

# OFFER

**AKYAPAKUSA®**  
METALWORKING TECHNOLOGIES

## **PER 8X10 R** **31" x 40"** **SHOT BLASTER MACHINE**



The product images shown are for illustration purposes only and may not be an exact representation of the product.

Akyapak reserves the right to change product images and specifications at any time without notice.



4007 W Alva Street Unit B  
Tampa, FL 33614



+1 813 351 7100



[luis@akyapakusa.com](mailto:luis@akyapakusa.com)



[www.akyapakusa.com](http://www.akyapakusa.com)



## AKYAPAK EXPORTS TO 6 CONTINENTS

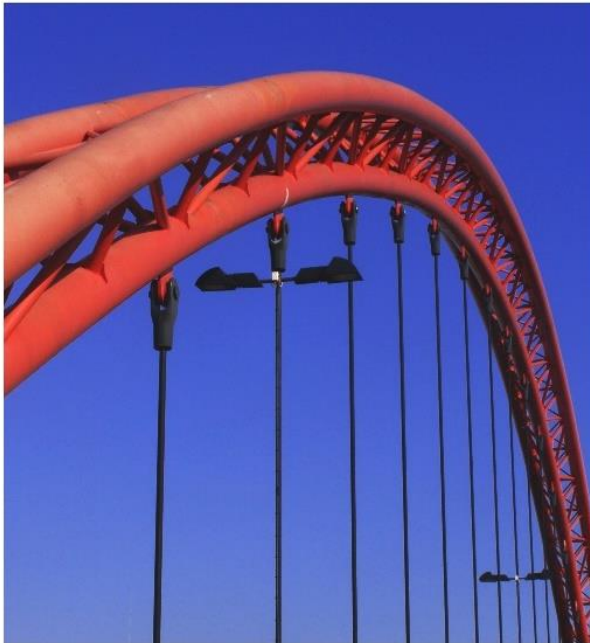


### HIGH TECHNOLOGY FROM TURKEY TO THE WORLD

One of the longest-established producers in Bursa, Akyapak celebrates its 60<sup>th</sup> foundation anniversary. Akyapak proudly exports metal-bending, drilling, cleaning, painting, cutting machines and welding solutions to 110 countries in 6 continents and delivers high quality from Turkey to the world. Akyapak is a source of pride to Bursa and Turkey with its total 345,000 Sft covered technological manufacturing facilities. Akyapak, established in 1962 in Bursa, is continuing to shape technology in Turkey and the world with its 370 qualified and experienced staff.

Akyapak has taken new steps to reinforce its strong image all over the world, with offices in Bursa, Turkey, Akyapak USA in Tampa Florida and Akyapak Moscow, Russia.

THE **GIGANTIC** POWER  
THAT CHALLENGES  
THE **HEAVY INDUSTRY**



Akyapak offers a wide range of profile cleaning and painting solutions that help customers overcome the most challenging cleaning applications. The high-quality components combine with special design in a strong and reliable machine body and construct the advanced technology of our blaster equipment.

The adequate machine for your most frequently profiles enable the PER and the EST series to have minimum wear and hence less deformation, also results in longer product life.

The simple and friendly operation of all our series have been designed to allow these machines to work almost unattended. Only switch on the roller conveyor and the PLC takes control of the entire process. When it monitor the material to be clean, the cleaning cycle begin automatically by starting the abrasive recycling system and blast wheels sequentially one at the time. The blow off at the filters section also happen automatically as need it, to preserve clean filters. Adjusted shot curtain ensure the separation of dust and good shot.

## STANDARD FEATURES

- Machine suitable for shot blasting of beams, profiles, angles and pipes equipped with complete abrasive recovery system, including a bucket elevator, abrasive air wash separator, dust collector, roller conveyor and electrical components
- Parts
  - Maximum passage section of pieces 31" (0.8 m) W x 40" (1 m) H
  - Effective shot blasting: 24" (0.6 m) W x 31" (0.8 m) H
  - Length: 10 ft. (3 m) to 26 ft. (8 m)
- Blasting cycle

The operator loads the profiles onto the entrance conveyor. Parts is fed into the entrance of the machine, it passes through the Blast Chamber, parts are then unloaded at exit of machine chamber.

