

# Safely Prevent Fires from Spreading

Technical Details & Applications

Fire PROtec® - Fire Curtains



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## **Introduction**

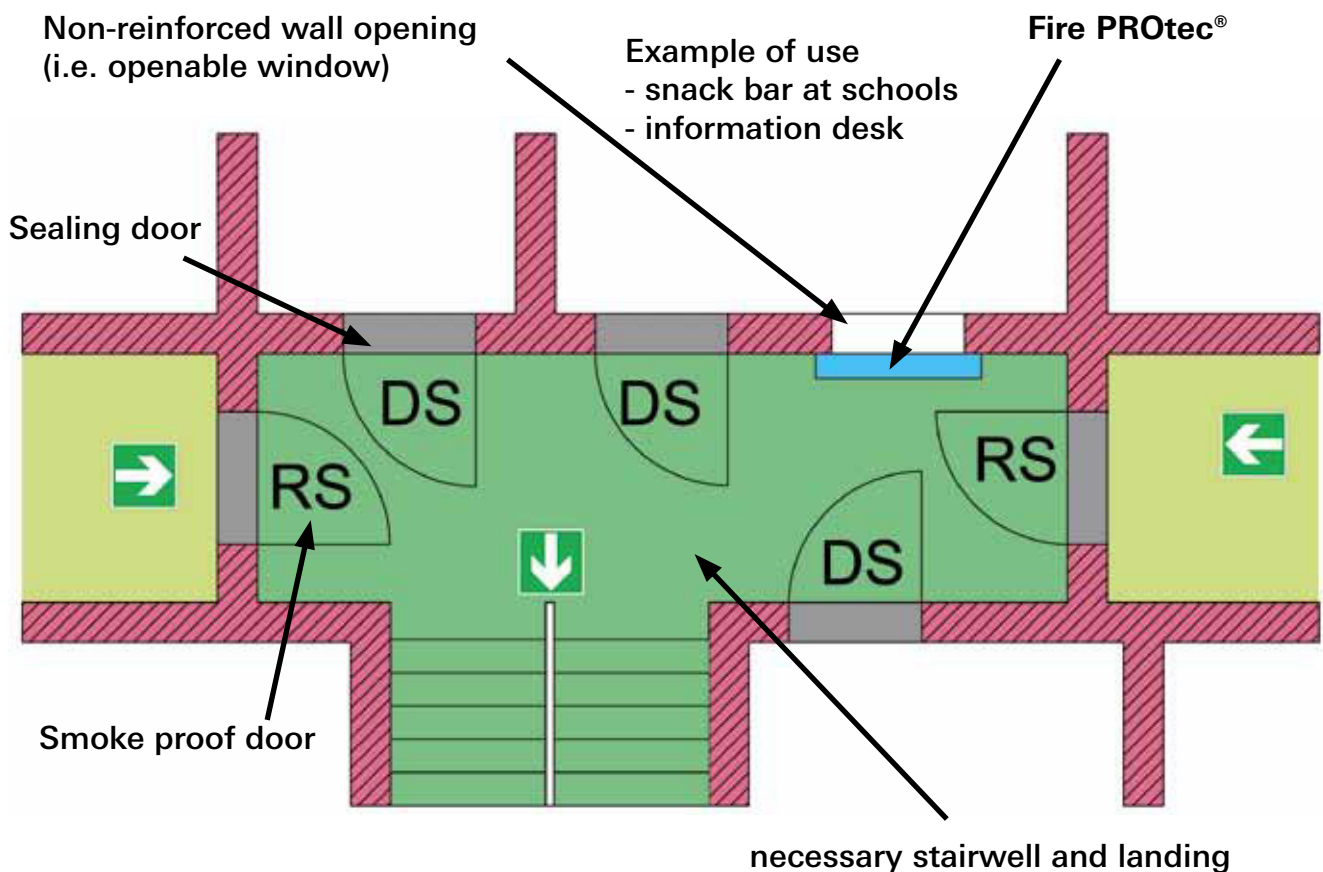
Fire curtains are an important part in modern fire protection concepts to prevent the spread of fire in buildings and to secure escape and rescue routes. The use of these mobile systems sets standards for the creative freedom of buildings. Automatic fire curtains are applied especially in buildings with a high-volume of people, such as shopping malls, car parks or public facilities.



