

Tested AOV Solutions for Smoke Ventilation

Tested Solutions and Standard Details



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

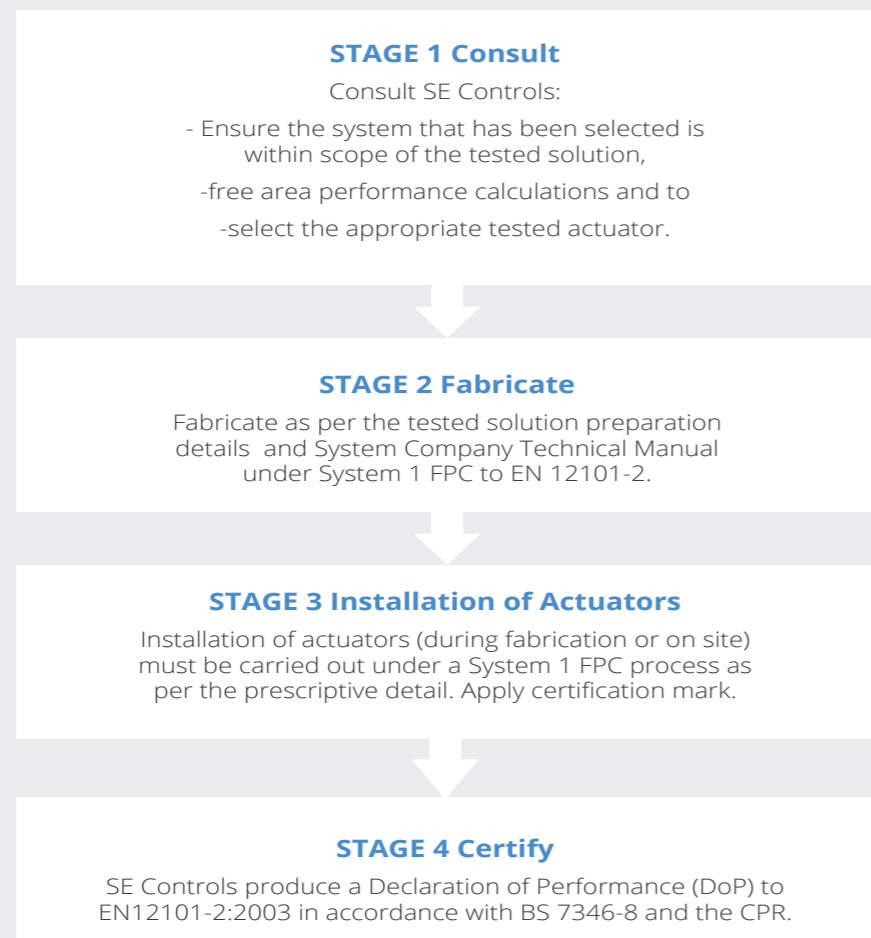
Metal Technology and SE Controls have collaborated together to provide the fabricator network with a compliant NSHEV AOV to meet the requirements of EN12101-2:2003

The Construction market cannot accept the use of a standard window and 'off the shelf' actuator as an AOV as both must be tested together and manufactured under a System 1 Factory Production Control process to comply. Utilising this tested solution and process detailed below will remove risk from the fabricator of non-compliance in life safety systems.

Compliance to EN12101-2:2003 for smoke vents is mandated by law in the Construction Products Regulation which has been in force since 2013.

The following process has been put in place to support you as a fabricator in placing that product onto the market compliantly

