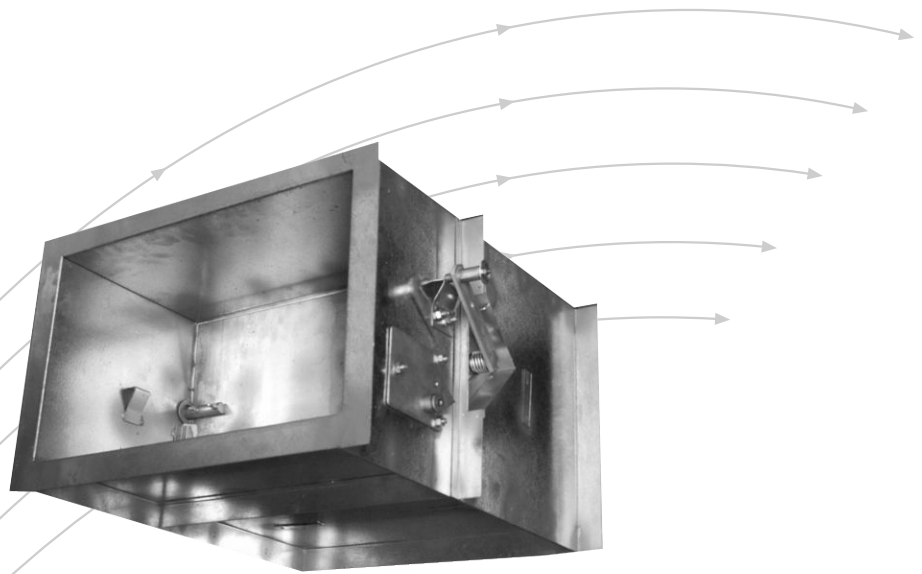


# Fire Dampers

Type FDF



**TROX<sup>®</sup> TECHNIK**

TROX (South Africa) (Pty) Ltd.  
10 Wigford Road  
Masons Mill  
Pietermaritzburg

Tel. +27 (0)33 398 1006  
Fax. +27 (0)33 398 1100  
email : [pmb@troxsa.co.za](mailto:pmb@troxsa.co.za)  
Website: [www.troxsa.co.za](http://www.troxsa.co.za)



# Contents • Description

Contents • Description	2	Product Range	6
Construction	3	Functional Description • Circuit Diagrams	7
Standard sizes • Weight	4	Technical Data	8
Installation Details	5	Accessories	9
		Order Details	10



**FDF-S**

The TROX 2 hour fire rated damper series FDF provides isolation of fire areas in ventilation and air conditioning systems. The construction and operation corresponds to the principal requirements of fire protection installations. The symmetrical position of the damper blade facilitates installation into walls or ceilings independent of the direction of entry air flow.

The external operation and control components - manual lever - position indicator - manual release enables the installed damper to be rapidly checked for correct functioning.

The thermal holding device arranged within the casing has a release temperature of 72°C. The use of corrosion proof materials makes the damper almost free of maintenance.

