

Tested AOV Solutions for Smoke Ventilation

Tested Solutions and Standard Details



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

Tested AOV Solutions

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Schueco 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

STAGE 1 Consult

Consult SE Controls:

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

STAGE 2 Fabricate

Fabricate as per the tested solution preparation details and System Company Technical Manual under System 1 FPC to EN 12101-2.

STAGE 3 Installation of Actuators

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

STAGE 4 Certify

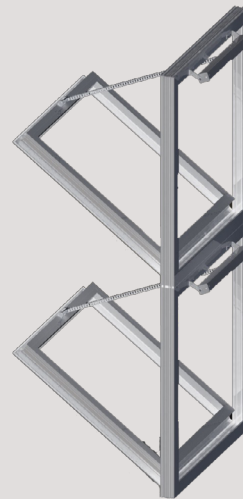
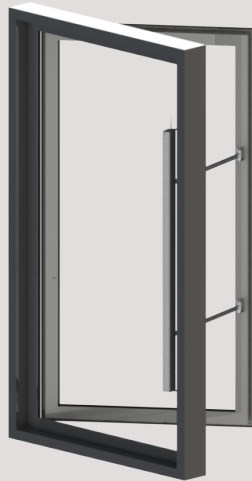
SE Controls produce a Declaration of Performance (DoP) to EN12101-2:2003 in accordance with BS 7346-8 and the CPR.



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			
SE CONTROLS	Document Ref: SEP-0001-01-01 Project Name: Block A, High Street, Town	Date: 15.09.2021 SE Ref: SOR010000	
1	Unique Identification Code of Product Type: NSHEV comprising SE Controls SECO M 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:		
	Declared performance	EN12101-2:2003	
	Nominal Activation Conditions	24v DC	4.1/ 4.2
	Response Delay	<80s	7.1.2
	Operational Reliability	Ref 1000 / 100.1000	7.1/ 7.4 (Annex C/F)
	Effectiveness of Smoke/ hot gas extraction	C _{tr} : 0.35 to 0.61	6 (Annex B)
	Aerodynamic Free Area	C _{tr} : 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	F300	7.2/ 7.3 (Annex D/E)
	Reaction to Fire	A1	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	

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CHAS
 ISO 9001
 ISO 14001
 ISO 45001
 CE
 UKCA
 UKNI

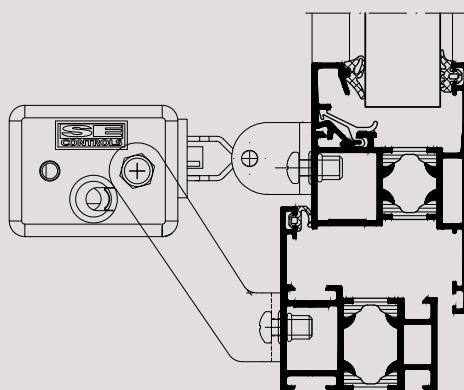
The Declaration of Performance (DoP) and the product certification mark are the ultimate proof of compliance which illustrates the vent profile and actuator have been tested together as a single solution to all declarable essential characteristics of EN12101-2:2003.

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.

UK UK CA NI CE

Schueco AWS 50 EN12101-2 Tested Profiles and Parameters



FRAME REF No.	OPENING VENT REF NO.	ADDITIONAL FEATURES REF NO.	SERIES 40 BRACKET KIT NO.
355 510	355 470	-	AKS16100003
355 370	355 470	-	AKS16100003
355 370	355 480	-	AKS16100003
355 410	355 470	-	AKS16100003
355 490	355 470	341 490	AKS16100003
355 490	355 470	341 430	AKS16100003
355 430	355 470	-	AKS16100003
355 370	355 460	-	AKS16100003
464 270	355 480	341 430	AKS16100003

