



bre

**Rytons Building
Products Ltd.
Laboratory Sound
Insulation Test of Core
Ventilators in the BRE
Horizontal Transmission
Suite**

Prepared for:
Design House
Orion Way
Kettering Business Park
Kettering Northants
NN15 6NL

3rd April 2013

Test report number 284908



0578



(<http://rts.vents.co.uk/blog/>)

Product Ranges

Product Guides

Ventilation Calculators

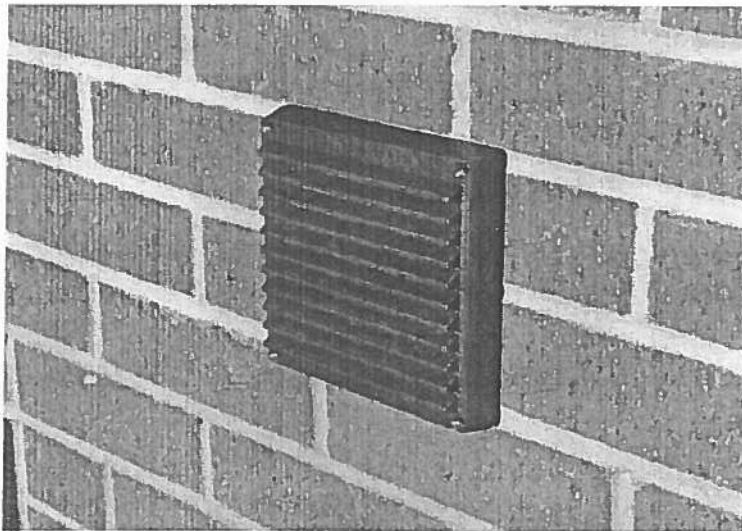
Tailor-made by Rytons (<http://rts.vents.co.uk/blog/tailor-made-by-rytons/>)

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AAC125HP – Rytons Super Acoustic Controllable LookRyt® AirCore®



Background Ventilation - Rytons Controllable Super Acoustic LookRyt AirCore Range

from Rytons Building Products

01:39



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Category: [Acoustic AirCore and Airliner Sets \(<http://rts.vents.co.uk/blog/products/acoustic-aircore-and-airliner-sets-background/>\)](http://rts.vents.co.uk/blog/products/acoustic-aircore-and-airliner-sets-background/)

General Details

AAC125HP – Rytons Super Acoustic Controllable LookRyt AirCore

- Retro-fitted core ventilator for background room ventilation.
- Allows the introduction of fresh outside air into the room to disperse moisture, odours and other airborne pollutants.
- Use in noisy areas to reduce the amount of noise entering the building for a more peaceful environment.
- Unique draught reducing panel manually adjusted with an easy push/pull or tilt action allowing air to be controlled as required.
- Paint or wallpaper the panel to match room décor for a discreet appearance.
- External water baffle prevents transfer of water across the cavity.
- External grille U.V. stabilised to slow down the effects of sunlight.
- Patent No. GB 2523676.

Calculate your background venting requirements here. (<http://rts.vents.co.uk/blog/rytons-background-ventilation-calculator/>)



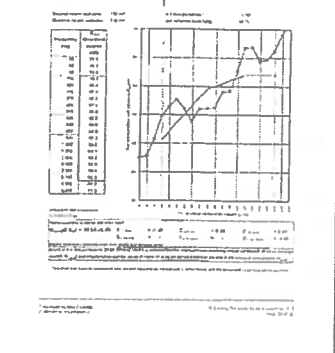
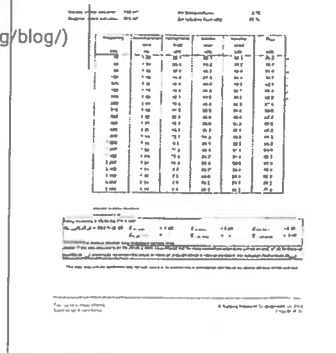
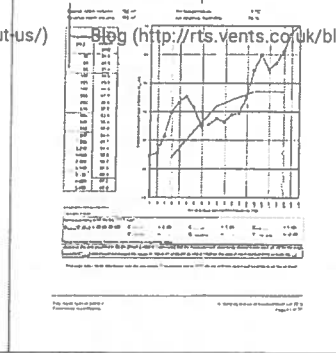


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About Us (http://rts.vents.co.uk/blog/about-us/) Blog (http://rts.vents.co.uk/blog/blog/)

