



# WDBB

**Fire-resistant wall/door diffuser**

**Transfer**

**Outdoor air application**

**Damp-resistant**

## Use

The fire-resistant element type WDBB is suitable for use in fire-retardant wall or door constructions, including in damp conditions. It should be fixed mechanically in the recess or it can be fitted between two cover diffusers (optional).

The gap between the recess and the element should be filled with intumescent sealant.

The fire-resistant element consists of thermal foam material, enclosed by metal profiles.

In temperatures above 190 °C it expands strongly in volume and consequently closes the opening.

## Characteristics

Free passage: approx. 42 to 64 %

## Finish

### **Fire-resistant element**

Metal profiles filled with heat-sensitive foam material.

post-treatment: none

colour: grey

fitting: intumescent sealant

### **Internal cover diffusers (optional)**

material: pressed steel

post-treatment: none

colour: white RAL 9010

### **External cover diffusers (optional)**

See documentation: BM diffusers page 205 ff. type B M - -

## Available types

### **W D B B O O**

**W** wall/door diffuser

**D** transfer

**B** fire-resistant

**B** rectangular, thickness 44 mm, 120 minutes fire-resistant

**O** none

**O** not applicable

### **Enkelvoudig afdekrooster**

#### **W D O O E O**

**W** wall/door diffuser

**D** transfer

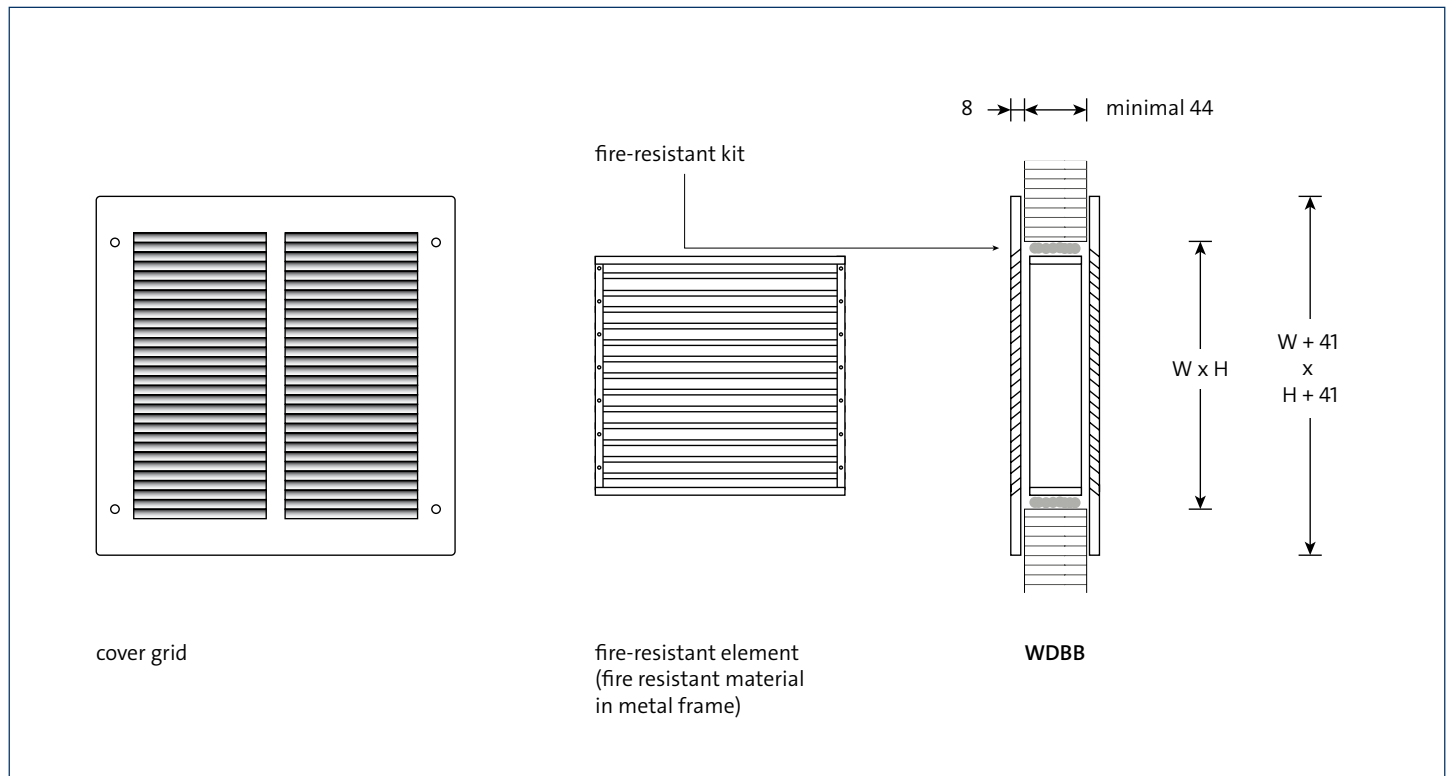
**O** not applicable

**O** not applicable

**E** cover diffuser

**O** not applicable

## Dimensions



## Available dimensions

H	W									
	100	150	200	250	300	350	400	450	500	600
100	■	■	■	■	■	■	■	■	■	■
150	■	■	■	■	■	■	■	■	■	■
200	■	■	■	■	■	■	■	■	■	■
250	■	■	■	■	■	■	■	■	■	■
300	■	■	■	■	■	■	■	■	■	■
350	■	■	■	■	■	■	■	■	■	■
400	■	■	■	■	■	■	■	■	■	■
450	■	■	■	■	■	■	■	■	■	■
500	■	■	■	■	■	■	■	■	■	■
600	■	■	■	■	■	■	■	■	■	■

## Comment

- The listed dimensions are in mm.
- $W \times H$  is the recess size.
- The actual width is  $W - 2$  mm.
- The actual height is  $H - 2$  mm.
- Any sizes in between are available on request.
- Fire resistance of 60 minutes in accordance with BS 476 : part 20 : 1987.

## Selection details

### WDBB

air volume		free passage in cm <sup>2</sup>																	
		50		60		80		100		125		150		200		250		300	
m <sup>3</sup> /s	m <sup>3</sup> /h	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp
0.0100	36	5	-																
0.0125	45	8	11	6	7														
0.0150	54	12	15	9	12	5	-												
0.0175	63	17	20	12	16	7	-	4	-										
0.0200	72	22	23	15	19	9	13	5	-	4	-								
