

Product Description

Brett Martin Daylight Systems Mardome Reflex is a individual polycarbonate 'glazing only' dome rooflight intended for refurbishment projects on flat roofs of all modern building types to provide natural light. Mardome Circular is available as dome only or with 175mm tall kerb, if required.

Mardome Rooflights are designed and manufactured under an ISO9001 approved quality system. Product options which will help to satisfy differing requirements for light transmission, thermal performance, ventilation and acoustics are available.

BBA Approval

Brett Martin Daylight Systems Mardome Reflex and Circular Rooflight Domes have full BBA approval and are certified under 06/4385.



Composition

The outer dome of Mardome Reflex and Circular is manufactured from 3mm impact resistant Marlon FSX Longlife polycarbonate sheet which is co-extruded with a UV protective coating to both sides. The inner domes are manufactured from 2mm impact resistant Marlon FSX Longlife polycarbonate sheeting for double and triple skin options.

The Mardome Circular kerb is manufactured from insulated GRP with a gloss gel coat finish to the interior.

The polycarbonate which comprise the product can be recycled at the end of useful product life.

Fire Rating

Building Regulations Approved Document B (2006 edition, amended 2007) sets out the rules for fire safety of buildings, which can be met by achieving specific fire ratings to either British (BS476) or European (BS EN 13501) test standards.

Brett Martin Daylight Systems Mardome Reflex and Circular Rooflights achieve Class B s1, d0 to BS EN 13501: Part 1. Building Regulations state they can therefore be regarded as B_{ROOF(t4)}.

Durability

Mardome Reflex and Circular Rooflights are designed to remain fit for purpose in normal industrial conditions for a period of 20 years (guaranteed for 10 years) i.e. they will not become perforated, lose significant structural integrity, or distort to the extent of losing weather-tightness. In addition, the polycarbonate used in Mardome Rooflights is guaranteed against loss of light transmission, discolouration or loss of impact strength for 10 years.

Safety Requirements/CDM Regulations

Mardome Reflex and Circular Rooflights achieve Class B non-fragility to ACR[M]001 when new and fully installed in accordance with Brett Martin Daylight System's installation guides (See TB 185).



Safety Requirements/CDM Regulations

Foot traffic on all rooflights should always be avoided; impacts such as foot traffic or a falling person may cause damage which may necessitate rooflight replacement.

Appearance

Mardome Reflex is a 'glazing only' specification dome to fit existing upstands. The low profile dome improves the aesthetics and also the clarity of light.

Mardome Circular domes provide an economical solution where circular rooflights are required. They're available to fit existing upstands or can be supplied with an insulated GRP kerb. It's contemporary design gives a clean white internal appearance and unobtrusive exterior.

Security

Please refer to BBA Certificate 06/4385, Section 14.

Mardome Reflex and Circular rooflights are manufactured from polycarbonate which has an impact strength 200x greater than glass, therefore making breakage very difficult.

Wind and Snow Load

Please refer to BBA Certificate 06/4385, Section 9.

Mardome Rooflights have been independently tested to show that when correctly fitted in accordance with our instructions, they will resist wind loads calculated in accordance with BS EN 1991-1-4: 2005, and imposed loads in accordance with BS EN 1873: 2005 as shown in Table 1.

Table 1
Resistance to Snow and Wind Loads

Rooflight Type	Dimensions (mm)	Snow Load (N.m ²)	Wind Load (N.m ²)
Domed	1200 x 2400	1125	1500
Pyramid	1500 x 1500	1750	3000

Available Options

Mardome Reflex and Circular Rooflights are available in a curved dome profile and in a range of sizes listed in Table 4. Other sizes within this range can also be fabricated on request and are covered by the BBA Certificate.

Ventilation:

Mardome Reflex and Circular are 'glazing only' specification domes. If ventilation is required, please see our Trade and Ultra range of rooflights.

Glazing Options & Transmission Values

Mardome Reflex and Circular Rooflights are available with a selection of glazing tint options depending on the required level of light transmission.

Tint	Lighting Effect	Light Transmission (%) DIN 5036		
		Single Skin	Double Skin	Triple Skin
Clear	High Visibility	90%	85%	78%
Textured	Privacy	84%	78%	72%
Bronze	Solar Control	54%	39%	36%
Opal	Diffused Light & Solar Control	37%	35%	32%

Tint	Double Skin	Triple Skin
Clear	0.73	0.66
Opal	0.33	0.30

Tint	Double Skin	Triple Skin
Clear	0.84	0.76
Opal	0.38	0.34

Thermal Performance

The thermal transmittance of Mardome Rooflights is measured by the Guarded Hot Box method according to BS EN ISO 12567-2: 2005.

Part L Building Regulations require a U-value of at least 2.2W/m²K: Brett Martin Daylight Systems recommend the use of at least triple skin rooflights in all applications.

