



XCAL
TOOLS



GRADING

All Locations

XCAL TOOLS of Clare

314 E. 4th Street
Clare, MI 48617
Ph: (989) 386-5376

XCAL TOOLS of Madisonville

3957 Anton Road
Madisonville, KY 42431
Ph: (270) 825-BITS (2487)

XCAL TOOLS of South Point

235 Commerce Drive
South Point, OH 45680
Ph: (740) 377-3354
Fax: (740) 377-3363

XCAL Industries

843 Lochgelly Road
Oak Hill, WV 25901
Ph: (304) 469-4721
Fax: (304) 469-4750

XCAL TOOLS of Beckley

256 Industrial Drive
Oak Hill, WV 25901
Ph: (304) 465-0651
Fax: (304) 465-5244

XCAL TOOLS of Bristol

15020 Industrial Park Road
Bristol, VA 24202
Ph: (276) 644-3520
Fax: (276) 644-3523





SUPERIOR QUALITY

XCAL TOOLS takes pride in manufacturing and selling a full line of road planing, soil stabilization, reclaiming, grading, trenching and foundation drilling bits and carbide tooling products that are American-made. Our inhouse operations gives us the flexibility to quickly test and adapt to changing environments and customer needs. Our cost effective production methods, allows us to provide a exceptional product of the highest quality.

For over 20 years, our carbide producer XCAL INDUSTRIES, has been producing high quality carbide for the mining, roof drilling, snow and ice removal, road planing, wear products and metal cutting blanks, producing over fifty grades of cemented carbide and the capability to develop extra coarse, tougher grades to meet the demands of the industry.



SERVICE AND INNOVATION

These affiliates of JENNMAR, in collaboration with each other, can provide you with superior quality products and unmatched customer service. Our commitment to the customer is guided by three words; SAFETY, SERVICE, and INNOVATION. It's these words that form the foundation of our business. It's who we are.





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Carbide Tips

We are an ISO 9001 certified facility that offers a wide range of carbide tips to match the various challenges that you might face. Producing over fifty grades of cemented carbide and the ability to create new ones, we can find a carbide grade to meet your needs. Our versatility helps us to check and respond easily to evolving conditions and customer needs. All of our tips provide superb penetration and maximum productivity - regardless of whether you work in soft, medium-hard or extremely hard and demanding conditions.



Valve-Seat Carbide Tips

Valve-Seat Carbide Tips have a valve-seat braze joint for increased strength and shear resistance. The tips provide excellent penetration, and the large carbide shoulder gives excellent protection against steel wash. These tips are best suited for use in soft to medium materials or conditions.



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S-2000



The S-2000 is an innovative road grading system that uses rotating, replaceable tungsten carbide tools as a cutting edge, ideal for maintaining a variety of non-hard surfaced roads (e.g., ice, dirt, gravel, hauling roads, roads including public road districts, private construction contractors, federal land management, logging and mining roads).

It works by utilizing a replaceable conical tool installed in a heat-treated adapter board that allows better wear resistance and improved cutting capability over conventional steel blades and can be mounted on a motor grader in place of a conventional blade. It can also be mounted to an under body blade on a truck or a rear blade on a tractor.

Features and Benefits:

- **Lower Grading Costs:** Reduced equipment costs with a blade life equal to 5 to 15 sets of conventional blades
- **Negligible Downtime:** Easy handling and installation in the field with no heavy lift required
- **Improves Road Surface:** Cuts road surface instead of scraping providing an improved mix of materials
- **Increases Productivity:** Reduces dust and brings larger gravel particles to the top of the road surface
- **Cost-Effective Asphalt Removal:** Easily removes asphalt to the desired profile and granulates material to a uniform size to be re-used for fill

- **Excellent Ice Removal System:** Cutting action produces a grooved surface providing improved road traction

Applications:

- Gravel reclamation and maintenance
- Oil road reclamation
- Asphalt planing or following a milling machine to remove the final layer of asphalt
- Removal of potholes, washboards and rebuilding the crown for proper drainage on dirt or gravel roads
- Removal of temporary pavement marking
- Snow removal and ice shaving



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22 mm Grading System



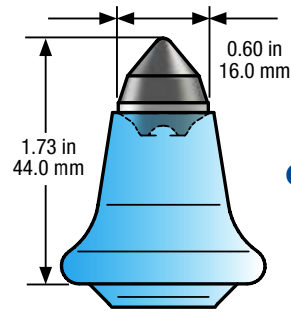
Features:

- Multiple tip options for different applications

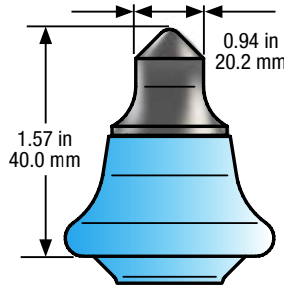


Features:

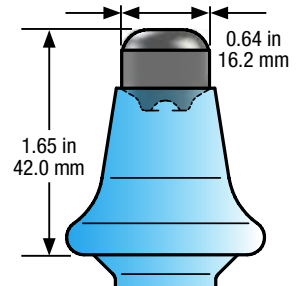
- Square washer “gear tooth” arrangement prevents washer movement allowing gap between tools
- Precompressed retainer for easier installation
- Enhances tool rotation
- Serves as replaceable wear plate/surface
- GWX28 has hex shape tail allowing tool to spin and clean out fines for better rotation



G01
Valve-Seat Carbide Tip

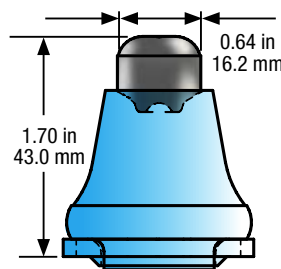


G27
Valve-Seat Carbide Tip

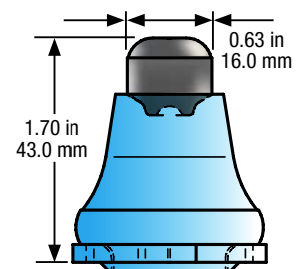


G28
Valve-Seat Carbide Tip

Part Number	Shank (in, mm)	Tip Diameter (in, mm)	Base Diameter (in, mm)	Gauge (in, mm)	Pieces per Box	Pieces per Pallet
G01	0.87 in 22.0 mm	1.11 in 12.8 mm	0.60 in 16.0 mm	1.73 in 44.0 mm	65	3900
G27	0.87 in 22.0 mm	0.40 in 10.1 mm	0.94 in 20.2 mm	1.57 in 40.0 mm	65	3900
G28	0.87 in 22.0 mm	0.64 in 16.2 mm	0.64 in 16.2 mm	1.65 in 42.0 mm	65	3900



GW28
Valve-Seat Carbide Tip



GWX28
Valve-Seat Carbide Tip

Part Number	Shank (in, mm)	Tip Diameter (in, mm)	Base Diameter (in, mm)	Gauge (in, mm)	Pieces per Box	Pieces per Pallet
GW28	0.87 in 22.0 mm	0.64 in 16.2 mm	0.64 in 16.2 mm	1.70 in 43.0 mm	50	3000
GWX28	0.87 in 22.0 mm	0.64 in 16.2 mm	0.63 in hex 16.0 mm hex	1.670 in 43.0 mm	50	3000



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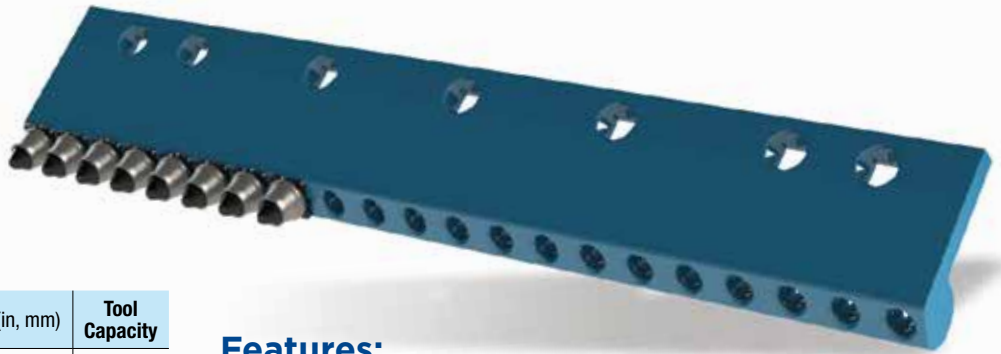
22 mm Grading System



