

Sandvik Construction Tools

Grading

RC500



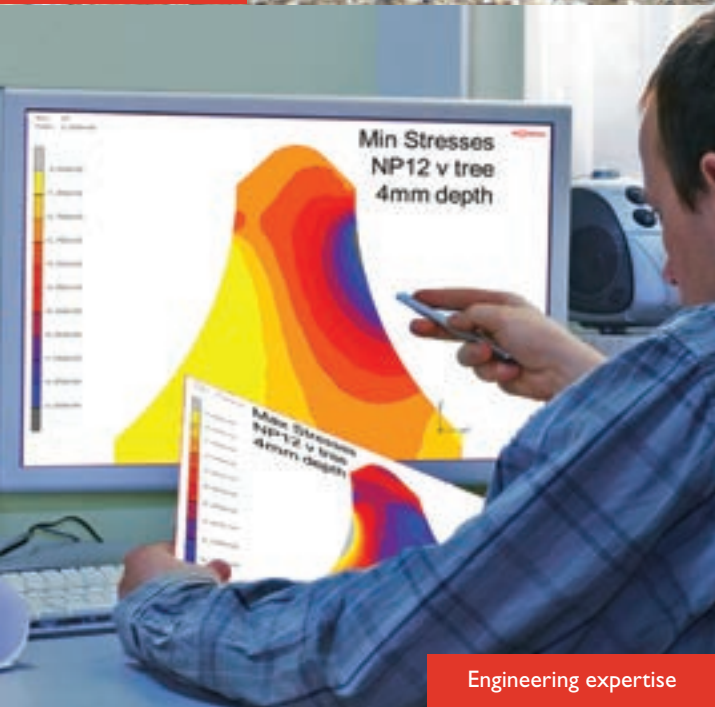
SANDVIK



Advanced brazing/heat treatment



Cutting force analysis



Engineering expertise

Productivity in Action

Sandvik Construction Tools

TOUGH TOOLS FOR TOUGH JOBS

Sandvik Construction manufactures a full line of tools and accessories for the trenching, road planing, reclaiming industries. Our tools are manufactured globally to the highest quality standards, using the strongest materials and most stringent manufacturing processes.

Headquartered in Stockholm, Sweden, and established in 1862, Sandvik is a high-technology engineering group and the world's leading manufacturer of tungsten carbide tools for the construction, mining and drilling industries.

We take special care in the manufacturing process to ensure that the cemented tungsten carbide in Sandvik's tools will meet our customers' demanding needs. The tungsten carbide is processed through a proprietary method to maximize its strengths and brazing properties. A special brazing/heat treatment bonds the tungsten carbide to high-grade alloy steel to ensure the hardness of the steel – and the superior performance of these tools in the field.

You can be confident that Sandvik tools will always provide maximum productivity and efficiency and that we will back them with the most dedicated customer and technical support in the industry.

As a world leading supplier of drilling, excavation, mining, tunneling, crushing and screening machinery, and equipment and tools for the mining and construction industries, only Sandvik can offer customers the entire package – products, service and expertise. We use our 150 years of experience and our comprehensive product line to create value for our customers through relationships that combine hands-on knowledge of our customers' processes with our own real-world applications knowledge – proven around the world.

NOTE: This is the 2013 catalog for Sandvik grading tools and all data are current at time of printing. Visit our Web site at www.construction.sandvik.com to learn more about our services and to check for any updates on the tools and products listed here. Periodic technical bulletins may be issued with updates.

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Sandvik

Cemented Carbide

APPLYING OUR CARBIDE EXPERTISE

Sandvik Construction is the world's leading supplier of machines and tool systems for all rock, surface and mineral excavation applications. Sandvik delivers millions of tools annually, including everything from small road planing, ice scraping and roof drilling bits used in all types of coal and soft minerals, to the biggest tunneling, trenching and surface mining tools.

