

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 Electric with HSK

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

0.37 kW @ 120V or 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
with hand wheel

18.75 inches

476.3 mm

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)

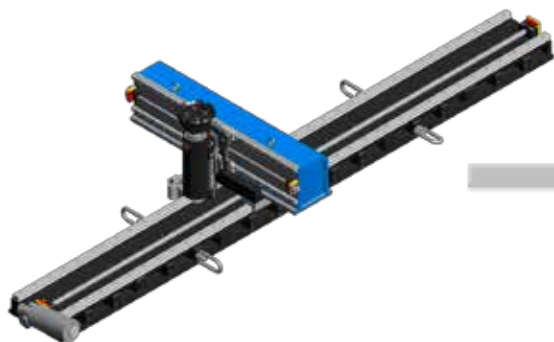
All dimensions should be considered reference. Contact your Climax Representative for precision dimensions. Specifications are subject to change without notice. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does not use lasers nor does it create hazardous materials such as gasses or dust.

TOOL CONFIGURATIONS

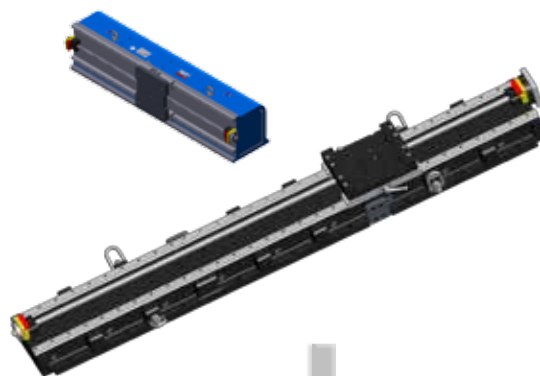
Easy Conversion from Linear to Gantry Milling

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

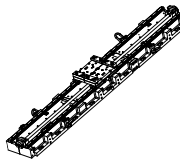
Configure your LM5200 in 13 steps:

- 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.

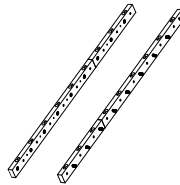
1 Base Unit

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



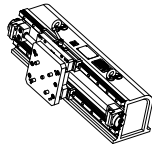
2 Gantry Kit

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)	72644

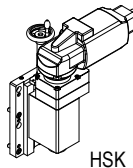
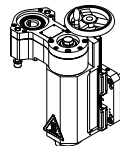


4 Shipping Container

Wooden Crate for 36 In (914.4 mm) Travel Bed	65237
Metal Container for 36 In (914.4 mm) Travel Bed	65397
Wooden Crate for 60 In (1524.0 mm) Travel Bed	65239
Metal Container for 60 In (1524.0 mm) Travel Bed	65398
Wooden Crate for 84 In (2133.6 mm) Travel Bed	65240
Metal Container for 84 In (2133.6 mm) Travel Bed	65399

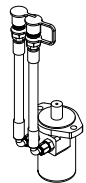
5 Milling Head Assembly

Inch #40 Taper NMTB	62399
Inch #40 Taper CATV	62732
Metric #40 Taper NMTB	62654
Metric #40 Taper CATV	62733
Hydraulic #40 HSK	65262
120V Electric #40 HSK (Motor Included)	64667
230V Electric #40 HSK (Motor Included)	66342



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, 120V and 230V	
#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, 120V and 230V	
Collet Inch ER-32, 3/4 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 2-1/2 Inch Diameter Head x 3/4 Inch Shank	20713
Cutter Fly 2-1/4 Inch (57.15 mm) Dia. Head x 20 mm Shank	31625



7 Spindle Hyd. Motors Assembly

Milling Head Assembly	Motor Displacement		Speed		Part Number
			Min RPM	Max RPM	
	in ³	cm ³	@ 1 gpm (3.79 l/min)	@ 10 gpm (37.9 l/min)	
40 Taper	3.6	59.0	85	591	62627
	5.7	93.4	34	353	62628
	7.3	119.6	29	275	62629
	8.8	144.2	21	221	62630
			@ 1 gpm (3.79 l/min)	@ 5.5 gpm (20.8 l/min)	
HSK 40A	1.21	19.8	175	1009	65094
	1.93	31.6	99	606	65095
	3.00	49.2	72	369	65096

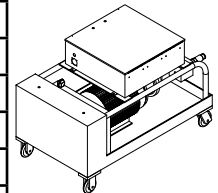
8 Milling Head Swivel Assembly

Milling Head Swivel Plate Assembly	66217
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9 Hydraulic Power Unit

HP	Voltage	Part Number
10 HP	200V-208V	65111
	230V	65109
	380V-415V	65112
	460V	65110
	575V	65114
5HP	200V-208V	66386
	230V	66387
	380V-415V	66389
	460V	66388
	575V	66390



NOTE: Drawings are for reference only, are not to scale, and may not represent actual product.

