

Now includes
'A' rated window

A

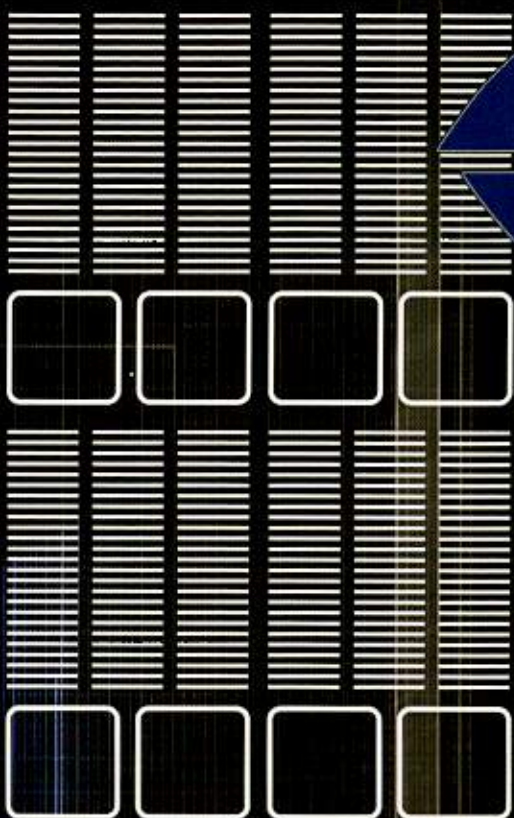
0
-10
A
B



SHIELD

SPECIFICATION GUIDE

Effective from February 2008



TECHNICAL DATA

ACCREDITATIONS

SCHEMATICS

FAQs





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FAQs

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SCHEMATICS

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TECHNICAL DATA

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FAQs

TECHNICAL

What woodgrain finish do you use and do you offer other colours?

We offer Light Oak, Mahogany and Cherrywood finishes (these are available internally/externally and also on white). The colours we offer are Anthracite Grey, Black Brown, Dark Red (Burgundy), Steel Blue (Oxford) and Dark Green (Brookland). Please contact the sales office for information.

What colour are Synseal's extruded products?

If matching door panels, the colour code nearest match for white profile is C121. If difficulty is experienced it is advisable to send a sample of profile to the door panel supplier.

What is the standard stack height for friction stays on Synseal Shield casement windows?

13mm is the standard.

What back-set espag or shootbolt will fit into Synseal casement?

A 22mm back-set espag or shootbolt will be fine.

Which back-set door lock is recommended?

35mm is recommended.

What exposure ratings do your windows achieve?

Up to 2400 pascals is achievable.

Do you offer the service of Patio Midrail End milling and how do I measure for Midrail length?

Yes, and we require the overall finished patio width (inc. number of panes).

For woodgrain on white windows how do I know which face to order?

The price lists and profile wallcharts clearly identify which faces are foiled by using A and B codes.

What are the size limitations and performance characteristics for the Synseal Shield PVC-U Casement Window System?

Please see the following table:

Window Type	Length (up to a maximum of)	Height (up to a maximum of)	Perimeter (up to a maximum of)	Transom/Mullion length including frame (up to a maximum of)	Exposure category as given in Table 1 of BS 7412:2002
Projecting top hung windows	1200mm	1200mm	-	-	2400 Special
Projecting side hung windows	650mm	1200mm	-	-	2400 Special
Fixed windows	2500mm	2500mm	8200mm	-	2400 Special
Multilight windows RA71 transom/mullion reinforcement	1500mm	1500mm	6000mm	1500mm	1600 Special
Multilight windows RS73 transom/mullion reinforcement	1800mm	1800mm	6000mm	1200mm	2000 Special

QUALITY ASSURANCE

Can we use kitemark logo on our adverts?

No, use the phrase 'Our Windows are manufactured from profile supplied by Synseal Extrusions Ltd, which are Kitemarked to BS EN 12608 (Licence no. KM30983) and BS7950/BS EN 12608 (Licence no. KM41324)'.

Does the profile have a BBA certificate?

No, but Synseal Shield profiles have been assessed by the BBA, Assessment report no. 1672 and no. 2519.

Can I make a half hour fire rated door from Synseal Extrusions?

No, as with all PVC-U profile, Synseal Extrusions achieve a class 1 surface spread of flame when tested to BS476 part 7.

Are PVC-U windows & doors load bearing?

No, but load bearing data is available for bay reinforcement RA75/SR06 (which are to be used in conjunction with Shield bay pole jack BPJS-RD and square corner jack BPJS-SQ).

Is there any regrind material in Shield window and door profiles?

All Shield window and door profiles are extruded from 100% virgin compound and are not diluted with second or more generation of reground extrusion profile.



WINDOW/DOOR/PATIO INSTALLATION

Is it necessary to install Safety Glass in patio doors?

Yes, the use of safety glass in buildings is specified in a British Standard - refer to BS6262-4:1994. For further information, reference should also be made to Building Regulations Approved Document N - Glazing.

When replacing windows do Tricklevents need to be installed?

Yes, as of early 2006. Refer to Building Regulations Approved Document F - Ventilation.

Do I have to employ the services of a FENSA approved fitter when installing windows and doors?

No, but if non-FENSA approved fitters are used, then application to the local Building Control Office must be made to arrange appropriate inspection and approval. However, it is recommended that FENSA approved fitters are used.

Is it essential to have gas fires reserviced after fitting windows and doors?

