

Uniclass L414		EPIC D15
CI/SfB (37.4)	X	

Issue 3

# STARDOME

A NATURAL LIGHT INNOVATION



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# STARDOME Rooflights



All **STARDOME** Rooflights are manufactured to the highest standards, providing exceptional light transmission and maximum weather protection.

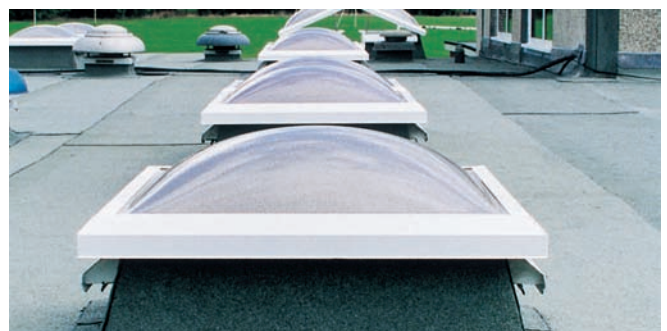
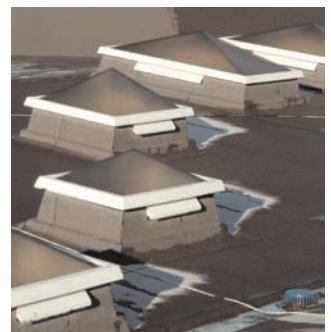
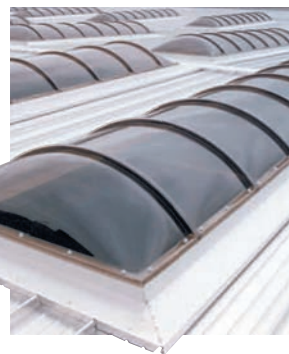
## DESIGN OPTIONS

Manufactured from high quality UV protected polycarbonate, Stardome Rooflights are available in a choice of profiles such as domes (SD220) and pyramids (SD200). Polycarbonate offers high impact resistance as well as a variety of glazing options in either clear, diffused, opal or bronze. (Other shapes are available on request)

Stardome Rooflights are available in either a single, double or triple skin units. By using double or triple skin rooflights, the possibility of internal condensation can be reduced significantly.

The Thermoformed Barrel Vault (SD210) is ideal for large expanses. It is manufactured nominally in one metre sections, which interlock—facilitating easy on site assembly.

This provides designers, architects and contractors with a wide range of design options as detailed on the back page.



Rooflight fitted with security frame option.

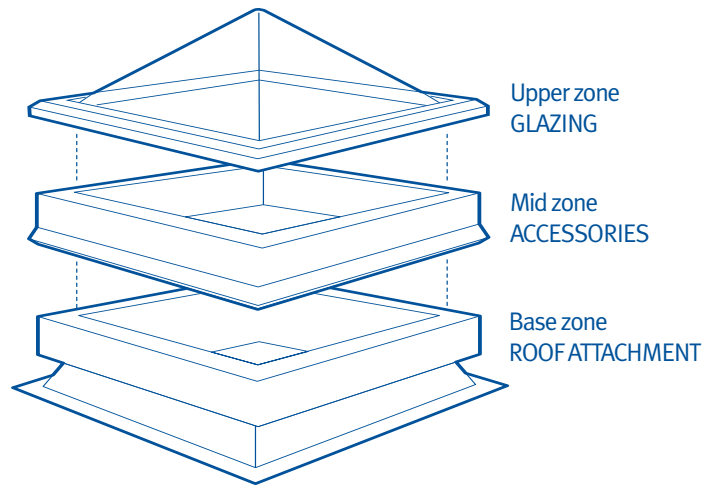
# The Standard STARDOME Range

## The complete range of rooflights in standard and non-standard sizes

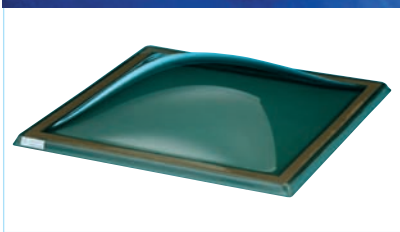
Specifying a rooflight with Stardome could not be easier. We have a complete range of glazing, ventilation and roof mounting systems for you to choose from. They also come in a broad selection of standard sizes, with non-standard sizes available upon request. With ventilation often being a key requirement for rooflights—a variety of options from permanent to power operated systems are available.

Stardome Rooflights are designed to give outstanding natural light transmission with added security where required in anti-vandal kerbs with the optional extra of burglar bars. Our standard kerb detail is available in PVCU and GRP as well as galvanised steel and aluminium.