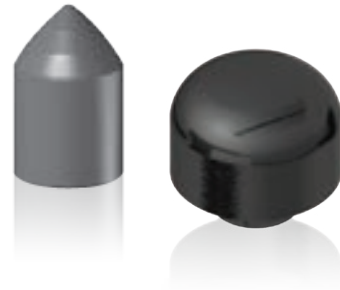
Sandvik continues to develop new hard material alloys to meet today's demanding environments. An extensive research project within Sandvik has resulted in a new generation of carbide grades and new larger, stronger, more stable and efficient tools. The demand on tool performance, especially pertaining to the cemented carbide tip material and its resistance to wear and fracturing, becomes more critical as we progress into harder rock and mineral formations. Larger continuous cutting machines are being used to replace the drill and blast process in many tunneling and construction projects. The continuous process offers a lower cost per ton of excavated material, assures maximum worker safety and has a positive effect on the environment.

PROVIDING THE TOUGHEST CARBIDE IN THE INDUSTRY

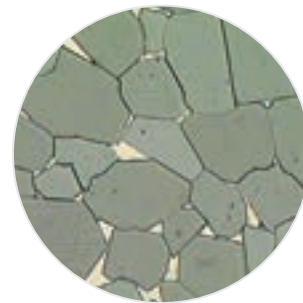
This latest generation of patented carbide grades is manufactured using an innovative process technique with completely new raw materials. This process has made it possible to create new extra-coarse, super-tough alloys with perfectly uniform grain structure. It has also allowed Sandvik to better match tip material grade to hard rock and soft rock applications.

The creation of this carbide, with a significantly stronger carbide matrix and a perfect grain size configuration, has contributed to the superior toughness and high-temperature wear resistance experienced in a great number of operations.

The Sandvik range of standard grades are cost effective in all general surface and underground applications and meet or exceed the performance of competitive brands.

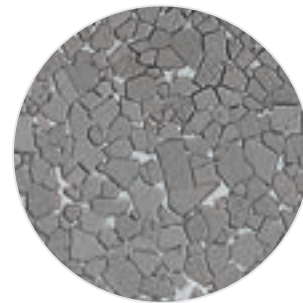


CARBIDE TIPS



HARD ROCK GRADE

Image Magnified



SOFT ROCK GRADE

Image Magnified

Product Index

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Applications & Performance

APPLICATIONS

The Sandvik System 2000® road grading maintenance system is designed to fit most motor graders and can handle a variety of applications.

- Gravel reclamation
- Gravel maintenance
- Oil road reclamation
- Asphalt planing
- Ice and snow removal
- Removal of potholes and washboards on dirt and gravel roads

PERFORMANCE

The System 2000 was developed to improve the performance and productivity of your motor grader. The System 2000...

- Features heat treated boards for optimal wear resistance
- Provides a better mix of materials
- Cuts out ruts and washboards
- Breaks up rocks in the roadway
- Rehabilitates oil and calcium chloride roads
- Cuts ice and snow
- Cuts through crust, rocks and ice easier and faster than conventional systems
- Offers easy field maintenance
- Reduces equipment costs
- Replacement tools last as long as 5-15 sets of conventional blades
- Greatly reduces downtime
- Incorporates the unique back-blading capability that is the only one of its kind in the marketplace

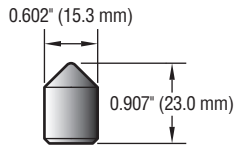
Carbide Tips



INSERT CARBIDE TIPS

Insert carbide tips are best suited for penetration applications where steel wash is not an issue. These tips are ideal for use in hard, high-impact conditions.