Product Name	Max. Air Flow (m³/s)	Max. Air Flow (CFM)	Max. Air Flow (m³/h)	Max. Air Flow (CFM/h)
100mm	0.1	2.1	3.6	80
125mm	0.2	4.2	7.2	160
150mm	0.3	6.3	10.8	240
175mm	0.4	8.4	14.4	320
200mm	0.5	10.5	18.0	400
225mm	0.6	12.6	21.6	480
250mm	0.7	14.7	25.2	560
275mm	0.8	16.8	28.8	640
300mm	0.9	18.9	32.4	720
325mm	1.0	21.0	36.0	800
350mm	1.1	23.1	39.6	880
375mm	1.2	25.2	43.2	960
400mm	1.3	27.3	46.8	1040
425mm	1.4	29.4	50.4	1120
450mm	1.5	31.5	54.0	1200
475mm	1.6	33.6	57.6	1280
500mm	1.7	35.7	61.2	1360
525mm	1.8	37.8	64.8	1440
550mm	1.9	39.9	68.4	1520
575mm	2.0	42.0	72.0	1600
600mm	2.1	44.1	75.6	1680
625mm	2.2	46.2	79.2	1760
650mm	2.3	48.3	82.8	1840
675mm	2.4	50.4	86.4	1920
700mm	2.5	52.5	90.0	2000
725mm	2.6	54.6	93.6	2080
750mm	2.7	56.7	97.2	2160
775mm	2.8	58.8	100.8	2240
800mm	2.9	60.9	104.4	2320
825mm	3.0	63.0	108.0	2400
850mm	3.1	65.1	111.6	2480
875mm	3.2	67.2	115.2	2560
900mm	3.3	69.3	118.8	2640
925mm	3.4	71.4	122.4	2720
950mm	3.5	73.5	126.0	2800
975mm	3.6	75.6	129.6	2880
1000mm	3.7	77.7	133.2	2960
1025mm	3.8	79.8	136.8	3040
1050mm	3.9	81.9	140.4	3120
1075mm	4.0	84.0	144.0	3200
1100mm	4.1	86.1	147.6	3280
1125mm	4.2	88.2	151.2	3360
1150mm	4.3	90.3	154.8	3440
1175mm	4.4	92.4	158.4	3520
1200mm	4.5	94.5	162.0	3600
1225mm	4.6	96.6	165.6	3680
1250mm	4.7	98.7	169.2	3760
1275mm	4.8	100.8	172.8	3840
1300mm	4.9	102.9	176.4	3920
1325mm	5.0	105.0	180.0	4000
1350mm	5.1	107.1	183.6	4080
1375mm	5.2	109.2	187.2	4160
1400mm	5.3	111.3	190.8	4240
1425mm	5.4	113.4	194.4	4320
1450mm	5.5	115.5	198.0	4400
1475mm	5.6	117.6	201.6	4480
1500mm	5.7	119.7	205.2	4560
1525mm	5.8	121.8	208.8	4640
1550mm	5.9	123.9	212.4	4720
1575mm	6.0	126.0	216.0	4800
1600mm	6.1	128.1	219.6	4880
1625mm	6.2	130.2	223.2	4960
1650mm	6.3	132.3	226.8	5040
1675mm	6.4	134.4	230.4	5120
1700mm	6.5	136.5	234.0	5200
1725mm	6.6	138.6	237.6	5280
1750mm	6.7	140.7	241.2	5360
1775mm	6.8	142.8	244.8	5440
1800mm	6.9	144.9	248.4	5520
1825mm	7.0	147.0	252.0	5600
1850mm	7.1	149.1	255.6	5680
1875mm	7.2	151.2	259.2	5760
1900mm	7.3	153.3	262.8	5840
1925mm	7.4	155.4	266.4	5920
1950mm	7.5	157.5	270.0	6000
1975mm	7.6	159.6	273.6	6080
2000mm	7.7	161.7	277.2	6160
2025mm	7.8	163.8	280.8	6240
2050mm	7.9	165.9	284.4	6320
2075mm	8.0	168.0	288.0	6400
2100mm	8.1	170.1	291.6	6480
2125mm	8.2	172.2	295.2	6560
2150mm	8.3	174.3	298.8	6640
2175mm	8.4	176.4	302.4	6720
2200mm	8.5	178.5	306.0	6800
2225mm	8.6	180.6	309.6	6880
2250mm	8.7	182.7	313.2	6960
2275mm	8.8	184.8	316.8	7040
2300mm	8.9	186.9	320.4	7120
2325mm	9.0	189.0	324.0	7200
2350mm	9.1	191.1	327.6	7280
2375mm	9.2	193.2	331.2	7360
2400mm	9.3	195.3	334.8	7440
2425mm	9.4	197.4	338.4	7520
2450mm	9.5	199.5	342.0	7600
2475mm	9.6	201.6	345.6	7680
2500mm	9.7	203.7	349.2	7760
2525mm	9.8	205.8	352.8	7840
2550mm	9.9	207.9	356.4	7920
2575mm	10.0	210.0	360.0	8000



Fitting Instructions
 Rytons LookRyt® AirCore® Range

DO NOT clip the internal LookRyt panel to the backplate until the backplate is fixed to the wall.

