



# **The Sola Skylight Tubular Daylighting System.**



## Contents

Mission Statement .....	2
Product Photos .....	3
Series 3 Sola Skylight introduction .....	4
Specifications of the Series 3 Sola Skylight .....	5
Domes, Soaker Trays, Electric Light & Diffusers.	6
Leadlights .....	7
Ducting Systems .....	8
Varilight - Variable Light Control Unit .....	8
Power & Turbo Kit .....	9
Adjust-air .....	10
Conversion Boxes .....	11
Lightwell Skylight .....	12
Frequently Asked Questions .....	13
Energy Efficiency .....	14
Product Approvals & Patents .....	15
Warranty Statement .....	15
D.I.Y. Installation .....	15
Company Profile.....	15

# Mission Statement

## **Our purpose**

.... is to bring daylight into your home or business by providing effective and efficient products that maximise this natural resource.

## **Our objective**

.... to be leaders in an evolving industry by manufacturing and supplying products that reflect the latest in technology and scientific research.

## **Our future**

.... to continue to gain knowledge from our worldwide experiences and to offer practical and economical solutions for your day lighting needs.

## **Your benefit**

.... the product recommended, and service offered to you, by our representatives will reflect all of the above attributes ensuring you get the maximum benefits from the available daylight.



# "WOW!"

Skylights are very exciting in terms of a product and what makes it worthwhile is the "WOW" effect.

Sola Skylights can change the whole atmosphere in a room when the correct size and type is fitted.

That dark and dull room or hallway is suddenly bright and fresh and the spontaneous comment is usually "WOW - Why didn't I do this earlier!"



## Series 3 Sola Skylights give you more light...



A Sola Skylight with Flexi-tube not only gives you superior light transmission but is also easily installed in under 2 hours.

A Sola Skylight is a compact but effective product and with the highly efficient Flexi-tube, installation in cluttered ceiling spaces is a breeze.

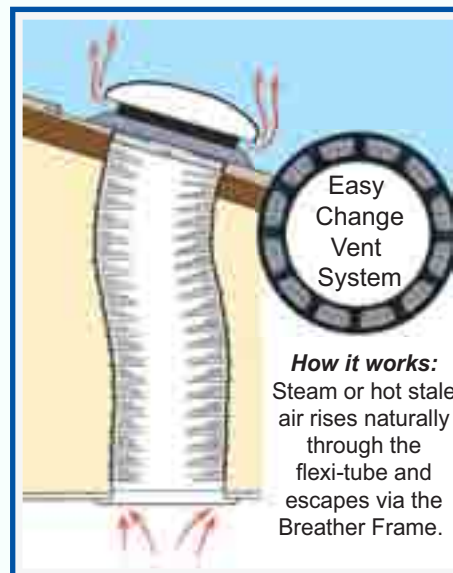
But that's not all. The Sola Skylight is available in five sizes (300mm, 350mm, 400mm, 500mm & 550mm) to suit any room or roof type and its modern aerodynamic design on the roof prevents wind noise and water build up.

Sola Skylights simply gives you more light, more flexibility and more choice.

There are plenty of options & accessories to help your Sola Skylight meet all of your requirements



## ...and can clear the air at the same time!!!



Think of those places in your home where you could not only use more natural light but an air vent too. Maybe the bathroom, ensuite or kitchen.

Now you can have the best of both worlds with Sola Skylights Easy Change Vent System incorporated into the Breather Frame.

The vented Sola Skylight allows steam or hot stale air to escape freely.

The Easy Change Vent System helps you control the natural ventilation in your living areas, as the seasons change.

If more substantial venting is required other options are available, and discussed on page 9 of this catalogue.

# Specifications of the Series 3 Sola Skylight

**Steel Soaker Tray**

The "Hi Rise" centre is what makes our Soaker Trays unique and this feature is standard on all Sola Skylights.

There is no reliance on any sealant against water ingress when the breather frame and dome are fitted into position, fastened with high quality polyurethane construction adhesive.

Manufactured in thicker 0.55mm gauge Zincalume, Galvanised or Colorbond finishes and designs to suit any roof type.

Tile trays have a special double gutter system and 15kg/m<sup>2</sup> "Acrylead" flashing.

