# **Construction Tools**



Ballantine Mineral and Ground Engineering Tools

# **Product Catalog**



Features sleeved retainers. For use in Augering, Trenching, Milling and HDD backreamers.



#### 550CSF24

Flared body for block protection and improved rotation. Unique low energy carbide design increases penetration.





550CS24 Same carbide features as 550CSF24 except no flared body design. Puller groove for easy removal.





#### 550CS for hard

Pointed cap design for hard inconsistent cutting conditions. Puller groove for easy removal.





#### 550MS

Slender profile design to increase penetration in soft cutting conditions. Puller groove for easy removal.





#### 550BLK

Long base and chamfers for increased weld area and penetration. Machine finish to insure tight tolerances to improve block life and tool performance.





735LB This point attack tool with slim nose profile is designed for deep penetration in light cutting conditions for trenching, boring and augering machines.



#### 735CB

This tool features an extra-large tungsten carbide tip which helps extend tool life by reducing steel wear, and is normally used when abrasive cutting conditions are encountered.



#### 735MRW

This tool features an extra-long shank for external retention. Available in 1/2" diameter carbide, specify 735-HR.



735BLK



#### 735HDBLK

These blocks are designed to hold the 735 tools solidly in position while providing a free-rotating, selfsharpening action.









(Standard)



(Heavy Duty)



#### 735MB

This tool has been designed primarily for multi-purpose trenching equipment as well as vertical and horizontal augers. This medium carbide tip will effectively handle most cutting applications.





0.735 18.7 mm 1.750 44.5 mm

3.345 85.0 mm

#### limestone, and ultra hard rock. It is an excellent heavy-duty tool for trenching and ditching applications. For longer gage 1.90", 48 mm, specify 735-HBL.

This tool performs well in tough

conditions such as concrete, solid



#### 735CBF

This tool features an extra-large tungsten carbide tip which helps extend tool life by reducing steel wear, and is normally used when abrasive cutting conditions are encountered. Flared head design protects block and reduces seating.





735HRBLK Block designed .393" (10 mm) taller than standard for additional clearance when needed. For use with sleeved, band or externally retained tools. Block width is 1.688" (42.9 mm).





765CB With an extra-large capped carbide tip, this tool is excellent for horizontal augers, vertical augers, trenchers, and ditching equipment in abrasive cutting conditions.



765HB This tool performs well in tough conditions such as concrete, solid limestone, and ultra hard rock, and it is an excellent heavy-duty tool for trenching and ditching applications.



#### 765MB

This tool is used in trenching, boring, and augering applications, and is recommended when faster penetration rates are required in light and medium duty cutting conditions.



With an extra-large capped carbide tip, this tool is excellent for horizontal augers, vertical augers, trenchers, and ditching equipment in abrasive cutting conditions. Flared head design protects block and reduces seating.



765HS This tool performs well in tough conditions such as concrete, solid limestone, and ultra hard rock.













765BLK These blocks are designed to hold the 765 tools solidly in position while providing a free rotating, selfsharpening action.



765HDBLK





(Standard)

(Heavy Duty)

765HRBLK Block designed .393" (10mm) taller than standard for additional clearance when needed. For use with sleeved, band or externally retained tools. Block width is 1.688" (42.9 mm).





765LBLK This block features locator pins for easy alignment when rewelding in the field. The "V"-shaped front reduces washout on the block face by channeling material away from the face. For use with 765 full sleeve retainer tools only.







765LBSER 1.00" high base for use with 765LBLK.



#### 765CS2FPHD

This tool has the same carbide tip as the 765CS2FP. It features a larger steel body to provide more wear resistance in abrasive conditions where steel wash shortens tool life.

For No Puller Groove, specify 765CS2FHD.



#### 765CSFP38

Same design as 765CSFP29 except for short height carbide to increase carbide fracture resistance when milling concrete or on reclaimers in extreme cutting conditions.

