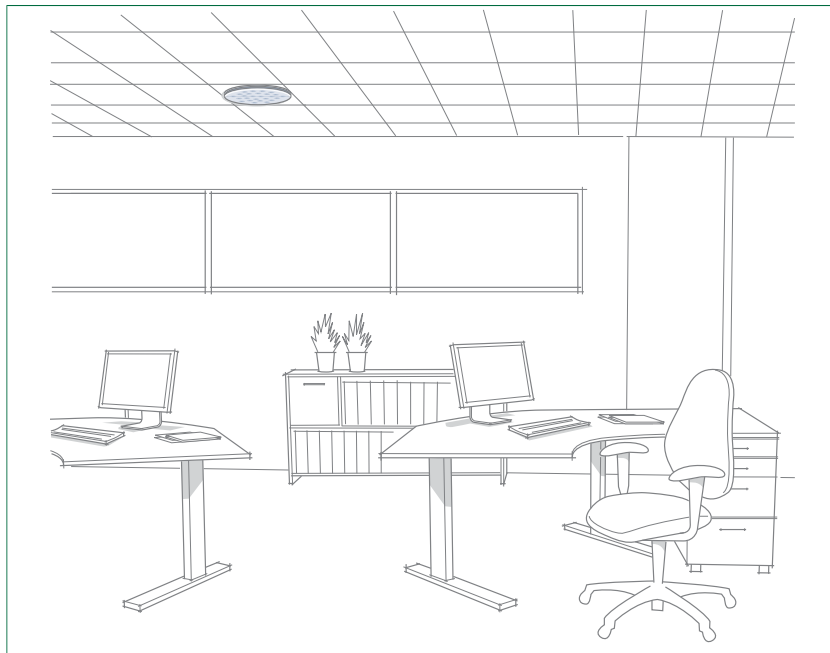


# Nozzle diffuser DYRH / Supply air unit DYRB (=DYRH+ATTD)



The DYRB is a quiet, ceiling-mounted supply air unit that consists of a nozzle diffuser, DYRH, and a plenum box, ATTD. The diffuser has adjustable nozzles for the setting of an optional diffusion pattern. The slot height of the diffuser can be set at 0 or 12 mm. Fixed to the diffuser body with magnets, the diffuser plate is easy to open. The DYRH nozzle diffuser is also available without the plenum box.

### Quick Selection

DYRB with 0 mm slot, 1:3 plenum box ATTD (50 Pa)

Supply air unit DYRB-	Diffuser DYRH-	Connection ATTD		Air flow l/s at sound level		
		inlet mm	outlet mm	25 dB(A)	30 dB(A)	35 dB(A)
100-3	160	100	160	28	42	-
125-3	200	125	200	30	52	-
160-3	250	160	250	53	92	-
200-3	315	200	315	78	113	138
250-3	400	250	400	100	125	150

DYRB with 0 mm slot, 1:2 plenum box ATTD (50 Pa)

Supply air unit DYRB-	Diffuser DYRH-	Connection ATTD		Air flow l/s at sound level		
		inlet mm	outlet mm	25 dB(A)	30 dB(A)	35 dB(A)
100-2	125	100	125	30	40	-
125-2	160	125	160	32	50	-
160-2	200	160	200	53	67	78
200-2	250	200	250	67	93	120
250-2	315	250	315	97	123	142
315-2	400	315	400	113	133	155

- = outside working area

### Specifications

- Easy to install and adjust
- Low sound level
- Adjustable air slot 0 or 12 mm
- Easily adjustable diffusion pattern
- 6 connection sizes and 2 diffuser sizes (Ø395 or Ø595)
- All connection sizes are suitable for suspended ceiling systems (595x595), false ceiling plate available for all sizes
- Available with CleanVent coating
- Silent plenum box ATTD with air flow control
- Also available with the extremely compact plenum box ATTS

