mita | FLEX®

# FRP/GRP Cable Management System

COMPOSITE SOLUTIONS FOR HARSH ENVIRONMENTS

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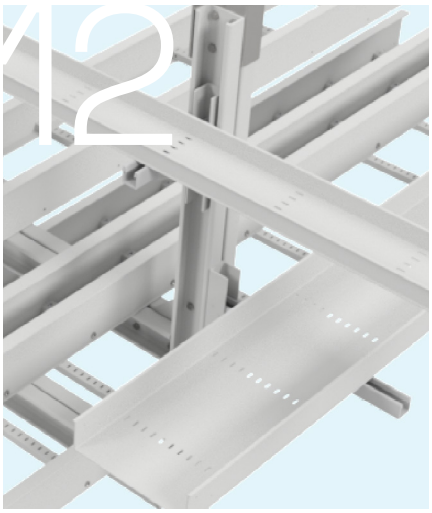
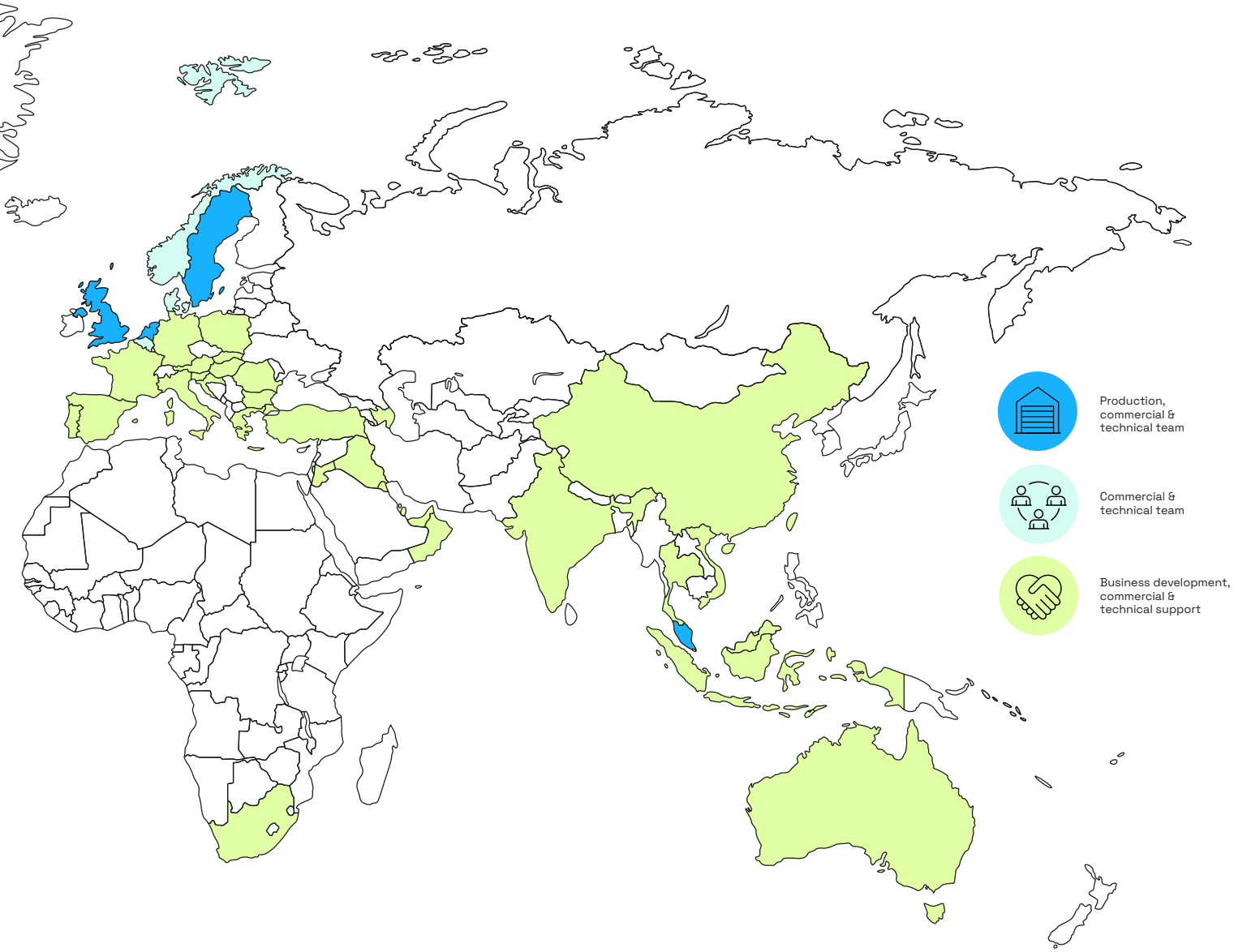


## Wibe Group presents; Mita Flex FRP/GRP Cable Management Solution

Welcome into our new catalogue presenting Mita Flex with Multi-Flex Support System – created for your bespoke configuration and freedom of installation. Discover the power of flexibility for extreme corrosive environments.

wibe group

# Creating clever, uplifting solutions, together with our clients for almost 100 years.

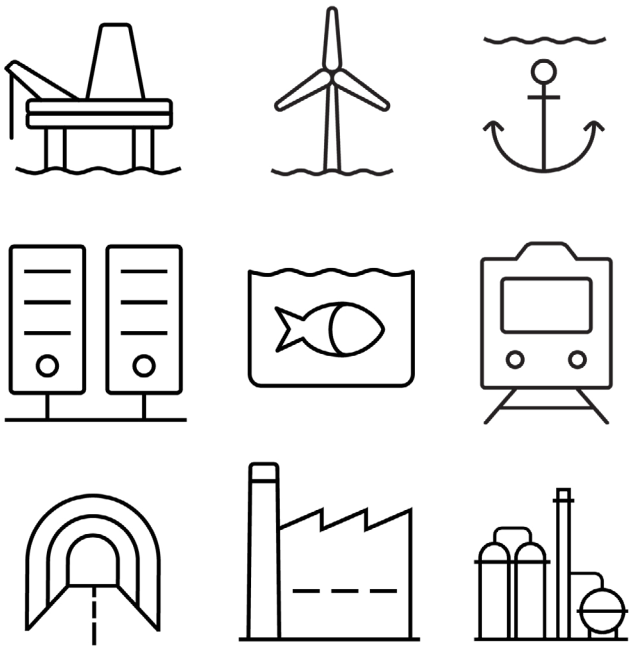



# As Wibe Group, specialist in cable management systems, we offer a complete, innovative and high-quality range of cable ladders, cable trays and mesh trays, for a wide variety of applications, ranging from commercial buildings to extreme corrosive industrial environments.

With our head office in Sweden and multiple in-house locations, where we combine expertise, production and distribution, we offer cable management solutions under our brands Wibe, Stago, Defem and Mita.

By the power of combining our brands, we are now able to offer a comprehensive offer in both FRP/GRP pultruded materials, as well as metal materials in surface treatments ranging from pre-galvanized Zinkpox to hot-dipped galvanized and stainless steel.

# Mita Flex – our range of FRP/GRP cable management solutions for extreme corrosive environments



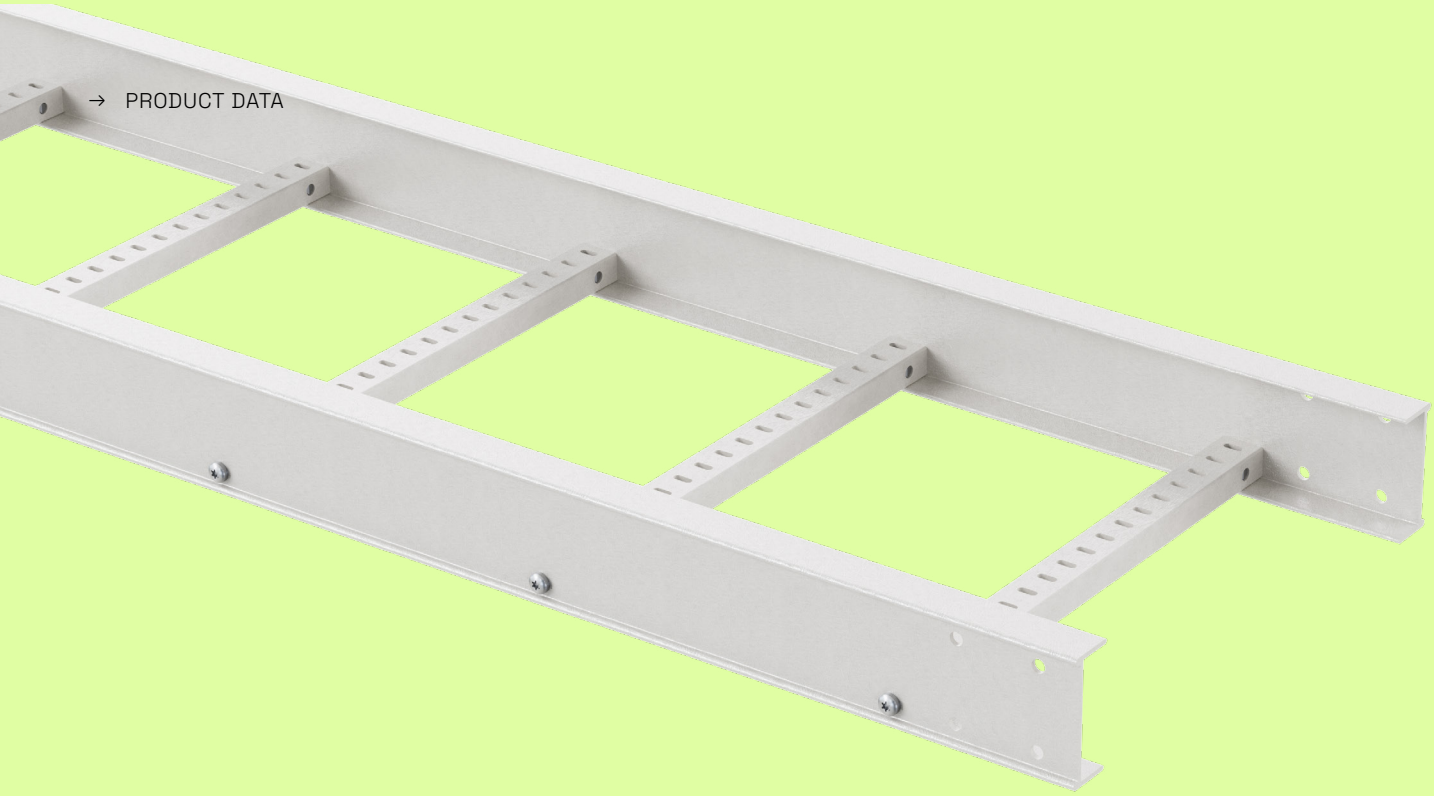
Mita Flex relates to our newest range of FRP/GRP pultruded cable management solutions, including cable ladders, cable trays, all related formpieces and accessories, as well as a new innovative and flexible support system, needed for a professional installation.

As the materials are produced in FRP/GRP, they are perfectly suited to be installed in harsh environments under extreme corrosive circumstances. Examples of such applications are:

- Oil and gas
- Wind energy
- Industry e.g. petrochemical, water treatment
- Infrastructure e.g. tunnels
- Datacenters
- Fish farms
- Marine

# Mita

High performance leader in Glass Fibre Polymer (GRP) ladder and tray system. Top-tier corrosion resistance, anti-static and non-conductive solutions tailored for extreme environments and applications.



# What is FRP/GRP?

FRP/GRP refers to Glass fibre Reinforced Polymer, meaning it is a man-made resin based material which makes it a polymer, reinforced with glass fibre.

Polymer itself is extremely strong. It is a fiber material and in contrary to how it sounds it is very durable. It is resistant to most chemicals, stretching and shrinking, resistant to mildew and abrasion as well. When it is reinforced with glass, it becomes a structural polymer. Further to these, GRP does not conduct heat. It has extra durability to adverse weather conditions and has UV stability which makes it an excellent candidate for outdoor applications, even for Wind substations built in the middle of the sea.

## Long service life

- → UV-resistant
- → Corrosion resistance
- → High chemical resistance
- → Low maintenance

## Fire resistance

- → Low thermal propagation
- → Halogen free
- → Self-extinguishing material
- → Lower toxic fumes

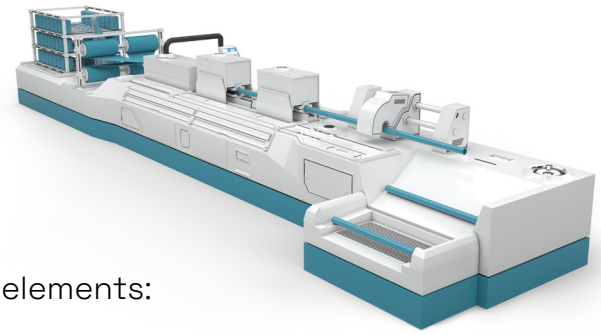
## Insulation

- → Excellent electrical insulator
- → No earth needed
- → Excellent cable protection
- → Low thermal conductivity
- → High dielectric strength

## Materials

- → Light, flexible and robust
- → Light weight & very strong
- → None sparking
- → UV resistance
- → High mechanical resistance
- → High temperature resistance
- → Optimized design to reduce volume and handling

# Mita Flex FRP/GRP is pultruded for optimal strength



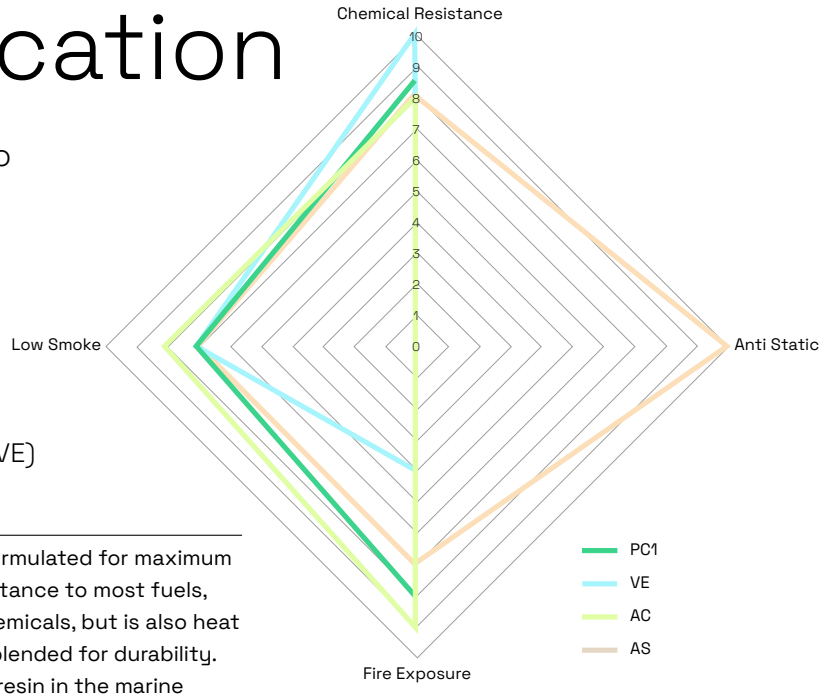
Pultruded Composites consist of four or five main elements:

1) Glass rovings (strands) and mats -approx. 50% by weight
2) Resin - usually Polyester
3) Filler - usually Calcium Carbonate
4) UV Veil and UV additives
5) Fire Retardants as required

Pultruded composites remain largely impervious to corrosion regardless of application.

# Resin types for any kind of application

Mita® Flex offers 4 main resin types to accommodate the requirements of various industrial applications which can be in chemically aggressive, demanding environments.




## Polyester Class 1 (PC1)

Colour RAL7047

Polyester is the most widely used resin. It offers good weathering properties with resistance to ultraviolet light and offers resistance to corrosion. Our polyester resin has been specially formulated to meet certain fire and smoke standards and can be classified as a “class 1” resin in accordance with BS476 P7 and ASTM E84.

## Vinylester (VE)

Colour RAL7047

Vinylester is formulated for maximum corrosion resistance to most fuels, vapors and chemicals, but is also heat resistant and blended for durability. It’s a common resin in the marine industry due to it’s excellent corrosion resistance and ability to withstand water absorption.

## Acrylic (AC)

Colour RAL7047

Acrylic is a formula that meets or exceeds the most stringent low flame, smoke and toxicity standards in the market today. Typical applications such as tunnels, mass transit, en-closed areas or needs where low flame, smoke and toxicity levels are critical.

## Polyester with anti-static properties (AS)

Colour RAL9004

Polyester resin can be given anti-static properties to meet specific project requirements. Anti-static resins contain carbon powder, which increases the conductivity of the material and as a result this material requires grounding.

All FRP/GRP materials are standard available in Polyester Class 1 - article numbers with suffix PC1. To obtain article numbers for materials in other available resins, Polyester Antistatic (AS), Vinyl Ester (VE) and Acrylic (AC), simply replace the “PC1” suffix at the end of the article number with “AS”, “VE” and “AC” respectively.