## Application Range

- \* Prevention of fire spread » Creation of fire areas
- \* As substitute for fire-protection doors and gates
- \* In front of elevator doors
- \* Sealing of wall openings at food counters or kitchens
- \* Cladding application (instead of fire-protection glazing)

## Application procedure: (example) schematic

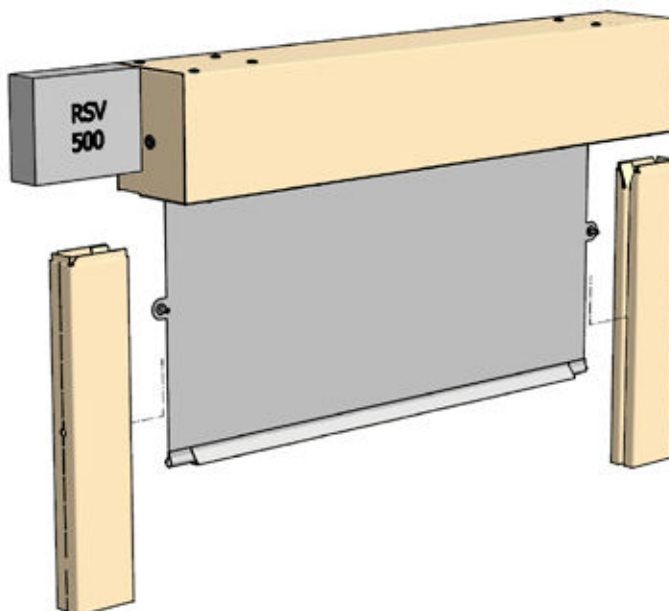




## Technical Details: Overview

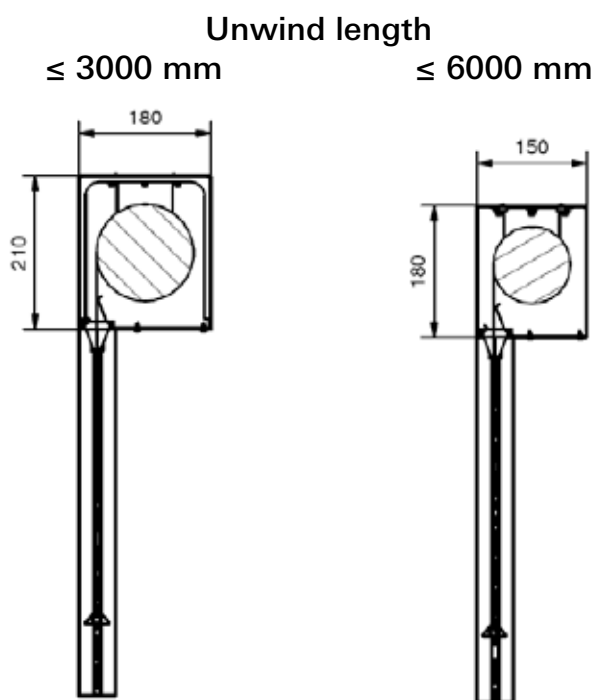
The system setup is nearly the same as for smoke curtain, but:

- \* More strengthened head-box
- \* Stronger tube for roller unit
- \* No multiple rollers possible => max. width 6m
- \* Side guides are necessary (for wall mounting with extra angle brackets)
- \* Special glass fabric with high-grad steel threads
- \* But same control unit (RSV-500)