No, but whilst it is not essential, this is always a good idea to ensure ventilation is still adequate.

When replacing timber windows and/or doors with PVC-U ones, do I need to check/replace as necessary the lintel above the removed windows/doors to maintain structural integrity?

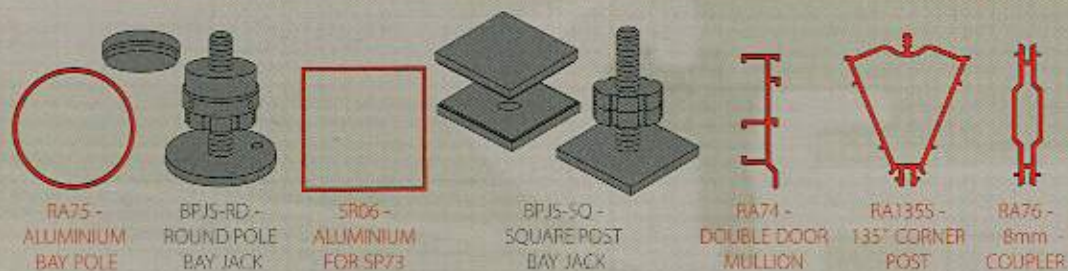
Yes, PVC-U windows are not designed to be load-bearing.

What is the minimum size for a fire escape window?

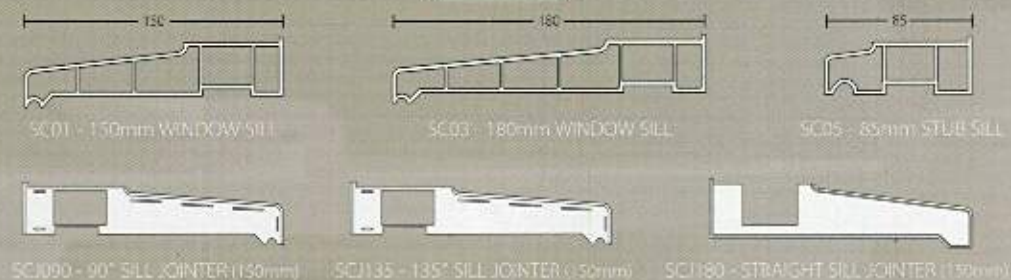
The minimum size is an unobstructed openable area that is at least 0.33m² (minimum dimensions: 750mm high and 450mm wide or 450mm high and 750mm wide). The bottom of the openable area should not be more than 1100mm from the floor. See Building Regulations Approved Document B.



