

## Powerful, rigid, high performance machine with easy setup and handling.

### Quick and Easy Setup

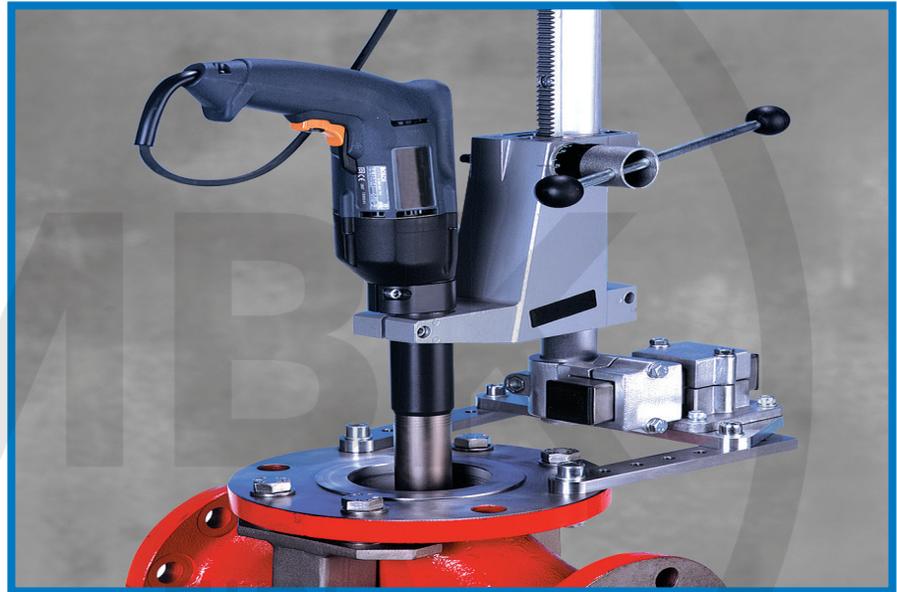
- Quickly change between electric and pneumatic by simply loosening a single clamping bolt.
- The adhesive on the media discs is specifically formulated to provide a firm hold while in use, but are easy to remove after use.

### Rigid

- Thicker Planet Wheels and webbed design provides increased rigidity, allowing consistent flatness regardless of grinding pressure.

### Versatile

- Using an odd number of Planet Arms ensures constant contact between all five arms and the seat, which allows you to grind perfectly flat seats.
- Planet Arm bearings are sealed, preloaded and preset to be within .000079 inches (.002mm) of each other on a flat plane.
- When changing the grinding head, the bearings don't need to be adjusted.
- All grinders come with a complete set of diameters and grit of abrasives; 800-1200 pieces included.



447-3377

oficina@vendo.com.pe

# SPECIFICATIONS

US

Metric

## Operating Ranges:

Working range (nominal diameter)

Minimum	3 inches	80 mm
Maximum (VM2350)	14 inches	350 mm
Maximum (VM2500)	20 inches	500 mm
Maximum (VM2600)	24 inches	600 mm

Submerging Depth	Maximum (VM2350)	24 inches	600 mm
	Maximum (VM2500,2600)	31 inches	800 mm
	Optional	38 inches	1000 mm

Power	Electric	1.3 Hp	1.0 kW
	Pneumatic	0.7 Hp	0.55 kW

Variable spindle speed	Electric	30 - 550 rev/min	30 - 550 rev/min
	Pneumatic	30 - 400 rev/min	30 - 4000 rev/min

Spindle Torque	Permanent	19 ft-lbs	26 N•m
	Max	80 ft-lbs	108N•m

## Weight

VM2350

Basic machine without tooling	29 lbs.	13 kg
Machine Case	77 lbs	35 kg
Accessory Case	42 lbs	19 kg

VM2500

Basic machine without tooling	31 lbs	14 kg
Machine Case	80 lbs	39 kg
Accessory Case	71 lbs	36 kg

VM2600

Basic machine without tooling	31 lbs	14 kg
Machine Case	80 lbs.	39 kg
Accessory Case	71 lbs	36 kg

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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.

