AFF

Low Velocity Supply Unit

- Horizontal low velocity air supply at floor level
- Flat and wide construction
- Large airflow rates with low residual velocities in occupied zone due to large front plate
- Detachable front plate and metallic internal structure enable cleaning of the unit and ductwork
- Rectangular duct connection on top/bottom of the unit

Product Models & Accessories

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

MATERIAL 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	80	100	140	200	240	300	400	500	600	800	1000	1200
	m³/h	288	360	504	720	864	1080	1440	1800	2160	2880	3600	4320
AFF-300x100-600	LpA	19	25	37									
	ΔPst	5	7	14									
	ΔPtot	9	14	27									
	L0,2 (-3 °C 1.1 m)	< 0.5	< 0.5	< 0.5									
	L0,2 (- 3 °C)	1,9	2,5	3,1									
AFF-300x100-1200	LpA	17	21	31	39								
	ΔPst	5	8	16	27								
	ΔPtot	10	15	29	48								
	L0,2 (-3 °C 1.1 m)	< 0.5	< 0.5	0,9	1,6								
	L0,2 (- 3 °C)	2,1	2,6	3,0	3,6								
AFF-600x100-800	LpA		15	20	27	36							
	ΔPst		5	9	16	28							
	ΔPtot		6	13	21	37							
	L0,2 (-3 °C 1.1 m)		< 0.5	< 0.5	< 0.5	< 0.5							
	L0,2 (- 3 °C)		2,1	2,8	3,4	4,6							
AFF-600x100-1200	LpA			20	23	32	39						
	ΔPst			7	12	22	34						
	ΔPtot			11	18	32	49						
	L0,2 (-3 °C 1.1 m)			< 0.5	0,8	1,3	2,1						
	L0,2 (- 3 °C)			2,8	3,1	4,0	4,6						
AFF-600x200-1200	LpA						24	31	39				
	ΔPst						13	23	35				
	ΔPtot						16	29	46				
	L0,2 (-3 °C 1.1 m)						0,9	1,8	2,7				
	L0,2 (- 3 °C)						3,5	4,2	4,9				
AFF-600x200-1800	LpA						17	23	31	38			
	ΔPst						5	10	15	22			
	ΔPtot						9	16	26	37			
	L0,2 (-3 °C 1.1 m)						1,7	2,3	3,0	4,7			
	L0,2 (- 3 °C)						4,3	5,0	5,9	6,6			
AFF-800x250-1200	LpA						19	26	33	39			
	ΔPst						10	18	28	40			
	ΔPtot						11	20	32	45			
	L0,2 (-3 °C 1.1 m)						1,4	2,3	3,5	5,4			
	L0,2 (- 3 °C)						4,0	5,1	5,9	7,2			
AFF-800x250-1800	LpA							20	23	28	40		
	ΔPst							6	9	14	24		
	ΔPtot							8	13	19	34		
	L0,2 (-3 °C 1.1 m)							1,3	1,6	2,1	2,9		
	L0,2 (- 3 °C)							3,5	4,3	4,8	5,8		
AFF-1000x300-1800	LpA								22	25	31	39	
	ΔPst								8	11	20	31	
	ΔPtot								9	14	24	38	
	L0,2 (-3 °C 1.1 m)								1,4	1,7	2,6	3,8	
	L0,2 (- 3 °C)								4,2	4,7	5,5	6,4	
AFF-1000x500-1800	LpA									15	22	31	36
	ΔPst									7	13	20	29
	ΔPtot									8	14	22	32
	L0,2 (-3 °C 1.1 m)									1,9	3,1	4,5	6,2
	L0,2 (- 3 °C)									4,8	5,7	6,6	7,8

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

Product Options & Accessories

Product options

- Model with stainless steel (AISI 316)
- Duct cover (DC) made of perforated steel (same as AFF)
- Thick front panel (1.5 mm)
- Smaller than standard duct connection of 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 300x100 ... 600x100
Installation base (2)	AB	Standard height 100 mm Sizes 600x200 ... 1000x500
Installation base	SB	Standard height 200 mm Dimensions = unit size + 60 mm High (store) model

