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# 2024 PRODUCT CATALOG

Accesssories





Ultrasonic Washing Machines



Consumables



Wastewater Treatment and Recycling Machines

KAYAKOCVIB



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# About US



Founded in 1974 under the name of KOÇ KUM-LAMA, our company has established its first surface blasting system as a subcontractor in Turkey and has contributed to the industry by meet-

ing the demands of the market for many years. KOC KUMLAMA, which consistently improved itself in surface processing in the following years, has kept up with the developing technologies with vibrators and deburring, polishing, and drying of abrasive materials used in these machines as of 1993. Renamed KAYAKOCVIB in 19..., the company strengthened its quality and structure that prioritizes R&D and continued its production according to the demands of customers by making all necessary preparations to keep pace with the developing and changing market conditions. KAYAKOCVIB, which made its first export to Germany in 1997, proved its quality in the European market. Receiving orders from France, United States, Canada, and the Middle East countries in the following years; our company continues production and sales with its own capital.

The target of KAYAKOCVIB is to continue production in European standards with the aim of continuous and high-quality service. We provide services for our valuable customers for innovative surface grinding and polishing technologies. KAYAKOCVIB is a surface finishing group supplier that develops and manufactures all components with the basic technology of deburring and polishing processes as well as industrial washing systems. We offer you different solutions according to the geometry, type, and production quantity of your parts with our 40 years of experience in surface finishing. KAY-AKOCVIB products are preferred in 25 different countries in the world, mainly in Europe.

KAYAKOCVIB surface finishing machines will amortize your investment in the shortest time thanks to their cost-effectiveness, time-saving and consumables-saving technology. With machine alternatives that allow you to reduce your costs, surface finishing is faster, more practical, and with less labor cost. Therefore, we provide service in various sectors. We deliver innovative and longterm solutions with its innovation and R&D studies every year. KVM Series (Circular Type of Vibrators) ...... 4 TVM Series (Trough Type of Vibrators) ...... 10 DVM Series (Circular Type of Dryers) ...... 16 KSM Series (Centrifugal Disc Finishing Machine) ....... 22 D-TVM Series (Trough Type of Dryers) ...... 26 SM Series (Separator Machines) ..... 27 Flog Series (Waste Water Treatment System)...... 47 USW (Ultrasonic Washing Machines) ...... 50 PRS-W (Pressure Washing Machines)...... 58 CNV-C (Chips Conveyor) ...... 68 HPM (High Pressure Machine)......70 HYD-L (Hydraulic Loader)......71 PVD-C (Nano Pvd Coatings)......74 PROSHOT (Coated Sleeve)......78 



# Surface Finishing Machines



**KVM** Series Circular Type of Vibrators

KSM Series Centrifugal Disc Finishing Machine

**SM** Series Separator Machines

**TVM** Series Trough Type of Vibrators

**D-TVM** Series Trough Type of Dryers

**DVM** Series Circular Type of Dryers

**DRG** Series Drag Finishing Machines



- KVM Series can be integrated into the press lines that are • continuously producing and work automatically.
- All parts used in our machines are selected according to EU standards.



Vibratory bowl sizes are classified based on volume (liter). The appropriate bowl volume is selected according to the geometric structure of the parts and daily production quantity.

### Advantages of the KVM series

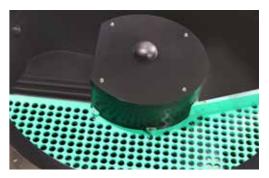
- Grinding and polishing in minimum time thanks to bowl design.
- Vibration impact can be reduced or increased mechanically (by weight).
- Easy to separate stone and material used in models with sieve and ramp.
- It allows the use of different sizes of stones thanks to the easily removable portable sieve.
- Thanks to its conformable ramp design, all materials are easily unloaded from the bowl.
- Our high-performance vibration motor is long-lasting and minimizes your service costs.
- ٠ Resistance to acidic environments with double layer epoxy paint.
- Long bowl life thanks to our abrasion-resistant Elastomer type (90 Shore) polyurethane coating.
- Custom-design bowl or chassis height and spring design.
- Noise level is minimized with the optional Pneumatic ٠ Acoustic cover.
- Remote control of the pneumatic ramp lever from the • control panel is available as an option.
- As the vibration level can be adjusted with our speedcontrolled panels, the most precise surface finishing is ensured on metal and non-metal surfaces.
- All electrical panels are produced in accordance with CE norms.
- Minimum consumption of liquids used in degreasing, deburring, and polishing processes is ensured by means of dosing pump.
- KVM Series electrical panels can work in accordance with ٠ automation systems with PLC software.

#### Sieves

Sieves are produced in different diameters or geometries which can be designed as optional in models with sieve.



DL series, optional double layer screen unit.



R series, manual ramp unit with screen

#### **Pneumatic ramps**

Thanks to our pneumatic ramp, ramp lifting and lowering operations can be controlled from the panel. Besides, the PLC software automates the sieving process without operator intervention.



## Left-Right working

Motor weight design which can turn clockwise and counterclockwise in our sieve machines. It is available in all models with sieve as standard.

#### Pneumatic sound cover

Our sound covers are mounted on the chassis in production in order to minimize the noise generated in the vibratory machines. Thanks to its special sound insulation foam, it can reduce the sound level from 93 decibels to 78-80 decibels.



Before / After



Easy changable screen with PU bumpers.



Polyurethane casting process.



O series, without screen unit.



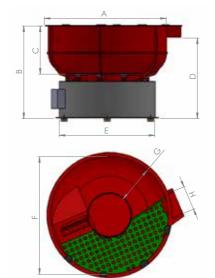
Polyurethane lining.



Waste water drain filter.

Dosing pumps are standard in all models. The amount of liquid used can be controlled thanks to the pump and it provides an economic advantage.

DESCRIPTION	KVM15	KVM40	KVM120	KVM220	KVM420	KVM720	KVM1000
Total volume of bowl (lt)	18	43	130	280	490	830	1200
Capacity (lt)	8	25-35	70-90	220	300-350	400-550	700-850 Max.
Size of work piece (mm)	90	120	160	180	240	320	360
Bottom P.U. layer of the bowl (mm)	10	10	15	15	15	20	25
Side wall P.U. layer of the bowl (mm)	8	8	12	13	15	18	20
Diameter of working bowl (mm)	410	565	852	1150	1355	1600	1785
Engine power (kW), 380V / 50Hz	0,17	0,37	1,5	2,2	3	4	11
Engine (RPM)	1500	1500	1500	1500	1500	1500	1500
Separating ramp	_	-	Optional	Optional	Optional	Optional	Optional
Dosage pump (5 lt / 7bar)	Standart						
Noise isolating cover	Optional						
Weight (kg)	42	100	225	460	780	1270	1770



DIM.	KVM15	КVM40	KVM120	KVM220	KVM420	KVM720	кум1000
А	410	565	852	1150	1355	1600	1785
В	520	680	791	1000	1000	1200	1450
С	200	276	315	430	480	595	685
D	-	-	658	830	820	1050	1100
Е	330	400	600	855	950	1300	1340
F	345	525	780	1020	1235	1460	1650
G	130	228	284	300	380	445	485
н	-	-	200	320	270	380	380
					Dimensio	ns are given	in millimeters.



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THE BRAND FOR QUALITY SURFACES HAS BEEN THE SAME SINCE 1974. 20



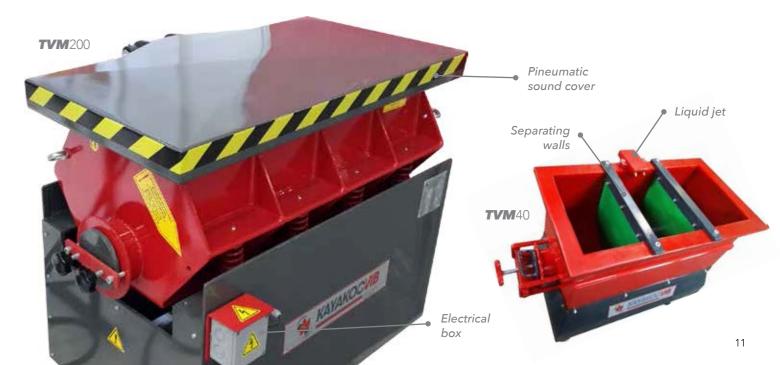




They are particularly preferred because the long length of the work bowl allows long and large parts to fit into the bowl and be tumbled easily in the deburring and polishing process.

### Advantages of the TVM series

- You can choose a suitable bowl for long or large parts you produce.
- The internal volume of the bowl can be divided according to the part size. Bowl volume can be adjusted with plates.
- Grinding and polishing in minimum time thanks to bowl design.
- Vibration impact can be reduced or increased mechanically (by weight).
- Our high-performance vibration motor is long-lasting and minimizes your service costs.
- Long bowl life thanks to our abrasion-resistant elastomer type (90 Shore) polyurethane coating.
- ٠ Resistance to acidic environments with double layer epoxy paint.
- High efficiency with custom-design bowl and chassis height and spring design.
- Noise level is minimized with the optional Pneumatic Acoustic cover.
- As the vibration level can be adjusted with our speedcontrolled panels, the most precise surface finishing is ensured on metal and non-metal surfaces.
- Minimum consumption of liquids used in degreasing, deburring, and polishing processes is ensured by means of dosing pump.
- TVM Series electrical panels can work in accordance with automation systems with PLC software.
- TVM Series can be integrated into the press lines that are • continuously producing and work automatically.
- All parts used in our machines are selected according to EU standards.



# **Separating Walls**

Separating walls are optional. The number and spacing of the walls are determined according to the product size.



Single separating wall application.



Multi separating walls application.

# **Vibratory bowls**

Vibratory bowl sizes are classified based on volume (liter). The appropriate bowl volume is selected according to the geometric structure of the parts and daily production quantity.



TROUGH TYPE OF VIBRATORS







DESCRIPTION	TVM15	TVM40	TVM100	TVM200	TVM350	TVM500	TVM500 Long	TVM1000
Total volume of bowl (lt)	23	53	130	240	380	550	550	1180
Bottom P.U. layer of the trough (mm)	10	10	15	15	16	18	18	25
Side wall P.U. layer of the trough (mm)	6	8	10	12	12	16	12	18
Dimensions of working trough (mm)	490x 225x230	590 x 290 x 290	1000 x 400 x 400	1240 x 440 x 475	1250 x 520 x 520	1580 x 580 x 645	2300 x 450 x 470	1750 x 820 x 850
Engine power (kW), 380V / 50Hz	0,1	0,55	1,1	1,5	1,1×2	1,1×2	1,1×2	4×2
Engine (RPM)	1500	1500	1500	1500	1500	1500	1500	1500
Dosage pump (5 lt / 7bar)	Standart	Standart	Standart	Standart	Standart	Standart	Standart	Standart
Noise isolating cover	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Weight (kg)	110	175	300	400	750	1050	1180	2500
Special el. box (included speed control)	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Noise isolating cover	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional



A. 2x Pineumatic sound cover
B. 2x Dosing pump
C. 2x Liquides valve
D. Electrical box E. Air connection F. 2x Water drain valve

2x vibro motors are used in long machines.



Some units are used 2x in long machines.

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TVM500 series, without separating wall.



Media unloading unit.



Waste wa

ater drain filter.	

Dosing pumps are standard in all models. The amount of liquid used can be controlled thanks to the pump and it provides an economic advantage.

**TVM**100

Dimensions are given in millimeters.

THE BRAND FOR QUALITY SURFACES HAS BEEN THE SAME SINCE 1974.