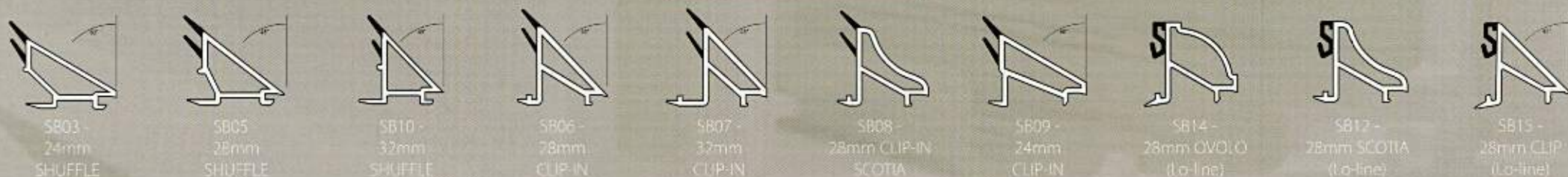
ALUMINIUM REINFORCEMENTS & BAY JACKS



SILLS



GLAZING BEADS



GASKETS

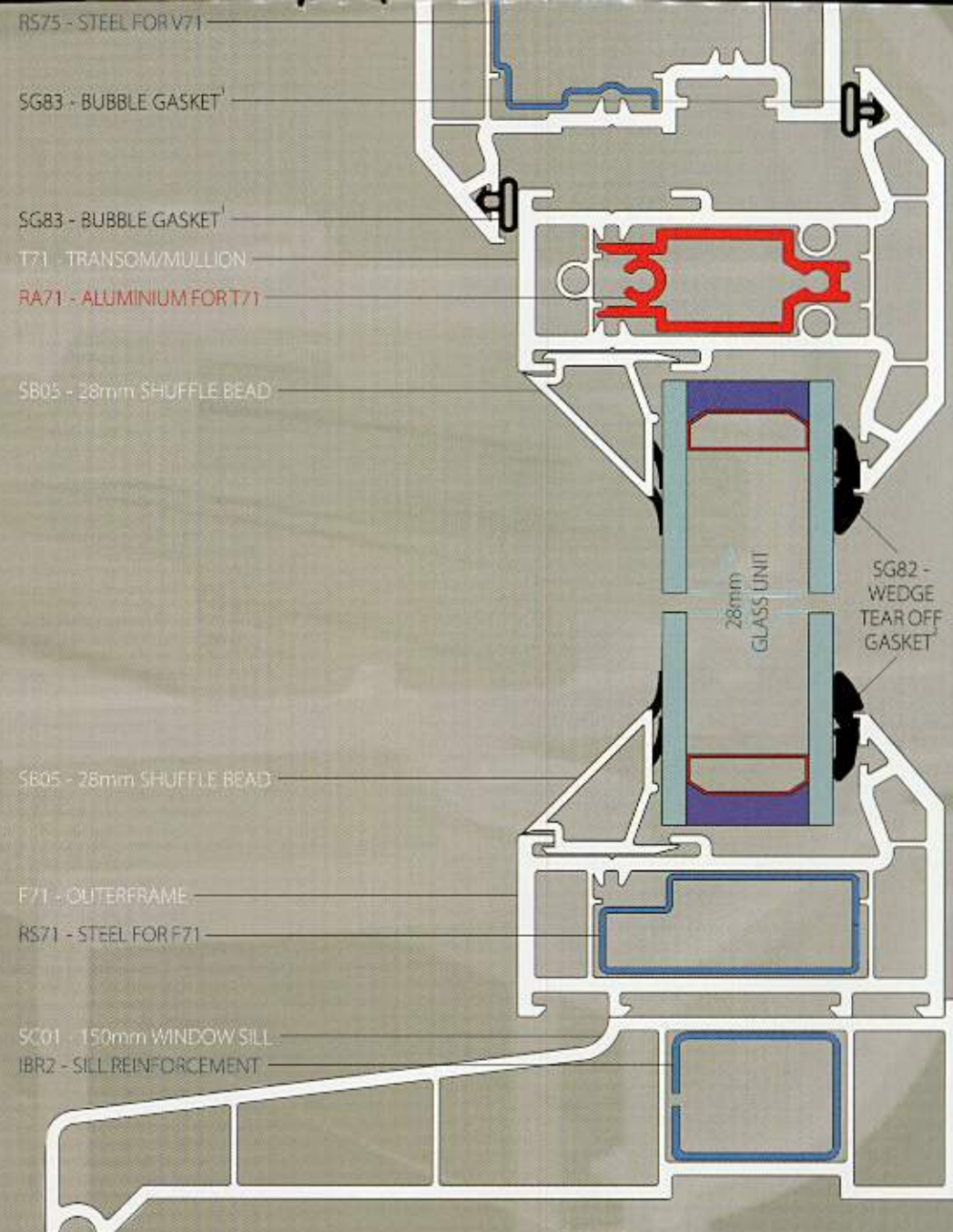
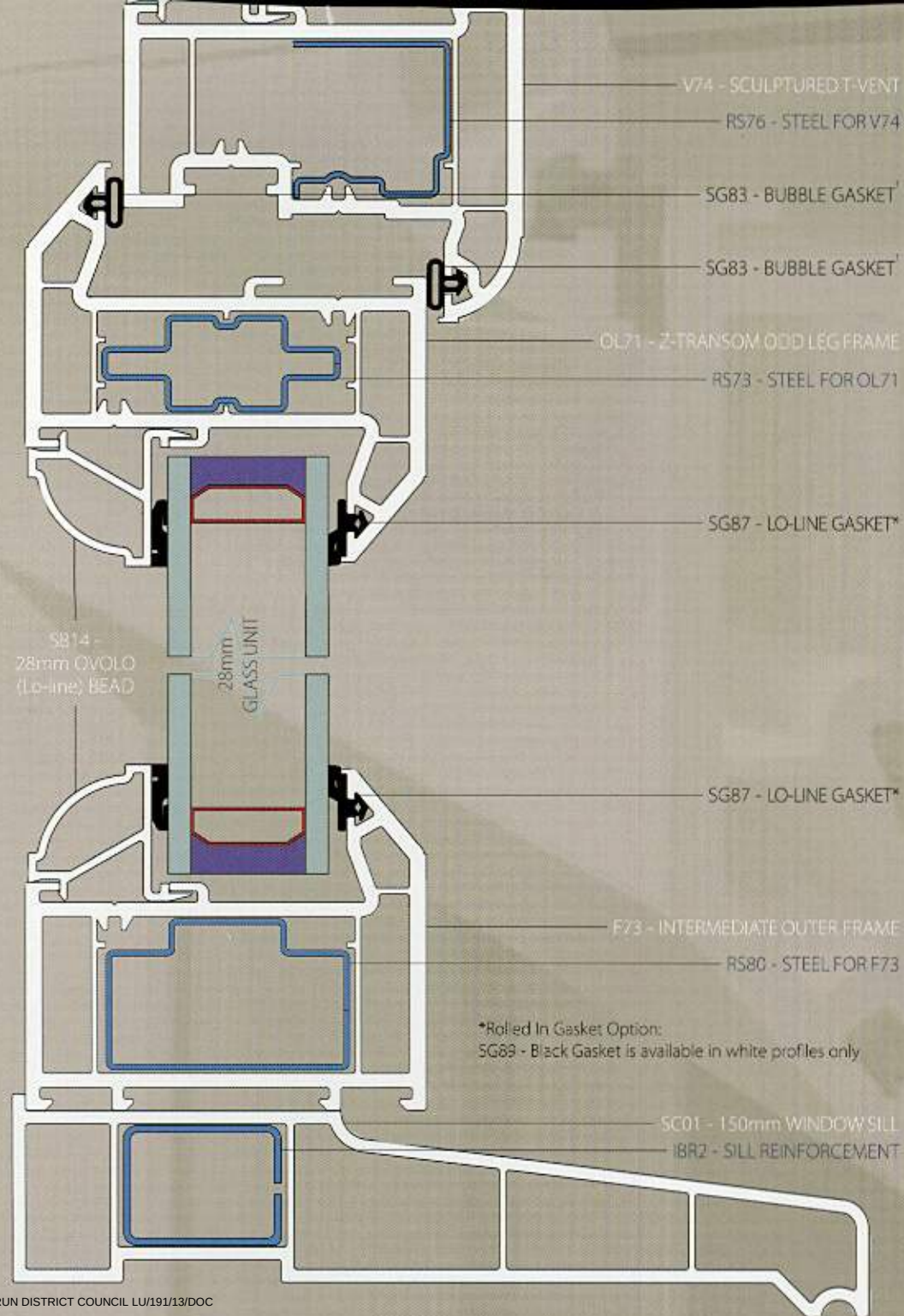


