

VM1700-VM1900 GATE VALVE GRINDING & LAPPING MACHINE

04 | 2014
VM1700-1900

Powerful, rigid design with easy set up and handling.

Powerful

- Wide working range: nominal diameter of 1.5 - 48 inches (40 -1200 mm).
- Submersion depth up to 55 inches (1400 mm).
- Heavy duty drive chains provide minimum of 10,000 hours of service.

Versatile

- Drive system uses a drive chain up to three sizes larger than the competition with a Mean Time Between Failure (MTBF) of approximately 10,000 hours. This minimizes the risk of breakage and costly downtime on the job.
- Five Planet Arms ensure no two discs are ever directly across from each other and carrying the entire work load. All of the discs are in contact with the work surface, eliminating development of high and low spots on valve seat.
- The adhesive on the media discs is specifically formulated to provide a firm hold while in use, but are easy to remove after use.
- High quality abrasives can help reduce grinding time by up to 50%.



Rigid

- Rigid Planet Arms eliminate machine chatter and ensure a uniform finish.
- Planet Arm bearings are sealed, preloaded and preset to be within .000079 inches (.002 mm) of each other.

Quick and Easy Setup



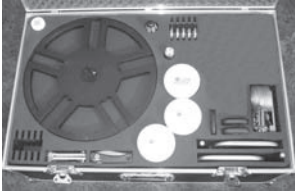
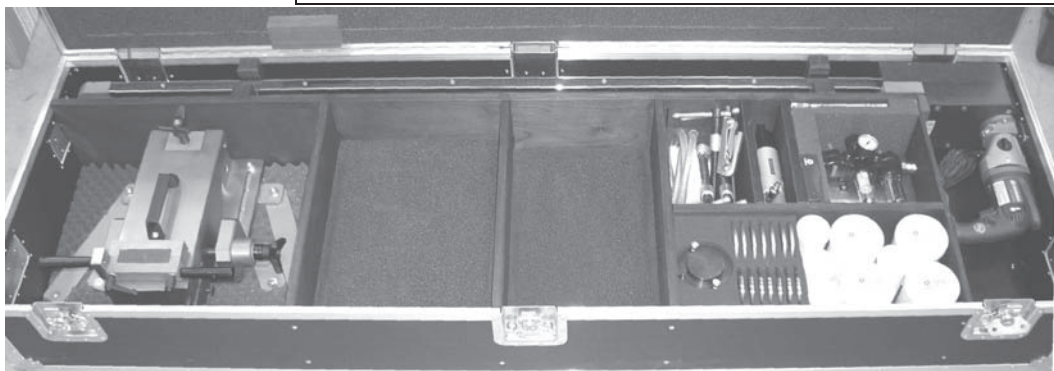
- Quickly change between electric and pneumatic by simply loosening a single clamping bolt.
- Quickly change from grinding to lapping operations by simply changing the discs.
- Factory sealed bearings for fast, easy grinding head change out.
- Planet Arms feature fast, one screw adjustment of diameter size.

SPECIFICATIONS

		US	Metric
Operating Ranges:			
Working range diameter	Minimum	8 inches	200 mm
	Maximum (VM1700)	28 inches	700 mm
	Maximum (VM1700) (with extension)	36 inches	900 mm
	Maximum (VM1900)	40 inches	1000 mm
	Maximum (VM1900) (with extension)	48 inches	1200 mm
Submerging Depth	Maximum (VM1700)	40 inches	1000 mm
	Maximum (VM1900)	55 inches	1400 mm
Power	Electric	1.3 Hp	1.0 kW
	Pneumatic	0.75 Hp	0.55 kW
Variable spindle speed	Electric	20 - 370 rpm	20 - 370 rpm
	Pneumatic	20 - 270 rpm	20 - 270 rpm
Spindle Torque	Permanent	28 ft-lbs	40 N•m
	Max	117 ft-lbs	160 N•m
Weight			
Model VM1700			
	Basic machine without tooling	62 lbs	28 kg
	Shipping Weight	330 lbs	160 kg
Model VM1900			
	Basic machine without tooling	68 lbs	31 kg
	Shipping Weight	507 lbs	230 kg



