

**Review of the Festool  
Rotex RO 150 FEQ Dual-Mode Sander  
By Matthew Schenker**

**Introduction**

Call me crazy, but when I was thinking of the best way to review the Festool Rotex RO 150 FEQ sander, I wanted to do something unusual, something that most woodworkers would not use a hand-held sander for. My answer? I decided to refinish a floor in my old house using this sander. My thinking went like this: "If the new Rotex RO 150 can make floor refinishing easy, it should also be easy to use it for regular sanding jobs."

Now, I'm not quite as crazy as you might think. I did not choose to refinish my whole house. I selected a relatively small space, an entry area measuring about 10 feet by 15 feet. It turned out to be a great way to see how effectively the RO 150 removes old material, how comfortable it is to use, how well it controls dust. Along the way, I also became acquainted with this sander's many other unique features.

Here's what the floor looked like before I began my refinishing project:



What follows is the story of how I made it look better using the Rotex RO 150...

## What You Get with the Festool RO 150 FEQ

Before I got started with my floor-refinishing project, I took some time to examine the Festool RO 150. As with most other Festool tools, the Rotex RO 150 comes in a Systainer, with everything neatly packed inside.

The next two photos show the inside and outside of the Systainer when I first brought it into my shop.





Below is the “scope of delivery” for the RO 150:

- > Systainer 3
- > Rotex RO 150 sander with a soft sanding pad
- > Plug-It cord
- > Side handle
- > Edge guard
- > Instruction manual
- > One 120-grit sanding disk

## General Characteristics

When I took the sander out and set it down on a table surface, I noticed right away that it has a firm, comfortable feel. Although this is a relatively large sander, it is very well balanced, and stays firmly upright on the surface, without tilting. The rubberized grip on the head of the sander offers a nice tactile gripping surface. The barrel of the sander is also designed for getting a good grip. The barrel is a bit fat: my hands have about an average span, and I can get my fingers about three-quarters of the way around it. Still, that was enough to maintain good control.

Here's a photo of me getting accustomed to the rubberized grip and the barrel, with the power off:



*Rubberized Grip.* As I just mentioned, the RO 150 has a rubberized head. It is a nice large surface, and it provides a great holding area while operating the machine. With your hand on the rubberized grip, the sander is naturally kept in a correct position during sanding, and you have a good hold while sweeping the sander back and forth across the work surface.

Even though this is a nice gripping surface, it should be noted that with the RO 150, as well as other Festool sanders, you do not need to push the sander down onto the surface very much. It is important to let the sander do most of the work. The rubberized grip just helps to keep the sander stable and in the position you need it to be.

Here's a shot of the rubberized gripping area on the RO 150:



*Sanding Pad.* This sander has a 150-mm sanding pad, which is about 6" in diameter. Festool's other Rotex sander is a smaller 125-mm model. They are very similar in design and power, but obviously quite different in size.

Here is a top view of the RO 150 (left) and RO 125 (right), showing how similar their controls are. Later on, I'll describe what each of those controls is for. By the way, the rubberized grips of each machine is the same material and design. The one on the RO 125 looks lighter because it has been used a lot, while the RO 150 is still brand new in the photo:

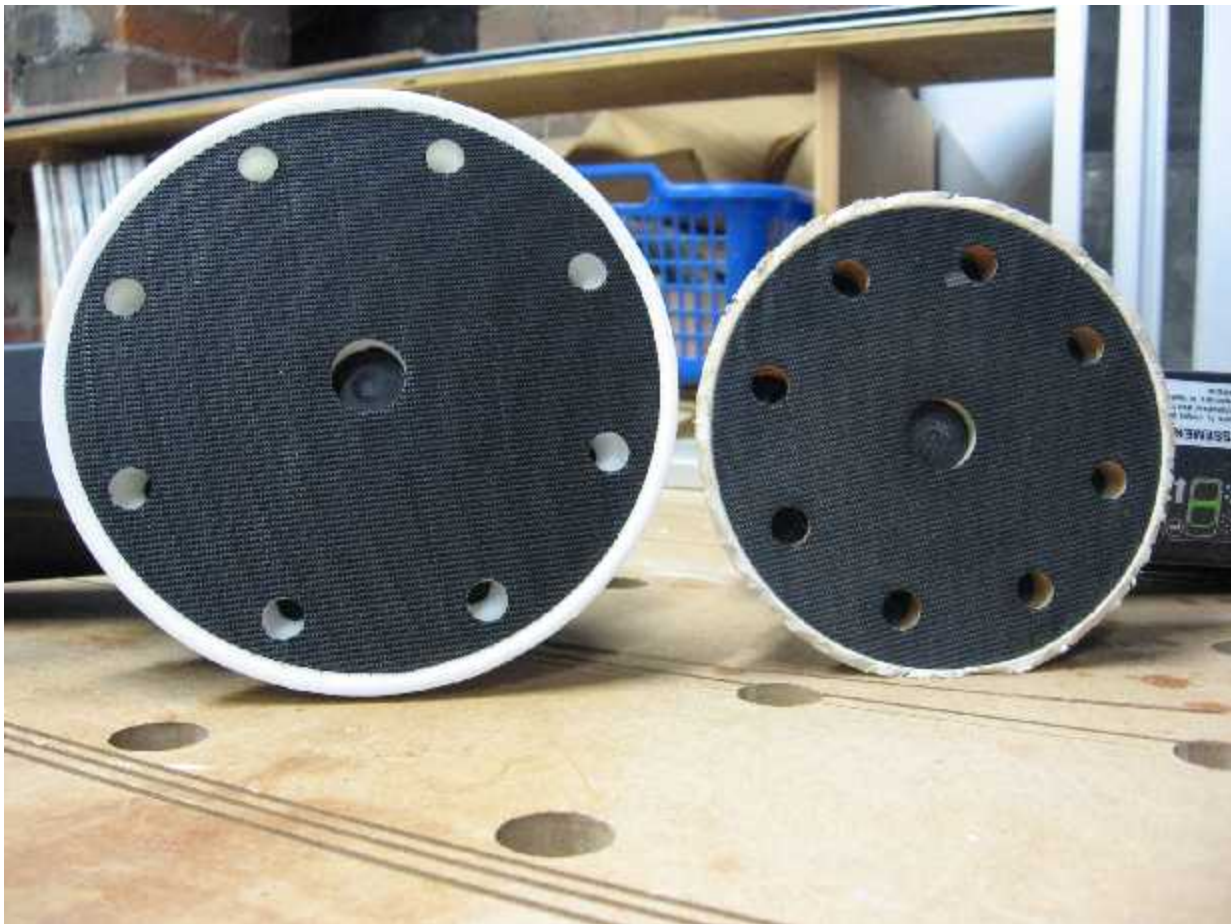


The next photo shows the difference in size of the heads and barrel grips on the 150-mm and 125-mm Rotex sanders, in a side-by-side view. Notice in this photo how the sanding pad on my RO 125 has become worn out. The RO 150 has a new feature that helps prevent this from happening (more on that later).



*The “Jetstream” Principle.* Below is another photo of the RO 150 (left) and the RO 125 (right), showing their sanding pads. Notice that both sanders have eight holes around the perimeter of the pad to suck dust up into the dust extractor.

Notice that both sanders also have a large hole in the center of the sanding pad. This center hole, which is unique to Festool sanders, aids in dust extraction. In essence, a stream of air pushes out of the center hole. The outward-flowing air pushes dust toward the periphery of the sanding pad, where the eight outer holes then suck it in. Festool calls this their “Jetstream” principle, and it works very effectively in dust collection, or what Festool calls “dust extraction.” More about dust collection later in this review.



### **Plug-It Power Cord**

Like all other Festool sanders, the Rotex RO 150 has a detachable power cord, what Festool calls the “Plug-It” system. This system allows you to use a single cord to switch from one Festool tool to another. You simply twist the plug and pull it out to remove it from tool, then you insert it into the next tool and twist to lock it in place. Plug-It cords maintain a firm connection and will not come loose while using the machine.

Here's another advantage to the Plug-It concept: if the power cord is ever damaged, you can easily replace it without having to rewire the tool. Below are two photos illustrating the Plug-It concept:





Festool designed the power cord so that it stays out of the way during sanding. This is because the Plug-It power cord connects to the back of the sander in a very natural direction.

