

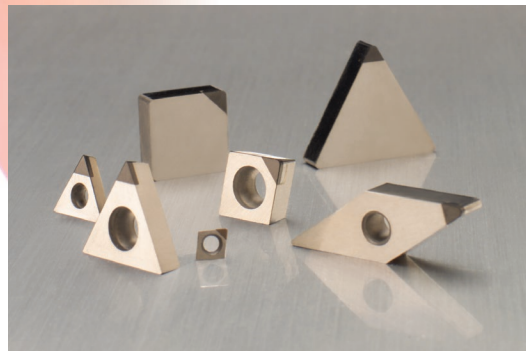


Single Point Standard Brazed Carbide Tools



STANDARD TOOL DIVISION

PCD & CBN Tipped Inserts



PRECISION TOOL DIVISION

**Cutting Tools of Uncompromising Quality
Delivering the Ultimate
In Performance and Value**



American Carbide Tool Company (ACT) is a leading manufacturer of single point brazed carbide tipped tools.

Known for the uncompromising excellence of our products, we have applied our years of tool manufacturing expertise to our Precision Tool Division. ACT's Precision Tool Division produces the most advanced cutting tools including PCD (polycrystalline diamond) & CBN (cubic boron nitride) tipped inserts and tools, as well as precision-ground cutting tools and flat form tools made from carbide and other materials. The result is precision cutting tools which are unsurpassed in quality.



American Carbide Tool Company

GIVES YOU THE EDGE!

- ***Over 50 years of toolmaking experience***
- ***PCD & CBN tipped inserts and tools***
- ***Special precision-ground and wire-EDM flat form tools***
- ***Made in the USA***

BENEFITS OF PCD AND CBN

- Potentially hundreds of times the tool life of carbide with PCD.
- Up to 50 times the tool life of carbide with CBN.
- High material removal rates decrease operation cycle times, providing more parts per shift.
- Cutting speeds are two to three times those of conventional tools.
- Longer tool life results in excellent dimensional control and consistent surface finishes. Together these provide improved workpiece quality and minimize scrap rates.
- Increased machine tool uptime as a result of longer tool life provides greater production capacity without investment in new equipment.
- PCD & CBN provide significant productivity and cost savings in manufacturing operations.
- The full potential and value of super-abrasive tools over conventional tooling can be evaluated by tracking gains in productivity.

We have developed our own unique grinding process for PCD & CBN, giving ACT's cutting tools a superior edge.

The ACT edge gives you **increased tool life and **improved finish**, while providing you with **increased productivity** and **lower cost**.**

Prove it for yourself with a trial order! American made PCD & CBN tipped tooling from American Carbide Tool Company can outperform the competition.

Recommended Superabrasive Applications

There are significant differences in applications for PCD vs. CBN. While PCD is engineered for use on nonferrous material, CBN is designed for machining high temperature alloys and hardened ferrous materials. Failure to have the correct tool for the application will result in tool failure. Choosing the PCD grade is straight forward in soft/abrasive applications however, hard turning requires multiple application specific grades of CBN. CBN works best with a specifically designed tool for your application. The optimally designed CBN tool for each material will allow for longer tool life and quality of finish. Whether choosing a PCD or CBN insert, let the experts at ACT design the perfect tool for your application.

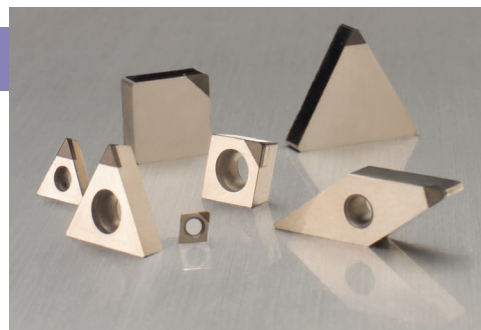
PCD Applications

Abrasive Nonmetallics

Carbon
Ceramics
Fiberglass Composites
Graphite
Plastics
Rubber

Nonferrous Metals

Aluminum
Aluminum Alloys
Brass Alloys
Bronze Alloys
Copper
Copper Alloys
Lead Alloys
Manganese Alloys
Metal Matrix Composites
Sintered Tungsten Carbide

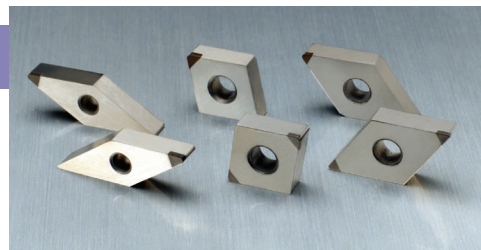


Primary PCD Markets

- Automotive** Transmission housings and valve bodies; manifolds; cylinder heads; wheels; pistons; oil, water, power steering and fuel pumps; brake cylinders; carburetors; engine blocks; alternator, starter and air conditioning housings
- Pumps/Valves** Housings; moving parts
- Home Appliances** Housings; compressor pistons
- Aircraft/Aerospace** Cowling; wing tips; ducts; floor posts; structural components; trim panels
- Electrical Machinery** Commutator shafts; housings
- Computer and Electronic** Moving discs; mirrors/lenses

CBN Applications

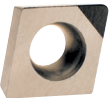


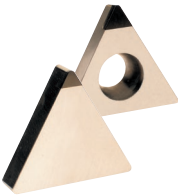

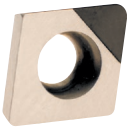

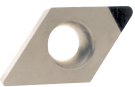


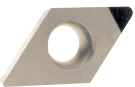

Hardened Steels
Gray Cast Iron
Hard Cast Iron
Powder Metal Materials
Hard Facing Alloys
Thermal Spray Ni Based
Thermal Spray Co Based
Superalloys



Primary CBN Markets

- Automotive** Gears; axles; shafts; bearings; engine blocks; valve seats; brake rotors; brake drums; clutch plates; transfer housings
- Aerospace** Combustion case; shafts; landing gear; bolts; struts; cylinders; turbine disk; turbine blades; turbine; shrouds; engine shafts; turbine vanes
- Other** Pumps; impellers; shafts; rolls

PCD Diamond

		GRADE	GRADE			GRADE	GRADE
		PCD13	PCD15			PCD13	PCD15
STYLE				STYLE			
	CCMW 21.51	60000	60004		SPG 321		63404
	CCMW 21.52	60050	60054		SPG 322		63454
	CCMW 32.51	60100	60104		SPG 421		63604
	CCMW 32.52	60150	60154		SPG 422		63654
	CDCD 51*		60254		TCMW 21.51	64000	64004
	CNGA 431	60300	60304		TNG 321		64504
	CNGA 432	60450	60454		TNG 322		64554
	CPMW 21.51	61200	61204		TPG 221		65154
	CPMW 21.52	61250	61254		TPG 222		65204
	CPMW 32.51	61300	61304		TPG 321	65250	65254
	CPMW 32.52	61350	61354		TPG 322	65300	65304
	DCMW 21.51	61400	61404		TPG 431		65604
	DCMW 32.52	61450	61454		TPG 432		65654
	DNGA 431	61500	61504		TPMW 21.51		66054
	DNGA 432	61650	61654		VNGA 331		66754
	DPMW 21.51	61950	61954		VNGA 332	66900	66904
	DPMW 32.52	62150	62154				

* .060" PCD edge

- Max D.O.C. = .075
- Standard PCD edge for all stock inserts is .125" unless otherwise indicated.

Non-standard grades, PCD edge lengths, insert styles and sizes will be quoted on request.

NOTE: Minimum PCD edge for all stock inserts is .125". (Except for TPG-221 and TPG-222, which have minimum PCD edges of .095" and .085" respectively.)

