




**Introduction to the SCA - independent certification
and testing of smoke control products**

www.smokecontrol.org.uk

About the SCA

- ❖ The Smoke Control Association (SCA) is an independent body involved in various aspects of smoke control, including service and maintenance.
- ❖ Projects include the publication of guides related to the design of smoke control systems and projects.
- ❖ These guides also include methods for testing smoke extract fans, natural ventilators, dampers, smoke curtains and controls.





“Unless we fix the system, we have no way of guaranteeing that there won’t be another catastrophic event”

Dame Judith Hackitt – author of the independent review into building regulations and fire safety, commissioned in the wake of the Grenfell Tower tragedy

The SCA is proud to have been contributors and selected to be part of Working Group 2

WG2 – Building Installers
WG12 – Building Products

Industry
working
groups
With a new
working
group formed
WGO for
Competence

IRG Competence for Building a Safer Future

MHCLG		Joint Competent Authority
Industry Response Group		
Steering Group on Competency for Building a Safer Future		
Engineers	Installers	Fire Engineers
Fire Risk Assessors	Fire Safety Enforcement Officers	Building Control/Standards Inspectors
Building Designers/Architects	Building Safety Managers	Site Supervisors
Project Managers	Procurement	Products
Organised Capacity of Buildings (OCB)	Principles of Competence/Culture and Behaviour	

Implications for the smoke and fire sector

- HRRBs
- Third party accreditation
- Certified tested products
- Joint Competence Authority



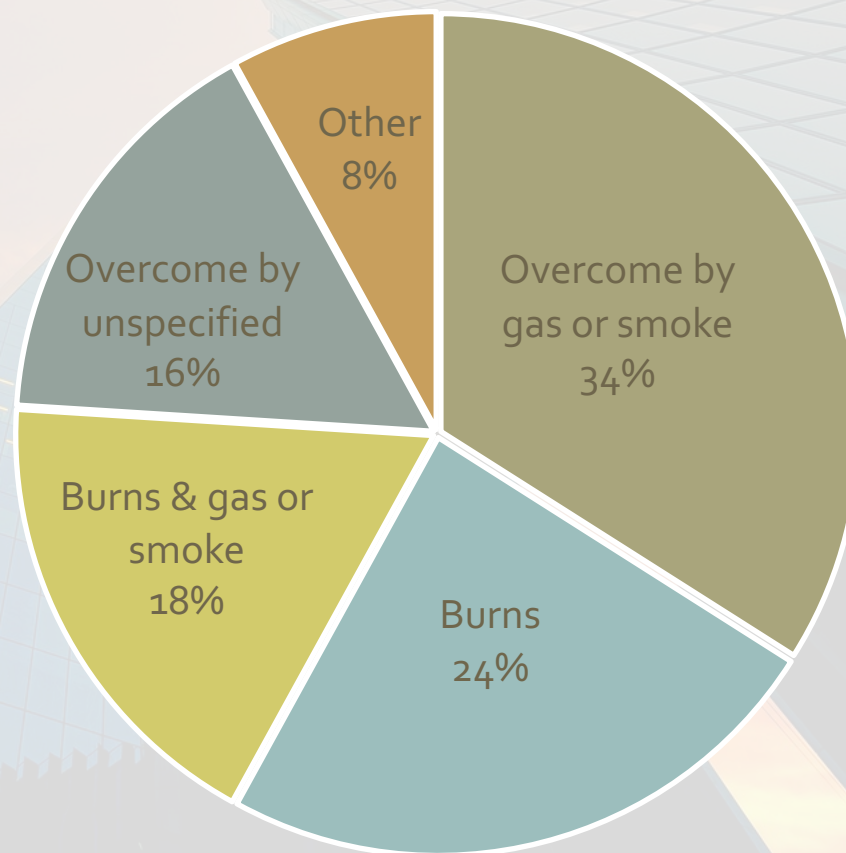
Key issues in the smoke control industry

There are industry specific issues that has made it hard to assess competence of smoke control specialists:

- The industry is unregulated.
- There is a lack of commercially available training and qualifications.
- The industry is fairly small and sometimes overlooked.
- Fire Safety seems to have a higher profile than Smoke Control.

