

Project**QUIK-TUBE® Pillar Foundations**

QUIK-TUBE™ rigid fiber building forms are the ideal method of pouring cylinder-shaped concrete foundations for deck and porch supports and other loadbearing applications. QUIK-TUBE™ forms can also be used to create attractive bases for lamp posts, fence posts, basketball net posts, mailbox posts and other post-setting applications. Such forms may also be required by frost line building codes.

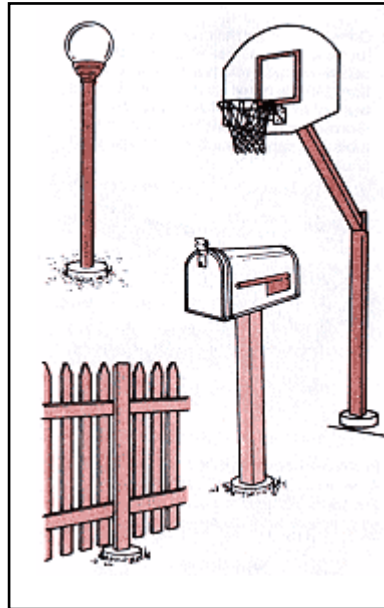
QUIK-TUBE™ forms allow you to place the strongest foundation possible. The inner walls of the form are waxed. This holds in the concrete's water content, which results in maximum curing and strength buildup. Consider that when placed in a hole or dirt form, water can be sucked out of the concrete by the surrounding soil. This shortens curing time and reduces concrete strength. For this reason, many local building codes now specify the use of forms for all footers and foundations used in load-bearing applications.

QUIK-TUBE™ forms are available in 6", 8", 10" and 12" (15cm, 20cm, 25cm, and 30cm) nominal diameters. Each tube is 4' (122cm) long and can easily be cut to length using ordinary power tools. They can be left in place or stripped away after the concrete has cured for 24 hours. For the easiest removal and the smoothest concrete finish, apply a release agent to the inside of the forms.

Pressure-treated wood or metal posts can be secured to the footer by anchor plates or bolts embedded in the concrete. The posts themselves can also be embedded in the concrete to a depth that ensures complete support. The exact method acceptable for load-bearing applications such as decks are subject to local building codes.

For example, in areas prone to termite problems, the code may specify the use of pressure-treated lumber attached to the footer using anchor plates. The elevation of the footer may be several inches above grade. These steps keep the lumber from direct contact with the soil, a condition that reduces the likelihood of termite problems.

Flag, basketball and playground equipment poles may require embedding in concrete to certain depths, often up to 1/3 overall pole height. Check local codes and/or pole manufacturer recommendations.



Required Tools and Materials

- QUIK-TUBE™ Building Forms
- QUIKRETE® Fast-Setting Concrete or QUIKRETE® Concrete Mix
- QUIKRETE® All-Purpose Gravel or crushed stone
- Shovel or posthole digger
- Tamper hammer
- Mason's level
- Lumber for braces and nails
- Wood preservative and/or rust inhibitor
- Paintbrush concrete release agent (if required)
- Anchoring hardware (if required)

Step-by-Step

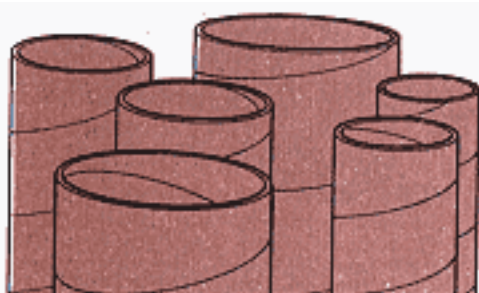
Positioning the Form

1. The diameter of the QUIK-TUBE™ form should be at least double the post or pillar diameter it will support. When supporting deck posts or other load-bearing members the form should extend down below the frost line.

2. Use a posthole digger or shovel to dig a hole to the proper depth. Do not make the hole wider than needed to minimize backfilling.

3. Place 6" (150mm) of QUIKRETE® All-Purpose Gravel on the base of the hole to help with drainage.

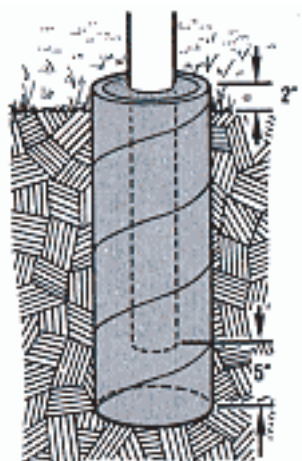
4. Cut the QUIK-TUBE™ rigid form to size. In most cases you will want to size the form so that the finished footing will extend out of the ground approximately 2" to 6" (50mm to 150mm). This protects lumber from direct contact with the ground and allows rainwater to drain rapidly from the area.



