Certificate of Constancy of performance
0432-CPR-900087-01

Version 01

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

„EuroLam-Lamellen-NRWG"

[Natural smoke and heat exhaust ventilator
(NSHV wall mounted – particular conditions applicable to the use of the product according to the technical specification see enclosures to this EC-Certificate of Conformity)]

produced by or for

Eurolam GmbH
Kupferstraße 1
D-99510 Wiegendorf

and produced in the manufacturing plant(s)

Eurolam GmbH
Kupferstraße 1
D-99510 Wiegendorf

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in annex ZA of the standard

EN 12101-2: 2003

under **system 1** are applied and that

the product fulfils all the prescribed requirements set out above.

This certificate was first issued on 2014-04-17 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly, or latest on 2019-04-18.

Dortmund, 2014-04-17

Materialprüfungsamt MPA NRW 15 Nordrhein-Westfalen

Tanja Friedrich
Head of Certification Body

This Certificate consists of 1 page and 2 annexes.

This Certificate replaces the EC Certificate of Conformity

no. 0432 – CPD – 210004788 dated 2013-06-20.

DAkkS Deutsche Akkreditierungsstelle D-ZE-11142-01-01

The original of this document was issued in German language. In case of doubt only the German version is valid.

Essential characteristics (Part I)

Harmonised technical specification: EN 12101-2:2003					
Essential characteristics		**Section**	**Performance** [1]	**Certificate of performance**	**Noti-fied Body**
Nominal activation conditions / Sensitivity					
Initiation device:	thermal-electrical, optic-electrical thermal	4.1	pass	EN12259-1 EN 54-7 210005888-WB-KB	0432
Opening mechanism:	electrical pneumatic	4.2	pass	210005888-WB-KB	
Effectiveness of smoke/hot gas extraction – aerodynamic free area		6	A_a-Values [1]	1368-CPD-P-297/2006-B 1368-CPD-P-066/2009-B 1368-CPD-P-067/2009-B 1368-CPD-P-068/2009-B 1368-CPD-P-204/2010-B 1368-CPD-P-205/2010-B 1368-CPD-P-143/2012-B 1368-CPD-P-166/2012-B	1368
Response delay (≤ 60 s) (Opening time)		7.1.2	pass	See Certificate of performace according to Section 7.1 to 7.5	
Reliability					
Operational reliability		7.1	Re 1000 (Type B)	1368-CPD-P-298/2006-C 1368-CPD-P-390/2006-C 1368-CPD-P-069/2009-C 1368-CPD-P-070/2009-C 1368-CPD-P-071/2009-C 1368-CPD-P-099/2009-C 1368-CPD-P-100/2009-C 1368-CPD-P-101/2009-C 1368-CPD-P-102/2009-C 1368-CPD-P-206/2010-C 1368-CPD-P-207/2010-C 1368-CPD-P-208/2010-C 1368-CPD-P-209/2010-C 1368-CPD-P-210/2010-C 1368-CPD-P-211/2011-C 1368-CPD-P-017/2012-C 1368-CPD-P-177/2012-C 1368-CPR-P-176/2013-C	1368
Operational reliability (opening into the comfort position)		7.1.3	dual purpose NSHEV	838 36413-1 U	0757

1) The Aa-Values and the classifications only apply to the dimensions, equipment and mounting positions of the natural smoke and heat exhaust ventilator (NSHEV) described in the listed Certificate of performance.

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Essential characteristics (Part II)

