



## SHEET METAL PROCESSING MACHINES

**2020 PUBLICATION** 





## "WORKING AT THE CUTTING EDGE!" "IT'S IN OUR DNA"

For the ultimate result in deburring and edge rounding, and the perfect precision in surface treatment and precision grinding we always do that little bit extra.

Pushing the boundaries with regard to technology, innovative power and flexibility is in our DNA. This is one of the reasons why we are known as specialists in standard and custom-made work. Timesavers is the creative party that likes nothing better than taking a constructive approach and putting forward technically well-thought-out solutions with the best results. This working method suits us: we want to offer our customers added value, that's what motivates us and keeps us ahead!

#### TIMESAVERS HAS BEEN SETTING THE STANDARDS FOR YEARS NOW

Timesavers is the largest producer of wide abrasive belt equipment in the world with sites in Minneapolis (USA) and Goes (the Netherlands). With more than 70 years of experience and a huge customer base worldwide, we recognise like no other the need for and strength of constant development and innovation. We provide a total package to our customers with our technical solutions, international production, extensive application knowledge and unmatched after-sales support. This is all brought about by a dedicated team with a sharp focus on quality and customer satisfaction.

#### YOUR PRODUCT DESERVES TOP QUALITY

The Timesavers range is specialised abrasive equipment for the optimal processing of products made of steel, stainless steel, aluminium and Zincor coated (including plastic films or embossed surfaces). Apart from these standard metal types, our machines can also process various types of stone, concrete, composites and special metals. Are you looking for perfection in deburring, edge rounding, finishing or precision grinding with the highest attainable quality and with an unmatched finish? Choose Timesavers.



#### CREATIVITY AND TECHNOLOGY GO HAND-IN-HAND AT TIMESAVERS

We adhere to the principle that different options are required for different applications and there is nobody who offers a broader range of machines than Timesavers. In addition, Timesavers also develops and produces machines for special applications up to complete turnkey project solutions with various types of peripheral equipment. Timesavers thinks in terms of solutions and likes to meet your challenge with vigour and enthusiasm.

#### THE WORLD IS OUR PLAYING FIELD

More than 50,000 Timesavers' grinding machines have been sold worldwide of which a large number are still operational today. More than 100 factory-trained independent distributors are ready to give service worldwide. In addition, the organisation has a team of engineers who are stationed strategically and provide support. We will always know how to help you, regardless of where you may be in the world.





Table of contents		Deburri	ng Edge rol	<sub>Inding</sub> Finishing	precisi	on grinding Laser o	<sub>ixide removal</sub> Heavy slag	<sub>j</sub> remo
	DEBURRING	EDGE ROU	NDING					
10 series	page 6	0	0	0				
11/12 series	page 8	0		0				
22 series	page 10	0	0	0			0	
22 RB series	page 12	0	0	0		0		
31 series	page 14	0		0				
32 RB series	page 16	0	0	0		0	0	
41 series	page 18	0	0	0	0			
42 series	page 20	0	0	0				
42 RB series	page 24	0	0	0		0	0	
	STAINLESS ST	EEL FINISH	ING					
62 series	page 32			0				
71/72 series	page 34			0				
	PRECISION GI	RINDING						
81 series	page 36			0	0			





# TIMESAVERS: THE BEST WHEN IT COMES TO SHEET METAL PROCESSING MACHINES



#### DEBURRING WITH A TIMESAVERS DEBURRING MACHINE

Deburring is the removal of irregularities and sharp edges on metal products. They are often caused by machining work such as laser, water jet, punched or plasma cutting. Discover Timesavers' broad machine line for effective and efficient deburring.



#### ARE YOU LOOKING FOR THE MOST BEAUTIFUL AND BEST EDGE ROUNDING OF METAL?

A radius is created on the edge of the metal during edge rounding of metal products. This ensures that the sharpness of the edge is removed and it is given a uniform rounding. Timesavers offers perfection in edge rounding with a radius of up to two mm in a single pass.



#### GET THE BEST FINISH WITH TIMESAVERS

Surface finishing applies to, for example, stainless steel and aluminium in several versions: a hairline, a brush and a grain finish. Timesavers offers a wide range of quality finishing machines with abrasive belts and brushes.



#### PRECISION GRINDING WITH TIMESAVERS' INNOVATIVE GRINDING TECHNOLOGY

Surplus material such as the oxide layer is removed from metal products through surface grinding when you apply precision grinding. Timesavers is the expert in precision grinding where tolerances of up to 0,02 mm can be achieved.



#### **REMOVAL OF LASER OXIDE SKIN**

Oxide skin occurs on metal and stainless steel when laser cutting using oxygen, and it must be removed for subsequent coating processes or welding. Timesavers has developed a perfect solution for the removal of laser oxide, both from the suface, as well as from the sides of the product.



#### EASY REMOVAL OF HEAVY SLAG

Slag occurs when metal melts because of, for example, autogenous and plasma cutting. Slag removal requires a special approach for which Timesavers offers the ultimate solutions.



## OVERVIEW POSSIBLE MACHINE CONFIGURATIONS

Possible machine configurations for the 11 till 42 RB series machines to deburr, edge round, finish, remove laser oxide or remove heavy slag.