MOULDINGS & HARDWARE



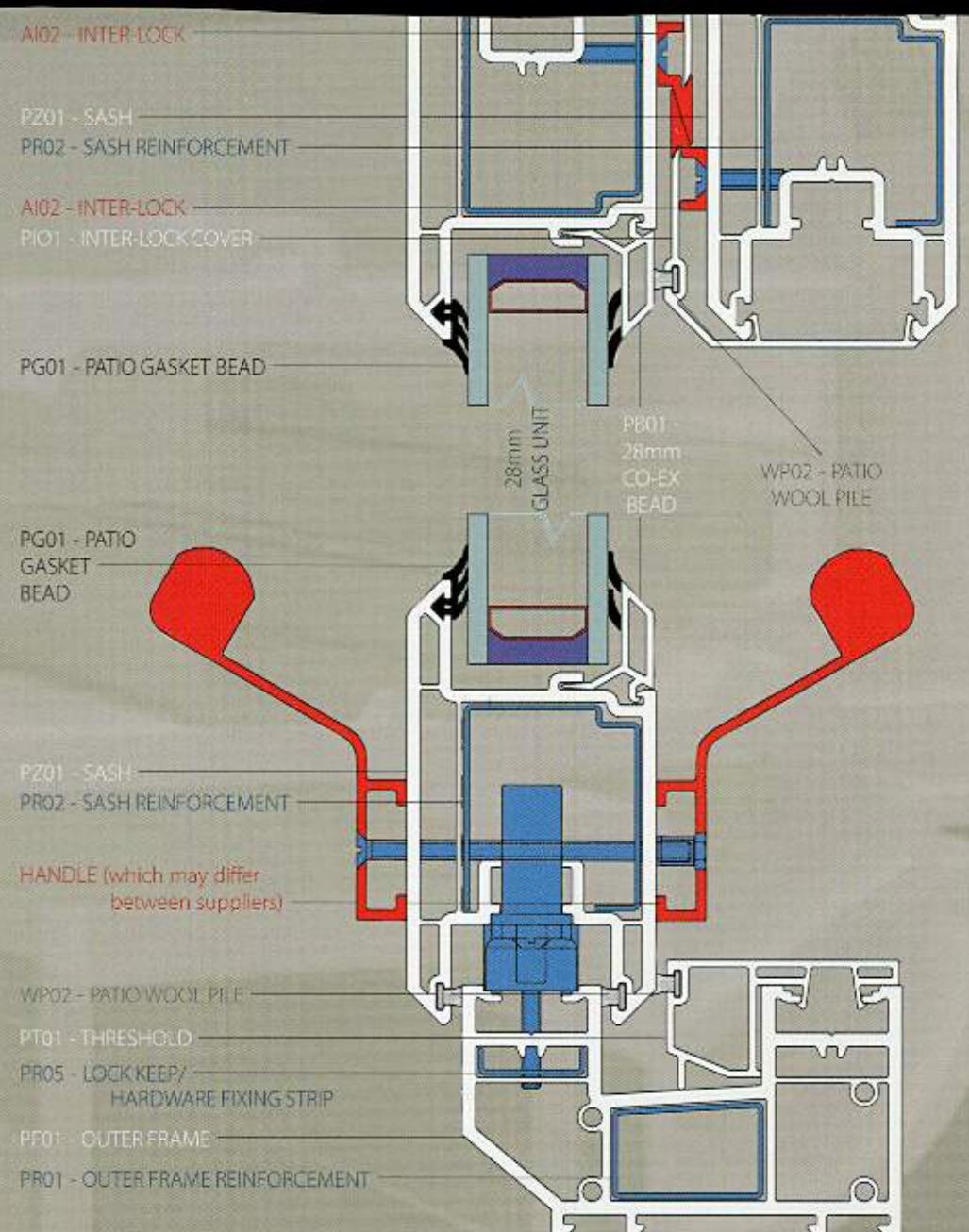
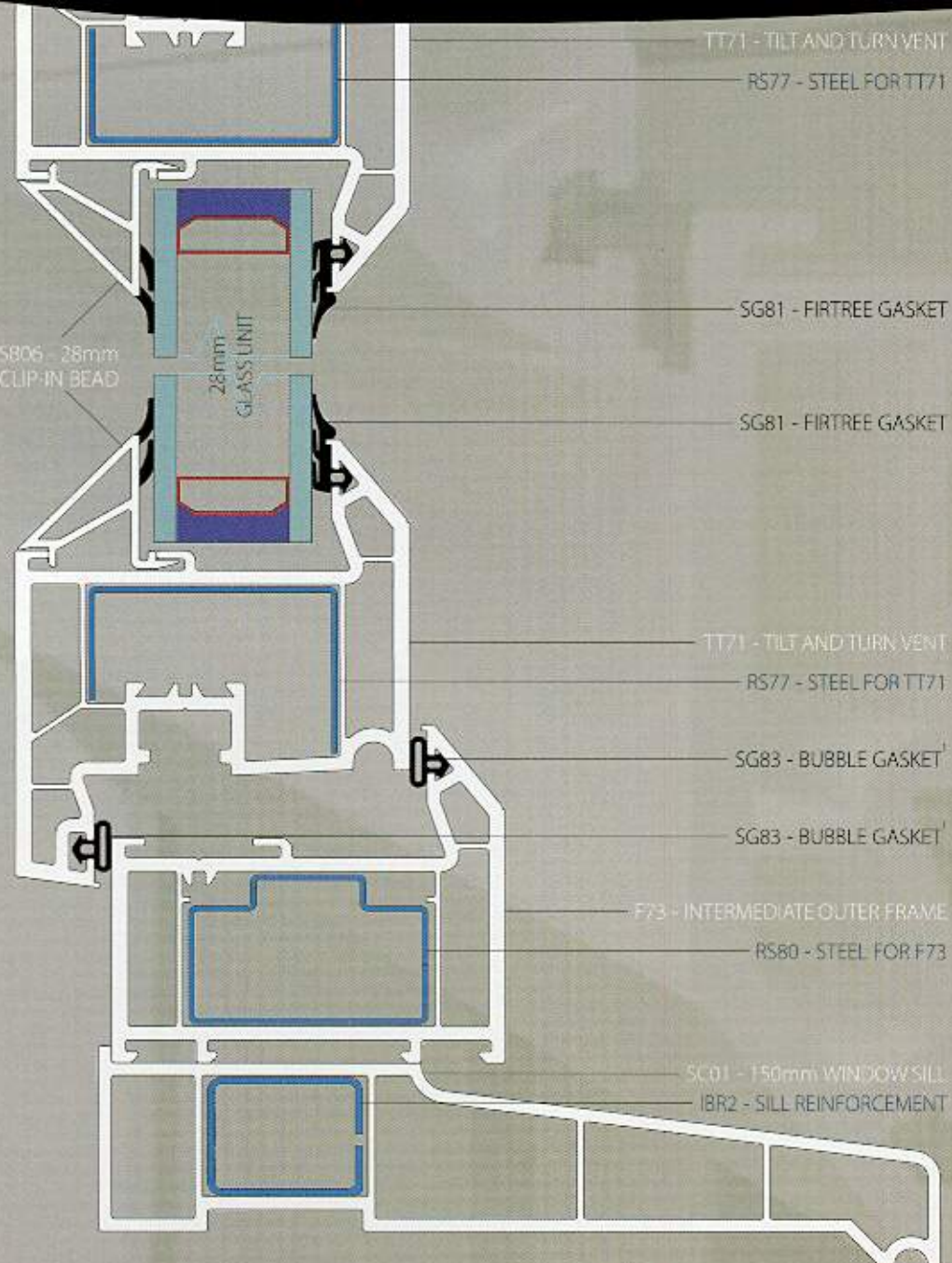
ANCILLARY PROFILES



