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WARRANTY

All PPE machinery is warranted to be free of defective material and workmanship for a minimum period of 1 YEAR from date of sale. Some machinery components may carry longer warranties per our suppliers policies which are passed on to our customers (i.e. our drier compressors, conveyor motors, etc.).

KNOW YOUR WARNING SIGNS AND SYMBOLS!

This instruction manual uses the following signal words Caution and/or Danger and symbols to call attention to the degree or level of possible hazard seriousness.

- 1. **CAUTION:** A warning to indicate a potentially hazardous situation which, if ignored, may result in personal injury or threat of health. Also used to alert against unsafe practices which could cause property damage or accidents. See label B.
- 2. **WARNING:** Warns of a potentially hazardous situation which, if not avoided , could result in serious injury. Warning signs are a yellow triangle with a black border and black symbols. See Label A.
- 3. **DANGER:** Indicates an imminently hazardous situation which, if not avoided, may result in serious injury or death. This signal word is limited to the most extreme situations. Always follow the warnings or instructions that accompany the danger label, such as: High Voltage, Acid, Hot Surface, etc, etc, etc. See Label C.
- 4. **SYMBOL/PICTORIAL:** Conveys a message without words. See labels A & B.
- 5. **SAFETY ALERT SYMBOL** (an exclamation point inside a triangle): Is a general warning and indicates a potential personal injury hazard. Follow instructions and read labels and/or product information. See Label A.



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INTRODUCTION AND GENERAL INFORMATION TAL-15, TAL-3U-E, TAL-6U & TAL-12U

RECEIVING

Please thoroughly inspect your PPE TAL Series Vacuum Hopper Loader and report any damage to the motor freight carrier before uncrating for setup. They are responsible for any damage incurred during transit. Make note of model and serial numbers. These numbers must be used when ordering parts or accessories from PPE.

Before installation of this equipment the user must carefully read the Use and Operating Instructions to avoid damage to the machine and most important to avoid personal injuries. The TAL Series Vacuum Hopper Loaders are designed to convey virgin plastic bead materials via a vacuum motor which is self-contained and does not require outside air pressure except for the filter cleaning blow-off system. A few of our many other features include our latest Euro-Style designs, stainless steel hoppers to avoid material contamination with high surface polish, noise reducing motor covers, air filter blow-off system and most important, a remote control pad with a 6 foot line cord for extra operator safety while making settings and adjustments.

CHARACTERISTICS OF TAL SERIES VACUUM LOADERS

- A. All models TAL-15U, TAL-3U-E, TAL-6U and TAL-12U utilize a vacuum type carbon brush high speed motor for maximum power in a compact design.
- B. The models TAL-15U, TAL-6U and TAL-12U hoppers use a bottom hinged dump valve and a magnetic sensor switch for dependable long life. The dump valve must swing freely to empty the material. The model TAL-3U-E features a material sight glass and proximity level control switch for those that wish to view material flow. It also requires a smaller 1-9/16" dia. hole in your hopper lid.
- C. Loader mounting bases have multiple mounting holes to aid installation. See diagram.
- D. The filter auto-clean function can be set with the program pendant. The filter must be kept clean for maximum suction. Keep the filter clean!!
- E. The vacuum motors are equipped for a soft start function set with the control pendant.
- F. All electrical components are enclosed within the control box for user safety and security.

All electrical work of any kind, if necessary, must be done by a licensed professional electrician. All power sources and the unit power switch must be turned off before any maintenance can be performed.





CAUTION NOTICE:

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. The Trouble Shooting section contains service instructions intended for service engineers. Other sections contain instructions for the daily operator.

MODIFICATIONS:

WARNING! Do not modify this machine in any way. Modifications of any kind not only void any warranty, but it can cause serious injury or damage to personnel or equipment.

