

AFE - Flat Low Velocity Displacement Diffuser for Wall Mounting



- Specially designed for installation inside a wall.
- Rectangular connection.
- Flat front panel and internal distribution structure are detachable.
- Flow velocities are low in the occupied area.



QUICK SELECTION

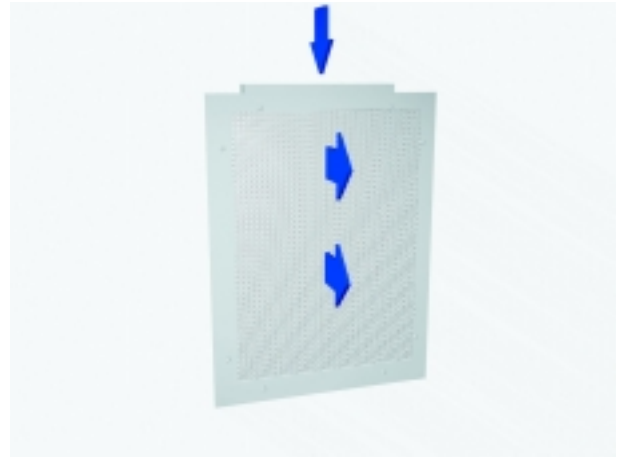
AFE-400x80	Δp_{tot}																																										
AFE-400x60	Δp_{tot}																																										
AFE-400x40	Δp_{tot}																																										
AFE-400x30	Δp_{tot}																																										

$\Delta T = 0.0$ 20 30 50 100 200 500 qv [l/s] qv [m³/h]

$\Delta L_r = 4$ [dB] LpA < 25 [dB(A)] LpA 25 - 30 [dB(A)] LpA 30 - 35 [dB(A)]

FUNCTION

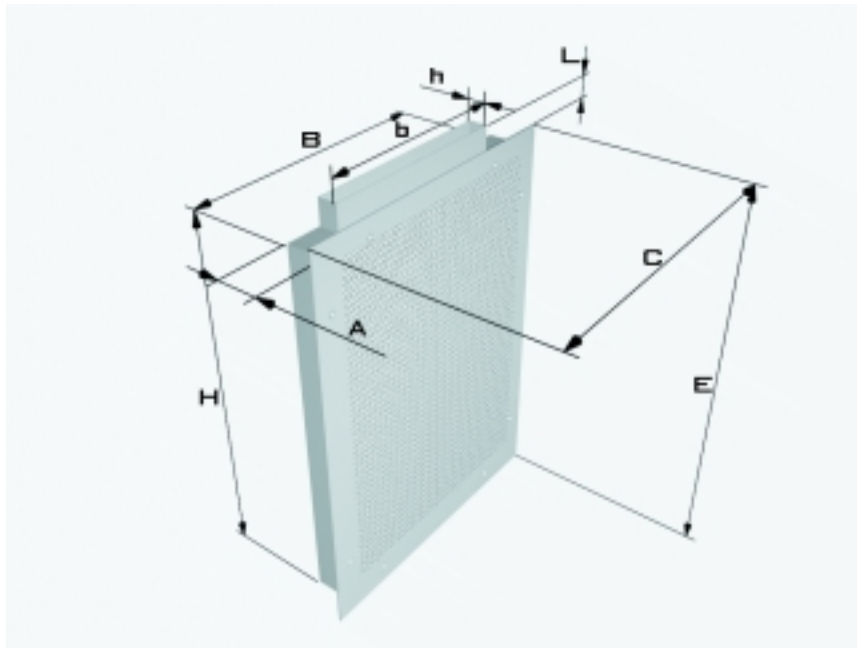
Air is supplied into the space through the front panel of the device, normally at a slightly lower temperature than the room. The incoming air flows down to floor level and gradually pervades the lower level of the occupied space. The low velocity flow pattern is direct, allowing workstations to be located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



MATERIAL AND FINISHING

The AFE has a casing and a detachable front panel (10% perforation) made of epoxy-painted galvanized steel, with white RAL 9010 (30% gloss) as standard colour.

