

CI/SfB

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AUGUST 2019

Raised Access Flooring Solutions

devar

Devar Raised Access Flooring

Our integrated approach to raised access flooring has ensured that we are the first choice with architects, developers and end users to meet their particular needs.

Devar's trading history in the provision of flooring solutions started in Glasgow, Scotland, with further expansion of our operations by opening offices in both Hong Kong and Shanghai. Working in partnership with contractors, specifiers, architects and direct clients, we have provided commercial flooring for a host of customers worldwide.

Our reputation has been built on an integrated approach, examining the specific needs of each project and choosing the best flooring solution to suit. With an absolute commitment to delivery on time and on budget, we instill confidence in our customers by insisting on the highest quality and performance at every stage.

Our raised access division builds upon the existing Devar reputation and now offers a new option:

A high quality access floor system at a cost effective price.

We have invested in securing our own manufacturing facility to produce the 'Devar' access flooring system which has already been implemented successfully on a number of high calibre projects in the UK, Hong Kong, China, Macau, Singapore, Qatar, UAE as well as South America.

We have the skills and capability in product manufacturing and have the detailed knowledge required to ensure a quality installation. We always deliver on budget.

If you would like an informal discussion on how you can upgrade your project without upgrading the cost, please contact:

Technical Services Team,
Email: enquiries@devargroup.com.hk

or

Stephan Leonard,
Managing Director
Devar Access Flooring
Tel: (+852) 3108 2108
Email: sleonard@devargroup.com.hk



**A Calcium Sulphate
Core with a reputation
for excellence.**



Panel Specification - Medium Grade DMG670

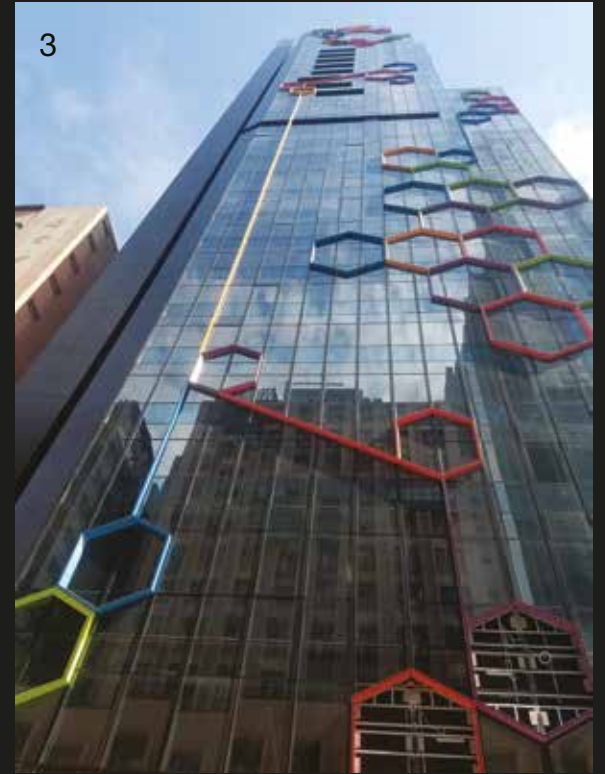
Size: 600mm x 600mm x 33.5mm
System Weight: 39.3kg +/- 0.5kg
Exterior: Fully steel encapsulated
Interior: Calcium sulphate / cementitious core
Finish: Powder coated
Choice: Gravity Lay or Corner Lock supplied as standard
Additional Benefits: System compliant to PSA MOB PF2 PS/SPU and CISCA
Non-combustible: Fire Resistant Class 0
Enhanced acoustic properties

**High quality
and performance
in an adaptable low
profile panel.**



Panel Specification - Medium Grade LMG670

Size: 600mm x 600mm x 27.0mm / 30.00mm
System Weight: 31.0kg +/- 0.5kg
Exterior: Fully steel encapsulated
Interior: High density particle board or calcium sulphate core
Finish: Galvanised Steel
Choice: Gravity Lay or Corner Lock supplied as standard
Additional Benefits: System compliant to PSA MOB PF2 PS/SPU and CISCA



Projects

1. The Chinese University of Hong Kong, Hong Kong

Supply and Installation of our own proprietary flooring system, including aluminium perforated panels with adjustable dampers for controlled air-flow.

