Cut a new, full-depth, 6 inch (152.4mm) keyway in less than 4 minutes.*

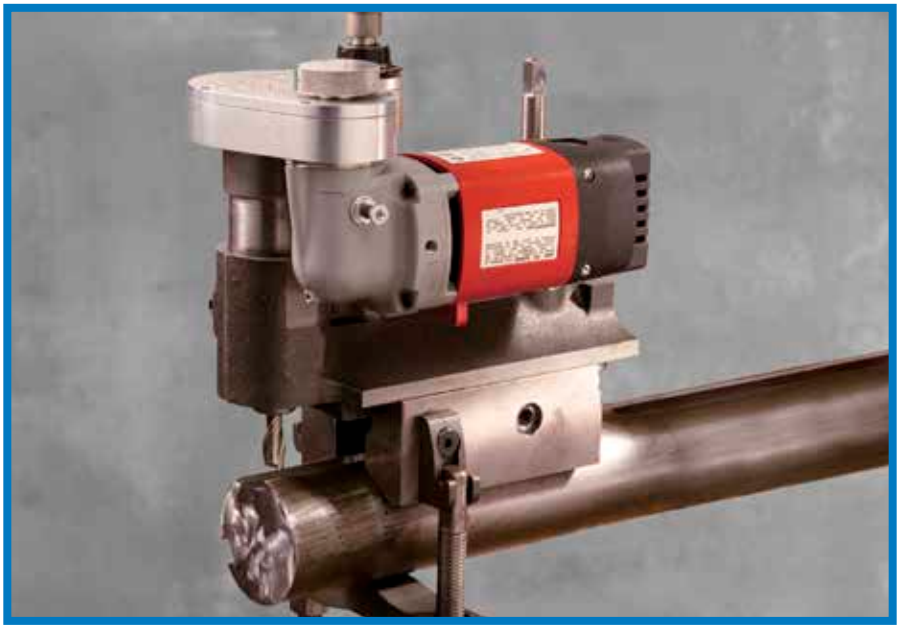
The CLIMAX KM3000 Portable Key Mill is a simple, rugged, dependable machine tool designed to cut keyways in shafts without extensive dismantling. The automatically centering V-base is quick and easy to set up. Clamps on any shaft from 1.5 - 4.5 inches (38.1 - 114.3 mm) in diameter with the standard bar clamp. Cuts stub-end keyways or mid-shaft keyways, or 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 (19.1 mm) in diameter.

Compact & Powerful

- Compact, rugged, portable milling machine for on-site keyway and other milling jobs.
- Self-centering and self-aligning V-base.
- Needs only 1.5 inches (38.1 mm) of shaft for clamping
- Clamps on shafts up to 10.5 inches (266.7 mm) diameter with optional chain clamp.
- Slotted V-base allows you to cut right to the end of the shaft.

Efficient Operations with High Quality Components

- Vertical and horizontal travel via hand crank.
- Dovetail ways for accurate cutting action.



- Standard Weldon-type spindle accepts 5/8 inch end mills, or 16 mm shank end mills on metric machines.
- Precision Acme thread leadscrew with roller thrust bearings.
- Zeroing-type vertical adjustment dial calibrated to control cutter depth in 0.001 inch (0.1 mm) increments.
- Sealed aluminum alloy gear box permits operation at any angle.
- Precision ground quill housing ensures smooth operation.

* Actual cutting time for a keyway 1 x 0.5 x 6 inches (25.4 x 12.7 x 152.4 mm) was 3 minutes 10 seconds. This time was achieved in C1018 steel with a sharp end mill.

