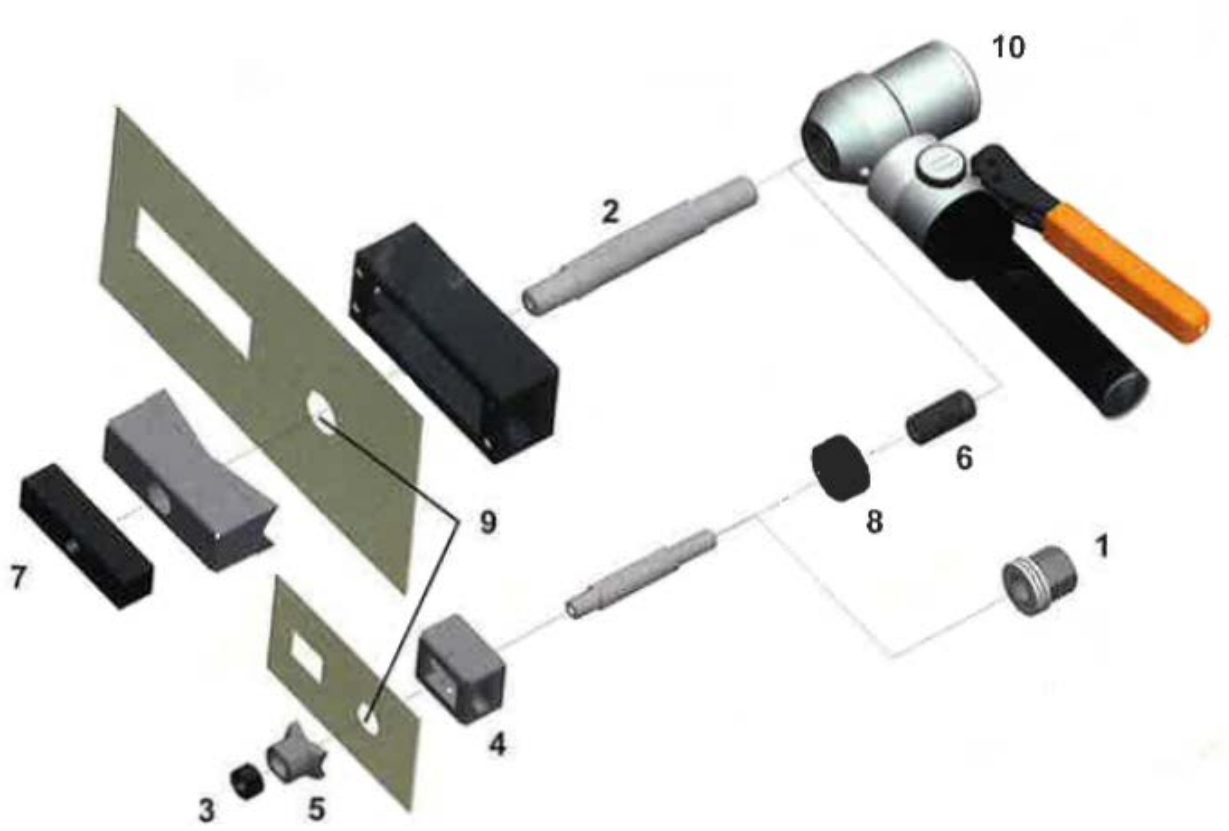
ITC Electrical Components

# Instructions for ALFRA Hydraulic/Manual Punches

**ITC Models**: 502.311, 502.313, 502.314, 502.314, 502.315, 502.325, 502.326, 502.327, 502.328




1. Pressure nut for manual operation
2. Tension bolt
3. Lock nut
4. Die
5. Punch
6. Adapter
7. Bridge
8. Spacer nut
9. Pre-drilled or punched hole
10. Hydraulic punch or cylinder

**Caution**

- The tool is intended for use only as described in the operating instructions. Any other form of usage can lead to accidents or destruction of the tool.
- Repairs must only be performed by qualified personnel in order to avoid operator accidents.

**Notice**

- For your own safety, only use the accessories and attachments recommended in the operating instructions or by the manufacturer.
- Please always carry out all the required precautionary measures and observe all applicable accident prevention regulations.
- Subject to the frequency of use and type of service, the tool must be checked regularly to ensure flawless functioning. If appropriate inspections are not possible at the place of use, these may be conducted by the manufacturer.

## Hydraulic Operation

Drill holes beforehand with a spiral or multi-step drill bit.
With universal tools, remove the pressure nut (1) from the tension bolt (2). Screw the adapter (6) with the inner threads onto the long threads from the tension bolt.

Screw the tension bolt with the adapter into the receptacle threads of the punch. Put the correct spacer nut (8) onto the tension bolt and then attach to the cylinder. It is absolutely necessary to use a spacer nut. Place the die (4) onto the tension bolt so that it is not wedged in. Put the tension bolt into the pre-drilled hole on the work piece. Place the punch (5) on the tension bolt. The rear side of the punch should not be wedged. Screw the lock nut (3) or bridge (7) on the tension bolt until it contacts the punch. The bridge link must sit flush against the punch. Align the tool (with the four marks on the die) with the work piece, using the cross-hairs.

Close the valve knob. Hold the pump body with one hand, and pump slowly. The punching process is completed after a few strokes. Pull the punch completely through the metal sheet. After the punching process, release the hydraulic cylinder. Detach the lock nut/bridge and remove the punch and the die from the tension bolt. Scrap from the punching will fall laterally easily from the die. Open the valve knob. The built-in spring presses the plunger back into the starting position.

Screw off the punch and remove the lock nut. Remove punch scrap from the die.

## Hand Operation

Drill holes beforehand with a spiral or multi-step drill bit.
Screw the lock nut (1) off of the long threads of the tension bolt (2).

Place the die (4) onto the tension bolt so that it is not wedged in. Put the tension bolt into the pre-drilled hole on the work piece. Place the punch (5) on the tension bolt. The rear side of the punch should not be wedged. Screw the lock nut (3) or bridge (7) on the tension bolt until it contacts the punch. Align the tool (with the four marks on the die) with the work piece, using the cross-hairs. Use the spanner wrench to slowly move the pressure nut (1). Make sure that the tool itself does not twist. Pull the punch completely through the sheet. After the punching process, detach the lock nut and remove the punch and die from the tension bolt. Scrap from the punching will fall laterally from the die.

## Caution

- Proceed with the punching process until the work piece is punched through. It is very important to avoid that the inside of the punch rests on the die.
- Offset punching (nibbling) is not possible, and will damage the tool.

## Notice

- Tension bolts, threads, cutting edges and guides should always be oiled or greased. The punches, dies and nuts will then move more freely and friction will be significantly reduced.
- The tool should be sharpened regularly, at intervals which depend on how dulled its edges are.



■ ITC Electrical Components ■ sales@itcproducts.com ■ www.itcproducts.com ■ Tel: 416-663-7223 ■ Fax: 416-663-7224