**High Impact Dome**

Transparent U.V. Stabilised grade 1 acrylic, injection moulded for uniform thickness and strength.


Live load tested to 112kg.  
(Approved to AS4285-1995)

**360° Reflective Ring**

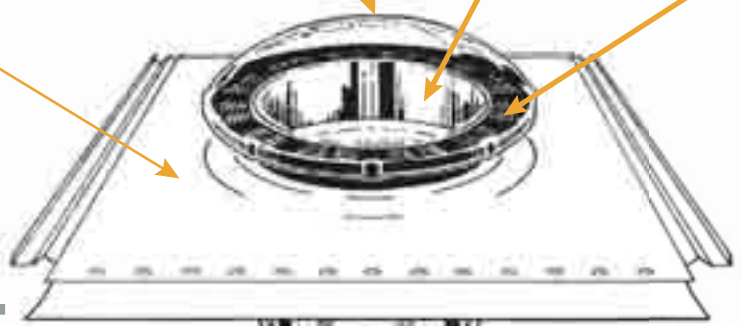
The 0.45mm, 430 BA Grade mirror finish stainless steel ring is positioned within the breather frame of the skylight to direct sunlight coming from any angle down to the flexi-tube and through the diffuser at ceiling level.

**Breather Frame**

Injection Moulded with BASF Luran S, a high quality UV Stabilised material. Incorporating the patented Easy Change Vent System - interchangeable blanking plates & insect screens to suit your venting needs.



Blanking plate      Insect Screen



**Roof Level**



**Ceiling Level**

**Lower Reflective Ring**

The 0.45mm, 430 BA Grade mirror finish stainless steel ring secures the flexi-tube to the ceiling frame.

**Flexi-tube**

The most user friendly shaft system available.

Designed specifically for use in Skylights and manufactured under our quality control conditions. Flexi-tube offers a cost effective balance between ease of installation and quality light transmission against \$\$\$ spent.

Four layers of material, incorporating Metalised Polyester (2), Polyester & Aluminum Foil encapsulating copper coated wire. This ensures a smooth reflective surface when tensioned at installation.

**Ceiling Frame**

White Injection Moulded ABS thermo plastic. Designed to be unobtrusive on any ceiling.

**Diffuser**

Pattern 12 Prismatic manufactured from Clear Acrylic with a uniform thickness of 3mm.

**Diffuser Clips**

Designed to hold the diffuser into position, whether vented or non-vented. When the skylight is vented, the diffuser is raised to allow inlet air flow.

## Options & Accessories List.

- Dome:**  
Clear Acrylic, Opal Acrylic, Double Glazed Acrylic or Clear Polycarbonate.
- Soaker Tray Profiles:**  
Double Gutter Tile, Moulded Custom Orb, Custom Orb or Metal Dek - All profiles.
- Soaker Tray Finishes:**  
Colorbond, Galvanised or Zincalume.
- Ducting:**  
Flexi-tube, Rigi-tube or Silver-tube.
- Ceiling Frame:**  
ABS White thermo plastic, Powdercoated Aluminium or Adjust-air
- Diffusers:**  
Acrylic - P12, P15, Seadrift, Lattice, Flat Opal, Opal P12, Eggcrate, Dished P12, Dished Flat Opal or Dished Seadrift.  
Polycarbonate - P12.  
Leadlight Designs.
- Ventilation:**  
Non Vented.  
Vented with Diffuser Clips or Eggcrate.  
Adjust-air.  
Power Kit or Turbo Kit.

**Accessories:**  
Electric Light  
Varilight - Variable Light Control Unit  
Conversion Boxes

*These options & accessories are described in further detail later in this catalogue.*

