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CERTIFICATE OF APPROVAL
No CF 5763

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

ALLIANCE DESIGN SERVICES LTD

Unit 303 Central Park, Petherton Road, Hengrove,
Bristol, BS14 9BZ
Tel: 01275 892882

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	TECHNICAL SCHEDULE
"CS77 – FP" Aluminium Doorsets	**TS12 Fire Resisting Pedestrian Type Doorsets With Metallic Leaves And Frames Including Optional Smoke Control**
"CS77 – FP" Aluminium Glazed Screens	**TS25 Fire Resisting Glass, Glazing Systems And Glazing Materials**
"CW50 – FP" Aluminium Curtain Walling	**TS25 Fire Resisting Glass, Glazing Systems And Glazing Materials**

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager

Issued: 10th October 2019
Valid to: 30th September 2023

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"CS77 – FP" Doorsets

Application	Integrity - (mins)	Insulation - (mins)	Page No.
Single Leaf only	30	--	14
	30	30	14
Single leaf with side light and fan lights	30	--	15
	30	30	16
Double leaf only	30	30	17
Double leaf with side lights and fan lights	30	30	17
Single Leaf only	60	--	18
	60	60	18
Single leaf with side lights and fan lights	60	--	19
	60	60	20
Double leaf only	60	--	20
	60	60	21
Double leaf with side lights and fan lights	60	--	21
	60	60	22

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"CS77 – FP" Glazed Screens

Application	Integrity - (mins)	Insulation - (mins)	Page No.
Glazed Screen	30	--	23
	30	30	23
	60	--	24
	60	30	24
	60	60	25
Use of infill panels in Glazed Screens	30 minute applications		26
	60 minute applications		27

"CW50 – FP" Curtain Wall

Application	Integrity - (mins)	Insulation - (mins)	Page No.
Curtain Wall	30	30	28
	60	60	28
Use of infill panels in Curtain Walling	30	30	29
	60	60	29

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General Requirements - "CS77 – FP" Doorsets

1. This approval relates to the use of the above doorsets in providing fire resistance of 30 or 60 minutes integrity and insulation (dependent upon design limitations) as defined in BS 476: Part 22: 1987. Subject to the undermentioned conditions, the doors would be expected to meet the relevant requirements of BS 9999 for fire resisting doorsets, for periods of 30 or 60 minutes (dependent upon design limitations) when used in accordance with the provisions therein.

2. This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

3. The doorsets are approved on the basis of:

   i) Initial type testing.
   ii) Audit testing as defined in TS12.
   iii) A design appraisal against TS12.
   iv) Inspection and surveillance of factory production control.
   v) Certification of quality management system to ISO 9001

4. The doorsets comprise aluminium framed, glazed door leaves hung within aluminium frames.

5. This approval is applicable to complete doorsets only.

6. This approval is applicable to single-acting, single and double-leaf, latched doorsets at leaf dimensions up to those given in the relevant Table on each page. Fire exposure may be from either opening direction. Beading may be on either face of the construction. Orientation may, however, be restricted by the requirements of an insulating glazed unit. Orientation may also be restricted by other, non-fire, concerns e.g. Weather-tightness.

7. Insulating Glass Units may only be used where fire rating is required from the direction of the non-fire glass only. Insulating Glass Units may be used in all applications. Where interchangeability of the glass is allowed, this applies to IGU's also.

8. The doorsets shall be mechanically fixed to wall constructions having a fire resistance of at least the same period as the doorset and as per the manufacturer's instructions.

9. This certificate does not include any approval relating to the mechanical requirements of the doorsets specified in TS12.

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General Requirements - "CS77 – FP" Doorsets

10. Doorsets shall be single-acting, single or double leaf. Double-acting doorsets are not included within the scope of this assessment. Side and fan lights are included within the scope of approval.

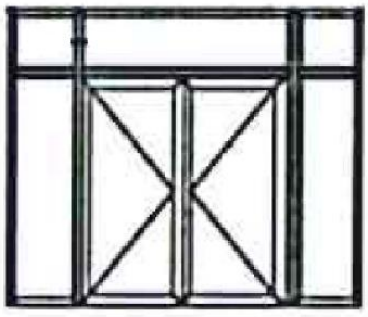
11. The dimensions given in the relevant Tables refer to leaf outer dimensions. Dimensions given are based upon test evidence and subsequent assessment.

12. The sections of this Certificate of Approval relating to the "CS77 – FP Doorsets" must be read in conjunction with CERTIFIRE Technical Schedule 'TS12, Fire Resisting Pedestrian Type Doorsets with Metallic Leaves and Frames Including Optional Smoke Control'.

13. The "CS77 – FP" doorsets are approved for use in the following assemblies:

- Single leaf.
- Single leaf with one or two side lights (dependent upon requirement).
- Single leaf with fan light.
- Single leaf with one or two side lights and a fan light.
- Double leaf.
- Double leaf with one or two side lights.
- Double leaf with fan light.
- Double leaf with one or two side lights and a fan light.
- Single or double leaf in to glazed screens.

