

PRODUCT PASS

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1 GENERAL EXPLANATION

The performances indicated in this product pass can be used for a Declaration of Performance (DoP) in accordance with EU Regulation no. 305/2011. The characteristics are in accordance with the harmonized product standard EN 13830:2003 (Curtain walling - Product standard).

At least one performance of an essential characteristic shall be mentioned on the DoP. Non-essential characteristics are not legally required in any European country and thus not mandatory to declare. Where no performance is declared "NPD" (No Performance Declared) can be used.

The performances indicated can be achieved for the configuration and dimensions as tested and when the product is fabricated in accordance with the instructions of Reynaers (system catalogue). It is obviously allowed to declare lower performances; e.g. when resistance to wind load of 1600 Pa was tested, also 1200 Pa can be declared for the same configuration and dimensions.

Higher performances for smaller dimensions, lower performances for larger dimensions, or similar performances for larger dimensions but with the appropriate selection of profiles and/or reinforcements are possible. Validate your performances and deflections, adhering to the maximum admissible dimensions indicated in the system catalogue.

2 NOTIFIED BODIES

ID	Name	Address	Country
0074	CENTRE D'EXPERTISE DU BÂTIMENT ET DES TRAVAUX PUBLICS	Domaine De Saint-Paul – 102, Route de Limours 78471 Saint-Remy-Les-Chevreuse Cedex	France
0432	MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN	Auf den Thränen 2 59597 Erwitte	Germany
0679	CENTRE SCIENTIFIQUE ET TECHNIQUE DU BÂTIMENT	84, Avenue Jean Jaurès Champs-sur-Marne F-77447 Marne-la-Vallée Cedex 2	France
0744	SOCOTEC	Les Quadrants – 3, Avenue du Centre – Guyancourt 78182 St-Quentin en Yvelines	France
0749	BELGIAN CONSTRUCTION CERTIFICATION ASSOCIATION	Aarlenstraat 53 1040 Brussel	Belgium
0757	IFT ROSENHEIM	Theodor-Gietl-Strasse 7-9 83026 Rosenheim	Germany
0845	DANISH INSTITUTE OF FIRE AND SECURITY TECHNOLOGY	Jernholmen, 12 2650 Hvidovre	Denmark
0960	SKG-IKOB	Poppenbouwing 56 4191 NZ Geldermalsen	Netherlands
1136	BELGIAN BUILDING RESEARCH INSITUTE	Lombardstraat 42 1000 Brussel	Belgium
1234	EFECTIS NEDERLAND	Brandpuntlaan Zuid 16, Postbus 554 2665 ZN Bleiswijk	Netherlands
1288	WINTECH ENGINEERING LIMITED	Halesfield 2 Telford,Shropshire TF7 4QH	United Kingdom
1309	PRÜFINSTITUT SCHLÖSSER UND BESCHLÄGE, VELBERT	Wallstrasse 41 42551 Velbert	Germany
1488	INSTYTUT TECHNIKI BUDOWLANEJ	ul. Filtrowa 1 00-611 Warszawa	Poland
1671	PEUTZ	Lindenlaan 41, Molenhoek PO Box 66 6585 ZH MOOK	Netherlands
1749	TNO DEFENCE, SECURITY AND SAFETY	Lange Kleiweg 137, Postbus 45 2280 AA Riiswiik	Netherlands
1769	UNIVERSITY OF GENT	Sint-Pietersnieuwstraat 41 9000 Gent	Belgium
2211	INSTITUTO DE INVESTIGAÇÃO E DESENVOLVIMENTO TECNOLÓGICO PARA A CONSTRUÇÃO, ENERGIA, AMBIENTE E SUSTENTABILIDADE	Rua Pedro Hispano Pólo II da Universidade de Coimbra 3030-289 Coimbra	Portugal



3 EXPLANATIONS AND SYMBOLS

H: Element Height B: Element Width Fh: Vent Height Fb: Vent Width npd: No Performance Declared CWFT: Classification Without Further Testing

