Linear and Gantry Milling in one machine, for X-Axis travel of up to 84 inches (2133.6 mm) and Y-Axis travel of up to 34 inches (863.6 mm).

The Climax LM5200 Milling Machine revolutionizes both the capabilities and functionality of portable mills. Four main features make this one of the best milling machines on the market today:

1. Extremely rigid, modular bed design.
2. Innovative configuration options allow setup for both Linear AND Gantry Milling in one machine.
3. Powerful, precise machining.
4. Reduced Friction Rail Technology.

Rigid, Modular Design

- Unique modular bed design allows shorter bed sections to be combined to fit the length of the work area without losing rigidity.
- Unique bed length section design provides superior rigidity across the entire bed length.
- Connection plates and fasteners optimized to provide the ultimate in rigidity, even when bed is extended by 2 or 3 times the original length.

Flexible Configuration & Operation

- The innovative new design of these Climax Milling Machines allow them to be configured for traditional linear milling, or simply split the rails lengthwise to configure for gantry milling!!
- Electric feeds can be mounted on the X, Y or Z axis.
- Machining capabilities include milling, drilling and even boring.

Powerful, Precise Machining

- Features heavy duty spindle design and a choice of Hydraulic Power Units - a 10 Hp (7.5 kW) HPU allows use of cutter heads of up to 6 inches (152.4 mm) in diameter.
- Milling can be done in any axis, with a milling head that can rotate 360° with an optional swivel plate for optimal spindle flexibility.
- Fast, aggressive milling in horizontal, vertical, or inverted applications.
- Provides reliable, precise milling to meet tight machining tolerances in both linear and gantry mill configurations.

Reduced Friction Rail Technology

- Reduced friction rail system allows extremely smooth, continuous, and non stick-slip travel.
- Precisely machined and aligned rails with advanced lubrication make machining applications smooth and efficient.
- Low friction system reduces maintenance costs and extends product life.
- Precision ball screws in X, Y and Z- axis assemblies allow precise location of milling head.

SPECIFICATIONS

Operating Ranges:

	Bed		Ram	
	Travel	Length	Travel	Length
LM5200 Model	36 inches (914.4 mm)	48 inches (1219.2 mm)	16 inches (406.4 mm)	26 inches (660.4 mm)
	60 inches (1524.0 mm)	72 inches (1828.8 mm)	34 inches (863.6 mm)	44 inches (1117.6 mm)
	84 inches (2133.6 mm)	96 inches (2438.4 mm)		

	US	Metric
Spindle Assembly (Z-Axis):		
Milling Head Spindle with #40 Taper	NMTB or CATV or optional HSK	
Spindle Drive	Hydraulic, Optional	
Axial Tool Head Travel	4 inches	101.6 mm
Milling Head Gearbox Ratio	1 : 1	1 : 1
Tool Head Position	in 90° increments (infinite 360° position w/ optional swivel plate)	
Gearbox Position Adjustment	180° in 90° increments (3 positions)	
Electric Feed		
Drive Power	Modified Baldor GP3303 1/2 HP DC gear motor	
Gearbox Reduction	20 : 1	
Feed Rate	0.5 - 24 in/min	12.7 - 609.6 mm/min
Power Input Requirements	5 amps @ 120V / 2.5 amps @ 230V	
Overall Dimensions		
Bed (overall length)	Bed Length + 2.5 in.	Bed Length + 63.5 mm
Ram (overall width)	Ram Length + 2.5 in.	Ram Length + 63.5 mm
Height without hand wheel	18.75 inches	476.3 mm
with hand wheel	22.0 inches	558.8 mm

TEST DATA

All test cuts performed with a 10Hp (7.5 KW) HPU and a 7.3 cu. in. (119.6 cu. cm) hydraulic motor in A-36 steel

Orientation	Cutter Diameter	Inserts	Depth of Cut	Width of Cut	Feed Rate
Horizontal Overhang	6 inches (152.4 mm)	7	0.020 inches (0.508 mm)	6 inches (152.4 mm)	14 in/min (355.6 mm/min)
Horizontal Overhang	6 inches (152.4 mm)	7	0.020 inches (0.508 mm)	3 inches (76.2 mm)	14 in/min (355.6 mm/min)
Horizontal Gantry	6 inches (152.4 mm)	7	0.020 inches (0.508 mm)	3 inches (76.2 mm)	12 in/min (304.8 mm/min)
Horizontal Gantry	6 inches (152.4 mm)	7	0.055 inches (1.397 mm)	3 inches (76.2 mm)	1 in/min (25.4 mm/min)
Vertical	4 inches (101.6 mm)	6	0.020 inches (0.508 mm)	3 inches (76.2 mm)	15 in/min (381 mm/min)
Drilling	1.5 inch (38.1 mm) superdrill	n/a	2 inches (50.8 mm)	n/a	Spindle RPM: 250
Boring	2.5 inch (63.5 mm) Criterion Boring Head	n/a	2 inches (50.8 mm)	n/a	Spindle RPM: 425

Flatness (Machine setup & flatness measurements performed with a Hamar laser)					
Configuration	Cutter Diameter	Inserts	Material	Area	Total Flatness
Linear Milling	6 inches (152.4 mm)	7	A-36 Steel Plate	6.0 x 36.0 inches (152.4 x 914.4 mm)	0.0018 inches (0.046 mm)
Gantry Milling	6 inches (152.4 mm)	7	A-36 Steel Plate	6.0 x 36.0 inches (152.4 x 914.4 mm)	0.0015 inches (0.038 mm)

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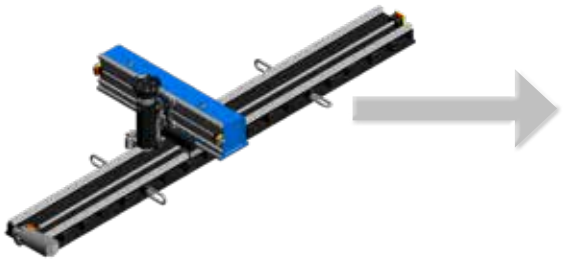
TOOL CONFIGURATIONS

Easy Conversion from Linear to Gantry Milling

The Climax LM5200 and LM6200 Milling Machines can be easily reconfigured to perform Linear or Gantry Milling. Below is a step by step overview of the conversion steps from traditional linear milling to gantry milling.

