

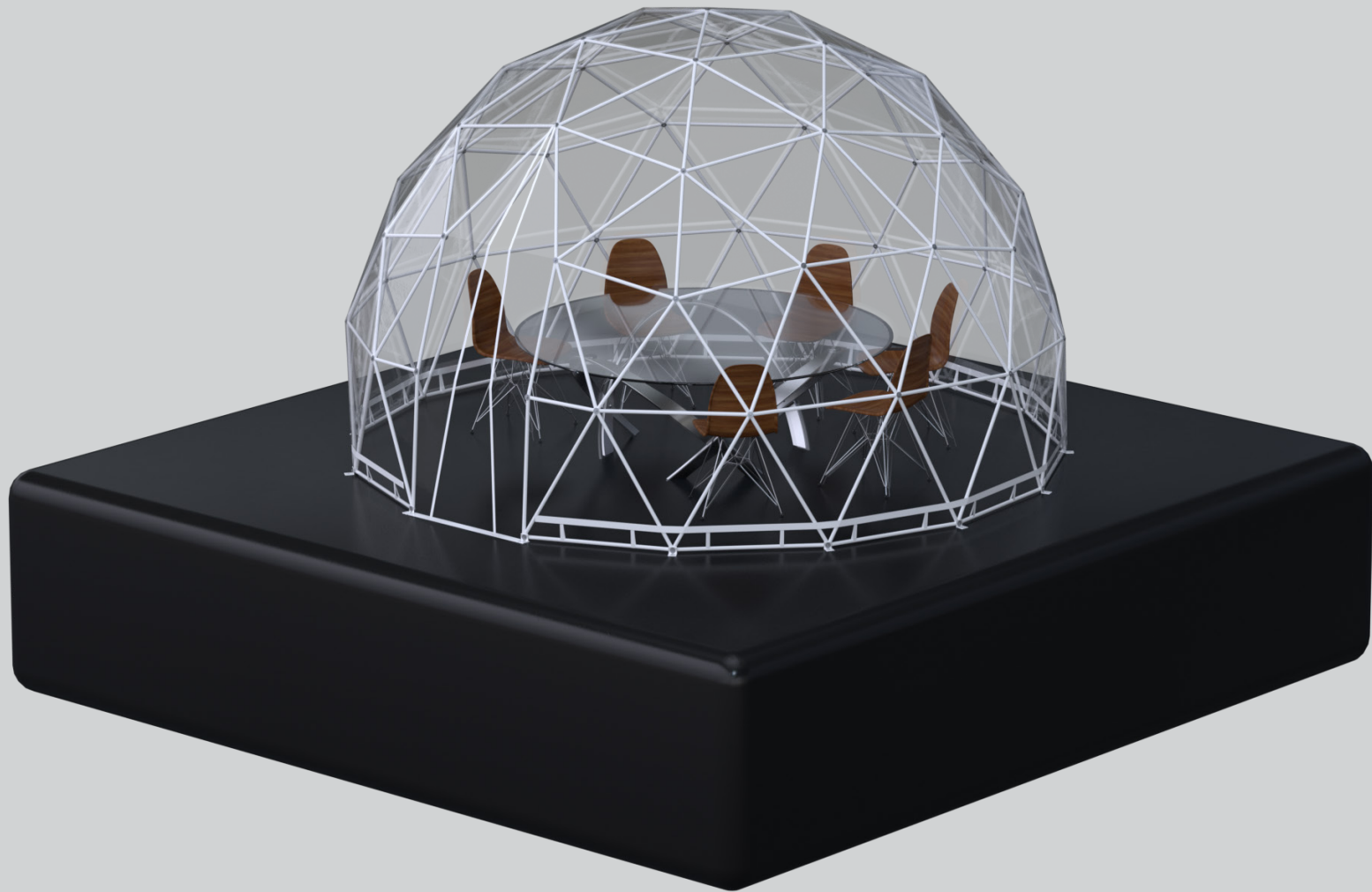
# WARNING!

DO NOT UNPACK COVER IN COLD WEATHER.

ANY DAMAGE RESULTING FROM FAILURE TO READ AND  
FOLLOW ALL INSTRUCTIONS WILL VOID WARRANTY  
AND COULD LEAD TO DAMAGE OF PRODUCT,  
PROPERTY, INJURY OR DEATH.

# DOME INSTRUCTION MANUAL

4m Geodesic Dome



# TABLE OF CONTENTS

Section Topic	Page Number
Item list	1
Hardware Overview and Information	2
3D Frame Diagram - Right Angle View	3
2D Frame Diagram - Top View	4
Row by Row Strut Placement	5
Door Frame and Door Hub View	6
Measurements	7
Dome Maintenance, Storage and Repair	8
Ballasting / Anchoring Options and Information	9
Hub Hardware and Arrangement	10
Frame Construction Step by Step Instructions	11
Dome Cover Installation Step by Step Instructions	16
Finishing Touches	17
Final Checklist	18

## HARDWARE

ITEM NUMBER	ITEM	QUANTITY	DIMS W x L x H	WEIGHT	UNIT
T-1	Nuts	68	5/16"	0.32	lbs
T-2	Bolts	62	2" x 5/16"	1.16	lbs
T-3	Nylon Washers	136	5/8"OD x 5/16"ID	0.04	lbs
T-4	Nylon Acorn Nuts	68	1/2" x 5/16"	0.08	lbs
T-5	Anchor Plates	15	4" x 2 3/4" x 3 1.4"	5.55	lbs
T-6	Bolts	8	1" x 5/16"	0.08	lbs
T-7	Bolts	8	1/4" x 7/32"	0.04	lbs
P-1	Cover	1	N/A	83.15	lbs
P-2	Frame	See page 5	See page 5	191.9	lbs
P-3	Zip Ties	28	20" x 3/8"	0.18	lbs

*\*P items not pictured on page 2*

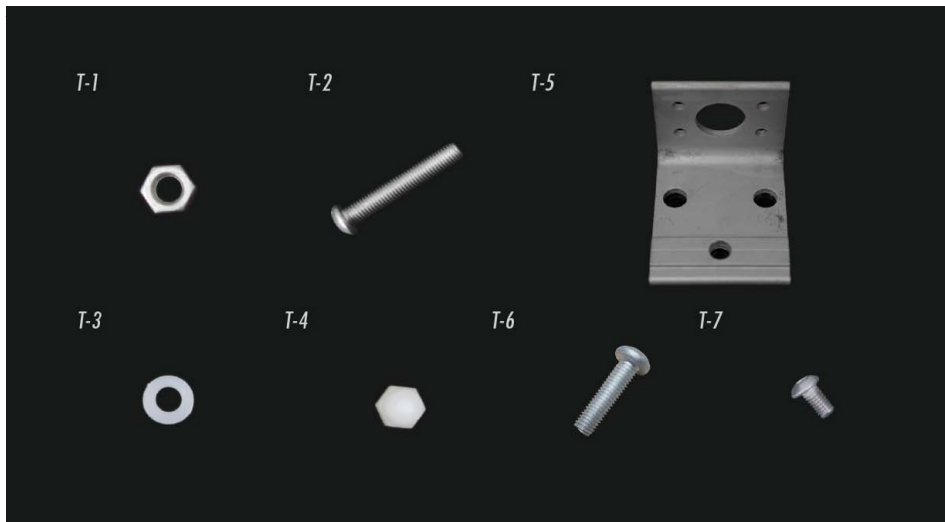
*\*Extra hardware is included in package - Only **required** hardware listed in manual*

## STRUTS

ITEM NUMBER	QUANTITY
G-01	37
G-02	26
G-03	44
G-04	8
G-05	10
G-06	8
G-07	12
D-B1	2
D-B2	2
D-B3	2
D-B4	2
D-B5	2
D-B6	2
D-B7	2
D-B8	2
D-B9	2
Mid Door Brackets	2
Upper Door Brackets	2
Door Threshold	1

