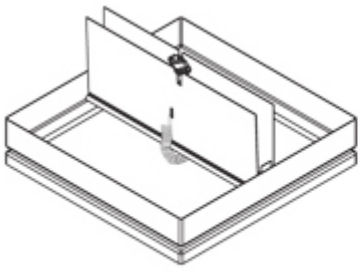
BACK DRAFT DAMPERS

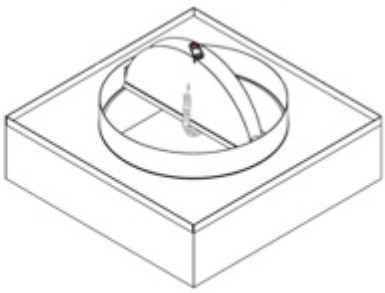
Rev.02
26-05-2015

GMC BDD-042 PRODUCT SPECIFICATIONS:

- Chasis and blades are made of galvanised steel sheet or aluminum profile.
- Back Draft damper is designed to prevent back-flow when fan motor is off and to open when fan motor is on. Provides one-way flow in ducting system.
- Has two models: Standart Model (BDD-142) and Circular Model (BDD-242).
- Reduces the heat loss and prevents ingress of dust, rain, insect and bird when system is off.
- Optional: Flow rate – Pressure settings can be done with balance load.
- Provides fast response against extreme pressure changes in the ducting system by opening blades.



Butterfly Type - Rectangular



Butterfly Type - Circular

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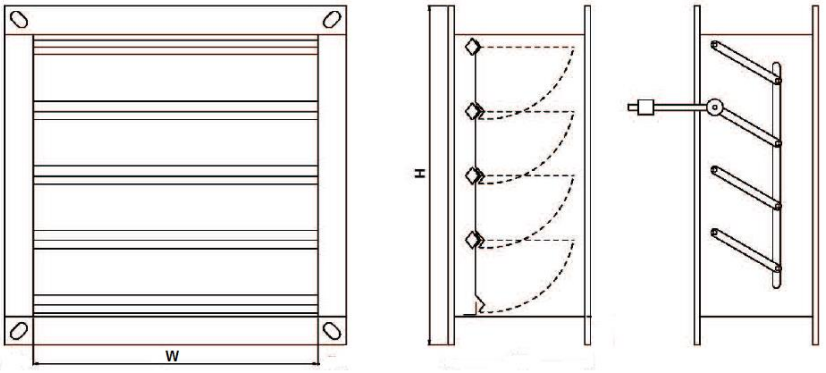
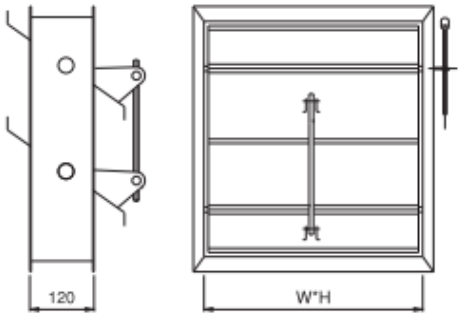
TECHNICAL DETAILS



BDD-142

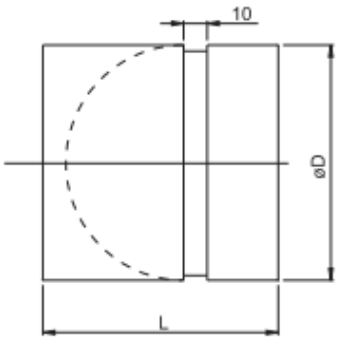
Stepped air volume settings cannot be done by Back Draft Damper mechanisms. Blade positions are comparative with flowing air volume. If there is none, blades are closed.



