AVALON machines

deburring
grinding
polishing
smoothing
rounding
degreasing

Producer of MACHINES for mass finishing

ABOUT US

POLISH PRODUCER

Avalon Machines- made in Poland. We are a company that produces machines for mass surface finishing. Our machines perform such processes as: deburring, grinding, smoothing, polishing, degreasing, deburring, etc. Our devices are used in many sectors of industry - from jewelry, through the medical and aviation sectors, automotive, museum, watchmaking, foundry, plastics, 3D printing, gastronomy, and wide application in the production industry for laser-cut, embossed, milled workpieces, etc.

Quality and trust. The quality of our machines has been appreciated not only by the Polish jewellery producers. Avalon devices reach to clients in many countries in Europe, America or Asia. We regularly take part in international fairs held all over the world and continue searching for new inspirations and challenges to taken. For you we create, develop and improve. Thank you for being with us.

Know-how, we share it with you. As we provide solutions that are complementary, we offer you complete technological lines fully adjusted to your needs. Apart from equipping our customers with the devices we offer the necessary abrasive media – chips, compounds, and powders and last but not least knowledge allowing to use the machines most effectively. Our laboratory develops and optimizes finishing processes and conduct polishing trials of customer samples. We organise trainings for our customers.

The highest standards in customer care. The mission of our company is constant growth and the satisfaction of our clients. We pay special attention to post sale support which includes instructions or trainings, necessary service or adjusting the technology for an individual.

Avalon Machines Sp. z o.o.
84-351 Nowa Wieś Lęborska,
ul. Grunwaldzka 38, POLAND
VAT ID : PL8411731100

Contact
Tel. +48 59 86 22 667 int.25
Mob. +48 600 957 826
Whatsapp +48 600 957 826
export@avalon-machines.pl

DISC FINISHING MACHINES

Avalon for Industry
Watch a video presenting the work of our machines on YouTube

Disc finishing machines are the most modern as well as the fastest machines designed for surface processing. Processing time is determined by the centrifugal force, which is created by rotating movement of the bottom disc. Bottom disc puts the media and workpieces into spiral movement. Curved shape of the working bowl eliminates impingement and provides efficient media flow in the working bowl. It also results in shortening of the process time. Processing times in disc finishing machines are several times shorter than in vibratory machines and up to 20 times shorter than in rotary tumblers.

Machines in this series are to replace the initial manual processing and prepare the worpieces for subsequent finishing processes up to the polishing stage. Disc finishing machines are suitable for **deburring; blunting and rounding edge; grinding; degreasing; cleansing; removal of scale, rust, carbon deposit; smoothoning; polishing.** Applied dosing system and emptying of working bowl facilitate often cycle changes, what significantly increases efficiency of the process.

Our machines are also available as combined versions (e.g. Wet+Wet, Wet+Dry). Disc finishing machines are suitable for wet and dry processing. Wet processing is supported by chemical compounds, which increase slide properties and accelerate grinding process. In dry process the walnut media are pre-impregnated with grinding or polishing paste and the media is cooled down by means of air blower, which is integrated in the machine.

EC6
disc finishing machine

supply: 230 V; 50 Hz
power: 0,3 kW
weight: 33 kg
dimensions: (WxDxH): 525x486x702 mm
working bowl capacity: 6 l.
working bowl inside diameter: 210 mm

EC10
disc finishing machine

supply: 230 V; 50 Hz
power: 0,6 kW
weight: 56 kg
dimensions (WxDxH): 610x590x770 mm
working bowl capacity: 10 l.
working bowl inside diameter: 265 mm

TE10
disc finishing machine

supply: 230 V; 50 Hz
power: 0,6 kW
weight: 101 kg
dimensions (WxDxH): 460x910x1800 mm
working bowl capacity: 10 l.
working bowl inside diameter: 265 mm

