

Cutting Clay Pavers

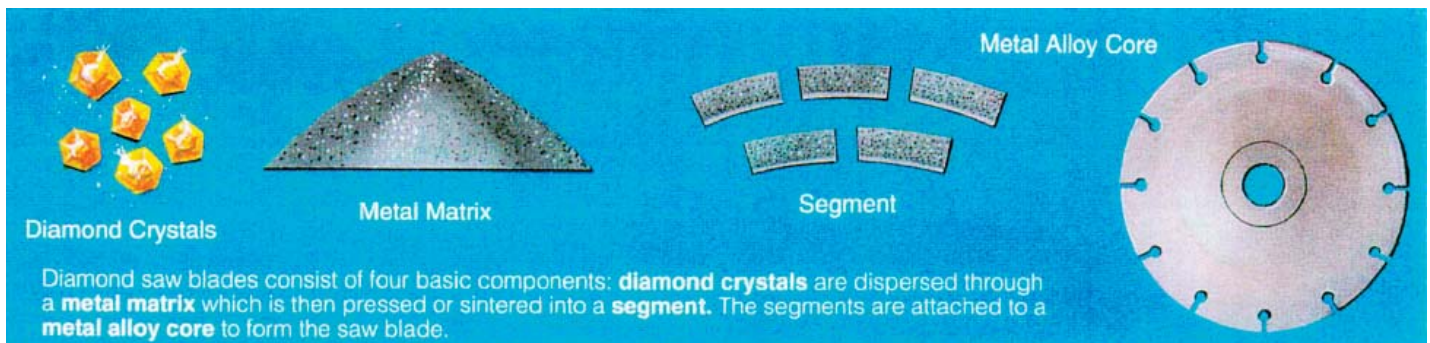
Diamond Blade Basics

- Not all diamond blades are equal. There are different diamond blades made to cut green concrete, brick, block, refractory, etc.... Hard, dense materials like PHB Pavers need a softer bond matrix with a higher diamond concentration to cut effectively.
- Using a diamond blade in the wrong application can be expensive. A concrete blade with a hard bond matrix cutting PHB pavers will glaze over or polish after a few cuts and will quit cutting but still show segment life.
- For best performance, optimum Surface Feet per Minute cut rate is 10,000 to 12,000. (see below) Harder materials like brick cut better at lower RPM's. Determine the best RPM speed through surface feet per minute calculations.
- Generally, the more horsepower (torque) applied to the blade shaft, the more efficient the cutting action. Remember, lower horsepower may require softer bonds or less diamonds to cut efficiently.
- Improper RPM's can cause blade wobble and may create dangerous cutting conditions causing injury.
- Excessive pressure can dull the blade and cause it to cut slower or not at all. Let the diamonds do the work.
- High speed saws should use a blade specifically designed for high RPMs and not exceed 16,000 SFM.

Surface Feet per Minute & RPM

- The best cutting rate for PHB pavers is 10,000 to 12,000 surface feet/ minute(SFM).
- Surface feet per minute is a factor of RPM and blade diameter.
- The formula to calculate SFM is $[\text{blade diameter} \times 3.14 \times \text{RPM}] / 12 = \text{SFM}$

BLADE	10,000 SFM	12,000 SFM
12"	3184 RPM	3822 RPM
14"	2730 RPM	3276 RPM
16"	2389 RPM	2866 RPM
20"	1911 RPM	2293 RPM



Diamond Blade Selection

Soft Bond Matrix Blades by Type

Diamond Blade Type	Cushion Cut	MK	Target	Clipper	Dia. Prod
Dry-Std. Diamond Concentration	DM PVQ 2.5	MK-399D/314D	DM3	ZDM-150	Gold DM-80S
Dry-Medium Dia. Concentration	DM-1 Prem. 3.2	MK-414D/537	MS-1/FC-10	ZDM-150XL	Orange DM-80H
Dry-High Dia. Concentration	DM-1 Sup. 4.0	---	---	ZDM-200	Black DM-80P
Wet-Std. Diamond Concentration	M40 PVQ 4.0	MK-10	BlueM-GoldM	CM-100	DM-80H
Wet-Medium Dia. Concentration	M40 Prem. 4.5	MK-10S	Gold-1 BLM	PM-100	DM-80S
Wet-High Dia. Concentration	M40 Sup. 4.5	MK-10P	---	PMX-100	DM-80P
High RPM-Med. Dia. Concentration	DHS-1 Prem. 3.2	MK-400D	HS3	ZHD 150XL	Orange H-7H

WARNING: The dust generated from dry sawing may contain silica and may be a potential health problem for the lungs although we are aware of no scientific evidence to support this conclusion. Wet sawing is recommended.

A Few Words from Mr. Diamond...



Use Me in the Right Places...

Through the years of testing, special specifications have been developed to give the best cutting for each application. Green concrete, old concrete, bricks and clay, asphalt, wall sawing, etc., all have

blades made especially for them. Making sure the blade is suited to your cutting job will result in faster, easier cutting and better blade life.

Don't Push Me Too Hard...



Excessive pressure on the blade will dull the diamonds, create stress in the steel core and cause the blade to become out of round. On lighter saws, too much pressure causes the blade to rise out of

the cut, and will lug the engine down. Just listen for that smooth cutting sound; when you hear that, you know the blade is cutting at it's best.



Run Me at My Right Speed...

Blades should generally be run between 9,000 to 13,000 surface feet per minute. This means larger blades should be run at lower RPM than smaller blades. If you want to help

sharpen a dull blade, try running it for a short time at reduced RPM.

Give Me Enough Power...

The More horsepower (torque, not pressure on the blade) supplied to the spindle, the more efficient the cutting action will be. Low horsepower may require a



softer blade band or less diamonds.

Turn Me in the Same Direction...

Always put the blade on the spindle so that the blade is always running in the same direction. Longer blade life will result. There



is an arrow to show you the way

the blade was sharpened at the plant.



Special Thanks to Cushion Cut for providing the information used in this TechBulet. Cushion Cut is a full line diamond blade manufacturer with factories worldwide. Over 30 years of research went into the development of their bond matrix formulas making them a leader in the sawing and drilling industry. For your nearest dealer call 800-421-2222.



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