1 Linear Mill set up for overhead milling.



2 Separate main bed and RAM.

3 Split the bed & saddle pictured above into two separate rails for Gantry Milling as pictured below.

4 Reattach RAM to saddle and rails for a complete Gantry Mill.

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TOOL CONFIGURATIONS

Configure your LM5200 in 13 steps:

1 Select a Base Unit
2 Select a Gantry Kit
3 Select a RAM Assembly
4 Select a Shipping Container
5 Select a Milling Head Assembly
6 Select Tooling
7 Select a Spindle Hydraulic Motor
8 Select a Milling Head Swivel Assembly
9 Select a Hydraulic Power Unit (HPU)
10 Select Hoses and Pendant Cable Assemblies
11 Select a Stand Alone Feed Control
12 Select a Feed Assembly
13 Select a Z-Axis Feed Adapter

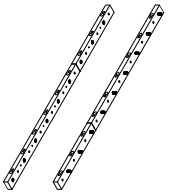
To generate the correct part number for the machine you require, simply select the part number needed in each step as appropriate, and contact your Climax representative.

1. Base Unit

Base Unit, 36 Inch (914.4 mm) Travel, Bed Length 48 Inch (1219.2 mm)	**66324**
Base Unit, 60 Inch (1524.0 mm) Travel, Bed Length 72 Inch (1828.8 mm)	**64201**
Base Unit, 84 Inch (2133.6 mm) Travel, Bed Length 96 Inch (2438.4 mm)	**66325**

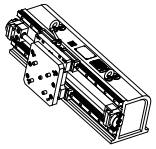
2. Gantry Kit

Gantry Kit For 36 Inch (914.4 mm) Travel, Bed Length 48 Inch (1219.2 mm)	**64978**
Gantry Kit For 60 Inch (1524.0 mm) Travel, Bed Length 72 Inch (1828.8 mm)	**64624**
Gantry Kit For 84 Inch (2133.6 mm) Travel, Bed Length 96 Inch (2438.4 mm)	**64979**



3. RAM Assembly

RAM Assembly 16 Inch (406.4 mm) Travel, Length 26 Inch (660.4 mm)	**72642**
RAM Assembly 34 Inch (863.6 mm) Travel, Length 44 Inch (1117.6 mm)	**72643**
RAM Assembly 16 Inch (406.4 mm) Travel, Length 26 Inch (660.4 mm) & RAM Assembly 34 Inch (863.6 mm) Travel, Length 44 Inch (1117.6 mm)	**67652**

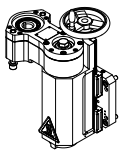


4. Shipping Container

Wooden Crate for 36 In (914.4 mm) Travel Bed	**65237**
Metal Container for 36 In (914.4 mm) Travel Bed	**101902**
Wooden Crate for 60 In (1524.0 mm) Travel Bed	**65239**
Metal Container for 60 In (1524.0 mm) Travel Bed	**101903**
Wooden Crate for 84 In (2133.6 mm) Travel Bed	**65240**
Metal Container for 84 In (2133.6 mm) Travel Bed	**101904**

5. Milling Head Assembly

Inch #40 Taper NMTB	**62399**
Inch #40 Taper CATV	**62732**
Metric #40 Taper NMTB	**62654**
Metric #40 Taper CATV	**62733**
Hydraulic #40 HSK	**65262**
Pneumatic Right Angle #40 HSK	68455
Pneumatic Direct Drive #40 HSK	68584



40 Taper

6. Tooling (for inch milling head assy only)

#40 Taper

#40, 4 Inch (101.6 mm) Face Mill with Inserts	**47380**
#40, 5 Inch (127.0 mm) Face Mill with Inserts	**47381**
#40, 6 Inch (145.4 mm) Face Mill with Inserts	**47382**
Carbide Inserts	**47229**

HSK #40A Hydraulic

#40A, 3 Inch (76.2 mm) HSK Face Mill w/ Inserts	**64984**
Collet Holder ER-32 #40A HSK Taper, 0.08 - 0.81 Inch (2.0 - 20.6 mm)	**64985**
Carbide Inserts	**47229**

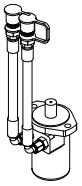
Collet Tooling

HSK 40A Hydraulic

Collet Inch ER-32, ¾ Inch	**64986**
Collet Metric ER-32, 20 mm	**66344**
Collet Set Inch ER-32, $^1/_8$ - $^{13}/_{16}$, $^1/_{16}$ Increments	**66345**
Collet Set Metric ER-32, 3 - 20 mm, 1mm Increments	**66346**
Cutter Fly 2-½ Inch Diameter Head x ¾ Inch Shank	**20713**
Cutter Fly 2-¼ Inch (57.15 mm) Dia. Head x 20 mm Shank	**31625**

7. Spindle Hyd. Motors Assembly

Milling Head Assembly	Motor Displacement		Max Spindle Speed		Hydraulic Motor PN	
	in³	cm³	@ 50 Hz Mains Power	@ 60 Hz Mains Power	60 Series	ISO 16028
40 Taper	3.6	59.0	490	591	62627	84224
	5.9	93.4	292	353	62628	84225
	7.3	119.6	228	275	62629	84226
	8.8	144.2	183	221	62630	84227
HSK 40A	1.21	19.8	873	1009	65094	79701
	1.93	31.6	502	606	65095	79699
	3.00	49.2	306	369	65096	83963



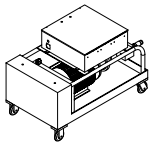
Minimum speed is 20% of the maximum speed

