Fire&Smoke Dampers-EN
YD344

DESCRIPTION:

The spring return actuator enables the motorised opening and closing of the damper blade; it can be activated by the central BMS. In the event of a fire, the damper is triggered thermoelectrically at 72 °C or 95 °C (use in warm air ventilation systems). As long as power is supplied to the actuator, the damper blade remains open. If the supply voltage fails, the damper closes (power off to close). Motorised fire dampers can be used to shut off ducts. The torque of each actuator is sufficient to open and close the damper blade even while the fan is running. The spring return actuator is fitted with limit switches that can be used for capturing the damper blade position..

MATERIAL :

Casing:

- Galvanised sheet steel
- Stainless steel

Damper blade:

- Special insulation material

Other components:

- Damper blade shafts and driving linkage made of stainless steel
- Brass or stainless steel bearings
- Seals of polyurethane or elastomer

APPLICATIONS:

- GMCAIR fire dampers of Type YD344, with CE marking and declaration of performance, for the isolation of duct penetrations between fire compartments in the event of a fire
- To prevent the propagation of fire and smoke through ductwork to adjacent designated fire compartments

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FUNCTION:

The fire damper is used as a shut-off device to prevent fire and smoke from spreading through ducting in areas with potentially explosive atmospheres. The fire damper is suitable for supply air and extract air systems in potentially explosive atmospheres. For the operation of the fire damper, the operating and installation manual and the technical data in the supplementary operating manual must be observed.

CLASSIFICATION

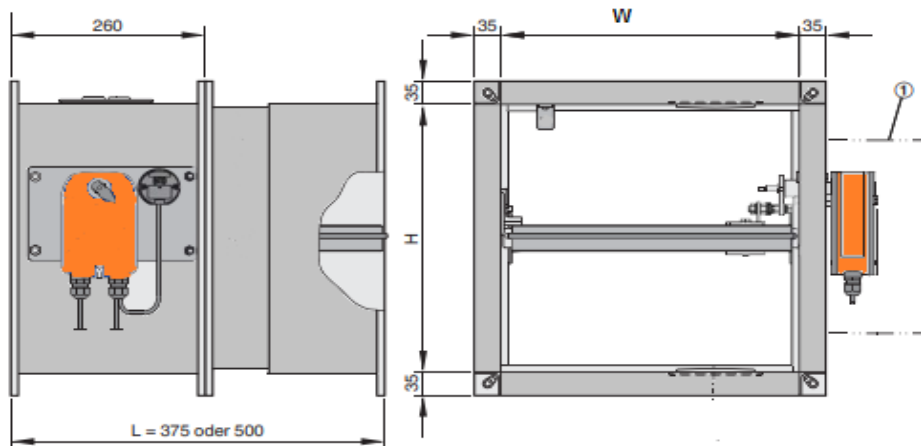Class of performance to EN 13501-3, up to EI 180 (ve, ho, i ↔ o) S

STANDARD SIZES (mm):

AVAILABLE SIZES (mm) - Always width x height								
	WIDHT							
HEIGHT	100	200	300	400	500	600	700	800
200	X	X	X	X	X	X	X	X
300	X	X	X	X	X	X	X	X
400	X	X	X	X	X	X	X	X
500	X	X	X	X	X	X	X	X
600	X	X	X	X	X	X	X	X
700	X	X	X	X	X	X	X	X
800	X	X	X	X	X	X	X	X
900	X	X	X	X	X	X	X	X
1000	X	X	X	X	X	X	X	X
1100	X	X	X	X	X	X	X	X
1200	X	X	X	X	X	X	X	X
1300	X	X	X	X	X	X	X	X
1400	X	X	X	X	X	X	X	X
1500	X	X	X	X	X	X	X	X

H (mm)
200
250
300
350
400
450
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800

W (mm)
100
200
300
400
500
600
700
800
900
1000

Flange

F (mm)
30
25

DRAWING

L = 375 oder 500

① Keep clear to provide access to the spring return actuator

The servomotors are supplied for 24 V operation 230 V operation available on request. GMCAIR incorporates motors from different manufacturers (Belimo, Siemens, etc.).

