



### CERTIFICATE OF APPROVAL No CF 5358

This is to certify that, in accordance with TS00 General Requirements for Certification of Fire Protection Products The undermentioned products of

### **DEKO Partitions Limited**

11 Maarkaervej, DK-2630, Taastrup, Denmark Tel: +45 53 60 55 76

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT

Non Load Bearing Fully Glazed
Framed Partition System

TECHNICAL SCHEDULE
TS 25 Fire Resistant Glass,
Glazing Systems and Materials

Signed and sealed for and on behalf of CERTIFIRE

Sir Ken Knight Chairman

**Certifire** 

**WCL Impartiality Committee** 

Paul Duggan Certification Manager

**Warrington Certification Ltd** 

Issued: 4<sup>th</sup> May 2016 Valid to: 3<sup>rd</sup> May 2021

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### Non Load Bearing Fully Glazed Framed Partition System

This Certificate of Approval relates to the fire resistance of DEKO V and DEKO VS glass when used in the following applications, as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.

Glass Type	Glass Thickness	Framing system	Butt Joint	Integrity (minutes)	Insulation (minutes)	Page No.
DEKO V2	16mm – 22mm	Open Profiles – Bottom and Sides	Steel/Aluminium	120*	30*	4-9
DENO VE	22	Closed - Top	connection	120	00	. 0
DEKO V3	25mm – 33mm	Open Profiles – Bottom and Sides	Steel/Aluminium	60*	60*	4-7,
DENO VS	2311111 — 33111111	Closed - Top	connection	60	00	10-11
DEKO V7	40mm – 48mm	Open Profiles – Bottom and Sides	Steel/Aluminium connection	120*	120*	4-7, 12-13
BERG VI		Closed - Top				
DEKO VS4	20mm	Open Profiles – Bottom and Sides	Silicone	60*	30*	4-7,
		Closed - Top	connection			14-15
DEKO VS5	23mm – 30mm	Open Profiles – Bottom and Sides	Silicone	60*	30*	4-7,
DERO VOS		Closed - Top	connection	00	00	16-17
DEKO VS6	31mm – 41mm	Open Profiles – Bottom and Sides	Silicone connection	60*	60*	4-7,
22.10 100		Closed - Top		00	00	18-19

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

CF 5358 DATA SHEET contains confidential information and is not included in the Certificate of Approval No. CF 5358 when that CERTIFIRE is publicly available.

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#### **DEKO V and DEKO VS FIRE RESISTING GLASS**

This product is approved on the basis of:

- i) Initial type testing
- ii) A design appraisal against TS25.
- iii) Certification of quality management system to ISO 9001: 2015.
- iv) Inspection and surveillance of factory production control.
- v) Audit testing.

This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and materials.

### **General Requirements**

Where the glass is installed in an open or closed profile steel framed screen, the orientation of the screen shall be no more than  $\pm 10^{\circ}$  from the vertical.

There is no restriction to the direction of exposure for the glass and framing system.

The edge cover to each pane of glass can be increased but not decreased above the manufacturing tolerances except for edge sensitive glasses.

The DEKO V and DEKO VS glass family is approved in a nominal thickness from 16mm to 48mm (depending on application). Glazing will have allowable tolerances applied by the manufacturer to permit for variation in the physical thickness e.g. minor thickness increase to improve sound reduction. In all cases the actual thickness shall not be less than the minimum tested and compromise certified fire resistance performance.

The exact components of the glazed framed partition systems are laid down in the CF 5358 DATA SHEET which is deposited at Warrington Certification Limited. For the reason the annex contains confidential information, it is not included in the publicly available version of Certificate of Approval No. CF 5358.

Additional product performance relating to equivalent area has been supplied by DEKO Partitions Limited. These results are presented for product information only rather than being certificated performance indicators.