### Product code example

**Bundle code:**

Supply air unit DYRB-200-3

**Ordering codes:**

Nozzle diffuser DYRH-315

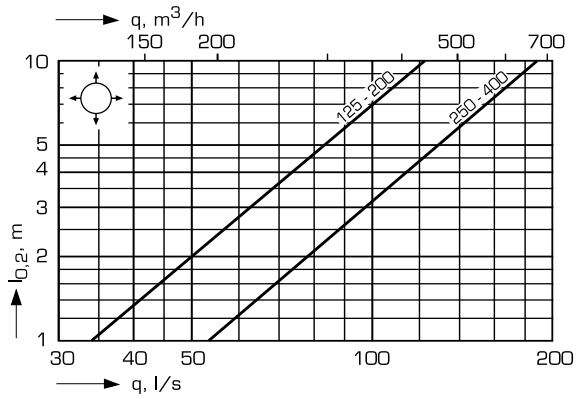
Plenum box ATTD-200-315-1

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

Supply air unit DYRB with 0 mm slot, 4-way diffusion

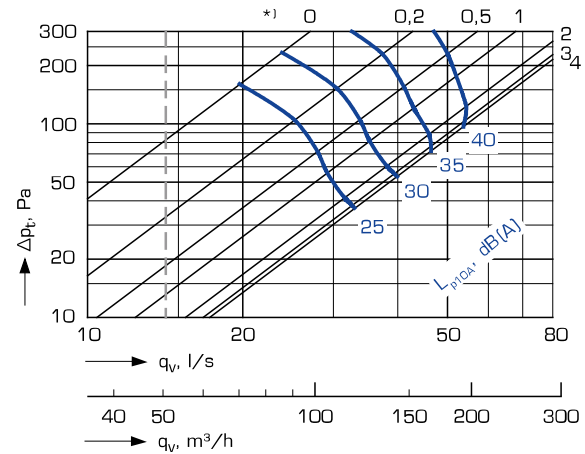
### Throw (isothermal)

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



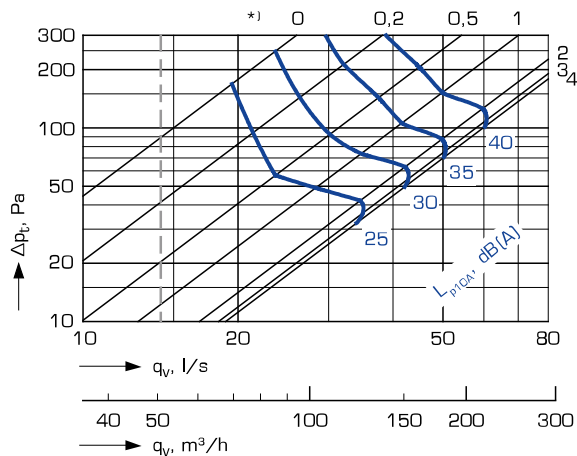
### DYRB-100-2 - with 0 mm slot

[DYRH-125 + ATTD-100-125-1]



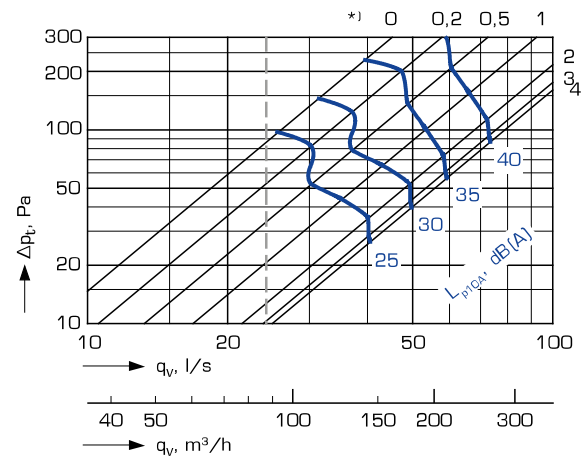
### DYRB-100-3 - with 0 mm slot

[DYRH-160 + ATTD-100-160-1]



