

Polaris Observatory Domes

Professional
Design
at an
Affordable Price



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POLARIS SIX FOOT DOMES

The 6' diameter POLARIS observatory provides all the convenience and protection of large observatories, but in a limited space. Its small size allows installation on almost any building



Polaris 6 - Tall Version

or structure and is less imposing in communities where neighbors have concerns about their view of your property. Though compact, the 6' dome will easily accommodate a pier-mounted Schmidt-Cassegrain up to 12", or, depending on the mounting design, a 6" Newtonian. There is space for you and a guest, but for larger groups, a 10' dome is more appropriate. The 6' POLARIS observatory is available in two models. Each has the same 74" diameter dome with a 30" wide slot opening and two piece, up-and-over shutter. The PHD-6S is our "short" 6' observatory, intended for mounting on your own structure or walls.

"It went together with no problems, it looks terrific. Thanks for all your help." -Alan Ellis, Scotland

The dome sits on a 9" high base ring for a total internal height of 3'10". The PHD-6S is strong but very lightweight and can be mounted on a rectangular or circular skirt for an additional 4" of height. The PHD-6T is a complete, free-standing "tall" observatory for installation on a pad, deck, or flat roof. The PHD-6T dome comes with 45" high wall and full height access door for a total inside height of 6'10". For added floor space, you can add one or more computer cubbies. Your dome must be bolted to a secure foundation. The base has an internal flange for mounting to your structure. Assembly time required: approximately one day for two people.

Six Foot (short) POLARIS (PHD-6S)
Complete 6' diameter POLARIS fiberglass observatory for on-structure use. Center height 46". Includes dome halves (2), rear cover, shutters (2), dome support ring (2 pieces), 9" high base ring with reverse flange (3 pieces), rollers, latches, hardware (stainless steel bolts, etc), caulk, and instructions for construction and operation.

Six Foot (tall) POLARIS (PHD-6T)
Complete 6' diameter POLARIS fiberglass observatory for Stand-alone use. Center height 82". Includes dome halves (2), rear cover, shutters (2), dome support ring (2 pieces), 45" high wall with reverse flange (3 pieces), molded entrance door, rollers, latches, hardware (stainless bolts, etc.), caulk, and instructions.

PHD-6T Computer Cubby (PCC-6)
Increases dome floor area by providing a recess into the dome wall for working with your

computer or notebook. Size is 30" wide, 16" deep, and 40" high. Specify 1, 2 or 3 cubbies; each will be molded into a wall section,

Rectangular Skirt (PRS-6)
Four piece fiberglass skirt to make the transition between the 6' circular observatory and a flat/sloping roof or building edge. The horizontal flange of the PRS-6 fastens under the PHD-6S, while a vertical drip flange attaches to your structure. The PRS-6 can support the dome when drip flange is securely bolted. The skirt slopes downward 4" to 6'7" square with drip flange.

Circular Skirt (PCS-6)
Same as PRS-6, except skirt ends in 6'8" diameter circle, with drip flange. Useful for transition to circular building, or to keep water draining down the side of observatory away from foundation.

POLARIS 10 FOOT DOMES

Available in two models; The POLARIS (PHD-10) has a lower cost and is designed primarily for on-structure installation, while the POLARIS (PPD-10) is normally a Stand-alone dome. Both the PHD-10 and PPD-10 can accommodate most Schmidt-Cassegrain telescopes up



Polaris 10 - no wall rings

to 16" and Newtonians (on German Equatorials) up to 16" diameter. Large yoke-mounted Newtonians may require a larger dome or an off-center telescope mount. Built to the same high standard, both PHD-10 and PPD-10 have a 5' high dome made of two pairs of "quadrants" bolted together along internal flanges. The dome sits on a 12" high base ring that incorporates the ball-bearing rollers for dome rotation. A reverse flange at the top of the base ring covers the roller area and keeps the dome safe from wind. The shutter opening is a generous 36" wide, extending up to zenith and 16" beyond. Two shutters open by sliding up and over the dome, then nest together outside the rear cover. As in all our observatories, two integral, automatic latches lock the shutter together for security when closed.