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The fol agg-

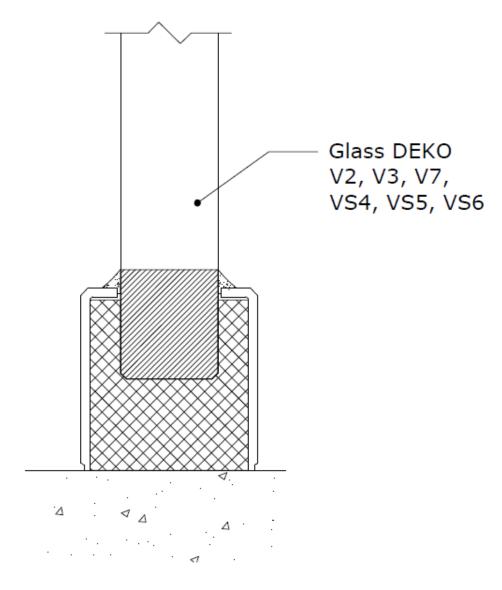




#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

### DEKO V and DEKO VS glasses in butt jointed steel/aluminium framed screens

The following general drawing presents the fixing of the glass at the bottom. The exact components are laid down in the CF 5358 DATA SHEET.



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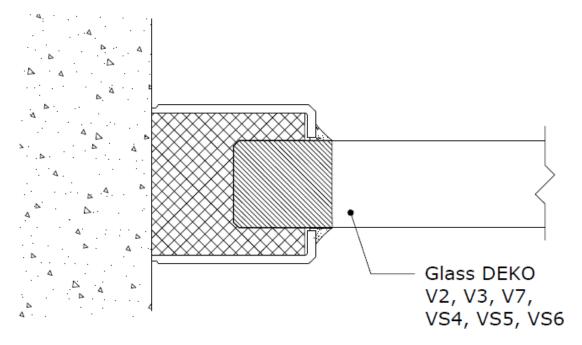




#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

### DEKO V and DEKO VS glasses in butt jointed steel/aluminium framed screens

The following general drawing presents the fixing of the glass at the sides. The exact components are laid down in the CF 5358 DATA SHEET.



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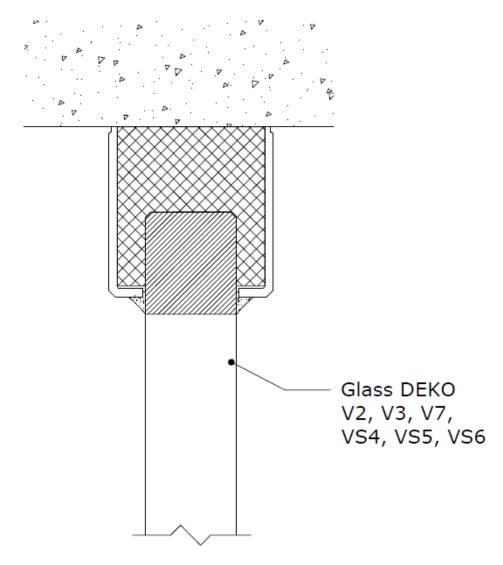




#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

### DEKO V and DEKO VS glasses in butt jointed steel/aluminium framed screens

The following general drawing presents the fixing of the glass at the top. The exact components are laid down in the CF 5358 DATA SHEET.



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top fol ligger

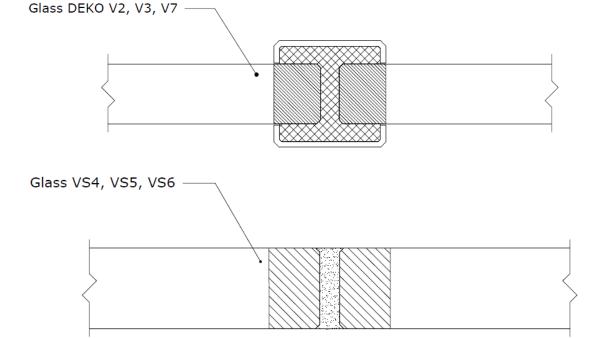




#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

### DEKO V and DEKO VS glasses in butt jointed steel/aluminium framed screens

The following general drawing presents the fixing of the glass at the butt joint. The exact components are laid down in the CF 5358 DATA SHEET.



