










Carbide Punches

Punches will increase productivity by reducing replacement tooling cost and downtime. Punches manufactured in carbide can improve the quality of your product and extend the life of your tooling. Working with you, to supply you with carbide components for your Die Set Assembly.

Cylindrical Punch Line:

-  Pilots Punches with Machinable Steel Sleeve Head or Solid Carbide.
-  Carbide Punches, Straight Ground with Machinable Steel Sleeve Head or Solid Carbide.
-  Ejector Punches with Self-Contained Ejector Pin with Carbide Head and Hardened Steel Collar or Machinable Steel Sleeve Head.
-  Punches with Carbide Head and Hardened Steel Collar or Machinable Steel Sleeve Head.
-  Carbide Punches with Air Hole, Carbide Head and Hardened Steel Collar or Machinable Steel Sleeve Head.
-  Carbide Punches with Ball Lock Retainer.
-  Carbide Punches, Blueprint Specials for Customers Specific Requirements.

Specials and standards from .030" to 6" in diameter.

Using Steel? Unsure if carbide will work for your application? Applications assistance is available.

This is a service that can be a major factor in the success and longevity of any punch and die set.

When reducing down time and less cost per piece are of the utmost importance.



Carbide Bushings from Endurance Carbide will reduce your down time

Carbide Press Fit Bushings – Endurance Carbide manufactures tungsten carbide bushings that are made with or without heads. They are normally used when the bushing is not to be replaced during the life of the jig.

Carbide Fixed Renewable Bushings – Endurance Carbide manufactures tungsten carbide bushings with “F” or “XF” locks. These will be used where several bushings are required during the life of the jig. They can be replaced without removing the fixture from the machine.

Carbide Slip or Slip Fixed Renewable Bushings – Endurance Carbide manufactures tungsten carbide Slip and Slip Fixed Renewable Bushings. These are selected for applications requiring several operations with the same machine.

Carbide Direct Coolant Bushings – Endurance Carbide manufactures tungsten carbide direct coolant bushings of all types, grades and sizes to our customer’s specifications. Tungsten carbide direct coolant bushings will improve cooling and chip flushing during the drilling process and improve the life of the drill.

Carbide Blueprint Special Bushings – Endurance Carbide manufactures tungsten carbide blueprint special bushings for many industries with a wide array of applications.

Carbide Gun Drill Insert Bushings – Endurance Carbide manufactures tungsten carbide (GDI) Gun Drill Insert Bushings. We will manufacture them to your specific ID sizes, and determine proper tungsten carbide grade to meet your requirements. The ID, OD, and face of the GDI tungsten carbide bushing are ground concentric and square within .0002 T.I.R.







Carbide Jig Bushings, Carbide Chip Breaker Bushing

ANSI/STANDARD DRILL BUSHINGS:	
I.D. Range (Std. Drill Size)	Standard I.D. Tolerance (add to nominal I.D.)
#60 to 1/4"	+.0001 to +.0004
Over 1/4" to 3/4"	+.0001 to +.0005
Over 3/4" to 1-1/2"	+.0002 to +.0006
Over 1-1/2" to 2-3/4"	+.0003 to +.0007

REAMER BUSHINGS:	
I.D. Range (Std. Drill Size)	Standard I.D. Tolerance (add to nominal I.D.)
Up to 1/4"	+.0005 to +.0008
Over 1/4" to 1"	+.0006 to +.0010
Over 1"	+.0008 to +.0012



ENDURANCE CARBIDE Gages last “40 TIMES” longer than steel





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Reversible Plug Gages – Single or double ended for size control of holes and other applications. The reversible carbide plug gage has the advantage that it can be reversed and used at the opposite end when one end becomes worn and the member goes out of tolerance. Color coded handles for easy identification. Green for “Go” members, and Red for “No Go” members. Depth steps, and extra length members also available upon request at an additional cost.
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Progressive Gages – Complete internal gage with GO & NO GO sections combined on a single member. This type of gage is suitable for checking a short hole.
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Taplock Gage – Designed for larger diameter gaging members. Size can be applied similar to reversible plug gages. The Go and No Go have different lengths of gaging surface – No Go being shorter. Depth steps, and extra length members available upon request at an additional cost.
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Master Setting Disks – Master setting disks are used for setting various types of comparators, snap gages and other types of precision gages. Insulated grips on the end of the master setting disks prevent heat distortion.
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Inserted Rings/Solid Carbide Ring Gages – An external gage of cylindrical form used for the size control of external diameters. Gages can be supplied with carbide inserted into a steel body or solid carbide depending upon your application.
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Gage Reconditioning Services – We will recondition M. Curry or competitive Tungsten Carbide ring gages to practical larger diameters. Prices for salvaging will be submitted on receipt of worn gages after inspection for salvage possibilities. In ordering, please state size, direction and tolerance class required for respective gages.

All gages are manufactured to A.G.D. standards in the controlled environment of our metrology lab.

SIZE RATING		Class XX	Class X	Class Y	Class Z
Above	To & Incl.				
.029	.825	.00002	.00004	.00007	.00010
.825	1.510	.00003	.00006	.00009	.00012
1.510	2.510	.00004	.00008	.00012	.00016



Endurance Carbide Dies will increase productivity by reducing replacement tooling cost and downtime.

-  **Endurance Carbide Extruding Type Dies** are manufactured in the United States with the highest quality carbide. Tungsten Carbides' high compressive strength allows the Die to handle extreme pressure and can provide higher quality finished product in regard to dimensional satisfaction and surface finish requirements. We manufacture to blueprint specifications and also industry standards. We provide both solid tungsten carbide dies, or tungsten carbide inserted dies in a steel casing body. These dies can provide you with the same set-up of your present steel application, but give you the performance and quality of a carbide die.
-  **Endurance Carbide Stamping Dies** are available in various sizes and configurations per customer's specific blueprint requirements. We provide both solid tungsten carbide stamping dies, or tungsten carbide inserted dies in a steel casing body.
-  **Endurance Carbide Shaving Dies** are used to remove surface defects that occur in the drawing process. We manufacture both solid tungsten carbide shaving dies and tungsten carbide inserted shaving dies in a steel casing body. These are available in various sizes, configurations, and a wide array of rake and face angles.
-  **Endurance Carbide Die Bushings, Die Inserts, Die Buttons.** These dies in combination with our carbide punch can increase productivity and reduce tooling costs. Working with you, to supply you with carbide components for your Die Set.