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1 Orbital Guide
Start / Stop Switch

2 Orbital Guide

3 Orbital Guide
Locking Handles

4 Debris Shroud

5 Vent*
*Shop vacuums with spark arresters are required.

6 Vertical Sander
Start / Stop Button

Image shown
Eaton Part Number ET0100-005
General information

The LifeSense orbital guide (ET0100-001) was designed with the specific intent to aid in, and expedite, the mandatory hose end cleanup process when producing a LifeSense hose assembly. The orbital guide was designed by Eaton and is a required piece of equipment in making a LifeSense hose assembly.

The purpose of this manual is to present the basic operating, maintenance, and safety information for the Eaton LifeSense orbital guide and a JET J-4300A vertical belt sander (Eaton part number ET0100-005).

Safety instructions - general safety precautions

⚠️ WARNING

Read and understand this manual before attempting to operate the equipment. Failure to follow operating instructions may lead to death, severe injury, or property damage.

⚠️ WARNING

PREVENT UNAUTHORIZED OPERATION:
DO NOT permit anyone to operate this machine unless they have read and thoroughly understood this manual.

⚠️ WARNING

WEAR SAFETY GLASSES:
Risk of eye injury! Eye protection is required at all times during the installation, operation and maintenance of this machine. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

⚠️ WARNING

KEEP WORK AREA CLEAN:
Cluttered areas and benches invite accidents.

⚠️ WARNING

WEAR SAFETY GLOVES:
Safety gloves should be worn at all times during the operation of the orbital guide. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

⚠️ WARNING

Only the hose mandrels specifically designed for use with the orbital guide should be inserted into the orbital guide. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Electrical requirements

The orbital guide is supplied with an electrical enclosure and toggle on/off switch which requires a 120-volt, 15-amp power source. The JET J-4300A vertical belt sander also requires 120-volt, 20-amp service.
Installation / environment

**WARNING**

Only qualified personnel should be utilized for installation of the unit. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

When installing the orbital guide onto a vertical belt sander, align the guide bar on the bottom of the orbital guide with the guide bar slot on the sander table/platen. This will ensure the orbital guide is parallel with the sander belt. Finally, ensure that the bottom back ledge of the orbital guide overlaps the sander table next to the belt, while at the same staying with in the sander manufacturer’s recommended min./max. distance from the belt. This will prevent debris from building up on the sander table top. Install a vent system with a spark arrester at the belt sander outlet.

The JET J-4300A vertical belt sander, or any belt sander, must be installed indoors on a level surface, in a clean, dry environment and in a manner that meets consumer safety standards.

Maintenance

**WARNING**

Keep rubber debris from accumulating at the back of the orbital guide between the sanding belt and clear safety screen by removing it regularly. Excessive rubber debris accumulation from the sanding process can cause belt damage, begin to smoke, or catch fire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

As the belt wears down, the orbital guide will need to be shuttled to another section of the belt. Simply loosen the two black locking handles, slide the fixture, and re-tighten. (See Figure 3). Replacement belts should be 100 grit.

LifeSense hose end clean up

Prepping or cleaning the end of a cut LifeSense hose is a mandatory step in the LifeSense hose assembly process. Utilize Eaton’s orbital guide (ET0100-001), mounted to a vertical belt sander and the proper mandrel for the given hose size. This clean-up step isolates the first and second deck of the wire reinforcement; avoiding continuity between the two decks.

**Step 1: Select mandrel**

Turn the power off on the orbital guide and sander. Then select the correct size mandrel insert for the hose size. (See Figure 4).

**Step 2: Insert mandrel**

Slide the mandrel into the orbital housing until it bottoms out. (See Figure 5).
Step 3: Turn on power

Turn the orbital guide on by moving the toggle on/off switch to the “On” position. If you are using the JET sander, press the green power button to activate the sander. (See Figures 6 & 7).

Step 4: Hose end clean up

Insert the hose into the mandrel until the hose makes contact with the sanding belt. Only light pressure needs to be applied to achieve a good bevel; CAUTION: DO NOT push the hose aggressively against the belt as the belt will wear prematurely or tear. (See Figure 8).

Hold the hose steady while applying light pressure. Allow the hose to turn 3-5 revolutions. CAUTION: DO NOT allow the hose to turn in your hands. (See Figure 9).
Step 5: Visually inspect
Visually inspect the hose end to ensure no wires are touching between the first and second layers. (See Figure 10).

Step 6: Isolation test
To verify separation between hose layers an isolation test must be conducted. You can do so by using the Eaton test gauge (ET0100-002) and plier gauge (ET0100-003) or a multimeter.

Using Eaton gauges
If using the Eaton test gauge, insert the positive and negative wires of the test pliers into the corresponding ports on the test gauge. Then insert the pliers into the hose and squeeze the handles firmly to pierce the inner and outer wire reinforcement layers. While maintaining pressure on the handles press the button on the test gauge. Both lights, hose and connection, should illuminate green. (See Figure 11).

If one or both of the lights illuminate red, reposition pliers, apply firm pressure on the handles, and re-test. If a light(s) remain red examine both hose ends to verify the wire decks are truly separated. (See Figures 12 & 10).

Using a multimeter
If using a multimeter, turn the multimeter on and locate the Ohm setting (Ω) on the dial. Place the tip of one probe on the outer wire reinforcement and the other on the inner layer. The resistance reading MUST be greater than 5,000 ohms. (See Figure 13).