TE18
disc finishing machine

supply: 230 V; 50 Hz
power: 0,6 kW
weight: 124 kg
dimensions (WxDxH): 460x910x1800 mm
working bowl capacity: 18 l.
working bowl inside diameter: 320 mm

TE30
disc finishing machine

supply: 230 V; 50 Hz
power: 1,5 kW
weight: 168 kg
dimensions (WxDxH): 500x1040x1800 mm
working bowl capacity: 30 l.
working bowl inside diameter: 400 mm

TE60
disc finishing machine

supply: 3x400 V; 50 Hz
power: 4,7 kW
weight: 380 kg
dimensions (WxDxH): 1270x1160x1690 mm
working bowl capacity:60 l.
working bowl inside diameter: 525 mm

TE60 ECO
disc finishing machine

supply: 400 V; 50 Hz
power: 4,5 kW
weight: 345 kg
dimensions (WxDxH): 900x910x1400 mm
working bowl capacity: 60 l.
working bowl inside diameter: 525 mm

TFS30
disc finishing machine

supply: 3x400 V; 50 Hz
power: 1,8 kW
weight: 380 kg
dimensions (WxDxH): 1600x1100x1900 mm
working bowl capacity: 30 l.
working bowl inside diameter: 400 mm

Disc Finishing Machine TFS30
Watch a video presenting
the work of the machine
on YouTube

ROUND VIBRATORY MACHINES

Round vibratory machines have a wide spectrum of applications, what distinguishes them from rotary tumblers and disc finishing machines. By choosing correct media type, compound and appriopriate process parameters it is possible to obtain desired results – **cleaning, grinding, smoothing and polishing**. Interactions between media-workpiece and workpiece-workpiece are much less aggressive than in case of disc polishing machines. This results in **efficient grinding or smoothing of fine and fragile workpieces that are prone to mechanical deformation.**

Processing in round vibratory machines is up to 5 times faster than in rotary tumblers. During this process, the workpieces and the grinding material are added loosely into a container which is open at the top. The items are oscillated through an imbalance in weight, which forces them into a screwing movement.

Round vibratory machines are especially suitable for CEROFIN process, which helps to obtain a mirror-like finishing. Material loss during this process is relatively small. The machines allow to process workpieces of different shapes, weight or sizes.

WE6
round vibratory machine

supply: 230 V; 50 Hz
power: 0,14 kW
weight: 22 kg
dimensions (WxDxH): 340x350x420 mm
working bowl capacity: 6 l.
working bowl inside diameter: 280 mm

WE10
round vibratory machine

supply: 230 V; 50 Hz
power: 0,19 kW
weight: 55 kg
dimensions (WxDxH): 380x400x500 mm
working bowl capacity: 10 l.
working bowl inside diameter: 310 mm

W15
round vibratory machine

supply: 230 V; 50 Hz
power: 0,49 kW
weight: 121 kg
dimensions (WxDxH): 500x590x890 mm
working bowl capacity: 15 l.
working bowl inside diameter: 360 mm

W35
round vibratory machine

supply: 230 V/50 Hz; 400V/50Hz
power: 0,7 kW
weight: 175 kg
dimensions (WxDxH): 580x830x1150 mm
working bowl capacity: 35 l.
working bowl inside diameter: 460 mm

W50
round vibratory machine

supply: 230 V; 50 Hz
power: 0,61 kW
weight: 195 kg
dimensions (WxDxH): 770x660x1150 mm
working bowl capacity: 50 l.
working bowl inside diameter: 560 mm

