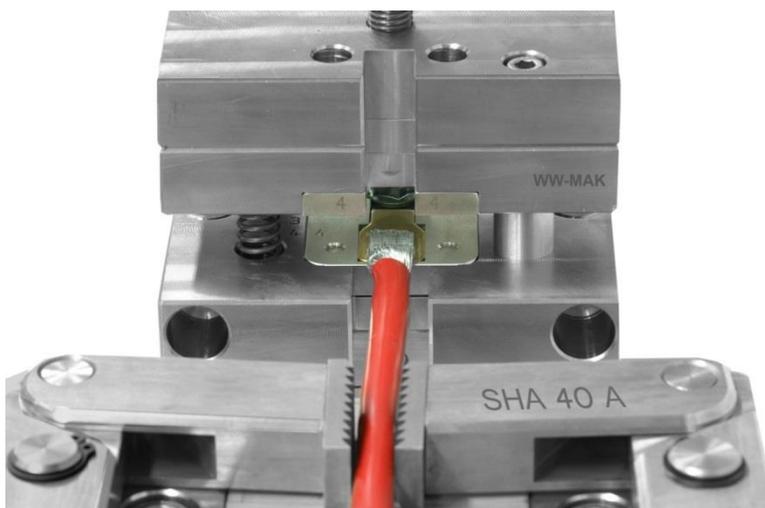
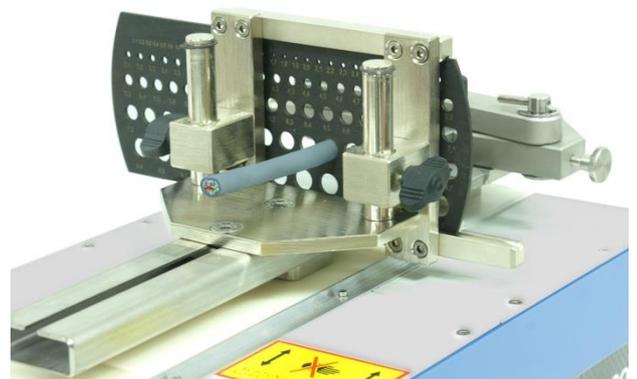
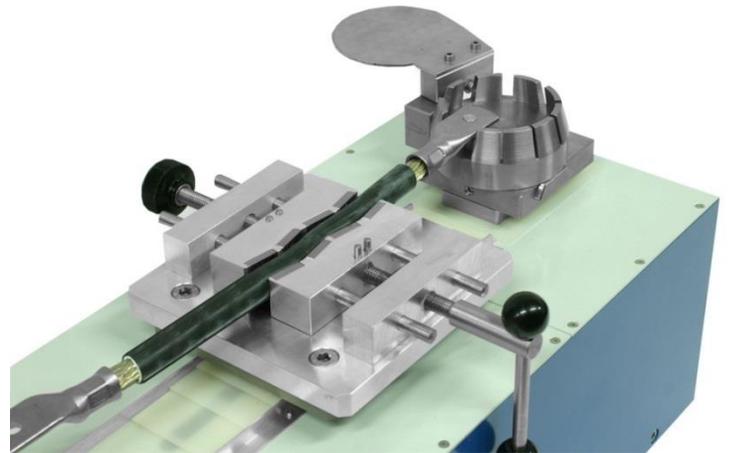
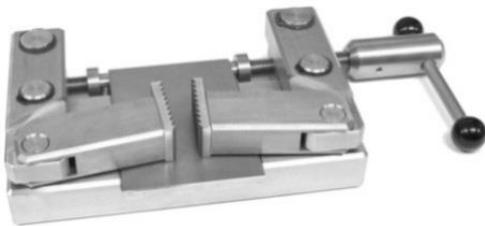


## Tools for MAV Test Stations



**MAV PRÜFTECHNIK GMBH • D- 12047 Berlin**

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eMail: [info@mav-germany.de](mailto:info@mav-germany.de) • Internet: [www.mav-germany.de](http://www.mav-germany.de)

- Standardized Tools
- Description, Function, Force Range

## Clamping Crowns SG 40, SG 80 (V), SG 90

Rotatable clamping crowns for tensile strength tests of wire terminals, connectors and other end fittings.

### SG 40:

40 mm diameter, 6 slots from 1.2 to 5 mm width. Suitable for all hand-lever testers up to 500 N.

### SG 80:

80 mm diameter, 8 slots from 1.5 to 8 mm width, a slot with 20 mm width and a graded pin with diameters 4, 6 and 8 mm.

Suitable for all tester models up to 2,000 N

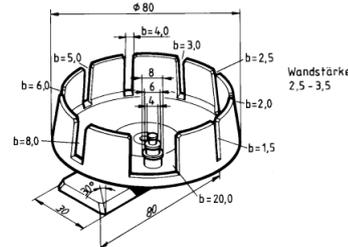
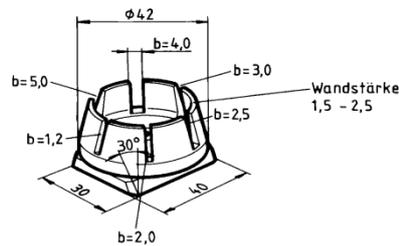
### SG 80 V:

Reinforced model SG 80-V with max. load of 3,000 N. Suitable for all tester models up to 3,000 N.

### SG 90:

90 mm diameter, 8 slots from 1.5 to 15 mm width, a slot with 25 mm width and graded pin with diameters 8, 12 and 16 mm. Additional rotating safety cover included.

Suitable for all tester models ranging from 5,000 to 10,000N.



Measuring point arrangement only!  
 (all SG tools)

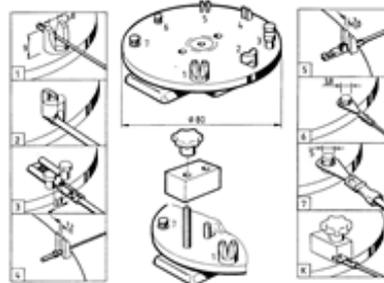
## Turntable DT 88K

Turntable with 80 mm diameter and 8 different gripping and fastening fixtures for wire terminals, clips, sleeves, end splices, round plug connectors and other end fittings.

Suitable for all hand-lever testers up to 500 N.

Upon request, customized gripping stations or brackets can be assembled, designed according to customer's samples of test specimen.