BDD-142

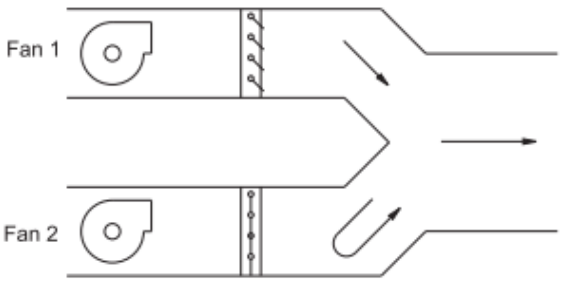
BDD-242

Circular back draft dampers are ideal for -of course- circular air ducts.
Other characteristics are same as back draft dampers.



BDD-242

If there are more fan-blows than one in the system, back draft dampers will be excellent choice for maximum efficiency.



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DATA DIAGRAMS

BD-142, EFFECTIVE AREA TABLE (m^2)

S [m²]		B [mm]													
		200	300	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
H [mm]	210	0,042	0,063	0,084	0,105	0,126	0,147	0,168	0,189	0,210	0,252	0,294	0,336	0,378	0,420
	310	0,062	0,093	0,124	0,155	0,186	0,217	0,248	0,279	0,310	0,372	0,434	0,496	0,558	0,620
	410	0,082	0,123	0,164	0,205	0,246	0,287	0,328	0,369	0,410	0,492	0,574	0,656	0,738	0,820
	510	0,102	0,153	0,204	0,255	0,306	0,357	0,408	0,459	0,510	0,612	0,714	0,816	0,918	1,020
	610	0,122	0,183	0,244	0,305	0,366	0,427	0,488	0,549	0,610	0,732	0,854	0,976	1,098	1,220
	710	0,142	0,213	0,284	0,355	0,426	0,497	0,568	0,639	0,710	0,852	0,994	1,136	1,278	1,420
	810	0,162	0,243	0,324	0,405	0,486	0,567	0,648	0,729	0,810	0,972	1,134	1,296	1,458	1,620
	910	0,182	0,273	0,364	0,455	0,546	0,637	0,728	0,819	0,910	1,092	1,274	1,456	1,638	1,820
	1010	0,202	0,303	0,404	0,505	0,606	0,707	0,808	0,909	1,010	1,212	1,414	1,616	1,818	2,020
	1110	0,222	0,333	0,444	0,555	0,666	0,777	0,888	0,999	1,110	1,332	1,554	1,776	1,998	2,220
	1210	0,242	0,363	0,484	0,605	0,726	0,847	0,968	1,089	1,210	1,452	1,694	1,936	2,178	2,420
	1310	0,262	0,393	0,524	0,655	0,786	0,917	1,048	1,179	1,310	1,572	1,834	2,096	2,358	2,620
	1410	0,282	0,423	0,564	0,705	0,846	0,987	1,128	1,269	1,410	1,692	1,974	2,256	2,538	2,820
	1510	0,302	0,453	0,604	0,755	0,906	1,057	1,208	1,359	1,510	1,812	2,114	2,416	2,718	3,020
	1610	0,322	0,483	0,644	0,805	0,966	1,127	1,288	1,449	1,610	1,932	2,254	2,576	2,898	3,220
	1710	0,342	0,513	0,684	0,855	1,026	1,197	1,368	1,539	1,710	2,052	2,394	2,736	3,078	3,420
	1810	0,362	0,543	0,724	0,905	1,086	1,267	1,448	1,629	1,810	2,172	2,534	2,896	3,258	3,620
	1910	0,382	0,573	0,764	0,955	1,146	1,337	1,528	1,719	1,910	2,292	2,674	3,056	3,438	3,820
	2010	0,402	0,603	0,804	1,005	1,206	1,407	1,608	1,809	2,010	2,412	2,814	3,216	3,618	4,020

N.B. The free surface areas refer to the net frontal section and are linked to the effective jet velocity and flow rate parameters of the following equation:

where:

$$Q = v_F \times S \times 3600$$

Q supply air flow rate [m³/h]; v_F velocity relating to BxH [m/s]; S gross passageway surface area [m²]