* Available on 25mm tools only



NP13

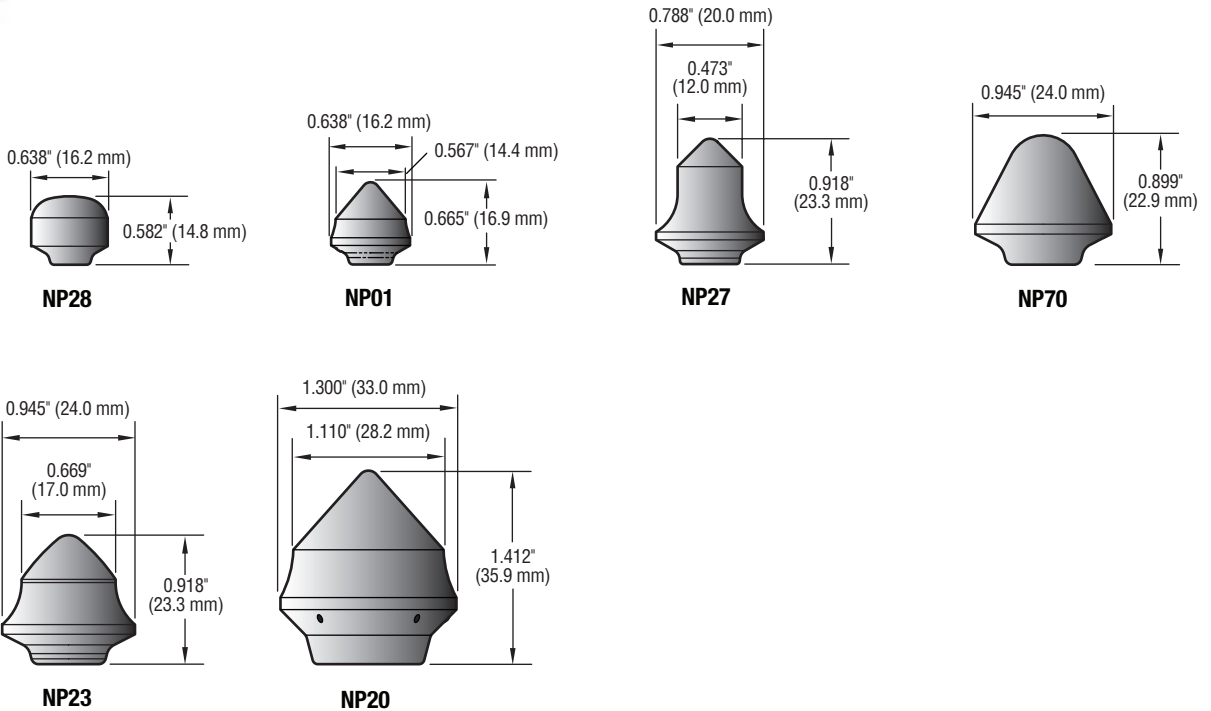
	STANDARD DUTY	STANDARD DUTY	STANDARD DUTY	HEAVY DUTY	SUPER DUTY
APPLICATION	GRAVEL/DIRT	ICE	ASPHALT	GRAVEL/DIRT	S35
CARBIDE TIP					
NP01	✓				
NP13				✓	
NP20					✓
NP23				✓	
NP27			✓		
NP28	✓	✓			
NP70				✓	

* THESE ARE GENERAL GUIDELINES. PRODUCTS MAY VARY DEPENDING ON ACTUAL CONDITIONS. CONTACT YOUR LOCAL REPRESENTATIVE FOR MORE INFORMATION.



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 medium to hard conditions.