For example, cable ladder LM100 CL-150-3000;

MLM1142PC1 for material in PC1
MLM1142AS for material in AS
MLM1142PVE for material in VE
MLM1142PAC for material in AC

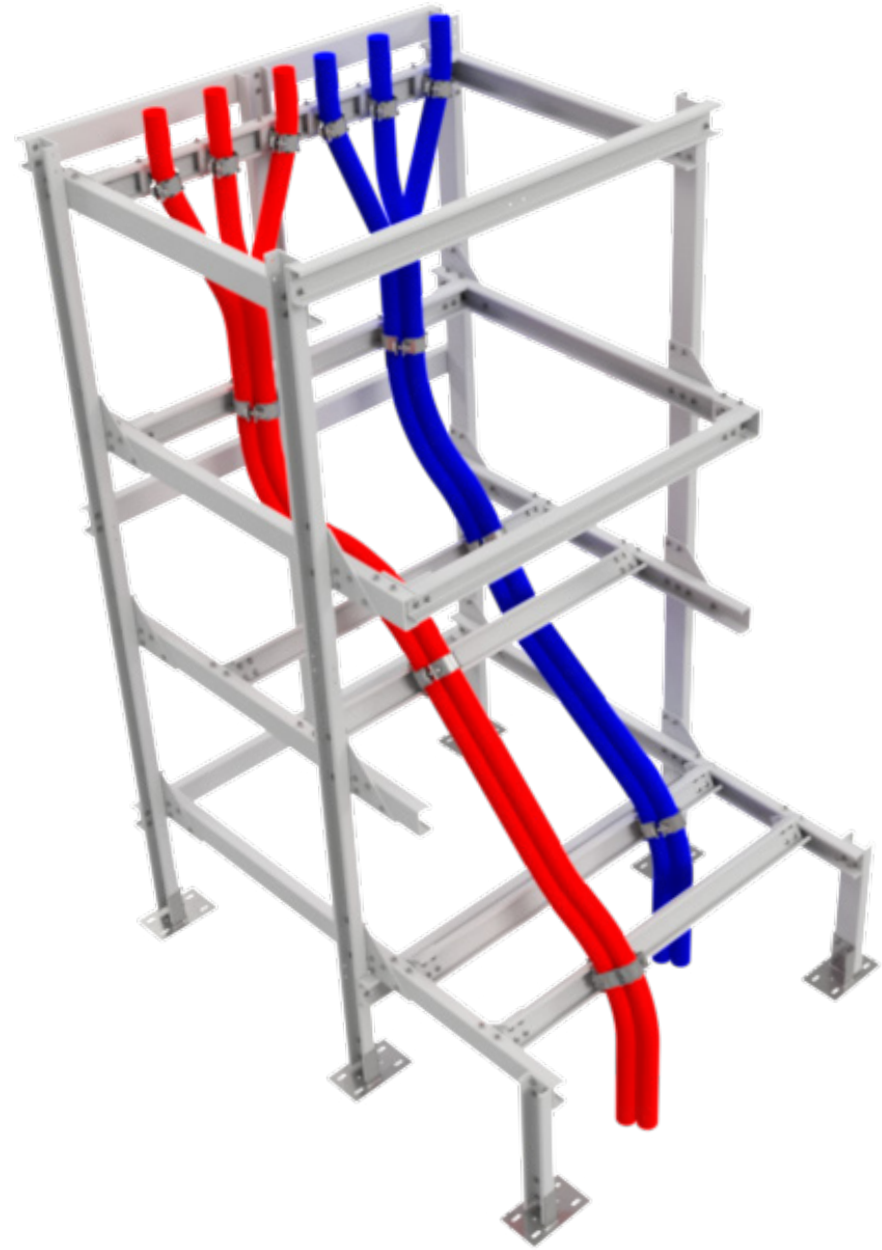
# Introducing Our MultiFlex Support System

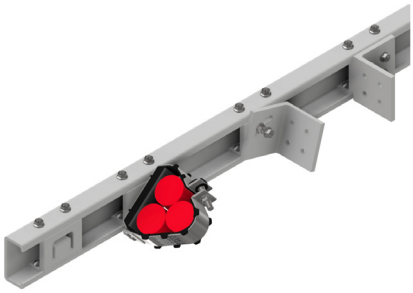
A versatile system of interchangeable parts that provides complete flexibility during installation and enables genuine bespoke configurations. It is designed to support heavy cables and offers adjustment in every direction. The system allows for creating flexible fixation points wherever needed for heavy cables thus securing complete installation adaptability.

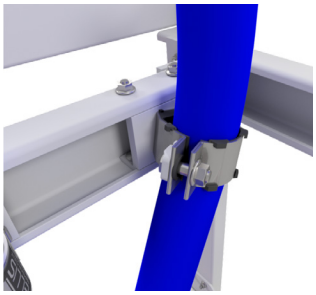
GRP/FRP Support channels are designed to reduce weight while maintaining strength and maximizing loading capacity. The MultiFlex system offers ergonomic benefits while handling and installing ladders and support system equipment. The support channels are available in multiple polyester resin material, each carefully designed to fit specific project requirements. Our innovative support system comes with a wide range of smart and practical features which simplify and improve the installation process.

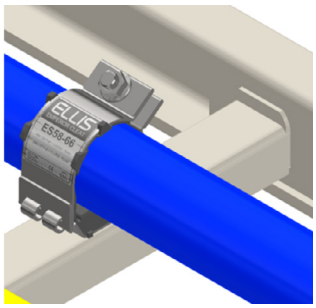
## Profiles Used

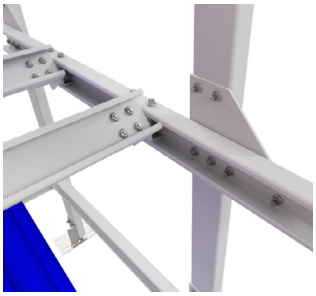
CONTACT US FOR DESIGN & ENGINEERING SERVICES FOR YOUR PROJECT

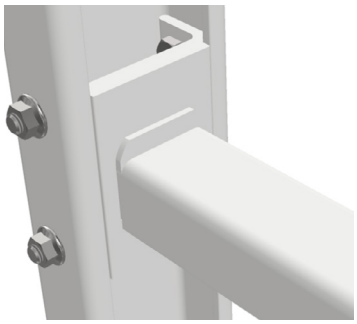


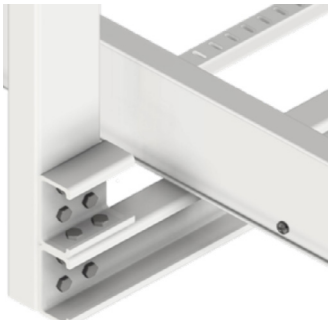


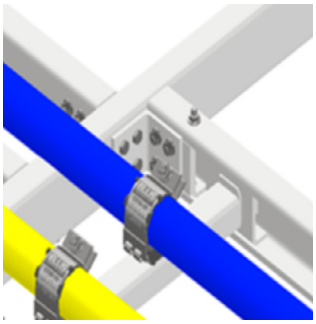




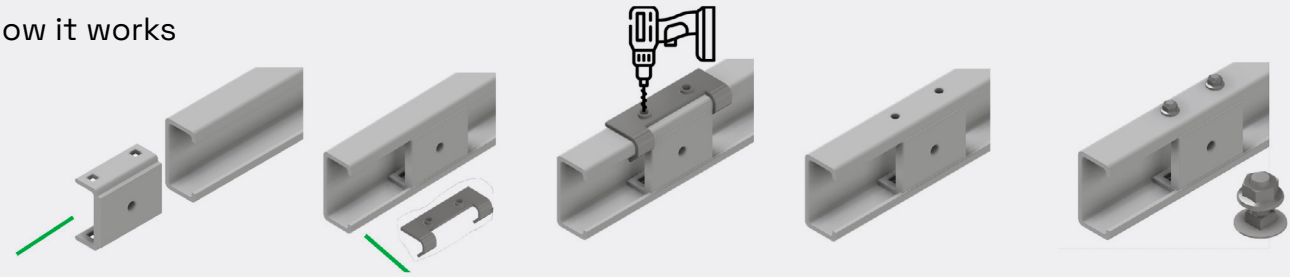









## How it works



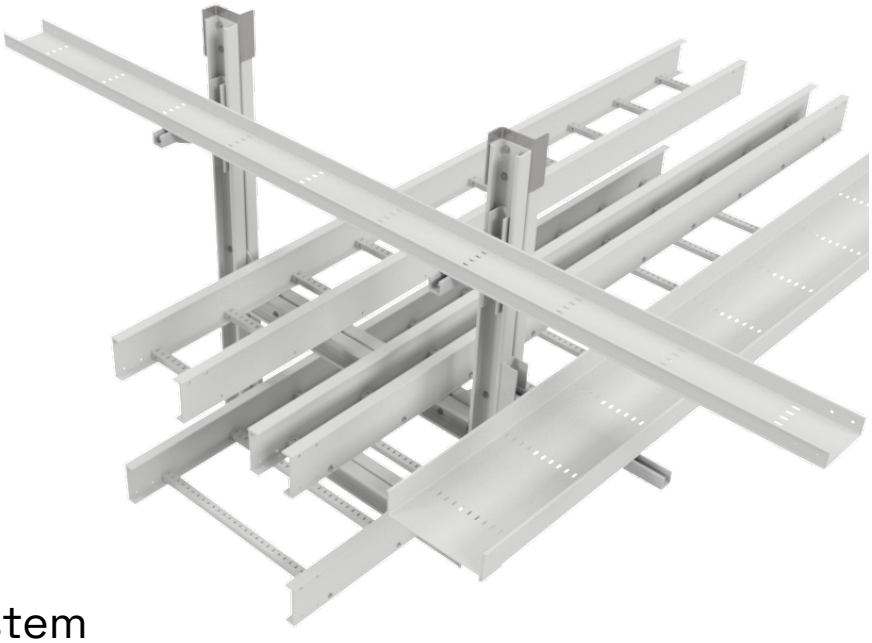
Insert sleeve into channel

Position sleeve, apply drill jig

Drill the required holes

Now holes are all drilled quick and easy

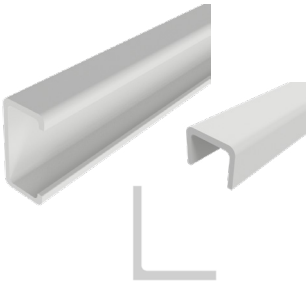
Insert the bolts and tighten the nuts



# MultiFlex Support System

## Channel Support Profile

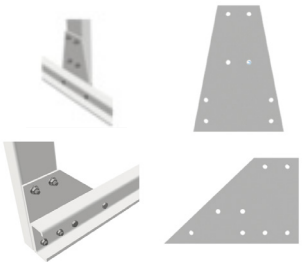
Support Channels for a robust yet flexible framework.



| Product | Ref No | Kg |
|---|---|---|
| Channel Sup profile SC100-50/6 3m PC1 | MS4101PC1 | |
| Channel Sup profile SC100-50/6 6m PC1 | MS4129PC1 | |
| Channel Sup profile SC53-40 3m PC1 | MS4131PC1 | |
| Channel Sup profile SC53-40 6m PC1 | MS4130PC1 | |
| | | |
| Channel sup angel profile 100x100x10/6 | MS4191PC11 | |
| Channel sup angle profile 100x100x10/3 | MS4190PC1 | |

## Gusset Plate

Are used to strengthen central joints or corners that could need more bracing because of increasing loading.



| Product | Ref No | Kg |
|---|---|---|
| Gusset Plate T CH100 6mm | MS4103PC1 | |
| Gusset Plate L CH100 6mm | MS4102PC1 | |

## Spacer Plate B2B channel 100x100x6

| Product | Ref No | Kg |
|---|---|---|
| Spacer Plate B2B channel 100x100x3 | MS2143PC1 | |

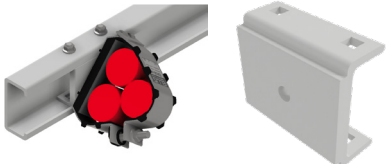
## Channel Sleeve Rung PC1

Rungs from 200 mm - 1000 mm are available on request.

| Product | Ref No | Kg |
|---|---|---|
| Channel Sleeve / Rung Hor PC1 | MS4181PC1 | |
| Channel Sleeve / Rung Vert PC1 | MS4189PC1 | |
| | | |
| Lock Plate LP53 PC1 | MS4107PC1 | |

## Channel Sleeve Cleat

Channel sleeve with M12 hole for Cleat fixations.



| Product | Ref No | Kg |
|---|---|---|
| Channel Sleeve Cleat | MS4182PC1 | |

## Channel Sleeve PC1

Channel sleeve with five M10 hole for Flexi Angle and Angle Brackets.

| Product | Ref No | Kg |
|---|---|---|
| Channel Sleeve PC1 | MS4183PC1 | |

## Angle Bracket PC1

When combined with channel sleeve, allows sliding adjustability with a fixed angle inside the support channels. Fasteners needed M4825SS M10 x 35 and coach headbolts

| Product | Ref No | Kg |
|---|---|---|
| Angle Bracket PC1 | MS4184PC1 | |

## Flexi Angle Bracket PC1

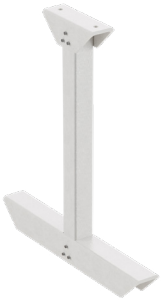
When combined with channel sleeve - angle fitting, allows for sliding and angular adjustability inside the support channels. Fasteners needed M4825SS M10 x 35 and coach headbolts

| Product | Ref No | Kg |
|---|---|---|
| Flexi Angle Bracket PC1 | MS4186PC1 | |

## L-bracket

| Product | Height | Ref No | Kg |
|---|---|---|---|
| L Support Bracket 200PC1 | 0,6m | MS4165PC1 | 3,3 |
| L Support Bracket 300 PC1 | 0,6m | MS4166PC1 | 3,5 |
| L Support Bracket 400 PC1 | 0,6m | MS4167PC1 | 3,7 |
| L Support Bracket 600 PC1 | 0,6m | MS4169PC1 | 4,2 |

## Central support

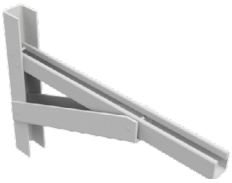


| Product | Height | Ref No | Kg |
|---|---|---|---|
| Central Support 200 PC1 | 0.5m | MS41655PC1 | 1.2 |
| Central Support 200 PC1 | 1.0m | MS416510PC1 | 1.8 |
| Central Support 300 PC1 | 0.5m | MS41605PC1 | 1.3 |
| Central Support 300 PC1 | 1.0m | MS416010PC1 | 1.9 |
| Central Support 400 PC1 | 0.5m | MS41615PC1 | 1.4 |
| Central Support 400 PC1 | 1.0m | MS416110PC1 | 2 |
| Central Support 600 PC1 | 0.5m | MS41635PC1 | 1.8 |
| Central Support 600 PC1 | 1.0m | MS416310PC1 | 2.3 |

## LW Cantilever Arm

| Product | Ref No | Kg |
|---|---|---|
| LW Cantilever Arm 50 PC1 | MS4197PC1 | 0,5 |
| LW Cantilever Arm 100 PC1 | MS4198PC1 | 0,5 |
| LW Cantilever Arm 150 PC1 | MS4199PC1 | 0,6 |
| LW Cantilever Arm 200 PC1 | MS4200PC1 | 0,6 |
| LW Cantilever Arm 300 PC1 | MS4201PC1 | 0,8 |
| LW Cantilever Arm 400 PC1 | MS4202PC1 | 0,9 |

## HD Cantilever Arm



| Product | Ref No | Kg |
|---|---|---|
| HD Cantilever Arm 150 PC1 | MCS4120PC1 | 1 |
| HD Cantilever Arm 200 PC1 | MCS4121PC1 | 1,2 |
| HD Cantilever Arm 300 PC1 | MCS4122PC1 | 1,6 |
| HD Cantilever Arm 400 PC1 | MCS4125PC1 | |
| HD Cantilever Arm 450 PC1 | MCS4123PC1 | 1,9 |
| HD Cantilever Arm 600 PC1 | MCS4124PC1 | 2,2 |

## Channel Spring Nut M10 PC1

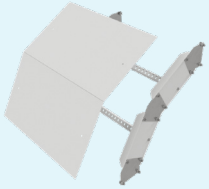
| Product | Ref No | Kg |
|---|---|---|
| Channel Spring Nut M10 PC1 | M4829PC1 | |

# Cable Ladders overview

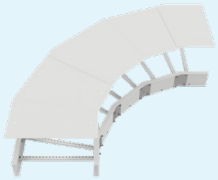
Mita Flex offers a complete range of composite cable ladders, including fittings and accessories, available in three series, LM100, LMP150 and LH150.