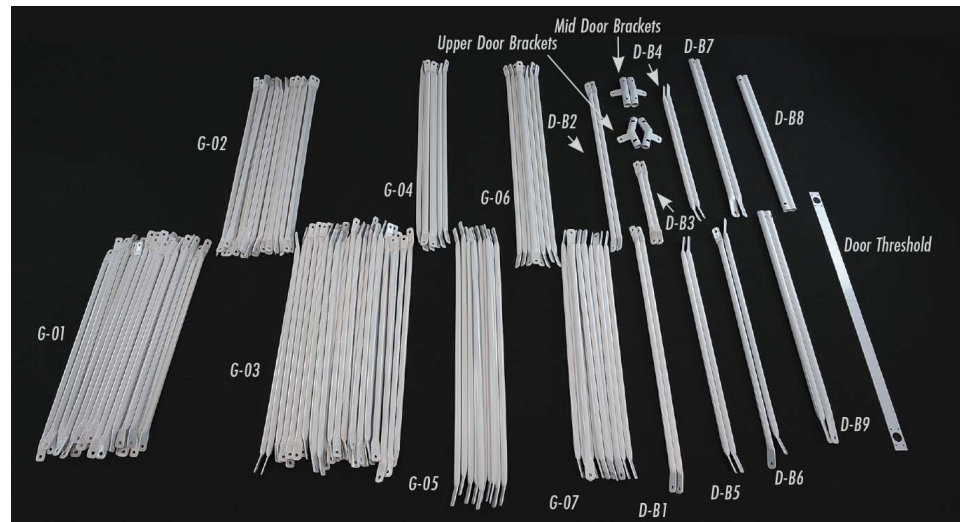
- Before you start, make sure you **become familiar with the frame diagram** and ensure that all items in the item list are accounted for.

**Make sure all hardware is accounted for and lay it out to streamline the build process.**



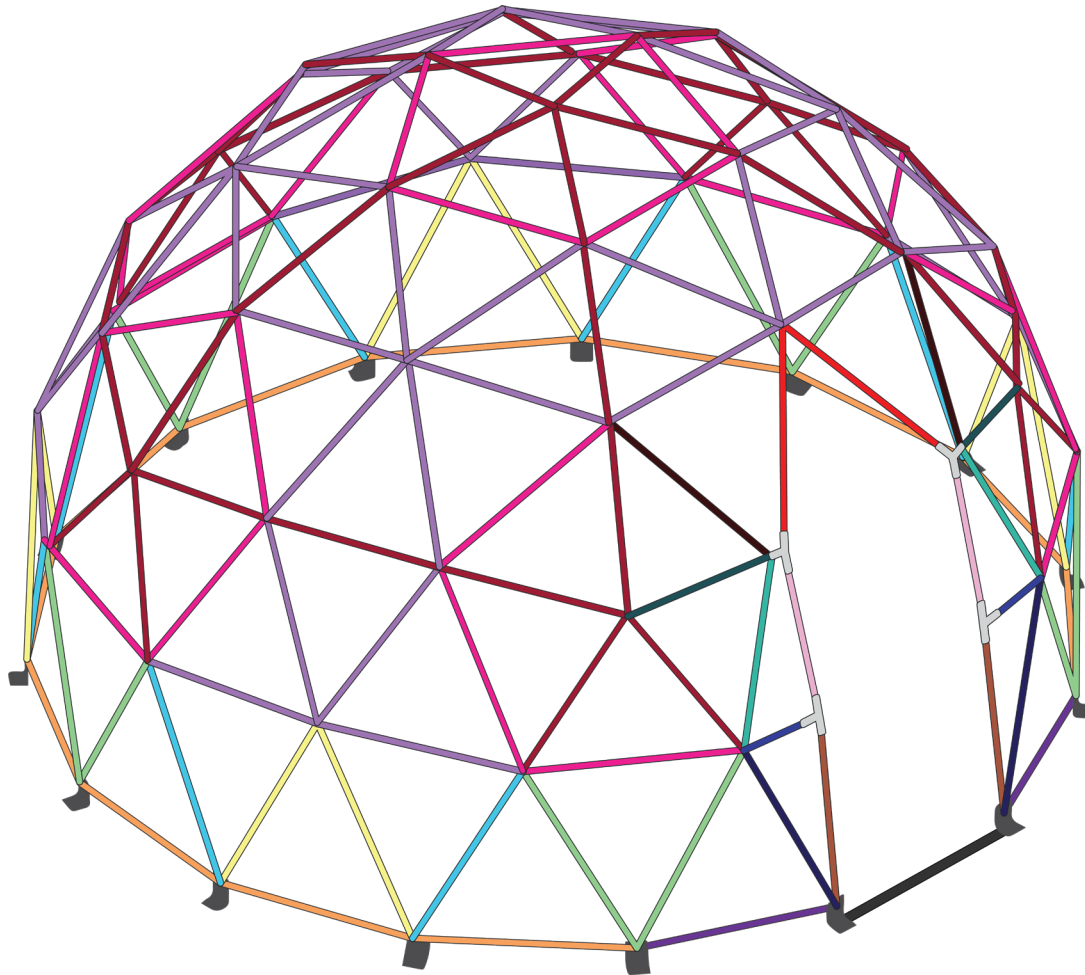
ITEM NUMBER	ITEM	QUANTITY	DIMS W x L x H	WEIGHT	UNIT
T-1	Nuts	68	5/16"	0.32	lbs
T-2	Bolts	62	2" x 5/16"	1.16	lbs
T-3	Nylon Washers	136	5/8"OD x 5/16"ID	0.04	lbs
T-4	Nylon Acorn Nuts	68	1/2" x 5/16"	0.08	lbs
T-5	Anchor Plates	15	4" x 2 3/4" x 3 1/4"	5.55	lbs
T-6	Bolts	8	1" x 5/16"	0.08	lbs
T-7	Bolts	8	1/4" x 7/32"	0.04	lbs

**Count the struts and stagger them into groups before you start.**



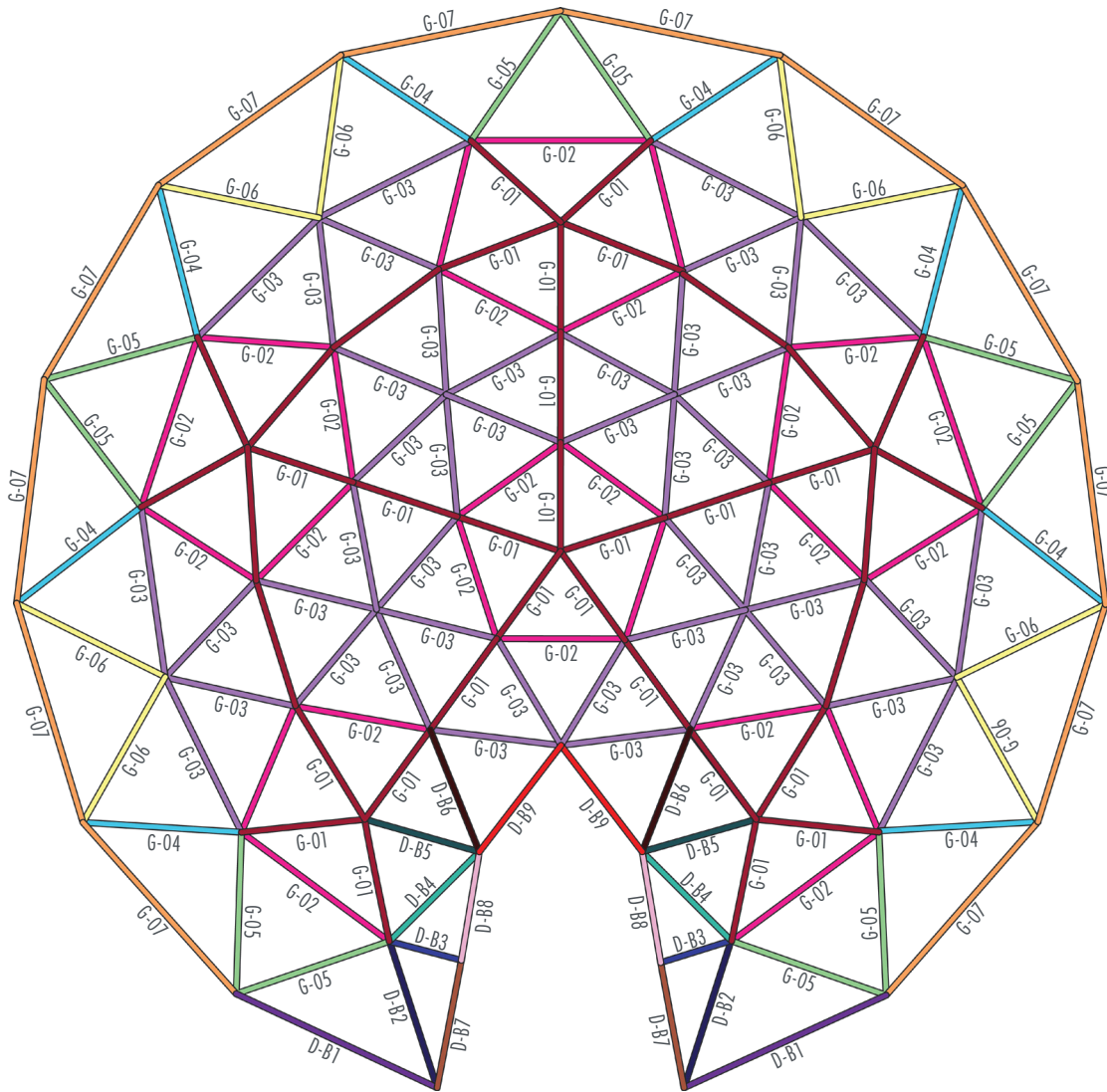
ITEM NUMBER	QUANTITY
G-01	37
G-02	26
G-03	44
G-04	8
G-05	10
G-06	8
G-07	12
D-B1	2
D-B2	2
D-B3	2

