

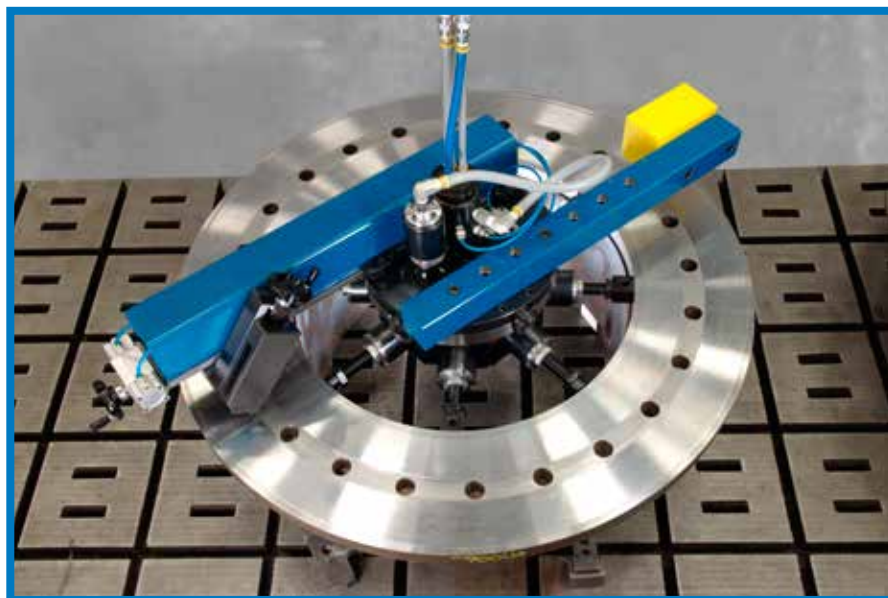
Rugged, Heavy-Duty Flange Facers

Rugged Machine Design

- Large, heavy-duty construction-grade bearings provide powerful, rigid performance throughout the entire machine facing range, even machining over bolt hole patterns.
- Oversized ring gear accommodates extremely high torque levels for challenging flange repair applications, and these machines are able to generate a phonographic finish.

Flexible and Versatile

- Both radial and axial feed is achieved with a pneumatic feedbox. Manual feeding for rapid positioning is also possible.
- Feed rate is adjusted remotely at the pneumatic conditioning unit, providing the ultimate in operator safety and the flexibility for feed rate adjustments even during machining operations.
- Infinitely variable feed rates from 0.002-0.035 in. (0.05 - 0.89 mm)/rev provides operational flexibility.
- Reversible feed box can be mounted to provide either radial or axial feed.
- Turning and counterweight arms can both be adjusted for the desired swing clearance and machining range.
- Can be mounted both OD and ID



- Tool head can be rotated a full 360° (with ID chuck only) providing the ability to create a variety of chamfers, O-Ring grooves, lens rings and other angular surfaces as needed.
- Pneumatic and hydraulic drive option available.
- Chucking system can be removed to allow the flange facer to be face-mounted.
- Grinding option available for fine finish work.

Quick and Easy Setup

- Modular design allows many of the machine components to be removed to facilitate easier setup and storage.
- Unique chucking system minimizes parts to greatly simplify machine setup and tear down.
- Quick-adjust leveling feet make setup quick and easy.



SPECIFICATIONS

	US	Metric
Machine Performance Ranges		
ID: Mounting range	20 - 50 inches	508.0 - 1270.0 mm
Facing diameter range	20 - 50 inches	508.0 - 1270.0 mm
Grinding diameter range	22 - 50 inches	558.8 - 1270.0 mm
Swing diameter @ minimum with feedbox on end of arm	40 inches	1016.0 mm
Radial tool slide travel	12 inches	304.8 mm
Axial tool head travel	4 inches	101.6 mm
Depth required inside bore for ID chuck (± 0.25 inches (± 6.4 mm) is travel of leveling foot)	2.75 ± 0.25 inches	69.9 ± 6.4 mm
Feed Rate	0.002 - 0.035 in/rev	0.051 - 0.889 mm/rev
OD: Mounting range *	42 - 57.1 inches	1066.8 - 1450.3 mm
Facing diameter range	20 - 50 inches	508.0 - 1270.0 mm
Grinding diameter range (w/ feed box)	22 - 43 inches	558.8 - 1092.2 mm
Grinding diameter range (w/o feed box)	22 - 48 inches	558.8 - 1219.2 mm
Refer to ID for specifications not listed		