The FRP/GRP cable ladders are light, yet strong and corrosion resistant. They are designed to deliver high performance, maximum load capacity with reduced weight and improved handling, allowing easy and quick installation. The cable ladders are available in a variety of resin types.

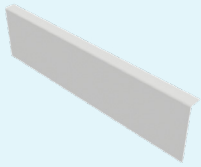
Straight Length



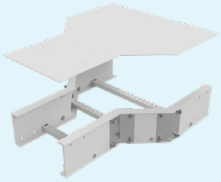
Flexi Riser



90° Flat Elbow

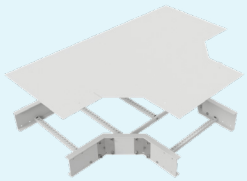


End Plate

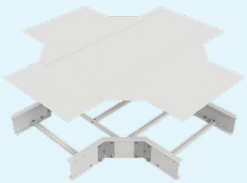


Reducer

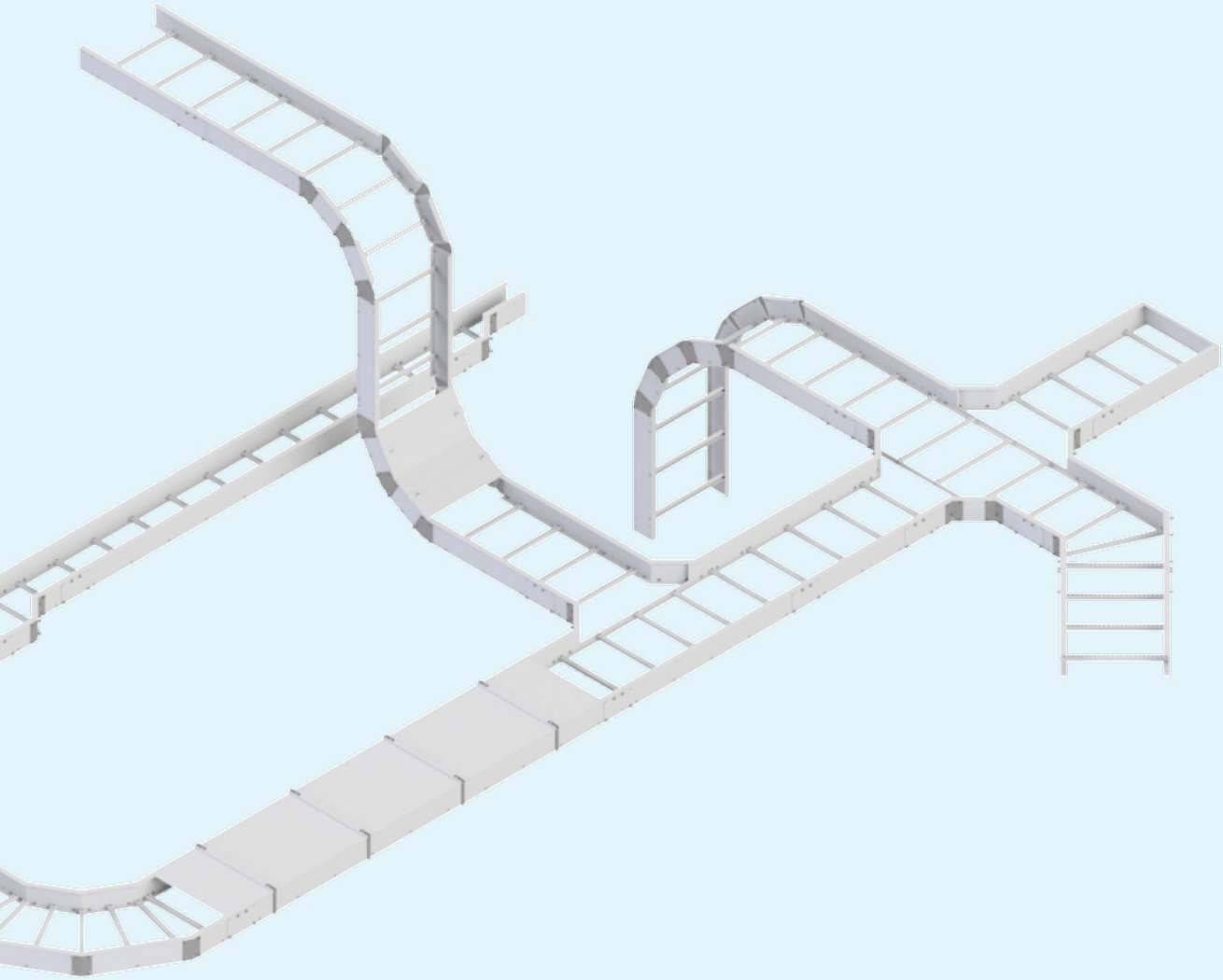
45° Flat Elbow



Tee



Cross



| Cable Ladder Type | Resin Selection | Rail Height (mm) | Working Depth | Rung Fixation | SWL 3m(kg/m) | Length (m) | Nema FG1 / UL568 |
|---|---|---|---|---|---|---|---|
| LM100 | PC1 – Polyester Class 1<br>AS – Polyester Antistatic<br>VE – Vinyl ester<br>AC – Acrylic | 100 | 70 | √ | 200 | 3 * | 12C |
| LMP150 | PC1 – Polyester Class 1<br>AS – Polyester Antistatic<br>VE – Vinyl ester<br>AC – Acrylic | 150 | 120 | √ | 250 | 3/6 * | 16B |
| LH150 | PC1 – Polyester Class 1<br>AS – Polyester Antistatic<br>VE – Vinyl ester<br>AC – Acrylic | 150 | 120 | √ | 350 | 3/6 * | 20C |

SWL according to IEC 61537, Test Type 3 with reduced end span 3/4 | For NEMA F61 Load rating. Technical Department to be contacted.

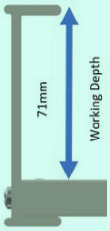
* Alternative lengths available on request

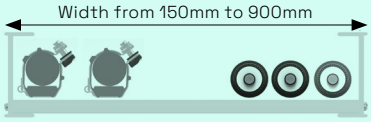
Composite Cable Ladder range for supporting cables.

- → Tested to IEC & NEMA Standards for SWL
- → Ladder heights 100mm & 150mm
- → Length 3000mm & 6000mm
- → Material: FRP Polyester Class 1 (Other Resins are available)

## Cable Ladder
# LM100

Cable ladder with system height 100mm, used for medium duty applications.



| Product | Ref No | Kg |
|---|---|---|
| CL-150-3000 | MLM1142PC1 | 9,2 |
| CL-200-3000 | MLM1148PC1 | 9,5 |
| CL-300-3000 | MLM1143PC1 | 10 |
| CL-400-3000 | MLM1155PC1 | 10,6 |
| CL-450-3000 | MLM1144PC1 | 10,9 |
| CL-600-3000 | MLM1145PC1 | 11,7 |
| CL-750-3000 | MLM1146PC1 | 12,5 |
| CL-900-3000 | MLM1147PC1 | 13,3 |
| | | |
| CL-150-6000 | MLM1149PC1 | 18,4 |
| CL-200-6000 | MLM1156PC1 | 19 |
| CL-300-6000 | MLM1150PC1 | 20,1 |
| CL-400-6000 | MLM1157PC1 | 21,2 |
| CL-450-6000 | MLM1151PC1 | 21,7 |
| CL-600-6000 | MLM1152PC1 | 23,4 |
| CL-750-6000 | MLM1153PC1 | 25 |
| CL-900-6000 | MLM1154PC1 | 26,6 |

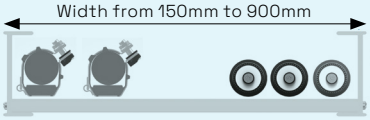
## Cable Ladder
# LMP150

Cable ladder with system height 150mm, used for multi-purpose applications.

| Product | Ref No | Kg |
|---|---|---|
| CL-150-3000 | MMP1136PC1 | 13,8 |
| CL-300-3000 | MMP1137PC1 | 14,7 |
| CL-450-3000 | MMP1138PC1 | 15,7 |
| CL-600-3000 | MMP1139PC1 | 15,6 |
| CL-750-3000 | MMP1140PC1 | 17,5 |
| CL-900-3000 | MMP1141PC1 | 18,4 |
| | | |
| CL-150-6000 | MMP1695PC1 | 27,6 |
| CL-300-6000 | MMP1696PC1 | 29,6 |
| CL-450-6000 | MMP1697PC1 | 31,4 |
| CL-600-6000 | MMP1698PC1 | 33,3 |
| CL-750-6000 | MMP1699PC1 | 35,1 |
| CL-900-6000 | MMP1700PC1 | 36,9 |

## Cable Ladder
# LH150

Cable ladder with system height 150mm, used for heavy duty applications.



| Product | Ref No | Kg |
|---|---|---|
| CL-150-3000 | MLH1130PC1 | 18,5 |
| CL-300-3000 | MLH1131PC1 | 19,2 |
| CL-450-3000 | MLH1132PC1 | 20,1 |
| CL-600-3000 | MLH1133PC1 | 21,0 |
| CL-750-3000 | MLH1134PC1 | 22,0 |
| CL-900-3000 | MLH1135PC1 | 22,9 |
| | | |
| CL-150-6000 | MLH11306PC1 | 37,0 |
| CL-300-6000 | MLH11316PC1 | 38,4 |
| CL-450-6000 | MLH11326PC1 | 40,3 |
| CL-600-6000 | MLH11336PC1 | 42,1 |
| CL-750-6000 | MLH11346PC1 | 44,0 |
| CL-900-6000 | MLH11356PC1 | 45,8 |

## CL Splice Connector

Fasteners not included. For splice plates in SS use M10x20 mm bolt set.For splice plates in GRP use M10x25 mm bolt set.

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL splice plates PC1 | MLM2326PC1 | 0,2 | MLH2186PC1 | 2,5 | MLH2186PC1 | 2,5 |
| CL splice plates SS | MLM2328SS | 0,2 | MLH2327SS | | MLH2327SS | |

## CL Horizontal Angle Bracket 90°

Fasteners not included. For splice plates in SS use M10x20 mm bolt set.For splice plates in GRP use M10x25 mm bolt set.

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL hor angle bracket 90 PC1 | MLM2253PC1 | | MLH2151PC1 | | MLH2151PC1 | |
| CL hor angle bracket 90 SS | MLM2222SS | | MLH2101SS | | MLH2101SS | |

## CL Vertical Hinge

Fasteners not included. For splice plates in SS use M10x20 mm bolt set.For splice plates in GRP use M10x25 mm bolt set.

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL vertical hinge PC1 | MLM2254PC1 | | MLH2152PC1 | | MLH2152PC1 | |
| CL vertical hinge adj SS | MLM2223SS | | MLH2224SS | | MLH2224SS | |

## CL Vertical Angle Bracket

Fasteners not included. For splice plates in SS use M10x20 mm bolt set.For splice plates in GRP use M10x25 mm bolt set.

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| Splice angle vert. 22.5o SS | MLM2280SS | | MLH2258SS | | MLH2258SS | |
| Splice angle vert. 30o SS | MLM2281SS | | MLH2259SS | | MLH2259SS | |
| Splice angle vert. 45o SS | MLM2282SS | | MLH2260SS | | MLH2260SS | |

## CL/CT Fixing Clamp

Supplied without bolts.
Use M10 for CL/CT Flange Fixing Clamp.
For Fixing Clamp use M10 for cable ladder and M6 for cable trays.

| Product | Ref No | Kg |
|---|---|---|
| CL/CT Flange Fixing clamp SS | MCT2125SS | |
| | | |
| CL/CT Fixing clamp SS | MCT2123SS | |
| CL/CT Fixing clamp PC1 | MCT2124PC1 | |

## CL Cover

Material GRP, Length 3000mm



| Product | Ref No | Kg |
|---|---|---|
| CL Cover-150 | MLC1658PC1 | 2,9 |
| CL Cover-200 | MLC1158PC1 | |
| CL Cover-300 | MLC1659PC1 | 5,5 |
| CL Cover-400 | MLC1159PC1 | |
| CL Cover-450 | MLC1660PC1 | 8 |
| CL Cover-600 | MLC1661PC1 | 10,6 |
| CL Cover-750 | MLC1662PC1 | 13,2 |
| CL Cover-900 | MLC1663PC1 | 15,8 |

## CL Cover Fixing Clamp

Fastners included.

| Product | Ref No | Kg |
|---|---|---|
| CL Cover Fixing clamp PC1 | MCC2331PC1 | |
| CL cover fixing clamp SS | MCC2330SS | |

## CL Cover Clamp HD

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL cover clamp-150 | MCL3240PC1 | 0,3 | MCL3246PC1 | | MCL3246PC1 | |
| CL cover clamp-200 | MCL3241PC1 | 0,3 | MCL3247PC1 | | MCL3247PC1 | |
| CL cover clamp-300 | MCL3242PC1 | 0,3 | MCL3248PC1 | | MCL3248PC1 | |
| CL cover clamp-400 | MCL3243PC1 | 0,4 | MCL3249PC1 | | MCL3249PC1 | |
| CL cover clamp-450 | MCL3256PC1 | | MCL3298PC1 | | MCL3298PC1 | |
| CL cover clamp-600 | MCL2373PC1 | 0,5 | MCL2376PC1 | | MCL2376PC1 | |
| CL cover clamp-750 | MCL2374PC1 | 0,6 | MCL2377PC1 | | MCL2377PC1 | |
| CL cover clamp-900 | MCL2375PC1 | 0,7 | MCL2378PC1 | | MCL2378PC1 | |

## CL Divider



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Divider | MLM2272PC1 | 1,7 | MLH2170PC1 | 2,5 | MLH2170PC1 | 2,5 |

## CL Flat Elbow 45° R3

Prefabricated standard flat elbow, appx radius 400mm
Ladder Height 100 & 150
Material: FRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flat Elbow-150 | MLF1439PC1 | 2,3 | MLF1307PC1 | 3,3 | MLF1174PC1 | 4,1 |
| CL Flat Elbow-200 | MLF1152PC1 | 2,4 | | | | |
| CL Flat Elbow-300 | MLF1440PC1 | 2,6 | MLF1308PC1 | 3,7 | MLF1175PC1 | 4,7 |
| CL Flat Elbow-400 | MLF1153PC1 | 2,8 | | | | |
| CL Flat Elbow-450 | MLF1441PC1 | 3,3 | MLF1309PC1 | 4,5 | MLF1176PC1 | 5,5 |
| CL Flat Elbow-600 | MLF1442PC1 | 3,7 | MLF1310PC1 | 5,1 | MLF1177PC1 | 6,2 |
| CL Flat Elbow-750 | MLF1443PC1 | 4,2 | MLF1311PC1 | 5,6 | MLF1178PC1 | 6,8 |
| CL Flat Elbow-900 | MLF1444PC1 | 4,6 | MLF1312PC1 | 6,1 | MLF1179PC1 | 7,4 |

## CL Flat Elbow 90° R3

Prefabricated standard flat elbow, Available in Radius R300, R600 & R900
Ladder Height 100 & 150
Material: GRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flat Elbow-150 | MLF1425PC1 | 3,8 | MLF1293PC1 | 5,4 | MLF1160PC1 | 6,8 |
| CL Flat Elbow-200 | MLF1150PC1 | 4 | | | | |
| CL Flat Elbow-300 | MLF1426PC1 | 4,4 | MLF1294PC1 | 6,2 | MLF1161PC1 | 7,7 |
| CL Flat Elbow-400 | MLF1151PC1 | 4,8 | | | | |
| CL Flat Elbow-450 | MLF1427PC1 | 5,6 | MLF1295PC1 | 7,7 | MLF1162PC1 | 9,4 |
| CL Flat Elbow-600 | MLF1428PC1 | 6,4 | MLF1296PC1 | 8,7 | MLF1163PC1 | 10,6 |
| CL Flat Elbow-750 | MLF1429PC1 | 7,1 | MLF1297PC1 | 9,7 | MLF1164PC1 | 11,7 |
| CL Flat Elbow-900 | MLF1430PC1 | 7,8 | MLF1298PC1 | 10,7 | MLF1165PC1 | 12,2 |

