

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.

Tested AOV Solutions



NorDan and SE Controls have collaborated together to provide the Construction market 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 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 in placing that product onto the market compliantly.

SE Controls Certification Process

STAGE 1 Consult

Consult SE Controls:

- Ensure the profile that has been selected is within scope of the tested solution,
- free area performance calculations and to
- select the appropriate tested actuator.

STAGE 2 Purchase

Purchase your EN12101-2:2003 compliant AOV from NorDan

STAGE 3 Installation of Actuators

Installation of actuators (on site) must be carried out under a System 1 FPC process as per the prescriptive detail. Apply certification mark.

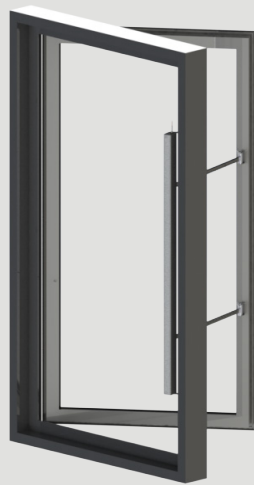
STAGE 4 Certify

SE Controls produce a Declaration of Performance (DoP) to EN12101-2:2003 in accordance with BS 7346-8 and the CPR.



For a list of all SE Controls approved actuator installers [click here](#).

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: SOR010000																														
1	Unique Identification Code of Product Type: NSHEV comprising SE Controls SSCO NJ 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 443060. 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-0001/A.																															
9	Essential Characteristics: <table border="1"> <thead> <tr> <th>Declared performance</th> <th></th> <th>EN12101-2:2003</th> </tr> </thead> <tbody> <tr> <td>Nominal Activation Conditions</td> <td>24v DC</td> <td>4.11 4.2</td> </tr> <tr> <td>Response Delay</td> <td><60s</td> <td>7.1.2</td> </tr> <tr> <td>Operational Reliability</td> <td>see 1030 / 104, 1050</td> <td>7.1.7 7.4 (Annex C/F)</td> </tr> <tr> <td>Effectiveness of Smoke/ hot gas extraction</td> <td>See 1030 to 1031</td> <td>6 (Annex B)</td> </tr> <tr> <td>Aerodynamic Free Area</td> <td>See 1030 to 1031</td> <td>6 (Annex B)</td> </tr> <tr> <td>Performance Criteria under Fire Conditions</td> <td>B300</td> <td>7.5 (Annex G)</td> </tr> <tr> <td>Fire Resistance - Mechanical stability</td> <td>B300</td> <td>7.5 (Annex G)</td> </tr> <tr> <td>Ability to open under Environmental Conditions</td> <td>T (B0)</td> <td>7.2/ 7.3 (Annex D/E)</td> </tr> <tr> <td>Resistance to Fire</td> <td>A1</td> <td>7.5.2.1</td> </tr> </tbody> </table>		Declared performance		EN12101-2:2003	Nominal Activation Conditions	24v DC	4.11 4.2	Response Delay	<60s	7.1.2	Operational Reliability	see 1030 / 104, 1050	7.1.7 7.4 (Annex C/F)	Effectiveness of Smoke/ hot gas extraction	See 1030 to 1031	6 (Annex B)	Aerodynamic Free Area	See 1030 to 1031	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 (B0)	7.2/ 7.3 (Annex D/E)	Resistance to Fire	A1	7.5.2.1
Declared performance		EN12101-2:2003																														
Nominal Activation Conditions	24v DC	4.11 4.2																														
Response Delay	<60s	7.1.2																														
Operational Reliability	see 1030 / 104, 1050	7.1.7 7.4 (Annex C/F)																														
Effectiveness of Smoke/ hot gas extraction	See 1030 to 1031	6 (Annex B)																														
Aerodynamic Free Area	See 1030 to 1031	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 (B0)	7.2/ 7.3 (Annex D/E)																														
Resistance to Fire	A1	7.5.2.1																														
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 Gates - Director of Global Sales																														

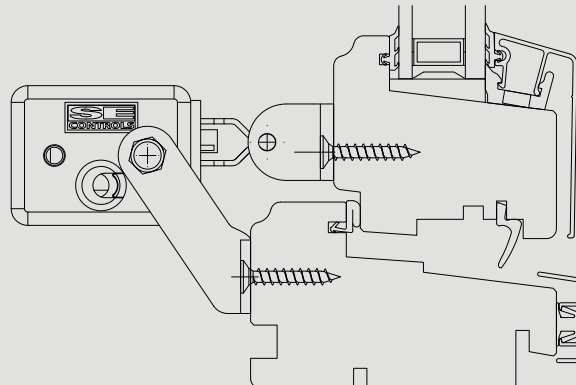
The Declaration of Performance (DoP) and the product certification mark are the ultimate proof of compliance which illustrates the vent profile and actuator have been tested together as a single solution to all declarable essential characteristics of EN12101-2:2003.

