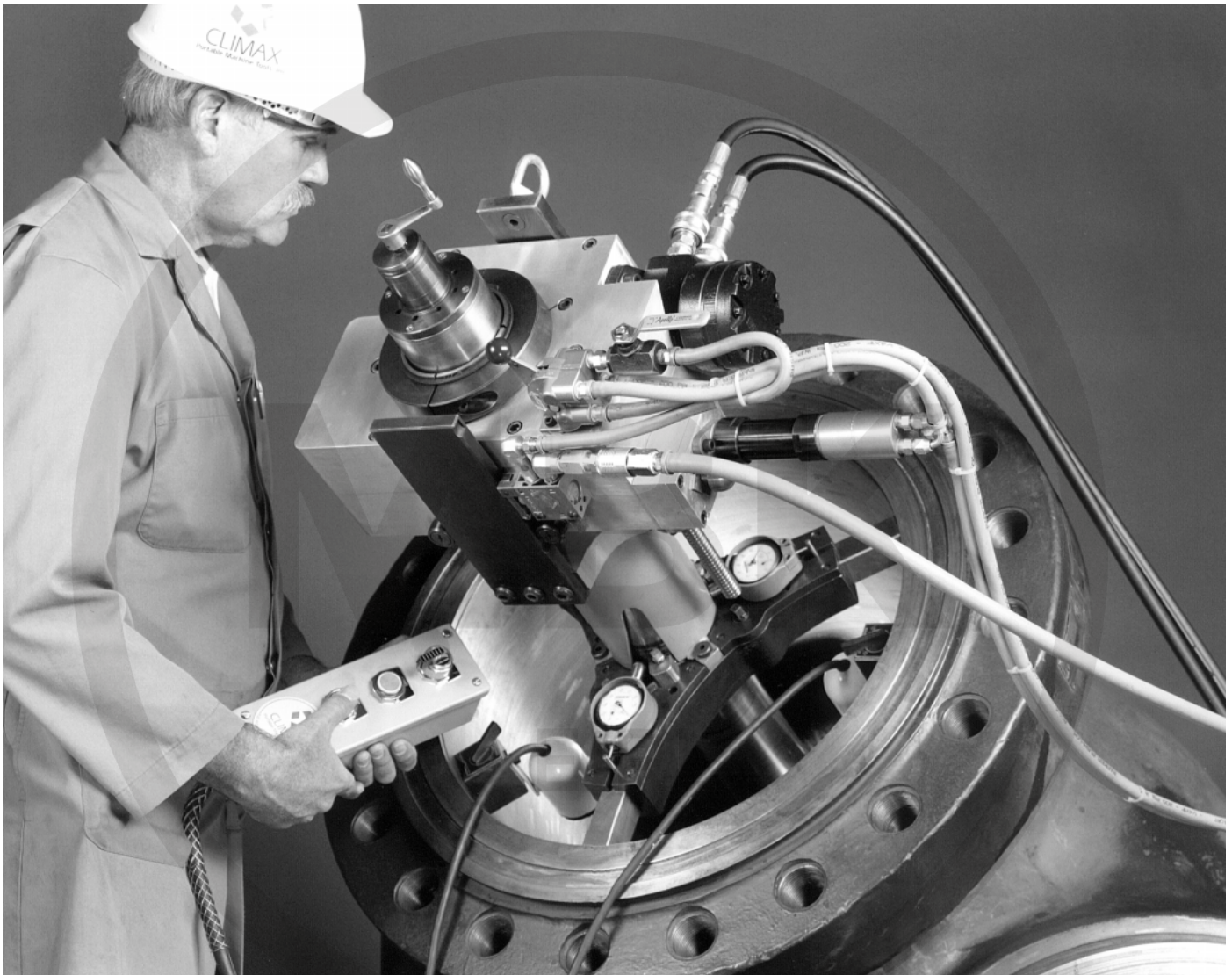


Model VM9000 Globe Valve Repair Machine



- Features and Specifications
- Components and Optional Assemblies
- Operational Dimensions



CLIMAX

Portable Machine Tools, Inc.

