



ALLIED MACHINE & ENGINEERING CORP



EcoCut Catalog

www.alliedmachine.com



Represented by:



Allied Machine & Engineering Corp is Registered to ISO 9001:2008



ALLIED MACHINE & ENGINEERING CORP

Our focus on product excellence, service to the customer, respect for the individual, and competitive advantage enables us to deliver outstanding results in a diverse range of manufacturing, production, and process engineering industries.

As a result, Allied's high performance tooling is helping countless businesses around the world to produce better products with greater accuracy, increased speed, and higher quality.

Precision, performance, and productivity are core features of Allied tooling. Our commitment to innovation in all aspects of holmaking technology means we continually set new industry standards in production efficiency, tool life, and manufacturing cost improvements.

This product catalog provides detailed information on products in a comprehensive, easy to use, and informative single source reference guide. However, we recognize that every company's needs are unique, which is why our customer service and technical support teams are always available to provide help and advice, should you need it.

Whatever your need, Allied Machine & Engineering Corp. delivers high performance tooling on the cutting edge.

Allied Machine & Engineering Corp. offers EcoCut through a supply agreement with Ceratizit

EcoCut, distributed in North America by Allied Machine, offers a versatile line of lathe tools that can perform up to four machining operations. A single EcoCut tool can be used for drilling, boring, facing, and standard turning operations. EcoCut tools can improve cycle times while reducing both tooling costs and tool storage problems. They also offer the benefit of shorter set-up times for many lathe applications.

The EcoCut product line is divided into three basic styles:

- Mini: Solid carbide version available in diameters ranging from 4 - 8 mm
- Classic: Indexable version available in diameters ranging from 8 - 32 mm
- Rebore: Indexable three-flute boring tool available in two diameters, 40 & 60 mm

Allied continues to be a global leader in the engineering and manufacturing of replaceable drill inserts and holders. The EcoCut products allow Allied to offer additional solutions in holmaking.

Visit the Allied Machine & Engineering Corp. website at www.alliedmachine.com for additional information about all Allied products, or contact the Application Engineering Department at 800-321-5537 for technical assistance.

WARNING

Tool failure during use can cause serious injury. Follow safety precautions and instructions that accompany machinery and all tools.

Wear safety glasses and appropriate safety equipment at all times when machinery is operating.



EcoCut



Grade Overview	5
Reference	6
EcoCut Mini Product Offering	7-8
EcoCut Classic Product Offering . . .	9-13
EcoCut Rebore	14
EcoCut Accessories	15
EcoCut Inserts	16-18
EcoCut Cutting Data	20-21
EcoCut Mini Technical Information . .	22
EcoCut Classic Technical Information . .	23-25
EcoCut Rebore Technical Information . .	26
Application Recommendations	27-31
Troubleshooting Info	32

Your safety and the safety of others is very important. This catalog contains important safety messages. Always read and follow all safety precautions



This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalog. Safety messages follow these words.



WARNING (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury

NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

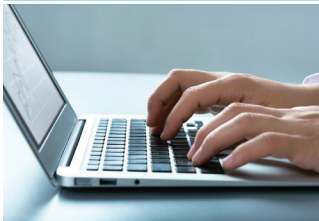
Visit www.alliedmachine.com for the most up-to-date information and procedures.



Services and Support

Allied Machine's success is not just a result of our quality products and high performance solutions, but also the level of technical support and expertise we provide on a constant basis to all of our customers through a range of dedicated services.

Online Services

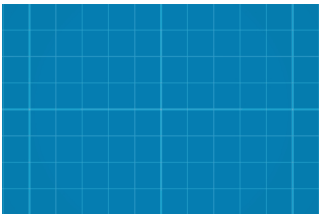


Allied Machine's website hosts a number of key features for distributors, one being our online ordering service that simplifies and speeds up the ordering process. Our website can also be used for checking inventory and pricing. Available

to distributors and end-users is our fast response **Insta-Quote™** quoting system that provides quotes and drawings for special purpose tooling online in a matter of minutes.

All of our case studies, product literature, industry sector information and a wealth of other data is available through our website, which includes the latest details to ensure that up-to-date information is available for download. Visit www.alliedmachine.com.

Technical Support



Our technical department is staffed by Allied Machine experts who have years of experience in helping customers meet demanding application challenges with high performance Allied Machine tooling. They are also

able to provide technical support on a wide range of industry sectors via our technical helpline, which can help customers save time and money when a solution is needed quickly.

We also have an excellent and unique reference library of technical case studies and cutting data which is compiled from information and experience gained from our global applications base. Chances are, if you have an application issue or problem, we've already solved it somewhere in the world.

External Support



Our Field Sales Engineers (FSEs) provide a constant "on-the-ground" support network, helping solve manufacturing problems on site and providing the most effective solutions.

Customer Service



The most important aspect of our business is our customers. Our customer care processes and support operations are vital and integral parts of our commitment to customers.

Sometimes, all that's needed is a helpful and friendly voice at the end of a telephone to check an order, answer a question, or just point you in the right direction. Our fully trained team is always available to help. No matter what your requirement, we'll have someone who can handle your question quickly and effectively.

Training



Allied Machine holds regular Technical Education Seminar (TES) training courses in our training facility in Dover, Ohio. These classes allow customers to experience the advanced Allied Machine holmaking solutions and gain deeper knowledge of their applications. The seminars cover technical data, cutting technology, tool application, and benefits of all Allied Machine products as well as extensive and detailed on-machine training while demonstrating the tools in action. Details and listings for TES courses can be found at www.alliedmachine.com/TES.aspx.

TES

Technical Education Seminar





Grade designation	Standard designation	Cutting material	Application range										P Steel	S Heat-resistant	M Stainless	H Hard materials	K Cast iron	N Non-ferrous metals
			01	05	10	15	20	25	30	35	40	45						
H210T	HW-M10	W													○			
	HW-K10	W												●			○	●
H216T	HW-K15	W															●	●
CTWN425	HW-N25	W																●
CTCP425	HC-P25	C											●					
	HC-M20	C													○			
	HC-K30	C															●	
CTPP430	HC-P30	P											●					
	HC-M25	P													●			
	HC-S25	P												●			○	○
CTCP435	HC-P35	C											●					
	HC-M30	C													○			
	HC-K40	C															●	
CTPP435	HC-P35	P											●					
	HC-M30	P													●			
	HC-S30	P												●			○	○
			01	05	10	15	20	25	30	35	40	45	50	● Main application ○ Extended application				



EcoCut

Reference Page

EcoCut Tools

ECC	32	R	3.0D	17	H
↑ EcoCut Classic	↑ Nominal Diameter (mm)	↑ Cutting Direction	↑ Maximum Drilling Depth 3.0 x diameter	↑ Insert Size	↑ Tool Holder in Densimet

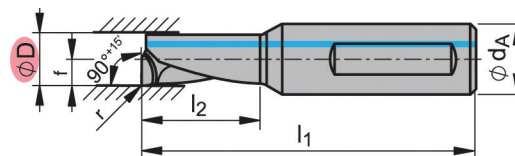
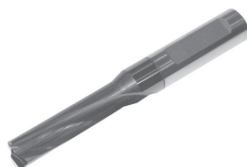
EcoCut Inserts

X	C	E	T	17	05	08	F	N	-	27P
↑ Insert Shape	↑ Clearance Angle	↑ Tolerances	↑ Form of Top Surface	↑ Cutting Edge Length	↑ Insert Thickness	↑ Corner Radius	↑ Cutting Edge	↑ Cutting Direction		↑ Chamfer Version

EcoCut Mini



.157", .197", and .236" (4mm, 5mm, and 6mm) Diameter Tools



Picture shows right-hand version

Item Number	Description - Grade	L N R	D inch	d _A inch	l ₁ inch	l ₂ inch	f inch	r inch	MasterGuide					
									Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11831130	ECM 04L-2.25D CTPP435	L	0.157	0.236	1.378	0.354	0.079	0.008	●	●	●		○	○
11830752	ECM 04L-2.25D-27 CTWN425	L	0.157	0.236	1.378	0.354	0.079	0.008						●
11831155	ECM 04L-4.00D CTPP435	L	0.157	0.236	1.614	0.630	0.079	0.008	●	●	●		○	○
11830779	ECM 04L-4.00D-27 CTWN425	L	0.157	0.236	1.614	0.630	0.079	0.008						●
11831177	ECM 04R-2.25D CTPP435	R	0.157	0.236	1.378	0.354	0.079	0.008	●	●	●		○	○
11830786	ECM 04R-2.25D-27 CTWN425	R	0.157	0.236	1.378	0.354	0.079	0.008						●
11831183	ECM 04R-4.00D CTPP435	R	0.157	0.236	1.614	0.630	0.079	0.008	●	●	●		○	○
11830804	ECM 04R-4.00D-27 CTWN425	R	0.157	0.236	1.614	0.630	0.079	0.008						●

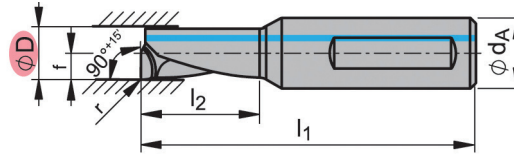
Item Number	Description - Grade	L N R	D inch	d _A inch	l ₁ inch	l ₂ inch	f inch	r inch	MasterGuide					
									Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11831187	ECM 05L-2.25D CTPP435	L	0.197	0.236	1.457	0.443	0.098	0.008	●	●	●		○	○
11830808	ECM 05L-2.25D-27 CTWN425	L	0.197	0.236	1.457	0.443	0.098	0.008						●
11831190	ECM 05L-4.00D CTPP435	L	0.197	0.236	1.772	0.787	0.098	0.008	●	●	●		○	○
11830811	ECM 05L-4.00D-27 CTWN425	L	0.197	0.236	1.772	0.787	0.098	0.008						●
11831417	ECM 05R-2.25D CTPP435	R	0.197	0.236	1.457	0.443	0.098	0.008	●	●	●		○	○
11830814	ECM 05R-2.25D-27 CTWN425	R	0.197	0.236	1.457	0.443	0.098	0.008						●
11831427	ECM 05R-4.00D CTPP435	R	0.197	0.236	1.772	0.787	0.098	0.008	●	●	●		○	○
11830822	ECM 05R-4.00D-27 CTWN425	R	0.197	0.236	1.772	0.787	0.098	0.008						●

Item Number	Description - Grade	L N R	D inch	d _A inch	l ₁ inch	l ₂ inch	f inch	r inch	MasterGuide					
									Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11831428	ECM 06L-2.25D CTPP435	L	0.236	0.315	1.496	0.531	0.118	0.008	●	●	●		○	○
11830826	ECM 06L-2.25D-27 CTWN425	L	0.236	0.315	1.496	0.531	0.118	0.008						●
11831434	ECM 06L-4.00D CTPP435	L	0.236	0.315	1.929	0.945	0.118	0.008	●	●	●		○	○
11830829	ECM 06L-4.00D-27 CTWN425	L	0.236	0.315	1.929	0.945	0.118	0.008						●
11831445	ECM 06R-2.25D CTPP435	R	0.236	0.315	1.496	0.531	0.118	0.008	●	●	●		○	○
11830832	ECM 06R-2.25D-27 CTWN425	R	0.236	0.315	1.496	0.531	0.118	0.008						●
11831453	ECM 06R-4.00D CTPP435	R	0.236	0.315	1.929	0.945	0.118	0.008	●	●	●		○	○
11831090	ECM 06R-4.00D-27 CTWN425	R	0.236	0.315	1.929	0.945	0.118	0.008						●