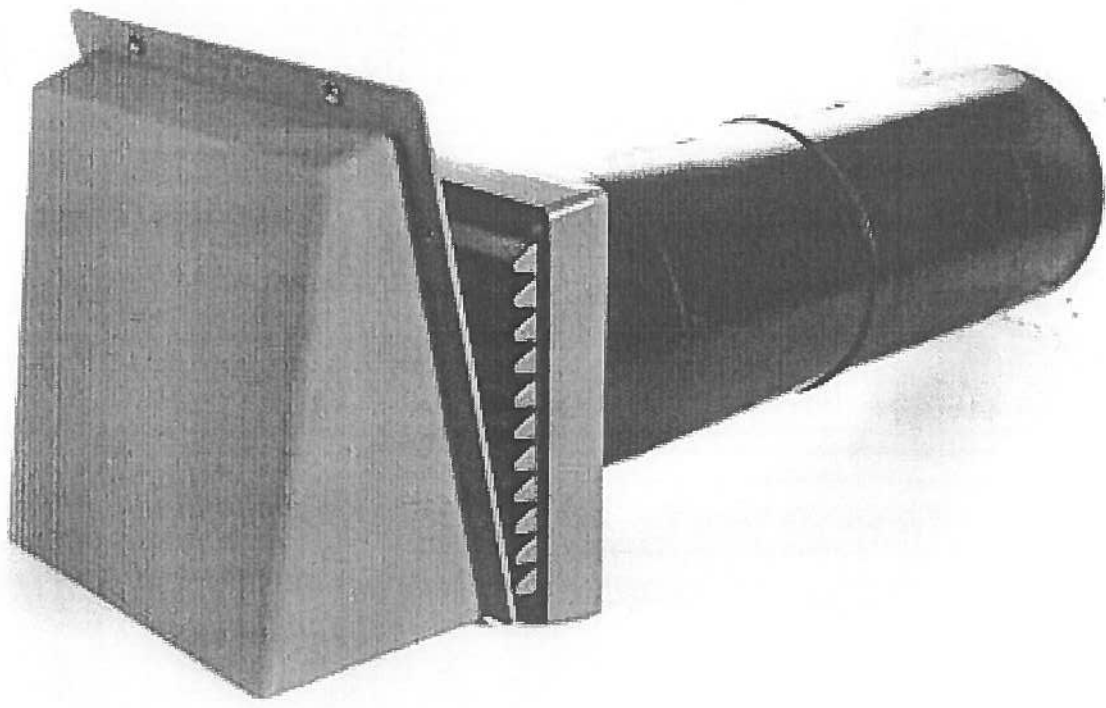
1. To minimise cracking, drill a pilot hole and then core drill from both sides into the cavity.
2. Measure the width of the wall.
3. If necessary, cut the tube to length. Reduce each end of the tube equally to ensure the external water baffle remains central. A maximum of 50mm may be cut from each end of a tube containing internal baffles.
4. Insert the tube into the hole.
5. On the reverse side of the external louvre grille place a small dab of grab adhesive onto each of the corner screw holes.



6. Fix the louvre backplate and the louvre grille together.
 7. Place a thin bead of grab adhesive around the spigot of the backplate.
 8. Insert the louvre grille and backplate assembly into the exterior end of the tube.
 9. Level the grille before the grab adhesive sets.
- High Rise Models: Place a thin bead of grab adhesive around the top ring of the circular grille and fit into the tube. Ensure the groove in the grille is aligned with the lip inside the tube. Insert the grille and tube assembly into the hole from inside the property.

10. Place a thin bead of grab adhesive around the spigot of the internal backplate (providing seepage into the screw holes).
11. Insert the LookRyt backplate into the interior end of the tube.
12. Level the backplate before the grab adhesive sets.
13. When the adhesive is completely set and the backplate is secure, align the LookRyt panel with the backplate and push fit into position.
14. If desired, paint or wallpaper the LookRyt panel to match room décor.