## Technical Details: Head-Box

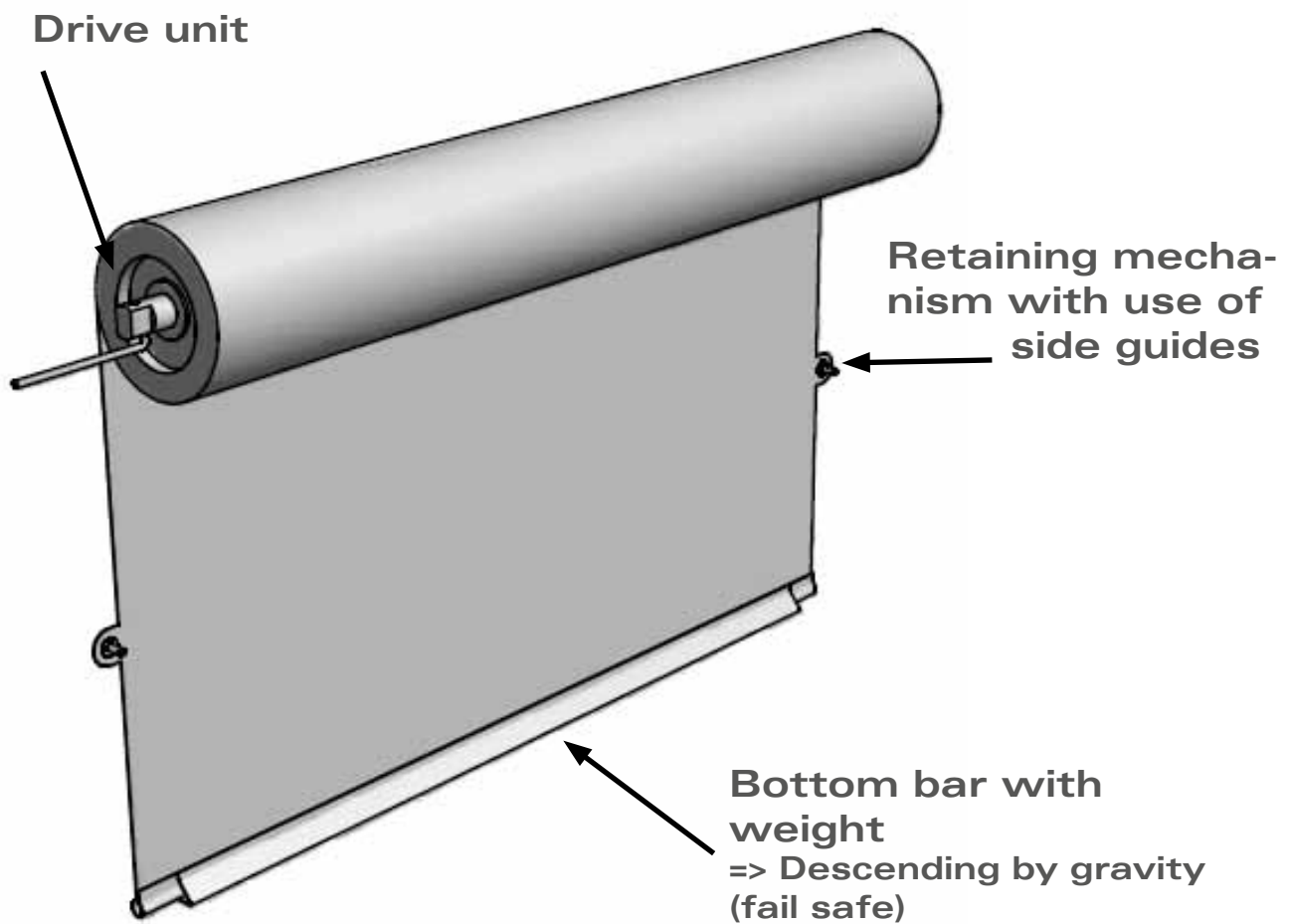
Galvanized steel sheet headbox, powder coated according RAL (standard RAL 7035)





## Technical Details: Roller unit

Strong accuracy tube with inside tubular motor 24 V DC



Tubular motor with hall sensor for

- \* Drop programming
- \* 2-step descent



## Technical Details: Motor control unit AM-830

The AM-830 will be placed directly to the roller unit and is with micro controller responsible for keeping the curtain in position and dropping it down in the case of an alarm. Without own power element it will be supplied from central point. For this you can use our known control units SHEV® 3/6 (3A are enough for a single roller unit of each size) and ESM in a RSV-Version. In case of main failures the curtain will drop down by gravity fail.