SIEMENS SERVOMOTOR

BELIMO SERVOMOTOR

BELIMO SERVOMOTOR + BSIA

SELECTION TABLES

TECHNICAL DATA

Nominal sizes	200 × 200 to 1500 × 800 mm
Casing lengths	300 and 600mm
Volume flow rate range	Up to 14400 l/s or up to 51840 m³/h
Differential pressure range	Up to 2000 Pa
Operating temperature	At least 0 – 50 °C
Release temperature	72 °C or 95 °C (for warm air ventilation systems)
Upstream velocity	≤ 11m/s with spring return actuator

EFFECTIVE AREA TABLE (m2)

								W (mm)							
		200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
H (mm)	150 Aeff f	0,012	0,025	0,034	0,044	0,053	0,063	0,073	0,082	0,092	0,101	0,111	0,121	0,130	0,140
		0,95	0,90	0,90	0,85	0,80	0,80	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75
	200 Aeff f	0,022	0,041	0,055	0,070	0,084	0,099	0,114	0,128	0,143	0,157	0,172	0,187	0,201	0,216
	Aeff f	1,00	0,90	0,90	0,85	0,80	0,80	0,75	0,75	0,75	0,75	0,75	0,75	0,75	0,75
	300 Aeff f	0,040	0,068	0,093	0,118	0,142	0,167	0,191	0,216	0,241	0,265	0,290	0,314	0,339	0,364
	Aeff f	1,20	1,00	0,95	0,90	0,90	0,85	0,82	0,80	0,80	0,80	0,80	0,80	0,80	0,80
	300 Aeff f	0,058	0,096	0,131	0,165	0,200	0,235	0,269	0,304	0,338	0,373	0,408	0,442	0,477	0,511
	Aeff f	1,30	1,10	1,00	0,95	0,92	0,90	0,85	0,85	0,85	0,85	0,85	0,80	0,80	0,80
	500 Aeff f	0,075	0,124	0,169	0,213	0,258	0,302	0,347	0,392	0,436	0,481	0,525	0,570	0,615	0,659
		1,40	1,20	1,10	1,00	0,95	0,92	0,90	0,90	0,85	0,85	0,80	0,80	0,80	0,80
	600	0,093	0,152	0,206	0,261	0,316	0,370	0,425	0,479	0,534	0,589	0,643	0,698	0,752	0,807
		1,60	1,40	1,20	1,10	1,00	0,95	0,95	0,95	0,90	0,90	0,85	0,85	0,80	0,80
	700	0,111	0,180	0,244	0,309	0,373	0,438	0,503	0.567	0,632	0,696	0,761	0,826	0,890	0,955
		1,70	1,45	1,30	1,20	1,10	1,00	1,00	0,95	0,90	0,90	0,85	0,85	0,85	0,85
		0,129	0,207	0,282	0,357	0,431	0,506	0,580	0,655	0,730	0,804	0,879	0,953	1,028	1,103
	800	1,80	1,60	1,40	1,30	1,20	1,10	1,10	1,00	1,00	0,95	0,90	0,90	0,90	0,85