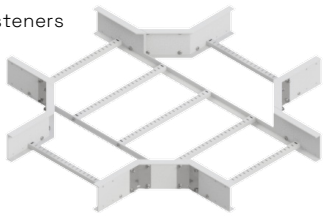
## CL Equal Tee R3

Prefabricated standard horizontal tee, Standard Radius R300, R600 & R900 - Other Radius available
Ladder Height 100 & 150
Material: FRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Equal Tee-150 | MLF1453PC1 | 5,6 | MLF1321PC1 | 7,9 | MLF1188PC1 | 10,0 |
| CL Equal Tee-200 | MLF1154PC1 | 5,8 | | | | |
| CL Equal Tee-300 | MLF1454PC1 | 6,2 | MLF1322PC1 | 8,6 | MLF1189PC1 | 11,0 |
| CL Equal Tee-400 | MLF1155PC1 | 6,7 | | | | |
| CL Equal Tee-450 | MLF1455PC1 | 7,2 | MLF1323PC1 | 9,9 | MLF1190PC1 | 12,3 |
| CL Equal Tee-600 | MLF1456PC1 | 8 | MLF1324PC1 | 10,8 | MLF1191PC1 | 13,4 |
| CL Equal Tee-750 | MLF1457PC1 | 9,3 | MLF1325PC1 | 12,3 | MLF1192PC1 | 15,0 |
| CL Equal Tee-900 | MLF1458PC1 | 10,2 | MLF1326PC1 | 13,3 | MLF1193PC1 | 16,2 |

## CL Cross Piece R3

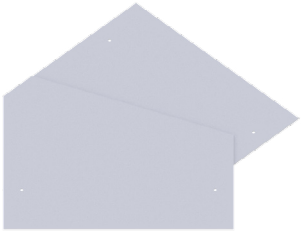
Prefabricated standard horizontalcross, Standard Radius R300, R600 & R900 - Other Radius available
Ladder Height 100 & 150
Material: FRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Cross Piece-150 | MLF1467PC1 | 7,6 | MLF1335PC1 | 10,9 | MLF1202PC1 | 13,3 |
| CL Cross Piece-200 | MLF1473PC1 | 7,9 | | | | |
| CL Cross Piece-300 | MLF1468PC1 | 8,3 | MLF1336PC1 | 11,7 | MLF1203PC1 | 14,3 |
| CL Cross Piece-400 | MLF1340PC1 | 8,8 | | | MLF1204PC1 | 15,4 |
| CL Cross Piece-450 | MLF1469PC1 | 9,4 | MLF1337PC1 | 12,7 | | |
| CL Cross Piece-600 | MLF1470PC1 | 10,2 | MLF1338PC1 | 13,5 | MLF1205PC1 | 16,3 |
| CL Cross Piece-750 | MLF1471PC1 | 11,5 | MLF1339PC1 | 14,9 | MLF1206PC1 | 17,6 |
| CL Cross Piece-900 | MLF1472PC1 | 12,3 | MLF1340PC1 | 15,8 | MLF1207PC1 | 18,7 |

## CL Flat Elbow Cover 45° R3

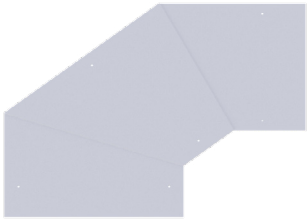
Prefabricated Flat Cover using one of our standard cover clamps.



| Product | Ref No | Kg |
|---|---|---|
| CL FE Cover-150 | MLC1671PC1 | 0,9 |
| CL FE Cover-200 | MLM2229PC1 | |
| CL FE Cover-300 | MLC1672PC1 | 1,3 |
| CL FE Cover-400 | MLM2230PC1 | |
| CL FE Cover-450 | MLC1673PC1 | 2,1 |
| CL FE Cover-600 | MLC1674PC1 | 3,0 |
| CL FE Cover-750 | MLC1675PC1 | 4,0 |
| CL FE Cover-900 | MLC1676PC1 | 5,1 |

## CL Flat Elbow Cover 90° R3

Prefabricated Flat Cover using one of our standard cover clamps. Available: R300, R600 & R900



| Product | Ref No | Kg |
|---|---|---|
| CL FE Cover-150 | MLC1664PC1 | 1,1 |
| CL FE Cover-200 | MLM2231PC1 | |
| CL FE Cover-300 | MLC1665PC1 | 2,3 |
| CL FE Cover-400 | MLM2232PC1 | |
| CL FE Cover-450 | MLC1666PC1 | 3,6 |
| CL FE Cover-600 | MLC1667PC1 | 5,2 |
| CL FE Cover-750 | MLC1668PC1 | 7,1 |
| CL FE Cover-900 | MLC1669PC1 | 9,0 |

Mita Flex Cable Ladders

## CL Equal Tee Cover R3

Prefabricated Flat Cover can be secured with SS316L Self Tapping screws or by using one of our standard cover clamps. Available: R300, R600 & R900



| Product | Ref No | Kg |
|---|---|---|
| Equal Tee Cover 150 | MLC1677PC1 | 1,8 |
| Equal Tee Cover 200 | MLM2233PC1 | 2,3 |
| Equal Tee Cover 300 | MLC1678PC1 | 3,5 |
| Equal Tee Cover 400 | MLM2234PC1 | 4,5 |
| Equal Tee Cover 450 | MLC1679PC1 | 5,2 |
| Equal Tee Cover 600 | MLC1680PC1 | 7,4 |
| Equal Tee Cover 750 | MLC1681PC1 | 9,8 |
| Equal Tee Cover 900 | MLC1682PC1 | 12,5 |

## CL Equal Cross Cover R3

Prefabricated Flat Cover can be secured with SS316L Self Tapping screws or by using one of our standard cover clamps. Available: R300, R600 & R900



| Product | Ref No | Kg |
|---|---|---|
| CL Equal Cross Cover 150 | MLC1683PC1 | 2,6 |
| CL Equal Cross Cover 200 | MLM2235PC1 | 3,3 |
| CL Equal Cross Cover 300 | MLC1684PC1 | 4,7 |
| CL Equal Cross Cover 400 | MLM2236PC1 | 6,1 |
| CL Equal Cross Cover 450 | MLC1685PC1 | 6,8 |
| CL Equal Cross Cover 600 | MLC1686PC1 | 9,6 |
| CL Equal Cross Cover 750 | MLC1687PC1 | 12,4 |
| CL Equal Cross Cover 900 | MLC1688PC1 | 15,5 |

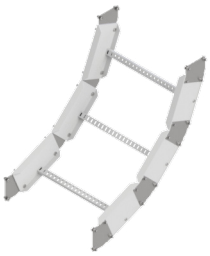
## CL Flexi Riser Internal 90° R4

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1488PC1 | 2,1 | MLF1356PC1 | 3,2 | MLF1223PC1 | 3,4 |
| CL Flexi Riser-200 | MLF1156PC1 | 2,1 | | | | |
| CL Flexi Riser-300 | MLF1489PC1 | 2,2 | MLF1357PC1 | 3,3 | MLF1224PC1 | 3,5 |
| CL Flexi Riser-400 | MLF1157PC1 | 2,2 | | | | |
| CL Flexi Riser-450 | MLF1490PC1 | 2,3 | MLF1358PC1 | 3,4 | MLF1225PC1 | 3,6 |
| CL Flexi Riser-600 | MLF1491PC1 | 2,3 | MLF1359PC1 | 3,5 | MLF1226PC1 | 3,7 |
| CL Flexi Riser-750 | MLF1492PC1 | 2,4 | MLF1360PC1 | 3,5 | MLF1227PC1 | 3,8 |
| CL Flexi Riser-900 | MLF1493PC1 | 2,5 | MLF1361PC1 | 3,6 | MLF1228PC1 | 3,8 |

## CL Flexi Riser Internal 90° R6

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1495PC1 | 3,3 | MLF1363PC1 | 5,4 | MLF1230PC1 | 5,7 |
| CL Flexi Riser-200 | MLF1158PC1 | 3,6 | | | | |
| CL Flexi Riser-300 | MLF1496PC1 | 3,5 | MLF1364PC1 | 5,5 | MLF1231PC1 | 5,9 |
| CL Flexi Riser-400 | MLF1169PC1 | 6,6 | | | | |
| CL Flexi Riser-450 | MLF1497PC1 | 3,6 | MLF1365PC1 | 5,8 | MLF1232PC1 | 6,04 |
| CL Flexi Riser-600 | MLF1498PC1 | 3,8 | MLF1366PC1 | 5,9 | MLF1233PC1 | 6,2 |
| CL Flexi Riser-750 | MLF1499PC1 | 4,1 | MLF1367PC1 | 6 | MLF1234PC1 | 6,3 |
| CL Flexi Riser-900 | MLF1500PC1 | 4,2 | MLF1368PC1 | 6,2 | MLF1235PC1 | 6,5 |

## CL Flexi Riser Internal 90° R8



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1502PC1 | 4,6 | MLF1370PC1 | 7,8 | MLF1237PC1 | 8,1 |
| CL Flexi Riser-200 | MLF1170PC1 | 7,5 | | | | |
| CL Flexi Riser-300 | MLF1503PC1 | 4,9 | MLF1371PC1 | 8 | MLF1238PC1 | 8,3 |
| CL Flexi Riser-400 | MLF1171PC1 | 9,1 | | | | |
| CL Flexi Riser-450 | MLF1504PC1 | 5,2 | MLF1372PC1 | 8,3 | MLF1239PC1 | 8,5 |
| CL Flexi Riser-600 | MLF1505PC1 | 5,6 | MLF1373PC1 | 8,5 | MLF1240PC1 | 8,8 |
| CL Flexi Riser-750 | MLF1506PC1 | 5,9 | MLF1374PC1 | 8,8 | MLF1241PC1 | 9 |
| CL Flexi Riser-900 | MLF1507PC1 | 6 | MLF1375PC1 | 9 | MLF1242PC1 | 9,3 |

## CL Riser Cover Internal 90° R4



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1793PC1 | | MLR1793PC1 | | MLR1793PC1 | |
| CL FR Cover-200 | MLR1792PC1 | | | | | |
| CL FR Cover-300 | MLR1791PC1 | | MLR1791PC1 | | MLR1791PC1 | |
| CL FR Cover-400 | MLR1790PC1 | | | | | |
| CL FR Cover-450 | MLR1789PC1 | | MLR1789PC1 | | MLR1789PC1 | |
| CL FR Cover-600 | MLR1788PC1 | | MLR1788PC1 | | MLR1788PC1 | |
| CL FR Cover-750 | MLR1787PC1 | | MLR1787PC1 | | MLR1787PC1 | |
| CL FR Cover-900 | MLR1786PC1 | | MLR1786PC1 | | MLR1786PC1 | |

## CL Riser Cover Internal 90° R6



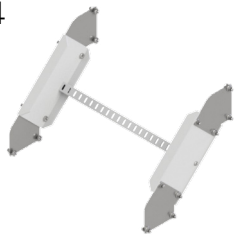
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1801PC1 | | MLR1801PC1 | | MLR1801PC1 | |
| CL FR Cover-200 | MLR1800PC1 | | | | | |
| CL FR Cover-300 | MLR1799PC1 | | MLR1799PC1 | | MLR1799PC1 | |
| CL FR Cover-400 | MLR1798PC1 | | | | | |
| CL FR Cover-450 | MLR1797PC1 | | MLR1797PC1 | | MLR1797PC1 | |
| CL FR Cover-600 | MLR1796PC1 | | MLR1796PC1 | | MLR1796PC1 | |
| CL FR Cover-750 | MLR1795PC1 | | MLR1795PC1 | | MLR1795PC1 | |
| CL FR Cover-900 | MLR1794PC1 | | MLR1794PC1 | | MLR1794PC1 | |

## CL Riser Cover Internal 90° R8



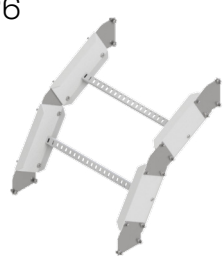
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1809PC1 | | MLR1809PC1 | | MLR1809PC1 | |
| CL FR Cover-200 | MLR1808PC1 | | | | | |
| CL FR Cover-300 | MLR1807PC1 | | MLR1807PC1 | | MLR1807PC1 | |
| CL FR Cover-400 | MLR1806PC1 | | | | | |
| CL FR Cover-450 | MLR1805PC1 | | MLR1805PC1 | | MLR1805PC1 | |
| CL FR Cover-600 | MLR1804PC1 | | MLR1804PC1 | | MLR1804PC1 | |
| CL FR Cover-750 | MLR1803PC1 | | MLR1803PC1 | | MLR1803PC1 | |
| CL FR Cover-900 | MLR1802PC1 | | MLR1802PC1 | | MLR1802PC1 | |

## CL Flexi Riser External 90° R4



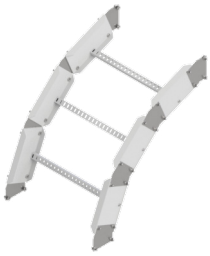
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1509PC1 | 1,9 | MLF1377PC1 | 2,9 | MLF1244PC1 | 3,1 |
| CL Flexi Riser-200 | MLF1172PC1 | 10,1 | | | | |
| CL Flexi Riser-300 | MLF1510PC1 | 2 | MLF1378PC1 | 2,9 | MLF1245PC1 | 3,2 |
| CL Flexi Riser-400 | MLF1173PC1 | 11,1 | | | | |
| CL Flexi Riser-450 | MLF1511PC1 | 2,1 | MLF1379PC1 | 3 | MLF1246PC1 | 3,3 |
| CL Flexi Riser-600 | MLF1512PC1 | 2,2 | MLF1380PC1 | 3,1 | MLF1247PC1 | 3,4 |
| CL Flexi Riser-750 | MLF1513PC1 | 2,3 | MLF1381PC1 | 3,2 | MLF1248PC1 | 3,5 |
| CL Flexi Riser-900 | MLF1514PC1 | 2,4 | MLF1382PC1 | 3,3 | MLF1249PC1 | 3,6 |

## CL Flexi Riser External 90° R6



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1516PC1 | 3,3 | MLF1384PC1 | 5 | MLF1251PC1 | 5,4 |
| CL Flexi Riser-200 | MLF1182PC1 | | | | | |
| CL Flexi Riser-300 | MLF1517PC1 | 3,5 | MLF1385PC1 | 5,2 | MLF1252PC1 | 5,6 |
| CL Flexi Riser-400 | MLF1183PC1 | | | | | |
| CL Flexi Riser-450 | MLF1518PC1 | 3,6 | MLF1386PC1 | 5,2 | MLF1253PC1 | 5,7 |
| CL Flexi Riser-600 | MLF1519PC1 | 3,8 | MLF1387PC1 | 5,5 | MLF1254PC1 | 6 |
| CL Flexi Riser-750 | MLF1520PC1 | 4,1 | MLF1388PC1 | 5,7 | MLF1255PC1 | 6,2 |
| CL Flexi Riser-900 | MLF1521PC1 | 4,2 | MLF1389PC1 | 5,9 | MLF1256PC1 | 6,4 |

## CL Flexi Riser External 90° R8



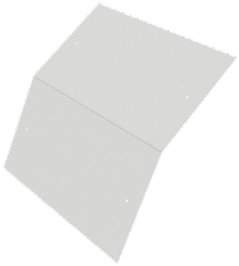
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Flexi Riser-150 | MLF1523PC1 | 4,6 | MLF1391PC1 | 7 | MLF1258PC1 | 7,6 |
| CL Flexi Riser-200 | MLF1180PC1 | | | | | |
| CL Flexi Riser-300 | MLF1524PC1 | 4,9 | MLF1392PC1 | 7,3 | MLF1259PC1 | 7,9 |
| CL Flexi Riser-400 | MLF1181PC1 | | | | | |
| CL Flexi Riser-450 | MLF1525PC1 | 5,2 | MLF1393PC1 | 7,5 | MLF1260PC1 | 8,2 |
| CL Flexi Riser-600 | MLF1526PC1 | 5,6 | MLF1394PC1 | 7,9 | MLF1261PC1 | 8,6 |
| CL Flexi Riser-750 | MLF1527PC1 | 5,9 | MLF1395PC1 | 8,1 | MLF1262PC1 | 8,8 |
| CL Flexi Riser-900 | MLF1528PC1 | 6 | MLF1396PC1 | 8,4 | MLF1263PC1 | 9,15 |

## CL Flexi Riser Cover External 90° R4



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1817PC1 | 0,3 | MLR1823PC1 | 0,4 | MLR1823PC1 | 0,4 |
| CL FR Cover-200 | MLR1816PC1 | 0,4 | | | | |
| CL FR Cover-300 | MLR1815PC1 | 0,7 | MLR1822PC1 | 0,7 | MLR1822PC1 | 0,7 |
| CL FR Cover-400 | MLR1814PC1 | 0,9 | | | | |
| CL FR Cover-450 | MLR1813PC1 | 1 | MLR1821PC1 | 1,1 | MLR1821PC1 | 1,1 |
| CL FR Cover-600 | MLR1812PC1 | 1,3 | MLR1820PC1 | 1,4 | MLR1820PC1 | 1,4 |
| CL FR Cover-750 | MLR1811PC1 | 1,6 | MLR1819PC1 | 1,8 | MLR1819PC1 | 1,8 |
| CL FR Cover-900 | MLR1810PC1 | 2,2 | MLR1818PC1 | 2,2 | MLR1818PC1 | 2,2 |

