



## Declaration of performance ESTRA

### Declaration of performance NO. 0336-CPR-2013/ESTRA

**Product: Estra**  
**Type: Estra EG 400x700 t/m 1500x3000 (bxh)**  
**Estra DG 400x700 t/m 1600x3000 (bxh)**

Natural smoke and heat exhaust ventilators (NSHEV) intended to be installed in smoke and heat control systems in buildings

Manufacturer: Brakel Aluminium b.v.  
 Linie 48  
 5405 AN Uden  
 Tel: +31 413-338360  
 Fax: +31 413-338361  
 Email: [info@brakel.com](mailto:info@brakel.com)

System: **System 1**

Notified factory production control certification body No. 0336 TÜV Rheinland Apeldoorn performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

TÜV has distributed the following reports:

Definition	Reportnr
Certificate Estra	336-CPD-8561
Classification report	2007-Efectis-R0289
Heat exposure B300	210003446-WB
Aerodynamic (B)	1368-CPD-P-070-2007-B
Reliability (C)	2007-Efectis-R0289
	2007-Efectis-R0289
SL + T (D)+(E)	2011-Efectis-R0529[Rev.1]
	2011-Efectis-R0529[Rev.1]
Windload (F)	2011-Efectis-R0529[Rev.1]
	2011-Efectis-R0529[Rev.1]

Definition	Reportnr
Factory control (FPC)	Audit report nr 11-34044



## Declaration of performance ESTRA

### Declared performance:

Essential characteristics	Performance	Harmonised technical specification
<b>Nominal activation conditions/ sensitivity, as:</b> -Initiation device -Opening mechanism -Inputs and outputs	Pass Pass Pass	<b>EN 12101-2: 2003</b>
<b>Response delay (response time), as:</b> -Reliability -Opening under (snow, wind) load -Low ambient temperature -Fire performance	≤ 60 s	
<b>Operational reliability, as:</b> -Reliability	Re 1000 DP*	
<b>Effectiveness of smoke/hot gas extraction, as:</b> -Aerodynamic free area	See report 1368-CPD-P-070-2007-B	
<b>Performance parameters under fire conditions, as:</b> -Resistance to heat -Mechanical stability -Reaction to fire	B30030 Pass E	
<b>Ability to open under environmental conditions, as:</b> -Opening under load -Low ambient temperature -Stability under wind load -Resistance to wind-induced vibration (where included)	SL 0 (only wall) T(-15) WL 1500 Pass	
<b>Durability</b>	Pass	

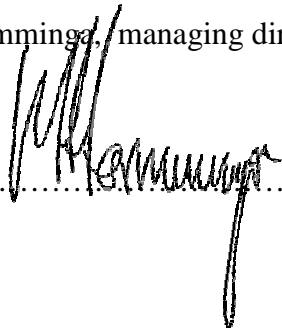
DP\* = Natural ventilation and Fire ventilation (10.000x + 1000x)

De performance of the Estra is in conformity with the declared performance here above.

This declaration of performance is issued under the sole responsibility of Brakel Aluminium and contains 2 pages:

Signed for and on behalf of Brakel Aluminium by:

M. Homminga, managing director Brakel Aluminium b.v.



Uden, 6-5-2013