Rotational Drive System

Drive type	Pneumatic or hydraulic drive with pinion and internal ring gear	
Pinion gear to ring gear reduction	5.1: 1	
Single point turning speed range:		
Pneumatic	7 - 29 RPM	
Hydraulic (based on motor choice)	3.5 - 36 RPM	
Grinding speed ranges (with reducer):		
Pneumatic	0.006 - 0.25 RPM	
(rapid only, not in cut)	(58 ipm @ 72 inch dia.)	
Hydraulic (based on motor choice)	0.011 - 0.75 RPM	
(1473.2 mm/min @ 1828.8 mm dia.)		
Power input requirements		
Pneumatic - 3.5 Hp (2.6 kW)	50 ft ³ /min @ 90 psi	1.53 m ³ /min @ 620 kPa
Hydraulic	10 gpm @ 1200 psi	37.9 L/min @ 8273 kPa

Measures

For machine dimensions, please refer to dimensional drawings

ID machine weight, approximate	735 lbs	333.4 kg
OD machine weight, approximate	925 lbs	419.6 kg
ID Crate dimensions (WxDxH)		
Wood, approx.	62.5 x 28 x 27.5 in	1588 x 711 x 699 mm
Metal, approx.	60.2 x 25 x 28.5 in	1529 x 635 x 724 mm
OD crate dimensions (WxDxH)		
Wood, approx.	40 x 38.5 x 20 in	1016 x 978 x 508 mm
Metal, approx.	46.5 x 25.3 x 18.3 in	1181 x 643 x 465 mm

Testing Data

Flatness at 50 inch (1270 mm) diameter: .0042 inches (.11 mm)

On a dedicated fixture made of A-36 steel in a controlled environment with single point machine, after warm-up.

* OD mount minimum arm swing is 40 inches (1016 mm) diameter. An additional customer supplied structure will be required to chuck below the minimum swing diameter

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

The FF6200 can be configured to meet your specific machining needs.

To configure your FF6200

To configure your machine, please follow these steps.

- 1 Select a Base Package
- 2 Select a Feed Assembly
- 3 Select a Drive Motor Assembly
- 4 Select a Hydraulic Motor
- 5 Select an Optional Grinder Attachment
- 6 Select a Hydraulic Power Unit
- 8 Select a Turning Arm Assembly
- 9 Select a Counterweight Assembly
- 0 Select a Chuck Assembly
- 10 Select a Shipping Container

1 Base Package

Rotary table, tool kit, operator's manual **58182**

2 Feed Assembly

Pneumatic Feed Assembly with Remote Air Control **58671**

3 Drive Motor Assembly

Pneumatic Motor and Drive Assembly **58189**

(Pneumatic drive system includes: Pneumatic motor w/fittings and mount, rotary union, hoses, feed trip valve, cam, and pneumatic conditioning unit with low pressure drop out.)

Hydraulic Drive Assy with Feed Conditioning Unit **58191**

****DOES NOT INCLUDE MOTOR ****

(Hydraulic drive system includes: Hyd drive system includes: Hyd motor mount, rotary union, feed trap valve, cam, and feed pneumatic conditioning unit)

4 Hydraulic Motor

11.3 cu in (185.2 cu cm), 7 - 36 RPM **58331**

14.4 cu in (231.1 cu cm), 5.5 - 29 RPM **59911**

17.9 cu in (293.3 cu cm), 4.5 - 22 RPM **59912**

22.6 cu in (370.3 cu cm), 3.5 - 17 RPM **58332**

5. Optional Grinder Attachment

Grinding Attachment for Pneumatic Table Drive Motor **62537**

Grinding Attachment for Hydraulic Table Drive Motor **62570**

Grinder Rotational Gearbox

Slow Rotation Gearbox for Pneumatic **62542**

Motor (gear ratio 160:1)

Slow Rotation Gearbox for Hydraulic Motor **69753**

(gear ratio 160:1)

