

**maxi  
gravity/stoner**

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**DUST HOOD  
INSTALLATION  
&  
OPERATING  
INSTRUCTIONS**

### **-INTRODUCTION-**

The Dust Hood Operating Instructions contain valuable information regarding the installation and use of Oliver Dust Hoods on **Maxi-Cap Gravities and Stoners**. Please take a few minutes to read these instructions to help eliminate future problems that may arise.

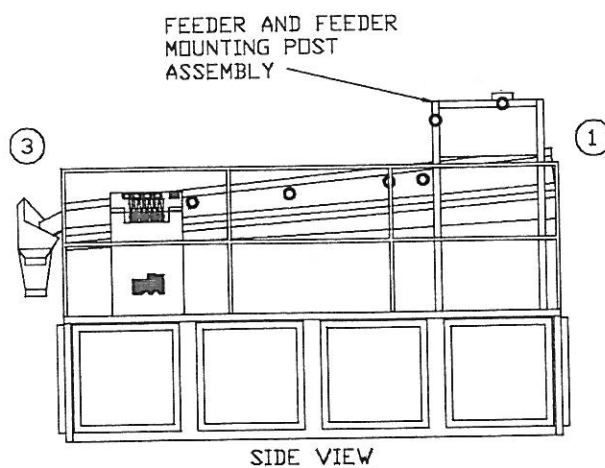
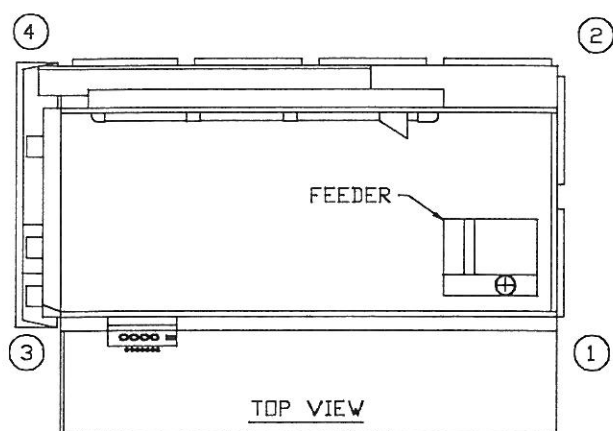
Before installing the dust hood on your machine, be sure you understand fully, the operation of the Maxi Gravity or Stoner. Consult your Operators Manual or call Oliver Mfg. Company at (719) 254-7814.

## MAXI GRAVITY DUST HOOD INSTALLATION INSTRUCTIONS

Oliver Dust Hoods are designed to be installed over existing machines with standard feeders. However, because accurate positioning is required, we suggest the following procedure. for the purpose of indentification we have numbered each corner of the machine as shown below:

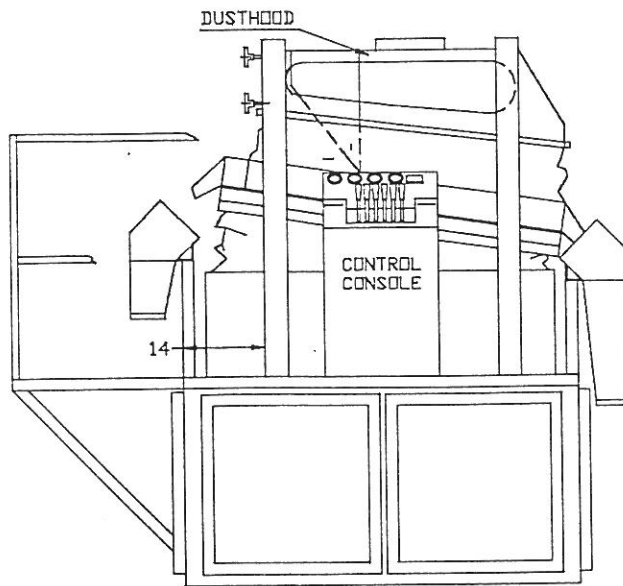
- #1- Feed Corner
- #2- Corner opposite the feeder
- #3- Low Side, Discharge End Corner
- #4- High Side, Discharge End Corner

If you purchased your Maxi Cap Gravity and Dust Hood at the same time, the mounting holes for the Maxi Dust Hood will be pre-drilled at the factory. If the dust hood was purchased at a later date, it will be necessary to drill the mounting holes, using the following drawings and instructions.



### STEP #1

Remove the existing feeder and feeder mounting posts.



