Flexible Smoke Curtains

Automatic smoke curtains

- Smokeshield-S
- Supercoil H / HC
- Supercoil
- Stripecoil
- Smokeshield-C
- Moducoil

Temporary smoke barrier

- Apericoil

Fixed smoke curtains

- Supercoil fix
- Moducoil fix

Control Units

www.stoebich.com
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STÖBICH FIRE PROTECTION

Innovation for your Protection!

Overview Page

Certificate for the usability

UL 864-listing:

A certificate for the usability according to **UL 864-listing** is required.

Classical, first class, automatic smoke curtain:

Approval according to the Building Supervision for the characteristics of the complete smoke curtain in case of fire: Provided that basic demands from the valid product standards are missing, additional certificates become necessary. Smoke curtains always need an official approval document.

According to the test standard UL 864 / UL 1784 /ASTM E 84 the following tests are necessary:
Leakage test, cycle test and a test for the tightness of the fabric .

Temperature/time-classifications

Class	*Temp.(°F)*	*Time (minutes)*
D 30	1112	30
D 60	1112	60
D 90	1112	90
D 120	1112	120
DA	1112	>120 achieved time

Class	*Temp.(°F)*	*Time (minutes)*
DH 30	2012	30
DH 60	2012	60
DH 90	2012	90
DH 120	2012	120
DHA	2012	> 120 achieved time

Application with higher temperature

STTC = Standard-Time-Temperature-Curve

Additional performance features due to 33 years of experience by Stöbich:

Innovation leader:

· Over **130** patents, e.g. Gravigen drive unit

· Over **300** smoke and fire tests

· Many awards, e.g. Award of Architectural Product Innovation
· Large variety for control units

Long time experience:

· More than **1.500** projects have been successfully completed

· More than **10.000** installations worldwide

Premium quality:

· ISO 9001 - certification since 1996
· Highest expertise for the fabrics
· In-house development, in-house production of the fabrics, In-house coating and handling of the fabrics

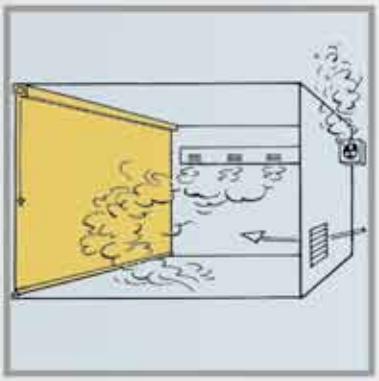
Challenges & protection targets

- **90% of all victims die from smoke**
- **70% of physical damages are caused by smoke**
- **The source of the fire as well as further sources of danger can not be detected by the fire brigade**

Safe escape routes due to adapted smoke protection classifications according to leakages, temperature loads and time classifications.

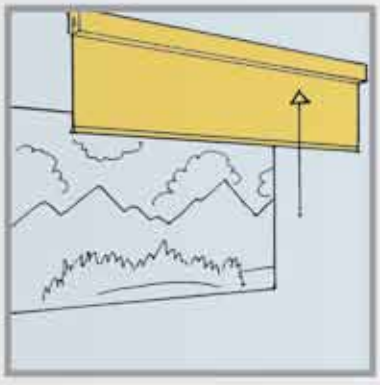
Extinction of the fire by the fire brigade becomes easier as they can detect the origin of the fire. This is possible due to the smoke compartments avoid **a spread of smoke** to the complete room.

Smoke curtains can increase the effectiveness of SHEV sytems, i.e. the higher the smoke layer, the smaller the openings for exhaust air as well as for the fresh air intake openings.



Smoke curtains serve **to separate rooms for the mechanical smoke exhaust.** Therefore the rating and the linked investment for exhaust fans can be reduced.

A **controlled flow** of the smoke can be achieved by smoke curtains even with cross streams which may have a negative influence on the entrainment of the smoke - especially in high rooms.



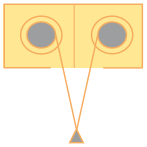
Invisible smoke curtains not only comply with the highest architectural demands, but also do **not restrict limit the view.**

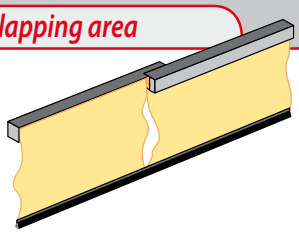
The Stripecoil system offers the following solutions to buildings with an unfavourable structure when the **escape routes** have to be combined with smoke curtains. Even a large number of persons (the width of the system of 10' up to approx. 200 persons) can pass through the system.

Fixed smoke curtains have the advantage of being **extremely light weight** - approx 2,2 lbs ft^2 and offer an easy sealing of continuing pipes, ducts or cable trays.

Definition of the smoke exhaust concept and the associated requirements to the smoke curtains can be done according to the UL 864 / UL 1784, calculation or a small scale test

Remaining opening within the overlapping area



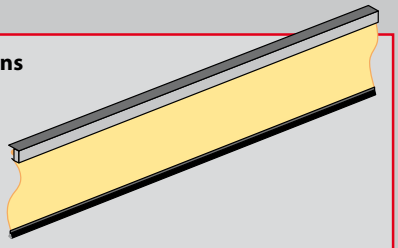


Do you have to avoid any openings remaining?

Supercoil offers smoke curtains with a width of 164 feet in one piece - therefore

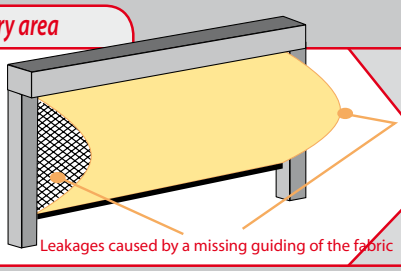
0%

leakage within the overlapping area .



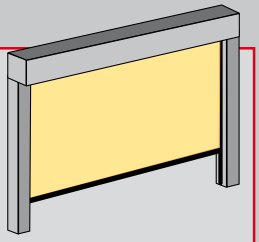
Remaining opening within the boundary area

Do you have to avoid openings remaining caused by pressure load in boundary areas?



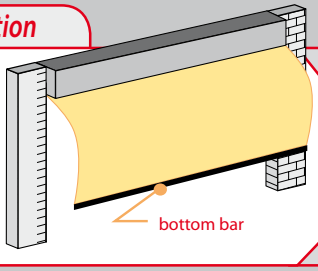
Special side guides with steel rods guarantee for a positive fitting in the boundary area for the complete height - therefore

0% leakage in the boundary area even in the case of a pressure load.

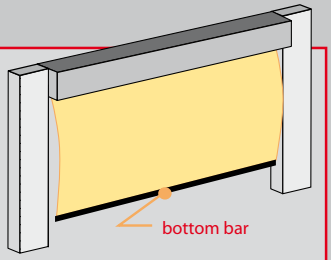


Remaining opening caused by deflection

Is the deflection and the involved leakage a problem?
(a weight of the bottom bar of approximately 4,4 lbs / ft is common).

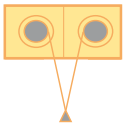


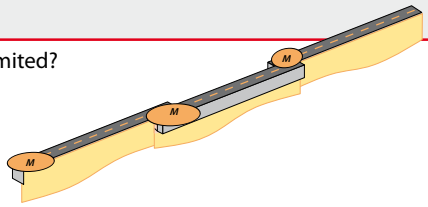
Stöbich Supercoil system offers a remarkably lower deflection due to the high weight of the bottom bars (between 10,14 and 29,76 lbs).



Demand for space + number of drive units

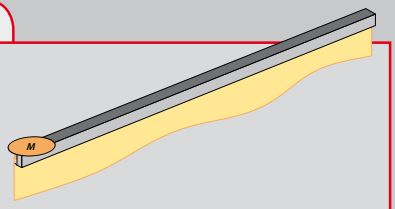
Is the available space limited?





Provided you do not want to have a drive unit for each element …

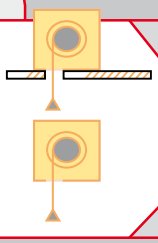
… chose the ***Stöbich Supercoil system*** with corresponding control unit and large drive capacity - independent from the drop length and up to 164 feet in width.



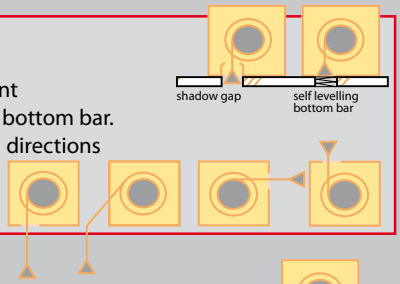
Closing of a ceilling and closing direction

Do you require a clean sealing of a ceilling even for large dimensions?

Do you have a fire protection concept which can not be achieved by using vertical smoke curtains?

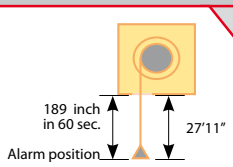


Stöbich Supercoil system offers an optical more significant design e.g. by the self levelling bottom bar. Supercoil offers various closing directions and adjusts to your protection concept.



Reaction time and drop length

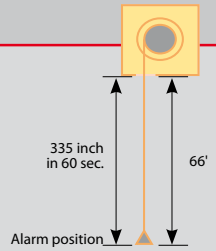
Which drop length has to be achieved within 60 seconds?



Do you require an extreme drop length?
(standard is 27'11")

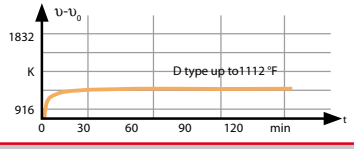
Stöbich Supercoil system offers closing velocities to achieve a drop length of 335 inch within 60 seconds.

Stöbich Supercoil system offers drop lengths of up to 65'8".

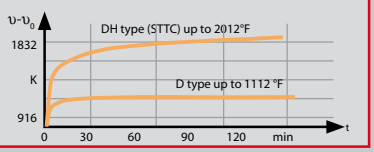


Temperature classification

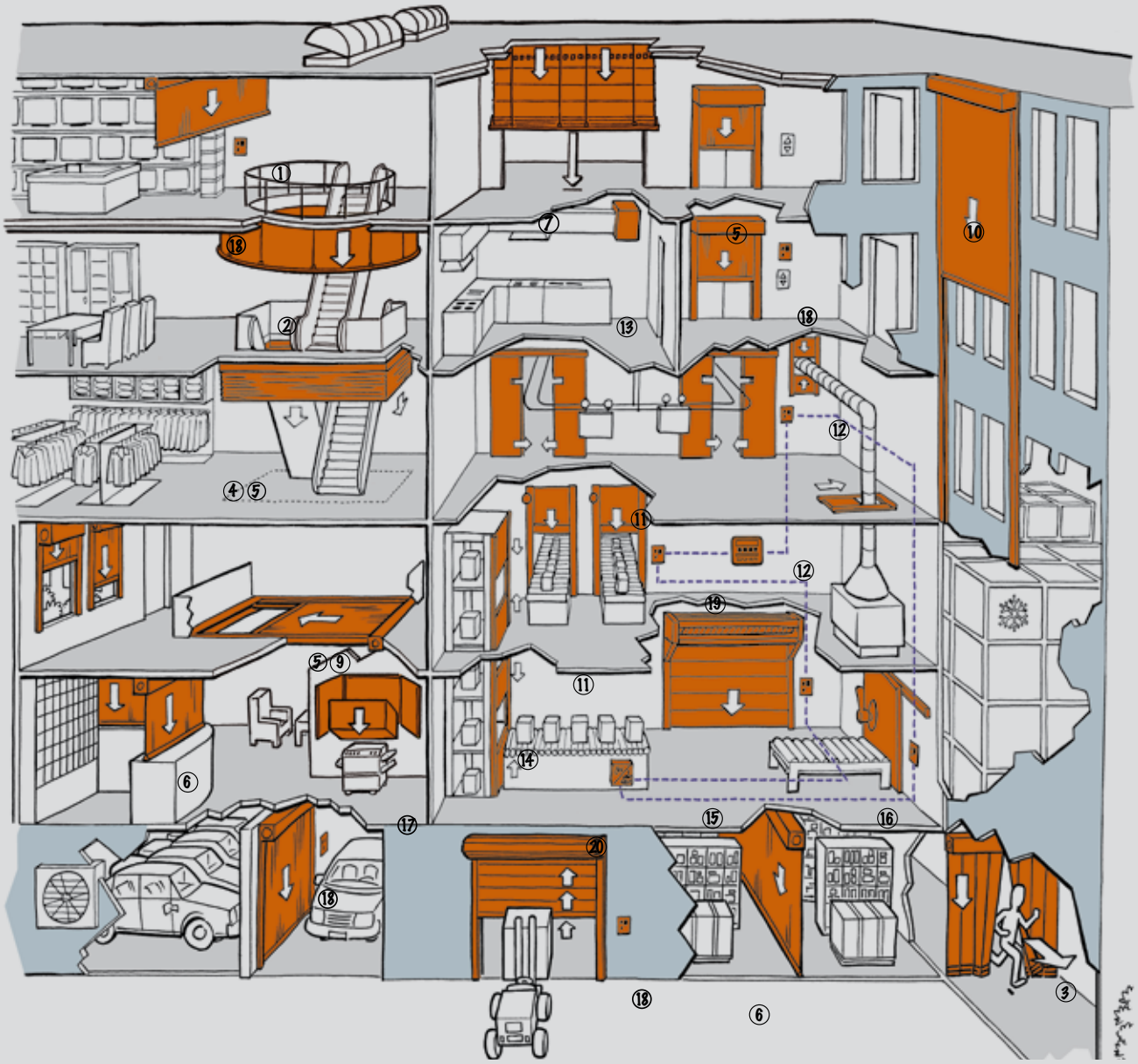
Is your protection concept demanding for a higher temperature classification?