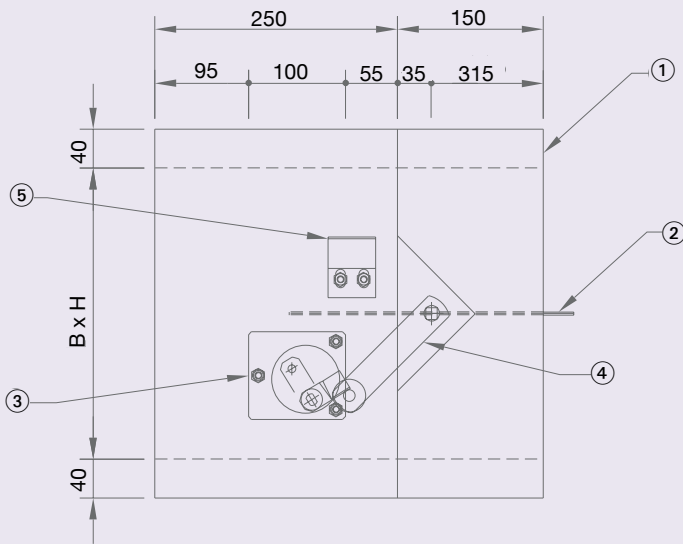
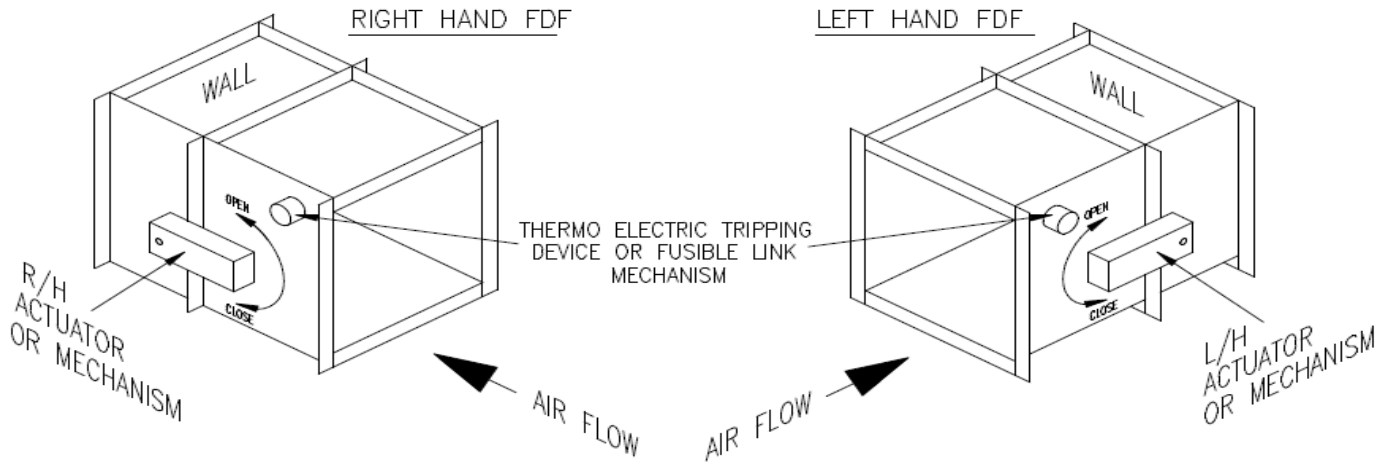
**Materials:**

Casing and attachments of galvanised sheet steel. Blade seating channel with fire retarded calcium silicate felt.

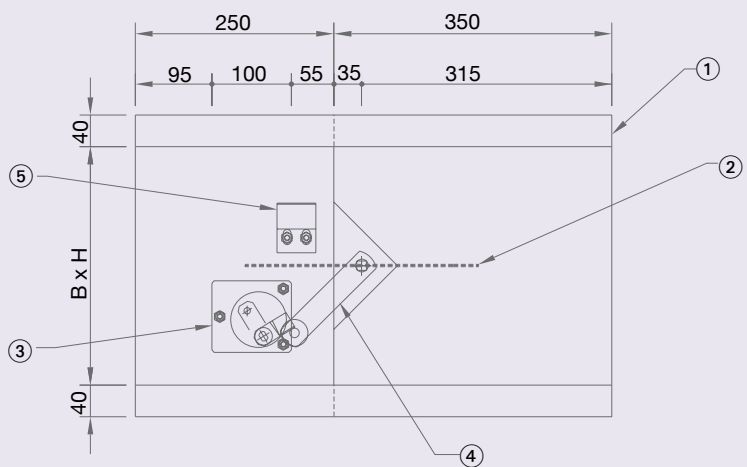
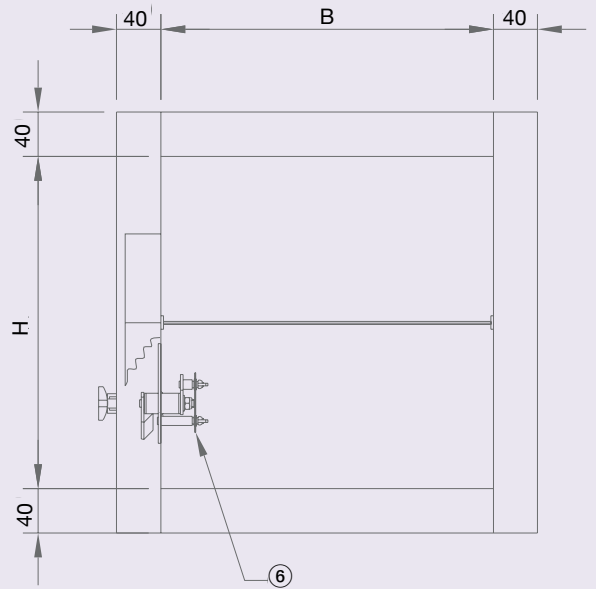
Alternatively:

- Casing and attachments in stainless steel

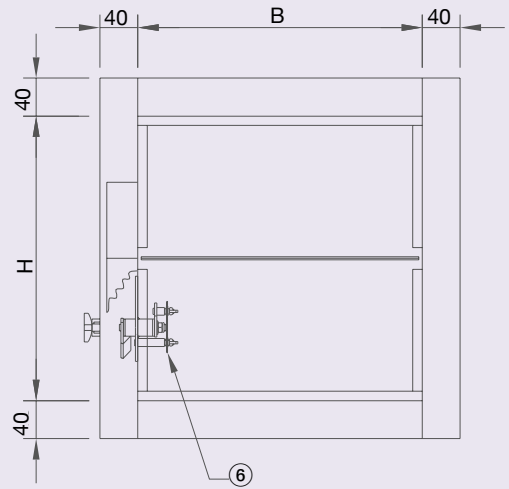
# Handling and Construction



FDF-S 400 (L)



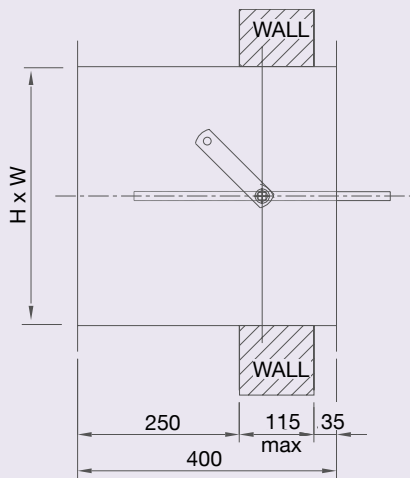
FDF-S 600 (L)



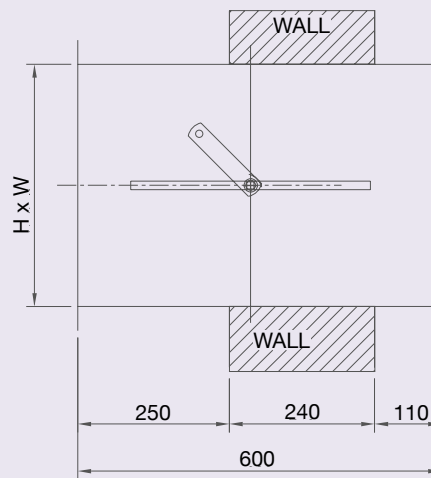
FDF-S

- ① = Casing
- ② = Blade
- ③ = Release mechanism (side inspection panel)
- ④ = Manual lever
- ⑤ = Locking device
- ⑥ = Fusible link

# Standard Sizes • Weights



Single Brick Wall Installation



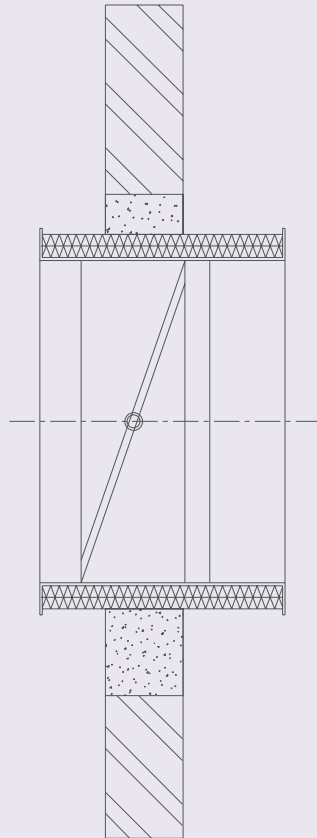
Double Brick Wall Installation

Standard Sizes (mm) & Approximate Weights (Kg)

