COSTA
LEVIGATRICI
METAL

SERIE MA SERIE MA2

SERIE MSH3

SERIE MSA2

Deburring Polishing Universal Machines

デバーリング　磨き　ユニバーサル・マシン

COSTA
LEVIGATRICI

SERIE MA SERIE MA2 SERIE MSA2

鉄、非鉄金属用の普遍的なデバーリングと研磨システム

Universal deburring-finishing systems for processing ferrous and non-ferrous materials This series of working centers are available with moving table for stand-alone processes or constant height table for in-line operations, or for processing large work-pieces.
These machines are available in 1150 or 1350mm width, with maximum load capacity of 500 kg.
The larger sanding belts, of 2620mm length, guarantee consistent surface finish and improved belt life, therefore lowering machine operating costs.
Thanks to their modular concept, these working centers can be customized according to the individual customer need, through a specific selection of the working units for each type of work to be performed. The frame is engineered to hold from 2 through 4 internal working units, and one external unit.
The high structural rigidity of the frame as well as the feed bed combined with high-tech mechanics and electronics, make this series the perfect working center for your operation.

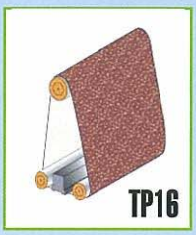
Cylinder units


C200


C250


C330

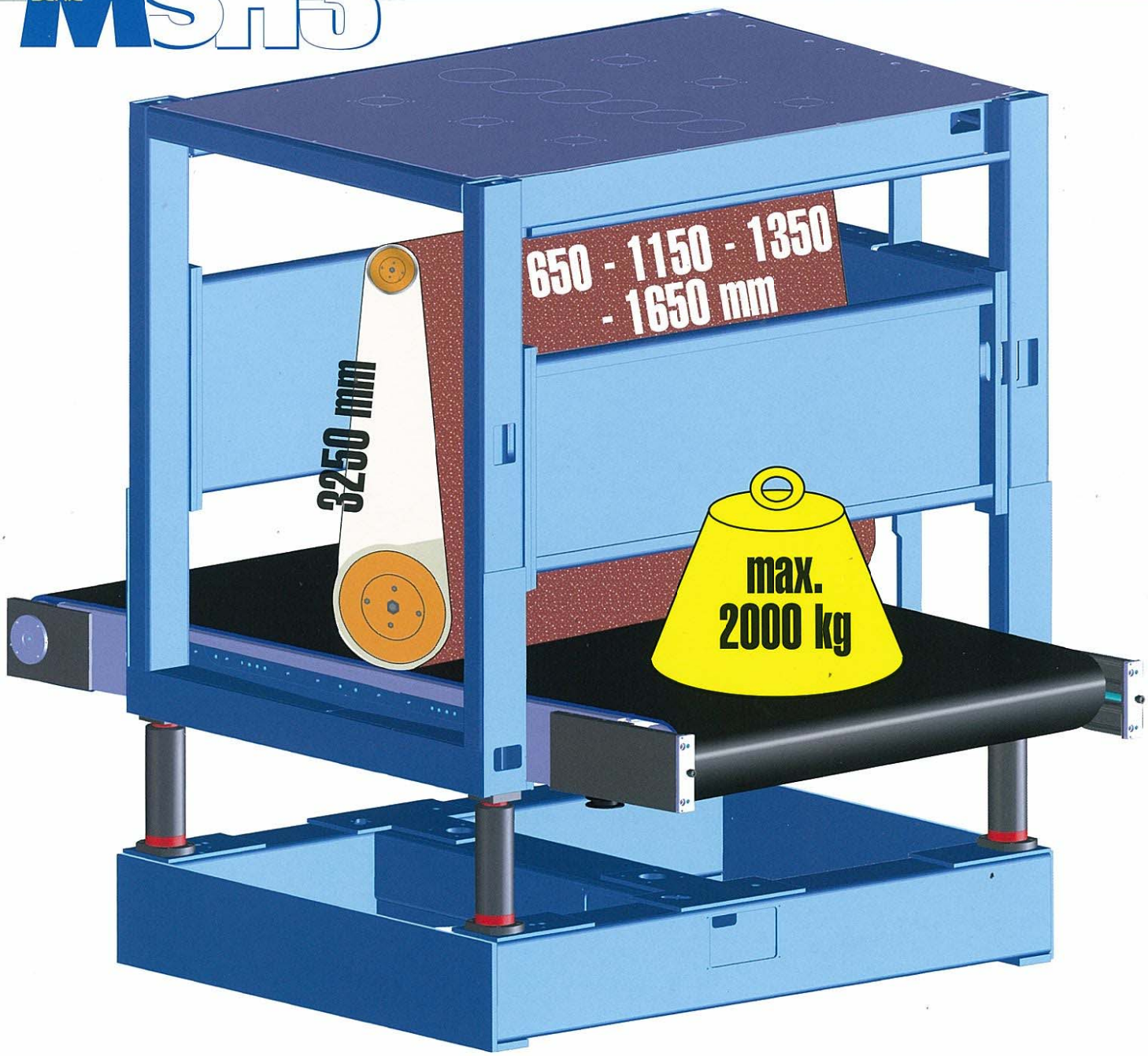
Pad units


TP16


TP32


SB180

SERIE MSH3



ヘビーデューティーなシステムです。

This series combines the heavy-duty structure of constant pass-line technology typical of industrial systems with working units engineered for deburring and finishing, therefore creating the "FORMULA ONE" of all deburring-finishing systems.
Available in 4 different working widths, 650mm, 1150mm, 1350mm, 1650mm, these machines can be equipped with 2 and up-to 5 internal working units, and up-to 2 external units.
The constant pass-line feed ensures the highest rigidity, with a maximum load capacity of 2000 kg. Different level of finish can be achieved in one pass through the optimal working unit combination. The 3250mm length abrasive belts guarantee a professional finish and consistent surface rugosity, also in softer materials such as aluminum, brass, etc.
The longer abrasive belt becomes even more important in deburring operations to extend abrasive life while maintaining a constant level of abrasion. With the SB250 brush units, with quick extraction system, it is possible to add a Scotch Brite (tm) finish to stainless steel, aluminum, etc.

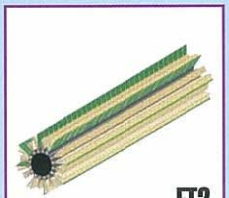
Therefore, we made it now possible to debur, polish, and brush finish at the industrial level with one machine only.

Brush units

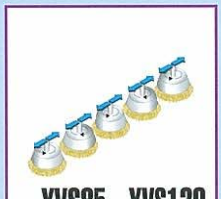

S180


SB250


S250


FT2

Blowers


XVS85 - XVS130


SR

Control systems

Electromechanical Panel

電子パネル

Control panel positioned in front of the machine, with push-buttons for all motors and amp-meter readers of power utilization of the working units.
Digital positioner with read-out of the thickness adjustment with decimal accuracy.
Emergency stop and reset
Range change switch for the variation of the feed speed
Diagnostic leds of electric-pneumatic-safety problems

1

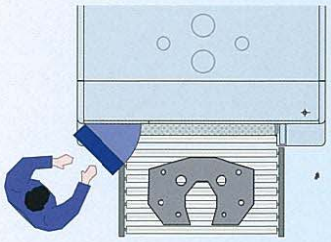
PCM - "Touch-screen" Computer control with Logic.A

タッチスクリーン

Computer controlled machine, with "TOUCH-SCREEN" monitor positioned in the machine front

Costa's new machine software solution enabling operators to quickly setup automatic wide-belt sanding machines to reach the desired level of finish.