**APPLICATION** deburring and edge rounding



APPLICATION deburring



WRD

APPLICATION

deburring

APPLICATION deburring and 2x edge rounding

11 12

22 41

42



**APPLICATION** deburring, edge rounding and finishing







APPLICATION edge rounding





**APPLICATION** edge rounding and finishing



**APPLICATION** deburring, edge rounding and finishing





heavy slag removal, deburring and edge rounding



TIMESAVERS OFFERS A PREMIUM SOLUTION TO EVERY SPECIFIC NEED



## **THE 10 SERIES MANUAL GRINDER**



#### The manual grinder for fast deburring, edge rounding and finishing of metal

This versatile machine has two heads, an easy to change grinding pad and a brush. The different kind brushes could take care of deburring, edge rounding, finishing, laser oxide removal and heavy slag removal. Also, mirror finish can be created if required. With the 180 degrees rotating shaft is it easy to rapid switching between different consumables.

**The manual grinder is ergonomically responsibly designed for optimal operating conditions** The machine has a special tabletop with a high friction surface to fix the parts during processing. Smaller parts are kept fixed in their place through the integrated vacuum.

Link the operating ease of the manual grinder to an increased production capacity Get information from Timesavers' experts. They will gladly provide good advice.



#### Available configurations (mm):

MG 1300 x 880 Number of heads	2
Head types	disc / cup
Disc/brush diameter	150 mm
Rotating grinding heads	180°











#### STANDARD VERSION WITH VACUUM:

- 2-position movable arm with weight compensation.
- Starter set to process different materials.
- Grinding dust is collected in a container, that can be cleaned easily.
- Frequency controlled drive.
- Worktable 1300 x 800 mm.
- Weight approx. 270 kg.
- Vacuum table size 250 x 300 for small parts.
- 0,75 kW main motor.
- Height-adjustable side guards for personal protection and machining of larger parts.
- CE-certified.
- 400 Volt/50 Hz connection with plug.

#### **APPLICATIONS AND BENEFITS:**

- Reduction in consumables costs by long-life brushes.
- 3 4 times faster compared to hand operation.
- Even edge rounding/deburring.
- Affordable entry-level model.
- Wheels for easy movement.
- Optimal user-friendliness.

Table	1300 x 800 mm (960 mm working height)		
Vacuum area	310 x 260 mm		
Maximum thickness of a part	100 mm		0 50
Power supply	400 Volt / 2,5 kW / 11,6 A	E R S	- Strokenze
Applications	deburring, edge rounding and finishing		and the state







## 11/12 SERIES FOR WET AND DRY DEBURRING AND FINISHING OF SMALL PARTS

Timesavers' deburring machines from the 11 and 12 series have been the standard in the metal industry for more than forty years. Thousands of these economically attractive deburring machines are being used worldwide for the deburring and finishing of small parts.

## The 11 series machine is compact and requires a minimum of energy, and therefore the machine can be installed everywhere

The 11 series operates wet and has an integrated product dryer and paper belt filter. The machine is easy to operate. After just a short training, a perfectly finished product can already be produced. The 11 series is delivered with a 225 mm wide conveyor belt.

## The 12 series is available in 225 and 600 mm and is suitable for the deburring and finishing of small parts

This dry working deburring machine with a 225 mm wide conveyor belt has an abrasive belt, disc and/or brush and is suitable for deburring and finishing a large number of small sheet metal parts. The bigger variant with a 600 mm wide conveyor belt is available with an abrasive belt and/or brush for efficient deburring and finishing.

#### Efficiency and ease of use

Operation of all Timesavers machines is ergonomic and intuitive. The 11/12 series are perfect examples of this. Please feel free to ask for more information.



#### Available configurations (mm):

W	225	600	Number of heads	1 - 2
WW	225	600	Head types	roller, disc and brush
WB		600	Machine width	225, 600 mm
WRd	225		Disc diameter	355 mm
			Main drive motor	3,7, 5 or 7,5 kW







1149 mm

#### 11 SERIES/12 SERIES - 225 MM WIDTH

#### STANDARD VERSION:

- Manual table height adjustment 1 75 mm.
- Digital thickness display in mm.
- Feed rate 3 9 m/min, frequency controlled.
- CE-certified.

#### **12 SERIES 600 MM WIDTH**

#### STANDARD VERSION:

- Electric table height adjustment 1 125 mm.
- Digital thickness display in mm.
- Throughput speed W: 3 9 m/min | WW+WB: 1,5 9 m/min.
- CE-certified.

#### APPLICATIONS AND BENEFITS:

- Removing vertical burrs from laser, punched and waterjet-cut parts.
- Stainless steel, steel, aluminium, copper, etc.
- Pre-grinding of heavy burrs and finishing in one pass.
- Option of edge breaking / fine grinding with a brush.
- Optimal ease of operation.

Transport speed	3 - 9 and 1,5 - 9 m/min	0	·
Abrasive belt length	1525 mm		
Contact roller diameter	80 and 150 mm		
Applications	deburring and finishing		
			- Contraction of the second se





## THE 22 SERIES FOR DRY DEBURRING AND PERFECT FINISHING OR HEAVY SLAG REMOVAL

The 22 series is suitable for the dry finishing and deburring of metal. This versatile machine is available in three nominal widths: 900 mm, 1050 mm and 1280 mm. In total, three attachments can be used with the machine for several applications.

#### Reduction of costs and an increase in efficiency

By combining an abrasive belt and a brush, products can be deburred and rounded in one go. The machine is produced for deburring laser cut metal and edge rounding of sides and all of this while incurring very low costs. The Multi Disc head which consists out of 6 deburring brushes which rotate against each other can create a large rounding and nice finish.

#### Effective removal of heavy slag

The Hammerhead is specially developed for fast removal of heavy slag on plasma and flame cut steel. As an option, the machine can have a wide belt grinding head behind the Hammerhead for edge breaking and further deburring.

For more information ask your Timesavers' expert.

