

990-APEX

THE NEW STANDARD IN SPEED & FLEXIBILITY

Architectural, Prehanging, & Exterior. All in one.

The 990-APEX redefines door and jamb machining flexibility by bridging the interior, exterior, and architectural/commercial markets. Designed with 75 years of experience and proven concepts at the foundation of our legendary 990 series, the APEX easily outperforms the competition.

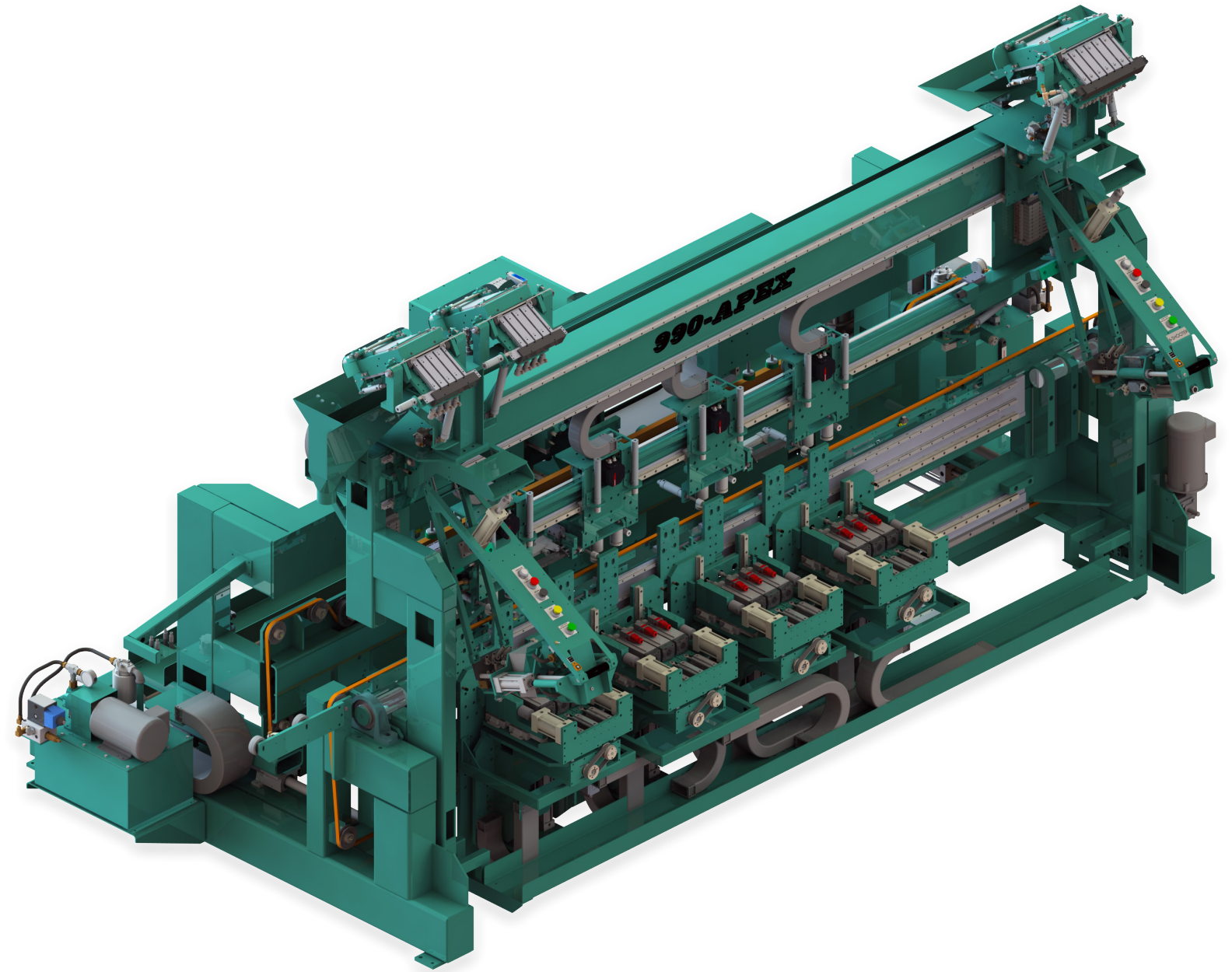
Leveraging our patented KvalCAM® software—integrated with CNC technology—the 990-APEX provides complete control of all machine movement and precision cutting. It is the perfect machine for those looking to serve several markets with a single high-performance solution.