EcoCut Mini

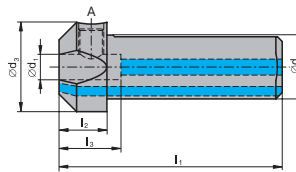
.276", .315", and Adapters (7mm, 8mm, and Adapters)



Picture shows right-hand version

Item Number	Description - Grade	L N R	D inch	d _A inch	l ₁ inch	l ₂ inch	f inch	r inch	MasterGuide					
									Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11831458	ECM 07L-2.25D CTPP435	L	0.276	0.315	1.654	0.620	0.138	0.008	●	●	●		○	○
11831091	ECM 07L-2.25D-27 CTWN425	L	0.276	0.315	1.654	0.620	0.138	0.008	●	●	●		○	●
11831473	ECM 07L-4.00D CTPP435	L	0.276	0.315	2.087	1.102	0.138	0.008	●	●	●		○	○
11831093	ECM 07L-4.00D-27 CTWN425	L	0.276	0.315	2.087	1.102	0.138	0.008	●	●	●		○	●
11831477	ECM 07R-2.25D CTPP435	R	0.276	0.315	1.654	0.620	0.138	0.008	●	●	●		○	○
11831101	ECM 07R-2.25D-27 CTWN425	R	0.276	0.315	1.654	0.620	0.138	0.008	●	●	●		○	●
11831478	ECM 07R-4.00D CTPP435	R	0.276	0.315	2.087	1.102	0.138	0.008	●	●	●		○	○
11831108	ECM 07R-4.00D-27 CTWN425	R	0.276	0.315	2.087	1.102	0.138	0.008	●	●	●		○	●

Item Number	Description - Grade	L N R	D inch	d _A inch	l ₁ inch	l ₂ inch	f inch	r inch	MasterGuide					
									Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11831480	ECM 08L-2.25D CTPP435	L	0.315	0.315	1.772	0.709	0.157	0.008	●	●	●		○	○
11831109	ECM 08L-2.25D-27 CTWN425	L	0.315	0.315	1.772	0.709	0.157	0.008	●	●	●		○	●
11831483	ECM 08L-4.00D CTPP435	L	0.315	0.315	2.244	1.260	0.157	0.008	●	●	●		○	○
11831111	ECM 08L-4.00D-27 CTWN425	L	0.315	0.315	2.244	1.260	0.157	0.008	●	●	●		○	●
11831484	ECM 08R-2.25D CTPP435	R	0.315	0.315	1.772	0.709	0.157	0.008	●	●	●		○	○
11831112	ECM 08R-2.25D-27 CTWN425	R	0.315	0.315	1.772	0.709	0.157	0.008	●	●	●		○	●
11831491	ECM 08R-4.00D CTPP435	R	0.315	0.315	2.244	1.260	0.157	0.008	●	●	●		○	○
11831114	ECM 08R-4.00D-27 CTWN425	R	0.315	0.315	2.244	1.260	0.157	0.008	●	●	●		○	●



Adapters

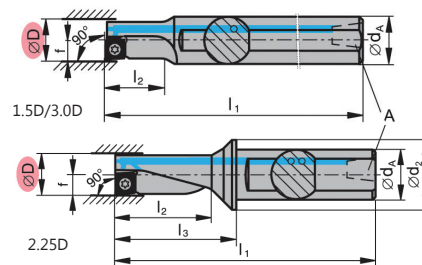
Item Number	Description	d ₁ inch	d _A inch	d ₃ inch	l ₁ inch	l ₂ inch	A inch
11160654	EC-ADX12-06-E	0.236	0.750	0.984	2.500	0.550	1/8"-27 NPT
11147398	EC-ADX12-08-E	0.315	0.750	0.984	2.500	0.550	1/8"-27 NPT
METRIC							
11155590	EC-ADX20-06	6	20	25	65	18	-
11108076	EC-ADX20-08	8	20	25	65	18	-

Accessories

d ₁ inch	1 piece
0.236	310720
0.315	310720

EcoCut Classic

Diameter Range: .315" - .394" (8mm - 10mm)



Pictures show right-hand version

Inch

Item Number	Description	L N R	D inch	d _A inch	d ₂ inch	l ₁ inch	l ₂ inch	l ₃ inch	f inch	A	
11065068	EC 08L-1.5D 04-E	L	0.315	0.500	-	3.15	0.47	-	0.157	1/16" -27 NPT	XC.. 0401..
11065200	EC 08L-2.25D 04-E	L	0.315	0.375	0.472	2.37	0.71	0.870	0.157	1/8" *	XC.. 0401..
11147310	EC 08L-3.0D 04 H-E	L	0.315	0.500	-	3.15	0.94	-	0.157	1/16" -27 NPT	XC.. 0401..
11065069	EC 08R-1.5D 04-E	R	0.315	0.500	-	3.15	0.47	-	0.157	1/16" -27 NPT	XC.. 0401..
11065201	EC 08R-2.25D 04-E	R	0.315	0.375	0.472	2.37	0.71	0.870	0.157	1/8" *	XC.. 0401..
11147327	EC 08R-3.0D 04 H-E	R	0.315	0.500	-	3.15	0.94	-	0.157	1/16" -27 NPT	XC.. 0401..
11065070	EC 10L-1.5D 05-E	L	0.394	0.500	-	3.54	0.59	-	0.197	1/16" -27 NPT	XC.. 0502..
11065202	EC 10L-2.25D 05-E	L	0.394	0.500	0.630	2.71	0.89	1.085	0.197	1/16" -27 NPT	XC.. 0502..
11147311	EC 10L-3.0D 05 H-E	L	0.394	0.500	-	3.35	1.18	-	0.197	1/16" -27 NPT	XC.. 0502..
11065071	EC 10R-1.5D 05-E	R	0.394	0.500	-	3.54	0.59	-	0.197	1/16" -27 NPT	XC.. 0502..
11065203	EC 10R-2.25D 05-E	R	0.394	0.500	0.630	2.71	0.89	1.085	0.197	1/16" -27 NPT	XC.. 0502..
11147328	EC 10R-3.0D 05 H-E	R	0.394	0.500	-	3.35	1.18	-	0.197	1/16" -27 NPT	XC.. 0502..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

* 1/8" = through-hole only

Metric

Item Number	Description	L N R	D mm	d _A mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	f mm	
11837869	ECC 08L-1.5D 04	L	8	12	-	80	12	-	4	XC.. 0401..
11837911	ECC 08L-2.25D 04	L	8	10	12	60	18	22,0	4	XC.. 0401..
11837989	ECC 08L-3.0D 04 H	L	8	12	-	80	24	-	4	XC.. 0401..
11837870	ECC 08R-1.5D 04	R	8	12	-	80	12	-	4	XC.. 0401..
11837912	ECC 08R-2.25D 04	R	8	10	12	60	18	22,0	4	XC.. 0401..
11837990	ECC 08R-3.0D 04 H	R	8	12	-	80	24	-	4	XC.. 0401..
11837873	ECC 10L-1.5D 05	L	10	12	-	90	15	-	5	XC.. 0502..
11837915	ECC 10L-2.25D 05	L	10	12	16	69,5	22,5	27,5	5	XC.. 0502..
11837991	ECC 10L-3.0D 05 H	L	10	12	-	85	30	-	5	XC.. 0502..
11837881	ECC 10R-1.5D 05	R	10	12	-	90	15	-	5	XC.. 0502..
11837917	ECC 10R-2.25D 05	R	10	12	16	69,5	22,5	27,5	5	XC.. 0502..
11837993	ECC 10R-3.0D 05 H	R	10	12	-	85	30	-	5	XC.. 0502..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Accessories

	D inch		
		10 pieces	1 piece
XC.. 0401..	0.315	11807484	11843205
XC.. 0502..	0.394	11807480	11843205

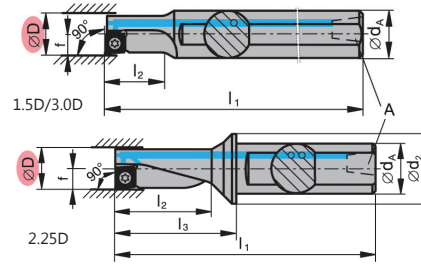
See page 15 for Screw and Driver details

Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents



EcoCut Classic

Diameter Range: .472" - .551" (12mm - 14mm)



Pictures show right-hand version

Inch

Item Number	Description	L N R	D inch	d _A inch	d ₂ inch	l ₁ inch	l ₂ inch	l ₃ inch	f inch	A	
11065073	EC 12L-1.5D 06-E	L	0.472	0.625	-	3.94	0.71	-	0.236	1/8"-27 NPT	XC.. 0602..
11065204	EC 12L-2.25D 06-E	L	0.472	0.625	0.787	3.05	1.06	1.300	0.236	1/8"-27 NPT	XC.. 0602..
11147313	EC 12L-3.0D 06 H-E	L	0.472	0.625	-	3.74	1.42	-	0.236	1/8"-27 NPT	XC.. 0602..
11065074	EC 12R-1.5D 06-E	R	0.472	0.625	-	3.94	0.71	-	0.236	1/8"-27 NPT	XC.. 0602..
11065205	EC 12R-2.25D 06-E	R	0.472	0.625	0.787	3.05	1.06	1.300	0.236	1/8"-27 NPT	XC.. 0602..
11147329	EC 12R-3.0D 06 H-E	R	0.472	0.625	-	3.74	1.42	-	0.236	1/8"-27 NPT	XC.. 0602..
11065075	EC 14L-1.5D 07-E	L	0.551	0.625	-	4.33	0.83	-	0.276	1/8"-27 NPT	XC.. 0703..
11065207	EC 14L-2.25D 07-E	L	0.551	0.625	0.787	3.27	1.24	1.520	0.276	1/8"-27 NPT	XC.. 0703..
11147314	EC 14L-3.0D 07 H-E	L	0.551	0.625	-	3.94	1.65	-	0.276	1/8"-27 NPT	XC.. 0703..
11065076	EC 14R-1.5D 07-E	R	0.551	0.625	-	4.33	0.83	-	0.276	1/8"-27 NPT	XC.. 0703..
11065228	EC 14R-2.25D 07-E	R	0.551	0.625	0.787	3.27	1.24	1.520	0.276	1/8"-27 NPT	XC.. 0703..
11147330	EC 14R-3.0D 07 H-E	R	0.551	0.625	-	3.94	1.65	-	0.276	1/8"-27 NPT	XC.. 0703..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Metric

Item Number	Description	L N R	D mm	d _A mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	f mm	
11837886	ECC 12L-1.5D 06	L	12	16	-	100	18	-	6	XC.. 0602..
11837918	ECC 12L-2.25D 06	L	12	16	20	78	27	33,0	6	XC.. 0602..
11837994	ECC 12L-3.0D 06 H	L	12	16	-	95	36	-	6	XC.. 0602..
11837887	ECC 12R-1.5D 06	R	12	16	-	100	18	-	6	XC.. 0602..
11837919	ECC 12R-2.25D 06	R	12	16	20	78	27	33,0	6	XC.. 0602..
11837995	ECC 12R-3.0D 06 H	R	12	16	-	95	36	-	6	XC.. 0602..
11837888	ECC 14L-1.5D 07	L	14	16	-	110	21	-	7	XC.. 0703..
11837920	ECC 14L-2.25D 07	L	14	16	20	83,5	31,5	38,5	7	XC.. 0703..
11837996	ECC 14L-3.0D 07 H	L	14	16	-	100	42	-	7	XC.. 0703..
11837890	ECC 14R-1.5D 07	R	14	16	-	110	21	-	7	XC.. 0703..
11837921	ECC 14R-2.25D 07	R	14	16	20	83,5	31,5	38,5	7	XC.. 0703..
11837999	ECC 14R-3.0D 07 H	R	14	16	-	100	42	-	7	XC.. 0703..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

