

# *Northfield* No. 737

## PLANER-SURFACER 37"

Available with  
the Northfield  
Helical Carbide  
Cutterhead



Front View of Machine  
with Knife Grinder and  
Blower Type Dust Hood

A Precision Built Machine manufactured from an exacting design utilizing ideas and components to provide the user with a machine to meet the most demanding and varied needs of today's production and vocational woodworking.

PROFIT THROUGH AMERICAN TECHNOLOGY  
 WOOD MACHINERY  
MANUFACTURERS  
OF AMERICA  
MEMBER

## POSITIVE, OVERLOAD PROTECTED FEED MECHANISM

A carefully engineered feed mechanism offers speeds from 20 to 100 lineal feet per minute with built-in overload protection. A positive gear drive produces uniform power to all rolls. A safety overload clutch is provided on the drive shaft to prevent damage to the drive system. A convenient feed speed adjustment and indicator are provided to simplify machine operation. This type of drive virtually eliminates feed works related dubbing problems. The feed is also reversible by means of a drum switch, allowing the operator to BACK OUT stock once it has been fed into the machine.



### CAPACITY

These machines are designed to plane material 37" wide and from 1/16" to 8-3/4" thickness. The cutterhead design allows a maximum cut of 3/8". Butted pieces as short as 4" and single pieces 12" may be planed.

### HEAVY ONE PIECE CAST IRON TABLE

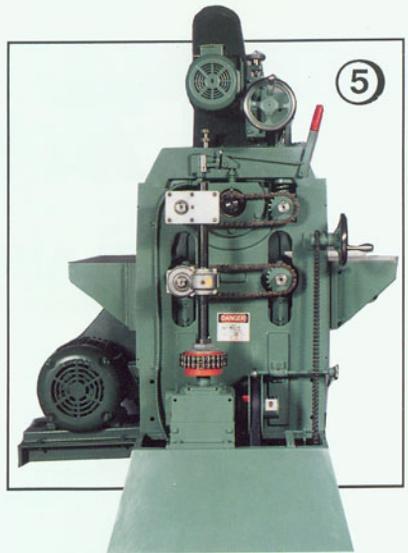
The heavy one-piece table accurately carries all table parts for precision planing and is easily adjustable by a conveniently located hand wheel.

### LARGE BOX TYPE CAST IRON BASE

A large box-type three point mounted base of rigid design insures proper support of all components.

### EACH MACHINE IS ELECTRONICALLY BALANCED

Each NORTHFIELD machine is carefully tested with modern vibration-analyzing equipment. Even conditions hidden from view, which might interfere with the smooth, long life of the machine, are detected and corrected.



## VEE BELT CUTTERHEAD DRIVE

This machine is available in VEE-Belt drive with 10, 15, 20, 25 and 30 HP T.E.F.C. motors. VEE-Belt drives operate at 3600 RPM or to customer's order. The feed mechanism is driven by a 2 HP totally enclosed fan-cooled motor. 3 HP feed motor is also available.

*Note: The higher the cutterhead RPM, the higher the noise level of the machine.*

## INDEPENDENT MOTOR GEAR BOX FOR POWER TABLE ELEVATION

An independent gear motor with overload clutch is available as an option providing powered table elevation. A micro switch is also provided to prevent elevating the table into the cutterhead.



## FOUR KNIFE CUTTERHEAD WITH INTEGRAL MICROMETER TYPE, KNIFE RAISING SCREWS

The four knife cutterhead of high carbon steel is 37" long and has a 5" cutting circle. The 5/32" x 1-1/4" x 37" knives are of high speed steel and can be quickly adjusted with the micrometer type knife raising screws machined integral with the cutterhead. The cutterhead can be quickly stopped with a convenient brake.



1

### SECTIONAL CHIPBREAKER MOUNTED CONCENTRICALLY WITH HEAD

A sectional chipbreaker of 2" ductile iron sections is spring counter-balanced concentric with the cutterhead and yields to 3/8". It rises with the sectional infeed roll on heavy cuts and is fully adjustable.

2

### QUICKLY ADJUSTABLE PRESSURE BAR

A heavy pressure bar is located directly behind the cutterhead. It is quickly adjustable by means of spring loaded micrometer-type adjusting screws at either end of the bar. If necessary, the pressure bar can be easily removed. Hard chrome plating is available as an option.

3

### SECTIONAL UPPER INFEED ROLL

All four 4" feed rolls are power driven. The upper infeed roll is the sectional type with 2" milled ductile sections. Each section yields 5/16" and the entire roll yields 3/4". All the other feed rolls are solid steel and easily removable. The feed rolls are mounted with sealed-for-life ball bearings. To adjust the machine from rough to smooth stock a single hand lever quickly adjusts the table power feed rollers from .001 to .075 above the table.

4

**TOP VIEW**, showing Knife Grinder in place with grinding wheel and stem in place. Grinding attachment can be left on the machine during operation with collection system-type dust hood in place.