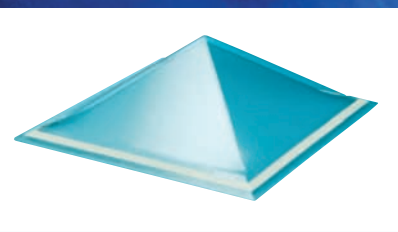
It is recommended that site surveys are carried out prior to any design or production work. Stardome technical staff are always on hand to discuss your project.



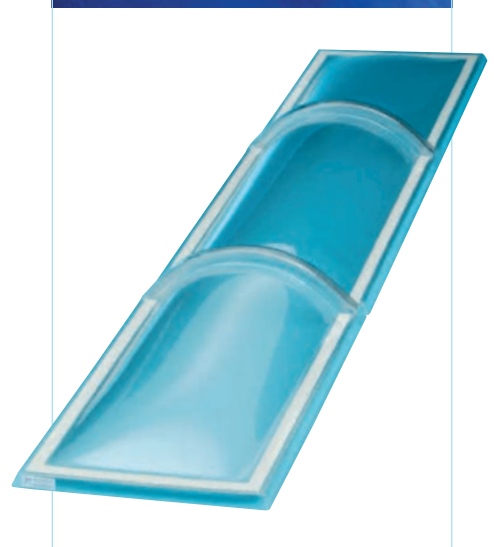
**Stardome SD220 Dome**



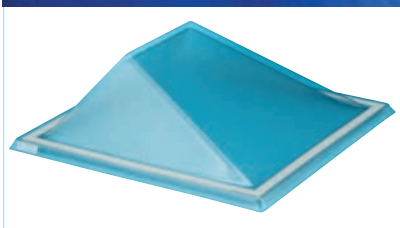
**Stardome SD200 Pyramid**



**Stardome SD210 Barrel Vault**



**Stardome SD250 Northlight**



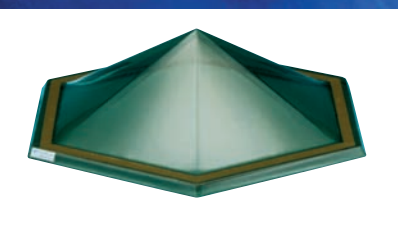
**Stardome SD240 Circular Dome**



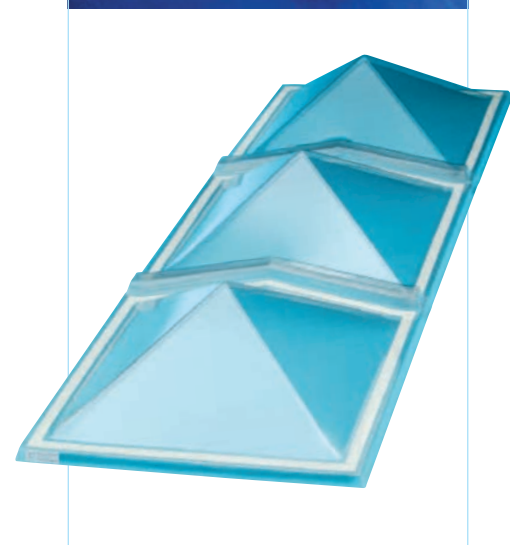
**Stardome SD270 Hemispherical**



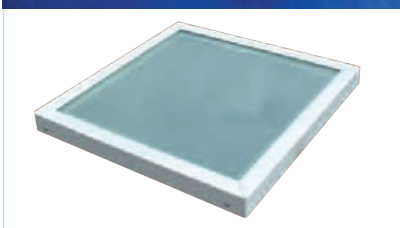
**Stardome SD280 Hexagon**



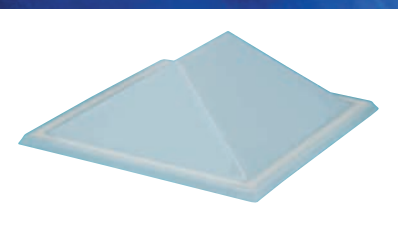
**Stardome SD300 Continuous Pyramid**



**Stardome SD260 Glass**






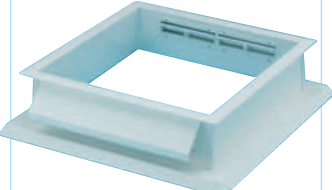
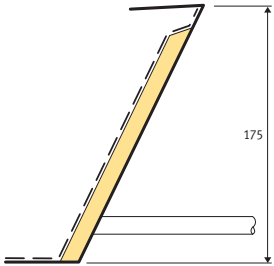
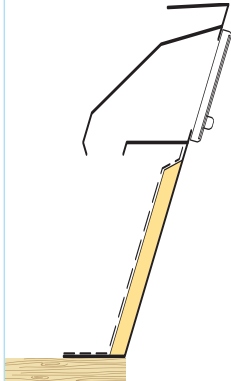
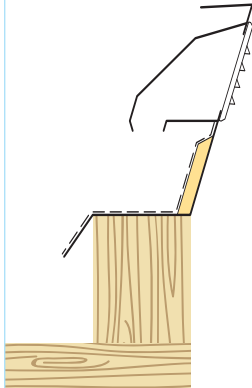
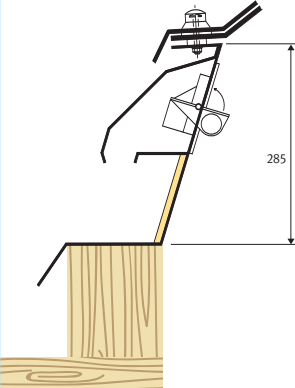
**Stardome SD230 Trapezoid**



# STARDOME Ventilation and Kerb Options



These high specification units combine advanced materials with outstanding design, to provide no-compromise roofing for all kinds of applications

<b>Stardome 300</b> Metal Kerb, Unvented with Optional Burglar Bars	<b>Stardome 320</b> Metal Kerb with Hit and Miss Ventilation	<b>Stardome 325</b> Metal Kerb with Permanent Ventilation	<b>Stardome 330</b> Metal Kerb with Controlled Louvre
			
<p>Available as upstand or adaptor kerb. Variable upstand heights to suit specification.</p>	<p>Available as upstand or adaptor kerb. Variable upstand heights to suit specification.</p>	<p>Available as upstand or adaptor kerb. Variable upstand heights to suit specification.</p>	<p>Available as upstand or adaptor kerb. Variable upstand heights to suit specification.</p>
 <p>175</p>		<p>Shown here with adapter kerb.</p> 	<p>Shown here with adapter kerb.</p>  <p>285</p>

# STARDOME Ventilation and Kerb Options

## Fixing Rooflights

For individual and continuous rooflights, a kerb/upstand is used to raise the glazing and or ventilation module above and away from the roof surface.

Pre-formed kerbs/upstands must be fixed squarely to the roof structure surrounding the rooflight opening with appropriate fixings.

