

 **Teca-Print**



mint edition

TPX 205

Machine Competence

for the Mint Industry



High Standards:

Special standards for precision and perfection apply to the mint industry with respect to the production of coins and medals. The same dedication and passion with which the collectors view their pieces or the value for which the medals represent for their owners should also be reflected in the production process.

Challenge:

Coins are provided with raised reliefs, which require an adaptable print medium. Moreover, the exact placement of the coin and transfer of the print

image are crucial for a good print result. Manual positioning cannot satisfy these requirements.

Solution:

The Mint Edition TPX 205 Pad Printing Machine was developed by Teca-Print expressly for the needs of the mint industry. It uses just one printing pad to transfer up to 5 colours and two vision systems, which provide images for the special software functions for both the cliché-adjustment and coin orientation systems.

Details:

The highest degree of stability is ensured by the fact that the machine utilizes only pre-stressed linear ball guides. All of the machine's axes are driven by servomotors, which operate absolutely free of play. Even the turning station for the coins is equipped with a servomotor, which has a positional accuracy of 1/100th of a millimeter. Because of the special arrangement of the machine axis and the material properties of the printing pad, multi-printing with just one printing pad is made possible, which contributes greatly to an improved print accuracy.

The cleaning of the printing pad after each ink deposit is programmable. The cliché-adjustment system provides two important functions: by means of the integrated vision system, the exact positioning of the cliché can be determined and the tolerances in the film production for each individual print position can be ascertained and corrected. An additional camera is used for the coin's orientation system. Once the coin is loaded and the start signal is given, the camera acquires the position of the coin. Within a split second according to previously measured





parameters the coin is rotated automatically into the position required for the print image transfer. During the printing process, the coin is centered exactly and held firmly in the tooling fixture with a three-sided pneumatic clamp. Both the cliché adjustment system and coin orientation system are integrated into the machine's software. During setup the measured results can be easily accessed by the various "teach-functions" and saved. As with the other machines of Teca-Print's Series X2, the ink deposit sequence or a multiple print can also be programmed for each position as desired.

Technical Information:

Machine:

- ▶ TPX 205

Printing:

- ▶ 5 colours

Drive:

- ▶ Vertical and horizontal print strokes – electro-mechanical
- ▶ Inking mechanism – pneumatic

Control System:

- ▶ PLC with touch screen

Technical Equipment:

- ▶ Vision system for cliché orientation
- ▶ Vision system for coin orientation
- ▶ Automatic coin orientation system