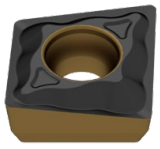
New products for machining technicians

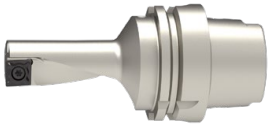
NEW ISO-P indexable inserts



Update of the reliable CVD EcoCut grades CTCP425 / CTCP435. With the update, the grades are more wear-resistant and have a wear-detection coating layer.

→ Page 13

NEW EcoCut Classic with direct machine interface



The new EcoCut Classic product range with direct machine interface performs the same application functions as all other EcoCut Classic tools, but the new monotools impress when it comes to stability – and therefore run quietly and very reliably. Furthermore, chip removal has been optimised thanks to the updated chip space, guaranteeing process security.

→ Page 20+21

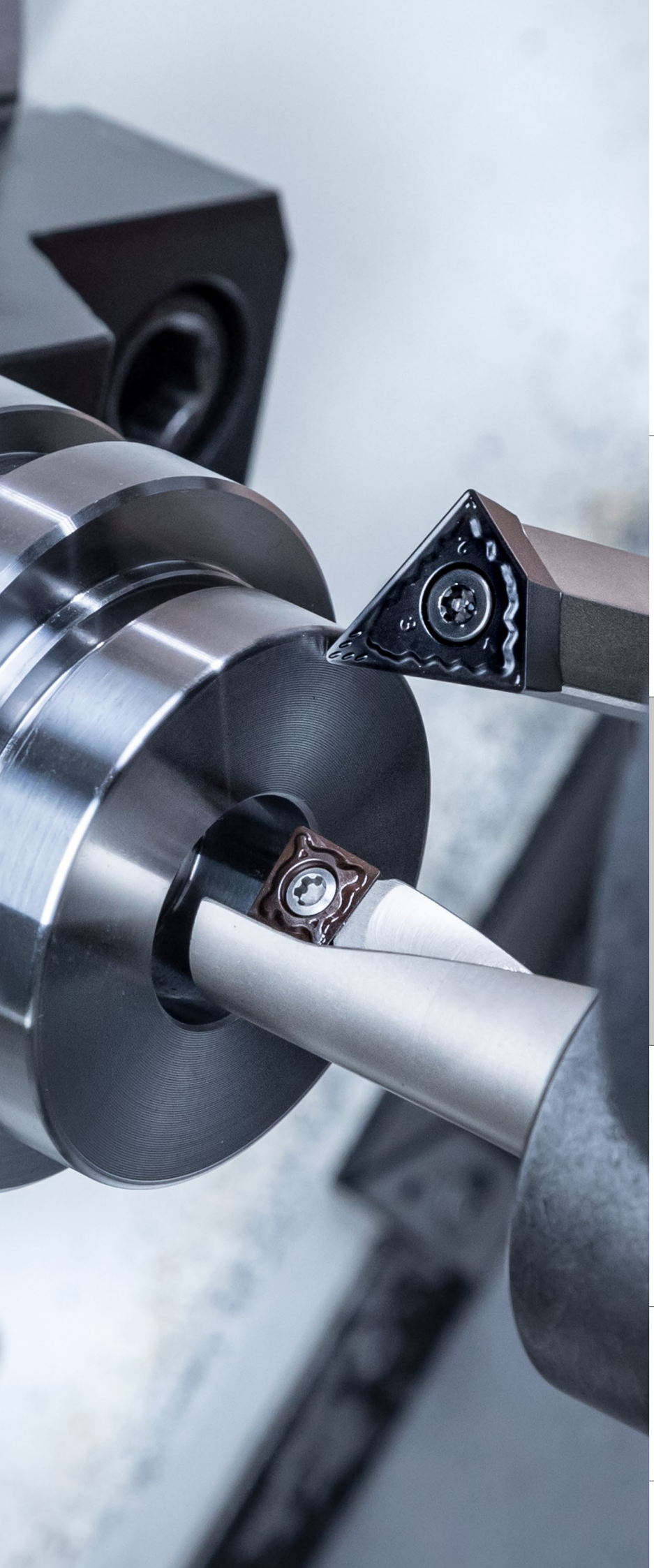


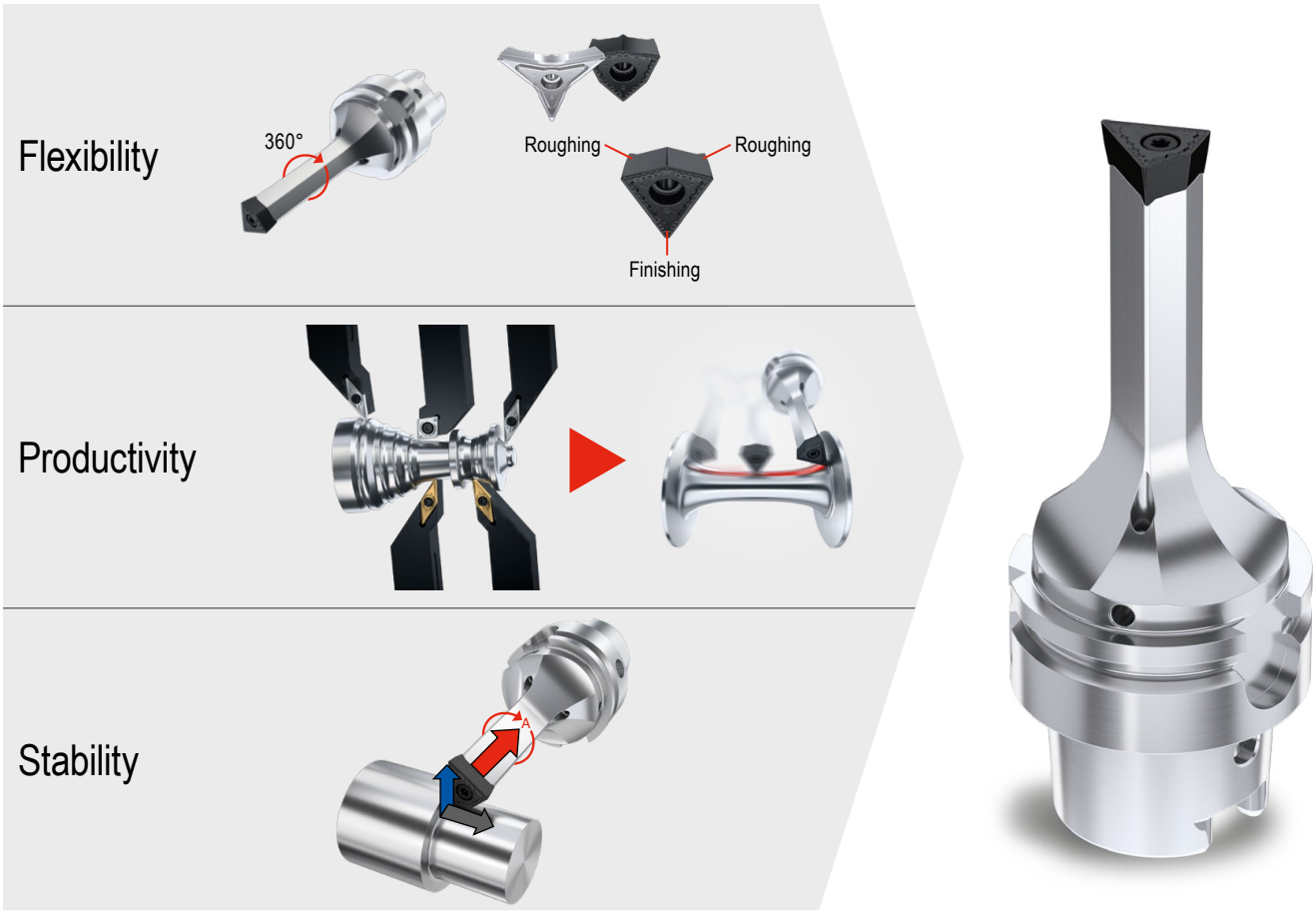
Table of contents

CERATIZIT \ Performance

Premium quality tools for high performance.

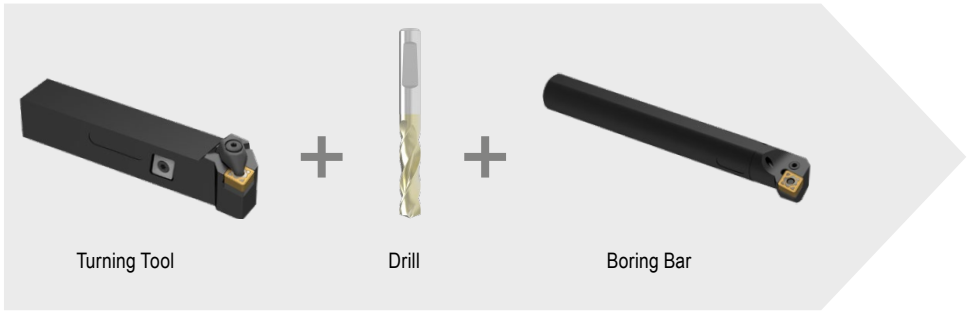
The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

