

WEEKE OPTIMAT Venture 3 – Machine number: 0-250-10-1311

CNC-controlled machining center for the commission-based production of furniture parts

1. BASIC MACHINE

- Sturdy steel frame construction
- 2 workpiece collets with integrated stop system
- Separate clamping of the collets via rack and pinion drive in the X direction
- Digital AC servo motors
- Position of the collets on the workpiece is program-controlled
- Repositioning of the workpiece collets between individual machining steps in the machining area is possible
- Automatic workpiece thickness and length measurement via the collet and stop system

1.1 LOWER MACHINING SUPPORT

- Sturdy cast aluminum construction
- Integrated three-part support table with switchable air cushion
- Side stop system
- Axis positioning in the Y and Z directions
- Ball screw (Z direction) and rack and pinion drive (Y direction)
- Digital AC servo motors

- Designed for the installation of various equipment variants

1.2 TOP MACHINING SUPPORT

- Sturdy cast aluminum construction
- Integrated triple-split pressure beam with switchable air cushion
- Experience of the axes in the Y and Z directions
- Ball screw (Z direction) and rack and pinion drive (Y direction)
- Digital AC servo motors
- Designed for the installation of various equipment variants

1.3 WORKPIECE DIMENSIONS

Workpiece length: min. 200 mm

Workpiece length: max. 2500 mm

Workpiece width: min. 70 mm

Workpiece width: max. 1000 mm

- with machining restrictions: 1300 mm

Workpiece thickness: min. 8 mm (2 x 4 mm)

Workpiece thickness: max. 80 mm (2 x 40 mm)

Workpiece stacking: max. 2 pieces

- Identical workpiece dimensions

Note:

- Workpieces must be one on the feed side
have a straight edge.

- Max. curvature tolerance: +/- 0.5 mm for workpiece length = 2,000 mm

- Min. workpiece length/width ratio 2:1

with automatic loading table

- Cupped components (≥ 0.3 mm) lead to
increased manufacturing tolerances and wear on the workpiece tables.

- Stacked production is not possible during milling due to chips.

Workpieces are guaranteed.

- An external cleaning or extraction system in the
outfeed area is recommended.

- For through-holes in double parts,

The drilling quality depends on the workpiece materials

and tools, as well as the feed rate profile and the speed

of the drill spindle. This may result in performance reductions.

1.4 WORKPIECE LOADING AREA

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- Air cushion loading table made of a sturdy frame construction
- Hornit plate surface
- Integrated fan

1.5 WORKPIECE UNLOADING AREA

- Cross belt conveyor made of a sturdy frame construction
- 8 frequency-controlled conveyor belts
- 8 electro-pneumatically controlled lifting arms

2. CE SAFETY AND PROTECTION DEVICES

- Protective grilles on the sides and rear
- Safety mats in the loading area

3. DOCUMENTATION

- Documentation in printed form and on CD-ROM including spare parts catalog and circuit diagram

4. PAINTING

- Paint finish: Gray RDS 240 80 05

5. CENTRAL EXTRACTION

- For connection to an extraction system
- Connection dimensions can be found in the technical data sheet

6. PC85T Power Control

Modern control system based on on a

Windows PC

Hardware:

- PLC control according to the international standard IEC 61131
- Embedded Windows XP (US) operating system
- PC with at least 2 GHz and 512 MB RAM
- 17-inch TFT flat screen
- 1 hard drive with at least 40 GB
- 3.5-inch floppy disk drive
- CD-RW drive suitable for reading and writing CDs (dust protection warranty not included)
- USB port on the control panel
- Digital drive technology via fiber optic cable
- Decentralized, digital fieldbus system
- 10/100 MBIT RJ45 Ethernet connection (without switch)
- Provision of teleservice (modem)

Includes the general provision of a machine's teleservice capability, including the appropriate modem, as well as the free use of teleservice services within the warranty period. After the warranty period, a corresponding teleservice contract must be concluded to use the teleservice.

- UPS (Uninterruptible Power Supply)

Protects the computer from damage in the event of a power failure, overload, or short circuit.

In the event of a power failure, the computer shuts down in a controlled manner after one minute, thus preventing data loss.

- Control panel with potentiometer and emergency stop button.

Software:

- PC85T CNC kernel with:
 - Continuous path control in all axes and parallel processes using multi-channel technology
 - Look-ahead function for optimal speeds at transitions
 - Dynamic feedforward control for the most precise contour accuracy
- PC85T software package with graphical operating programs:
 - woodWOP for graphical, dialog-oriented CNC program creation
 - Graphical tool database

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- Production list management
- CNC operation
- Graphical display of workspaces
- Error message in plain text
- Schuler MDE Basic for machine data acquisition
- Software package for external PC:
- woodWOP for graphical, dialog-oriented creation of CNC programs

G.0001 Number: 0099 1 piece
OPERATING SIDE / INSERT SIDE RIGHT

G.0004 Number: 0026 1 piece
CONFIG. 2V21, 2H4X/1Y, N2 X-Y 90, F2-ETP-6 KW
2V21 HIGH SPEED 7500
Vertical drilling unit arranged in the upper and lower machining supports, each with 21 drilling spindles (individually controllable with variable speed range). Spindle clamping for reliable drilling depth.
Travel: see attached assembly plan
Z-axis stroke: 60 mm
Drilling depth: max. 38 mm
Direction of rotation: right/left
Speed: 1,500 - 7,500 rpm, frequency-controlled
Drive: 2 x 2.7 kW
Drill chuck: d = 10 mm
Total drill length: 70 mm
Drill diameter: see attached assembly plan
Spindle spacing: 32 mm
Spindle type: individually controllable
2H4X/1Y

Horizontal drilling unit arranged in the upper and lower machining supports, each with 5 drilling spindles that can be individually controlled via the program.