TOOL CONFIGURATIONS

10 Hose and Pendant Cable Assemblies

Hose and Cable Kit 1/2 x 20 ft (609.6 cm)	65145
Hose and Cable Kit 1/2 x 50 ft (1524.0 cm)	65151
Hose and Cable Kit 1/2 x 100 ft (3048.0 cm)	65154

11 Stand Alone Feed Control

(Stand Alone Control Panel & Pendant with Cables)

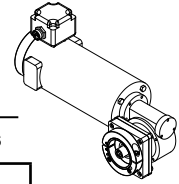
NOTE: Not needed if using a Climax Hydraulic Power Unit

Tooling	Voltage	Cable Length	Part Number
40 Taper	120V	20 ft (609.6 cm)	53398
		50 ft (1524.0 cm)	53399
		100 ft (3048.0 cm)	53400
	230V	20 ft (609.6 cm)	53401
		50 ft (1524.0 cm)	53402
		100 ft (3048.0 cm)	53403
HSK	120V	20 ft (609.6 cm)	66425
		50 ft (1524.0 cm)	66426
		100 ft (3048.0 cm)	66427
	230V	20 ft (609.6 cm)	66428
		50 ft (1524.0 cm)	66429
		100 ft (3048.0 cm)	66430

12 Electric Feed Assembly

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

Voltage	Cable Length	Part Number
120V	20 ft (609.6 cm)	64684
	50 ft (1524.0 cm)	66310
	100 ft (3048.0 cm)	66311
230V	20 ft (609.6 cm)	64743
	50 ft (1524.0 cm)	66312
	100 ft (3048.0 cm)	66313



