

HOMAG DRILLTEQ V - 200/055 HSK

Machining Center

DRILLTEQ V-Series machining centers help customers worldwide increase productivity, reduce errors, and lower cost of ownership. Rigid, fast, and reliable, each unit is constructed on a heavy steel frame. The machine is driven by a powerful linear motion package engineered to accommodate industrial requirements while ensuring accuracy and longevity. With advanced automated features and intuitive touch-screen controls, it's easy to learn and operate.



Product image is for illustration purposes only. Delivered machine may not be the same color or have the same markings as shown in the picture above.

Features & Details:

HOMAG DRILLTEQ V - Series

Easy maintenance optimizes product life

MMR Basic software enables complete operator-assisted maintenance of the entire machine. The software prompts the operator on needed maintenance in real time and provides graphic instructions. There's no need to rely on paper manuals. Once maintenance is finished, the operator initials the work as complete. The interval resets, and a log is created on the machine.

Powerful, reliable and efficient

With robust machine design and rapid speeds of 50 m/min, this industrial machining center is designed for the demanding CNC user.

Precise, accurate, consistent

HOMAG introduced 32-mm system drilling to the market more than 60 years ago, and individually selectable drill spindles in the 1980's. The quality and performance of the HOMAG drill block remains second to none. The drill block features fully encased drill spindles and reliable pneumatic actuation and retraction of each spindle. The block's patented mechanical spindle locking technology ensures precise drill depth regardless of variations in material density.

Eliminates human error

When evaluating a production machine, it's important to consider efficiency as well as speed. How fast can it cut, and how efficiently can it be operated when it is not cutting? The machine features sensors that measure the length and width of the raw part, and confirms the part's thickness, prior to allowing the operator to start the machine cycle, ensuring the raw part matches the dimensions contained within the CNC program. This decreases the opportunity for the operator to make errors while running the machine.

Features & Details: HOMAG DRILLTEQ V - Series (continued)



Minimal set-up time means more productivity

The machine's zero set clamping system increases efficiency by creating a no set-up machining solution. The operator has no vacuum benches, pods, or fixtures to move before machining parts. The machine can run a part as small as 7.9" long, followed by a part as big as 10' long without stopping to setup the machine.

Innovative, ergonomic, state-of-the-art

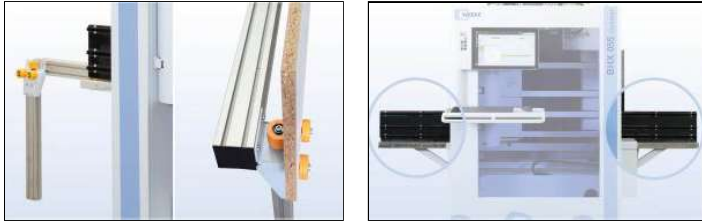
The DRILLTEQ V-Series features Windows-based **powerTouch** touchscreen operation, the most user-friendly and intuitive machine control available. Fit, finish, and functionality of the **powerTouch** control unite to provide a user interface like no other. It's essentially a tablet computer configured to operate a machine. It's that easy to use.

Small footprint, big ability

Requiring only a small amount of floor space to operate, the machine packs productivity into its compact package. DRILLTEQ V-Series machines have the ability to vertically and horizontally drill, route, and command a grooving saw.

Features & Details:

HOMAG DRILLTEQ V - 200/055



Working Length of 3050 mm Including Roller Conveyor

For workpieces with a maximum total length of 3050 mm, the working area of the machine is enlarged by extending the software regarding the clamping device function and automatic displacement of the clamping device. The additional roller support enables safe feeding of long workpieces. The roller support has an adjusting range of 1200-1850 mm, measured from the stop, and can be dismantled easily. To ensure safe handling and clamping of the lower edge of long workpieces, the rollers are positioned approximately 100 mm apart.

Workpiece Feeding and Removing Areas

Mechanical support is provided by roller conveyors in the workpiece feeding and removal areas.

Workpiece Handling

To feed the machine, workpieces are manually positioned against a pneumatically adjustable stop cylinder in the workpiece feeding area. The workpieces are removed manually from the workpiece discharge area, or by means of the reversing function from the workpiece feeding area.

| User-focused operation

Features & Details: HOMAG DRILLTEQ V - 200/055 (continued)



Workpiece Clamping System

The workpiece clamping/locating system consists of:

- 1 stop cylinder for workpiece positioning
- 1 workpiece clamping device traveling in X direction via ball screw
- the position of the clamping device in the X-direction is automatically adjusted by program control
- the clamp jaw must be manually adjusted to the thickness of the workpiece
- clamping device stroke is 10 mm
- 1 workpiece counter-pressure block with automatic adjustment for workpiece thickness

Panel Size Verification (X & Y) for Vertical Processing Centers

A contact-free optical sensor system for panel size verification of the workpiece is positioned at the workpiece fence. A contact-free sensor in the X-direction checks the workpiece length, and another contact-free sensor in the Y-direction checks the workpiece width. The tolerance range has been preset at the factory to 5 mm.