**Manufactured to Australian Standard AS4285-1995.**

## Domes



**Clear Acrylic** - Standard  
**Clear Polycarb** - Available



**Opal Acrylic** - Used when a softer light is required.



**Double Glazed Acrylic** - For extreme heat climates.

## Soaker Trays



Tile - Suits all types



"Moulded" Custom Orb



Custom Orb



Metal Dek - All profiles

## Diffusers



**Acrylic P12** - Standard  
**Polycarb P12** - Available



Clear P15



Eggcrate



Flat Opal



Clear Lattice



Opal P12



Clear Seadrift

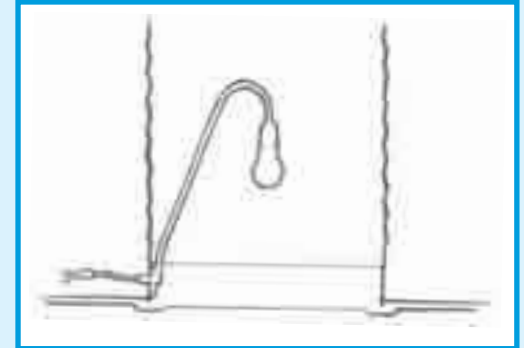


Dished  
(Clear P12, Flat Opal or Seadrift)

*Diffuser Selection is based on personal preference of appearance.*

*Our studies show there is little difference in the throughput and spread of light, when comparing different patterns of diffusers, however Opal Diffusers are used when a softer light is required.*

## Electric Light



Reduce the number of fixtures on your ceiling and include an Electric Light in your skylight, for night time usage.



The Electric Light must be connected to the power supply by a qualified electrician.

*Maximum 60W Globe to be used, (not included).*

# Leadlights

Enhance the beauty of your Sola Skylight with the addition of an optional Leadlight Diffuser. The Designs shown below are available to suit the 350mm, 400mm, 500mm & 550mm sizes.  
(Photo is of 500mm, designs are adapted to suit smaller sizes)



*Traditional*



*Climbing Rose*



*Rose Links*



*Blue Iris*



*Single Rose with Buds*



*Classic*



*Eucalyptus*



*Humming Bird*



*Ring of Roses*



*Tulips*



*Western Rosella*



*Autumn Falls*

Please note: \* As these are handmade, variances may occur in design, layout and colours.

# DUCTING SYSTEMS

## Flexi-tube



The most user friendly shaft system available.

Designed specifically for use in Skylights and manufactured under our quality control conditions.

Flexi-tube offers a cost effective balance between ease of installation and quality light transmission against \$\$\$ spent.

Four layers of material, including Metalised Polyester (2), Polyester & Aluminum Foil encapsulating copper coated wire. This ensures a smooth reflective surface when tensioned at installation.

Surface Specular Reflectance 86%

Available in all 5 Skylight Sizes, up to 6m in length.



## Rigi-tube



The Rigi-tube is made from highly polished reflective aluminium and is riveted together to make a strong straight line tube.

Rigi-Tube can be more efficient over longer length drops in excess of 3 metres.

The system includes the use of 600mm lengths of telescopic tube and angle adaptors which can be installed at either the roof or ceiling level or both if required.

Surface Specular Reflectance 90%

Available in 400mm and 500mm diameter sizes.



## Silver-tube



Silver-tube is made from high strength, high performance specular silver mirror like aluminium.

A patented coating protects the silver from oxidation.

The system includes the use of 600mm lengths of tube and angle adaptors which can be installed at either the roof or ceiling level or both if required.

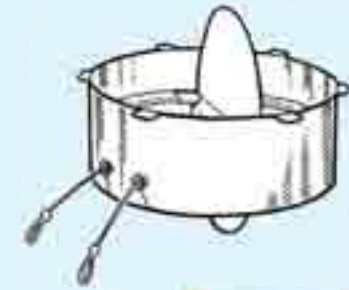
Surface specular reflectance 95%

Available in 400mm diameter size.



## "Vari-light"

### Variable Light Control Unit



**"Open"**



**"Closed"**

Ideal for any room where light control is desirable (ie. bedrooms, work areas).

Manual pull cord operation can be installed at a convenient position in the room.

Stainless steel construction ensures maximum light when you need it.

# Power & Turbo Kits

These kits are designed to significantly improve the exhaust capacity of your skylight.

They are most often used in bathrooms, toilets and laundries where condensation and fumes can be a problem.

Our soaker trays are designed to incorporate either the turbo or power unit which means you only have one penetration in your roof. Also at the ceiling level, there is one fixture.

Add the Electric Light, and you have three features in the one unit.



Illustration of Turbo Kit with the "Series 3" & "Adjust-air".

## POWER KIT

An Electric Fan Ventilation System coupled to your Sola Skylight.