Possibility to have an inclinable panel board to 45° very usefull for machines positioned in line. (OPTIONAL)

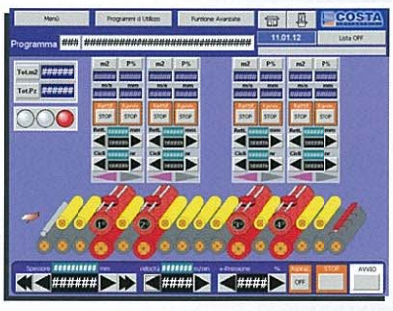


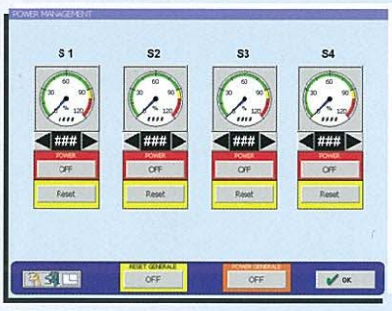
2

PC-NC - Computer control with interconnecting possibilities

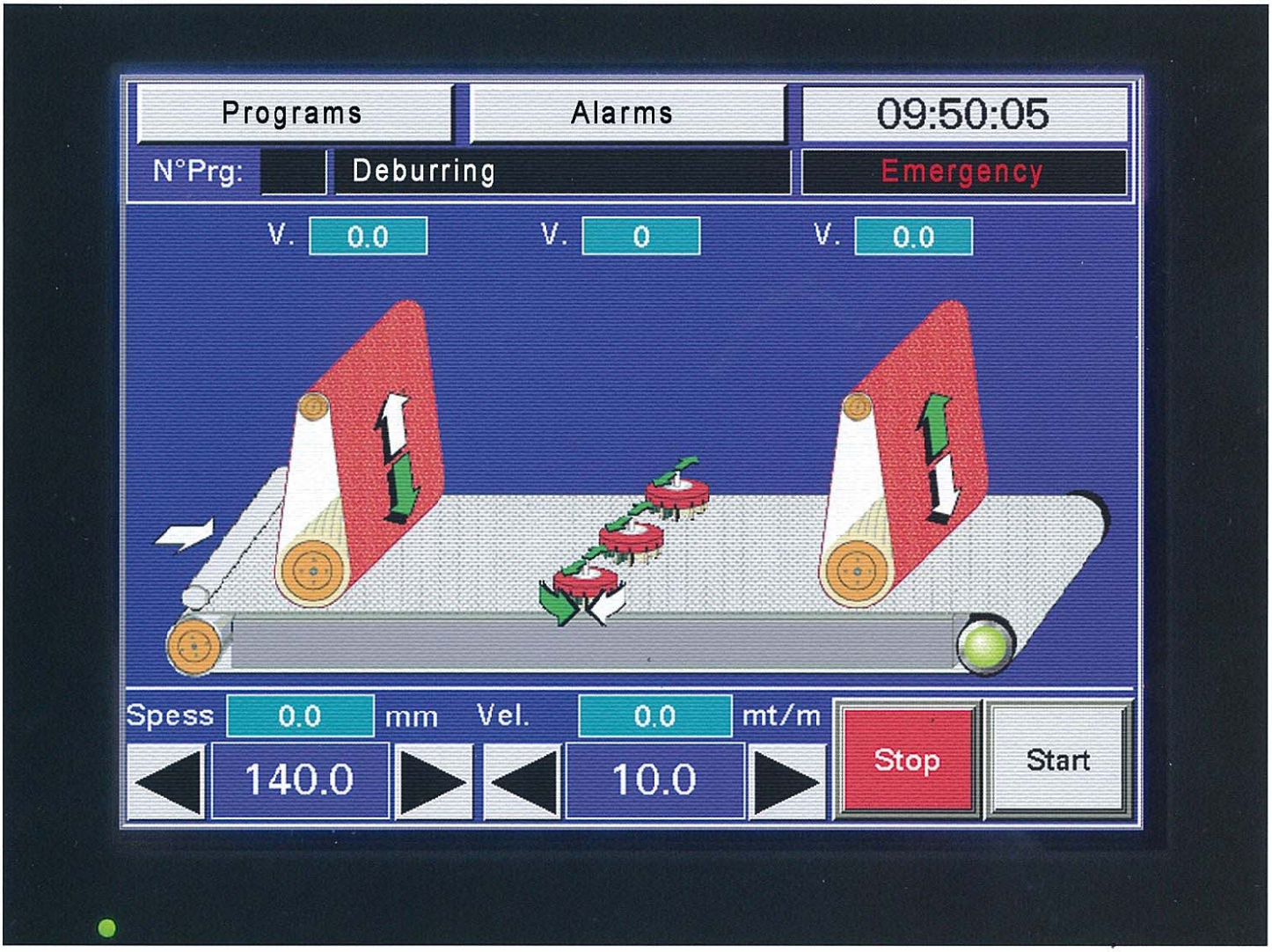
PC-NCも可能

Computer controlled machine, with touch screen monitor (PLC Siemens S 7 300 - 12") positioned in a separate column or mounted inside self-standing board.
This is a PC working position integrated in the company network.
The PC control system allows to pre-set all the working programs; besides the usual controls of the machine, it can also supply complete production data such as: number of pieces processed, working time per each code , square meter produced, compressed air , volume of dust extraction, electric power consumption , etc..
Through a modem we have the possibility to connect directly Costa Service for help and service.

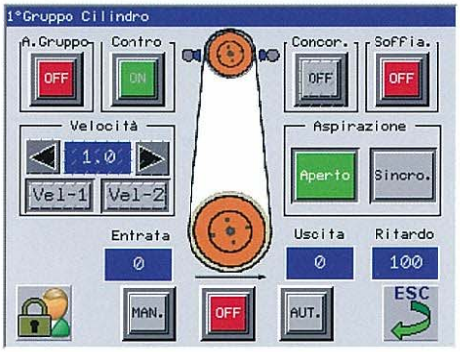




3



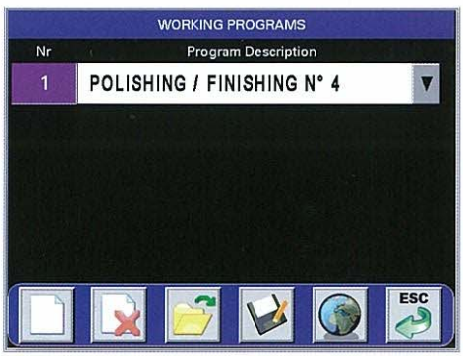
real size (monitor touch screen 7,5")



PLC VISION (optional)

PLCビジョン

The PLC panel VISION enable the visualization in a touch-screen monitor of the actual setup data and operation of the machine, and to store many complete working programmes.
Possibility to program the thickness and feed speed adjustment only, if required.
This system is especially useful for UNIVERSAL DEBURRING AND POLISHING.

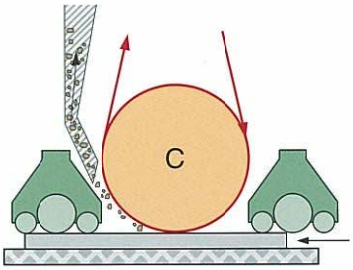


C200
C250
C330

Cylinder units
シリンダーユニット

contact surface in
steel,
rubber covered (with various hardness)
(Special type of helicoidal grooves on the surface of all cylinders, for better cooling and discharging of air).

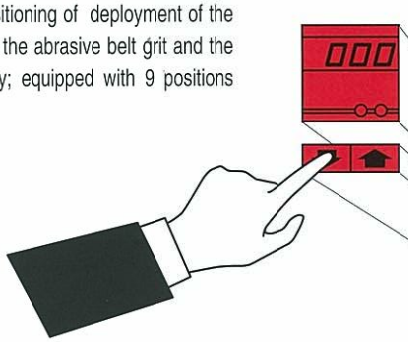
Units available
- ø 200 mm (series MA)
- ø 250 mm (series MA2)
- ø 330 mm (last position for all Series)

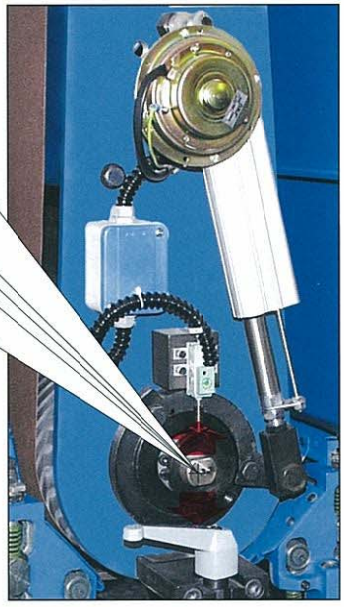


C200: Cylinder, ø 200 mm, covered with special rubber, oil and heat resistant or in alternative with steel surface
C250: Cylinder, ø 250 mm, covered with special rubber, oil and heat resistant or in alternative with steel surface
C330: Cylinder, ø 330 mm, covered with special rubber, oil and heat resistant or in alternative with steel surface

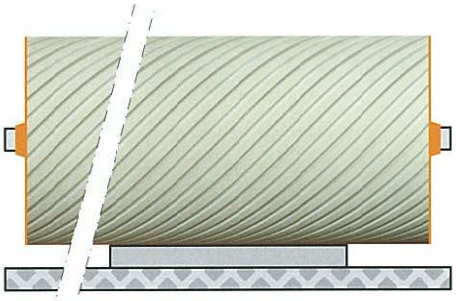
Quick and easy change-over of the sanding belt

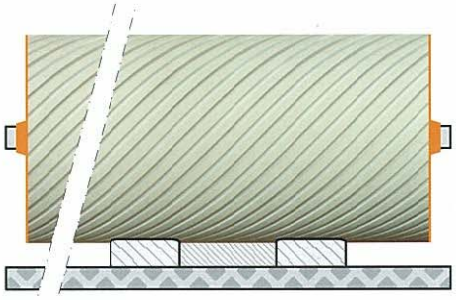
Pneumatic Grit-set
System for depth positioning of deployment of the cylinder in relation to the abrasive belt grit and the amount of take away; equipped with 9 positions revolver