SPECIFICATIONS

	US	Metric
Machine Performance Ranges		
Stroke (slide travel) max.	6.0 inches	152.4 mm
Vertical travel max.	1.75 inches	44.5 mm
No load variable spindle speed		
minimum	365 rpm	365 rpm
maximum	675 rpm	675 rpm
Spindle hole diameter INCH	0.625 inches	
METRIC		16.0 mm
Maximum end mill diameter	1.25 inches	31.75 mm
Maximum shaft diameter:		
standard bar clamp	4.5 inches	114.3 mm
with optional chain clamp	10.5 inches	266.7 mm
Minimum shaft diameter:		
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
Power Options		
Power, electric 120V or 230V, 50-60Hz	1 Hp	0.75 kW
Power, pneumatic	1.2 Hp	0.9 kW
Power, hydraulic	4.7 Hp	3.5 kW
Measures		
Overall length	12.5 inches	317.5 mm
Overall width	6.6 inches	167.6 mm
Overall height	11.63 inches	295.4 mm
Base size	4.38 x 6.75 inches	111.3 x 175.1 mm
Operating weight (with speed control)	70 lbs.	31.8 kg
Shipping weight (with speed control)	82 lbs.	37.2 kg
Shipping dimensions	13 x 14 x 20 inches	330 x 360 x 508 mm
Machining Ability Example		
Material	C1018 steel	C1018 steel
Metal removal rate	1 $inch^3$/minute	16.4 cm^3/min
Keyway dimensions	1 x 0.5 x 6 inches	25.4 mm x 12.7 mm x 152.4 mm
Cutting Time	3 minutes and 10 seconds	3 minutes and 10 seconds

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.

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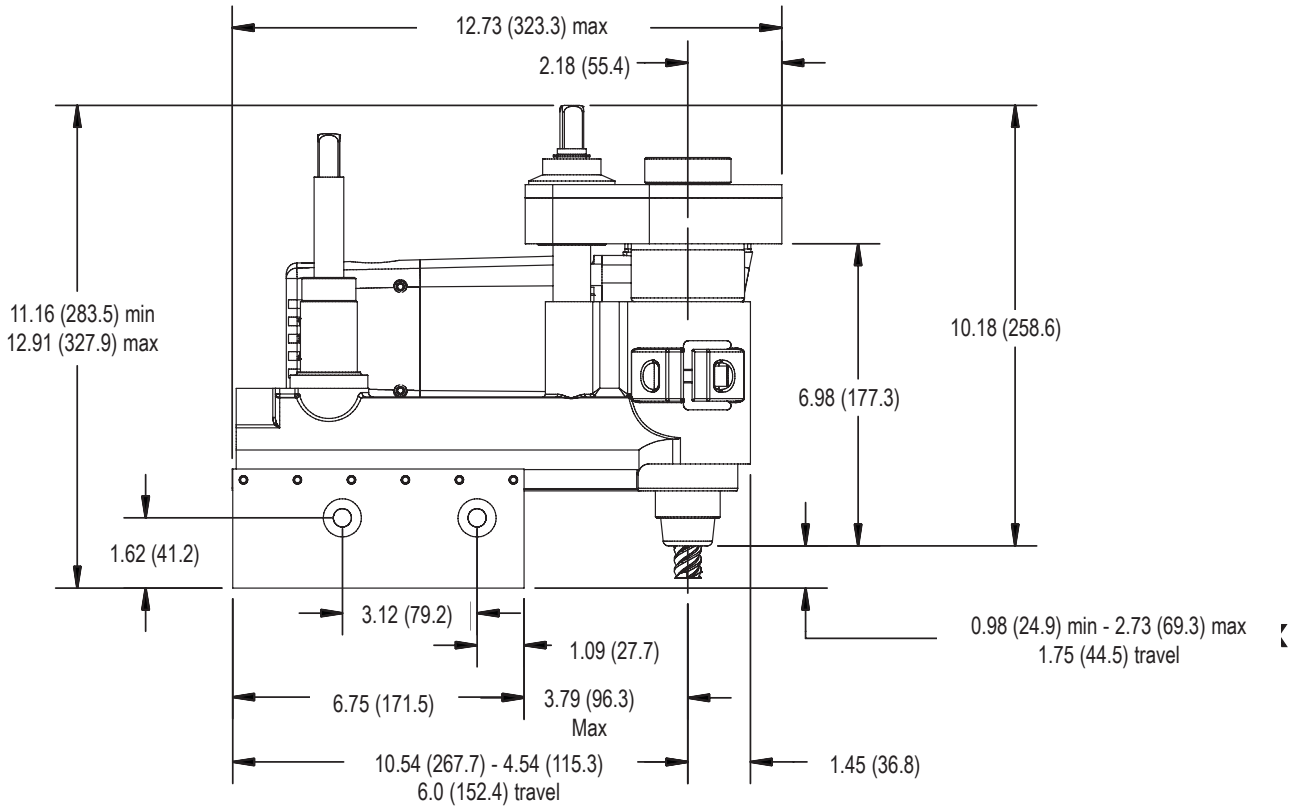
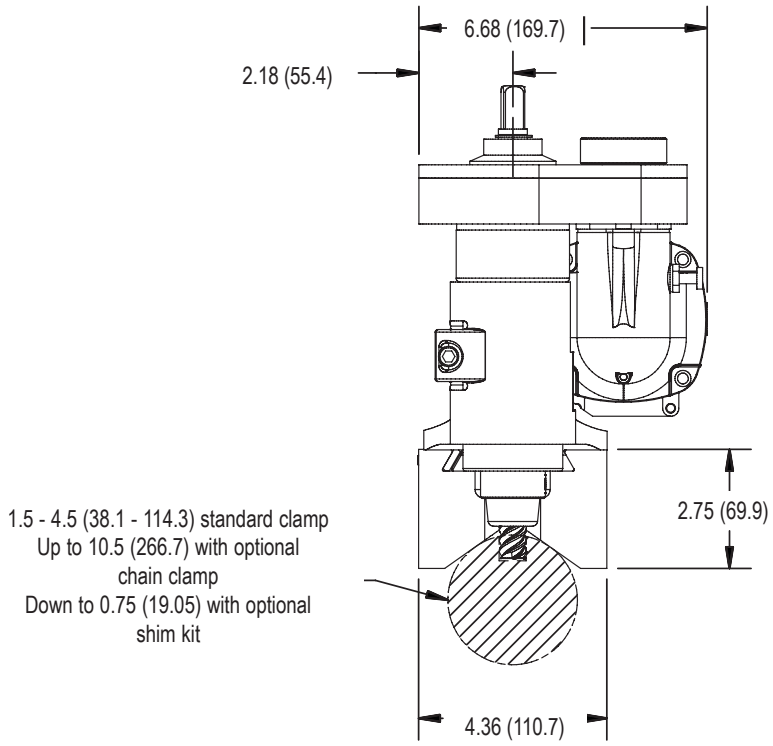
OPERATIONAL DIMENSIONS