Advantages of FreeTurn

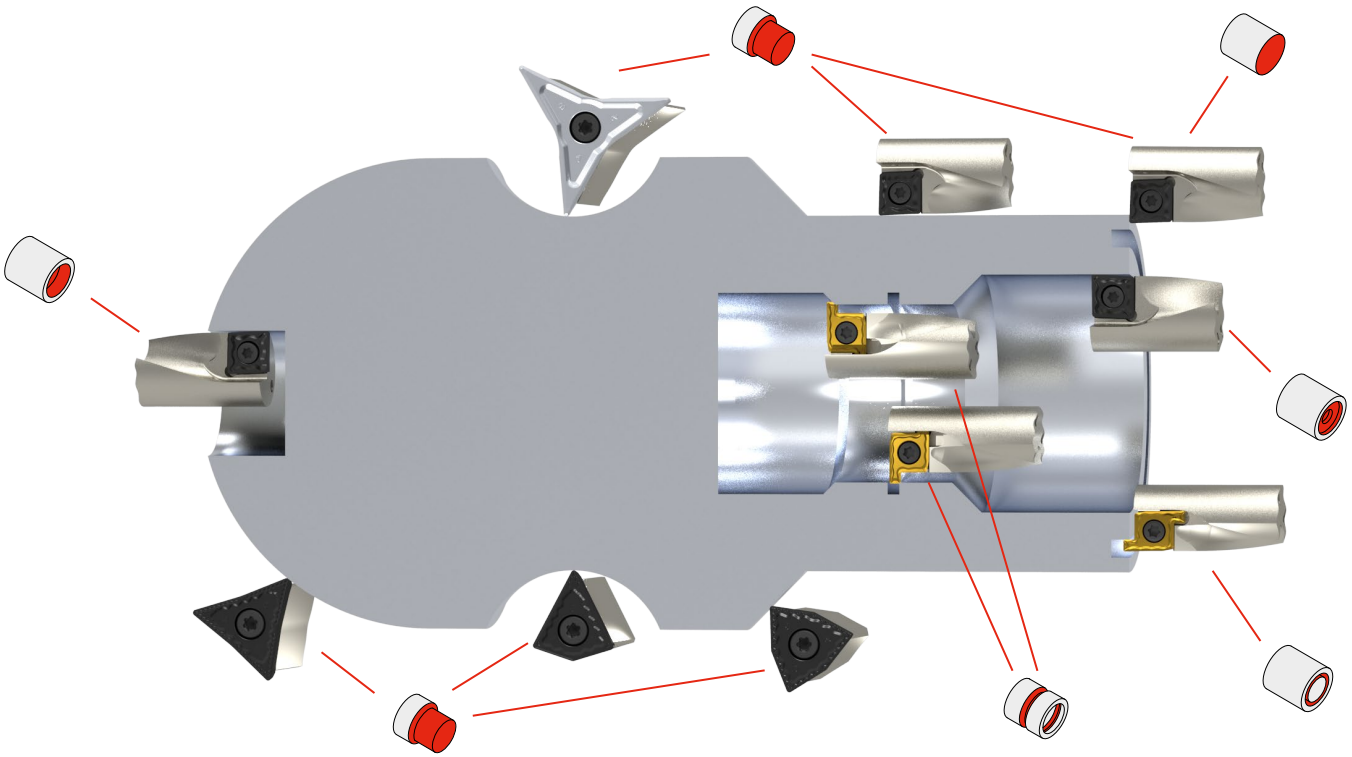


Advantages of EcoCut

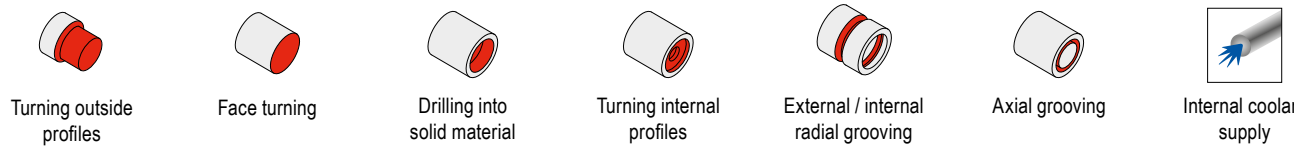
- ▲ reduced machining time
- ▲ reduced need for tool positions
- ▲ generates flat bottom of hole
- ▲ less programming
- ▲ lower set-up costs / reduced setting time
- ▲ time savings due to fewer tool changes



Application examples



Symbol explanation



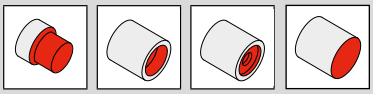
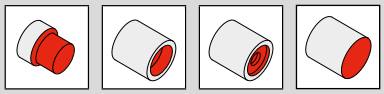
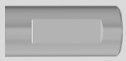
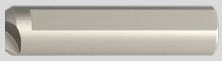
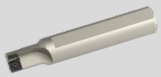
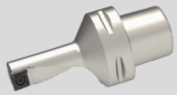
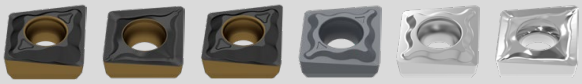
-28P — Polished chip breaker
H216T — Carbide Grade

F Fine Machining
M Medium Machining
R Rough Machining

Smooth cut
Irregular cutting depth
Interrupted cut

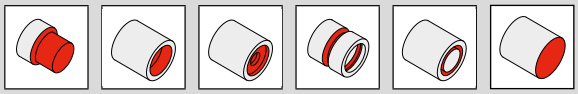
10

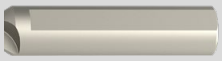
Toolfinder

Tool system	EcoCut Mini	EcoCut Classic
Application		
Machine interface	  → 10–12 Adapter for EcoCut Mini	  HSK-T 63  PSC 50 PSC 63
Lengths and diameters Versions	2.25xD Ø 0.078–0.314" 4xD Ø 0.078–0.314"  → 8 2.25xD Ø 0.078–0.314" 4xD Ø 0.078–0.314"  → 9	1.5xD Ø 0.314–1.260" Ø 8–32 mm  → 14+15 2.25xD Ø 0.314–1.260" Ø 8–32 mm  → 16+17 3xD Ø 0.314–1.260" Ø 8–32 mm  → 18+19 2.25xD Ø 16–32 mm  HSK-T → 20 2.25xD Ø 16–32 mm  PSC → 21
Cutting material designation	CTPP435	CTPP435	CTWN425	CTWN425	CTCP425-P	-M50Q CTCP425-P	CTCP435-P	CTPP430	-27P H216T	-27Q H210T
Cutting conditions	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		
										
	Solid carbide	Solid carbide	Solid carbide	Solid carbide	M	M	M	M	M	M
	Left-hand	Right-hand	Left-hand	Right-hand	XCNT	XCNT	XCNT	XCNT	XCET	XCET
Application range	● ● ○ ○ ● ○	● ● ○ ○ ● ○	○ ● ○	○ ● ○	● ○ ○	● ○ ○	● ○ ○	● ● ○	○ ● ○	○ ● ●
Page No.	○ → 8	○ → 8	○ → 9	○ → 9	○ → 13	○ → 13	○ → 13	○ → 13	○ → 13	○ → 13
	→ v_c Page 36+37				→ v_c Page 36+37					

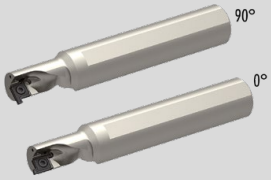
→ **Page 56**
EcoCut tools are suitable for off-centre drilling. This permits certain deviations from the nominal tool diameter to be achieved.

EcoCut ProfileMaster



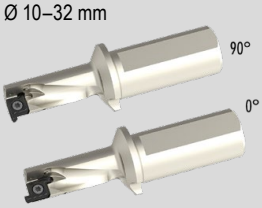


1.5xD
Ø 0.394–1.260"
Ø 10–32 mm



→ 24+25

2.25xD
Ø 0.394–1.260"
Ø 10–32 mm



→ 26+27

-M20 CTPP430	-M20 CTPP430
DRAGONSKIN	DRAGONSKIN

M	M
PM-R	PM-L
●	●
●	●
○	○
○	○
●	●
○	○

→ 22+23 → 22+23

→ v_c Page 36+37

FreeTurn

HSK-T 63

PSC 63

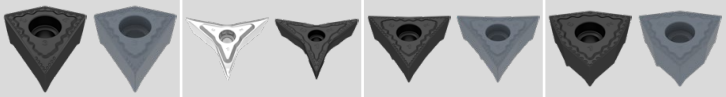
HSK-T
LPR = 3.937"
LPR = 4.921"

→ 31+34

PSC
LPR = 3.937"
LPR = 4.921"

→ 32+34

CTCP125	CTPM125	-28P H216T	-F CTCP125	CTCP125	CTPM125	CTCP125	CTPM125
DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN



M	M	F	F	F	F	F	F	M	M	M
FT15 . 808055...			FT15 . 353535...			FT15 . 555555...			FT17 . 808080...		
●	○			●		●	○		●	○	
	●						●			●	
○			○	○		○			○		
			●								
			○								
			○								

→ 28 → 28 → 29 → 29 → 30 → 30 → 33 → 33

→ v_c Page 38+39

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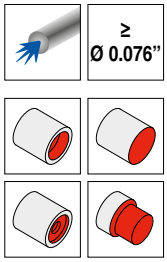
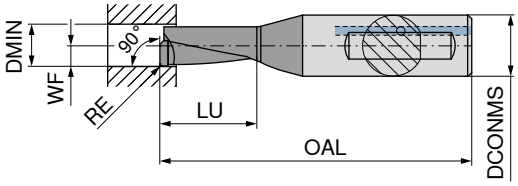
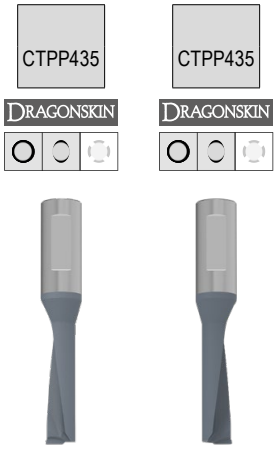
EcoCut – Mini