Measuring point arrangement only!



## Universal Turntable UNI-DT-2K

### UNI-DT-2K

Universal turntable with 100 mm diameter and 12 different gripping and fastening stations for wire terminals, clips, sleeves, end splices, round plug connectors and other end fittings.

Suitable for all tester models up to 1,000 N.

### UNI-DT-2K-V

Suitable for all tester models up to 2,000 N.

Upon request, customized gripping fixtures or brackets can be assembled, designed according to customer's samples of test specimen.

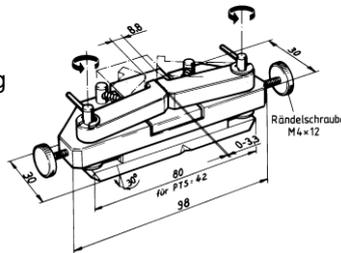


Measuring point arrangement only!

- Standardized Tools
- Description, Function, Force Range

## Quick Action Clamps KSH 6

Quick action clamps with adjustable clamping range from 0 to 6 mm for fixing cable, wire, filaments, fibers and shaped parts. After release of the locking screws, the clamping diameter can be adjusted by the toggle arm's eccentric jaw mechanism. The mechanism is self-tightening and results in an increasing clamping pressure at rising test loads.

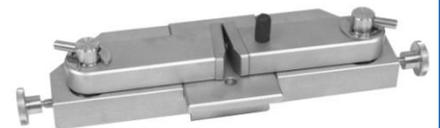
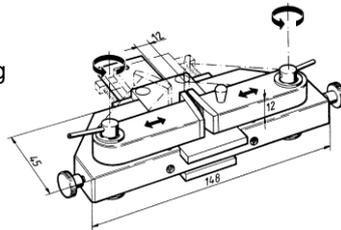


**Measuring point arrangement: KSH-6/M !**  
**Load bar arrangement: KSH-6/A !**

Suitable for all testers of all model series up to 500 N.

## Quick Action Clamps SHA 12

Quick action clamps with adjustable clamping range from 0 to 12 mm for fixing cable, wire, filaments, fibers and shaped parts. After release of the locking screws, the clamping diameter can be adjusted by the toggle arm's eccentric jaw mechanism. The mechanism is self-tightening and results in an increasing clamping pressure at rising test loads.

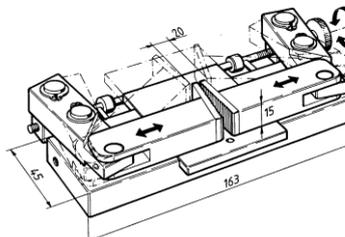


**Measuring point arrangement: SHA-12/M !**  
**Load bar arrangement: SHA-12/A !**

Suitable for all testers of all model series up to 1,000 N.

## Quick Action Clamps SHA 20

Quick action clamps with adjustable clamping range from 0 to 20 mm for fixing cable wire, filaments, fibers and shaped parts. The diameter is changed by using the laterally attached adjustment screw. The mechanism is self-tightening and results in an increasing clamping pressure at rising test loads.

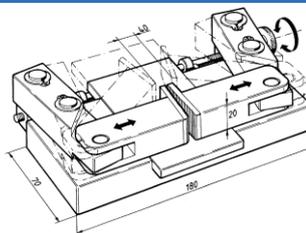


**Measuring point arrangement: SHA-20/M !**  
**Load bar arrangement: SHA-20/A !**

Suitable for all testers of all model series  
 Ranging from 1,000 - 3,000 N.

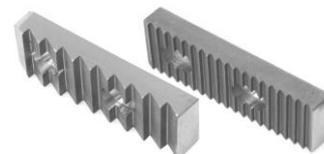
## Quick Action Clamps SHA 40

Quick action clamps with adjustable clamping range from 0 to 40 mm for fixing cable wire, filaments, fibers and shaped parts. A central adjustment spindle ensures a fast diameter adjustment. The mechanism is self-tightening and results in an increasing clamping pressure at rising test loads. For cables with very thin copper conductors, clamps with a finer toothing (twice as many teeth), are deliverable, to prevent the wire from being torn apart.



**Measuring point arrangement: SHA-40/M !**  
**Load bar arrangement: SHA-40/A !**

Suitable for all testers of all model series  
 ranging from 5,000 - 10,000 N.



- Standardized Tools
- Description, Function, Force Range

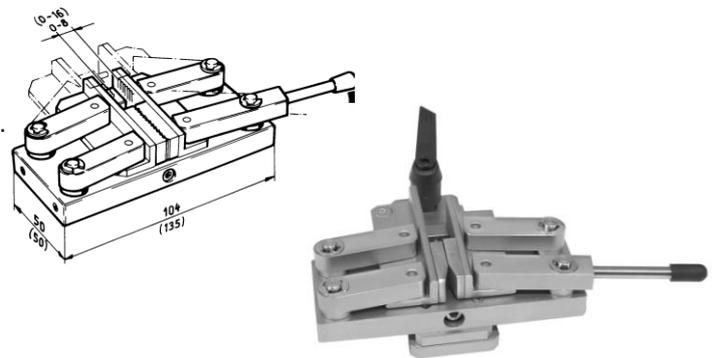
## Quick Action Clamps KSP 8 and KSP 16

Quick action grippers with parallel clamping jaw for rapid and semi-automatic testing of wire, cable, wire cable and filaments.

The clamps of the KSP-8 Grippers open up to 8 mm, the clamps of the KSP-16 open up to 16 mm and are operated by a hand lever. No diameter adjustment is necessary. Rising test loads result in an increase of the clamping pressure. The clamps are being adjusted symmetrically.

**Measuring point arrangement:** KSP-8/M / KSP-16/M  
**Load bar arrangement:** KSP-8/A / KSP-16/A

KSP-8 suitable for all testers of all model series up to 1,000 N;  
 KSP-16 suitable for all testers of all model series up to 3,000 N.



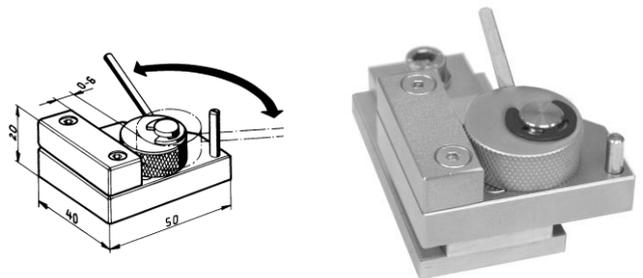
## Miniature Cable Clamp MK 8

Self-tightening cable clamp for pull-off tests of cable, wire, strip etc. Clamping range 0-8 mm.

