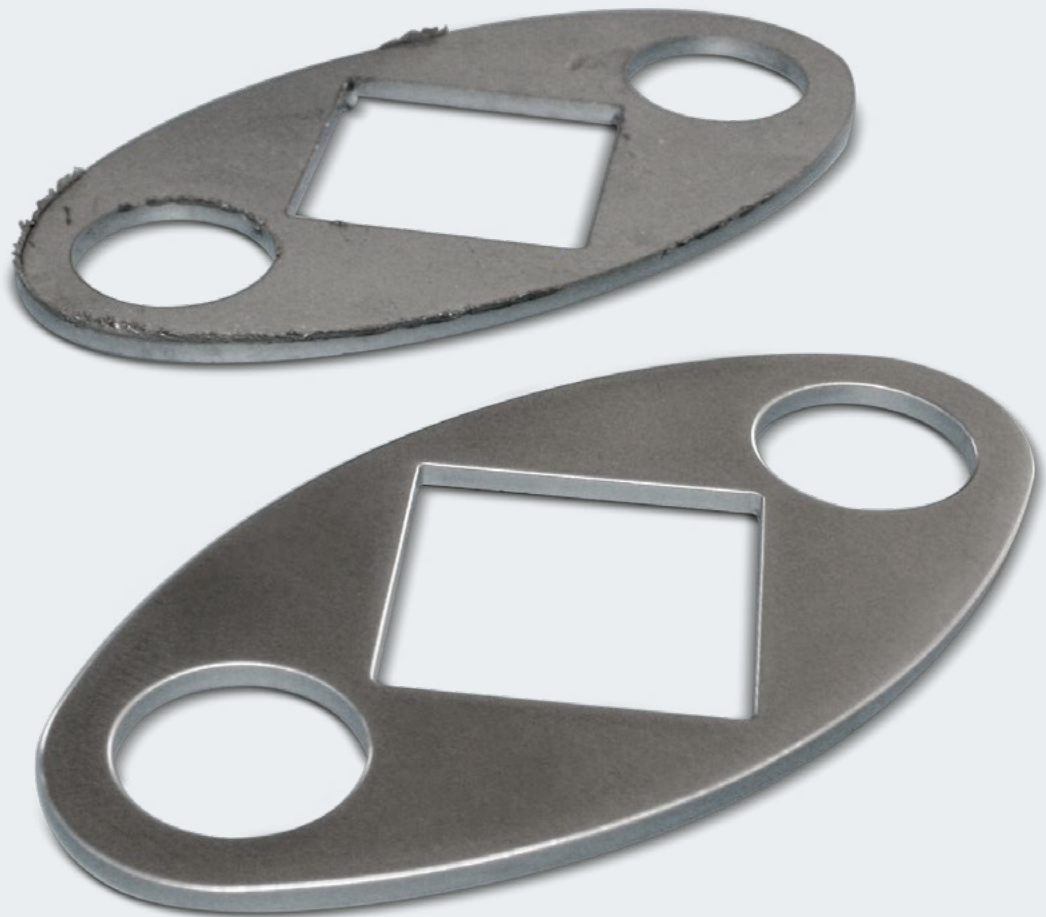


# LOEWER

## INNOVATIVE DEBURRING AND GRINDING MACHINES



DEBURRING · EDGE ROUNDING · GRAINING · OXIDE REMOVAL · ORBITAL FINISH

# LOEWER – Disc technology for sheet metal deburring

Finding a suitable solution for deburring and rounding sheet metal depends on a number of factors such as the cutting quality, the sheet material, the dimensions of the part, the number of pieces and the edge quality required. A deburring machine should achieve an even result on all edges, regardless of the contour of the workpiece. The abrasive tools should also wear evenly in order to avoid time-consuming calibrating or readjusting.