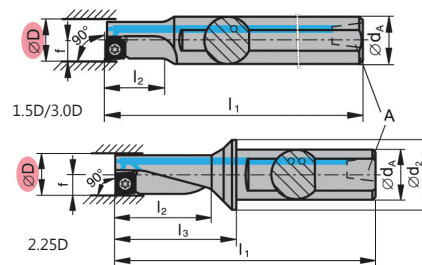
Accessories

	D inch		
		10 pieces	1 piece
XC.. 0602..	0.472	11684214	11488748
XC.. 0703..	0.551	11684216	11206195

See page 15 for Screw and Driver details

EcoCut Classic

Diameter Range: .630" - .709" (16mm - 18mm)



Pictures show right-hand version

Inch

Item Number	Description	L N R	D inch	d _A inch	d ₂ inch	l ₁ inch	l ₂ inch	l ₃ inch	f inch	A	
11065077	EC 16L-1.5D 08-E	L	0.630	0.750	-	4.92	0.94	-	0.315	1/8"-27 NPT	XC.. 0803..
11065230	EC 16L-2.25D 08-E	L	0.630	0.750	0.984	3.73	1.42	1.730	0.315	1/8"-27 NPT	XC.. 0803..
11147316	EC 16L-3.0D 08 H-E	L	0.630	0.750	-	4.33	1.89	-	0.315	1/8"-27 NPT	XC.. 0803..
11065098	EC 16R-1.5D 08-E	R	0.630	0.750	-	4.92	0.94	-	0.315	1/8"-27 NPT	XC.. 0803..
11065231	EC 16R-2.25D 08-E	R	0.630	0.750	0.984	3.73	1.42	1.730	0.315	1/8"-27 NPT	XC.. 0803..
11147332	EC 16R-3.0D 08 H-E	R	0.630	0.750	-	4.33	1.89	-	0.315	1/8"-27 NPT	XC.. 0803..
11065099	EC 18L-1.5D 09-E	L	0.709	1.000	-	5.31	1.06	-	0.354	1/4"-18 NPT	XC.. 09T3..
11065232	EC 18L-2.25D 09-E	L	0.709	1.000	1.260	4.36	1.59	2.110	0.354	1/4"-18 NPT	XC.. 09T3..
11147318	EC 18L-3.0D 09 H-E	L	0.709	1.000	-	5.05	2.12	-	0.354	1/4"-18 NPT	XC.. 09T3..
11065100	EC 18R-1.5D 09-E	R	0.709	1.000	-	5.31	1.06	-	0.354	1/4"-18 NPT	XC.. 09T3..
11065233	EC 18R-2.25D 09-E	R	0.709	1.000	1.260	4.36	1.59	2.110	0.354	1/4"-18 NPT	XC.. 09T3..
11147333	EC 18R-3.0D 09 H-E	R	0.709	1.000	-	5.04	2.12	-	0.354	1/4"-18 NPT	XC.. 09T3..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Metric

Item Number	Description	L N R	D mm	d _A mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	f mm	
11837891	ECC 16L-1.5D 08	L	16	20	-	125	24	-	8	XC.. 0803..
11837922	ECC 16L-2.25D 08	L	16	20	25	94	36	44,0	8	XC.. 0803..
11838000	ECC 16L-3.0D 08 H	L	16	20	-	110	48	-	8	XC.. 0803..
11837893	ECC 16R-1.5D 08	R	16	20	-	125	24	-	8	XC.. 0803..
11837923	ECC 16R-2.25D 08	R	16	20	25	94	36	44,0	8	XC.. 0803..
11838001	ECC 16R-3.0D 08 H	R	16	20	-	110	48	-	8	XC.. 0803..
11837894	ECC 18L-1.5D 09	L	18	25	-	135	27	-	9	XC.. 09T3..
11837924	ECC 18L-2.25D 09	L	18	25	32	109,5	40,5	53,5	9	XC.. 09T3..
11838002	ECC 18L-3.0D 09 H	L	18	25	-	125	54	-	9	XC.. 09T3..
11837897	ECC 18R-1.5D 09	R	18	25	-	135	27	-	9	XC.. 09T3..
11837926	ECC 18R-2.25D 09	R	18	25	32	109,5	40,5	53,5	9	XC.. 09T3..
11838003	ECC 18R-3.0D 09 H	R	18	25	-	125	54	-	9	XC.. 09T3..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Accessories

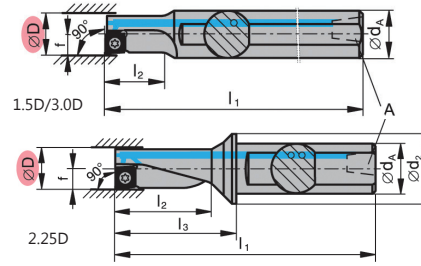
	D inch		
		10 pieces	1 piece
XC.. 0803..	0.630	11227305	11843208
XC.. 09T3..	0.709	11227305	11843208

See page 15 for Screw and Driver details



EcoCut Classic

Diameter Range: .787" - .984" (20mm - 25mm)



Pictures show right-hand version

Inch

Item Number	Description	L N R	D inch	d _A inch	d ₂ inch	l ₁ inch	l ₂ inch	l ₃ inch	f inch	A	
11065101	EC 20L-1.5D 10-E	L	0.787	1.000	-	5.91	1.18	-	0.394	1/4"-18 NPT	XC.. 10T3..
11065234	EC 20L-2.25D 10-E	L	0.787	1.000	1.260	4.42	1.77	2.170	0.394	1/4"-18 NPT	XC.. 10T3..
11147321	EC 20L-3.0D 10 H-E	L	0.787	1.000	-	5.12	2.36	-	0.394	1/4"-18 NPT	XC.. 10T3..
11065102	EC 20R-1.5D 10-E	R	0.787	1.000	-	5.91	1.18	-	0.394	1/4"-18 NPT	XC.. 10T3..
11065235	EC 20R-2.25D 10-E	R	0.787	1.000	1.260	4.42	1.77	2.170	0.394	1/4"-18 NPT	XC.. 10T3..
11147334	EC 20R-3.0D 10 H-E	R	0.787	1.000	-	5.12	2.36	-	0.394	1/4"-18 NPT	XC.. 10T3..
11065103	EC 25L-1.5D 13-E	L	0.984	1.250	-	7.09	1.48	-	0.492	1/4"-18 NPT	XC.. 1304..
11065236	EC 25L-2.25D 13-E	L	0.984	1.250	1.575	5.09	2.22	2.715	0.492	1/4"-18 NPT	XC.. 1304..
11147323	EC 25L-3.0D 13 H-E	L	0.984	1.250	-	5.91	2.95	-	0.492	1/4"-18 NPT	XC.. 1304..
11065105	EC 25R-1.5D 13-E	R	0.984	1.250	-	7.09	1.48	-	0.492	1/4"-18 NPT	XC.. 1304..
11065238	EC 25R-2.25D 13-E	R	0.984	1.250	1.575	5.09	2.22	2.715	0.492	1/4"-18 NPT	XC.. 1304..
11147335	EC 25R-3.0D 13 H-E	R	0.984	1.250	-	5.91	2.95	-	0.492	1/4"-18 NPT	XC.. 1304..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Metric

Item Number	Description	L N R	D mm	d _A mm	d ₂ mm	l ₁ mm	l ₂ mm	l ₃ mm	f mm	
11837899	ECC 20L-1.5D 10	L	20	25	-	150	30	-	10	XC.. 10T3..
11837927	ECC 20L-2.25D 10	L	20	25	32	111	45	55,0	10	XC.. 10T3..
11838017	ECC 20L-3.0D 10 H	L	20	25	-	130	60	-	10	XC.. 10T3..
11837903	ECC 20R-1.5D 10	R	20	25	-	150	30	-	10	XC.. 10T3..
11837928	ECC 20R-2.25D 10	R	20	25	32	111	45	55,0	10	XC.. 10T3..
11838019	ECC 20R-3.0D 10 H	R	20	25	-	130	60	-	10	XC.. 10T3..
11837905	ECC 25L-1.5D 13	L	25	32	-	180	37,5	-	12,5	XC.. 1304..
11837930	ECC 25L-2.25D 13	L	25	32	40	129	56,5	69,0	12,5	XC.. 1304..
11838021	ECC 25L-3.0D 13 H	L	25	32	-	150	75	-	12,5	XC.. 1304..
11837908	ECC 25R-1.5D 13	R	25	32	-	180	37,5	-	12,5	XC.. 1304..
11837931	ECC 25R-2.25D 13	R	25	32	40	129	56,5	69,0	12,5	XC.. 1304..
11838022	ECC 25R-3.0D 13 H	R	25	32	-	150	75	-	12,5	XC.. 1304..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Accessories

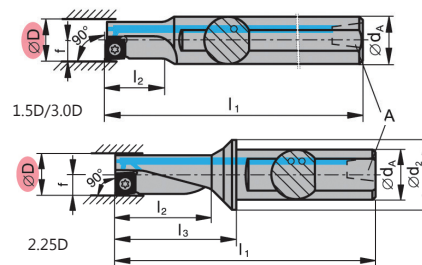
	D inch		
		10 pieces	1 piece
XC.. 10T3..	0.787	11610311	11450858
XC.. 1304..	0.984	11801441	11816974

See page 15 for Screw and Driver details



EcoCut Classic

1.260" (32mm) Diameter Tools



Pictures show right-hand version

Inch

Item Number	Description	L N R	D inch	d_A inch	d_2 inch	l_1 inch	l_2 inch	l_3 inch	f inch	A	
11065106	EC 32L-1.5D 17-E	L	1.260	1.500	-	7.87	1.89	-	0.630	1/4"-18 NPT	XC.. 1705..
11065239	EC 32L-2.25D 17-E	L	1.260	1.500	1.969	6.21	2.83	3.460	0.630	1/4"-18 NPT	XC.. 1705..
11147324	EC 32L-3.0D 17 H-E	L	1.260	1.500	-	7.28	3.78	-	0.630	1/4"-18 NPT	XC.. 1705..
11065107	EC 32R-1.5D 17-E	R	1.260	1.500	-	7.87	1.89	-	0.630	1/4"-18 NPT	XC.. 1705..
11065240	EC 32R-2.25D 17-E	R	1.260	1.500	1.969	6.21	2.83	3.460	0.630	1/4"-18 NPT	XC.. 1705..
11147336	EC 32R-3.0D 17 H-E	R	1.260	1.500	-	7.28	3.78	-	0.630	1/4"-18 NPT	XC.. 1705..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Metric

Item Number	Description	L N R	D mm	d_A mm	d_2 mm	l_1 mm	l_2 mm	l_3 mm	f mm	
11837909	ECC 32L-1.5D 17	L	32	40	-	200	48	-	16	XC.. 1705..
11837937	ECC 32L-2.25D 17	L	32	40	50	158	72	88,0	16	XC.. 1705..
11838023	ECC 32L-3.0D 17 H	L	32	40	-	185	96	-	16	XC.. 1705..
11837910	ECC 32R-1.5D 17	R	32	40	-	200	48	-	16	XC.. 1705..
11837988	ECC 32R-2.25D 17	R	32	40	50	158	72	88,0	16	XC.. 1705..
11838025	ECC 32R-3.0D 17 H	R	32	40	-	185	96	-	16	XC.. 1705..

