

RADIUS TRACK® DOMES PACKET

DOMES CONTENT

Wondering how to build a dome the quick and easy way? Start by reviewing this informative Domes Packet, which includes the following topics:

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- [BASIC DOME KIT](#)
- [ON-SITE ASSEMBLY](#)
- [INFILL APPLICATION \(Hybrid Dome\)](#)
- [DOME PLANNING & ENGINEERING](#)
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STRUCTURAL DOME COMPONENTS

COMPRESSION RING - All Radius Track dome kits include a structural steel compression ring serving as the securing base for the top of the dome ribs. The compression ring will be sized according to the dimensions of the dome and the total number of ribs in the structure.

RIB PROPERTIES

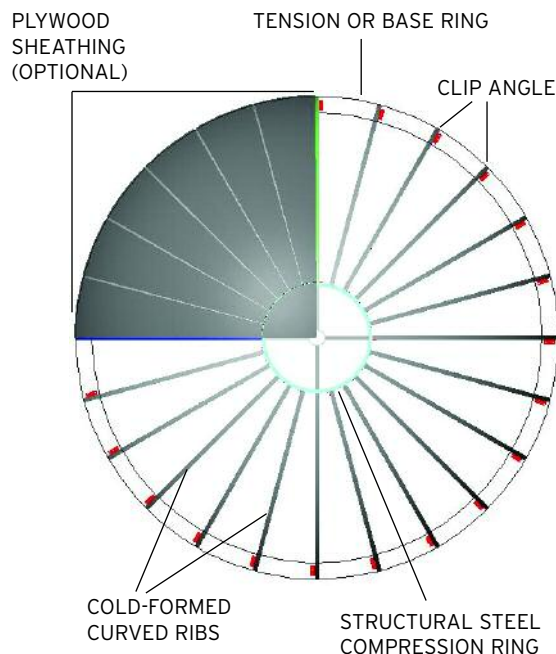
- **Rib Spacing:** Typical spacing of the ribs is 16 to 24 inches on center to accommodate cladding material dimensions for exterior dome finish.
- **Rib Size:** The size of the ribs will be based on meeting engineering requirements specified by the dome size and all other contributing structural parameters.
- **Rib Gauge:** The gauge of the rib material will be based on meeting the engineering requirements in conjunction with the size of the rib material.
- **Rib Reinforcement:** If necessary clinching straps up to 1/8" thick can be added to either the inside or outside of the ribs for additional strength.

TENSION RING - A tension ring at the base of the dome is required on some domes, depending on the type of support structure the dome will be secured to. If the dome will be secured to a rolled steel tube or beam it is less likely that a tension ring will be necessary.

ANGLE CLIPS - Angle clips are provided for connecting the dome ribs to the compression ring and the base. Radius Track does not supply the fasteners for securing the angle clips.

PLYWOOD SHEATHING - As an option Radius Track offers pre-cut, plywood sheathing. For easy installation the sheathing is contour-cut into sections to match the rib structure of the dome and sized for your specific application.

TOP VIEW TYPICAL DOME



DOMES KIT BEING ASSEMBLED
ON PROJECT SITE



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BASIC DOME KIT

When you order a Dome Kit from Radius Track you will receive all of the pre-shaped structural parts ready for assembly.

The side view below illustrates the parts supplied in a typical Radius Track Dome Kit.

- Compression ring
- Ribs
- Angle clips
- Tension ring (if applicable)*, or base ring
- Rib cross-bracing (not shown in diagram)

In the diagram, the portion above the actual dome represents anything that may be affixed to the top of the dome such as a cupola, a finial, etc. For engineering purposes it is important to know what will be mounted on top of the dome. Radius Track can accommodate specific mounting needs and skylight openings with proper advance notice.

