

Specification of Q2615 Shot Blasting Booth

Part I Processed workpieces and parameters

1	Max. Workpiece size	Customized
2	Finish level	Can achieve Sa2.5 (GB8923-88)
3	Max. Workpiece weight	15 T
4	Processing speed	30-60 m ³ /min
5	Surface roughness	40~75 μ (Depend on abrasive size)
6	Suggest abrasive	Grinding steel shot and steel grit, Φ0.6~1.5
7	Chamber inside dimension (L*W*H)	16*6*4 m
8	Electric power supply	380V, 3P, 50HZ or customized
9	Pit requirement	Waterproof

Part II Technical data of Q2615 Shot Blasting Booth

1	Blasting Chamber	Rock wool composite panels	50 mm (0.5 mm galvanized sheet on each side of composite panels)	
		Support frame	80*32 mm, 100*50 mm rectangle steel	
		Protection plate	4 mm white wear resistant rubber plate	
		Gate	Size (H*W): 3600*4000 mm; Qty: 1 Operating: Manually open	
		Emergency door	1 pcs (W*H=900*1900 mm)	
2	Shotblasting system	Blasting capacity	2*35 kg/min	
		Abrasive storage volume	0.8 m ³	
		The nozzle length	2*25 m	
		Number of Blasting Guns	2 pcs	
		Number of sandblaster	1 set	
3	Abrasive circulatory System	Screw conveyor	Conveying capacity	15 T/H
			Screw diameter	180 mm
			Quantity	7 sets
			Total power	7*1.5 kw
		Separator	Separating capacity	15 T/H
			Wind speed of separator	4-5 M/S
			Waste content of separator	≤1%
			Quantity	1 set
		Bucket elevator	Lifting capacity	15 T/H
			Lifting speed	1.21 m/s
			Quantity	1 set
			Power	2.2 kw
4	Lighting system	Lamp	LED	
		Brightness	≥500 Lux	
		Power	24*0.1 kw	

5	Dust removal system	Filtering material	Polyester coated filter cartridge
		Quantity	1 set
		Fan power	2*11 kw
		Full pressure	2000 pa
		Ventilation volume	22000 m ³ /h
		Cartridge quantity	16*φ350*660 pcs
		Filtering area	352 m ²
		Dust falling way	Automatic back pulse
		Filtering accuracy	1 μm
		Back Pulse Quantity	4 pcs
6	Trolley system	Dynamic load	15 T
		Track pitch	2100 mm
		Trolley size	3000*5000 mm
		Number of trolleys	2 sets
		Motor Power	7.5 kw
7	Dust emission level	≤90 mg/m ³	
8	Noise	≤95 dB	
9	Total electric power	About 45 kw	
10	Production time	60 workdays	

Part III

Reference Pictures of Q26 Shot Blasting Booth

Pictures



Part IV

Installation and After-sales Policies

4.1 Installation, Commissioning, Training and Acceptance

- Seller will send one engineer to buyer's factory to supervise installation.
- Seller shall provide training to buyer's relevant employee.
- Seller shall test the machine to reach surface requirements indicated in the technical parameter.
- Buyer shall afford the visa, insurance, return tickets, transportation, hotel and meals.
- Buyer shall provide finished pits according to drawing by seller, necessary labor workers, and necessary tools, facilities, and powers.
- Buyer shall pay salary to our technicians. The date will be counteracted from the date when the engineer departure from Buyer's factory. All the holidays and weekends will be included.
- Buyer shall sign on the "**Q2615 Testing and acceptance agreement**" after the successful trial.

4.2 After-sales Service

- One year guarantee time. Easily worn parts and spare parts are not included. *(stated in Q2615)*
- Extended guarantee will be available based on mutual negotiation.
- Whole-life technical support. Any problem during using appears, will reply within 8 working hours with technical solution.
- Wear parts and spare parts will be available through the machine life. *(stated in Q2615)*

Part V

Technical specification of Q2615 Shot Blasting Booth

5.1. Application

Q26 Shot Blasting Chamber is a specially designed machine used in the surface cleaning for high and large jobs.

