

AFQ

Low Velocity Supply Unit



- Horizontal low velocity air supply at floor level
- Installation in corner of the space; flow pattern in an angle of 90 degrees
- Detachable front plate and metallic internal structure enable cleaning of the unit and ductwork
- Circular duct connection with integral gasket on top/bottom

Product Models & Accessories

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

MATERIALS AND FINISHING

| PART | MATERIAL | NOTE |
|---------------------------|--|------------------------------------|
| Front panel | Perforated galvanised steel | Stainless steel AISI 316 as option |
| Casing | Galvanised steel | Stainless steel AISI 316 as option |
| Flow equalisation element | Perforated galvanised steel | |
| Cover strip | Plastic PVC | |
| Spigot | Galvanised steel | |
| Gasket | Rubber compound | |
| Installation base | Galvanised steel | |
| Duct cover | Galvanised steel | |
| Finishing | Polyester-epoxy-painted RAL 9010 / 30% gloss | Special colours available |

QUICK SELECTION

| qv | l/s m ³ /h | 20 | 30 | 40 | 60 | 80 | 100 | 140 | 180 | 240 | 300 | 400 | 500 | 600 | 800 | 1100 |
|---------|--------------------------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|------|------|
| AFQ-100 | LpA | 20 | 28 | 36 | | | | | | | | | | | | |
| | ΔPst | 7 | 15 | 27 | | | | | | | | | | | | |
| | ΔPtot | 11 | 24 | 42 | | | | | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | < 0.5 | < 0.5 | < 0.5 | | | | | | | | | | | | |
| | L0,2 (- 3 °C) | 1,3 | 2,1 | 2,7 | | | | | | | | | | | | |
| AFQ-125 | LpA | | 19 | 25 | 37 | | | | | | | | | | | |
| | ΔPst | | 9 | 16 | 36 | | | | | | | | | | | |
| | ΔPtot | | 13 | 22 | 50 | | | | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | < 0.5 | < 0.5 | < 0.5 | | | | | | | | | | | |
| | L0,2 (- 3 °C) | | 1,9 | 2,5 | 3,7 | | | | | | | | | | | |
| AFQ-160 | LpA | | | | 22 | 28 | 34 | | | | | | | | | |
| | ΔPst | | | | 8 | 15 | 23 | | | | | | | | | |
| | ΔPtot | | | | 14 | 24 | 38 | | | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | < 0.5 | < 0.5 | 1,2 | | | | | | | | | |
| | L0,2 (- 3 °C) | | | | 2,4 | 3,0 | 3,7 | | | | | | | | | |
| AFQ-200 | LpA | | | | | | 19 | 27 | 34 | | | | | | | |
| | ΔPst | | | | | | 4 | 8 | 12 | | | | | | | |
| | ΔPtot | | | | | | 10 | 19 | 32 | | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | | 0,7 | 1,7 | 2,6 | | | | | | | |
| | L0,2 (- 3 °C) | | | | | | 3,0 | 3,7 | 4,5 | | | | | | | |
| AFQ-250 | LpA | | | | | | 15 | 20 | 26 | 35 | | | | | | |
| | ΔPst | | | | | | 4 | 8 | 13 | 23 | | | | | | |
| | ΔPtot | | | | | | 6 | 13 | 21 | 37 | | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | | < 0.5 | 0,7 | 1,0 | 1,7 | | | | | | |
| | L0,2 (- 3 °C) | | | | | | 2,0 | 2,7 | 3,2 | 3,9 | | | | | | |
| AFQ-315 | LpA | | | | | | | 20 | 23 | 28 | 34 | | | | | |
| | ΔPst | | | | | | | 6 | 10 | 18 | 27 | | | | | |
| | ΔPtot | | | | | | | 8 | 13 | 23 | 36 | | | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | 1,2 | 1,8 | 2,7 | 3,5 | | | | | |
| | L0,2 (- 3 °C) | | | | | | | 3,4 | 4,0 | 5,1 | 5,8 | | | | | |
| AFQ-400 | LpA | | | | | | | | | 16 | 23 | 31 | 38 | | | |
| | ΔPst | | | | | | | | | 8 | 13 | 21 | 30 | | | |
| | ΔPtot | | | | | | | | | 11 | 20 | 30 | 44 | | | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | | | 2,8 | 4,5 | 6,3 | 7,8 | | | |
| | L0,2 (- 3 °C) | | | | | | | | | 5,3 | 6,6 | 7,7 | 9,0 | | | |
| AFQ-500 | LpA | | | | | | | | | | 19 | 23 | 28 | 37 | | |
| | ΔPst | | | | | | | | | | 9 | 14 | 20 | 36 | | |
| | ΔPtot | | | | | | | | | | 11 | 18 | 26 | 46 | | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | | | | 3,2 | 5,1 | 7,0 | 9,4 | | |
| | L0,2 (- 3 °C) | | | | | | | | | | 6,0 | 7,2 | 8,1 | 10,4 | | |
| AFQ-630 | LpA | | | | | | | | | | | 21 | 22 | 27 | 38 | |
| | ΔPst | | | | | | | | | | | 9 | 13 | 22 | 42 | |
| | ΔPtot | | | | | | | | | | | 10 | 15 | 26 | 50 | |
| | L0,2 (-3 °C 1.1 m) | | | | | | | | | | | 4,6 | 5,5 | 8,4 | 11,5 | |
| | L0,2 (- 3 °C) | | | | | | | | | | | 6,4 | 7,6 | 9,5 | 12,2 | |