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V2 glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation/integrity and 120 minutes integrity

Table 1.1 – Maximum Permitted DEKO V2 Glass Dimensions						
Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)						
Inculation/Integrity 20*	1650	3300	4.950			
Insulation/Integrity 30*	(at 3000 height)	(at 1500 width)	4.950			
Integrity 30*/Integrity 60*	1650	3300	4.950			
integrity 30 /integrity 00	(at 3000 height)	(at 1500 width)	4.950			
Integrity 90*/Integrity 120*	1650	3300	4.950			
integrity 90 /integrity 120	(at 3000 height)	(at 1500 width)	4.950			

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

	DEKO V2-16 Insulation/Integrity 30 Integrity 30/Integrity 60 Integrity 90/Integrity 120	DEKO V2-18 Insulation/Integrity 30 Integrity 30/Integrity 60 Integrity 90/Integrity 120	DEKO V2-22 Insulation/Integrity 30 Integrity 30/Integrity 60 Integrity 90/Integrity 120	
Glass thickness	16 mm	18 mm	22 mm	
Glass area	< 4.5 m <sup>2</sup>	< 4.95 m <sup>2</sup>	< 4.95 m <sup>2</sup>	
UV resistance*	Yes	Yes	Yes	
Glass weight*	34 kg/m <sup>2</sup>	39 kg/m <sup>2</sup>	49 kg/m <sup>2</sup>	
Thickness tolerance*	+2/-1 mm	+2/-1 mm	+2/-1 mm	
Length tolerance*	+2/-1 mm	+2/-1 mm	+2/-1 mm	
Resistance range*	1(B)1	1(B)1	1(B)1	
Sound reduction on glass*	Rw 38 dB	Rw 40 dB	Rw 40 dB	
Sound reduction on wall*	Have to be calculated with minus 2-3 dB from the glass value. Larger glass sizes have less sound insulation than smaller glass sizes.			

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

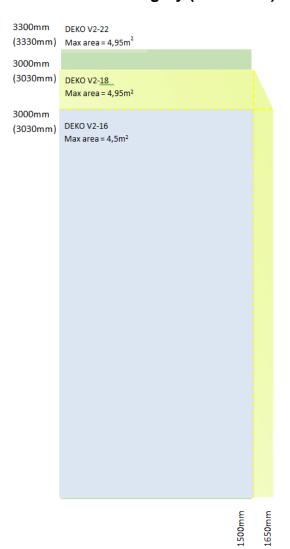
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V2 glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation/integrity and 120 minutes integrity (continued)



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V3 Glass in butt jointed steel/aluminium framed screens for periods of 60 minutes insulation/integrity and 60 minutes integrity

Table 1.2 – Maximum Permitted DEKO V3 Glass Dimensions					
Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)					
Insulation/Integrity 60*	2500 (at 3000 height)	3750 (at 2000 width)	7.500		

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m² for the duration of classification period.

	DEKO V3-25 Insulation/Integrity 60	DEKO V3-26 Insulation/Integrity 60	DEKO V3-29 Insulation/Integrity 60	DEKO V3-33 Insulation/Integrity 60	
Glass thickness	25mm	26mm	29mm	33mm	
Glass area	< 3.75 m <sup>2</sup>	< 5.4 m <sup>2</sup>	< 6.3 m <sup>2</sup>	< 7.26 m <sup>2</sup>	
UV resistance*	YES	YES	YES	YES	
Glass weight*	52 kg/m <sup>2</sup>	54 kg/m <sup>2</sup>	60 kg/m <sup>2</sup>	73 kg/m <sup>2</sup>	
Thickness tolerance*	+2/-2	+2/-2	+2/-2	+2/-2	
Length tolerance*	+2/-2	+2/-2	+2/-2	+2/-2	
Resistance range*	1(B)1	1(B)1	1(B)1	1(B)1	
Sound reduction on glass*	41dB	41dB	42dB	44dB	
Sound reduction on wall*	duction on less sound insulation than smaller class sizes				

