EFX

CNC ARCHITECTURAL DOOR MACHINING DONE RIGHT

One Machine Does It All

Kval's EFX is our newest CNC machine that combines the advanced functionality of our existing Edge SS and Face SS machines to significantly reduce unnecessary labor and costly mistakes associated with machining architectural doors.

Designed specifically for the Commercial and Architectural Door Distributor; architectural hardware templates including hinges, mortise locks, card locks, exit devices, overhead closers, door bottoms, and flushbolts can be easily programmed and machined without any knowledge of G-Code or other programming languages.

The EFX processes doors up to 4′×9′ and 2 ¼″ in thickness with a production capacity of 60-100 architectural doors per shift, depending on individual hardware complexity needs; it can complete a door with three 4 ½″ squared hinges (including pilot holes) and a commercial cylinder lock in under 3 ½ minutes, door-to-door.

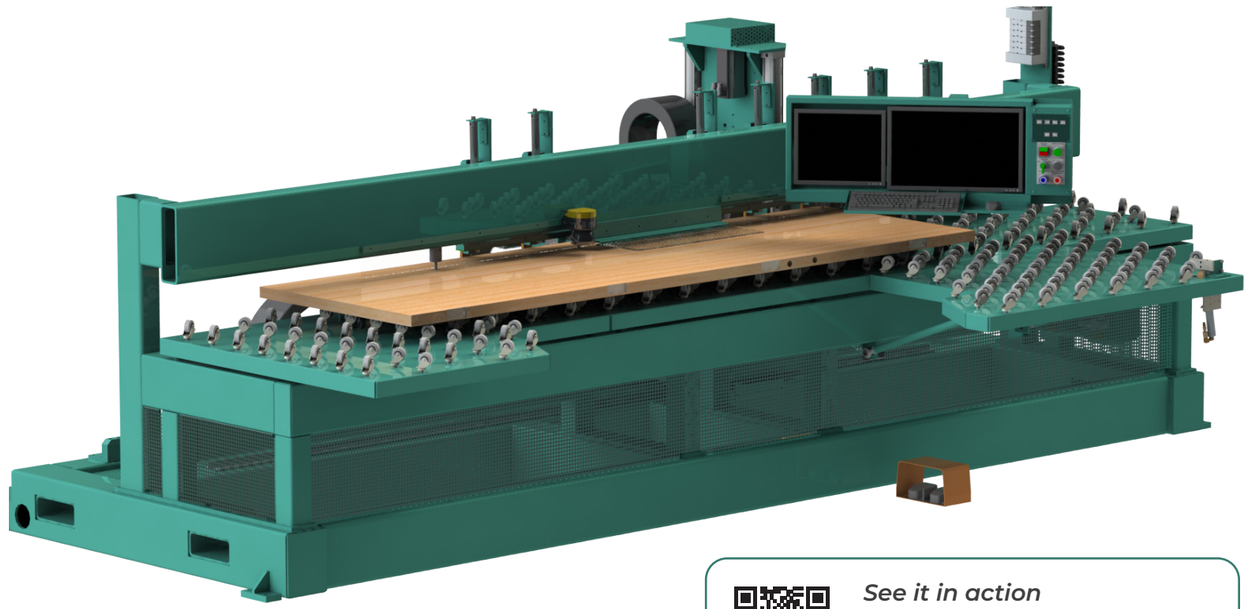
It's the perfect option for machining the highest quality commercial doors in a small footprint without breaking the bank!

On The Cutting Edge

Speed – Seven different router motors for face and edge machining allow the EFX to complete all door templates without wasting machine time for tool changes. A 12 HP hogging router provides fast, clean, and accurate machining of mortise pockets and overhead closers.

Quality – Corner chisels and a predrill motor for pilot holes guarantee that hinges and faceplates are perfectly completed without additional manual labor. RH and LH routers combine to eliminate chip out in hinges and open lip hardware. The EFX provides the most accurate and clean cuts every time.