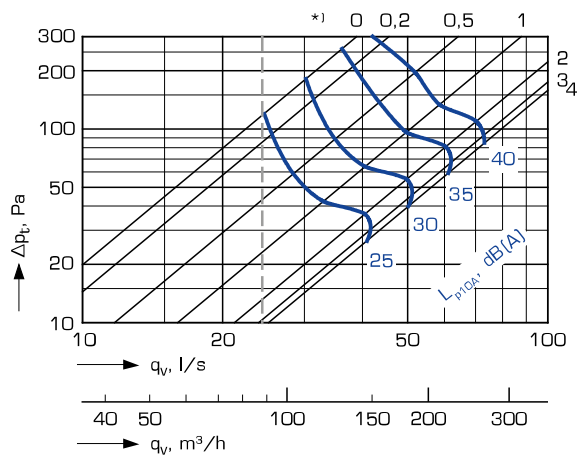
### DYRB-125-2 - with 0 mm slot

[DYRH-160 + ATTD-125-160-1]



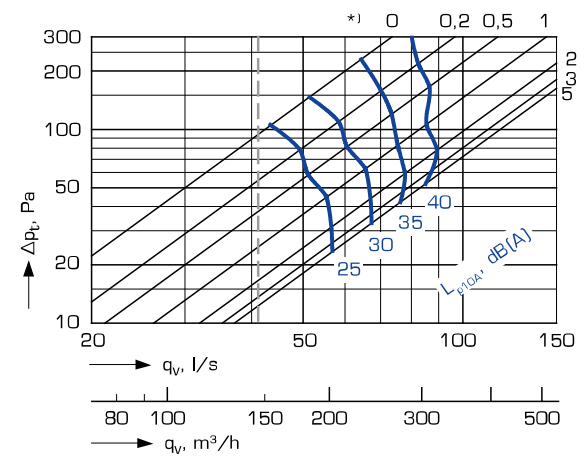
### DYRB-125-3 - with 0 mm slot

[DYRH-200 + ATTD-125-200-1]



### DYRB-160-2 - with 0 mm slot

[DYRH-200 + ATTD-160-200-1]



\*) adjustment position

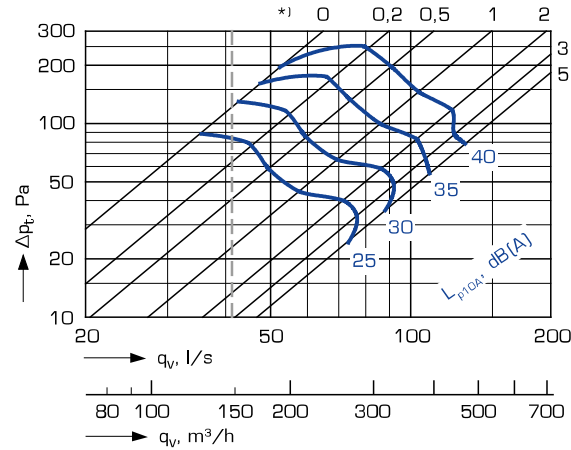
- - - Min. airflow required to obtain sufficient measuring pressure.

## Air flow, pressure drop, sound level

Supply air unit DYRB with 0 mm slot, 4-way diffusion

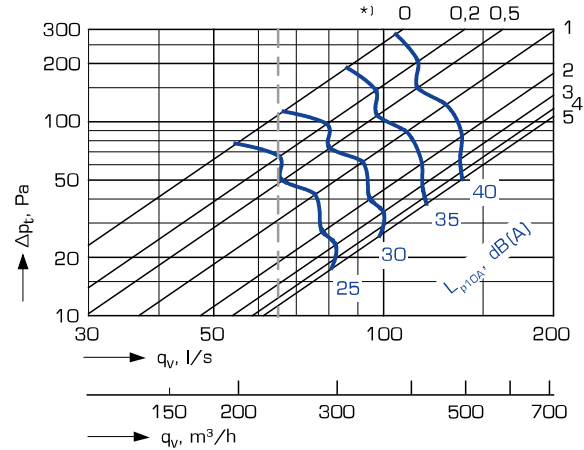
**DYRB-160-3 - with 0 mm slot**

[DYRH-250 + ATTD-160-250-1]



