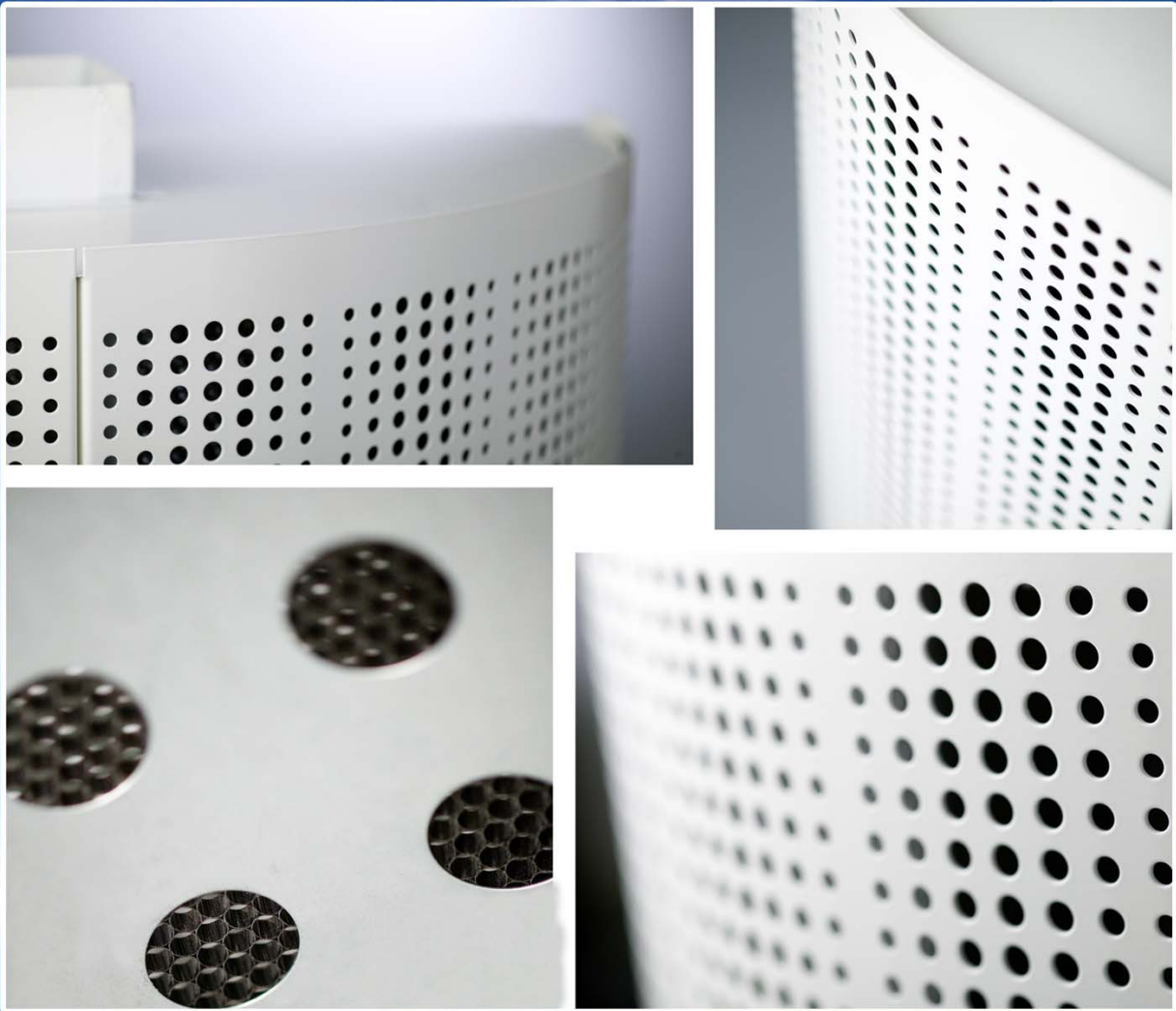


# *Displacement Terminals*



# Floormaster® DVHA, semi-cylindrical terminals



Floormaster® DVHA are semi-cylindrical supply air terminals for positioning on the floor against a wall. The terminals are designed for displacement air handling in accordance with the Floormaster system for good air comfort and high ventilation efficiency.

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air distribution through the front panel with a short near zone and a very low noise level.

## Quick Selection

Floormaster® DVHA, semi-cylindrical terminal with duct connection which provides space for a sound attenuator inside the enclosure.

Size	Height	Connection	Air flow range l/sm <sup>2</sup> /h at sound level		
			25 dB(A)	30 dB(A)	35 dB(A)
100	400	100	33	40	46
125	600	125	58	74	88
160	600	160	85	100	120
200	1000	200	132	189	223
250	1000	250	210	240	280
315	1500	315	277	471	541
400	1500	400	500	590	730
500	2000	500	780	905	1025

Can be placed behind the duct enclosure

DVHA	Sound attenuator		Damper		
	BDER-30	BDER-34	BDEP	IRIS	
100	No	No	No	Yes	
125	Yes	No	Yes	Yes	
160	Yes	No	Yes	Yes	
200	Yes	No	Yes	Yes	
250	No	No	Yes	Yes	
315	Yes	Yes	Yes	Yes	
400	Yes	No	Yes	Yes	
500	Yes	Yes	Yes	Yes	

## Product Facts

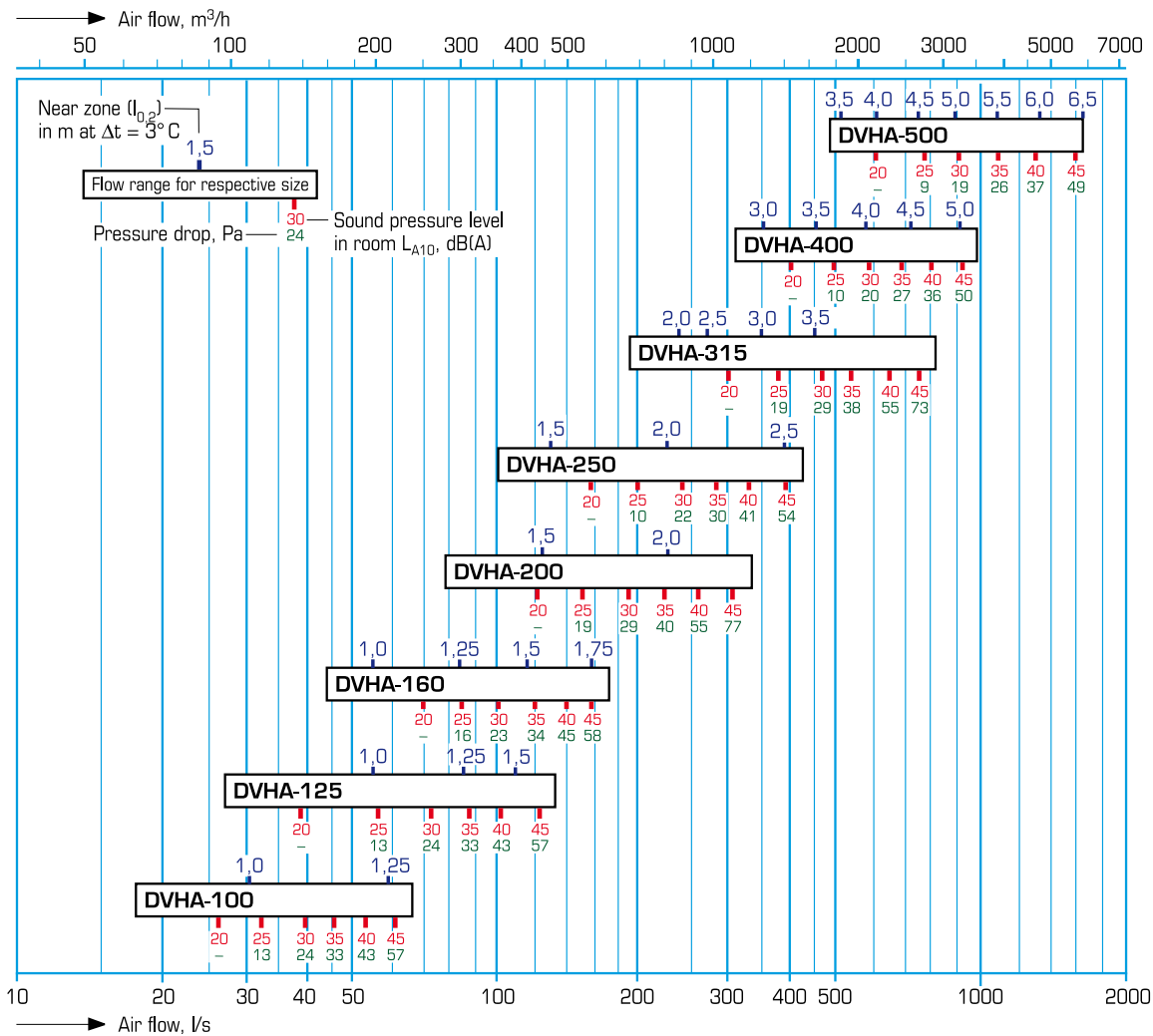
- 8 sizes
- Very low sound level
- Uniformly circular diffusion pattern
- Short comfort boundaries
- Internal duct connection (female)
- Outlet for flow measurement
- Terminal base as accessory
- Easy maintenance - no spare parts
- Dismountable front plate
- No visual screws

## Product code example

Floormaster DVHA-250-0-0-1-0  
(Size 250, height 1000 mm ,  
internal connection 250 mm , top  
connection, without induction,  
with mounted terminal base and  
standard white colour)

# Capacity and Sound data

Capacity data - Airflow pressure drop, comfort boundaries, sound level



## Sound power level in Octave bands

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the acoustic value in the graphs. The indicated sound levels are applicable for 4 dB room attenuation (10 m<sup>2</sup> room absorption area).

	Octave bands, centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DVHA	-2	5	6	2	-2	-9	-12	-6
Tolerance	+/- 1	2	1	0	1	2	3	5

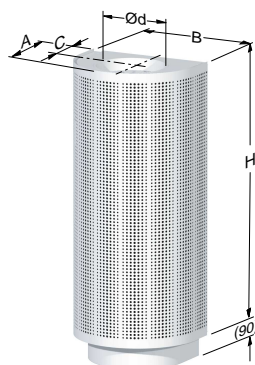
## Sound attenuation

The table shows the difference between the sound power level in the duct and the sound power level in the room, in dB. Orifice attenuation is included in the calculation. Sound levels in the capacity graphs apply for an unchanged connection diameter.

DVHA size	Octave bands, center frequency Hz							
	63	125	250	500	1000	2000	4000	8000
100	21	14	9	4	2	2	3	4
125	20	13	8	3	2	2	3	4
160	18	12	6	2	2	2	3	4
200	17	11	4	2	1	1	3	4
250	15	9	3	2	1	1	3	4
315	14	8	3	2	1	1	3	4
400	12	6	2	2	1	1	3	4
500	11	4	2	2	1	1	2	3

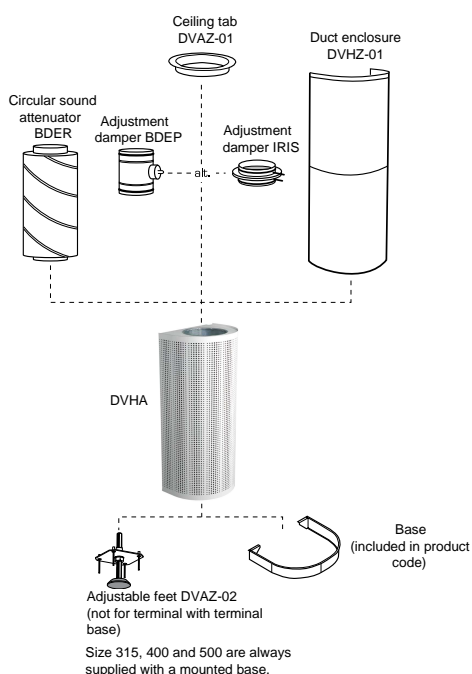
# Dimensions and weights, product summary and description

## Dimensions and weights



Size	Ød [mm]	H [mm]	A [mm]	B [mm]	C [mm]	Weight [kg]
100	100	400	175	182	81	2.8
125	125	600	279	355	141	6.4
160	160	600	279	355	141	6.4
200	200	1000	356	457	176	15.3
250	250	1000	356	457	176	15.3
315	315	1500	595	787	308	40.2
400	400	1500	595	787	308	40.2
500	500	2000	761	917	374	63.8

## Product summary



## Material and surface finish

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air diffusion through the front panel with a short throw and a very low noise level.

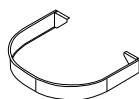
The air distribution system is surrounded by a casing and is accessible by removing the front panel of the device.

The Floormaster terminals are made from hot-dip galvanized steel sheet, SS1151.

The Floormaster terminals are easy to maintain and no replacement parts are necessary.

The terminals are powder-coated for a high surface finish and good impact and scratch resistance. Standard colour White RAL-9010, gloss 30, equivalent to NCS S 0502Y. Other colours on request.