8. Milling Head Swivel Assembly

Milling Head Swivel Plate Assembly **66217**

9. Hydraulic Power Unit

HP1000, 208 - 230 Volts				
Cordset/hose length		Quick Connect Style		PN
Feet	Meters	60 Series QD	ISO 16028 CE	
20	6	✓		85815
50	15	✓		90947
100	30	✓		90948
20	6		✓	90962
50	15		✓	90963
100	30		✓	90964



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TOOL CONFIGURATIONS

Hydraulic Power Unit (continued)

HP1000, 380 - 415 Volts				
Cordset/hose length		Quick Connect Style		PN
Feet	Meters	60 Series QD	ISO 16028 CE	
20	6	✓		85789
50	15	✓		90949
100	30	✓		90950
20	6		✓	90965
50	15		✓	90966
100	30		✓	90967

HP1000, 460 Volts				
Cordset/hose length		Quick Connect Style		PN
Feet	Meters	60 Series QD	ISO 16028 CE	
20	6	✓		85785
50	15	✓		90951
100	30	✓		90952
20	6		✓	90968
50	15		✓	90969
100	30		✓	90970

HP1000, 575 Volts				
Cordset/hose length		Quick Connect Style		PN
Feet	Meters	60 Series QD	ISO 16028 CE	
20	6	✓		89633
50	15	✓		90953
100	30	✓		90954
20	6		✓	90973
50	15		✓	90974
100	30		✓	90975

10. Stand Alone Feed Control

(Stand Alone Control Panel & Pendant with Cables)

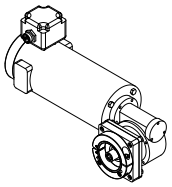
NOTE: Not needed if using a CLIMAX Hydraulic Power Unit

Voltage	Cable Length	PN
120V	20 ft (609.6 cm)	95573
	50 ft (1524.0 cm)	95574
230V	20 ft (609.6 cm)	106752
	50 ft (1524.0 cm)	106754

11. Electric Feed Assembly

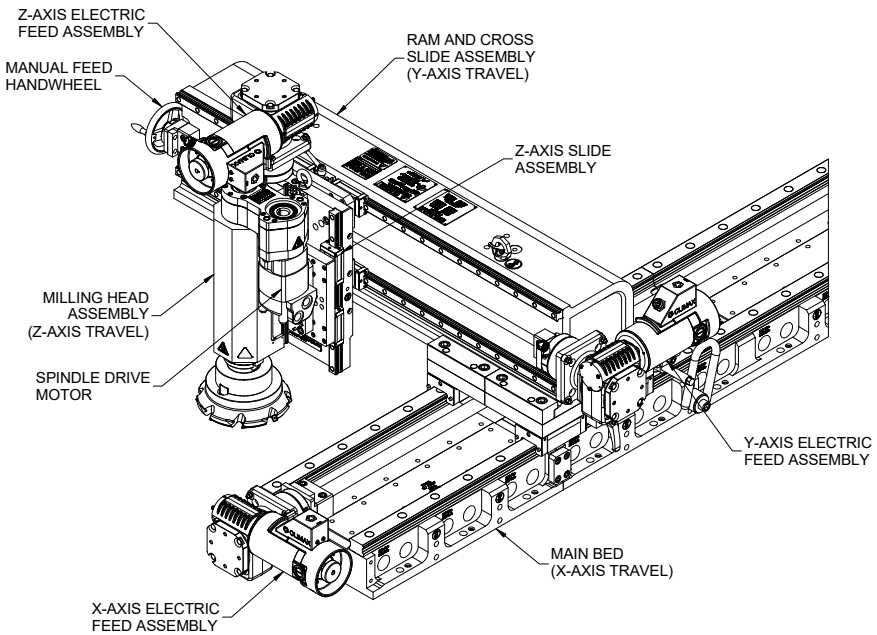
NOTE: 230V Feeds not for use with CLIMAX Hydraulic Power Units

Voltage	Cable Length	PN
120V	20 ft (609.6 cm)	64684
	50 ft (1524.0 cm)	66310
	100 ft (3048.0 cm)	66311



12. Z-Axis Feed Adapter

Z-Axis Feed Adapter Kit - I Axis 40 Taper 64856



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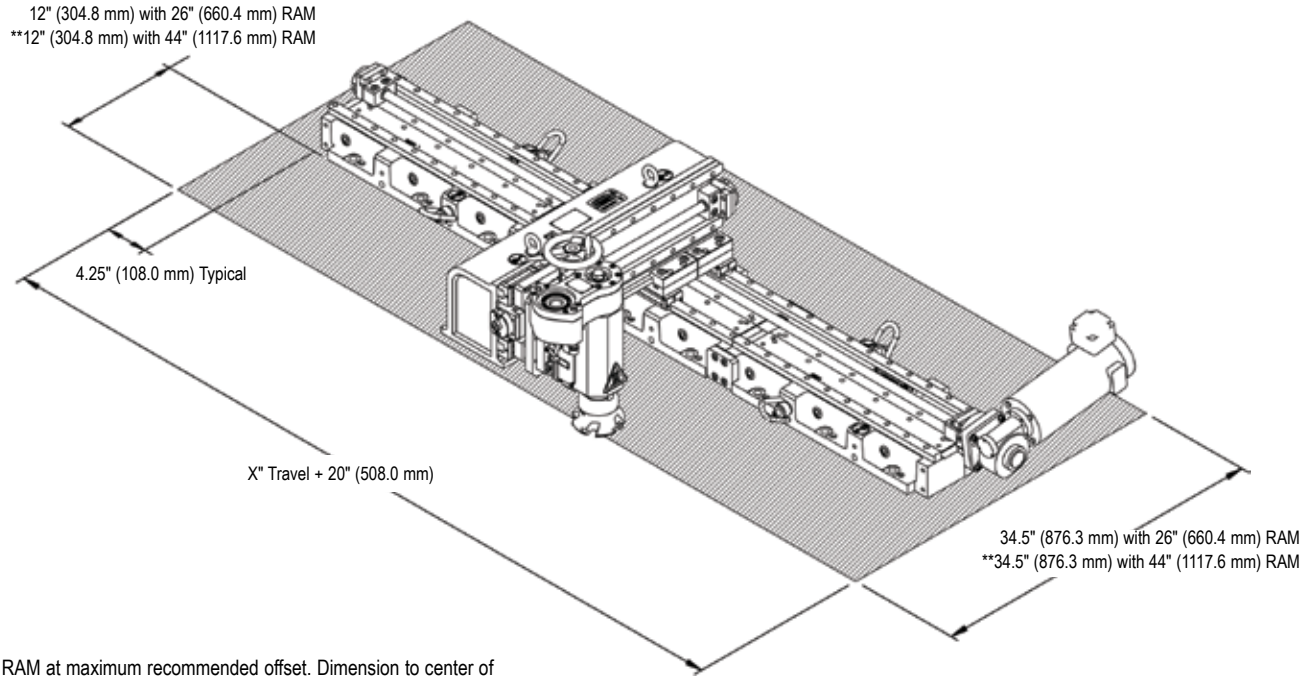
OPERATIONAL DIMENSIONS