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

LpA - 4dB.

LpA A-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



Accessories and Product Models

Product Models and Options

- Model with stainless steel (AISI 316) design
- Duct cover (DC) made of perforated steel (same as AFQ)
- Thick front panel (1.5 mm)
- Smaller duct connection for the unit
- Cover strip in white, grey, black or blue colour

| ACCESSORY | CODE | DESCRIPTION |
|-----------------------|------|--|
| Duct cover (1) | DC | Standard lengths 1000/1500/2000 mm |
| Installation base (2) | AB | Standard height 50 mm Sizes 200...315 |
| Installation base (2) | AB | Standard height 100 mm Sizes 400...800 |
| Installation base | 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.

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

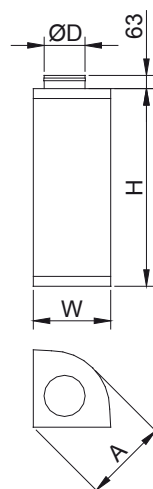
The low velocity flow pattern is quarter-circular (90°). The unit has an openable and cleanable unit with non-clogging design.

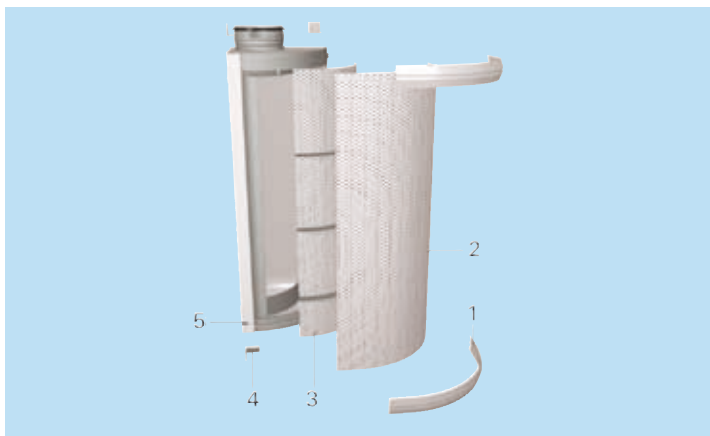
Note: The flow pattern data has been defined for floor installation.

DIMENSIONS

| NS | W | H | ØD | A |
|-----|-----|------|-----|-----|
| 100 | 205 | 600 | 99 | 224 |
| 125 | 235 | 600 | 124 | 255 |
| 160 | 275 | 800 | 159 | 298 |
| 200 | 330 | 1200 | 199 | 355 |
| 250 | 390 | 1200 | 249 | 417 |
| 315 | 475 | 1500 | 314 | 497 |
| 400 | 585 | 1800 | 399 | 616 |
| 500 | 725 | 1800 | 499 | 758 |
| 630 | 890 | 1800 | 629 | 925 |

- AB installation base: height = 50 mm (100 ... 315), and 100 mm (400...630).
- SB installation base, high (store) model: height = 200 mm, $W=W+120$, $A=A+60$.





| CODE | DESCRIPTION |
|------|---------------------------|
| 1 | Plastic cover strips |
| 2 | Front panel |
| 3 | Flow equalization element |
| 4 | Assembly brackets |
| 5 | Casing |

Servicing

Open the front panel (2) by first removing the plastic cover strips (1) and unscrewing the screws.

Pull out the front panel.

If required, the flow equalisation element (3) can be detached by unscrewing the fixing screws.