⁽¹⁾ Indicated wind load = design load

(2) For multi level solution

⁽³⁾ Other dimensions and deformations to be calculated in function of the wind load (fmax< L/200, max 15 mm)

⁽⁴⁾ Impact resistance was only tested with screw connection between transom and mullion -> Also connections with additional T-connectors are approved

⁽⁵⁾ Composition of the spandrel part: see test report



4 PERFORMANCE

4.1 Classifications for CW50

		Characteristic	Performance		Notified body - Report		Tested size [mm]	
			Essen	Essential characteristics				
	4.1	Resistance to wind load	2000 Pa 2000 Pa	(1) (1)	[0 [096]	960] – 06.174 0] – 15.00669 ⁽²⁾	See report ⁽³⁾	
	4.2	Dead load	See system of	catalogu	e for more detailed info about maximum weights for ea type of glass support.			
	4.3	Impact resistance	I5 / E5		[113	6] – CAR 5010/1	1500x1200 ⁽⁴⁾	
	4.4	Air permeability	A4 (600 P AE750 (750 AE1200 (120	a) IPa) 0 Pa)	0] [096] [0	960] – 06.174 0] – 15.00669 ⁽²⁾ 960] – 09.149	See report	
	4.5	Watertightness	RE950 (950 RE1050 (105 RE1200 (120	Pa) 0 Pa) 0 Pa)	[0 [0 [096]	960] – 06.174 960] – 09.149 0] - 15.00669 ⁽²⁾	See report	
0:2003	4.6	Airborne sound insulation	Glass 34 (-1;-4) 40 (-2;-7) 48 (-2;-8) 48 (-2;-8) + spandrel ⁽⁵⁾	Curtair 34 (42 (47 (55 (n walling -1;-4) -2;-6) -2;-5) -2;-7)	[1488] – LA/1365a/0 [1488] – LA/1365b/0 [1488] – LA/1365b/0 [1488] – LA/1365c/0 [1488] – LA/1365d/0	6 6 6	
EN 1383(4.7	Thermal transmittance	Ucw to be ca the different the profiles ar	lculated profiles e calcula	according are availat ated under	to EN ISO 12631 (see ble in separate U-value certification of BCCA: 10077/2.	e also 6). The U-values of e tables. The U-values of certificate BPCB-420-72-	
	4.8	Resistance to fire				npd		
	4.9	Reaction to fire	Anodized: Painted: / Gaskets:	A1 \2 E	EC de certificat [0432	ecision 96/603/EC te EFR-21-001664A 2] – 230006500-6		
	4.10	Fire propagation	EI60		[1488] –	- 02142/17/Z00NZP	See report	
	4.15	Thermal shock resistance	When req	uested, ap	glass with propriate	thermal shock resistant standards has to be ch	nce conforming to the nosen.	
	4.17	Resistance to live horizontal loads	When reque calculated	ested, de accordir	eclare the v ng to nation conn	value in kN at sill heigh nal specifications. The ection are given in 5.	nt. The loads have to be allowable loads per T-	
			Non-ess	ential c	haracteris	tics		
	4.13	Equipotentiality	All metal pa catalogue and to l	All metal parts have to be conductively connected (see also examples in the catalogue and guidelines in Annex A of EN 13830). The electrical resistance has to be measured in accordance with Annex A of EN 13830.				