In order to meet the above requirements our engineers quickly recognized the advantages of the disc technology. In particular when combined with a large oscillation stroke it delivers a uniform 360° processing of parts together with an even tool wear. Furthermore it is possible to process very small parts in contrast to common wide belt grinders.

## Our disc technology methods



**Rotating disc without oscillation**

The workpiece is fed through the machine on a feed belt. The disc works from above. Every point on the workpiece is processed from two directions (right to left and left to right).

- processing from two directions
- even tool wear
- economic technique

This method is featured in our CrossMaster models as well as in the TwinMaster TbD.



**Rotating disc station with oscillation**

The discs oscillate with a stroke the size of approximately the diameter of the single disc. This ensures a 360° processing from all angles and directions for uniform edge rounding.

- 360° uniform processing

This method is featured in our DiscMaster SF models. The planetary head of our DiscMaster P is very similar to this method.



**Rotating disc with large oscillation stroke**

The disc oscillates over the full width of the feed belt. This method not only ensures a uniform 360° processing but also leads to an even tool wear, regardless of the position of the workpieces on the feed belt.

- 360° uniform processing
- even tool wear

This technology is featured in our DiscMaster models 2TD and 4TD as well as in the BeltMaster K4TD.

## Our disc tools

The desired deburring and edge rounding results can only be achieved using the right combination of disc tools and machine. LOEWER has developed several unique discs to achieve optimal results. For example our legally protected (DBGM) CompactDisc removes hard burrs of up to 3 mm height effortlessly. Our special MediumDisc with additional hold down rings (patent pending) rounds the edges of very small, lighter parts.

Our disc tools are available in different diameters to suit our different machine models. In particular the DiscMaster 2TD, 4TD and 6TD and the BeltMaster K4TD can use all the different disc tools shown below, making them unbeatably versatile.



**SoftDisc with surface conditioning abrasives**

Ideal for deburring laser-cut aluminium or steel parts. The softness of the disc creates a lot of pressure on the edges and very little pressure on the surface of the part. It generates only a small amount of heat and is very forgiving. It also works well for small parts.



**CompactDisc with abrasive discs**

The CompactDisc removes high burrs and spatter on stainless steel. Abrasive discs are available in ceramic or zirkonium in different grit sizes.



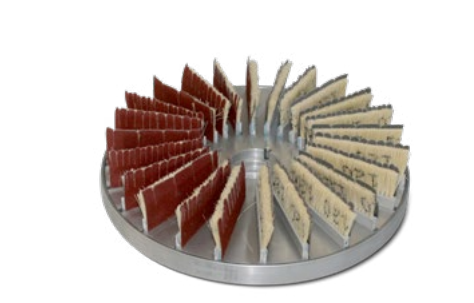
**MediumDisc B**

The MediumDisc B is the first choice for edge rounding on all materials. It is a very economic tool with a high life time and is available in different compressions and grit sizes.



**OrbitalDisc**

For creating a non-directional finish with the Löwer Orbital device for which there is a patent pending.



**SmartFlexDisc**

Equipped with brush-supported flexible finger abrasives. It creates very little pressure on the surface of the workpiece and is ideal for edge rounding of foiled or zinc-plated parts as well as for 3D-parts with stamped or drawn forms.



**OxideDisc**

With angled wire brushes to remove oxide on the side edges of laser-cut steel parts.

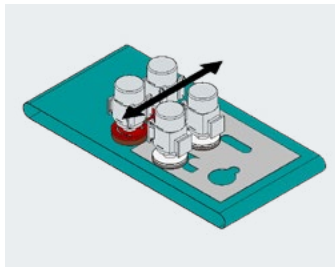


## DiscMaster 4TD

Efficient through-feed machine in working widths of 1000 mm, 1500 mm or 2000 mm for laser job shops

The DiscMaster 4TD is equipped with four disc units which oscillate continuously over the full width of the feed belt. This unique technology offers great deburring and edge rounding results at a very low operating cost. A good selection of disc tools for different applications makes the machine very versatile.