ITEM NUMBER	QUANTITY
D-B4	2
D-B5	2
D-B6	2
D-B7	2
D-B8	2
D-B9	2
Mid Door Brackets	2
Upper Door Brackets	2
Door Threshold	1



ITEM NUMBER	COLOR	QUANTITY
G-01	Dark Red	37
G-02	Magenta	26
G-03	Purple	44
G-04	Cyan	8
G-05	Light Green	10
G-06	Yellow	8
G-07	Orange	12
D-B1	Dark Purple	2
D-B2	Dark Blue	2
D-B3	Blue	2
D-B4	Teal	2
D-B5	Dark Teal	2
D-B6	Dark Brown	2
D-B7	Brown	2
D-B8	Pink	2
D-B9	Red	2
Mid Door Brackets	Grey	2
Upper Door Brackets	Grey	2

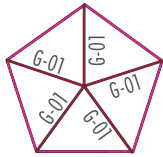
# 4m Geodesic Dome - 2D Diagram - Struts Top View



ITEM NUMBER	COLOR	QUANTITY
G-01		37
G-02		26
G-03		44
G-04		8
G-05		10
G-06		8
G-07		12
D-B1		2
D-B2		2
D-B3		2
D-B4		2
D-B5		2
D-B6		2
D-B7		2
D-B8		2
D-B9		2

# 4m Geodesic Dome - Row by Row Strut Placement

Top



Row 9



Row 8



Row 7



Row 6



Row 5



Row 4



Row 3



Row 2



Row 1



ITEM NUMBER	COLOR
G-01	Red
G-02	Magenta
G-03	Purple
G-04	Cyan
G-05	Light Green
G-06	Yellow
G-07	Orange
D-B1	Dark Purple
D-B2	Dark Blue
D-B3	Blue
D-B4	Teal
D-B5	Dark Teal
D-B6	Dark Brown
D-B7	Brown
D-B8	Pink
D-B9	Red

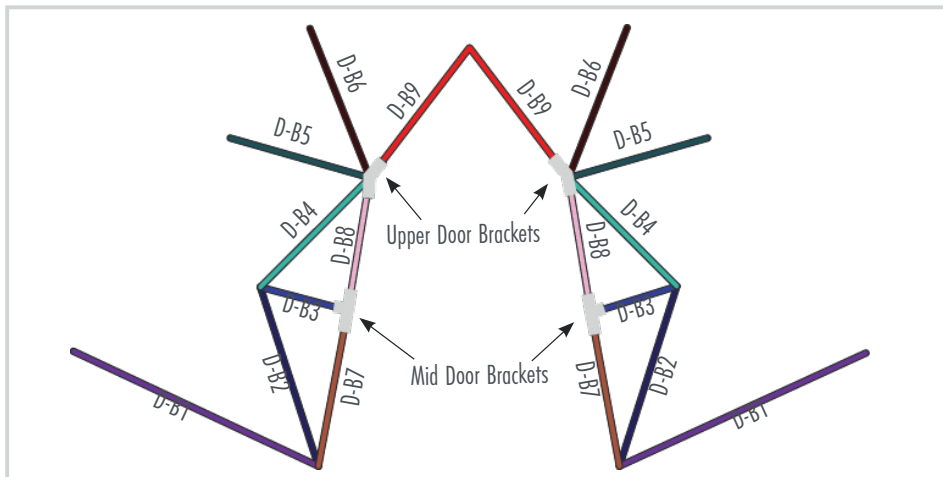
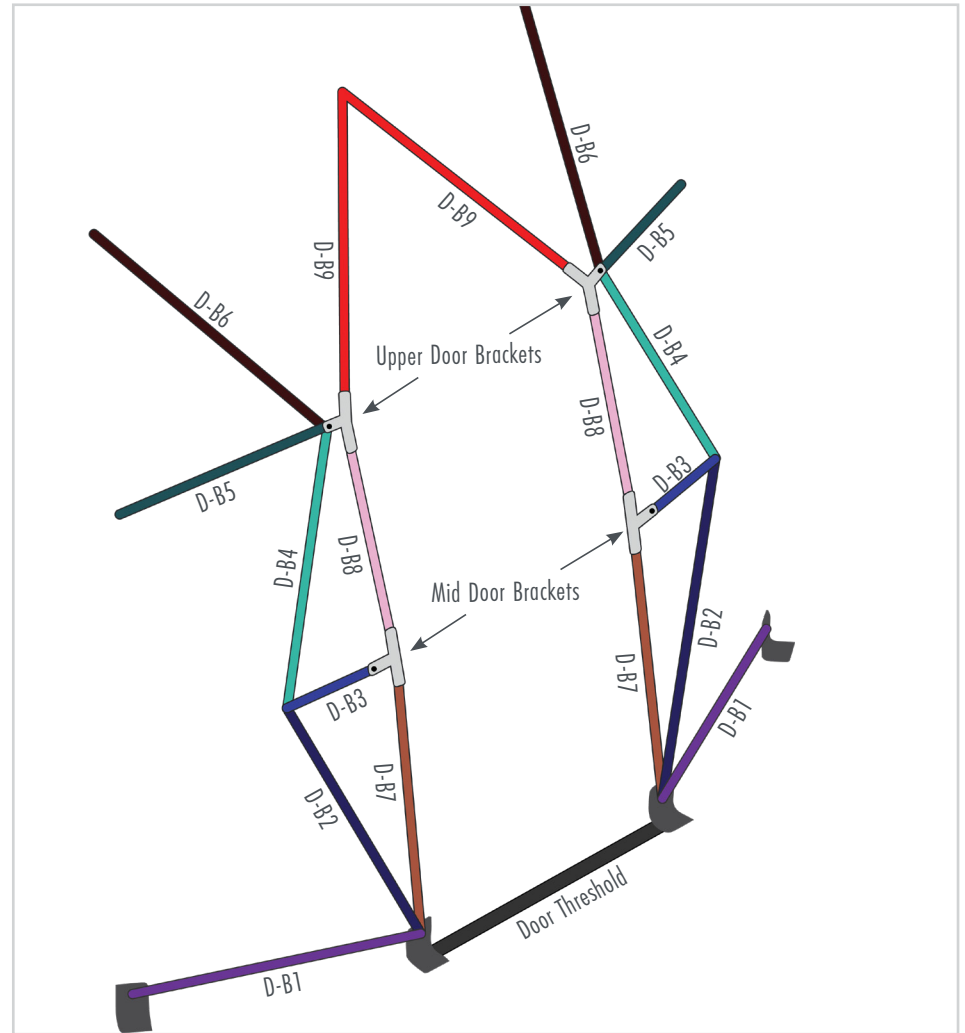
\* Struts not to scale



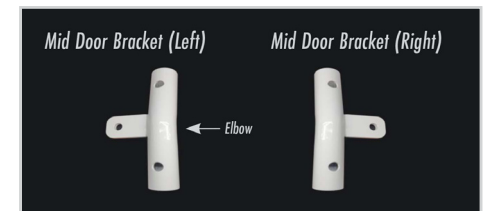
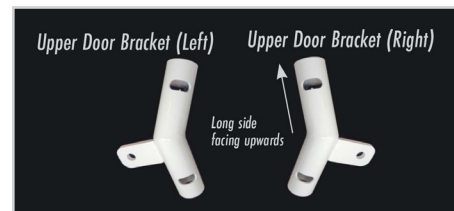
## Door Frame Assembly

- The door frame is best constructed row by row with the rest of the dome.
- The tubular parts of the **door brackets** are to be secured to the struts above and below using **bolts (T-2)**, **nylon washers (T-3)** and **nuts (T-1)**.
- Each door bracket is attached to the joining struts of the dome using one **bolt (T-6)**, one **nylon washer (T-3)** and one **nut (T-1)**.
- The **door threshold** is attached to the **anchor plates (T-5)** at the base of the door frame using eight **bolts (T-7)**.