**Exhaust capacity: 200m<sup>3</sup>/Hr.**

The electric fan will operate continuously as required, at the flick of a switch.

## TURBO KIT

A 150mm Turbo Ventura Wind Turbine is coupled to your Sola Skylight.

**Exhaust capacity: 15 - 25m<sup>3</sup>/Hr dependant on windspeed.**

A variable performance, but will effectively clear the air over a period of time.



Power Kit coupled to a Series 3 Sola Skylight.

# "ADJUST-AIR"

*Pure Excellence in Comfort Control*

Natural light and ventilation are beneficial to your home and essential for healthy living. Installing a Series 3 Sola Skylight with the "ADJUST-AIR", an optional accessory, combines natural illumination with the luxury of optional air flow.

Using the "ADJUST-AIR" Activator from inside your room gives you the freedom to open and close the "ADJUST-AIR" system at any time, with little effort.

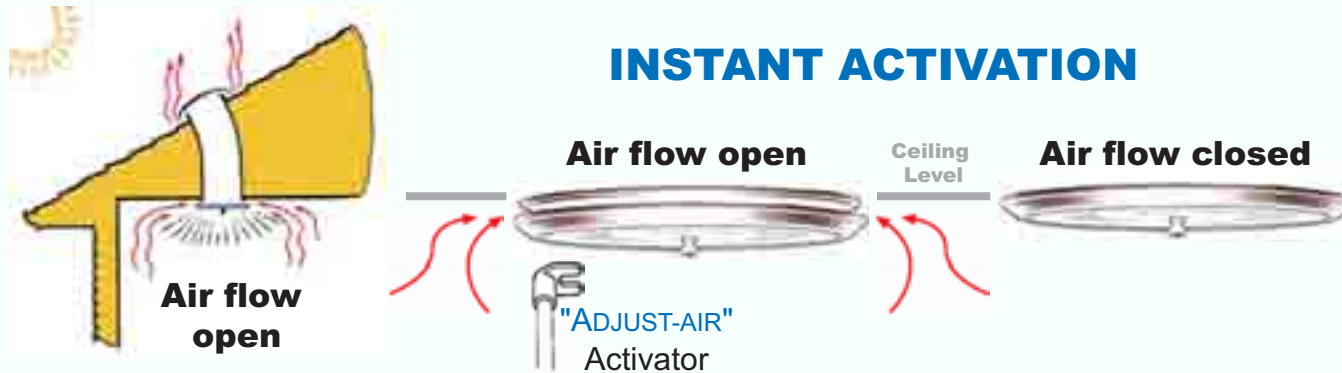
The "ADJUST-AIR" utilises two methods of air movement:-

**Convection:** Air that has been "warmed" by cooking and showering will want to rise because it has become lighter. The "ADJUST-AIR" allows this warmed air to quietly escape, stabilising the room temperature and removing any odours.

**Bernoulli's Principle of Aerodynamics:** Explains how the warm air is able to be drawn from the skylight through the breather frame and escape into the outside air.



**IT IS SO SIMPLE!  
IT IS SO INSTANT!**



*Air Movement for Sola Skylights*

PERFORMANCE TABLE			
Series 3 Sola Skylight Throat Size	Exhaust Capacity Litres per minute		
	Wind 10km/h	Wind 20km/h	Wind 30km/h
400mm	765	1530	2185
500mm	840	2340	3830

\*\* Results formulated by the School of Mechanical & Manufacturing Engineering, at the University of NSW, Australia.

\*\* Tested with 1.2m of Duct and zero temperature difference.

\*\* Results may vary for different conditions.

## ADVANTAGES

- \* Air Flow open or closed at your discretion.
- \* No running costs
- \* Silent air movement
- \* Attractive design
- \* Assists in promoting healthy indoor plants.
- \* Simple to install.

# Conversion Boxes

Some rooms are more suited to having a square, rectangular or octagonal ceiling frame, than they are to having the more standard round style.

Therefore we have developed a conversion box, utilising the round Sola Skylight Roof Section & Tubing, with a more unique ceiling frame.

Choose from a selection of timber frames, or our standard white aluminium style. Some Leadlight designs are also available (see images to the right).



**Please note:**

\* As these are handmade, variances may occur in design, layout and colours.



