Installation & Operating Instruction Manual

For

Oliver Dust Hoods

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Oliver
SEPARATION SOLUTION SPECIALISTS SINCE 1930

INTRODUCTION

The Dust Hood Operation Instructions contain valuable information regarding the installation and use of Oliver Dust Hoods on Oliver Separation Equipment. Please take a few minutes to read these instructions to help eliminate future problems that may occur.

Before installing the dust hood on your machine, be sure you understand fully, the operation of the Gravity Separator or Stoner. Consult your Operator's Manual if there are questions,

If you run into any problems not covered in thins manual, please feel free to call the factory (719) 254-7814

OPERATION

The most critical factor in operation your gravity or stoner with the dust hood installed is to balance the air between, what the gravity or stoner is producing and what the exhaust fan is venting. In a properly balanced system there should be a slight suction or negative air in the dust hood. There should be no discharge of dust or dirt between the hood and the machine.

First of all set the machine for optimum separation. If there are any problems setting the machine, consult your Operation's Manual. Balance the air after the machine is operating satisfactory.

To do this, start opening the air gage control on the dust hood. The gate should be opened until there is no air being discharged between the dust hood and the machine. After this has been accomplished open the air gage 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. If the machine requires adjustment, the air system may have to be slightly adjusted also

GRAVITY DUST HOOD
INSTALLATION INSTRUCTIONS

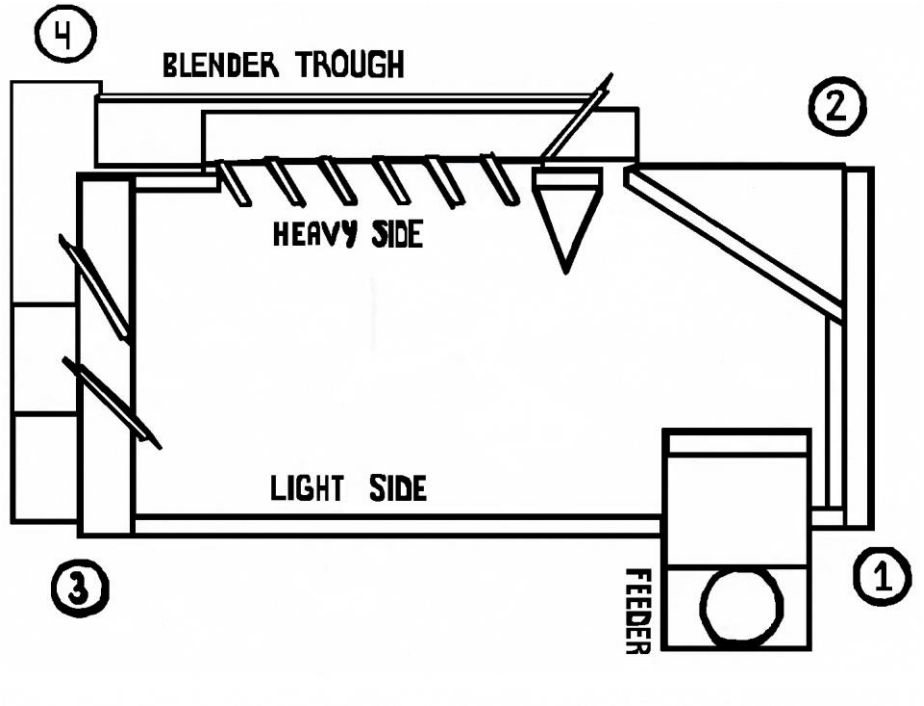
Oliver Dust Hoods are designed to be installed over existing equipment with a minimum of trouble. However, because accurate positioning is required, we suggest the following procedure. For the purpose of identification we have numbered the corners of the machine as follows:

1. The corner closest to the feeder.

2. The corner opposite the feeder on the feed end.

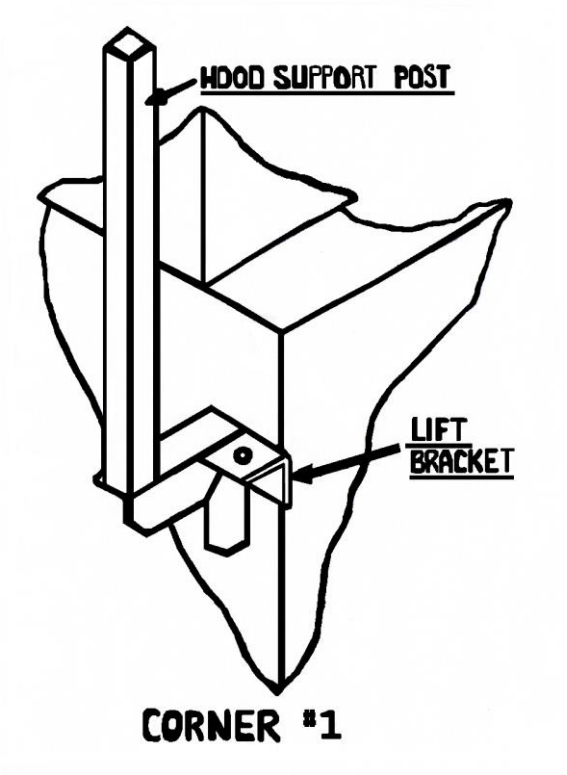
3. The corner of the light side on the discharge end.

4. The corner on the heavy side on the discharge end.



STEP #1

Remove the existing feeder and feeder brackets.

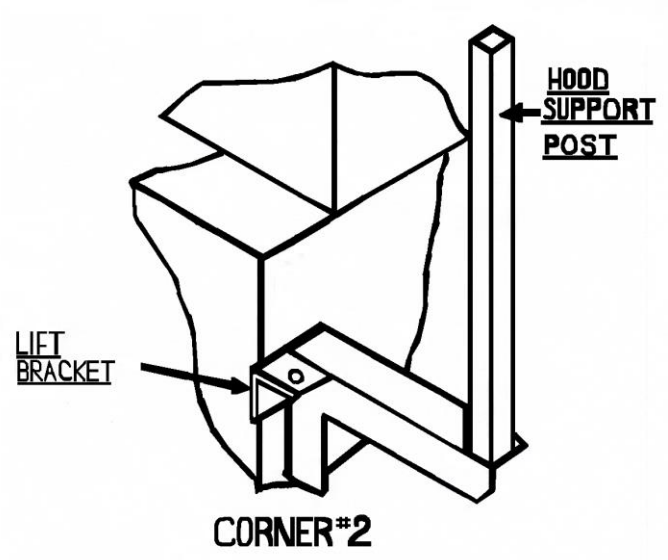


STEP #2

Install a hood support post in the #1 corner of the machine. The support post should be placed next to the lifting bracket and should be installed at the same height as the bracket.