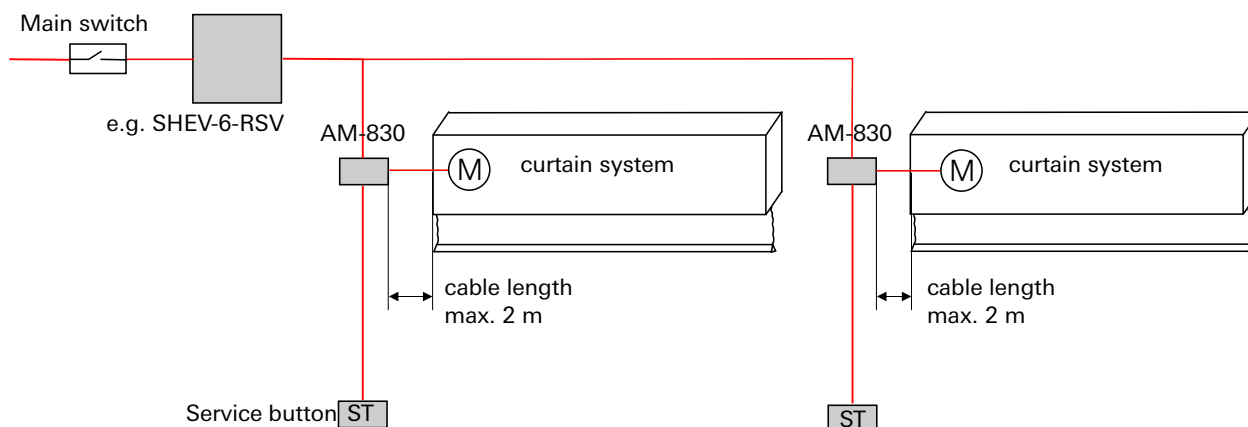
### Technical Details AM-830

Nominal voltage	24 V DC
Nominal current	max. 3 A
Housing W x D x H	180 x 94 x 57 mm
Battery mode	60 minutes (powered by control unit)
Usage	1 unit for each roller unit
Tandem mode	up to four roller units
further features:	<ul style="list-style-type: none"> <li>• Current limit while winding</li> <li>• DIP-switch settings</li> <li>• Programming the unwind stop position</li> <li>• Rotary control switch for holding and nominal current settings</li> <li>• Dry-contact</li> <li>• Programming interface</li> <li>• Service switch button</li> <li>• Cycle counter</li> <li>• Holding current regulation in battery mode</li> </ul>

further details described in our manual available for download at our website [www.simon-rwa.com](http://www.simon-rwa.com)



### Wiring schematics for single roller unit







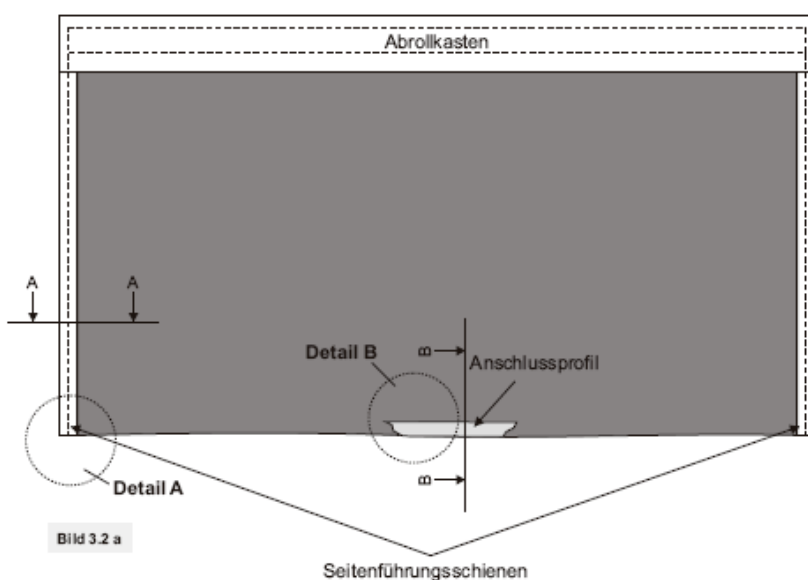
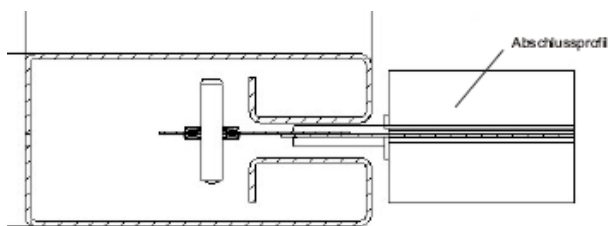
## Technical Details: Fabric

