



DOVETAIL CUTTERS

SERIES 127: HIGH SPEED STEEL - 45° ANGLE
SERIES 128: HIGH SPEED STEEL - 60° ANGLE
SERIES 775: COBALT STEEL



Dia.	Width of Cutter		Shank Dia.	Overall Length	Ordering No.					
	45°	60°			HIGH SPEED STEEL			COBALT STEEL		
					45°	60°	Price	45°	60°	Price
3/8	1/8	3/16	3/8	2-1/8	1325024	1330024		7750024	7751024	
1/2	5/32	1/4	3/8	2-1/8	1325032	1330032		7750032	7751032	
3/4	1/4	5/16	3/8	2-1/8	1325048	1330048		7750048	7751048	
1-3/8	7/16	9/16	5/8	2-7/8	1325088	1330088		7750088	7751088	
1-7/8	9/16	13/16	7/8	2-1/4	1325156	1330156		7750156	7751156	
2-1/4	5/8	1-1/16	1	2-3/4	1325216	1330216		7750216	7751216	

SETS - 3/8 - 1-7/8" 5 pc.
Supplied on a wooden stand.

Description	Order No.	Price
High Speed Steel - 45°	1325500	
High Speed Steel - 60°	1320500	
Cobalt 45°	7750500	
Cobalt 60°	7751500	



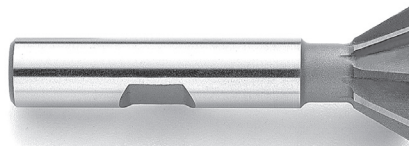
CUTTING TOOLS - CUTTERS

DOVETAIL CUTTERS

SERIES 997:



Dovetail Cutters are provided with 45° and 60° angles utilizing a right hand cutting action. You may choose from HSS, M42 or carbide tipped cutters.
Carbide tipped tools include a .020 radius.

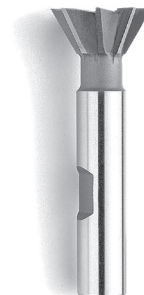


HSS and M42

Cutter Dia.	Cutter Width	Shank Dia.	Overall Length	Teeth	HIGH SPEED STEEL			COBALT		
					45° Order No.	60° Order No.	Price	45° Order No.	60° Order No.	Price
3/8	1/8	3/8	2-1/8	6	9775034	9775036		9776034	9776036	
1/2	1/8	3/8	2-1/8	8	9775044	9775046		9776044	9776046	
3/4	3/16	3/8	2-1/8	8	9775064	9775066		9776064	9776066	
1	1/4	1/2	2-1/2	10	9775084	9775086		9776084	9776086	
1-3/8	3/8	5/8	2-7/8	10	9775114	9775116		9776114	9776116	
1-7/8	1/2	7/8	3-1/4	12	9775154	9775156		9776154	9776156	
2-1/4	11/16	1	3-3/4	12	9775184	9775186		9776184	9776186	
2-1/2	3/4	1	3-3/4	12	9775204	9775206		9776204	9776206	

Carbide Tipped

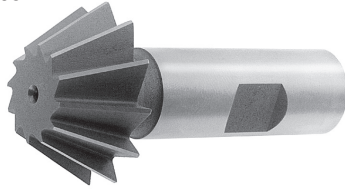
Cutter Dia.	45° Cutter Width	60° Cutter Width	Shank Dia.	Overall Length	Carbide Teeth	45° Order No.	60° Order No.	Price
1/2	5/32	7/32	3/8	2-1/8	3	9774044	9774046	
3/4	1/4	1/4	3/8	2-1/4	3	9774064	9774066	
1	5/16	3/8	1/2	2-1/2	4	9774084	9774086	
1-1/4	5/16	1/2	5/8	2-3/4	4	9774114	9774116	
1-1/2	1/2	5/8	3/4	3-1/4	4	9774154	9774156	
2	5/8	3/4	1	4-1/4	6	9774184	9774186	
2-1/2	3/4	7/8	1-1/4	4-3/8	6	9774204	9774206	
3	1	1-1/8	1-1/4	4-1/2	6	9774244	9774246	



HIGH SPEED STEEL

SINGLE ANGLE CHAMFERING CUTTERS

SERIES 965:



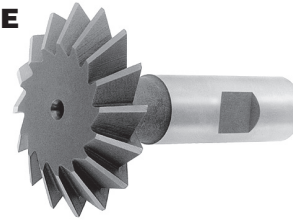
STAR USA brand available. See our website or inquire.



HIGH SPEED STEEL

DOUBLE ANGLE CUTTER - SHANK TYPE

SERIES 965:



STAR USA brand available. See our website or inquire.



CUTTING TOOLS - CUTTERS

Cutter Dia.	Cutter Width	Shank Dia.	OAL	Angle	Order No.	Price
1/2	1/8	3/8	2-1/8	45°	5680001	
3/4	3/16	3/8	2-1/8	45°	5680002	
1	5/16	1/2	2-1/2	45°	5680003	
1-1/2	1/2	3/4	2-3/4	45°	5680004	
1/2	7/32	3/8	2-1/8	60°	5680005	
3/4	5/16	3/8	2-1/8	60°	5680006	
1	7/16	1/2	2-1/2	60°	5680007	
1-1/2	5/8	3/4	2-3/4	60°	5680008	

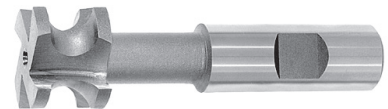
Included Angle	Cutter Dia.	Shank Dia.	Overall Length	Cutter Thickness	Order No.	Price
60°	3/4	3/8	2-3/8	3/16	5682010	
60°	1	1/2	2-27/32	5/16	5682020	
60°	1-3/8	5/8	3-7/32	7/16	5682040	
60°	1-1/2	5/8	3-3/8	1/2	5682060	
60°	1-7/8	3/4	3-25/32	5/8	5682080	
60°	2-1/4	7/8	4-5/32	3/4	5682090	
90°	3/4	3/8	2-7/16	1/4	5682110	
90°	1	1/2	2-29/32	3/8	5682120	
90°	1-3/8	5/8	3-9/32	1/2	5682140	
90°	1-1/2	5/8	3-7/16	9/16	5682160	
90°	1-7/8	3/4	3-25/32	5/8	5682180	
90°	2-1/4	7/8	4-5/32	3/4	5682190	

HIGH SPEED STEEL

CONCAVE CUTTER - SHANK TYPE

SERIES 965: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA

Radius	Shank Dia.	Overall Length	Cutter Dia.	No. of Flutes	MEDA		STAR - USA	
					Order No.	Price	Order No.	Price
1/32	1/2	3	3/4	6	5693005		8512476	
1/16	1/2	3	3/4	6	5693010		8512477	
3/32	1/2	3	3/4	6	5693015		8512478	
1/8	3/4	3-1/2	1	6	5693020		8512479	
5/32	3/4	3-1/2	1	6	5693025		8512480	
3/16	3/4	3-1/2	1	6	5693030		8512481	
1/4	3/4	4	1-1/4	4	5693035		8512482	
5/16	3/4	4	1-1/4	4	5693040		8512483	
3/8	3/4	4-3/16	1-1/2	4	5693045		8512484	

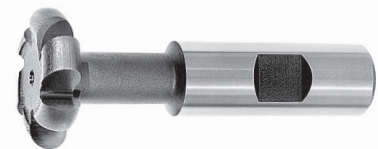


HIGH SPEED STEEL

CONVEX CUTTER - SHANK TYPE

SERIES 965: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA

Radius	Shank Dia.	Overall Length	Cutter Dia.	No. of Flutes	MEDA		STAR - USA	
					Order No.	Price	Order No.	Price
1/32	1/2	3	3/4	6	9690005		8512451	
1/16	1/2	3	3/4	6	5690010		8512452	
3/32	1/2	3	7/8	6	9690015		8512453	
1/8	3/4	3-1/2	1-1/4	6	9690020		8512454	
5/32	3/4	3-1/2	1-5/16	6	5690025		8512455	
3/16	3/4	3-1/2	1-3/8	6	5690030		8512456	
1/4	3/4	4	1-1/2	4	5690035		8512457	
5/16	3/4	4	1-5/8	4	5690040		8512458	
3/8	3/4	4	1-3/4	4	5690045		8512459	



All above also available as Arbor Type Cutters.

See PRODUCT INDEX

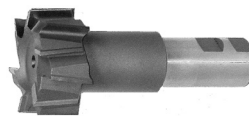
HIGH SPEED STEEL

T-SLOT CUTTERS

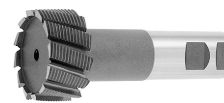
SERIES 126: HIGH SPEED STEEL

SERIES 773: COBALT STEEL

SERIES 774: ROUGHING COBALT STEEL



HIGH SPEED STEEL



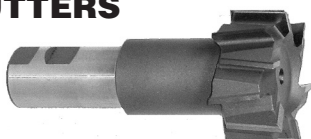
ROUGHING



Bolt Size	Cutter Dia	Cutter Thick	Neck Dia.	Overall Length	Shank Dia.	High Speed Steel		Cobalt Steel		Roughing Cobalt	
						Order No.	Price	Order No.	Price	Order No.	Price
1/4	9/16	15/64	17/64	2-19/32	1/2	1320016		7730016			
5/16	21/32	17/64	21/64	2-11/16	1/2	1320020		7730020			
3/8	25/32	21/64	13/32	3-1/4	3/4	1320024		7730024			
1/2	31/32	25/64	17/32	3-7/16	3/4	1320032		7730032		7740032	
5/8	1-1/4	31/64	21/32	3-15/16	1	1320040		7730040		7740040	
3/4	1-15/32	5/8	25/32	4-7/16	1	1320048		7730048		7740048	
1	1-27/32	53/64	1-1/32	4-13/16	1-1/4	1320064		7730064		7740064	
1-1/4	2-7/32	1-3/32	1-9/32	5-3/8	1-1/4	1320080		7730080		7740080	
1-1/2	2-21/32	1-11/32	1-17/32	5-29/32	1-1/4	1320096		7730096		7740096	

T-SLOT MILLING CUTTERS

SERIES 997:



T-SLOT CUTTER SETS

SERIES 126: HIGH SPEED STEEL

SERIES 774: COBALT STEEL

RANGE: 1/4 - 1" - 7 pc.

Supplied on a wooden stand.



T-Slot milling cutters have staggered teeth on the circumferential surface and teeth on both sides. The Side teeth alternate to provide maximum chip clearance and stability to permit rapid milling of T-slots with minimum risk of breakage.



Bolt Size	Head Dia.	Head Width	Neck Dia.	Shank Dia	Overall Length	Shank Length	Teeth (RH)	Order No.	Price
1/4	9/16	15/64	17/64	1/2	2-19/32	1-25/32	8	9770140	
5/16	21/32	17/64	21/64	1/2	2-11/16	1-25/32	8	9770560	
3/8	25/32	21/64	13/32	3/4	3-1/4	2-1/32	8	9770380	
1/2	31/32	25/64	17/32	3/4	3-7/16	2-1/32	8	9770120	
5/8	1-1/4	31/64	21/32	1	3-15/16	2-9/32	10	9770580	
3/4	1-15/32	5/8	25/32	1	4-7/16	2-9/32	10	9770340	
1	1-27/32	53/64	1-1/32	1-1/4	4-13/16	2-9/32	10	9771000	
1-1/4	2-7/32	1-3/32	1-7/32	1-1/4	5-3/8	2-9/32	12	9771140	
1-1/2	2-21/32	1-11/32	1-17/32	1-1/4	5-29/32	2-9/32	12	9771120	

Description	Order No.	Price
H.S.S.	1320000	
Cobalt	7731700	

HIGH SPEED STEEL

WOODRUFF KEYSEAT CUTTERS

SHANK TYPE -

1/2" DIA. STRAIGHT

SERIES 112 - STRAIGHT TEETH

SERIES 113 - STAGGERED TEETH



Model No.	Dia.	Width of Face	Overall Length	Straight Teeth		Staggered Teeth	
				Order No.	Price	Order No.	Price
202	1/4	1/16	2-1/16	2400202		2450202	
202-1/2	5/16	1/16	2-1/16	2400212		2450212	
302-1/2	5/16	3/32	2-3/32	2400312		2450312	
203	3/8	1/16	2-1/16	2400203		2450203	
303	3/8	3/32	2-3/32	2400303		2450303	
403	3/8	1/8	2-1/8	2400403		2450403	
204	1/2	1/16	2-1/16	2400204		2450204	
304	1/2	3/32	2-3/32	2400304		2450304	
305	5/8	3/32	2-3/32	2400305		2450305	
404	1/2	1/8	2-1/8	2400404		2450404	
405	5/8	1/8	2-1/8	2400405		2450405	
406	3/4	1/8	2-1/8	2400406		2450406	
505	5/8	5/32	2-5/32	2400505		2450505	
605	5/8	3/16	2-3/16	2400605		2450605	
506	3/4	5/32	2-5/32	2400506		2450506	
806	3/4	1/4	2-1/4	2400806		2450806	

Model No.	Dia.	Width of Face	Overall Length	Straight Teeth		Staggered Teeth	
				Order No.	Price	Order No.	Price
507	7/8	5/32	2-5/32	2400507		2450507	
606	3/4	3/16	2-3/16	2400606		2450606	
607	7/8	3/16	2-3/16	2400607		2450607	
707	7/8	7/32	2-7/32	2400707		2450707	
608	1	3/16	2-3/16	2400608		2450608	
708	1	7/32	2-7/32	2400708		2450708	
1208	1	3/8	2-3/8	2401208		2451208	
609	1-1/8	3/16	2-3/16	2400609		2450609	
807	7/8	1/4	2-1/4	2400807		2450807	
808	1	1/4	2-1/4	2400808		2450808	
709	1-1/8	7/32	2-7/32	2400709		2450709	
809	1-1/8	1/4	2-1/4	2400809		2450809	
610	1-1/4	3/16	2-3/16	2400610		2450610	
710	1-1/4	7/32	2-7/32	2400710		2450710	
810	1-1/4	1/4	2-1/4	2400810		2450810	
811	1-3/8	1/4	2-1/4	2400811		2450811	
812	1-1/2	1/4	2-1/4	2400812		2450812	
1008	1	5/16	2-5/16	2401008		2451008	
1009	1-1/8	5/16	2-5/16	2401009		2451009	
1010	1-1/4	5/16	2-5/16	2401010		2451010	
1011	1-3/8	5/16	2-5/16	2401011		2451011	
1012	1-1/2	5/16	2-5/16	2401012		2451012	
1210	1-1/4	3/8	2-3/8	2401210		2451210	
1211	1-3/8	3/8	2-3/8	2401211		2451211	
1212	1-1/2	3/8	2-3/8	2401212		2451212	

HIGH SPEED STEEL

NARROW WIDTH KEYSEAT CUTTERS - SHANK TYPE

SERIES 997:



Narrow width keyseat cutters provide many standard width and diameter combinations to accommodate a variety of milling requirements
Shank Size: 1/2" Diameter x 2" long