Grinder Tooling

Grinding Wheel 1.5 in (38.1 mm), CBN 125 Grit **62633**

Grinding Wheel 2.25 in (57.2 mm), CBN 125 Grit **62634**

5 Hydraulic Power Unit

For Hydraulic Drive Machine

Single Pump (single pointing only)

HPU 230V, 10 HP (7.5 kW) single **63264**

HPU 380V, 10 HP (7.5 kW) single **63265**

HPU 415V, 10 HP (7.5 kW) single **63266**

HPU 460V, 10 HP (7.5 kW) single **63267**

HPU 575V, 10 HP (7.5 kW) single **63268**

5 Hydraulic Power Unit, continued Single Pump with Air (for use with grinder)

HPU 230V, 10 HP (7.5 kW) single with air **62759**

HPU 380V, 10 HP (7.5 kW) single with Air **62760**

HPU 415V, 10 HP (7.5 kW) single with Air **62761**

HPU 460V, 10 HP (7.5 kW) single with Air **62762**

HPU 575V, 10 HP (7.5 kW) single with Air **62763**

Pendant Cable, Hose

0.5 in (12.7 mm) Hose and Pendant Cable Assy, 20 ft (6.1 m) **62799**

0.5 in (12.7 mm) Hose and Pendant Cable Assy, 30 ft (9.1 m) **62800**

0.5 in (12.7 mm) Hose and Pendant Cable Assy, 50 ft (15.2 m) **62801**

0.5 in (12.7 mm) Hose and Pendant Cable Assy, 100 ft (30.5 m) **62802**

6 Turning Arm Assembly

Turning Arm Assembly with Single Point Tool Head **57875**

7 Counterweight Assembly

Counterweight Assembly **58177**

8 Chuck Assembly

ID Chuck Assembly **57949**

OD Chuck Assembly **61496**

ID/OD Chuck Assembly **61495**

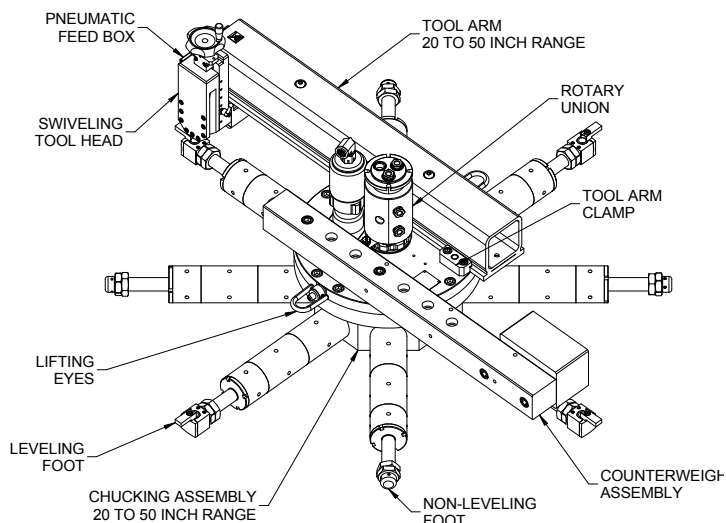
9 Shipping Container

Wooden Crate for ID Mount Machine **58339**

Metal Container for ID Mount Machine **59305**

Wooden Crate Set for ID/OD Mount Machine **62641**

Metal Container Set for ID/OD Mount Machine **61722**



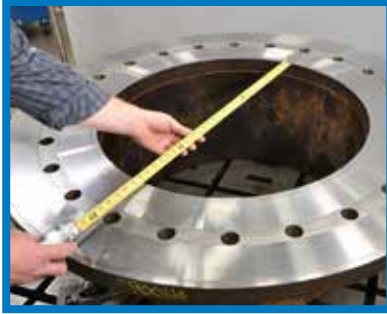
Overall Machine View

SETUP AND OPERATION

A Fast Eight-Step Process

This model is so fast and easy to set up that an experienced operator can usually mount the machine into the flange bore, align it, and start cutting in less than an hour.

- 1** Measure the bore diameter. This will be used to determine the leg length.



- 5** Set machine onto flange using setup fingers. Lightly tighten leveling feet in the flange.



- 2** Select the appropriate leg length and foot.