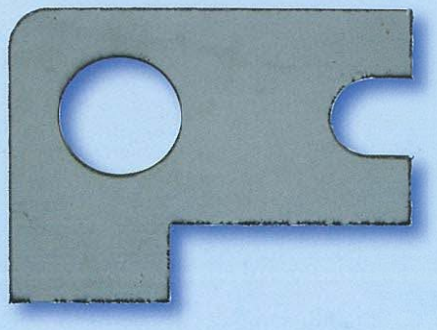


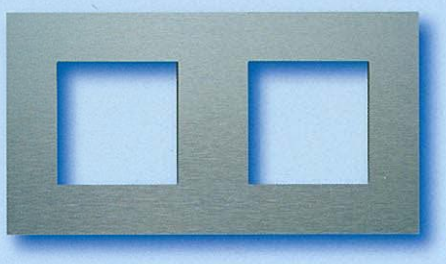


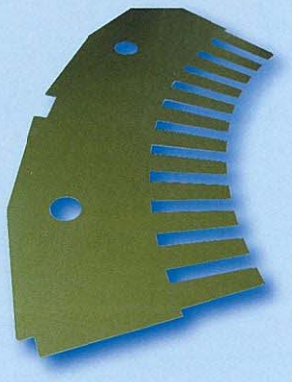
Electronic Grit set (opt.)
System for centesimal positioning of depth of deployment of cylinder in relation to the abrasive belt grit and amount of take away. Read-out and centesimal setting from control panel.











TP16
TP32

Electronic controlled perimetral deburring unit

周囲仕上げ用デバーリングマシン

The perimetral-deburring unit is constituted by a series of electronically controlled pneumatic pistons of 32mm pitch (16 mm), exercising pressure on the sanding belt.
A shape-reading system is positioned in the machine in-feed to detect the work pieces edges (where the burrs are) and to electronically activate the sections needed once the piece reaches the perimetral-deburring unit.
Thanks to the electronic control it is possible to vary, increase-decrease, both the width (resolution) of the action zone and the pressure, depending on the requirement.

a manual pad control panel; enable the variation of electronic parameters

b electronic card for pad control

c infeed sensing bar with rubber covered wheels and inductive sensors, to detect form and size of work-pieces

d pressing system - acting on each-one section with pneumatic or electromagnetic pressure

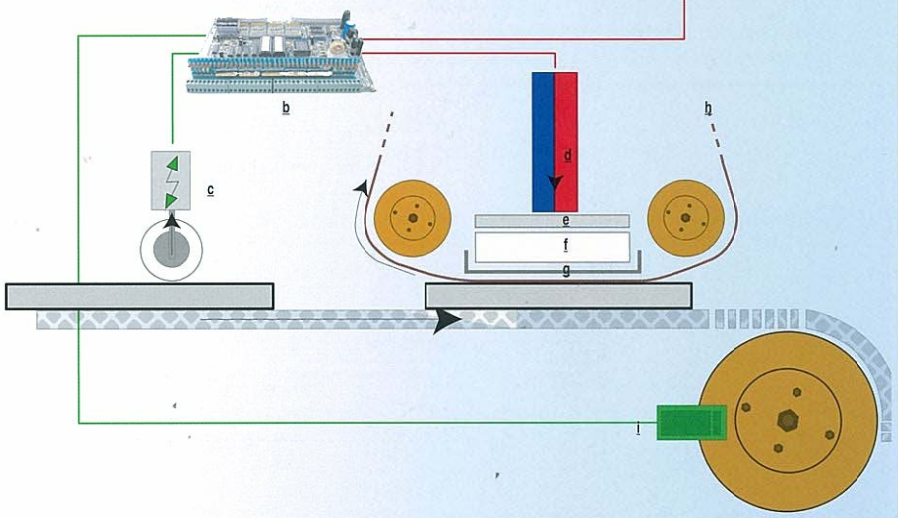
e metal pad section, spreading the pressure of the upper element on the underneath layers of felt / graphite / sanding belt

f felt / rubber / foam intermediate contact element that is adapting on the panel surface and is changeable depending on operations required

g graphite cloth - a sliding surface working on the back side of abrasive belt, changeable depending on wear

h sanding belt

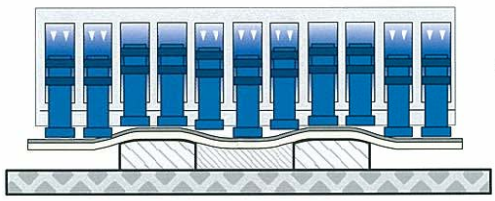
i encoder on feed drive unit to give a signal every 1 mm



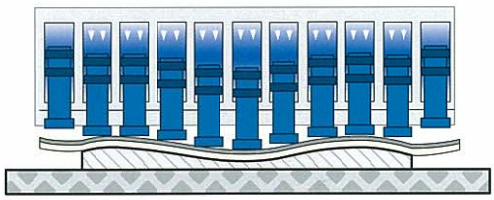
The main features of this unit are:

- possibility to process only the edges (width at choice) in order to facilitate the welding process;
- possibility to process only the burrs and not the whole surface (power and sanding belts saving).

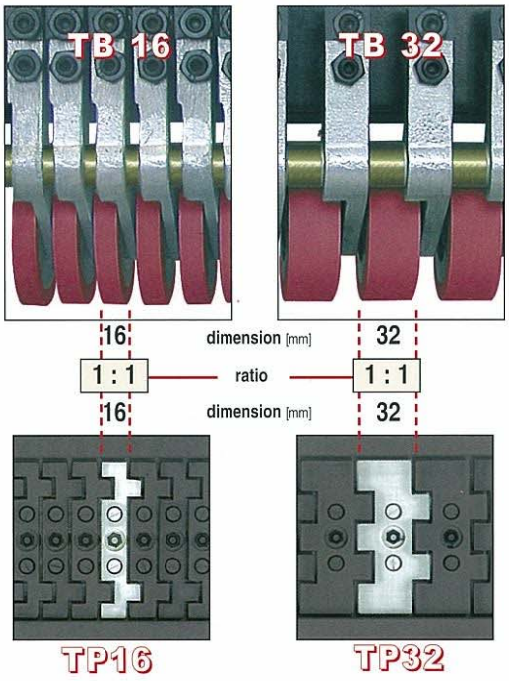
The independence and big excursion (up to 4 - 6 mm) of each section make possible a perfect deburring operation also on warped work-pieces (both in width and in length)

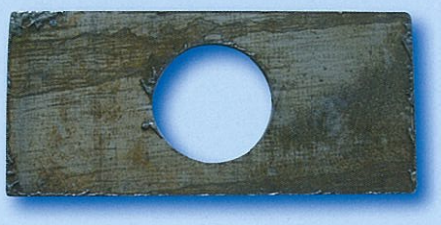


Perimetral deburring



Polishing of deformed and/or uneven pieces

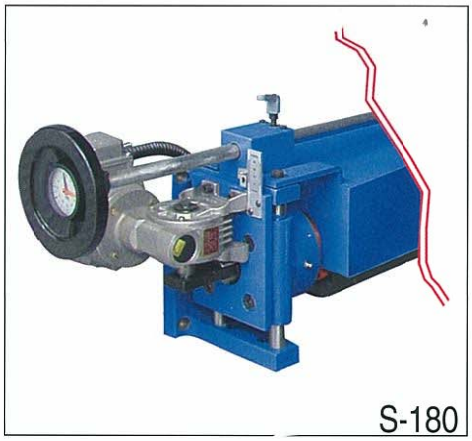




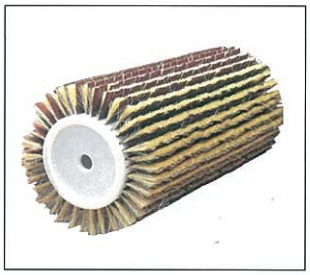
S180
SB180
S250
SB250

Brush units
ブラシユニット

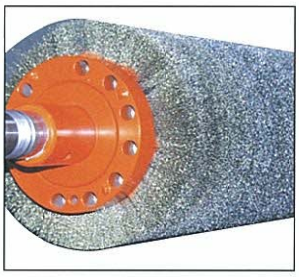
The brush units are positioned inside the machine frame, have a diameter of 180 mm (Series MA) or 250 mm (Series MA2 - MSA2), are oscillating and driven by high power motors.
Our brushes are available in various materials: steel, stainless-steel, scotch-brite™ and many others, for different applications. We are supplying specific steel brushes to eliminate both the sharp-edge and the sanding belt longitudinal streaks (deeper or lighter according to the sanding belt grit and wear conditions) from the sheet metal surface.
The steel wire thickness 0,2 mm wound up in a special way on our specific design, has high resistance and long lasting time.
The scotch-brite brushes can be utilized for deburring on "soft" material (aluminium, copper ... etc) or for surface finishing similar to grinding-polishing, to obtain an homogeneous surface finishing and a low rugosity.


