SRPC

Positive Pressure Conveying

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Version：Ver. A (English)

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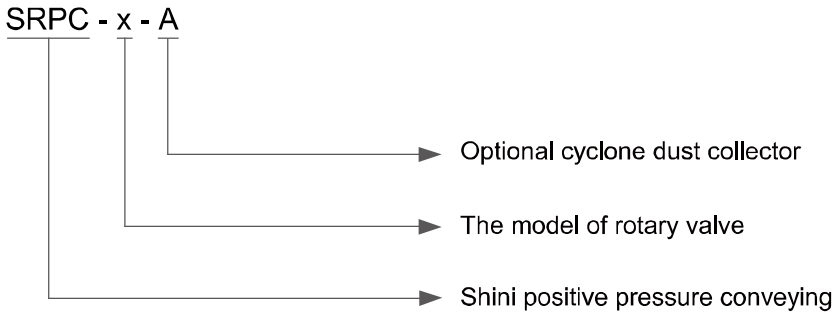
1. General Description

Please read this manual carefully before installation and using of the machine to prevent damage or personal injuries.

The positive pressure conveying device is utilized positive pressure to convey and discharge the granules (not suitable for glass fiber materials) with good flowability in the factory. It features a simple structure, high conveying ability, and long conveying distance; and is widely used in plastic granules and other industries.

Picture 1-1：Positive Pressure Conveying SRPC-4

1.1 Coding Principle



1.2 Features

- Adopt positive pressure powered air, fast conveying speed and long conveying distance.
- Equipped with the storage box that makes manual feeding available, which also can work with the Auto Loader of Big Bag;
- Large conveying capacity; Compared with negative pressure suction, positive pressure conveying of the materials can work continuously, and there’s no discharging and suction and waiting for the suction process. Meanwhile, the conveying capacity can reach several times the power of the same blower.

All service work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both handling and servicing. Chapter 6, which contains service instructions intended for service engineers. Other chapters contain instructions for the daily operator.

Any modifications of the machine must be approved by SHINI in order to avoid personal injury and damage to machine. We shall not be liable for any damage caused by unauthorized change of the machine.

Our company provides excellent after-sales service. Should you have any problem during using the machine, please contact the company or the local vendor.

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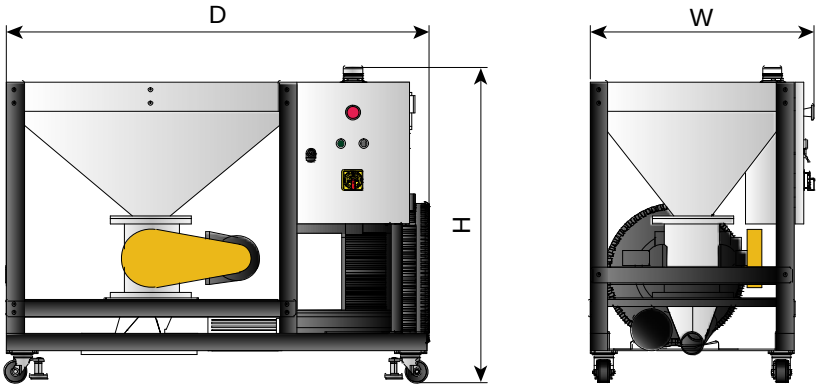
1.3 Machine Specifications

1.3.1 Outline Drawing



Picture 1-2：Outline Drawing

1.3.2 Specification List

Table 1-1：Specification List

Model	SRPC-2	SRPC-4
Machine Power（KW）	3.75	7.5
Rotary Valve Power (KW)	0.55	0.55
Rotary Valve Discharge Amount (KG/Hr)	2000	4200
Acceleration Chamber Pipe Diameter (MM)	50.8	76.2
H(MM)	935	1088
D(MM)	1250	1465.5
W(MM)	680	776
Weight（KG）	250	320

Notes：1) We reserve the right to change specifications without prior notice.
2) Machine power：3Φ，400V，50Hz

