

QUALITY CONTROL

- The glass is processed in the factory with a management system registered to BS EN ISO 9001:2008
- Flat safety glass for use in buildings is assessed by BSI license number KM84315
- Insulating Glass Units are assessed by BSI license number KM45548

Dimensional Tolerances Insulating Glass Units

Size: +2mm, -1mm
 Thickness: ±1.5mm
 Squareness: Difference in diagonals of rectangular panes >2mm/M

Specification Tolerances Toughened/ Heat Strengthened Distortion

Maximum bow 0.2% (2mm/M) along each edge

Maximum Roller Wave Limits:-

4mm Clear and Coated Float.....0.30mm/300mm
 6mm Clear and Coated Float.....0.20mm/300mm
 10mm Clear and Coated Float.....0.15mm/300mm
 12mm Clear Float.....0.15mm/300mm

Typical Sound Reduction Indices—dB (Data from EN 12354)

Insulating glass unit configuration (float glass)*

	Frequency - Hertz						Rw (C:Ctr)	Rw	Rw+C	Rw+Ctr
	125	250	500	1000	2000	4000				
4mm/6 to 20mm cavity / 4mm	21	17	25	35	37	31	29(-1;-4)	29	28	25
6mm/6 to 20mm cavity / 4mm	21	20	26	38	37	39	32(-2;-4)	32	30	28
6mm/6 to 20mm cavity / 6mm	20	18	28	38	34	38	31(-1;-4)	31	30	27
10mm/6 to 20mm cavity / 4mm	24	21	32	37	42	43	35(-2;-5)	35	33	30
10mm/6 to 20mm cavity / 6mm	24	24	32	37	37	44	35(-1;-3)	35	34	32

Insulating glass unit configuration (float glass & standard PVB laminates)*

6mm/16mm cavity / 8.8 (44.2)	23	25	35	43	41	50	38(-2;-5)	38	36	33
6mm/16mm cavity / 10.8 (55.2)	26	27	34	41	41	50	39(-2;-4)	39	37	34
8mm/16mm cavity / 10.8 (55.2)	28	30	37	42	41	53	40(-1;-3)	40	39	37
10mm/16mm cavity / 8.8 (44.2)	29	30	29	42	43	56	40(-1;-4)	40	39	36
10mm/16mm cavity / 12.8 (66.2)	28	32	38	38	42	55	39(-1;-4)	39	38	35

*Performance results obtained by interpolation and extrapolation of test results obtained from similar insulating glass units.

Disclaimer: The information contained in this publication is a general description of the products 'Dualtherm' and 'Dualspan' and Dual Seal Glass Ltd hereby disclaims all liability arising from any inaccuracy in or omissions from this publication and all the consequences of relying on it. It is the responsibility of the users of this information to ensure that the intended application of 'Dualtherm'/'Dualspan' products is appropriate and complies with all relevant laws, regulations, standards, codes of practices and other requirements. Information regarding specific instructions appertaining to handling and storage of 'Dualtherm' and 'Dualspan' products is available on the Dual Seal Glass web pages: www.dualsealglass.co.uk

PROCESSING CAPABILITIES

- **Toughening**
4mm up to 19mm - maximum 2800mm x 4800mm
- **Heat Soak Testing**
maximum 4500 x 2400
- **Heat strengthening**
4mm up to 10mm - maximum 2800 x 4800
- **Laminated Stock**
6.4mm up to 16.8mm - maximum size 3210 x 6000
- **Ceramics and Screen Printing**
6mm up to 12mm - size limitations apply relative to designs
- **Insulating Glass Units - Double and Triple Systems**
Maximum 2700mm x 4500mm, up to 600kgs per unit
- **Accredited Structural Glass Systems**
Schuco, Technal, Kawneer, Comar, Raynaers and Metal Technology
- **Interstitial 'Screenline' Blinds**
Manual or Motorised

Maximum product sizes for manufacturing into Double Glazed Units

Glass		Cavity	Maximum Sizes mm		Nominal max	Nominal avg. Weight
Type	Thickness		Square	Rectangle	area m ²	kg / m ²
LAMINATED & ACOUSTIC LAMINATED	6mm	12,14,16,18,20	1600 x 1600	1500 x 2500	3.75	30
	8mm	12,14,16,18,20	2250 x 2250	2250 x 3500	7.88	40
	10mm	12,14,16,18,20	2500 x 2500	2500 x 4500	11.25	50
	12mm	12,14,16,18,20	2700 x 2700	2700 x 4500	12.15	60
TOUGHENED inc DUALTHERM 'E' & DUALTHERM 'HP' (4mm to 10mm only)	4	12,14,16,18,20	1400 x 1400	1400 x 2100	2.94	20
	5	12,14,16,18,20	2000 x 2000	2000 x 3000	6	25
	6	12,14,16,18,20	2100 x 2100	2000 x 4000	8	30
	8	12,14,16,18,20	2250 x 2250	2100 x 4200	8.82	40
	10	12,14,16,18,20	2500 x 2500	2500 x 4500	11.25	50
12	12,14,16,18,20	2600 x 2600	2600 x 4500	11.7	60	

Front cover photos (Left to right): Huddersfield University Media Centre, Christies Hospital Manchester, Campus D Sheffield.



