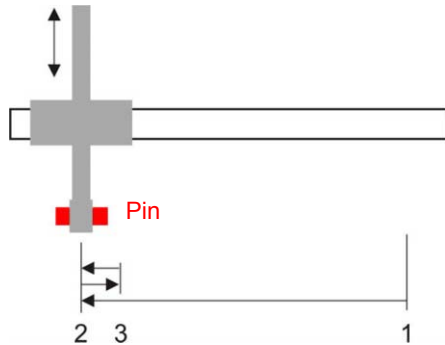


Chain production using WATT positioning drive system.

The company Ketten-Wulf in Kückelheim, Germany manufactures traditional link chains for industrial use. As part of a modernisation programme for their production plants, the process of machining the chain pins has been automated. In this process, the pin needs to be moved according to a specific sequence of movements, covering a total of three positions.



Figure 1: Functional principle



A pin holder (figure 3) is moved using two linear tracks which are fitted onto an overhead gantry. The horizontal movement is generated via an electrical motor using the WATT drive; the vertical movement is generated pneumatically.

The pin is raised from the removal point (1), moved into position (2) and lowered at this point. It is then moved back slightly into an automatic lathe. After machining, the grabber moves back to position 2, is raised and then moves to the removal point. The machined pin is replaced with a non-machined pin and the cycle starts again from the beginning.

Positions 2 and 3 can be adjusted by the operator; position 2 is an absolute position, pos. 3 has a relative reference to pos. 2.

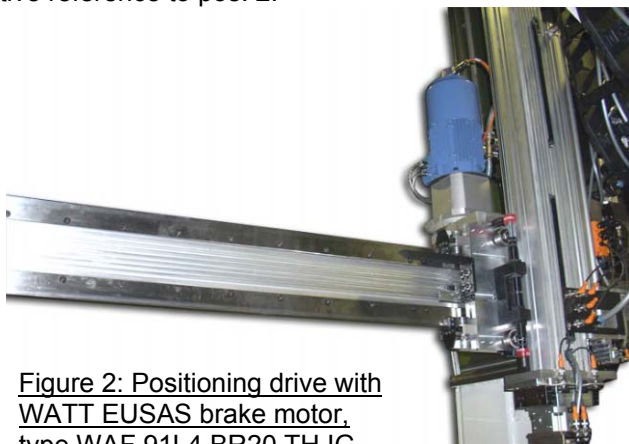


Figure 2: Positioning drive with WATT EUSAS brake motor, type WAF 91L4 BR20 TH IG

The entire positioning control is implemented using a *PROFI-line P6000* WATT frequency converter; tapping mode is also possible here in addition to the production run itself, and hardware limit switches are included. Due to the number of digital inputs required, the P6000 is equipped with an options card that provides additional inputs and outputs.

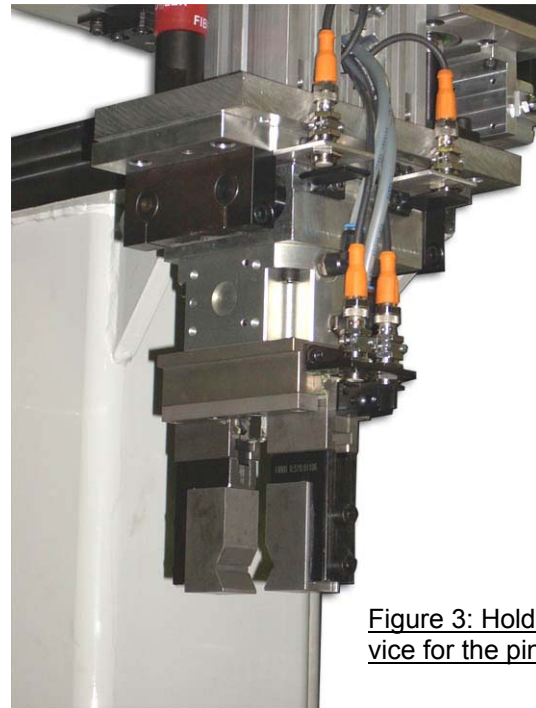


Figure 3: Holding device for the pin

The operator can edit the positions using a small operator panel VT050 (figure 4) which is installed on a swivel panel along with other control elements. It communicates with the P6000 directly via CAN-Open; the interface fitted as standard means that a positioning system can be created at an attractive price as no additional field bus nodes are required, nor is a separate SPS control. Programming is also exceptionally easy to carry out.



Figure 4: Control unit VT050 for the WATT-P6000

Six production stations have now been converted and others are anticipated to follow.

For more information on the WATT product range, please visit our website at www.wattdrive.com.