# DVM



### Advantages of the DVM series

- All metal and non-metal materials are rubbed and dried.
- It saves time and energy with minimum drying time thanks ٠ to heating coils.
- Hot air blow cover and dust absorption system are available as an option.
- Efficient ramp angle ensures the evacuation of all products.
- Vibration impact can be reduced or increased mechanically • (by weight).
- Our high-performance vibration motor is long-lasting and minimizes your service costs.
- Long bowl life thanks to our abrasion-resistant elastomer type (90 Shore) polyurethane coating.
- Resistance to acidic environments with double layer epoxy paint.
- High efficiency with custom-design bowl and chassis height • and spring design.
- Noise level is minimized with the optional Pneumatic Acoustic cover.
- As the vibration level can be adjusted with our speedcontrolled panels, the most precise surface finishing is ensured on metal and non-metal surfaces.
- Remote control of the pneumatic ramp lever from the control panel is available as an option.
- DVM Series electrical panels can work in accordance with • automation systems with PLC software.
- TVM Series can be integrated into the press lines that are • continuously producing and work automatically.
- All parts used in our machines are selected according to EU standards.



CIRCULAR TYPE OF DRYERS



## **Epoxy paint**

The interior of the DVM series bowls are painted with steel paint. Optionally, polyurethane can be coated.



DVM, painted with epoxy paint.



KVM and DVM series are working togather.

# **Vibratory bowls**

Vibratory bowl sizes are classified based on volume (liter). The appropriate bowl volume is selected according to the geometric structure of the parts and daily production quantity.

Cloth filter

**DVM**600-U

Special design bowl



CIRCULAR TYPE OF DRYERS





#### Heating control

Our DVM series dryers allow you to control the temperature. You can increase or decrease the temperature according to the humidity of your products.

### Pneumatic ramp

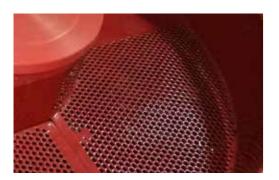
The DVM series is usually used with a manual ramp, but an optional pneumatic ramp is also used.



Ramp cover on the dust cover.



Resistance - electrical box with thermocouple.



Polyurethane casting.



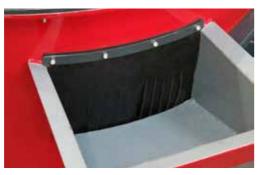
Warm and cold air flow system.



Clampings.



Inside of the unloading unit.

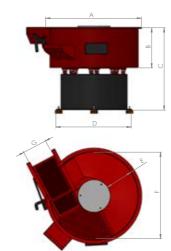


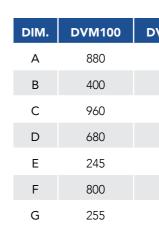
Product loading unit.



CE

DESCRIPTION	DVM100	DVM200	DVM400	DVM600	DVM800	DVM1000
Diameter of working bowl (mm)	800	990	1200	1300	1500	1700
Engine power (kW), 380V / 50Hz	1,1	1,1	2,2	2,2	4	4
Engine (RPM)	1500	1500	1500	1500	1500	1500
Temperature of the corn granules (°C)	50	50	50	50	50	50
Max. heating power (Watt)	800	1000	1000	1600	2400	3200
Integrated separating unit	Standart		Standart	Standart	Standart	Standart
Weight (kg)	250	350	480	570	920	1250







**DVM**600-U

VM200	DVM400	DVM600	DVM800	DVM1000
1080	1280	1480	1500	1600
440	500	550	630	750
1010	1080	1180	1130	1125
750	940	1140	1225	1325
315	380	460	530	565
1000	1200	1400	1420	1520
280	305	330	355	355

Dimensions are given in millimeters.

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# Advantages of the KSM series

- The speed of processing is 10 times faster than vibratory bowls.
- Our centrifugal bowls are produced as hardened aluminum casting and provide ease of unloading thanks to their light alloy.
- Our high-volume bowls are easily unloaded with standard reducer.
- Unloading is optional in low-volume bowls. •
- The housing is insulated against water or corrosion. •
- Resistance to acidic environments with double layer epoxy • paint.
- The basin and bowl gap is designed in the most suitable way and the VORTEX effect allows fast processing.
- Minimized service and spare parts costs thanks to the longlasting basin-bowl gap.
- The parts can be separated by the sieve after deburring or polishing process. The separator is manufactured for KSM series and sieve plates can be changed to fit the required dimensions.
- All centrifugal finishing machines have standard electrical box, equipped with time control, speed control unit.
- All parts used in our machines are selected according to EU standards.





Manual unloading is generally preferred in our KSM 60 series surface treatment machines. An optional automatic unloading is also available. All KSM series are included speed control unit.

0

KSM

CENTRIFUGAL DISC FINISHING

# Zero (0,2) gap

KSM series surface treatment machines use two kinds of main plates. It is decided to use INOX or polyurethane main plate according to the size and structure of your product.



KSM160 INOX can use 0,2 mm gap min.







0

CENTRIFUGAL DISC FINISHING

SM

KAYAKOCV

**KSM**18-H

## Special vortex effect

With the vortex effect created by the special plate design, the products move not only on the horizontal axis but also on the vertical axis. Thus, the process is extremely fast.

#### High speed

All KSM series surface treatment machines process 10 times faster than conventional vibration machines.



KSM200 unloading system.



KSM control panel.



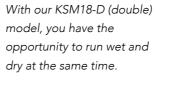
Unloading system stoper box.



Compounds taps.



Compounds taps.



PU Main

Plate (WET)

**KSM**18-D

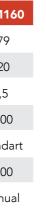
**KSM**18-D

DESCRIPTION	KSM18	KSM60	KSM1
Working bowl gross volume (lt)	21	63	179
Diameter of working bowl (mm)	340	520	720
Engine power (kW), 380V / 50Hz	0,75	2,2	5,5
Engine (RPM)	1500	1500	1500
Dosage pump (5 lt / 7bar)	Standart	Standart	Stand
Weight (kg)	120	380	1100
Unloading system	Manual	Manual	Manu









KSM18 INOX main plate for the dry process.



KSM18 PU main plate for the wet process.





#### TROUGH TYPE OF DRYERS



Linear vibratory dryer machines are used to remove water from the surfaces of products that are wet after deburring or polishing processes and to improve their corrosion resistance. They are designed for long and large parts. We produce special machines according to product size.

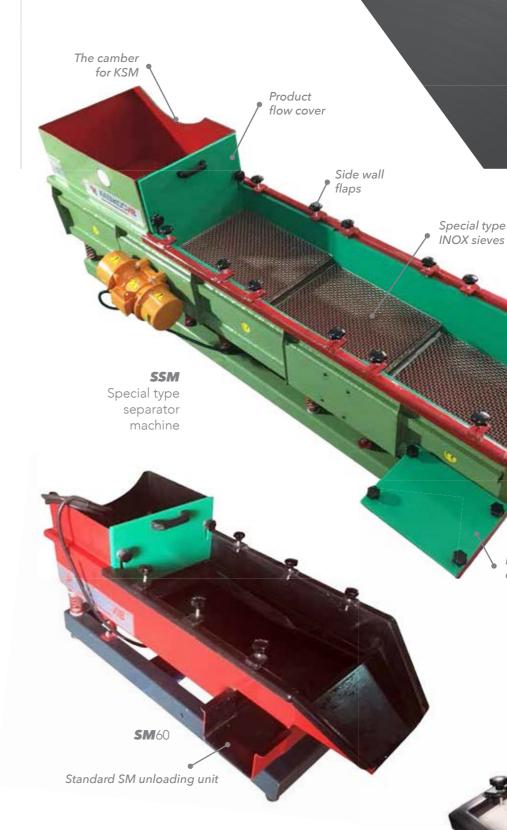
**D-TVM**500



#### Advantages of the D-TVM series

- All metal and non-metal materials are rubbed and dried. Suitable for long and large parts.
- It saves time and energy with minimum drying time thanks to heating coils.
- Hot air blow cover and dust absorption system are available as an option.
- Efficient ramp angle ensures the unloading of all products.
- Resistance to acidic environments with double layer epoxy ٠ paint.
- Vibration impact can be reduced or increased mechanically (by weight).
- Our high-performance vibration motor is long-lasting and minimizes your service costs.
- High efficiency with custom-design bowl and chassis height and spring design.
- Noise level is minimized with the optional Pneumatic • Acoustic cover.
- As the vibration level can be adjusted with our speedcontrolled panels, the most precise surface finishing is ensured on metal and non-metal surfaces.
- D-TVM Series can be integrated into the press lines that are continuously producing and work automatically.
- All parts used in our machines are selected according to EU standards.

DESCRIPTION	DTVM100	DTVM200	DTVM350	DTVM500	DTVM1000
Total volume of trough (lt.)	100	200	350	500	1000
Engine power (kW), 380V / 50Hz	1.1	1.1	0.75 x 2	1.1 x 2	2.2 x 2
Engine (RPM)	1500	1500	1500	1500	1500
Weight (kg)	270	370	500	800	1600
Special el. box (included speed control)	optional	optional	optional	optional	optional



				<b>SM</b> 18
DESCRIPTION	SM18	SM60	SM160	
Engine power (kW), 380V / 50Hz	0,37	0,55	1,1	5
Engine (RPM)	1500	1500	1500	
Weight (kg)	70	110	200	7

Optional SM unloading unit



SEPERATOR MACHINES

Although there is no screen belonging to KSM series, SM coded vibrating screens are integrated into KSM series. The separator machines are useful for separating chips and products.

> Polyurethane lining

Media exit unit





#### WHEEL RIM CLEANING AND POLISHING MACHINE

Our FPM150-FPM250 Wheel Rim cleaning and polishing machines are widely used in the automotive industry. They are produced for grinding fine scratches, polishing, and removing surface roughness.

High quailty polyurethane lining	Double layer epoxy paint	Liquid jet	<ul><li>Resistance</li><li>paint.</li><li>Fast proce</li></ul>
			<ul> <li>Vibration (by weigh</li> <li>Speed-cc</li> <li>Liquid flo</li> </ul>
			Wastewater drain valve Dosing pump
<b>FPM</b> 150	Non-slip feets	Long lasting springs	
28			

### Advantages of the FPM series

- Long lasting polyurethane bowl coating. (Minimum 10 mm thickness at the bottom)
- Surface preparation for up to 22-inch wheel rims. ٠
- Precision processing with 3000 rpm vibro motors. ٠
- Easy attachment and detachment of the wheel rim. •
- ce to acidic environments with double layer epoxy
- cess time thanks to high-performance motors.
- impact can be reduced or increased mechanically ht).
- ontrolled electrical panel is available as an option.
- ow control with dosing pump.



**KAYAKOCVIB** SURFACE FINISHING MACHINES

Wheel installing bar.



FPM150 while working.

There are two sizes of the FPM series. FPM 150: Ø 610 mm, up to 22" wheels. FPM 250: Ø 710 mm, up to 26" wheels.



DISOILER

### Advantages of the **DISOILER**

- Long service life with a basket made of 500 x 300 mm or 400 x 300 mm stainless steel perforated sheet.
- Rotation speed of 500 rpm. •
- Resistance to acidic environments with double layer • epoxy paint.
- Extra drying facility with optional hot air blow unit. •
- Fast stop with motor brake. ٠
- Electrical panel complying with CE norms. •



# DISOILER

CENTRIFUGAL **DISOILER MACHINE** 

With our Disoiler series degreasing machines, you can clean the oil on your products at the maximum level.





brake unit

CENTRIFUGAL DRYER Working principle of our C-DRY series dryers; It is based on the principle of drying the products with centrifugal force and hot air. It has a solid construction and easy use thanks to its discharge system. In this series, the basket is fixed and cannot be removed.

