



Hoffmann Dovetail Joining System

1-2-3-Done!



The Hoffmann
Dovetail Joining System



Hoffmann GmbH, Germany and Hoffmann, Inc., USA - our journey



When Dr. Walter Hoffmann and his two sons, Thomas and Martin Hoffmann, founded Hoffmann GmbH of Bruchsal, Germany in 1990, exceeding customers' expectations with every machine they built was their top priority. Initially, their newly founded business concentrated on a variety of technological solutions for woodworkers but soon after the founding of the company, a major milestone was reached: **The development of the HOFFMANN DOVETAIL KEY.**

The result of several years of development, the Keys are four-dimensional fasteners in the shape of a double dovetail, with obliquely converging ribbed inner surfaces. This unique design allows the Keys to draw two work pieces together for a tight and permanent joint.

In addition to Dovetail Keys, which are offered in a variety of sizes, materials, colors and special shapes, Hoffmann also manufactures a wide range of specialized equipment to process parts for Dovetail Key joints. From small entry-level machines for Do-it-Yourselfers and hobbyists, to medium sized machines for custom woodworking shops all the way to custom-made industrial cutting and joining solutions, Hoffmann GmbH designs and builds everything at their facility in Bruchsal in southwestern Germany.

To better serve a rapidly growing customer base in the US, Canada and Mexico, Hoffmann Machine Company, Inc. was founded in late 1990 on Long Island, NY. After 15 years of growth and expansion, the company was relocated to a more geographically centralized location in western North Carolina in the summer of 2005. A spacious warehouse is stocked with all standard Hoffmann machines and an extensive supply of spare parts, accessories and Hoffmann Dovetail Keys are on hand at all times. Our factory trained technicians and customer service center are here to offer exceptional service, before and after the sale.

The premises on which the company was founded many years ago are still our top priority today and we strive to exceed your expectations every day.

Thank you for your business!



Hoffmann Dovetail Keys

Hoffmann Machine Program



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The Hoffmann Dovetail Key – Our System

Simply Brilliant – Brilliantly Simple

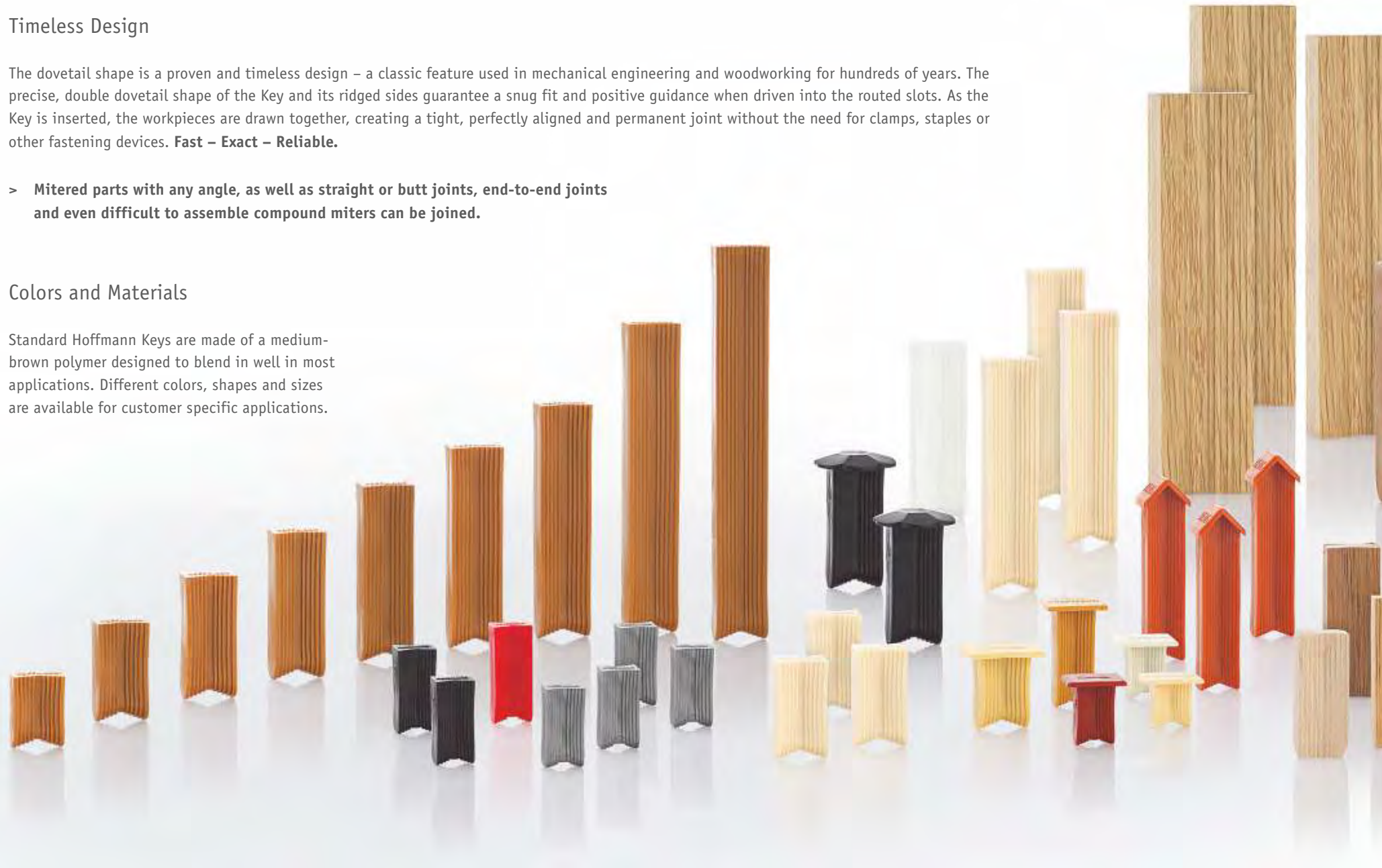
Timeless Design

The dovetail shape is a proven and timeless design – a classic feature used in mechanical engineering and woodworking for hundreds of years. The precise, double dovetail shape of the Key and its ridged sides guarantee a snug fit and positive guidance when driven into the routed slots. As the Key is inserted, the workpieces are drawn together, creating a tight, perfectly aligned and permanent joint without the need for clamps, staples or other fastening devices. **Fast – Exact – Reliable.**

- > **Mitered parts with any angle, as well as straight or butt joints, end-to-end joints and even difficult to assemble compound miters can be joined.**

Colors and Materials

Standard Hoffmann Keys are made of a medium-brown polymer designed to blend in well in most applications. Different colors, shapes and sizes are available for customer specific applications.





Fast and Reliable Assembly even with Difficult Joints

Hoffmann Dovetail Keys provide a fast, exact and reliable way of joining wood, whether on a large production scale or in a small custom shop. The double-dovetail shape and ribbed, sloped sides guarantee strong, tight joints every time. Every Key has a rounded end to aid in starting the insertion process and no special tools are required.

In fact, one of the main advantages is the fact that the person assembling the parts cannot change the alignment or tightness of the resulting connection, a major benefit not only in shop assembly, but also when shipping RTA products. A hammer is all that's needed to create perfect joints every time.

The Right Key for Every Joint

Hoffmann Dovetail Keys are extremely versatile, with lengths ranging from 1/4" - 4" in different colors and materials. For every joint, for every application, for every environment we have the perfect Dovetail Key..

1-2-3-Done!