▲ Drilling and turning tool for small diameters





Illustrations show right-hand versions

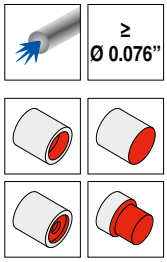


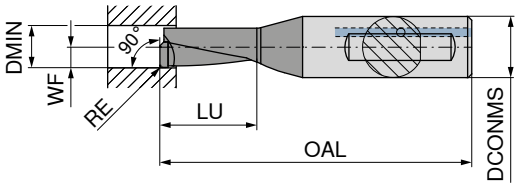
Designation	DMIN inch	DCONMS inch	OAL inch	LU inch	WF inch	RE inch	Solid carbide Left-hand 70 805 ...	Solid carbide Right-hand 70 804 ...
ECM 02 R/L 2,25D	0.079	0.157	1.102	0.177	0.039	0.004	320	320
ECM 02 R/L 4,00D	0.079	0.157	1.220	0.315	0.039	0.004	321	321
ECM 02,5 R/L 2,25D	0.098	0.157	1.142	0.222	0.049	0.004	325	325
ECM 02,5 R/L 4,00D	0.098	0.157	1.299	0.394	0.049	0.004	326	326
ECM 03 R/L 2,25D	0.118	0.157	1.220	0.266	0.059	0.004	330	330
ECM 03 R/L 4,00D	0.118	0.157	1.378	0.472	0.059	0.004	331	331
ECM 03,5 R/L 2,25D	0.138	0.157	1.260	0.310	0.069	0.004	335	335
ECM 03,5 R/L 4,00D	0.138	0.157	1.457	0.551	0.069	0.004	336	336
ECM 04 R/L 2,25D	0.157	0.236	1.378	0.354	0.079	0.008	300	300
ECM 04 R/L 4,00D	0.157	0.236	1.614	0.630	0.079	0.008	301	301
ECM 05 R/L 2,25D	0.197	0.236	1.457	0.443	0.098	0.008	302	302
ECM 05 R/L 4,00D	0.197	0.236	1.772	0.787	0.098	0.008	303	303
ECM 06 R/L 2,25D	0.236	0.315	1.496	0.531	0.118	0.008	306	306
ECM 06 R/L 4,00D	0.236	0.315	1.929	0.945	0.118	0.008	312	312
ECM 07 R/L 2,25D	0.276	0.315	1.654	0.620	0.138	0.008	308	308
ECM 07 R/L 4,00D	0.276	0.315	2.087	1.102	0.138	0.008	314	314
ECM 08 R/L 2,25D	0.315	0.315	1.772	0.709	0.157	0.008	310	310
ECM 08 R/L 4,00D	0.315	0.315	2.244	1.260	0.157	0.008	316	316
P							●	●
M							●	●
K							○	○
N							○	○
S							●	●
H								
O							○	○

→ v_c Page 36+37

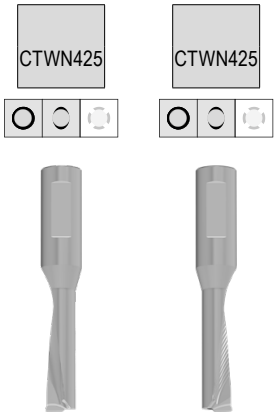
EcoCut – Mini

▲ Drilling and turning tool for small diameters





Illustrations show right-hand versions



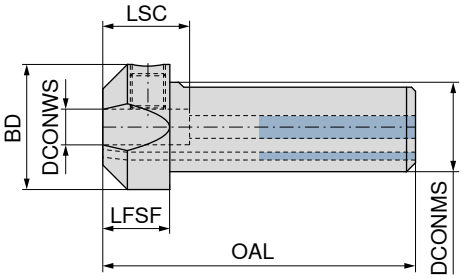
Designation	DMIN inch	DCONMS inch	OAL inch	LU inch	WF inch	RE inch	Solid carbide Left-hand 70 805 ...		Solid carbide Right-hand 70 804 ...
ECM 02 R/L 2,25D AL	0.079	0.157	1.102	0.177	0.039	0.004	420		420
ECM 02 R/L 4,00D AL	0.079	0.157	1.220	0.315	0.039	0.004	421		421
ECM 02,5 R/L 2,25D AL	0.098	0.157	1.142	0.222	0.049	0.004	425		425
ECM 02,5 R/L 4,00D AL	0.098	0.157	1.299	0.394	0.049	0.004	426		426
ECM 03 R/L 2,25D AL	0.118	0.157	1.220	0.266	0.059	0.004	430		430
ECM 03 R/L 4,00D AL	0.118	0.157	1.378	0.472	0.059	0.004	431		431
ECM 03,5 R/L 2,25D AL	0.138	0.157	1.260	0.310	0.069	0.004	435		435
ECM 03,5 R/L 4,00D AL	0.138	0.157	1.457	0.551	0.069	0.004	436		436
ECM 04 R/L 2,25D AL	0.157	0.236	1.378	0.354	0.079	0.008	450		450
ECM 04 R/L 4,00D AL	0.157	0.236	1.614	0.630	0.079	0.008	451		451
ECM 05 R/L 2,25D AL	0.197	0.236	1.457	0.443	0.098	0.008	452		452
ECM 05 R/L 4,00D AL	0.197	0.236	1.772	0.787	0.098	0.008	453		453
ECM 06 R/L 2,25D AL	0.236	0.315	1.496	0.531	0.118	0.008	456		456
ECM 06 R/L 4,00D AL	0.236	0.315	1.929	0.945	0.118	0.008	462		462
ECM 07 R/L 2,25D AL	0.276	0.315	1.654	0.620	0.138	0.008	458		458
ECM 07 R/L 4,00D AL	0.276	0.315	2.087	1.102	0.138	0.008	464		464
ECM 08 R/L 2,25D AL	0.315	0.315	1.772	0.709	0.157	0.008	460		460
ECM 08 R/L 4,00D AL	0.315	0.315	2.244	1.260	0.157	0.008	466		466
P									
M									
K							○		○
N							●		●
S							○		○
H									
O							○		○

→ v_c Page 36+37

EcoCut – Adapter Mini

Scope of supply:

Toolholder with one clamping screw



Designation	DCONWS inch	DCONMS inch	BD inch	OAL inch	LFSF inch	LSC inch	70 800 ...
EC-ADX12-04-E	0.157	0.750	0.984	2.500	0.551	0.709	**719**
EC-ADX12-06-E	0.236	0.750	0.984	2.500	0.551	0.709	**986**
EC-ADX12-08-E	0.315	0.750	0.984	2.500	0.551	0.709	**988**

Clamping screw

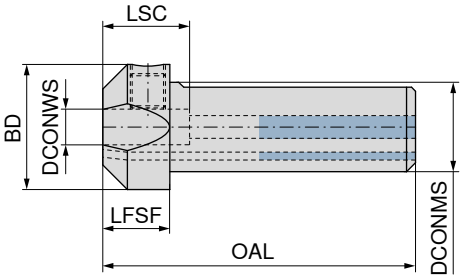
Spare parts DCONWS		70 950 ...
0.157	M5x10 ISO 4026	**867**
0.236	M8x1x8 - SW4	**123**
0.315	M8x1x8 - SW4	**123**

Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

EcoCut – Adapter Mini

Scope of supply:

Toolholder with one clamping screw



Designation	DCONWS mm	DCONMS mm	BD mm	OAL mm	LFSF mm	LSC mm	70 800 ...
EC-ADX16-04	4	16	22	59	14	18	**716**
EC-ADX20-04	4	20	25	64	14	18	**720**
EC-ADX16-06	6	16	22	59	14	18	**976**
EC-ADX20-06	6	20	25	64	14	18	**996**
EC-ADX16-08	8	16	22	59	14	18	**978**
EC-ADX20-08	8	20	25	64	14	18	**998**

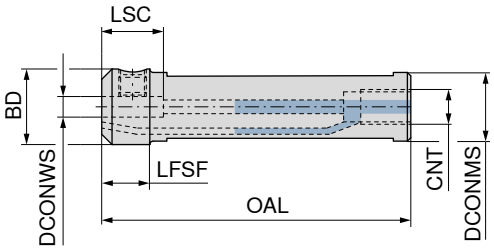
Clamping screw

Spare parts DCONWS		70 950 ...
4	M5x10 ISO 4026	**867**
6	M8x1x8 - SW4	**123**
8	M8x1x8 - SW4	**123**

Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

EcoCut – Mini adapter with coolant connection thread

Scope of supply:
Toolholder with one clamping screw



Designation	DCONWS mm	DCONMS mm	BD mm	OAL mm	LFSF mm	LSC mm	CNT	70 801 ...
ECA 16-04	4	16	20.0	75	14	18	G 1/8	**716**
ECA 20-04	4	20	19.6	90	14	18	G 1/8	**720**
ECA 22-04	4	22	21.6	110	14	18	G 1/8	**722**
ECA 16-06	6	16	22.0	75	14	18	G 1/8	**816**
ECA 20-06	6	20	22.0	90	14	18	G 1/8	**820**
ECA 22-06	6	22	21.6	110	14	18	G 1/8	**822**
ECA 16-08	8	16	22.0	75	14	18	G 1/8	**916**
ECA 20-08	8	20	22.0	90	14	18	G 1/8	**920**
ECA 22-08	8	22	21.6	110	14	18	G 1/8	**922**

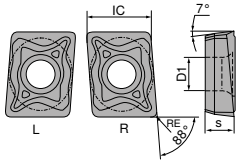
Clamping screw

Spare parts DCONWS		70 950 ...
4	M5X8 - DIN 913	**13200**
6	M8x1x8 - SW4	**123**
8	M8x1x8 - SW4	**123**

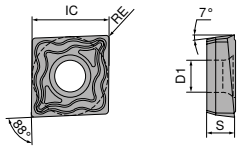
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

XCNT / XCET

Designation	S inch	D1 inch	IC inch
XC.T 0401..	0.071	0.083	0.177
XC.T 0502..	0.083	0.089	0.228
XC.T 0602..	0.094	0.098	0.256
XC.T 0703..	0.125	0.110	0.299
XC.T 0803..	0.125	0.134	0.335
XC.T 09T3..	0.156	0.134	0.378
XC.T 10T3..	0.156	0.173	0.417
XC.T 1304..	0.187	0.209	0.531
XC.T 1705..	0.219	0.209	0.689

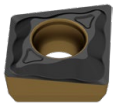
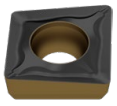
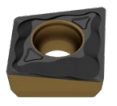
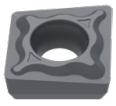
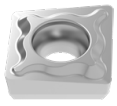


XC. T 04..



XC. T 05../06../07../08../09../10../13../17..

XCNT / XCET

	NEW	NEW	NEW			
	-EN CTCP425-P	-M50Q CTCP425-P	-EN CTCP435-P	-EN CTPP430	-27P H216T	-27Q H210T
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		
						
	M	M	M	M	M	M
	XCNT	XCNT	XCNT	XCNT	XCET	XCET
	70 386 ...	70 386 ...	70 386 ...	70 386 ...	70 286 ...	70 286 ...