#### For No Puller Groove, specify 765CSF38.



#### 765CSF

This tool has a wide flanged shank that offers added protection. The full cap carbide provides maximum performance in abrasive conditions on rock wheels, small utility planers and recyclers.

For Puller Groove, specify 765CSFP.



#### 765CSFP48HD

\* The carbide geometry used is covered by U.S. Patent No. 4,938,538

\*\* The carbide geometry used is covered by U.S. Patent No. 6,270,165

For use where large base carbides slow machine speed. Large profiled tip with small base to improve cutting in tough carbide wear conditions while maintaining slender design. Increased steel in wear areas to improve performance in abrasive conditions. Flared body design protects block.

For No Puller Groove, specify 765CSF48HD.

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1.720 43.7 mm 3.355 85.2 m 0.765

19.4 mm





#### 765CSFP29

This tool has a cap carbide design that provides excellent penetration. The large carbide base and steel body improve performance over standard tools by reducing steel wash. This tool includes a puller groove for easy removal.

For No Puller Groove specify 765CSE29



#### 765CSFP58

This tool has a patented cap carbide design that provides maximum penetration. A wide carbide base reduces steel wash on body, increasing tool life. An excellent application for mainline milling and recycling trains. This tool includes a puller groove for easy removal.

For No Puller Groove specify 765CSF58



Patented carbide geometry allows for consistent performance in all cutting conditions. Tip design of carbide maintains same diameter in tough cutting conditions (carbide wear) and wide base reduces steel wash in abrasive conditions. This allows machine to maintain high tram speed, increase tool life and improve production rates.

For Puller Groove specify 765CSFP68



#### 765CSFP67HD

Patented carbide geometry combines large barrel diameter to improve performance in carbide wear applications and small base to maintain machine tram speed throughout life of the tool. Has puller groove for easy removal and flared head for block protection.

For No Puller Groove specify 765CSF67HD











# 765CSF68



### 765 FSW SERIES (U.S. Patent No. 6,113,195)

These tools feature unique designed sleeve to enhance rotation in worn blocks, reduce tool binding caused by tail of tool rubbing on block bore and improve tool installation. Unique washer design provides new face on worn blocks for tool to seat correctly and enhance rotation. Diameter of washer improves exterior block protection while curved design improves rotation and material removal. Tools pictured feet e puller groove for easy installation and removal.

#### NOTE: ALSO AVAILABLE WITHOUT PULLER GROOVE.



#### 765CFP2FSW

Unique patented profiled carbide tip maintains the same diameter as it wears. This reduces slowdown in machine speed. Heavy-duty steel body design to maximize tool life in abrasive conditions where steel wash determines tool performance.



765CFP29FSW This tool has cap carbide design to maximize penetration. Large carbide base and steel body improve performance in steel wash conditions. Large radius on carbide reduces fracturing in impact conditions.



#### 765FP58FSW

Tool features patented carbide design with wide barrel diameter and base. Unique carbide design allows for maximum performance in hard cutting conditions while maintaining penetration rate. Excellent for use in reclaimers, high horsepower milling machines and recycling trains.







#### 765CFP48FSW

For use where large base carbides slow machine speed. Large profiled tip with small base to improve cutting in tough carbide wear conditions while maintaining slender design. Increased steel in wear areas to improve performance in abrasive conditions.





765CFP38FSW Same features as 765CFP29FSW except for shortened height on carbide to increase fracture resistance in concrete.







#### 765CFP68FSW

Patented carbide geometry allows for consistent performance in all cutting conditions. Tip design of carbide maintains same diameter in tough cutting conditions (carbide wear) and wide base reduces steel wash in abrasive conditions. This allows machine to maintain high tram speed, increase tool life and improve production rates.





#### 765CFP67FSW

Patented carbide geometry combines large barrel diameter to improve performance in carbide wear applications and small base to maintain machine tram speed throughout life of the tool.



