

# HB

## High Speed Presses

60 & 80 Tons Capacity



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## Standard Features

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### **One-Piece Cast Frame**

The Hummingbird frame is of class 40 grade cast iron. Minster's construction provides the compressive strength and vibration dampening that provides greater die life and part accuracy.



### **Heavy Drive Connection and Rigid Slide**

The Hummingbird slide is designed to minimize deflection under full loading. The high strength 1045 steel connections and pistons are made specifically for high speed blanking. This feature, designed to handle snap-through forces equal to 50% tonnage rating of the press, reduces punch penetration and promotes die life.

### **Speed & Precision**

Minster Hummingbird presses provide consistently accurate, automated high speed blanking. The 80 metric ton machine is capable of 1,000 SPM with a stroke length of 25 mm making the Hummingbird the fastest machine of its type in this tonnage range.

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### **Flywheel Drive Arrangement for Maximum Press Efficiency**

The Hummingbird series are flywheel type presses to provide higher speeds for punching, notching and blanking operations. Minster's patented combination hydraulic clutch and brake produces the maximum torque possible providing for faster starting and stopping, resulting in increased production. A segmented drive disc design provides easy maintenance. In addition, Minster's clutch and brake unit requires no adjustment and years of maintenance-free operation, resulting in less downtime and higher production rates.

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### **Dynamic Balancer System**

The dynamic balancing system on the Hummingbird greatly reduces the effect of the slide and tooling inertia forces caused by running at high speeds. This reciprocating balancer helps maintain precise slide bottom-dead-center repeatability resulting in less die wear and greater part accuracy.

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### **Sealed Crown**

The design of the Hummingbird series features a total sealed crown and hydrostatic piston drives system. This helps keep contaminants out of the lube system, prevents oil loss and provides a cleaner work environment.

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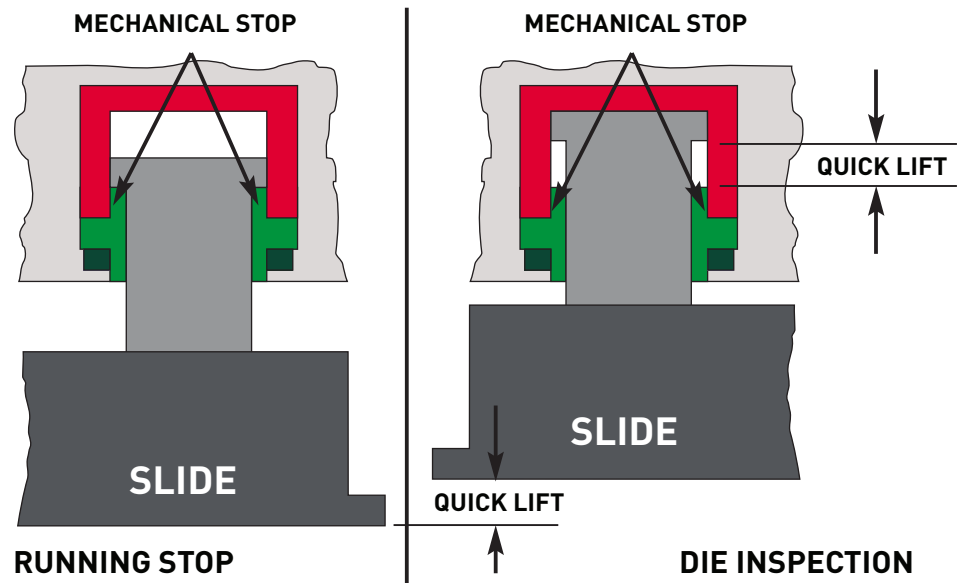
### **Heavy Duty Bed**

The massive bed of the Hummingbird press has a maximum deflection of 0.001" per foot increasing die life and improving part quality.

## Standard Features

### Hydraulic Quick Lift

Quick access to dies is provided by a hydraulic system which lifts the slide as much as 50mm. The hydraulic system returns the slide to the original shutheight position against a mechanical stop, maintaining tool settings. This feature enhances die accessibility and allows fast and easy unsticking from the bottom even with shorter strokes and higher speeds, thus contributing to greater production efficiency.



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### **Production Management Control (PMC)**

Incorporates all press functions including:

- Full machine diagnostics detailing all press and feed line faults.
- Multiple selectable languages.
- Open architecture which allows for greater convenience in planning and maintenance.
- PLC and color touch screen technology; all press and feed line functions can be monitored for efficient diagnosis of production line faults.

Available popular options include: die protection, load monitoring as well as automatic shutheight and counterbalance controls.

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### **Thermal Control Package**

Minster's Hummingbird presses provide a Thermal Control Package consisting of an air/oil heat exchanger and preheating system. A thermostatically controlled heating system helps maintain the oil at a constant temperature, thereby reducing shutheight fluctuations.