Blind dovetail keyways are routed in the back of the material, in the adjoining faces of the two parts. The pieces are set together, a Dovetail Key is inserted and - **that's it!** Applying glue in the joint is optional but recommended and the assembled joint can be handled immediately without waiting for the glue to set.



Hoffmann Dovetail Keys - Sizes and Lengths.

A comprehensive range from 1/4" up to 4" long, solid polymer, medium brown color.

Hoffmann Keys are available in four different sizes, designated W-1, W-2, W-3 and W-4, with W-2 being the most popular size for general woodworking applications. Each size is offered in a range of lengths, starting with 1/4" in W-1 and W-2 (for moulding as thin as 5/16") and ending with 4" long Keys in W-3 and W-4 for heavy post-and-beam construction. Special sizes, lengths and colors can be produced to meet our customers' requirements.

W0



3/8"



- > Picture and Mirror frames
- > Small, Applied moulding

7/8"



- > Shadow Box Frames
- > Delicate Trim Moulding

1 3/8"



W1



1/4"



3/8"



- > Picture and Mirror frames
- > Small, Applied moulding
- > Shadow Box Frames
- > Delicate Trim Moulding

9/16"



3/4"



7/8"



1 3/16"



1 9/16"



2"



2 3/8"



W2



1/4"



3/8"



1/2"



9/16"



5/8"



3/4"



13/16"



7/8"



1"



1 1/4"



1 1/2"



1 13/16"



2 3/8"



W3



1/2"



5/8"



11/16"



3/4"



1"



1 1/4"



1 1/2"



1 13/16"



2"



2 3/8"



3 1/8"



4"



- > Handrail Connections
- > Furniture Frames
- > Casket Components
- > Plantations Shutters (Wood & PVC)
- > Canvas Stretcher Frames

W4



- > Post and Beam Construction
- > Exterior Millwork
- > Prefabricated Homes

- > Pillar Bases
- > Pergolas and Garden Arbors
- > Wooden Outdoor Planters

1 9/16"



2 3/8"



3 1/8"



4"



Hoffmann Dovetail Keys - Sample Case

Medium brown polymer

Size	Part Number
W-1, approx. 180 Keys	W9000111
W-2, approx. 255 Keys	W9000222
W-3, approx. 175 Keys	W9000333



Hoffmann Dovetail Keys - Solid Hardwood

Available in 12" pre-cut lengths, min. order 5 ft. per size and species



Ref.	Description	Size
W8210000-CHE	cherry	W2
W8210000-MAH	mahogany	W2
W8210000-MAP	maple	W2
W8210000-OAK	oak	W2
W8210000-WAL	walnut	W2
W8210000-WEN	wenge	W2

Ref.	Description	Size
W8310000-CHE	cherry	W3
W8310000-MAH	mahogany	W3
W8310000-MAP	maple	W3
W8310000-OAK	oak	W3
W8310000-WAL	walnut	W3
W8310000-WEN	wenge	W3

Ref.	Description	Size
W8410000-CHE	cherry	W4
W8410000-MAH	mahogany	W4
W8410000-MAP	maple	W4
W8410000-OAK	oak (3ply)	W4
W8410000-WAL	walnut	W4
W8410000-WEN	wenge	W4

White Dovetail Keys for plantation shutters, exterior poly trim, etc.

White Keys are produced for prefinished products such as plantation shutters, exterior building trim, PVC door and windows casing, etc. White W-2 and W-3 Keys in different lengths are available from stock.



Dovetail Keys, white polymer, size W-2

Ref.	Description	Size
W 9200600-22	white, 1/4"	W2
W 9200900-22	white, 3/8"	W2
W 9201200-22	white, 1/2"	W2
W 9201400-22	white, 9/16"	W2
W 9201500-22	white, 5/8"	W2
W 9201800-22	white, 3/4"	W2
W 9202000-22	white, 13/16"	W2

Dovetail Keys, white polymer, size W-3

Ref.	Description	Size
W 9301200-22	white, 1/2"	W3
W 9301500-22	white, 5/8"	W3
W 9301700-22	white, 11/16"	W3
W 9301900-22	white, 3/4"	W3
W 9302500-22	white, 1"	W3

Ref.	Description	Size
W 9202200-22	white, 7/8"	W2
W 9202500-22	white, 1"	W2
W 9203200-22	white, 1 1/4"	W2
W 9203800-22	white, 1 1/2"	W2
W 9204600-22	white, 1 13/16"	W2
W 9206000-22	white, 2 3/8"	W2

Ref.	Description	Size
W 9303100-22	white, 1 1/4"	W3
W 9303800-22	white, 1 1/2"	W3
W 9304600-22	white, 1 13/16"	W3
W 9305200-22	white, 2"	W3

Plastic Dovetail Keys in „wood-match“ colors

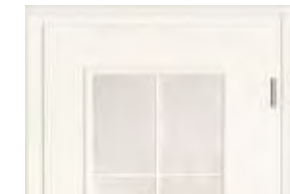
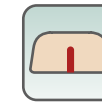
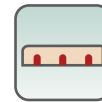
Specifically for the production of mitered cabinet doors and other applications where the Keys are visible in the finished product, we offer plastic Keys in different brown shades. Our wood-match Keys are available in sizes W2 – 5/8" (for 3/4" thick stock) and W2 – 7/8" (for 1" thick stock) in the following colors: Light Maple, Maple, Cherry, Walnut, Dark Walnut and Black. Dovetail Keys in other sizes and over 200 different colors can be produced as special orders.



Applications for Hoffmann Dovetail Keys

We're Found in the Best Joints!

Hoffmann Dovetail Keys are used in architectural and woodworking applications worldwide. Here are but a few examples:



Mitered Cabinet Doors
Doors
Wall Panels

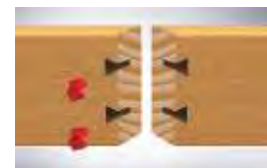
Picture Frames
(shop assembled or RTA)
Dry Erase and Message Boards
Stretcher Frames

Cornices
Crown Mouldings
Wooden Casket Lids

Angled cabinet fronts
Range Hoods
Column Wrap
Millwork

Casket Body Joinery
Large Trunks and
Wooden Boxes

Mullions in Windows
and Doors
Glazing Stops
Inset Frames





Window and Door Casing
Wall Panel Trim
Exterior Brick Moulding
in Wood and PVC



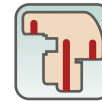
Flag Display Cases
Toys and Jewelry Boxes
Cigar Humidors



Profiled Handrails
Banisters
Architectural Millwork



Plantation Shutters
in Solid Wood
and PVC



Window Sash and
Frame Corner Joints
In solid wood and
aluminum clad



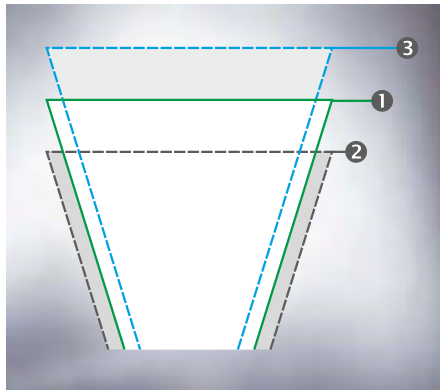
Post and Beam
Construction
Curtain Wall Systems
Sunrooms
Screened Porches



Technical Details

Some Helpful Tips

Proper Keyway Adjustment



1 The ideal router bit position

The ideal setting for the installed router bit is preset at the factory and corresponds to the included set-up jig. This bit position will assure optimum joint strength in a wide variety of materials and profiles.