Inside the chamber, parts are blasted by four (4) turbines. The abrasive falls into the collection hopper mounted underneath where it flows into the foot of the bucket elevator to be carried up to the abrasive reclamation unit to be sieved and cleaned before going into the abrasive silo mounted underneath. Then the abrasive is re-fed to the turbines via the control valves. The blast chamber is sealed against stray abrasive by rubber sealing.



- Production
  - 20" (0.5 m) to 80" (2 m) per minute
  - Degree of cleaning: Not specify.
  - Abrasive: S 330 / S390 steel shot.
  - Operating conditions ambient temperature and humidity - (less than  $\leq 110^{\circ}\text{F}$  ( $45^{\circ}\text{C}$ ))
  - Parts must be dry and free of oil and grease
  - Beams and profiles must pass through the machine in vertical position (I) since to pass them in H position shot in the superior part of it would be accumulated.
  - Form complex structures could be necessary to pass more than once by the machine because shadows produced by the same piece
  - Omega-shaped profiles or similar could not properly shot blasted inside.
  - The production can vary depending on the degree of cleaning, degree of rust, mill scale, and or other contaminants present.
  - Cleaning speeds are based upon the use of good quality premium abrasive.
  - Surface finish will vary with blast media selected.
  - Profiles less than 10 ft. (3 m) long, light weight parts or parts that are not flat may be necessary to pass them through the machine in a rack or basket



### WORK CONVEYOR

- Conveyor length
  - Inlet: 26 ft. (8 m)
  - Outlet: 26 ft. (8 m)
- Motor: 2 x 0.5 HP (0.375 Kw)
- Variable speed control: Frequency inverter
- Solid steel rollers
- Distance between rollers
  - Inside basting machine: 40 " (1 m)
  - External work conveyor
    - First 160 " (4 m): 40" (1 m)
    - Remaining 60" (1.5 m)
- Maximum weight capacity 374 lb./ft. (560 Kgs/m)
- Parts entry detection sensor for automatic shot blast valve opening actuation.
- 26 ft. (8 m) outlet pneumatic sweeper conveyor for return of shot to the equipment.



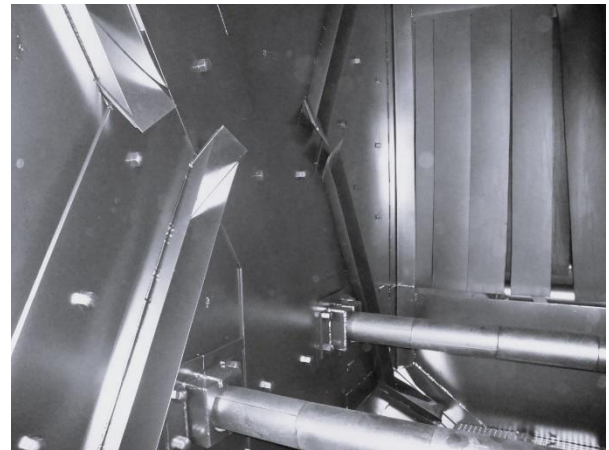
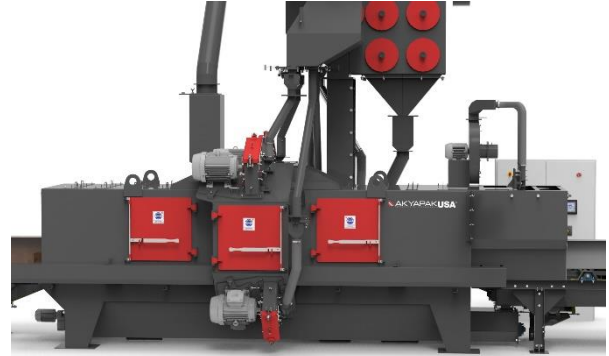
### HYDRAULIC TRANSVERSE LOADER-UNLOADED PROFILES AND PLATES

- In order to meet the need of the processing, this production line equips with hydraulic transverse loading/unloading devices. The loading or unloading system consists of lifting car, heavy-duty supporting frame, driving mechanism and hydraulic system.
- The lifting action is realized by hydraulic cylinders, and the moving forward/reverse action is driven by reducer via chains. The speed of the transverse device:  $V=20\text{m/min}$
- Loading: 4 frames x 15 ft. (3 m) length
- Unloading 4 frames x 15 ft. (3 m) length
- Maximum load capacity. 11000 lb (5000 kg)
- Hydraulic Lifting - 20 Hp (15 Kw)
- Moving Forward/reverse cars 2 hp (1.5 Kw)
- Control panel



