

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:** L112-083 **Test element:** vent

0578

Filler wall area: 9.8 m²

Description:

AAH125HP-OPEN- High Rise 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)	Reverberation time (s)	Background level (dB)	Source level (dB)	Receive level (dB)	<i>D</i> _{n,e} (dB)
50	1.68	23.1	92.8	68.9	24.7
63	1.51	20.1	98.1	72.9	25.7
80	1.28	17.7	96.5	64.5	31.6
100	1.56	19.4	97.8	58.1	40.3
125	1.72	16.6	98.5	56.3	43.3
160	1.72	16.8	97.0	51.7	46.3
200	1.80	12.1	98.4	56.3	42.7
250	1.58	14.6	96.2	59.2	36.4
315	1.66	11.0	93.9	57.0	36.4
400	1.60	11.8	92.6	53.5	38.4
500	1.57	15.7	93.5	55.7	37.1
630	1.61	14.7	95.2	55.0	39.6
800	1.59	12.1	95.3	54.7	40.0
1,000	1.56	9.3	94.9	49.4	44.8
1,250	1.62	11.3	95.5	40.0	54.9
1,600	1.59	12.8	95.7	34.3	60.8
2,000	1.57	10.3	93.3	36.7	55.9
2,500	1.51	8.7	93.7	36.1	56.7
3,150	1.38	7.5	94.6	30.5	62.8
4,000	1.25	7.9	99.7	28.6	69.5
5,000	1.13	7.4	100.1	25.3	72.6

x Adjusted for flanking transmission

o Correction = 13 dB

Rating according to BS EN ISO 717-1:1997					
<i>D</i> _{n,e,w} (C;C _{tr}) = 44 (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: L112-083 Test element: vent

0578

Filler wall area: 9.8 m²

Description:

AAH125HP-OPEN- High Rise Super Acoustic Controllable LookRyt® AirCore®

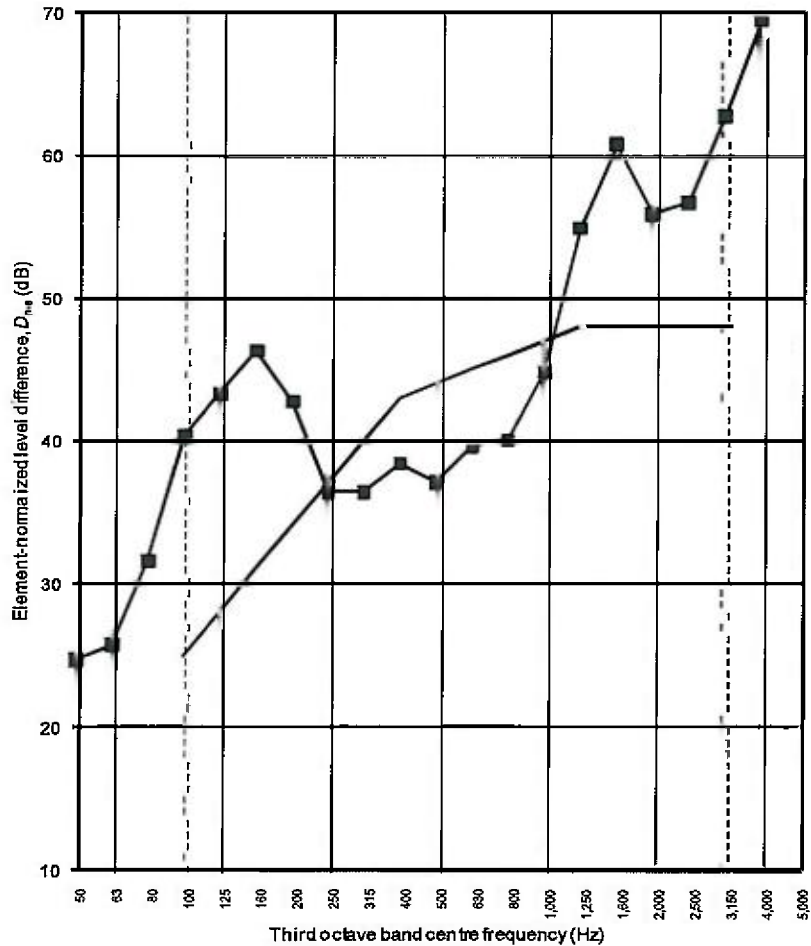
Source room volume: 130 m³

Air temperature: 9 °C

Receive room volume: 115 m³

Air relative humidity: 55 %

Frequency (Hz)	$D_{n,e}$ One-third octave (dB)
50	24.7
63	25.7
80	31.6
100	40.3
125	43.3
160	46.3
200	42.7
250	36.4
315	36.4
400	38.4
500	37.1
630	39.6
800	40.0
1,000	44.8
1,250	54.9
1,600	60.8
2,000	55.9
2,500	56.7
3,150	62.8
4,000	69.5
5,000	72.6



x Adjusted for flanking transmission

o Correction = 1.3 dB

Rating according to BS EN ISO 717-1:1997

$D_{n,e,w}(C;C_{tr}) = 44 (0;-2) \text{ dB}$ $C_{50-3150} = 0 \text{ dB}$ $C_{50-5000} = 1 \text{ dB}$ $C_{100-5000} = 1 \text{ dB}$
 $C_{tr,50-3150} = -$ $C_{tr,50-5000} = -$ $C_{tr,100-5000} = -2 \text{ dB}$

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:** L112-084 **Test element:** vent

0578

Filler wall area: 9.8 m²

Description:

AAH125HP-CLOSED- High Rise 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)	Reverberation time (s)	Background level (dB)	Source level (dB)	Receive level (dB)	D _{n,e} (dB)
50	1.68	23.1	93.3	69.3	24.8
63	1.51	20.1	98.0	73.1	25.3
80	1.28	17.7	97.0	64.5	32.2
100	1.56	19.4	97.7	58.1	40.1
125	1.72	16.6	98.7	56.3	43.4
160	1.72	16.8	96.8	51.7	46.0
200	1.80	12.1	98.3	53.9	45.6
250	1.58	14.6	96.0	56.5	38.8
315	1.66	11.0	93.7	51.5	41.8
400	1.60	11.8	92.5	49.0	42.9
500	1.57	15.7	93.5	50.1	42.8
630	1.61	14.7	95.2	46.6	48.1
800	1.59	12.1	95.4	47.0	47.8
1,000	1.56	9.3	94.9	39.4	54.8
1,250	1.62	11.3	95.4	30.7	64.2
1,600	1.59	12.8	95.7	28.5	66.6
2,000	1.57	10.3	93.3	30.1	62.5
2,500	1.51	8.7	93.6	29.5	63.3
3,150	1.38	7.5	94.6	27.9	65.5
4,000	1.25	7.9	99.6	26.9	71.0
5,000	1.13	7.4	100.0	23.9	74.0

o
o
o
o
o
o
x

x Adjusted for flanking transmission

o Correction = 1.3 dB

Rating according to BS EN ISO 717-1:1997						
D _{n,e,w} (C;C _{tr}) = 50 (0;-3) dB	C ₅₀₋₃₁₅₀	= -1 dB	C ₅₀₋₅₀₀₀	= 0 dB	C ₁₀₀₋₅₀₀₀	= 1 dB
	C _{tr,50-3150}	= -	C _{tr,50-5000}	= -	C _{tr,100-5000}	= -3 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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The BRE logo is displayed in a bold, lowercase, yellow sans-serif font. It is positioned on the left side of the page, set against a dark teal background. The background features a complex pattern of thin, yellow, curved lines that create a sense of depth and movement, resembling a stylized architectural or scientific structure.

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