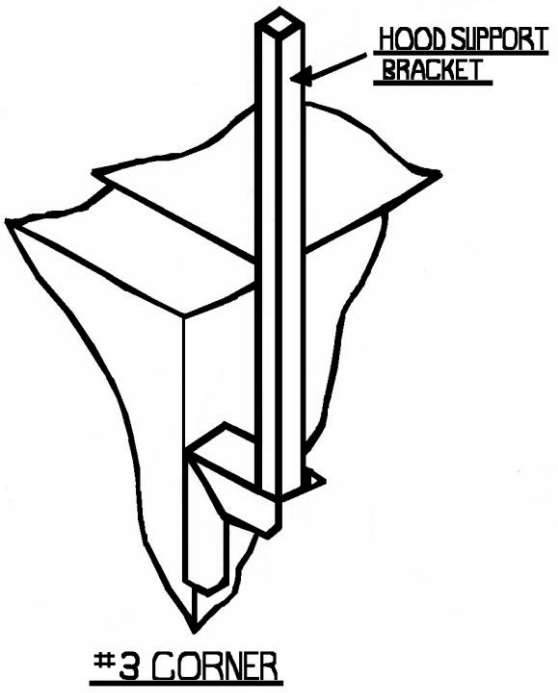
STEP #3

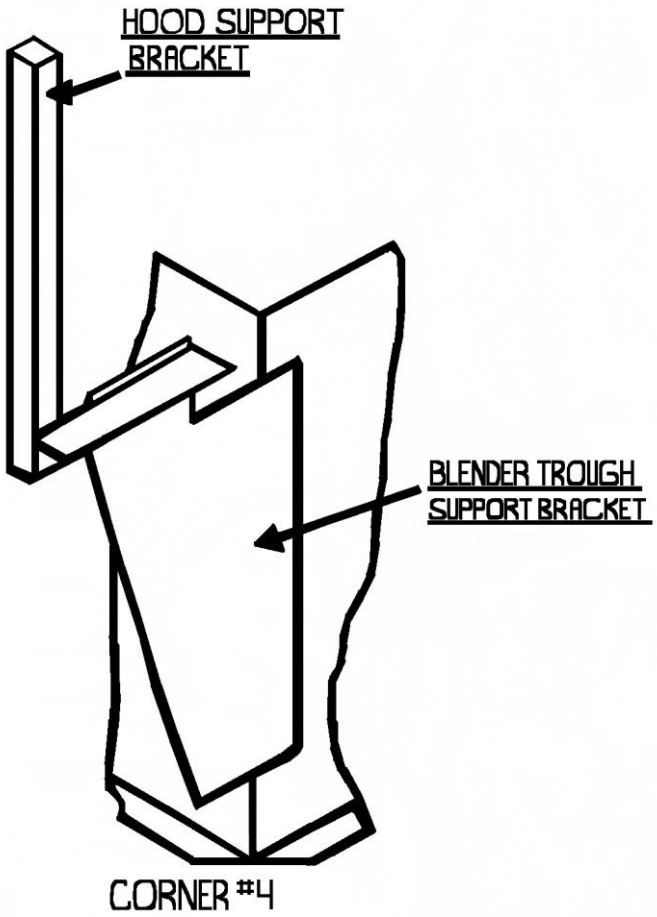
Install a support post (with longest support angle) in corner #2. The support post should be placed next to the lifting bracket and installed at the same height as the lifting bracket.



STEP #4

Remove the lifting bracket from corner #3. Center the top hole of the hood support bracket to the existing hole from the lifting bracket.



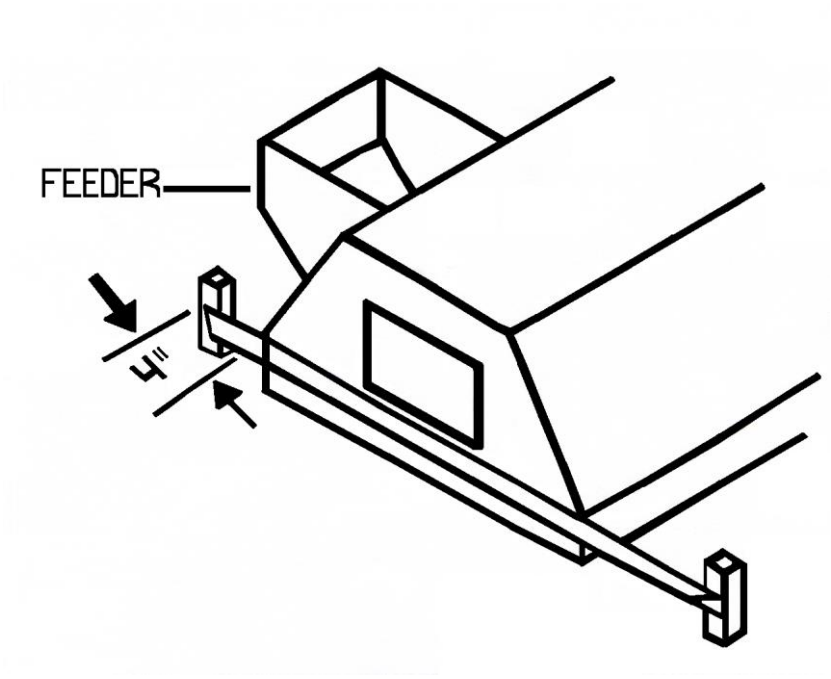


STEP #5

Remove the two 3/8” bolts from the blender trough support bracket (corner #4). Attach the dust hood support bracket with the bolts removed.

STEP #6

Install the support angles on the Dust Hood. Insure that the longest side of the support angles is away from or opposite from the feeder side. Note illustration below.



STEP #7

Set the side tilt control of the gravity to maximum tilt. Set the end raise control to maximum setting. Place the Dust Hood over the gravity and slip the mounting brackets over the support posts. Adjust the Dust Hood so that the highest corner of the deck (#2 corner) clears the metal frame of the Dust Hood by ½" to 1". Then adjust the Dust Hood so that the top of the Dust Hood is level.

