Stoebich
Flexible Fire & Smoke Curtains

Automatic fire & smoke curtains

• **Stoebich Fire & Smoke Curtain S**

• **Stoebich Fire & Smoke Curtain H / HC**

• **Stoebich Fire Curtain U**

• **Stoebich Fire & Smoke Curtain P**

• **Stoebich Fire & Smoke Curtain E**

• **Stoebich Fire Curtain W**

• **Stoebich Fire Curtain F**

• **Stoebich Fire Curtain I**

• **Stoebich Fire Curtain V**

**Automatic fire tight curtain**

• **Stoebich Fire Curtain T**

Control units

• **RZ 8**

• **RZ 7**

Stoebich
Fire & Smoke Protection

@ **info@stoebich.us, www.stoebich.us**

STÖBICH ®
FIRE PROTECTION
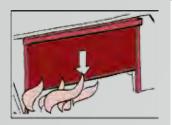
Protection concepts with automatic textile fire curtain:

1. For openings in walls

How to seal large openings in walls – which create fire compartments – according to the protection target although the available space is limited or other architectural demands exist?

These automatic systems are very small and easily integrated into any situation. You may choose between the protection targets up to 4 hours fire rating or up to 120 minutes insulation ("invisible fire protection").

Stoebich Fire & Smoke Curtain:

Stoebich Fire Curtain U ●
Stoebich Fire & Smoke Curtain P ●
Stoebich Fire & Smoke Curtain E ●
Stoebich Fire Curtain I ●
Stoebich Fire Curtain T ●
Stoebich Fire Curtain V ●

2. For openings in ceilings

How to seal large openings in ceilings – which create fire compartments – according to the protection target even though the available space is limited or architectural demands exist?

These automatic systems are very small and easily integrated into any situation. You may choose between the protection targets up to 2 hours fire rating, up to 60 minutes integrity with limitation of heat transmission, or up to 120 minutes insulation ("invisible fire protection").

Stoebich Fire & Smoke Curtain H / HC ●

3. For fire protection which goes around the corner

Provided that no limitations caused by side guides or columns can be accepted (as in the case of prestigious buildings). How to adjust the existing high demands of fire protection closures to architectural constructions even when it has to create a room or has to go around the corner?

The Stoebich Fire Curtain offers a polygon shaped design without the necessity of disturbing side guides but still maintaining the required tightness. Due to the flat design, the system is easily integrated into ceilings and can be built with extremely large widths and lengths. Where as the angle may be between 30° and 150°.

Stoebich Fire & Smoke Curtain S ●

4. For openings in facades in corner situations

When buildings or parts of a building connect to each other in a corner situation or if they are separated by a fire wall, no openings in the fire wall are allowed. How to guarantee this if operable windows are planned?

The protection is assured by the possibility to install them inside or outside the building. With this automatic sealing system, operable standard windows without fire-rated glazing can be used. Therefore, the room comfort is not restricted.

Stoebich Fire Curtain F ●

5. For openings in facades with a minor distance between the buildings

Subject to a lower deviation of these requirements the adjacent walls need to be designed as fire walls. Openings have to be closed in a fire-resistant manner to avoid the passage of fire. How to guarantee this if operable windows are planned?

The protection is assured by the possibility to install them inside or outside the building. With this automatic sealing system, operable standard windows without fire-rated glazing can be used. Therefore, the room comfort is not restricted. The robust functionality is approved by a weathering test for 10 years created by a German testing laboratory.

Stoebich Fire Curtain F ●
Stoebich Fire Curtain W ●

6. For openings in facades and canopies

When the roof of building extensions join to walls with openings or to walls which are not fire-retardant. How to solve this problem?

The protection is assured by the possibility to install them inside or outside the building. With this automatic sealing system, operable standard windows without fire-rated glazing can be used. Therefore, the room comfort is not restricted.

Stoebich Fire Curtain F ●
Stoebich Fire & Smoke Curtain H / HC ●

7. To prevent the passage of fire from one level to another

A textile fire protection closure designed as a barrier that prevents the passage of flames from one level to another. How to solve this problem without limiting the field of view?

Fire protection closures which are integrated into a building and being activated by fire detection or a thermal release mechanism automatically, create a fire barrier in the case of fire.

Stoebich Fire Curtain W ●
Stoebich Fire & Smoke Curtain E ●
Stoebich Fire & Smoke Curtain P ●

8. To create a section

The creation of sections within fire compartments limits the risk of fire to especially endangered machines or installations. How to achieve such a sealing?

The Stoebich Fire Curtain creates the required walls or even ceilings. In case of a fire, these rooms can be flooded by high pressure water-spray extinguishing systems or gas extinguishing systems that douse the fire. The fire protection systems are designed in dependence on the allowed leakage. Systems with side guides are used to match the high demands concerning tightness for gas extinguishing systems.

Stoebich Fire Curtain U ●
Stoebich Fire & Smoke Curtain P ●
Stoebich Fire Curtain I ●
Stoebich Fire & Smoke Curtain E ●

Stoebich
innovative fire & smoke protection

1. Smoke extraction by automatic or fixed textile smoke curtains
2. Smoke curtains with a curved course
3. Automatic textile smoke curtain with the feasibility to pass through
4. Creation of areas for smoke conduction or as fire protection closure
5. Automatic textile fire & smoke tight curtain
6. Automatic textile fire curtain for openings in walls
7. Automatic textile fire curtain without side guides
8. High speed door with integrated fire protection
9. Automatic textile fire curtain for openings in ceilings
10. Automatic textile fire curtain for facades, exterior installation
11. Conveyor system closures for uninterrupted and interrupted conveyor systems
12. Conveyor system closures for pneumatic conveyor systems
13. Automatic textile fire curtain with Hose Stream test
14. Elevator shaft doors as fire protection closure
15. Fire protection stacking door
16. Isogate – fire protection insulation doors and gates
17. Fire protection hood 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 - 480 VAC

Attention:
Textile fire curtains are not regulated in the Building Code and has to be approved by the local authorities as an alternate solution, means and methods.