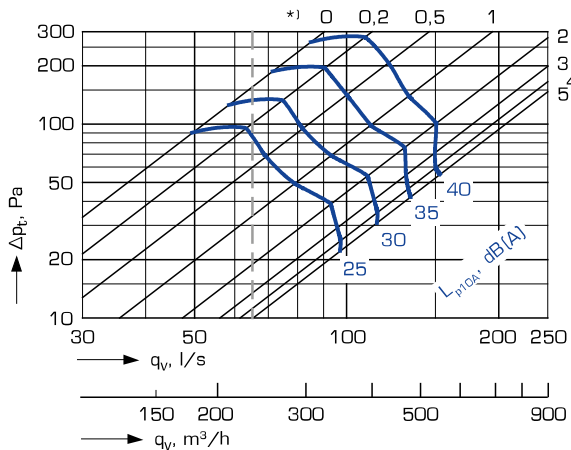
**DYRB-200-2 - with 0 mm slot**

[DYRH-250 + ATTD-200-250-1]



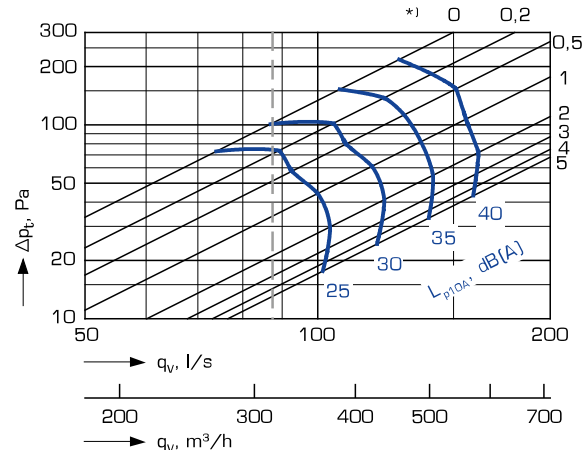
**DYRB-200-3 - with 0 mm slot**

[DYRH-315 + ATTD-200-315-1]



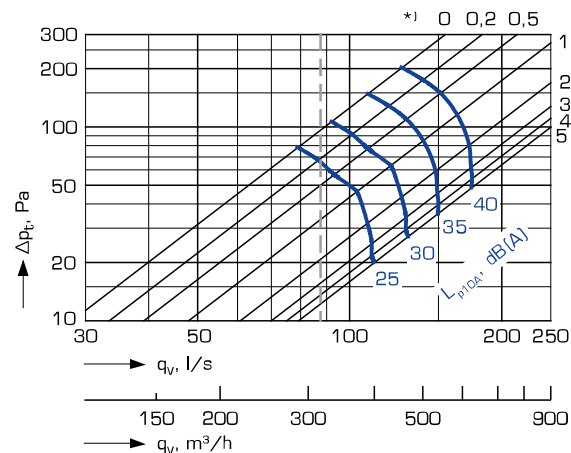
**DYRB-250-2 - with 0 mm slot**

[DYRH-315 + ATTD-250-315-1]



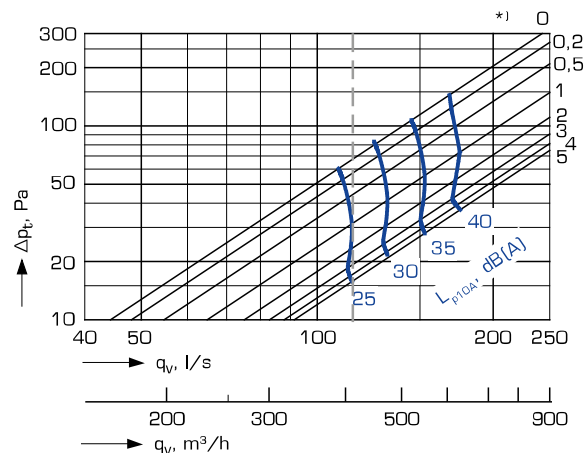
**DYRB-250-3 - with 0 mm slot**

[DYRH-400 + ATTD-250-400-1]



**DYRB-315-2 - with 0 mm slot**

[DYRH-400 + ATTD-315-400-1]