The test specimen is inserted between the eccentric cam and the static tension block and is fixed by rotating the cam by its hand lever. Increasing the test load also increases the clamping pressure.

**Measuring point arrangement:** MK-8/M  
**Load bar arrangement:** MK-8/A

Suitable for all testers of all model series up to 500 N.



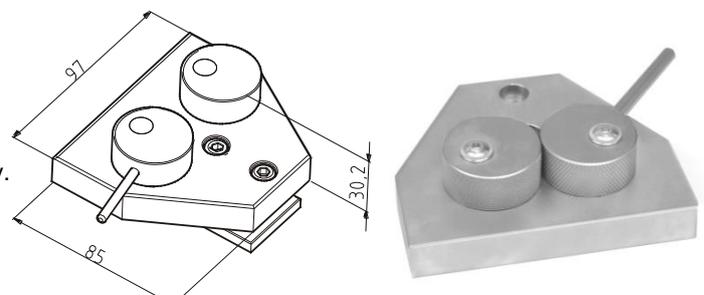
## Cable Clamp DKS 20

Self-clamping cable clamp for pull-off tests of cable, wire, strip etc. Clamping range 0-20 mm.

The test specimen is inserted between the two eccentric cams and is secured by rotating the small lever a tone cam and tightens as the tension load is applied. Increasing the test load also increases the clamping pressure. The cams are being tightened symmetrically.

**Measuring point arrangement:** DKS-20/M  
**Load bar arrangement:** DKS-20/A

Suitable for all testers of all model series up to 2,000 N.



## Cable Clamp ESP

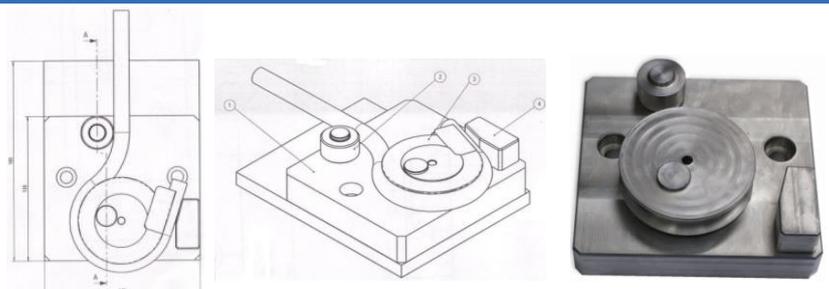
Eccentric cable clamping tool for cable with fine strands and/or soft cable sheath.

Diameter adjustment possible by simply shifting the clamping cam.

**Load bar arrangement.**

Suitable for all testers of all model series.

ranging from 5,000 to 10,000 N.





- Standardized Tools
- Description, Function, Force Range

### Precision Component Grip FSEL

Narrow faced grip for very small or difficult to grab parts such as fine wire, filaments and other small components or in difficult to access areas.

**Measurement point arrangement:** FSEL/M  
**Load bar arrangement:** FSEL/A

(different tool tip compared to KSEL)



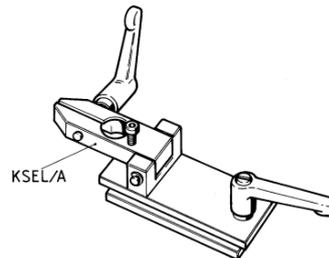
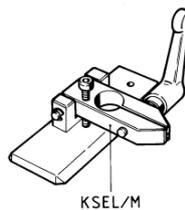
Suitable for all testers of all model series up to 500 N.

### Miniature Component Grip KSEL

Narrow faced grip for small or difficult to grab parts such as fine wire, filaments and other small components or in difficult to access areas.

**Measurement point arrangement:** KSEL/M  
**Load bar arrangement:** KSEL/A

(different tool tip compared to FSEL)

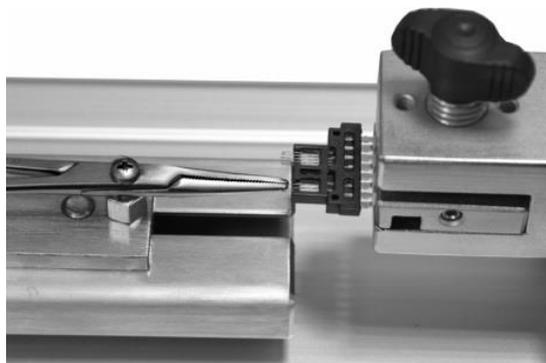


Suitable for all testers of all model series up to 500 N.

### Miniature Component Grip FSZ

Narrow faced grip for very small or difficult to grab parts such as fine wire, filaments and other small components. Also suitable for testing in areas, which are difficult to access.

**Load bar arrangement only.**



Suitable for all testers of all model series up to 250 N.

- Standardized Tools
- Description, Function, Force Range

### Ring Testing Tool RP

Divided mandrel for rubber-, plastic- or jewelry rings. Stepped with diameters of 14 mm and 24 mm. By altering the gap width, the diameter can be adjusted. Upon request, the mandrel is also available in customer specific diameters.



Suitable for all testers of all model series up to 500 N.

### Ferrule Testing Tool ADE

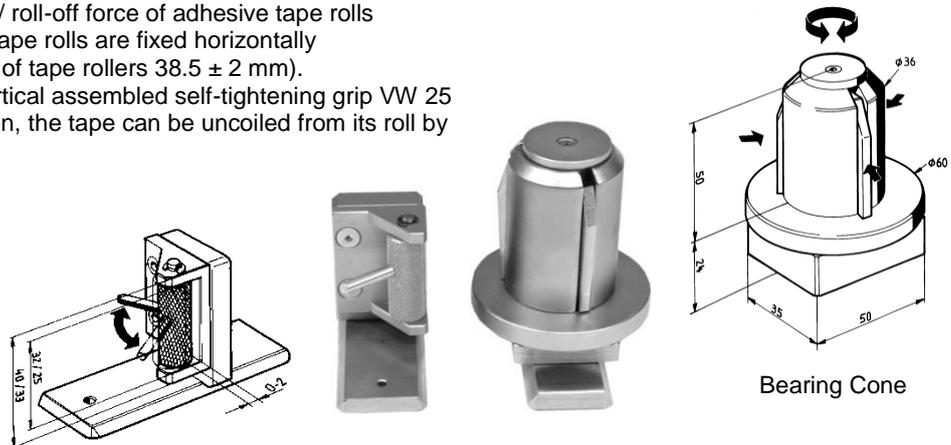
Clamping tool for testing wire-end ferrules. The clamping tool ADE features two clamps with adjustable diameter, which are capable of gripping between the end sleeve and the cable sheath. They are infinitely adjustable between 0 mm and 8 mm and therefore suitable for a variety of cable diameters.