Stoebich
Fire & Smoke Protection

Protection targets

		Definition	Fire rating	Test standard/certificate
	E (European classification)	**Integrity** Integrity is the resistance against fire to avoid a passage of flames or hot gases. Protection target EI (insulation) can be achieved by a fire load free zone: 30 min. insulation: x = 3.5' 60 min. insulation: x = 5' 90 min. insulation: x = 7'	up to 4 hours fire rating	EN 1634-1 UL 10B (20 min. fire rating) UL 10B (120 min. fire rating) UL 10C (20 min. fire rating) UL 10D (120 min. fire rating) NFPA 252 (20 min. fire rating)
	EW (European classification)	**Integrity with a limitation of heat transmission** Limitation of the heat transmission is the characteristic to reduce the heat being transferred through a fire protection system to limiting materials. Protection target EI (insulation) can be achieved by a fire load free zone: 30 min. insulation: x = 0.7' 60 min. insulation: x = 1' 90 min. insulation: x = 1.7'	up to 2 hours fire rating with limitation of heat transmission	
	EI **(insulation with sprinkler)** (European classification)	**Insulation with intensified sprinkler protection in case of fire** Insulation is the ability of the system to avoid the transmission of fire caused by heat radiation. The transmission has to be limited in a way, that neither the opposite fire side surface nor any other materials near to this surface ignite and so persons are protected. x = 0.7' - 1.7' depending on the environment	up to 3 hours insulation	
	EI **(insulation with water film)** (European classification)	**Insulation with water in case of fire**	up to 3 hours insulation	
	EI **(insulation without water)** (European classification)	**Insulation without water in case of fire**	up to 1 hour insulation	
	Transmission from one level to another	**Avoidance of transmission of flames from one level to another without (with) balustrade**	The necessary barrier (or lintel) height of 3.3' is automatically created in case of fire	
	Extinguishing	**Creation of sections** Limitation of a room which is usually not there to avoid the transmission of flames or hot gases to the room without fire. Enclosure by textile fire protection closures with the targets: limitation of the fire, smothering of the fire, extinguishing of the fire by gases or water-spray.	Enclosure by textile fire protection closures with the target to: · limit the fire · quench the fire · extinguish the fire with gases or water-spray	

Stoebich - References North America

**2012 Harley Marine,
Seattle, Washington**

**2012 Historical Sherlock Building,
Portland, Oregon**

**2012 Hyatt Place Hotel,
El Segundo, California**

**2014 Seaholm Power Plant,
Austin, Texas**

**2013 The University of Missouri,
Kansas City, Missouri**

**2014 New Broad Museum,
Los Angeles, California**

**2011 Sargento Foods,
Plymouth, Wisconsin**

**2013 Pharmaceutical Building,
Princeton, New Jersey**
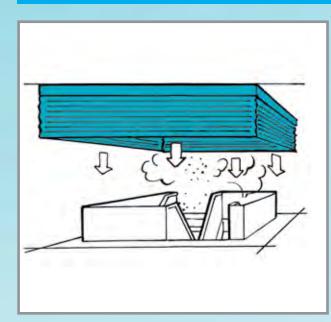
**2010 Vancouver Library,
Vancouver, Washington**

Stoebich Fire & Smoke Curtain S

Room creating textile fire protection closure without any columns

System description

· 2 hours fire rating according to UL 10D
· 20 minutes fire rating according to UL 10B, UL 10C, NFPA 252
· closed polygon shape or open systems with connection to
  the wall by special side guides, lengths up to 53' per
  side and a drop length up to 20'
· rectangular corners or angles from 30° up to 150°
· corners without additional columns
· low installation height
· self-leveling bottom bar (flush sealing with the ceiling)
· warp-free bottom bar
· drive unit with fail-safe technology (closing without auxiliary power)
· drive unit with 10,000 cycles
· redundant drive unit as fall protection
· additional unrolling fabric to form a chamber for the insulation
  by inside water sprinklers
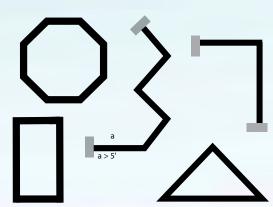
| Fabric	Perimeter of the system	Drop length	w	h
Stoebich Fire & Smoke Fabric E	≤ 300'	≤ 10'	1.6'	4.92"
Stoebich Fire & Smoke Fabric E	≤ 300'	10' - 20'	1.6'	8.86"
Stoebich Fire & Smoke Fabric H	≤ 300'	≤ 10'	1.6'	8.86"
Stoebich Fire & Smoke Fabric H	≤ 300'	10' - 20'	1.6'	17.72"
Stoebich Fire & Smoke Fabric E (insulation version)	≤ 300'	≤ 20'	1.97'	9.41"
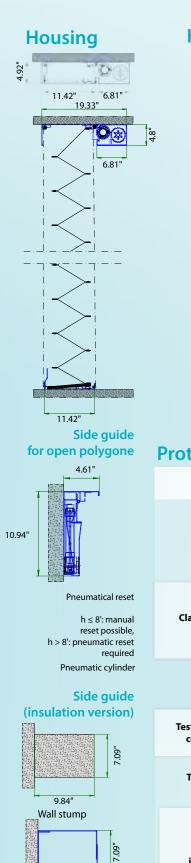
At least 2 drive units and one more for each 33' above 66' perimeter

Other configurations and special design on request

Weight of the system:
23 lbs per linear foot, side guides: 15 lbs per linear foot

Range of runs of the fire protection closure

Housing

4.92"
11.42" 6.81"
19.33"
4.8"
6.81"
11.42"
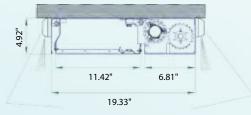
Housing (insulation version)

9.41"
21.97"
23.62"

Bottom bar

4.92"
11.42" 6.81"
19.33"

With security device (infrared) (optional)
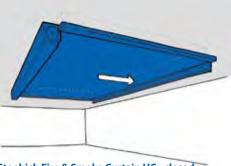
Side guide
for open polygone

4.61"
10.94"

Pneumatical reset

h ≤ 8': manual
reset possible,
h > 8': pneumatic reset
required

Pneumatic cylinder

Side guide
(insulation version)

7.09"
9.84"

Wall stump

7.09"
9.84"

Metal plate as alternative
for the wall stump (optional)

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with inten-sified sprinkler protection	Insulation by water mist in the intermediate layer
Classification	2 hours fire rating (UL 10D) 20 minutes fire rating (UL 10B, UL 10C, NFPA 252)	EW 30 (European classification)	EI 90 (European classification)	EI 120 (European classification)
Fabric	Stoebich Fire & Smoke Fabric E (ASTM E84)	Stoebich Fire & Smoke Fabric E (ASTM E84)	Stoebich Fire & Smoke Fabric E (ASTM E84)	Stoebich Fire & Smoke Fabric E (ASTM E84)
Test standard / certificate	UL 10B, UL 10C, UL 10D, NFPA 252, UL 864, UL 1784 OSHPD CA	European test standard EN 1634-1	European test standard EN 1634-1	European test standard EN 1634-1
Test report	OPA-2965-10	IBS 08062415 UB 3.3 / 10-018-1	IBS 08062416	EFR-14-G-001085
Water irrigation			20" 20"	

