



# Beaded Face Frame System

A Winning Team  
for Beaded  
Face-Frames



The Hoffmann  
Dovetail Joining System



## Hoffmann & Morso A Winning Team for Beaded Face-Frames

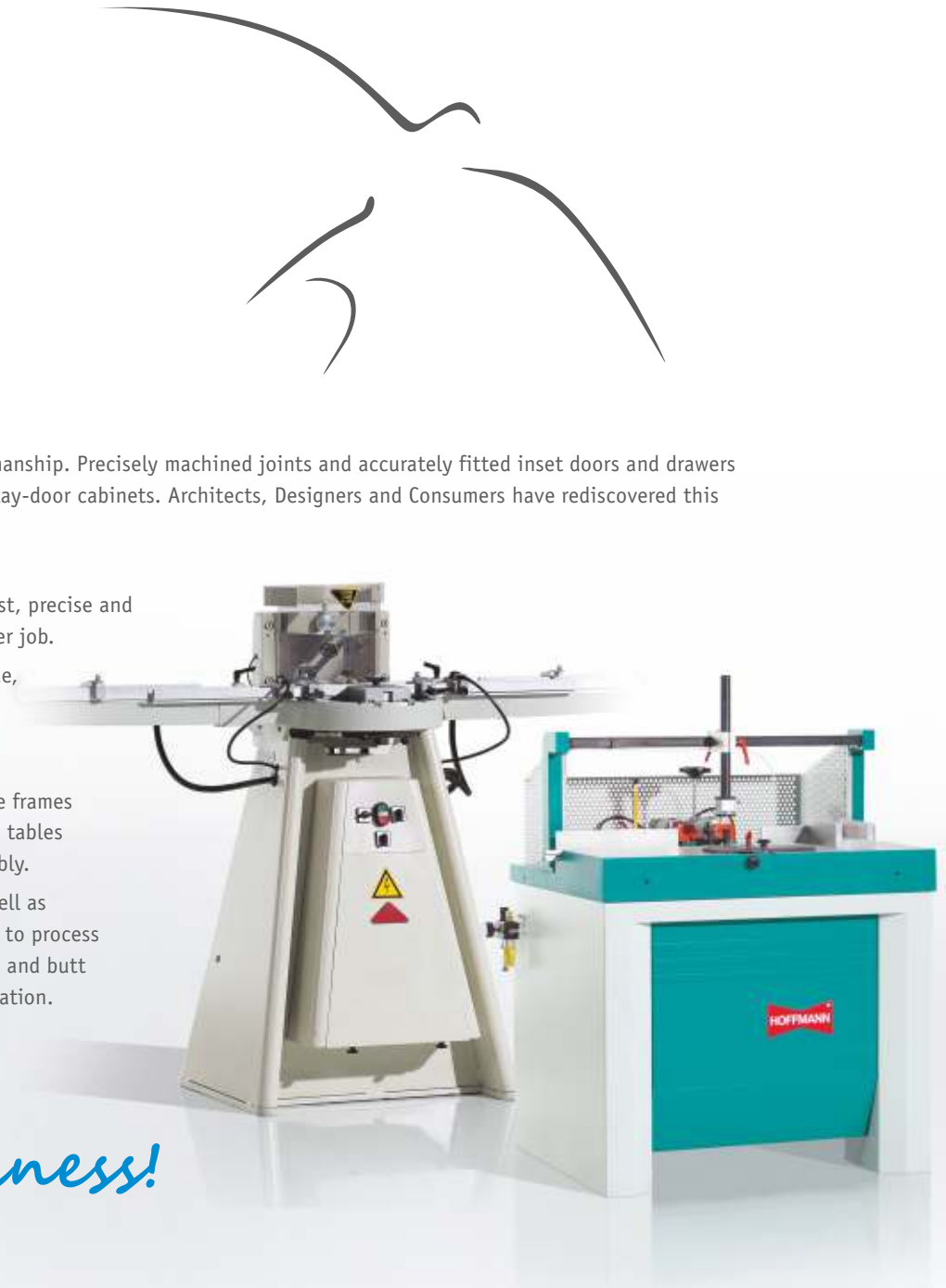
A cabinet with a beaded face frame immediately conveys a high level of quality and craftsmanship. Precisely machined joints and accurately fitted inset doors and drawers elevate even the simplest, single door design and distinctly set it apart from common overlay-door cabinets. Architects, Designers and Consumers have rediscovered this style and consequently, demand for beaded face-frame cabinets is on the rise.