## CL Riser Cover External 90° R6



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1831PC1 | 0,6 | MLR1837PC1 | 0,7 | MLR1837PC1 | 0,7 |
| CL FR Cover-200 | MLR1830PC1 | 0,8 | | | | |
| CL FR Cover-300 | MLR1829PC1 | 1,2 | MLR1836PC1 | 1,3 | MLR1836PC1 | 1,3 |
| CL FR Cover-400 | MLR1828PC1 | 1,6 | | | | |
| CL FR Cover-450 | MLR1827PC1 | 1,8 | MLR1835PC1 | 2 | MLR1835PC1 | 2 |
| CL FR Cover-600 | MLR1826PC1 | 2,4 | MLR1834PC1 | 2,6 | MLR1834PC1 | 2,6 |
| CL FR Cover-750 | MLR1825PC1 | 3,1 | MLR1833PC1 | 3,3 | MLR1833PC1 | 3,3 |
| CL FR Cover-900 | MLR1824PC1 | 3,7 | MLR1832PC1 | 3,9 | MLR1832PC1 | 3,9 |

## CL Riser Cover External 90° R8



| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL FR Cover-150 | MLR1845PC1 | 0,9 | MLR1851PC1 | 0,9 | MLR1851PC1 | 0,9 |
| CL FR Cover-200 | MLR1844PC1 | 1,2 | | | | |
| CL FR Cover-300 | MLR1843PC1 | 1,8 | MLR1850PC1 | 1,9 | MLR1850PC1 | 1,9 |
| CL FR Cover-400 | MLR1842PC1 | 2,3 | | | | |
| CL FR Cover-450 | MLR1841PC1 | 2,6 | MLR1849PC1 | 2,8 | MLR1849PC1 | 2,8 |
| CL FR Cover-600 | MLR1840PC1 | 3,5 | MLR1848PC1 | 3,7 | MLR1848PC1 | 3,7 |
| CL FR Cover-750 | MLR1839PC1 | 4,4 | MLR1847PC1 | 4,6 | MLR1847PC1 | 4,6 |
| CL FR Cover-900 | MLR1838PC1 | 5,3 | MLR1846PC1 | 5,6 | MLR1846PC1 | 5,6 |

## CL Reducer Right

Prefabricated standard Reducer, Available Central/Straigh, Left or Right Hand
Height 100 & 150
Material: FRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L as Standard
(GRP Angle Plates also available)

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Reducer-300-150 | MLF1530PCc | 3,2 | MLF1398PC1 | 4,6 | MLF1265PC1 | 5,7 |
| CL Reducer-450-150 | MLF1531PC1 | 3,8 | MLF1399PC1 | 5,4 | MLF1266PC1 | 6,9 |
| CL Reducer-600-150 | MLF1532PC1 | 4,7 | MLF1400PC1 | 6,6 | MLF1267PC1 | 8,3 |
| CL Reducer-450-300 | MLF1533PC1 | 3,4 | MLF1401PC1 | 4,8 | MLF1268PC1 | 6 |
| CL Reducer-600-300 | MLF1534PC1 | 4 | MLF1402PC1 | 5,7 | MLF1269PC1 | 7,1 |
| CL Reducer-750-300 | MLF1535PC1 | 5 | MLF1403PC1 | 7 | MLF1270PC1 | 8,7 |
| CL Reducer-900-300 | MLF1536PC1 | 5,7 | MLF1404PC1 | 8 | MLF1271PC1 | 9,9 |
| CL Reducer-600-450 | MLF1537PC1 | 3,7 | MLF1405PC1 | 5,1 | MLF1272PC1 | 6,3 |
| CL Reducer-750-450 | MLF1538PC1 | 4,3 | MLF1406PC1 | 6 | MLF1273PC1 | 7,4 |
| CL Reducer-900-450 | MLF1539PC1 | 5,4 | MLF1407PC1 | 7,4 | MLF1274PC1 | 9,1 |
| CL Reducer-750-600 | MLF1540PC1 | 4 | MLF1408PC1 | 5,4 | MLF1275PC1 | 6,5 |
| CL Reducer-900-600 | MLF1541PC1 | 4,6 | MLF1409PC1 | 6,3 | MLF1276PC1 | 7,7 |
| CL Reducer-900-750 | MLF1542PC1 | 4,3 | MLF1410PC1 | 5,7 | MLF1277PC1 | 6,8 |

## CL Reducer Center

| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Reducer-300-150 | MLF1558PC1 | 3 | MLF1735PC1 | 3,9 | MLF1279PC1 | 5,7 |
| CL Reducer-450-150 | MLF1559PC1 | 3,7 | MLF1736PC1 | 4,8 | MLF1280PC1 | 6,7 |
| CL Reducer-600-150 | MLF1560PC1 | 4,1 | MLF1737PC1 | 5,4 | MLF1281PC1 | 7,4 |
| CL Reducer-450-300 | MLF1561PC1 | 3,3 | MLF1738PC1 | 4,1 | MLF1282PC1 | 5,9 |
| CL Reducer-600-300 | MLF1562PC1 | 4 | MLF1739PC1 | 5,1 | MLF1283PC1 | 7 |
| CL Reducer-750-300 | MLF1563PC1 | 4,4 | MLF1740PC1 | 5,7 | MLF1284PC1 | 7,7 |
| CL Reducer-900-300 | MLF1564PC1 | 4,8 | MLF1741PC1 | 6,2 | MLF1285PC1 | 8,4 |
| CL Reducer-600-450 | MLF1565PC1 | 3,4 | MLF1742PC1 | 4,3 | MLF1286PC1 | 6,1 |
| CL Reducer-750-450 | MLF1566PC1 | 4,3 | MLF1743PC1 | 5,3 | MLF1287PC1 | 7,3 |
| CL Reducer-900-450 | MLF1567PC1 | 4,7 | MLF1744PC1 | 5,9 | MLF1288PC1 | 8 |
| CL Reducer-750-600 | MLF1568PC1 | 3,6 | MLF1745PC1 | 4,5 | MLF1289PC1 | 6,2 |
| CL Reducer-900-600 | MLF1569PC1 | 4,6 | MLF1746PC1 | 5,6 | MLF1290PC1 | 7,5 |
| CL Reducer-900-750 | MLF1570PC1 | 3,8 | MLF1747PC1 | 4,7 | MLF1291PC1 | 6,4 |

## CL Reducer Left

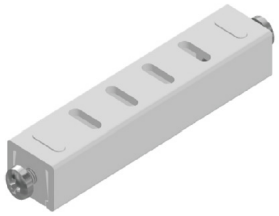
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Reducer-300-150 | MLF1544PC1 | 3,2 | MLF1412PC1 | 4,6 | MLF1722PC1 | 5,7 |
| CL Reducer-450-150 | MLF1545PC1 | 3,8 | MLF1413PC1 | 5,4 | MLF1723PC1 | 6,9 |
| CL Reducer-600-150 | MLF1546PC1 | 4,7 | MLF1414PC1 | 6,6 | MLF1724PC1 | 8,3 |
| CL Reducer-450-300 | MLF1547PC1 | 3,4 | MLF1415PC1 | 4,8 | MLF1725PC1 | 6 |
| CL Reducer-600-300 | MLF1548PC1 | 4 | MLF1416PC1 | 5,7 | MLF1726PC1 | 7,1 |
| CL Reducer-750-300 | MLF1549PC1 | 5 | MLF1417PC1 | 7 | MLF1727PC1 | 8,7 |
| CL Reducer-900-300 | MLF1550PC1 | 5,7 | MLF1418PC1 | 8 | MLF1728PC1 | 9,9 |
| CL Reducer-600-450 | MLF1551PC1 | 3,7 | MLF1419PC1 | 5,1 | MLF1729PC1 | 6,3 |
| CL Reducer-750-450 | MLF1552PC1 | 4,3 | MLF1420PC1 | 6 | MLF1730PC1 | 7,4 |
| CL Reducer-900-450 | MLF1553PC1 | 5,4 | MLF1421PC1 | 7,4 | MLF1731PC1 | 9,1 |
| CL Reducer-750-600 | MLF1554PC1 | 4 | MLF1422PC1 | 5,4 | MLF1732PC1 | 6,5 |
| CL Reducer-900-600 | MLF1555PC1 | 4,6 | MLF1423PC1 | 6,3 | MLF1733PC1 | 7,7 |
| CL Reducer-900-750 | MLF1556PC1 | 4,3 | MLF1424PC1 | 5,7 | MLF1734PC1 | 6,8 |

## CL Z Reducer

Prefabricated standard Reducer, Available Central/ Straigh, Left or Right Hand
Height 100 & 150
Material: GRP Polyester Class 1 (Other Resins are available)
Angle plates and fasteners SS316L are included.
(GRP Angle Plates also available)

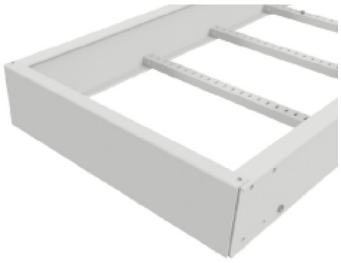
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Z Reducer-150 | MLM2259PC1 | 0,8 | MLH2157PC1 | 1 | MLH2157PC1 | 1 |
| CL Z Reducer-200 | MLM2227PC1 | 0,9 | | | | |
| CL Z Reducer-300 | MLM2260PC1 | 1 | MLH2158PC1 | 1,5 | MLH2158PC1 | 1,5 |
| CL Z Reducer-400 | MLM2228PC1 | 1,1 | | | | |
| CL Z Reducer-450 | MLM2261PC1 | 1,1 | MLH2159PC1 | 1,9 | MLH2159PC1 | 1,9 |
| CL Z Reducer-600 | MLM2262PC1 | 1,3 | MLH2160PC1 | 2,4 | MLH2160PC1 | 2,4 |

## CL Rung

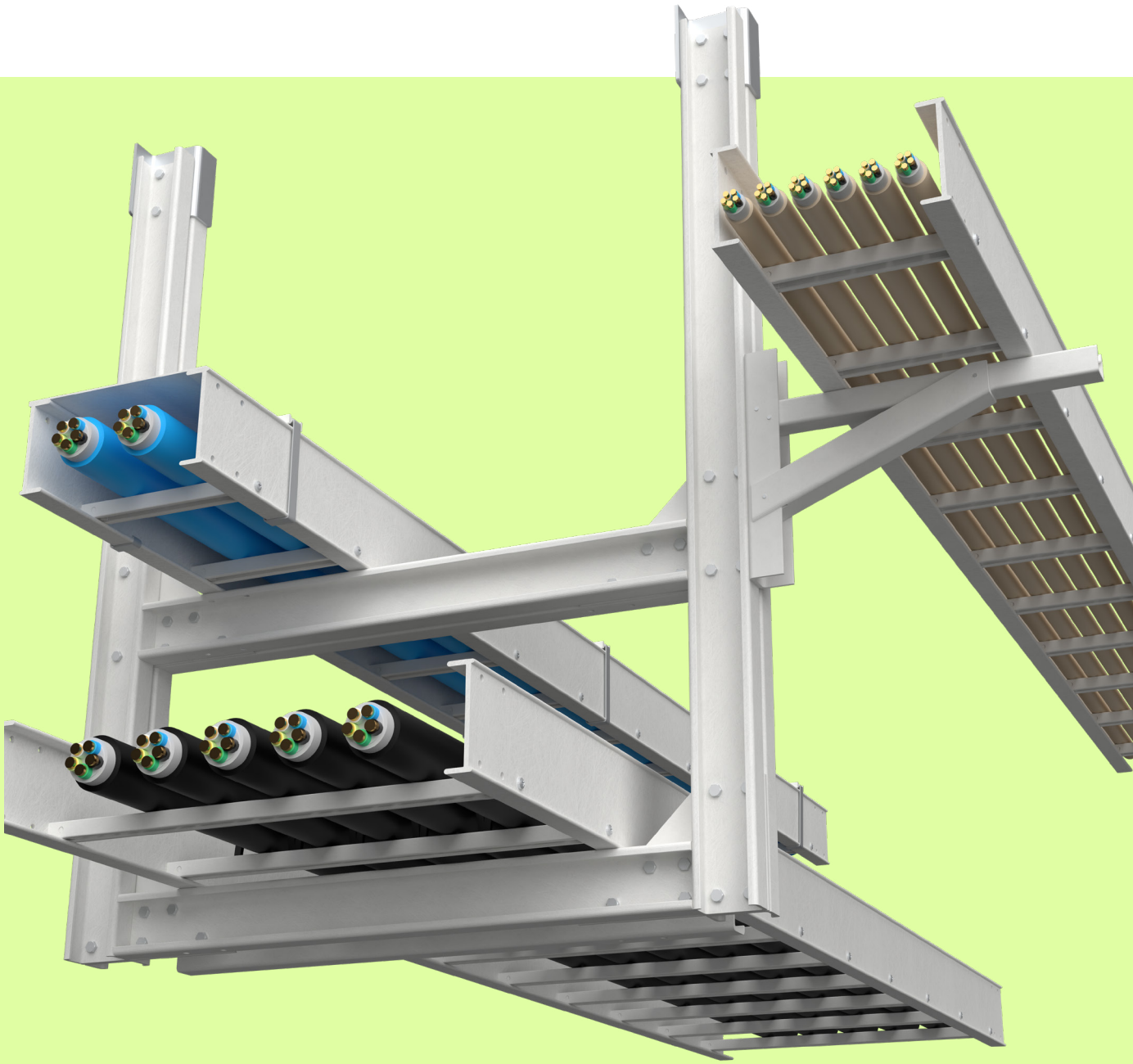


| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Rung-150 | MR1695PC1 | 0,1 | MR1695PC1 | 0,1 | MR1695PC1 | 0,1 |
| CL Rung-200 | MR1791PC1 | 0,1 | MR1791PC1 | 0,1 | MR1791PC1 | 0,1 |
| CL Rung-300 | MR1696PC1 | 0,2 | MR1696PC1 | 0,2 | MR1696PC1 | 0,2 |
| CL Rung-400 | MR1792PC1 | 0,2 | MR1792PC1 | 0,2 | MR1792PC1 | 0,2 |
| CL Rung-450 | MR1697PC1 | 0,3 | MR1697PC1 | 0,3 | MR1697PC1 | 0,3 |
| CL Rung-600 | MR1698PC1 | 0,4 | MR1698PC1 | 0,4 | MR1698PC1 | 0,4 |
| CL Rung-750 | MR1699PC1 | 0,5 | MR1699PC1 | 0,5 | MR1699PC1 | 0,5 |
| CL Rung-900 | MR1700PC1 | 0,6 | MR1700PC1 | 0,6 | MR1700PC1 | 0,6 |

## CL Endplate



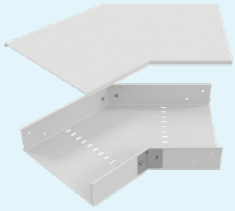
| | LM100 | | LMP150 | | LH150 | |
|---|---|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg | Ref No | Kg |
| CL Endplate-150 | MLM2265PC1 | 0,1 | MLH2163PC1 | 0,2 | MLH2163PC1 | 0,2 |
| CL Endplate-200 | MLM2225PC1 | 0,1 | | | | |
| CL Endplate-300 | MLM2266PC1 | 0,2 | MLH2164PC1 | 0,3 | MLH2164PC1 | 0,3 |
| CL Endplate-400 | MLM2226PC1 | 0,2 | | | | |
| CL Endplate-450 | MLM2267PC1 | 0,3 | MLH2165PC1 | 0,4 | MLH2165PC1 | 0,4 |
| CL Endplate-600 | MLM2268PC1 | 0,4 | MLH2166PC1 | 0,5 | MLH2166PC1 | 0,5 |
| CL Endplate-750 | MLM2269PC1 | 0,5 | MLH2167PC1 | 0,6 | MLH2167PC1 | 0,6 |
| CL Endplate-900 | MLM2270PC1 | 0,5 | MLH2168PC1 | 0,7 | MLH2168PC1 | 0,7 |



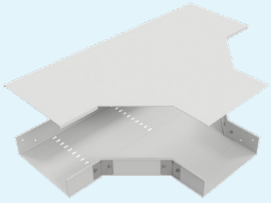
# Cable Tray overview

Mita Flex offers a complete range of composite perforated cable trays, including fittings and accessories, available in two series, CT50 and CT80.

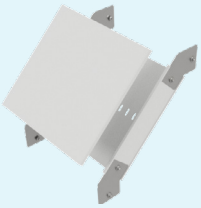
The FRP/GRP cable trays are light, yet strong and corrosion resistant. They are designed to deliver high performance, maximum load capacity with reduced weight and improved handling, allowing easy and quick installation. The cable trays are available in a variety of resin types.