Floral Links



Classic Flower



Golden Gumnuts



Bluebells



Classic Fruit



Gumnuts



Irises



Rose Box



Tulips

## Sizes

Conversion boxes can be linked to a 400mm or 500mm diam Skylight.

*Octagonal Throat Size*

Width 600mm.

*Square Throat Size*

550mm x 550mm.

*Rectangular Throat Size*

850mm x 550mm.

## Frame Selection



White Aluminium  
(not available for Octagonal)

Flat Walnut

Baltic Pine - Brown

Baltic Pine - Rust

Round Burgundy

# Lightwell *Skylights*

## **Simple but Effective!!**

When economy counts, a Lightwell Skylight is the answer. We have taken out some of the special features from our Series 3 Sola Skylight to provide a more economical unit. The differences are on the roof, the injection moulded dome and breather frame (with Easy Change Vent System & Insect Screens) have been replaced by a simple injection moulded dome, fastened directly to the Soaker Tray. The Tile Soaker Tray also has standard lead flashing (10kg/m<sup>2</sup>) and single gutter instead of the Acrylead (15kg/m<sup>2</sup>) & double gutter system.



Lightwell Skylights are available in 4 sizes (300mm, 350mm, 400mm & 500mm) to suit any room or roof type. The Unique "Hi Rise" centre on the soaker tray guards against the possibility of water build up.

Most options and accessories are also suited to the Lightwell Skylight.

# Frequently Asked Questions

**1. How much extra light will a skylight give me?**

There is no standard answer because of the variables that affect the performance of any skylight. Like time of year, time of day, throat size, length of shaft, dome orientation on the roof, room size, wall colours and general decor. Plus general weather & ambient light conditions always effect the end result.

Our many years of experience has taught us that an assessment of these variables, and your needs, is the most effective way that we can ensure that you get the natural light you're looking for. Your Sola Skylights Representative can help you.

**2. Does heat come through a skylight?**

Some heat may want to come through the skylight because heat and light are directly related. Sola Skylights experience indicates there is no appreciable Heat Gain or Loss in normal circumstances. In extreme climates, Sola Skylights can provide an opal or double glazed dome to meet BCA requirements.

**3. Will my skylight leak?**

No. The Sola Skylights products are guaranteed against leaking. A Warranty Card is issued with every skylight, and your installer will guarantee the the installation against any leaking.

**4. What Warranty will my skylight have?**

This depends on the particular model purchased. A detailed Warranty Section is located on Page 15 of this catalogue.

**5. What is the best shape/size for a Skylight?**

Round skylights provide more light per unit of area, and one of our representatives can recommend the right size skylight to give the best light for the area of concern in your home. A personal preference for a square ceiling frame can be achieved by using a conversion box.

*(For more information on Conversion Boxes see Page 11)*

**6. How important is the skylight duct?**

Very important as it transmits the outside light into your room. Key factors are the open area of the tubing, the length of the tubing, and that the tubing should be "shiny" and, in the case of a flexible tube, quite taunt. The tubing, like the shape and size of a skylight is a major factor in transmitting the most efficient light. *(For more information on Skylight Ducting see Page 8)*

**7. Does my interior colour scheme affect the performance of my skylight?**

Yes it does. Light bright colours will tend to reflect daylight around the room while dark colours will tend to absorb daylight. Adjusting the size or quantity will help to solve this problem.

**8. Can I turn off daylight/moonlight in a bedroom?**

Yes. A Variable Light Control Unit is available. *(For more information see Page 8)*

**9. Can I have an electric light in my skylight?**

Yes. An Electric Light is available. *(For more information see Page 6)*

**10. "Flat" or "Dished" diffuser - which one is better?**

Curtin University tests show there is no real difference in the way light is spread around your room when using a "flat" or "dished" diffuser. The dished diffuser may look brighter because it protrudes into the room space.

**11. Can I have ventilation with my skylight?**

Yes. The standard Series 3 Sola Skylight has the option of passive ventilation utilising our Interchangeable Vent System. For high performance venting a Turbo or Power Kit is available. *(For more information on Turbo or Power Kits see Page 9)*

**12. What is the SIAI and AS4285-1995?**

The SIAI is the acronym for the Skylight Industry Association of Australia, the industry group setting standards & quality. AS4285-1995 is the Standards Australia code for skylights. This code set out the structural requirements for skylights.



