BEMA

Three-dimensional Universal Engraving-Reducing Machine with Computer-aided Surface tension

Copying milled shape is made simple. The use of the engraving machine represents a piece of independence for the tool-making, model building, jewellery, coin and minting industries. Personal creativity is almost limitless. The engraving machine has been continually improved over the past 50 years. A better piece of evidence for robustness and reliability is hardly possible.

The engraving machine's mode of function is simple but ingenious. Above all, the surface grade of finished items is absolutely unbeatable. We have now further developed the system for you with the possibility of producing a computer-aided concave or convex shape from a straight model.

The infinitely variable reduction and infinitely variable zoom functions both remain unchanged.

Top forgery-proof security is guaranteed through the machine's feeler principle.

1 The model

Your model can be made from plaster, steel, bronze or duroplastic. You can also of course have a model produced from wax and then trough an intermediate form, develop a duroplastic model.
The maximum model diameter is 500 mm.

2 The feeler

The feeler scans the model. Due to the fact that the machine operates without vibrations, even the tiniest of depths can be picked up.

3 The milling spindle

The milling spindle is solidly fixed to the probe and it mills exactly according to that which is scanned from the model. The complete scanning and milling procedure does not have to be supervised. The machine operates independently 24 hours a day.

4 The stamping die

The stamp can be infinitely reduced or increased in size relationship from between 1 : 1.45 (1.31) to 1 : 100.

SYSTEM 4001

BEMA System 4001 (model diameter 500 mm)

Including Standard Accessories:

- High-Frequency Milling Spindle 5.000 to 35.000 rpm with draw-in tube ∅ 6 mm
- Carbide milling cutter ∅ 6 mm
- Stylus hard metal 17 degrees
- Face plate ∅ 500 mm
- Concentric chuck ∅ 125 mm
- Pressure weights
- Digital display X, Y, Z

Technical Data:

- Reducing from work piece to model 1 : 1.45 (1.31) to 1 : 100
- Infinitely variable drive
- The flatting or the raising of a profile correspond to 0–100 % of the normal cut
- Mirror-inverted transmission right or left ("Janus-Form")
- Automatic circumference speed control from work-piece and model
- Surface tension up to a radius of 10000 mm (concave or convex)
- Infinitely variable increased

Made in Germany

Special accessories:

Measurement systems (figures 1 + 2)

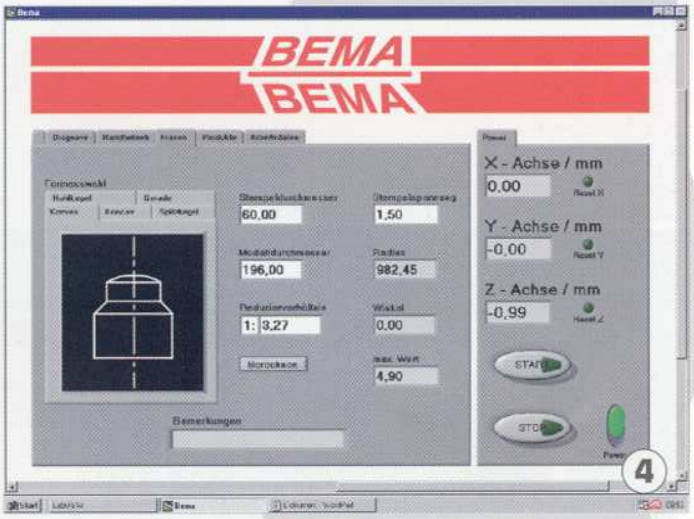
The feeler and the mill spindle can be equipped with dial test indicator (figure 1) or digital display (figure 2). Relief distortions on the stamp surface resulting from bad centring can therefore be ruled out.

Control:

CPU/Archive page (figure 3)

Through the control unit you can enter the necessary data for concave or convex shapes which the stamp or die should attain.

Your pre-sted data can be stared on an archive page. A photograph (digital) can be scanned. You can print the archive page with the printer supplied. In the event of having to reproduce an item you merely need to call up the necessary data.



Display/Menu/Routing (figure 4)

Here you enter the data for the stamp or die's respective concave or convex shape.

Centring (figure 5)

Centring microscope for centring of milling cutters and for centring of stylus.

Field of Application

1 Mirror-Inverted Transmission

The machine is equipped with a reversing gear which allows a synchronous reverse rotation of model and work-piece.
It results a mirror-inverted transmission from model to work-piece. This fact enables the production of symmetrical mirror-inverted workpieces ("Janus-form").

