

KM3000 PORTABLE KEY MILL

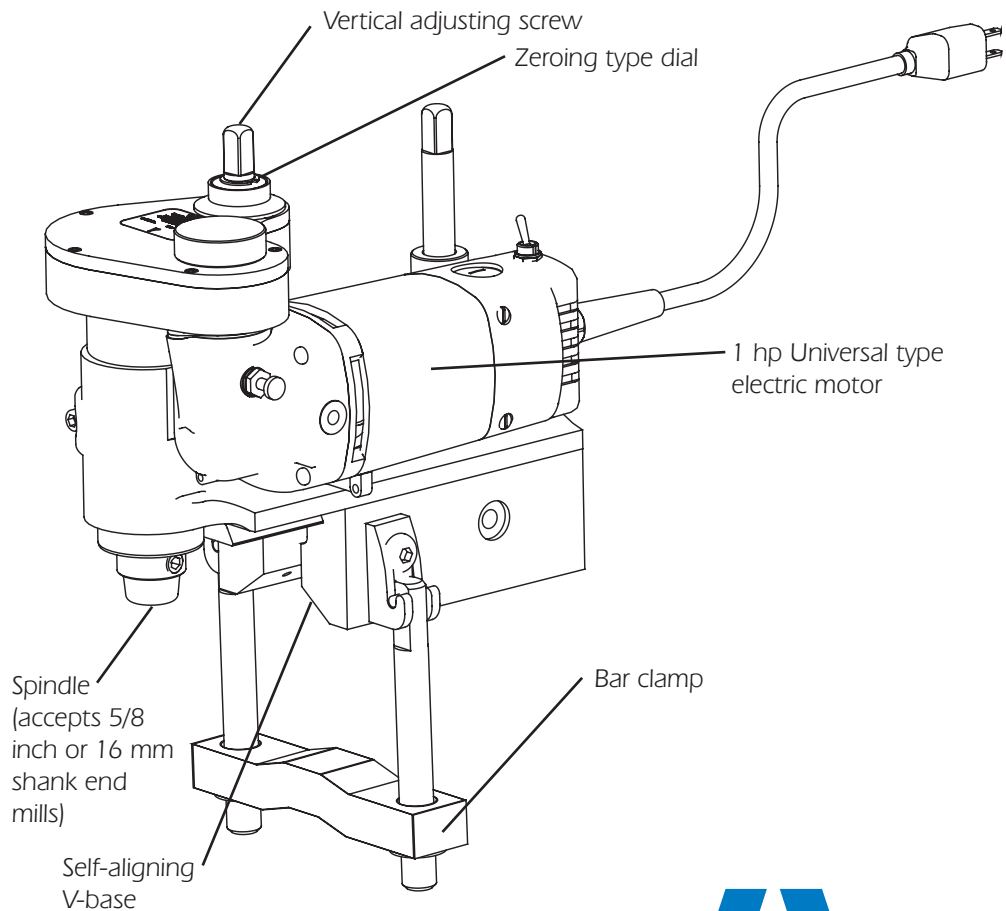
FEATURES • SETUP & OPERATION COMPONENTS & ACCESSORIES • TECHNICAL DATA

Cut a new, full-depth, 6 inch (152 mm) keyway in less than 4 minutes.*

The KM3000 Portable Key Mill is a simple, rugged, dependable machine tool designed to cut keyways in shafts without extensive dismantling. The automatically centering V-base is quick and easy to set up. The KM3000 clamps on any shaft up to 4.5 inches (114 mm) in diameter with the standard bar clamp. Cut stub-end keyways or mid-shaft keyways. Clamp the machine to a flat surface, and you can cut motor mount slots. With the optional shim kit you can cut keyways or slots in shafts as small as 0.75 inch (19 mm) in diameter.