CUTTING TOOLS - CUTTERS

Head Dia.	Head Width	Teeth(RH)	Order No.	Price
1/4	1/64	Str.-8.	9768981	
1/4	0.020	Str.-8.	9768978	
1/4	1/32	Str.-8.	9768982	
1/4	3/64	Str.-8.	9768983	
5/16	1/64	Str.-8	9768984	
5/16	0.020	Str.-8	9768979	
5/16	1/32	Str.-8	9768985	
5/16	3/64	Str.-8	9768986	
3/8	1/64	Str.-8	9768987	
3/8	0.020	Str.-8	9768980	
3/8	1/32	Str.-8	9768988	
3/8	3/64	Str.-8	9768989	
1/2	1/64	Str.-10	9768990	
1/2	0.020	Str.-10	9768991	
1/2	1/32	Str.-10	9769000	
1/2	3/64	Str.-10	9769001	
5/8	0.020	Str.-10	9769009	
5/8	1/32	Str.-10	9769010	
5/8	3/64	Str.-10	9769011	
5/8	1/16	Str.-10	9769020	
5/8	5/64	Str.-10	9769021	
3/4	1/32	Str.-10	9769030	
3/4	3/64	Str.-10	9769031	
3/4	1/16	Str.-10	9769040	
3/4	5/64	Str.-10	9769041	
3/4	3/32	Str.-10	9769050	
3/4	7/64	Str.-10	9769051	
7/8	1/32	Str.-12	9769060	
7/8	3/64	Str.-12	9769061	
7/8	1/16	Str.-12	9769070	
7/8	5/64	Str.-12	9769071	
7/8	3/32	Str.-12	9769080	
7/8	7/64	Str.-12	9769081	
7/8	1/8	Str.-12	9769090	
7/8	9/64	Str.-12	9769091	
1	1/32	Str.-12	9769098	
1	3/64	Str.-12	9769099	
1	1/16	Str.-12	9769100	
1	5/64	Str.-12	9769101	
1	3/32	Str.-12	9769110	
1	7/64	Str.-12	9769111	
1	1/8	Str.-12	9769120	
1	9/64	Str.-12	9769121	
1	5/32	Str.-12	9769130	
1	11/64	Str.-12	9769131	

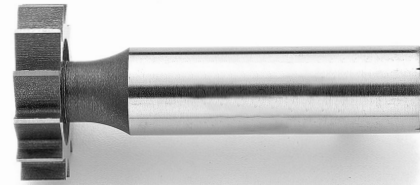
Head Dia.	Head Width	Teeth(RH)	Order No.	Price
1-1/8	3/64	Str.-12	9769139	
1-1/8	1/16	Str.-12	9769140	
1-1/8	5/64	Str.-12	9769141	
1-1/8	3/32	Str.-12	9769150	
1-1/8	7/64	Str.-12	9769151	
1-1/8	1/8	Str.-12	9769160	
1-1/8	9/64	Str.-12	9769161	
1-1/8	5/32	Str.-12	9769170	
1-1/8	11/64	Str.-12	9769171	
1-1/4	3/64	Str.-14	9769179	
1-1/4	1/16	Str.-14	9769180	
1-1/4	5/64	Str.-14	9769181	
1-1/4	3/32	Str.-14	9769190	
1-1/4	7/64	Str.-14	9769191	
1-1/4	1/8	Str.-14	9769200	
1-1/4	9/64	Str.-14	9769201	
1-1/4	5/32	Str.-14	9769210	
1-1/4	11/64	Str.-14	9769211	
1-3/8	3/64	Str.-14	9769219	
1-3/8	1/16	Str.-14	9769220	
1-3/8	5/64	Str.-14	9769221	
1-3/8	3/32	Str.-14	9769230	
1-3/8	7/64	Str.-14	9769231	
1-3/8	1/8	Str.-14	9769240	
1-3/8	9/64	Str.-14	9769241	
1-3/8	5/32	Str.-14	9769250	
1-3/8	11/64	Str.-14	9769251	
1-3/8	3/16	Str.-14	9769260	
1-3/8	13/64	Str.-14	9769261	
1-3/8	7/32	Str.-14	9769270	
1-1/2	3/64	Str.-16	9769279	
1-1/2	1/16	Str.-16	9769280	
1-1/2	5/64	Str.-16	9769281	
1-1/2	3/32	Str.-16	9769290	
1-1/2	7/64	Str.-16	9769291	
1-1/2	1/8	Str.-16	9769300	
1-1/2	9/64	Str.-16	9769301	
1-1/2	5/32	Str.-16	9769310	
1-1/2	11/64	Str.-16	9769311	
1-1/2	3/16	Str.-16	9769320	
1-1/2	13/64	Str.-16	9769321	
1-1/2	7/32	Str.-16	9769330	
1-1/2	15/64	Str.-16	9769331	

Quality Cutting Tools



The Choice Is Yours!!!

**Solid Carbide
Keyseat Cutters
available;
please inquire.**



WOODRUFF KEYSEAT CUTTERS - SHANK TYPE
SERIES 997:

H.S.S - R.H., H.S.S. - L.H., Cobalt, Carbide Tipped
Woodruff keyseat cutters are extremely versatile profile milling cutters. Although originally designed to mill standard woodruff keyseats, they now satisfy a variety of applications from milling slots to milling threads.
Shank size: 1/2" Diameter x 2" long

Amer. Standard No.	Head Dia.	Head Width	Teeth	H.S.S. - R.H.		H.S.S. - L.H.		COBALT		CARBIDE TIPPED		
				Order No.	Price	Order No.	Price	Order No.	Price	Teeth	Order No.	Price
202	1/4	1/16	Str-8	9762010			9793928		9793932			
			Stag-6	9762015					9793933			
202-1/2	5/16	1/16	Str-8	9762020			9793934		9793938			
			Stag-6	9762025					9793939			
302-1/2	5/16	3/32	Str-8	9763020			9793940		9793944			
			Stag-6	9763025					9793945			
203	3/8	1/16	Str-8	9762030			9793946		9793950			
			Stag-6	9762035					9793951			
303	3/8	3/32	Str-8	9763030			9793952		9793956			
			Stag-6	9763035					9793957			
403	3/8	1/8	Str-8	9764030			9793958		9793962			
			Stag-6	9764035					9793963			
204	1/2	1/16	Str-10	9762040			9793964		9793968	Str.-6	9793971	
			Stag-8	9762045					9793969	Stag.-6	9793972	
304	1/2	3/32	Str-10	9763040			9793970		9793974	Str.-6	9793977	
			Stag-8	9763045					9793975	Stag.-6	9793978	
404	1/2	1/8	Str-10	9764040			9793982		9793986	Str.-6	9793983	
			Stag-8	9764045					9793987	Stag.-6	9793984	
305	5/8	3/32	Str-10	9763050			9793976		9793980	Str.-6	9793989	
			Stag-8	9763055					9793981	Stag.-6	9793990	
405	5/8	1/8	Str-10	9764050			9793988		9793992	Str.-6	9793995	
			Stag-8	9764055					9793993	Stag.-6	9793996	
505	5/8	5/32	Str-10	9765050			9794000		9794004	Str.-6	9794001	
			Stag-8	9765055					9794005	Stag.-6	9794002	
605	5/8	3/16	Str-10	9766050			9794006		9794010	Str.-6	9794007	
			Stag-8	9766055					9794011	Stag.-6	9794008	
406	3/4	1/8	Str-10	9764060			9793994		9793998	Str.-6	9794013	
			Stag-8	9764065					9793999	Stag.-6	9794014	
506	3/4	5/32	Str-10	9765060			9794012		9794016	Str.-6	9794019	
			Stag-8	9765065					9794017	Stag.-6	9794020	
606	3/4	3/16	Str-10	9766060			9794030		9794034	Str.-6	9794025	
			Stag-8	9766065					9794035	Stag.-6	9794026	
806	3/4	1/4	Str-10	9768060			9794018		9794022	Str.-6	9794031	
			Stag-8	9768065					9794023	Stag.-6	9794032	
507	7/8	5/32	Str.-12	9765070			9794024		9794028	Str.-6	9794037	
			Stag.-10	9765075					9794029	Stag.-6	9794038	
607	7/8	3/16	Str.-12	9766070			9794036		9794040	Str.-6	9794043	
			Stag.-10	9766075					9794041	Stag.-6	9794044	
707	7/8	7/32	Str.-12	9767070			9794042		9794046	Str.-6	9794049	
			Stag.-10	9767075					9794047	Stag.-6	9794050	
807	7/8	1/4	Str.-12	9768070			9794072		9794076	Str.-6	9794055	
			Stag.-10	9768075					9794077	Stag.-6	9794056	
608	1	3/16	Str.-12	9766080			9794048		9794052	Str.-8	9794061	
			Stag.-10	9766085					9794053	Stag.-8	9794062	
708	1	7/32	Str.-12	9767080			9794054		9794058	Str.-8	9794067	
			Stag.-10	9767085					9794059	Stag.-8	9794068	
808	1	1/4	Str.-12	9768080			9794078		9794082	Str.-8	9794073	
			Stag.-10	9768085					9794083	Stag.-8	9794074	
1008	1	5/16	Str.-12	9760080			9794126		9794130	Str.-8	9794079	
			Stag.-10	9760085					9794131	Stag.-8	9794080	
1208	1	3/8	Str.-12	9762080			9794060		9794064	Str.-8	9794085	
			Stag.-10	9762085					9794065	Stag.-8	9794086	
609	1-1/8	3/16	Str.-12	9766090			9794066		9794070	Str.-8	9794091	
			Stag.-10	9766095					9794071	Stag.-8	9794092	
709	1-1/8	7/32	Str.-12	9767090			9794084		9794088	Str.-8	9794097	
			Stag.-10	9767095					9794089	Stag.-8	9794098	
809	1-1/8	1/4	Str.-12	9768090			9794090		9794094	Str.-8	9794103	
			Stag.-10	9768095					9794095	Stag.-8	9794104	
1009	1-1/8	5/16	Str.-12	9760090			9794132		9794136	Str.-8	9794109	
			Stag.-10	9760095					9794137	Stag.-8	9794110	

(Continued)

WOODRUFF KEYSEAT CUTTERS - SHANK TYPE (Continued)

SERIES 997:



CUTTING TOOLS - CUTTERS

American Standard No.	Head Dia.	Head Width	Teeth	H.S.S. - R.H.		H.S.S. - L.H.		COBALT		CARBIDE TIPPED		
				Order No.	Price	Order No.	Price	Order No.	Price	Teeth	Order No.	Price
610	1-1/4	3/16	Str-14	9766100		9794096		9794100		Str. -8	9794115	
	1-1/4	3/16	Stag-12	9766105		-		9794101		Stag.-8	9794116	
710	1-1/4	7/32	Str-14	9767100		9794102		9794106		Str. -8	9794121	
	1-1/4	7/32	Stag-12	9767105		-		9794107		Stag.-8	9794122	
810	1-1/4	1/4	Str-14	9768100		9794108		9794112		Str. -8	9794127	
	1-1/4	1/4	Stag-12	9768105		-		9794113		Stag.-8	9794128	
1010	1-1/4	5/16	Str-14	9760010		9794138		9794142		Str. -8	9794133	
	1-1/4	5/16	Stag-12	9760015		-		9794143		Stag.-8	9794134	
1210	1-1/4	3/8	Str-14	9762100		9794156		9794160		Str. -8	9794139	
	1-1/4	3/8	Stag-12	9762105		-		9794161		Stag.-8	9794140	
811	1-3/8	1/4	Str-14	9768110		9794114		9794118		Str. -8	9794145	
	1-3/8	1/4	Stag-12	9768115		-		9794119		Stag.-8	9794146	
1011	1-3/8	5/16	Str-14	9760110		9794144		9794148		Str. -8	9794151	
	1-3/8	5/16	Stag-12	9760115		-		9794149		Stag.-8	9794152	
1211	1-3/8	3/8	Str-16	9762110		9794162		9794166		Str. -8	9794157	
	1-3/8	3/8	Stag-14	9762115		-		9794167		Stag.-8	9794158	
812	1-1/2	1/4	Str-16	9768120		9794120		9794124		Str. -8	9794163	
	1-1/2	1/4	Stag-14	9768125		-		9794125		Stag.-8	9794164	
1012	1-1/2	5/16	Str-16	9760120		9794150		9794154		Str. -8	9794169	
	1-1/2	5/16	Stag-14	9760125		-		9794155		Stag.-8	9794170	
1212	1-1/2	3/8	Str-16	9762120		9794168		9794172		Str. -8	9794174	
	1-1/2	3/8	Stag-14	9762125		-		9794173		Stag.-8	9794175	

HIGH SPEED STEEL

WOODRUFF KEYSEAT CUTTER SETS

SERIES 997:



Right Hand

Pcs. Per Set	Sizes Included	Type	Order No.	Price
10	403, 204, 404, 305,	Straight Stag.	9760100	
10	505, 406, 606, 806, 608, 808		9760105	
41	1 piece each size.	Straight Stag.	9760000	
41			9760005	



HIGH SPEED STEEL

WOODRUFF KEYSEAT CUTTER SETS

SERIES 112: STRAIGHT TEETH

SERIES 113: STAGGERED TEETH



Pieces Per Set	Sizes Included	Type	Ordering No.	Price
8	204, 304, 305, 406, 605, 606, 608, 806,	Straight	2405500	
		Staggered	2455000	
9	204, 404, 406, 806, 606, 608, 808, 610, 1210	Straight	2405509	
		Staggered	2455009	
41	All Sizes	Straight	2405541	
		Staggered	2455041	



8 and 9 piece sets supplied in wooden block.
41 piece set supplied in wooden box.