Stöbich Supercoil system can be supplied in different temperature classifications.



Stöbich
innovative smoke & fire protection



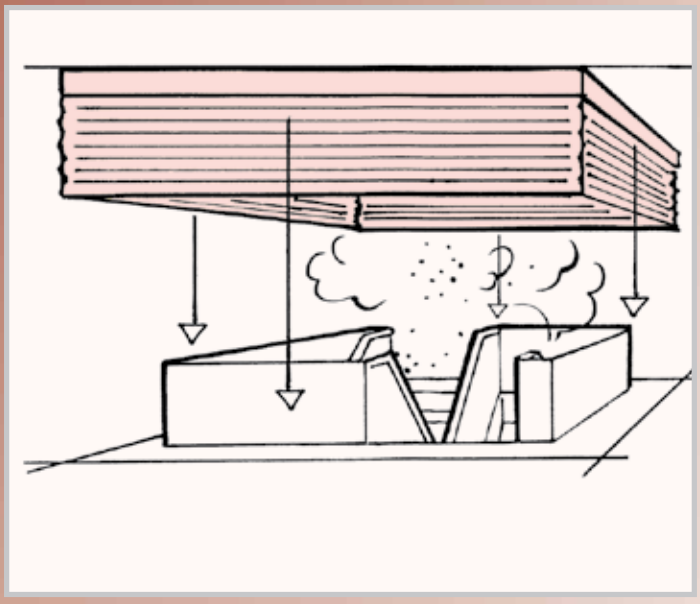
1. Smoke extraction by automatic or fixed textile smoke curtain
2. Smoke curtain with a curved course
3. Automatic textile smoke curtain with the feasibility to pass through
4. Creation of areas for smoke conduction or as smoke curtain
5. Automatic smoke curtain
6. Automatic textile smoke curtain for openings and walls
7. Textile fire curtain EI 90 without water admission
8. High speed doors with integrated fire curtain
9. Automatic horizontal textile smoke curtain for openings in ceilings
10. Fire curtain for facades, external installation
11. Conveyor system fire curtain for uninterrupted and inter rupted conveyor systems
12. Conveyor system closures for pneumatic conveyor systems
13. Smoke protection curtain for industrial kitchen exhaust system
14. Elevator shaft doors as fire curtains
15. Fire protection stacking doors
16. Isogate – fire protection insulation doors and – gates
17. Fire protection hoods for electric devices
18. RZ 7, RZ 8, AMU Control units
19. CAN BUS – cross linked hold open units
20. Emergency power back up unit "Powerdrive" 400 VAC

Attention:

The textile fire curtain are not regulated in the IBC Building Code and has to be approved by the local authorities as an alternate means and methods.

Smokeshield-S

Automatic smoke curtain Smokeshield-S



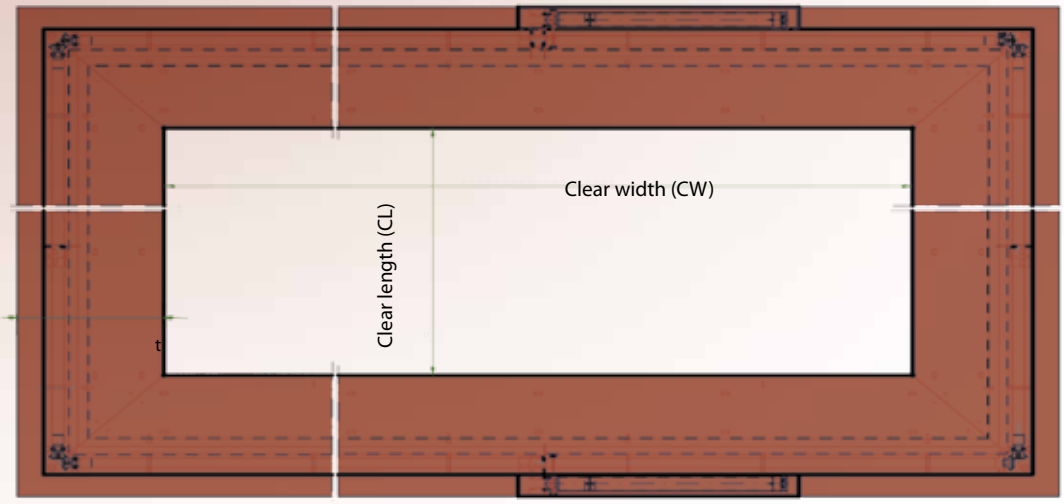
System Description

- Rectangular or polygon shaped base area of the smoke curtain
- Outer dimensions up to 52'8" and drop lengths of up to 19'9"
- Designed for a high time classification and temperature load D = 1112°F and DH = 2012°F
- No openings remaining - neither in the upper area nor at the corners
- Pillars are not necessary, nevertheless complete tightness even in case of high pressure
- Small height of the casing - approx. 4 3/4" at a drop length < 11' 6"
- Standard drive system „Gravigen" that is closing without auxiliary power, no fire resistant cables are necessary
- Redundant drive system as crash protection
- Also suitable (and approved) as smoke curtain that is flush with the floor

Perimeter of the system	Drop length	t (inch)	h (inch)
< 300'	9'5"	4 3/4"	9 3/4"
< 300'	9'5"- 19' 8 1/4"	8 3/4"	17 3/4"

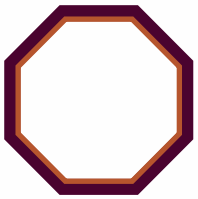
At least 2 drive units
and one more for each 33' above 65'8" perimeter

Dimensions



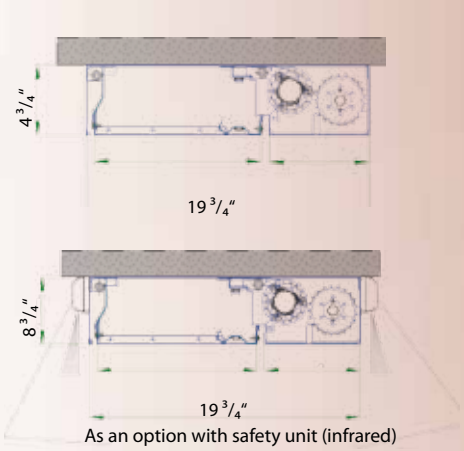
Weight of the system:
18 - 22lbs per lineal foot, side guides: 14,6lbs per lineal foot

Range of different runs of the smoke curtain

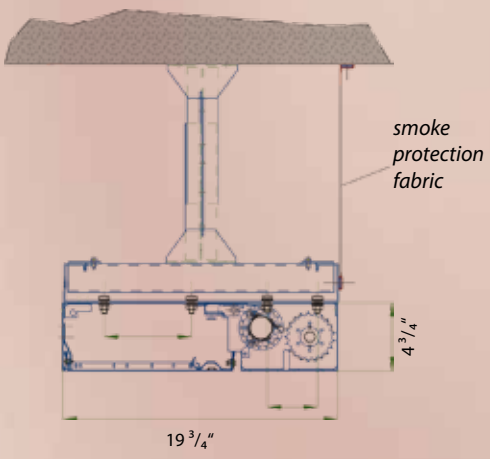


STÖBICH FIRE PROTECTION

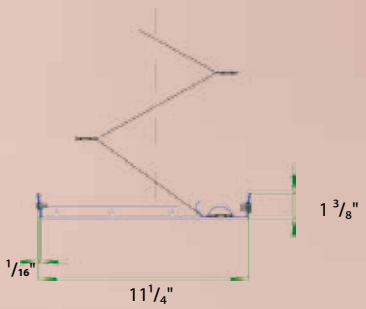
Range of housings



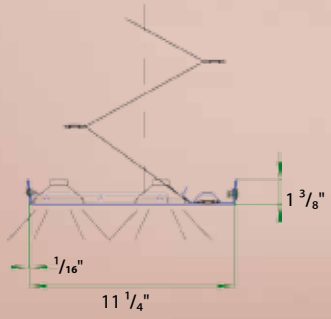
As an option with safety unit (infrared)



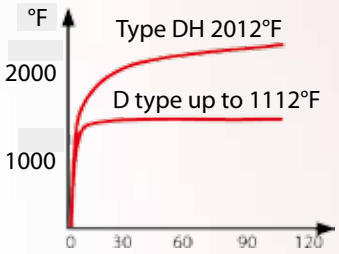
Bottom tray

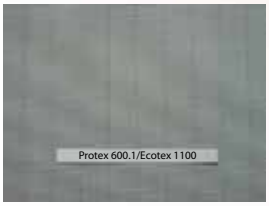


optional with spots or light strip
(possibly raise of construction height)



Patented tubular motor with
Gravity Fail Safe technology

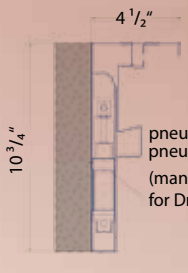




Labelling UL 864	Stöbich **Smokeshield-S** system
Automatic smoke curtain	ASB 1 / ASB 3 type Closing without electric power
Temperature/Time class	D120 (1112°F/60 min.) DH120 (2012°F/120 min.)
Closing speed (depends on the drive)	From 5,9 inches/sec. up to approx 11,8 inches sec. e.g. drop length 29'8" = 60s in the closed position
Gap - casing (a-f)	0 inches
Gap - edges (g) embrasure	0 inches
Gap - joint (h)	0 inches
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/ f2/h)	< 3 3/8" 3/feet²/h
Test temperature	At ambient temperature and at 392°F
Free area - casing	= Length of the housing x gap housing = L x 0 = 0 inches²
Free area - edges	= D x gap - edges
Free area - joint	= D x gap - joint x number of joints
Certificate of Conformity	UL 864 (control unit) OSHPD CA Certificate
Approval for smoke behaviour of the fabric	ASTM E 84

D = Drop length of the smoke curtain

Side guide for open polygones



pneumatical reset
pneumatic cylinder
(manual recommendation
for Drop Length< 8'3")

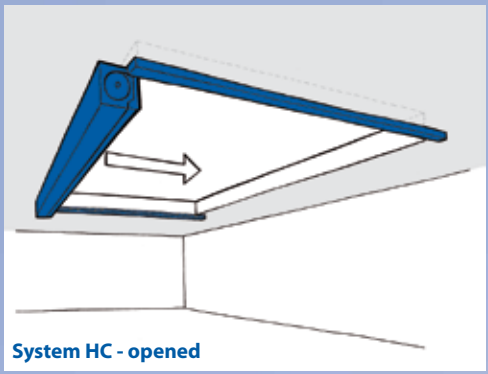
Supercoil-H+HC

The textile (H)orizontal smoke protection closure for openings in ceilings with a leakage of 0%

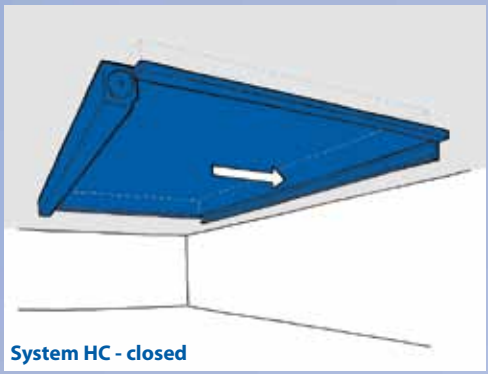
new generation - without tensioning ropes

patent pending

High flexibility due to low space requirement (installation under the ceiling and into the embrasure)



System HC - opened



System HC - closed

System HC two-part - closed

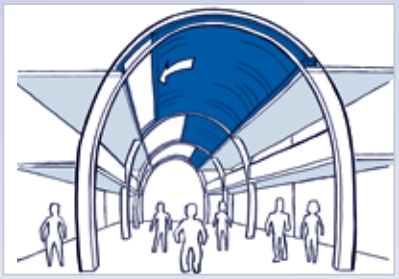
System description Supercoil-HC

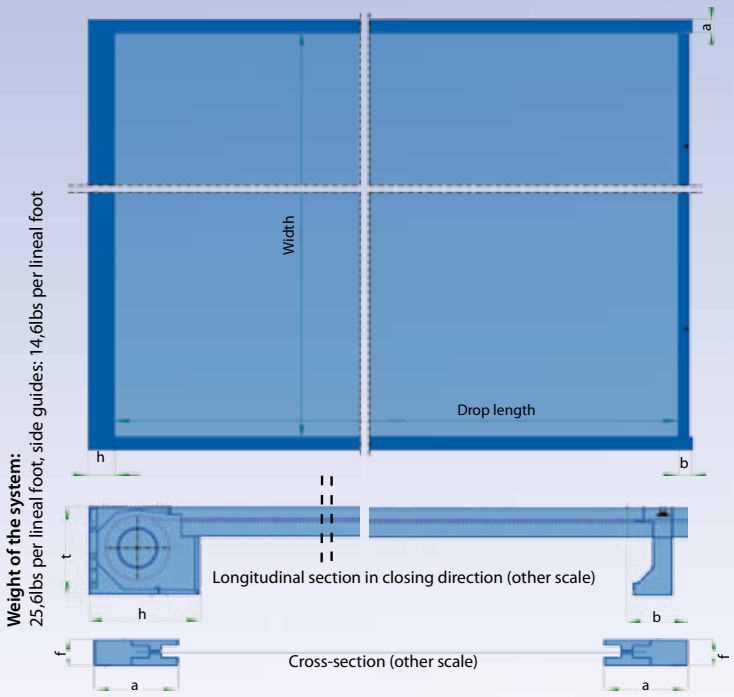
- sealing system for large openings in ceilings without supporting or tensioning ropes up to 33' x 33'
- housing and bottom bar build a closed casing in operating condition (patent applied)
- extensive testings with the dimensions 16'5" x 16'5" till DH 120 and EW 60
- two-part version in design status with the dimensions 33' x 65'8" with centrally locking end bars
- motorized closing and opening (emergency power supply is required)

System description Supercoil-H

- large openings in ceilings till 65'8" width and high drop lengths – see table
- tensioning ropes in a distance of 5' to support the fabric with large dimensions as well as to withstand the pressure load in case of smoke
- high variability in dependence on the design e.g. arch-shape
- safe closing process up to 16'5". drop length, optionally with gas tension springs that means without auxiliary energy, or with Duplex drive system (emergency power supply is required) up 31'2" drop length
- spring system is closing gravity fail safe.