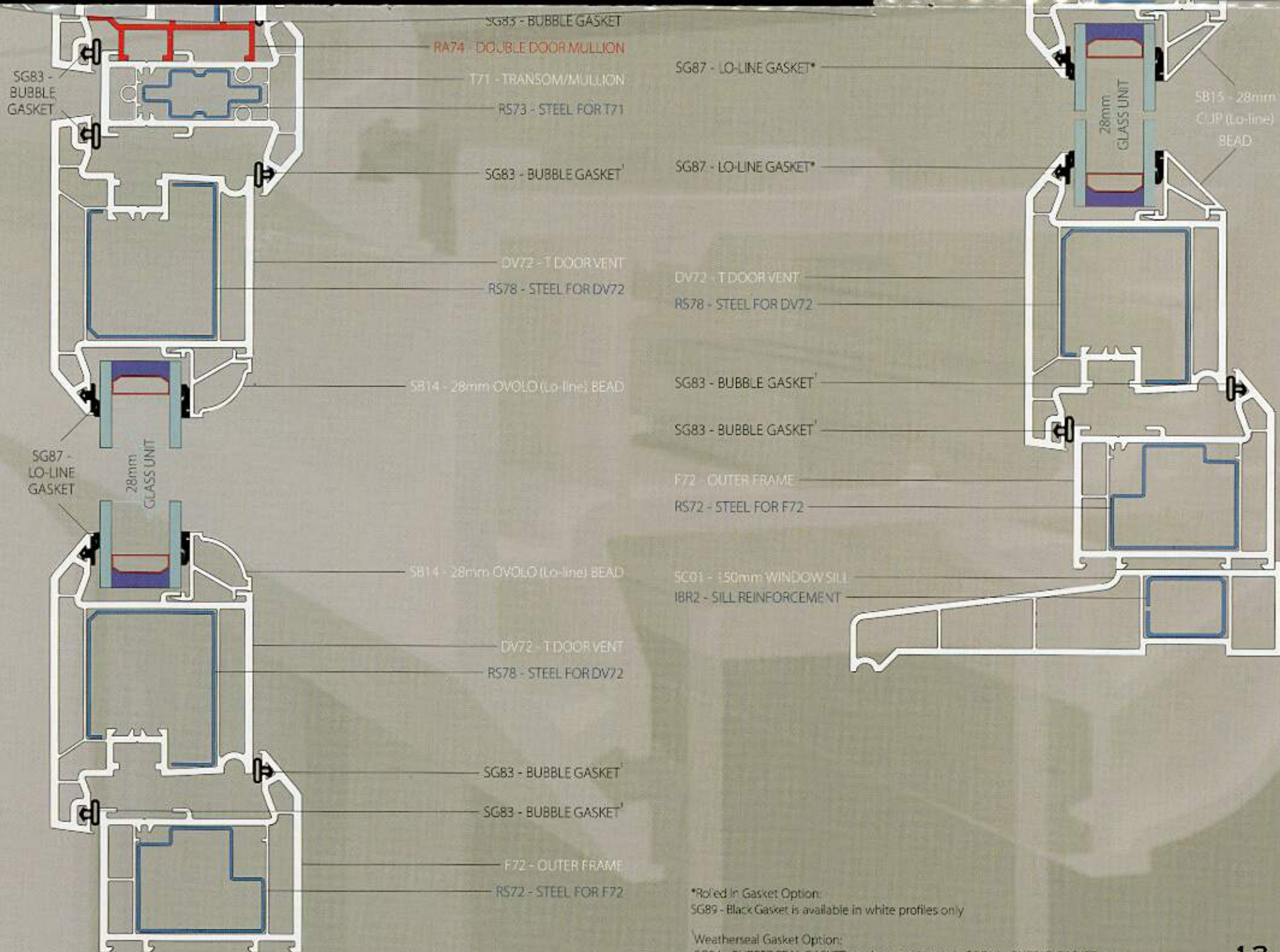


¹Weatherseal Gasket Option:
SG84 - FLIPPER SEAL GASKET can be used instead of SG83 - BUBBLE GASKET

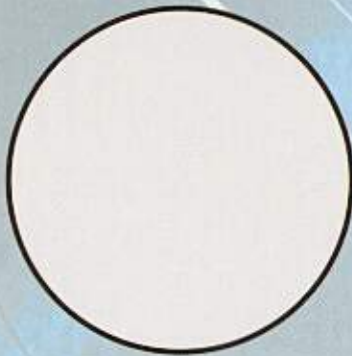
²Option: SG85 - WEDGE TEAR OFF GASKET
can be used instead of SG82 - WEDGE TEAR OFF GASKET



¹Weatherseal Gasket Option:
SG84 - FLIPPER SEAL GASKET can be used instead of SG83 - BUBBLE GASKET



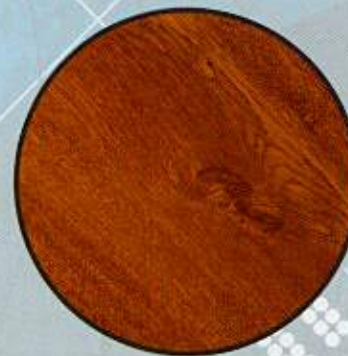
AVAILABLE PROFILE COLOURS*



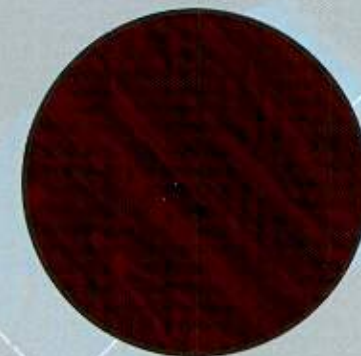
White
C121



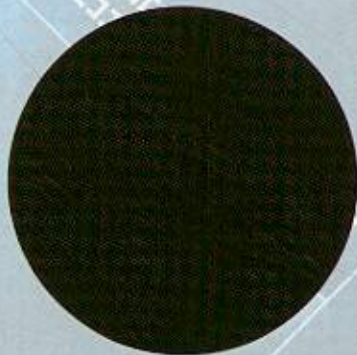
Mahogany
(Also available for roofs)
2097013



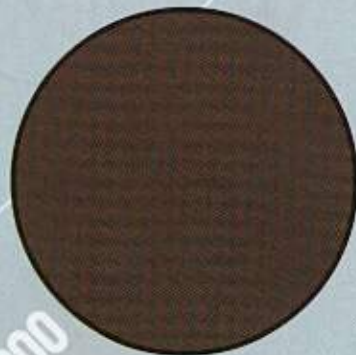
Golden Oak
(Also available for roofs)
80001



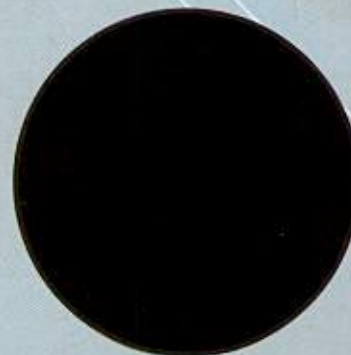
Cherrywood
(Also available for roofs)
8015/16/17



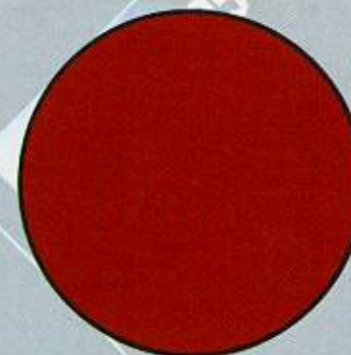
Dark Green (Brookland)
6125



Anthracite Grey
7016



Black Brown
8518



Dark Red (Burgundy)
3081



Steel Blue (Oxford)
5150

*Please note: the swatches on this page should be used as a guide only and are as accurate as our printing process allows

'U'-VALUES AND ENERGY RATINGS

(From computer simulations)

'A' rated Shield Window

PVC-U narrow frame F71 with minimum steel reinforcement to BFRC requirements with 4-16-4 Low-E 0.04 uncorrected emissivity (Saint Gobain Planitherm Total), 90% Argon 10% Air filled, low-iron (Saint Gobain Diamant) glazing unit with Superspacer warm edge spacer bar with 5mm hot melt butyl secondary seal

