

UNITED



ASSEMBLERS

Beyond Instructions

Professionals Installation Guide
for
In-Ground Basketball Goals

This ongoing instructional series is sponsored in part by:



**Become a UAN
Sponsor**

[Click Here](#)

Introduction to Installation

Before you start on this project, you might want to do your home-work.

First...

Do you have the mechanical aptitude?

You don't need to be a rocket scientist to install a basketball goal but you definitely need to know the difference between a hammer and a screwdriver.

You also need to know... it "IS" a labor intensive job. Digging a hole (the foundation) for a basketball system takes a few special tools and a lot of muscle. You cannot dig effectively with only a spade shovel (see Day One Digging Tools).

DO NOT cut corners digging your foundation unless you know what you are doing. Almost all goals are designed for "all" conditions... Do you know your soil conditions, I mean really know them? If not... **DO NOT CUT CORNERS**... I can't tell you how many times a goal fell over because an inexperienced tech or home owner that didn't dig the required foundation by the locations soil conditions and the products directions.

After you have the foundation in, you need to wait a minimum of four days to allow the concrete to harden and cure enough to stand your goal. The pole standing straight up is not the problem to a premature assembly after the foundation; it is the cavaliered backboard forcing the pole to lean which pulls on the back two j-bolts and "will" loosen them.

Second...

Do you have the right tools and help?

Although as true as it is... the foundation is labor intensive; the standing of the backboard can be DANGEROUS!!!

I had a customer that called and said they needed help replacing the backboard only because they had to order a new one after their attempt to install themselves shattered when it fell on their son. Yes their son was rushed to the hospital with serious injuries; but he ended up okay... luckily!!!

And finally...

Again tools; if you don't have the right tools and find you have to buy them just to complete this project, consider this... Why are you going to buy tools you are most likely going to use once?

By the time you buy all the tools you need and should have; just paying a professional will have you coming out way ahead of the "GAME"... puns intended :-)

www.UnitedAssemblers.com

First Things First

**Call 811
Before
Digging**

Before digging to install the new basketball system...
someone needs to call to have the utilities marked...

It's The Law!

No one can dig without getting clearance first, even if a contractor or home owner "thinks" they know there is nothing down there.

When it comes to installing basketball goals, typically the home owner calls for digging clearance; but the contracting technician is advised to call if they think the customer does not know why this procedure is required... it is a courtesy and a comfort to know it was done.

For most parts of the country there is one number to call 811 or <http://call811.com>

If you are a contracting technician...

Make sure the customer knows the following before committing to the project:

- The tech is not responsible for irrigation systems if they get nicked during the dig.
- The tech is not responsible for electrical, TV/Internet cables, invisible fence wiring or any other underground obstacles if they get damaged or nicked during the dig.
- The tech does not haul away the dirt dug out for the foundation. We will dump it in a location of the customers choice but not more than 200 feet away on their property.
- The tech does not haul away boxes the product came in (including skids and the concrete bags). We do break them down and place them in trash bags and will move to a location of the customers choice but not more than 200 feet away on their property.
- Do not cut your fees just to get the job, basketball goal installation is a construction project. Suggested pricing can be found by here:

<http://unitedassemblers.com/Training/Pricing-Guide.pdf>

- Concrete takes at least 4 days to cure (depending on weather)
- If you are an independent contracting technician, the entire installation fee is collected before starting the job.

IMPORTANT

The key to a quick and successful installation just like anything else... you **MUST** have a foundation that is as near perfect as you can get it.

The few extra minutes you spend getting the pole or j-bolt system square and plumb, will make your final assembly steps much easier and your system will be professionally installed.

Read The Instructions

Unless you have installed enough of any in-ground system that you could do it in your sleep...
READ THE DIRECTIONS!!!

There are many manufactures; and the assembly of each of their in-ground basketball goals are designed in many different ways. Getting to know all of them and their steps to installation will take experience; however, the basics of the actual installation is the same with them all.

