



Maxon OvenPak Flamerod and Igniter Setup



Caution!

Before changing the flame rod or igniter, make sure that all power is off to the dryer or oxidizer. As long as power is present at the dryer, the flame rod circuit will have a voltage potential of up to 480VAC. The ignition transformer may have a potential voltage of 7500VAC.

Setting or replacing the igniter or flame rod on a Maxon burner involves identifying the burner model, then the proper flame rod and igniter needed.

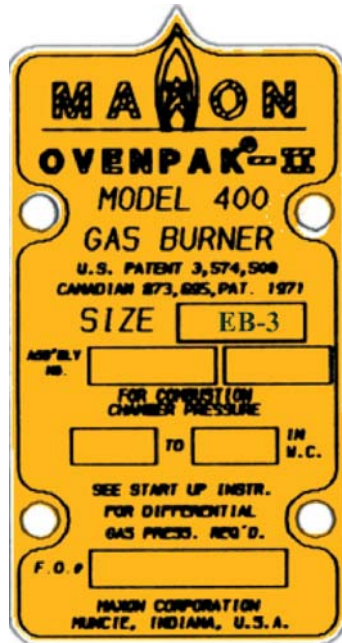


Figure 1. A typical Maxon burner manufacturer tag. This tag identifies an OvenPak II EB-3. It is important not to confuse the OvenPak with the Oven Pak II. Check the tag carefully.

To identify the burner, locate the manufacturers tag found on the burner casting. Figure 1 shows a typical tag found on a Maxon EB-3 burner. Use chart 1 and 2 (found on pages 2 and 3) to identify the proper flame rod and igniter needed for OvenPak burners. Chart 1 is used to determine the correct igniter and UV scanner for burners that do not use a flame rod. Chart 2 is for burners that utilize a flame rod. **Note that the chart dimensions are based on Auburn flame rods and igniters supplied by MEGTEC Systems.**

Figure 2 explains how to determine the correct “X” (flame rod length) and “Y” (insertion measurement) dimension for the flame rod. To change or set the flame rod, loosen the packing nut as identified in figure 2. Slide the old rod out. Use care when removing the flame rod. The ceramic is very brittle and can crack easily. The broken pieces of ceramic can lodge in the burner casting. If the old rod will not pull out easily, the entire packing nut assembly may have to be removed. The rod and assembly can then be separated on a bench.

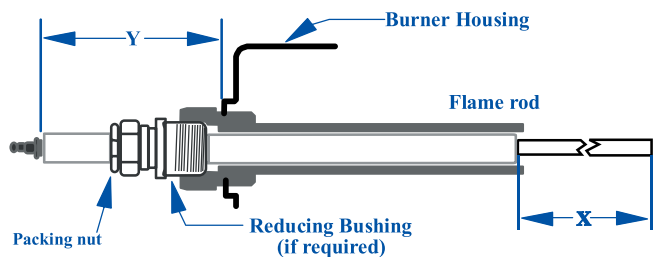


Figure 2. The “X” dimension is the required rod length from the end of the ceramic to the tip of the metal rod. The “Y” dimension is the measurement from the ceramic to the burner casting. Figure 4 shows a detailed photo of the “Y” measurement.

Maxon OvenPak Flamerod and Igniter Setup

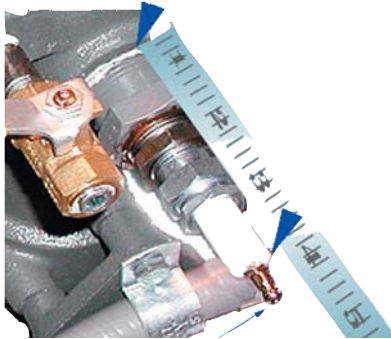


Figure 3. To set the flamerod, measure from the edge of the casting to the end of the ceramic.

Before inserting the new rod, check the rajah connector (figure 3) on the end of the rod, tighten it if it is loose. Slide the new rod in and tighten the packing nut finger tight. Using a ruler, measure the distance from the edge of the flame rod ceramic to the casting of the burner as shown in figure 3. When the flame rod is at the correct “Y” dimension, tighten the packing nut with a wrench. Do not over tighten the packing nut. The packing nut assembly has a rubber O-ring inside. Over tightening may push the ring out of the position and allow gas to escape from the burner during operation. After tightening the rod in place, check the insertion measurement again and adjust it if necessary.

To replace the igniter, follow the same procedure as detailed for the flame rod. Use the “Z” dimension as shown in chart 1 or 2 for the proper insertion depth. Figure 4 explains the required “Z” (insertion measurement) for the igniter.

Note that the insertion and flame rod dimensions are critical measurements for proper burner light off and flame sensing. If the flame rod is inserted to far, the ceramic will be exposed to the burner flame causing it to crack. Any cracks that form will fill with carbon deposits. Carbon is a conductor and will allow the flame signal to ‘ground out’ resulting in a flameout. If the flame rod is too far back, the rod may be out of the path of the burner flame at high fire causing a flameout.

