

Crucible control unit ETS 110

A product of BALZERS AG, Balzers

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1. APPLICATION

The ETS 110 crucible control is used for automatic positioning (particularly if the coating process is controlled by Coat-O-Matic) and for continuous control of the rotary and oscillating movements of the evaporation crucibles.

2. TECHNICAL DATA

The ETS 110 is a partial panel module to be installed only into the EKS evaporation control unit.

The necessary power is drawn from the EKS.

3. DESCRIPTION

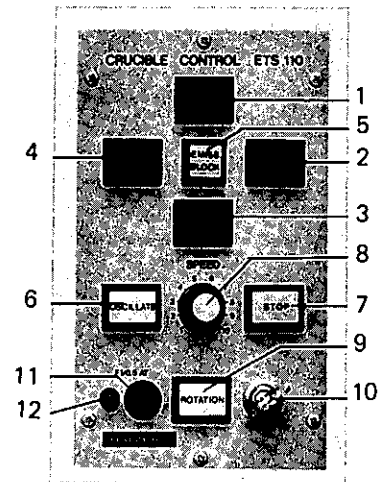
The ETS 110 will deliver the motor power only if the "CRUCIBLE DRIVE" switch on the EKS is in "OFF" position.

The required crucible position (depending on the material to be evaporated), is automatically set on the appropriate push-button. The oscillating movement is effected at variable speed for the oscillating crucible in the "OSCILLATE" position (this position can be selected from any other positions). The oscillating movement can be interrupted by pressing the "STOP" button and restarted by pressing this button again. For the grooved and pot crucibles a continuous rotary movement with variable speed can be selected. A key switch has been provided for this purpose to avoid accidental operation of the "ROTATION" button. An interlock circuit in the ETS 110 isolates the emission current circuit of the EKS evaporation control unit during positioning.

As soon as the crucible is in new position, switch the emission current potentiometer back to Zero. This makes the interlock ineffective and the emission current can be re-adjusted, starting again from Zero.

In "ROTATION" position the interlock for the emission current becomes ineffective. If either the 4-way or the oscillating crucible were fitted in this position, they would eventually be destroyed without the interlock.

If the EFS, remote control, is used, the emission interlock will be inoperative. During automatic evaporation (e.g. with Coat-O-Matic) the controls of the ETS 110 will be ineffective.

3.1. The front panel of ETS 110 contains:

1. Selector push-button Position 1 (SOURCE 1)
2. Selector push-button Position 2 (SOURCE 2)
3. Selector push-button Position 3 (SOURCE 3)
4. Selector push-button Position 4 (SOURCE 4)
5. Signal lamp for the emission current interlock (EMISS. BLOCKED)
6. Selector push-button "OSCILLAT" for the oscillating crucible
7. STOP Oscillation
8. Potentiometer "SPEED" for crucible rotation speed
9. Selector push-button "ROTATION"
10. Key-switch for releasing the emission current interlock during continuous rotation (ROTATION)
11. Control fuse F 1
12. Signal lamp (lights if control fuse F 1 defective)

3.2. The rear panel contains:

- 1 plug-type printed circuit output, 56-poles

4. TROUBLESHOOTING

Fault	Cause	Correction
No button lights although EKS is switched on	Fuse F 1 defective	Change F 1
Buttons light, drive can't be started from ETS.	Fuse F 2 (inside the unit) defective.	Change F 2.