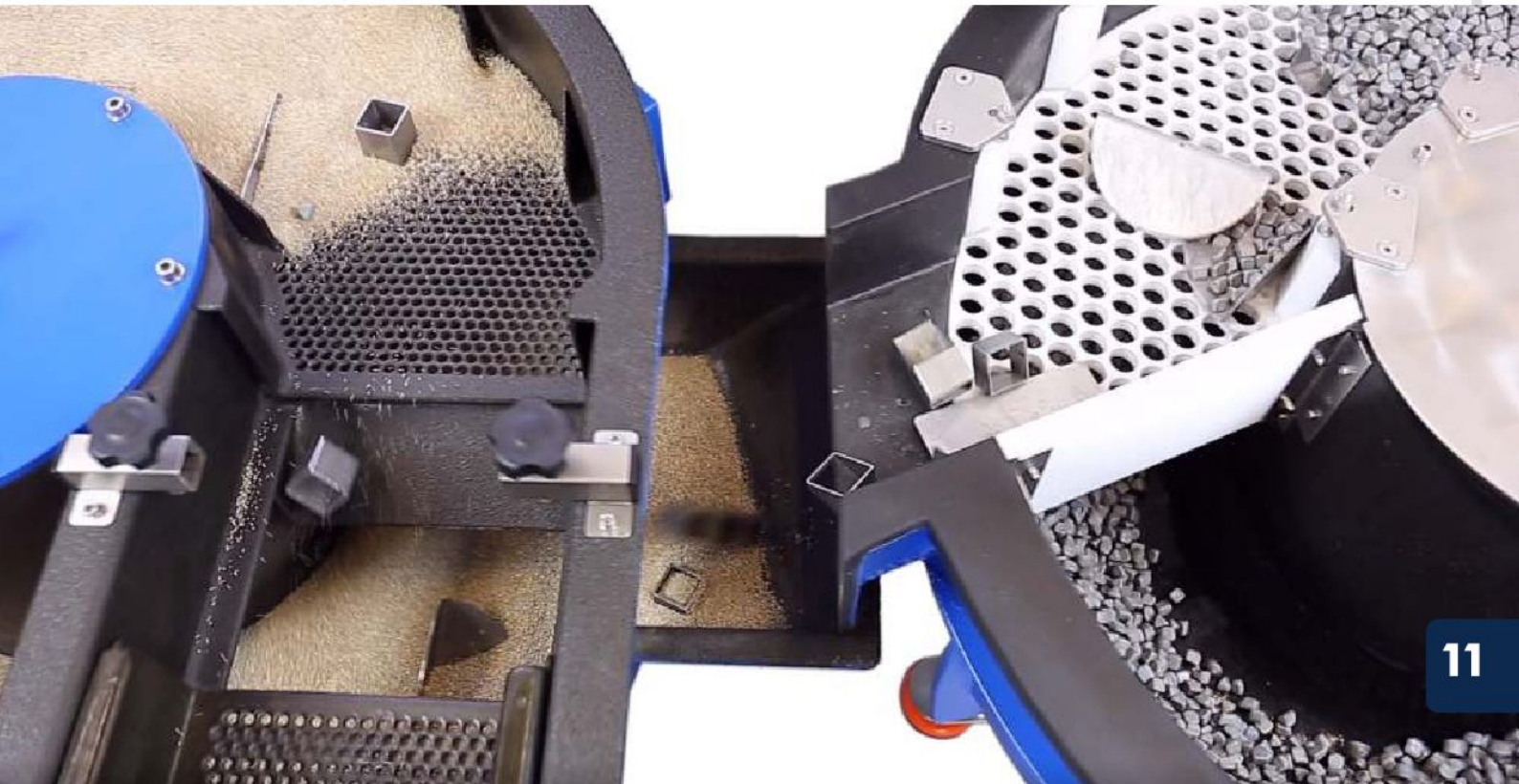
W100
round vibratory machine

supply: 230 V; 50 Hz
power: 0,7 kW
weight: 260 kg
dimensions (WxDxH): 960x900x1180 mm
working bowl capacity: 100 l.
working bowl inside diameter: 772 mm

Round Vibratory Machine W100
Watch a video presenting
the work of the machine
on YouTube