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### **Fully Hydrostatic Slide Guiding**

The Hummingbird is guided by four hydrostatic passline guide posts for accuracy and repeatability.

## Standard Features

### FieldHawk - i4.0

FieldHawk is a cloud-based mobile application designed to communicate with your Nidec stamping press lines from your iOS or Android mobile devices. Cloud-based, secured communications allows all authorized users to check machinery status from anywhere you can get phone service and/or an internet connection, thus reducing downtime.

### Additional Standard Features

- Powered shutheight adjustment with electronic readout
- Cast iron bolster plate with general purpose t-slots
- Flywheel brake
- Four vibration mounts
- Minster full function pedestal control



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## Optional Features

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### Infinitely Adjustable Stroke

Provides more flexibility and higher production due to the ability to produce either blanked/shallow formed parts or drawn/higher formed parts on the same press.

- No limit on stroke length
- Quick and simple pushbutton adjustment
- Dial-in, or pushbutton stroke length via die number automatically sets stroke & shutheight for easy changeover
- Provides power microinch mechanism for easier die set-up
- Extremely accurate bottom-dead-center repeatability & parallelism

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### Adjustment-In-Motion

Minster offers an Adjustment-In-Motion feature on Hummingbird presses. The A.I.M. allows the operator to make precise shutheight adjustments with just the touch of a button, while the press is running. The operator can adjust the press for close tolerance parts without sacrificing production time.

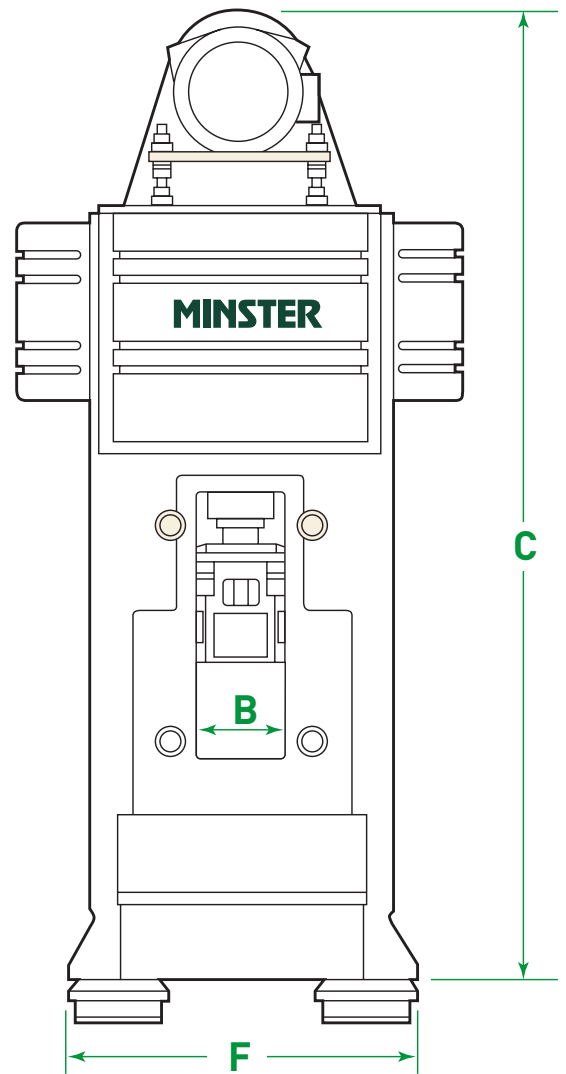
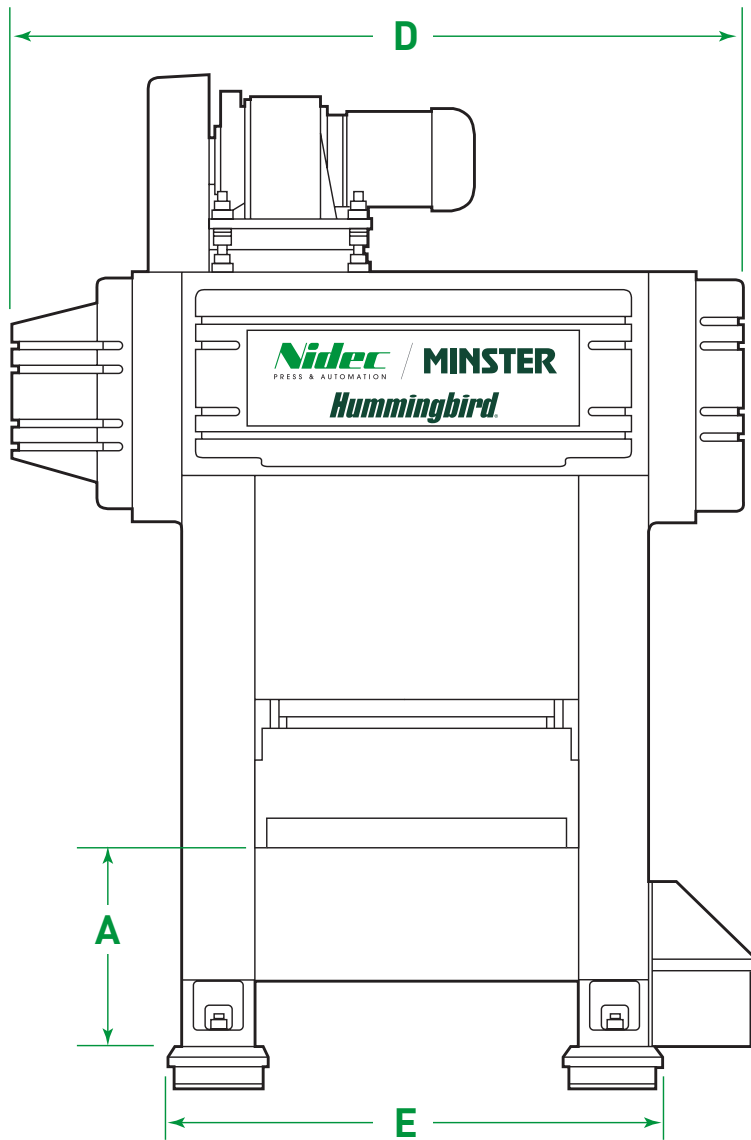
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### Additional Options