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.



NorDan Ntech Top Swing Reversible EN12101-2 Tested Profiles and Parameters



SYSTEM NAME

SERIES 40 BRACKET KIT NUMBER

TOP TECH 92MM FRAME

AKS00020018

OPUS 92MM FRAME

AKS00020018

PLEASE NOTE: This orientation is only acceptable for air intake as part of a smoke extract system. Top hung ventilators are not acceptable for smoke extract in accordance with Approved Document B.

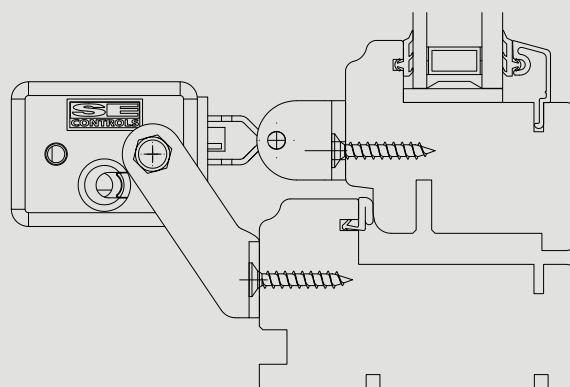
System Parameters

SYSTEM NAME	MIN OUTER FRAME WIDTH	MAX OUTER FRAME WIDTH	MIN OUTER FRAME HEIGHT	MAX OUTER FRAME HEIGHT	MAX SASH WEIGHT
TOPTECH 92MM FRAME	348MM	2388MM	388MM	1788MM	80KG
OPUS 92MM FRAME	488MM	2388MM	550MM	1588MM	55KG

Max Certifiable Weight = 80KG, Max Certifiable Perimeter = 7.1 Metres



NorDan Ntech Side Hinged EN12101-2 Tested Profiles and Parameters



SYSTEM NAME	SERIES 40 BRACKET KIT NUMBER
92MM FRAME	AKS00020018
105/80 105MM FRAME	AKS00020018
100MM FRAME INCL 8MM ALUM	AKS00020018
105/80 113MM FRAME INCL 8MM ALUM	AKS00020018

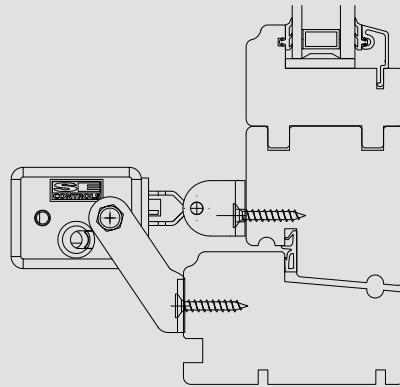
System Parameters

SYSTEM NAME	MIN OUTER FRAME WIDTH	MAX OUTER FRAME WIDTH	MIN OUTER FRAME HEIGHT	MAX OUTER FRAME HEIGHT	MAX SASH WEIGHT
92MM FRAME	388MM	1200MM	388MM	2188MM	55KG
105MM FRAME	450MM	1200MM	488MM	2188MM	55KG

Max Certifiable Weight = 55KG, Max Certifiable Perimeter = 7.1 Metres



NorDan Ntech Side Hinged Balcony Door EN12101-2 Tested Profiles and Parameters



SYSTEM NAME

SERIES 40 BRACKET KIT NUMBER

92MM FRAME EXTENDED STILES

AKS00020018

System Parameters

SYSTEM NAME	MIN OUTER FRAME WIDTH	MAX OUTER FRAME WIDTH	MIN OUTER FRAME HEIGHT	MAX OUTER FRAME HEIGHT	MAXSASH WEIGHT
92MM FRAME	588MM	1188MM	1338MM	2537MM	120KG

Max Certifiable Weight = 120KG, Max Certifiable Perimeter = 7.1 Metres



Notes

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

The actuators alone will not act as 'window restrictors'. SE Controls recommend 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.

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.