CALIDAD Industries Pty Ltd are founding members of the SIAI and our products have been tested and passed the requirements of AS4285-1995.

Looking for the SIAI Approval Sticker (shown below) is your most reliable guide to proven product quality.



# Energy Efficiency and your Sola Skylight

## ABCB Sets New Energy Standards

The Australian Building Codes Board sets standard building codes throughout Australia and now with Amendment 12 of the Building Code of Australia they have set minimum energy efficiency standards for all new houses.

The reason this has been done is to try and slow down the effects of global warming by decreasing the amount of fossil fuels we use to heat and cool our homes. These new codes came into effect from January 1st, 2003. Each state will take them up at different times during the year but by the end of 2003 all states will conform to these new regulations. The residential building sector contributes 80.9 million tonnes of Greenhouse gases per year with an annual increase of 40%. These new codes are an attempt to reduce this annual increase to only 17%, or less, by the year 2010. (CSIRO Scoping Study 1999)

Work has already started on further amendments to the Building Code of Australia that will see the same energy requirements being applied to all new commercial buildings in Australia starting from 2005.

Amendment 12 has set these special limits for skylights...

1. A ratio of skylight opening sizes to room floor area up to a maximum of 5% of the floor area. (See Table 1)
2. A short duct length with a large throat size will have an effect on heat load but the longer the duct the less potential for heat gain. (Note: When there is a short or no duct [like in an exposed beam ceiling] it will be necessary to have high performance glazing)
3. A ratio of skylight opening sizes to the whole buildings floor area up to a maximum of 3% of the whole building area. (See Table 2)
4. If the ratio is greater than 5% (or 3%) then special glazing options - like double glazed domes and ceiling frames need to be considered.

Note: These rules apply to habitable rooms in the house like kitchens and living rooms. (Bathrooms & toilets are not included).

## Does a Sola Skylight meet Amendment 12 of the Building Codes?

**YES** - Table 1 shows average floor areas of different types of rooms in a house and then shows the area of all the Sola Skylights sizes as a percentage of that rooms floor area. This is without needing to include the shaft length. A Sola Skylight will meet the code in every situation but we would always suggest discussing your needs with one of our representatives before purchasing your skylight.

Type Of Room	Average Room Size m <sup>2</sup>	350mm dia Skylight	400mm dia Skylight	500mm dia Skylight	550mm dia Skylight
Toilet	3	3.21%	4.19%	N/A	N/A
Bathroom	10	0.96%	1.26%	1.96%	2.38%
Passage	15	0.64%	0.84%	1.31%	1.58%
Entry Hall	9	1.07%	1.40%	2.18%	2.64%
Kitchen	25	0.38%	0.50%	0.79%	0.95%
Dining	20	0.48%	0.63%	0.98%	1.19%
Living	42	0.23%	0.30%	0.47%	0.57%
Bedroom	20	0.48%	0.63%	0.98%	1.19%

**Table 1** - Relates to Point 1 in the special limits for skylights, in Amendment 12 of the Building Code of Australia as described to the left.

Sample floor areas of a house m <sup>2</sup>	3% of that floor area in m <sup>2</sup>	Area of 350mm dia Skylight	Area of 400mm dia Skylight	Area of 500mm dia Skylight	Area of 550mm dia Skylight
100 m <sup>2</sup>	3.0 m <sup>2</sup>	0.10 m <sup>2</sup>	0.13 m <sup>2</sup>	0.20 m <sup>2</sup>	0.24 m <sup>2</sup>
125 m <sup>2</sup>	3.75 m <sup>2</sup>				
150 m <sup>2</sup>	4.5 m <sup>2</sup>				
200 m <sup>2</sup>	6.0 m <sup>2</sup>				
400 m <sup>2</sup>	12.0 m <sup>2</sup>				

**Table 2** - Relates to "Point 3" in the special limits for skylights, in Amendment 12 of the Building Code of Australia as described to the left.

\*\*These tables show that using Sola Skylights tubular skylights will not have any real impact on the energy efficiency of your home or placing you, or your builder, into a breach of the new Building Code energy regulations.