# MACHINE OVERVIEW

## VM2350, VM2500, VM2600 Globe Valve Machines Overview

Quick coupling for changing the motor

Scale for grinding pressure at the upper housing.  
The grinding pressure may be changed during the operation.

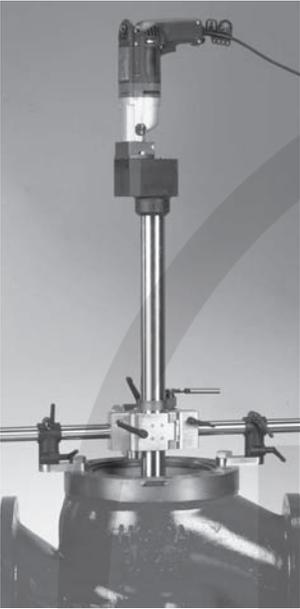
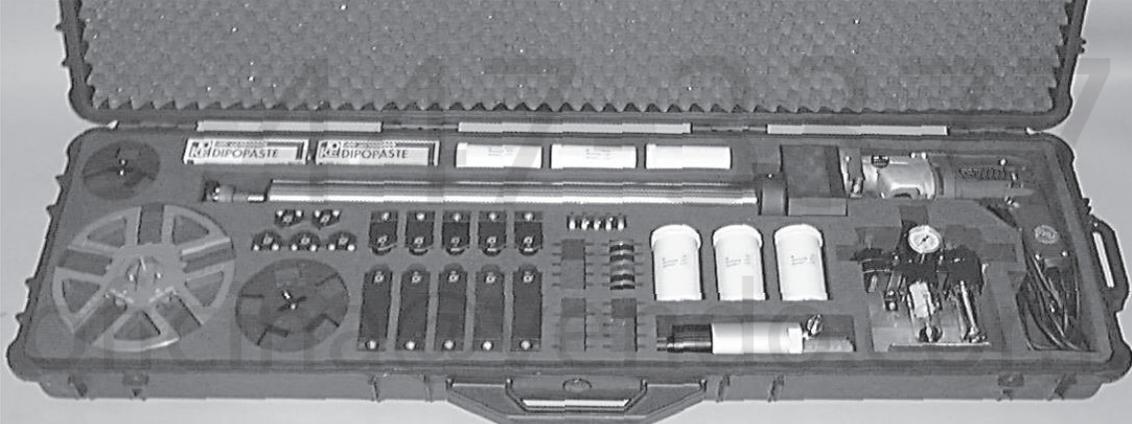
Universal mounting device for valves with or without top flange.

Planet grinding wheel

Grinding spindle with self aligning coupling

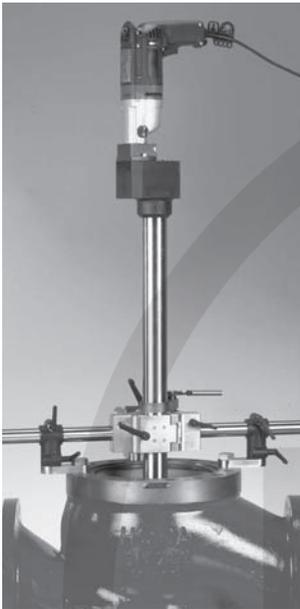
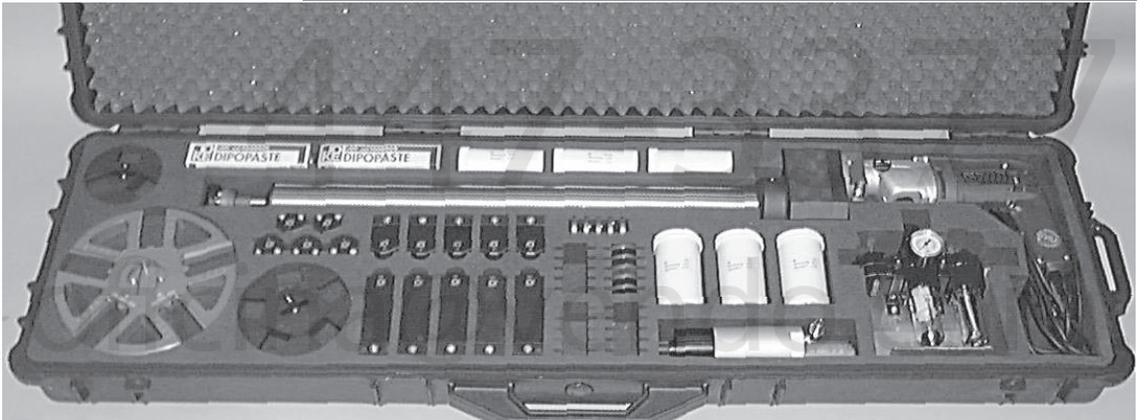
**Maximum submerging depth:**  
 24" (610 mm) (VM2350)  
 31" (787 mm) (VM2500, VM2600)  
 39" (991 mm) (Option)

