

**PROPRIETARY ITEM: WINDOWSHIELD M**  
**AUTOMATIC OVERHEAD COILING FABRIC FIRE SHUTTER**

**PART 1 - GENERAL**

1.01 SUMMARY

- A. Section Includes:
  - 1. Fire alarm / heat detector-activated and manual deployment, overhead coiling fabric fire shutter.
  - 2. Self-closing without auxiliary power.
  - 3. For medium protected openings.
- B. Related Requirements:
  - 1. Load Bearing Header Framing
  - 2. Finish: Powder coating of specified components.
  - 3. Detection and Alarm: Provision of fire alarm if desired.
  - 4. Site Electrical: Provision of 240VAC, 10Amp General purpose outlets (GPO's)
  - 5. Product Electrical: System connection including cable glands, junction boxes, conductors, wiring devices, and backup power (if required).

1.02 REFERENCES

- A. National Construction Code
  - 1. NCC Clause C3.4 Acceptable methods of protection
- B. Standards:
  - 1. AS1530.4 – Methods for fire tests on building materials, components and structures, Part 4 Fire-resistance test of elements of construction
  - 2. AS3959 – Construction of buildings in bushfire-prone areas
  - 3. AS1905.2 – Fire Shutters.
  - 4. AS3837– Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter

1.03 SUSTAINABLE DESIGN REQUIREMENTS

- A. ESD: Comply with sustainable design requirements including, without limitation, submittal and documentation requirements.
- B. Credit/Point Goals Applicable To This Section: In addition to global project credit/point goals:
  - 1. Materials & Resources - construction waste management
  - 2. Materials & Resources - recycled content
  - 3. Materials & Resources - regional materials
  - 4. Indoor Environmental Quality - construction IAQ management plan

#### 1.04 SUBMITTALS

- A. Comply with Submittal Procedures:
  - 1. NCC Clause A2.3 Evidence of Suitability – submit full scale fire test report and Formal Opinion from a Registered Testing Authority clearly identifying maximum Fire Resistance Level and maximum allowable sizes.
  - 2. Manufacturers Product data
  - 3. Shop drawings:
    - a. Shutter location and unique identification number
    - b. Include opening dimensions
    - c. Show and identify related work performed under other sections of the specifications including access and electrical requirements
  - 4. Quality Assurance/Control Submittals:
    - a. Site Inspection and Test Plan.
    - b. Manufacturers ISO 9001 Certificate of Accreditation

#### 1.05 CLOSEOUT SUBMITTALS

- A. Comply with Project Closeout:
  - 1. Certificate of Compliance with reference to NCC clause and AS3959 - Evidence of Suitability.
  - 2. Operation and maintenance manual.
  - 3. Manufacturer's warranty.

#### 1.06 QUALITY ASSURANCE

- A. Certifications:
  - 1. AS1530.4 full scale fire test on a complete assembly in plasterboard and masonry/concrete wall
  - 2. National Construction Code Clause C3.4
  - 3. AS3959 Clause 9.5.2 (b) (i)
  - 4. Laboratory cycle tested on a 3m x 3m complete assembly
- B. Pre-Installation Meeting:
  - 1. Schedule and convene a pre-installation meeting prior to commencement of field operations with representatives of the following in attendance: Owner, Architect, General Contractor, fire curtain sub-contractor, mechanical sub-contractor, electrical sub-contractor, and ceiling/fitout sub-contractor
  - 2. Review substrate conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.
  - 3. Document the responsibilities of various parties and deviations from specifications and installation instructions.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Comply with project delivery, storage, and handling requirements.
- B. Comply with manufacturer's instructions.

#### 1.08 WARRANTY

- A. Provide manufacturer's standard one year warranty for Defect Liability Period.
- B. Maintenance and Testing:

1. Perform minimum quarterly maintenance and testing on each fire curtain as required by the manufacturer's warranty, AS1851 - Maintenance, and as required by the Fire Engineers Report.
2. Provide Commissioning documentation including Project name, project address, location and curtain number, number of cycles tested, observations, comments (eg: curtain out of alignment), notes (eg: curtain alignment repaired), Pass/fail.
3. Re-certification after the defect liability period

## **PART 2 - PRODUCTS**

### 2.01 MANUFACTURED UNITS

- A. Proprietary item; Model Windowshield M automatic fire Shutter.
- B. Manufacturer:
  1. Smoke Control Systems Pty Ltd
  2. Distributed by Smoke Control Systems Pty Ltd, 26 Ferndell St, South Granville, NSW 2142, Australia [www.smokecontrol.com.au](http://www.smokecontrol.com.au)
- C. Label each fire Shutter with following information:
  1. Manufacturer's name and contact details.
  2. Curtain location and unique identification number
  3. Fire Resistance Level
  4. Date of installation

### 2.02 DESIGN CRITERIA

- A. Country of Manufacture: Australia
- B. Head box; 165 H x 163 W mm
- C. Bearing type: Standard fixed end bearings
- D. Side guide; 100 mm x 50mm

See manufacturer's literature for head box and side guide mounting options.