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

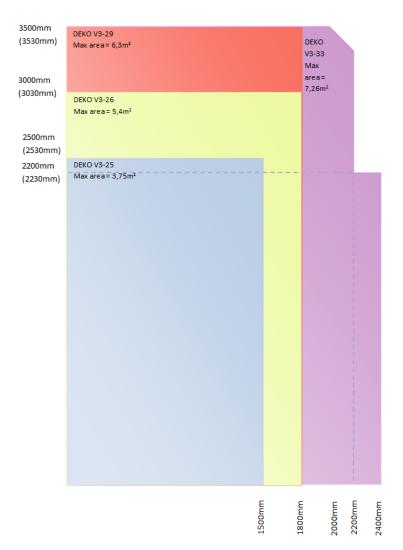
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V3 Glass in butt jointed steel/aluminium framed screens for periods of 60 minutes insulation/integrity and 60 minutes integrity (continued)



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V7 Glass in butt jointed steel/aluminium framed screens for periods of 120 minutes insulation/integrity and 120 minutes integrity

Table 1.3 – Maximum Permitted DEKO V7 Glass Dimensions						
Classification	Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)					
Insulation/Integrity 90*	1860	3100	4.650			
Insulation/integrity 90	(at 2500 height)	(at 1500 width)	4.050			
Inculation/Integrity 120*	1860	3100	4.650			
Insulation/Integrity 120*	(at 2500 height)	(at 1500 width)	4.030			

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

	DEKO V7-40 Insulation/Integrity 90 Insulation/Integrity 120	DEKO V7-43 Insulation/Integrity 90 Insulation/Integrity 120	DEKO V7-48 Insulation/Integrity 90 Insulation/Integrity 120		
Glass thickness	40mm	43mm	48mm		
Glass area	< 4.5 m <sup>2</sup>	< 4.5 m <sup>2</sup>	< 4.5 m <sup>2</sup>		
UV resistance*	YES	YES	YES		
Glass weight*	82 kg/m <sup>2</sup>	89,5 kg/m <sup>2</sup>	102 kg/m <sup>2</sup>		
Thickness tolerance*	+3/-3 mm	+3/-3 mm	+3/-3 mm		
Length tolerance*	+2/-2 mm	+2/-2 mm	+2/-2 mm		
Resistance range*	1(B)1	1(B)1	1(B)1		
Sound reduction on glass*	Rw 46dB	Rw 46dB	Rw 46dB		
Sound reduction on wall*	You have to calculate with minus 2-3 dB from the glass value. In addition, big glass sizes have less sound insulation than smaller glass sizes.				

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

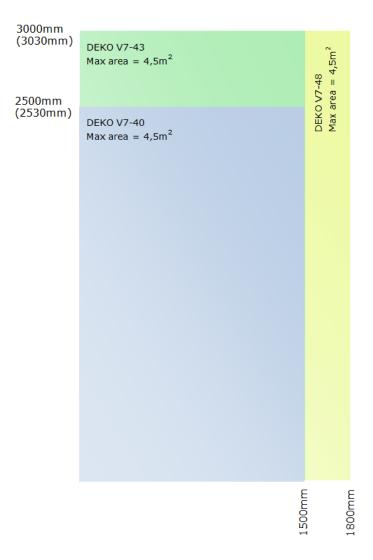
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO V7 Glass in butt jointed steel/aluminium framed screens for periods of 120 minutes insulation/integrity and 120 minutes integrity (continued)