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PRODUCT PORTFOLIO

- 'Dualtherm' Solar
- 'Dualtherm' HP
- 'Dualtherm' E
- 'Dualtherm' E+
- 'Dualspan' Ceramics
- 'Dualspan' Print
- 'Dualtherm' Clean
- 'Dualtherm' Sound
- 'Dualtherm' Blinds
- 'Dualspan' Safety and Security



DUAL SEAL GLASS

Dual Seal Glass is one of the UK's leading independent processors of High Performance Vision and Insulated Spandrel Glass Panels for the Building Products and Construction Markets.

The continued expansion in sales of all our products is underlined by our commitment to traditional values. Our business principles are based on a customer driven ethos of quality and service and our management team is committed to fulfilling every customer order 'complete, first time, every time'.

All our products are registered to the relevant European Standards and our site is registered to ISO9001:2008.

Our independence allows us the opportunity to process glass from all the major flat glass manufacturers. We are therefore able to give our clients unbiased advice and best value solutions.

Dual Seal Glass is one of the few UK companies to have been awarded the prestigious licences to manufacture specialist structural silicone units for Schuco International, Kawneer Aluminium glazing systems, Technal Aluminium systems and Metal Technology Windows.

GLASS STANDARDS

Insulating Glass Units

- The units will conform to the requirements of BSEN1279 Part 2 and Part 3
- Insulating glass units manufactured by Dual Seal Glass Ltd, Leeds Road, Huddersfield are known by the trade names 'Dualtherm and DualSpan'
- The life expectancy for units manufactured by Dual Seal Glass Ltd is 20 years + in recognised framing systems and glazed to the relevant standards, although not guaranteed
- The standard warranty against seal failure for insulated glass units manufactured by Dual Seal Glass Ltd is 5 years. Extended warranties are available where systems demonstrate adequate drainage and ventilation with full maintenance packages to the requirements of Dual Seal Glass Ltd Quality Management
- The warranty from Dual Seal Glass Ltd is with its direct customer, the warranty is not transferable

Toughened Glass

- The glass will conform to the requirements of BSEN12150
- Heat Soaked Toughened Glass will conform to BSEN14179

Heat Strengthened Glass

- The glass will conform to the requirements of BSEN1863
- Heat Strengthened glass used in locations requiring safety glass must be laminated



Dualtherm HP Insulating Glass Units



High Performance Neutral Solar Control Coatings

Product	Visible Light		Solar Energy			g Value	SC	U Value	
	Total Trans-mission %	Reflection Outside %	Direct Trans-mission %	Reflection Outside %	Absorbion %	EN 410 %	g EN /0.87	Air w/m²K	Argon (90%) w/m²K
Double Glazing 6 - 16 - 6, Dualtherm HP Coating on surface #2									
Dualtherm HP 74	68	11	37	27	35	0.41	0.47	1.3	1.1
Dualtherm HP 70	69	11	34	39	28	0.37	0.42	1.3	1.0
Dualtherm HP 65	60	16	30	30	41	0.33	0.38	1.3	1.0
Dualtherm HP 54	50	18	24	32	44	0.27	0.31	1.3	1.0
Dualtherm HP 44	40	20	20	31	49	0.23	0.26	1.3	1.1

DUALTHERM HP INSULATING GLASS

Dualtherm high performance insulating glass units are designed to reflect specific wavelengths of solar radiation, ensuring that whilst most of the heat is reflected out of the building, the maximum amount of natural daylight is transmitted inside the building. The resulting energy savings for the heating, cooling and lighting provide improved design flexibility for the architect

Advantages of Dualtherm HP Coatings

- Availability-stock products
- Heat treatable ensuring controlled lead times
- Neutral aesthetics in both reflection and transmission
- Maximum energy savings throughout the building life span
- Excellent thermal insulation

Dualtherm E Insulating Glass Units



High Performance Thermal Insulating Coatings

Product	Visible Light		Solar Energy			g Value	SC	U Value	
	Total Trans-mission %	Reflection Outside %	Direct Trans-mission %	Reflection Outside %	Absorbion %	EN 410 %	g EN /0.87	Air w/m²K	Argon (90%) w/m²K
Double Glazing 6 - 16 - 6, Dualtherm E Coating on surface #3									
Dualtherm En	78	12	52	25	24	0.61	0.7	1.4	1.1
Dualtherm E+	70	22	42	36	22	0.49	0.56	1.3	1.0

Advantages of Dualtherm E Coatings

- Neutral aesthetics in both reflection and transmission
- Excellent thermal insulation, minimising heat loss
- High light transmission, utilising natural daylight