PCD Application Guidelines

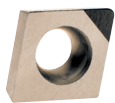






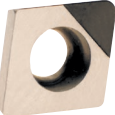







		PCD 13	PCD 15 / PCD 18		
		General Purpose Applications Aluminums <12% Silicon Copper Alloys	Interrupted Cuts Aluminums >12% Silicon Composite Graphite Epoxy Metal Matrix Composites		
Material	Operation	Grade	Surface Speed (ft./min.)	Feed Rate (in./rev.)	
Aluminum/Aluminum Alloys <12% Silicon	Rough Turning	13	2000-6000	.005 -.020	
Aluminum/Aluminum Alloys <12% Silicon	Finish Turning	15/18	2000-6000	.003 -.008	
Aluminum/Aluminum Alloys >12% Silicon	Rough Turning	15/18	1000-2000	.005 -.015	
Aluminum/Aluminum Alloys >12% Silicon	Finish Turning	15/18	1000-3000	.003 -.008	
Copper/Copper Alloys/Zinc	Rough Turning	13	800-1200	.005 -.010	
Copper/Copper Alloys/Zinc	Finish Turning	13	1000-2000	.004 -.010	
Plastics/Composites	Rough Turning	13/15	650-2600	.004 -.016	
Plastics/Composites	Finish Turning	13	1000-5000	.004 -.016	
Sintered Tungsten Carbide <16 Cobalt	Finish Turning	15	50-100	.004 -.010	

Rough Turning: >.025" D.O.C.; Finish Turning: <.025" D.O.C.

WARNING: PCD depth of cut should not exceed 60% of total cutting edge available.

CBN Stock Inserts

CBN Inserts

	STYLE	GRADE CBN6	GRADE CBN8		STYLE	GRADE CBN6	GRADE CBN8
	CCMW 21.51	60012	60028		TCMW 21.51	64012	64028
	CCMW 21.52	60062	60078		TCMW 21.52	64062	64078
	CCMW 32.51	60112	60128		TCMW 32.51	64112	64128
	CCMW 32.52	60162	60178		TCMW 32.52	64162	64178
	CDCD 505*		60228		TNG 432	64612	64628
	CDCD 51*		60278				
	CNGA 431	60312	60328		TNGA 431	64712	64728
	CNGA 432	60462	60478		TNGA 432	64762	64778
	CNGA 433	60612					
	CPMW 21.51	61212	61228		TPG 221	65162	65178
	CPMW 21.52	61262	61278		TPG 222	65212	65228
	CPMW 32.51	61312	61328		TPG 321	65262	65278
	CPMW 32.52	61362	61378		TPG 322	65312	65328
	DNKA 431	61512	61528		TPG 431		65628
	DNKA 432	61662	61678		TPG 432	65662	65678
	RNG32	62362	62378		TPMW 21.51	66062	66078
	RNG42	62412	62428				
	SNG 432 FULL TOP	62862	62878		VNGA 331	66762	66778
	SNG 433 FULL TOP	62912	62928		VNGA 332	66912	66928
	SNG 432	63012	63028		VNGA 333	67062	

* .060" CBN edge

- Max D.O.C. = .044
- Standard CBN edge for all stock inserts is .125" unless otherwise indicated.
- Interrupted cut may require an additional hone. If applicable, please indicate when ordering.

CBN Stock Inserts

CBN Application Guidelines

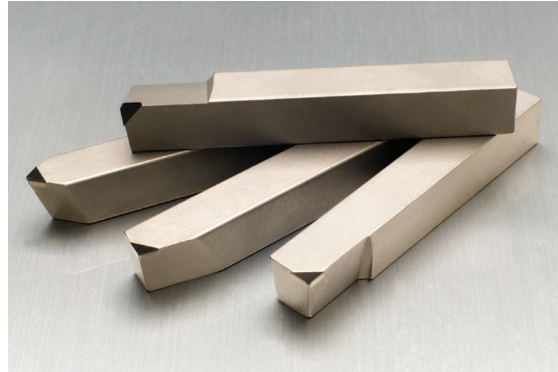
Material	Operation	Grade	Surface Speed (ft./min.)	Feed Rate (in./rev.)
Hardened High Carbon Steel	Rough Turning	CBN8	300-450	.004 -.012
Hardened High Carbon Steel	Finish Turning	CBN8/CBN30	400-600	.004 -.008
Hardened Alloy Steels	Rough Turning	CBN8	300-400	.004 -.012
Hardened Alloy Steels	Finish Turning	CBN8/CBN30	400-500	.004 -.008
Hardened Tool and Die Steels	Rough Turning	CBN8	200-300	.004 -.008
Hardened Tool and Die Steels	Finish Turning	CBN8/CBN30	250-350	.004 -.008
Pearlitic Gray Cast Iron <240HBN	Rough Turning	CBN6	1500-3500	.010 -.020
Pearlitic Gray Cast Iron <240HBN	Finish Turning	CBN6	1500-3500	.010 -.020
Pearlitic Gray Cast Iron >240HBN	Rough Turning	CBN6	1000-2000	.010 -.020
Pearlitic Gray Cast Iron >240HBN	Finish Turning	CBN6	1000-2000	.010 -.020
White Alloy Cast Iron (Ni-hard, Cr-Mo, HiCr)	Rough Turning	CBN6	200-400	.010 -.030
White Alloy Cast Iron (Ni-hard, Cr-Mo, HiCr)	Finish Turning	CBN6	300-600	.010 -.030
Superalloys	Rough Turning	CBN6	500-1000	.004 -.010
Superalloys	Finish Turning	CBN6	500-1000	.004 -.010
Thermal Spray Nickel Based	Rough Turning	CBN6	200-600	.003 -.008
Thermal Spray Nickel Based	Finish Turning	CBN6	300-1000	.003 -.008
Thermal Spray Cobalt Based	Rough Turning	CBN6	400-700	.002 -.006
Thermal Spray Cobalt Based	Finish Turning	CBN6	500-1000	.002 -.006
Powder Metal	Rough Turning	CBN6	300-800	.004 -.010
Powder Metal	Finish Turning	CBN6	300-1000	.003 -.008

Rough Turning: >.025" D.O.C.; Finish Turning: <.025" D.O.C.

WARNING: CBN depth of cut should not exceed 35% of total cutting edge available.

PCD Turning Tools


STYLE	GRADE PCD18
AL-4	67048
AL-6	67458
AL-8	67508
AR-4	67658
AR-6	67708
AR-8	67758
BL-4	67908
BL-6	67958
BL-8	67758
BR-4	68158
BR-6	68208
BR-8	68258
E-4	68658
E-6	68708
E-8	68758
D-4	68408
D-6	68458
D-8	68508

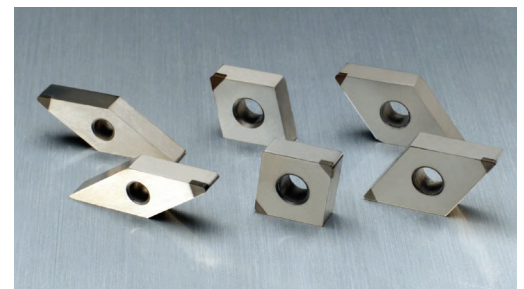


- Superior Life Over Carbide Tools
- Higher Speed and Feed Capabilities

When you need cutting tools, depend on the company that provides you with the very best in quality and service.

CBN Mini Tip Inserts

	STYLE	GRADE CBN30
	CNGA 431 MT	60359
	CNGA 431 DE MT	60409
	CNGA 432 MT	60509
	CNGA 432 DE MT	60559
	DNGA 431 MT	61559
	DNGA 431 DE MT	61609
	DNGA 432 MT	61709
	DNGA 432 DE MT	61759
	VNGA 331 MT	66809
	VNGA 331 DE MT	66859
	VNGA 332 MT	66959
	VNGA 332 DE MT	67009



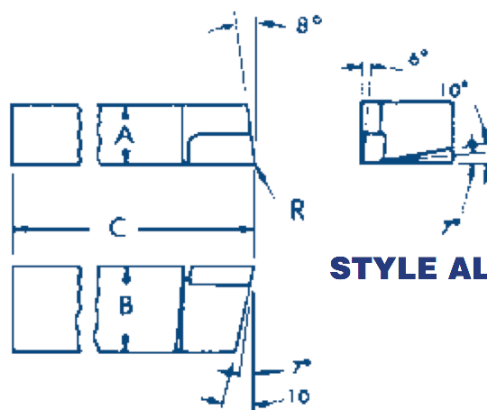
- For Finishing of Hardened Steel
- Continuous or Interrupted Cut
- Single Use Insert Eliminates Regrinding
- Low Cost Per Insert

STRAIGHT TURNING TOOLS

AR & AL Style Tools -

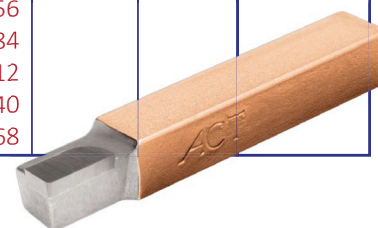
0° Side Cutting Edge Angle

For Turning, Facing or Boring to a square shoulder.
A lead angle can be ground on the side cutting edge for use on shallow cuts or Chamfering.



