

TECHNICAL SPECIFICATIONS



Perimeter Systems - DADO Trunking

Decoduct PVC Perimeter (DADO) Trunking is a new, large capacity Cable Management System for use in modern offices, hospitals, laboratories or workshops, and is ideal for both new building projects and refurbishments.

Salient features of this system include:

- Individual compartment lids for safety and ease of access, with easy clip on features.
- End caps with easy clip on features
- Self aligning Couplers
- External bends featuring internal segregators which offer greater retention and alignment of fitting

Decoduct PVC Perimeter (DADO) Trunking is available in a wide range of decorative finishes in addition to the standard white colour, hence the whole system can be colour coordinated to blend with the interior design/environment

Fabricated DADO Trunking Accessories such as Angles & Tees are under development, and when ready would complete the system and meet the total project requirements of the contractor.

Decoduct PVC DADO Trunking Component Chart

Components	(P1) Profile 1	(P2) Profile 2	(P3) Profile 3	(P4) Profile 4
Base Unit BU1	1	-	-	-
BU2	-	1	-	-
BU3	-	-	1	-
BU4	-	-	-	1
Bevelled Lid BL1	2	-	-	-
BL2	-	1	-	-
BL3	-	-	1	-
Centre Lid CL1	1	-	-	-
CL2	-	1	-	-
CL3	-	-	1	-
CL4	-	-	-	1
Angle Lid AL2	-	1	-	-
AL3	-	-	1	-
AL4	-	-	-	2
Internal Bend (Set) (Number Of Sets Depends On Actual On-Site Requirement)	IB 1	IB 2	IB 3	IB 4
External Bend (Set) (Number Of Sets Depends On Actual On-Site Requirement)	EB 1	EB 2	EB 3	EB 4
Coupler (Set) (Number Of Sets Depends On Actual On-Site Requirement)	C1	C2	C3	C4
End Cap (Set) (Number Of Sets Depends On Actual On-Site Requirement)	EC 1	EC 2	EC 3	EC 4

Mini Trunking System

No more than 45% of the inside space of mini trunking should be occupied by cables. The table below gives the cross-sectional areas of various cables and the maximum number of cables that can be laid in each size of Decoduct mini trunking. If cables of different sizes are to be used, the sum of their nominal cross-sectional areas must be calculated, and then a trunking size with equal or higher filling factor must be selected without exceeding the stipulated space factor of 45%.

Cable Size (mm ²)	Normal Overall Cross Sectional Area(mm ²)	Decoduct Mini Trunking Size References					
		DMT 0	DMT 1	DMT 2	DMT 3	DMT 4	DMT 5
		45% Filling Factor(mm ²)					
		19	68	119	199	336	496
Single core cables		Maximum number of cables					
1.0	6.6		10	18	30	50	
1.5	7.6		8	15	26	44	
2.5	9.6		7	12	20	35	
4.0	14.5		4	8	13	23	
6.0	18.8		3	6	10	17	
10	29.3		2	4	6	11	
16	40.2		1	2	4	8	
25	63.8		1	1	3	5	
35.0	83.5		-	1	1	4	
50.0	113.0		-	-	1	2	
95.0	204.0		-	-	-	1	
Flat twin & earth cables							
1.0	30.3		2	3	6	11	
1.5	38.3		1	3	5	8	
2.5	54.0		1	2	3	6	
4.0	66.4		1	1	2	5	
6.0	87.9		-	1	2	3	



Mini Trunking System

Safety

To ensure safety in use, the installation should be undertaken by competent personnel and in accordance with relevant codes of practice and statutory requirements. Information on proper installation can be found in:

- Regulations, British Standards specifications and codes of practice
- Regulations for Electrical equipment of buildings (IEE publication)

Description

Decoduct mini trunking consists of a body, and a clip-on lid which is fitted to the body by pressing it along its front face. The lid can be easily removed by lifting it from the body at one end and then peeling it away. The lid has an easy closing mechanism which is designed to give a securely closed installation, yet is easily accessible for maintenance or modifications.