INSTALLATION:

The PPE TAL Series Vacuum Hopper Loader must be mounted on a flat horizontal surface. It must be fastened to the cover of the material feed hopper or your barrel feed throat to avoid tipping over. Precautions must be taken to prohibit the fasteners from loosening and falling into the feed throat (i.e.: nylok nuts, lok-tite, etc.). The unit must be mounted so that the discharge counterweight dump valve swings freely without hitting anything. The counterweight has been adjusted at the factory and should not require any readjustments. The feed probe is secured to the feed hose with the supplied hose clamps. The other end of the hose is connected to the inlet tube located on the loader unit. A ground wire must be installed inside the feed hose to make a good connection between the feed probe and the loader unit. We suggest you use 18GA wire and strip 1-1/2" at each end and pinch the stripped ends between the feed hose and the mounting tubes it slides over. Failure to connect the ground wire can cause excessive static buildup and can result in possible static shock to personnel or damage the unit. When the TAL Series Vacuum Hopper Loader is in operation the feed hose should not have any sags or goose-necks, like the trap under a sink. If the hose sags, when the unit shuts off the material in the hose will fall to the bottom of the sag and can plug the feed hose and restrict suction. When inserting the feed probe into your material gaylord, do not jam the probe in! Insert the probe gently until it is about 1/4 to 1/3 submersed. When the unit is turned on, the probe will pull itself toward the bottom of the gaylord. Check this after a few cycles.



All PPE Vacuum Hopper Loaders are supplied with a vacuum hose that contains a ground wire to help control static electricity for user safety. We also recommend you install an extra static ground wire on your TAL Series Vacuum Hopper Loader unit. The ground wire should be run **INSIDE** your feed tube and connect the probe to the hopper loader frame. This will help to dissipate the static charge generated by some plastics as they are conveyed up the tube. You can use a standard 18 gauge electrical wire, strip the ends about 1-1/2" and pinch them between the plastic feed hose and the metal tubes that it mounts over, then clamp it securely with the supplied hose clamps.





ELECTRICAL

The PPE TAL Series Vacuum Hopper Loader comes wired for 120/60/1 power. Always use a **grounded** 120 volt outlet. If you must use an extension cord, ensure that the extension cord's rating is of the proper size. Failure to do so could cause a low voltage condition and premature failure of the motor. Be sure the control box power switch is off before you power up!

SETTING THE UNIT

After the unit has been installed and grounded, plug in the power cord. Next move the power switch to the "ON" position. The lights should flash and the unit should begin to cycle. See programming instructions. The green power light will remain on.

For optimum performance the unit should run just long enough to fill itself. A full unit is indicated by a higher pitched motor sound because it cannot accept more material. Run several cycles and decrease the "CONVEY" time slightly each cycle until the motor shuts off at approximately the same time it is full. If the unit is allowed to run after it is full, performance will decrease or you may burn out the motor! The load time can be adjusted from 0 to 99 seconds (Note: these are approximate times and may vary by a few seconds). In general, longer load times will be needed for: longer distances, heavier materials, and increased amounts of regrind. Do not use with powder materials.

Your PPE TAL Series Vacuum Hopper Loader was designed to operate on the **ON DEMAND** principal. In the event there is a shortage of material the red Material Shortage light will begin flashing and an alarm buzzer will sound. When your machine material hopper is full the unit will sense this because the loader dump valve will remain held open by the presence of your material. As long as the dump valve remains open the unit will not cycle. As the machine hopper material level lowers, the dump valve will freely swing closed and the loader will begin to cycle again.





PROGRAMMING INSTRUCTIONS





Control Pendant

OPERATING INSTRUCTIONS

Be sure power switch is in the off position before you plug it into a 120 volt receptical. When unit is energized it will be in standby mode. To start Hopper loader Press the run/set button. The hopper loader must fill the hopper in 3 cycles Or the alarm will be activated.

PROGRAMMING

Loading Time: Press & hold the down button (momentarily) until the number flashes, then set the loading time 0-99 seconds.

Off Time: Press and hold the run/set button until "TO" appears on the screen, then hit the down/up button to adjust the time the hopper loader is off, then set the off time to 0-99 seconds.

Air Blow Off time: Press and hold the run/set button until "TO" appears on the screen, then press the run/ set button again until "HT" appears on the screen. This is for the amount of time the air blast will stay on to clean the filter, set the air blow off time to 0-99 seconds using the down/up arrows.

To set the number of cycles in between air blow off, press & hold the run/set Button until "TO" appears on the screen, then press the run/set button twice to get "CO" to appear on the screen. Press the down/ up arrows to set the number of cycles in between air blow offs.