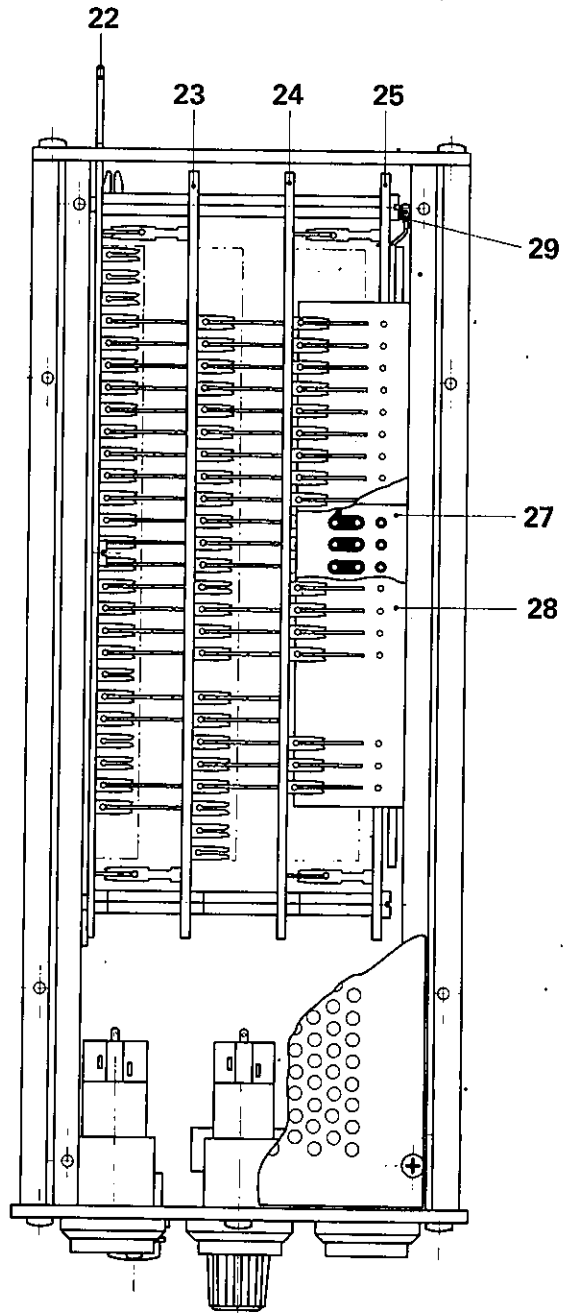
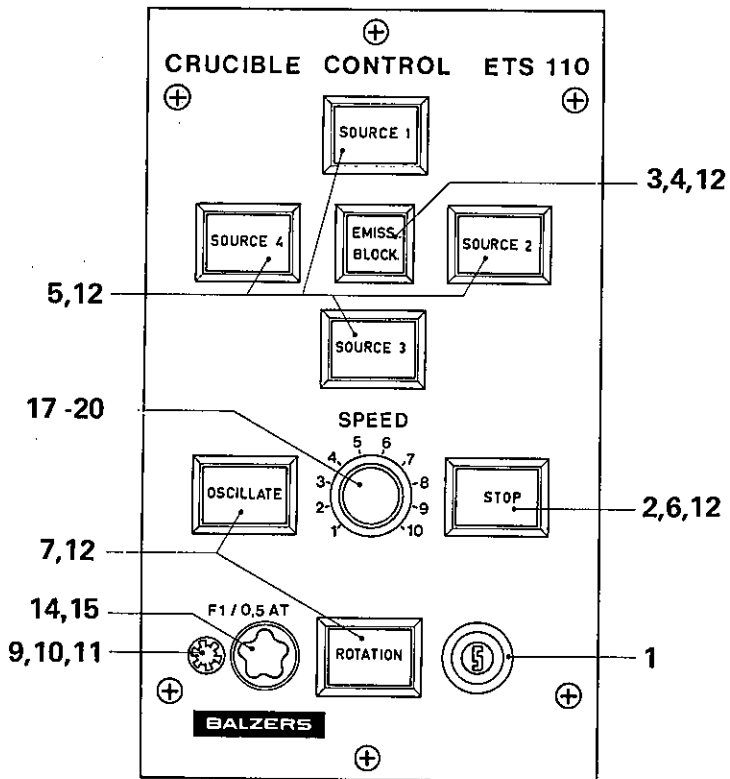
5. SPARE PARTS

Please order your spare parts according to the enclosed spare parts list.