Hinges - Four independent CNC router heads allow you to specify hinge location, depth, radius, and pre-drill patterns from the control panel for the door and jamb. Use of clockwise and counter-clockwise high-frequency spindles eliminate material chip-out without the need for chip-out blocks. A third spindle is designated for point-to-point pre-drilling any hole pattern. Automatic corner squaring and concealed hinge capability are standard.

Lock Section - Routers mounted on the CNC tower in the lock section can machine the entire lock edge, making it possible to complete preps for three-point locks, deep mortise locks, flush bolts, and more. Face work in the lock section is completed with vertical spindles mounted on the same CNC tower, making function holes, different size bores, and irregular shapes all possible.

Corner squaring and point-to-point pre-drilling in the lock section are standard with the 990-APEX, and optional CNC ball-catch routers can be added to both bore and route for face plates on the door top.

Jambs - The 990-APEX can machine and attach 3 ½" or 4" hinges with Kval's original patented 6-Shooter and 8-Shooter technology for pre-hanging interior and exterior doors. KvalCAM allows the door and jamb to be machined separately to accommodate special hinges and strikes, such as ASA strikes and three-point lock strike jambs.



KvalCAM®

The 990-APEX is programmed and controlled by our patented KvalCAM software that has been in development for over five years. Door files are easily created at the controller, off-line, or automatically from your data system through its easy-to-use API.

No G-Code experience is necessary to program new and unique door files. Jobs can be queued for operator or automatic bar-code reader selection, and 3D drawings can be viewed in real time as the door file is created. All machine control, calibration, and tool management is done through KvalCAM's intuitive UI.