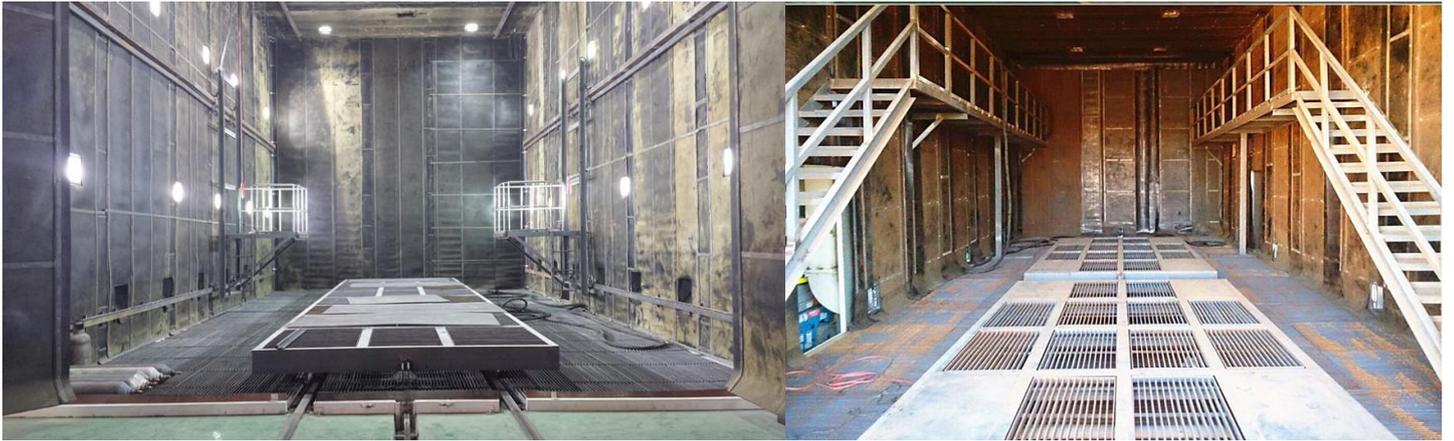
5.2 Components and function

Q2615 Shot Blasting Booth mainly includes Blasting chamber, Shotblasting system, Abrasive circulation system, Lighting system, Dust collector, Electric control system and other parts. The surface finish level can achieve Sa2.5.

5.2.1 Blasting chamber

Blasting body is made of 50 mm rock wool composite panels and rectangular steel frame, it is a strong, seal and spacious operation space to clean the workpiece. Blasting chamber is consist of body shell, left and right side wall, lateral wall, roof, protection plate, etc.

It is equipped with 24 LED lamps (all lamps are defended by steel protective net), inner light brightness can achieve 500 Lux. The blasting chamber is protected by white wear resistant rubber plate which has high wear resistant performance. This can prolong the service life, reduce noise. The door is manually door, on one side of blasting chamber has one set of emergency door.



5.2.2. Blasting assembly



Blasting assembly is composed of one set 0.8 m³ shotblasting tank, sprayer pipe, nozzle and pneumatic components, etc. It is used for continuous operation with sand blast wheel, nozzle using boron carbide material, spray pipe is 25*2 meters length, and the production of tank with pressure vessel certificate. **Equipped 2 pcs air conditioning protective clothing.**

5.2.3 Abrasive circulation system

This machine used materials circulation purification equipment including shot circulatory system and abrasive separation purification system, is made up by screw conveyor, bucket elevator, separator, abrasive supply valve, conveying shot tube, etc.

5.2.3.2 Screw conveyor

Screw conveyor consists of decelerator, screw axis, conveyor shell, bearing, etc. It is standard conveying device and an important part of abrasive circulating system. The screw blade is made of 16 Mn.