- 6** Extend feet into flange. Indicate, level and tighten leveling feet and stationary feet.



- 3** Install setup fingers.



- 7** Install tool bit. Connect to power.



- 4** Tighten legs.

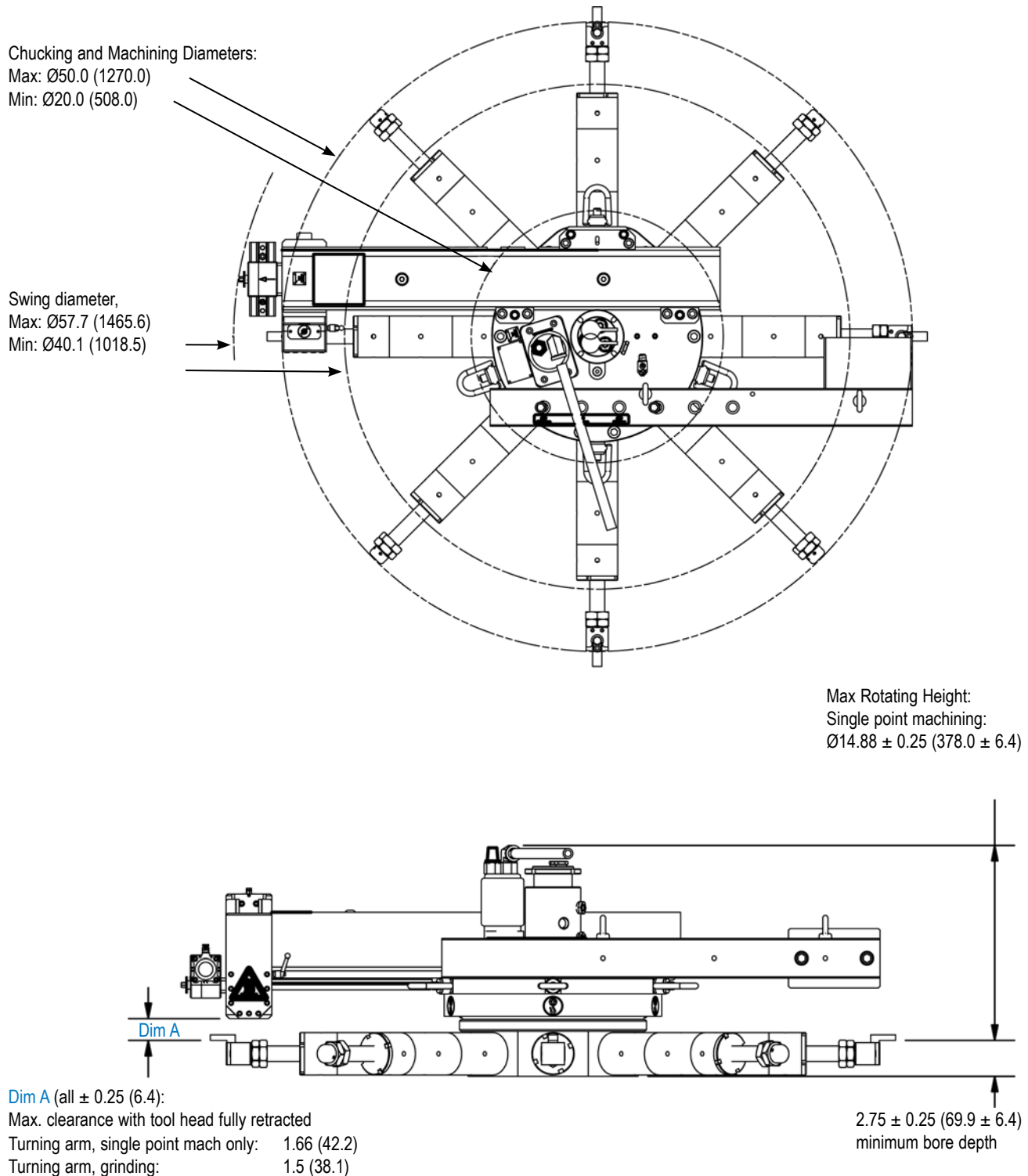


- 8** You are ready to begin machining!