Suitable for all testers of all model series up to 500 N.

### Tool Set CB for Adhesive Tape Rolls

Tool set for testing the adhesive force / roll-off force of adhesive tape rolls with a max. tape width of 25mm. The tape rolls are fixed horizontally on a bearing cone (for inside diameter of tape rollers  $38.5 \pm 2$  mm). The end of the tape is gripped by a vertical assembled self-tightening grip VW 25 or any other suitable gripping tool. Then, the tape can be uncoiled from its roll by the tester's drive.



Suitable for all testers of all model series up to 500 N.

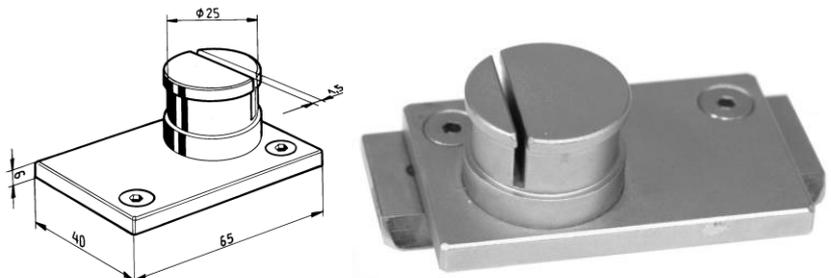
VW 25 (vertical orientation)

### Spool Grip VW 10

Used for hard-to-hold items, such as fine wires, fibers, filaments etc.

The sample is simply threaded into the locking groove and wrapped around the spool.

Measurement point arrangement: VW 10/M  
 Load bar arrangement: VW 10/A



Suitable for all testers of all model series up to 500N.

- Standardized Tools
- Description, Function, Force Range

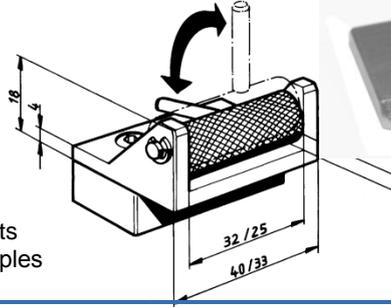
### Self-Tightening Grip VW 25

Grip for flat samples such as rubber, fabric, plastics etc. Eccentrically mounted serrated pressure roller enables self-tightening of specimen once load is applied.

Max. gripping width: 25 mm  
 (standard version, other diameters upon request).

**Measurement point arrangement:** VW 25/M  
**Load bar arrangement:** VW 25/A

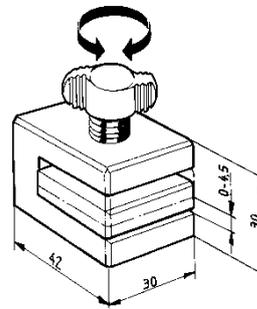
Suitable for all testers of all model series up to 500N.  
 Upon request, also customized gripping stations or brackets can be assembled, designed according to customer's samples of test specimen.



### Clamping Jaws VW 30

Clamping jaws with manually tightened jaw clamps for tensile tests of flat samples such as paper, cardboard strips, foil strips, plastics, packaging, etc.

Clamping width: 30 mm (standard version)  
 Other versions available.

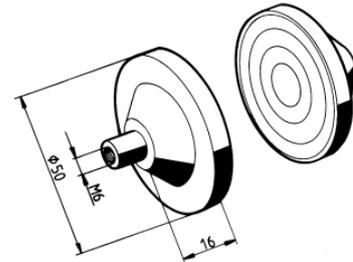


Suitable for all testers of all model series up to 500 N.

### Pressure Plates VW 50

Pressure plates for testing springs, tablets, packaging, etc.

Plate diameter: 50 mm (standard version),  
 other versions available.



Suitable for all testers of all model series up to 500 N.

### Comb Tool KW-1 & KW-2

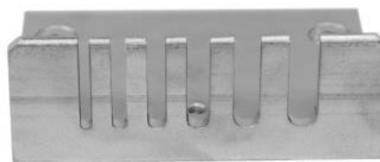
The KW comb tools are provided with slits of different width and thus are also suitable for larger specimen such as carbon brushes. By laterally displacing the comb tool within the quick-change chucks, the required slit can be brought into testing position.

Comb tool KW 1:

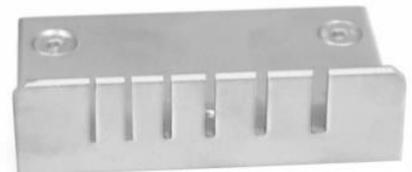
Comb width: 100 mm, comb height: 30 mm,  
 6 slits, width: 3/4/5/6/7/8 mm, slit depth: 26 mm

Comb tool KW 2:

Comb width: 100 mm, comb height: 20 mm,  
 6 slits, width: 1.2/1.6/2/2.5/3/4 mm, slit depth: 26 mm



KW-1



KW-2

Suitable for all testers up to 2,000 N, greater force ranges upon request.

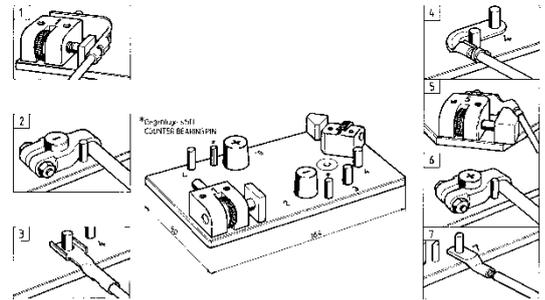
- Standardized Tools
- Description, Function, Force Range

### Plug-in Plate SL-BAT for Battery Cable Terminals

The standard version of the Plug-in Plate SL-BAT has 7 receptions for battery cable terminals according to the drawing on the right. The receptions on the SL-BAT are arranged on both sides of the plate. That means the plate can be reversed for the use of all receptions.

