



**Growing Spaces**  
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# Preparing & Budgeting for a Growing Dome

## THE KIT

Your Growing Dome<sup>®</sup> kit essentially consists of the following:

- Foundation wall units with connecting hardware
- Structural units for dome with connecting hardware
- Dome outer covering (glazing & tape)
- Insulated entry door and door framing
- North wall insulation panels
- Vents (opening windows) complete with automatic openers
- Solar powered, thermostatically controlled cooling fan
- Undersoil temperature management fan, solar panel, and distribution box
- Hardware plus liner for making your own water tank

## ITEMS SUPPLIED BY OWNER

The Growing Dome<sup>®</sup> is purchased as a kit, designed to be owner-installed. However, since the following items are bulky, expensive to ship and inexpensively available at your local building supply store, they are not included in the kit. We are attempting to save on shipping costs for the dome owner by handling them in this manner.

The under-soil heating ducts, perimeter and wall insulation, sand, 3/4 inch washed rock for Dome perimeter, sheet metal\* and lumber for the water tank will be purchased locally by you, or your crew. A detailed list with measurements and quantity will be provided along with the installation package you receive from Growing Spaces<sup>®</sup>.

Approximate cost of the above items is as follows (varies according to local suppliers):

15 foot diameter Dome.....	\$ 650.00
18 foot diameter Dome.....	\$ 700.00
22 foot diameter Dome.....	\$ 800.00
26 foot diameter Dome.....	\$ 1050.00
33-foot diameter Dome .....	\$1400.00
42-foot diameter Dome .....	\$1850.00

\* Sheet metal can be found at a heating & air conditioning or sheet metal supply store.

## SELECTING A SITE

You may want to check to see if there are any restrictions on greenhouses in your area - local subdivision, county, or city. Planning and zoning departments may be consulted on this matter. Growing Spaces® can provide you with structural analysis and drawings stamped by an engineer, if required, to give to your local Building Department. In addition, neighbors may be informed and, hopefully, will support and even benefit from your excess produce. The dome can usually be classified as an agricultural or temporary structure, as it bolts together and unbolts, if you choose, and does not necessarily need a concrete foundation. Here are some factors to consider when choosing the site for your dome:

- 1. Solar horizon** - Preferably unrestricted to the south, east and west - in that order of preference. You can consult with a solar architect in your area if you have questions or need advice. A solar pathfinder is a useful tool to borrow. If you have a lot of sun in the summer, this may cause overheating problems. Deciduous trees, especially on the west side of the dome, may be helpful as they lose their leaves, allowing solar gain in the winter. We also offer a shade cloth option, which can ease overheating. If you have to choose between morning sun and afternoon sun, the plants prefer the morning sun to get them off to an early start. The dome site needs to have a minimum of 4 to 5 hours of clear sun for the dome to perform effectively. If it has less than this, the dome will still perform, but you may need to add auxiliary heat in the winter months.
- 2. Proximity to dwelling** - The closer the dome is to the house, the easier it is to pop in to pick dome-fresh greens or a few herbs for your salad or stir-fry. Also, it's closer to power, to water, to check on that ripening tomato, or if you need to shovel a pathway through the snow!
- 3. Shelter** - Having trees to give some shelter from the wind is useful in reducing heat loss in the winter. Evergreen trees on the north side of the dome also help minimize heat loss. In addition, trees can reduce stress on the vents during high winds.
- 4. Soil** - It is preferable to start with a level site, otherwise, use a site sloping to the south. A sloping site needs to be leveled, and usually owners choose to excavate the high side in combination with building up the low side, often using a retaining wall made of landscape timbers or rocks. Most dome owners build raised beds directly on top of finished grade and bring in good topsoil for the beds. However, if you choose to plant directly at grade, and if your soil is poor and rocky, you may choose to excavate down a foot or two, remove the poor soil and bring in good topsoil.

It is strongly advised to remove all perennial weeds before grading, as removing them later is a proverbial pain. Many dome owners have regretted omitting this step. Also, remove creeping weeds with underground rhizomes to a distance of 2 to 3 feet away from the dome, as they can creep under the wall and right through the insulation! Helpful Hint: If time permits, cover the area with black or clear plastic for 1 to 2 months prior to beginning. This will help to kill the weeds in this area without dangerous chemicals.

If you have burrowing animals, you may want to buy some hardware screen (1/4" squares) to keep them out of the dome. Rabbits, mice, and skunks may try to dig under the foundation wall. Hardware screen placed over the perimeter skirting should keep them out. If you have gophers, prairie dogs, or voles, all of which burrow deeper, you may want to consider enough hardware screen to cover the entire inside floor of the dome. Gophers have been known to tunnel under the foundation wall and pop up in the middle of a 24" raised bed! (Detailed instructions are included in the Installation Manual. This is considered an option and is not included in the kit.)

## SERVICES

Some dome owners choose to install electricity and water supply, although these are not necessary for the dome to function and can be added later. Some owners use polyethylene water pipe, which can freeze and thaw without rupturing. Plants in the dome can also be watered directly from the water tank during wintertime, as water demands are usually low and the tank can be topped off once a month or so. In the summer, the dome can be hand-watered, using a hose or a sprinkler system. Propane heat can be used for an auxiliary heat supply for sub-zero winter nights and is preferred by most Dome owners. Electric heat is helpful, but expensive. The 26' Growing Dome<sup>®</sup> is designed to require no electricity. It has a solar powered cooling fan, and more fans can be provided for hotter climates for an extra cost.

Growing Spaces<sup>®</sup> can give you personal advice on your particular location and we are more than happy to consult on any aspect of installing or maintaining your Growing Dome<sup>®</sup>.

### Installation Standard Cost

The following charges are for the installation of the **basic Dome structure**, and so do *not* include site preparation or excavation or installation of the blue-board skirt, as identified in the Installation Agreement, as it has been found more economical for an outside contractor to do the leveling and excavation. Excavation quotes, however, are available from Growing Spaces<sup>®</sup> and will take into consideration: contour, design and degree of difficulty (rocks, etc.). These costs do not include delivery, shipping or travel costs:

15-foot diameter Dome.....	\$ 1125.00
18-foot diameter Dome.....	\$ 1729.00
22-foot diameter Dome.....	\$ 2420.00
26 foot diameter Dome .....	\$ 3025.00
33 foot diameter Dome .....	\$ 3675.00
42 foot diameter Dome .....	\$ 4745.00

**2010 Planting Beds Estimate**  
**(Actual costs will vary according to materials selected and Design)**  
(includes Labor)

15-foot diameter Dome.....	\$ 400.00
18-foot diameter Dome.....	\$ 500.00
22-foot diameter Dome.....	\$ 800.00
26 foot diameter Dome .....	\$1000.00
33 foot diameter Dome .....	\$1500.00
42 foot diameter Dome .....	\$2500.00

**2010 Soil Estimate**  
(Cubic yards)

**Soil volume varies according to wall height and bed design.** This *ballpark estimate* is based on most of the Dome being given over to growing beds as opposed to sitting areas, but would take into consideration pathways.

15-foot diameter Dome .....	4 yards
18-foot diameter Dome.....	6 yards
22-foot diameter Dome.....	12 yards
26 foot diameter Dome .....	20 yards
33 foot diameter Dome .....	30 yards
42 foot diameter Dome .....	45 yards

**Plants Estimate**

Due to the wide diversity and types of plants that can be obtained and whether you are using bedding plants or seeds to start your plants, actual estimates on this are not available. Please refer to square footage of each Growing Dome for estimating the costs on this portion of your project.