QUICK SIZING

W [mm]	L_{WA} [dB(A)]	H [mm]												
		200	250	300	350	400	450	500	550	600	650	700	750	800
200	35	666	900	1152	1404	1620	1116	1260						
	45	936	1296	1620	1944	2268	1584	1800						
250	35	864	1188	1476	1764	2052	1476	1692						
	45	1188	1620	2052	2448	2844	2088	2376						
300	35	1044	1404	1764	2124	2448	1836	2088	2340	2592	2844	3060	3312	3564
	45	1476	1980	2484	2952	3420	2628	2952	3312	3672	4032	4356	4716	5076
350	35	1224	1656	2088	2484	2844	2196	2484	2808	3096	3384	3672	3960	4248
	45	1728	2304	2880	3456	3996	3132	3564	3960	4392	4824	5220	5652	6048
400	35	1404	1908	2376	2808	3240	2556	2916	3240	3600	3924	4284	4608	4968
	45	1980	2664	3312	3924	4572	3636	4140	4608	5112	5580	6084	6552	7056
450	35	1584	2124	2664	3168	3636	2916	3312	3708	4104	4500	4860	5256	5652
	45	2232	2988	3708	4392	5112	4176	4716	5256	5832	6372	6912	7488	8028
500	35	1764	2376	2916	3492	4032	3276	3744	4176	4608	5040	5472	5904	6336
	45	2484	3312	4104	4860	5652	4680	5292	5904	6552	7164	7776	8388	9000
550	35	1944	2592	3204	3816	4428	3636	4140	4608	5112	5580	6048	6552	7020
	45	2736	3636	4500	5328	6156	5184	5868	6552	7236	7920	8604	9288	9972
600	35	2124	2808	3492	4140	4788	3996	4536	5076	5616	6120	6660	7164	7704
	45	2952	3924	4860	5796	6696	5688	6444	7200	7956	8712	9468	10188	10944
650	35	2304	3024	3744	4464	5148	4356	4932	5508	6084	6660	7236	7812	8388
	45	3204	4248	5256	6228	7200	6192	7020	7848	8676	9468	10296	11124	11916
700	35	2448	3240	4032	4788	5508	4716	5364	5976	6588	7200	7848	8460	9072
	45	3420	4572	5652	6696	7740	6696	7596	8496	9360	10260	11124	12024	12888
750	35	2628	3492	4284	5112	5904	5076	5760	6444	7092	7776	8424	9072	9756
	45	3672	4860	6012	7128	8244	7236	8172	9144	10080	11052	11988	12924	13860
800	35	2808	3708	4572	5400	6264	5436	6156	6879	7596	8316	9000	9720	10440
	45	3888	5148	6372	7560	8748	7740	8748	9792	10080	11808	12816	13824	14832
900	35	1944	2808	3672	4500	5328	6156	6984	7776	8604	9396	10188	10980	11808
	45	2772	3996	5220	6408	7596	8748	9900	11052	12204	13356	14508	15624	16776
1000	35	2160	3132	4104	5040	5940	6876	7776	8676	9576	10476	11376	12276	13140
	45	3096	4464	5832	7164	8460	9756	11052	12348	13608	14904	16164	17424	18720
1100	35	2412	3456	4536	5544	6588	7596	8568	9576	10584	11556	12564	13536	14508
	45	3744	4932	6444	7884	9324	10764	12204	13608	15048	16452	17820	19224	20700
1200	35	2628	3816	4932	6084	7200	8280	9396	10476	11556	12636	13716	14796	15876
	45	4068	5400	7020	8640	10224	11808	13356	14904	16452	17964	19440	21060	22500
1300	35	2844	4140	5364	6588	7812	9000	10188	11376	12564	13716	14904	16056	17208
	45	4392	5868	7632	9396	11124	12816	14508	16164	17856	19440	21240	22860	24480
1400	35	3096	4464	5796	7128	8424	9720	11016	12276	135236	14796	16056	17316	18540
	45	4716	6336	8244	10116	11988	13824	15624	17460	19260	21060	22860	24660	26460
1500	35	3312	4788	6228	7632	9036	10440	11808	13176	14544	15876	17244	18540	19980
	45	4716	6804	8856	10872	12852	14832	16776	1870	20700	22500	24480	26460	28260