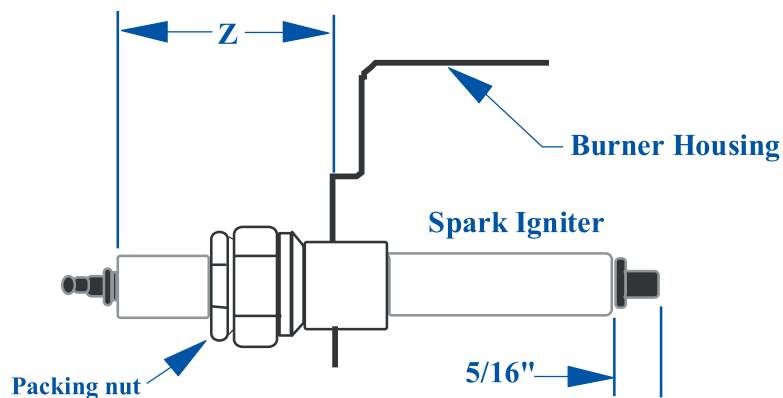


Figure 4. The “Z” dimension determines the insertion depth of the igniter. Measure from the end of the ceramic to the burner casting.



Maxon OvenPak Flamerod and Igniter Setup



Figure 5. Relocate the flamerod ground wire from the site port screw to the burner casting bolts

The igniter position is also important. The tip of the igniter produces a high voltage spark that ignited the pilot gas when the burner starts. If the igniter is inserted to far, the tip may ground against the internal parts of the burner. This will prevent an ignition spark from being generated, resulting in the pilot gas not lighting and the burner shutting down. With the igniter pulled to far back from the required “Z” dimension, the spark gap may be to large to produce a strong enough spark to lithe the pilot gas or no spark may be produced at all, resulting in the burner locking out and shutting down.

Flamerods and igniters should be replaced annually. To improve flame rod signal strength, it may be helpful to move the signal ground wire from the connection at the burner site port to the casting of the burner as shown in figure 5.

Please note: Local codes may require that a MEGTEC of a factory trained technician service your burner.

UV Scanner P/N 121231 For Burner	Igniter P/N 134031 “Z” Dimension
EBC-2SP	4 3/4” (121)
EBC-3SP	5 1/8” (130)
EBC-4SP	4 3/4” (121)
EBC-5SP	4 3/4” (121)
EBC-6SP	4 3/4” (121)
508	4 3/4” (121)
515	5 1/8” (130)
525	4 3/4” (121)
535	4 3/4” (121)
550	4 3/4” (121)

Chart 1. This chart is used for burners that use a UV-scanner instead of a flamerod. The “Z” dimension is still used to set the



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Technical Bulletin

Burner	Flame Rods			Igniters
	"X" Dimension (mm)	"Y" Dimension (mm)	Flame Rod Part Number	P/N 134031 "Z" Dimension (mm)
OvenPak				
EB1	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
EB2	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
EB2-MRV	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
EB3	8" (203)	4-13/16" (122)	134005	5" (127)
EB3-MRV	8" (203)	4-13/16" (122)	134005	5" (127)
EB4	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
EB4-MRV	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
EB5	12-3/4" (323)	3-3/8" (86)	134007	4-3/4" (121)
EB5-MRV	12-3/4" (323)	3-3/8" (86)	134007	4-3/4" (121)
EB6	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
EB7	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
405	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
407M	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
408	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
408M	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
412M	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
413M	6" (152)	4-13/16" (122)	134004	4-13/16" (122)
415	6" (152)	4-13/16" (122)	134004	5" (127)
422M	6" (152)	4-13/16" (122)	134004	5" (127)
425	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
432M	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
435	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
442M	8" (203)	3-3/8" (86)	134005	4-3/4" (121)
445	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
456M	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
470M	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
487M	12-3/4" (323)	2-11/16" (69)	134007	4-13/16" (122)
OvenPak II				
EB1	8" (203)	3-1/2" (89)	134005	5-9/16" (141)
EB2	8" (203)	3-1/2" (89)	134005	5-9/16" (141)
EB3	8" (203)	3-1/2" (89)	134005	4-3/4" (121)
EB4	12-3/4" (323)	2-1/2" (64)	134007	4-3/8" (111)
EB5	12-3/4" (323)	2-1/2" (64)	134007	4-3/8" (111)
EB6	*1	*1	*1	3-1/4" (83)
EB7	*1	*1	*1	3-1/4" (83)
*1 – Flamerod option not available for these burners				

Chart 2. This chart lists all of the X, Y, and Z dimensions for OvenPak burners that use a flamerod.

For further information, availability, please contact your nearest MEGTEC office by visiting www.megtec.com and click on parts and upgrades or email to info@megtec.com.