## Terminal base



Semi-cylindrical Floormaster terminals of size 100, 125, 160, 200 and 250 are supplied with small plastic feet. The terminal base is available as a choice in the main product code for these sizes.

Semi-cylindrical Floormaster terminals of size 315, 400 and 500 are always supplied with a mounted base. The base is adapted to the shape of the terminal and has a height of 90 mm. It is made from hot-dip galvanized steel sheet SS 1151 and powder-coated in the same colour as the terminal. Note: Terminals who has been ordered and delivered with a terminal base can't be equipped with adjustable feet.

## Duct enclosure DVHZ-01



Terminal-shaped duct enclosure with telescopic function with three lengths: 1 = 900 - 1300 mm, 2 = 1300 - 1800 mm and 3 = 1800 - 2400 mm. Powder-coated in the same colour as the terminal. Note! When combining duct enclosure with sound attenuator see remarks below each product code.

## Technical data and dimensioning

For complete dimensioning details, please see Fläkt Woods product selection program. Contact our nearest sales office for further information.

## Descriptive text, product code

### Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

### Descriptive text

Floormaster terminal manufactured by Fläkt Woods. DVHA size 250 height 1000 mm, internal connection with terminal base, sound attenuator and duct enclosure. Standard colour.

### Product code

#### **Floormaster terminal DVHA-aaa-b-c-d-e**

##### Size (aaa)

100, 125, 160, 200, 250, 315, 400, 500

##### Connection alternatives (b)

0 = Top connection

1 = Bottom connection

##### Function (c)

0 = without induction

##### Terminal base (d)

0 = without

1 = with (mounted) (Size 315, 400 and 500 are always supplied with a mounted base)

##### Colour (e)

0 = standard colour

1 = special colour (stated in clear text)

### Accessories

#### Duct enclosure DVHZ-O1

##### **Duct enclosure (with telescopic function) DVHZ-01-bbb-c-d**

##### Size (bbb)

100<sup>1)</sup>, 125, 160, 200, 250, 315, 400, 500

##### Length (c)

1 = 900 - 1300 mm (not size 100, 125 and 160)

2 = 1300 - 1800 mm (not size 100, 125 and 160)

3 = 1800 - 2400 mm

##### Colour (d)

0 = Standard colour

1 = Special colour (stated in clear text)

<sup>1)</sup> Duct enclosure size 100 can not be combined with a sound attenuator.

#### Reducer BDED

Use Fläkt Woods – Veloduct BDED for duct reduction.

#### Ceiling tab DVAZ-O1

##### **Ceiling tab DVAZ-01-bbb**

##### Connection diameter, mm (bbb)

100, 125, 160, 200, 250, 315, 400, 500

#### Adjustable feet DVAZ-O2

##### **Adjustable feet (set with 3 spcs.) DVAZ-02**

#### Adjustment damper BDEP

##### **Circular adjusting damper BDEP-1-bbb**

##### Connection diameter, cm (bbb)

010, 012, 016, 020, 025, 031, 040, 050

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDEP-1, see catalogue part 3.

#### IRIS damper

##### **Regulation and measuring devices IRIS-aaa**

##### Connection diameter, mm (aaa)

100, 125, 160, 200, 250, 315, 400, 500

Technical data, connection dimensions, including dimensions, are given in separate product documentation for IRIS, see catalogue part 3.

#### Circular sound attenuator BDER

##### **Circular sound attenuator BDER-aa-bbb-ccc**

##### Type (aa)

30, 32, 34 (max 100mm thick filling)

##### Size, connection in cm (bbb)

012, 016, 020, 025, 031, 040, 050 (max 100mm thick filling)

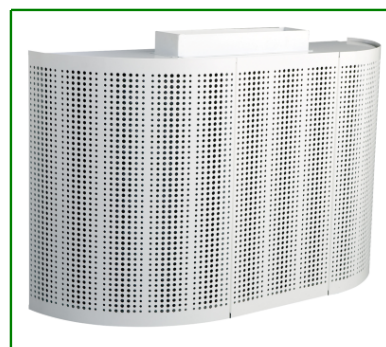
##### Length, cm (ccc)

030, 050, 060, 090, 100, 120

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDER, see catalogue part 3.

Note! Prior to ordering, make sure that the sound attenuator can be fitted behind the duct enclosure (if ordered). See dimensions for the terminal and outer dimensions for the sound attenuator.

# Floormaster® DVPA, flat terminals



Floormaster® DVPA is flat supply air terminals designed for positioning on the floor against a wall with a diffusion pattern of 180 degrees. The terminals are designed for displacement air handling in accordance with the Floormaster system for good air comfort and high ventilation efficiency. Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air distribution through the front panel with a short near zone and a very low noise level.

## Quick Selection

Floormaster® DVPA, flat surface-mounted terminal

Size	Height	Connection	Air flow range l/s at sound level		
			25 dB(A)	30 dB(A)	35 dB(A)
0300-060	400	300 x 60	68	78	92
0400-100	600	400 x 100	160	200	240
0700-150	1000	700 x 150	420	510	620
1200-200	1500	1200 x 200	980	1190	1400
1300-300	2000	1300 x 300	1600	1840	2300

## Product Facts

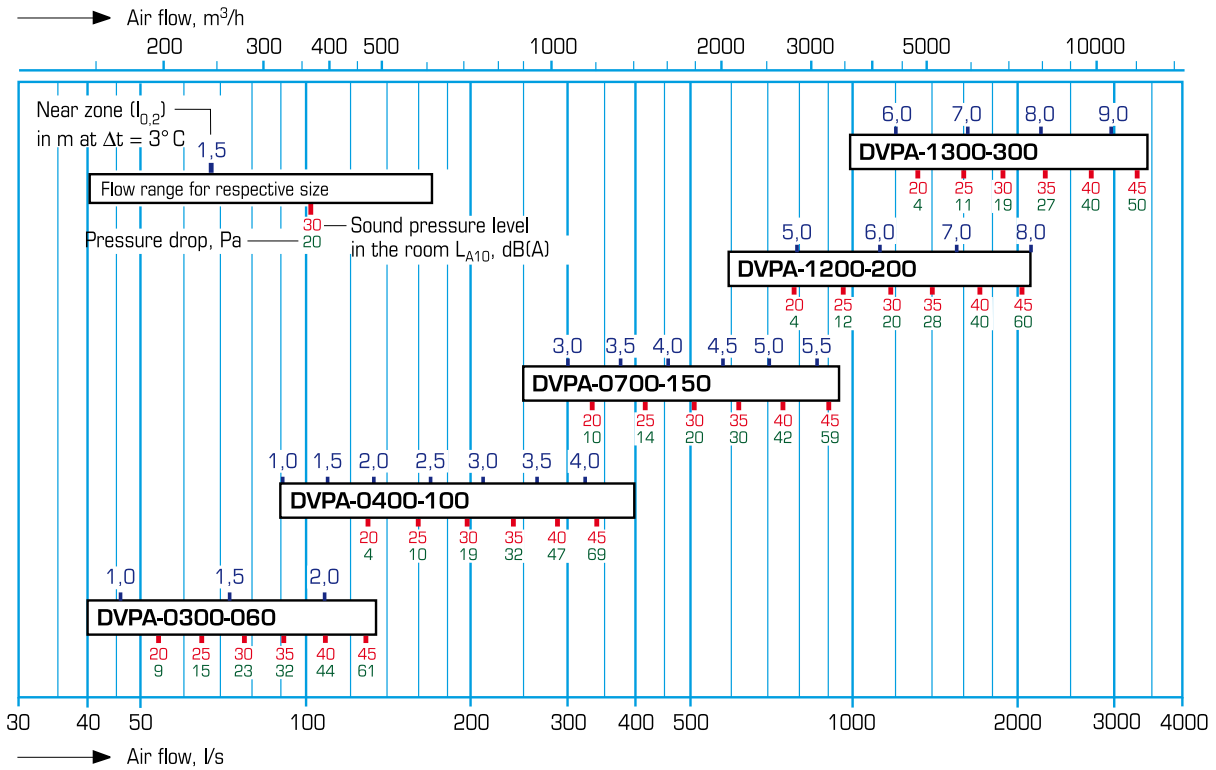
- 5 sizes
- Very low sound level
- Uniformly diffusion pattern (180°)
- Short comfort boundaries
- External duct connection (male)
- Outlet for flow measurement
- Terminal base as accessory
- Easy maintenance - no spare parts
- Dismountable front plate
- No visual screws

## Product code example

Floormaster DVPA-0700-150-0-0-1-0  
(Size 0700-150, height 1000 mm, external connection, top connection, without mounted terminal base and standard white colour).

# Capacity, Sound data

## Capacity data - Airflow, comfort boundaries, sound level



## Sound power level in Octave bands

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the acoustic value in the graphs. The indicated sound levels are applicable for 4 dB room attenuation (10 m<sup>2</sup> room absorption area).

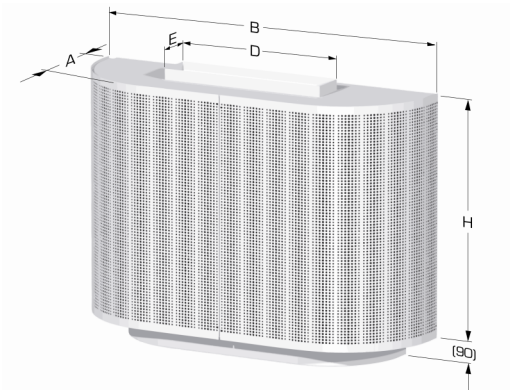
	Octave bands, centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DVPA	-9	2	6	4	-1	-9	-15	-11
Tolerance	+/- 4	2	1	0	1	3	1	4

## Sound attenuation

The table shows the difference between the sound power level in the duct and the sound power level in the room, in dB. Orifice attenuation is included in the calculation. Sound levels in the capacity graphs apply for an unchanged connection diameter.

DVPA size	Octave bands, center frequency Hz							
	63	125	250	500	1000	2000	4000	8000
0300-060	17	10	6	3	2	2	3	5
0400-100	15	8	2	3	2	2	3	5
0700-150	12	5	2	3	2	2	3	5
1200-200	9	2	2	3	2	2	3	5
1300-300	8	2	2	3	2	2	2	4

# Dimensions and weights

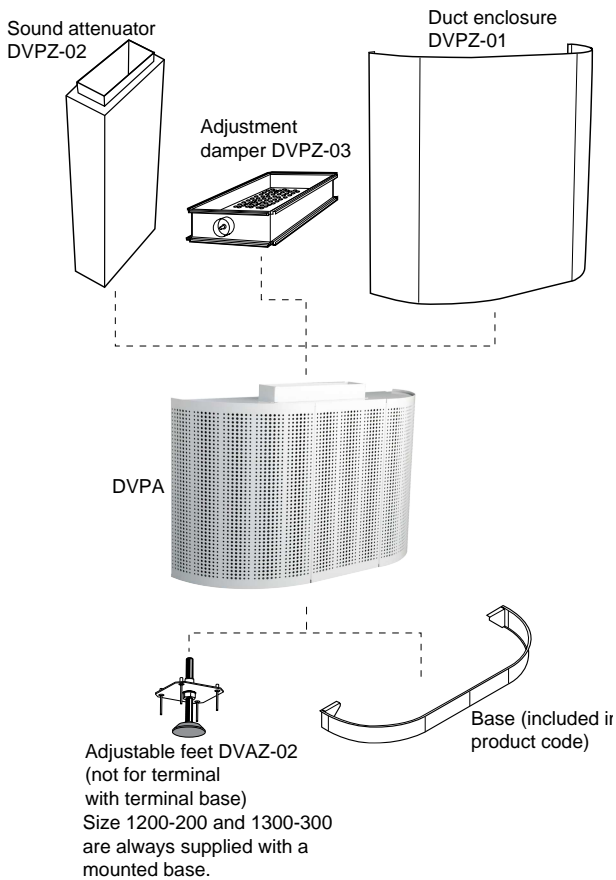


Size	D [mm]	E [mm]	H [mm]	A [mm]	B [mm]	F [mm]	Weight [kg]
0300 - 060	300	60	400	210	567	70	6.2
0400 - 100	400	100	600	340	929	97	14.8
0700 - 150	700	150	1000	390	1494	100	38.3
1200 - 200	1200	200	1500	440	2236	105	80.1
1200 - 300	1300	300	2000	535	2699	105	125.2



# Product summary and description

## Product summary



## Material and surface finish

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air diffusion through the front panel with a short throw and a very low noise level.

The air distribution system is surrounded by a casing and is accessible by removing the front panel of the device.

The Floormaster terminals are made from hot-dip galvanized steel sheet, SS1151.

The Floormaster terminals are easy to maintain and no replacement parts are necessary.

The terminals are powder-coated for a high surface finish and good impact and scratch resistance. Standard colour White RAL-9010, gloss 30, equivalent to NCS S 0502Y. Other colours on request.