**INSULATION:** PVCU and GRP integral, galvanised steel and aluminium optional.

**SIZES:** Various standard (see table on back page) and non-standard sizes are available to suit specific requirements.

## OTHER KERB OPTIONS AVAILABLE

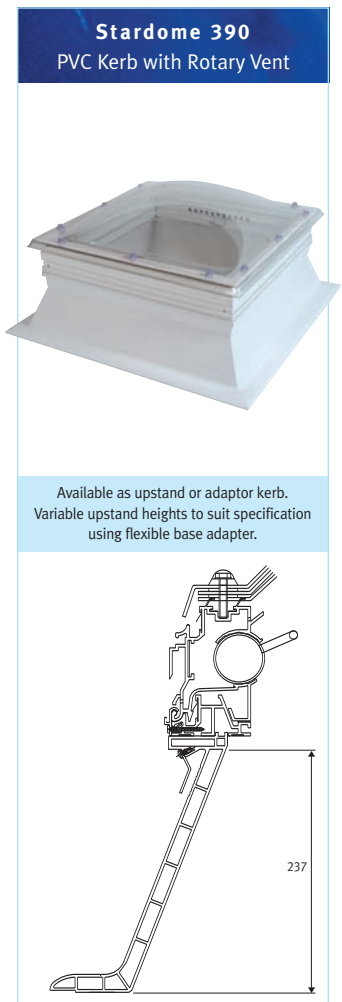
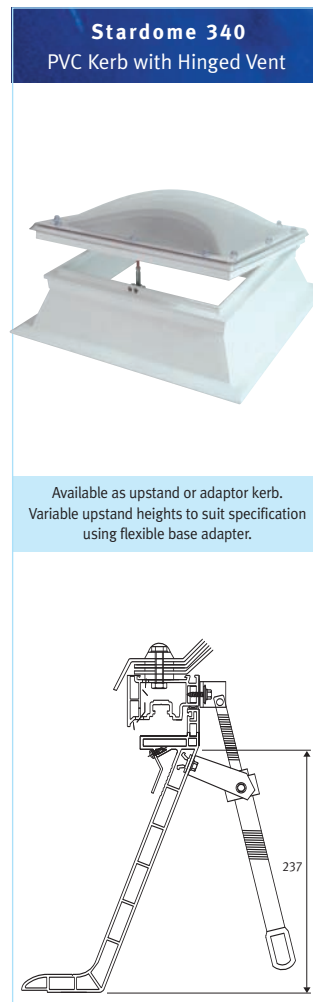
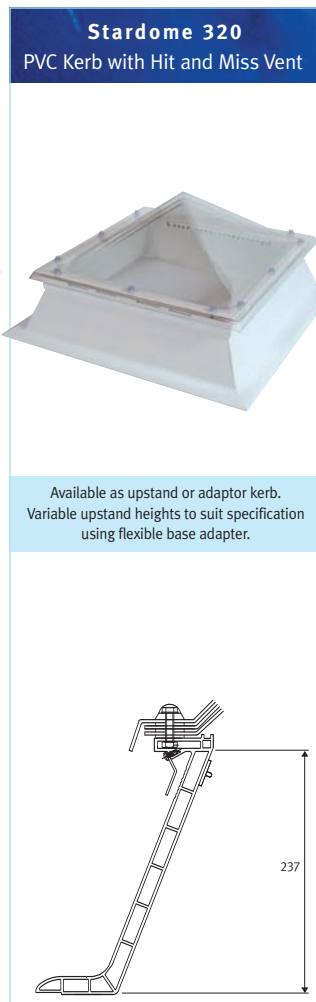
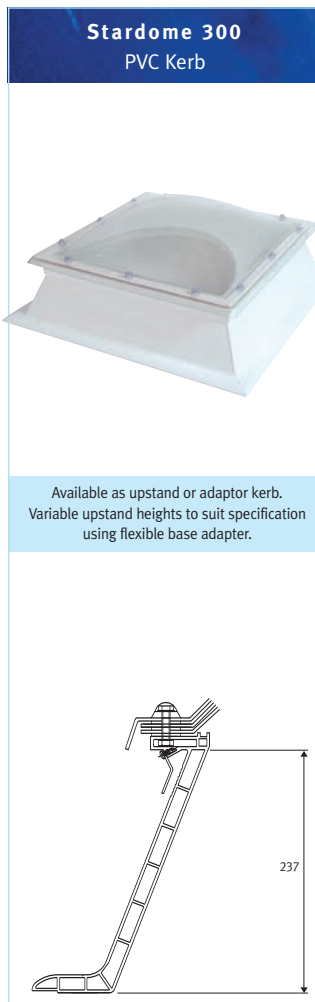
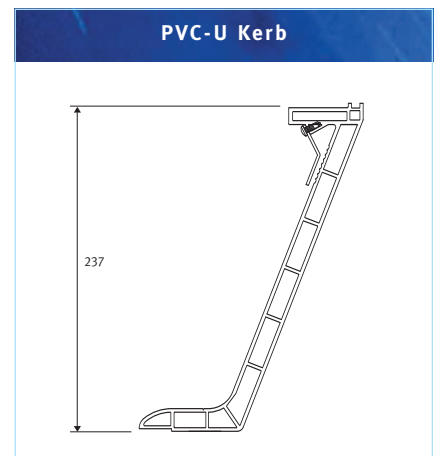
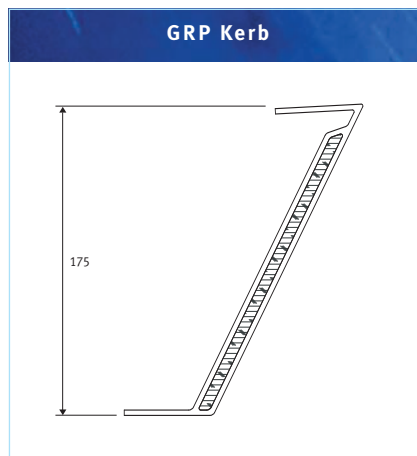
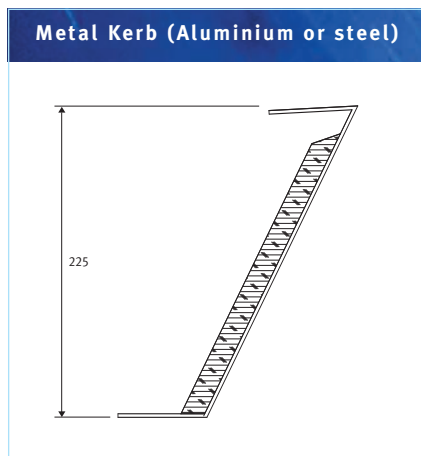
**STARDOME 370 LINEAR MOTOR\***