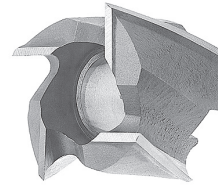
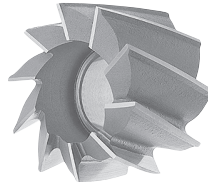
HIGH SPEED STEEL AND COBALT STEEL

SHELL END MILLS

SERIES 86: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



- Shell Endmills for Steel and for Aluminum.
- Right Hand (RH) Cut and Left Hand (LH) Cut (Right Hand Cut supplied unless indicated)
- Finishers and Roughers



For Steel

For Aluminum

HIGH SPEED STEEL

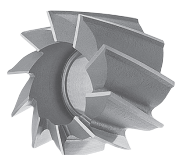
Dia	LOC	Hole Dia.	MEDA				STAR - USA		MEDA		STAR - USA	
			HSS-RH	Price	HSS-LH	Price	HSS*	Price	Aluminum	Price	Aluminum*	Price
1-1/4	1	1/2	1270080		1275080		8514496		1265080		8514586	
1-3/8	1-1/8	1/2	-		-		8514498		-		8514588	
1-1/2	1-1/8	1/2	1270096		1275096		8514500		1265096		8514590	
1-5/8	1-1/4	3/4	-		-		8514502		-		8514592	
1-3/4	1-1/4	3/4	1270148		1275148		8514504		1265148		8514594	
1-7/8	1-3/8	3/4	-		-		8514506		-		8514596	
2	1-3/8	3/4	1270200		1275200		8514508		1265200		8514598	
2-1/8	1-1/2	1	-		-		8514510		-		8514600	
2-1/4	1-1/2	1	1270216		1275216		8514512		1265216		8514602	
2-3/8	1-5/8	1	-		-		8514514		-		8514604	
2-1/2	1-5/8	1	1270232		1275232		8514516		1265232		8514606	
2-5/8	1-5/8	1	-		-		8514518		-		8514608	
2-3/4	1-5/8	1	1270248		1275248		8514520		1265248		8514610	
2-7/8	1-3/4	1-1/4	-		-		8514522		-		8514612	
3	1-3/4	1-1/4	1270300		1275300		8514524		1265300		8514614	
3-1/4	1-7/8	1-1/4	-		-		8514526		-		8514616	
3-1/2	1-7/8	1-1/4	1270332		1275332		8514528		1265332		8514618	
3-3/4	2-1/4	1-1/2	-		-		8514530		-		8514620	
4	2-1/4	1-1/2	1270400		1275400		8514532		1265400		8514622	
4-1/2	2-1/4	1-1/2	1270432		1275432		8514534		1265432		8514624	
5	2-1/4	1-1/2	1270500		1275500		8514536		1265500		8514626	
5-1/2	2-1/4	2	1270532		1275532		8514538		1265532		8514628	
6	2-1/4	2	1270600		1275600		8514540		1265600		8514630	

*RH shown, LH available. See our website or inquire.

COBALT STEEL

Dia.	LOC	Hole Dia.	MEDA Finishing		STAR USA* Finishing*		MEDA Roughing		STAR USA* Roughing	
			Order No.	Price	Order No.	Price	Order No.	Price	Order No.	Price
1-1/4	1	1/2	6110080		8514542		-		-	
1-3/8	1-1/8	1/2	-		8514544		-		-	
1-1/2	1-1/8	1/2	6110096		8514546		-		-	
1-5/8	1-1/4	3/4	-		8514548		-		-	
1-3/4	1-1/4	3/4	6110148		8514550		-		-	
1-7/8	1-3/8	3/4	-		8514552		-		-	
2	1-3/8	3/4	6110200		8514451		1240200		8535100	
2-1/8	1-1/2	1	-		8514554		-		-	
2-1/4	1-1/2	1	6110216		8514556		1240216		8535101	
2-3/8	1-5/8	1	-		8514558		-		-	
2-1/2	1-5/8	1	6110232		8514453		1240232		8535102	
2-5/8	1-5/8	1	-		8514560		-		-	
2-3/4	1-5/8	1	6110248		8514562		1240248		8535103	
2-7/8	1-3/4	1-1/4	-		8514564		-		-	
3	1-3/4	1-1/4	6110300		8514455		1240300		8535104	
3-1/4	1-7/8	1-1/4	-		8514566		-		-	
3-1/2	1-7/8	1-1/4	6110332		8514568		1240332		8535105	
3-3/4	2-1/4	1-1/2	-		8514570		-		-	
4	2-1/4	1-1/2	6110400		8514457		1240400		8535106	
4-1/2	2-1/4	1-1/2	6110432		8514572		1240432		8535107	
5	2-1/4	1-1/2	6110500		8514459		1240500		8535108	
5-1/2	2-1/4	2	6110532		8514574		1240532		-	
6	2-1/4	2	6110600		8514576		1240600		8535109	

*RH shown, LH available. See our website or inquire.



Finishing

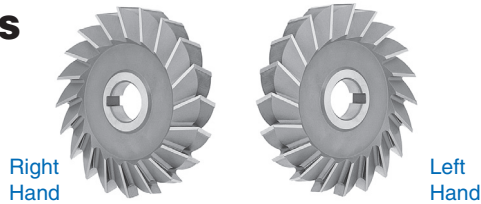


Roughing

HIGH SPEED STEEL AND COBALT STEEL

HALF SIDE MILLING CUTTERS

SERIES 104: MEDA - SUPERIOR IMPORT
SERIES 985: STAR USA - FETTE



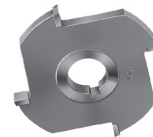
Dia.	Width of Face	Hole Dia.	MEDA - HSS			STAR USA - HSS			FETTE - COBALT		
			RH Order No.	LH Order No.	Price	RH Order No.	LH Order No.	Price	RH Order No.	LH Order No.	Price
4	3/4	1-1/4	3504484	3604484		8511801	8511802		8511821	8511822	
5	3/4	1-1/4	3505484	3605484		8511803	8511804		8511823	8511824	
6	3/4	1-1/4	3506484	3606484		8511805	8511806		8511825	8511826	
6	1	1-1/2	3506645	3606645		8511807	8511808		8511827	8511828	
7	3/4	1-1/2	3507485	3607485		8511809	8511810		8511829	8511830	
7	1	1-1/2	3507645	3607645		8511811	8511812		8511831	8511832	
8	3/4	1-1/2	3508485	3608485		8511813	8511814		8511833	8511834	
8	1	1-1/2	3508645	3608645		8511815	8511816		8511835	8511836	

HIGH SPEED STEEL

SIDE MILLING CUTTERS - STRAIGHT TOOTH

SERIES 107: MEDA - SUPERIOR IMPORT
SERIES 985: STAR USA

Carbide Tipped Cutters available.
See our website or inquire.



Dia.	Width of Face	Hole Dia.	MEDA		STAR USA	
			Order No.	Price	Order No.	Price
2	3/16	1/2	4502120		8510701	
2	1/4	1/2	4502160		8510703	
2	5/16	1/2	4502200		-	
2	3/8	1/2	4502240		8510705	
2	3/16	5/8	4502121		8510702	
2	1/4	5/8	4502161		8510704	
2	5/16	5/8	4502201		-	
2	3/8	5/8	4502241		8510706	
2	1/4	7/8	4502162		-	
2	5/16	7/8	4502202		-	
2	3/8	7/8	4502242		-	
2	7/16	7/8	4502282		-	
2-1/2	3/16	7/8	4525122		-	
2-1/2	1/4	7/8	4525162		8510707	
2-1/2	5/16	7/8	4525202		8510709	
2-1/2	3/8	7/8	4525242		8510711	
2-1/2	7/16	7/8	4525282		-	
2-1/2	1/2	7/8	4525322		8510714	
2-1/2	9/16	7/8	4525362		-	
2-1/2	5/8	7/8	4525402		-	
2-1/2	3/16	1	4525123		-	
2-1/2	1/4	1	4525163		8510708	
2-1/2	5/16	1	4525203		8510710	
2-1/2	3/8	1	4525243		8510712	
2-1/2	7/16	1	4525283		8510713	
2-1/2	1/2	1	4525323		8510715	
2-1/2	9/16	1	4525363		8510716	
2-1/2	5/8	1	4525403		8510717	

Dia.	Width of Face	Hole Dia.	MEDA		STAR USA	
			Order No.	Price	Order No.	Price
3	3/16	1	4503123		8510718	
3	7/32	1	4503143		9510720	
3	1/4	1	4503163		8510722	
3	9/32	1	4503183		8510724	
3	5/16	1	4503203		8510726	
3	11/32	1	4503223		8510728	
3	3/8	1	4503243		9510730	
3	13/32	1	4503263		8510732	
3	7/16	1	4503283		8510734	
3	1/2	1	4503323		8510736	
3	9/16	1	4503363		8510738	
3	5/8	1	4503403		9510740	
3	11/16	1	4503443		8510742	
3	3/4	1	4503483		8510744	
3	13/16	1	4503523		8510746	
3	7/8	1	4503563		8510748	
3	15/16	1	4503603		9510750	
3	1	1	4503643		8510752	
3	3/16	1-1/4	4503124		8510719	
3	7/32	1-1/4	4503144		8510721	
3	1/4	1-1/4	4503164		8510723	
3	9/32	1-1/4	4503184		8510725	
3	5/16	1-1/4	4503206		8510727	
3	11/32	1-1/4	4503224		8510729	
3	3/8	1-1/4	4503244		8510731	
3	13/32	1-1/4	4503264		8510733	
3	7/16	1-1/4	4503284		8510735	
3	1/2	1-1/4	4503324		8510737	
3	9/16	1-1/4	4503364		8510739	
3	5/8	1-1/4	4503404		8510741	
3	11/16	1-1/4	4503444		8510743	
3	3/4	1-1/4	4503484		8510745	
3	13/16	1-1/4	4503524		8510747	
3	7/8	1-1/4	4503564		8510749	
3	15/16	1-1/4	4503604		8510751	
3	1	1-1/4	4503644		8510753	
3-1/2	3/16	1	4535123		8510754	
3-1/2	1/4	1	4535163		8510756	

(Continued)

CUTTING TOOLS - CUTTERS

HIGH SPEED STEEL
SIDE MILLING CUTTERS -

STRAIGHT TOOTH (Continued)

SERIES 107: MEDA -

SUPERIOR IMPORT

SERIES 985: STAR - USA



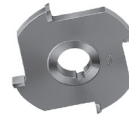
Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
3-1/2	5/16	1	4535203		8510758	
3-1/2	3/8	1	4535243		9510760	
3-1/2	7/16	1	4535283		8510762	
3-1/2	1/2	1	4535323		8510764	
3-1/2	9/16	1	-		8510766	
3-1/2	5/8	1	4535403		8510768	
3-1/2	11/16	1	-		8510771	
3-1/2	3/4	1	-		8510773	
3-1/2	13/16	1	-		8510775	
3-1/2	7/8	1	-		8510776	
3-1/2	15/16	1	-		8510778	
3-1/2	1	1	-		9510780	
3-1/2	3/16	1-1/4	-		8510755	
3-1/2	1/4	1-1/4	-		8510757	
3-1/2	5/16	1-1/4	-		8510759	
3-1/2	3/8	1-1/4	-		8510761	
3-1/2	7/16	1-1/4	4535284		8510763	
3-1/2	1/2	1-1/4	4535324		8510765	
3-1/2	9/16	1-1/4	-		8510767	
3-1/2	5/8	1-1/4	-		9510770	
3-1/2	11/16	1-1/4	-		8510772	
3-1/2	3/4	1-1/4	-		8510774	
3-1/2	13/16	1-1/4	-		8510775	
3-1/2	7/8	1-1/4	-		8510777	
3-1/2	15/16	1-1/4	-		8510779	
3-1/2	1	1-1/4	-		8510781	
4	3/16	1	4504123		-	
4	7/32	1	4504143		-	
4	1/4	1	4504163		8510782	
4	9/32	1	4504183		8510784	
4	5/16	1	4504203		8510786	
4	11/32	1	4504223		8510788	
4	3/8	1	4504243		9510790	
4	13/32	1	4504263		8510792	
4	7/16	1	4504283		8510794	
4	15/32	1	-		8510796	
4	1/2	1	4504323		8510798	
4	9/16	1	4504363		9510800	
4	5/8	1	4504403		8510802	
4	11/16	1	4504443		8510804	
4	3/4	1	4504483		8510806	
4	13/16	1	4504523		8510808	
4	7/8	1	4504563		9510810	
4	15/16	1	4504603		8510812	
4	1	1	4504643		8510814	
4	1-1/8	1	4504723		-	
4	1-1/4	1	4504803		-	
4	1-1/2	1	4504963		-	
4	3/16	1-1/4	4504124		-	
4	7/32	1-1/4	4504144		-	
4	1/4	1-1/4	4504164		8510783	
4	9/32	1-1/4	4504184		8510785	
4	5/16	1-1/4	4504204		8510787	
4	11/32	1-1/4	4504224		8510789	
4	3/8	1-1/4	4504244		8510791	
4	13/32	1-1/4	4504264		8510793	
4	7/16	1-1/4	4504284		8510795	
4	15/32	1-1/4	-		8510797	
4	1/2	1-1/4	4504324		8510799	
4	9/16	1-1/4	4504364		8510801	

Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
4	5/8	1-1/4	4504404		8510803	
4	11/16	1-1/4	4504444		8510805	
4	3/4	1-1/4	4504484		8510807	
4	13/16	1-1/4	4504524		8510809	
4	7/8	1-1/4	4504564		8510811	
4	15/16	1-1/4	4504604		8510813	
4	1	1-1/4	4504644		8510815	
4	1-1/8	1-1/4	4504724		-	
4	1-1/4	1-1/4	4504804		-	
4	1-1/2	1-1/4	4504964		-	
4-1/2	1/4	1	-		8510816	
4-1/2	5/16	1	-		8510818	
4-1/2	3/8	1	-		9510820	
4-1/2	1/2	1	-		8510822	
4-1/2	5/8	1	-		8510824	
4-1/2	3/4	1	-		8510826	
4-1/2	7/8	1	-		8510828	
4-1/2	1	1	-		9510830	
4-1/2	1/4	1-1/4	-		8510817	
4-1/2	5/16	1-1/4	-		8510819	
4-1/2	3/8	1-1/4	4545244		8510821	
4-1/2	7/16	1-1/4	4545284		-	
4-1/2	1/2	1-1/4	4545324		8510823	
4-1/2	5/8	1-1/4	-		9510825	
4-1/2	3/4	1-1/4	-		8510827	
4-1/2	7/8	1-1/4	-		8510829	
4-1/2	1	1-1/4	-		8510831	
5	1/4	1	4505163		8510832	
5	9/32	1	4505183		8510834	
5	5/16	1	4505203		8510836	
5	11/32	1	4505223		8510838	
5	3/8	1	4505243		9510840	
5	13/32	1	4505263		8510842	
5	7/16	1	4505283		8510844	
5	15/32	1	-		8510846	
5	1/2	1	4505323		8510848	
5	9/16	1	4505363		9510850	
5	5/8	1	4505403		8510852	
5	11/16	1	4505443		8510854	
5	3/4	1	4505483		8510856	
5	13/16	1	4505523		8510858	
5	7/8	1	4505563		9510860	
5	15/16	1	4505603		8510862	
5	1	1	4505643		8510864	
5	1/4	1-1/4	4505164		8510833	
5	9/32	1-1/4	4505184		8510835	
5	5/16	1-1/4	4505204		8510837	
5	11/32	1-1/4	4505224		8510839	
5	3/8	1-1/4	4505244		8510841	
5	13/32	1-1/4	4505264		8510843	
5	7/16	1-1/4	4505284		8510845	
5	15/32	1-1/4	-		8510847	
5	1/2	1-1/4	4505324		8510849	
5	9/16	1-1/4	4505364		8510851	
5	5/8	1-1/4	4505404		8510853	
5	11/16	1-1/4	4505444		8510855	
5	3/4	1-1/4	4505484		8510857	
5	13/16	1-1/4	4505524		8510859	
5	7/8	1-1/4	4505564		8510861	
5	15/16	1-1/4	4505604		8510863	
5	1	1-1/4	4505644		8510865	
5	1-1/4	1-1/4	4505804		-	
5-1/2	1/4	1	-		8510866	
5-1/2	5/16	1	-		8510868	
5-1/2	3/8	1	-		9510870	
5-1/2	1/2	1	-		8510872	
5-1/2	5/8	1	-		8510874	
5-1/2	3/4	1	-		8510876	
5-1/2	7/8	1	-		8510878	

(Continued)

CUTTING TOOLS - CUTTERS

HIGH SPEED STEEL
SIDE MILLING CUTTERS -
STRAIGHT TOOTH (Continued)
SERIES 107: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



Carbide Tipped Cutters available.
See our website or inquire.