ISO	RE inch											
040102EL	0.008	72001				82001		920				
040102ER	0.008	72201				82201		922				
040102FL	0.008									620		120
040102FR	0.008									622		122
040104EL	0.016	70001		75001		80001		900				
040104ER	0.016	70201		75201		80201		902				
040104FL	0.016									600		100
040104FR	0.016									602		102
050202EN	0.008	72301				82301		923				
050202FN	0.008									623		123
050204EN	0.016	70301		75301		80301		903				
050204FN	0.016									603		103
060202EN	0.008	72401				82401		924				
060202FN	0.008									624		124
060204EN	0.016	70401		75401		80401		904				
060204FN	0.016									604		104
070304EN	0.016	70501		75501		80501		905				
070304FN	0.016									605		105
080304EN	0.016	70601		75601		80601		906				
080304FN	0.016									606		106
09T304EN	0.016	70701		75701		80701		907				
09T304FN	0.016									607		107
10T304EN	0.016	70801		75801		80801		908				
10T304FN	0.016									608		108
10T308EN	0.031	73801		78801		83801		938				
10T308FN	0.031									628		128
130404EN	0.016	71001		76001		81001		910				
130404FN	0.016									610		110
130408EN	0.031	74001		79001		84001		940				
130408FN	0.031									611		111
170508EN	0.031	71201		76201		81201		912				
170508FN	0.031									612		112
P		●		●		●		●				
M		○		○		○		●				
K		○		○		○		○		●		○
N								○		●		●
S						○		○		○		●
H												
O								○		○		○

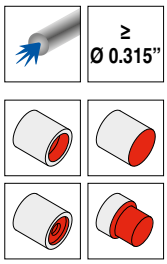
→ v_c Page 36+37

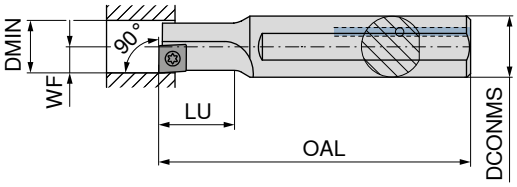
EcoCut – Classic 1.5xD

▲ Drilling and turning tool

Scope of supply:

Toolholder with one clamping screw, two spare screws and a screwdriver





Illustrations show right-hand versions

Left-hand | Right-hand

Designation	DMIN inch	DCONMS inch	OAL inch	LU inch	WF inch	torque moment Nm	Insert	78 805 ...	78 804 ...
ECC 08 L 1,5D 04-E	0.315	0.500	3.100	0.470	0.157	0.4	XC.T 0401..EL	**00800**[2]	
ECC 08 R 1,5D 04-E	0.315	0.500	3.100	0.470	0.157	0.4	XC.T 0401..ER		**00800**[1]
ECC 10 R/L 1,5D 05-E	0.394	0.500	3.500	0.590	0.197	0.7	XC.T 0502..	**01000**	**01000**
ECC 12 R/L 1,5D 06-E	0.472	0.625	3.900	0.710	0.236	1.0	XC.T 0602..	**01200**	**01200**
ECC 14 R/L 1,5D 07-E	0.551	0.625	4.300	0.830	0.276	1.2	XC.T 0703..	**01400**	**01400**
ECC 16 R/L 1,5D 08-E	0.630	0.750	4.900	0.940	0.315	2.2	XC.T 0803..	**01600**	**01600**
ECC 18 R/L 1,5D 09-E	0.709	1.000	5.300	1.060	0.354	2.2	XC.T 09T3..	**01800**	**01800**
ECC 20 R/L 1,5D 10-E	0.787	1.000	5.900	1.180	0.394	3.2	XC.T 10T3..	**02000**	**02000**
ECC 25 R/L 1,5D 13-E	0.984	1.250	7.000	1.480	0.492	5.0	XC.T 1304..	**02500**	**02500**
ECC 32 R/L 1,5D 17-E	1.260	1.500	7.800	1.890	0.630	5.0	XC.T 1705..	**03200**	**03200**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

Spare parts Insert		80 950 ...		70 950 ...
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

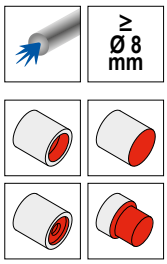
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

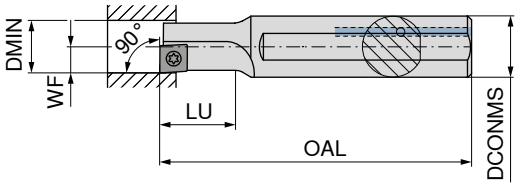
EcoCut – Classic 1.5xD

▲ Drilling and turning tool

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver





Illustrations show right-hand versions

Left-hand

Right-hand

Designation	DMIN mm	DCONMS mm	OAL mm	LU mm	WF mm	torque moment Nm	Insert	70 805 ...	70 804 ...
ECC 08 L 1,5D 04	8	12	80	12.0	4.0	0.4	XC.T 0401..EL	**008** [2]	
ECC 08 R 1,5D 04	8	12	80	12.0	4.0	0.4	XC.T 0401..ER		**008** [1]
ECC 10 R/L 1,5D 05	10	12	90	15.0	5.0	0.7	XC.T 0502..	**010**	**010**
ECC 12 R/L 1,5D 06	12	16	100	18.0	6.0	1.0	XC.T 0602..	**012**	**012**
ECC 14 R/L 1,5D 07	14	16	110	21.0	7.0	1.2	XC.T 0703..	**014**	**014**
ECC 16 R/L 1,5D 08	16	20	125	24.0	8.0	2.2	XC.T 0803..	**016**	**016**
ECC 18 R/L 1,5D 09	18	25	135	27.0	9.0	2.2	XC.T 09T3..	**018**	**018**
ECC 20 R/L 1,5D 10	20	25	150	30.0	10.0	3.2	XC.T 10T3..	**020**	**020**
ECC 25 R/L 1,5D 13	25	32	180	37.5	12.5	5.0	XC.T 1304..	**025**	**025**
ECC 32 R/L 1,5D 17	32	40	200	48.0	16.0	5.0	XC.T 1705..	**032**	**032**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

Spare parts Insert	80 950 ...		70 950 ...	
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

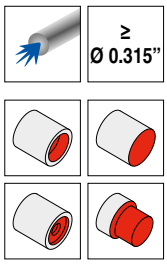
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

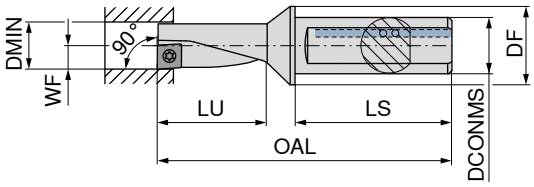
EcoCut – Classic 2.25xD

▲ Drilling and turning tool

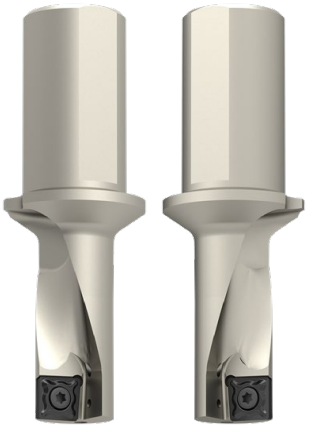
Scope of supply:

Toolholder with one clamping screw, two spare screws and a screwdriver





Illustrations show right-hand versions



Left-hand | Right-hand

										78 805 ...		78 804 ...
Designation	DMIN inch	DCONMS inch	DF inch	OAL inch	LU inch	LS inch	WF inch	torque moment Nm	Insert			
ECC 08 L 2,25D 04-E	0.315	0.375	0.472	2.300	0.710	1.430	0.157	0.4	XC.T 0401..EL	**10800**[2]		
ECC 08 R 2,25D 04-E	0.315	0.375	0.472	2.300	0.710	1.430	0.157	0.4	XC.T 0401..ER			**10800**[1]
ECC 10 R/L 2,25D 05-E	0.394	0.500	0.630	2.700	0.890	1.615	0.197	0.7	XC.T 0502..	**11000**		**11000**
ECC 12 R/L 2,25D 06-E	0.472	0.625	0.787	3.000	1.060	1.700	0.236	1.0	XC.T 0602..	**11200**		**11200**
ECC 14 R/L 2,25D 07-E	0.551	0.625	0.787	3.200	1.240	1.700	0.276	1.2	XC.T 0703..	**11400**		**11400**
ECC 16 R/L 2,25D 08-E	0.630	0.750	0.984	3.700	1.420	1.970	0.315	2.2	XC.T 0803..	**11600**		**11600**
ECC 18 R/L 2,25D 09-E	0.709	1.000	1.260	4.300	1.590	2.190	0.354	2.2	XC.T 09T3..	**11800**		**11800**
ECC 20 R/L 2,25D 10-E	0.787	1.000	1.260	4.400	1.770	2.230	0.394	3.2	XC.T 10T3..	**12000**		**12000**
ECC 25 R/L 2,25D 13-E	0.984	1.250	1.575	5.000	2.220	2.285	0.492	5.0	XC.T 1304..	**12500**		**12500**
ECC 32 R/L 2,25D 17-E	1.260	1.500	1.969	6.200	2.830	2.740	0.630	5.0	XC.T 1705..	**13200**		**13200**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