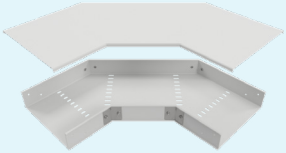
Flexi Riser



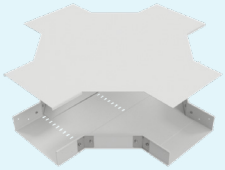
Tee R300



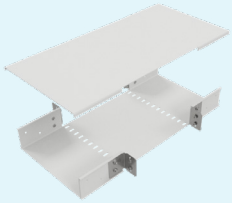
Combi Riser



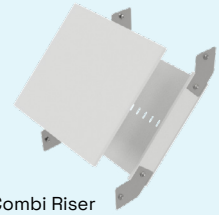
45° Flat Elbow



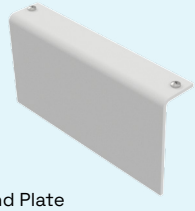
Cross R300



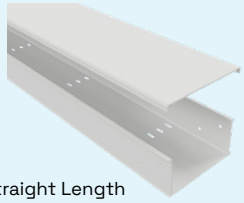
Tee



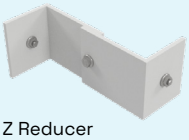
Combi Riser



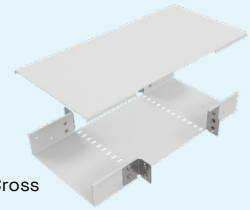
End Plate



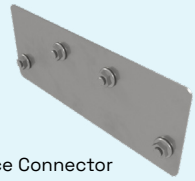
Straight Length



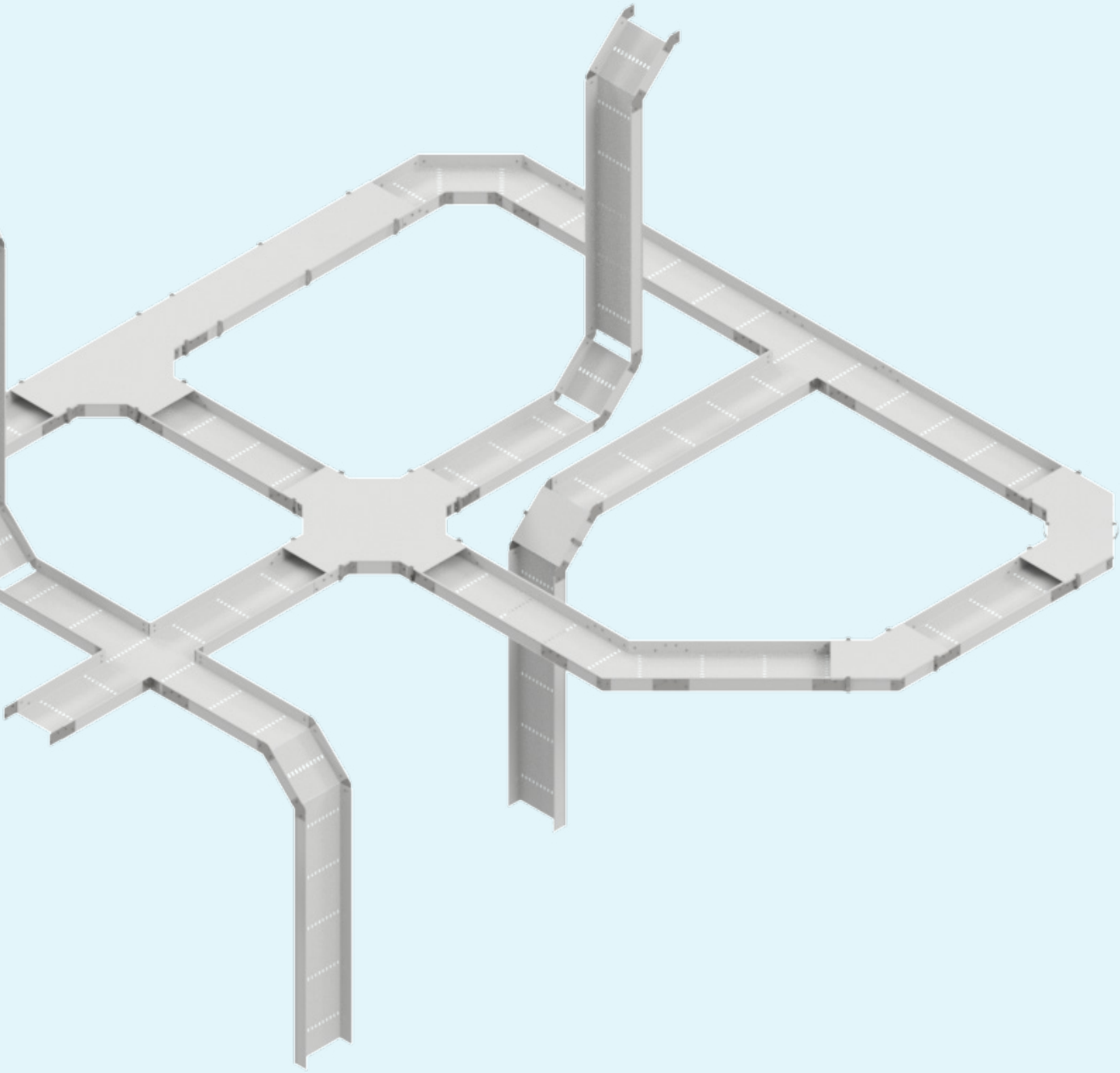
Z Reducer



Cross



Splice Connector

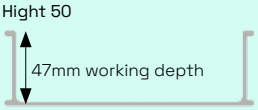


## A complete and flexible system

### Cable Tray
### CT50

Cable tray with system height 50mm and widths 50 to 400 mm.

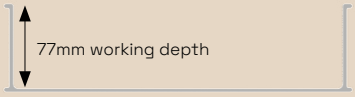
Hight 50




### Cable Tray
### CT80

Cable tray with system height 80mm and widths 50 to 400 mm.

Hight 80



# Cable Trays and fitting selection

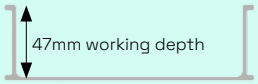
Return Flange type profile design for added strength.

→ For Electrical & Instrumentation Applications.
→ Tray heights 50mm & 80mm
→ Length 3000mm

## CT50

Cable tray with system height 50mm and widths 50 to 400 mm.

Hight 50

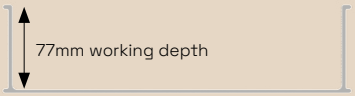


| Product | Ref No | Kg |
|---|---|---|
| CT50-50-3000 | MCT3105PC1 | 2,9 |
| CT50-100-3000 | MCT3106PC1 | 3,7 |
| CT50-150-3000 | MCT3107PC1 | 4,5 |
| CT50-200-3000 | MCT3108PC1 | 5,5 |
| CT50-300-3000 | MCT3109PC1 | 7,8 |
| CT50-400-3000 | MCT3250PC1 | 11,8 |

## CT80

Cable tray with system height 80mm and widths 50 to 400 mm.

Hight 80



| Product | Ref No | Kg |
|---|---|---|
| CT80-50-3000 | MCT3156PC1 | 3,9 |
| CT80-100-3000 | MCT3157PC1 | 4,7 |
| CT80-150-3000 | MCT3158PC1 | 5,5 |
| CT80-200-3000 | MCT3159PC1 | 6,5 |
| CT80-300-3000 | MCT3160PC1 | 9,2 |
| CT80-400-3000 | MCT3313PC1 | 13,1 |

| Cable Tray Type | Resin Selection | Rail Height (mm) | Working Depth | SWL 1,5m(kg/m) | Length (m) |
|---|---|---|---|---|---|
| CT50 | PC1 – Polyester Class 1<br>AS – Polyester Antistatic<br>VE – Vinyl ester<br>AC – Acrylic | 50 | 47 | 70 | 3 * |
| CT80 | PC1 – Polyester Class 1<br>AS – Polyester Antistatic<br>VE – Vinyl ester<br>AC – Acrylic | 80 | 77 | 100 | 3 * |

SWL according to IEC61537, test type 3.

* Alternative lengths available on request

## CT Splice Plates

Fasterners not included.
Use M6 x 16 for Splice plate GRP.
Use M6 x 12 SS for Splice plate SS.

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| Splice plate PC1 | MCT3102PC1 | | MCT3110PC1 | |
| Splice plate SS | MCT3101SS | | MCT3103SS | |

## CT Vertical Splice Angle 45°

Fasterners not included.
Use M6 x 16 for Splice plate GRP.
Use M6 x 12 SS for Splice plate SS.

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| Vertical Splice Angle 45° PC1 | MCT3145PC1 | | MCT3196PC1 | |
| Vertical Splice Angle 45° SS | MCT3104SS | | MCT3179SS | |

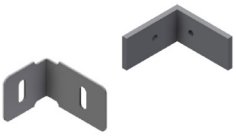
## CT Vertical Hinge

Fasterners not included.
Use M6 x 16 for Splice plate GRP.
Use M6 x 12 SS for Splice plate SS.

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Vertical Hinge PC1 | MCT3143PC1 | | MCT3194PC1 | |
| CT Vertical Hinge adjust. SS | MCT3800SS | | MCT3801SS | |

## CT Horizontal Splice Angle Bracket 90°

Fasterners not included.
Use M6 x 16 for Splice plate GRP.
Use M6 x 12 SS for Splice plate SS.



| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Horizontal Splice Angle 90° PC1 | MCT3144PC1 | | MCT3195PC1 | |
| CT Horizontal Splice Angle 90° SS | MCT3802SS | | MCT3803SS | |

## CL/CT Fixing Clamp

Supplied without bolts.
Use M10 for CL/CT Flange Fixing Clamp.
For Fixing Clamp use M10 for cable ladder and M6 for cable trays.

| Product | Ref No | Kg |
|---|---|---|
| CL/CT Flange Fixing clamp SS | MCT2125SS | |
| | | |
| CL/CT Fixing clamp SS | MCT2123SS | |
| CL/CT Fixing clamp PC1 | MCT2124PC1 | |

## CT Cover

Snap-Fit Covers provide an easy to install and positive fixing with additional clips available for most applications or Heavy duty cover clamps for extreme conditions
Length 3000mm



| Product | Ref No | Kg |
|---|---|---|
| CT Cover-50-3000 PC1 | MCT3206PC1 | 1,5 |
| CT Cover-100-3000 PC1 | MCT3207PC1 | 2,2 |
| CT Cover-150-3000 PC1 | MCT3208PC1 | 3 |
| CT Cover-200-3000 PC1 | MCT3209PC1 | 3,8 |
| CT Cover-300-3000 PC1 | MCT3210PC1 | 5,3 |
| CT Cover-400-3000 PC1 | MCT3211PC1 | 6,9 |

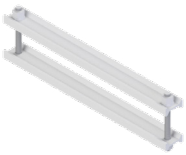
## CT Grip Clip

The SS316L Grip Clip provides an easy to install solution to secure the tray cover
Tray heights 50mm & 80mm

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT grip clip SS | MCT3236SS | 0,01 | MCT3237SS | 0,02 |

## CT HD Cover Clamp

Heavy Duty cover clamp for securing snap fit covers in exposed wind areas.
Tray heights 50mm & 80mm
Full GRP Construction



| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT HD cover clamp-50 | MCT2379PC1 | | MCT2385PC1 | |
| CT HD cover clamp-100 | MCT2380PC1 | | MCT2386PC1 | |
| CT HD cover clamp-150 | MCT2381PC1 | | MCT2387PC1 | |
| CT HD cover clamp-200 | MCT2382PC1 | | MCT2388PC1 | |
| CT HD cover clamp-300 | MCT2383PC1 | | MCT2389PC1 | |
| CT HD cover clamp-400 | MCT2384PC1 | | MCT2390PC1 | |

## CT Divider

Divider for seperation of different cable types.
Tray heights 50mm & 80mm



| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Divider | MCT3755PC1 | 1,2 | MCT3205PC1 | 1,6 |

## CT Flat Elbow 45° R3

Prefabricated standard flat elbow,
Tray heights 50mm & 80mm
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Flat Elbow-50 | MCT3117PC1 | 0,5 | MCT3168PC1 | 0,7 |
| CT Flat Elbow-100 | MCT3118PC1 | 0,7 | MCT3169PC1 | 0,83 |
| CT Flat Elbow-150 | MCT3119PC1 | 0,8 | MCT3170PC1 | 0,98 |
| CT Flat Elbow-200 | MCT3120PC1 | 1 | MCT3171PC1 | 1,18 |
| CT Flat Elbow-300 | MCT3121PC1 | 1,5 | MCT3172PC1 | 1,7 |
| CT Flat Elbow-400 | MCT3252PC1 | 2,23 | MCT3259PC1 | 2,53 |

## CT Flat Elbow 90° R3

Prefabricated standard flat elbow, (Other Radius available)
Tray heights 50mm & 80mm
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Flat Elbow-50 | MCT3111PC1 | 0,9 | MCT3162PC1 | 1,2 |
| CT Flat Elbow-100 | MCT3112PC1 | 1,1 | MCT3163PC1 | 1,4 |
| CT Flat Elbow-150 | MCT3113PC1 | 1,4 | MCT3164PC1 | 1,7 |
| CT Flat Elbow-200 | MCT3114PC1 | 1,7 | MCT3165PC1 | 2,0 |
| CT Flat Elbow-300 | MCT3115PC1 | 2,6 | MCT3166PC1 | 2,9 |
| CT Flat Elbow-400 | MCT3251PC1 | 4,1 | MCT3258PC1 | 4,4 |

## CT Equal Tee

Prefabricated standard Equal Tee, available also as Radius 300mm
Tray heights 50mm & 80mm
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Equal Tee-50 | MCT3174PC1 | 0,4 | MCT3123PC1 | 0,7 |
| CT Equal Tee-100 | MCT3175PC1 | 0,5 | MCT3124PC1 | 0,9 |
| CT Equal Tee-150 | MCT3176PC1 | 0,7 | MCT3125PC1 | 1,1 |
| CT Equal Tee-200 | MCT3177PC1 | 1,0 | MCT3126PC1 | 1,3 |
| CT Equal Tee-300 | MCT3178PC1 | 1,6 | MCT3127PC1 | 2,0 |
| CT Equal Tee-400 | MCT3260PC1 | 2,8 | MCT3257PC1 | 3,3 |

## CT Equal Tee R3

Prefabricated standard Equal Tee, available also as Radius 300mm
Tray heights 50mm & 80mm
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Equal Tee-50 | MCT3174R3PC1 | 1,4 | MCT3123R3PC1 | 1,8 |
| CT Equal Tee-100 | MCT3175R3PC1 | 1,8 | MCT3124R3PC1 | 2,3 |
| CT Equal Tee-150 | MCT3176R3PC1 | 2,3 | MCT3125R3PC1 | 2,7 |
| CT Equal Tee-200 | MCT3177R3PC1 | 2,8 | MCT3126R3PC1 | 3,3 |
| CT Equal Tee-300 | MCT3178R3PC1 | 4,0 | MCT3127R3PC1 | 4,6 |
| CT Equal Tee-400 | MCT3260R3PC1 | 6,1 | MCT3257R3PC1 | 6,9 |

## CT Cross Piece

Prefabricated standard Cross Piece, available also as Radius 300mm
Tray heights 50mm & 80mm
Angle plates and fasteners SS316L as Standard (GRP Angle Plates also available)

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Cross Piece-50 | MCT3129PC1 | 0,4 | MCT3180PC1 | 0,6 |
| CT Cross Piece-100 | MCT3130PC1 | 0,6 | MCT3181PC1 | 0,7 |
| CT Cross Piece-150 | MCT3131PC1 | 0,7 | MCT3182PC1 | 0,9 |
| CT Cross Piece-200 | MCT3132PC1 | 0,9 | MCT3183PC1 | 1,1 |
| CT Cross Piece-300 | MCT3133PC1 | 1,5 | MCT3184PC1 | 1,7 |
| CT Cross Piece-400 | MCT3253PC1 | 2,6 | MCT3261PC1 | 2,9 |

## CT Cross Piece R3

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Cross Piece-50 | MCT3129R3PC1 | 2,1 | MCT3180R3PC1 | 2,7 |
| CT Cross Piece-100 | MCT3130R3PC1 | 2,7 | MCT3181R3PC1 | 3,3 |
| CT Cross Piece-150 | MCT3131R3PC1 | 3,3 | MCT3182R3PC1 | 3,9 |
| CT Cross Piece-200 | MCT3132R3PC1 | 4,1 | MCT3183R3PC1 | 4,7 |
| CT Cross Piece-300 | MCT3133R3PC1 | 5,6 | MCT3184R3PC1 | 6,3 |
| CT Cross Piece-400 | MCT3253R3PC1 | 8,1 | MCT3261R3PC1 | 8,8 |