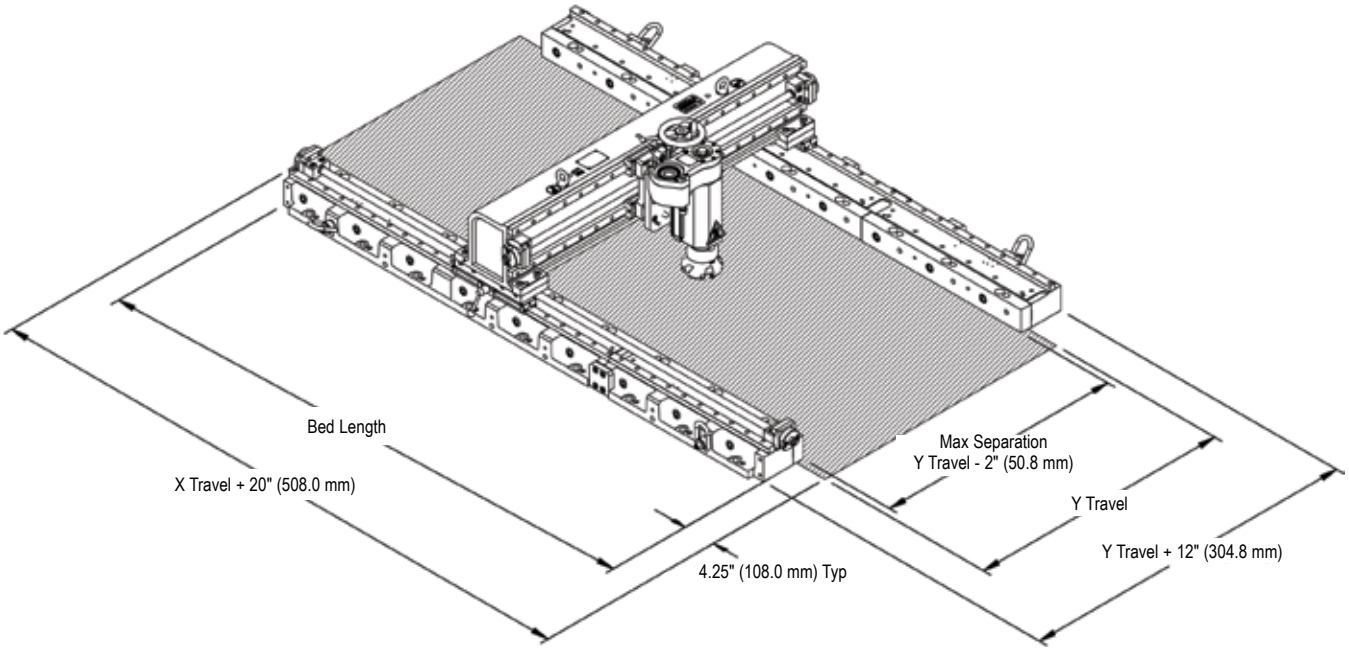
Dimensions in Inch (mm)