The Hoffmann Beaded Face Frame System offers cabinet and millwork shops of all sizes a fast, precise and efficient way to manufacture beaded face frames; whether it's one or one hundred frames per job.

Starting with beaded moulding, the stiles are notched and the rails are coped on fixed-blade, guillotine style notching machines. For a standard stile-rail connection, this operation takes about 5 seconds with our manual notching machine (the automatic model is even faster!). A second step takes place on Hoffmann dovetail routing machines equipped with special fixtures for beaded material. Dovetail keyways are routed in all mating parts and the frames are assembled by simply applying some glue and inserting Dovetail Keys. No large clamping tables or bar clamps are required, the frames can be sanded and finished immediately upon assembly.

The notching machines are sold complete with table extensions, fence rails, flip-stops as well as tooling and a detailed manual. The routing machines are set-up with a complete fixture set to process stiles and rails, but can also be used to process regular miter joints, compound miter joints and butt joints. Solid carbide dovetail bits are installed and the machines are shipped ready for operation.

*Thank you for your business!*



Notched joints in beaded face-frames are difficult to produce with consistent accuracy because three surfaces must meet perfectly for a tight joint. MORSO notching machines address this problem by using three fixed knives; two side knives set a 45° angle and one nose knife, set parallel to the moulding. Changing the nose knife (available from 1/4" -1" wide) or sharpening the knives will never reduce the notch dimension or change the cutting angles – the machines produce consistent results even after many years of use.

#### Notching Operation



Beaded moulding is notched by making 2-4 cuts. Cock-bead stops are adjusted to bead size and limit depth of for perfect joints.

#### Coping Operation



Moulding ends are coped on same machine with adjustable center stop. Coping cut is done in one pass.

#### Routing Keyway in Notch



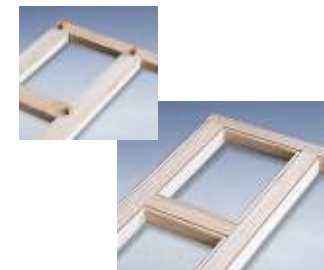
Fixtures on routing machines hold notched moulding accurately for centered dovetail keyways.

#### Routing Keyway in Cope



Coped ends are routed on same machine with removable square stop.

#### Completed Frame



Stiles and rails are assembled with glue and Dovetail Keys. No clamping table, notch fixtures or other fasteners are required.

The face-frame fixture kit installed on Hoffmann routing machines will not interfere with the miter joining operation of the machine. Locator blocks are used position the square stops when processing beaded moulding; to produce a miter joint the square stops are removed and the include center fence plate is installed in less than a minute.

## MORSO NXLEH

Electro-Hydraulic, Wide Capacity Face-Frame Notching Machine  
Heavy-Duty, Professional Model for Higher Production Shops

The NXLEH is an automatic guillotine-style notching machine for the production of beaded face-frames, French-mitered cabinet doors as well as muntin and mullion joints. This model will accept moulding up to 8" wide, allowing the operator to process virtually every face frame, including wide bottom and top rails.

The completely self contained machine is equipped with a heavy-duty motor and hydraulic pump and operates with pressurized hydraulic fluid. An industrial-quality PLC unit controls all movements – a clear acrylic guard and two-hand safety controls are used for safe operation.

