

Heritage / Slim-Fit Sealed Units

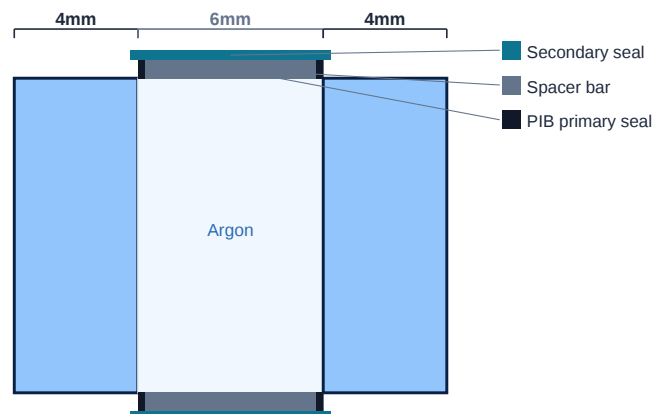
Narrow-profile units for period frames, Crittall steel and conservation areas

HERITAGE RECOMMENDATION

14mm (4-6-4) with Pilkington K Glass S Low-E, 6mm argon cavity, warm edge. U-value: 1.8 W/m²K. Thinnest possible thermal upgrade. For premium performance: krypton gas achieves 1.5 W/m²K in the same 14mm profile.

Product Overview

CSU Ltd supplies slim-profile sealed units using narrow spacer bars (6-12mm) for heritage and conservation applications. These units deliver meaningful thermal improvement while maintaining the slimmest possible profile to fit period frames. Always specify the widest spacer the frame allows — plus Low-E and argon to maximise performance within the narrow cavity.



Heritage 4-6-4 slim-fit cross-section — 6mm cavity for narrow period frame rebates.

Slim Configuration Performance

Configuration	Thick.	U-value	Rw	Weight/m²	Frame
3-6-3 Air	12mm	3.1	27	15 kg	Thinnest — very narrow timber
3-6-3 Low-E Argon	12mm	2.0	27	15 kg	Thermal upgrade, narrow rebate
4-6-4 Low-E Argon ★	14mm	1.8	28	20 kg	Heritage sash — most popular
4-6-4 Krypton Low-E	14mm	1.5	28	20 kg	Premium heritage
4-8-4 Low-E Argon	16mm	1.5	29	20 kg	Crittall steel, slim aluminium
4-10-4 Low-E Argon	18mm	1.3	29	20 kg	Best balance slim + performance

Heritage Glass Types

Glass	Character	Thickness	Best For
Restoration Glass	Slight undulation, seed imperfections	3-4mm	Grade I/II listed buildings
Crown Glass	Concentric ripple from spinning	3mm	Museum, highest-grade restoration
Cylinder Glass	Linear distortion, handmade look	3-4mm	Period properties, churches
Pilkington Optiwhite	Ultra-clear, no green tint	4mm	Maximum clarity
Pilkington K Glass S	Clear Low-E, toughenable	4mm	Max thermal in slim frames

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.

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).