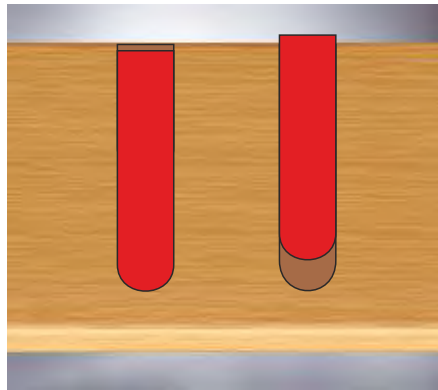
2 To reduce Key tension

Reducing the projection of the router bit (as measured from the back fence) by approx. 0.2mm will reduce pressure but also create a weaker joint.

3 To increase Key tension

Increasing the projection of the router bit (as measured from the back fence) by approx. 0.2mm will increase pressure but also increase the chance for splitting the material when inserting a Key.

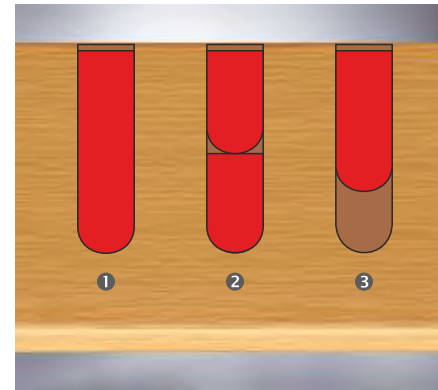
Selecting the Proper Keyway Length



Dovetail keyways should generally be routed to within 1/16" – 1/8" of the finished surface.

Driving the Keys all the way in until they bottom-out will increase tightness and strength of the assembled joint.

Choosing the Proper Dovetail Key Length



1 Correct Key length

2 Keys can be stacked if necessary

3 Incorrect Key length resulting in weak joint

Hoffmann Keys are available in a wide range of lengths, from 1/4" up to 4".

Always choose the longest possible Key for best results, e.g. 5/8" Keys for 3/4" material, 7/8" Keys for 1" material, etc.

Choosing the Proper Keyway Location



1 Correct Key position

2 Incorrect position

Setting the Keys closer to the middle of the material reduces the chance for splitting.

Fox Decking Keys

The Multi Function Connector

Merging interior and exterior living spaces to create a home has become increasingly important for both new construction and existing home renovations and upgrades.

The warm, natural feel of a solid wood surface under bare feet connects us with nature in a way few other materials can. The FoX Decking Key, a multifunctional, 100% waterproof connector, opens a whole new range of possibilities in creating outdoor living spaces. FoX, the innovative decking board connector, is installed without the need for any tools. Inserted by hand in the pre-routed keyways, the natural rubber connectors are quickly set and the boards are connected by lightly pushing down with both hands. Special Edge Keys and Spacer Discs are available for the perimeter boards to assure full support of the decking material along the edges.

Deck boards can be installed in a variety of different patterns, including running bond, herring bone, random, straight line, etc. Depending on the desired look, the gap width between the boards can also be varied by simply adjusting the router bit on the machine.

With FoX Decking Keys patios, decks and pool surrounds can be constructed with a variety of traditional and modern materials, including softwoods such as larch, heart pine, cedar, cypress, redwood, and hardwoods species including white oak, locust, mahogany, ipè, teak and various other tropical hardwoods. Composite deck boards available from many different manufacturers can be joined with FoX Keys as well.

The material thickness can range from 7/8" – 1 1/4", the board width may range from 2" - 6".

Installation - Quick and Easy

Assembling the boards on site is simple and quick – much like a board game for children - and is accomplished in record time.



No cutting, trimming or fitting is necessary – all pre-cut parts fit into place perfectly. If the deck later requires cleaning or even refinishing, the boards can be disassembled with the same ease. Once the FoX Keys are removed, the boards can be cleaned and if necessary sanded and refinished before being reinstalled. Damaged or discolored sections, for example boards beneath large flower pots, can be replaced quickly without the need to dismantle the entire floor.



MU 3-PD

Pneumatic Dovetail Routing Machine with Digital Position Displays



Professional level, pneumatically controlled dovetail routing machine to rout a single dovetail keyway with each machining cycle. Heavy cast aluminum construction with large, ergonomically shaped table surface, precision linear bearings, galvanized steel motor carriage with integrated motor fine adjustment and digital displays for routing height and routing location. For Dovetail Key sizes W-0, W-1, W-2, W-3 (W-4 with optional larger motor).

Operation

The keyway location is adjusted by positioning the guided center fence plate on the machine table; the keyway length (routing height) is adjusted by setting a height-stop rod to the desired setting. Both positions are shown on separate digital displays for accuracy and repeatability. Pressing the pneumatic foot pedal starts the machining cycle:

- > Pneumatic clamps secure workpiece and motor is switched on
- > Router head advances until pre-set height is reached
- > Router head returns to home position and motor is switched off
- > Pneumatic clamp releases workpiece

Technical data

Power Supply	120 volts – 7.4 Amps
Air Supply	90 psi - approx. 0.1 cubic foot/cycle
Motor	885 Watt motor with double front bearing
Motor speed	35,000 rpm at idle
Collet size	1/4"
Motor carriage guides	20mm diameter guide rods, precision ground
Digital Display	dual liquid crystal display, 3/8" digit size, accurate to 0.004"
Operation	pneumatic – dual cylinder design
Max. height	routing 3 3/4" – 95mm / moulding 5 7/8" – 150mm
Dust collection port	2" – 50mm diameter
Installed router bit	W-2, solid carbide
Available router bits	W-0, W-1, W-2, W-3 (W-4 with optional larger motor)
Dimensions W/D/H	29 1/8" x 25 5/8" x 32 3/4" (without optional table extensions)
Weight	70.4 lbs.
Order Number	W1032100



Motor Fine Adjustment

Precise fine adjustment with scaled knob and tool-less locking lever for perfect settings every time. Easily increase joint strength for larger profiles or decrease strength when joining thin and tall material without guesswork.

Larger guide rods

Motor carriage features precision ground steel guide rods and sealed linear bearings which are 25% larger (20mm vs. 16mm) than previous models for added strength and long term accuracy.