14. Fan lights and side lights may also be split as shown in the below diagram:



Doorsets incorporating side lights and/or fan lights may be constructed using a 'T-Bar' or 'Split Coupled Joint' method. Please see the data sheet for further details.

15. Each page and the Table therein details which glass types may be used for each different application.

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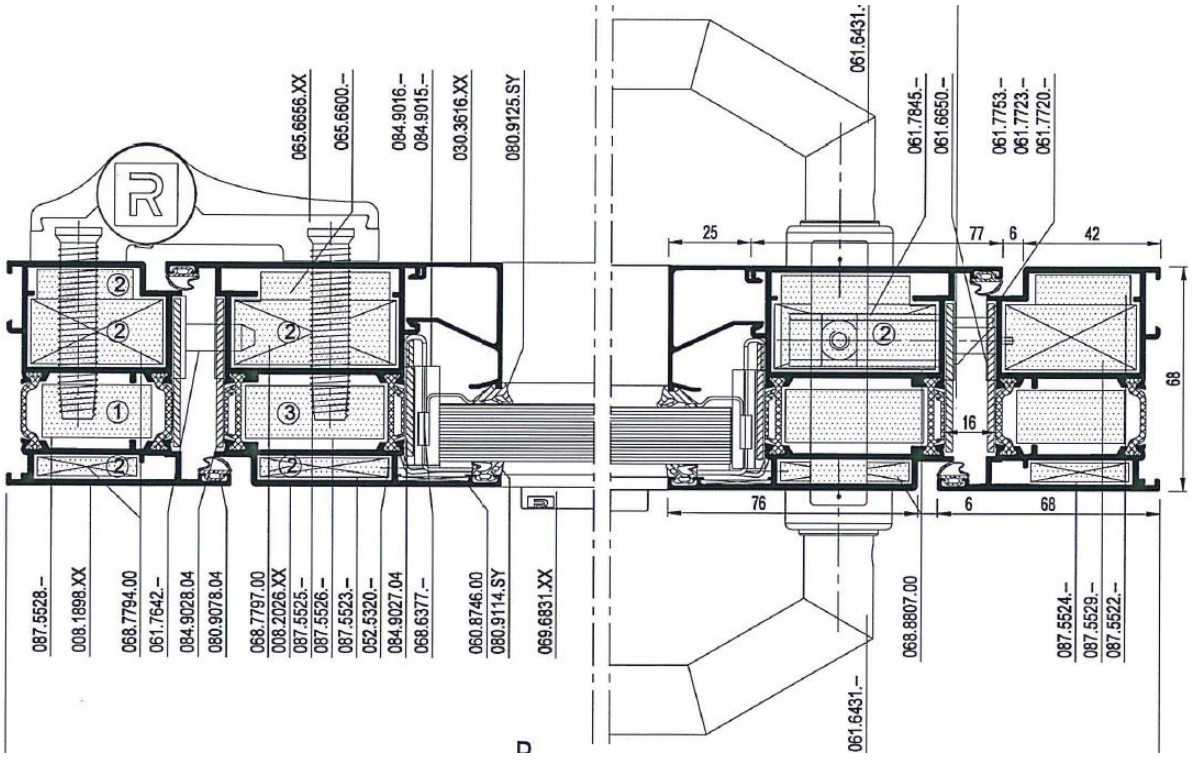
General Requirements - "CS77 – FP" Doorsets

16. This Certifire approval is based upon the requirements of BS 476: Part 22: 1987. The test data submitted was carried out in accordance with EN1634-1. Where the test data failed to meet both the requirements of the I_1 and I_2 insulation criteria of the test standard, this has been noted on the relevant page of this approval (despite these individual criteria not being defined in the BS 476: Part 22 standard, I_1 is required in order to meet the insulation criteria of BS 476: Part 22: 1987).

17. Refer to manufacturer for fixing details.

18. The below diagram is a representative cross section of the "CS77 – FP" aluminium framing system for a single leaf doorset. Please note this diagram shows all profiles filled with the insulating material (this would not be the case for 30 minute applications).