Advanced technology for quality and accuracy

Features & Details: HOMAG DRILLTEQ V - 200/055 (continued)



Horizontal Drill Blocks

Horizontal drill blocks are integrated into the drill head of the machine.

- 4 spindles in the X direction
- 2 spindles in the Y direction

13-Spindle Vertical Drill Block

A 13-spindle vertical drilling aggregate is separately activated with a variable high-speed range. Includes a quick change system. A spindle clamping mechanism safely achieves the proper drilling depth.

Routing Motor

The automatic tool change routing spindle includes a frequency converter and a 4-place tool change magazine.

Grooving Saw

The grooving saw is integrated in the drill head of the machine.

Increased flexibility

Features & Details: HOMAG DRILLTEQ V - 200/055 (continued)



Guide System and Drive Technique

The X, Y, and Z axes are all supported on THK-style linear motion guides. These guides are engineered to produce straight line tracking at high travel speeds while providing stability in both the radial and lateral directions.

- The X axis is driven by two (2) helically-ground rack and pinion gear systems
- The Y and Z axes are driven by high-precision ball screw
- Indramat solid state drives and digital AC servo motors power the axes
- Digital drive technique in X, Y and Z direction features:
 - Maintenance-free motors with high-resolution optical encoders for precision and accuracy
 - Digital drive control units guarantee high reliability

Workpiece Length Dependent Processing in X-Direction

Drilling and/or routing processes are programmed in woodWOP to suit the workpiece length. The measured differences are calculated automatically using the programmed set-point.

Electrics

This machine is equipped with electric components according to UL Standards and has CE-Security and Safety Units. The machine's special voltage transformer allows connection to various electrical sources at a customer location from 208V to 460V.

Energy Saving Mode: Stand-by operation

To save energy, the machine's ecoPlus button can be activated to start stand-by operation after a pre-set time while the machine is not processing.

- Primary power of drives is switched off
- Vacuum pumps are switched off (if so equipped)
- Sets a potential-free output that can activate the slide (supplied by the customer) of an external extraction device

Features & Details:

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Manuals and Control Texts

- Standard manuals, CD, as well as .PDF versions containing operating and maintenance instructions are stored on the machine
- Display texts for power control operators
- Spare parts descriptions (CAD-drawings and wiring diagrams)



Workforce Development

A well-trained workforce is essential to realizing the full capabilities of HOMAG equipment, safe and efficient machine operation, increased component and tooling life, and reduced maintenance costs. At the time of installation, basic machine programming, operation, and troubleshooting training is administered onsite by a Stiles Field Service Representative (FSR).

Pre-installation Introduction to woodWOP Programming training is conducted through Stiles University, the industry's only nationally accredited training program. With over twenty regularly-scheduled courses, Stiles University provides comprehensive, virtual and hands-on technical and application training as well as best practices designed to equip manufacturers with the skills and knowledge they need to thrive.

Included with your machine purchase is one (1) thirty (30) day subscription to the Stiles University Online course: **CNC100**. The course, created for machine operators, design, drafting, and programming personnel, as well as facility supervisors and owners is self-paced and serves as a pre-requisite to machine shipment.

CNC100: guides learners through various woodWOP functions complemented by exercises that explore a wide-range of programming capabilities, as well as self-assessments:

- Welcome to CNC100
- Welcome to the CNC Family
- Panel Sizing
- Vertical Drilling
- Horizontal Drilling
- Variables
- Conditions
- Vertical Sawing
- Trimming Vertical Pockets
- Contour Creation
- Adding Router Tooling to Contours
- Free Form Pockets
- Block Macros
- Components
- Stop Macros

Machine Control & Software: HOMAG DRILLTEQ V - 200/055



powerControl with powerTouch

The DRILLTEQ V-Series features a Microsoft Windows 7 based state-of-the-art powerTouch control with software. The woodWOP 7.x programming system (included) offers powerful drawing functions to simplify programming for operators without CNC experience and provide the premium features required to satisfy advanced users. A copy of the program is also included for installation on an office PC for off-line programming.

Hardware

- 21.5" Full HD wide screen multi-touch display, keyboard, mouse and an industrial PC
- Operating system Windows 7 (US)
- PLC control according to international standard IEC 61131
- USB connection at the operating panel
- EtherNet connection 10/100 MBIT RJ45 (without switch)

powerControl CNC-Core

- Path control in all axes and parallel sequences by multi-channel technology
- Look-ahead function for optional speed at transitions

Premium functionality that's easy to learn



Machine Software Bundle

The following software is preloaded on the machine:

powerControl Software Package with Graphical Operating Programs

woodWOP generation of CNC programs

- Enables graphical tool selection from your database
- Production list administration
- Graphical presentation of work zones
- Clear error messaging
- 3D CNC-simulation and time calculation: 1 license

Maintenance Prompting Software

MMR BASIC alerts operator to required maintenance

- Provides graphic instruction
- Creates and saves maintenance log
- Recording of automatically justifiable statuses using the machine control system
- Recording of shift changeovers
- Evaluation of key indicators and numerical depiction at the machine control system
- Display and recording of maintenance measures

