Surtech Sheet Metal **Ways of Deburring**

What Edge? What Size? What Finish?

A short guide to sheet metal deburring equipment



Removing burrs from laser cutting, guillotining, sawing and punching

With modern cutting equipment burrs are relatively light but still have to be removed for safety and technical reasons. Automatic deburring machines are available to produce a variety of edge configurations.



Burrs removed, leaving rounded edges

Rounded edges are the preferred choice of sheet metal product producers and more and more are now demanding such edges from their subcontractors. Model SBM-M S will deburr and round edges on both sides in a single pass.



Removing burrs and slag from plasma and flame cut blanks

This is one of the most labour intensive jobs, usually carried out manually. Model SBM-M D2 uses unique bolt heads and abrasive belts to not only remove burrs and slag but also to clean surfaces, again on both sides in a single pass

Model Range SBM Sheet and Plate Deburring Machines

- · Deburring, edge rounding, de-slagging and oxide removal on both sides in a single pass.
- Up to 60% time savings.



SBM-M series machines are available in the following configurations:

Model SBM-M S2 with 4 abrasive flap belts for deburring, blending and edge rounding

Model SBM-M B2 with 4 wire brushing belts for oxide removal

Model series SBM-M with 4 belts. Two at the top, two at the bottom.

Model SBM-M D2 with 4 power pin belts for slag removal.

Features common to all models:

- 1000mm or 1500mm max. working width
- Throughfeed rubber conveyor belt
- Insulation class IP42
- · Individually adjustable heads · Feed speed: 0-4m/min
- Motorised thickness setting



View inside a machine, clearly showing the top and bottom belt heads and access doors for simple and fast belt changes and general maintenance

Short Parts ?

SBM machines like most throughfeed machines have limits on the lengths of parts they can handle. In the case of SBM models it is around 160mm.

For shorter parts you have 3 choices:

- Leave parts tagged 1.
- Place parts in a simple jig (You will lose the 2. ability to deburr both sides in one pass)
- Buy a manually operated Swing Grinder. (see No. 4)

The Tools



. for de-

Wire belts for oxide removal

slagging

Abrasive cloth belts for removing heavy burrs. Available in aluminium oxide or silicon carbide





Burr removed but corners still sharp

Single head wide belt machines have been the most widely used method to remove burrs from sheet metal and plate over the last 25 years. They do, however, leave sharp edges and cannot produce the rounded edges of Model SBM.

Heavy Duty Model Range G Wide Belt Grinding, **Deburring, Graining & Finishing Machines** The Applications 600mm, 1100mm, 1300mm and 1600mm working width Single, twin or three abrasive heads

- Single or twin planetary brushes





1600mm wide

Deburring of thermal cut blanks and punched sheet metal parts. Graining of stainless steel



Ceramic and

Non-woven

Belts. Rotarv

and Planetary

Brushes

For the Largest range of ABRASIVE GRINDING, DEBURRING AND

Surtech

POLISHING MACHINES IN THE UK **CLICK ON** or ring 0121 359 4322 surtech.co.uk





Burrs removed, leaving rounded edges

The Swing Grinder produces round edges and can handle small parts.

Swing Grinder for Deburring and Edge Rounding of laser or plasma cut punched parts

The SWING GRINDER bridges the gap between the labour intensive portable power tools and the expensive throughfeed machines.

Parts are placed on the 1400 x 800mm table, kept firmly in place by the perforated polyurethane mat and then manually deburred by slowly moving the deburring head in all directions over the parts.

The deburring head is equipped with 2 different discs and can be tilted 180° in seconds to always use the most effective disc.

Since pressure is applied from above even small parts stay in position. The machine can handle smaller parts than most other deburring machines.



Swing grinder with 2 deburring heads.1400 x 800mm table. Variable speed



The friction deslagging machine will remove burrs, slag and clean edges and surfaces of plasma and flame cut blanks. Machines work unsupervised in automatic cycles between 20 and 45 min.

Friction De-Slagging Machines

LOEWER (3

- For oxy fuel, plasma and laser cut blanks
- A powerful de-slagging system that replaces hammers, angle grinders
- and abrasive belt grinders Four ruggedly constructed models with a drum life in excess of ten years

Savings

Compared with manual de-slagging, a saving of £100 or more for each loading.

