



Made in America Since 1968

TOOLING & ACCESSORIES

Tooling plays a crucial role in concrete surface preparation. Understanding the different types of grinder tooling—and knowing when to use each one—can significantly boost your efficiency on the job. Below is a quick guide to help you choose the right tooling for your grinder:

Choosing the right tool and machine:

Surface prep tools grind and polish concrete while removing coatings like epoxy or glue. Planetary grinders are ideal for polishing and scratch removal, delivering a high gloss finish without coatings.

Key factors in tool selection:

- Bond Hardness
- Diamond grit size
- Diamond concentration
- Segment shape
- Segment pressure (machine weight and segment count)
- Material type (soft, hard or abrasive)
- Desired finish

Rule of thumb:

- The finer the grit, the slower the grinder speed should be.
- If you're producing dust, you're grinding, if not, the machine is drifting over the surface - change the tooling.
- Always clean up! A clean surface prevents scratches from debris and makes it easier to assess your progress.
- Do not polish green concrete - it must be fully cured first.
- More tool segments result in a less aggressive grind due to increased surface area and reduced pressure. Smaller segments create more down-force, leading to a more aggressive cut but faster wear.

What is Bond?

The bond is a metal alloy that wears away to expose new diamonds, Soft bonds wear faster on hard materials, while medium bonds balance durability and speed for concrete. Hard bonds last longer on softer, abrasive surface like asphalt. Selecting the right bond prevents glazing and premature wear, ensuring optimal performance.

PLANETARY GRINDER TOOLING GUIDE

CONCRETE PREP

TOOLING RECOMMENDATIONS

FULL BAR DIAMONDS

Works best in most applications.

HALF BAR DIAMONDS

Use when needing more pressure than Full Bar Diamonds.

SINGLE BAR DIAMONDS

Single bar diamonds should only be used to open up really tough concrete.



FLYING V DIAMONDS

The Flying V metal bond diamonds offer similar head pressure as the full bar diamonds, but increased productivity due to the leading edge of the arrow shape.

PROFILING DIAMONDS

Use profiling diamonds when prepping concrete for polishing.

BRAZED DIAMONDS

Because brazed diamonds expose all diamonds at once, both trapezoid and 5-inch discs are highly efficient. You will go through tooling much quicker than metal bond diamonds.

OPERATION TIPS

Depending on the removal, you may need to adjust the weights

If you're having trouble breaking open the concrete, try 9504-25.

HELIX®

Set your machine to High Speed. If you notice diamonds glazing, decrease to Low Speed.

8274-4

Set your machine to the highest speed. If you notice diamonds glazing, decrease speed incrementally until glazing stops.



FULL BAR DIAMONDS



HALF BAR DIAMONDS



SINGLE BAR DIAMONDS



FLYING V DIAMONDS



PROFILING DIAMONDS



TRAPEZOID BRAZED DIAMONDS



5-INCH DISC BRAZED DIAMONDS

CONCRETE POLISHING

TOOLING RECOMMENDATIONS

PROFILING DIAMONDS

Use profiling diamonds, increasing grit with each pass, when prepping concrete for polishing.

5-INCH POLISHING PADS

After prepping with the profiling diamonds, work through the 5-inch polishing pads, increasing grit after each pass.

The Helix® polishes up to a 400 Grit Finish.

The 8274-4 polishes up to a 1500 Grit Finish.

OPERATION TIPS

SPEED

Set your machine to high speed on both the Helix® and the 8274-4.

HELIX®

Install all weights on your machine.

8274-4

Tilt 2 of your weights forward

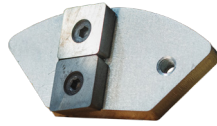


GLUE AND MASTIC REMOVAL

TOOLING RECOMMENDATIONS

CARBIDE CHIPS

- Install 2 Carbide Chips on your tooling holder.
- Carbide chips will scrape the glue or mastic off of the concrete without breaking open the concrete.
- Rotate your carbide chip for 4x the use



CARBIDE CHIPS
ON TOOLING HOLDER

OPERATION TIPS

Heat is your enemy when removing glue or mastic.

HELIX®

Attach your tooling directly to the grind and scrape plate and remove the satellites.

Remove weights
Low Speed

8274-4

Tilt all 4 weights back to reduce head pressure and decrease heat.

Low Speed

COATING AND PAINT REMOVAL

TOOLING RECOMMENDATIONS

1/2 ROUND PCDs

Available as 1-Up or 2-Up, PCDs will likely profile the concrete underneath the coating during removal

MICRO PCDs

Available in 2-Up or 4-Up, these Micro PCDs have increased head pressure for difficult removal.

HELIX SCARIFIER TOOLING

Only for Helix®

Helix Scarifier Tooling has TSR teeth and will leave little to no profile on the concrete (depending on hardness) while fully removing the paint or coating.

OPERATION TIPS

Start with 2-Up 1/2 Round PCDs. Switch to other PCDs if in need of higher head pressure.

HELIX®

Avoid aggressive concrete profiling by using Helix Scarifier Tooling.

Install weights
Low Speed

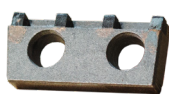
8274-4

Tilt 2 weights forward in most applications. Tilt 4 if additional head pressure is needed.

Low Speed



2-UP MICRO PCDs



4-UP MICRO PCDs



1-UP 1/2 ROUND PCDs



2-UP 1/2 ROUND PCDs



HELIX SCARIFIER
TOOLING

THIN SET REMOVAL

TOOLING RECOMMENDATIONS

1/2 ROUND PCDs

Available as 1-Up or 2-Up, PCDs will likely profile the concrete underneath the coating during removal

CARBIDE CHIPS

Because of the dispersed head pressure, the Carbide Chips will remove the thin set and leave little to no profile on the concrete.

OPERATION TIPS

Set your Helix or 8274-4 to Low Speed

HELIX®

Low Speed

Weights dependent on removal - start with weights removed if trying to avoid profiling.

8274-4

Low Speed

Weights dependent on removal - start with weights tilted back if trying to avoid profiling.



1-UP 1/2 ROUND PCDs



2-UP 1/2 ROUND PCDs



CARBIDE CHIPS

* FLYING V DIAMONDS AND OTHER METAL BOND DIAMONDS ARE ALSO SUITABLE FOR REMOVAL APPLICATIONS

** FOR TOUGH REMOVALS, CONSIDER BOLTING YOUR TOOLING TO YOUR GRINDER USING 73081 OR 73097

Metal Bond Diamonds

Perfect for leveling concrete high spots and profiling the concrete for new coatings, epoxies, and prepping concrete polishing.

Part #	Best Uses	6-Grit	12-Grit	16-Grit	30-Grit	50-Grit	80-Grit	120-Grit
Single Bar Diamonds								
9504-16SB	1 Super Seg, HARD concrete			X				
9504-16MB	1 Super Seg, MEDIUM concrete			X				
9504-25XSB	extremely aggressive - coating removal, for HARD concrete, perfect for breaking surface tension				X			
9504-25MB	1 Super Seg, Medium concrete				X			
Half Bar Diamonds								
9507-6MB	remove thin hard epoxy, paint, adhesive, sealers	X						
9507-16SB	remove thin epoxy, paint, adhesive, sealers, HARD concrete			X				
9507-16MB	remove thin epoxy, paint, adhesive, sealers,			X				
9507-16HB	remove thin epoxy, paint, adhesive, sealers, SOFT concrete			X				
9507-30SB	remove sealers, profile HARD concrete				X			
9507-30MB	remove sealers, prep concrete for polishing				X			
9507-30HB	remove sealers, profile SOFT concrete				X			
9507-50SB	remove sealers, profile HARD concrete					X		
9507-50MB	remove sealers, prep concrete for polishing					X		
9507-50HB	remove sealers, profile SOFT concrete					X		
Full Bar Diamonds								
9508-16SB	remove coatings, profile HARD concrete			X				
9508-16MB	remove epoxy and sealers			X				
9508-30SB	remove coatings, profile HARD concrete				X			
9508-30MB	remove light sealers				X			
9508-50SB	remove coatings, profile HARD concrete					X		
9508-50MB	remove light sealers					X		
Flying V Diamonds								
9509-16SB	prep, aggressive removal, HARD concrete			X				
9509-16MB	prep, aggressive removal			X				
9509-30SB	prep, aggressive removal, HARD concrete				X			
9509-30MB	prep, aggressive removal				X			
Profiling Diamonds								
9510-16MB	prep concrete for polishing			X				
9510-30MB	prep concrete for polishing				X			
9510-50MB	prep concrete for polishing					X		
9510-80MB	prep concrete for polishing						X	
9510-120MB	prep concrete for polishing							X

Brazed Diamonds

Part #		16-Grit	30-Grit	50-Grit	100-Grit
Brazed Trapezoid Diamonds					
9522-16	remove paint, stain, adhesives & heavy sealers	X			
9522-30	prep concrete for reapplication & polishing		X		
9522-50	prep concrete for reapplication & polishing			X	
9522-100	prep concrete for polishing				X
5-inch Brazed Diamonds					
9235-16	remove thin epoxy, paint, stain, adhesives, & heavy sealers	X			
9235-30	remove adhesives, heavy, & light sealers		X		
9235-50	«broom finish» on soft concrete, first stage of polishing			X	
9235-100	«broom finish» on soft concrete, first stage of polishing				X

5-inch Polishing Pads

Used for polishing concrete to various finishes and shines. Resind Bond. Available in escalating grits. These polishing pads are for use with all National planetary grinders.

Part #	50-Grit	100-Grit	200-Grit	400-Grit	800-Grit	1500-Grit	3000-Grit
9267-50	X						
9267-100		X					
9267-200			X				
9267-400				X			
9267-800					X		
9267-1500						X	
9267-3000							X

PCDs & Carbides

Part #	
9554	1-up 1/2 Round remove heavy stock, adhesive, thin set & epoxy
9556	2-up 1/2 Round remove heavy stock, adhesive, thin set & epoxy
9555	2-up Micro remove heavy stock, adhesive, thin set & epoxy
9557	4-up Micro remove heavy stock, adhesive, thin set & epoxy
7268-2	Carbides remove coatings, glue, thin set & mastic
9521	Shoe/Holder Use to attach any PCD tooling to an NFE grinder
9500	Blank fill open spots on tooling plate when in-use
9550	Screw Qty 1 - holds PCD to shoe/holder (Need 2 per shoe)

Attachments & Accessories

Part #	
73081	Helix® Safety Screw for bolting tooling to the Direct Drive Plate
73097	Satellite Safety Screw for bolting tooling to Helix® or 8274-4 satellites
402757	Direct Drive Plate magnetic tooling plate for Helix®

Helix® Scarifier Tooling

