

BAADER SLIT DOMES

OVERVIEW

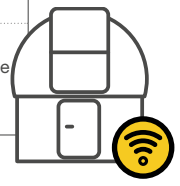
AUTOMATIC SLIT DOMES

Suggested Usecase: Remote Observatory

ADVANCED SLIT DOMES (HIGHSPEED)

Suggested Usecase: 24/7, highspeed and robotic operation

Ø Dome Size		2,1 m	2,6 m	3,2 m	4,2 m	5,3 m	6,15 m	3,2 m	4,2 m	5,3 m	6,15 m	8,5 m
Rotation Rate(s)		2°/s up to 8°/s						2°/s up to 30°/s				2°/s up to 15°/s
Flap and shutter open & closing time(s)		30 s			45 s	60 s	90 s	20 s	25 s		30 s	180 s
Recommended telescope aperture		up to 320 mm	up to 450 mm	up to 600 mm	up to 700 mm	up to 1.000 mm	up to 1.500 mm	up to 600 mm	up to 700 mm	up to 1.000 mm	up to 1.500 mm	up to 2.000 mm
Slit width		900 mm	900 mm	1.150 mm	1.500 mm	1.750 mm	1.950 mm	1.150 mm	1.500 mm	1.750 mm	1.950 mm	2.800 mm
Total Mass (including either base options)	**Short Cylin.**	~ 490 kg	~ 700 kg	~ 1.150 kg	~ 1.500 kg	~ 2.300 kg	~ 3.100 kg	~ 1.300 kg	~ 2.450 kg	~ 3.250 kg	~ 4.000 kg	up to 9.000 kg
	Long Cylin.	~ 570 kg	~ 800 kg	~ 1.320 kg	~ 1.850 kg	~ 2.700 kg		~ 1.500 kg	~ 2.800 kg	~ 3.750 kg		
Power Parameters	**Voltage**	230 V (50/60 Hz)	230 V (50/60 Hz)	230 V (50/60 Hz)	230 V (50/60 Hz)	230 V (50/60 Hz)	230 V (50/60 Hz)	230 V (50/60 Hz)	400 V 3ph (50/60 Hz)	400 V 3ph (50/60 Hz)	400 V 3ph (50/60 Hz)	400 V 3ph (50/60 Hz)
	Max. Peak (incl. Ads. dryer)	2,5 kW (3 kW)	2,5 kW (3 kW)	2,5 kW (3 kW)	3,5 kW (5 kW)	3,5 kW (5 kW)	3,5 kW (5 kW)	3,5 kW (5 kW)	7,5 kW (9 kW)	7,5 kW (9 kW)	11 kW (12,5 kW)	18 kW (*custom solution*)
Wind Speeds	**Survival**	up to 200 km/h						Standard: up to 200 km/h / optional High-Alpine Upgrades up to 300 km/h available				
	Operational	up to 60 km/h (7 bft max. gusts)										
Temperature Range	**Survival**	-40°C to +60°C						Standard: -40°C to +60°C / optional Climatic Performance Upgrades available				
	Operational	-20°C to +40°C						Standard: -20°C to +40°C / optional Climatic Performance Upgrades available				
Humidity inside the dome	**Survival**	45 - 60% (Recommended: Dome Adsorption Air Drying Unit Set | Permanent humidity of 100% outside the dome is no problem)										
	Operational	45 - 100% (Operation at up to 100% humidity possible for up to 24h, afterwards humidity must be reduced to <60%)										
Dome air volume (excl. observation room)	**w.Short Cylin.**	4 m³	7 m³	13 m³	29 m³	60 m³	84 m³	13 m³	29 m³	60 m³	84 m³	237 m³
	w.Long Cylin.	8 m³	14 m³	23 m³	48 m³	89 m³		23 m³	48 m³	89 m³		
Mandatory Base Options		Short Cylinder (Wall Adapter) or Long Cylinder with Entrance Door					Short Cylinder (Wall Adapter)	Short Cylinder (Wall Adapter) or Long Cylinder with Entrance Door			Short Cylinder (Wall Adapter)	
Azimuthal drive concept		Endless dome rotation in azimuth. Friction drive mechanism by means of:						Endless dome rotation in azimuth. Geared drive mechanism by means of				
		One (1) f.d.unit	Two (2) friction drive units			Three (3) friction drive units		Three (3) geared drive units				
Encoder		Azimuth encoder with homing sensor						Absolute encoder in Azimuth and Shutter				
Material		Glass-fiber reinforced polyester (GRP), double layer with intermediate insulation										
Required RCD		All current sensitve residual circuit breaker (Typ B, Ierr = 300mA)										
Command & Control		IR-Hand Controller, RS232 and TCP/IP (Webinterface and native API)						Cable-bound Hand Controller, RS232 and TCP/IP (Webinterface and native API)				
Emergency closure	**Power Fail**	Manually / Optionally: UPS						1. layer: UPS / 2. layer: manually, hydraulically assisted				
	Weather	Weather Station included for emergency closure only, no readout										
Uninterrupted Power Supply		Optionally available (see below)						Emergency closure UPS single-phase				*provided by client*
Communication Protocol		Proprietary API (TCP/IP, RS232), ASCOM-Alpaca (TCP/IP), ASCOM (RS232), INDIGO (RS232)										
Upgrades available upon request	**All versions**	Professional Weather Station, Desert Upgrade (enhanced dust-proof seals), LED lighting red/white, Instrument lifting equipment, Dome Adsorbtion air drying unit set, Custom modifications / mounting points / throughholes etc., Input-/Output-Module										
	Specific	Emergency closure UPS (Uninterrupted Power Supply) single-phase, Dome slit seal with wind-deflector						Solar Shield, High-alpine upgrade: triple layer with double intermediate insulation, enhanced mechanics for up to 300 km/h survival wind speed, Climatic Performance Upgrades: extended operational range down to -60°C or up to +60°C, Lightning Mitigation Hardware (automatically engaged)				



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