Always state type and serial number as indicated on the name plate of the unit.

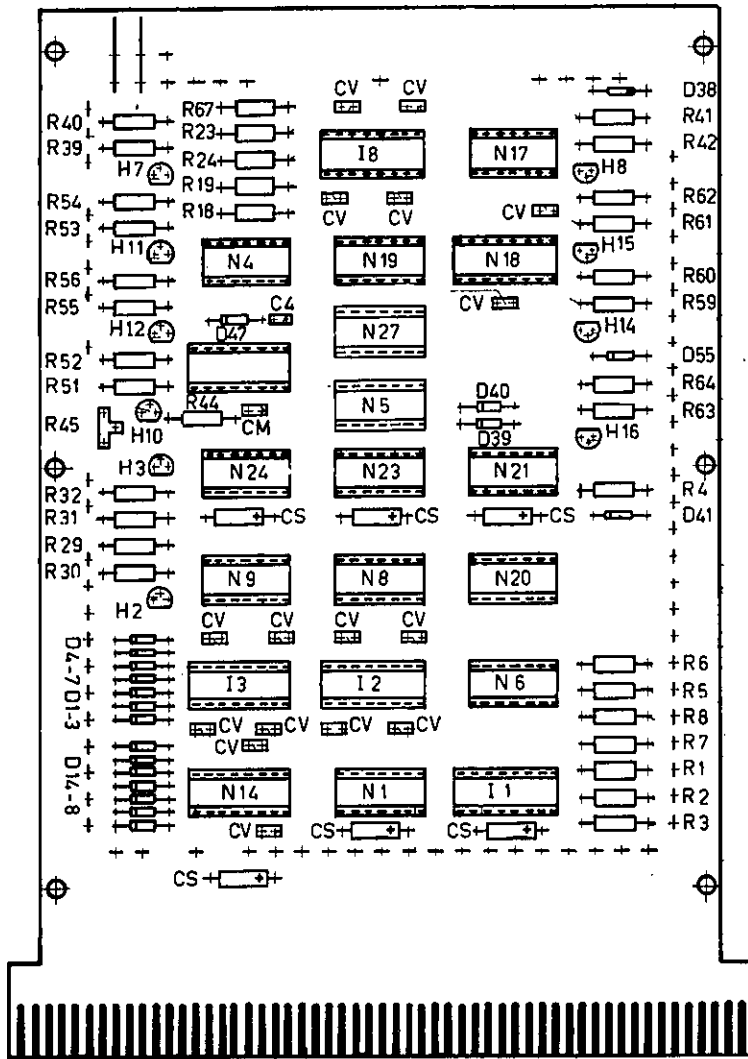
Ordering example:

1 fuse 0.5 A slow, Code No. B 4666 430, as to spare parts list BB 800 061 E/1, item 15.



