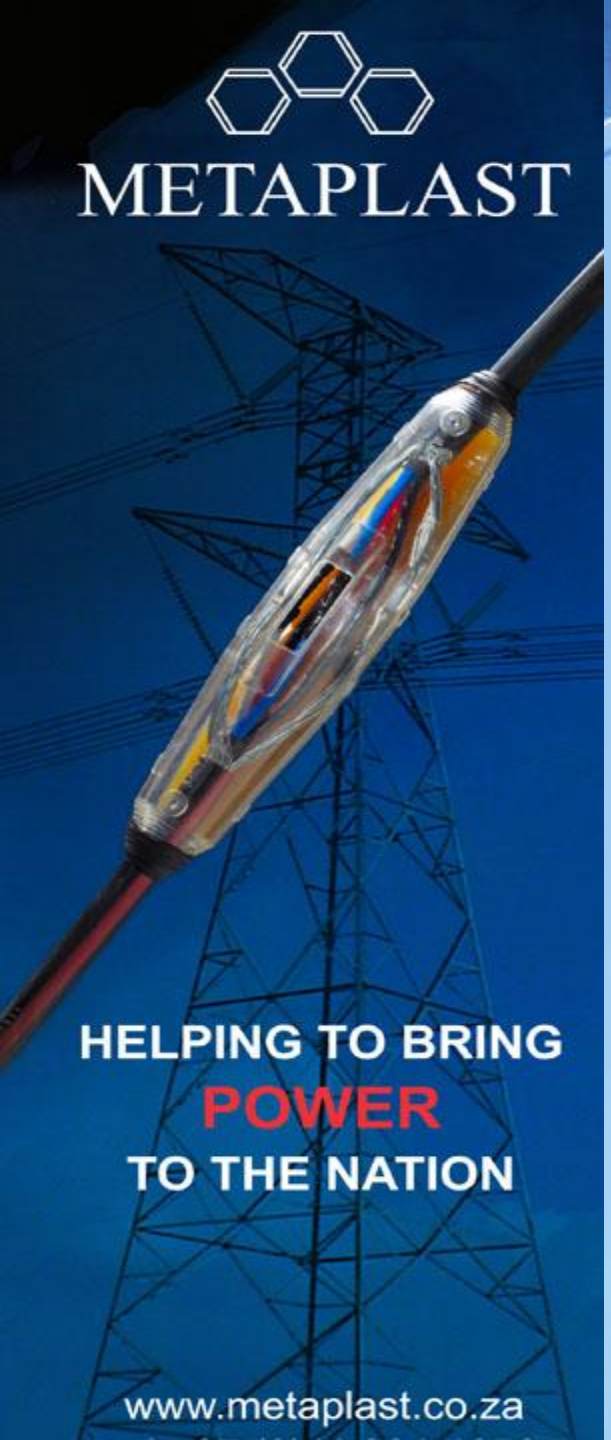



# METAPLAST CHEMICALS (PTY) LTD

# LOW VOLTAGE CABLE JOINTING KITS

- Introduction
- Straight Through Joints
- Branch Joints (injection moulded)
- Distribution Branch Joints (vacuum formed)
- Recommended Installation
  - Straight Through Resin Joints
  - Branch Joints
  - Accessories

# Company History

- Established 1963 - Family owned business
- Based in Wadeville – Industrial area of Germiston
- Formulate / Manufacture and market our range of products
- Concentrate on Low Voltage Market
- Sell to Electrical Wholesalers and Mines

| | |
|---|---|
| **Export to Europe viz** | Italy, France, Germany, Far East, United Kingdom |
| **Export to various African countries** | Angola, Botswana, Congo, Kenya, Mauritius, Mocambique, Malawi |
| **Supply various utilities** | Nelson Mandela Metro Municipality,(Port Elizabeth) Cape Town, (Ethekwini) Durban , Klerksdorp, Rustenburg, etc |

# Factory

- Factory : Land - 5 600m²
- Warehouse - 500m²
- Office & Factory - 2 200m²
- Staff Compliment: ± 24
- BEE Compliant : Level 4

