SURFACE
PREPARATION

Tumble Belt Machines

CYM MATERIALES S.A.
Industrial Solutions

Tumble belt shot blasting machines are the most universal among all shotblasters as their design makes them suitable for processing parts of different sizes in bulk loads.

Cym Materiales SA manufactures two groups of tumble belt machines. The blasting units belonging to the first group are rather small with one turbine and a shot capacity range of 20 to 60 liters while the second group has two turbines and a shot capacity from 130 to 900 liters.

These types of tumble belt shot blasting machines are very easy to operate.

The process starts with the loading of the parts on the belt either manually or through an automatic loading system.

Once the door is closed the blasting cycle initiates. The wheels and the belt start spinning producing a continuous rotation of the parts thereby ensuring that all components are exposed to the shot blasting stream for consistent cleaning.

When the blasting process finishes, the machine stops automatically allowing the unloading of the parts to take place. Then, the operator moves the belt in the reverse direction to prepare the machine for a new load.

Features Construction

Blast cabinet

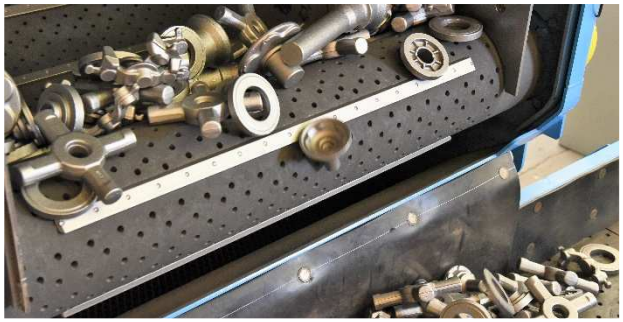
- External structure with robust and compact design made of SAE1010 steel

- Cast steel Liner plates (≥64Rc) and manganese steel plates to protect cabinet

- Loading / unloading door for parts with manual or pneumatic opening according to model

- Screw conveyor - Spiral 15b30 boron-steel

- Wide easily accessible rear door for internal maintenance of the cabinet and bottom of the bucket elevator



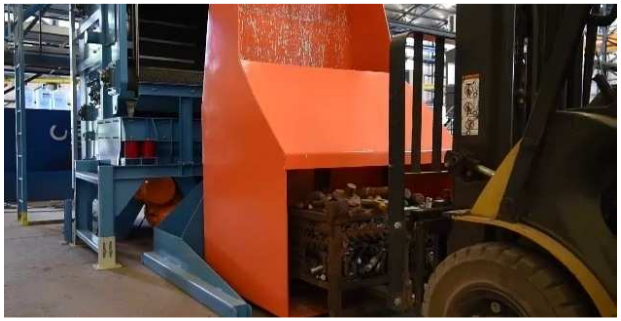
Belt conveyor

Two options of high resistance to wear belt

- G Model: Rubber
- T Model Steel

Loading & Unloading

- Hydraulic parts loader
- Vibratory or belt conveyor for parts unloading



Bi-directional Blast Wheel

- Equipped with one or two blasting turbines according to the model of the machine-

- Located strategically with a correct distribution of the shot on the parts to be treated resulting in a better coverage and better performance of the machine

- Direct Drive from 10 HP up to 60 HP

- Housing manufacture in MN (11%-14%) steel Forming together with the internal liners and double resistant wear wall

- High chrome steel Internal liners ≥64Rc. Liners attached by screw with hardened cast steel head cover for abrasion protection

- Positioning and fixing system for control cage, eliminates the risk of incorrect adjustment of the hot spot.

- Labyrinth seal of abrasive between engine coupling and housing with possibility to mount the turbines in any position

Abrasive reclaim system

- Bucket elevator
  - Cast bucket – SAE 1035 steel
- High efficiency Air flow abrasive cleaning
- Storage hopper for good abrasive
- Pneumatic Valves flow
- Upper Screw - Spiral 15b30 boron-steel

Optional

- Magna Valve – Amperage Electronic Control
- Automatic Abrasive Regeneration System
- Maintenance platform

Dust collector

- Steel construction: 3.2 mm thick
- Cartridge media cleaning: reverse Pulse jet
- Easy replacement of cartridges
- Efficiency ≥ 0.5 micron / 99.9%
- Emission <1 mg/m3
- 200L dust accumulation drum with lid transition to drum with sleeve filter
- Intermediate gravitational separator located between blast cabinet and dust collector allows for increasing the air flow inside the cabinet without risk of carrying good abrasive to the dust collector drum

Optional

- Silencer and Mineral wool cover kit to reduce noise ≤ 85dBA a 1.52m
- Maintenance platform

Electric component

- Control panel for operation control
- Components and motors: according to customer requirement IEC, Nema, UL, etc.
- PLC control: Siemens
- Emergencies stop button: included
- Wire cables to connect control panel and motors

Optional

- Movement sensor motors
- Cooling (for maximal temperature: + 45 ℃)
- Soft Start motors

Technical Data – Tumble Belt Shot Blasting Machine – LT 1TR

Model	Turbine			Belt		Maximum load capacity					Production (Kg/ hour) (**)			
	Qty.	Power		R	S	Liter (*)	Total (kg)		Unit (kg)		Product density (kg/m3)			
		HP	Kw				R	S	R	S	800	1000	1500	2000
LT 20	1	4	3	X	-	20	60	-	10	-	65 95	80 120	120 180	160 240
LT 40	1	5.5	4.12	X	-	40	90	-	15	-	128 92	160 240	240 360	320 480
LT 60	1	10	7.5	X	-	60	150	-	15	-	192 290	240 360	360 540	480 720

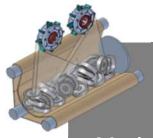
Note:
R: Rubber
S: Steel

(*) The value of liters of payload is averaged, varying according to the type of parts to be shot.
(**) The production calculations (kgs / hs) are estimated according to and vary according to the density of the pieces to be shot (kgs / m3). The referenced values can also vary depending on the amount of scale, paint, sand, oxides and degree of completion that you want to achieve in the blasting process.
(***)If the equipment you require is not in this catalog please contact our sales or engineering departments which will help to develop the best equipment to suit your needs with our goal to reduce operating costs and increase profitability in your production systems.

Main uses and applications of tumble belt shot blasting machines

- Surface preparation for paint, metal, rubber, etc.
- Pickling of forgings or parts heat treated
- Blasting Sanding of castings in ferrous and non-ferrous metals.
- Deburring of metallic and non-metallic parts.
- Elimination of oxides and scale
- Shot Peening

Technical Data – Tumble Belt Shot Blasting Machine – LT 2TR



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		HP	Kw				R	S	R	S	800	1000	1500	2000
LT 130	2	10	7.5	X	X	130	250	500	20	60	415 625	510 780	780 1170	1040 1560
LT 240	2	20	15	X	X	240	1000	1500	50	200	750 960	960 1200	1440 1800	1920 2400
LT 450	2	30	22.5	X	X	450	1000	1500	50	200	1400 2160	1750 2700	2600 4050	3500 5400
LT 600	2	30	22.5	X	X	600	1000	1500	50	200	1400 2160	1750 2700	2600 4050	3500 5400
LT 900	2	50	37.5	-	X	900	-	2500	-	300	2800 4280	3500 5320	5200 7900	7000 10600

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Advantages of the use of 2-turbine tumble belt machines

- Blasting time reduced between 40% and 50% with similar installed power.
- Maintenance costs reduced by better exploitation of the equipment.
- Amount of blast consumption reduced by finished part.
- Electric consumption reduced by blasted part.
- Working costs reduced.
- More consistent quality of the parts.

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