Dimensions in inch (mm)





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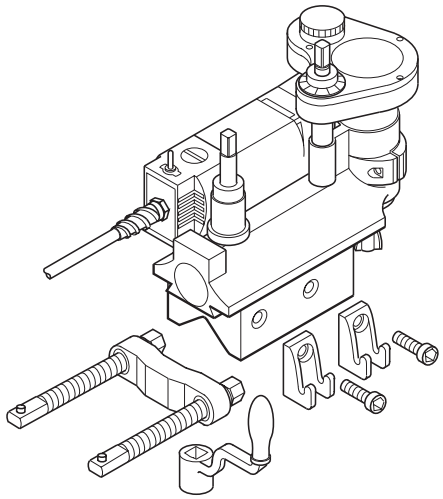
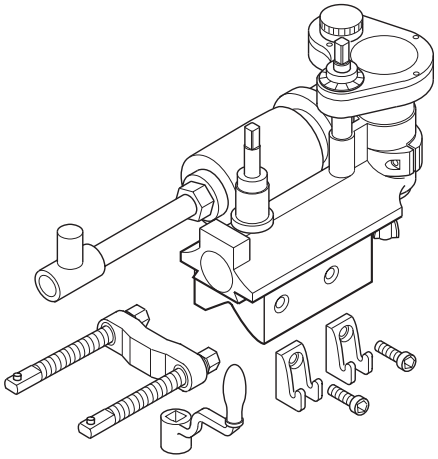
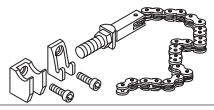
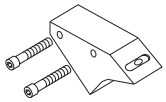
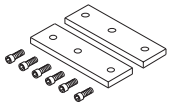
TOOL CONFIGURATIONS