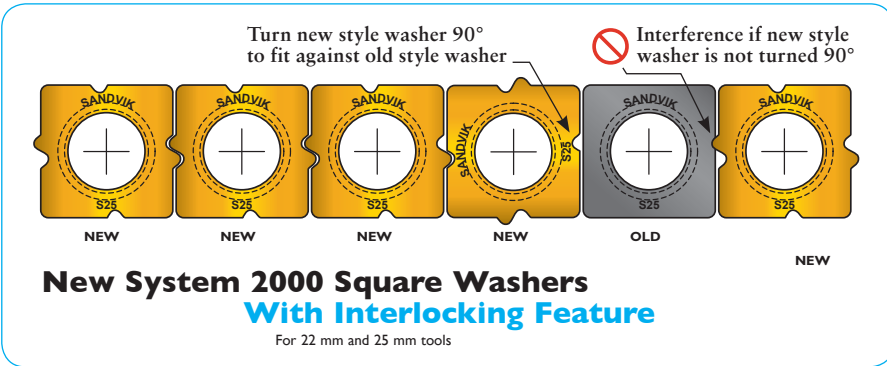
Productivity Squared

Sandvik System 2000® is a high-tech road rehabilitation cutting system ideal for maintaining rural roads (e.g. ice, dirt, gravel, hauling roads). System 2000 increases productivity, essentially eliminating downtime. It works by utilizing a replaceable conical tool installed in a heat-treated adaptor board that allows better wear resistance and improved cutting capability over conventional steel blades.

In addition to the integral end protector—which always leaves cutting edges straight—the latest innovation to the System 2000 is a unique patent-pending square washer that further increases productivity.

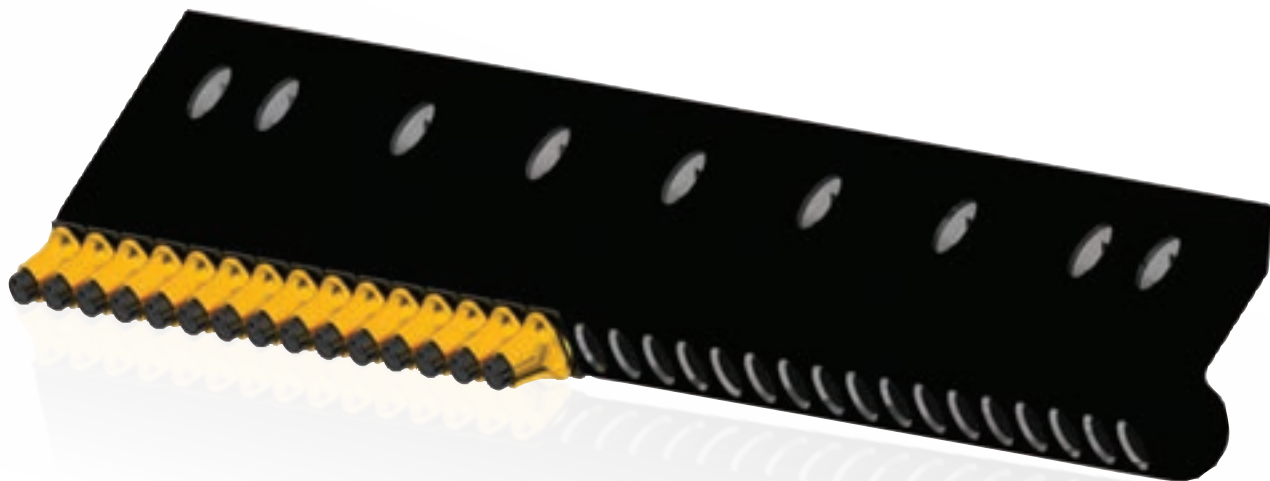


Patent-Pending Square Washer



Benefits of Sandvik grading tools with NEW square washer:

- 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
- Eliminates washer rotation, preventing wear between washer and mating surface
- Provides support and stability to the tool with an extruded cone that fits neatly in the bore of the adaptor board
- Serves as a replaceable “armor plate” wear surface



SYSTEM 2000 TOOLS WITH SQUARE WASHERS.