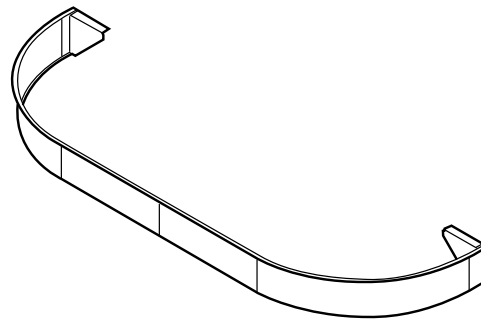
## Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

## Technical data and dimensioning

For complete dimensioning details, please see Fläkt Woods product selection program. Contact our nearest sales office for further information.

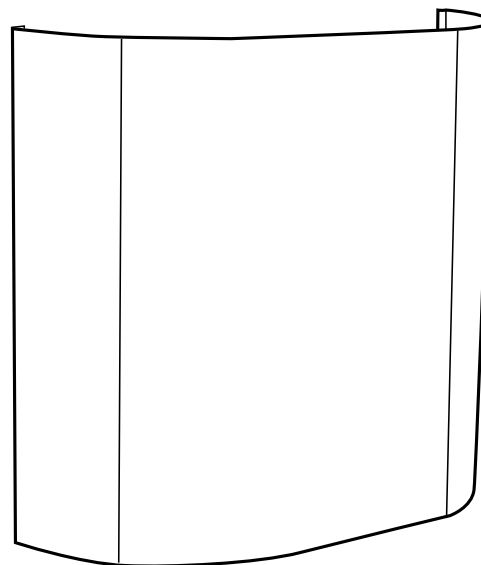
## Terminal base



Flat surface-mounted Floormaster terminals of size 0300-060, 0400-100 and 0700-150 are supplied with small plastic feet. Terminal base is available as a choice in the main product code for these sizes.

Flat surface-mounted Floormaster terminals of size 1200-200 and 1300-300 are always supplied with a mounted base. The base is adapted to the shape of the terminal and has a height of 90 mm. It is made from hot-dip galvanized steel sheet SS 1151 and powder-coated in the same colour as the terminal. Note: Terminals who has been ordered and delivered with a terminal base can't be equipped with adjustable feets.

## Duct enclosure DVPZ-01



Terminal-shaped duct enclosure with telescopic function (length 1800-2400 mm) is available as accessories for the DVPA size 0300-60, 0400-100 and 0700-150. Powder-coated in the same colour as the terminal.

# Descriptive text

## Descriptive text

Floormaster terminal manufactured by Fläkt Woods.  
DVPA size 0700-150 height 1000 mm, external connection,  
with terminal base, sound attenuator and duct enclosure.  
Standard colour.

## Product code

**Floormaster terminal**  
**DVPA-aaaa-bbb-c-d-e-f**

Size (aaaa-bbb)  
0300-060, 0400-100, 0700-150, 1200-200, 1300-300

### Connection alternatives (c)

0 = Top connection  
1 = Bottom connection

### Function (d)

0 = Without induction

### Terminal base (e)

0 = Without  
1 = With (mounted)  
(Size 1200-200 and 1300-300 are always supplied with a  
mounted base)

### Colour (f)

0 = Standard colour  
1 = Special colour (stated in clear text)

## Accessories

### Duct enclosure

**DVPZ-01-bbbb-ccc-d-e (with telescopic function)**

Size (bbbb-ccc)  
0300-060, 0400-100, 0700-150

### Length (d)

1 = 900 - 1300 mm  
2 = 1300 - 1800 mm  
3 = 1800 - 2400 mm

### Colour (e)

0 = Standard colour  
1 = Special colour (stated in clear text)

### Adjustment damper

**DVPZ-03-bbbb-ccc**

Size (connection dimensions) (bbbb-ccc)  
0300-060, 0400-100, 0700-150, 1200-200, 1300-300

### Rectangular sound attenuator

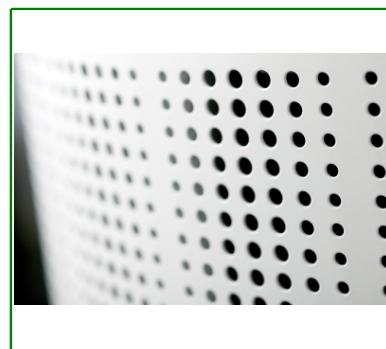
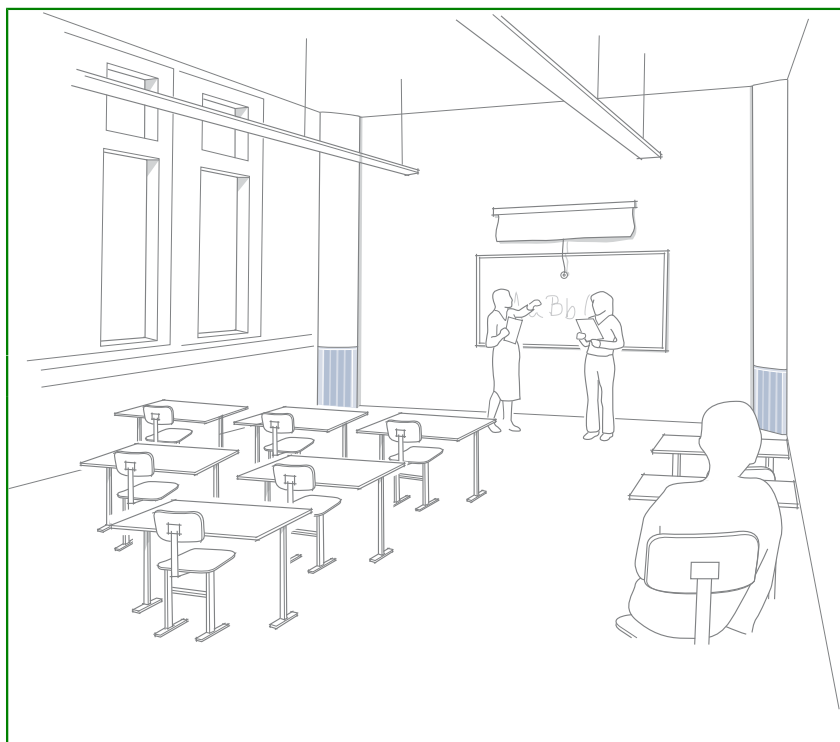
**DVPZ-02-bbbb-ccc**

Size (connection dimensions) (bbbb-ccc)  
0300-060, 0400-100, 0700-150, 1200-200, 1300-300

### Adjustable feet

**DVAZ-02 (Set with 3 pcs.)**

# Floormaster® DVQA, quarter-cylindrical terminals



Floormaster® DVQA are quarter-cylindrical supply air terminals for positioning on the floor in a corner. The terminals are designed for displacement air handling in accordance with the Floormaster system for good air comfort and high ventilation efficiency.

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air distribution through the front panel with a short near zone and a very low noise level.

## Quick Selection

Floormaster® DVQA, quarter-cylindrical terminal with duct connection which provides space for a sound attenuator inside the enclosure.

Size	Height	Connection	Air flow range l/s at sound level		
			25 dB(A)	30 dB(A)	35 dB(A)
100	400	100	33	40	48
125	600	125	58	75	90
160	600	160	85	100	120
200	1000	200	111	153	224
250	1000	250	210	250	305
315	1500	315	330	400	490
400	2000	400	530	640	780

Can be placed behind the duct enclosure

DVQA	Sound attenuator			Damper	
	BDER-30	BDER-34	BDEP	IRIS	
100	No	No	No	Yes	
125	Yes	No	No	Yes	
160	Yes	No	No	Yes	
200	Yes	Yes	No	Yes	
250	Yes	No	No	Yes	
315	Yes	No	No	Yes	
400	Yes	No	No	Yes	

## Product Facts

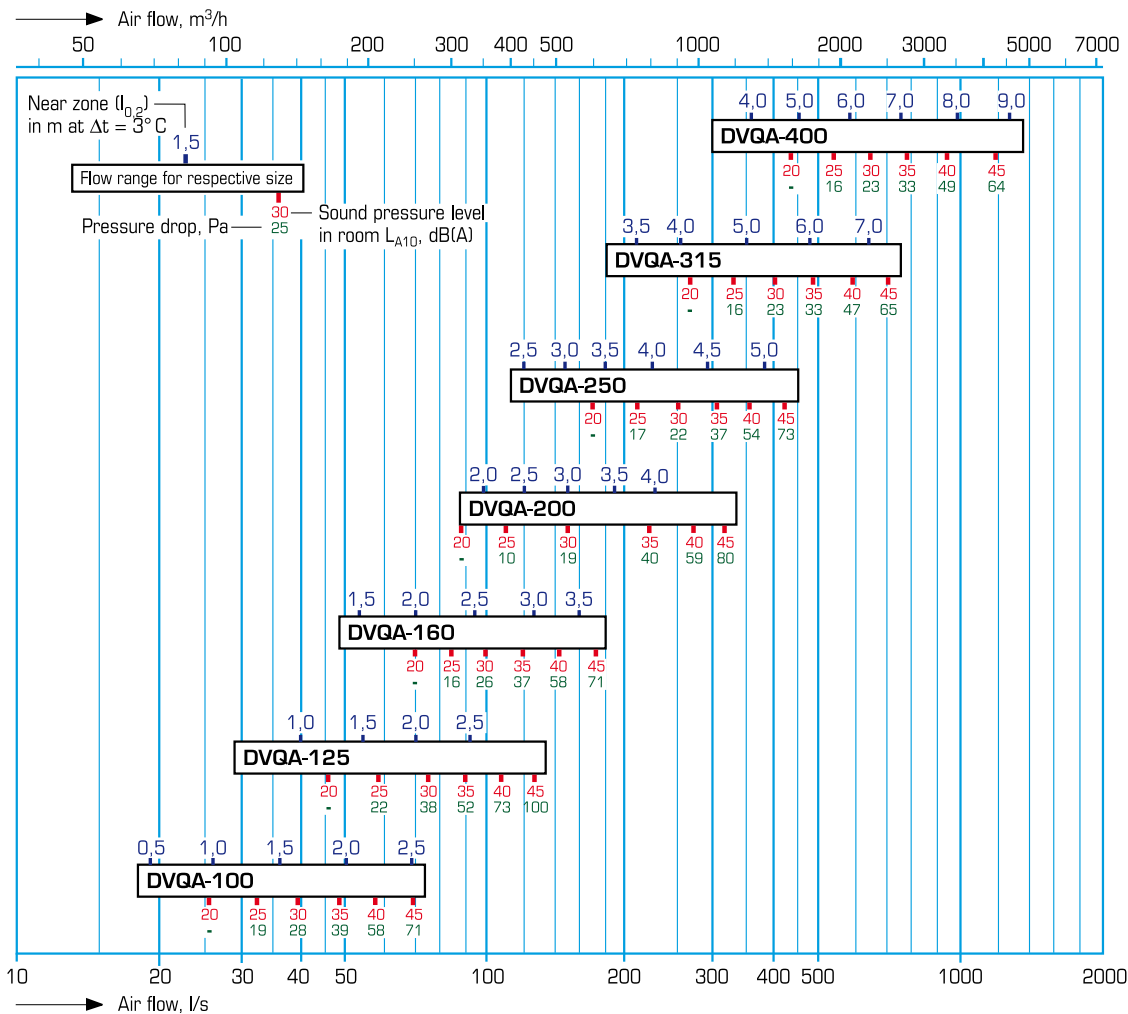
- 7 sizes
- Very low sound level
- Uniformly circular diffusion pattern
- Short comfort boundaries
- Internal duct connection (female)
- Outlet for flow measurement
- Terminal base as accessory
- Easy maintenance - no spare parts
- Dismountable front plate
- No visual screws

## Product code example

Floormaster DVQA-160-0-0-0-0  
 (Size 160, height 600 mm ,  
 internal connection 160 mm , top  
 connection, without mounted  
 terminal base and standard white  
 colour)

# Capacity, Sound data

## Capacity data - Airflow, comfort boundaries, sound level



## Sound power level in Octave bands

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the acoustic value in the graphs. The indicated sound levels are applicable for 4 dB room attenuation (10 m<sup>2</sup> room absorption area).

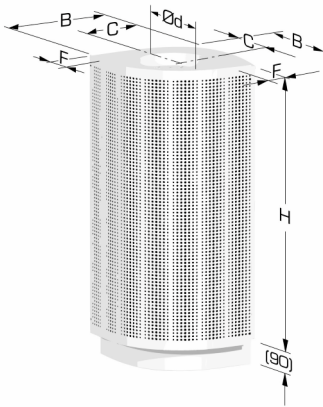
DVQA	Octave bands, centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
Tolerance	+/- 2	+/- 2	+/- 1	0	+/- 1	+/- 1	+/- 2	+/- 4

## Sound attenuation

The table shows the difference between the sound power level in the duct and the sound power level in the room, in dB. Orifice attenuation is included in the calculation. Sound levels in the capacity graphs apply for an unchanged connection diameter.

