



DNC- face-boring automat DB 40



DNC – Face-boring Automat DB 40

with dialog-oriented multiprocessor control DNC40

The Automat is conceived for

- dowel hole boring
- boring of hole rows or groups
- drilling of furniture hardware

in furniture side boards,

- without tool change and
- without readjusting stop or fence

in one clamping step during the production of

- single and small series consignments,
for interior decoration, for the furniture
industry and suppliers.

The respective boring or drilling pattern is programmed amazingly easy and stored for repeated use at any time.

The program input proceeds in a dialog with screen of multiprocessor control. The work, the boring pattern and dimensions are shown graphically on screen. Each programming step is called for and acknowledged. Corrections can be easily made. Upon release of program the boring or drilling sequence is fully automatic. The program can be stored, the boring pattern is repeatable at any time.



DNC – Face-boring Automat DB 40,
boring carriage in righthand starting position

The Boring Automat

- saves time and thereby wages;
- replaces special boring machines which are often not fully utilized;
- prevents damage to work with sensitive surfaces;
- is operated with absolute ease.

The machine serves both for

- rationalizing production
- and improvement in quality.

No special knowledge is required for programming, practically anyone can set up a program after a few short instructions and can handle the Automat.

The machine comprises a heavy machine bed with work support, hardened round guides and the compound slide rest running in ball bushings. The slide rest is controlled in longitudinal direction by a DC gear motor with 4-quadrant drive. The travelling speed amounts to approx. 350 mm/sec.

The respective dimensions are picked up by an impulse transmitter and a measuring rack. The dimensional resolution is 0.05 mm – which means maximum precision of approach!

The boring carriage is equipped with 3 boring groups.

The first boring group is used for construction holes, and has a 25-spindle gear unit with a spindle spacing of 32 mm. The motor output is 2.2 kW.

A second boring group with 2 boring units, each with 1.1 kW, 5 spindles and 32 mm spindle spacing, is intended for hole groups or rows, for cabinet connectors and lock bores.

The third boring group is mounted on a cross slide which is additionally controlled and motor-powered in the y axis. The speed of movement is 350 mm/sec., and the distance 800 mm. The boring unit, with 1.1 kW output, has a 3-spindle boring head, 32 mm spindle spacing and features individual control of each spindle.

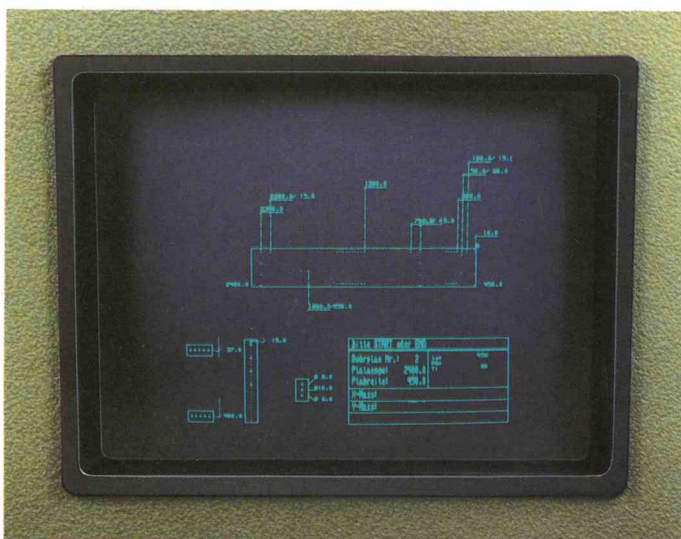
The numerical control of the first and second boring groups sets the groups in the x axis, i.e. the longitudinal direction. The boring width, i.e. the y axis, and the boring depth are set manually using graduated scales.

In the third boring group, however, both the x and the y axes have electronic control, with only the depth being set manually. That means that the 3 boring spindles can be tipped with different tools with different boring diameters, and that each spindle can then reach any point whatsoever on the workpiece. The machine can therefore be operated with even greater flexibility.

The work is clamped pneumatically. Two switching circuits are available for the purpose of automatically aligning the clamps in relation to length of the work.

The machine table is connected to an exhaust system extending across entire work range.





Boring pattern graphically shown on screen

The electronic system is a system of multi-processors with display screen and discette (floppy disk) storage of the data. The pertinent dimensions are put in by means of a keyboard by way of a dialog sequence with the display screen. The application of the various boring spindles, the dimensions of the workpiece and the dimensions of the boring diagram are put directly into the computer and are displayed graphically on the screen. The boring diagram is continuously numbered and stored under the respective number. Storing is on discettes (floppy disks). This makes the storage capacity (memory) almost unlimited.

By connecting a separate printer to an existing V 24 interface the boring diagrams can also be printed and documented.

Any stored program is called up in seconds.



The clearly arranged keyboard allows convenient data input.



Completely finished side board



Righthand and lefthand side boards can be bored in one step



The Automat bores both righthand and lefthand workpieces. they can even be bored at the same time, if the respective parts are smaller than half the entire working length of the machine. The electronic system then enters each boring pattern as a mirror image immediately into a boring program sequence for lefthand or righthand parts without any new programming steps. By means of an optimization procedure the Automat selects the most favorable boring succession, i.e. the bores will be completed in the sequence which permits the fastest cycle.