Available	configurations	(mm):
-----------	----------------	-------

_				
Н	900			1
W	900	1050	1280	
В	900	1050		
HW	900			
WB	900	1050	1280	
WW	900	1050	1280	1
BB	900	1050		
WWB	900	1050	1280	
WWB-s	900	1050		
WWW	900	1050	1280	
WBB	900	1050	1280	
WMd	900	1050		
WMdMd	900	1050		



Number of heads 1 - 3	Number of heads 1 - 3	
Head types roller, brush, multi disc	Head types roller, brush, mu	lisc, hammerhead
Machine width 900, 1050, 1280 mm	Machine width 900, 1050, 1280	า
Abrasive belt length 1900, 2620 mm	Abrasive belt length 1900, 2620 mm	



#### STANDARD VERSION:

- Table mounted on 4 synchronous spindles.
- Digital thickness adjustment and display in mm.
- Frequency controlled transport motor, 2,5 14 m/min and 0,7 7 m/min for WBB.
- Automatic table height adjustment 1 125 mm.
- Electronic oscillation.
- Dust extraction hoods and connections on top.
- CE-certified.

#### APPLICATIONS AND BENEFITS:

- Removal of vertical burrs from punched, laser and waterjet-cut parts.
- Stainless steel, steel, aluminium, copper, etc.
- Deburring and surface finishing in one throughput when using multiple heads.
- Edge breaking by means of cylindrical Nylon web brushes (B), flap brushes (B) or small brushes (MD).
- Finishing grinding / brushing.
- Very low operating costs and high production capacity.



1 - 125 mm
0,7 - 7 and 2.5 - 14 m/min
150, 200 mm
deburring, finishing, edge rounding and heavy slag removal
-





Chesaso

## THE MOST COMPACT AND VERSATILE ROTATING BRUSH MACHINE

The 22 RB series is the most compact dry operating machine for deburring, edge rounding, finishing, and/or laser oxide removal of various sheet metal parts.

## The ideal machine for companies with a smaller capacity requirement, but still requiring the popular features of the 32 RB and 42 RB series

This machine enables customers with smaller production demand and corresponding budget to deburr, edge round and finish parts perfectly.

## Reliable, repeatable grinding, deburring and edge rounding results with an automated process

Ergonomically demanding and dirty work such as grinding and manual edge milling can be cost-efficiently automated with the 22 RB series. As market demand for consistent and repeatable grinding, deburring and edge rounding increases, the 22 RB series is the ultimate machine to help your company improve these processes to the highest standards.

#### Constant results thanks to smart software and sensors

The machine is equipped with Siemens PLC and HMI, allowing the process and parameters to be adjusted automatically. Unique in this machine segment is that the 22 RB series is suitable for the use of Cobots and integration in an Industry 4.0 / Smart Industry software platform. Let one of our Timesavers experts advise you.



#### Available configurations (mm):

WRB	600 Number of heads	2 - 3
WRBW	600 Head types	roller (W), rotating brush (RB)
	Machine width	600 mm
	Main drive motor	7,5 kW
	Number of brushes	4 (quick change brush system)



#### **STANDARD VERSION:**

- Machine working width of 600 mm.
- Efficient ergonomic operation through user-friendly Siemens HMI.
- Vacuum table for processing small products (50 x 50 mm).
- Vacuum table with an integrated automatic cleaning cycle.
- Easily changeable brush units.
- Various brush types are possible for multifunctional use of materials.
- Adjustable table height 0 100 mm.
- Transport speed from 0,5 8 m/min.
- CE-certified.

#### **APPLICATIONS AND BENEFITS:**

- Very compact rotary brushing machine.
- The brush contact distance of 850 mm.
- The 4 brushes have a total of 12 m<sup>2</sup> of abrasive material.
- Low tooling costs and very low energy consumption.
- Maximum user-friendliness and an optimal process visibility.
- E Removal of burrs on laser-cut, waterjet-cut and punched products.
- Processable materials: stainless steel, steel, aluminium, copper etc.
- Removal of large burrs, laser oxide and finishing of surfaces in one pass.
- Edge breaking/finishing of metal with brushes.
- Removal of oxide skin with special brushes.



Table opening	0 - 100 mm
Transport speed	0,5 - 8 m/min
Brush diameter	300 mm
Contact roller diameter	150 mm
Applications	deburring, edge rounding, finishing and/or oxide skin removal













## THE 31 SERIES FOR WET DEBURRING AND FINISHING

The 31 series deburring and finishing machine is available in a width of 450 mm, 600 mm and 900 mm.

#### Three widths and innumerable possibilities

The 31 series could be equipped with a powerful grinding belt and a brush head and therefore it is the ideal machine for grinding and finishing square pipes and sheet metal.

#### The 31 series, a complete Timesavers' machine

This complete machine has an integrated coolant filter system to cool the metal products during machining. This ensures that the abrasive belt's service life is extended. The wet-working system uses filter paper to filter the coolant before it is recirculated. An integrated dryer dries the metal products while they are exiting the machine.

#### Optimum machining process in combination with ease of use

The 31 series is the ultimate machine for fast and efficient deburring and finishing. The machine can be easily operated thanks to a clear control panel. The finishing level is one of the reasons why the 31 series is so popular. Ask our experts for more information.