ITEM NUMBER	COLOR
D-B1	Purple
D-B2	Dark Blue
D-B3	Blue
D-B4	Teal
D-B5	Dark Green
D-B6	Dark Brown
D-B7	Brown
D-B8	Pink
D-B9	Red
Door Brackets	Grey
Door Threshold	Black

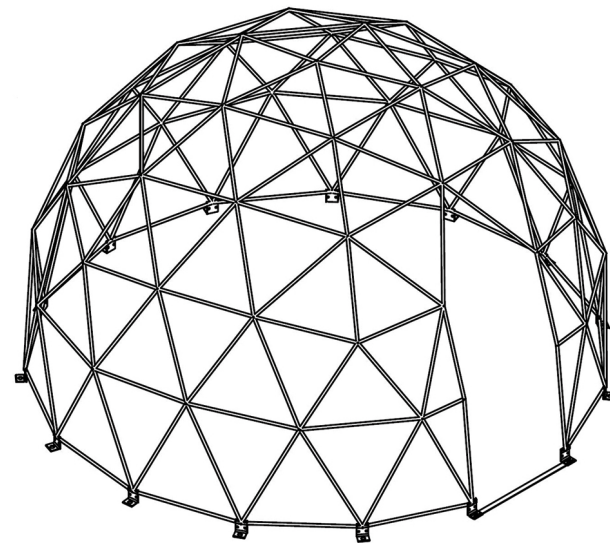
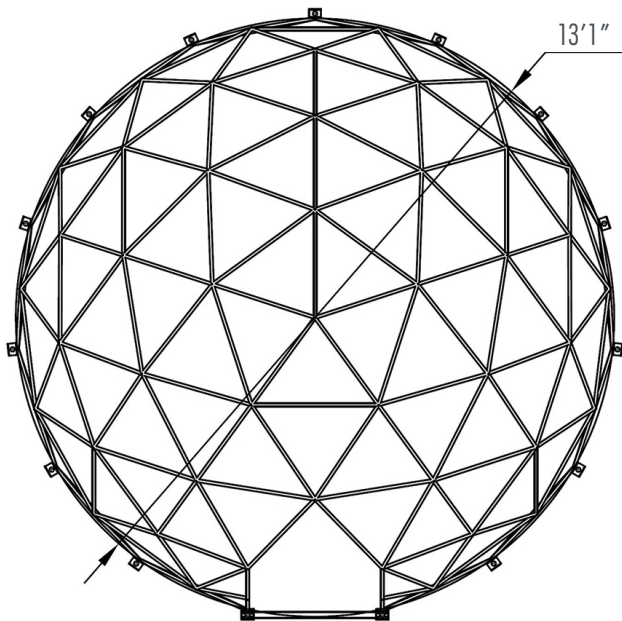
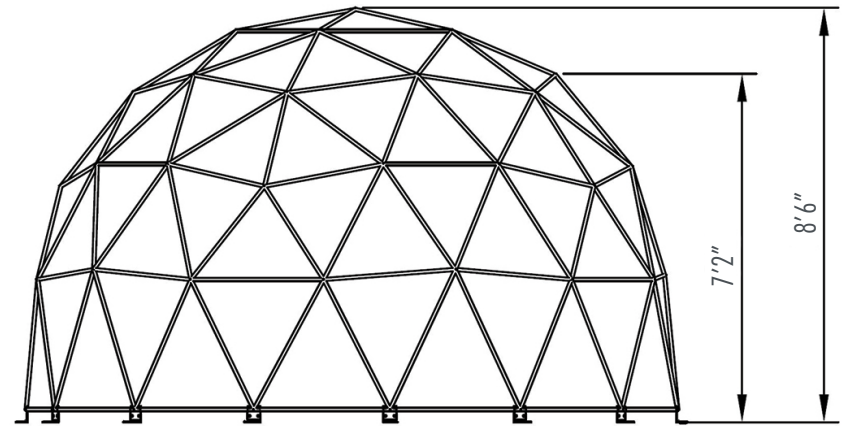
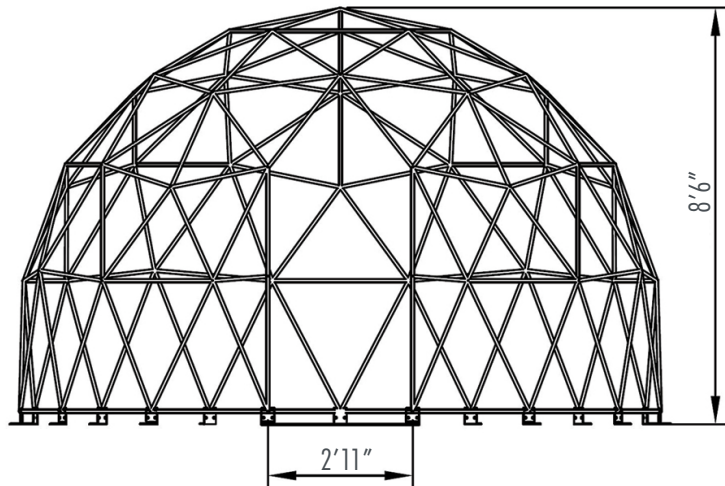


\*To distinguish left and right brackets, elbow should be facing up / curved towards you - as shown above



# 4m Geodesic Dome - Measurements

\*Measurements in inches and feet





**WARNING** - Only use electric heat source in dome!

**NEVER USE ANY SORT OF GAS HEATER** (e.g. propane or kerosene).

## Cover Maintenance and Cleaning

- Ensure that dome cover stays clean.
- Make sure the dome is warmed up prior to cleaning, an electric heater can be used.
- Cover should be hosed down once a month in warm weather. Use a damp cloth if weather is cooler. In freezing temperatures, do not clean the dome as any frost will damage the cover.
- Allow the cover to dry prior to turning off the electric heater.
- Do not use any products other than mild soap to clean the dome cover. There is a coating that is easily removed by harsher products.
- Do not place the dome where it may come in contact with shrubberies and vines, as some contain acids that can be harmful to the material.
- Repair any small rips or tears immediately to prevent further damage.
- Do not allow water or snow to sit on the dome cover, this can cause the material to stretch and create pockets from the weight.

## Cover Repair

- Repair any tears on the vinyl cover with a vinyl patch using a vinyl repair kit.

## Frame Maintenance and Cleaning

- Clean with mild soap and water.
- Treat any rust on the dome frame immediately with a steel brush and metal preserve.

## Storage

- Store in a warm, dry place.
- Do not store the dome cover when damp or wet, as mildew can grow and may stain the material.
- Do not store in freezing temperatures as this will cause the vinyl to become brittle, which may cause it to crack or break when moved.
- Both the frame and dome cover should be stored above the ground. This will prevent rot from moisture.