Features

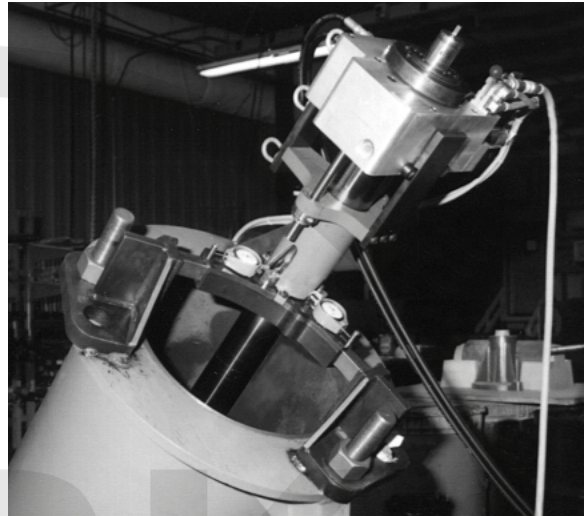
Climax valve repair machines simplify repairs in a variety of valve applications by performing many machining operations right in place. Their easy set-up and operation eliminates costly downtime for removal, off-site machining, re-installation, and in some cases, weld re-certification. Using Climax valve repair machines, worn surfaces can be remachined for immediate reuse, or prepped with weld buildup, then machined back down to original specifications.

The Climax Model VM9000 is a portable valve repair machine designed to repair MSIV and other globe valves from 16 inches to 28 inches in diameter. It will machine and grind pressure-seal bores, guide ribs, and seats. Switch from single-point machining to grinding in minutes. Grinding head produces 16 Ra finish.

Individually adjustable three-jaw mounting chucks allow precise alignment with valve bore and face. Included lighting assembly provides excellent visibility for accurate setup and machining.

Features variable hydraulic rotational drive and variable pneumatic axial feed. Tool head is adjustable through 360° for cutting any straight angle.

The VM9000 is a made-to-order machine. Delivery will be quoted at time of order.



Component Selection

To accommodate a wide range of globe valves, the Model 9000 has several assembly options to choose from. The assemblies which have options include:

- Lower mounting chuck assembly
- Turning bar assembly.
- Jaw sets

You may also want to buy:

- Special standoffs
- Small mounting chuck assembly
- Metal shipping containers



Model 9000 Specifications

Main body assembly

- Variable speed hydraulic rotational drive with double-enveloping worm gear (.5-10 rpm)
- Twin ball screws for smooth axial feed

Mounting chuck assembly

- Two spacings available: 120°/120°/120° and 132.5°/95°/132.5°
- Adjustable jaws and dial indicators for aligning and centering machine inside valve.

Turning bar and arm assembly

- 16 - 28" (406 - 711mm) diameter turning range
- Available in 58" (1472mm) or 66" (1676mm) lengths
- 30:1 reduction radial feed box feeds single-point tool arm or grinding head radially .005" per revolution. Manual or automatic. Feed rate is not adjustable.

Tool head assembly

- Rack-fed tool holder, infinitely adjustable through 360°
- Radial feed is fixed at .005" per revolution (manual or automatic)

Grinding head assembly

- Pneumatically powered
- Grinding stones turn 3000 - 4000 rpm under load

- Total radial travel 1.5 (38mm)
- 0.7 hp (.52 kW) air motor to turn stones
- 4 grinding stones included

Pneumatic axial feed (Z axis)

- Reversible .4 hp (.3 kW) air motor
- Variable reversible pneumatic axial feed 0 - 1.5" (0 - 38mm) per minute
- 7" (177.8mm) stroke per setting

Wheel dressing fixture

- Dresses grinding stones at angles from 0° to 50°.

Lighting assembly

- Two high-intensity 12V lights with magnetic bases provide excellent visibility inside valve during operation. Includes 110V AC power supply.