#### Available configurations (mm):

W	450	6	600	900	Number of heads	1 - 3
WB	450			900	Head types	roller (W), brush (B)
WW	450			900	Machine width	450, 600, 900 mm
WWB	450			900	Main drive motor	7.5, 11 or 15 kW
WBB				900	Abrasive belt length	1525 mm and 1900 mm



#### STANDARD VERSION:

- Built-in cleaning filter and recirculation pump.
- Transport table with a fixation system.
- Automatically adjustable table opening:
  - 450 wide: 1 80 mm | 600 wide: 1 125 mm | 900 wide: 1 150 mm.
- Digital readout material thicknesses in mm.
- Transport speed from 4 12 m/min.
- Integrated drying with air knives and squeeze rollers.

#### **APPLICATIONS AND BENEFITS:**

- Removing burrs on laser-cut, waterjet-cut and punched metal parts.
- Suitable for stainless steel, steel, aluminium, titanium etc.
- Deburring and finishing of surfaces in one pass.
- Deburring and finishing of metal parts with abrasive belt and brush.
- Optimal production process and ease of use.



Fixed table with constant working height

**Specifications:** 

Table opening

0 - 200 mm (450, 900 mm), 0 - 80 mm (600 mm) 980 mm	$\bigcirc$	
2.5 – 14 m/min		373
150 mm		man
150 mm		

Transport speed	2.5 – 14 m/min	
Contact roller diameter	150 mm	
Brush diameter	150 mm	



## THIS COMPACT VERSATILE MACHINE OFFERS THE PERFECT PRICE-PERFORMANCE RATIO

The 32 series is the compact dry operating machine for deburring, edge rounding, finishing, and/or laser oxide and heavy slag removal of different materials.

## The 32 series has been developed based on the Red Dot Award-winning 42 series and is equipped with Timesavers' much-vaunted RB technology

The machine forms the new standard in deburring, edge rounding and finishing technology for a broad range of materials.

#### Very small parts can be machined due to the use of a vacuum table

Much attention has been paid to the ease of use and user comfort with regard to this stylish and efficient deburring and finishing machine. A result is a machine that can be operated intuitively and easily. In addition, consumable use is low, the machine is energy efficient and the price-quality ratio is optimal. The machining process can be easily observed because of the angled control panel and the large windows.

#### The ultimate deburring and finishing machine

Our innovative high-quality deburring and rounding technologies ensure that the latest deburring machine from the Timesavers 32 series is the perfect machine for the metal machining industry. Let one of our Timesavers experts advise you.



#### Available configurations (mm):

1100 Number of boots		1 2
Number of heads		1 - 3
1100 Head types		roller (W), rotating brush (RB),
1100		hammerhead (H)
1100 Machine width		1100 mm
Main drive motor		7,5 kW
Number of brushes		4 (quick change brush system)
	1100 Head types   1100 Machine width   Main drive motor Head types	1100     Head types       1100



## 





1700 mm



#### STANDARD VERSION:

- Machine working width: 1100 mm.
- Efficient ergonomic operation through user-friendly Siemens HMI (located at 45° for a good overview of the treatment process).
- Vacuum table for processing small products (50 x 50 x 1 mm).
- Vacuum table with an integrated cleaning cycle.
- **LED** bar on the input side indicating the machine status.
- Frequency controlled motors (roller, brush and carousel) for flexibility during the process.
- Easily changeable brushes.
- Various brush types are possible for multifunctional use of materials.
- Adjustable table opening 0 100 mm.
- Transport speed from 0,2 8 m/min.
- CE-certified.

#### APPLICATIONS AND BENEFITS:

- Compact rotary brush machine.
- Brush contact distance of 600 mm.
- The 4 brushes have a total of 12 m<sup>2</sup> of abrasive material.
- 🛃 Removal of burrs on e.g. laser-cut, waterjet-cut, punched products, etc.
- Processable material: stainless steel, steel, aluminium, copper etc.
- Removal of burrs, egde rounding, laser oxide removal and finishing of surfaces in one pass.
- Edge breaking/finishing with abrasive flap brushes.
- Removal of oxide skin with special brushes.
- Removal of large burrs caused by flame or plasma cutting by using the Hammerhead
- Low tooling costs and very low energy consumption.
- Maximum user-friendliness and an optimal observation process.
- Removal of large burrs caused by flame cutting

Table opening	0 - 100 mm
Transport speed	0.2 - 8 m/min
Brush diameter	300 mm
Contact roller diameter	150 mm
Applications	deburring, edge rounding, finishing and/or oxide skin and heavy slag removal











## 41 SERIES: WET GRINDER FOR 24/7 DEBURRING AND FINISHING

The Timesavers 41 series deburring machine has been designed to be operational 24/7. This makes the 41 series the ideal machine for deburring and finishing of metal products.

#### The 41 series has been developed for high volume production

This wet, high-quality grinder is available with one to four heads in combination with wide abrasive belts, disc and brush heads. This makes the machine extremely suitable for machining thin, oiled, greasy and/or highly inflammable metal parts and materials.

Timesavers offers the 41 series in three operating widths: 900 mm, 1100 mm or 1350 mm.

#### The 41 series can be accessed on all sides and is easy to clean

This wet grinding and deburring machine can be perfectly and easily maintained. The entire machine can be pressure cleaned every day because of easy access from both sides of the machine.

#### Are you looking for a machine with consistent performance?

The 41 series is the equipment to use when you machine high volumes! Allow us to explain in detail about the flexibility of this machine and Timesavers.



Available configurations (mm):

Rd	900		1350		
WRd	900		1350		
WRdW	900		1350	Specifications:	
W	900		1350	Number of heads	1 - 4
WB	900		1350	Head types	roller, brush, disc
WW	900		1350	Machine width	900, 1100 and 1350 mm
WWB		1100	1350	Main drive motor	up to 2.6 kW
WWBB		1100	1350	Sanding belt length	1900, 2150 and 2620 mm



#### **STANDARD VERSION:**

- Easily interchangeable brush units.
- Different brush types possible for multifunctional use of materials.
- Infeed velocity from 1 10 m/min.
- Integrated paper belt filter and product dryer.
- CE-certified.