0.0250	90	34	29	24	25	13	19	9	14	6	-	4	-						
0.0300	108			34	30	19	23	12	19	8	14	6	10						
0.0400	144					34	31	22	26	14	21	10	17	6	11	4	-		
0.0500	180							34	32	22	27	15	23	9	17	6	12	4	-
0.0600	216									32	32	22	28	13	22	8	17	6	13
0.0800	288											40	35	22	29	15	25	10	21
0.1000	360													35	35	23	30	16	27
0.1250	450															36	36	25	32
0.1500	540																	36	37

air volume		free passage in cm <sup>2</sup>																	
		400		500		600		800		1000		1250		1500		2000		2500	
m <sup>3</sup> /s	m <sup>3</sup> /h	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp	P <sub>s</sub>	Lp
0.0800	288	6	15	4	10														
0.1000	360	9	21	6	16	4	12												
0.1250	450	14	26	9	22	7	18	4	12										
0.1500	540	21	31	14	27	10	23	6	17	4	13								
0.1750	630	28	35	18	31	13	27	8	21	5	17	4	-						
0.2000	720			24	34	17	30	10	25	7	20	5	16	3	13				
0.2500	900					27	36	16	30	11	26	7	22	5	19				
0.3000	1080							23	35	15	31	10	27	8	23	5	19	4	15
0.4000	1440									27	38	18	34	14	31	9	26	6	23
0.5000	1800											29	40	21	37	14	32	10	29
0.6000	2160															20	37	14	33
0.8000	2880																	26	41

Preferred range for use in doors: 8 - 10 Pa.

## Free passage in cm<sup>2</sup>

H	W									
	100	150	200	250	300	350	400	450	500	600
100	42	67	94	139	179	208	241	273	302	363
150	68	108	143	210	283	329	332	365	478	575
200	97	145	226	281	387	450	520	591	653	786
250	141	210	279	354	491	570	660	750	829	997
300	187	283	378	487	550	691	800	909	1004	1209
350	220	332	444	572	700	822	940	1067	1180	1420
400	252	381	510	657	804	933	982	1226	1355	1631
450	285	431	577	742	908	1054	1219	1211	1531	1842
500	318	480	643	827	1012	1175	1359	1544	1578	2054
600	383	579	775	998	1220	1416	1639	1862	2058	2316

## Important information:

Fire-resistant products based on thermal foam material, such as the WDBB, are tested in accordance with Fpr EN 1364-5 : 2017; or similar products tested in accordance with NEN-EN 1366-3, or NEN 6069 pertain to “dividing constructions”.

The NEN-EN 1366-2 (or NEN 6077) regarding ‘fire dampers in air ducts’ applies to using fire-resistant elements in air ducts, such as fire dampers, where tests take place under much greater pressure differences. Therefore, the aforementioned products cannot simply be used in air ducts.

## General

- Static pressure loss  $P_s$  in Pa.
- The assumed space attenuation is 10 dB.
- Sound pressure  $L_p$  in dB(A).
- It is permitted to interpolate the interim values.
- The selection details apply to the WDBBOO and in combination with the BMXN, WDVC/WRHA.