## Cold Weather Cover Installation Guide

Cold weather causes the dome cover to stiffen, making installing it a near impossible task. For cold weather installation, follow the tips below:

- Warm up the cover as much as possible before unwraveling it. This can be done by leaving it in a warm room or vehicle for a few hours .
- In cold weather, some of the smaller folds can be very difficult to stretch out. As soon as the cover is unwraveled enough to drape it over the dome, place an electric heater inside the dome frame. The heat from within the dome should warm up the vinyl, allowing any folds to stretch out.
- **In extreme cold, use a 20' x 40' tarp to trap the heat inside of the dome, allowing for more heat retention.**

## IMPORTANT SAFETY INFORMATION **REQUIRED FOR INSTALL**

- An unanchored dome with the cover installed should never be left unattended and the dome should be anchored immediately. Winds can lead to displacement of the dome, resulting in destruction of property, serious injury and/or death.
- Do not install dome cover in winds above 5mph.
- Even when anchored, dome cover should be removed if winds exceed 60mph.

## Anchoring - Ground Stakes

For medium to soft terrain such as soil or dirt, ground stakes called bull pricks can be used as anchors.

Drive a stake through each anchor plate at a 75-80 degree angle.



## Anchoring - Penetrators (Ground Screws)

Penetrators work for a range of outdoor terrain types from loose, uncompacted sand to asphalt.

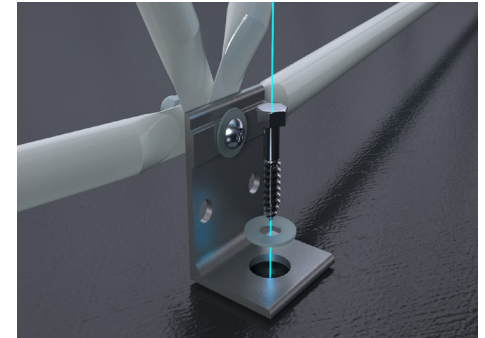
These vary in size, ensure that you are using the correct size for the type of terrain.



## Anchoring - Deck Bolts

For wooden surfaces, wooden deck lag screws can be used.

Bolts are another option that can be used on wood, as well as a range of other surface materials.



## Ballasting

We recommend you ballast the dome to the ground at each individual anchor point.

Each ballast should weigh a minimum of 150lbs, totalling a weight of 2,250lbs to secure the dome to the ground. Again, this is only safe at wind speeds of up to 60mph.

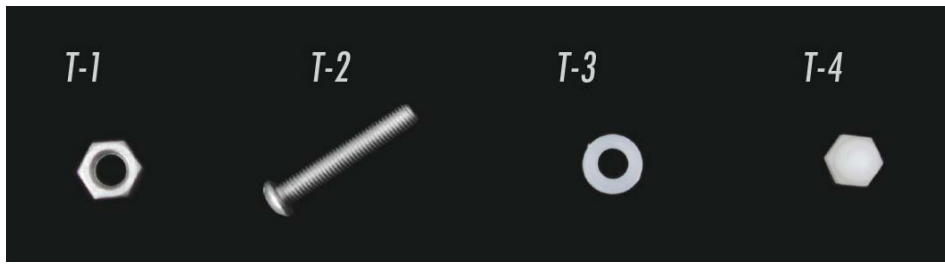
Ballasts need to be secured to the domes anchor plate, just placing them on the foot is not suitable.

They can be strapped to the base of the dome frame or secured directly to the anchor plates.

For something a little more unique than standard concrete blocks, we recommend looking at water ballasts or planter ballasts (pictured).



## Hardware Required at each Hub



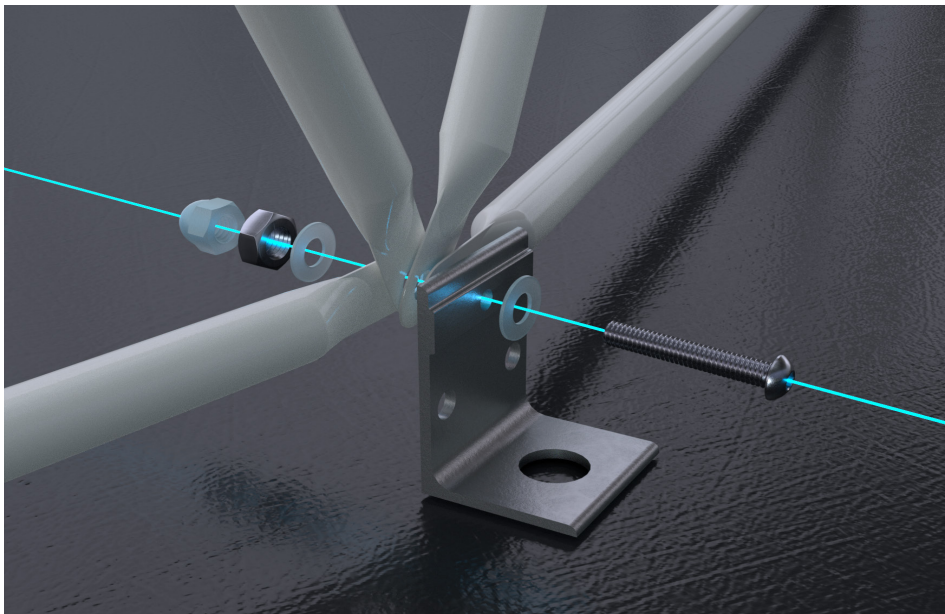
## Hub Structure for Rows 3 and Above

ITEM NUMBER	ITEM	QUANTITY
T-1	Nuts	68
T-2	Bolts	62
T-3	Nylon Washers	136
T-4	Nylon Acorn Nuts	68

Use the hardware in the table to secure each of the dome frame's hubs.

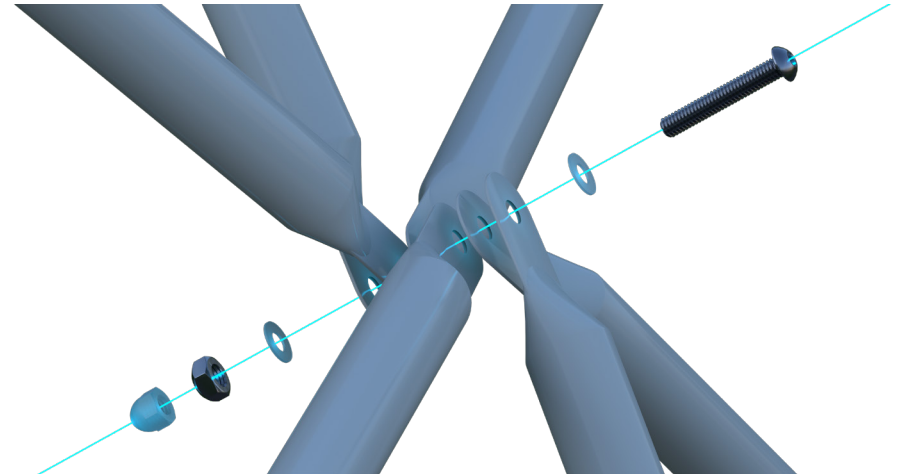
We recommend you consistently align the struts at each hub so the dome frame is as stable as possible.

## Hub Structure at Dome Base

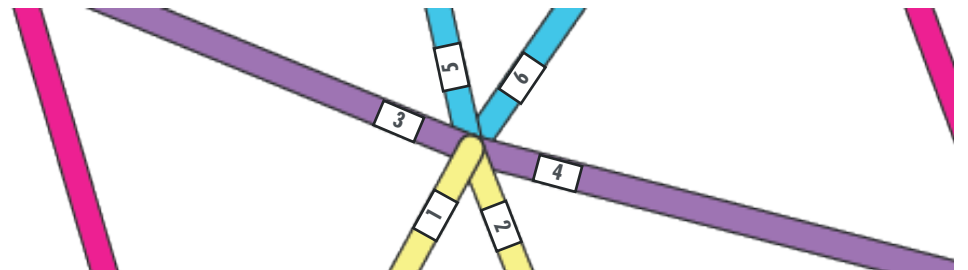


Bolt an **anchor plate (T-5)** onto each hub facing outward using a **bolt (T-7)**, two **nylon washers (T-3)**, a **nut (T-1)** and a **nylon acorn nut (T-4)**.

