

leavy Duty Underfloor Trunking System





₩ SEISCO BS IEC CE DEKRA KEMA CO

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DAVIS®

POWER DISTRIBUTION & CABLE MANAGEMENT SYSTEMS



Davis, well known for introducing modern underfloor cable management system 60 years ago, is a pioneer in cable management systems. Today, Davis remains at the forefront of the cable management industry.

With more than half a century of cable management leadership and technology, Davis continues to innovate and improvise its vast range of cable management products which complies with the most stringent technical specifications and the highest standards of today's modern office requirements.

Davis has of a team of dynamic and dedicated pool of design engineers and professional sales force, providing first class service and support for the company's wide range of products. Our people will always be there to ensure all its highperformance products meet the ever changing trends and demands of smart homes, stylish office designs, intelligent building structures and sophisticated monumental skyscrapers.

At Davis, we always produce what the market wants. We always keep up with new challenges of the electrical industry. Davis adopts a policy of continuous improvement, producing competitively priced products and is committed to give excellent customer service which keeps us *"Always Ahead"*.

With strategically located manufacturing and support facilities and an extensive distribution network across the region, Davis is well positioned to meet every exact need and requirement of our customers all over the world.

DAVIS range of products includes:-

- Modular Flushfloor Trunking System
- Raised Floor Trunking System
- Underfloor Trunking System
- Heavy Duty Underfloor Trunking System
- 63A 240/415V Raised Floor Bustrack System
 - 200A 6300A Busway System

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POWER DISTRIBUTION & CABLE MANAGEMENT SYSTEMS

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INTRODUCTION

DAVIS Heavy Duty Underfloor Trunking System is designed for the distribution of power, voice and data services in floors where the trunking is buried in the screed. This system provides the simplest and most economical method of carrying services to feed a grid of outlet installation and can be used to integrate with the perimeter or surface trunking systems.

DAVIS Underfloor floor boxes are especially constructed for heavy duty applications:

- Airports
- Shopping malls
- Commercial complexes
- Convention centres

DAVIS Underfloor Trunking System consists of the following components :

Metal Underfloor Trunking Vertical Access Boxes Service Outlet Boxes Junction Boxes Pedestal Boxes

FEATURE BENEFITS

- Constructed from pre-galvanized steel sheets in accordance with BS 4678 : Part 2, BS EN 50085-2-2 & IEC 61084-2-2.
- Trap & frame tested to withstand 4.5kN concentrated load. Underfloor trunking (screeded) tested to withstand 30kN concentrated load.
- The system incorporates numerous design features to ensure a fast and simple installation.
- Designed to support CAT 6 structured cabling systems.
- Suitable for screeded depth from 56mm to 80mm.
- Floor boxes are IP30 rated in accordance with BS EN 60529.
- Choice of 1, 2, 3 or 4 compartment floor boxes.
- Wide range of power and data accessories available to meet all requirements.

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HEAVY DUTY SERVICE BOXES

STAINLESS STEEL



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9mm RECESS

20mm RECESS



9mm RECESS

20mm RECESS



20mm RECESS

320 x 225 SERVICE BOX

> BRASS SERVICE BOX

SPECIFICATIONS

- *For 125x125 and 125x250 service boxes, traps, frames and infill plates are made from 1.5mm SUS 304 stainless steel sheets.
- *For 250x250, 300x300 and 320x225 service boxes, traps and frames are made from 1.5mm SUS 304 stainless steel sheets with 3.0mm pre-galvanized steel sheets infill plates.



125x125 Service Box				
LXWXH	Model		No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
125X125X56 125X125X69	UFS125/1/25/SS/9 UFS125/1/38/SS/9	UFS125/1/25/SS/20 UFS125/1/38/SS/20	1 1	125X25 125X38

125x250 Service Box				
LXWXH	Model		No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
		UFS125250/1/25/SS/20	1	125 / 250X25
125X250X69	UFS125250/1/38/SS/9	UFS125250/1/38/SS/20	1	125 / 250X38
		UFS125250/2/25/SS/20 UFS125250/2/38/SS/20	2	125 / 250X25 125 / 250X38
1237230708	UF3120200/2/38/33/9	UF3123230/2/38/33/20	Z	120/200738

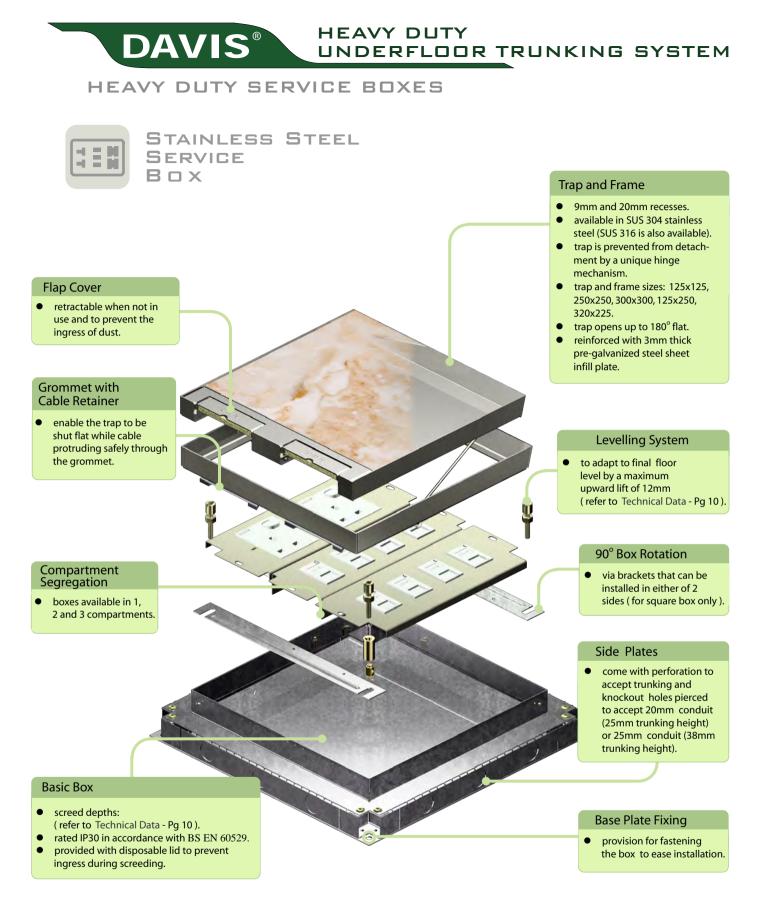
250x250 Service Box				
LXWXH	Мо	del	No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
250X250X56	UFS250/2/25/SS/9	UFS250/2/25/SS/20	2	250X25
250X250X69	UFS250/2/38/SS/9	UFS250/2/38/SS/20	2	250X38
250X250X56	UFS250/3/25/SS/9	UFS250/3/25/SS/20	3	250X25
250X250X69	UFS250/3/38/SS/9	UFS250/3/38/SS/20	3	250X38

300x300 Service Box				
LXWXH	Model		No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
300X300X56 300X300X69	UFS300/2/25/SS/9 UFS300/2/38/SS/9	UFS300/2/25/SS/20 UFS300/2/38/SS/20	2	300X25 300X38
300X300X56 300X300X69	UFS300/3/25/SS/9 UFS300/3/38/SS/9	UFS300/3/25/SS/20 UFS300/3/38/SS/20	3	300X25 300X38

320x225 Service Box			
rk Entry			
VXH(mm)			
225X25			
250X25			
300X25			
225X38			
250X38			
300X38			
225X25			
250X25			
300X25			
225X38			
250X38 300X38			
225X 250X 300X 225X 250X 300X 225X 250X 300X 225X 250X 225X 250X			

BRASS SERVICE BOX				
LXWXH	Мо	del	Trk Entry	
(mm)	2 Compart.	3 Compart.	W X H (mm)	
180X180X56	UFS180/2/25/B	UFS180/3/25/B	150X25	
180X180X69	UFS180/2/38/B	UFS180/3/38/B	150X38	
180X250X56	UFS180250/2/25/B	UFS180250/3/25/B	150 / 225X25	
180X250X69	UFS180250/2/38/B	UFS180250/3/38/B	150 / 225X38	

3



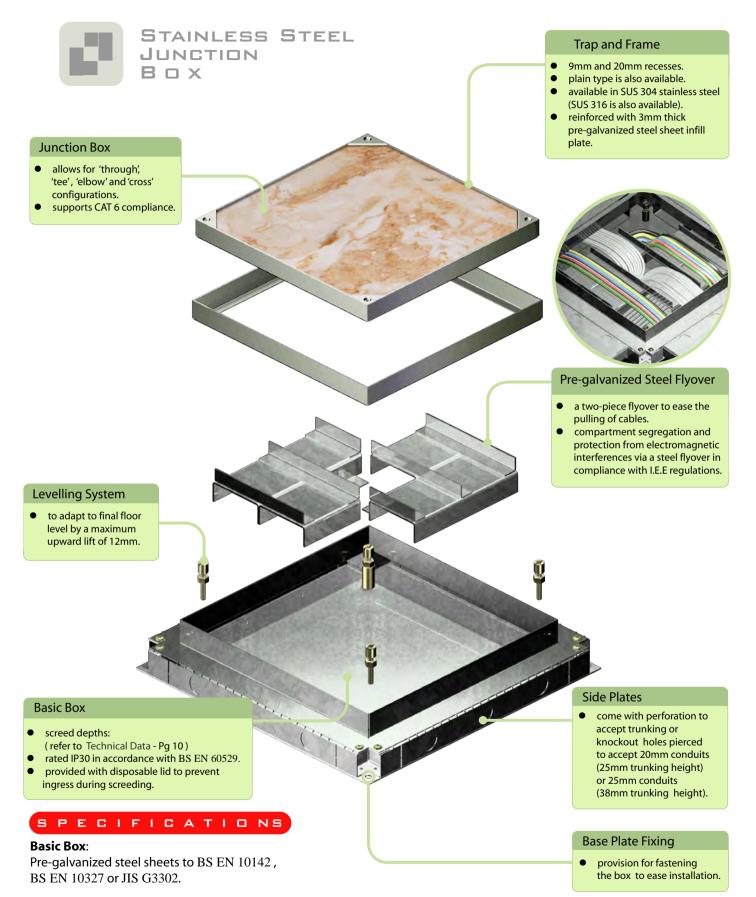
SPECIFICATIONS

Basic Box:

Pre-galvanized steel sheets to BS EN 10142 , BS EN 10327 or JIS G3302.

Trap and Frame:

SUS 304 Stainless Steel (SUS 316 is also available).



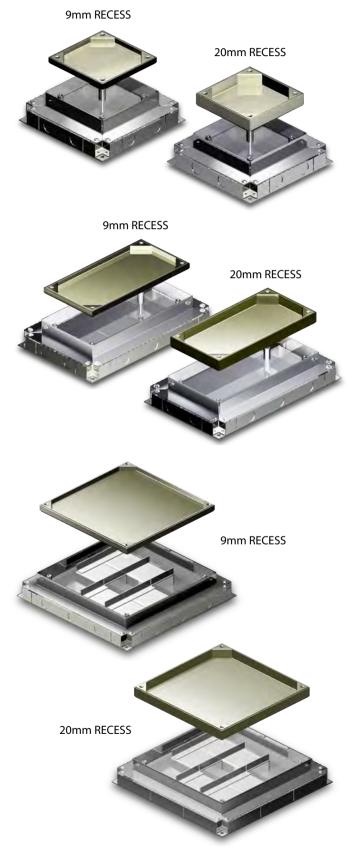
Trap and Frame:

SUS 304 Stainless Steel (SUS 316 is also available).

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HEAVY DUTY JUNCTION BOXES

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125x125 JUNCTION BOX				
LXWXH (mm)	Model		No. of	Trk Entry
	9mm Recess	20mm Recess	Compart.	W X H (mm)
125X125X56 125X125X69	UFJ125/1/25/SS/9 UFJ125/1/38/SS/9	UFJ125/1/25/SS/20 UFJ125/1/38/SS/20	1 1	125X25 125X38

125x250 JUNCTION BOX				
LXWXH	Мо	del	No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
125X250X56	UFJ125250/1/25/SS/9	UFJ125250/1/25/SS/20	1	125 / 250X25
125X250X69	UFJ125250/1/38/SS/9	UFJ125250/1/38/SS/20	1	125 / 250X38
125X250X56	UFJ125250/2/25/SS/9	UFJ125250/2/25/SS/20	2	125 / 250X25
125X250X69	UFJ125250/2/38/SS/9	UFJ125250/2/38/SS/20	2	125 / 250X38

250x250 Junction Box				
LXWXH	Мо	del	No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
250X250X56	UFJ250/2/25/SS/9	UFJ250/2/25/SS/20	2	250X25
250X250X69	UFJ250/2/38/SS/9	UFJ250/2/38/SS/20	2	250X38
250X250X56	UFJ250/3/25/SS/9	UFJ250/3/25/SS/20	3	250X25
250X250X69	UFJ250/3/38/SS/9	UFJ250/3/38/SS/20	3	250X38

300x300 Junction Box				
LXWXH	Мо	del	No. of	Trk Entry
(mm)	9mm Recess	20mm Recess	Compart.	W X H (mm)
300X300X56	UFJ300/2/25/SS/9	UFJ300/2/25/SS/20	2	300X25
300X300X69	UFJ300/2/38/SS/9	UFJ300/2/38/SS/20	2	300X38
300X300X56	UFJ300/3/25/SS/9	UFJ300/3/25/SS/20	3	300X25
300X300X69	UFJ300/3/38/SS/9	UFJ300/3/38/SS/20	3	300X38

SPECIFICATIONS

- * For 125x125 and 125x250 junction boxes, traps, frames and infill plates are made from 1.5mm SUS 304 stainless steel sheets.
- * For 250x250 and 300x300 junction boxes, traps and frames are made from 1.5mm SUS 304 stainless steel sheets with 3.0mm pre-galvanized steel sheets infill plates.
- * Also available in SUS 316.
- * Other recess heights are also available.





TRAP / FRAME

infill plate.

HEAVY DUTY UNDERFLOOR LAYOUT VIEW

VERTICAL ACCESS BOX

• is specifically designed to access the electrical distribution board or a surface trunking system.

TRUNKING SYSTEM

• constructed from pre-galvanized steel sheets in accordance with BS 4678 : Part 2, BS EN 50085-2-2 & IEC 61084-2-2. Tested under screeding to withstand 30kN concentrated load.

FLOOR FINISHING

• wide range of sizes are available to suit various finishings such as carpet, vinyl tiles, ceramic tiles, marble and wooden floors.

CLAMPING SADDLE

• used to fix the trunking to the base floor.

CONNECTING SADDLE

• used to secure 2 lengths of trunking together without the ingress of screed during screeding.

ACCESSORIES

• a full range of accessories such as floor pedestal boxes, round grommets, extension screw terminals, offsets, etc., are available.

PRE-GALVANIZED STEEL FLYOVER

- a two-piece flyover to ease the pulling of cables.
- compartment segregation and protection from electromagnetic interferences via a steel flyover in compliance with IEE regulations.

HEAVY DUTY UNDERFLOOR TRUNKING SYSTEM





Heavy Duty Underfloor Trunking

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Material	Pre-galvanized steel sheets in accordance with BS EN 10142, BS EN 10327 or JIS G3302.
Strength	Tested under screeding to withstand 30 kN concentrated load.
International Standards	The trunking supplied shall comply with BS 4678 : Part 2, BS EN 50085-2-2 & IEC 61084-2-2.
Construction	Construction of the trunking is by channel method. This is to avoid damage to its galvanized coating to prevent corrosion. This method also adds strength to the section whilst allowing site adaptation. The top channel has continuous side returns to prevent the ingress of screed and is clamped to the base channels with two clamping saddles and a double width connecting saddle.
Standard thickness	1.6mm
Standard lengths	2.3 or 2.44 meters
No. of Compartments	1, 2 and 3 compartments
Standard heights	25mm and 38mm

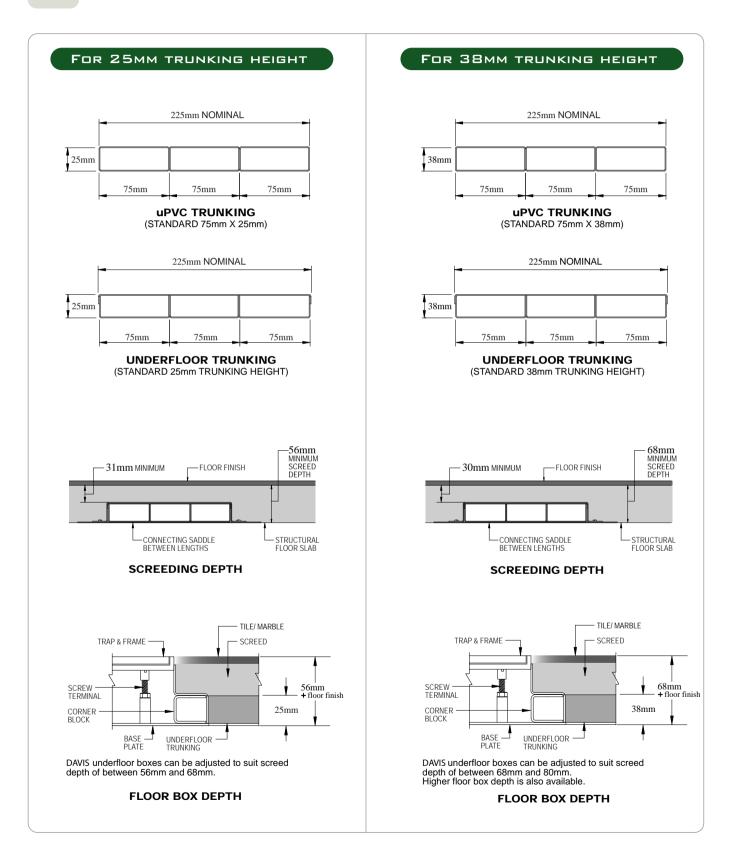
Junction Box / Service Outlet Box

Material	250x250mm or 300x300mm constructed from pre-galvanized steel sheets, suitable for screed depths from 56mm to 80mm with provision for trunking entry on four sides or 20mm conduits (for 25mm trunking height) or 25mm conduits (for 38mm trunking height) on blank sides. A throwaway lid shall be provided to prevent the ingress of screed during installation.
Strength	 DAVIS heavy duty underfloor boxes shall be able to withstand the following load tests:- a) Concentrated load test – 3.0kN @25mm sq. steel platen. b) Concentrated load test – 4.5kN @300mm sq. steel platen. c) Uniform distributed load test – 8.0kN/m². d) Maximum deflection shall not exceed 3mm for these loadings (BS EN 50085-2-2).
Construction	Covers (traps and frames) for the service outlet box and junction box shall be constructed from 1.5mm thick SUS 304 stainless steel sheets with 3mm thick pre-galvanized steel sheets infill plates. All are available in 9mm or 20mm recess.
Lid Opening	Service outlet cover shall be able to be flat open through 180°. It comes with cable grommets and cable retainers. Junction box cover is shut flat and secured by counter sunk screws.
Electromagnetic Compatibility	Junction Box shall be provided with pre-galvanized steel sheets flyover for compartment segrega- tion. Due to electromagnetic interferences, the use of plastic flyover is not suitable. This is to comply with the latest I.E.E regulations. A Service outlet box shall have fully segregated outlet panels to isolate the services in compliance with the latest I.E.E regulations.

i

TECHNICAL DATA

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A COMB DESIGN

More suitable for low density service area. This pattern uses less trunking and offers an extremely cost-effective solution. This design is typically used for modular flushfloor, raised floor and underfloor systems.

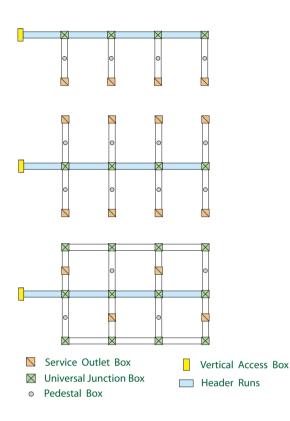
A FISHBONE DESIGN

Widely used in areas where tenants require a good degree of flexibility in reorganizing work areas. This design is typically used for modular flushfloor, raised floor and underfloor systems.

A GRID DESIGN

Most widely used pattern where the tenants require a greater degree of flexibility in reorganizing work areas. This pattern allows the work place capacity to be increased and the capacity of rewiring through individual ring networks. This design is typically used for modular flushfloor and underfloor systems.

CABLE CAPACITY GUIDE



			^{100x25x1} C	^{100x38x1C}	^{225x25x2C}	^{225x25x3C}	^{225x38x2C}	^{225_{X38X3C}}	^{250x25x2C}	^{250x25x3C}	³⁰⁰ x25x2C	300x25x3C	^{300x38x2C}	^{300x38x3C}
Capacity (mm ²) per c	ompartment	(45% fill)	950	1516	1072	704	1712	1124	1195	786	1440	950	2299	1516
Cable type CSA (mm ² /mm) Cable Factor		Capacity (no.) per compartment (45% fill)												
Power Cables														
PVC Stranded	1.5 mm ²	8.6	110	176	124	81	199	130	138	91	167	110	267	176
	2.5 mm ²	12.6	75	120	85	55	135	89	94	62	114	75	182	120
	4 mm ²	16.6	57	91	64	42	103	67	71	47	86	57	138	91
	6 mm ²	21.2	44	71	50	33	80	53	56	37	67	44	108	71
	10 mm ²	35.3	26	42	30	19	48	31	33	22	40	26	65	42
	16 mm ²	47.8	19	31	22	14	35	23	24	16	30	19	48	31
	25 mm ²	73.9	12	20	14	9	23	15	16	10	19	12	31	20
Twin & Earth	2.5 mm ²	86	11	17	12	8	19	13	13	9	16	11	26	17
	4 mm ²	99	9	15	10	7	17	11	12	7	14	9	23	15
	6 mm ²	148	6	10	7	4	11	7	8	5	9	6	15	10
Data Cables														
CAT 5e UTP	5.5 dia	30.2	31	50	35	23	56	37	39	26	47	31	76	50
CAT 5e STP	6 dia	36	26	42	29	19	47	31	33	21	40	26	63	42
CAT 6 UTP	6.5 dia	42.2	22	35	25	16	40	26	28	18	34	22	54	35
CAT 6 STP	7 dia	49	19	30	21	14	34	22	24	16	29	19	46	30

The table above gives the available capacity units on 45% factor (IEE Wiring Regulation), applied to internal wiring area and serves as a guideline only.

UNDERFLOOR TRUNKING SYSTEM

G INSTALLATION GUIDE

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The structural floor slab shall be level and smooth. Humps and protruding cement must be hacked to level to ensure the trunking being laid will maintain the minimum screed thickness of 25mm over the trunking. It is also recommended that a mesh such as chicken wire mesh be placed over the trunking runs to prevent screed damage or cracking at a later stage.

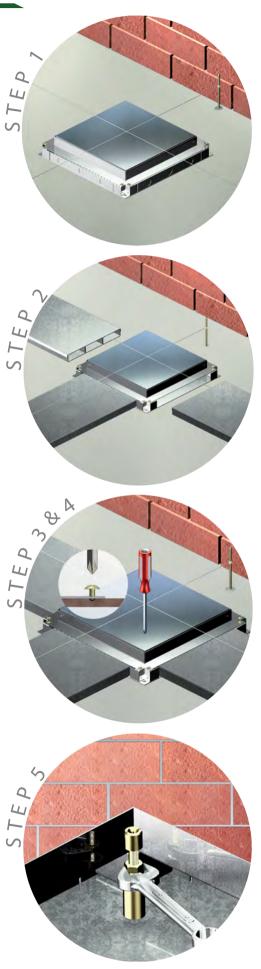
Step 1: Use trunking layout drawing to select a fixed starting point for installation, for instance a junction box. Tie two guide lines approximately 150mm above the floor slab at 90° to each other. Position the junction box below the intersection of the guide lines.

Step 2: Position the floor boxes and trunkings to reflect the layout drawing. The junction box's position can be used as a reference point. Bend 90° up the perforated section of the box's side plate. Insert the trunking approximately 40mm into the box.

Step 3: Use connecting and clamping saddles to secure all screw connections and to fasten the trunkings to the slab. Use base plate holes provided to fasten floor box to the slab.

Step 4: The box should be properly covered with a disposable lid and taped to prevent the ingress of cement during screeding. The disposable lid top can be set as a screed depth datum. The system is now ready for screeding to take place.

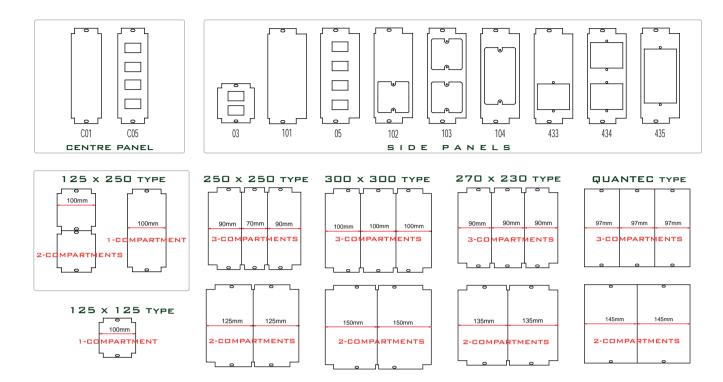
Step 5: Once the screed is completely dried, the disposable lid can be removed, and the box interiors can be fitted. Use the levelling system to adjust the box height to reach the level of the required screed depth (box is factory set to 56mm or 68mm). Once the wiring is completed, the trap and frame can then be installed. Should extra wiring space/ plug top clearance be required, use levelling system to top up the space.





