

## Nozzle air diffuser DYFB



DYFB is a nozzle air diffuser with an integrated plenum box for freely suspended installation in a ceiling. The diffuser has adjustable nozzles for setting of an optional diffusion pattern. Patented measurement and adjustment damper ZAEF is included in the plenum box. The slot height of the diffuser can be set at 0 or 12 mm.

### Quick Selection

DYFB with 0 mm slot, at 50 Pa

Air diffuser	Connection, mm	Air flow l/s at sound level		
		25 dB(A)	30 dB(A)	35 dB(A)
DYFB-100	100	12	23	36
DYFB-125	125	18	37	47
DYFB-160	160	27	40	54
DYFB-200	200	40	58	74
DYFB-250	250	39	71	100
DYFB-315	315	78	110	140
DYFB-400	400	-	-	200

- = outside working area

NOTE! With size Ø400 adjustment with IRIS damper (included).

### Specifications

- Easy to install and adjust
- Low sound level
- Adjustable air slot 0 or 12 mm
- Easily adjustable diffusion pattern
- Measurement and adjustment damper ZAEF included
- 7 connection sizes

### Product code example

Nozzle air diffuser DYFB-200.

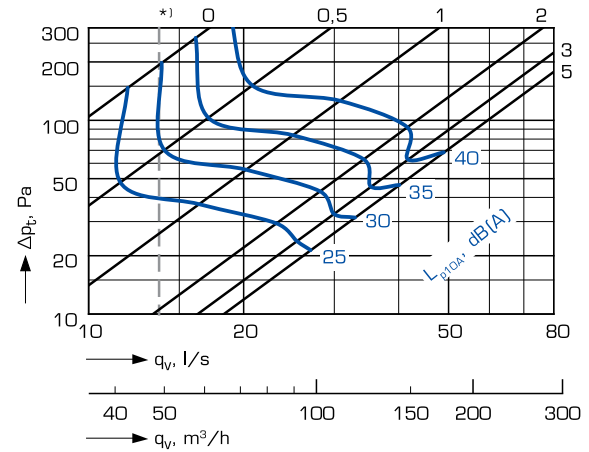
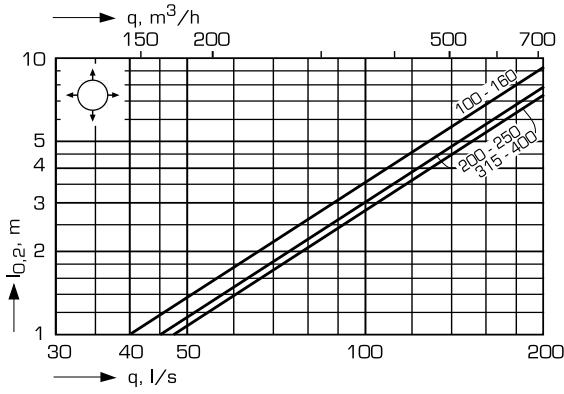
### Air flow, throw, pressure drop, sound level

Nozzle air diffuser DYFB with 0 mm slot, 4-way diffusion

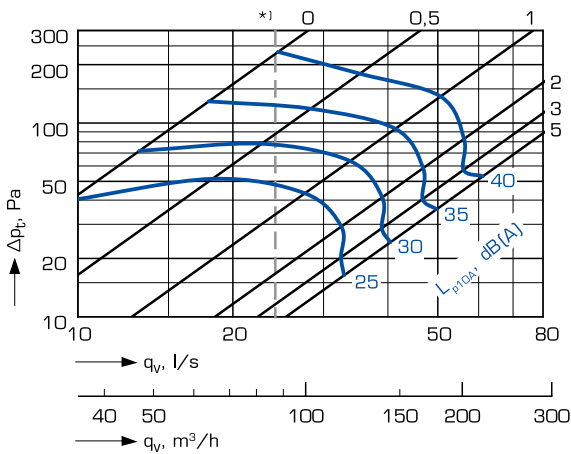
**Throw (isothermal)**

Sizes in the diagram below refer to air diffuser connection in mm.

