PITCHED SKYLIGHT SYSTEM

www.brettmartin.com
The Natural Choice for Natural Light
Our company, our passion

Ritchlight Ultra is the latest example of blue sky thinking from Brett Martin Daylight Systems. We are the UK’s biggest, most innovative skylight manufacturer, supplying the most comprehensive range of skylights available from a single source, and supporting this with expert advice on design specification and installation. All the service you’d expect from the industry specialists. All the know-how you need to make the most of Earth’s most abundant, life-enhancing, energy saving natural resource – daylight. Established in 1958 we have built our reputation on superbly engineered products (ISO 9001:2000) and environmental responsibility (ISO 14001).
Ritchlight Ultra now combines maximum illumination with minimum condensation
The innovation that makes Ritchlight Ultra so special is the addition of the thermal break. This splits the aluminium structure into internal and external components with no thermal bridging in between. As a result, heat on the inside of the skylight can’t cross the divide and disappear into the outside world.

Thermally Bridged

Thermally Broken

The result is a skylight with greatly enhanced thermal insulation properties. Condensation occurs when warm moist air meets a cold surface, and the thermal break helps keep the interior side of the skylight warm. So, as well as helping the roof to achieve optimum U-values, Ritchlight Ultra’s design means minimal condensation.

The Ritchlight Ultra difference

Ritchlight Ultra is the latest development of Brett Martin’s popular and versatile glazing system – the ideal way to create architecturally stunning pitched skylights in a variety of shapes, sizes, frame colours and glazing options. In line with today’s increasing emphasis on sustainability, we have added a unique thermal break to Ritchlight’s already outstanding engineering. This splits the internal and external components to prevent thermal bridging, and results in a skylight system that’s ultra effective at keeping heat in as well as bringing in natural light. Improved insulation means minimal condensation too.

Each precision-engineered Ritchlight Ultra system is custom-built. With a span up to 5 metres (or more with a subframe) and any run length, the possibilities are limitless. Ritchlight Ultra skylights are widely specified for schools, public buildings, retail developments and homes both new-build and refurbishment – ideal for flat roofs and ridge glazing, and perfect too for creating covered courtyards. Once installed, Ritchlight Ultra skylights combine their spectacular aesthetics with outstanding weather resistance, durability, reliability and the reassurance of a 20-year warranty.
Relax, the Brett Martin Daylight Systems team will help you choose the ideal Ritchlight Ultra options and look after every detail under the sun.
Passionate about service

The key is to involve the Brett Martin Daylight Systems team as early as possible. We’ll help you specify the most appropriate skylights with expert, impartial advice. Then we’ll come to your site and measure up, look at your plans and discuss design options, positioning of skylights and all the technical issues involved - including the tougher than ever Building Regulations and other legislation. We’ll provide full drawings and technical calculations if required. Every skylight is manufactured in our state of the art, BS EN ISO 9001:2000 quality approved factory with meticulous quality control and attention to detail, backed by long comprehensive guarantees, and delivered promptly to site. Your Ritchlight Ultra skylight will be installed by Brett Martin Daylight Systems’ own fully trained craftsmen, and our friendly, flexible customer service team will be available at all times - supervising the project every step of the way.
Designing schools? The Department for Education urges you to make daylight the primary means of lighting whenever possible.
Brighter students

Natural light is proven to make students brighter as well as classrooms. Research clearly shows that daylight reduces stress, improves attention spans and promotes learning. The most illuminating evidence for including Ritchlight Ultra skylights in educational projects is a widely reported California Board for Energy Efficiency study. The results showed that, in classrooms with the most daylighting, learning progressed 20% faster in maths and 25% faster in reading. Ritchlight Ultra’s flexibility makes it child’s play to create a covered all-weather play area (as recommended for every primary school in The Department for Education’s Building Bulletin BB82) or turn a neglected courtyard into an extra classroom. The work can be completed with minimal disturbance by Brett Martin Daylight Systems’ fully trained and employed installers.
Government regulations insist that every workplace must have suitable and sufficient lighting. People work better when it’s natural light.
Again research proves what common sense suggests anyway – that natural light in the workplace increases productivity, reduces absenteeism and improves the speed and accuracy with which people perform everyday tasks. Many government regulations and guides have been written to take account of these findings. In fact the educational, retail and productivity benefits of installing Ritchlight Ultra skylights are all based upon the same profound and indisputable physiological facts: natural light stimulates and regulates the release of the mood-enhancing neurotransmitter serotonin by the body. Daylight from the sun also promotes Vitamin D production, which helps to build healthy teeth and bones by producing calcium.
Fancy some light shopping? Ritchlight Ultra can help you bring brilliant sales performance as well as beautiful natural illumination into retail environments.
The serotonin produced in the human body by optimum levels of natural light doesn’t only have a positive effect on stress levels and attention span, it puts people in the mood to shop as well. A companion study to the California student survey researched 108 stores in a large retail chain and found that the outlets with skylights sold on average 40% more merchandise than those without. It’s simple really – stylish surroundings with lots of natural light encourage shoppers to linger longer and therefore spend more. Ritchlight Ultra can also make stores more profitable by keeping energy costs to a minimum.
Whether you’re building a minimalist new eco-home or renovating a period cottage, Ritchlight Ultra makes light work of creating your very own grand design.
Make your home stunning and your neighbours jealous by adding a superbly engineered, outstandingly versatile Ritchlight Ultra skylight. Bathroom, kitchen or lounge, you’ll create a spectacular new architectural feature, transforming your interior into a light, airy living space that’s cool and comfortable in summer, cosy and condensation-free in winter, and energy efficient all year round. The possibilities are endless.
Need illumination? Our technical department is always on hand to offer free, expert design and specification advice.
Installing Ritchlight Ultra is a brilliant way to reduce your carbon footprint. And that doesn’t just save you money these days; it’s essential to comply with Part L 2006 of the Building Regulations.
Meeting Part L