CUTTING TOOLS - CUTTERS

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
5-1/2	1	1	-		9510880	
5-1/2	1-1/4	1	-		8510882	
5-1/2	1/4	1-1/4	-		8510867	
5-1/2	5/16	1-1/4	-		8510869	
5-1/2	3/8	1-1/4	-		8510871	
5-1/2	1/2	1-1/4	-		8510873	
5-1/2	5/8	1-1/4	-		8510875	
5-1/2	3/4	1-1/4	-		8510877	
5-1/2	7/8	1-1/4	-		8510879	
5-1/2	1	1-1/4	-		8510881	
5-1/2	1-1/4	1-1/4	-		8510883	
6	1/4	1	4506163		8510884	
6	9/32	1	-		8510886	
6	5/16	1	4506203		8510888	
6	11/32	1	-		9510890	
6	3/8	1	4506243		8510892	
6	13/32	1	-		8510894	
6	7/16	1	4506283		8510896	
6	15/32	1	-		8510898	
6	1/2	1	4506323		9510900	
6	9/16	1	4506363		8510902	
6	5/8	1	4506403		8510904	
6	11/16	1	4506443		8510906	
6	3/4	1	4506483		8510908	
6	13/16	1	4506523		9510910	
6	7/8	1	4506563		8510912	
6	15/16	1	4506603		8510914	
6	1	1	4506643		8510916	
6	1-1/4	1	4506803		-	
6	1/4	1-1/4	4506164		8510885	
6	9/32	1-1/4	4506184		8510887	
6	5/16	1-1/4	4506204		8510889	
6	11/32	1-1/4	4506224		8510891	
6	3/8	1-1/4	4506244		8510893	
6	13/32	1-1/4	4506264		8510895	
6	7/16	1-1/4	4506284		8510897	
6	15/32	1-1/4	-		8510899	
6	1/2	1-1/4	4506324		9510901	
6	9/16	1-1/4	4506364		8510903	
6	5/8	1-1/4	4506404		8510905	
6	11/16	1-1/4	4506444		8510907	
6	3/4	1-1/4	4506484		8510909	
6	13/16	1-1/4	4506524		8510911	
6	7/8	1-1/4	4506564		8510913	
6	15/16	1-1/4	4506604		8510915	
6	1	1-1/4	4506644		8510917	
6	1-1/8	1-1/4	4506724		-	
6	1-1/4	1-1/4	4506804		-	
7	1/4	1-1/4	4507164		8510918	
7	5/16	1-1/4	4507204		8510919	
7	3/8	1-1/4	4507244		9510920	
7	7/16	1-1/4	4507284		8510921	
7	1/2	1-1/4	4507324		8510922	
7	9/16	1-1/4	4507364		8510923	
7	5/8	1-1/4	4507404		8510924	
7	11/16	1-1/4	4507444		8510925	
7	3/4	1-1/4	4507484		8510926	
7	13/16	1-1/4	4507524		8510927	
7	7/8	1-1/4	4507564		8510928	
7	15/16	1-1/4	4507604		8510929	
7	1	1-1/4	4507644		9510930	

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
8	1/4	1	4508163		-	
8	5/16	1	4508203		-	
8	3/8	1	4508243		-	
8	7/16	1	4508283		-	
8	1/2	1	4508323		-	
8	1/4	1-1/4	4508164		8510931	
8	5/16	1-1/4	4508204		8510932	
8	3/8	1-1/4	4508244		8510933	
8	7/16	1-1/4	4508284		8510934	
8	1/2	1-1/4	4508324		8510935	
8	9/16	1-1/4	4508364		8510936	
8	5/8	1-1/4	4508404		8510937	
8	11/16	1-1/4	4508444		8510938	
8	3/4	1-1/4	4508484		8510939	
8	13/16	1-1/4	4508524		9510940	
8	7/8	1-1/4	4508564		8510941	
8	15/16	1-1/4	4508604		8510942	
8	1	1-1/4	4508644		8510943	
8	1/4	1-1/2	4508165		-	
9	1/4	1-1/4	4509164		8510944	
9	5/16	1-1/4	-		8510945	
9	3/8	1-1/4	4509244		8510946	
9	7/16	1-1/4	-		8510947	
9	1/2	1-1/4	4509324		8510948	
9	9/16	1-1/4	-		8510949	
9	5/8	1-1/4	4509404		9510950	
9	11/16	1-1/4	-		8510951	
9	3/4	1-1/4	4509484		8510952	
9	13/16	1-1/4	-		8510953	
9	7/8	1-1/4	-		8510954	
9	15/16	1-1/4	-		8510955	
9	1	1-1/4	4509644		8510956	
10	5/8	1-1/4	4510404		-	
10	3/4	1-1/4	4510484		-	
10	1/4	1-1/2	4510165		8510957	
10	5/16	1-1/2	4510205		8510958	
10	3/8	1-1/2	4510245		8510959	
10	7/16	1-1/2	4510285		9510960	
10	1/2	1-1/2	4510325		8510961	
10	9/16	1-1/2	4510365		8510962	
10	5/8	1-1/2	4510405		8510963	
10	11/16	1-1/2	4510445		8510964	
10	3/4	1-1/2	4510485		8510965	
10	13/16	1-1/2	4510525		8510966	
10	7/8	1-1/2	4510565		8510967	
10	15/16	1-1/2	4510605		8510968	
10	1	1-1/2	4510645		8510969	
10	1-1/8	1-1/2	4510725		-	
10	1-1/4	1-1/2	4510805		-	
10	1-1/2	1-1/2	4510965		-	
12	1/4	1-1/2	-		9510970	
12	5/16	1-1/2	-		8510971	
12	3/8	1-1/2	-		8510972	
12	7/16	1-1/2	-		8510973	
12	1/2	1-1/2	-		8510974	
12	9/16	1-1/2	-		8510975	
12	5/8	1-1/2	-		8510976	
12	11/16	1-1/2	-		8510977	
12	3/4	1-1/2	-		8510978	
12	13/16	1-1/2	-		8510979	
12	7/8	1-1/2	-		9510980	
12	15/16	1-1/2	-		8510981	
12	1	1-1/2	-		8510982	

HIGH SPEED STEEL

WOODRUFF KEYSEAT CUTTERS

ARBOR TYPE, STAGGERED TOOTH

SERIES 111: MEDA - SUPERIOR IMPORT

SERIES 985: STAR - USA



Model	Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
				Order No.	Price	Order No.	Price
617	2-1/8	3/16	3/4	2350617		8511001	
817	2-1/8	1/4	3/4	2350817		8511002	
1017	2-1/8	5/16	3/4	2351017		8511003	
1217	2-1/8	3/8	3/4	2351217		8511004	
822	2-3/4	1/4	1	2350822		8511016	
1022	2-3/4	5/16	1	2351022		8511017	
1222	2-3/4	3/8	1	2351222		8511018	
1422	2-3/4	7/16	1	2351422		8511019	
1622	2-3/4	1/2	1	2351622		9511020	
1228	3-1/2	3/8	1	2351228		8511067	
1428	3-1/2	7/16	1	2351428		8511069	
1628	3-1/2	1/2	1	2351628		8511071	
1828	3-1/2	9/16	1	2351828		8511073	
2028	3-1/2	5/8	1	2352028		8511075	
2228	3-1/2	11/16	1	2352228		8511077	
2428	3-1/2	3/4	1	2352428		8511079	

HIGH SPEED STEEL

SIDE MILLING CUTTERS - STAGGERED TOOTH

SERIES 108: MEDA -

SUPERIOR IMPORT

SERIES 985: STAR - USA



This type of cutter is recommended for slotting operations. The alternate spiral effectively counteracts all tendency to chatter.

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
2-1/8	3/16	3/4	2350617		8511001	
2-1/8	1/4	3/4	2350817		8511002	
2-1/8	5/16	3/4	2351017		8511003	
2-1/8	3/8	3/4	2351217		8511004	
2-1/2	3/16	7/8	5025122		-	
2-1/2	1/4	7/8	5025162		8511005	
2-1/2	5/16	7/8	5025202		8511007	
2-1/2	3/8	7/8	5025242		8511009	
2-1/2	7/16	7/8	5025282		-	
2-1/2	1/2	7/8	5025322		8511012	
2-1/2	1/4	1	5025163		8511006	
2-1/2	5/16	1	-		8511008	
2-1/2	3/8	1	-		8511010	
2-1/2	7/16	1	5025283		8511011	
2-1/2	1/2	1	5025323		8511013	
2-1/2	9/16	1	-		8511014	
2-1/2	5/8	1	-		8511015	
2-3/4	1/4	1	2350822		8511016	
2-3/4	5/16	1	2351022		8511017	
2-3/4	3/8	1	2351222		8511018	
2-3/4	7/16	1	2351422		8511019	
2-3/4	1/2	1	2351622		9511020	
3	5/32	1	5003103		-	
3	3/16	1	5003123		8511021	
3	7/32	1	5003143		8511023	
3	1/4	1	5003163		9511025	
3	9/32	1	5003183		8511027	
3	5/16	1	5003203		8511029	

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
3	11/32	1	5003223		8511031	
3	3/8	1	5003243		8511033	
3	13/32	1	-		8511035	
3	7/16	1	5003283		8511037	
3	1/2	1	5003323		8511039	
3	9/16	1	5003363		8511041	
3	5/8	1	5003403		8511043	
3	11/16	1	5003443		8511045	
3	3/4	1	5003483		8511047	
3	13/16	1	5003523		8511049	
3	7/8	1	5003563		8511051	
3	15/16	1	5003603		8511053	
3	1	1	5003643		8511055	
3	3/16	1-1/4	5003124		8511022	
3	7/32	1-1/4	-		8511024	
3	1/4	1-1/4	5003164		8511026	
3	9/32	1-1/4	-		8511028	
3	5/16	1-1/4	5003204		8511030	
3	11/32	1-1/4	-		8511032	
3	3/8	1-1/4	5003244		8511034	
3	13/32	1-1/4	-		8511036	
3	7/16	1-1/4	5003284		8511038	
3	1/2	1-1/4	5003324		8511040	
3	9/16	1-1/4	5003364		8511042	
3	5/8	1-1/4	5003404		8511044	
3	11/16	1-1/4	5003444		8511046	
3	3/4	1-1/4	5003484		8511048	
3	13/16	1-1/4	5003524		9511050	
3	7/8	1-1/4	5003564		8511052	
3	15/16	1-1/4	5003604		8511054	
3	1	1-1/4	5003644		8511056	
3	1-1/4	1-1/4	-		8511058	
3-1/4	1/4	1-1/4	-		8511059	
3-1/4	3/8	1-1/4	-		8511060	
3-1/4	1/2	1-1/4	-		8511061	
3-1/4	3/4	1-1/4	-		8511062	
3-1/2	1/4	1	5035163		8511063	
3-1/2	5/16	1	5035203		8511065	
3-1/2	3/8	1	5035243		8511067	
3-1/2	7/16	1	2351428		8511069	
3-1/2	1/2	1	5035323		8511071	
3-1/2	9/16	1	2351828		8511073	
3-1/2	5/8	1	5035403		8511075	
3-1/2	11/16	1	5035443		8511077	
3-1/2	3/4	1	2352428		8511079	
3-1/2	13/16	1	-		8511081	
3-1/2	7/8	1	-		8511083	
3-1/2	15/16	1	-		8511085	
3-1/2	1	1	-		8511087	
3-1/2	1/4	1-1/4	-		8511064	
3-1/2	5/16	1-1/4	-		8511066	
3-1/2	3/8	1-1/4	-		8511068	
3-1/2	7/16	1-1/4	-		8511070	
3-1/2	1/2	1-1/4	-		8511072	
3-1/2	9/16	1-1/4	-		8511074	
3-1/2	5/8	1-1/4	-		8511076	
3-1/2	11/16	1-1/4	-		8511078	
3-1/2	3/4	1-1/4	-		9511080	
3-1/2	13/16	1-1/4	-		8511082	
3-1/2	7/8	1-1/4	-		8511084	
3-1/2	15/16	1-1/4	-		8511086	
3-1/2	1	1-1/4	-		8511088	
3-3/4	1/4	1-1/4	-		8511089	
3-3/4	3/8	1-1/4	-		8511090	
3-3/4	1/2	1-1/4	-		8511091	
3-3/4	3/4	1-1/4	-		8511092	
4	3/16	1	5004123		8511093	
4	7/32	1	5004143		8511095	
4	1/4	1	5004163		8511097	
4	9/32	1	5004183		8511099	
4	5/16	1	5004203		8511101	
4	11/32	1	5004223		8511103	
4	3/8	1	5004243		8511105	

CUTTING TOOLS - CUTTERS

HIGH SPEED STEEL

SIDE MILLING CUTTERS - STAGGERED TOOTH (Continued)