Part Number	Length (ft, m)	Bolt Size (in, mm)	Tool Capacity
GB223658	3 ft .914 m	0.625 in 15.875 mm	24
GB224858	4 ft 1.219 m	0.625 in 15.875 mm	32
GB223634	3 ft .914 m	0.75 in 19.05 mm	24
GB224834	4 ft 1.219 m	0.75 in 19.05 mm	32

Features:

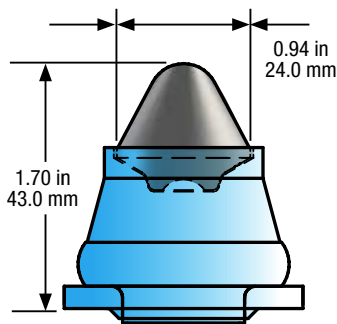
- Tool spacing 1.50" / 38.1 mm
- Multi-piece assembly allows for manageable installation
- Board fits bits G01, G27, G28, GW28, GWX28



Part Number	Length (ft, m)	Bolt Size (in, mm)	Tool Capacity
GB223658G	3 ft .914 m	0.625 in 15.875 mm	21
GB224858G	4 ft 1.219 m	0.625 in 15.875 mm	28
GB223634G	3 ft .914 m	0.75 in 19.05 mm	21
GB224834G	4 ft 1.219 m	0.75 in 19.05 mm	28

Features:

- Tool spacing is 1.72"/43.7 mm
- Tool bores feature internal clip groove for use with any style retainer
- Multi-piece assembly allows for manageable installation
- Board fits bit GW2270



GW2270

Valve-Seat Carbide Tip

Part Number	Shank (in, mm)	Tip Diameter (in, mm)	Base Diameter (in, mm)	Gauge (in, mm)	Pieces per Box	Pieces per Pallet
GW2270	0.87 in 22 mm	N/A	0.94 in 24.0 mm	1.07 in 43.0 mm	40	2400



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S-2000 Square Washers

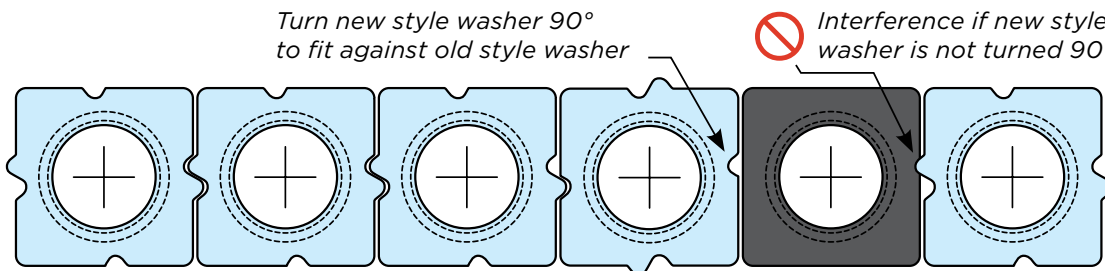
Benefits:

- New “gear tooth” arrangement prevents washers from sliding and opening a gap between the tools
- Compatible with old-style square washer and end protectors
- Pre-compressed retainer for easy installation
- Enhances tool rotation eliminating premature wear of carbide tips
- Eliminates washer rotation, preventing wear between washer and mating surface
- Provides support and stability to the tool with an extruded cone that fits neatly into the bore of the adapter board



Hexagon design makes install and removal **QUICK & EASY!**

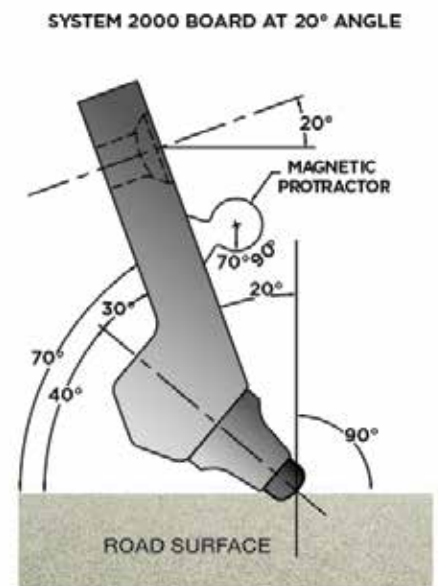
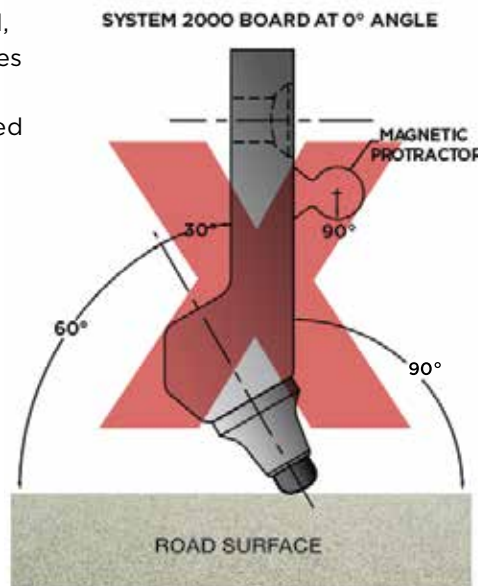
- The S-2000 square washers act as a replaceable “armor plate” wear surface preventing material buildup to allow the tool to rotate freely for improved cutting ability. The square design eliminates washer rotation preventing wear between the washer and the adapter board.



S-2000 Square Washers With Interlocking Feature
(For 22 mm and 25 mm Tools) *Patent-Protected Square Washer

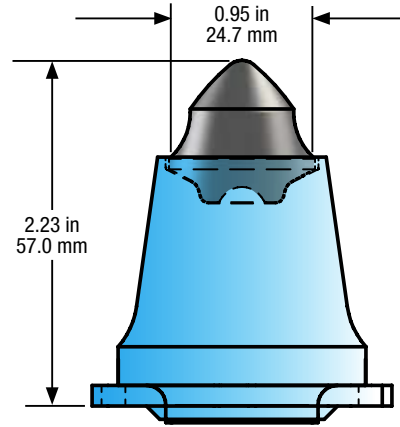
Why the angle makes a difference:

The unique operating angle of the board, that is 20° back from vertical, creates a mixing action that produces a homogeneous blend of material. This can significantly reduce the need to add new gravel.



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25 mm Grading System

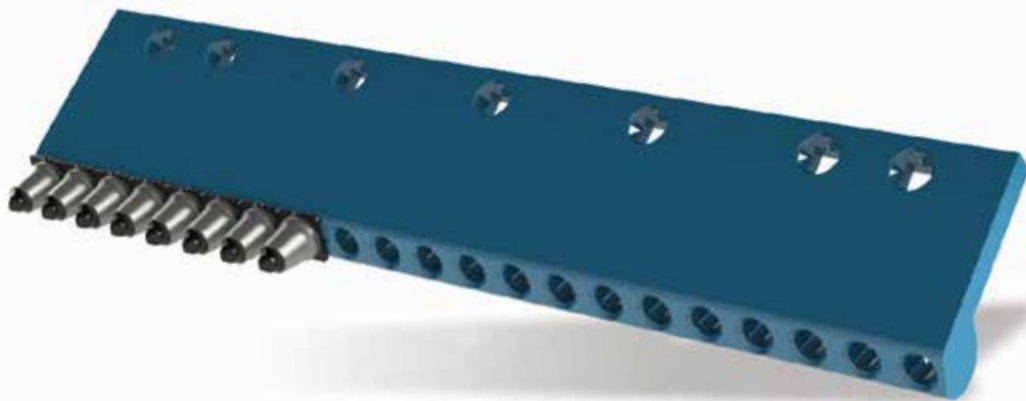


GW2523
Valve-Seat Carbide Tip

Features:

- “Gear Tooth” washer protects board mating face
- Pre-compressed retainer for easy installation
- 25 mm shank

Part Number	Shank (in, mm)	Tip Diameter (in, mm)	Base Diameter (in, mm)	Gauge (in, mm)	Pieces per Box	Pieces per Pallet
GW2523	0.98 in 25.0 mm	0.68 in 17.3 mm	0.95 in 24.7 mm	2.23 in 57.0 mm	30	1800



Part Number	Length (ft, m)	Bolt Size (in, mm)	Tool Capacity
GB2536	3 ft .914 m	0.75 in 19.05 mm	21
GB2548	4 ft 1.219 m	0.75 in 19.05 mm	28

Features:

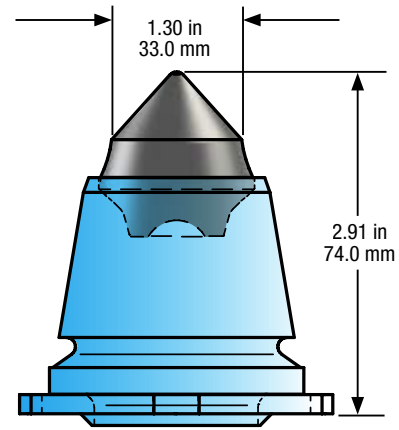
- Tool spacing is 1.72"/43.7 mm
- Multi-piece assembly allows for manageable installation
- Board fits bit GW2523



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35 mm Grading System

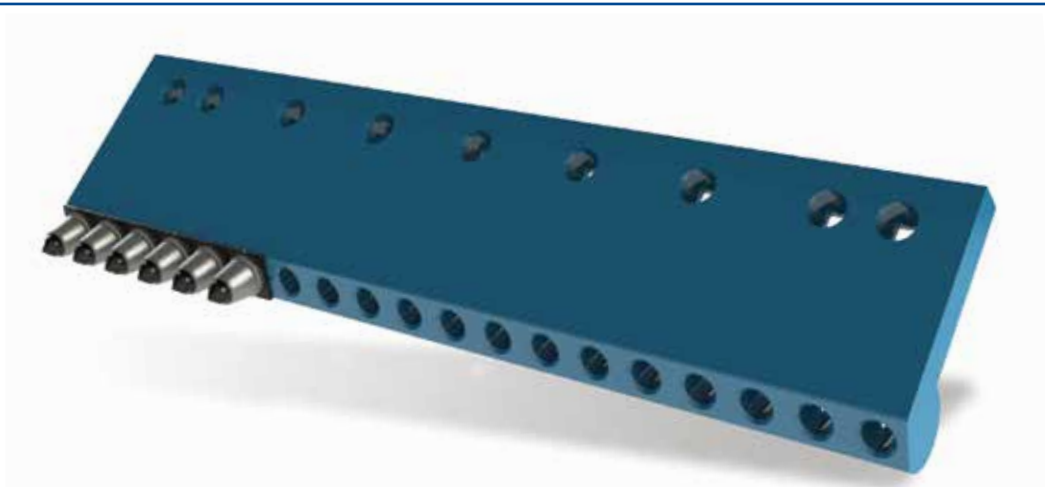


GW3520
Valve-Seat Carbide Tip

Features:

- Heavy Duty Body
- Square washer enhances tool rotation
- Serves as a replaceable “armor plate” wear surface

Part Number	Shank (in, mm)	Tip Diameter (in, mm)	Base Diameter (in, mm)	Gauge (in, mm)	Pieces per Box	Pieces per Pallet
GW3520	1.37 in 35.0 mm	0.68 in 17.3 mm	1.30 in 33.0 mm	2.91 in 74.0 mm	8	480



Part Number	Length (ft, m)	Bolt Size (in, mm)	Tool Capacity
GB3548	4 ft 1.219 m	1 in 25.4 mm	19

Features:

- Tool spacing is 2.50"/63.5mm
- Multi-piece assembly allows for manageable installation
- Board fits bit GW3520



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Accessories



.401 Shank Light Duty Hammer

Our .401 shank hammer has a lightweight aluminum handle for light chipping, casting and foundry work. Spring style retainer included. Optional deluxe quick change retainer available.

TAM-401	
Bore	0.75"
Stroke	2-5/8"
Impact Rate	3500 BPM
Length	6-3/4"
Weight	3.5 lbs.
Air Inlet Thread	1/4"
Rec'd Hose Size	3/8"
Avg. Air Consumption	4 CFM



Air Hammer Punch

- .401 Shank. For removal of conical tools from blocks
- Hardened tip provides long life
- Fits .401 light-duty air-hammer gun

Part Number Product Code	A-AH38
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Air Hammer Punch

- .498 Shank. For installation of conical tools into blocks
- Fits light-duty and heavy-duty air-hammer guns with .498 shank

Part Number Product Code	A-AH12
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Curved Knock Out Punch with Handle

- Tool remover with carbide tip for extended life

Part Number Product Code	CKP
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15020 INDUSTRIAL PARK ROAD
BRISTOL, VA USA
(276) 644-3520

www.xcaltools.com

