



# VARIFLEX<sup>®</sup>

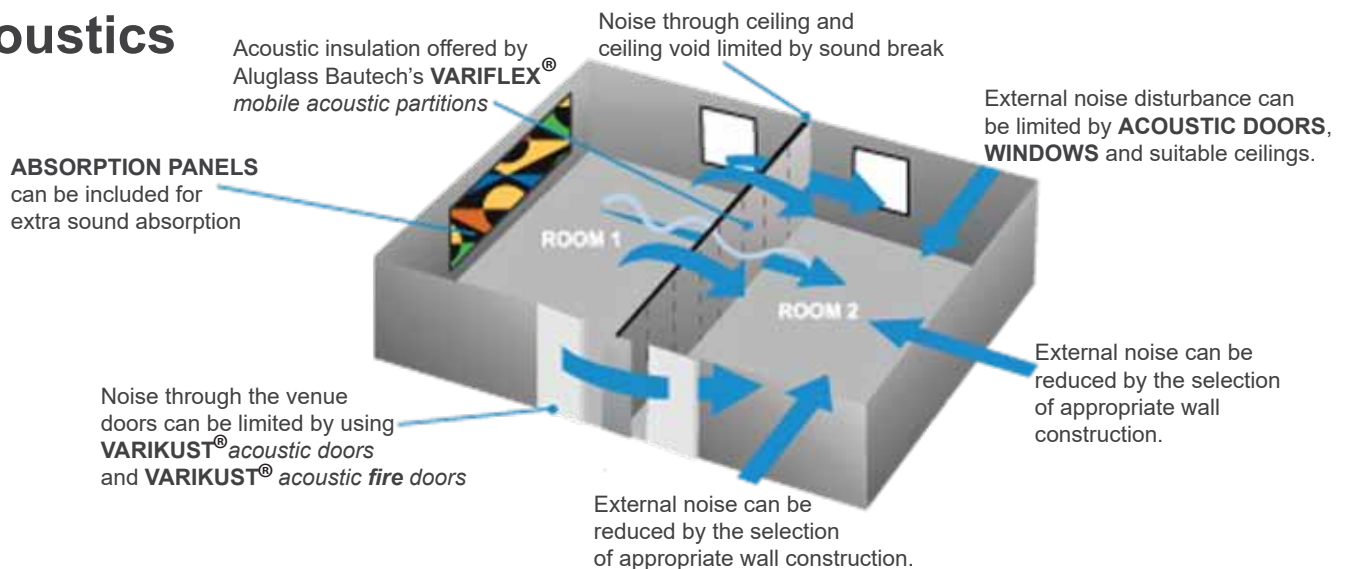
mobile acoustic partitions

***ENGINEERING QUIET***



# Overview

## Acoustics



## Acoustic rating selection table

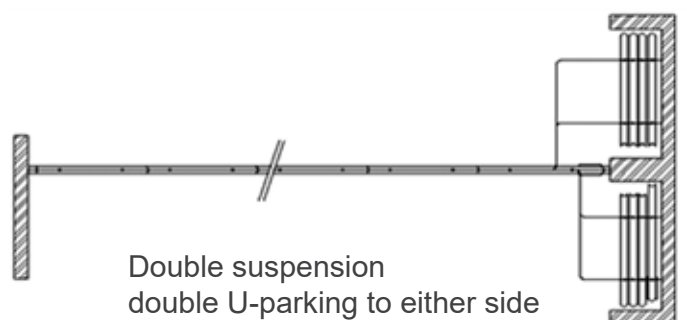
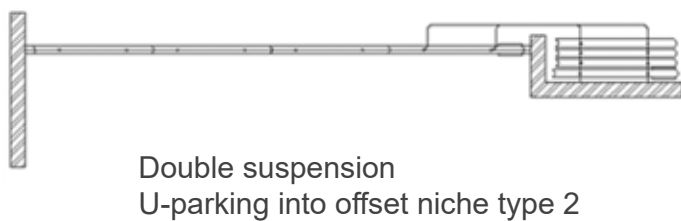
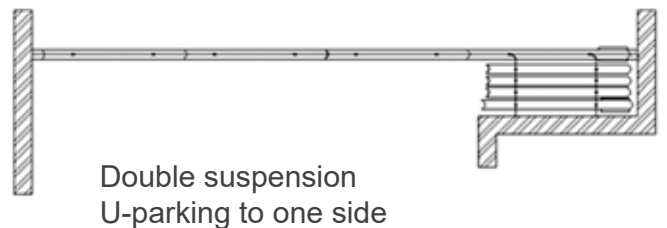
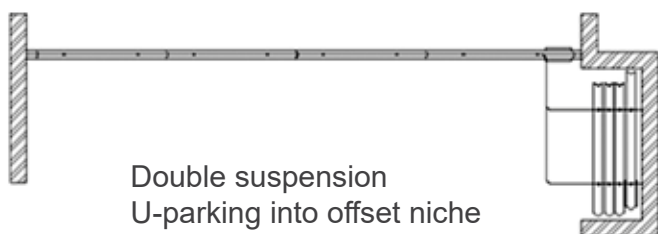
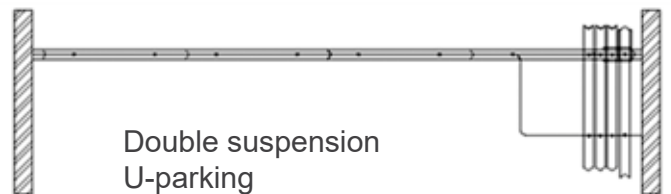
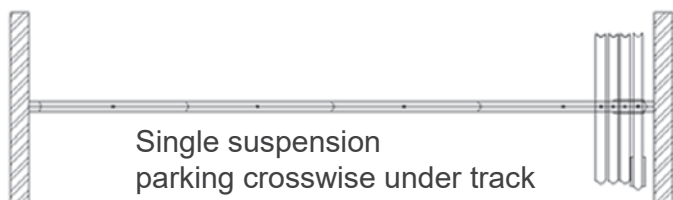
Room 1		louder				
Room 2	Activity	Meeting 50dB (BN) 75dB (Peak)	Discussion 50dB (BN) 80dB (Peak)	Conference 50dB (BN) 85dB (Peak)	Audiovisual (AV) presentation 50dB (BN) 90dB (Peak)	Studio Recording 35dB (BN) 85dB (Peak)
louder	Meeting	40dB	45dB	49dB	≥ 49dB	52dB
	Discussion	45dB	45dB	49dB	≥ 49dB	52dB
	Conference	49dB	49dB	49dB	≥ 49dB	n/a
	AV presentation	≥ 49dB	≥ 49dB	≥ 49dB	45dB	55dB
	Studio recording	52dB	52dB	n/a	55dB	55dB

## Which Variflex® system to use?

System	Acoustic rating	Max height (mm)
VX83	40dB	4800
	45dB	4800
	49dB	4200
VX110	47dB	7000
	50dB	7000
	52dB	6000
VX164	52dB	12000
	55dB	10000

The updated acoustic sound level testing method is an in-situ measurement of the Standardised Level Difference according to ISO 162283-1 2014, analysed according to weighted Standardised Level Difference, DnTw, according to ISO 717-1.

dB	what can be heard through the partition?
30	normal speech can be perceived easily
34	loud speech can be perceived easily
40	loud speech can be perceived, but not understood
45	loud speech can be perceived only as a murmur
49	must strain to perceive loud speech
52	only some loud speech can be barely perceived
55	loud speech cannot be perceived





# Element details

## The inside of an element

### 1. Horizontal seal

To achieve optimum sound attenuation, a double-shell construction is used. Working on the jack principle, telescopic, flexible, spring-loaded double seals press against the ceiling track and floor; the spring sections taking up any normal ceiling deflection. Each panel exerts a load of 80–150kp (kilo pond) on the floor screed, which is not sufficient to overload the floor (particularly when the panels are parked) but is sufficient to give the Variflex system enough stability to avoid its displacement, even when subjected to pressure.

### 2. Corner block

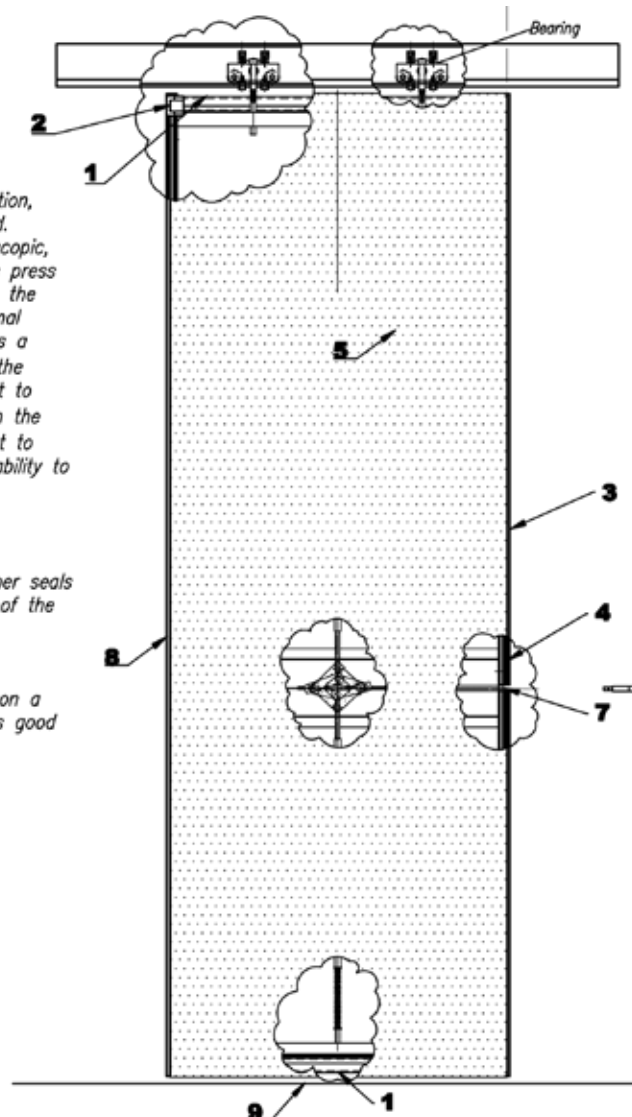
Special corner sections act as corner seals and serve to increase the stability of the wall.

### 3. Vertical

A 4-way PVC lipped profile based on a tongue and groove principle ensures good sealing against sound penetration.

### 4. Magnetic strip

A 4-pole magnetic edge strip bonds adjacent elements with a force of 7kp (kilo pond) per linear meter. The modules are aligned by the magnetic strips.



### 5. Facing panels

To achieve optimum sound attenuation, 16mm thick chipboard facing panels with a variety of limp mass laminates attached to the inside face of the panels, to suit the acoustic requirements, are suspended on each of the frames. These are acoustically decoupled to allow the panels to vibrate independently. Panels can be covered in a wide variety of wall finishes from natural timber veneers, wall papers, laminate surfaces etc., and individual facing panels can be interchanged. Decorative and fire retardant or non-combustible panels to various standards are available upon request, subject to confirmation.

### 6. Operating handle

Operating the Variflex system is carried out using a special crank handle.

### 7. Releasing of the Elements

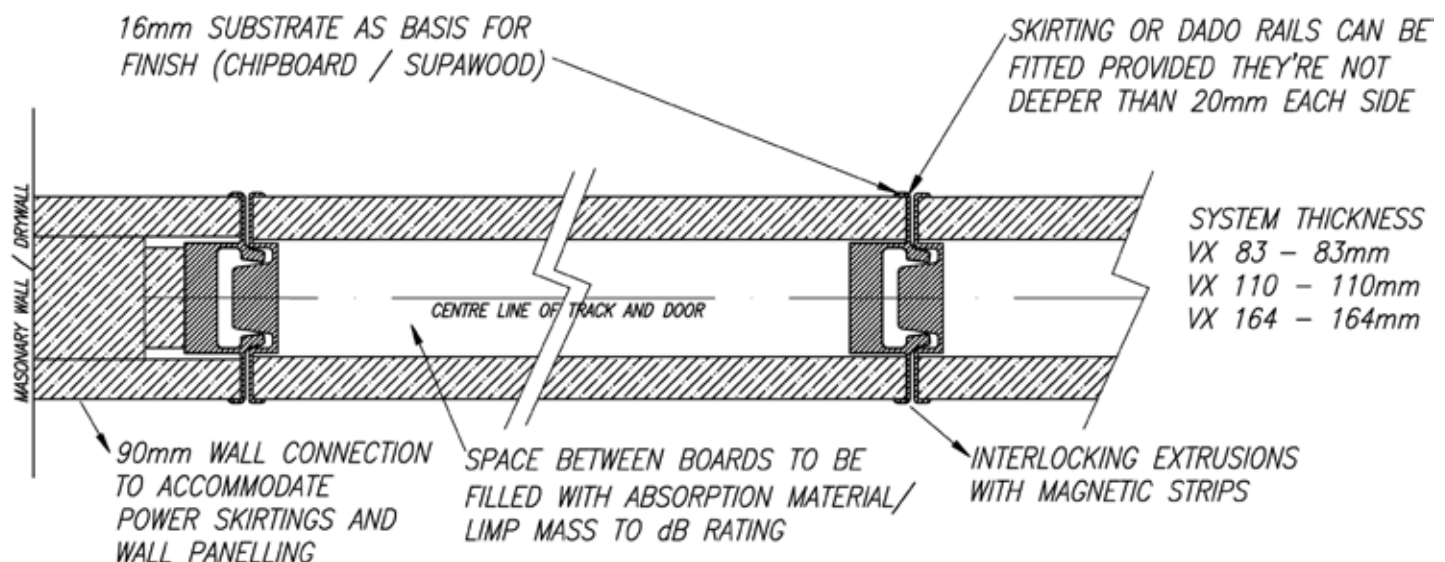
The magnetic force which bonds adjacent panels together can be broken by a gentle pulling motion.

### 8. Frames

The element framework is made up of aluminium hollow sections and steel tube profiles. The rigid, non-deflecting framework, together with the 16mm chipboard facing panels, gives a module of high strength, exceptional sound attenuation and trouble free operation.

### 9. No floor guides are required.

## Wall and element connection



# Sound test

## Sound test example conducted on an in-situ product after installation

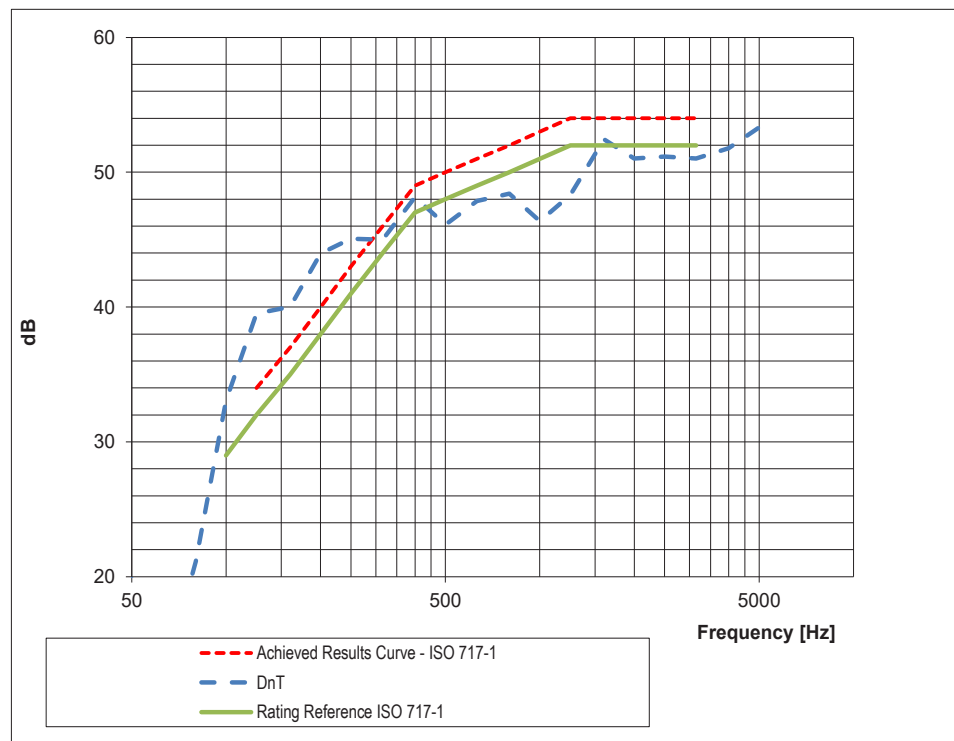
### STANDARDISED LEVEL DIFFERENCE ACCORDING TO ISO 162283-1 2014 FIELD MEASUREMENTS OF AIRBORNE SOUND INSULATION BETWEEN ROOMS

TEST DATE		31-08-15
PRODUCT		VX110 - 48dB
ALUGLASS ACOUSTIC RATING		48dB
PRODUCT DESCRIPTION		VX110 System with White Board
		Finish and Limp Mass Treatment
		Wall A
TEST DESCRIPTION AND COMMENT		Some Noise Transmission evident through automated sliding doors - particularly when one is open - this reduced the acoustic separation between the spaces by between 8 and 10dB. Within the supplied system the Telescopic remains the greatest contributor to sound transmission between the spaces.
PARTITION / DOOR AREA		29 m <sup>2</sup>
RECEIVING ROOM VOLUME		290 m <sup>3</sup>
SOURCE ROOM VOLUME		348 m <sup>3</sup>
<b>TEST EQUIPMENT USED</b>		
Source		Pink Noise Generator / Aluglass Omni-directional Speaker
Measurement		MIC W i436 Omnidirectional Test Microphone (Class 2)
		on Iphone 5S calibrated with Quest Calibrator (Class 1)



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Frequency	DnT
Hz	dB
50	19.8
63	12.2
80	21.1
100	33.0
125	39.5
160	40.0
200	44.0
250	45.1
315	45.0
400	48.2
500	46.1
630	47.9
800	48.4
1000	46.4
1250	48.3
1600	52.5
2000	51.0
2500	51.2
3150	51.0
4000	51.8
5000	53.3



RATING ACCORDING TO ISO 717-1									
	DnT <sub>w</sub> (C; Ctr) =			49	(0;-3) dB				
	DnT <sub>w</sub> (C; Ctr; C <sub>50-5000</sub> ; Ctr <sub>50-5000</sub> ) =			49	(0;-3 -4;-15) dB				
STC RATING ACCORDING TO ASTM - E413									
				50	dB				