#### **APPLICATIONS AND BENEFITS:**

- Treatment of oiled parts or contaminated parts.
- Products are automatically washed and are exiting the machine dry and dust-free.
- Suitable for various materials, without need for changing abrasives.
- Removal of burrs on laser cut, water jet cut and punched products.
- Suitable material: stainless steel, steel, aluminium, titanium etc.
- Pre-grinding of large burrs and finishing of surfaces in one pass.



#### **Specifications:**

Table opening	1 - 80 mm (900) and 1 - 60 mm (1100/1350)
Transport speed	1 - 10 m/min
Contact roller diameter	180 or 280 mm
Applications	deburring, finishing, precision grinding





4464 mm



# 

## DISCOVER 'THE POSSIBILITIES' OF THE 42 SERIES FROM TIMESAVERS

The 42 series consists of a broad range of machines for flawless deburring and finishing. The 42 series is Timesavers' most popular and versatile machine series.

#### **The grinding machines in Timesavers' 42 series are available in several widths:** 900 mm, 1100 mm and 1350 mm. The machines can be supplied with a maximum of three heads in various combinations of abrasive belt, disc and brushes. The machine can deburr and finish in one pass by integrating different heads.

#### Convenience

The 42 series grinding machines have been produced for constant use and are equipped with a lifting and lowering unit on the abrasive belt (diameters of 180 mm, 280 mm and 450 mm). This ensures that the flexibility of application can be changed easily.

#### The power of simplicity

This machine stands out because of its ease of use and an operator can immediately and effectively work with the machine after a short training course. Our experts will give you professional advice.



#### Available configurations (mm):

1100     1350     Number of heads     1 - 4	
11001350Head typesroller,	r, brush, disc
1100     1350     Machine width     900, 1	1100 and 1350 mm
1100     1350     Main drive motor     11 kW	W, 15 kW, 18.5 kW
11001350Sanding belt length1900	) mm













#### Specifications:

Table opening	0 - 150 mm
Transport speed	1 - 10 m/min
Brush diameter	280 mm
Contact roller diameter	180, 280 mm
Applications	deburring, finishing



#### STANDARD VERSION:

- Centrally located and user-friendly control panel.
- Automatic infeed height adjustment from 0 150 mm.
- Frequency-controlled conveyor belt with a speed of 1 10 m/min.
- Window doors and illuminated interior for process observation.
- Available with 1, 2, 3 or 4 heads.
- CE-certified.

#### APPLICATIONS AND BENEFITS:

- Removal of burrs on laser, plasma-cut or waterjet-cut parts, cut parts, machined parts.
- Stainless steel, steel, copper, aluminium, copper, etc.
- Long-life consumables and higher processing efficiency.





2мм

RADIUS

## 42 RB SERIES FOR ULTIMATE DEBURRING, FINISHING, EDGE ROUNDING, LASER OXIDE AND HEAVY SLAG REMOVAL

Discover the ultimate machine for uniform deburring, edge rounding and finishing of your product(s). Read everything about Timesavers' 42 Rotating Brush (RB) series below. This is the most popular and award winning Timesavers machine.

#### This machine has been developed for people who want only the best

The 42 RB series offers the solution for manufacturers who supply premium quality products. This top quality is achieved through a multi-rotating brush machine with eight abrasive flap brushes that deburr uniformly and round the edges of the metal perfectly. This makes it possible to achieve a radius of 2 mm on mild steel and even more on softer material like aluminium.

#### The Timesavers Rotating Brush Machine

This deburring machine can also be provided with one or more abrasive belt heads and therefore it will perfectly remove very large burrs and/or it will guarantee the perfect finish. The machine is suitable for machining punched, laser-cut and plasma-cut part and even 3D and milled parts with deep pockets. With the use of a standard vacuum table with automatic vacuum control also small parts (from 50 mm) up to large parts, up to 1600 mm can be machined. The materials that can be machined include stainless steel, aluminium, zincor, zinc and laser film products. Available in this machine segment is the use of Cobots and integration in an Industry 4.0 / Smart Industry software platform.

**Do you want to know more about the Timesavers Rotating Brush Machine and its performance?** Contact Timesavers' experts for professional advice.



#### Available configurations (mm):

RB	1350	1600	Specifications:	
WRB	1350	1600	Number of heads	1 - 4
RBW	1350	1600	Head types	rotating brush, roller, hammerhead
WRBW	1350	1600	Machine width	1350, 1600 mm
WWRB	1350		Main drive motor	28 - 75 kW/67-180 A
WWRBW	1350		Number of brushes	8 (quick to change brush system)
HWRB	1350			







2385 mm



**Specifications:** 

## STANDARD VERSION:

- Ergonomic positioned and user-friendly control panel (located at 45° for a good overview of the treatment process).
- Motorised adjustable table opening from 0 100 mm.
- Rotating brush carousel equipped with 4 counterclockwise and 4 clockwise rotating brushes.
- Frequency-controlled conveyor belt with an adjustable feed speed of 0,2 8 m/min.
- Window doors, illuminated interior and optional camera's for process observation.
- Brushes with an extremely long service life of up to 3000 hours.
- LED bars on the input and output to indicate machine status.
- Available with 1, 2, 3 or 4 heads.
- Vacuum table with an automatic cleaning cycle.
- Quick change system for brushes and belts.
- CE-certified.