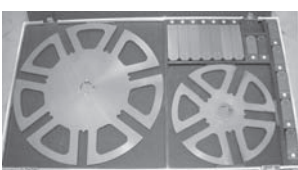

All dimensions should be considered reference. Contact your Climax Representative for precision dimensions. Specifications are subject to change without notice. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does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

TOOL CONFIGURATIONS



Model VM1700 (8 - 28" (200 - 700 mm) diameter range)		
  	P/N	Description
		Gate Valve Grinder VM1700S Nominal working dia 8" to 28" (200 mm to 700 mm) Submerging depth 40"(1000 mm). Included Components: <ul style="list-style-type: none"> • 3 sets (5 arms/set) of planet arms 2.4" (60 mm), 4.5" (115 mm), 6.3" (160 mm) in length. • Set of 3 planet wheels 8.7" (220 mm), 15.0" (380 mm), 21.3" (540 mm) in diameter. • 2 sets (5 discs/set) of grinding discs 2.0" (50 mm) & 3.2" (80 mm) in diameter. • 1 set of clamping equipment for mounting the machine on valves with and without top flange. • Start up set of abrasives grain 100 and 500. • 1 set (5) of CBN grinding disks 2.0"(50 mm) diameter • 1 set of tooling. • Carrying cases with foam inlet for the machine and the accessories.
	470-00S-S12	VM1700S with electric motor 230 V / 50 Hz
	470-00S-S13	VM1700S with pneumatic motor
	470-00S-S14	VM1700S with electric motor 230V / 50 Hz and pneumatic motor
	470-00S-S15	VM1700S with electric motor 115 V / 60 Hz
	470-00S-S16	VM1700S with electric motor 115V / 60 Hz and pneumatic motor
		Gate Valve Grinding and Lapping machine VM1700 Machine like VM1700S but with additional lapping equipment: <ul style="list-style-type: none"> • 2 sets (5 discs/set) of lapping disks 2.0"(50 mm) & 3.2"(80 mm) in diameter. • Lapping paste 10 and 30 µm.
	470-00S-S02	VM1700 with electric motor 230 V / 50 Hz
	470-00S-S03	VM1700 with pneumatic motor
	470-00S-S04	VM1700 with electric motor 230V / 50 Hz and pneumatic motor
	470-00S-S05	VM1700 with electric motor 115 V / 60 Hz
	470-00S-S06	VM1700 with electric motor 115V / 60 Hz and pneumatic motor
		

Pneumatically driven machines also require the accessory pneumatic motor maintenance kit

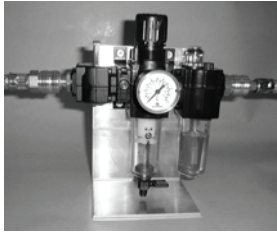
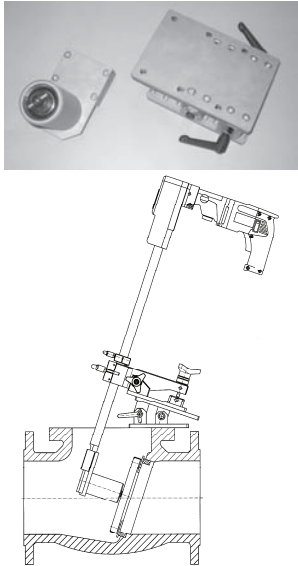