4.2 Classifications for CW50 with flat pressure plate 034.0551.XX

		Characteristic	Performan	ice	Notified body - Report		Tested size [mm]		
			Essen	Essential characteristics					
	4.1	Resistance to wind load	1200 Pa	(1)	[09	60] – 13.00949	See report ⁽³⁾		
	4.2	Dead load	See system of	catalogu	e for more typ	e detailed info about m be of glass support.	aximum weights for each		
	4.3	Impact resistance	E5		[1136] – CAR 5010/1		1500x1200 ⁽⁴⁾		
	4.4	Air permeability	A4 (600 P	a)	[09	60] – 13.00949	See report		
	4.5	Watertightness	R5 (300 P	a)	[09	60] – 13.00949	See report		
):2003	4.6	Airborne sound insulation	Glass 34 (-1;-4) 40 (-2;-7) 48 (-2;-8) 48 (-2;-8) + spandrel ⁽⁵⁾	Glass Curtain 34 (-1;-4) 34 (-1 40 (-2;-7) 42 (-2 48 (-2;-8) 47 (-2 48 (-2;-8) + 55 (-2 spandrel ⁽⁵⁾ 5		[1488] – LA/1365a/0 [1488] – LA/1365b/0 [1488] – LA/1365b/0 [1488] – LA/1365d/0	06 06 06		
EN 13830	4.7	Thermal transmittance	Ucw to be cal the different the profiles an	to be calculated according to EN ISO 12631 (see also 6). The U-values of different profiles are available in separate U-value tables. The U-values of ofiles are calculated under certification of BCCA: certificate BPCB-420-72- 10077/2.					
	4.8	Resistance to fire				npd			
	4.9	Reaction to fire	Anodized: Painted: A Gaskets:	A1 A2 E	EC de certificat [0432	ecision 96/603/EC te EFR-21-001664A 2] – 230006500-6			
	4.10	Fire propagation				npd			
	4.15	Thermal shock resistance	When req	uested, ap	glass with	thermal shock resista standards has to be ch	nce conforming to the nosen.		
	4.17	Resistance to live horizontal loads	When requested, declare the value in kN at sill height. The loads have to be calculated according to national specifications. The allowable loads per T-connection are given in 5.						
			Non-ess	ential c	haracteris	stics			
	4.13	Equipotentiality	All metal pa catalogue and to l	rts have guidelir be meas	to be connes in Anne sured in ac	ductively connected (s ex A of EN 13830). Th cordance with Annex /	ee also examples in the e electrical resistance has A of EN 13830.		



4.3 Classifications for CW50-HI

		Characteristic	Performance		Notified b	oody - Report	Tested size [mm]	
			Essential	cha	racteristics			
	4.1	Resistance to wind load	2000 Pa ⁽¹⁾ 2400 Pa ⁽¹⁾		[0960] - [1488] – LK03	- 15.00669 ⁽²⁾ -00948/15/R86NK	See report ⁽³⁾	
	4.2	Dead load	See system cata	logu	e for more det type of	e for more detailed info about maximum weights for each type of glass support.		
	4.3	Impact resistance	I5 / E5		[1136] – CAR 5010/1		1500x1200 ⁽⁴⁾	
	4.4	Air permeability	AE750 (750Pa) AE1950 (1950Pa)		[0960] – 15.00669 ⁽²⁾ [1488] – LK03-00948/15/R86NK		See report	
	4.5	Watertightness	RE1200 (1200 Pa RE1950 (1950 Pa	a) a)	– [0960] [1488] – LK03	- 15.00669 ⁽²⁾ -00948/15/R86NK	See report	
2003	4.6	Airborne sound insulation	Glass Cu 34 (-1;-4) 40 (-2;-7) 48 (-2;-8) Spandrel ⁽⁵⁾		ırtain walling 34 (-1;-4) 42 (-2;-6) 47 (-2;-5) 54 (-2;-7)	[1488] – LA/136 [1488] – LA/136 [1488] – LA/136 [1488] – LA/136	55i/2006 + LA/1365a/2006 55j/2006 + LA/1365b/2006 5k/2006 + LA/1365c/2006 55l/2006 + LA/1365d/2006	
EN 13830:2	4.7	Thermal transmittance	Ucw to be calculated according to EN ISO 12631 (see also 6). The U-values of the different profiles are available in separate U-value tables. The U-values of the profiles are calculated under certification of BCCA: certificate BPCB-420-7 10077/2.			e also 6). The U-values of e tables. The U-values of c certificate BPCB-420-72-		
_	4.8	Resistance to fire				npd		
	4.9	Reaction to fire	Anodized: A1 Painted: A2 Gaskets: E		EC decisi certificate E [0432] – 2	on 96/603/EC FR-21-001664A 230006500-6		
	4.10	Fire propagation	EI60		[1488] – 02	142/17/Z00NZP	See report	
	4.15	Thermal shock resistance	When reques	ted, ap	glass with the propriate stan	rmal shock resista dards has to be ch	nce conforming to the nosen.	
	4.17	Resistance to live horizontal loads	When requested calculated acco	d, de ordir	eclare the valu ng to national s connectio	e in kN at sill heig specifications. The on are given in 5.	ht. The loads have to be allowable loads per T-	
			Non-essenti	al cl	haracteristics	•		
	4.13	Equipotentiality	All metal parts h catalogue and gui to be m	nave delir neas	to be conduct thes in Annex A sured in accord	ively connected (s of EN 13830). Th dance with Annex	ee also examples in the le electrical resistance has A of EN 13830.	