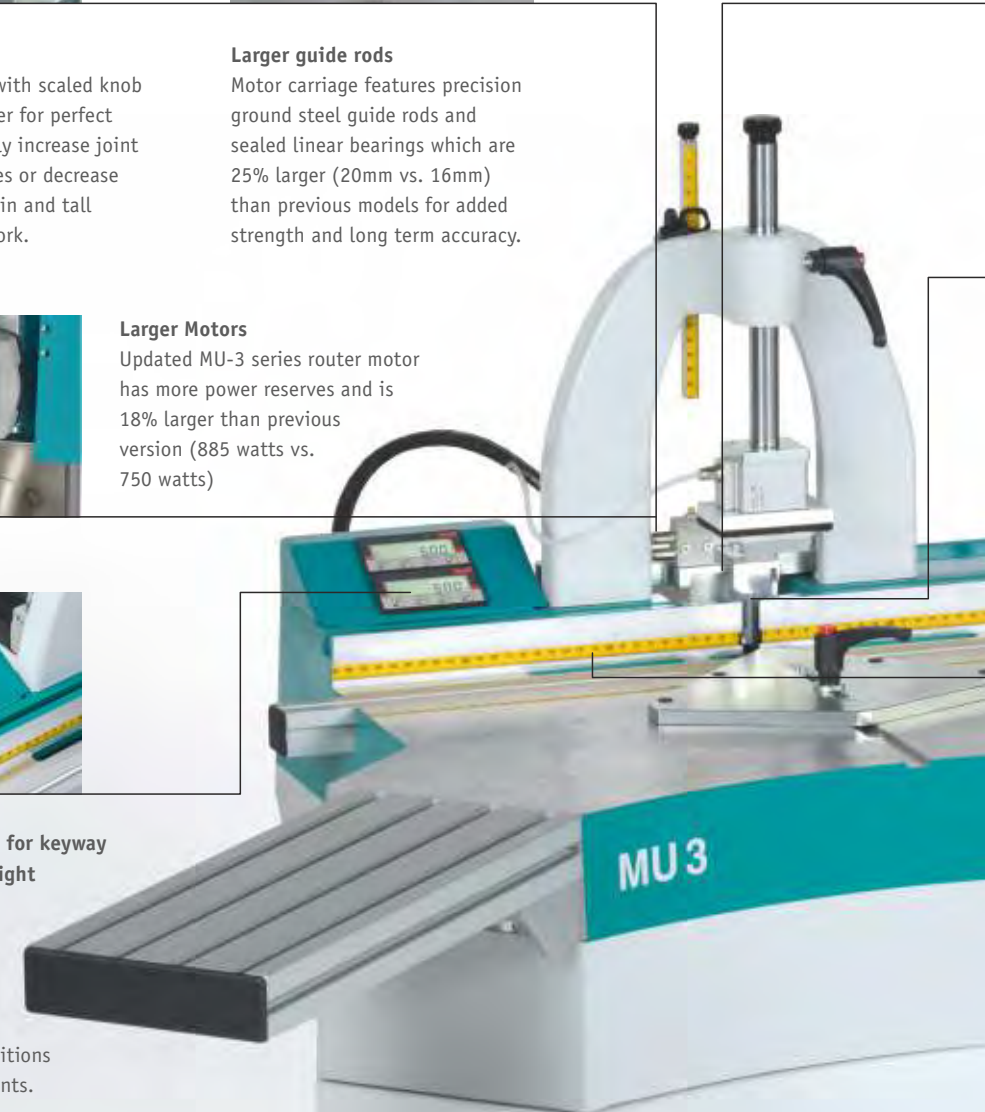
Larger Motors

Updated MU-3 series router motor has more power reserves and is 18% larger than previous version (885 watts vs. 750 watts)



Digital Position Display for keyway location and keyway height

Dust-proof dual display with 1/10mm accuracy for precise positioning of center fence plate and routing height. Assures same keyway positions every time for perfect joints.





Higher Routing Heights
Maximum routing height has been increased from 3" to 3^{3/4}" on pneumatic models and from 3" to 3 3/8" on manual models.



Center Line Locator
Precise center line locator is factory installed and clearly indicates center of keyway



Dual Tape Scales
Tape scales are recessed in machine table and in both sides of back fence to accurately set square-stops.



Covered Tool Storage
Built-in storage compartment with dust cover to keep router bits and tools handy.



MU3-PD pneumatic dovetail routing machine

Ergonomic Design
Ergonomically designed machine base with curved front for comfortable operation and larger table surface.

Table Extension Wings
Optional left and right hand material support tables made of anodized aluminum. New, innovative mounting system for fast and strong connection to machine base without the need for additional support legs.

Full Range of Accessories I

Complete line of accessories designed specifically for the MU-3 series machines include center fence plate, square stops and inside corner fences prepared for later installation of height extensions, adjustable inside corner fences to accommodate different angles, adjustable compound miter fixtures for crown moulding joints, etc.



45degr. Fence Plate



Square Stop



Inside Corner Fences



Flip Stop for rear fence



Compound Miter Fixture



Inside Corner Fences, adjustable



Adjustable fence "Synchro" 0-90°



Table Flip Stop

MU 3-D

Manual Dovetail Routing Machine with Digital Position Displays



Professional level, manually operated dovetail routing machine to rout a single dovetail keyway with each machining cycle. Heavy cast aluminum construction with large, ergonomically shaped table surface, precision linear bearings, galvanized steel motor carriage with integrated motor fine adjustment and digital displays for routing height and routing location. For Dovetail Key sizes W-0, W-1, W-2, W-3 (W-4 with optional larger motor).

Operation

The keyway location is adjusted by positioning the guided center fence plate on the machine table; the keyway length (routing height) is adjusted by setting a height-stop rod to the desired setting. Both positions are shown on separate digital displays for accuracy and repeatability. Pulling the main lever downward starts the machining cycle:

- > Padded hold-down plate secures workpiece and motor is switched on
- > Continued pulling advances the router head until pre-set height is reached
- > Releasing the lever returns the motor to its home position and shuts off motor
- > Padded hold-down plate releases workpiece

Technical data

Power Supply	120 volts – 7.4 Amps
Motor	885 Watt motor with double front bearing
Motor speed	35,000 rpm at idle
Collet size	1/4"
Motor carriage guides	20mm diameter guide rods, precision ground
Digital Display	dual liquid crystal display, 3/8" digit size, accurate to 0.004"
Operation	manual – dual action design
Max. routing height	3 3/8" – 85mm
Max. moulding height	5 1/8" – 150mm
Dust collection port	2" – 50mm diameter
Installed router bit	W-2, solid carbide
Available router bits	W-0, W-1, W-2, W-3 (W-4 with optional larger motor)
Dimensions W/D/H	29 1/8" x 25 5/8" x 32 3/4" (without optional table extensions)
Weight	70.4 lbs.
Order Number	W1031100



Motor Fine Adjustment

Precise fine adjustment with scaled knob and tool-less locking lever for perfect settings every time. Easily increase joint strength for larger profiles or decrease strength when joining thin and tall material without guesswork.

Larger guide rods

Motor carriage features precision ground steel guide rods and sealed linear bearings which are 25% larger (20mm vs. 16mm) than previous models for added strength and long term accuracy.