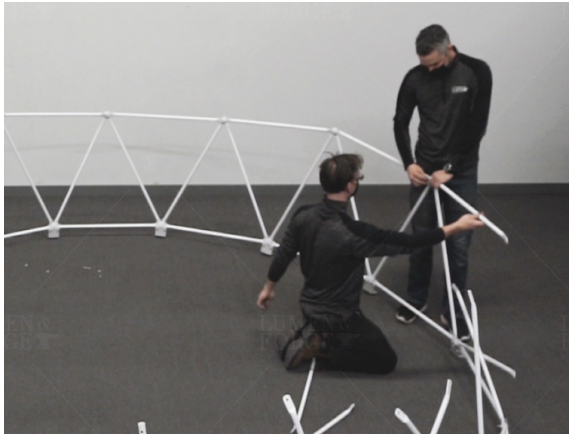
Ensure that the frame perimeter is as circular as possible and the hubs are positioned equidistantly.



Each hub has 3 Rows of struts attached at the center, ordered as follows (outside to inside):  
 (1) Bottom Left (2) Bottom Right (3) Middle Left (4) Middle Right (5) Top left (5) Top Right

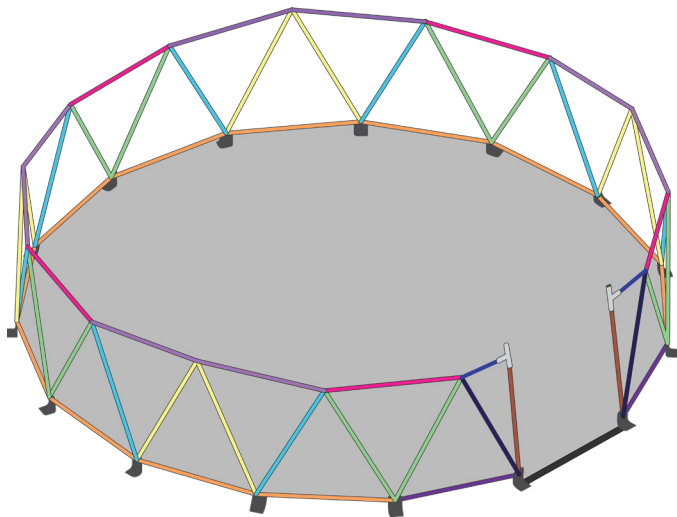




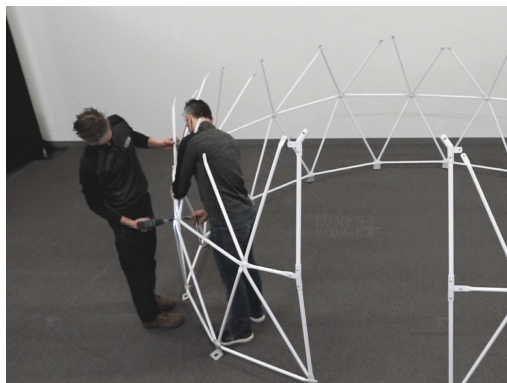
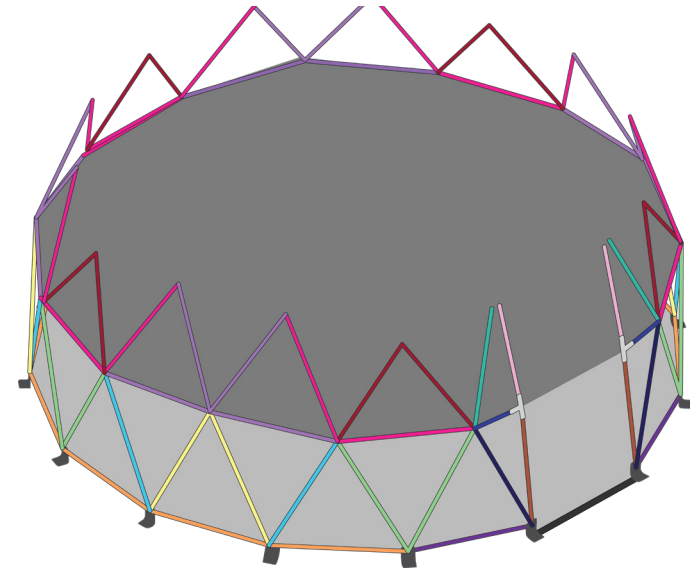


- ⑤ Loosely attach Row 3 to Row 2 using the provided bolts (T-2).
- ⑥ Secure the mid door brackets to either end of Row 3.

### Row 3

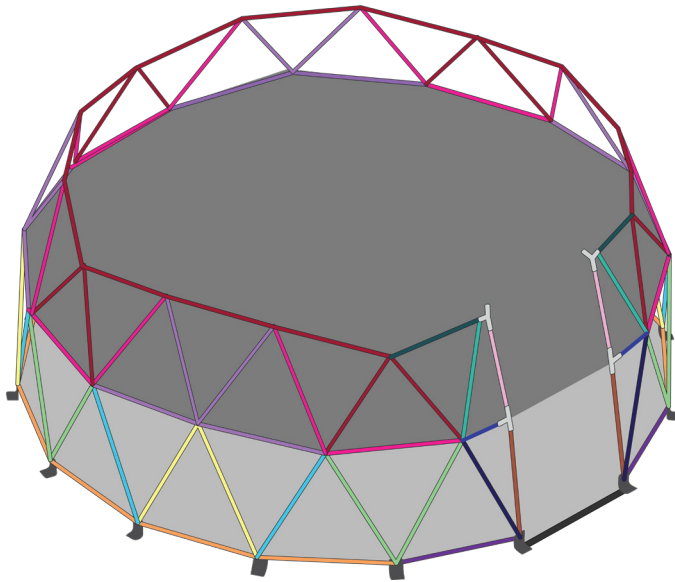


### Row 4

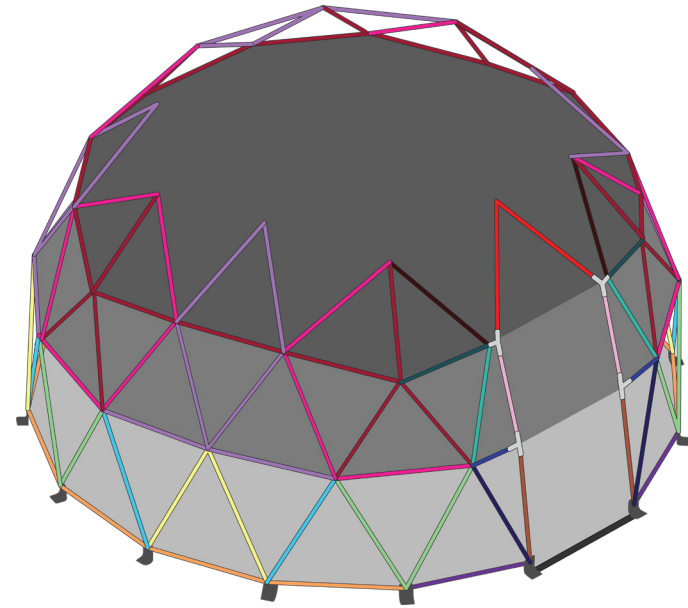


- ⑦ When adding Row 4, secure this layer to Row 2 and Row 3 using a drill and the remaining hardware required to complete the hubs.
- ⑧ Each hub from Row 3 and above will require a bolt (T-2), two nylon washers (T-3) and a nut (T-1).

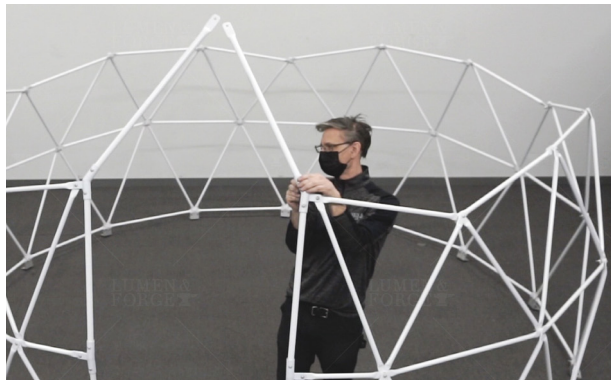
## Row 5



## Row 6



- ⑨ Loosely connect Row 3 to Row 2 using the provided bolts (T-2).
- ⑩ Attach the upper door brackets to the ends of Row 4 and 5.