S-180

The scotch brite ™ brush units are employed in groups of 2, 3 or 4 brushes for detail brushing stainless steel, aluminum, etc (SB 250). These brush units are employed in sequence after abrasive belt units to reduce peaks and rugosity levels (SB180 - SB250)

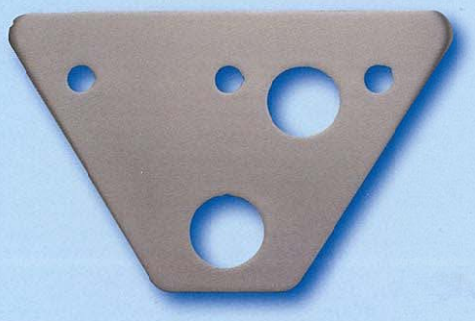


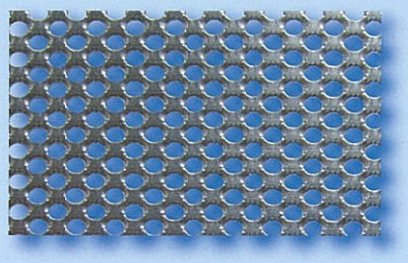
"Abrasive strip brushes" are used to deburr soft materials (Aluminum, copper, etc)




S-250

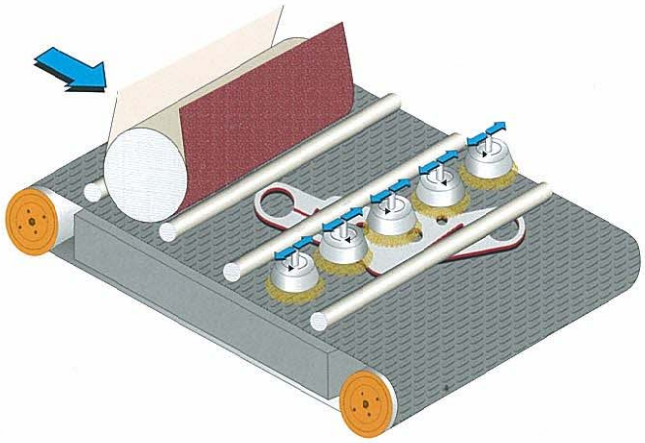

View of the oscillation system of brushes S-250



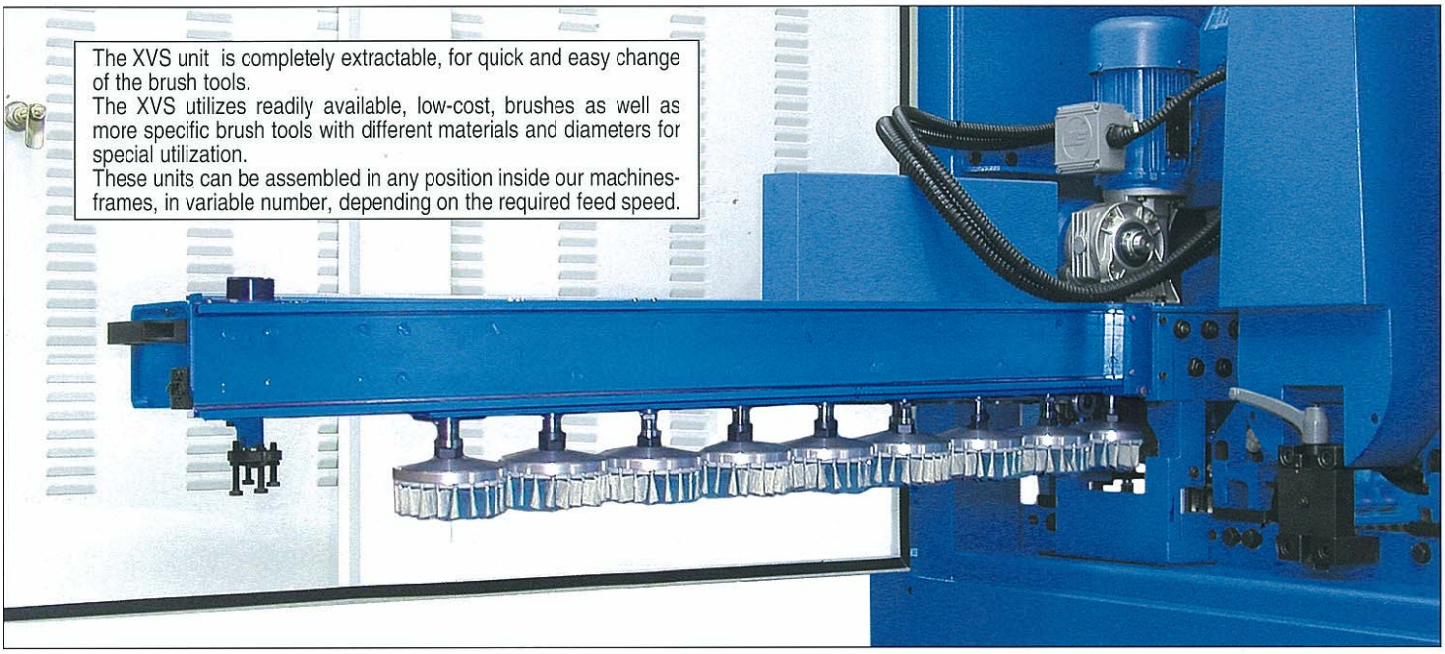


XVS Multifunction unit with vertical brushes

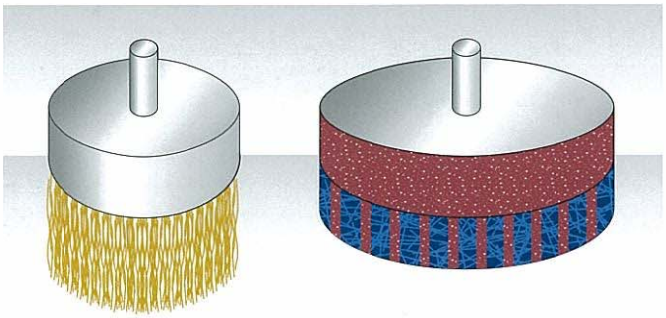
垂直ブラシ付きのマルチユニット



This unit is composed of a series of standard vertical brushes, rotating at high speed (inverter controlled) and oscillating side-ways at adjustable rate of oscillation.
The flexibility of the abrasive brushes assure a perfect deburring also on work-pieces with high surface irregularities as well as in material protected with plastic film.
The unit XVS is utilized for a series of operations mainly on the sides and on the edges of the work-pieces, both for deburring, for oxy-cleaning and for edge rounding.
The combination of brush-revolution with high frequency oscillation guarantee a perfect finish, with only one working unit.
The pressure of operation is electronically controlled from the main panel.
The pressure rollers, positioned very close to the XVS unit, guarantee the same quality and efficiency also with very short/small work-pieces.

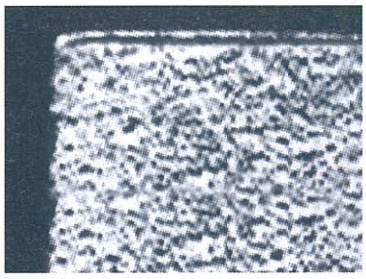


The XVS unit is completely extractable, for quick and easy change of the brush tools.
The XVS utilizes readily available, low-cost, brushes as well as more specific brush tools with different materials and diameters for special utilization.
These units can be assembled in any position inside our machines-frames, in variable number, depending on the required feed speed.