**STARDOME 380 SLIDING ROOFLIGHT**

**STARDOME 385 SLIDING ROOFLIGHT (with motor)\***

**STARDOME 310 ROOF MOUNTED SMOKE VENT WITH ELECTROMAGNETIC CATCHES\***

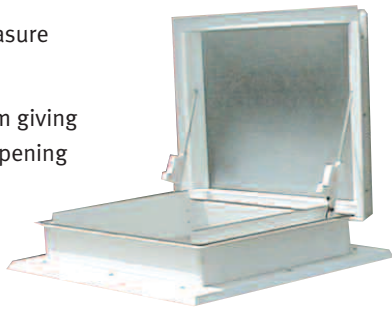
\*Requires electrical connections



# STARDOME AOV

Usually located at the top of a ventilation shaft or stairwell, the **STARDOME AOV** unit allows complete flexibility of specification.

- All units made to measure
- Glazed or solid top
- Concealed mechanism giving clear uninterrupted opening
- Easy installation
- Opens to 90°
- Supplied with or without control backup



Usually located at the top of a ventilation shaft or at the head of a stairwell where up to 1.5 m<sup>2</sup> of free vent area is required, the Stardome AOV presents total specification flexibility.

The lid or top of the unit can be supplied in three forms:

- Solid metal panel, insulated and polyester powder coated—generally at the head of a smoke shaft when only ventilation is required in case of a fire (no need for light).
- Glazed top in single, double or triple skin polycarbonate, which can be made in the full range of sizes.
- Glazed top in a double-glazed glass unit with toughened outer and laminated inner.

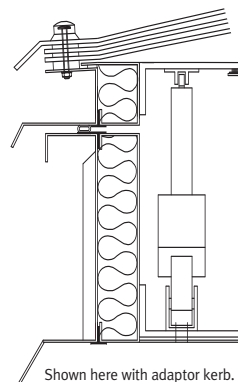
Stardome AOV's can be supplied with their own kerb for fixing directly to the roof deck and then weathered in the traditional manner with the roofing membrane being dressed up the outside of an insulated kerb.

Alternatively if a kerb is being constructed as part of the roofing system (metal roofing or a builder's kerb) then we are able to supply a kerb adaptor.

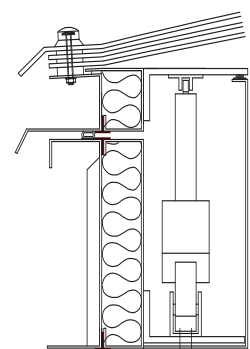
Both kerb and kerb adaptor units are manufactured from folded galvanised steel or aluminium, both materials being polyester powder coated white.

This type of product is usually specified by the Mechanical and Electrical Consultant as part of an overall smoke/fire ventilation/ alarm system and as an integral part, is linked into a control panel.

## AOV Thermally Broken

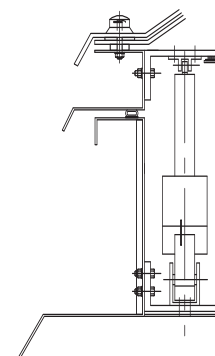


Shown here with adaptor kerb.

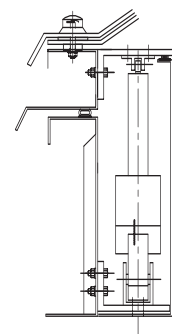


Shown here with upstand.

## AOV Opening Mechanism



Shown here with adaptor kerb.



Shown here with upstand.

### CONTROL PANEL OPTIONS

Controller unit with battery backup, Firemans Switch and smoke detector.



**CALL US NOW FOR A QUOTE ON 01276 451555**

# Meeting Insulation Requirements of Part L

From 6th April 2006 the latest revision to 'Part L' has had a major influence on the very nature of rooflight design, construction and incorporation. In summary, the thermal performance of the whole constructed building envelope has been upgraded by reducing the permitted 'U' values for each thermal element, including 'controlled fittings' such as doors, windows and rooflights.

## HOW TO COMPLY

There are some key details that will affect the rooflight element of your project designs which are detailed as follows:

### L2A & L2B—New and Existing Buildings, Other than Dwellings

- The minimum area for rooflights is 10% of the floor area. (The standard in some cases could be as high as 20%.)
- Rooflights are permissible only if the rooflight design provides a method for limiting solar overheating—usually shading, solar control glazing or simply the orientation of the unit.
- The 10% figure assumes a light transmission of 70%—if lower, then the area of rooflights must be increased proportionately.
- Whole unit, glazing, vent and rooflight kerb – whole unit 'U' Values must equal 2.2 W/m<sup>2</sup>K or better.
- Finally there will no longer be a 'trade off' against other parts of the roof, except under special circumstances.

