

Check all dimensions and site conditions prior to commencement of any work, the purchase or ordering of any material, fitting, plant, services or equipment and the preparation of shop drawings and/or the fabrication of any components.

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

All drawings may not be reproduced or distributed without prior permission from the architect.

02	02/10/09	Consultant Issue for Review	AL	NM
01	23/09/09	Consultant Issue for Review	AL	NM
Review	Date	Description	Initial	Checked



Level 11, 68 Alfred Street,
Milsons Point, NSW 2061

JIA
Architecture - Interiors - Project Managers

STONEY - SINGAPORE
JAKARTA - MANILLA

Lavel 11, 66 Alfred Street
Midons Park, NSW 2081
Ph (02) 9522 5522
Fax (02) 9022 5077
Email: info@jia-pon.com



Scale	1:200 @ A1	
Drawn	AL	Checked
Project No.	S11174	
Stage	PRELIMINARY	
Pkt Date	3/21/2010 10:51:14 PM	
Pkt File	S:\11001\110011174\110011174.dwg (parent) 00_mak\copy\p101.dwg -- E:\2\452.dwg [Redaction]	
Drawing No.		

EA2.14[02]

Sydney 1/243 Liverpool Street
East Sydney NSW 2010 Australia
T 02 8354 5100 F 02 8354 5199
email: syd@batesmart.com.au
http://www.batesmart.com.au

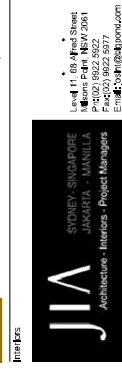
Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email: melb@batesmart.com.au
http://www.batesmart.com.au

Bates Smart Pty Ltd ABN 70 004 999 400

BATES SMART™

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Client



Drawing No. EA2-15US.dwg
(Revision)

Sydney 1/243 Liverpool Street
East Sydney NSW 2010 Australia
T 02 9354 5100 F 02 9354 5199
email syd@batesmart.com.au
<http://www.batesmart.com.au>

Bates Smart Ply Ltd ABN 70 004 999 400

BATES SMART[®]

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Client

Abstract

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

BATES SMART

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Client

Millions Paid, NSW 2061

Drawing No. [Revision]
-- E2.1904.00WQ

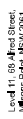
Bates Smart Ply Ltd ABN 70 004 999 400

Bates Smart Fly Ltd ABN 70 004 999 400

BATES SMART[®]

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Client



Level 11, 88 Alfred Street
Mills Point, NSW 2061
P: (02) 9922 5922
F: (02) 9922 5977
E: info@bimond.com

EA2.20101.00WG
[Revision]

Sydney 1/243 Liverpool Street
East Sydney NSW 2010 Australia
T 02 8354 5100 F 02 8354 5199
email syd@batesmart.com.au
http://www.batesmart.com.au

Melbourne 1 Nicholson Street
Melbourne VIC 3000 Australia
T 03 8664 6200 F 03 8664 6300
email melb@batesmart.com.au
http://www.batesmart.com.au

Bates Smart Fly Ltd ABN 70 004 999 400

BATES SMART[®]

Appendix C

Raven Products Brochure

Acoustic Engineering



Burchill VDM Pty Limited ABN: 89 010 140 495 ACN: 010 140 495
3rd Floor Evandale Place, 142 Bundall Road, Surfers Paradise QLD 4217, PO Box 5017, Gold Coast MC QLD 9726
P: +61 7 5574 0511 F: +61 7 5574 0011 E: burchillvdm@vdmgroup.com.au W: www.burchillvdm.com.au

BRISBANE

GOLD COAST

BEENLEIGH

AIRLIE BEACH

MACKAY

PERTH



Acoustic Door Seals

Helping reduce the amount of sound that passes through a doorway is one of the most common applications for door seals.

Sealing the gaps around a door is of prime importance when reducing the amount of sound entering or leaving a room or building. Raven acoustic seals provide an excellent barrier to airborne sound and help ensure that the acoustic attenuation provided by a doorset (the frame and doorleaf along with the seals) is, in many cases, equivalent to the wall or partition into which it is installed.

Raven acoustic seals also help

isolate buildings from external noise, for example, from the noise generated from roads, railways and airports. They also help isolate rooms from airborne noise generated within a building. For example; from plant and machinery, theatres, cinemas, creches, dental and doctors' surgeries, stairwells, passages, interconnected hotel rooms and adjoining apartments.

It may be necessary to check with local regulatory authorities to see if any regulations or standards apply for a particular application. For example: **BCA Sect. F 5.5** and **Sect. F2.4.6** stipulates a requirement where Class 2

buildings, typically apartments and Class 3 buildings such as hotels, motels and age care buildings, must have entry doors with a sound insulation rating minimum of **Rw30**.

The UK Building Approved Document E states a minimum **Rw29** is required.

Raven acoustic seals are widely used internationally in airports, hotels, offices, hospitals, homes and anywhere noise infiltration occurs through doors. Their effectiveness is best illustrated by the repeated use of Raven acoustic seals by architects, acoustic consultants, door

manufacturers, engineers and project builders.

The performance of Raven door seals are routinely tested by internationally accredited organisations.

Acoustic Door Fabricators

Increasingly use Raven Door sealing systems in their door sets to achieve and maintain high ratings. Some are detailed on **pages 19 and 20**.

Techwide Engineering LTD Manufacturing Acoustic rated doors featuring Raven seals, which have been independently tested and certified to **STC 47**.

Performance / Testing

Raven acoustic sealing systems are tested in accordance with **AS1191 (ISO 140.3)** and rated to **AS 1276.1 (ISO 717.1)** by N.A.T.A. accredited Vipac Engineers and Scientists Ltd.

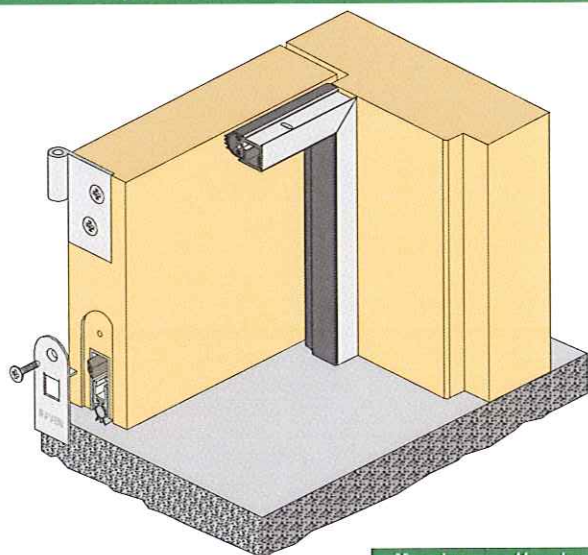
The tabulated results are presented as the Sound Transmission Loss (STL) in one

third octave bands and the Weighted Sound Reduction Index (Rw) for each of the door/seal combinations. **Note:** Higher acoustic values of up to **STC 47** have been certified by using higher density, acoustically designed doors in conjunction with Raven acoustic sealing systems. To achieve predictable acoustic

ratings, the door type, configuration, Raven acoustic sealing system and the room construction should all be considered during the specification process. Raven, the industry leader in door sealing systems, pioneered baseline acoustic testing, utilising "off the shelf" doors and ironmongery to give

specifiers proven, cost effective solutions to the growing problem of noise in living and workplace environments.