C-DRY





Heating fan

**KAYAKOCVIB** 

SURFACE FINISHING MACHINES

DESCRIPTION	C-DRY 80
Inox basket dimensions (mm)	350×800
Capacity (kg)	80
RPM/min (optional inverter)	480
Heating power (kW)	4,8
Fan power (kW)	0,37
Fan speed (RPM)	3000
Brake motor power (kW)	1,10
Electric power supply (three phase)	380
Machine weight (kg)	350
Cover opening	6 bar, pneumatic
Door opening	6 bar, pneumatic
Body tilting gearbox (RPM/min)	3



Unloading gearbox.

**FOR SPECIAL DEMANDS** Contact us for technical details and questions.

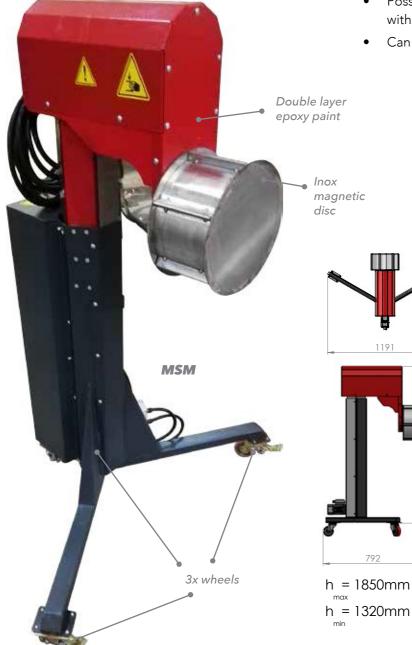
# THE BRAND FOR QUALITY SURFACES HAS BEEN THE SAME SINCE 1974.





MAGNETIC SEPARATOR MACHINE

MSM series magnetic separator unit is one of the best automatic solutions for separating magnetic ferritic alloys workpieces from the chips. Since its height and rotation speed are adjustable, it can be easily used in machines of different volumes.





- Inox electromagnetic roller
- Rotation speed adjustable while working
- Height adjustable up and down by reductor
- Angle adjustable powerfull magnets
- Easily portable movements ٠
- Possibility to control from a single control panel together with the surface finishing machine
- Can be integrated into the automation systems



KAYAKOCVIB SURFACE FINISHING MACHINES

Separation area.



MSM works with different machines.

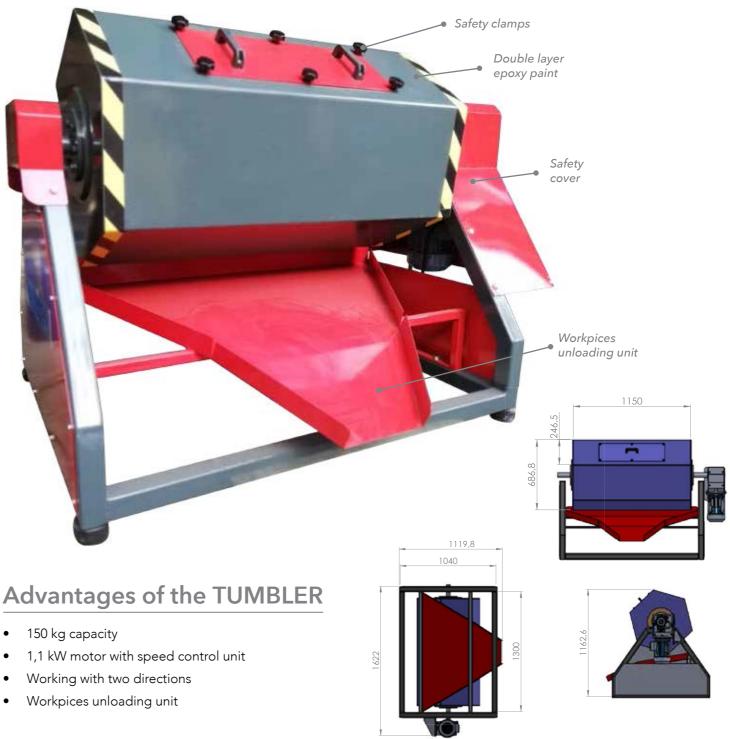
Changeable height control is offered standardly on the MSM series.





Powerfull electric motor

Cover



### Advantages of the TUMBLER

- •
- •
- •





#### **TUMBLER MACHINE**

Tumblers are used for separating of the die casting parts after the injection presses. It is usually used for separation of the casting runners.



Machine alternatives with different dimensions, bowl volume and number of holders specific to your applications.

### Advantages of the DRG series

- Special processes for parts with different geometries with angled head option.
- User-friendly, fully automatic manageable software with Siemens HMI and PLC systems.
- User interface with 500 recipe memories, adaptable to your barcode and ERP systems.
- With the stream finishing option, you can combine technologies, discover the process speed provided by the rotary boiler and the preparation of homogeneous surfaces and corners.
- The chassis is placed on a robust sigma profile system. ٠
- Recipes specific to special processes with independently • adjustable table and spindle speeds provided by the 2nd speed motor option.
- Choose the most suitable system for you with collet, bush and chuck holder alternatives.
- You can combine different processes in one machine with • the easily replaceable bowl system.



#### PATENTED STREAM **FINISHING SYSTEM®** During this process the clamped tools and the media container are turning.

DRG-XL



With our DRG series Drag Finishing machines, we reduce every surface roughness (RA) down to 0.02 microns with rough finishing media and fine polishing media.

# Where to use?

KAYAKOCVIB is your surface treatment solution partner in every field of mold, Automotive, Marine, Aerospace, Defense Industry etc. machining and additive manufacturing.



Patented angle head <sup>®</sup> options.



DRG series used for the top quality surfaces.

### **Special processes**

On the life and performance of your products, at least as important as raw material and production quality; You can achieve homogeneity and quality by getting rid of the human factor with our fully automatic Drag Finishing and Stream Finishing machines in your corner preparation and surface polishing processes.







#### DRAG FINISHING MACHINES

You can perform deburring, polishing, surface cleaning or aging processes of all kinds of metal products in our Drag Finishing machines, which we will choose according to the production capacity, and you can achieve quality results.



#### DRG-Robot

#### High-speed robotized

- High-speed robotized loading and unloading ٠
- ٠ Fast processes due to the high processing forces
- ٠ Processes parameters for deburring, polishing, honing in a single-process operation
- Homogenous process on the full tool length ٠
- High productivity: up to 144 tools/hour







### **Tool holders**

- Quick Tool Holder proprietary tool holders for very fast tool change available for all shank diameters (metric and inch) 3 mm/1/8" to 25 mm/1"
- Screwholders with bushings the economic solution for odd sizes available for all shank diameters (metric and inch)
- Special holders for non standard tools (e.g. inserts, drill heads, • stick blades, etc.) are available on request



#### Drag Finish in relation with PVD Coating:

• Improve surface roughness and remove droplets after coating to reduce the torque and give better chip flow

• Surface preparation before recoating tools



The punches used in the producing of

DRG-Pharma series.

pharmaceutical tablets and their corresponding

molds must be polished after each process. As

a solution to be able to do this process easily,

quickly and homogeneously; we developed the

DRG-Two Step

#### Two steps Drag Finish

The machine is equipped with two containers of media:

- To avoid changing the media container for the
- different requests of edge preparation and polishing.
- With one single clamping the tools can be operated in two different media deburring and fine polishing.



All heads are equipped with quick jigg connect system to facilitate the loading of the tool holders.

### Benefits of the **DRG** series

- No pecking cycles
- Maximum precision and stability ٠
- Efficient chip evacuation
- Superior surface finish
- Increased speeds & feeds
- Best surface results



DRG

 $\bigcirc$ 

DRAG FINISHING MACHINES

#### HOW TO SELECT SUITABLE DRAG FINISHING MACHINES?

DRG-COMPACT	: They are the small machines used for all cu
DRG-STANDARD	: They are the biggest machines than copac
DRG-TWO STEP	: They are used for polishing cutting tools ar
DRG&STREAM FINIS	H: They are used for polishing cutting tools ar
DRG-XL	: Polishing machine for medical implants. It
	It is used for polishing molds up to 100 mr
DRG-PHARMA	: It is used for surface polishing of pharmace
DRG-ROBOT	: Automated system for corner radius proces

S: Spindle head, H: Holder, A: Angular head, RC: Rotary container, ARC: Rotary container+angular head, D: Drum, P: Pharmaceutical

DESCRIPTION	DRG- COMPACT	DRG-STA	DRG-STANDARD		DRG-		TWO STEP		DRG&STREAM FINISH		DRG-XL DRG-PHARMA	
	4S16H	4520H-A	6S30H	4S20H2D-A	4S20H2D-A-RC	6S30H2D	6S30H2D-RC	4S20H-A-RC	6S30H-RC	6S24H-1000	4S36H-P	6S72H-P
Power (kW) 380-510V/50-60Hz 16A	1,5	3	3	3	4,5	3	4,5	4,5	4,5	6	1,5	2
Control Unit Voltage (V)	24	24	24	24	24	24	24	24	24	24	24	24
Nominal Load (kVA)	1	2	2	2	3	2	3	3	3	4,5	1	1,5
Angular head	-	15°	-	15°	15°	-	-	15°	-	-	-	-
Heads	4	4	6	4	4	6	6	4	6	6	4	6
Quick Tool / Part Connectors	16	20	30	20	20	30	30	20	30	24	36	72
Container volume (lt)	50	80	80	100-100	80-100	100-100	80-100	80	80	240	50	80
Second speed motor	-	Included	Included	-	Optional							
Speed (RPM) Table/Head/Tool	50/100/200	45/180/360	45/180/360	45/180/360	45/180/360	45/180/360	45/180/360	45/180/360	45/180/360	40/200/400	45/90/-	45/90/-
Stream finishing RPM	-	-	-	-	45	-	45	45	45	-	-	-
Laser sensor for tool depth	Included	Included	Included	Included	Included	Included	Included	Included	Included	-	Optional	Optional
Max. Media depth (mm)	180	200	200	220	220	220	220	200	200	360	180	200
Body chasis / Plating	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Steel	Allu./Stainless	Allu./Stainless
Control unit	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC	Siemens PLC
Wet usage	-	-	-	Optional	-	Optional	-	-	-	Optional	-	-
Water filtration unit (Optional)	-	-	-	60 lt	-	60 lt	-	-	-	150 lt	-	-
Speed and direction cont.	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV	Danfoss INV
Lift movement direction	*	*	•	•	•	•	•	•	•	•	*	▲ /70
Media mixer	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Dimensions L/W/H (mm)	1190x890x1830	1200x900x2010	1200×900×2010	2065×900×2010	2065×900×2010	2065×900×2010	2065×900×2010	1200×900×2010	1200×900×2010	1625x1360x2280	1190x890x1830	1200x900x2010
Weight (kg)	320	420	420	600	650	600	650	480	480	950	280	380
Recipe storage HMI, USB	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Max. recipe number	500	500	500	500	500	500	500	500	500	500	500	500
Max. workpiece Ø (mm) Tool/ Shaft	110/25	160/40	160/40	160/40	160/40	160/40	160/40	160/40	160/40	280/42	1"/1,5"	1"/1,5"
Dust collector unit	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

utting tools finishing.

- ect series used for all cutting tools finishing.
- and other products.
- and other products.
- t is used for deburring and surface polishing of large products.
- m, cutting tools and surface roughness and polishing.
- eutical punches.
- essing of large (mass production) cutting tools.

# Wastewater Treatment and Recycling Machines



**ENVIRO1000** Series Wastewater treatment and recycling system

**PF** Series Paper filters

**FLOG** Series Wastewater treatment and recycling system

# ENVIRO1000

WASTEWATER TREATMENT AND RECYCLING SYSTEM

 $(\mathbf{f})$ 

The vibration of the wastewater treatment machines, deburring degreasing-use-polishing liquid fluids up to 90% savings. Enviro makes Re-using of the water and compound. Process water is used over and over again by providing up to 98% water savings. Pump repeated use of the same liquid-water mixture. Environmentally friendly technology, the wastewater discharge ZERO.