- Compact, rugged, portable milling machine for on-site keyway and other milling jobs.
- Self-centering and self-aligning V-base
- Standard Weldon-type spindle — accepts 5/8 inch or 16 mm shank end mills
- Zeroing-type vertical adjustment dial calibrated in 0.001 inch (0.1 mm) increments
- Vertical and horizontal travel via hand crank
- Dovetail ways for accurate cutting action
- Precision Acme thread leadscrew with roller thrust bearings
- Sealed aluminum alloy gear box permits operation at any angle
- Precision ground quill housing assures smooth operation

- The KM3000 Portable Key Mill only needs 1.5 inches (38 mm) of shaft for clamping.
- The KM3000 clamps shafts up to 10.5 inches (266 mm) dia. with optional chain clamp.
- Slotted V-base allows you to cut right to the end of the shaft.
- Zeroing-type adjusting dial for controlling cutter depth.

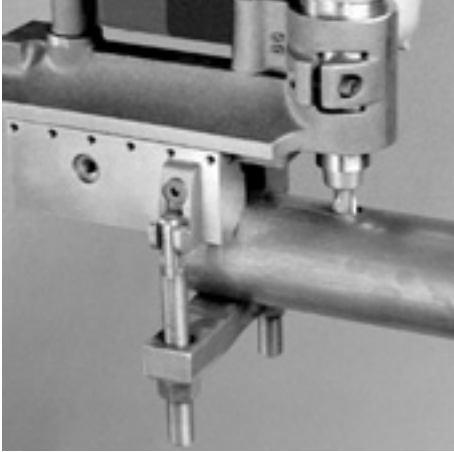


*** Actual cutting time for a keyway
1 X 0.5 X 6 inches (25 mm X 13 mm
X 152 mm) was 3 minutes and 10
seconds. This time was achieved in
C1018 steel with a sharp end mill.**



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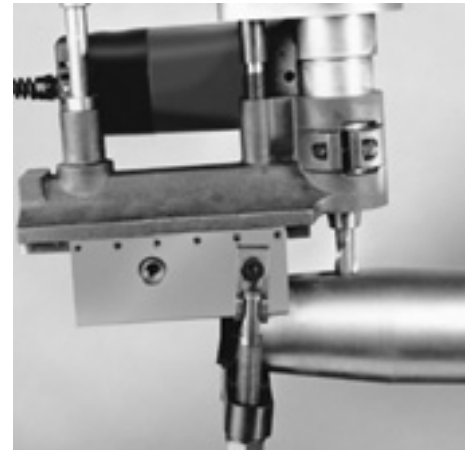
Insert the proper end mill in the spindle of the KM3000 Key Mill and clamp it on the shaft...it's that simple. On a straight shaft an experienced operator can mount the machine and be ready to cut a new keyway in less than five minutes! Shimming to fit tapered shafts may take a little longer.



MOUNT ON END Only 1.5 inches (38 mm) of shaft required for mounting the KM3000.



MOUNT IN MIDDLE The machine can be leveled for cutting long keyways.

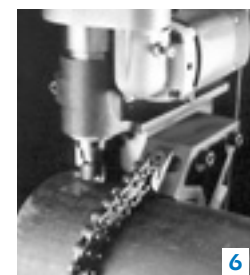
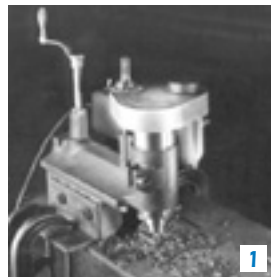


TAPERED SHAFTS Mounting on tapered shafts require shimming.

As versatile as your imagination

Here are some examples:

1. Attach angles to the sides of the base, and clamp the KM3000 down to cut motor mount slots or bore holes.
2. Clamp on shafts up to 10.5 inches (266 mm) dia. with optional chain clamp.
3. Mounted in a vice, the KM3000 can cut keyways in small shafts and mill other small parts such as gear pullers.
4. Special fixtures make the KM3000 a rotating milling head to cut ID keyways and slots in large tubing, etc.
5. Use the KM3000 in tight places, like the shaft on a paving machine.
6. Cut flats on drill pipe section with the optional cross milling adapter and stamp ID marks if you wish.
7. Mounted vertically on a stationary milling machine, the KM3000 can cut a mounting pad for a readout instrument.



Hydraulic motors

The KM3000 Portable Key Mill is available with a hydraulic drive motor for applications that require the higher horsepower or in environments where spark from an electric motor would create a hazard. Three spindle rpm motors are available: 274, 430 and 664 rpm. A hydraulic power unit capable of producing 6 gallons per minute (22.3 liter/min) is required to obtain maximum performance from these motors. Hydraulic power units are available from Climax.

Pneumatic motors (not shown)

For customers that would rather use air power, the KM3000 can be provided with a pneumatic motor rated at 1.2 hp (0.9 kW). Air powered key mills can be used safely in some environments where electric motors would create a hazard. The operator has infinite control of the spindle speed with the needle valve on the air motor.

Shim kits

By installing a shim kit on your KM3000 Portable Key Mill, you can mill shafts as small as 0.75 inches (19.1 mm) in diameter. The shims close up the throat of the V-base so smaller stock can be securely clamped for milling.

Cross milling adapter

With the cross milling adapter attached to the side of the KM3000 base, the machine can be clamped on shafts or pipe 90° to the longitudinal axis. The adapter bolts to the base using the clamp block attachment points so no modification of the machine is necessary. A chain clamp is required for use.

Chain clamp assembly

By using a chain clamp you can clamp the KM3000 to shafts as large as 10.5 inches (266.7 mm) in diameter. Only 1.5 inches (38.1 mm) of clamping space is needed on the end of the shaft. The assembly comes complete with chain, clamp blocks and bolts.

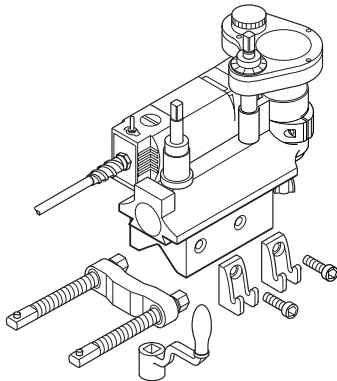


The KM 3000 Portable Key Mill comes complete with bar clamp, hand crank, hex wrench set, and instruction manual.

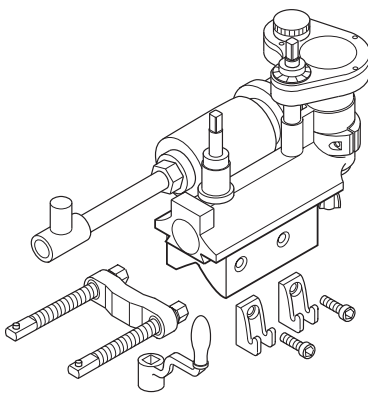
Specifications

Overall length	12.50 inches	317.5 mm
Overall width	6.60 inches	167.6 mm
Overall height	11.63 inches	295.4 mm
Base size	4.38 x 6.75 in.	111.3 x 171.5 mm
Stroke (slide travel) max.	6 inches	152.4 mm
Vertical travel max.	1.75 inches	44.5 mm
Power, electric 115 V or 230 V, 50-60 Hz.	1 hp	0.75 kW
No load variable spindle speed	350 with speed control	
minimum	280 rpm	280 rpm
maximum	525 rpm	525 rpm
Power, pneumatic	1.2 hp	0.9 kW
Power, hydraulic	4.7 hp	3.50 kW
Spindle hole dia.	0.625 inches	16 mm
Maximum end mill dia.	1.25 inches	31.75 mm
Metal removal rate in C1018 steel.	1 in ³ /min	16.4 cm ³ /min
Maximum shaft dia:		
standard bar clamp	4.5 inches	114.3 mm
with optional chain clamp	10.5 inches	266.7 mm
Minimum shaft dia:		
standard bar clamp	1.5 inches	38.1 mm
with optional shim kit	0.75 inches	19.1 mm
Minimum clamping space required on stub shaft	1.5 inches	38.1 mm
Machine weight (with Speed Control)	70 lb	31.8 Kg
Shipping weight	82 lb	37.3 kg
Shipping size	13 x 14 x 20 in.	33 x 36 x 51 cm

