


































cutters

## Cutters - summary

| Type of cut   | Order code  | length mm   | cutting force kg | copper wire Ø mm | awg  | safety clip order code | type of clip |    |
|---|---|---|------------------|------------------|------|------------------------|--------------|----|
| flush cut   |  <b>TR 20 M</b>      | 134   | 3                | 0.81             | 20   | TR 20 M A              | AF           |    |
|   |  <b>TR 20 SM</b>     | 134   | 3                | 0.81             | 20   | TR 20 SM A             | AF           |    |
|   |  <b>TR 25 P</b>      | 135   | 3.5              | 1.02             | 18   | TR 25 P A              | AF           |    |
|   |  <b>TR 25</b>        | 138   | 5                | 1.30             | 16   | TR 25 A                | AF           |    |
|   |  <b>TR E 03 NB</b>   | 138   | 3                | 1.30             | 16   | TR E 03 NB A           | AF           |    |
|   |  <b>TR 25 L</b>      | 165   | 3                | 1.30             | 16   | TR 25 L A              | AF           |    |
|   |  <b>TR 25 L 25</b>   | 160   | 3                | 1.30             | 16   | TR 25 L 25 A           | AF           |    |
|   |  <b>TR 30</b>        | 138   | 5.5              | 1.30             | 16   | TR 30 A                | AL           |    |
|   |  <b>TR 30 58 R</b>   | 138   | 6.5              | 1.63             | 14   | TR 30 58 R A           | AL           |    |
|   |  <b>TR 58 R</b>      | 137   | 9                | 2.05             | 12   | TR 58 R A              | AL           |    |
|   |  <b>TRR 58 G</b>     | 160   | 1.5              | 2.59             | 10   | -                      | -            |    |
|   |  <b>TR 5000 R</b>    | 138   | 8                | 2.00             | 12   | TR 5000 R A            | AF           |    |
|   |  <b>TR 5000 PR</b>   | 138   | 5                | 1.60             | 14   | TR 5000 PR A           | AF           |    |
|   | rounded flush cut   |  <b>TR 25 B</b>   | 138              | 5                | 1.02 | 18                     | TR 25 B A    | AF |
|   |   |  <b>TR 30 B</b>  | 138              | 5.5              | 1.02 | 18                     | TR 30 B A    | AL |
|  <b>TRR 58 B</b>   |   | 160   | 3                | 2.05             | 12   | -                      | -            |    |
|  <b>TR 5000 PG</b> |   | 138   | 5                | 1.02             | 18   | TR 5000 PG A           | AF           |    |
| chamfered cut   |  <b>TR 30 58</b>   | 138   | 8.5              | 1.63             | 14   | TR 30 58 A             | AL           |    |
|   |  <b>TR 58</b>      | 137   | 11               | 2.05             | 12   | TR 58 A                | AL           |    |
|   |  <b>TRR 58</b>     | 160   | 15               | 2.59             | 10   | TRR 58 A               | AL           |    |
|   |  <b>TR 5000</b>    | 138   | 12               | 2.05             | 12   | TR 5000 A              | AF           |    |
|   |  <b>TR 5000 P</b>  | 138   | 8                | 1.63             | 14   | TR 5000 P A            | AF           |    |
|   |  <b>TRR 5000</b>   | 138   | 14               | 2.59             | 10   | TRR 5000 A             | AF           |    |
|   | reverse cut   |  <b>TR 25 15</b> | 138              | 5                | 1.30 | 16                     | -            | -  |
|  <b>TR 25 15 L</b> |   | 160   | 3                | 1.30             | 16   | -                      | -            |    |
| flush cut (in high density areas)   |  <b>TR 20 VM</b>   | 136   | 2                | 0.64             | 22   | -                      | -            |    |
|   |  <b>TR 30 V</b>    | 144   | 3                | 1.02             | 18   | -                      | -            |    |
|   |  <b>TR 5000 V</b>  | 147   | 3.5              | 1.30             | 16   | -                      | -            |    |
|   |  <b>TR 25 50</b>   | 135   | 5                | 1.30             | 16   | -                      | -            |    |
|   |  <b>TR 20 50 M</b> | 131   | 2                | 0.64             | 22   | -                      | -            |    |
|   |  <b>TR 5000 W</b>  | 147   | 3.5              | 1.30             | 16   | -                      | -            |    |



| Type of cut                                 | Order code | length mm | cutting force kg | copper wire Ø mm | copper wire awg | safety clip order code | type of clip |
|---|------------|-----------|------------------|------------------|-----------------|------------------------|--------------|
| flush cut<br>(at 1-1,3-1,5 mm from surface) | TR 30 10   | 138       | 5.5              | 1.30             | 16              | -                      | -            |
|   | TR 5000 10 | 147       | 5.5              | 1.30             | 16              | -                      | -            |
|   | TR 5000 13 | 147       | 5.5              | 1.30             | 16              | -                      | -            |
|   | TR 5000 15 | 147       | 5.5              | 1.30             | 16              | -                      | -            |
|   | TR 30 15 V | 144       | 3                | 1.02             | 18              | -                      | -            |
|   | TR 30 15   | 138       | 5.5              | 1.30             | 16              | -                      | -            |
|   | TR 50 15   | 138       | 8                | 1.63             | 14              | -                      | -            |
| IC pin cut                                  | TR 30 T    | 137       | 2.5              | 1.02             | 18              | -                      | -            |
|   | TR 20 TM   | 130       | 2                | 0.64             | 22              | -                      | -            |
| vertical flush cut                          | TR 5045 V  | 147       | 3                | 1.30             | 16              | -                      | -            |

## Cutters - description

| PHOTO     | NOTES   | TECHNICAL SPECIFICATIONS |                  |                  |                 |     |     |      |    |  |
|-----------|---|--------------------------|------------------|------------------|-----------------|-----|-----|------|----|--|
|           | <p><b>TR 20 M</b><br/>Tool for a flush cut. The reduced size and refined and anatomic style of this tool make it ideal for work in tight places and for delicate electronic work. Thickness 2mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>134</td> <td>3</td> <td>0.81</td> <td>20</td> </tr> </tbody> </table> | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 134 | 3   | 0.81 | 20 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 134       | 3   | 0.81                     | 20               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 20 SM</b><br/>Tool for a flush cut. Same characteristics as the TR 20 M, but with rounded edges. Thickness 2mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>134</td> <td>3</td> <td>0.81</td> <td>20</td> </tr> </tbody> </table>   | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 134 | 3   | 0.81 | 20 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 134       | 3   | 0.81                     | 20               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 25 P</b><br/>Tool for a flush cut with particularly sharp cutting edges. Purposely designed for very delicate work in electronics. Thickness 2.5mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>138</td> <td>3.5</td> <td>1.02</td> <td>18</td> </tr> </tbody> </table>                                   | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 138 | 3.5 | 1.02 | 18 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 138       | 3.5   | 1.02                     | 18               |                  |                 |     |     |      |    |  |



| PHOTO | NOTES   | TECHNICAL SPECIFICATIONS |
|-------|---|--------------------------|
|       | <p><b>TR 25</b><br/>Tool for a flush cut. Lightweight and easy to handle. Purposely designed for work in electronics. Thickness 2.5mm<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TRE 03 NB</b><br/>Tool for a flush cut. Purposely designed as the simplified version of the TR 25 but with the same main characteristics. Thickness 2.5mm.<br/>Dissipative version available.</p>                                 |                          |
|       | <p><b>TR 25 L</b><br/>Tool for a flush cut. Same characteristics as TR 25, but specially designed with longer handles to reduce the force needed by the operator. Thickness 2.5mm.<br/>Dissipative version available.</p>               |                          |
|       | <p><b>TR 25 L 25</b><br/>Tool for a flush cut. The special 25° angle permits the use in poorly accessible areas and its longer handles reduce the force needed by the operator. Thickness 2.5mm.<br/>Dissipative version available.</p> |                          |
|       | <p><b>TR 30</b><br/>Tool for a flush cut. An upgraded version of the TR 25, with stronger blades. Thickness 3.0mm<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TR 30 58 R</b><br/>Tool for a flush cut. Also particularly suitable for the cutting of ferrous material, due to the special treatment of the blades. Thickness 3.0mm<br/>Dissipative version available.</p>                       |                          |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5                | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 3                | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 165       | 3                | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 160       | 3                | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 6.5              | 1.63             | 14              |

PHOTO

NOTES

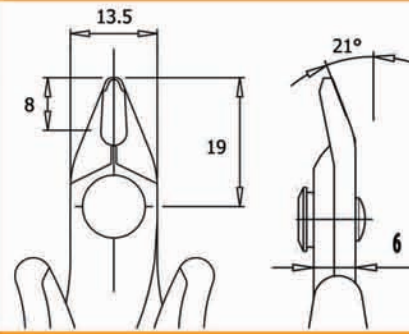
TECHNICAL SPECIFICATIONS



**TR 58 R**

Tool for a flush cut. The special treatment of the blades make this tool particularly suitable for the cutting of ferrous material.  
Thickness 3.0mm.  
Dissipative version available.

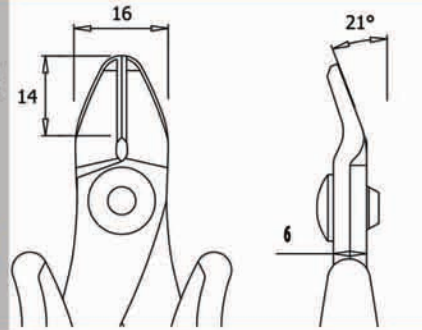
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 137       | 9                | 2.05             | 12              |



**TRR 58 G**

Tool for a flush cut very strong, suitable, apart from work in electronics, also for use by goldsmiths in the cutting rubber seal.  
Thickness 3.0mm.  
Dissipative version available.

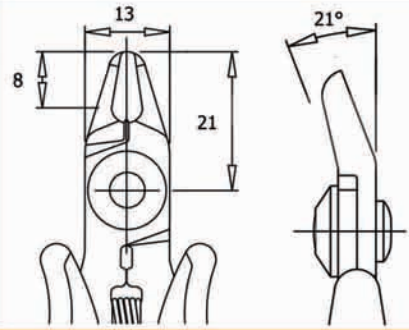
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 160       | 1.5              | 2.59             | 10              |



**TR 5000 R**

Strong flush cutting tool. Due to the perfect joint between the quality ground faces of the two halves, it is possible to lengthen the life and maintain the perfect functioning of the tool.  
Thickness 5.0mm.  
Dissipative version available.

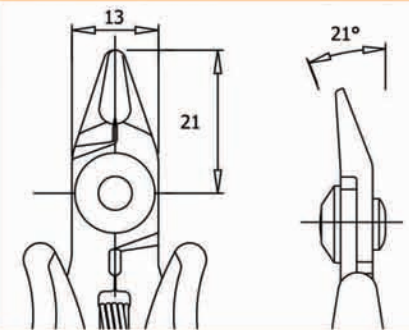
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 8                | 2.00             | 12              |



**TR 5000 PR**

Strong flush cutting tool with pointed cutting blades. Due to the perfect joint between the quality ground faces of the two halves, it is possible to lengthen the life and maintain the perfect functioning of the tool.  
Thickness 5.0mm.  
Dissipative version available.

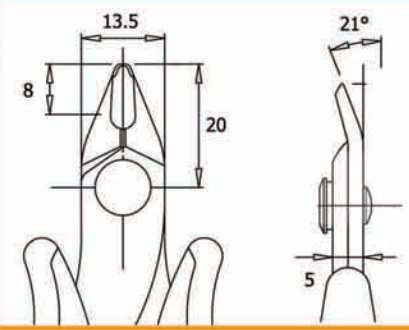
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5                | 1.60             | 14              |



**TR 25 B**

Tool for a flush finished cut. Lightweight and easy to handle with swelled blades, leaving the cut well finished. Suitable for work with plastic.  
Thickness 2.5mm.  
Dissipative version available.

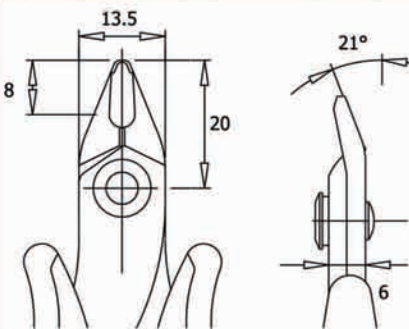
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5                | 1.02             | 18              |



**TR 30 B**

Tool for a flush finished cut. Lightweight and easy to handle with swelled blades, leaving the cut well finished. Suitable for work with plastic.  
Thickness 3.0mm.  
Dissipative version available.

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5.5              | 1.02             | 18              |



cutters



| PHOTO     | NOTES   | TECHNICAL SPECIFICATIONS |                  |                  |                 |     |     |      |    |  |
|-----------|---|--------------------------|------------------|------------------|-----------------|-----|-----|------|----|--|
|           | <p><b>TRR 58 B</b><br/>Strong tool for a flush cut. Swelled surface of the blades enables a well finished cut. Thickness 3.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>160</td> <td>3</td> <td>2.05</td> <td>12</td> </tr> </tbody> </table>  | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 160 | 3   | 2.05 | 12 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 160       | 3   | 2.05                     | 12               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 5000 PG</b><br/>Strong flush cutter with pointed, well finished cutting blades. The swelling in the cutting edges enables very well finished cutting. Suitable for trimming in the plastic field. Thickness 5.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>138</td> <td>5</td> <td>1.02</td> <td>18</td> </tr> </tbody> </table>                  | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 138 | 5   | 1.02 | 18 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 138       | 5   | 1.02                     | 18               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 30 58</b><br/>Chamfered cutting tool. the special treatment of the blades also make this tool particularly suitable for the cutting of ferrous material. Thickness 3.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>138</td> <td>8.5</td> <td>1.63</td> <td>14</td> </tr> </tbody> </table>   | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 138 | 8.5 | 1.63 | 14 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 138       | 8.5   | 1.63                     | 14               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 58</b><br/>Tool for a chamfered cut. A stronger version of the TR 30 58 model, maintaining the same characteristics. Thickness 3.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>137</td> <td>11</td> <td>2.05</td> <td>12</td> </tr> </tbody> </table>  | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 137 | 11  | 2.05 | 12 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 137       | 11  | 2.05                     | 12               |                  |                 |     |     |      |    |  |
|           | <p><b>TRR 58</b><br/>Strong tool for a chamfered cut. Particularly suitable for cutting material of a resistant nature. Thickness 3.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>160</td> <td>15</td> <td>2.59</td> <td>10</td> </tr> </tbody> </table>  | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 160 | 15  | 2.59 | 10 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 160       | 15  | 2.59                     | 10               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 5000</b><br/>Strong chamfered cutting tool. Due to the perfect joint between the quality ground faces of the two halves, it is possible to lengthen the life and to maintain the perfect functioning of the tool. Thickness 5.0mm. Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>138</td> <td>12</td> <td>2.05</td> <td>12</td> </tr> </tbody> </table> | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 138 | 12  | 2.05 | 12 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 138       | 12  | 2.05                     | 12               |                  |                 |     |     |      |    |  |

PHOTO

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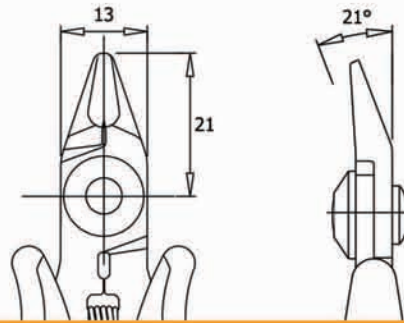
TECHNICAL SPECIFICATIONS



**TR 5000 P**

Strong chamfered cutting tool with pointed cutting blades. Due to the perfect joint between the quality ground faces of the two halves, it is possible to lengthen the life and maintain the perfect functioning of the tool. Thickness 5mm. Dissipative version available.

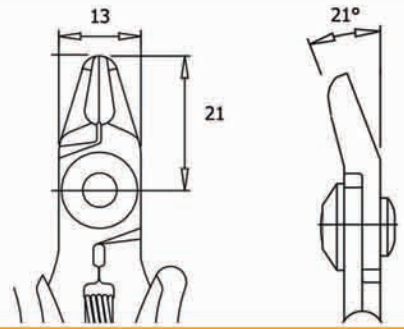
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 8                | 1.63             | 14              |



**TRR 5000**

Strong chamfered cutting tool. Ideal to cut materials of a resistant nature. Thickness 5mm. Dissipative version available.

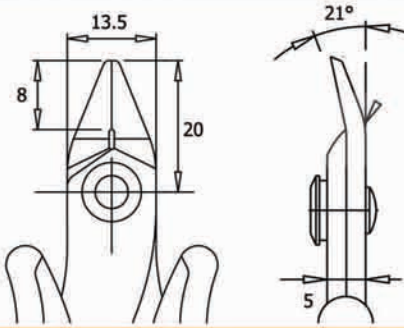
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 14               | 2.59             | 10              |



**TR 25 15**

Tool with reverse cut. Terminal wire cut at 1.5mm from the surface. Thickness 2.5mm. Dissipative version available.

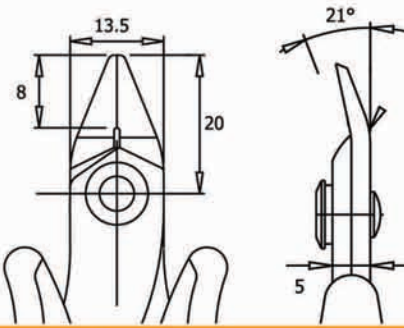
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5                | 1.30             | 16              |



**TR 25 15 L**

Tool with reverse cut. Same characteristics as TR 25 15, but designed with longer handles reduce the force needed by the operator. Thickness 2.5mm. Dissipative version available.

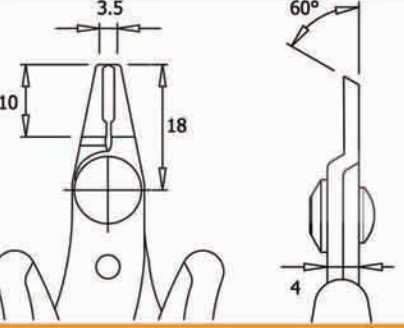
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 160       | 3                | 1.30             | 16              |



**TR 20 VM**

Tool for a front, flush cut. The reduced size and the special 30° angle permits the tool to be easily used in otherwise poorly accessible areas. Thickness 2.0mm. Dissipative version available.

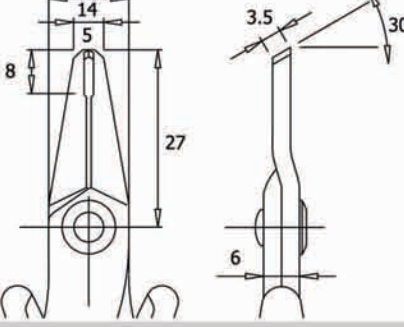
| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 136       | 2                | 0.64             | 22              |



**TR 30 V**

Tool for a front, clean, flush cut. The special 30° angle permits the tool to be easily used in otherwise poorly accessible areas. Thickness 3.0mm. Dissipative version available.

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 144       | 3                | 1.02             | 18              |



cutters



| PHOTO | NOTES   | TECHNICAL SPECIFICATIONS |
|-------|---|--------------------------|
|       | <p><b>TR 5000 V</b><br/>Special 30° angled tool for a front, flush cut, enabling work in a poorly accessible areas. Same as TR 30 V with thickness of 5mm.<br/>Dissipative version available.</p>                               |                          |
|       | <p><b>TR 25 50</b><br/>Tool for a flush cut, with inclined 48° blades, for specific work in electronics.<br/>Dissipative version available.</p>   |                          |
|       | <p><b>TR 20 50 M</b><br/>Particularly thin nose tool for a flush cut with inclined 48° blades. Ideal for reaching places otherwise difficult.<br/>Thickness 2.0mm.<br/>Dissipative version available.</p>                       |                          |
|       | <p><b>TR 5000 W</b><br/>Tool for a front, flush cut, enabling work in very dense areas with possibility to set the cutting height from the surface (from 0 to 5mm).<br/>Thickness 5.0mm.<br/>Dissipative version available.</p> |                          |
|       | <p><b>TR 30 10</b><br/>Tool for a clean, flush cut. Specially designed for cutting component wires 1mm from the surface.<br/>Thickness 3.0mm.<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TR 5000 10</b><br/>Specially designed tool for front cutting, suitable for access in dense areas of PCBs. It cuts the component lead at 1mm from the surface.<br/>Thickness 5.0mm.<br/>Dissipative version available.</p> |                          |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 147       | 3.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 135       | 5                | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 131       | 2                | 0.64             | 22              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 147       | 3.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 147       | 5.5              | 1.30             | 16              |



| PHOTO | NOTES  | TECHNICAL SPECIFICATIONS |
|-------|--|--------------------------|
|       | <p><b>TTR 5000 13</b><br/>Specially designed tool for front cutting, suitable for access in dense areas of PCBs. It cuts the component lead at 1.3mm from the surface.<br/>Thickness 5mm.<br/>Dissipative version available.</p> |                          |
|       | <p><b>TR 5000 15</b><br/>Specially designed tool for front cutting, suitable for access in dense areas of PCBs. It cuts the component lead at 1.5mm from the surface.<br/>Thickness 5mm.<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TR 30 15 V</b><br/>Front cutting 30° angled tool. Specially designed for cutting component wires 1.5mm from the surface.<br/>Thickness 3.0mm.<br/>Dissipative version available.</p>                                       |                          |
|       | <p><b>TR 30 15</b><br/>Tool for a clean, flush cut. Specially designed for cutting component wires 1.5 mm from the surface.<br/>Thickness 3.0mm.<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TR 50 15</b><br/>Tool for a clean, flush cut. Specially designed for cutting component wires 1.5 mm from the surface.<br/>Thickness 5.0mm.<br/>Dissipative version available.</p>  |                          |
|       | <p><b>TR 50 20</b><br/>Tool for a clean, flush cut. Specially designed for cutting component wires 2.0 mm from the surface.<br/>Thickness 5.0mm.<br/>Dissipative version available.</p>  |                          |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 147       | 5.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 147       | 5.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 144       | 3                | 1.02             | 18              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 138       | 5.5              | 1.30             | 16              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 140       | 8.0              | 1.63             | 14              |

| length mm | cutting force kg | copper wire Ø mm | copper wire awg |
|-----------|------------------|------------------|-----------------|
| 140       | 8.0              | 1.63             | 14              |





| PHOTO     | NOTES   | TECHNICAL SPECIFICATIONS |                  |                  |                 |     |     |      |    |  |
|-----------|---|--------------------------|------------------|------------------|-----------------|-----|-----|------|----|--|
|           | <p><b>TR 30 T</b><br/>Specially designed tool for the cutting of integrated circuit pins. High precision, easy to use tool. Thickness 3mm.<br/>Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>137</td> <td>2.5</td> <td>1.02</td> <td>18</td> </tr> </tbody> </table>   | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 137 | 2.5 | 1.02 | 18 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 137       | 2.5   | 1.02                     | 18               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 20 TM</b><br/>Specially designed tool for the cutting of integrated circuit pins. The very small size of the cutting blades, specially angled at 48°, enables closely placed pins to be cut. Thickness 2mm.<br/>Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>130</td> <td>2</td> <td>0.64</td> <td>22</td> </tr> </tbody> </table> | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 130 | 2   | 0.64 | 22 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 130       | 2   | 0.64                     | 22               |                  |                 |     |     |      |    |  |
|           | <p><b>TR 5045 V</b><br/>Front, flush cutting, 45°angled. Thickness 5mm.<br/>Dissipative version available.</p> <table border="1"> <thead> <tr> <th>length mm</th> <th>cutting force kg</th> <th>copper wire Ø mm</th> <th>copper wire awg</th> </tr> </thead> <tbody> <tr> <td>147</td> <td>3</td> <td>1.30</td> <td>16</td> </tr> </tbody> </table>  | length mm                | cutting force kg | copper wire Ø mm | copper wire awg | 147 | 3   | 1.30 | 16 |  |
| length mm | cutting force kg  | copper wire Ø mm         | copper wire awg  |                  |                 |     |     |      |    |  |
| 147       | 3   | 1.30                     | 16               |                  |                 |     |     |      |    |  |