### Advantages of the ENVIRO1000

Capacity:

SURFACE FINISHING MACHINES

1000 liters per hour wastewater treatment capacity.

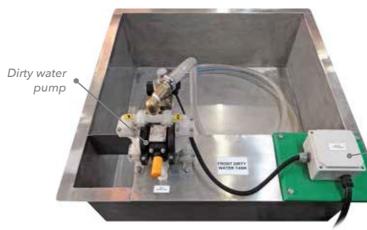
- Reducing Costs: No monthly costs for filtering types of equipment like paper, cloth, etc.
- High centrifugal effect:

The high centrifugal effect allows very small quantities of waste materials.

• No need maintenance:

No maintenance needed like any kind of filter unit.

- Not spacious: No big areas required.
- PLC Software:
   Fully automatic PLC control.



INOX front tank for the dirty water.



### Baskets

The Enviro system has one basket but there is also a spare basket. Baskets' volume up to 23 kg. When a basket is full, you must replace it with a backup. Baskets are made of polyurethane and are resistant to abrasion and other effects.



Polyurethane basket.



E. II. I. and the

Water electrodes

Full basket.



Clean water tank

Engine cover

## Fully automatically

Enviro works with PLC software which does not require human control. All you have to do is press the start button after the system is installed.

# ENVIRO1000

WASTEWATER TREATMENT AND **RECYCLING SYSTEM** 



### Wastewater recycle

When the wastewater is purified, the difference will look like the picture. The wastewater is 99% treated so that it is recycled to your system. This greatly saves water.

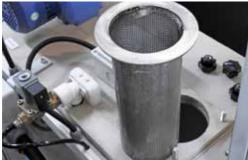


#### Capacity

The wastewater treatment capacity of 10 tons per day. 1000 liter/h. polyurethane mud holding baskets very easy to use. Necessary because it has a high volume there is no need to change constantly basket.



Automatic lubricants for engine.



Dirty water mixer is lining with polyurethane.

Inox filter.



High quality components.





SURFACE FINISHING MACHINES

Designed with high-

quality components to work without problems

for many years. Suitable

for 24 hours of working

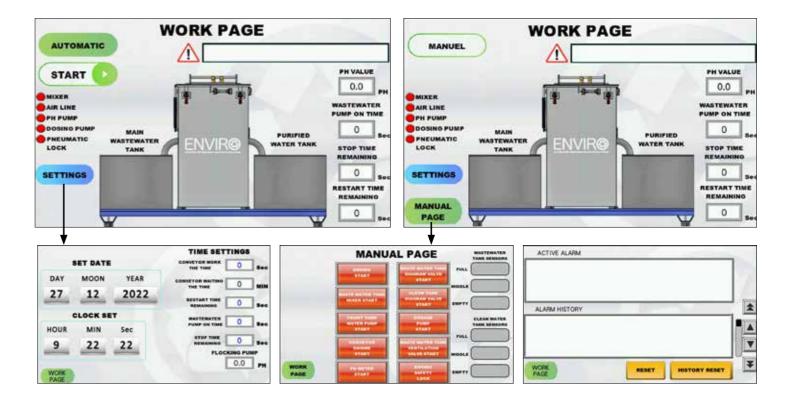
and reduces your costs

when it starts working.

conditions. It saves water

Electrodes that provide automatically working.

**Technical Features** 



MAIN CONTROL PAGE (Work Page) the tests. If you need using manually any pumps or other AUTOMATIC: This button determines the operating mode specs for test, you can do it. Green colors mean "working" of Enviro. It can work automatically or manually. When and red colors mean "stopped". you click the Automatic button, the MANUAL button appears automatically. Then you can START or switch to the **ERROR PAGE** MANUAL PAGE page. Enviro sometimes issues error messages. When you click

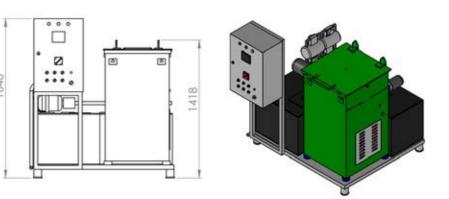
START: The system starts automatically. STOP: The system stops automatically. SETTINGS: The Settings page opens when you press and hold the button for 2 seconds. It provides operational times,

#### MANUAL CONTROL PAGE

date and time information entry from this page. Equipped with Enviro voice alert system. Buzzer sounds continuously in case of important faults such as engine failure. When the water in the boilers is completely empty The Enviro can be used manually with the Manual Page for or full, it warns by ringing for 5 seconds.

### **ENVIRO1000 technical drawings**





on the error messages bar that appears on the screen, the Error Page opens. On this page you can see and delete errors.

#### **BUZZER ALERTS**





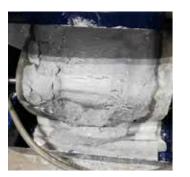
PAPER FILTER

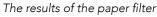
Paper filter, which enables separating the solid-liquid mixture (wastewater) coming out of the vibration process from solids with a paper filter, is the suitable treatment type for vibration systems.



#### Advantages of the PF series

- Capacity of filtration unit is 100 lt/min, 3-5% emulsion and 30 micron filtering.
- Band filter surface is 0,7 m2.
- Level switch of band filter has closed circuit. Thus band filter is fully automatic.
- Steel band transporter has 16B1 type chain and high flexibility material.
- Filtration unit has 4 main components; magnetic seperator (option), band filter, tank and pump.
- Dirty oil inlet will be on the collector of filtration unit.
- 1pc 3 bar 100 lt/min circulation pump will be mounted on the tank.
- Operating of filtration unit is silent and nonvibrating.
- 1pc bleeder outlet will be mounted at filtration unit.
- Band filter width is 500 mm.
- Tank dimensions are 1200x600x280 mm and 200 lt capacity. Tank has 2 main sections as contaminated and pump side.
- Main voltage supplier and control circuit will be in the control panel. (3 ~ 220Volt or 380 Volt.)
- Pump signal and machine adaptation signal must inform to us.
- Whole system will be painted with electrostatic application of powdered paint.
- 1pc 40 gr. (30 micron) extra demo band filter will be sent together with filtration unit.







Connection with KVM series



Automatic paper sensor



Paper roll





FLOG500

WASTEWATER TREATMENT AND RECYCLING SYSTEM

It ensures the flocculation process of the wastewater coming from the vibratory machines by the main silo and treatment with a paper filter.

## Advantages of the FLOG series

- It has two models as FLOG 500 and FLOG 1000.
- It brings together the chemical additive and solid particles and ensures their agglomeration.
- It provides an effective purification with PF series paper filters.
- The storage capacity allows it to work with many surface treatment machines at the same time.

# Ultrasonic Washing Machines & Machining by-products



**USW** Series Ultrasonic Washing Machines

**PRS-W** Series Pressure Washing Machines

**FLT** Series *Filters* 

**OIL-S** Series Oil Skimer

**EMULSION** Series Boron Oil Cleaner

**SNS-F** Series Sensitive Filters

OIL-M Series Oil Mist Filter

**CNV-B** Series Conveyors

HPM Series High Pressure Machine

**HYD-L** Series Hydraulic Loader



# USW

ULTRASONIC WASHING MACHINES

Industrial size ultrasonic cleaners are designed for use in industrial applications where heavy cleaning demands and performance are commonly required.

### Advantages of the USW series

- Low or high capacity tank volumes on demand.
- Made entirely of stainless steel.
- Adjustment of cleaning time and water temperature.
- Optional ultrasonic power adjustment feature.
- Polishing waste removes general pollution,
- It leaves a clean and corrosion resistant surface.
- 100% washing quality for impurities in the inaccessible area
- It is the definitive solution in production lines with its effective, fast, economical, reliable, environmentally friendly washing quality.
- Production is made in special sizes according to demand.
- Removal of all kinds of impurities is done in molecular dimensions.



Thanks to the robotic transport systems, the products go through the desired process in order.





Basket washing system.



Hanger washing system.



Fully inox construction.

The cleaning ability of the USW series is 16 times more effective than conventional hand washing, and with the use of ultrasonic cleaning power this gives you effective access to the smallest holes and compartments.

1 2 2 2 2 1

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# The ultrasonic washing processes

#### PRE-WASH

Before proceeding to the cleaning phase of heavily soiled or oily parts, a pre-wash is applied before the delicate cleaning process in order to save time, energy, water, and chemicals and to remove coarse contamination.

#### ULTRASONIC CLEANING

Ultrasonic cleaning reaches points on the product that are normally very difficult to reach, such as small voids or excessively curved crevices that cannot be physically cleaned. It gives very sensitive and successful cleaning results.

#### RINSE

After the ultrasonic cleaning process, rinsing is performed to clean the chemical substances remaining on the product. The rinsing process is provided by a closed circulation system or a continuous freshwater supply.

#### PASSIVATION

The passivation process is applied for products that need to be protected against oxidation. At this stage, the passivation chemical is used and is an additional stage.

#### DRYING

After cleaning, the products can be dried. The drying process is an additional step and it can be hot air or vacuum drying.

#### OPTIONALLY;

Ultrasonic Washing systems have many optional by-products. These are products that increase the functionality and make it easier to use. For example; Pneumatic covers, oil scrapers, basket transport systems, pump circulation, and filtration are some of them. In addition, different solutions can be offered upon request or need.

Contact us for technical details and questions.

USW

ULTRASONIC WASHING MACHINES





Industrial size ultrasonic cleaners are designed for use in industrial applications where heavy cleaning demands and performance are commonly required.





**M-US**125

Fully inox construction.



New generation digital generators.



An example image of the array of probes.

Frequency and current values can be monitored instantaneously on the digital display panel of our ultrasonic washing machines with 28 khz or 40 khz frequencies. In addition, full protection is provided in voltage changes with new generation cards.



Multiple ultrasonic washing systems are available for processes such as ultrasonic washing, rinsing, passivation, and drying.



Ultrasonic washing system while working.





Ultrasonic probs.

USW while working.

DESCRIPTION	M-USW 10	M-USW 20	M-USW 60	M-USW 80	M-USW 125	M-USW 185	M-USW 420	M-USW 520	M-USW 620	M-USW 820
Volume / It	1,5	2,8	6	8	12	18	30	50	60	90
Weight / kg	3	3,4	4,8	7,6	7,9	10	35	43	45	86
Ultrasonic Power / W	80	80	160	240	240	320	480	880	960	2240
Ultrasonic Generator / W	132	132	132	132	132	132	440	660	660	1540
Internal Dimensions / mm W x D x L	150x138x x150	240x138x x100	240x138x x200	300x240x x150	300x240x x200	330x300x x200	350x250x x350	400x300 x420	400x350 x420	530x440 x490
External Dimensions / mm W x D x L	165x150 x315	265x160 x290	270x160 x330	325x265 x300	325x265 x365	350x325 x410	500x440 x880	550x490 x880	545x540 x880	765x725 x870
Basket Dimensions / mm W x D x L	120x110 x45	210x110 x55	210x110 x55	250x190 x80	240x190 x120	290x255 x120	300x210 x285	355x300 x260	370x300 x270	460x370 x370
Frequency / kHz	40	40	40	40	40	40	40	40	40	40
Heating Power / W	250	250	500	750	750	750	2000	2400	2400	3000
Power V / Hz	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60	220/50-60

# About the ultrasonic cleaners

Industrial ultrasonic washing machines with basket and hanger system; Ideal solution for industrial parts washing, oil scraping and general cleaning of chipped parts...

#### COMMON FEATURES

• Polishing residue removes general pollution, -Leaves a clean and corrosion-resistant surface.