Installation & Assembly

550
150
30
thermal sensor

air flow direction

damper blade

150 mm thick block work wall

150 mm thick block work wall

A-A Section

heat-resistant seramik based gasket

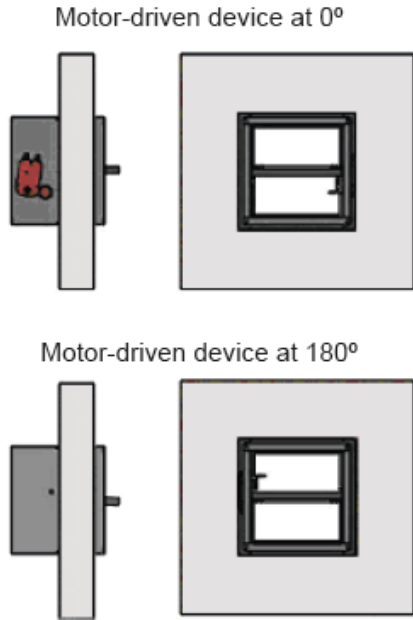heat-resistant silicon

flange clamps
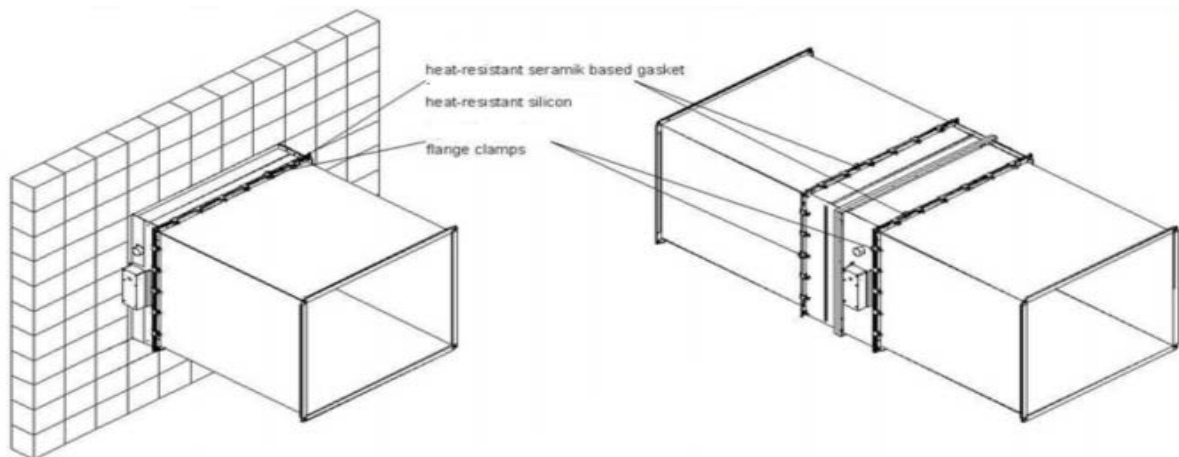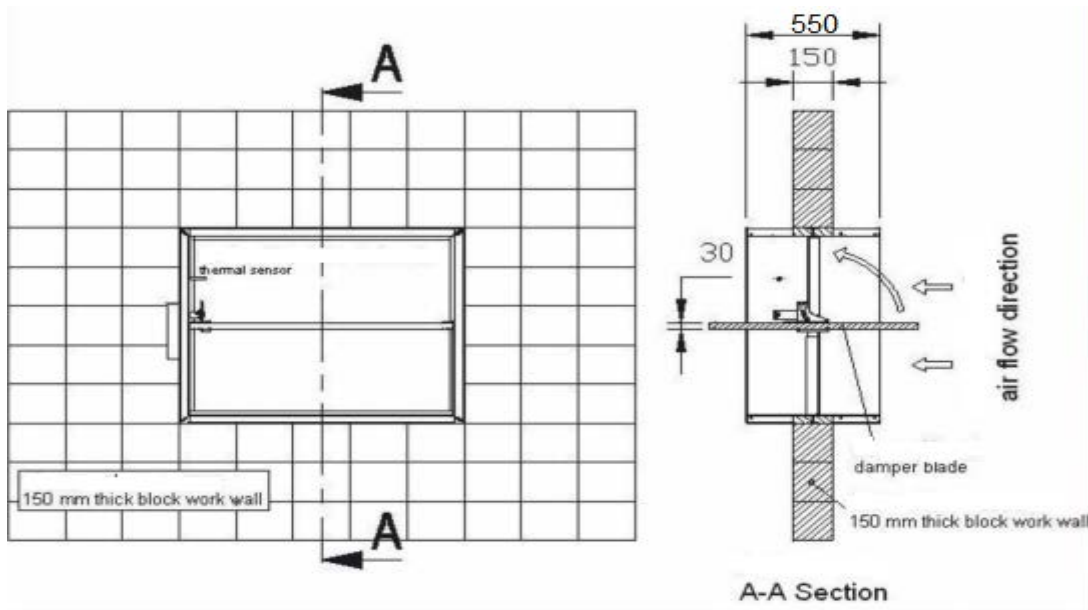
In wall