	Lima 400	Lima 600	Lima 800	Lima 1000
Drum size in litres	400	600	800	1000
Drum capacity in litres	250	400	600	800
Approx. filling weight	500 kg	1000 kg	1000 kg	1300 kg
Variable drum rotation	4 - 18 rpm			
Size W x D x H in mm	3000 x 1500 x 2000			



- be cleaned and have even the most stubborn slag removed on all edges. At the end of the cycle, the drum
- can be positioned over a pallet and automatically emptied. Friction cleaned parts are
- metallically clear and facilitate subsequent

welding

operations





The Model I S90 deslagging machine is manually operated and the perfect partner to the friction deburrer. It will remove surface scale and blend edges.



Replace up to 6 angle grinders with the LS90 SLAG GRINDER

Yes, you read correctly. 1 person using the LS90 de-slagged as many blanks as 6 people with angle grinders!





More than

a thousand

machines

so/a

worldwide





Series 84 machines deburr and put a tiny chamfer on edges. Only for straight parts without holes.



Model 844 has a twin head for deburring top and bottom straight edges of sheet.

Model 845 has a twin head plus a single head for deburring top and bottom straight edges of sheet plus blending the face.

Model 846 has a twin head plus a single head for deburring top and bottom straight edges of sheet plus grinding the face.



By moving parts several times to and fro you can deburr and produce rounded edges. Straight parts without holes only.

Pedestal Abrasive Belt Polishing Machines

Model 420 -Manual

- Faster than any other method
 - For all burrs & finishes
- 3.5 HP motor
- Abrasive Belt size:
- 2000mm x 25mm or 50mm • Approx weight
- 90 kg









Abrasive belt can be angled to facilitate deburring action



By moving parts across the contact wheel you can deburr or chamfer edges. Straight parts without holes only.



Model 127 Belt Edge Grinder

• 3.5 HP, 400V, 3 phase

Abrasive belt: 2000mm x 75mm. The large table can be tilted in both directions and moved up and down to make use of the entire belt width.

For grinding, deburring and chamfering edges on plate, flat bar, thermal cut blanks, hollow sections, castings, etc.

Range of quick change contact wheels from 25mm dia to 200mm dia



Smooth plate edges



Finish sides of flat bar and hollow sections



Bevel prior to welding



Deburr thermal cut blanks



You can quickly deburr edges by moving the belt file down the length of the part once, or rounded edges by moving it several times at different angles.



Belt files are designed to grind difficult to reach areas. They are also ideal sheet edge deburring tools when used with a special cranked contact arm.

All belt files are suitable for abrasive cloth belts, structured belts, nylon belts and polishing belts, covering grinding, deburring, satinizing and mirror polishing.





The cranked contact arm bends the abrasive belt around the edge for a perfectly deburred finish.



This machine can round, chamfer and radius edges on heavy steel parts.



Cevisa machines are ideal for bevelling plate ready for welding.

Corner & Edge Preparation Machines for Grinding, Bevelling, Profiling and Radiusing

 Plates • Thermal Cut Blanks • Beams • Bars As used for offshore construction, shipbuilding, bridge building, structural steelwork, etc.





Some of the edge preparations grobi machines can carry out



🖌 Ways of improving the tolerance and consistancy of welded fabrications



Jigging & Welding Tables

machines self propel along the length of the plate.

Modular 3-dimensional precision Welding Tables with ingenious clamping system

- Up to 40% time saving
- To a tolerance of 0.03mm
- In steel, stainless, Hardox or plasma nitrided
- Any size, any weight (up to 50 t)
- More than 100 clamps and fixtures to suit plate, tube, pipe, fabrications, etc.







Tube and Pipe Fabricators



Heavy Duty Fabricators



High Capacity Precision Roller Levelling Machines

For laser and thermal cut blanks, coil, punched and fine blanked parts - from the world's leading manufacturer.

Distorted parts before and after

Some typical parts which can be straightened on ARKU machines. Flat and stress free parts greatly improve subsequent operations like bevelling, welding, bending, etc. ARKU levellers straighten sheet and plate in minutes where manual work can take hours. For parts thickness from 0.5mm to 50mm and for widths up to 2000mm.



SURFACE TECHNOLOGY PRODUCTS LTD.

244 HENEAGE STREET. BIRMINGHAM B7 4LY Telephone: 0121 359 4322 Fax: 0121 359 1817 Email: sales@surtech.co.uk www.surtech.co.uk