Milling Area Dimensions - LINEAR MILLING



** RAM at maximum recommended offset. Dimension to center of the tool

Milling Area Dimensions - GANTRY MILLING



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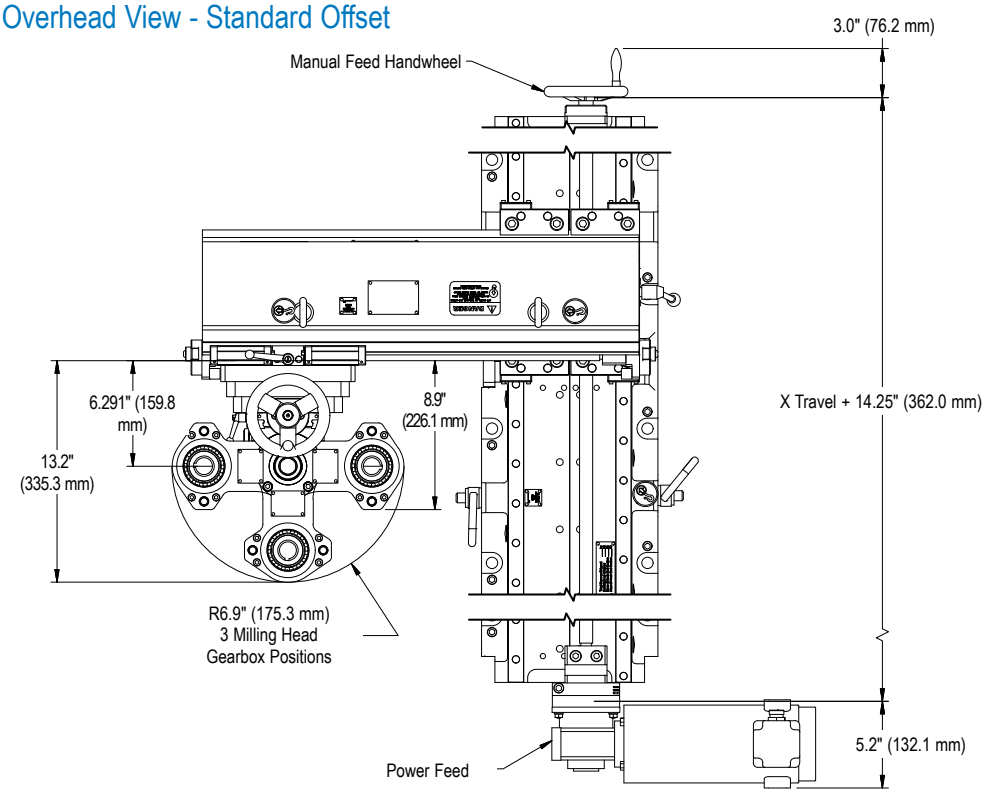
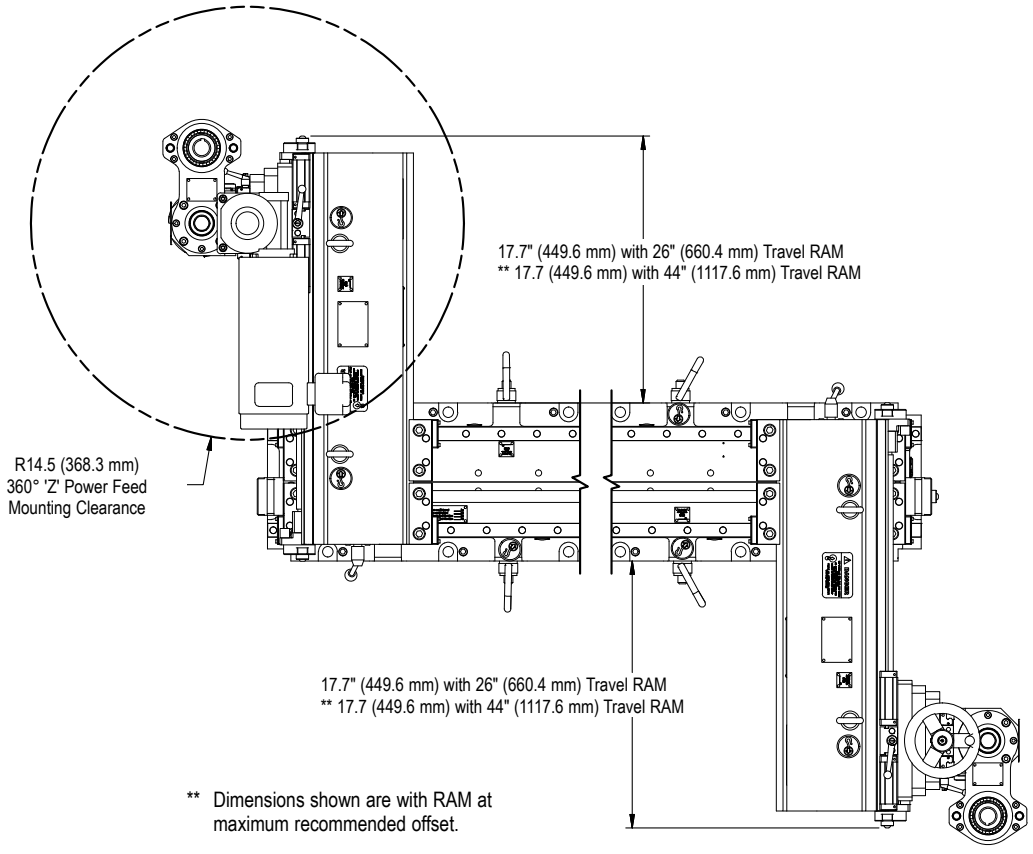
OPERATIONAL DIMENSIONS

Dimensions in Inch (mm)