The POLARIS (PPD-10) includes these added features: a molded semi-door section to allow full height entrance; additional rollers, wind brackets and soffit to meet the most extreme wind/ snow conditions; and a key operated, custom deadbolt lock for security. Wall height of the PPD-10 can be increased by adding matching 12" high wall rings, each with a molded door section. Because no part of the PHD-10/PPD-10 weighs more than about 45 lb, it is easy to assemble without use of cranes, even on top of high structures. As with our other dome designs, the PPD-10 or PHD-10 must be mounted on a foundation or other solid support structure. Assembly time required: two people, two days,

Ten Foot POLARIS (PHD-10)
Complete 10' diameter POLARIS fiberglass observatory.
Center height 72". Includes dome quadrants (4), rear cover, shutters (2), dome support ring (4 pieces), base ring with reverse flange (4 pieces), rollers, latches, hardware (stainless steel bolts, etc.), caulk, and instructions for construction and operation.

Ten Foot POLARIS (PPD-10)
Complete 10' diameter POLARIS fiberglass observatory. Center height 72". Includes dome quadrants (4), rear cover, shutters (2), dome support ring (4 pieces), base ring with reverse flange (6 pieces with molded semi-door section), locking system, all hardware (stainless steel bolts, etc.), caulk, and instructions for construction and operation.

Wall Ring (PPDWR-10)
Ten foot diameter wall ring (6 pieces including door), 12" high, matches PPD-10 base ring. Stack one or more rings to increase wall height. Includes molded door section, hinge, latches, and hardware. No cutting needed for assembly.

Rectangular Skirt (PRS-10)
Eight piece fiberglass skirt to make transition between the 10' circular observatory base and a flat/sloping roof or building edge. The horizontal flange of the PRS-10 fastens under the wall or ring flange on the base ring, while a vertical drip flange attaches to your structure. The skirt slopes downward 4" to 10'8" square with drip flange. Can be used with PHD-10 or PPD-10.

Circular Skirt (PCS-10)
Same as PRS-10 except 4 piece skirt ends in 10'8" diameter circle with drip flange. Useful for transition to circular buildings, or to keep water away from the foundation. Can be used with PHD-10 or PPD-10.

POLARIS 15 FOOT DOMES

The 15' diameter POLARIS (PPD-15) observatory will accommodate all but the very largest amateur and professional telescopes with associated equipment, and provides room for group use of the observatory. The PPD-15 uses the same proven design as the PPD-10 observatory. A unique feature of the PPD-15 is the 36" wide semi-door entrance which meets requirements for access by disabled persons. The PPD-15 dome is made of four quadrants, bolted together along internal flanges. The slot opening is 50" wide, with 24" available past the zenith. The shutter is an up-and-over, two piece, automatic latching system. The shutters nest on the rear of the dome when opened. The PPD-15 includes an electric shutter and electric dome rotation system, with power supply,



Polaris 15 with 2 wall rings

Wall height of the PPD-15 can be increased by adding matching 12" high wall rings. Each ring includes a molded door section. The PPD-15 can be installed at ground level on its own foundation, or can be mounted on a roof-top, tower, or other structure. The dome turns on 58 ball-bearing rollers mounted in the 12" high base ring. The standard PPD-15 will meet all but the most stringent code requirements. Where needed, minor modifications can be made to meet special requirements. The base ring bottom flange (4" wide) will be bolted to your foundation. Assembly time required: two people, three days, with additional people or equipment needed for certain steps.

Fifteen Foot POLARIS (PPD-15)
Complete 15' diameter POLARIS fiberglass observatory designed for institutional, industrial, or group use; or to meet other special observing needs. Center height 102", includes dome sections (4), rear cover, shutters (2), dome support ring (4 pieces), base ring with reverse flange (7 pieces, with molded semi-door section), locking hardware, rollers, latches, special fittings, assembly hardware (stainless steel bolts, etc.) caulk, and instructions for construction and operation. Also includes custom PPD-15 electric shutter and dome rotation drives, with power supply.

Wall Ring (PPDWR-15)
Fifteen foot diameter wall ring (7 pieces including door) 12" high; matches PPD-15 base ring. One or more wall rings may be stacked to increase wall height of PPD-15. Includes molded semi-door section, hinge, latches and hardware. No cutting needed for assembly.

Circular Skirt (PCS-15)
Five piece skirt, ends in circle 15'8" with drip flange.

Rectangular Skirt (PRS-15)
Not available at this time.

OUR DOMES ARE EFFICIENT

No more long set-up times; you can be ready to observe in 5 minutes or less.

VERSATILE

Install on a foundation at ground level or on a structure; match wall height to your pier height and scope

WEATHER RESISTANT

Watertight, snow-tight, withstands winds over 100 mph.

EASY TO ASSEMBLE

Bolt together construction; you'll need only common hand tools to do the job.

