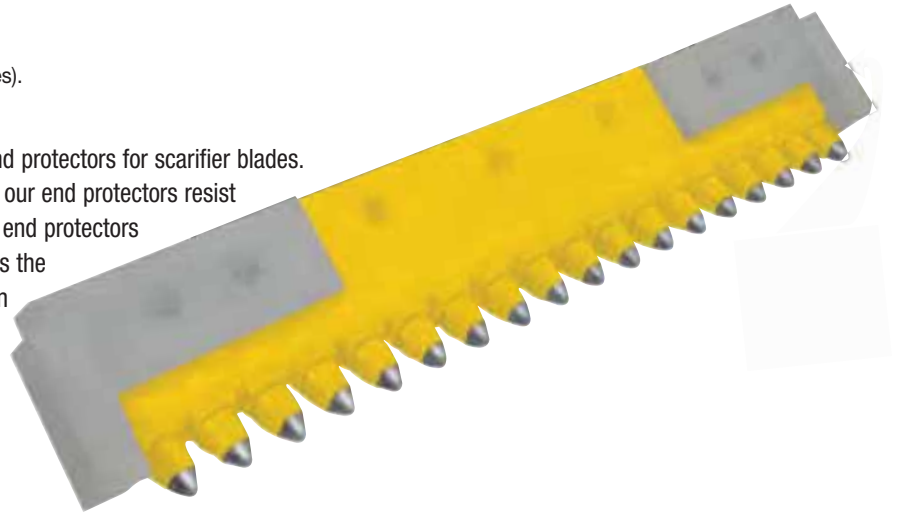


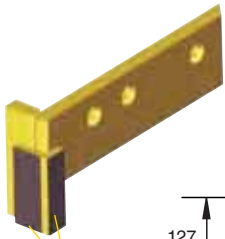
## End Protectors

Dimensions below are shown in millimeters and (inches).

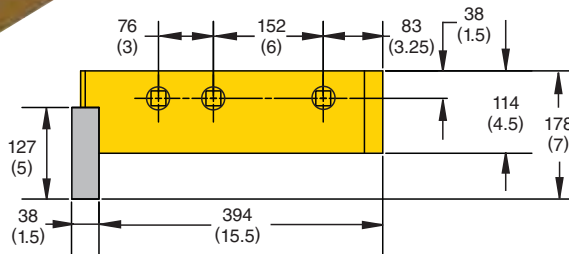
Kennametal recommends the use of our carbide end protectors for scarifier blades. The heavy-duty design and tough steel supports of our end protectors resist breakage and bending in any road application. Our end protectors feature KenCast™ composite material that combines the wear resistance of Kennametal's exclusive tungsten carbide with the ductility of air-hardening steel.



### For Severe-Duty Blades



KenCast protection



### ■ End Protectors • Ordering Information

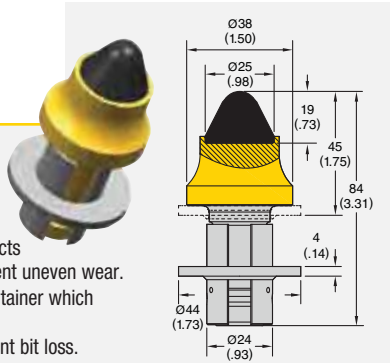
order number	catalog number	bolt design	description	bolt diameter		approximate unit weight	
				mm	in	kg	lbs
<b>for severe-duty blades:</b>							
1821674	KCWB-0442	3-bolt design for severe-duty systems	right-hand end protector	19	.75	11	25
1821679	KCWB-0443	3-bolt design for severe-duty systems	left-hand end protector	19	.75	11	25



Dimensions below are shown in millimeters and (inches).