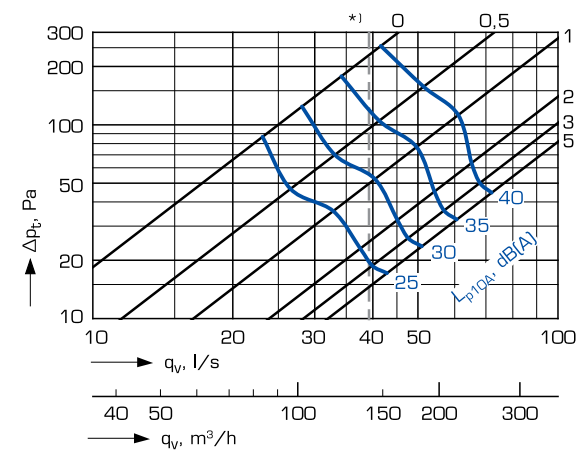
**DYFB-100**



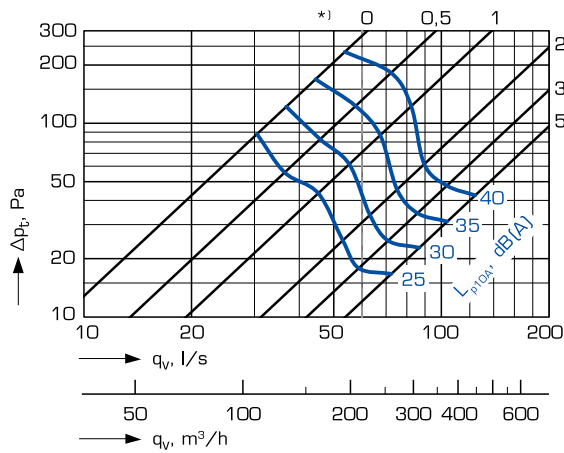
**DYFB-125**



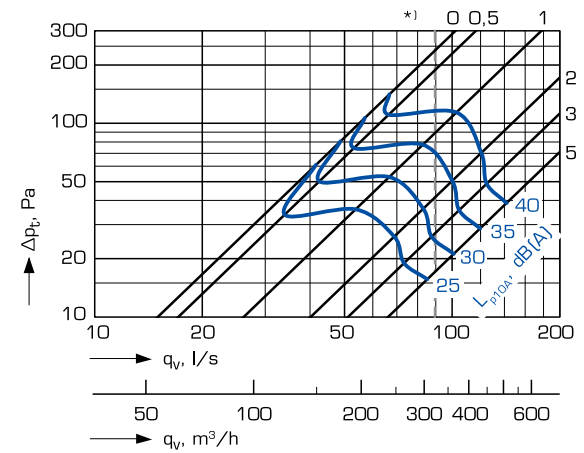
**DYFB-160**



**DYFB-200**



**DYFB-250**



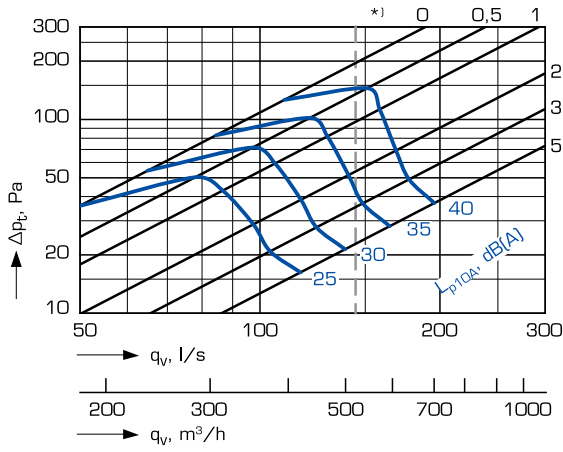
\*) adjustment position

- - - Min. airflow required to obtain sufficient measuring pressure.

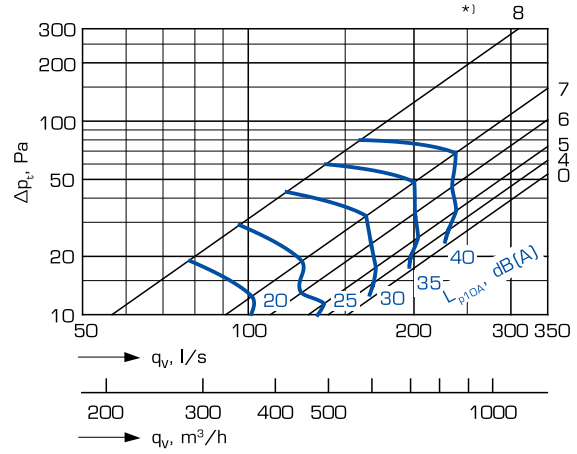
### Air flow, pressure drop, sound level

Nozzle air diffuser DYFB with 0 mm slot, 4-way diffusion

DYFB-315



DYFB-400



\*) adjustment position

- - - Min. airflow required to obtain sufficient measuring pressure.

### Sound Power level L<sub>w</sub>

DYFB with 0 mm slot

DYFB	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100	9	10	7	0	-1	-8	-13	-12
125	7	10	7	-1	-1	-6	-13	-15
160	7	10	7	1	-2	-6	-13	-16
200	7	10	4	1	-1	-5	-12	-16
250	5	8	2	1	-1	-3	-11	-16
315	5	10	3	2	-1	-5	-12	-16
400	13	11	4	2	-4	-10	-12	-8
Tolerance ±	6	3	2	2	2	2	2	3

Sound power levels by octave bands are obtained by adding to total sound pressure level  $L_{p10A}$ , dB(A), the correction  $K_{oct}$  presented in the table according to the following formula:

$$L_w = L_{p10A} + K_{oct}$$

Correction  $K_{oct}$  is average value in range of use of the device.