VGS250
round vibratory machine

supply: 3x400 V; 50 Hz
power: 2,75 kW
weight: 440 kg
dimensions (WxDxH):
1260x1280x965 mm
working bowl capacity: 250 l.
working bowl inside diameter: 1070 mm



DRYERS

WD200
vibratory dryer

supply: 3x400 V; 50 Hz
power: 2,2 kW (motor) + 2,4kW (heaters)
weight: 420 kg
dimensions (WxDxH): 1250x1280x1160 mm
temperature range: 20-60°C
timer range: 1-60 min
RPM range: constant
capacity: 200 l.
covering: polyurethane

Vibratory Dryer WD200 allows to automate the process of drying the workpieces after they have been previously processed using Round Vibratory Machines. Together with Vibratory Machine VGS250, it forms a complete line for processing and drying workpieces. The elements processed in our Vibratory Machine VGS250 can follow directly to the Vibratory Dryer WD200, which is heated before drying begins. The drying medium - corn granulate is used to absorb moisture from the workpieces. **The drying process takes a few minutes** to clean the workpieces and protect them from corrosion.

Vibratory Dryer **WD200 is equipped with a mechanical separation system** that allows quick separation of the drying corns from the workpieces. The separation screens are covered with polyurethane protecting the workpieces against unexpected defects.

TABLE- TOP

CD5
centrifugal dryer

supply: 230 V; 50 Hz
power: 1 kW
weight: 42 kg
dimensions (WxDxH): 470x400x580 mm
temperature range: 35-80°C
timer range: 1-60 min
working chamber: fi 180x120 mm

CD10
centrifugal dryer

supply: 230 V; 50 Hz
power: 2,75 kW
weight: 90 kg
dimensions (WxDxH): 580x430x900 mm
temperature range: 35-80°C
timer range: 1-60 min
working chamber: fi 280x160 mm

CD25
centrifugal dryer

supply: 3x400 V; 50 Hz
power: 5,3 kW
weight: 190 kg
dimensions (WxDxH): 710x680x1050 mm
temperature range: 20-80°C
timer range: 1-60 min
working chamber: fi 380x250 mm

Centrifugal dryers are used for **drying workpieces after mass finishing**. The water evaporates from surface of the workpieces thanks to centrifugal force created by rotating drum. Additionally the machine incorporates hot air blower for faster removal of moisture and an easily removable basket, which facilitates loading/unloading of workpieces. **The machine is adapted for drying fine workpieces by use of special protective material lining inside of the rotating drum**. Additional protection against damage of the workpieces is provided by gentle start and smooth engine braking after the process. Centrifugal dryers incorporate a direct drive system fixed to the housing by polyurethane sleeves of large diameter, which provides good damping and promotes uniform distribution of parts in a rotating drum. Air channels are designed to absorb heat from the main engine, which results in long and trouble-free processing. **Efficient drying of metal parts occurs within 3-5 minutes with loading weight of 4-5 kg.** Centrifugal dryers are designed for continuous work. The design of working chamber and draining system ensures process stability. For safety reasons the electric door strike prevents the lid from opening during processing. The temperature is programmable in range of 30°C to 80°C.

TROUGH VIBRATORY MACHINES

These devices are perfect for roughing operations, especially with the use of ceramic media of high abrasion. The result is a homogeneous structure free of sharp edges and corners. Dimensions of the working container are suitable for processing of long, irregularly shaped or even flat workpieces. Trough vibrators remove burrs, blunt and round sharp edges, eliminate subsurface layers - oxides formed after laser cutting or grease left on the surface. High amplitude and low frequency of the vibration are especially recommendable for deburring and grinding processes with grey ceramic media. Possible processes to be run in this machine are: deburring, rounding, grinding, cleaning, deoiling, smoothing and polishing.