Customized gripping stations can be assembled, designed according to customer's test samples.

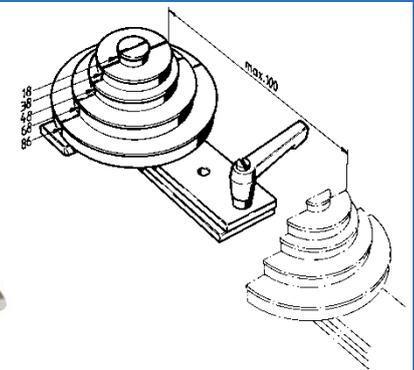
Suitable for all testers of all model series ranging from 5,000 to 10,000 N.



### Step Cone KBS for Cable Tie Testing

Divided stepped cone for testing cable ties. The cable tie is looped around the step of the corresponding size. The lock should point in the direction of the slit. During the test, the two parts of the cone are dispersed by the tester.

Cone with 5 gradations: 18, 38, 48, 68, 86 mm, additionally the diameters can be adapted by the continuously adjustable length adjustment of the tester's load bar fixing.



Suitable for all testers of all model series up to 1,000 N.

### Cable Insulation Pull-off Testing - ML Plug Gauge

Cable insulation pull-off tests can be carried out with motor driven and hand operated testers. The tool set consists of a SPA holding frame (must be purchased separately, suitable for all ML models) and the ML plug gauge, which will be assembled on the load bar of the tester. The plug gauge can be moved sideways within the holding frame. This enables the operator to select the right Bore diameter.

The stripped end of the tested cable is put through the respective hole and then clamped by the tools located on the measuring point.

**Specification ML1:**

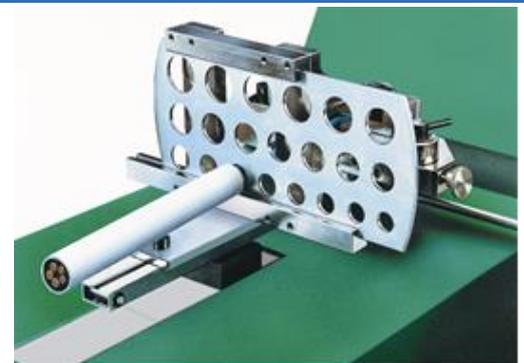
Bore diameters: 0.1 to 10 mm, gradation 0.1 mm.

**Specification ML2:**

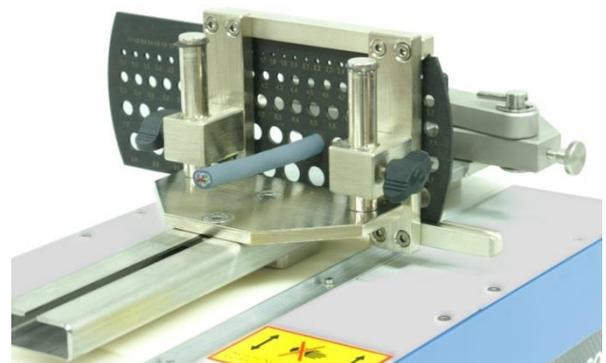
Bore diameters: 10 to 20 mm, gradation 0.5 mm.

**Specification ML3:**

Bore diameters: 21 to 30 mm, gradation 1.0 mm.



ML1 (below) ML2 (above) - SHA-12 on measuring point



Arrangement on load bar.

Suitable for all testers of all model series up to 500 N.

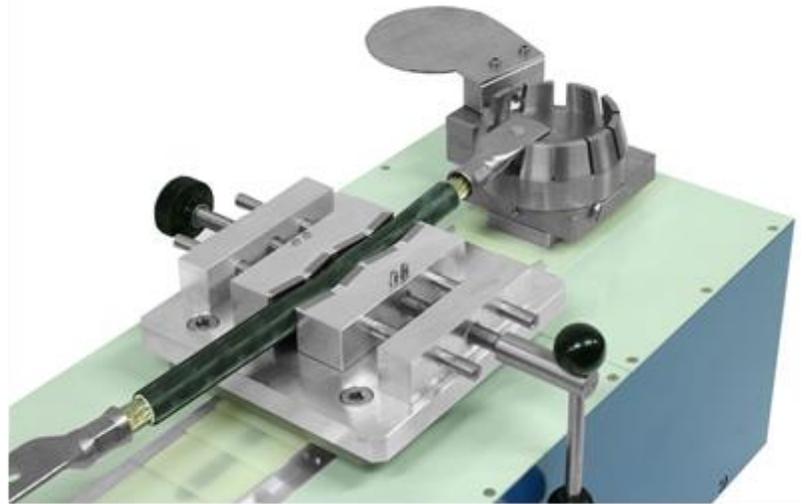
- Standardized Tools
- Description, Function, Force Range

### Undulate Clamping Tool WS

Wave-shaped clamping tool with double-sided force application. Suitable for fixing wire, cable and stranded wire. Available with either changeable clamping jaws (as seen on the picture) or with continuous knurling. The clamping diameter is infinitely adjustable between 0 - 40 mm. The adjustment is implemented via a spindle.

WS-R (with knurling)  
 WS-K (with clamping jaws)

Arrangement on load bar.  
 Suitable for all testers of all model series ranging from 5,000 to 10,000 N.



### Tool Set for Testing Cable Tie Tightening Pistols KBP

The KBP tool set is designed to determine the tightening force of cable tie pistols. The set consists of a plug-plate with 3 pins of the diameters 12, 20 and 30 mm for assembly on the measuring point of the tester and a special fixture for the cable tie pistol for assembly on the load bar of the tester.

Basically, fixtures for any chosen cable tie pistol can be manufactured. In our standard delivery program, we consistently provide fixtures for cable tie tool models HellermannTyton MK 7, MK 7HT, MK 7P, MK9, MK 9HT, MK3SP, MK3PNSP, MK 6PN as well as Panduit GS2B, GS4H, GTS, PPTS.

The cable tie pistol is not included!