### Standard Equipment

MORSO NXLEH series automatic, electro-hydraulic guillotine for beaded face-frames:

- > with four short-arm flip-stops and two long-arm flip-stops
- > with left and right hand side cast iron table extensions and fence rails
- > with one set of original MORSO side knives, one 3/4" and one 1" wide nose knife

### Technical Data

Pump motor	220 volts, single or three phase, 60 Hz - 1,1 KW, 10 Amp.
Hydraulic System	1,200 psi (80 bar) - 1.85 gal. (7 liters) per minute
Max. moulding width/thickness	8" (200mm) / 6 1/4" (155mm)
Machine Controls	Industrial PLC unit, proximity switches
Nose knife capacity	1/2" - 1" width (1/4", 5/16", 1/2" nose knives require smaller cutting head)
Extension tables	heavy cast iron, machined surface, 30 3/4" long, one left and one right hand side
Fence rails	silver anodized aluminum, 59 1/2" total length, one left and one right hand side
Flip-stops	aluminum, with locking lever, four with short arm, two with long arm
Table height	33" - floor to table surface
Width incl. fence rails	118"
Weight	320 lbs.
Order No.	N 0018L



Table view

1. Cast iron cutting head
2. Laminated side and nose knives
3. L & R fence rails
4. Moveable center fence assembly
5. Adjustable flip-stop
6. Cast iron table extension



# MORSO NLEH

## Electro-Hydraulic Face-Frame Notching Machine Heavy-Duty, Professional Model for Higher Production Shops

The NLEH is an automatic guillotine-style notching machine for the production of beaded face-frames, French-mitered cabinet doors as well as muntin and mullion joints. This model will accept moulding up to 2 3/4" wide, allowing the operator to process virtually every face frame, including wide bottom and top rails.

The completely self contained machine is equipped with a heavy-duty motor and hydraulic pump and operates with pressurized hydraulic fluid. An industrial-quality PLC unit controls all movements – a clear acrylic guard and two-hand safety controls are used for safe operation.

### Function

The automatic machine cycle is started by pressing the foot-pedal. The positioned work-piece is clamped and the routed vertically to the pre-set depth. The unit returns to its home position and the work-piece is released. The motor switches on and off automatically. Adjustment of the fences and router depths is made manually.

### Technical Data

Pump motor	220 volts, single or three phase, 60 Hz - 1,1 KW, 10 Amp.
Hydraulic System	1,200 psi (80 bar) - 1.85 gal. (7 liters) per minute
Max. moulding width / thickness	2 3/4" (70mm) / 6 1/4" (155mm)
Machine Controls	Industrial PLC unit, proximity switches
Nose knife capacity	1/2" - 1" width (1/4", 5/16", 1/2" nose knives require smaller cutting head)
Extension tables	heavy cast iron, machined surface, 30 3/4" long, one left and one right hand side
Fence rails	silver anodized aluminum, 59 1/2" total length, one left and one right hand side
Flip-stops	aluminum, with locking lever, four with short arm, two with long arm
Table height	33" - floor to table surface
Width incl. fence rails	118"
Weight	320 lbs.
Order No.	N 0016L



## MORSO NFXL

### Manual, Wide Capacity Face-Frame Notching Machine Heavy-Duty, Professional Model

The NFXL is a heavy-duty foot pedal operated notching machine for the production of beaded face-frames, French-mitered cabinet doors as well as muntin and mullion joints. This manual model will accept moulding up to 8" wide, allowing the operator to process virtually every face frame, including wide bottom and top rails. The machine features a heavy-duty steel frame with cast iron tabletop. The vertical travel of the cutting head, which is also made of cast-iron, can be adjusted depending on workpiece thickness, assuring comfortable operation.