22 mm System

1.50" Tool Spacing



STANDARD BOARDS (1.50" (38.1 mm) TOOL SPACING)

LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
3 FT	5/8"	24	B36A	S1BA-2236-1930
3 FT	3/4"	24	B36B	S1BB-2236-1930
4 FT	5/8"	32	B48A	S1BA-2248-1930
4 FT	3/4"	32	B48B	S1BB-2248-1930

UNDERBODY BOARDS* (1.50" (38.1 mm) TOOL SPACING)

LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
3 FT	5/8"	24	BU36	PS2036NR
4 FT	5/8"	32	BU48	PS2048NR

* BEVEL CUT ON BACK OF BOARD FOR TRUCK UNDERBODY BLADES

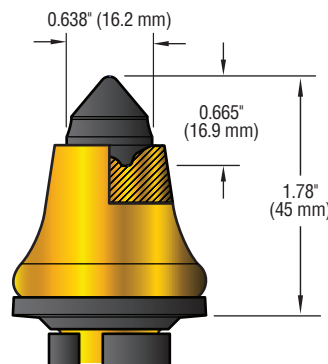
END PROTECTORS*

LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
LEFT	-	-	EL22	S4PX-2203-1030
RIGHT	-	-	ER22	S5PX-2203-1030

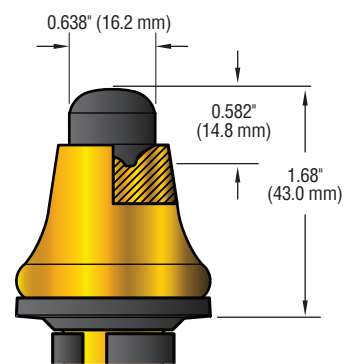
* FOR 22 mm STANDARD & UNDERBODY BOARDS ONLY



GW01
K1LW-2244-0169



GW28
K1LW-2244-2869



SHIPPING INFORMATION

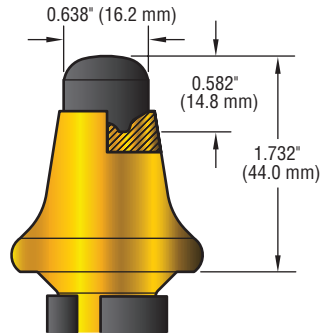
PIECES PER BOX	BOXES PER PALLET	PIECES PER PALLET
50	45	2250

22 mm System

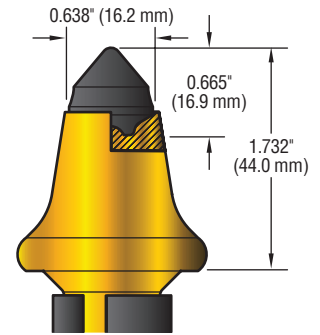
1.50" Tool Spacing



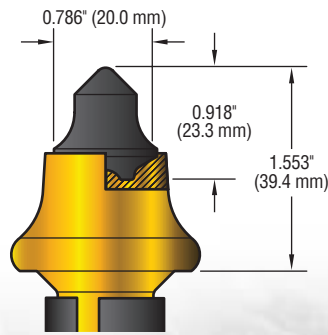
G28
K1LS-2244-2869



G01
K1LS-2244-0169



G27
K1LS-2244-2766



SHIPPING INFORMATION		
PIECES PER BOX	BOXES PER PALLET	PIECES PER PALLET
65	45	2925

22 mm System

1.72" Tool Spacing

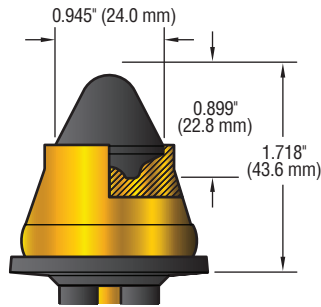


2100 BOARDS* (1.72" (43.7 mm) TOOL SPACING)				
LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
3 FT	5/8"	21	BW36A	S1EA-2236-1930
3 FT	3/4"	21	BW36B	S1EB-2236-1930
4 FT	5/8"	28	BW48A	S1EA-2248-1930
4 FT	3/4"	28	BW48B	S1EB-2248-1930