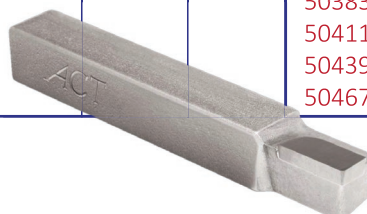
AR

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose MICROGRAIN
	A	B	C			C2	C4	883*	K68	C5	C6	370*	K21	
AR-4	1/4	1/4	2	1/64	12	50503		50507	50511	50519	50520	50524	50528	50529
AR-5	5/16	5/16	2½	1/64	12	50531	50546	50535	50539	50547	50548	50552	50556	50557
AR-6	3/8	3/8	2½	1/64	12	50559	50574	50563	50567	50575	50576	50580	50584	50585
AR-7	7/16	7/16	3	1/32	12	50587	50602	50591	50595	50603	50604	50608	50612	50613
AR-8	1/2	1/2	3½	1/32	12	50615	50630	50619	50623	50631	50632	50636	50640	50641
AR-10	5/8	5/8	4	1/32	12	50643		50647	50651	50659	50660	50664	50668	50669
AR-12	3/4	3/4	4½	1/32	12	50671			50679	50687	50688	50692	50696	50697
AR-16	1	1	7	1/32	6	50699		50703		50715	50716	50720		
AR-20	1¼	1¼	8	1/32	Bulk	50727				50743	50744			
AR-24	1½	1½	8	1/16	Bulk	50755				50771	50772			
AR-44	1/2	1	7	1/32	Bulk	50783				50799	50800			
AR-54	5/8	1	6	1/32	Bulk	50811				50827	50828			
AR-55	5/8	1¼	8	1/32	Bulk	50839				50855	50856			
AR-64	3/4	1	6	1/32	Bulk	50867				50883	50884			
AR-66	3/4	1½	8	1/32	Bulk	50895				50911	50912			
AR-85	1	1¼	8	1/32	Bulk	50923				50939	50940			
AR-86	1	1½	8	1/32	Bulk	50951				50967	50968			



AL

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose MICROGRAIN
	A	B	C			C2	C4	883*	K68	C5	C6	370*	K21	
AL-4	1/4	1/4	2	1/64	12	50003		50007	50011	50019	50020	50024	50028	50029
AL-5	5/16	5/16	2½	1/64	12	50031	50046	50035	50039	50047	50048	50052	50056	50057
AL-6	3/8	3/8	2½	1/64	12	50059	50074	50063	50067	50075	50076	50080	50084	50085
AL-7	7/16	7/16	3	1/32	12	50087	50102	50091	50095	50103	50104	50108	50112	50113
AL-8	1/2	1/2	3½	1/32	12	50115	50130	50119	50123	50131	50132	50136	50140	50141
AL-10	5/8	5/8	4	1/32	12	50143		50147	50151	50159	50160	50164	50168	50169
AL-12	3/4	3/4	4½	1/32	12	50171		50175	50179	50187	50188	50192	50196	50197
AL-16	1	1	7	1/32	6	50199				50215	50216	50220		
AL-20	1¼	1¼	8	1/32	Bulk	50227				50243	50244			
AL-24	1½	1½	8	1/16	Bulk	50255				50271	50272			
AL-44	1/2	1	7	1/32	Bulk	50283				50299	50300			
AL-54	5/8	1	6	1/32	Bulk	50311				50327	50328			
AL-55	5/8	1¼	8	1/32	Bulk	50339				50355	50356			
AL-64	3/4	1	6	1/32	Bulk	50367				50383	50384			
AL-66	3/4	1½	8	1/32	Bulk	50395				50411	50412			
AL-85	1	1¼	8	1/32	Bulk	50423				50439	50440			
AL-86	1	1½	8	1/32	Bulk	50451				50467	50468			



Red stock numbers – non-stock items

* Limited quantities available while supplies last.

Single Point Standard Brazed



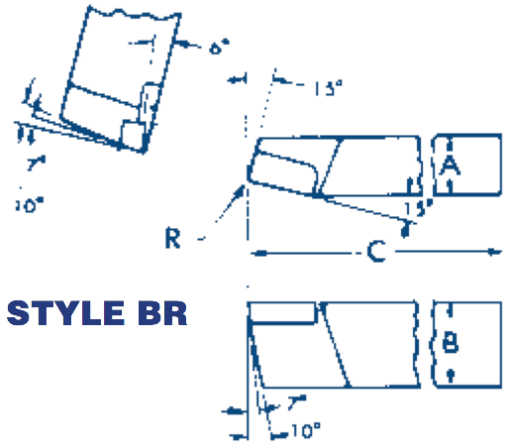
LEAD ANGLE TURNING TOOLS

BR & BL Style Tools -

15° Side Cutting Edge Angle

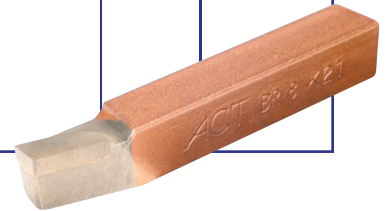
For interrupted or irregular cuts. Side edge angle provides gradual entrance to the workpiece. Lead angle distributes cutting load.

For Turning, Light Planing, Boring, Milling and Facing.



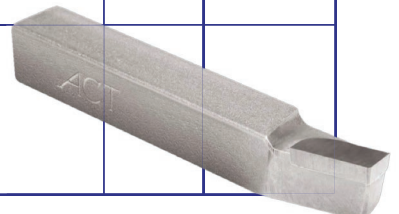
BR

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose MICROGRAIN
	A	B	C			C2	C4	883*	K68	C5	C6	370*	K21	
BR-4	1/4	1/4	2	1/64	12	51503		51507	51511	51519	51520	51524	51528	51529
BR-5	5/16	5/16	2 1/4	1/64	12	51531		51535	51539	51547	51548	51552	51556	51557
BR-6	3/8	3/8	2 1/2	1/64	12	51559	51574	51563	51567	51575	51576	51580	51584	51585
BR-7	7/16	7/16	3	1/32	12	51587	51602	51591	51595	51603	51604	51608	51612	51613
BR-8	1/2	1/2	3 1/2	1/32	12	51615	51630	51619	51623	51631	51632	51636	51640	51641
BR-10	5/8	5/8	4	1/32	12	51643		51647	51651	51659	51660	51664	51668	51669
BR-12	3/4	3/4	4 1/2	1/32	12	51671			51679	51687	51688	51692	51696	51697
BR-16	1	1	7	1/32	6	51699		50703		51715	51716			
BR-20	1 1/4	1 1/4	8	1/32	Bulk	51727				51743	51744			
BR-24	1 1/2	1 1/2	8	1/16	Bulk	51755				51771	51772			
BR-44	1/2	1	7	1/32	Bulk	51783		51787		51799	51800	51804		
BR-54	5/8	1	6	1/32	Bulk	51811				51827	51828			
BR-55	5/8	1 1/4	8	1/32	Bulk	51839				51855	51856			
BR-64	3/4	1	6	1/32	Bulk	51867				51883	51884			
BR-66	3/4	1 1/2	8	1/32	Bulk	51895				51911	51912			
BR-85	1	1 1/4	8	1/32	Bulk	51923				51939	51940			
BR-86	1	1 1/2	8	1/32	Bulk	51951				51967	51968			