 $^{\left(7\right)}$ Result based on combination of tests on old version of CW50-HI and test of CW50



4.4 Classifications for CW50-TT

		Characteristic	Performance		Notified body - Report		Tested size [mm]
			Essen	tial cha	racteristic	cs	
	4.1	Resistance to wind load	2000 Pa	(1)	[09	60] – 15.00422	See report ⁽³⁾
	4.2	Dead load	See system	catalogu	e for more typ	e detailed info about m be of glass support.	aximum weights for each
	4.3	Impact resistance	I5 / E5		[0960] – 15.00678		735x1200
	4.4	Air permeability	AE1200 (120	0 Pa)	[09	60] – 15.00422	See report
	4.5	Watertightness	RE1200 (120	0 Pa)	[09	60] – 15.00422	See report
0:2003	4.6	Airborne sound insulation	Glass Curtain 34 (-1;-4) 34 (-1 40 (-2;-7) 42 (-2 48 (-2;-8) 47 (-2 48 (-2;-8) + 55 (-2 spandrel ⁽⁵⁾ 57 (-2		-1;-4) [1488] - LA/1365a/0 -2;-6) [1488] - LA/1365b/0 -2;-5) [1488] - LA/1365b/0 -2;-7) [1488] - LA/1365c/0 -2;-7) [1488] - LA/1365d/0		06 06 06
EN 13830	4.7	Thermal transmittance	Ucw to be calculated according to EN ISO 12631 (see also 6). The U-values of the different profiles are available in separate U-value tables. The U-values of the profiles are calculated under certification of BCCA: certificate BPCB-420-72 10077/2.				
	4.8	Resistance to fire				npd	
	4.9	Reaction to fire	Anodized: Painted: A Gaskets:	A1 \2 E	EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6		
	4.10	Fire propagation	E160		[1488] -	- 02142/17/Z00NZP	See report
	4.15	Thermal shock resistance	When req	juested, ap	glass with propriate	thermal shock resista standards has to be ch	nce conforming to the nosen.
	4.17	Resistance to live horizontal loads	When requested, declare the value in kN at sill height. The loads have to be calculated according to national specifications. The allowable loads per T-connection are given in 5.				
			Non-ess	ential c	haracteris	stics	
	4.13	Equipotentiality	All metal pa catalogue and to	rts have I guidelir be meas	to be con nes in Ann sured in ac	ductively connected (s ex A of EN 13830). Th cordance with Annex A	ee also examples in the e electrical resistance has A of EN 13830.