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS4 Glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation and 60 minutes integrity

Table 1.4 – Maximum Permitted DEKO VS4 Glass Dimensions						
Classification	Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)					
Integrity 30*	3690 (at 2300 height)	2680 (at 3170 width)	8.500			
Insulation/Integrity 30*	3690 (at 2300 height)	2680 (at 3170 width)	8.500			
Integrity 60*	2450 (at 1500 height)	1600 (at 2300 width)	3.680			

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

	DEKO VS4-20 Insulation/Integrity 30	DEKO VS4-20 Integrity 60	
Glass thickness	20 mm	20 mm	
Glass area	$< 7.93 \text{ m}^2$	< 3.68 m <sup>2</sup>	
UV resistance*	Yes	Yes	
Glass weight*	46 kg/m <sup>2</sup>	46 kg/m <sup>2</sup>	
Thickness tolerance*	+2/-1 mm	+2/-1 mm	
Length tolerance*	+2/-1 mm	+2/-1 mm	
Resistance range*	1(B)1	1(B)1	
Sound reduction on glass*	Rw 38 dB	Rw 38 dB	
Sound reduction on wall*	Sound reduction on wall* You have to calculate with minus 2-3 dB from the glass valuaddition, big glass sizes have less sound insulation than sm glass sizes.		

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

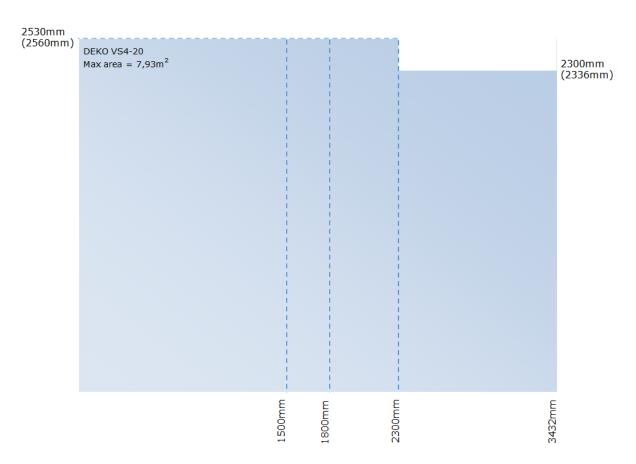
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS4 Glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation and 60 minutes integrity (continued)



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS5 Glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation and 60 minutes integrity

Table 1.5 – Maximum Permitted DEKO VS5 Glass Dimensions					
Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)					
Insulation/Integrity 30*	2260 (at 2940 height)	3130 (at 2120 width)	6.645		
Insulation/Integrity 45*	2260 (at 2940 height)	3130 (at 2120 width)	6.645		
Integrity 60*	2260 (at 2940 height)	3130 (at 2120 width)	6.645		

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

	DEKO VS5-23 Insulation/Integrity 30 Insulation/Integrity 45 Integrity 60	DEKO VS5-28 Insulation/Integrity 30 Insulation/Integrity 45 Integrity 60	DEKO VS5-30 Insulation/Integrity 30 Insulation/Integrity 45 Integrity 60
Glass thickness	23 mm	28 mm	30 mm
Glass area	< 6.645 m <sup>2</sup>	< 6.645 m <sup>2</sup>	< 6.645 m <sup>2</sup>
UV resistance*	Yes	Yes	Yes
Glass weight*	52 kg/m <sup>2</sup>	64.5 kg/m <sup>2</sup>	69.5 kg/m <sup>2</sup>
Thickness tolerance*	+2/-2 mm	+2/-2 mm	+2/-2 mm
Length tolerance*	+2/-2 mm	+2/-2 mm	+2/-2 mm
Resistance range*	1(B)1	1(B)1	1(B)2
Sound reduction on glass*	41 dB	42 dB	-
Sound reduction on wall*	You have to calculate with minus 2-3 dB from the glass value. In addition, big glass sizes have less sound insulation than smaller glass sizes.		