## CT Flat Elbow Cover 45° R3

Prefabricated Snap-Fit Covers

| Product | Ref No | Kg |
|---|---|---|
| CT Flat Elbow Cover-50 | MCT3218PC1 | 0,2 |
| CT Flat Elbow Cover-100 | MCT3219PC1 | 0,3 |
| CT Flat Elbow Cover-150 | MCT3220PC1 | 1,3 |
| CT Flat Elbow Cover-200 | MCT3221PC1 | 0,6 |
| CT Flat Elbow Cover-300 | MCT3222PC1 | 0,9 |
| CT Flat Elbow Cover-400 | MCT3223PC1 | 1,3 |

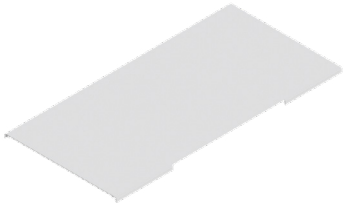
## CT Flat Elbow Cover 90° R3



| Product | Ref No | Kg |
|---|---|---|
| CT Flat Elbow Cover-50 | MCT3212PC1 | 0,3 |
| CT Flat Elbow Cover-100 | MCT3213PC1 | 0,5 |
| CT Flat Elbow Cover-150 | MCT3214PC1 | 0,8 |
| CT Flat Elbow Cover-200 | MCT3215PC1 | 1 |
| CT Flat Elbow Cover-300 | MCT3216PC1 | 1,6 |
| CT Flat Elbow Cover-400 | MCT3217PC1 | 2,3 |

## CT Equal Tee Cover

Prefabricated Snap-Fit Covers



| Product | Ref No | Kg |
|---|---|---|
| CT Equal Tee Cover-50 | MCT3224PC1 | 0,2 |
| CT Equal Tee Cover-100 | MCT3225PC1 | 0,3 |
| CT Equal Tee Cover-150 | MCT3226PC1 | 0,5 |
| CT Equal Tee Cover-200 | MCT3227PC1 | 0,7 |
| CT Equal Tee Cover-300 | MCT3228PC1 | 1,1 |
| CT Equal Tee Cover-400 | MCT3229PC1 | 1,7 |

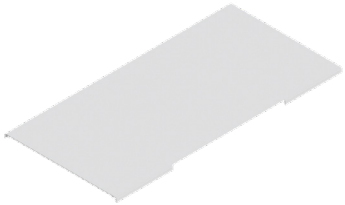
## CT Equal Tee Cover R3

Prefabricated Snap-Fit Covers



| Product | Ref No | Kg |
|---|---|---|
| CT Equal Tee Cover-50 R3 | MCT3224R3PC1 | 0z,6 |
| CT Equal Tee Cover-100 R3 | MCT3225R3PC1 | 0,9 |
| CT Equal Tee Cover-150 R3 | MCT3226R3PC1 | 1,2 |
| CT Equal Tee Cover-200 R3 | MCT3227R3PC1 | 1,5 |
| CT Equal Tee Cover-300 R3 | MCT3228R3PC1 | 2,3 |
| CT Equal Tee Cover-400 R3 | MCT3229R3PC1 | 3,2 |

## CT Cross Piece Cover



| Product | Ref No | Kg |
|---|---|---|
| CT Cross Piece Cover-50 PC1 | MCT3327PC1 | 0,2 |
| CT Cross Piece Cover-100 PC1 | MCT3328PC1 | 0,3 |
| CT Cross Piece Cover-150 PC1 | MCT3329PC1 | 0,5 |
| CT Cross Piece Cover-200 PC1 | MCT3330PC1 | 0,7 |
| CT Cross Piece Cover-300 PC1 | MCT3331PC1 | 1,1 |
| CT Cross Piece Cover-400 PC1 | MCT3332PC1 | 1,7 |

## CT Cross Piece Cover R3

Prefabricated Snap-Fit Covers

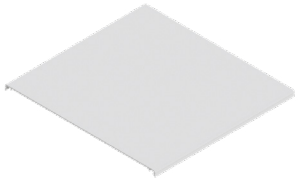


| Product | Ref No | Kg |
|---|---|---|
| CT Cross Piece Cover-50 R3 | MCT3327R3PC1 | 0,8 |
| CT Cross Piece Cover-100 R3 | MCT3328R3PC1 | 1,2 |
| CT Cross Piece Cover-150 R3 | MCT3329R3PC1 | 1,6 |
| CT Cross Piece Cover-200 R3 | MCT3330R3PC1 | 2,0 |
| CT Cross Piece Cover-300 R3 | MCT3331R3PC1 | 3,0 |
| CT Cross Piece Cover-400 R3 | MCT3332R3PC1 | 4,0 |

## CT Combi Riser

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Combi Riser-50 | MCT3135PC1 | 0,6 | MCT3186PC1 | 0,9 |
| CT Combi Riser-100 | MCT3136PC1 | 0,6 | MCT3187PC1 | 0,9 |
| CT Combi Riser-150 | MCT3137PC1 | 0,7 | MCT3188PC1 | 1,0 |
| CT Combi Riser-200 | MCT3138PC1 | 0,8 | MCT3189PC1 | 1,1 |
| CT Combi Riser-300 | MCT3139PC1 | 1,1 | MCT3190PC1 | 1,4 |
| CT Combi Riser-400 | MCT3254PC1 | 1,5 | MCT3262PC1 | 1,7 |

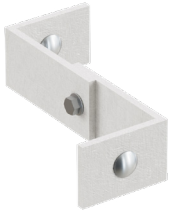
## CT Combi Riser Cover



| Product | Ref No | Kg |
|---|---|---|
| CT Combi Riser Cover-50 | MCT3230PC1 | |
| CT Combi Riser Cover-100 | MCT3231PC1 | |
| CT Combi Riser Cover-150 | MCT3232PC1 | |
| CT Combi Riser Cover-200 | MCT3233PC1 | |
| CT Combi Riser Cover-300 | MCT3234PC1 | |
| CT Combi Riser Cover-400 | MCT3235PC1 | |

## CT Reducer

Prefabricated reducer part, for jointing two trays of different width
Tray heights 50mm & 80mm
Fasteners SS316L are included.

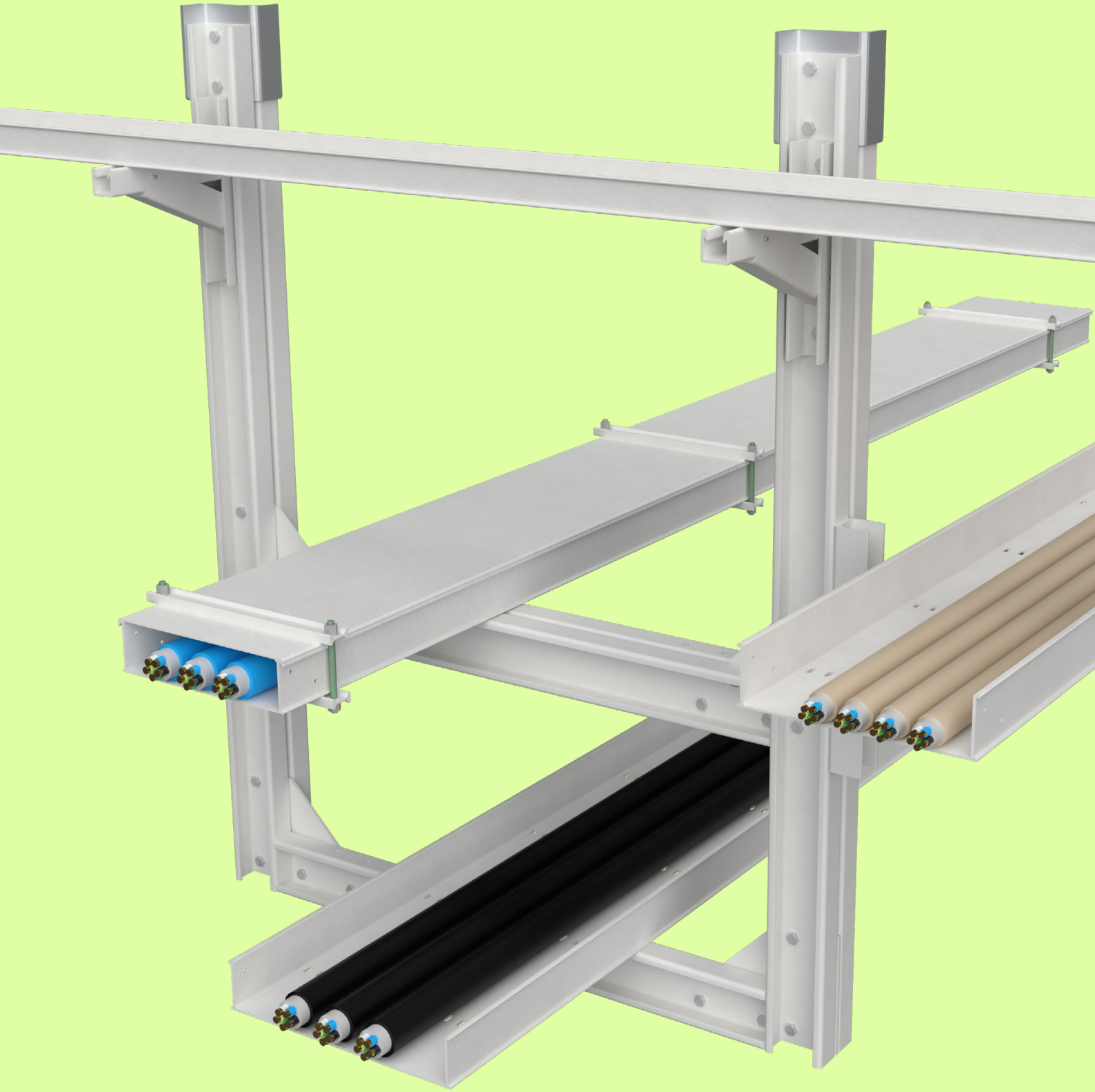


| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT Reducer-50 | MCT3350PC1 | 0,1 | MCT3365PC1 | 0,2 |
| CT Reducer-100 | MCT3351PC1 | 0,2 | MCT3366PC1 | 0,2 |
| CT Reducer-150 | MCT3352PC1 | 0,2 | MCT3367PC1 | 0,2 |
| CT Reducer-200 | MCT3353PC1 | 0,2 | MCT3368PC1 | 0,3 |
| CT Reducer-300 | MCT3354PC1 | 0,2 | MCT3369PC1 | 0,4 |

## CT End Cover

Fastners included.

| | CT50 | | CT80 | |
|---|---|---|---|---|
| Product | Ref No | Kg | Ref No | Kg |
| CT End Cover-50 | MCT3148PC1 | 0,03 | MCT3199PC1 | 1,33 |
| CT End Cover-100 | MCT3149PC1 | 0,06 | MCT3200PC1 | 1,33 |
| CT End Cover-150 | MCT3150PC1 | 0,08 | MCT3201PC1 | 1,33 |
| CT End Cover-200 | MCT3151PC1 | 0,1 | MCT3202PC1 | 1,33 |
| CT End Cover-300 | MCT3152PC1 | 0,12 | MCT3203PC1 | 1,33 |
| CT End Cover-400 | MCT3255PC1 | 0,14 | MCT3297PC1 | 0,16 |



# Accessories

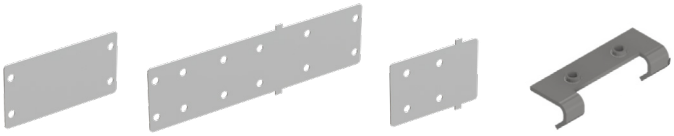
## Bolted Starter Bracket

| Product | Ref No | Kg |
|---|---|---|
| Bolted Starter Bracket HDG | MS4155S | |
| Bolted Starter Bracket SS | MS4157SS | |

## Welded Starter Bracket

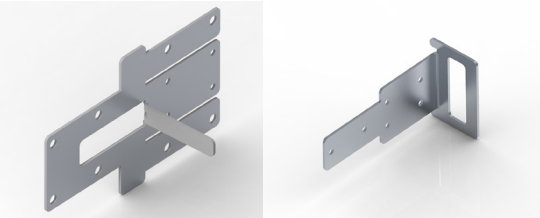
| Product | Ref No | Kg |
|---|---|---|
| Welded Starter Bracket - mild steel | MS4156S | |
| Welded Starter Bracket - SS | MS4158SS | |

## Channel Support Drill Template



| Product | Ref No | Kg |
|---|---|---|
| Channel Sup Drill Template -1 SS | MD2247SS | |
| Channel Sup Drill Template -2 SS | MD2248SS | |
| Channel Support Drill Template -3 SS | MD2249SS | |
| Channel Sleeve Drill Template SC100-50 SS | MD2246SS | |

## Cable Ladder / Cable tray Drill Template



| Product | Ref No | Kg |
|---|---|---|
| CL 100/150 Drill Template SS | MD2251SS | |
| CT 50/80 Drill Template SS | MD2252SS | |

# Bolt & Bolt sets

| Product | Ref No | Kg |
|---|---|---|
| 1. Bolt set M6 x 12 SS | M4820SS | 0,01 |
| 1. Bolt set Square neck M6 x 16 SS | M4824SS | 0.011 |
| 2. Bolt M8 x 25 pan SS | M4813SS | 0.021 |
| 3. Bolt set M10 x 20 A4 SS | M4823SS | |
| 3. Bolt set M10 x 25 A4 SS | M4804SS | 0.043 |
| 3. Bolt set M10 x 30 A4 SS | M4808SS | 0.046 |
| 4. Bolt set Square neck M10 x 35 A4 SS | M4802SS | 0.049 |
| 5. Bolt M10 x 25 SS | M4811SS | 0.03 |
| 6. Hex Bolt M10 x 30 SS | M4809SS | 0.03 |
| 7. Flange Nut M10 SS | M4810SS | 0.015 |
| 8. Long Thread Hex Nut M10 PC1 | M4816PC1 | 0.005 |
| 9. Bolt Stud M10 x 50 PC1 | M4115PC1 | 0.01 |
| 10. Threaded rod M10 3m PC1 | M4817PC1 | 0,55 |

## MultiFlex support system bolt recomendation:

- → When bolting Mita flex support system standard bolt size is 10 mm.
- → For connections back to back use M10x25 boltset
- → For use with gusset plates usew M10x30 boltset

### Cable ladder system:

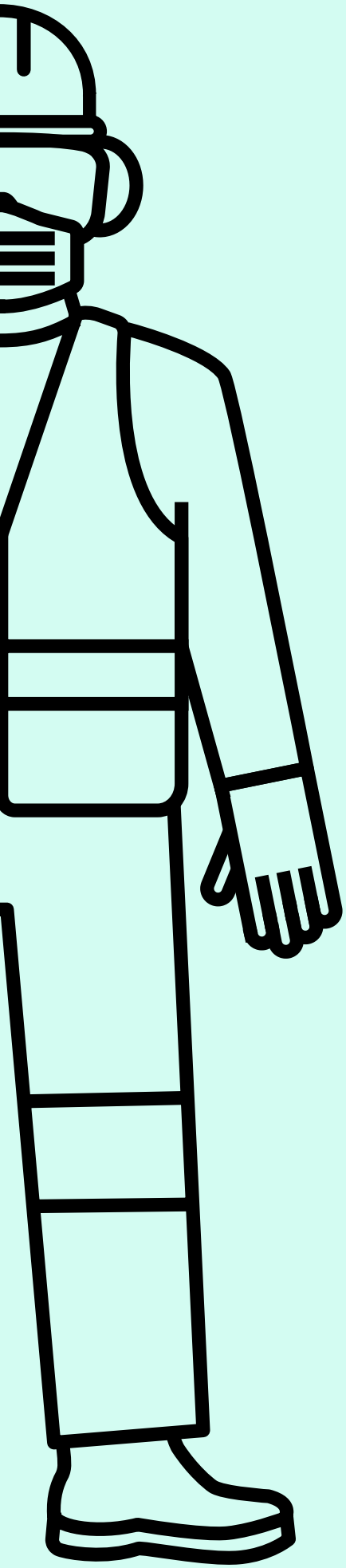
→ All bolts M10

When using stainless steel accesories (splice plates, hinges etc) standard bolt set is M10x20 mm, when using GRP accesories standard bolt set is M10x25mm

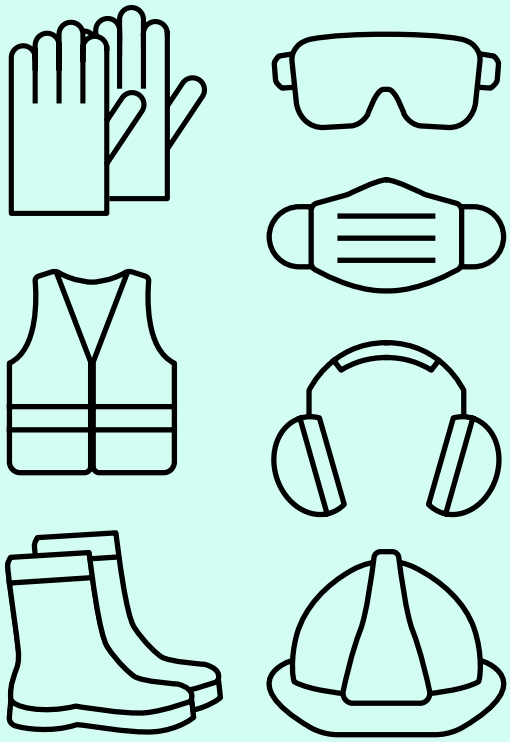
### Cable tray system:

→ All bolts M6

When using stainless steel accesories (splice plates, hinges etc) use M6 x 12mm bolt set, for GRP accesories use M6 x 16mm bolt set



# Safety first



## Tool selection

On-site cutting is easily done with the use of portable circular power saws and drilling equipment. For best results a diamond or carbide edged saw blade and carbide tip drill bits are the best solution.