					80 950 ...		70 950 ...
Spare parts							
Insert							
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**			
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**			
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**			
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**			
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**			
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**			
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**			
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**			
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**			
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**			

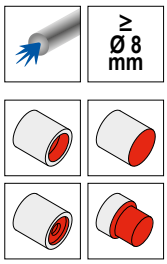
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

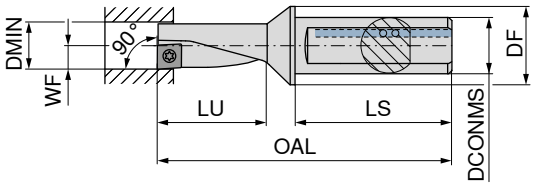
EcoCut – Classic 2.25xD

▲ Drilling and turning tool

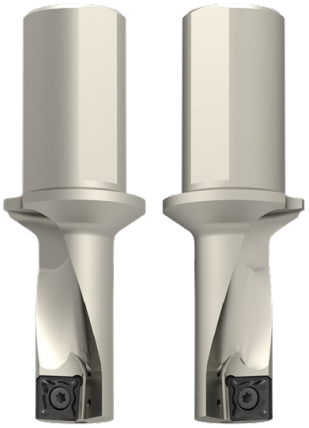
Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver





Illustrations show right-hand versions



Left-hand | Right-hand

Designation	DMIN mm	DCONMS mm	DF mm	OAL mm	LU mm	LS mm	WF mm	torque moment Nm	Insert	70 805 ...	70 804 ...
ECC 08 L 2,25D 04	8	10	15	60.0	18.0	38	4.0	0.4	XC.T 0401..EL	**108** [2]	
ECC 08 R 2,25D 04	8	10	15	60.0	18.0	38	4.0	0.4	XC.T 0401..ER		**108** [1]
ECC 10 R/L 2,25D 05	10	12	18	69.5	22.5	42	5.0	0.7	XC.T 0502..	**110**	**110**
ECC 12 R/L 2,25D 06	12	16	22	78.0	27.0	45	6.0	1.0	XC.T 0602..	**112**	**112**
ECC 14 R/L 2,25D 07	14	16	23	83.5	31.5	45	7.0	1.2	XC.T 0703..	**114**	**114**
ECC 16 R/L 2,25D 08	16	20	28	94.0	36.0	50	8.0	2.2	XC.T 0803..	**116**	**116**
ECC 18 R/L 2,25D 09	18	25	36	109.5	40.5	56	9.0	2.2	XC.T 09T3..	**118**	**118**
ECC 20 R/L 2,25D 10	20	25	35	111.0	45.0	56	10.0	3.2	XC.T 10T3..	**120**	**120**
ECC 25 R/L 2,25D 13	25	32	44	129.0	56.5	60	12.5	5.0	XC.T 1304..	**125**	**125**
ECC 32 R/L 2,25D 17	32	40	54	158.0	72.0	70	16.0	5.0	XC.T 1705..	**132**	**132**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

Spare parts Insert	80 950 ...		70 950 ...	
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

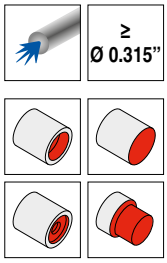
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

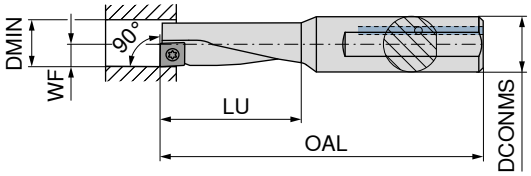
EcoCut – Classic 3xD – Heavy metal

▲ Drilling and turning tool
▲ vibration-damped

Scope of supply:

Toolholder with one clamping screw, two spare screws and a screwdriver





Illustrations show right-hand versions

Left-hand

Right-hand

Designation	DMIN inch	DCONMS inch	OAL inch	LU inch	WF inch	torque moment Nm	Insert	78 805 ...	78 804 ...
ECC 08 L 3,00D 04 H-E	0.315	0.500	3.100	0.940	0.157	0.4	XC.T 0401..EL	**60800**[2]	
ECC 08 R 3,00D 04 H-E	0.315	0.500	3.100	0.940	0.157	0.4	XC.T 0401..ER		**60800**[1]
ECC 10 R/L 3,00D 05 H-E	0.394	0.500	3.300	1.180	0.197	0.7	XC.T 0502..	**61000**	**61000**
ECC 12 R/L 3,00D 06 H-E	0.472	0.625	3.700	1.420	0.236	1.0	XC.T 0602..	**61200**	**61200**
ECC 14 R/L 3,00D 07 H-E	0.551	0.625	3.900	1.650	0.276	1.2	XC.T 0703..	**61400**	**61400**
ECC 16 R/L 3,00D 08 H-E	0.630	0.750	4.300	1.860	0.315	2.2	XC.T 0803..	**61600**	**61600**
ECC 18 R/L 3,00D 09 H-E	0.709	1.000	5.000	2.120	0.354	2.2	XC.T 09T3..	**61800**	**61800**
ECC 20 R/L 3,00D 10 H-E	0.787	1.000	5.100	2.360	0.394	3.2	XC.T 10T3..	**62000**	**62000**
ECC 25 R/L 3,00D 13 H-E	0.984	1.250	5.900	2.950	0.492	5.0	XC.T 1304..	**62500**	**62500**
ECC 32 R/L 3,00D 17 H-E	1.260	1.500	7.200	3.780	0.630	5.0	XC.T 1705..	**63200**	**63200**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

Spare parts Insert				
	80 950 ...		**70 950 ...**	
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

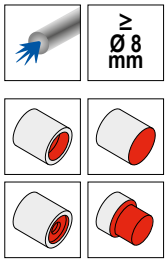
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

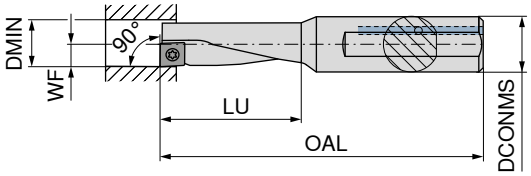
EcoCut – Classic 3xD – Heavy metal

▲ Drilling and turning tool
▲ vibration-damped

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver





Illustrations show right-hand versions

Left-hand

Right-hand

Designation	DMIN	DCONMS	OAL	LU	WF	torque moment	Insert	70 805 ...	70 804 ...
	mm	mm	mm	mm	mm	Nm			
ECC 08 L 3,00D 04 H	8	12	80	24	4.0	0.4	XC.T 0401..EL	**608** [2]	
ECC 08 R 3,00D 04 H	8	12	80	24	4.0	0.4	XC.T 0401..ER		**608** [1]
ECC 10 R/L 3,00D 05 H	10	12	85	30	5.0	0.7	XC.T 0502..	**610**	**610**
ECC 12 R/L 3,00D 06 H	12	16	95	36	6.0	1.0	XC.T 0602..	**612**	**612**
ECC 14 R/L 3,00D 07 H	14	16	100	42	7.0	1.2	XC.T 0703..	**614**	**614**
ECC 16 R/L 3,00D 08 H	16	20	110	48	8.0	2.2	XC.T 0803..	**616**	**616**
ECC 18 R/L 3,00D 09 H	18	25	125	54	9.0	2.2	XC.T 09T3..	**618**	**618**
ECC 20 R/L 3,00D 10 H	20	25	130	60	10.0	3.2	XC.T 10T3..	**620**	**620**
ECC 25 R/L 3,00D 13 H	25	32	150	75	12.5	5.0	XC.T 1304..	**625**	**625**
ECC 32 R/L 3,00D 17 H	32	40	185	96	16.0	5.0	XC.T 1705..	**632**	**632**

1) Note! Right-hand insert on right-hand tool
2) Note! Left-hand insert on left-hand tool

Screwdriver

Clamping screw

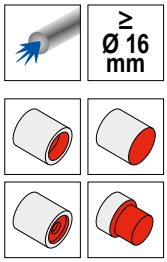
Spare parts		80 950 ...		70 950 ...
Insert				
XC.T 0401..EL	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0401..ER	T06 - IP	**123**	M1.8x3.6 - IP	**862**
XC.T 0502..	T06 - IP	**123**	M2x4.3 - IP	**863**
XC.T 0602..	T07 - IP	**124**	M2.2x5 - IP	**856**
XC.T 0703..	T08 - IP	**125**	M2.5x6 - IP	**857**
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 09T3..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

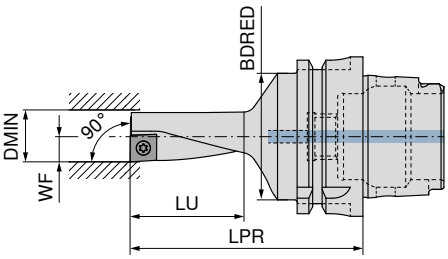
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

EcoCut – HSK-T 2.25xD

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver





Illustrations show right-hand versions

NEW NEW

									Left-hand		Right-hand	
									74 591 ...		**74 590 ...**	
Designation	Adapter	LPR mm	LU mm	BDRED mm	WF mm	DMIN mm	torque moment Nm	Insert				
HSK-T 63 ECC 16 R/L 2,25D 08	HSK-T 63	84	36.00	50	8.0	16	2.2	XC.T 0803..		**51637**		**51637**
HSK-T 63 ECC 20 R/L 2,25D 10	HSK-T 63	92	45.00	50	10.0	20	3.2	XC.T 10T3..		**52037**		**52037**
HSK-T 63 ECC 25 R/L 2,25D 13	HSK-T 63	104	56.25	50	12.5	25	5.0	XC.T 1304..		**52537**		**52537**
HSK-T 63 ECC 32 R/L 2,25D 17	HSK-T 63	120	72.00	50	16.0	32	5.0	XC.T 1705..		**53237**		**53237**

Screwdriver

80 950 ...