- 100% washing quality in inaccessible impurities
- Effective. It is the definitive solution in production lines with fast, economical, reliable, environmentally friendly washing quality,
- Special production is made upon request
- Removal of all kinds of pollution is done in molecular dimensions.

According to the material and pollution of the part to be washed, process studies are carried out by expert engineers in the production department and chemical, temperature, ultrasonic powerfrequency parameters are selected.

#### USAGE AREAS

- Automotive Industry Metalware Industry
- Defense industry Food industry
- Electronics Industry Optical, Plastic Industry
- Textile Industry Medical Industry
- In all sectors with mass production
- Cleaning for maintenance purposes
- In all production areas before coating and painting.



USW

ULTRASONIC WASHING MACHINES



**USW**1400

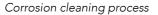




#### Ultrasonic power

All of our USW series ultrasonic washers are manufactured with high quality stainless steel. We have electric or natural gas heating options according to your needs. Control panels are designed according to IEC standards and CE certified switchgear is used.







#### Large-volume USW solutions for private businesses such as shipyards

You can easily clean even the largest products with our large volume USW machines. We offer the most ideal washing solutions for your products with the ultrasonic power level that can be increased according to the capacity.





Easily clean even the largest products.

Images from the shipyard use.



Watch the video.



T-DRY

TUNNEL WASHING&DRYER MACHINES





Watch the video

In general, they are special production machines that are designed differently according to the type of material, the characteristics of the product and the drying rates in the drying process. It is used in many different industries. It is frequently used to prevent water stains on wet products from surface treatment or other processes. It is used in the food industry to prevent the formation of bacteria and fungi caused by moisture. The products coming out of the Tunnel Dryer can be packaged.

Conveyor belt transport type and speed are related to the exact drying time of the products. Accordingly, the conveyor belt design and speed vary.

#### **T-DRY**15









High pressure cleaning process.

Fully automatic control panel.

#### Advantages of the T-DRY series

- The conveying system, dimensions and process differ according to the product.
- Depending on the ambient temperature, high • pressure fans or low pressure fans are used.
- The ambient temperature is determined by the product.
- Depending on the material of the product, parts may heat up or cool down slowly. The design is made accordingly.
- Air circulation in the cabin is provided by special fans. •
- Natural gas or electricity can be used as energy. ٠

# THE BRAND FOR QUALITY SURFACES HAS BEEN THE SAME SINCE 1974.



# **PRS-W**

PRESSURE WASHING MACHINES

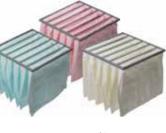
PRS-W washing systems offer a very good solution for washing your products with pressurized hot water and cleaning chemicals. The inner parts of the boilers are heat insulated. It has Inox construction and additional processes are applied according to customer demands.

#### **USAGE AREAS**

- General parts cleaning
- Paint removal or cleaning
- Protection against rust
- Removal of chips
- Cleaning of oils
- Passivation
- Phosphating







Coarse bag filters







Rigid bag filters



Cartrige filters





Rigid panel filters



Metal panel filters



ISO 16890 is the new global standard for air filter testing and classification and replaces the existing EN 779: 2012 standard. This new standard represents a major turning point in the evaluation of filter efficiency.

- ISO Coarse (assessment of the separation of ISO A2 dust) •
- . ISO PMIO: particle size  $\leq$  IO  $\mu$ m
- ISO PM2.5: particle size  $\leq 2.5 \, \mu m$ •
- ISO PMI: particle size  $\leq 1 \, \mu m$ •
- ISO 16890 classifications are based on where particles are deposited in the human lung. .



Washing, rinsing and drying processes are optionally offered with special filtration and oil separation units. It stands out with its product quality and reducing operating costs.



#### Advantages of the PRS-W series

- The system operates in complete isolation from the external environment.
- Water is sprayed on the parts to be washed by means • of nozzles.
- Covers work with pneumatic piston. •
- The inner parts of the machines are also varied according to the basket and volume dimensions, and there are two different types as a working principle, as a rotating platform and a rotating nozzle arm.
- Production is made in a special size for the process. ٠
- Basket sizes are produced according to the piece. ٠



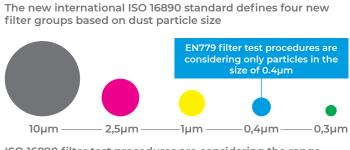
FILTERS

We supply paper according to the desired thickness, width, and length for your filter equipment. Products in different sizes are available in our stocks according to the filtering and permeability flow rates of the material used in the paper filter.

The determination of the filter performance of particulate filters for general room air technology has been described by the industry standard EN 779: 2012.

EN 779:2012 standard is a certification program applicable to air filter elements rated and sold as "Medium and Fine Filters Class M5, M6, and F7 to F9."

For coarse filters, the filter effect is evaluated by measuring the initial gravimetric arrestance when challenging the filter with synthetic test dust using ASHRAE-test dust. For fine filters, the filter effect is evaluated by measuring the efficiency against 0.4-micron DEHS droplets.



ISO 16890 filter test procedures are considering the range from 0,3µm - 10µm



# OIL-S

OIL SKIMER

The OIL-S series are used for the separation of foreign oils in boron oil in the tanks of metalworking machines such as CNC, lathe, milling. It prevents the formation of bacteria in boron oil and prolongs its service life.

# Advantages of the OIL-S series

- They performs its oil separator function by means of the disc or belt on it.
- It is mounted on the CNC bench backup tanks to the close areas of the pump.
- Since the system has a time relay, only the accumulated waste oil is discharged. Thus, the discharge of boron oil or cutting oil is minimized.
- The system also prevents the discharge of boron oil outside the oil layer, just in case, and saves money with the return system to the boiler.
- By separating mineral oils from boron oil and extending the service life of boron oil, economy is achieved.
- The separated mineral oils are discharged automatically.
- Disc diameter 300 mm disc will be stainless.
- The belt is 50 mm wide and the plunge height is 220 mm.
- 220 V electric power

**FOR SPECIAL DEMANDS** Contact us for technical details and questions.



Oil collection box



lnox oil disc







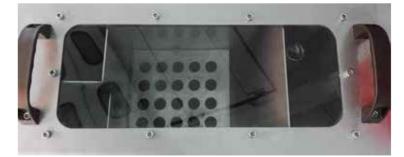


Oil belt



**OIL-S BELT** 





High efficiency is provided with oil separation up to 90% with the liquid level adjustable oil separation unit.

# Advantages of the OIL-S CENTER series

- The product will be turbulent with rashing rings, and the resulting oil will accumulate above, and the separation process will take place with the level difference.
- The pump used for the product will be a miksan brand kep 100 model pump specially designed for this process. It works with a capacity of 3 bar -150 lt / min.
- The oil outlets of the product will be controlled by means of hoses and valves, and the liquid inlets and outlets will be in such a way that they do not harm the environment during discharge and entry.
- It is made of 304 quality stainless steel.

### About the OIL-S CENTER

In the system, in ultrasonic and spray washing machines, level balls are mounted from the oil taking areas in the tanks, and foreign oils taken from the upper area of the tank are separated in the OIL-S CENTER oil separator with the help of the pump and the separated liquid returns with its own flow. Thus, it is a system that works continuously in circulation. It is also used as a central oil separator in metal processing machines such as CNC, Lathe, Milling.

#### USAGE AREAS

- Automotive Industry Metalware Industry
- Defense industry Food industry
- Electronics Industry Optical, Plastic Industry
- Textile Industry 
   Medical Industry
- In all sectors with mass production
- Cleaning for maintenance purposes

• In all production areas before coating and paintingpainting





# EMULSION

BORON OIL CLEANER

Emission filter system is produced to clean the foreign oils on the boron oils in CNC machining benches with a mobile system. Thus, it is ensured that the foreign oils in boron oils in CNC machining benches are separated by 90% in a short time. The system is mobile and provides continuous circulation oil separation by being sucked from the upper part of the counter into the boron oil tank by means of a pump with a float ball, separating the boron oil and foreign oil in the oil separation unit and recycling the boron oil back to its own tank.

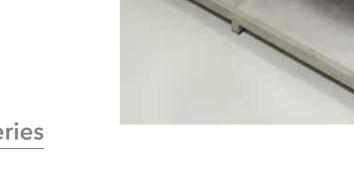


Inox construction.



#### Advantages of the EMULSION series

- Continuous circulation oil separation system
- Separated foreign oils from boron oil by 90% in a short time





SENSITIVE FILTERS

Precision filter units are for general purposes and filtering principles change according to the desired cleaning quality. The liquid to be filtered can be water, boron oil, cutting oil, heat treatment and similar liquids. The system is designed considering the filtering quality according to the product type and amount of the metal or particle to be cleaned. It is produced as a special project for companies.





Mobile filters.

OIL-M

#### OIL MIST FILTERS

The OIL MIST provides suction, filtering and recycling of boron or cutting oils formed due to pump and spindle speed in metal processing machines such as CNC, lathe, milling.

#### **USAGE AREAS**

- Lathe Sliding Vending Machine
- Automat Vertical Machining Center
- 5 Axis Machining Center
- Horizontal Machining Center
- Cylindrical Grinding



DESCRIPTION	OIL MIST
Engine power (2800 RPM) (kW)	0.75
Number of phase	3
Maximum air volume (cube/hour)	1250
Static pressure (Kpa)	150
Efficiency capture	99%
Noise level	65
Suction cap (mm)	150
Length (mm)	430
Diameter (mm)	450
Number of filter	1

#### FOR SPECIAL DEMANDS

Contact us for technical details and questions.



**KAYAKOCVIB** 

### Advantages of the OIL-M series

- Simple & quick installation
- High efficiency
- Low noise
- Contaminated air inlet
- Air passes through the Turbulence Wings creating initial filtering stage.
- Main filter a micro glass nonwoven separates >97,5 % of the oil mist and has a self-draining function.
- OIL-M filters can be equipped with HEPA filter which Filtration efficiency >99,97% for oilmist
- Collected oil is drained back to a collecting tank or to the machine
- Integrated high efficiency fan
- Clean Air outlet meets the PM2.5 and PM10 directives from authorities on effective filtration.



DESCRIPTION	OIL-M1	OIL-M2	OIL-M3	OIL-M4	OIL-M5
Height (mm)	890	1375	1915	2253	2340
Width (mm)	550	760	770	797	797
Depth (mm)	600	792	870	922	1060
Inlet (mm)	Ø 125	Ø 160	Ø 200	Ø 250	Ø 400
Outlet (mm)	Ø 125	Ø 160	Ø 200	Ø 250	Ø 400
Oil drainage (in)	3⁄4	1	1	1	1
Weight (kg)	80	140	300	450	560
Pressure drop (Pa)	1000	1000	1000	1000	1200
Main Filters (piece)	1	1	2	3	4
Main Filter surface (m <sup>2</sup> )	3	8,5	14	21	28
Hepa(H13) (Each)	1	1	1	1	1
Hepa (H13) surface (m²)	5,5	16	24	40	40
Max. Airflow (m³/h)	500	1000	2000	3000	4000
Noise level (dB(A))	60	64	66	67	67
Filtration efficiency (%)	97,75	97,75	97,75	97,75	97,75
HEPA efficiency (%)	99,975	99,975	99,975	99,975	99,975
Operating temp. (C)	5-60°	5-60°	5-60°	5-60°	5-60°
Power (kW)	0,55	0,75	1,1	2,2	2,2
Current (380V) (A)	1,04	1,4	2,1	4,4	4,8
Fan (RPM)	2800	2800	2800	2800	2800

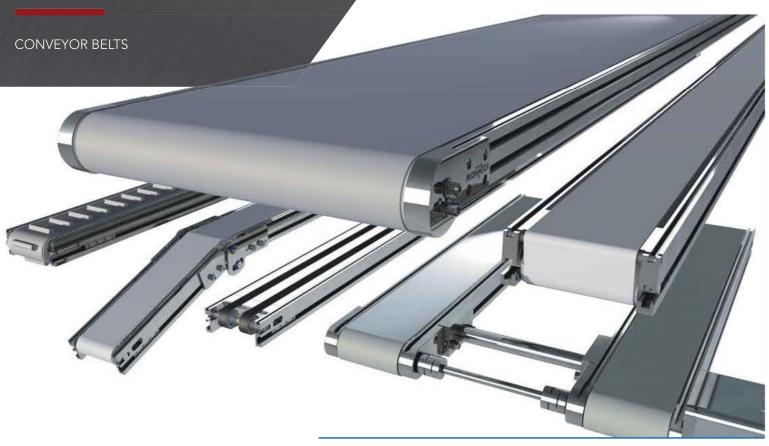
OIL-M filters are designed for lathing and milling applications, for machines stamping and pressing steel plates, industrial washing machines, abrasive water jets.