## Cutting and drilling

When cutting, grinding or sanding FRP products it is important to wear suitable protective equipment. Safety glasses, dust mask rated at N94 or above is recommended and gloves are necessary.

We also recommend wearing long-sleeved shirt or overalls when working with FRP. In some cases non-toxic dust is created if you are not in a well ventilated environment and this can cause some small irritations so make sure you wear the right gear at all times.

| Mechanical Properties | ASTM | Units | Value | Units | Value |
|---|---|---|---|---|---|
| Tensile Stress, LW | D-638 | psi | 30,000 | MPa | 206.8 |
| Tensile Stress, CW | D-638 | psi | 7,000 | MPa | 48.2 |
| Tensile Modulus, LW | D-638 | 106 psi | 2.5 | GPa | 17.2 |
| Tensile Modulus, CW | D-638 | 106 psi | 0.8 | GPa | 5.5 |
| Compressive Stress, LW | D-695 | psi | 30,000 | MPa | 206.8 |
| Compressive Stress, CW | D-695 | psi | 15,000 | MPa | 103.4 |
| Compressive Modulus, LW | D-695 | 106 psi | 2.5 | GPa | 17.2 |
| Compressive Modulus, CW | D-695 | 106 psi | 1.0 | GPa | 6.9 |
| Flexural Stress, LW | D-790 | psi | 30,000 | MPa | 206.8 |
| Flexural Stress, CW | D-790 | psi | 10,000 | MPa | 68.9 |
| Flexural Modulus, LW | D-790 | 106 psi | 1.8 | GPa | 12.4 |
| Flexural Modulus, CW | D-790 | 106 psi | 0.8 | GPa | 5.5 |
| Modulus of Elasticity | Full Section | 106 psi | 2.8 | GPa | 19.3 |
| Shear Modulus | ---- | 106 psi | 0.45 | GPa | 3.1 |
| Short Beam Shear | D-2344 | psi | 4,500 | MPa | 31.0 |
| Punch Shear | D-732 | psi | 10,000 | MPa | 68.9 |
| Notched Izod Impact, LW | D-256 | ft - lbs/in | 25 | J/mm | 1.33 |
| Notched Izod Impact, CW | D-256 | ft - lbs/in | 4 | J/mm | 0.21 |
| Bearing Strength | D-953 | psi | 30,000 | MPa | 206.8 |
| **Physical Properties** | **ASTM** | **Units** | **Value** | **Units** | **Value** |
| Bar Hardness | D-2583 | ---- | 45 | ---- | 45 |
| 24 Hour Water Absorption | D-570 | % Max | 0.45 | % Max | 0.45 |
| Density | D-792 | lbs/in3 | 0.062 - 0.070 | g/cm3 | 1.72 - 1.94 |
| Coefficient of Thermal Expansion, LW | D-696 | 106in/in/°F | 7 | 10-6cm/cm/°C | 12 |
| **Electrical Properties** | **ASTM** | **Units** | **Value** | **Units** | **Value** |
| Arc Resistance, LW | D-495 | seconds | 120 | seconds | 120 |
| Dielectric Strength, LW | D-149 | kv/in | 35 | kv/mm | 1.37 |
| Dielectric Strength, PF | D-149 | volts/mil | 200 | volts/mil | 200 |
| Dielectric Constant, PF | D-150 | @60hz | 5 | @60hz | 5 |
| **Flammability Properties** | **ASTM** | | **Units** | **Value** | |
| Tunnel Test | E-84 | | Flame Spread | 25 max | |
| Flammability | D-635 | | ---- | Non-Burning | |
| NBS Smoke Chamber | E-662 | | Smoke Density | 600 - 700 | |

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# Effect on strength with temperature

The strength properties of reinforced plastics are reduced when the material is continually exposed to high temperatures. Loading shall be reduced based on the below table. Percentages shown are approximates.

When high temperatures are present please consult the manufacturer for application advice. Freezing temperatures do not effect the load rating of cable ladders and the cable management system as the FRP material does not be-come fragile. Special consideration is required whn service temperatures are over 200° Fahrenheit/ 94° Celsius. Please contact us for expert consultation for special requirements.

| Temperature | Polyester Resin % of Strength | Vinyl Ester % of Strength |
|---|---|---|
| 75°F (24°C) | 100% | 100% |
| 100°F (38°C) | 90% | 100% |
| 125°F (52°C)\| | 78% | 100% |
| 150°F (66°C) | 68% | 90% |
| 175°F (79°C) | 60% | 90% |
| 200°F (93°C)\| | 52% | 75% |

The test values in this chart are obtained from laboratory testing

# Thermal Contraction and Expansion

The table to the below compares the thermal contraction and expansion based on various temperature differentials for fiberglass, steel and aluminium cable trays. The values shown represent the length of cable tray that will produce a 16 mm (5-B*) movement between expansion connectors for the indicated temperature differential. Fiberglass has the least movement and requires least expansion joints. This simplifies the design and installation and minimizes expanansion dynamic forces on the structure.

| Temperature Differential | FRP Ft.(m) | Steel Ft. (m) | Aluminium Ft. (m) |
|---|---|---|---|
| 25°F (14°C) | 417 (126)\| | 320 (97) | 162 (49) |
| 50°F (28°C) | 208 (63) | 160 (48) | 81 (25) |
| (42°C) | 138 (42) | 106 (48 | 54 (16) |
| 100°F (56°C) | 104 (32) | 80 (24) | 40 (12) |
| 125°F (69°C) | 83 (25) | 63 (19) | 32 (10) |
| 150°F (83°C) | 69 (21) | 53 (16) | 26 (8) |
| 175°F (83°C) | 59 (17) | 45 (13) | 23 (6) |

# Material & Product Standards and Certifications

## Fire performance

BS 476 PART 7: CLASS 1
This is a vertical flame spread test and its one of the most requested certificates.

BS 476 P6
Specifies a method of test, the result is expressed as a fire propagation index.

ASTM E84 (from UL 0568)
Tests the rate of flame spread and smoke emissions of materials.

ASTM D635
Standard test method for measuring the rate of burning and duration of burning in plastic products. / Class HB

ISO 5659-2
Specifies a method of measuring smoke production from the exposed surface of specimens of materials or composites.

ISO 4589-2
Determination of burning behavior by oxygen index

ANSI/UL94
Plastics flammability standard for horizontal and vertical class.

IEC 61537:
Non-flame propagating system component class - Contribution to fire test IEC60695-2-11 (GWT) / Spread of fire 1kW test IEC60695-11-2

ISO 6721-11
Methods for determining a value of the glass transition temperature from the dynamic mechanical properties

EN14582-2016
This standard specifies a combustion method for the determination of halogen and sulfur contents in waste materials by combustion.

IEC 60754-series
Halogen contents determination only on materials for cables.

IEC 63355:2022
"New" Standard to determine the Halogen content specially for "Cable Management Systems."

## Weathering / Chemical corrosion

ASTM G154-16
Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials. (Color DeltaE measurement)

ISO 4892-2
Plastics- Methods of exposure to laboratory light sources - Part2- xenon-arc lamps (preferred test for "Cable Management Systems.")

ASTM D 4329 (from UL 0568)
Ultraviolet light exposure or ASTM G 155 Arc xenon light exposure (evaluating mechanical acc. to ASTM D 790)

ISO 4582
Methods to determine changes in colour and other appearance properties, and variations in mechanical or other properties

ASTM B-117
Tests a materials ability to resist the corrosive effect of salt water.

ASTM D570
Determine the rate of absorption of water by immersing the specimen in water for a specific period of time.

ASTM C581
Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures

## Isolation / Electrical properties

Electrically non-conductive system component -resistivity values of 100 MΩ or greater.

ASTM D257-14
This test measures the volume and surface resistivity of a material.

ASTM D149 (from UL 0568)
Dielectric Strength

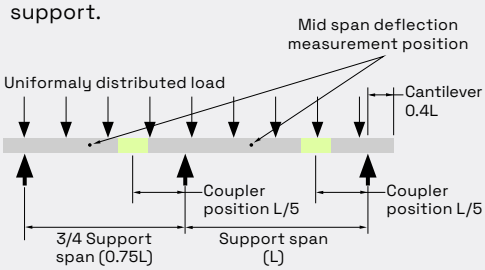
IEC60079-0
General requirements for construction, testing and marking of Ex Equipment and Ex Com-ponents (for Antistatic resin)

## Mechanical performance

UL 0568
Nonmetallic Cable Tray Systems

Nema FG-1
Standard that defines the construction and testing standards for nonmetallic cable tray systems

IEC 61537
International Standard specifies requirements and tests for cable tray systems and cable ladder systems intended for the Cable support.




IEC 61914 (Short Circuit test)
Cable cleats for electrical installations_ 9.5 Test for resistance to electromechanical force.

FRP Cable ladders, trays and accessories have been designed to withstand 25 years or more service life. Nevertheless, this cannot be achieved by product alone, Actual service of 25 years can only be achieved if cable ladders, trays and accessories are:

→ NOT subjected to any abnormal mechanical loads or mechanical impacts that would have long term effect on the performance of the product.

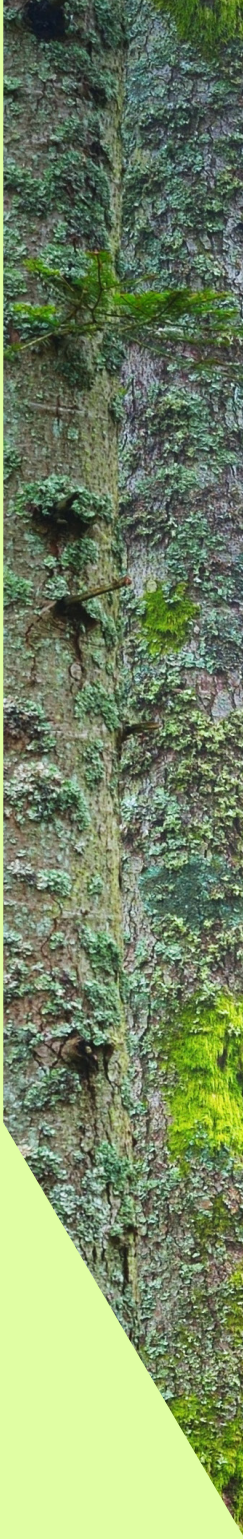
→ NOT subjected to abnormal corrosive atmosphere or subjected to direct contact with corrosive substance.

→ NOT subjected to any major alteration to the structure of the product or cut away areas or drill holes outside of the recommended installation guidelines.

# Chemical Exposure Guide

| CHEMICAL | Polyester Class 1 resin | | Vinyl Ester Resin | |
|---|---|---|---|---|
| ENVIRONMENT | %Concentration | Max Op, Temp. F/C | % Concentration | Max Op, Temp. F/C |
| Acetic Acid | 50 | 125/52 | 50 | 180/82 |
| Aluminum Hydroxide | 100 | 160/71 | 100 | 180/82 |
| Ammonium Chloride | All | 170/77 | All | 210/99 |
| Ammonium Hydroxide | 28 | N/R | 28 | 100/38 |
| Ammonium Bicarbonate | 15 | 125/52 | 15 | 160/70 |
| Ammonium Sulfate | ALL | 170/77 | ALL | 210/99 |
| Benzene | N/R | N/R | N/R | N/R |
| Benzoic Acid | SAT | 150/66 | SAT | 210/99 |
| Borax | SAT | 170/77 | SAT | 210/99 |
| Callum Carbonate | ALL | 170/77 | ALL | 180/82 |
| Calcium Nitrate | ALL | 180/82 | ALL | 210/99 |
| Carbon Tetrachloride | N/R | N/R | N/R | 150/65 |
| Chlorine, Dry Gas | – | 140/60 | – | 210/99 |
| Chlorine Water | SAT | 80/27 | SAT | 200/93 |
| Chromic Acid | 5 | 70/21 | 5 | 150/65 |
| Citric Acid | ALL | 170/77 | ALL | 210/99 |
| Copper Chloride | ALL | 170/77 | ALL | 210/99 |
| Copper Cyanide | ALL | 170/77 | ALL | 210/99 |
| Copper Nitrate | ALL | 170/77 | ALL | 210/99 |
| Ethanol | 50 | 75/24 | 50 | 100/38 |
| Ethylene Glycol | 100 | 90/32 | 100 | 200/93 |
| Ferric Chloride | ALL | 170/77 | ALL | 210/99 |

| | | | | |
|---|---|---|---|---|
| Ferrous Chloride | ALL | 170/77 | ALL | 210/99 |
| Formaldehyde | 50 | 75/24 | 50 | 150/65 |
| Gasoline | 100 | 80/27 | 100 | 180/82 |
| Glucose | 100 | 170/77 | 100 | 210/99 |
| Glycerine | 100 | 150/66 | 100 | 210/99 |
| Hydrobromic Acid | 50 | 120/49 | 50 | 150/65 |
| Hydrochloric Acid | 37 | 75/24 | 37 | 150/65 |
| Hydrogen Peroxide | 5 | 100/38 | 5 | 150/65 |
| Lactic Acid | ALL | 170/77 | ALL | 210/99 |
| Lithium Chloride | SAT | 150/66 | SAT | 210/99 |
| Magnesium Chloride | ALL | 170/77 | ALL | 210/99 |
| Magnesium Nitrate | ALL | 140/60 | ALL | 210/99 |
| Magnesium Sulfate | ALL | 170/77 | ALL | 210/99 |
| Mercuric Chloride | 100 | 150/66 | 100 | 210/99 |
| Mercurous Chloride | ALL | 140/60 | ALL | 210/99 |
| Nickel Chloride | ALL | 170/77 | ALL | 210/99 |
| Nickel Sulfate | ALL | 170/77 | ALL | 210/99 |
| Nitrate Acid | 20 | 70/21 | 20 | 120/49 |
| Oxalic Acid | ALL | 75/24 | ALL | 210/99 |
| Perchloric Acid | N/R | N/R | N/R | 100/38 |
| Phosphoric Acid | 100 | 120/49 | 100 | 210/99 |
| Potassium Chloride | ALL | 170/77 | ALL | 210/99 |
| Potassium Dichromate | ALL | 170/77 | ALL | 210/99 |
| Potassium Nitrate | ALL | 170/77 | ALL | 210/99 |
| Potassium Sulfate | ALL | 170/77 | ALL | 210/99 |
| Propylene Glycol | ALL | 170/77 | ALL | 210/99 |
| Sodium Acetate | ALL | 160/71 | ALL | 210/99 |
| Sodium Bisulfate | ALL | 170/77 | ALL | 210/99 |
| Sodium Bromide | ALL | 170/77 | ALL | 210/99 |
| Sodium Cyanide | ALL | 170/77 | ALL | 210/99 |
| Sodium Hydroxide | N/R | N/R | N/R | 180/82 |
| Sodium Nitrate | ALL | 170/77 | ALL | 210/99 |
| Sodium Sulfate | ALL | 170/77 | ALL | 210/99 |
| Stannic Chloride | ALL | 160/71 | ALL | 210/99 |
| Sulfuric Acid | 25 | 75/24 | 25 | 100/38 |
| Tartaric Acid | ALL | 170/77 | ALL | 210/99 |
| Vinegar | 100 | 170/77 | 100 | 210/99 |
| Water, Distilled | 100 | 170/77 | 100 | 180/82 |
| Zinc Nitrate | ALL | 170/77 | ALL | 210/99 |
| Zinc Sulfate | ALL | 170/77 | ALL | 210/99 |



# Responsible business

Wibe Group is a multinational company with operations in different parts of the world. We want to run a responsible business, by understanding and managing all effects in the value chain. We see it not only as a responsibility but also an opportunity to influence and drive sustainable development for our business and communities.

Our ambition is to take the lead in our industry. With a clear vison and long term commitment, we will get there.

In 2024, we received a Silver Sustainability Rating from EcoVadis, placing us in the top 15% of all companies in the world, and top 3% of our industry segment. Join us on our journey to create sustainable solutions for generations to come!

Read more about our sustainability work on wibe-group.com

SILVER | Top 15%

ecovadis

Sustainability Rating

FEB 2024

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