Stoebich Fire & Smoke Curtain H / HC

Horizontal textile fire protection closure for openings in ceilings

Stoebich Fire & Smoke Curtain HC - opened

Stoebich Fire & Smoke Curtain HC - closed

Stoebich Fire & Smoke Curtain HC two-part - closed

System description - Stoebich Fire & Smoke Curtain HC

· system for large openings in ceilings without supporting or tensioning cables up to 33' x 33' (two-part version up to 33' x 66')

· housing and bottom bar build a closed casing under operating condition

· motorized closing and opening (emergency power supply is required)

### System description - Stoebich Fire & Smoke Curtain H
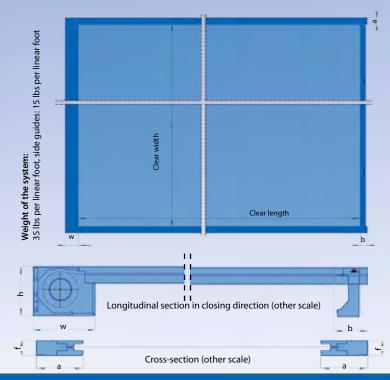
· system for large openings in ceilings up to 66' in width and high drop length

· tensioning cables in a distance of 5' to support the fabric with large dimensions as well as for the pressure load in case of smoke

· high variability in design (e.g. arch-shape)

· safe-closing process up to 17' drop length with gas spring (no auxiliary energy) or with duplex drive system (electrical power supply is required) for drop length up to 30'

· spring system is closing with fail-safe technology

Special design
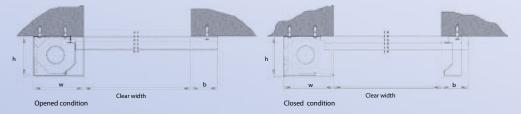
Deviation from the linear closing direction possible.

Weight of the system:
35 lbs per linear foot, side guides: 15 lbs per linear foot

Clear width

Clear length

Longitudinal section in closing direction (other scale)

Cross-section (other scale)
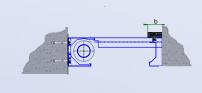
System	Clear width	Clear length	a	b	h	w	f
Spring	≤ 4.6'	≤ 5'	4.72"	4.29"	7.48"	7.87"	7.48"
Spring	≤ 15'	≤ 9.5'	4.72"	4.29"	7.48"	9.84"	7.48"
Spring	≤ 15'	9.5' - 16.4'	5.91"	4.29"	9.25"	11.42"	9.25"
Spring	15' - 100'	9.5' - 16.4'	5.91"	8.86"	9.25"	12.60"	9.25"
Duplex	≤ 66'	9.5' - 27.9'	6.30"	13.19"	10.79"	13.98"	3.15"
HC (1-part)	≤ 20'	≤ 20'	7.87"	8.66"	9.25"	11.81"	3.15"
HC (1-part)	≤ 33'	≤ 33'	11.81"	12.99"	15.75"	19.69"	5.91"
HC (2-part)	≤ 33'	≤ 66'	11.81"	19.69"	15.75"	19.69"	5.91"

Other configurations and special design on request
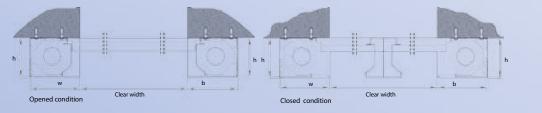
Stoebich Fire & Smoke Curtain HC (one-part): housings

Opened condition   Clear width

Closed condition   Clear width
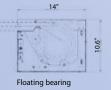
Stoebich Fire & Smoke Curtain HC (two-part): housings

Opened condition   Clear width

Closed condition   Clear width

Clear width
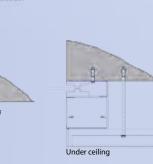
Stoebich Fire & Smoke Curtain H: housings

14"

10.6"

Fixed bearing

14"

10.6"

Floating bearing
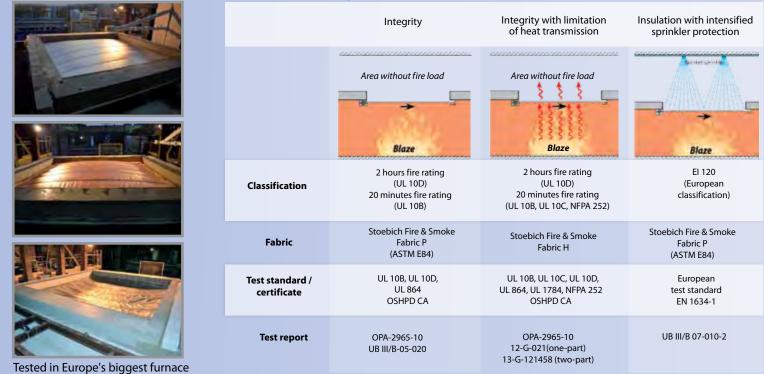
Side guide, bottom bar, feeding edge

14"

10.6"

Under ceiling

Tested in Europe's biggest furnace

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with intensified sprinkler protection
	Area without fire load	*Area without fire load*	
	Blaze	Blaze	Blaze
Classification	2 hours fire rating (UL 10D) 20 minutes fire rating (UL 10B)	2 hours fire rating (UL 10D) 20 minutes fire rating (UL 10B, UL 10C, NFPA 252)	EI 120 (European classification)
Fabric	Stoebich Fire & Smoke Fabric P (ASTM E84)	Stoebich Fire & Smoke Fabric H	Stoebich Fire & Smoke Fabric P (ASTM E84)
Test standard / certificate	UL 10B, UL 10D, UL 864 OSHPD CA	UL 10B, UL 10C, UL 10D, UL 864, UL 1784, NFPA 252 OSHPD CA	European test standard EN 1634-1
Test report	OPA-2965-10 UB III/B-05-020	OPA-2965-10 12-G-021(one-part) 13-G-121458 (two-part)	UB III/B 07-010-2

Stoebich Fire Curtain U

First textile fire protection closure in the world, that passed the Hose Stream test according to UL 10B

System description

· 2 hours fire rating according to UL 10B
  with Hose Stream test (high stability)
· one-part with a width up to 19' and a large
  drop length up to 15'
· drive unit with fail-safe technology
  (closing without auxiliary power)
· drive unit with 10,000 cycles
· only one drive unit is necessary
  (reduced effort for the installation)

patent pending

Section B-B

3.2"

5.7"