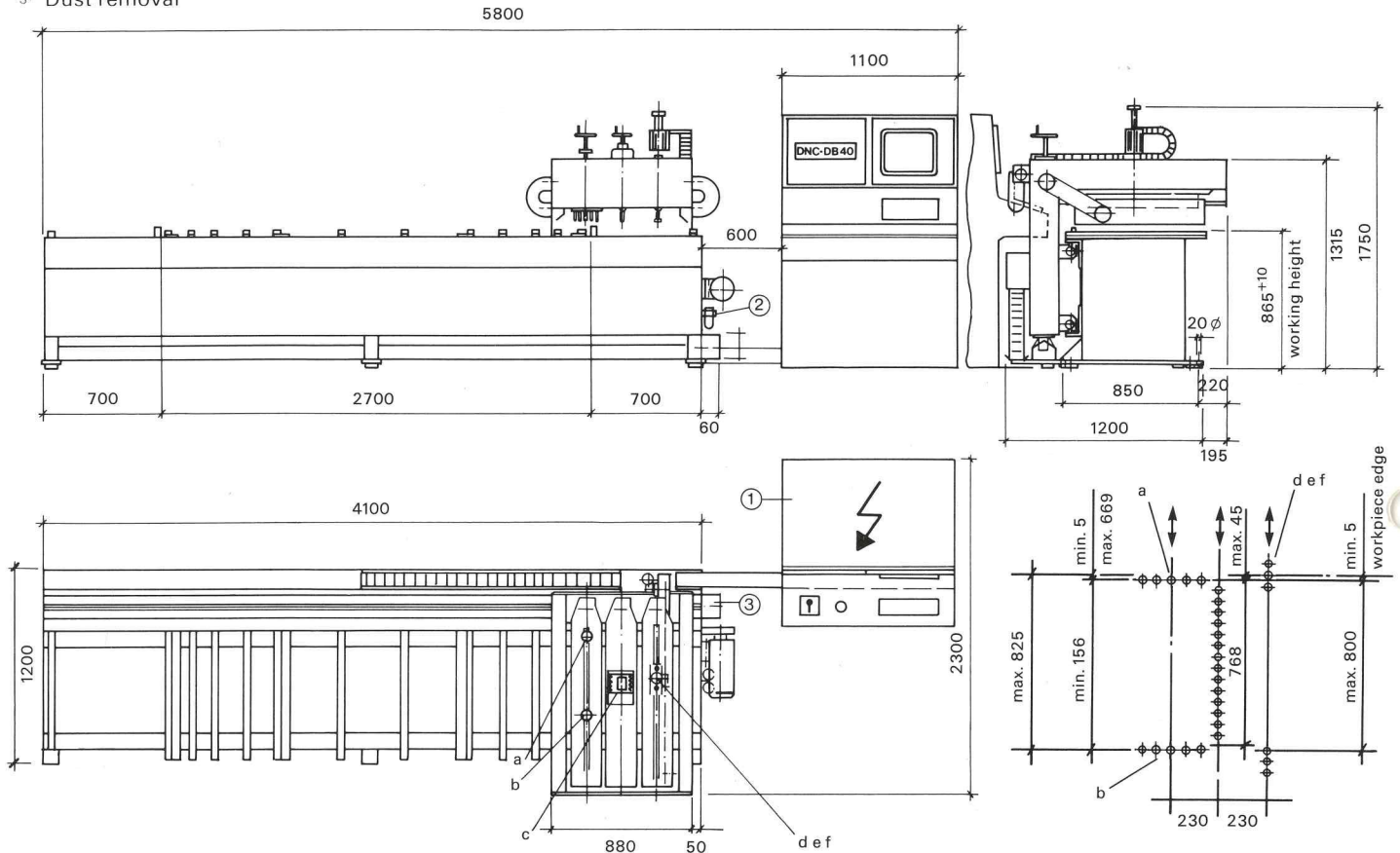
Data and programs remain stored in the event of a power failure.



View of boring carriage with its 4 boring groups

Technical specifications

- ① Electric connection
- ② Pneumatic connection
- ③ Dust removal



Design subject to modifications.

Technical specifications:

Working length	2 700 mm Owing to the bracket type arrangement of slide rest even longer work pieces can be bored – no hindering bridge supports
Working width	825 mm
Net weight approx.	920 kgs
Electric connection	5 kW; 4 x 2.5 qmm; fuse protection 20 A (slow)
Pneumatic connection	10 mm ID, 6 bars
Air consumption	14 l at 6 bars per stroke
Dust removal	1 orifice 140 mm ID
Air quantity	3400 cbm/h at 30 m/sec air velocity

Scope of delivery:

DNC face-boring Automat DB 40 with dialog-oriented multiprocessor control, boring carriage provided with 3 boring units, with pneumatic

clamping of the work, exhaust for entire work range, with display screen and discette (floppy disk) unit.



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