# Features of Resin for Kits

- Up to 1000 volts
- Two year (24 month) shelf life
- Injection moulded shells for entire range
- Snap together – leak proof
- Dual type "mix in the bag" that can be easily pulled apart for mixing for all sizes up to 750gram
- Use mechanical seal at centre of bag for all pouches containing 750gram + of resin
- Pure resin – no fillers
- Separate resin packs available
- No heat or flame required
- No skin contact whilst mixing
- Odour free
- Robust and transparent moulds

# Types of Resin for Joint Kits

## Polyurethane Resin

- Unfilled, pure resin (MA153)
- No sedimentation
- Tested in accordance with VDE 0278 And SABS 526
- Opaque in colour
- Polyurethane flexible resin (DL1267)
- Outstanding abrasion resistance
- Re-enterable polyurethane resin (MA212)

## Epoxy Resin

- Unfilled, pure resin (E97 / SE125)
- No sedimentation
- FVO rating
- Low toxicity epoxy 3.2
- Self extinguishing epoxy
- Tested in accordance with (1EC 707) Mould and resin coloured
- blue for easy identification.

# Suitable for Almost any Type of Cable

- Aluminium or Copper conductors
- Aluminium strip armoured
- Single or multi core cables
- PVC sheathed single wire armoured cable
- Flexible cables eg; rubber, polyurethane

# Different Resin Types

- E28 : Casting Resin
- MA460 : Casting Resin
- MA153 : Polyurethane Cable Encapsulating Resin
- SE125 : Self-extinguishing Clear Epoxy Resin
- MA447 : Polyurethane Encapsulating Resin
- MA212 : Polyurethane re-enterable Resin
- MA246 : Self-extinguishing Polyurethane re-enterable Resin
- DL1267: Flexible Cable Encapsulating Resin
- 1148 : Electrical Potting Compound

# Packaging Features

- Each batch is labelled with a batch number and "use-by" date and resin type
- Detailed storage instructions included
- Inner transparent bag provides a visible reference for user when mixing
- Each resin pack contains correctly proportioned resin components, separated by a divider
- Outer aluminium packaging provides environmental protection of the contents
- Controlled curing temperature designed to be compatible with PVC, XLPE, EPR, Polythene and PILC cables
- Fully detailed product specifications and MSDS reports available
- Tested in accordance with VDE 0278, SABS 526