Software for External PC

Requires a computer operating Windows 7, 8, or 10. Single-seat licenses for the following programs:

- woodWOP 7.x for simple generation of CNC programs
- DXF-postprocessor Basic for data exchange from 2D-CAD-programs to woodWOP
 - Import of 2D-DXF files via pre-determined layering rules
 - Display of geometry, layer, and drawing elements
 - Generation of woodWOP program files

Powerful, simple, user-focused

woodScan Barcode Software

- 'woodScan' for preparing the control to automatically take over a 1D or 2D barcode from the barcode reader (optional)
- The connection of the barcode reader with the control is via a separate interface
- Simple allocation of the barcode information to the machine control
- Range of functions:
 - Up to 2 different barcodes per part can be read
 - Transfer of up to ten variables
 - Transfer of location or mode information by choice as a second barcode or as the last character in the barcode
 - Transfer of program names in a production list with transfer of a set-point
 - Import of a production list

Corded Barcode Reader

Included will be a corded handheld scanner that reads all popular 1D barcodes.

*Note: a separate electrical line (110-volt) will need to be supplied for this device.

Technical Specifications

Dimensions All equipment offered is made to metric standards. Dimensions shown in English measure are approximate and for comparison purposes only.

DRIVE SYSTEM AND AXIS SPEEDS

Ball Screw X/Y (vector)	50 m/min
Ball Screw Z	15 m/min

FACILITY REQUIREMENTS

Ambient Temperature Range (minimum)	5° C (41° F)
Ambient Temperature Range (maximum)	40° C (104° F)
Concrete Quality	C25/30 X C1
Concrete Thickness (minimum)	200 mm (7.9")
Surface Pressure in area of points of support	1.20 N/mm ²

MACHINE DIMENSIONS (APPROXIMATE)

Length	2,920 mm
Width	1,538 mm
Height	1895 mm
Weight	1580 kg (3483 lbs)

Technical Specifications (continued)

WORKPIECE SPECIFICATIONS

Length (minimum)	200 mm
Length (maximum)	3050 mm
Width (minimum)	70 mm
Width (maximum)	850 mm
Thickness (maximum)	56 mm
Thickness (maximum) center drilling at lower panel edge	19 mm
Thickness (minimum) processing surface, left, right and top edges	12 mm
Thickness (minimum) vertical drilling only	8 mm
Workpiece weight (maximum)	35 kg

ELECTRICAL

Operating Voltage	3 Phase 208v / 480v
Amperage (Nominal)	58 at 208v or 26 at 480v
Recommended Amperage	75/40 Amps
Control Voltage	24v
Total Connected Load	16.5 kW

DUST EXTRACTION

Connection Size(s)	1 at 160 mm diameter
Air Velocity (minimum)	30 m/sec (99 ft/sec)
Static Pressure (minimum)	2200 PA
Air Volume (minimum)	2170 M3/H (1278 CFM)

Technical Specifications (continued)

COMPRESSED AIR

Connection Size(s)	R 1/2"
Pressure Required	102 PSI 7 bar
Consumption / Volume	CA 40 - 60 NL/min (1.4 - 2.1 CFM)

VERTICAL DRILLING

Stroke Z-Direction	60 mm
Drilling Depth (maximum)	38 mm
Direction of Rotation	Right / Left hand
Rotation Speed	1,500 - 7,500 rpm frequency controlled
Drive	2.3 kW
Drill Shaft Diameter	10 mm
Total Length of Drill	70 mm
Drill Diameter (maximum)	35 mm (specific locations)
Spindle Pitch	32 mm
Type of Spindle	Quick change / Individually selectable

Technical Specifications (continued)

HORIZONTAL DRILLING

X-Spindles	4 (2 in each X+ / X-)
Y-Spindles	2 (1 each in Y+ / Y-)
Drilling Depth (maximum)	38 mm
Drilling Height Z-Direction	32 mm from upper workpiece edge
Direction of Rotation	Right / Left hand
Rotation Speed	1,500 - 7,500 rpm frequency controlled
Drive	2.3 kW
Drill Shaft Diameter	10 mm
Total Length of Drill	70 mm
Drill Diameter (maximum)	20 mm
Spindle Pitch	32 mm
Type of Spindle	Individually selectable

ROUTING

Tool Interface	HSK 63F*
Tool Changing	Automatic (4 position)**
Tool Change Time	16 seconds***
Direction of Rotation	Right / Left hand
Rotation Speed	1,250 - 24,000 rpm (programmable)
Drive	8.5/10 kW (S-1/S-6 - 50%) frequency controlled
Spindle Lubrication	Permanent grease
Cooling	Air
Router Bit Shank Diameter (maximum)	25 mm
Projected Tool Length (maximum)	80 mm

* Tool Interface for ETP is optional

** Tool Changing is Manual for ETP

*** Tool Change Time is N/A for the ETP

Technical Specifications (continued)

GROOVE SAW

Cutting Depth (maximum)	30 mm
Rotation Speed	1,500 - 7,500 rpm frequency controlled
Blade Diameter	100 mm
Cutting Width (maximum)	5 mm