\* The carbide geometry used is covered by U.S. Patent No. 4,938,538 \*\* The carbide geometry used is covered by U.S. Patent No. 6,270,165



#### 875HS

This tool is engineered with a large 1/2" insert that allows maximum performance in severe cutting conditions and concrete where abrasive steel wear is not a problem.

For abrasive conditions specify **875CS**.





This tool provides full cap protection in abrasive conditions. The wide flanged shank allows maximum block protection with minimal seating. Excellent for use on reclaimers.

For Puller Groove specify 875CSFP.





#### 875HSFP

This tool provides maximum performance in severe cutting conditions. Wide flanged surface protects block and reduces seating. Has puller groove for easy removal.

For No Puller Groove, specify **875HSF**.



### 875CSF24

This tool's profiled carbide increases penetration in abrasive conditions. Wide flanged surface reduces block wear.

For Puller Groove, specify 875CSFP24.





#### 875CSFP38

This tool has profiled carbide tip to maximize penetration. Shortened carbide height increases resistance to carbide fracturing in extremely hard conditions. Wide flanged body design provides block protection and minimizes seating. Excellent design for use on rock saw wheels and reclaimers.

For No Puller Groove, specify 875CSF38.



#### 875CSFP29

This tool has a cap carbide design that provides maximum penetration. A wide carbide base reduces steel wash on body, increasing tool life. An excellent application for mainline milling and reclaimers.

For No Puller Groove, specify 875CSF29.



1.910

48.5mm

#### 875CSF58

Patented carbide design features wide tip and base for improved performance in hard cutting conditions (carbide wear) by increasing carbide wear and reducing carbide breakage. Unique low energy carbide geometry can maintain penetration rates while providing improved wear.

For Puller Groove, specify 875CSFP58





#### 875CSF68

Same features as K1LA-2248-58XX except carbide tip is taller for longer tool life. (NOTE: In some conditions, tip loss could be experienced. If this happens, use the K1LA-2248-58XX.

For Puller Groove, specify 875CSFP68





#### 875CSFP67

Patented carbide geometry combines large barrel diameter to improve performance in carbide wear applications and small base to maintain machine tram speed throughout life of the tool. Has puller groove for easy removal and flared head for block protection. Excellent for use on rock saws and reclaimers in hard cutting conditions.

For No Puller Groove, specify 875CSF67







875hdblk

#### 875HDBLK

This heavy-duty block is designed to hold 875 series tools solidly in position while providing a free rotating, self-sharpening action.

For Internal Groove, specify **875HDGBLK** 



875HRBLK Block designed .393" (10 mm) taller than standard for additional

taller than standard for additional clearance when needed. For use with sleeved or externally retained tools. Block width is 1.688" (42.9 mm).



#### 875MPHBLK

This is a high rise block designed for use on reclaimers.







\*The carbide geometry used is covered under U.S. Patent No. 4,938,538.

\*\* The carbide geometry used is covered under U.S. Patent No. 6,270,165.

## 990 FLARE SERIES

These tools feature a wide 2.50" head design to help reduce seating in the block, and to keep cuttings out of the bore, which can hinder rotation. The flared head also will protect the block face from excessive wear, thus reducing block changes. All have external retention for use on new or worn blocks.



### 990 FLARE SERIES



#### 990CRF2225

This tool features a 1.00" diameter based carbide cap with profiled tip to increase tool life in abrasive conditions where steel wear is a problem. The profiled carbide tip increases penetration over standard designs.





#### 990CRF2325

Same design features as 990CRF2225 except larger carbide barrel diameter to increase tool life in severe conditions where tool life is determined by carbide wear.





#### 990CRF25

This tool has capped carbide to help extend tool life in abrasive conditions (i.e., sandstone or shale), where steel wash, not carbide wear is a problem.



\* The carbide geometry used is covered under U.S. Patent No. 4,938,538.

2.500 . 63.5 mm

> 2.500 63.5 mm

> > 5.440 138.2 mm

#### 921BLK50

990CRF5625

Large profiled carbide design to

maintain penetration while increasing tool life in extremely hard conditions

where carbide wear is a problem.

