

## Shut-off fire dampers

# FDA-12-T/FDA-12-M



### Description

The FDA-12 round fire dampers are designed for use in general ventilation systems to seal off smoke and fire between adjacent fire partitions.

The fire dampers are classified according to EN 13501-3+A1:2010P (Fire classification of construction products and building elements). The fire resistance was tested as per PN-EN 1366-2:2001P (Fire resistance tests for service installations — Part 2: Fire dampers). The entire manufacturing process meets the requirements of EN 15650:2010.

The FDA-12 fire dampers can be installed in horizontal and vertical fire partitions to provide fire resistance of EI 120 (ve ho i↔o) S (which may depend on the actual fire resistance of the partition).

The fire dampers are available in the nominal diameter sizes DN100, DN125, DN160, DN200, DN250, and DN315. All fire dampers have a pull spring control gear and a fusible thermal trip (in FDA-12-T) or a return-spring actuator coupled with a thermal trip (in FDA-12-M). The spring-action versions can be provided with optional limit switches. The casing and optional accessories are made from galvanized steel sheet; the fire damper blade is made from silicate cement board.

Revision: 005/05/16/PG.

#### Available materials — Product code examples

FDA-12- aaa - bbb - ccc

aaa — control method: T — pull spring with fusible thermal fuse

bbb — nominal diameter 100, 125, 160, 200, 250, 315

ccc — optional accessories:

- no limit switches (standard version)
- Z — limit switch (closed position feedback)
- O — limit switch (open position feedback)
- ZO — limit switch (open and closed position feedback)

aaa — control method: M — return-spring actuator with thermal fuse

bbb — nominal diameter 100, 125, 160, 200, 250, 315

ccc — optional accessories:

- B24 — BELIMO BFL24-T / BLF-24-T actuator
- B230 — BELIMO BFL230-T / BLF230-T actuator
- B24ST — BELIMO BFL24-T-ST / BLF-24-T-ST actuator

### Intended use and application

Round fire dampers are designed for installation in general ventilation systems. When integrated into fire partitions, they provide equivalent protective performance and features as the partitions. The fire damper blade remains open under normal operating conditions. It is closed shut automatically in the event of a fire.

The fire dampers can be installed in the following partitions:

Type of partition	Minimum partition thickness (mm)
concrete separating floor	150
concrete wall	115
solid brick wall	115
cellular concrete unit wall	115
gypsum board wall on steel frame with fire resistance rated at EI 120 or higher	125

#### Product code example

Product code: **FDA-12**    **aaa**    **bbb**    **ccc**  
 type                                                              
 Control method      \_\_\_\_\_  
 Ød                      \_\_\_\_\_  
 Optional accessories \_\_\_\_\_

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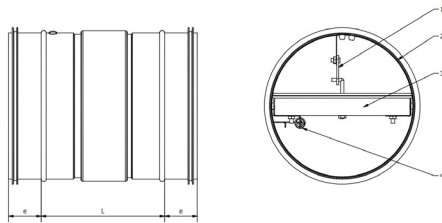
# FDA-12-T/FDA-12-M

### Dimensions and design of the damper

DN	$\varnothing d$ (mm)	e (mm)	L (mm)	L1 (mm)	f (mm)	Weight of FDA-12-T (kg)	Weight of FDA-12-M* (kg)
100	99,0	36,0	132	248	0,0	0,52	2,74
125	124,0	36,0	132	248	0,0	0,80	2,98
160	159,0	36,0	132	248	0,0	1,10	3,54
200	199,0	36,0	132	248	0,0	1,48	3,84
250	249,0	36,0	132	248	25,0	2,62	5,22
315	314,0	36,0	132	248	50,0	3,54	6,48

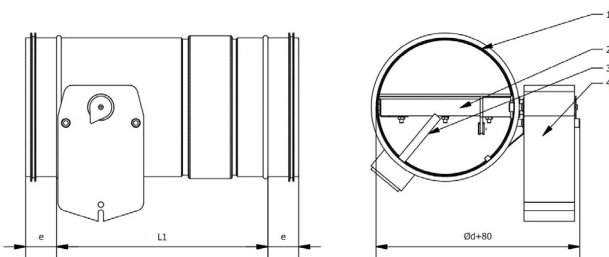
\* BFL actuator, manufactured by Belimo Siłowniki

