

AFB

Low Velocity Supply Unit



- Horizontal low velocity air supply at floor level
- Flow pattern at an angle of 180 degrees enables large airflow rates with low residual velocities in the occupied zone
- Detachable front panel and metallic internal structure allow cleaning of the unit and ductwork
- Circular duct connection with integral gasket at the top/bottom

Product Models & Accessories

- Stainless steel (AISI 316) design
- Model with thick front panel (1.5 mm)
- Duct cover
- Installation base

MATERIAL AND FINISHING

| PART | MATERIAL | NOTE |
|-----------------------------|--|---------------------------|
| Front panel | Perforated galvanised steel | |
| Casing | Galvanised steel | |
| Flow equalisation element | Perforated galvanised steel | |
| Cover strip | Plastic PVC | |
| Coupling sleeve with gasket | Galvanised steel | Gasket of rubber compound |
| Installation base | Galvanised steel | |
| Duct cover | Galvanised steel | |
| Finishing | Polyester-epoxy-painted White RAL 9010 / 30% gloss | Special colours available |

QUICK SELECTION

| qv | l/s m ³ /h | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |
|--------------|--------------------------|------|------|------|-----|-----|-----|-----|-----|-----|------|------|------|------|
| AFB-200-600 | LpA | 28 | 40 | | | | | | | | | | | |
| | ΔPst | 15 | 33 | | | | | | | | | | | |
| | ΔPtot | 21 | 47 | | | | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | <0.5 | <0.5 | | | | | | | | | | | |
| | L0,2 (- 3 °C) | 2,5 | 3,5 | | | | | | | | | | | |
| AFB-200-1200 | LpA | 20 | 29 | 38 | | | | | | | | | | |
| | ΔPst | 2 | 5 | 8 | | | | | | | | | | |
| | ΔPtot | 8 | 18 | 33 | | | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | <0.5 | <0.5 | 0,6 | | | | | | | | | | |
| | L0,2 (- 3 °C) | 1,6 | 2,1 | 2,7 | | | | | | | | | | |
| AFB-250 | LpA | | 21 | 27 | 33 | 38 | | | | | | | | |
| | ΔPst | | 2 | 4 | 7 | 9 | | | | | | | | |
| | ΔPtot | | 8 | 14 | 22 | 32 | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | <0.5 | 0,6 | 1,0 | 1,6 | | | | | | | | |
| | L0,2 (- 3 °C) | | 2,2 | 2,6 | 3,2 | 3,5 | | | | | | | | |
| AFB-315 | LpA | | | 19 | 22 | 26 | 33 | 41 | | | | | | |
| | ΔPst | | | 2 | 3 | 4 | 6 | 10 | | | | | | |
| | ΔPtot | | | 6 | 9 | 13 | 22 | 35 | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | <0.5 | 0,9 | 1,5 | 2,2 | 3,0 | | | | | | |
| | L0,2 (- 3 °C) | | | 2,7 | 3,0 | 3,4 | 4,3 | 5,0 | | | | | | |
| AFB-400-1200 | LpA | | | | | 21 | 26 | 32 | 37 | | | | | |
| | ΔPst | | | | | 7 | 13 | 20 | 28 | | | | | |
| | ΔPtot | | | | | 11 | 19 | 29 | 42 | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | 0,5 | 1,2 | 2,3 | 3,0 | | | | | |
| | L0,2 (- 3 °C) | | | | | 3,1 | 3,8 | 4,5 | 5,3 | | | | | |
| AFB-400-1800 | LpA | | | | | 17 | 22 | 27 | 33 | 42 | | | | |
| | ΔPst | | | | | 2 | 3 | 4 | 6 | 11 | | | | |
| | ΔPtot | | | | | 5 | 9 | 14 | 20 | 35 | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | 1,4 | 1,7 | 2,5 | 2,9 | 4,0 | | | | |
| | L0,2 (- 3 °C) | | | | | 3,9 | 4,6 | 5,5 | 5,8 | 7,5 | | | | |
| AFB-500 | LpA | | | | | 19 | 22 | 26 | 33 | 40 | | | | |
| | ΔPst | | | | | 3 | 5 | 8 | 14 | 22 | | | | |
| | ΔPtot | | | | | 6 | 9 | 13 | 24 | 37 | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | 1,5 | 1,9 | 2,3 | 3,4 | 4,6 | | | | |
| | L0,2 (- 3 °C) | | | | | 3,8 | 4,4 | 4,9 | 6,0 | 7,3 | | | | |
| AFB-630 | LpA | | | | | | | 20 | 22 | 27 | 31 | 36 | 41 | |
| | ΔPst | | | | | | | 4 | 6 | 10 | 16 | 23 | 31 | |
| | ΔPtot | | | | | | | 6 | 8 | 14 | 22 | 32 | 43 | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | 1,6 | 2,0 | 3,1 | 4,2 | 5,6 | 6,9 | |
| | L0,2 (- 3 °C) | | | | | | | 4,3 | 4,6 | 5,6 | 6,6 | 7,5 | 8,3 | |
| AFB-800 | LpA | | | | | | | | 19 | 24 | 29 | 33 | 37 | |
| | ΔPst | | | | | | | | 8 | 13 | 19 | 26 | 34 | |
| | ΔPtot | | | | | | | | 10 | 16 | 22 | 30 | 40 | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | | 2,6 | 4,2 | 5,6 | 6,9 | 8,0 | |
| | L0,2 (- 3 °C) | | | | | | | | 5,3 | 6,2 | 7,4 | 8,3 | 9,1 | |

LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 25m² - sab):

LpA - 4dB.

LpA-weighted sound pressure level, reduced by total equivalent absorption surface of 10m², dB(A) red 10m² - sab

ΔPst Static pressure drop, Pa

ΔPtot Total pressure drop, Pa

L_{0,2} (-3 °C 1.1 m) Throw length, m when residual velocity of supply air jet 0,2 m/s, ΔT -3 °C in 1,1 m height

L_{0,2} (- 3 °C) Throw length, m when residual velocity of supply air jet 0,2 m/s, ΔT -3 °C

Room temperature (Tr) = 24 °C

Supply air temperature (Ta) = 21 °C



Product Options & Accessories

Product options

- Duct cover (DC) made of perforated steel (same as AFB)
- Construction made of stainless steel AISI 316
- Thicker front panel (1.5 mm)
- Smaller than standard duct connection of the unit
- Cover strip in white, grey, black or blue colours

| ACCESSORY | CODE | DESCRIPTION |
|------------------------------|------|---|
| Duct cover (1) | DC | Standard lengths 1000 / 1500 / 2000 mm |
| Installation base (2) | AB | Standard height 50 mm for sizes 200 ... 315 |
| Installation base (2) | AB | Standard height 100 mm for sizes 400 ... 800 |
| Installation base high model | SB | Standard height 200 mm Dimensions = (unit size+ 60 mm) |

Function

Air is supplied into the space through the front panel of the unit, normally at a slightly lower temperature than the room air temperature.

The supply air flows down to floor level and gradually pervades at low velocity level the occupied space and finally rises up due to the convection of warm surfaces.

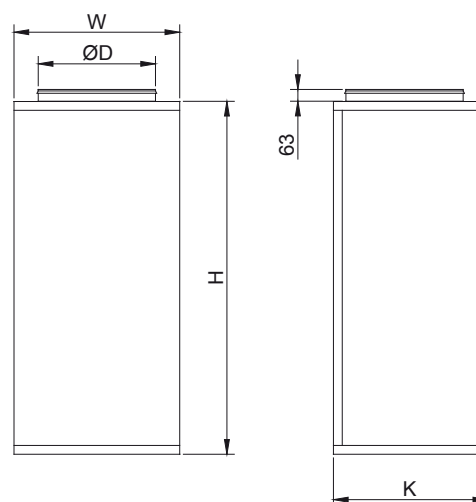
The low velocity flow pattern is semicircular (180°). Openable and cleanable unit with non-clogging design.