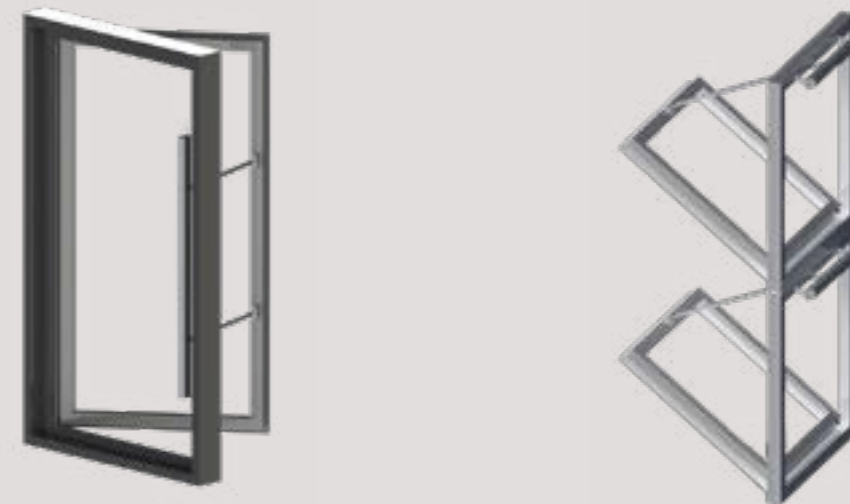
SE Controls Certification Process





As detailed in the certification process the fabricator manufacturing the smoke vents must be audited under a System 1 Factory Production Control Process by a notified body. If you are not already audited and would like to speak to someone about the process please contact our facade technical team - facade.technical@secontrols.com

Alternatively, click [here](#) for our list of audited facade fabricators who can manufacture for you.

Typical AOV Applications



Proof of Compliance

DECLARATION OF PERFORMANCE			
	Document Ref: SEP-0001-01-01	Date: 15.09.2021	
Project Name: Block A, High Street, Town	SE Ref: SE Ref.	SORD10000	
1 Unique Identification Code of Product Type:			
NSHEV comprising SE Controls SECO N 24 40 Chain Actuator and the System Company, Profile vertical vent			
2 Manufacturing Date Code and Serial Number:			
As appears on product			
3 Intended Use:			
Natural smoke and heat exhaust ventilator for smoke and heat control in construction works.			
4 Name of Manufacturer:			
SE Controls, Wellington Crescent, Fradley Park, Lichfield, Staffs, UK: WS13 8RZ Tel: +44 (0)1543 443050. Web: www.secontrols.com			
5 Authorised Representatives:			
Not applicable			
6 System of Assessment and verification of constancy of performance:			
System 1			
7 Harmonised Standard covered by Construction Products Regulation:			
EN 12101-2:2003 Smoke and Heat Control Systems - Specification for Natural Smoke and Heat Exhaust Ventilators.			
8 Notified Body:			
IFC International Certification Ltd., Princes Risborough, HP27 9AH, UK Notified body number: 1720 Performed the initial inspection of the manufacturing plant and of factory production control (FPC), and the continuous surveillance, assessment and evaluation of FPC, and issued the certificate of constancy of performance. Certificate ref 1720-CPR-0001A			
9 Essential Characteristics:			
Declared performance			EN12101-2:2003
Thermal Activation Conditions	24h DC		4.3/4.2
Response Delay	<=5s		7.1.2
Operational Reliability	1000 / WL1000		7.1/7.4 (Annex C/F)
Effectiveness of fire gas extraction	C _{sm} : 0.35 to 0.61		6 (Annex B)
Aerodynamic Free Area	C _{sm} : 0.35 to 0.61		6 (Annex B)
Performance Criteria under Fire Conditions	B300		7.5 (Annex G)
Fire Resistance - Mechanical stability	B300		7.5 (Annex G)
Ability to open under Environmental Conditions	T (00)		7.2/7.3 (Annex H/I)
Reaction to Fire	AT		7.3.2.1
10 The performance of the product identified in sections 1 and 2 above is in conformity with the declared performance in section 9 above.			
The declaration of performance is issued under the sole responsibility of the manufacturer identified in section 4 above.			
Date:	15.09.21	Signed:	
Place of Issue:	Lichfield, UK		Martin Oates - Director of Global Sales

