

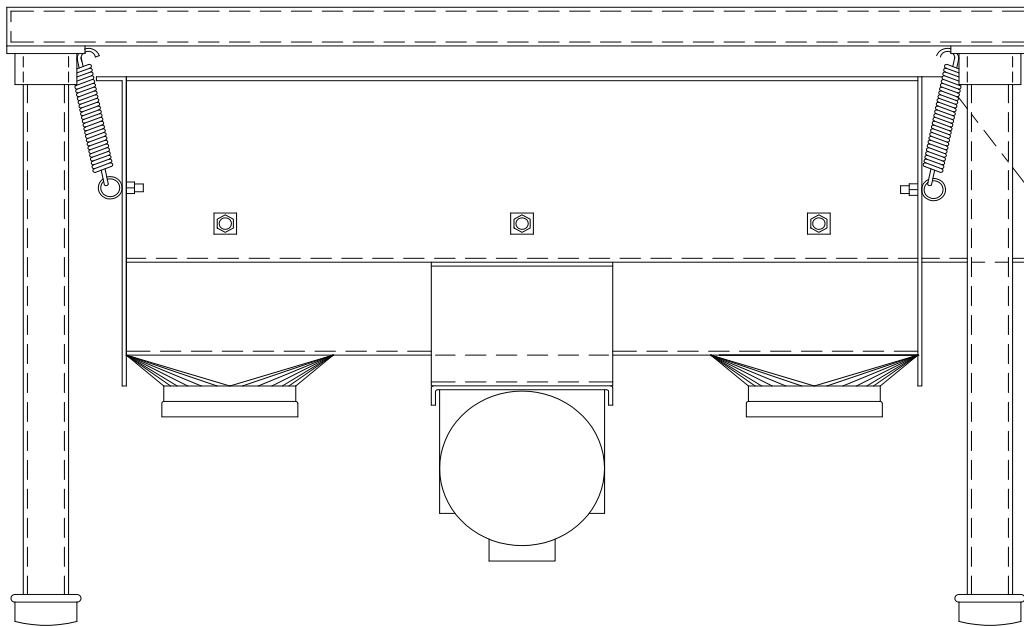


SMICO Manufacturing

SCREENETTE

Vibrating Screener

MANUAL



IMPORTANT

Before operating your SCREENETTE series screener, be sure to remove the transit bracket from the spring mounts. These brackets have been provided to minimize damage to the shaker while in transit. Failure to remove these brackets before operation of your screener could result in damage to the screener as well as the surrounding structure. Retain these brackets for use when moving or re-shipping the unit.

DISCHARGE HOPPER/CHUTE (if applicable)

In erecting a hopper or chute beneath the screen or discharge(s), be sure the valley angles are steep enough to give a free flow of the material being screened. See that the hopper is built low enough so the live machine structure will not strike the hopper, even when the machine is set at the steepest angle. Also note the screener will have random and erratic movement during start up and shut down. Allow an extra 1" minimum around the live machine to allow for this movement.

FEED CHUTES (if applicable)

Feed chutes must also conform to the specifications specified in the hopper paragraph. In addition to that feed chutes are an important part of the screener.

Feed chutes should provide for distribution of the material across the full width of the machine. Feed chutes should limit the fall of the material as much as possible. They should also slow up fast moving streams. These aspects will allow for efficient screening of your product. Proper feed chutes will adequately repay for the time spent constructing them by reducing screen cloth wear and increasing the efficiency.

CONNECTIONS (if applicable)

The connections between the SCREENETTE series screener and the matching chute work needs to be via a flexible connector. The distance between the two spouts needs to be 2 - 3 inches. This distance allows the machine the room necessary for start up and shut down. The connection between the two needs to be a flexible connector held in place by clamps. On a rectangular spout the flexible connector is held on by a clamp bar with bolts and welded nuts on the inside of the spout. On a round or elliptical spout a hose clamp type fastener is all that is needed to hold the flexible connector in place.