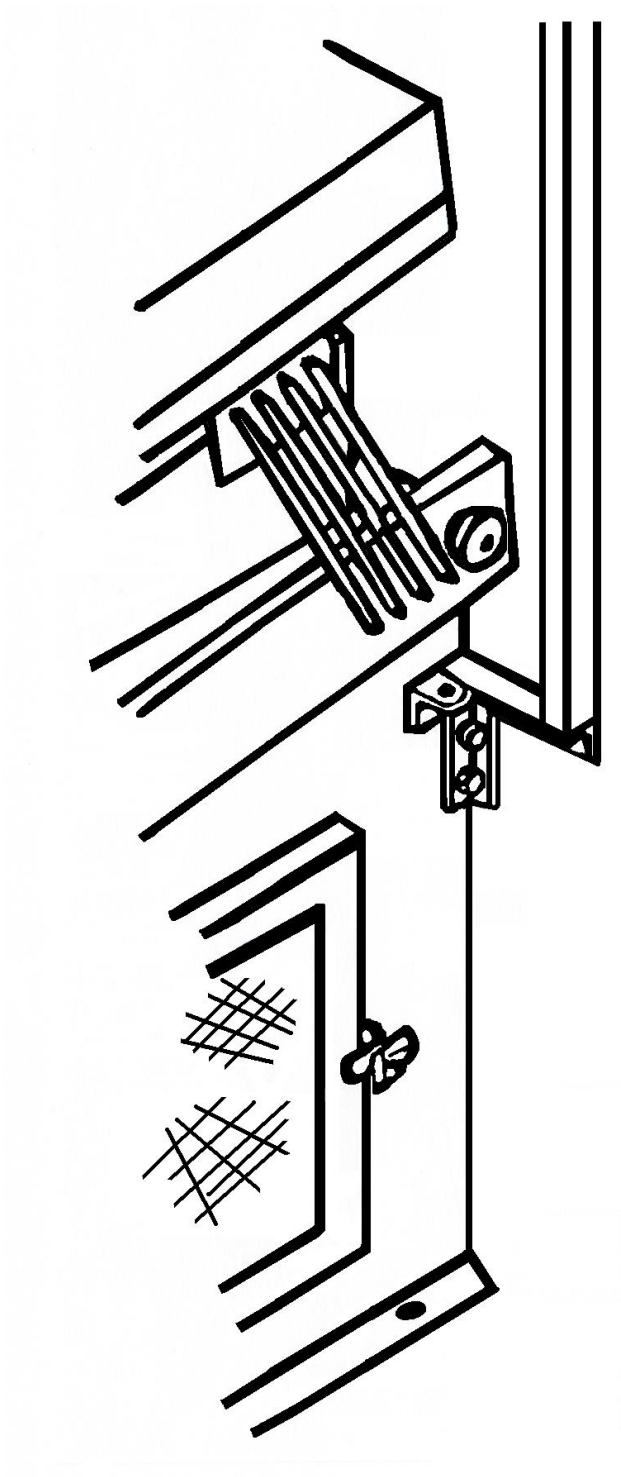
OLIVER STONER DUST HOOD INSTALLATION INSTURCTIONS

If you purchased your Stoner and Dust Hood at the same time, the holes for the Dust Hood mounting brackets will be pre-drilled at the factory. If the Dust Hood was purchased at a later date, it will be necessary to drill the holes to mount the brackets.

The four brackets should be placed at each corner of the Stoner. Place the hood bracket next to the lifting bracket with the top of the hood bracket level with the top of the lifting bracket. Mark and drill the holes with a 3/8" drill bit. Bold the brackets on securely with the bolts supplied.

