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**CERTIFICATE OF APPROVAL**  
**No ME 5120**

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**K & D Systems Holdings Ltd**

**2 Charles Street, Sunderland, SR6 0AN**  
**Phone: 0191 534 3906**

Have been assessed against the requirements of the test standard(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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**CERTIFIED PRODUCT**

**Ultimate Fire & Smoke Single  
Barrel Active Fire Curtains**

**TEST STANDARD**

**ETS001 – Technical Schedule  
for the Fire Performance of  
Construction Products and  
Building Elements**

**Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited**

**Paul Duggan**  
**Certification Manager**



Issued: 17<sup>th</sup> August 2020  
Valid to: 16<sup>th</sup> August 2025



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## CERTIFICATE No ME 5120

### K & D Systems Holdings Ltd

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#### Ultimate Fire & Smoke Single Barrel Active Fire Curtains

1. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by local Building Control authorities or any other third parties for any purpose.
2. This approval relates to the performance of Ultimate Fire & Smoke Single Barrel Active Fire Curtains against the testing requirements of Section 5 of BS 8524-1: 2013, as summarised in Table 1 of this certificate. This approval specifically relates to the use of single barrel designs.
3. The product is EWCL5 approved on the basis of:
  - i) Initial type testing.
  - ii) An appraisal against ETS001.
  - iii) Inspection and surveillance of factory production control
4. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the EWCL5 name or name and mark, together with the EWCL5 certificate number and application where appropriate.
5. The Ultimate Fire & Smoke Active Fire Curtains are approved for installation into concrete, masonry or timber stud partitions having a fire performance no less than that required for the fire curtain. The approved installation details are provided in the EWCL5 datasheet linked to this certificate.



## CERTIFICATE No ME 5120 K & D Systems Holdings Ltd

<b>Table 1: Summary of Performance Characteristics to Section 5 of BS 8524-1:2013</b>				
Product name: Ultimate Fire & Smoke Single Barrel Active Fire Curtains				
Performance Measure	Test Report No.	Clause within BS 8524-1: 2013	Test Method	Performance Level
Pressure and impact	WIL 426877	5.2	BS 5234-2	SD
Reliability and durability of barrier assembly	WIL 426877 (Specimen 1)	5.3.1	BS 8524-1:2013, Annex D	500 cycles, C1 classification
	WF 429683 (Specimen 2)	5.3.1	BS 8524-1:2013, Annex D	500 cycles, C1 classification
	WF 423799 (Specimen 3)	5.3.1	BS 8524-1:2013, Annex D	500 cycles, C1 classification
Response time and velocity	WIL 426877 (Specimen 1)	5.4	BS 8524-1:2013, Annex D	Vertical: <0.15 m/s below heights of 2 m
	WF 429683 (Specimen 2)	5.4	BS 8524-1:2013, Annex D	Vertical: <0.15 m/s below heights of 2 m
	WF 423799 (Specimen 3)	5.4	BS 8524-1:2013, Annex D	Vertical: <0.15 m/s below heights of 2 m
Smoke Containment	WYC419750/02	5.5	BS EN 1634-3: 2004 & BS EN 8524-1: 2013 Annex F	Head/Vertical Edges: <3 m <sup>3</sup> /m/h
Smoke Leakage	See Table 2			
Fire Resistance (Integrity only)	WF No. 416337	5.6.2	BS EN 1634-1: 2018	Classified to BS EN 13501-2: 2016 as E180 (WF No. 432025)
Fire Resistance (Radiation only)	WF No. 416337	5.6.4	BS EN 1634-1: 2018	5 mins – Radiometer malfunction 10 mins – 3.9kW/m <sup>2</sup> 20 mins – 5.7kW/m <sup>2</sup> 30 mins – 7.2kW/m <sup>2</sup> 40 mins – 8.4kW/m <sup>2</sup> 50 mins – 9.6kW/m <sup>2</sup> 60 mins – 11.5kW/m <sup>2</sup> 70 mins – 13.0kW/m <sup>2</sup> 78 mins – 15.1kW/m <sup>2</sup>
Deflection Zone	WF No. 416337	5.6.5	BS EN 1634-1: 2018	60 mins - 66 mm 120 mins - 37 mm 180 mins - 60 mm
Motor Operation	WF No. 423505	5.6.6	BS 8524-1:2013, Annex G	Pass (50kg)

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Reaction to Fire	WF No's. 429363 & 429364	5.7	BS EN 11925-2: 2010 & BS EN 13823: 2010 + A1: 2014	Classified to BS EN 13501-1: 2018 as C - s2, d0 (WF No. 429988)
Ancillary Equipment*	WIL 426877	5.8	BS 8524-1:2013, Annex H	Pass

\*Tested for:

**Obstruction Warning Devices:** single beam detectors, multi-beam detectors,

**Activation Devices:** fire alarm, smoke detector, heat detector, short circuit of smoke and heat detectors, secondary power supply,

**Delayed and/or multi-positional deployment,**

**Emergency egress control:** general, emergency egress failure (short circuit), emergency egress control (fire damage),

**Emergency access control:** general, emergency access failure (short circuit), emergency access failure (fire damage).

Not tested for: Fusible link or self-test device.

This certification covers the testing requirements of Section 5 of BS 8524-1 only. Further considerations outside of the scope of this certification are as follows:

- Clause 5.8.4 of BS 8524-1: 2013 requires that the fire alarm system shall conform to the relevant parts of BS 5839 or BS EN 54.
- Clause 5.8.6 of BS 8524-1: 2013 requires that the pressure-sensitive protective equipment shall conform to BS EN 12453:2001.
- Table 1 of BS 8524-2: 2013 requires that control panels *should* conform to BS ISO 21927-9
- Table 1 of BS 8524-2: 2013 requires that the power supply *should* conform to BS EN 12101-10

This certification does not demonstrate compliance with respect to the above.

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### Approved Dimensions

The single barrel curtains may be used at the following maximum dimensions when making a fire resistance (integrity) only claim. Please refer to table 2, below, when making a claim of fire resistance (integrity) & smoke:

Integrity Performance (mins)	Maximum Height (metres)	Maximum Width (metres)
180	6	7

All quoted dimensions relate to the height from the underside of the headbox to floor level and the width from the inside of one side guide to the inside of the other.

Any constructions over 2600mm wide shall include barrel support brackets, at an appropriate location (centrally or equi-spaced) in order that a maximum centre to centre distance of 2600mm (depending on overall width) shall be maintained.

**Table 2 – Calculated Leakage for Additional Size Assemblies**

		Width (m)						
		1	2	3	4	5	6	7
Height (m)	1	✓	✓	x	x	x	x	x
	2	✓	✓	x	x	x	x	x
	3	✓	✓	x	x	x	x	x
	4	✓	✓	x	x	x	x	x
	5	✓	✓	✓	x	x	x	x
	6	✓	✓	✓	x	x	x	x

Note: The above, table 2, is a summary of the proposed curtain sizes that have a leakage rate not exceeding 3 m<sup>3</sup>/m/h, at both a positive and negative pressure of 25Pa when tested in accordance with EN 1634-3: 2004.