

# AFL

Radial flow diffuser for supply air



## QUICK FACTS

- Easily integrated to suspended metal ceiling systems
- Suitable for room heights of 2.5–4 m
- Suitable for high supply air temperature differences
- Available with perforated front panel for a seamless visual integration with the ceiling design
- Distribution pattern can be blanked off using blanking plates
- Can be combined with plenum box with a horizontal duct connection
- Standard colour Jet Black RAL 9005

Size	AFL-Q							
	$L_{PA} = 25 \text{ dB}$		$L_{PA} = 30 \text{ dB}$		$L_{PA} = 35 \text{ dB}$		$L_{PA} = 40 \text{ dB}$	
	V (m <sup>3</sup> /h)	$\Delta p$ (Pa)	V (m <sup>3</sup> /h)	$\Delta p$ (Pa)	V (m <sup>3</sup> /h)	$\Delta p$ (Pa)	V (m <sup>3</sup> /h)	$\Delta p$ (Pa)
200	100	35	117	48	136	65	158	89
250	148	32	170	43	196	58	226	79
350	223	25	256	34	292	45	334	59
450	324	19	372	26	428	35	493	47
550	451	18	516	23	591	31	676	40

*Data applies to AFL with perforated front panel, Rg 2,5-5,5 with 16% open area.*

*Data for AFL including blanking plates is available in the product sheet.*

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# Technical description

## Design

The AFL is a radial flow diffuser for supply air, designed for efficient integration with suspended metal ceiling systems.

The diffuser can be fitted with a perforated front panel in the design of standard metal ceiling panels, for a seamless visual integration.

Suitable for room heights of 2.5 to 4 m.

## Functionality

The air is evenly distributed across the perforated front panel, spreading radially in a horizontal direction resulting in the Coanda effect. This way, the airflow speed and the temperature difference between the supply air and room air are rapidly minimized, creating an indoor environment with low air velocity and consistent room temperatures in the occupied zone.

## Material and surface treatment

- Made of galvanized sheet steel.
- Standard colour:
  - RAL 9005, Jet black, gloss 30

## Adaptation

- Other colours available on request.

## Accessories

### Plenum box

Plenum box with horizontal duct connection.

- Made of galvanized sheet steel.

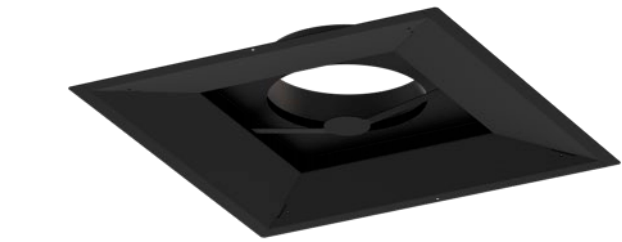
### Front panel

Perforated front panel designed for a seamless visual integration with the ceiling system.

- Made of galvanized sheet steel.
- Standard colour:
  - RAL 9003, signal white, gloss 70
- Standard perforation: approximately 16% free cross section with 2.5–5.5 circular perforations.
  - Other perforations available on request.

### Blanking plate

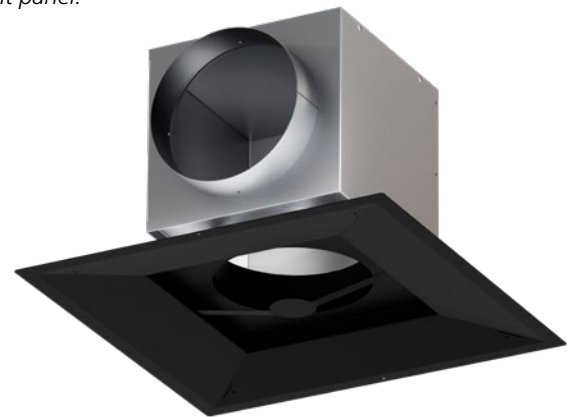
Blanking plate for covering one or two sections of the front panel in specialized installations. Enables the possibility to change the distribution pattern to 2- or 3-way.



AFL.



Front panel.



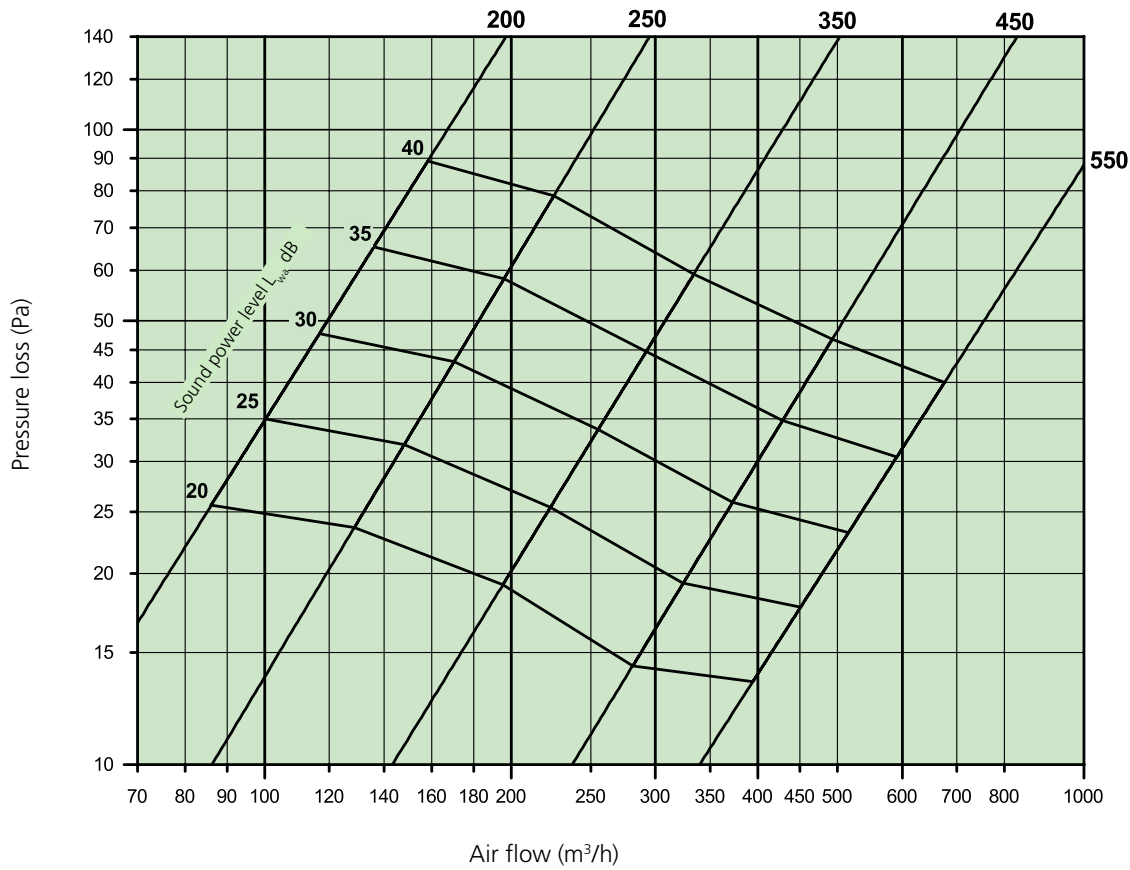
AFL with plenum box.

# Technical data

## Sizing diagram

### AFL with front panel

Data applies to AFL with the perforated front panel, with 2.5–5.5 circular perforations with 16% rel. free hole area and sheet thickness  $\leq 0.8$  mm.