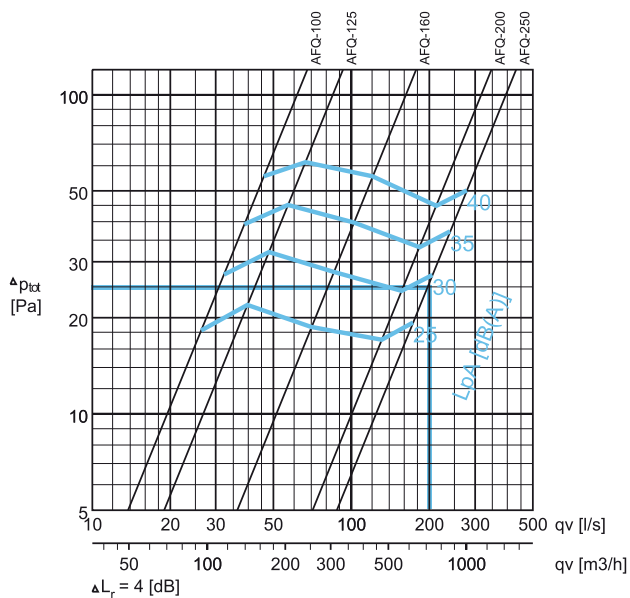
Pull out the flow equalisation element.

Clean the parts with a brush or damp cloth.

After cleaning, reassemble in reverse order.

Pressure drop and sound data, supply

AFQ-100, AFQ-125, AFQ-160, AFQ-200, AFQ-250

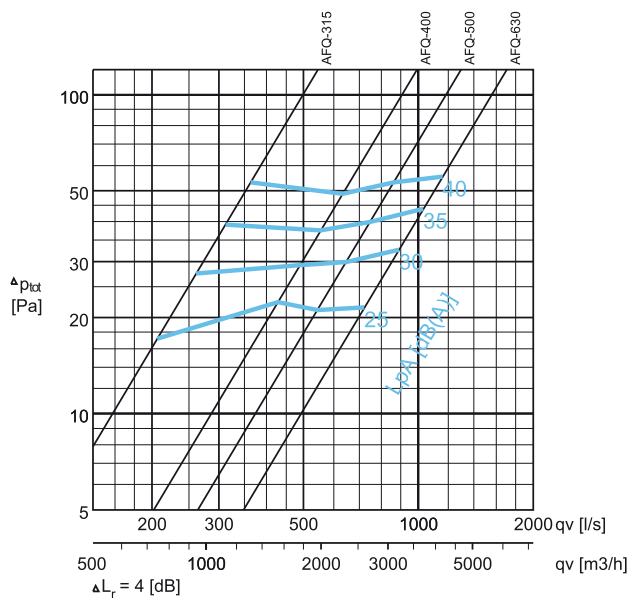


Selection example :

Requirements : $q_v = 200$ l/s
 $L_{pA} \leq 30$ dB(A)

Selection : AFQ-250
 $\Delta p_{tot} = 26$ Pa
 $L_{pA} = 29$ dB(A)