## Dust Hose Connection

Festool sanders are known for their dust-pickup abilities. That is what first got me interested in them! More on the dust-collection abilities a bit later. For now, I wanted to show you where, and how, the dust hose hooks into the Rotex RO 150 sander. This is a detail that you may not think much about, but it is important, and it shows the engineering thought that goes into these tools. Before I started using Festool sanders, I was often frustrated with other large sanders because they had dust hoses that connect at an uncomfortable position and got in the way during sanding. Also, with other large sanders, the dust hoses did not form a firm connection with the tool and popped off during sanding.

*Dust-Hose Connection.* Festool sanders solve both of these problems. The hose connects securely to the sander's dust port, and stays on throughout your sanding operations. The dust hose is out of the way, which helps with comfort while using the tool. The Rotex RO 150 has a round dust port, with ribbed walls. This allows you to attach a dust hose easily, and the hose locks on. I have never had a Festool dust hose pop off during sanding.

In the photo below, you can see the dust port, which is located below the Plug-It cord. Notice the ribs on the dust port, which lock the dust hose into place:



The next photo shows the dust hose and the dust port of the Rotex RO 150.



The photo below shows the dust hose firmly attached to the Rotex RO 150 dust port. Notice how the dust hose and the Plug-It cord both flow out the back of the sander in the same direction, and at a good distance from the handle. This keeps them comfortably out of the way during sanding:



## Power Switch

The location of the power switch on the RO 150 is very easy to access during sanding. Slide the button forward to turn the sander on. When you want to turn the sander off, simply push the button down and the power cuts out. Although the power button is easy to access, it is intelligently located so you will not hit it accidentally either before you are ready to begin sanding or while you are in the middle of sanding.

Here's a photo of the power switch in the “off” position:



### Switching from Random-Orbit Mode to “Rotex” Mode

The Rotex RO 150 is dubbed a “dual-mode sander,” which means you have the option of working in an aggressive mode or a random-orbit mode. The aggressive mode is also called the “Rotex” mode, which is where the sander gets its name. In Rotex mode, the sanding pad spins in a more circular (rotary) motion. In Rotex mode, the sander takes down a lot of material very quickly, although it would not be used for fine sanding since it leaves some swirl marks on the wood surface. But when you switch over to random-orbit mode, the RO 150 can be used for fine sanding.

Switching between Rotex and random-orbit modes is simple: slide a toggle button on the head of the sander to the left or the right. The bright-green mode button is located just forward of the power switch. Push the button to the left to get it into random-orbit mode. To set it for Rotex mode, pull the mode switch to the right.

A graphical symbol on the sander represents each mode. If you are like me, these symbols do not naturally associate in your mind with "Rotex" or "random-orbit." Here is a simple reminder I came up with that makes it very easy to remember: *Right=Rotex (rotary)*!

One important note: the sander must be off when switching sanding modes.

Below are two photos showing how to toggle the mode switch. In the first photo, I am pushing down on the left side of the mode switch, which puts the sander into random-orbit motion:



In this second photo, I am pulling the mode switch to the right, which puts the sander into Rotex (rotary) motion:



## Speed Control

Like other Festool sanders, the Rotex RO 150 has a speed dial that is easily accessed during sanding, but still out of the way so it is not turned accidentally.

*Setting the Speed.* By turning the speed dial, the operator can smoothly adjust the speed between a setting of “1” (slowest) and “6” (fastest). The settings are not detented, so you can adjust the sander for an infinite number of fine settings. Depending on the sanding job you are doing, different speed settings may be needed. The speed settings are displayed with black numbers on a bright green background, making them easy to read.

The photo below shows the speed control dial on the RO 150, at a setting of “1”:



*Speed in Aggressive Mode.* When running this sander in its aggressive Rotex mode, I usually keep it at a low setting, “3” or under. For jobs where I am stripping old finish, or removing paint, I may even run the sander at its lowest speed setting. Many times, if you run the sander too fast in Rotex mode, the heat build-up causes the finish you are removing to gunk up the sanding disk. When using the Rotex RO 150 to remove dried glue, I will usually run it at faster speeds, as there is less of a chance of gunking up the sanding discs.