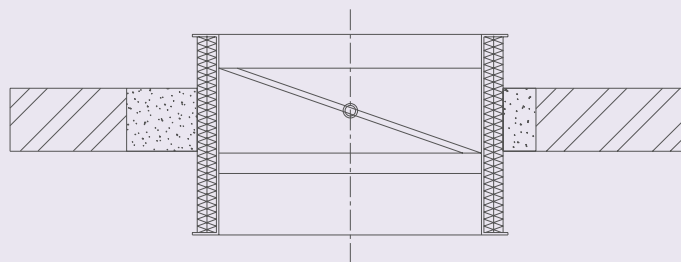
		Length	Width (B)																		
			200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Height (H)	200	400	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58	61	64
		600	13	16	20	24	28	31	35	39	43	46	50	54	58	61	65	69	73	76	80
	300	400	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66
		600	15	19	23	26	30	34	38	41	45	49	53	56	60	64	68	71	75	79	83
	400	400	14	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59	62	65	68
		600	18	21	25	29	33	36	40	44	48	51	55	59	63	66	70	74	78	81	85
	500	400	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58	61	64	67	70
		600	20	24	28	31	35	39	43	46	50	54	58	61	65	69	73	76	80	84	88
	600	400	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92
		600	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115
	700	400	22	26	30	34	38	42	46	50	54	58	62	66	70	74	78	82	86	90	94
		600	28	33	38	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118
	800	400	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96
		600	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
	900	400	26	30	34	38	42	46	50	54	58	62	66	70	74	78	82	86	90	94	98
		600	33	38	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118	123
	1000	400	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
		600	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125
	1100	400	32	37	42	47	52	57	62	67	72	77	82	87	92	97	102	107	112	117	122
		600	40	46	53	59	65	71	78	84	90	96	103	109	115	121	128	134	140	146	153
	1200	400	34	39	44	49	54	59	64	69	74	79	84	89	94	99	104	109	114	119	124
		600	43	49	55	61	68	74	80	86	93	99	105	111	118	124	130	136	143	149	155
	1300	400	36	41	46	51	56	61	66	71	76	81	86	91	96	101	106	111	116	121	126
		600	45	51	58	64	70	76	83	89	95	101	108	114	120	126	133	139	145	151	158
	1400	400	38	43	48	53	58	63	68	73	78	83	88	93	98	103	108	113	118	123	128
		600	48	54	60	66	73	79	85	91	98	104	110	116	123	129	135	141	148	154	160
	1500	400	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130
		600	50	56	63	69	75	81	88	94	100	106	113	119	125	131	138	144	150	156	163

# Installation Details

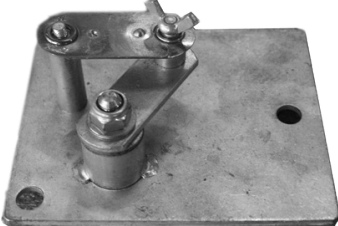



Installation in solid walls and ceiling slabs.



Installation also with vertical damper blade in concrete walls and ceiling slabs.



# Product Range

Construction or Construction variant	Combined with	Code
<p>With fusible link (Standard construction)</p> 	Standard fusible link - 72°C	S
	Limit switch indicated "CLOSED"	LSC
	Limit switch indicates blade "OPEN"	LSO
	Limit switch indicates blade "CLOSED" and "OPEN"	LSOC
	Belimo BLF 230V/24V spring return actuator	BLF_T
	Thermal release mechanism (single action only)	
	Built in limit switches for open and closed position	
	Replacement thermal trip Tf2 available	ZBAE72
	Belimo BFL/BFN 230V/24V spring return actuator	B__VT
	Thermal release mechanism (single action only)	
	Built in limit switches for open and closed position	
	Replacement thermal trip Tf2 available	ZBAE72
	Spare fusible links optional	05GX-G157-A

# Technical Data

## Standard Sizes (mm) & Approximate Pressure Drop (Pa)

### PRESSURE DROP (Pa) @ 3m/s

		Width																		
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Height	200	7	6	6	5	5	5	5	5	5	9	6	6	6	6	6	6	6	6	6
	300	6	5	5	4	4	4	4	4	4	8	6	6	6	6	6	6	6	6	6
	400	6	5	4	4	4	4	3	3	3	7	5	5	5	5	5	5	5	5	5
	500	5	4	4	4	3	3	3	3	3	7	5	5	5	5	5	5	5	5	5
	600	5	4	4	3	3	3	3	3	3	7	5	5	5	5	5	5	5	5	5
	700	9	8	8	7	7	7	7	7	7	11	9	9	9	9	9	9	9	9	9
	800	6	6	5	5	5	5	5	5	5	9	7	7	7	7	7	7	7	7	7
	900	6	6	5	5	5	5	5	5	5	9	7	7	7	7	7	7	6	6	6
	1000	6	6	5	5	5	5	5	5	5	9	7	7	7	6	6	6	6	6	6
	1100	6	6	5	5	5	5	5	5	5	9	7	6	6	6	6	6	6	6	6
	1200	9	8	7	7	7	7	7	7	7	11	8	8	8	8	8	8	8	8	8
	1300	9	8	7	7	7	7	7	7	7	11	8	8	8	8	8	8	8	8	8
	1400	9	8	7	7	7	7	7	7	7	11	8	8	8	8	8	8	8	8	8
	1500	6	6	5	5	5	5	5	5	5	8	6	6	6	6	6	6	6	6	6