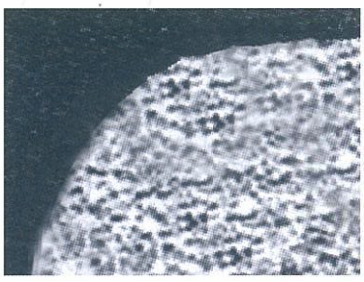


Various type of steel / stainless steel brush (according to different jobs)

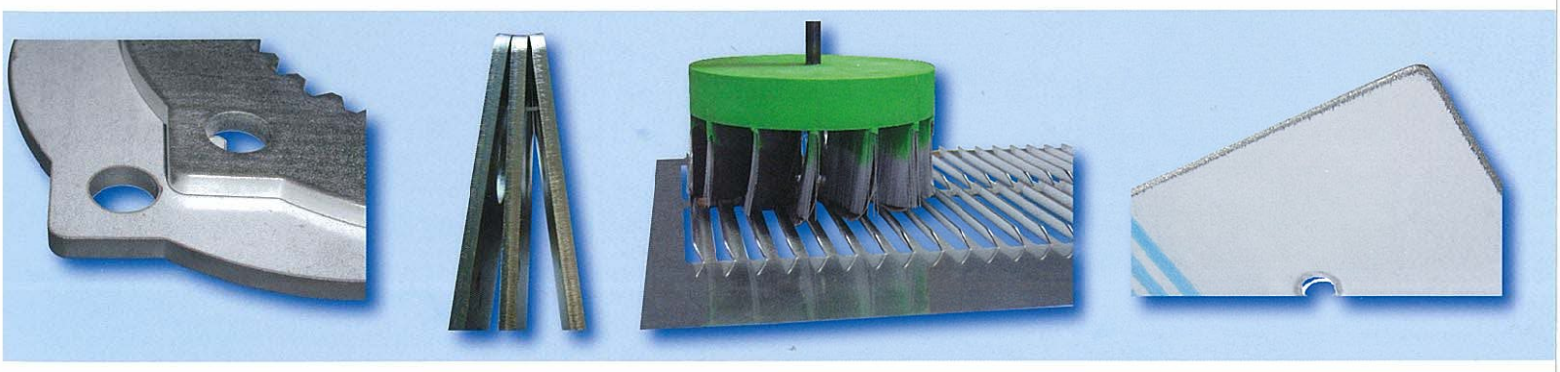
Various type of abrasive brush (according to different jobs)



Before XVS deburring

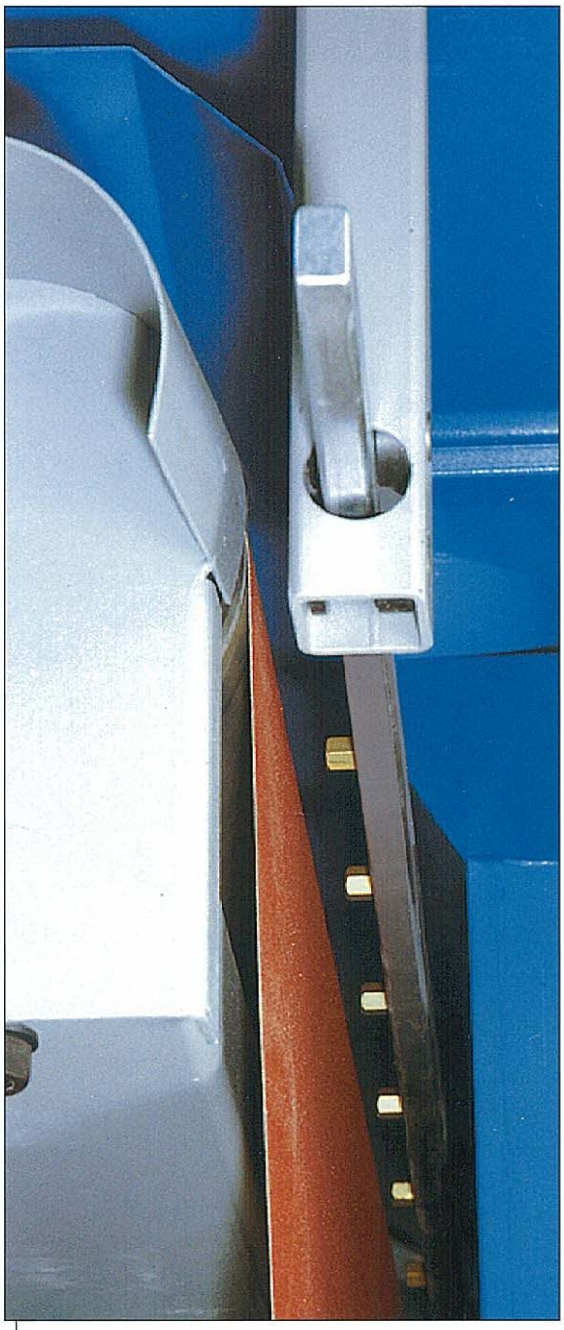


After XVS deburring



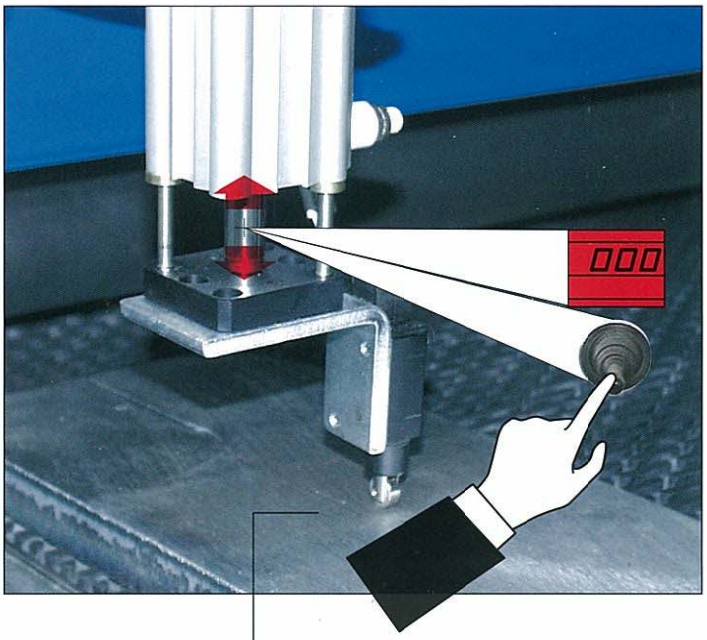
Accessories

アクセサリー



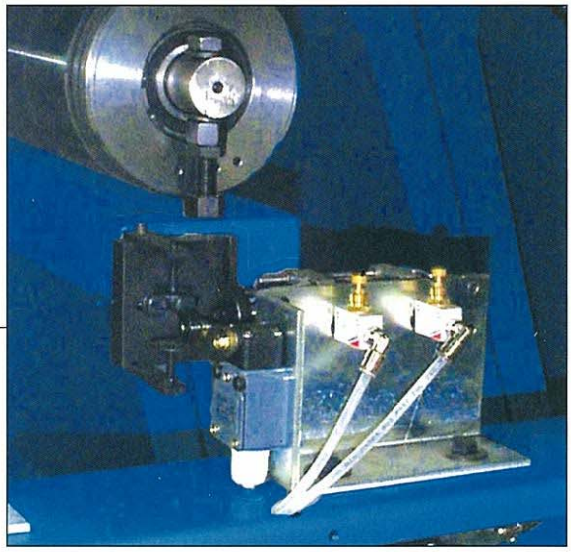
AIR JET BLOWERS エアージェットブロアー

Oscillating for an efficient cleaning of sanding belts, blowing only when the belt is sanding.



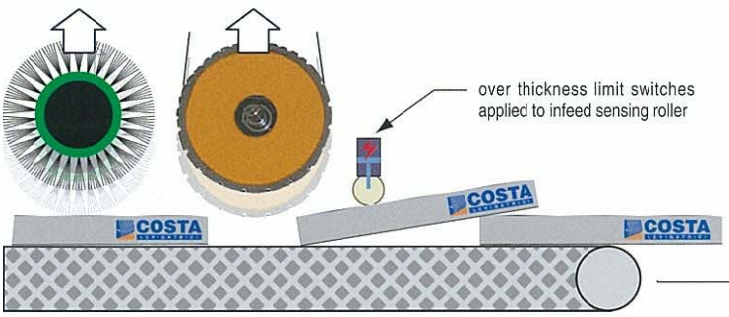
AUTO-SET

Automatic thickness positioning system.



SANDING BELT CENTRING

Sanding belt centring system with electronic photocell.
Complete with safety micro switch to stop the machine in case of abrasive belt exit or breakage.



板厚検知

SAFETY IN-FEED SENSING ROLLER FOR OVER THICKNESS LIMIT

Safety device designed to stop the feed, and exclude the working units, if the roller detects a work-piece of thickness exceeding the set value.