1.3.3 Machine Performance Table

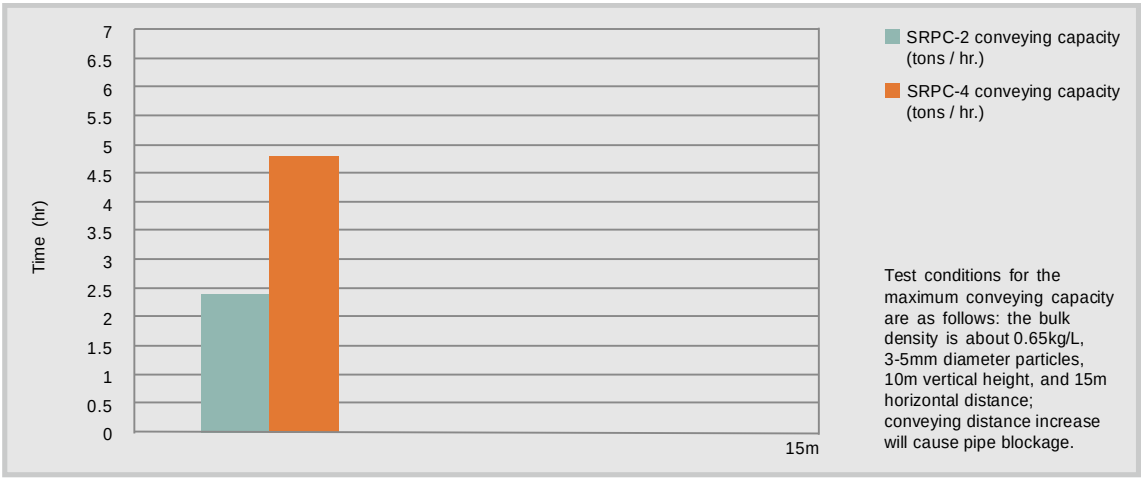


Table 1-3：Machine Performance

1.4 Safety Regulations

1.4.1 Safety Signs and Labels

Strictly abide by the following safety guide to prevent damage of the machine or personal injuries.

Do observe following safety rules when operating this machine.

All the electrical components should be installed by qualified electricians.

Turn off the main switch and control switch during maintenance or repair.

Warning!

High voltage!

This sign is attached on the cover of control box!

Warning!

Be careful!

Be more careful at the place where this sign appears!

Attention!

All the screws for installing electrical components in the control box are locked, which is no need of regular inspection!

1.3.2 Label Description

	1. Please clean the air filter regularly to avoid blocking, which affects the conveying capacity and reduce machine service life. 2. Please clean the filter carefully as it is the consumable, which is not included in the machine's warranty period.

1.5 Exemption Clause

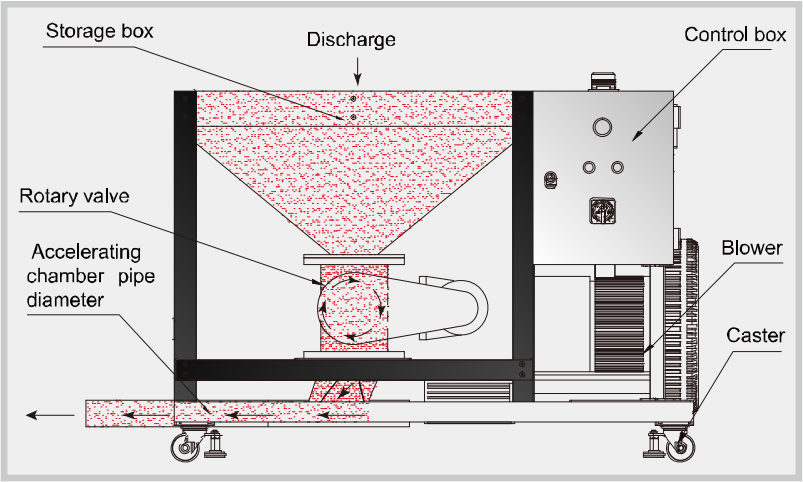
The following statements clarify the responsibilities and regulations born by any buyer or user who purchases products and accessories from Shini (including employees and agents).