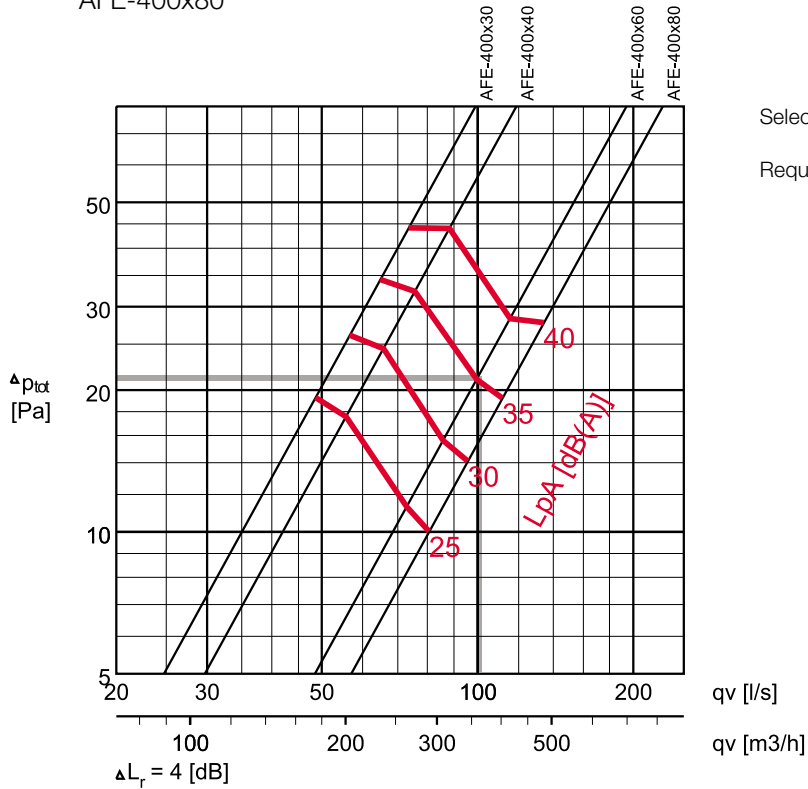
DIMENSIONS



NS	A	B	C	E	H	bxh	L
400x30	65	540	600	600	540	398x28	50
400x40	75	540	600	800	740	398x38	50
400x60	96	540	600	1000	940	398x58	50
400x80	115	540	600	1200	1140	398x78	50

PRESSURE DROP AND SOUND DATA, SUPPLY

AFE-400x30, AFE-400x40, AFE-400x60,
AFE-400x80

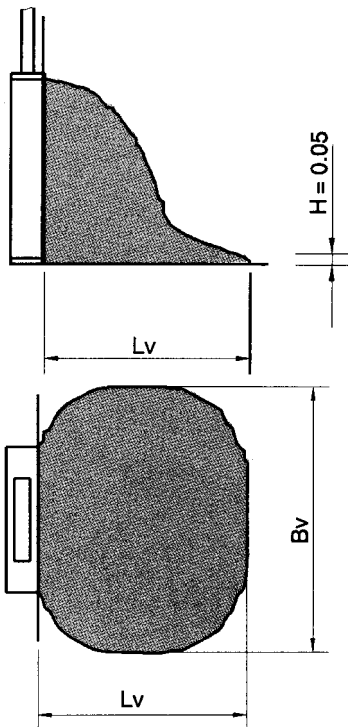


Selection example :

Requirements : $q_v = 100$ l/s
 $L_{pA} \leq 35$ dB(A)

Selection : AFE-400x60
 $\Delta p_{tot} = 21$ Pa
 $L_{pA} = 35$ dB(A)

NEARZONE



H = 0,05 m	Qv		L _{pA} [dB(A)]	ΔP _{tot} (Pa)	v = 0,20 m/s		v = 0,35 m/s	
	(l/s)	(m ³ /h)			Lv (m)	Bv (m)	Lv (m)	Bv (m)
AFE-400x30	49	176	25	19	2,4	1,9	<0,5	<0,5
	57	205	30	26	2,6	2,1	1,1	1,1
	65	234	35	34	3,0	2,4	1,5	1,5
	73	263	40	44	3,4	2,7	1,7	1,7
	86	310	45	60	4,0	3,2	2,1	2,1
AFE-400x40	56	202	25	18	2,5	2,3	<0,5	<0,5
	66	238	30	24	2,9	2,6	<0,5	<0,5
	76	274	35	32	3,4	3,1	1,3	1,5
	88	317	40	44	3,7	3,4	1,8	2,1
	103	371	45	60	4,5	4,1	2,4	2,7
AFE-400x60	73	263	25	11	3,2	3,0	<0,5	<0,5
	86	310	30	16	3,5	3,3	<0,5	<0,5
	100	360	35	21	4,0	3,8	1,8	1,7
	115	414	40	28	4,7	4,5	2,5	2,4
	138	497	45	40	5,5	5,2	3,0	2,9
AFE-400x80	81	292	25	10	3,4	2,3	<0,5	<0,5
	96	346	30	14	3,8	2,6	<0,5	<0,5
	112	403	35	19	4,6	3,2	2,5	2,1
	134	482	40	28	5,2	3,6	2,8	2,3
	160	576	45	39	5,8	4,0	3,2	2,7