You must call the DIG number



First Day:

- You need to find out the concrete requirements for any particular system (more on how to calculate the volume on another page in this guide).
- You need to dig the foundation for the system (**DO NOT CUT CORNERS HERE**).
- You will mix and pour the concrete. (mix one bag at a time using a rigid garden rake and mix the concrete to about the consistency of a thin milk shake).
- Before dropping in the j-bolt system - trowel the concrete to give it a finished look and making sure the concrete is level with the playing surface (typically a driveway).
- Lower the j-bolt system and work it back and forth, up and down to make sure the concrete completely surrounds the bolts to their entire length.
- You will now need to go back and finish the concrete to have a nice finished look.
- Clean up and allow the concrete to cure at least (4) four days.
- Inventory the system... if there is anything short... now is the time to know. If parts are missing or broken, call the manufacturer now so the replacement parts will be there by the time you go back to stand the system up.

Second Day (after (4) four days of curing):

Unless you have special tools and equipment you will need at least 3 strong technicians to raise many backboards.

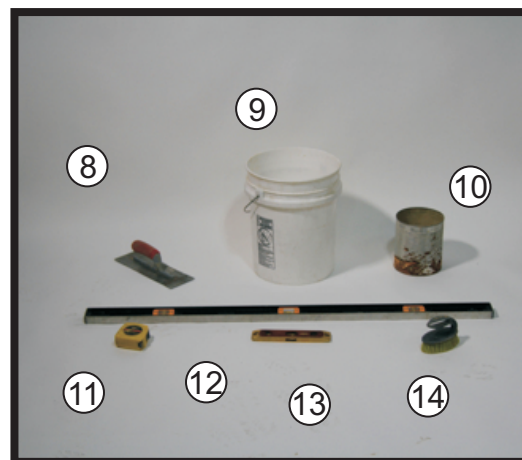
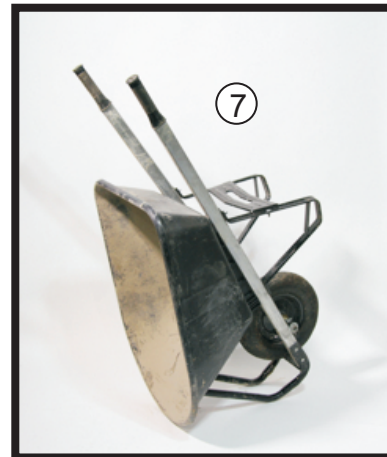
- Unpack the system, sort and layout in approximate order of assembly
- Follow the steps according the manufacturers instructions.
- Make sure all the nuts and bolts are secured to their proper positions.
- Clean-up all packing materials and place in trash.
- Have customer sign-off on your work-order and you are finished!

**Call 811
Before
Digging**

Day One Digging Tools

**Call 811
Before
Digging**

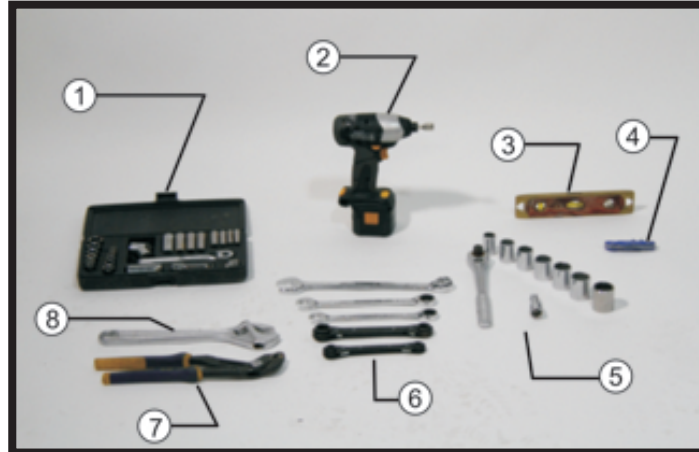
- ① Broom
- ② Spud Bar
- ③ Short Rake
- ④ Spade Shovel
- ⑤ Post Hole Digger (Tips cut flat)
- ⑥ Work Gloves
- ⑦ Wheel Barrow
- ⑧ Trowel
- ⑨ Five Gallon Bucket
- ⑩ One Gallon Can
- ⑪ Tape Measure
- ⑫ Four Foot Level
- ⑬ Bullet Level
- ⑭ Brush



**Call 811
Before
Digging**

Day Two Assembly Tools

Of course you will develop your own tool arsenal and you will have your own favorite brands.



