

Roof Glazing / Overhead Units

Safety-compliant sealed units for rooflights, skylights and overhead applications

MOST POPULAR ROOFLIGHT BUILD

28.0mm all-toughened 4+20+4 (T4-20-T4) — 4mm toughened both sides, 20mm argon cavity, Low-E warm edge. U-value 1.0. Laminated-inner builds available where specified; add Pilkington Activ for self-cleaning or Suncool for solar control.

Product Overview

There is no one-size 'standard' roof unit — every overhead unit is made to your sizes and specification.

Overhead safety guidance calls for a laminated inner (lower) pane — our standard specification — to prevent glass fallout onto occupants below. The outer pane **MUST** be toughened — we manufacture every overhead unit with a toughened outer as standard for impact resistance against hail, debris and maintenance loads. We also manufacture fully toughened units (toughened both sides) where the project specification or risk assessment allows — common for garden rooms, canopies and smaller panes. Solar control coatings (Pilkington Suncool, SGG Cool-Lite) are essential for south-facing rooflights. Self-cleaning coatings (Pilkington Activ, SGG Bioclean) are recommended for hard-to-access installations. For conservatory roofs we also supply Pilkington Activ Blue and Rooflite roof glass — blue-tinted self-cleaning units combining solar control with a cooler, glare-reduced light.

Configurations

How to read the codes: T6 = 6mm toughened glass; the middle number = cavity width in mm; 6.8L = 6.8mm laminated glass. Example: T6-16-6.8L is a 6mm toughened outer pane, 16mm argon-filled gap and 6.8mm laminated inner pane.

Build	Code	Thick.	U-value	g-value	Light	Application
Lighter 4mm build	T4-16-6.4L Low-E Argon	26.4mm	1.0	0.63	80%	Smaller residential rooflights
Laminated-inner build	T6-16-6.8L Low-E Argon	28.8mm	1.0	0.61	78%	Where a laminated inner is specified
Most popular ★ all-toughened 4+20+4	T4-20-T4 Low-E Argon	28.0mm	1.0	0.63	80%	Most rooflights — where spec allows
All-toughened 6mm	T6-16-T6 Low-E Argon	28.0mm	1.0	0.61	78%	Larger panes — where spec allows
Triple glazed	T6-12-4-12-6.8L TGU	40.8mm	0.7	0.50	72%	Passivhaus rooflights

Coated outer pane — add to any build: Suncool 66/33 or 50/25 solar control (cuts solar gain to a third or a quarter), Pilkington Activ self-cleaning, or Activ Blue / Rooflite Blue tinted self-cleaning for conservatory roofs.

Mandatory Requirements

- Laminated inner as standard — toughened-both-sides units also manufactured where the specification or risk assessment allows.
- Outer pane **MUST** be toughened — supplied as standard on every CSU overhead unit.
- Minimum slope 5° for self-draining.

- Solar control strongly recommended for south-facing rooflights.

Gas Fill — Air as Standard, Argon Optional

CSU sealed units are air-filled as standard. Argon gas fill (minimum 90% concentration) is available as an optional upgrade. Argon has 34% lower thermal conductivity than air (0.018 vs 0.026 W/mK), improving thermal insulation by approximately 15%. Argon is an inert, non-toxic, odourless gas that makes up 0.93% of Earth's atmosphere. Krypton gas is available by special order for slim-cavity applications where maximum performance is needed in a narrow gap.

Property	Dry Air (Standard)	Argon (Optional)	Krypton (Special)
Thermal conductivity	0.026 W/mK	0.018 W/mK	0.010 W/mK
U-value benefit	Reference	~15% better	~25% better
Optimal cavity	12-16mm	16-20mm	10-12mm
Depletion rate	N/A	<1% per year	<1% per year
Relative cost	1x	~1.2x (optional upgrade)	~50x (premium)

Spacer Bar Options — Warm Edge vs Aluminium

Traditional aluminium spacers conduct heat rapidly, creating a cold thermal bridge at the unit edge that causes condensation and heat loss. Warm edge spacers use low-conductivity materials, reducing this bridge by up to 94%. CSU recommends Swisspacer Ultimate or Super Spacer TriSeal for all projects.

Spacer	Material	Conduct. (W/mK)	Psi value	Edge Temp vs Alu.
Aluminium	Aluminium alloy	160.0	0.080	Baseline (cold)
Swisspacer Ultimate ★	Composite polymer	0.19	0.030	+3-4°C warmer
Super Spacer TriSeal ★	Silicone foam	0.17	0.028	+3-4°C warmer
Thermix TX.N Plus	Stainless + plastic	0.60	0.040	+2-3°C warmer
TGI Spacer	Stainless + polymer	0.90	0.050	+1-2°C warmer

Warm edge improves whole-window U-value by 0.1-0.2 W/m²K, eliminates edge condensation, and can improve Window Energy Rating by one full band. Available in widths: 6-24mm.

Glass Weight Reference

Glass weighs 2.5 kg per m² per mm of thickness (density 2,500 kg/m³). Sealed unit weight = sum of glass panes.
 Formula: Weight (kg) = Thickness (mm) × 2.5 × Area (m²).

Glass / Unit	Weight/m²	600×900	1000×1200	1500×2000
4mm single	10 kg	5.4 kg	12 kg	30 kg

Glass / Unit	Weight/m ²	600×900	1000×1200	1500×2000
6mm single	15 kg	8.1 kg	18 kg	45 kg
4-16-4 DGU	20 kg	10.8 kg	24 kg	60 kg
4-20-4 DGU (28mm) ★	20 kg	10.8 kg	24 kg	60 kg
6-16-6 DGU	30 kg	16.2 kg	36 kg	90 kg
4-16-4-16-4 TGU	30 kg	16.2 kg	36 kg	90 kg
6.8mm Laminated	16 kg	8.6 kg	19 kg	48 kg
10.8mm Laminated	26 kg	14.0 kg	31 kg	78 kg

Handling, Storage & Lead Times

- **Storage:** Store vertically on A-frames under cover. Never store flat.
- **Handling:** Suction cups for units over 25kg. Mechanical handling over 60kg.
- **Edge protection:** Protect edges during transport. Avoid glass-to-glass contact.
- **Installation:** Install within 28 days of delivery for warranty validity.
- **Temperature:** Do not install below 5°C. Allow units to acclimatise first.

Product	Standard	Express	Notes
Standard DGU	3-5 days	1-2 days	Most configs
Triple Glazed	5-7 days	3-4 days	Warm edge std
Integral Blinds	10-15 days	—	Made to order
Jumbo Units	5-10 days	—	Size dependent
Shaped Units	5-7 days	—	Template req.
Fire-Rated	7-14 days	—	Availability
Walk-On Glass	7-10 days	—	SGP lamination
Smart Glass	10-15 days	—	PDLC film

How to Order

Contact our sales team: 020 8574 9342 | 07305 993794 | sales@csultd.co.uk | csultd.co.uk — quotes returned within 2 business hours (Mon-Fri, 8am-5pm).