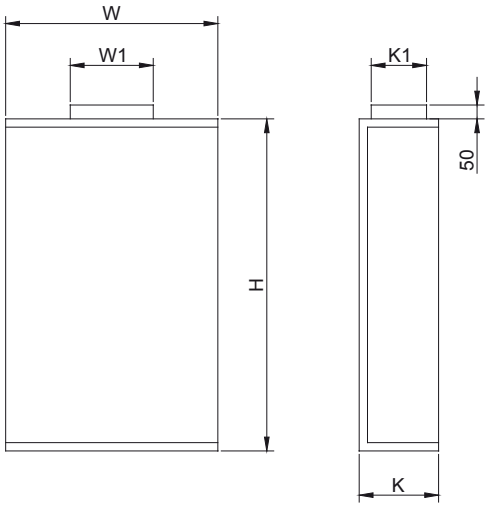
Function

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 to the convection of warm surfaces.
The low velocity flow pattern is semi-circular (180°).
The unit has an openable and cleanable unit with non-clogging design.

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

DIMENSIONS

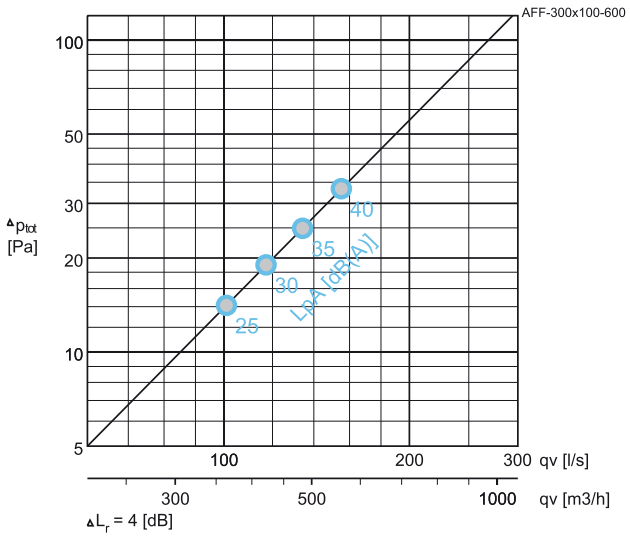
NS	W	H	K	W1xK1
300x100-600	767	605	187	298x98
300x100-1200	767	1205	187	298x98
600x100-800	967	805	187	598x98
600x100-1200	967	1205	187	598x98
600x200-1200	1067	1205	287	598x198
600x200-1800	1067	1805	287	598x198
800x250-1200	1217	1205	337	798x248
800x250-1800	1217	1805	337	798x248
1000x300	1517	1805	387	998x298
1000x500	1817	1805	607	998x498



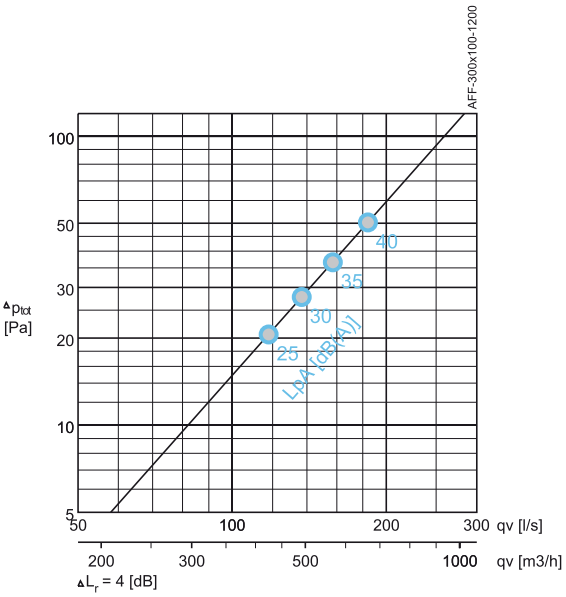
- AB installation base: height = 50 mm (300x100 … 600x100) and 100 mm (600x200 … 1000x500).
- SB installation base, high (store) model: height = 200 mm, W=W+120, K=K+60.