BD-342, STANDARD DIMENSIONS

SIZE	ØD	L
100	100	150
125	125	125
150	150	150
160	160	160
180	180	180
200	200	200
250	250	250
315	315	315

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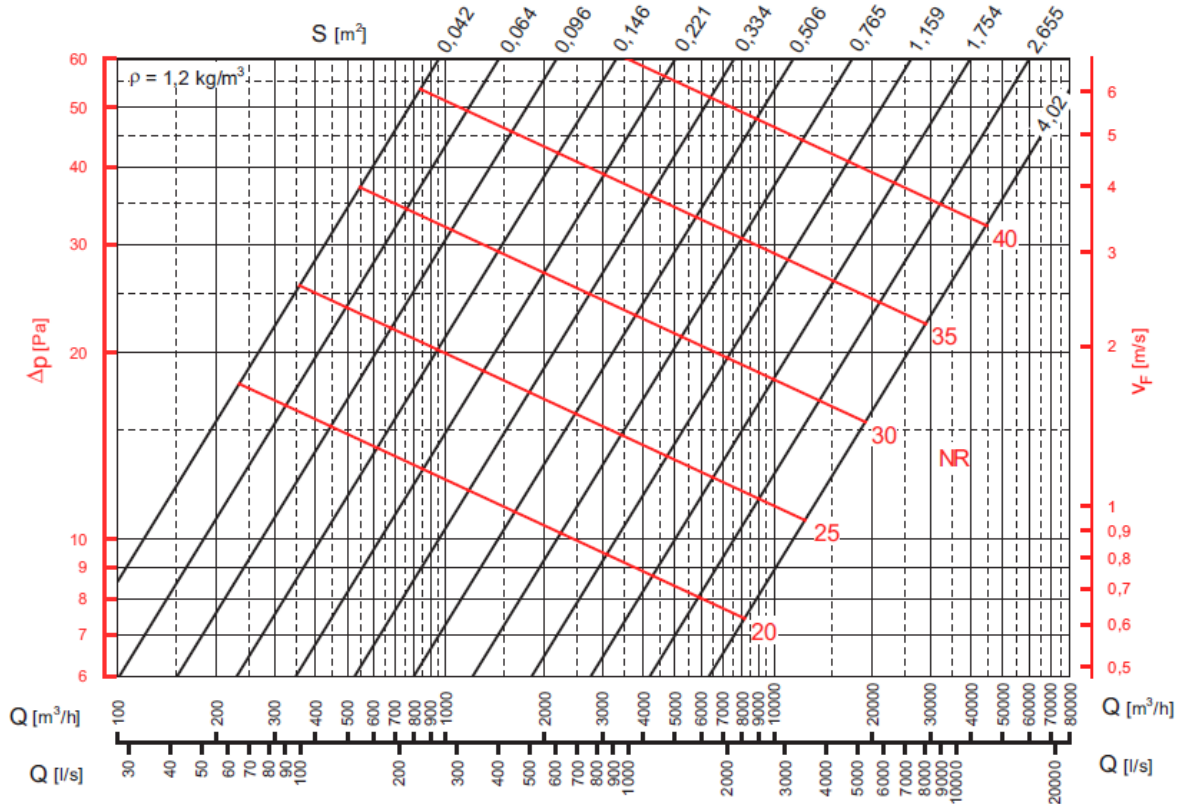
BD-142, PRESSURE DROP AND NOISE LEVELS



Q [m³/h] [l/s]	through air flow rate
S [m²]	gross passageway surface area
v_F [m/s]	velocity relating to BxH (gross section)
Δp [Pa]	total pressure loss
NR	noise rating (ISO standard, in relation to 10^{-12} W) taking no account of the attenuation of the room

ORDER PARAMETERS:

BDD-042	G	01	L400	-	N 1000X700

BDD-142: Rectangular Model

BDD-242: Circular Model

A: Aluminum Chasis
G: Galvanised Chasis

00: Standard Counter-Weight
01: Special Requested Counter-Weight

L: Requested Product Length

- Standard Application

N: Neck Size

D: Neck Diameter