2. Marriott International, Dubai

82,882 sq. ft. of both our HPL flooring solution as well as our bare face DMG670 corner lock system ready to accept our range of floor finishes.

3. Gravity, Hong Kong

LHG 760 heavy grade calcium sulphate system with galvanised encapsulation. 33 floors, totalling over GFA 8,500m².

4. Hong Kong Airport – Terminal 1 Expansion, Hong Kong

Supply and Installation of Heavy Grade LHG760 calcium sulphate panel system with stringer support to the pedestal understructure and carpet tile finish.

5. Hong Kong Science and Technology Park IE 2.0, Hong Kong

LMG670 calcium sulphate panel system accepting a range of finishes such as carpet and vinyl as well as our integral HPL panel system, totalling 18,000m².

6. Dundee Waterfront Offices, UK

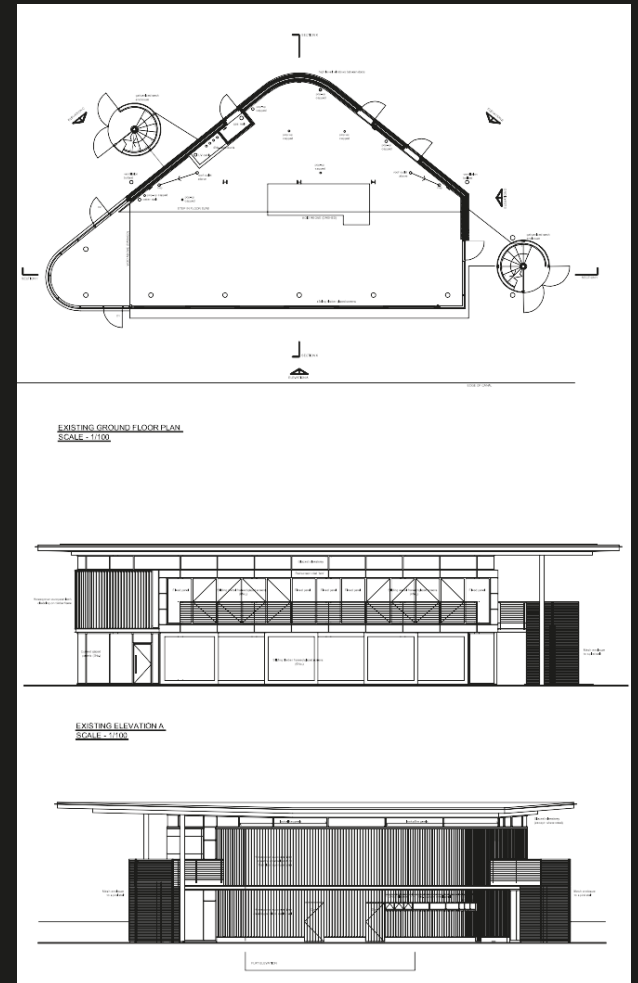
Supply and Installation of our DMG 670 corner lock system at a 150mm FFH, totalling 5,940m².

7. Global Gateway Tower, Hong Kong

LMG 670 medium grade calcium sulphate with galvanised encapsulation raised access floor system. 31,220ft², across 31 floors.

8. Ernst & Young, ICD Brookfield Place, Dubai, U.A.E.

Supply and Installation of our Medium Grade cementitious corner lock panel system accepting a range of floor finishes, such as carpet, hard wood and vinyl.



Acoustic understructure of a standard panel



The benefits of using a Calcium Sulphate Panel

STABLE

Less susceptible to fluctuations in humidity & temperature

SAFE

Non-combustible:
Fire Resistant
Class 0

ENVIRONMENTAL

No timber or
VOCs used in the
manufacturing process

Calcium Sulphate / Cementitious Panels

Certified Raised Access Floor Systems

Fully Compliant to PSA MOB PF2 PS/SPU, BS EN 12825:2001 and Cisca standards

Unlike most other manufacturers, Devar makes the advantages of calcium sulphate core panels available in all situations, not only in heavy duty ranges.

General Information

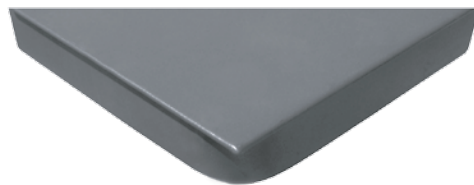
Devar's calcium sulphate panel has become the preferred choice for architects, specifiers and end users due to its enhanced performance characteristics compared to a standard wood core panel.

The calcium sulphate core is inherently less susceptible to fluctuations in humidity and temperature than a wood core product. This assists with on-site installation programming and therefore offers greater flexibility.

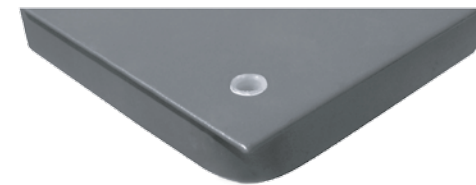
The corner lock panel system provides maximum lateral stability at higher floor heights.

Covering Options

- Standard finish: Powder coated steel
- Integral HPL, PVC or carpet finishes are available, utilising all of the world's top flooring brands



GRAVITY LAY
WITHOUT HOLES



CORNER LOCK
WITH HOLES

Both available as standard

Benefits

- Exceptionally high rolling load capacity
- Improved acoustic properties
- Non-combustible: Fire Resistant Class 0
- Suitable for areas with high humidity and other specialist applications
- Complies with IEE Regulations (19th Edition)
- Oversize panels available for perimeter details
- Four sides are protected by edge trim
- No volatile organic compounds (VOCs) used
- Exceeds PSA MOB PF2 PS/SPU and Cisca specification standards

Recommended Applications

- Light Duty - General office areas
- Medium Duty - High density / populated office commercial areas
- Heavy Duty - Plant rooms, server rooms
- Extra Heavy - Specialist applications and exceptionally heavy equipment requirements

Double folded and interlocked steel encapsulation



The benefits of using a Calcium Sulphate Panel with Galvanised Steel Encapsulation

ADAPTABLE

Easily worked on site to fit oblique perimeters and structural details

SAFE

Non-combustible:
Fire Resistant
Class 0

ENVIRONMENTAL

Panels are
100% recyclable
at end of life

Calcium Sulphate Panels with Galvanised Steel Encapsulation

Certified Raised Access Floor Systems

Fully Compliant to PSA MOB PF2 PS/SPU and BS EN 12825:2001 standards

By encapsulating high density calcium sulphate board with double folded, interlocking steel sheet, Devar has produced a high quality panel suitable for use in situations where lower height, better environmental properties and increased adaptability during installation are required.

General Information

Devar's galvanised panel has been designed with superior double folded, interlocking steel sheet encapsulation, creating a high quality product with enhanced strength for this height and weight class.

The high density core can be easily cut onsite to fit oblique perimeters and around structural details without specialist equipment.

The corner lock panel system provides maximum lateral stability at higher floor heights.

Covering Options

- Standard finish: Galvanised Steel
- Integral HPL, PVC or carpet finishes are available, utilising all of the world's top flooring brands



GRAVITY LAY
WITHOUT HOLES



CORNER LOCK
WITH HOLES

Both available as standard

Benefits

- Non-combustible: Fire Resistant Class 0
- Complies with IEE Regulations (19th Edition)
- Easily cut to fit perimeter / structural details
- Double folded / interlocking encapsulation prevents delamination
- Exceeds PSA MOB PF2 PS/SPU specification standards

Recommended Applications

- Medium Duty - High density / populated office commercial areas
- Heavy Duty - Plant rooms, server rooms

Double folded and interlocked steel encapsulation



The benefits of using a Wood Core Panel

ADAPTABLE

Easily worked on site to fit oblique perimeters and structural details

LIGHTWEIGHT

Interlocked encapsulation enables strength without weight: from 31 kg per m²

ENVIRONMENTAL

Panels are 100% recyclable at end of life

Wood Core Panels

Certified Raised Access Floor Systems

Fully Compliant to PSA MOB PF2 PS/SPU and BS EN 12825:2001 standards

By encapsulating high density particle board with double folded, interlocking steel sheet, Devar has produced a high quality wood core panel suitable for use in situations where lower height, lower weight and increased adaptability during installation are required.

General Information

Devar's wood core panel has been designed with superior double folded, interlocking steel sheet encapsulation, creating a high quality product with enhanced strength for this height and weight class.

The high density particle board core can be easily cut onsite to fit oblique perimeters and around structural details without specialist equipment.

The corner lock panel system provides maximum lateral stability at higher floor heights.

Covering Options

- Standard finish: Galvanised Steel
- Integral HPL, PVC or carpet finishes are available, utilising all of the world's top flooring brands.



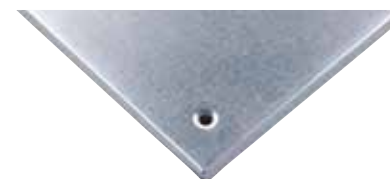
GRAVITY LAY
WITHOUT HOLES

Benefits

- Non-combustible: Fire Resistant Class 0
- Complies with IEE Regulations (19th Edition)
- Easily cut to fit perimeter / structural details
- Double folded / interlocking encapsulation prevents delamination
- Exceeds PSA MOB PF2 PS/SPU specification standards

Recommended Applications

- Medium Duty - High density / populated office commercial areas
- Heavy Duty – Plant rooms, server rooms



CORNER LOCK
WITH HOLES

Both available as standard

Specification: Calcium Sulphate / Cementitious System

DIMENSIONS	600mm x 600mm x 30.0mm / 33.5mm / 39.3mm	INTERIOR	Calcium Sulphate / Cementitious Core
EXTERIOR	Fully Steel Encapsulated	FINISH	Powder Coated or Galvanised Steel

TYPE	AREA OF USE	SYSTEM WEIGHT	PANEL SYSTEM		UNIFORMLY DISTRIBUTED LOAD		SAFETY FACTOR		OVER 25mm SQUARE		PANEL DEFLECTION AFTER 24 HOURS		PANEL SQUARENESS		CONCAVITY & CONVEXITY	
			Gravity Lay	Corner Lock	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec
PANEL NUMBER	PSA Description	Total	Availability		kN/m ²	Load	kN	mm	%	mm						
LIGHT GRADE DLG580 / LLG580	General office areas with no heavy equipment	36.30	Yes	Yes	≥ 6.70	11.11	3 x load for 5 mins	✓	≥ 1.50	3.11	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓
MEDIUM GRADE DMG670 / LMG670	General office areas with heavy equipment	39.30	Yes	Yes	≥ 8.00	12.44	3 x load for 5 mins	✓	≥ 3.00	3.55	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓
HEAVY GRADE DHG760 / LHG760	Computer rooms, telecom switch rooms, etc	41.70	Yes	Yes	≥ 12.00	15.55	3 x load for 5 mins	✓	≥ 4.50	4.50	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓
EXTRA HEAVY GRADE DXL850 / LXL850	Specialist applications	44.60	Yes	Yes	≥ 12.00	17.78	3 x load for 5 mins	✓	≥ 4.50	5.55	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓

✓ = meets or exceeds standards

Delivery on Time - Everytime

Specification: Wood Core System

DIMENSIONS	600mm x 600mm x 28.0mm / 30.0mm	INTERIOR	High Density Particle Board Core
EXTERIOR	Fully Steel Encapsulated	FINISH	Galvanised Steel

TYPE	AREA OF USE	SYSTEM WEIGHT	PANEL SYSTEM		UNIFORMLY DISTRIBUTED LOAD		SAFETY FACTOR		OVER 25mm SQUARE		PANEL DEFLECTION AFTER 24 HOURS		PANEL SQUARENESS		CONCAVITY & CONVEXITY	
			Gravity Lay	Corner Lock	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec	PSA Spec	Devar Spec
PANEL NUMBER	PSA Description	Total	Availability		kN/m ²	Load		kN	mm	%	mm					
MEDIUM GRADE WMG670	General office areas with heavy equipment	31.00	Yes	Yes	≥ 8.00	12.00	3 x load for 5 mins	✓	≥ 3.00	✓	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓
HEAVY GRADE WHG760	Computer rooms, telecom switch rooms, etc	33.20	Yes	Yes	≥ 12.00	13.50	3 x load for 5 mins	✓	≥ 4.50	✓	≤ 2.40	✓	≤ 0.06	✓	≤ 0.75	✓

✓ = meets or exceeds standards

Delivery on Time - Everytime

Pedestals

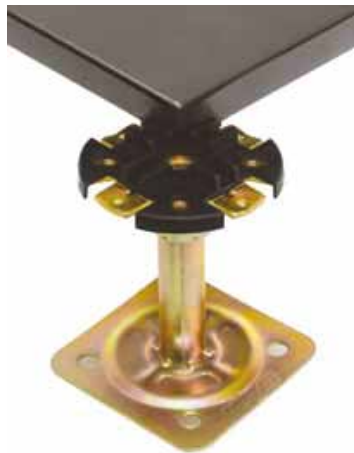
Unique Devar design for our 600mm x 600mm Panel Systems

Pedestal Fixing

All pedestals are normally adhered to the subfloor with our own proprietary epoxy adhesive ensuring complete system compatibility and performance. They can also be mechanically fixed to the subfloor. Full details of these different options are available upon request from our Technical Services Team.

Genesis 1 Pedestal

- Used in standard installations
- 100mm x 100mm x 2.5mm base plate
- M16 screw lock nut with secure engagement channels
- Projection welded steel



Genesis 2 Pedestal

- Used in low profile floor installations
- 100mm x 100mm x 2.5mm base plate
- Die-cast aluminium head



Stringers, Gaskets & Accessories

Snap-on Stringer

A cost-effective solution for further increasing rigidity in light/medium grade systems for use in exceptionally highly populated areas.

Bolt-on Stringer

- Increases system rigidity.
- For use with extra heavy grade panels.
- 540mm long and made from galvanised steel.
- Screwed to the pedestal heads for enhanced structural performance.

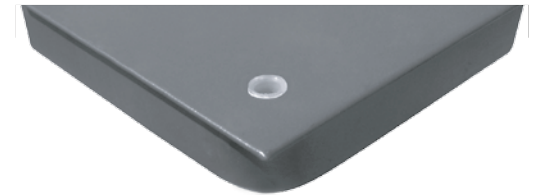
Gasket

- Injection moulded and manufactured using conductive material.
- Double vertical spines to allow secure panel engagement.
- Corner lock holes for screw fixing.

Accessories

A full range of accessories are also available for use with our system including:

- steps
- ramps
- cavity barriers
- fire barriers
- lifting devices
- bridging sections
- edge trims
- electrical outlet boxes
- grommets
- air grilles



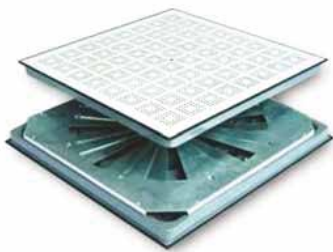
HPL/ESD PVC Covered Panels

These panels help to reduce the static electricity generated by computers and other electrical equipment thus improving their performance and lifespan. As a result, our system is frequently specified for computer rooms where a strictly controlled environment is critical.

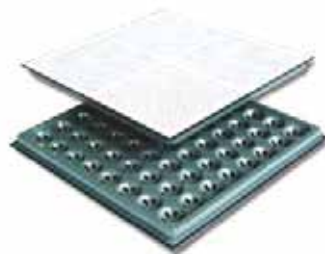
Devar's HPL/ESD PVC covered panels can be installed directly onto a rigid network system of pedestals and stringers. The panels are manufactured to exact tolerances allowing them to be freely interchanged. Devar's system can incorporate a variety of outlet boxes which facilitate comprehensive wiring configurations to optimise cabling within computer rooms.