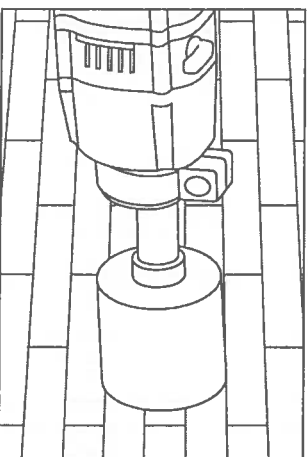
10. Place a thin bead of grab adhesive around the spigot of the internal backplate (providing seepage into the screw holes).
11. Insert the LookRyt backplate into the interior end of the tube.
12. Level the backplate before the grab adhesive sets.
13. When the adhesive is completely set and the backplate is secure, align the LookRyt panel with the backplate and push fit into position.
14. If desired, paint or wallpaper the LookRyt panel to match room décor.



Fitting Instructions

Rytons LookRyt® AirCore® Range

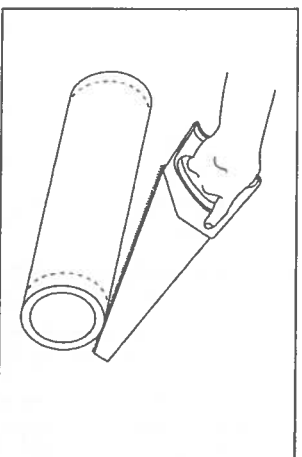
DO NOT clip the internal LookRyt panel to the backplate until the backplate is fixed to the wall.



1. To minimise cracking, drill a pilot hole and then core drill from both sides into the cavity.

Use a 127mm dia. core drill for Rytons 127mm (5") LookRyt AirCore range.

Use a 78mm dia. core drill for Rytons Mini LookRyt AirCore.

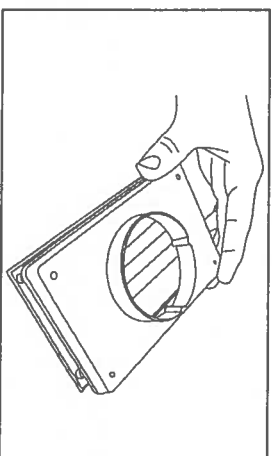
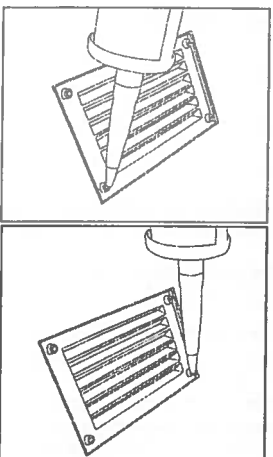


2. Measure the width of the wall.

3. If necessary, cut the tube to length. Reduce each end of the tube equally to ensure the external water baffle remains central. A maximum of 63mm may be cut from each end of a tube containing internal baffles.

4. Insert the tube into the hole.

5. On the reverse side of the external louvre grille place a small dab of grab adhesive onto each of the corner screw holes.

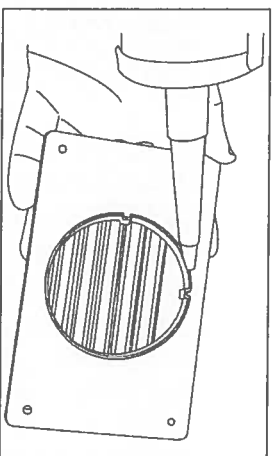


6. Fix the louvre backplate and the louvre grille together.

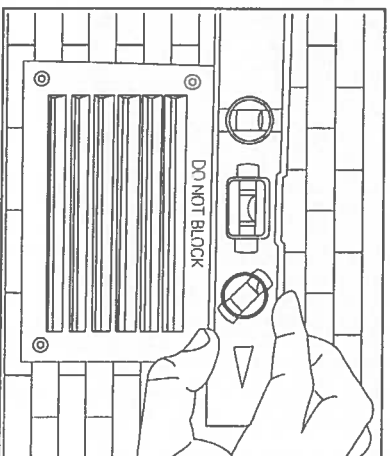
7. Place a thin bead of grab adhesive around the spigot of the backplate.

8. Insert the louvre grille and backplate assembly into the exterior end of the tube.

9. Level the grille before the grab adhesive sets.



High Rise Models: Place a thin bead of grab adhesive around the top ring of the circular grille and fit into the tube. Ensure the groove in the grille is aligned with the lug inside the tube. Insert the grille and tube assembly into the hole from inside the property.