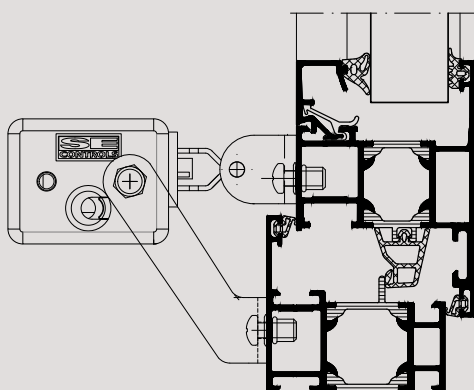
System Parameters

ORIENTATION	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
TOP HUNG ON BUTT HINGES	1900MM	1450MM	75KG
SIDE HUNG ON BUTT HINGES	1450MM or 1000MM	1900MM or 2200MM	90KG
BOTTOM HUNG ON BUTT HINGES	1900MM	1450MM	75KG

Max Certifiable Weight = 90KG, Max Certifiable Perimeter = 7.1 Metres



Schueco AWS 60 EN12101-2 Tested Profiles and Parameters



FRAME REF No.	OPENING VENT REF NO.	ADDITIONAL FEATURES REF NO.	SERIES 40 BRACKET KIT NO.
390 140	390 260	-	AKS16100003
390 220	390 260	-	AKS16100003
390 290	390 260	340 120	AKS16100003
390 180	390 260	-	AKS16100003
390 280	390 260	-	AKS16100003
390 140	390 270	-	AKS16100003
390 140	390 250	-	AKS16100003
494 280	390 270	340 050	AKS16100003
390 140	390 260	-	AKS16100003
390 330	390 260	-	AKS16100003

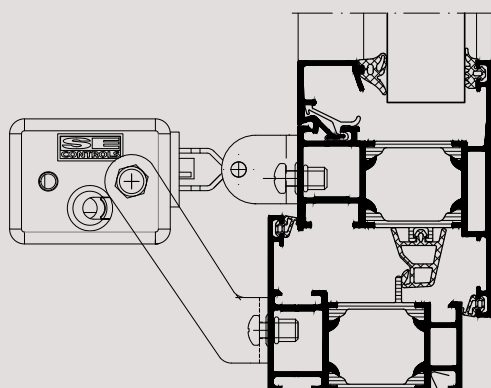
System Parameters

ORIENTATION	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
TOP HUNG ON BUTT HINGES	1900MM	1450MM	75KG
SIDE HUNG ON BUTT HINGES	1450MM or 1000MM	1900MM or 2200MM	90KG
BOTTOM HUNG ON BUTT HINGES	1900MM	1450MM	75KG

Max Certifiable Weight = 90KG, Max Certifiable Perimeter = 7.1 Metres



Schueco AWS 65 EN12101-2 Tested Profiles and Parameters



FRAME REF No.	OPENING VENT REF NO.	ADDITIONAL FEATURES REF NO.	SERIES 40 BRACKET KIT NO.
319 930	319 870	-	AKS16100003
319 750	319 870	-	AKS16100003
319 760	319 860	-	AKS16100003
319 750	319 860	-	AKS16100003
319 820	319 860	-	AKS16100003
319 910	319 860	363 990	AKS16100003
319 900	319 860	-	AKS16100003
319 910	319 860	363 900	AKS16100003
319 930	319 860	-	AKS16100003
494 300	319 870	363 900	AKS16100003
319 750	319 860	-	AKS16100003
319 740	319 870		AKS16100003

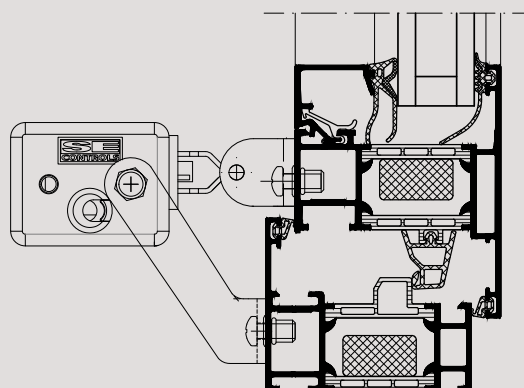
System Parameters

ORIENTATION	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
TOP HUNG ON BUTT HINGES	1900MM	1450MM	75KG
SIDE HUNG ON BUTT HINGES	1450MM or 1000MM	1900MM or 2200MM	90KG
BOTTOM HUNG ON BUTT HINGES	1900MM	1450MM	75KG

