

# Declaration of Performance

Number: DeclarationOfPerformance\_FDS-EIS\_D\_EN

## 1. Unique identification code of the product

FDS-EI90S & FDS-EI120S

## 2. Type

Systemair rectangular fire damper FDS-EI90S and FDS-EI120S

Valid also for subtypes: FDS-EI90S...EX; FDS-EI120S...EX

## 3. Intended use of the construction product

Fire closure for HVAC ductworks for the compartmentization

## 4. Name, registered trade name and contact address of the manufacturer

Systemair Production a.s.

Hlavná 371,

90043 Kalinkovo, Slovakia

## 5. Where applicable, name and contact address of the authorized representative

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## 6. System of assessment and verification of constancy of performance of the construction product

System 1

## 7. Harmonized product standard, test standard, classification standard

EN 15 650:2010

## 8. Identification number of the notified body

1396

Name and address of the notified person:

FIRES s.r.o.,

Osloboditeľov 282,

059 35 Batizovce, Slovakia











































Notified person performed in system 1 the determination of the product type based on type testing (including sampling) and descriptive documentation of the production initial inspection of the manufacturing plant and of factory production control and continuous surveillance, assessment and evaluation of factory production control and issued certificate of constancy of performance:












































1396 - CPR - 0169

## 9. Declared performance:

## Installations:

 1 Wet	FDS-EI90S $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	 *  *  *  * * $\leq 1000 \times 1000$
	FDS-EI120S $W \leq 1600 \ \& \ H \leq 1000$	EI 120 ( $v_e \ h_o \ i \leftrightarrow o$ ) S				
 2 Dry	FDS-EI90S $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	 *  *  *  * * $\leq 1000 \times 1000$
 3 Soft	FDS-EI90S $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	 *  *  *  * * $\leq 1000 \times 1000$
	FDS-EI120S $W \leq 1600 \ \& \ H \leq 1000$	EI 120 ( $h_o \ i \leftrightarrow o$ ) S	c) 	 *  *  *  * * $\leq 1000 \times 1000$		
 5.1 On, Out	FDS-EI90S $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ - \ i \leftrightarrow o$ ) S	a) 	b) 	 *  *  *  *	
 7 Multi	FDS-EI90S $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ - \ i \leftrightarrow o$ ) S	b) 	 *  *  *  *		

 1 Wet	FDS-EI90S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	    $* \leq 1000 \times 1000$
	FDS-EI120S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 120 ( $v_e \ h_o \ i \leftrightarrow o$ ) S				
 2 Dry	FDS-EI90S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	    $* \leq 1000 \times 1000$
	FDS-EI120S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 120 ( $v_e \ h_o \ i \leftrightarrow o$ ) S				
 3 Soft	FDS-EI90S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e \ h_o \ i \leftrightarrow o$ ) S	a) 	b) 	c) 	    $* \leq 1000 \times 1000$
	FDS-EI120S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 120 ( $h_o \ i \leftrightarrow o$ ) S		c) 	    $* \leq 1000 \times 1000$	
 5.1 On, Out	FDS-EI90S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e - i \leftrightarrow o$ ) S	a) 	b) 	   	
	FDS-EI90S...EX $W \leq 1600 \ \& \ H \leq 1000$	EI 90 ( $v_e - i \leftrightarrow o$ ) S	b) 	   		

## Legend:

- 1. **Wet** - Wet Installation, Using Plaster/Mortar/Concrete Filling
- 2. **Dry** - Dry Installation, using cover boards and mineral wool filing
- 3. **Soft** - Soft Installation, using mineral wool filing
- 3H. **Hilti** - Filling made only from Hilti foam
- 5.1. **On & Out** - ON & OUT of the wall installation rated for EI90S, Using 2 layers of Mineral Wool
- 7. **Multi** - Installation of multiple FDS-EI90S dampers, forming single duct connection
- a) - Flexible (plasterboard) wall
- b) - Concrete/masonry/cellular concrete (rigid) wall
- c) - Concrete/cellular concrete (rigid) floor/ceiling
- $v_e$  - Vertical wall
- $h_o$  - Horizontal floor/ceiling