WR60 mini
trough vibratory machine

supply: 230 V; 50 Hz
power: 0,44 kW
weight: 211 kg
dimensions (WxDxH): 990x540x810 mm
working bowl capacity: 60 l.
working bowl inside dimensions: (LxWxH)
760x290x360 mm

WR60
trough vibratory machine

supply: 230 V; 50 Hz
power: 0,44 kW
weight: 266 kg
dimensions (WxDxH): 1400x800x1350 mm
working bowl capacity: 60 l.
working bowl inside dimensions: (LxWxH)
760x290x360 mm

Trough Vibratory Machine WR60
Watch a video presenting
the work of the machine
on YouTube

WR120
trough vibratory machine

supply: 230 V; 50 Hz
power: 1,7 kW
weight: 610 kg
dimensions (WxDxH): 1510x920x1200 mm
working bowl capacity: 120 l.
średnica komory roboczej: 320 mm
working bowl inside dimensions: (LxWxH)
1200x350x435 mm

MECHANICAL SEPARATING
UNITS

TESEPA mini TE30
separating unit

supply: 230 V; 50 Hz
power: 0,12 kW
weight: 28 kg
dimensions (WxDxH): 530x645x260 mm

WRSEPA (WR30/ WR60)
separating unit

supply: 230 V; 50 Hz
power: 0,12 kW
weight: 78 kg
dimensions (WxDxH): 780x640x920 mm

TESEPA (TE18/ TE30/ TE60)
separating unit

supply: 230 V; 50 Hz
power: 0,36 kW
weight: 175 kg
dimensions (WxDxH): 1420x890x1150 mm

Separating units facilitate separation of mass finished workpieces. Manual separating is time consuming and reduce the efficiency of the process. **Automatic separation integrated into mass finishing machine is a great solution for large scale production** of small workpieces, which are difficult to be separated manually.

Workpieces are separated from the media on the vibrating screen. Automatic separating units are suitable for machines with capacities starting from 18 litres.

WASTEWATER
TREATMENT

K6/250
cascade system

supply: 230 V; 50 Hz
power: 0,4 kW
weight: 84 kg
dimensions (WxDxH): 1170x990x1540 mm
total capacity: 250 l.

Watch a presentation about Cascade System K6/250 on YouTube

Mass finishing processes are connected with constant producing of **technological waste**, that needs treatment and utilization due to the presence of harmful substances or metal filings. The **Cascade System is a perfect solution for companies and factories that share the problem of wastewater treatment.** Our system allows to reuse the processing water for further work.

The wastewater treatment system consists of two modules: of highly effective container for rough water treatment and of vertical cascade system. The role of rough treatment is capturing bigger particles and slime from the wastewater. After the initial filtration process the water is pumped to the cascade, in which water stage by stage slowly falls down to another container. The principle of operation is based on keeping the wastewater in slowed down flow, thanks to which we get a division into two phases: one is water, the other one is suspended particles. The processed water can be used for further production. The durability of the water depends on processing time, chemical composition or the compounds used for processing.

Introducing the technology of recycling water is beneficial for ecological, economic and legal reasons.