Harmonised technical specification: EN 12101-2:2003				
Essential characteristics	**Section**	**Performance** [1]	**Certificate of performance**	**Noti-fied Body**
Performance under environmental conditions				
Opening under snow load	7.2	SL 0 / T (00)	1368-CPD-P-395/2006-D 1368-CPD-P-396/2006-D 1368-CPD-P-072/2009-D 1368-CPD-P-073/2009-D 1368-CPD-P-074/2009-D 1368 CPD-P-212/2010-D 1368-CPD-P-213/2010-D 1368-CPD-P-178/2012-D	1368
		SL 0 / T (-20)	210005888-NT-KB	0432
Opening under snow load with low ambient temperature	7.3	T (00)	EN 12101-2:2003	0432
		T (-20)	210005888-NT-KB	0432
Opening under wind load	7.4	WL 2500	1368-CPD-P-076/2009-F 1368-CPD-P-216/2010-F 1368-CPD-P-018/2012-F 1368-CPR-P-177/2013-F	1368
		WL 3000	1368-CPD-P-391/2006-F 1368-CPD-P-299/2006-F 1368-CPD-P-075/2009-F 1368-CPD-P-077/2009-F 1368-CPD-P-214/2010-F 1368-CPD-P-215/2010-F	
		WL 1500	1368-CPD-P-179/2012-F 1368-CPD-P-180/2012-F	
		WL 2000	838 36413-2 U	0757
Resistance to heat and mechanical stability	7.5	$B_{300}30$	210005888-WB-KB	0432
		B300	272 36413U	0757
Reaction to fire	7.5.2.1	E	230005628 - 2 210005455 - 4 230008810 - 2	0432

1) The Aa-Values and the classifications only apply to the dimensions, equipment and mounting positions of the natural smoke and heat exhaust ventilator (NSHEV) described in the listed Certificate of performance.

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Configurations for all system series (Part I)

Component	Type designation / Manufacturer	Nominal voltage / CO2-Quantity	Power	Stroke	Moved area	Moved mass	Classification acc. Para. 7.3	EAL
Locking motor	R01/ STG Beikirch	24 V DC	1200 N	36 mm	3,15 m²	51 kg	T(00)	no
Locking motor	Lamellenantrieb LDE 800/036 / D+H Mechatronic	24 V DC	800 N	36 mm	1,49 m²	57 kg	T(00)	no
Locking motor	Elektroantrieb FA121 24 / esco	24 V DC	1200 N	36 mm	2,30 m²	80 kg	T(00)	no
Pneumatic cylinder	PUDV 32/12-40-M8x20-BA1R / Grasl-Pneumatik-Mechnaik GmbH	20 g CO_2	480 N with 6 bar	40 mm	1,00 m²	37 kg	T(00)	no
Electrical motor	Picolo 0 / Elero	24 V DC	900 N	36 mm	3,07 m²	90 kg	T(00)	no
Electrical motor	Picolo 0 / Elero	24 V DC	1600 N	36 mm	3,07 m²	90 kg	T(-20)	no
Electrical motor	WAL / Weber & Rosenhäger GmbH	24 V DC	1600 N	36 mm	2,73 m²	64 kg	T(-20)	no
Electrical motor	WAL / Weber & Rosenhäger GmbH	24 V DC	1600 N	36 mm	3,38 m²	140 kg	T(00)	no
Electrical motor	2x WAL / Weber & Rosenhäger GmbH	24 V DC	2x 1600 N	36 mm	6,76 m²	280 kg	T(00)	no
Electrical motor	2x Picolo 0 / Elero	24 V DC	2x 1800 N	100 mm	3,0 m²	137 kg	T(00)	yes

NSHEVs with system serie EAL are allowed to carry out with one row up to an max. total width of 2500 mm and up to max. total height of 2500 mm with an arrangement of four opening devices of the type „Picolo 0".

NSHEVs with other system series are allowed to carry out with one or two rows. Independently of the choose of the opening device according to the table above it is allowed to carry out NSHEVs with one row up to a max. total height of 3000 mm and up to a max. total width „B = max. width of one louver (see pages 2 and 3 of this annex) + 76 mm" and NSHEVs with two rows up to a max. total height of 3000 mm and up to a max. total width „B = 2x max. width of one louver (see pages 2 and 3 of this annex) + 123 mm" within one outer frame with multiple opening mechanisms, if following conditions will be kept:

- subject to the rules of the table above, each opening device will be connected to an own driving rod with a max. length of 1700 mm (separate mechanic) **and** each louver will be moved by exactly one opening device **and**
- each electrical opening device will be connected to its own electrical energy source (separate wires to a distribution outside of the NSHEV) **and** it will be hold available a energy source, which allows the operating of all connected opening devices at the same time **or**
- each pneumatic opening device will be connected to its own thermic actuation device (each with its own bottle with carbon dioxide) together with piping wiring to the NSHEV **and** for each pneumatic opening device it will be hold available an own energy source