BL

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose MICROGRAIN
	A	B	C			C2	C4	883*	K68	C5	C6	370*	K21	
BL-4	1/4	1/4	2	1/64	12	51003		51007	51011	51019	51020	51024	51028	51029
BL-5	5/16	5/16	2 1/4	1/64	12	51031		51035	51039	51047	51048	51052	51056	51057
BL-6	3/8	3/8	2 1/2	1/64	12	51059	51074	51063	51067	51075	51076	51080	51084	51085
BL-7	7/16	7/16	3	1/32	12	51087	51102	51091	51095	51103	51104	51108	51112	51113
BL-8	1/2	1/2	3 1/2	1/32	12	51115	51130	51119	51123	51131	51132	51136	51140	51141
BL-10	5/8	5/8	4	1/32	12	51143		51147	51151	51159	51160	51164	51168	51169
BL-12	3/4	3/4	4 1/2	1/32	12	51171			51179	51187	51188	51192	51196	51197
BL-16	1	1	7	1/32	6	51199				51215	51216			
BL-20	1 1/4	1 1/4	8	1/32	Bulk	51227				51243	51244			
BL-24	1 1/2	1 1/2	8	1/16	Bulk	51255				51271	51272			
BL-44	1/2	1	7	1/32	Bulk	51283		51287		51299	51300	51304		
BL-54	5/8	1	6	1/32	Bulk	51311				51327	51328			
BL-55	5/8	1 1/4	8	1/32	Bulk	51339				51355	51356			
BL-64	3/4	1	6	1/32	Bulk	51367				51383	51384			
BL-66	3/4	1 1/2	8	1/32	Bulk	51395				51411	51412			
BL-85	1	1 1/4	8	1/32	Bulk	51423				51439	51440			
BL-86	1	1 1/2	8	1/32	Bulk	51451				51467	51468			



Red stock numbers – non-stock items

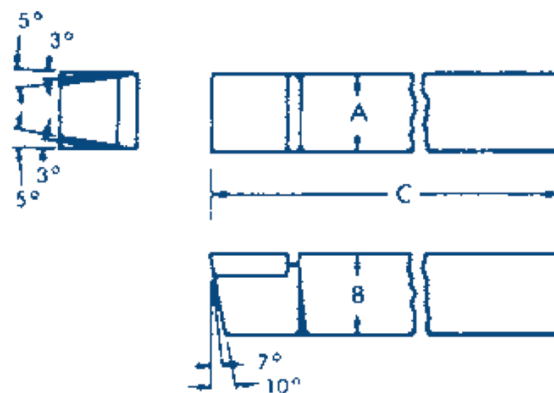
* Limited quantities available while supplies last.

SQUARE NOSE UTILITY TOOL

C Style Tool - 0° Square Nose

Allows for right or left hand cutting.

For use in Forming, Turning, Facing, Chamfering and Grooving applications.



C

TOOL NUMBER	SHANK DIMENSIONS			PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose
	A	B	C		C2	C4	883*	K68	C5	C6	370*	K21	MICROGRAIN
C-4	1/4	1/4	2	12	52003		52007	52011	52019	52020	52024	52028	52029
C-5	5/16	5/16	2 1/4	12	52031		52035	52039	52047	52048	52052	52056	52057
C-6	3/8	3/8	2 1/2	12	52059	52074	52063	52067	52075	52076	52080	52084	52085
C-7	7/16	7/16	3	12	52087		52091	52095	52103	52104	52108	52112	52113
C-8	1/2	1/2	3 1/2	12	52115		52119	52123	52131	52132	52136	52140	52141
C-10	5/8	5/8	4	12	52143		52147	52151	52159	52160	52164	52168	52169
C-12	3/4	3/4	4 1/2	12	52171		52175	52179	52187	52188	52192	52196	52197
C-16	1	1	7	6	52199		52203		52215	52216			
C-20	1 1/4	1 1/4	8	Bulk	52227				52243	52244			
C-44	1/2	1	7	Bulk	52283				52299	52300			
C-54	5/8	1	6	Bulk	52311				52327	52328			
C-55	5/8	1 1/4	8	Bulk	52339				52355	52356			
C-64	3/4	1	6	Bulk	52367				52383	52384			
C-66	3/4	1 1/2	8	Bulk	52395				52411	52412			
C-86	1	1 1/2	8	Bulk	52451				52467	52468			

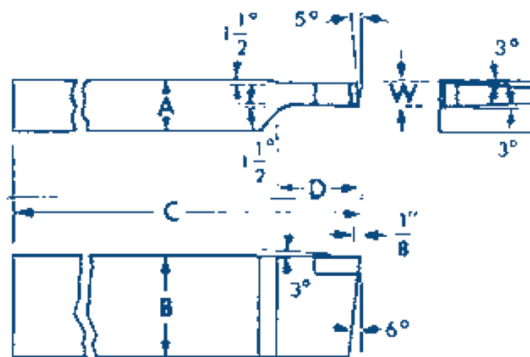
CUTOFF TOOLS

CT(COR & CTL(COL) Style

For Cutoff or Grooving of solid bars and tubing stock.



STYLE CT



CT(COR & CTL(COL)

TOOL NUMBER	SHANK DIMENSIONS					PKG QTY	Cast Iron & Non-Ferrous Grades		Steel Grades			Multi-purpose
	A	B	C	D	W		C2	883*	C5	C6	370*	MICROGRAIN
CT-111	1/2	1	5	3/4	1/8	6	52503		52519	52520	52524	52529
CT-122(443)	1/2	1	5	13/16	3/16	6	52531	52535	52547	52548	52552	52557
CT-120(445)	1/2	1	5	1	5/16	6	52559		52575	52576		52585
CT-121(444)	1/2	1	5	1	1/4	6	52587	52591	52603	52604	52608	52613
CT-130(556)	5/8	1 1/4	5	1 1/4	3/8	6	52615		52631	52632		52641
CT-140(666)	3/4	1 1/2	6	1 1/4	3/8	6	52643		52659	52660		52669
CTL-111	1/2	1	5	3/4	1/8	6	52783		52799	52800	52804	
CTL-122(443)	1/2	1	5	13/16	3/16	6	52811	52815	52827	52828	52832	52837
CTL-120(445)	1/2	1	5	1	5/16	6	52839		52855	52856	52860	52865
CTL-121(444)	1/2	1	5	1	1/4	6	52867	52871	52883	52884	52888	52893
CTL-130(556)	5/8	1 1/4	5	1 1/4	3/8	6	52895		52911	52912	52916	52921
CTL-140(666)	3/4	1 1/2	6	1 1/4	3/8	6	52923		52939	52940		52949

Red stock numbers – non-stock items

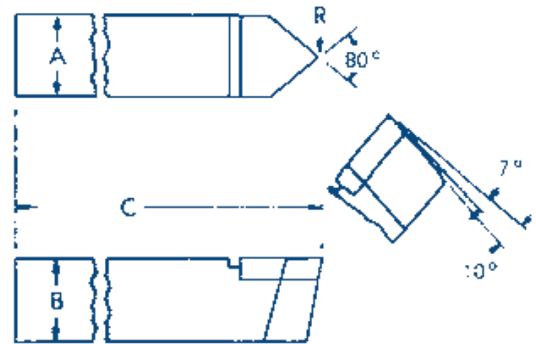
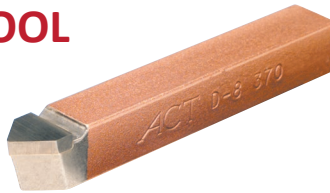
* Limited quantities available while supplies last.



POINTED NOSE UTILITY TOOL

D Style Tool - 80° Included Angle

Allows for right or left hand cutting.
For use in Light Turning, Undercutting,
Chamfering and Boring applications.