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)	(m ³ /h)			63	125	250	500	1000	2000	4000	8000			
AFE-400x30	49	176	9	19	43	26	26	29	23	10	16	18	25	21	19
	57	205	13	26	44	28	30	34	30	19	17	19	30	26	24
	65	234	17	34	45	30	33	38	36	26	18	20	35	32	30
	73	263	22	44	45	31	36	42	42	33	20	20	40	38	37
AFE-400x40	56	202	10	18	47	29	23	28	24	5	12	18	25	21	18
	66	238	14	24	48	30	28	33	30	17	13	19	30	26	25
	76	274	19	32	49	31	33	38	36	27	14	20	35	32	30
	88	317	26	44	49	31	36	41	41	34	20	20	40	37	36
AFE-400x60	73	263	6	11	47	26	28	29	19	6	13	18	25	21	19
	86	310	8	16	48	27	32	35	27	13	15	19	30	27	25
	100	360	11	21	49	28	36	40	34	19	17	20	35	32	31
	115	414	14	28	49	29	38	44	40	28	18	20	40	37	35
AFE-400x80	81	292	6	10	46	25	29	30	15	16	11	17	25	21	20
	96	346	9	14	47	28	33	36	23	19	12	18	30	27	26
	112	403	12	19	48	30	36	41	31	21	13	19	35	33	32
	134	482	17	28	48	32	39	44	38	29	20	21	40	37	36

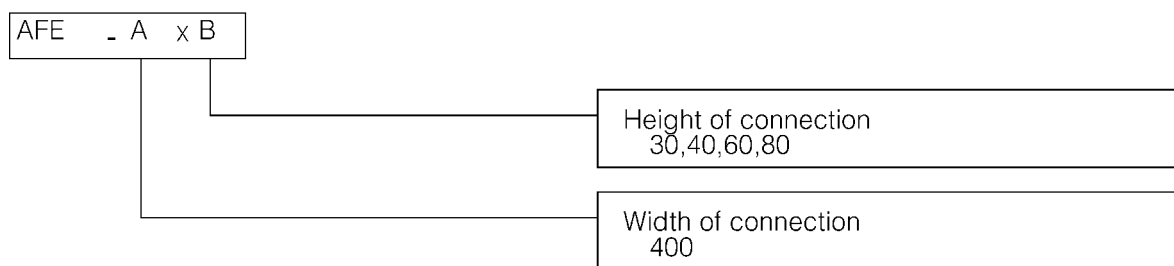
$$\Delta L_r = 4 \text{ dB}$$

SPECIFICATION

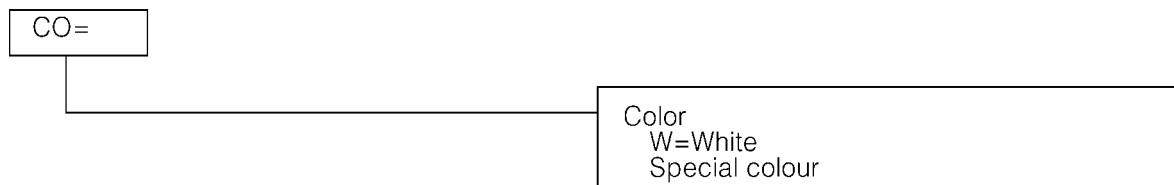
The Halton AFE displacement unit shall be furnished and installed where shown on the working drawings. It shall be made of epoxy-painted galvanized steel, with a robust, maintenance free, non-clogging structure and white (RAL 9010) as the standard colour.

The AFE shall incorporate a detachable perforated front panel, and an internal fixed flow equalization element. Air distribution into the occupied zone shall be over the entire surface area, with uniform low velocity and noise.