Overhead View - Standard Offset



Overhead View - RAM at Maximum Recommended Offset



** Dimensions shown are with RAM at maximum recommended offset.

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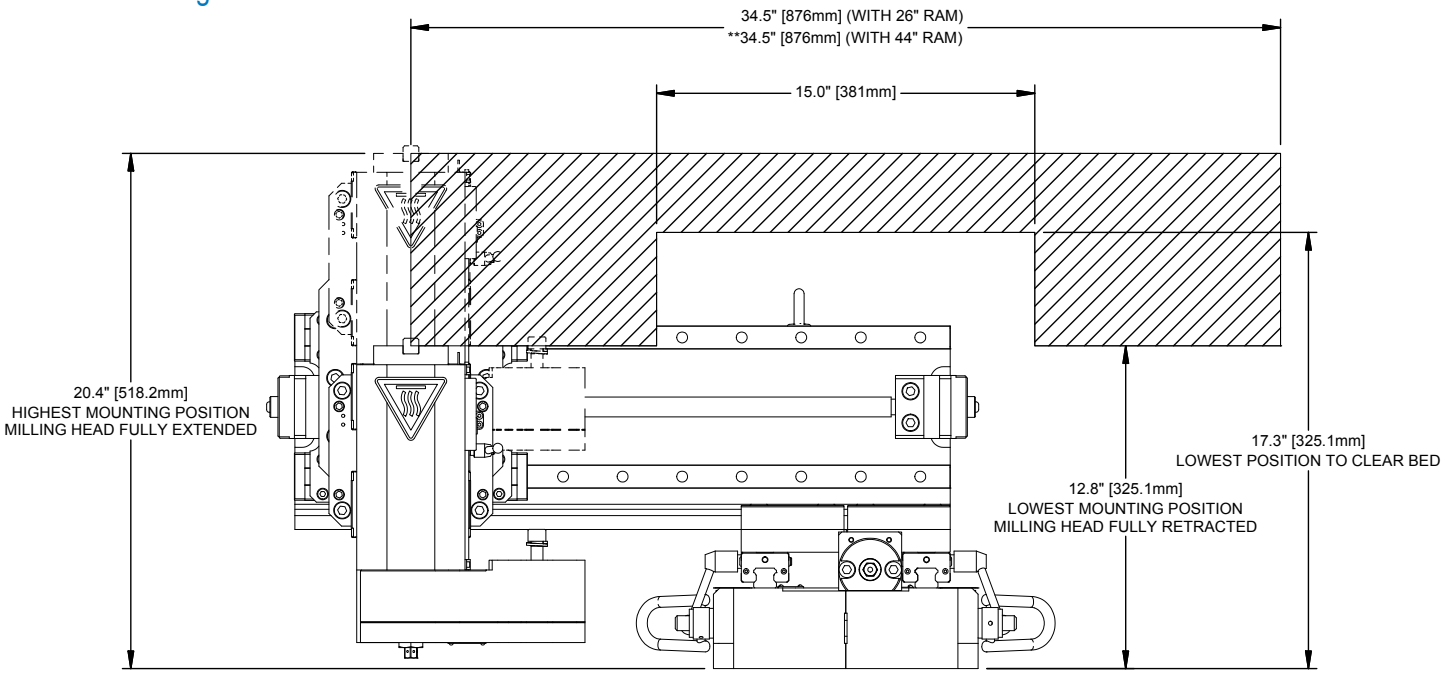
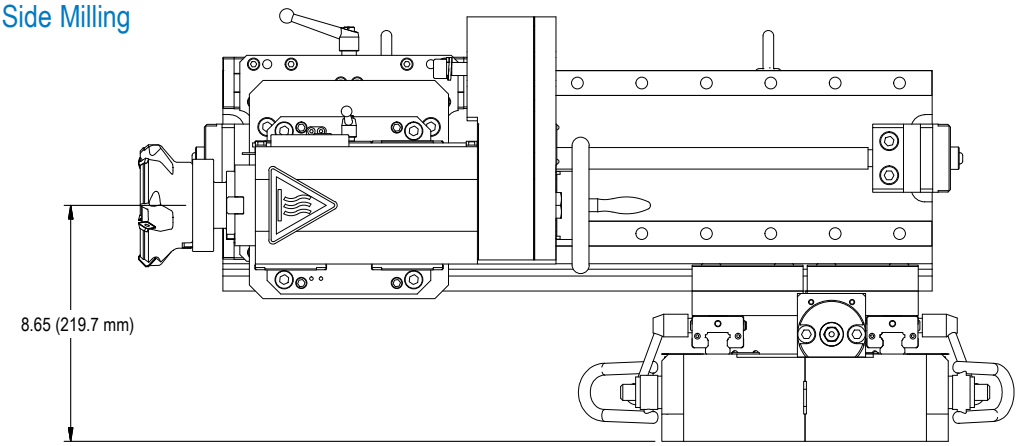
OPERATIONAL DIMENSIONS

Dimensions in Inch (mm)

Inverted Milling Area

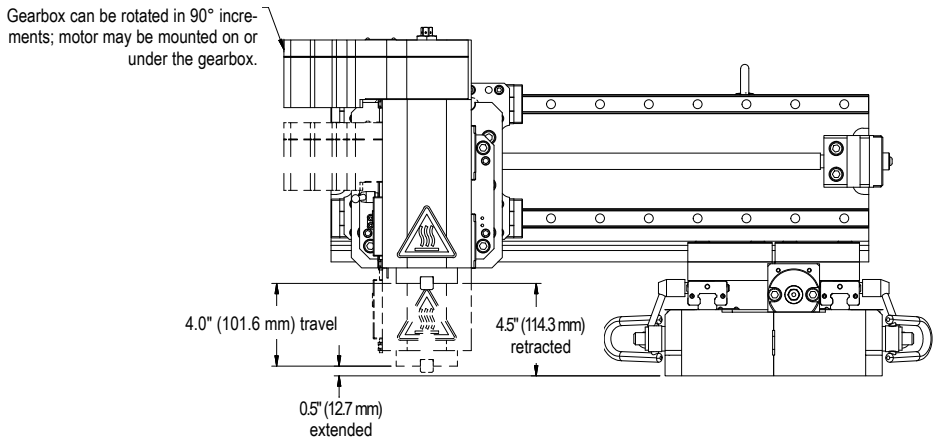


Side Milling



Example of side milling. (No vertical movement in this configuration.)

Spindle Travel



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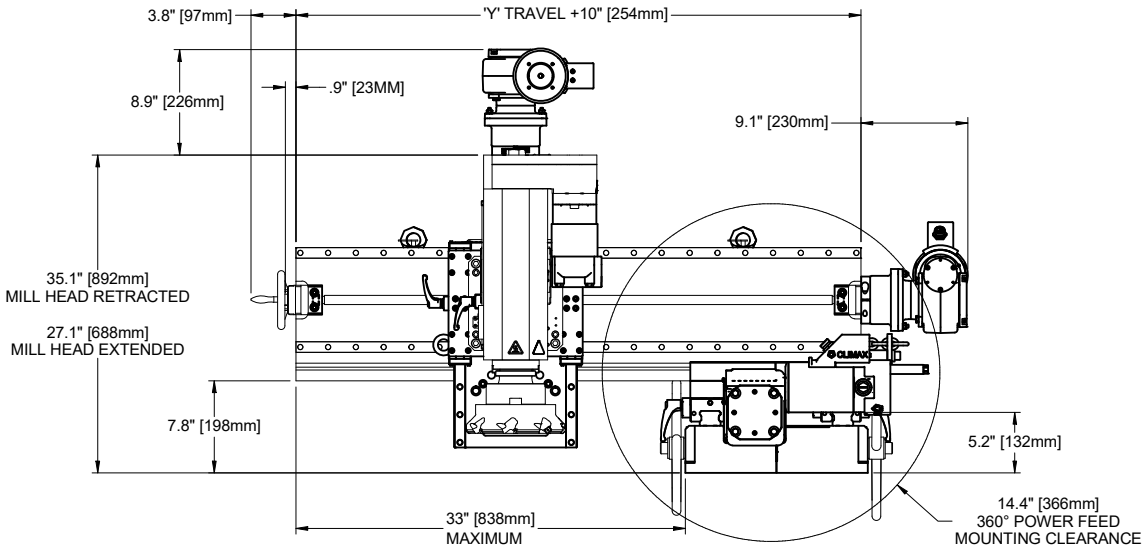
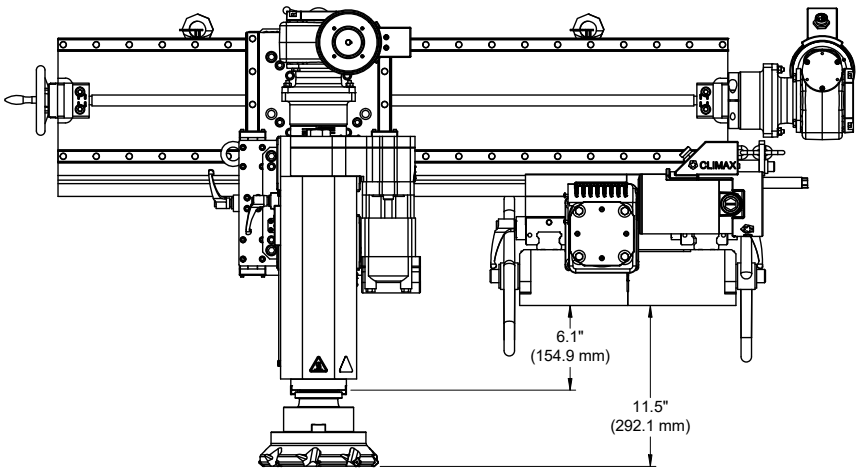
OPERATIONAL DIMENSIONS