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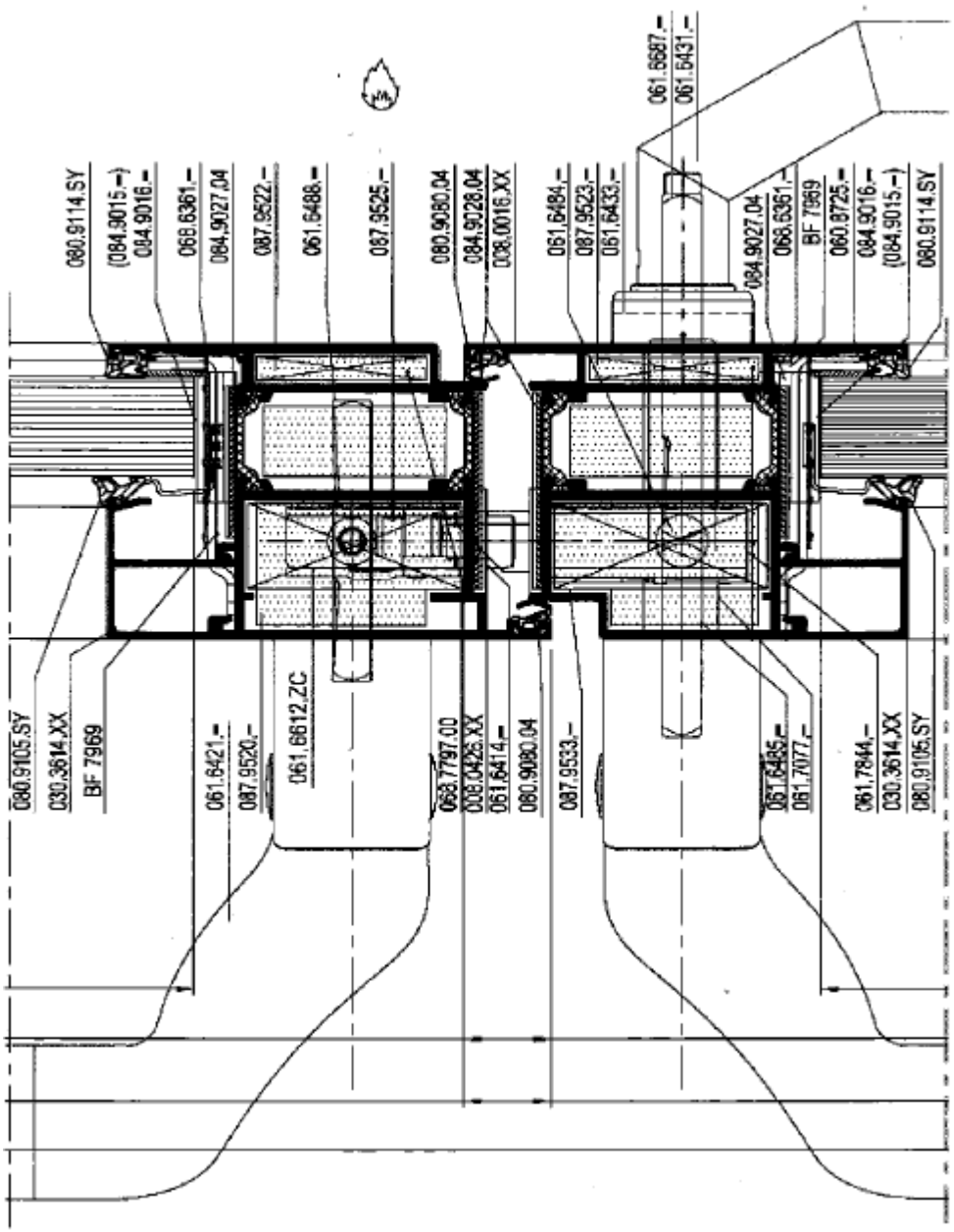
General Requirements - "CS77 – FP" Doorsets



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General Requirements - "CS77 – FP" Doorsets

19. Please also refer to manufacturer's guidance and current catalogue for application specific details. Only those details, contained within the catalogue, that have direct test evidence, or are covered by the scope of this Certifire certification, are applicable.

20. Hardware items of the types listed below; including, but not limited to, hinges, locks, closing devices and panic exit devices must be CE Marked and approved for use with aluminium fire resisting doorsets or as specified in the data sheet section of this certificate.

    Hardware elements for single and double leaf doorsets of Reynaers "CS77 – FP" system shall be in conformity with the following product standards:

    - BS-EN 1935:2003+AC:2005 -hinges,
    - BS-EN 12209:2005+AC:2006-locks,
    - BS-EN 1906:2003-lever handles and knob furniture,
    - BS-EN 1154: 1999+A 1 :2004 -closers,
    - BS-EN 179: 2009 -emergency exit devices,
    - BS-EN 1125: 2009-panic exit devices,
    - BS-EN 1303:2007+AC:2008-cylinders for locks.

    Other hardware elements of the same type can be used if their fire resistance characteristic was confirmed on the test element of specified construction (according to definition in PN-EN 14600:2009):

    - In small scale fire resistance tests in accordance with PN-EN 1634-2:2009 or
    - In full scale fire resistance tests in accordance with PN-EN 1634-1:2009.

    Types of hardware elements shall be adjusted to weight of the door leaves and service loads. Using alternative hardware equipment must not result in changes being made to the doorset construction.