The new Part L demands much higher standards of thermal efficiency and lower CO₂ emissions than ever before. Because Ritchlight Ultra floods the interior with daylight, it reduces the need for artificial lighting and this can make a major contribution to lowering overall energy consumption. Result: the reduced carbon emissions you need. With its innovative thermal break, Ritchlight Ultra also provides more efficient insulation – further reducing energy consumption, shrinking fuel bills and helping you achieve the minimum U-value of 2.2W/m²K required by Part L. Independent research conducted by De Montfort University demonstrates that the greater the area of skylight on a building, the lower its CO₂ emissions will be, especially if automatic lighting controls are included. In fact carbon emissions increase dramatically if the skylight area falls below 15%. Part L itself assumes a 20% skylight area. So it makes sense to install between 15% and 20% of the roof area as skylights.
Configurations

Ritchlight Ultra can be configured as a Pyramid, Gable or Hip with the addition of a lantern to the base if required. Depending on the size of your skylight the bar configuration will change to cater for the increased span and we have laid out a variety of these configurations for you below.

Additional details to be aware of include:

- Ritchlight Ultra skylights can be glazed in glass or multiwall polycarbonate
- Glazing bar centres are usually 650mm for glass (or up to 1250mm for spans less than 1.75m) and 1000mm for polycarbonate
- The same casting centre plate is used for all skylight configurations and therefore may look larger on small sized units (275mm x 275mm)
- The major glazing bar has an additional box section for strength, 50mm deeper than the standard bar
- For spans over 3.5m, stainless steel retention wires will also be fitted
- The glazing bar configurations will suit most UK locations. For extreme loading conditions and/or non-standard layouts please consult our Technical Service Team on 01363 773301

NB: The maximum size for each configuration is different for glass and polycarbonate
Ritchlight Ultra can be used to achieve a mono pitch if required
Pyramid (TE23)

Pyramid with Lantern (TE23/24)

Gable (TE21)

Gable with Lantern (TE21/24)

Hip (TE22)

Hip with Lantern (TE22/24)
Glazing bar systems

The Ritchlight Ultra glazing bar system consists of superbly engineered aluminium profiles, polyester powder coated to match any RAL colour. Ridge bars, gable bars and hip bars are combined with either standard or major glazing bars, depending on the configuration and span of the proposed skylight and the chosen glazing option.

NB: Major range bars will be used on units with a span greater than 2.5m
Upstand specifications

The support upstand must be constructed to the overall external and internal sizes as agreed with Brett Martin Daylight Systems and it is to be fully weathered. The upstand should be a minimum of 150mm high from the finished roof level. It should also be a minimum of 100mm wide including all finishes with the top surface flat, level and free from any protrusions or projections. It is important that there be no build up of waterproofing layers, particularly at the corners to cause undulating surfaces.

A dimensional check should be made to ensure that the overall external sizes of the weathered upstand are correct to the agreed dimensions. A check also is needed at intermediate positions across the span, together with diagonals ensuring that the structure is square. When the skylight unit is placed on the upstand there will normally be an even 20mm overhang all round to act as a weather drip.

1. Thermal-break must sit on upstand
2. 150mm minimum upstand height from finished roof level
3. Minimum 10mm required for water management outlets
4. Timber top must be thick enough to take minimum fixing engagement (refer to chosen fixing manufacturer)
5. 36mm fixing centre must be into solid material i.e. NOT plasterboard/insulation
6. 20mm minimum, using typical 5.5mm diameter screw (indicative only)
7. Plasterboard
8. Upstand (concrete/timber)
9. 100mm
The superbly engineered Ritchlight Ultra glazing bar system is so versatile the creative possibilities are endless. Our ventilation options are another breath of fresh air.
Ventilation is crucial – to comply with the Building Regulations and make the most of Ritchlight Ultra’s ability to create a light, airy, welcoming internal environment. Top hung vents can be specified for the Ritchlight Ultra skylight, with either manual or electrical operation. The electric venting can also be specified with rain, wind and heat sensors.