	No.	Description
		**KM3000 Portable Key Mill, Electric** Standard key mill Model KM3000 complete with 1 Hp (0.75 kW) electric motor, instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Shipped in wooden crate.
	37000	**KM3000, inch 120V with Speed Control** As above with inch calibration and 120 V motor, inch spindle, and electric speed contro
	16000	**KM3000, inch 120 V with no speed control** As above with inch calibration and 120 V MOTOR, in-line switch and standard U.S. cord set.
	16001	**KM3000, inch 230V with speed control, CE Compliant** As above with inch calibration and 230 V motor, inch spindle and electric speed control.
	16003	**KM3000, metric 120V with no speed control** As above with metric calibration and 120 V motor, metric spindle, inline switch and standard U.S. Cord set.
	16004	**KM3000, metric 230V with speed control, CE Compliant** As above with metric calibration and 230 V motor, metric spindle, and electric speed control.
	39572	**KM3000, metric 120V with Speed Control** As above with metric calibration and 120 V motor, metric spindle, and electronic speed control.
	39571	**KM3000, metric 230V with no Speed Control, CE-Compliant** As above with metric calibration and 230 V motor, metric spindle, and no speed control.
		**KM3000 Portable Key Mill, Pneumatic (with pneumatic conditioning unit), all CE-Compliant** Standard key mill Model KM3000 complete with 1.2 Hp (0.89 kW) pneumatic motor*, instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Shipped in wooden crate.
	16002	**KM3000, pneumatic, inch** As above with inch calibration.
	16005	**KM3000, pneumatic, metric** As above with metric calibration.
		*Motor requires 40 ft^3/min (1 m^3/min) at 90 psi (620 kPa).
	**27364**	**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.l8 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).

NOTE: Drawings are for reference only, are not to scale, and may not represent actual product.

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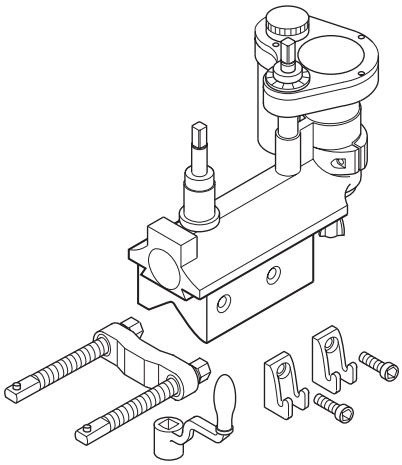
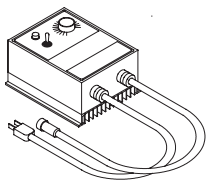
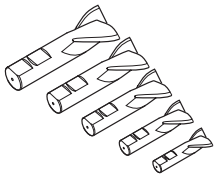
TOOL CONFIGURATIONS

	No.	Description
		**KM3000 Portable Key Mill, Hydraulic*, all CE-Compliant** Standard key mill Model KM3000 complete with instruction manual, tool kit, and bar clamp. Order collets and end mills separately. Shipped in wooden crate..
	16008	**KM3000, inch hydraulic 274 rpm** As above with inch calibration and hydraulic motor producing 274 spindle rpm at 6 gal/min (22.3 liter/min).
	16009	**KM3000, inch hydraulic 430 rpm** As above with inch calibration and hydraulic motor producing 430 spindle rpm at 6 gal/min (22.3 liter/min).
	45134	**KM3000, metric hydraulic 430 rpm** As above with metric calibration and hydraulic motor producing 430 spindle rpm at 6 gal/min (22.3 liter/min).
	16010	**KM3000, inch hydraulic 664 rpm** As above with inch calibration and hydraulic motor producing 664 spindle rpm at 6 gal/min (22.3 liter/min). *Hydraulic power unit sold separately.
 36549 shown	**37388**	**KM3000 inline 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 inline switch 230V, CE-Compliant** 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 assembly 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.
	36685	**KM3000 speed control assembly 230V, CE-Compliant** 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.
	36950	**KM3000 speed control assembly and retrofit kit** Provides on/off and variable speed of the KM3000 motor. Includes 36549 speed control assembly and a new end cap assembly (34142) for the motor so that older machines can use the current design controller. Has standard NEMA 5-15 straight blade plug with ground.
 NOTE: Drawings are for reference only, are not to scale, and may not represent actual product.		**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** Eight end mills from 3/16 - 1 inch in 1/16 inch increments, and seven end mills from 1/4 - 1 inch in 1/8 inch increment, plus 3/8 inch I.D. collet for end mills 7/16 inch and smaller.
	10387	**End mill set, metric** Five end mills: 8 mm, 10 mm, 12 mm, 16 mm, and 18 mm, plus two collets, one with 16mm OD with 10mm ID, the other with 16mm OD and 12mm ID.
	22387	**End mill set, metric** Eight end mills: 5 mm, 6 mm, 8 mm, 10 mm, 12 mm, 14 mm,16 mm, 18 mm, plus three collets.