Clamping screw

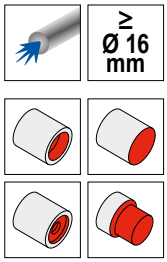
70 950 ...

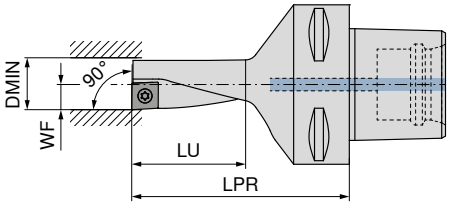
Spare parts				
Insert				
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

EcoCut – Classic PSC 2.25xD

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver





Illustrations show right-hand versions

NEW NEW

Designation	Adapter	LPR mm	LU mm	WF mm	DMIN mm	torque moment Nm	Insert	Left-hand 74 591 ...	Right-hand 74 590 ...
PSC 50 ECC 16 R/L 2,25D 08	PSC 50	70	36.00	8.0	16	2.2	XC.T 0803..	**51694**	**51694**
PSC 50 ECC 20 R/L 2,25D 10	PSC 50	81	45.00	10.0	20	3.2	XC.T 10T3..	**52094**	**52094**
PSC 50 ECC 25 R/L 2,25D 13	PSC 50	93	56.25	12.5	25	5.0	XC.T 1304..	**52594**	**52594**
PSC 50 ECC 32 R/L 2,25D 17	PSC 50	110	72.00	16.0	32	5.0	XC.T 1705..	**53294**	**53294**
PSC 63 ECC 16 R/L 2,25D 08	PSC 63	75	36.00	8.0	16	2.2	XC.T 0803..	**51693**	**51693**
PSC 63 ECC 20 R/L 2,25D 10	PSC 63	86	45.00	10.0	20	3.2	XC.T 10T3..	**52093**	**52093**
PSC 63 ECC 25 R/L 2,25D 13	PSC 63	97	56.25	12.5	25	5.0	XC.T 1304..	**52593**	**52593**
PSC 63 ECC 32 R/L 2,25D 17	PSC 63	114	72.00	16.0	32	5.0	XC.T 1705..	**53293**	**53293**

Screwdriver **80 950 ...**

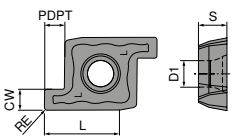
Clamping screw **70 950 ...**

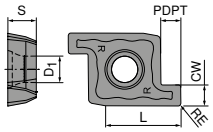
Spare parts Insert				
XC.T 0803..	T09 - IP	**126**	M3x7 - IP	**819**
XC.T 10T3..	T15 - IP	**128**	M3.5x8.6 - IP	**859**
XC.T 1304..	T20 - IP	**129**	M4.5x10.5 - IP	**864**
XC.T 1705..	T20 - IP	**129**	M4.5x10.5 - IP	**864**

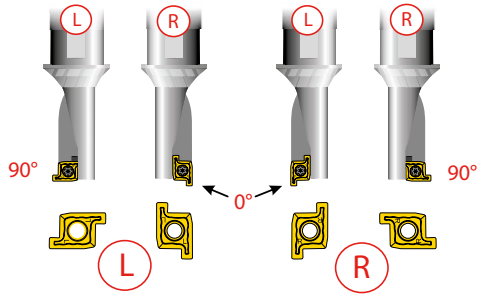
10

PM-R / PM-L

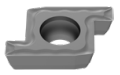
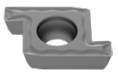
Designation	CW inch	PDPT inch	L inch	S inch	D1 inch
PM 10 G 201504	0.079	0.059	0.197	0.083	0.083
PM 12 G 201804	0.079	0.071	0.236	0.091	0.098
PM 16 G 252004	0.098	0.079	0.315	0.110	0.134
PM 20 G 302504	0.118	0.098	0.394	0.146	0.157
PM 25 G 353004	0.138	0.118	0.492	0.177	0.173
PM 32 G 404004	0.157	0.157	0.630	0.220	0.236







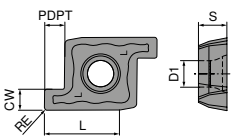
PM-L / PM-R

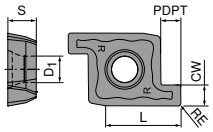
ISO	RE inch	-M20 CTPP430 DRAGONSKIN	-M20 CTPP430 DRAGONSKIN
			
		M	M
		PM-L	PM-R
		70 289 ...	**70 289 ...**
PM 10 G 201504	0.016	**510**	**511**
PM 12 G 201804	0.016	**515**	**516**
PM 16 G 252004	0.016	**520**	**521**
PM 20 G 302504	0.016	**525**	**526**
PM 25 G 353004	0.016	**530**	**531**
PM 32 G 404004	0.016	**535**	**536**
P		●	●
M		●	●
K		○	○
N		○	○
S		●	●
H			
O		○	○

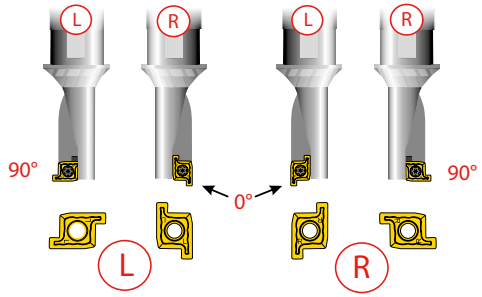
→ v_c Page 36+37

PM-L / PM-R

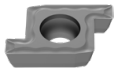
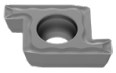
Designation	CW mm	PDPT mm	L mm	S mm	D1 mm
PM 10 G 201504	2.0	1.5	5.0	2.10	2.1
PM 12 G 201804	2.0	1.8	6.0	2.30	2.5
PM 16 G 252004	2.5	2.0	8.0	2.80	3.4
PM 20 G 302504	3.0	2.5	10.0	3.70	4.0
PM 25 G 353004	3.5	3.0	12.5	4.50	4.4
PM 32 G 404004	4.0	4.0	16.0	5.60	6.0







PM-L / PM-R

	-M20 CTPP430 DRAGONSKIN	-M20 CTPP430 DRAGONSKIN
		
	M	M
	PM-L	PM-R
	70 289 ...	70 289 ...
ISO / RE mm		
PM 10 G 201504 / 0.4	510	511
PM 12 G 201804 / 0.4	515	516
PM 16 G 252004 / 0.4	520	521
PM 20 G 302504 / 0.4	525	526
PM 25 G 353004 / 0.4	530	531
PM 32 G 404004 / 0.4	535	536
P	●	●
M	●	●
K	○	○
N	○	○
S	●	●
H		
O	○	○

→ v_c Page 36+37

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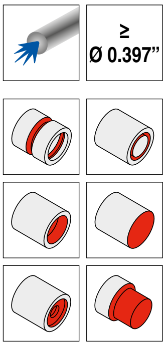
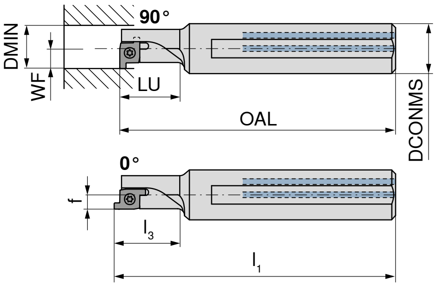
EcoCut – ProfileMaster 1.5xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver



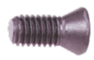


Illustrations show right-hand versions

Designation	DMIN inch	DCONMS inch	OAL inch	LU inch	WF inch	l_1 inch	l_3 inch	f inch	torque moment Nm	Insert	Left-hand 78 811 ...	Right-hand 78 810 ...
PMC 10 R/L 1,5D-E	0.394	0.500	3.100	0.590	0.197				0.4	PM 10R/L	**01000**[1)]	**01000**[1)]
PMC 12 R/L 1,5D-E	0.472	0.625	3.500	0.709	0.236				1.0	PM 12R/L	**01200**[1)]	**01200**[1)]
PMC 16 R/L 1,5D-E	0.630	0.750	4.900	1.004	0.315	4.991	1.094	0.224	2.2	PM 16R/L	**01600**	**01600**
PMC 20 R/L 1,5D-E	0.787	1.000	5.900	1.181	0.394	6.010	1.291	0.283	2.2	PM 20R/L	**02000**	**02000**
PMC 25 R/L 1,5D-E	0.984	1.250	7.000	1.476	0.492	7.130	1.606	0.362	3.2	PM 25R/L	**02500**	**02500**
PMC 32 R/L 1,5D-E	1.260	1.500	7.800	1.890	0.630	7.969	2.059	0.461	5.0	PM 32R/L	**03200**	**03200**

