03|2026 Rev B

EN12101-2:2003 Tested Solutions

Manufacturers Guide

Kawneer AA720
SE Controls NSHEV

It is a mandatory requirement under the Construction Products Regulations (Regulation (EU) No305/2011) for Natural Smoke and Heat Exhaust Ventilators (NSHEVs) to be UKCA and CE certified as conforming to the Harmonised Standard EN12101-2:2003.

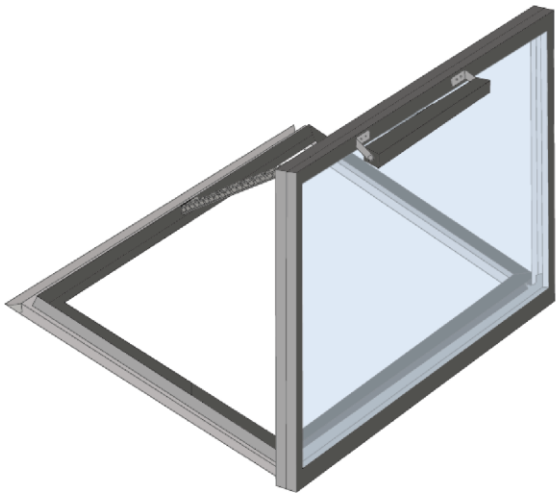
Kawneer and SE Controls have collaborated on an extensive test and certification program with IFC a UKCA Notified Body (Notified Body Nr. 1720) to meet this requirement and ensure a seamless façade installation and performance can be provided.

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

KAWNEER
AN ARCONIC COMPANY

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

Frame System	Applications (Open Out)
AA720 Window	Side Hung, Top Hung, Bottom Hung
AA720 Door	Side Hung

SE CONTROLS

The information in this document is correct at the time of issue, however is subject to change.

UKCA

Creating a **Healthier** & **Safer** Environment

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-CPR-0062A AA720 Window		
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 NPD Single Chain WL 1500 Twin Chain Only
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.

CCP 1720-CPR-0177 AA720 Door		
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	NPD NPD Single Chain NPD Twin Chain Only
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.

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. Kawneer AA720 SE Controls NSHEV Certifiable Parameters

2.1 AA720 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	900mm	1500mm	500mm	685mm	45KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Single
Side Hung	900mm	1900mm	500mm	1350mm	55KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Twin
Top Hung	1500mm	1200mm	685mm	500mm	60KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Single
Top Hung	1800mm	1200mm	685mm	500mm	60KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Twin
Bottom Hung	1500mm	1200mm	685mm	500mm	60KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Single
Bottom Hung	1600mm	1200mm	1350mm	500mm	60KG	100mm Butt Hinge	SECO Ni 24 40 Actuator Twin

2.2 AA720 Door

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	1200mm	1500mm	500mm	685mm	70KG	Concealed 276-468 hinges	SECO Ni 24 40 Actuator Single
Side Hung	1200mm	2500mm	500mm	1350mm	120KG	Concealed 276-468 hinges	SECO Ni 24 40 Actuator Twin
Side Hung	1400mm	3000mm	500mm	1350mm	120KG	Concealed 276-468 hinges	3x 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.

2.3 Sash/Frame Combinations

Frame Reference	Sash Reference	Prep Detail Reference (Single Chain)	Prep Detail Reference (Twin Chain)
773158	3001716	SEF_2202	SEF_2203
773159	3001716	SEF_2218	SEF_2219
773174	3001716	SEF_2514	SEF_2515
773175	3001716	SEF_2635	SEF_2636
3001027	3001716	SEF_2156	SEF_2157
3001028	3001716	SEF_2581	SEF_2582
3001029	3001716	SEF_2629	SEF_2630
3001044	3001716	SEF_2583	SEF_2584
3001045	3001716	SEF_2637	SEF_2638
3001046	3001716	SEF_2639	SEF_2640
3001719	3001716	SEF_1695	SEF_1703
3001794	3001716	SEF_2631	SEF_2632
3001821	3001716	SEF_2633	SEF_2634
3002625	3001716	SEF_1690	SEF_1698
3002627	3001716	SEF_1691	SEF_1699
3003068	3001716	SEF_2713	SEF_2712
773158	3001717	SEF_2607	SEF_2608
773159	3001717	SEF_2143	SEF_2144
773160	3001717	SEF_2443	SEF_2445
773176	3001717	SEF_2444	SEF_2446
3001816	3001717	SEF_2052	SEF_2053
3002627	3001717	SEF_2186	SEF_2187

2.4 AA720 Door Sash/Frame Combinations

Frame Reference	Sash Reference	Prep Detail Reference (Single Chain)	Prep Detail Reference (Twin Chain)
3000502	3000500	SEF_1916	SEF_1915
3000502	3000773	SEF_2702	SEF_2703

The information provided in this document must be used in conjunction with the Kawneer 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., 1.5m^2). 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: July 2020

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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