#### Standard Equipment

- MORSO NFXL series foot operated guillotine for beaded face-frames
- > with four short-arm flip-stops and two long-arm flip-stops
  - > with left and right hand side cast iron table extensions and fence rails
  - > with one set of original MORSO side knives, one 3/4" and one 1" wide nose knife

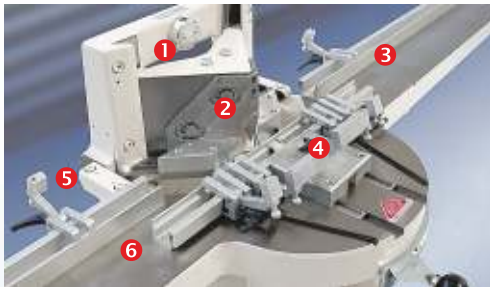


Table view

1. Cast iron cutting head
2. Laminated side and nose knives
3. L & R fence rails
4. Moveable center fence assembly
5. Adjustable flip-stop
6. Cast iron table extension

#### Technical Data

Max. moulding width / thickness	8" (200mm) / 6 1/4" (155mm)
Machine Controls	manually controlled with hand lever and foot pedal
Nose knife capacity	1/2" - 1" width (1/4", 5/16", 1/2" nose knives require smaller cutting head)
Extension tables	heavy cast iron, machined surface, 30 3/4" long, one left and one right hand side
Fence rails	silver anodized aluminum, 59 1/2" total length, one left and one right hand side
Flip-stops	aluminum, with locking lever, four with short arm, two with long arm
Table height	33" - floor to table surface
Width incl. fence rails	118"
Weight	220 lbs.
Order No.	N 0017L



## MORSO NFL

### Manual Face-Frame Notching Machine Heavy-Duty, Professional Model

The NFL is a heavy-duty, foot pedal operated notching machine for the production of beaded face-frames, French-mitered cabinet doors as well as muntin and mullion joints. This manual model will accept moulding up to 2 3/4" wide, allowing the operator to process virtually every face frame, including wide bottom and top rails.

The machine features a heavy-duty steel frame with cast iron tabletop. The vertical travel of the cutting head, which is also made of cast-iron, can be adjusted depending on workpiece thickness, assuring comfortable operation.

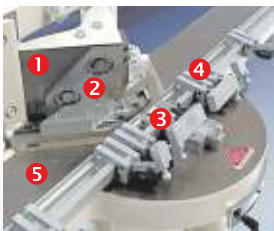


Table view

- |                                   |                              |
|-----------------------------------|------------------------------|
| 1. Cast iron cutting head         | 4. Adjustable flip-stops     |
| 2. Laminated side and nose knives | 5. Cast iron table extension |
| 3. Fixed center fence assembly    |                              |

#### Technical Data

Max. moulding width / thickness	2 3/4" (70mm) / 6 1/4" (155mm)
Machine Controls	manually controlled with hand lever and foot pedal
Nose knife capacity	1/2" - 1" width (1/4", 5/16", 1/2" nose knives require smaller cutting head)
Extension tables	heavy cast iron, machined surface, 30 3/4" long, one left and one right hand side
Fence rails	silver anodized aluminum, 59 1/2" total length, one left and one right hand side
Flip-stops	aluminum, with locking lever, four with short arm, two with long arm
Table height	33" - floor to table surface
Width incl. fence rails	118"
Weight	220 lbs.
Order No.	N 0015L



## MORSO NM

### Manual Face-Frame Notching Machine Standard-Duty Model

The NM is a manually operated, standard-duty notching machine for the production of beaded face-frames, French-mitered cabinet doors as well as muntin and mullion joints. This manual model accepts material up to 4 1/2" wide, allowing the operator to process a wide range of face frame moulding sizes.

Operation of the machine, cutting head and length stop design are based on the larger NFL and NFXL models, the main differences are a reduced overall footprint and smaller cutting head and knives. The machine features a steel frame with cast iron tabletop. The vertical travel of the cutting head can be adjusted depending on workpiece thickness, assuring comfortable operation.