Clear width
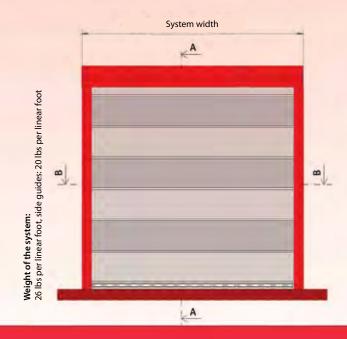
System width	Drop length	w	h
≤ 19'	≤ 15'	10.63"	12.6"

Other configurations and special design on request
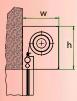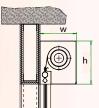
System width

Section A-A

Weight of the system:
26 lbs per linear foot, side guides: 20 lbs per linear foot

Drop length

10

Installation of housings

Installation of the housing to the wall
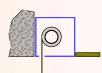
Installation of the housing to the ceiling

Alternatives for the installation

Installation of the housing to the wall, front site run

Installation of the housing to the wall, false ceiling is attached to the housing on one side, front site run

Side guides

Continuous fabric clamping due to side guiding for high pressures and high tightness

3.2"

5.7"
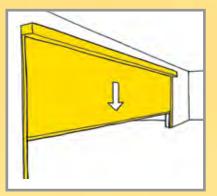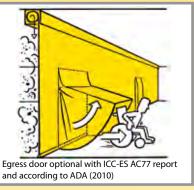
Tested by Intertek in Middleton Wisconsin

Protection targets

	Integrity	Insulation with intensified sprinkler protection	Insulation with water film
Classification	2 hours fire rating (UL 10B)	EI 120 (European classification)	EI 120 (European classification)
Fabric	Stoebich Fire Fabric Herkutex	Stoebich Fire Fabric Herkutex	Stoebich Fire Fabric Herkutex
Test standard / certificate	UL 10B (with Hose Stream test), UL 864 OSHPD CA		
Test report	OPA-2965-10		
Water irrigation			

11

Stoebich Fire & Smoke Curtain P
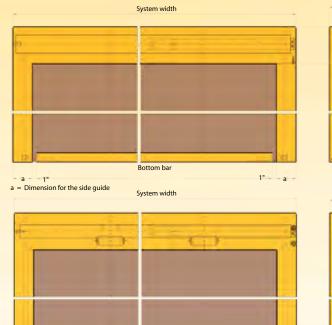
Premium textile fire protection closure for high requirements with large dimensions

Egress door optional with ICC-ES AC77 report and according to ADA (2010)

System description

· 2 hours fire rating according to UL 10D
· 20 minutes fire rating according to UL 10B, UL 10C, NFPA 252
· 4 hours fire rating according to European test standard EN 1634-1
· one-part with a width up to 100' and a large drop length up to 30'
· high variability in construction and design
· drive unit with fail-safe technology (closing without auxiliary power)
· drive unit with 10,000 cycles
· different protection targets (E, EW, EI) by using different types of fabrics
  (European classification)
· self-leveling bottom bar, safety edge (optional)
· continuing lateral fixing of the fabric by using the side guides with steel rod
  for large drop lengths, high pressure, high tightness and gentle closing

Weight of the system:
23 lbs per linear foot, side guides: 13 lbs per linear foot

a = Dimension for the side guide

Fixed bearing

Fabric	System width	Drop length	w	h
Stoebich Fire & Smoke Fabric H	2.6' - 13'	≤ 6.6'	7.48"	9.84"
Stoebich Fire & Smoke Fabric H	2.6' - 13'	≤ 25'	9.25"	11.41"
Stoebich Fire & Smoke Fabric P	2.6' - 5.2'	≤ 11'	7.48"	9.84"
Stoebich Fire & Smoke Fabric P	5.2' - 13'	≤ 11'	7.48"	7.87"
Stoebich Fire & Smoke Fabric P	2.6' - 13'	11' - 20'	7.48"	9.84"
Stoebich Fire & Smoke Fabric P	2.6' - 13'	20' - 30'	9.25"	11.41"

Other configurations and special design on request
Width-to-drop-length ratio: max. 1:3

Floated bearing

Fabric	System width	Drop length	w	h
Stoebich Fire & Smoke Fabric H	13' - 40'	≤ 6.6'	7.48"	9.84"
Stoebich Fire & Smoke Fabric H	13' - 40'	≤ 20'	9.25"	11.41"
Stoebich Fire & Smoke Fabric P	13' - 72'	≤ 11'	7.48"	7.87"
Stoebich Fire & Smoke Fabric P	13' - 72'	11' - 20'	7.48"	9.84"
Stoebich Fire & Smoke Fabric P	13' - 66'	11' - 30'	9.25"	11.41"

Other configurations and special design on request
Width-to-drop-length ratio: max. 1:3

Range of housings

Standard - Fixed bearing

Standard - Floated bearing

Special construction

Range of side guides

Continuous fabric clamping due to rod guiding for high pressures and high tightness

| Type	Drop length	Square footage
80 E	≤ 11.5'	≤ 194 ft²
105 E	≤ 20'	≤ 538 ft²
105 V	≤ 20'	≤ 754 ft²
160 E	≤ 30'	≤ 1,129 ft²

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 160 E
Installation to the wall

Type 160 E
Installation in the embrasure

Type 160 E
Installation in the niche

Bottom bars

4,6 type

9,6 heavy type

5,61 narrow type

3,84 F type

Self-leveling bottom bar without safety edge (optional)

3,84 FK type

Self-leveling bottom bar, with safety edge (optional)

Self-leveling bottom bar without safety edge, under the ceiling (optional)

Alternatives for the installation

Installation of the housing to the wall, front site run

Installation of the housing to the wall, rear site run

Installation of the housing to the wall, false ceiling is attached to the housing on one side, front site run

Installation of the housing to the wall, false ceiling is attached to the housing on one side, rear site run

Installation of the housing directly to the ceiling

Installation of the housing directly to the ceiling, false ceiling is attached to the housing on both sides

Installation of the housing to the ceiling by using hangers

Installation of the housing to the ceiling by using hangers, false ceiling is attached to the housing on both sides