HPL/ESD PVC covered panels with exceptional anti-static qualities

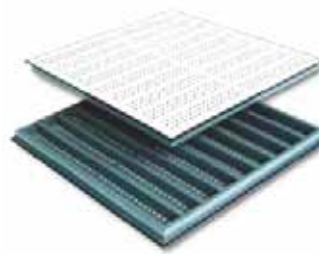
Perforated HPL/ESD PVC panels



DEVAR PERFORATED PANEL 1
With Damper

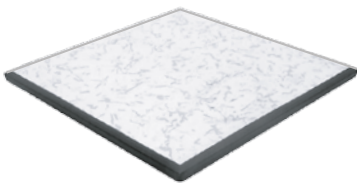


DEVAR PERFORATED PANEL 2
Without Damper

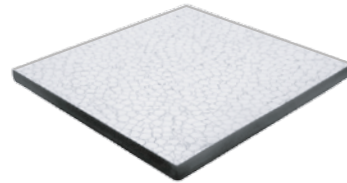


DEVAR PERFORATED PANEL 3
Without Damper

Non-perforated HPL/ESD PVC panels



DEVAR NON-PERFORATED PANEL 4



DEVAR NON-PERFORATED PANEL 5

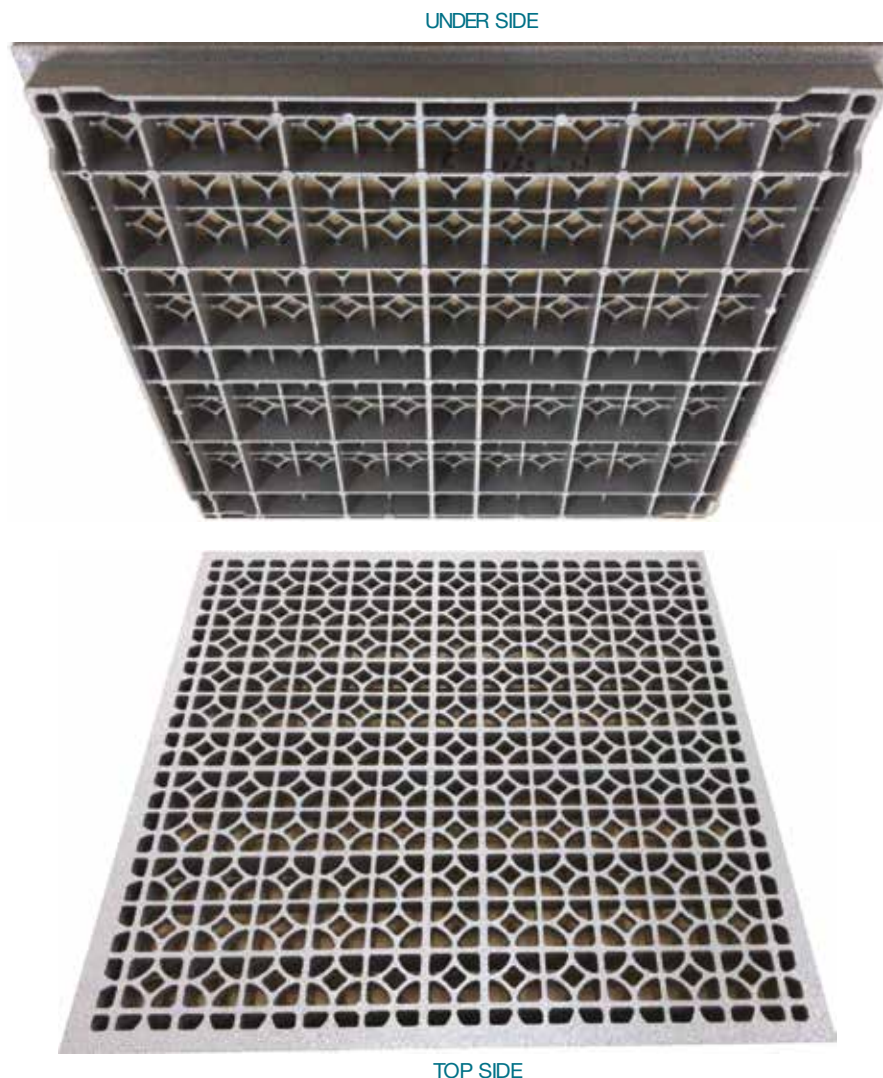
A wide range of colour options is available



Aluminium Grate Panels

Perforated Aluminium Panels come in a wide variety of hole sizes and patterns to fit different design solutions. Perforated aluminium panel offers savings in weight, passage of light, sound and air, while providing a decorative effect.

These panels are corrosion resistant and commonly used in Data Centres and Cleanrooms.



Benefits

- Non-combustible: Class A flame spread
- Available with top-adjusting slide dampers
- Die cast aluminium construction
- Suitable for cleanroom applications
- Environmental: Recycled material content 70%

Dimensions

- Size: 600 mm x 600 mm
- Thickness: 35 mm
- Open Area (Air Flow): 56% without damper, 0-56% with damper.
- Concentrated Load at Panel: 1000 lbs grade with deflection of 2.5 mm (For installation with FS panel or Calcium Sulphate Panel)

Covering Options

- Bare finish
- Conductive epoxy paint finish

Recommended Applications

- Hi-tech facilities
- Microelectronic
- Pharmaceutical
- Biomedical
- Laboratory facilities

Floor Boxes & Grommet Brushes

Floor Boxes

Floor boxes are available in 2 and 3 compartment versions, 270 x 270 mm only.

- Side blanks can be adapted to take metal ducts, UPVC duct or conduits and are manufactured from Pre-Galvanised sheet steel.
- The frame, trap and ratchet are manufactured from UL94V-O flame retardant ABS material which provides the box with strength and durability.
- The trap frame is secured to the basic box using a ratchet arrangement, hence making installation and removal easier.
- Boxes can be adapted to take ducts from 25 to 38 mm. They can be manufactured to accommodate a void of 50 mm height on request.
- A wide range of inter-changeable accessory plates that can accommodate power, data and telephone outlets are available.



Grommet Brushes

Devar is offering a wide range of grommet brush models varying by shape, dimensions and cable area.

- Usable Cable Area: 80 x 80 mm, 150 x 80 mm, 100 x 100 mm, 200 x 100 mm, 120 x 120 mm, 559 x 66 mm, 559 x 140 mm.
- Dimensions: 150 x 150 x 35 mm, 210 x 160 x 35 mm, 186 x 186 x 35 mm, 380 x 210 x 35 mm, 176 x 176 x 35 mm, 610 x 102 mm, 610 x 178 mm.
- Colour: Black.
- Flame Retardants Levels: A.



Many more options available upon request.

Services

Supply

Devar has invested in an in-house manufacturing facility to produce a raised access flooring system that has already been successfully installed on various high calibre projects.

We are now offering to supply our own proprietary raised access flooring system to our clients worldwide.

Installation

Installation forms the crucial link between manufacturer and client ensuring the optimum performance of the product and its functionality.

In order to address these issues it is necessary to plan the installation carefully from the outset, and to monitor these parameters constantly during the installation.

At Devar, we can provide the complete solution to your raised access flooring needs.

Consultancy

Our technical support team provides a full consultancy service that can include but is not limited to:

- Laser level survey of site
- Design
- Testing and Commissioning
- Upgrading of existing installations
- Project Management
- NBS+ / RIBA specification drafting for Architects, design and calculations



Quality Assurance

Quality

At Devar we always insist on delivering the highest quality of product and service levels to all our clients. Having experienced this, our customers return to us time and time again.

We are proud of our first class reputation. You can be assured that this attention to detail and commitment continues throughout all of our processes.

Manufacturing

Our system is constructed to the highest standards and strictest tolerances of quality control in our impressive manufacturing facility.

Testing

Our system is tested and certified by SGS: the world's largest body for inspection and testing. It is also tested by Building Testing Limited (BTL) who are a prominent independent UKAS accredited testing house.

This ensures that the testing, assessment and certification criteria utilised meets all the relevant quality, safety and performance standards demanded by our clients.

Compliance

Our system is fully compliant with, and indeed exceeds, the performance parameters stipulated by the industry standard for performance and suitability: PSA MOB PF2 PS/SPU and CISCA.

Guarantee

Our system is guaranteed for 25 years.



After sales

Full after-sales technical support team at your disposal for the lifetime of the installation.

Cost Affordability

Manufacturing efficiencies ensure that our panel system is highly cost effective when compared to systems from other manufacturers.

Safety

Non-combustible: Fire Resistant Class 0 and 1.

Environment

No timber product or volatile organic compounds (VOCs) are used in the manufacture of our Calcium Sulphate core panels and our Wood core panels are 100% recyclable.

Performance

Excellent acoustic qualities. The rigid construction of all Devar panels helps eliminate noise generated from the surroundings, creating a perfect working environment. The concave shape of the understructure of our Calcium Sulphate core panels further enhances the excellent acoustic performance.

Testing & Certification

Full PSA MOB PF2 PS/SPU and CISCA standard testing by BTL, SGS.

Full certification data available upon request or on our website.



Performance

The following test results were achieved by our system as tested and certified by both BTL and SGS based on our Medium and Heavy Grade Calcium Sulphate Core Panels. These results were achieved when tested to comply with PSA MOB PF2 PS/SPU.

All testing data and certification is available on request and can also be viewed at www.devargroup.com.hk

TEST REF NO	TEST PARAMETERS	DMG670 / LMG670	DHG760 / LHG760
T1.00	Concavity and Convexity	PASS	PASS
T2.00	Twist	PASS	PASS
T3.00	Panel squareness	PASS	PASS
T4.00	Pull off strength of panel edge strip	N/A	N/A
T5.00	Free play in pedestal	PASS	PASS
T6.00	Air leakage rate	0.32 l/s.m ² @ 25 Pa	2.33 l/s.m ² @ 25 Pa
T7.00	300mm square loading	PASS	PASS
T8.00	25mm square point loading	PASS	PASS
T8a.00	25mm square point loading on perimeter cut panel	PASS	PASS
T9.00	Four point loading	N/A	N/A
T10.00	Uniformly distributed load	PASS	PASS
T11.00	Safety factor	PASS	PASS
T12.00	Soft body impact	PASS	PASS
T13.00	Hard body impact	PASS	PASS
T14.00	Pedestrian dynamic load	PASS	PASS
T15.00	Pedestal strength – horizontal load	PASS	PASS
T16.00	Pedestal strength – vertical load	PASS	PASS
T17.00	Effect of temperature	PASS	PASS
T18.00	Effect of humidity	PASS	PASS
T19.00	Determination of surface spread of flame and index of performance	PASS	PASS
T20.00	Small scale fire test	PASS	PASS
T20a.00	Thermal properties	PASS	PASS

CONCLUSION

Our individual panels and pedestals meet all the required standards for performance and safety. More importantly, our complete system is fully compliant with the PSA MOB PF2 PS/SPU standard. This is your guarantee of peace of mind in specifying our product for your projects.

Client List

Devar clients include:



ARCHITECTS & DEVELOPERS

Hassell Studio
Heng Tat Construction
Henderson Land
Hong Kong Airport Authority
Kohn Pedersen Fox
Lu Tang Lai
MLA Architects

COMMERCIAL

Arnold Clark
BAE Systems
Baker Tilly
BP
British Airports Authority
British Energy
BT
BUPA
Caterpillar
Chinese University of Hong Kong
Daily Record & Sunday Mail
Johnson Controls
KPMG
RAC
Rolls Royce
Scottish Media Group
Sodexo
St Enoch Square, Glasgow
Unilever

CONSTRUCTION

Amec
Al Tayer Stocks
BAFCO
Balfour Beatty
Bovis
CBRE
Cheung Kee Fung Cheung Construction
China State Construction
City Building (Glasgow) LLP
Chun Wo Development
Dawn Construction
Doha Floor
ESA McIntosh
FES FM
Havelock Europa
Hip Shing Hong Group
ISG Singapore
Iek Mei Engineering
Kier
MELCO
Laing O'Rourke
Miller Construction
Morgan Ashurst
Pihl
Paul Y Engineering
Schlumberger
Sir Robert McAlpine
Skanska
Takatuf
Tarkus Interiors

ELECTRONICS

IBM
JVC
Motorola
National Semi-Conductors
Siemens
Solectron
Sun Microsystems

FINANCIAL SERVICES

American Express
Aviva
Clydesdale Bank
Ernst & Young
Esure
JP Morgan
Legal & General
Lloyds Banking Group
Nationwide
Prudential
RBS
RSA
Santander
Standard Life
Zurich

HOSPITALITY

City of Dreams
Gleneagles Hotel
JD Wetherspoon
MGM
Old Course Hotel, St Andrews
Premier Inns
Radisson Hotels
SECC



devar

HONG KONG

SHANGHAI

SINGAPORE

DUBAI

LONDON

GLASGOW



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Email: enquiries@devargroup.com.hk