One-Side fluorocarbon-coated glass fabric, about 680 g/m<sup>2</sup>, colour: grey, A2 according to DIN 4102-1



## Technical Details: Side guides

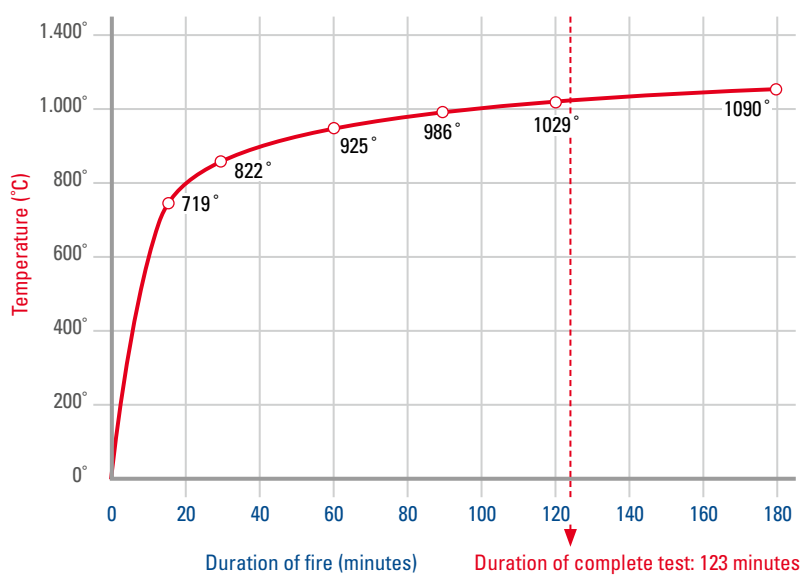
- \* For wall mounting with additional angle brackets





## Approval and Tests

- \* Tested according EN 13501-1
- \* Classification E 90 EW 20 C2
- \* E 90: Space enclosing effect for 90 minutes
- \* EW 20: Limitation of thermal radiation for at least 20 min. ( $< 15 \text{ kW/m}^2$ )
- \* C2: self-closing, tested in 10,000 cycles
- \* Fabric is non-combustible according DIN 4102-1, A2
- \* Smoke-proof according EN 1634-3
- \* Weatherproof for outdoor use
- \* Fire test according EN 1634-1: Standard Temperature Curve (STC)







## References and Examples

### Typical applications for fire curtains

- \* In front of elevators
- \* Commercial buildings, offices
- \* Schools
- \* Hospitals
- \* Facades



