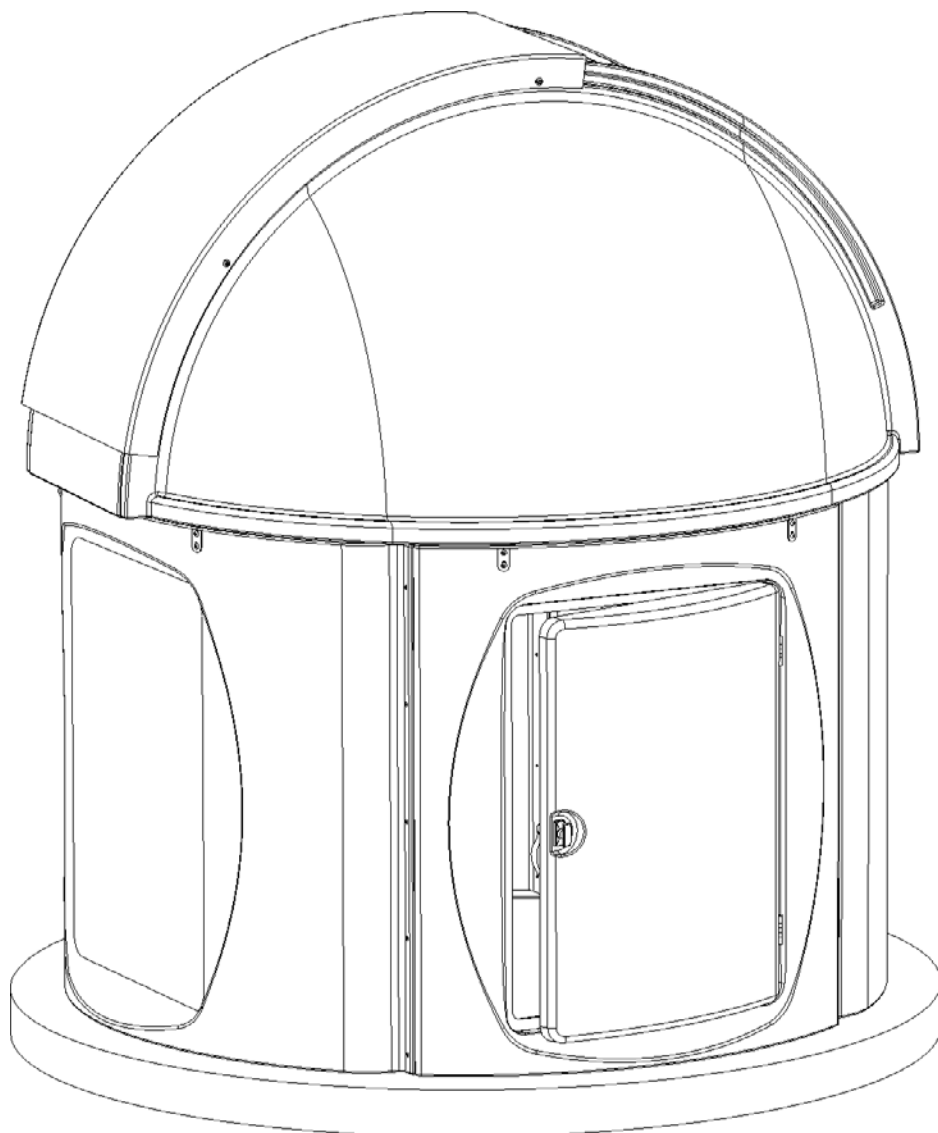


PULSAR

OBSERVATORIES

Art. No. 4900515 / 4900565 / 4900555 / 4900505



Assembly Instructions

Issue 2 | 2024



Contents

IMPORTANT SAFETY INFORMATION.	3
Assembly Guide Notes	4
Fixings and Parts List	5
Dome Top and Shutter Assembly	6
Wall Assembly	11
Final Assembly	12
Using your Observatory	14
Accessory Bay Installation	15



IMPORTANT SAFETY INFORMATION

Please read this safety information and the assembly instructions carefully before assembling your Pulsar Observatory Dome



Your Pulsar Observatory Dome is made from highest quality GRP. It is designed for self assembly without the need for special tools. To avoid risk of injury or damage to the observatory, care must be taken when handling and assembling your new dome.