### L2A & L2B—New and Existing Buildings, Other than Dwellings

- All 'U' values quoted refer to the 'whole' unit including and vent
  - New build—rooflights must have a 'U' value of 2.2 W/m<sup>2</sup>K or better
  - Refurbishment—New controlled fitting must have a 'U' value of 1.8 W/m<sup>2</sup>K
  - Replacement—must have a 'U' value of 2.0 W/m<sup>2</sup>K
- Adequate levels of daylight must be provided as detailed in BS 8206.

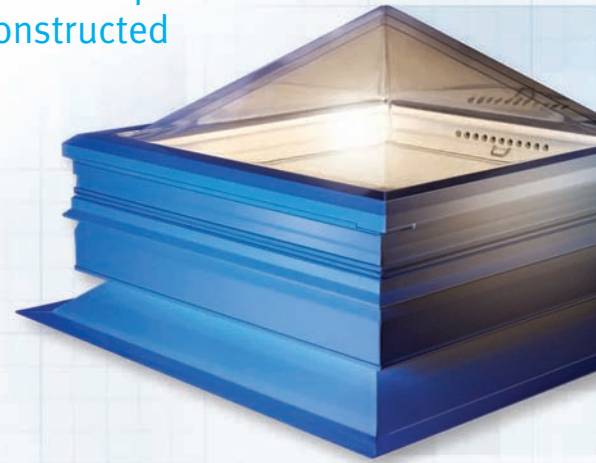
### General

- All rooflight units, regardless of design and use will be required to achieve an 'Air Infiltration' performance of better than 10m<sup>3</sup>/h/m<sup>2</sup>.
- All rooflight units must be designed without cold bridges.

As a guide the table below provides indicative 'U' values for the various choice options for the Stardome range of rooflights.

'U' Value Guidance Chart	Single Skin	Double Skin	Triple Skin
Glazing only e.g. Stardome 220	4.0	2.8	1.8
Glazing with Stardome 300 insulated metal kerb	5.6	3.6	2.9
Glazing with Stardome 320 vented insulated metal kerb	5.7	3.7	2.9
Glazing with Stardome X-One 300 unvented			1.32*
Glazing with Stardome X-One 390 rotary vent			1.32*
Glazing with Stardome 390 rotary vent themally broken metal kerb			1.55
Glazing with Stardome 300 themally broken metal kerb			1.6
Glazing with Stardome 390 rotary vent PVC kerb			1.75
Glazing with Stardome 300 PVC kerb			1.8*
Glazing with Stardome 320 hit & miss vent PVC kerb			1.8

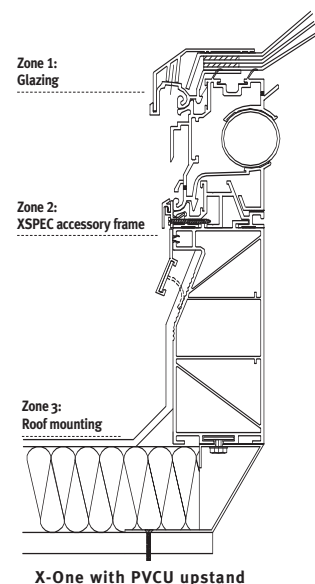
□ Equal of better than the requirements of Part L    ■ Worse than the requirements of Part L    ■ N/A  
 All of the above figures are quoted in W/M<sup>2</sup>K\* and are designed as a guide only. Those marked with \* are hot box test results. All have been adjusted for SBEM.



The Stardome X-One rooflight is designed and constructed, in three distinct zones: Upper zone— Glazing, Mid zone— Accessories and Base zone— Roof Attachment.

The purpose of such an approach is to rationalise and simplify the specification of a complete rooflight assembly allowing a full range of functions and options.

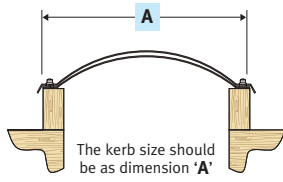
The Stardome X-One is triple glazed as standard, uses 'XSPEC' Accessory Frame ensuring compliance with 'Part L' and has two available roof mounting options which allows the glazing unit to be fitted after the roofing finish is applied.



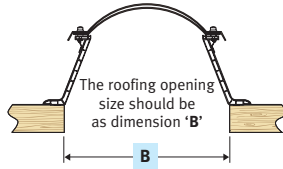
These revolutionary triple skinned rooflights combine exceptional performance with outstanding design to provide specifiers with the most advanced rooflight range ever.