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

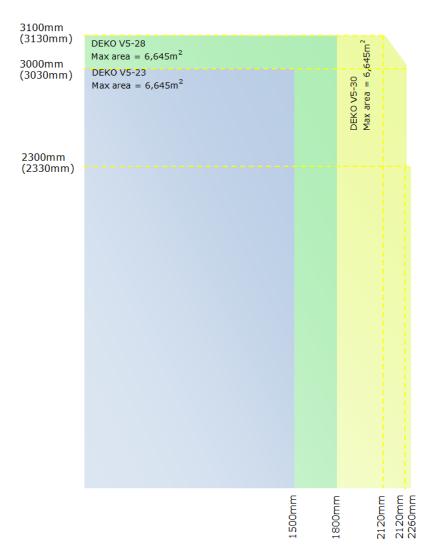
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS5 Glass in butt jointed steel/aluminium framed screens for periods of 30 minutes insulation and 60 minutes integrity (continued)



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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS6 Glass in butt jointed steel/aluminium framed screens for periods of 60 minutes insulation and 60 minutes integrity

Table 1.6 – Maximum Permitted DEKO VS6 Glass Dimensions					
Classification Max. Width (mm) Max. Height (mm) Max. Area (m²)					
Insulation/Integrity 60*	2400 (at 2940 height)	3330 (at 2120 width)	7.060		

<sup>\*</sup>The measurement of radiation in a plane parallel to and at a distance of 1.0m from the geometric centre of the unexposed face of the test specimen did not exceed a value of 15 kW/m<sup>2</sup> for the duration of classification period.

	DEKO VS6-31 Insulation/Integrity 60	DEKO VS6-37 Insulation/Integrity 60	DEKO VS6-41 Insulation/Integrity 60
Glass thickness	31 mm	37 mm	41 mm
Glass area	< 7.060 m <sup>2</sup>	< 7.060 m <sup>2</sup>	< 7.060 m <sup>2</sup>
UV resistance*	Yes	Yes	Yes
Glass weight*	52 kg/m <sup>2</sup>	64.5 kg/m <sup>2</sup>	69.5 kg/m <sup>2</sup>
Thickness tolerance*	+2/-2 mm	+2/-2 mm	+2/-2 mm
Length tolerance*	+2/-2 mm	+2/-2 mm	+2/-2 mm
Resistance range*	1(B)1	1(B)1	1(B)2
Sound reduction on glass*	41 dB	42 dB	-
Sound reduction on wall*	You have to calculate with minus 2-3 dB from the glass value. In addition big glass sizes have less sound insulation than smaller glass sizes.		

<sup>\*</sup>These results are presented for product information only rather than being certificated performance indicators

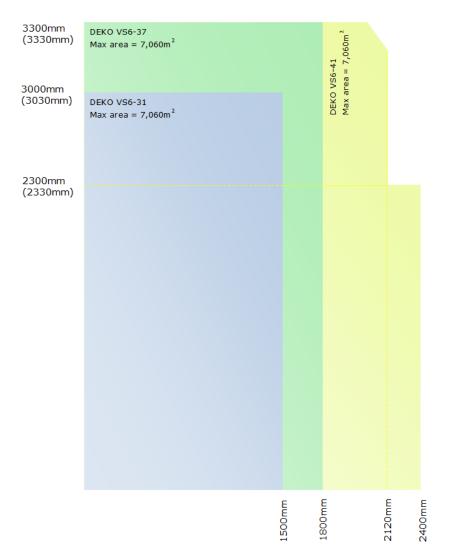
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#### **DEKO V AND DEKO VS FIRE RESISTING GLASS**

The following tables and graph present permitted extensions for DEKO VS6 Glass in butt jointed steel/aluminium framed screens for periods of 60 minutes insulation and 60 minutes integrity (continued)



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