- E. Side guide restraint system; Standard tab and button type
- F. Fabric type; 660g/m<sup>2</sup> stainless steel woven fabric, incorporating a coated glassfibre material to reduce radiant heat transmission.
- G. Motor type; Proprietary Smoke Control 24V tubular motor with torque selection based on curtain size, upper limited determined by overload current (resistance), reverting to hold current.
- H. Bottom bar; 35mm wide (at the base) Triangular section, requiring a 50mm min. slot in the ceiling lining.
- I. Finishes; Dulux Duralloy colour range (Standard)
- J. Load requirements at head = 25kg/m of width
- K. Load requirements at sides = 20kg/m of height
- L. Mounting orientation

1. Installation Configuration: Housing attached directly to substrate above opening or face fixed to wall. [*delete mounting type not applicable*].
2. Fabricate and install mounting brackets, hardware, and fasteners needed to attach fire shutter assembly to building structure.

#### 2.03 PERFORMANCE CRITERIA

1. Fire Resistance Level (FRL): -/60/-
2. Smoke leakage: N/A
3. Group Number for fabric: 1 when tested in accordance with AS3837
4. Durability; light duty – tested to 30,000 maintenance free cycles
5. Maximum pressure;  $\Delta 10\text{Pa}$
6. Closing time of 100 - 200mm/sec
7. Fail safe close on:
  - a. loss of power
  - b. heat detector activation
  - c. Internal switch Activation
8. Motor rewind automatically on:
  - a. re-set of power
  - b. Internal switch deactivation
  - c. Replacement of fusible bulb (requires maintenance visit)
9. Battery backup for nuisance deploys (power failure only) (*delete if not required*)
10. Maintenance shall be conducted quarterly by the Manufacturer and/or their nominated representative to the Manufacturers recommendations.

#### 2.04 COMPONENTS

- A. Curtain Fabric: Fyrehalt fabric glass 2060/1A - Glass fibre material with stainless steel wire reinforcement, coated on a single side with polyurethane.
- B. Side Guide Assembly: 1.6mm thick Zincalume mild steel incorporating a welded pin along its spine for rigidity incorporating a tab and bobbin restraint system.
- C. Housing/Bearing Type: 1.6mm thick galvanized mild steel head box incorporating a fixed pivot bearing.
- D. Bottom Bar: 2mm thick galvanized mild steel triangular section to assist with resistance to pressure differentials incorporating staggered joints to span wider distances.
- E. SCS2000 Series Rewind Motor
  1. Tubular motor with fail safe gravity deploy operation.
  2. Upper limit set by placing physical obstruction in the path of the bottom bar.
  3. 24 VDC.
- F. SCS2034 Series Trigger Unit
  1. Battery backup (*delete if not required*).
  2. 240 VAC power
  3. Normally closed 0 Volt alarm signal / Heat detector

### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine substrates upon which work will be installed.
  1. Verify related work performed under other sections is complete and in accordance with shop drawings.
  2. Verify wall surfaces are acceptable for installation of fire curtain system components

3. Verify setout point locations.
  - B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
  - C. Coordinate electrical interface and connection with Electrical sub-contractor.
  - D. Coordinate fire and alarm interface with fire sub-contractor.
  - E. Commencement of work by installer is acceptance of substrate.

### 3.02 INSTALLATION

- A. Install fire shutter system components in accordance with fire test approvals and manufacturer's installation instructions.
- B. Once installed it shall be demonstrated that the system shall gravity fail safe close on the activation of fusible heat detector, on loss of power or activation of switch. On reset of power / the fusible detector / internal switch the system shall automatically rewind to its standby position.

### 3.03 FIELD QUALITY CONTROL

- A. Field Test 1: Calibration

Follow manufacturer's cycle test procedures prior to application of mechanical services.