5

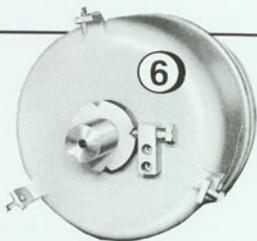
**AS STANDARD EQUIPMENT** each machine is equipped with conveniently placed hand brake. As an optional feature, the machine may be ordered with a limit switch which shuts off power on both the cutterhead and feed motor when the hand brake is applied.

6

**POSITIVE CUTTERHEAD GRINDING** indexing plate insures that each knife is ground in proper position.

7

**THE NORTHFIELD NO. 737 PLANER-SURFACER** is shown here with dust hood that can be attached to central dust collection system. Model shown has knife grinding attachment in place.



## SPECIFICATIONS: No. 737

|                         |  |
|-------------------------|--|
| <b>Nominal Size</b>     | 37" x 8"---36" x 8" Helical Head   |
| <b>Actual Capacity</b>  | 37" x 8-3/4"---36" x 8-3/4" Helical Head   |
| <b>Cylinder</b>         | 5" cutting circle, 4 knife, high carbon steel,<br>micrometer-type knife raising screws   |
| <b>Knife Size</b>       | 5/32" x 1-1/4" x 37" high speed steel  |
| <b>Drive</b>            | VEE-belt 3 VX belts  |
| <b>Brake</b>            | Conveniently located hand brake  |
| <b>Motors</b>           | Cutterhead--10, 15, 20, 25 or 30 HP totally<br>enclosed fan cooled. Feed--2 HP totally<br>enclosed fan cooled  |
| <b>Voltage</b>          | 208 - 220 /440, 550 volt 60 cycle, 3 phase std.  |
| <b>RPM</b>              | VEE-belt--3600 (or to customer's specifications)   |
| <b>Lower Feed Rolls</b> | 4" solid steel, power driven, sealed-for-life ball bearings  |
| <b>Upper Feed Rolls</b> | INFEED 4" diameter, 2" milled ductile iron<br>sections, 5/16" section yield, 3/4" roll<br>yield, sealed-for-life ball bearings<br>OUTFEED 4" solid steel, power driven,<br>sealed-for-life ball bearings |

|                                 |   |
|---------------------------------|---|
| <b>Maximum Stock Width</b>      | 37"---36" Helical Head  |
| <b>Shortest Butted Piece</b>    | 4"  |
| <b>Shortest Single Piece</b>    | 12"   |
| <b>Maximum Stock Thickness</b>  | 8-3/4"  |
| <b>Maximum Depth of Cut</b>     | 3/8"  |
| <b>Table Feed Roller</b>        |   |
| <b>Adjustment</b>               | Single hand lever .001" to .075"  |
| <b>Feed Speed</b>               | 20 to 100 lineal feet per minute (higher or lower<br>available in same ratio)     |
| <b>Chipbreaker</b>              | Ductile iron, 2" sections, concentric with head                                   |
| <b>Pressure Bar</b>             | easily adjustable with micrometer type screws                                     |
| <b>Controls</b>                 | Double magnetic switch, single push button,<br>reversing switch on feed mechanism |
| <b>Base</b>                     | Large box-type, three point mounted   |
| <b>Floor Space</b>              | 69" x 50"   |
| <b>Net Weight</b>               | 3300 lbs.*  |
| <b>Domestic Shipping Weight</b> | 3900 lbs.*  |
| <b>Export Shipping Weight</b>   | 4200 lbs.*  |
| <b>Cubic Export Crate Size</b>  | 175 cu. ft.   |

\*Add 225 lbs. if knife grinder is ordered with the machine. Knife grinder must be ordered with Helical Cutterhead option.  
15 HP minimum HP for Helical Head option. Machine requires approximately 1500 CFM air flow for dust collection.

### EXTRAS

Shaving hood for connection to blower system, knife grinder and jointing attachment, idler rollers for edge of table, dial type knife and roll setting gauge, limit switch for hand brake, NEMA 12 electrics, powerlift table, hard chrome plated pressure bar, digital readout, 3 HP feed motor, smooth sectional out feed roll, higher or lower feed speeds, modifications to customer's order.

## Northfield Helical Carbide Cutterhead: No. 737



### CUTS MAINTENANCE

The Northfield Helical Carbide Cutterhead offers fast maintenance compared to other helical cutterheads. Northfield's Helical Carbide Cutterhead can be jointed and hollow ground in under two hours. Machined grinding alignment grooves on cutter heads assure accurate hollow grinding on each row of bits.

### RUNS QUIETLY

The Northfield Helical Cutterhead runs quietly, both loaded and unloaded. Cylinders are dynamically balanced and bits are arranged in helical, or spiral, rows of 20° for low noise and smooth cutting.

### OVERLAP BITS

Individual bits, or teeth, in the Northfield Helical Cutterhead overlap. This staggered bit arrangement places the space between bits in one row, directly in the cutting path of the bits in preceding and following rows. Result is a clean cut, free of surface ridges. Each cutterhead has 29 easily replaceable bits in a row, total of 116 bits.

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