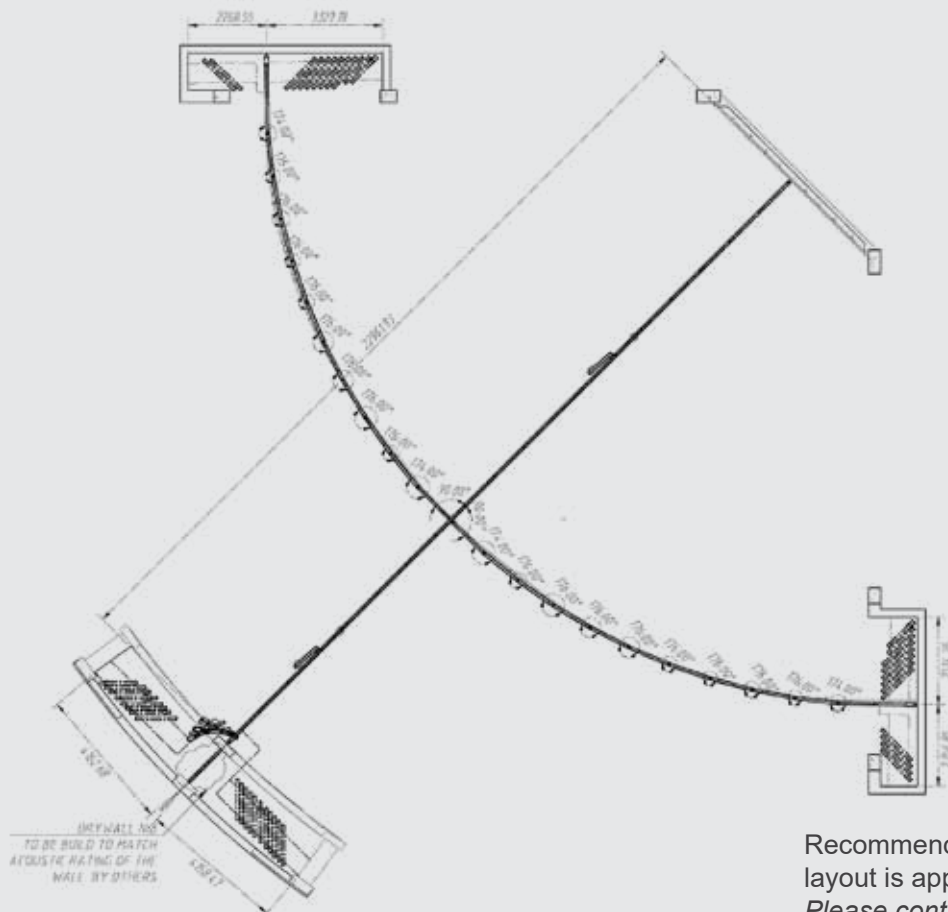
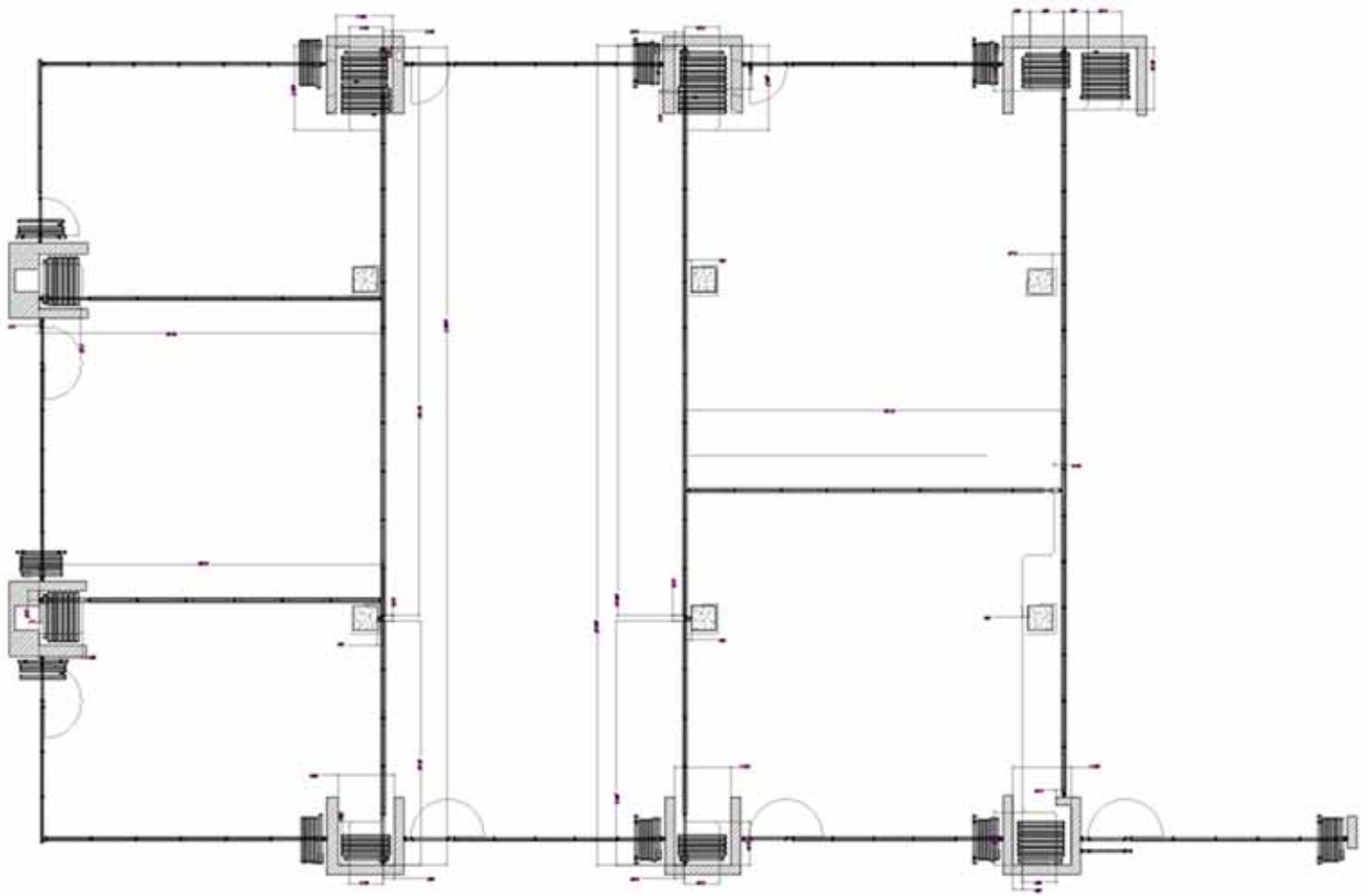
Acoustic test by:

Niels Eichhorn Pr.Eng.

Analysis by:

Niels Eichhorn Pr.Eng.

# Layout examples



Recommended minimum radius for a curved layout is approximately 10 meters.  
*Please contact us for your specific requirement.*





# Finishes

- Fabric - any upholstery weight with a min. width of 1400mm
- Wallpaper - with a min. width of 1400mm wide
- Laminate surfaces
- Velcromat
- Glass
- MDF - sealed or painted
- Marine ply - external applications
- Natural wood veneers include:
  - Beech, Cherry, Etimoe, Kiaat, Mahogany, Maple, Oak, Rosewood, Walnut, Wenge (stains, waxes and oils can also be applied)
- Integrated magnetic white boards or pin boards
- Integrated absorption panels to assist with sound absorption

*Special requirements can be accommodated. **Please contact us for your design needs.***

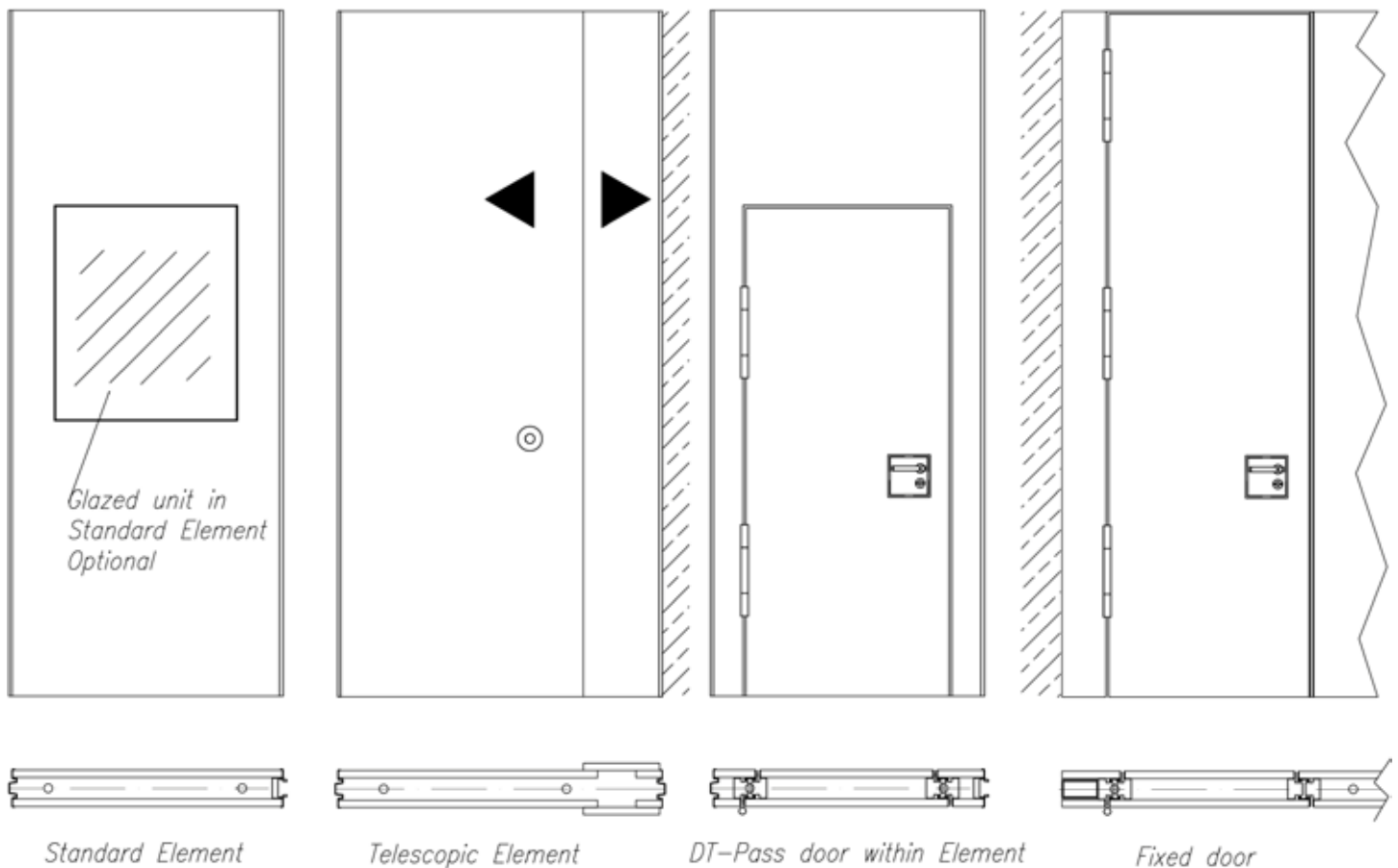






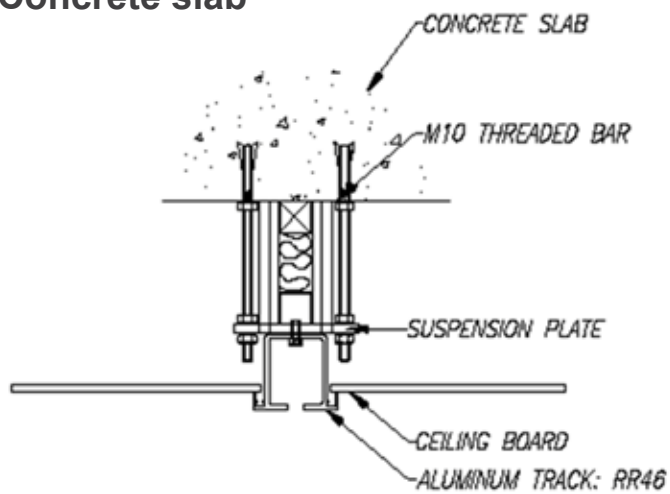
Variflex® configuration comprising of standard elements and DT-pass doors within elements finished with Velcromat.

## Element types

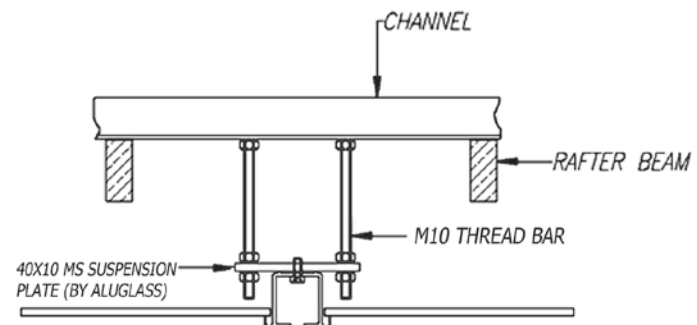


# Suspension details

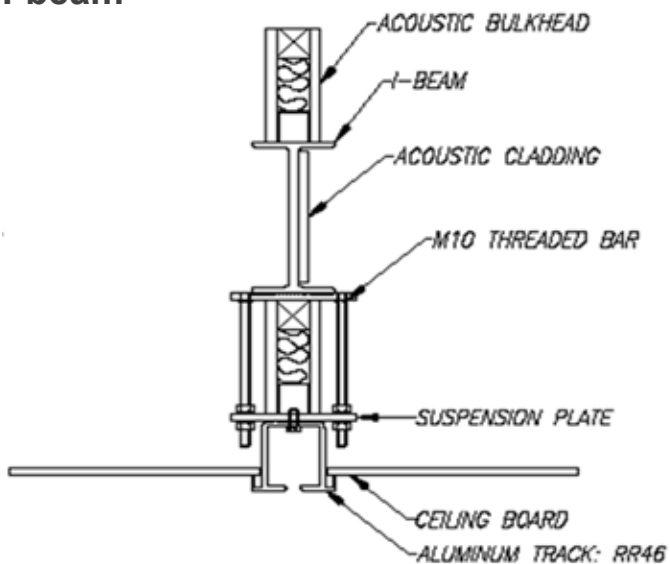
## Concrete slab



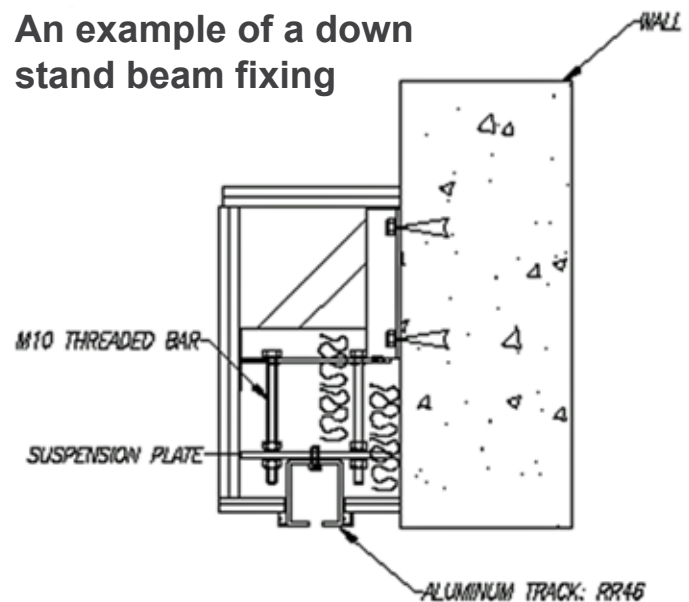
## Roof trusses



## I-beam



## An example of a down stand beam fixing





A Variflex® system installed at an Educational Institution, with options to have either 1 or 2 lecture rooms.



Up to 12 meters high, the Variflex® system is suitable for all Convention Centres providing optimal flexibility.



# VARIFLEX®

## mobile acoustic partitions

DESIGN FACILITIES | TECHNICAL EXPERTISE | CUSTOM MADE | PROFESSIONAL INSTALLATIONS

### MAJOR PROJECTS COMPLETED

- INTERNATIONAL CONVENTION CENTRE  
DURBAN PHASE 1, 2 & 3
- SANDTON CONVENTION CENTRE
- CAPE TOWN CONVENTION CENTRE
- GABORONE CONVENTION CENTRE
- EAST LONDON CONVENTION CENTRE
- MICROSOFT OFFICES

- MARRIOTT HOTEL GHANA
- SASOL
- ESKOM
- IDC AUDITORIUM
- RAND MERCHANT BANK
- SKYRINK JOHANNESBURG
- AND MANY MORE ...

### FLEXIBLE & CREATIVE MULTIFUNCTION SPACE SOLUTIONS FOR

- CONFERENCE FACILITIES
- AUDITORIA
- TRAINING ROOMS
- EDUCATION FACILITIES – SCHOOLS, UNIVERSITIES, COLLEGES
- BOARDROOMS

- OFFICES
- HOSPITALS
- LABORATORIES
- PLACES OF WORSHIP
- COMMUNITY FACILITIES

### SPECIFICATION TEXT

Aluglass Bautech Variflex® \_\_\_\_\_ (VX83 / VX110 / VX164) mobile acoustic (operable wall) partition, \_\_\_\_\_ mm width x \_\_\_\_\_ mm high to suit steel support up to underside of structural support (not by Aluglass Bautech) opening size \_\_\_\_\_ mm width x \_\_\_\_\_ mm high, comprising of tongued and grooved acoustically decoupled \_\_\_\_\_ dB (see 'Which Variflex system to use?' table) panels with \_\_\_\_\_ (veneer, fabric, chipcore, marine ply, supawood, wallpaper or carpet) finish, with mechanically retractable top and bottom seals and vertical seals formed of aluminium extrusions with lip seals and magnetic strips, panels suspended at (one roller trolley / two roller trolley) per panel on track with ball bearing and/or thrust rollers with track bolted to suspension plates in turn bolted to (concrete/ timber / steel) support structure and \_\_\_\_\_ mm high bulkhead fitted to and above track in ceiling void. Elements are to park (crosswise under track / U-parking) with elements stacking (one side / two sides).



SPECIFICATION TEXTS AVAILABLE ON AUTOSPEC AND OUR WEBSITE



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