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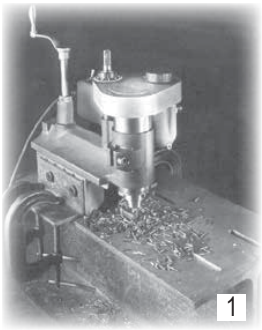
APPLICATION PHOTOS

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 allow the KM3000 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.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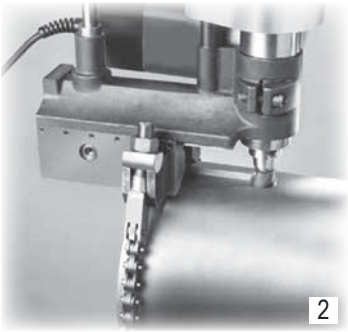
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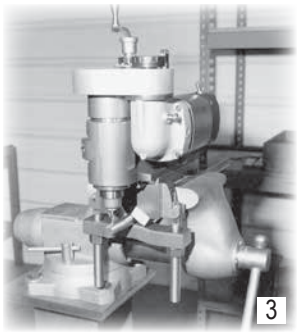
The KM3000 is widely used by these industries:

- Construction
- Mining
- Power Generation
- Ship building
- Pulp and paper
- Steel and aluminum

Typical applications:

- Key slots on crank shafts
- Keyways on tapered shafts
- Keyways on pump shafts
- Motor and pump repair
- Mill radius slots in turbine shafts
- Cutting new keyways on paper rolls
- Chipper and conveyor repair
- Keyways on motors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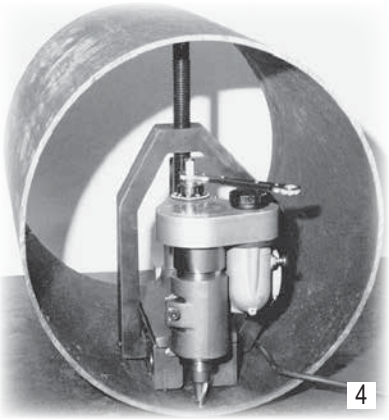
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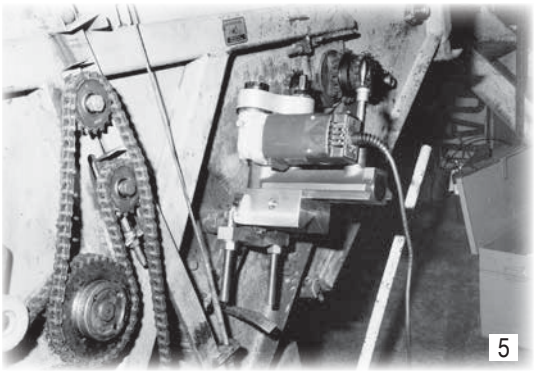
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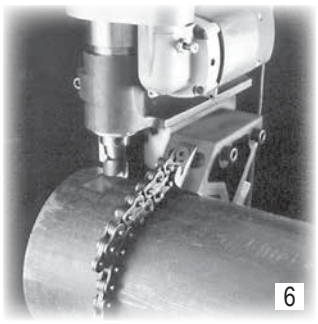
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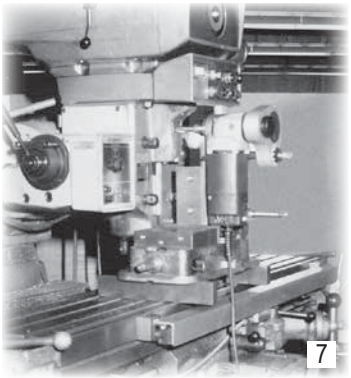
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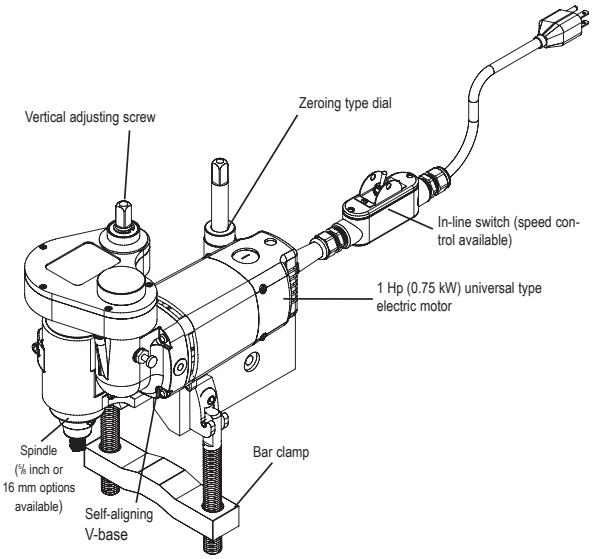

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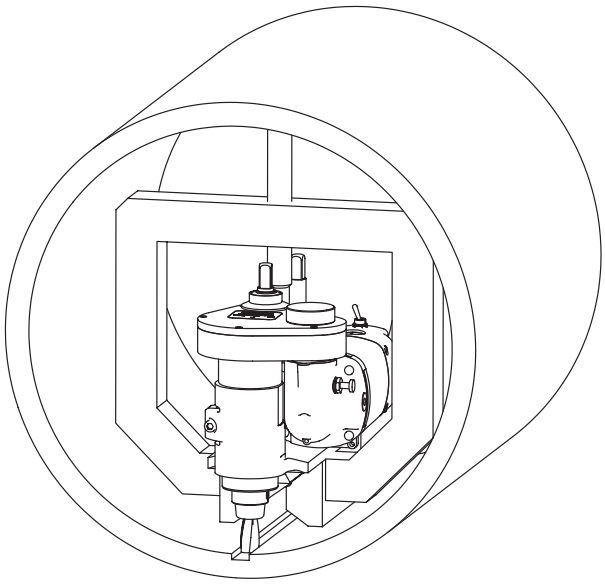
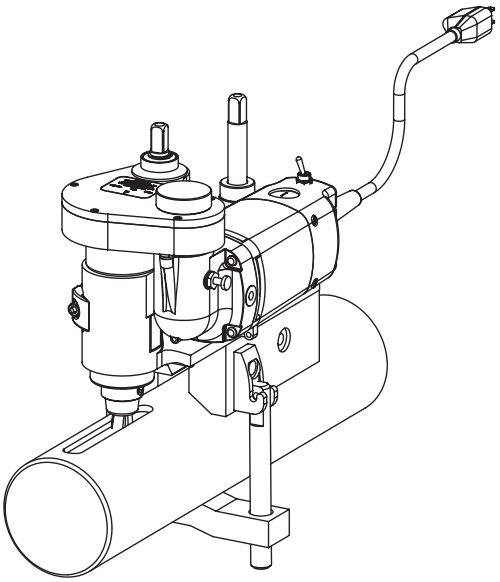
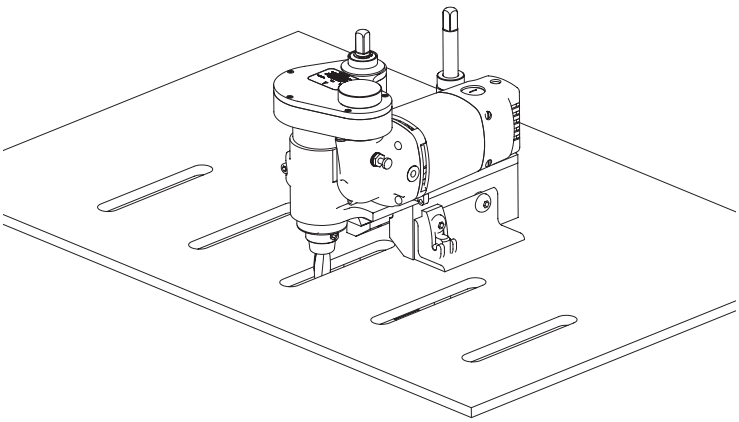
APPLICATIONS



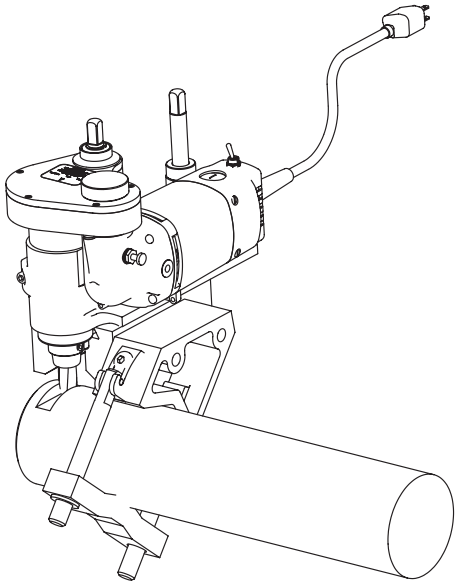
ID Keyway Cutting



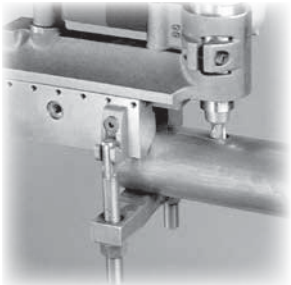
OD Keyway Cutting



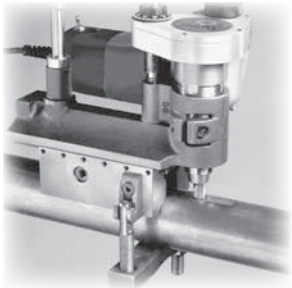
Slotting



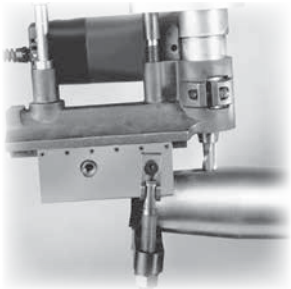
Cross Milling



Mount on end
Only 1.5 inches (38.1 mm) of shaft required for mounting the KM3000.



Mount in the middle
The machine can be leveled for cutting long keyways.



Tapered shafts
Mounting on tapered shafts require shimming.

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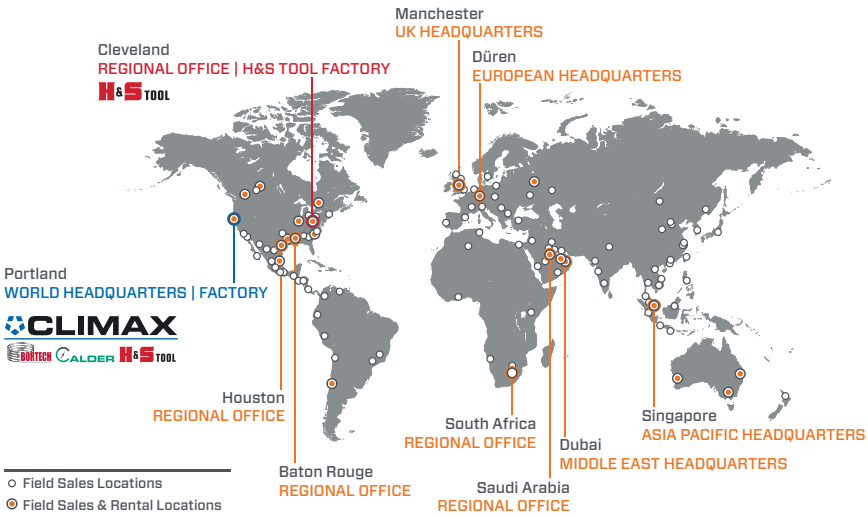

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