SERIES 108: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



CUTTING TOOLS - CUTTERS

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
4	13/32	1	-	-	8511107	-
4	7/16	1	5004283	-	8511109	-
4	15/32	1	-	-	8511111	-
4	1/2	1	5004323	-	8511113	-
4	9/16	1	5004363	-	8511115	-
4	5/8	1	5004403	-	8511117	-
4	11/16	1	5004443	-	8511119	-
4	3/4	1	5004483	-	8511121	-
4	13/16	1	5004253	-	8511123	-
4	7/8	1	5004563	-	8511125	-
4	15/16	1	5004603	-	8511127	-
4	1	1	5004643	-	8511129	-
4	3/16	1-1/4	5004124	-	8511094	-
4	7/32	1-1/4	5004144	-	8511096	-
4	1/4	1-1/4	5004164	-	8511098	-
4	9/32	1-1/4	5004184	-	9511100	-
4	5/16	1-1/4	5004204	-	8511102	-
4	11/32	1-1/4	5004224	-	8511104	-
4	3/8	1-1/4	5004244	-	8511106	-
4	13/32	1-1/4	5004264	-	8511108	-
4	7/16	1-1/4	5004284	-	8511110	-
4	15/32	1-1/4	-	-	8511112	-
4	1/2	1-1/4	5004324	-	8511114	-
4	9/16	1-1/4	5004364	-	8511116	-
4	5/8	1-1/4	5004404	-	8511118	-
4	11/16	1-1/4	5004444	-	9511120	-
4	3/4	1-1/4	5004484	-	8511122	-
4	13/16	1-1/4	5004524	-	8511124	-
4	7/8	1-1/4	5004564	-	8511126	-
4	15/16	1-1/4	5004604	-	8511128	-
4	1	1-1/4	5004644	-	8511130	-
4	1-1/8	1-1/4	5004724	-	8511131	-
4	1-3/16	1-1/4	5004764	-	8511132	-
4	1-1/4	1-1/4	5004804	-	8511133	-
4	1-3/8	1-1/4	-	-	8511134	-
4	1-1/2	1-1/4	5004964	-	8511135	-
4-1/4	1/4	1-1/4	-	-	8511136	-
4-1/4	3/8	1-1/4	-	-	8511137	-
4-1/4	1/2	1-1/4	-	-	8511138	-
4-1/4	3/4	1-1/4	-	-	8511139	-
4-1/2	7/32	1	-	-	8511140	-
4-1/2	1/4	1	-	-	8511142	-
4-1/2	5/16	1	-	-	8511144	-
4-1/2	3/8	1	-	-	8511146	-
4-1/2	1/2	1	5045323	-	8511148	-
4-1/2	5/8	1	-	-	9511150	-
4-1/2	3/4	1	-	-	8511152	-
4-1/2	7/8	1	-	-	8511154	-
4-1/2	1	1	-	-	8511156	-
4-1/2	1-1/4	1	-	-	8511158	-
4-1/2	7/32	1-1/4	-	-	8511141	-
4-1/2	1/4	1-1/4	-	-	8511143	-
4-1/2	5/16	1-1/4	-	-	8511145	-
4-1/2	3/8	1-1/4	-	-	8511147	-
4-1/2	1/2	1-1/4	5045324	-	8511149	-
4-1/2	5/8	1-1/4	-	-	8511151	-
4-1/2	3/4	1-1/4	-	-	8511153	-
4-1/2	7/8	1-1/4	-	-	8511155	-
4-1/2	1	1-1/4	-	-	8511157	-
4-1/2	1-1/4	1-1/4	-	-	8511159	-
5	7/32	1	-	-	8511160	-
5	1/4	1	5005163	-	8511162	-
5	9/32	1	-	-	8511164	-
5	5/16	1	5005203	-	8511166	-
5	11/32	1	-	-	8511168	-
5	3/8	1	5005243	-	8511170	-
5	13/32	1	-	-	8511172	-
5	7/16	1	5005283	-	8511174	-

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
5	15/32	1	-	-	8511176	-
5	1/2	1	5005323	-	8511178	-
5	9/16	1	5005363	-	9511180	-
5	5/8	1	5005403	-	8511182	-
5	11/16	1	5005443	-	8511184	-
5	3/4	1	5005483	-	8511186	-
5	13/16	1	5005523	-	8511188	-
5	7/8	1	5005563	-	8511190	-
5	15/16	1	5005603	-	-	-
5	7/32	1-1/4	-	-	8511161	-
5	1/4	1-1/4	5005164	-	8511163	-
5	9/32	1-1/4	-	-	8511165	-
5	5/16	1-1/4	5005204	-	8511167	-
5	11/32	1-1/4	-	-	8511169	-
5	3/8	1-1/4	5005244	-	8511171	-
5	13/32	1-1/4	-	-	8511173	-
5	7/16	1-1/4	5005284	-	8511175	-
5	15/32	1-1/4	-	-	8511177	-
5	1/2	1-1/4	5005324	-	8511179	-
5	9/16	1-1/4	5005364	-	8511181	-
5	5/8	1-1/4	5005404	-	8511183	-
5	11/16	1-1/4	5005444	-	8511185	-
5	3/4	1-1/4	5005484	-	8511187	-
5	13/16	1-1/4	5005524	-	8511189	-
5	7/8	1-1/4	5005564	-	8511191	-
5	15/16	1-1/4	5005604	-	8511192	-
5	1	1-1/4	5005644	-	8511193	-
5	1-1/4	1-1/4	-	-	8511194	-
5	1-1/2	1-1/4	-	-	8511195	-
5-1/2	1/4	1	-	-	8511196	-
5-1/2	5/16	1	-	-	8511198	-
5-1/2	3/8	1	-	-	9511200	-
5-1/2	1/2	1	-	-	8511202	-
5-1/2	5/8	1	-	-	8511204	-
5-1/2	3/4	1	-	-	8511206	-
5-1/2	7/8	1	-	-	8511208	-
5-1/2	1	1	-	-	8511210	-
5-1/2	1-1/4	1	-	-	8511212	-
5-1/2	1/4	1-1/4	-	-	8511197	-
5-1/2	5/16	1-1/4	-	-	8511199	-
5-1/2	3/8	1-1/4	-	-	8511201	-
5-1/2	1/2	1-1/4	-	-	8511203	-
5-1/2	5/8	1-1/4	-	-	8511205	-
5-1/2	3/4	1-1/4	-	-	8511207	-
5-1/2	7/8	1-1/4	-	-	8511209	-
5-1/2	1	1-1/4	-	-	8511211	-
5-1/2	1-1/4	1-1/4	-	-	8511213	-
6	7/32	1	-	-	8511214	-
6	1/4	1	5006163	-	8511217	-
6	9/32	1	5006183	-	9511220	-
6	5/16	1	5006203	-	8511223	-
6	11/32	1	-	-	9511226	-
6	3/8	1	5006243	-	8511229	-
6	13/32	1	-	-	8511232	-
6	7/16	1	5006283	-	8511235	-
6	15/32	1	-	-	8511238	-
6	1/2	1	5006323	-	8511241	-
6	17/32	1	-	-	8511244	-
6	9/16	1	5006362	-	8511247	-
6	5/8	1	5006403	-	9511250	-
6	11/16	1	5006443	-	8511253	-
6	3/4	1	5006483	-	8511256	-
6	13/16	1	5006523	-	8511259	-
6	7/8	1	5006563	-	8511262	-
6	15/16	1	5006603	-	-	-
6	1	1	5006643	-	-	-
6	7/32	1-1/4	-	-	9511215	-
6	1/4	1-1/4	5006164	-	9511218	-
6	9/32	1-1/4	5006184	-	8511221	-
6	5/16	1-1/4	5006204	-	8511224	-
6	11/32	1-1/4	-	-	8511227	-
6	3/8	1-1/4	5006244	-	8511230	-
6	13/32	1-1/4	-	-	8511233	-

(Continued)

HIGH SPEED STEEL

SIDE MILLING CUTTERS -

STAGGERED TOOTH (Continued)

SERIES 108: MEDA - SUPERIOR IMPORT

SERIES 985: STAR - USA



Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
6	7/16	1-1/4	5006284		8511236	
6	15/32	1-1/4	-		8511239	
6	1/2	1-1/4	5006324		8511242	
6	17/32	1-1/4	-		8511245	
6	9/16	1-1/4	5006364		8511248	
6	5/8	1-1/4	5006404		8511251	
6	11/16	1-1/4	5006444		8511254	
6	3/4	1-1/4	5006484		8511257	
6	13/16	1-1/4	5006524		8511260	
6	7/8	1-1/4	5006564		8511263	
6	15/16	1-1/4	5006604		8511265	
6	1	1-1/4	5006644		8511267	
6	1-1/16	1-1/4	-		8511269	
6	1-1/8	1-1/4	5006724		8511270	
6	1-3/16	1-1/4	5006764		8511271	
6	1-1/4	1-1/4	5006804		8511272	
6	1-1/2	1-1/4	5006964		-	
6	7/32	1-1/2	-		8511216	
6	1/4	1-1/2	-		8511219	
6	9/32	1-1/2	-		8511222	
6	5/16	1-1/2	-		8511225	
6	11/32	1-1/2	-		8511228	
6	3/8	1-1/2	-		8511231	
6	13/32	1-1/2	-		8511234	
6	7/16	1-1/2	-		8511237	
6	15/32	1-1/2	-		8511240	
6	1/2	1-1/2	-		8511243	
6	17/32	1-1/2	-		8511246	
6	9/16	1-1/2	-		8511249	
6	5/8	1-1/2	-		8511252	
6	11/16	1-1/2	-		8511255	
6	3/4	1-1/2	-		8511258	
6	13/16	1-1/2	-		8511261	
6	7/8	1-1/2	-		8511264	
6	15/16	1-1/2	-		8511266	
6	1	1-1/2	5006645		8511268	
7	1/4	1-1/4	5007164		8511273	
7	5/16	1-1/4	5007204		8511275	
7	3/8	1-1/4	5007244		8511277	
7	7/16	1-1/4	5007284		8511279	
7	1/2	1-1/4	5007324		8511281	
7	9/16	1-1/4	5007364		8511283	
7	5/8	1-1/4	5007404		8511285	
7	11/16	1-1/4	5007444		8511287	
7	3/4	1-1/4	5007484		8511289	
7	13/16	1-1/4	5007524		8511291	
7	7/8	1-1/4	5007564		8511293	
7	15/16	1-1/4	5007604		8511295	
7	1	1-1/4	5007644		8511297	
7	1/4	1-1/2	-		8511274	
7	5/16	1-1/2	-		8511276	
7	3/8	1-1/2	5007245		8511278	
7	7/16	1-1/2	5007285		8511280	
7	1/2	1-1/2	5007325		8511282	
7	9/16	1-1/2	-		8511284	
7	5/8	1-1/2	5007405		8511286	
7	11/16	1-1/2	-		8511288	
7	3/4	1-1/2	5007485		8511290	
7	13/16	1-1/2	-		8511292	
7	7/8	1-1/2	5007565		8511294	
7	15/16	1-1/2	-		8511296	
7	1	1-1/2	5007645		8511298	
8	1/4	1	5008163		-	
8	3/8	1	5008243		-	
8	1/2	1	5008323		-	
8	1/4	1-1/4	5008164		8511299	

Dia	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
8	5/16	1-1/4	5008204		8511301	
8	3/8	1-1/4	5008244		8511303	
8	7/16	1-1/4	5008284		8511305	
8	1/2	1-1/4	5008324		8511307	
8	9/16	1-1/4	5008364		8511309	
8	5/8	1-1/4	5008404		8511311	
8	11/16	1-1/4	5008444		8511313	
8	3/4	1-1/4	5008484		8511315	
8	13/16	1-1/4	5008524		8511317	
8	7/8	1-1/4	5008564		8511319	
8	15/16	1-1/4	5008604		8511321	
8	1	1-1/4	5008644		8511323	
8	1-1/4	1-1/4	-		8511325	
8	1/4	1-1/2	5008165		8511300	
8	5/16	1-1/2	5008205		8511302	
8	3/8	1-1/2	5008245		8511304	
8	7/16	1-1/2	5008285		8511306	
8	1/2	1-1/2	5008325		8511308	
8	9/16	1-1/2	5008365		8511310	
8	5/8	1-1/2	5008405		8511312	
8	11/16	1-1/2	5008445		8511314	
8	3/4	1-1/2	5008485		8511316	
8	13/16	1-1/2	5008525		8511318	
8	7/8	1-1/2	5008565		8511320	
8	15/16	1-1/2	5008605		8511322	
8	1	1-1/2	5008645		8511324	
8	1-1/8	1-1/2	5008725		-	
8	1-1/4	1-1/2	5008805		8511326	
8	1-1/2	1-1/2	5008965		-	
9	1/4	1-1/4	5009164		8511327	
9	3/8	1-1/4	5009244		8511329	
9	1/2	1-1/4	5009324		8511331	
9	5/8	1-1/4	5009404		8511333	
9	3/4	1-1/4	5009484		8511335	
9	1	1-1/4	5009644		8511337	
9	1/4	1-1/2	5009165		8511328	
9	3/8	1-1/2	5009245		8511330	
9	1/2	1-1/2	5009325		8511332	
9	5/8	1-1/2	5009405		8511334	
9	3/4	1-1/2	5009485		8511336	
9	1	1-1/2	5009645		8511338	
10	3/8	1-1/4	5010244		-	
10	13/16	1-1/4	5010524		-	
10	15/16	1-1/4	5010604		-	
10	1/4	1-1/2	5010165		8511339	
10	5/16	1-1/2	5010205		8511340	
10	3/8	1-1/2	5010245		8511341	
10	7/16	1-1/2	5010285		8511342	
10	1/2	1-1/2	5010325		8511343	
10	9/16	1-1/2	5010365		8511344	
10	5/8	1-1/2	5010405		8511345	
10	11/16	1-1/2	5010445		8511346	
10	3/4	1-1/2	5010485		8511347	
10	13/16	1-1/2	5010525		8511348	
10	7/8	1-1/2	5010565		8511349	
10	15/16	1-1/2	5010605		8511350	
10	1	1-1/2	5010645		8511351	
10	1-1/8	1-1/2	5010725		-	
10	1-1/4	1-1/2	5010805		-	
10	1-1/2	1-1/2	5010965		-	
12	1/4	1-1/2	-		8511352	
12	5/16	1-1/2	-		8511353	
12	3/8	1-1/2	-		8511354	
12	7/16	1-1/2	-		8511355	
12	1/2	1-1/2	-		8511356	
12	9/16	1-1/2	-		8511357	
12	5/8	1-1/2	-		8511358	
12	11/16	1-1/2	-		8511359	
12	3/4	1-1/2	-		8511360	
12	13/16	1-1/2	-		8511361	
12	7/8	1-1/2	-		8511362	
12	15/16	1-1/2	-		8511363	
12	1	1-1/2	-		8511364	

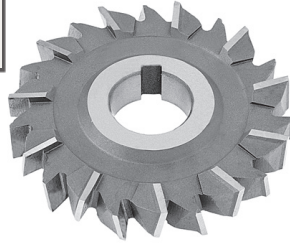
CUTTING TOOLS - CUTTERS

COBALT STEEL

**SIDE MILLING CUTTERS -
STAGGERED TOOTH
SERIES 985:**



- Increased tool life
- Higher metal removal rates
- Lower inventory costs



Cobalt staggered and straight tooth side milling cutters. Today's electronic controlled heat treat and laboratory facilities produce a high hardness cutting tool material that possesses excellent resistance to cutting temperature and wear with more toughness than was previously attainable.