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with intensified sprinkler protection	Insulation with water film
Classification	2 hours fire rating (UL 10D) 20 minutes fire rating (UL 10B, UL 10C, NFPA 252)	EW 90, EW 120 (European classification)	EI 120, EI 180 (European classification)	EI 90, EI 180 (European classification)
Fabric	Stoebich Fire & Smoke Fabric P (ASTM E84)	Stoebich Fire & Smoke Fabric H	Stoebich Fire & Smoke Fabric P (ASTM E84)	Stoebich Fire & Smoke Fabric P (ASTM E84)
Test standard / certificate	UL 10B, UL 10C, UL10D UL 864, UL 1784, NFPA 252 OSHPD CA	European test standard EN 1634-1	European test standard EN 1634-1	European test standard EN 1634-1
Test report	OPA-2965-10	UB III/B-08-012 UB III/B-07-003 UB 3.3 / 10-035-1 UB 3.3 / 11-009-1	UB III/B-05-006 UB III/B-08-016 UB III/B-07-010-2	UU IV/00-39-1 UB III/B-02-008-1 08/32309876 2011-Efectis-R0495
Water irrigation				

Stoebich Fire & Smoke Curtain E
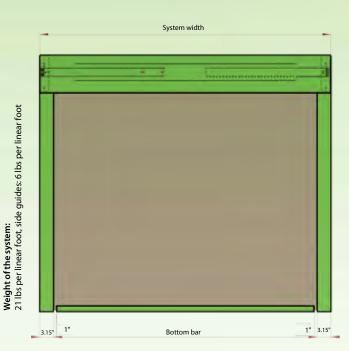
Economical textile fire protection closure with high level of standardization

Egress door optional with ICC-ES AC77 report
and according to ADA (2010)

System description

· 2 hours fire rating according to UL 10D

· 20 minutes fire rating according to UL 10B, UL 10C, NFPA 252

· one-part with a width up to 20' and a drop length up to 26'

· side guides with bobbins

· drive unit with fail-safe technology (closing without auxiliary power)

· drive unit with 10,000 cycles

· different protection targets (E, EW, EI) by using different types
  of fabrics (European classification)

· self-leveling bottom bar, safety edge (optional)

Weight of the system:
21 lbs per linear foot, side guides: 6 lbs per linear foot

Fabric	System width	Drop length	w	h
Stoebich Fire & Smoke Fabric E	3.6' - 20'	≤ 26'	7.87"	8.66"
Stoebich Fire & Smoke Fabric E	3.6' - 23'	≤ 16'	7.87"	8.66"
Stoebich Fire & Smoke Fabric H	3.6' - 13'	≤ 16'	7.87"	8.66"
Stoebich Fire & Smoke Fabric H	3.6' - 16'	≤ 13'	7.87"	8.66"
Stoebich Fire & Smoke Fabric H	3.6' - 20'	≤ 10'	7.87"	8.66"

Other configurations and special design on request
Width-to-drop-length ratio: max. 1:3

Range of housings
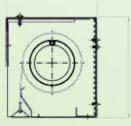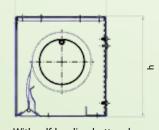

Installation to the ceiling

Installation to the wall
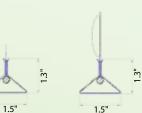
With self-leveling bottom bar (optional)

Bottom bars

Standard design

Self-leveling bottom bar (optional)
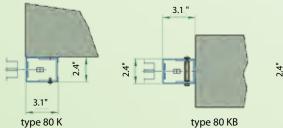
## Alternatives for the installation
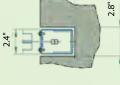
Installation of the housing to the wall, front site run

Installation of the housing to the wall, false ceiling is attached to the housing on one side, front site run

Installation of the housing directly to the ceiling

Installation of the housing directly to the ceiling, false ceiling is attached to the housing on both sides

Installation of the housing to the ceiling by using hangers

Installation of the housing to the ceiling by using hangers, false ceiling is attached to the housing on both sides

Range of side guides

type 80 K

type 80 KB

type 80 KN

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with intensified sprinkler protection
Classification	2 hours fire rating (UL 10D) 20 minutes fire rating (UL 10B, UL 10C, NFPA 252)	EW 90 (European classification)	EI 120 (European classification)
Fabric	Stoebich Fire & Smoke Fabric E (ASTM E84)	Stoebich Fire & Smoke Fabric H	Stoebich Fire & Smoke Fabric E (ASTM E84)
Test standard / certificate	UL 10B, UL 10C, UL10D UL 864, UL 1784, NFPA 252 OSHPD CA	European test standard EN 1634-1	European test standard EN 1634-1
Test report	OPA-2965-10	UB III/B-08-012	UB III/B-08-016
Water irrigation			

Stoebich Fire Curtain W

System description

· 2 hours fire rating according to European test standard EN 1634-1
· system width up to 13' (with small drop lengths)
· textile fire protection closure for standard window openings
  (metal windows require Stoebich Fire Fabric E,
  wooden or plastic windows require Stoebich Fire Fabric H)
· cost saving solution by a manual re-opening, drive unit (optional)
· soft bottom bar (to fulfill industrial safety requirements)
· thermomechanical release, release by fire detection elements (optional)
· drive unit by a hand wheel respectively hexagon nut,
  crank handle (optional)
· drop length of max. 3.3' by prevention of a flame flashover over
  the balustrade

Fabric	System width	Drop length	w	h
Stoebich Fire Fabric E	≤ 1.6'	≤ 1.6'	5.31"	5.51"
Stoebich Fire Fabric E	≤ 4.9'	≤ 6.6'	5.31"	5.51"
Stoebich Fire Fabric E	≤ 5.9'	≤ 5.9'	5.31"	5.51"
Stoebich Fire Fabric E	≤ 7.5'	≤ 3.3'	5.31"	5.51"
Stoebich Fire Fabric E	≤ 13.1'	≤ 3.3'	5.31"	5.51"
Stoebich Fire Fabric H	≤ 1.6'	≤ 1.6'	5.31"	5.51"
Stoebich Fire Fabric H	≤ 4.9'	≤ 4.6'	5.31"	5.51"
Stoebich Fire Fabric H	≤ 5.9'	≤ 4.6'	5.31"	5.51"
Stoebich Fire Fabric H	≤ 7.5'	≤ 3.3'	5.31"	5.51"
Stoebich Fire Fabric H	≤ 13.1'	≤ 3.3'	5.31"	5.51"

Other configurations and special design on request

Installation dimension

System width

w

h

Building shell opening

Weight of the system:
14 lbs per linear foot, side guides: 4 lbs per linear foot

Housings
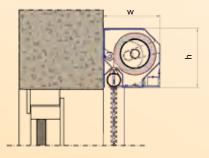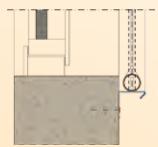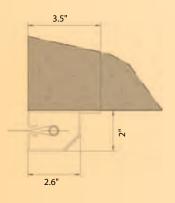
Thermomechanical
(standard)