DVQA size	Octave bands, center frequency Hz							
	63	125	250	500	1000	2000	4000	8000
100	21	12	10	6	2	2	3	5
125	20	11	9	5	2	2	3	5
160	18	10	7	4	2	2	3	5
200	17	9	5	4	1	1	3	5
250	15	7	4	4	1	1	3	5
315	14	5	3	4	1	1	3	5
400	12	4	3	4	1	1	3	5

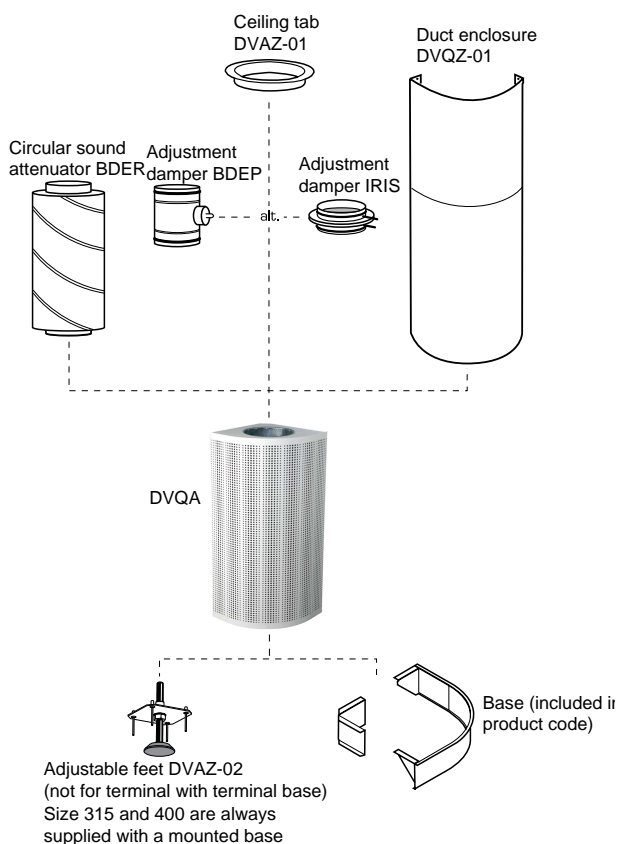
## Dimensions and weights



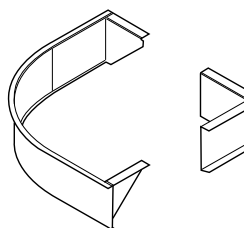
Size	Ød [mm]	H [mm]	B [mm]	C [mm]	F [mm]	Weight [kg]
100	100	400	205	90	40	3.3
125	125	600	334	151	88	7.9
160	160	600	334	151	71	7.9
200	200	1000	442	210	110	17.1
250	250	1000	442	210	85	17.1
315	315	1500	505	227	69	27.6
400	400	2000	624	275	75	44.8

# Product summary and description

## Product summary



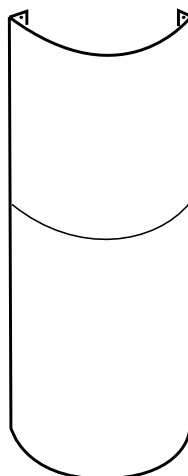
## Terminal base



Quarter-cylindrical Floormaster terminals of size 100, 125, 160, 200 and 250 are supplied with small plastic feet. Terminal base is available as a choice in the main product code for these sizes.

Quarter-cylindrical Floormaster terminals of size 315 and 400 are always supplied with a mounted base. The base is adapted to the shape of the terminal and has a height of 90 mm. It is made from hot-dip galvanized steel sheet SS 1151 and powder-coated in the same colour as the terminal. Note: Terminals who has been ordered and delivered with a terminal base can't be equipped with adjustable feet.

## Duct enclosure



Terminal-shaped duct enclosure with telescopic function with three lengths: 1 = 900 - 1300 mm, 2 = 1300 - 1800 mm and 3 = 1800 - 2400 mm. Powder-coated in the same colour as the terminal. Note! When combining duct enclosure with sound attenuator see remarks below each product code.

## Material and surface finish

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air diffusion through the front panel with a short throw and a very low noise level.

The air distribution system is surrounded by a casing and is accessible by removing the front panel of the device.

The Floormaster terminals are made from hot-dip galvanized steel sheet, SS1151.

The Floormaster terminals are easy to maintain and no replacement parts are necessary.

The terminals are powder-coated for a high surface finish and good impact and scratch resistance. Standard colour White RAL-9010, gloss 30, equivalent to NCS S 0502Y. Other colours on request.

# Descriptive text, product code

## Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

## Technical data and dimensioning

For complete dimensioning details, please see Fläkt Woods product selection program. Contact our nearest sales office for further information.

## Descriptive text

Floormaster terminal manufactured by Fläkt Woods. DVQA size 160 height 600 mm, internal connection, with terminal base, sound attenuator and duct enclosure. Standard colour.

## Product code

### Floormaster terminal DVQA-aaa-b-c-d-e

#### Size (aaa)

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

#### Connection alternatives (b)

0 = Top connection

1 = Bottom connection

#### Function (c)

0 = Without induction

#### Terminal base (d)

0 = Without

1 = With (mounted)

(Size 315 and 400 are always supplied with a mounted base)

#### Colour (e)

0 = Standard colour

1 = Special colour (stated in clear text)

## Accessories

### Duct enclosure DVHZ-01-bbb-c-d

(with telescopic function)

#### Size (bbb)

100<sup>1)</sup>, 125, 160, 200, 250, 315, 400

#### Length (c)

1 = 900 - 1300 mm (not size 100, 125 and 160)

2 = 1300 - 1800 mm (not size 100, 125 and 160)

3 = 1800 - 2400 mm

#### Colour (d)

0 = Standard colour

1 = Special colour (stated in clear text)

<sup>1)</sup> Duct enclosure size 100 can not be combined with a sound attenuator.

### Reducer BDED

Use Fläkt Woods – Veloduct BDED for duct reduction.

### Ceiling tab DVAZ-01-bbb

#### Connection diameter (mm) (bbb)

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

#### Adjustable feet

DVAZ-02 (Set with 3 pcs.)

### Circular adjusting dampers

#### BDEP-1-bbb

#### Connection diameter (cm) (bbb)

010, 012, 016, 020, 025, 031, 040

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDEP-1, see catalogue part 3.

### IRIS damper - Regulation and measuring devices IRIS-aaa

#### Connection diameter (mm) (bbb)

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

Technical data, connection dimensions, including dimensions, are given in separate product documentation for IRIS, see catalogue part 3.

### Circular sound attenuator

#### BDER-aa-bbb-ccc

#### Type (aa)

30, 32, 34

#### Size (connection in cm) (bbb)

012, 016, 020, 025, 031, 040 (max 100mm thick filling)

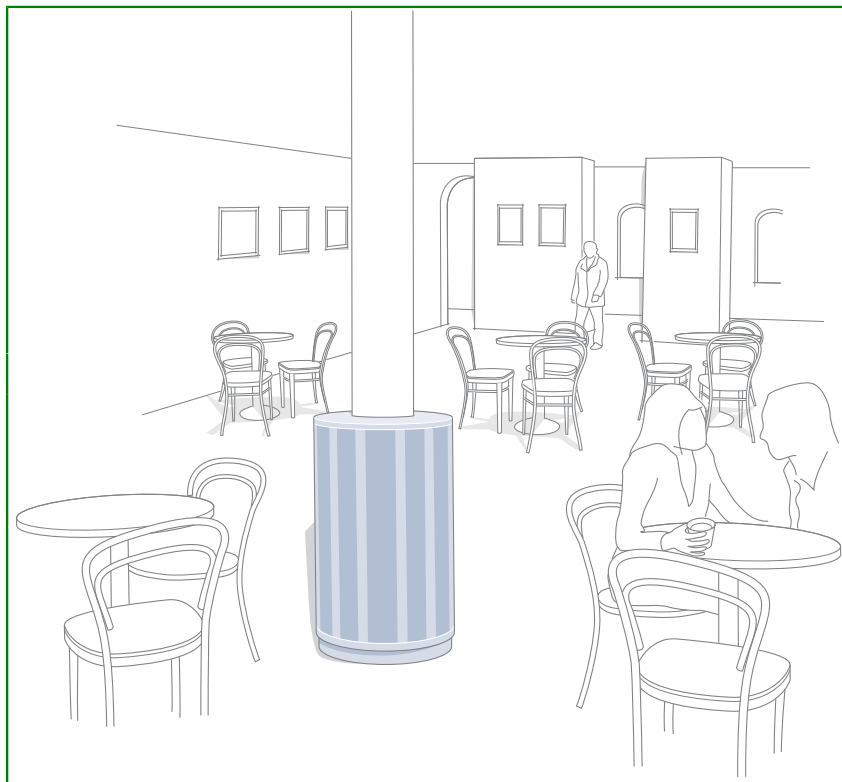
#### Length (cm) (ccc)

030, 050, 060, 090, 100, 120

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDER, see catalogue part 3.

Note! Prior to ordering, make sure that the sound attenuator can be fitted behind the duct enclosure (if ordered). See dimensions for the terminal and outer dimensions for the sound attenuator.

# Floormaster® DVRA, Round terminals



Floormaster® DVRA are round supply air terminals for positioning on the floor with a connection to a circular duct. The terminal is designed for displacement air handling in accordance with the Floormaster system for good air comfort and high ventilation efficiency.

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air distribution through the front panel with a short near zone and a very low noise level.

## Quick Selection

Floormaster® FMR, round terminal with duct connection which provides space for a sound attenuator inside the enclosure.

Size	Height	Connection	Air flow range l/s at sound level		
			25 dB(A)	30 dB(A)	35 dB(A)
125	600	125	55	73	85
160	600	160	87	100	120
250	1000	250	222	286	332
315	1000	315	350	410	495
400	1500	400	500	570	795
630	2000	630	1630	400	1980

Can be placed behind the duct enclosure

DVRA	Sound attenuator		Damper		
	BDER-30	BDER-34	BDEP	IRIS	
125	Yes	No	Yes	Yes	
160	Yes	No	Yes	Yes	
250	Yes	Yes	Yes	Yes	
315	Yes	Yes	Yes	Yes	
400	Yes	No	Yes	Yes	
630	Yes	Yes	Yes	Yes	

## Product Facts

- 6 sizes
- Very low sound level
- Uniformly circular diffusion pattern
- Internal duct connection (female)
- Short comfort boundaries
- Outlet for flow measurement
- Terminal base as standard
- Easy maintenance - no spare parts
- Dismountable front plate
- No visual screws

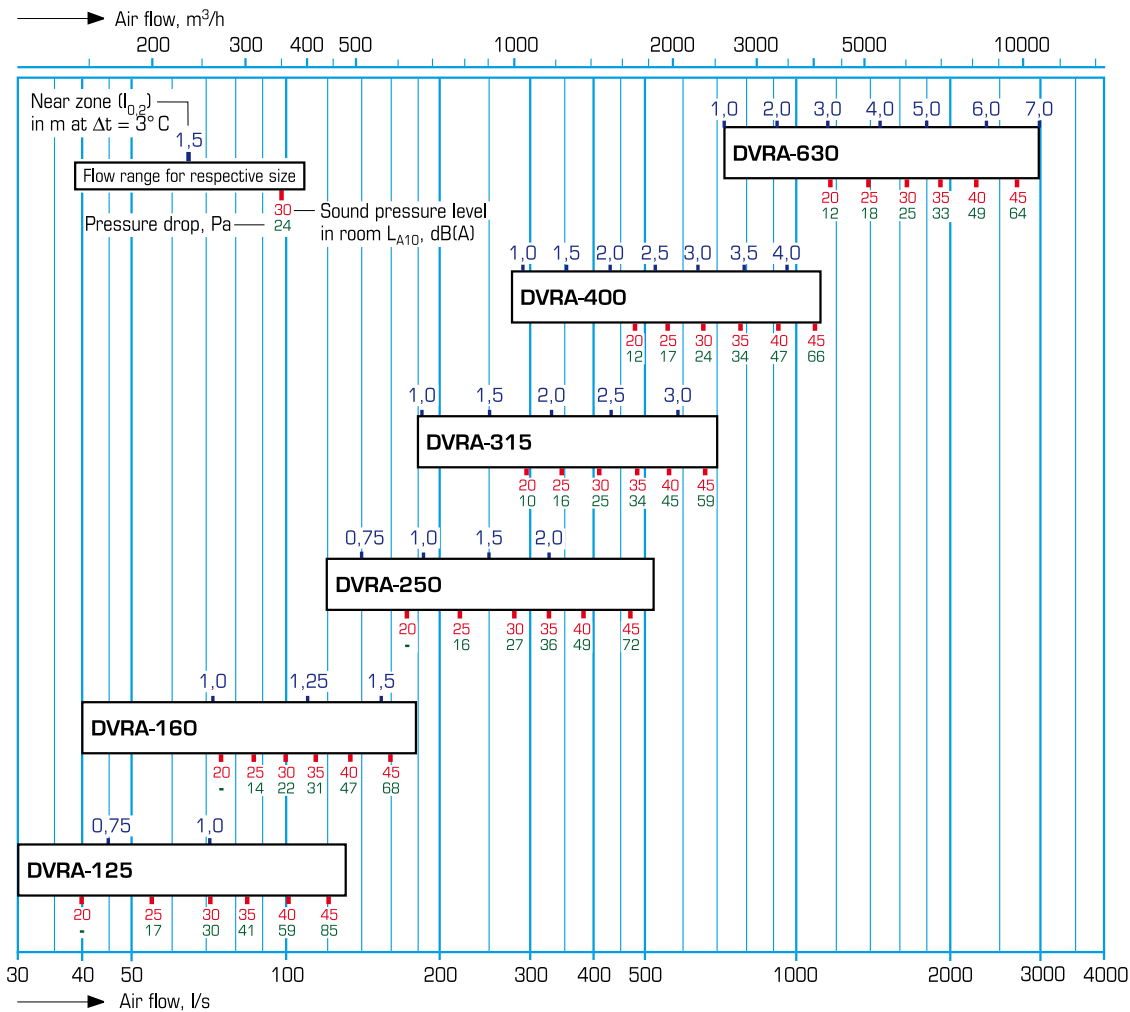
## Product code example

Floormaster DVRA-400-1-0-1-0  
(Size 400, height 1500 mm, internal connection 400 mm, with mounted terminal base and standard colour)



# Capacity, Sound data

## Capacity data - Airflow, comfort boundaries, sound level



## Sound power level in Octave bands

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the acoustic value read in the graphs. The indicated sound levels are applicable for 4 dB room attenuation (10 m<sup>2</sup> room absorption area).