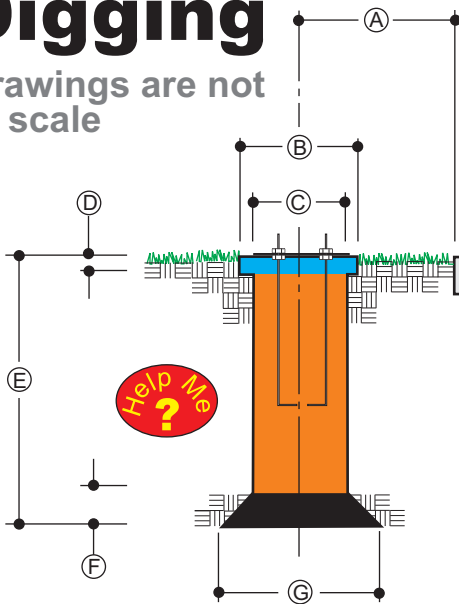
- ① 3/8" Drive Socket Set
- ② Impact Driver (Corded or Cordless... corded is stronger)
- ③ Bullet Level
- ④ Razor Knife
- ⑤ 1/2" Drive Socket Set
- ⑥ Assorted Wrenches (Boxed Combo Sets -
- ⑦ Large Channel Lock Pliers
- ⑧ 12" Crescent Wrench
- ⑨ Not shown... Hammer

Digging

Drawings are not to scale

DO NOT CUT CORNERS

All basketball systems are designed for soft soil conditions... **IMPORTANT**; If you are not an experienced installer and are not sure about your soil conditions... **GO BY THE INSTRUCTIONS**



Playing Surface and Installation location is level

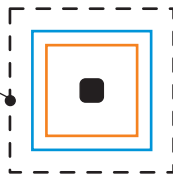
Best case scenario is a level installation location where the playing surface and the foundation location areas are level.

Typically no form is needed in this situation.

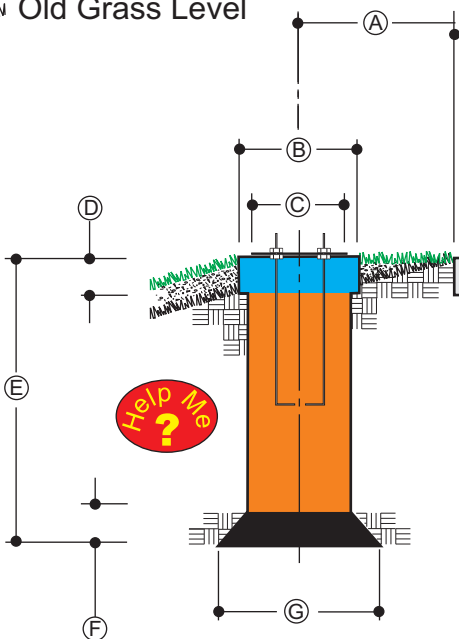
The following definitions and dimensions are typical to the system you are installing.

- (A) - This is the measurement from the playing surface to the center of the pole. To get this measurement you must know the overhang of the system and where the backboard will align on the playing area.
- (B) - This is the measurement of the top cap (optional).
- (C) - This is the main hole... **DO NOT** under "**ANY**" circumstances reduce the size of this measurement as called out in the products instructions.
- (D) - This measurement (if you do it) should be at least 2 inches deep or deep enough for the back measurement (B) to be at playing level.
- (E) - The overall depth of the foundation. This measurement can be slightly modified to the soil conditions. For rocky or clay conditions you can shorten the depth to the frost line at a minimum depth of 32 inches for backboards up to 60 inches and 40 inches for 72 inch backboards.
- (F) - This measurement (mandatory) should be least 6 inches in height.
- (G) - This measurement (mandatory) should bell out in least 3 inches.

Top View Typical For All Bases.
"Note Colors"



- Pole
- Top Cap (Forming area)
- Main hole
- Belled Out Area
- ▨ Existing Ground
- ▨ Backfill
- ▨ Finished Grass Level
- ▨ Old Grass Level



Playing Surface and Installation location are not level

In this situation, all is not lost. All you need to do is backfill the foundation with the dirt you dug up for the foundation.