Special design:
Deviation from the linear closing direction



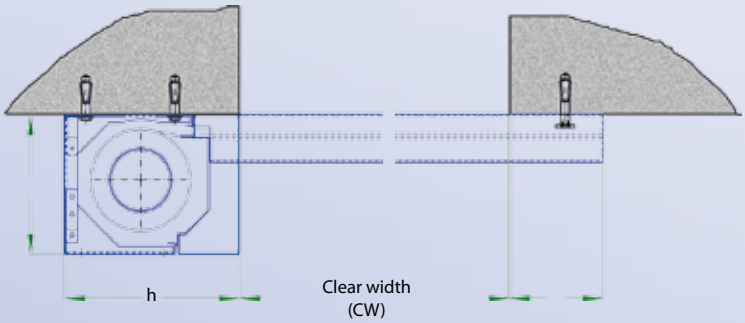


Weight of the system:
25,6lbs per lineal foot, side guides: 14,6lbs per lineal foot

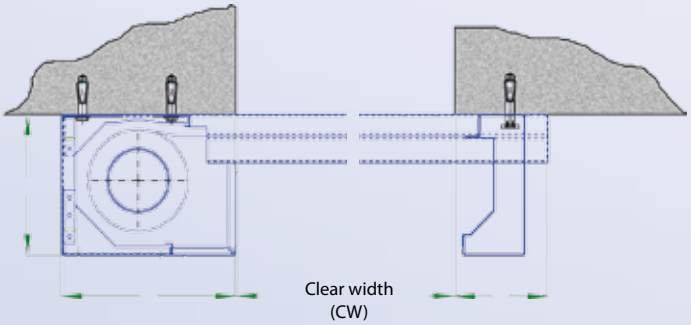
Table of dimensions (standard design)

System version	Width (feet)	Drop length (feet)	a (inch)	b (inch)	t (inch)	h (inch)	f (inch)
Spring	< 4'7"	4'11"	4 3/4"	4 1/4"	7 1/2"	7 3/4"	7 1/2"
Spring	14'9"	9'6"	4 3/4"	4 1/4"	7 1/2"	9 3/4"	7 1/2"
Spring	14'9"	9'6"	5 3/4"	4 1/4"	9 1/4"	11 1/4"	9 1/4"
Spring	14'9"-98'5"	16'4 3/4"	5 3/4"	8 3/4"	9 1/4"	12 1/2"	9 1/4"
Duplex	65'8"	9'6"-27'11"	6 3/4"	13' 1/4"	10 3/4"	14"	3 1/8"
HC (1-part)	< 20'	20'	7 3/4"	8 3/4"	9 1/4"	12"	3 1/8"
HC (1-part)	< 33'	33'	12"	13' 1/4"	15 3/4"	20"	5 3/4"
HC (2-part)	< 33'	65'8"	12"	20"	15 3/4"	20"	5 3/4"

Supercoil-HC: housings

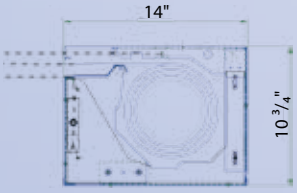


opened condition

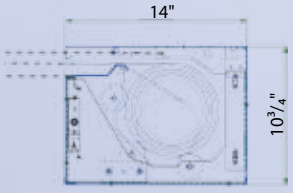


closed condition

Supercoil-H: housings

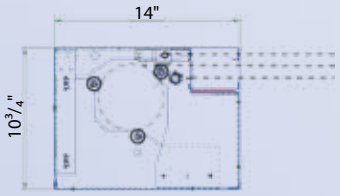


Fixed bearing

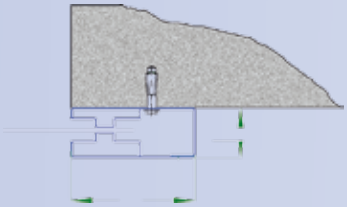


Floating bearing

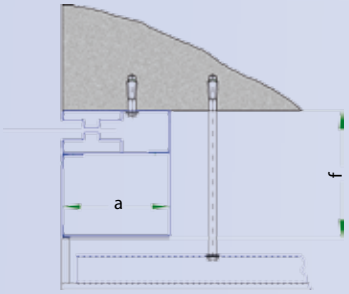
Bottom bar and feeding edge



Side guide



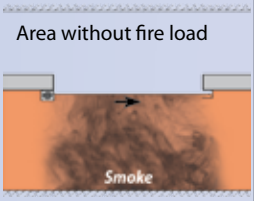
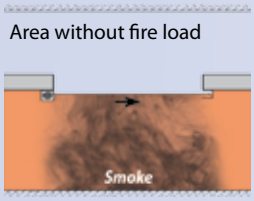
Floating bearing



Under ceiling

Protection targets

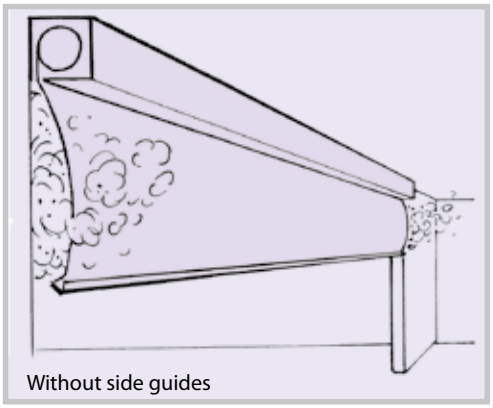
Testing in the EU´s largest oven

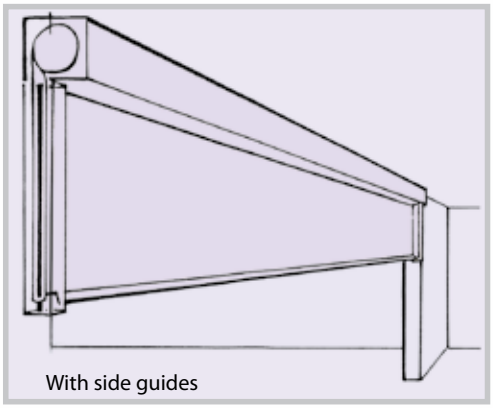
Protection target	Smoke protection HC	Smoke protection H	Insulation with sprinkler protection in case of smoke
	Area without fire load 	Area without fire load 	Blanket sprinkler 
Classification	DH 120	DH 120	DH 120
Fabric	Heliotex EW 120	Protex 1100.1	Protex 1100.1 special coating
Test report **Certificate of Conformity**	12-G-021 UL 864 OSHPD CA Certificate	UB III/B-05-020 UL 864 OSHPD CA Certificate, ASTME 84	UB III/08-016 UL 864

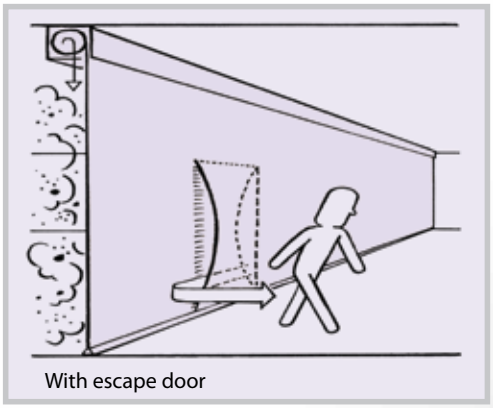
Supercoil

UL 1784

The traditional automatic smoke curtain to match highest demands and large dimensions

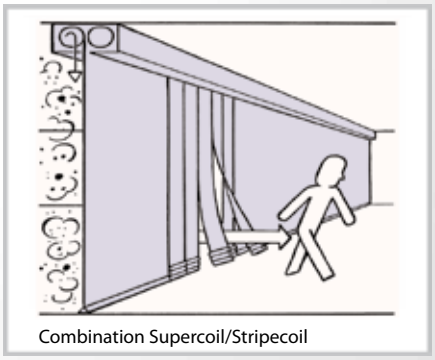

Without side guides


With side guides


With escape door

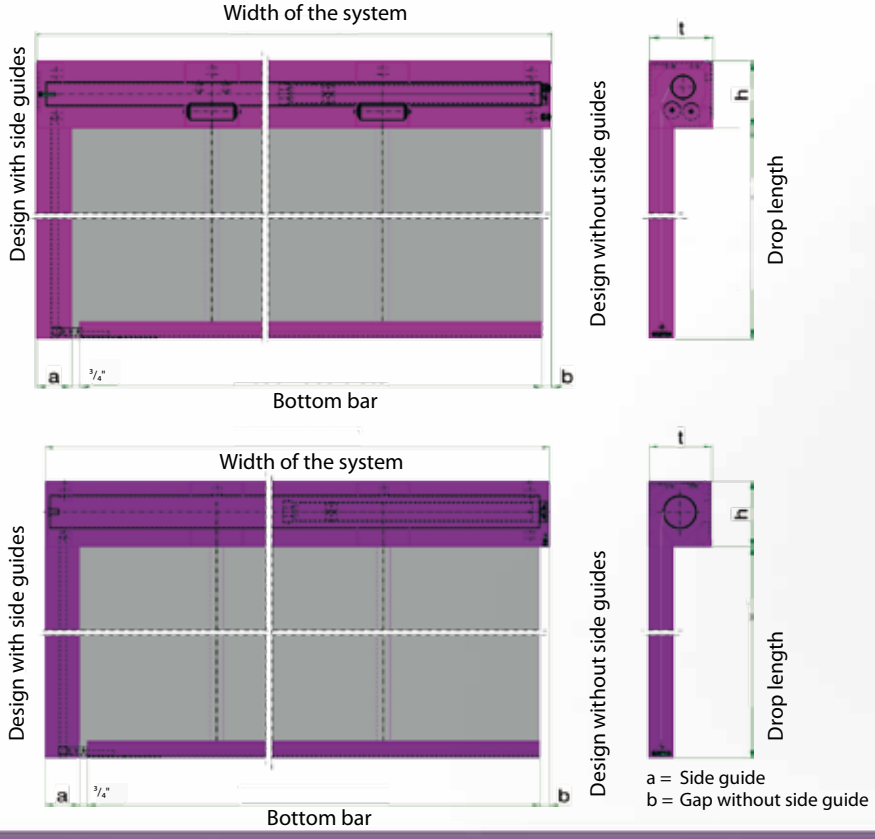
System Description

- Made of one piece up to 164 feet in width and 31 feet 2 inches metres drop
- For highest time classifications in case of fire load D = up to 1112°F and DH 2012°F
- No openings remaining within the housing area
- Only one drive unit is necessary, therefore reduced complexity for the installation
- Using side guides achieves 0% leakage in reference to the whole smoke curtain
- Highest variability concerning engineering and design
- Standard drive system „Gravigen", closing without auxiliary power, no fire resistant cables are necessary
- For smoke curtains closing down to the floor level an escape door can be equipped as an option
- The system has a weight between 44 and 66 lbs/ft system width
- Also suitable (and approved) as smoke curtain that is flush with the floor


Combination Supercoil/Stripecoil

- Combination Stripecoil with technology of Supercoil for person passage in restricted areas

Dimensions



a = Side guide
b = Gap without side guide

Weight of the system:
14 - 25lbs per lineal foot, side guides: 7,3lbs per lineal foot

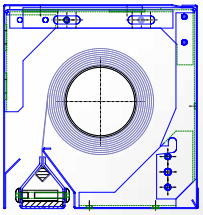
System table (without side guides)

Fabric	Width of the system	Drop length	t (inch)	h (inch)
Protex 600.1 / 1100.1	164'	11'6"	7 1/2"	7 3/4"
Protex 600.1 / 1100.1	164'	>11'6"-19'8"	7 1/2"	9 3/4"
Protex 600.1 / 1100.1	164'	19'8"-29'8"	9 1/2"	11 3/4"
Protex 600 .1 / 1100.1	164'	19'8"-29'8"	10"	12 1/2"

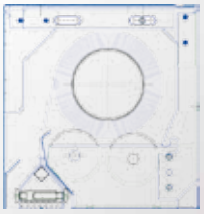
System table (with side guides)

Fabric	Width of the system	Drop length	t (inch)	h (inch)
Protex 600.1 / 1100.1	98'6"	11'6"	7 1/2"	7 1/2"
Protex 600.1 / 1100.1	98'6"	>11'6"-19'8"	7 1/2"	9 3/4"
Protex 600.1 / 1100.1	98'6"	19'8"-29'6"	9 1/4"	11 1/4"
Protex 600 .1 / 1100.1	98'6"	19'8"-29'6"	10 "	12 1/2"