AFQ-315, AFQ-400, AFQ-500, AFQ-600



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 | | | |
| AFQ-100 | 26 | 94 | 12 | 18 | 40 | 24 | 26 | 30 | 22 | 10 | 3 | 18 | 25 | 22 | 20 |
| | 32 | 115 | 17 | 27 | 41 | 25 | 30 | 34 | 29 | 19 | 10 | 19 | 30 | 26 | 25 |
| | 39 | 140 | 25 | 39 | 42 | 26 | 34 | 38 | 36 | 28 | 17 | 20 | 35 | 32 | 30 |
| | 46 | 166 | 35 | 55 | 41 | 27 | 37 | 42 | 41 | 35 | 23 | 21 | 40 | 37 | 35 |
| AFQ-125 | 40 | 144 | 16 | 22 | 30 | 22 | 30 | 29 | 22 | 11 | 5 | 19 | 25 | 22 | 19 |
| | 48 | 173 | 23 | 32 | 31 | 26 | 34 | 34 | 29 | 20 | 12 | 20 | 30 | 26 | 25 |
| | 57 | 205 | 32 | 45 | 32 | 30 | 37 | 39 | 34 | 28 | 17 | 22 | 35 | 31 | 29 |
| | 67 | 241 | 44 | 62 | 32 | 31 | 40 | 43 | 40 | 36 | 22 | 22 | 40 | 36 | 35 |
| AFQ-160 | 70 | 252 | 11 | 19 | 40 | 26 | 32 | 28 | 22 | 11 | 3 | 18 | 25 | 21 | 18 |
| | 85 | 306 | 17 | 28 | 41 | 29 | 35 | 33 | 29 | 21 | 9 | 19 | 30 | 25 | 24 |
| | 102 | 367 | 24 | 40 | 42 | 31 | 37 | 38 | 35 | 29 | 17 | 20 | 35 | 31 | 30 |
| | 121 | 436 | 34 | 55 | 42 | 33 | 40 | 41 | 41 | 36 | 25 | 21 | 40 | 37 | 35 |
| AFQ-200 | 131 | 472 | 7 | 17 | 43 | 28 | 32 | 28 | 22 | 11 | 7 | 14 | 25 | 19 | 18 |
| | 156 | 562 | 9 | 24 | 44 | 32 | 35 | 33 | 29 | 20 | 14 | 18 | 30 | 25 | 23 |
| | 183 | 659 | 13 | 33 | 45 | 36 | 38 | 38 | 35 | 27 | 20 | 22 | 35 | 31 | 29 |
| | 213 | 767 | 17 | 45 | 45 | 38 | 41 | 42 | 41 | 34 | 26 | 26 | 40 | 37 | 35 |
| AFQ-250 | 173 | 623 | 12 | 19 | 41 | 28 | 30 | 27 | 24 | 13 | 17 | 20 | 25 | 23 | 20 |
| | 206 | 742 | 17 | 27 | 42 | 31 | 34 | 32 | 30 | 22 | 19 | 21 | 30 | 26 | 24 |
| | 241 | 868 | 23 | 37 | 43 | 34 | 38 | 36 | 35 | 29 | 21 | 22 | 35 | 31 | 30 |
| | 279 | 1004 | 31 | 50 | 43 | 36 | 40 | 40 | 41 | 36 | 27 | 26 | 40 | 37 | 36 |
| AFQ-315 | 207 | 745 | 13 | 17 | 40 | 32 | 30 | 24 | 17 | 10 | 22 | 24 | 25 | 27 | 24 |
| | 261 | 940 | 21 | 27 | 42 | 36 | 35 | 31 | 27 | 20 | 24 | 26 | 30 | 30 | 26 |
| | 312 | 1123 | 30 | 39 | 43 | 39 | 39 | 37 | 34 | 27 | 25 | 28 | 35 | 31 | 29 |
| | 363 | 1307 | 40 | 53 | 43 | 40 | 41 | 41 | 41 | 35 | 26 | 29 | 40 | 37 | 36 |
| AFQ-400 | 428 | 1541 | 15 | 22 | 39 | 28 | 32 | 26 | 24 | 17 | 3 | 17 | 25 | 20 | 18 |
| | 489 | 1760 | 20 | 29 | 40 | 31 | 35 | 31 | 30 | 24 | 8 | 18 | 30 | 26 | 24 |
| | 554 | 1994 | 26 | 37 | 41 | 35 | 37 | 36 | 36 | 30 | 18 | 19 | 35 | 32 | 30 |
| | 633 | 2279 | 34 | 49 | 42 | 37 | 40 | 40 | 41 | 36 | 25 | 19 | 40 | 37 | 36 |
| AFQ-500 | 544 | 1958 | 17 | 21 | 50 | 25 | 31 | 27 | 21 | 10 | 3 | 17 | 25 | 20 | 17 |
| | 647 | 2329 | 23 | 30 | 51 | 31 | 34 | 33 | 29 | 19 | 9 | 18 | 30 | 25 | 23 |
| | 747 | 2689 | 31 | 40 | 52 | 36 | 37 | 38 | 35 | 27 | 14 | 19 | 35 | 31 | 29 |
| | 861 | 3100 | 42 | 53 | 53 | 40 | 41 | 42 | 41 | 35 | 22 | 19 | 40 | 37 | 36 |
| AFQ-630 | 722 | 2599 | 18 | 22 | 52 | 27 | 31 | 26 | 15 | 8 | 10 | 17 | 25 | 20 | 17 |
| | 890 | 3204 | 28 | 33 | 53 | 34 | 36 | 33 | 26 | 13 | 10 | 18 | 30 | 25 | 23 |
| | 1031 | 3712 | 37 | 44 | 53 | 39 | 40 | 39 | 34 | 22 | 10 | 18 | 35 | 31 | 30 |
| | 1158 | 4169 | 47 | 55 | 53 | 43 | 43 | 44 | 40 | 28 | 10 | 19 | 40 | 36 | 35 |