## BLAST CABINET

- Cabinet structure
  - Steel plate 1/4" , 3/8" and 1/2"
  - Access door for inspection and maintenance
- Inlet and outlet chamber
  - Steel plate 1/4"
  - Each chamber is fitted with five (5) sealing rubber curtains to minimize abrasive escape from the blast compartment
- Internal liners - Two layers
  - First layer lining (all blast cabinet) with 4 mm and 8 mm manganese steel (11/14%). Full welded
  - Second Layer lining in hot area with 3/8" thickness high chrome cast (Hardness  $\geq 64Rc$ ). Bolt-on replaceable
- Screw conveyor
  - Spiral 15b30 boron-steel
  - Motor 2 HP (1.5 Kw)
- Blow-off
  - Fan 4 HP
  - Nozzles adjustable



### **BLAST WHEEL**

- Model TR 360
- Quantity: Four (4)
- Direct Drive: 15 HP (11.25 Kw)
- Abrasive flow
  - Unit flow 353 lb. (160 kgs) per minute
  - Total flow 1412 lb. (640 Kgs) per minute
- Abrasive speed 262 ft. (80 m) per second
- Wheel with blade
  - Ø 15" (380 mm)
  - High chrome steel
  - Hardness ≥64Rc
- Housing
  - Manganese steel (11-14%)
  - Forming together with the internal liners a double resistant wear wall
- Internal liners
  - High chrome steel - Hardness ≥64Rc
  - Supported by screw with hardened cast steel head for abrasion protection.
- Close labyrinth of abrasive between engine coupling and housing with possibility to mount the turbines in any position even with the vertical axis.





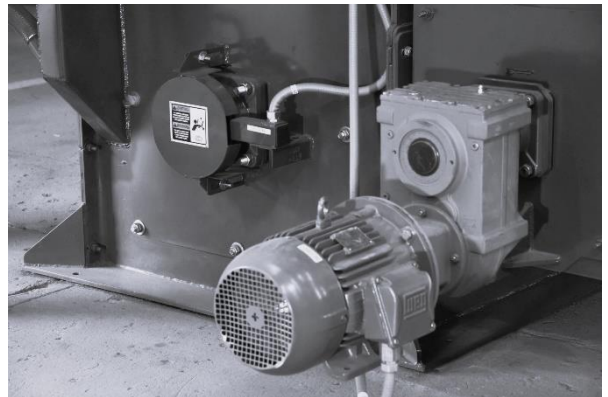
### **BUCKET ELEVATOR**

- Discharges spent abrasives and refuse from cabin to abrasive separator and storage hopper for cleaning and reuse.
- Fully encased, dust and adhesive tight with drive at elevator head
- Steel structure in SAE 1010, 1/8" (3.2 mm) thick
- Upper tension roller: 3 Hp (2.25 kw) drive
- Lower squirrel cage with auger
- Bucket: Steel SAE1045 - Thickness: 1/4" (6.4 mm)
- Hopper for abrasive recharge



### **LOWER MOTION ELECTRIC SENSOR (OPTIONAL)**

- Electric motion detection sensor of the following components
  - Elevator belt
  - Screw conveyor



### **MAINTENANCE PLATFORM (OPTIONAL)**

- For dust collector, abrasive separator upper bucket elevator
- Welding Steel pipes and Expanded metal construction
- Marine ladder with man covers