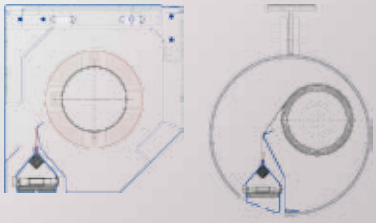
Range of housings



Standard - fixed bearing



Standard - floating bearing



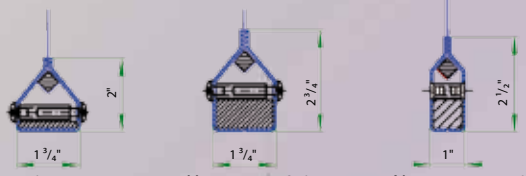
Range of special constructions

Range of side guides

Type	Drop length	Size
80 E	≤ 11'6"	≤ 194 ft²
105 E	≤ 19'9"	≤ 538 ft²
105 V	≤ 19'9"	≤ 754 ft²
140 E	≤ 29'8"	≤ 1129 ft²

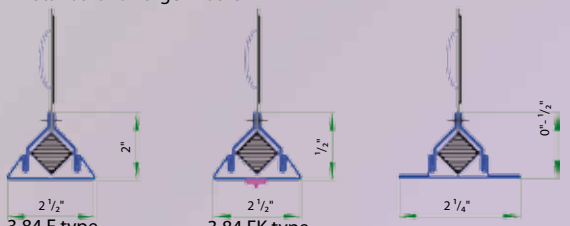
Bottom bars

Standard for small widths



4,6 type — Heavy type 9,6 — Narrow type 5,61

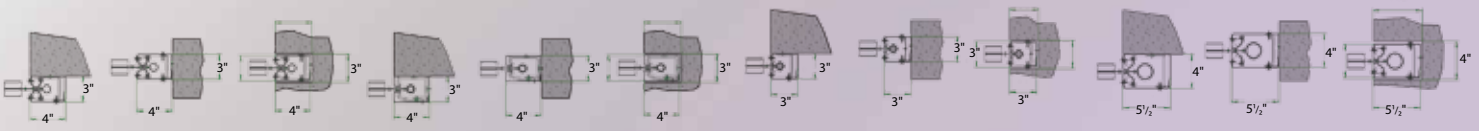
Standard for large widths



3,84 F type — Self levelling bottom bar without safety edge

3,84 FK type — Self levelling, as an option with safety edge

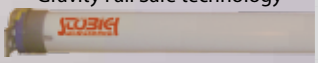
Self levelling bottom bar without safety edge, underneath the ceiling

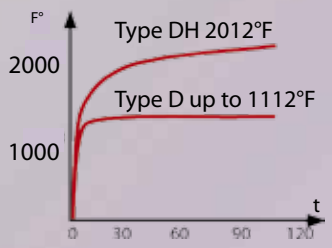


Type 105 E Installation to the wall — Type 105 E Installation in the embrasure — Type 105 E Installation in the niche — Type 105 V Installation to the wall — Type 105 V Installation in the embrasure — Type 105 V Installation in the niche — Type 80 E Installation to the wall — Type 80 E Installation in the embrasure — Type 80 E Installation in the niche — Type 140 E Installation to the wall — Type 140 E Installation in the embrasure — Type 140 E Installation in the niche

Classification

Patented tubular motor with Gravity Fail Safe technology

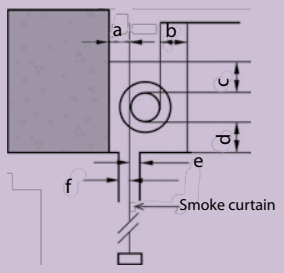




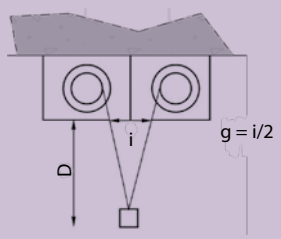
Labelling UL 1784	Stöbich **Supercoil** system
Automatic smoke curtain	ASB 1 / ASB 3 type closing without electric power
Temperature / Time class	D60 (1112°F/60 min.) DH120 (2012°F/120 min.)
Closing speed (depends on the drive)	From 5,9 inches/sec. to 11,8 inches/sec.e.g. drop length 29,5 feet = within 60 s in the closed position
Gap - casing (a-f)	0 inches
Gap - edges (g) embrasure	g = 0 inches with side guide g = 0,59 inch +1,18 inches for fixed bearing without side guide g = 1,18 inches+ 1,18 inches for floating bearing without side guide
Gap - joint (h)	0 inches (standard ceiling installation)
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/ f2/h)	< 3 3/8" 3/feet²/h
Test temperature	At ambient temperature and at 392°F
Free area - casing	= Length of the casing x gap casing = L x 0 = 0 inches²
Free area - edges	= D x gap edges
Free area - joints	= D x gap - joint x number of joints
Certificate of Conformity	UL 1784 / UL 864 (control unit) OSHPD CA Certificate
Approval for smoke behaviour of the fabric	ASTM E 84

D = Drop length of the smoke curtain

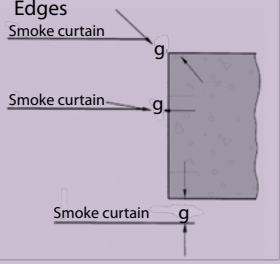
Joint



housing

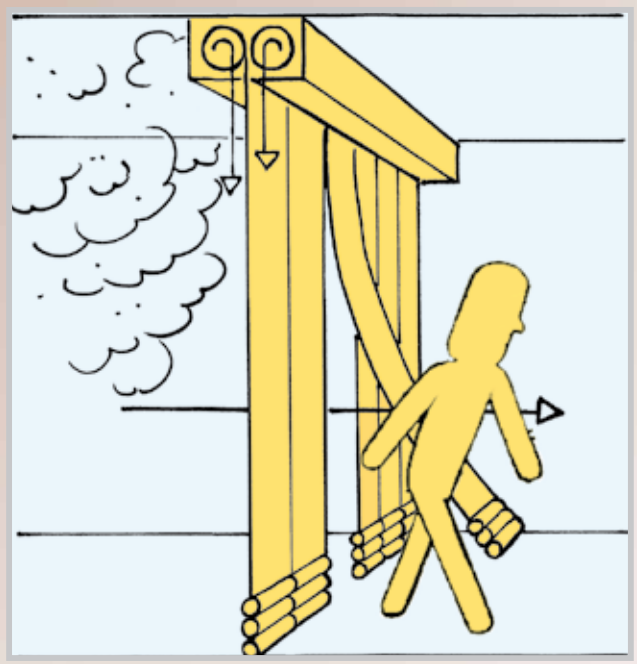


Edges



Stripecoil

Automatic smoke curtain Stripecoil



System Description

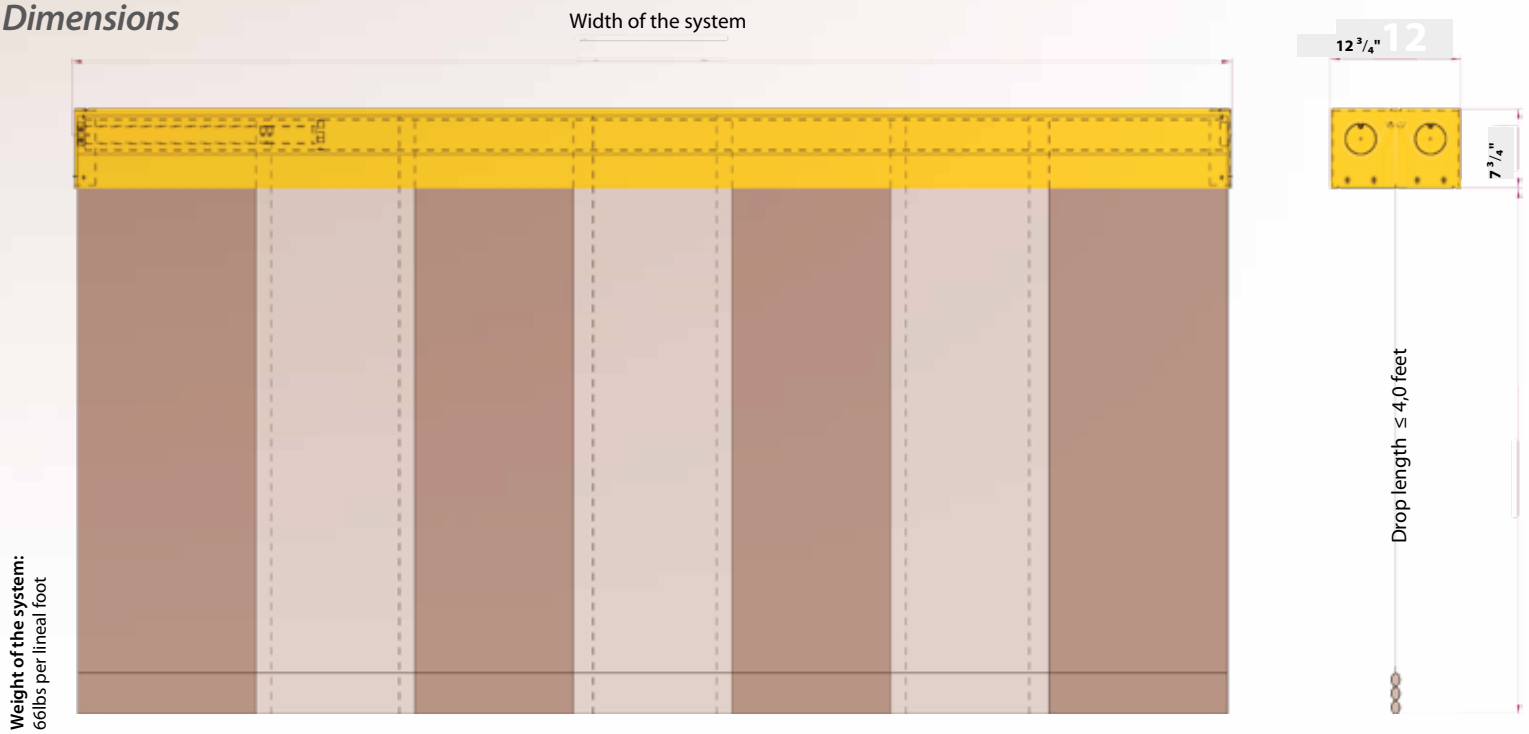
- Creation of smoke compartments in alleyways respectively in escape routes with a passage for people
- Double-coil system with unlimited width
- Drop length up to 11' 6"
- Designed for the time classification and temperature load D = 1112°F up to 120 minutes
- Passage of up to 200 persons per minute at a width of 10 feet is possible
- Standard drive system "Gravigen", closing without auxiliary power, no fire resistant cables are necessary
- Translucent fabric to optimize the visibility in the area of the passage
- Little demand for space for the casing, therefore no limitations in the height of the passage
- Soft, elastic and interrupted bottom bar to avoid any injuries
- Protected bottom bar against damages and vandalism
- Designed for the time classification and temperature load DH (2012°F) up to 30 minutes (Test report UBII/B-07-012)

Limitations to the system

Drop length	Width of the system
≥ 3'4"	≥ 8'3"
≥ 6'7"	≥ 7'3"
> 10'	≥ 6'7"

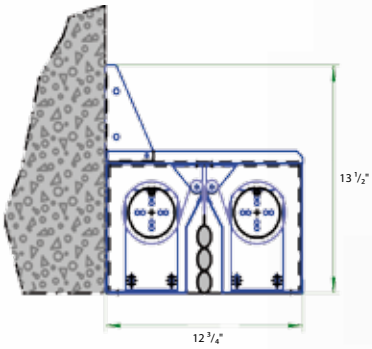
Please consult the manfacturer for smaller systems

Dimensions

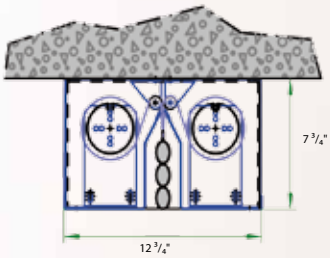


Weight of the system:
66lbs per lineal foot

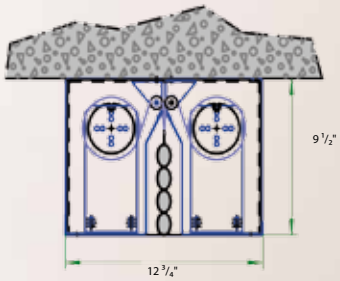
Range of housings



Wall mounting

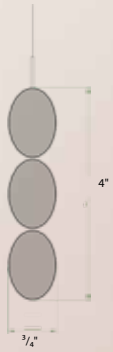


Ceiling mounting



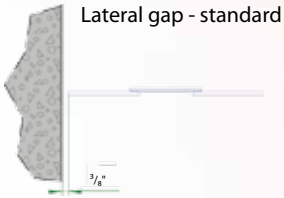
Ceiling mounting

Bottom bar

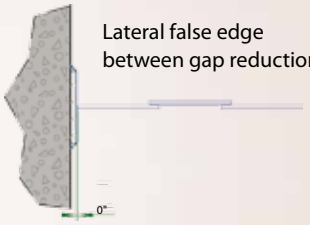


Elastic bottom bar
with a tear proof fabric

Lateral gap



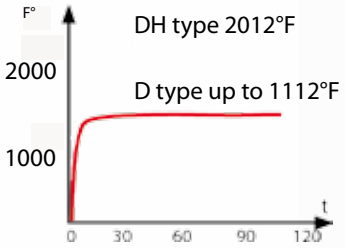
Lateral gap - standard

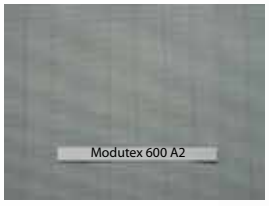


Lateral false edge
between gap reduction

Classification

Patented tubular motor with
Gravity Fail Safe technology

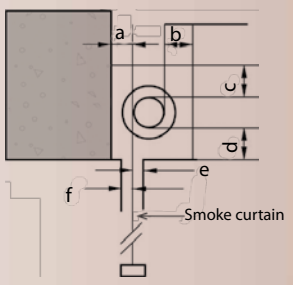




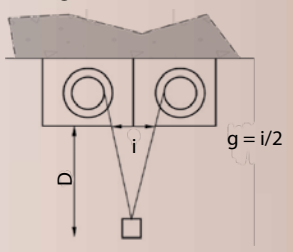
Labelling UL 864	Stöbich **Stripecoil** system
Automatic smoke curtain	ASB 1 / ASB 3 type closing without electric power
Temperature / Time class	DH30 (2012°F/30 min) D120 (1112°F/120 min)
Closing speed (depends on the drive)	Approx 5,9 inches/sec - e.g. drop length 11'6" = within 24 s in the closed position
Gap - casing (a-f)	0 inches
Gap - edges (g) embrasure	g = 0,39 inches + 0,39 inches
Gap - joint (h)	0,39 inches
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/ f2/h)	< 3 3/8" 3/feet²/h
Test temperature	At ambient temperature and at 392°F
Free area - casing	= Length of the casing x gap casing = L x 0 = 0 inch²
Free area - edges	= D x gap - edges
Free area - joints	= D x gap - joint x number of joints
Certificate of Conformity	UL 864 (control unit) OSHPD CA Certificate
Approval for smoke behaviour of the fabric	applied ASTM E 84