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General Requirements - "CS77 – FP" Glazed Screens

1. This approval relates to the use of the above Glazed Screens in providing fire resistance of 30 or 60 minutes integrity and insulation (dependent upon design limitations) as defined in BS 476: Part 22: 1987.

2. This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

3. The Glazed Screens are approved on the basis of:

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

4. The Glazed Screens comprise aluminium framed glazing sections which may or may not incorporate mullions and transoms.

5. The Glazed Screens shall be mechanically fixed to wall constructions having a fire resistance of at least the same period as the Glazed Screen and as per the manufacturer's instructions.

6. All maximum height, width and area dimensions, given in the various Tables, relate to the glass pane size (not sight line). Dimensions given are based upon test evidence and subsequent assessment.

7. Fire exposure may be from either face. Orientation may, however, be restricted by the requirements of an insulating glazed unit.

8. Insulating Glass Units may only be used where fire rating is required from the direction of the non-fire glass only. Insulating Glass Units may be used in all applications. Where interchangeability of the glass is allowed, this applies to IGU's also.

9. Each Table details which glass types may be used for each different application.

10. The sections of this Certificate of Approval relating to the "CS77 – FP Glazed Screens" must be read in conjunction with CERTIFIRE Technical Schedule 'TS25, Fire Resisting Glass, Glazing Systems and Glazing Materials'.

11. The use of infill panels is allowed. Details are given in the "Glazed Screens" section of this certificate of approval.

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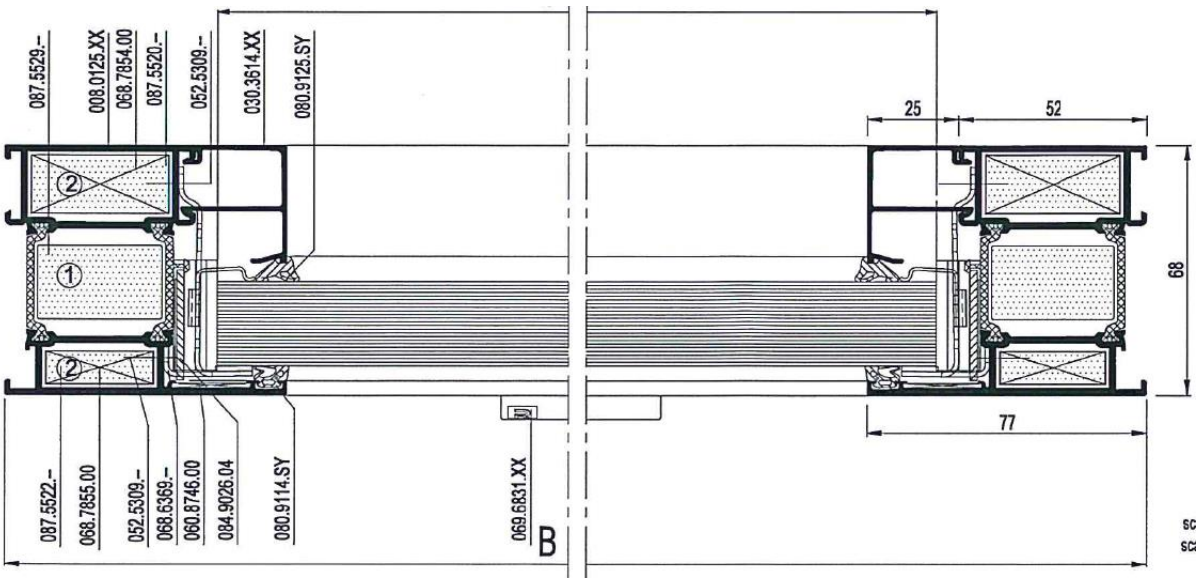
General Requirements - "CS77 – FP" Glazed Screens

12. Refer to manufacturer for fixing details.

13. The below diagram is a representative cross section of the "CS77 – FP" aluminium framing system for a single glazed screen. Please note this diagram shows all profiles filled with the insulating material (this would not be the case for 30 minute applications).



14. Glazed Screens may be constructed using a 'T-Bar' or 'Split Coupled Joint' method. Please see the data sheet for further details.

15. Please also refer to manufacturer's guidance and current catalogue for application specific details. Only those details, contained within the catalogue, that have direct test evidence, or are covered by the scope of this Certifire certification, are applicable.

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ALLIANCE DESIGNS SERVICES LTD

General Requirements - "CW50 – FP" Curtain Wall

1. This approval relates to the use of the above Curtain Wall in providing fire resistance of 30 or 60 minutes integrity and insulation (dependent upon design limitations) as defined in BS 476: Part 22: 1987.

2. This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

3. The Curtain Wall is approved on the basis of:

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

4. The Curtain Wall comprises aluminium framed glazing sections, including transoms and mullions, which build up to form a façade.

