

► Application example

Modernisation of the product range. The technical effort for the control system shall be kept simple and production costs should be saved. In addition the operation shall be simplified and the setting-up time of the machine massively reduced. At the same time, the settings for different work-pieces shall be kept flexible..

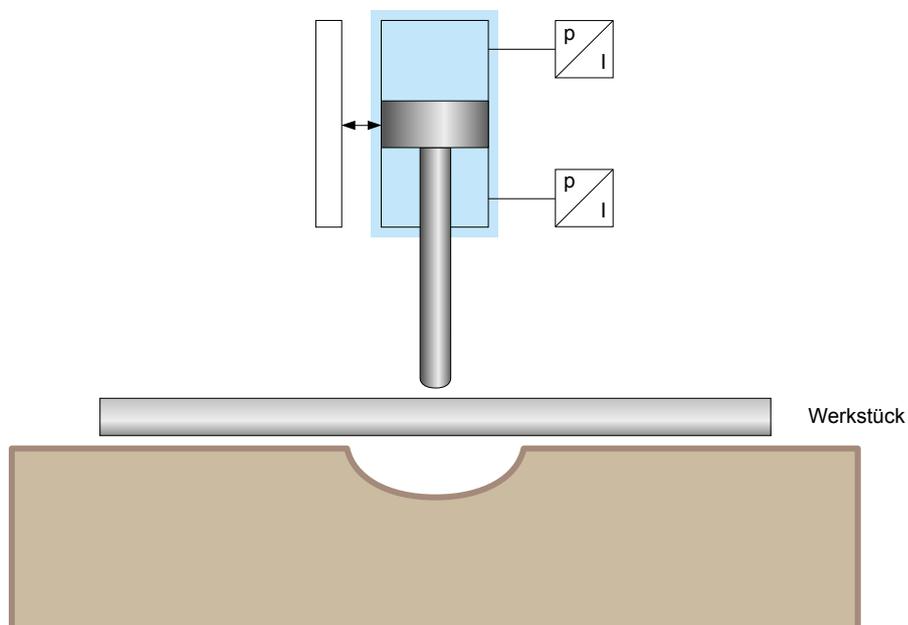
Solution approach

The cylinder is lowered with an adjustable speed. A potentiometer determines the stroke of the press and with this the bending angle "position feedback value". The maximum effective pressure can be set. This is monitored. The requirement of a flexible setting for different work-pieces - "position command values" for different folding angles, "pressure command value" for different materials - is therefore accounted for..

Customer benefit

- ◆ Flexible solution for different work-pieces
- ◆ Reduced effort for the implementation
- ◆ Solution from one hand

Task



► Technical description

A position control with integrated speed control controls the movement of the press. As a command variable, to this position control an analogue value in the form of a voltage through the potentiometer "bending angle" is provided. This position is run up to at the speed set as a parameter and controlled.

At the same time the pressure applied at the workpiece is continuously measured. As a command variable, to this pressure control an analogue value in the form of a voltage through the potentiometer "bending pressure" is provided. If the pressure at the work-piece exceeds the command value, the movement is braked.

The current position of the cylinder is provided through the SSI-travel measuring system "position feedback value".

The pressure at the work-piece is generated as a differential pressure by the two pressure sensors „pressure 1“ and „pressure 2“. Alternatively, a force sensor could also be used.

In order to terminate the bending process, the command value „bending angle“ is to 0 and the cylinder moves back to the starting position.

Alternatively, the bending angle can also be predefined by the integrated profile generator. With this, different bending angels/material thicknesses can be preset and selected by means of digital inputs.

The SD6 control electronics is operated in the controller mode „alternating control“.

Utilised components

1 proportional directional valve	WDPFA06-ACB-S-16-G24	Data sheet 1.10-75
1 Data sheet „Enhanced controller“	SD6362D27-BA	Data sheet 1.13-105

Technical realisation