	Centre Pane U-Value ¹ (W/m ² K)
Single Skin Polycarbonate	5.5
Double Skin Polycarbonate	2.7
Triple Skin Polycarbonate	1.8

Design Features

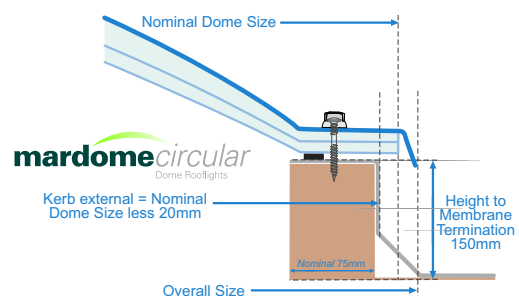
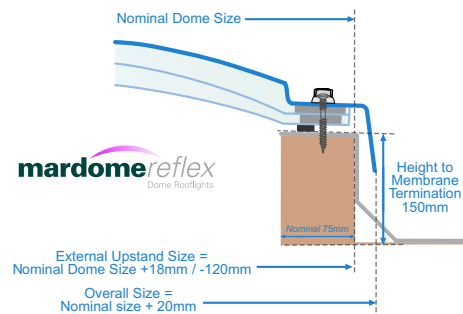
- Glazing only for refurbishment or economical circular applications.
- Contemporary design (dome and pyramid options).
- Options to satisfy requirements for light transmission and thermal performance.
- U-Value to as low as 1.8 W/m²K

General Product Dimensions

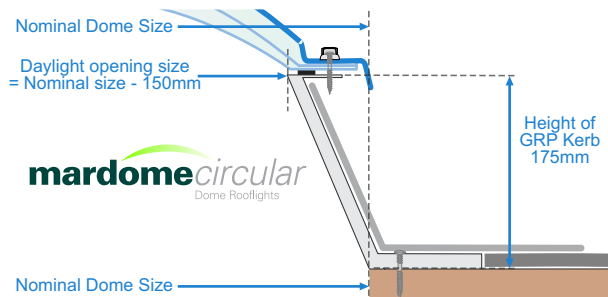
Table 4
Sizes of Rooflights

Nominal Dome Sizes (mm)					
Square	Reflex Only				Circular Only
	Rectangular				
450 x 450	600 x 750	900 x 1050	1200 x 1350	1500 x 1800	600
600 x 600	600 x 900	900 x 1200	1200 x 1500	1500 x 1950	750
750 x 750	600 x 1050	900 x 1350	1200 x 1650	1500 x 2100	900
900 x 900	600 x 1200	900 x 1500	1200 x 1800	1500 x 2250	1050
1050 x 1050	600 x 1350	900 x 1650	1200 x 1950	1500 x 2400	1200
1200 x 1200	600 x 1500	900 x 1800	1200 x 2100	1650 x 1800	1350
1350 x 1350	600 x 1650	900 x 1950	1200 x 2250	1650 x 1950	1500
1500 x 1500	600 x 1800	900 x 2100	1200 x 2400	1650 x 2100	1800
1650 x 1650	750 x 900	1050 x 1200	1350 x 1500	1650 x 2250	
1800 x 1800	750 x 1050	1050 x 1350	1350 x 1650	1650 x 2400	
	750 x 1200	1050 x 1500	1350 x 1800	1800 x 1950	
	750 x 1350	1050 x 1650	1350 x 1950	1800 x 2100	
	750 x 1500	1050 x 1800	1350 x 2100	1800 x 2250	
	750 x 1650	1050 x 1950	1350 x 2250	1800 x 2400	
	750 x 1800	1050 x 2100	1350 x 2400		
	750 x 1950	1050 x 2250	1500 x 1650		

Note: Available in 70 mm and 100 mm flat flanges, Mardome Reflex can be mechanically fixed to existing kerbs of varying dimensions without the use of a kerb adapter in the majority of cases.



General Product Dimensions Continued



Installation

Full installation details can be found in the below Technical Bulletins:

Table 7 Technical Bulletins	
Technical Bulletin	Technical Bulletin Description
TB 185	Installation for Mardome Reflex AND Mardome Circular
TB 191	Installation for Mardome Kerb Adapter on Existing Upstand for Unvented AND Vented Domes

Mardome Reflex and Circular Rooflight products have differing height and weight. As this value varies with rooflight size and specification, a range of values is quoted below. For more details contact Brett Martin Daylight Systems.

Handling, Maintenance & Storage

For full maintenance and product care details, see data sheet:

Table 5 Product Overall Height		
Description	Min 450 x 450	Max 1800 x 2400
Reflex Dome direct to builders upstand	54 mm	178 mm
	Min 600 x 600	Max 1800 x 1800
Circular Dome direct to builders upstand	80 mm	241 mm
Circular Dome on GRP kerb	255 mm	416 mm

Table 8 Technical Bulletins	
Technical Bulletin	Technical Bulletin Description
COSHH12	COSHH Data Sheet for Dome Rooflights - Product Safety and Handling Data Sheet
TB 203	Polycarbonate Dome: Product care before & after installation

Table 6 Product Overall Weight		
Description	Min 450 x 450	Max 1800 x 2400
Reflex Dome direct to builders upstand	2.1 Kg	37.9 Kg
	Min 600 x 600	Max 1800 x 1800
Circular Dome direct to builders upstand	3.1 Kg	27.5 Kg
Circular Dome on GRP kerb	6.1 Kg	36.6 Kg

Note: Weights based on triple skin dome.

Product Accessories

Kerb Adapter:

See Technical Bulletin 191 for more information.

The Mardome Kerb Adapter allows standard domes from the Mardome range to fit on non-standard builders kerb sizes.