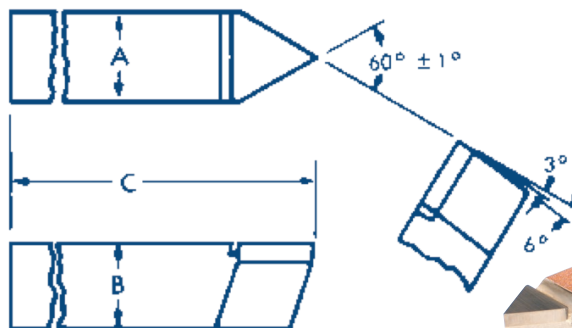
D

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades				Steel Grades				Multi-purpose
	A	B	C			C2	C4	883*	K68	C5	C6	370*	K21	MICROGRAIN
D-4	1/4	1/4	2	1/64	12	53003		53007	53011	53019	53020	53024	53028	53029
D-5	5/16	5/16	2½	1/64	12	53031			53039	53047	53048	53052	53056	53057
D-6	3/8	3/8	2½	1/64	12	53059	53074	53063	53067	53075	53076	53080	53084	53085
D-7	7/16	7/16	3	1/32	12	53087		53091	53095	53103	53104		53112	53113
D-8	1/2	1/2	3½	1/32	12	53115		53119	53123	53131	53132	53136	53140	53141
D-10	5/8	5/8	4	1/32	12	53143			53151	53159	53160		53168	53169
D-12	3/4	3/4	4½	1/32	12	53171		53175	53179	53187	53188	53192	53196	53197
D-16	1	1	7	1/32	6	53199				53215	53216	53220		

THREADING TOOL

E Style Tool - 60° Included Angle

Cuts a standard 60° V-thread. Ground to a sharp point for fine Threading, but can be easily modified for cutting round bottom threads. Can also be used for Chamfering, Notching and Undercutting.



E

TOOL NUMBER	SHANK DIMENSIONS			PKG QTY	Cast Iron & Non-Ferrous Grades			Steel Grades				Multi-purpose
	A	B	C		C2	883*	K68	C5	C6	370*	K21	MICROGRAIN
E-4	1/4	1/4	2	12	53255	53259	53263	53271	53272	53276	53280	53281
E-5	5/16	5/16	2½	12	53283	53287	53291	53299	53300		53308	53309
E-6	3/8	3/8	2½	12	53311		53319	53327	53328	53332	53336	53337
E-7	7/16	7/16	3	12	53339	53343	53347	53355	53356		53364	
E-8	1/2	1/2	3½	12	53367	53371	53375	53383	53384	53388	53392	53393
E-10	5/8	5/8	4	12	53395		53403	53411	53412		53420	53421
E-12	3/4	3/4	4½	12	53423		53431	53439	53440	53444	53448	53449
E-16	1	1	7	6	53451			53467	53468	53472		

* Limited quantities available while supplies last.

Policy & Terms

Quantity Discounts

Available for orders specifying 500 pieces or more of one style, size and grade.

Non-stock Items

Subject to quantity extra charge.

Warning

Any cutting tool may break or shatter under improper use. Government regulations require the use of safety glasses and other appropriate safety equipment at all times in the vicinity of use.

WARRANTY

Products manufactured by American Carbide Tool Company are fully guaranteed against defects in material and workmanship. If the product has been subjected to improper operating conditions, machine set-up, application of cutting fluids or user alterations, which in the opinion of American Carbide Tool Company would adversely affect the performance of the product, the warranty will not apply.

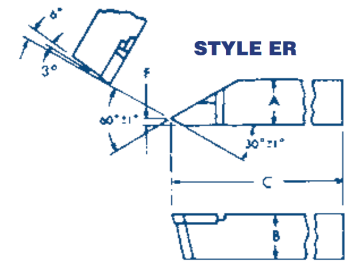
OFFSET THREADING TOOL

ER & EL Style Tools -
Offset 60° Included Angle

Offset for Threading or Boring to a shoulder.



STYLE EL



STYLE ER

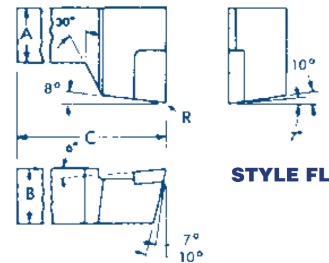
ER • EL

TOOL NUMBER	SHANK DIMENSIONS				PKG QTY	Cast Iron & Non-Ferrous Grades			Steel Grades			Multi-purpose
	A	B	C	F		C2	883*	C5	C6	370*	MICROGRAIN	
ER-4	1/4	1/4	2	1/16	12	54255		54271	54272	54276		
ER-5	5/16	5/16	2½	1/16	12	54283	54287	54299	54300	54304	54309	
ER-6	3/8	3/8	2½	1/16	12	54311	54315	54327		54322		
ER-8	1/2	1/2	3½	3/32	12	54367		54383	54384	54388	54393	
ER-10	5/8	5/8	4	3/32	12	54395		54411	54412	54416	54421	
ER-12	3/4	3/4	4½	1/8	12	54423		54439	54440	54444	54449	
EL-4	1/4	1/4	2	1/16	12	54003		54019	54020	54024		
EL-5	5/16	5/16	2½	1/16	12	54031	54035	54047	54048	54052	54057	
EL-6	3/8	3/8	2½	1/16	12	54059	54063	54075	54076	54080	54085	
EL-8	1/2	1/2	3½	3/32	12	54115		54131	54132	54136	54141	
EL-10	5/8	5/8	4	3/32	12	54143		54159	54160	54164	54169	
EL-12	3/4	3/4	4½	1/8	12	54171	54175	54187	54188	54192	54197	

END CUTTING OFFSET TOOLS

FR & FL Style Tools - 0° End Cutting Edge Angle

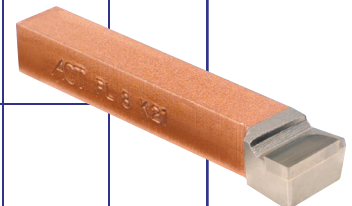
For Turning, Facing, Boring and Straddle Facing close to chuck jaws on lathe and boring mill applications.



STYLE FL

FR • FL

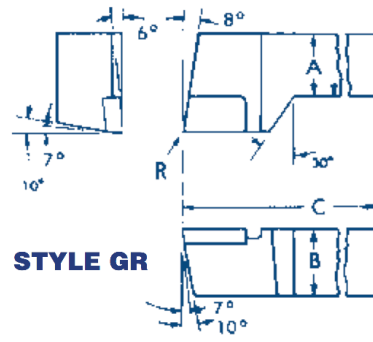
TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades			Steel Grades			
	A	B	C			C2	883*	K68	C5	C6	370*	K21
FR-8	1/2	1/2	3½	1/32	12	55615	55619	55623	55631	55632	55636	55640
FR-10	5/8	5/8	4	1/32	12	55643	55647	55651	55659	55660	55664	55668
FR-12	3/4	3/4	4½	1/32	12	55671	55675	55679	55687	55688	55692	55696
FR-16	1	1	7	1/32	6	55699			55715	55716	55720	
FR-20	1¼	1¼	8	1/32	Bulk	55727			55743	55744		
FR-24	1½	1½	8	1/16	Bulk	55755			55771	55772		
FR-44	1/2	1	6	1/32	Bulk	55783	55787		55799	55800		
FR-55	5/8	1¼	7	1/32	Bulk	55839			55855	55856		
FR-64	3/4	1	6	1/32	Bulk	55867			55883	55884		
FR-66	3/4	1½	8	1/32	Bulk	55895			55911	55912		
FR-85	1	1¼	8	1/32	Bulk	55923			55939	55940		
FR-86	1	1½	8	1/32	Bulk	55951			55967	55968		
FL-8	1/2	1/2	3½	1/32	12	55115	55119	55123	55131	55132	55136	55140
FL-10	5/8	5/8	4	1/32	12	55143	55147	55151	55159	55160	55164	55168
FL-12	3/4	3/4	4½	1/32	12	55171	55175	55179	55187	55188	55192	55196
FL-16	1	1	7	1/32	6	55199	55203		55215	55216	55220	
FL-20	1¼	1¼	8	1/32	Bulk	55227			55243	55244		
FL-24	1½	1½	8	1/16	Bulk	55255			55271	55272		
FL-44	1/2	1	6	1/32	Bulk	55283	55287		55299	55300	55304	
FL-55	5/8	1¼	7	1/32	Bulk	55339			55355	55356		
FL-64	3/4	1	6	1/32	Bulk	55367			55383	55384		
FL-66	3/4	1½	8	1/32	Bulk	55395			55411	55412		
FL-85	1	1¼	8	1/32	Bulk	55423			55439	55440		
FL-86	1	1½	8	1/32	Bulk	55451			55467	55468		



Single Point Standard Brazed

Red stock numbers – non-stock items

* Limited quantities available while supplies last.