Energy Index (kWh/m²/year)

+0

(Energy Index certified by BFRC and based on UK standard window. The actual energy consumption for a specific application will depend on the building, the local climate and the indoor temperature)

The climate zone is:

UK

Thermal Transmittance (U_{window})

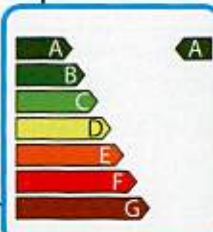
1.40 W/m²K

Solar Factor (g_{window})

0.44 W/m²K

Effective Air Leakage (L_{factor})

0 W/m³K



Shield Window, OptiWhite, Argon, K-glass & Edgetech Super Spacer

Part (see Fig 1)	$\Delta\psi$ m	A m ²	U_1 W/m ² K	U_2 W/m ² K	U_p W/m ² K	U_f W/m ² K	ψ W/m-K	ϕ_f W/K
1	1.3665	0.0808	1.1340	1.6352	1.0309	1.4792	0.0291	0.1593
2	0.4945	0.0315	1.1340	1.6352	1.0309	1.4792	0.0291	0.0610
3	0.4945	0.0315	1.1340	1.6352	1.0309	1.4792	0.0291	0.0610
4	1.2785	0.1389	1.2408	1.6618	1.0309	1.6367	0.0279	0.2631
5	0.4505	0.0537	1.1963	1.6197	1.0309	1.5083	0.0286	0.0938
6	0.4505	0.0537	1.1963	1.6197	1.0309	1.5083	0.0286	0.0938
7left	1.3665	0.1786	1.2039	1.6895	1.0309	1.7196	0.0574	0.3831
7right	1.2785				1.0309			
$\Sigma \Delta\psi$	7.1800					ψ_{av}	0.0287	

Glass	D mm	A m ²	U_g W/m ² K	ϕ_g W/K
Left	28	0.6757	1.5284	1.0328
Right	28	0.5760	1.5284	0.8803

Window 'U' - Value = 1.6635 W/m²K

Domestic Window Energy Rating (DWER)

Pane	q_L	% glass	F_w	g_w	L factor W/m ² K	DWER kWh/m ² /yr
Left	0.78	38.40	0.9	0.5000	0.00	-4.65
Right	0.78	32.83				



Shield Window, Argon, K-glass & Edgetech Super Spacer

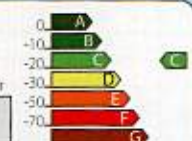
Part (see Fig 1)	$\Delta\psi$ m	A m ²	U_1 W/m ² K	U_2 W/m ² K	U_p W/m ² K	U_f W/m ² K	ψ W/m-K	ϕ_f W/K
1	1.3665	0.0808	1.1340	1.6563	1.0309	1.4792	0.0290	0.1591
2	0.4945	0.0315	1.1340	1.6563	1.0309	1.4792	0.0290	0.0609
3	0.4945	0.0315	1.1340	1.6563	1.0309	1.4792	0.0290	0.0609
4	1.2785	0.1389	1.2408	1.6795	1.0309	1.6367	0.0277	0.2628
5	0.4505	0.0537	1.1963	1.6375	1.0309	1.5083	0.0284	0.0937
6	0.4505	0.0537	1.1963	1.6375	1.0309	1.5083	0.0284	0.0937
7left	1.3665	0.1786	1.2039	1.7099	1.0309	1.7196	0.0571	0.3826
7right	1.2785				1.0309			
$\Sigma \Delta\psi$	7.1800					ψ_{av}	0.0285	

Glass	D mm	A m ²	U_g W/m ² K	ϕ_g W/K
Left	28	0.6757	1.5565	1.0518
Right	28	0.5760	1.5565	0.8965

Window 'U' - Value = 1.6822 W/m²K

Domestic Window Energy Rating (DWER)

Pane	q_L	% glass	F_w	g_w	L factor W/m ² K	DWER kWh/m ² /yr
Left	0.72	38.40	0.9	0.4616	0.00	-14.32
Right	0.72	32.83				



Shield Window, Air, K-glass & Edgetech Super Spacer

Part (see Fig 1)	$\Delta\psi$ m	A m ²	U_1 W/m ² K	U_2 W/m ² K	U_p W/m ² K	U_f W/m ² K	ψ W/m-K	ϕ_f W/K
1	1.3665	0.0808	1.1340	1.8093	1.0309	1.4792	0.0280	0.1577
2	0.4945	0.0315	1.1340	1.8093	1.0309	1.4792	0.0280	0.0604
3	0.4945	0.0315	1.1340	1.8093	1.0309	1.4792	0.0280	0.0604
4	1.2785	0.1389	1.2408	1.8088	1.0309	1.6367	0.0265	0.2613
5	0.4505	0.0537	1.1963	1.7673	1.0309	1.5083	0.0274	0.0933
6	0.4505	0.0537	1.1963	1.7673	1.0309	1.5083	0.0274	0.0933
7left	1.3665	0.1786	1.2039	1.8583	1.0309	1.7196	0.0549	0.3797
7right	1.2785				1.0309			
$\Sigma \Delta\psi$	7.1800					ψ_{av}	0.0275	

Glass	D mm	A m ²	U_g W/m ² K	ϕ_g W/K
Left	28	0.6757	1.7605	1.1897
Right	28	0.5760	1.7605	1.0140

Window 'U' - Value = 1.8182 W/m²K

Domestic Window Energy Rating (DWER)

Pane	q_L	% glass	F_w	g_w	L factor W/m ² K	DWER kWh/m ² /yr
Left	0.72	38.40	0.9	0.4616	0.00	-23.64
Right	0.72	32.83				



Figure 1.