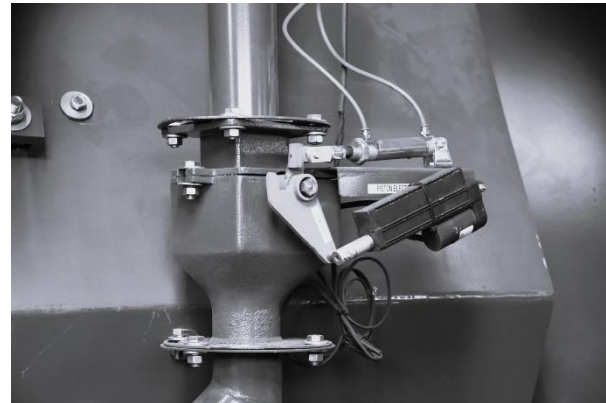
### ABRASIVE SEPARATOR

- Model: 800G Air flow abrasive cleaning
- Principle of operation: Used abrasives and fines are stored behind the fixed, but adjustable metering gate. Abrasives and fines are allowed to fall in a uniform curtain through the air-wash separation zone.
- Made of mild steel, 1/8" (3.2 mm) thick sheets, reinforced in hot areas with 4 mm thick manganese steel (11-14%)
- Retention of thick particles: fixed
- Download dust and fine abrasives
- Storage hopper for good abrasives
- 26-gal.(100L) drum -flexible hose connection



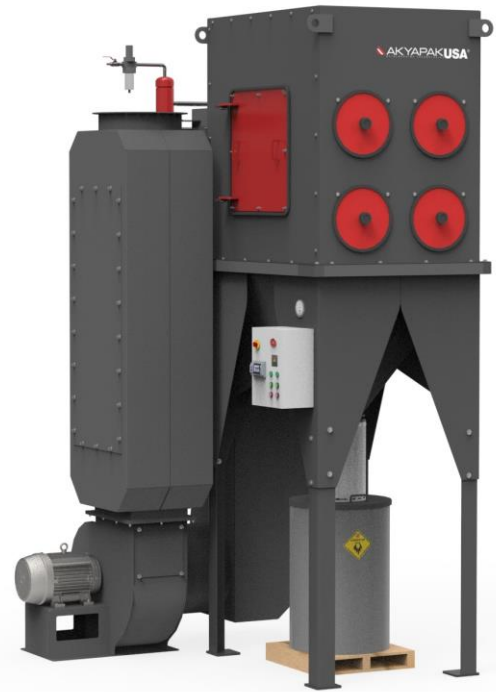
### ABRASIVE VALVE FLOW

- Pneumatic ON-OFF flow control for feeding abrasive to the blast turbine
  - Four (4) - Cast steel SAE 1045
  - Connection to blast wheel: steel pipe
- Optional
  - Four (4) Abrasive flow valve control with double drive, pneumatic ON-OFF and electrical linear actuators controlled by HMI in lieu of pneumatic on/off flow control.



### **CART8H DUST COLLECTOR**

- Steel construction: ¼" (3.2 mm) thick
- Media cleaning: reverse Pulse jet
- Cartridge
  - Cellulose / polyester
  - Quantity 8
  - Unit filter area: 226 ft<sup>2</sup> (21 m<sup>2</sup>)
  - Total filter area: 1356 ft<sup>2</sup> (168 m<sup>2</sup>)
- Fan
  - Drive: 15 HP (11.25 Kw)
  - Air volume 3386 cfm (96 m<sup>3</sup>/min)
- Efficiency ≥ 0.5 micron / 99.9%
- Emission: ≤ 1 mg/m<sup>3</sup>
- Filter Loss of pressure
  - Initial: 12-25 mm H<sub>2</sub>O
  - Normal operation: 50mm to 75 mm H<sub>2</sub>O
  - Final resistance: 100 – 125 mm H<sub>2</sub>O
  - Operating Temp: 14° F (-10°C) to 194° F (90°C)
- Ducting connection – included
- Chimney: Not included
- One (1) 26-gal. (100L) dust accumulation drum with lid transition to drum with sleeve filter
- Optional
  - Silencer and Mineral wool cover kit to reduce noise ≤ 85dBA a 5 ft. (1.52 m)



### **INTERMEDIATE GRAVITATIONAL SEPARATOR**

- Located between blast cabinet and dust collector.
- Allows increasing the air flow inside the cabinet without risk of carrying good abrasives to the dust collector.