Electromechanical
(special)
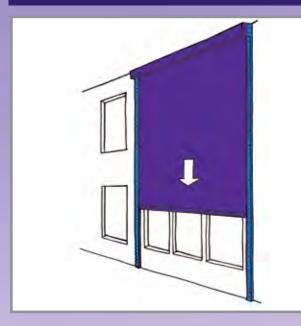
Bottom bar

Side guide

3.5"

2"

2.6"

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with intensified sprinkler protection
Classification	2 hours fire rating	EW 30 (European classification)	EI 120 (European classification)
Fabric	Stoebich Fire Fabric E (ASTM E84)	Stoebich Fire Fabric H	Stoebich Fire Fabric E (ASTM E84)
Test standard / certificate	UL 864, European test standard EN 1634-1	European test standard EN 1634-1	European test standard EN 1634-1
Test report		UB III/B-08-012	UB III/B-08-016
Water irrigation			

17
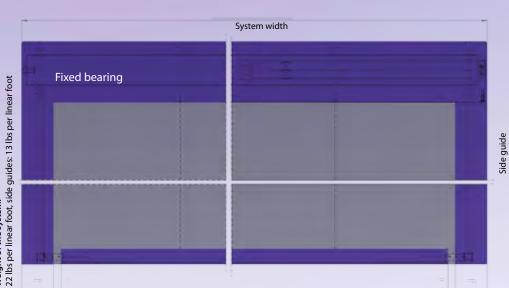
Stoebich Fire Curtain F

Textile fire protection closure for openings in facades and installation outside a building

System description
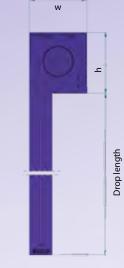
· 2 hours fire rating according to European test standard EN 1634-1
· special design for the application under climatic influence
· high variability for installations in facades (noninsulated facades, insulated facades, with combustible or noncombustible insulation)
· temperature control to avoid the icing of the side guides
· safe drive unit, which guarantee a safe closing even in case of low temperatures
· proven components for the application outside of a building
· drive unit with fail-safe technology (closing without auxiliary power)
· 10 years outdoor weathering test

Weight of the system:
22 lbs per linear foot, side guides: 13 lbs per linear foot

a = Dimension for the side guide
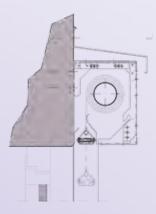
Fabric	System width	Drop length	w	h
Stoebich Fire Fabric H	2.6' - 16.4'	≤ 6.6'	7.48"	9.84"
Stoebich Fire Fabric H	2.6' - 16.4'	≤ 16.4'	9.25"	11.4"
Stoebich Fire Fabric P	2.6' - 5.2'	≤ 11.5'	7.48"	9.84"
Stoebich Fire Fabric P	5.2' - 16.4'	≤ 11.5'	7.48"	7.87"
Stoebich Fire Fabric P	2.6' - 16.4'	11.5' - 16.4'	7.48"	9.84"

Other configurations and special design on request
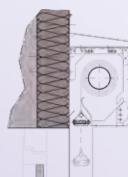
Width-to-drop-length ratio: max. 1:3
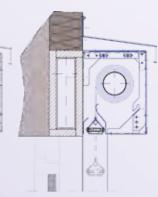
Installation of housings
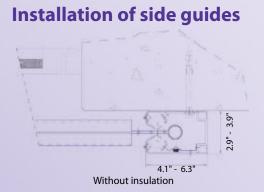
Without insulation
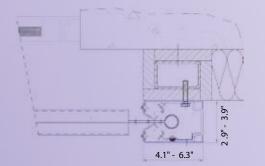
With noncombustible insulation

With combustible insulation

Bottom bars

(Alternative solutions are possible in case of closing onto noncombustible materials)

Installation of side guides

2.9" - 3.9"

4.1" - 6.3"

Without insulation

2.9" - 3.9"

4.1" - 6.3"

With noncombustible insulation

2.9" - 3.9"

4.1" - 6.3"
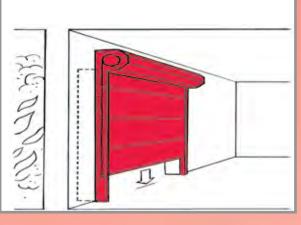
With combustible insulation

Protection targets

	Integrity	Integrity with limitation of heat transmission	Prevention of flashover from floor to floor
Classification	2 hours fire rating	EW 90 (European classification)	2 hours fire rating
Fabric	Stoebich Fire Fabric P	Stoebich Fire Fabric H	Stoebich Fire Fabric P
Test standard / certificate	UL 864, European test standard EN 1634-1	European test standard EN 1634-1	European test standard EN 1634-1
Test report	GU IV/97-73	UB III/B-08-012	B 15045

19

Stoebich Fire Curtain I

System description

· 30 min. insulation according to European test standard EN 1634-1
· system width up to 20' and a drop length up to 13'
· single-layer sealing
· less space requirements of the housing
· simple mounting on the wall
· dry system (no sprinkler necessary)
· drive unit with fail-safe technology (closing without auxiliary power)
· emergency opening with battery backup (optional)
· surveillance of closing edgings and areas (optional)

System width	Drop length	w	h
≤ 20'	≤ 10'	20.08"	15.75"
≤ 20'	≤ 13'	22.64"	17.72"

Other configurations and special design on request

Range of housings

With casing

Without casing

Drive options

8.7"

With chain drive

With tubular motor

System width

w

Drop length

Opening width

Clearance width

Standard version: space requirement for installation = opening width + 27.6"

Special construction: space requirement for installation = opening width + 21.3"

Weight of the system:
68 lbs per linear foot, side guides: 14 lbs per linear foot

Side guide

Protection target

Integrity and insulation

Blaze

Classification	30 min. fire rating 30 min. insulation
Test standard / certificate	UL 864, European test standard EN 1634-1
Test report	2200/131/15 3469/11/14

Insulating textile fire protection closure without sprinkler

System description

· 60 min. insulation according to European test standard EN 1634-1
· system width up to 20' and a drop length up to 13'
· double-layer sealing
· less space requirements of the housing
· simple mounting on the wall
· dry system (no sprinkler necessary)
· drive unit with fail-safe technology (closing without auxiliary power)
· emergency opening with battery backup (optional)
· surveillance of closing edgings and areas (optional)

System width	Drop length	w	h
≤ 20'	≤ 10'	25.98"	22.05"
≤ 20'	≤ 13'	28.94"	25.59"

Other configurations and special design on request

Range of housings

With housing

Without housing

Weight of the system:
120 lbs per linear foot, side guides: 14 lbs per linear foot