# TOOL CONFIGURATIONS

<b>Model VM2350 (Seat Diameter Range: 3"-14" (80 mm-350 mm))</b>	
<b>P/N</b>	<b>Description</b>
	<p><b>Globe Valve Grinder VM2350S</b> Nominal working diameter 3" to 14" (80 mm to 350 mm) Submerging depth 24" (600 mm). Included Components:</p> <ul style="list-style-type: none"> <li>• 3 sets of planet arms (5 arms/set) 1.2"(30 mm), 2.4"(60 mm), 4.5"(115 mm) in length</li> <li>• Set of 3 planet wheels 3.9" (100 mm), 5.3" (135 mm), 8.7" (220 mm) in diameter.</li> <li>• 1 set of 5 grinding discs 2.0" (50 mm) in diameter.</li> <li>• Integrated grinding pressure detection with a scale at the upper machine housing.</li> <li>• 1 set of clamping equipment for mounting the machine on valves with and without top flange.</li> <li>• Start up set of abrasives grain 100 and 500.</li> <li>• 1 set of 5 CBN grinding disks 2.0" (50 mm) in diameter.</li> <li>• 1 set of tooling.</li> <li>• Carrying cases with foam inlet for the machine and the accessories.</li> </ul>
	<b>240-00S-S12 VM2350S with electric motor 230 V / 50 Hz</b>
	<b>240-00S-S13 VM2350S with pneumatic motor</b>
	<b>240-00S-S14 VM2350S with electric motor 230V / 50 Hz and pneumatic motor</b>
	<b>240-00S-S15 VM2350S with electric motor 115 V / 60 Hz</b>
	<b>240-00S-S16 VM2350S with electric motor 115V / 60 Hz and pneumatic motor</b>
	<p><b>Globe valve grinding and lapping machine VM2350</b> Machine like VM2350S but with the following <b>additional lapping equipment</b>:</p> <ul style="list-style-type: none"> <li>• 2 sets (5 discs/set) of lapping disks 1.2" (30 mm) and 2.0" (50 mm).</li> <li>• Lapping paste 10 and 30 µm.</li> </ul>
	<b>240-00S-S02 VM2350 with electric motor 230 V / 50 Hz</b>
	<b>240-00S-S03 VM2350 with pneumatic motor</b>
	<b>240-00S-S04 VM2350 with electric motor 230V / 50 Hz and pneumatic motor</b>
	<b>240-00S-S05 VM2350 with electric motor 115 V / 60 Hz</b>
	<b>240-00S-S06 VM2350 with electric motor 115V / 60 Hz and pneumatic motor</b>
	