PRODUCT CODE



Specifics and accessories



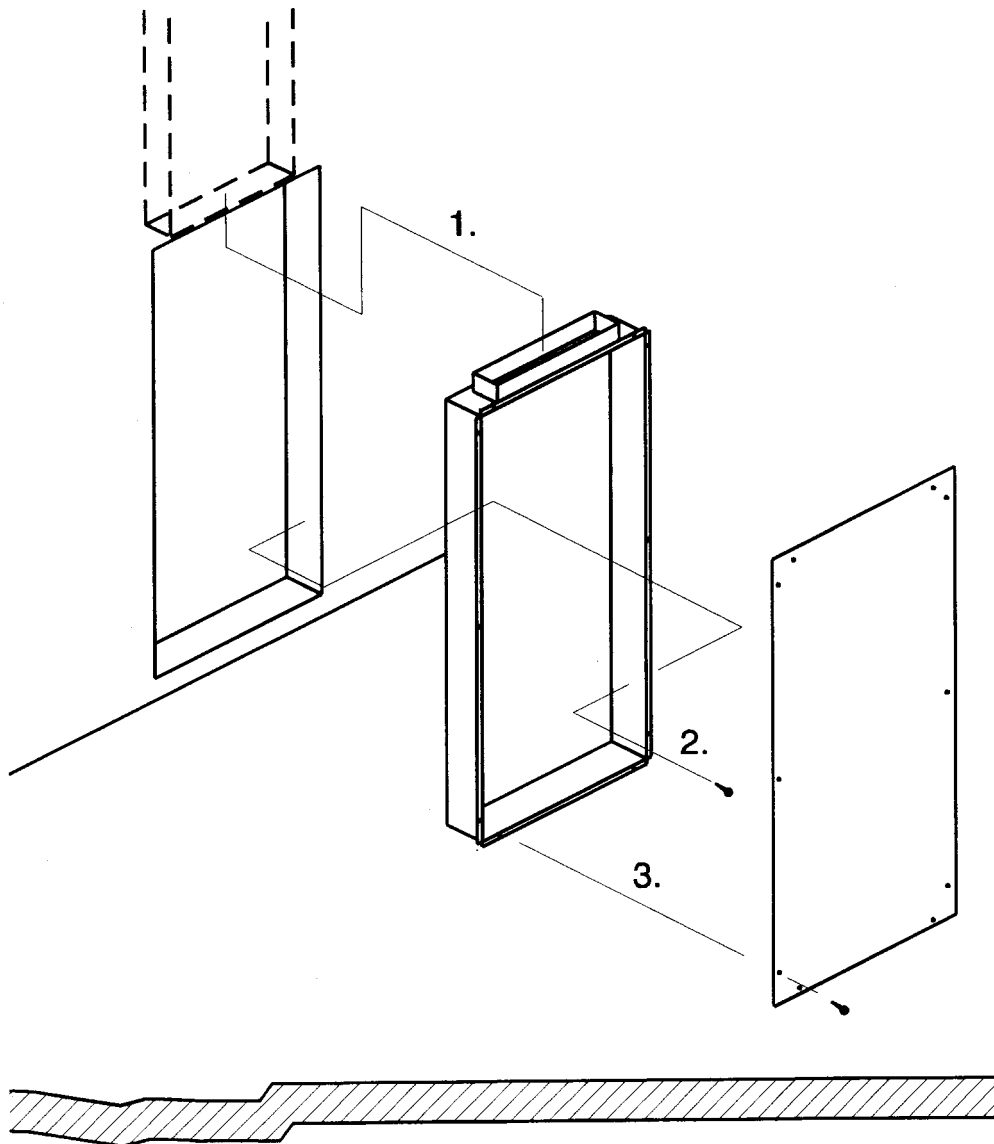
Example

AFE-400x30; CO=W

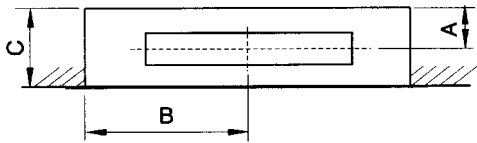
INSTALLATION

Perform the installation in the numerical order.

1. Locate the diffuser within the wall space and connect the ductwork.
2. Fix the diffuser to the wall from inside the casing.
3. Screw the front plate to the casing and hide the screws with the plastic plugs delivered with the diffuser.



DUCT INSTALLATION

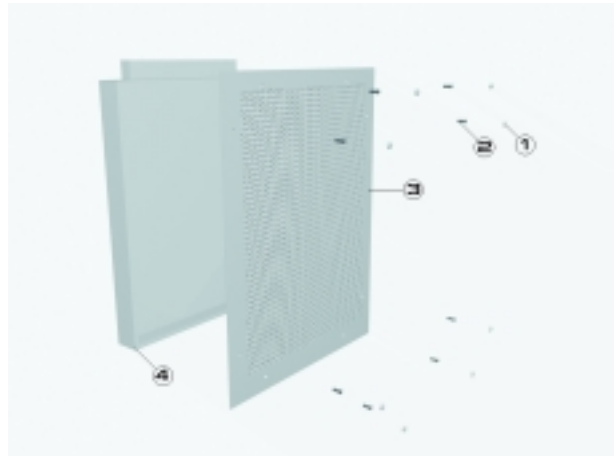


	A	B	C
AFE-400x30	27	270	65
AFE-400x40	32	270	75
AFE-400x60	42	270	95
AFE-400x80	52	270	115

SERVICE

To remove the front panel (3). First undo the screws (2) under the cover plugs (1). Pull out the front panel. Reassemble in reverse order attaching the front plate to the casing (4).

Clean the parts with a brush or damp cloth. Reassemble after cleaning.



NUMBER	NAME
1	COVER PLUG
2	SCREW
3	FRONT PANEL
4	CASING