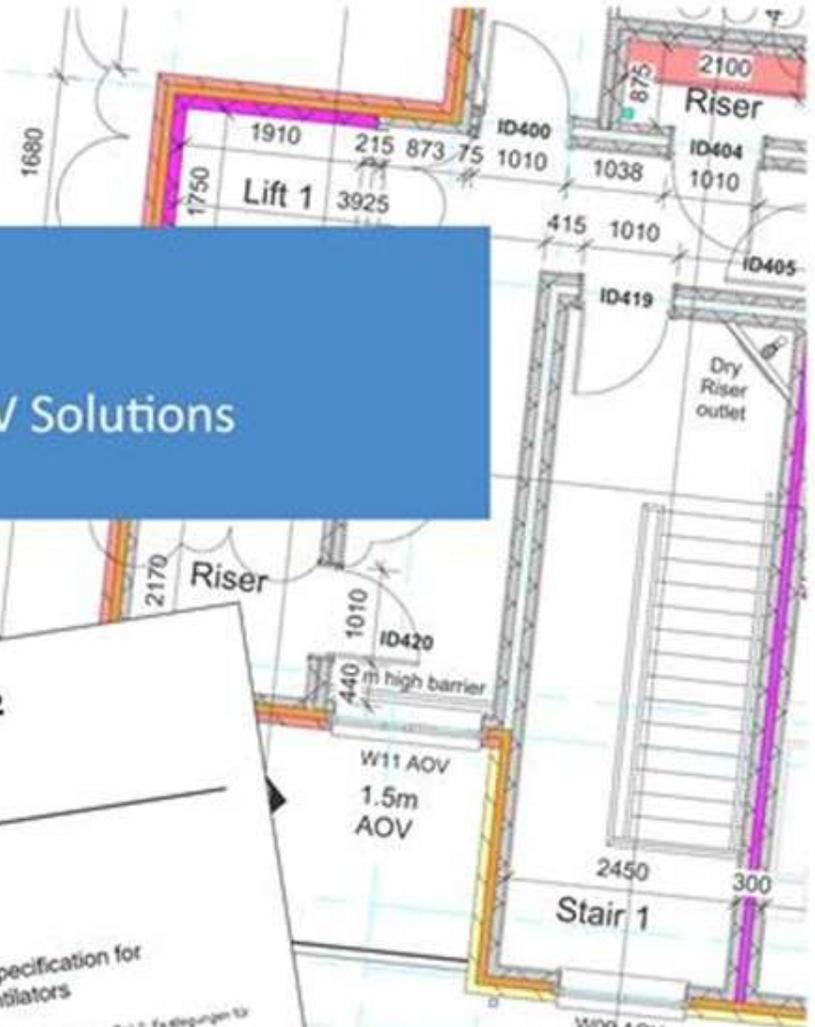


EN12101-2:2003

UKCA Certified NSHEV Solutions



EN 12101-2
 EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM
 June 2003
 English version
Smoke and heat control systems - Part 2: Specification for natural smoke and heat exhaust ventilators
 Rauch- und Wärmeabzug - Teil 2: Festlegungen für natürliche Rauch- und Wärmeabzugseinrichtungen
 Systèmes pour le contrôle des fumées et de la chaleur - Partie 2: Spécifications pour les dispositifs d'évacuation de fumées et de chaleur
 ICS 13.220.20, 23.120
 This European Standard was approved by CEN on 3 April 2003.
 CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving the European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.
 This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official version.
 CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

Official Journal of the European Union
 4.4.2011
REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
 of 9 March 2011
 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
 (Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION
 Member States have introduced provisions, but requirements, relating not only to safety of buildings and other construction works but also to health, energy efficiency, protection of the environment, and other important aspects.



1

AluK 58BW SE Controls NSHEV

It is a mandatory requirement under the Construction Products Regulations (Regulation (EU) No 305/2011) for Natural Smoke and Heat Exhaust Ventilators (NSHEVs) to be UKCA certified as conforming to the Designated Standard EN12101-2:2003.