Feed drive system

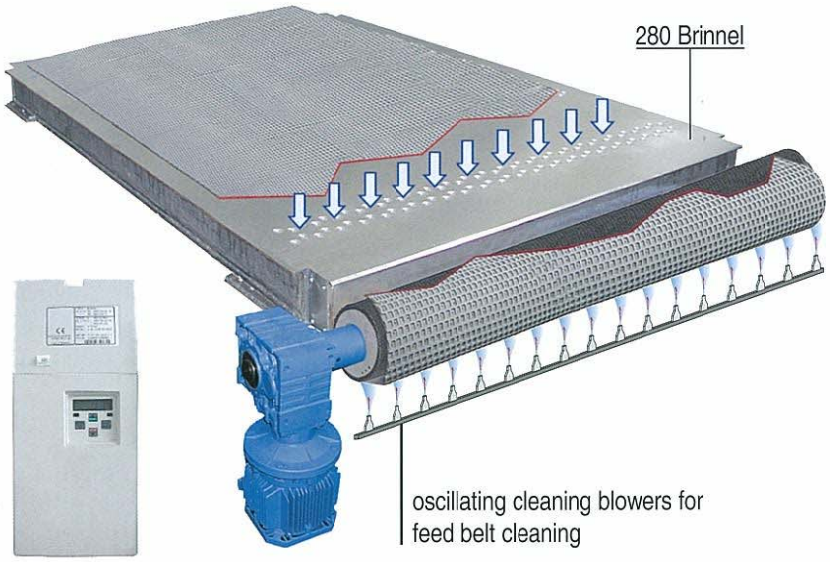
送り装置

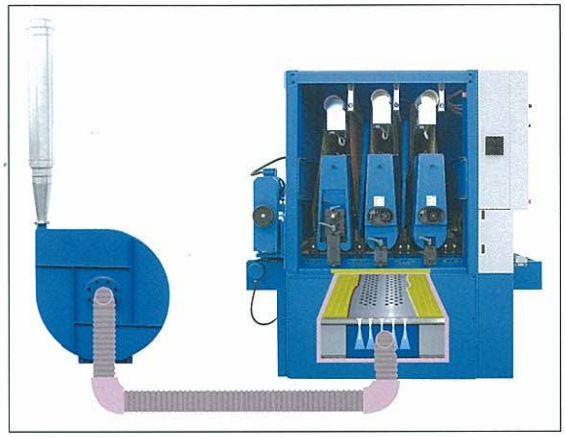
The workpieces are fed on a heavy-duty rubber feed belt.

The feed belt can be:

- rigid;
- soft;
- with square profile;
- with holes for the vacuum hold system;
- special for magnetic hold system.

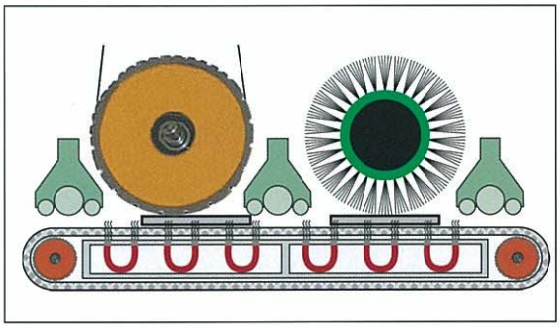
The drive is secured by a traction cylinder rubber covered of big diameter, driven by a motorvariator of appropriate size according to machine features, inverter controlled.





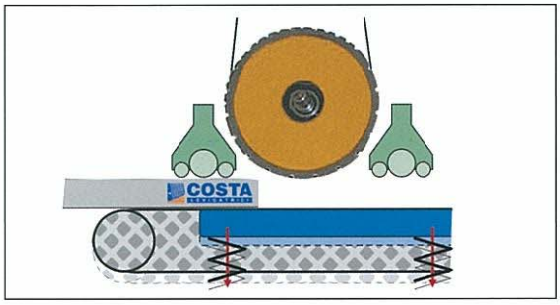
VACUUM HOLD SYSTEM (opt.)

An high speed electroventilator creates a vacuum hold under each working unit to secure the traction of sliding material or of workpieces smaller than the distance between the pressure units.



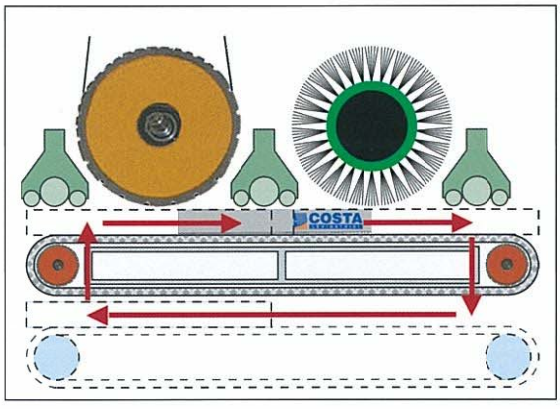
MAGNETIC HOLD SYSTEM (opt.)

The magnetic elements are inserted in the feed table, either in the full width or in a partial width of the machine, to create a stronger hold of smaller work-pieces.



FLOATING FEED TABLE (opt.)

Feed table with floating system to allow the processing of warped work pieces



AUTOMATIC CYCLE OF RETURN OF WORK-PIECES (opt.)

To allow a second sanding pass under the sanding units, via the automatic lowering of the feed table in the return-cycle and re-positioning for the working cycle.

SERIE MSA2

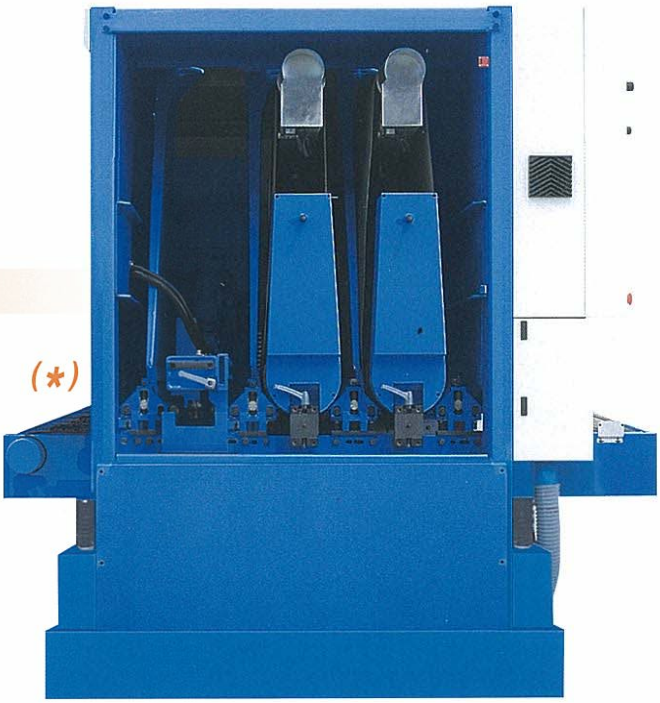
Top machine with constant working level from floor

- Working widths 1150 - 1350 mm
- Thickness from 0,5 to 160 mm
- Available with 2 - 3 - 4 internal working units + 1 external auxiliary unit
- Working units with contact cylinder Ø 250 mm (C250)
- Multifunction unit with vertical brushes (XVS)
- Electronic controlled perimetral deburring unit (TP32)
- Brush units Ø 250 mm (S250)
- Rigid feed table
- Rubber feed belt
- Maximum weight on feed table 500 Kg

MSA2 CS+s

constant pass-line of feed table, with
1st cylinder unit (C250)
2nd brush unit (S250)
3rd external brush unit Ø 180 mm (optional)

(•) Roller table extentions are OPTIONAL



MSA2 CCV

constant pass-line of feed table, with
1st cylinder unit (C250)
2nd cylinder unit (C250)
3rd multifunction unit with vertical brushes (XVS)

(*) Extra brush unit outside the machine frame (optional)

MSA2 CTSS

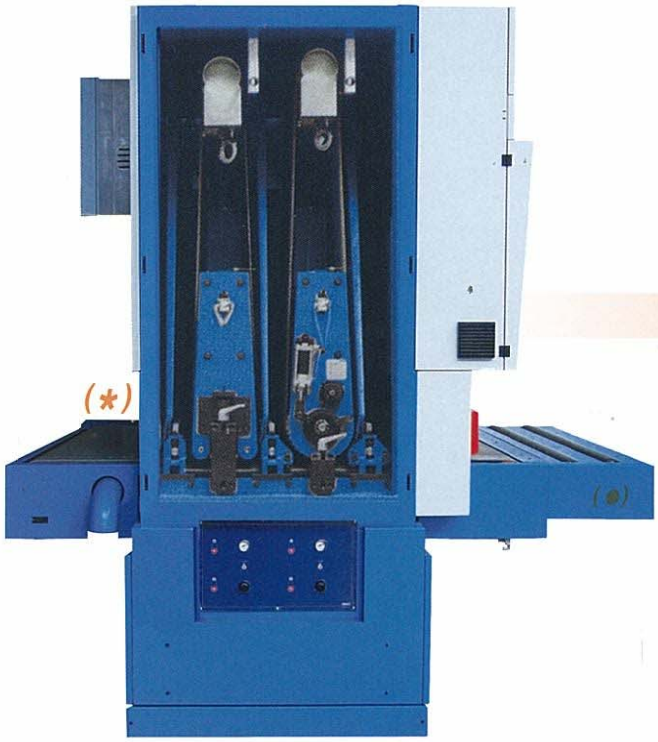
constant pass-line of feed table, with
1st cylinder unit (C250)
2nd electronic controlled perimetral deburring unit (TP32)
3rd brush unit (S250)
4rd brush unit (S250)