4.5 Classifications for CW50-HL

	Characteristic		Performance		Notifi	ied body - Report	Tested size [mm]	
		-	Essen	tial cha	racteristi	cs		
	4.1	Resistance to wind load	1200 Pa	(1)	[C	960] – 07.190	See report ⁽³⁾	
	4.2	Dead load	See system	catalogu	e for more detailed info about maximum weights for each type of glass support.			
	4.3	Impact resistance	I5 / E5		[113	6] – CAR 5010/1	1500x1200 ⁽⁴⁾	
	4.4	Air permeability	A4 (600 Pa)		[0960] — 07.190		See report	
	4.5	Watertightness	R7 (600 P	'a)	[C	9960] – 07.190	See report	
2003	4.6	Airborne sound insulation	Glass 34 (-1;-4) 40 (-2;-7) 48 (-2;-8) Spandrel (5)	Curtaii 33 (41 (43 (54 (n walling (-1;-4) (-2;-5) (-1;-4) (-2;-7)	[1488] – LA/1365e/0 [1488] – LA/1365f/0 [1488] – LA/1365g/0 [1488] – LA/1365g/0 [1488] – LA/1365h/0	06 6 06 06	
EN 13830:2	4.7	Thermal transmittance	Ucw to be calculated according to EN ISO 12631 (the different profiles are available in separate U-va the profiles are calculated under certification of BCC 10077/2			to EN ISO 12631 (see ble in separate U-value r certification of BCCA: 10077/2.	e also 6). The U-values of e tables. The U-values of certificate BPCB-420-72-	
_	4.8	Resistance to fire				npd		
	4.9	Reaction to fire	Anodized: Painted: A Gaskets:	A1 \2 E	EC de certifica [043:	ecision 96/603/EC ite EFR-21-001664A 2] – 230006500-6		
	4.10	Fire propagation	E160		[1488] -	- 02142/17/Z00NZP	See report	
	4.15	Thermal shock resistance	When rec	juested, ap	glass with propriate	n thermal shock resista standards has to be ch	nce conforming to the nosen.	
	4.17	Resistance to live horizontal loads	When requested, declare the value in kN at sill height. The loads have to be calculated according to national specifications. The allowable loads per T- connection are given in 5.					
			Non-ess	ential c	haracteris	stics		
	4.13	Equipotentiality	All metal pa catalogue and to	rts have I guidelir be meas	to be con nes in Ann sured in ac	ductively connected (s lex A of EN 13830). Th ccordance with Annex A	ee also examples in the e electrical resistance has A of EN 13830.	



4.6 Classifications for CW50-SC (clamping profiles)

		Characteristic	Performance		Notified body - Report		Tested size [mm]
			Essen	Essential characteristics			
	4.1	Resistance to wind load	1600 Pa 2000 Pa 2400 Pa	(1) (1) (1)	[0960] – 06.135 ⁽⁶⁾ [1136] – CAR 5010/2 ⁽⁷⁾ [1488] – LZE00- 00948/17/R136NZE		See report ⁽³⁾
	4.2	Dead load	See system	catalogu	e for more detailed info about maximum weights for each type of glass support.		
	4.3	Impact resistance	I5 / E5		[0960] – 06.136		1525x1225 ⁽⁴⁾
	4.4	Air permeability	A4 (600 F A4 (600 F AE1200 (120	'a) 'a) 0 Pa)	[09 [1136 [1- 009-	60] – 06.135 ⁽⁶⁾] – CAR 5010/2 ⁽⁷⁾ 488] – LZE00- 48/17/R136NZE	See report
EN 13830:2003	4.5	Watertightness	RE1050 (1050 Pa) RE1200 (1200 Pa) RE1200 (1200 Pa)		[0960] – 06.135 ⁽⁶⁾ [1136] – CAR 5010/2 ⁽⁷⁾ [1488] – LZE00- 00948/17/R136NZE		See report
	4.6	Airborne sound insulation	Glass Curtair 32 (-1;-5) 34 (40 (-2;-7) 42 (45 (-3;-8) 47 (Spandrel (5) 56 (n walling (-1;-3) [1488] – LA/1220a/((-1;-5) [1488] – LA/1220b/((-2;-6) [1488] – LA/1220c/((-1;-5) [1488] – LA/1220d/()5)5)5)5
	4.7	Thermal transmittance	Ucw to be calculated according to EN I the different profiles are available in se the profiles are calculated under certific 100			to EN ISO 12631 (see ole in separate U-value certification of BCCA: 10077/2.	e also 6). The U-values of e tables. The U-values of certificate BPCB-420-72-
	4.8	Resistance to fire				npd	
	4.9	Reaction to fire	Anodized: Painted: Gaskets:	A1 \2 E	EC de certifica [0432	ecision 96/603/EC te EFR-21-001664A 2] – 230006500-6	
	4.10	Fire propagation	EI60		[1488] –	00948/20/R169NZP	See report
	4.15	Thermal shock resistance	When rec	juested, ap	glass with propriate	thermal shock resista standards has to be ch	nce conforming to the nosen.
	4.17	Resistance to live horizontal loads	When reque calculated	ested, de accordir	eclare the ng to natio conn	value in kN at sill heigh nal specifications. The ection are given in 5.	nt. The loads have to be allowable loads per T-
			Non-ess	ential c	haracteris	stics	
	4.13	Equipotentiality	All metal pa catalogue and to	rts have I guidelir be meas	to be con nes in Ann sured in ac	ductively connected (s ex A of EN 13830). Th cordance with Annex /	ee also examples in the e electrical resistance has A of EN 13830.