2 Working process: plaster model, silicone casting, scanning model, various work piece dimension

3 Minting tools for coins

4 Casting moulds for tin plates and tin goblet

5 Electrodes for spark erosion machines

6 Processing of semi precious stones such as coral, onyx, agate and pearl-shell

7 Stamping dies for the jewellery industries

8 Coining dies for button production (coat button) various work piece dimension

BEMA MASCHINEN GMBH
Bunsenstrasse 13
D-75210 Keltern-Ellmendingen · Germany
Tel. +49 (0) 72 36 / 14 27
Fax +49 (0) 72 36 / 14 29
E-Mail: info@bemagmbh.de
Internet: http://www.bemagmbh.de

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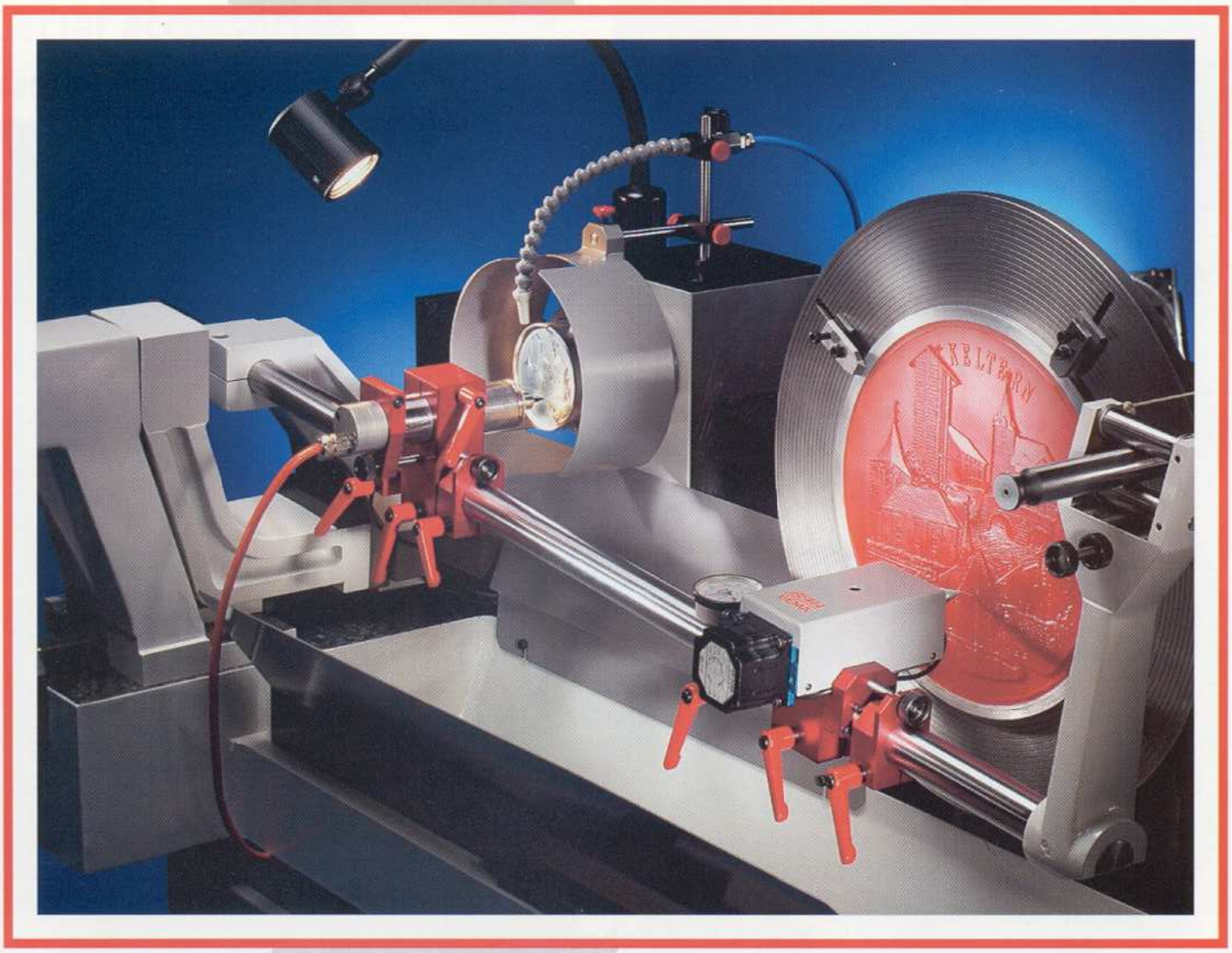

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