(*) Extra brush unit outside the machine frame (optional)

SERIE MSH3

Top machine with constant working level from floor

- Working widths 650 - 1150 - 1350 - 1650 mm
- Thickness from 0,5 to 160 mm
- Available with 2 - 3 - 4 internal working units + 1 external auxiliary unit
- Working units with contact cylinder Ø 250 mm (C250)
- Multifunction unit with vertical brushes (XVS)
- Electronic controlled perimetral deburring unit (TP32)
- Brush units Ø 250 mm (S250)
- Rigid feed table
- Rubber feed belt
- Maximum weight on feed table 2000 Kg



MSH3 CT

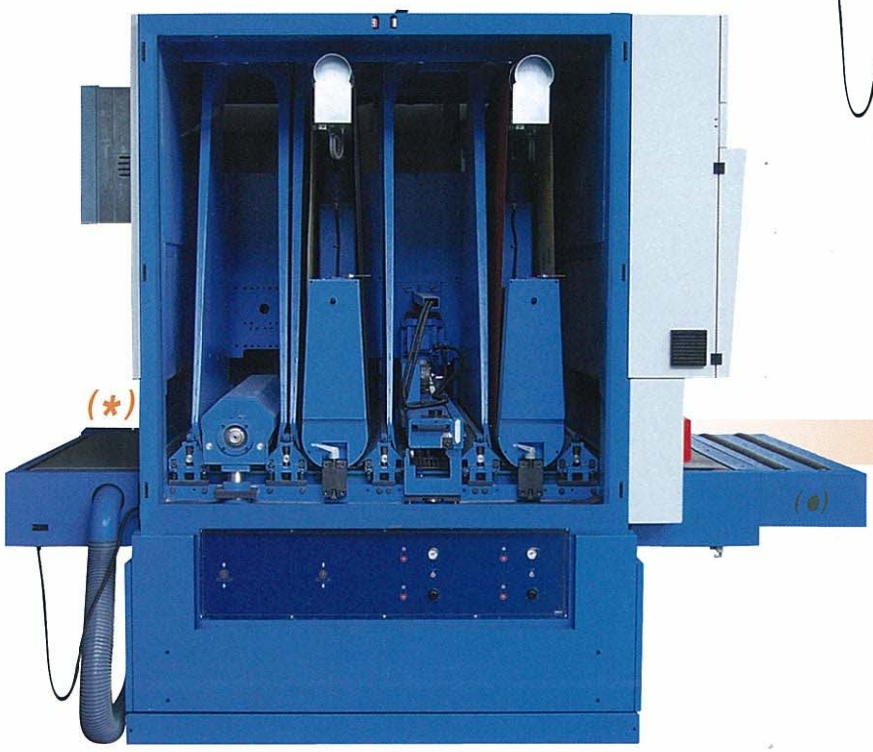
constant pass-line of feed table, with
1st cylinder unit (C250)
2nd electronic controlled perimetral deburring unit (TP32)

(●) Roller table extentions are OPTIONAL
(*) Extra brush unit outside the machine frame (optional)

MSH3 CTV

constant pass-line of feed table, with
1st cylinder unit (C250)
2nd electronic controlled perimetral deburring unit (TP32)
3rd multifunction unit with vertical brushes (XVS)

(*) Extra brush unit outside the machine frame (optional)



MSH3 CVCS

constant pass-line of feed table, with
1st cylinder unit (C250)
2nd multifunction unit with vertical brushes (XVS)
3rd cylinder unit (C250)
4rd brush unit (S250)

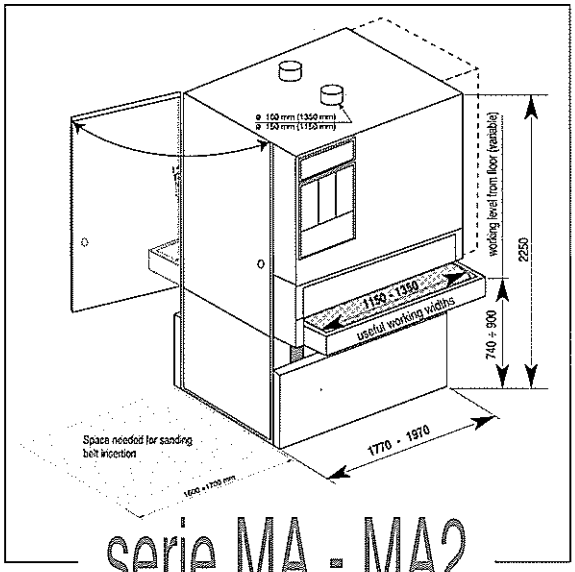
(●) Roller table extentions are OPTIONAL
(*) Extra brush unit outside the machine frame (optional)

Series MA - MA2 - MSA2: Main technical data

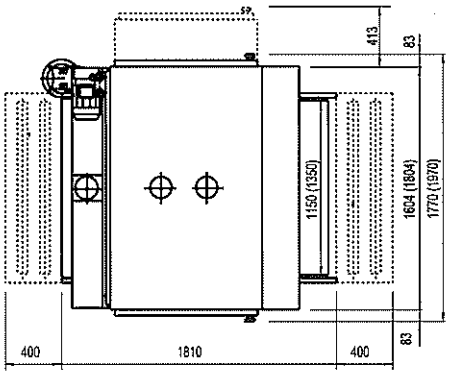
Main technical data

Useful working widths [mm]	**1150**	**1350**
Longitudinal sanding belt dimensions [mm]	1180 x 2620	1380 x 2620
Standard machine opening [mm]	0,5 ÷ 160	0,5 ÷ 160
Feed speed [m/min]	3 ÷ 20	3 ÷ 20
Compressed air required - Each working unit [Nl/min]	100	100

Air volume required for each unit [m³/h]	ø outlet	28 m/s
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - width 1150 mm	150 mm	1781
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - width 1350 mm	160 mm	2026

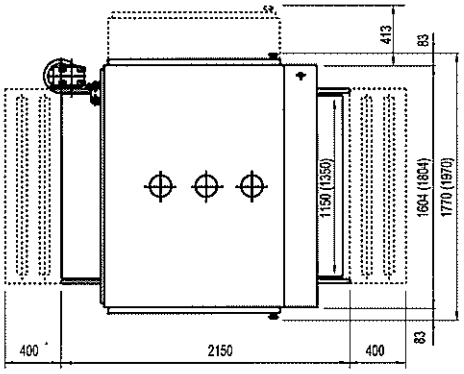


serie MA - MA2



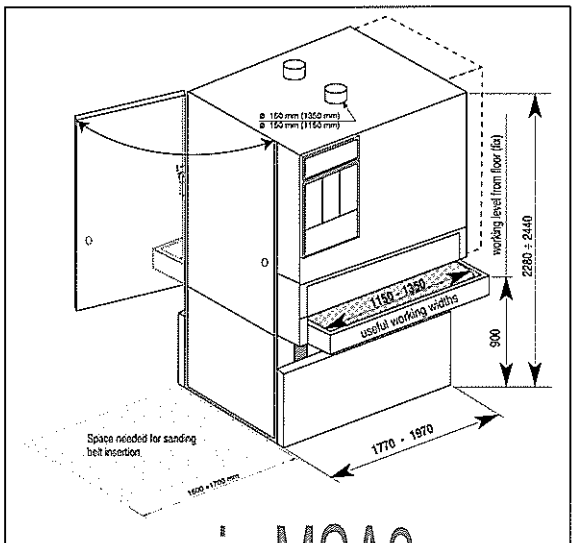
Approx. weight ---- 2950 ÷ 3450 [kg]

Machine with **2** working units

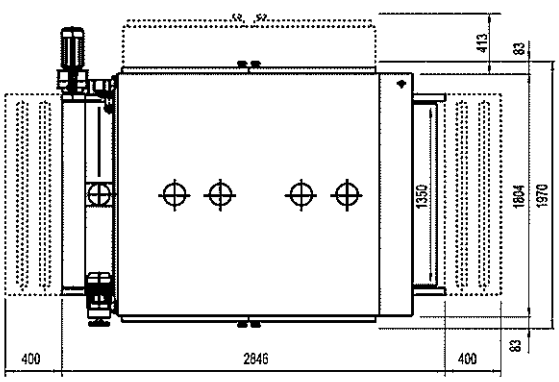


Approx. weight ---- 3650 ÷ 4650 [kg]

Machine with **3** working units



serie MSA2



Approx. weight ---- 4100 ÷ 5250 [kg]

