



## Roller Conveyor Series

- (1) Ari-shoc cartridge filter unit
- (2) Pre-separator
- (3) Bucket elevator
- (4) (Windsifter) Abrasive preparation unit (Windsifter with pre-separator/abrasive silo)
- (5) **Rotation brush**
- (6) Lift/lowering unit
- (7) Blow-off unit with air circulation
- (8) Abrasive hopper
- (9) Central dust removal
- (10) Noise dampening chamber
- (11) Shot blast chamber
- (12) Turbines
- (13) Roller conveyor system
- (14) Spiral conveyor

### **Usage**

1. Carrying out getting rid of alien substance, rust, and scaling attached on the surface of steel plates, H-beams, channels, angles. Because this machine is manufactured as one body from shot blasting to painting process, it is possible to do all process without manpower.
2. This machine make possible perform all process for itself to make goods like steel plate and beam.
3. With the inner lining treatment using Hi-Mn plate, it make possible reduce exchange cost and increase working rate of machine.
4. Carrying out continuous working by installing loading and unloading equipments.
5. Improving working environment through preventing scatteration of shot balls with installing front door.
6. Blow-off part : maximizing cleaning power through eliminating abrasive which is loaded at goods.

### **2. Working principle**

This series of machines is a continuous pass-through type machine for automatically blasting plate and large other structural steel components placed onto a roller conveyor. Work pieces with overall dimensions not exceeding the specifications can be blasted in a continuous operation. Each machine is provided with an integrated roller conveyor for powering the work pieces beneath the blasting wheels. The blast wheels are mounted above and below the conveyor at optimum angles for effectively blasting all exposed work piece surfaces.

The pass-through openings in the entry and exit vestibules are shrouded by wear resistant rubber curtains to limit the escape of stray abrasive. The exit vestibule is fitted with a high pressure fan powered blowing system and a rotary brush system for removing and recovering residual abrasive from the blasted work pieces. Loading and unloading operations are performed on conveyor extensions located at each end of the machine.

All shot blast machines include an integral abrasive recovery and cleaning system. After passing through the blast wheel, the abrasive from the blast cabinet, and the residual abrasive from the blasted work pieces removed by a high pressure fan powered blowing system and a rotary brush system will be directly collected together by screw conveyor, and send the mixed

abrasive to the air wash separator to clean through the bucket elevator and rotary separating drum ,the cleaned abrasive is separated from the resulting dust and other contaminants, then stored in a hopper, ready for reuse. Collected contaminants are stored in a separate hopper for periodic disposal.

Effective cleaning of the shot blasting media is perhaps the determining factor in achieving a high blasting performance, low system wear, and short blasting times. An archimedic screw conveyor or a vibrating screening channel conveyor transports the shot blasting medium from the shot blasting chamber to a high performance sectioned air flow sepating unit.

The shot blasting media is first distributed via a cascade and regulated with adjustable separator flaps. it falls as a curtain and passes through a cleaning air stream, drawn by the the dust collector. The flow rate of the cleaning air stream is exactly adjustable to the different core sizes of the blasting media by air flow regulating valves.

Non-usable blasting media and dust are carried out of the media mixture while usable blasting media flows direct into the blasting media flows into the blasting media hopper. complete cleaning is ensured by integrated separators and cyclone units,also can be equipped with a highly efficient pulse-style backing-blowing dust-filter.

All machines utilize replaceable highly wear resistant materials in critical locations. All machine control systems are pre-piped and pre-wired. All machine dust exhaust ports are pre-piped to a central collection point, ready to be connected to an external dust collector or optionally, a fully integrated dry cartridge type dust collector can be provided.

#### **Optional Features:**

##### **\* Integrated Load/unload transfer Roller Conveyor :**

The peripheral equipments is adapted to suit the need of the user,delivery of the workpieces to the entry side and their discharge from the exit side can done manually or automatically.seals on the entrance and exit vestibules prevent the escape of the shot particles.in the exit area is a roller conveyor with abrasive collection hopper where all residual abrasive is removed manually or with a cleaning device to then be reconditioned for reuse.