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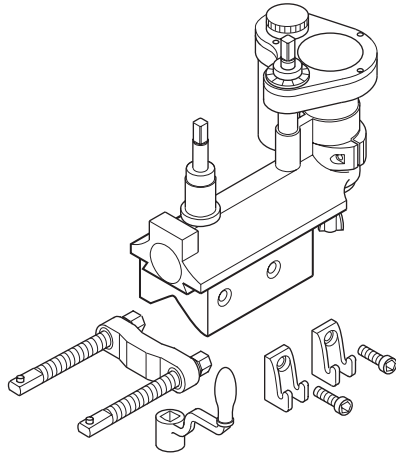
- | | |
|--------------|---|
| | <p>KM3000, electric
Standard key mill Model KM3000 complete with 1 hp electric motor, instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Shipped in wooden crate. Net Wt. 25 kg (55 lb).</p> |
| 16000 | <p>KM3000, inch 120 V with no Speed Control (domestic)
As above with in-line switch and standard U.S. cord set.</p> |
| 16001 | <p>KM3000, inch 230V with Speed Control CE
As above with 230 V motor, inch spindle and CE-compliant electric speed control.</p> |
| 16003 | <p>KM3000, metric 120V with no Speed Control (domestic)
As above with 120 V motor, inch spindle, inline switch and standard U.S. Cord set.</p> |
| 16004 | <p>KM3000, metric 230V with Speed Control CE
As above with 230 V motor, metric spindle, and CE- compliant electric speed control.</p> |
| 37000 | <p>KM3000, inch 120V with Speed Control (domestic)
As above with 120 V motor, inch spindle, and electric speed control.</p> |
| 36783 | <p>KM3000, metric 120V with Speed Control CE
As above with 120 V motor, metric spindle, and CE- compliant electric speed control.</p> |
| 39572 | <p>KM3000, metric 120V with Speed Control (domestic)
As above with 120V motor, metric spindle, and electronic speed control.</p> |
| 39571 | <p>KM3000, metric 230V with no Speed Control
As above with 230V motor, metric spindle, and no speed control.</p> |



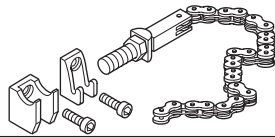
- | | |
|----------------|---|
| | <p>KM3000 Portable Key Mill, pneumatic (with conditioning unit)
Standard key mill Model KM3000 complete with 1.2 hp pneumatic motor*, instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Shipped in wooden crate. Net Wt. 55 lb (25 kg).</p> |
| 16002 | <p>KM3000 Portable Key Mill, inch
As above with inch calibration.</p> |
| 16005 | <p>KM3000 Portable Key Mill, metric
As above with metric calibration.</p> |
| 16005CE | <p>KM3000 Portable Key Mill, CE approved
As above with metric calibration.</p> |

*Motor requires 40 ft³/min (1 m³/min) at 90 psi (620 kPa).

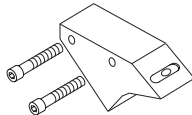
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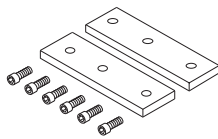
- 16008** **KM3000 Portable Key Mill, Inch, hydraulic***
Standard key mill Model KM3000 complete with instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Includes flow control valve. Shipped in wooden crate.
- 16008** **KM3000 Portable Key Mill, hydraulic 274 rpm**
As above with hydraulic motor producing 274 spindle rpm at 6 gal/min (22.3 liter/min).
- 16009** **KM3000 Portable Key Mill, hydraulic 430 rpm**
As above with hydraulic motor producing 430 spindle rpm at 6 gal/min (22.3 liter/min).
- 16010** **KM3000 Portable Key Mill, hydraulic 664 rpm**
As above with hydraulic motor producing 664 spindle rpm at 6 gal/min (22.3 liter/min).
- *Hydraulic power unit sold separately.