#### Technical Data

Max. moulding width / thickness	4" (100mm) / 3" (75mm)
Nose knife sizes	1/2" - 1" width (1/4" - 5/16" - 3/8" with optional smaller NMS cutting head)
Extension tables	sheet metal construction, black finished surface, 18 3/4" long, one left and one right hand side
Fence rails	silver anodized aluminum, 59 1/2" total length, one left and one right hand side
Flip-stops	aluminum, with locking lever, one per side plus one center stop
Table height	33" - floor to table surface
Width incl. fence rails	63"
Weight	110 lbs.
Order No.	N 0076

# Beaded Face Frame Combo Systems

## RGC

Combination of RazorGage positioning systems with manual or electro-hydraulic MORSO notching machine and integrated cut-off saw

Automatic positioning system with integrated cut-off saw and MORSO notching machine for fast and accurate production of beaded cabinet face-frames. Precision stop system, manufactured by RazorGage to Hoffmann specifications, with fully adjustable saw shelf, attachment bracket and riser platform for manual NFL & NFXL as well as electro-hydraulic NLEH & NXLEH Morso notching machines. Comprehensive software package allows operator to design face-frames individually on large touchscreen or download complete files from cabinet design programs capable of outputting .RZG files. Positioning system is used to cut all stiles and rails to length and also to position material for notching and copying operation on MORSO machine.



### Technical Data

	RGC 95	RGC 119	RGC 143	RGC 167
Max. distance to saw blade	68"	92"	116"	140"
Max. distance at nose knife	95"	119"	143"	167"
Overall system length	204"	228"	252"	276"
Table length	10 ft.	12ft.	14ft.	16ft.
Table support legs	2	3	3	3
MORSO notching machine (included)	NFXL	NFXL	NFXL	NFXL
MORSO nose knives (included)	3/4" & 1"	3/4" & 1"	3/4" & 1"	3/4" & 1"
Cut-off saw Festool (included)	Kapex 120	Kapex 120	Kapex 120	Kapex 120
Standard touch screen	15.5" diag.	15.5" diag.	15.5" diag.	15.5" diag.
Optional larger screen (w. tower stand)	21" diag.	21" diag.	21" diag.	21" diag.

Upgrade to electro-hydraulic NLEH or NXLEH Morso notching machines available. Positioning systems are also available for use with existing cut-off saws and/or MORSO notching machines. Cut-off saw make and model subject to change.





## RGNFXL

Combination of RazorGage positioning systems with manual or electro-hydraulic MORSO notching machine

Automatic positioning system with MORSO notching machine for fast and accurate production of beaded cabinet face-frames. Precision stop system, manufactured by RazorGage to Hoffmann specifications, with attachment bracket and riser platform for manual NFL & NFXL as well as electro-hydraulic NLEH & NXLEH Morso notching machines.

Comprehensive software package allows operator to design face-frames individually on large touchscreen or download complete files from cabinet design programs capable of outputting .RZG files. Positioning system is used to position material for notching and copying operation on MORSO machine.

### Technical Data

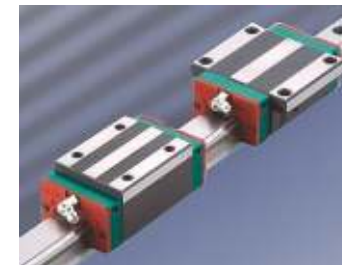
	RGNFXL 95	RGNFXL 119	RGNFXL 143	RGNFXL 167
Max. distance at center of nose knife	95"	119"	143"	167"
Overall system length	177"	201"	225"	249"
Table length	10 ft.	12ft.	14ft.	16ft.
Table support legs	2	3	3	3
MORSO notching machine (included)	NFXL	NFXL	NFXL	NFXL
MORSO nose knives (included)	3/4" & 1"	3/4" & 1"	3/4" & 1"	3/4" & 1"
Standard touch screen	15.5" diag.	15.5" diag.	15.5" diag.	15.5" diag.
Optional larger screen (w. tower stand)	21" diag.	21" diag.	21" diag.	21" diag.

Upgrade to electro-hydraulic NLEH or NXLEH Morso notching machines available.  
Positioning systems are also available for use with existing MORSO notching machines.