# TECHNICAL INFORMATION

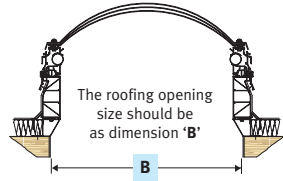
## ROOFLIGHT FIXING TO BUILDER'S KERB



## KERBS TO FIT ROOF APERTURE



## X-ONE KERBS TO FIT ROOF APERTURE



### Polycarbonate (Solid Sheet)

3 mm UV protected polycarbonate\*

Glazing options; Clear, diffused, bronze and opal.

### Light transmissions for 3mm

thick single skin material:

Clear 88% Obscure 86% Opal 50% Bronze: 50%

Service temperatures: -50 to +120 degrees C.

### Kerbs.

Galvanised steel, aluminium, GRP and PVCU. Galvanised steel and aluminium 225 mm to underside of vent section, non-vented 225 mm to underside of the fixing flange. Extra heights available to accommodate cut to falls insulation and below deck fixings.

### Fire:

BS 476 pt 3 AA rating

BS 476 pt 7 Class 1\*\*

1991 Building Regulations Tp(a) on 3 mm and over.

\*\*Materials which achieve class 1 (or 1y)

can be classed as an AA designation.

Weight: 3 mm – 3.6 kg/m<sup>2</sup> 4 mm – 4.8 kg/m<sup>2</sup>

\*4 mm may be used on larger thermoformed rooflights.

### Non-fragility.

All Stardome double and triple rooflights, thermoformed, barrel vaults and kerbs are classified as Class B – Non Fragile to ACR[M] 001:2005. The polycarbonate material used is considered virtually unbreakable.

### Ventilation.

In accordance to Part F of the Building Regulations background ventilation should not be less than 8000 mm<sup>2</sup> of controllable and secure ventilation. Where rapid ventilation is necessary, this should equate to 5% of the total floor area of the room. On a standard kerb 1200 x 1200 mm vented on two sides the free air space is;  
 Permanent Vent 160 cm<sup>2</sup> (16,000 mm<sup>2</sup>)  
 Hit & Miss Vent 92 cm<sup>2</sup> (9,200 mm<sup>2</sup>)  
 Controlled Louvre 480 cm<sup>2</sup> (48,000 mm<sup>2</sup>)  
 Rotary Vent 112 cm<sup>2</sup> (11,200 mm<sup>2</sup>)

### Polyester Powder Coating.

All metal kerbs and glazing bars are supplied in a white matt finish to BS 6496. Other RAL colours are available upon request.

### Insulation.

We offer a choice of either fibre board or PVCU. Other options are available to suit various membranes.

**For further information please contact our technical department on 01276 451555.**

## STARDOME SQUARE SIZES

Domes and Pyramids		Upstands (insulated)			Ventilation			
Ref. No.	To fit overall builder's kerb. Size (mm) (See diagram A)	To fit roof opening. Size (mm) (See diagram B)	GRP	PVC	Steel or Aluminium	Rotary/Controlled	Hinged Vent	Access Hatch
SD1	400 x 400*	500 x 500		●	●	●	●	
SD2	500 x 500*	600 x 600	●	●	●	●	●	
SD3	600 x 600*	700 x 700		●	●	●	●	
SD4	650 x 650*	750 x 750	●	●	●	●	●	
SD5	700 x 700*	800 x 800		●	●	●	●	●
SD6	750 x 750*	850 x 850		●	●	●	●	
SD7	800 x 800*	900 x 900	●	●	●	●	●	●
SD8	850 x 850*	950 x 950		●	●	●	●	●
SD9	900 x 900*	1000 x 1000		●	●	●	●	●
SD10	950 x 950*	1050 x 1050	●	●	●	●	●	●
SD11	1000 x 1000*	1100 x 1100		●	●	●	●	●
SD12	1050 x 1050*	1200 x 1200	●	●	●	●	●	●
SD13	1100 x 1100*	1250 x 1250		●	●	●	●	●
SD14	1150 x 1150*	1300 x 1300		●	●	●	●	●
SD15	1200 x 1200*	1350 x 1350	●	●	●	●	●	●
SD16	1300 x 1300*	1400 x 1400		●	●	●	●	●
SD17	1400 x 1400*	1500 x 1500	●	●	●	●	●	●
SD18	1500 x 1500*	1600 x 1600		●	●	●	●	●
SD19	1600 x 1600*	1650 x 1650	●	●	●	●	●	●
SD20	1700 x 1700*	1800 x 1800	●	●	●	●	●	●
SD21	1800 x 1800*	1900 x 1900		●	●	●	●	●