# STRAIGHT  THROUGH JOINTS

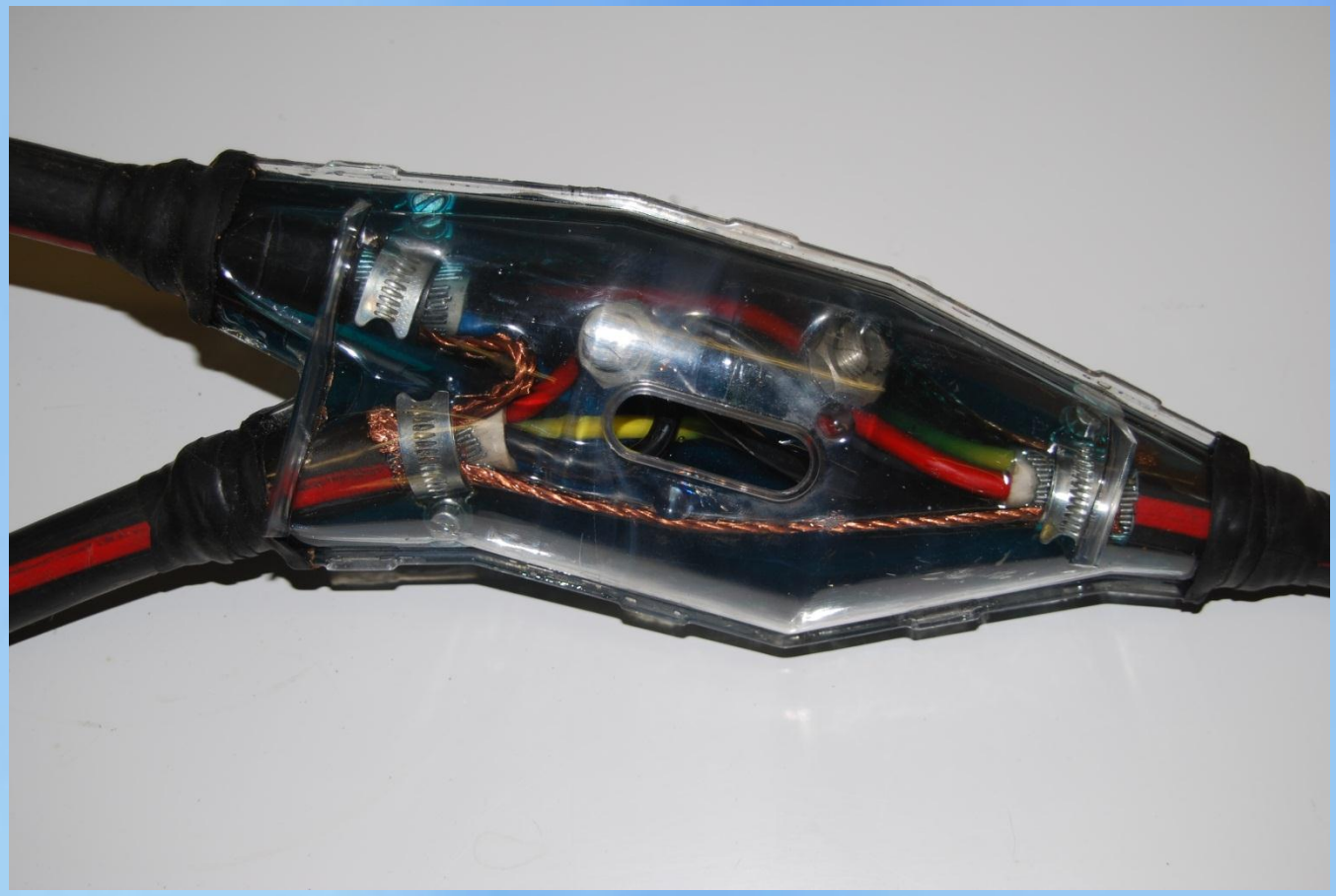
# CHART OF STRAIGHT THROUGH CABLE SIZES

| CABLE SIZE | CABLE SIZE | METAPLAST |
|---|---|---|
| **ARMOURED** | **INSULATED** | - |
| 1.5-2.5mm | 1.5-4.0mm | **MX1** |
| 10-16mm | 10-16mm | **MX2** |
| 16-35mm | 16-35mm | **MX3** |
| 4-6mm | 2.5-10.0mm | **MT1** |
| 16-25mm | 16-25mm | **MT2** |
| 16-35mm | 16-35mm | **MT2.5** |
| 10-50mm | 10-50mm | **MT3** |
| 25-70mm | 25-70mm | **MT4** |
| 70-95mm | 70-95mm | **MT4.5** |
| 95-120mm | 95-150mm | **MT5** |
| 120-240mm | 120-300mm | **MT6** |
| 185-300mm | 182-300mm | **MT6** |
| | | |

# STRAIGHT THROUGH CABLE LENGTH AND WIDTH

| SPLICING KIT | MOULD LENGTH mm | MOULD WIDTH mm |
|---|---|---|
| **MX1** | 185 | 24 |
| **MX2** | 275 | 44 |
| **MX3** | 310 | 55 |
| **MT1** | 240 | 40 |
| **MT2** | 275 | 50 |
| **MT2.5** | 310 | 60 |
| **MT3** | 355 | 70 |
| **MT4** | 400 | 70 |
| **MT4.5** | 436 | 86 |
| **MT5** | 550 | 110 |
| **MT6** | 810 | 135 |

# BRANCH JOINTS
# (injection moulded)



# INJECTION MOULDED BRANCH JOINTS

| CODE | CORES CROSS CABLE SEC mm | DIAMETER MAIN CABLE mm | DIAMETER BRANCH mm | LENGTH mm | WIDTH mm |
|---|---|---|---|---|---|
| Y1 | 6 | 6 – 22 | 6 – 22 | 220 | 76 |
| Y2 | 16 | 10 – 32 | 10 – 22 | 282 | 100 |
| Y2.5 | 35 | 20 – 38 | 20 – 38 | 310 | 112 |
| Y3 | 50 | 20 – 45 | 20 – 45 | 380 | 134 |