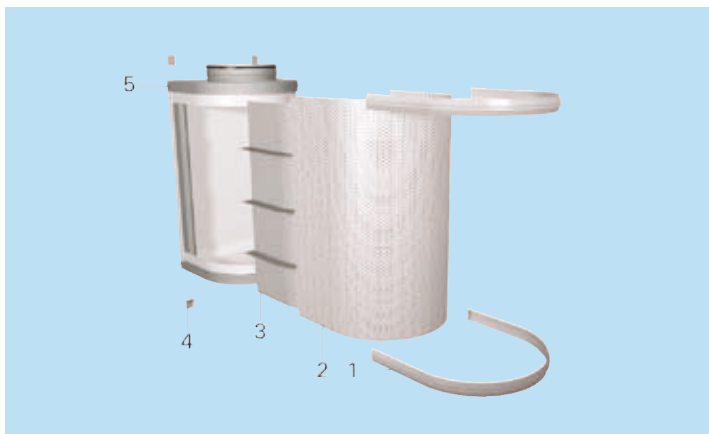
Note: The flow pattern data has been defined for floor installation.

DIMENSIONS

| NS | W | H | K | ØD |
|----------|-----|------|-----|-----|
| 200-600 | 324 | 600 | 305 | 199 |
| 200-1200 | 324 | 1200 | 305 | 199 |
| 250 | 394 | 1200 | 365 | 249 |
| 315 | 459 | 1500 | 430 | 314 |
| 400-1200 | 564 | 1200 | 525 | 399 |
| 400-1800 | 564 | 1800 | 525 | 399 |
| 500 | 704 | 1800 | 645 | 499 |
| 630 | 824 | 1800 | 770 | 629 |
| 800 | 984 | 1800 | 935 | 799 |

- AB/AFB installation base: height = 50 mm (200 ... 315), and 100 mm (400 ... 800).
- SB/AFB installation base, high model: height = 200 mm, $W=W+120$, $K=K+60$.





Servicing

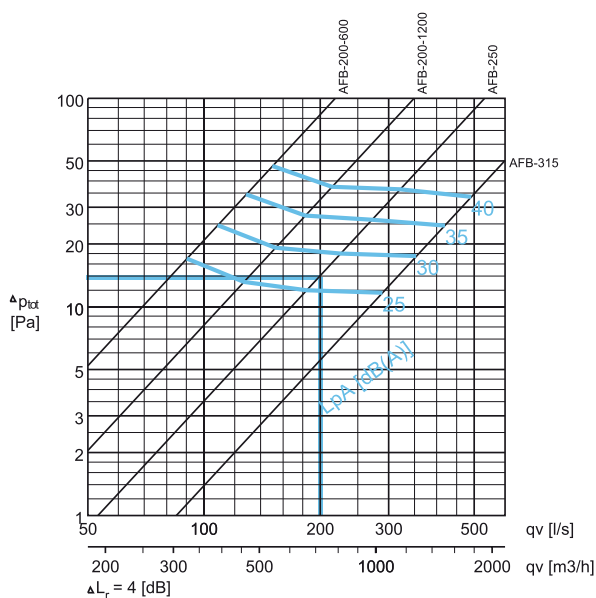
CODE DESCRIPTION

| | |
|---|---------------------------|
| 1 | Cover strips |
| 2 | Front panel |
| 3 | Flow equalization element |
| 4 | Assembly brackets |
| 5 | Casing |

Open the front panel (2) by first removing the cover strips (1) and unscrewing the screws. Pull out the front panel. If required, the flow equalization element (3) can be detached by unscrewing the fixing screws. Pull out the inner structure. Wipe the parts with a damp cloth, instead of immersing in water. Reassemble after cleaning in reverse order.

Pressure drop and sound data, supply

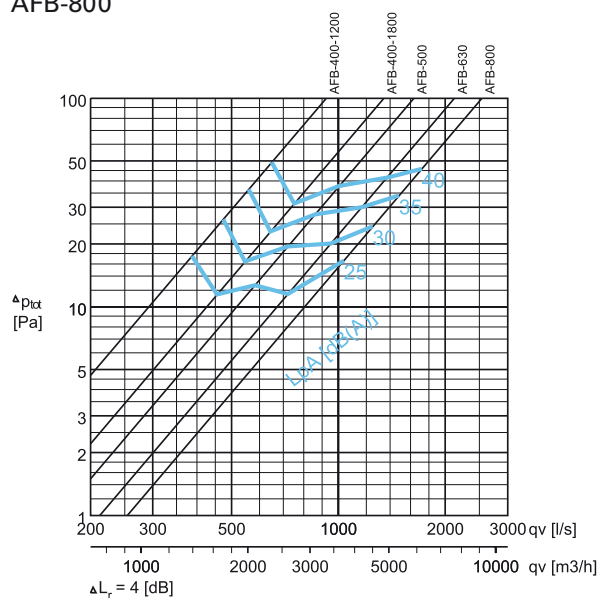
AFB-200-600, AFB-200-1200, AFB-250, AFB-315