Additionally to these rules it is allowed to carry out NSHEVs with a height > 3000 mm up to 6000 mm and the max. width B = 2000 mmm, if the vertical outer frame of the NSHEV will be connected to the vertical construction of the building with adequate screws (or similar means) in intervals of not more than 2000 mm among each other and not more than 2000 mm to the horizontal outer frame on the top and on the bottom of the NSHEV.

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Configurations for all system series (Part II)

Louver					Filling			
System series (max. width / max. height)	Min./Max. height	Min./Max. width	Max. area	Max. mass	Outside pane (Tempered safety glass / Laminated glass / Float)	Space between panes	Inside pane (Tempered safety glass / Laminated glass)	Total thick-ness
GG ISO 24 BT 50 (1000 mm / 3000 mm)	120 mm / 300 mm	224 mm / 924 mm	0,28 m²	12 kg	6 mm	12 mm	6 mm	24 mm
					6 mm	10 mm	8 mm	24 mm
					8 mm	10 mm	6 mm	24 mm
					8 mm	8 mm	8 mm	24 mm
GG ISO 32 BT 60 (1500 mm / 3000 mm)	200 mm / 350 mm	324 mm / 1424 mm	0,50 m²	20 kg	8 mm	12 mm	8 mm	32 mm
	200 mm / 300 mm	324 mm / 924 mm	0,28 m²	12 kg	6 mm	20 mm	6 mm	32 mm
					6 mm	18 mm	8 mm	32 mm
					8 mm	18 mm	6 mm	32 mm
STG ISO 36 BT 50 (2000 mm / 3000 mm)	120 mm / 400 mm	224 mm / 1924 mm	0,77 m²	22 kg	6 mm	22 mm	8 mm	36 mm
					8 mm	20 mm	8 mm	36 mm
	120 mm / 300 mm	224 mm / 924 mm	0,28 m²	12 kg	6 mm	24 mm	6 mm	36 mm
					8 mm	22 mm	6 mm	36 mm
	120 mm / 400 mm	224 mm / 1924 mm	0,77 m²	22 kg	6 mm / 6-12 mm / 4 mm	6-12 mm	8 mm	36 mm
STG ISO 38 BT 60 EAL (2000 mm / 3000 mm)	120 mm / 400 mm	324 mm / 1924 mm	0,77 m²	22 kg	6 mm	24 mm	8 mm	38 mm
					8 mm	22 mm	8 mm	38 mm
	120 mm / 300 mm	324 mm / 924 mm	0,28 m²	12 kg	6 mm	26 mm	6 mm	38 mm
					6 mm	24 mm	8 mm	38 mm
TGL ISO SLP BT 50 (1800 mm / 3000 mm)	Fix: 174 mm / 192 mm / 200 mm *)	244 mm / 1724 mm	0,59 m²	13 kg	2 mm Aluminium sheet, 37 mm insulation core (min. Klasse E according to EN 13501-1), 2 mm Aluminium sheet			
TGL ISO SLP BT 60 (1800 mm / 3000 mm)	Fix: 174 mm / 192 mm / 200 mm *)	324 mm / 1724 mm	0,59 m²	13 kg	2 mm Aluminium sheet, 44 mm insulation core (min. Klasse E according to DIN EN 13501-1), 2 mm Aluminium sheet			
S200 (1800 mm / 3000 mm)	Fix: 200 mm	74 mm / 1724 mm	0,34 m²	3,3 kg	2 mm Aluminium			
NTL ISO 24 BT 50 (2000 mm / 3000 mm) **)	120 mm / 245 mm	224 mm / 1924 mm	0,47 m²	12 kg	4 mm	16 mm	4 mm	24 mm
					4 mm	14 mm	6 mm	24 mm
					6 mm	14 mm	4 mm	24 mm

*) Additional in-between sizes up to 200 mm height are possible

**) Instead of the listed glazing panel fillings can be used, with an insulation core of at least class E according to EN 13501-1 and with outer sheets of the class A1 according to EN 13501-1. The thickness of the outer sheets must be at least 2 mm. The holder of this certificate is responsible for the correct expulsion of wind load class according to Section 7.4 of EN 12101-2 (possibly by static analysis).