##### **\* Variable roller transporting speed system:**

Sections ( except for C-sections) can be descaled from all sides in one single passage.adjustable thoroughput speeds and optionally adjustable abrasive throwing speeds and throughput quantities offer the following advantages:

Easy adaptation of dwell periods and blast cleaning intensity to suit a specific type of workpiece

Reduction of wearing

Reduction of the shot consumption

**\* Option for residual abrasive removal:**

Cartridge or bag type of dust collectors

A highly efficient filter-barrel pulse back – blowing dust abrasive recycling system

Pneumatic removal

Combined pneumatic/mechanical removal using compressed air and vertically adjustable rotating roller brushes.

Air and Rotary Brush Abrasive Recover System at Exit

A compensating flow air wash separator providing 90” of abrasive classification

A rotary screen scalping drum with secondary screen

Overhead abrasive storage hopper for abrasive

A highly efficient filter-barrel pulse back – blowing dust abrasive recycling system

Screw conveyor at the bottom of the hopper moves abrasive to the boot section of the elevator, elevator lifts the shot to the shot hopper after removing of dust.

Abrasive separation in gravity type with separating tip air wash system and and abrasive trip arrangement.

**\*Shot blasting without ifs and buts**

Direct drives and the rugged hanger bearings, all assure maximum up time and lowest maintenance cost.

The unique arrangement of the blast wheels slightly tilted in the blasting direction and the best pattern geometry ensure

Even abrasive impingement to blast clean the workpieces from all sides

A thorough blast cleaning effect for perfectly cleaned workpieces.

**\* Electric control system**

\* Mechanical and electrical installation

\* Factory modern support

\* Inspection and maintenance service contracts

\* Modernization of existing installations

\* User friendly PLC driven controls or normal push button controls

**\*Safe protecting system:**

Safety ladders, platforms ( and optional platforms for wheel maintenance)

Emergency lighting system in tough up booth

Handrail or covers around all open pits

No .	description	unit	Q698	Q6912	Q6915	Q6920	Q6925	Q6930	Q6940
1	Valid width of workpiece	mm	800	1200	1500	2000	2500	3000	4000
2	Valid size of the inlet of the chamber	mm	800x400	1200x400	1500x400	2000x400	2500x800	3000x800	4000x400

3	Valid length of the workpiece	mm	1200-12000	1200-6000	1200-12000	1200-12000	3000-12000	2400-12000	4500-18000
4	Roller transporting speed( stepless)	m/min	0.5-4	0.5-4	0.5-5	0.5-4	0.5-4.5	0.5-4	2-8
5	The thicjness of the cleaning steel plate	mm	3-60	3-60	1.5-60	3-60	3-60	3-110	4.5-100
6	The cleaned material specification		Φ16-28	[≤20#<≤16#	[≤20#<≤16#	[≤20#<≤16#		60×8-300×1000	
7	Shot blasting amount	kg/min	4×240	4×240	4×240	6×240	6×240	6×300	8×300
8	Initial charge of shot	kg	2000	3000	4000	4500	4500	8000	11000
9	height adjustment of the rotary brush(scrape r)	mm		200	350	450	600	850	900
10	Ventilation volume	m3/h	8500	17560	19000	19550	27758	28050	38000
11	Machine size	mm	25017×4500 ×9015	12180×4250 ×7095	15200×5370 ×6797	30650×6850 ×9095	31200×8070 ×7500	44042×6385 ×7758	45000×7830 ×11117
12	pit	mm	800	1616	2257	2800	2353	2800	4317
13	Total power (not include the dust removal)	kw	78.3	78.3	113.5	156.6	224.55	204.8	293.6
14	Machine weight	t	20	20.4	33	41	53.2	71.8	75