*Speed in Random-Orbit Mode.* After the material-removal stage, you can switch the RO 150 into random-orbit mode. At that point, you are doing finer sanding and can set the RO 150 to higher speeds, as gunking up of old finish is no longer an issue. In random-orbit mode, I often run the sander at full speed.

## Edge Guard

The Rotex RO 150 comes with a horseshoe-shaped plastic edge guard that fits over the front of the sander. With the edge guard installed, the operator can get right up to a vertical surface that is perpendicular to the sanding surface without marring the vertical surface. At first, I thought the edge guard would prevent me from getting close enough to the edge of the sanding surface. However, in actual use I was pleased to discover that even with the edge guard in place, I was able to get right up to the walls. This simple innovation is really a great idea. The photo below shows what the edge guard looks like.



*Installing the Edge Guard.* To install the edge guard, simply push it onto the front of the sander. The Rotex RO 150 has a track that accepts the guard. The photo below illustrates how to install the edge guard.



The next photo shows the sander with the edge guard fully installed and ready to use. Once it is inserted, the edge guard is held firmly in place throughout any sanding where you may bump against a vertical surface.



I do not use the edge guard when sanding large flat surfaces, where I will not be hitting a vertical surface. It is very easy to remove the edge guard for those times when you do not want it. Just pull it straight out from the body of the sander.

*Edge Guard in Use.* In actual use, the edge guard allows you to get up close to a vertical surface while sanding, without damaging the vertical surface. In the photo below, I was sanding my floor up to the edge of a threshold on the entry door. As you can see, the sanding pad still covered the floor, but it is not scratching the threshold. With the edge guard installed, I was able to move freely along every vertical edge in the entry area without worrying about damage.



The edge guard not only protects vertical surfaces from being damaged. It also protects the sanding pad from getting worn out. The next photo shows how a "naked" sanding pad can bump up against a vertical surface:



The photo below shows how the edge guard prevents the pad from coming into contact with the vertical surface, protecting the pad as well as the surface:



## Side Handle

*Purpose of the Side Handle.* For better control, some people like to use a side handle on their high-powered sanders. The Rotex RO 150 comes with a side handle that is easily attached or detached from the sander. In the aggressive Rotex sanding mode, the RO 150 does require a firm grip, and this is where the side handle could help out. Doing my refinishing project, I found the RO 150 easier to control without the side handle, so I left it off. But there may be other jobs where the side handle would be a good option.

*Installing the Side Handle.* The side handle screws into a threaded hole, which is shown in the photo below.



The photo below illustrates what the Rotex RO 150 looks like with the side handle attached:



## Removable Sanding Pad

The Rotex RO 150 comes with a soft sanding pad, which is useful for almost all operations. But Festool makes a variety of 150-mm sanding pads that can also be used on the RO 150, including “super soft” pads, hard pads, and polishing pads. In order to use any of these other pads, you obviously need to remove the one that is on the sander. Festool has designed the Rotex RO 150 so it is very easy to take the sanding pad off and install another one without needing tools.

*Unlocking the Pad and Removing It.* By pressing a green button on the side of the sander, the sanding pad becomes unlocked. While holding the button down, you turn the sanding pad until it comes off. The photo below shows the green button used to unlock the sanding pad.



Once the sanding pad is removed, you are ready to install any of the optional pads available from Festool. The photo below gives a view of the Rotex RO 150 with the sanding pad removed.



The photo below offers a close-up of the inside of the Rotex RO 150, with the sanding pad removed.



### Detachable Vacuum Handle

The Rotex RO 150 has one rather unusual feature. The handle can be completely detached from the sander while the dust hose is hooked up to it. In essence, the handle becomes a quick little vacuum accessory with pretty good suction. I tried this feature out, but must admit I do not find that much use for it. Still, I am documenting it here for those of you who may find it more useful.

*Detaching the Handle from the RO 150.* By pressing a green button located near the rear of the handle, the handle is unlocked and detaches from the body of the sander. The photo below indicates where this button is located. The button is out of the way, so it does not get accidentally pressed during sanding.



The next two photos show the entire handle being removed from the sander for use as a vacuuming accessory. After you are done using the handle as a vacuum, it is easily re-attached by clicking it back into place on the sander.