### C87WFRKCSB

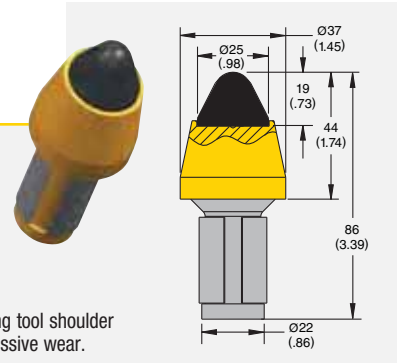
- Superior wear and rotation.
- Washer keeps out debris and improves rotation for longer bit life and less block wear.
- New full-sleeve retainer protects the inside of the bore to prevent uneven wear.
- Washer precompresses the retainer which makes it easier to install.
- Retainer grips tighter to prevent bit loss.



order number	catalog number	pieces per container	kg	lbs
2041786	C87WFRKCSB	50	,38	.841

### C858KCSB

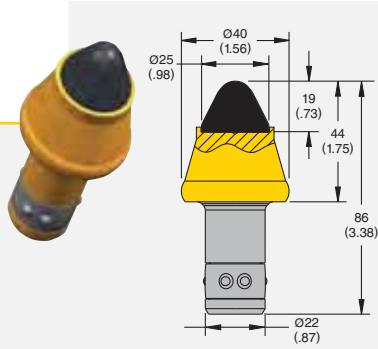
- Longest wearing carbide tip available.
- For use on all types of road surfaces.
- Specially designed carbide tip for extra-long tool life and added steel-wash protection.
- 37mm (1.45") diameter cutting tool shoulder protects block face from excessive wear.



order number	catalog number	pieces per container	kg	lbs
1010880	C858KCSB	50	,38	.840

### C87KCSBSR

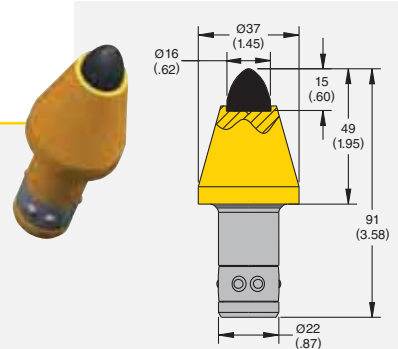
- Same design as C858KCSB, with added "barbed" short retainer for improved cutting tool retention.



order number	catalog number	pieces per container	kg	lbs
1010937	C87KCSBSR	50	,37	.815

### C87DSSR

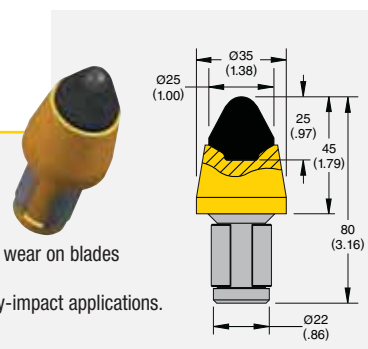
- Same tip design as C387DS, but shank features "barbed" short retainer for improved retention in block.
- Larger steel body provides longer wear life.



order number	catalog number	pieces per container	kg	lbs
1010935	C87DSSR	50	,35	.772

### C855KCSB

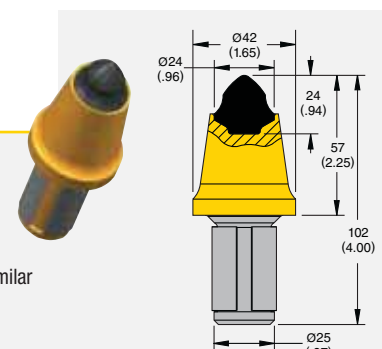
- Designed for maximum wear life and durability (like C858KCSB), but made to fit most blade systems.
- Longer gage length for reduced wear on blades and blocks.
- Ideal for general-duty and heavy-impact applications.



order number	catalog number	pieces per container	kg	lbs
1855704	C855KCSB	50	,35	.780

### C100 24.43SB

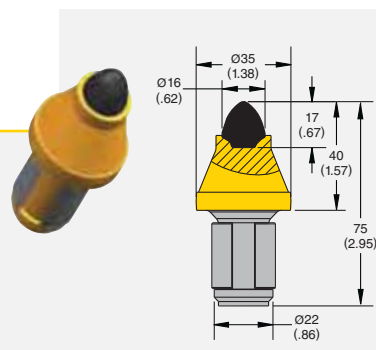
- Specially designed and manufactured for use in competitive "mining duty" systems (This tool does NOT fit Kennametal blade systems).
- Contains more carbide than similar competitive designs.