1) only usable as 90° version

Screwdriver



Clamping screw

Spare parts

Insert	Screwdriver	80 950 ...	Clamping screw	70 950 ...
PM 10R/L	T06	**100**	M1.8x3.8	**57300**
PM 12R/L	T07	**101**	M2.2x4	**360**
PM 16R/L	T08	**102**	M3x5.7	**365**
PM 20R/L	T15	**105**	M3.5x7.2	**110**
PM 25R/L	T15	**105**	M3.5x8.6	**304**
PM 32R/L	T20 - IP	**129**	M5x10.8 - IP	**010**

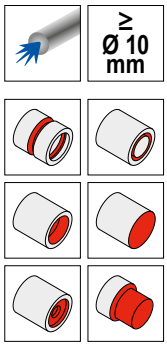
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

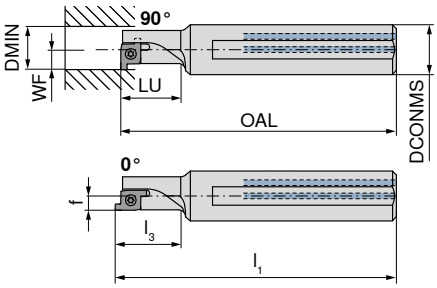
EcoCut – ProfileMaster 1.5xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver





Illustrations show right-hand versions

											Left-hand		Right-hand	
											70 821 ...		**70 820 ...**	
Designation	DMIN	DCONMS	OAL	LU	WF	l_1	l_3	f	torque moment	Insert				
	mm	mm	mm	mm	mm	mm	mm	mm	Nm					
PMC 10 R/L 1,5D	10	12	80	15	5.0				0.4	PM 10R/L	**010**	1)	**010**	1)
PMC 12 R/L 1,5D	12	16	90	18	6.0				1.0	PM 12R/L	**012**	1)	**012**	1)
PMC 16 R/L 1,5D	16	20	125	24	8.0	127.3	26.3	5.7	2.2	PM 16R/L	**016**		**016**	
PMC 20 R/L 1,5D	20	25	150	30	10.0	152.8	32.8	7.2	2.2	PM 20R/L	**020**		**020**	
PMC 25 R/L 1,5D	25	32	180	38	12.5	183.3	40.8	9.2	3.2	PM 25R/L	**025**		**025**	
PMC 32 R/L 1,5D	32	40	200	48	16.0	204.3	52.3	11.7	5.0	PM 32R/L	**032**		**032**	

1) only usable as 90° version

		Screwdriver		Clamping screw	
		80 950 ...		**70 950 ...**	
Spare parts					
Insert					
PM 10R/L	T06 - IP	**123**	M1.8x3.6 - IP	**862**
PM 12R/L	T07 - IP	**124**	M2.2x4.2 - IP	**137**
PM 16R/L	T09 - IP	**126**	M3x5.7 - IP	**008**
PM 20R/L	T15 - IP	**128**	M3x5.7 - IP	**009**
PM 25R/L	T15 - IP	**128**	M3.5x8.6 - IP	**859**
PM 32R/L	T20 - IP	**129**	M5x10.8 - IP	**010**

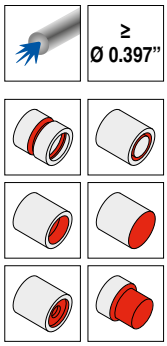
Metric Adaptors can be found in our Metric Catalogue 2024, in the Metric eCatalog 2024 and in the online shop at cuttingtools.ceratizit.com

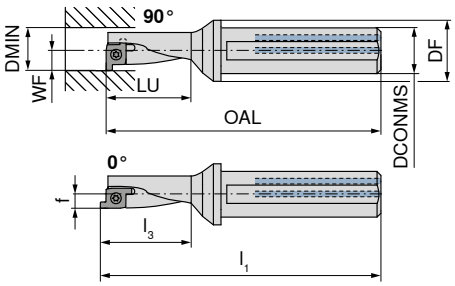
EcoCut – ProfileMaster 2.25xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver





Illustrations show right-hand versions

												Left-hand	Right-hand
												78 811 ...	**78 810 ...**
Designation	DMIN inch	DCONMS inch	DF inch	OAL inch	LU inch	WF inch	l_1 inch	l_3 inch	f inch	torque moment Nm	Insert		
PMC 10 R/L 2,25D-E	0.394	0.500	0.630	2.800	0.886	0.197				0.4	PM 10R/L	**11000**[1)]	**11000**[1)]
PMC 12 R/L 2,25D-E	0.472	0.625	0.787	3.000	1.063	0.236				1.0	PM 12R/L	**11200**[1)]	**11200**[1)]
PMC 16 R/L 2,25D-E	0.630	0.750	0.984	3.800	1.417	0.315	3.891	1.508	0.224	2.2	PM 16R/L	**11600**	**11600**
PMC 20 R/L 2,25D-E	0.787	1.000	1.260	4.400	1.772	0.394	4.510	1.882	0.283	2.2	PM 20R/L	**12000**	**12000**
PMC 25 R/L 2,25D-E	0.984	1.250	1.575	5.200	2.217	0.492	5.330	2.347	0.362	3.2	PM 25R/L	**12500**	**12500**
PMC 32 R/L 2,25D-E	1.260	1.500	1.969	6.200	2.835	0.630	6.369	3.004	0.461	5.0	PM 32R/L	**13200**	**13200**

1) only usable as 90° version

Screwdriver

Clamping screw

		80 950 ...		**70 950 ...**
Spare parts Insert				
PM 10R/L	T06	**100**	M1.8x3.8	**57300**
PM 12R/L	T07	**101**	M2.2x4	**360**
PM 16R/L	T08	**102**	M3x5.7	**365**
PM 20R/L	T15	**105**	M3.5x7.2	**110**
PM 25R/L	T15	**105**	M3.5x8.6	**304**
PM 32R/L	T20 - IP	**129**	M5x10.8 - IP	**010**

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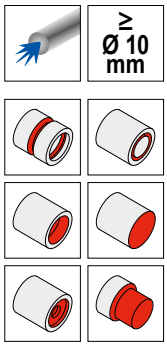
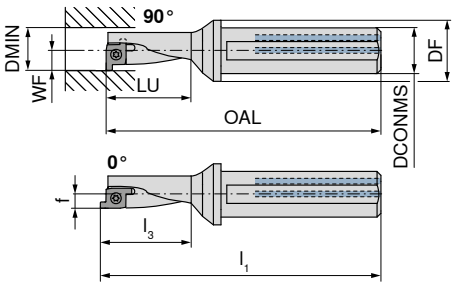
EcoCut – ProfileMaster 2.25xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver





Illustrations show right-hand versions

												Left-hand	Right-hand
												70 821 ...	**70 820 ...**
Designation	DMIN	DCONMS	DF	OAL	LU	WF	l_1	l_3	f	torque moment	Insert		
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm			
PMC 10 R/L 2,25D	10	12	18	72.4	22.50	5.0				0.4	PM 10R/L	**110** [1]	**110** [1]
PMC 12 R/L 2,25D	12	16	22	78.0	27.00	6.0				1.0	PM 12R/L	**112** [1]	**112** [1]
PMC 16 R/L 2,25D	16	20	28	96.5	36.00	8.0	98.8	38.3	5.7	2.2	PM 16R/L	**116**	**116**
PMC 20 R/L 2,25D	20	25	32	111.0	45.00	10.0	113.8	47.8	7.2	2.2	PM 20R/L	**120**	**120**
PMC 25 R/L 2,25D	25	32	44	132.6	56.25	12.5	135.9	59.6	9.2	3.2	PM 25R/L	**125**	**125**
PMC 32 R/L 2,25D	32	40	54	158.0	72.00	16.0	162.3	76.3	11.7	5.0	PM 32R/L	**132**	**132**

1) only usable as 90° version

		Screwdriver			Clamping screw	
		80 950 ...			**70 950 ...**	
Spare parts						
Insert						
PM 10R/L	T06 - IP	**123**		M1.8x3.6 - IP	**862**	
PM 12R/L	T07 - IP	**124**		M2.2x4.2 - IP	**137**	
PM 16R/L	T09 - IP	**126**		M3x5.7 - IP	**008**	
PM 20R/L	T15 - IP	**128**		M3x5.7 - IP	**009**	
PM 25R/L	T15 - IP	**128**		M3.5x8.6 - IP	**859**	
PM 32R/L	T20 - IP	**129**		M5x10.8 - IP	**010**	

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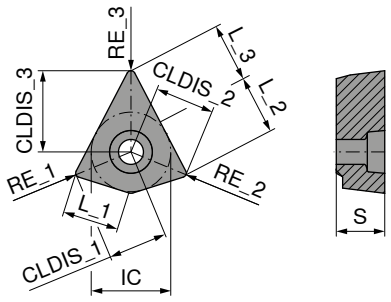
FT15 . 808055...

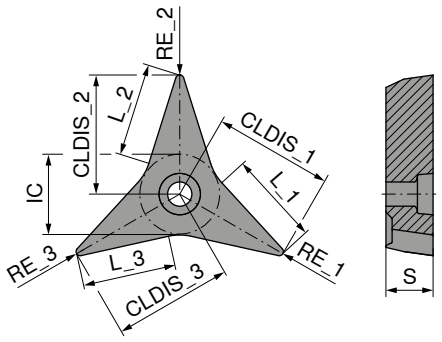


Designation	IC inch	CLDIS_1 inch	L_1 inch	CLDIS_2 inch	L_2 inch	CLDIS_3 inch	L_3 inch	S inch
FT15 M 808055R080804-MMF	0.591	0.442	0.425	0.442	0.449	0.621	0.449	0.360
FT15 M 808055R08-MMF	0.591	0.442	0.425	0.442	0.441	0.603	0.441	0.360
FT15 M 808055R121208-MMF	0.591	0.433	0.421	0.433	0.441	0.603	0.441	0.360

ISO	RE_1 inch	RE_2 inch	RE_3 inch	M FT15 . 808055... 74 003 ...	M FT15 . 808055... 74 003 ...
FT15 M 808055R080804-MMF	0.031	0.031	0.016	**00400**	
FT15 M 808055R08-MMF	0.031	0.031	0.031	**00200**	**10200**
FT15 M 808055R121208-MMF	0.047	0.047	0.031	**00600**	
P				●	○
M					●
K				○	
N					
S					
H					
O					

→ v_c Page 38+39

FT15 . 353535...



