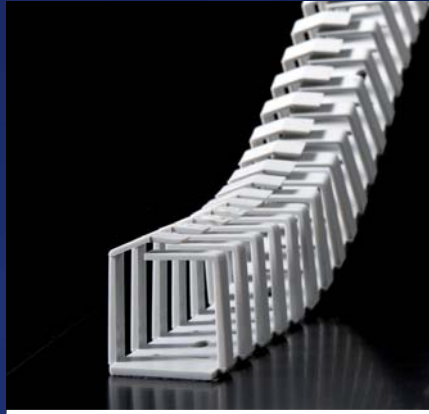




# ***IBOCO***

Wiring Ducts and Components



***IBOCO IBOCO IBOCO IBOCO***



# Bocchiotti Industrial Group



## KEY TO SUCCESS

Sales is the engine that drives the business. But successful sales require years of experience in extrusion, moulding and advanced technology and automated systems, perfect organisation in logistics and distribution. All of these elements are the well recognized keys to success that IBOCO has developed in more than 40 years of international activity.

## CORPORATE PROFILE

Founded in 1965, Bocchiotti Group (marketed under the Iboco's brand name), is one of the major manufactures of wiring ducts, trunking, enclosures, conduits and metal trays. The Group is headquartered in Genoa, Italy, and has more than 500 employees in production plants and warehouses in 10 different locations. This allows to produce over 60 million metres of wiring ducts and trunking that are exported through 38 distributors and 2 branch offices (in France and USA).



## HIGH STANDARD PRODUCTS FOR ADVANCED AND TIME-SAVING PANEL ASSEMBLING

Every item in the rapidly expanding product line is designed and produced to meet the needs of original equipment manufacturers, installers, panel builders, and system integrators and complies with IMQ, CE, UL, CSA and most international certifications.

IBOCO's extensive catalogue features several product lines: DIN rail, DIN rail accessories, slotted duct, DINOSAUR flexible duct, Spiralite, braided expandable sleeveings, installation tools and accessories. The Company's integrated panel management systems continue to evolve and grow to meet the changing needs of panel builders. However, its overriding philosophy remains unchanged: to simplify and accelerate panel building operations including wire identification, retention and separation.

**IBOCO**

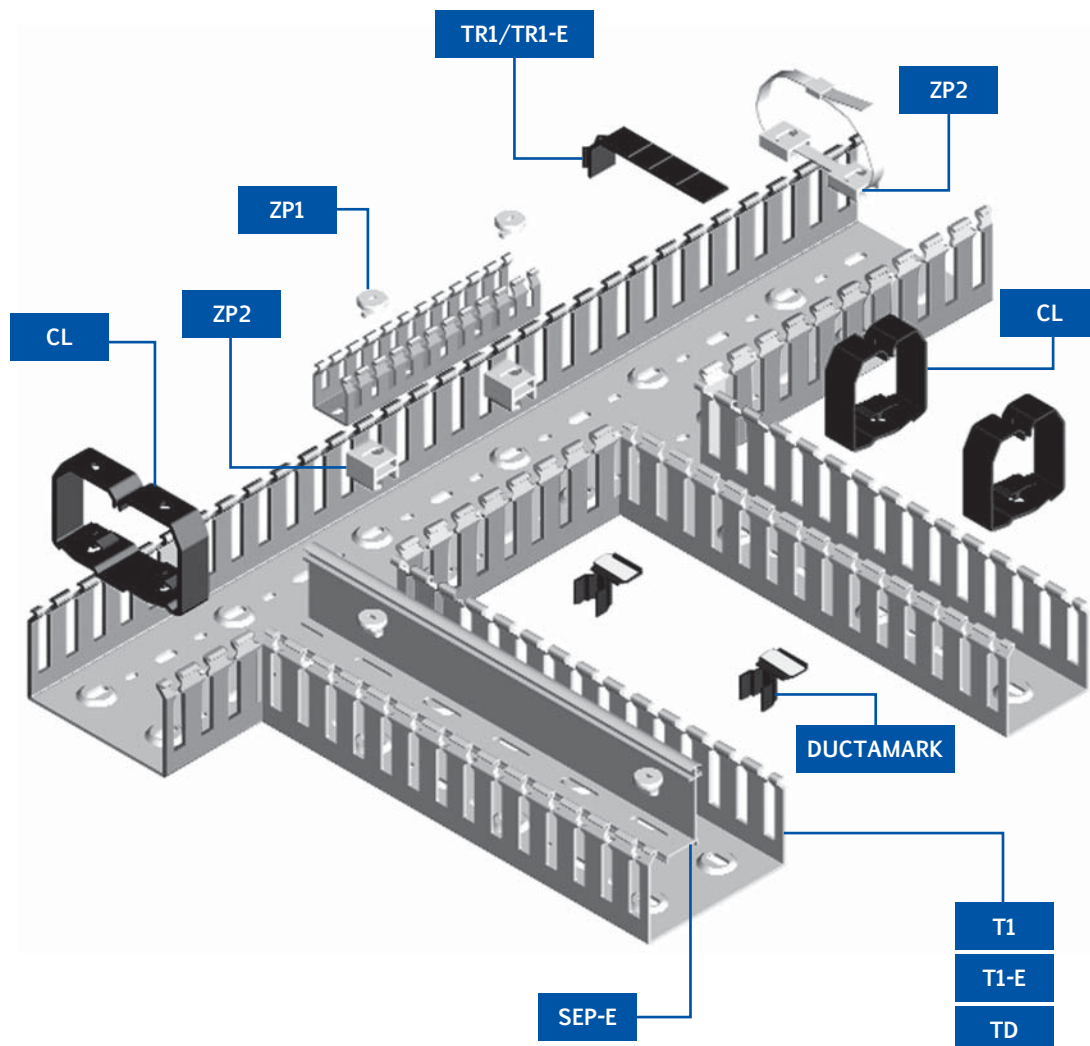
## THE MOST EXTENSIVE LINE OF WIRING DUCT AND COMPONENTS

BOCCHIOTTI wiring systems feature excellent assembly functionality and are ideal for any type of power and control panel where performance remains unaltered over time even under the heaviest operating conditions.

The reliability and durability of these products is guaranteed by a very severe selection of raw materials employed for their production and rigorous process controls.

Their superior quality is a guarantee of product compliance with all major national and international standards.

The full range, featuring state-of-the-art technical solutions, includes 9 types, 4 colours and 30 sizes of ducts with different side slot openings, size and colours, in addition to several functional components and accessories including universal spiral wrapping and galvanic zinc plating steel DIN rails.



# Table of contents

|                                                      | Page  |
|------------------------------------------------------|-------|
| International Standards and Certifications           | 4-5   |
| Wiring duct series                                   | 6-9   |
| Duct covers                                          | 9     |
| Wiring duct separators                               | 10    |
| Fixing inserts - Modular spacers                     | 10    |
| Wire retainers                                       | 11-12 |
| Din rail mounting block                              | 12    |
| Identification tag                                   | 13    |
| Component to fix the separator                       | 13    |
| Wiring duct rivets - Rivet tool                      | 14    |
| Flexible ducts                                       | 15    |
| Universal spiral wraps - Braided expandable sleeving | 16    |
| Din rails                                            | 17    |
| Din rail support brackets                            | 18    |
| Mounting clips                                       | 18-19 |
| Multifunctional tool                                 | 19    |

The name of the following products illustrated in this Bocchiotti "Wiring Ducts and Components" Catalogue are all trademarks: DINBLOCK - DUCTAFIX - DUCTAMARK - TRACY.

The products presented in this Catalogue comply with applicable standards and are produced according to workmanlike manufacturing methods.

Correct installation by qualified staff, proper use and periodical maintenance contribute to safety and to the safeguarding of people and property.

Continuous production and technological improvement is the primary objective of Bocchiotti S.p.A. through the constant acquisition of new developments in international standards and materials. For this reason, technical specifications, sizes, drawings, pictures and product description may be altered without prior notice.

The information presented in this Catalogue is given only as an indication and in any case does not involve the liability of the manufacturer.

All rights of industrial property, name, corporate image and product exclusivity shall be reserved.

This Catalogue is property of Bocchiotti S.p.A.. No total or partial copy shall be allowed without prior authorization.

## COMPLIANCE WITH INTERNATIONAL STANDARDS

|                              |                                                                                                        |                                                    |               |
|------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------|
| <b>CSA</b>                   | Canadian Standards Association                                                                         | C 22.2 n. 0<br>file n. 40464                       | Canada        |
| <b>DIN</b><br><b>DIN VDE</b> | Deutsches Institut für Normung<br>Deutsches Institut für Normung<br>Verband deutscher Elektrotechniker | 43659<br>0660 Teil 506                             | Germany       |
| <b>AFNOR</b>                 | Association Française de Normalisation                                                                 | NF C 68-102                                        | France        |
| <b>UL</b>                    | Underwriters Laboratories                                                                              | 1565 recognized<br>file n. E66583/E66583 SP        | United States |
| <b>CENELEC</b>               | Comité Européen<br>de Normalisation Electrotechnique                                                   | CEI EN 50085-1<br>CEI EN 50085-2-3<br>CEI EN 60715 | Europe/Italy  |

Bocchiotti products have also been tested and approved by the following Approval Agencies:

| Agency                                                         | Reference                                                                                                | Bocchiotti<br>wiring products concerned                                                                                                                             |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EZU'</b><br>Elektrotechnický zkušební ústav                 | N° 1001555<br>18-8-2000                                                                                  | T1, T1-E, T1-F, T1-EF, TD                                                                                                                                           |
| <b>MEEI</b><br>Magyar Elektrotechnikai Ellenőrző<br>Intézet    | N° C4026K085                                                                                             | T1, T1-E, TD, DN-A                                                                                                                                                  |
| <b>CSTB</b><br>Centre Scientifique et Technique<br>du Bâtiment | Fire Performance<br>Certificate<br>Classification: M1<br>Procès-Verbal de<br>Classement<br>n° RA 07-0315 | The approval covers rigid<br>self-extinguishing PVC used for the<br>production of all Bocchiotti products<br>in plastic insulating material.<br><br>(GREY RAL 7030) |
| <b>SIQ</b><br>Slovenian Institute of Quality<br>and Metrology  | N° C212-0128/02                                                                                          | T1, T1-E, TD                                                                                                                                                        |

### NATO CODE

Bocchiotti has obtained the NATO MANUFACTURER CODE (NATO code A5536) from the Ministry of Defence, Central Military Procurement Office, and is listed in the "15-H4 Publication - NATO MANUFACTURERS CODE".