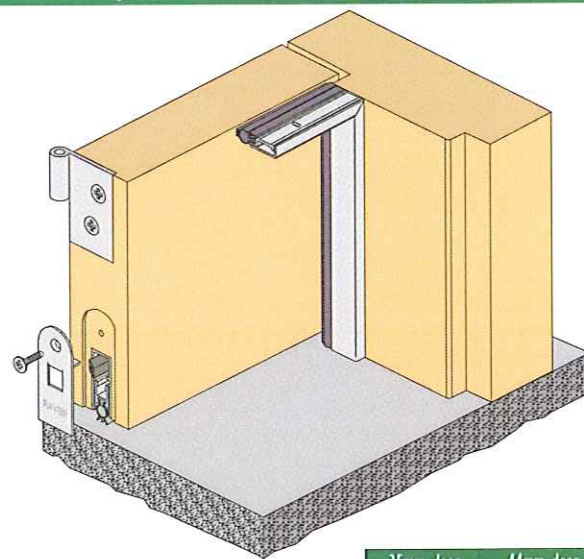
RP8 Si Fully Morticed & RP10



35mm door			44mm door		
STC	Rw	STL(dB)	STC	Rw	STL(dB)
No seals	17	18	17.2	15	15.5
Fully caulked door	30	30	28.8	33	33
RP8 Si fully morticed/RP10	30	30	28.0	32	32

Frequency (Hertz) vs STL (dB)																
Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150
35mm door (dB)	20.7	21	20.7	26.5	22.2	26.7	24.4	25.3	27.3	28.4	27.9	28.6	30.8	33.6	35.5	35.2
44mm door (dB)	21.6	20.6	23.8	25.8	25.2	27.4	29.1	30.1	28.9	30.5	29.5	29.7	31.7	34.6	36.8	35.6

RP8 Si Fully Morticed & RP94 Si



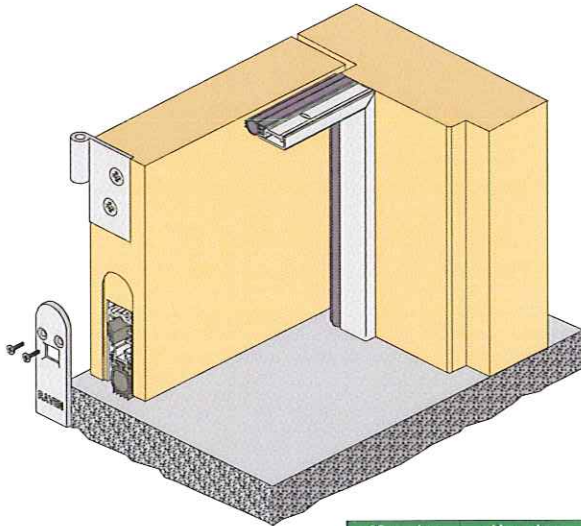
35mm door			44mm door		
STC	Rw	STL(dB)	STC	Rw	STL(dB)
No seals	17	18	17.2	15	15.5
Fully caulked door	30	30	28.8	33	33
RP8 Si fully morticed/RP94 Si	29	29	27.3	30	30

Frequency (Hertz) vs STL (dB)																
Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150
35mm door (dB)	20.5	20.7	20.6	26.6	22.2	26.2	24.2	24.7	25.6	28.3	27.6	28	29.6	30.6	33.1	34.5
44mm door (dB)	21.3	20.4	23.7	25.9	25.1	27	28.6	28.3	26.5	30.2	29.2	28.9	30.3	31.1	33.8	35