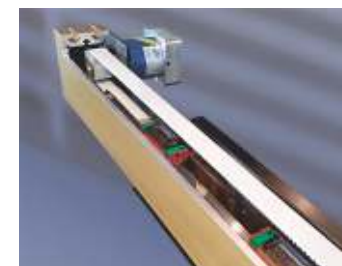
Standard touch-screen



Double bearing block



Industrial quality carriages and linear rails



## Perfect Half-Lap Joints with HOFFMANN-MORSO

Half-lap joints are a traditional and proven way of joining window mullions at 90 degree angles. This type of joinery is aesthetically pleasing and easy to assemble. And with the horizontal and vertical mullion being full length, the finished mullion grill is always perfectly aligned and stronger than a grill with short, coped cross bars.

Half-lap joints can be produced in window and door mullions, either applied or true-divided style. Even small mullion grills for cabinet doors can be produced in house – an especially attractive option if beaded face-frames are manufactured as well.

### The process

The mullion bars are notched on both sides on a MORSO notching machine. Adjustable stops aid in positioning the material for proper notch spacing.

The notched mullion is then placed on a HOFFMANN routing machine equipped with half-lap fixtures and a spiral router bit. The bit is set to remove  $\frac{1}{2}$  of the stock thickness. One mullion is routed with the top side against the fence, the other one with the back side. A special down-cut router bit drastically reduces tear-out of the profiled material.



Mullion bars are notched on MORSO notching machine.



Mullion bars are routed on Hoffmann routing machine.



Assembled half-lap joint.

### Hoffmann Dovetail Keys

Hoffmann Dovetail Keys are available from 1/4" - 4" in length - see our website for more details.



# DGS 1000 Fence System

for MORSO face frame notching machines

An innovative, manual fence system is available as an option for all MORSO NM, NFL, NFXL, NLEH and NXLEH notching machines. The Glide-Stop System includes two heavy-walled, anodized aluminum fence rails and the moveable Glide-Stop.

Self-adhesive tape scales and hairline pointers on both sides of the stop assembly assure accurate settings. The fence rails are installed on the cast-iron extension tables with specially designed mounting brackets (included).

Adjustable index screws are used in a special channel along the back edge of the fence rails to set multiple stops, which are referenced with a spring-loaded plunger on the Glide-Stop. Once adjusted, frequently used dimensions on a face-frame, e.g. for a bank of drawers, are found again and again with 100% repeatability and accuracy.

### Standard Equipment

- > Two five foot long heavy-duty fence rails, silver anodized finish
- > Left and right hand self-adhesive tape scales with 1/16" increments
- > GlideStop with two extended contact rods
- > Mounting brackets, bolts, nuts, washers



Shown installed on MORSO NFXL notching machine



### Technical Data

Fence rail length	60" per side (L + R)
Adjustable Index Stops	20 included
Mounting brackets	four included

Tape Scale Graduation	1/16" (digital read-out optional)
Min. spacing of indexes	9/16"
Order Number	

# Accessories

## MORSO Notching Machine Accessories

Original MORSO accessories are guaranteed to perform. Complete knife sharpening services are available for side and nose knives.

### MORSO Side Knives

Laminated steel



### MORSO Nose Knives

From 1/4" - 1" width



### Chip Breaker

Nylon table insert



### Center Fitting



### DGS 1000

Manual fence system



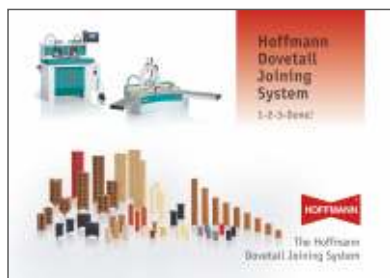
### DGS-DD

Digital upgrade for DGS 1000



# Hoffmann Machine Catalogs

Designed to Perform



**Dovetail Joining System**  
Full range of Hoffmann dovetail routing machines, from smaller bench-top units to freestanding multi-head production machines.



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



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



**Picture Framing**  
Professional dovetail joining equipment and accessories for custom picture framers



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