STYLE GR

SIDE CUTTING OFFSET TOOLS

GR & GL Style Tools - 0° Side Cutting Edge Angle

For Turning, Facing and Boring close to chuck jaws on lathe and boring mill applications.

GR • GL

TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades			Steel Grades			
	A	B	C			C2	883*	K68	C5	C6	370*	K21
GR-8	1/2	1/2	3/2	1/32	12	56615	56619	56623	56631	56632	56636	56640
GR-10	5/8	5/8	4	1/32	12	56643	56647	56651	56659	56660	56664	56668
GR-12	3/4	3/4	4 1/2	1/32	12	56671	56675	56679	56687	56688	56692	56696
GR-16	1	1	7	1/32	6	56699	56703		56715	56716	56720	
GR-20	1 1/4	1 1/4	8	1/32	Bulk	56727			56743	56744		
GR-24	1 1/2	1 1/2	8	1/16	Bulk	56755			56771	56772		
GR-44	1/2	1	6	1/32	Bulk	56783	56787		56799	56800		
GR-55	5/8	1 1/4	7	1/32	Bulk	56839			56855	56856		
GR-64	3/4	1	6	1/32	Bulk	56867			56883	56884		
GR-85	1	1 1/4	8	1/32	Bulk	56923			56939	56940		
GR-86	1	1 1/2	8	1/32	Bulk	56951			56967	56968		
GL-8	1/2	1/2	3 1/2	1/32	12	56115	56119	56123	56131	56132	56136	56140
GL-10	5/8	5/8	4	1/32	12	56143	56147	56151	56159	56160	56164	56168
GL-12	3/4	3/4	4 1/2	1/32	12	56171	55175	56179	56187	56188	56192	56196
GL-16	1	1	7	1/32	6	56199			56215	56216	56220	
GL-20	1 1/4	1 1/4	8	1/32	Bulk	56227			56243	56244		
GL-24	1 1/2	1 1/2	8	1/16	Bulk	56255			56271	56272		
GL-44	1/2	1	6	1/32	Bulk	56283	56287		56299	56300	56304	
GL-55	5/8	1 1/4	7	1/32	Bulk	56339			56355	56356		
GL-64	3/4	1	6	1/32	Bulk	56367			56383	56384		
GL-85	1	1 1/4	8	1/32	Bulk	56423			56439	56440		
GL-86	1	1 1/2	8	1/32	Bulk	56451			56467	56468		



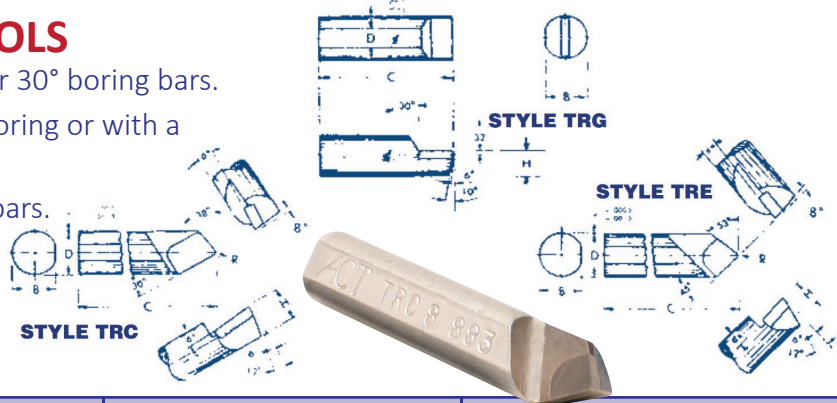
ROUND SHANK BORING TOOLS

TRC Style – For Boring to a square shoulder 30° boring bars.

TRE Style – For Boring to a square in 45° boring or with a 15° lead angle in 30° shoulder boring bars.

TRG Style – For shouldering in 90° boring bars.

Neutral rake.



TRC • TRE • TRG

TOOL NUMBER	SHANK DIMENSIONS				NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades			Steel Grades	
	A	B	C	F			C2	883*	C5	C6	370*
TRC-5	5/16	19/64	1 1/2	7/32	1/64	12	57003	57007	57019	57020	
TRC-6	3/8	11/32	1 3/4	9/32	1/64	12	57031	57035	57047	57048	57052
TRC-8	1/2	15/32	2 1/2	3/8	1/32	12	57059		57075	57076	
TRE-5	5/16	19/64	1 1/2	7/32	1/64	12	57143	57147	57159	57160	57164
TRE-6	3/8	11/32	1 3/4	9/32	1/64	12	57171	57175	57187	57188	57192
TRE-8	1/2	15/32	2 1/2	3/8	1/32	12	57199		57215	57216	
TRG-5	5/16	19/64	1 1/2	13/16		12	57283	57287	57299	57300	57304
TRG-6	3/8	11/32	1 3/4	1/4		12	57311	57315	57327	57328	57332
TRG-8	1/2	15/32	2 1/2	9/32		12	57339	57343	57355	57356	57360

Red stock numbers – non-stock items

* Limited quantities available while supplies last.

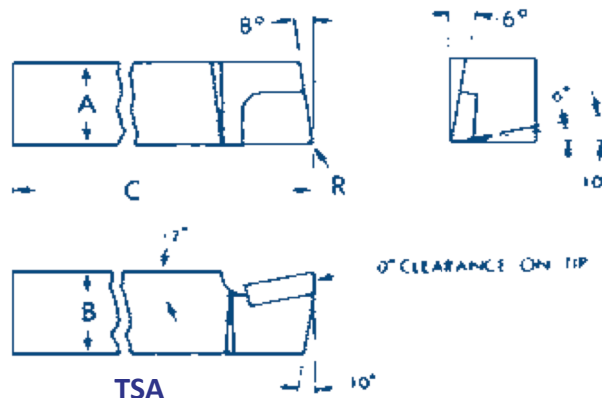
SQUARE SHANK BORING TOOLS

TSA Style – For Boring to a square shoulder in a 90° boring bar. High positive rake.

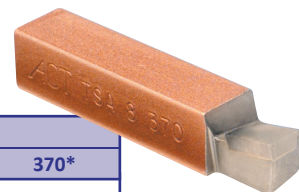
TSB Style – For Boring to a 10° shoulder in 90° boring bars. High positive rake.

TSC Style – For Boring to a square shoulder in 60° boring bars. High positive rake.

TSE Style – For Boring to a square shoulder in 45° boring bars or with a 15° lead angle in 30° boring bars. High positive rake.