- deburring and edge rounding in one pass
- removal of high burrs and spatter
- 360° uniform edge rounding from all angles and directions
- even wear of disc tools
- processing of small parts > 20 mm diameter
- quick change of tools (when processing different materials)
- for punched, laser-cut, water-cut or plasma-cut parts
- special tools available for upformed, foiled or zinc-coated parts or for oxide removal
- processing of steel, stainless steel, aluminium

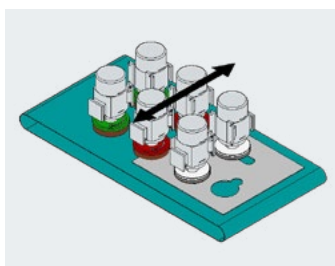


## DiscMaster 6TD

Versatile through-feed machine with three stations in working widths of 1000 mm and 1500 mm

Compared to the DiscMaster 4TD the 6TD model has an additional station. On the one hand the machine can be used with three different tools, for example for deburring, edge-rounding and oxide removal in one pass. On the other hand it is possible to create larger edge rounding or run at a faster feed speed when using standard tools. This makes the DiscMaster 6TD our most powerful and versatile disc machine.

- Offers the same possibilities and advantages as DiscMaster 4TD, but in addition:
- Is more versatile due to availability of three different tools
- Features a faster feed speed

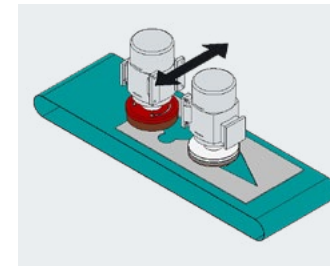


## DiscMaster 2TD-500

Quick and uniform deburring of small parts in a working width of 500 mm

The DiscMaster 2TD works with two rotating and oscillating discs in a row, one for deburring and one for edge rounding.

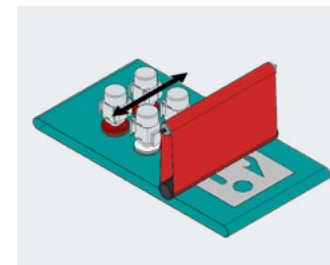
- 360° uniform processing
- compact machine with the same advantages as the DiscMaster 4TD



## BeltMaster K4TD

Grinding, deburring and edge rounding machine in a working width of 1350 mm

The BeltMaster K4TD is equipped with the same disc technology as the DiscMaster 4TD. In addition it offers a wide belt unit in front of the discs making it even more versatile. The wide belt unit is used for creating an optical graining finish or for removing very strong burrs. Our unique floating head system makes it possible for the abrasive belt unit to follow varying thicknesses of the workpiece.



### Optional extras for our TD-models

- variable rpm of disc motors
- special dust extraction kit for processing aluminium
- large variety of disc tools for different applications
- quick-change adapters for disc tools
- touch panel control
- magnets for under feed belt and demagnetisation unit
- suitable dust extraction units for steel, stainless steel or aluminium



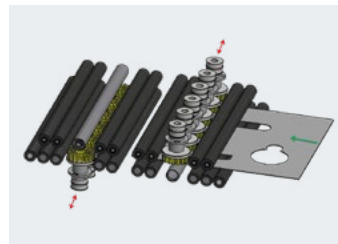


## DiscMaster SF

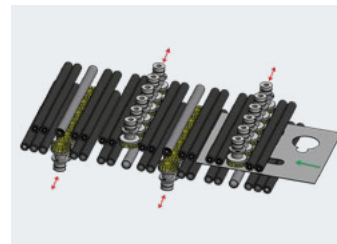
Top and Bottom deburring, edge rounding and/or oxide removal in one pass, in working widths of 1000 mm or 1500 mm

The DiscMaster SF works with oscillating disc stations from top and bottom.