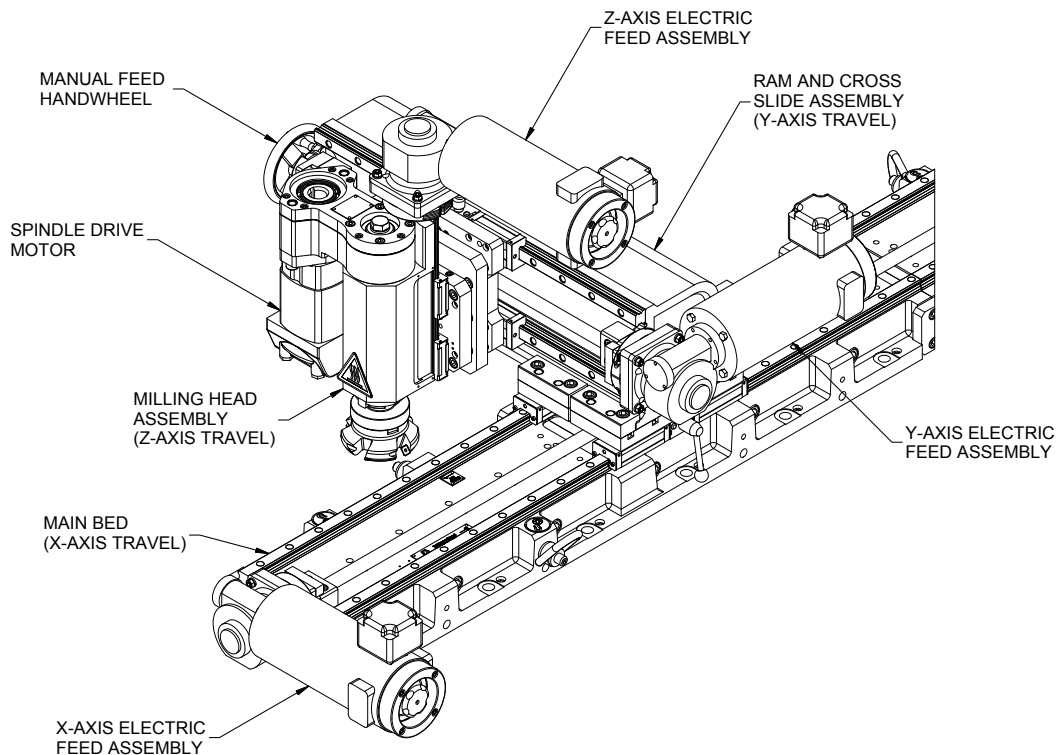
13 Z-Axis Feed Adapter

Z-Axis Feed Adapter Kit - I Axis 40 Taper

64856



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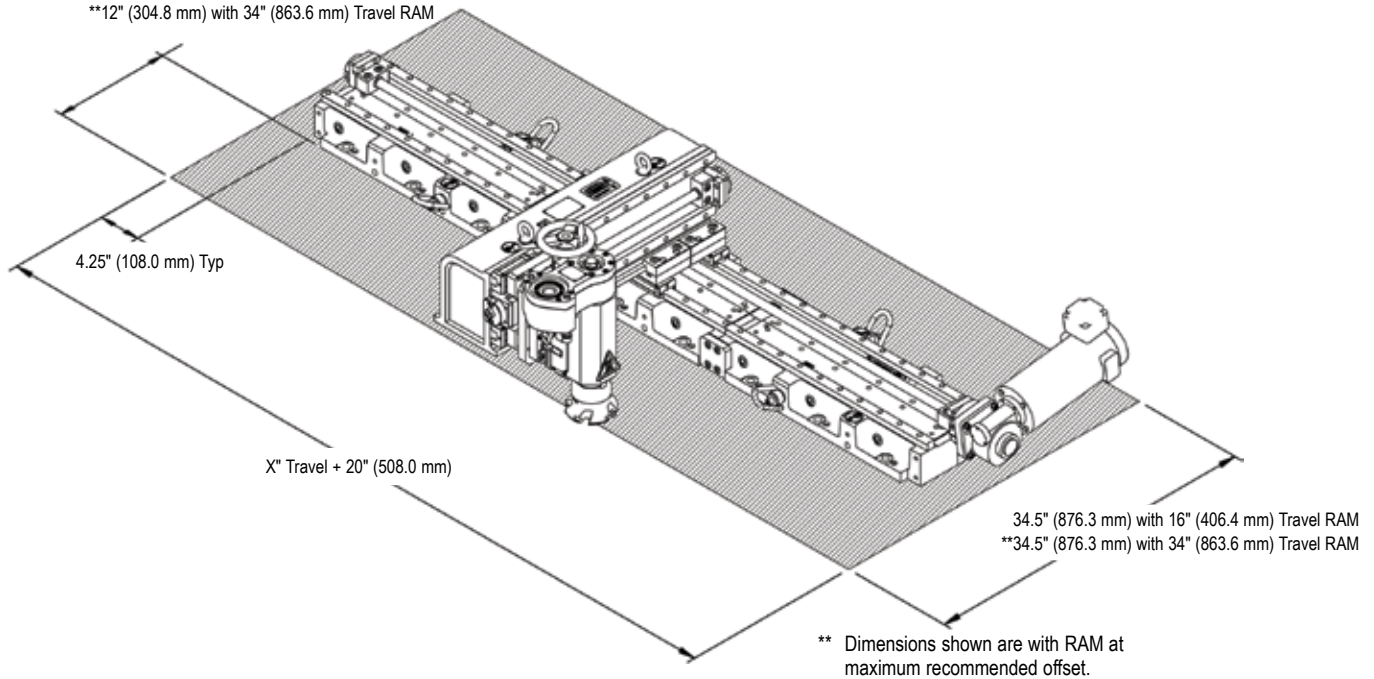


OPERATIONAL DIMENSIONS

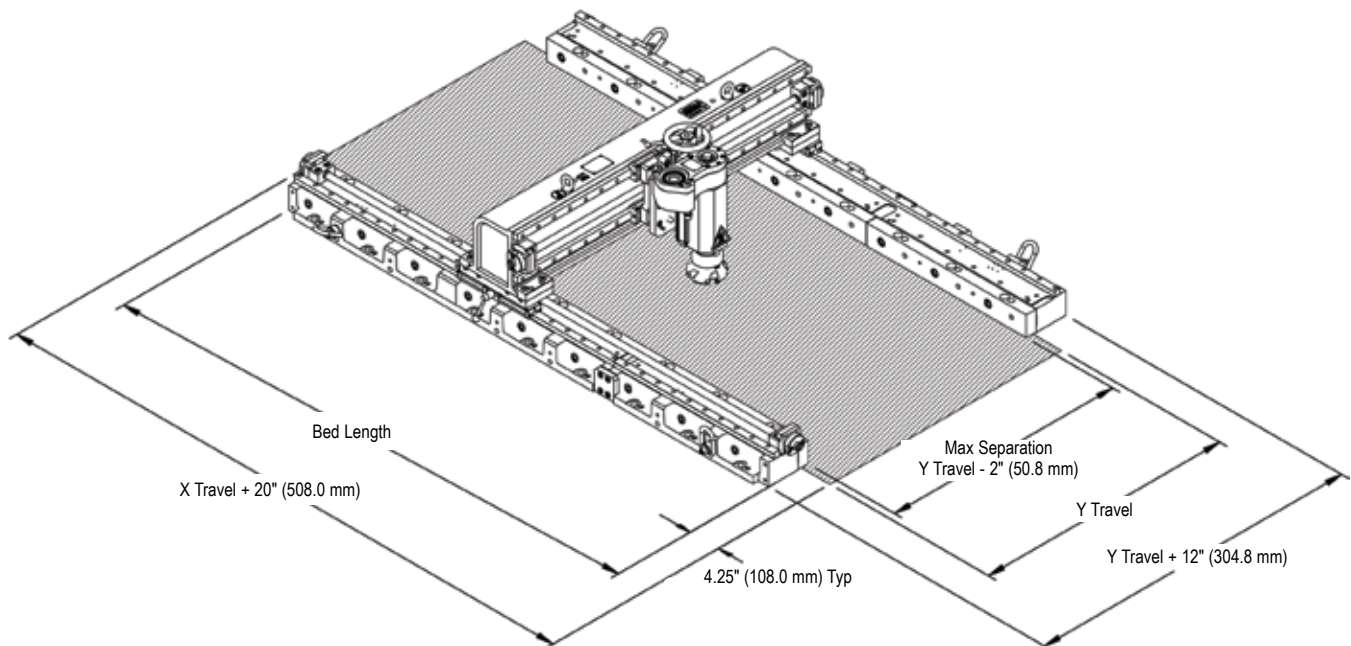
Dimensions in Inch (mm)