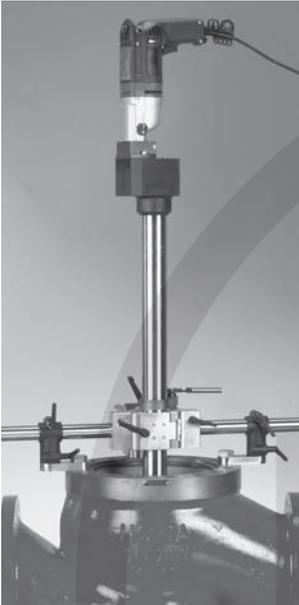
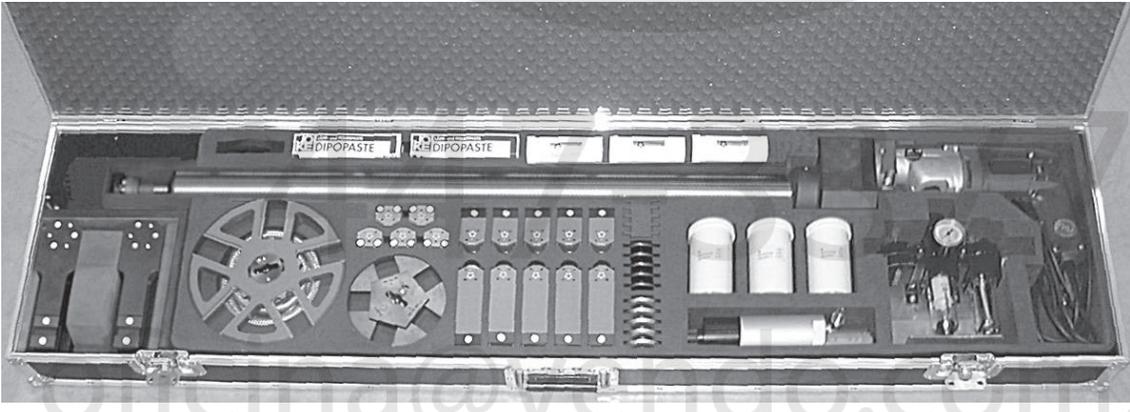
Pneumatically driven machines also require the accessory pneumatic motor maintenance kit

# TOOL CONFIGURATIONS

<b>Model VM2500 (Seat Diameter Range: 3"-20" (80 mm-500 mm))</b>	
<b>P/N</b>	<b>Description</b>
	<p><b>Globe Valve Grinder VM2500S</b>            Nominal working dia 3" to 20" (80 mm to 500 mm)            Submerging depth 31" (800 mm).            Included Components:</p> <ul style="list-style-type: none"> <li>• 3 sets of planet arms (5 arms/set) 1.2" (30 mm), 2.4" (60 mm), 4.5" (115 mm) in length.</li> <li>• Set of 4 planet wheels 3.9" (100 mm), 5.3" (135 mm), 8.7" (220 mm), 15.0" (380 mm) in diameter</li> <li>• 2 sets (5 discs/set) of grinding discs 2.0" (50 mm) and 3.2" (80 mm) in diameter.</li> <li>• Integrated grinding pressure detection with a scale at the upper machine housing.</li> <li>• 1 set of clamping equipment for mounting the machine on valves with and without top flange.</li> <li>• Start up set of abrasives grain 100 and 500.</li> <li>• 1 set (5 discs/set) of CBN grinding disks 2.0" (50 mm) in diameter.</li> <li>• 1 set of tooling.</li> <li>• Carrying cases with foam inlet for the machine and the accessories.</li> </ul>
	<b>240-00S-S32 VM2500S with electric motor 230 V / 50 Hz</b>
	<b>240-00S-S33 VM2500S with pneumatic motor</b>
	<b>240-00S-S34 VM2500S with electric motor 230V / 50 Hz and pneumatic motor</b>
	<b>240-00S-S35 VM2500S with electric motor 115 V / 60 Hz</b>
	<b>240-00S-S36 VM2500S with electric motor 115V / 60 Hz and pneumatic motor</b>
 	<p><b>Globe valve grinding and lapping machine VM2500</b>            Machine like VM2500S but with the following <b>additional lapping equipment</b>:</p> <ul style="list-style-type: none"> <li>• 3 sets (5 discs/set) of lapping disks 1.2" (30 mm), 2.0" (50 mm), and 3.2" (80 mm) in diameter</li> <li>• Lapping paste 10 and 30 µm.</li> </ul>
	<b>240-00S-S22 VM2500S with electric motor 230 V / 50 Hz</b>
	<b>240-00S-S23 VM2500S with pneumatic motor</b>
	<b>240-00S-S24 VM2500S with electric motor 230V / 50 Hz and pneumatic motor</b>
	<b>240-00S-S25 VM2500S with electric motor 115 V / 60 Hz</b>
	<b>240-00S-S26 VM2500S with electric motor 115V / 60 Hz and pneumatic motor</b>
	