If not handled with care, GRP can splinter and drilling creates dust. In addition to a respiratory mask, safety glasses, gloves and suitable protective footwear must be worn.

Pulsar Observatories accept no liability for injury or damage where appropriate safety measures have not been adhered to.



Assembly Guide Notes

It is important that your observatory base is flat and level to ensure smooth operation of the observatory dome rotation.

Assemble the dome top first using your base as a flat and level work surface and follow the procedure as shown in the instruction. Make sure that the shutter is installed as described in the instruction.

When bolting dome top panels together, **always ensure that the outside, underside flanges are perfectly aligned.** This is important to allow smooth dome rotation. There is a level of adjustment that can be done before tightening the bolts.

Remove any marks from the dome top using acetone or spirit, then seal all outside joints with a thin bead of silicone, as described in the instruction, **before** lifting the dome on to the wall.

Move the dome top to one side before assembling the walls on your base. Follow the instruction carefully to ensure that the walls are level and circular before bolting down.

Make sure all of the wheels freely rotate before installing the dome top. (**Note:** your wheel brackets may have been preinstalled).

3 persons minimum are recommended when lifting the dome top into position on the walls. Carefully lower the dome down onto the walls to prevent damage to wheel assemblies and the dome flange.

Ensure that the dome top rotates freely on the walls, the dome will settle to its natural shape after a few days and run more smoothly.

Allow the observatory to rest for a couple of days after completing the installation while the silicone sealant dries and the dome is allowed to settle. You are then ready to install your equipment.

Your observatory will require very little maintenance other than an occasional washdown with a mild detergent to remove any dirt and stains.

Please contact us if you have any questions regarding your observatory installation.



Fixings and Parts List

(2.2 & 2.7 Observatories)

PART	NO.	DESCRIPTION
M6 X 15MM COUNTERSINK BOLT	20	WALL PANEL FIXINGS
M6 X 15MM BUTTON BOLT	28	DOME TOP PANEL FIXINGS
M6 X 50MM BUTTON BOLT	4	DOME TOP PANEL FIXINGS
M6 X 18MM WASHER	32	DOME TOP PANEL FIXINGS
SILICONE SEALANT	2	COLOUR MATCHED FOR OUTSIDE PANEL JOINS
SECURITY CLAMP	4	
SHUTTER ROLLER KIT	1	
M8 RAWLBOLT	8	FOR SECURING WALLS TO BASE
SHUTTER LATCH KIT	1	FOR MANUAL DOMES ONLY
BRUSH STRIP	1	FOR OUTSIDE TOP OF REAR INFILL PANEL
DRIP GUARD	1	FOR OUTSIDE, UNDERSIDE OF DOME TOP

Assembly Instructions

Issue 2 | 2024

Dome and Shutter Assembly

Use your concrete base if possible as a flat and level surface for assembling the dome. Start with the rear filling plate with shutter and the two rear quadrant panels as shown in image 1 (note that the rear quadrants have three fixing holes for attachment to the rear infill panel). Use the M6 x 50mm and M6 x 15mm bolts provided to attach the quadrants to the infill panel as shown in images 2 and 3, making sure that the outside underside flanges are perfectly aligned to ensure smooth rotation of the dome top, as shown in image 4.