The tool set is suitable for all testers up to 1,000 N. We recommend using a Clip Gun Tester CGT or CGT-Touch (as seen on the right figure).



### Tool Set for Automatic Testing of Cable Tie Tightening Pistols KBP-A

The KBP-A tool set is designed for the automatic testing of the tightening force of cable tie pistols from our standard delivery program (see above KBP). The set consists of a plug-plate with 3 pins of the diameters 12,20 and 30 mm on the measuring point side and a fixture plate for the cable tie pistols. Moreover there is a moveable driver-roll on the machine's load sled, which is used for actuating the cable tie pistol's trigger.



The KBP-A tool enables a continuous testing due to the electromotive drive of the machine's load sled. The options force preset, movement path preset and testing speed preset can be chosen and adjusted.

The KBP-A tool set is only available for ETM-A and ETM-M test stations ranging up to 1,000 N.

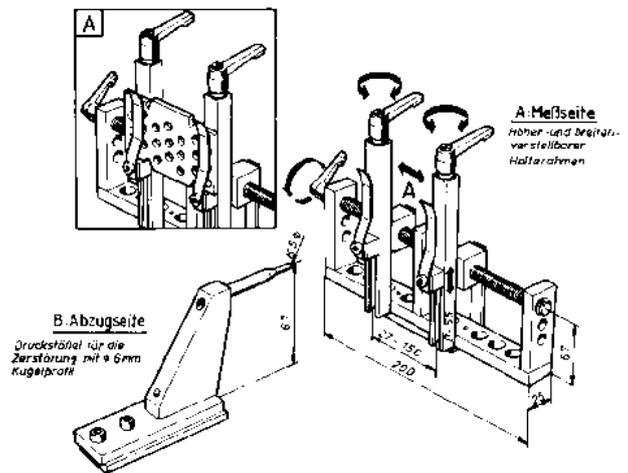
The cable tie pistol is not included!

- Standardized Tools
- Description, Function, Force Range

## Plate Breaking Fixture KPB

The plate breaking fixture allows uni-directional bending and breaking tests on rigid and semi rigid materials, such as ceramic plates, plastics, etc.

The tool set consists of a pressure pestle with 6 mm diameter ball profile and a height and width adjustable holding frame for the fixture of the test specimen.



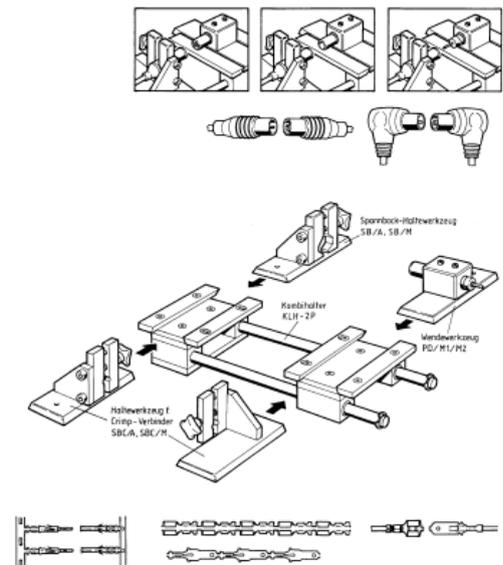
Suitable for all testers of all model series up to 1,000 N.

## Insertion and Extraction Tool KLH

Tool set for insertion and extraction tests of crimped connectors, antenna plugs, etc.

The tool set KLH consists of a tool reception with parallel guidance bars and adjustable force idle facility to avoid pre-loads during change of test load direction.

On top of this tool reception, corresponding fixtures for the test samples are assembled. A fixture set for crimped standard connectors and a fixture set for antenna plugs are available as a standard. Customized fixtures can be designed, too.



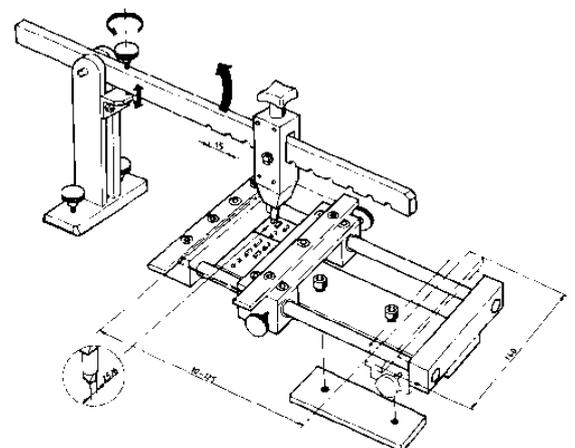
Suitable for all testers of all model series up to 500 N.

## PCB Holding Frame LSS

Tool set consisting of the Holding Frame LSS and a shearing mechanism for tests of electronic components on PC boards.

The LSS holding frame features an adjustable fixing bar for PCB side lengths of ca. 10 to 125 mm and a material thickness of up to 3.5 mm.