### CE MARKING

CE directives define the procedures concerning the safety. The mark CE proves the conformity of the product to the safety requirements of the European Community. Bocchiotti is in full compliance with the low voltage Community Directive 2006/95/EC, and with its usual care and awareness of legal developments, is authorized to affix the CE mark on its products.

### UNI EN ISO 9001:2000 CERTIFICATION



BOCCHIOTTI S.p.A. has obtained the Corporate Quality System Certification in compliance with UNI EN ISO 9001:2000 Standards (Certificate No. 9105. BOCC).



## CERTIFICATIONS

| Name        | Certifications                                                                                     |                                                                                                   |                                                                                                       |                                                                                                        | Name          | Certifications                                                                                     |                                                                                                   |                                                                                                         |                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|             | <br>CSA<br>CANADA | <br>IMQ<br>ITALY | <br>UL<br>REC<br>USA | <br>R.I.N.A.<br>ITALY |               | <br>CSA<br>CANADA | <br>IMQ<br>ITALY | <br>UL<br>REC<br>USA | <br>R.I.N.A.<br>ITALY |
| CL 40x40    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 120x80   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 60x40    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 25x100   |                                                                                                    | ○                                                                                                 | ●                                                                                                       |                                                                                                          |
| CL 40x60    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 40x100   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 60x60    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 60x100   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 80x60    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 80x100   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 100x60   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 100x100  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 120x60   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-F 150x100  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 40x80    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 25x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 60x80    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 40x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 80x80    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 60x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 100x80   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 80x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 120x80   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 100x40   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 60x100   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 25x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 80x100   |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 40x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 100x100  |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 60x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| CL 150x100  |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-E 80x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| DINBLOK 3   |                                                                                                    | ●                                                                                                 |                                                                                                       |                                                                                                        | T1-E 100x60   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| DN-AS       |                                                                                                    |                                                                                                   |                                                                                                       | ●                                                                                                      | T1-E 120x60   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| DN-AM       |                                                                                                    |                                                                                                   |                                                                                                       | ●                                                                                                      | T1-EF 25x80   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| DN-AL       |                                                                                                    |                                                                                                   |                                                                                                       | ●                                                                                                      | T1-EF 40x80   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| DUCTAMARK 1 |                                                                                                    | ●                                                                                                 |                                                                                                       |                                                                                                        | T1-EF 60x80   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| SEP-E 40    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-EF 80x80   | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| SEP-E 60    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-EF 100x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| SEP-E 80    |                                                                                                    | ●                                                                                                 |                                                                                                       | ●                                                                                                      | T1-EF 120x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| ST          |                                                                                                    | ●                                                                                                 |                                                                                                       |                                                                                                        | T1-EF 25x100  |                                                                                                    | ○                                                                                                 | ●                                                                                                       |                                                                                                          |
| T1 15x18    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | T1-EF 100x100 | ●                                                                                                  | ○                                                                                                 | ●                                                                                                       | ●                                                                                                        |
| T1 15x30    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 25x25      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 25x30    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 37,5x25    | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 15x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 50x37,5    | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 25x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 25x50      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 40x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 37,5x50    | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 60x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 50x50      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 80x40    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 75x50      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 100x40   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 100x50     | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 15x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 125x50     | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 25x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 37,5x75    | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 40x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 50x75      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 60x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 75x75      | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 80x60    | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 100x75     | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 100x60   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 125x75     | ●                                                                                                  |                                                                                                   | ●                                                                                                       |                                                                                                          |
| T1 120x60   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 75x125     | ●                                                                                                  |                                                                                                   | ●                                                                                                       |                                                                                                          |
| T1 75x125   | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TD 100x125    | ●                                                                                                  |                                                                                                   | ●                                                                                                       | ●                                                                                                        |
| T1 100x125  | ●                                                                                                  | ●                                                                                                 | ●                                                                                                     | ●                                                                                                      | TPD 37,5x50   |                                                                                                    |                                                                                                   |                                                                                                         | ●                                                                                                        |
| T1-F 25x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                     | ●                                                                                                      | TPD 50x50     |                                                                                                    |                                                                                                   |                                                                                                         | ●                                                                                                        |
| T1-F 40x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                     | ●                                                                                                      | TPD 75x50     |                                                                                                    |                                                                                                   |                                                                                                         | ●                                                                                                        |
| T1-F 60x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                     | ●                                                                                                      | TPD 100x50    |                                                                                                    |                                                                                                   |                                                                                                         | ●                                                                                                        |
| T1-F 80x80  | ●                                                                                                  | ○                                                                                                 | ●                                                                                                     | ●                                                                                                      | TPD 125x50    |                                                                                                    |                                                                                                   |                                                                                                         | ●                                                                                                        |
| T1-F 100x80 | ●                                                                                                  | ○                                                                                                 | ●                                                                                                     | ●                                                                                                      | ZP1           |                                                                                                    | ●                                                                                                 |                                                                                                         |                                                                                                          |
|             |                                                                                                    |                                                                                                   |                                                                                                       |                                                                                                        | ZP2           |                                                                                                    | ●                                                                                                 |                                                                                                         |                                                                                                          |

○ in compliance CEI EN 50085-2-3

# T1

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030, White  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



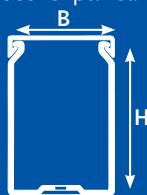
# T1-F

## DUCT SERIES

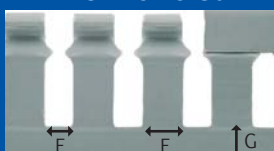
**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



This duct is ideal for wiring large-sized cables usually employed in power panels. With thick side and base, it has a strong construction and maximum application stability, very good holding also under heavy wiring and longer durability and reliability. Available in a wide range of heights for space optimization inside the electric panel.



BASE 15-25x30



BASE 25-40-60-75-80-100-120-150



Detail of duct body/cover coupling for maximum wire retention and maximum solidity



Blue colour duct recognized for intrinsic safe



| Name             | Dimensions (mm) |     |   |     |    | Section mm <sup>2</sup> | Packaging metres |
|------------------|-----------------|-----|---|-----|----|-------------------------|------------------|
|                  | B               | H   | E | F   | G  |                         |                  |
| T1 15x18 G       | 15              | 18  | 5 | 7,5 | 4  | 200                     | 72               |
| T1 15x30 G       | 15              | 30  | 5 | 7,5 | 6  | 340                     | 64               |
| T1 25x30 G/W/BL* | 25              | 30  | 5 | 7,5 | 8  | 610                     | 72               |
| T1 15x40 G*      | 15              | 40  | 5 | 7,5 | 10 | 460                     | 48               |
| T1 25x40 G/W     | 25              | 40  | 8 | 12  | 12 | 820                     | 72               |
| T1 40x40 G/W/BL* | 40              | 40  | 8 | 12  | 12 | 1360                    | 40               |
| T1 60x40 G/BL*   | 60              | 40  | 8 | 12  | 12 | 1970                    | 24               |
| T1 80x40 G       | 80              | 40  | 8 | 12  | 12 | 2680                    | 24               |
| T1 100x40 G      | 100             | 40  | 8 | 12  | 12 | 3380                    | 16               |
| T1 15x60 G       | 15              | 60  | 5 | 7,5 | 10 | 680                     | 32               |
| T1 25x60 G/W/BL* | 25              | 60  | 8 | 12  | 14 | 1190                    | 48               |
| T1 40x60 G/W/BL* | 40              | 60  | 8 | 12  | 14 | 2040                    | 36               |
| T1 60x60 G/W/BL* | 60              | 60  | 8 | 12  | 14 | 3080                    | 24               |
| T1 80x60 G/W     | 80              | 60  | 8 | 12  | 14 | 4150                    | 24               |
| T1 100x60 G/W*   | 100             | 60  | 8 | 12  | 14 | 5250                    | 16               |
| T1 120x60 G      | 120             | 60  | 8 | 12  | 14 | 6300                    | 16               |
| T1 75x125 G/W*   | 75              | 125 | 8 | 12  | 20 | 8398                    | 12               |
| T1 100x125 G/W*  | 100             | 125 | 8 | 12  | 20 | 11415                   | 8                |