OIL-M1 while working.



# CNV-B



FOR SPECIAL DEMANDS Contact us for technical details and questions.



Conveyors of various widths, lengths and powers can be used in a multitude of applications in the metalworking industry, agriculture and many other industries.







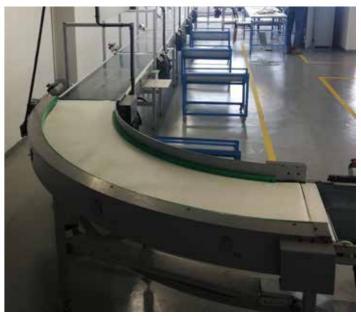
#### USAGE AREAS

- Automotive Industry Metalware Industry Defense industry Food industry Electronics Industry
- $\bullet \ {\sf Optical, Plastic Industry} \bullet {\sf Textile Industry} \bullet {\sf Medical Industry} \bullet {\sf In all sectors with mass production}$
- $\bullet$  Cleaning for maintenance purposes  $\bullet$  In all production areas before coating and painting

### Advantages of the CNV-B series

- Easy & fast transportation of materials from one location to another.
- Reduce labor costs and improves productivity.
- Prevent human injury and product damage while transporting.
- The multi-floor material movement made it easy.
- Very helpful in truck loading and unloading.
- Belt conveyors can be used to transport products in a straight line or through changes in elevation or direction.
- For conveying Bulk Materials like Grains, Ore, Coal, Sand, etc., over gentle slopes or gentle curvatures, a troughed belt conveyor is used.





d industry • Electronics Industry sectors with mass production coating and painting





FOR SPECIAL DEMANDS Contact us for technical details and questions.

### Advantages of the CNV-C series

- The transport system of CNV-C conveyors changes according to the size of the chip and the type of material to be transported.
- The transfer of sawdust is provided by scraping from the bottom, magnetic and drum conveyors.
- The pitches of the pallets used are produced as 31.75-38.1-50.8 mm.
- Pallets are produced from HRP material.
- 2,5 mm sheet and pallet sidewall thickness is used.
- Carrier dimensions may vary according to the usage area.







HIGH PRESSURE MACHINE

The HPM series filter machines are used when a high level of filtration is required in CNC machining centers with internal water pumping. Thanks to the magnetic and paper filter in the system, aluminum, iron, casting chips and non-magnetic chips are also cleaned from the system. With the help of a mud pump in CNC machining benches, the liquid, which passes first through the magnetic and then filtered, comes to the liquid tank where the high pressure pump is located at the bottom and is transmitted back to the CNC machine.





Magnetic separator





### Induction feeding

These conveyors send a certain amount of product into the induction at the same time and eliminate the problems experienced regarding the hardening and heating times of the metals in the induction. Induction feeding conveyors work hydraulically. The materials accumulated with the help of the bunker in front of it are hydraulically transported to the desired height in a certain amount and transmitted to the part reducer located in the upper area. The part reducer transfers the parts to the continuously running conveyor. Here, with the help of a barrier, the parts are arranged and with the help of the pneumatic system, the parts are loaded into induction one by one and regularly.

#### USAGE AREAS

- Automotive Industry Metalware Industry
- Defense industry Food industry
- Electronics Industry Optical, Plastic Industry
- Textile Industry
   Medical Industry
- In all sectors with mass production
- Cleaning for maintenance purposes

• In all production areas before coating and paintingpainting

• Pressure range between 5-120 bar

НРМ

High pressure

regulating valve

Oil level sensor

- Circulation range between 5-35 lt/min
- Filtering range between 50-20 micron
- Provides excellent filtration for all magnetic and non-magnetic chips •
- ٠ Pollution rates in the system are provided by level sensors.
- The system works fully automatically
- It filters from 0.20 bar to 5 to 30 liters/minute.

FOR SPECIAL DEMANDS Contact us for technical details and questions.



HYDRAULIC LOADER

These conveyors send a certain amount of product into the induction at the same time and eliminate the problems experienced regarding the hardening and heating times of the metals in the induction.





# Nano PVD Coatings

**PVD-C** Series Nano PVD Coatings

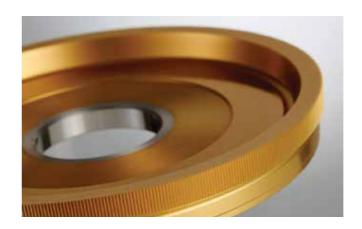
**PROSHOT** Series Coated Sleeves PVD-C



NANO PVD COATINGS

As Metistec Metal, we offer PVD coating services in many different compositions by using the advantages of our largescale furnaces with cathodic arc technology according to mold applications. Our PVD coating processes, which we have developed for sectorbased application conditions; Reproducibility before and after coating, you can maximize your working performance thanks to our continuous process steps. we can level up.

FOR SPECIAL DEMANDS Contact us for technical details

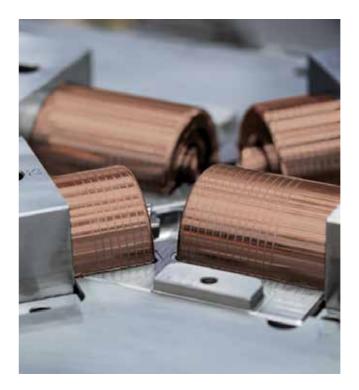


#### HOT HEAT APPLICATIONS

With the Hotplus coating series, which provides solutions in hot work mold applications, it provides high temperature abrasion resistance and wrapadhesion.

Resistant surface properties are created. High pressure metal injection (zamak, aluminum, magnesium) especially metal extrusion (aluminum, brass, copper, silver), hot forging and hot forming applications.

Priority hot work applications. FEXOY in the Hotplus series is a coating with high wear resistance (crater wear) and solid lubrication properties obtained by applying a combination of long-term diffusion process hardening and oxide-based coating. We especially recommend it for hot forging press molds and high pressure metal injection sleeves.



and questions.

### Advantages of the **PVD-Coating of the molds**

- The coating process temperature is below 500°C, so there is no change in size in mold steels that have undergone high temperature tempering.
- With the coating, we form a thin film layer of high hardness and thickness in the range of 2-8 m along the surface form, hardnesses up to 4500 HV. Thus, we increase the mold's resistance to abrasion, wrapping and sticking.
- When PVD coating is combined with special diffusion processes, which we call the duplex process, we increase the resistance to corrugated abrasion (abrasive, abrasion, cavitation) on the mold surface at much better levels, apart from increasing the winding adhesion resistance in the molds.
- With the coating, a low coefficient of friction (compared to the steel surface) is provided on the mold surface, thus it provides an advantage and accelerates the removal of the workpiece from the mold. It contributes to the reduction of mold cycle times.
- When multi-layer, multilayer is applied, each layer can be in different combinations (such as nitride and carbon-based), as a result of this, the clarification (deepening) of cracks that may occur on the mold surface can be postponed.
- Coating is a highly reproducible process, and the same process performance can be achieved each time, specific to the molds.
- It is a thin film (2-8 micron thickness) layer.
- It gives high hardness (2500-4500 HV). •
- It has very good adhesion to the surface throughout the surface form.
- It protects the surface very well.
- It reduces the coefficient of friction compared to the • precision machined steel surface.
- Increases corrosion resistance.
- Decomposition resistance temperatures/oxidation • temperatures are high.



#### PLASTIC INJECTION APPLICATIONS

We have Moldplus series PVD coatings, which do not impair the surface sensitivity of plastic injection molds, and PVD coating solutions to increase mold life. For example; In plastic injection, on steel-steel working surfaces (scrapers, cores, pins-pushers, wear/locking plates),

### PVD-C

#### NANO PVD COATINGS

### COLD WORK

With Coldplus series coatings, we provide a combination of high wear resistance and low friction coefficient with PVD coating solutions special for cold work applications such as forming, cutting, precision cutting.

Hotplus coating series, which provides solutions in hot work applications; It is especially preferred in applications where high temperature abrasion resistance and high thermal resistance are expected from coatings. We recommend Coldplus coating series for high abrasive adhesive wear resistance in cold work applications. With the Moldplus coating series, solutions are provided in plastic injection molds.

Covering	Chemical Composition	Colour	<b>Sertlik</b> (HV 0.05)	Friction coefficient (against steel)	<b>Thickness</b> (µm)	Oxidation/ Decomposition Temperature (°C)	General Characteristics	Mold Application Suggestions
HOTPLUS	AlTiCrN	Dark grey	3600±400	0,4	2 – 8	900°C	High hardness, high toughness, good high temperature resistance	In high pressure aluminum injection cores, aluminum extrusion die-tenon and hot forming cores
HOTPLUS	AlCrN	Light grey	3600±300	0,5	2-5	1000°C	High hardness, high hot hardness, very good high temperature resistance	High pressure aluminum injection insert-core, in hot forming cores
HOTPLUS	TIAIN	Dried rose	2800±200	0,4	4 - 8	800°C	High toughness and high hot hardness, low coefficient of friction and high applicability of coating thickness	In high pressure aluminum and zamak injection cores, pin, insert-core, hot forming cores
HOTPLUS	ZrN	Light yellow	3000±200	0,35	2-5	600°C	Excellent surface properties, very high adhesive wear resistance, very good corrosion resistance	In high pressure magnesium injection
FEXOY	Diffusion Process + FeO	Dark black	1150± 50	-	12 – 15	-	Abrasion resistance and solid lubricating surface properties	Press hot forging dies, Metal injection sleeves
COLDPLUS	TiN	Gold yellow	2600±200	0,5	2 – 4	600°C	General purpose use, wide application area, all mechanical- chemical properties are moderate	In cutting (if the workpiece is iron-based) molds
COLDPLUS	CrN	Silver grey	2100±200	0,35	2-8	600°C	High toughness, corrosion resistance, low coefficient of friction	Forming molds
COLDPLUS	TiCN	Magenta-grey	3800±200	0,25	2-4	400°C	High hardness, high wear resistance and low friction coefficient, improved toughness, lubricating properties	Cutting, forming molds
COLDRILUS	TiCrN	Dark golden yellow	3400±200	0,35	2-5	600°C	Excellent toughness, low coefficient of friction, high hardness, high resistance to workpiece sticking and wrapping	Deep drawing, forming molds
COLDPLUS	AlCrN	Light grey	3600±200	0,5	1 – 4	1000°C	High hardness, high hot hardness, high oxidation resistance	In cutting (precision, dry cutting) molds
COLDPLUS	AITIN	Anthracite	3400±200	0,7	2-6	900°C	High hardness, high toughness, high temperature resistance, high hot hardness	In cutting, plucking cutting, forming molds
COLDPLUS	ZrN	Light yellow	3000±200	0,35	2 – 5	600°C	Excellent surface properties, very high adhesive wear resistance, very good corrosion resistance.	Forming (if the workpiece is non-ferrous based) molds
MOLDPLUS	TiN	Gold yellow	2600±200	0,5	2 – 4	600 °C	General purpose use, wide application area, all mechanical- chemical properties are moderate	Plastic injection mold, pin, pusher, scrapers
MOLDPLUS	CrN	Silver grey	2100±200	0,35	2-8	600°C	High toughness, corrosion resistance, low coefficient of friction	Plastic injection mold cores, cores, scrapers
MOLDPLUS	TiCN	Magenta- grey	3800±200	0,25	2 – 4	400 °C	High hardness, high wear resistance and low friction coefficient, improved toughness, lubricating properties	Plastic injection moulding, cutting, forming
MOLDPLUS	TiCrN	Dark golden yellow	3400±200	0,35	2 – 5	600°C	Excellent toughness, low coefficient of friction, high hardness, high resistance to workpiece sticking and wrapping	Plastic injection mold cores, cores, scrapers
MOLDPLUS	AITIN	Anthracite	3400±200	0,7	2-6	900° C	High hardness, high toughness, high temperature resistance, high hot hardness	Plastic injection mold, cores, pin, pushers, scrapers
MOLDPLUS	ZrN	Light yellow	3000±200	0,35	2-5	600°C	Excellent surface properties, very high adhesive wear resistance, very good corrosion resistance,	Plastic injection mold cores, cores, scrapers
MOLDPĻUS	Patent	Silver gray anthracite	3400±200	0,35	2 - 8	600°C	High toughness, corrosion resistance, low internal stress, low coefficient of friction, high wear resistance for copper-beryllium alloy	CuBe2 - copper-beryllium alloy; plastic injection mold cores, cores

