

EN12101-2:2003 Tested Solutions

Manufacturers Guide

TECHNAL SOLEAL Next 75 Window 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 Harmonised Standard EN12101-2:2003.

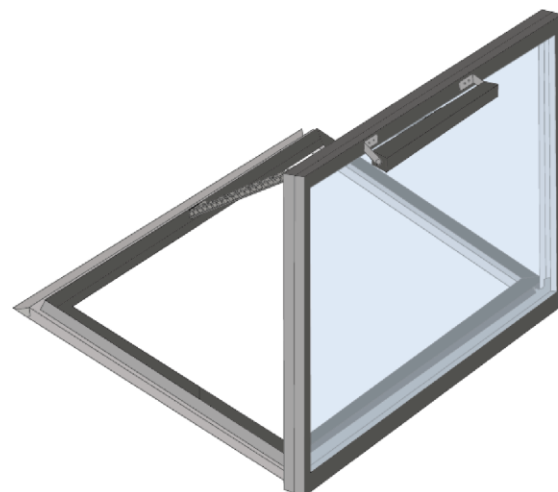
TECHNAL and SE Controls have collaborated on an extensive test and certification program with IFCC, a UK Notified Body (Notified Body Nr. 1720) to meet this requirement and ensure a seamless façade installation and performance can be provided.

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 at info@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.



Tested Solution



The following TECHNAL frame systems can be **UKCA certified** under SE Controls' Tested Solutions program:

Frame System

TECHNAL SOLEAL
Next 75 Window

Applications (Open Out)

Side Hung
Bottom Hung

1. Certification

1.1 Essential Characteristics

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

CCP 1720-0304		
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 + 10,000 Dual Purpose WL 1500
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	E

“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.

1.2 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 confirm 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.

2. TECHNAL SOLEAL Next 75 Window

SE Controls NSHEV Certifiable Parameters

2.1 SOLEAL Next 75 Window

Orientation	Max. Outer Frame Width	Max. Outer Frame Height	Min. Outer Frame Width	Min. Outer Frame Height	Max. Outer Frame Weight	Hinges	Actuator
Side Hung	1288mm	1537mm	500mm	685mm	80Kg	FZ62003	SECO Ni 24 40 Actuator Single
Bottom Hung	1537mm	1288mm	685mm	500mm	80Kg	FZ62003	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 Info@secontrols.com for more information.

2.2 Sash/Frame Combinations

Frame Reference	Sash Reference	Prep Detail Reference (Single Chain)
TFZ17001	TFZ17250	SEF_2860
TFZ17001	TFZ17252	SEF_2862
TFZ17001	TFZ17254	SEF_2864
TFZ17002	TFZ17250	SEF_2865
TFZ17002	TFZ17252	SEF_2867
TFZ17002	TFZ17254	SEF_2869
TFZ17003	TFZ17250	SEF_2938
TFZ17003	TFZ17252	SEF_2940
TFZ17003	TFZ17254	SEF_2942
TFZ17004	TFZ17250	SEF_2943
TFZ17004	TFZ17252	SEF_2945
TFZ17004	TFZ17254	SEF_2947
TFZ17005	TFZ17250	SEF_2952
TFZ17005	TFZ17252	SEF_2954
TFZ17005	TFZ17254	SEF_2956
TFZ17507	TFZ17250	SEF_2870
TFZ17507	TFZ17252	SEF_2872
TFZ17507	TFZ17254	SEF_2874
TFZ17509	TFZ17250	SEF_257
TFZ17509	TFZ17252	SEF_2959
TFZ17509	TFZ17254	SEF_2961
TFZ17510	TFZ17250	SEF_2962
TFZ17510	TFZ17252	SEF_2664
TFZ17510	TFZ17254	SEF_2966
TFZ17512	TFZ17250	SEF_2967
TFZ17512	TFZ17252	SEF_2969
TFZ17512	TFZ17254	SEF_2971
TFZ17135	TFZ17250	SEF_2875
TFZ17135	TFZ17252	SEF_2877
TFZ17135	TFZ17254	SEF_2879
TFZ17090	TFZ17250	SEF_2880
TFZ17090	TFZ17252	SEF_2882
TFZ17090	TFZ17254	SEF_2884
TFZ17094	TFZ17250	SEF_2885

Frame Reference	Sash Reference	Prep Detail Reference (Single Chain)
TFZ17094	TFZ17252	SEF_2887
TFZ17094	TFZ17254	SEF_2889
TFZ17095	TFZ17250	SEF_2890
TFZ17095	TFZ17252	SEF_2892
TFZ17095	TFZ17254	SEF_2894
TFZ17136	TFZ17250	SEF_2895
TFZ17136	TFZ17252	SEF_2897
TFZ17633	TFZ17254	SEF_2899
TFZ17633	TFZ17250	SEF_2900
TFZ17633	TFZ17252	SEF_2902
TFZ17633	TFZ17254	SEF_2904
TFZ17092	TFZ17250	SEF_2905
TFZ17092	TFZ17252	SEF_2907
TFZ17092	TFZ17254	SEF_2909
TFZ17630	TFZ17250	SEF_2910
TFZ17630	TFZ17252	SEF_2912
TFZ17630	TFZ17254	SEF_2914

The information provided in this document must be used in conjunction with the TECHNAL SOLEAL Next 75 Window Technical Manual.

3. System Design and Installation Considerations

3.1 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). The two methods should not be confused.

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)

3.2 Controls

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

3.3 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:

3.4 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.

3.5 Installation & Maintenance

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

4. Support

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