SIDE VIEW  
MAXI STONER DUSTHOOD PLACEMENT

This drawing illustrates the proper location of the Dust Hood on the Maxi Stoner. Note that the 14" [355.6] dimension is from the High Side of the machine.

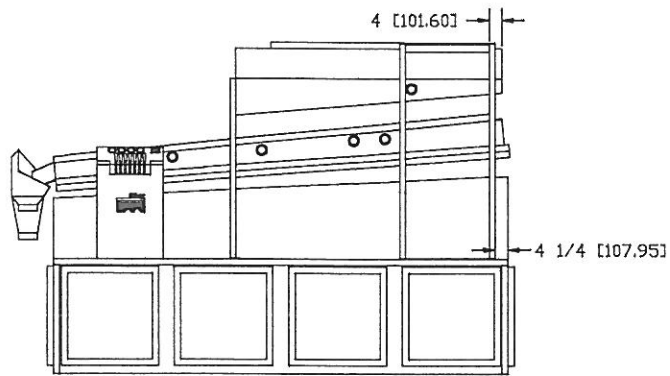
In most cases the Dust Hood will be shipped with the Dust Hood posts installed to the hood. To reduce shipping volume, especially with export orders, the mounting posts will have to be assembled to the dust hoods. The mounting posts have been pre-assembled at the factory. All of the bolting locations have been pre-drilled. The drawing illustrates typical mounting arrangement for the dust hood support posts.

### STEP #2

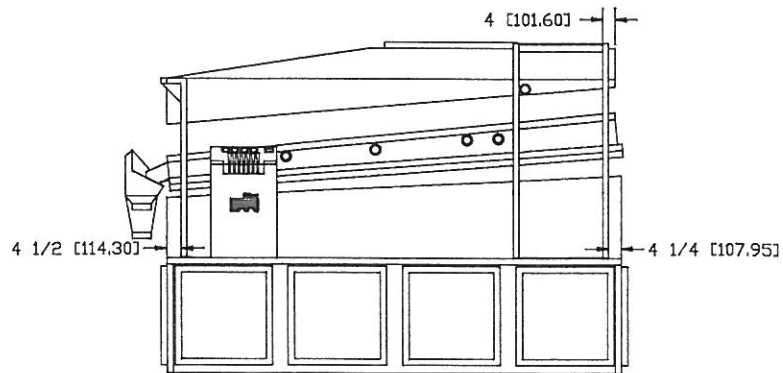
The following drawings illustrate the correct position of the dust hood location to the gravity. The Maxi Dust Hood can be raised up over the machine and positioned as the drawings show.

Check that the mounting posts are square with the machine, then mark the mounting holes from the dust hood post mounting foot pads. Move the hood off the mounting position a few inches, drill out the holes using a  $13/32$ " [9.5mm] drill.

After marking and drilling all of the mounting points on all four corners, move the dust hood assembly back over the drilled holes and mount securely to the gravity separator using  $3/8$ " [9.5mm] diameter bolts.



MAXI MINI HOOD INSTALLATION

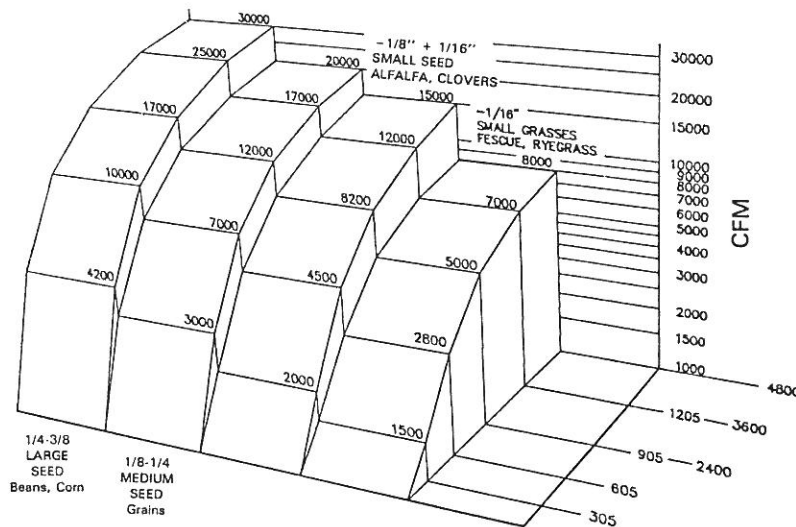


MAXI FULL DUST HOOD LOCATION

## -EXHAUST FAN SELECTION-

Exhaust fan selection for your dust control system is critical. A fan should be chosen that can handle dust, dirt and other small particles, commonly referred to as a material handling fan. **Most importantly, choose the correct size fan.** The chart below shows the CFM (cubic feet of air per minute) requirement for Oliver Maxi Gravities and Stoners on various commodities.