Hydraulic power unit

- Variable volume 0 - 6 gal/min pump
- 1100 psi max pump pressure at 6 gal/min
- 5 hp, 1800 rpm, 240/480V, 3-phase motor
- 5 gal reservoir
- 2200 psi relief valve
- 3000 psi system gage with snubber
- 100 ft. hydraulic hoses
- 100 ft. control pendant

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VM9000 Components

NO. DESCRIPTION

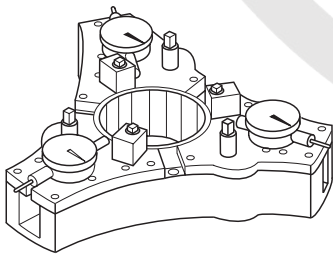
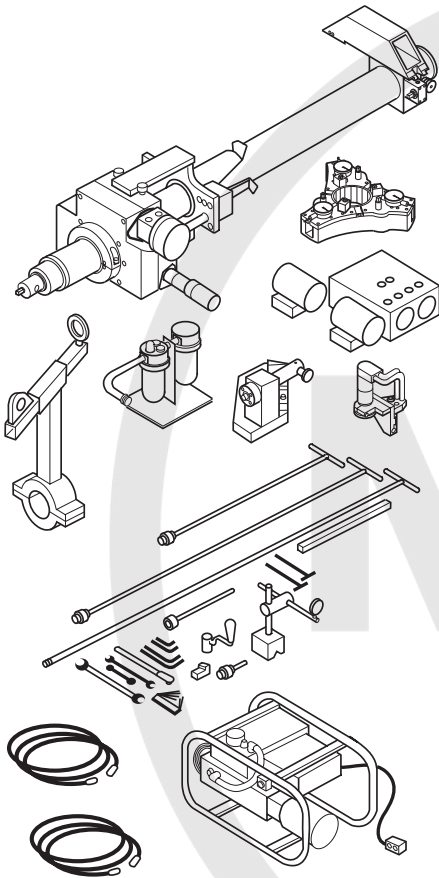
17337

Model 9000 globe valve repair machine. Machine includes lifting assembly, mounting chuck, gear box and fixture assemblies, radial feed box, turning bar and arm assembly to hold the tool and grinding heads, grinding wheel dresser, hydraulic power unit to drive the turning bar and arm, pneumatic assembly to drive the tool and grinding heads, and lighting assembly. In addition, the customer chooses from the following included options:

Lower mounting chuck assembly (choose one spacing)

Jaw set (choose one set)

Turning bar assembly (choose one length)



Lower mounting chuck assembly - 16" to 28" (406.4-711.2mm) dia.

Assembly secures lower part of the machine inside the valve. Includes three adjustable dial indicators with housings and three jaw housings with adjusters for selected jaws. Available in two spacings. One customer-selected lower mounting chuck assembly is included with machine (P/N 17337).

17347

Lower mounting chuck assembly - 120° spacing

Chuck body arms are arranged so jaws are 120° apart. (Same as the upper mounting chuck assembly included with the machine.)

18984

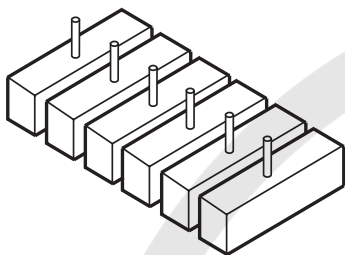
Lower mounting chuck assembly - 95° spacing Chuck body arms are arranged so jaws are 132.5°, 95°, and 132.5° apart.

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Drawings may not represent actual product.

VM9000 Components

NO. DESCRIPTION

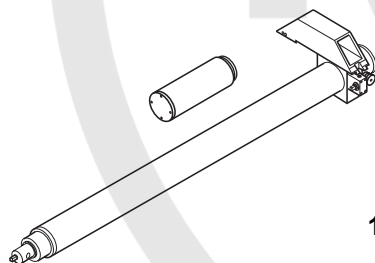


(*) Jaw set

Jaws extend from the mounting chuck assembly arms to hold the machine tightly inside the valve. Adjustable dial indicators help center the machine inside the valve. Includes six jaws, enough for both chuck assemblies. One set of jaws is included with the machine at no extra cost. Diameters listed are actual diameters, not "called valve size."