order number	catalog number	pieces per container	kg	lbs
1847237	C100 24.43SB	25	,54	1.180

### C855LR

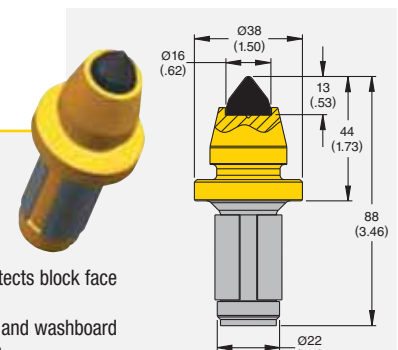
- Sharp carbide tip.
- Fits Kennametal and competitive blade systems.



order number	catalog number	pieces per container	kg	lbs
1011001	C855LR	50	,25	.544

### C387BF

- Sharp pointed tip for easy penetration of hard surfaces.
- Excellent in soft to medium-hard abrasive conditions.
- Specially designed flange protects block face from excessive wear.
- Ideal for removing high spots and washboard effect on asphalt-paved roads.



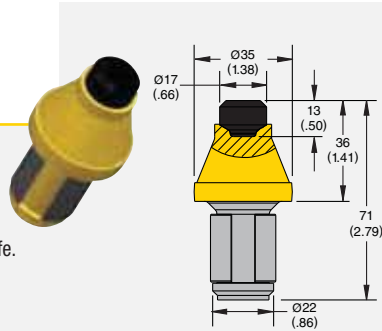
order number	catalog number	pieces per container	kg	lbs
1010817	C387BF	50	,30	.659

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Dimensions below are shown in millimeters and (inches).

**■ C855HDX-4**

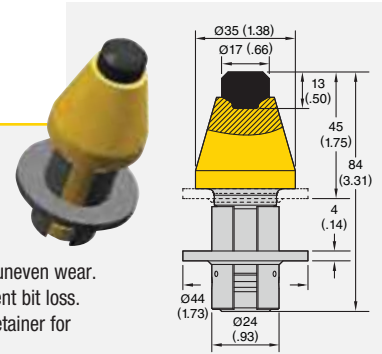
- Economy-sized carbide tip.
- Improved with 30% stronger braze.
- Additional steel in body style for added strength and wear life.
- Fits most blade systems.



order number	catalog number	pieces per container	kg	lbs
3386038	C855HDX-4	50	,26	.570

**■ C87HDRP**

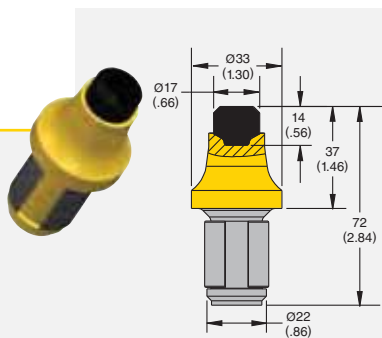
- Economy-sized carbide tip.
- Washer keeps out debris and improves rotation for longer bit life and less block wear.
- Full sleeve retainer protects inside of the bore to prevent uneven wear.
- Retainer grips tighter to prevent bit loss.
- Washer precompresses the retainer for easier installation.



order number	catalog number	pieces per container	kg	lbs
3837213	C87HDRP	50	,34	.756

**■ C855HD**

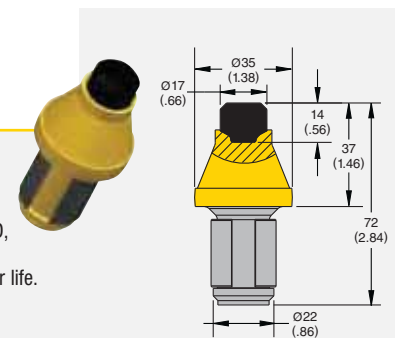
- Larger carbide tip.
- Improved with 30% stronger braze.
- Blunt-nose tip style.
- Fits most blade systems.