in plastic injection molds with glass fiber (20-50%) additive or corrosive raw material, in molds with plastic raw material retention problems, cuBe2 copper- We recommend cuBe2 copper-beryllium in molds using beryllium alloy to significantly increase the abrasion resistance and to provide abrasion resistance in patterned molds.

### PROSHOT

COATED SLEEVE

The cold chamber/sleeve is a critical part in the high pressure metal injection manufacturing process. Dimensional stability and lifetime are very important for production. Generally, at the beginning of the hive damage that may cause production stoppages; Erosion/hot abrasion damage where the molten metal is the first contact in the sleeve. Then, the damage to the barrel axis flatness/distortion may take the second place.



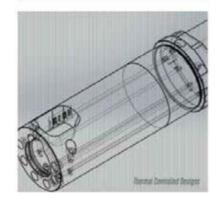
#### In NADCA properties

Following the clarification of the design process in our Proshot hives, we apply vacuum hardening heat treatment to tool steel in chemical 1.2367, which has a microstructure with acceptance criteria in the AS table according to NADCA specification, after gradual roughing, again according to NADCA heat treatment conditions. With precision machining; We bring the surface roughness value to the lowest level so that the inside diameter of the hole is within H7 tolerances throughout. After the final measurement control and measurement report, we apply Hotplus series coating and make it ready for shipment to our customers in our special cases.









# Advantages of the PROSHOT-Coating

With PROSHOT hive; We offer long life with special materials, heat treatment, precision machining steps and coating. Especially the advantages of PROSHOT; It has high abrasion resistance, has very low tolerances on the inner surface sensitivity of the barrel, and has a high resistance to being warped (banana effect) during operation.

### We have different ProShot sleeve designs for Metal Injection presses;

- Conventional
- Thermally controlled deep hole drilling
- Special design (with plug-in/insert system of certain regions) shot



## Consumables

Finishing Consumables Supplier



www.ggfinishing.com Grant Global is the group company of KAYAKOCVIB. **Plastic Chips** For the deburring process

Ureic Chips For the deburring process

**Ceramic Chips** For the deburring process

**Liquids** For the deburring and polishing process

**Granules** For the drying process

# PLASTIC CHIPS

FOR THE DEBURRING PROCESS

Conic chips Pyramid chips



Paraboloid chips

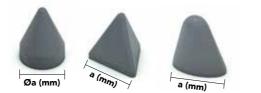
Plastic chips are used for abrasion of sharp corners in non-metal products (copper, zinc-nickel alloys, bronze, aluminum, zamak, composite materials). Our plastic chips are classified and coded as low-medium-high. They have a maximum abrasion-grinding rate. They provide an economic advantage thanks to their long-lasting structure. Our plastic chips can be prepared in various compositions depending on the desired surface quality. Our plastic chips make the surface ready for polishing with the abrasion process and shorten the polishing

process. All the raw materials we use comply with the European standards. We have fully automatic standard production. Please contact us for various geometric chip sizes which are out of the list. Our chips do not leave deposits on metal surfaces. We can make custom production according to your needs. Vibration exit water may contain 1-1.5% solid particles. It is ideal for systems with a treatment unit.

Ureic chips are used for surface abrasion and deburring especially in soft metals such as zinc (zamak) and aluminum. They are suitable for pre-coating surface preparation. Our ureic chips can be prepared in various compositions depending on the desired surface quality. They can be produced with different types of abrasives. They have a softer structure compared to plastic chips.

#### • Resin: Polyester

- Example Ordering: VH/C22 or L/P61 or M/PRB55
- Please contact our sales department for different dimensions.



CODE	GRINDING/TIME PERFORMANCE	ABRASIVITY Surface Screen	COLOR	DENSITY g/cm³	C CONE	<b>P</b> PYRAMID	PRB PARABOLOID	
νн	l% Grinding I 0 50 100			1,90				
н				1,75	12 22	33		
М				1,60	31 41	45 61 80		55
L				1,35	50 60			
VL	100 50 0			1,15				

#### **HOW TO SELECT CHIPS?**

We select the chips that are suitable for your parts. Ideally, chips should touch the entire surface area of your parts, should be easily separated from the parts in the sieving process and should not get into gaps of the parts. Chips have an optimum abrasion-grinding rate and long life. All stone types are tested in our R&D test center and then shipped. Please contact us for more information about our ceramic chips.

	<b>:</b> Urea <b>ple Ordering:</b> VH/UC22 e contact our sales depa				Øa (mm)	a (mm)	
CODE	GRINDING/TIME PERFORMANCE	ABRASIVITY Surface Screen	COLOR	DENSITY g/cm³	UC CONE	UP PYRAMID	UPRB PARABOLOID
νн	% Grinding I 0 50 100			1,90			
н				1,75	12 22	33	
м				1,60	31 41	45 61	55
L				1,35	50 60	80	
VL	100 50 0			1,15			



#### CONTACT US FOR MORE INFORMATION ABOUT EVERY QUESTIONS...

- - kayakocvib.com then we will contact you as quickly as possible.

# **UREIC CHIPS**

FOR THE DEBURRING PROCESS

They have a maximum abrasion-grinding rate. They can be preferred as an economic alternative. We have fully automatic standard production. Custom production can be made according to your needs. Vibration exit water may contain 2.5-3% solid particles. In systems with treatment units, filter maintenance may be more frequent than plastic chips.

• If you have any questions about consumables you can contact us via e-mail with this QR code easily. • Also, you can write to us via WhatsApp from the top of our mobile website for all questions. • The third way to reach us is through our website forms. If you fill "Call Back Form" in



FOR THE DEBURRING PROCESS

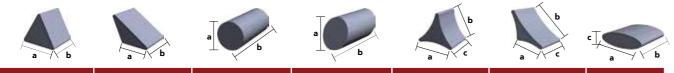


### Example Ordering: MK/TRIANGLE-SC/10x15 Please contact our sales department for

Please contact our sales department f different dimensions.

CODE	GRINDING/TIME PERFORMANCE	ABRASIVITY Surface Screen
νн	% Grinding   0 50 104	•
VS		
МК		
MS		
ST		
РМ	100 50 %	

Ceramic abrasive chips are used in vibratory machines and drums for deburring-grinding and to remove surface roughness of sharp corners in iron and some non-ferrous metals. Our ceramic stone formulation can be prepared in various compositions depending on the desired surface quality. Our chips generally contain low-medium-high abrasives for various applications. They are suitable for hard metals. Iron-steel, stainless steel, etc.



CODE	TRIA	<b>NGLE</b> (axb)	∃S/C	TRIA	NGLE (axb)	A/C	CYLI	NDEP (axb)	R S/C	CYLI	NDEF (axb)	R A/C		<b>AR S/C</b> bxc)	-	<b>AR A/C</b> bxc)	ELLIPSE S/C (axbxc)
VH	13x13 25x25	16x16 30x30		16x16	15x15 20x20 30x30	20x20 25x25 40x40	10x15	10x20	15x20	04x15 07x15 20x20	05x10 10x10 10x20	05x15 16x16 16x32	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	15x15x06 20x20x08 25x25x15
VS		07x10 20x20		10x15 20x25	10x20	15x20	10x15 20x25	10x20	15x20	05x15	05x10 07x15 16x16	10x10	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	15x15x06 20x20x08
МК		07x10 15x15 20x25 30x40		10x10	10x15	10x20	10x10	10x15	10x20	04x10 04x15 10x10 20x20	05x10 05x15 10x20 16x32	07x15	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	05x10x05 10x10x15 15x15x20 25x25x25	10x10x10 15x15x15 20x20x20	-
MS	13x13	15x15	25x25		10x20			10x20		10x20	20x30	15x20	10x10x10	15x15x15	10x10x10	15x15x15	15x15x06 20x20x08
ST		07x10 15x15	10x10 20x20	04x06	06x15	10x20	04x06	06x15	10x20	04x10	06x15			-		_	_
РМ		-		03x10	04x10	05x15	03x10	04x10	05x15	03x10 08x15	04x10 10x15	05x15		-		-	-





SURFACE TREATMENT CHEMICALS

Liquids are used in the following

processes in vibratory machines:

Corrosion prevention

• Pre-degreasing

Descaling

Deburring

Polishing



It provides effective

They are available in

plastic drums of 30 kg.

polishing.

**pH:** 10-10,5



Various derivatives of liquids are available and they are selected according to the applications. All our liquids are environmentally friendly and do not harm human health. Please contact us about the usage and quantity in vibratory machines. Our liquids do not contain any paint that may mix into wastewater or ingredients that are not in compliance with discharge standards.

#### CODE: 028-S

It is used for predegreasing purposes. It can be generally used for all metal and non-metal surfaces. It is used for degreasing of the surface before deburring and preparing the parts for deburring or polishing. **pH:** 3-4 They are available in plastic drums of 30 kg. degreasing and descaling. It can be generally used for all metal and nonmetal surfaces. It is used for degreasing of the surface before deburring and preparing the parts for deburring or polishing. It is a strong acidic degreasing liquid. **pH:** 1-2 They are available in plastic drums of 30 kg.

#### CODE: 943

It is a surface treatment liquid used for deburring and polishing of iron and iron alloy (ferritic) metals. It prevents corrosion during vibration and provides effective polishing. It has a high corrosion prevention effect. **pH:** 9-10 They are available in plastic drums of 30 kg.

#### CODE: 085

It is a surface treatment liquid used for deburring and polishing of nonferrous metals (Aluminum-Zamak-Zinc Nickel alloys).



**Technical Futures** 



	LIQUID CODES								
SPECIFICATIONS	028-S	028	943	085					
Cleaning	****	****	***	**					
Degreasing	****	****	***	*					
Deburring	**	**	****	****					
Foaming	****	**	**	***					
Passivation	***	*	****	***					
Polishing	***	*	****	****					
Pickling	***	****	-	-					
Corrosion protection	**	*	****	***					
Package	30 kgs plastic drum								
Liquid color	Transparent	Transparent	Yellowish	Yellowish					
pH value	3-4	1-2	9-10	10-10,5					

LIQUIDS' EFFECT ON THE METAL TYPES							
Carbon steel	****	**	****	-			
Stainless steel	****	****	****	****			
Non-ferrous metals	****	****	-	****			
Plastic/Ceramic	****	****	****	****			

★ Very low effect | ★★ Low effect | ★★★ Suitable | ★★★★ Good effect | ★★★★★ Excellent effect | - Not suitable



**CODE: 028** 

It is used for pre-

#### OTHER LIQUID DERIVATIVES

Custom-made liquids can be developed for various applications. You can contact us for more information.

