

Rotor Information

Brown Products, Inc. manufactures a number of rotors for the Trenchmaster, Bededger, Bantam, Redefiner, Wiremaster Mole and Bantam Mole. Each rotor is designed to dig a trench for a specific purpose. Some of the rotors are interchangeable from one machine to another (Trenchmaster and Bededger) (Bantam, Redefiner and Mole units) as long as they do not exceed the limitation of the machine it is to be used on and the shaft size is the same.

Each machine has its limitations. Some guidelines for trenching rotors and trenching machines are given below.

Units with a 1" shaft:

F-780, 781, 791 Bededgers and F-702,703, and 704 Trenchmasters have a limit of 7" digging depth.

F-990, F-991 Bededgers and F-903, F-904 Trenchmasters have a limit of 9" digging depth.

F-1201 and F-1202 have a limit of 12" digging depth (there is a 13" deep by 2" wide clay rotor built for propane gas line installation)

Units with a ¾" shaft:

Bededger Bantam uses the Bantam Bedmaster 5" rotor and has a trenching depth of 5" maximum.

Bantam Mole wire installer, 7" maximum depth for low voltage lighting.

Redefiner (R450) has a maximum depth of 4" for redefining.

Wiremaster Mole (R460) has a 4" maximum trenching depth for installing invisible pet/dog fence.

Root Pruners/Low Voltage Wire Rotors - Bededgers & Trenchmasters

702-92 digs 3" deep and ½" wide. It is 13" long and weighs 4.00 pounds.

702-90 digs 4" deep and ½" wide. It is 15" long and weighs 4.35 pounds.

These two rotors are used primarily for installing invisible dog/pet fence and to cut surface roots along sidewalks and driveways. They can also be used for installing aluminum or steel edging.

12-41A digs 5" deep and ½" wide. It is 17" long and weighs 4.8 pounds.

12-41 digs 7" deep and ½" wide. It is 21" long and weighs 6.00 pounds.

These two rotors can be used for pruning tree roots and for installing low voltage wire less than ½" diameter. The 5" rotor for low voltage wire installation often insures that the trench is shallower than standard irrigation systems, thus avoiding cutting irrigation pipes.

12-42 (12" x ½") and 12-42A (9" x ½") are used primarily for pruning tree roots along sidewalks, driveways and curbs. Also, for low voltage wire at deeper depths.

**The Rotor Guide and the Brown Product Catalog (dated 1/15/19 and earlier) show the Root Pruner rotors as having 2 points on each end. This is incorrect, they only have 1 point on each end.

Clay Rotors for Bededgers and Trenchmasters

These rotors are so named because they are designed/built to dig in hard ground, which in most cases is clay soil. They will cut through small rocks and roots.

The clay rotors are made to dig in a number of depths and widths. All measurements are given in the depth that the rotor will dig and the width it will dig, not the length of the rotor. For example, rotor number 702-133 is described as 7" x 2". That means it will dig 7" deep and 2" wide. It is not 7" long. Another example, rotor number 12-76 is described as 12" x 3". That means it will dig 12" deep and 3" wide, not that it is 12" long.

The clay rotor numbers as printed in our publications and in our parts lists also show the number of points on each end of the rotor. The clay rotors which dig 3 inches wide are offered with 5 points on each end or 7 points on each end. The 7 point rotor doesn't dig better but will last longer than the 5 point rotor. (There is a price difference.) Trenching depths vary from 3" deep to 12" deep and from 1" wide to 3" wide. See the Rotor Guide for a list of clay rotors available.

To determine the length of a clay rotor, use the depth it will dig, multiply it by two and add 7, i.e., rotor 702-133 (7 x 2 clay rotor), 7×2 equals 14 plus 7 equals 21. The 702-133 clay rotor is 21 inches long.

To determine the depth a rotor will dig, measure the entire length of the rotor from tip to tip. Subtract 7 from the length and divide by 2. This will give the depth it will dig. Example, you have a rotor with is 25 inches long from tip to tip. Subtract 7, equals 18. Divide by 2 equals 9. This rotor would dig 9" deep.

The most popular clay rotors sold are the 702-133 (7" depth) and 12-110 (9" depth) and are mostly used for installing sprinkler systems.

The photos on the next page show how to measure a rotor.

Measure from tip of the rotor to the corresponding tip on the opposite end of the rotor. (Measuring over the hole in the bar) Examples are shown below.

Bedmaster Rotor

Rain Drain Rotor

Clay Rotor

Bedmaster and Redefiner Rotors for Bededgers and Trenchmasters

702-93 digs 3" deep and gives an angle cut back to the surface. It is used for defining mulch/flower beds. Somewhat of a V-type cut. It places the spoil dirt in the bed. It is 13" long from tip to tip along the bar with the hole in it and is 5 ½" wide and weighs 8.65 pounds.