Acoustic Sealing Single Door's

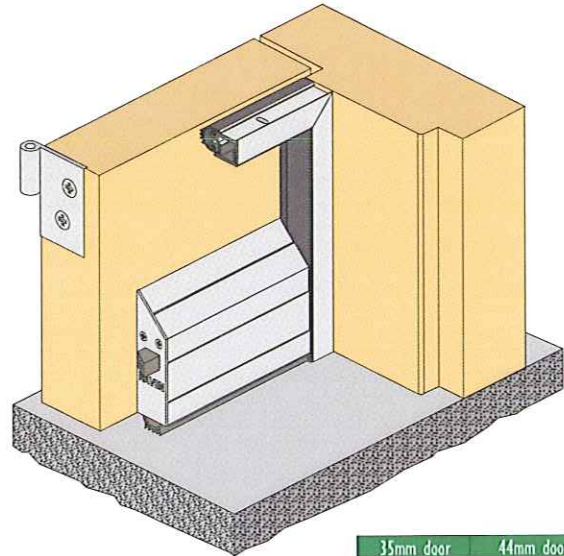


RP99 Si Fully Morticed & RP94 Si



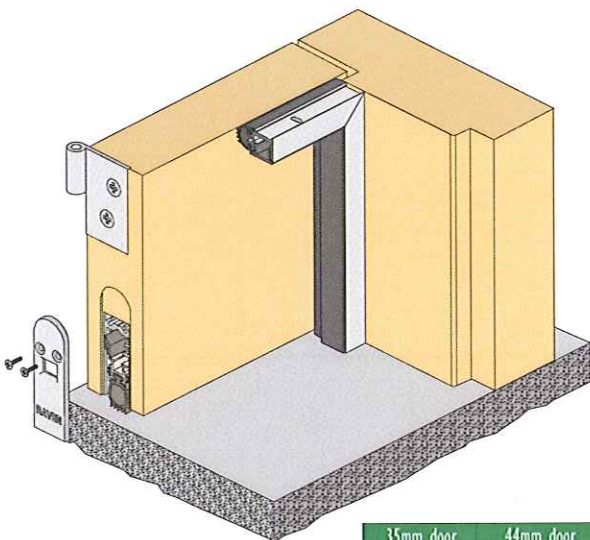
		35mm door			44mm door		
		STC	Rw	STL(α)	STC	Rw	STL(α)
		17	18	17.2	15	16	15.5
		No seals					
		30	30	28.8	33	33	30.5
		Fully caulked door					
		30	30	28.8	33	33	30.5
		RP99 Si fully morticed/RP94 Si					
		28	28	26.8	30	30	28
Frequency (Hertz) vs STL (dB)							
Hz	100	125	160	200	250	315	400
35mm door (dB)	20.5	20.9	20.1	26.6	21.9	25.3	24
44mm door (dB)	21.3	20.5	22.6	25.9	24.6	25.8	28.1

RP99 Si Face Mounted & RP10



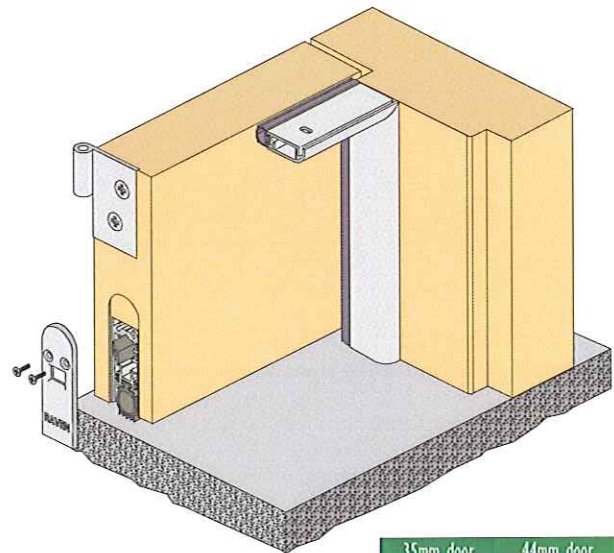
		35mm door			44mm door		
		STC	Rw	STL(α)	STC	Rw	STL(α)
		17	18	17.2	15	16	15.5
		No seals					
		30	30	28.8	33	33	30.5
		Fully caulked door					
		30	30	28.8	33	33	30.5
		RP99 Si face mounted/RP10					
		30	30	28.7	32	32	30.4
Frequency (Hertz) vs STL (dB)							
Hz	100	125	160	200	250	315	400
35mm door (dB)	20.7	21	20.4	26.8	22.2	26.7	24.4
44mm door (dB)	21.6	20.6	23.3	26	25.2	27.5	29.1

RP99 Si Fully Morticed & RP10



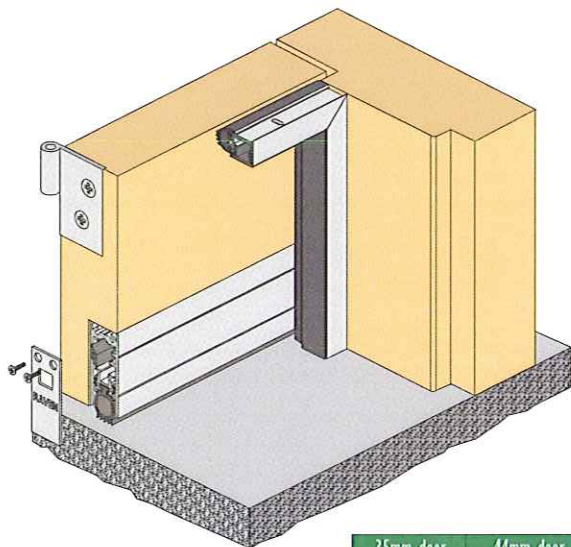
		35mm door			44mm door		
		STC	Rw	STL(α)	STC	Rw	STL(α)
		17	18	17.2	15	16	15.5
		No seals					
		30	30	28.8	33	33	30.5
		Fully caulked door					
		30	30	28.8	33	33	30.5
		RP99 Si fully morticed/RP10					
		30	30	28.7	33	32	30.4
Frequency (Hertz) vs STL (dB)							
Hz	100	125	160	200	250	315	400
35mm door (dB)	20.7	21	20.4	26.8	22.2	26.7	24.4
44mm door (dB)	21.6	20.6	23.3	26	25.2	27.5	29.1

RP99 Si Fully Morticed & RP93 Si



		35mm door			44mm door		
		STC	Rw	STL(α)	STC	Rw	STL(α)
		17	18	17.2	15	16	15.5
		No seals					
		30	30	28.8	33	33	30.5
		Fully caulked door					
		30	30	28.8	33	33	30.5
		RP99 Si fully morticed/RP93 Si					
		30	30	28.7	32	32	30.4
Frequency (Hertz) vs STL (dB)							
Hz	100	125	160	200	250	315	400
35mm door (dB)	20.6	21	20.6	26.8	22.2	26.7	24.4
44mm door (dB)	21.5	20.6	23.7	26	25.2	27.5	29

RP99 Si Semi Morticed & RP10

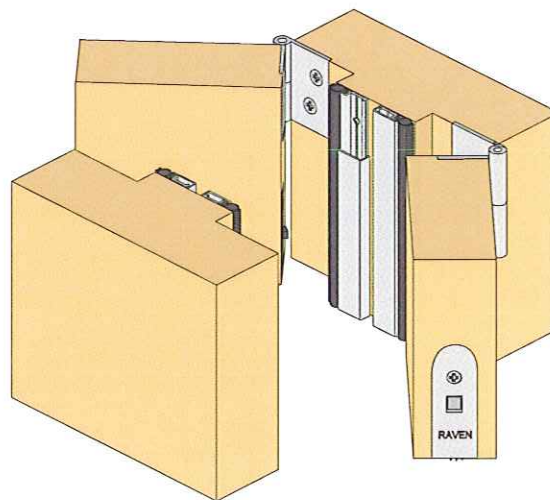


	35mm door			44mm door		
	STC	Rw	STL(dB)	STC	Rw	STL(dB)
No seals	17	18	17.2	15	16	15.5
Fully caulked door	30	30	28.8	33	33	30.5
RP99 Si semi morticed/RP10	30	30	28.6	32	32	30.3

Frequency (Hertz) vs STL (dB)

Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
35mm door (dB)	20.4	21	20.6	26.7	22.2	26.7	24.4	25.3	27.9	28.4	28.9	30	31.9	34.3	35.5	37.2	37.3	36.9
44mm door (dB)	21.2	20.6	23.7	26	25.1	27.4	29	29.9	29.6	30.5	31	31.6	33.2	35.5	36.8	38	38.5	37.6