#### APPLICATIONS AND BENEFITS:

- The brush contact distance of 42 RB 1350: 1670mm 42 RB 1600: 1750mm.
- The 8 brushes have a total of 46 m<sup>2</sup> (1350) 53 m<sup>2</sup> (1600) of abrasive material.
- Processing of mixed materials with optional wet dust extraction.
- Treatment of small parts (50 x 50 mm) possible with the standard vacuum table.
- The removal of burrs due to laser, plasma, water jet cut and embossed parts in one go.
- Flat, formed and 3D parts with pockets/protrusions.
- Preliminary removal of large burrs and finishing of surfaces.
- Stainless steel, mild steel, aluminium, copper, etc.
- Deburring Zintec, galvanised and plated material.
- Use of Cobots integration in an Industry 4.0/Smart industry software platform.

Table opening	0 - 100 mm	
Transport speed	0,2 - 8 m/min	
Brush diameter	350 mm	
Contact roller diameter	180, 280 and 450 mm	
Applications	finishing, deburring, edge rounding, laser oxide and heavy slag removal	







## ALL OPTIONS OF THE 42 RB SERIES LISTED CONVENIENTLY FOR YOU

These pages provide insight into the possibilities of the 42 RB series. Timesavers has listed all heads including the application possibilities for you.

Regardless of what your requirements or preferences may be: Timesavers has the solution Timesavers serves customers in many industries and sectors and strives to achieve the greatest flexibility in several areas: Timesavers' customers can count on quality, service and innovative and problem-solving capacity. Therefore, always contact Timesavers if you want to exchange ideas and discuss your requirements with regard to perfect deburring, edge rounding and finishing. Our professional experts will help you further.

5

- Perfect edge rounding (radius of up to 2 mm).
- Low tooling costs.
- Different thicknesses can be machined simultaneously.
- Suitable for different materials such as stainless steel, aluminium, Zintec, etc.
- Suitable for deburring small (50 mm) and large parts.
- Can be integrated into an (existing) production process.









## TIMESAVERS ORIGINALS OVERVIEW TOOLING 10 SERIES

#### Requests & orders: parts@timesaversint.com

	DESCRIPTION	PART NUMBER	APPLICATION
0	<b>Media disc</b> Hard Medium	00809000 00809001	Holder for pads. Hard for the removal of hard burrs. Medium for the removal of other (various) burrs.
	<b>Grinding pad</b> Grit 80 Grit 120	00809100 00809200	Pregrinding, primary burr removal.
	<b>Scotch Brite pad</b> Grit 180 Grit 280	00809300 00809400	Pregrinding, light deburring and finish grinding.
	<b>Deburring disc HERO</b> Grit 80	00809500	Light primary and secondary burrs + strong edge roundings.
	Deburring disc Grit 80 Al-Ox	00809600	Deburring and edge rounding of steel.
	<b>Deburring disc</b> Grit 80 Zirk	00809700	Deburring and strong edge rounding of stainless steel with bigger radius.
	<b>Deburring disc</b> Grit 80 Si-Ca	00809800	Edge rounding and fine surface pattern for aluminium and plastic.
	Deslagging brush	00809900	Deslagging residues.
	Oxide brush	00810600	Removal of oxide layers.

## TIMESAVERS ORIGINALS OVERVIEW BRUSHES 22 RB/32 RB SERIES



#### Requests & orders: parts@timesaversint.com

DESCRIPTION	PART NUMBER	APPLICATION
Aluminium Oxide Deburring brush Grit 80 Grit 100 Grit 120 Grit 150 Grit 180 Grit 240	599344 599300 599333 599346 599299 599347	Medium edge rounding and finish grinding for steel, aluminium and stainless steel (3 & 5 mm width flaps)
Silicon Carbide Deburring brush Grit 180	599334	Medium edge rounding and finish grinding for aluminium (3 & 5 mm width flaps)
<b>Cross Flex</b> <b>Deburring brush</b> Grit 80 Grit 180 Grit 240	599348 599335 599349	Directional finish and removal of milling marks for all types of metal (3 & 5 mm width flaps)
<b>Zirconium Deburring brush</b> Grit 80 Grit 120	599392 599393	Strong edge rounding (5 & 5 mm width flaps)
Cutting Skin Oxide Removal brush	460370	Brush for optimal oxide skin removal
Flange assy set	460623	4 x Flanges, 16 x bolts, mounting instruction





## TIMESAVERS ORIGINALS OVERVIEW BRUSHES 42 RB SERIES 1350

#### Requests & orders: parts@timesaversint.com

DESCRIPTION	PART NUMBER	APPLICATION
Aluminium Oxide Deburring brush Grit 60 5&5 mm Grit 80 5&5 mm Grit 100 5&5 mm Grit 100 3&5 mm Grit 120 3&5 mm Grit 180 3&5 mm Grit 400 3&5 mm	599316 599325 599317 599308 599306 599305 599326	Medium edge rounding and finish grinding of steel, aluminium and stainless steel by 5 & 5 mm width flaps, for material with smaller inserts we advise 3 & 5 mm width flaps
<b>Silicon Carbide</b> <b>Deburring brush</b> Grit 180 5&5 mm Grit 180 3&5 mm	599303 599341	Medium edge rounding and finish grinding for aluminium (3 & 5 and 5 & 5 mm width flaps)
<b>Cross Flex</b> <b>Aluminium Oxide</b> <b>Deburring brush</b> Grit 80 Grit 180 Grit 240	599342 599338 599339	Non-directional finish and removal of milling marks for all types of metal (3 & 5 mm width flaps)
<b>Zirconium Deburring brush</b> Grit 80 Grit 120	599385 599386	Strong edge rounding (5 & 5 mm width flaps)
<b>Cutting Skin Oxide</b> <b>Removal brush</b> (4 pieces) (8 pieces)	459667 460368	Brush for optimal oxide skin removal
<b>Cutting Skin Oxide</b> <b>Removal brush</b> Adjustable (4 pieces)	460076	Adjustable brush for optimal oxide skin removal
<b>Korfill Brush</b> Grit 120	599329	Brush for aluminium with deep pockets and push-throughs
Flange assy Orange special materials Flange assy Red aluminium Flange assy Blue steel Flange assy White stainless	460389 460388 460387 460386	8 x Flanges, 32 x bolts, 16 x colored rings, mounting instruction