order number	catalog number	pieces per container	kg	lbs
1011208	C855HD	50	,24	.540

**■ C855HDX**

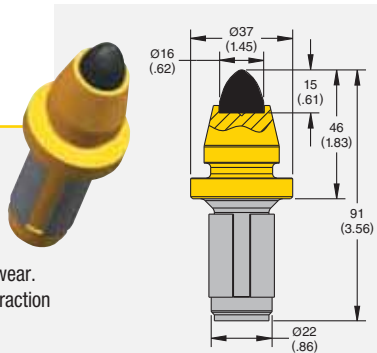
- Larger carbide tip.
- Improved with 30% stronger braze.
- Same body style as C855HD, but with added steel for increased strength and wear life.
- Fits most blade systems.



order number	catalog number	pieces per container	kg	lbs
1011206	C855HDX	50	,27	.597

**■ C387DS**

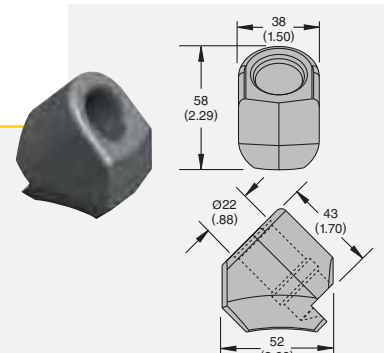
- Sharper carbide tip for increased penetration.
- Large carbide tip for long tool life.
- Specially designed flange protects block from excessive wear.
- Puller groove for easier tool extraction from front side of blade.



order number	catalog number	pieces per container	kg	lbs
1010906	C387DS	50	,31	.674

**■ C87GB Block**

- Replacement toolholder for Kennametal blade systems.
- Easily welded with a 7018 or 8018 low-hydrogen rod, with no pre-heating required.



order number	catalog number	pieces per container	kg	lbs
1012234	C87GB Block	30	,43	.950

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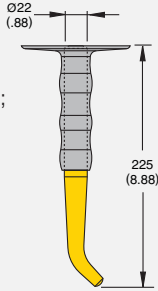
## Extraction Tools

Make cutting tool changes easier and safer.

Dimensions below are shown in millimeters and (inches).

### KHP2 Hammer Punch

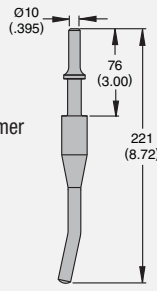
- For removing cutting tools from blocks.
- Hardened tip for longer life; used with a hammer.
- Plastic hand protector for added safety.



order number	catalog number
1012247	KHP2 KMTL PUNCH

### KAHP1 Air-Hammer Punch

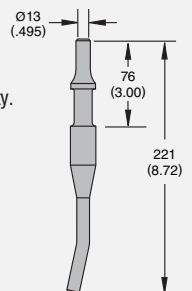
- For removing cutting tools from blocks.
- Hardened tip for durability.
- Fits all light-duty, air-hammer guns that have a 10mm (.375") chuck.



order number	catalog number
1012245	KAHP 1 AIR HAMMER PUNCH

### KAHP 1D Air-Hammer Punch

- For removing cutting tools from blocks.
- Hardened tip for durability.
- Fits all heavy-duty, air-hammer guns that have a 13mm (.500") chuck.



order number	catalog number
1012246	KAHP 1HD AIRHAMMER PUNCH

## Retainers

### LR87

- Replacement retainer for use with C387DS, AR15087, C387BF, KCWB-0448, and C87BF cutting tools.



order number	catalog number
1011935	LR87 RETAINER

### C87SR

- Replacement retainer for use with C87KCSBSR and C87DSSR cutting tools.



order number	catalog number
1012363	C87SR RETAINER

### LR858

- Replacement retainer for use with C858KCSB.



order number	catalog number
1012089	LR858 RETAINER

### C100SB

- Replacement retainer for use with C100 24.43SB cutting tools.



order number	catalog number
1851733	C100SB RETAINER

### RPR07 Retainer

- Replacement retainer for C87WFRKCSB.



order number	catalog number
1990418	RPR07

### LR85

- Replacement retainer for use with C855DS, C855HD, C855HDX, C855LR, C855KCSB, and C855HDX-4 cutting tools.



order number	catalog number
1012117	LR85 RETAINER

### SR Washer 44MM

- Replacement washer for C87WFRKCSB.