### PRESSURE DROP (Pa) @ 6m/s

		Width																		
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Height	200	30	24	24	19	19	19	19	19	19	34	25	25	25	25	25	25	25	25	25
	300	24	19	19	16	16	16	16	16	16	32	23	23	23	23	23	23	23	23	23
	400	24	19	16	16	16	16	14	14	14	29	20	20	20	20	20	20	20	20	20
	500	19	16	16	16	14	14	14	14	14	29	20	20	20	20	20	20	20	20	20
	600	19	16	16	14	14	14	14	14	14	29	20	20	20	20	20	20	20	20	20
	700	34	32	32	29	29	29	29	29	29	44	35	35	35	35	35	35	35	35	35
	800	25	23	20	20	20	20	20	20	20	35	27	27	27	27	27	27	27	27	27
	900	25	23	20	20	20	20	20	20	20	35	27	27	27	27	27	27	25	25	25
	1000	25	23	20	20	20	20	20	20	20	35	27	27	27	25	25	25	25	25	25
	1100	25	23	20	20	20	20	20	20	20	35	27	25	25	25	25	25	25	25	25
	1200	34	32	29	29	29	29	29	29	29	44	33	33	33	33	33	33	33	33	33
	1300	34	32	29	29	29	29	29	29	29	42	33	33	33	33	33	33	33	33	33
	1400	34	32	29	29	29	29	29	29	29	42	33	33	33	33	33	33	33	33	33
	1500	25	23	20	20	20	20	20	20	18	33	25	25	25	25	25	25	25	25	25

### PRESSURE DROP (Pa) @ 9m/s

		Width																		
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Height	200	67	55	55	43	43	43	43	43	43	77	57	57	57	57	57	57	57	57	
	300	55	43	43	37	37	37	37	37	37	71	52	52	52	52	52	52	52	52	52
	400	55	43	37	37	37	37	31	31	31	65	45	45	45	45	45	45	45	45	45
	500	43	37	37	37	31	31	31	31	31	65	45	45	45	45	45	45	45	45	45
	600	43	37	37	31	31	31	31	31	31	65	45	45	45	45	45	45	45	45	45
	700	77	71	71	65	65	65	65	65	65	99	79	79	79	79	79	79	79	79	79
	800	57	52	45	45	45	45	45	45	45	79	60	60	60	60	60	60	60	60	60
	900	57	52	45	45	45	45	45	45	45	79	60	60	60	60	60	60	56	56	56
	1000	57	52	45	45	45	45	45	45	45	79	60	60	60	56	56	56	56	56	56
	1100	57	52	45	45	45	45	45	45	45	79	60	56	56	56	56	56	56	56	56
	1200	77	71	65	65	65	65	65	65	65	99	75	75	75	75	75	75	75	75	75
	1300	77	71	65	65	65	65	65	65	65	95	75	75	75	75	75	75	75	75	75
	1400	77	71	65	65	65	65	65	65	65	95	75	75	75	75	75	75	75	75	75
	1500	57	52	45	45	45	45	45	45	41	75	56	56	56	56	56	56	56	56	56

# Accessories

## Description

The smoke detector works on the optical light scattering principle and is used to monitor the ventilation duct in air conditioning systems. When used with a fire damper, it prevents cold smoke with a temperature of  $< 72\text{ °C}$  from propagating through the AC system.

In the function mode, the smoke alarm of the smoke detector is permanently flushed by the air flow in the duct being monitored. If the smoke density exceeds a specific concentration, the smoke alarm breaks the power circuit to the control device of the fire damper and the damper closes.

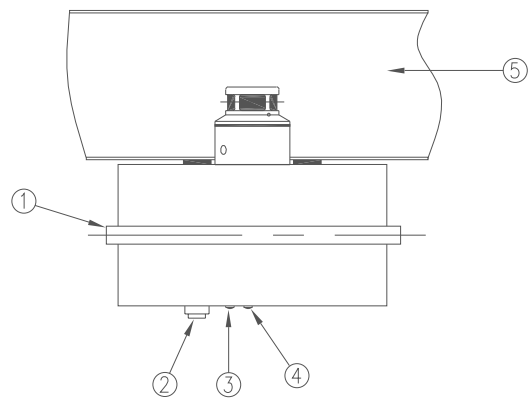
Installation of a remote control terminal enables the electrical function tests to be carried out from a central point, eg. fire control room.