- ⑪ Connect the struts for the top of the door frame (DB-9) to the upper door brackets
- ⑫ Row 6 can now be secured at the hubs to Rows 4 and 5 using a drill.



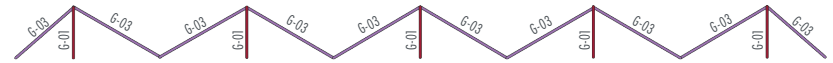




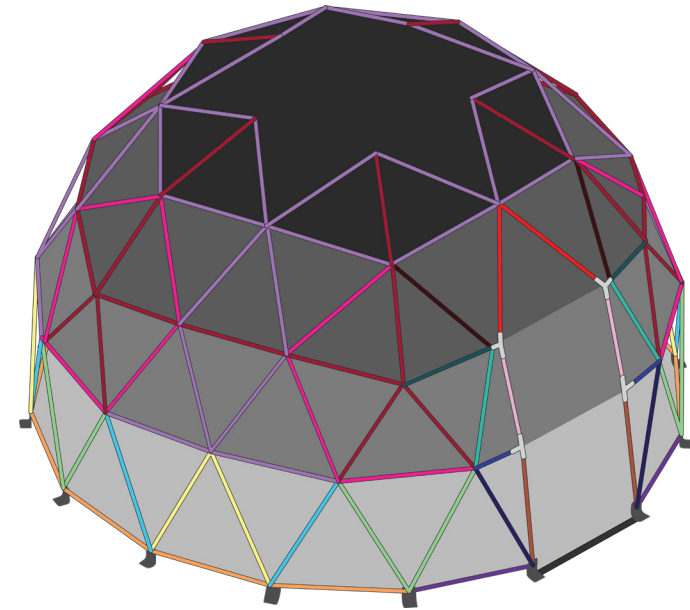
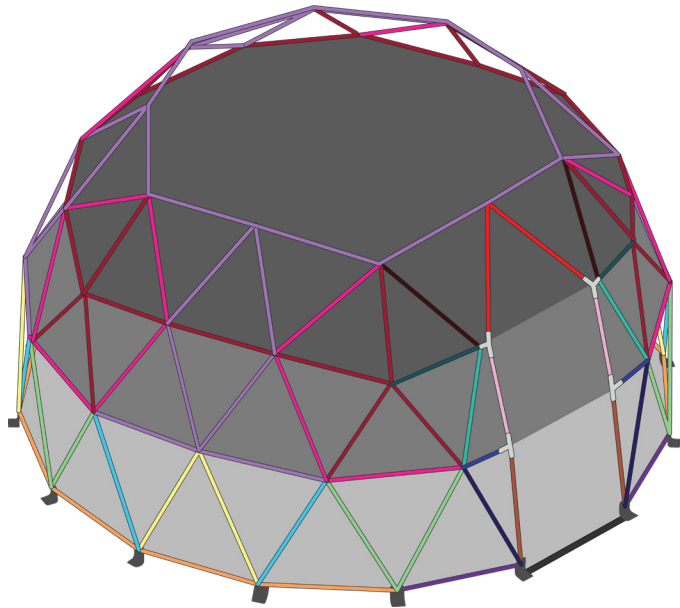
\*This row will require a ladder.

- ⑬ Slowly work your way around, loosely attaching Row 7 to Row 6 using the provided bolts (T-2).

## Row 8



## Row 7



- ⑭ Secure Row 8 at the hubs to Rows 6 and 7 using a drill.

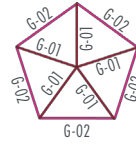


# 4m Geodesic Dome - Frame Construction Step By Step

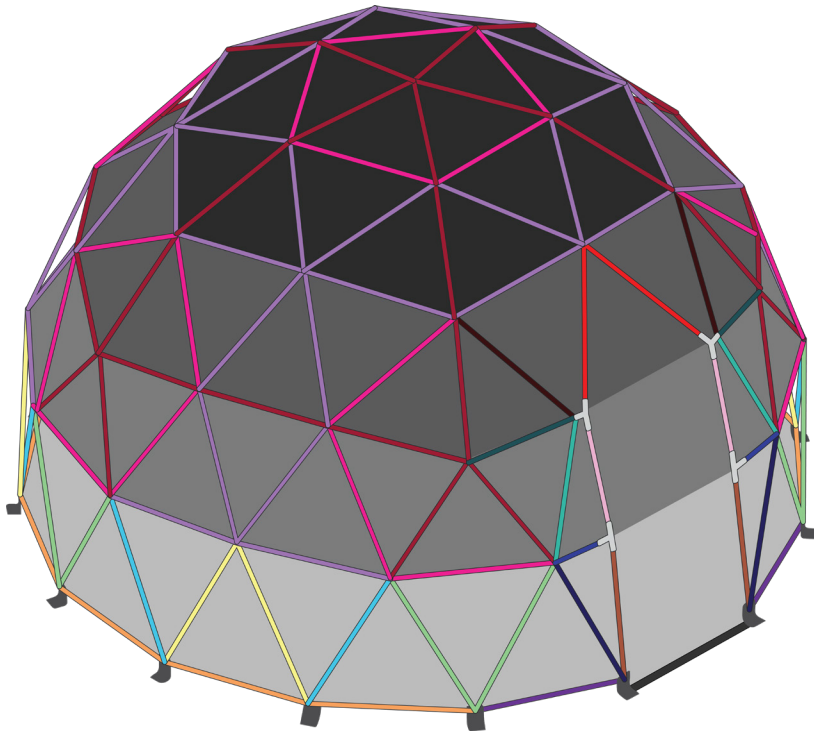
## Row 9



## Top



- 15 The struts for the **dome top** will need to be added simultaneously as they will fall if not secured immediately.
- 16 Once the top is in place, secure the final hub at the top of the dome.



- ① The cover must be warm prior to unrolling. See *\*Cold Weather Cover Installation Guide (Pg 8)*



- ② Place a heater inside the dome before installing the cover, to provide as much heat as possible and allow the material to stretch.

- ③ Once the cover is relaxed enough to cover most of the dome, slowly pull the cover across the dome.



- ④ One person pulls the cover over the frame while another person uses a ladder and pushes the cover upwards from the interior of the frame using gentle waving movements.



- ⑤ When the cover has been pulled past the top of the dome, continue to pull the rest of the cover over from the outside.



- ⑥ Push outwards against the cover and gently undo small folds until it is sufficiently stretched across the dome.



- ⑦ When the dome cover has been properly placed, tie the grommets of the dome cover to the door frame using the provided zip ties (P-3).

- ⑧ To help the cover relax, unscrew one side of the door threshold and zip up the dome to allow it to stretch over the course of a few hours.



- ⑨ Once the cover is sufficiently relaxed, re-attach the door threshold and tighten the zip ties once again.

- ⑩ Secure the dome cover to the frame along the base using the tension straps.

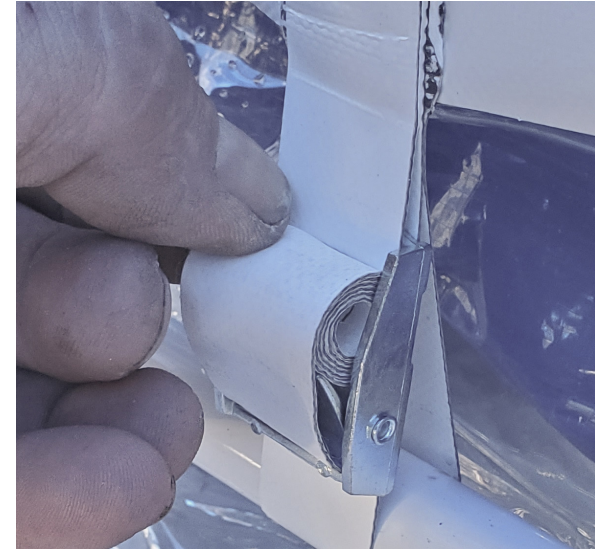
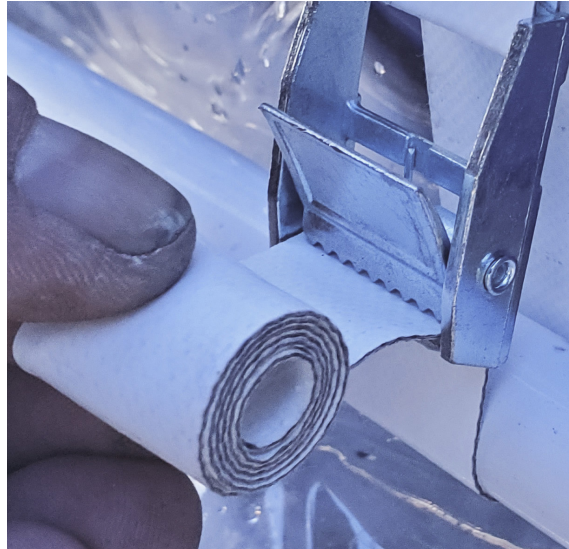


- ⑪ With the door zipped up and the dome fully relaxed, tighten the zip ties a final time.

