



**Tube puller TP79**



## 1) General

In the device, it is of great advantage to remove thin-walled tubes from the tube sheet as quickly as possible with little effort.

The TP79 has been designed to work with an extremely handy and mobile device tube puller works especially thin-walled tubes, for example: evaporator construction to perform ringing and effectively .

Depending on the different tools and cylinder design can be made of various pipe dimensions the expanding area be removed or taken off the tube sheet with the TP79 .

In particular, the extremely low weight allow a flexible and non-tiring work .

## 2 ) Application

The hydraulic tube puller TP79 consists of the following :

- Hydraulic unit ( electric motor with pump, valve control block, electr. control, power cord , control cable )
- Hydraulic connection hoses
- Pull-out ( expanding cylinder, pulling cylinder , nut-expansion sleeve , nut-expanding mandrel )

And the tool set (order separately ) consisting of :

**expansion mandrel**

**expansion sleeve**

**collar**





### 3 ) Specifications :

#### Hydraulic unit :

- Radial piston pump 1.21 cc / rev , 700 bar
- 2/2 way valve , 24 VDC
- 3/2 way valve , 24 VDC
- 3/2 way valve , 24 VDC
- Manometer 0 - 1000 bar , first shot G1 / 4 "
- Pressure relief valve - return
- Pressure relief valve with locking nut fixable , pressure to 700 bar adjustable
- Basic Block - Building block
- Bellhousing
- couplings
- E - motor design B5-250D
- Oil level indicator incl thermometer execution
- control unit
- 10 (20) liter tank
- Weight 36 kg
- max. loudness 81 dbA

#### - Control unit pull out :

- Double piston cylinders with :
  - expanding cylinder stroke 20 mm
  - pulling stroke 60/100 mm
- Working pressures : - expansion pressure 30-150 bar ( adjustable with a screw )
- pull pressure up to 700 bar ( about controllable DBV )
- Dimensions : Ø90( without handle ) x length 350 mm ( without tools )
- Weight ( without tools ) : 13 kg

**Caution :** The drawing pressure must always be **greater** than the expansion pressure .

#### **4) Function:**

The hydraulic tube puller TP79 we connected to the power 3Ph-380V / 50Hz/16 A.

The hydraulic hoses are color coded according to the hydraulic unit and the connected pullout.

C - Pull - Red

B - Return - Blue (2 pieces)

A - Clamping - White

The valve block is a valve with sequential circuit. This valve ensures that is operated as the first of the spreading cylinder, and then the puller cylinder cylinder.

The expansion pressure (30-150 bar) by an adjusting screw at the top of pressure suppression roosters – lock at diagram - set.

The extraction piston moves to which the expansion piston has anchored the expansion sleeve in the tube the tube from the fastening point, with a factory-set operating pressure of 400 bar.

If not enough in a tube of extendable pressure, until all remaining pipes are drawn.

Only then must the extendable pressure (max 700 bar) can be increased with the pressure control valve (DBV) until the pipe can be dragged.

At termination of the pull-off the extendable pressure again on 400 bar

The pull-out unit, consisting of spreading and drawing cylinders, as well as the tools - the expansion sleeve, expanding mandrel and spacer sleeve is, can change tools for pulling the different accommodate pipe sizes.

It is recommended that the tools let means: expansion sleeve, expanding mandrel and spacer sleeve, the respective conditions, in particular the pipe dimensions (after rolling) adapt.

#### **Installation of tools:**

First, the spacer sleeve must be mounted on the piston of the traction cylinder.

Subsequently, the expansion sleeve is screwed into the nut.

There after, the expanding mandrel is screwed into the expansion cylinder piston.

The expanding cylinder carries a maximum stroke of 20 mm.  
The pull cylinder delivers a maximum stroke of 60/100 mm.

The spreading of the expanding shaft is adjusted by screw or unscrew so that the expansion sleeve, the tube securely holds the extraction process. The expanding mandrel is secured with the locknut. In addition, the expansion sleeve of the clamping pressure of the clamping cylinder must be set, engages in the pipe and this upheld nick of surface.

This very simple solution has proven in the apparatus in the conventional tube and hole tolerances than absolutely sufficient sic.

An excessive spreading of the expansion should be avoided, otherwise damage the expansion sleeve can be the result and / or the tube additionally clamped in the tube plate will prevent pulling out.

The spreading or drawing operation is started durch permanent pressing of start button (black). Once the tube is released from its anchorage or the stroke of the cylinder completely is executed, we completed the pulling process by releasing the button.

If the **start button (black)** during the pulling process achieved, the cylinder remains in the instantaneous position stand.

Through permanent press the **back button (red)** are spreading and pulling cylinders by returned to its initial position. As soon as the cylinder reaches this position are, the next operation can be initiated.

In order to achieve optimum anchoring between the expansion sleeve and pipe, it is recommended that periodically the expansion sleeve in their area of metal residues to clean.

The tube puller TP80 is basically maintenance-free. A check for contamination the hydraulic oil should be carried out periodically. If necessary, has this to be renewed.

By suspending the Ausziehgerätes on a balancer is a workload possible. (Balancer must be ordered separately).

**Note:** For first we ask you to send the completed questionnaire, the Us provides information on pipe dimensions and tube sheet. With demand orders please quote the standing on the tools part number.

**To electrical failure of the device, first check the fuses in the control cabinet.**