AluK and SE Controls have collaborated on an extensive test and certification program with IFCC, a UK Notified Body (Notified Body Nr. 1720) to meet this requirement and ensure a seamless façade installation and performance can be provided.

The following AluK frame systems can be certified under SE Controls' Tested Solutions program.

Frame System	Applications	Refer to
AluK 58BW HI	Side Hung, Top Hung, Bottom Hung Open Out	Section 4.1

2 Manufacturing

Prior to manufacturing an NSHEV it is important to seek guidance from SE Controls to ensure the NSHEV is manufactured under an annually audited EN12101-2 System 1 Factory Production Control process.

It is mandatory this is in place before manufacturing. Please register your interest to Façade.technical@secontrols.com

If an NSHEV is not manufactured under an EN12101-2 System 1 Factory Production Control process the product will not be certifiable by SE Controls.



Contact the SE Controls Façade Support Team

SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

Creating a **Healthier & Safer** Environment

3 Certification

3.1 Essential Characteristics declared on the SE Controls NSHEV Declaration of Performance (DoP) as defined by EN12101-2:2003 Annex ZA.1.

CCP 1720-CPR-0063A		
Essential Characteristics	Clauses in This European Standard	Mandated Level(s) or Class(es)
Nominal Activation Conditions/sensitivity	4.1 4.2	24V dc.
Response relay (Time relay)	7.1.2	<60s
Operational Reliability	7.1 7.4	Re 1000 + 10000 (Dual Purpose) NPD / WL A 750 (Single / Twin Chain)
Effectiveness of smoke/hot gas extraction	6.	Pass
Aerodynamic free area	6.	Pass
Performance parameters under fire conditions	7.5	30
Resistance to fire – Mechanical stability	7.5	B300
Ability to open under environmental conditions	7.2 7.3	T(00) SL(0)
Fire reaction	7.5.2.1	NPD

“PASS”; Each NSHEV will have a specific aerodynamic free area based upon its dimensions, opening angle and applicable coefficient of discharge (Cv) of between 0.31 and 0.62.

3.2 Factory Production Control

The vent is manufactured, the actuator installed and the NSHEV completed under SE Controls' System 1 Factory Production Control (FPC) process, audited by the Notified Body, IFCC in accordance with the requirements of the Construction Products Regulation (EU) No 305/2011 and EN12101-2:2003 product standard.

The Certificate of Constancy of Performance (CoCoP) issued by IFCC and Declaration of Performance (DoP) issued by SE Controls confirms the audited system 1 FPC process is in place.

The NSHEV is certified and placed upon the market by SE Controls in the capacity of the manufacturer.



Contact the SE Controls Facade Support Team

SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

Creating a **Healthier & Safer** Environment

4 AluK 58BW SE Controls NSHEV Certifiable Parameters

4.1 58BW HI

Orientation	Maximum Width	Maximum Height	Minimum Width	Minimum Height	Maximum Weight	Hinges	Actuator
Side Hung	1115mm	1500mm	500mm	685mm	10KG per Hinge	H443004 Butt Hinge	SECO Ni 24 40 Actuator Single
Side Hung	1115mm	2215mm	500mm	1350mm	10KG per Hinge	H443004 Butt Hinge	SECO Ni 24 40 Actuator Twin
Top Hung	1500mm	1200mm	685mm	500mm	10KG per Hinge	H443004 Butt Hinge	SECO Ni 24 40 Actuator Single
Bottom Hung	1500mm	1200mm	685mm	500mm	10KG per Hinge	H443004 Butt Hinge	SECO Ni 24 40 Actuator Single

Any make up of double-glazed unit or triple-glazed unit can be assessed providing the weight of the vent remains within maximum weight limitation stated above.

Infill panels must have minimum classification certificates for combustibility and achieve Class A2,S1-d0 under EN13501-1. The panels must also be compatible with the System Company profiles (glazing clips etc.). Unless specifically tested as a combination, Reaction to Fire will be declared as NPD on the Declaration of Performance. Please contact façade.technical@secontrols.com for more information.