In the diagram the portion below the actual dome represents the structural profile of the actual mounting surface that the dome will be attached to. Typical mounting surfaces include:

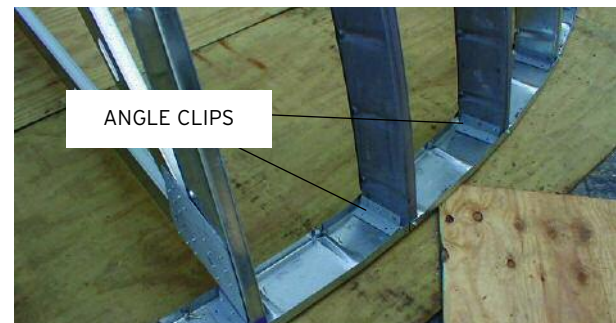
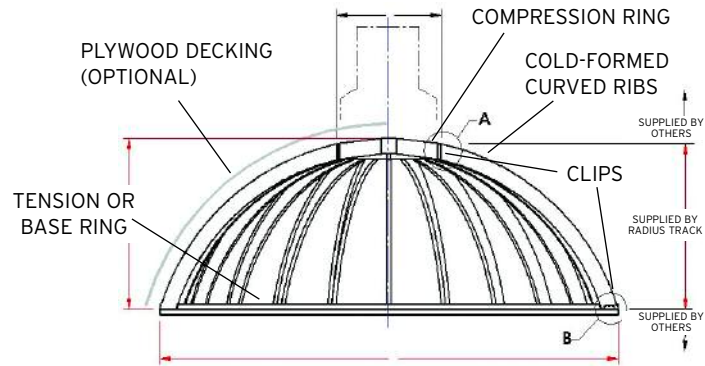
- Continuous rolled beam or tube (recommended method)
 - *In this mounting application a tension ring is not required.
- Minimum 3 inches of 3000PSI concrete
- Minimum 18 gauge steel decking

ON-SITE ASSEMBLY

THE FIRST PHOTO ILLUSTRATES THE ANGLE CLIPS SECURING THE DOME RIBS TO THE BASE RING.

THE MIDDLE PHOTO SHOWS ASSEMBLY OF THE OPEN DOME TO THE LEFT, THE COLD-FORMED CURVED STEEL RIBS ARE BEING CONNECTED TO THE COMPRESSION RING.

THE BOTTOM PHOTO SHOWS A DOME THAT HAS BEEN SHEATHED WITH PRE-CUT CONTOURED PLYWOOD AND IS NOW BEING WEATHERIZED.



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INFILL APPLICATION (HYBRID DOME)

In some larger dome applications Radius Track's lighter cold-formed dome ribs are used in conjunction with heavier structural steel members. Using the Radius Track ribs as in-fill in domes 45' in diameter or more provides several advantages:

LABOR COST SAVINGS

- Quicker on-site installation
- Cold-formed material does not require expensive iron workers
- Lighter accurate materials speed up the handling and assembly process
- Cold-formed material allows for faster attachment of sheathing

MATERIAL COST SAVINGS

- Cold-formed material is less expensive

The photos to the right show Radius Track cold-formed ribs used as infill in combination with structural steel on a 60' dome. The smaller 40' apse is formed completely with Radius Track cold-formed ribs.