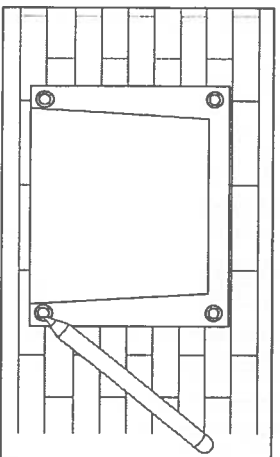


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Since 1972



Cowled Models: Screw the cowl to the brickwork through the pre-formed holes in the flange around the cowl. Fittings not supplied.

DO NOT clip the internal LookRyt panel to the backplate until the backplate is fixed to the wall.

10. Place a thin bead of grab adhesive around the spigot of the internal backplate (avoiding seepage into the screw holes).

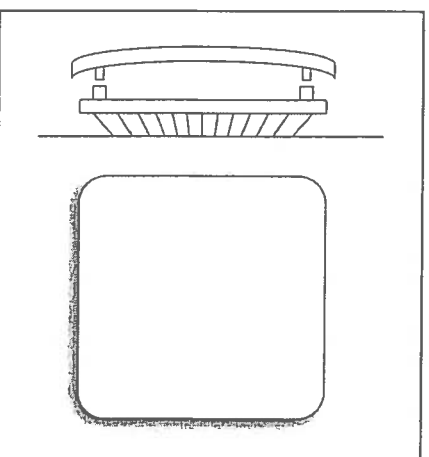
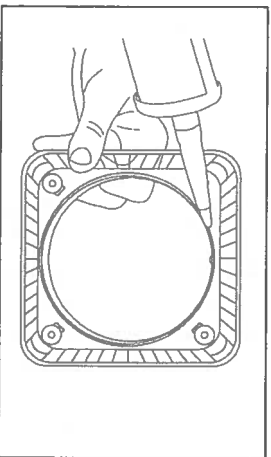
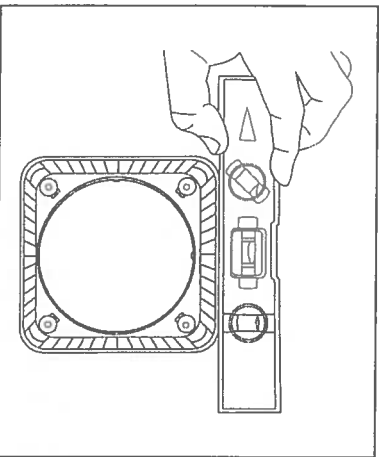
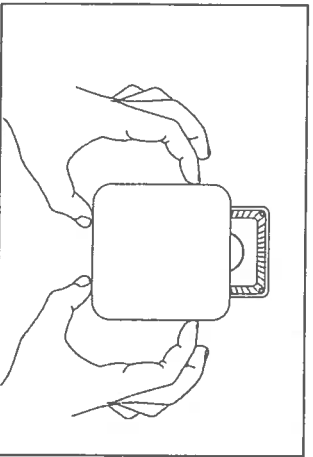
11. Insert the LookRyt backplate into the interior end of the tube.

12. Level the backplate before the grab adhesive sets.

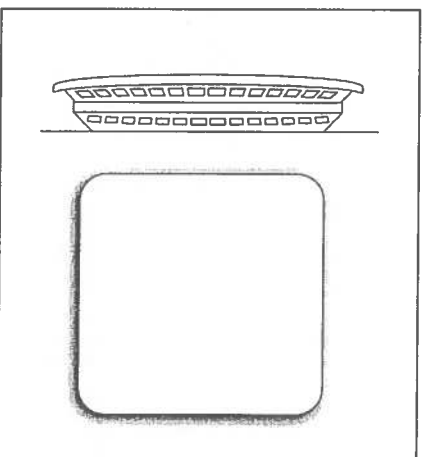
Alternatively, screw the backplate to the wall using the fixings provided.

13. When the adhesive is **completely set** and the backplate is secure, align the LookRyt panel with the backplate and push fit into position.

14. If desired, paint or wallpaper the LookRyt panel to match room décor.



Rytens fixed open LookRyt panel is for the provision of combustion air to boilers, stoves and fires.



Rytens controllable LookRyt panel is for the provision of background room ventilation.

The panel is manually adjusted with an easy push/pull or tilt action allowing air to be controlled as required.