IMAGE 1

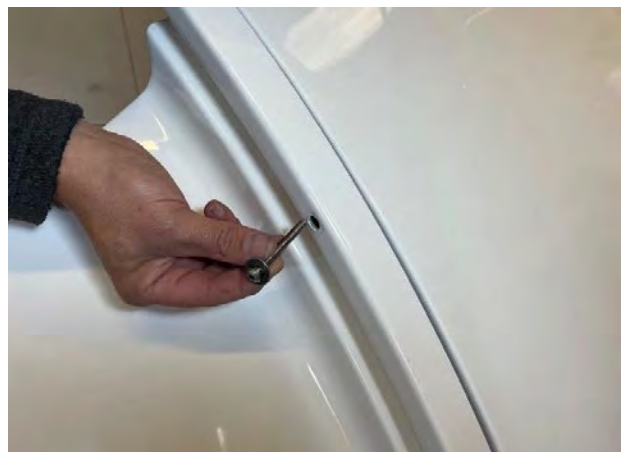


IMAGE 2



IMAGE 3



IMAGE 4

PULSAR

OBSERVATORIES

Install the inner bolts as shown in image 5, using the bolts provided, insert the bolt from underneath and secure with the nut on the inside of the dome.



IMAGE 5



IMAGE 6

Install the 2 larger side panels next as shown in image 6, again making sure that the outside underside flanges are perfectly aligned to ensure smooth rotation of the dome top.

The assembly should now appear as shown in image 7.

At this point, remove any marks from the dome assembly using acetone or spirit before carefully applying a bead of silicon sealant to the external joints as shown in image 8.

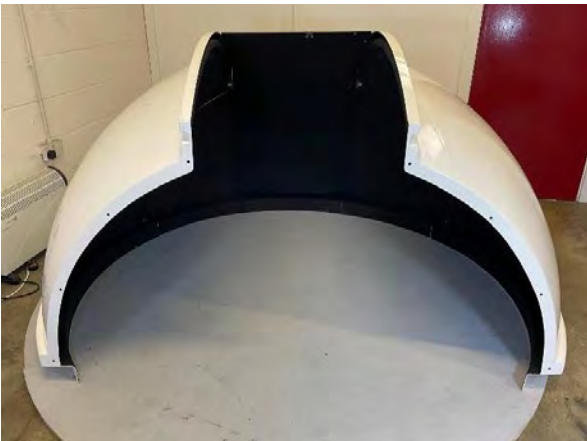


IMAGE 7



IMAGE 8

Assembly Instructions

Issue 2 | 2024

Preparing the shutter

Install the shutter lid rollers using the fixings supplied, and as shown in image 9.

The holes are predrilled in the shutter lid panel sides. You may need to run a 6mm drill through the holes to clear them.



IMAGE 9

Fit the pulley rope as shown in images 10 and 11, as shown below.

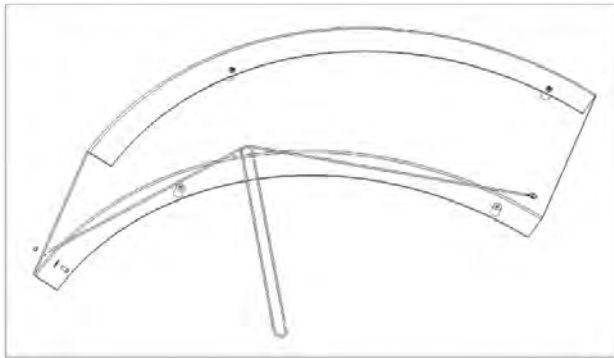


IMAGE 10 (AS VIEWED FROM INSIDE)



IMAGE 11

Fit the latch catch plate to the front of the shutter lid as shown in image 12.

Drill an 8mm hole at the centre of the shutter lid, 50mm back from the leading edge. Attach the latch using the M8 bolt provided, with the large washer to the outside.



IMAGE 12

Installing the pulley guide (manual domes only)

Install as shown in the image 13 below. There are 2 moulding marks on the left hand top of the rear infill panel (approximately where shown in the image), where you will need to drill 8mm for the fixing bolts. Fix using the fittings as supplied in the pulley kit.



IMAGE 13

Fit the brush weather strip as shown in image 14 below, across the width of the rear infill panel.