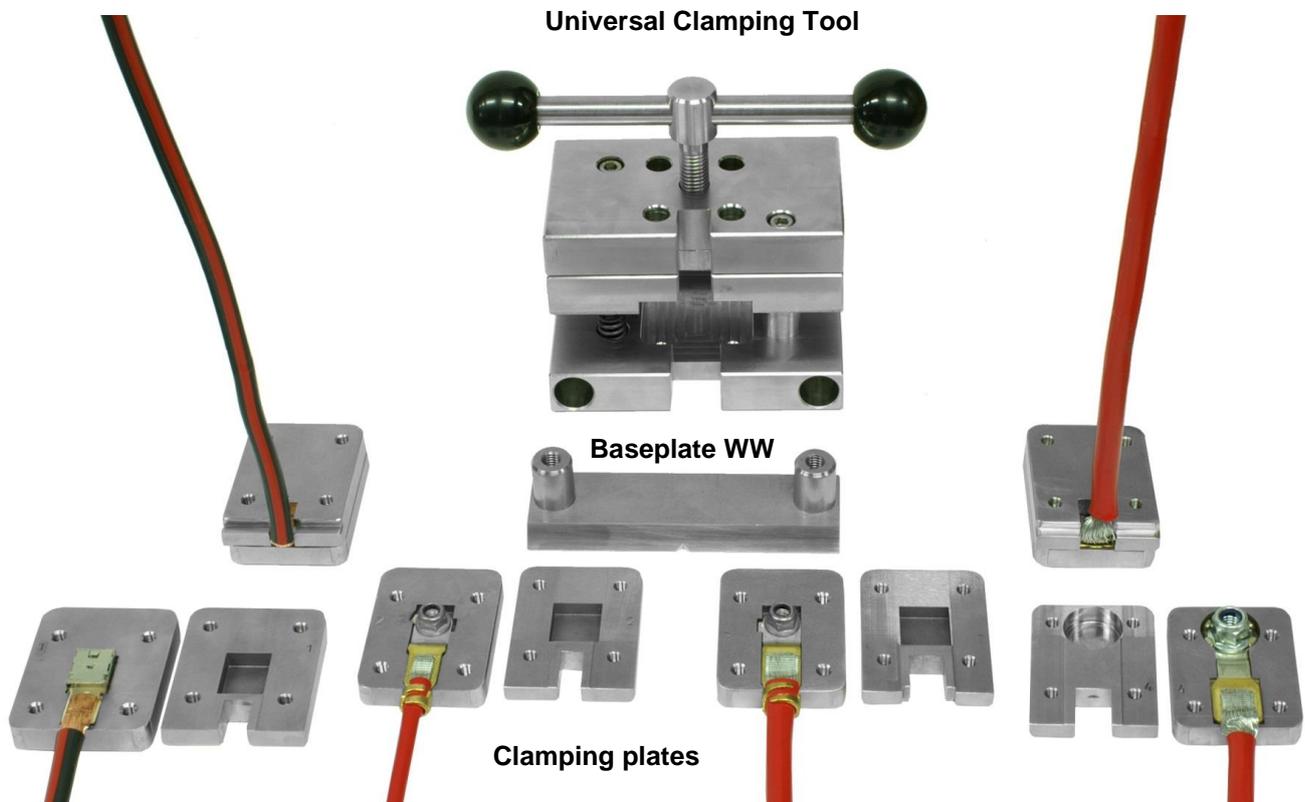
Customized holding frames can be designed, too. The shearing mechanism has a vertical length adjustment of ca. 140 mm and is also adjustable in height. The shearing pin can be reversed and has shearing blades on both sides (2.5 and 6 mm width).



Suitable for all testers of all model series up to 500 N.

- Standardized Tools
- Description, Function, Force Range

## Interchangeable Tool WW-MAK: Functional Principle

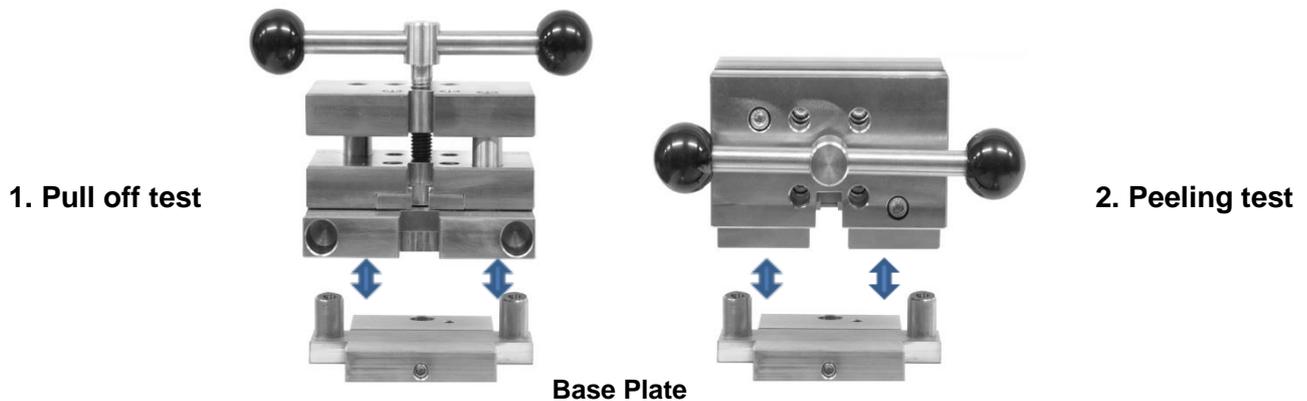


The WW-MAK is a universally usable tool for the testing of high power terminals and connectors of the MAK8 and MAK 12 production series MAK8-Crimp, MAK8 Sonic Weld and MAK12 Sonic Weld. Its construction design also allows the testing of different ultrasonic welded or crimped components due to the inter-changeable specimen fixtures.

There is the option to carry out standardized pull-off tests with the designated clamping plates as well as peeling tests in a 90° angle by simply rotating the universal clamping tool as a whole.

Positioning capabilities of the WW-MAK:

1. Pull-off test: the lever is located on the upper side
2. Peeling test: tool is rotated by 90°, the lever is located in front and faces the load side of the machine (in this case, the specimen has to be inserted in the specimen fixture before the whole tool is positioned on the mandrel prism-plate)



- Standardized Tools
- Description, Function, Force Range

The testing procedure basically is as follows:

- Insertion and mounting of the chosen specimen fixture in the tool
- Insertion of the chosen specimen in the fixture and clamping through the fixture's pressure plate
- Mounting of the tool on the measuring point in the chosen position
- Tightening of the tool's contact pressure plate by actuating the handle
- Clamping the specimen on the load side and start testing as is usual (SHA20/SHA40)

