SECTION 08 33 44 – DRAFT SMOKE CURTAINS

PART I: REFERENCE

1.1 Scope of Works

Supply and installation of Automatic Smoke Curtains, complete with motors, fabric, headboxes, bottom bars, guides, and control systems. The system shall be **tested and certified for up to 3 hours** accordance with EN standards and shall function as a gravity-fail-safe smoke containment barrier during fire incidents.

1.2 Related Sections

- **Division 23** – Heating, Ventilating, and Air Conditioning (HVAC) for fire control systems that are part of mechanical equipment.

1.3 References

- **BS EN 12101-1+A1:2006** – Smoke & heat control systems. Part 1: Specification for smoke barriers.
- **BS EN 1363-1:2012** – Fire resistance tests. Part 1: General requirements.
- **BS EN 1634-3:2004** – Smoke leakage test
- **BS EN 13501-1:2018** – Fire classification of construction products and building elements.
- **BS EN 13501-4:2007+A1:2009** – Classification using data from fire resistance tests on components of smoke control systems.
- **ASTM E84 / UL 723** – Surface Burning Characteristics of Building Materials.
- **BS 476 Part 6 & 7** – Fire propagation and surface spread of flame

1.4 Submittals

- **Product Data**: Submit manufacturer's technical product data sheets.
- **Shop Drawings**: Submit detailed shop drawings showing plans, elevations and sections
- **Warranty**: Submit executed copy of the manufacturer’s standard warranty.

1.5 Certifications

Submit third-party test reports and certificates demonstrating compliance with:

- BS EN 12101-1+A1:2006
- ASTM E84 / UL 723
- ISO 9001, ISO 14001, ISO 45001

1.6 Delivery, Storage, and Handling

- Deliver components in **manufacturer-labeled packaging**, indicating product name, size, batch number, and origin.
- Store in **dry indoor environment**, protected from dust, moisture, UV rays, and physical damage.
- Do not install damaged materials; any damaged parts must be removed from the site.
- Follow manufacturer's handling guidelines strictly to avoid deformation or misalignment.

1.7 Quality Assurance

- System rated for up to **3 hours** for use in masonry wall type constructions.
- The **complete product** tested to **BS EN 12101-1+A1:2006**.
- Fabric is capable of withstanding smoke and temperatures up to **620°C**.

1.8 Field Conditions

- Contractor shall perform **site measurements** to confirm dimensions before fabrication.
- Verified measurements to be reflected in the shop drawings.

1.9 Warranty

- Provide manufacturer’s **minimum 1-year warranty** from date of commissioning.
- Extended warranty options may be discussed based on project requirements.

PART II: PRODUCTS

2.1 Acceptable Manufacturers

Refer to **Approved Vendor List** in project documents or submit for consultant approval.

2.2 Automatic Smoke Curtains

A. Description

Electrically operated **HIRA Draft Smoke Curtains** designed to prevent the movement of smoke and heat during fire incidents.

B. Performance

- Fire resistance rating: **Up to 3 hours** in masonry-type construction.
- Tested in accordance with **BS EN 12101-1+A1:2006**.
- Fabric resists temperatures up to **620°C**.

C. Curtain Design

A draft curtain is a passive smoke control system fixed from the roof to a purlin or I-beam. It uses fibreglass fabric to form a vertical barrier that contains smoke in designated zones. During a fire, rising smoke is blocked from spreading laterally by the curtain. This containment channels smoke toward extraction points like smoke vents or fans. It enhances visibility, aids evacuation, and supports efficient smoke management.

PART III: EXECUTION

3.1 Contractor's Scope of Work

Measurement & Fabrication:

- Verify all openings and conditions before fabrication.

Installation:

- Ensure fabric is centered, smooth, and properly tensioned.

Labeling:

- Each installed curtain to be labeled with manufacturer's name, fire rating, and batch number.

3.2 Acceptance

Final inspection and acceptance by **manufacturer's technician or authorized representative** to ensure:

- Installation per manufacturer guidelines
- Full operational compliance

3.3 Warranty

- Minimum warranty period: **One (1) year**
- Extended warranty may be considered upon agreement between **client, consultant, and manufacturer.**

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