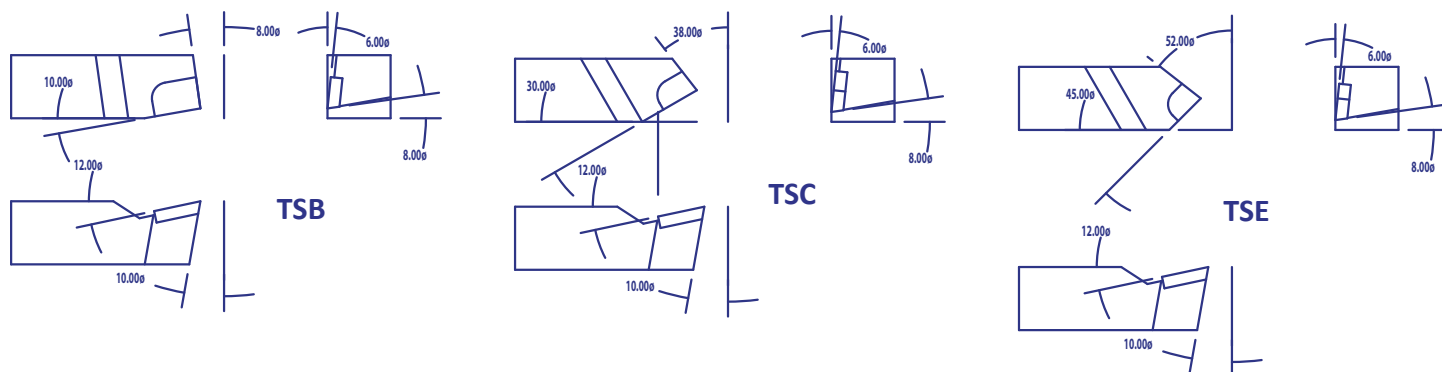
TSA • TSB • TSC • TSE



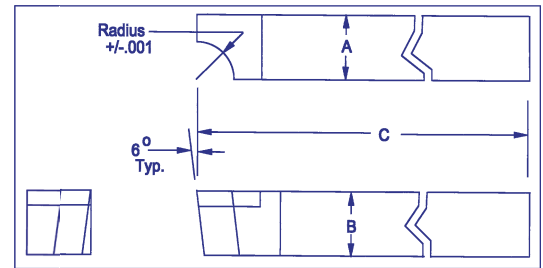
TOOL NUMBER	SHANK DIMENSIONS			NOSE RADIUS	PKG QTY	Cast Iron & Non-Ferrous Grades		Steel Grades		
	A	B	C			C2	883*	C5	C6	370*
TSA-4	1/4	1/4	1½	1/64	12	58003	58007	58019	58020	58024
TSA-5	5/16	5/16	1½	1/64	12	58031	58035	58047	58048	58052
TSA-6	3/8	3/8	1¾	1/64	12	58059	58063	58075	58076	58080
TSA-8	1/2	1/2	2½	1/32	12	58087	58091	58103	58104	58108
TSA-10	5/8	5/8	3	1/32	12	58115		58131	58132	
TSA-12	3/4	3/4	3½	1/32	12	58143		58159	58160	58164
TSB-4	1/4	1/4	1½	1/64	12					
TSB-5	5/16	5/16	1½	1/64	12	58199	58203	58215	58216	58220
TSB-6	3/8	3/8	1¾	1/64	12	58227	58231	58243	58244	58248
TSB-8	1/2	1/2	2½	1/32	12	58255	58259	58271	58272	58276
TSB-10	5/8	5/8	3	1/32	12	58283		58299	58300	
TSB-12	3/4	3/4	3½	1/32	12	58311		58327	58328	
TSC-4	1/4	1/4	1½	1/64	12	58339	58343	58355	58356	58360
TSC-5	5/16	5/16	1½	1/64	12	58367	58371	58383	58384	58390
TSC-6	3/8	3/8	1¾	1/64	12	58395	58399	58411	58412	58416
TSC-8	1/2	1/2	2½	1/32	12	58423	58427	58439	58440	58444
TSC-10	5/8	5/8	3	1/32	12	58451		58467	58468	
TSC-12	3/4	3/4	3½	1/32	12	58479		58495	58496	
TSE-4	1/4	1/4	1½	1/64	12	58671	58675	58687	58688	58692
TSE-5	5/16	5/16	1½	1/64	12	58669	58703	58715	58716	58720
TSE-6	3/8	3/8	1¾	1/64	12	58727	58731	58743	58744	58748
TSE-8	1/2	1/2	2½	1/32	12	58755	58759	58771	58772	58776
TSE-10	5/8	5/8	3	1/32	12	58783		58799	58800	
TSE-12	3/4	3/4	3½	1/32	12	58811		58827	58828	

Red stock numbers – non-stock items

* Limited quantities available while supplies last.

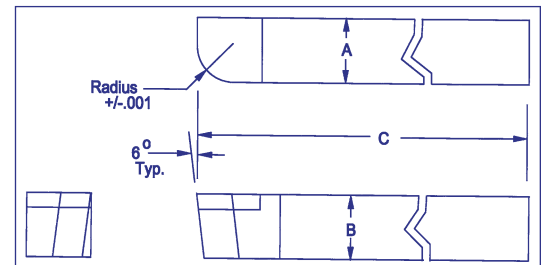
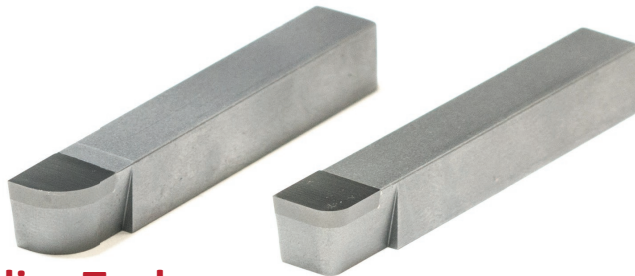


Single Point Standard Brazed



Concave Radius Tools

TOOL NUMBER	SHANK DIMENSIONS			RADIUS DIMENSION	HAND	MICROGRAIN Multi-Purpose
	A	B	C			
CCRH-6 .032	3/8"	3/8"	2 1/2"	1/32"	RH	70009
CCRH-6 .062	3/8"	3/8"	2 1/2"	1/16"	RH	70011
CCRH-6 .093	3/8"	3/8"	2 1/2"	3/32"	RH	70013
CCRH-6 .125	3/8"	3/8"	2 1/2"	1/8"	RH	70015
CCRH-6 .156	3/8"	3/8"	2 1/2"	5/32"	RH	70017
CCRH-6 .187	3/8"	3/8"	2 1/2"	3/16"	RH	70019
CCRH-6 .218	3/8"	3/8"	2 1/2"	9/32"	RH	70021
CCRH-6 .250	3/8"	3/8"	2 1/2"	1/4"	RH	70023
CCLH-6 .032	3/8"	3/8"	2 1/2"	1/32"	LH	70010
CCLH-6 .062	3/8"	3/8"	2 1/2"	1/16"	LH	70012
CCLH-6 .093	3/8"	3/8"	2 1/2"	3/32"	LH	70014
CCLH-6 .125	3/8"	3/8"	2 1/2"	1/8"	LH	70016
CCLH-6 .156	3/8"	3/8"	2 1/2"	5/32"	LH	70018
CCLH-6 .187	3/8"	3/8"	2 1/2"	3/16"	LH	70020
CCLH-6 .218	3/8"	3/8"	2 1/2"	9/32"	LH	70022
CCLH-6 .250	3/8"	3/8"	2 1/2"	1/4"	LH	70024
CCRH-8 .218	1/2"	1/2"	3 1/2"	9/32"	RH	70109
CCRH-8 .312	1/2"	1/2"	3 1/2"	5/16"	RH	70111
CCRH-8 .343	1/2"	1/2"	3 1/2"	11/32"	RH	70113
CCRH-8 .375	1/2"	1/2"	3 1/2"	3/8"	RH	70115
CCLH-8 .218	1/2"	1/2"	3 1/2"	9/32"	LH	70110
CCLH-8 .312	1/2"	1/2"	3 1/2"	5/16"	LH	70112
CCLH-8 .343	1/2"	1/2"	3 1/2"	11/32"	LH	70114
CCLH-8 .375	1/2"	1/2"	3 1/2"	3/8"	LH	70116