AIR FLOW FOR MAXI-CAPS AND MAXI-STONERS



The fan you choose will have to produce these air requirements **after** ducting and collection losses have been included. Costly mistakes have been made as a result of choosing the incorrect fan. If you have any questions regarding fan and air requirement, call Oliver Mfg. Company.

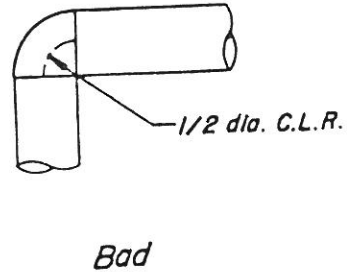
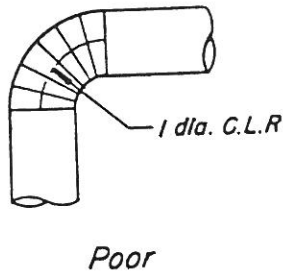
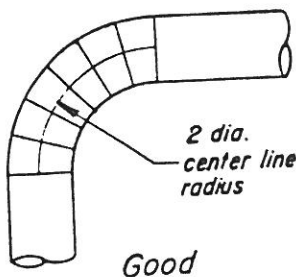
Remember, that if you intend to process a variety of products that your fan will have to produce the air required for all. For example, if you are processing alfalfa seed on a Model 240, 8000 CFM would be required. However, if you should process wheat, then 12,000 CFM will be required.

Dust control and collection can be costly. Processors have chosen too small of an exhaust fan because they were cheaper. A good rule of thumb when considering a dust control system is that it will cost you \$4.00 per CFM required, for a full dust control and collection system, installed in your plant.

# -DUCTING-

The ducting used should be well supported and constructed of materials strong enough to withstand the operating pressures of the equipment. See attached chart for duct construction guidelines. Elbows should be of large sweeping construction and a minimum of 2 diameter radius should be used.

Round Duct Diameter	Galvanized Sheet Thickness			Girth Reinforcing	
	Spiral Lock Seam Duct	Longitudinal Seam Duct	Round Duct Fittings	Angle	Centers
3"-8"	26 ga	24 ga	22 ga	—	—
9"-22"	24 ga	22 ga	20 ga	—	—
23"-36"	22 ga	20 ga	20 ga	—	—
37"-50"	20 ga	20 ga	18 ga	1 1/4"x1 1/4"x 1/8"	72"
51"-60"		18 ga	18 ga	1 1/4"x1 1/4"x 1/8"	72"
61"-84"		16 ga	16 ga	1 1/2"x1 1/2"x 1/8"	48"