## STARDOME RECTANGULAR SIZES

Ref. No.	To fit overall builder's kerb. Size (mm) (See diagram A)	To fit roof opening. Size (mm) (See diagram B)	PVC	Steel or Aluminium	Rotary/Controlled	Hinged Vent	Access Hatch†
SR1	500 x 650*	600 x 750	●	●	●	●	
SR2	500 x 800*	600 x 900	●	●	●	●	
SR3	500 x 1100*	600 x 1200	●	●	●	●	●
SR4	500 x 1400*	600 x 1500	●	●	●	●	●
SR5	500 x 1700*	600 x 1800	●	●	●	●	●
SR6	600 x 900*	700 x 1000	●	●	●	●	●
SR7	600 x 1200*	700 x 1300	●	●	●	●	●
SR8	600 x 1500*	700 x 1600	●	●	●	●	●
SR9	600 x 1800*	700 x 1900	●	●	●	●	●
SR10	650 x 800*	750 x 900	●	●	●	●	●
SR11	650 x 1150*	750 x 1200	●	●	●	●	●
SR12	650 x 1250*	750 x 1350	●	●	●	●	●
SR13	700 x 1000*	800 x 1100	●	●	●	●	●
SR14	700 x 1300*	800 x 1400	●	●	●	●	●
SR15	750 x 900*	850 x 1000	●	●	●	●	●
SR16	750 x 1200*	850 x 1300	●	●	●	●	●
SR17	750 x 1500*	850 x 1600	●	●	●	●	●
SR18	750 x 1800*	850 x 1900	●	●	●	●	●
SR19	800 x 1100*	900 x 1200	●	●	●	●	●
SR20	800 x 1250*	900 x 1350	●	●	●	●	●
SR21	800 x 1400*	900 x 1500	●	●	●	●	●
SR22	800 x 1700*	900 x 1800	●	●	●	●	●
SR23	800 x 2300*	900 x 2400	●	●	●	●	●
SR24	900 x 1200*	1000 x 1300	●	●	●	●	●
SR25	900 x 1500*	1000 x 1600	●	●	●	●	●
SR26	900 x 1800*	1000 x 1900	●	●	●	●	●
SR27	950 x 1250*	1050 x 1350	●	●	●	●	●
SR28	1000 x 1800*	1100 x 1900	●	●	●	●	●
SR29	950 x 1400*	1050 x 1500	●	●	●	●	●
SR30	950 x 1850*	1050 x 1950	●	●	●	●	●
SR31	1100 x 1400*	1200 x 1500	●	●	●	●	●
SR32	1100 x 1700*	1200 x 1800	●	●	●	●	●
SR33	1100 x 2300*	1200 x 2400	●	●	●	●	●
SR34	1200 x 1500*	1300 x 1600	●	●	●	●	●
SR35	1200 x 1800*	1300 x 1900	●	●	●	●	●
SR36	1200 x 2400*	1300 x 2500	●	●	●	●	●
SR37	1400 x 2300*	1500 x 2400	●	●	●	●	●
SR38	1700 x 2300*	1800 x 2400	●	●	●	●	●
SR39	1800 x 2400*	1900 x 2500	●	●	●	●	●

## STARDOME CIRCULAR SIZES

Domes		Upstands (insulated)		Ventilation	
Ref. No.	To fit overall builder's kerb dia. (mm)	To fit roof opening dia. (mm)	Availability: 9 – 14 days delivery (except for 1800 mm) Available in GRP and Aluminium (for aluminium dome sizes add 150 mm)		Hinged Vent
SC1	540*	600			●
SC2	690*	750			●
SC3	840*	900			●
SC4	990*	1050			●
SC5	1140*	1200			●
SC6	1290*	1350			●
SC7	1440*	1500			●
SC8	1590*	1650			●
SC9	1740*	1800			●

Clearlight size when using Steel, Aluminium or GRP upstands = Rooflight opening size – 150 mm  
 eg: 600 x 600 mm opening = 450 x 450 mm clearlight

Clearlight size when using PVC upstands = Rooflight opening size – 170 mm  
 eg: 600 x 600 mm opening = 430 x 430 mm clearlight

All units are available within 1 – 9 days. \*Available in single, double and triple skins. \*\*Consult with Stardome technical department for upstand material. †Alternative sizes are available – Consult with Stardome technical department.

Domes and Pyramids - Clear, diffused, bronze and opal. For AOV smoke ventilators, powered ventilation, concealed fixing frames, burglar bars, multi-assembly and continuous barrel vaults, please contact us any time on 01276 451555. KERB HEIGHTS: GRP = 175 mm, PVC = 237 mm, Steel and Aluminium = 225 mm high to underside vent section. Adaptor kerbs are made to specific site measurements. Purpose-made kerbs are manufactured on request.