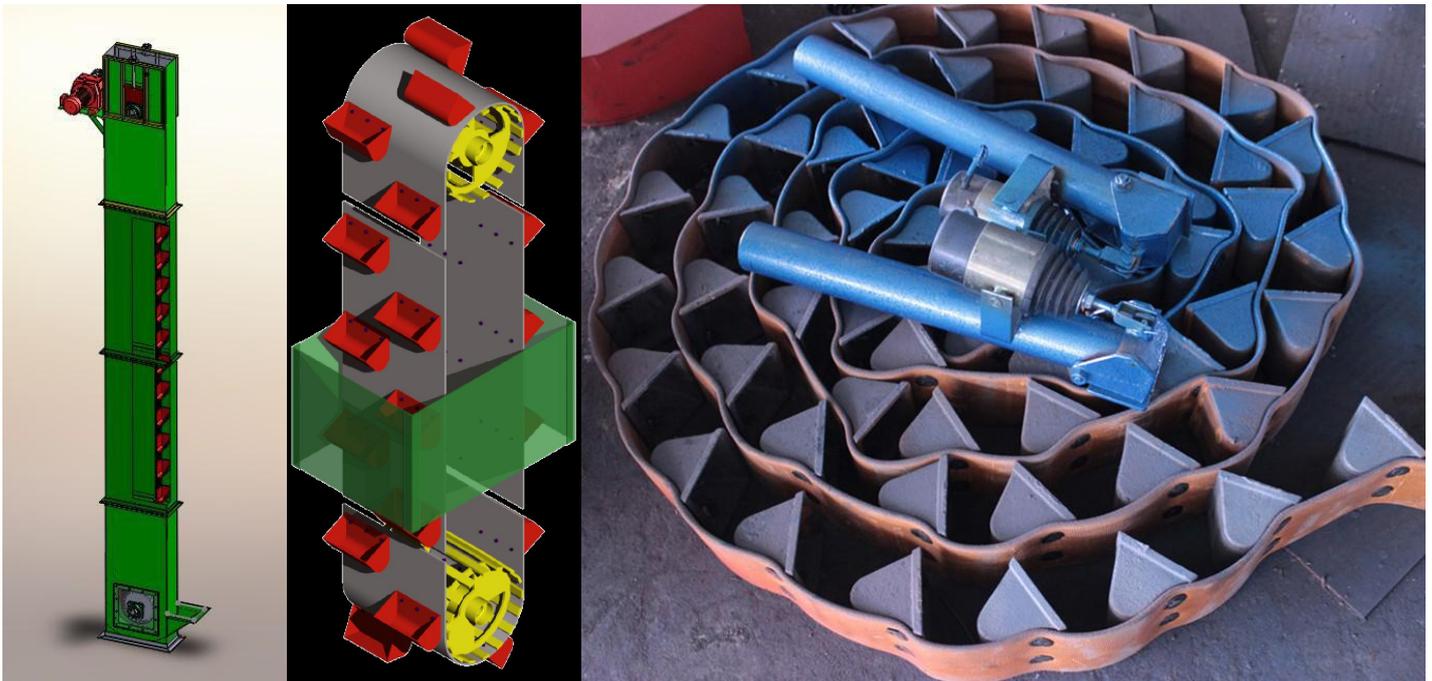


This unit is responsible for conveying the abrasive to the elevator. Screw conveyor located at the bottom of shot blasting chamber, the spiral blade welding in the drive shaft. Conveyor motor drives screw conveyor to send abrasive to discharge outlet, then the mixed abrasive will be conveyed to elevator bottom.

On both ends of the screw conveyor adopt triple seal protection. the abrasive and dust will drop to the clearance between end plate and bearing once leak out, will not enter the bearing. Screw conveyor shaft with sensors detecting unit can detect the working state.

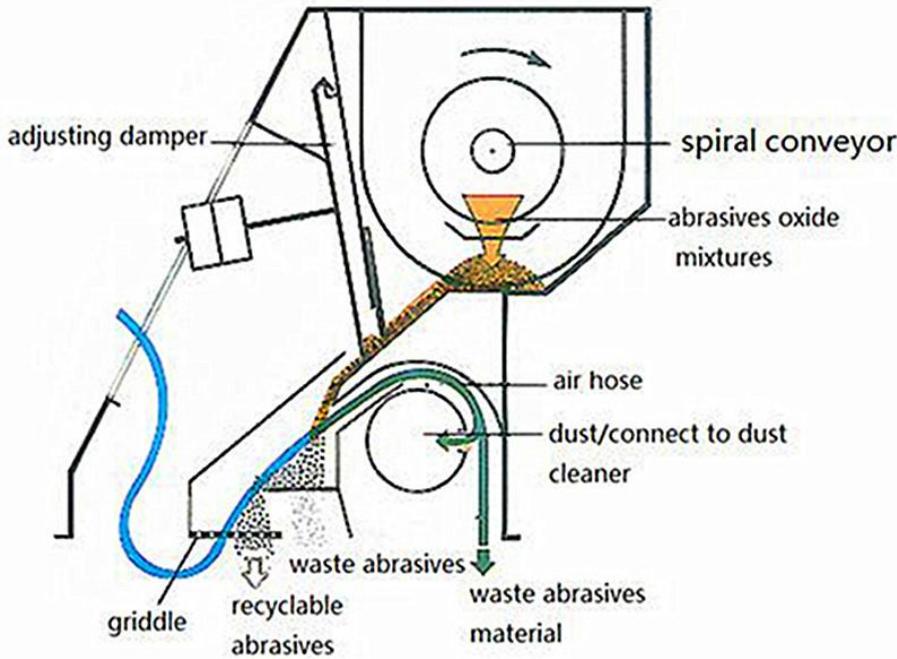
5.2.3.3 Bucket elevator

Consists of decelerator, upper and bottom barrel, belt, bucket and tensioning device, etc. Housing of bucket elevator is welded of steel plate. There is a checking door for maintenance and replacing buckets at the bottom of the housing.



In operation, the hoppers fixed on the conveyor belt bring the abrasive to the top, then put down the abrasive to separator. Using polyester wire core special belt, with the function of high strength, high tensile properties. Pulley use squirrel cage structure, avoiding scattered abrasive embed to the gap between the pulley and belt, affecting transmission. There is 10% design Margin for elevator capacity. Because the hoist falls abrasive by centrifugal gravity, part of the material will fall back into the hoist every time. Therefore, it is necessary to increase the lifting capacity appropriately.