Travel: see attached assembly plan
4 drilling spindles each: in the X direction
1 drilling spindle each: in the Y direction
Drilling depth: max. 38 mm
Drilling height in the Z direction: see attached assembly plan
Direction of rotation: right/left
Speed: 1,500 - 7,500 rpm, frequency-controlled
Drill chuck: d = 10 mm
Total drill length: 70 mm
Drill diameter: see attached assembly plan
Spindle type: individually controllable
Note: Horizontal drilling spindles in the Y direction only for drilling into the workpiece edge opposite the machine zero line.
N2 X-Y 90°

Grooving saw unit located in the upper and lower machining supports for machining
can be pivoted 90° in the X-Y direction.

Cutting depth: 30 mm
Cutting cross-section: max. 70 mm²
Speed: 1,500 - 7,500 rpm, frequency-controlled
Tool diameter: 125 mm
Saw blade thickness: max. 5 mm
F2-ETP-6 KW

Milling unit located in the upper and lower machining supports, suitable for shank-type tools.
Manual tool change.
Tool holder: for shank diameter d = 25 mm

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Tool weight: max. 2.5 kg
Tool feed: manual, ETP 25 hydraulic quick-clamping system
Rotation direction: right/left
Speed: 6,000 - 18,000 rpm, continuously programmable
Drive: frequency-controlled three-phase motor
Max. tool power: up to 5/6 kW in continuous/intermittent operation
(S1/S6-50%)

G.0007 Number: 0103 1 piece
MULTI-PR. PROCESSING UP TO 3000 MM WORKPIECE LENGTH
- Extension of the protective grilles and safety mats
- Automatic repositioning of the collets
when transporting workpieces with a length of
2500 mm to 3000 mm
- For workpieces between 2500 mm and 3000 mm, processing or process
restrictions may occur.
- Processing restrictions can be found in the
assembly plan

G.0010 Number: 3407 1 piece
INSERT TABLE WITH AUTOMATIC WORKPIECE FEEDING AND
POSITIONING
- Cross belt conveyor made of a sturdy frame construction
- Frequency-controlled conveyor belt drive
- Insertion table divided into two sections by control technology
- First section suitable for manual or
automatic insertion of workpieces
- Second section equipped with an integrated alignment unit

for the workpiece's longitudinal and transverse edges
- The inserted workpieces are automatically transferred

from the first section to the second section.

The integrated alignment unit

feeds the workpieces to the clamping system

and aligns them with the machine stop system.

- The first section can be loaded with another workpiece while machining

a workpiece. - Workpiece width and length control +/- 5 mm

- The maximum width of the workpieces that are located
in the processing area and are to be reloaded
must not exceed 1000 mm.

The workpiece dimensions from the base machine
change as follows:

Single part:

Workpiece length: min. 250 mm

Workpiece width: min. 100 mm

max. 1000 mm

- with processing restrictions: 1300 mm

Double part:

Workpiece length: min. 300 mm

Workpiece width: min. 150 mm

max. 1000 mm

- with processing restrictions: 1300 mm

Note: The safety mats from the
base machine are no longer required.

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G.0013 Number: 3408 1 piece

EXTENSION OF THE INSERTION TABLE SYSTEM TO 3000 MM WORKPIECE LENGTH

The infeed table with automatic workpiece feeding and positioning (Vk No. 3407 and 3409) is designed for handling workpieces up to 3000 mm long.

Note: Only in conjunction with Vk No. 0103

G.0016 Number: 3412 1 piece

ADDITIONAL COST: OUTPUT TABLE WITH LONGITUDINAL AND CROSS CONVEYOR

- Cross belts and longitudinal roller conveyor made of a sturdy frame construction

- Cross conveyor belts and longitudinal rollers driven by frequency control

- Electro-pneumatically controlled lifting arms with universal rollers

The outfeed direction of the finished workpiece can be selected via a softkey.

The infeed table is designed for the following purposes: Note: The workpiece dimensions from the base machine change as follows:

Workpiece length: min. 250 mm

Workpiece width: min. 100 mm

E.01 Service: 6240 1 x

ETHERNET CONNECTION 10/100 MBIT FOR MACHINE,
RJ45 (WITH SWITCH)

Use of the internal 10/100 Mbit network card
(software and Windows network function).

- Network cable (approx. 2 m)

- 8-way 10/100 Mbit switch (industrial version)

- Peer-to-peer connection

Note: No network software may be installed on the machine's PC without consulting WEEKE.

WEEKE assumes no liability for malfunctions caused by third parties.

D.01 Service: 8321 1 time

DOCUMENTATION AND CONTROL TEXTS: GERMAN

Scope of delivery:

1. Operating manuals

consisting of operating and maintenance instructions
on DIN A4 paper and CD-ROM

2. On-screen operating texts

for machine operators, for POWERCONTROL

3. Spare parts descriptions

consisting of CAD drawings and circuit diagrams
on CD-ROM

- Delivery time: With machine delivery

- Note: Tools are not included!