

NCO developed a versatile range of timber doors for a variety of applications. These doors are being installed to effectively control noise and fire-resisting in conference rooms, broadcasting studios, theatres and music practice rooms where noise pollution is one of the major concerns.

Acoustic doors, tested in the accredited laboratory, equipped with compression seals around the periphery of the doors. Standard doors have an acoustic rating up to STC 45. Many of the doors in the range also meet fire specification.

Fire doors are tested to BS476- Part 22:1987 with fire rating up to two hours for stability and integrity. An intumescent strip is used for fire rating doors. The door ranges incorporate the latest acoustic technology and optimum in engineering design with high quality standard and optional fittings, e.g. windows, locks, closers, etc. are available to meet individual customer requirements.

The following figures present the performances for various models:



#### ACOUSTIC DOOR PERFORMANCE

| Model   | Weighted<br>Apparent SRI<br>R'w<br>(ISO-140-3) | Sound<br>Transmission<br>Loss (STC), dB<br>(ASTM-E90) | Combined<br>Wall<br>Rating, dB<br>(ASTM-E413) |
|---------|------------------------------------------------|-------------------------------------------------------|-----------------------------------------------|
| 32dB-TA | 32                                             | 32                                                    | 38                                            |
| 34dB-TA | 34                                             | 33                                                    | 40                                            |
| 39dB-TA | 39                                             | 38                                                    | 45                                            |
| 40dB-TA | 40                                             | 39                                                    | 46                                            |
| 41dB-TA | 41                                             | 41                                                    | 47                                            |
| 43dB-TA | 43                                             | 43                                                    | 50                                            |
| 45dB-TA | 45                                             | 45                                                    | 51                                            |
| 50dB-TA | 2 x 41dB-TA                                    |                                                       |                                               |
| 55dB-TA | 2 x 45dB-TA                                    |                                                       |                                               |



#### FIRE DOOR PERFORMANCE

Fire Code: (To BS 476: Part 22:1987)

| Model       | Stability   | Integrity   | Insulation  |
|-------------|-------------|-------------|-------------|
| F60         | 60 minutes  | 60 minutes  | -           |
| F120/F120A* | 120 minutes | 120 minutes | 30 minutes* |

#### GENERAL PURPOSE DOOR

(Non-Acoustic, Non-Fire rated)

| Model  | Core/ Thickness | FSTC (Estimated) |
|--------|-----------------|------------------|
| GP50-H | Hollow/ 50mm    | < 20 dB          |
| GP50-S | Solid/ 50mm     | 22 dB            |



**DOOR TYPE**

| Door Type   | General Purpose | Acoustic                                                                                    | Fire-resistance      | Acoustic & Fire                                                                                  |
|-------------|-----------------|---------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------|
| BASIC MODEL | GP50            | 32dB-TA / 34dB-TA<br>39dB-TA / 40dB-TA<br>41dB-TA / 43dB-TA<br>45dB-TA / 50dB-TA<br>55dB-TA | F60<br>F120<br>F120A | 32dB-TA / 34dB-TAF<br>39dB-TA / 40dB-TAF<br>41dB-TA / 43dB-TAF<br>45dB-TA / 50dB-TAF<br>55dB-TAF |

**DOOR SPECIFICATION**

| Door Type                                            | General Purpose                       | Acoustic*                          | Fire-resistance                                          | Acoustic* & Fire                   |
|------------------------------------------------------|---------------------------------------|------------------------------------|----------------------------------------------------------|------------------------------------|
| DOOR LEAF                                            | GP44: Hollow Core<br>GP50: Solid Core | Supplied hung in frame             | F60: Solid Core<br>F120: Solid Core<br>F120A: Solid Core | Supplied hung in frame             |
| DOOR FRAME<br>a) Softwood<br>b) Hardwood<br>c) Steel | Standard<br>Available<br>Available    | --<br>Standard<br>Standard (>40dB) | F60: Standard<br>F60: Available<br>F120: Standard        | --<br>Standard<br>Standard (>40dB) |
| COMPRESSION SEALS                                    | Not Available                         | Standard                           | Not available                                            | Standard                           |
| INTUMESCENT STRIP                                    | Not available                         | Not available                      | Standard                                                 | Standard                           |
| DOOR CLOSER                                          | Available                             | Available                          | Available                                                | Available                          |
| DOOR LOCK                                            | Available                             | Available                          | Available                                                | Available                          |
| VISION PANEL                                         | Available                             | Available                          | Available                                                | Available                          |

\* Using high quality RAVEN Sealing System

**DOOR FINISH**

| Door Type        | General Purpose | Acoustic  | Fire-resisting | Acoustic & Fire |
|------------------|-----------------|-----------|----------------|-----------------|
| PRIMER PAINT     | Standard        | Standard  | Standard       | Standard        |
| VENEER           | Standard        | Standard  | Standard       | Standard        |
| PLASTIC LAMINATE | Available       | Available | Available      | Available       |

**RANGE OF VENEER**

| Veneer Type | General Purpose                    | Acoustic  | Fire-resisting | Acoustic & Fire |
|-------------|------------------------------------|-----------|----------------|-----------------|
| BEECH       | Standard                           | Standard  | Standard       | Standard        |
| CHERRY      | Available                          | Available | Available      | Available       |
| MAPLE       | Available                          | Available | Available      | Available       |
| TEAK        | Available                          | Available | Available      | Available       |
| SPECIAL     | Please consult us for availability |           |                |                 |

***DIMENSIONS (STRUCTURE WALL OPENING, MM)***

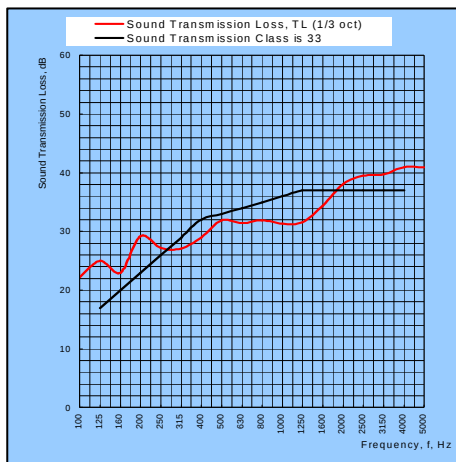
| Door Type             | 32dB / 34dB / 39dB |      |        |      | 40dB/41dB/ 43dB/ 45dB |      |        |      |
|-----------------------|--------------------|------|--------|------|-----------------------|------|--------|------|
| Leave                 | Single             |      | Double |      | Single                |      | Double |      |
|                       | W                  | H    | W      | H    | W                     | H    | W      | H    |
| Standard Size         | 930                | 2160 | 1830   | 2130 | 930                   | 2130 | 1830   | 2130 |
| Fire Door Size (Max.) | 1130               | 2430 | 1830   | 2430 | 1130                  | 2430 | 1130   | 2430 |

Note: overall frame size is 10mm less than Structural Work Opening for width and height.

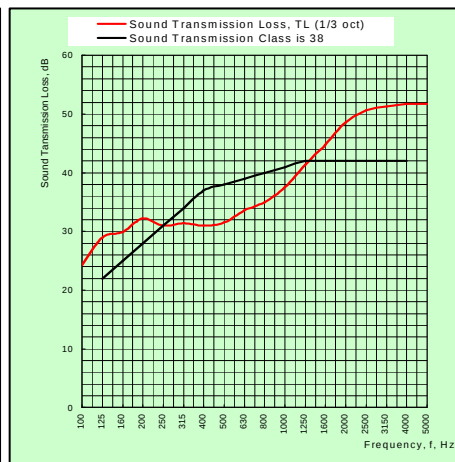
***DIMENSIONS (CLEAR DOOR OPENING = STRUCTURE WALL OPENING - VALUES BELOW)***

| Leave               | Single |      | Double |      |
|---------------------|--------|------|--------|------|
| Door Type           | W,mm   | H,mm | W,mm   | H,mm |
| GP50                | 100    | 50   | 100    | 50   |
| F60 / F120 / F120A* | 110    | 55   | 110    | 55   |
| ACOUSTIC DOOR       | 120    | 60   | 120    | 60   |

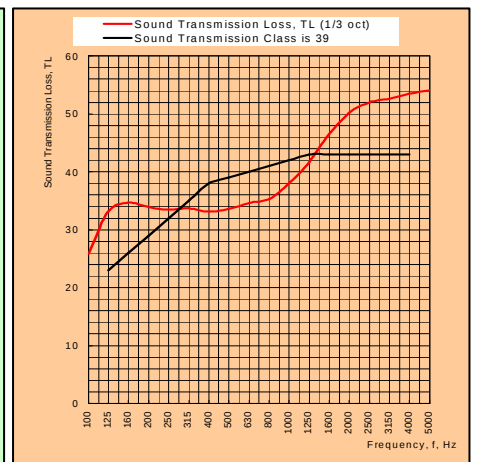
Note: These dimensions may be subject to change.



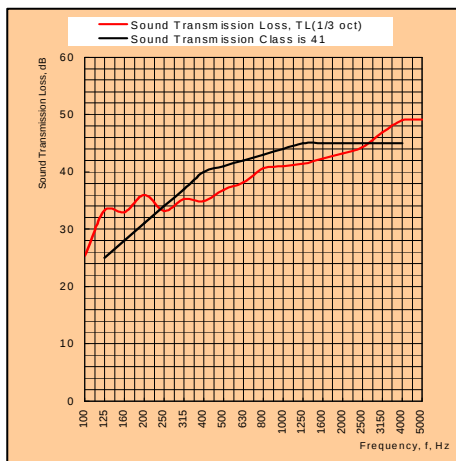
Model: 34dB-TA (STC 33)



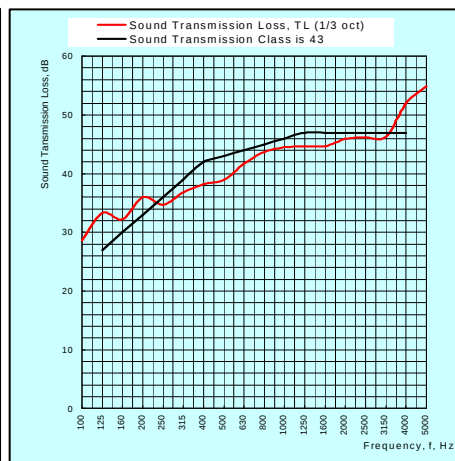
Model: 39dB-TA (STC 38)



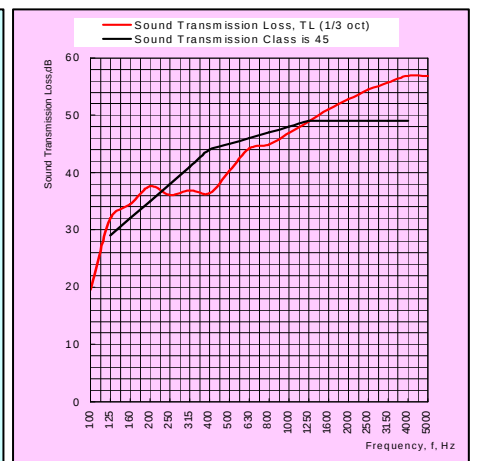
Model: 40dB-TA (STC 39)



Model: 41dB-TA (STC 41)



Model: 43dB-TA (STC 43)



Model: 45dB-TA (STC 45)

## ACOUSTIC DOOR FEATURES



Concealed Perimeter Seal Design for Professional Appearance



High Performance Bottom Design for Air Tight Efficiency



Flush Bottom & Automatic Drop Seal Design to ensure Soundproofing Capability



High Quality Acoustic Roller Tightening Door Lock.