## TIMESAVERS ORIGINALS OVERVIEW BRUSHES 42 RB SERIES 1600



#### Requests & orders: parts@timesaversint.com

DESCRIPTION	PART NUMBER	APPLICATION
Aluminium Oxide Deburring brush Grit 60 5&5 mm Grit 80 5&5 mm Grit 100 5&5 mm Grit 100 3&5 mm Grit 120 3&5 mm Grit 180 3&5 mm Grit 400 3&5 mm	599358 599359 599356 599360 599361 599355 599362	Medium edge rounding and finish grinding of steel, aluminium and stainless steel by 5 & 5 mm width flaps, for material with smaller inserts we advise 3 & 5 mm width flaps.
Silicon Carbide Deburring brush Grit 180 5&5 mm Grit 180 3&5 mm	599363 599364	Medium edge rounding and finish grinding for aluminium (3 & 5 and 5 & 5 mm width flaps)
Cross Flex Aluminium Oxide Deburring brush Grit 80 Grit 180 Grit 240	599367 599368 599369	Non-directional finish and removal of milling marks for all types of metal (3 & 5 mm width flaps)
<b>Zirconium</b> <b>Deburring brush</b> Grit 80 Grit 120	599390 599391	Strong edge rounding (5 mm width flaps)
Cutting Skin Oxide Removal brush (4 pieces) (8 pieces)	460686 460687	Brush for optimal oxide skin removal
<b>Cutting Skin Oxide</b> <b>Removal brush</b> Adjustable (4 pieces)	460673	Adjustable brush for optimal oxide skin removal
Flange assy Orange special materials Flange assy Red aluminium Flange assy Blue steel Flange assy White stainless	460389 460388 460387 460386	8 x Flanges, 32 x bolts, 16 x colored rings, mounting instruction



## THE 62 SERIES: FOR FINISHING COLD ROLLED STAINLESS STEEL SHEETS

The 62 series offers a full solution for finishing stainless steel sheets. Two different working widths are available: 1350 mm and 1600 mm.

#### Perfect finishing including thin sheet material from 0,4 mm (optional)

The 62 series machine can be fitted with one or more heads and therefore you can achieve a no. 3, no. 4 and duplo finish in one machine.

A duplo finish can be achieved using a grinding belt followed by a Scotch-Brite brush that will produce an additional fine surface. Very thin sheets can be ground and finished because of the special construction of the roller table.

#### In addition to the standard machine, we also offer turnkey solutions

We can also supply the ancillary equipment. Timesavers organises, installs, instructs and provides a perfect working machine-line. Examples include:

- Roller conveyors and tables.
- Automatic stacking/de-stacking units.
- PVC-coating machines.
- Dust extractors for dry grinding machines.

#### Do you want to know more about this Timesavers machine and our service?

Contact Timesavers' experts for professional advice.



#### Available configurations (mm):

Number of heads 1 - 3	1600 Number	1350	WWB
Head types roller and/or brush	1600 He	1350	WW
Machine width 1350, 1600 mm	1600 <b>Machi</b>	1350	WB
Brush attachment size 350 mm	1600 Brush attachn	1350	BB
Number of brushes 1 - 3	Number of		



#### **STANDARD VERSION:**

- Centrally programmable HMI Siemens control panel.
- Wide belt grinding heads with a fine adjustment of the contact rollers (diameter of 220 mm). With frequency controlled main motors for all possible finishes.
- Scotch-Brite brush heads with fast oscillation of up to 700 strokes per minute: frequency controlled main motor, brush outer diameter of 350 mm, motorised height adjustment with quick exchange brush system.
- Roller table construction with hardened steel counter roller under the contact roller for finishing thin sheets from 0,4 mm (need of an additional package).

#### **APPLICATIONS AND BENEFITS:**

- No. 3 or no. 4 finishing with abrasive belts from grit 120, 180 to even 240 and 320.
- Brush / microlon finishing with Scotch-Brite brushes or with Scotch-Brite belts.
- Duplo finish; a combination of finishing with grinding belts and Scotch-Brite brush(es). Can be purchased as a turnkey project.



2200 mm

Microlon finish

Duplo finish

#### **Specifications:**

Table opening	0 - 50 mm
Transport speed	4 - 20 m/min
Brush diameter	350 mm
Adjustable contact roller diameter	220 mm
Applications	grinding and finishing of stainless steel sheets

#### No. 4 finish



# THE 71/72 SERIES: A COMPLETE 'COIL-TO-COIL' LINE: WET OR DRY

In addition to top working machines bottom working machines can be integrated in the production line. Finishing of cold & hot rolled sheets is also possible with this machine.