 $^{\rm (6)}$ With 080.9850.04 and glass edge with silicone

(7) With 034.0100.17



4.7 Classifications for CW50-SC (butterfly)

	Characteristic		Performance		Notified body - Report		Tested size [mm]	
			Esser	Essential characteristics				
	4.1	Resistance to wind load	2000 Pa	(1)	[00	1488] – LK01- 948/15/R94NK	See report ⁽³⁾	
	4.2	Dead load	See system	catalogu	e for more detailed info about maximum weights for each type of glass support.			
	4.3	Impact resistance			npd			
	4.4	Air permeability	AE1200 (1200 Pa)		[00	1488] – LK01- 948/15/R94NK	See report	
	4.5	Watertightness	RE1200 (1200 Pa) [1488] – LK01- 00948/15/R94NK		See report			
2003	4.6	Airborne sound insulation	Glass 32 (-1;-5) 40 (-2;-7) 45 (-3;-8) Spandrel (5)	Glass Curtain 32 (-1;-5) 34 (40 (-2;-7) 42 (45 (-3;-8) 47 (spandrel (5) 56 ([1488] – LA/1220a/0 [1488] – LA/1220b/0 [1488] – LA/1220b/0 [1488] – LA/1220c/0 [1488] – LA/1220d/0)5)5)5)5	
EN 13830:	4.7	Thermal transmittance	Ucw to be calculated according to EN ISO 12631 (see also 6). The U-values of the different profiles are available in separate U-value tables. The U-values of the profiles are calculated under certification of BCCA: certificate BPCB-420-72 10077/2.				e also 6). The U-values of e tables. The U-values of c certificate BPCB-420-72-	
_	4.8	Resistance to fire				npd		
	4.9	Reaction to fire	Anodized: Painted: Gaskets:	A1 A2 E	EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6			
	4.10	Fire propagation	EI60		[1488] –	00948/20/R169NZP	See report	
	4.15	Thermal shock resistance	When rec	juested, ap	glass with propriate	n thermal shock resista standards has to be ch	nce conforming to the nosen.	
	4.17 Resistance to live horizontal loads When requested, declare the value in kN at sill height. The calculated according to national specifications. The allow connection are given in 5.				nt. The loads have to be allowable loads per T-			
			Non-ess	ential c	haracteris	stics		
	4.13	Equipotentiality	All metal pa catalogue and to	All metal parts have to be conductively connected (see also examples in the catalogue and guidelines in Annex A of EN 13830). The electrical resistance has to be measured in accordance with Annex A of EN 13830.				