Milling Area Dimensions - LINEAR MILLING

12" (304.8 mm) with 16" (406.4 mm) Travel RAM
 **12" (304.8 mm) with 34" (863.6 mm) Travel RAM



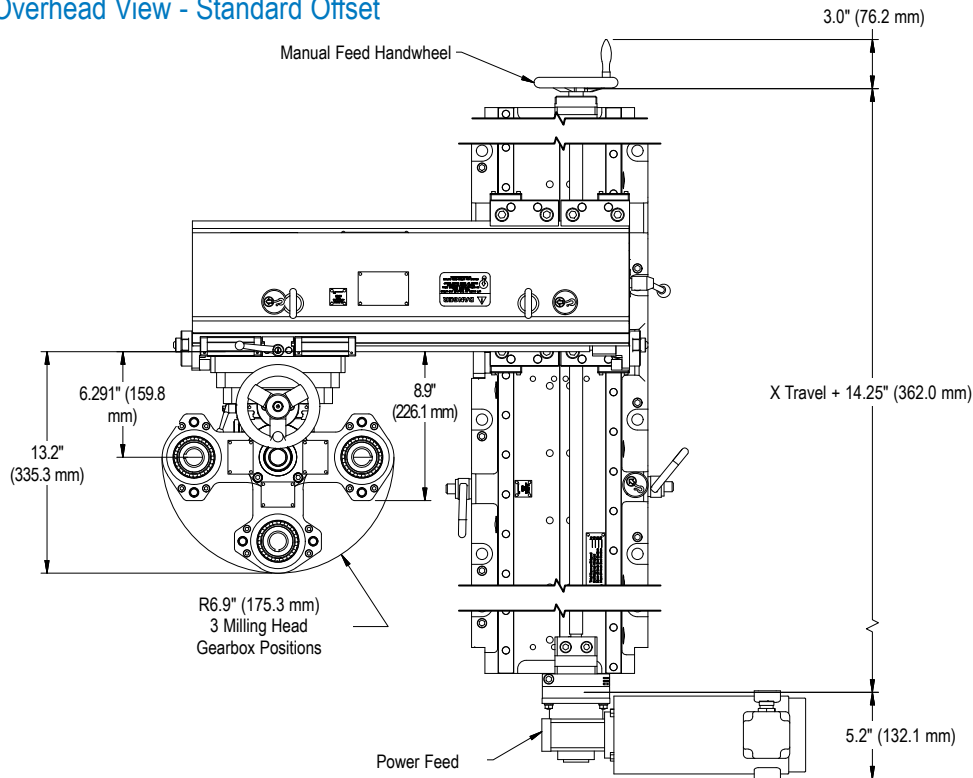
Milling Area Dimensions - GANTRY MILLING