Dimensions in Inch (mm)

ID Chuck Assembly

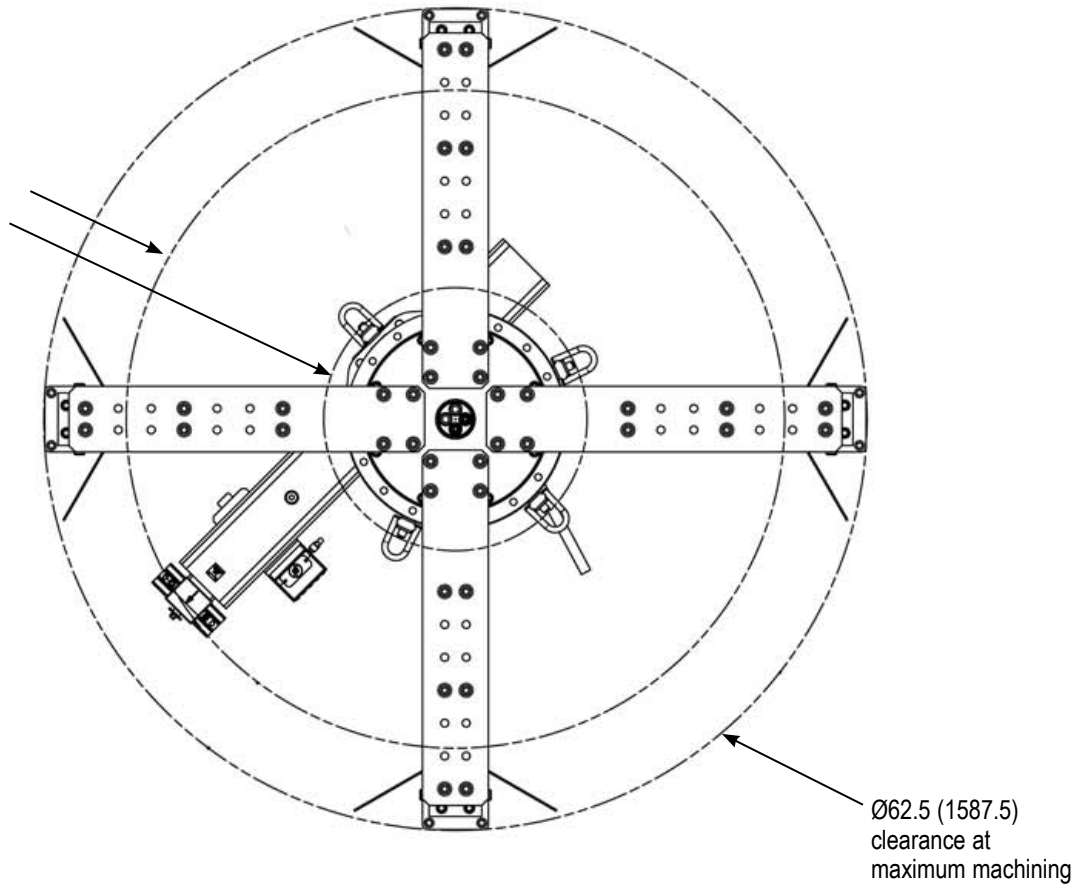


OPERATIONAL DIMENSIONS

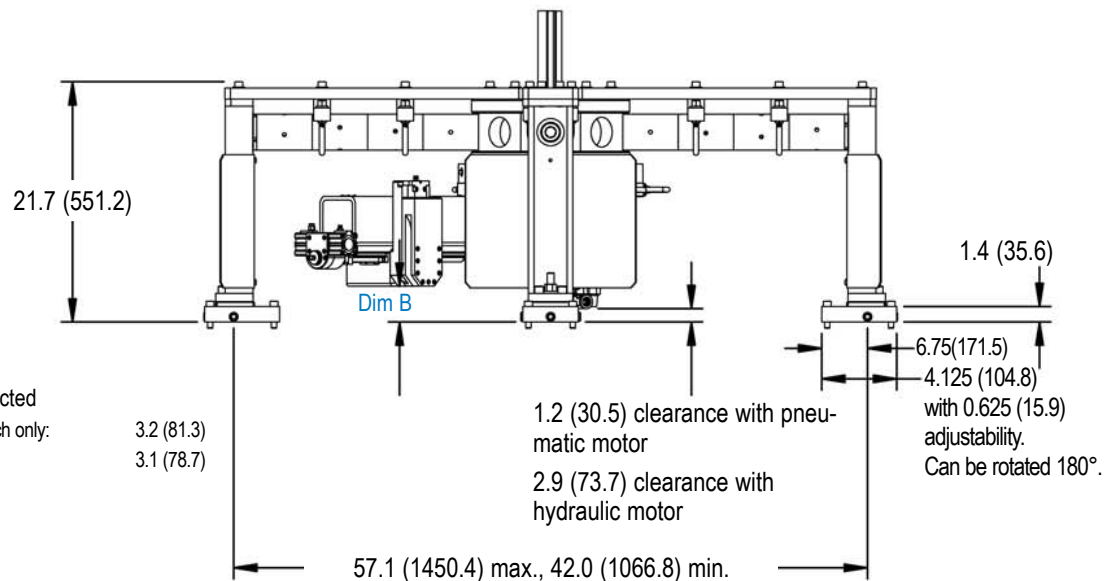
Dimensions in Inch (mm)

OD Chuck Assembly

Machining Diameter:
Max: Ø50.0 (1270.0)
Min: Ø20.0 (508.0)



Dim B:
With tool head fully retracted
Turning arm, single point mach only:
Turning arm, grinding:



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.



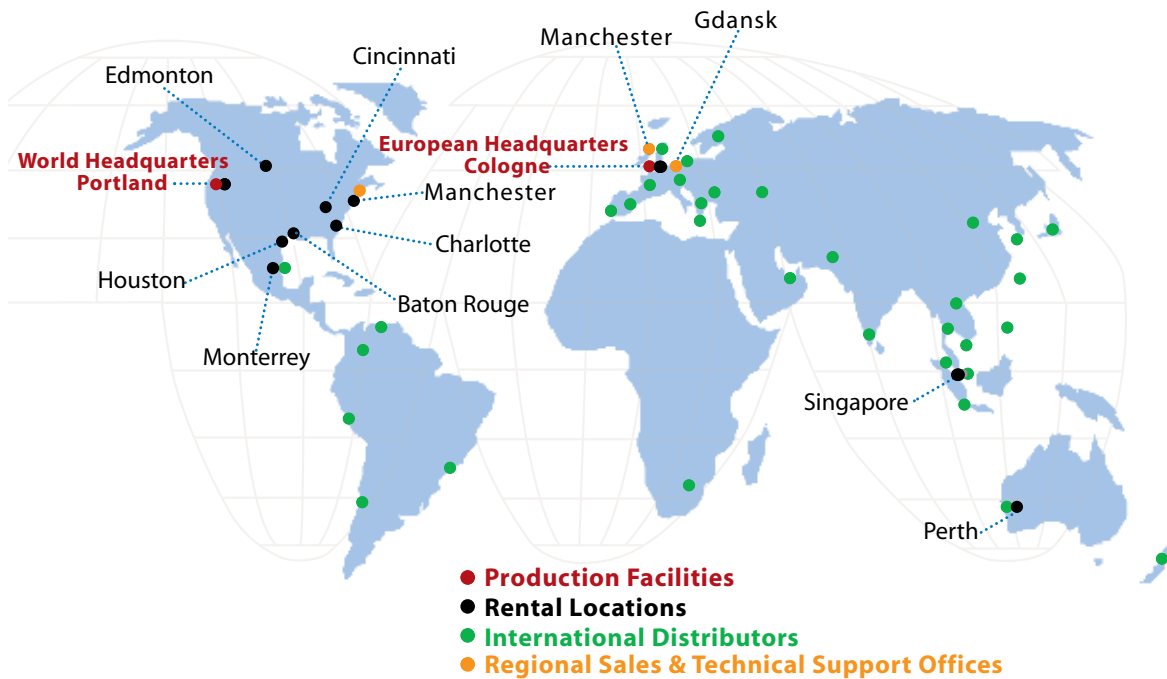
The Climax instructional team includes specialists in shipbuilding, power generation, civil engineering, bridge re-building, petrochemical and other industries.

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.

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