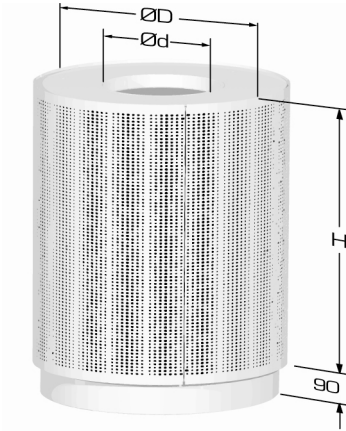
DVRA	Octave bands, centre frequency Hz								
	63	125	250	500	1000	2000	4000	8000	
Tolerance	+/-	1	2	1	0	1	2	3	5

## Sound attenuation

The table shows the difference between the sound power level in the duct and the sound power level in the room, in dB. Orifice attenuation is included in the calculation. Sound levels in the capacity graphs apply for an unchanged connection diameter.

DVRA size	Octave bands, center frequency Hz							
	63	125	250	500	1000	2000	4000	8000
125	18	11	6	4	3	2	3	5
160	16	9	4	3	2	2	3	5
250	15	8	3	3	1	1	3	5
315	14	6	2	3	1	1	3	5
400	12	5	2	3	1	1	3	5
630	9	2	1	3	1	1	1	4

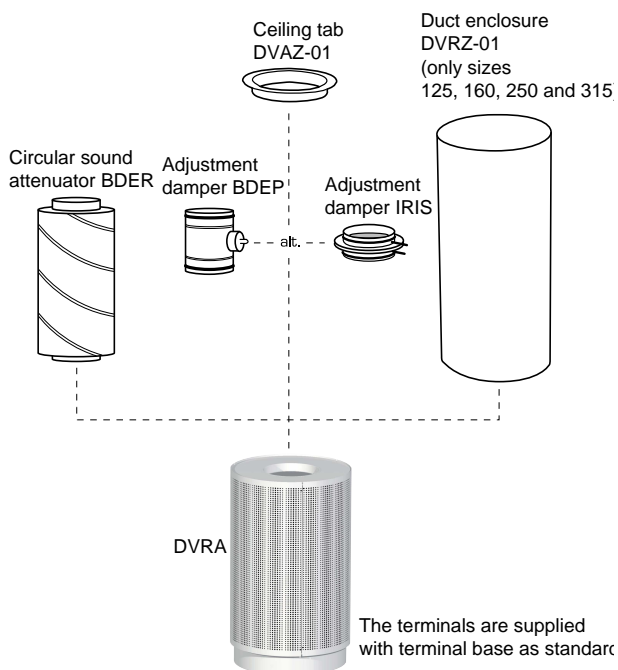
# Dimensions and weights



Size	$\varnothing d$ [mm]	H [mm]	$\varnothing D$ [mm]	Weight [kg]
125	125	600	125	6.6
160	160	600	160	6.6
250	250	1000	250	23.6
315	315	1000	315	23.6
400	400	1500	400	39
630	630	2000	630	91.6

# Product summary and description

## Product summary



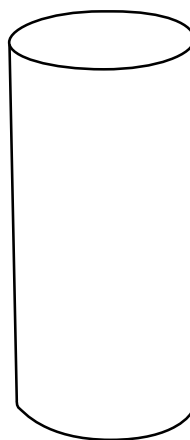
## Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

## Technical data and dimensioning

For complete dimensioning details, please see Fläkt Woods product selection program. Contact our nearest sales office for further information.

## Duct enclosure



Terminal-shaped duct enclosure with two fixed lengths, 1 = 1800 mm and 2 = 2400 mm. Powder-coated in the same colour as the terminal.

Sizes 125 and 160 can only be ordered with length 2 = 2400 mm.

Note! When combining duct enclosure with sound attenuator see remarks below each product code.

## Material and surface finish

Floormaster terminal devices are equipped with an air distribution system consisting of a roll-shaped perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air diffusion through the front panel with a short throw and a very low noise level.

The air distribution system is surrounded by a casing and is accessible by removing the front panel of the device.

The Floormaster terminals are made from hot-dip galvanized steel sheet, SS1151.

The Floormaster terminals are easy to maintain and no replacement parts are necessary.

The terminals are powder-coated for a high surface finish and good impact and scratch resistance. Standard colour White RAL-9010, gloss 30, equivalent to NCS S 0502Y. Other colours on request.

## Descriptive text, product code

### Descriptive text

Floormaster terminal manufactured by Fläkt Woods.  
DVRA size 315 height 1000 mm, internal connection,  
with terminal base, sound attenuator and duct enclosure.  
Standard colour.

### Product code

#### **Floormaster terminal DVRA-aaa-b-c-d-e**

Size (aaa)

125, 160, 250, 315, 400, 630

Connection alternatives (b)

0 = Top connection

1 = Bottom connection

Function (c)

0 = Without induction

Terminal base (d)

1 = always supplied with a mounted base

Colour (e)

0 = Standard colour

1 = Special colour (stated in clear text)

### Accessories

#### **Duct enclosure**

##### **DVHZ-01-bbb-c-d**

Size (bbb)

125, 160, 250, 315

Length (c)

1 = 1800 mm (not size 160 and 125)

2 = 2400 mm

Colour (d)

0 = Standard colour

1 = Special colour (stated in clear text)

#### **Reducer BDED**

Use Fläkt Woods – Veloduct BDED for duct reduction.

#### **Ceiling tab**

##### **DVAZ-01-bbb**

Connection diameter (mm) (bbb)

125, 160, 250, 315, 400, 630

#### **Circular adjusting dampers**

##### **BDEP-1-bbb**

Connection diameter (cm) (bbb)

012, 016, 025, 031, 040, 063

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDEP-1, see catalogue part 3.

#### **IRIS damper - Regulation and measuring devices**

##### **IRIS-aaa**

Connection diameter (mm) (bbb)

125, 160, 250, 315, 400, 630

Technical data, connection dimensions, including dimensions, are given in separate product documentation for IRIS, see catalogue part 3.

#### **Circular sound attenuator**

##### **BDER-aa-bbb-ccc**

Type (aa)

30, 32, 34

Size (connection in cm) (bbb)

012, 016, 025, 031, 040, 063 (max 100mm thick filling)

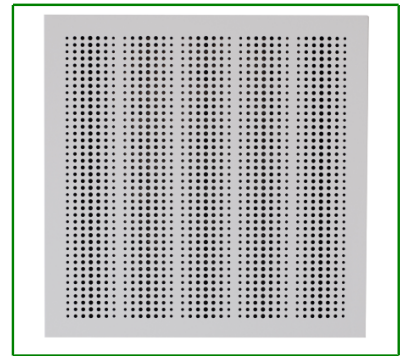
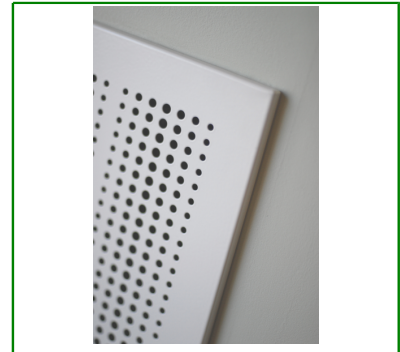
Length (cm) (ccc)

030, 050, 060, 090, 100, 120

Possible combinations of lengths and connection dimensions, including dimensions, are given in separate product documentation for BDER, see catalogue part 3.

Note! Prior to ordering, make sure that the sound attenuator can be fitted behind the duct enclosure (if ordered). See dimensions for the terminal and outer dimensions for the sound attenuator.

# Recessed terminals Floormaster DVCA



Floormaster® DVCA flat supply air terminals for flush-mounting in walls. The terminals are designed for displacement air handling in accordance with the Floormaster system for good air comfort and high ventilation efficiency. Floormaster terminal devices are equipped with an air distribution system consisting of a perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air distribution through the front panel with a short near zone and a very low noise level.

## Quick Selection

Floormaster® DVCA, flat supply air terminals for flushmounting in walls

Size	Height	Connection	Air flow range l/sm <sup>3</sup> /h at sound level		
			25 dB(A)	30 dB(A)	35 dB(A)
300-60	589	300 x 60	62	72	85
400-80	1165	400 x 80	114	132	153

## Product Facts

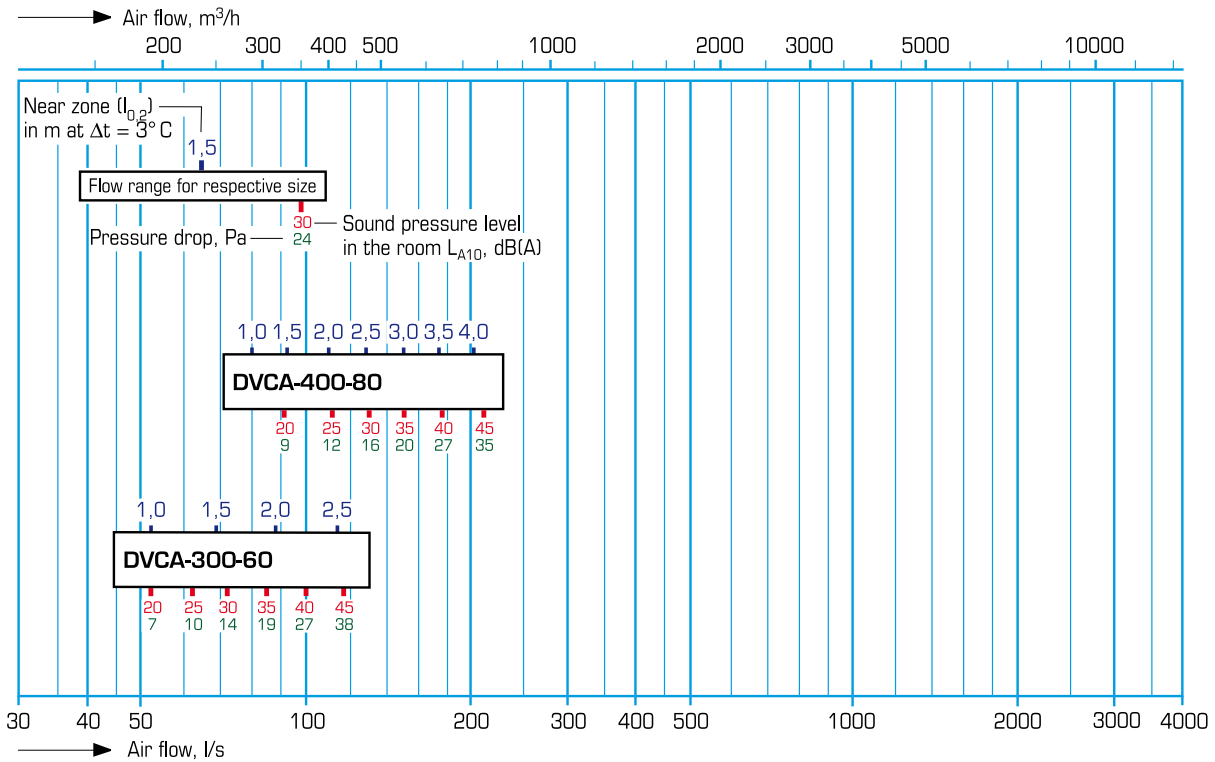
- Consist of a visible flat terminal part a terminal box and a wall duct for flush-mounting in a wall.
- 2 sizes.
- Very low sound level.
- Uniformly circular diffusion pattern.
- Short comfort boundaries.
- Outlet for flow measurement.
- Easy maintenance - no spare parts.
- Dismountable front plate.
- No visual screws.