DOME PLANNING & ENGINEERING

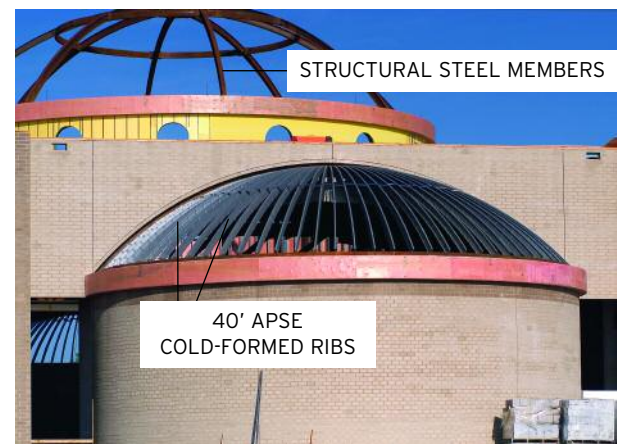
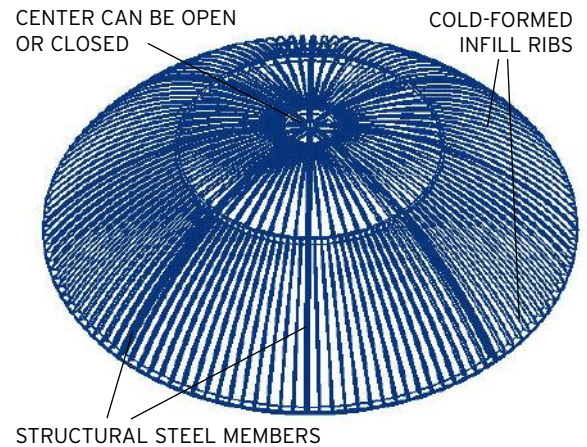
Ideally for the engineering of the dome takes place during the overall project planning. Contacting Radius Track early in the project planning phase will allow the engineer of record to work with Radius Track and incorporate the dome engineering process into the overall planning.

Specific structural requirements of the dome will be based on climatic and geographic factors including wind-loads, snow-loads, dead-loads, live-loads, and seismicity. All applicable building codes will also need to be taken into account as part of the engineering process. Radius Track has a great deal of experience in facilitating dome design requirements in conjunction with architectural, contractor and engineering specifications. All Radius Track domes are designed to meet IBC 2000 Building Code requirements.

Advantages of bringing Radius Track into the process early are:

1. **Timeline** - Radius Track's early involvement will ensure the dome you need is delivered to the project site ready for assembly when you need it.
2. **Costs** - Early involvement means getting a dome that is made to meet the specific requirements for the project at the most reasonable cost possible. In addition lead-time is shortened, holding down expenses due to delays.
3. **Sheathing** - Radius Track's early involvement will also ensure that if pre-cut contoured plywood sheathing is needed it will be delivered with the Dome Kit, allowing the weatherizing and cladding process to take place on schedule.
4. **Expertise** - When Radius Track is brought into the process early you gain project specific expert advice and consultation from the company as often as you need it.

TOP VIEW TYPICAL DOME



RADIUS TRACK® DOMES REQUEST FOR QUOTATION

Company: _____

Date: _____

Address: _____

City: _____ St: _____ Zip: _____

Ph: _____ Fax: _____

Contact name: _____

Title: _____

Project Name: _____

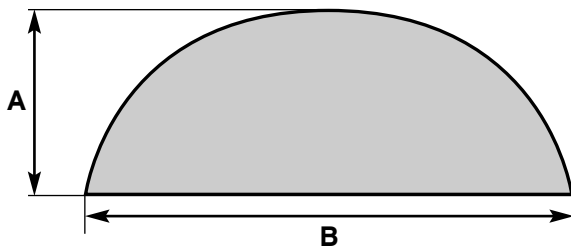
TO ASSIST WITH THE QUOTE, PLEASE PROVIDE AS MUCH INFORMATION AS POSSIBLE WHEN ANSWERING THE FOLLOWING QUESTIONS.

1. In what city, and/or zip code will the project be constructed?

2. Will the dome be: (check below)

- Interior
- Exterior

3. What are the dome dimensions?



A = Height _____ B = Width _____

4. If the dome is exterior what will the base be mounted to? (check below)

- Structural steel
- Concrete
- Steel decking
- Wood framing
- Other _____

5. Will anything be mounted on top of the dome (cupola, finial, etc.)?

6. Will anything be attached to the inside of the dome (chandelier, etc)?

7. Will the dome have a skylight or any other openings?

8. Would you also like to get a quote on pre-cut plywood for the sub-cladding deck on the dome?

- Yes
- No

9. What will the finish dome be covered with? (standing-seam, copper clad, etc.)

10. Is the quote for a bid or an actual awarded project?

- Bid
- Awarded Project

11. Please specify the actual due date of the proposal. Needed no later than:

____ / ____ / ____

12. Approximately when will the dome construction begin?

____ / ____ / ____



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