Laboratory measurement of airborne sound insulation of small building elements
Element-normalized level difference according to BS EN 20140-10:1992
BRE horizontal transmission suite (B9)
Client: Rytons Building Products Ltd
Test date: 12/02/2013 Test number: L112-079 Test element: vent

0578

Filler wall area: 9.8 m²

Description:

AAC125HP-OPEN- Super Acoustic Controllable LookRyt® AirCore®

Source room volume: 130 m³

Air temperature: 9 °C

Receive room volume: 115 m³

Air relative humidity: 55 %

Frequency (Hz)	Reverberation time (s)	Background level (dB)	Source level (dB)	Receive level (dB)	D _{n,e} (dB)
50	1.68	23.1	92.6	68.9	24.6
63	1.51	20.1	98.0	72.8	25.6
80	1.28	17.7	96.6	64.9	31.4
100	1.56	19.4	98.0	58.6	39.9
125	1.72	16.6	98.6	56.4	43.2
160	1.72	16.8	96.7	52.3	45.4
200	1.80	12.1	98.2	57.0	41.6
250	1.58	14.6	95.9	60.2	35.0
315	1.66	11.0	93.7	57.7	35.5
400	1.60	11.8	92.4	54.3	37.5
500	1.57	15.7	93.5	56.3	36.4
630	1.61	14.7	95.1	55.6	38.9
800	1.59	12.1	95.4	55.4	39.4
1,000	1.56	9.3	94.9	49.0	45.1
1,250	1.62	11.3	95.4	40.4	54.4
1,600	1.59	12.8	95.7	35.3	59.8
2,000	1.57	10.3	93.3	37.9	54.7
2,500	1.51	8.7	93.7	35.9	56.9
3,150	1.38	7.5	94.6	32.4	60.9
4,000	1.25	7.9	99.6	30.7	67.2
5,000	1.13	7.4	100.0	27.9	69.9

x Adjusted for flanking transmission

o Correction = 13 dB

Rating according to BS EN ISO 717-1:1997						
D _{n,e,w} (C;C _{tr}) = 43 (0;-2) dB	C ₅₀₋₃₁₅₀	= 0 dB	C ₅₀₋₅₀₀₀	= 1 dB	C ₁₀₀₋₅₀₀₀	= 1 dB
	C _{tr,50-3150}	= -	C _{tr,50-5000}	= -	C _{tr,100-5000}	= -2 dB
Evaluation based on laboratory measurement results obtained by an engineering method						

Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed ±1 dB for the single quantity (D_{n,e,w}) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves (D_{n,e,w})

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Laboratory measurement of airborne sound insulation of small building elements
Element-normalized level difference according to BS EN 20140-10:1992
BRE horizontal transmission suite (B9)
 Client: Rytons Building Products Ltd
 Test date: 12/02/2013 Test number: L112-079 Test element: vent

0578

Filler wall area: 9.8 m²

Description:

AAC125HP-OPEN- Super Acoustic Controllable LookRyt® AirCore®

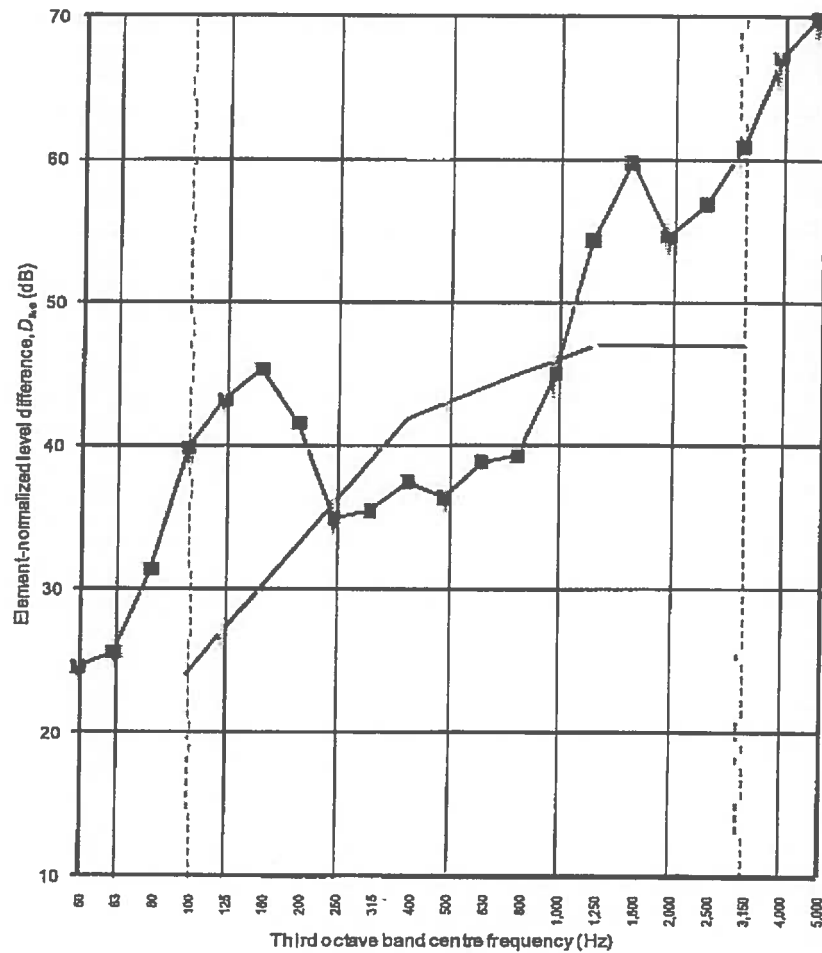
Source room volume: 130 m³

Air temperature: 9 °C

Receive room volume: 115 m³

Air relative humidity: 55 %

Frequency (Hz)	$D_{n,e}$ One-third octave (dB)
50	24.6
63	25.6
80	31.4
100	39.9
125	43.2
160	45.4
200	41.6
250	35.0
315	35.5
400	37.5
500	36.4
630	38.9
800	39.4
1,000	45.1
1,250	54.4
1,600	59.8
2,000	54.7
2,500	56.9
3,150	60.9
4,000	67.2
5,000	69.9



x Adjusted for flanking transmission

o Corradion = 13 dB

Rating according to BS EN ISO 717-1:1997

$D_{n,e,w}(C;C_{tr}) = 43 (0;-2) \text{ dB}$	$C_{50-3150} = 0 \text{ dB}$	$C_{50-5000} = 1 \text{ dB}$	$C_{100-5000} = 1 \text{ dB}$
	$C_{tr,50-3150} = -$	$C_{tr,50-5000} = -$	$C_{tr,100-5000} = -2 \text{ dB}$

Evaluation based on laboratory measurement results obtained by an engineering method

Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed $\pm 1 \text{ dB}$ for the single quantity ($D_{n,e,w}$) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves ($D_{n,e,w}$)

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Laboratory measurement of airborne sound insulation of small building elements
Element-normalized level difference according to BS EN 20140-10:1992
BRE horizontal transmission suite (B9)
Client: Rytons Building Products Ltd
Test date: 12/02/2013 Test number: L112-080 Test element: vent

0578

Filler wall area: 9.8 m²

Description:

AAC125HP-CLOSED- Super Acoustic Controllable LookRyt® AirCore®

Source room volume: 130 m³

Air temperature: 9 °C

Receive room volume: 115 m³

Air relative humidity: 55 %

Frequency (Hz)	Reverberation time (s)	Background level (dB)	Source level (dB)	Receive level (dB)	$D_{n,e}$ (dB)
50	1.68	23.1	93.1	69.0	25.0
63	1.51	20.1	98.2	73.0	25.7
80	1.28	17.7	96.7	64.9	31.6
100	1.56	19.4	97.5	58.4	39.7
125	1.72	16.6	98.4	56.6	42.8
160	1.72	16.8	96.5	52.1	45.4
200	1.80	12.1	98.2	56.5	42.2
250	1.58	14.6	96.0	57.9	37.5
315	1.66	11.0	93.8	51.4	42.0
400	1.60	11.8	92.6	49.8	42.2
500	1.57	15.7	93.6	50.3	42.6
630	1.61	14.7	95.2	46.7	48.0
800	1.59	12.1	95.5	46.5	48.3
1,000	1.56	9.3	94.9	39.0	55.2
1,250	1.62	11.3	95.4	31.4	63.5
1,600	1.59	12.8	95.7	31.4	63.7
2,000	1.57	10.3	93.4	33.8	58.9
2,500	1.51	8.7	93.7	33.4	59.4
3,150	1.38	7.5	94.6	31.1	62.3
4,000	1.25	7.9	99.6	29.7	68.2
5,000	1.13	7.4	99.9	26.5	71.3

x Adjusted for flanking transmission

o Correction = 13 dB

Rating according to BS EN ISO 717-1:1997					
$D_{n,e,w}(C;C_{tr}) = 50 (-1;-3) \text{ dB}$	$C_{50-3150} = -1 \text{ dB}$	$C_{50-5000} = 0 \text{ dB}$	$C_{100-5000} = 0 \text{ dB}$	$C_{100-5000} = 0 \text{ dB}$	$C_{100-5000} = 0 \text{ dB}$
	$C_{tr,50-3150} = -$	$C_{tr,50-5000} = -$	$C_{tr,100-5000} = -$	$C_{tr,100-5000} = -3 \text{ dB}$	$C_{tr,100-5000} = -3 \text{ dB}$