**Why use
smoke
control
products?**

Death resulting from building fire



Overcome by gas or smoke Burns Burns & gas or smoke Overcome by unspecified Other



*"Of 500 residential blocks assessed,
65% failed a fire safety inspection"*

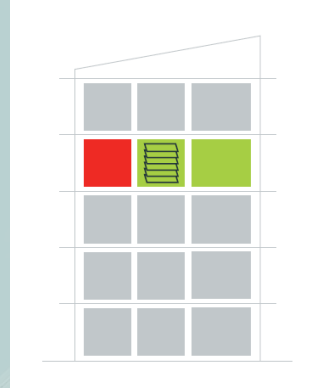
Nick Coombe – Strategic Technical
Advisor at London Fire Brigade and
Vice Chair of NFCC



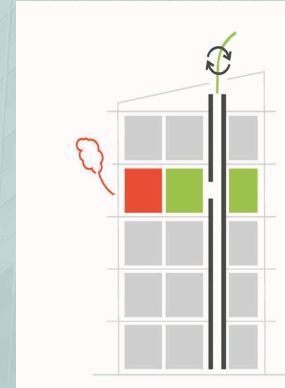
Key products used in the smoke control industry

- ☐ Mechanical smoke removal fans
- ☐ Passive vent products such as louvres or flap ventilators
- ☐ Jet fan systems for car parks
- ☐ Fire dampers
- ☐ Smoke dampers
- ☐ Intelligent controls
- ☐ Smoke removal motor drives

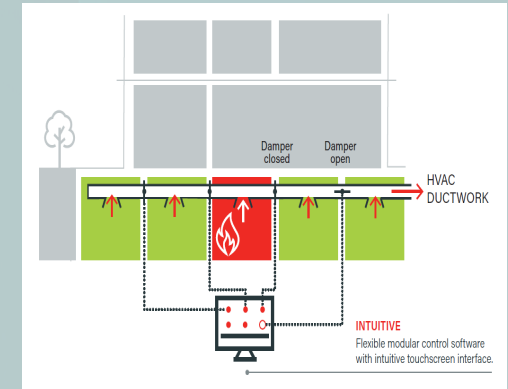
Common smoke system types



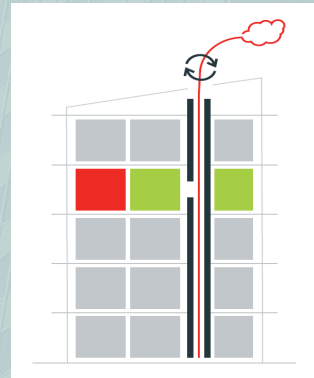
Automatic ventilators



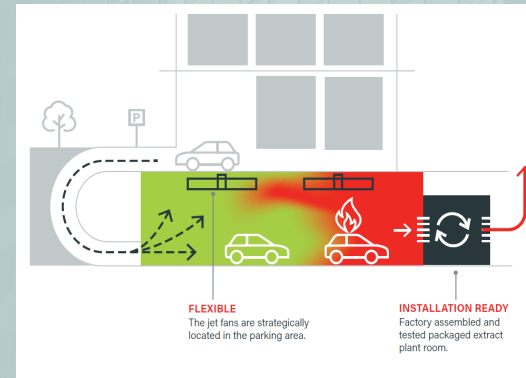
Pressurisation systems



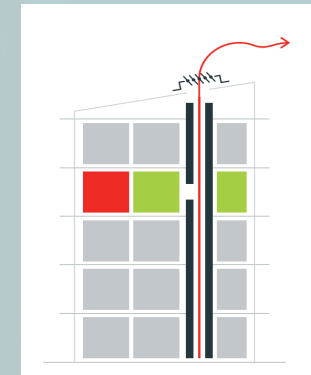
Smoke and fire dampers



Mechanical smoke
extract shafts



Car park ventilation



Natural smoke
extract shafts

Reference standards for smoke control products for high rise residential buildings

System/Product	Standard
Mechanical Smoke Extract (smoke shaft)	
System (design)	BS 9999 & SCA Guide on Common Escape Routes in Apartment Buildings
Extract Fans	EN12101:3, 2015
Roof Ventilators	EN12101:2, 2017
Lobby Dampers	EN12101:8, 2011
Control Panels	EN12101:9, (draft) EN12101:10, 2005
Pressurisation Systems	
System (design)	EN12101:6, 2005
Input Fans	
Extract Fans	
Air Release Dampers	EN12101:8, 2011
Roof Ventilators	EN12101:2, 2017
Control Panels	EN12101:9, (draft) EN12101:10, 2005