D = Drop length of the smoke curtain

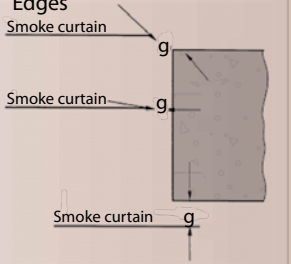
Joint



Casing

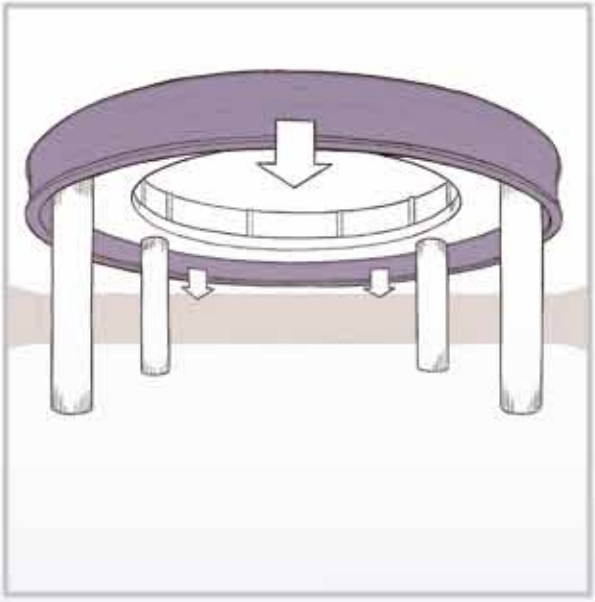


Edges



Smokeshield-C

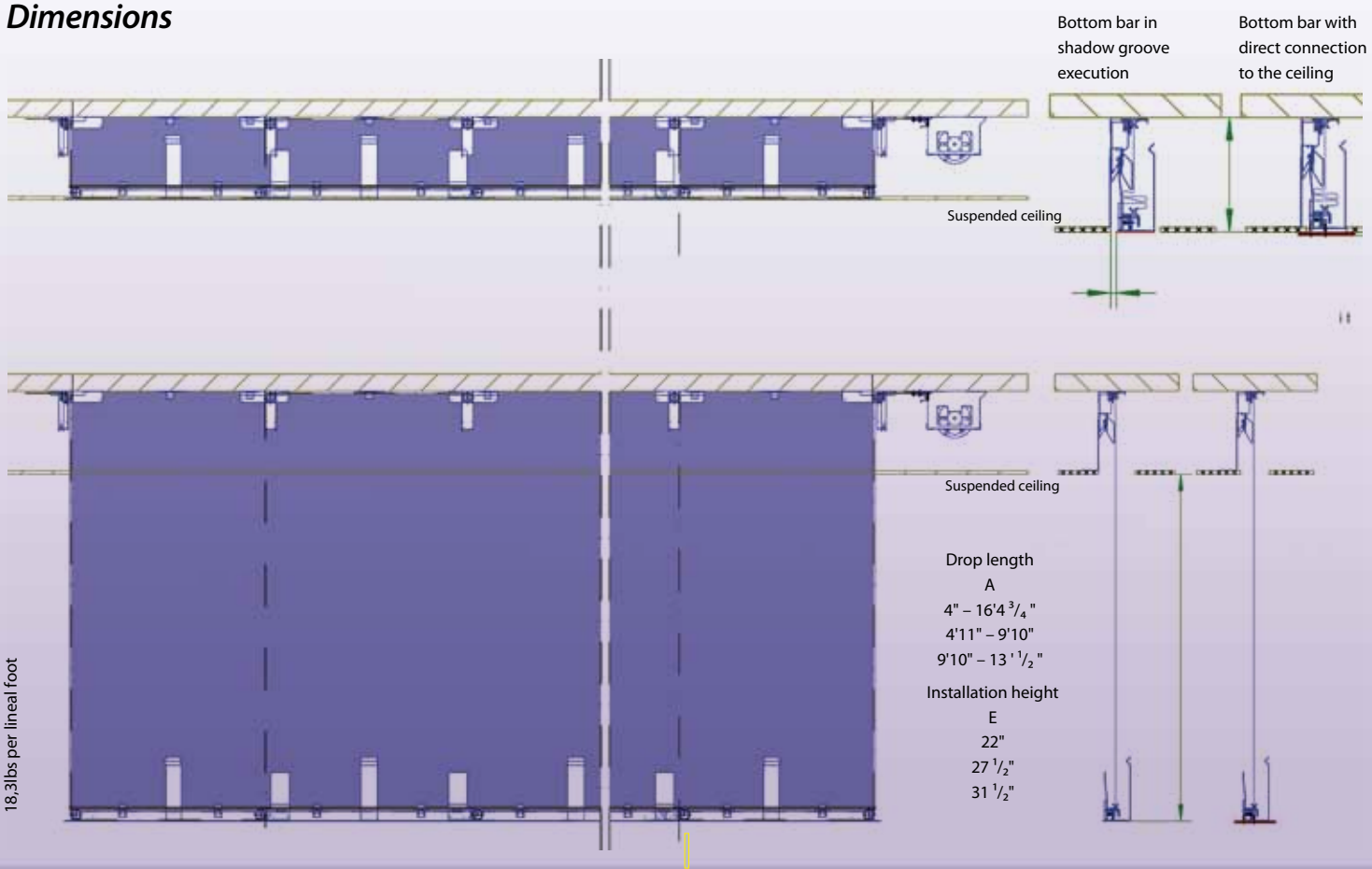
The curved smoke curtain with a leckage of 0 %



System description

- The flexible smoke curtain with a closed, curved course is designed for an installation in circle- or ellipse-shape but also as an open, curved (serpentine) smoke curtain
- For the time and temperature-class D 60 resp. D 120 (1112°F)
- Since the smoke curtains consists of one fabric panel there is no overlapping and no remaining openings
- Integrated in the suspended ceilings
- Connection to the ceiling panel with laser-cut bottom rail over self-levelling bearing elements
- Alternatively with direct connection to the false ceiling (hardly visible, only 16" mismatch) or by a shadow groove execution
- As standard the smoke curtain closes by the engine system gravigen, that means closing without auxiliary energy, hence no fire- resistant cables are needed
- Extreme widths of the smoke curtain up to 984 feet and drop length up to 13 feet (for curve shape radii > 13 feet)
- The textile surfaces are piled stored on the completion modul under the ceiling
- Connected completion modul over the total length of the smoke curtain
- Optional: integrable ligthings in the completion modul

Dimensions

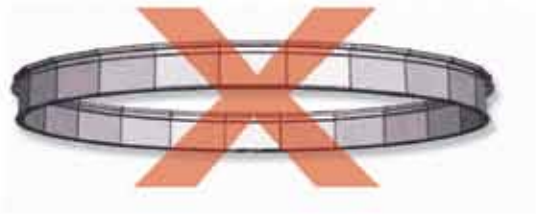


Weight of the system:
18,3lbs per lineal foot




Previous solution:

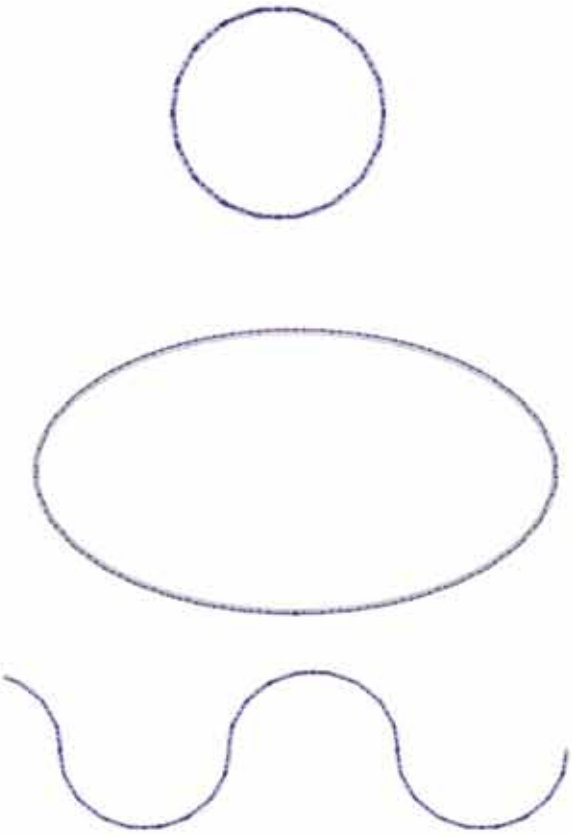
Devided, overlapping smoke curtain elements



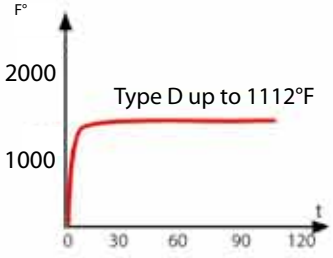
STÖBICH-INNOVATION:

Continous smoke curtain

Range of curve courses



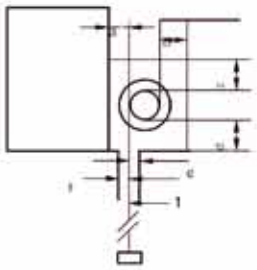
-Classification



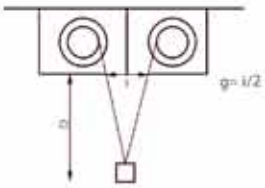
Labelling UL 864	Stöbich Smokeshield-C system
Automatic smoke curtain	Type ASB 1 / ASB 3 Closing without electric energy
Temperature/Time class	D120 (1112°F/120 min.)
Closing Time (depending on the drive)	0,19 inches/sec e.g. drop length 29,5 ft = 30s in fire alarm position
Gap – casing	0 inches
Gap edges embrasure	0 inches
Gap joint	0 inches
Max. permeability of the smoke curtain fabric with ambient temperature and 200 °C (max. 82 $^{1}/_{4}$" ^{3}/f2/h)	< 3 $^{3}/_{8}$" ^{3}/feet^{2}/h
Free area casing	= Casing length x gap casing = L x 0 = 0 inches^{2}
Free area edges	= D x gap edges
Free area joint	= D x gap joint x number of joints
Certificate of Conformity	UL 864 (control unit), OSHPD CA Certificate
Approval for smoke behaviour of the fabric	applied ASTM E 84