Diameter	Width of Face	Hole Size	Order No.	Price
3	3/16	1	8511501	
3	1/4	1	8511502	
3	5/16	1	8511503	
3	3/8	1	8511504	
3	1/2	1	8511505	
3	1/2	1-1/4	8511506	
3	5/8	1-1/4	298340	
4	1/4	1	8511507	
4	1/4	1-1/4	8511508	
4	5/16	1	8511509	
4	5/16	1-1/4	8511510	
4	3/8	1	8511511	
4	3/8	1-1/4	8511512	
4	7/16	1-1/4	298428	
4	1/2	1	8511513	
4	1/2	1-1/4	8511514	
4	3/4	1	8511515	
4	3/4	1-1/4	8511516	
4	7/8	1-1/4	298456	
4	1	1-1/4	8511517	
4	1-1/4	1-1/4	8511518	
4	1-1/2	1-1/4	8511519	
5	1/4	1	8511520	
5	1/4	1-1/4	8511521	
5	5/16	1	8511522	
5	5/16	1-1/4	8511523	
5	3/8	1	8511524	
5	3/8	1-1/4	8511525	
5	1/2	1	8511526	
5	1/2	1-1/4	8511527	
5	5/8	1-1/4	298540	
5	3/4	1	8511528	
5	3/4	1-1/4	8511529	
5	1	1-1/4	8511530	
6	1/4	1-1/4	8511531	
6	5/16	1-1/4	8511532	
6	3/8	1-1/4	8511533	
6	1/2	1-1/4	8511534	
6	5/8	1-1/4	298640	
6	3/4	1-1/4	8511535	
6	7/8	1-1/4	298656	
6	1	1-1/4	8511536	

COBALT STEEL

**SIDE MILLING CUTTERS -
STRAIGHT TOOTH
SERIES 985:**



- Increased tool life
- Higher metal removal rates
- Lower inventory costs

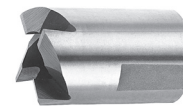


Diameter	Width of Face	Hole Size	Order No.	Price
3	3/16	1	8511551	
3	1/4	1	8511552	
3	5/16	1	8511553	
3	3/8	1	8511554	
3	1/2	1	8511555	
3	1/2	1-1/4	8511556	
4	1/4	1	8511557	
4	1/4	1-1/4	8511558	
4	5/16	1	8511559	
4	5/16	1-1/4	8511560	
4	3/8	1	8511561	
4	3/8	1-1/4	8511562	
4	1/2	1	8511563	
4	1/2	1-1/4	8511564	
4	3/4	1	8511565	
4	3/4	1-1/4	8511566	
5	1/4	1	8511567	
5	1/4	1-1/4	8511568	
5	5/16	1	8511569	
5	5/16	1-1/4	8511570	
5	3/8	1	8511571	
5	3/8	1-1/4	8511572	
5	1/2	1	8511573	
5	1/2	1-1/4	8511574	
5	3/4	1	8511575	
5	3/4	1-1/4	8511576	
6	1/4	1-1/4	8511577	
6	5/16	1-1/4	8511578	
6	3/8	1-1/4	8511579	
6	1/2	1-1/4	8511580	
6	3/4	1-1/4	8511581	
6	1	1-1/4	8511582	

HIGH SPEED STEEL

HOLLOW MILLS

SERIES 732:



STAR USA MILLS available. Please inquire.

Hole Dia.	Shank Dia.	Overall Length	Order Number	Price
3/32	5/8	1-1/2	7320006	
1/8	5/8	1-1/2	7320008	
5/32	5/8	1-1/2	7320010	
3/16	5/8	1-1/2	7320012	
7/32	5/8	1-1/2	7320014	
1/4	5/8	1-1/2	7320016	
9/32	3/4	1-1/2	7320018	
5/16	3/4	1-1/2	7320020	
11/32	3/4	1-1/2	7320022	
3/8	1	1-3/4	7320024	
7/16	1	1-3/4	7320028	
1/2	1	1-3/4	7320032	
9/16	1-1/4	2	7320036	
5/8	1-1/4	2	7320040	
11/16	1-1/2	2	7320044	
3/4	1-1/2	2	7320048	
13/16	1-1/2	2	7320052	
7/8	1-3/4	2-1/4	7320056	
15/16	1-3/4	2-1/4	7320060	
1	1-3/4	2-1/4	7320064	

HIGH SPEED STEEL

LIGHT DUTY PLAIN MILLING CUTTERS

SERIES 117: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



Recommended for light milling or finishing cuts. Cutters less than 3/4" wide have straight teeth. Cutters 3/4" wide and over have spiral teeth and are regularly furnished with L.H. spiral.

Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
2-1/4	1/4	7/8	6001162		8510501	
2-1/4	1/2	7/8	6001322		8510502	
2-1/4	1	7/8	6001642		8510503	
2-1/2	3/16	1	6002123		8510504	
2-1/2	1/4	1	6002163		8510505	
2-1/2	5/16	1	6002203		8510506	
2-1/2	3/8	1	6002243		8510507	
2-1/2	7/16	1	6002283		8510508	
2-1/2	1/2	1	6002323		8510509	
2-1/2	5/8	1	6002403		9510510	
2-1/2	3/4	1	6002483		8510511	
2-1/2	7/8	1	6002563		-	
2-1/2	1	1	6002643		8510513	
2-1/2	1-1/2	1	6002963		8510515	
2-1/2	2	1	6002973		8510516	
2-1/2	2-1/2	1	6002983		8510518	
2-1/2	3	1	6002993		9510520	
3	3/16	1	6003123		8510522	
3	1/4	1	6003163		8510523	
3	5/16	1	6003203		8510524	
3	3/8	1	6003243		8510525	
3	7/16	1	6003283		8510527	
3	1/2	1	6003323		8510529	
3	9/16	1	6003363		-	
3	5/8	1	6003403		8510531	
3	11/16	1	6003443		-	
3	3/4	1	6003483		-	
3	13/16	1	6003523		-	
3	7/8	1	6003563		-	
3	1	1	6003643		-	
3	1/4	1-1/4	6003165		-	
3	5/16	1-1/4	6003205		-	
3	3/8	1-1/4	6003245		8510526	
3	7/16	1-1/4	6003285		8510528	
3	1/2	1-1/4	6003324		9510530	
3	9/16	1-1/4	6003364		-	
3	5/8	1-1/4	6003404		8510532	
3	11/16	1-1/4	6003444		-	
3	3/4	1-1/4	6003484		8510533	
3	13/16	1-1/4	6003524		-	
3	7/8	1-1/4	6003564		8510534	
3	1	1-1/4	6003644		8510535	
3	1-1/4	1-1/4	6003804		8510536	
3	1-1/2	1-1/4	6003964		8510538	
3	2	1-1/4	6032004		9510540	
3	2-1/2	1-1/4	6032324		8510542	
3	3	1-1/4	6033004		8510543	
3	4	1-1/4	-		8510545	
4	1/4	1	6004163		8510546	
4	5/16	1	6004203		8510548	
4	3/8	1	6004243		9510550	

Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
4	7/16	1	6004283		-	
4	1/2	1	6004323		-	
4	1	1	6004643		-	
4	1/4	1-1/4	6004164		8510547	
4	5/16	1-1/4	6004204		8510549	
4	3/8	1-1/4	6004244		8510551	
4	1/2	1-1/4	6004324		8510552	
4	5/8	1-1/4	6004404		8510553	
4	3/4	1-1/4	6004484		8510554	
4	7/8	1-1/4	6004564		-	
4	1	1-1/4	6004644		8510555	
4	1-1/4	1-1/4	6004804		-	
4	1-1/2	1-1/4	6004964		8510557	
4	2	1-1/4	6042004		8510559	
4	2-1/2	1-1/4	6042324		-	
4	3	1-1/4	6043004		8510561	
4	4	1-1/4	6044004		8510563	
4	2	1-1/2	6042005		-	
4	4	1-1/2	6044005		-	

HIGH SPEED STEEL

HEAVY DUTY PLAIN MILLING CUTTERS

SERIES 118: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
2-1/2	2	1	6502203		8510565	
2-1/2	4	1	6502403		8510567	
3	1-1/4	1-1/4	6503124		8510569	
3	2	1-1/4	6503204		8510571	
3	2-1/2	1-1/4	6503254		8510573	
3	3	1-1/4	6503304		8510575	
3	4	1-1/4	6503404		8510577	
3	6	1-1/4	6503604		8510579	
4	2	1-1/2	6504205		8510581	
4	3	1-1/2	6504305		8510583	
4	4	1-1/2	6504405		8510585	
4	6	1-1/2	6504605		8510587	
4-1/2	6	2	6504606		8510589	
4-1/2	12	2	-		9510590	

HIGH SPEED STEEL

HIGH HELIX PLAIN MILLING CUTTERS

SERIES 106: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



Helical Milling Cutters can be run at high speeds and will produce a smooth finish. Helical milling cutters will not "hog" in when entering or leaving a cut and for this reason are well suited for milling thin pieces of steel, or other pieces of metal which cannot be held securely in the milling machine.

Dia.	Width of Face	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
3	4	1-1/4	4003044		8510591	
3	6	1-1/4	4003064		8510593	
4	3	1-1/2	4004035		8510595	
4	4	1-1/2	4004045		8510596	
4	6	1-1/2	4004065		8510597	
4	8	1-1/2	4004085		8510598	
4	10	1-1/2	-		8510599	
4-1/2	6	2	4004566		9510600	
4-1/2	12	2	4004596		8510601	

CUTTING TOOLS - CUTTERS

HIGH SPEED STEEL

SINGLE ANGLE MILLING CUTTERS

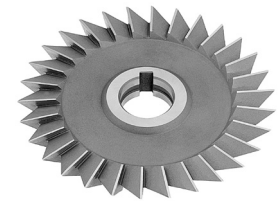
SERIES 121: MEDA - SUPERIOR IMPORT

SERIES 985: STAR - USA



CUTTING TOOLS - CUTTERS

Dia.	Width of Face	Hole Dia.	Angle	MEDA			STAR - USA		
				Order No.		Price	Order No.		Price
				RH	LH		RH	LH	
2-1/2	1/2	7/8	45°	2752322	2852322		8511901	8511902	
2-1/2	1/2	7/8	60°	2802322	2902322		8511903	8511904	
2-3/4	1/2	1	45°	2752323	2852323		8511905	8511906	
2-3/4	1/2	1	60°	2802323	2902323		8511907	8511908	
3	1/2	1	45°	2753323	2853323		-	-	
3	1/2	1	60°	2803323	2903323		-	-	
3	1/2	1-1/4	45°	2753324	2853324		8511909	8511910	
3	1/2	1-1/4	60°	2803324	2903324		8511911	8511912	
3	5/8	1	45°	2753403	2853403		-	-	
3	5/8	1	60°	2803403	2903403		-	-	
3	5/8	1-1/4	45°	2753404	2853404		-	-	
3	5/8	1-1/4	60°	2803404	2903404		-	-	
3	3/4	1	45°	2753483	2853483		-	-	
3	3/4	1	60°	2803483	2903483		-	-	
3	3/4	1-1/4	60°	2803484	2903484		-	-	
4	1/2	1	45°	2754323	2854323		-	-	
4	1/2	1	60°	2804323	2904323		-	-	
4	1/2	1-1/4	45°	2754324	2854324		8511913	8511914	
4	1/2	1-1/4	60°	2804324	2904324		8511915	8511916	
4	3/4	1	45°	2754483	2854483		-	-	
4	3/4	1	60°	2804483	2904483		-	-	
4	3/4	1-1/4	45°	2754484	2854484		8511917	8511918	
4	3/4	1-1/4	60°	2804484	2904484		8511919	8511920	
4	1	1-1/4	45°	2754644	2854644		8511921	8511922	
4	1	1-1/4	60°	2804644	2904644		8511923	8511924	
5	3/4	1-1/4	45°	2755484	2855484		8511925	8511926	
5	3/4	1-1/4	60°	2805484	2905484		8511927	8511928	
5	1	1-1/4	45°	2755644	2855644		8511929	8511930	
5	1	1-1/4	60°	2805644	2905644		8511931	8511932	
6	3/4	1-1/4	45°	2756484	2856484		8511933	8511934	
6	3/4	1-1/4	60°	2806484	2906484		8511935	8511936	
6	1	1-1/4	45°	2756644	2856644		8511937	8511938	
6	1	1-1/4	60°	2806644	2906644		8511939	8511940	
6	1-1/4	1-1/4	45°	320065	320165		8511941	8511942	
6	1-1/4	1-1/4	60°	320265	320365		8511943	8511944	



Right Hand

FOR MILLING MACHINE ARBORS

PLEASE SEE INDEX

HIGH SPEED STEEL

DOUBLE ANGLE MILLING CUTTERS

SERIES 114: MEDA - SUPERIOR IMPORT

SERIES 985: F&D - USA



Dia.	Width of Face	Hole Dia.	Angle	MEDA		STAR - USA	
				Order No.	Price	Order No.	Price
2-3/4	1/2	1	45°	2502323		8511945	
2-3/4	1/2	1	60°	2552323		8511946	
2-3/4	1/2	1	90°	2602323		8511947	
3	5/8	1	45°	2503403		-	
3	5/8	1	60°	2553403		-	
3	5/8	1	90°	2603403		-	
3	3/4	1	60°	2553483		-	
3	3/4	1	90°	2603483		-	
4	1/2	1-1/4	45°	2504324		8511948	
4	1/2	1-1/4	60°	2554324		8511949	
4	1/2	1-1/4	90°	2604324		8511950	

Dia.	Width of Face	Hole Dia.	Angle	MEDA		STAR - USA	
				Order No.	Price	Order No.	Price
4	3/4	1	45°	2504483		8511951	
4	3/4	1	60°	2554483		8511952	
4	3/4	1	90°	2604483		8511953	
4	3/4	1-1/4	45°	2504484		8511954	
4	3/4	1-1/4	60°	2554484		8511955	
4	3/4	1-1/4	90°	2604484		-	
4	1	1-1/4	60°	2554644		-	
4	1	1-1/4	90°	2604644		-	
5	3/4	1-1/4	45°	2505484		8511956	
5	3/4	1-1/4	60°	2555484		8511957	
5	3/4	1-1/4	90°	2605484		8511958	
5	1	1-1/4	45°	2505644		8511959	
5	1	1-1/4	60°	2555644		8511960	
5	1	1-1/4	90°	2605644		8511961	
6	3/4	1-1/4	45°	2506484		-	
6	3/4	1-1/4	60°	2556484		-	
6	3/4	1-1/4	90°	2606484		-	
6	1	1-1/4	45°	2506644		8511962	
6	1	1-1/4	60°	2556644		8511963	
6	1	1-1/4	90°	2606644		8511964	
6	1-1/2	1-1/4	45°	2506964		8511968	
6	1-1/2	1-1/4	60°	2556964		8511969	
6	1-1/2	1-1/4	90°	2606964		8511970	

HIGH SPEED STEEL

CONVEX CUTTERS

SERIES 120: MEDA - SUPERIOR IMPORT

SERIES 985: STAR - USA



Convex milling cutters are used to produce a true concave radius. These cutters are made for milling half circles and may be sharpened without changing their form by grinding the face.