Shini is exempted from liability for any costs, fees, claims and losses caused by reasons below:

1. Any careless or man-made installations, operation and maintenances upon machines without referring to the Manual prior to machine using.
2. Any incidents beyond human reasonable controls, which include man-made vicious or deliberate damages or abnormal power, and machine faults caused by irresistible natural disasters including fire, flood, storm and earthquake.
3. Any operational actions that are not authorized by Shini upon machine, including adding or replacing accessories, dismantling, delivering or repairing.
4. Employing consumables or oil media that are not appointed by Shini.

2. Structure Characteristics and Working Principle

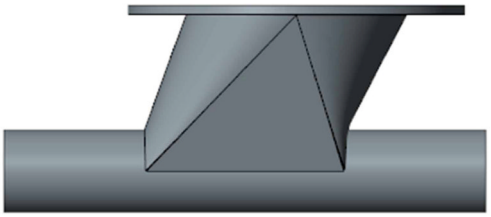
2.1 Working Principle



Picture 2-1：Working Principle

When the SRPC positive-pressure conveying starts, the blower will open directly, and the rotary valve will have a certain delay. After the delay, the valve will rotate, and the materials will discharge into the rotary valve from the storage box. Then, the materials will flow the lower accelerating chamber, and be blown away by the positive pressure air via the pipe. When the machine stops, the rotary valve will stop first without discharging. The blower will set delay closing to clear the materials accumulated in the pipe, and then stop.

2.2 Accelerating Chamber



Picture 2-2：Accelerating Chamber

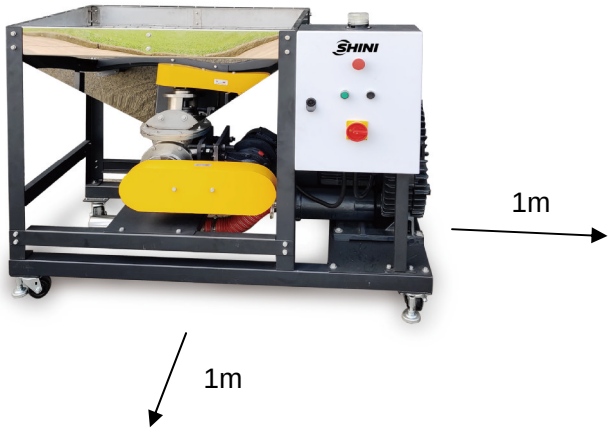
Accelerating Chamber: the upper feed port of the accelerating chamber is large, and there's a forward inclination angle. The lower part is a small pipe, and there is no delay when the material drops.

2.3 Rotary Valve

Picture 2-3：Rotary Valve

When the rotary valve works, the blade will rotate and the material will drop with the rotating blades. The gap between the rotating blade and the valve body is very small, thus forming a sealing effect to ensure the air in the pipe will not spray upward that would hinder the dropping of materials.

3. Installation and Debugging



Notes for Installation and Positioning:

1) Machine just can be mounted in vertical position. Make sure there's no pipe, fixed structure or other objects above the installing location and around the machine which may block machine's installation, hit objects or injure human person.
2) For easy maintenance, it's suggested to leave 1m space around the machine.
3) Machine should be placed on water-level surface. If it needs to be mounted on a higher surface (e.g. the scaffold or the interlayer), should ensure its structure and size could bear the weight and size of the machine.

3.1 Power Connection

1) Make sure the voltage and frequency of the power source comply with those indicated on the manufacturer nameplate that attached to the machine.
2) Power cable and earth connection should conform to your local regulations.
3) Use independent electrical wires and power switch. Diameter of electrical wire should not be less than those used in the control box.
4) The power cable connection terminals should be tightened securely.
5) The machine requires 3-phase 3-wire power source, connect the power lead (L1, L2， L3) to the live wires, and the earth (PE) to the ground.
6) Power supply requirements:

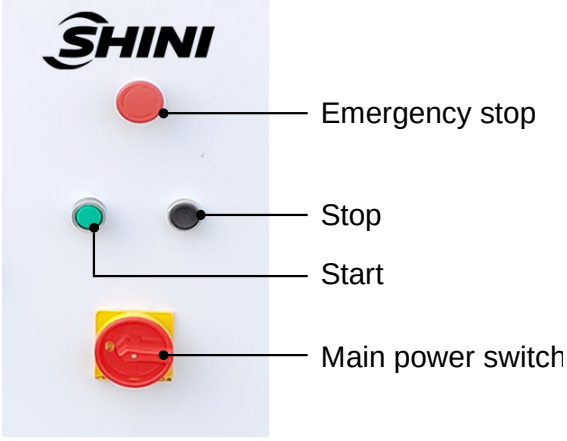
Main power voltage: +/- 5%

Main power frequency: +/- 2%

7) Please refer to electrical drawing of each model to get the detailed power supply specifications.

4. Application and Operation

4.1 Control Panel



Picture 4-1：Control Panel

Main power switch

The main power switch is installed on the front panel, and the power on/off is controlled by rotating the main power switch.

Stop/start button

Machine stop/start is controlled by the stop button and the start button.

Emergency stop button

When emergency stop is necessary in case of accident or other conditions, it can press the emergency stop button.

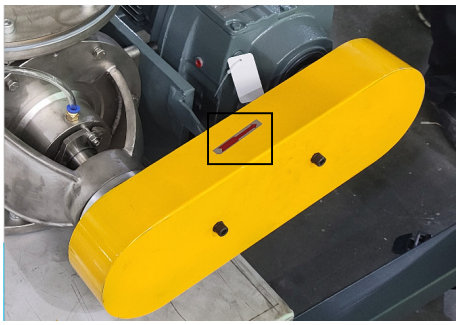
4.2 Alarm Light Status

Table 4-1：Alarm Light Instruction

No.	Items	Instruction
1	Yel. light	Standby status（It means the machine is powered on, please be noted!）
2	Gre. light	Running status（It means the machine starts, and is running.）
3	Red light	Alarm status (It means that the machine has fault alarm. For specific fault information, please refer to corresponding alarm text or code. Notes: Some models have mute function, and click the mute button on the controller screen. At this time, only red light of the machine is on. After clicking the mute button again, the machine will resume the buzzer output.)
4	Buzzer	

4.3 Notices for Using

1) After the machine startup, observe whether the chain direction of the rotary valve is the same as the label arrow on the shield. If it is different, replace the sequence of any two live wires of the power cables.



Picture 4-2：Rotary Valve Shield

2) The rotary valve is common anti-jamming discharge valve, so the material conveying is only applicable to conveying circular small particles, which can't be used to convey powders or flakes, so as to prevent the rotary valve from jamming.
3) During operation, observe the material discharging in the storage hopper, and press the emergency stop button when it is found the discharging is slow or without discharging. The blower and rotary valve will stop running immediately, and empty the materials. Then, check whether the rotary valve is stuck or the conveying pipeline is blocked.
4) If the rotary valve is stuck, please check whether there are impurities in the materials or it also conveys other materials besides the circular small particles.
5) If the conveying pipe is blocked, please check whether the conveying distance is too long, the conveying height exceeds the standard (see Pic. 1-2 for details), or the corner elbow is too small, etc., resulting in materials can't be transported to the specified position. If it exceeds the standard distance, it's necessary to increase the blower's power.

5. Maintenance Schedule

5.1.1 About the Machine

Model: _____ No.: _____ Manufacturing date: _____

Voltage: ____ Φ _____V Frequency: _____ Hz Total power: _____ kW

5.1.2 Check after Installation

☐Check that the feeding pipe is properly connected.
☐Check whether the feeding pipe is connected tightly.
☐Check whether the mounting plate is fixed properly.

Electrical Installation

☐Voltage: _____ V _____ Hz

☐Fuse melt current: 1 Phase _____ A 3 Phase _____ A

☐ Check the power phase sequence

5.1.3 Daily Checking

☐Check the main power
☐Check the filter screen
☐Check the motor running status

5.1.4 Weekly Checking

☐Check if there’re damaged electrical wires.
☐Check whether the electrical components are loose
☐Check whether the flange screws of the feeding pipe are loose

5.1.5 Monthly Checking

☐Check if there’s damaged stainless steel mesh.