

AFB -Semicircular Low Velocity Displacement Diffuser



- Circular duct connection D200...800mm with an integral rubber gasket to D400mm.
- Flat front panel and internal distribution structure are detachable.
- Provides large draught free air flows in the occupied area.
- Flow pattern of 180° ensures a rapid reduction in velocity.
- Normally mounted against a wall.

QUICK SELECTION

AFB-800	Δ _{ptot}									17	24	34
AFB-630	Δ _{ptot}									12	20	30
AFB-500	Δ _{ptot}									13	19	28
AFB-400-1800	Δ _{ptot}									11	16	23
AFB-400-1200	Δ _{ptot}									18	26	36
AFB-315	Δ _{ptot}									12	17	25
AFB-250	Δ _{ptot}									12	18	26
AFB-200-600	Δ _{ptot}									17	25	35
AFB-200-1200	Δ _{ptot}									13	19	27

Δ_T=0.0

50 100 200 300 500 1000 2000 3000 qv [l/s]

200 300 500 1000 2000 3000 5000 10000 qv [m³/h]

Δ_{L_r} = 4 [dB]

L_{pA} < 25 [dB(A)]
 L_{pA} 25 - 30 [dB(A)]
 L_{pA} 30 - 35 [dB(A)]

FUNCTION

Air is supplied into the space through the front panel of the device, normally at a slightly lower temperature than the room. The incoming air flows down to floor level and gradually pervades the lower level of the occupied space. The low velocity flow pattern is semicircular, allowing workstations to be located adjacent the device.

MATERIAL AND FINISHING

The AFB consists of a casing, removable front panel (10% perforation) and fixed flow equalization inner structure, all manufactured from epoxy-painted



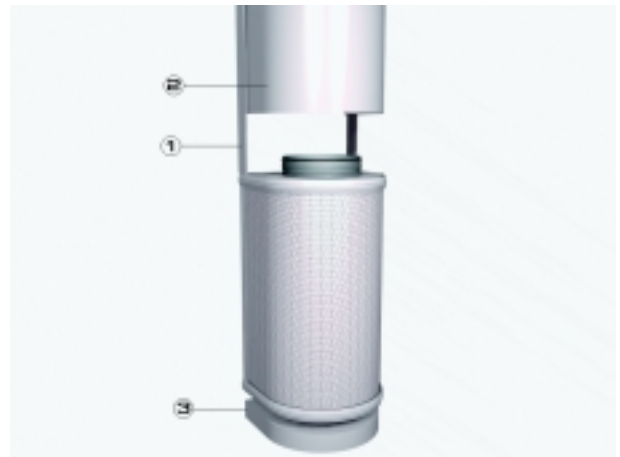
galvanized steel, with white RAL 9010 (30% gloss) as the standard colour. The unit includes mounting brackets and a detachable gasketed spigot.

ACCESSORIES

- AB/AFB : base (3).
- SB/AFB : base, store model.
- DC/AFB : duct cover 1000, 1500 or 2000 mm (2).

OPTIONS

- Acid Proofed Steel AISI 316 construction.
- Thicker front panel (1.5 mm).
- Smaller connection for the unit.
- Duct cover (DC) made of perforated plate (same as AFB).