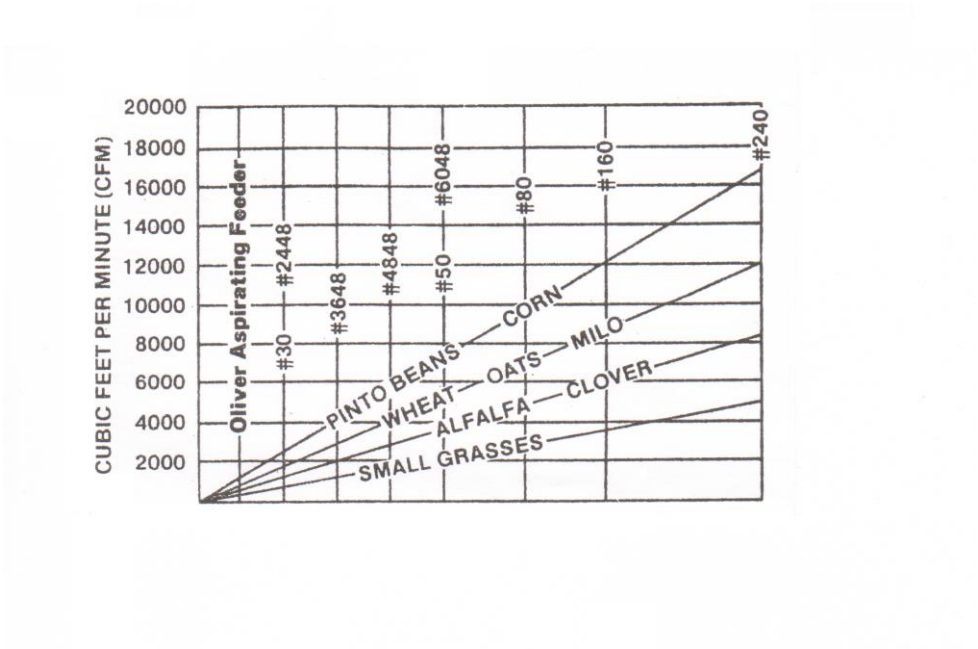
After the brackets are installed, the Dust Hood can be mounted and adjusted to the proper height. Turn the Dust Hood so that the feeder is close to the stone trap portion of the Stoner and the air outlet is closed to the clean product discharge of the Stoner.

Adjust the height of the Dust Hood so that the skirt touches the Stoner deck. Be sure to vary the tilt of the deck from the minimum to maximum to check that the deck will not strike the Dust Hood in any position.



FAN SELECTION

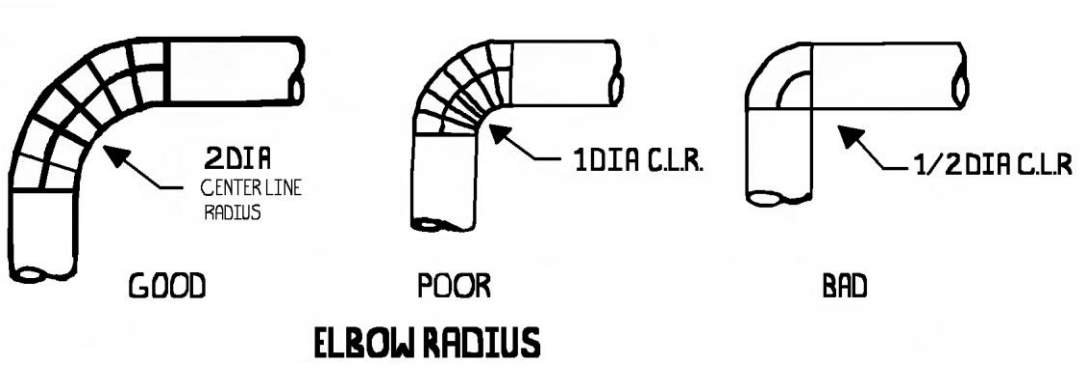
Fan selection for your dust control system is critical. A fan should be chosen that can exhaust dirt and small particles. These are Material Handling Fans. Most importantly, choose the correct size fan. The chart below shows the CFM (cubic feet per minute) requirements for Oliver gravity separators and stoners on various commodities.



The fan you choose will have to produce this CFM at whatever pressure losses you encounter in your particular system. Keep in mind also, that if you intend to condition a variety of products that your fan will have to produce the necessary air requirement for all. For example, if you are conditioning alfalfa seed on a model 240, 8000 CFM would be required. However if you should condition wheat, then 12,000 CFM would be required.