Pneumatically driven machines also require the accessory pneumatic motor maintenance kit

# TOOL CONFIGURATIONS

<b>Model VM2600 (Seat Diameter Range: 3"-24"(80 mm-600 mm))</b>	
<b>P/N</b>	<b>Description</b>
	<p><b>Globe Valve Grinder VM2600S</b>            Nominal working dia 3" to 24" (80 mm to 600 mm)            Submerging depth 31"(800 mm).            Included Components:</p> <ul style="list-style-type: none"> <li>• 4 sets of planet arms (5 arms/set) 1.2"(30 mm), 2.4"(60 mm), 4.5"(115 mm), 7.5" (190 mm) in length.</li> <li>• Set of 4 planet wheels 3.9" (100 mm), 5.3" (135 mm), 8.7" (220 mm), 15.0" (380 mm) in diameter.</li> <li>• Integrated grinding pressure detection with a scale at the upper machine housing.</li> <li>• 1 set of clamping equipment for mounting the machine on valves with and without top flange.</li> <li>• Start up set of abrasives grain 100 and 500.</li> <li>• 1 set (5 discs/set) of CBN grinding disks 2.0" (50 mm) in diameter..</li> <li>• 1 set of tooling.</li> <li>• Carrying cases with foam inlet for the machine and the accessories.</li> </ul>
	<p><b>240-00S-S52 VM2600S with electric motor 230 V / 50 Hz</b></p>
	<p><b>240-00S-S53 VM2600S with pneumatic motor</b></p>
	<p><b>240-00S-S54 VM2600S with electric motor 230V / 50 Hz and pneumatic motor</b></p>
	<p><b>240-00S-S55 VM2600S with electric motor 115 V / 60 Hz</b></p>
	<p><b>240-00S-S56 VM2600S with electric motor 115V / 60 Hz and pneumatic motor</b></p>
	<p><b>Globe valve grinding and lapping machine VM2500</b>            Machine like VM2600S but with the following <b>additional lapping equipment:</b></p> <ul style="list-style-type: none"> <li>• 3 sets (5 discs/set) of lapping disks 1.2" (30 mm), 2.0" (50 mm), and 3.2" (80 mm) in diameter</li> <li>• Lapping paste 10 and 30 µm.</li> </ul>
	<p><b>240-00S-S42 VM2600S with electric motor 230 V / 50 Hz</b></p>
	<p><b>240-00S-S43 VM2600S with pneumatic motor</b></p>
	<p><b>240-00S-S44 VM2600S with electric motor 230V / 50 Hz and pneumatic motor</b></p>
	<p><b>240-00S-S45 VM2600S with electric motor 115 V / 60 Hz</b></p>
	<p><b>240-00S-S46 VM2600S with electric motor 115V / 60 Hz and pneumatic motor</b></p>
	
	

Pneumatically driven machines also require the accessory pneumatic motor maintenance kit