## Operating the Sander

After taping up the baseboards all around the floor, I brought my CT22 and new Rotex RO 150 upstairs. I hooked the sander to the dust extractor, then installed a 32-grit sanding disk, and got to work. I set the sander into Rotex mode, then turned the speed down to a setting of “1.” I flipped the power on, and began moving across the floor, along a wall.

Below are my impressions of the sander during this operation.

*Comfort and Control.* The Rotex RO 150 is amazingly smooth in operation. The rubberized grip on the sanding head was comfortable to hold while operating the sander, and offered a good position for holding onto the machine as I swept back and forth across the surface of the floor. In Rotex mode (heavy material removal), I had to keep a firm grip on the sander, but it was always in control. I did not use the side handle, as I felt more comfortable without it. With the edge guard in place, I felt very confident moving along the walls and other vertical surfaces without damaging the surfaces or the sanding pad.

*Vibration.* Like all Festool sanders, the Rotex RO 150 has very low vibration. This is a powerful sander, and yet it feels extremely smooth during operation. Even after running this sander for about 40 minutes, I did not experience that uncomfortable numb, tingling sensation in my fingers that often comes from using a high-powered sander. Lower vibration also helps you be more accurate in your sanding, since you can concentrate on the feeling of the material removal. Low vibration, in addition to dust control, is one of the key reasons I made a switch over to Festool sanders.

*Noise Level.* In Rotex mode, this sander is fairly loud. It emits a grinding sound, and there is some high-pitched whining sounds mixed in. The noise level is enough that I would suggest hearing protection while running the RO 150, especially if you are going to be running it in the Rotex mode for more than a few minutes.

In the random-orbit mode, the RO 150 is much more quiet. There is no grinding or whining sound. If you are sanding in the random-orbit mode, hearing protection may not be as vital.

*Material Removal.* I started off in Rotex mode, which means the sander is spinning more aggressively and removes material more quickly. As I stated earlier, in Rotex mode you have to hold onto the sander firmly, because it can sometimes try to wander in one direction or another. But within a short time, I got comfortable with the way the sander works and was in complete control.

You do not have to push down on this sander to get good material removal. Just the weight of the sander, with very slight downward pressure, is enough to remove material quickly. In fact, pushing down on the sander hinders material removal. The fact that the sander does such a great job removing material without having to exert a lot of downward pressure is important in a job like this, or any other big sanding operation. This, along with the low vibration level, greatly reduces the fatigue that can come from spending a lot of time sanding.

After about 40 minutes running the sander in Rotex mode, using 32-grit sanding discs, I was able to remove all of the old, worn-out finish shown in the first photo of this review. The floor came out level and smooth. To remove all the old finish from the entire floor, I used up five 32-grit discs. Below is a photo of what the floor looked like after removing all the old finish in Rotex mode.



I briefly cleaned the floor of any minor amounts of dust (there was hardly any). Then I switched the RO 150 into random-orbit mode and moved up through 50-, 80-, 100-, and 120-grit discs. This took about another 45 minutes.

After that, I was ready to begin applying the new polyurethane finish.

*Dust Extraction.* The wonderful thing about using the RO 150 for this job is that there was hardly any dust on the floor, and absolutely no dust in the air. Previously, when I rented a big drum sander for floor refinishing, there was dust everywhere, on all surfaces in the room and in adjoining spaces as well. The RO 150 gets rid of that problem!

The Rotex RO 150 falls right in line with all of Festool's other sanders when it comes to dust collection. All of them do a terrific job controlling dust, and this is one of the main reasons I began using Festool sanders. Festool sanders reduce the amount of clean-up work you need to do, but even more importantly they help assure that you are not breathing in harmful wood dust particles or dust from old finishes.

## **Conclusion**

Sanding a floor is not the ideal job for a hand-held sander. You have to work the whole time on your knees, which makes the job rather uncomfortable. So, you may not decide to refinish a floor using the Rotex RO 150 sander! Most likely, I would not use it for a very large room, although for small spaces, it may be perfect. In my case, it worked out well for the entry area of my house, and it was a great way to review all the features of this terrific sander. Since this was a very uncomfortable job, it was an even better test of the features of the RO 150.

This sander proved itself to be a powerful, comfortable, and well-designed tool, with incredible dust collection. It made this difficult task seem a lot easier!