc units using two frequency inverters (separate for infeed and outfeed discs)
- Integrated rotating brush for cleaning conveyor belt
- Automatic setting of workpiece thickness by limit switch
- Aluminium extraction hood for improved dust extraction when processing aluminium
- Quick-fix tool connector for speedier changing of discs between steel and stainless steel
- Suitable dust extraction units for steel, stainless steel or aluminium
- Magnetic track for holding small steel parts using OxideDiscs
- Touch panel control with coloured panel
- Large variety of abrasives for deburring, edge rounding and polishing
- Extended maximum working width of 2000 mm

LOEWER

**Jakob LÖWER**
**Inh. von Schumann GmbH & Co. KG**
Am Wasser 4
D-34576 Homberg-Caßdorf

Telefon +49 5681 9904-0
Telefax +49 5681 9904-99

info@loewer-maschinen.de
www.loewer-maschinen.de