Top hung vent
1 Opening mechanism opened manually or electrically

NB: Top hung vents are also available on lanterns
<table>
<thead>
<tr>
<th>Material</th>
<th>U-value W/m²K</th>
<th>Light transmission DIN 5036</th>
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<tbody>
<tr>
<td><strong>Glass</strong></td>
<td></td>
<td></td>
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<tr>
<td>Standard specification</td>
<td>1.6</td>
<td>73 - 75%</td>
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<tr>
<td>Clear toughened outer (4mm or 6mm) 6.4mm clear low E laminated inner</td>
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</tr>
<tr>
<td>Soft Coat for improved insulation Clear toughened outer (4mm or 6mm) 6.4mm clear soft coat Low E laminated inner</td>
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<td>Antisun tinted outer</td>
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<td>Bronze 52% (4mm) 42% (6mm)  Grey 46% (4mm) 35% (6mm)</td>
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<tr>
<td>Bronze or grey Antisun toughened outer (4mm or 6mm) 6.4mm clear Low E laminated inner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft coat inner and Antisun tinted outer Bronze or grey Antisun toughened outer (4mm or 6mm) 6.4mm clear soft coat Low E laminated inner</td>
<td>1.1</td>
<td>Bronze 52% (4mm) 42% (6mm)  Grey 48% (4mm) 38% (6mm)</td>
</tr>
<tr>
<td><strong>Multiwall Polycarbonate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25mm Fivewall</td>
<td>1.6</td>
<td>66%</td>
</tr>
<tr>
<td>Clear S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opal V</td>
<td>1.6</td>
<td>30%</td>
</tr>
<tr>
<td>Bronze B</td>
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<td>11%</td>
</tr>
<tr>
<td>25mm Solar Control</td>
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<td>25%</td>
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<tr>
<td>Solar metallic (Clear)</td>
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</tr>
<tr>
<td>Solar ice (Opal)</td>
<td>1.7</td>
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<tr>
<td>32mm Sevenwall</td>
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<tr>
<td>Bronze B</td>
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Glazing options

Ritchlight Ultra can be specified with glass or multiwall polycarbonate to cater for a number of different requirements.

**Glass**
The standard specification is a 6.4mm thick Low E laminated inner, 12mm argon filled cavity, and a clear toughened outer, 4mm or 6mm thick depending on span. The outer pane can be specified with bronze or grey Antisun tint (to control the amount of sun/heat coming in through the glass) whilst the inner can be specified with soft coat Low E laminated glass for significantly improved thermal performance. Almost any glass can be used in the Ritchlight Ultra system including Pilkington Activ™ Self-cleaning and the wide range of glass available for solar control and improved thermal insulation.

![Grey](image1)
![Clear](image2)
![Bronze](image3)

**Service temperature**
Marlon ST can be installed in a diversity of applications, with varying temperatures. The material's mechanical performance is known to remain stable in prolonged service in temperatures ranging from -40°C to +100°C.

**Fire performance**
The fire performance of Marlon ST 25mm Fivewall has been independently tested and the following classification obtained:
UK BS476: Part 7: CLASS 1Y

![25mm Fivewall](image4)
![32mm Sevenwall](image5)

**Multiwall polycarbonate**
Marlon ST Longlife is characterised by impact resistance and durability. It is available in opal, clear and bronze. Marlon ST Longlife has a co-extruded UV protection layer on one side and is manufactured by the Brett Martin Group.

![Opal V](image6)
![Clear S](image7)
![Bronze B](image8)
# Checklist

<table>
<thead>
<tr>
<th>Feature</th>
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<tbody>
<tr>
<td>Brett Martin Daylight Systems can help you to design, specify and install Ritchlight Ultra</td>
<td>✓</td>
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<tr>
<td>50 years’ experience</td>
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<tr>
<td>Market leading global company</td>
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<tr>
<td>UK’s leading rooflight manufacturer</td>
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<td>Installed by qualified employees</td>
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<td>Fully insured</td>
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<td>Fully Part L compliant</td>
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<td>Fully thermally broken</td>
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<td>NBS specification</td>
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<td>ISO 9001:2000</td>
<td>✓</td>
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<tr>
<td>British-made products</td>
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</table>
Make it happen

Talk to the Brett Martin Daylight Systems team as soon as possible for optimum results on your next project.

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