## Product code example

Floormaster DVCA-300-60  
and insulated wall duct  
DVCZ-300-60-0-1

# Capacity and Sound data

Capacity data - Airflow pressure drop comfort boundaries sound level for DVCA with wall duct



## Sound power level in octave bands

The Sound Power Level in octave bands is obtained by adding the correction (with sign) in the table to the acoustic value in the graphs. The indicated sound levels are applicable for 4 dB room attenuation.

DVCA	Octave bands, centre frequency Hz							
	63	125	250	500	1000	2000	4000	8000
With wall duct	5	0	3	4	-2	-12	-13	-9
Tolerance	+/- 5	2	2	1	1	1	2	6

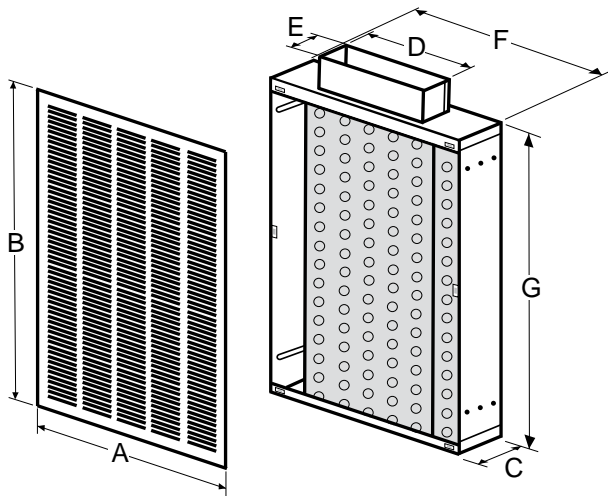
## Sound attenuation

The table shows the difference between the sound power level in the duct and the sound power level in the room, in dB. Orifice attenuation is included in the calculation. Also, for the attenuation values indicated for terminals with duct, there is a requirement for the wall duct to be mount behind a 13 mm plasterboard sheet. Double plasterboard sheet give better attenuation in the low frequency range.

Terminal/Wall duct	Octave bands, center frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DVCA-300x60								
Uninsulated wall duct	19	11	5	8	4	6	9	11
Insulated wall duct	19	11	10	19	24	21	16	15
DVCA-400x80								
Uninsulated wall duct	19	11	6	8	4	5	7	9
Insulated wall duct	20	12	11	17	24	22	16	14
Tolerance +/- dB	5	2	2	1	1	1	2	6

# Dimensions and weights

## Dimensions and weights

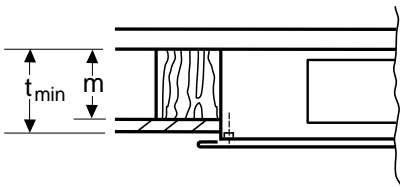


D x E dimension of the terminal is a push-in dimension (male connection)

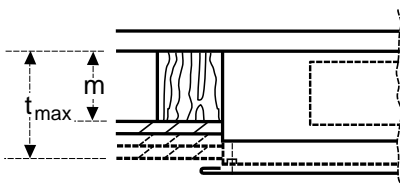
Dimensions in mm

DVCA	A	B	C	D	E	F	G	W, kg
300-60	575	589	81	300	60	545	570	7
400-80	575	1165	101	400	80	545	1145	14

### Mounting in wall with one 13 mm plasterboard



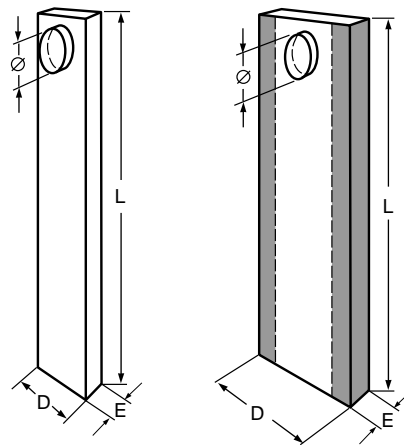
### Mounting in wall with three 13 mm plasterboards



DVCA	tmin	tmax	m
300-60	83	109	70
400-80	103	129	90

DVCA shall be installed in the space between the wall boards.

## Wall duct DVCZ-01



D x E dimension of the wall duct is a push-on dimension (female connection)

The ducts are supplied with a loose upper end wall and a loose circular connection sleeve. The upper part is cut to obtain the right length for the duct, and a hole is made for the connection sleeve, which is applied from inside the duct, and the end wall is then set in place.

DVCZ	Dnom	Enom	L	Ø	Execution	Weight
300-60-0-0	302	62	2100	160	Uninsulated	18
300-60-0-1	402	62	2100	160	Insulated <sup>1)</sup>	24
300-60-1-0	302	62	2500	160	Uninsulated	18
300-60-1-1	402	62	2500	160	Insulated <sup>1)</sup>	24
400-80-0-0	402	82	2100	200	Uninsulated	20
400-80-0-1	502	82	2100	200	Insulated <sup>1)</sup>	27
400-80-1-0	402	82	2500	200	Uninsulated	24
400-80-1-1	502	82	2500	200	Insulated <sup>1)</sup>	29

<sup>1)</sup> 100 mm insulation

# Material, descriptive text, product code

## Material and surface finish

Floormaster terminal devices are equipped with an air distribution system consisting of a perforated distribution plate with an attached honeycomb sheet in black polycarbonate. This component combination permits uniformly horizontal air diffusion through the front panel with a short throw and a very low noise level. The air distribution system is surrounded by a casing and is accessible by removing the front panel of the device.

The Floormaster terminals are made from hot-dip galvanized steel sheet. The Floormaster terminals are easy to maintain and no replacement parts are necessary.

The terminals are powder-coated for a high surface finish and good impact and scratch resistance.

Standard colour White RAL-9010, gloss 30, equivalent to NCS S 0502Y. Other colours on request.

## Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

## Descriptive text

Floormaster terminal manufactured by Fläkt Woods. DVCA size 300x60 with front plate 565 x 565, standard colour.

## Product code

**Terminal device for wall mounting**  
**DVCA-aaa-bb-c**

Size, mm (aaa)  
300, 400

Duct depth, mm (bb)  
60, 80

Colour (c)  
0 = standard colour  
1 = special colour (stated in clear text)

**Wall duct**  
**DVCZ-01-bbb-cc-d-e**

Duct width, mm (bbb)  
300, 400

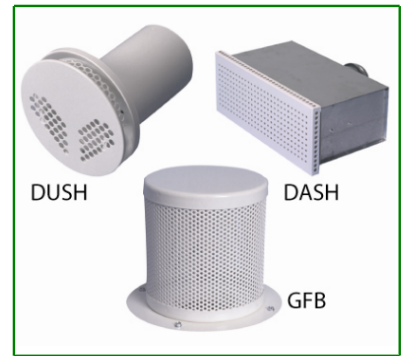
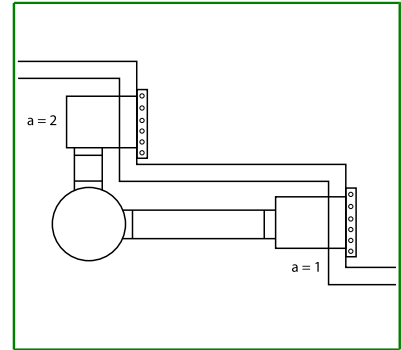
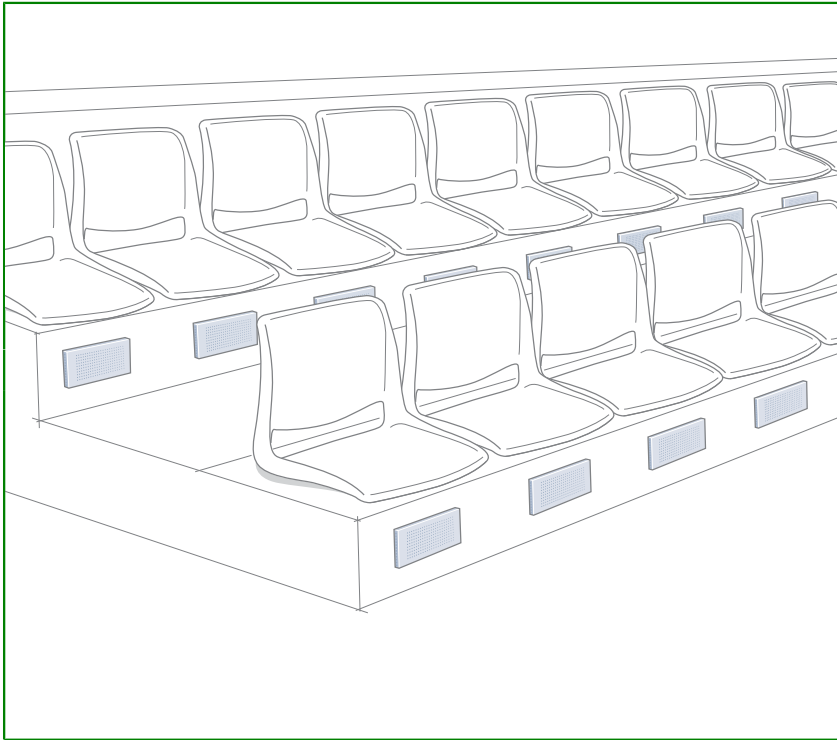
Duct depth, mm (cc)  
60, 80

Duct height, mm (d)  
0 = 2100  
1 = 2500

Duct insulation (e)  
0 = uninsulated  
1 = insulated



# Floormaster GFB, DASH, DUSH



The Floormaster system with its displacement air management technology permits the design of installations with a low sound level, good air comfort and high ventilation efficiency.

Floormaster air terminal devices for premises with tiered seating are intended for meeting rooms, lecture theatres, cinemas and concert halls.

From the point of view of comfort, it may be difficult to supply the whole of the desired flow with only air terminal devices for premises with tiered seating, and combination with a few larger devices in appropriate places may be advantageous.

The devices are powder-coated for a high surface finish and good impact and scratch resistance.

Standard colour White RAL-9010. Other colours on request.

GFB is intended for mounting in floors under chairs. The device is equipped with a long sleeve with a nozzle for connection to a pressure chamber.

DASH is rectangular and is intended for mounting in the riser. The device is equipped with a connection box. The device can be connected to a duct or a pressure chamber, from below or from the rear.

DUSH is round and is intended for mounting in the riser. The device can be connected to a duct or a pressure chamber

## Quick Selection

Floormaster air terminal devices for premises with tiered seating

Flow	Recommended flow 12 l/s(43 m <sup>3</sup> /h) and device		
Positioning	on floor tread	in riser; rectangular	in riser; round
Device	GFB	DASH	DUSH
Connection	Ø 81 mm	Ø 100 mm	Ø 125 mm

## Product Facts

- Floormaster air terminal devices for premises with tiered seating.
- Options for different positions
- Very low sound level
- Even diffusion pattern
- Short comfort boundaries

## Product code example

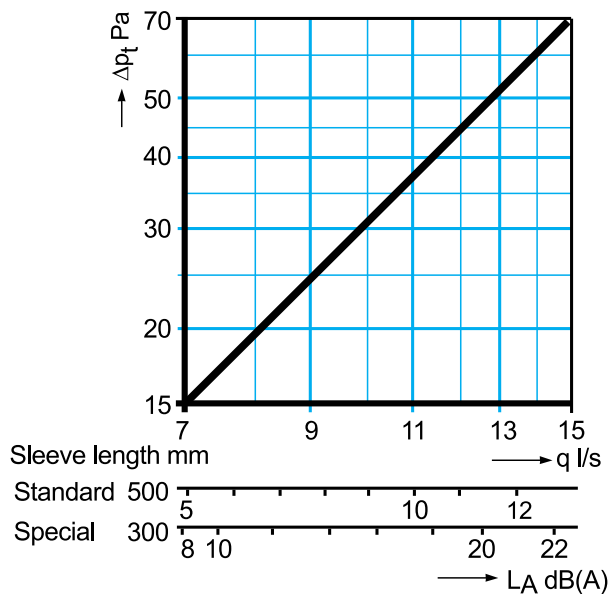
GFB-081-023

DASH-100-0

DUSH-125

# Floormaster GFB

Pressure drop, air flow, sound level



$\Delta p_t$  = total pressure drop, Pa

$q$  = air flow, l/s

$L_A$  = sound level, dB(A), applies for room attenuation of 4 dB (room absorption area 10 m<sup>2</sup>). The sound level applies with the device connected to a pressure chamber.

## ComfortZone

For a supply air flow of 11 l/s (40 m<sup>3</sup>/h) and high thermal load, the air movements 360 mm from the surface of the device at the front edge of the chair are in accordance with the following table.

Height over floor, mm	Air Velocity, m/s
50	0.12
150	0.07

In view of these low air velocities, no comfort boundaries are given.

## Sound Data

### Sound power level

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the sound level obtained from the table below.

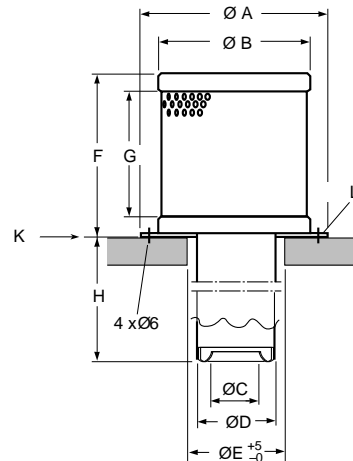
Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
GFB	+5	-6	-4	+2	-5	-10	-15	-20
Tol $\pm$ dB	6	3	2	2	2	2	2	3

### Sound attenuation

Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
GFB	21	16	12	7	3	1	0	0
Tol $\pm$ dB	6	3	2	2	2	2	2	3

Dimensions and weights

Floormaster air terminal device for premises with tiered seating GFB



L = Connection flange

K = Floor level

$\varnothing A$ [mm]	$\varnothing B$ [mm]	$\varnothing C$ [mm]	$\varnothing D$ [mm]	$\varnothing E$ [mm]	F [mm]	G [mm]	H [mm]	Weight [kg]
190	145	46	81	87	150	120	150	1,5

## Material and surface finish

Supply air terminal device GFB is manufactured of heavy hot-dip galvanized steel sheet. The outer jacket is perforated with circular holes and with a large free area. The device is powder-coated as standard in white.

## Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

## Descriptive text

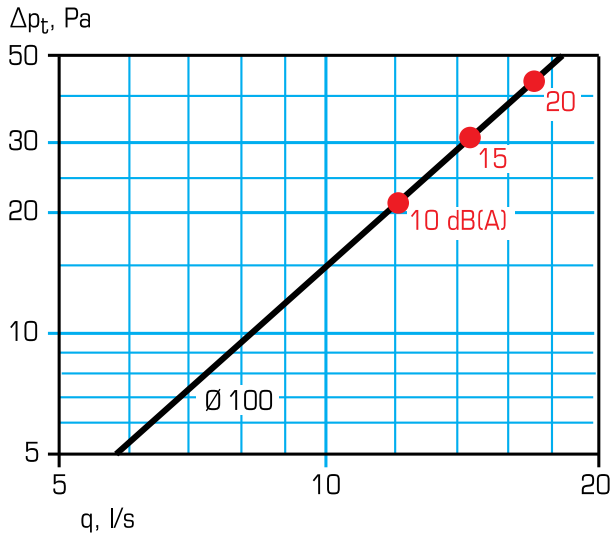
Supply air terminal device Floormaster GFB manufactured by Fläkt Woods with a standard/special sleeve and with/without connection flange.

## Product code

**Floormaster air terminal device for premises with tiered seating GFB-081-023**

# Floormaster DASH

Pressure drop, air flow, sound level



Sound data

### Sound power level

The sound power level in octave bands is obtained by adding the correction (with sign) in the table to the sound level obtained from the table below.

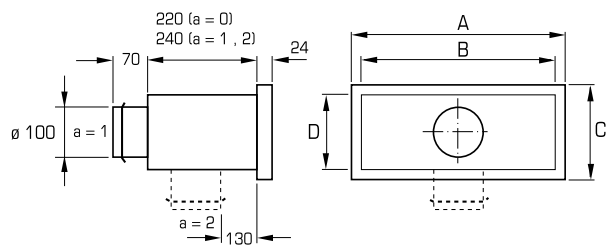
Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DASH	0	+6	+9	+4	-5	-14	-16	-15
Tol ±dB	6	3	2	2	2	2	2	3

### Sound attenuation

Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DASH	24	20	14	13	15	15	16	14
Tol ±dB	6	3	2	2	2	2	2	3

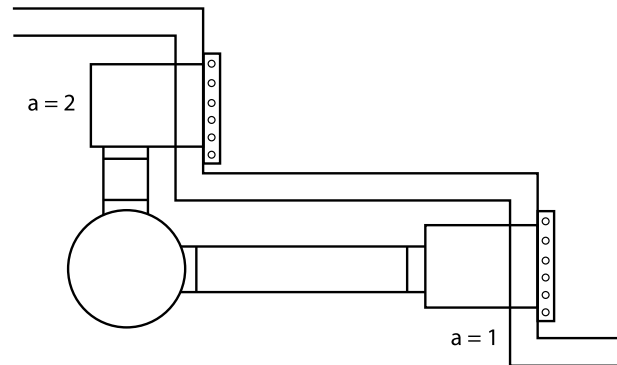
Dimensions and weights

Rectangular air terminal device for premises with tiered seating DASH



A	B	C	D	Weight
[mm]	[mm]	[mm]	[mm]	[kg]
427	397	173	147	3,3

Installation



Material and surface finish

DASH is manufactured of heavy hot-dip galvanized steel sheet. The front grille is perforated with square holes.

The device is powder-coated in white as standard, RAL9010. Powder coating gives a clean, strong and impact-resistant surface.

Baffle plates and diffusion cones are made from a porous textile material.

Adjustment

The device has a well defined pressure drop, which means that the desired air flow is achieved by setting a specific pressure in the pressure chamber. This can be adapted from case to case. As a standard value,  $k = 2.56$ .

Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

Descriptive text

Supply air terminal device DASH manufactured by Fläkt Woods for duct connection/for connection to a pressure chamber.

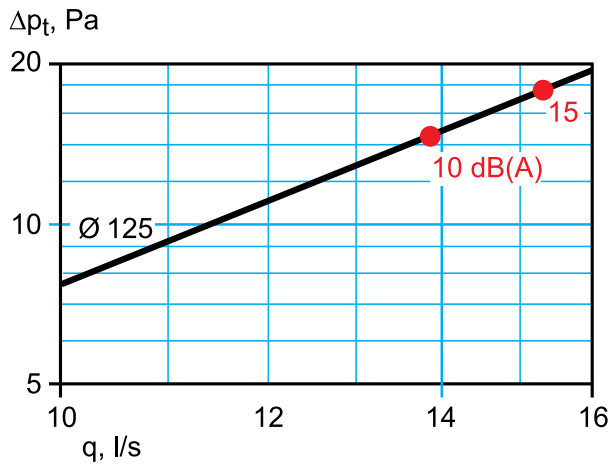
Product code

**Floormaster air terminal device for premises with tiered seating DASH-100-a**

Connection side (a)  
 0 = pressure chamber, rear opening  
 1 = duct from the rear  
 2 = duct from below

# Floormaster DUSH

Pressure drop, air flow, sound level



Sound data

### Sound power level

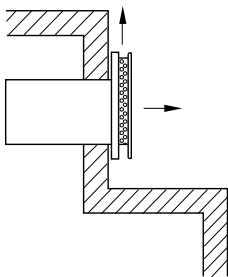
The Sound power level in octave bands is obtained by adding the correction (with sign) in the table to the sound level obtained from the table below.

Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DUSH	+6	+3	+9	+5	-5	-13	-17	-21
Tol ±dB	6	3	2	2	2	2	2	3

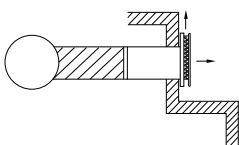
### Sound attenuation

Terminal	Octave bands, middle frequency Hz							
	63	125	250	500	1000	2000	4000	8000
DUSH	18	18	14	7	3	1	4	6
Tol ±dB	6	3	2	2	2	2	2	3

Installation



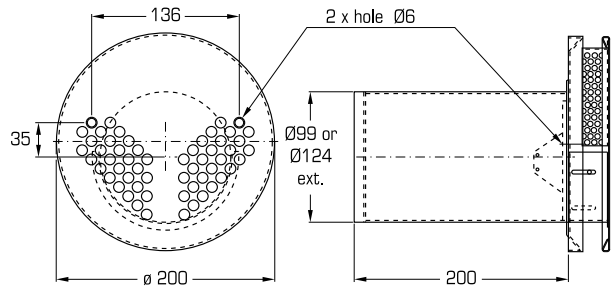
Alternative Pressure Chamber



"Alternative Duct Connection"

Dimensions and weights

Circular air terminal device for premises with tiered seating DUSH



ØA	B	C	ØD	Weight
[mm]	[mm]	[mm]	[mm]	[kg]
200	195	40	124	1,4

Material and surface finish

DASH is manufactured of heavy hot-dip galvanized steel sheet. The front grille is perforated with square holes.

The device is powder-coated in white as standard, RAL9010. Powder coating gives a clean, strong and impact-resistant surface.

Baffle plates and diffuser cones are made from a porous textile material.

Adjustment

The device has a well defined pressure drop, which means that the desired air flow is achieved by setting a specific pressure in the pressure chamber. This can be adapted from case to case. As a standard value,  $k = 3.5$ .

Instructions

Directions for installation, adjustment and care are set out in detail in our technical instruction which accompanies each product. The instruction is also accessible on [www.flaktwoods.com](http://www.flaktwoods.com).

Descriptive text

Supply air terminal device DASH manufactured by Fläkt Woods for duct connection/for connection to a pressure chamber.

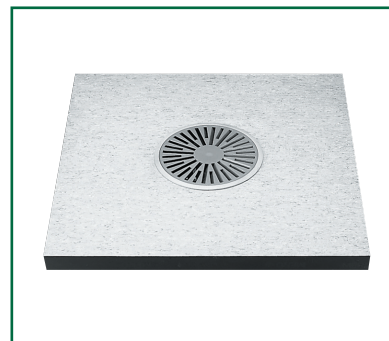
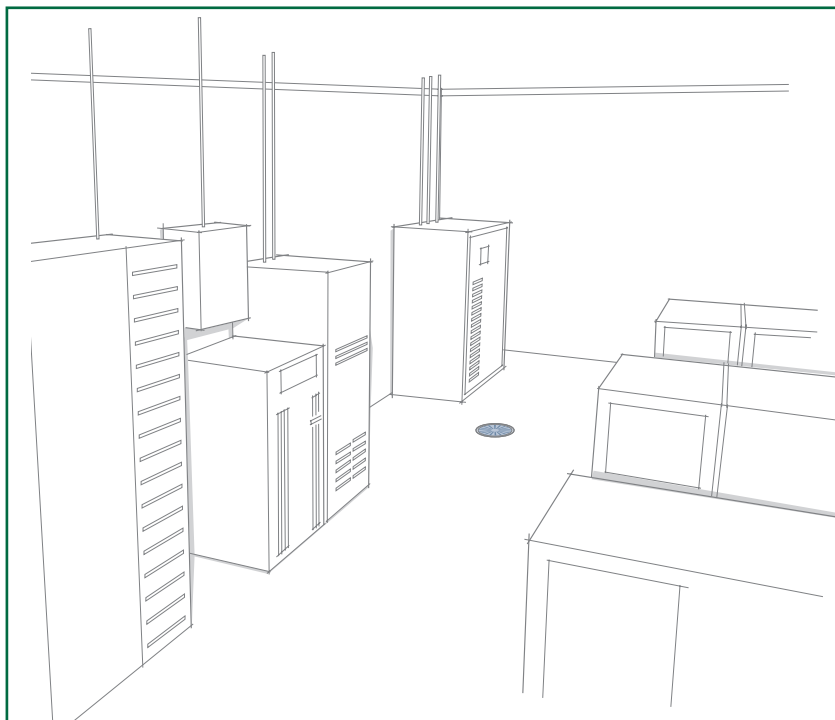
Product code

**Circular air terminal device  
for premises with tiered seating  
DUSH-125**

Dimension

125 = sleeve Ø125

# Floor-mounted air terminal PWAA



Floor-mounted air terminal PWAA is suitable for types of premises such as telecommunications rooms, computer centres and similar – where the floor zone must have good ventilation. The terminals have good ability to supply air to the installation, with the result that the air flow quickly reaches a stable temperature. PWAA is suitable for the cooling and ventilation of electronic equipment and other devices standing on the floor.

PWAA is suitable for installations where the upper floor is constructed from sheets of standard size which are manufactured from mechanically and thermally resistant materials.

Terminals installed in floor tiles are provided with air directly from the space between the floors, with the help of flexible ducts directly from the ventilation system or via connection boxes. Diffusers are made from mechanically durable plastic, which means that the whole floor area can be used without any weak points. The material is not combustible and conforms to fire safety requirements. Terminals are normally supplied in a grey (RAL 7040) or black (RAL 7021) colour, but can be also supplied in other colour on request.

## Quick selection

Size	Air flow		Supply air temp. °C	Max temperature difference $t_s - t_e$ , K	Maximum loading, kg
	l/s	m <sup>3</sup> /h			
PWAA-20	15,3 - 48,6	55 - 175	17 - 31	±12	550

In premises in which large numbers of people are constantly present, the maximum air flow  $q_{supply} = 33.3$  l/s (120 m<sup>3</sup>/h).

## Product facts

### Floor-mounted air terminal PWAA

Floor-mounted directly in the floor tiles.

Made of mechanically durable plastic.