Circle Dia.	Cutter Dia.	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
1/16	2-1/4	1	7504223		-	
3/32	2-1/4	1	7506223		-	
3/32	3	1	-		8512501	
3/32	4	1	-		8512502	
3/32	4	1-1/4	-		8512503	
1/8	2	7/8	7508202		8512504	
1/8	2-1/4	1	7508223		8512505	
1/8	3	1	-		8512506	
1/8	4	1	-		8512507	
1/8	4	1-1/4	-		8512508	
5/32	2-1/4	1	7510223		-	
5/32	3	1	-		8512509	
5/32	4	1	-		8512510	
5/32	4	1-1/4	-		8512511	
3/16	2	7/8	7512202		8512512	
3/16	2-1/4	1	7512223		8512513	
3/16	3	1	317124		8512514	
3/16	4	1	317126		8512515	
3/16	4	1-1/4	-		8512516	
7/32	2-1/4	1	7514223		-	
7/32	3	1	-		8512517	
7/32	4	1	-		8512518	
7/32	4	1-1/4	-		8512519	
1/4	2	7/8	7516202		8512520	
1/4	2-1/4	1	7516223		-	
1/4	2-1/2	1	7516253		8512521	
1/4	3	1	-		8512522	
1/4	4	1	317166		8512523	
1/4	4	1-1/4	-		8512524	
9/32	2-1/2	1	7518253		-	
9/32	3	1	-		8512525	
9/32	4	1	-		8512526	
9/32	4	1-1/4	-		8512527	
5/16	2-1/4	7/8	-		8512528	
5/16	2-3/4	1	7520273		8512529	
5/16	3	1	-		8512530	
5/16	4	1	317206		8512531	
5/16	4	1-1/4	317208		8512532	
5/16	5	1-1/4	317240		8512533	
11/32	2-3/4	1	7522273		-	
11/32	3	1	-		8512534	
11/32	4	1	-		8512535	
11/32	4	1-1/4	-		8512536	
3/8	2-1/4	7/8	7524222		8512537	
3/8	2-1/2	1	7524253		-	
3/8	2-3/4	1	7524273		8512538	
3/8	4	1	317244		8512539	
3/8	4	1-1/4	317246		8512540	
3/8	5	1-1/4	-		8512541	
13/32	2-3/4	1	7526273		-	
13/32	3	1	-		8512542	
13/32	4	1	-		8512543	
13/32	4	1-1/4	-		8512544	
7/16	2-1/4	7/8	-		8512545	
7/16	3	1	7528303		8512546	
7/16	4	1	-		8512547	
7/16	5	1-1/4	-		8512548	
15/32	3	1	-		8512549	
15/32	4	1	-		8512550	
15/32	4	1-1/4	-		8512551	

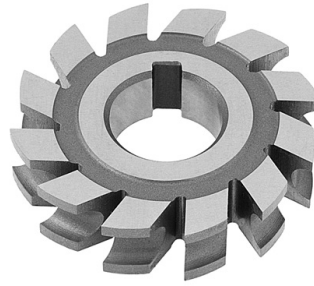
Circle Dia.	Cutter Dia.	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
1/2	2-1/4	7/8	7532222		8512552	
1/2	3	1	7532303		8512553	
1/2	4	1	-		8512554	
1/2	4	1-1/4	-		8512555	
1/2	5	1-1/4	-		8512556	
1/2	6	1-1/4	317330		8512557	
17/32	3	1	-		8512558	
17/32	4	1	-		8512559	
17/32	4	1-1/4	-		8512560	
9/16	2-3/4	1	7536273		-	
9/16	3	1	7536303		8512561	
9/16	4	1-1/4	-		8512562	
5/8	2-3/4	1	7540273		8512563	
5/8	3	1	7540303		-	
5/8	3-1/2	1	7540353		-	
5/8	3-1/2	1-1/4	7540354		8512564	
5/8	5	1-1/4	-		8512565	
5/8	6	1-1/4	-		8512566	
11/16	3	1	7544303		8512567	
11/16	4	1-1/4	-		8512568	
3/4	3	1	7548303		8512569	
3/4	3-3/4	1-1/4	7548373		8512570	
3/4	5	1-1/4	-		8512571	
3/4	6	1-1/4	317486		8512572	
13/16	3-1/4	1	7552323		8512573	
13/16	4	1-1/4	-		8512574	
7/8	3-1/4	1	7556323		8512575	
7/8	4	1-1/4	7556404		8512576	
7/8	5	1-1/4	317564		8512577	
7/8	6	1-1/4	317566		8512578	
15/16	3-1/4	1	-		8512579	
15/16	3-1/2	1-1/4	7560553		-	
15/16	4	1	-		8512580	
1	3-1/4	1	7564323		8512581	
1	4-1/4	1-1/4	7564423		8512582	
1	5	1-1/4	-		8512583	
1	6	1-1/4	-		8512584	
1-1/8	4	1-1/4	7572404		-	
1-1/8	4-1/2	1-1/4	-		8512585	
1-1/8	5-1/2	1-1/4	-		8512586	
1-1/4	4	1-1/4	7580404		-	
1-1/4	4-1/2	1-1/4	-		8512587	
1-1/4	5-1/2	1-1/4	-		8512588	
1-1/4	6	1-1/4	-		8512589	
1-3/8	4-1/4	1-1/4	7588424		-	
1-3/8	4-3/4	1-1/4	-		8512590	
1-3/8	6	1-1/4	317762		8512591	
1-1/2	4-1/4	1-1/4	7596424		-	
1-1/2	5	1-1/4	-		8512592	
1-1/2	5	1-1/2	-		8512593	
1-1/2	6	1-1/4	317802		8512594	
1-5/8	5-1/4	1-1/4	-		8512595	
1-5/8	5-1/2	1-1/4	7640554		-	
1-3/4	5-1/2	1-1/4	7648554		8512596	
1-7/8	5-3/4	1-1/2	-		8512597	
1-7/8	6	1-1/2	7656604		-	
2	6	1-1/2	7664605		8512597	

CUTTING TOOLS - CUTTERS

HIGH SPEED STEEL

CONCAVE CUTTERS

SERIES 119: MEDA - SUPERIOR IMPORT
SERIES 985: STAR - USA



Concave milling cutters are used to produce a true convex radius. These cutters are made for milling half circles and may be sharpened without changing their form by grinding the face.

CUTTING TOOLS - CUTTERS

Circle Dia.	Cutter Dia.	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
1/16	2-1/4	1	7004223	-	-	-
3/32	2-1/4	1	7006223	-	-	-
3/32	3	1	-	-	8512601	-
1/8	2	7/8	-	-	8512602	-
1/8	2-1/4	1	7008223	-	8512603	-
1/8	3	1	-	-	8512604	-
1/8	4	1	-	-	8512605	-
1/8	4	1-1/4	-	-	8512606	-
5/32	2-1/4	1	7010223	-	-	-
5/32	3	1	-	-	8512607	-
3/16	2	7/8	316120	-	8512608	-
3/16	2-1/4	1	7012223	-	8512609	-
3/16	3	1	-	-	8512610	-
3/16	4	1	-	-	8512611	-
3/16	4	1-1/4	-	-	8512612	-
7/32	2-1/4	1	7014223	-	8512681	-
7/32	3	1	-	-	8512613	-
1/4	2	7/8	316160	-	8512614	-
1/4	2-1/2	1	7016253	-	8512615	-
1/4	3	1	-	-	8512616	-
1/4	4	1	-	-	8512617	-
1/4	4	1-1/4	-	-	8512618	-
9/32	2-1/2	1	7018253	-	-	-
9/32	4	1	-	-	8512619	-
5/16	2-1/4	7/8	-	-	8512620	-
5/16	2-3/4	1	7020273	-	8512621	-
5/16	3	1	316204	-	8512622	-
5/16	4	1	-	-	8512623	-
5/16	4	1-1/4	-	-	8512624	-
11/32	2-3/4	1	7022273	-	-	-
11/32	4	1	-	-	8512625	-
3/8	2-1/4	7/8	-	-	8512626	-
3/8	2-1/2	1	7024273	-	-	-
3/8	2-3/4	1	316242	-	8512627	-
3/8	4	1	-	-	8512628	-
3/8	4	1-1/4	316246	-	8512629	-
13/32	2-3/4	1	7026273	-	-	-
13/32	4	1	-	-	8512630	-
7/16	2-1/4	7/8	-	-	8512631	-
7/16	3	1	7028303	-	8512632	-
7/16	4	1	-	-	8512633	-
15/32	4	1	-	-	8512634	-

Circle Dia.	Cutter Dia.	Hole Dia.	MEDA		STAR - USA	
			Order No.	Price	Order No.	Price
1/2	2-1/4	7/8	7032222	-	8512635	-
1/2	3	1	7032303	-	8512636	-
1/2	4	1	-	-	8512637	-
1/2	4	1-1/4	316326	-	8512638	-
1/2	5	1-1/4	-	-	8512639	-
1/2	6	1-1/4	-	-	8512640	-
17/32	4	1	-	-	8512641	-
9/16	3	1	7036303	-	8512642	-
9/16	4	1-1/4	-	-	8512643	-
5/8	2-3/4	1	316400	-	8512644	-
5/8	3	1	7040303	-	-	-
5/8	3-1/2	1-1/4	7040354	-	8512645	-
5/8	5	1-1/4	-	-	8512646	-
5/8	6	1-1/4	-	-	8512647	-
11/16	3	1	7044303	-	8512648	-
11/16	4	1-1/4	-	-	8512649	-
3/4	3	1	7048303	-	8512650	-
3/4	3-3/4	1-1/4	7048374	-	8512651	-
3/4	5	1-1/4	-	-	8512652	-
3/4	6	1-1/4	316486	-	8512653	-
13/16	3-1/4	1	7052323	-	8512654	-
13/16	3-1/4	1-1/4	7052324	-	-	-
13/16	4	1-1/4	-	-	8512655	-
7/8	3-1/4	1	7056323	-	8512656	-
7/8	4	1-1/4	7056404	-	8512657	-
7/8	5	1-1/4	-	-	8512658	-
7/8	6	1-1/4	-	-	8512659	-
15/16	3-1/4	1	-	-	8512660	-
15/16	3-1/2	1-1/4	7060353	-	-	-
15/16	4	1	-	-	8512661	-
1	3-1/4	1	7064323	-	8512662	-
1	4-1/4	1-1/4	7064424	-	8512663	-
1	5	1-1/4	-	-	8512664	-
1	6	1-1/4	-	-	8512665	-
1-1/16	4	1-1/4	7068404	-	-	-
1-1/8	4	1-1/4	7072404	-	-	-
1-1/8	4-1/4	1-1/4	-	-	8512666	-
1-1/8	5-1/2	1-1/4	-	-	8512667	-
1-3/16	3-1/4	1	7076323	-	-	-
1-1/4	4	1-1/4	7080404	-	-	-
1-1/4	4-1/2	1-1/4	-	-	8512668	-
1-1/4	5-1/2	1-1/4	-	-	8512669	-
1-3/8	4-1/4	1-1/4	7088424	-	-	-
1-3/8	4-3/4	1-1/4	-	-	8512670	-
1-3/8	6	1-1/4	316762	-	8512671	-
1-1/2	4-1/4	1-1/4	7096424	-	-	-
1-1/2	5	1-1/4	-	-	8512672	-
1-1/2	6	1-1/4	316802	-	8512673	-
1-5/8	5-1/4	1-1/4	-	-	8512674	-
1-5/8	5-1/2	1-1/4	7140554	-	-	-
1-3/4	5-1/2	1-1/4	7148554	-	8512675	-
1-7/8	5-3/4	1-1/2	-	-	8512676	-
1-7/8	6	1-1/2	7156605	-	-	-
2	6	1-1/2	7200605	-	8512677	-

Quality Cutting Tools



The Choice Is Yours!!!

HIGH SPEED STEEL

CORNER ROUNDING MILLING CUTTERS

SERIES 109: MEDA - SUPERIOR IMPORT

SERIES 985: STAR - USA



Corner rounding cutters are designed for radius milling arbor type milling machines. They may be used singly or in pairs. These cutters have side and radical clearance and can be sharpened by grinding the face without changing their form.

Radius of Circle	Dia	Hole Dia.	Width of Face	MEDA			STAR - USA		
				Order No.		Price	Order No.		Price
				RH	LH		RH	LH	
1/8	2	7/8	1/4	5508202	5608202		8512401	8512402	
1/8	2-1/2	1	1/4	5508253	5608253		8512403	8512404	
3/16	2-1/2	1	5/16	5512253	5612253		8512405	8512406	
1/4	2-1/4	7/8	13/32	5516222	5616222		8512407	8512408	
1/4	3	1	13/32	5516303	5616303		8512409	8512410	
5/16	2-3/4	1	7/16	5520273	5620273		-	-	
5/16	3	1	7/16	5520303	5620303		8512411	8512412	
3/8	3	1	9/16	5524303	5624303		8512413	8512414	
3/8	3-3/4	1-1/4	9/16	5524374	5624374		8512415	8512416	
7/16	3-1/4	1	3/4	5528323	5628323		-	-	
7/16	3-1/4	1	5/8	312628	312528		8512417	8512418	
1/2	3-1/4	1	3/4	5532323	5632323		8512419	8512420	
1/2	4-1/4	1-1/4	3/4	5532424	5632424		8512421	8512422	
9/16	3-1/2	1	13/16	5536353	5636353		-	-	
9/16	4-1/4	1-1/4	13/16	-	-		8512423	8512424	
5/8	3-1/2	1	15/16	5540353	5640353		8512425	8512426	
5/8	4-1/4	1-1/4	15/16	5540424	5640424		8512427	8512428	
3/4	3-3/4	1	1-1/8	5548373	5648373		-	-	
3/4	4-1/4	1-1/4	1-1/8	-	-		8512429	8512430	
7/8	4-1/2	1-1/4	1-1/4	5556454	5656454		-	-	
7/8	4-1/2	1-1/4	1-5/16	-	-		8512431	8512432	
1	4-1/2	1-1/4	1-3/8	5564454	5664454		-	-	
1	4-1/2	1-1/4	1-9/16	-	-		8512433	8512434	



CUTTING TOOLS - CUTTERS

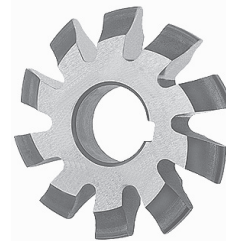
HIGH SPEED STEEL

INVOLUTE GEAR CUTTERS - METRIC MODULE

SERIES 124:

Pressure Angle 20°

For each module listed from 0.5mm to 7mm, 8 cutters are required to produce a full set of gears from 12 teeth to a rack. **Note:** These cutters may be sharpened repeatedly without changing their original form.