# GRANULES



#### FOR THE DRYING PROCESS

Drying granules are used in vibratory dryers to dry wet metal surfaces. Thus, the wet parts that come from the vibration process become more resistant to corrosion. Granules are made from maize plant. Drying granules are of various sizes and granular particle sizes are selected according to the materials. Our drying vibratory machines provide a more polished surface by rubbing the surface as well as the metal drying process. Our granules are dust-free. They do not leave dust particles on surfaces. They are available in bags of 20 kg.

#### WALNUT AND PECAN GRANULES

They are used in various applications especially in the jewelry industry. Various grit sizes are available. They are available in bags of 20 kg.

CODE	SIZES	MICRONS
MG 04	6,5 – 8,0 mm	6500 – 8000 microns
MG 06	3,5 – 6,5 mm	3500 – 6500 microns
MG 08	2,5 – 3,5 mm	2500 – 3500 microns
MG 10	1,6 – 2,5 mm	1600 – 2500 microns
MG 12	1,0 – 2,0 mm	1000 – 2000 microns
MG 16	0,8 – 1,5 mm	800 – 1500 microns
MG 20	0,6 – 1,0 mm	600 – 1000 microns
MG 30	0,25 – 0,8 mm	250 – 800 microns
MG 80	0,18 – 0,6 mm	180 – 600 microns

MEDIA NAME	AIM-1	AIM-2	OPERATIONS	LIFETIME	MATERIALS CAN BE USED
GRIND20	Rough Finishing Media for spares, aviation, automotive and naval products. Main aim is to decrease surface roughness Ra below 0,3	To decrease the Ra (Average surface roughness) on items from 1,0 to 0,3 microns	• Surface Finishing	500 hours (for Std DF)	• Steel • Stainless Steel • Non-ferrous metals
GRIND30	Rough Finishing Media for spares, aviation, automotive and naval products. Main aim is to decrease surface roughness Ra below 0,25	To decrease the Ra (Average surface roughness) on items from 0,7 to 0,25 microns	• Surface Finishing	500 hours (for Std DF)	• Steel • Stainless Steel • Non-ferrous metals
DREP20	Edge Preparation for Carbide Drills	Edge Rounding aim up to +20 microns in between 8 minutes on especially Drills and Endmills for Superalloys, Inconnel and Titanium	• Edge Preparation on Carbide Drills	450 hours (for Std. DF)	• Carbide Drills • Carbide Endmills
EDGEP30	Standard Edge Prep. Media for Carbide Endmills	<ul> <li>Standard Edge Preparation Media on DF machines for carbide endmills</li> </ul>	• Edge rounding aim from 12 to 15 microns within 6-8 mins on carbide endmills on STD DF machine	450 hours (for Std. DF)	• Carbide Endmills • Carbide Drills
EDGEP50	Edge Prep Small Rounding, Allum. & Stainless Tools, Post-Treatment	• Fine Abrasive for edge preparation of endmills, taps, drills, reamers	• Edge Rounding aim from 8 to 10 microns at STD machine within 6 - 8 minutes	450 hours (for Std. DF)	<ul> <li>Carbide Endmills</li> <li>HSS Drills</li> <li>HSS Taps</li> <li>HSS Reamers</li> <li>Carbide REamers</li> </ul>
POL60	Polishing , Brightening and Post-Treatment of Carbide and HSS-Tools with small amount of edge-rounding	<ul> <li>To decrease the surface roughness from 0,5 to 0,1 fastly on carbides</li> <li>To decrease the surface roughness from 0,5 to 0,1 fastly on steel and alloys</li> </ul>	<ul> <li>Pre and post treatment of tools both carbide and HSS for very fine polishing</li> <li>Fine Polishing of holders, spares and industrial parts</li> </ul>	350 hours (for Std. DF)	<ul> <li>Carbide Endmills</li> <li>Carbide Drills</li> <li>Carbide Tooling</li> <li>HSS Taps</li> <li>HSS Drills</li> <li>Steel Alloys</li> <li>Stainless Steel</li> <li>Inconnel Steel</li> <li>Titanium Alloys</li> <li>Non Ferrous Metals</li> </ul>
MICFIN60	PostCoating, Small Edge Prep. For Carbide, Process for MicroTools	• Especially using on Micro Tools dia. 3mm to 1.2mm	<ul> <li>Micro Tooling</li> <li>Post Treatment After</li> <li>PVD Coating</li> </ul>	600 hours (for Std. DF)	Carbide and HSS Tools
WS400	Post-Treatment for MicroTools and Other tools Fine Polishing media for Steel Alloys	<ul> <li>Especially using on Micro Tools dia. 1.2 mm to 0.4mm</li> <li>Polishing paste should be added after 10 hrs of operation (provided by us)</li> <li>Main aim to get Average Surface roughness from 0,3 to 0,1</li> </ul>	• Fine Polishing	400 hours (for Std. DF)	• Carbide Tooling • Steel Alloys
MAI1677	Surface Roughness destabilizer for carbides , But main aim to get mirror-polish surface for steels,stainless, and super-alloys	<ul> <li>To decrease the Surface roughness values below 0,05 Ra</li> <li>Can be used on every metals, Non-ferrous ones are faster on polishing</li> </ul>	<ul> <li>Ultra Fine Polishing</li> <li>Surface Destabilizer</li> <li>Mirror Polishing</li> </ul>	350 hours	<ul> <li>Non Ferrous Metals</li> <li>Titanium</li> <li>Super Alloys</li> <li>Steel Alloys</li> <li>Carbides</li> </ul>

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#### **GLASS BEADS FOR THIN PLATE PRODUCTS**

They are micro-particles that prevent flat and smooth surfaces from sticking together. They separate the parts that may stick or touch each other in the vibratory machines, during the tumbling process. They are selected in different microns according to the application. They are available in carton pouches of 25 kg.



## **DRG-MEDIA**

FOR DRAG FINISHING MACHINES

# Systems & Control Panels



**Systems** Special systems for the special productions

**On-site** On-site installations

BCP-10 Coin polishing system

Panels Electrical box



### SYSTEMS

SPECIAL SYSTEMS FOR THE SPECIAL PRODUCTIONS



4x KVM40 - SM60 - DVM200



LOADING BUNKER - KSM160 - SM160



LOADING BUNKER - KSM160 - SM160 - DVM600



VIBRATORY SILO - KVM420 - DVM600



VIBRATORY SILO - KSM160

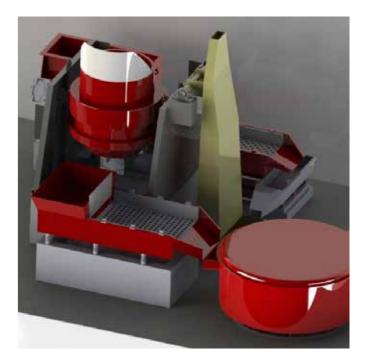


LOADING BUNKER - KSM160





LOADING BUNKER - KSM160 - SM160



LOADING BUNKER - KSM160 - 2x SM160 - TVM200 - DVM600



### **ON-SITE**

**ON-SITE INSTALLATIONS** 





KVM 420 **DVM 600** Otomation System

**TVM 1000** TVM 500 **D-TVM 500** ENVIRO 1000



**KSM 60** SM 60

KVM 220

**DVM 200** TVM 350

KVM 220



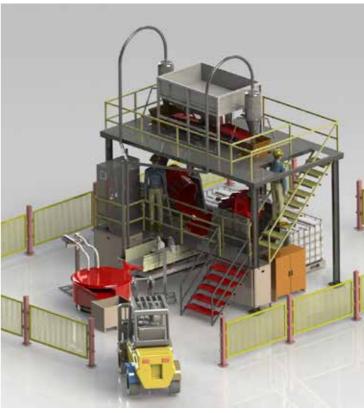


KSM 160 SM 160 **DVM 600** 



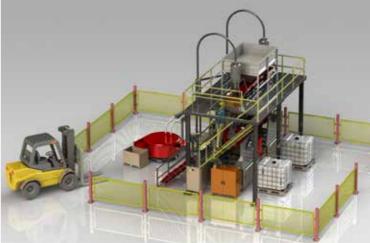
**COIN POLISHING SYSTEMS** 

You can visit coinpolishing.com website (QR) for more information about coin polishing systems.









## **BCP-10**

COIN POLISHING SYSTEM

### Coin washing and polishing process

Our centrifugal washing machine washes the stains, marks, and scratches on the surfaces of the washers coming out of the oven quickly and sleekly. Thanks to its superior construction (tubplate and ring), your washers are washed without damage and with minimum waste. Our coin washing lines are manufactured fully automatic, semi-automatic or suitable for manual use. Besides, our surface treatment fluids provide fast and perfect shine.

#### INFORMATION ABOUT THE PROCESS

In washing systems, the coins are loaded into the main coin silo via the loading conveyor. They are transferred to the weighing pan by the washer feeding vibrators in the silo.

When the transferred washers reach the desired weight, they are taken into the centrifugal washing machine. The coins washed with PLC control are transferred to the separator; they are dried in the dryer after sieving and the process is completed. The prescribed amount of liquid and water is supplied to the system automatically and controlled by the water flow sensor. The system can be followed with PLC system software. 16 different programs can be installed according to the size of washers. Time-liquid-water use can be programmed as required. Optionally, the pH graph can be taken at the end of each process.





### PANELS

#### ELECTRICAL BOX

Our electrical panels are separating two types like standard and special. We are using boxes in the IP65 standard. The standard electrical panel means a plastic box and has standard buttons, timer, tachometer, and on/off switch. The special electrical panel comes with a metal box. It has a speed control unit and noise cover on/off switch, reverse working switch, timer, tachometer, water valve switch, and on/ off switch. Also, for the systems that need PLC control, we use special electrical panels.

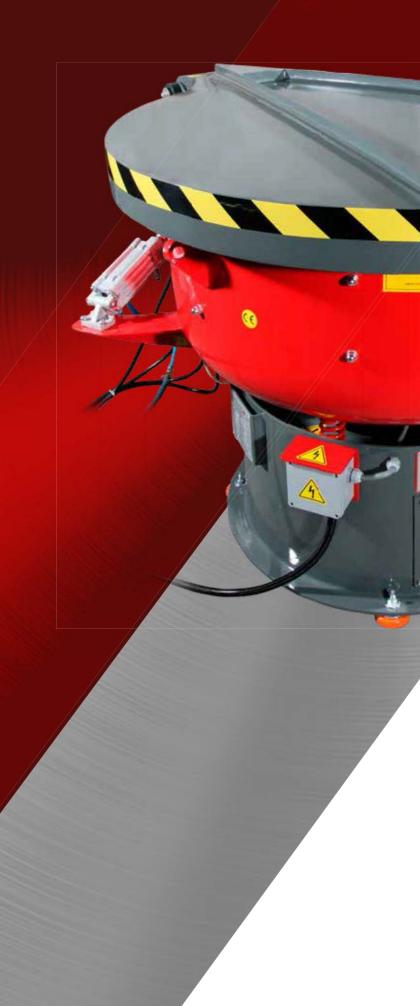






#### ENDUSTRIAL SAFETY

Our electric panels are producing with top-quality components. Also, all components have CE and other international certificates. Our all electric panels (Standard - Special) will be going on at your service for a lot of years. Just as our machines.





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