4.8 Classifications for CW50-SG

		Characteristic	Performance		Notified body - Report		Tested size [mm]		
			Essen	tial cha	racteristics				
	4.1	Resistance to wind load	2000 Pa	(1)	[113	6] – CAR 5010/3	See report ⁽³⁾		
	4.2	Dead load	See system	See system catalogue for more detailed info about maximum weights for each type of glass support.					
	4.3	Impact resistance			npd				
	4.4	Air permeability	A4 (600 Pa)		[1136] – CAR 5010/3		See report		
	4.5	Watertightness	RE1200 (120	00Pa)	[113	6] – CAR 5010/3	See report		
003	4.6	Airborne sound insulation	Glass 33 (-1;-4) 40 (-2;-7) 43 (-2;-6) Spandrel ⁽⁵⁾	Curtai 33 (41 (45 (60 (n walling (-1;-3) (-2;-6) (-2;-6) (-2;-6)	[1488] – LA/1220e/([1488] – LA/1220f/([1488] – LA/1220g/([1488] – LA/1220g/([1488] – LA/1220h/()5 5 5 5		
EN 13830:2	4.7	Thermal transmittance	e e e e e e e e e e e e e e				e also 6). The U-values of e tables. The U-values of certificate BPCB-420-72-		
-	4.8	Resistance to fire				npd			
	4.9	Reaction to fire	Anodized: Painted: A Gaskets:	A1 \2 E	EC de certifica [0432	ecision 96/603/EC te EFR-21-001664A 2] – 230006500-6			
	4.10	Fire propagation	El60		[1488] —	00948/20/R169NZP	See report		
	4.15	Thermal shock resistance	When rec	juested, ap	glass with propriate	thermal shock resista standards has to be ch	nce conforming to the nosen.		
	4.17	Resistance to live horizontal loads	When requested, declare the value in kN at sill height. The loads have to be calculated according to national specifications. The allowable loads per T-connection are given in 5.						
			Non-ess	ential c	haracteris	stics			
	4.13	Equipotentiality	All metal pa catalogue and to	rts have I guidelir be meas	to be con nes in Ann sured in ac	ductively connected (s ex A of EN 13830). Th cordance with Annex	ee also examples in the e electrical resistance has A of EN 13830.		



4.9 Classifications for CW50-FP El30/El60

		Characteristic	Performanc	e	Notified body - Report		Tested size [mm]
			Essen	tial cł	naracteristi	cs	
	4.1	Resistance to wind load	1200 Pa ⁽¹⁾)	[0960] – 08.171	See report (3)
	4.2	Dead load	See system o	catalog	gue for more typ	num weights for each	
	4.3	Impact resistance	I5/E5		[0	960] – 23.01024	735x600 ⁽⁴⁾
	4.4	Air permeability	A4 (600 Pa) [0960] – 08.171		See report		
	4.5	Watertightness	R7 (600 Pa	ı)	[0960] – 08.171	See report
:2003	4.6	Airborne sound insulation	Glass Curta 34 (-1;-4) 34 40 (-2;-7) 42 48 (-2;-8) 47 48 (-2;-8) 47 55 55		ain walling 4 (-1;-4) 2 (-2;-6) 7 (-2;-5) 5 (-2;-7)	[1488] – LA/1365a/06 [1488] – LA/1365b/06 [1488] – LA/1365c/06 [1488] – LA/1365d/06	
EN 13830	4.7	Thermal transmittance	Ucw to be cal the different the profiles are	lculate profile e calc	ed according s are availa ulated under	to EN ISO 12631 (see als ble in separate U-value tab r certification of BCCA: cer 10077/2.	o 6). The U-values of bles. The U-values of tificate BPCB-420-72-
	4.8	Resistance to fire	EI30 EI60		[1812] – EFR-20-004109 Rev 1 [1812] – EFR-20-003155 Rev 2		See report
	4.9	Reaction to fire	Anodized: A Painted: A Gaskets: E	\1 2 E	EC decision 96/603/EC certificate EFR-21-001664A [0432] – 230006500-6		
	4.10	Fire propagation	EI30 EI60		[1812] – E [1812] – E	FR-20-004109 Rev 1 FR-20-003155 Rev 2	See report
	4.15	Thermal shock resistance	When req	ueste	d, glass with appropriate	thermal shock resistance standards has to be chose	conforming to the
	4.17	Resistance to live horizontal loads	When requested, declare the value in kN at sill height. The loads have to be calculated according to national specifications. The allowable loads per T-connection are given in 5.				
			Non-ess	ential	characteris	stics	
	4.13	Equipotentiality	All metal pa catalogue and to b	All metal parts have to be conductively connected (see also examples in the catalogue and guidelines in Annex A of EN 13830). The electrical resistance has to be measured in accordance with Annex A of EN 13830.			



5 RESISTANCE TO HORIZONTAL LOADS

The maximum loads on each T-connection can be derived from following table which summarises the results from test report R-44-05-2 of PSP.