ABRASIVE MEDIA

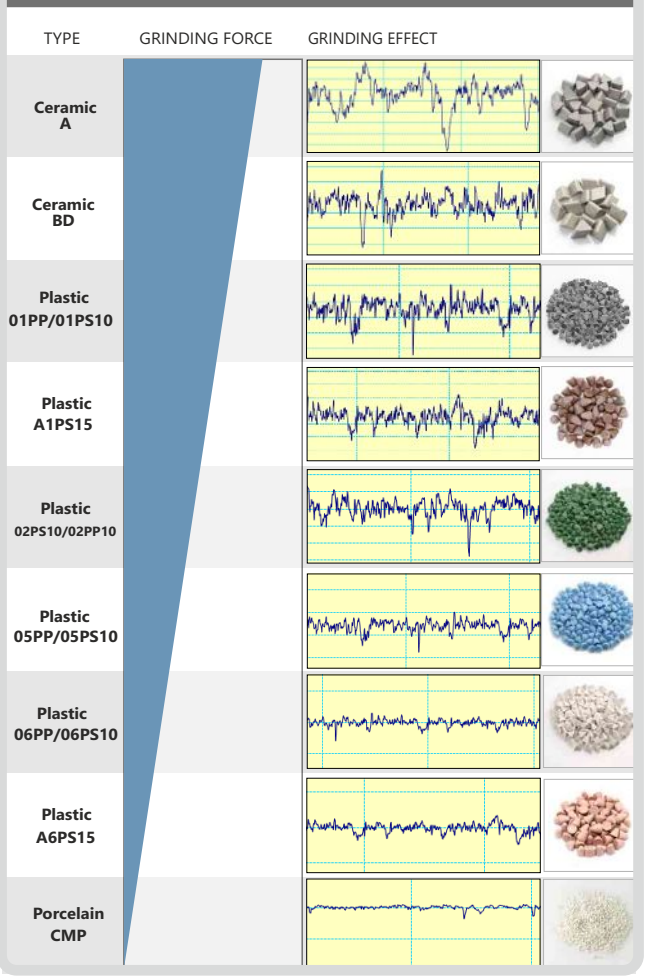
In the mass finishing processes it is critical to choose appriopriate media according to the material and processing purpose. Both factors impact the processing time and desirable results.

Synthetic, ceramic, porcelain and stainless steel media with compounds are used for wet processing, on the other hand walnut shell with polishing paste is used for dry processing.

There is a wide variety of grinding and polishing media in regard to shape, size and abrasiveness.

Supporting compounds are added to abrasive media in wet process. Additives in the compound help to clean, brighten and passivate workpieces.

MEDIA ABRASIVE FORCE

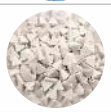


PORCELAIN CHIPS

TYPE		SYMBOL	SIZE in mm
pin		2x5 CMG/CMP*	2x5
		2x8 CMG/CMP	2x8
		3x10 CMG/CMP	3x10
		6x15 CMG/CMP	6x15
ball		fi 1,0 CMG/CMP	fi 1,0
		fi 1,5 CMG/CMP	fi 1,5
		fi 3 CMG/CMP	fi 3
		fi 4 CMG/CMP	fi 4
		fi 5 CMG/CMP	fi 5
mix		CMG/CMP	mix

***CMG** -smoothing process, **CMP**- polishing process*

PLASTIC CHIPS

SYMBOL/COLOUR		PYRAMID (PP)	CONE (PS)	SIZE in mm
01	black			10x10
02	green			10x10 15x15 20x20
03	pink			PS 14x14 PP 18x18
05	blue			10x10
06	white			10x10
A1	brown	X		15x15
A6	pink	X		15x15

CERAMIC MEDIA

TYPE		SYMBOL	SIZE in mm	ABRASIVE CLASS
prism oblique		GP20x20	20 x 20	A, BD*
		GP15x10	15 x 10	A
		GP15x15	15 x 15	A
		GP10x10	10 x 10	BD
		GP6x10	6 x 10	A, BD
		GP4x4	4 x 4	BD
prism		G25x25	25 x 25	BD
		G15x15	15 x 15	A, BD
		G10x10	10 x 10	A
		G6x6	6 x 6	A, BD
		G4x4	4 x 4	A, BD
tristar oblique		STP15x10	15 x 10	BD
		STP6x6	6 x 6	A, BD
cone		KC15	15 x 15	A, BD
ellipse		E10x5x10	10 x 5 x 10	A
ellipse oblique		EP10x5x10	10 x 5 x 10	BD

*A - more agressive, BD- less agressive

Avalon Machines Sp. z o.o.
ul. Grunwaldzka 38 K-L
84-351 Nowa Wieś Lęborska
Poland

export@avalon-machines.pl
+48 59 86 22 667, int. 25
+48 600 957 826