**BRANCH JOINT - TYPE: Y0 - CATHODIC PROTECTION**

| TYPE | DIMENSIONS L mm | D mm | C mm | C1 mm | MAIN CABLE $mm^2$ | BRANCH CABLE $mm^2$ | BRANCH CABLE mm |
|---|---|---|---|---|---|---|---|
| Y0 | 130 | 73 | 11 - 25 | 7 - 21 | 1 x 70 | 1 x 35 | 0.4 |

# DISTRIBUTION BRANCH JOINTS

# (vacuum formed)


ESP
MB356

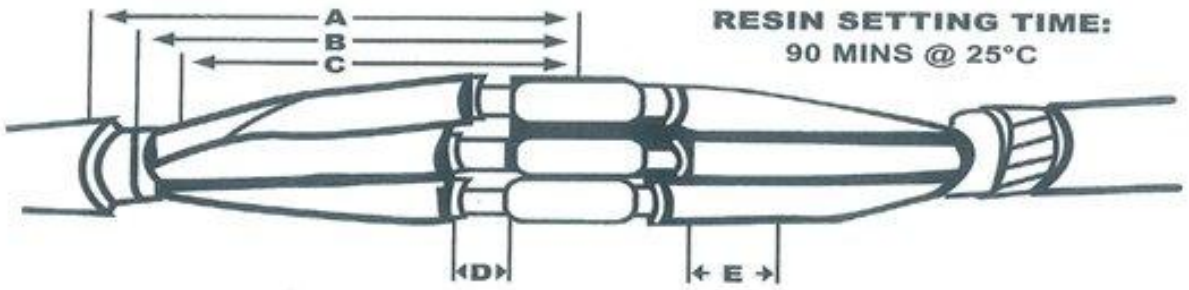
# INJECTION MOULDED BRANCH JOINTS

| CODE | CORES CROSS CABLE SEC mm | DIAMETER MAIN CABLE mm | DIAMETER BRANCH mm | LENGTH mm | WIDTH mm |
|---|---|---|---|---|---|
| Y5 | 120 | 40 - 50 | 40 - 50 | 560 | 155 |
| Y6 | 185 | 50 - 62 | 50 - 62 | 640 | 180 |
| Y7 | 300 | 60 - 74 | 60 - 74 | 850 | 205 |

# RECOMMENDED INSTALLATION

# Installation Straight Through Resin Joints

Ensure the electrical power is turned off before commencing with cable joint.
Examine cable end for moisture, contamination or damage. If found, cut back until usable cable is encountered.




**RESIN SETTING TIME:**
**90 MINS @ 25°C**

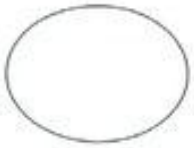
DIAMENSION 'A'
Distance from centre of joint to outer sheath of cable
DIAMENSION 'B'
Distance from centre of joint to edge of armouring
DIAMENSION 'C'
Distance from centre of joint to edge of bedding
DIAMENSION 'D'
Distance from edge of ferule to core insulation
DIAMENSION 'E'
Distance that PVC tape extends over core

***TABLE OF DIAMENSIONS (In mm)***

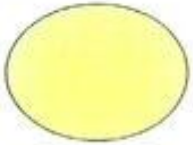
| Cable Cross-Section Area | 'A' | 'B' | 'C' | 'D' | 'E' |
|---|---|---|---|---|---|
| 5 - 16 mm² | 50 | 40 | 30 | 10 | 20 |
| 16 - 25 mm² | 70 | 60 | 50 | 10 | 20 |
| 25 - 35 mm² | 105 | 100 | 90 | 10 | 20 |
| 35 - 70 mm² | 115 | 105 | 100 | 10 | 20 |
| 70 - 150 mm² | 175 | 165 | 155 | 10 | 20 |
| 150 - 240 mm² | 235 | 225 | 215 | 10 | 20 |

## TYPES OF RESIN SUPPLIED WITH JOINT KITS

**E97**
CLEAR EPOXY



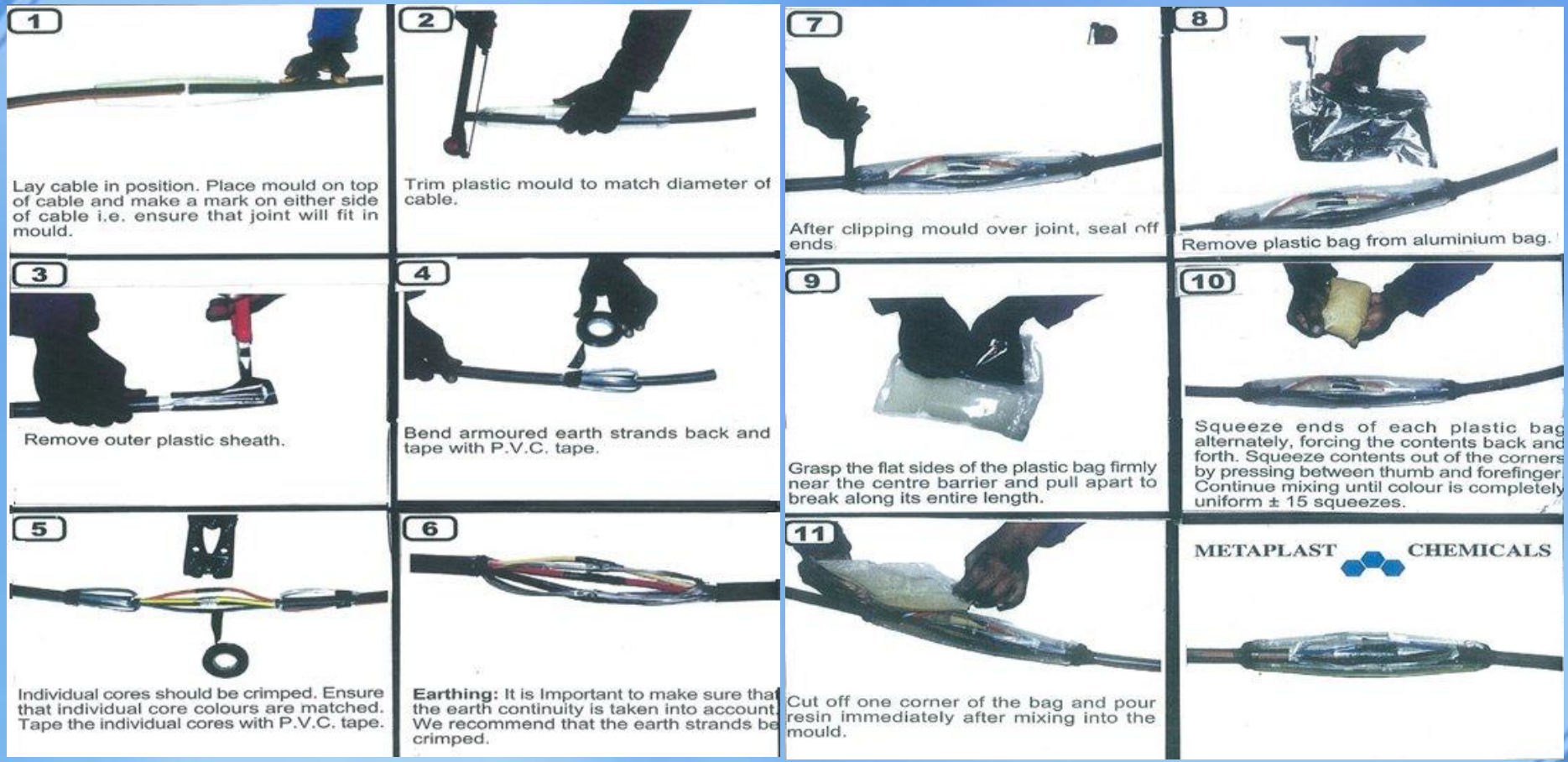
**SE125**
CLEAR EPOXY
SELF EXTINGUISHING
LOW TOXICITY



**MA153**
UNFILLED
POLYURETHANE RESIN

**MA 191**
POLYURETHANE RESI
**FILLED SYSTEM**

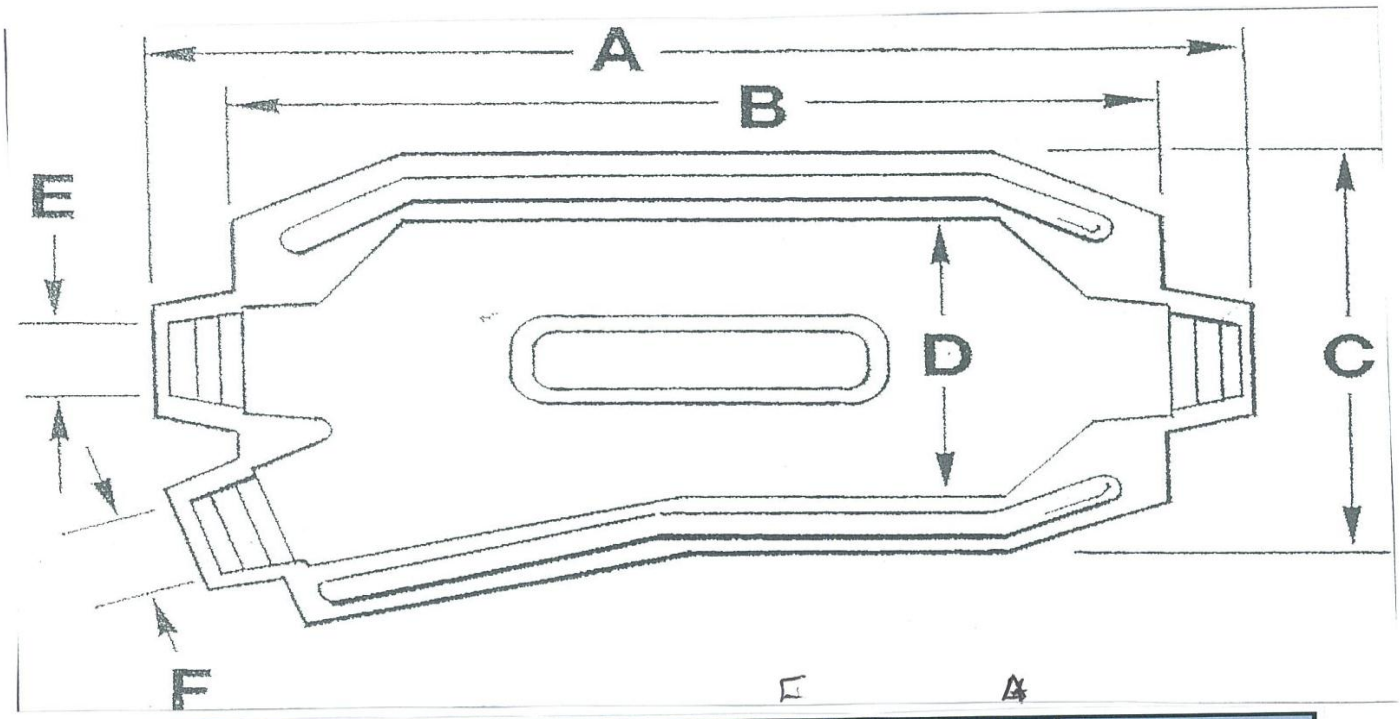
# Installation Straight Through Resin Joints



# Installation Branch Joints

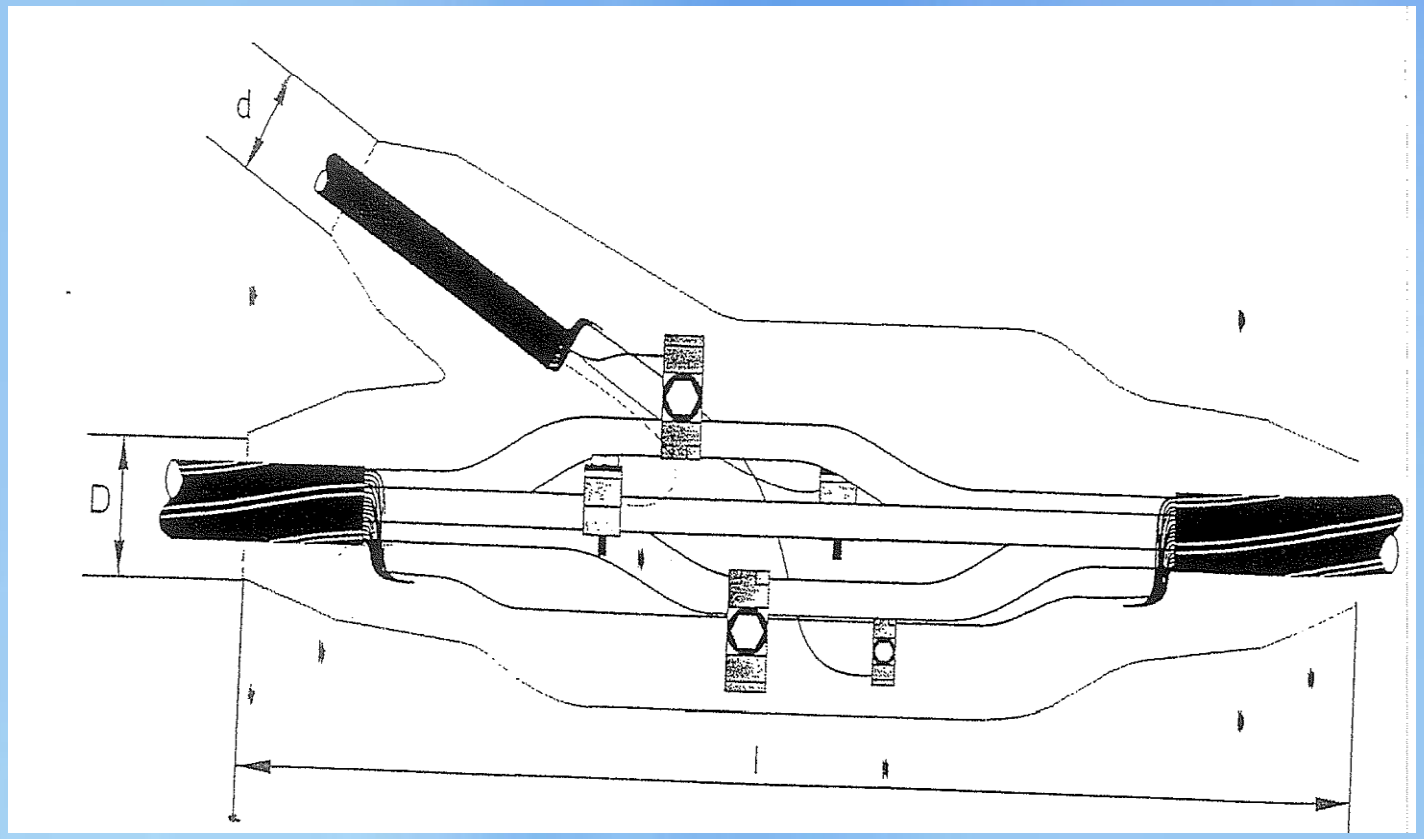
# Installation Branch Joints

## METAPLAST DISTRIBUTION BRANCH JOINT




| CODE | MAIN CABLE AREA UP TO MAX mm² | BRANCH CABLE AREA TO MAX mm² | CABLE DIAMETER E | | OVERALL DIMENSION | EFFECTIVE WORK SPACE | |
|---|---|---|---|---|---|---|---|
| | | | MIN | MAX | A | B | C |
| Y5 | 120 X 4 | 120 X 4 | 40 | 50 | 560 | 500 | 155 |
| Y6 | 185 X 4 | 185 X 4 | 50 | 60 | 640 | 580 | 180 |
| Y7 | 300 X 4 | 300 X 4 | 60 | 70 | 850 | 790 | 205 |

# Installation Branch Joints



# Accessories

## LINE TAPS

### LINE TAPS ( SPLIT BOLT CONNECTORS )
### SOLID BRASS ( CU - ALLOY ) TIN OR CADMIUM PLATED

| | |
|---|---|
| Brass specification: | B S 2874 CZ 121 Cu-alloy |
| Pressure: | B S 2872 CZ 122 Cu-alloy |
| Cadmium plating: | B S 1706 DTD 904 C |
| Tin plating | To B S 1892 sn 6c - 12 microns |

Cadmium plated for use with aluminium conductors.
Tin plated for use with copper conductors

## PARALLEL GROOVE CLAMP

Current carrying and / or strain dead ends for aluminium alloy A C S R conductors for the fixing of strainings, dead ends and auxillary conductors

| | |
|---|---|
| Material for body: | AL ALOY 6261 - T6 and H T Alloy 6005 High strength - corrosion resisting. |
| Material for bolt : | Steel 8,8 cadmium plated or stainless steel. |
| Clamp rating: | 350 AMP |

# THANK YOU
# FOR
# YOUR TIME