Accessories	
P/N	Description
	<p><b>240-13K-001 Maintenance unit for pneumatic motor</b>  <b>Required for machines with pneumatic motor.</b>            The maintenance unit is <b>not</b> included in the standard scope of supply with pneumatic driven machines.            Includes:</p> <ul style="list-style-type: none"> <li>• filter</li> <li>• oiler</li> <li>• pressure gauge</li> <li>• speed controller</li> </ul>
	<p><b>240-66S-N01 Extension Kit 20" (500 mm) for grinding</b>            To extend the working range of the VM2350(S) to 20" (500 mm).            1 planet wheel 15.0" (380 mm) diameter.            1 set (5) grinding discs 3.2" (80 mm) diameter.            1 start up set self-adhesive abrasive discs 3.2" (80 mm) diameter, grain 100 and 500.</p>
	<p><b>240-67S-N01 Extension Kit 20" (500 mm) for grinding and lapping</b>            To extend the working range of the VM2350 to 20" (500 mm).            1 planet wheel 15.0" (380 mm) diameter.            1 set (5) grinding discs 3.2" (80 mm) diameter.            1 set (5) lapping discs 3.2" (80 mm) diameter            1 start up set self-adhesive abrasive discs 3.2" (80 mm) diameter, grain 100 and 500.</p>
	<p><b>110-24S-N01 Planet arm to extend seat range from 20" (500 mm) to 24" (600 mm) Each</b>  <b>(A total of 5 are required)</b>            A planet arm (7.5" (190 mm)), that extends the grinding range of the 15" (380 mm) diameter planet wheel up to 24" (600 mm).</p>
	<p><b>Extension of submerging depth</b>            Allows you to extend the submerging depth without changing the maximum grinding diameter  <b>(Must be ordered with the machine. Can not be ordered after delivery of the machine.</b>            e.g... 240-00S-S05-M01)</p>
	<p><b>-M01 Extension of submerging depth from 24" to 31" (600 mm to 800 mm)</b>  <b>(only VM2350(S))</b></p> <ul style="list-style-type: none"> <li>• Extension of the machine arm.</li> <li>• Adaption of the machine case.</li> </ul>
	<p><b>-M02 Extension of submerging depth from 24" to 39" (600 mm to 1000 mm)</b>  <b>(only VM2350(S))</b></p> <ul style="list-style-type: none"> <li>• Extension of the machine arm.</li> <li>• Adaption of the machine case.</li> </ul>
	<p><b>-M03 Extension of submerging depth from 31" to 39" (800 mm to 1000 mm)</b>  <b>(only VM2500(S) or VM2600(S))</b></p> <ul style="list-style-type: none"> <li>• Extension of the machine arm.</li> <li>• Adaption of the machine case.</li> </ul>

Accessories		
	P/N	Description
 	300-10S-N01	<b>3-jaw centering chuck</b> <ul style="list-style-type: none"> <li>Clamping dia 80mm ... 430 mm</li> <li>Delivery in a high quality plastic case</li> </ul> <b>3-jaw centering chuck (additional to the machine)</b>
	-M10	<b>3-jaw centering chuck <i>instead of the universal clamping device</i></b> Extend the P/N by "M10": e.g. 240-00S-S05-M10
	185-00S-S22	<b>Grinding adapter</b> For using the tooling of the VM2000 series machines... on stationary drill presses. The grinding pressure is made by an application of springs. The scale for the grinding pressure is divided into two ranges: One for high rate of removal of material and the other for high precision surfaces. <b>Grinding adapter MT2</b> For using on stationary drill presses with morse taper #2.
	185-00S-S23	<b>Grinding adapter MT3</b> For using on stationary drill presses with morse taper #3.
	110-33S-N01	<b>CBN grinding disks 2" (50 mm) diameter. (each)</b> <b>(A total of 5 required)</b> Required for rough grinding of heavily damaged seats (1 set is included in each component package).
	110-34S-N01	<b>CBN grinding disks 3.2" (80 mm) diameter. (each)</b> <b>(A total of 5 required)</b> Required for rough grinding of heavily damaged seats.
	110-41S-N01	<b>Lapping disks 1.2" (30 mm) diameter (each)</b> <b>(A total of 5 required)</b>
	110-42S-N01	<b>Lapping disks 2" (50 mm) diameter (each)</b> <b>(A total of 5 required)</b>
	110-43S-N01	<b>Lapping disks 3.2" (80 mm) diameter (each)</b> <b>(A total of 5 required)</b>

Because CLIMAX is committed to product improvement, the machine you receive may be slightly different to the pictures above.