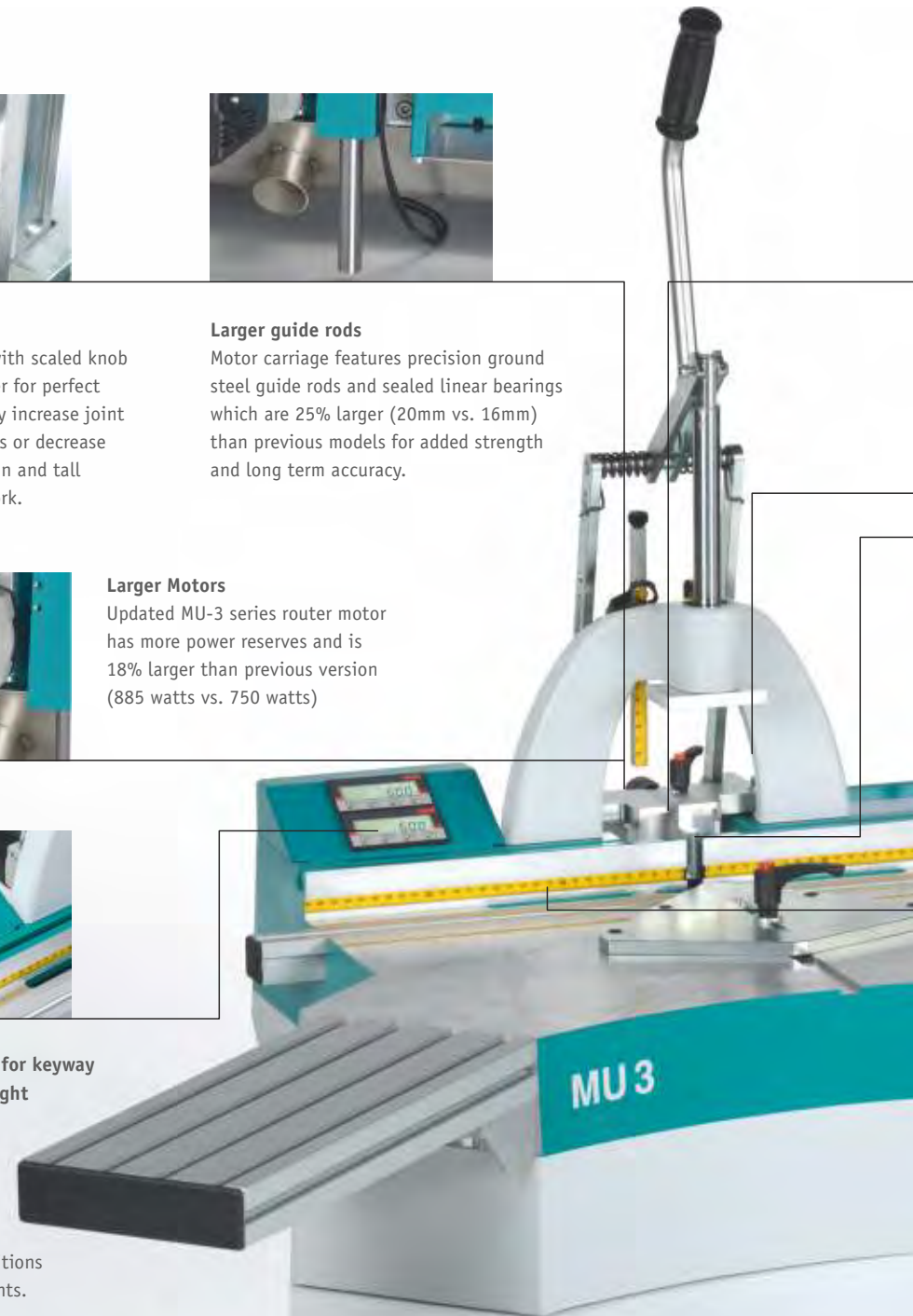
Larger Motors

Updated MU-3 series router motor has more power reserves and is 18% larger than previous version (885 watts vs. 750 watts)



Digital Position Display for keyway location and keyway height

Dust-proof dual display with 1/10mm accuracy for precise positioning of center fence plate and routing height. Assures same keyway positions every time for perfect joints.





Higher Routing Heights
Maximum routing height has been increased from 3" to 3^{3/4}" on pneumatic models and from 3" to 3 3/8" on manual models.



Routing Depth Limiter
Innovative depth limiter is adjustable and automatically stops routing stroke to avoid breaking through top of material.



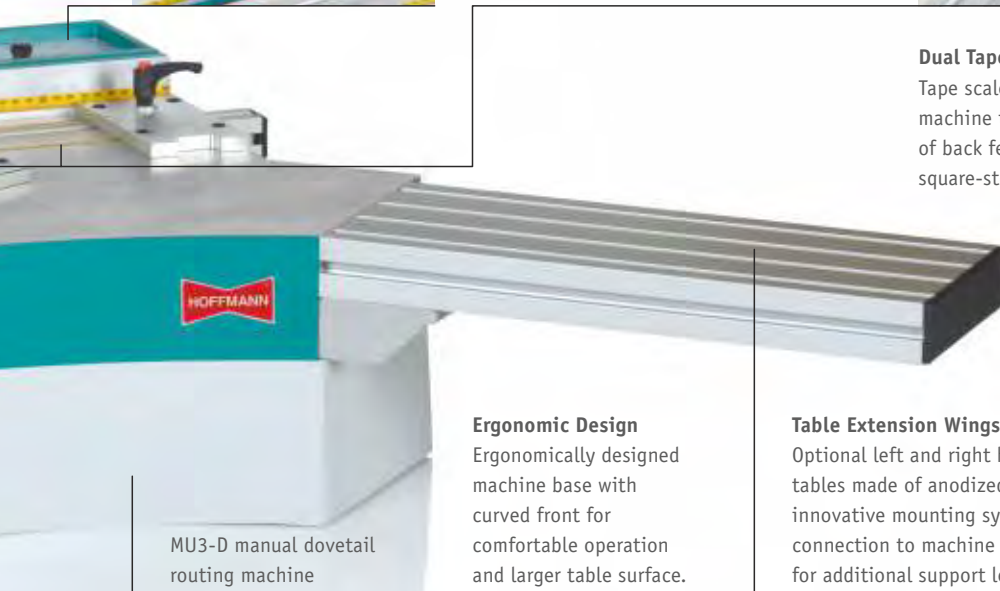
Center Line Locator
Precise center line locator is factory installed and clearly indicates center of keyway



Covered Tool Storage
Built-in storage compartment with dust cover to keep router bits and tools handy.



Dual Tape Scales
Tape scales are recessed in machine table and in both sides of back fence to accurately set square-stops.



MU3-D manual dovetail routing machine

Ergonomic Design
Ergonomically designed machine base with curved front for comfortable operation and larger table surface.

Table Extension Wings
Optional left and right hand material support tables made of anodized aluminum. New, innovative mounting system for fast and strong connection to machine base without the need for additional support legs.

Full Range of Accessories II

Complete line of accessories designed specifically for the MU-3 series machines include center fence plate, square stops and inside corner fences prepared for later installation of height extensions, adjustable inside corner fences to accommodate different angles, adjustable compound miter fixtures for crown moulding joints, etc.



45degr. Fence Plate with height extensions



Square Stop with height extensions



Inside Corner Fences with height extensions



Digital Multi Gauge



W-0 to W-4 solid carbide router bits and oversized carbide router bits



Square Chip Breaker

MU 3-P

Pneumatic Dovetail Routing Machine



Professional level, pneumatically controlled dovetail routing machine to rout a single dovetail keyway with each machining cycle. Heavy cast aluminum construction with large, ergonomically shaped table surface, precision linear bearings and galvanized steel motor carriage with integrated motor fine adjustment.

For Dovetail Key sizes W-0, W-1, W-2, W-3 (W-4 with optional larger motor).

Operation

The keyway location is adjusted by positioning the guided center fence plate on the machine table; the keyway length (routing height) is adjusted by setting a height-stop rod to the desired setting.

Pressing the pneumatic foot pedal starts the machining cycle:

- > Pneumatic clamps secure workpiece on machine table and motor is switched on
- > Router head advances until pre-set height is reached
- > Router head returns to home position and motor is switched off
- > Pneumatic clamp releases workpiece



Technical data

Power Supply	120 volts – 7.4 Amps
Air Supply	90 psi - approx. 0.1 cubic foot/cycle
Motor	885 Watt motor with double front bearing
Motor speed	35,000 rpm at idle
Collet size	1/4"
Motor carriage guides	20mm diameter guide rods, precision ground
Operation	pneumatic – dual cylinder design
Max. routing height	3 3/4" – 95mm
Max. moulding height	5 7/8" – 150mm

Dust collection port	2" – 50mm diameter
Installed router bit	W-2, solid carbide
Available router bits	W-0, W-1, W-2, W-3 (W-4 with optional larger motor)
Dimensions W/D/H	29 1/8" x 25 5/8" x 32 3/4" (without optional table extensions)
Weight	70.4 lbs.
Order Number	W1032000

MU 3

Manual Dovetail Routing Machine



Professional level, manually operated dovetail routing machine to rout a single dovetail keyway with each machining cycle. Heavy cast aluminum construction with large, ergonomically shaped table surface, precision linear bearings and galvanized steel motor carriage with integrated motor fine adjustment.
For Dovetail Key sizes W-0, W-1, W-2, W-3 (W-4 with optional larger motor).

Operation

The keyway location is adjusted by positioning the guided center fence plate on the machine table; the keyway length (routing height) is adjusted by setting a height-stop rod to the desired setting.

Pulling the main lever downward starts the machining cycle:

- > Padded hold-down plate secures workpiece on machine table and motor is switched on
- > Continued pulling advances the router head until pre-set height is reached
 - > Releasing the lever returns the motor to its home position and shuts off motor
 - > Padded hold-down plate releases workpiece



Technical data

Power Supply	120 volts – 7.4 Amps
Motor	885 Watt motor with double front bearing
Motor speed	35,000 rpm at idle
Collet size	1/4"
Motor carriage guides	20mm diameter guide rods, precision ground
Operation	manual – dual action design
Max. routing height	3 3/8" – 85mm
Max. moulding height	5 1/8" – 150mm
Dust collection port	2" – 50mm diameter
Installed router bit	W-2, solid carbide
Available router bits	W-0, W-1, W-2, W-3 (W-4 with optional larger motor)
Dimensions W/D/H	29 1/8" x 25 5/8" x 32 3/4" (without optional table extensions)
Weight	70.4 lbs.
Order Number	W1031000



X-18

Manual Dovetail Routing Machine



Entry level, manual dovetail routing machine to rout a single dovetail keyway with each machining cycle. For Dovetail Keys sizes W-0, W-1, W-2, W-3.

Funktion

The keyway location is adjusted with the guided center fence plate on the machine table. Pulling the hand lever secures the moulding on the table and raises the router bit to the pre-set height. Releasing the handle lowers the motors carriage back below the table and the material is removed. An electric limit switch automatically switches the motor on and off.

The X-18 manual dovetail routing machine is a light weight, more portable model with an open base design. The machine features a 530 watt router motor and a cast-aluminum router carriage. Due to its limited routing height of 2 1/4" this machine is not suitable for most floater frames or shadow box material.



Technical data

Power supply	120 volts – 4.4 Amps.
Motor / Motor speed	530 w / 29,000 rpm
Operation	Manual
Max. routing height	2 1/4"
Max. material height	3 1/2"
Available router bits	W-0, W-1, W-2, W-3
Dimensions W/D/H	19 3/4" / 21 1/4" / 30 1/4"
Weight	38 lbs.
Order Number	W 100 0180

X-20

Manual Dovetail Routing Machine



Entry level, manual dovetail routing machine to rout a single dovetail keyway with each machining cycle. For Dovetail Keys sizes W-0, W-1, W-2, W-3.

Funktion

The keyway location is adjusted with the guided center fence plate on the machine table. Pulling the hand lever secures the moulding on the table and raises the router bit to the pre-set height. Releasing the handle lowers the motors carriage back below the table and the material is removed. An electric limit switch automatically switches the motor on and off.

The X-20 is a slightly larger dovetail routing machine with manual operation. Compared to the X-18, the routing height and the maximum material capacity are larger, the aluminum table top is mounted on a three sided closed steel base.



Technical data

Power supply	120 volts – 4.4 Amps.
Motor / Motor speed	530 w / 29,000 rpm
Operation	Manual
Max. routing height	3"
Max. material height	4"
Available router bits	W-0, W-1, W-2, W-3
Dimensions W/D/H	23 5/8" / 21 1/4" / 30 1/4"
Weight	42 lbs.
Order Number	W 100 0200

Accessories for bench-top machines

45 degree Center Fence Plate for joining 4-sided frames (W3060001)



45 degree Tall Center Fence Plate for joining tall standard frames (W3060011)



Square Stop for square joints (W3020001)



Tall Square Stop for square joints (W3020011)



Synchro – Adjustable Center Fence Plate from 0-90° (W3011000)



Inside Corner Fence Set, 45° for joints requiring two Keys (W3011004)



Tall Inside Corner Fence Set, 45° for joining tall moulding with two Keys (W3011005)



Compound Miter Fixture (W3021000)



Inside Corner Fences, adjustable (W3012001)



Table Flip Stop (W3024000)



W-0 solid carbide router bit (W 2006350)
oversized carbide router bit (W 2006352)



W-1 solid carbide router bit (W 2016350)
oversized carbide router bit (W 2016352)



W-2 solid carbide router bit (W 2026350)
oversized carbide router bit (W 2026352)



W-3 solid carbide router bit (W 2036350)
oversized carbide router bit (W 2036352)



W-4 carbide tipped router bit (W 204800) Continuous use of W-4 bits requires larger 1,000 watt motor in machine



Square Chip Breaker (W 2000015)



Digital Multi Gauge for accurately setting of router bits (W 2001300)



PU 2 & PU 2-HF

Pneumatic Dovetail Routing Machine



Production-duty, freestanding dovetail routing machine with solid cast aluminum table and large work surface at comfortable working height. Machine is designed to rout a single dovetail keyway with each machining cycle. For Dovetail Keys sizes W-1, W-2, W-3 and W-4.

PU2-HF model is equipped with one high-frequency router motor for highest production levels.

Function

The keyway location is adjusted by positioning the guided center fence plate on the machine table. Pressing the pneumatic foot pedal activates the machining cycle:

- pneumatic clamp secures workpiece on machine table & motor is switched on
- router head advances until the pre-set height position is reached
- router head returns to home position & motor is switched off
- pneumatic clamp releases work piece



Machine components
 1. Router motor
 2. Height adjustment

Technical Data

Power supply	120 volts - 8.3 Amps.
Motor / Motor speed	1,000 w / 35,000 rpm
Motor / Motor speed HF	750 w / 18,000 rpm
Air supply	90 psi
Collet size	1/4"
Max. routing height	4"
Max. material height	5 3/4"
Installed router bit	W-2, solid carbide
Available router bits	W-1, W-2, W-3, W-4
Dust collection port	4" diameter
Dimensions W/D/H	31 1/2" / 29 1/2" / 59"
Weight	262 lbs.
Order number - PU 2	W 107 0000
Order number - PU 2-HF	W 107 6001

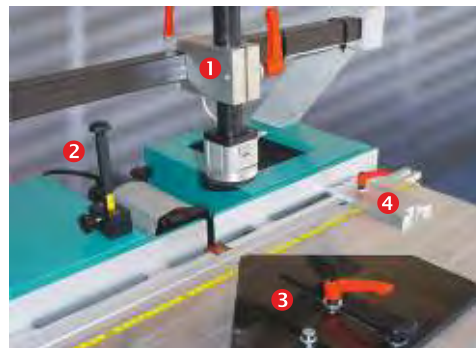


Table view
 1. Workpiece clamp
 2. Routing depth adjustment
 3. Center fence plate 45°
 4. Square stop



PP 2 & PP 2-HF

Pneumatic Dovetail Routing Machine



Production-duty, freestanding dovetail routing machine with solid cast aluminum table and large work surface at comfortable working height. Machine is designed to rout a single dovetail keyway into two workpieces with each machining cycle. For Dovetail Keys sizes W-1, W-2, W-3 and W-4.

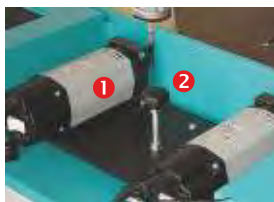
PP2-HF model is equipped with two high-frequency router motors for highest production levels.

Function

The keyway location is adjusted by positioning the guided center fence plate on the machine table.

Pressing the pneumatic foot pedal activates the machining cycle:

- pneumatic clamps secure workpieces on machine table & motors are switched on
- router heads advance until the pre-set height position is reached
- router heads return to home position & motors are switched off
- pneumatic clamps release work piece



Motor detail
1. Router motors
2. Height adjustment

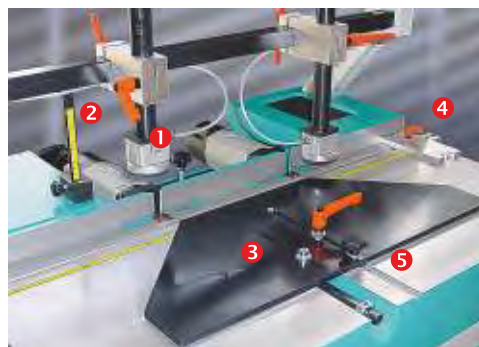


Table view
1. Workpiece clamp
2. Routing depth adjustment
3. Center fence plate 45°
4. Square stop
5. Aluminum table

Technical Data

Power supply	120 volts - 17 Amps.
Motor / Motor speed	2x 1,000 w / 35,000 rpm
Motor / Motor speed HF	2x 750 w / 18,000 rpm
Air supply	90 psi
Collet size	1/4"
Max. routing height	4"
Max. material height	5 3/4"
Installed router bits	2x W-2, solid carbide
Available router bits	W-1, W-2, W-3,W-4
Dust collection port	4" diameter
Dimensions W/D/H	39 3/8" / 29 1/2" / 59"
Weight	348 lbs.
Order number - PP 2	W 108 0000
Order number - PP 2-HF	W 108 8000



PU 2-TL

Pneumatic Dovetail Routing Machine with Tilting Motor Carriage



Production-duty, freestanding dovetail routing machine with adjustable steel table and large work surface at comfortable working height. Machine features a tilting motor carriage (+/- 45°) and is designed to rout a single dovetail keyway with each machining cycle. For Dovetail Keys sizes W-1, W-2, W-3 and W-4.

Function

The keyway location is adjusted by positioning the guided center fence plate on the machine table.

The motor carriage can be locked at 90 degree to the table, or tilted up to +/- 45 degrees.

Pressing the pneumatic foot pedal activates the machining cycle:

- pneumatic clamp secures workpiece on machine table and motor is switched on
- router head advances until the pre-set height position is reached
- router head returns to home position & motor is switched off
- pneumatic clamp releases work piece



Technical Data

Power supply	120 volts - 8.3 Amps.
Motor	1,000 watt
Motor speed	35,000 rpm
Air supply	90 psi
Collet size	1/4" Max. routing
height	7 1/2"
Max. material height	12"
Router carriage tilt	+/- 45 degrees
Installed router bit	W-2, solid carbide
Available router bits	W-1, W-2, W-3, W-4
Dust collection port	4" diameter
Dimensions W/D/H	33 1/4" / 42 1/8" / 59 1/2"
Weight	418 lbs.
Order Number	W 107 1000



Solid steel guide rods, motor carriage and 1000 watt router motor.



PP 2-TAB

Pneumatic Dovetail Routing Machine



Production-duty, freestanding dovetail routing machine with solid cast aluminum table and large work surface at comfortable working height. Equipped with four motors and gear heads to rout two keyways into two workpieces simultaneously. Router bit spacing is operator adjustable from 1 1/4" (32mm) to 4" (100mm).

Function

The keyway location is adjusted by positioning the guided center fence plate on the machine table. The distance between the router bits is adjusted with a hand wheel; the dimension is displayed on a digital counter. One height adjustment rod is used to set the routing height for all four motors.



Table detail

1. Centre fence 45°
2. Router depth setting
3. Extraction manifold

Technical Data

Power supply	230 v, 3 phase, 18 Amp.
Motor	4 x 1,000 watt
Motor speed	33,000 rpm
Air supply	90 psi
Collet size	1/4"
Router bit spacing	1 1/4" - 4", adjustable
Max. routing height	4"
Max. material height	8"
Installed router bits	4 x W-2, solid carbide
Available router bits	W-1, W-2, W-3
Dust collection port	4" diameter
Dimensions W/D/H	39 3/8" / 29 1/2" / 59"
Weight	473 lbs.
Order Number	W 108 3000

PP 2-TAB-4

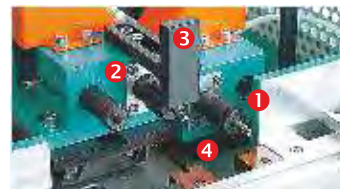
Pneumatic Dovetail Routing Machine



Production-duty, freestanding dovetail routing machine with solid cast aluminum table and large work surface at comfortable working height. Equipped with four motors and gear heads to rout two keyways into two workpieces simultaneously. Router bit spacing is operator adjustable from 1 1/4" (32mm) to 4" (100mm).

Function

The keyway location is adjusted by positioning the guided center fence plate on the machine table. The distance between the router bits is adjusted with a hand wheel; the dimension is displayed on a digital counter. **Routing height is individually set for left, right and two center routing heads to allow processing of profiled moulding and compound miter joints.**



Router positioning

1. External router
2. Internal router
3. Positioning pin
4. Chip-breaker



Table view

1. Centre fence 45°

Routing depth setting

2. Internal
3. External

Technical Data

Power supply	230 v, 3 phase, 18 Amp.
Motor	4 x 1,000 watt
Motor speed	33,000 rpm
Air supply	90 psi
Collet size	1/4"
Router bit spacing	1 1/4" - 4", adjustable
Max. routing height	4"
Max. material height	8"
Installed router bits	4 x W-2, solid carbide
Available router bits	W-1, W-2, W-3
Dust collection port	4" diameter
Dimensions W/D/H	39 3/8" / 29 1/2" / 59"
Weight	528 lbs.
Order Number	W 108 5000

PP 2-NC

Automatic Dovetail Routing and Dowel Boring Machine



Versatile, numerically controlled routing and drilling machine for the production of frame and sash joints in windows and doors, overhead glazing systems, curtain walls, sunrooms, conservatories as well as handrails, custom trim moulding and other larger dimension stock. Dovetail keyways are routed and dowel holes are drilled in one machining cycle. Keyways can be routed from left to right, right to left, bottom to top and top to bottom or any combination thereof. Dowel hole locations are programmable across a wide range of parameters. Miter joints from 0 – 67.5 degrees as well as 90 degree square joints can be processed with ease – custom fence plates and fixtures are available per customers’ requirements.

Function

All relevant data is entered either directly on a color touch-screen or downloaded via USB port. Up to 100 different routing and drilling programs can be saved for quick retrieval. Two workpieces are placed on the machine table and processed simultaneously.

Pressing the foot pedal activates the machining cycle:

- pneumatic clamps secure workpieces on machine table & motors are switched on
- router heads advance until pre-set positions are reached, then return to home positions
- boring heads advance until pre-set positions are reached, then return to home positions
- motors are switched off
- pneumatic clamps release workpieces

Technical Data

Power Supply	230 volts, 3 phase, 4 KW	Max. material height	5 1/2" (140mm)
Air Supply	90 psi – 6 bar	Max. boring depth	1 3/16" (30mm)
Router Motor	2 x 1,000 watt– 30,000 rpm	Available router bits	W-1, W-2, W-3
Drilling Motor	2 x 1,000 watt – 10,000 rpm	Available drill bits	8mm, 10mm, 12mm
Router head collet	1/4"		or per customers’ requirements
Drilling head collet	8mm	Dimensions W/D/H	47 1/4" / 51 1/8" / 59"
Operation	PLC controlled	Weight	564 lbs.
Display	5.7" color touch screen		
Max. horizontal travel	8 1/4" (210mm) L+R	Order Number	W 108 7010



Tight and accurate miter joints have always been a hallmark of high-end woodworking products. From furniture and cabinets, to custom interior millwork and window and door construction, miter joints are an aesthetically pleasing, durable and efficient means of assembling an ever increasing range of woodworking joints. Hoffmann machines are designed and built with one goal in mind – to produce the best and most reliable miter joints in the industry.

Programming



- > User friendly software designed for direct input on touch screen
- > All functions are optimized for quick entries
- > USB ports for importing external data via USB memory sticks
- > Multiple languages included (English, Spanish, French, German)
- > Software updates available
- > Barcode reader optional

Mechanics



- > Heavy, cast aluminum table surface at comfortable working height
- > Production duty routing and boring motors
- > Designed for easy maintenance and tooling changes
- > Functional safety guards to meet strict European Safety Rules

Ergonomics



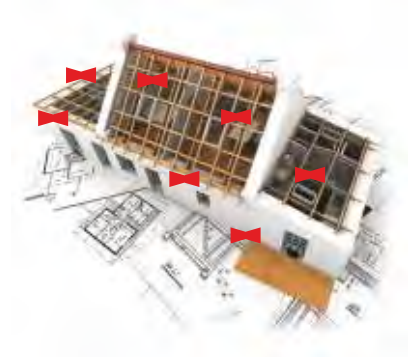
- > Touch screen, color monitor
- > Large 5.7" viewable screen size
- > Intuitive, step-by-step data entries
- > Diagnostics screen monitors sensors and valves
- > Optional network connection

Positioning



- > Precise positioning of boring and routing heads
- > Repeat accuracy within 4/1000" (0.1mm)
- > Fast positioning speeds to increase cycle times (up to 100mm/sec.)

Versatility



- > Post and beam construction (sunrooms, curtain walls, conservatories, etc.)
- > Window and door production (solid wood and aluminum clad designs)
- > Architectural millwork, handrails, custom door casing and trim
- > High-end yacht interiors

Upholstered furniture frames, handrail joints, mitered tilt-and-turn window corners, curtain wall connections - each type of application comes with its own set of specific requirements. Yet they all have fundamental parameters in common: They must be accurate, repeatable, show long-term reliability and strength and they must be cost efficient to produce. The PP2-NC Routing and Boring Machine not only rises to the challenge - it excels at it.

PP 2-NCF

Programmable Dovetail Routing Machine



The PP2- NCF is a fully programmable, numerically controlled dovetail routing machine for mid to high level frame production. This machine is capable routing one, two or three keyways per part in two parts simultaneously. Different routing heights can be programmed for each of the three keyways to take advantage of thicker portions in profiled moulding. An intuitive touch-screen allows the operator to quickly enter desired keyway positions or to recall up to 7,500 previously stored profiles. With the optional hand-held scanner a bar or QR code can be scanned from a worksheet or a label to assure the exact same Key locations and routing heights every time.

Function

Two high-speed router motors are mounted on a precision ball-and-screw spindle for fast and accurate lateral positioning via servo motor. The routing height (upward travel of router motors) is also electronically controlled to within 0.5mm. The operator can select to rout only one, two or three dovetail keyways into each miter face and a different routing height can be programmed for each keyway location. Keyway locations and routing heights for a given moulding profile can be stored with the unique moulding number for later recall.

The machine is equipped with a foot switch to activate the material clamps. Upon depressing of the switch, the following routing sequence is initiated by pressing a START button on the control panel:

- motors are switched on and router heads advance up until the pre-set height position is reached, then return below table
- router heads move to second or third location and repeat routing sequence
- pneumatic clamps release workpieces



Technical Data

Power Supply	230 volts, 3 phase, 4 KW
Air Supply	90 psi – 6 bar
Router Motor	2 x 1,000 watt– 30,000 rpm
Router head collet	1/4"
Operation	PLC controlled
Display	5.7" color touch screen
Max. moulding width	5"

Max. moulding thickness	5"
Max. routing vertical travel	4"
Available router bits	W-0, W-1, W-2, W-3
Dimensions W/D/H	47 1/4" / 51 1/8" / 59"
Weight	528 lbs.
Order Number	W 108 7020

Hoffmann offers a full range of double miter saws and adjustable double-end miter saws with and without integrated dovetail routing and dowel hole drilling stations. Please refer to our separate Double Miter Saw Catalog and our website for detailed information.

MS 35-SF

Production Double Miter Saw with Dovetail Routing Stations



The MS35SF Double Miter Saw is designed to simultaneously cut a left and right 45 degree miter with each machining cycle. Upon cutting the miters, the saw blades retract and the router carriage moves upward routing one or two dovetail keyways in the mitered ends.



Optional ELA-2 automatic length stop system

Machine Details



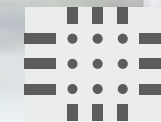
1. Pneumatic material clamping cylinders with non-marring bumper (8 total)
2. Carbide-tipped, industrial quality saw blades
3. Length stop with digital display
4. Left operator panel
5. Right operator panel
6. Emergency-Stop button
7. High-speed router motors with integr. gearheads
8. Solid carbide router bits (W-1, W-2, W-3)
9. Chip shield and dust extraction channel

MX 5-NC

Double-End Miter Saw with Dovetail Routing and Dowel Boring Stations



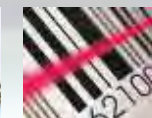
The numerically controlled MX 5 NC is the perfect choice for furniture and cabinet production, plantation shutter manufacturing, window and door facilities, casing and brick mold cutting, post and beam designs, curtain walls, etc. Both saw/routing stations are fully adjustable from 0-45 degree and are equipped with sealed linear bearing carriages for trouble-free operation in dusty environments.



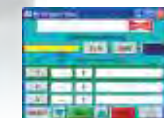
Fully adjustable dowel hole & dovetail keyway locations



Optional wireless measuring gauge



Barcode reader



Available length optimization software

Hoffmann Machine Catalogs

Designed to Perform



Double Miter Saws

Production double miter saws and double-end miter saws with adjustable cutting angles and various levels of automation.



Beaded Face Frame Equipment

Foot operated and automatic notching machines with manual and automatic positioning systems for every production level.



MOBIL Edgebanding Press

Heated, pneumatic press for solid wood edges in 8, 10 and 12 foot versions.



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