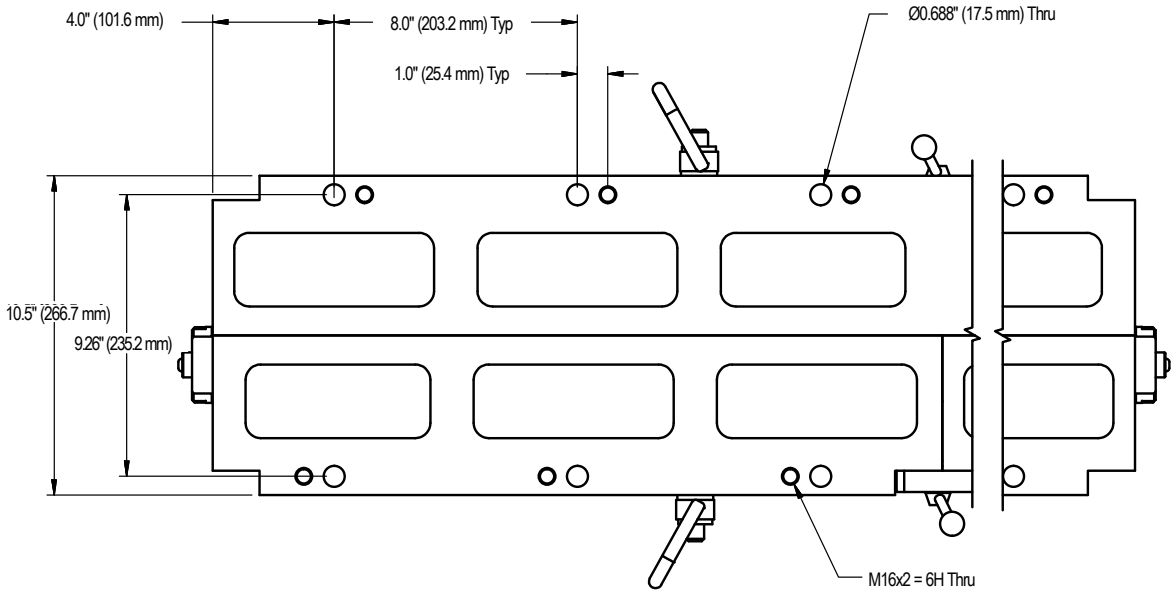
End View



End View Milling with Z Axis



Bottom View



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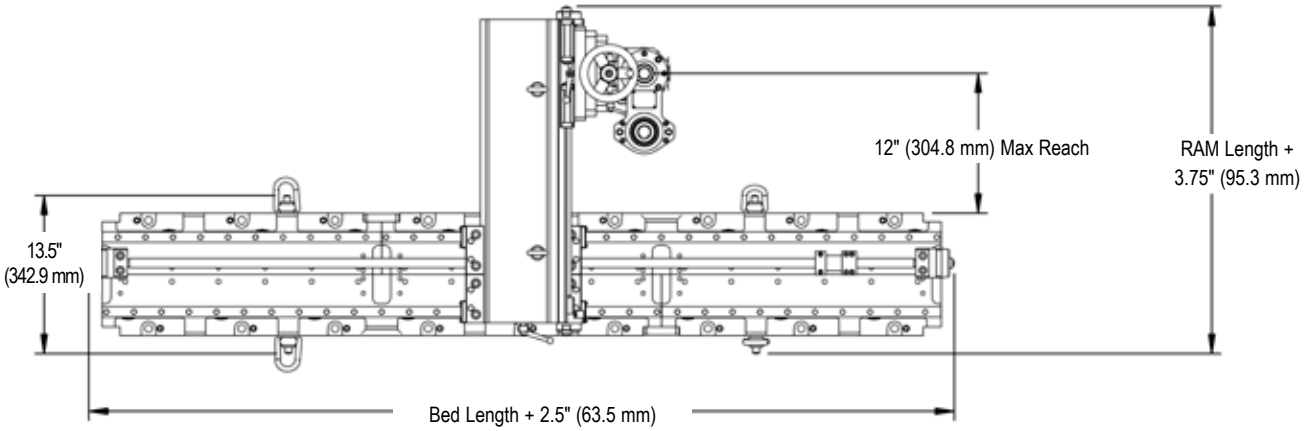
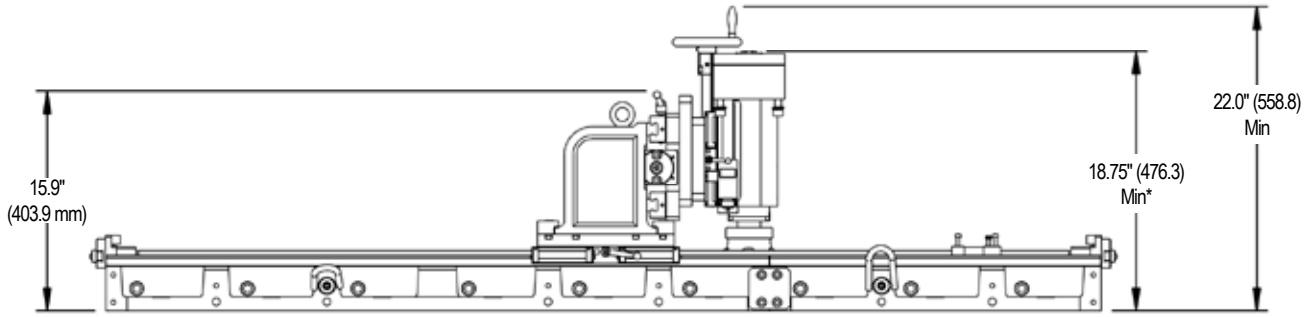
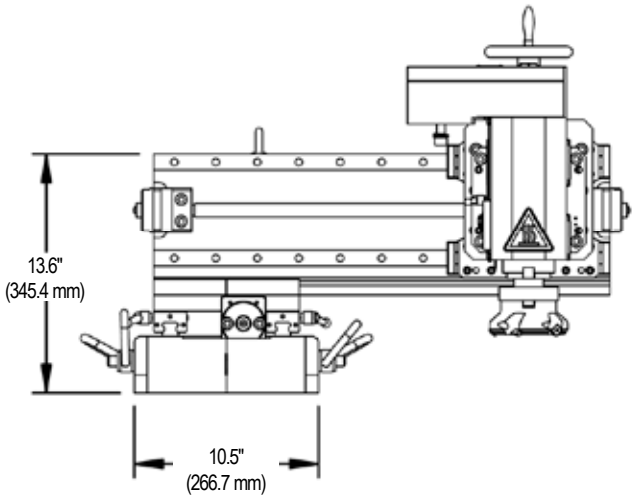
OPERATIONAL DIMENSIONS





* Minimum dimension to allow milling head with cutter to clear mounting surface