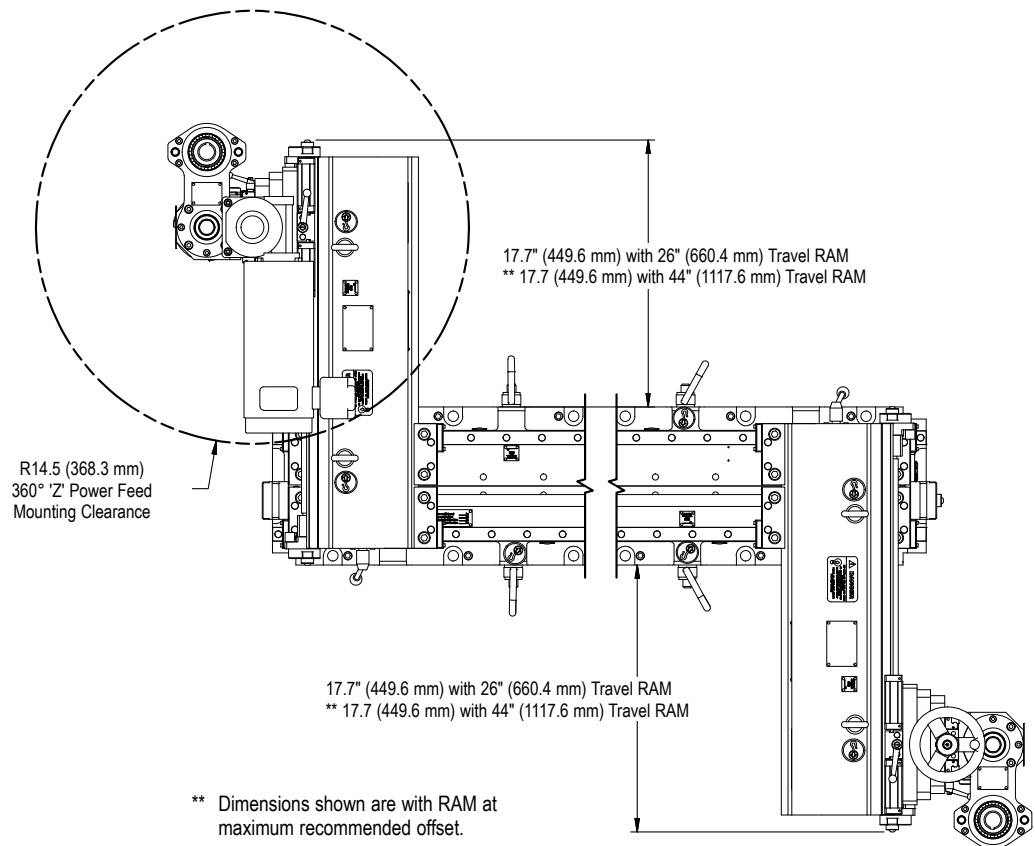
OPERATIONAL DIMENSIONS

Dimensions in Inch (mm)

Overhead View - Standard Offset



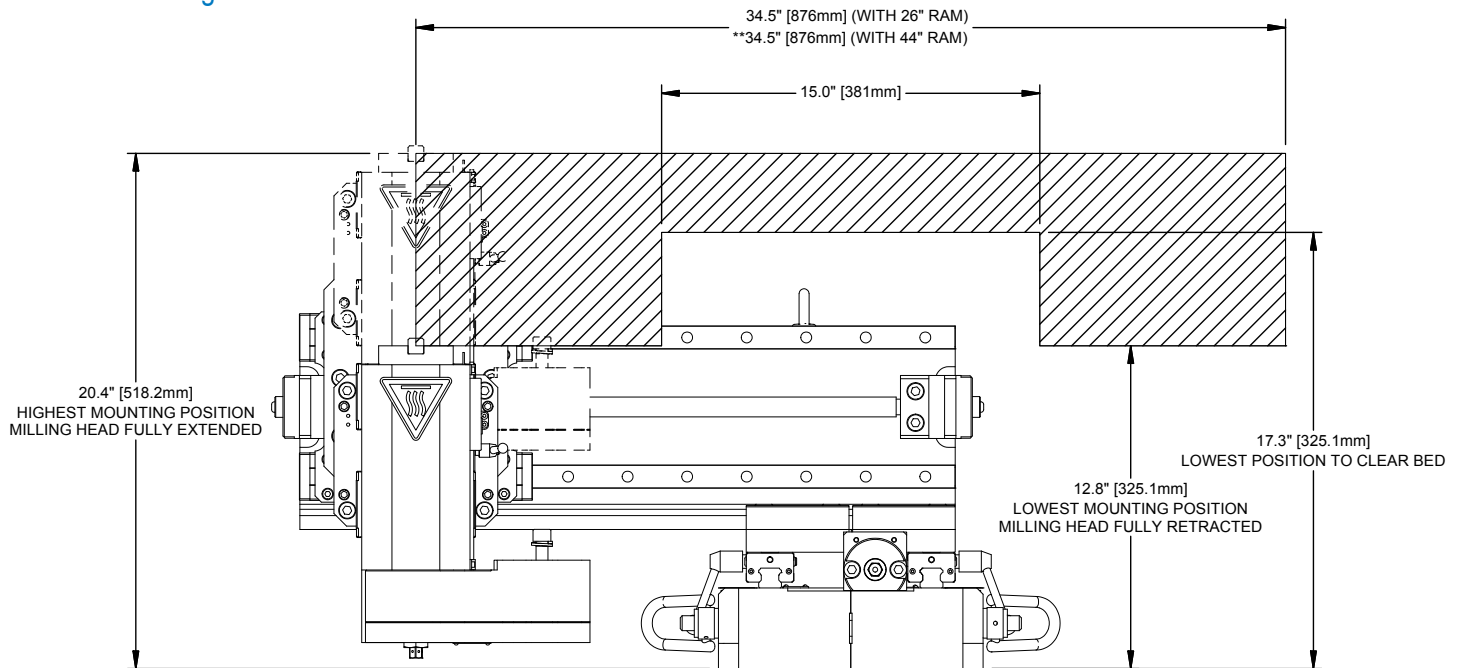
Overhead View - RAM at Maximum Recommended Offset



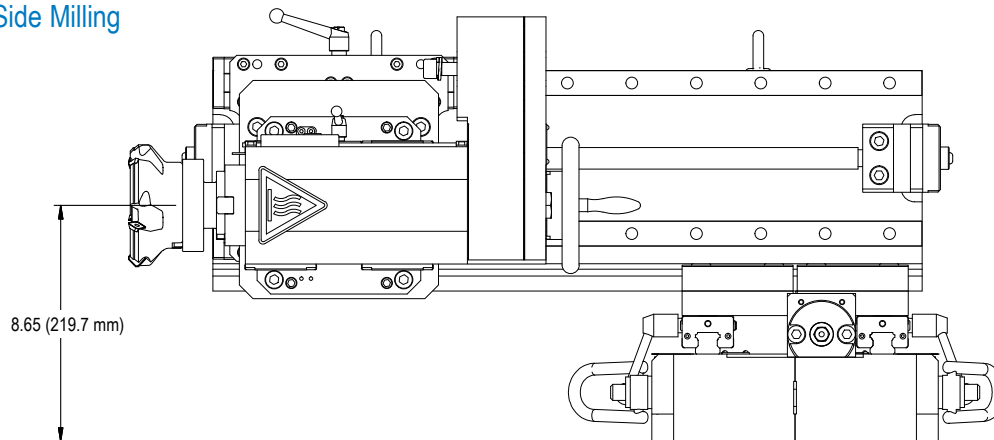
OPERATIONAL DIMENSIONS

Dimensions in Inch (mm)

Inverted Milling Area



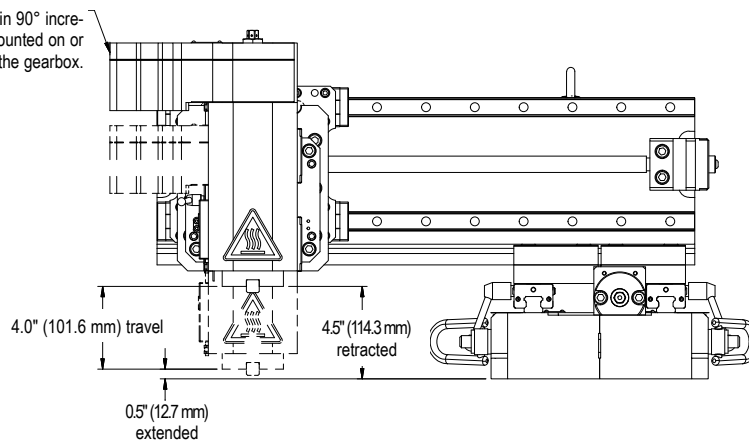
Side Milling



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

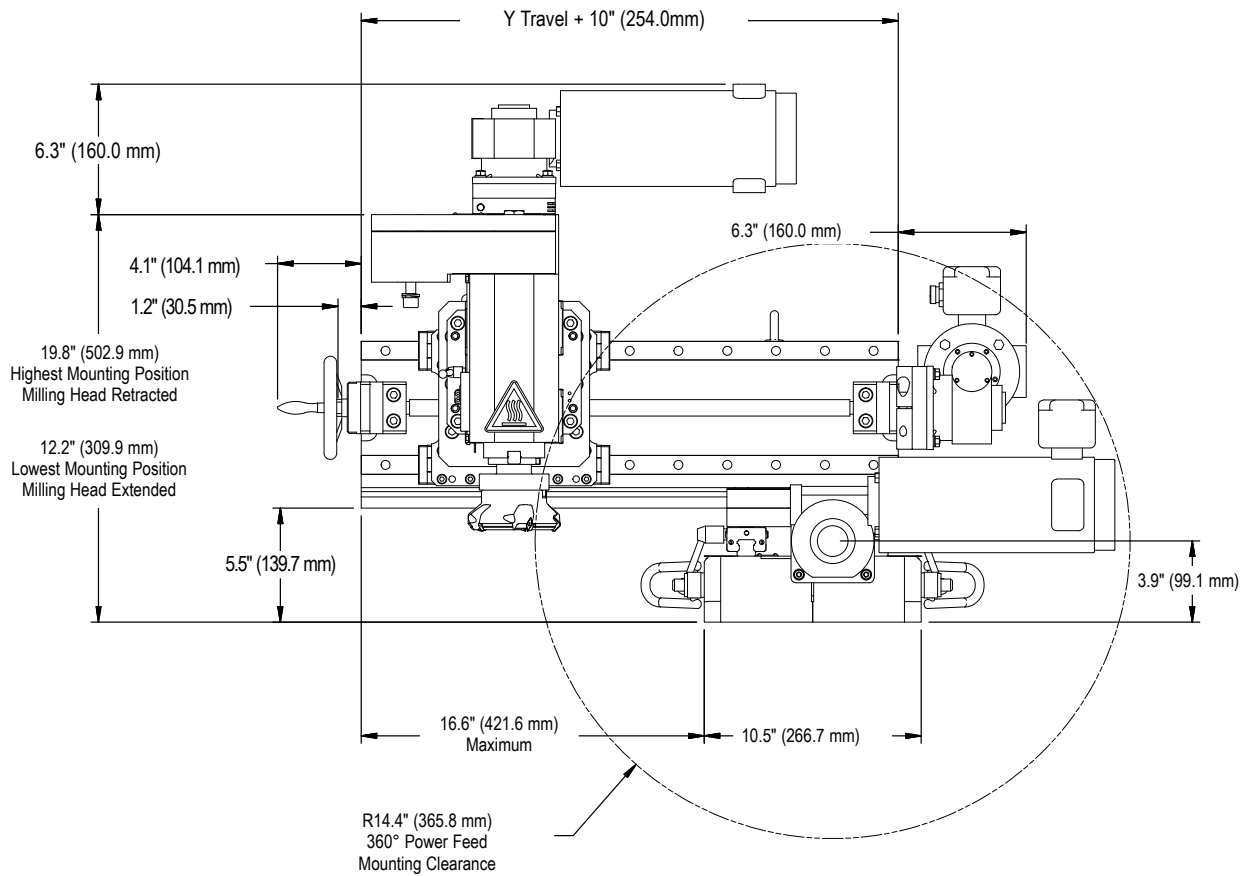
Spindle Travel

Gearbox can be rotated in 90° increments; motor may be mounted on or under the gearbox.