- Load production
- Remote stroke position indicator
- Quick-Die-Change Systems
- Stock Lubrication
- Material Handling Systems
- Feeds
- Conveyors
- Die Doors

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## Specifications & Dimensions





	HB-60	HB-80	HB-60 SPM	HB-80 SPM
			<b>Max.</b>	<b>Max.</b>
Tons Capacity	600 <b>kN</b> / 66 <b>Tons</b>	800 / 90		
Stroke of Slide (Standards)	0.98" ~ 25 mm	0.98" ~ 25 mm	1000	1000
	1.18" ~ 30 mm	1.18" ~ 30 mm	900	900
	1.57" ~ 40 mm	1.57" ~ 40 mm	750	750
	1.97" ~ 50 mm	1.97" ~ 50 mm	650	650
Stroke of Slide (Adjustable)	0.59" ~ 15 mm	.59" ~ 15 mm	1000	1000
	0.79" ~ 20 mm	0.79" ~ 20 mm	900	900
	0.98" ~ 25 mm	0.98" ~ 25 mm	800	800
	1.18" ~ 30 mm	1.18" ~ 30 mm	750	750
	1.38" ~ 35 mm	1.38" ~ 35 mm	700	700
	1.57" ~ 40 mm	1.57" ~ 40 mm	650	650
	1.77" ~ 45 mm	1.77" ~ 45 mm	600	600
	1.97" ~ 50 mm		550	
Slide Adjustment	1.97" ~ 50 mm	1.97" ~ 50 mm		
Shutheight on Bolster (S.D.A.U.)	13.98" ~ 355 mm	13.0" ~ 330 mm		
Shutheight on Bed (S.D.A.U.)	19.0" ~ 483 mm	18.29" ~ 464,60 mm	Varies According to Stroke Length	
Bolster Thickness	5.0" ~ 127 mm	5.30" ~ 134,60 mm		
Area of Slide, R-L x F-B	43.30 x 18.90" 1100 x 480 mm	48.03 x 20.08" 1220 x 510 mm		
Area of Bed, R-L x F-B	43.50 x 28.60" 1105 x 724 mm	48.50 x 28.0" 1232 x 711 mm		
Area of Bolster, R-L x F-B	43.30 x 27.60" 1100 x 700 mm	48.03 x 27.56" 1220 x 700 mm		
Bed Opening, R-L x F-B	37.0 x 10.0" 940 x 254 mm	44.0 x 11.0" 1117 x 280 mm		
<b>A</b> Bottom of Feet to Top of Bed	33.0" ~ 838 mm	33.0" ~ 838 mm		
<b>B</b> Upright Opening, F-B	15.0" ~ 381 mm	15.0" ~ 381 mm		
<b>C</b> Approximate Overall Height	157" ~ 3988 mm	160" ~ 4070 mm		
<b>D</b> Overall Width	116" ~ 2946 mm	120" ~ 3048 mm		
<b>E x F</b> Area of Footprint, R-L x F-B	74.0 x 54.0" 1880 x 1371 mm	81.0 x 57.25" 2057 x 1454 mm		
Strokes per Minute @ 25 mm	125-1000	125-100		
Motor HP and Speed	40-1800 <b>hp</b> 30-1800 <b>kw</b>	50-1800 37.5-1800		
Approximate Weight	38,000 <b>lbs</b> 17.263 <b>kg</b>	45000 20.410		



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