System/Product	Standard
Natural Smoke Extract	
Stairwell Ventilators	EN12101:2, 2017
Automatic Opening Ventilators (AOV)	EN12101:2, 2017
Control Panels	EN12101:9, (draft)
	EN12101:10, 2005
Car Park Ventilation	
System (design)	EN12101:11 (draft)
	BS7346:7, 2013
Jet Fans	EN12101:3, 2015
Extract Fans	EN12101:3, 2015
Dampers	EN12101:8, 2011
Control Panels	EN12101:9, (draft)
	EN12101:10, 2005
Basement Extract Systems	
Control Panels	EN12101:9, (draft)
	EN12101:10, 2005
Dampers	EN12101:8, 2011
Extract Fans	EN12101:3, 2015

IFC SD19 Certification

- ❑ The UKAS applied for SCA IFC SDI 19 Certification scheme is **mandatory** for SCA members involved in installation, service and maintenance since 2019
- ❑ The certification was developed to ensure a suitable level of competency in relation to fire strategy verification, system design and the installation of smoke control systems with ongoing scheme assessment



BS 7346-8:2013 Components for smoke control systems

Code of practice for planning, design, installation, commissioning and maintenance

- **IFC Standards** forms the basis of the third party certification scheme.
- All projects are logged on the IFC website.
- Each stage of a project is systematically checked and verified against the standard.



Installation

All smoke control equipment should be installed by *competent* persons in accordance with the manufacturer's instructions and the technical specification, preferably covered by an *installation certification scheme* where available and a DoP



Commissioning

- The system should be commissioned by a competent person who has access to the requirements of the designer (i.e. the system specification) and any other relevant documentation or drawings.
- The person commissioning the smoke control system should possess at least a basic knowledge and understanding of the activities covered in Clause 5, Clause 6 and Clause 7 of the scheme.
- At commissioning, the entire system should be inspected and tested to ensure that it operates satisfactorily and in conjunction with other life safety systems.

Maintenance

- *Frequent inspection of the system should be undertaken by a suitably-trained member of the premises management team.*
- *Smoke control equipment should only be maintained by a competent person with specialist knowledge of smoke control systems.*
- *Competence can be assured by using organisations that are third party certificated.*
- *Service and maintenance check list and matrix*



Latest Guide
Jan 2020

- Guidance on Smoke Control to
Common
Escape Routes in
Apartment Buildings
(Flats and Maisonettes)

Summary

- *Only use certified manufacturers, system designers and installers*
- Always ask for a copy of the products DoP
- Always ask for a copy of the relevant test certificate
- Always ask for a copy of the approved installer scheme certificate
- Always ask to confirm the relevant EN and ISO standards worked to



Potential Certificates of Compliance & Competence

- Certificate of fire engineers system design in accordance with BS/EN and ADB approval form (Compliance)
- Certificate of CFD system design
- Certificate of manufacture to EN ISO 9001/2
- IFC Certificate of Installer Competence
- Declaration of Performance (DoP) of products
- Tests EN 12101 certificates
- Installation completion certificate
- Wiring competence certificate
- Whiteness Test cert by system designer
- Commissioning certificate
- Issue of O&M manual
- Frequency of service and Maintenance form with signature and dates
- Building Inspectors Matrix check list
- Fire Brigade Sign off.
- Building inspector sign off certificate
- Master Certificate book register for all the above

CE

Shenzhen BCTC Testing Co., Ltd.
BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road,
Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China



Certificate of Compliance

Certificate Number: BCTC-FY170301569C

Applicant : Creative Bits Solutions
The View Mall mezzanine floor 2 - Office B Block 2, Between Arabian Gulf Street and Salem Mubarak Street, near Symphony Mall & Hotel Postal Code: 20002 city: Salmiya country: Kuwait

Manufacturer : MOKO TECHNOLOGY LIMITED
4Floor, G Building, Zhonggangxing Industrial Estate, Zhangge Community, Guanlan Street, Longhua, Shenzhen, China

Product : EBOT
M/N : EBOT

Test Standard : EN 55032:2015
EN 61000-3-2:2014, EN 61000-3-3:2013
EN 55024: 2010+A1:2015
EN 61000-4-2:2009, EN 61000-4-3: 2006+A1:2008+A2:2010
EN 61000-4-4:2012, EN 61000-4-5:2014
EN 61000-4-6:2014, EN 61000-4-8:2010, EN 61000-4-11:2004

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC directive 2014/30/EU. It is possible to use CE marking to demonstrate the compliance with this EMC Directive. It is only valid in connection with the test report number: BCTC-FY170301569E.



This certificate of conformity is based on a single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant. Directives have to be observed.

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