5. Center the form in the hole. Check that the top of the form is level using a mason's level.

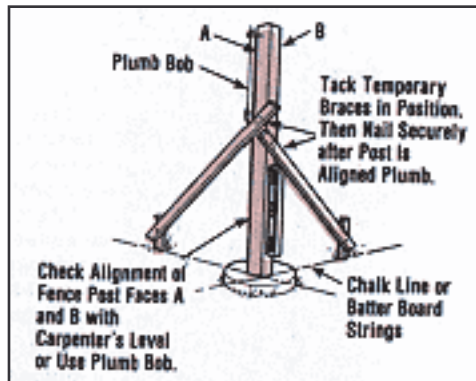
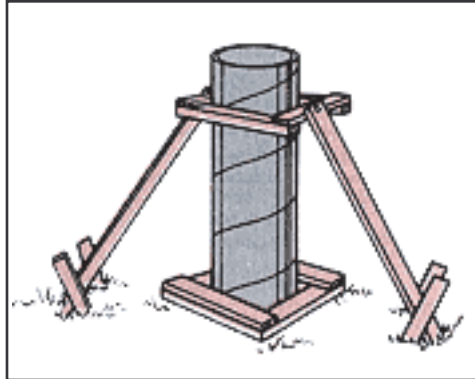
6. Carefully backfill against the sides of the QUIK-TUBE™ form to support the tube and keep it from shifting during the pour.

7. When forms are placed aboveground in applications that will be backfilled later, make sure the bottom of the QUIK-TUBE™ is properly braced. Build a bottom collar out of scrap lumber, and keep the form plumb by adding braces above its midpoint as needed. Nail and stake all braces firmly in place.



Positioning the Post

When the post or pillar is to be embedded in the concrete, position it inside the QUIK-TUBE™ prior to beginning the pour. Use pressure-treated lumber or apply creosote equivalent to prevent below-the-ground rot. Coat metal posts with rust inhibitor. Center the post or pillar inside the form. Brace it as needed to prevent shifting during the pour and while the concrete sets. Use a mason's level to make certain the post is plumb and its top is level.



Estimating the Concrete Needs

For a cylindrical form, such as QUIK-TUBE™, multiply the square of the form's radius (one-half its diameter) by 3.1416. This gives you the area of the QUIK-TUBE™ form. Multiply this area by the form height to determine the volume of concrete needed. The table given below simplifies the calculation process for QUIK-TUBE™ jobs. It lists the bags of mix needed per linear foot of QUIK-TUBE™ form for the various tube diameters.

For example:

If you are using 50-pound (22.7kg) bags of QUIKRETE® Fast-Setting Concrete Mix, to pour the 8" (20cm) diameter, 4' (1.2m) long form that calculation would be:

If you are using 80-pound (36.3kg) bags of QUIKRETE® Concrete Mix, the calculation would be:

$$3/5 \text{ bag per linear foot} \times 4' = 2 \frac{2}{5} \text{ bags}$$

QUIK-TUBE™ Calculations					
PER FOOT OF DEPTH		DIAMETER OF QUIK-TUBE™			
QUIK-TUBE™ size	cu ft per bag	6"	8"	10"	12"
# of 40-lb bags	0.3	0.7	1.2	1.8	2.6
# of 50-lb bags	0.375	0.5	0.9	1.5	2.1
# of 60-lb bags	0.45	0.4	0.8	1.2	1.7
# of 80-lb bags	0.6	0.3	0.6	0.9	1.3

Positioning the Concrete

QUIKRETE® Fast-Setting Concrete is the ideal concrete mix for this job. It gains its initial set in 20-40 minutes and reaches strength of 1000 psi (6.9MPa) in 1 day so construction work can continue almost uninterrupted. QUIKRETE® Concrete Mix is another excellent mix for constructing QUIK-TUBE™ footers.

1. Apply concrete release agent if the smoothest possible concrete surface is desired.
2. Mix and place the concrete in the form. Work it down and around any post or pillar set in the form, but do not use a mechanical vibrator to settle the concrete.
3. Carefully embed any anchor plates or bolts needed in the top of the form. Make absolutely certain these anchors are centered and level before the concrete gains its initial set.
4. If forms are to be removed, do so within 24 hours. Cut the QUIK-TUBE™ with a sharp knife or power saw set to the correct cutting depth. Simply peel the form away from the concrete.

For Best Results

- Store QUIK-TUBE™ forms at least 4" (10cm) off the ground. Cover them to keep dry.
- Never place concrete into a wet QUIK-TUBE™ form. Never use a mechanical vibrator to compact concrete inside a QUIK-TUBE® form.
- Never reuse a QUIK-TUBE™ form.