G = GREY RAL 7030

W = WHITE

BL = BLUE RAL 5015

\* = Available upon request

| Name                | Dimensions (mm) |     |   |    |    | Section mm <sup>2</sup> | Packaging metres |
|---------------------|-----------------|-----|---|----|----|-------------------------|------------------|
|                     | B               | H   | E | F  | G  |                         |                  |
| T1-F 25x80 G        | 25              | 80  | 8 | 12 | 16 | 1550                    | 48               |
| T1-F 40x80 G        | 40              | 80  | 8 | 12 | 16 | 2700                    | 32               |
| T1-F 60x80 G/W*/BL* | 60              | 80  | 8 | 12 | 16 | 4140                    | 24               |
| T1-F 80x80 G/W*/BL* | 80              | 80  | 8 | 12 | 16 | 5660                    | 24               |
| T1-F 100x80 G       | 100             | 80  | 8 | 12 | 16 | 7150                    | 16               |
| T1-F 120x80 G       | 120             | 80  | 8 | 12 | 16 | 8630                    | 16               |
| T1-F 25x100 G/BL*   | 25              | 100 | 8 | 12 | 18 | 2300                    | 16               |
| T1-F 40x100 G       | 40              | 100 | 8 | 12 | 18 | 3310                    | 16               |
| T1-F 60x100 G       | 60              | 100 | 8 | 12 | 18 | 5140                    | 8                |
| T1-F 80x100 G       | 80              | 100 | 8 | 12 | 18 | 7020                    | 8                |
| T1-F 100x100 G/BL*  | 100             | 100 | 8 | 12 | 18 | 8920                    | 8                |
| T1-F 150x100 G/W*   | 150             | 100 | 8 | 12 | 18 | 13570                   | 8                |

G = GREY RAL 7030

W = WHITE

BL = BLUE RAL 5015

\* = Available upon request

### Lines T1-F/T1-EF h 80-100

Finger narrowing for easier vertical wiring before the cover is mounted, for correct wire positioning and circuit separation



T1-F



# T1-E

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



# T1-EF

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



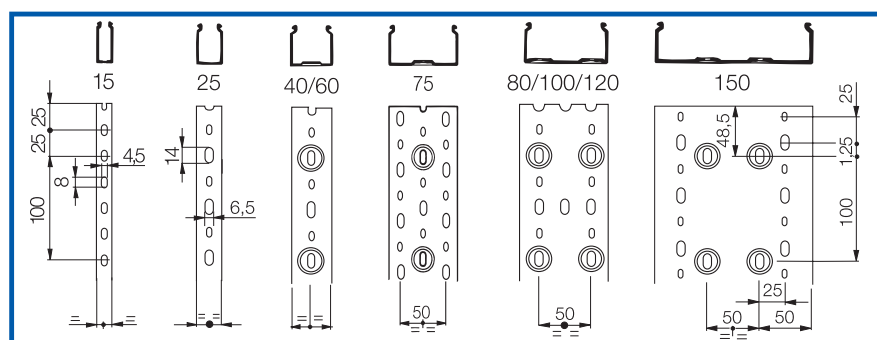
| Name          | Dimensions (mm) |    |   |   |    | Section mm <sup>2</sup> | Packaging metres |
|---------------|-----------------|----|---|---|----|-------------------------|------------------|
|               | B               | H  | E | F | G  |                         |                  |
| T1-E 25x40 G  | 25              | 40 | 4 | 6 | 12 | 820                     | 72               |
| T1-E 40x40 G  | 40              | 40 | 4 | 6 | 12 | 1360                    | 40               |
| T1-E 60x40 G  | 60              | 40 | 4 | 6 | 12 | 1970                    | 24               |
| T1-E 80x40 G  | 80              | 40 | 4 | 6 | 12 | 2680                    | 24               |
| T1-E 100x40 G | 100             | 40 | 4 | 6 | 12 | 3380                    | 16               |
| T1-E 25x60 G  | 25              | 60 | 4 | 6 | 14 | 1190                    | 48               |
| T1-E 40x60 G  | 40              | 60 | 4 | 6 | 14 | 2040                    | 36               |
| T1-E 60x60 G  | 60              | 60 | 4 | 6 | 14 | 3080                    | 24               |
| T1-E 80x60 G  | 80              | 60 | 4 | 6 | 14 | 4150                    | 24               |
| T1-E 100x60 G | 100             | 60 | 4 | 6 | 14 | 5250                    | 16               |
| T1-E 120x60 G | 120             | 60 | 4 | 6 | 14 | 6300                    | 16               |

G = GREY RAL 7030

| Name            | Dimensions (mm) |     |   |   |    | Section mm <sup>2</sup> | Packaging metres |
|-----------------|-----------------|-----|---|---|----|-------------------------|------------------|
|                 | B               | H   | E | F | G  |                         |                  |
| T1-EF 25x80 G   | 25              | 80  | 4 | 6 | 16 | 1550                    | 48               |
| T1-EF 40x80 G   | 40              | 80  | 4 | 6 | 16 | 2700                    | 32               |
| T1-EF 60x80 G   | 60              | 80  | 4 | 6 | 16 | 4140                    | 24               |
| T1-EF 80x80 G   | 80              | 80  | 4 | 6 | 16 | 5660                    | 24               |
| T1-EF 100x80 G  | 100             | 80  | 4 | 6 | 16 | 7150                    | 16               |
| T1-EF 120x80 G  | 120             | 80  | 4 | 6 | 16 | 8630                    | 16               |
| T1-EF 25x100 G  | 25              | 100 | 4 | 6 | 18 | 2300                    | 16               |
| T1-EF 100x100 G | 100             | 100 | 4 | 6 | 18 | 8920                    | 8                |

G = GREY RAL 7030

### T1/T1-E/T1-F/T1-EF - BOTTOM PERFORATION

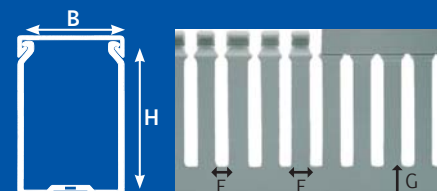


### Duct bottom perforation according to DIN 43659

The bottom perforation of the cable duct series T1 and T1-E allows mounting on the panel with DUCTAFIX R6 or R4 or on DIN rails.

The recess bosses in the base of duct series T1 and T1-E allow rapid mounting of components CL, ZP2 and SEP-E inside the cable duct.

This duct is ideal for small sized wires commonly employed in electric and electronic control panels. This duct with restricted slot opening is strong and robust due to its thick base and side construction. Perfect solidity is also guaranteed in cantilevered applications. Made of a material with more than 3000 NPa modulus of elasticity, it allows for repeated opening and closing of the duct fingers during wiring operations even at low temperature, without breaking. Maximum accuracy and standardization in series installations is achieved due to close design tolerance.



Two predetermined break lines:  
 - for breaking off and removal of sidewall finger segments only.  
 - for removal of sidewall finger and base segments.



Patented recess boss for rapid mounting of components.

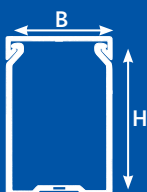
# TD

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



This duct features a 12,5 module according to DIN 43659 standards which is particularly suitable for use with other DIN 12,5 equipment for perfect size interfacing. Optimized duct size/wire retention ratio and perfectly rounded finger edges for safe operations even in installations with difficult access. Repeated opening and closing of the fingers during wiring operations is possible due to their size and resilience.



| Name          | Dimensions (mm) |      |   |     |    | Section<br>mm² | Packaging<br>metres |
|---------------|-----------------|------|---|-----|----|----------------|---------------------|
|               | B               | H    | E | F   | G  |                |                     |
| TD 25x25 G    | 25              | 25   | 5 | 7,5 | 7  | 460            | 48                  |
| TD 37,5x25 G  | 37,5            | 25   | 5 | 7,5 | 7  | 660            | 64                  |
| TD 50x37,5 G  | 50              | 37,5 | 5 | 7,5 | 10 | 1490           | 24                  |
| TD 25x50 G    | 25              | 50   | 5 | 7,5 | 11 | 990            | 48                  |
| TD 37,5x50 G  | 37,5            | 50   | 5 | 7,5 | 11 | 1500           | 24                  |
| TD 50X50 G    | 50              | 50   | 5 | 7,5 | 11 | 2060           | 24                  |
| TD 75X50 G    | 75              | 50   | 5 | 7,5 | 11 | 3200           | 24                  |
| TD 100x50 G   | 100             | 50   | 5 | 7,5 | 11 | 4330           | 16                  |
| TD 125x50 G*  | 125             | 50   | 5 | 7,5 | 11 | 5370           | 16                  |
| TD 37,5x75 G  | 37,5            | 75   | 5 | 7,5 | 13 | 2330           | 24                  |
| TD 50x75 G    | 50              | 75   | 5 | 7,5 | 13 | 3200           | 24                  |
| TD 75x75 G    | 75              | 75   | 5 | 7,5 | 13 | 4940           | 16                  |
| TD 100x75 G   | 100             | 75   | 5 | 7,5 | 13 | 6650           | 16                  |
| TD 125x75 G*  | 125             | 75   | 5 | 7,5 | 13 | 8310           | 12                  |
| TD 75x125 G*  | 75              | 125  | 5 | 7,5 | 20 | 8398           | 12                  |
| TD 100x125 G* | 100             | 125  | 5 | 7,5 | 20 | 11415          | 8                   |

G = GREY RAL 7030 \* = Available upon request

The TD line features an innovative coupling. Reliability and functionality of this line in any type of application are further enhanced by this new solution, even in panels subject to high thermal and dynamic stress.



# TPD

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
 Duct complete with cover

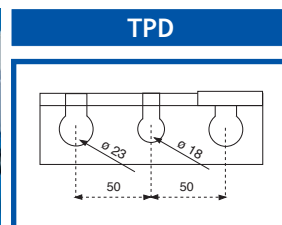


Slotted side-trunking with 18 and 23 mm diam. holes for branching rigid and corrugated pipes. Perfect fitting of the body-cover coupling system even under heavy duty conditions. Ideal trunking for use in lift installations.



| Name          | Packaging metres |
|---------------|------------------|
| TPD 37,5x50 G | 24               |
| TPD 50x50 G   | 24               |
| TPD 75x50 G   | 24               |
| TPD 100x50 G  | 16               |
| TPD 125x50 G  | 16               |

G = GREY RAL 7030

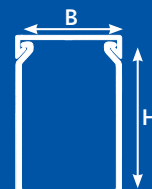




# TS

## DUCT SERIES

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres  
**Standard Unit Supplied:**  
 Duct complete with cover



Totally solid duct (no mounting holes in the bottom)

| Name         | Dimensions (mm) |     | Section mm <sup>2</sup> | Packaging metres |
|--------------|-----------------|-----|-------------------------|------------------|
|              | B               | H   |                         |                  |
| TS 15x18 G   | 15              | 18  | 200                     | 72               |
| TS 15x30 G   | 15              | 30  | 340                     | 64               |
| TS 25x30 G   | 25              | 30  | 610                     | 72               |
| TS 25x40 G   | 25              | 40  | 820                     | 72               |
| TS 40x40 G   | 40              | 40  | 1360                    | 40               |
| TS 40x60 G   | 40              | 60  | 2040                    | 36               |
| TS 60x60 G   | 60              | 60  | 3080                    | 24               |
| TS 80x60 G   | 80              | 60  | 4150                    | 24               |
| TS 25x80 G   | 25              | 80  | 1550                    | 48               |
| TS 40x80 G   | 40              | 80  | 2700                    | 32               |
| TS 60x80 G   | 60              | 80  | 4140                    | 24               |
| TS 80x80 G   | 80              | 80  | 5660                    | 24               |
| TS 100x80 G  | 100             | 80  | 7150                    | 16               |
| TS 80x100 G  | 80              | 100 | 7020                    | 8                |
| TS 100x100 G | 100             | 100 | 8920                    | 8                |

G = GREY RAL 7030



# COV

## COVERS FOR T1, T1-F, T1-E, T1-EF, TD, TPD AND TS

**Material:** Rigid PVC, self extinguishing  
**Colour:** Grey RAL 7030  
**Standard Length:** 2 metres

| Name       | Packaging metres |
|------------|------------------|
| COV 15 G   | 50               |
| COV 25 G   | 50               |
| COV 37,5 G | 50               |
| COV 40 G   | 50               |
| COV 50 G   | 50               |
| COV 60 G   | 50               |
| COV 75 G   | 50               |
| COV 80 G   | 50               |
| COV 100 G  | 40               |
| COV 120 G  | 40               |
| COV 125 G  | 40               |
| COV 150 G  | 40               |

G = GREY RAL 7030

# SEP-E

## SEPARATORS FOR T1, T-F, T1-E AND T1-EF

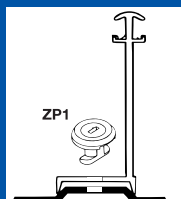
**Material:** Rigid PVC, self extinguishing

**Colour:** Grey RAL 7030

**Standard Length:** 2 metres



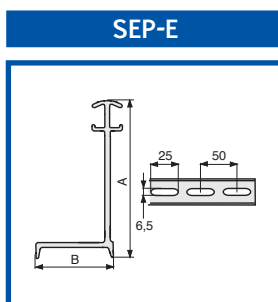
SEP-E allows the physical separation of circuits with different voltages and/or functions. The various mounting arrangements of SEP-E allow alternate compartmentation of duct and differing ratios of usable section.



SEP-E mounting detail



| Name     | For Ducts Height | Packaging metres |
|----------|------------------|------------------|
| SEP-E 40 | 40               | 64               |
| SEP-E 60 | 60               | 40               |
| SEP-E 80 | 80               | 24               |



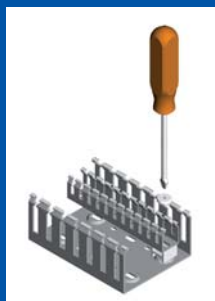
| Name     | Dimensions |    |
|----------|------------|----|
|          | A          | B  |
| SEP-E 40 | 33         | 23 |
| SEP-E 60 | 52         | 23 |
| SEP-E 80 | 72         | 23 |

# ZP1/ZP2

## FIXING INSERTS MODULAR SPACERS

**Material:** Polyamide 6

**Colour:** Natural



With a simple quarter turn, ZP1 is used to mount components and SEP-E separators inside duct. Also ZP1 can be used to mount smaller sizes of duct inside larger sizes, thus achieving separation of circuits with different voltages and/or functions.

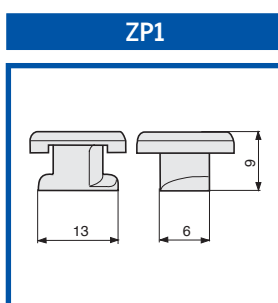
With a simple quarter turn ZP2 can be mounted inside duct. By stacking, mounting levels at different heights are achieved.



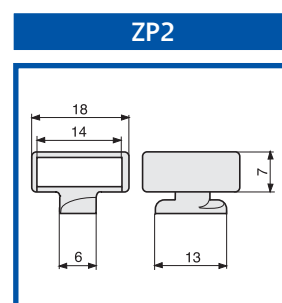
For tightening a wire bundle inside duct, pass a cable tie through ZP2.

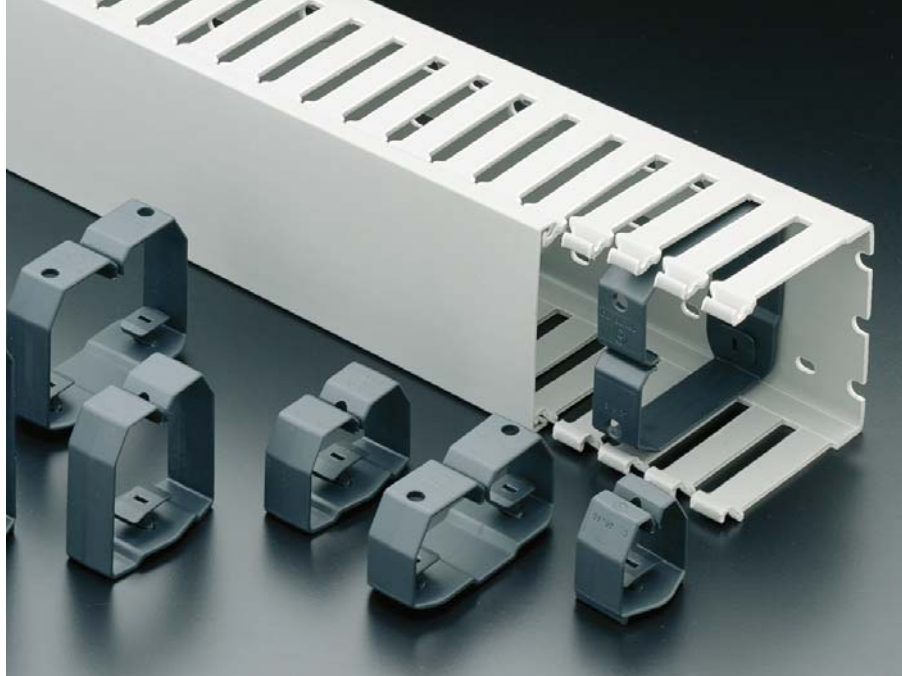


| Name | Packaging pieces |
|------|------------------|
| ZP1  | 1000 (10x100)    |



| Name | Packaging pieces |
|------|------------------|
| ZP2  | 500 (10x50)      |





# CL

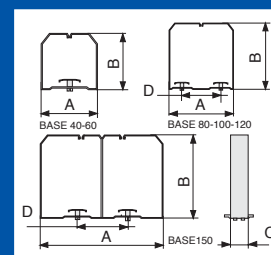
**WIRE RETAINERS FOR T1, T1-F,  
T1-E AND T1-EF**

**Material:** ABS/PC  
**Colour:** Black



CL wire retainers are available in a totally new shape to meet the most sophisticated wire holding requirements. Made of PVC for a better surface finishing and excellent dynamic resistance, CL feature an exclusive and patented system - with in-built anchoring element (ZP1) - for faster installation, allowing to be repositioned even when the duct is already installed and offering maximum locking with antirotational pins inserted in the recess boss in the duct base. CL are supplied in BLACK colour for a better aesthetic result, with name, size and quality marks placed on the upper front side. This solution offers immediate identification of the product and of the standards which it complies with, thus saving inspection and testing time.

**CL**



| Name       | Dimensions |    |    |    | Packaging pieces |
|------------|------------|----|----|----|------------------|
|            | A          | B  | C  | D  |                  |
| CL 40x40   | 35         | 36 | 20 |    | 120 (3x40)       |
| CL 60x40   | 55         | 35 | 20 |    | 120 (3x40)       |
| CL 40x60   | 35         | 56 | 20 |    | 120 (3x40)       |
| CL 60x60   | 54         | 55 | 20 |    | 120 (6x20)       |
| CL 80x60   | 74         | 55 | 20 | 50 | 60 (6x10)        |
| CL 100x60  | 94         | 55 | 20 | 50 | 60 (6x10)        |
| CL 120x60  | 114        | 54 | 20 | 50 | 50 (5x10)        |
| CL 40x80   | 34         | 75 | 20 |    | 120 (6x20)       |
| CL 60x80   | 54         | 75 | 20 |    | 60 (3x20)        |
| CL 80x80   | 74         | 74 | 20 | 50 | 60 (6x10)        |
| CL 100x80  | 94         | 75 | 20 | 50 | 30 (3x10)        |
| CL 120x80  | 113        | 74 | 20 | 50 | 30 (3x10)        |
| CL 60x100  | 54         | 95 | 20 |    | 40 (2x20)        |
| CL 80x100  | 74         | 94 | 20 | 50 | 30 (3x10)        |
| CL 100x100 | 93         | 94 | 20 | 50 | 30 (6x5)         |
| CL 150x100 | 143        | 94 | 20 | 50 | 20 (4x5)         |



| Name  | Packaging pieces |
|-------|------------------|
| TR1   | 100 (2x50)       |
| TR1-E | 100 (2x50)       |
| TRD*  | 100 (2x50)       |



\* = Available upon request

With a perfect fitting on duct fingers owing to an anti-rotation tooth, the unique profile allows for a more rapid mounting. The ideal solution for every panel builder during original equipment assembly as well as during maintenance work.

# TR1/TR1-E

**WIRE RETAINERS WITH  
PREDETERMINED BREAKLINES  
FOR T1 (TR1), T1E (TR1-E)**

**Material:** ABS/PC  
**Colour:** Black

# TRD

**WIRE RETAINERS WITH  
PREDETERMINED BREAKLINES  
FOR TD**

**Material:** Noryl® Modified PPO-Resins  
**Colour:** Grey

A line of easy-to-use accessories that suit the various duct sizes to hold wires during wire operations. TR1, TR1-E and TRD come in one single size with predetermined breaklines to adapt them to different duct width: 100, 80, 60 and 40 for T1, T1-E and 100, 75, 50 and 37.5 for TD.

# TR1-N/TR1-EN

## WIRE RETAINERS

**Material:** Glass reinforced Polyamide 6  
**Colour:** Grey RAL 7030

- Fast installation
- Maximum locking
- Same colour of the ducts for a perfect integration
- Only 4 ref. for the whole range of ducts



### Maximum locking

High resistance of the material and new anchorage system on both sides



### Maximum flexibility - min. references

The predetermined breaklines allow the anchorage on all the bases of the ducts (from the base 40 up to 150 mm) by only 4 ref. (2 for T1 and 2 for T1-E)



| Name          | Packaging pieces |
|---------------|------------------|
| TR1-N 40-80   | 100 (4x25)       |
| TR1-N 100-150 | 50 (2x25)        |

| Name           | Packaging pieces |
|----------------|------------------|
| TR1-EN 40-80   | 100 (4x25)       |
| TR1-EN 100-150 | 50 (2x25)        |



### Fast snap-in

It is sufficient to widen lightly a finger of T1 or 2 fingers of T1-E and the new wire retainer is mounted by an easy click

# DINBLOK 3

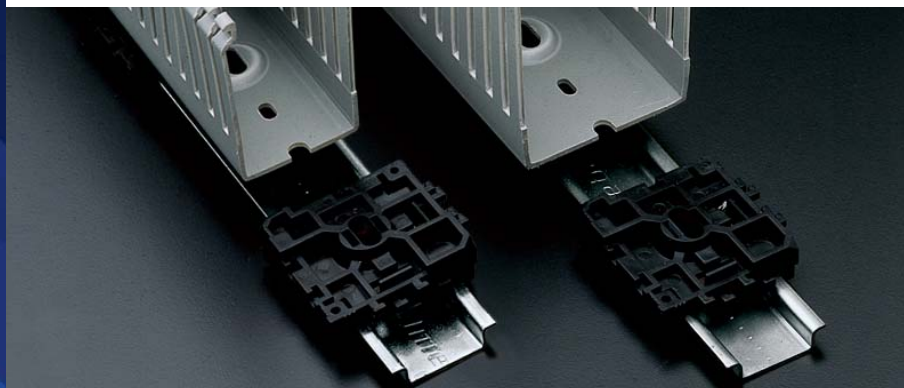
## MOUNTING BLOCK

**Material:** Acetal Resin  
**Colour:** Black



Allows the mounting of duct onto metal DIN mounting rails. DINBLOK can be applied in two different positions, in order to allow the mounting of duct in a horizontal as well as in a vertical direction.

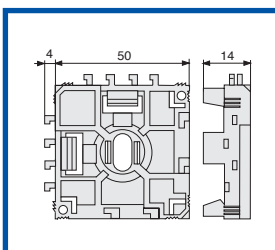
For good stability when mounting wiring duct with a width of 100, 120 and 150 on Din Rail it is recommended that two rails are used in parallel and that the Dinblok is snapped together.



| Name      | Packaging pieces |
|-----------|------------------|
| DINBLOK 3 | 100 (4x25)       |

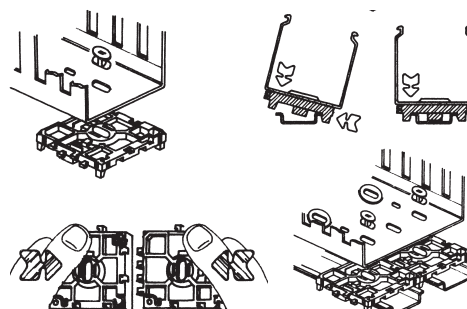
DINBLOK comes complete with ZP1

### DINBLOK 3



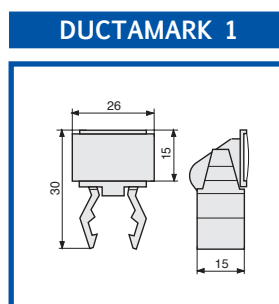
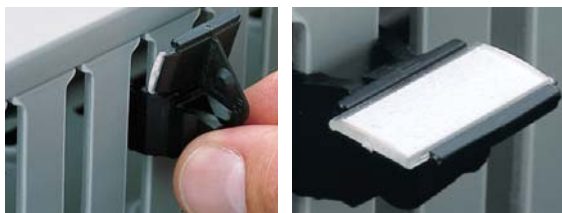
### DINBLOK 3

For mounting rails Omega 3/3A/3B type

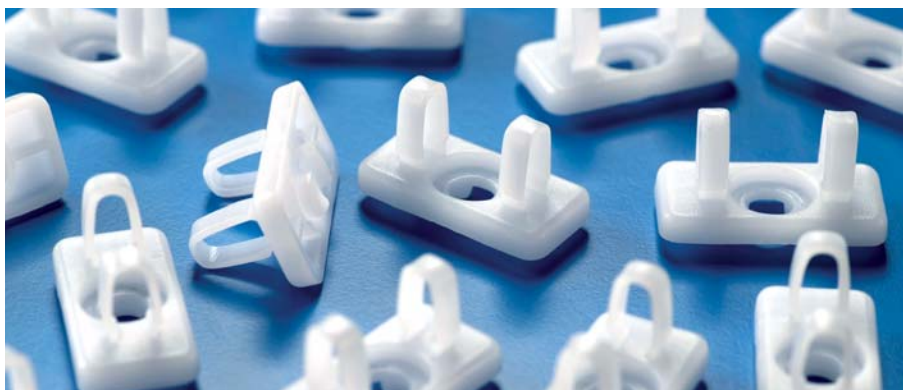




| Name        | Packaging pieces |
|-------------|------------------|
| DUCTAMARK 1 | 100              |



DUCTAMARK is mounted by snapping it onto the sidewall finger segments taking care that it is placed above the wires coming out to the sidewall slots.



| Name      | Packaging pieces |
|-----------|------------------|
| BLOKSEP-E | 500 (10x50)      |

An easy click to block the separator

# DUCTAMARK 1

## IDENTIFICATION TAG FOR T1

Material: Polyamide 6  
 Colour: Black  
 Slide: Transparent Polystyrene  
 Label: White cardboard



Resolves in a practical and functional manner the problem of control gear, and switchgear identification.

### DUCTAMARK

- avoids glueing and drilling
- need not be removed during maintenance or alteration work which involves the removal of the covers
- is always clearly visible



DUCTAMARK 1

# BLOKSEP-E

## COMPONENT TO FIX THE SEPARATOR

Material: Polyamide 6  
 Colour: Natural

Easy installation thanks to the antirotation system.

Maximum locking.



Antirrotation system



Mounting with R4 and R6 rivets or with the standard systems

# DUCTAFIX

## WIRING DUCT RIVETS

**Material:** Polyamide 6  
**Colour:** Light Blue (R4)  
 Orange (R6)

### MAIN FEATURES

The nylon rivets, respectively light blue and orange, are equipped with fins for a perfect tightness and allow a quick insertion of the rivet in the rivet tool to make the mounting easier. For a proper fitting, rivets have to be inserted in one of the hole ends.

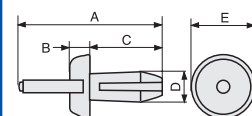


| Name        | Dimensions |   |    |      |    | Packaging pieces |
|-------------|------------|---|----|------|----|------------------|
|             | A          | B | C  | D    | E  |                  |
| DUCTAFIX R4 | 25         | 2 | 12 | 4    | 9  | 1000 (4x250)     |
| DUCTAFIX R6 | 29         | 2 | 14 | 6,25 | 11 | 500 (2x250)      |



Natural colour - Available upon request

### DUCTAFIX



## RT4/RT6

### RIVET TOOL

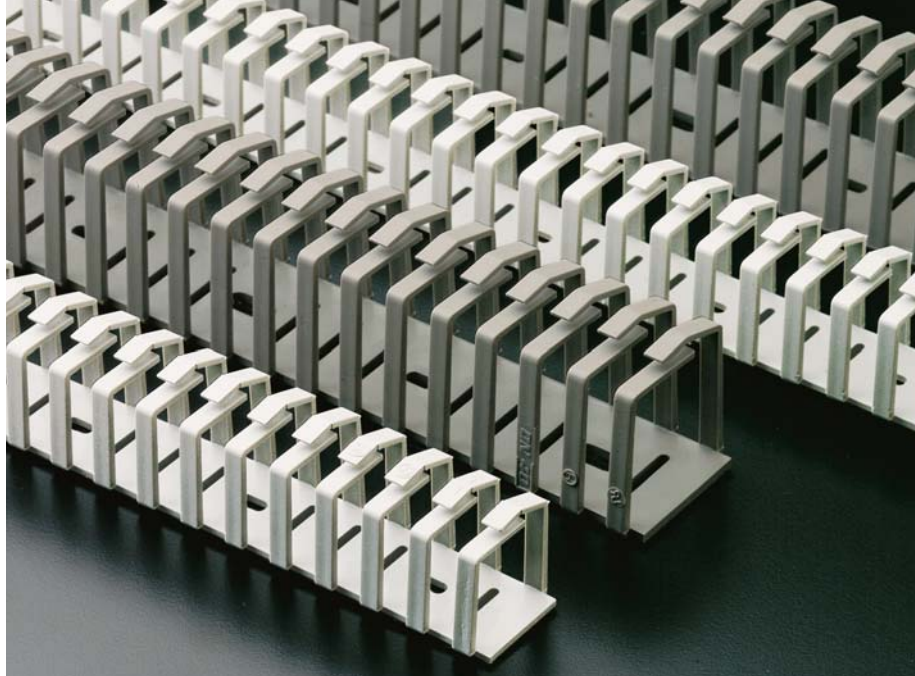
RT4 FOR R4 - RT6 FOR R6

- Independent sliding metal core for best tool stability and greater pressure exerted when inserting the rivet into the hole
- Soft plastics ergonomic handle
- Long (233 mm) metal body for easy insertion also in narrow and high wiring ducts



| Name | Packaging pieces |
|------|------------------|
| RT4  | 4 (4x1)          |
| RT6  | 4 (4x1)          |





# DN-A

## FLEXIBLE DUCTS

**Material:** Polypropylene  
self-extinguishing, non-toxic  
**Colour:** Grey RAL 7030, White  
**Standard length:** 0,5 metres



Applicable to white DN-A only

For all applications where one does not want to provide mounting holes. For wiring to cabinet doors, from control panels and for electronic equipment.

For that part of the cable run that leans against the side of the control cabinet.

For containing wires in variable direction ensuring the flexibility of the wiring run.

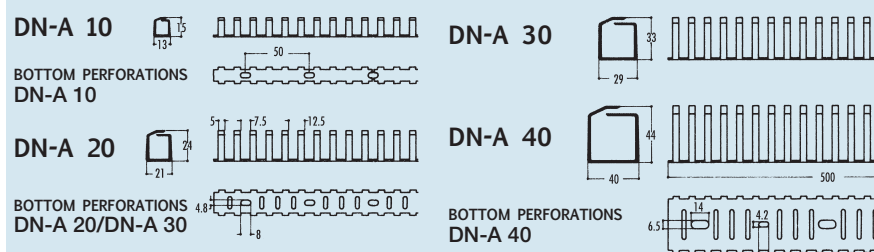
Available in four sizes with adhesive tape.

- Due to the flexibility of the material individual wires can easily be added, or removed from total wires within the duct.
- Since DN-A has no cover it can accommodate cables in restricted space applications, and also effectively removes the need for cable ties.
- It can be used in extreme operating conditions (i.e. max. temp. up to 80°C).
- DN-A withstands mechanical stress when installed. While in the event of fire does not emit corrosive, nor toxic gases, and smoke development is minimal.
- The duct can be cut to desired length using scissors or knife.

When applying the DN-A with adhesive tape, (DN-A 10, DN-A 20, DN-A 30, DN-A 40) it is necessary to make sure that the surface is perfectly clean and dry.

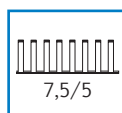
| Name      | Dimensions millimeter | Section mm <sup>2</sup> | Packaging pieces |
|-----------|-----------------------|-------------------------|------------------|
| DN-A 10 G | 13x15                 | 100                     | 42               |
| DN-A 20 G | 20x24                 | 320                     | 16               |
| DN-A 30 G | 30x33                 | 620                     | 12               |
| DN-A 40 G | 40x44                 | 1220                    | 8                |

G = GREY RAL 7030



| Name    | Dimensions millimeter | Section mm <sup>2</sup> | Packaging pieces |
|---------|-----------------------|-------------------------|------------------|
| DN-AS G | 17,5x28               | 275                     | 24               |
| DN-AM G | 32x43                 | 900                     | 24               |
| DN-AL G | 42,5x55               | 1550                    | 14               |

G = GREY RAL 7030



# DN-A

## FLEXIBLE DUCTS

**Material:** Talc reinforced polypropylene  
**Colour:** Grey RAL 7030  
**Standard length:** 0,5 metres



Especially designed for compact installations. The new design allows for easier inserting and removal of the wires.



# SPIRALITE

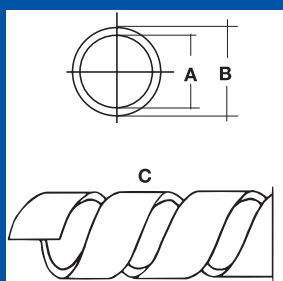
## UNIVERSAL SPIRAL WRAPS

**Material:** Polyethylene natural (P)  
Polyethylene self-extinguishing (PA)  
According to ASTM D 635

Robust, yet simple to install, it gives mechanical protection to the wire bundle which remains flexible although rigidly held. Easily removed, it can be re-used in the case of temporary wiring.

### Essential

- for fast and economical grouping of wire bundles
- for joining groups of wires and/or tubing for fluidic/pneumatic machine control
- for flexible connections between panel and door



| Name | Dimensions (mm) |    |    | Packaging metres |
|------|-----------------|----|----|------------------|
|      | A               | B  | C  |                  |
| P1   | 1,5             | 3  | 5  | 500 (10x50)      |
| P2   | 4               | 6  | 8  | 500 (20x25)      |
| P3   | 8               | 10 | 12 | 250 (10x25)      |
| P4   | 9               | 12 | 12 | 200 (10x20)      |
| PA1  | 1,5             | 3  | 5  | 500 (10x50)      |
| PA2  | 4               | 6  | 8  | 500 (20x25)      |
| PA3  | 8               | 10 | 12 | 250 (10x25)      |
| PA4  | 9               | 12 | 12 | 200 (10x20)      |



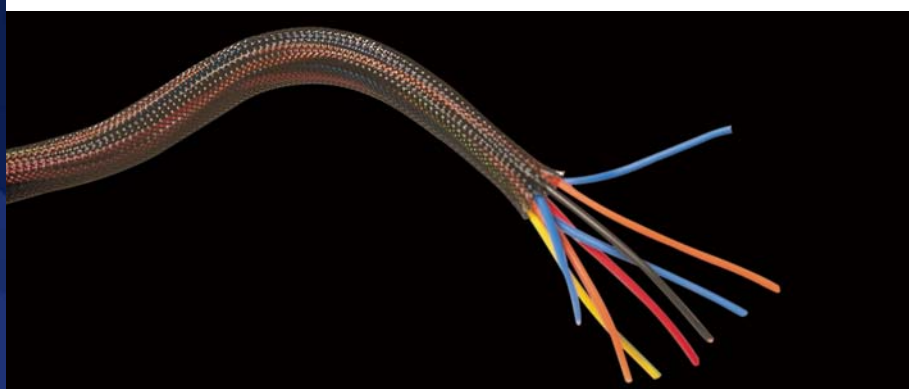
**Black colour**  
Available upon request

# TRACY

## BRAIDED EXPANDABLE SLEEVING

**Material:** Self extinguishing polyester halogen free  
**Colour:** Grey  
Black available upon request

Maximum elongation: 42%  
Maximum diameter expansions: 100%



| Name    | Nominal ø | Packaging metres |
|---------|-----------|------------------|
| TY 5 G  | 5         | 100              |
| TY 10 G | 10        | 100              |
| TY 20 G | 20        | 50               |
| TY 30 G | 30        | 50               |
| TY 50 G | 50        | 50               |

G = GREY



|                            | TY                     |
|----------------------------|------------------------|
| Material                   | Polyester halogen free |
| Tensile strength (kg/mm2)  | 4,2                    |
| Elongation at break %      | 42                     |
| Operating temperature (°C) | from -50 up to 120     |
| Self-extinguishing         | UL 94 V2               |



# DIN RAILS

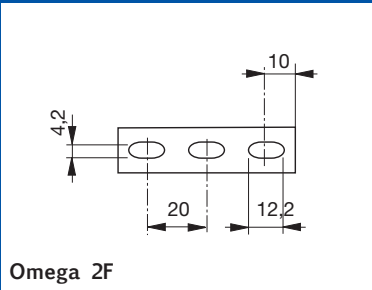
Steel treated with galvanic zinc plating  
and passivation  
(gal Zn 8c according to DIN 50960)  
Minimum thickness 6 micron  
**Standard length: 2 metres**  
**RoHs compliant**

- Ideal to support and anchor wiring equipment and ducts inside electric panels
- Of robust construction and corrosion resistant: cold rolled steel and treated with galvanic zinc plating and passivation
- F Series: with bottom perforation suitable for anchoring ducts and special supports

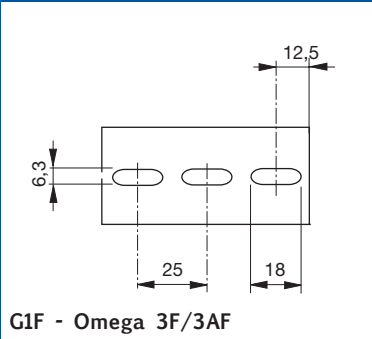
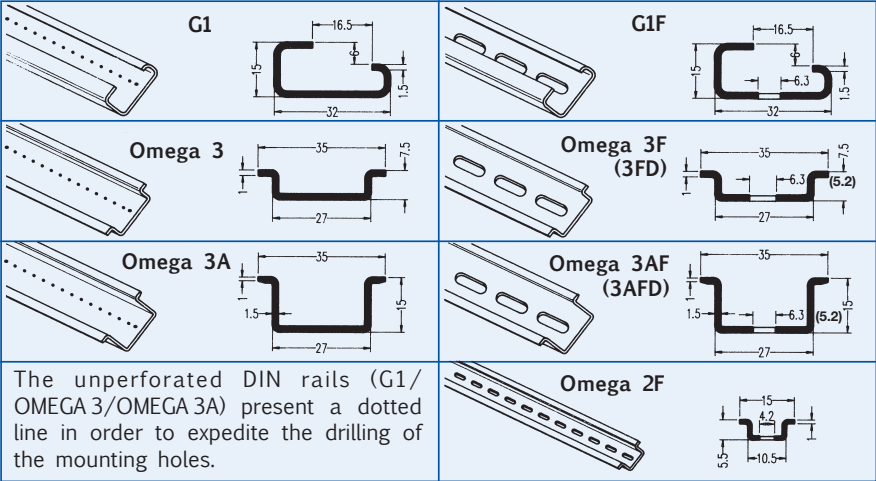
| Name        | Compliance   | Packaging metres |
|-------------|--------------|------------------|
| G1          | CEI EN 60715 | 24               |
| G1F         | CEI EN 60715 | 24               |
| OMEGA 2F    | CEI EN 60715 | 40               |
| OMEGA 3     | CEI EN 60715 | 40               |
| OMEGA 3F    | CEI EN 60715 | 40               |
| OMEGA 3FD*  | CEI EN 60715 | 40               |
| OMEGA 3A    |              | 20               |
| OMEGA 3AF   |              | 20               |
| OMEGA 3AFD* |              | 20               |

\* = Available upon request

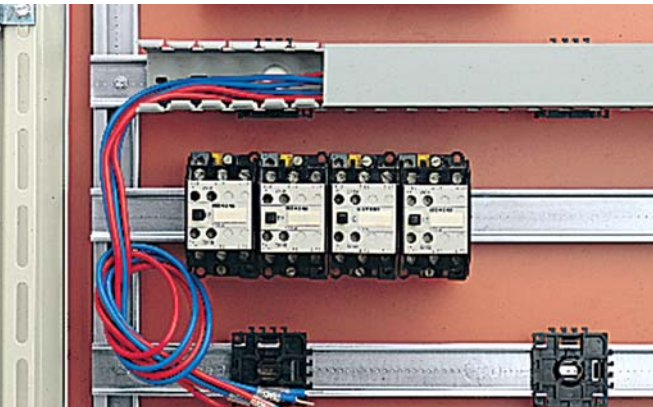
## BOTTOM PERFORATION



Omega 2F



G1F - Omega 3F/3AF



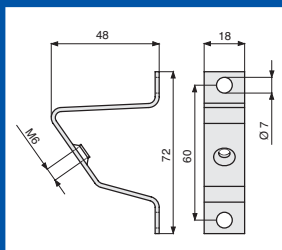
# ST/STS

## DIN RAIL SUPPORT BRACKETS

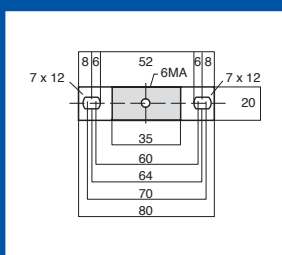
In cold-rolled steel treated with galvanic zinc plating and passivation

 applicable to ST only

### ST



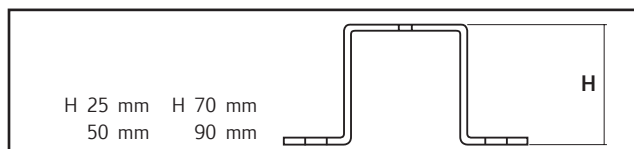
### STS



| Name | Packaging pieces |
|------|------------------|
| ST   | 20 (2x10)        |

| Name    | Packaging pieces |
|---------|------------------|
| STS 25* | 10               |
| STS 50* | 10               |
| STS 70* | 10               |
| STS 90* | 10               |

\* = Available upon request



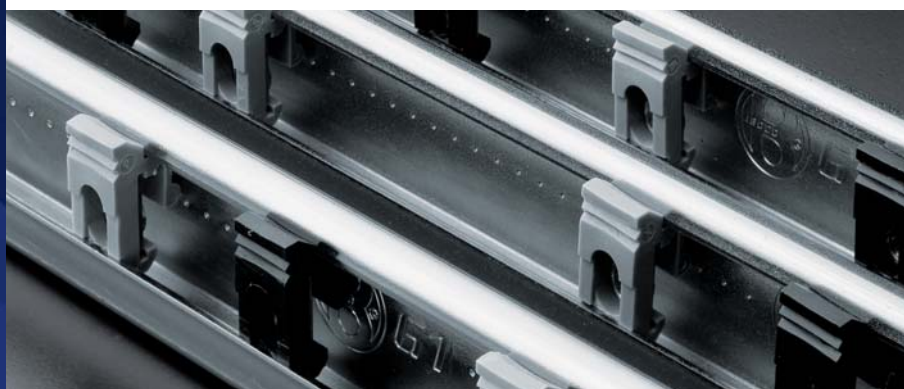
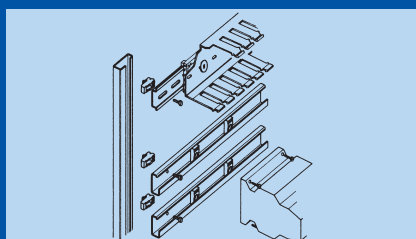
# DINFIX

## MOUNTING CLIPS

Material: Acetal resin (delrin) and galvanized steel

Dinfix permits the smooth mounting of metal rails on the mounting rail G1, thus allowing the construction of supporting frames for switchgear and wiring duct. DINFIX furthermore offers the possibility of installing onto the parallel rail G1, switchgear of a certain size and weight (e.g. transformers or contactors) that are not predisposed for snap-on assembly on the assembly rails Omega 3/3A/3B.

Service Temperature Limit  
(-15°C / +100°C)

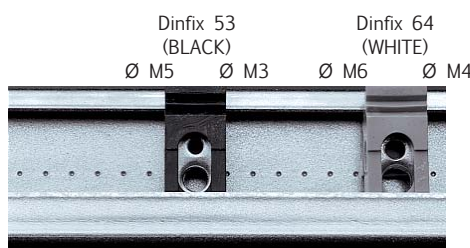


| Name       | Packaging metres |
|------------|------------------|
| DINFIX 64* | 100              |
| DINFIX 53* | 100              |

\* = Available upon request



Once they are mounted, the Dinfix form a strong mounting plane at the level of the upper flange of the rail G1.





# DINCLIC

## MOUNTING CLIPS

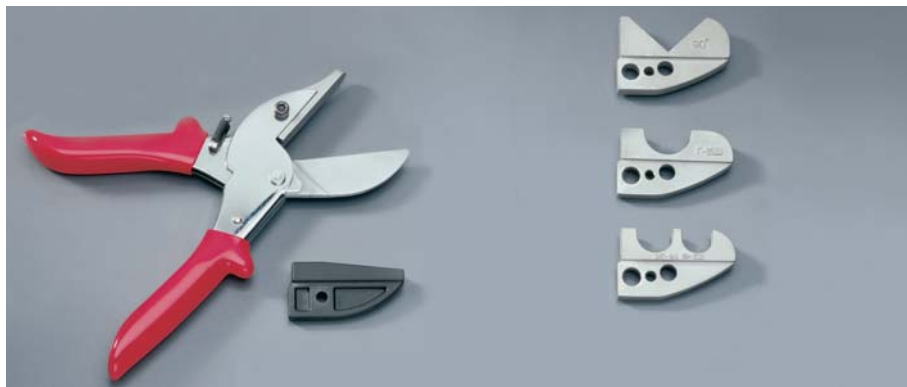
Material: Zinc plated steel

With its help, one can snap onto all the mounting rails (except OMEGA 2F) those small switching devices which are not made for mounting on DIN rails.

| Name | Packaging pieces |
|------|------------------|
|------|------------------|

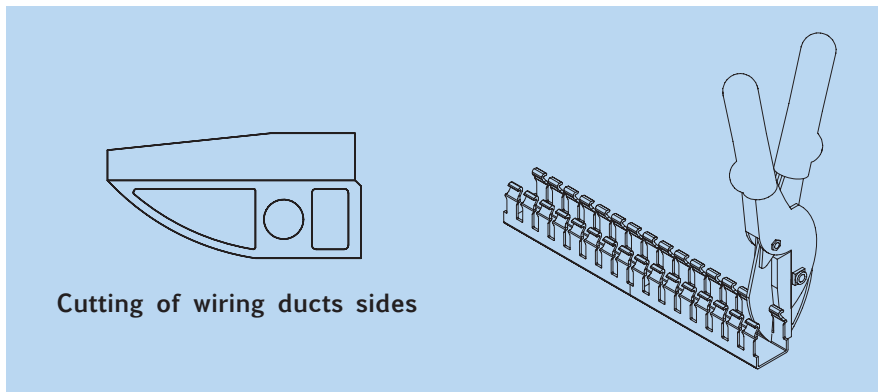
|              |    |                                           |
|--------------|----|-------------------------------------------|
| DINCLIC DM4* | 40 | Dinclid DM4 for mounting on rail G1, G1F  |
| DINCLIC FM4* | 40 | Dinclid FM4 - FM5 for mounting on OMEGA 3 |
| DINCLIC FM5* | 40 | OMEGA 3A - OMEGA 3F - OMEGA 3AF           |

\* = Available upon request



| Name | Pieces per carton |
|------|-------------------|
|------|-------------------|

|         |   |
|---------|---|
| 4F      | 1 |
| LAMA 4F | 1 |



Cutting of wiring ducts sides

# 4F

## MULTIFUNCTIONAL TOOL

4F is a multifunctional tool specially equipped with accessories. The interchangeable accessories enable:

- To cut and take off a portion of duct below the fingers.
- To cut both duct and/or cover
- To cut at different angles
- To cut rigid conduits, flexible conduits and sheaths

Specially shaped handle and dedicated accessories allow a perfect cut in a minimum strain.



Spare blade for 4F

## COMPLIANCE WITH INTERNATIONAL STANDARDS

IBOCO wiring products respond to all installation needs, coping with different uses and environment applications. They are manufactured with high quality materials that undergo severe quality controls and performance tests under extreme operating and duration conditions with a constant control of quality standards.

- Wiring ducts T1/T1-E, SEP-E are manufactured in rigid SELF-EXTINGUISHING PVC.
- Those components for which high bending resilience is required are in polyamide 6, polypropylene and ABS/PC.
- Spiralite is manufactured in natural polyethylene and self-extinguishing polyethylene.

| MATERIALS                          |                   | RIGID PVC          |             | POLYAMIDE 6           |             | POLYETHYLENE        |             | FLAME RETARDANT POLYETHYLENE |             |
|------------------------------------|-------------------|--------------------|-------------|-----------------------|-------------|---------------------|-------------|------------------------------|-------------|
| TECHNICAL CHARACTERISTICS          | MEASURE UNIT      | VALUE              | NORME       | VALUE                 | NORME       | VALUE               | NORME       | VALUE                        | NORME       |
| CHEMICAL-PHYSICAL PROPERTIES       |                   |                    |             |                       |             |                     |             |                              |             |
| Specific gravity                   | g/cm <sup>3</sup> | 1,55               | DIN 53479   | 1,14                  | ASTM D792   | 0,92                | ASTM D1505  | 0,97                         | DIN 53479   |
| Water absorption (23°C)            | %                 | <0,1               | ISO 62      | 2,5                   | ASTM D570   | < 0,1               | ISO 62      | < 0,1                        | ISO 62      |
| Formaldehyde                       | ppm               | absent             | -           | absent                | -           | absent              | -           | absent                       | -           |
| Cadmium                            | ppm               | absent             | -           | absent                | -           | absent              | -           | absent                       | -           |
| MECHANICAL PROPERTIES              |                   |                    |             |                       |             |                     |             |                              |             |
| Tensile stress at break            | Mpa               | 39                 | ISO 527     | 45                    | ISO 527     | 17                  | ASTM D638   | 15                           | DIN 53455   |
| Traction strenght                  | Mpa               | 44                 | ISO 527     | 55                    | ISO 527     | 9,5                 | ASTM D638   | 9                            | DIN 53455   |
| Elongation at break                | %                 | 130                | ISO 527     | 250                   | ISO 527     | 400                 | ASTM D638   | 600                          | DIN 53455   |
| Tensile Modulus                    | Mpa               | 4400               | ISO 527     | 950                   | ISO 527     | -                   | -           | 240                          | DIN 53455   |
| Flexural Modulus                   | Mpa               | 3200               | ISO 527     | 1100                  | ISO 178     | 210                 | ASTM D790   | 130                          | DIN 53457   |
| THERMAL PROPERTIES                 |                   |                    |             |                       |             |                     |             |                              |             |
| VICAT temperature                  | °C                | 84                 | DIN 53460   | 198                   | ISO 306     | 89                  | ASTM D1525  | -                            | -           |
| Heat Deflection Temperature        | °C                | 72                 | ISO 75      | 185                   | ISO 75      | -                   | -           | -                            | -           |
| Coefficient of expansion           | K-1               | 6 10 <sup>-5</sup> | DIN 53752   | 8-10 10 <sup>-5</sup> | ASTM D696   | 22 10 <sup>-5</sup> | DIN 53752   | 10 <sup>-5</sup>             | DIN 53752   |
| Specific heat                      | kJ/kgK            | 0,94               | INTERNAL    | 1,7                   | ASTM C351   | -                   | -           | -                            | -           |
| Thermal conductivity               | W/mk              | 0,14               | DIN 52612   | 0,29                  | ASTM C177   | 0,32                | DIN 52612   | 0,32                         | DIN 52612   |
| ELECTRICAL PROPERTIES              |                   |                    |             |                       |             |                     |             |                              |             |
| Dielectric constant                | -                 | 3,2 - 4,0          | ASTM D150   | 5,0                   | VDE 0303    | 2,4                 | VDE 0303    | 2,3                          | DIN 53483   |
| Dielectric strength                | Kv/mm             | 70                 | IEC 243     | 35                    | IEC 243     | 90                  | IEC 243     | 90                           | IEC 243     |
| Surface resistance                 | Ohm               | 10 <sup>13</sup>   | IEC 93      | 5 10 <sup>11</sup>    | IEC 93      | 10 <sup>13</sup>    | IEC 93      | 10 <sup>13</sup>             | IEC 93      |
| SELF-EXTINGUISHING                 |                   |                    |             |                       |             |                     |             |                              |             |
| Self-extinguishing 1,6 millimeters | -                 | V0                 | UL 94       | V2                    | UL 94       | HB                  | UL 94       | V2                           | UL 94       |
| Self-extinguishing 3,2 millimeters | -                 | V0                 | UL 94       | V2                    | UL 94       | HB                  | UL 94       | V2                           | UL 94       |
| Glow wire test (2 mm)              | °C                | 960                | IEC 695-2-1 | 650                   | IEC 695-2-1 | 650                 | IEC 695-2-1 | 850                          | IEC 695-2-1 |
| CSTB Classification                | -                 | M1 (RAL7030)       | CSTB        | -                     | -           | -                   | -           | -                            | -           |
| Oxygen Index                       | %                 | 43                 | ISO 4589    | 25                    | ASTM D2863  | -                   | -           | 25                           | ASTM D2863  |

| TALC REINFORCED<br>POLYPROPYLENE |             | ABS/PC           |             | GLASS REINFORCED<br>POLYAMIDE 6 |             |
|----------------------------------|-------------|------------------|-------------|---------------------------------|-------------|
| VALUE                            | NORME       | VALUE            | NORME       | VALUE                           | NORME       |
| 1,03                             | ASTM D1505  | 1,20             | ASTM D1505  | 1,35                            | ISO 1183    |
| < 0,1                            | ISO 62      | 0,40             | ISO 62      | 1,9                             | ISO 62      |
| absent                           | -           | absent           | -           | absent                          | -           |
| absent                           | -           | absent           | -           | absent                          | -           |
| 24                               | ASTM D638   | -                | -           | 180                             | ISO 527     |
| -                                | -           | -                | -           | -                               | -           |
| 30                               | ASTM D638   | -                | -           | 3,5                             | ISO 527     |
| 2300                             | ASTM D638   | -                | -           | 9500                            | -           |
| -                                | -           | -                | -           | 8600                            | -           |
| 93                               | ASTM D1525  | 112              | ISO 306     | -                               | -           |
| 85                               | ASTM D648   | 98               | ISO 75      | 210                             | ISO 75      |
| -                                | -           | -                | -           | 2-7 10 <sup>-5</sup>            | ISO 11359   |
| -                                | -           | -                | -           | -                               | -           |
| -                                | -           | -                | -           | -                               | -           |
| 2,7                              | VDE 0303    | 3                | VDE 0303    | -                               | VDE 0303    |
| 50                               | IEC 243     | 40               | IEC 243     | 20                              | IEC 243     |
| 10 <sup>13</sup>                 | IEC 93      | 10 <sup>14</sup> | IEC 93      | 10 <sup>14</sup>                | IEC 93      |
| HB                               | UL 94       | HB               | UL94        | HB                              | UL94        |
| HB                               | UL 94       | HB               | UL94        | HB                              | UL94        |
| 650                              | IEC 695-2-1 | 650              | IEC 695-2-1 | 650                             | IEC 695-2-1 |
| -                                | -           | -                | -           | -                               | -           |
| -                                | -           | -                | -           | -                               | -           |

**IBOCO**

A REGISTERED TRADE MARK OF  **BOCCHIOTTI**

[www.bocchiotti.eu](http://www.bocchiotti.eu)

**IBOCO IBOCO IBOCO IBOCO**