Selection example :

Requirements : $qv = 200$ l/s
 $LpA \leq 30$ dB(A)
 Selection : AFB-250
 $\Delta p_{tot} = 14$ Pa
 $LpA = 27$ dB(A)

AFB-400-1200, AFB-400-1800, AFB-500, AFB-630, AFB-800



SOUND LEVEL DATA, SUPPLY

| | qv | | ΔP_{st} (Pa) | ΔP_{tot} (Pa) | F (Hz) | | | | | | | | LpA [dB(A)] | NR | NC |
|--------------|-------|---------------------|-------------------------|--------------------------|--------|-----|-----|-----|------|------|------|------|----------------|----|----|
| | (l/s) | (m ³ /h) | | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | | |
| AFB-200-600 | 90 | 324 | 12 | 17 | 42 | 26 | 29 | 29 | 23 | 11 | 10 | 17 | 25 | 21 | 19 |
| | 109 | 392 | 17 | 25 | 42 | 29 | 33 | 33 | 29 | 20 | 16 | 19 | 30 | 25 | 24 |
| | 129 | 464 | 25 | 35 | 42 | 32 | 37 | 38 | 35 | 27 | 22 | 21 | 35 | 31 | 30 |
| | 150 | 540 | 34 | 47 | 43 | 35 | 40 | 41 | 41 | 35 | 27 | 24 | 40 | 37 | 36 |
| AFB-200-1200 | 127 | 457 | 3 | 13 | 41 | 26 | 29 | 29 | 22 | 13 | 3 | 18 | 25 | 21 | 19 |
| | 153 | 551 | 5 | 19 | 42 | 30 | 33 | 34 | 29 | 21 | 10 | 19 | 30 | 26 | 24 |
| | 183 | 659 | 7 | 27 | 43 | 33 | 36 | 38 | 35 | 28 | 18 | 20 | 35 | 31 | 29 |
| | 214 | 770 | 10 | 38 | 43 | 36 | 39 | 42 | 40 | 35 | 25 | 21 | 40 | 36 | 35 |
| AFB-250 | 184 | 662 | 4 | 12 | 36 | 28 | 28 | 27 | 23 | 12 | 15 | 23 | 25 | 27 | 23 |
| | 225 | 810 | 5 | 18 | 39 | 31 | 33 | 32 | 29 | 20 | 20 | 25 | 30 | 28 | 24 |
| | 272 | 979 | 8 | 26 | 42 | 34 | 37 | 37 | 35 | 28 | 24 | 26 | 35 | 31 | 30 |
| | 321 | 1156 | 11 | 37 | 44 | 37 | 40 | 42 | 40 | 36 | 28 | 27 | 40 | 36 | 35 |
| AFB-315 | 290 | 1044 | 3 | 12 | 45 | 27 | 28 | 27 | 22 | 12 | 15 | 23 | 25 | 26 | 23 |
| | 354 | 1274 | 5 | 17 | 46 | 31 | 32 | 32 | 29 | 21 | 20 | 24 | 30 | 27 | 24 |
| | 420 | 1512 | 7 | 25 | 47 | 34 | 36 | 37 | 35 | 29 | 24 | 25 | 35 | 31 | 30 |