System width

Opening width

Clearance width

Standard version: space requirement for installation = opening width + 31.5"

Special construction: space requirement for installation = opening width + 23.6"

Drop length

Side guide

Protection target

Integrity and insulation

Classification	60 min. fire rating 60 min. insulation
Test standard / certificate	UL 864, European test standard EN 1634-1
Test report	3004/878/09 3267/864/11

Stoebich Fire Curtain V

System description

· 90 min. insulation and 120 min. fire rating
  according to European test standard EN 1634-1
· system width up to 39' and a drop length up to 12'
· multi-chamber construction
· no side guides (embrasure is used as guidance)
· lateral system overlapping 6.9"
· drive unit with fail-safe technology
  (closing without auxiliary power)
· flexible stop system (accurate top position)
· low casing
· slide and roller elements for wall protection (no scratching
  on the wall when opening and closing)
· bottom tray with optical design possibilities (optional)

Calculation formula

Calculation of the clear height = 0.834 x opening height

Some examples

Clear height	Opening height	w	h	h_1	b
82.09"	98.43"	22.64"	16.34"	20.87"	16.34"
98.43"	118.11"	22.64"	19.69"	24.21"	16.34"
164.17"	196.85"	22.64"	32.68"	37.20"	16.34"

Other configurations and special design on request

With housing

In suspended ceiling without housing

With housing

In suspended ceiling without housing

Suspended ceiling

Opening height

Clear height

Opening width

System width

Weight of the system:
61 lbs per linear foot

Installation of housings
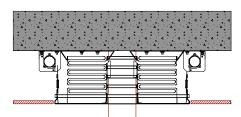
Installation of the housing directly to the wall

Installation of the housing directly to the
wall, false ceiling is attached to the housing on both sides

Installation of the housing directly to the ceiling

Design of bottom tray

Standard, three-part, paint coated

Installation of lightings

Bottom side coated

Design of embrasure

Lateral connection

11.22"
10.04"
≥ 6.89"

Protection target

	Integrity and insulation
	Blaze
Classification	120 min. fire rating 90 min. insulation
Test standard / certificate	UL 864, European test standard EN 1634-1
Test report	UB 3.3/11-009-2
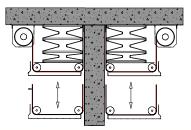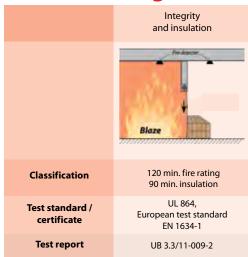
Wall protection

Revolving wall protection – invisible when system is open

23
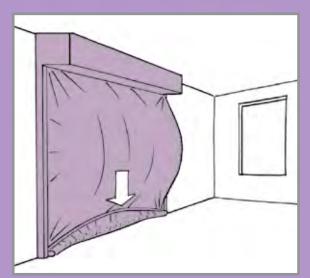
Stoebich Fire Curtain T

Tight fire protection closure for high pressure and smoke protection
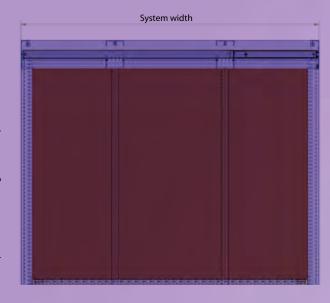
System description
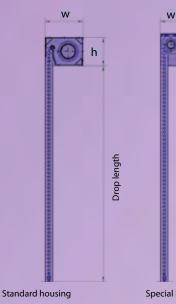
· 2 hours fire rating according to European test standard EN 1634-1
· system width up to 33' and a drop length up to 20' (Stoebich Fire & Smoke Fabric E)
· additional tight smoke protection
  (passive sealing system with noncombustible sealing parts)
· elastic floor sealing to seal bigger unevenness
· versatile mounting options
· drive unit with fail-safe technology (closing without auxiliary power)
· drive unit with 10,000 cycles
· different protection targets (E, EW) by using different types of fabrics
  (European classification)
· high quality fabric with silicone coating or with polyurethane coating
· safety edge (optional)

Housing 11.22" x 7.87"
exclusively for ceiling mounting

Fabric	System width	Drop length	w	h	Housing
Stoebich Smoke Fabric E	≤ 33'	≤ 20'	13.78"	10.24"	standard
Stoebich Smoke Fabric E	≤ 16'	≤ 15'	11.22"	7.87"	special
Stoebich Smoke Fabric E	≤ 11'	≤ 11'	7.48"	11.42"	special
Stoebich Smoke Fabric E	≤ 23'	≤ 16'	11.42"	14.17"	special
Stoebich Smoke Fabric H	≤ 23'	≤ 10.5'	13.78"	10.24"	standard
Stoebich Smoke Fabric H	≤ 16'	≤ 8.2'	11.22"	7.87"	special
Stoebich Smoke Fabric H	≤ 11'	≤ 6,6'	7.48"	11.42"	special
Stoebich Smoke Fabric H	≤ 20'	≤ 9.8'	11.42"	14.17"	special

Other configurations and special design on request

Weight of the system:
40 lbs per linear foot, side guides: 8 lbs per linearfoot

System width

Drop length

w h w h

Standard housing   Special housing

Range of housings

Standard housing

Special housing

Bottom bars

Standard

With safety edge

Installation of side guides

2.91"

4.09"

Installation to the wall

2.91"

4.09"
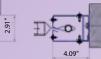
Installation to the embrasure

2.91"

4.09"

Installation to the nice

Alternatives for the installation

Installation of the housing to the wall

Installation of the housing to the wall; false ceiling is unilaterally connected to the housing

Installation of the housing directly to the ceiling

Installation of the housing directly to the ceiling, false ceiling is connected to the housing on both sides

Installation of the housing over a suspension to the ceiling
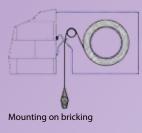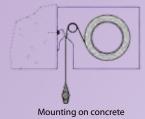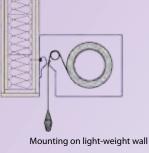
Installation of the housing over a suspension to the ceiling, false ceiling is connected to the housing on both sides without fire protection

Mounting options

Mounting on bricking

Mounting on concrete

Mounting on wood

Mounting on light-weight wall

Protection targets

	Integrity	Integrity with limitation of heat transmission	Insulation with intensified sprinkler protection
Classification	2 hours fire rating, s_{200} (European classification)	EW 90, s_{200} (European classification)	EI 120, s_{200} (European classification)
Fabric	Stoebich Fire Fabric P Stoebich Fire Fabric E (ASTM E84)	Stoebich Fire Fabric H	Stoebich Fire Fabric P Stoebich Fire Fabric E (ASTM E84)
Test standard / certificate	UL 864, European test standard EN 1634-1, EN 1634-3	European test standard EN 1634-1, EN 1634-3	European test standard EN 1634-1, EN 1634-3
Test report	UB III/B-06-15	UB III/B-08-012 UB III/B-06-15	UB III/B-08-016