5. The Curtain Wall shall be mechanically tied back to the floors or suitably protected steel constructions at no greater than 3.9m intervals (as per the tested construction). The construction shall have a fire resistance of at least the same period as the Curtain Wall. The floor joint shall be sealed and closed as per manufacturer's instructions.

6. All maximum height, width and area dimensions relate to the glass pane size. Dimensions given are based upon test evidence and subsequent assessment.

7. Fire exposure may be from either face. Insulating Glass Units may be used where fire rating is required from either direction. Insulating Glass Units must always be used – no other glass types are permitted for use in the "CW50 – FP" Curtain Wall. Further details are given on page 27.

8. The sections of this Certificate of Approval relating to the "CW50 – FP Curtain Wall" must be read in conjunction with CERTIFIRE Technical Schedule 'TS25, Fire Resisting Glass, Glazing Systems and Glazing Materials'.

9. Refer to manufacturer for fixing details.

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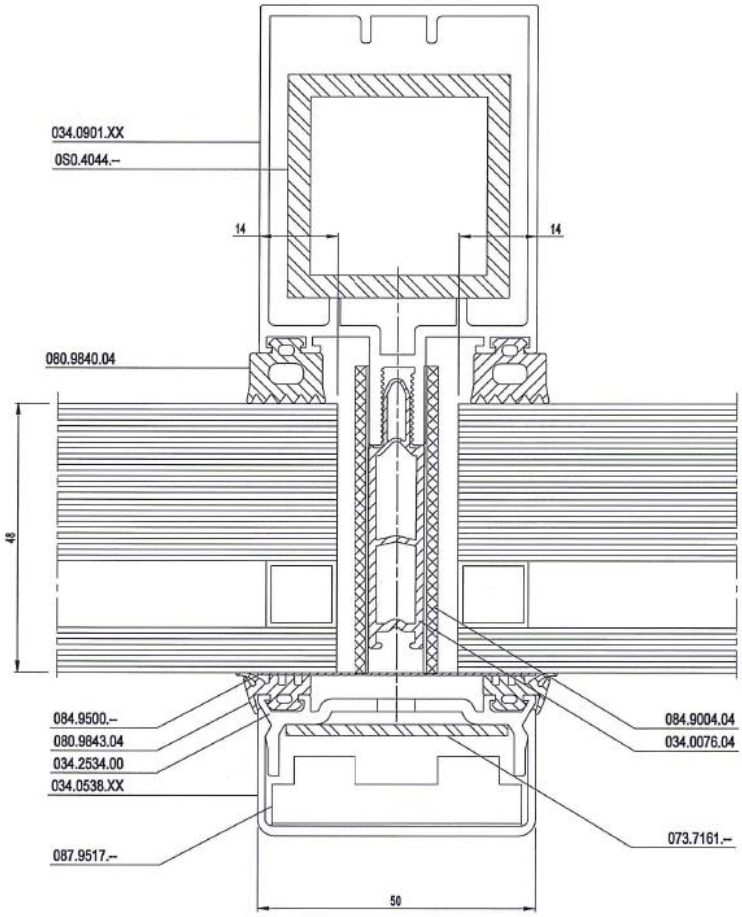
General Requirements - "CW50 – FP" Curtain Wall

10. The below diagrams are representative cross sections of the "CW50 – FP" aluminium framing system for curtain walling.



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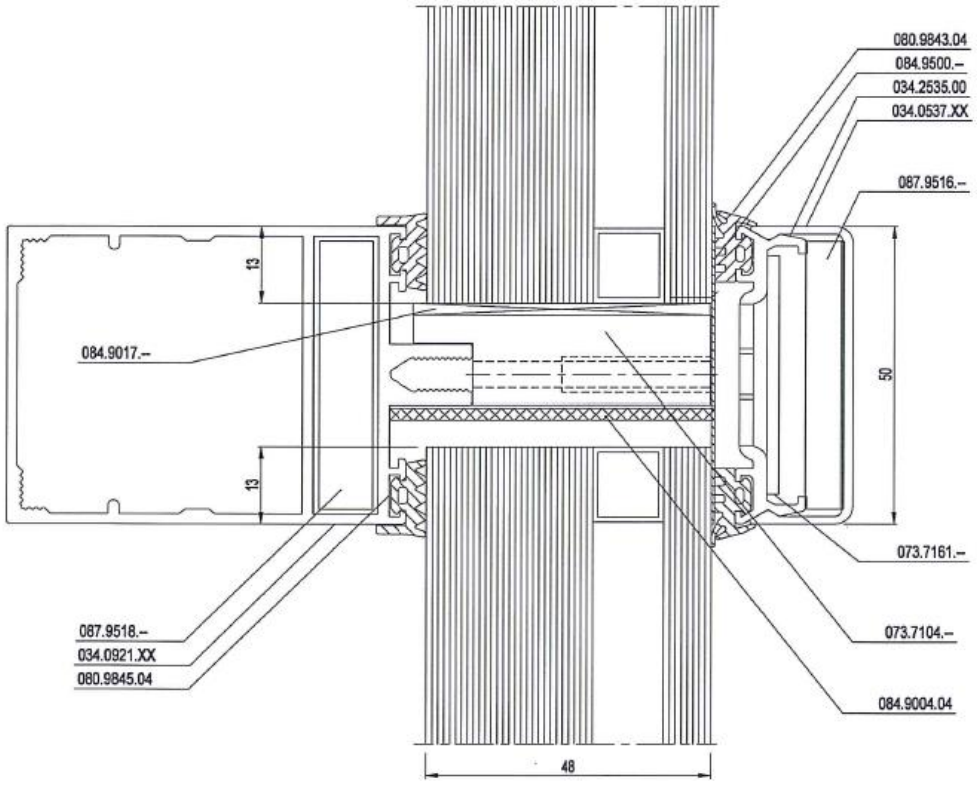
General Requirements - "CW50 – FP" Curtain Wall