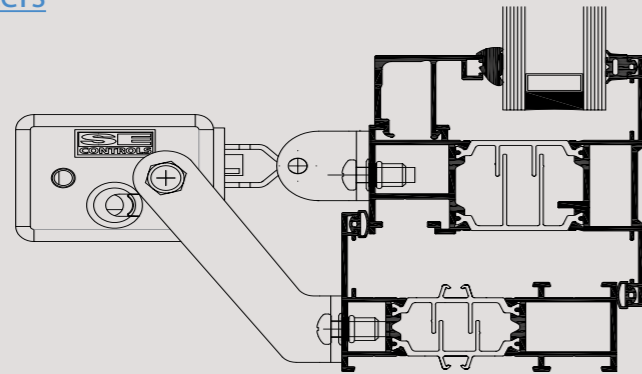
The Declaration of Performance (DoP) and the product certification mark are the ultimate proof of compliance which illustrates the vent profile and actuator have been tested together as a single solution to all declarable essential characteristics of EN12101-2:2003.

The NSHEV is part of a life safety system and the DoP is required at project handover stage in accordance with the CPR and BS7346-8 code of practice.

Ensure that you have this document as it will delay handover if not provided when requested.



Metal Technology 4-35 HI EN12101-2 Tested Profiles and Parameters



SYSTEM NAME	FRAME REF. NO.	STANDARD SASH REF. NO.	HEAVY DUTY SASH REF. NO.	SERIES 40 BRACKET KIT NO.
4-35Hi/Hi+	600-200	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	600-212	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	600-605	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	601-201	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	602-202	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	602-212	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	603-201	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	604-213	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	606-206	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	609-200	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	613-213	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	619-221	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	620-202	626-627/626-652	655-656	AKS16050001
4-35Hi/Hi+	620-204	626-627/626-652	655-656	AKS16050001
4-35Hi/Hi+	620-215	626-627/626-652	655-656	AKS16050001
4-35Hi/Hi+	620-216	626-627/626-652	655-656	AKS16050001
4-35Hi/Hi+	647-649	626-627/626-652	655-656	AKS16050003
4-35Hi/Hi+	685-686	626-627/626-652	655-656	AKS16050001

System Parameters

SYSTEM NAME	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
4-35 Hi/Hi+ TOP HUNG WITH BUTT HINGES	1800MM	1450MM	95KG
4-35Hi/Hi+ SIDE HUNG WITH BUTT HINGES	1000MM	1600MM	90KG
4-35Hi/Hi+ BOTTOM HUNG WITH BUTT HINGES	1800MM	1450MM	95KG
4-35Hi/Hi+ TOP HUNG HEAVY DUTY SASH ONLY	2500MM	2000MM	90KG
4-35Hi/Hi+ SIDE HUNG HEAVY DUTY SASH ONLY	1200MM	2500MM	95KG
4-35Hi/Hi+ BOTTOM HUNG HEAVY DUTY SASH ONLY	2500MM	2000MM	95KG

Max Certifiable Weight = 95KG, Max Certifiable Perimeter = 7.1 Metres

Please note that system parameters are different for Friction Stays and opening distances may be restricted. Please contact SE Controls for advice.

Butt hinges are the preferred hardware for AOV's.

Please refer to Metal Technology's Vent Size Limitation Charts for confirmation of size limits and suitable hardware.

Notes

The profile parameters outlined within this document are aligned to Metal Technology tested performance parameters. If your vents are outside of these sizes please ensure you obtain written acceptance from Metal Technology for the oversized vents. Without this we cannot produce a Declaration of Performance.

The actuators alone will not act as 'window restrictors'. The façade contractor/fabricator should consider the installation of suitable restrictors relative to the orientation of the vent, so that stability is provided should the actuator be removed, or the vent is subjected to high external forces whilst in the open position. Contact our team for further advice.

Please ensure that the latest Metal Technology Technical Manual is followed during fabrication of the vents. Any deviation from the technical manual must be discussed with SE Controls prior to fabrication

Façade Engineering Services

CAD DETAILS

PROJECT DESIGN

CERTIFICATION

QUOTATIONS

FREE AREA CALCULATIONS

REGULATIONS ADVICE

PRODUCT SELECTION

SPECIFICATION

To contact a member of the Façade support team [click here](#).

For further information [click here](#) for the Smoke Control Association's guidance document for EN12101-2:2003 Automatic Opening Smoke Vents.