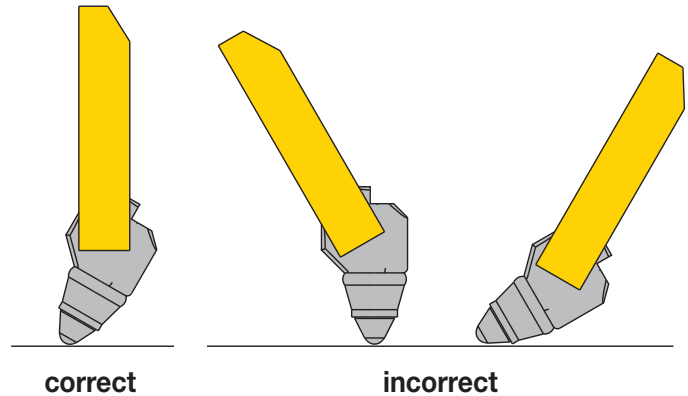


order number	catalog number
1992068	SR WASHER 44MM

## Guidelines for Proper Use of Scarifier Blades

These guidelines are designed to help maximize Kennametal Scarifier Blade performance:

1. Kennametal recommends using only Grade 8, No. 3 head plow bolts and matching Grade 8 heavy hex nuts to install our scarifier blades.
2. Position and operate blades at a 90° angle to the road surface so cutting tools are at the proper cutting angle (see drawing).
3. Carbide-tipped cutting tools should be used to penetrate a depth no greater than 25mm (1.00").
4. Inspect the blade and cutting tools daily. Replace lost, worn, or broken cutting tools immediately.
5. Kennametal carbide cutting tools are self-rotating and self-sharpening. Inspect cutting tools daily by turning them with your hand to ensure they are rotating properly. Cutting tools that do not turn can usually be freed by several light taps with a soft-headed hammer. Clean cutting tool and block assemblies with a solvent cleaner when necessary to ensure proper rotation of the cutting tool. Do not use oil for this purpose. Oil will cause dirt to adhere to the cutting tool, preventing proper rotation.
6. Do not use these blades to remove large rocks or boulders. These blades are intended for use in scarifying roads to return them to their original aggregate condition. Using Kennametal scarifier blades to remove large rocks or boulders terminates and voids all warranties and obligations from Kennametal as manufacturer and supplier.
7. When transporting scarifier blades fitted with long-retainer cutting tools, be sure to roll the moldboard backward so the blade is horizontal and the cutting tools are pointed upward. This will prevent the cutting tools from vibrating out of the blade while in transit. This procedure is not necessary when using short-retainer cutting tools in the blade.
8. The travel speed of the grader may affect the performance of the blade. When working in heavy-impact applications, use a lower speed (such as second gear). This will reduce the risk of cutting tool breakage or blade damage.
9. "Backdragging" is not recommended. This procedure increases the risk of breakage or loss of cutting tools and puts unnecessary stress on the blade, bolts, and moldboard.
10. Use Kennametal carbide end protectors in applications that subject the side of the blade to wear (like ditching). End protectors do not interfere with penetration and protect the ends of the blade from excessive wear.



### To replace a worn or broken block:

1. Cut out the broken block, if necessary, and clean the recess to remove rust and loose material.
2. Align the new block at the appropriate attack angle and tack weld into position.
3. Weld around the upper part of the block first on the front and back side of the blade.
4. Use Airco 7018M or equivalent welding material.
5. Use a welding rod (stick) with a maximum 3mm (.125") diameter or a welding wire with a maximum 1mm (.052") diameter.
6. Angle the weld gun or rod to run a root pass along the block base where it meets the 13mm (.500") wide steel "tongue" between the blocks. Do not weld back and forth between the blocks. Run one pass on each side of the block in opposite directions to weld it to the blade.