11. Please also refer to manufacturer's guidance and current catalogue for application specific details. Only those details, contained within the catalogue, that have direct test evidence, or are covered by the scope of this Certifire certification, are applicable.

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Reynaers "CS77 – FP" single leaf doorset for 30 minutes integrity only

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm).
Note: Leaf dimensions refer to outer leaf dimensions.

Table 1 – Maximum Permitted Leaf Dimensions Pilkington Pyrostop 30-10 (15mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1444 (at 2300mm high)	2760 (at 1204mm wide)	3.32

Reynaers "CS77 – FP" single leaf doorset for 30 minutes integrity and 30 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm).
Note: Leaf dimensions refer to outer leaf dimensions.

Table 2 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1200 (at 2100mm high)	2520 (at 1000mm wide)	2.52

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Reynaers "CS77 – FP" single leaf doorset with side lights and / or fan lights for 30 minutes integrity only

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm).
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 3 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1344 (at 2268mm high)	2721 (at 1120mm wide)	3.05
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
774 (at 2279mm high)	2734 (at 645mm wide)	1.76
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2822 (at 530mm high)	636 (at 2352mm wide)	1.5

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Reynaers "CS77 – FP" single leaf doorset with one side light (either side) and / or a fan light for 30 minutes integrity and 30 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm).
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions. Only one side light may be used for this application.

Table 4 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1200 (at 2100mm high)	2520 (at 1000mm wide)	2.52
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1003 (at 1936mm high)	2323 (at 836mm wide)	1.94
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2263 (at 450mm high)	540 (at 1886mm wide)	1.02

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Reynaers "CS77 – FP" double leaf doorset for 30 minutes integrity and 30 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm).
Note: Leaf dimensions refer to outer leaf dimensions.

Table 5 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1402 (at 2300mm high)	2691 (at 1198mm wide)	3.22

Reynaers "CS77 – FP" double leaf doorset with side lights and / or fan lights for 30 minutes integrity and 30 minutes insulation (I_2 insulation criteria only)

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 6 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1166	2305	2.69
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
836	1936	1.62
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1886	450	0.85

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Reynaers "CS77 – FP" single leaf doorset for 60 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions.

Table 7 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1469 (at 2300mm high)	2599 (at 1300mm wide)	3.38
1375 (at 2300mm high)	2875 (at 1100mm wide)	3.16

Reynaers "CS77 – FP" single leaf doorset for 60 minutes integrity and 60 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 60-101 (23mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions.

Table 8 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1155 (at 2300mm height)	2415 (at 1100mm width)	2.66

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Reynaers "CS77 – FP" single leaf doorset with side lights and / or fan lights for 60 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 9 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1265 (at 2300mm height)	2645 (at 1100mm width)	2.91
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
751 (at 2274mm high)	2615 (at 653mm wide)	1.71
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2408 (at 250mm high)	288 (at 2094mm wide)	0.60

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Reynaers "CS77 – FP" single leaf doorset with side lights and / or fan lights for 60 minutes integrity and 60 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 60-101 (23mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 10 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1155 (at 2300mm height)	2415 (at 1100mm width)	2.66
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
686 (at 2274mm high)	2388 (at 653mm wide)	1.56
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2199 (at 250mm high)	263 (at 2094mm wide)	0.55

Reynaers "CS77 – FP" double leaf doorset for 60 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions.

Table 11 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1277 (at 2300 mm high)	2553 (at 1150 mm wide)	2.94

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Reynaers "CS77 – FP" double leaf doorset for 60 minutes integrity and 60 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 60-101 (23mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions.