\*) adjustment position

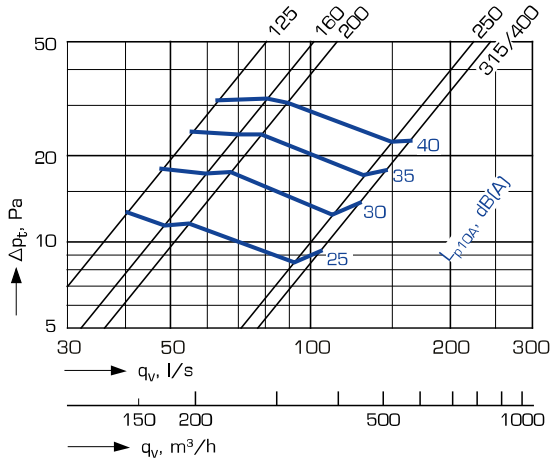
--- Min. airflow required to obtain sufficient measuring pressure.

### Air flow, pressure drop, sound level

Nozzle diffuser DYRH with 0 mm slot, 4-way diffusion

Nozzle diffuser DYRH with 0 mm slot

4-way diffusion



Effect of the plenum box's lower profile on sound level (ATTD-aaa-bbb-3)

Size (duct connection)	Sound pressure level $L_{p10A}$
100-315	+5 dB(A)

### Sound power level $L_w$

Supply air unit DYRB with 0 mm slot, 1:3 plenum box

DYRB-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100-3	11	9	7	1	-4	-8	-11	-7
125-3	14	9	8	-3	-4	-10	-11	-7
160-3	14	11	5	-1	-5	-8	-10	-8
200-3	3	8	5	-1	-3	-8	-10	-7
250-3	6	9	5	0	-2	-8	-11	-7
Tolerance ±	6	3	2	2	2	2	2	3

Supply air unit DYRB with 0 mm slot, 1:2 plenum box

DYRB-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	14	9	5	1	-3	-8	-10	-7
125-2	14	9	6	0	-3	-9	-12	-7
160-2	11	10	4	-1	-1	-6	-11	-7
200-2	14	10	4	0	-2	-9	-11	-8
250-2	5	9	2	1	-1	-8	-12	-8
315-2	8	9	3	2	-1	-11	-13	-8
Tolerance ±	6	3	2	2	2	2	2	3

Nozzle diffuser DYRH with 0 mm slot

DYRH-	Correction of sound level K (dB)							
	63	125	250	500	1000	2000	4000	8000
125	13	-1	0	2	0	-7	-13	-8
160	8	1	2	1	0	-7	-13	-8
200	12	3	3	2	-1	-7	-13	-8
250	12	4	3	2	0	-10	-14	-8
315	15	5	3	2	0	-9	-14	-8
400	9	2	5	2	-2	-12	-14	-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 $\Delta L$

Supply air unit DYRB with 0 mm slot, 1:3 plenum box

DYRB-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100-3	21	15	10	14	20	14	12	15
125-3	19	9	6	16	9	13	13	13
160-3	17	9	7	14	13	11	11	10
200-3	12	6	6	11	12	11	11	13
250-3	11	4	5	10	10	9	10	10
Tolerance ±	6	3	2	2	2	2	2	3

Supply air unit DYRB with 0 mm slot, 1:2 plenum box

DYRB-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
100-2	22	16	12	18	20	17	15	18
125-2	20	10	8	17	13	15	14	15
160-2	16	11	10	17	13	13	14	15
200-2	13	7	8	13	13	12	11	14
250-2	11	6	7	11	12	10	10	12
315-2	8	4	6	7	9	9	10	11
Tolerance ±	6	3	2	2	2	2	2	3

