



Motor rating

The motor rating determines the amount of load that can be supported by the gear assembly. On a 50 pound load motor, that would be 30 pounds by the motor and 20 pounds by the support.

The amount of food, baskets and other items including the spit, should total about 75% of the stated motor load, but can be as little as 20% or as much as 100%. This allows for other factors such as extreme temperatures or out of balance conditions.

Rotisserie motors employ a shaded pole style motor paired with a gear reduction transmission. This allows for an extremely high rpm motor to provide smooth and steady operation. OneGrill motors employ a high rpm (nearly 900 rpm) motor geared down to rpm. This allows for a torque curve forgiveness for imbalanced conditions without the opportunity for motor stall.

How much food can you actually put on?

It is all about balance! If the food is perfectly balanced on the rod so that there is no "Heavy Side", you can put 50 pounds or even more if the rod is of substantial weight. This, however, is rarely the case. The food will always be out of balance to some degree. If this is the case, then you may only be able to have as little as 20 pounds on the spit. If it is balanced fairly well then you can expect to turn a load approximately 50 lbs.

Balance

The most important thing to consider is the balance of the spit. If the spit is not properly balanced the motor will have excessive intermittent loads applied to the gear train and that will reduce the life of the unit. It is imperative that you balance your spit before applying load to the motor. A few extra minutes spent on this operation will make a huge difference in the life of your unit. A perfectly balanced heavy spit can be turned with your fingers easily. An out of balance spit, of the same weight will result in excessive force needed to turn. You should load your spit and test the spinning ability with your hands. If you can spin it easily and you have good balance, it is ready to grill.

Counterbalance

A counterbalance weight is used to make up for a minor out of balance condition. The easiest way to set it is to let the heavy side get to the bottom of the rotation. This is easy to see and hear, and is a natural condition for the load to want to be in. Turn off the motor; have your counterbalance weight pointing straight up. This will be exactly opposite the heaviest side.