## Application

All fire dampers fitted with electric control devices which operate when voltage is removed may be controlled via the smoke detector.

The smoke detectors are marked with the Ü symbol in accordance with the Approval Mark regulations in Germany.



- ① Smoke detector with power supply, smoke alarm and switched relay
- ② Push button "Test/Teset"
- ③ Green LED "Function Status"
- ④ Red LED "Alarm"
- ⑤ Air duct, provided by others

## Technical Data

- Supply voltage: 230 V, 50/60 Hz
- Power consumption: max 20 VA
- Enclosure rating: IP 42
- Permitted ambient temperature:  $+ 10\text{ °C}$  to  $+ 60\text{ °C}$
- Permitted air velocity in ventilation duct: 1 m/s to 20 m/s
- Permitted relative humidity: 0 – 90% relative humidity (condensation and water vapour can cause false alarms)
- EMC: interference suppression to EN 60801-2 and 60801-4
- Weight: 1.25 kg

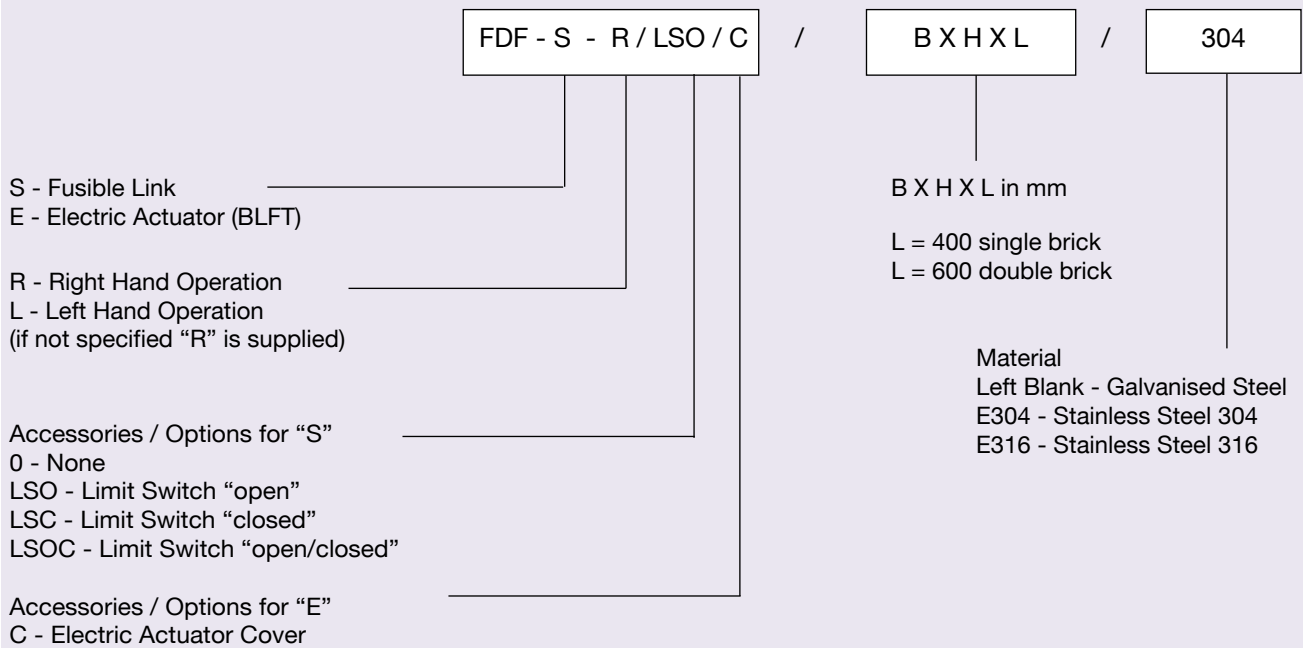
## Scope of Supply

Visual smoke alarm, power supply, switched relay, signal lights (LED), pushbutton and remote control connection, integrated in a plastic housing, wired ready for connection to snap terminals, drilling template and fixing materials.



# Order Details

## Order Code



## Specification Text

Square or rectangular fire dampers for the isolation of fire zones in air conditioning systems.

Description of materials, construction variants, accessories, etc. can be taken from the publication.

## Order Example

Make: TROX  
Type: FDF / S / R / LSOC / 400 X 200 X 400