D = drop length of the smoke curtain

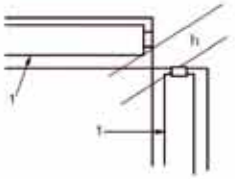
Joint



Housing

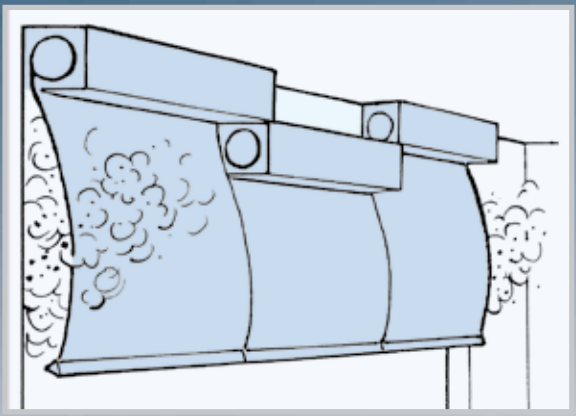


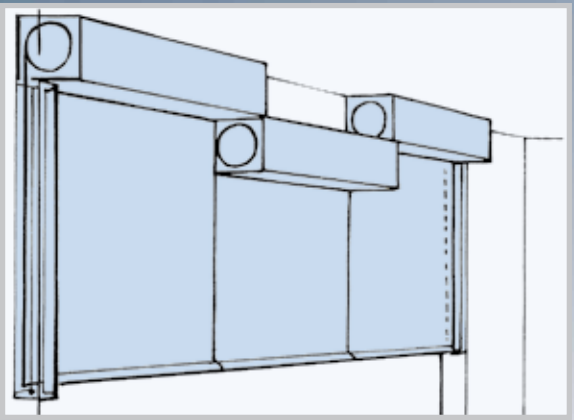
Edges



Moducoil

The standard smoke curtain in a modular design

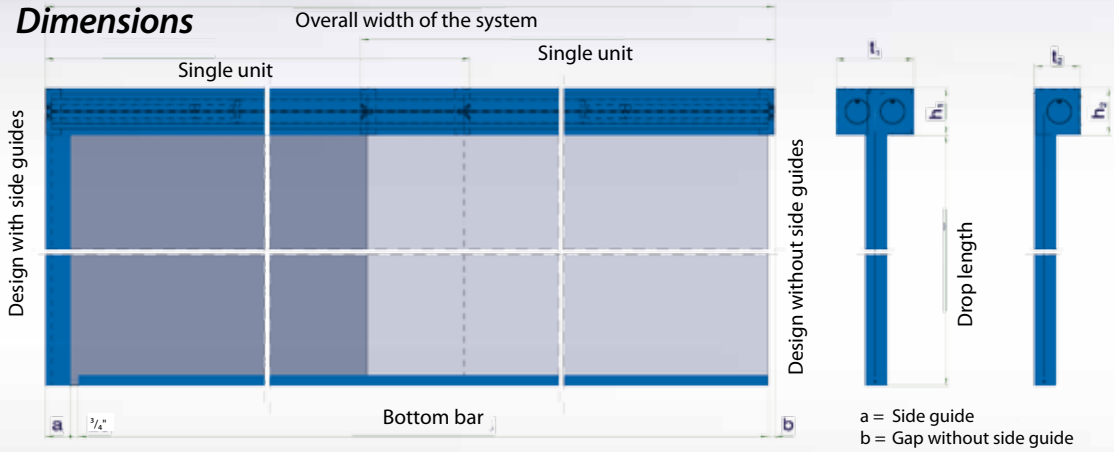




System Description

- Pre-manufactured single elements will be assembled to create one complete unit up to any width standard drop length of up to 28'4"
- Designed for the time classification and temperature load D = 1112°F
- Standard drive system "Gravigen", closing without auxiliary power, therefore no fire resistant cables are necessary
- Robust drive unit, applicable for a high number of cycles , with approved hold open unit
- Modular installation of the casings side by side or on top of each other
- Connected bottom bar across all elements
- Can be combined with a self levelling bottom bar
- Alternatively with side guides
- Also suitable (and approved) as smoke curtain that is flush with the floor

Dimensions



Single module

Width of the system	Drop length	Housing
≤ 16 '5 "	≤ 23'	5 ¾" x 5 ¾"
≤ 16 '5 "	>23'	7 ½" x 7 ½"
>23'	≤ 14 '10 "	7 ½" x 7 ½"

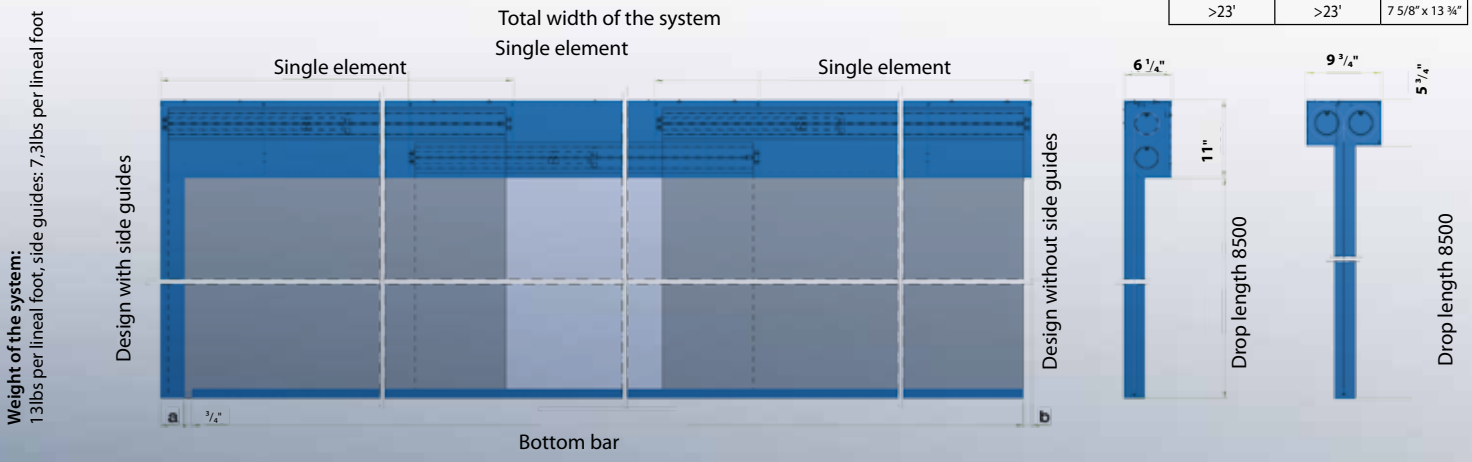
max. width of casing 23'
(but: max. drop length 14 '10 ")

Multiple module – parallel

Width of the system	Drop length	Housing
>23'	≤ 14 '10 "	9 ¾ x 5 ¾"
>23'	>23'	12 5/8" x 7 ½"

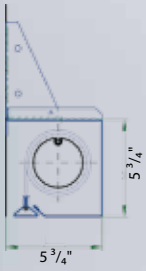
Multiple module - one upon the other

Width of the system	Drop length	Housing
>23'	≤ 14 '10 "	6 5/16" x 11"
>23'	>23'	7 5/8" x 13 ¾"



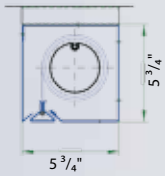
Weight of the system:
13lbs per lineal foot, side guides: 7,3lbs per lineal foot

Range of housings

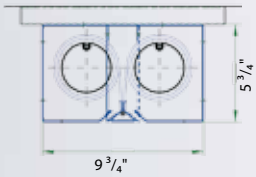


Single smoke curtain-wall

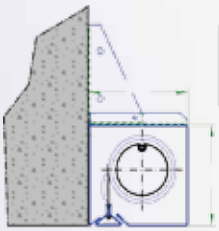
Modular smoke curtain-wall (standard)



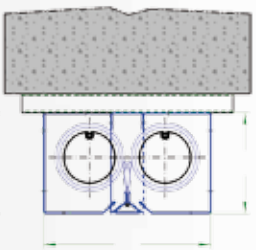
Single smoke curtain-ceiling



Modular smoke curtain-ceiling

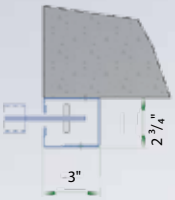


Self levelling bottom bar with single smoke curtain

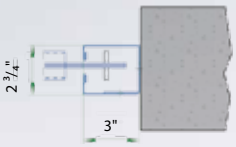


Self levelling bottom bar with modular smoke curtain

Range of side guides



Wall



Embrasure

Niche

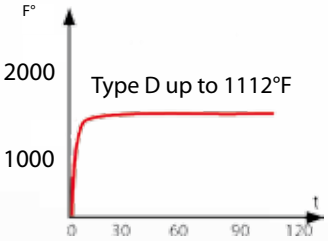
Bottom bars

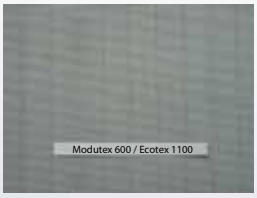
Standard

Self levelling bottom bar

Classification

Patented tubular motor with Gravity Fail Safe technology

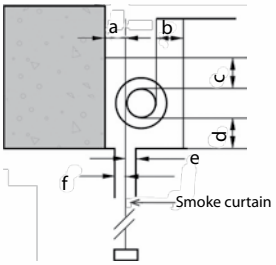




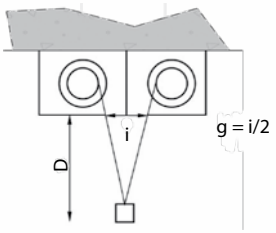
Labelling UL 864	Stöbich **Moducoil** system
Automatic smoke curtain	ASB 1 / ASB 3 type Closing without electric power
Temperature/Time class	D120 (1112°F/120 min.)
Closing speed (depends on the drive)	Approx 19 inches/secc e.g. drop length 29,5 ft = 60 s in the closed position
Gap - casing (a-f)	0 inches
Gap - edges (g) embrasure	g = 0 inches with side guide g = 0,78 inches + 0,78 inches without side guides
Gap - joint (h)	0,66 inches (standard ceiling installation) 0 inches (standard wall installation)
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/f2/h)	< 3 3/8" 3/feet²/h
Test temperature	At ambient temperature and at 392°F
Free area - casing	= Length of the casing x gap casing = L x 0 = 0 inches²
Free area - edges	= D x gap - edges
Free area - joints	= D x gap - joint x number of joints
Certificate of Conformity	UL 864 (control unit), OSHPD CA Certificate
Approval for smoke behaviour of the fabric	ASTM E 84

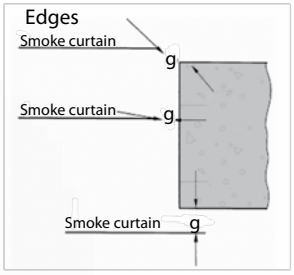
D = Drop length of the smoke curtain

Joint



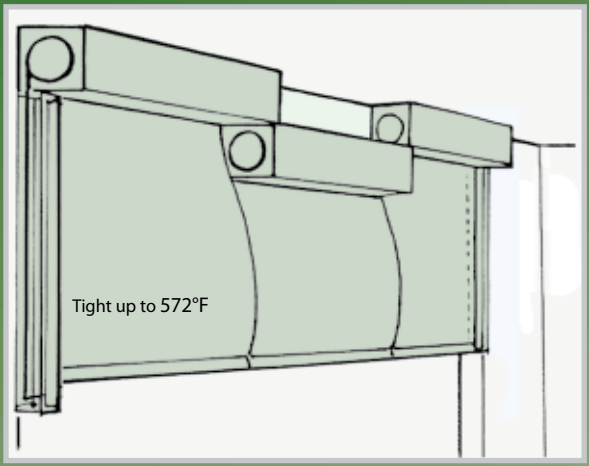
Housing

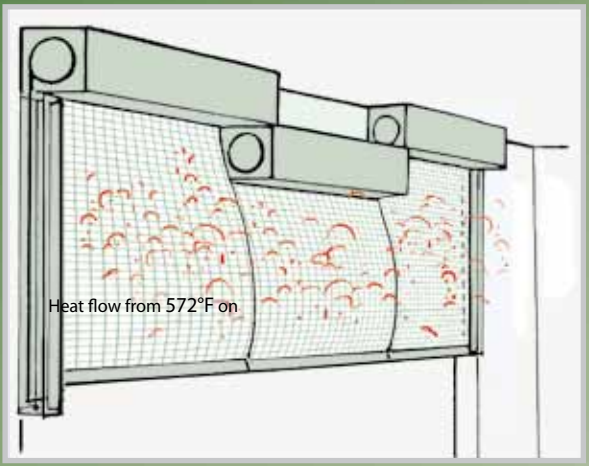




Apericoil

The self-opening smoke barrier at a temperature influence > 716°F





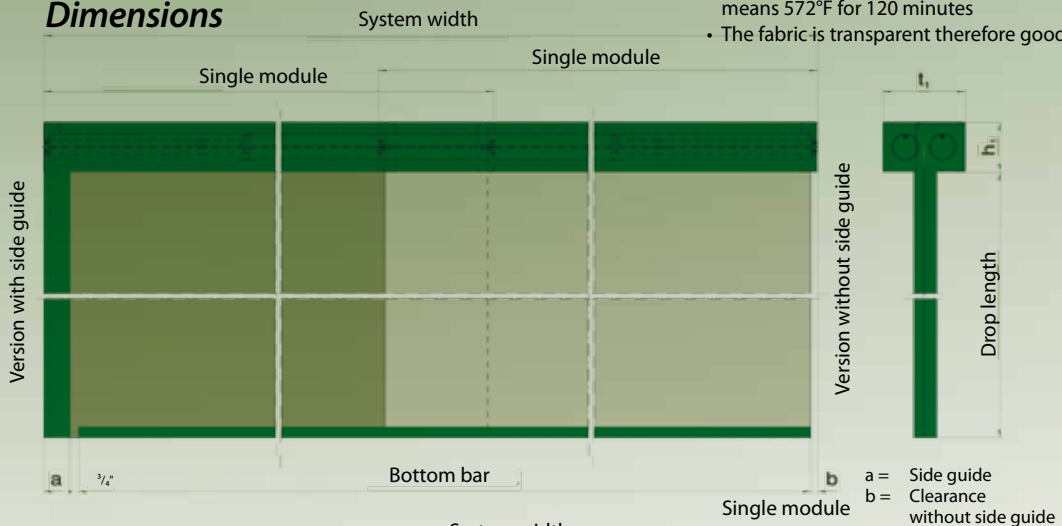
System Description

- Patented fabric „Aperitex 400“
- Prefabricated single modules can be arranged next to each other as a complete unit up to desired length
- Drop lengths up to 13' 2"
- Designed for time classification and temperature load DL = 572°F
- Standard equipped with drive-unit 'Gravigen', that means closing without auxiliary energy; fire resistant cables are not necessary
- Connected bottom bar over all modules
- Optional with lateral side guides

