

PKS 16.1 – 25.1 Pneumatic Clamp

Operation Instructions



1. Description

The pneumatic clamp is a high-power tool designed for use in clamping tasks in the processing of sheet metal. It consists of a housing made of aluminium "A" with an integrated pneumatic cylinder, mountings at the front and rear and a clamp arm "E" with receiver for the contour piece.

When used in clamping, the pneumatic cylinder functions on an integrated toggle lever to move the clamp arm. The position control of the clamp arm can optionally be achieved through external magnetic switches.

2. Safety

The pneumatic clamp was not conceived as a full tool supplied ready for independent use and has therefore not been fitted with its own safety equipment. Only when it is correctly installed in a production system and a corresponding safety control system is added, all safety requirements will be met.

Should any faults occur that place personnel at risk, the pneumatic clamp is to be switched off immediately. Maintenance measures are only to be undertaken when the machine is at a complete standstill and by suitably qualified specialists.

After maintenance work has been carried out, the protection devices are to be refitted in the correct way.

3. Assembly of the pneumatic clamp

- The clamp is installed by means of four head cap screws on the shoulder area on the front / back.
- Create supply of compressed air between pneumatic control and clamp (connections "N").

Caution: For fine adjustment of speed of clamping process, the use of external regulating valves is recommended. Magnetic switches, if present, have to be mounted and connected.

4. Setting for pneumatic clamp

Caution! Danger of crushing!

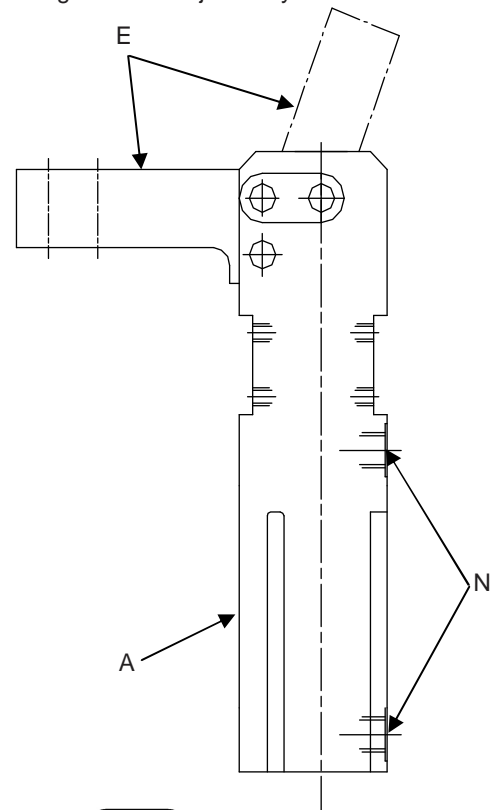
When the clamp arm is being set, fingers could be severed or crushed. Do not reach into the swivel area of the clamp arm while the pneumatic clamp is in operation. Before operations are commenced in the area of the tool, the supply of compressed air must first be interrupted.

- Mount contour piece on clamp arm.
- Close clamp. Toggle lever must audibly move into the upper dead center position. Position of the clamping arm to the clamping housing is exactly 90° or 180°.
- Determine the tolerance between clamp arm / contour piece and work piece.
- Open pneumatic clamp.
 - a) Softtouch adjustment
Offset the tolerance to 0 mm (!) by adding required shims.
 - a) Adjustment with preload
Adjust clamping arm/contour piece tolerance by adding appropriate shims as follows:
PKS 16.1, 20.1 : 0,1 mm
PKS 25.1: 0,1...0,2 mm
- Close pneumatic clamp. The toggle lever must audibly move into the upper dead center position. If dead center position is not achieved reduce tolerance in steps of 0.1 mm.

5. Maintenance

The pneumatic clamp is fitted with a view to application in series production with low-maintenance bearings and guides. However, it is recommended that the moving parts of the toggle lever mechanism be cleaned regularly.

Caution: When cleaning clamps make sure they are in closed position to prevent dust and dirt from getting into the clamp housing. Damage can be caused to the pneumatic clamp by cleaning with steam-jet or dry ice.



TÜNKERS®