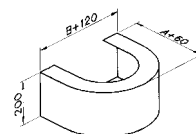


DIMENSIONS



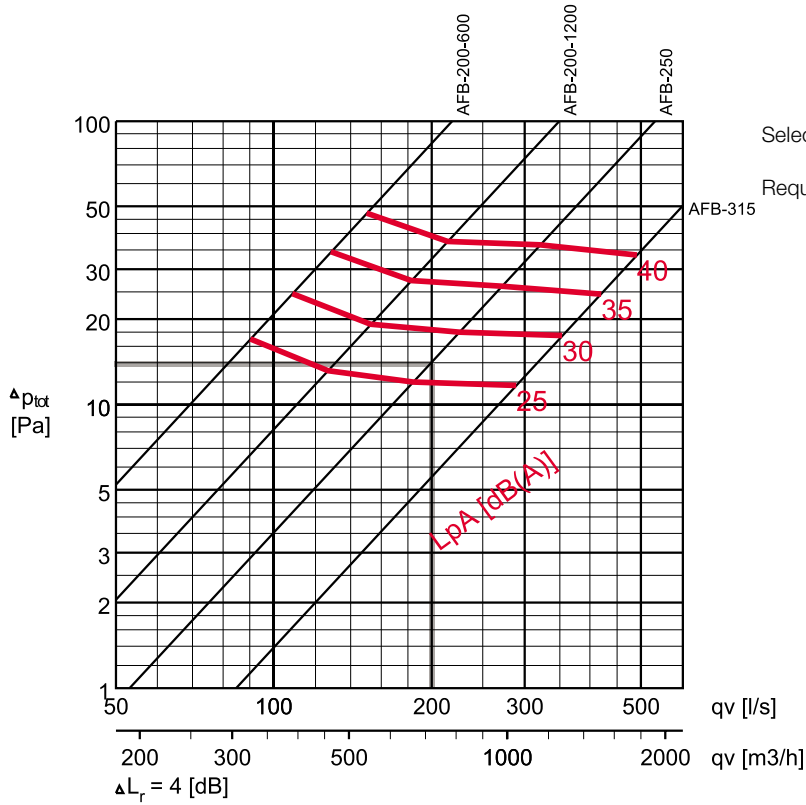
NS	A	B	D	H	L
200-600	305	324	199	600	40
200-1200	305	324	199	1200	40
250	365	394	249	1200	40
315	430	459	314	1500	40
400-1200	525	564	399	1200	40
400-1800	525	564	399	1800	40
500	645	704	499	1800	50
630	770	824	629	1800	50
800	935	984	799	1800	50

- AB/AFB base : height = 50 mm (200 ..315), and 100 mm (400...800).
- SB/AFB base store model : height = 200 mm, B=B+120, A=A+60.