Customer Benefit

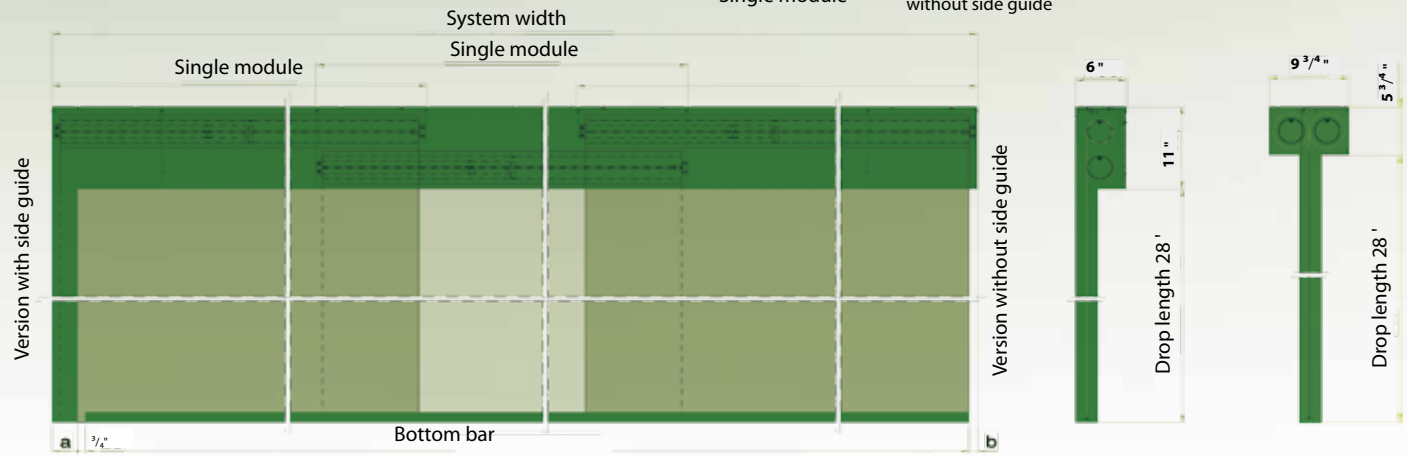
- The discrepancy, to positively dissipate the smoke with temperatures from 572°F to 752°F and to avoid that higher temperatures have influence on the building structure
- The Aperitex-fabric opens at temperatures of 716°F and stays 80% open at 982° (the rest are remaining lattice structures)
- The lattice structure has a heat resistance of approx. about over 1112°F for 2 hours so that the system will not crash under this load
- The constructional designs (casing, side guides, bottom bar) correspond to the proven system Moducoil
- The classification according to ISO 21027-1 is the class DL 120, that means 572°F for 120 minutes
- The fabric is transparent therefore good observe possibilities

Dimensions



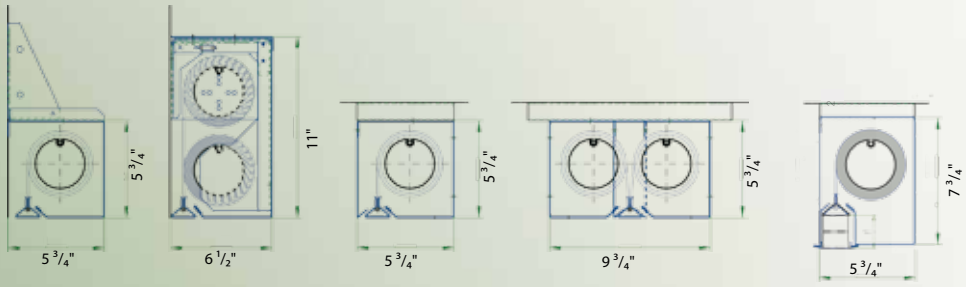
Single module up to 6 m system width

Drop length	t_1 (inch)	h_1 (inch)	t_2 (inch)	h_1 (inch)
≤ 14 ' 9 "	9 3/4"	5 3/4"	5 3/4"	5 3/4"
>14 ' 9 " - 28'	14"	7 1/2"	7 1/2"	7 1/2"



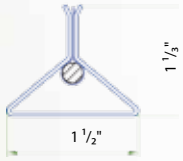
Weight of the system:
13lbs per lineal foot, side guides: 7,3lbs per lineal foot

Range of housings



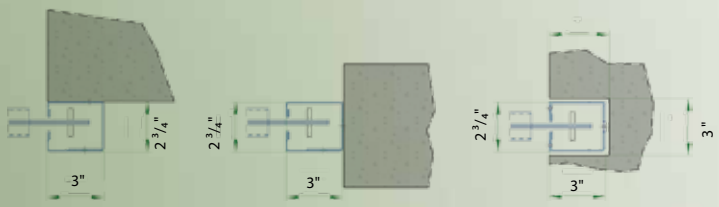
Single smoke barrier wall | *Modular smoke barrier wall (standard)* | *Single smoke barrier ceiling* | *Modular smoke barrier ceiling* | *Smoke barrier with self-levelling bottom bar*

Bottom bar



Standard

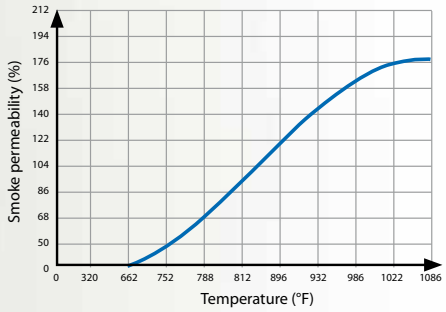
Range of side guides



Wall | *Embrasure* | *Niche*

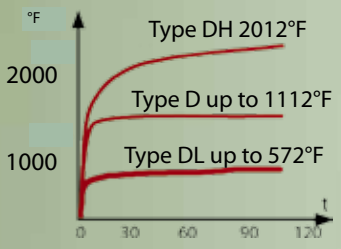
Permeability

Diagram of the smoke permeabilty of the fabric depending on the temperature

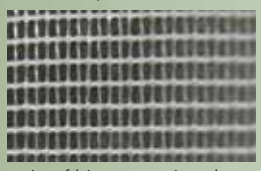


Classification

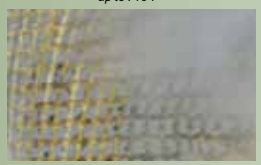
Patented tubular motor with gravity fail technology



Aperitex 400



Intact fabric structure restains smoke up to 716°F

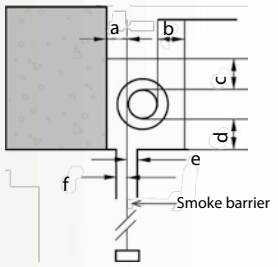


Fabric opens at a temperature from 716°F and let the smoke pass

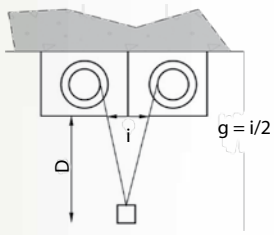
Labelling ISO 21927-1 / UL 864	**Stöbich System Apericoil**
Automatic smoke barrier	Type ASB 1 / ASB 3 Closing without electrical power
Temperature / Time Class	DL 120 (572°F/120 min.)
Opening time (depending on the drive)	5,9 inches/sec e.g. drop length 29,5 ft = 60 s in fire alarm position
Gap casing (a-f)	0 inch
Gap edges (g) Embrasure	g = 0 inches with side guides (SG) g = 0,78 inches + 0,78 inches without SG
Gap joint (h)	0,66 inches (Standard ceiling installation) 0 inches (Standard wall installation)
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/f2/h)	< 3 3/8" 3/feet²/h
Testing temperature	With RT and 200°C
Free surface casing	= Casing length x Gap casing = L x 0 = 0 inches²
Free surface edges	= D x Gap edges
Free surface joint	= D x Free surface joint

D = Drop length of the smoke curtain UL 864 (control unit)

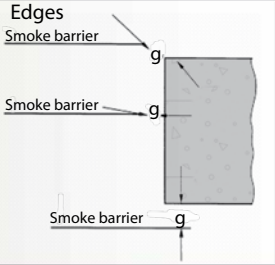
Joint



Housing

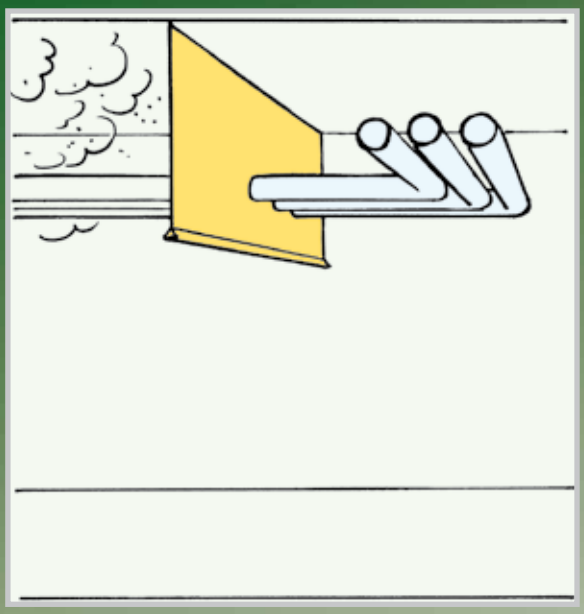


Edges



Moducoil/Supercoil fix

Fixed smoke curtains



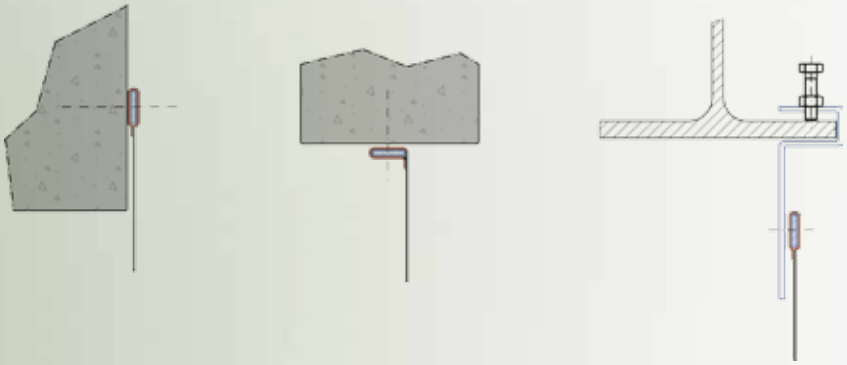
System Description

- Large dimensions are possible, unlimited widths
- Height depend on the wind pressure which may occur
- Pending fixing on fixing at the lateral and lower area
- Designed for the time classification and temperature load D = 1112°F and DH = 2012°F
- Extremely small static load to the building structure, weight of the fabric between 0,3 lb and 1lb/ft²
- Very easy sealing of systems which pass through the fixed barrier, e.g. pipes, ventilation lines, ducts, cable trays
- Also suitable (and approved) as smoke curtain that is flush with the floor
- Approval for smoke behaviour of the fabric ASTM E 84

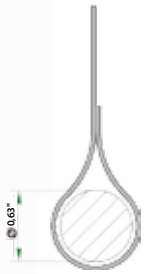
Dimensions

Weight of the system:
0,3 lb and 1 lb/ft²

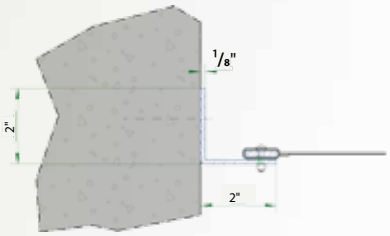
Range of fixings

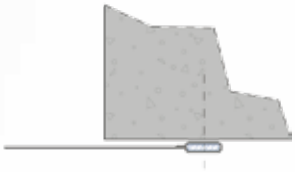


Bottom bar

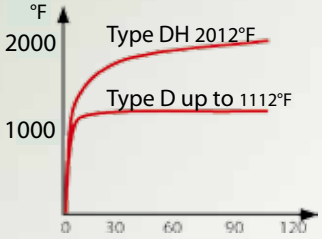


Range of lateral fixings





Classification

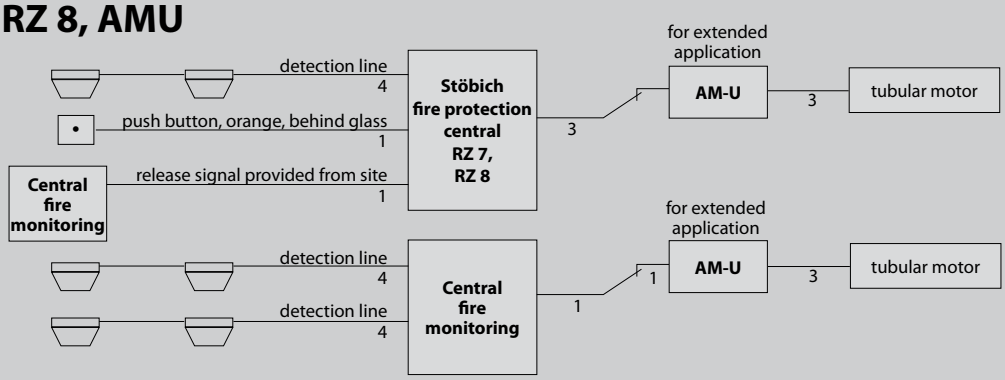


Labelling ASTM E 84	Stöbich **Moducoil/Supercoil fix** system	
Fixed smoke curtain	Elastic material	
Temperature / Time class	D60 (1112°F/60 min.)	DH120 (2012°F/120 min.)
Gap - edges (g) embrasure	0 inches	
Gap - joint (h)	0 inches	
Max. permeability of the smoke barrier fabric (max. 82 1/4" 3/ f2/h)	< 3 3/8" 3/feet²/h	
Test temperature	At ambient temperature and at 392°F	
Free area - edges	= D x gap - edges	
Free area - joint	= D x gap - joint x number of joints	
Conformity certificate	ASTM E 84	
Approval for smoke behaviour of the fabric	ASTM E 84	