Holder shipped with 3 insert clamping screws. Inserts and hand drivers sold separately.

Accessories

	D inch		
XC.. 1705..	1.260	10 pieces 11801441	1 piece 11816974

See page 15 for Screw and Driver details

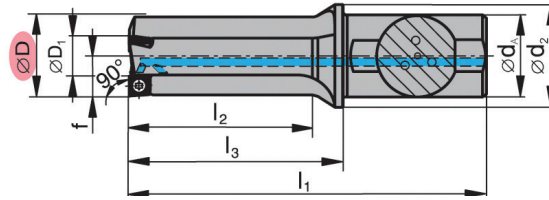
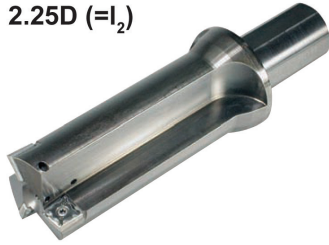
Allied Machine & Engineering Corp. patent information can be found at www.alliedmachine.com/patents



EcoCut Rebore

Diameter Range: 1.575" - 2.362" (40mm - 60mm)

2.25D (=l₂)



Picture shows right-hand version

Item Number	Description	L N R	D inch	D ₁ inch	d _A inch	d ₂ inch	l ₁ inch	l ₂ inch	l ₃ inch	f inch	
11108233	ECR 4020L03-2.25D 10	L	1.575	0.787	1.575	1.969	6.890	3.543	4.134	0.787	XC.. 10T3..
11108235	ECR 4020R03-2.25D 10	R	1.575	0.787	1.575	1.969	6.890	3.543	4.134	0.787	XC.. 10T3..
11108234	ECR 6032L03-2.25D 17	L	2.362	1.260	1.575	2.756	9.134	5.314	6.378	1.181	XC.. 1705..
11108236	ECR 6032R03-2.25D 17	R	2.362	1.260	1.575	2.756	9.134	5.314	6.378	1.181	XC.. 1705..

Discontinued. Subject to prior sale.

Accessories

	D inch	 10 pieces	 1 piece
XC.. 10T3..	1.575	11610311	11450858
XC.. 1705..	2.362	11801441	11816914

See page 15 for Screw and Driver details

	Material	Description	Key Size
	11843205	10014921/TORX 06IP F	T06IP
	11488748	10007404/TORX 07IP F	T07IP
	11206195	10002494/TORX 08IP F	T08IP
	11843208	10014922/TORX 09IP F	T09IP
	11450858	10006919/TORX 15IP	T15IP
	11816974	10013909/TORX 20IP	T20IP

	Material	Description	Length	Thread Size	Key Size	Torque Moment (Nm)	Torque Moment (in.lbs)
	11807484	M1,8x3,6-06IP/10013338	3.6	M1,8	T06IP	0,4	3.6
	11807480	M2,0x4,3-06IP/10013332	4.3	M2,0	T06IP	0,7	6.2
	11684214	M2,2x5,0-07IP/10009244	5.0	M2,2	T07IP	1,0	8.9
	11684216	M2,5x6,0-08IP/10009243	6.0	M2,5	T08IP	1,2	10.6
	11227305	M3,0x7,0-09IP/10003007	7.0	M3,0	T09IP	2,2	19.5
	11610311	M3,5X8,6-15IP/10008749	8.6	M3,5	T15IP	3,2	28.3
	11801441	M4,5X10,5-20IP/10013040	10.5	M4,5	T20IP	5,0	44.3

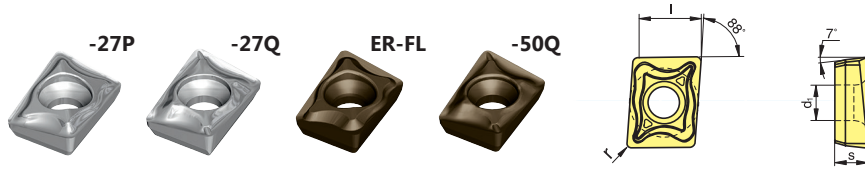
Screws supplied in packages of 10

	Material	Description	Length	Thread Size	Key Size
	310720	7897990/M8X1X8 DIN913	8	M8	SW4



EcoCut Inserts

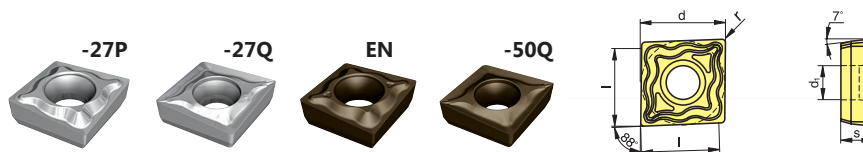
Diameter Range: .315" - .394" (8mm - 10mm)



Item Number	Description - Grade	L N R 	r inch	l ₁ inch	d inch	s inch	d ₁ inch	MasterGuide					
								Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11078744	XCET 040102FL-27P H216T	L	0.008	0.157	0.177	0.071	0.083					○	●
11215226	XCET 040102FL-27Q H210T	L	0.008	0.157	0.177	0.071	0.083		●	○		○	●
11078745	XCET 040102FR-27P H216T	R	0.008	0.157	0.177	0.071	0.083					○	●
11215241	XCET 040102FR-27Q H210T	R	0.008	0.157	0.177	0.071	0.083		●	○		○	●
11821270	XCNT 040102EL CTC1425	L	0.008	0.157	0.177	0.071	0.083	●		○		●	○
11821661	XCNT 040102EL CTC435	L	0.008	0.157	0.177	0.071	0.083	●		○		●	○
11820940	XCNT 040102EL CTC430	L	0.008	0.157	0.177	0.071	0.083	●	●	○		○	○
11821277	XCNT 040102ER CTP425	R	0.008	0.157	0.177	0.071	0.083	●		○		●	○
11821676	XCNT 040102ER CTC435	R	0.008	0.157	0.177	0.071	0.083	●		○		●	○
11820944	XCNT 040102ER CTP430	R	0.008	0.157	0.177	0.071	0.083	●	●	○		○	○
11002560	XCET 040104FL-27P H216T	L	0.016	0.157	0.177	0.071	0.083					○	●
11215229	XCET 040104FL-27Q H210T	L	0.016	0.157	0.177	0.071	0.083		●	○		○	●
11038512	XCET 040104FR-27P H216T	R	0.016	0.157	0.177	0.071	0.083					○	●
11215243	XCET 040104FR-27Q H210T	R	0.016	0.157	0.177	0.071	0.083		●	○		○	●
11821278	XCNT 040104EL CTC425	L	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11821678	XCNT 040104EL CTC435	L	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11820956	XCNT 040104EL CTP430	L	0.016	0.157	0.177	0.071	0.083	●	●	○		○	○
11838065	XCNT 040104EL-M50Q CTC425	L	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11821283	XCNT 040104ER CTC425	R	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11821681	XCNT 040104ER CTC435	R	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11820970	XCNT 040104ER CTP430	R	0.016	0.157	0.177	0.071	0.083	●	●	○		○	○
11838386	XCNT 040104ER-M50Q CTC425	R	0.016	0.157	0.177	0.071	0.083	●		○		●	○
11078798	XCET 050202FN-27P H216T	N	0.008	0.197	0.228	0.083	0.089					○	●
11215250	XCET 050202FN-27Q H210T	N	0.008	0.197	0.228	0.083	0.089		●	○		○	●
11821288	XCNT 050202EN CTC425	N	0.008	0.197	0.228	0.083	0.089	●		○		●	○
11821687	XCNT 050202EN CTC435	N	0.008	0.197	0.228	0.083	0.089	●		○		●	○
11820986	XCNT 050202EN CTP430	N	0.008	0.197	0.228	0.083	0.089	●	●	○		○	○
11038705	XCET 050204FN-27P H216T	N	0.016	0.197	0.228	0.083	0.089					○	●
11215256	XCET 050204FN-27Q H210T	N	0.016	0.197	0.228	0.083	0.089		●	○		○	●
11821618	XCNT 050204EN CTC425	N	0.016	0.197	0.228	0.083	0.089	●		○		●	○
11821905	XCNT 050204EN CTC435	N	0.016	0.197	0.228	0.083	0.089	●		○		●	○
11820995	XCNT 050204EN CTP430	N	0.016	0.197	0.228	0.083	0.089	●	●	○		○	○
11838388	XCNT 050204EN-M50Q CTC425	N	0.016	0.197	0.228	0.083	0.089	●		○		●	○

EcoCut Inserts

Diameter Range: .472" - .709" (12mm - 18mm)

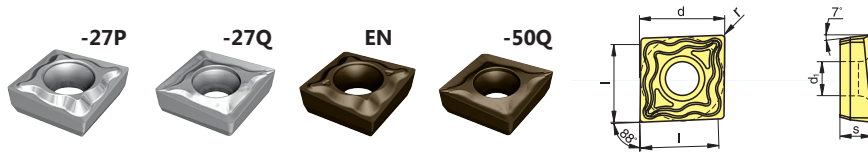


Item Number	Description - Grade	L N R	r inch	l inch	d inch	s inch	d1 inch	MasterGuide					
								Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11078799	XCET 060202FN-27P H216T	N	0.008	0.236	0.256	0.094	0.098						
11214549	XCET 060202FN-27Q H210T	N	0.008	0.236	0.256	0.094	0.098						
11821622	XCNT 060202EN CTC425	N	0.008	0.236	0.256	0.094	0.098						
11821912	XCNT 060202EN CTC435	N	0.008	0.236	0.256	0.094	0.098						
11821184	XCNT 060202EN CTP430	N	0.008	0.236	0.256	0.094	0.098						
11038706	XCET 060204FN-27P H216T	N	0.016	0.236	0.256	0.094	0.098						
11214551	XCET 060204FN-27Q H210T	N	0.016	0.236	0.256	0.094	0.098						
11821624	XCNT 060204EN CTC425	N	0.016	0.236	0.256	0.094	0.098						
11821914	XCNT 060204EN CTC435	N	0.016	0.236	0.256	0.094	0.098						
11821189	XCNT 060204EN CTP430	N	0.016	0.236	0.256	0.094	0.098						
11838393	XCNT 060204EN-M50Q CTC425	N	0.016	0.236	0.256	0.094	0.098						
11038707	XCET 070304FN-27P H216T	N	0.016	0.276	0.299	0.125	0.110						
11214569	XCET 070304FN-27Q H210T	N	0.016	0.276	0.299	0.125	0.110						
11821625	XCNT 070304EN CTC425	N	0.016	0.276	0.299	0.125	0.110						
11821920	XCNT 070304EN CTC435	N	0.016	0.276	0.299	0.125	0.110						
11821203	XCNT 070304EN CTP430	N	0.016	0.276	0.299	0.125	0.110						
11838406	XCNT 070304EN-M50Q CTC425	N	0.016	0.276	0.299	0.125	0.110						
11002562	XCET 080304FN-27P H216T	N	0.016	0.315	0.335	0.125	0.134						
11210378	XCET 080304FN-27Q H210T	N	0.016	0.315	0.335	0.125	0.134						
11821629	XCNT 080304EN CTC425	N	0.016	0.315	0.335	0.125	0.134						
11821923	XCNT 080304EN CTC435	N	0.016	0.315	0.335	0.125	0.134						
11821204	XCNT 080304EN CTP 430	N	0.016	0.315	0.335	0.125	0.134						
11838408	XCNT 080304EN-M50Q CTC425	N	0.016	0.315	0.335	0.125	0.134						
11038881	XCET 09T304FN-27P H216T	N	0.016	0.354	0.378	0.156	0.134						
11210380	XCET 09T304FN-27Q H210T	N	0.016	0.354	0.378	0.156	0.134						
11821635	XCNT 09T304EN CTC425	N	0.016	0.354	0.378	0.156	0.134						
11821928	XCNT 09T304EN CTC435	N	0.016	0.354	0.378	0.156	0.134						
11821210	XCNT 09T304EN CTP430	N	0.016	0.354	0.378	0.156	0.134						
11838413	XCNT 09T304EN-M50Q CTC425	N	0.016	0.354	0.378	0.156	0.134						