Accuracy – The EFX includes an encoder to automatically measure door length, assuring extreme accuracy for hinges, locks, and the location of all edge work for left-hand and right-hand doors. A thickness measurement option is available to automatically center faceplates, even when thickness varies between queued doors.



See it in action

Scan for a video demonstration, the complete feature list, and cycle times.

kvalinc.com/features/efx

KvalCAM, The Ultimate Platform

Our team of Software Engineers developed the KvalCAM™ platform to empower users to easily program templates and doors without knowledge of G-Code or other programming languages. Hardware templates can be created, saved, and modified by simply defining the shapes and locations of lock holes, hinges, faceplates, and other hardware.

> *Saved door features—selected from the pre-built library or your own custom templates—can be quickly loaded to create a complete door job that includes all edge work and lock face holes.*
>
> *The G-Code that controls the machine's hardware is automatically generated by KvalCAM based on the tools available in the line: our software can control multiple machines used in combination, e.g. the DL-NCD Door Light Cutter can be combined with the EFX to increase production and utilize the KvalCAM templates.*

> *Software can be utilized on office computers and at the EFX machine to connect to the same database, allowing off-line programming, hardware optimization, and library management.*
>
> *KvalCAM includes a built-in REST API that can be leveraged to generate template files and perform myriad other tasks, e.g. incorporating a barcode system to automate door job creation.*

The World's Most Advanced Door Machinery

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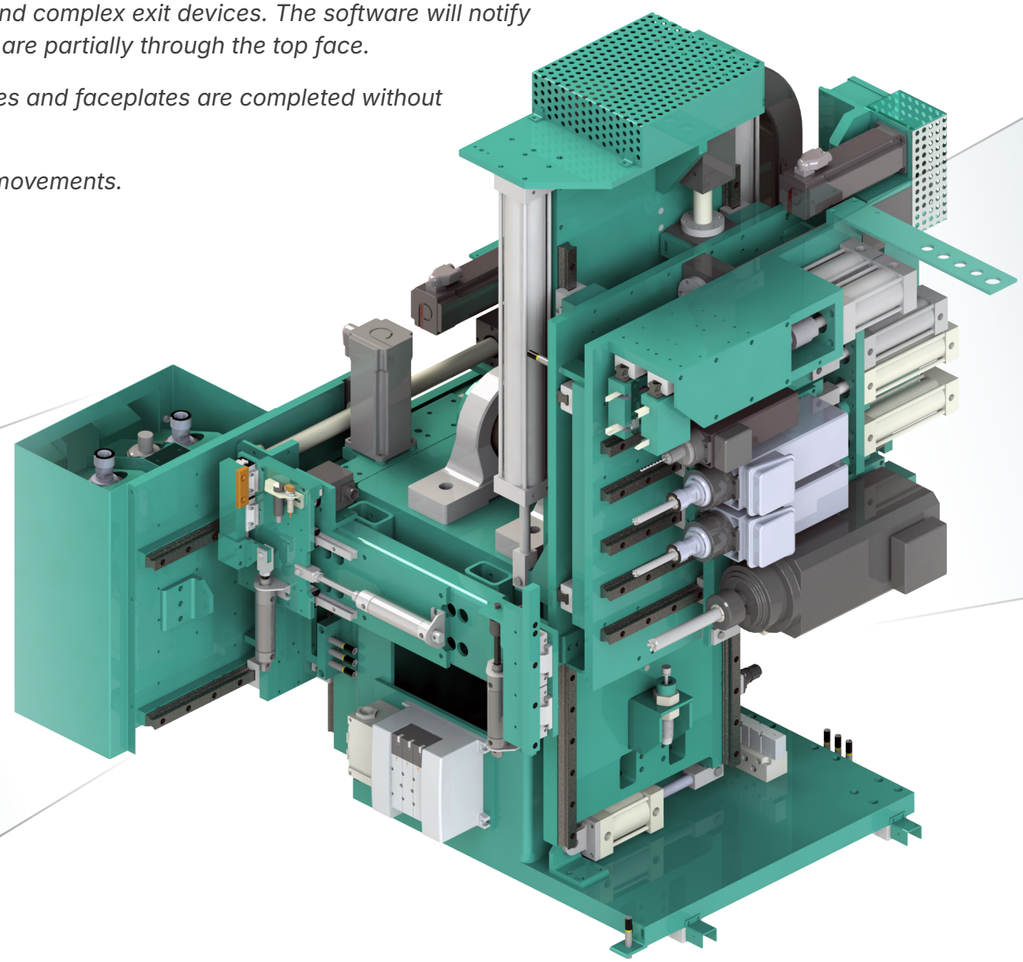
A Higher Standard

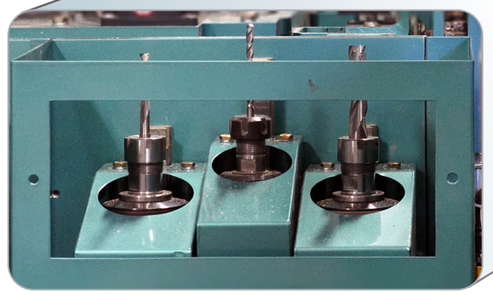
The EFX's standard configuration is detailed below, but tooling size and diameter can be controlled by the customer. KvalCAM automatically writes the machining program with the tools entered when a door is loaded, and tool changes and calibration are done easily without assistance.

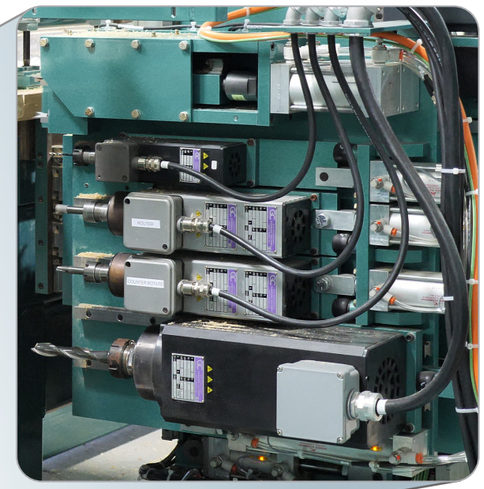
> *Counter and standard rotating high frequency routers for edge machining provide the highest quality machining for hinges and open lip hardware without chip out.*
>
> *A 12 HP hogging router provides fast, clean, and accurate machining of mortise pockets and overhead closers.*
>
> *Three face routers efficiently machine the lock holes from underneath the caster table bed, including small through holes on cylinder locks, mortise function holes, and complex exit devices. The software will notify the operator if the door needs to be flipped for holes that are partially through the top face.*
>
> *Corner chisels and a predrill motor for pilot holes so hinges and faceplates are completed without additional manual labor.*
>
> *Rack and Pinion x-axis for fast, solid, and precise tower movements.*

VISIT US ONLINE AT KVALINC.COM TO SEE MORE!

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Face Machining

4.8 HP Face Router: ⅝" diameter
Precise holes over ¾" in diameter.

1.7 HP Router: 5⁄16" diameter drill bit

4.8 HP Face Router: ⅜" diameter
Function hole ⅜" to ⅝" in diameter.

Edge Machining

Corner Chisels: 4 L-Shaped Sets
Each chisel has its own easy and accurate calibration. Servo depth also individually calibrated – no drag marks and clean corners every time.

1.7 HP Pilot Hole Drill: 5⁄32" diameter

4.8 HP Righthand Rotation Router: ⅝" diameter
Efficient and clean machining of hinges and face plates.

4.8 HP Lefthand Rotation Router: ½" diameter
Eliminates chip out with relief cuts and machines ¼" radius face plates.

12 HP Deep Mortise Hogging Motor: ⅞" diameter

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.