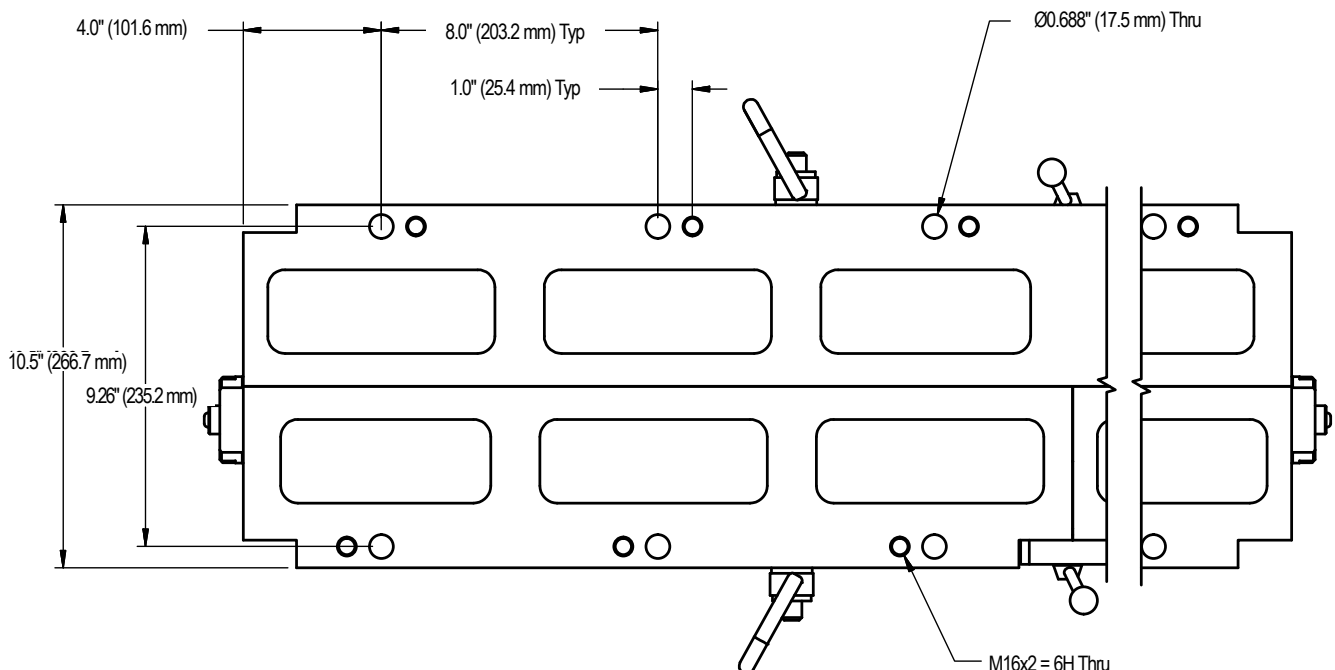


OPERATIONAL DIMENSIONS

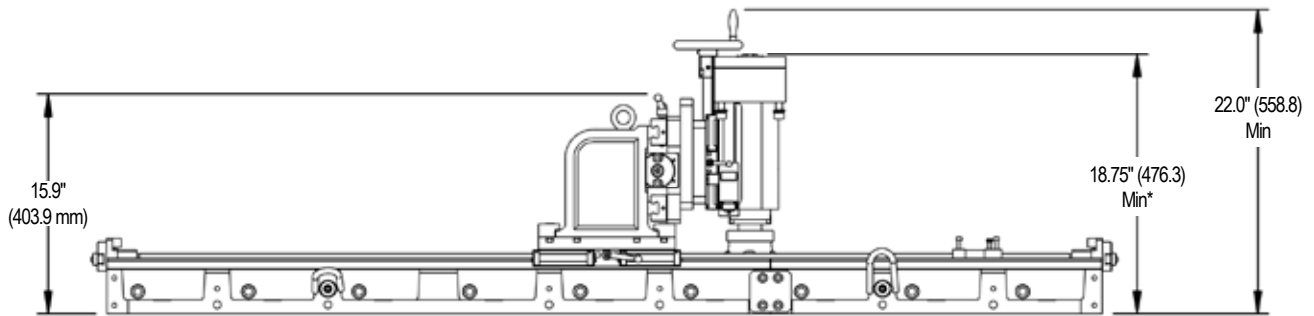
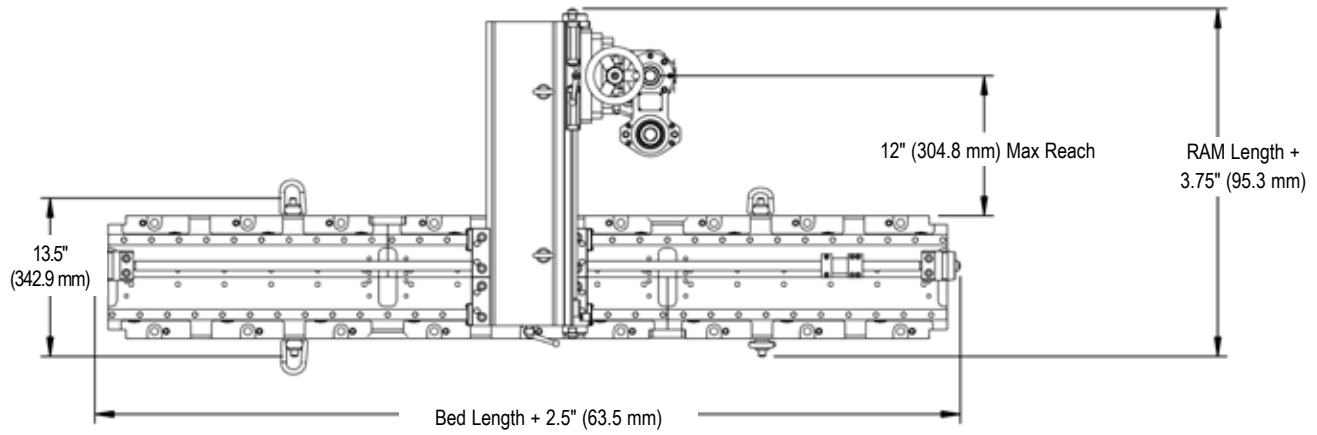
End View



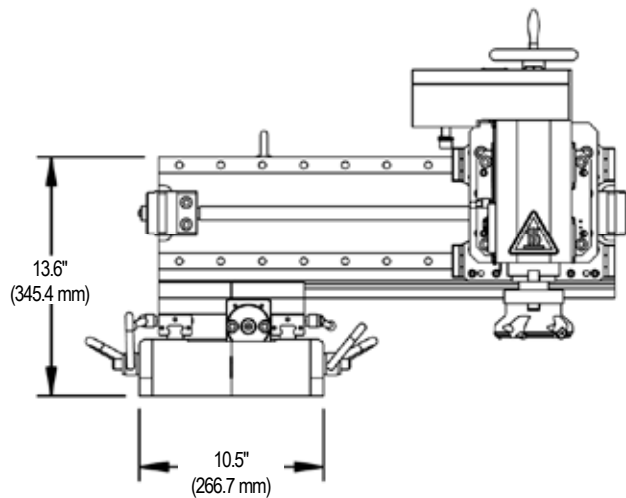
Bottom View



OPERATIONAL DIMENSIONS



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



Training at the Global Learning Center

Climax has been teaching the fundamentals and fine points of portable machine tool operation for practically as long as we've been inventing and building the tools.

At the Climax Global Learning Center situated in our corporate headquarters near Portland, Oregon, we provide training for machine tool operators on portable machine tool safety, and machine setup and operation. Trainees also receive technical tips and tools to improve operational efficiencies, with the vast majority of every program devoted to hands-on activities and skill development.



The Climax instructional team includes specialists in shipbuilding, power generation, civil engineering, bridge re-building, petrochemical and other industries.

Whether it's a regularly scheduled course at the Global Learning Center, or custom curriculum conducted at your facility, your machinists will benefit from courses developed by some of the most respected authorities in the business.

Call us today to register for a regularly scheduled class, or talk to us about how we can customize a training program for your specialized application.



CLIMAX GLOBAL LOCATIONS



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Need some refresher courses in setting up and operating your Climax machine tool?

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Rentals

With 14 worldwide rental depot locations, you are never far away from a Climax portable machine tool.

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