# CLIMAX TRAINING AND SUPPORT

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.

We offer several training facilities across the United States - the Global Learning Center, situated in our corporate headquarters near Portland, Oregon and Houston, Texas Training Facility. All facilities offer training for machine tool operators on 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 one of our training facilities, 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.



## Call CLIMAX for:

### Rentals

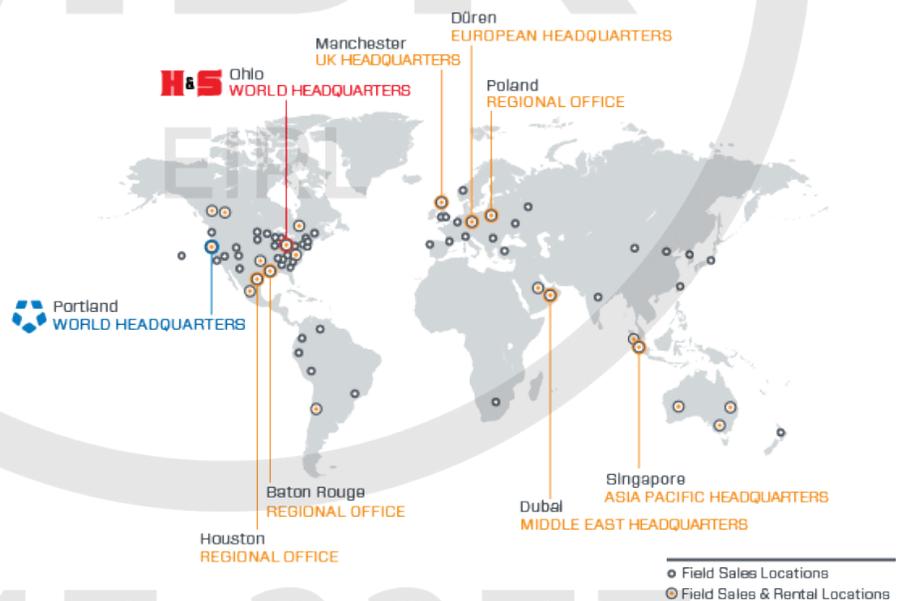
With worldwide rental depot locations, you are never far away from a CLIMAX tool.

### On-site Training

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

### Custom Projects

CLIMAX has been solving complicated machining, welding and valve testing problems for our customers since 1966



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### World Headquarters

2712 E. Second Street  
Newberg, Oregon  
97132 USA  
Tel: +1 503 538 2185  
N. America Toll-Free:  
1 800 333 8311  
Fax: +1 503 538 7600  
Email: [info@cpmt.com](mailto:info@cpmt.com)

### Asia Pacific

316 Tanglin Road #02-01  
Singapore 247978  
Tel: +65 9647 2289  
Fax: +65 6801 0699  
Email: [info@cpmt.com](mailto:info@cpmt.com)

### European

Am Langen Graben 8  
52353 Düren, Germany  
Tel: (+49) (0) 2421 9177 0  
Fax: (+49) (0) 2421 9177 29  
Email: [info@cpmt.de](mailto:info@cpmt.de)

### Middle East

Warehouse #5,  
Plot: 369 272  
Um Sequim Road  
Dubai, UAE  
Tel: +971 4 321 0328  
Email: [info@cpmt.com](mailto:info@cpmt.com)

### United Kingdom

Unit 7 Castlehill Industrial  
Estate  
Bredbury Industrial Park  
Horsfield Way  
Stockport SK6 2SU  
Tel: +44 (0) 161 406 1720  
Email: [info@cpmt.com](mailto:info@cpmt.com)