- 18841** Jaw set 14"-16" (355.6-406.4 mm) dia.**
- 18842 Jaw set 16"-18" (406.4-457.2 mm) dia.**
- 18843 Jaw set 18" to 20" (457.2-508.0 mm) dia.**
- 18844 Jaw set 20" to 22" (508.0-558.8 mm) dia.**
- 18845 Jaw set 22" to 24" (558.8-609.6 mm) dia.**
- 18846 Jaw set 24" to 26" (609.6-660.4 mm) dia..**
- 18847 Jaw set 26" to 28" (660.4-711.2 mm) dia.**

** For small mounting chuck assembly.
Other diameters available upon request.



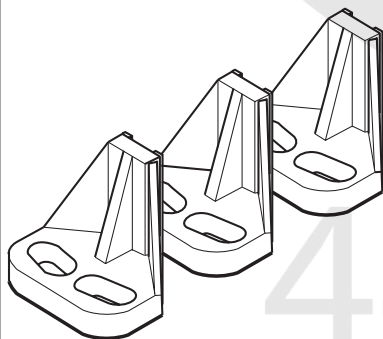
Turning bar assembly

One included with PN 17337. Bar is turned, ground, and hardened to Rockwell 55-62. Hollow bar accommodates grinder air inlet hose and exhaust at upper end of the bar. Bar acts as an inner race for the mounting chuck bearings for maximum machine rigidity. Assembly includes 12" (304.8 mm) bar extension and radially adjustable tool arm which holds tool and grinding head assemblies. Tool arm is manually set for nominal working diameters.

- 17332 Turning bar assembly 58" (1473.2 mm) long**
- 18982 Turning bar assembly 66" (1676.4 mm) long**

OPTIONAL ASSEMBLIES

The following assemblies are not included with the standard machine, but can be purchased separately.



Special standoffs

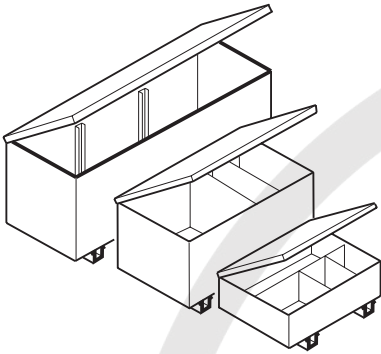
Available upon special request to allow the VM9000 to repair top edge of the valve. Includes three standoffs for proper machine support.

- 27701 Small mounting chuck assembly** fits bores 14" - 24" (355.6 - 609.6 mm). Uses PN18841. For more information, contact a Climax factory representative.

Drawings may not represent actual product.

VM9000 Components

NO. DESCRIPTION



Metal shipping containers

Metal storage containers to store the VM9000 (excluding the hydraulic power unit). All containers feature full-length piano hinges and lockable latches. The containers can be ordered as a set of three or individually.

18989 Metal container set for VM9000 with 58" (1473.2 mm) long bar. Includes three containers (P/N's 1572-100, 1572-200, and 1572-400).

18266 Metal container set for VM9000 with 66" (1676.4 mm) long bar. Includes three containers (P/N's 1572-100, 1572-200, and 1572-300).

1572-100 Small metal container 10" x 20" x 32" (254.0 x 508.0 x 812.8 mm)

1572-200 Medium metal container 20" x 25" x 43" (508.0 x 635.0 x 1092.2 mm)

1572-300 Large metal container for 66" (1676mm) bars 25" x 25" x 75" (635.0 x 635.0 x 1905.0 mm).

1572-400 Large metal container for 58" (1473.2 mm) bars 25" x 25" x 65" (635.0 x 635.0 x 1651.0 mm).

Training

At your request, Climax will provide qualified personnel to train your operators. Price charged is per day and does not include expenses (transportation, lodging, meals.) 2 or 3 days minimum training is recommended. Training must be scheduled in advance. Training can be held at your job site or at Climax Portable Machine Tools in Newberg, Oregon.

18267 Training at your premises

19250 Training at Climax Portable Machine Tools, Newberg, Oregon

Spare parts kit

A collection of spare parts that are most frequently purchased (due to wear, loss, or damage). To prevent unwanted downtime, you may want to buy any or all parts in the kit. For a current parts list and prices, contact your Climax factory sales representative.