Assistance is only a phone call away as we offer a design service to help you find the best size and number of skylights for your home.

## Why is **CORRECT SPECIFICATION** so important?

Fitting the best skylight for your needs will save you money by not using as much power and give you the satisfaction of knowing your actions are helping save our planet.

## D.I.Y. Installation

All of our products are designed for ease of installation, and to help the D.I.Y Installer there are written Installation Instructions. These are available upon request from our representatives.



## Approvals

Australian Standard - AS4285-1995.  
Deemed to Comply - Darwin.  
Australian Standard - AS1530.2  
Australian Standard - AS1804-1976.  
Australian Standard - AS1449.  
I.C.B.O. - 5185

## Patents

Australian Patent No. 671209  
USA Patent No. 4339900  
USA Patent No. 5435780  
Patent Pending "Adjust-air"

## WARRANTY

CALIDAD Industries Pty Ltd warrants that all components are free from defect of workmanship and/or materials for the following periods;

- Series 3 Sola Skylight** - 7 Years
- Vari-light** - 2 Years
- Adjust-Air** - 7 Years
- Electric Light** - 2 Years
- Turbo Ventura (Included in Turbo Kit)** - 5 Years
- Leadlights (All Shapes & Sizes)** - 2 years
- Electric Fan (Included in Power Kit)** - 1 Year
- Conversion Boxes** - 7 Years
- Lightwell Skylight** - 5 Years

*Assembly and installation guaranteed by your local Installation Company.  
All Sola Skylights Kits include a Warranty Card, sample shown to the right.  
This is to be completed by your local Installation Company at the time of Install.*



## CALIDAD Industries Evolution of a Company

CALIDAD Industries Pty Ltd is now well into its second decade of directing Natural Light and creating Freshness in Peoples homes and work places.

The Manufacturing Plant in Perth Western Australia started with a small team of dedicated workers in 1988.

What seperated CALIDAD from the industry was the development of a tubular skylight, the "Sola Skylight" and to introduce the use of a purpose made flexible shaft. We now call this "Flexi-tube".

Conscientious research, development and a commitment to quality have been the driving factors behind CALIDAD Industries evolution and marketing success.

CALIDAD Industries Pty Ltd now exports to all Australian States, New Zealand, the United Kingdom and many other countries around the world. Our Skylight design and patent has been utilised in the "Sun Tunnel Skylight" sold in the USA since 1993.

CALIDAD Industries Pty Ltd is committed to the Skylight Industry and is a foundation member of the Skylight Industry Association of Australia.



Manufactured in Australia since 1988.

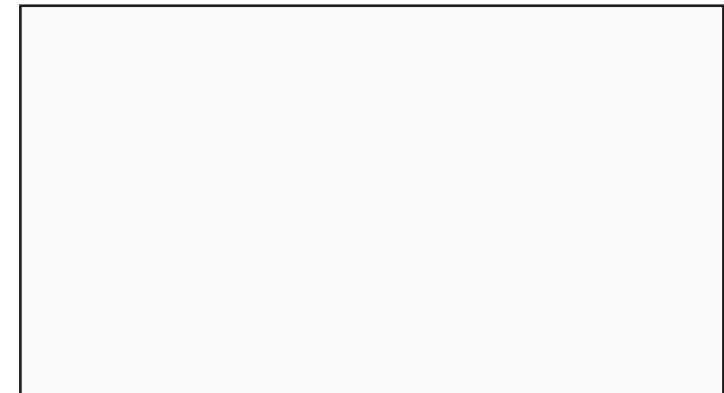
Founding Member of



[www.siai.info](http://www.siai.info)

Thank you for allowing our representative  
to assist you in choosing the best  
skylight for your home.

Authorised Dealer:



**Manufactured by:**

**CALIDAD Industries Pty Ltd**

22 Conquest Way, WANGARA WA 6065

Ph: (08) 9302 6622 Fax: (08) 9302 6007

e-mail: [admin@calidad.net.au](mailto:admin@calidad.net.au)

website: [www.calidad.net.au](http://www.calidad.net.au)

***\*\* All images in this catalogue are the property of CALIDAD Industries Pty Ltd  
and may not be reproduced for any purpose without owners prior consent.***