- high output due to top and bottom processing
- 360° uniform edge rounding from all angles and directions
- ideal for zinc-coated or foiled parts due to flexible SmartflexDiscs
- ideal for upformed 3D-parts due to soft feed rollers and SmartflexDiscs
- available in working widths of 1000 mm or 1500 mm



DiscMaster SF 1/1



DiscMaster SF 2/2

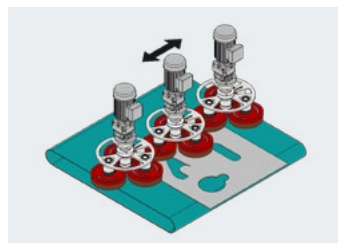


## DiscMaster P

Planetary head technology for large through-put in a working width of 1350 mm

Deburring and edge rounding or finishing of welded aluminium frames.

- planetary head features rotating discs with additional head rotation and oscillation
- 360° processing of parts from all angles and directions
- diffuse, non-directional finish

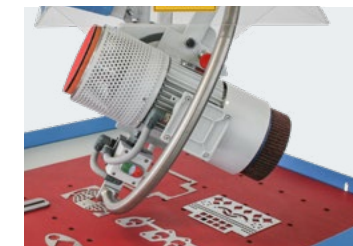


## SwingGrinder – The Original

Quick manual deburring and edge rounding

Deburring and edge rounding unit for small and medium sized production runs.

- 3 to 4 times faster than manual deburring
- easy to use with swinging arm and weight compensation
- high friction table cover, dust drawer and extraction outlet
- rotatable head with deburring and edge rounding tools
- optional vacuum hold-down device for small and light parts
- Safe operation with automatic motor shutdown when head is tilted and pneumatic brakes for swinging arm



## CrossMaster DD

Affordable and quick deburring of small parts in working widths of 150 mm or 300 mm

The CrossMaster DD works with two rotating discs in a row, one for deburring and one for edge rounding.

- for small parts > 20 mm diameter
- even wear of disc tools
- variety of disc tools for deburring, edge rounding, upformed 3D-parts or foiled parts
- large variety of optional extras such as motorized height adjustment, longer tables, magnets for small parts



### CrossMaster Dx2

Top and bottom deburring in one pass in a working width of 200 mm

The CrossMaster Dx2 works with one disc from the top and one from the bottom.

- top and bottom processing in one pass
- even wear of disc tools
- optional magnets for holding down small parts
- also available with two discs on top and two on bottom



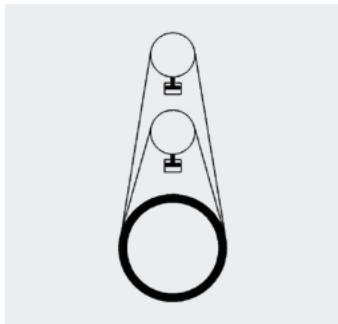
### TwinMaster TbD-600

Heavy deburring machine for flame-cut parts in a working width of 600 mm

- ideal for parts with varying degrees of thickness and high burrs
- unique TwinBelt unit for high deburring power
- optional floating head system to compensate distortions of up to 6 mm
- quick change of abrasive belt
- large disc unit for rounding edges
- magnet over full working width for holding down smaller parts

#### The unique TwinBelt unit

The core of the TwinMaster is the patented TwinBelt unit. The abrasive belt in combination with a very soft contact drum leads to a lot of pressure on the inside and outside contours. At the same time the unit is very flexible and can compensate variations of workpiece thickness. An additional pressure belt which runs between the abrasive belt and the contact drum creates even more pressure on the burrs without compromising the flexibility. It also protects the abrasive belt and the drum against cuts and tears, thus making it ideal for deburring flame-cut and plasma-cut parts.



### MultiMaster

Through-feed machine for finishing profiled, longitudinal work pieces

The MultiMaster finishes profiled work pieces from top, bottom, left and right in one pass.