Pressure drop and sound data, supply

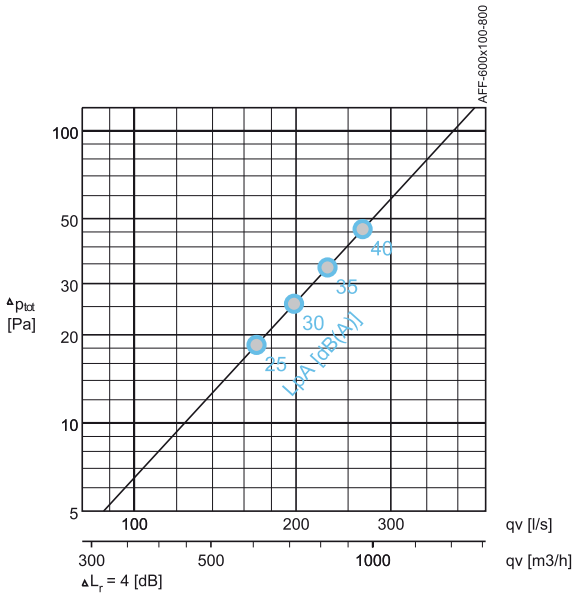
AFF-300x100-600



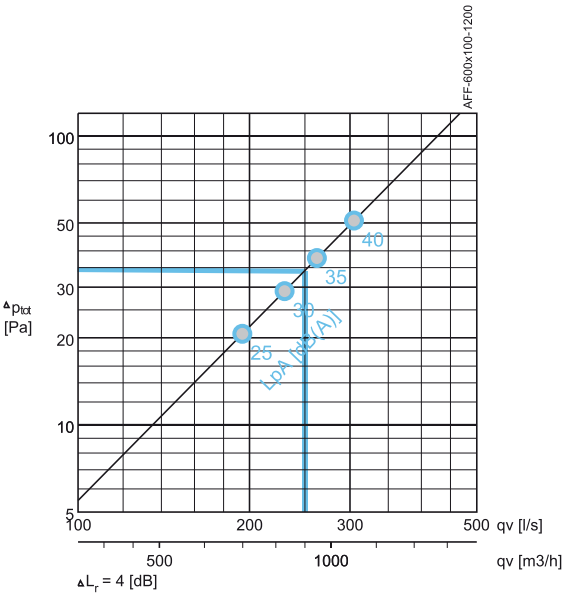
AFF-300x100-1200



AFF-600x100-800



AFF-600x100-1200

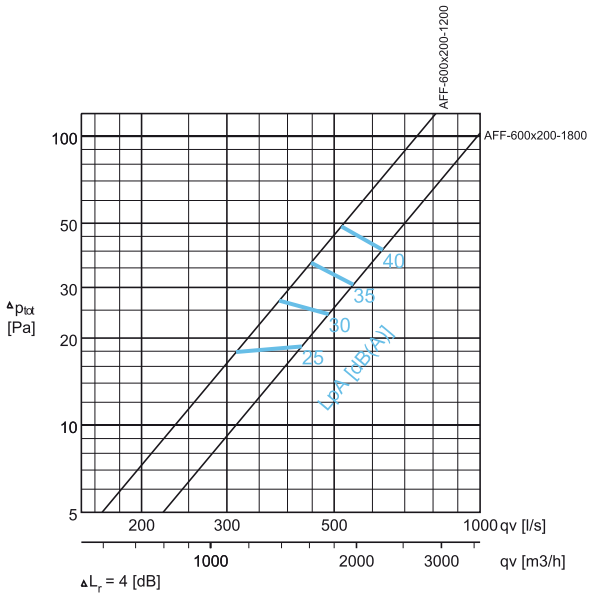


Selection example :