Control units
Variable control of the smoke/fire curtains by release of the detection loop according to **UL 864**

RZ 7, RZ 8, AM-U

detection line
4

Stoebich fire protection central RZ 7, RZ 8

push button, red
1

3 → **AM-U** → 3 → tubular motor

Central fire monitoring

release signal provided from site
1

RZ7 can control up to 10 AM-U and 10 motors with a standard hold-open-time of 45 minutes (standard hold open time can be expand)

RZ8 can control up to 2 AM-U and 2 motors with a standard hold-open- time of 3 minutes (standard hold-open-time can be expand)

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)
AM-U = 11 inch x 3 inch x 6 inch (width x height x length)

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

Logic via hardware possible up to 3 detector groups

Central fire monitoring

release fire compartment BA 1
release fire compartment BA 2
release fire compartment BA 3 [1]
1

Stoebich MC/REL Evaluation unit

2x3x3

2x3
AM-U
3
AM-U 3
2x3
AM-U
3
AM-U 3
tubular motor | tubular motor | tubular motor → smoke section 1

2x3
AM-U
3
AM-U 3
2x3
AM-U
3
AM-U 3
tubular motor | tubular motor | tubular motor → smoke section 2

2x3
AM-U
3
2x3
AM-U 3
AM-U 3
tubular motor | tubular motor | tubular motor → smoke section 3

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

---

Central fire monitoring

release fire compartment BA 1
1 → **AM-U / RS** → 5

release fire compartment BA 2
1 → **AM-U / RS** → 5

release fire compartment BA 3
1 → **AM-U / RS** → 5

release fire compartment BA 4
1 → **AM-U / RS** → 5

RZ7 - OP

Possible for up to 16 release groups

| smoke section 1 | smoke section 2 | smoke section 3 |
| smoke section 4 | smoke section 5 | smoke section 6 |

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

---

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

detection line
4

fire protection central RZ
3 → **AM-U / RS** → 3 → tubular motor

Re-opening of the smoke curtains for the firefighting and evacuation

central fire alarm system
1 → 2 → safe power supply

1

---

detection line
4

fire protection central RZ
3 → **AM-U / RS** → 3 → tubular motor

Re-opening of the smoke curtains for a short time opening of the escape route

central fire alarm system
1 → 2 → safe power supply

push button for manual re-opening timer defines the hold-open time
1

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

Tubular motor

| Intelligent electronic position sensor technology | Fail-safe technology | Certified locking device | 208 - 230 VAC drive motor with gear box |

Installation situations
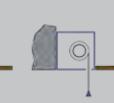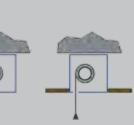
Installation of the casing to the wall, from behind	Installation of the casing to the wall, from the front	Installation of the casing to the wall, lower part of the casing is flush on one side with the casing, from below	Installation of the casing to the wall, lower part of the casing is flush on one side with the casing, from below	Installation of the casing directly to the ceiling, from behind/from below	Installation of the casing directly to the ceiling, lower part of the ceiling is flush on both sides with the casing, from below	Installation of the casing by suspensions to the ceiling, from behind/from below	Installation of the casing by suspensions to the ceiling, from behind/from below
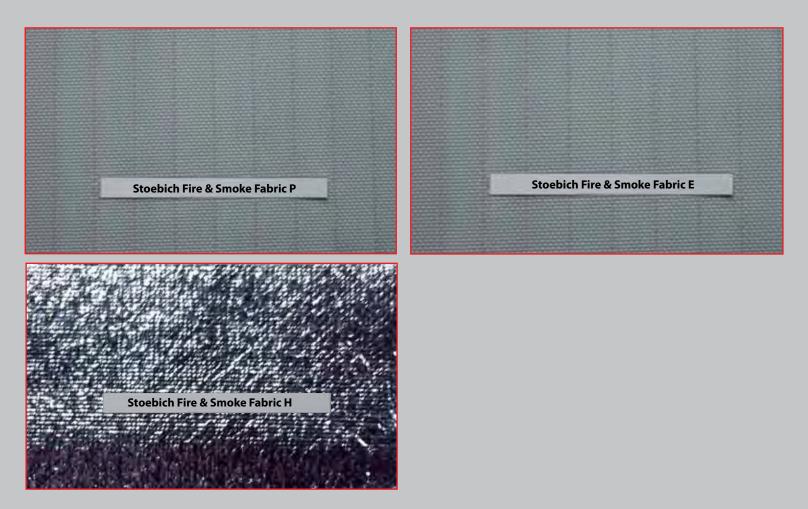
Design for the steel components

Coated

Galvanised

Stainless steel

Polished   *Circle matt finished*   *Grinded K 240*

Fabric - fire behaviour

Standard of the fabric:
ASTM E84

For the following fabrics:
Stoebich Fire & Smoke Fabric P
Stoebich Fire & Smoke Fabric E

Selection of fabrics for fire curtains

Stoebich Fire & Smoke Fabric P

Stoebich Fire & Smoke Fabric E

Stoebich Fire & Smoke Fabric H

Our innovation and passion
has brought ...

Since 1980 Stoebich Brandschutz GmbH has developed specialized separation technologies able to resist the effects of smoke and fire. Eleven of these are internationally recognized innovations and world novelties.

1980 FIRST CONVEYOR SYSTEM

1996 FIRST FIRE CURTAIN INSTALLATION, BOLTON UK

1993 FIRST SMOKE CURTAIN 0%-LEAKAGE-INSTALLATION

UNTIL 2016

No higher accolade than being imitated,
... but never accomplished

EXPERIENCED TRENDSETTER

11 world novelties and over 35 years of research, production and installations throughout the world have made us specialists for your protection! We are the most experienced and most innovative company in the market - Stoebich the Original!

BASED IN CHARLESTON, SC THROUGHOUT THE USA AND CANADA

Based in Charleston, SC and throughout our North American distributor network we provide high quality fire protection based on German engineering.

Stoebich
Fire & Smoke Protection

the original • the original • the original • the original • the original

STÖBICH ®
FIRE PROTECTION

Innovation for your Protection !

Stoebich Fire Protection Systems LP
1941 Savage Road / Suite 200 B
Charleston SC 29407 / United States
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