Dig your foundation as you would for a best case scenario... The main difference will be you need to build a form to hold the concrete while it sets and of course backfill on second day.

After the concrete sets (second day assembly work) remove the forms and distribute the dirt from digging the foundation around it bringing the dirt up to the foundations top. There should be plenty enough dirt to do this.

Before You Pour

VERY IMPORTANT

Concrete starts curing fast (depending on the weather). So it is **VERY IMPORTANT** to make sure you have enough bagged concrete on hand before you start mixing.

You are almost always better to mix a little (and I do mean a “little”) wet than dry.

If you mix to wet... the j-bolt system sinks as it sets up. This will typically present an unsightly foundation; however, it will be a safer since as you lowered the j-bolts into a wet mix, there was most likely no air pockets created. This situation will also take longer to cure.

If you mix to dry... the j-bolt system will most likely have air pockets and will not be safe. At first the installation may look good but over time as the goal system is played on the j-bolts could work loose.

It is better to mix a little on the wet side from the bottom up until you have a bag or two left to mix that will finish off the top of the foundation. Mixing the last bag a “little” dryer will allow the j-bolt system to set firmly on top without it sinking into the wet concrete and allow the j-bolts in the wet section do what they were designed to do.

If you pour and find yourself short a bag or two; you are not going to end up with a stable j-bolt system. So... use the following formulas to calculate how many bags of concrete you need.

Calculating the number of bags of concrete for basketball goals:

Everything must be converted to feet.

The width of an 18” hole in feet:
Divide 18” by 12” = 1.5'

The length of an 18” hole in feet:
Divide 18” by 12” = 1.5'

The depth of a 32” hole in feet:
Divide 32” by 12” = 2.7' (rounded up)

One 60 lb. bag of concrete yields 0.45 qu. feet
One 80 lb. bag of concrete yields 0.6 qu. feet

To calculate the number of bags of concrete needed for a ROUND hole...

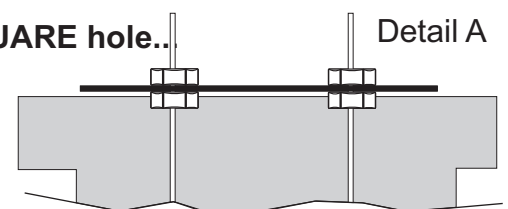
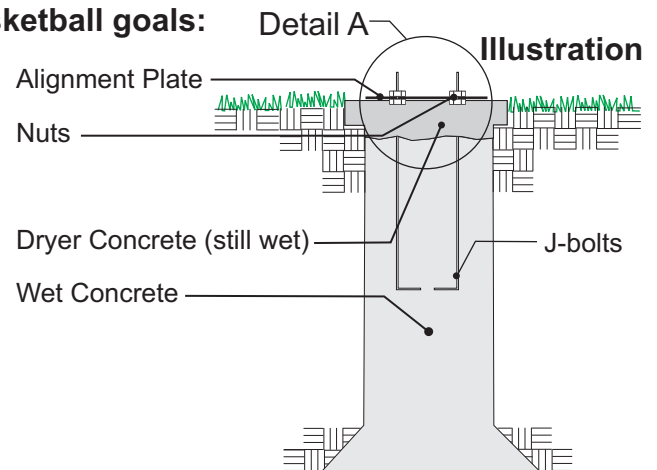
W = Width of the circle in feet
D = Depth in feet
CF = Cubic Feet of concrete

$$3.14 \div 4 \times W \times W \times D = CF \div (.45 \text{ or } .6) = \text{number of bags (ALWAYS round up)}$$

To calculate the number of bags of concrete needed for a SQUARE hole...

L = Length of the hole in feet
W = Width of the hole
D = Depth in feet
CF = Cubic feet of concrete

$$L \times W \times D = CF \div (.45 \text{ or } .6) = \text{number of bags (ALWAYS round up)}$$



Assembly

Although there will be some tips here... the best suggestion that can be given to "ANYONE" when it comes to assembly... is to follow the manufacturers INSTRUCTIONS!!!

Uniformity is key to end-up with a professional looking installation... make sure as you insert all the bolts so the bolts are all on one side and the nuts are on the other. The Bolt heads are cleaner and should be on the street side of the system if installed in a driveway.