* TOOL BORES FEATURE INTERNAL CLIP GROOVE FOR USE WITH ANY STYLE RETAINER



GW70 K9LW-2244-7062



SHIPPING INFORMATION		
PIECES PER BOX	BOXES PER PALLET	PIECES PER PALLET
40	45	1800

25 mm System

1.72" Tool Spacing



HEAVY-DUTY BOARDS (1.72" (43.7 mm) TOOL SPACING)

LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
3 FT	3/4"	21	BH36	S1CB-2536-2530
4 FT	3/4"	28	BH48	S1CB-2548-2530

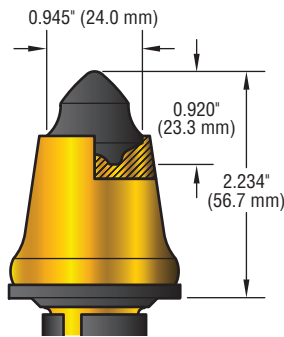
END PROTECTORS* (1.72" (43.7 mm) TOOL SPACING)

LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
LEFT	–	–	EL25	S4PX-2504-2530
RIGHT	–	–	ER25	S5PX-2504-2530

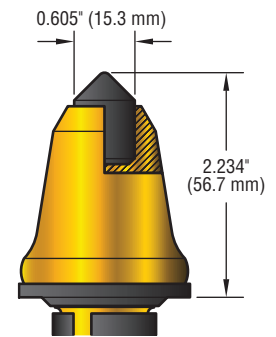
* FOR 25 MM BOARDS ONLY



GH23
K1LW-2557-2362



GH13
K1LW-2557-1362

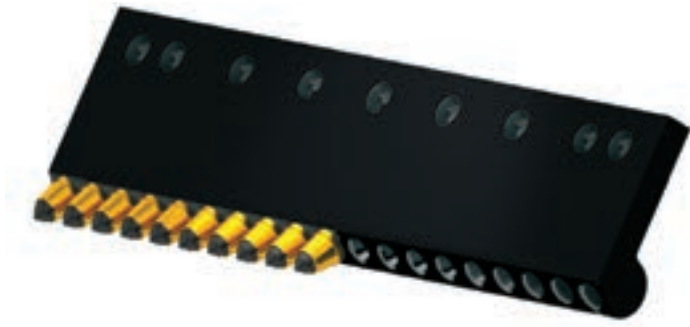


SHIPPING INFORMATION

PIECES PER BOX	BOXES PER PALLET	PIECES PER PALLET
30	45	1350

35 mm System

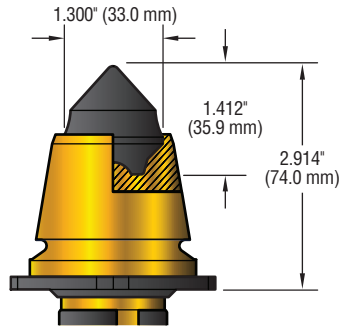
2.50" Tool Spacing



SUPER-DUTY BOARDS* (2.50" (63.5 mm) TOOL SPACING)				
LENGTH	BOLT SIZE	TOOL CAPACITY	PART #	PRODUCT #
4 FT	1"	19	B48Z	S1FC-3548-4435
* FOR USE ON EXTRA-LARGE MOTOR GRADERS ONLY				



GZ20
Q7JZ-3574-2062



SHIPPING INFORMATION		
PIECES PER BOX	BOXES PER PALLET	PIECES PER PALLET
8	50	400

Accessories

Sandvik provides accessories to assist with tool and machine maintenance.



CURVED KNOCK-OUT PUNCH

Tool remover with carbide tip for extended life.

PART NUMBER	PRODUCT NUMBER
M4	M8T-0004



MAGNETIC PROTRACTOR

Provides proper board alignment, so tools are at the correct angle to cut instead of scrape, minimizing wear on the carbide (*see next page*).

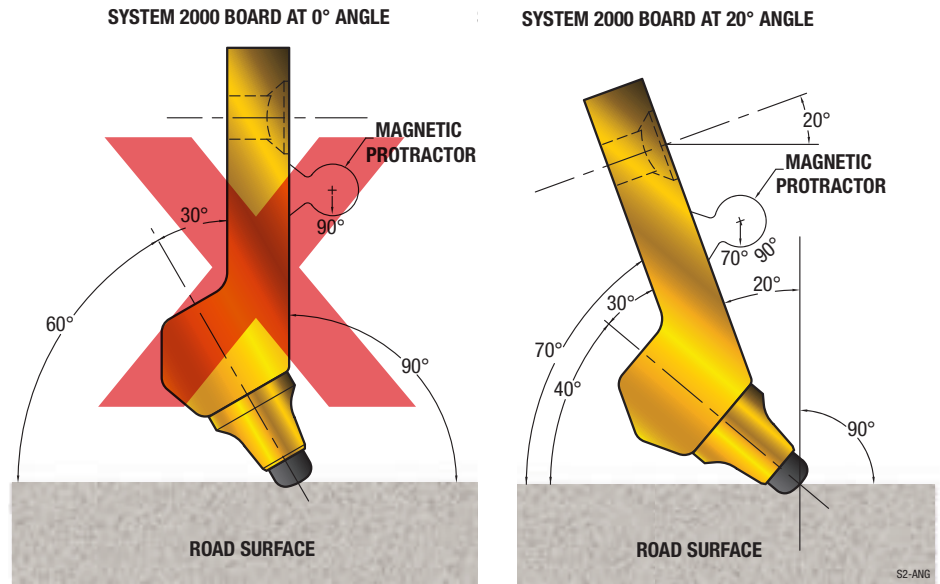
PART NUMBER	PRODUCT NUMBER
M58	M8T-0058

System 2000

Grading Tools Guidelines

INSTALLATION

1. Remove old blades from your moldboard and clean off all dirt on bolting surface.
2. Install new System 2000 boards and tools.
3. Move to flat, level surface. Apply forward and downward pressure. Using a magnetic protractor, set the board at 90° from the level surface. Tilt the moldboard back until the protractor reads 70°. Measure both ends of the moldboard. If different, split the difference. Mark the tilt quadrant and circle frame for future reference.
4. If angle is not correct, chattering or vibration will occur. If this happens, adjust adapter back to 70°.



GENERAL OPERATION

1. Ensure all tools are rotating freely and System 2000 is at the correct operating angle. (see INSTALLATION)
2. Check rotation of tools periodically. A tool not rotating will leave a “drag mark” and should be freed as soon as possible. Failure to do this will cause premature wear of the carbide tip.
3. In oil road reclamation and asphalt planing, take up only 1/2 of the material on the first pass. This will break the crust and make it possible to plane the desired depth.
4. When mixing calcium chloride, the tools should be pressure washed to prevent the mix from setting up between the tool shank and the spring retainer. Punch tool out 3/4 of the way and rotate by hand to free the tool. Then knock the tool back in place.
5. For ice and snow removal, put the blade in “float” position with no down pressure. Recommended travel speed is third gear (low range). Higher speeds could cause premature tool wear.
6. The one-piece board design has the ability to back-drag material from unwanted surfaces, such as manhole covers, driveways and curbs.
7. The unique design requires that the board be positioned at a 70° angle. This allows material to roll up the blade, providing superior mixing characteristics.

MAINTENANCE

1. If tools are not rotating freely, pressure wash all sides of the tools. After washing, rotate the tools by hand. Those not rotating, punch out and clean the bore hole and sleeve, then punch back into adapter. Lubricate with any lightweight oil.
2. When center tools are worn down to 1/2 to 2/3 of their original size, rotate them with less worn outside tools.
3. Replace tool if carbide wears to a flat spot, breaks or wears off.
4. If the end of the adapter on the outside of the grader moldboard shows wear, rotate with center section adapter.

Contact your Grading Tools representative for more detailed instructions for your applications.



SANDVIK CONSTRUCTION
www.construction.sandvik.com