### Interchangeable Tool WW-MAK: Structure

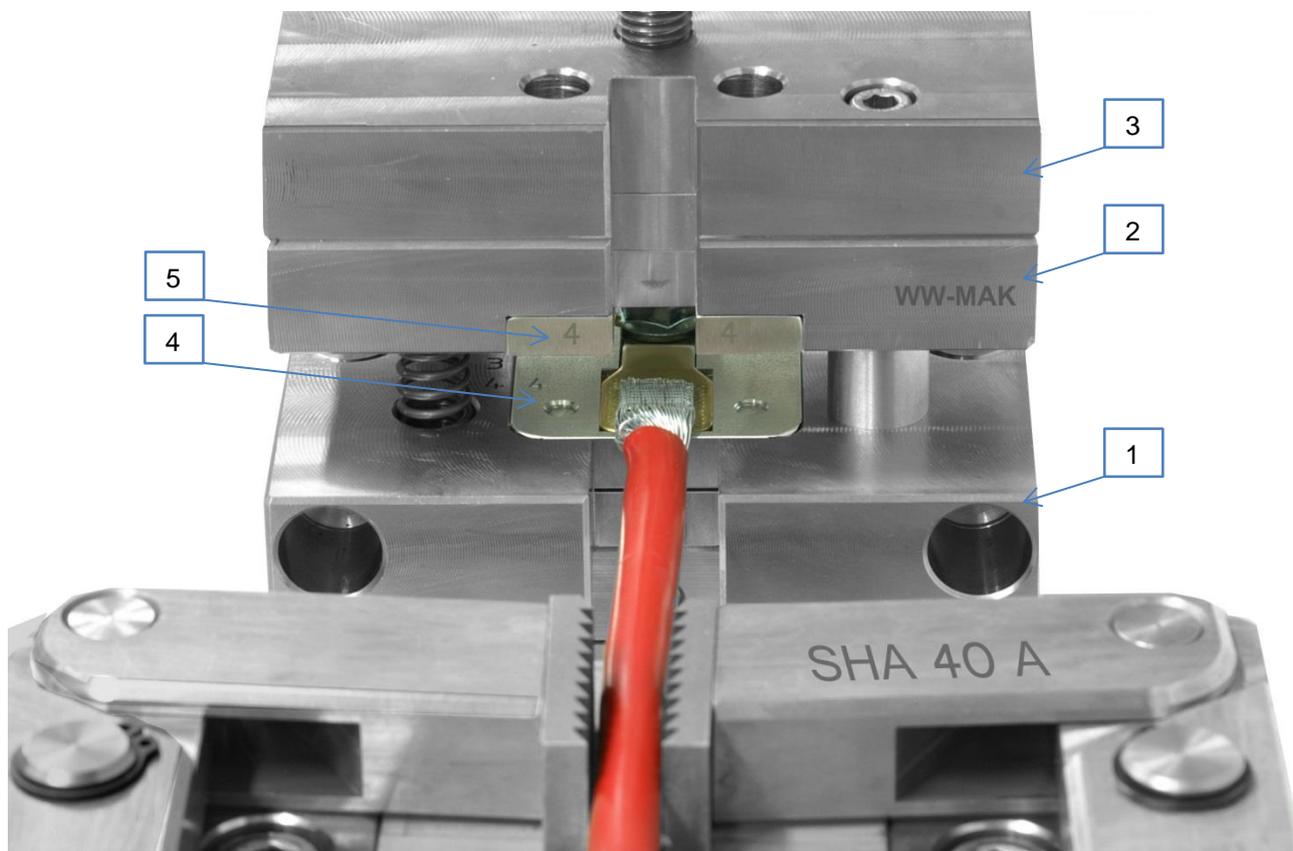
The WW-MAK tool is set up on the measuring point and due to the prism slider underneath, it is compatible with all MAV Prüftechnik devices of 5,000 N or higher force ranges.

The basic structure of the WW-MAK consists of the following components:

- tool – baseplate <sup>(1)</sup>
- tool – contact pressure plate <sup>(2)</sup>
- tool – pressure plate <sup>(3)</sup>
- specimen fixture – milled insert plate <sup>(4)</sup>
- specimen fixture – insert pressure plate <sup>(5)</sup>

Between pressure plate and contact pressure plate, there's room for the insertion of the specimen fixture, which can be exchanged quickly by simply loosening the screws above. The specimen fixture itself again consists of two plates – a baseplate <sup>(4)</sup> and a pressure plate <sup>(5)</sup> – both with finely milled recesses, so the inserted specimen can be clamped in between and will remain steady. Those clamping-plates always come in pairs and are adapted for a special specimen shape.

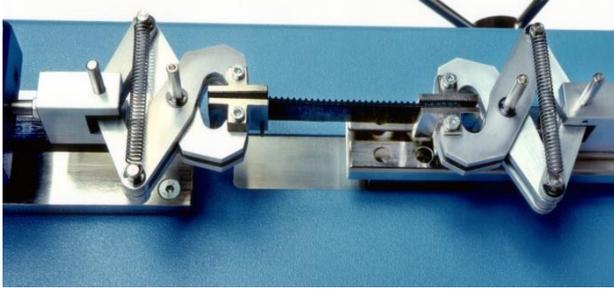
Additionally to the four fixtures for MAK terminal specimen existing so far, it is possible for us to manufacture customized fixtures upon request, given that we are provided with a sample specimen.



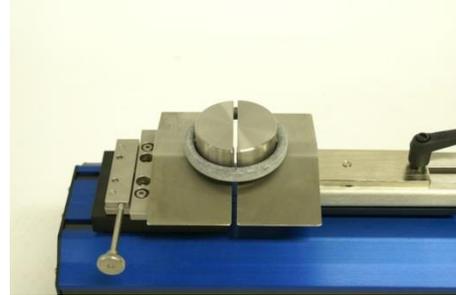
## Special Tools

- Developed and Manufactured Special Purpose Tools
- Application Examples

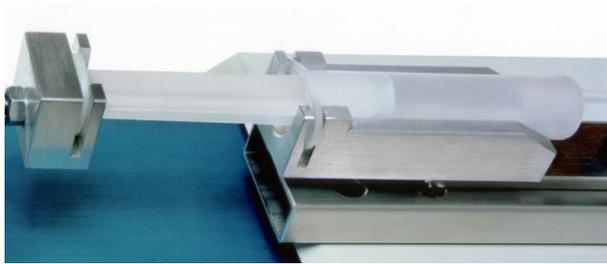
*Tool for Flat Specimen*



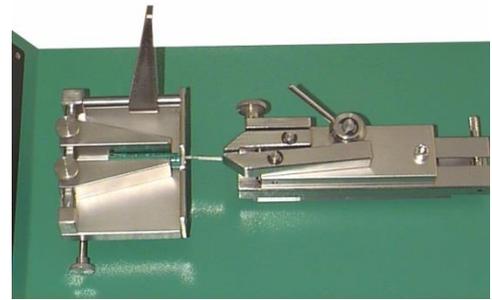
*Mandrel for Testing Rings*



*Syringes Testing Tool*



*Toolkit for Rechargeable Batteries*



*Testing Tool for Tension Springs*



*Testing Tool for Compression Springs*



*Circuit Board Pressure Testing Tool*



*Tool for Testing Medical Pills*