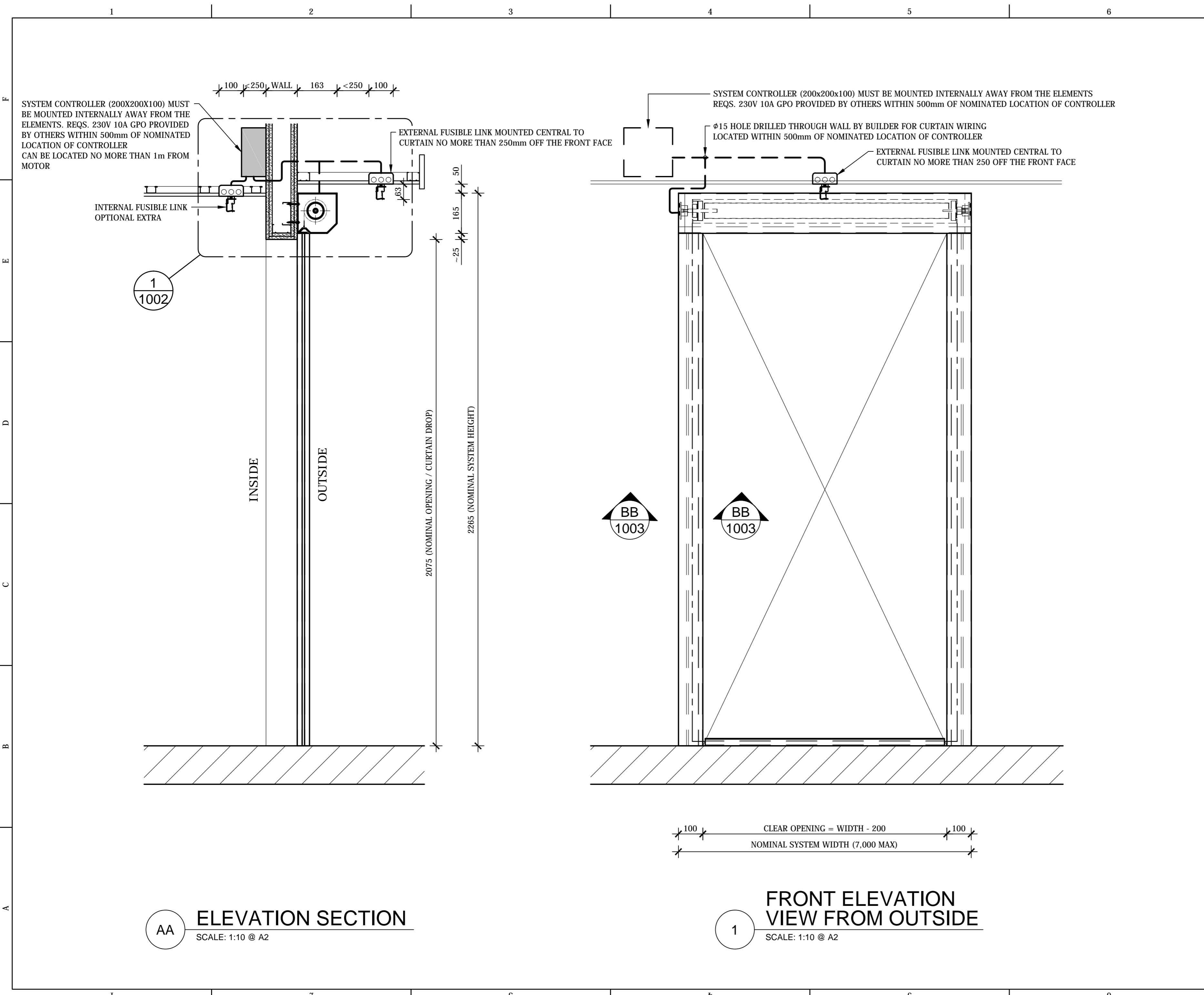
1. Conduct a minimum of 10 consecutive, error free cycle tests
2. Complete Inspection and Test Plan

- B. Field Test 2: Commissioning

Test operation by activating adjacent heat detector (if applicable) or remove fusible link

1. Notify Owner's Representative, local Fire Services and alarm sub-contractor minimum one week in advance of scheduled testing.
2. Complete Commissioning submittals.

END OF SECTION



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A	FP	INITIAL DRAWING	08/09/2015

CLIENT APPROVAL

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

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**SMOKE CONTROL**

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NSW HEADOFFICE PHONE: 1300 665 471 26 FERNDILL ST, (ENTER VIA STRAITS AVE) SOUTH GRANVILLE NSW 2142	WESTERN AUSTRALIA: AUSTRALIAN FIRE CONTROL PHONE: 08 9399 6957 UNIT 2, 71-73 BRANT RD KELMSCOTT WA 6997
VICTORIA OFFICE PHONE: 0417 657 623 336 SETTLEMENT RD THOMASTOWN VIC 3074	NEW ZEALAND PHONE: 09 300 1980 LEVEL 4, 369 QUEEN ST AUCKLAND NZ 1010

PROJECT  
 SMOKE CONTROL SYSTEMS  
 PROPRIETARY  
 PRODUCT TEMPLATE

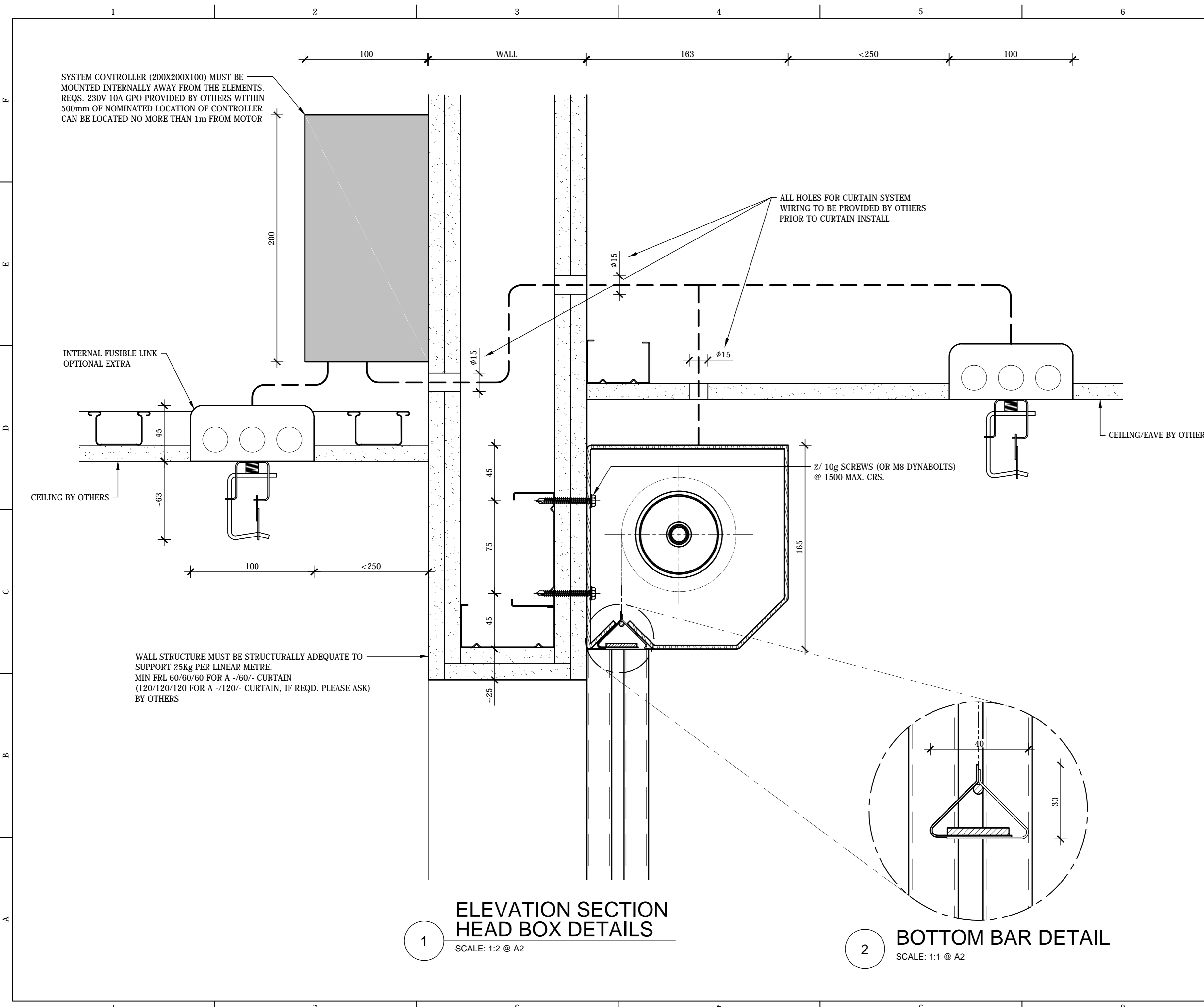
CLIENT

TITLE  
 FYREHALT - BOUNDARY  
 FUSIBLE LINKED FIRE CURTAIN  
 FRL -/60/- (E60)  
 UP TO FRL -/120/- (E120) POSSIBLE

DWG#  
 SCS-TEMP-FH-B-1001

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START DATE 08/09/2015	SCALE 1:10 SHEET 1 OF 3	