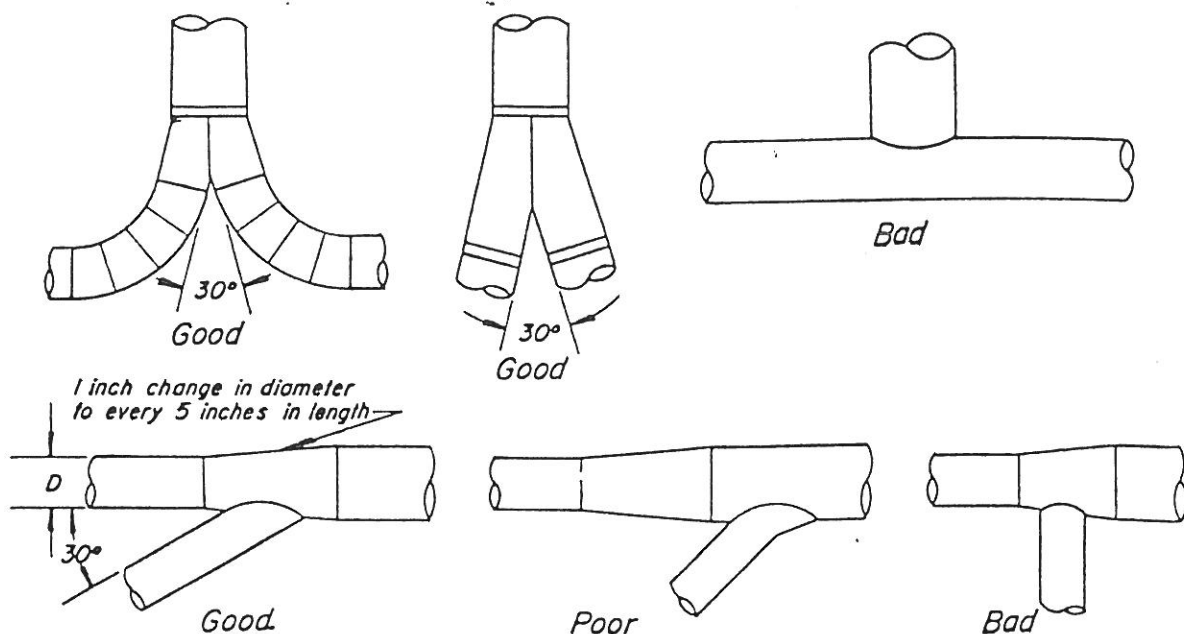


## ELBOW RADIUS

Elbows should be 2 or 2 1/2 diameters centerline radius except where space does not permit.

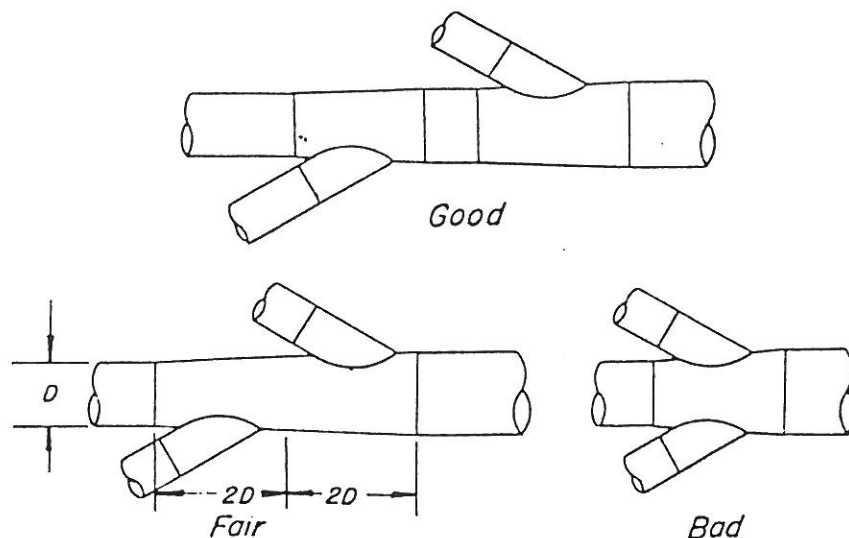
In determining the diameter of the pipe, keep in mind that the diameter should be small enough to maintain a minimum of 3500 FPM (feet per minute) velocity. But large enough to keep the pressure losses at a minimum.

All branches should enter the main carrier pipe in the direction of the air flow and at a slight angle no more than 30 degrees. The following illustrations show examples of various configurations.



### BRANCH ENTRY

Branches should enter at gradual expansions and at an angle of 30° or less (preferred) to 45° if necessary.



BRANCH ENTRY—Branches should not enter directly opposite each other.



### **-DUST HOOD OPERATION-**

The most critical factor in the operation of your gravity separator or stoner equipped with a dust hood, is to balance the air between the machine and exhaust system. The exhaust system should be capable of handling slightly more air than what the machine can produce. In a properly balanced and operating system, there should be a slight negative or suction in the dust hood. There should be no discharge of dirt and dust from between the dust hood and machine.

First of all set the machine for optimum separation. If there are any problems adjusting the machine consult your operators manual. After the machine is operating satisfactory, balance the air system. Start by opening the air gate control on the dust hood. The gate should be opened until there is no air being discharged between the dust hood and machine. After this has been accomplished open the air gate further to create a slight suction or negative air in the dust hood. After balancing the air it may be necessary to readjust the machine.

### **-MAINTENANCE-**

Inspect the feed control and air control rods inside the dust hood periodically for dirt build-up on the threads. Clean threaded control areas will provide for a smooth operation of the air and feed controls.

The ducting in the system should be inspected occasionally for settling of material within the ducting. Also inspect the condition of the ducting for wear and leaks. If the ducting is wearing through, the system layout should be changed to eliminate that excessive wear point. The exhaust fan and collection system should be inspected periodically and per manufacturers suggestions.

A good maintenance program and clean equipment will go a long way to insure a profitable and safe operation.