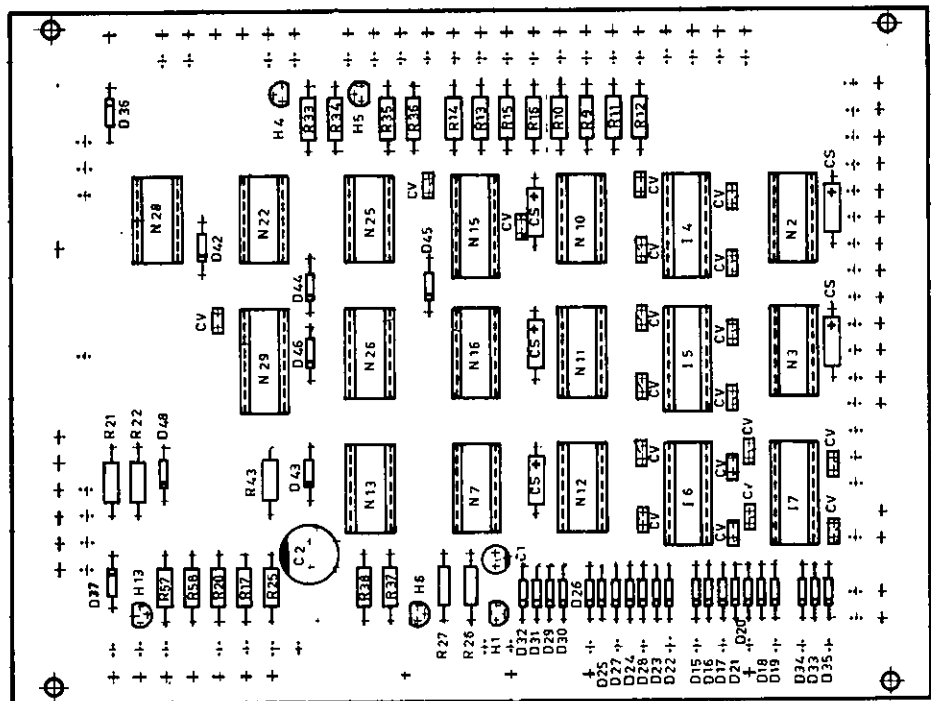
Crucible control unit / Tiegelsteuergerät ETS 110

BB 800 061 E / 2



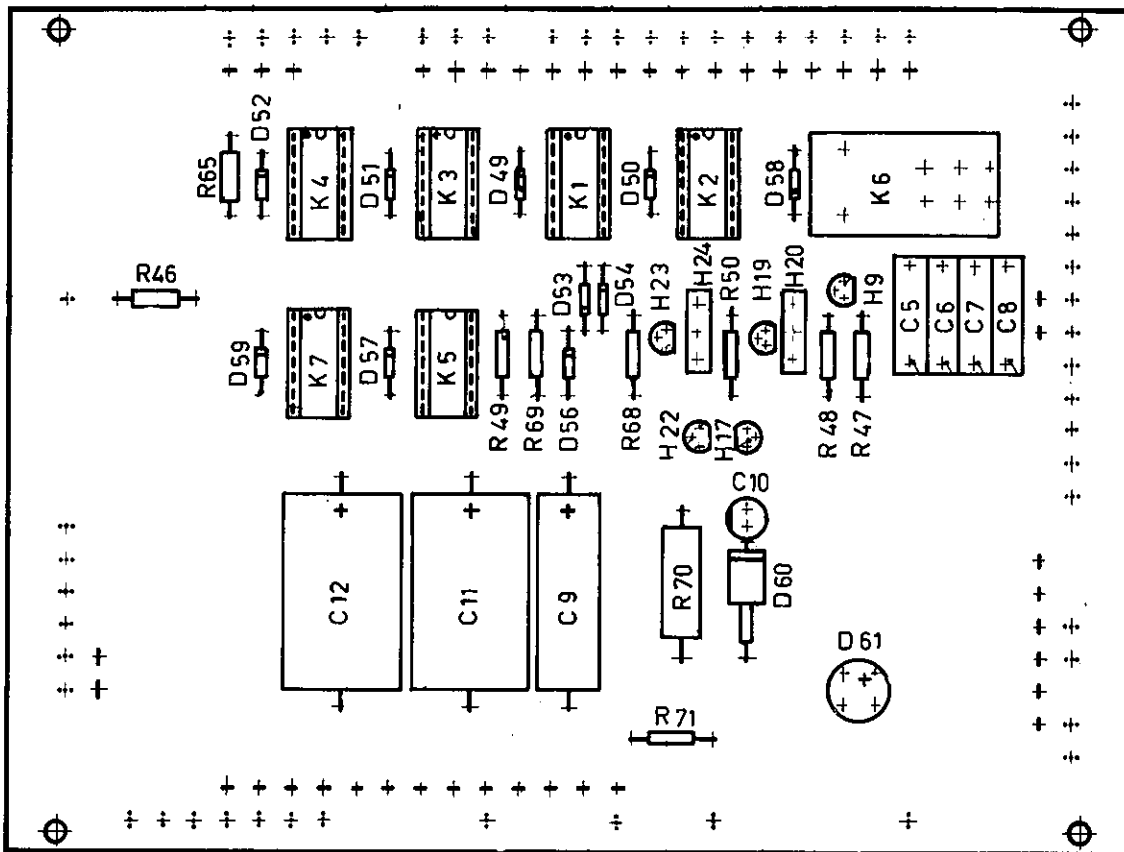
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Circuit board 1/ Print 1