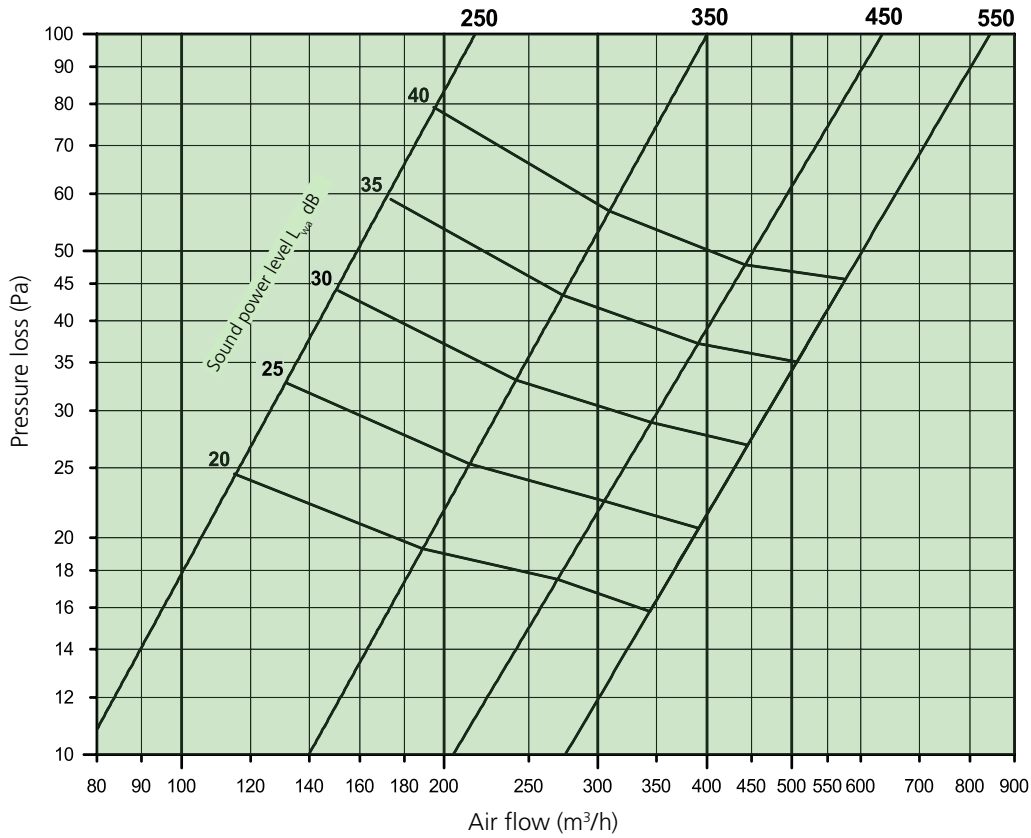


### Minimum air flow

Size	$V_{min}$ (m³/h)	
	isothermal	$\Delta T: -3$ K
200	70	70
250	60	60
350	100	120
450	160	180
550	240	250

**AFL with front panel, 1 section blanked off (1 blanking plate)**

Data applies to AFL with the perforated front panel, with 2.5–5.5 circular perforations with 16% rel. free hole area and sheet thickness  $\leq 0.8$  mm.