### Product code example:

Floor diffuser PWAA-20-1-1-1-2

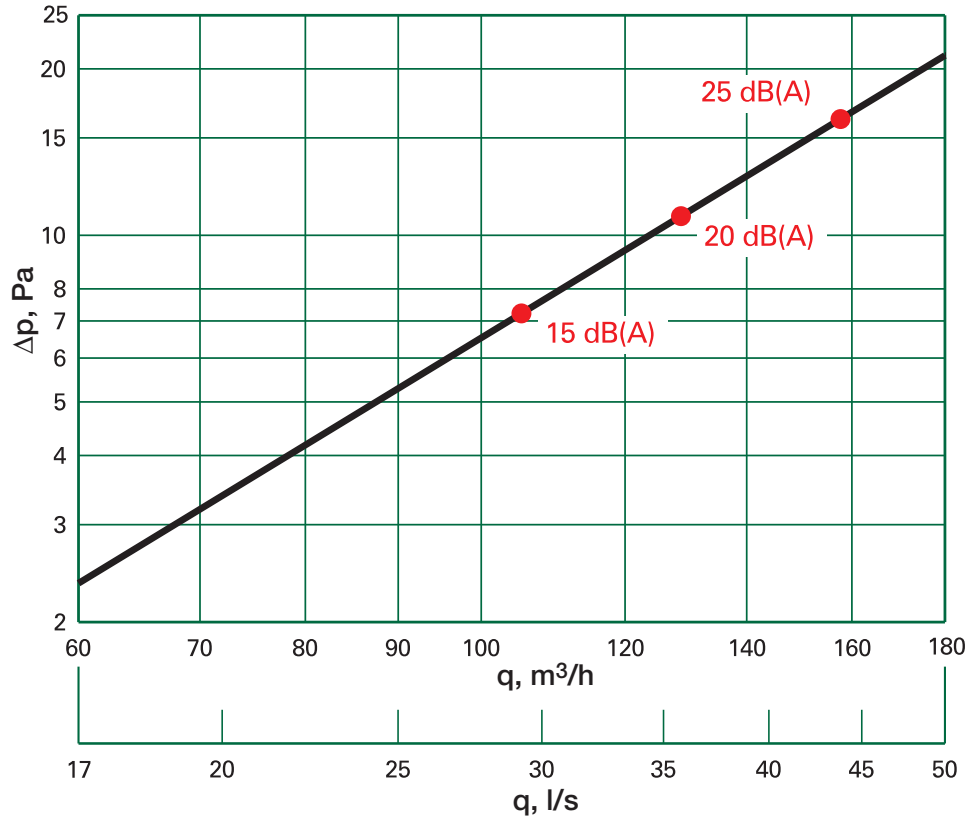
Floor-mounted air terminal with fixing ring, installation sleeve and intake part. The terminal colour is RAL 7021.

Connection box SKPA-12-0-1

Size 12 to fit diffuser size 20, unisolated, with manual damper.

# Air flow, pressure drop, sound levels and attenuation

## Air flow, pressure drop and sound level



## Sound power level

Size	Correction of the sound level $K_{ok}$ in dB by octave band, mean frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
20	14	9	8	2	-3	-10	-16	-27

The sound power levels for different octave bands are obtained by adding together the sound pressure level  $L_{A10}$ , dB(A), from the graph above, and the octave band corrections  $K_{ok}$  in the table using the following formula:

$$L_W = L_{A10} + K_{ok}$$

In the above graph, sound levels in dB(A) are shown for a reference room with 10 m<sup>2</sup> room absorption, equivalent to 4 dB room attenuation.

## Definitions

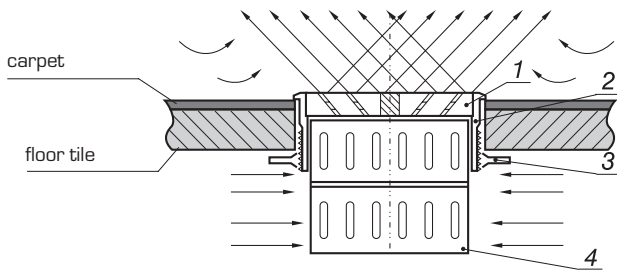
q	air flow	l/s, m <sup>3</sup> /h
Δp	pressure drop	Pa
$L_{A10}$	sound pressure level with room attenuation of 4 dB (10 m <sup>2</sup> room absorption area)	dB(A)
$L_W$	sound power level	dB
$K_{ok}$	octave band correction	dB
ΔL	sound attenuation from duct to room	dB

## Sound attenuation

Size	Sound attenuation in dB octave band, mean frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
20	14	8	6	4	3	4	4	6

# Product description, dimensions

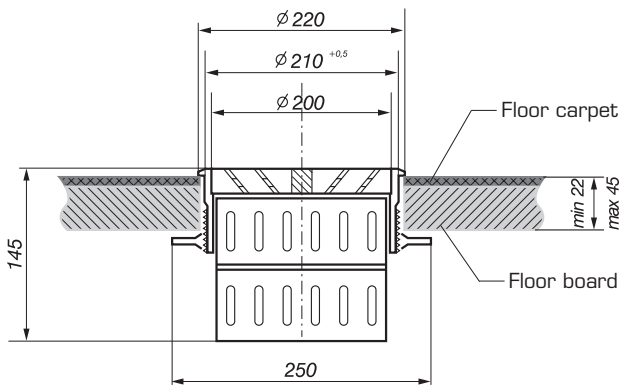
## Product description



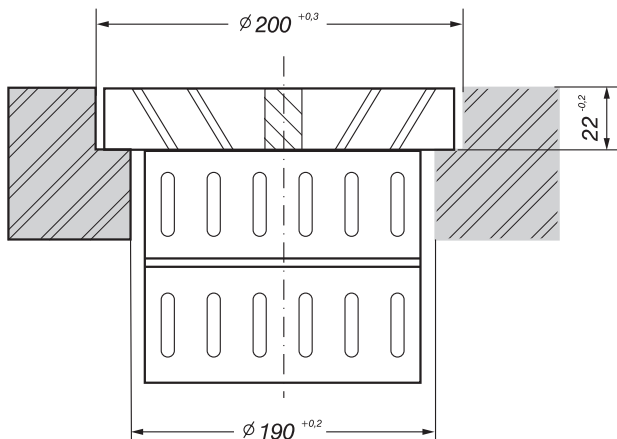
A terminal kit consists of the following components:

1. terminal
2. installation flange
3. mounting ring
4. dirt basket

## Dimensions

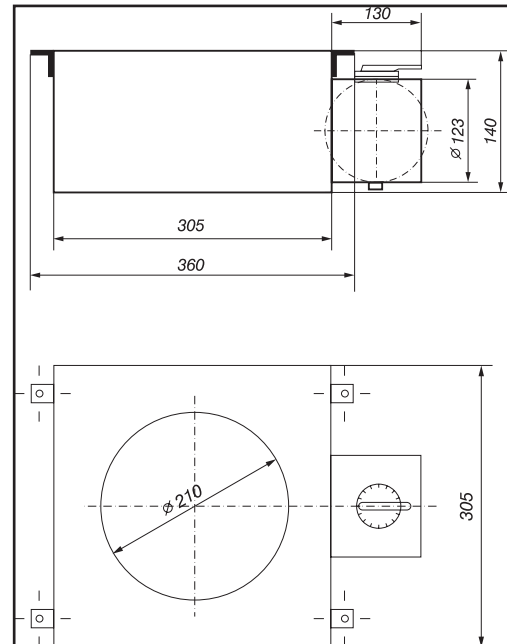


**NOTE!** Necessary hole in floor tile =  $\text{Ø}210^{+0,5}$



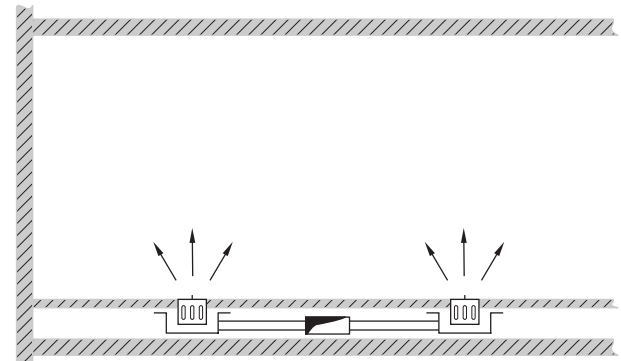
All dimensions are indicated in mm.

## Connection box

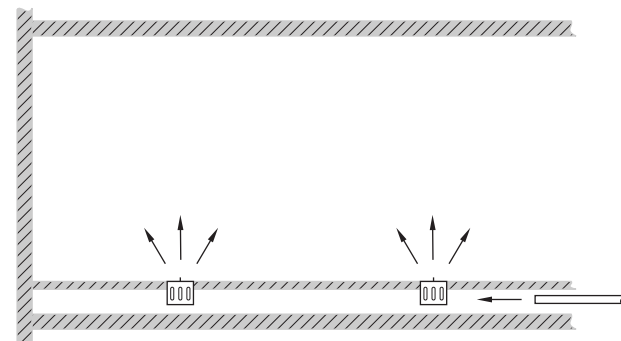


All dimensions are indicated in mm.

## Installation example



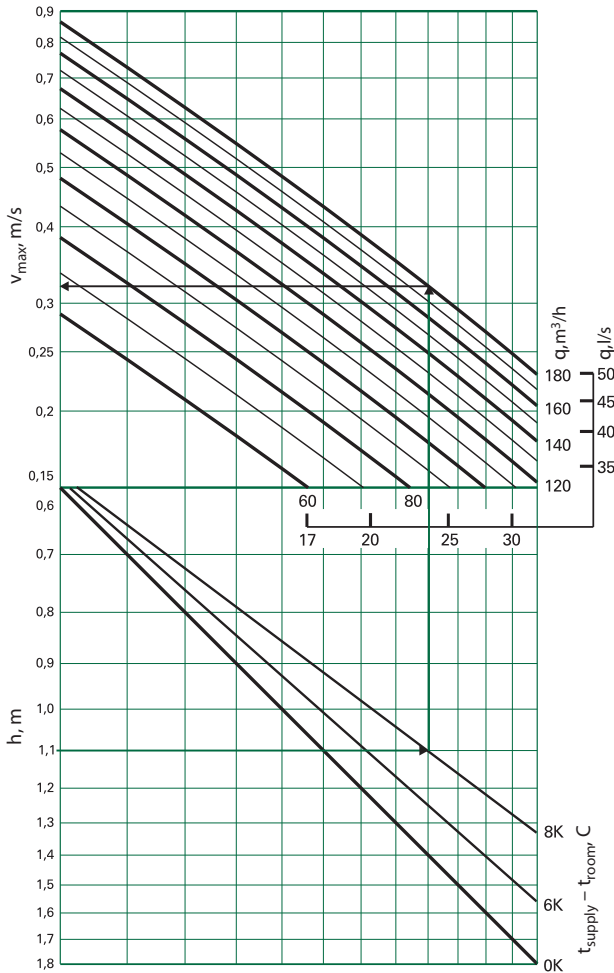
The diffusers are connected to the supply air duct via connection boxes.



Air is forced into the space between the floors; the supply air is produced by static pressure.

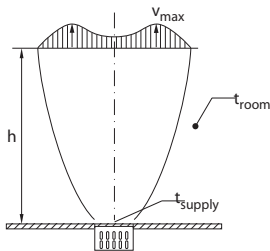
# Project design, descriptive text, product code

## Project design



At maximum air flow and with the cooling function, the difference between supply air temperature  $t_{\text{supply}}$  and room temperature  $t_{\text{room}}$  in the area from 1.1 m to 1.7 m is less than 1°C.

This means that the flow initially supplies a lot of the ambient air and, after mixing, its temperature gradually equalizes the air temperature in the premises.



## Definitions

$v_{\text{max}}$	air velocity at the distance x	m/s
h	flow range	m
$t_{\text{supply}}$	supply air temperature	°C
$t_{\text{room}}$	room temperature	°C

## Descriptive text

Floor-mounted air terminal PWAA for installation in a floor tile manufactured by Fläkt Woods.

## Product code

**Floor-mounted air terminal** PWAA-20-a-b-c-d-e

Terminal \_\_\_\_\_  
 0 = without  
 1 = with

Mounting ring \_\_\_\_\_  
 0 = without  
 1 = with

Installation flange \_\_\_\_\_  
 0 = without  
 1 = with

Dirt basket \_\_\_\_\_  
 0 = without  
 1 = with

Colour \_\_\_\_\_  
 1 = colour RAL 7040 (grey)  
 2 = colour RAL 7021 (black)

**Connection box** SKPA-aa-b-c

Duct connection diameter (cm) \_\_\_\_\_  
 12, 16, 18

Type \_\_\_\_\_  
 0 = uninsulated  
 1 = insulated

Damper \_\_\_\_\_  
 0 = without damper  
 1 = with blade damper  
 2 = with measurement and adjustment damper ZAED



**FläktWoods Ltd**

*Birmingham Business Park,  
Unit 6240, Bishops Court, Solihull Parkway,  
Birmingham, B37 7YB*

*Tel : 0121 717 4693*

**FläktWoods Ltd**

*First Floor, Entrance 6, Crossford Court  
Dane Road, Sale, Cheshire  
M33 7BZ*

*Tel : 0161 969 1992*

**Environmental Air Conditioning (Scotland) Ltd**

*Unit 5D Firhill House  
55-65 Firhill Road  
Glasgow  
G20 7BE*

*Tel: 0141 946 8901*