| | 491 | 1768 | 10 | 34 | 47 | 37 | 40 | 41 | 41 | 36 | 28 | 25 | 40 | 37 | 36 |
| AFB-400-1200 | 387 | 1393 | 12 | 18 | 46 | 27 | 29 | 26 | 21 | 12 | 14 | 24 | 25 | 27 | 24 |
| | 474 | 1706 | 18 | 26 | 47 | 31 | 34 | 32 | 29 | 21 | 19 | 25 | 30 | 28 | 25 |
| | 558 | 2009 | 25 | 36 | 47 | 34 | 37 | 37 | 35 | 29 | 24 | 25 | 35 | 31 | 29 |
| | 649 | 2336 | 33 | 49 | 48 | 37 | 41 | 42 | 40 | 36 | 28 | 26 | 40 | 36 | 35 |
| AFB-400-1800 | 455 | 1638 | 4 | 11 | 46 | 31 | 29 | 26 | 23 | 12 | 13 | 19 | 25 | 23 | 19 |
| | 545 | 1962 | 5 | 16 | 47 | 34 | 33 | 32 | 29 | 20 | 19 | 23 | 30 | 27 | 24 |
| | 644 | 2318 | 7 | 23 | 47 | 37 | 37 | 37 | 35 | 28 | 24 | 27 | 35 | 31 | 30 |
| | 751 | 2704 | 10 | 31 | 48 | 39 | 40 | 41 | 40 | 35 | 29 | 30 | 40 | 36 | 35 |
| AFB-500 | 583 | 2099 | 7 | 13 | 43 | 37 | 29 | 24 | 21 | 11 | 18 | 24 | 25 | 27 | 24 |
| | 721 | 2596 | 11 | 19 | 46 | 40 | 34 | 31 | 28 | 20 | 22 | 26 | 30 | 29 | 26 |
| | 861 | 3100 | 16 | 28 | 48 | 42 | 38 | 36 | 35 | 28 | 25 | 28 | 35 | 31 | 29 |
| | 1007 | 3625 | 22 | 38 | 50 | 44 | 41 | 41 | 40 | 35 | 29 | 29 | 40 | 36 | 35 |
| AFB-630 | 722 | 2599 | 8 | 12 | 49 | 40 | 31 | 21 | 15 | 3 | 9 | 14 | 25 | 18 | 15 |
| | 952 | 3427 | 14 | 20 | 53 | 44 | 36 | 31 | 26 | 13 | 15 | 18 | 30 | 22 | 21 |
| | 1164 | 4190 | 22 | 30 | 55 | 46 | 39 | 37 | 33 | 23 | 19 | 20 | 35 | 29 | 28 |
| | 1372 | 4939 | 30 | 42 | 55 | 48 | 43 | 43 | 40 | 31 | 23 | 21 | 40 | 36 | 35 |
| AFB-800 | 1037 | 3733 | 14 | 17 | 49 | 42 | 28 | 22 | 13 | 5 | 9 | 12 | 25 | 18 | 17 |
| | 1250 | 4500 | 21 | 24 | 53 | 46 | 34 | 29 | 22 | 14 | 13 | 13 | 30 | 23 | 22 |
| | 1483 | 5339 | 29 | 34 | 56 | 50 | 38 | 36 | 31 | 23 | 17 | 14 | 35 | 28 | 27 |
| | 1719 | 6188 | 39 | 46 | 59 | 54 | 43 | 42 | 38 | 30 | 20 | 15 | 40 | 34 | 33 |

