R2 Stake System (Patent # 6,702,239 B2)

Single Tree Staking System Products:

"R2 Stake System", a screw in auger-type steel stake with an adjustable anti-rotational coupler and "L" bar, adjustable height strap-bar, UV-resistant adjustable vinyl strap with 2 bolts/washers/nuts, and powder-coated dark green.

Sizes:

- a. 7 foot, 3/4" diameter, Schedule 40 for **5 and small 15 gallon** trees (less than 7') and conifers.
- b. 9 foot, 3/4" diameter, Schedule 40, for **15 gallon and 24 inch box** trees.

Specifications:

R2 Stakes utilized for staking tree sizes of 5 and small 15 gallon trees shall be a minimum of 7 feet in length with an outside diameter of 1.05" and .113" wall thickness.

R2 Stakes utilized for staking tree sizes of 15 gallon and 24 inch box trees shall be a minimum of 9 feet in length with an outside diameter of 1.05" and .113" wall thickness.

Each stake shall have an adjustable height anti-rotational device (coupler/"L"bar) with a yellow indicator line placed at 24" from the bottom of the stake for the recommended minimum installation depth. All R2 Stakes shall have a powder coated baked on finish for rust inhibiting qualities.

Each R2 Stake attached to a tree shall utilize a minimum of one strap-bar. The Strap-Bar shall be installed at the lowest position, which supports the tree in an upright position. Each Strap-Bar shall consist of 1" x .1865" x 12" flat bar secured with two set bolts and utilizing a strap with a minimum $\frac{1}{4}$ " x 1" x 20" 90 Duro Flex PVC with UV inhibitors; secured in place with a minimum of (2) $\frac{1}{4}$ " x 1 1/4" bolts/washers/nuts.

Trees to be staked shall be staked at the time of planting as shown on the plans or specified in the special provisions. One R2 Stake shall be installed approximately 16-18 inches away on the prevailing wind side of the tree. The steel tree stake should be installed to recommended minimum of 24" below finished grade.

Manufactured and distributed By J.R. Partners

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R2 Stake Installation:

- 1. Place the 'R2 Stake' approximately **16 inches** away on the **prevailing wind side** of the tree. The tree should be two to four inches away from the end of the strap-bar. Insert the "L" bar through the hole near the top of the 'R2 Stake' and twist clockwise into the soil.
- 2. Twist the 'R2 Stake' until the yellow indictor line is at or below ground level. Slide the coupler unit over the top end of the stake down to ground level and tighten set bolts. Drive the "L" bar through the hole in the coupler and into the soil. Use the handle of a shovel, rake, or two by two, and pack soil firmly around the stake.
- 3. Tree should be oriented with nursery stake on the same side as the 'R2 Stake'. Nursery stake must be **removed**. If trunk is too spindly to support itself, or has little or no taper; then a flexible auxiliary stake of either 1/4" spring steel or 1/2" bamboo should be used to provide needed support. Auxiliary stake should not extend past 2/3 of the tree. Wrap the ends of the auxiliary stake with tape to prevent rubbing and tie with nursery tape every 10 to 12 inches along the trunk.
- 4. Determine the correct height for the strap-bar keeping in mind it should be no higher than necessary but high enough to hold the tree upright. To locate the correct point to mount the strap-bar, hold the trunk of the tree in one hand and gently bend the top with the other. Find the lowest height at which the top returns upright, and mark the 'R2 Stake' six to eight inches higher than that point. Slip the strap-bar over the top of the 'R2 Stake' to the marked height and tighten the set bolts.
- 5. Place the UV-resistant, PVC strap around the tree, and secure the ends of the strap to the strap-bar using the bolts/washers/nuts provided. **Ensure a flat washer** is placed under each bolt head and nut. Adjust strap to ensure a finger space evenly around the trunk.
- 6. See drawings for further details.
- 7. J.R. Partners makes no claims of warranty due to improper installation, soil and/or weather conditions.
- *** Trees with tree grates will require the "Grate Stake"