IMAGE 14

Installing the pulley rope (manual domes only)

Carefully slide the shutter lid onto the wall assembly allowing it to drop right to the floor at the rear. Attach the pulley rope over the pulley as outlined in images 15 and 16.

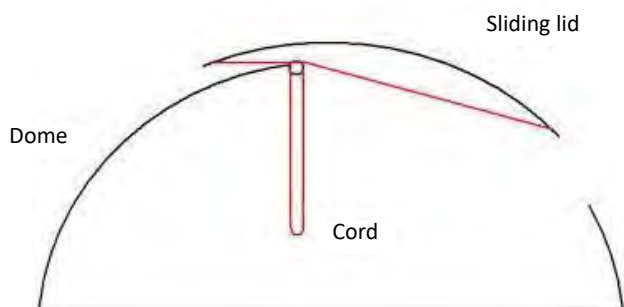


IMAGE 15



IMAGE 16

Install the two front quadrants followed by the front infill panel as shown in the image 17 below, again making sure that the outside underside flanges are perfectly aligned to ensure smooth rotation of the dome top.

At this point, remove any marks from the dome assembly using acetone or spirit before carefully applying a bead of silicon sealant to the external joints.



IMAGE 17

Move your dome top assembly to one side onto a flat level and level surface if possible and prepare for wall installation.

Assembly Instructions

Issue 2 | 2024

Wall Assembly

Place the walls on to your concrete base paying attention to where the door and accessory bays are required. Assemble the walls using the M6 x 15mm countersink bolts as supplied as shown in image 18.



IMAGE 18



IMAGE 19

Move the assembled walls into the required position and check for level and circularity in both directions as shown in images 19 and 20. Use a good quality straight edge across the dome wall and check for level in both directions. If the wall is not level the dome rotation will not be smooth. You will need to use packing wedges underneath the wall to bring it up to level. If the base is badly out of level we suggest recasting it.

It is important that the measurement for circularity is taken at the points shown in the image 21. Again, if the walls are not circular dome rotation will not be smooth.



IMAGE 20

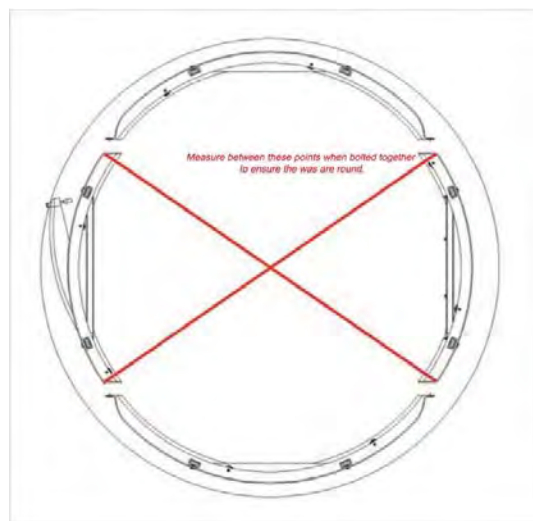


IMAGE 21



Final Assembly

The observatory walls can now be secured to the concrete base using the supplied rawlbolt fixings. Use 2 rawlbolts for each wall section, placing them equal distances apart. An SDS drill is required along with a 14mm SDS drill bit. Ensure that you drill the holes deep enough to accept the rawlbolt. When all rawlbolts are in place they can be tightened using a 13mm spanner.

If you have purchased a Pulsar observatory pier, it is advisable to install the pier at this stage before lifting the dome top onto the walls.

The observatory dome top is now ready to be lifted onto the walls. Make sure the dome top is clean and all joints have been sealed with silicone sealant. At least 3 persons are required to lift the dome onto the walls, the dome needs to be lowered carefully onto the walls and maneuvered into position.

Slowly rotate the dome top by hand to make sure there are no obstructions. The dome top may run a little uneven to begin with but will settle after a few days.