702-89 digs 4 ½" deep and angles up into the bed the same as the 3" rotor. It is 16" long, 5 ½" wide and weighs 9.10 pounds.

702-106 digs 5" deep and angles up into the bed the same as the 3" and 4" rotor. It is 17" long, 5 ½" wide and weighs 9.40 pounds.

702-107 digs 6" deep and angles up into the bed the same as the 3", 4", and 5" Bedmaster rotor. This rotor is 19" long, 5 ½" wide and weighs 10 pounds. This is a special request rotor and places a very big load on the Bededger. It costs considerably more than the other Bedmaster rotors.

The uppermost point on each Bedmaster rotor is a blank point (No carbide tip). This point hardly receives any wear, so the carbide tip was eliminated to reduce cost.

702-93R Redefining Rotor digs 3" deep. It is used for redefining existing bed edges which have deteriorated. This rotor is 13" long, 3 ½" wide and weighs 5.80 pounds

Specialty Rotors

Rain Drain Rotors

The following rotors dig a trench 4 ½" wide. They are made in several depths; 4 ½", 6", 8", 10" and 12".

702-112 digs 4 ½" deep and 4 ½" wide. Popularly used to install bullet block, brick and other type of bed edging material. Fits on all Bededger and Trenchmaster units.

702-114 digs 6" deep and 4 ½" wide. Popularly used to install 4" perforated drainage pipe from downspouts on houses to move rain water away from house foundations. This rotor fits on all Bededgers and Trenchmaster units.

702-102 digs 4 ½" deep and 6" wide. This rotor is included in our Rain Drain category, but is used mainly for installing decorative brick and stone edging. It fits on all Bededger and Trenchmaster units.

12-97 digs 8" deep and 4 ½" wide. Used to install 4" perforated drainage pipe from downspouts on houses to move rain water away from house foundations. This rotor **only** fits on F-1201 and F-1202 Trenchmaster units. **It will not fit on Bededgers, nor F-702, 703, 903, 904 Trenchmaster units.**

12-95 digs 10" deep and 4 ½" wide. Same usage data as the 12-97. Sometimes used to stack additional sprinkler or irrigation pipes. Fits only on F-1201 or F-1202 Trenchmaster units.

12-94 digs 12" deep and 4 ½" wide. Same usage data as the 12-95. Fits only on F-1201 and F-1202 Trenchmaster units.

Stumpmaster Rotor

702-100 This rotor is designed to grind small tree stumps and shrub stumps. It will grind the stump down to about 3" below the surface. This rotor requires a lot of movement of the machine from left to right and up and down. The machines are not balanced for this type of work, requiring a lot of manual labor. It is recommended to be used only for small stumps. If the user has many stumps to grind, we recommend he obtain a stump grinder.

Curbing Rotor

702-113 This rotor digs a trench 2" deep and 9" wide. It was designed to dig a footing for decorative concrete curbing machine but many landscapers also use it for placing decorative tile and blocks around flower beds. It fits on all Bededger and Trenchmaster units.

702-115 This rotor digs a trench 4" deep and 8" wide. It is used for the same purposes as the 2" x 9" curbing rotor. This is a big load on the

Bededgers and the F-702, 703, 704, 903 and 904 Trenchmasters, but it will function. The F-1202 handles it very well.

702-116 This rotor digs a trench 2" deep and 6" wide. It is used primarily for installing pavers around mulch beds and along sidewalks and driveways.

Rock Rotors

Rock Rotors are designed to be used in extremely rocky conditions. While they will cut through coral, they will not cut through granite. Even though they will cut through extreme rock conditions, they will not perform better than the clay rotors in non-rock soil, i.e., clay soil.

These rotors are sold without points. It requires 4 points (part #701-32C) for each rotor whether it is a 1½" or 3" wide rotor. When an individual purchases a rock rotor, it is suggested they purchase at least 2 spare points. They are digging in extreme rocky conditions and must anticipate breaking a point occasionally. The points are easily installed, the shaft of the point is threaded and each point comes with a nut to secure it in the rotor socket. The nut will not hold the point solid in the socket, there should be a small amount of play (1/16" to 3/32") which takes a little shock away from the point while hitting rocks.

Users of the rock rotor need to check the rotor periodically while in use to insure that all the points are intact. Normally, if a point is broken/missing, the operator will feel a vibration in the trencher because the rotor is out of balance. It still should be visually checked periodically. If a point is missing and the rotor is continued to be used, the socket which the point fits in will be worn away will need to be replaced. The worn socket (part #701-33) can be replaced, but must be removed and

the new socket welded to the rotor. It then must be balanced before use.