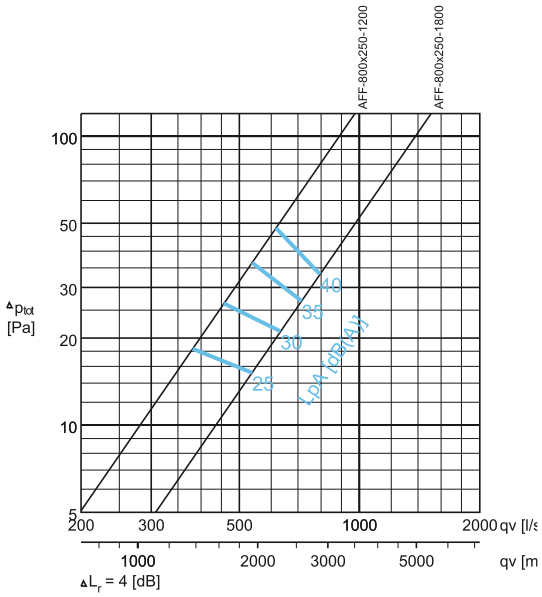
Requirements :	qv = 250 l/s
	LpA ≤ 35 dB(A)
Selection :	AFF-600x100-1200
	Δptot = 34 Pa
	LpA = 33 dB(A)

Pressure drop and sound data, supply

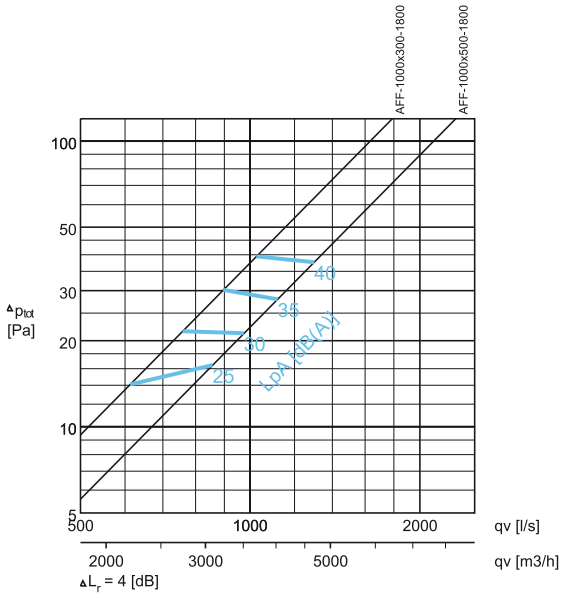
AFF-600x200-1200,
AFF-600x200-1800



AFF-800x250-1200,
AFF-800x250-1800



AFF-1000x300-1800,
AFF-1000x500-1800



SOUND LEVEL DATA, SUPPLY

	qv		ΔPst	ΔPtot	F (Hz)								LpA	NR	NC
	(l/s)	(m³/h)	(Pa)	(Pa)	63	125	250	500	1000	2000	4000	8000	[dB(A)]		
AFF-300x100-600	101	364	7	14	41	24	32	28	21	3	12	20	25	23	20
	117	421	10	19	43	31	36	34	28	9	15	21	30	26	24
	134	482	13	25	44	37	39	39	34	21	18	22	35	31	29
	155	558	17	33	46	40	43	43	40	30	21	22	40	36	35
AFF-300x100-1200	118	425	11	21	42	28	27	29	23	5	15	21	25	24	21
	137	493	15	28	42	30	32	34	29	16	15	21	30	26	24
	157	565	20	37	43	33	35	38	35	24	20	22	35	31	29
	184	662	28	50	43	37	39	42	41	32	26	23	40	37	36
AFF-600x100-800	169	608	14	18	41	28	30	28	22	6	16	20	25	24	20
	198	713	19	26	41	30	34	34	29	15	18	22	30	26	24
	229	824	25	34	42	32	38	39	35	23	19	23	35	31	30
	266	958	34	46	43	36	41	43	40	32	21	23	40	36	35
AFF-600x100-1200	194	698	14	21	41	27	29	29	19	8	19	21	25	24	21
	230	828	20	29	42	31	33	34	28	16	19	22	30	26	25
	263	947	26	38	43	35	37	38	35	22	19	23	35	31	30
	305	1098	35	51	43	36	39	43	41	30	21	24	40	37	36
AFF-600x200-1200	313	1127	14	18	42	33	31	27	20	12	17	22	25	25	22
	385	1386	21	27	43	34	34	33	29	21	19	23	30	26	23
	447	1609	28	36	44	35	37	37	36	28	21	24	35	32	30
	517	1861	38	49	45	36	40	41	41	35	21	24	40	37	36
AFF-600x200-1800	428	1541	11	19	44	29	28	29	20	10	17	21	25	24	21
	487	1753	14	24	44	29	33	34	28	18	19	23	30	26	24
	548	1973	18	31	45	30	37	39	35	25	21	24	35	31	30
	629	2264	24	40	45	36	41	43	41	33	21	24	40	37	35
AFF-800x250-1200	382	1375	16	18	44	30	31	27	22	8	17	19	25	22	19
	457	1645	23	26	45	33	35	33	29	15	20	23	30	26	23
	537	1933	32	36	46	36	39	38	35	22	23	27	35	31	29
	618	2225	42	48	46	40	43	42	41	30	24	27	40	37	36
AFF-800x250-1800	537	1933	11	15	44	33	30	27	16	11	19	22	25	25	22
	633	2279	15	21	45	36	35	33	26	19	20	23	30	26	24
	715	2574	19	27	46	38	39	38	34	24	21	24	35	30	29
	795	2862	24	33	47	40	42	43	40	30	27	30	40	36	35
AFF-1000x300-1800	613	2207	12	14	50	36	33	23	3	3	9	21	25	24	21
	759	2732	18	22	52	41	38	32	14	3	14	22	30	25	22
	896	3226	25	30	54	44	43	38	26	14	19	23	35	31	29
	1027	3697	32	40	56	47	46	44	36	22	22	23	40	36	35
AFF-1000x500-1800	858	3089	15	16	33	42	33	9	10	10	10	10	25	19	18
	975	3510	19	21	44	47	38	20	10	10	10	10	30	25	24
	1119	4028	25	28	45	49	43	30	25	20	20	20	35	29	26
	1299	4676	34	38	52	52	48	42	35	26	26	26	40	34	33

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

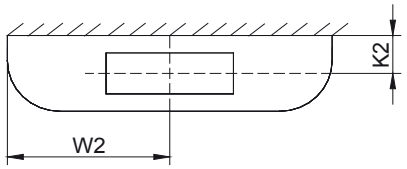
Perform the installation in the numerical order.

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 :

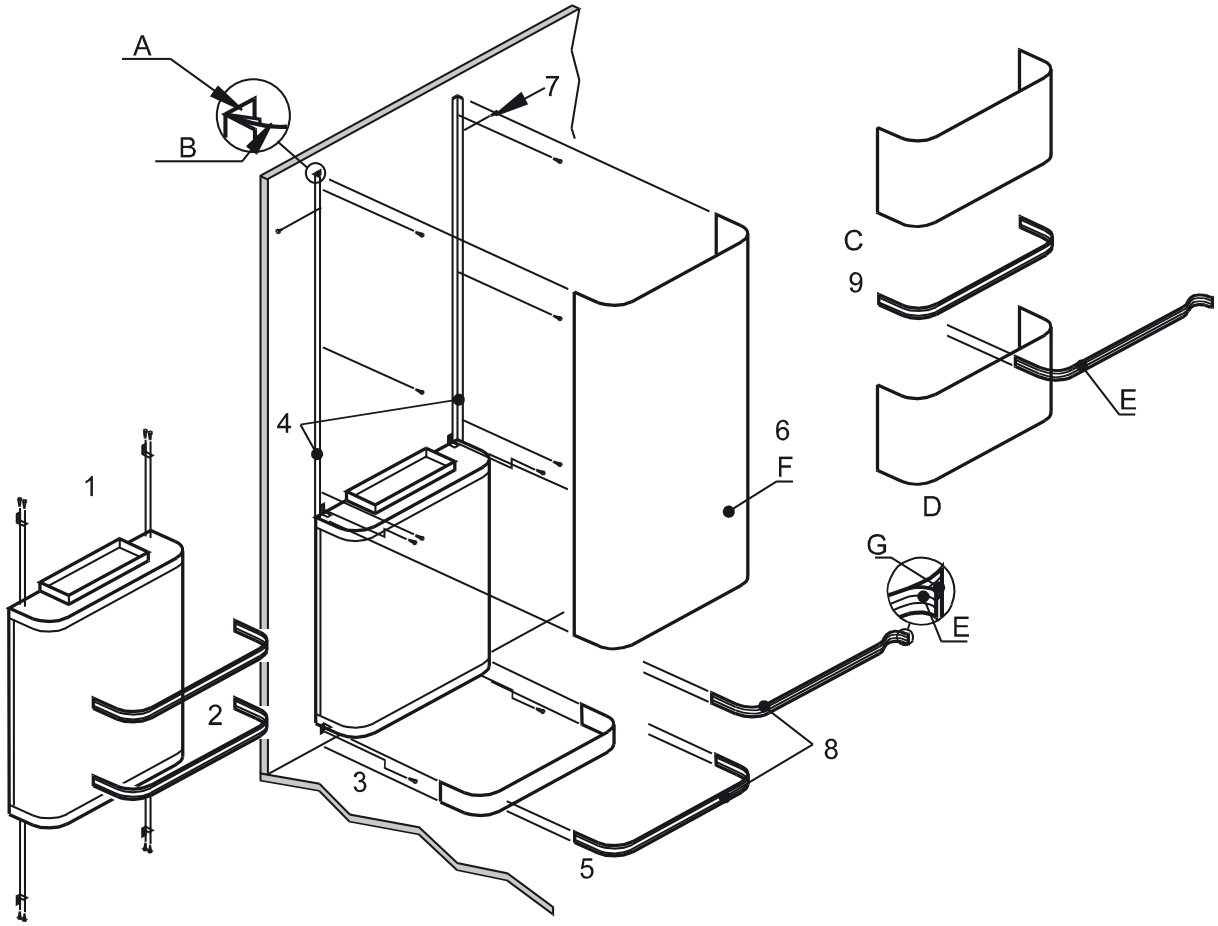
Locate DC duct cover section (F) on top flange (G) of AF unit and firmly push into support brackets fixed to wall (B).

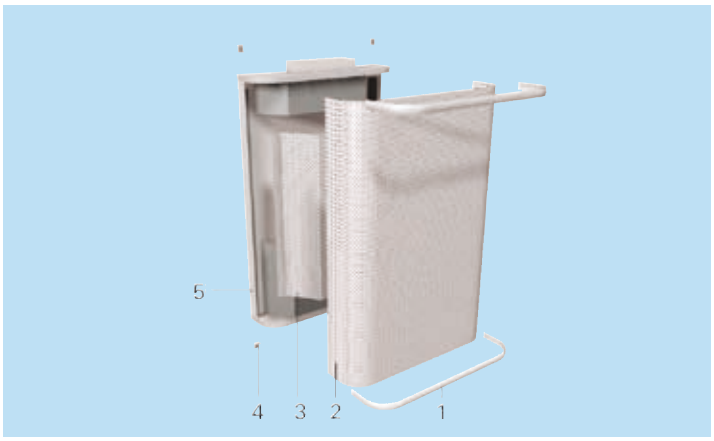
7. Secure DC duct cover with screws through cover into support brackets.
8. Re-fit plastic cover strips between DC duct cover and AF unit, and between AS base and AF unit by bending strip back on itself (E) and pressing bead into groove in flange (G).
9. When multiple sections of DC duct cover are used (D) an aluminium coupling flange (C) is needed.

Duct installation



AFF	W2	K2
300x100	375	71
600x100	475	71
600x200	525	120
800x250	600	145
1000x300	750	170
1000x500	900	270





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 plastic strips (1) and unscrew 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 inner structure. Clean the parts with a brush or a damp cloth.
After cleaning, reassemble in reverse order.

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 an internal fixed flow equalisation element. The unit shall have a rectangular 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

AFF-D-H

D = Size of duct connection
- 300 x 100
- 600 x 100
- 600 x 200
- 800 x 250
- 1000 x 300
- 1000 x 500

H = Unit height
- D=300 x 100: 600, 1200
- D=600 x 100: 800, 1200
- D=600 x 200: 1200, 1800
- D=800 x 250: 1200, 1800
- D=1000 x 300: 1800
- D=1000 x 500: 1800

Specifics and accessories

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

AFF-300x100-600, MA=CS,TP=N,CO=W,CP=W

Sub products

DC	Duct cover (Low velocity units)