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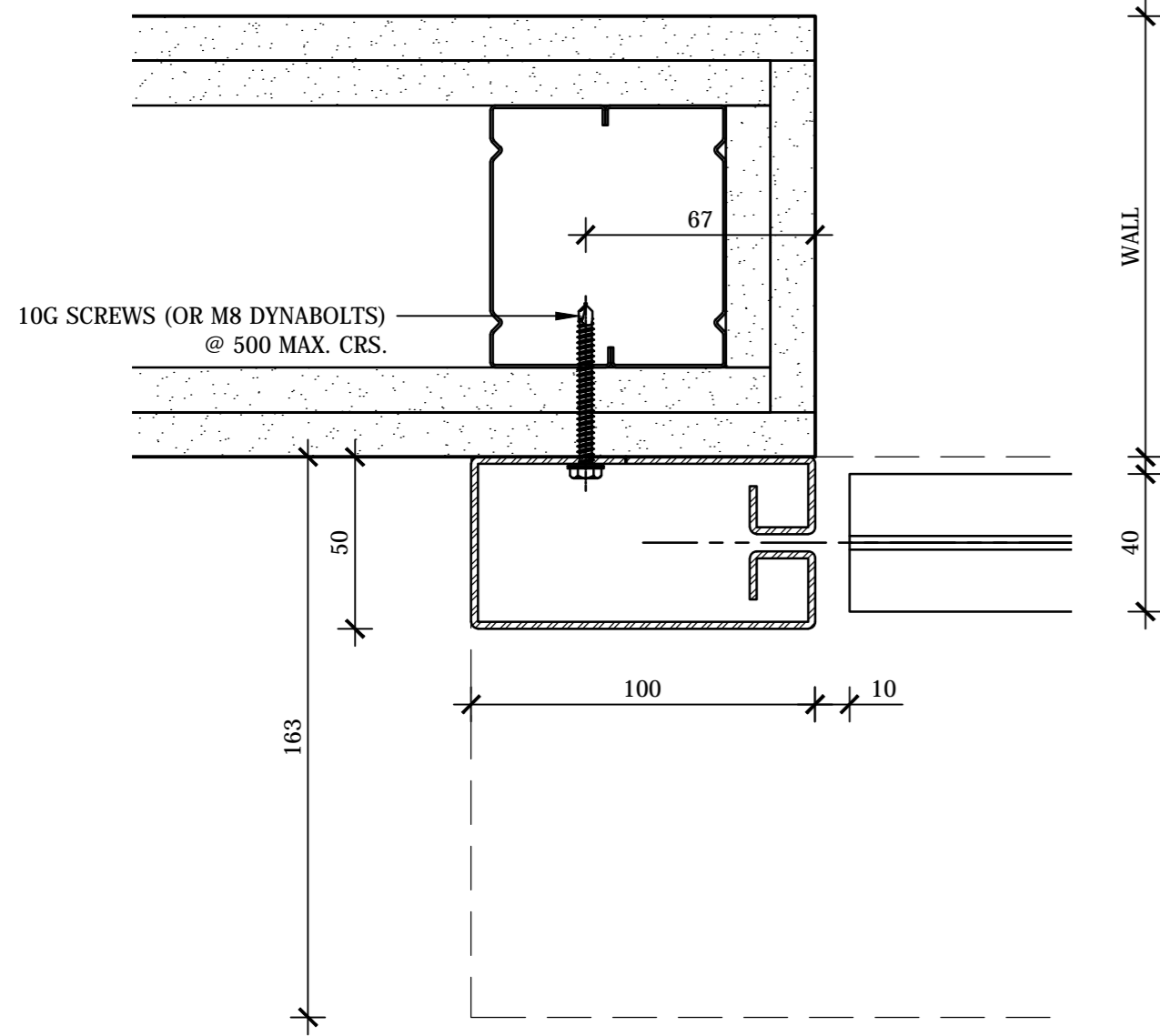
TITLE  
**FYREHALT - BOUNDARY**  
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**FRL -/60/- (E60)**  
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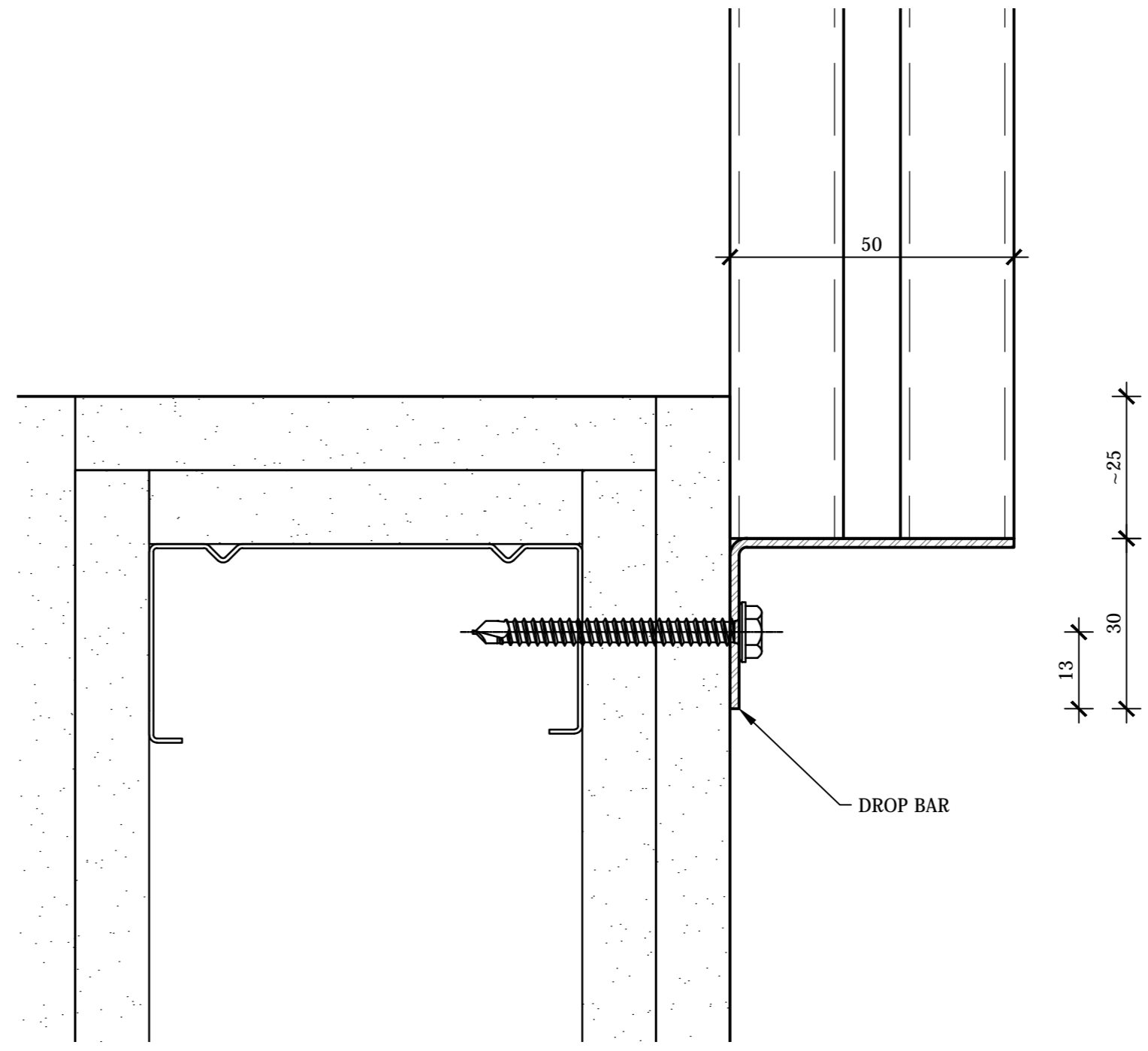
**1** ELEVATION SECTION  
 HEAD BOX DETAILS  
 SCALE: 1:2 @ A2

**2** BOTTOM BAR DETAIL  
 SCALE: 1:1 @ A2

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**PLAN SECTION  
SIDE GUIDE DETAIL**  
BB  
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**WINDOW SILL  
BOTTOM BAR DETAIL**  
3  
SCALE: 1:1 @ A2

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PRODUCT TEMPLATE**  
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TITLE  
**FYREHALT - BOUNDARY  
FUSIBLE LINKED FIRE CURTAIN  
FRL -/60/- (E60)  
UP TO FRL -/120/- (E120) POSSIBLE**

DWG# <b>SCS-TEMP-FH-B-1003</b>	A
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**A2**

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