The result is each time for 1 connection.

Type of connection	Force direction	Xk/γM (kN)
1. Standard transom/mullion connection	Dead load	0.88
	Wind suction	3.02
	Wind pressure	3.45
	Combined ⁽¹⁾	2.53
2. Connection with 021.0283 or 073.7000	Dead load	2.07
	Wind suction	2.93
	Wind pressure	4.46
	Combined ⁽¹⁾	2.59
3. Connection with 073.7318 ~ 073.7324	Dead load	1.60
	Wind suction	2.28
	Wind pressure	5.00
	Combined ⁽¹⁾	1.59

⁽¹⁾ The force indicated in the table is the maximum force wind suction in combination with the maximum dead load as indicated in the table





6 THERMAL TRANSMITTANCE

The U-value of the complete curtain wall should be calculated according to EN ISO 12631.

The thermal transmittance Ucw of a typical curtain wall module should be declared, using the U value for the correct profile section (provided by Reynaers) and the Ug or Up value for the used glazing or panel.

For standard curtain walls, Ucw can be calculated with following formula following the component assessment method from EN ISO 12631 with following formula:

$$\mathsf{U}_{\mathsf{cw}} = \frac{\sum A_g U_g + \sum A_p U_p + \sum A_f U_f + \sum A_m U_m + \sum A_t U_t + \sum l_{f,g} \psi_{f,g} + \sum l_{m,g} \psi_{m,g} + \sum l_{t,g} \psi_{t,g} + \sum l_p \psi_p + \sum l_{m,f} \psi_{m,f} + \sum l_{t,f} \psi_{t,f}}{A_{\mathsf{cw}}}$$

Where

U _g , U _p	= thermal transmittances of glazing and panels;
U_f , U_m , U_t	= thermal transmittances of frames, mullions and transoms;
$\Psi_{\text{f},\text{g}}$, $\Psi_{\text{m},\text{g}}$, $\Psi_{\text{t},\text{g}}$, Ψ_{p} transom;	= linear thermal transmittances due to the combined thermal effects of glazing unit or panel and frame or mullion or
$\Psi_{m,f}$, $\Psi_{t,f}$	= linear thermal transmittances due to the combined thermal effects of frame, mullion and frame-transom

Uf , Um , Ut can be derived from the U-value tables which were made up under certification of BCCA.

The Ψ-value can be calculated using the exact geometries of the connections or glass spacer or can be chosen from tables in Annex B from EN ISO 12631.

The area of the curtain walling can be calculated with formula:

 $A_{CW} = A_g + A_p + A_f + A_m + A_t$

Where

 A_{CW} = area of curtain walling;

- A_g = total area of glazing;
- A_p = total area of panels;
- A_f = total area of frame;
- A_m = total area of mullions;

 A_t = total area of transoms.

For structural clamped and structural glazing systems, the single assessment method is used. The U-value of the curtain wall can then be calculated with following formula:

$$U_{\rm cw} = \frac{\Sigma A_g U_g + \Sigma A_p U_p + \Sigma A_{TJ} U_{TJ}}{\Sigma A_g + \Sigma A_p + \Sigma A_{TJ}} \quad [{\rm W/m^2K}]$$





Where

- A = Area $[m^2]$
- U = U-value (thermal transmittance) [W/m²K]
- g = Glazing
- p = Panel
- TJ = Thermal Joint

In the U-value of the profile section (UTJ = U-value of thermal joint), the edge effect of the glass is already included and thus this must not be taken into account again.



UPDATES

09/03/2023

	VARIANTS	Characteristic
npd	4.9	4.3
EFR-20-003155 rev1	4.9	4.8 + 4.10
EFR-21-001664A	4.1 ~4.9	4.9

13/11/2023

	VARIANTS	Characteristic
Text revision	GENERAL EXPLANATION	
Tested size [mm]	4.1 – 4.9	
23.01024	4.9	4.3

23/04/2024

	VARIANTS	Characteristic
EFR-20-003155 Rev 2	4.9	4.8 + 4.10
EFR-20-004109 Rev 1	4.9	4.8 + 4.10