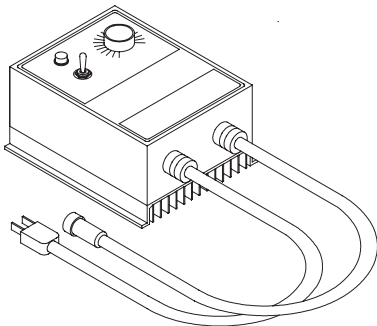
- 10378** **Chain clamp assembly**
Chain, clamping blocks and bolts for attaching key mill to shafts up to 10.5 inch (266.7 mm) diameters. Net weight 7 lb (3.2 kg).



- 10381** **Cross milling adapter**
Allows key mill to be clamped 90 degrees to shaft axis. Net weight 7.18 lb (3.5 kg).

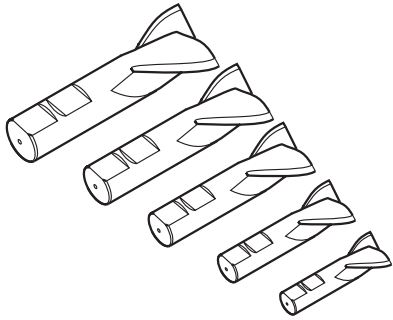


- 11669** **Shim kit**
Shims fit inside V- base to enable key mill to be mounted to shafts with diameters as small as 0.7 inch (19.1 mm). Net weight 3.4 lb (1.6 kg).



- 37388** **KM3000 In-line Switch 120V**
Provides on/off control of the KM3000 motor. No variable speed. Used when variable speed is not required. Fits current generation of KM motors only, not older models. Has standard NEMA 5-15 straight blade plug with ground. Overall length is 96 inches (244cm).
- 37389** **KM3000 In-line Switch 230V**
Provides on/off control of the KM3000 motor. No variable speed. Used when variable speed is not required. Fits current generation of KM motors only, not older models. Has european Schuko style plug. Overall length is 244 cm (96 inches).
- 36549** **KM3000 Speed Control Assy 120V**
Provides on/off and variable speed of the KM3000 motor. Fits current generation of KM motors only, not older models. Has standard NEMA 5-15 straight blade plug with ground. For use in NON-CE countries
- 36950** **KM3000 Speed Control Assy and retrofit kit**
Provides on/off and variable speed of the KM3000 motor. Includes 36549 speed control assy and a new end cap assy (34142) for the motor so that older machines can use the current design controller. Has standard NEMA 5-15 straight blade plug with ground. For use in NON-CE countries
- 36685** **KM3000 Speed Control Assy 230V CE**
Provides on/off and variable speed of the KM3000 motor. Fits current generation of KM motors only, not older models. Has european Schuko style plug. For use in CE countries.

Drawings may not represent actual product.



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End mill sets

SAE and metric 2-flute end mills are available. Short flutes for maximum rigidity. See separate end mill price list for availability.

10385

End mill set, inch

Seven end mills from 1/4 - 1 inch in 1/8 inch increments, plus collet.

10386

End mill set, inch

8 end mills from 3/16 - 1 inch in 1/16 inch increments, plus collet, and 7 end mills from 1/4 - 1 inch in 1/8 inch increments.

10387

End mill set, metric

Five end mills: 8 mm, 10 mm, 12 mm, 16 mm, and 18 mm, plus two collets.

Climax Portable Machine Tools Worldwide Manufacturing, Sales & Rental Facilities



KM3-1M0604

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