EcoCut Inserts

Diameter Range: .787" - 1.260" (20mm - 32mm)



Item Number	Description - Grade	L N R 	r inch	l ₁ inch	d inch	s inch	d ₁ inch	MasterGuide					
								Steel	Heat Resistant	Stainless	Hard Materials	Cast Iron	Non Ferrous metals
11038878	XCET 10T304FN-27P H216T	N	0.016	0.394	0.417	0.156	0.173					○	●
11161897	XCET 10T304FN-27Q H210T	N	0.016	0.394	0.417	0.156	0.173		●	○		○	●
11821640	XCNT 10T304EN CTCP425	N	0.016	0.394	0.417	0.156	0.173	●		○		●	
11821931	XCNT 10T304EN CTCP435	N	0.016	0.394	0.417	0.156	0.173	●		○		●	
11821225	XCNT 10T304EN CTPP430	N	0.016	0.394	0.417	0.156	0.173	●	●	●		○	○
11838418	XCNT 10T304EN-M50Q CTCP425	N	0.016	0.394	0.417	0.156	0.173	●		○		●	
11078800	XCET 10T308FN-27P H216T	N	0.031	0.394	0.417	0.156	0.173					○	●
11161900	XCET 10T308FN-27Q H210T	N	0.031	0.394	0.417	0.156	0.173		●	○		○	●
11821647	XCNT 10T308EN CTCP425	N	0.031	0.394	0.417	0.156	0.173	●		○		●	
11821946	XCNT 10T308EN CTCP435	N	0.031	0.394	0.417	0.156	0.173	●		○		●	
11821229	XCNT 10T308EN CTPP430	N	0.031	0.394	0.417	0.156	0.173	●	●	●		○	○
11838432	XCNT 10T308EN-M50Q CTCP425	N	0.031	0.394	0.417	0.156	0.173	●		○		●	
11002564	XCET 130404FN-27P H216T	N	0.016	0.492	0.531	0.187	0.209					○	●
11161904	XCET 130404FN-27Q H210T	N	0.016	0.492	0.531	0.187	0.209		●	○		○	●
11821695	XCNT 130404EN CTCP425	N	0.016	0.492	0.531	0.187	0.209	●		○		●	
11821950	XCNT 130404EN CTCP435	N	0.016	0.492	0.531	0.187	0.209	●		○		●	
11821230	XCNT 130404EN CTPP430	N	0.016	0.492	0.531	0.187	0.209	●	●	●		○	○
11838442	XCNT 130404EN-M50Q CTCP425	N	0.016	0.492	0.531	0.187	0.209	●		○		●	
11078801	XCET 130408FN-27P H216T	N	0.031	0.492	0.531	0.187	0.209					○	●
11161907	XCET 130408FN-27Q H210T	N	0.031	0.492	0.531	0.187	0.209		●	○		○	●
11821656	XCNT 130408EN CTCP425	N	0.031	0.492	0.531	0.187	0.209	●		○		●	
11821952	XCNT 130408EN CTCP435	N	0.031	0.492	0.531	0.187	0.209	●		○		●	
11821233	XCNT 130408EN CTPP430	N	0.031	0.492	0.531	0.187	0.209	●	●	●		○	○
11838444	XCNT 130408EN-M50Q CTCP425	N	0.031	0.492	0.531	0.187	0.209	●		○		●	
11038879	XCET 170508FN-27P H216T	N	0.031	0.63	0.689	0.219	0.209					○	●
11161908	XCET 170508FN-27Q H210T	N	0.031	0.63	0.689	0.219	0.209		●	○		○	●
11821658	XCNT 170508EN CTCP425	N	0.031	0.63	0.689	0.219	0.209	●		○		●	
11821953	XCNT 170508EN CTCP435	N	0.031	0.63	0.689	0.219	0.209	●		○		●	
11821239	XCNT 170508EN CTPP430	N	0.031	0.63	0.689	0.219	0.209	●	●	●		○	○
11838446	XCNT 170508EN-M50Q CTCP425	N	0.031	0.63	0.689	0.219	0.209	●		○		●	

Technical Information



CONTENTS

EcoCut Cutting Data	20-21
EcoCut Mini Drilling Depth / Feed Rate	22
EcoCut Classic Drilling Depth / Feed Rate	23-25
EcoCut Rebore Drilling Depth / Feed Rate	26
Application Recommendations	27-31
EcoCut Troubleshooting Info	32
Guaranteed Test / Demo Form	34
Warranty Information	35



**ALLIED MACHINE
& ENGINEERING CORP**



EcoCut

Cutting Data

Material	Hardness (HB)	Type of Treatment / Alloy	
Low and Medium Carbon Steel	125	annealed	≤ 0,15% C
	150-250	annealed	0,15% - 0,45% C
	300	tempered	≥ 0,45% C
Alloyed Steel	180	annealed	
	250-300	tempered	
	350	tempered	
High Strength Alloy Steel	200	annealed	
	350	tempered	
Heat Resistant Alloys	200		Fe-base
	280		Fe-base
	250		Ni or Co-base
	-		Ni or Co-base 30 - 58 HRC
	-		Ni or Co-base 1500 - 2000 N/mm ²
Titanium Alloys	R _m 440*		pure titanium
	R _m 1050*		alpha + beta alloys
Stainless Steel	200	annealed	ferritic / martensitic
	180	quenched	austenitic
	230-260	quenched	duplex
	330	hardened	martensitic / austenitic
Tempered Steel	55 HRC	hardened and tempered	
	60 HRC	hardened and tempered	
Chilled Castings	400	cast	
White Cast Iron	55 HRC	hardened and tempered	
Grey Cast Iron	180		perlitic / ferritic
	260		perlitic / martensitic
Ductile Cast Iron	160		ferritic
	-		perlitic
Tempered Iron	130		ferritic
	230		perlitic
Aluminum Wrought Alloys	60	non hardened	
	100	hardened	
Aluminum Cast Alloys	80	non hardened	< 12% Si
	90	hardened	< 12% Si
	130	non hardened	> 12% Si
Copper and Copper Alloys (Bronze, Brass)	-		machining alloy stock (1% Pb)
	-		brass, red bronze
	90		bronze
	100		lead-free copper and electrolytic copper
Non-metal Materials	100		thermosetting plastics
	-		fiber reinforced plastics
	-		hard rubber

* R_m = maximum strength, measured in MPa

$$\text{SFM} = \text{RPM} \cdot 0.262 \cdot \text{Dia.}$$

$$\text{RPM} = \text{SFM} \cdot 3.82 / \text{Dia.}$$

$$\text{IPM} = \text{RPM} \cdot \text{IPR}$$



SPEED						
EcoCut Mini		EcoCut Classic				
CTWN 425	CTPP 435	H210T	H216T	CTCP 425	CTPP 430	CTCP 435
V _c SFM	V _c SFM	V _c SFM	V _c SFM	V _c SFM	V _c SFM	V _c SFM
-	200-750	-	-	490-985	390-820	460-920
-	200-525	-	-	400-720	260-590	330-650
-	160-430	-	-	330-650	200-525	260-590
-	200-525	-	-	400-720	260-590	330-650
-	160-430	-	-	330-590	200-490	260-525
-	160-330	-	-	260-490	200-430	230-460
-	200-460	-	-	360-625	260-560	330-590
-	130-330	-	-	230-490	160-430	200-460
80-130	65-165	115-165	100-150	-	65-300	65-165
65-100	65-130	80-130	65-115	-	65-300	65-130
65-100	50-65	80-130	65-115	-	65-300	50-65
50-80	30-65	65-100	50-80	-	65-300	30-65
50-80	30-65	50-80	50-80	-	65-300	30-65
100-330	165-400	260-460	100-330	-	130-330	165-400
80-200	100-165	130-330	80-200	-	100-300	100-165
-	130-650	-	-	390-720	160-525	330-650
-	130-590	-	-	330-650	160-590	330-590
-	130-330	-	-	-	160-430	-
-	130-260	-	-	-	160-400	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
260-460	330-590	460-650	390-525	430-920	400-650	400-820
200-400	260-525	330-525	300-460	430-920	330-590	400-820
295-490	330-590	525-650	430-560	390-920	400-650	360-820
200-360	260-525	360-490	300-430	390-920	330-590	360-820
330-590	330-650	525-720	460-650	360-920	300-525	330-820
260-460	295-525	460-590	390-525	360-920	230-490	330-820
260-6500	260-6500	400-9850	330-8200	-	260-6500	260-6500
260-4900	260-4900	400-8200	330-6550	-	260-4900	260-4900
260-4900	260-4900	400-6550	330-4900	-	260-4900	260-4900
260-4250	260-4250	400-5900	330-4900	-	260-4250	260-4250
260-1970	260-1970	400-3280	330-2625	-	260-1970	260-1970
260-1310	260-1310	400-2625	330-1970	-	260-1310	260-1310
260-1310	260-1310	400-2625	330-1970	-	260-1310	260-1310
260-985	260-985	400-1970	330-1310	-	260-985	260-985
260-650	260-650	400-1310	330-985	-	260-650	260-650
200-525	200-525	295-720	260-590	-	200-525	200-525
165-460	165-460	260-650	200-490	-	165-460	165-450
260-650	260-650	390-985	330-820	-	260-650	260-650



EcoCut Mini

Drilling Depth / Feed Rate (IPR)

EcoCut Mini	Longitudinal Turning and Boring Feed Chart (2.25D)				
	Depth of Cut (inch)				
	up to 0.039	0.040 - 0.079	0.080 - 0.118	0.119 - 0.157	
EC 04..	.0002-.0039	.0002-.0020	-	-	
EC 05..	.0002-.0039	.0002-.0024	-	-	
EC 06..	.0002-.0039	.0002-.0032	.0002-.0016	-	
EC 07..	.0002-.0039	.0002-.0039	.0002-.0024	-	
EC 08..	.0002-.0039	.0002-.0039	.0002-.0032	.0002-.0016	