Max Certifiable Weight = 90KG, Max Certifiable Perimeter = 7.1 Metres



Schueco AWS 70Hi EN12101-2 Tested Profiles and Parameters



FRAME REF No.	OPENING VENT REF NO.	ADDITIONAL FEATURES REF NO.	SERIES 40 BRACKET KIT NO.
197 370	480 800	-	AKS16100003
197 440	480 800	-	AKS16100003
197 510	480 800	358 250	AKS16100003
197 410	480 800	-	AKS16100003
197 500	480 800	-	AKS16100003
197 360	480 810	-	AKS16100003
197 370	480 810	-	AKS16100003
197 380	480 810	-	AKS16100003
197 440	480 800	197 520	AKS16100003
494 310	480 810	358 150	AKS16100003
197 530	480 800	-	AKS16100003
197 440	480 810	-	AKS16100003
197 530	480 810	-	AKS16100003

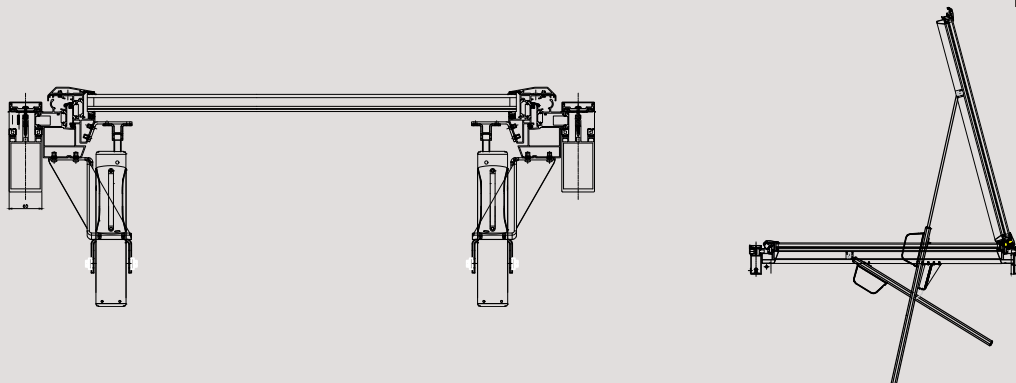
System Parameters

ORIENTATION	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
TOP HUNG ON BUTT HINGES	1900MM	1450MM	75KG
SIDE HUNG ON BUTT HINGES	1450MM or 1000MM	1900MM or 2200MM	90KG
BOTTOM HUNG ON BUTT HINGES	1900MM	1450MM	75KG

Max Certifiable Weight = 90KG, Max Certifiable Perimeter = 7.1 Metres



Schueco AWS 57RO Inclined EN12101-2 Tested Profiles and Parameters



FRAME REF NO.	OPENING VENT REF NO.	ACTUATOR SERIES	TRUNNION PLATE PART NUMBER	STAND OFF BRACKET LH	STAND OFF BRACKET RH	SLIDING BRACKET
369 770	369 830	SELA T 24 100 SYNCHRO	AXS15860001	AXS15850001	AXS15850002	AAU0041761Z
369 780	369 840	SELA T 24 100 SYNCHRO	AXS15860001	AXS15850001	AXS15850002	AAU0041761Z
331 810	369 830	SELA T 24 100 SYNCHRO	AXS15031001	AXS15850001	AXS15850002	AAU0041761Z
331 820	369 840	SELA T 24 100 SYNCHRO	AXS15031001	AXS15850001	AXS15850002	AAU0041761Z

System Parameters

ORIENTATION	MAX SASH WIDTH	MAX SASH HEIGHT	MAX SASH WEIGHT
TOP HUNG ON BUTT HINGES	1300MM OR 2100MM	2100MM OR 1300MM	120KG
BOTTOM HUNG ON BUTT HINGES	1300MM OR 2100MM	2100MM OR 1300MM	120KG

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



Notes

The profile parameters outlined within this document are aligned to Schueco tested performance parameters. If your vents are outside of these sizes please ensure you obtain written acceptance from Schueco 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 Schueco 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.