### Assessment of FDS-EI90S and FDS-EI120S, including subtypes FDS-EI90S...EX and FDS-EI120S...EX

Property	Test regulation	Classification standard	Technical specification for assessment	Performance expressed	Evaluation
Nominal activation /Sensing element conditions /sensitivity	ISO 10294-4	/	EN 15650 4.2.1.2 4.2.1.2.2 4.2.1.2.3	<ul style="list-style-type: none"> <li>load-bearing capacity in accordance with ISO 10294-4, 4.2;</li> <li>response temperature in accordance with ISO 10294-4, 4.2;</li> </ul>	<b>Satisfied</b>
Response delay (response time)	EN 1366-2	/	EN 15650 4.2.1.3	<ul style="list-style-type: none"> <li>closure time within time period of 2 minutes</li> </ul>	<b>Satisfied</b>
Operational reliability	EN 1366-2 cl. 10.2	/	EN 15650 4.3.1 a)	50 cycles	<b>Satisfied</b>
Fire resistance <ul style="list-style-type: none"> <li>integrity</li> <li>insulation</li> <li>smoke leakage</li> <li>mechanical stability</li> </ul>	EN 1366-2	EN 13501-3 + A1	EN 15650, cl. 4.1.1, a), cl. 4.1.1 b), cl. 4.1.1 c), cl. 4.1.1 a),	See installation Table 9.	<b>Satisfied</b>
Fire resistance <ul style="list-style-type: none"> <li>maintenance of cross-section</li> </ul>	EN 1366-2	EN 13501-3 + A1	EN 15650, cl. 4.4.1 a)	See installations in section 9.	<b>Satisfied</b>
Durability of response delay	ISO 10294-4	/	EN 15650 4.3.3.1	Durability of response delay (by tested temperature response and load-bearing capacity) is preserved.	<b>Satisfied</b>
Durability of operational reliability	EN 15650 Annex C	/	EN 15650 4.3.3.2	10 000+100+100 cycles for actuator mechanism 20 000+100+100 cycles for MOD actuator mechanism 50 cycles - for manual mechanism	<b>Satisfied</b>

**Electrical equipment in actuating mechanism:**

Type of control	Equipment/Actuator
Manual crank (H2, H5-2, H6-2):	Microswitch: 125/250V AC or 12/24V DC Electric Parameters: 3A Electromagnet: 24V AC/DC/ 230 V AC in impulse/ interruption connection
Actuator Belimo (B...):	BLF230-T, BLF24-T, BFL24-SR-T, BF230-T, BF24-T, BF24-SR-T, BFN230-T, BFN24-T, BFN24-T, BFL230-T, BFL24-T, BFL24-SR-T (also with connection possibilities with acronyms ST, W)
Actuator Gruner (G...):	360TA-230-12-S2, 360CTA-024-12-S2, 360TA-024-12-S2, 340TA-230D-03-S2, 340TA-024D-03-S2, 340CTA-024D-03-S2, 340TA-230-05-S2, 340TA-024-05-S2, 340CTA-024-05-S2 (also with connection possibilities with acronyms ST, W)
Actuator Schischek (SET-EX; SRT-EX):	ExMax-15 BF; RedMax-15 BF

**Tightness class according to EN 1751:**

Product type/subtype and/or size range	Achieved class at pressure
FDS-EI90S; FDS-EI120S; FDS-EI90S...EX; FDS-EI120S...EX	Casing class "C" up to 500 Pa Blade class "2" up to 500 Pa; (on demand class "3" up to 500 Pa)

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Kalinkovo, April 12, 2021

  
Ing. Maroš Chlebo, Managing Director