CNC-Machining Center Weeke Type BP145/Optimat
Used machine -year 2000

1.0 General description of the basic machine: BP145/Optimat

work table
Length: 3500 mm* (+1000mm, see machine extension)
Width: 1300mm*
Receipt height: 100 mm*

basic machine:
The machine base frame and the traveling column are statically and dynamically stiff welded constructions. Additional stability is achieved through the ribbing within the frame. The high dead weight of the basic stand compensates for the vibrations that occur during machining. The traveling column is arranged in the X-direction on the machine base frame. The cross support, which can be moved in the Y and Z direction, is located on the traveling column.

Guidance system:
The axes (X-Y-Z) are moved via a linear guide system that is sealed on all sides.

Digital drive system:
All axes (X, Y and Z) position with position control. The high processing quality and repeatability is achieved by AC servo motors, backlash-free ball screws in the Z direction and backlash-free rack and pinion drives in the X and Y directions.

Electronics:
As a control system, all WEEKE machining centers are equipped with the HOMATIC-2000 IPC system and the user-friendly WOODWOP programming software for Windows.

2.0 Workpiece clamping:
Vacuum clamping system for clamping coated and uncoated panel materials, consisting of:
1 low-maintenance vacuum pump with 100 m3/h output.
8 work piece support consoles (1300mm) that can be steplessly adjusted in the X direction, suitable for holding vacuum suction cups that can be positioned without hoses.
8 workpiece stops fixed to the machine frame (rear edge),
8 workpiece stops mounted in the workpiece supports (front edge), (position Y900mm).
4 side stops mounted in Y-direction on an aluminum profile
8 controlled workpiece insertion aids (plastic material), for positioning aids with heavy workpieces.
1 set of scales and pointers on the workpiece supports in the X and Y direction as a positioning aid.
16 pieces of large-area vacuum block suction cups, can be freely positioned manually without hoses. (115*140*100)
8 vacuum block suction cups for narrow parts, can be freely positioned manually without hoses. (125*75*100)
1 piece of vacuum connection for stencils for connecting self-made vacuum stencils to the vacuum circuit of the machine. (mounted on the right side of the machine)

The workpiece supports are guided on a dust-protected, hardened and ground linear guide system.

3.0 Unit technology:
1 piece vertical drilling unit, 22 spindles, in X Y direction including suction hood
1 piece horizontal drilling unit, 4 spindles, in the X direction
1 piece horizontal drilling unit, 2 spindles, in the Y direction
1 tool change spindle 12 kW - HSK F63, including liquid circulation cooling:
For the use of shank tools that are automatically exchanged from the pad changing magazine.
Tool holder: for HSK cones
Tool infeed: automatic
Direction of rotation: right / left
Speed range: infinitely variable 1250 24,000 rpm, programmable
Drive: frequency-controlled three-phase motor
Max. power at the tool: up to 7.5 / 9 kW in continuous / intermittent operation (S1 / S6-50%)
Spindle lubrication: grease lubricated for life
Cooling: liquid circulation cooling

1 automatic tool change magazine for 18 places (plate changer)

2 free spaces prepared for retrofitting
prepared for the installation of additional processing units with a separate drive.
e.g. E.g.: Additional router or grooving saw

1 piece of central suction

4.0 electronics

The control cabinet is arranged on the left side of the machine as standard.

4.1 Hardware system HOMATIC 2000 IPC:

CNC path control equipped with position-controlled axes. Simultaneous interpolation can be carried out in the axes, whereby circular interpolation can be carried out with 2 axes in each case. The third axis can be called a linear axis.
IPC industrial personal computer, Windows 95/98 operating system, 17-inch graphic monitor(Pentium compatible), 32 MB RAM memory, min. 2048 MB hard disk space, 3½ inch floppy disk drive
4.2 Software: 1 piece WOODWOP for the HOMATIC control
4.3 Machine data acquisition (MDE) for the HOMATIC control

4.4 Production list software: for the HOMATIC control
4.5 Hand terminal for controlling the machine

Ordered options:
Machine extension 1 meter

2 workpiece consoles 1300mm, with 3 vacuum suction cups, including insertion aid
Workpiece stop system K-System tubeless
Surcharge per stop bolt cover layer overhang (12 pieces - front stop row)
Surcharge per stop bolt (10 pieces) cover layer overhang (rear stop row)
Workpiece clamping aids:
Vacuum supply unit for multi-clamping system, right
Vacuum supply unit for multi-clamping system, left
Router 5 kW with hydraulic quick clamping system
Aggregate interface for the main spindle
for accommodating the adapter units including pneumatic interface and C-axis swivel drive with torque entrainment and 3-point support.
1 grooving saw automatically swivels 90°
Grooving saw with automatic, program-controlled swiveling device (0 and 90°), incl. drive motor and feed unit.

Interchangeable adapter units:
HSK 63 drilling/milling/sawing d=240mm, 2 spindles
HSK 63 drilling or milling, manually tiltable 90°, cranked version
Safety devices:
Protective grille on the right with door
Extension of the safety step mats,

Software, electrics, electronics:
WoodWOP for personal computers from 4 CNC axes
DXF - postprocessor software for CAD systems
Provision of teleservice capability