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# **Cutting**

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# **Cutting**

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.

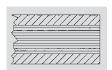
The requirement for all cutting tools is to perform a smooth, straight cut without deforming the conductor.

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 singlehanded operation.

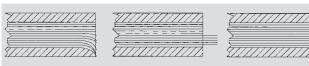
Tools by Weidmüller comply with all requirements imposed on professional cutting tools.

#### Clean cut



Insulation Conductor

An "unclean" cut may have the following appearance:



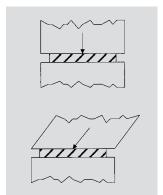
Conductor sheared off Conductor pulled out

Squeezed cable

#### Movement of the blades

We differentiate between two basic cutting processes:

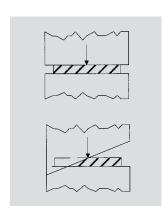
- Push cut
- Draw cut



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.

## **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









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>



**KT 22** 

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)	mm²/AWG
Stranded (max. conductor cross-section)	mm²/AWG
Flexible (max. conductor cross-section)	mm²/AWG
Flexible, stranded (max. conductor diameter)	mm
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm²/-
Stranded (max. conductor diameter)	mm
solid	mm²
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	

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

## Ordering data

Version	

1	9002650000
1	9002660000
	1

Type	Qty	Order No.
KT 22	1	1157830000

Note

## **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**



### **KT 20**





max. 20 mm



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



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



max. 70 mm<sup>2</sup>



## max. 70 mm<sup>2</sup>

max. 14 mm

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

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

## **Technical data**

Max. cutting performance, copper cable	
Solid (max. conductor cross-section)	mm²/AWG
Stranded (max. conductor cross-section)	mm²/AWG
Flexible (max. conductor cross-section)	mm²/AWG
Flexible, stranded (max. conductor diameter)	mm
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm²/-
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			

Туре	Qty	Order No.
KT 14	1	1157820000

Туре	Qty	Order No.
KT 20	1	9002300000

Note

**Specifying** "solid-core aluminium cable" corresponds to sector-shaped conductor with individual strands

**Specifying** "solid-core aluminium cable" corresponds to sector-shaped conductor with individual strands

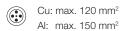
### Front cable cutter

- 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**







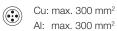


KTF 25

#### **KTF 36**



Cu + Al: max. 35 mm





#### **Technical data**

Max. cutting performance, copper cable		
Stranded (max. conductor cross-section)	mm²/kcmil	
Flexible (max. conductor cross-section)	mm²/kcmil	
Flexible, stranded (max. conductor diameter)	mm	
Copper sector cable		
Max. cutting performance, aluminium cable		
Stranded (max. conductor cross-section)	mm²/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		

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	

Туре	Qty	Order No.
KTF 25	1	9002180000

Туре	Qty	Order No.
KTF 36	1	9002190000

Note

### 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)	mm²/kcmil	
Flexible (max. conductor cross-section)	mm²/kcmil	
Flexible, stranded (max. conductor diameter)	mm	
Copper sector cable		
Max. cutting performance, aluminium cable		
Stranded (max. conductor cross-section)	mm²/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

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

N	nt.	

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

Туре	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.

В

## Cable cutter

- Easy handlingMinimal 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)	mm²/kcmil
Flexible (max. conductor cross-section)	mm²/kcmil
Flexible, stranded (max. conductor diameter)	mm
Copper sector cable	
Max. cutting performance, aluminium cable	
Stranded (max. conductor cross-section)	mm²/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

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

Note

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

В

## **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		

Туре	Qty	Order No.
WAW 1 NEUTRAL	1	9004500000

Туре	Qty	Order No.
WAW 2	1	9004510000

Note

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

## **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

#### **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



## **Technical data**

Length / Width / Height	mm
Weight	g
Note	

Ordering da	ata
-------------	-----

Version

KT ZQV	
215	
300	

Туре	Qty	Order No.
KT ZQV	1	9002170000

KT ZQV 1 900217000

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

VKSW		
280 / 285 / 290		
15000		

Туре	Qty	Order No.	
VKSW	1	1137530000	

Note

## Mounting rail cutter

#### **TSLD**



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
- Table-top unit for mounting on workbench or similar work places





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	

### Ordering data

Note

Version	Туре
	TSLD

A large selection of mounting rails can be found in our current Terminal Connectors Catalogue.

Order No.

9918700000

techn. Angabe ohne Hebel und Längenanschlag

19000

## Hydraulic hole puncher

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

Туре	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
	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

Maximum steel-sheet punching perfor	mance
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
Maximum stainless-steel-sheet punch	ing performance
Round holes up to	Ø 64 mm
Tool data	
Length / width / height	mm
Weight	kg
Punching force	kN
Max. operating pressure	bar
Including accessories (contents)	

IE-KO-HAT
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

Information

### Ordering data

Version	

Information

Accessories



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

1 spacer nut set (3-part)

1 bridge

Туре	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		

В

# Custom stamp for Industrial Ethernet connections



Туре	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

# Rectangular splitting stamp for heavy-duty connectors



Туре	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



Туре	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



Туре	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



Туре	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



Туре	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