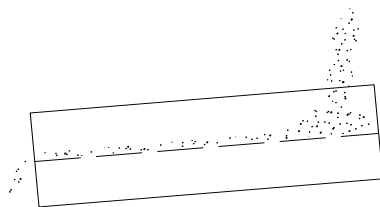
CONTROL YOUR PRODUCT

Your SCREENETTE series screener is fully adjustable to your product; Take full advantage of these exclusive features so you may obtain the most efficient results possible. Be sure the stroke and the angle of the machine are correct for your product. Do not guess! Check it!

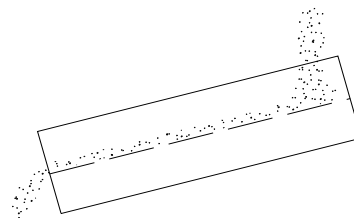
ANGLE

The inclination at which the screening surface is operated plays an important part in the screening efficiency. If the angle is too great the material will pass over too rapidly, and will not be properly graded. If the angle is too slight efficient grading may not be maintained, the capacity of the screen will be reduced, and material will tend to accumulate at the feed end of the machine, causing undue wear and breakage of the screen cloth. Proper inclination of the screen provides efficient grading and capacity.

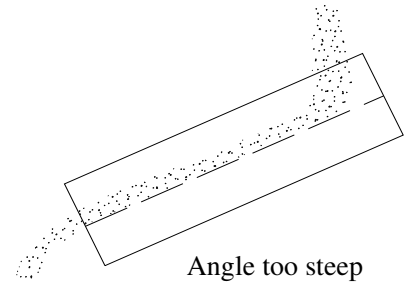
Tests have indicated on some materials a 5° difference on inclination has caused a variation in recovery as great as 90%.



Angle too slight



Proper angle

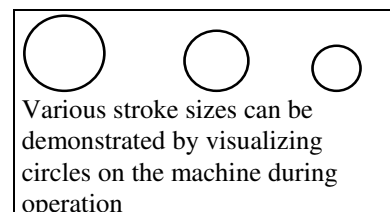


Angle too steep

STROKE

The SCREENETTE series of screeners vibrates in a circular pattern. The diameter of this circle is called the stroke. The stroke can be measured in one of two ways. First, a dot can be placed on the side of the machine and the diameter of the circle the dot makes when the machine is in operation is the stroke. Second, a stroke gauge can be used to determine the stroke.

A small stroke gauge is made up of a number of circles with specific diameters. One of those diameters must correspond to the stroke of the machine. The diameter of the circles corresponds to the number below the circle. When this gauge is placed on the side of a machine the circles will blur. There will be one blurred circle where the center of the blurred circle is a solid point. The diameter of that circle will be the stroke.



The SCREENETTE series of screeners are equipped with adjustable weights on the motor, the variation in range being indicated by numbers running zero to 100 in percentages. After the machine has been installed and operated at the setting made by the factory, it is desirable from

the standpoint of efficiency in screening that you try at least one or more percentage setting on either side of that tested by the factory, checking your product at each instance.

STROKE CHANGE

Refer to Motor Manual for instructions for adjusting eccentric weights.

SCREEN CLOTH, MUST BE TIGHT

The SMICO SCREENETTE series of screeners is a high-speed machine. Cloths not properly tightened will quickly separate due to flexing. See the following Pages for further details.

SCREEN CLOTH SELECTION

Screen cloth selection is very important in order to obtain proper results, to eliminate screening problems, and to avoid costly maintenance and replacement. Screen cloth should be selected by considering three aspects.

FIRST:

The first aspect is maximum open area. When the open area is maximized, the capacity and efficiency of the screen are at their peak; however, the screen life is greatly reduced, and frequent replacement will be required. The open area of a screen cloth can be increased by decreasing the wire size used in making the screen cloth.

SECOND:

The second aspect is maximum screen life. When screen life is at its maximum, the life of the screen is increased causing less frequent screen replacement, and fewer down times; however, when screen life is high the capacity of the screen is low. Screen life in a screen cloth can be increased by increasing the wire size used in making the screen cloth.

THIRD:

The third aspect is corrosion resistance. With a high corrosion resistant screen the screen will hold up longer from chemical materials such as water or acid; Yet, a screen with a high corrosion resistance is costly, and may be hard to locate, and have a long delivery schedules.