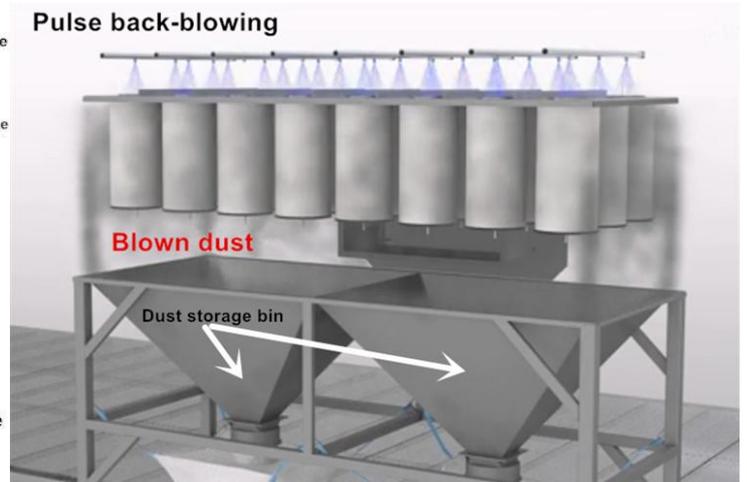
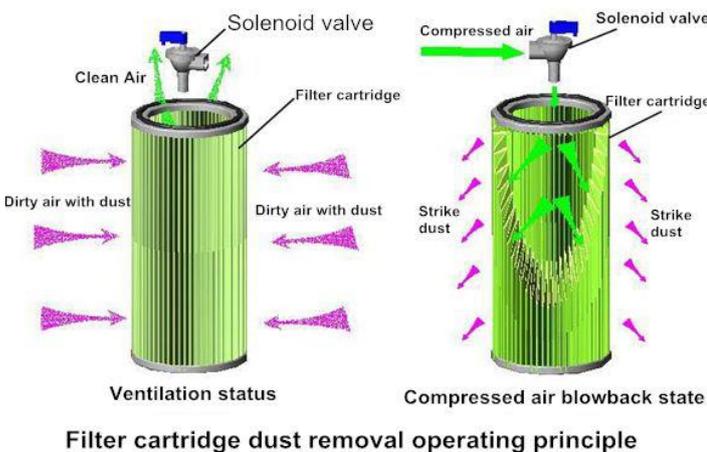
5.2.3.4 Separator



This machine uses full-curtain flow curtain air separator. It is the latest type of separator in our company, separating efficiency can reach 99.5%. The separator is one of the key components of this equipment. The design size of the separation zone directly affects the effect of the separator. The wear of the shot blasting turbines will be accelerated if the separation effect is not good.

5.2.4 Dust removal system

Dust removal system includes cartridge filter, blower, motor, pipes, etc. It is stable and easy operation, low noise, high efficiency and easy maintenance. The fan power is 22 kw, ventilation quantity is 22000 m³/h. Pulse blowback dust removing, cartridge can be easily removed for cleaning then re-use.



5.2.5 Electric control system

The electrical control system for three-phase AC frequency 50 HZ voltage 380 V power distribution, alarm device and overload protection device are available.

To ensure the reliable operation of the equipment and the safety of operators, the shot blasting turbines, maintenance door and abrasive circulation system are equipped with electric interlock and self-locking system.

Installed circulating system accident (Unexpected) abrasive supply blocking device and alarm device.



Part VI Main function parts and outsourcing parts manufacturer

The components name	Manufacturers	Place of origin
Blasting assembly	Qingdao Zhiling Machinery Co., Ltd	Qingdao, China
Separator	Qingdao Zhiling	Qingdao, China
Screw conveyor	Qingdao Zhiling	Qingdao, China
Electric control system	Qingdao Zhiling	Qingdao, China
Main low-voltage apparatus	China	China
Dust removal system	Qingdao Zhiling	Qingdao, China
Fan	Qingdao Zhiling	Qingdao, China
Speed reducer	China brand	China
Pneumatic parts	China brand	China
Detection electric	China brand	China

Part VII Each part of the wall thickness of the material

Name	Material	Thickness (mm)
Chamber body	Rock wool composite panels	75 mm
Chamber frame	Square tube	100*50 mm, 80*32 mm
Protective rubber plate	White wear-resistant rubber sheet	4 mm
Elevator, separator, screw, dust removal	Q235 steel plate	3 mm
Pipe	Galvanized pipe	0.5 mm
Screw blade	16 Mn	4 mm

Loading pictures for reference:

