







## **GROUP OF COMPANIES**

DANA WATER HEATERS & COOLERS FACTORY L.L.C., DUBAI, U.A.E. (Glass Lined Water Heaters, Coolers and Chillers, Pool Heat Pumps)

DANA WATER HEATER AND COOLERS FACTORY L.L.C. (BRANCH)
(Cable Management System, Plate and Coil Service Centre, Rollformed Products)

DANA STEEL PROCESSING INDUSTRIES L.L.C., UAE (Cable Management System, Profiles and Claddings, Dry Wall Partioning Systems)

SEVEN EAGLES INTERNATIONAL TRADING L.L.C. DUBAI, U.A.E. (Flat and Long Steel Products Steel Coils, Plates, Sheets, Pipes)

DANA STEELS PVT. LTD., BHIWADI, RAJASTHAN, INDIA (Pipe Mill, Black and Galvanized ERW Pipes, Scaffolding and Formwork Systems)

APIKA ENTERPRISES EXPORT HOUSE Jaipur, INDIA

DANA HOSPITAL PRIVATE LIMITED Jaipur, INDIA

DELTA STEEL ENGINEERING & ELECTRICAL APPLIANCES FACTORY, Tripoli, LIBYA



## **DANA GROUP OF COMPANIES**

P.O. Box 40743,

Head Office: Nasser Square, Deira, DUBAI U.A.E. Tel: +971-(0)4-2217273 Fax; +971-(0)4-2215940 Email: info@danagroups.com / drdana@eim.ae

URL: - www.danagroups.com



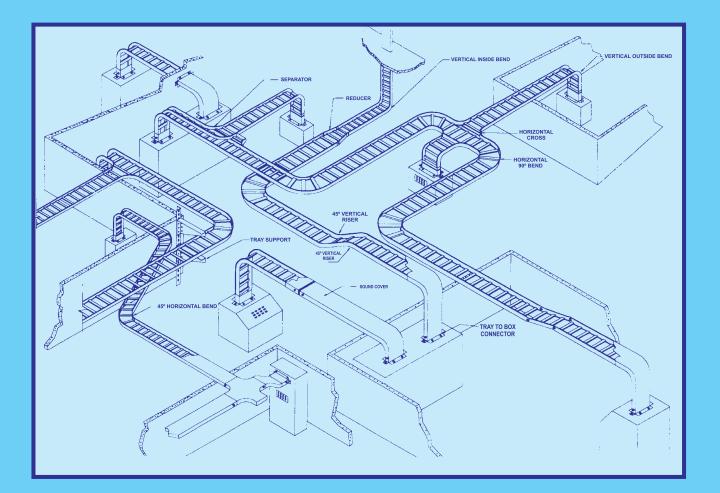






## **CABLE MANAGEMENT SYSTEM**

# **CABLE TRAYS, COVERS & ACCESSORIES**



**Perfect Designing** 

**Long Term Economy** 

**Easy Installation & Replacement** 

**Cable Tray as an Engineered Product** 









## **Vision and Mission**

#### **Our Vision**

We aspire to be the global steel industry benchmark by being the world's most reliable and innovative value added Steel Manufacturer, service and Solution Provider.

#### **Our Mission**

To maximize value for our worldwide client base by supply high quality steel products, providing related services and solutions while utilizing innovative technologies and a team of motivated employees, focused on continuous improvement, highest business standards, work ethics and corporate citizenship.

#### **Our Company Policy**

The company management preaches Japanese Style of Management where ideas pass on from shop floor level right up to the top management's desk. We make sure that right thing is at right place at right time. This helps us to manufacture our products with high precision and meeting all the specifications. We have capability to deliver and meet urgent needs of our customers and have built their confidence by providing high quality in time. Our manufacturing facilities which are spread out in Al Quoz, Umm-Al-Quwain, Ajman and Libya help us to execute bulky orders in time.

We believe in continuous improvement and follow Lean and Kaizen principles. We are striving to serve you better.

#### **PREFACE**

**DANA** Offers a comprehensive range of components forming the elements of a Complete cable management system. The system offered comprises:

- DANA Cable trays and cable ladders (conforming to BS EN 61537)
- DANA Metal channel cable supports (conforming to BS 6946)
- DANA Steel surface Trunking (conforming to BS EN 50085-1:2005 (which supersedes BS4678-1)
- DANA Pull Boxes
- DANA Cable tray Accessories

DANA Cable Management system's full range of products from are having ISO 9001:2008 certification. We have fully equipped factory with Design, production and Quality control Departments. The load capabilities. Support span requirements, Deflection criteria, site installation problems have been carefully considered by our design department while designing the entire product range. All our products are manufactured using the latest CNC technology which help us to maintain a unique quality product throughout manufacturing. Entire DANA Cable management system has been designed to minimize welding. Last 15 Years of research and development in this field has helped us to develope a system which has taken into account all the requirements of construction sites in the Middle East & Asia.

## Dana cable management system do comply with nema standard

It covers general cable tray defination, manufacturing standards, performance standards, test standards and application information.

#### Nema VE2

It is a cable tray installation guidelines which covers receiving and unloading material, storage of material and general installation process.

We offer the best quality products at best prices in the region .Over the years, DANA Steel has placed a continuous emphasis on improving processes, with a view to consistently enhancing quality, improving efficiency and thereby achieving better performance benchmarks in all areas. Our products provide you the Quality, Strength and Endurance. Contact Us right now for further Product Enquiry.

#### Flat Products



- Hot Dipped Galvanized Coils Hot Rolled
- Steel Plates
- Cold Rolled Coils - Hot Rolled Shipbuilding Plates (LR; ABS; DNV; BV

More

#### Metal Profile for Ceiling & Partition



Metal Profile Ceiling Partition

#### Long Products





Steel Coil Services

 Cut to length Slitting Line

#### Cable Trays



- Cable Trays Trunking and
- StrutChannel and Support System

#### Pipes & Tubes



Galvanzied Saffolding &

> Structural Pipes - Casing Pipes

#### Profiles and Cladding



Cladding (single skin) C and Z Purlin

- All kind of Accessories

#### Scaffolding & Formwork Systems



Steel Planks Galvanized

Scaffolding Planl - Props and

Water Coolers and Chillers



- Water Coolers
- Water Chillers

## Water Heaters & Pool Heat Pumps



- Water Pool
- Heat Pumps

#### GI/PVC Conduits



- PVC Conduits
- Accessories

#### Steel Lintels



- Double Wall Lintel
- Cavity Wall Lintel









S#	Final Customer	Project Name	Plant Type	Delivery Period (month/year)	Place of Construction
18	Emaar Properties PJSC	Infinity Tower, Dubai Marina	Commercial Complex	2008	Dubai
19	Hayan Petroleum Company (HPC)	Jihar Stage 3 Projet	Gas Treatment Plant	2009	Syria
20	Tamouh Investments	Al Reem Island : Zone C, Shopping Mall in Zone E1	Commercial Complex	2008	Dubai
21	BOROUGE LLC	Petrochemical Complex Expansion : Borouge	PetroChemical Complex	2009	Ruwais
22	DEWA (Dubai Electricity and Water Authority)	Power Plant and DeSalination Plant Phase 'M' Block 1	Power Plant	2008	Jebel Ali, Dubai
23	DEWA (Dubai Electricity and Water Authority)	Gas Compression Plant for Power Plant and DeSalination Plant Phase 'M' Block 1, 2 and 3	Gas Compression Plant	2009	Jebel Ali, Dubai
24	Gulf Steel Factory	Gulf Steel Rolling Mill Project	Mill	2009	Abu Dhabi
25	Dubailand	Skycourts Apartments	Commercial Complex	2008	Dubai
26	RTA , Dubai	Metro Station : Al Qusais Parking	Metro Project	2009	Dubai
27 E	nterprise de construction et des services	Avenue Georges Clemenceau,	Building Project	2009	Djibouti
28	Flowserve	Inhouse requirements	Pump Transport boxes	2009	Jebel Ali
29	Al Jazeera Port	Al Hamra Development Project	Port and maintenance	2009	Ras Al Kahimah
30	SNC Lavalin , Fichtner	Al Qatrana Power Project	Power Plant Project	2010	Jordan
31	Bechtel Overseas	Angola LNG Project	Angola LNG Project	2009 , 2010	Angola
32	GASCO	Hasshan Sulphar Granulation Plant	Sulphur Granulation Plant	2013-2014	HABSHAN
33	PDO	Saih Rawl Depletion Compression	SRDC Phase-2	2013-2014	Oman
34	SONGAS	Electrical Sub-Station Project	Sub-station Project	2014	Dar-es-salaam, Tanzaina
35	GASCO	Habshan Maqta Taweelah Gas Pipe Lines Project	Gas Pipe Lines Project	2013-2014	HABSHAN
36.	GAC	Maas Project Lighting System	Lighting System	2014	Saudi Arabia
37.	GAC	Razz-Al-Khair Project	Razz-Al-Khair Project	2014	Saudi Arabia

## **Raw Material**

#### **Carbon Steel**

This raw material occupies 90% of Cable tray manufactured through out the world, confirms to BS 1449 / BS EN 10130 / BS EN 10131. It combines good strength economy and availability. It has got various coating on top of that to avoid corrosion.

#### **Stainless Steel**

Stainless Steel Products, manufactured in accordance with AISI 304, or in accordance with AISI 316L are designed for use in highly aggressive environments. It has an extensive use in various areas like refineries. Chemical industries, Fertilizer factories and Industries where hygiene is a major concern like dairies, Abattoirs food industries and pharmaceutical factories. Apart from the aesthetic appearance it resists fire to a greater extent. Stainless steel can maintain its integrity even in a flame temperature of 1000°C. The main types available are the following.

#### Stainless Steel AISI 304 and AISI 316 L

304 is the normal grade used in stainless steel where as 316L is used in highly aggressive environment with high chlorine contents like in marine areas. With the presence of Molybdenum in 316L it has got an improved corrosion resistance against chlorides.

## **Surface Coatings**

#### **HOT DIP Galvanizing After Fabrication (HDGAF)**

Hot dip galvanizing is a process where completely manufactured or roll formed steel is chemically cleaned of all contaminants and then dipped in molten zinc. This will allow a coating consisting of Iron/zinc alloys which are usually over coated with a layer of almost pure zinc. The thickness of zinc coating depends on the thickness of the steel. Local coating thickness varies from 45-85 Micron (320-610 gm²) depending on thickness.

Corten A Steel can be deep galvanized upto 3 to 4 times of normal coating where the operation remain same as aforesid. Grey coating is expected due to the high silicon content of this Steel.

American Standard: ASTM A123, A153 and A767

British Standard: BS EN ISO 1461:1999 (which supersedes BS 729:1971)

#### PRE-GALVANIZED Finish or Hot DIP Galvanized sheet finish (HDGBF)

This finish is an economical solution in the normally dry indoor applications where the atmosphere is less corrosive. In this finish zinc coating is applied on both sides of the steel sheet during manufacturing itself, resulting in bright and smooth surface finish. Not suitable for any highly corrosive and high humidity atmospheric conditions.

Generally we use the current steel grade of Z 275 (G-90).

British Standard : BS EN 10346; 2009, which supersedes BS EN 10142:2000 (Formerly BS 2989-1982)

American Standard: ASTM A653 / A653M

#### Electro-Galvanizing (EG)

In this finish a thin zinc layer is deposited in electrolysis process to an average of 8 to 10. Usage is limited only to dry interior spaces due to very less coating tickness. All zinc electroplating with passivation is in accordance to BS7371 for threaded mild steel products up to 19mm in diameter and to BS1706 for other mild steel products.

#### **Epoxy Powder Coatings (PC)**

These coatings are applied to mild steel components. The coating can be offered in a wide variety of colours to meet the architectural project requirements. The coatings themselves are resilient to damage and will withstand atmospheric pollution and ultraviolet exposure from sunlight.









## INTERNATIONAL STANDARDS IN MATERIAL AND FINISHES

DANA Steel produces the components of its cable management system from materials to the following internationally recognized standards:

SUFFIX	ТҮРЕ	DESCRIPTION		
PG	Pre Galvanised	To BS EN 10346: 2009, which supersedes BS EN 10142:2000 (Formerly BS 2989-1982) the substrate is mild steel Grade DX51D with yield >200 N/mm2. The zinc coating is applied before metal forming and the grade used Z275 implies a coating thickness of 20 microns.		
HDG	Hot Dip Galvanized	>1.5mm thick steel Grade D11 to BS EN 10111 yield >200 N/mm2 or <1.5mm thick steel to Grade DC01 to BS EN 10130 yield >200N/mm2 is used to manufacture components, which are galvanized to the requirements of BS EN ISO 1461 generating a coating thickness of at least 65 microns. On customer request we can increase it upto 85 microns.		
SS	Stainless Steel	Austenitic stainless steel to BS EN 10088 Grade 1-4401 is used which has 17% Chromium 12% Nickel & 2% Molybdenum analysis.		
PC	Powder Coated	>1.5mm thick steel Grade D11 to BS EN 10111 yield >200 N/mm2 or <1.5mm thick steel to Grade DC01 to BS EN 10130 yield >200N/mm2 is used to manufacture components, which are coated with an epoxy powder. This will be in an agreed colour, offering a cosmetic finish with only limited anti-corrosive properties.		
HDP	Painting after Hot Dip Galvanization	After Hot Dip Galvanizing substrate steel to BS EN ISO 1461:1999 (65 - 85 microns) a fully automated painting line, paints the material in specified colors with a 3 coat system.  i.e.: Primer Coat: Primer epoxy (40 micron) Intermediate Coat: Polyamide MIO Epoxy (40 microns). Finish Coat: Modified aliphatic polurethane (75 microns).		

It is possible for DANA Steel to manufacture components of the product range in alternative materials to those listed above. For further information on these possibilities please contact our Technical Department.

S#	Final Customer	Project Name	Plant Type	Delivery Period (month/year)	Place of Construction
1	EMICOOL Union Properties PJSC	Dubai Motor City Project	District Cooling Plant	2007	Dubai
2	Ministry of Transport and Communications - Oman, Daewoo Shipbuilding and Marine Engineering (DSME) - South Korea , Ministry of National Economy Oman	Duqm Port in Gulf of Masirah, Oman	Port and neighbouring infrastructure projects	2009 till 2011	Oman
3	SNC Lavalin	Ambatovy Nickel Pipeline Project	Mining and preparation Plant	2009	Madagascar
4	BURULLUS GAS COMPANY	WDDM – Phase VII Main Compression Project	Gas Compression Project	2010	Egypt
5	SAUDI ARAMCO	KARAN ARAMCO OFFSHORE AND SUBSEA PIPELINES PROJECT	Offshore Gas Field Production Plant	2009-2010	Karan, KSA
6	EMAL ( Dubai Aluminium Company Limited (DUBAL) and Mubadala Development Company	Emirates Aluminium Smelter Complex	Smelter complex	2009	Taweelah, Abu Dhabi
7	DEWA (Dubai Electr icity and Water Authority)	Project 2202 : Jebel Ali DEWA substation for Blocks 1,2 & 3	Black Diesel Start Generator Set	2007 - till date	Jebel Ali
8	ADNOC Group, Abu Dhabi Polymers Company (BOROUGE LLC)	Petrochemical Complex Expansion : Phase 2	PetroChemical Complex	2008 till date	Ruwais
9	YEMEN LNG	TOTAL CCU extension project	Central Compression Unit	2010	Yemen
10	ADNOC Group, Abu Dhabi Polymers Company (BOROUGE LLC)	Petrochemical Complex Expansion : Borouge	PetroChemical Complex	2008	Ruwais
11	Jay Ray McDermott	Transformer Skids for Port	Jebel Ali Port	2010	Jebel Ali
12	Cimac FZCO	RAK GAS Project	Gas Project	2009	Ras Al Khaimah
13	GS Engineering and Construction	Green Diesel Project	Refinery Expansion	2009	Ruwais
14	TRANSCO (Abu Dhabi Transmission and Despatch company) , ADWEA	IWPP Fujairah Phase II Water Transmission Project System	Water Transmission Project	2008	Abu Dhabi
15	ADNOC Group, Abu Dhabi Polymers Company (BOROUGE LLC)	Borouge 2	PetroChemical Complex	2008-till date	Ruwais
16	DEWA (Dubai Electricity and Water Authority)	DFO PipeLine from Jebel Ali Free Zone to Aweer Power Station	PipeLine	2008-till date	Dubai
17	BP SAJAA SHARJAH LTD .	Jet Fuel Storage Facility (Anabeeb)	PipeLine	2008	Sharjah









#### CABLE TRAY LOAD GRAPHS

#### SAFE WORKING LOADS

The following Loading Charts are to give guidance on maximum safe working loads when using Cable Ladders & Trays (installedhorizontally) produced by DANA. They are published in accordance with the requirements of the industry standard BS EN 61537:2001. Load tests simulated the conditions of a multiple span of at least 4 spans with the end spans reduced to 75% of the intermediate spans.

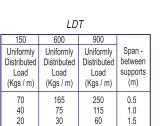
The graphical presentation links established maximum safe working loads at specified intermediate spans.

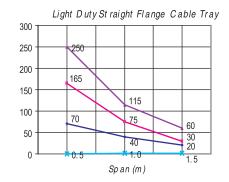
Loads below the drawn line are SAFE - loads above the drawn line are UNSAFE. When using this information the installer should take into account:

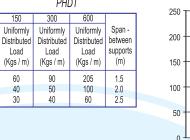
- The guidance offered in our presentation of system design considerations should be studied Loading is assumed to be uniformly distributed.
- If point loads are imposed or the installation is less than 4 spans our technical department should be consulted.
- The graphs should not be extrapolated to shorter or longer spans than those shown.
- The installer should be satisfied that supports are of adequate strength and that all connections are fully tightened.
- The loading information is given in good faith based on tests carried out with DANA products. However, DANA cannot be held responsible for a variation in performance of this product range.

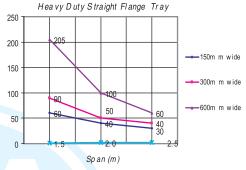
#### **WARNING!**

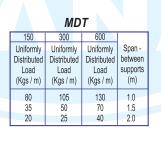
DANA CABLE TRAYS A LADDERS ARE PART
OF A CABLE MANAGEMENT SYSTEM THEY
SHOULD NEVER BE USED FOR OTHER
STRUCTURAL PURPOSES AND MUST NOT BE
USED AS WALKWAYS BY INSTALLATION OR
MAINTENANCE PERSONNEL.

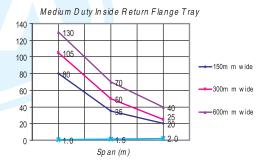




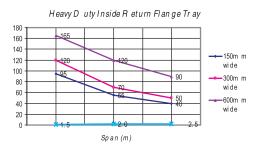


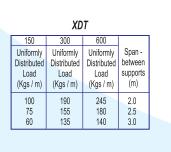




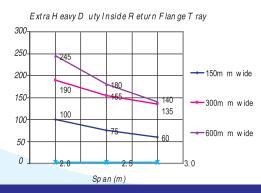


HDT					
150	300	600			
Uniformly	Uniformly	Uniformly	Span -		
Distributed	Distributed	Distributed	between		
Load	Load	Load	supports		
(Kgs / m)	(Kgs / m)	(Kgs / m)	(m)		
95	120	165	1.5		
55	70	120	2.0		
40	50	90	2.5		





20



#### **CABLE TRAY SYSTEM**

A cable tray system is an assembly of metallic cable tray sections and accessories, that forms a rigid structural system to support cables.

IEC 61537: 2006

# THE NEED FOR A CABLE TRAY SYSTEM

As technology advances, so too does the need for effective support systems. Today, plants and buildings are moving more and more towards automation. Requiring complex system of wiring and cable laying.

Old methods of cable management become obsolete under these demanding conditions.

- Regular inspections must be carried out, & faults located
- Many entry/exit points are required
- New cables may need to be installed, and old ones removed
- Ventilation, essential to power and similar cables, must be provided

Today cable trays have become a necessary part of industrial and commercial construction by offering quick, economical and flexible solutions to these problems.

Cable trays are capable of supporting all types of wiring:

- High Voltage Power Lines
- Power Distribution Cables
- Sensitive Control Wiring
- Telecommunication Wiring
- Optical Cables

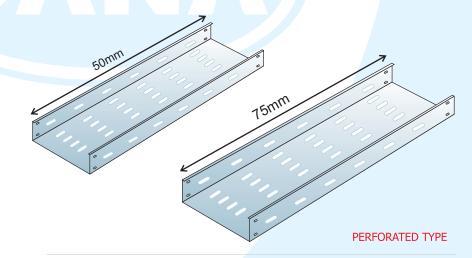
# ADVANTAGES OF DANA CABLE TRAYS

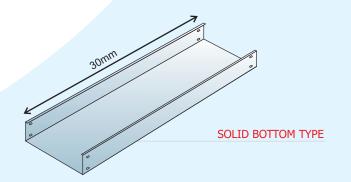
DANA cable tray systems are manufactured in accordance with the precise standards laid down by the IEC. Thus ensuring standardisation of materials used, as well as load-bearing capacities.

DANA cable tray system offer the following advantages

- Easy Installation
- Increased cable fill over other wiring method.
   Thereby saving material costs and installation labour
- Less space utilisation than comparable conduit or other systems
- The metal can be used as an equipment ground conductor
- Easy inspection of cables
- Easy location of faults and quick repair, without replacement of the original cable run
- Cables can be dropped out at any point without expensive boxes or fittings
- Cables can instantly be added to existing trays at a later stage

## **TYPES OF CABLE TRAY**









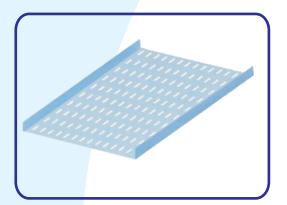




**DED** 

DEE

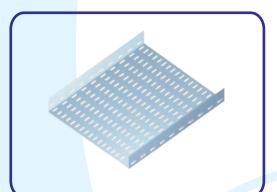
#### DANA CABLE TRAY SYSTEMS - OVERVIEW



### LIGHT DUTY STRAIGHT FLANGE CABLE TRAY

LDT - Cable Trays are produced with straight flanges and smaller side height for light duty applications. Ease of installation and accessibility.

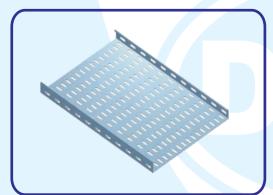
SIDE HEIGHT: 15 mm upto 300 mm 20 mm above 300 mm



### **HEAVY DUTY STRAIGHT FLANGE CABLE TRAY**

DHDT - Cable Trays are produced with straight flanges with larger provision of cable depth. Ease of installation and accessibility.

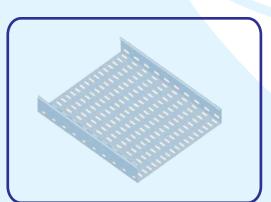
SIDE HEIGHT: 35 mm



## MEDIUM DUTY INSIDE RETURN FLANGE CABLE TRAY

MDT - Cable Trays are produced with inside return flanges to provide strength to the component and better load bearing capacity.

**SIDE HEIGHT: 25 mm** 



## **HEAVY DUTY INSIDE RETURN FLANGE CABLE TRAY**

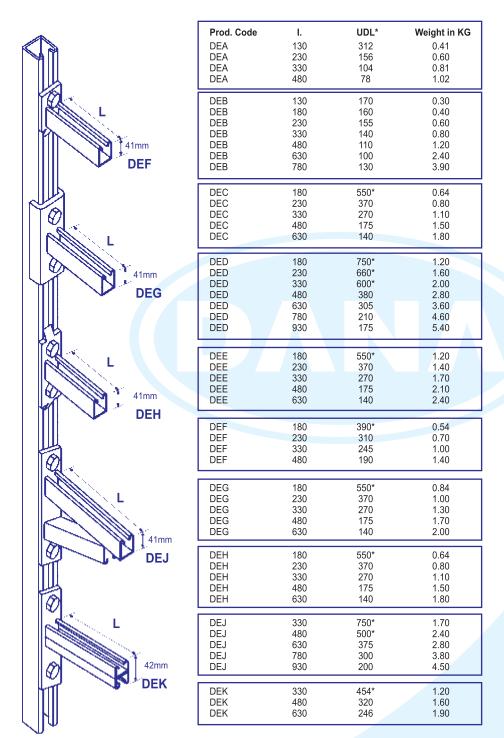
HDT - Cable Trays are produced with inside return flanges with larger depth for better cable management and increased load bearing capacity.

SIDE HEIGHT: 50 mm

#### MORE SUPPORT SYSTEMS

Details shown in more support options using DB100 (41 x 41mm) Series Channels as column. All holes are 14mm in diameter to use 12mm hex bolt.

All support systems except DEB uses channel nut to fix tray to support.





<sup>\*</sup> Slip Limit Loading Capacity

Note: Cantilever arms longer than 930mm is available with supporting members to increase safe working load. Contact Sale desk for details.

Load Details shown is for guidance only.







HN06HG

HN06A4

HN08A4

**HN10A4** HN12A4

HN06A2

HN08A2

HN10A2 HN12A2

**RB0612EG** 

RB0616EG RB0620EG

**RB0625EG RB0630EG RB0640EG** 

**RB0650EG** 





#### DANA CHANNEL SUPPORT SYSTEM

#### Standard fastenings

Fastenings
Hexagonal Hea Bolts

Hexagonal Nuts

Electro Plated Zinc



Roofing Bolts







<b>©</b>	<b>(a)</b>
Hexagonal H	ead Bolts

00			ï	

M6 x 16	pack 100
M6 x 20	pack 100
M6 x 25	pack 100
M8 x 16	pack 100
M8 x 20	pack 100
M8 x 25	pack 100
M8 x 30	pack 100
M8 x 35	pack 100
M8 x 40	pack 100
M10 x 20	pack 100
M10 x 25	pack 100
$M10 \times 30$	pack 100
$M10 \times 35$	pack 100
M10 x 40	pack 100
$M10 \times 50$	pack 100
M12 x 20	pack 100
M12 x 25	pack 100
M12 x 30	pack 100

M12 x 30	pack 100
M12 x 35	pack 100
M12 x 40	pack 100
M12 x 50	pack 100
Hot Dip Galvan	ized
M6 x 12	pack 100
M6 x 16	pack 100

M6 x 20	pack 100
M6 x 35	pack 100
Stainless Steel (A4)	
M6 x 20	pack 100
M6 x 25	pack 100
M8 x 25	pack 100
M8 x 35	pack 100
M8 x 40	pack 100
M10 x 16	pack 100

M10 x 40	pack 100
M12 x 25	pack 100
Stainless Steel (A2) M6 x 20	pack 100

M10 x 25

Stainless 3	Steel (A2)			
M6 x 20		pack	100	HB0620A2
M6 x 25		pack	100	HB0625A2
M8 x 25		pack	100	HB0825A2
M8 x 35		pack	100	HB0835A2
M8 x 40		pack	100	HB0840A2
M10 x 16		pack	100	HB1016A2
M10 x 25		pack	100	HB1025A2
M10 x 40		pack	100	HB1040A2
M12 x 25		pack	100	HB1225A2

pack 100

Electro Plated Zir	1C	
M6	pack 500	HN06EG
M8	pack 500	HN08EG
M10	pack 200	HN10EG
M12	pack 200	HN12EG

# Shakeproof Washers

•
Threaded Rods
<b>инии</b>

HB0616EG
HB0620EG
HB0625EG
HB0816EG
HB0820EG
HB0825EG
HB0830EG
HB0835EG
HB0840EG
HB1020EG
HB1025EG
HB1030EG
HB1035EG
HB1040EG
HB1050EG
HB1220EG
HB1225EG
HB1230EG
110400550

pack 100 pack 100 pack 100	HB1235EG HB1240EG HB1250EG
1	
pack 100	HB0612HG
pack 100	HB0616HG
pack 100	HB0620HG
pack 100	HB0635HG

HB0620A4
HB0625A4
HB0825A4
HB0835A4
HB0840A4

HB0835A4	
HB0840A4	
HB1016A4	
HB1025A4	
HB1040A4	
HB1225A4	
LIDOCOGAG	
HB0620A2	
LIDOGREAR	

100	HB0620A2
100	HB0625A2
100	HB0825A2
100	HB0835A2
100	HB0840A2
100	HB1016A2
100	HB1025A2
100	HB1040A2
100	HB1225A2

ectro Plated Zinc		
)	pack 500	HN06EG
}	pack 500	HN08EG

pack 500	HN06EG
pack 500	HN08EG
pack 200	HN10EG
pack 200	HN12EG

W10	раск 100
M12	pack 100
Roofing Bolts	
Electroplated Zinc	
Л6 x 12	pack 200
Л6 x 16	pack 200
Л6 x 20	pack 200
Л6 x 25	pack 200

Hot Dip Galvanized

Stainless Steel (A4)

Stainless Steel (A2)

M6

M8

M10

M12

M8

И6 x 16	pack 200
И6 x 20	pack 200
M6 x 25	pack 200
И6 x 30	pack 100
M6 x 40	pack 100
M6 x 50	pack 100
Hot Dip Galvanized	
M6 v 12	nack 100

M6 x 12 M6 x 16	pack 100 pack 100	RB0612HG RB0616HG
Stainless Stee M6 x 12 M6 x 16	pack 100 pack 100	RB0612A4 RB0616A4
M6 x 20	pack 100	RB0620A4
Stainless Stee M6 x 12	el (A2) pack 100	RB0612A2

pack 500

pack 100

pack 100

pack 100

pack 100

pack 100

pack 100

M6 x 12	pack 100	RB0612A2
M6 x 16	pack 100	RB0616A2
M6 x 20	pack 100	RB0620A2
Flat Washers		

pack 500	FW06EG
pack 500	FW08EG
pack 500	FW10EG
pack 200	FW12EG
2)	
pack 100	FW06A2
	pack 500 pack 500 pack 500 pack 200

M8	pack 100	FW08A2
V110	pack 100	FW10A2
M12	pack 100	FW12A2
Shakanroof	Washers	

#### Shakeproof Washers Electroplated Zinc

M6	pack 400	SW06EG
M8	pack 400	SW08EG
M10	pack 400	SW10EG
M12	pack 400	SW12EG
M12	pack 400	SW12EG

•	
Threaded Rods in 2 meters as standard Electroplated Zinc	
M6 x 2m	TR06EG
M8 x 2m	TR08EG
M10 x 2m	TR10EG
M12 x 2m	TR12EG
Stainless Steel (A4)	
M6 x 2m	TR06A4
M8 x 2m	TR08A4
M10 x 2m	TR10A4
M12 x 2m	TR12A4
Stainless Steel (A2)	
M6 x 2m	TR06A2
M8 x 2m	TR08A2
M10 x 2m	TR10A2
M12 x 2m	TR12A2

### STRAIGHT FLANGE CABLE TRAY

#### STANDARD FINISHES

HDG	Hot dip Galvanized to BS EN ISO 1461:1999
	(Formerly BS 729)
PG	Pre-galvanized to BS EN 10142 & 10143
PC	Powder Coating to suit clients requirements

SS	Stainless steel finish to required grades
S4	Stainless Steel 304

S6	Stainless Steel 316
AL	Aluminum

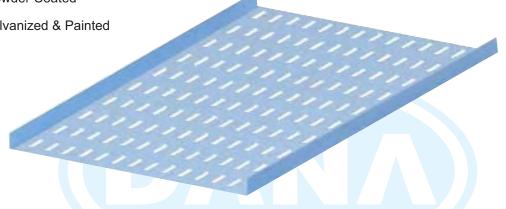
CA	Corten A Steel	

HP	Hot Dip Galvanized		
	& Epoxy powder Coated		

Hot Dip Galvanized & Painted

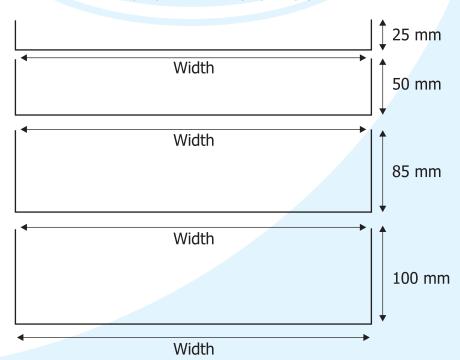
#### FOR STRAIGHT LENGTHS AND ACCESSORIES

Width (W)	Thickness (T)
All dimension	ns are in mm
50 to 150	1.0
225 to 300	1.2
450 to 600	1.5
750 to 900	2.0



Standard length is 3 meters.

"Custom made orders are also prepared. Kindly specify your dimensions."



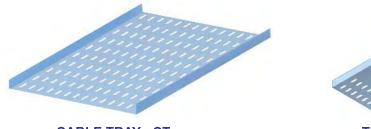








#### STRAIGHT FLANGE CABLE TRAY FITTINGS



**CABLE TRAY - CT** 



**ELBOW HORIZONTAL AL - B90** (90 DEG BEND)



**UNEQUAL TEE - UT** 



**EXTERNAL RISER - XR** 





**REDUCER STRAIGHT - RS** 



**REDUCER LEFT - RL** 



**INTERNAL RISER - IR** 



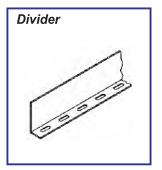
**CROSS HORIZONTAL - XH** 



**REDUCER RIGHT - RR** 

### **FISH PLATE**

Width (mm)	Thickness (mm)
50 to 300	1.5
450 to 900	2.0



Supplied in single without fasteners in three meter long. Used to divide different types of cables inside a single cable tray run. Order 5 Sets of M6 × 12mm roofing bolt, nut and washer per length.



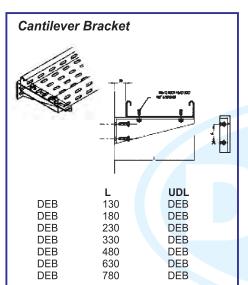
Uses of threaded rod is limited to a maximum of 12mm dia, if not using proper brackets in the Strut Channel

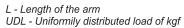


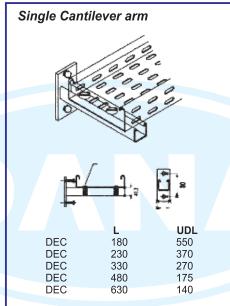
Fastening not included. Use M6 × 16mm roofing bolt, nut and washer. Copper braided and copper lugs, both in electrotinned finish.

Length between centres: 100mm. Conductor

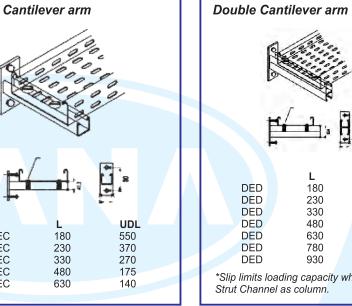
area: 4mm².

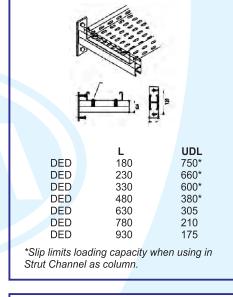


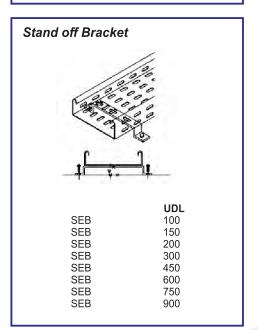


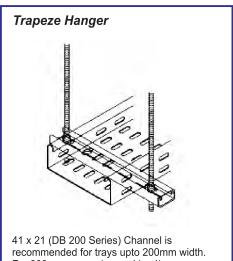


	Single Cant	ilever arm	1	
		00000		
			00	
		W.	1	
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	DEC	<b>L</b> 180	<b>UDL</b> 550	
	DEC DEC	230 330	370 270	
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	DEC	630	140	
ļ				

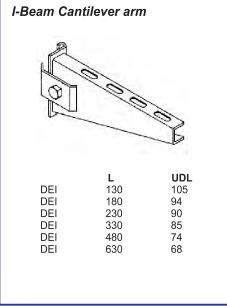








41 x 21 (DB 200 Series) Channel is recommended for trays upto 200mm width. For 300 mm onwards use 41 x 4) (DB 100 Series). Can be ordered in slotted profile in 3 meter. See delta strut Channel section for ordering information.





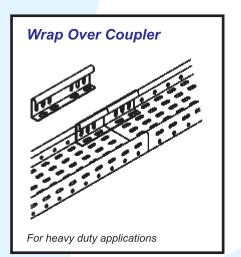


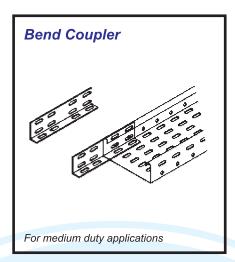


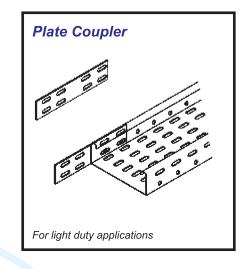


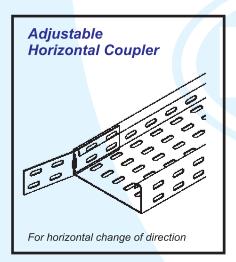
#### CABLE TRAY ACCESSORIES

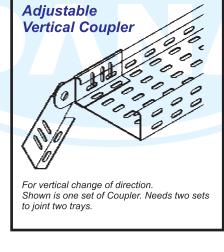
Couplers are supplied in pairs with eight sets of M6 × 16 mm roofing bolts, nuts & washers. Order the same fastenings to join fittings with cable tray.

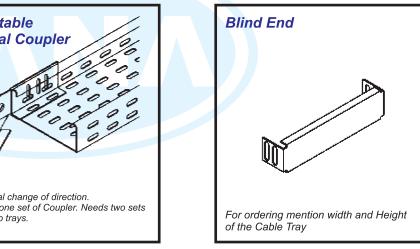


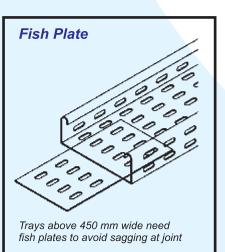


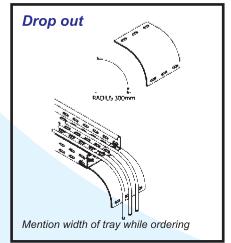


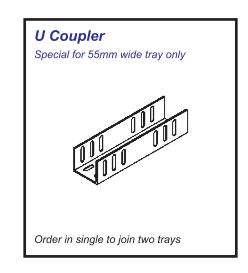












#### HEAVY DUTY STRAIGHT FLANGE CABLE TRAY

#### **STANDARD FINISHES**

HDG Hot dip Galvanized to BS EN ISO 1461:1999 (Formerly BS 729)

PG Pre-galvanized to BS EN 10142 & 10143

Powder Coating to suit clients requirements

SS Stainless steel finish to required grades

S4 Stainless Steel 304

Stainless Steel 316

AL Aluminum

CA Corten A Steel

Hot Dip Galvanized

& Epoxy powder Coated

Hot Dip Galvanized & Painted

#### FOR STRAIGHT LENGTHS AND ACCESSORIES

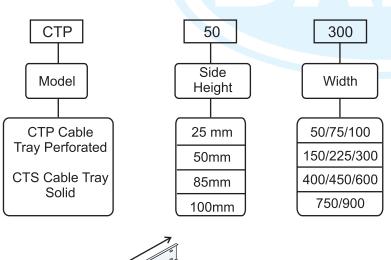
Width (W)	Thickness (T)
All dimension	ns are in mm
50 to 150	1.0
225 to 300	1.2
450 to 600	1.5
750 to 900	2.0

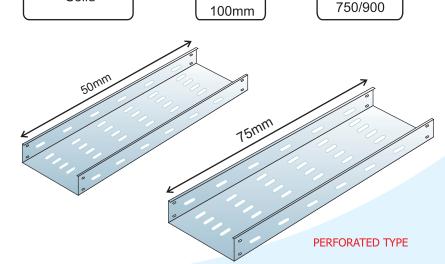
DANA Heavy Duty Straight Flange Cable Trays are produced in a standard length of 3 mtrs but can be produced in different lengths on request.

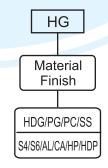
DANA Heavy Duty Straight Flange Cable Tray accessories are produced to standard radius of 300 mm but can be produced in 450 mm, 600mm and 900 mm as required.

Fish Plates are recommended for the trays & accessories above 200mm widths for better load bearing capacity

## Ordering Way: Straight Tray Ordering Way:





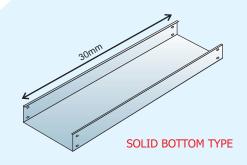


STRAIGHT CONNECTOR INTERNAL CONNECTOR

Width (mm)	Thicknes (mm)
50 to 300	1.5
450 to 900	2.0

INTERINAL CONNE		
	Width (mm)	Thickness (mm)
	50 to 150	2.0

- Internal Connectors are produced up to the width of 150 mm only.
- For special guages sizes or design consult our sales team or factory





**STANDARD FINISHES** 



Thickness

(T)

1.0

1.2

1.5

2.0

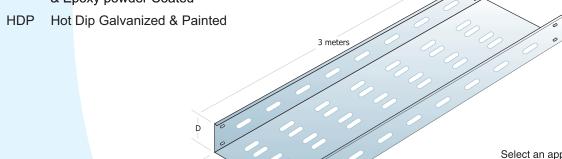




#### INSIDE RETURN FLANGE CABLE TRAY

## HDG Hot dip Galvanized to BS EN ISO 1461:1999 (Formerly BS 729)

- Pre-galvanized to BS EN 10142 & 10143 PG
- PC Powder Coating to suit clients requirements
- SS Stainless steel finish to required grades
- S4 Stainless Steel 304
- Stainless Steel 316 S6
- AL Aluminum
- CA Corten A Steel
- HP Hot Dip Galvanized
  - & Epoxy powder Coated



STRAIGHT / FLANGE CONNECTOR

FOR STRAIGHT LENGTHS AND ACCESSORIES

All dimensions are in mm

Width

(W)

75 to 150

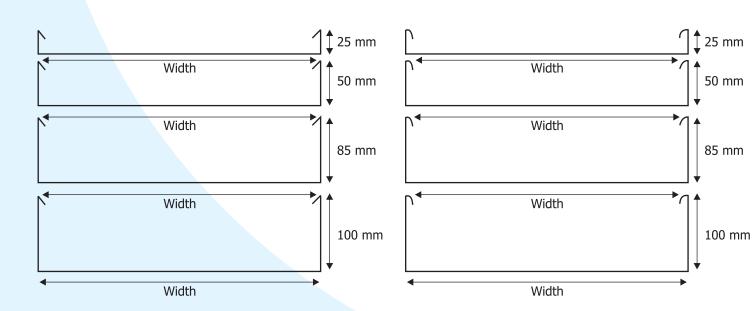
225 to 300

450 to 600

750 to 900

Width (mm)	Thickness (mm)	
75 to 300	1.5	
450 to 900	2.0	

Select an appropriate connector to suit your requirements Bonding Jumpers are used for the Earthing Connectivity.



**Angular Return Flange** 

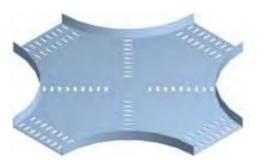
**Curved Return Flange** 

#### ROUND RADIAL ACCESSORIES

### STRAIGHT FLANGE CABLE TRAYS ROUND RADIAL ACCESSORIES



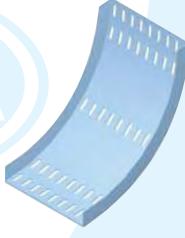
**ELBOW HORIZONTAL** 



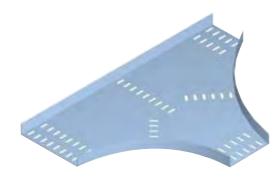
**CROSS HORIZONTAL** 



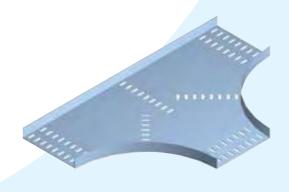
**EXTERNAL RISER** 



**INTERNAL RISER** 



**UN EQUAL TEE HORIZONTAL** 



**TEE HORIZONTAL** 









## CABLE TRAY FITTINGS

# **BONDING JUMPER**

**BLIND END** 

REDUCING CONNECTOR

**ADJUSTABLE VERTICAL CONNECTOR** 

**BOX CONNECTOR** 

**DROP OUT** 

**FISH PLATE** 

**BARRIER STRAIGHT** 

**HOLD DOWN CLAMP** 

#### **BONDING JUMPER**

AREA: 4 mm<sup>2</sup> LENGTH: 112 mm from center to center Bonding Jumper for Cable Tray earthing

connectivity is produced from braided tinned copper with M6 copper lugs on both sides. Roofing bolts M6 x 12, nuts & washers are used for fastening. To be ordered separately.

## BLIND END

Roofing bolt M6 x 12, nuts and washers are used for fastening.

Thickness (mm)
1.5
2.0

#### **REDUCING CONNECTOR**

Width (mm)	Thickness (mm)
50 to 300	1.5
450 to 900	2.0

Roofing bolt M6 x 12, nuts and washers are used for fastening.

#### ADJUSTABLE VERTICAL CONNECTOR

Adjustable Vertical Connectors are produce to standard 2mm thickness Roofing bolt M6 12, nuts and washers are used for fastening.

#### **BOX CONNECTOR**

Width (mm)	Thickness (mm)
50 to 300	1.5
450 to 900	2.0

Roofing bolt M6 x 12, nuts and washers are used for fastening.

#### DROP OUT

	(mm)	(mm)
5	50 to 300	1.5
4	50 to 900	2.0

Roofing bolt M6 x 12, nuts and washers are used for fastening

#### FISH PLATE

Width (mm)	Thickness (mm)
50 to 300	1.5
450 to 900	2.0

Roofing bolt M6 x 12, nuts and washers are used for fastening.

#### **BARRIER STRAIGHT**

All barrier straights are produced to standard length of 3 mtr and 1.5 mm thickness. Roofing bolt M6 x 12, nuts and washers are used for fastening.

#### **HOLD DOWN CLAMP**

Hold Down Clamps are produced to standard thickness of 2mm and hexagonal bolt M8 x 20 nuts and washers are used for fastening.

#### INSIDE RETURN FLANGE CABLE MANAGEMENT SYSTEM



**CABLE TRAY - CT** 

**STRAIGHT CONNECTOR - SC** 

**ADJUSTABLE ELBOW - AB** 

**FLANGE CONNECTOR - FC** 



**REDUCER RIGHT - RR** 



**TEE HORIZONTAL - T** 

**EBLOW HORIZONTAL - B90** 





**REDUCER LEFT - RL** 





**ADJUSTABLE RISER - AR** 





**EXTERNAL RISER - ER** 



**CROSS HORIZONTAL - XH** 



**REDUCER STRAIGHT - RS** 



HP





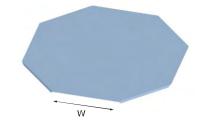


## CABLE TRAY COVERS

#### **STANDARD FINISHES** HDG Hot dip Galvanized to BS EN ISO 1461:1999 (Formerly BS 729) Pre-galvanized to BS EN 10142 & 10143 PG PC Powder Coating to suit clients requirements SS Stainless steel finish to required grades S4 Stainless Steel 304 Stainless Steel 316 S6 AL Aluminum CA Corten A Steel

**COVERS FOR STRAIGHT LENGTHS AND ACCESSORIES** 

Range / Width (W)	Thickness (T)	Side Height (H)		
All dimensions are in mm				
50 to 300	1.0	11		
450 to 600	1.2	11		
750 to 900	1,5	11		



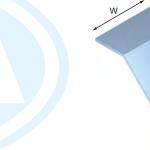
**CABLE TRAY CLOSED COVERS** 

**TEE HORIZONTAL COVER** 

**CABLE TRAY VENTILATED COVERS** 

INTERNAL RISER

**CROSS HORIZONTAL COVER** 



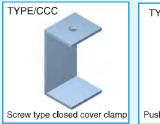
**ELBOW HORIZONTAL COVER** 

Hot Dip Galvanized

& Epoxy powder Coated

HDP Hot Dip Galvanized & Painted

**COVER CLAMPS** 



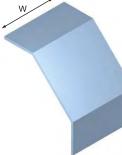
TYPE/CCC-P Push type closed cover clamp



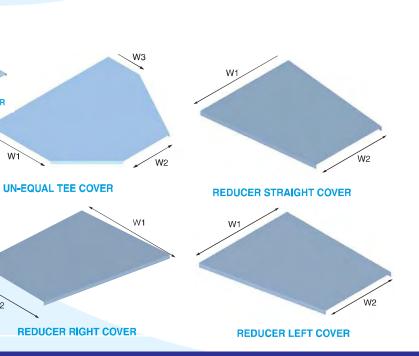


• Ventilated Cover Clamp - VC

• Closed Cover Clamp - CC



**EXTERNAL RISER COVER** 

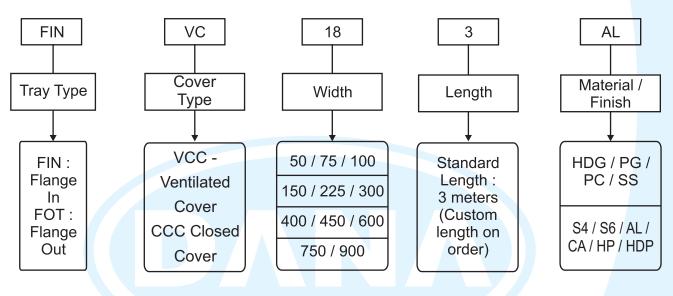


A Wide variety of covers which can be used horizontal and vertical runs to provide protection for cables installed in cable trays against environmental effects, sunlight and dirt. All covers are designed and fabricated to meet indoor and outdoor applications. Straight covers in standard are flat solid Type.

#### Ordering Way:

#### **Tray Cover Ordering way:**

#### Example:



#### Cable Tray Fittings Ordering Way:

