

# Cutting

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# Cutting

B

A large number of cables and conductors in many different types and designs are used to connect electrical and electronic components. The cables and wires must be accurately prepared for the various types of connection. The quality of the cutting process is therefore of critical importance. Mechanical efficiency together with the special cutting pattern reduces the manual force required to a minimum.

Weidmüller is a specialist in the cutting of copper or aluminium cables. The product selection ranges from cutting tools for small cross-sections (with direct transmission of force) to cutting tools for large diameters. Weidmüller's wide range of cutting tools fulfils all the criteria for professional cable preparation. The demands Weidmüller makes of its products can be summarised simply: a smooth, straight cut without deforming the conductor. Users profit directly from this philosophy, whilst maintaining ease of use.





At Weidmüller the term “cutting” refers to the severing of cables, wires and conductors of copper or aluminium with an appropriate tool for the application.

The requirement for all cutting tools is to perform a smooth, straight cut without deforming the conductor.

According to **DIN 8588**, experts differentiate between shear cutting, wedge-action cutting, tearing and breaking. Shear cutting is employed particularly in the cutting of cables, wires and conductors. Cutting tools with cross blades should perform an oblique cut and operate without play.

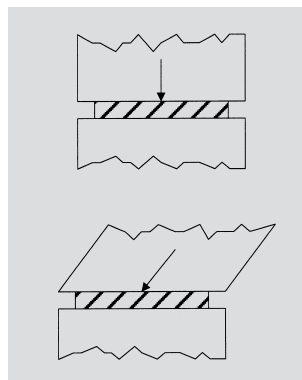
The essential quality characteristics for professional cutting tools are a cutting edge shape which is suited to, and optimised for, the corresponding application, so that the manual forces required for cutting remain low. This allows single-handed operation.

Tools by Weidmüller comply with all requirements imposed on professional cutting tools.

### Movement of the blades

We differentiate between two basic cutting processes:

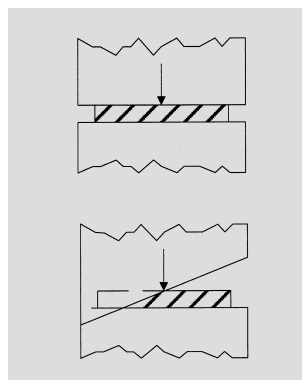
- Push cut
- Draw cut



In **push cut**, the cutting movement is perpendicular between tool and workpiece.

In **draw cut**, the cutting movement is oblique to the tool.

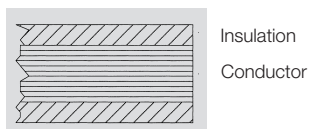
### Position of the blades



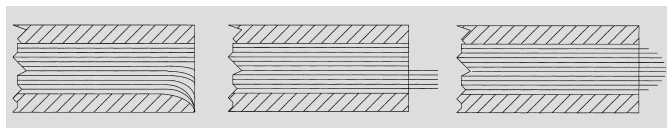
In **position 1** the blades act directly and over the whole length, i.e. considerable force is required.

In **position 2**, the blades cross as in a pair of scissors, the cut is therefore “offset” and requires less force.

### Clean cut



An “unclean” cut may have the following appearance:



Conductor sheared off

Conductor pulled out

Squeezed cable

## Cutting tools

### Cutting tools

- Cutting formation for different cable sizes increases the quality of the cuts for smaller cross-sections
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!
- Cutting without deformation of the conductor

#### KT 8



#### KT 12

#### KT 22



max. 8 mm

max. 16 mm<sup>2</sup>

max. 16 mm<sup>2</sup>

max. 16 mm<sup>2</sup>

max. 12 mm

max. 16 mm<sup>2</sup>

max. 25 mm<sup>2</sup>

max. 35 mm<sup>2</sup>

max. 22 mm

max. 25 mm<sup>2</sup>

max. 50 mm<sup>2</sup>

max. 95 mm<sup>2</sup>

### Technical data

Max. cutting performance, copper cable	
Solid (max. conductor cross-section)	mm <sup>2</sup> /AWG
Stranded (max. conductor cross-section)	mm <sup>2</sup> /AWG
Flexible (max. conductor cross-section)	mm <sup>2</sup> /AWG
Flexible, stranded (max. conductor diameter)	mm
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /-
Stranded (max. conductor diameter)	mm
Solid	mm <sup>2</sup>
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KT8	KT12
16 / 6	16 / 6
16 / 6	25 / 3
16 / 6	35 / 2
8	12
16 / 6	25 / 6
8	8
16	25
8	12
165 / 65 / 25	215 / 66 / 28
180	300
Tool closed	

<b>KT22</b>
25 / 3
50 / 1
95 / 3/0
22
70 / 2/0
22
50
22
220 / 66 / 30
460
Tool closed

### Ordering data

Version
Note

Type	Qty	Order No.
KT 8	1	9002650000
KT 12	1	9002660000

Type	Qty	Order No.
KT 22	1	1157830000

Cutting tools

- Easy handling because of automatic opening
- Safety lock reduces risk of injury
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!



KT 14



- ⌀ max. 14 mm
- max. 16 mm<sup>2</sup>
- ⊙ max. 35 mm<sup>2</sup>
- ⊙ max. 70 mm<sup>2</sup>

KT 20



- ⌀ max. 20 mm
- max. 16 mm<sup>2</sup>
- ⊙ max. 35 mm<sup>2</sup>
- ⊙ max. 70 mm<sup>2</sup>

Technical data

Max. cutting performance, copper cable	
Solid (max. conductor cross-section)	mm <sup>2</sup> /AWG
Stranded (max. conductor cross-section)	mm <sup>2</sup> /AWG
Flexible (max. conductor cross-section)	mm <sup>2</sup> /AWG
Flexible, stranded (max. conductor diameter)	mm
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /-
Stranded (max. conductor diameter)	mm
Solid	mm <sup>2</sup>
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KT14		
16 / 6		
35 / 2		
70 / 2/0		
14		
70 / 2/0		
14		
35		
14		
215 / 66 / 28		
320		
Tool closed		

KT20		
16 / 6		
35 / 2		
70 / 2/0		
20		
70 / 2/0		
20		
35		
20		
215 / 66 / 29		
400		
Tool closed		

Ordering data

Version
Note

Type	Qty	Order No.
KT 14	1	1157820000
Specifying „solid-core aluminium cable“ corresponds to sector-shaped conductor with individual strands		

Type	Qty	Order No.
KT 20	1	9002300000
Specifying „solid-core aluminium cable“ corresponds to sector-shaped conductor with individual strands		




## Front cable cutter

### Front cable cutter

- Can be used in confined spaces wherever cables need to be divided.
- Easy handling
- Minimal hand force required
- Release option in every cutting position
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!




#### KTF 25



-  Cu + Al: max. 25 mm
-  Cu: max. 120 mm<sup>2</sup>  
Al: max. 150 mm<sup>2</sup>
-  Cu: max. 120 mm<sup>2</sup>

#### KTF 36



-  Cu + Al: max. 35 mm
-  Cu: max. 300 mm<sup>2</sup>  
Al: max. 300 mm<sup>2</sup>
-  Cu: max. 300 mm<sup>2</sup>

### Technical data

Max. cutting performance, copper cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible, stranded (max. conductor diameter)	mm
Copper sector cable	
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Stranded (max. conductor diameter)	mm
Aluminium sector cable	
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KTF 25		
	120 / 250	
	120 / 250	
	25	
	150 / 300	
	25	
	25	
	245 / 80 / 40	
	900	
	Tool closed	

KTF 36		
	300 / 600	
	300 / 600	
	35	
	300 / 600	
	35	
	35	
	330 / 100 / 49	
	1400	
	Tool closed	

### Ordering data

Version
Note

Type	Qty	Order No.
KTF 25	1	9002180000

Type	Qty	Order No.
KTF 36	1	9002190000






## Cable cutter

- One-hand operation
- Easy handling
- Minimal hand force required
- Release option in every cutting position
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!



## KT 45 R






-  Cu + Al: max. 45 mm
-  Cu: max. 300 mm<sup>2</sup>  
Al: max. 400 mm<sup>2</sup>
-  Cu: max. 400 mm<sup>2</sup>



## KT 55



-  Cu + Al: max. 55 mm
-  Cu: max. 500 mm<sup>2</sup>  
Al: max. 500 mm<sup>2</sup>
-  Cu: max. 500 mm<sup>2</sup>



## Technical data

Max. cutting performance, copper cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible, stranded (max. conductor diameter)	mm
Copper sector cable	
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Stranded (max. conductor diameter)	mm
Aluminium sector cable	
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KT 45 R		
	300 / 600	
	400 / 800	
	45	
	3 x 70 SM	
	400 / 800	
	45	
	4 x 70 SE	
	45	
	290 / 85 / 40	
	740	

KT 55		
	500 / 1000	
	500 / 1000	
	55	
	3 x 150 SM	
	500 / 1000	
	55	
	4 x 150 SE	
	55	
	365 / 115 / 45	
	1450	

## Ordering data

Version
Note

Type	Qty	Order No.
KT 45 R	1	9202040000
Pivoting blade KT 45 R	1	9204270000

The dimensions of the cable cutter refer to the delivery condition, i.e. the point of the hinged blade parallel to the fixed blade.

Type	Qty	Order No.
KT 55	1	9202060000
Pivoting blade KT 55	1	9204280000

The dimensions of the cable cutter refer to the delivery condition, i.e. the point of the hinged blade parallel to the fixed blade.

## Cable cutter

### Cable cutter

- Easy handling
- Minimal hand force required
- Release option in every cutting position
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!

### KT 80



⊘ Cu + Al: max. 80 mm

⊘ Cu: max. 630 mm<sup>2</sup>  
Al: max. 1000 mm<sup>2</sup>

⊘ Cu: max. 630 mm<sup>2</sup>



### Technical data

Max. cutting performance, copper cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Flexible, stranded (max. conductor diameter)	mm
Copper sector cable	
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm <sup>2</sup> /kcmil
Stranded (max. conductor diameter)	mm
Aluminium sector cable	
Data / telephone / control cable	
Max. outer diameter	mm
Tool data	
Length / Width / Height	mm
Weight	g
Note	

KT 80		
630 / 1260		
630 / 1260		
80		
3 x 240 SM		
1000 / 2000		
4 x 240 SE		
80		
675 / 175 / 55		
3240		

### Ordering data

Version
Note

Type	Qty	Order No.
KT 80	1	9202080000
Pivoting blade KT 80	1	9204290000

The dimensions of the cable cutter refer to the delivery condition, i.e. the point of the hinged blade parallel to the fixed blade.



Cutting and releasing tool

Special release tool for the Weidmüller W-Series terminal connectors.

WAW 1

Notching tool



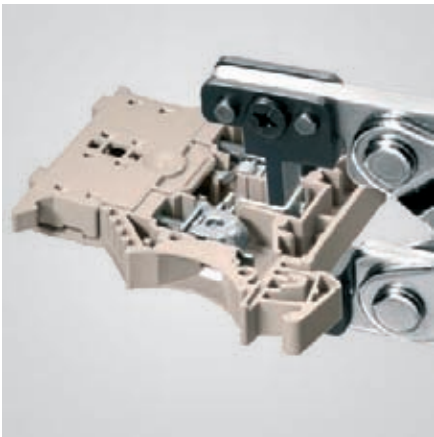
Tool for releasing poles from WQV 2.5 to WQV 35 cross connections used in Weidmüller W-Series terminal connectors.

WAW 2

Notching tool



Tool for punching out the cross-connection windows of the Weidmüller W-Series terminal connectors  
WTR 2.5 disconnect terminal  
WSI 6 fuse terminal



Technical data

Length	mm
Weight	g
Note	

WAW 1
167
227

WAW 2
205
338

Ordering data

Version
Note

Type	Qty	Order No.
WAW 1 NEUTRAL	1	9004500000
A large selection of cross-connectors can be found in our current Terminals Catalogue.		

Type	Qty	Order No.
WAW 2	1	9004510000

## Cutting and releasing tools

### Cutting and releasing tool

Special cutting tool for clean pinch-free cutting of Weidmüller Z-Series cross-connections

#### KT ZQV

##### Cutting tool



Cutting tool for clean cutting of Weidmüller ZQV Series cross-connections



#### Technical data

Length / Width / Height	mm
Weight	g
<b>Note</b>	

#### Ordering data

Version

KT ZQV		
	215	
	300	

Type	Qty	Order No.
KT ZQV	1	9002170000

A large selection of cross-connectors can be found in our current Terminals Catalogue.

#### VKSW

##### Wire channel cutter



Manually-operated wire channel cutter: for cutting (up to 125-mm wide) of wire channels and covers.

- Cutting with no burrs or waste
- Length end stop (1000 mm) with feed mechanism for precision-angled cuts
- Table-top unit for mounting on workbench or similar work places
- Hardened cutting edges made from specialized steel.

VKSW		
	280 / 285 / 290	
	15000	

Type	Qty	Order No.
VKSW	1	1137530000

Mounting rail cutter

TSLD

Terminal rail cutting and punching tool



Hand-operated mounting rail cutter for cutting and perforating DIN mounting rails

- Cutting with no burrs or waste
- Length end stop (1000 mm) is included in delivery
- Table-top unit for mounting on workbench or similar work places



Copper earthing bar



TS 32 mm according to EN 50035 (s = 1.5 mm)



TS 15/5.5 mm according to EN 50045 (s = 1.0 mm)



TS 35/7.5 mm according to EN 50022 (s = 1.0 mm)



TS 35/15 mm according to EN 50022 (s = 1.5 mm)

Technical data

Width	mm
Length	mm
Height	mm
Weight	g
Note	

TSLD	
Width	205
Length	270
Height	200
Weight	19000
Note	
techn. Angabe ohne Hebel und Längenanschlag	

Ordering data

Version
Note

Type	Qty	Order No.
TSLD	1	9918700000
Note		
A large selection of mounting rails can be found in our current Terminal Connectors Catalogue.		

# Hydraulic hole puncher

## B

The IP protection classes for housings, cable glands, heavy-duty connectors and industrial Ethernet connectors can only be maintained under two conditions: the sheet metal must not be bent during the punching process and the size of the punched-out holes must correspond precisely with the specifications. The IE-KO-HAT hydraulic sheet metal hole puncher, together with its accessories, guarantees you the highest quality workmanship available. It ensures that the connector fits precisely with the punched-out holes so that you can fulfill the proper IP protection class requirements.



**The hydraulic hole puncher punches out precise holes for accommodating metric and PG cable glands.**



**Automatic centre punching at the drill points when punching out holes for heavy-duty connectors.**



**Punching out holes for a variety of industrial Ethernet connectors.**

The table below lists the round splitting stamps and their corresponding tension screws – for manual use and for use with the hydraulic screws

Type	Descriptions	Dimension	Order No.	Tension screw Ø x l in mm	Order No.	Hydraulic screw (tension bolt) Ø in mm	Order No.
KOS M 16	Round splitting stamp for M16 cable glands	Ø 16.2 mm	9204880000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS M 20	Round splitting stamp for M20 cable glands	Ø 20.4 mm	9204950000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS M 25	Round splitting stamp for M25 cable glands	Ø 25.4 mm	9204900000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS M 32	Round splitting stamp for M32 cable glands	Ø 32.5 mm	9204910000	19.0 x 55	9205040000	19	9205010000
KOS M 40	Round splitting stamp for M40 cable glands	Ø 40.5 mm	9204920000	19.0 x 75	9204780000	19	9205010000
KOS PG 9	Round splitting stamp for PG9 cable glands	Ø 15.2 mm	9204930000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS PG 11	Round splitting stamp for PG11 cable glands	Ø 18.6 mm	9204940000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS PG 13	Round splitting stamp for PG13 cable glands	Ø 20.4 mm	9204950000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS PG 16	Round splitting stamp for PG16 cable glands	Ø 22.5 mm	9204960000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS PG 21	Round splitting stamp for PG21 cable glands	Ø 28.3 mm	9204970000	9.5 x 50	9205030000	19 x 9.5	9205000000
KOS PG 29	Round splitting stamp for PG29 cable glands	Ø 37.0 mm	9204980000	19.0 x 55	9205040000	19	9205010000
KOS PG 36	Round splitting stamp for PG36 cable glands	Ø 47.0 mm	9204990000	19.0 x 75	9204780000	19	9205010000
<b>Information:</b> Hydraulic screw included in the IE-KO-HAT set. Tension screws only used for manual operation.							

### Hydraulic hole puncher

## IE-KO-HAT



- Pressure-relief valve protects against overload
- Cylinder head angled 90°
- Angled head, 360° turnable
- Ergonomic handle springs back by itself
- Waste pieces no longer become jammed thanks to the three-way splitting
- Hydraulic punch made from high-strength aluminium (approx. 40 % weight savings)

## Technical data

<b>Maximum steel-sheet punching performance</b>	
Round holes up to	Ø 85 mm
Round holes up to	Ø 64 mm
Square holes up to	68 x 68 mm
Rectangular holes up to	36 x 112 mm
<b>Maximum stainless-steel-sheet punching performance</b>	
Round holes up to	Ø 64 mm
<b>Tool data</b>	
Length / width / height	mm
Weight	kg
Punching force	kN
Max. operating pressure	bar
Including accessories (contents)	

### Information

## Ordering data

Version

## Accessories

**Information**

<b>IE-KO-HAT</b>
2.0 mm F = 370 N/mm <sup>2</sup>
3.0 mm F = 370 N/mm <sup>2</sup>
2.0 mm F = 370 N/mm <sup>2</sup>
2.0 mm F = 370 N/mm <sup>2</sup>
2.5 mm F = 600 N/mm <sup>2</sup>
290/120/70
1.9
75
650
1 hydraulic screw Ø 19.0 mm
1 hydraulic screw Ø 19 x 9.5 mm
1 HSS pre-drill Ø 10 mm
1 spacer nut set (3-part)
1 bridge

Type	Qty.	Order No.
IE-KO-HAT	1	1966810000

Type	Qty.	Order No.
KOHS 19 Hydraulic screw	1	9205010000
KOHS 9 5/19 Hydraulic screw	1	9205000000
KOPD 10.0 Pre-drill	1	9205020000
Splitting stamp on the next page		

## Hole punch

## Custom stamp for Industrial Ethernet connections



Type	Description	Dimensions	Qty.	Order No.
IE-KOK-V1	Custom shape for Bajonet 01 metal	Ø 27 mm x single-sided 25.9 mm	1	1966780000
IE-KOK-V4	Custom shape for Push Pull V04 plastic	Ø 23.2 mm x double-sided 20.2 mm	1	1966790000
IE-KOK-V5	Custom shape for RockStar® V05 metal	22.0 x 22.0 mm	1	9204790000

## B

## Rectangular splitting stamp for heavy-duty connectors



Type	Description	Dimensions	Size	Qty.	Order No.
KOK 52 x 36	Splitting stamp for 6-pole heavy-duty connectors	52.0 x 36 mm	3	1	9204820000
KOK 65 x 36	Splitting stamp for 10-pole heavy-duty connectors	65.0 x 36 mm	4	1	9204830000
KOK 86 x 36	Splitting stamp for 16-pole heavy-duty connectors	86.0 x 36 mm	6	1	9204850000
KOK 91 x 36	Splitting stamp for 16-pole heavy-duty connectors	91.0 x 36 mm		1	9204860000
KOK 112 x 36	Splitting stamp for 24-pole heavy-duty connectors	112.0 x 36 mm	8	1	9204870000

## Rectangular splitting stamp for switches



Type	Description	Dimensions	Qty.	Order No.
KOK 46 x 46	Rectangular splitting stamp for switches	46.0 x 46.0 mm	1	9204810000
KOK 68 x 68	Rectangular splitting stamp for switches	68.0 x 68.0 mm	1	9204840000

## Round splitting stamp for metric cable glands



Type	Description	Dimensions	Qty.	Order No.
KOS M 16	Round splitting stamp for M16 cable glands	Ø 16.2 mm	1	9204880000
KOS M 20	Round splitting stamp for M20 cable glands	Ø 20.4 mm	1	9204950000
KOS M 25	Round splitting stamp for M25 cable glands	Ø 25.4 mm	1	9204900000
KOS M 32	Round splitting stamp for M32 cable glands	Ø 32.5 mm	1	9204910000
KOS M 40	Round splitting stamp for M40 cable glands	Ø 40.5 mm	1	9204920000

## Round splitting stamp for high-strength cable glands



Type	Description	Dimensions	Qty.	Order No.
KOS PG 9	Round splitting stamp for PG9 cable glands	Ø 15.2 mm	1	9204930000
KOS PG 11	Round splitting stamp for PG11 cable glands	Ø 18.6 mm	1	9204940000
KOS PG 13	Round splitting stamp for PG13 cable glands	Ø 20.4 mm	1	9204950000
KOS PG 16	Round splitting stamp for PG16 cable glands	Ø 22.5 mm	1	9204960000
KOS PG 21	Round splitting stamp for PG21 cable glands	Ø 28.3 mm	1	9204970000
KOS PG 29	Round splitting stamp for PG29 cable glands	Ø 37.0 mm	1	9204980000
KOS PG 36	Round splitting stamp for PG36 cable glands	Ø 47.0 mm	1	9204990000

## Tension screw



Type	Description	Dimensions	Qty.	Order No.
KOBBS	Tension screw	9.5 x 50 mm	1	9205030000
KOBBS	Tension screw	19 x 55 mm	1	9205040000
KOBBS	Tension screw	19 x 75 mm	1	9204780000