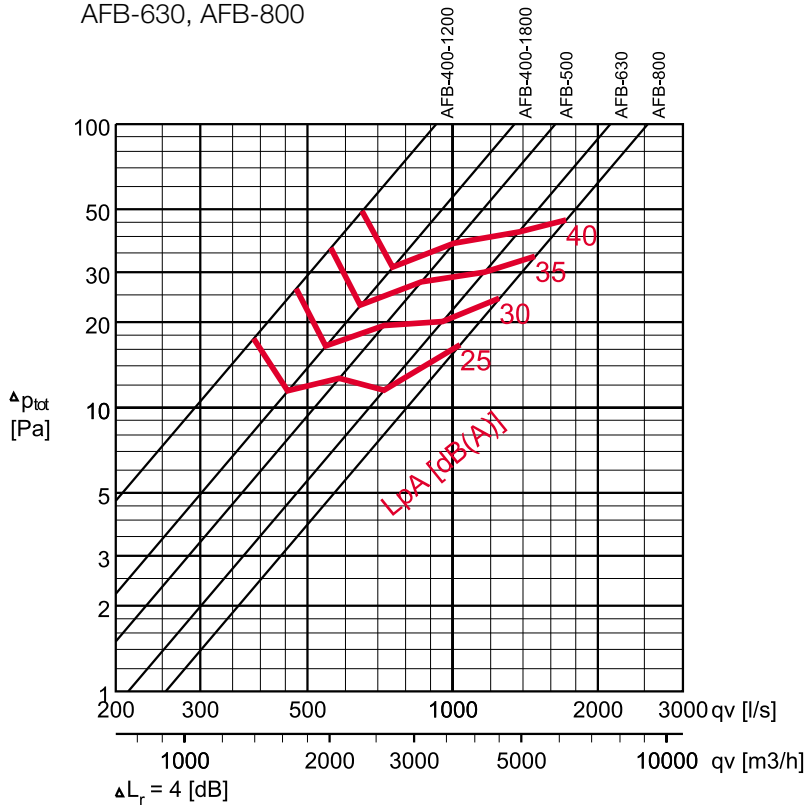


PRESSURE DROP AND SOUND DATA, SUPPLY

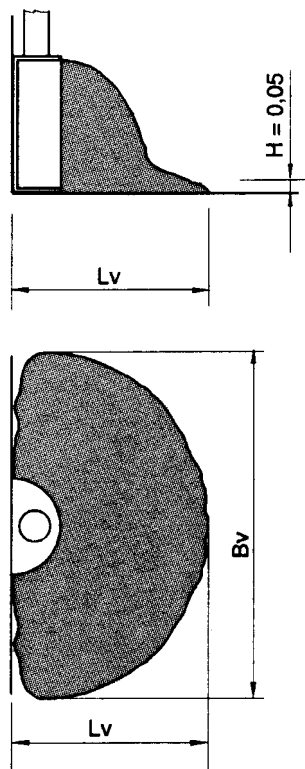
AFB-200-600, AFB-200-1200, AFB-250, AFB-315



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



NEAR ZONE



H = 0,05 m	Qv		L _{pA} [dB(A)]	ΔP _{tot} (Pa)	v = 0,20 m/s		v = 0,35 m/s	
	(l/s)	(m³/h)			L (m)	B (m)	L (m)	B (m)
AFB-200-600	90	324	25	17	1,9	2,6	<0,5	<0,5
	109	392	30	25	2,3	3,1	0,7	1,1
	129	464	35	35	2,7	3,6	1,0	1,5
	150	540	40	47	3,0	4,1	1,3	2,0
	175	630	45	64	3,6	4,9	1,7	2,6
AFB-200-1200	127	457	25	13	1,8	2,3	<0,5	<0,5
	153	551	30	19	2,1	2,7	<0,5	<0,5
	183	659	35	27	2,4	3,1	<0,5	<0,5
	214	770	40	38	2,7	3,5	<0,5	<0,5
	254	914	45	53	3,1	4,0	<0,5	<0,5
AFB-250	184	662	25	12	2,3	3,0	<0,5	<0,5
	225	810	30	18	2,6	3,4	<0,5	<0,5
	272	979	35	26	3,0	3,9	<0,5	<0,5
	321	1156	40	37	3,5	4,6	0,5	0,8
	380	1368	45	51	3,9	5,1	0,7	1,2
AFB-315	290	1044	25	12	3,2	6,7	<0,5	<0,5
	354	1274	30	17	3,7	7,8	<0,5	<0,5
	420	1512	35	25	4,2	8,8	0,5	0,8
	491	1768	40	34	5,0	10,5	0,9	1,4
	570	2052	45	45	5,5	11,6	1,4	2,1
AFB-400-1200	387	1393	25	18	3,5	6,0	<0,5	<0,5
	474	1706	30	26	4,2	7,1	0,6	0,9
	558	2009	35	36	4,7	8,0	1,4	2,0
	649	2336	40	49	5,5	9,4	2,1	3,0
	750	2700	45	66	6,0	10,2	2,8	4,1
AFB-400-1800	455	1638	25	11	4,5	7,7	<0,5	<0,5
	545	1962	30	16	5,1	8,7	<0,5	<0,5
	644	2318	35	23	5,8	9,9	0,7	1,1
	751	2704	40	31	6,5	11,1	1,5	2,4
	870	3132	45	42	7,2	12,2	2,8	4,5
AFB-500	583	2099	25	13	4,3	7,7	<0,5	<0,5
	721	2596	30	19	5,0	9,0	<0,5	<0,5
	861	3100	35	28	5,8	10,4	0,8	1,2
	1007	3625	40	38	7,0	12,6	2,2	3,4
	1170	4212	45	51	7,5	13,5	3,0	4,7
AFB-630	722	2599	25	12	5,0	7,8	<0,5	<0,5
	652	2347	30	20	6,0	9,3	1,0	1,5
	1164	4190	35	30	7,2	11,2	2,8	4,1
	1372	4939	40	42	8,1	12,6	4,1	6,0
	1590	5724	45	56	9,1	14,1	5,0	7,4
AFB-800	1037	3733	25	17	6,2	9,4	1,0	1,4
	1250	4500	30	24	7,0	10,6	3,5	4,9
	1483	5339	35	34	8,0	12,2	4,5	6,3
	1719	6188	40	46	9,5	14,4	5,1	7,1
	1950	7020	45	59	10,0	15,2	5,8	8,1

ΔL_r = 4 dB, ΔT = -3°C

SOUND LEVEL DATA, SUPPLY

	Qv		ΔP_{st} (Pa)	ΔP_{tot} (Pa)	F (Hz)								L_{pA} [dB(A)]	NR	NC
	(l/s)	(m³/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
AFA-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

$\Delta L_r = 4$ dB

SPECIFICATION

The Halton AFB displacement unit shall be furnished and installed where shown on the working drawings. It shall be made of epoxy-painted galvanized steel, with a robust, maintenance free, non-clogging structure and white (RAL 9010) as the standard colour. The AFB shall incorporate a detachable perforated front panel, and an internal fixed flow equalization

element. Mounting brackets shall be included in the package.

Air distribution into the occupied zone shall be over the entire surface area, with uniform low velocity and noise, even with large airflow rates.

A large range of accessories (duct cover, base, cover list) shall be available.



PRODUCT CODE

AFB - D - H

Height of device	
D	H
200	600,1200
250	1200
315	1500
400	1200,1800
500	1800
630	1800
800	1800

Size of connection
200,250,315,400,500,630,800

Specifics and accessories

SD=, MA=, TP=, CO=, CP=, AC=

Accessories
DC/AFB=Duct cover
SB/AFB=Base, store model
AB/AFB=Base

Plastic Strip Color
W=White
G=Grey
B=Black
L=Blue

Color
W=White
X=Special RAL colour (add code)

Thicker front panel (1.5mm)
N=No
Y=Yes

Material
CS=Steel
AS=Stainless steel /AISI316

D Special size of duct conn.
200 160
250 160,200
315 160,200,250
400 160,200,250,315
500 160,200,250,315,400
630 160,200,250,315,400,500
800 160,200,250,315,400,500,630

Example

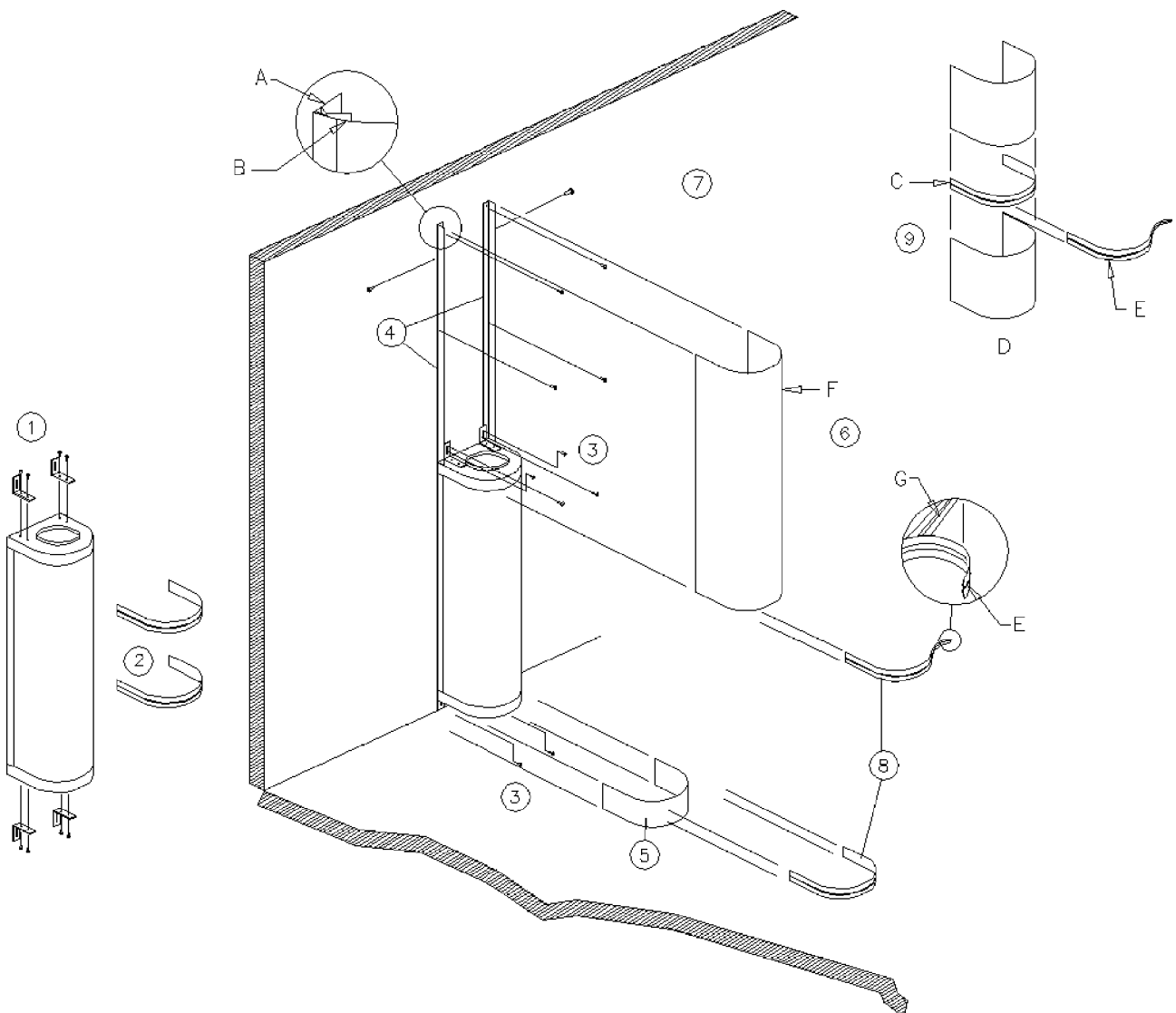
AFB-200-600; TP=Y; MA=CS; CO=W; AC=DC



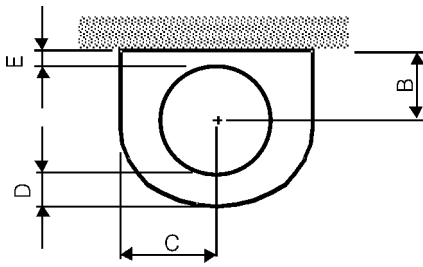
INSTALLATION

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 :
 7. Locate DC duct cover section (F) on top flange (G) of AF unit and firmly push into support brackets fixed to wall (B).
 8. Secure DC duct cover with screws through cover into support brackets.
 9. 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).



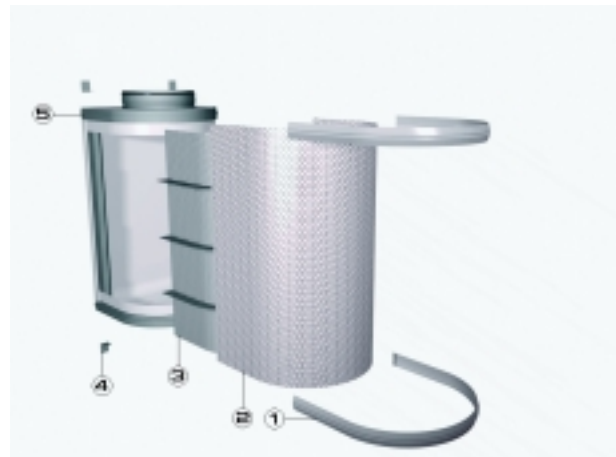
DUCT INSTALLATION



	B	C	D	E
AFB-200	142	162	58	42
AFB-250	167	197	68	42
AFB-315	202	230	68	42
AFB-400	242	282	78	42
AFB-500	292	352	98	42
AFB-630	357	412	93	42
AFB-800	442	492	88	42

SERVICE

To open the front panel (2). First remove the plastic strips (1) and undo the screws under them. Pull out the front panel. If required, the inner structure (3) can be detached by undoing the fixing screws. Pull out the inner structure. Reassemble in reverse order. Clean the parts with a brush or damp cloth. Reassemble after cleaning.



NUMBER	NAME
1	PLASTIC STRIPS
2	FRONT PANEL
3	INNER STRUCTURE
4	MOUNTING BRACKETS
5	CASING