Rock rotors are made in two widths, 1 ½" and 3" and various depths as listed below:

702-85 4" x 1 ½" Fits on all Bededgers and Trenchmasters.

702-58 5" x 1 ½" Fits on all Bededgers and Trenchmasters.

12-37 7" x 1 ½" Fits on all Bededgers and Trenchmasters.

12-37A 9" x 1 ½" Fits on Bededger and Trenchmaster models F-990, F-991, F-903, F-904, F-1201 and F-1202.

12-38 12" x 1 ½" Fits on Trenchmaster models F-1201 & F-1202 only.

12-39 7" x 3" Fits on all Bededger and Trenchmaster models, but may be underpowered on F-702, F-703 & F-704 model Trenchmasters.

12-39A 9" x 3" Fits on Bededger models F-990 and F-991, and Trenchmaster models F-903, F-904, F-1201 and F-1202.

12-40 12" x 3" Fits only on Trenchmaster models F-1201 & F-1202.

When installing points on rock rotors, the points must be loose and free to rotate to prevent uneven wear and breakage. The nut must be tightened to the end of the threads. There should be a gap of 1/16" to 3/32" (thickness of a nickel) between the socket and the nut.

Bantam and Redefiner Rotors (3/4" Shaft)

The following rotors fit on the models shown which have a 3/4" shaft. They will **NOT** fit on the Bededger nor Trenchmaster models. Rotor numbers marked with an asterisk (*) are no longer available.

450-100 The 4" Redefining rotor fits on the R450 models and the Bededger Bantam B565, B580 and B590 models.

460-002 4" x 1/2" Wiremaster Mole trenching rotor. Used for installing invisible dog/pet fence with the Wiremaster Mole model # R460HA to a maximum depth of 4".

459-002 10" long x 2" wide Flat sidewalk edger blade for 3/4" shaft.

470-013 5" x 2" Bantam clay rotor fits on Bantam and Bantam Mole.

470-019 Bantam Bedmaster rotor is used only on the Bantam units. Digs the same type trench as the Bedmaster rotors for the Bededgers. It will dig as deep as 5" and the machine is adjustable so it can be positioned to dig only about 3 1/2" deep. Weight 10.2 lbs.

*470-028 3 1/2" deep x 4 1/2" wide Edging block rotor. Only fits on the Bededger Bantam models.

*470-036 5" x 1 3/8" Clay rotor fits on the Bantam and Bantam Mole.

*470-038 7" x 1 3/8" Clay rotor fits on the Bantam and Bantam Mole.

*480-010 7" x 1 1/4" Bantam Mole rotor for installing low voltage wire.

480-011 3" x 1 3/8" Bantam Mole rotor used for dog/pet fence and low voltage wire.

*480-035 4" x 1 1/4" Bantam Mole rotor used for dog/pet fence and low voltage wire.

480-012 5" x 1 3/8" Bantam Mole rotor for installing low voltage wire.

*480-028 5" x 1 3/4" Clay rotor used for drip irrigation.

480-029 6"/7" x 1 3/8" Clay rotor (low voltage)

480-037 7" x 2" Clay rotor (coax cable)

Replacement Clay Points

The following are replacement points for the clay and specialty rotors (not rock rotors). If they are used to replace a missing/broken point, the old/broken point must be removed, the bar must be cleaned and the new point must be welded to the bar. The rotor will then need to be balanced before being put back into use. It may be more economical to replace the rotor rather than replace the points.

12-85 Straight point, 3 5/8" long, 1/2" square and tipped with carbide.

450-507 Straight point, 2 1/4" long, 1/2" square and tipped with carbide. This point is used mostly on the Bedmaster rotors for the Bededger, Bantam, Redefiner units and all rotors with points welded to angle iron.

12-85 BTL This point is bent to the left 12 degrees to enable the rotor to reach the proper width desired.

12-85 BTR This point is bent to the right 12 degrees to enable the rotor to reach the proper width.

12-85L Bent left 45 degrees to obtain the desired digging width.

12-85R Bent right 45 degrees to obtain the desired digging width.

We do make some 1" and 2" wide clay rotors with a $\frac{3}{4}$ inch hole which fit on the very old F-701 Trenchmaster. These are available but are not kept in stock. We stopped making the F-701 in about 1991. Available in digging depths of 4", 5" and 7".

We occasionally manufacture special rotors for clients, depending on the specifications. These are expensive and we only deal directly with the customer when building spec rotors.