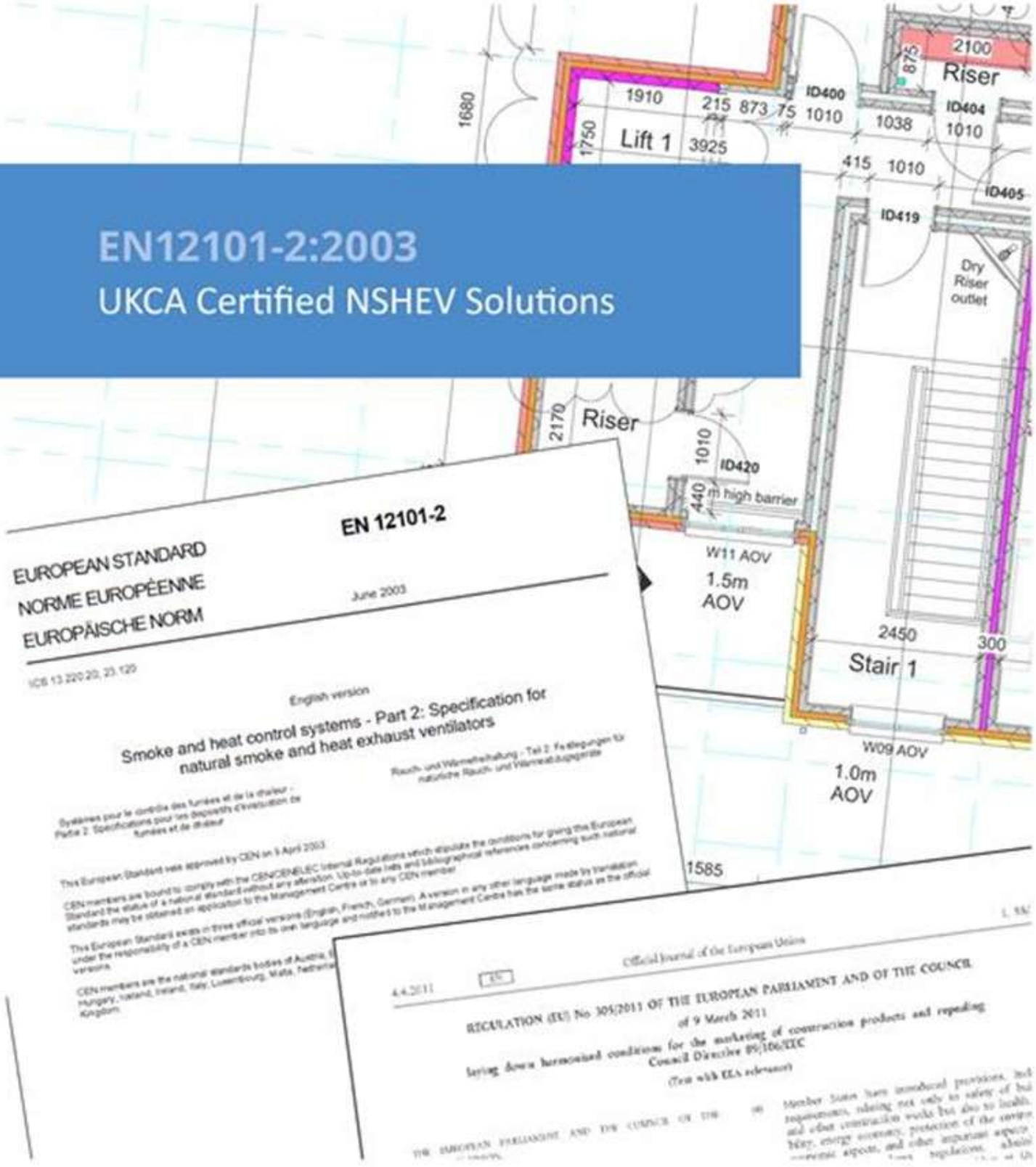
EN12101-2:2003

UKCA Certified NSHEV Solutions



SE CONTROLS

SAS **SENIOR** ARCHITECTURAL SYSTEMS

UK CA Creating a **Healthier** & **Safer** Environment

10/2025 – Rev A

1

Senior Architectural Systems SPW600 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.

Senior Architectural Systems 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 Senior Architectural Systems frame systems can be certified under SE Controls' Tested Solutions program.

Frame System	Applications	Refer to
SAS SPW600 AOV	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.

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-0178		
Essential Characteristics	**Clauses in This European Standard**	**Mandated Level(s) or Class(es)**
Nominal Activation Conditions/sensitivity	4.1 4.2	b) 24V dc.
Response relay (Time relay)	7.1.2	<60s
Operational Reliability	7.1 7.4	Re 1000 + dual purpose WL A 1250 (Twin Chain Only SPW600 AOV) NPD Single Chain
Effectiveness of smoke/hot gas extraction	6.	Pass
Aerodynamic free area	6.	Pass
Performance parameters under fire conditions	7.5	B300
Resistance to fire – Mechanical stability	7.5	$B_{300}30$
Ability to open under environmental conditions	7.2 7.3	SL0 T(00)
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 Approved 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.

SE CONTROLS

Contact the SE Controls Facade Support Team
SE Controls
Lancaster House, Fradley, Lichfield
WS13 8RZ
Tel +44 1543 443060

4 Seniors SPW600 SE Controls NSHEV Certifiable Parameters

4.1 Seniors SPW600 AOV with BiFold Door Hinge and Heavy Duty Sash

Orientation	Maximum Width	Maximum Height	Minimum Width	Minimum Height	Maximum Weight	Hinges	Actuator
Side Hung	1200mm	1500mm	500mm	685mm	60KG	PURA764HDB	SECO Ni 24 40 Actuator Single
Side Hung	1200mm	2500mm	500mm	1350mm	120KG	PURA764HDB	SECO Ni 24 40 Actuator Twin
Top Hung	1500mm	1200mm	685mm	500mm	60KG	PURA764HDB	SECO Ni 24 40 Actuator Single
Top Hung	2500mm	1200mm	1350mm	500mm	120KG	PURA764HDB	SECO Ni 24 40 Actuator Twin
Bottom Hung	1500mm	1200mm	685mm	500mm	60KG	PURA764HDB	SECO Ni 24 40 Actuator Single
Bottom Hung	2500mm	1200mm	1350mm	500mm	120KG	PURA764HDB	SECO Ni 24 40 Actuator Twin

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.

4.2 Sash/Frame Combinations

SPW600 AOV with BiFold Door Hinge and Heavy Duty Sash

Frame Reference	Sash Reference	Prep Detail Reference (Single Chain)	Prep Detail Reference (Twin Chain)
SPW60102	SPW6041040	SEF_2395	SEF_2396
SPW60106	SPW6041040	SEF_2477	SEF_2482
SPW60506	SPW6041040	SEF_2429	SEF_2432
SPW66902	SPW6041040	SEF_2431	SEF_2434
SPW605043	SPW6041040	SEF_2430	SEF_2433

Contact Senior Architectural Systems for access to their technical manual.

The information provided in this document must be used in conjunction with Senior Architectural Systems SPW600 AOV Technical Manual.

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., 1.5m^2) 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