TOOL CONFIGURATIONS



Model VM1900 (8 - 40" (200 - 1000 mm) diameter range)		
	P/N	Description
		Gate Valve Grinder VM1900S Nominal working diameter 8" to 28" (200 mm to 1000 mm) Submerging depth 55"(1400 mm). Included Components: <ul style="list-style-type: none"> • 3 sets (7 arms/set) of planet arms 2.4" (60 mm), 4.5" (115 mm), 6.3" (160 mm) in length. • Set of 4 planet wheels 8.7" (220 mm), 15.0" (380 mm), 21.3" (540 mm), 32.3"(820 mm) in diameter. • 2 sets (7 discs/set) of grinding discs 2.0" (50 mm) & 3.2" (80 mm) in diameter. • 1 set of clamping equipment for mounting the machine on valves with and without top flange . • Start up set of abrasives grain 100 and 500. • 1 set (7) of CBN grinding disks 2.0"(50 mm) diameter • 1 set of tooling. • Carrying cases with foam inlet for the machine and the accessories.
	470-00S-S32	VM1900S with electric motor 230 V / 50 Hz
	470-00S-S33	VM1900S with pneumatic motor
	470-00S-S34	VM1900S with electric motor 230V / 50 Hz and pneumatic motor
	470-00S-S35	VM1900S with electric motor 115 V / 60 Hz
	470-00S-S36	VM1900S with electric motor 115V / 60 Hz and pneumatic motor
 		Gate Valve Grinding and Lapping machine VM1900 Machine like VM1900S but with additional lapping equipment : <ul style="list-style-type: none"> • 2 sets (7 discs/set) of lapping disks 2.0"(50 mm) & 3.2"(80 mm) in diameter. • Lapping paste 10 and 30 µm.
	470-00S-S22	VM1900 with electric motor 230 V / 50 Hz
	470-00S-S23	VM1900 with pneumatic motor
	470-00S-S24	VM1900 with electric motor 230V / 50 Hz and pneumatic motor
	470-00S-S25	VM1900 with electric motor 115 V / 60 Hz
	470-00S-S26	VM1900 with electric motor 115V / 60 Hz and pneumatic motor
		

Pneumatically driven machines also require the accessory pneumatic motor maintenance kit

TWIN Machines for Gate and Globe Valves (8 - 48" (200 - 1200 mm) diameter range)		
	P/N	Description
		Gate Valve Grinder VM1700ST <ul style="list-style-type: none"> Includes The VM1700S and the Globe valve conversion
	470-00S-T12	VM1700ST with electric motor 230 V / 50 Hz
	470-00S-T13	VM1700ST with pneumatic motor
	470-00S-T14	VM1700ST with electric motor 230 V / 50 Hz and pneumatic motor
	470-00S-T15	VM1700ST with electric motor 115 V / 60 Hz
	470-00S-T16	VM1700ST with electric motor 115 V / 60 Hz and pneumatic motor
		Gate Valve Grinding an Lapping machine VM1700T <ul style="list-style-type: none"> Includes The VM1700 and the Globe valve conversion
	470-00S-T02	VM1700T with electric motor 230 V / 50 Hz
	470-00S-T03	VM1700T with pneumatic motor
	470-00S-T04	VM1700T with electric motor 230 V / 50 Hz and pneumatic motor
	470-00S-T05	VM1700T with electric motor 115 V / 60 Hz
	470-00S-T06	VM1700T with electric motor 115 V / 60 Hz and pneumatic motor
		Gate Valve Grinder VM1900ST <ul style="list-style-type: none"> Includes The VM1900S and the Globe valve conversion
	470-00S-T32	VM1900ST with electric motor 230 V / 50 Hz
	470-00S-T33	VM1900ST with pneumatic motor
	470-00S-T34	VM1900ST with electric motor 230 V / 50 Hz and pneumatic motor
	470-00S-T35	VM1900ST with electric motor 115 V / 60 Hz
	470-00S-T36	VM1900ST with electric motor 115 V / 60 Hz and pneumatic motor
		Gate Valve Grinding an Lapping machine VM1900T <ul style="list-style-type: none"> Includes The VM1900 and the Globe valve conversion
	470-00S-T22	VM1900T with electric motor 230 V / 50 Hz
	470-00S-T23	VM1900T with pneumatic motor
	470-00S-T24	VM1900T with electric motor 230 V / 50 Hz and pneumatic motor
	470-00S-T25	VM1900T with electric motor 115 V / 60 Hz
	470-00S-T26	VM1900T with electric motor 115 V / 60 Hz and pneumatic motor

CLIMAX is committed to product improvement. The machine you receive may vary slightly from what is shown.