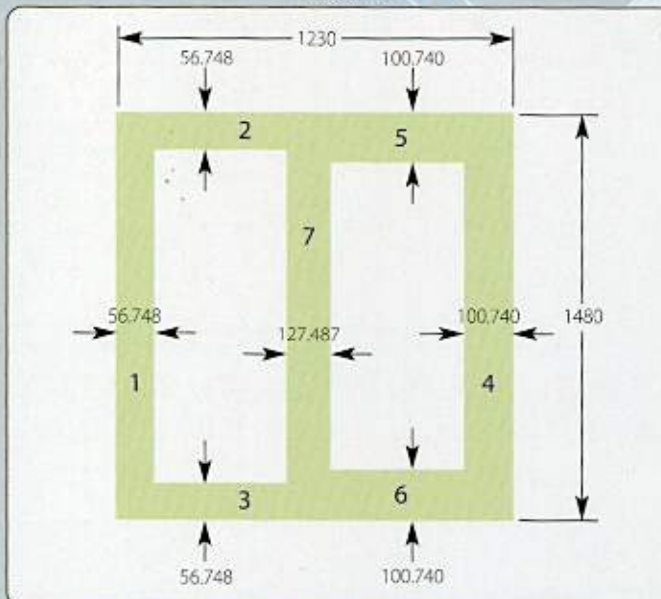


Figure 1.

Sound transmission loss (TL) for sealed single glazing

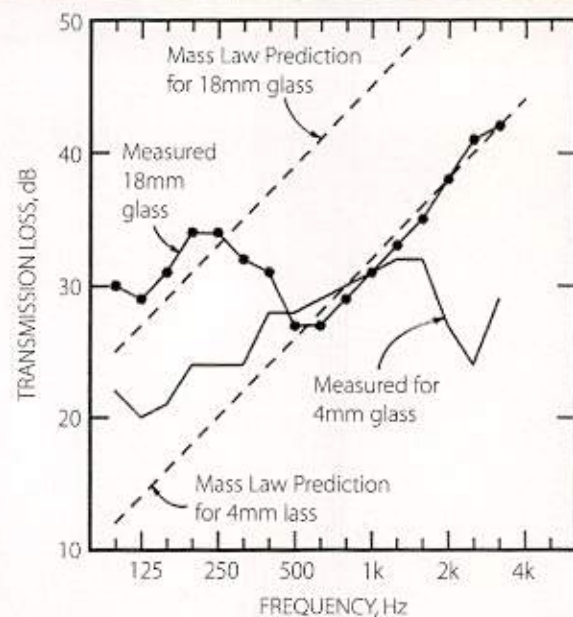


Figure 2.

Sound transmission class (STC) versus interpane spacing for double glazing

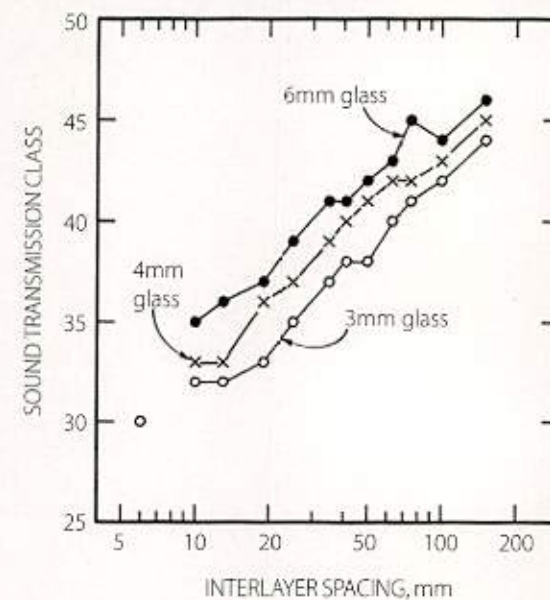


Figure 3.

The effect of a small airspace on TL of double glazing

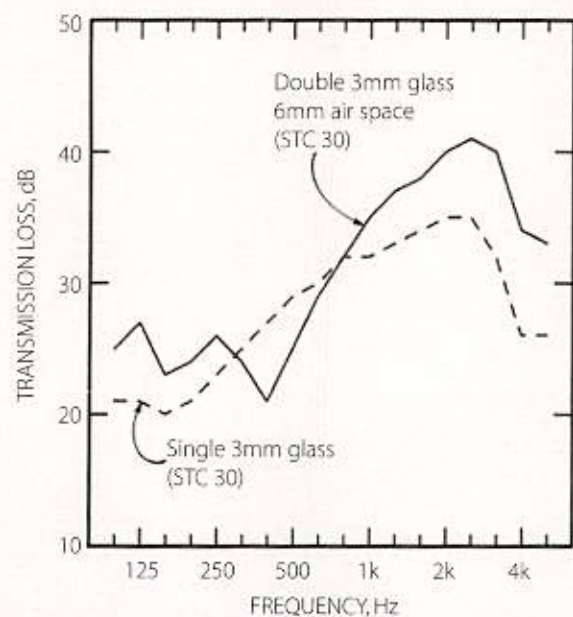


Figure 4.

TL of double and triple glazed windows