Contact the SE Controls Facade Support Team

SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

Creating a **Healthier** &
Safer Environment

4.2 Sash/Frame Combinations

Original Frame Reference	New Frame Reference	Original Sash Reference	New Sash Reference	Prep Detail Reference (Single Chain)	Prep Detail Reference (Twin Chain)
AW605	U44009	AW620	U44105	SEF_1658	SEF_1665
AW604	U44008	AW620	U44105	SEF_1659	SEF_1666
AW625	U44018	AW620	U44105	SEF_1660	SEF_1667
AW608	U44012	AW620	U44105	SEF_1661	SEF_1668
AW632	U44053/U44045	AW620	U44105	SEF_1662	SEF_1669
AW634	U44055/U44047	AW620	U44105	SEF_1663	SEF_1670
AW635	U44056/U44048	AW620	U44105	SEF_1664	SEF_1671
AW629	U44017	AW620	U44105	SEF_2700	SEF_2701
AW605	U44009	AW618	U44104/44103	SEF_2567	SEF_2574
AW604	U44008	AW618	U44104/44103	SEF_2568	SEF_2575
AW625	U44018	AW618	U44104/44103	SEF_2569	SEF_2576
AW608	U44012	AW618	U44104/44103	SEF_2570	SEF_2577
AW632	U44053/U44045	AW618	U44104/44103	SEF_2571	SEF_2578
AW634	U44055/U44047	AW618	U44104/44103	SEF_2572	SEF_2579
AW635	U44056/U44048	AW618	U44104/44103	SEF_2573	SEF_2580

Contact AluK for access to their technical manual.

The information provided in this document must be used in conjunction with the AluK 58BW Technical Manual.



Contact the SE Controls Facade Support Team

SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

Creating a **Healthier & Safer** Environment

5 System Design and Installation Considerations

5.1 Free Area

The free area essential characteristic of an NSHEV is declared on the Declaration of Performance as “Aerodynamic Free Area”. Often building codes do not specify aerodynamic free areas, but instead require a Geometric Free Area (e.g., 1.5m²) and the two methods should not be confused.

A Geometric Free Area will be larger than the Aerodynamic Free Area for the same NSHEV, but they are not directly comparable.

Refer to the applicable design standard BS 9991:2024 (Section 20.1. Table 3 - Summary of Smoke Control Provisions)

Top Of stair Vent for a building below 11 meters tall: 0.7m² (Aerodynamic Free Area)

Top Of stair Vent for a building above 11 meters tall: 0.7m² (Aerodynamic Free Area)

Lobby / Corridor vent for a building above 11 meters tall: 0.9m² (Aerodynamic Free Area)

5.2 Controls

NSHEVs must be operated by a compatible EN12101-10 compliant control system; SE Controls recommends its OS series of control systems.

5.3 Safety: Entrapment Protection

Consideration should be given to the installation of suitable measures to mitigate the risks of entrapment.

NSHEVs should be closed/ reset via a local Manual Control Point (MCP) with a ‘biased off principle’*, or alternative safety measures/ operational procedures should be considered.

*Smoke Control Association: Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (Flats and Maisonettes) Revision 3.1: July 2020

For advice on further safety considerations contact SE Controls.

5.4 Safety: Fall Restraint

Consideration should be given to the installation of suitable measures to mitigate the risks of falling through an NSHEV.

For advice on additional window restraint options contact SE Controls.

5.5 Installation & Maintenance

A smoke ventilation system should be designed, installed and maintained by a suitably competent and trained smoke ventilation specialist.

6 Support

Contact the SE Controls Technical Façade Team – Façade.technical@secontrols.com

SE Controls, Lancaster House, Wellington Crescent, Fradley, Lichfield, Staffs WS13 8RZ

Tel. +44 1543 443060 Website: www.secontrols.com



Contact the SE Controls Façade Support Team

SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

Creating a **Healthier & Safer** Environment