RP8 Si x 2 & RP94 Si x 2

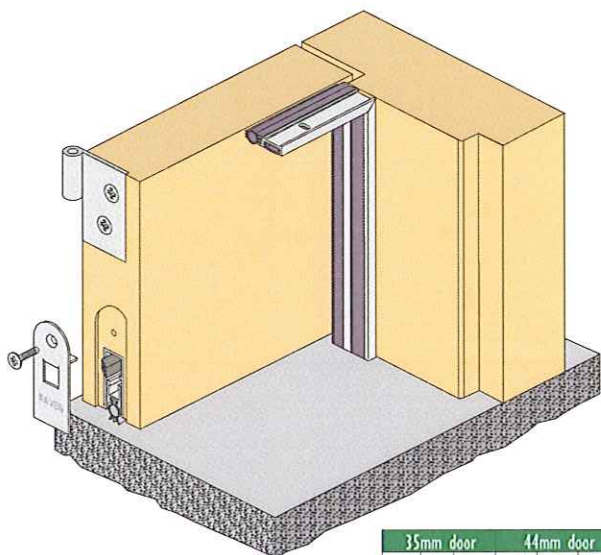


	40mm door		
	STC	Rw	STL(dB)
No seals	24	28	24.5
Fully caulked door	40	40	35.8
RP8 Si x 2/RP94 Si x 2	38	38	35.7

Frequency (Hertz) vs STL (dB)

Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
35mm door (dB)	25.5	22	28.5	35.5	34	37.5	40.5	35	34.5	36	38	N/A	37	39.5	41	41.5	41	39.5

RP8 Si Fully Morticed & RP78 Si

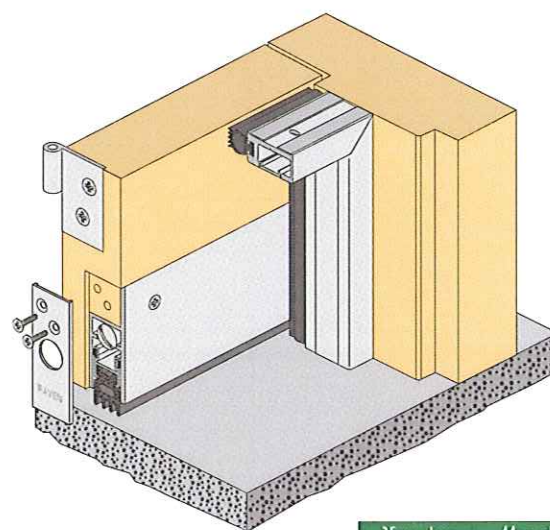


	35mm door			44mm door		
	STC	Rw	STL(dB)	STC	Rw	STL(dB)
No seals	17	18	17.2	15	16	15.5
Fully caulked door	30	30	28.8	33	33	30.5
RP8 Si fully morticed/RP78 Si	30	30	28.1	32	32	29.6

Frequency (Hertz) vs STL (dB)

Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
35mm door (dB)	20.7	21	20.4	26.8	22.2	26.3	24.4	25.3	27	28.4	28.7	29.5	31.1	32.5	34.1	35.1	35.9	35.7
44mm door (dB)	21.6	20.6	23.2	26	25.2	27.1	29.1	29.9	28.3	30.5	30.8	30.9	32.1	33.2	35	35.6	36.7	36.2

RP38 Semi Morticed & RP47



	35mm door			44mm door		
	STC	Rw	STL(dB)	STC	Rw	STL(dB)
No seals	17	18	17.2	15	16	15.5
Fully caulked door	30	30	28.8	33	33	30.5
RP38 semi morticed/RP47	30	30	28.6	32	32	30.3

Frequency (Hertz) vs STL (dB)

Hz	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
35mm door (dB)	20.6	21	20.4	26.6	22.2	26.3	24.3	25.3	27.9	28.4	28.8	30.2	32.3	34.4	35.3	36.5	37	37.3
44mm door (dB)	21.5	20.6	23.2	25.9	25.2	27	29	30	29.6	30.5	31	31.8	33.7	35.7	36.5	37.2	38.1	38.1

Do not scale drawings - refer to figured dimensions only. Any discrepancies shall immediately be referred to the architect for clarification.

Client

Missions Pdnl, NSW 2061

(Revision)

Bates Smart Ply Ltd ABN 70 004 999 400

BATES SMART[™]