EcoCut Mini	Face Turning Feed Chart (2.25D)				
	Depth of Cut (inch)				
	up to 0.0079	0.008 - 0.0157	0.0158 - 0.0236	0.0237 - 0.0315	0.0316 - 0.0394
EC 04..	.0003-.0028	.0003-.0028	.0003-.0028	-	-
EC 05..	.0003-.0028	.0003-.0028	.0003-.0028	-	-
EC 06..	.0003-.0028	.0003-.0028	.0003-.0028	-	-
EC 07..	.0003-.0031	.0003-.0031	.0003-.0031	.0003-.0031	.0003-.0031
EC 08..	.0003-.0031	.0003-.0031	.0003-.0031	.0003-.0031	.0003-.0031

2.25xD Drilling Feed Rates					
EcoCut Mini	EC 04..	EC 05..	EC 06..	EC 07..	EC 08..
Feed Rate (IPR)	.0002-.0012	.0002-.0012	.0002-.0012	.0002-.0014	.0002-.0016

EcoCut Mini	Longitudinal Turning and Boring Feed Chart (4.0D)				
	Depth of Cut (inch)				
	up to 0.0039	0.040 - 0.079	0.080 - 0.118	0.119 - 0.157	
EC 04..	.0002-.0031	-	-	-	
EC 05..	.0002-.0035	.0002-.0016	-	-	
EC 06..	.0002-.0035	.0002-.0016	-	-	
EC 07..	.0002-.0039	.0002-.0023	-	-	
EC 08..	.0002-.0039	.0002-.0031	.0002-.0016	-	

EcoCut Mini	Face Turning Feed Chart (4.0D)				
	Depth of Cut (inch)				
	up to 0.0079	0.008 - 0.0157	0.0158 - 0.0236	0.0237 - 0.0315	0.0316 - 0.0394
EC 04..	.0003-.0020	.0003-.0020	.0003-.0020	-	-
EC 05..	.0003-.0020	.0003-.0020	.0003-.0020	-	-
EC 06..	.0003-.0020	.0003-.0020	.0003-.0020	-	-
EC 07..	.0003-.0023	.0003-.0023	.0003-.0023	.0003-.0023	.0003-.0023
EC 08..	.0003-.0023	.0003-.0023	.0003-.0023	.0003-.0023	.0003-.0023

4.0xD Drilling Feed Rates					
EcoCut Mini	EC 04..	EC 05..	EC 06..	EC 07..	EC 08..
Feed Rate (IPR)	.0002-.0010	.0002-.0010	.0002-.0010	.0002-.0011	.0002-.0012



EcoCut Classic

Drilling Depth / Feed Rate (IPR)



EcoCut Holder	Longitudinal Turning and Boring Feed Chart (1.5D)						
	Depth of Cut (inch)						
	up to 0.079	0.080 - 0.157	0.158 - 0.236	0.237 - 0.315	0.316 - 0.394	0.395 - 0.472	0.473 - 0.551
EC 08..	.0005-.005	.0005-.003	-	-	-	-	-
EC 08.. With MasterFinish	.001-.010	.001-.006	-	-	-	-	-
EC 10..	.0005-.006	.0005-.0035	-	-	-	-	-
EC 10.. With MasterFinish	.001-.012	.001-.007	-	-	-	-	-
EC 12..	.0005-.0065	.0005-.0055	.0005-.004	-	-	-	-
EC 12.. With MasterFinish	.001-.013	.001-.011	.001-.008	-	-	-	-
EC 14..	.0007-.0073	.0007-.0073	.0007-.005	-	-	-	-
EC 14.. With MasterFinish	.0014-.0145	.0014-.0145	.0014-.010	-	-	-	-
EC 16..	.0007-.008	.0007-.008	.0007-.006	.0007-.004	-	-	-
EC 16.. With MasterFinish	.0014-.016	.0014-.016	.0014-.012	.0014-.008	-	-	-
EC 18..	.0008-.0087	.0008-.0087	.0008-.008	.0008-.006	-	-	-
EC 18.. With MasterFinish	.0016-.0175	.0016-.0175	.0016-.016	.0016-.012	-	-	-
EC 20..	.0008-.0095	.0008-.0095	.0008-.009	.0008-.0075	.0008-.006	-	-
EC 20.. With MasterFinish	.0016-.019	.0016-.019	.0016-.018	.0016-.015	.0016-.012	-	-
EC 25..	.0009-.0105	.0009-.0105	.0009-.0105	.0009-.0095	.0009-.008	.0009-.0063	-
EC 25.. With MasterFinish	.0018-.021	.0018-.021	.0018-.021	.0018-.019	.0018-.016	.0018-.0125	-
EC 32..	.001-.012	.001-.012	.001-.012	.001-.012	.001-.0103	.001-.0088	.001-.0073
EC 32.. With MasterFinish	.002-.024	.002-.024	.002-.024	.002-.024	.002-.0205	.002-.0175	.002-.0145

EcoCut Holder	Face Turning Feed Chart (1.5D)						
	Depth of Cut (inch)						
	up to 0.079	0.080 - 0.157	0.158 - 0.236	0.237 - 0.315			
EC 08..	.0005-.0037	-	-	-			
EC 08.. With MasterFinish	.001-.0075	-	-	-			
EC 10..	.0005-.005	-	-	-			
EC 10.. With MasterFinish	.001-.010	-	-	-			
EC 12..	.0005-.0058	-	-	-			
EC 12.. With MasterFinish	.001-.0115	-	-	-			
EC 14..	.0005-.0065	-	-	-			
EC 14.. With MasterFinish	.001-.013	-	-	-			
EC 16..	.0005-.0073	.0005-.0073	-	-			
EC 16.. With MasterFinish	.001-.0149	.001-.0149	-	-			
EC 18..	.0005-.008	.0005-.008	-	-			
EC 18.. With MasterFinish	.001-.016	.001-.016	-	-			
EC 20..	.0005-.0088	.0005-.0088	-	-			
EC 20.. With MasterFinish	.001-.0175	.001-.0175	-	-			
EC 25..	.0005-.010	.0005-.010	.0005-.010	-			
EC 25.. With MasterFinish	.001-.020	.001-.020	.001-.020	-			
EC 32..	.0005-.011	.0005-.011	.0005-.011	.0005-.011			
EC 32.. With MasterFinish	.001-.022	.001-.022	.001-.022	.001-.022			

1.5xD Drilling Feed Rates									
EcoCut Classic	EC 08..	EC 10..	EC 12..	EC 14..	EC 16..	EC 18..	EC 20..	EC 25..	EC 32..
Feed Rate (IPR)	.0004-.0016	.0004-.0018	.0004-.0023	.0006-.0030	.0008-.0031	.0012-.0035	.0012-.0039	.0016-.0047	.0018-.0059



EcoCut Classic

Drilling Depth / Feed Rate (IPR)

EcoCut Holder	Longitudinal Turning and Boring Feed Chart (2.25D)						
	Depth of Cut (inch)						
	up to 0.039	0.040 - 0.079	0.080 - 0.118	0.119 - 0.157	0.158 - 0.197	0.198 - 0.236	0.237 - 0.276
EC 08..	.0008-.0052	.0008-.004	-	-	-	-	-
EC 08.. With MasterFinish	.0016-.0104	.0016-.008	-	-	-	-	-
EC 10..	.0008-.006	.0008-.0052	.0008-.0035	-	-	-	-
EC 10.. With MasterFinish	.0016-.012	.0016-.0104	.0008-.007	-	-	-	-
EC 12..	.0008-.0065	.0008-.0065	.0008-.005	.0008-.004	-	-	-
EC 12.. With MasterFinish	.0016-.013	.0016-.013	.0016-.010	.0016-.008	-	-	-
EC 14..	.0009-.0072	.0009-.0072	.0009-.0058	.0009-.0045	-	-	-
EC 14.. With MasterFinish	.0018-.0145	.0018-.0145	.0018-.0115	.0018-.009	-	-	-
EC 16..	.001-.008	.001-.008	.001-.007	.001-.0055	-	-	-
EC 16.. With MasterFinish	.002-.016	.002-.016	.002-.014	.002-.011	-	-	-
EC 18..	.001-.0085	.001-.0085	.001-.008	.001-.0065	.001-.005	-	-
EC 18.. With MasterFinish	.002-.017	.002-.017	.002-.016	.002-.013	.002-.010	-	-
EC 20..	.001-.0095	.001-.0095	.001-.0095	.001-.008	.001-.0065	-	-
EC 20.. With MasterFinish	.002-.019	.002-.019	.002-.019	.002-.016	.001-.013	-	-
EC 25..	.001-.0105	.001-.0105	.001-.0105	.001-.0105	.001-.0085	.001-.007	-
EC 25.. With MasterFinish	.002-.021	.002-.021	.002-.021	.002-.021	.002-.017	.002-.014	-
EC 32..	.001-.012	.001-.012	.001-.012	.001-.012	.001-.011	.001-.0085	.001-.008
EC 32.. With MasterFinish	.002-.024	.002-.024	.002-.024	.002-.024	.002-.022	.002-.017	.002-.016

EcoCut Holder	Face Turning Feed Chart (2.25D)						
	Depth of Cut (inch)						
	up to 0.039	0.040 - 0.079	0.080 - 0.118	0.119 - 0.157	0.158 - 0.197	0.198 - 0.236	
EC 08..	.0005-.0037	.0005-.0037	-	-	-	-	
EC 08.. With MasterFinish	.001-.0075	.001-.0075	-	-	-	-	
EC 10..	.0005-.005	.0005-.005	-	-	-	-	
EC 10.. With MasterFinish	.001-.010	.001-.010	-	-	-	-	
EC 12..	.0005-.0058	.0005-.0058	-	-	-	-	
EC 12.. With MasterFinish	.001-.0115	.001-.0115	-	-	-	-	
EC 14..	.0005-.0065	.0005-.0065	.0005-.0065	-	-	-	
EC 14.. With MasterFinish	.001-.013	.001-.013	.001-.013	-	-	-	
EC 16..	.0005-.0073	.0005-.0073	.0005-.0073	-	-	-	
EC 16.. With MasterFinish	.001-.0145	.001-.0145	.001-.0145	-	-	-	
EC 18..	.0005-.008	.0005-.008	.0005-.008	.0005-.008	-	-	
EC 18.. With MasterFinish	.001-.016	.001-.016	.001-.016	.001-.016	-	-	
EC 20..	.0005-.0085	.0005-.0085	.0005-.0085	.0005-.0085	-	-	
EC 20.. With MasterFinish	.001-.017	.001-.017	.001-.017	.001-.017			
EC 25..	.0005-.0095	.0005-.0095	.0005-.0095	.0005-.0095	.0005-.0095	-	
EC 25.. With MasterFinish	.001-.019	.001-.019	.001-.019	.001-.019	.001-.019		
EC 32..	.0005-.0108	.0005-.0108	.0005-.0108	.0005-.0108	.0005-.0108	.0005-.0108	
EC 32.. With MasterFinish	.001-.0215	.001-.0215	.001-.0215	.001-.0215	.001-.0215	.001-.0215	

2.25xD Drilling Feed Rates									
EcoCut Classic	EC 08..	EC 10..	EC 12..	EC 14..	EC 16..	EC 18..	EC 20..	EC 25..	EC 32..
Feed Rate (IPR)	.0004-.0016	.0004-.0018	.0004-.0023	.0006-.0030	.0008-.0031	.0012-.0035	.0012-.0039	.0016-.0047	.0018-.0059

EcoCut Classic

Drilling Depth / Feed Rate (IPR)