Creation of fire areas in an aluminium foundry



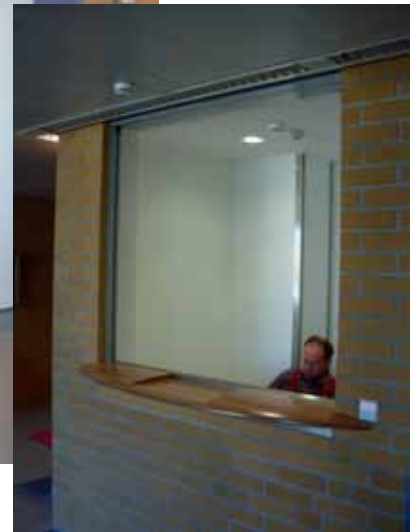
# Fire Curtain **Fire PROtec®**



Amber Museum in Rostock



Hospital Berlin-Marzahn



Sealing a facade at Hospital Greifswald





# Fire Curtain **Fire PROtec®**



Hospital Zweibrücken in front of  
nurse room



Grammar Grafenau: snack bar



Bank in Berlin



Senior citizen center: level separation



# Fire Curtain **Fire PROtec®**



University in Bern, Switzerland

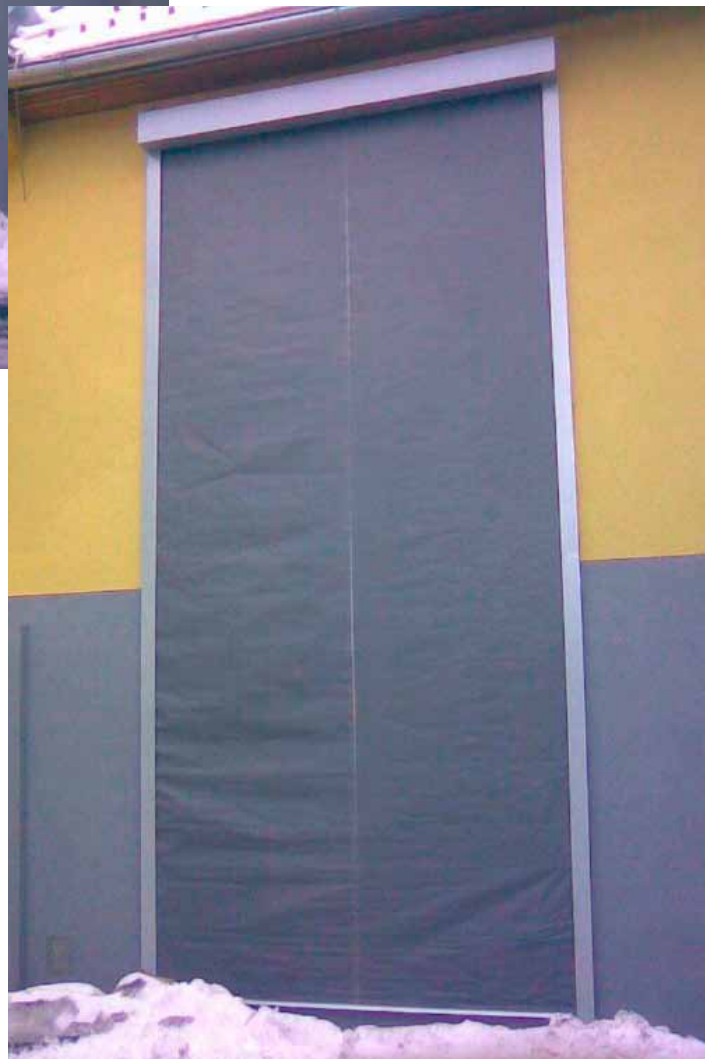


A restaurant in Switzerland





Facade application







# Fire Curtain **Fire PROtec®**

## TECHNICAL DATA

<b>Fabric for outdoor use</b>	Glass fabric with silicone coating on both sides, about 800 g/m <sup>2</sup> , Toxicologically tested, B1 according to DIN 4102-1, colour: grey
<b>Fabric for indoor use</b>	One-side fluorocarbon-coated glass fabric, about 680 g/m <sup>2</sup> , A2 according to DIN 4102-1, colour: grey
<b>Unwind</b>	descending by gravity (fail safe)
<b>Wind up</b>	planet drive, 24 V DC, 3 A with electric load breaking; maximum turning moment 4 Nm, roll shaft-integrated.
<b>RSV-500 motor control panel</b>	Plastic housing (w x h x d) 200 x 145 x 55 mm integrated emergency power supply optional
<b>Installation</b>	Ceiling / wall with appropriate approved mounting material
<b>Maximum size</b>	Width = 6 m, drop length = 6 m
<b>Head box (w x h)</b>	Steel plate 1.2 mm powder-coated, RAL 7035 (standard colours), 150 x 180 mm or 180 x 210 mm for drop over 3 m
<b>Side guides (w x h)</b>	Steel plate 1.2 mm powder-coated, RAL 7035 (50 x 100 mm)
<b>Bottom bar</b>	Steel plate powder-coated, RAL 7035 with integrated round steel in fabric bag
<b>Classification / Standardisation</b>	E 90 EW 20 C2 according to DIN EN 13501-2 *
<b>Fire resistance duration</b>	90 minutes
<b>Limitation of thermal radiation</b>	20 minutes

## Approvals and Tests

Simon Fire PROtec systems are tested according to EN 1634-1, classification E 90 EW 20 C2\*, DIN EN13501-2 requirements.

### Further tests:

- Fabric is fire-proof according to DIN 4102-1, A2, and smoke-proof according to DIN EN 1634-3
- Long-term function tested according to DIN EN 1191, 10,000 cycles
- Weatherproof for outdoor use

\* E90: Closes off rooms for 90 minutes | EW20: Limitation of thermal radiation for 20 minutes  
C2: Self-closing, tested in 10,000 cycles

Latest references: We will be happy to send you the latest references from all around the world. You can also download them at [www.simon-rwa.de](http://www.simon-rwa.de).



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