Fixing

Holes should be drilled on the base of the body to mechanically fix to the desired surface using flat head screws. Fixing centres should not be more than 40cm apart, or more than 15cm away from the end of a straight run. On appropriate surfaces, the trunking can also be fixed by using a suitable contact adhesive. Alternatively DECODUCT trunking can be installed on clean dry surfaces.

Jointing

A fine toothed tenon saw and mitre block should be used to cut the trunking, to provide a neat installation. In all straight joints, it is important to stagger the joints of the trunking body and lid to give better protection and reduce joint visibility. On long straight runs, allowance for expansion must be made. For corners, the trunking must be mitred and for T-joints it must be slotted for cable entry.

Self-adhesive fixing

Decoduct self-fix mini trunking is offered with self-adhesive tape for easier fixing on suitable surfaces. The surface should be flat, clean, dry and free from dust or flaky paint. The backing should be peeled-off not more than 12 cm at a time, to expose the adhesive tape. Ensure the trunking is correctly positioned before pressing on surface as the self adhesive tape is designed to give immediate fixing. For permanence, screws can also be used.

Maxi Trunking System

Single-core P.V.C. insulated cables in trunking

For each cable it is intended to use, obtain the appropriate factor from Table 1A.

Add all the cable factors so obtained and compare with the factors for trunking given in Table 1B.

The size of trunking which will satisfactorily accommodate the cables is that size having a factor equal to or exceeding the sum of the cable factors.

TABLE 1A
Cable Factors for trunking

Type of Conductor	Conductor Cross-sectional area mm ²	Factor
Solid	1.0	7.1
	2.5	10.2
Stranded	1.5	8.1
	2.5	11.4
	4.0	15.2
	4.0	15.2
	6.0	22.9
	10.0	36.3

TABLE 1B
Factors for trunking

Dimensions of Trunking mm x mm	Factor	
DXT 1	50 x 50	1037
DXT 2	75 x 50	1555
DXT 3	75 x 75	2371
DXT 4A	100 x 40	2200
DXT 4	100 x 50	2091
DXT 5	100 x 100	4252
DXT 6	1 00 x 150	4650

For other sizes and types of cable or trunking

For sizes and types of cable and sizes of trunking other than those given in Tables 1A and 1B above, the number of cables installed should be such that the resulting space factor does not exceed 45%.

The table below gives the 45% filling factors for Decoduct Maxi-Trunking, based on which the right size of trunking can be selected.

Item Code	Size(mm)	45% Filling Factor(mm2)
DXT 1	50 X 50	940
DXT 2	75 X 50	1700
DXT 3	75 X 75	2450
DXT 4A	100 X 40	2350
DXT 4	100 X 50	2250
DXT 5	100 X 100	4350
DXT 6	100 X 150	4500



Maxi Trunking System

Safety

To realize the full advantages of the Decoduct system, as well as to ensure safety, its installation, commissioning and maintenance should be undertaken by competent personnel and in accordance with relevant codes of practice and statutory requirements. Information on the installation of Decoduct products to ensure that so far as it is reasonably practicable they are safe and without risk to health when properly used, can be found in:

- Regulations, British Standards specifications and codes of practice
- Regulations for Electrical equipment of buildings (IEE publication)

Description

Seven sizes of Decoduct maxi trunking are available, each consisting of a U-channel body, and a specially designed clip-on lid for secure closing. The lid is closed by aligning it with the body, clipping it on one end of the body, and pressing into place along the length of the trunking, applying equal pressure on both sides. Lid removal is simply done by starting at one end and peeling of the lid along the length of the trunking.

Fixing

Two widely spaced holes should be drilled on the base of the trunking body at every fixing point. Fixing can be done using screws and fixing points should not be spaced more than one metre apart. The drilled holes should be oversized to allow for expansion, and washers should be used under the heads of screws. Care should be taken not to overtighten the screws.

Jointing

A fine toothed tenon saw and mitre block should be used to cut trunking, for accurate clean cuts leading to a neat installation. In all straight joints, it is important to stagger the joints of the trunking body and lid, to give better cable protection and reduce joint visibility. For corners and T-joints, a comprehensive range of Decoduct maxi-trunking fittings is provided, complete with extended lids on all branches, to provide an overlap. The fittings are fitted by removing the lids, drilling holes and using washers and screws, as in the case of trunking. After the cables are laid, the lids of the fittings should be fitted first, before finally fitting the lids on the trunking body.

Conduit Systems

Single-core PVC insulated cables in straight runs of conduit not exceeding 3m in length

For each cable it is intended to use, obtain the appropriate factor from Table 12A. Add all the cable factors so obtained and compare with the conduit factors given in Table 12B. The conduit size which will satisfactorily accommodate the cables is that size having a factor equal to or exceeding the sum of the cable factors.

TABLE 12A
Cable factors for short straight runs

Type of Conductor	Conductor cross sectional area mm ²	Factor
Solid	1.0	22
	1.5	27
	2.5	39
	1.5	31
Stranded	2.5	43
	4.0	58
	6.0	88
	10.0	146

Table 12B Conduit factors for short straight runs

Conduit dia (mm)	Factor
16	290
20	460
25	800
32	1400

TABLE 12C Cable factors for short straight runs or runs incorporating bends

Type of Conductor	Conductor cross sectional area mm ²	Factor
Solid or Stranded	1.0	16
	1.5	22
	2.5	30
Stranded	4.0	43
	6.0	58
	10.0	105

Single-core PVC insulated cables in straight runs of conduit exceeding 3m in length or in runs of any length incorporating bends or sets

For each cable it is intended to use, obtain the appropriate factor from Table 12C. Add all the cable factors so obtained and compare with the conduit factors given in Table 12D, taking into account the length of run it is intended to use and the number of bends and sets in that run. The conduit size which will satisfactorily accommodate the cables is that size having a factor equal to or exceeding the sum of the cable factors.

TABLE 12D Conduit factors for runs incorporating bends

Length of run m	Conduit																			
	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32	16	20	25	32
	Straight				One bend				Two bends				Three bends				Four bends			
1.0	Covered by Tables 12A and 12B				188	303	543	947	177	286	514	900	158	256	463	818	130	213	388	692
1.5					182	294	528	923	167	270	487	857	143	233	422	750	111	182	333	600
2.0					177	286	514	900	158	244	442	783	120	196	358	643	86	141	260	474
2.5					171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474
3.0					167	270	487	857	143	233	422	750	111	182	333	600				
3.5	179	290	521	911	162	263	475	837	136	222	404	720	103	163	311	563				
4.0	177	286	514	900	158	256	463	818	130	213	388	692	97	159	292	529				
4.5	174	282	507	889	184	250	452	800	125	204	373	667	91	149	275	500				
5.0	171	278	500	878	150	244	442	783	120	196	358	643	86	141	260	474				
6.0	167	270	487	857	143	233	422	750	111	182	333	600								
7.0	162	263	475	837	136	222	404	720	103	169	311	563								
8.0	158	256	463	818	130	213	388	692	97	159	292	529								
9.0	154	250	452	800	125	204	373	667	91	149	275	500								
10.0	150	244	442	783	120	196	358	643	86	141	260	474								



Conduit Systems

Safety

To ensure safety in installation, commissioning and maintenance, work should be undertaken by competent personnel and in accordance with relevant codes of practice and statutory requirements. Information on installation can be found in:

- Regulations, British Standards specifications and codes of practice
- Regulations for Electrical equipment of buildings (IEE publication)

Surface Installation

Conduit used for in-surface installations should be fixed using saddles or spacer bar saddles. The maximum recommended spacing between saddles is 1.0 metre for horizontal conduit runs and 1.25 metres for vertical conduit runs. Saddles should be fixed no more than 20 cm on either side of the bends or boxes.

As PVC conduit expands with increasing temperatures, it should be able to slide in the saddles, to allow for expansion/contraction movements. In long straight runs, the use of an expansion coupling is recommended every 6 metres to absorb expansion and avoid conduit buckling.

Jointing

Solvent welding is the recommended method of joining conduit into fittings like couplings, adaptors, bends and boxes. Decoduct PVC sealing cement provides a waterproof permanent joint.

Bonding Instructions :

A. Surface Preparation:

Pipes and fittings to be bonded must be clean, dry and free from oil, dirt, moisture and grease.

B. Pipes and Sockets :

- Cut pipe square, remove any burrs from both the inside and outside of the pipe with a knife, file or reamer.
- Ensure product is free from dirt, grease and moisture.
- For proper mating, insert pipe into the full length of the socket.
- Apply an even layer of cement to the pipe and the fitting.
- Immediately push the pipe into the fitting together to the full depth without twisting. Hold in place for 30 seconds and clean off excess cement. Maximum strength is achieved thereafter.

Joints & Couplers

Expansion Couplers are installed with short side coated with solvent cement (DSG2) and the coupler pushed firmly over the conduit to the notch. Expansion side of the coupler should be coated inside with a semi permanent mastic and shall be positioned in such a way that the conduit is mid point to the notch. This will facilitate expansion or contraction of the conduits.

Bending

Bending of conduit up to 25mm diameter can be carried out cold, using the correct bending spring size, according to the diameter and the gauge of the conduit. After inserting the spring, the bend can be made by hand by bending slightly beyond the required angle, and allowing the conduit to recover back to the required position. Bending should not be done too fast and once made, a bend should not be forced backwards, as these actions can lead to conduit or spring damage. According to IEE Regulations, the bend inner radius should not be less than 2.5 times the conduit outside diameter.

For conduit sizes over 25mm diameter, hot bending is required, with the same procedure as cold bending, but with the application of gentle heat just prior to bending. No open flames should be used for heating, Once the conduit is warm, it can be bent around a suitable former, and held there until it cools and sets in position.

General

Once installation is complete, wires can be drawn through the system by using nylon draw tape. PVC is an electrical insulating material, making the use of a separate insulated earth wire essential.

Note: All information is provided as guidance only. Installation should be carried out by a suitable qualified electrician.

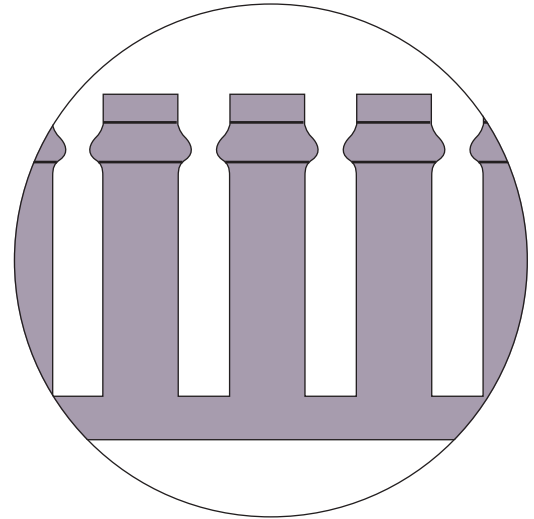
Panel Trunking

Rounded wall finger design – no sharp edges

All wall fingers of Decoduct panel trunking have a rounded design with burr-free edges, so that any injury, either to the hands of the user or the insulation of the cables, is prevented.

Holes on fingers for cable retainer insertion

For the bigger sizes of Decoduct panel trunking, holes are provided on one finger every 100 mm, for insertion of a screwdriver to act as a cable retainer, making the wiring faster and easier.



Cable retaining protrusions on wall fingers

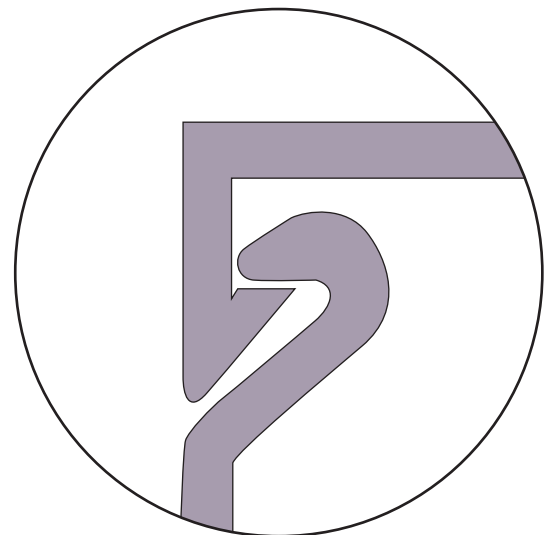
Rounded protrusions at the top of all wall fingers effectively reduce the slot width, for cable retention. For the bigger sizes of Decoduct panel trunking, protrusions are also provided at the centre of wall fingers for easy positioning of exiting cables.

Secure lid closing

The lid closing mechanism is designed for easy lid fixing and removal, but at the same time for secure trunking closing.

Sizes based on 12.5 mm module to DIN 43 660

The dimensions of Decoduct panel trunking are based on steps of 12.5 mm, as required by DIN 43 660. The use of the 12.5 mm module as a basis for sizing makes Decoduct ideal for perfect size interfacing with other DIN 12.5 components.





Panel Trunking

STANDARD EXECUTION

Decoduct panel trunking is classified as follows under clause 6 of EN 50085:

Minimum storage & transport temperature:	- 25°C
Application temperature range:	- 15°C to + 60°C
Flame propagation:	Non-flame propagating
Electrical characteristics:	Insulating

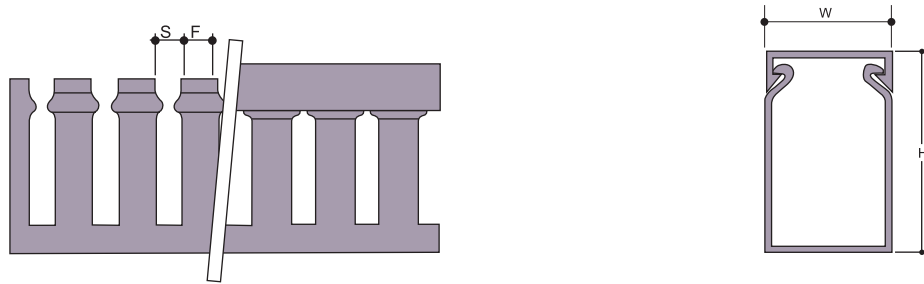
Decoduct panel trunking is supplied in the following standard execution:

Standard length:	2.0 mt.
Standard colour	RAL 7030 Grey
Material:	Impact modified U-PVC

Non-standard executions are available on request, based on reasonable quantity.

DIAGRAMS

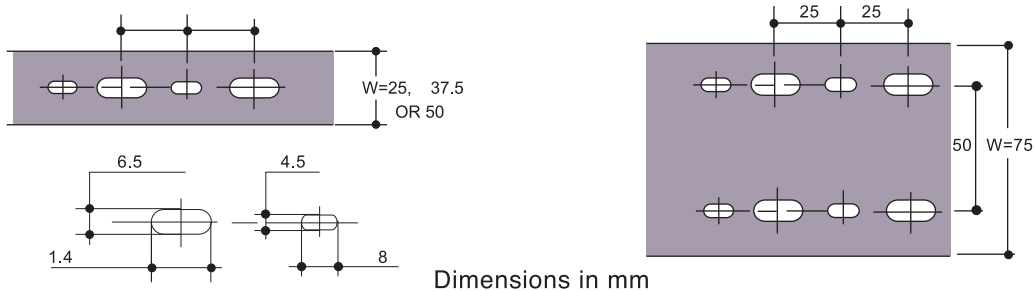
PROFILE DIMENSIONS AND WALL PERFORATIONS



- For dimensions details refer to page 35 and 36

BASE PERFORATION (TO DIN 43 659)

BASE PERFORATIONS (TO DIN 43 659)



Dimensions in mm