Installing the foam weatherstrip

Clean the under surface of the dome top and carefully attach the foam weatherstrip. Position just to the inside of the radius of the outside edge as shown in the image 22.



IMAGE 22

Installing the security clamps

Install the four security clamps by removing the lower bolt on the wheel assembly, position the clamp so that it has adequate clearance for the dome to rotate, then replace the bolt, as shown in the image 23. When all clamps are installed, rotate the dome top slowly to make sure that the security clamps clear the wall flanges.



IMAGE 23

Assembly Instructions

Issue 2 | 2024

Installing the shutter latch (manual domes only)

Close the observatory shutter and position the shutter latch over the latch catch plate as shown in image 24. Mark and drill the holes for the latch and fix with the bolts provided.

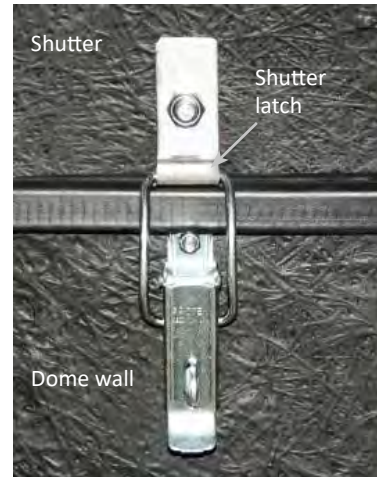


IMAGE 24

Installing the rope cleat (manual domes only)

The rope cleat is to enable the pulley rope to be tied out of the way of the telescope once the dome shutter is opened or closed.

It is attached at the rear infill panel at a convenient height to take the rope.

Finally...

Check the installation and make sure that you are happy and everything works as it should. Rotate the dome top slowly and again make sure that it does not bind on the security clamps, etc., and adjust if necessary.

Leave the observatory to stand unused for a couple of days to allow the silicone to fully cure. The observatory can then be hoovered out and wiped down with a damp cloth to remove any dust before installing your equipment.



Using your Observatory

To give a pleasing finish to the observatory interior, use matt black aerosol paint and carefully spray over the dome top joins and bolts, and any other interior marks. The only maintenance required for your observatory is an occasional wash down of the exterior gel coat with a mild detergent.

The door lock has an internal handle; do not leave keys in the outside door lock when inside the observatory.

Shutting the door on the inside could result in the key turning in the lock and locking the door!

The sliding shutter lid is easily opened and closed by pulling on the ropes. Hold the ropes with each hand to control the lid, preventing it from crashing down with force.

The observatory is easily rotated by hand to place the aperture in the correct position.

Always rotate the dome slowly to the next subject for safety reasons.

Your observatory will give you many years of good service, treat it with respect and look after it!

All domes can be used in conjunction with our drive systems for complete remote operation of your observatory, see website for details: <https://www.pulsarobservatories.com>

Accessory Bay Installation

A maximum of 3 accessory bays can be installed on either the 2.2m or 2.7m observatory.

Installing the accessory bay requires two persons. Hold the accessory bay to the wall panel opening and correctly align it as viewed from the inside and outside, as shown in image 25, before drilling and fixing with supplied bolt kit.

Apply a bead of silicone sealant to the inside where the bay meets the wall to prevent water ingress.

If your wall panel is not precut you will need to mark out the opening on the wall using a pencil and straight edge as shown in the image.

The hole can then be cut preferably using a jigsaw with diamond blade.

Use a coarse sandpaper on a block to smooth the cut edges for a pleasing finish and to prevent splinters.



IMAGE 25





Lynx Astro / Pulsar Observatories

Unit 13 The Old Steamhouse | Goblands Farm | Hadlow, Kent TN11 0LT | Great Britain
info@pulsarastro.com | www.pulsarobservatories.com



Bresser GmbH

Exclusive International Distributor
Gutenbergstr. 2 | Gutenbergstr. 2 | 46414 Rhede/Westf. | Germany
info@bresser.de | www.bresser.de