Profiled design of carbide allows tool to maximize chip size of material to

increase productivity.

This is a heavy duty block for use with 990 series tools. This block features: 1) an improved attack angle to maximize tool performance; 2) built-in gusset designed for added strength; 3) "V" design on the face to reduce washout on the front of the block; 4) increased base length to improve welding, and 5) a beveled base to improve weld penetration.

For applications where bolt clearance is needed, specify **921BLK50MOD** with 2.00" base length.







921BLK50MOD

# 990 SERIES CLIP



# 990 SERIES CLIP



#### 990MB

This tool is designed for medium cutting conditions in trenching, tunneling, and augering. A puller groove provides easy tool removal and spring band retainer provides positive retention.







Also available with capped carbide for abrasive conditions - specify 990CB





### 990BLK

Slim design holder for 990 series tools. Can be used with band or external keeper. Ideal for use on core barrels and foundation augers where close spacing is needed. Block diameter is 1.98" (50.4mm). Block attack angle is 45 degrees.



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### 55, 56 SERIES

56 series tools feature 2.00" flared heads to reduce "peening" which hinders rotation of the tool.



flanged head provides added block protection.

Available in 1.00" longer gage specify 56-2.

CAT. NO.	DIM. (A)		DI	1. (B)
56	2.500	63.0 mm	5.430	137.9 mm
56-2	3.500	88.9 mm	6.430	163.3 mm



#### **56HS**

This tool features a large diameter carbide for severe cutting applications, and a flanged head for block protection. Double angle carbide tip design improves resistance to fracturing in high impact applications.





#### 56XHSH

This tool features a large diameter carbide with extra long length for severe rock cutting conditions. The 2.68" gage allows you to use the full length of the carbide without losing cutting clearance for the block. Double angle carbide tip design improves resistance to fracturing in high impact







#### 56HC23

This tool features a heavy-duty capped carbide to reduce steel wash and increase tool performance. This will allow maximum tool life in abrasive conditions where steel wash, not carbide wear, is a problem.



#### **55**S

These tools are engineered with large diameter 75-degree angle carbide that provides extended tool life in tunneling, augering, and trenching applications. They are available in 1.00' longer gage where penetration and clearance are needed. Specify 551S.

CAT. NO.	DIM. (A)		
55-S	5.430	137.9 mm	
55-1S	6.430	163.3 mm	

1.406 35.8 mm 1.162 29.5 mm 1.500 37.7 mm



#### THE 66 SERIES OF TOOLS FEATURES 66 SERIES A LARGE FLARED HEAD DESIGN

These tools feature a wide 2.50" flared head design to help reduce seating in the block, and to keep cuttings out of the bore, which can hinder rotation. The flared head also will protect the block face from excessive wear, thus reducing block changes. All have external retention for use on new or worn blocks. NOTE: 66 series tools are used with 56 series blocks. NOTE: ALSO AVAILABLE WITH LOCKWASHER RETAINERS.



#### 66HS

This tool is similar to 56HS but has a 2.50" wide shoulder for block protection and better rotation. Double angle carbide tip design improves resistance to fracturing in high impact applications.



#### 66HC23

66HC23 is similar to 56HC23 but has a 2.50" wide shoulder for block protection and better rotation.

For 2.75"/70mm specify gage.

2.500	_
63.5 mm	
$ \land$	
	2 500
	63.5 mm
<u> </u>	א   ה
L L	
	5.440
	138.2 mm
1.162	
29.5 mm	
2 500	
63.5 mm	-
	+ +
$  / \rangle$	(A)
L	
1 [	
	(B)
<u> </u>	
29.5 mm	
1.485	
-+ 37.7 mm	-

66-234 This tool has a slim profile to increase penetration and productivity in softer conditions. Large 2.50" wide shoulder for complete block protection and a 1/2" diameter insert carbide. -1.162-For 3.50"/89mm gage, specify 66-2. 29.5 mm 1.485 37.7 mm - 2.500 -63.5 mm

#### 66XHSH

66XHSH is similar to 56XHSH but has a 2.50" wide shoulder for block protection and better rotation. Double angle carbide tip design improves resistance to fracturing in high impact applications.