Accessories		
	P/N	Description
	240-13K-001	Maintenance unit for pneumatic motor <i>Required for machines with pneumatic motor.</i> The maintenance unit is not included in the standard scope of supply with pneumatic driven machines. Includes: <ul style="list-style-type: none">• filter• oiler• pressure gauge• speed controller
	470-00S-L03	Swing Check accessories For grinding of swing check valves. Includes: <ul style="list-style-type: none">• swivel adapter for adaption of the machine on the valve• spindle extension for reaching the seat with the planet wheels.
	120-22S-N01	Planet arm 10.8" (275 mm) long (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900) To extend the working diameter of the: <ul style="list-style-type: none">• VM1700 from 28" to 36" (700 mm to 900 mm)• VM1900 from 40" to 48" (1000 mm to 1200 mm)
	110-33S-N01	CBN grinding disks 2" (50 mm) diameter. (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900) Required for rough grinding of heavily damaged seats (1 set is included in each component package).
	110-34S-N01	CBN grinding disks 3.2" (80 mm) diameter. (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900) Required for rough grinding of heavily damaged seats.
	110-41S-N01	Lapping disks 1.2" (30 mm) diameter (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900)
	110-42S-N01	Lapping disks 2" (50 mm) diameter (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900)
	110-43S-N01	Lapping disks 3.2" (80 mm) diameter (each) (A total of 5 are required for VM1700) (A total of 7 are required for VM1900)
		

Accessories	
P/N	Description
	<p>Globe Valve Conversion Kit</p> <p>The conversion kit comes with a complete machine arm (submerging depth 40" (1000 mm)) and mounting equipment. It uses the motor and the tooling of the VM1700/1900.</p> <p>Scope of supply:</p> <ul style="list-style-type: none"> • One pieces of ball joint coupling size 15 and 25 each. • Integrated grinding pressure detection with a scale. • Mounting column with mounting plate for valves with and without flange. • Carrying case with foam inlet for the accessories. The machine arm is included in the case of the VM1700
	<p>270-00S-L12 Globe Valve Conversion with electric motor 230 V / 50 Hz</p>
	<p>270-00S-L13 Globe Valve Conversion with pneumatic motor</p>
	<p>270-00S-L15 Globe Valve Conversion with electric motor 115 V / 60 Hz</p>
	

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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.

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Rentals

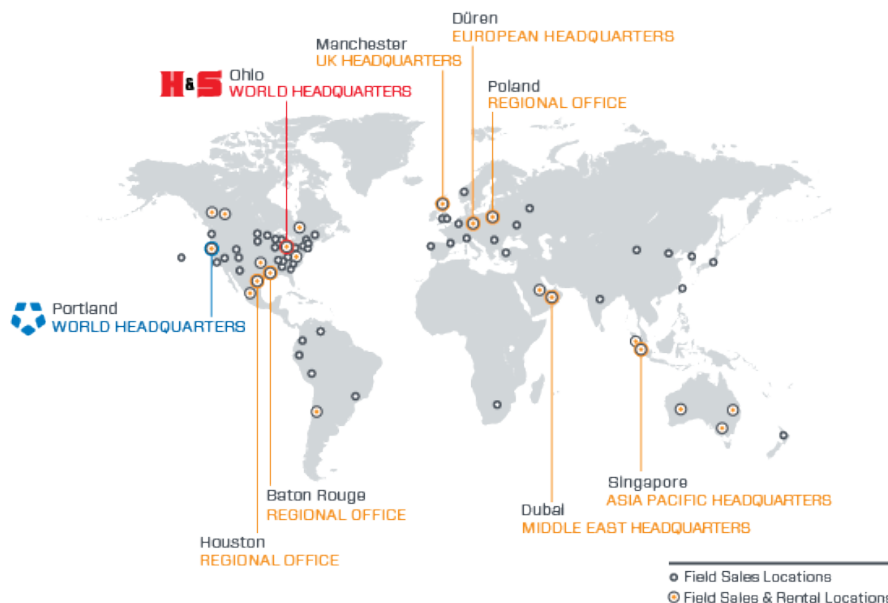
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