No Material Alarm: Press and hold the run/set button until "TO" appears on the screen, then press the run/ set button 3 times to show "CI" on the screen. Then press the up/down button to show either 0, 1 or 2. "0" shuts this alarm Off, "1" will activate the alarm after the hopper loader does not load material the first time. "2" will activate the alarm after the hopper loader does not load material after 2 cycles.





MAINTENANCE

The PPE TAL Series Vacuum Hopper Loader is a filtered unit. There is a diaphragm type filter located between the top and bottom halves of the loader housing. This filter should be checked weekly. The automatic air blow-off system should help keep the filter clean, but checking is required to make sure there are no tears or holes. The Air Blow-Off requires a 8mm dia. air hose. Extra filters are available from PPE.

WARNING: The brushes should be changed BEFORE the brush stunt touches the commutator. On reassembly and handling, the lead wires must be kept away from rotating parts and motor frame.

To achieve best performance, the new brushes should be seated on the commutator before full rated voltage is applied. After brush change, apply 50% to 75% of rated voltage for thirty minutes to accomplish this seating. The motor will return to full performance after thirty to forty-five minutes of running at full rated voltage. CAUTION: The motor must not be run with the material vacuum suction line air inlet blocked or sealed off. Check your material probe for blockage. DIRECT APPLICATION OF FULL RATED VOLTAGE AFTER CHANGING BRUSHES MAY CAUSE ARCING, COMMUTATOR PITTING, AND REDUCED OVERALL LIFE. If reduced voltage is unavailable, connecting two motors of similar rating in series for thirty minutes will accomplish the brush seating.

MODEL	TAL-15U	TAL-3U-E	TAL-6U	TAL-12U	
Motor Type	Carbon Brush	Carbon Brush	Carbon Brush	Carbon Brush	
Motor Power	0.412 kW / .55 H.P.	0.412 kW / .55 H.P.	1.15 kW / 1.5 H.P.	1.15 kW / 1.5 H.P.	
Pipe Diameter	1-1/2"	1-1/2"	1-1/2"	1-1/2"	
* Conveying Capacity	450 lbs / hr	450 lbs / hr	660 lbs / hr	900 lbs / hr	
Hopper Volume	2 lbs	4-1/2 lbs	8-1/2 lbs	17 lbs	
Sight Glass	n/a	4-1/4 or 16 oz.	n/a	n/a	
Power Supply	110V / 50Hz / 1	110V / 50Hz / 1	110V / 50Hz / 1	110V / 50Hz / 1	
★ Filter Automatic Blow-Off	Standard	Standard	Standard	Standard	
Discharge Hole Req'd.	6-1/4" dia.	1-1/2" dia.	8-1/4" dia.	8-1/4" dia.	
Height	20"	25-1/2"	23"	25-1/2"	
Width	10"	10"	12"	15"	
Depth	15"	14"	18"	21"	
Weight	22 lbs	24 lbs	26 lbs	31 lbs	

MACHINE SPECIFICATION TABLE

* Conveying capacity tested @ 13 ft. vertical & 3 ft. horizontal.

★ Filter Blow-Off Air Pressure required 56 to 85 P.S.I.





TROUBLE SHOOTING

TROUBLE SHOOTING	POSSIBLE REASON	EXCLUSION METHOD	
Motor does not work for a long period after the material is discharged.	1.) Motor fault or electromagnetic switch fault.	1.) Repair or replacement.	
	2.) Magnetic reed switch or proximity sensor.	2.) Adjust or replace.	
	3.) Signal line broken	3.) Reconnect signal wire.	
Loader for several times in a row tries to suck the material or the material shortage alarm occurs.	1.) Raw materials have been used up.	1.) To add raw materials.	
	2.) Air pipe leakage.	2.) Lock or replace the air duct.	
	3.) Filter plugged.	3.) Clean filter.	
Motor does not operate.	The motor is burned out.	Check replacement.	
After starting it blows the fuse.	Short circuit somewhere.	Check the line.	
Motor keeps running after hopper is fully loaded.	1.) Circuit board fault.	Repair or replace.	
	2.) Solenoid valve switch contact.		
	3.) Sensor switch bad.		

BASE MOUNTING DIMENSIONS