The hooks on the outside edges of the screen cloth should vary depending upon the wire diameter of the screen cloth. For lighter than 16 gage cloth the hooks need to be double bent sheet metal shrouds, to prevent the screen cloth from pulling loose when the screen cloth is tightened. Screen cloths from 16 gage to 8 gage wires need only a single fold sheet metal shroud. Wires heavier than 8 gage are strong enough to allow tensioning without any shroud.

In addition to this, specialty screens can be furnished for your particular needs. Some of these types of screens are perforated plate, slotted screens, music wire screens, flat top screens,

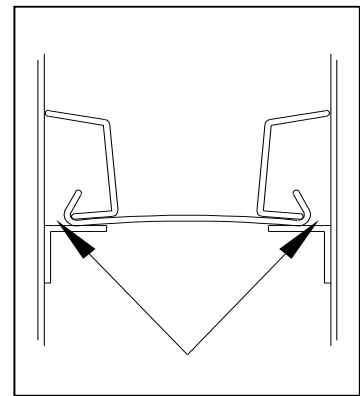
synthetic screens, and many others. If you need further information on screen cloth selection consult the factory.

SCREEN CLOTH REMOVAL

1. Remove the tension bolts on each side. These are the bolts holding the tension rail that stretches the screen cloth.
2. Remove the tension rails.
3. Stand at the side of the machine and lift the screen out.

SCREEN CLOTH INSTALLATION

1. The inside of the screen body should be thoroughly washed or wiped clean. Be sure that all surfaces are free from debris and that there are no cuttings or other foreign material caught beneath the screen when it is installed.
2. Now insert the new screen cloth.
3. The screen is in place when the hook strips on the screen are flush with each end of the screener.
4. Replace tension rails and bolts.
5. Hand tighten the four corner tensioning nuts so that there is an equal amount of space between the hook strips and the wall of the screener on all four corners.
6. Tighten the remaining nuts hand tight.



These distances must be equal

7. Starting with the nuts in the CENTER of the tension rail and working out to the ends, slightly tighten two bolts on one side; then move to corresponding two bolts on opposite side and tighten in equal proportions. Repeat process moving from the center to the ends until screen feels tight and even.
8. Check the cloth tightness by feeling of the cloth for loose spots. The screen cloth must be drum head tight. Life of the screen cloth and efficiency of separation depend on there being no loose areas in the cloth. Any loose spots must be removed by tightening the tension bolts in the vicinity of the loose spot. If this does not correct the problem consult the factory.
9. Run the screener for about 30-40 minutes. Then stop the machine and re-tighten the tension bolts. This is important since the weave of the screen will allow it to take a certain set during the first few minutes of operation and will allow slack to develop in the screen.
10. Again, re-tension after running 24 hours, as this will give greatly improved screen life.

BOLTS

All bolts on the screener are secured with lock washers or some other type of locking mechanism. After the machine has been in operation for two weeks it is wise to re-tighten the bolts to assure they are tight. Loose bolts break.

Motor

The motor on the FLOW THROUGH SIFTER is a shaker motor. This motor has an operating temperature range of -20°F to 104°F. The motor operates at 1800 cycles per minute, and has a variable stroke. This motor does not have any serviceable parts. If this motor fails for any reason contact SMICO for a replacement. When replacing this motor use only 1/2" grade 5 bolts. Torque these bolts down to 100ft-lb, and **do not** reuse the bolts.

Wiring

Note: All wiring should be done to the National Electric Code Handbook specifications, and should be done by a certified electrician.

Wiring diagrams for this motor are included inside the terminal block of the motor. Wire the motor according to the voltage available. This motor must be grounded. This machine shakes at a large enough movement that the metal flexible conduits will eventually break, and are not acceptable to be used under these circumstances. A flexible coated wire must be used here.

Overload protection must be installed. If the motor is operated without overload protection, damage to the motor will result, and the warranty will be void. The overload protection must be according to NEC article 430.

Once the motor is operating, check the amperage reading. The amperage reading should not exceed the motor name plate reading.