In stud wall

In floor

CORRECT INSTALLATION   **INCORRECT INSTALLATION**

Motor-driven

Motor-driven device at 0º

Motor-driven device at 180º

Motor-driven

Motor-driven device at top

Motor-driven device at bottom
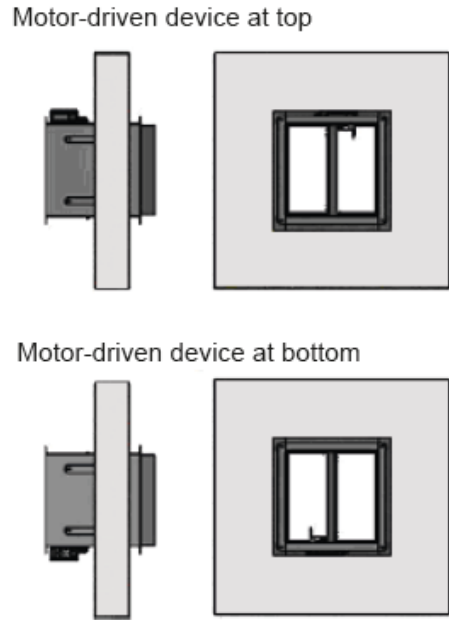
Special finishes with duct connection spigots and truncated conical transformations

Rectangular

Circular

Oval
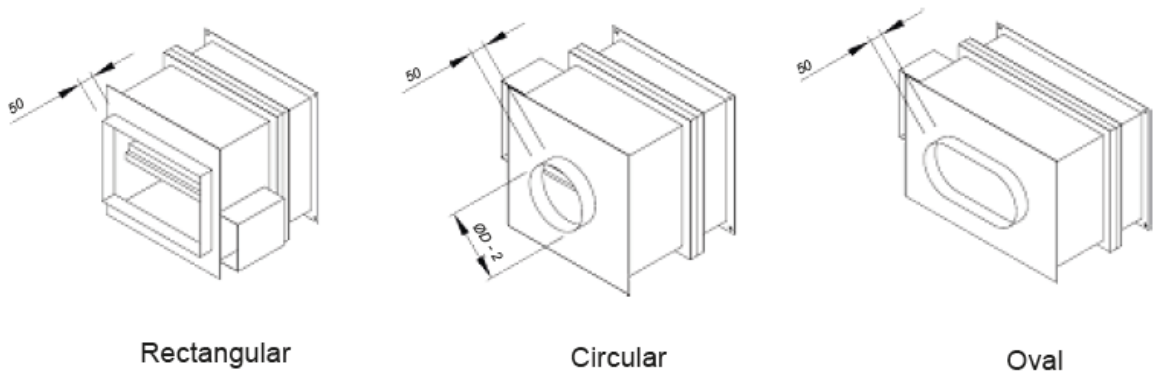
Length of the frame assembly in relation to the height of the damper.

Reducers

If H < 250

If H ≥ 300
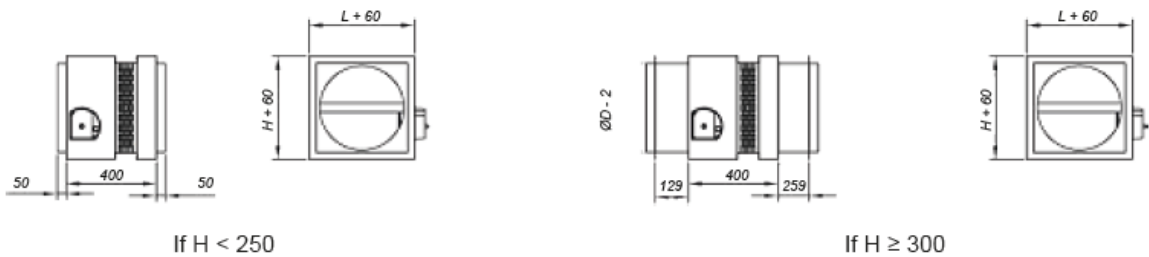
ORDER CODE

YD-344	F25	01	S	N 1000X700

FD-344: Rectangular, with motor

WXH
N: Neck Size

S: Standad (H+50mm)
L: Requested Product Length (custom choice)

F00: No Flange
F25: Flange Width = 25mm
F30: Flange Width = 30mm

00: Standard Duct Connection
01: Through Wall Connection