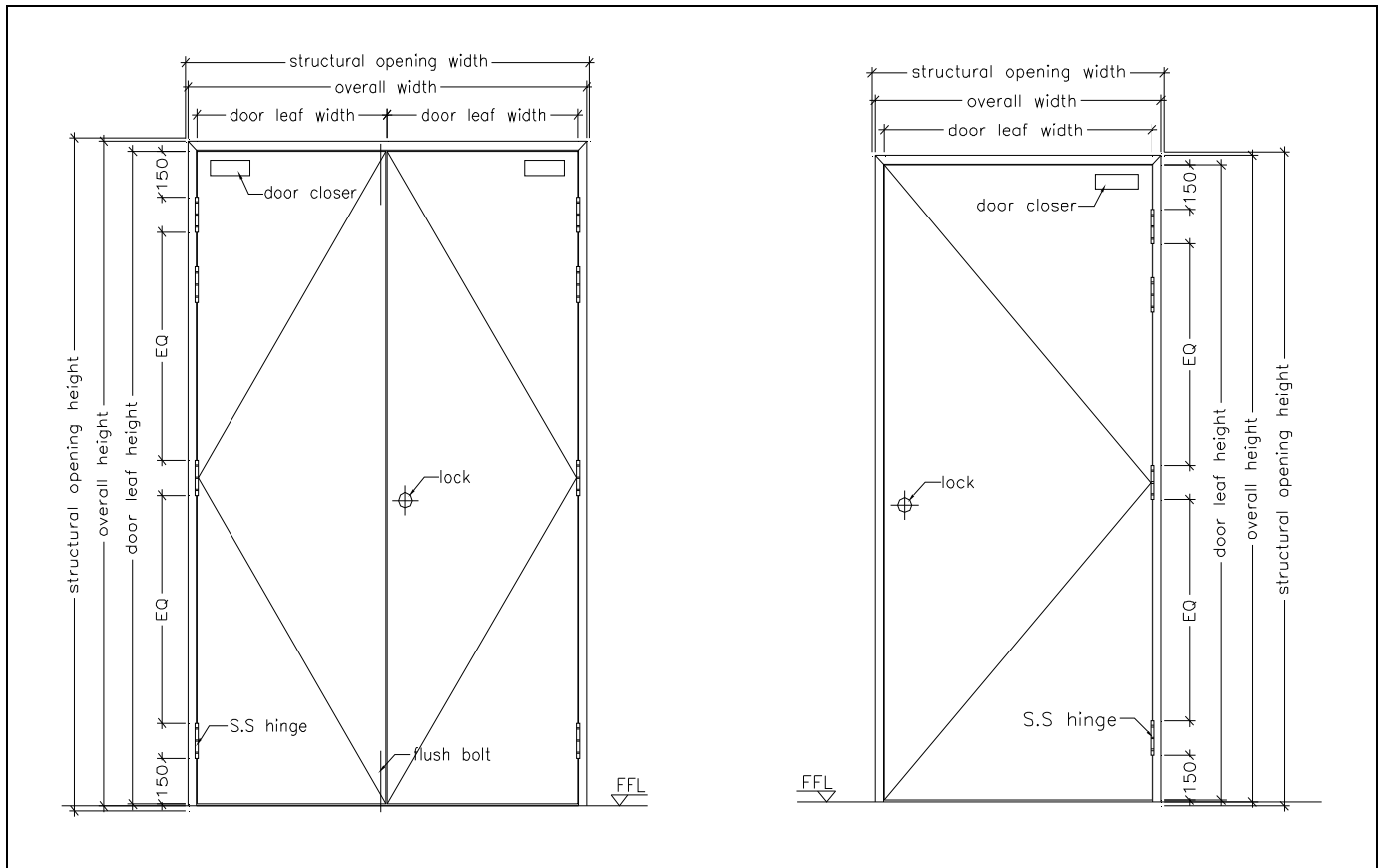


Acoustic Glass Vision Panel Design

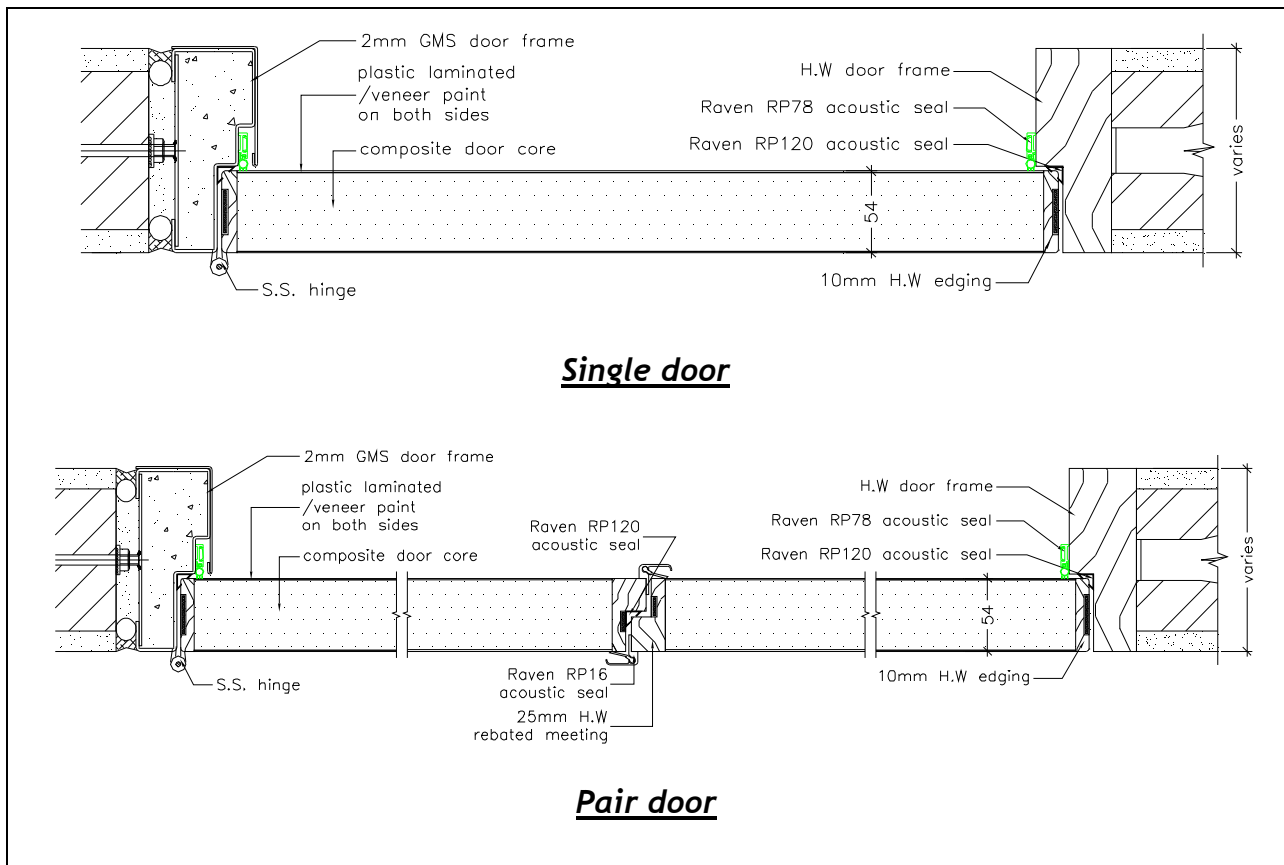


**High Sound Insulation Composite Door Core** designed for reducing both Low & High frequencies noise sources targeted for noise sensitive applications and environments.

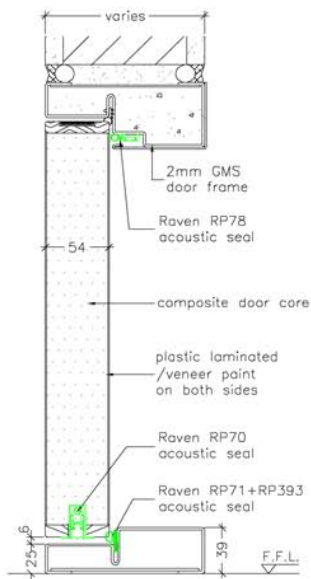
**OUTLINE DRAWING OF NCO ACOUSTIC DOOR**



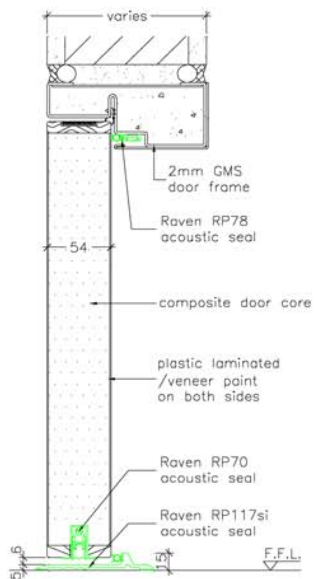
**OUTLINE DETAILS OF HORIZONTAL SECTION**



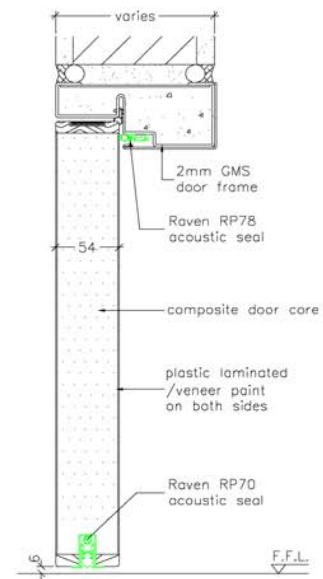
## OUTLINE DETAILS OF TYPICAL VERTICAL SECTIONS



**RAISED THRESHOLD**



**DETACHABLE THRESHOLD**



**FLUSH BOTTOM**



雋高有限公司  
**KOEL HOLDINGS LTD**

*Go Green!*

香港新界沙田火炭坳背灣街41-43號安華工業大廈4字樓B室

Flat B, 4/F., On Wah Industrial Building

41-43 Au Pui Wan Street, Fo Tan

Shatin, N.T., Hong Kong.

Tel: (852) 3568-6251 Fax: (852) 3568-6252

website: [www.koel-holdings.com](http://www.koel-holdings.com)