EcoCut Holder	Longitudinal Turning and Boring Feed Chart (3.0D)						
	Depth of Cut (inch)						
	up to 0.039	0.040 - 0.079	0.080 - 0.118	0.119 - 0.157	0.158 - 0.197	0.198 - 0.236	0.237 - 0.276
EC 08..	.0008-.0052	.0008-.004	-	-	-	-	-
EC 08.. With MasterFinish	.0016-.0104	.0016-.008	-	-	-	-	-
EC 10..	.0008-.006	.0008-.0052	.0008-.0035	-	-	-	-
EC 10.. With MasterFinish	.0016-.012	.0016-.0104	.0008-.007	-	-	-	-
EC 12..	.0008-.0065	.0008-.0063	.0008-.005	.0008-.004	-	-	-
EC 12.. With MasterFinish	.0016-.013	.0016-.0125	.0016-.010	.0016-.008	-	-	-
EC 14..	.0009-.0072	.0009-.0072	.0009-.0058	.0009-.0045	-	-	-
EC 14.. With MasterFinish	.0018-.0145	.0018-.0145	.0018-.0115	.0018-.009	-	-	-
EC 16..	.001-.008	.001-.008	.001-.007	.001-.0055	-	-	-
EC 16.. With MasterFinish	.002-.016	.002-.016	.002-.014	.002-.011	-	-	-
EC 18..	.001-.0085	.001-.0085	.001-.008	.001-.0065	.001-.005	-	-
EC 18.. With MasterFinish	.002-.017	.002-.017	.002-.016	.002-.013	.002-.010	-	-
EC 20..	.001-.0095	.001-.0095	.001-.0095	.001-.008	.001-.0065	-	-
EC 20.. With MasterFinish	.002-.019	.002-.019	.002-.019	.002-.016	.001-.013	-	-
EC 25..	.001-.0105	.001-.0105	.001-.0105	.001-.010	.001-.0085	.001-.0068	-
EC 25.. With MasterFinish	.002-.021	.002-.021	.002-.021	.002-.020	.002-.017	.002-.0135	-
EC 32..	.001-.012	.001-.012	.001-.012	.001-.012	.001-.011	.001-.0085	.001-.008
EC 32.. With MasterFinish	.002-.024	.002-.024	.002-.024	.002-.024	.002-.022	.002-.017	.002-.016

EcoCut Holder	Face Turning Feed Chart (3.0D)						
	Depth of Cut (inch)						
	up to 0.039	0.040 - 0.079	0.080 - 0.118				
EC 08..	.0005-.003	-	-				
EC 08.. With MasterFinish	.001-.006	-	-				
EC 10..	.0005-.0037	-	-				
EC 10.. With MasterFinish	.001-.0075	-	-				
EC 12..	.0005-.0045	-	-				
EC 12.. With MasterFinish	.001-.009	-	-				
EC 14..	.0005-.0047	-	-				
EC 14.. With MasterFinish	.001-.0095	-	-				
EC 16..	.0005-.0062	.0005-.0062	-				
EC 16.. With MasterFinish	.001-.0124	.001-.0124	-				
EC 18..	.0005-.0055	.0005-.0055	-				
EC 18.. With MasterFinish	.001-.011	.001-.011	-				
EC 20..	.0005-.0085	.0005-.0085	-				
EC 20.. With MasterFinish	.001-.017	.001-.017	-				
EC 25..	.0005-.0073	.0005-.0073	.0005-.0073				
EC 25.. With MasterFinish	.001-.0145	.001-.0145	.001-.0145				
EC 32..	.0005-.008	.0005-.008	.0005-.008				
EC 32.. With MasterFinish	.001-.016	.001-.016	.001-.016				

3.0xD Drilling Feed Rates									
EcoCut Classic	EC 08..	EC 10..	EC 12..	EC 14..	EC 16..	EC 18..	EC 20..	EC 25..	EC 32..
Feed Rate (IPR)	.0004-.0012	.0004-.0014	.0004-.0015	.0006-.0023	.0008-.0024	.0012-.0026	.0012-.0029	.0016-.0038	.0018-.0045



EcoCut Rebore

Drilling Depth / Feed Rate (IPR)

EcoCut Rebore	Longitudinal Turning Feed Chart						
	Depth of Cut (inch)						
	up to 0.079	0.080 - 0.157	0.158 - 0.197	0.198 - 0.315	0.316 - 0.394	0.395 - 0.472	0.473 - 0.551
ECR 40..	.001-.016	.001-.015	.001-.012	.001-.009	-	-	-
ECR 60..	.001-.016	.001-.016	.001-.015	.001-.013	.001-.010	.001-.0075	.001-.005

EcoCut Holder	Face Turning Feed Chart						
	Depth of Cut (inch)						
	up to 0.020	0.021 - 0.040	0.041 - 0.060	0.061 - 0.080	0.081 - 0.100	0.101 - 0.120	
ECR 40..	.0005-.012	.0005-.012	.0005-.012	.0005-.012	-	-	
ECR 60..	.0005-.012	.0005-.012	.0005-.012	.0005-.012	.0005-.012	.0005-.012	

EcoCut Holder	Face Turning Feed Chart						
	Depth of Cut (inch)						
	0.787	1.181	1.575	1.969	2.362		
ECR 40..	.002-.016	.002-.035	.002-.035	-	-		
ECR 60..	-	-	.002-.030	.002-.045	.002-.045		

EcoCut

Application Recommendations



Mounting of the insert

For tools $\varnothing$ 8 mm, right-hand or left-hand inserts are required.
From $\varnothing$ 10-32 mm, neutral inserts are applied.



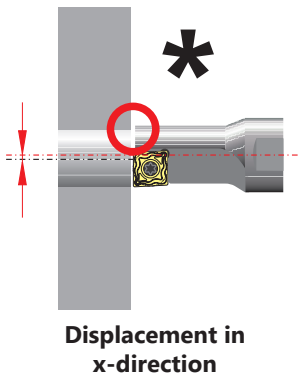
Through hole

With through holes, a **sharp-edged disk** is created as tool break-out occurs.

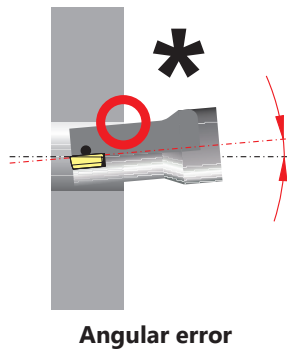
WARNING

Hand protection such as cut-resistant gloves is recommended when handling the disk.

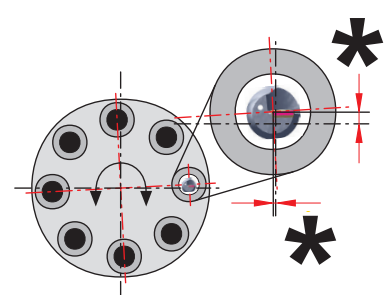
Axial displacement of the machine



Displacement in
x-direction



Angular error

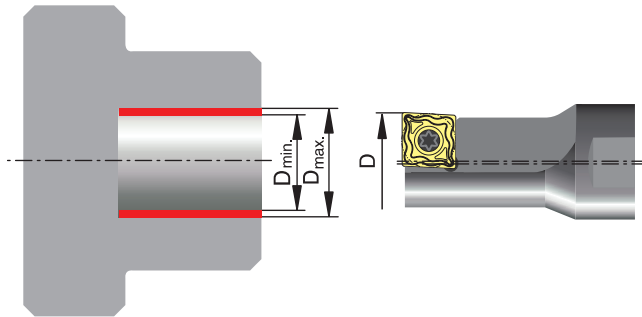


Turret position error



EcoCut

Application Recommendations



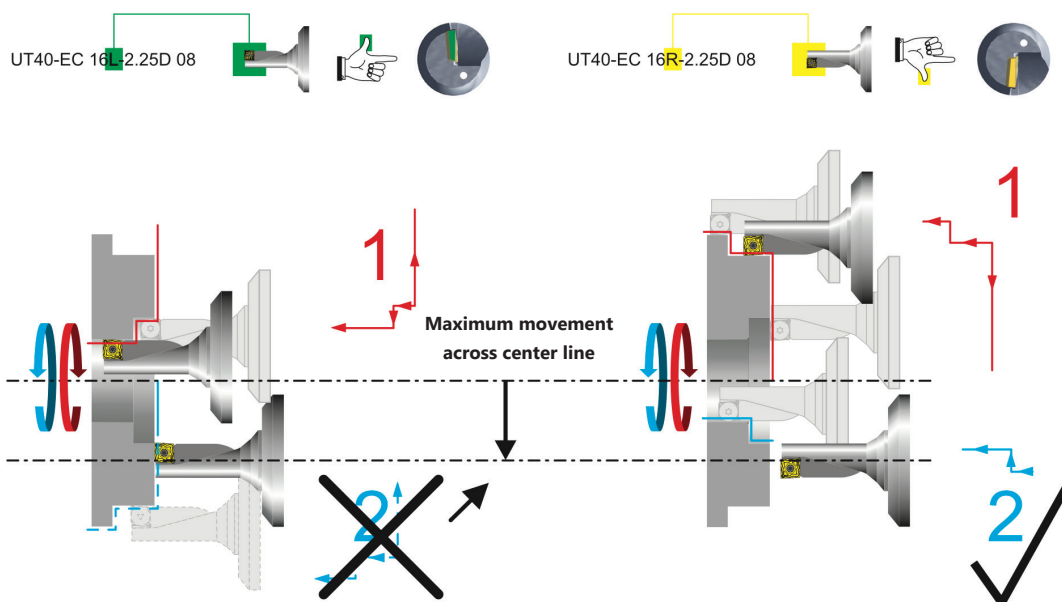
Off-center drilling

Off-center drilling is possible due to the special construction of EcoCut tools and inserts. Thus desired deviations from the tool's nominal diameter can be obtained (see table below).

Type of tool Solid carbide	Nominal tool	Work piece bore diameter	
	D [inch]	D _{min} [inch]	D _{max} [inch]
ECM 04 L/R - 2.25D	.157	.154	.165
ECM 05 L/R - 2.25D	.197	.193	.205
ECM 06 L/R - 2.25D	.236	.232	.244
ECM 07 L/R - 2.25D	.276	.272	.283
ECM 08 L/R - 2.25D	.315	.311	.323

Type of tool	Nominal tool	Work piece bore diameter	
	D [inch]	D _{min} [inch]	D _{max} [inch]
ECC 08 L/R - ... 04	.315	.309	.327
ECC 10 L/R - ... 05	.394	.388	.413
ECC 12 L/R - ... 06	.472	.467	.492
ECC 14 L/R - ... 07	.551	.542	.571
ECC 16 L/R - ... 08	.63	.624	.65
ECC 18 L/R - ... 09	.709	.703	.728
ECC 20 L/R - ... 10	.787	.78	.807
ECC 25 L/R - ... 13	.984	.976	1.016
ECC 32 L/R - ... 17	1.26	1.252	1.299

Machining across center line



Situation:

In case of insufficient movement of the machine across the center line, the external diameter cannot be machined with the same tool.

Solution

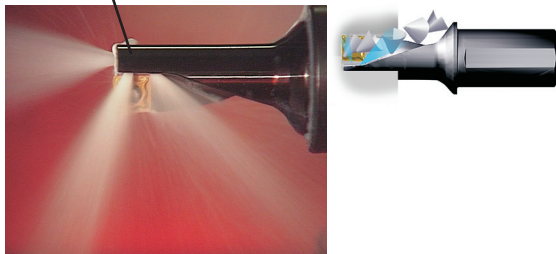
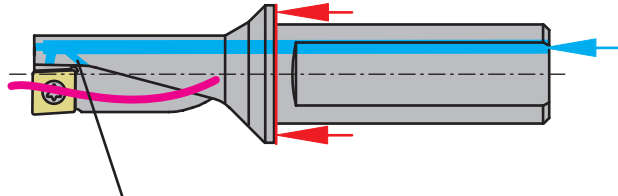
Use a right-hand EcoCut tool.