DUCTING

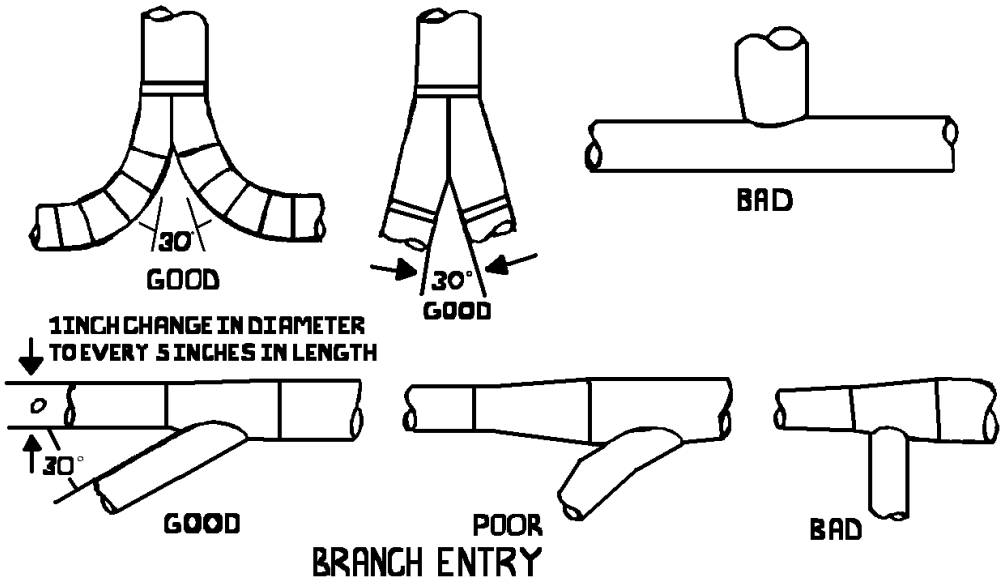
The ducting used should be well supported and constructed of materials strong enough to withstand the operation pressures of the equipment. Elbows should be of large sweeping construction. A minimum 2 Diameter Radius should be used.



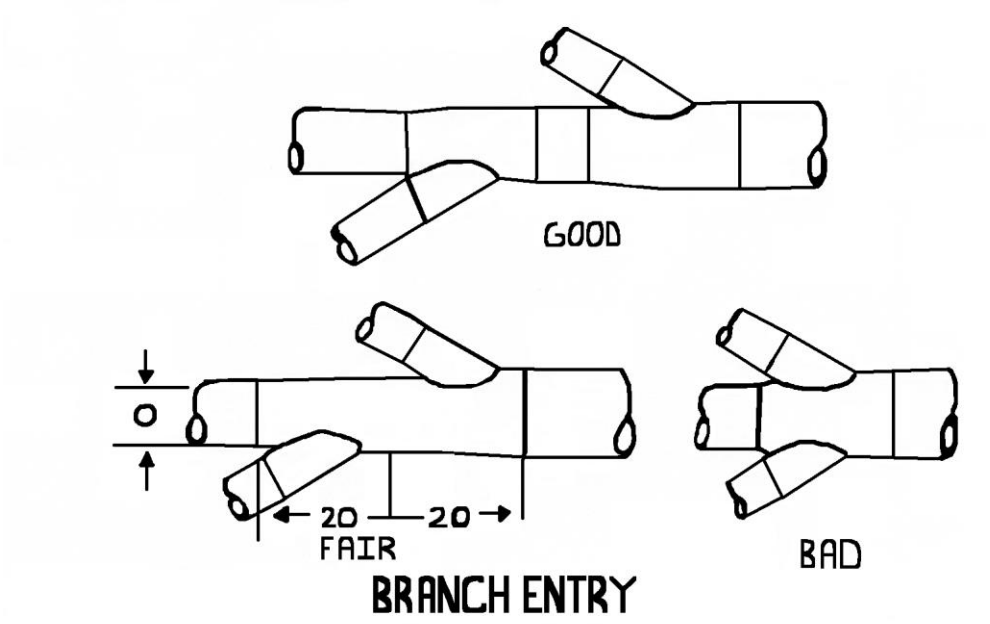
Elbows should be 2 or 2 ½ diameters centerline radius except where space does not permit.

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.



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



Branches should not enter directly opposite each other.

MAINTENANCE

Inspecting the feed control and air control and rods inside the hood periodically for dirt build-up on the threads is recommended.

The inspection windows should be kept clean to enable the operator to observe the product on the deck at all times.

The ducting should be checked occasionally for settling of material in low places. Also inspect the condition of the ducting. Look for cracks and leaks. Also look for areas of deterioration where the material is actually wearing through the pipe. Not only should these areas be repaired but the system layout changed to keep these type of problems from reoccurring.

The exhaust fan itself should be inspected periodically. Look for unusual wear on the interior of the fan. Also check the condition of the drive belts and shaft bearings, Keep your dust collection system clean and in good working order. If you are using cyclones be sure they are clean and functioning. Check the cone of the cyclone for obstructions. A plugged cyclone will adversely affect the whole system

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