Convex Radius Tools

TOOL NUMBER	SHANK DIMENSIONS			RADIUS DIMENSION	HAND	MICROGRAIN Multi-Purpose
	A	B	C			
CVRH-6 .032	3/8"	3/8"	2 1/2"	1/32"	RH	71009
CVRH-6 .062	3/8"	3/8"	2 1/2"	1/16"	RH	71011
CVRH-6 .093	3/8"	3/8"	2 1/2"	3/32"	RH	71013
CVRH-6 .125	3/8"	3/8"	2 1/2"	1/8"	RH	71015
CVRH-6 .156	3/8"	3/8"	2 1/2"	5/32"	RH	71017
CVRH-6 .187	3/8"	3/8"	2 1/2"	3/16"	RH	71019
CVRH-6 .218	3/8"	3/8"	2 1/2"	9/32"	RH	71021
CVRH-6 .250	3/8"	3/8"	2 1/2"	1/4"	RH	71023
CVLH-6 .032	3/8"	3/8"	2 1/2"	1/32"	LH	71010
CVLH-6 .062	3/8"	3/8"	2 1/2"	1/16"	LH	71012
CVLH-6 .093	3/8"	3/8"	2 1/2"	3/32"	LH	71014
CVLH-6 .125	3/8"	3/8"	2 1/2"	1/8"	LH	71016
CVLH-6 .156	3/8"	3/8"	2 1/2"	5/32"	LH	71018
CVLH-6 .187	3/8"	3/8"	2 1/2"	3/16"	LH	71020
CVLH-6 .218	3/8"	3/8"	2 1/2"	9/32"	LH	71022
CVLH-6 .250	3/8"	3/8"	2 1/2"	1/4"	LH	71024
CVRH-8 .218	1/2"	1/2"	3 1/2"	9/32"	RH	71109
CVRH-8 .312	1/2"	1/2"	3 1/2"	5/16"	RH	71111
CVRH-8 .343	1/2"	1/2"	3 1/2"	11/32"	RH	71113
CVRH-8 .375	1/2"	1/2"	3 1/2"	3/8"	RH	71115
CVLH-8 .218	1/2"	1/2"	3 1/2"	9/32"	LH	71110
CVLH-8 .312	1/2"	1/2"	3 1/2"	5/16"	LH	71112
CVLH-8 .343	1/2"	1/2"	3 1/2"	11/32"	LH	71114
CVLH-8 .375	1/2"	1/2"	3 1/2"	3/8"	LH	71116

Items in red non-stock available upon request.

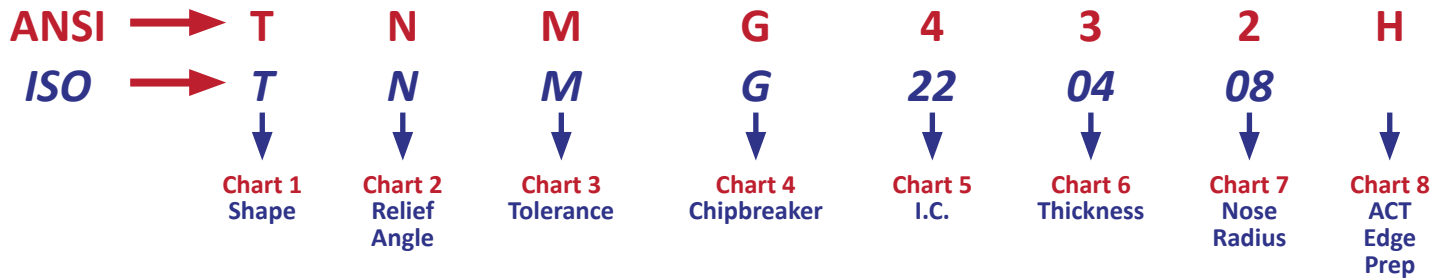
Other grades and styles also available upon request.

Concave or Convex Radius Tolerance +/- .001.

Description

Concave/Convex Right Hand/Left Hand 3/8" Sq. 1/2" Sq. Radius as Shown
 CC / CV RH / LH 6 8 .xxx

ANSI/ISO Turning Insert Identification



1 Insert Shape	
Symbol	Insert Shape
T	Triangle
S	Square
W	Trigon
R	Round
A, K, M	Parallelogram
C	80° Diamond
D	55° Diamond
V	35° Diamond

2 Relief Angle	
Symbol	Relief Angle
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

3 Tolerance		
Symbol	Insert I.C.	Thickness
A	± .001	± .001
C	± .001	± .001
E	± .001	± .001
F	± .0005	± .001
G	± .001	± .005
J	± .002	± .001
M	± .002~+.005	± .005
U	± .003~+.010	± .005

4 Type			
Symbol	Hole	Chipbreaker	Hole Style
A	Yes	None	None
G	Yes	Double	Straight
M	Yes	Single	Straight
N	No	None	None
F	No	Double	None
R	No	Single	None
B	Yes	Double	Countersunk
D	Yes	Single	Countersunk
P	Yes	Single	Straight

5 I.C.							
ACT Number Size/Shape	ISO Number						
	R	S	T	C	D	V	I.C.
(5)			06				5/32
(6)			08				3/16
—			09				7/32
—	06						(.236)
2 (8)		06	11	06	07		1/4
0		07		08	09		5/16
—	08						(.315)
3	09	09	16	09	11	16	3/8
—	10						(.394)
—	12						(.472)
4	12	12	22	12	15		1/2
5	15	15	27	16			5/8
—	16						(.630)
6	19	19	33	19			3/4
—	20						(.787)
—	25						(.984)
8	25	25					1¼
0	31						
—	32						(1.260)

6 Thickness		
ACT Number	ISO Number	Thickness
1.5	02	3/32
2	03	1/8
3	04	3/16
—	05	7/32
4	06	1/4
5	07	5/16
5	08	5/16
6	09	3/8

7 ° Nose Radius		
ACT Number	ISO Number	Radius
—	00	0
0	02	.0079
1	04	.0156
—	05	.0197
2	08	.0312
—	10	.0394
3	12	.0469
—	15	.0591
4	16	.0625
6	24	.0938
8	32	.1250
—	40	.1575

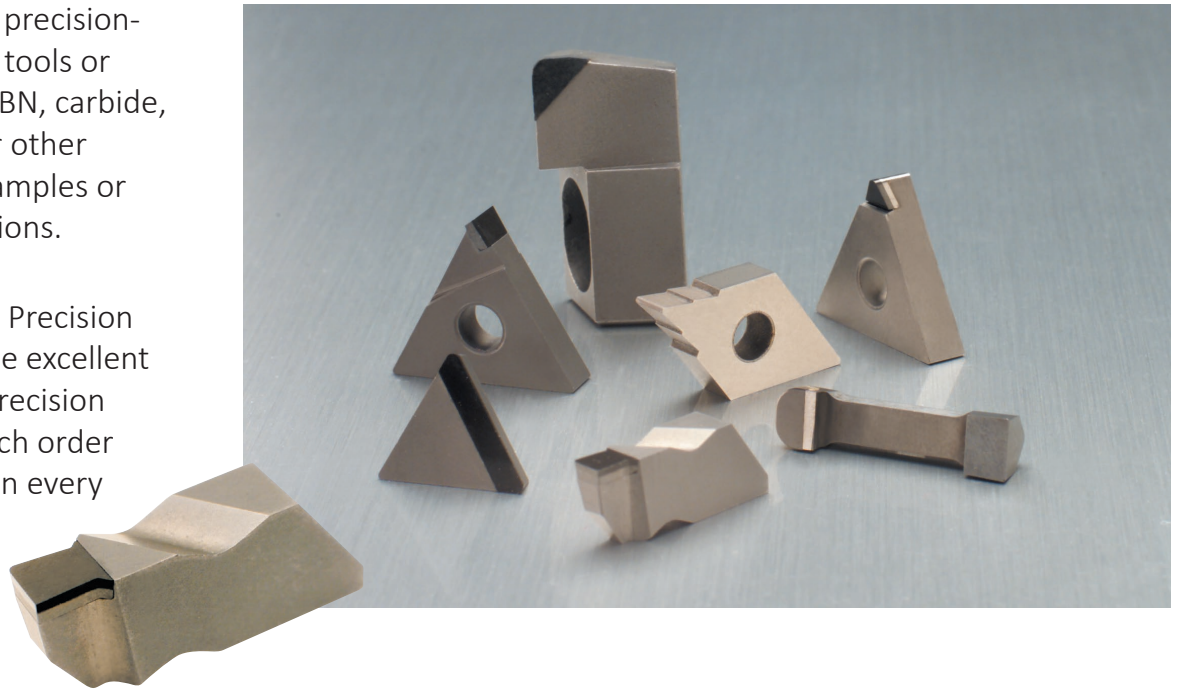
8 ACT Edge Prep	
Symbol	Edge Preparation
H	Light Hone
HH	Heavy Hone



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