**CONTROL PANEL**

- Control panel - IP54
- Components and motors: according to IEC or NEMA
- Command voltage 220v
- PLC control: Siemens Logo
- HMI – Siemens KTP400
- Amp meters 4 (four)
- Emergency stop button
- Wire cables to connect control panel and motors
- Optional: Ewon remote communication



**MOTORS**

- 440 v. 3Ph 60 Hz
- Horsepower

Motor	HP	Qty
Screw cabinet	2 hp	1
Bucket Elevator	3 hp	1
Turbine	15 hp	4
Dust collector fan	15 hp	1
Abrasive blower	4 hp	1
External roller conveyor	0.5hp	2
Outlet screw conveyor	1 hp	1
Total HP	81 HP - 60.75 Kw	

Note: (\*) Inform us in case you require another type of energy than the proposal because depending on these can change the price



## SERVICE UTILITIES

- Electricity – 460 volts / 3 phase / 60 Hertz - ± 15% variation in input voltage
  - The supply voltage for the Force Cabinet will be adapted to match the local power supply
- Compressed air– 160 gal (600 l) to 320 gal (1200 L) per minute at 85 PSI (6 Kg/cm<sup>2</sup>)
  - The compressed air must be clean, dry and free from oil.
  - Dryness: Less than 5 gms/Std. m<sup>3</sup> (Dew point +3 / 7 bars).
  - Oil filtered to less than 5 gms/Std. m<sup>3</sup>
  - Operating dew point for compressed air should not exceed 40° F (15°C)

## PAINT

The equipment will be blasted and painted externally with the following scheme

- Surface preparation: SA 2 to SA 2 ½ or similar suitable for indoor coating application
- One component polyurethane paint and color according to customer requirement/specification

## BRAND NAME COMMERCIAL ITEMS

We have included within our offer the following:

Name	Item	Akyapak Proposal
Motors	Motors	WEG
	Gear motor	Sew
Electrical components	PLC CPU	Siemens
	Push button, pilot	Siemens
	Circuit breaker	Siemens
	Frequency inverter	Siemens
	Drivers	Siemens
	Contactors	Schneider /Siemens
	Motor protection	Schneider / Siemens
	Air conditioner	Rittal - Optional
Sensors	Main Control Cabinet	Rittal
	Switch	IFM
	Photoelectric	IFM
Pneumatic	Pressure	IFM
	Actuator	Festo
	Pneumatic control Valves	Festo
	Pneumatic valves for cleaning filters	Mecair
	FRL	Festo

**FOUNDATIONS**

Detailed installation drawings incorporating requisite dimensional details, point and distributed loading data and other relevant data shall be provided by the seller. All holding down bolts for equipment are included in the supply. All pit covers, pit access ladders and civil engineering work are excluded. Customer can choose the option of a layout with or without a pit.

**INSTALLATION/ COMMISSIONING SERVICE**

Preliminary installation of the machine will be carried out by the buyer prior to our technician's arrival. The assembly instructions will be given by phone or e-mail.

Akyapak USA may provide the services of a Field Service Engineer to assist with the final installation and start-up of the equipment, for a period of one business weeks (five working days/week). Additional days, if required by customer, will be billed at USD 600 per day.

At the same time the equipment is started up at the customer plant, maintenance and operation training will be given to familiarize operators and maintenance personnel with setting procedures, peening techniques, plotting saturation curves and general information about the peening process. The material that will be used in the training is the maintenance and operational manual of the equipment. Additional copies will not be supplied to the people that attend the course.

The price for Installation / Commissioning service does not include air fares, meals, travel to and from site, and hotel accommodation for Akyapak' engineers.

**OPERATING AND MAINTENANCE MANUAL**

One (1) maintenance manual in printed version and one (1) digital CD containing operating and maintenance instructions, spares identification drawings, electrical wiring and pneumatic circuit diagrams will be provided. The language used would be English.

**EXCLUSIONS**

- Foundation
- Sea Port nearest Customer Location
- Cranage or bridge crane for site off-loading and installation.
- Connections to network
- Site off-loading
- Placement on site.
- Compressed air piping and piping up from mains to machines and dust collector.
- Labor to assist our engineer during installation and commissioning.
- Boarding, Lodging and transportation expenses for our engineer
- Abrasives required during commissioning trials.
- All sample parts for testing and commissioning of equipment as required.
- Any touch-up painting required after the completion of installation. This includes minor paint damage which inevitably results from loading, tarping, shipping and unloading.