D = Drop length of the smoke curtain

Control units Static control of the smoke curtains by release of the detection loop according UL 864

RZ 7, RZ 8, AMU



Dimensions of the systems:

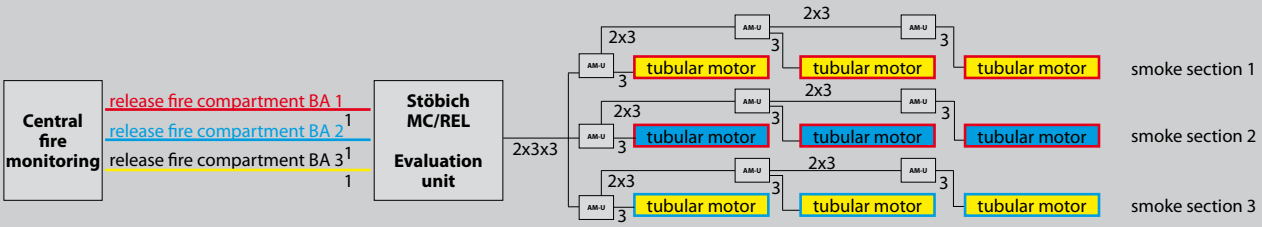
RZ7 = 16 inch x 5 inch x 16 inch (width x height x length)

RZ8 = 12 inch x 5 inch x 12 inch (width x height x length)

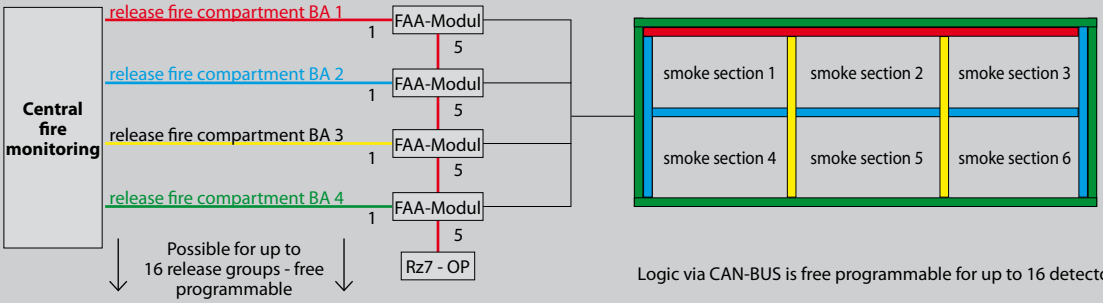
AMU = 11 inch x 3 inch x 6 inch (width x height x length)

Static control of the smoke curtains by release of the detection loop

Logic via hardware possible up to 3 detector groups

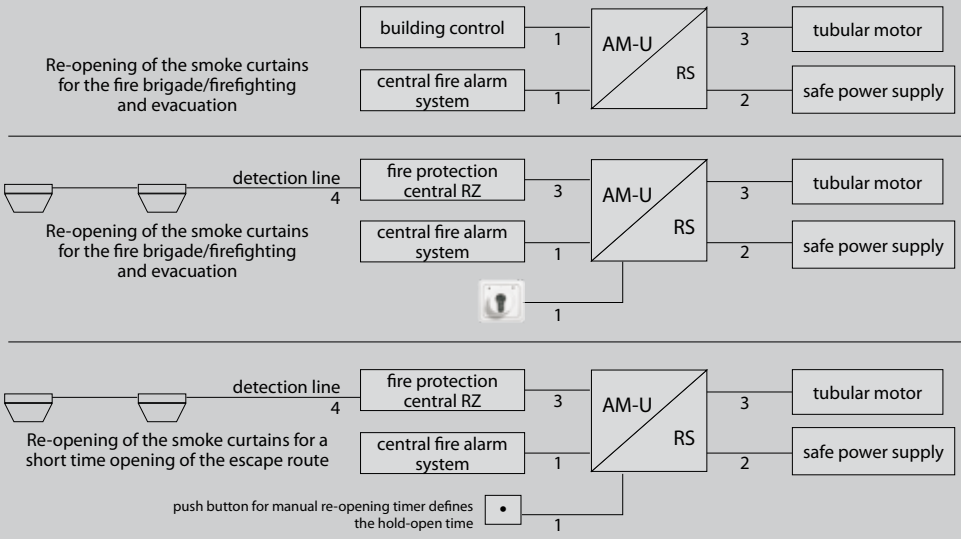


Static control of the smoke barriers by a release signal from the detection loop



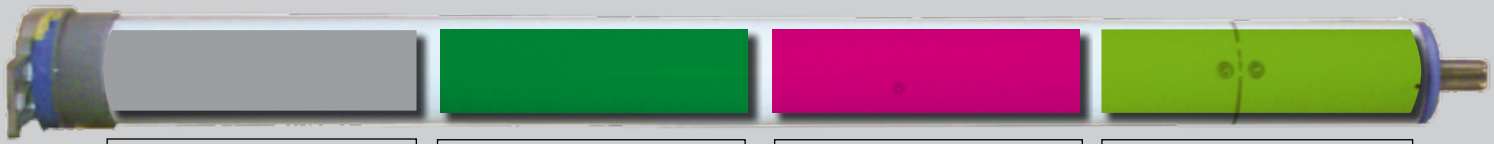
Logic via CAN-BUS is free programmable for up to 16 detector groups

Controlled, motor-driven re-opening despite of fire alarm



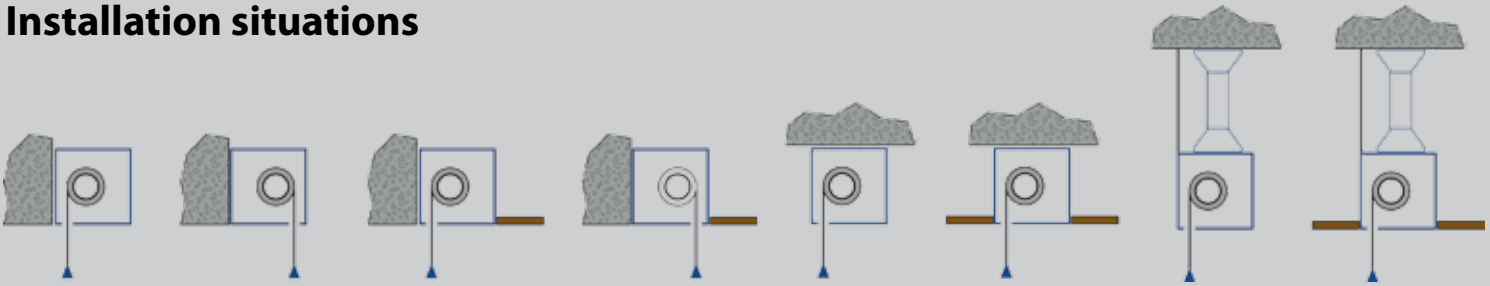
caption:
1 = Ölflex 3G0, 0,01 ft²
2 = NHXH-J E90 3 x 0,02 ft² RE with function preservation
3 = system cable, pluggable / Stöbich
4 = J-Y(St)Y-2 x 2 x 0,01 ft²
5 = BUS cable J-Y(St)Y-2 x 2 x 0,01 ft²

Tubular motor Gravigen Stöbich



Intelligent electronic position sensor technology	**Patented Fail-Safe – closing**	**Certified and VdS-controlled locking device**	**208 -240 VAC 60 Hz drive motor with gear box**

Installation situations



Installation of the housing to the wall, from behind

Installation of the housing to the wall, from the front

Installation of the housing to the wall, lower part of the housing is flush on one side with the housing, from below

Installation of the housing to the wall, lower part of the housing is flush on one side with the housing, from below

Installation of the housing directly to the ceiling, from behind/from below

Installation of the housing directly to the ceiling, lower part of the ceiling is flush on both sides with the housing, from below

Installation of the housing by suspensions to the ceiling, from behind/from below

Installation of the housing by suspensi-ons to the ceiling, from behind/from below

Design for the steel components

The Stöbich Supercoil system offers various options in reference to colours, surfaces and individual shapes.

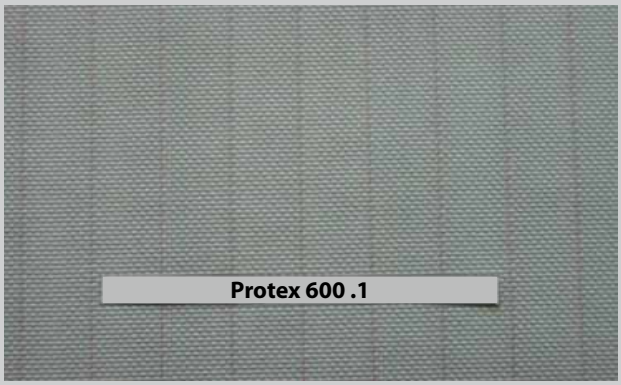
Fabric - smoke behaviour

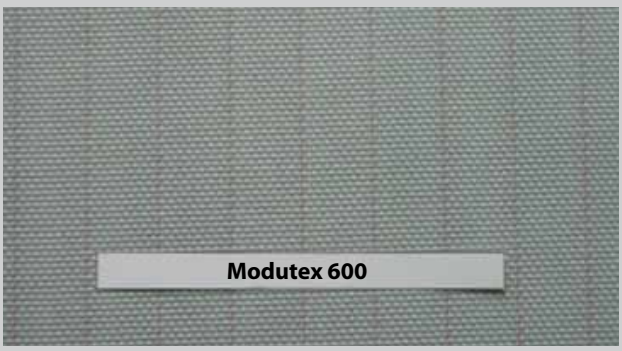
Approval for smoke behaviour of the fabric ASTM E 84

For Fabrics: Protex 600.1
Protex 1100.1
Ecotex 1100

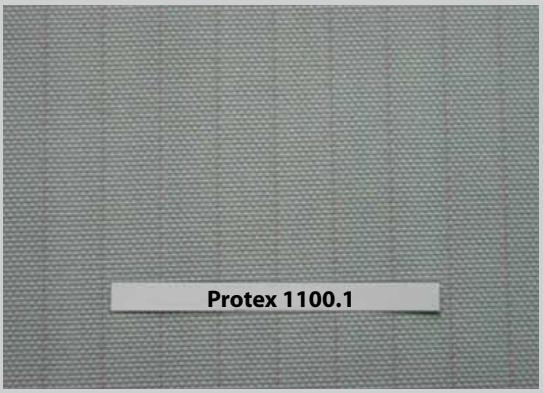
Selection of fabrics for smoke curtains

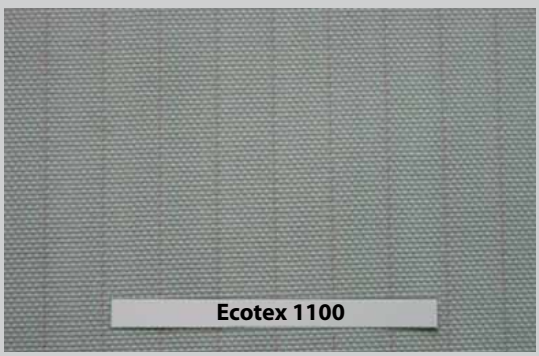
Temperature classification „D“ = 1112 °F





Temperature classification „DH“ = 2012 °F





Stöbich - Smoke and Fire Protection

Since 1980 Stöbich Brandschutz GmbH has developed specialized separation technologies able to resist the effects of smoke and fire - 11 of them are internationally recognized innovations and world novelties. The high safety standards established by Stöbich have been proven in more than **300 smoke** and **fire tests**, an example of which is shown in the picture above demonstrating the exceptionally large dimensional capabilities of our systems. Stöbich flexible separation systems are designed using innovative fire retardant and smoke tight fabrics. These designs have been recognized repeatedly for achieving the highest architectural demands for " **invisible smoke and fire protection** " . Our innovative products and internationally recognized unique designs have made Stöbich the market leader in fire and smoke protection barriers. We continuously develop and advance our product line while conducting extensive resdearch on new material and techniques.

Dr. Ing. Jochen Stöbich

Stöbich Smoke Protection

Inventor of conveyor system closures and flexible textile smoke and fire curtains
founded by the German inventor and entrepeneur Dr.Jochen Stöbich
market leader in smoke and fire protection systems
over 130 patents since the founding of the company
quality made in Germany
over 10.000 installations worldwide
specializing in both standard and custom systems
solutions for demanding project requirements

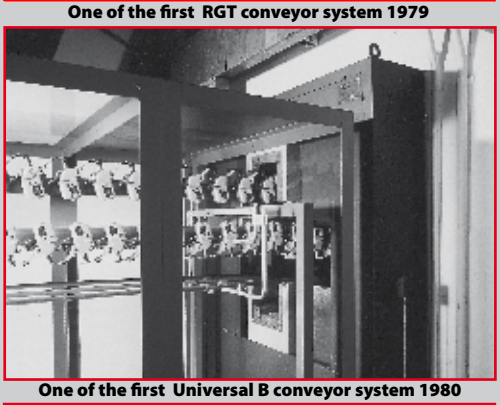
Stoebich Fire Protection Systems LP
1000 Bonieta Harrold Drive
#9205, Charleston, SC, 29414

Office 925-849-7181
Service 843-327-8968

info@stoebich.com
www.stoebich.com

History

One of the first RGT conveyor system 1979



One of the first Universal B conveyor system 1980

First Stöbich Exhibition Interschutz Fair Hannover 1980

The first Fibershield E 240- Installated in Bolton , UK 1996

The first Supercoil with 0% leakage- installaton from 1993

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