- uses discs or cylinders with brush-supported abrasive lamellas (Smartflex)
- available with between two and twelve brush units in one machine



### Dust extraction units

We offer suitable wet or dry dust extraction solutions for all our machines. The units can be delivered with tubing and electrical connections to the machines if required.



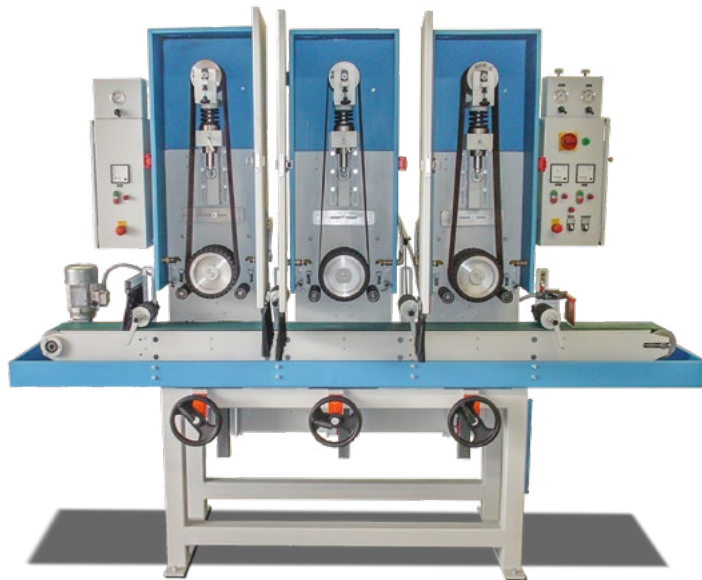


# LOEWER abrasive belt grinding machines for perfect finishing

## SmartGrinder SG – The affordable serial model

The SmartGrinder SG models are straightforward, sturdy and easy to use abrasive belt grinding machines „Made in Germany“. The modular concept with one to four stations in a row together with some useful optional extras make the machine adaptable to different grinding tasks. The SmartGrinder SG is especially suitable for graining or finish grinding of flat bar and hollow sections.

- working widths of 150 mm or 300 mm
- one to four stations in a row
- belt units for abrasive belts, nylon abrasive belts or nylon abrasive drums
- available for wet or dry processing
- optional „floating head“ for grinding hollow sections (no bending, no blue surface)



SmartGrinder SG 150 3K

- three stations
- 150 mm working width
- wet processing
- floating heads



SmartGrinder SG 150 K

- one station
- 150 mm working width
- dry processing

## SmartGrinder FST – the individual, custom-built model

The SmartGrinder FST models are custom-built abrasive belt grinding machines for finishing or deburring. A large variety of different units and optional extras make it possible to tailor the machine exactly to individual requirements.

- working widths of 150 mm or 300 mm
- one to four stations in a row
- abrasive belt or drum units or planetary heads
- dry or wet processing
- large range of optional extras such as floating heads, magnets, demagnetisation, longer tables, stainless steel casing, variable spindle rpm, motorized height adjustment



SmartGrinder FST 300 KP

- one abrasive belt unit
- one planetary head unit for 360° uniform edge rounding
- 300 mm working width
- magnets underneath feed belt
- wet processing



SmartGrinder FST 150 3P

- three planetary heads
- 360° processing with even tool wear
- 150 mm working width
- wet processing
- stainless steel casing
- magnets and demagnetisation



SmartGrinder FST 150 4K

- four abrasive belt units
- 150 mm working width
- wet processing
- floating heads
- control panels at each station
- additional hold-down rollers
- return roller conveyor inside upper collection basin

## The LOEWER technical centre – When it's best to test

Most deburring and finishing tasks can be solved using our standard machines. In some cases however it is better for our customers to try out the machines for themselves and this is exactly what we offer in our technical centre. Not only can customers bring their own samples but they can also try out various abrasives and tools on different machines and actually see and feel the results first hand. What's more they can also speak directly with our qualified engineers and technicians about individual problems or customised solutions.



# LOEWER

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