Nozzle diffuser DYRH with 0 mm slot

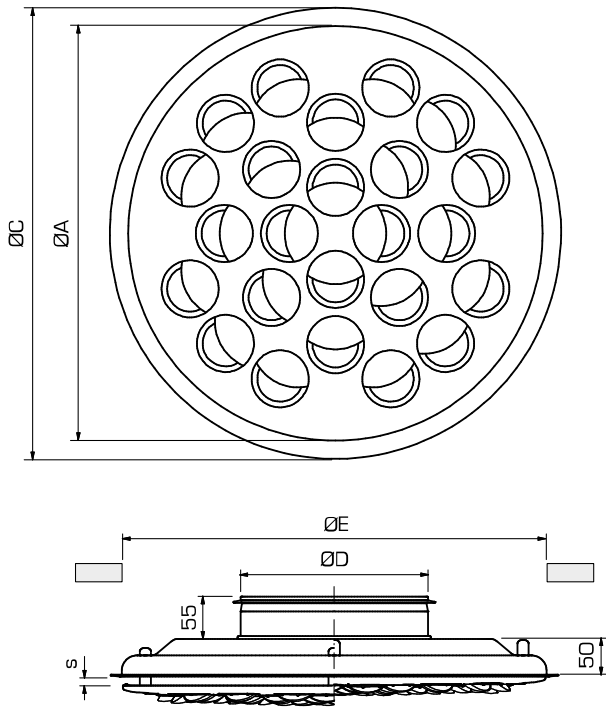
DYRH-	Sound attenuation (dB)							
	63	125	250	500	1000	2000	4000	8000
125	21	16	9	1	3	8	10	16
160	19	12	7	1	1	2	2	3
200	15	11	5	1	1	2	3	4
250	13	8	3	1	2	2	2	3
315	8	7	0	-2	-4	0	1	1
400	10	6	2	-1	1	3	3	5
Tolerance ±	6	3	2	2	2	2	2	3

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

More technical data can be found in our selection tool. Contact our nearest sales office for further information.

## Dimensions and weights

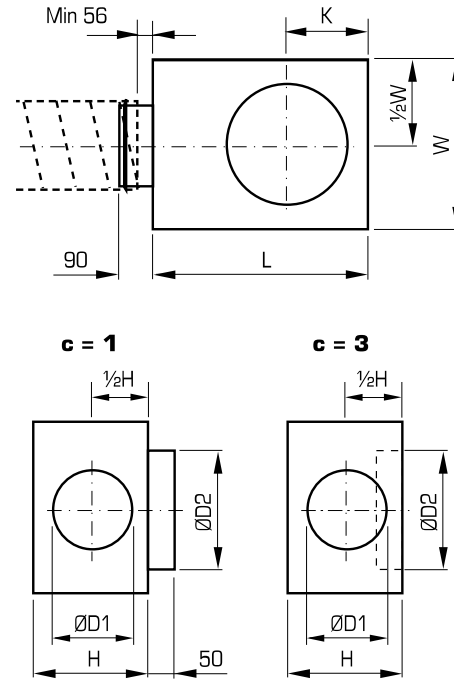
### Nozzle diffuser DYRH



s = 0 or 12 mm

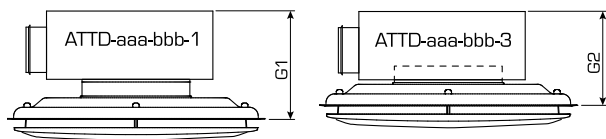
Size	ØA [mm]	ØC [mm]	ØD [mm]	ØE [mm]	Weight [kg]
125	363	395	124.3	370	1.4
160	363	395	159.3	370	1.4
200	363	395	199.3	370	1.4
250	563	595	249.3	570	3.0
315	563	595	314.3	570	2.9
400	563	595	393.3	570	3.0

### Plenum box ATTD



Size	ØD1 [mm]	ØD2 [mm]	H [mm]	L [mm]	W [mm]	K [mm]	Weight [kg]
100-125	99.3	125	170	350	320	132	2.5
100-160	99.3	160	170	350	320	132	2.3
125-160	124.3	160	170	450	320	152	3.0
125-200	124.3	200	170	450	320	152	2.9
160-200	159.3	200	205	480	440	177	4.0
160-250	159.3	250	205	480	440	177	4.0
200-250	199.3	250	245	630	480	210	5.5
200-315	199.3	315	245	630	480	210	5.4
250-315	249.3	315	295	680	570	252	6.9
250-400	249.3	400	295	680	570	252	6.9
315-400	314.3	400	360	680	570	252	8.0