Module m	Dia.	Hole	Partial Order No. 862 + Add on last four digits below.								Set (1-8)		
			#1	#2	#3	#4	#5	#6	#7	#8	Price	Order No.	Price
0.5	40	16	0051	1052	1053	1054	1055	1056	1057	1058		5862005	
0.7	40	16	0071	0072	0073	0074	0075	0076	0077	0078		5862007	
1.0	50	16	0101	1102	1103	1104	1105	1106	1107	1108		5862010	
1.25	50	16	0121	0122	0123	0124	0125	0126	0127	0128		5862012	
1.5	56	22	0151	1152	1153	1154	1155	1156	1157	1158		5862015	
1.75	56	22	0171	0172	0173	0174	0175	0176	0177	0178		5862017	
2.0	63	22	0201	1202	1203	1204	1205	1206	1207	1208		5862020	
2.25	63	22	0221	0222	0223	0224	0225	0226	0227	0228		5862022	
2.5	63	22	0251	0252	0253	0254	0255	0256	0257	0258		5862025	
2.75	71	27	0271	0272	0273	0274	0275	0276	0277	0278		5862027	
3.00	71	27	0301	1302	1303	1304	1305	1306	1307	1308		5862030	
3.25	71	27	0321	0322	0323	0324	0325	0326	0327	0328		5862032	
3.50	80	27	0351	0352	0353	0354	0355	0356	0357	0358		5862035	
3.75	80	27	0371	0372	0373	0374	0375	0376	0377	0378		5862037	
4.0	80	27	0401	1402	1403	1404	1405	1406	1407	0408		5862040	
4.5	90	32	0451	0452	0453	0454	0455	0456	0457	0458		5862045	
5.0	90	32	0501	2502	2503	1504	1505	1506	1507	1508		5862050	
5.5	90	32	0551	0552	0553	0554	0555	0556	0557	0558		5862055	
6.0	100	32	0601	0602	0603	0604	0605	0606	0607	0608		5862060	
6.5	100	32	0651	0652	0653	0654	0655	0656	0657	0658		5862065	
7.0	100	32	0701	1702	1703	1704	1705	1706	1707	1708		5862070	

Cutter No.	Range of Teeth Cut
1	12 & 13
2	14 - 16
3	17 - 20
4	21 - 25
5	26 - 34
6	35 - 54
7	55 - 134
8	135 to RACK

Other model sizes available. See our website or inquire.

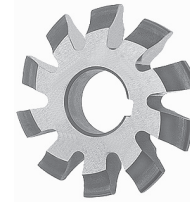
HIGH SPEED STEEL

INVOLUTE GEAR CUTTERS - 20° PRESSURE ANGLE

SERIES 731:



Pressure Angle 20° - Used to mill spur gears having a 20° pressure angle. For each diametral pitch listed, 8 cutters are required to produce a full set of gears from 12 teeth to rack. When ordering, state diametral pitch and the number of cutter from the chart in accordance with the number of teeth to be cut. Specify the arbor hole where choice exists. These cutters may be sharpened repeatedly without changing their original form.



CUTTING TOOLS - CUTTERS

Diametral Pitch	Cutter Diameter	Hole Diameter	Cutter No. 1	Cutter No. 2	Cutter No. 3	Cutter No. 4	Cutter No. 5	Cutter No. 6	Cutter No. 7	Cutter No. 8	Price
1	8-1/2	2	9783766	9783767	9783768	9783769	9783770	9783771	9783772	9783773	
1-1/4	7-3/4	2	9783774	9783775	9783776	9783777	9783778	9783779	9783780	9783781	
1-1/2	7	1-3/4	9783782	9783783	9783784	9783785	9783786	9783787	9783788	9783789	
1-3/4	6-1/2	1-3/4	9783790	9783791	9783792	9783793	9783794	9783795	9783796	9783797	
2	5-3/4	1-1/2	9783798	9783799	9783800	9783801	9783802	9783803	9783804	9783805	
2-1/2	5-3/4	1-1/2	9783806	9783807	9783808	9783809	9783810	9783811	9783812	9783813	
3	4-3/4	1-1/4	9783814	9783815	9783816	9783817	9783818	9783819	9783820	9783821	
4	3-5/8	1	9783822	9783823	9783824	9783825	9783826	9783827	9783828	9783829	
4	4-1/4	1-1/4	9783830	9783831	9783832	9783833	9783834	9783835	9783836	9783837	
5	3-3/8	1	9783838	9783839	9783840	9783841	9783842	9783843	9783844	9783845	
5	3-3/4	1-1/4	9783846	9783847	9783848	9783849	9783850	9783851	9783852	9783853	
6	3-1/8	1	9783854	9783855	9783856	9783857	9783858	9783859	9783860	9783861	
6	3-1/2	1-1/4	9783862	9783863	9783864	9783865	9783866	9783867	9783868	9783869	
7	2-7/8	1	9783870	9783871	9783872	9783873	9783874	9783875	9783876	9783877	
8	2-7/8	1	9783878	9783879	9783880	9783881	9783882	9783883	9783884	9783885	
8	3-1/4	1-1/4	9783886	9783887	9783888	9783889	9783890	9783891	9783892	9783893	
9	2-3/4	1	9783894	9783895	9783896	9783897	9783898	9783899	9783900	9783901	
10	2-3/8	7/8	9783902	9783903	9783904	9783905	9783906	9783907	9783908	9783909	
10	2-3/4	1	9783910	9783911	9783912	9783913	9783914	9783915	9783916	9783917	
11	2-5/8	1	9783918	9783919	9783920	9783921	9783922	9783923	9783924	9783925	
12	2-1/4	7/8	9783926	9783927	9783928	9783929	9783930	9783931	9783932	9783933	
12	2-5/8	1	9783934	9783935	9783936	9783937	9783938	9783939	9783940	9783941	
14	2-1/8	7/8	9783942	9783943	9783944	9783945	9783946	9783947	9783948	9783949	
14	2-1/2	1	9783950	9783951	9783952	9783953	9783954	9783955	9783956	9783957	
16	2-1/8	7/8	9783958	9783959	9783960	9783961	9783962	9783963	9783964	9783965	
16	2-1/8	1	9783966	9783967	9783968	9783969	9783970	9783971	9783972	9783973	
18	2	7/8	9783974	9783975	9783976	9783977	9783978	9783979	9783980	9783981	
18	2-3/8	1	9783982	9783983	9783984	9783985	9783986	9783987	9783988	9783989	
20	2	7/8	9783990	9783991	9783992	9783993	9783994	9783995	9783996	9783997	
20	2-3/8	1	9783998	9783999	9784000	9784001	9784002	9784003	9784004	9784005	
22	2	7/8	9784006	9784007	9784008	9784009	9784010	9784011	9784012	9784013	
24	1-3/4	7/8	9784014	9784015	9784016	9784017	9784018	9784019	9784020	9784021	
24	2-1/4	1	9784022	9784023	9784024	9784025	9784026	9784027	9784028	9784029	
26	1-3/4	7/8	9784030	9784031	9784032	9784033	9784034	9784035	9784036	9784037	
26	2-1/4	1	9784038	9784039	9784040	9784041	9784042	9784043	9784044	9784045	
28	1-3/4	7/8	9784046	9784047	9784048	9784049	9784050	9784051	9784052	9784053	
28	2-1/4	1	9784054	9784055	9784056	9784057	9784058	9784059	9784060	9784061	
30	1-3/4	7/8	9784062	9784063	9784064	9784065	9784066	9784067	9784068	9784069	
30	2-1/4	1	9784070	9784071	9784072	9784073	9784074	9784075	9784076	9784077	
32	1-3/4	7/8	9784078	9784079	9784080	9784081	9784082	9784083	9784084	9784085	
32	2-1/4	1	9784086	9784087	9784088	9784089	9784090	9784091	9784092	9784093	
36	1-3/4	7/8	9784094	9784095	9784096	9784097	9784098	9784099	9784100	9784101	
36	2-1/4	1	9784102	9784103	9784104	9784105	9784106	9784107	9784108	9784109	
40	1-3/4	7/8	9784110	9784111	9784112	9784113	9784114	9784115	9784116	9784117	
48	1-3/4	7/8	9784118	9784119	9784120	9784121	9784122	9784123	9784124	9784125	
48	2-1/4	1	9784126	9784127	9784128	9784129	9784130	9784131	9784132	9784133	
60	1-3/4	7/8	9784134	9784135	9784136	9784137	9784138	9784139	9784140	9784141	

Bevel Involute Gear Cutters Available

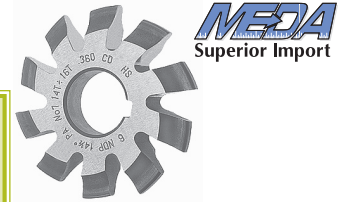
Eight different cutters are available for each diametral pitch to produce a full set of gears from 12 teeth to a rack as follows:

Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From
1	135 to Rack	3	35 to 54	5	21 to 25	7	14 to 16
2	55 to 134	4	26 to 34	6	17 to 20	8	12 to 13

HIGH SPEED STEEL

INVOLUTE GEAR CUTTERS - 14-1/2° PRESSURE ANGLE

SERIES 125:



Pressure Angle 14-1/2° - Used to mill spur gears having a 14-1/2° pressure angle. For each diametral pitch listed, 8 cutters are required to produce a full set of gears from 12 teeth to rack. When ordering, state diametral pitch and the number of cutter from the chart in accordance with the number of teeth to be cut. Specify the arbor hole where choice exists. These cutters may be sharpened repeatedly without changing their original form.

Diametral Pitch	Cutter Diameter	Hole Diameter	Cutter No. 1	Cutter No. 2	Cutter No. 3	Cutter No. 4	Cutter No. 5	Cutter No. 6	Cutter No. 7	Cutter No. 8	Price
2	5-3/4	1-1/2	3201051	3201052	3201053	3201054	3201055	3201056	3201057	3201058	
2-1/2	5-3/4	1	3202031	3202032	3202033	3202034	3202035	3202036	3202037	3202038	
2-1/2	5-3/4	1-1/2	3202051	3202052	3202053	3202054	3202055	3202056	3202057	3202058	
3	4-3/4	1-1/4	3203041	3203042	3203043	3203044	3203045	3203046	3203047	3203048	
3	5-1/4	1-1/2	3203051	3203052	3203053	3203054	3203055	3203056	3203057	3203058	
3	5-1/4	1-1/4	3203141	3203142	3203143	3203144	3203145	3203146	3203147	3203148	
3	5-3/4	1-1/2	3203151	3203152	3203153	3203154	3203155	3203156	3203157	3203158	
4	3-5/8	1	3204031	3204032	3204033	3204034	3204035	3204036	3204037	3204038	
4	4-1/4	1-1/4	3204041	3204042	3204043	3204044	3204045	3204046	3204047	3204048	
4	4-1/2	1-1/2	3204051	3204052	3204053	3204054	3204055	3204056	3204057	3204058	
5	3-3/8	1	3205031	3205032	3205033	3205034	3205035	3205036	3205037	3205038	
5	3-3/4	1-1/4	3205041	3205042	3205043	3205044	3205045	3205046	3205047	3205048	
5	3-5/8	1	3205131	3205132	3205133	3205134	3205135	3205136	3205137	3205138	
6	3-1/8	1	3206031	3206032	3206033	3206034	3206035	3206036	3206037	3206038	
6	3-1/2	1-1/4	3206041	3206042	3206043	3206044	3206045	3206046	3206047	3206048	
7	2-7/8	1	3207031	3207032	3207033	3207034	3207035	3207036	3207037	3207038	
7	3-3/8	1-1/4	3207041	3207042	3207043	3207044	3207045	3207046	3207047	3207048	
8	2-7/8	1	3208031	3208032	3208033	3208034	3208035	3208036	3208037	3208038	
8	3-1/4	1-1/4	3208041	3208042	3208043	3208044	3208045	3208046	3208047	3208048	
9	2-3/4	1	3209031	3209032	3209033	3209034	3209035	3209036	3209037	3209038	
9	3-1/8	1-1/4	3209041	3209042	3209043	3209044	3209045	3209046	3209047	3209048	
10	2-3/8	7/8	3210021	3210022	3211023	3211024	3211025	3211026	3211027	3211028	
10	2-3/4	1	3210031	3210032	3210033	3210034	3210035	3210036	3210037	3210038	
11	2-3/8	7/8	3211021	3211022	3211023	3211024	3211025	3211026	3211027	3211028	
11	2-5/8	1	3211031	3211032	3211033	3211034	3211035	3211036	3211037	3211038	
12	2-1/4	7/8	3212021	3212022	3212023	3212024	3212025	3212026	3212027	3212028	
12	2-5/8	1	3212031	3212032	3212033	3212034	3212035	3212036	3212037	3212038	
14	2-1/8	7/8	3214021	3214022	3214023	3214024	3214025	3214026	3214027	3214028	
14	2-1/2	1	3214031	3214032	3214033	3214034	3214035	3214036	3214037	3214038	
16	2-1/8	7/8	3216021	3216022	3216023	3216024	3216025	3216026	3216027	3216028	
16	2-1/8	1	3216031	3216032	3216033	3216034	3216035	3216036	3216037	3216038	
16	2-1/2	1	3216131	3216132	3216133	3216134	3216135	3216136	3216137	3216138	
18	2	7/8	3218021	3218022	3218023	3218024	3218025	3218026	3218027	3218028	
18	2-3/8	1	3218031	3218032	3218033	3218034	3218035	3218036	3218037	3218038	
20	2	7/8	3220021	3220022	3220023	3220024	3220025	3220026	3220027	3220028	
20	2-3/8	1	3220031	3220032	3220033	3220034	3220035	3220036	3220037	3220038	
22	2	7/8	3222021	3222022	3222023	3222024	3222025	3222026	3222027	3222028	
22	2-1/4	1	3222031	3222032	3222033	3222034	3222035	3222036	3222037	3222038	
24	1-3/4	7/8	3224021	3224022	3224023	3224024	3224025	3224026	3224027	3224028	
24	2-1/4	1	3224031	3224032	3224033	3224034	3224035	3224036	3224037	3224038	
26	1-3/4	7/8	3226021	3226022	3226023	3226024	3226025	3226026	3226027	3226028	
26	2-1/4	1	3226031	3226032	3226033	3226034	3226035	3226036	3226037	3226038	
28	1-3/4	7/8	3228021	3228022	3228023	3228024	3228025	3228026	3228027	3228028	
28	2-1/4	1	3228031	3228032	3228033	3228034	3228035	3228036	3228037	3228038	
30	1-3/4	7/8	3230021	3230022	3230023	3230024	3230025	3230026	3230027	3230028	
30	2-1/4	1	3230031	3230032	3230033	3230034	3230035	3230036	3230037	3230038	
32	1-3/4	7/8	3232021	3232022	3232023	3232024	3232025	3232026	3232027	3232028	
32	2-1/4	1	3232031	3232032	3232033	3232034	3232035	3232036	3232037	3232038	
32	2-1/4	7/8	3232121	3232122	3232123	3232124	3232125	3232126	3232127	3232128	
36	1-3/4	7/8	3236021	3236022	3236023	3236024	3236025	3236026	3236027	3236028	
36	2-1/4	1	3236031	3236032	3236033	3236034	3236035	3236036	3236037	3236038	
40	1-3/4	7/8	3240021	3240022	3240023	3240024	3240025	3240026	3240027	3240028	
40	2-1/4	1	3240031	3240032	3240033	3240034	3240035	3240036	3240037	3240038	
48	1-3/4	7/8	3248021	3248022	3248023	3248024	3248025	3248026	3248027	3248028	
48	2-1/4	1	3248031	3248032	3248033	3248034	3248035	3248036	3248037	3248038	

Eight different cutters are available for each diametral pitch to produce a full set of gears from 12 teeth to a rack as follows:

Bevel Involute Gear Cutters Available

Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From	Cutter No.	Will Cut Gears From
1	135 to Rack	3	35 to 54	5	21 to 25	7	14 to 16
2	55 to 134	4	26 to 34	6	17 to 20	8	12 to 13