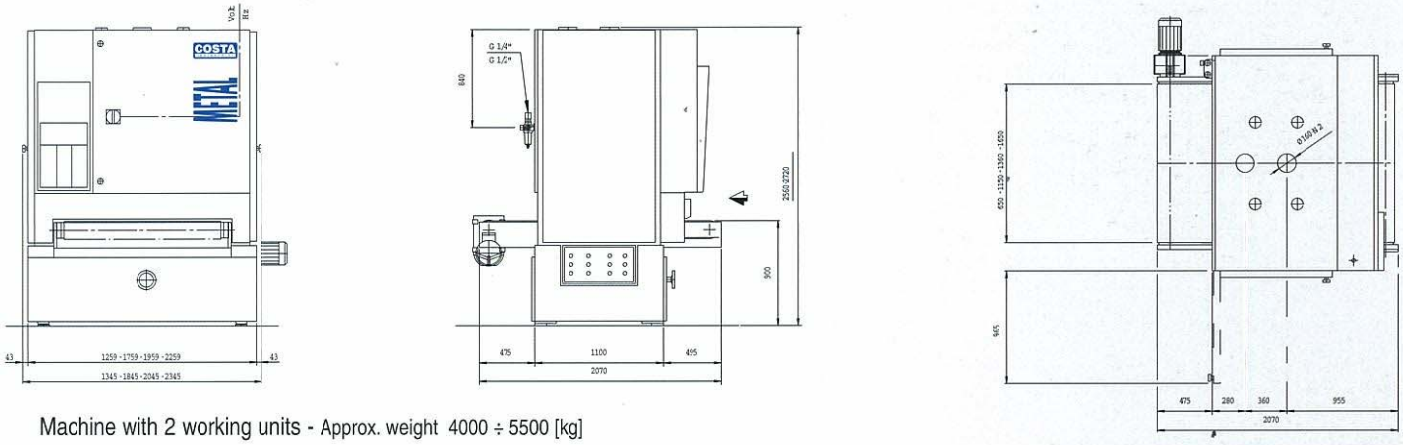
Machine with **4** working units

Series MSH3: Main technical data

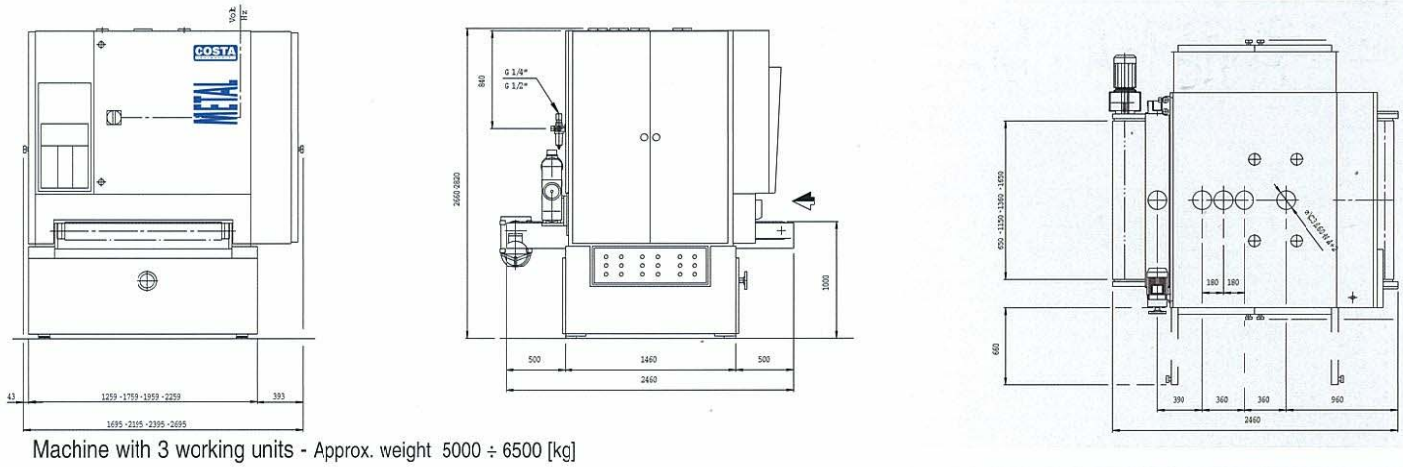
Main technical data

Useful working widths [mm]	**650**	**1150**	**1350**	**1650**
Longitudinal sanding belt dimensions [mm]	680 x 3250	1180 x 3250	1380 x 3250	1680 x 3250
Standard machine opening [mm]	0,5 ÷ 160	0,5 ÷ 160	0,5 ÷ 160	0,5 ÷ 160
Feed speed [m/min]	3 ÷ 20	3 ÷ 20	3 ÷ 20	3 ÷ 20
Compressed air required - Each working unit [Nl/min]	100	100	100	100

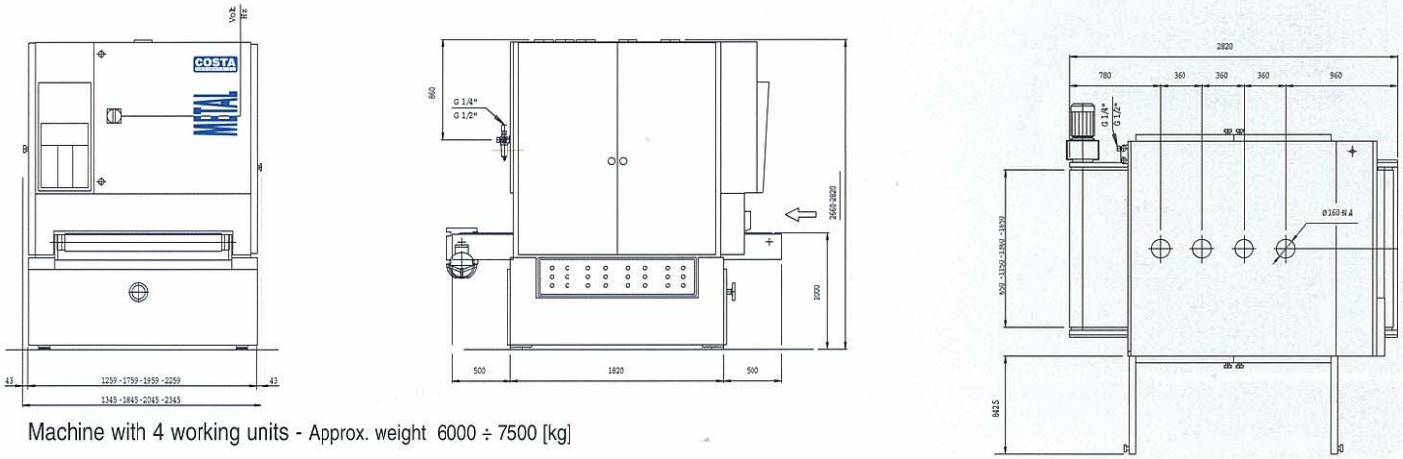
Air volume required for each unit [m³/h]	ø outlet	28 m/s
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - Useful working width 650 mm	120 mm	1139
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - Useful working width 1150 mm	150 mm	1781
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - Useful working width 1350 mm	160 mm	2026
Cylinder working unit, brush unit (S 180/250 - SB 180/250) - Useful working width 1650 mm	200 mm	3166



Machine with 2 working units - Approx. weight 4000 ÷ 5500 [kg]



Machine with 3 working units - Approx. weight 5000 ÷ 6500 [kg]



Machine with 4 working units - Approx. weight 6000 ÷ 7500 [kg]

COSTA LEVIGATRICI METAL

SERIE MA SERIE MA2 SERIE MSA2

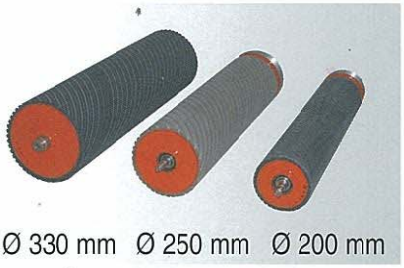
Belt length 2620 mm

SERIE MSH3

Belt length 3250 mm

C

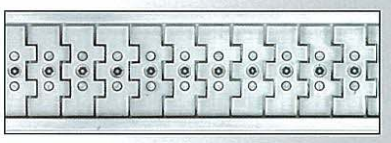
C200
C250
C330



Ø 330 mm Ø 250 mm Ø 200 mm

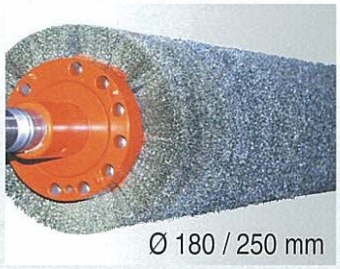
T

TP32



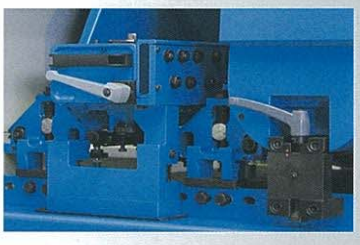
S

S180
S250



Ø 180 / 250 mm

V



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