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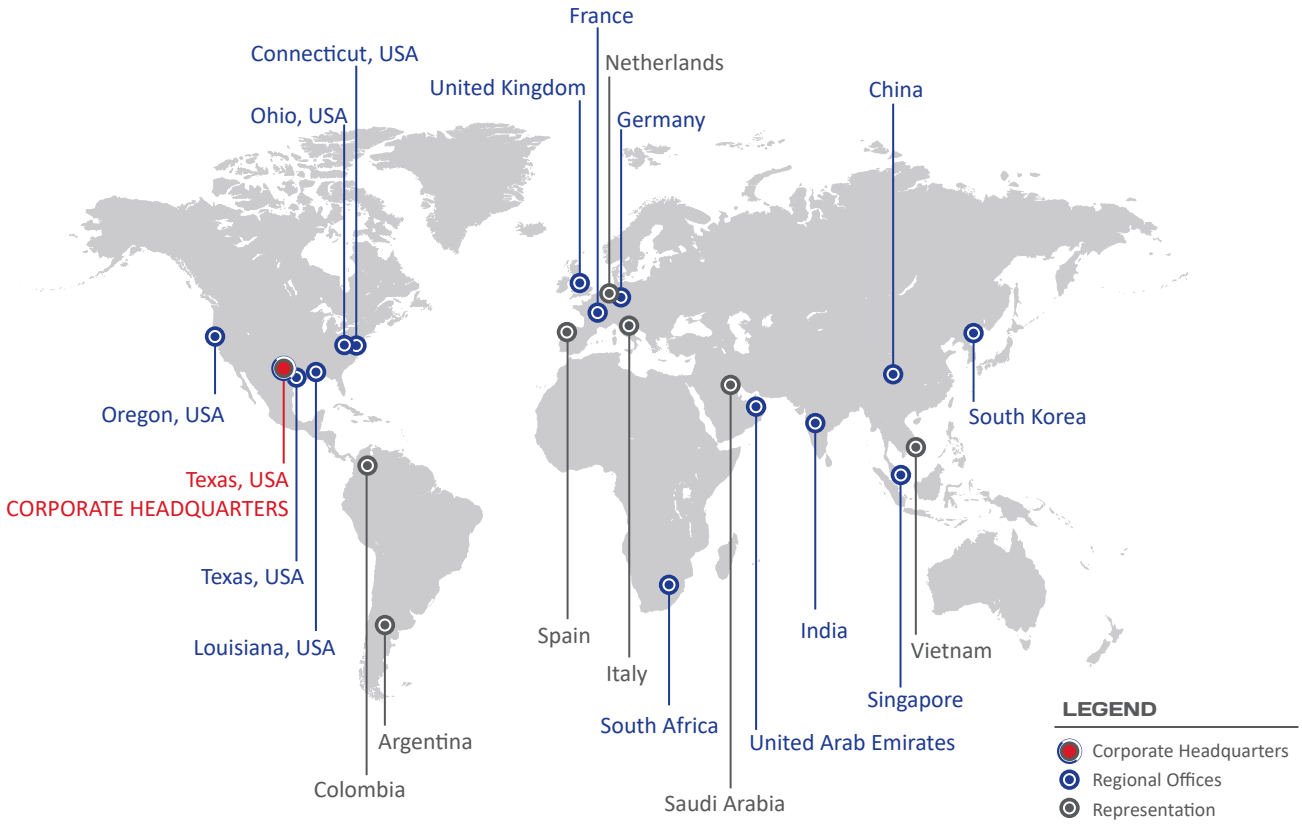

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Address: 2712 E. 2nd St, Newberg, Oregon 97132, USA
Tel: +1 503 538 2185
Email: info@sfe-brands.com

INTERNATIONAL HEADQUARTERS
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