



Preface

Hand-operated machine, especially for mechanical through-hole-plating purposes. Professional through-hole-platings by individual tools for each rivet diameter. Optimal contacts, even without soldering. Favorit offers high quality results at a low cost level.

Technical data:

- **Width x height x depth:** approx. 9,5 x 21 x 30 cm
- **Working depth:** 200 mm
- **Weight:** approx. 4 kg

Technical alteration reserved.

Safety Regulations

Attention! Especially tools for small rivet diameter (0.4 and 0.6 mm) are sensitive and require careful handling. The tip of the upper tool and spring-loaded pin of the bottom tool may not be damaged. Avoid any excessive pressure on both parts!

Zu Transportzwecken kann die Spitze des Unterwerkzeuges im Körper versenkt sein. In diesem Fall die Madenschraube vorsichtig eindrehen, bis die Spitze wieder vorsteht, sich aber dennoch eindrücken lässt.

For transport reasons the tip of the lower tool may be hidden inside of the tool body. If so, carefully turn in the headless screw, until the tip shows up again, but still can be pushed into the body again.

See also the video on our website for tool changes and adjustments:

http://www.bungard.de/index.php?option=com_content&view=article&id=48&Itemid=65&lang=english

Set-up

Put the unit on a table and assure good illumination to that workplace.

Proceed as follows to mount the pair of tools coming with the unit*): The lower tool goes into the hole in the socket of the unit. It is being fixed by the lateral Allan screw. It may happen that the tool fits very tight into the hole. For transport reasons the tip of the lower tool may be hidden inside of the tool body. If so, carefully turn in the headless screw, until the tip shows up again, but still can be pushed into the body again. Screw the upper tool to the actuator that becomes visible when you lower the lever.

Take care not to damage the tip of the upper tool and the pin in the lower tool. Do not apply force to the lever when doing the following test: The tip of the upper tool must line up with the pin in the lower tool. If the tip does not hit the pin, you need to turn the lower tool, say a quarter of a turn.

There is a steel pin with a thread on one end coming with the unit. This pin must be mounted on top of the unit. It serves as a stop for the lever. The right setting of this pin can be determined by putting a standard 1.6 mm board between the upper and the lower tool and applying a slight pressure to the lever. Keep the lever in that position and counter-screw the stop pin.

*) If ordered from one of our distributors it is possible that rivets and tools are not included for logistic reasons but have to be ordered separately with the desired diameter.

passes the rivet it can cause the rivet to grow under the heat so that the rivet becomes loose. In such case, you should solder fix both rivet collars to the pads before inserting component leads.

Operating

Put a rivet with the collar downside onto the pin of the lower tool. With etched boards and good illumination, you can identify the position of the hole versus the pin through the board. Another targeting aid is to lift the board so that the drill hole fits the tip of the upper tool and then lowering the tool until the board matches the lower tool with the rivet.

Make sure that the rivet has been inserted into the drill hole as far as possible. Press the lever until it reaches the stop pin. The spring loaded pin in the lower tool keeps the rivet open during the pressing action. Due to the special geometry of the upper tool, a collar is being formed on the upper side of the board.

The shape of this collar depends on the rivet diameter, the board thickness and the geometry of the upper tool. If it happens that the collar cracks, the pressure was much too high or the board was significantly thinner than 1.5 mm. On the other hand, a loose rivet indicates a too low pressure or the rivet was not entirely inserted into the board.

If the rivets fit the holes in a way that they do not fall out, you may alternatively insert all rivets into the board and do the pressing action with the unit in a second step.

Rivets of different diameter require a separate set of tools each. Changing the tool sets is done according to the set-up instructions above.

Hints

A well placed rivet gives a good connection that is resistant to bending and twisting. In order to obtain a good long-term stability, we recommend that you apply our SUR-TIN immersion tin. This will help to prevent corrosion at the transition layer of the rivet and the copper clad (and will increase solderability).

If you place component leads in the rivet holes and solder them from one side only, you should avoid thermal stress to the rivet. Certainly if solder

Rivets: Technical data

Standard

Tubular Rivets according to DIN 7340, Form A

Material

Copper, blank

Dimensions

I	O	L	H	W
0.4	0.6	2.2	0.9	0.1
0.6	0.8	2.2	1.3	0.1
0.8	1.0	2.2	1.6	0.1
1.0	1.4	2.5	2.2	0.2
1.2	1.6	2.6	2.6	0.2
1.5	1.9	2.7	3.1	0.2

Legend

I	Inner diameter	mm
O	Outer diameter	+/- 0.03 mm
L	Length	+/- 0.10 mm
H	Head diameter	+/- 0.15 mm
W	Wall thickness	+/- 10%

Note

When drilling on CNC machines, the drill diameter should be 0.1 mm larger than the above outer diameter.

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