



# IMS SERIES

## COMPRESSED AIR LOADER

### Model DAC-1 and DAC-2

Item #143637 / Item #159655

## INSTRUCTION MANUAL



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## **DESCRIPTION & FEATURES**

The IMS Series DAC Loader is a compressed air loader powered by your facility's compressed air system. It is capable of handling most materials, whether in virgin or regrind form. It is designed to transfer material from gaylords, storage bags or hoppers to material drying hoppers or mold press feed throats. With an adequate source of compressed air, the loader is capable of moving material a distance of 15 feet at a rate of 125 lbs/hr.

Each loader package includes:

- Line Vac™ accelerator
- Two different length material wands
- Stainless steel receiver with level sensor and filter
- Feed throat or hopper mounting adapter depending on model
- Material hose
- Air line
- Electric control assembly with a regulator and mounting bracket.

Please see Assembly Drawing on page 11 for further descriptions.

The loader controls are available in either 110 or 220 volt configurations. (110V is standard / 220V is a special order)

## **INSTALLATION PROCEDURE**

Prior to installing the loader, make sure that all the components listed in the previous section are in the package you received.

If the unit you are installing is a 220 volt model, a connector compatible to your power distribution system will have to be installed on to the power cord connected to the Control Assembly.

If the receiver is to be installed onto a hopper lid without a material retaining ring, the mounting adapter will require an extension that protrudes into the hopper to prevent overfilling of the hopper.

When installing the loader, care must be taken to select a location with a suitable electrical power source that is as close as possible to the “hard piping” of your facility compressed air distribution system. Some hoses, pigtailed and connectors can restrict the airflow, decreasing the efficiency of the loader.

### **MOUNTING CONTROL ASSEMBLY**

## **CONTROL INSTALLATION**

1. Using the mounting bracket supplied with the Control Assembly, mount the assembly at a convenient location near the receiver that is accessible to the operator. It must be within 8 feet of the receiver so the sensor wires can reach and within 6 feet of the electrical power source.
2. Connect the material conveying hose (1-1/4”) to the receiver and tighten the clamp.
3. Connect the Line-vac assembly to the other end of the hose and tighten the clamp. The material hose must be connected to the “FLOW” port side of the Line-vac. An arrow on the Line-vac indicates this port. The Line-vac assembly includes a wand or tube for pickup from out take-off-box or material supply such as a bag or gaylord.

4. Connect the black compressed air hose from the control box assembly to the Line-vac. No tools are required, just push the hose into the fittings. Pull tubing to ensure it is secured.
5. Plug the sensor wire from the receiver into the control box. Twist the plug after insertion to lock it into place.
6. To connect the shop compressed air to the regulator on the control assembly, thread an appropriate quick disconnect nipple to the inlet port on the regulator. The supply air must be at least 90 psi using a 1/4" airline.

## **RECEIVER INSTALLATION**

### **MOUNTING RECEIVER**

1. Depending on which model DAC loader you purchased, it will either come with a 6" x 6" square bottom flange mounting adapter for mounting on the throat of the molding press (DAC-1) or a 4" x 4" square bottom flange mounting adapter with (4) 1/4" ID bolt holes for mounting on a material hopper (DAC-2).
2. If you have Model DAC-1, you will need to drill the 6" x 6" mounting flange to match the pattern on the machine feed throat flange and bolt the mounting flange to the machine.
3. If you have a Model DAC-2, you will need to drill your hopper lid to match the bolt pattern on the 4" x 4" flange. CAUTION: If you are mounting on a drying hopper, be sure that the hopper lid is equipped with a material retaining ring that prevents material from obstructing the hopper's process air outlet port. If one is not present order Flange #84741 from Spare Parts List.
4. Mount the receiver to the adapter by slipping it over the flange stub. Take note that the two O-rings in the mounting throat of the receiver are in place.

### **Material Wand Selection**

Select the wand that fits the application for the loader. (The short takeoff box wand is designed to facilitate transferring material from a hopper, while the long material wand is designed to transfer material from a storage bag or gaylord.) Insert the Line-vac assembly into the wand and press until it fits snugly.

The unit is now ready for operation.

## OPERATION

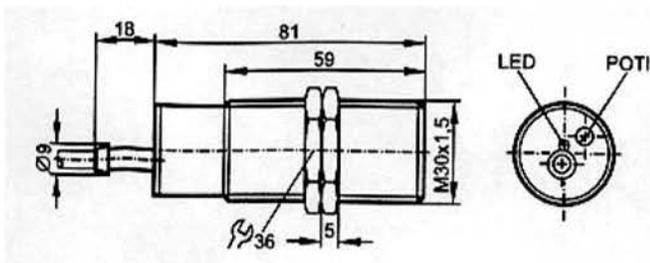
Material is conveyed using the facility compressed air that is accelerated by the Line-vac. The Line-vac creates a vacuum at the tip of the wand to pull material into the hose and amplifies the air volume entering the material hose to convey the material to the receiver. The rate of material transfer can be adjusted by regulating the air pressure. The higher the pressure setting on the regulator, the more material that will be conveyed. Air pressure can be adjusted by using the regulator on the Control Assembly.

### Air Pressure Adjustment

Adjust the air pressure using the regulator on the control assembly. Pull the adjustment knob up and turn the knob until the material conveys at a proper rate. Too low a pressure will result in not moving the material to the receiver or too long a fill time. If the pressure is too high, the material will not drop properly into the receiver. When the proper pressure is achieved, push the knob down until you hear a click. This locks the knob at its current setting.

The loader will transfer material to the receiver until the level sensor on the receiver is satisfied. The sensor signal will shut off the air supply and conveying stops. The level sensor is factory adjusted, but due to some operational conditions further adjustments may be necessary. If the level sensor is out of adjustment, follow the procedures detailed in the next section.

### Level Sensor Adjustment



The sensor is adjusted at the factory for most materials. If the unit does not load material and the sensor light is not lit, turn the adjustment screw on the back of the sensor counterclockwise until the light is lit. If the loader does not stop loading with material in front of the sensor, turn the adjustment screw (POT1) clockwise until the light goes out. The adjustment screw has a 20-turn adjustment with

a slip clutch to prevent damaging the sensor. If the sensor is completely out of adjustment, turn the screw 20 turns counter clockwise to reach a home position. Then turn it clockwise until the light goes out.

## **ROUTINE MAINTENANCE**

The DAC Loader is practically maintenance free. The operator need only perform the following procedures to keep the unit operating efficiently.

### **Receiver Filter**

Due to the dust in materials being transferred, the receiver filter will require a regular cleaning. Simply remove the wing nut holding the filter element to the top of the receiver and pull the filter off. Remove the pre-filter and blow out the filter with compressed air. Perform this at least monthly, sooner if material is very dusty.

### **Line-vac**

Over time, contaminates from the compressed air source and the material being conveyed can plug the Line-vac's small ports in the flow generator, affecting the efficiency of the unit. Cleaning these ports will require the operator to disassemble the Line-vac assembly. Remove the hose and wand from the Line-vac and loosen the 3 button-head cap screws holding the inlet port cap to the body. Separate the cap from the body and remove the o-ring, flow generator and second o-ring. Clean the o-rings with water and wipe dry. Inspect and clean the flow generator ensuring that all the ports are free from obstructions. If oils are present, wipe with a solvent and allow to dry. **CAUTION:** Do not put solvent on o-rings. Reassemble the unit.

**Spare Parts List:**

<b><u>Item #</u></b>	<b><u>Description</u></b>
125622	Line Vac / Eductor / Air Transvector – 1-1/4” OD
163625	Gaylord Wand/Pick-up Probe (32” Long, does not include line vac)
120734	1-1/4” ID OEM Loader Hose
159734	Receiver Filter Element
147555	Control Assembly (Includes Controller, 110V Solenoid, Air Filter Regulator, and Power Cord) 110/115/60/1 VAC
147556	Proximity Switch/Sensor with Cord (Does not include plug)
104179	Proximity Switch/Sensor Plug
163070	Material Sight Glass /Clear Butylate Tube
163626	Hopper Body/Receiver Cone
163627	Upper Hopper Body/Receiver Cyclone
163628	Quick Release Clamp
NONE	Filter Regulator #82995
NONE	Filter Regulator Gauge #82995A
NONE	Solenoid Valve 110VAC #83031
NONE	Solenoid Valve 220VAC #83385
NONE	Proximity Switch Bracket #83955
NONE	Sight Glass Flange Support Rod #83028 (4 Pieces)
NONE	Take Off Box Wand/Pick-Up Probe #83937 (9-1/2” Long)
NONE	Loader Flange (4” Sq) for use with Drying Hoppers without Material Retaining Rings #84741
NONE	Loader Flange (6” Sq) for use with Molding Machine #83668
NONE	Loader Flange (4” Sq) for use with Material Hopper #83926

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