Evaluation based on laboratory measurement results obtained by an engineering method

Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed $\pm 1 \text{ dB}$ for the single quantity ($D_{n,e,w}$) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves ($D_{n,e,w}$)

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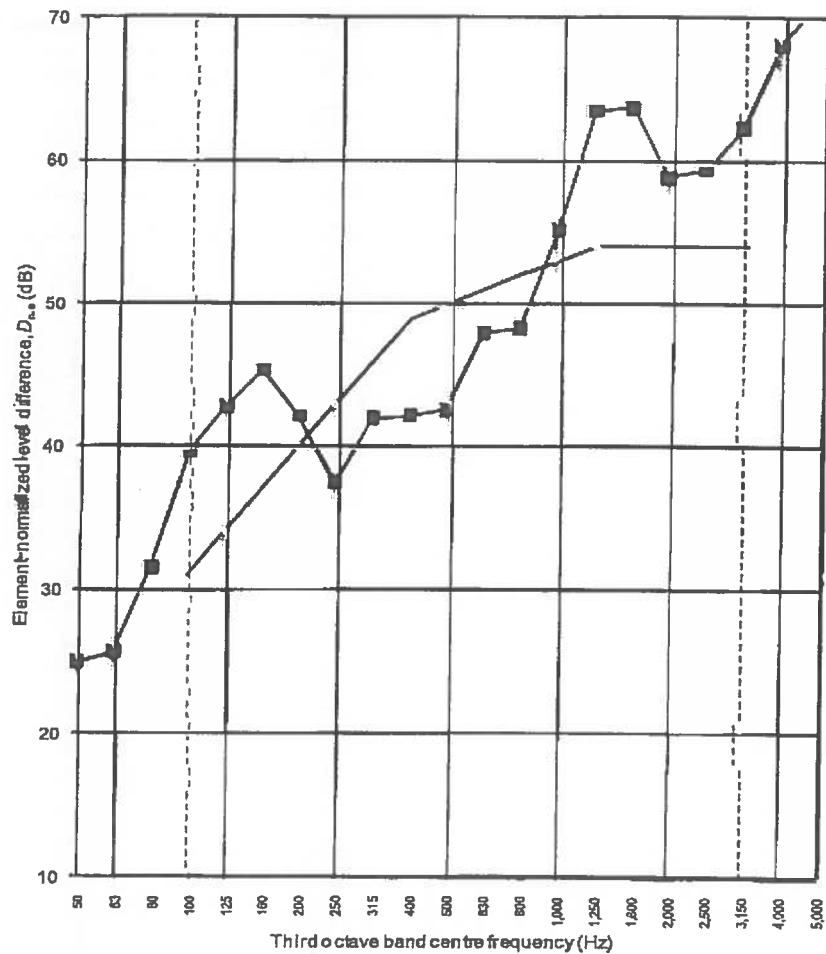
Laboratory measurement of airborne sound insulation of small building elements
 Element-normalized level difference according to BS EN 20140-10:1992
 BRE horizontal transmission suite (B9)
 Client: Rytons Building Products Ltd
 Test date: 12/02/2013 Test number: L112-080 Test element: vent

0578
 Filler wall area: 9.8 m²
 Description:
 AAC125HP-CLOSED- Super Acoustic Controllable LookRyt® AirCore®

Source room volume: 130 m³
 Receive room volume: 115 m³

Air temperature: 9 °C
 Air relative humidity: 55 %

Frequency (Hz)	$D_{n,e}$ One-third octave (dB)
50	25.0
63	25.7
80	31.6
100	39.7
125	42.8
160	45.4
200	42.2
250	37.5
315	42.0
400	42.2
500	42.6
630	48.0
800	48.3
1,000	55.2
1,250	63.5
1,600	63.7
2,000	58.9
2,500	59.4
3,150	62.3
4,000	68.2
5,000	71.3



x Adjusted for flanking transmission
 o Correction = 13 dB

Rating according to BS EN ISO 717-1:1997

$D_{n,e,w}(C;C_{tr}) = 50 (-1;-3) \text{ dB}$	$C_{50-3150} = -1 \text{ dB}$	$C_{50-5000} = 0 \text{ dB}$	$C_{100-5000} = 0 \text{ dB}$
	$C_{tr,50-3150} = -$	$C_{tr,50-5000} = -$	$C_{tr,100-5000} = -3 \text{ dB}$

Evaluation based on laboratory measurement results obtained by an engineering method

Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed $\pm 1 \text{ dB}$ for the single quantity ($D_{n,e,w}$) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves ($D_{n,e,w}$)

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