For 3.00"/76mm gage, specify 66XHSH3. For 3.50"/89mm gage, specify 66XHSH35.

CAT. NO.	DIM. (A)		DI	1. (B)
66XHSH	2.680	68.1 mm	5.625	142.9 mm
66XHSH3	3.000	76.2 mm	5.940	150.9 mm
66XHSH35	3.500	88.9 mm	6.440	163.6 mm



56BLK50 is a heavy-duty

56BLK50

1.162 9.5 mm

-1.485 -

37.7 mm

2.500 63.5 mm

> 2.750 69.9 mm

> > (A)

(B)

5.690

144.5 mm

block for use with 55, 56 and 66 series tools. This block features: I) an improved attack angle to maximize tool performance; 2) built-in gusset designed for added strength; 3) "V" design on the face to reduce washout on the front of the block; 4) increased base length to improve welding; and 5) a beveled base to improve weld penetration.

For applications where bold clearance is needed, please specify 56BLK50MOD with shorter 2.00" length base.

66HC23275\*.

For 3.50"/89mm gage, specify 66HC2335\*.

CAT. NO.	DIM. (A)		DI	1. (B)
66HC23*	2.500	63.5 mm	5.440	138.2 mm
66HC23275*	2.750	70.0 mm	5.690	144.5 mm
66HC2335*	3.500	88.9 mm	6.440	163.6 mm



#### 66HC56275

Large profiled carbide to increase penetration thus increase chip size of cutting in layered and solid rock conditions. Low energy profiled carbide design keeps tool sharp while providing increased performance.

For 3.00"/76.2mm gage, specify 66HC563.

For 3.50"/89mm gage, specify 66HC5635.





#### 66BC35

This tool features large carbide cap design to improve tool performance in hard abrasive conditions. Carbide covers top of tool to reduce steel wash on body. For use in layered rock.

For 3.00"/76.2mm gage, specify 66BC3.



CAT. NO.	DIM. (A)		DI	1. (B)
66HC56275	2.750	70.0 mm	5.690	144.5 mm
66HC563	3.000	76.2 mm	5.940	150.9 mm
66HC5635	3.500	88.9 mm	6.440	163.6 mm

CAT. NO.	DIM. (A)		DII	М. (В)
66BC	3.000	76.2 mm	5.940	150.9 mm
66BC35	3.500	88.9 mm	6.440	163.6 mm

### **I 162 SERIES**

#### THE 1162 SERIES FEATURES A SINGLE DIAMETER SHANK





1162BLK50MOD

\_2.000\_ 76.2 mm

1162BLK50MOD.

For induction hardened bore, to increase block life, please add IH to the part number when ordering.

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# NEW PRODUCTS



#### 765CTF

Features threaded shank for maximum retention where problems are encountered with other retention methods. Capped carbide geometry provides extended wear life. Flats on flare provide ease of threading tool onto locknut. Used primarily on horizontal feed grinders/recyclers. Locknut provided with tool.

Used to install lock nut on 765CTF. Socket fits over head of tool. For use with I/2" square drive impact wrench.





#### TT45D24

Small carbide capped tool designed at 50-degree angle for correct angle positioning. Primarily used on backreamers for cutting and wear protection. Easily replaced by cutting off worn tool and welding on new. Can be used in various other applications to reduce wear.







#### TT99045D

Large carbide capped tool designed at 45-degree angle for correct angle positioning. Low energy cap for improved penetration. Primarily used on back-reamers for cutting and wear protection. Easily replaced by cutting off worn tool and welding on new. Can be used in various other applications to reduce wear.



### 765CRF

This tool features an extra-large tungsten carbide tip which helps extend tool life by reducing steel wear, and is normally used when abrasive cutting conditions are encountered. Flared head design protects block and reduces seating.

Add an "N" to the part number for steel retention clip.

This style tooth is also available with a .735" diameter shank. 735CRF or 735CRFN



CARBIDE

INSERT BLADES Available for all models

of Milling machines.

# ACCESSORIES

#### STEEL-KEEPERS K91 K01

K91 is used for 735 and 765 external retention tools.

K01 is used for external retention on 990 series tools.



#### **PULLERS**

For all tools with puller grooves. Use the first three digits (shank diameter) of the part number to specify the puller tool size.

SERIES	PRODUCT-CODE
735	M8T-003-18
765	M8T-003-19
875	M8T-003-22
990	M8T-003-25

K86 is used for retention on 55, 56, 66 and 1162 series tools.



#### CURVED KNOCK-OUT PUNCH Carbide-tipped for extended life.

K25

K25 lock washer for 66 series tools, specify P (Q) 3 DD instead of P (Q) 3DS in product code number.



#### K30

Hairpin for use on 66 series tools in place of K25.



#### **AIR-HAMMER PUNCH**

For removal of conical tools from blocks. Hardened tip provides long life. Fits all light-duty air hammer guns with a 3/8" chuck. For heavy-duty guns with 1/2" chuck specify .

#### EXTRACTOR

This tool is used for installation and removal of tools with external retention.

SERIES	PRODUCT-CODE
990	M8T990EXT
66	M8T66EXT

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#### PLASTIC-KEEPERS K07

K07 is used for 735 and 765 external retention tools.





# BALLANTINE – ADDITIONAL SERVICES

- Custom lacing for trenchers, rocksaws, milling and reclaiming drums.
- Specialized tools for tub and horizontal feed grinders.
- Custom designed tools for brush cutters.
- Technical training for proper tool application through seminars and literature.



## **BALLANTINE, INC. PRODUCT LINES**

- Trencher Chain, Teeth, Sprockets, Rollers (booms, augers, bearings and more)
- Terminator<sup>®</sup> Chain Assemblies and Teeth.
- Trench-All<sup>®</sup> Chain and Chain Assemblies.
- HDD Downhole Tools (drill rod, backreamers, pilot bits, drive chucks and more)
- Elevating Scraper Chain, Flights, Sprockets, Rollers and more.
- Carbide Construction Tools (rotary bits, blocks and more)
- Roller Chain, Sprockets, Leaf Chain
- Rockwheel/Rocksaw Segments, Cutters

- · Vibratory and Static Plow Blades, Pull Blades
- Crane/Dragline Drive Chains
- Vertical Augers & Accessories (post-hole, digger derricks, pressure diggers)
- Recycling Tools for Bandit<sup>®</sup> Beast<sup>®</sup>, Morbark<sup>®</sup> and other recyclers and grinders
- Tiller Tines, Power Rake Blades, Shafts
- Backhoe Buckets, Teeth
- Stump Cutter Teeth, Holders
- State-Of-The-Art Robotic Hardfacing Equipment (Unlimited Capabilities, Expert Programmers, Expert Operators)

### JOB SAFETY

Ballantine, Inc., as a supplier of construction tools, joins with industry and government in their efforts to improve safety.

Cemented carbide, which serves as the cutting edge on construction tools, has limited ductility. Like all brittle materials, it may fragment in service, particularly under conditions of impact loading and/or upon release from high compressive loading. Precautions should therefore be taken to ensure protection of personnel and equipment from flying fragments and sharp edges when working with such materials. This is to emphasize the importance of all safety precautions, including appropriate construction machinery manufacturers. To avoid adverse health effects, read material safety data sheet (MSDS).

Inasmuch as Ballantine, Inc. has no control over the use to which others may put the material, it does not guarantee that the same results as those described herein will be obtained. Each user of the material should make his own tests to determine the material's suitability for his own particular use.



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