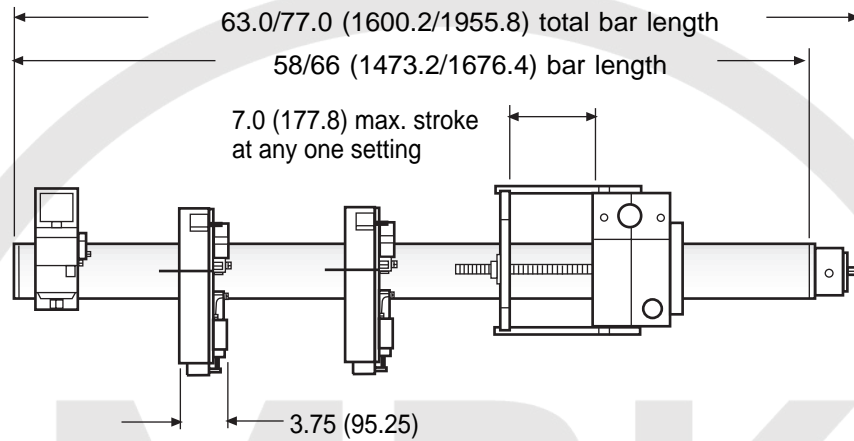
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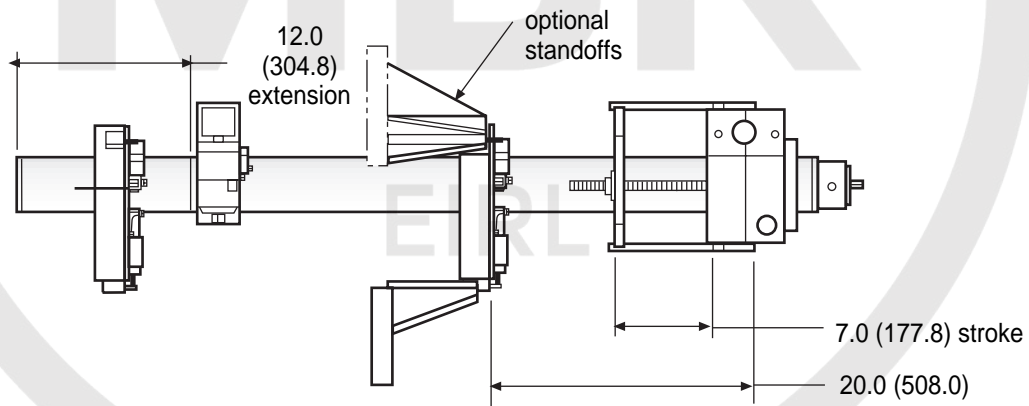
VM9000 Operational Dimensions

Inches (mm)

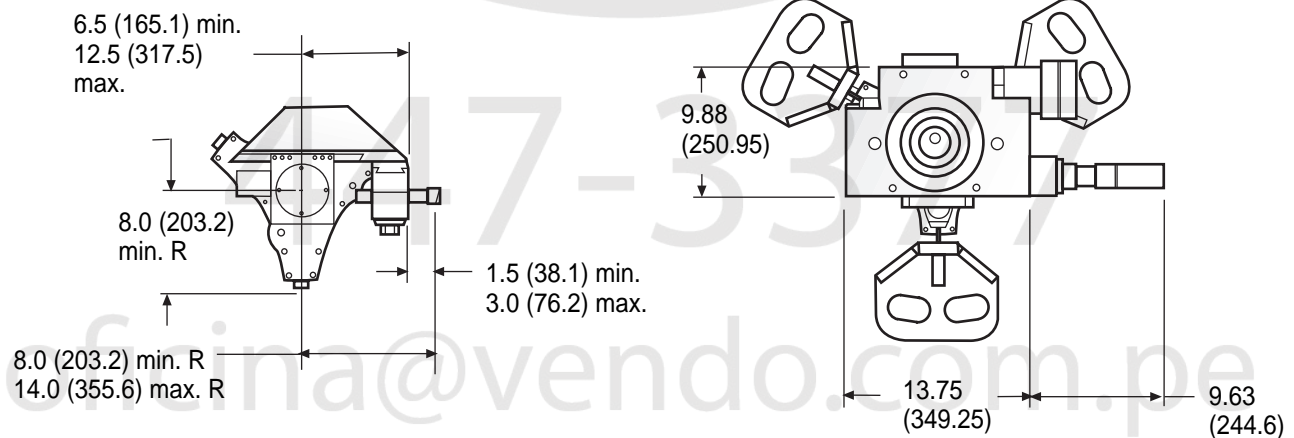
Specifications subject to change without notice.



Setup without standoffs



Setup with standoffs (optional)



Bottom view (tool head)

Top view (gear box)



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