The machine has a production speed of up to 30 m/min and delivers a perfectly finished end result. The 71/72 series has been developed to perform: day-in, day-out, year-in and year-out.

#### Timesavers provides advice, delivers, installs and offers backups

If required we can deliver turnkey projects that can include, for example, a leveling machine, decoiler, coiler, a PVC-coating machine, roller tables and/or stackers. With experienced support from the design phase up to and including delivery. Additional examples include:

- Dust extractors for dry finishing machines.
- Water filter units for wet finishing machines.
- In other words a complete 'coil-to coil' finishing line.

#### Do you want to know more?

Contact the Timesavers experts.



#### Available configurations (mm):

WW	1350	1600	2100	Number of heads	1 - 2
WB	1350	1600	2100	Head types	roller, brush and hairline
BB	1350	1600	2100	Machine width	1350, 1600 and 2100 mm
				Brush attachment size	400 mm
				Number of brushes	1 - 2





#### **Specifications:**

Table opening	0 - 50 mm	- No. 4 fini:
Transport speed	0 - 30 m/min	
Brush diameter	400 mm	
Adjustable contact roller diameter	280 mm	
Applications	grinding and finishing of stainless steel sheets or coils	

ish



## **THE 81 SERIES: THE INNOVATIVE SOLUTION FOR PRECISION GRINDING**

The Dutch build 81 series machine is Timesavers' innovative solution for precision metal grinding.

#### Precision grinding up to 0.02 mm? No problems with the Timesavers 81 series

This machine uses wide grinding belts with a tight tolerance and is used for the precision grinding of titanium, molybdenum, stainless steel, aluminium/nickel alloys, carbon steel and more. The machine grinds these metals with a precision of no less than 0,02 mm.

#### The Timesavers precision grinding machine: totally tailor made

Every variant from the 81 series is produced especially based on customer requirements. Precision grinding is performed by a wide belt that grinds the thickness of a part to achieve a fixed thickness. The Timesavers 81 series has a conveyor belt, a roller table or a reciprocating table, coupled with high grinding power to make this precision grinding possible.

All executions in this machine range will have air knives to keep the coolant in the machine. In addition to this, a mist filter will remove small coolant particles out of the air. The machine is executed with servo drives for accurate positioning.

#### Timesavers offers know-how and a far-reaching service

We also, for example, offer turnkey solutions where the handling of all ancillary equipment is organised and installed for you. Examples include:

- Roller conveyor and tables.
- Coolant filter units for wet grinders. Automatic stacking and de-stacking units. Turnover unit.









#### Available configurations (mm):

1 - 2	Number of heads	2600	2100	1600	1000	600	W
roller, brush	Head types	2600	2100	1600	1000	600	WW
600, 1000, 1600, 2100 and 2600 mm	Machine width	2600	2100	1600	1000	600	WB
400 mm	Brush attachment size	2600	2100	1600	1000	600	BB
1 - 2	Number of rollers						







Specifications:		
Table opening	0 - 100 mm	
Transport speed	1 - 10 m/min	
Applications	precision grinding	



## 81 SERIES TABLE EXECUTIONS



#### Conveyor belt

Precision grinding with a conveyor belt will guarantee a transport speed from 0.1 up to 10 m/ min. Optional is a transport feed from 0,1 up to 20 m/min. Besides that, the conveyor belt is oil and heat resistant. Plates could have a minimum thickness from 0,8 mm up to a maximum thickness of 100 mm.

The conveyor belt is specially used when you have thicker material and when the material is not totally straight in length direction. The conveyor belt will give support for the low spots and the end result will be a homogeneous finish. The material will reciprocate during the grinding process over the conveyor belt and the grinding will be done in both directions to get maximum stock removal per cycle.

Also capable of grinding material with various shapes.

- Accuracy of +/- 0,07 mm.
- Specially produced for sheet and plate material and has to be connected to infeed and outfeed tables





#### **Roller table**

The roller table is executed with hardened steel Billy Rollers which guarantee a very constant grinding result. The minimum thickness of a plate could be 0,4 mm up to a maximum thickness of 20 mm. The material should be level in both length and width before grinding if the material is > 4 mm. The billy rollers make sure that you have a constant pressure over the full width of the material, due to this you will get a homogeneous finish and an accuracy of +/- 0,05 mm.

Can be used for both sheets and coils, the machine has to be connected to in and outfeed tables or to coil equipment.

#### **Reciprocating table**

By using a reciprocating table the most precise grinding could be reached. Possible for very small plates with a minimum thickness of 0,25 mm up to plates with a maximum thickness of 100 mm. The product stays perfectly in place due to the vacuum system or the magnetic chuck. The table will have integrated channels on the side to remove swarf and coolant from the grinding area to the filter system.

The vacuum chuck mounted on top of the reciprocating table has multiple suction holes to accommodate one or multiple parts. The groove pattern can be adapted for the customers' needs. With the optional hydro pins, the plates can be either taken off with a sling or with a vacuum lifter.

- The table can also be executed with a magnetic chuck if the parts are from steel. This is an electro-permanent magnet to avoid heat production and to guarantee an accurate result.
- The accuracy of this type of table is +/- 0,02 mm depending on the material that is machined.













#### TIMESAVERS INTERNATIONAL BV

Fruitlaan 20-30, 4462 EP Goes The Netherlands T +31 113 23 89 00 F +31 113 23 20 03 info@timesaversint.com www.timesaversint.com

#### **TIMESAVERS INC**

11123 89th Ave North Maple Grove, Minnesota USA T +763 488 6600 F +763 488 6601 info@timesaversinc.com www.timesaverinc.com