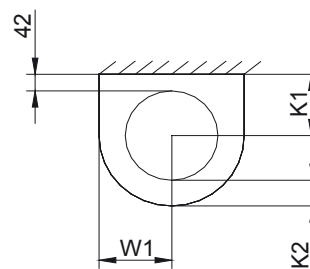
LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 25m² - sab): LpA - 4dB.
NR/NC noise criteria

Installation

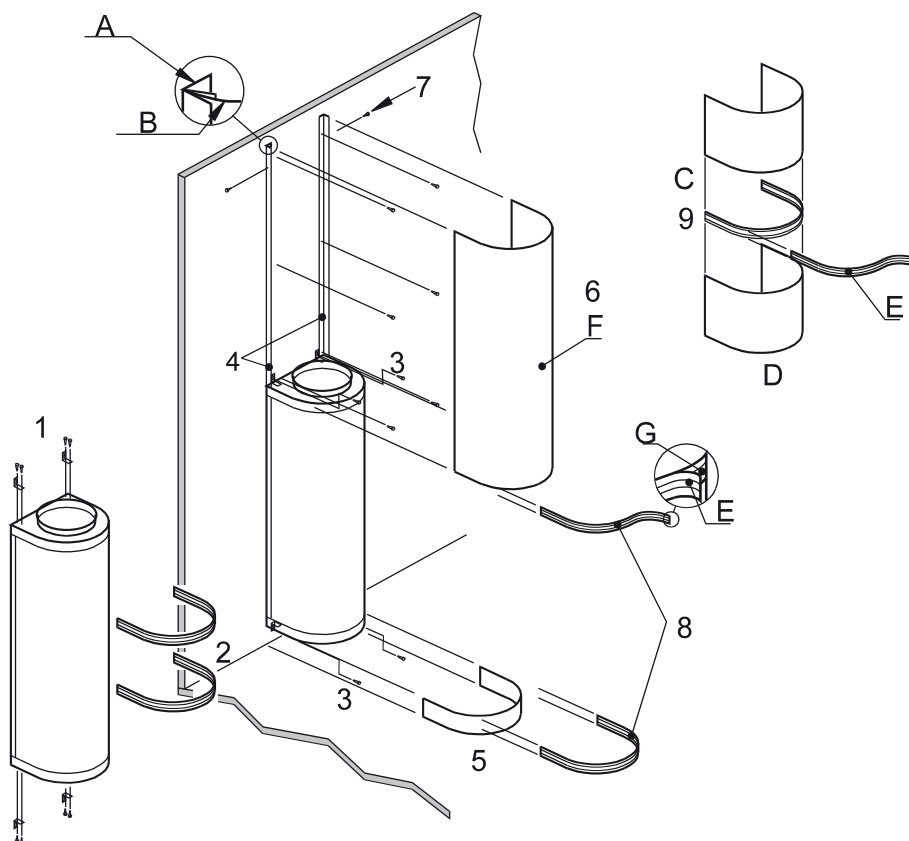
Perform the installation in the numerical order.

1. Fix mounting brackets (4 places) to low velocity unit.
2. Remove plastic cover strips (E) from unit.
3. Locate unit against wall and secure through mounting brackets.
4. Fix duct cover support brackets (A) to wall between unit and ceiling.
5. Position AS base against lower flange of the unit.
6. After installation of ductwork, locate DC duct cover as follows : Locate DC duct cover section (F) on top flange (G) of AF unit and firmly push into support brackets fixed to wall (B).
7. Secure DC duct cover with screws through cover into support brackets.
8. Re-fit plastic cover strips between DC duct cover and AF unit, and between AS base and AF unit by bending strip back on itself (E) and pressing bead into groove in flange (G).
9. When multiple sections of DC duct cover are used (D) an aluminium coupling flange (C) is needed.

Duct installation



| AFB | W1 | K1 | K2 |
|-----|-----|-----|----|
| 200 | 162 | 142 | 58 |
| 250 | 197 | 167 | 68 |
| 315 | 230 | 202 | 68 |
| 400 | 282 | 242 | 78 |
| 500 | 352 | 292 | 98 |
| 800 | 492 | 442 | 88 |



Suggested specifications

The low velocity unit shall be made of polyester-epoxy-painted hot galvanized steel, with white (RAL 9010) colour.

The unit shall have a robust maintenance-free, non-clogging structure.

The unit shall comprise a detachable, perforated front panel and a hygienic internal fixed flow equalization element.

The unit shall have a circular duct connection at the top or bottom depending the location of the unit.

Mounting bracket shall include in the delivery.

Option

The unit shall be equipped with a duct cover, installation base and/or coloured cover strip where required.

The front panel of the unit shall be made of galvanised steel with a thickness of 1.5 mm.

Product code

AFB-D-H

D = Diameter of duct connection
200, 250, 315, 400, 500, 630, 800

H = Height
D=200: 600, 1200
D=250: 1200
D=315: 1500
D=400: 1200, 1800
D>400: 1800

Specifics and accessories

SD = Special size of duct connection

| | |
|-----|--------------|
| N | Not assigned |
| 160 | 160 |
| 200 | 200 |
| 250 | 250 |
| 315 | 315 |
| 400 | 400 |
| 500 | 500 |
| 630 | 630 |

MA = Material

| | |
|----|---------------------------|
| CS | Steel |
| AS | Stainless steel, AISI 316 |

TP = Front panel thickness 1.5 mm

| | |
|---|-----|
| N | No |
| Y | Yes |

CO = Colour

| | |
|---|----------------|
| W | White |
| X | Special colour |

CP = Plastic Strip Colour

| | |
|---|-------|
| W | White |
| G | Grey |
| B | Black |
| L | Blue |

AC = Accessories

| | |
|----|-------------------------------|
| AB | Base |
| SB | Installation base/ high model |

Code example

AFB-200-600, SD=N,MA=CS,TP=N,CO=W,CP=W

Sub products

DC Duct cover (Low velocity units)