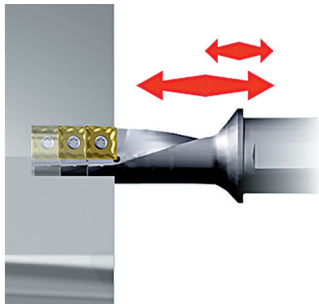
EcoCut

Application Recommendations

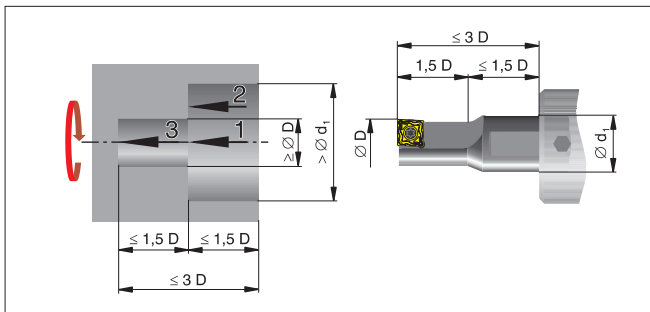
Chip booster/coolant pressure



EcoCut offers an innovative detail solution for **range 2.25D**, namely additional bidirectional coolant supply for better chip evacuation. An additional **backwards directed coolant stream** improves chip transportation from the flute area. Minimum coolant pressure required 22 - 44 psi.



If the necessary coolant pressure is not available, it can be advantageous to interrupt the cutting action in order to clear the bore.



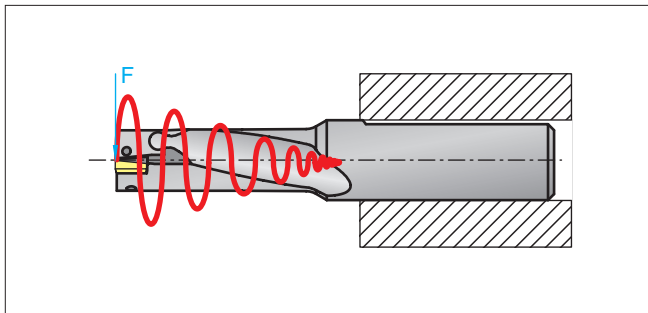
Deep bores up to 3xD

With a stepped bore approach, EcoCut tools EC..1.5D can be machined with holes of up to three times the nominal diameter (see picture). Operation sequences 1, 2, and 3, respectively, should be followed.

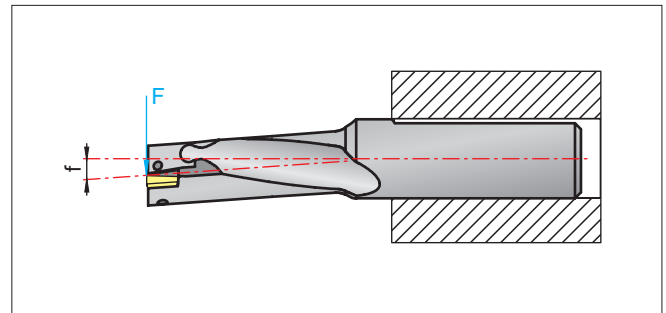
The advantages of DENSIMET compared to steel

The new generation of our EcoCut 3.0D series with the new designation offers maximized performance. The tools are classified with the new designation **ECC .. R/L-3.0D .. H** and have particularly been developed for bigger drilling depths and maximum precision requirements. The material used here is DENSIMET, a PLANSEE tungsten heavy metal alloy. The high modulus of elasticity as well as its density give this alloy very good vibration-damping properties. The result is highest precision, excellent surface quality and improved tool life.

Material	Nominal tool Ø Modulus of elasticity (N/mm ²)	Density (g/mm ³)
Steel	210 000	7,85
DENSIMET	360 000	17,50

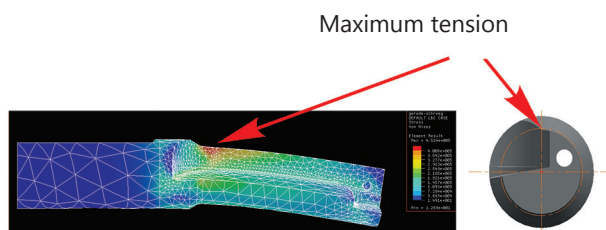


Vibration-damping

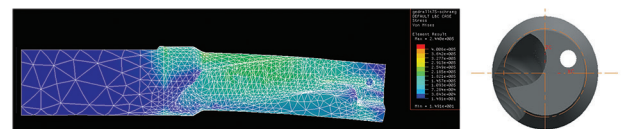


40% lower deflection than steel

The new chip flute design



Version with straight chip flute



Version with helical chip flute

Up to 50% reduced tensions in the tool through Finite Element Modelling (FEM), optimized chip pocket design



EcoCut

Troubleshooting Guide

Type of problem								Corrective measures	
Wear type				Workpiece problems		Chip control			
Edge chipping	Built-up edge	Wear on clearance face	Plastic deformation	Vibrations	Surface finish	Chip too long (ribbon chip)	Chip too short (fragmented chip)		
	↑	↓	↓	↓	↑	↓		Cutting speed	Cutting values
↓		~	↓	↑	↓	↑	↓	Feed	
↑		↑	↑	↓	↑			Corner radius	Insert selection
								larger ↓ ↑ smaller	
↓		↑	↑					Cutting material	wear resistance ↓ ↑ toughness
~				~	~			Tool clamping	General criteria
~				~	~			Workpiece clamping	
~				~	↓			Overhang	
~		~		~	~			Tip height	
	●	●	●		●	●		Cooling lubricant	
↑	raise, increase, large influence			↓	avoid, reduce large influence			~	check, optimize
↑	raise, increase low influence			↓	avoid, reduce low influence			●	use



Guaranteed Test/Demo Application Form

Distributor PO # _____

The following must be filled out completely before test will be considered

Distributor: _____	End User: _____
Contact: _____	Contact: _____
Account Number: _____	Industry: _____
Phone: _____	Phone: _____
Email: _____	Email: _____

Current Process List all tooling, coatings, substrates, speeds and feeds, tool life and any problems

Test Objective List what would make this a successful test (i.e. Penetration Rate, Finish, Tool Life, Hole Size, etc.)

Application Information

Hole Diameter: _____ in/mm	Tolerance: _____	Material: _____ (4150/A36/Cast Iron/etc.)
Pre-existing Diameter: _____ in/mm	Depth of Cut: _____ in/mm	Hardness: _____ (BHN/Rc)
Required Finish: _____ RMS	Material State: _____ (Casting/Hot Rolled/Forging)	

Machine Information

Machine Type: _____ (Lathe/Screw Machine/Machine Center, etc.)	Builder: _____ (Haas/Mori Seiki, etc.)	Model#: _____
Shank Required: _____ (CAT50, Morse Taper, etc.)	Rigidity: ☐ Excellent ☐ Good ☐ Poor	Tool Rotating: ☐ Yes ☐ No
Power: _____ HP/KW	Orientation: ☐ Vertical ☐ Horizontal	
Thrust: _____ Lbs./N		

Coolant Information

Coolant Delivery: _____ (Through Tool/Flood)	Coolant Pressure: _____ PSI/bar
Coolant Type: _____ (Air Mist/Oil/Synthetic/Water Soluble, etc.)	Coolant Volume: _____ GPM/LPM

Requested Tooling

QTY	Item Number	QTY	Item Number

Allied Machine & Engineering Corp.
Telephone: (330) 343-4283
Toll Free USA & Canada: (800) 321-5537
Fax: (330) 602-3400

Warranty Information



Allied Machine & Engineering Corp. warrants to original equipment manufacturers, distributors, industrial and commercial users of its products that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

Allied's obligation under this warranty is limited to furnishing without additional charge for a replacement, or the option of repairing or issuing credit for any product which shall within one year from the date of sale be returned freight prepaid to the plant designated by an Allied representative and which upon inspection is determined by Allied to be defective in materials or workmanship.

Complete information as to operating conditions, machine, set-up, and application of cutting fluid should accompany any product returned for inspection. The provisions of this warranty shall not apply to any Allied products which have been subjected to misuse, improper operating conditions, machine set-up or application of cutting fluid or which have been repaired or altered if such repair or alteration in the judgment of Allied would adversely affect performance of the product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Allied shall have no liability or responsibility on any claim of any kind, whether in contract, tort or otherwise, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery or use of any product sold hereunder, in excess of the cost of replacement or repair as provided herein.

ALL PRICES, DELIVERIES, DESIGNS, AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



**ALLIED MACHINE
& ENGINEERING CORP**

120 Deeds Drive
Dover, OH 44622
Ph. (330) 343-4283
Toll Free USA & Canada (800) 321-5537
Fax. (330) 602-3400
Toll Free USA & Canada (800) 223-5140
International Country Code: 01
Website: www.alliedmachine.com
Email: info@alliedmachine.com

Regional Distribution Warehouse Locations

USA

Allied Machine & Engineering Corp.
120 Deeds Drive - PO Box 36
Dover, Ohio 44622-0036

Ph: (330) 343-4283
(800) 321-5537 (*Toll Free USA & Canada*)
Fax: (330) 602-3400
(800) 223-5140 (*Toll Free USA & Canada*)
(330) 364-7666 (*Engineering*)

Europe

Allied Maxcut Engineering Co. Limited
93 Vantage Point, Pensnett Estate
Kingswinford, West Midlands
DY6 7FR ENGLAND

Ph: 011 -44-1384-400900
Fax: 011 -44-1384-400105

Singapore

Allied Machine & Engineering Corp.
1 Ubi View
#3-18 Focus One
Singapore SG 408555

Ph: (330) 343-4283
Fax: (330) 602-3400
(330) 364-7666 (*Engineering*)
Email: exports@alliedmachine.com



Allied Machine & Engineering Corp.
Registered to ISO 9001:2008
10001329

Also available

Allied Drilling Products Catalog



Allied Drilling Products are designed and manufactured by Allied Machine & Engineering Corp. The combination of premium materials, along with unique geometry and coatings allows for the finest drilling systems in the metal cutting industry, resulting in the lowest cost per hole.

Literature Order Number: ADP

Allied Threadmilling Catalog



AccuThread 856® specific Threadmills conform with J1926 and SAE AS5202 and have a thicker core and a helical flute which offers increased strength and rigidity when cutting forces are applied. AccuThread 856 provides superior thread forms compared to other competitive threadmills and taps.

Literature Order Number: TMC

Allied Criterion Boring Systems



Allied Criterion products offer a wide variety of options that can cover a range of .050" in diameter. Products include CB Style Boring Head, Cri-Twin®, Cri-Bore®, LCB1500, and CBER®. Ideal for close tolerance precision boring.

Literature Order Number: CRIT-14

ALVAN® Reamers



The ALVAN® product line includes monobloc, ring style, and replaceable head reamers, offered with carbide, cermet, PCD, and CBN cutting edges.

Literature Order Number: ALV