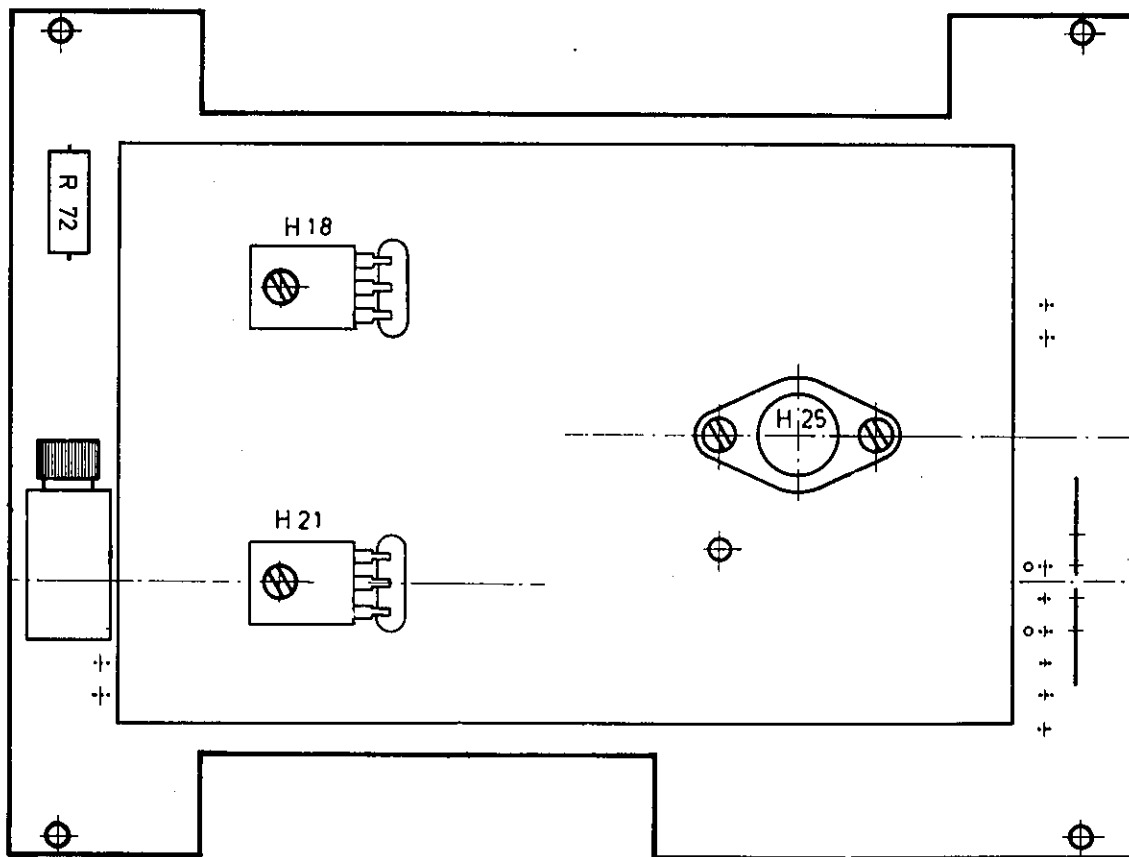
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Circuit board 2/ Print 2



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Circuit board 3/ Print 3



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Circuit board 4/ Print 4