**FDA-12-T**  
Fire damper with pull spring and thermal fuse ( $\varnothing 100-200$ ).



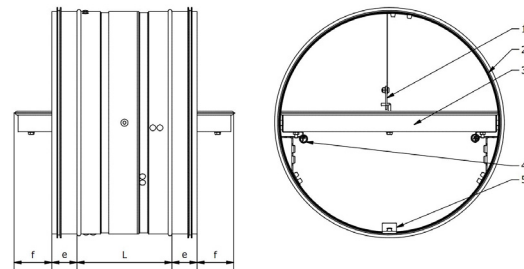
- 1 – thermal fuse
- 2 – casing
- 3 – damper blade
- 4 – pull spring

**FDA-12-M**  
Fire damper with return-spring actuator ( $\varnothing 100-200$ ).



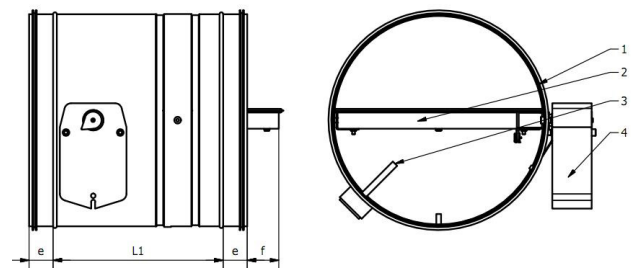
- 1 – casing
- 2 – damper blade
- 3 – thermal fuse
- 4 – actuator

**FDA-12-T**  
Fire damper with pull spring and thermal fuse ( $\varnothing 250-315$ ).



- 1 – thermal fuse
- 2 – casing
- 3 – damper blade
- 4 – pull spring
- 5 - lock

**FDA-12-M**  
Fire damper with return-spring actuator ( $\varnothing 250-315$ ).



- 1 – casing
- 2 – damper blade
- 3 – thermal fuse
- 4 – actuator

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### Technical specifications

The pressure loss and the sound pressure level of emission into the ductwork.

DN	v		q		$\Delta p$	$L_w$ [dB/Okt]							$L_w$ [dB]	$L_{pA}$ [dB(A)]	
						$f_m$ [Hz]									
	[m/s]	[m³/s]	[l/s]	[Pa]	63	125	250	500	1000	2000	4000	8000			
100	2	39	11	4	12	12	11	11	11	5	-3	-11	19	14	
	4	78	22	16	30	30	30	29	29	29	23	15	37	34	
	6	116	32	35	41	41	40	40	40	40	38	30	48	46	
	8	155	43	63	48	48	48	48	47	47	47	47	41	56	54
	10	194	54	98	54	54	54	54	53	53	53	53	49	62	60
125	2	66	18	2	11	11	10	10	8	0	-8	-16	17	11	
	4	132	37	10	29	29	29	28	28	26	18	10	36	32	
	6	198	55	22	40	40	39	39	39	39	33	25	47	44	
	8	264	73	40	47	47	47	47	46	46	44	36	55	52	
	10	330	92	62	53	53	53	53	52	52	52	44	61	59	
160	2	116	32	2	10	10	10	10	3	-5	-13	-20	16	9	
	4	232	64	6	28	28	28	28	28	21	13	5	35	31	
	6	348	97	14	39	39	39	38	38	36	28	21	46	43	
	8	464	129	25	47	47	46	46	46	46	39	31	54	51	
	10	580	161	39	53	52	52	52	52	52	47	40	60	57	
200	2	190	53	1	10	10	9	7	-1	-8	-16	-24	15	7	
	4	380	105	4	28	28	28	28	27	20	12	4	35	30	
	6	570	158	9	39	39	38	38	38	33	25	17	46	41	
	8	759	211	16	46	46	46	46	46	43	35	28	54	50	
	10	949	264	25	52	52	52	52	51	51	44	36	60	57	
250	2	298	83	1	12	12	11	7	-1	-9	-17	-24	17	7	
	4	596	166	4	30	30	30	30	25	17	9	1	36	30	
	6	894	248	9	41	41	40	40	40	32	24	17	48	43	
	8	1192	331	17	48	48	48	48	48	43	35	27	55	51	
	10	1490	414	26	54	54	54	54	54	51	43	36	61	58	
315	2	490	136	1	12	11	11	3	-5	-13	-20	-28	16	5	
	4	981	272	3	30	30	30	29	21	13	6	-2	36	28	
	6	1471	409	6	41	40	40	40	36	28	21	13	47	41	
	8	1961	545	10	48	48	48	48	47	39	31	24	55	50	
	10	2451	681	16	54	54	54	54	53	48	40	32	61	57	