Table 12 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1173 (at 2300 mm high)	2346 (at 1150 mm wide)	2.70

Reynaers "CS77 – FP" double leaf doorset with side lights and / or fan lights for 60 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 13 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1265 (at 2300 mm high)	2530 (at 1150 mm wide)	2.91
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
710 (at 2274 mm high)	2501 (at 645 mm wide)	1.61
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2587 (at 535 mm high)	589 (at 2352 mm wide)	1.39

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Reynaers "CS77 – FP" double leaf doorset with side lights and / or fan lights for 60 minutes integrity and 60 minutes insulation (I_2 insulation criteria only)

Note: The glass used in this construction must be Pilkington Pyrostop 60-101 (23mm) at the below dimensions.
Note: Leaf dimensions refer to outer leaf dimensions. Side Light / Fan Light dimensions refer to glass pane dimensions.

Table 14 – Maximum Permitted Leaf Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1150	2300	2.65
Maximum Permitted Side Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
645	2274	1.47
Maximum Permitted Fan Light Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
2352	535	1.26

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Reynaers "CS77 – FP" Glazed Screens for 30 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 30-10 (15mm) or AGC Pyrobel 16/16EG (17mm or 21mm) at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 15 – Maximum Permitted Glass Dimensions Pilkington Pyrostop 30-10 (15mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1740 (at 1902 mm high)	2378 (at 1392 mm wide)	3.31
Maximum Permitted Glass Dimensions AGC Pyrobel 16EG (17mm or 21mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1740 (at 1900 mm high)	2375 (at 1392 mm wide)	3.31

Reynaers "CS77 – FP" Glazed Screens for 30 minutes integrity and 30 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 30-10 (15mm) at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 16 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1740 (at 1902 mm high)	2378 (at 1392 mm wide)	3.31

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Reynaers "CS77 – FP" Glazed Screens for 60 minutes integrity only

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 17 – Maximum Permitted Glass Dimensions Pilkington Pyrostop 60-101 (23mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1533 (at 1901 mm high)	2091 (at 1394 mm wide)	2.91
Maximum Permitted Glass Dimensions AGC Pyrobel 60 (25mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
957 (at 1910 mm high)	2063 (at 886 mm wide)	1.83

Reynaers "CS77 – FP" Glazed Screens for 60 minutes integrity and 30 minutes insulation

Note: The glass used in this construction can be either Pilkington Pyrostop 60-101 (23mm) or AGC Pyrobel 60 (25mm) at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 18 – Maximum Permitted Glass Dimensions Pilkington Pyrostop 60-101 (23mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1533 (at 1901 mm high)	2091 (at 1394 mm wide)	2.91
Maximum Permitted Glass Dimensions AGC Pyrobel 60 (25mm)		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
957 (at 1910 mm high)	2063 (at 886 mm wide)	1.83

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Reynaers "CS77 – FP" Glazed Screens for 60 minutes integrity and 60 minutes insulation

Note: The glass used in this construction must be Pilkington Pyrostop 60-101 (23mm) at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 19 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1533 (at 1901 mm high)	2091 (at 1394 mm wide)	2.91

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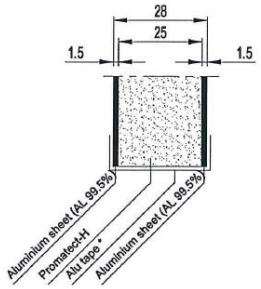
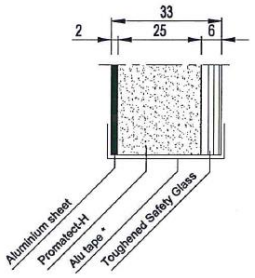
Use of infill panels in Reynaers "CS77 – FP" Glazed Screens – 30 minute applications

Promat



IQpanel (B)
IQpanel eclips type IQpr33



Promat	
Weight	30 kg/m²
Max approved glass dimension(b x h)	width ≤ 875 mm height ≤ 1912 mm area ≤ 1.68 m²
U-values	2.66 w/m²k
Application	Internal/External
Glue (optional)	

IQpanel eclips_type IQpr36	
Tested	2-Sided
Weight	43 kg/m²
Max approved glass dimension(b x h)	width ≤ 1395 mm height ≤ 906 mm area ≤ 1.27 m²
U-values	2.66 w/m²k
Application	Internal/External
Glue	Henkel hotmelt adhesive (full surface)

Note: Panel edges must have appropriate protection tape applied. Refer to manufacturers guidance.