LOW MAINTENANCE

No need to paint, outside or inside; stainless steel hardware never rusts

RESEARCH FRIENDLY

Triple your observing time with a permanent setup for CCD, spectrometer, camera, remote control or other special equipment

CONVENIENT

Customize the dome to suit your observing style. Add a chart table, computer, storage for eyepieces and filters, observers chair, etc.

AFFORDABLE

Costs far less than other domes; save even more by doing the assembly yourself

COMFORTABLE

Wind protection in all directions; carpet the floor to reduce foot fatigue; add red lights; computer/workstation; and enjoy

BEAUTIFUL

A clean, classic design

COOL

Brilliant white gel coat exterior reflects heat and UV; inside stays cool, no cool down time required to begin observing

DARK

The ultimate answer to local light pollution; screen those offending lights from view once and for all.

ACCESSIBLE

Full height entry door built into the dome wall.

SAFE

No need to put you and your equipment at risk every time you set up.

RELOCATABLE

Take the dome with you when you move

GUARANTEED

Every product carries a warranty.

"A MOST EXCELLENT DOME"

Astronomers praise the design and quality of our observatories: "I love my dome.... It operates easily.... No detail was overlooked.... The workmanship on the dome is excellent, it mated with my structure perfectly." Designed for the professional, priced for the amateur, POLARIS fiberglass observatories are the best selling astronomy domes in the USA.

Every POLARIS has a wide slot opening, extending past zenith. Two shutters move up-and-over, automatically disengaging during opening to nest together at the rear of the dome when open. This patented design makes the full shutter opening available to the astronomer (and assists in sky orientation for students). The dome turns easily on hard rubber, ball-bearing rollers mounted on the base ring. You can add motors to rotate the dome and move the shutters, and even operate the dome remotely. By stacking modular wall rings, walls of any height can be assembled to match your telescope and pier height. Or you can build your own wall. We offer a full height entrance door (using the slot opening as part of the doorway) allowing access without duck-under doors or high walls.

Weather protection is assured by overlapping flanges and baffling, not seals that will wear out or deteriorate. Temperature control is provided by a brilliant white exterior gel coat that normally keeps inside temperature within a few degrees of the shade temperature, so no cool-down period is required before your observing session begins. A dark blue interior helps preserve dark adaptation.

The domes use bolt-together construction. Assembly requires alignment of parts, measuring and drilling bolt holes, and use of common hand and power tools. Larger holes, for rollers and latches, are cut and finished at the factory. Typically, domes are assembled in place by two or three persons, without cranes or special equipment.

Our 6', 10' and 15' diameter domes are installed at homes, schools, colleges, museums and research sites. Observers place them on concrete pads, wooden towers, decks, rooftops, and on custom structures. Nearly 1,500 of our domes are now in use by amateur and professional astronomers around the world.

ACCESSORIES AND SPECIAL SERVICES

Electric Shutter (PES-6/PES-10)

Electric motor (12 VDC); windlass, and stainless steel cable system for opening and closing shutter on 6' or 10' domes. Includes all hardware. Can be added at any time.

Electric Dome Drive (PED-6/PED10)

Electric motor (12 VDC) drive system for dome rotation on 6' or 10' domes. Includes all hardware. Can be added at any time.

Power Supply (PPS-1)

Power supply (12V 10A DC) with built-in key switch and two toggle switches for electric drive and electric shutter. Specify 110 or 220 VAC.

Pre-Assembly Service 15% of Order

Complete factory assembly and testing of your observatory, including all fitting and drilling of holes. The observatory is shipped partially disassembled with all parts marked for easy re-assembly at your site. Preassembly typically reduces installation time by at least 50%.

Special Fiberglass Colors

\$300 - \$400 extra cost. Standard colors for fiberglass parts; white outside, dark blue inside. We can match nearly any color sample provided. May increase production time.

POLARIS SPECIFICATIONS	PHD-6S	PHD-6T	PHD-10	PPD-10	PPD-15
Dome Diameter	6'2"	6'2"	10'	10'	15'
Base Ring Height	9"	45"	12"	12"	12"
Height Inside	3'10"	6'10"	6'	6'	8'6"
Door Opening	NA	19"	NA	19"	36"
Rollers, 3" Dia.	9	10	16	31	48
Slot Width	30"	30"	36"	36"	50"
Slot Past Zenith	10"	10"	16"	16"	24"
Dome Weight	150 lb	200 lb	350 lb	350 lb	650 lb
Electric Shutter	OPT	OPT	OPT	OPT	INC
Electric Rotation	OPT	OPT	OPT	OPT	INC
Automation	OPT	OPT	OPT	OPT	OPT



Polaris 10 with 4 wall rings