### Supply air unit DYRB



DYRB	G1min [mm]	G1max [mm]	G2min [mm]	G2max [mm]	
100-2	100-3	270	300	220	250
125-2	125-3	270	300	220	250
160-2	160-3	305	335	255	285
200-2	200-3	345	375	295	325
250-2	250-3	395	425	345	375
315-2	-	460	490	410	440

## Execution and function

The DYRB is a ceiling-mounted supply air unit that consists of a nozzle diffuser, DYRH, and a plenum box, ATTD. The design of the nozzles provides a highly effective mixing of the supply air with the air in the premises (high induction rate). The nozzles are rotatable and offer the possibility of changing the diffusion pattern and the diffusion direction for adaptation to the actual needs. Optimal air distribution is assured in this way, even in the case of cooling. The slot height of the diffuser can be set at 0 or 12 mm. Fixed to the diffuser body with magnets, the diffuser plate is easy to open. This supply air unit is suitable for both suspended ceiling systems and false ceilings built on site.

The ATTD plenum box features an extremely quiet patented measurement and adjustment damper for multipoint measuring with balanced and accurate values. The adjustment 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 or removing the sound attenuation elements. The sound attenuation elements (made of polyester fibre) are designed to direct the air flow in order to provide an air distribution that is as uniform as possible. The diffuser connection collar is either outwards or inwards in the plenum box – in the latter case, the plenum box needs less space. The ATTD plenum box is applicable for supply and exhaust air alike. In exhaust air use, the position of the measuring hose is changed to the measuring connector inside the box. The unit is also available with the extremely compact plenum box ATTS – please see the plenum box technical catalogues for more details.

## General

### Material and surface finish

Both the diffuser and the plenum box are made from steel sheet.

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

The standard colour is RAL 9010. Other diffuser colours and CleanVent coating (for metal parts only) 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

The DYRB supply air unit by Fläkt Group consists of a round nozzle diffuser, DYRH, and a plenum box, ATTD. The DYRH diffuser has adjustable nozzles and can be set to provide an air slot of 0 or 12 mm. The diffuser plate, fixed to the diffuser body with magnets, is easy to open. The ATTD plenum box includes a quiet, easily removable measurement and adjustment damper (ZAEF). The effective sound attenuation elements of the ATTD box direct the air flow in order to provide an air distribution that is as uniform as possible.

## Product code and accessories

### Product code

Nozzle diffuser	DYRH-aaa
Nozzle diffuser, CleanVent	DYRH-aaa-C
Nozzle diffuser, special colour	DYRH-aaa-E

### Size (aaa)

125, 160, 200, 250, 315, 400 (diffuser connection)

### CleanVent coated (C)

### Special colour (E)

Plenum box	ATTD-aaa-bbb-c
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### Duct connection in mm (aaa)

### Diffuser connection in mm (bbb)

### Type (c)

1 = collar outwards

3 = low, collar inwards (only 1:2 model)

### Bundle codes for example for design:

Supply air unit	DYRB-aaa-b
Supply air unit, CleanVent	DYRB-aaa-b-C

(includes diffuser and plenum box)

### Size (aaa)

100, 125, 160, 200, 250, 315 (duct connection)

### Plenum box model (b)

2 = 1:2 collar outwards

3 = 1:3 collar outwards

4 = 1:2 low, collar inwards

### CleanVent coated diffuser (C)

## Accessories

False ceiling plate	UTRZ-3
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for sizes 125, 160 and 200  
(body size of diffuser Ø395)

False ceiling plate	UTRZ-5
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for sizes 250, 315 and 400  
(body size of diffuser Ø595)

## Order example

Bundle code is **DYRB-200-3**.

Size indication in the code refers to the size of the supply air duct.

Diffuser and plenum box are ordered separately:

Nozzle diffuser	DYRH-315
Plenum box	ATTD-200-315-1

duct connection (200)

diffuser connection (315)

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