ACCESSORIES

OUTLET PANELS



	125 x 125	125 >	< 250		250 x 250)	QUANTEC			
	1-Compart.	1-Compart.	2-Compart.	2-Compart.	3-Compart.		2-Compart.	3-Compart.	4-Compart.	
Description					CENTRE	SIDES				
Blank plate				OP125 101	OP70 C01	OP90 101	ST145 C01	ST97 C01	SF72 C01	
2 nos. Cut-out RJ45 37x22.5mm	OP125 03S		OP125 03D							
4 nos. Cut-out RJ45 37x22.5mm		OP100 05D		OP125 05	OP70 C05	OP90 05	ST145 C05	ST97 C05	SF72 C05	
Cut-out in accordance to BS4662 1G	OP125 102S	OP100 102D	OP125 102D	OP125 102		OP90 102	ST145 102	ST97 102		
Cut-out in accordance to BS4662 2x1G		OP100 103D		OP125 103		OP90 103	ST145 103	ST97 103		
Cut-out in accordance to BS4662 2G		OP100 104D		OP125 104		OP90 104	ST145 104	ST97 104		
1G 13A DAVIS Switched Socket Outlet	OP125 433S	OP100 433D	OP125 433D	OP125 433		OP90 433	ST145 433	ST97 433		
2x1G 13A DAVIS Switched Socket Outlet		OP100 434D		OP125 434		OP90 434	ST145 434	ST97 434		
2G 13A DAVIS Switched Socket Outlet		OP100 435D		OP125 435		OP90 435	ST145 435	ST97 435		

		300 x 300		270 x 230				
	2-Compart.	3-Com	part.	2-Compart.	3-Compart.			
Description		CENTRE	SIDES		CENTRE	SIDES		
Blank plate	OP150 101	OP100 C01	OP100 101	OP135 2 101	OP90 2 101	OP90 2 101		
4 nos. Cut-out RJ45 37x22.5mm	OP150 05	OP100 C05	OP100 05	OP135 2 05	OP90 2 05	OP90 2 05		
Cut-out in accordance to BS4662 1G	OP150 102	OP100 C102	OP100 102	OP135 2 102	OP90 2 102	OP90 2 102		
Cut-out in accordance to BS4662 2x1G	OP150 103	OP100 C103	OP100 103	OP135 2 103	OP90 2 103	OP90 2 103		
Cut-out in accordance to BS4662 2G	OP150 104	OP100 C104	OP100 104	OP135 2 104	OP90 2 104	OP90 2 104		
1G 13A DAVIS Switched Socket Outlet	OP150 433	OP100 C433	OP100 433	OP135 2 433	OP90 2 433	OP90 2 433		
2x1G 13A DAVIS Switched Socket Outlet	OP150 434	OP100 C434	OP100 434	OP135 2 434	OP90 2 434	OP90 2 434		
2G 13A DAVIS Switched Socket Outlet	OP150 435	OP100 C435	OP100 435	OP135 2 435	OP90 2 435	OP90 2 435		

Note : All outlet panels supplied are epoxy coated. Non-standard outlet panels are also available upon request.



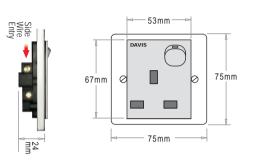
ACCESSORIES



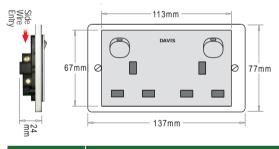
DAVIS one and two gang 13A Switched Socket Outlets are specially designed to be slim (24mm) with side wire entries to suit underfloor service boxes.

- Rating / Standard : 240V, 13A a.c / BS 1363 : Part 2
 - 3 terminals to : $4x2.5mm^2\,cables$ each or $3x4.0mm^2\,\,cables$ each accommodate

Approved by : JKR & Suruhanjaya Tenaga



Model	Description
D13/1GS	1 Gang 13A Switched Socket



Model	Description
D13/2GS	2 Gang 13A Switched Socket



DAVIS modular type RJ45 & RJ11 data outlets are specially designed to suit underfloor service boxes. Comply with : TIA/EIA-568-B specifications

Come with : IDC connector and shutter Hole cut-out : 37mm x 22.5mm



Model	Description
D-RJ45-CAT6	CAT 6 RJ45 Data Outlet - TIA/EIA-568-B