Table 20 – Maximum Permitted "IQpanel – eclips type IQpr33" Dimensions		
30 minute integrity only application		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1744 (at 906 mm high)	1133 (at 1395 mm wide)	1.58

Table 21 – Maximum Permitted "Promat" Dimensions		
30 minute integrity only application		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1094 (at 1912 mm high)	2390 (at 875 mm wide)	2.09
30 minute integrity and insulation application		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1015 (at 1912 high)	2218 (at 875 mm wide)	1.94

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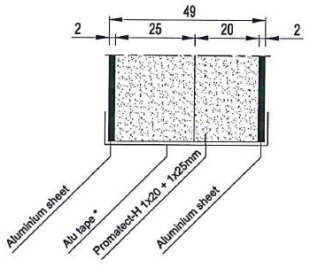
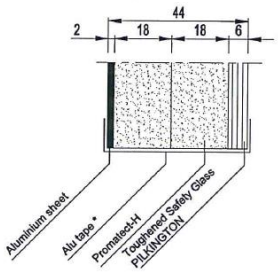
Promat



Promat	
Weight	50 kg/m²
Max approved glass dimension(b x h)	width ≤ 875 mm height ≤ 1914 mm area ≤ 1.68 m²
U-values	2.66 w/m²k
Application	Internal/External
Glue (optional)	

IQpanel (B)

IQpanel eclips type IQpr33



IQpanel eclips_type IQpr36	
Tested	2-Sided
Weight	52 kg/m²
Max approved glass dimension(b x h)	width ≤ 1395 mm height ≤ 908 mm area ≤ 1.27 m²
U-values	2.66 w/m²k
Application	Internal/External
Glue	Henkel hotmelt adhesive (full surface)

Note: Panel edges must have appropriate protection tape applied. Refer to manufacturers guidance.

Table 22 – Maximum Permitted "IQpanel – eclips type IQpr36" Dimensions			
	Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
60 minutes integrity only	1604 (at 908 mm high)	1044 (at 1395 mm wide)	1.46m^2
60 minutes integrity, 30 minutes insulation	1604 (at 908 mm high)	1044 (at 1395 mm wide)	1.46m^2
60 minutes integrity, 60 minutes insulation	1437 (at 908 mm high)	935 (at 1395 mm wide)	1.30m^2

Table 23 – Maximum Permitted "Promat" Dimensions			
	Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
60 minutes integrity only	945 (at 1914 mm high)	2067 (at 875 mm wide)	1.81m^2
60 minutes integrity, 30 minutes insulation	945 (at 1914 mm high)	2067 (at 875 mm wide)	1.81m^2
60 minutes integrity, 60 minutes insulation	Not permitted		

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Reynaers "CW50 – FP" Curtain Wall for 30 minutes integrity and 30 minutes insulation

Note: The glass used in this construction must be, as detailed below, at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 24 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1656 (at 2080 high)	2496 (at 1380 wide)	3.44m^2
2136 (at 1030 high)	1236 (at 1780 wide)	2.20m^2

Reynaers "CW50 – FP" Curtain Wall for 60 minutes integrity and 60 minutes insulation

Note: The glass used in this construction must be, as detailed below, at the below dimensions.
Note: Dimensions refer to glass pane dimensions.

Table 25 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1740 (at 3200 high)	3712 (at 1500 wide)	5.57m^2
2552 (at 1500 high)	1740 (at 2200 wide)	3.83m^2

Glass build up:

30 minutes: Insulating Glass Unit consisting of Pilkington Pyrostop (15mm thick), Spacer bar (10mm), 9mm float glass, Argon gas filled.

60 minutes: Insulating Glass Unit consisting of Contraflam 60-3 (27mm thick), Aluminium Spacer bar (12mm), Toughened Glass (6mm), Argon gas filled.

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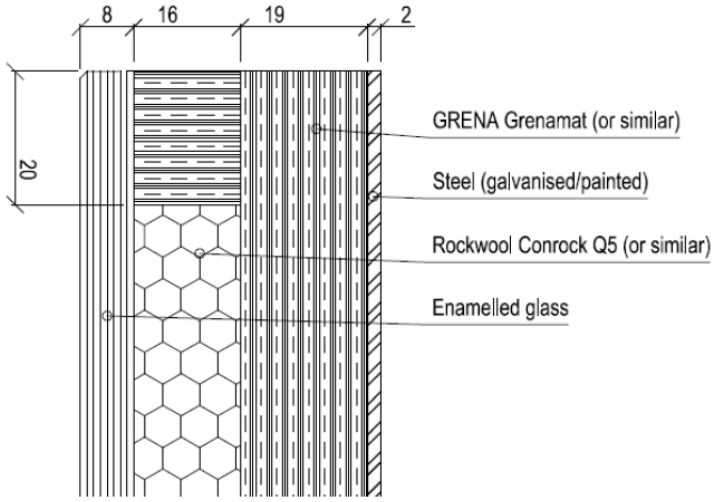
Use of infill panels in Reynaers "CW50 – FP" Curtain Walling – 30 minute and 60 minute applications



The above construction may be used in the "CW50 – FP" Curtain Walling for applications of up to 60 minutes integrity and 60 minutes insulation. The steel face, of the construction, must be oriented to the fire.

Table 26 – Maximum Permitted "GRENA" Panel Dimensions		
Max. Width (mm)	**Max. Height (mm)**	**Max. Area (m^2)**
1089	1687	1.84

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