

UKAM Industrial Superhard Tools

Division of LEL Diamond Tools International, Inc.

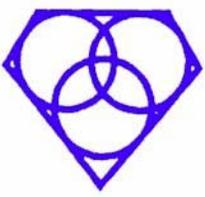
25345 Avenue Stanford, Unit 211 Valencia, CA 91355 USA

Phone: (661) 257-2288 Fax: (661) 257-3833 www.ukam.com



Diamond Band Saw Blades have proven to be an effective diamond machining tool on a large variety of materials and applications. With diamonds firmly attached to ultra thin metal body, Diamond Band Saw Blades remain the tool of choice for many diamond cutting and machining jobs. Only the highest quality raw materials are used in the manufacturing process. Manufacturing process is carefully controlled, matching your application with the right bond type, grit size, bond hardness and composition. **Average Band Saw Blade Life:** 40 to 80 hours. Some has shown to last as long as **192 hours**.

Applications for Diamond Band Saw Blades						
Material	Workheight (Inches)	Recommended Band	Edge Configuration	Band Speed (SFPM)	Kerf Loss	Coolant
Quartz/Glass	1-6	1" x .020"	Continuous or Segmented	2000-2500	0.040"	Yes
	6-10	1" x .025"		2000-2500	0.055"	Yes
	10-18	1" x .035"		2000-2500	0.072"	Yes
	18-30	1¼" x .040"		2000-2500	0.075"	Yes
	30+	1½" x .040"		2000-2500	0.075"	Yes
Silicon (Electronic)	1-6	1" x .020"	Continuous	1800-2200	0.040"	Yes
	6-10	1" x .025"		1800-2200	0.055"	Yes
	10+	1" x .035"		1800-2200	0.072"	Yes
Silicon (Solar)	1-6	1" x .020"	Continuous	1800-2200	0.040"	Yes
	6-10	1" x .025"		1800-2200	0.055"	Yes
	10-12	1" x .035"		1800-2200	0.072"	Yes
	12+	1¼" x .040"		1800-2200	0.075"	Yes
Ceramic	1-6	1" x .020"	Continuous	1800-2200	0.040"	No
	6-10	1" x .025"		1800-2200	0.055"	No
	10+	1" x .035"		1800-2200	0.072"	No
Carbide	1-4	¾" x .020"	Continuous	1800-2200	0.035"	No
	4-6	1" x .020"		1800-2200	0.040"	No
Granite	1-4	1" x .025"	Continuous or Segmented	1800-2200	0.055"	Yes
	4-8	1" x .035"		1800-2200	0.072"	Yes
	8-12	1¼" x .040"		1800-2200	0.075"	Yes
	12+	1½" x .040"		1800-2200	0.075"	Yes
Marble	1-4	1" x .020"	Continuous or Segmented	2000-2500	0.040"	Yes
	4-8	1" x .025"		2000-2500	0.055"	Yes
	8-12	1" x .035"		2000-2500	0.072"	Yes
	12-18	1¼" x .040"		2000-2500	0.075"	Yes
	18+	1½" x .040"		2000-2500	0.075"	Yes
Pyrex	1-4	1" x .020"	Continuous	1800-2200	0.040"	Yes
	4-8	1" x .025"		1800-2200	0.055"	Yes
	8+	1" x .035"		1800-2200	0.072"	Yes
Masonry Materials	1-4	1" x .020"	Continuous or Segmented	1800-2200	0.040"	Yes
	4-8	1" x .025"		1800-2200	0.055"	Yes
	8+	1" x .035"		1800-2200	0.072"	Yes
Carbon/Graphite	1-6	1" x .020"	Segmented or Gulleted	2000-2500	0.040"	No
	6-18	1" x .025"		2000-2500	0.055"	No
	18-24	1" x .035"		2000-2500	0.072"	No
	24-32	1¼" x .040"		2000-2500	0.075"	No
	32-40	1½" x .040"		2000-2500	0.075"	No
	40+	2" x .040"		2000-2500	0.080"	No
Fiberglass FRP	ANY	1" x .020"	Gulleted	2000-2500	0.040"	No
Glass Reinforced Plastic (GRP)	1-6	1" x .020"	Segmented or Gulleted	2000-2500	0.040"	No
	6-10	1" x .025"		2000-2500	0.055"	No
	10+	1" x .035"		2000-2500	0.072"	No
Fiberglass Laminate	ANY	1" x .020"	Gulleted	2000-2500	0.040"	No



**** Note that kerf loss is dependant on diamond grit selected.**

Diamond Band Saw Blade Setup Procedure

With new developments of advanced materials, the diamond band saw blade has played a key role in effective sawing and development of these materials. Proper use and installation of diamond band saw blade is critical to its cutting efficiency and life. The following suggestions, will help you **get the most out of your diamond band sawing operation.**

Step 1: Place new band saw blade over band saw machine wheels and through guides

Step 2: Set band saw machine guides to .001" - .0015" over diamond band saw width

Step 3: Place tensigage on the diamond band saw blade in intentioned condition.

Step 4: Zero gage, then tension to 1.5 units. Diamond Band Saw Blade tension should be set as low as possible to saw your material while still maintaining straight cuts.

Step 5: Run Diamond Band Saw Blade slowly to properly track on tires.

Step 6: Release the tension and retention to 1.5 units. Check the tension at beginning of each shift.

Step 7: Make sure your diamond band saw blade is not toughing back up bearings. Rubbing back up bearings will cause premature failure in the backing material of the diamond band.

Step 8: Set table speed to cut at four square inches per minute. This is only a recommended starting point. Keeping accurate records on every band saw blade will help you adjust the feed rate to optimize the total square inches of sawing for one diamond band saw blade.

Step 9: Set band speed to approximately 1500-2500 surface feet per minute. Again, keep accurate records on every band.

Step 10: Allow only enough table feed to permit the diamonds to cut freely. Overfeed will cause the diamond band saw blade to rub excessively against back up bearings resulting in early fatigure.

Step 11: When stopping production reduce diamond band saw blade speed to eliminate start up shock.

Step 12: Make sure to remove tension from diamond band saw blade when not in use.

Step 13: Occasionally dress diamond band saw blade with silicon carbide dressing stic. Dressing band saw blade will clean, sharpen, and renew the diamonds.

Step 14: Weekly inversion of the diamond band saw blade may improve cutting life.



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Diamond Band Saw Machine Maintenance

Proper mounting and use of diamond band saw blade will insure maximum productivity and life of both your diamond band saw blade and machine. Here are some recommendations and steps to follow on a daily basis:

Guide Blocks - Check periodically for war and regrind as needed. Setting the guides for .001" - .0015" band clearance is important for straight cuts.

Backup Bearings - Check periodically for war

Upper Guideposts - Ste as close to work piece as possible

Upper Wheel Slide Assembly - As this area seriously effects band tensioning it must be kept clean. Flush the area with coolant at least once per day.

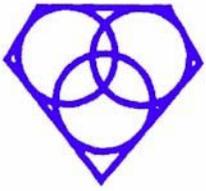
Lower Wheel Area - Again flush with coolant once per day.

Tires - Grooves in the tires must be kept clean to prevent hydroplaning and to maintain proper tracking. Check during installation of each new band saw blade.

Overall Cleanliness - Wiping sown the machine daily can help remind everyone to maintain all the important parts inside the machine.

Operator Training - The most important of all, including keeping accurate records on each and every diamond band saw blade.

Proper setup, use, and maintenance of your diamond band saw blades will optimize blade life as well as increase total square inches of material cut by one diamond band saw blade.



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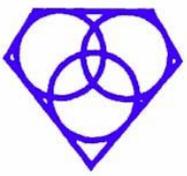


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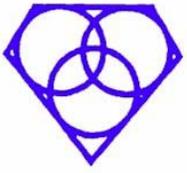
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