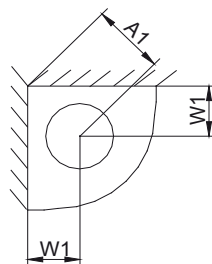
LpA values presented with room attenuation 4 dB (red 10m² - sab). When using room attenuation 8 dB (red 10m² - sab): LpA - 4dB.
NR/NC noise criteria

Installation

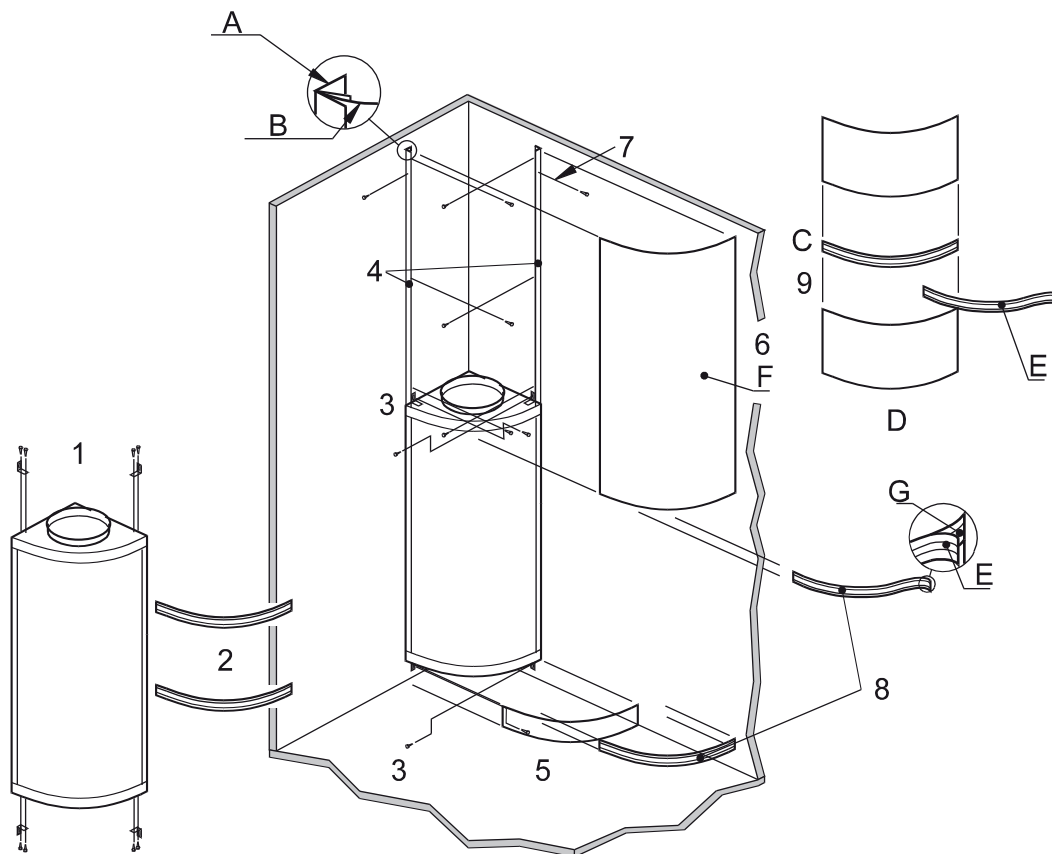
Perform the installation in the numerical order.

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



| NS | A1 | W1 |
|-----|-----|-----|
| 100 | 123 | 87 |
| 125 | 140 | 99 |
| 160 | 151 | 107 |
| 200 | 191 | 135 |
| 250 | 229 | 162 |
| 315 | 274 | 194 |
| 400 | 335 | 237 |
| 500 | 421 | 298 |
| 630 | 511 | 361 |



Suggested specifications

The low velocity unit shall be made of polyester-epoxy-painted galvanised steel with white (RAL 9010) colour. The unit shall have a robust maintenance free, non-clogging design.

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

The unit shall have a circular duct connection at the top or bottom, depending on the location of the unit. Assembly brackets shall be included in the delivery.

Option

The unit shall be equipped with 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

AFQ-D

D = Diameter of duct connection

100, 125, 160, 200, 250, 315, 400, 500, 630

Specifics and accessories

SD = Special size of duct connection

| | |
|-----|--------------|
| N | Not assigned |
| 100 | 100 |
| 125 | 125 |
| 160 | 160 |
| 200 | 200 |
| 250 | 250 |
| 315 | 315 |
| 400 | 400 |
| 500 | 500 |

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

AFQ-100, SD=N,MA=CS,TP=N,CO=W,CP=W

Sub products

DC Duct cover (Low velocity units)