**WEAR PARTS AND ABRASIVE**

- Spare parts: will be quote separately
- Consumption of recommended spare parts and steel shot abrasives can vary based on customer's set up and adjustment of shot blasting machine. Failure to follow manufacturer recommended start up and operating procedures may lead to increased maintenance and operating costs.
- Manufacturer recommendation for spare parts will not include commercially available items which Akyapak USA recommends customer to source locally at lowest cost.

## QUOTATION

### SCOPE OF SUPPLY & PRICING

<b>PER 8X10 R (31"x 40") – 4TR 15 HP</b>	<b>Qty.</b>
Blast Cabinet <ul style="list-style-type: none"> <li>- Structure Mild steel</li> <li>- Spiral screw conveyor - 15B30 Boron steel</li> <li>- Internal liners               <ul style="list-style-type: none"> <li>a. Full coverage lining in 4 mm manganese steel welded</li> <li>b. Additional liners in hot areas made of high Chromes steel grades (<math>\geq 64RC</math>) and Manganese steel (12-14) 8 mm thick</li> </ul> </li> </ul>	1
Blast Wheel TR 360 15HP direct drive – Manganese steel housing	4
ON-OFF Flow control valve for feeding abrasive to the blast turbine	4
Bucket Elevator	1
Air wash abrasive separator and Storage Hooper	1
Intermediate gravitational separator	1
Dust Collector – CART 8H	1
Inlet and Outlet Work Conveyor 26 ft. (8 m) each	1
26 ft. (8 m) outlet pneumatic sweeper conveyor for return of shot to the equipment.	1
Control Panel – IP54 – According to IEC or NEMA	1
Startup commissioning and training (8 days)	included
<b>Total Price</b>	<b>US\$ 299.600.-</b>



## OPTIONAL FEATURES

Optional	Qty	Price
Hydraulic transverse loader-unloaded profiles and plates	1	Not Included
Abrasive flow valve control with electrical linear actuators controlled by HMI instead of standard on-off valve	4	US\$ 4.200.-
Lower motion electric sensor for lock detection or cutting of belt, screw conveyor and work conveyor	1	US\$ 2.650.-
Automatic abrasive regeneration with 1100 lb (500 Kilos) capacity hooper along with bucket elevator for user-friendly loading of abrasives at an ergonomic height.	1	US\$ 3.500.-
Silencer dust collector components	1	US\$ 2.850.-
Maintenance Platform for the Blast Cabinet – for Upper Elevator, Air Wash Separator and dust collector	1	US\$ 3.250.-
Ewon remote communication	1	US\$ 2.800.-
Recommended Spare Parts Set	1	Not Included
Final supervision assembly and start up training (8 days)	1	Included

## GENERAL CONDITIONS

### **WARRANTY**

12 Months. The warranty expires in case of incorrect utilization and requires using original Akyapak spare parts and consumables. The warranty period starts after installation and commissioning of the equipment.

### **PRODUCTION LEAD TIME**

IN STOCK

### **INCOTERMS**

Alto, MI

### **PAYMENT**

- T/T Payment  
50% with order  
50% before shipment

### **INSTALLATION, COMMISSIONING AND TRAINING**

Installation, commissioning and training requested by a customer is provided by Akyapak for an extra fee.

All required items such as lubricants, oil, air compressor, items for connections of hydraulic, electric and air, test materials to be used during training and all other possible requirements are subject to be provided by the purchaser.

### **OFFER VALIDITY**

30 days.

### **MISCELLANEOUS**

- All goods remain Akyapak property until completely paid.
- Due to technical reasons, all test materials are supplied by purchaser in order to guarantee the results.
- Akyapak is not liable for delays and additional costs caused by force majeure. Akyapak reserves the right to make changes on the technical features and machine design when it deems necessary. Given dimensions and weights might differ in delivery.



## HEADQUARTERS

Hasanağa OSB Mah. HOSAB Sanayi Cad. No: 62 Nilüfer/Bursa/TÜRKİYE  
Tel : + 90 224 280 75 00 Fax : + 90 224 280 75 01 Email : info@akyapak.com.tr

## AKYAPAK USA

4007 W Alva Street Unit B Tampa, FL 33614  
Tel : +1 (813) 351 7100 Email : info@akyapakusa.com

## AKYAPAK RUSSIA

Moscow, Russia / Tel : +7 925 608 28 80 Email : russia@akyapak.com



/AkyapakMachinery



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