*\*See Finishing Touches on following page to complete the dome!*

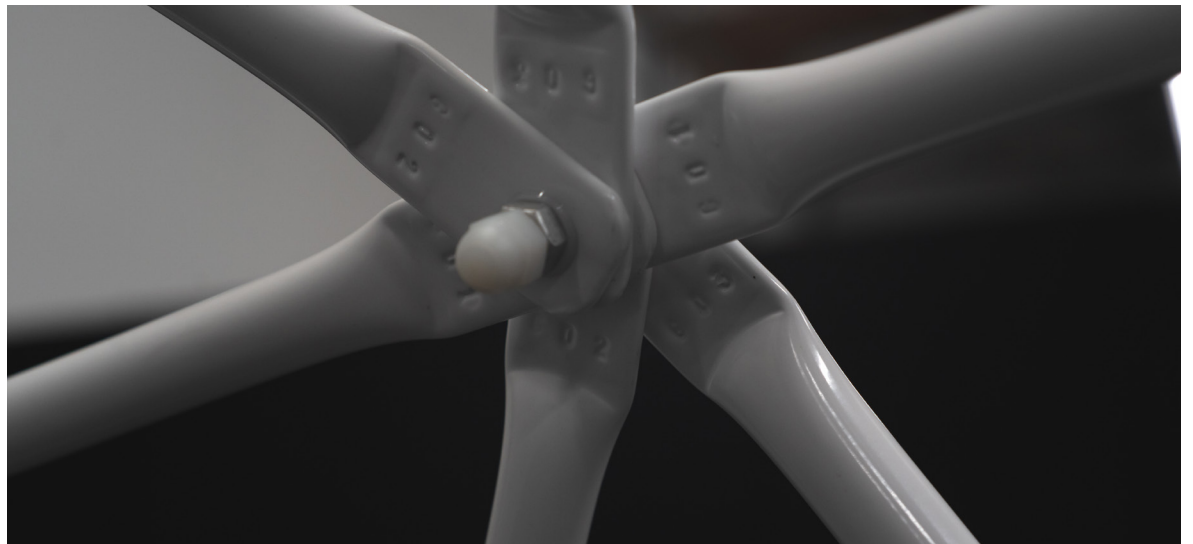


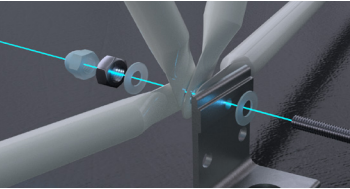
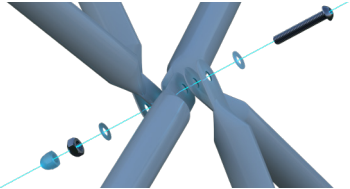




⑫ Roll up the extra material from the tension straps of the dome cover and tuck them in to neaten up the interior of the dome.



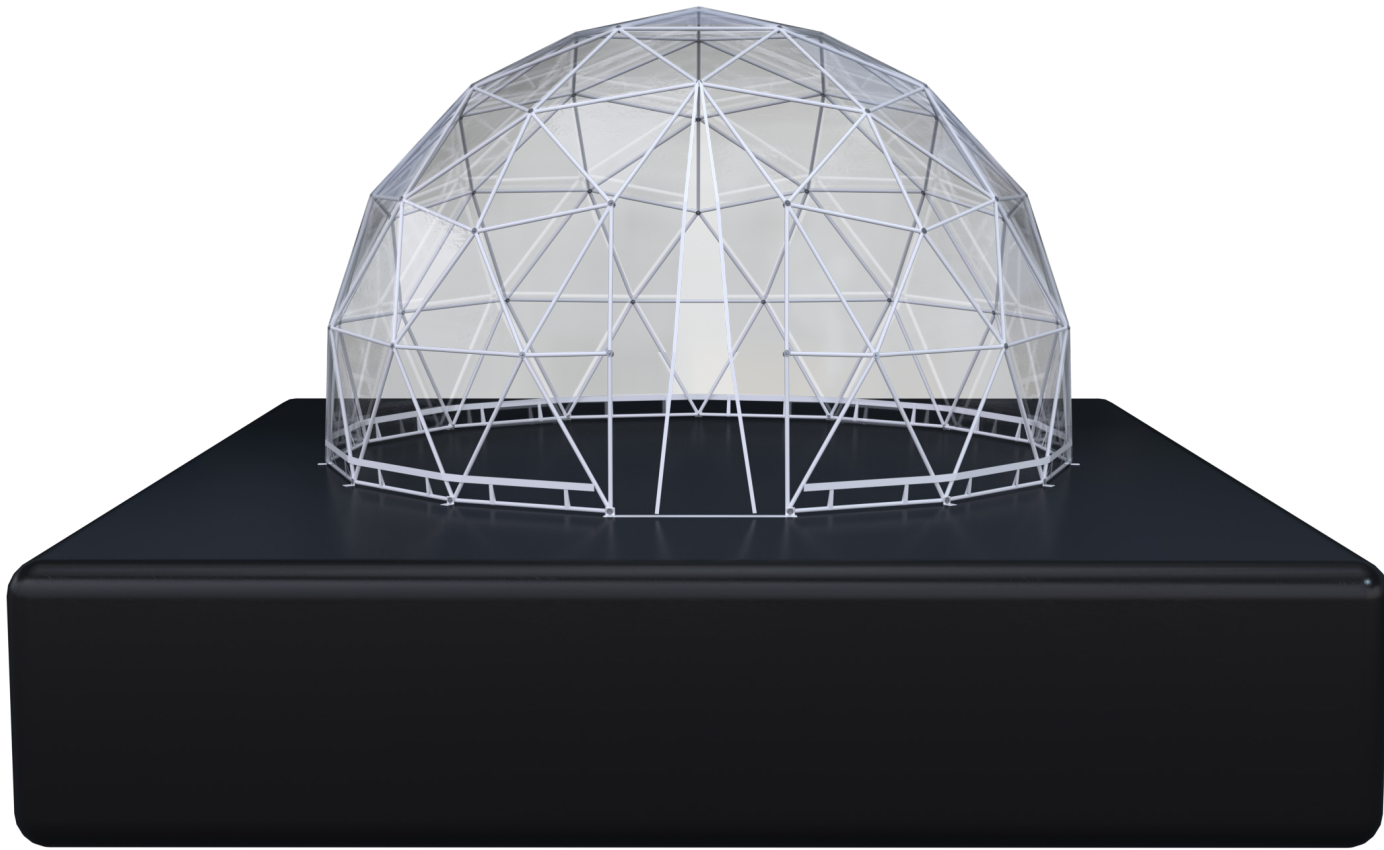
⑬ Snip the zip ties along the door frame at the free end.

⑭ Attach nylon end caps to the inside of each hub for a seamless finish.



Check	Make Sure	Thumbnail
<input type="checkbox"/>	Anchor plates properly bolted to hubs along base of the dome	
<input type="checkbox"/>	Bolts at the hubs are tightened securely	
<input type="checkbox"/>	Nylon acorn nuts are secured at all of the hubs	
<input type="checkbox"/>	Each base hub is properly anchored or ballasted to the ground	
<input type="checkbox"/>	Cover is correctly strapped to the base of the frame	
<input type="checkbox"/>	Zip ties are secured attaching cover to door frame	

# Congratulations!



Your dome is now complete and ready for use.