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Configurations for all system series (Part III)

Louver					Filling					
System series (max. width / max. height)	Min./Max. height	Min./Max. width	Max. area	Max. mass	Outside pane (Tempered safety glass / Laminated glass / Float)			Space between panes	Inside pane (Tempered safety glass / Laminated glass)	Total thick-ness
TGL ISO 24 BT 50 (2000 mm / 3000 mm) **)	120 mm / 245 mm	224 mm / 1924 mm	0,47 m²	12 kg	4 mm			16 mm	4 mm	24 mm
					4 mm			14 mm	6 mm	24 mm
					6 mm			14 mm	4 mm	24 mm
	120 mm / 400 mm	224 mm / 1924 mm	0,77 m²	22 kg	4 mm			14 mm	6 mm	24 mm
					6 mm			12 mm	6 mm	24 mm
					6 mm			10 mm	8 mm	24 mm
TGL ISO 32 BT 60 (2500 mm / 3000 mm) **)	120 mm / 245 mm	324 mm / 1924 mm	0,47 m²	12 kg	4 mm			24 mm	4 mm	32 mm
					4 mm			22 mm	6 mm	32 mm
					6 mm			22 mm	4 mm	32 mm
	120 mm / 400 mm	324 mm / 1920 mm	0,77 m²	22 kg	4 mm			22 mm	6 mm	32 mm
		324 mm / 2420 mm	0,97 m²	40 kg	6 mm			20 mm	6 mm	32 mm
					6 mm			18 mm	8 mm	32 mm
					8 mm			18 mm	6 mm	32 mm
	120 mm / 400 mm	324 mm / 2420 mm	0,97 m²	40 kg	6-8 mm	6-8 mm	4 mm	6-8 mm	6-8 mm	32 mm
GG Overlapping BT 50	120 mm / 292 mm	274 mm / 1324 mm	0,39 m²	12 kg	8-12 mm Tempered safety glass					
GG Overlapping BT 60	120 mm / 292 mm	274 mm / 1724 mm	0,50 m²	16 kg	12 mm Tempered safety glass					
GG Bevelled Edge 30 BT 50	120 mm / 295 mm	274 mm / 1324 mm	0,39 m²	12 kg	8-12 mm Tempered safety glass					
GG Bevelled Edge 30 BT 60	120 mm / 295 mm	274 mm / 1724 mm	0,51 m²	16 kg	12 mm Tempered safety glass					
GG step cascade glass BT 50	120 mm / 295 mm	274 mm / 1324 mm	0,39 m²	12 kg	10-12 mm VSG of heat-strengthened glass					
GG step cascade glass BT 60	120 mm / 295 mm	274 mm / 1724 mm	0,51 m²	16 kg	12 mm VSG of heat-strengthened glass					
EAL	200 mm / 404 mm	346 mm / 2446 mm	0,99 m²	46 kg	8 mm (no Float)	14 mm	4 mm	14 mm	6 mm (no Float)	46 mm
					8 mm (no Float)			32 mm	6 mm (no Float)	46 mm
					10 mm (no Float)			28 mm	8 mm (no Float)	46 mm
					8 mm (no Float)			28 mm	10 mm (no Float)	46 mm
					12 mm (no Float)			28 mm	6 mm (no Float)	46 mm

*) Additional in-between sizes up to 200 mm height are possible

**) Instead of the listed glazing panel fillings can be used, with an insulation core of at least class E according to EN 13501-1 and with outer sheets of the class A1 according to EN 13501-1. The thickness of the outer sheets must be at least 2 mm. The holder of this certificate is responsible for the correct expulsion of wind load class according to Section 7.4 of EN 12101-2 (possibly by static analysis).

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