### Sound attenuation ΔL

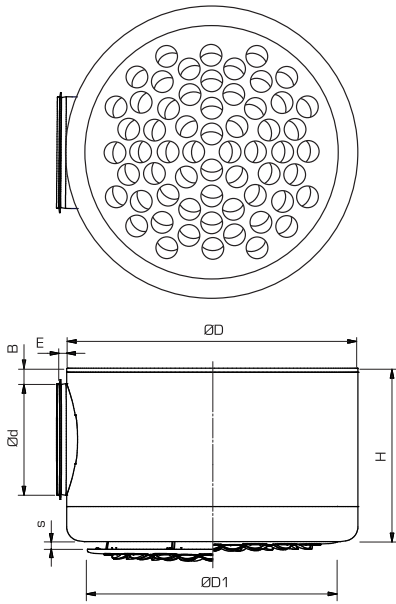
DYFB with 0 mm slot

DYFB	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100	21	13	7	15	9	8	6	9
125	18	6	7	12	6	10	6	7
160	18	8	7	10	9	9	7	8
200	13	4	8	5	8	6	4	8
250	11	2	6	6	6	5	5	8
315	9	1	8	7	4	4	5	7
400	5	4	8	4	6	5	6	9
Tolerance ±	6	3	2	2	2	2	2	3

The average sound attenuation ΔL from duct to room including the orifice attenuation of the connecting duct in ceiling installation, is obtained in the table above.

## Dimensions and weights

### Nozzle diffuser DYFB

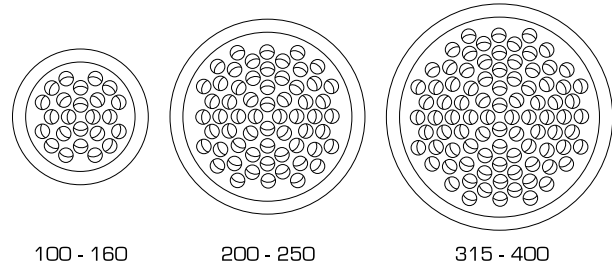


s = 0 or 12 mm

Size	ØD [mm]	ØD1 [mm]	Ød [mm]	B [mm]	E [mm]	H [mm]	Weight [kg]
100	450	363	99.3	30	50	240	4.0
125	450	363	124.3	30	50	265	4.3
160	450	363	159.3	30	50	300	4.6
200	650	563	199.3	30	50	340	8.6
250	650	563	249.3	30	50	390	9.2
315	750	663	314.3	30	50	455	12.2
400	750	663	399.3	15	50	515	18.8 *

\* weight of IRIS damper is included (6.4 kg)

## Nozzle pattern for each size



## Execution and function

DYFB is a nozzle air diffuser with an integrated plenum box for freely suspended installation in a ceiling. The diffuser has adjustable nozzles for setting of an optional diffusion pattern.

The slot height of the diffuser can be set at 0 or 12 mm. DYFB is manufactured in 7 connection sizes.

The plenum box has a combined measurement and adjustment damper with very low noise generation. The patented multipoint measurement of the measurement and adjustment damper enables balanced and accurate values. The regulating handle of the measurement and adjustment damper has a position indicator and a locking device. The measurement and adjustment damper can be easily removed for inspection and cleaning without changing the setting of the damper.

The measurement hoses from the adjustment damper are very easily accessible inside the diffuser. This facilitates measurement and balancing.

## General

### Material and surface finish

Diffuser is made from steel sheet.

The diffuser is powder-coated for a high surface finish.

The standard colour is RAL 9010. Other diffuser colours are available on special order.

The nozzles are made of white plastic and have antistatic treatment.

### Installation, adjustment and maintenance

The instructions for installation, adjustment and maintenance are available at [www.flaktgroup.com](http://www.flaktgroup.com). The k-factors for supply air are also provided on the plenum box.

### Technical data and design

For complete design details, please see the FläktGroup product selection program. The program can be found on the Internet at [www.flaktgroup.com](http://www.flaktgroup.com).

### Product description

Round nozzle air diffuser DYFB by FläktGroup with an integrated plenum box for freely suspended installation in a ceiling. The diffuser front plate can be set to provide an air slot of 0 or 12 mm. The supply air device includes a quiet, easily removable measurement and adjustment damper (ZAEF).

**Product code**

Nozzle air diffuser

Nozzle air diffuser, special colour

(with integrated plenum box)

DYFB-aaa

DYFB-aaa-E

Size (aaa)

100, 125, 160, 200, 250, 315, 400