Innovation, Quality, and Honesty Since 1947



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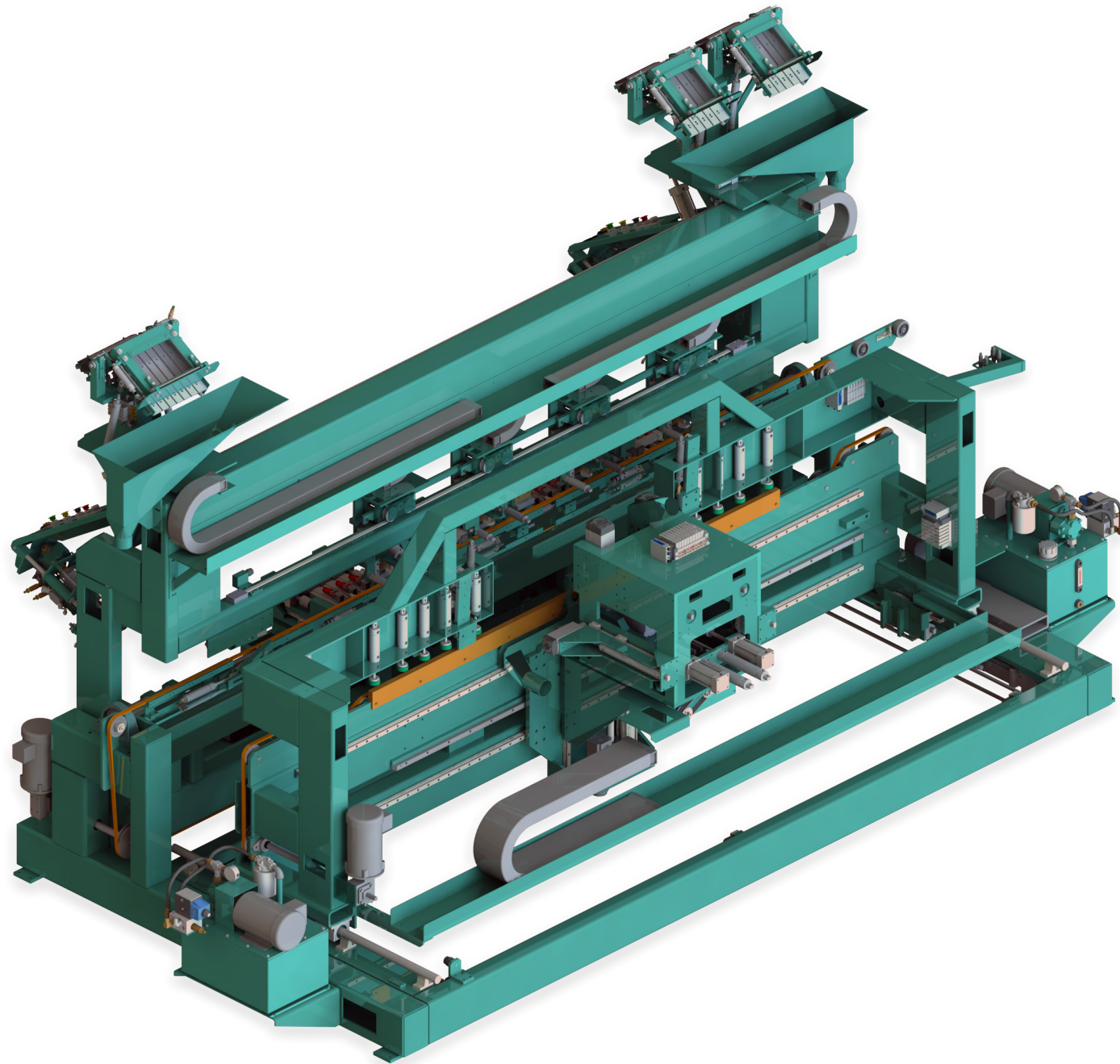
Cutting Edge Technology

- *Hi-Frequency CNC Controlled Routers* increase hinge pocket quality with extreme accuracy and long life
- *Counter-Rotating Routers* eliminate chip-out without the need for chip-out blocks, changing hinge sizes is fast and done from the controller
- *Point-to-point Pre-drill Spindles* replace air operated "gang drills" to allow for any pre-drill pattern
- *Selectable Chisels* provide perfectly square hinges or face plates automatically
- *High Quality Beckhoff Control Components* are used throughout the 990-APEX
- *Laser Encoder* for real-time door thickness measurement and program adjustment for correct hardware
- *CNC Ball-catch Motors* for varying size, location, face plates, pivots, and flush bolt top/bottom plates
- *Variable Run Modes* of prehanging, door-only, and/or jamb-only are fully supported
- *Jamb Programming* fully supports hinges and strike jambs (including three-point locks)

Door Specifications

Height	78"-96"
Width	14" - 48" (12" - 14" hinge only with option ND1)
Thickness	1 3/8" - 1 3/4"
Bevel	0° or 3°
Hinge Width	3" - 4 1/2"
Hinge Corner	1/4" Rad, 5/8" Rad, Square
Hinge Mortise Depth	0-1"
Hinge Center	24" - 32"
Maximum Lock Mortise Depth	4.5"
Minimum Jamb Width	4.5"
Maximum Jamb Width	7 1/4"

These values are in standard configuration, special options can be ordered to modify them. Contact Kval Sales for more information.



The Kval Advantage

Kval differentiates itself within the industry by controlling each step of the manufacturing process at their facility on the west coast of the United States: raw steel is received, and finished machinery is shipped. Kval designs, cuts, machines, welds, paints, wires, and programs each and every machine in-house using the best components and materials available, enabling a hands-on approach to quality control and reducing unforeseen complications caused by outside vendors.



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