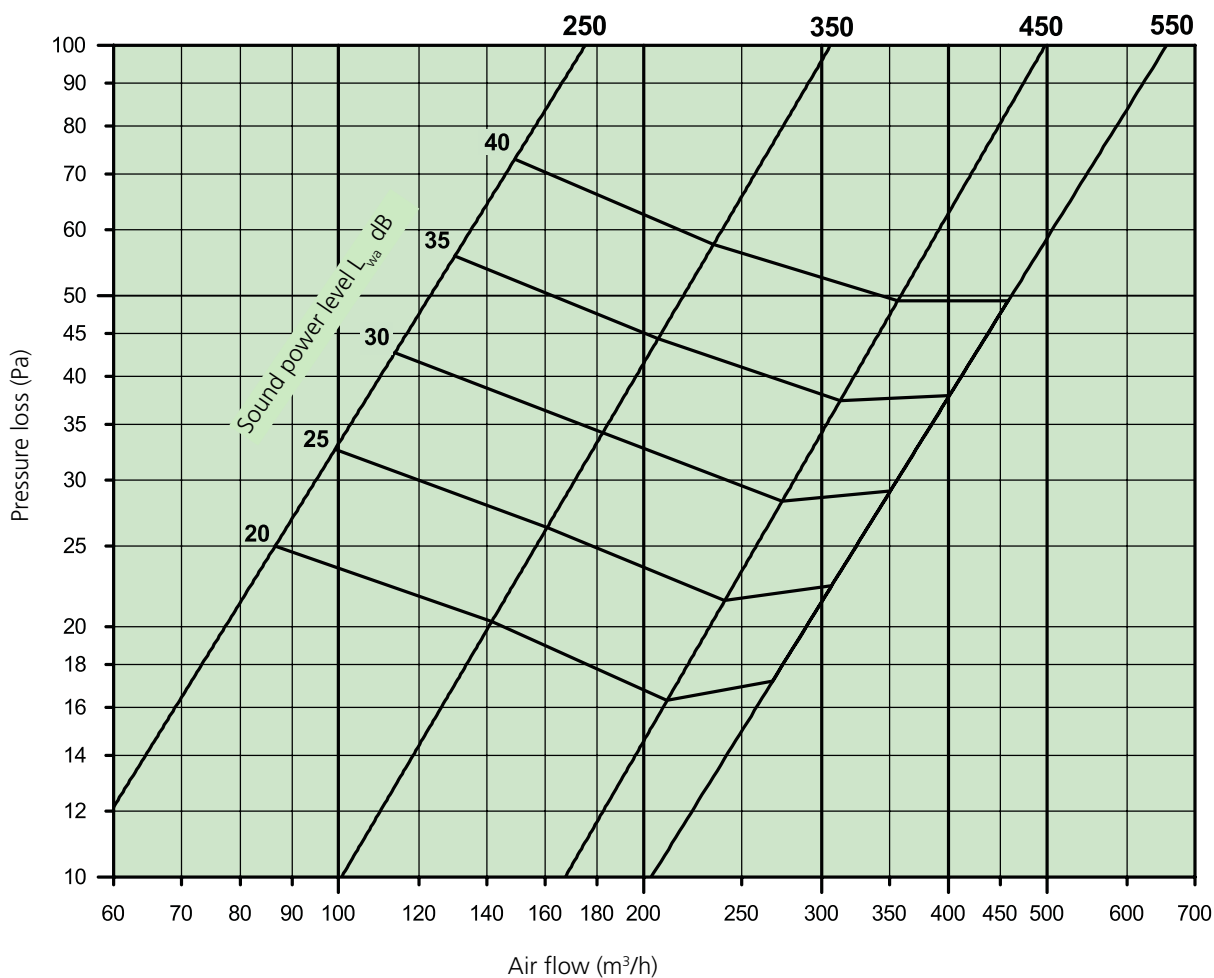


**Quick selection**

Size	L <sub>PA</sub> = 25 dB		L <sub>PA</sub> = 30 dB		L <sub>PA</sub> = 35 dB		L <sub>PA</sub> = 40 dB	
	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)
250	132	33	151	44	174	59	194	79
350	214	25	242	33	273	43	309	57
450	305	23	345	29	391	37	442	48
550	391	21	445	27	507	35	577	46

## AFL with front panel, 2 sections blanked off (2 blanking plates)

Data applies to AFL with the perforated front panel, with 2.5–5.5 circular perforations with 16% rel. free hole area and sheet thickness  $\leq 0.8$  mm.



### Quick selection

Size	L <sub>PA</sub> = 25 dB		L <sub>PA</sub> = 30 dB		L <sub>PA</sub> = 35 dB		L <sub>PA</sub> = 40 dB	
	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)	V (m³/h)	Δp (Pa)
250	99	33	114	43	130	56	149	73
350	161	26	182	34	207	44	234	58
450	240	22	274	28	313	37	356	49
550	307	22	350	29	401	38	458	49

# Dimensions

## AFL

Size	A (mm)	A <sub>1</sub> (mm)	H2 (mm)	Ø D (mm)
200	200	230	27	98
250	250	290	29	123
350	350	390	33	158
450	450	490	37	198
550	550	590	40	248

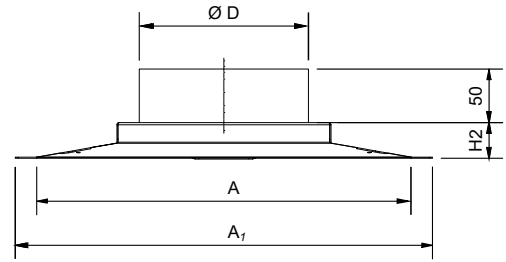


Figure 1. Dimensions, AFL.

## AFL with plenum box

Size	A (mm)	A <sub>1</sub> (mm)	B (mm)	H1 (mm)	H2 (mm)	H (mm)	Ø D (mm)	Ø d (mm)
200	200	230	160	140	27	204	98	98
250	250	290	180	165	29	231	123	123
350	350	390	220	200	33	270	158	158
450	450	490	260	241	37	315	198	198
550	550	590	315	290	40	367	248	248

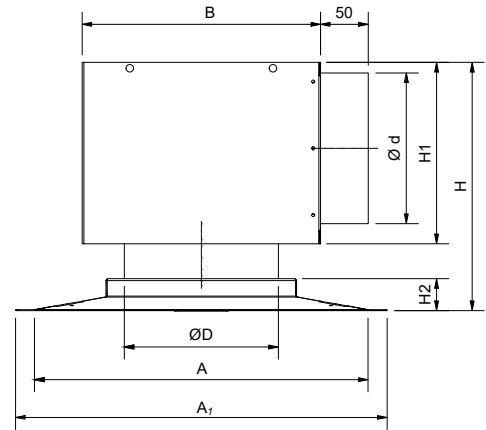


Figure 2. Dimensions, AFL with plenum box.

## AFL with perforated front panel

Size	Q (mm)	H3 (mm)	Ø D (mm)
200	595/620	28	98
250	595/620	29	123
350	595/620	33	158
450	595/620	37	198
550	595/620	40	248

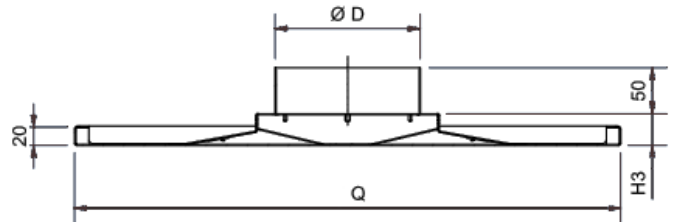


Figure 3. Dimensions, AFL with perforated front panel.

## Specification

For ordering, contact your local Swegon sales office.

## Specification text

Radial flow diffuser AFL with horizontal discharge characteristics, with the following features:

- Designed for efficient integration with suspended metal ceiling systems for supply air.
- The formation of the Coanda effect results in low air velocities and consistent room air temperatures in the occupied zone.
- The uniform, full-surface air flow prevents the room air from being drawn into the diffuser, ensuring that the ceiling panels remain clean.
- Suitable for room heights of 2.5 to 4 m.
- Made of galvanized sheet steel, standard colour black (RAL 9005).