PROPRIETARY ITEM: WINDOWHALT FIRE SHUTTER

FUSIBLE LINK COILING FIRE SHUTTER

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Fusible link-activated, overhead coiling fire shutter.
   2. Self-closing without auxiliary power.
   3. For small protected openings.

B. Related Requirements:
   1. Load Bearing Header Framing
   2. Sill details
   3. Finish: Powder coating of specified components.

1.02 REFERENCES

A. National Construction Code:
   1. NCC 2014/2015

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. AS1905.2 – Fire Shutters.
   3. 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 C3.4 and AS1905.2.
   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
   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 AS1905.2 requirements.
   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
   2. AS1905.2 Clause 7; Manufacturers Certificate of Compliance

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, certifier
   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 shutter as required by the manufacturer's warranty, AS1851 - Maintenance.
   2. Provide Commissioning documentation including Project name, project address, location and shutter 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 Windowhalt 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

C. Label each fire curtain 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. Head box; 165 H x 165 W mm

B. Bearing type: Standard support rollers

C. Side guide; 100 mm x 50mm

D. Side guide restraint system; Standard bobbin type

E. Fabric type; 660g/m^2 stainless steel woven fabric, incorporating a coated glass fibre material to reduce radiant heat transmission.

F. Fusible link type; 72^{o}C thermal link.

G. Bottom bar; Steel incorporating weights

H. Finishes; Dulux Duralloy colour range (Standard)

I. Load requirements at head = 20kg/m of width

J. Load requirements at sides = 15kg/m of height

K. Mounting orientation
1. Installation Configuration: Housing attached directly to substrate face fixed ONLY.
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. Group Number for fabric: 1 when tested in accordance with AS3837
3. Durability; light duty
4. Maximum allowable gap to non-combustible sill 25mm
5. Fail safe close on thermal link activation.
6. Maintenance shall be conducted quarterly by the Manufacturer and/or their nominated representative to the Manufacturers recommendations.

2.04 COMPONENTS

A. Curtain: Windowhalt stainless steel, incorporating fiberglass and coated on a single side with polyurethane.

B. Side Guide Assembly: 1.6mm thick Zincalume mild steel incorporating rivets along its tab for rigidity incorporating a bobbin restraint system.

C. Housing/Bearing Type: 1.6mm thick galvanized mild steel head box incorporating roller bearings.

D. Bottom Bar: Steel triangle with concealed weights.

E. SCS1 Series Thermal Link
1. 72^{o}C activation temperature.

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 shutter system components
3. Verify setout point locations.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. 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 release/removal of fusible link.

3.03 FIELD QUALITY CONTROL

A. Field Test 1: Calibration & Commissioning

Follow manufacturer's cycle test procedures prior to application of thermal holding link.
1. Conduct a minimum of 3 consecutive, error free cycle tests
2. Complete Inspection and Test Plan

END OF SECTION