Designation	IC inch	CLDIS_1 inch	L_1 inch	CLDIS_2 inch	L_2 inch	CLDIS_3 inch	L_3 inch	S inch
FT15 G 353535R04-28P	0.591	0.945	0.634	0.945	0.634	0.945	0.634	0.360
FT15 G 353535R08-28P	0.591	0.909	0.598	0.909	0.598	0.909	0.598	0.360
FT15 G 353535R08-F	0.591	0.909	0.589	0.909	0.589	0.909	0.589	0.360

ISO	RE_1 inch	RE_2 inch	RE_3 inch	-F CTCP125	-28P H216T
				DRAGONSKIN	DRAGONSKIN
					
				F F F	F F F
				FT15 . 353535...	FT15 . 353535...
				74 077 ...	74 001 ...
FT15 G 353535R04-28P	0.016	0.016	0.016		20200
FT15 G 353535R08-28P	0.031	0.031	0.031		20400
FT15 G 353535R08-F	0.031	0.031	0.031	00400	
P				●	
M					
K				○	○
N					●
S					○
H					
O					○

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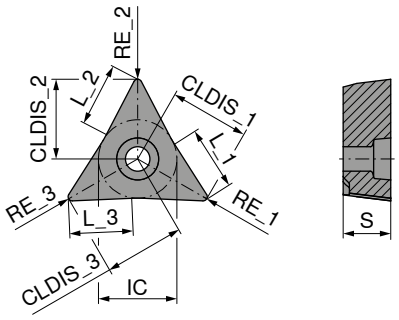
FT15 . 555555...



Designation	IC inch	CLDIS_1 inch	L_1 inch	CLDIS_2 inch	L_2 inch	CLDIS_3 inch	L_3 inch	S inch
FT15 M 555555R04-FFF	0.591	0.621	0.496	0.621	0.496	0.621	0.496	0.360
FT15 M 555555R08-FFF	0.591	0.603	0.484	0.603	0.484	0.603	0.484	0.360

ISO	RE_1 inch	RE_2 inch	RE_3 inch	F F F FT15 . 555555... 74 002 ...	F F F FT15 . 555555... 74 002 ...
FT15 M 555555R04-FFF	0.016	0.016	0.016	**00200**	**10400**
FT15 M 555555R08-FFF	0.031	0.031	0.031	**00400**	
P				●	○
M					●
K				○	
N					
S					
H					
O					

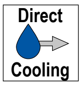
→ v_c Page 38+39

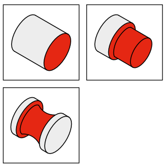
FreeTurn – HSK-T tool holder FT15

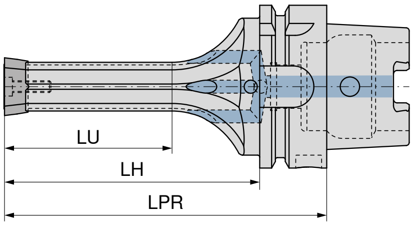
- ▲ Tool holder for FreeTurn indexable insert
- ▲ DirectCooling coolant supply

Scope of supply:

Toolholder with one clamping screw and one screwdriver







Figures show version FT15 . 808055...

Designation	Adapter	LPR inch	LH inch	LU inch	Insert	DirectCooling **74 700 ...**
HSK-T63-100-FT15 353535	HSK-T 63	3.937	2.913	1.575	FT15 . 353535...	**00137**
HSK-T63-100-FT15 808055	HSK-T 63	3.937	2.913	1.575	FT15 . 808055...	**00537**
HSK-T63-100-FT15 555555	HSK-T 63	3.937	2.913	1.575	FT15 . 555555...	**00337**
HSK-T63-125-FT15 353535	HSK-T 63	4.921	3.898	2.559	FT15 . 353535...	**00237**
HSK-T63-125-FT15 808055	HSK-T 63	4.921	3.898	2.559	FT15 . 808055...	**00637**
HSK-T63-125-FT15 555555	HSK-T 63	4.921	3.898	2.559	FT15 . 555555...	**00437**

Screwdriver

Clamping screw

Spare parts **Adapter**		Screwdriver **80 950 ...**		Clamping screw **70 950 ...**
HSK-T 63	T20 - IP	**121**	M4.5x18 - IP	**25900**

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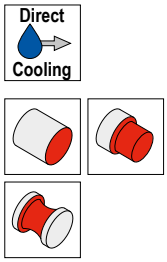
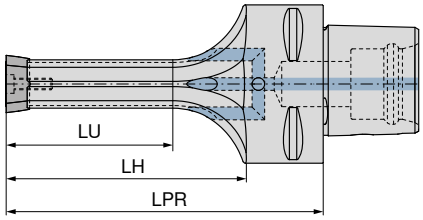
FreeTurn – PSC tool holder FT15

▲ Tool holder for FreeTurn indexable insert
▲ DirectCooling coolant supply

Scope of supply:

Toolholder with one clamping screw and one screwdriver



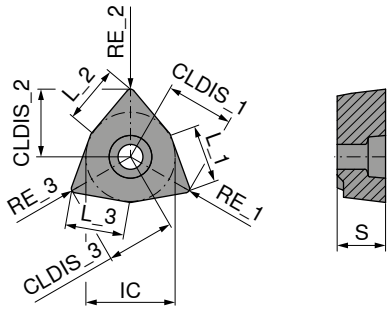


Figures show version FT15 . 808055...

Designation	Adapter	LPR inch	LH inch	LU inch	Insert	DirectCooling 74 700 ...
PSC-63-100-FT15 353535	PSC 63	3.937	2.732	1.575	FT15 . 353535...	**00193**
PSC-63-100-FT15 808055	PSC 63	3.937	2.728	1.575	FT15 . 808055...	**00593**
PSC-63-100-FT15 555555	PSC 63	3.937	2.740	1.575	FT15 . 555555...	**00393**
PSC-63-125-FT15 353535	PSC 63	4.921	3.717	2.559	FT15 . 353535...	**00293**
PSC-63-125-FT15 808055	PSC 63	4.921	3.713	2.559	FT15 . 808055...	**00693**
PSC-63-125-FT15 555555	PSC 63	4.921	3.724	2.559	FT15 . 555555...	**00493**

Spare parts		Screwdriver 80 950 ...		Clamping screw 70 950 ...	
Adapter					
PSC 63		T20 - IP	**121**	M4.5x18 - IP	**25900**

FT17 . 808080...



Designation	IC inch	CLDIS_1 inch	L_1 inch	CLDIS_2 inch	L_2 inch	CLDIS_3 inch	L_3 inch	S inch
FT17 M 808080R04-MMM	0.669	0.512	0.445	0.512	0.445	0.512	0.445	0.360
FT17 M 808080R08-MMM	0.669	0.503	0.445	0.503	0.445	0.503	0.445	0.360
FT17 M 808080R12-MMM	0.669	0.494	0.441	0.494	0.441	0.494	0.441	0.360

ISO	RE_1 inch	RE_2 inch	RE_3 inch	M FT17 . 808080... 74 000 ...	M FT17 . 808080... 74 000 ...
FT17 M 808080R04-MMM	0.016	0.016	0.016	**00200**	
FT17 M 808080R08-MMM	0.031	0.031	0.031	**00400**	**10400**
FT17 M 808080R12-MMM	0.047	0.047	0.047	**00600**	
P				●	○
M					●
K				○	
N					
S					
H					
O					

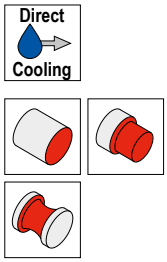
→ v_c Page 38+39

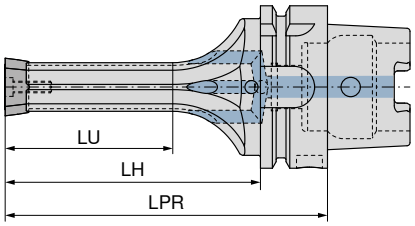
FreeTurn – HSK-T tool holder FT17

▲ Tool holder for FreeTurn indexable insert
▲ DirectCooling coolant supply

Scope of supply:

Toolholder with one clamping screw and one screwdriver





Designation	Adapter	LPR inch	LH inch	LU inch	Insert	DirectCooling 74 701 ...
HSK-T63-100-FT17 808080	HSK-T 63	3.937	2.913	1.575	FT17 . 808080...	**00737**
HSK-T63-125-FT17 808080	HSK-T 63	4.921	3.898	2.559	FT17 . 808080...	**00837**


Screwdriver


Clamping screw

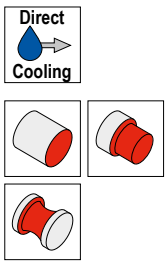
Spare parts		Screwdriver 80 950 ...		Clamping screw 70 950 ...	
Adapter					
HSK-T 63	T20 - IP	**121**	M4.5x18 - IP	**25900**	

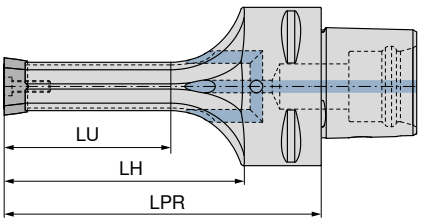
FreeTurn – PSC tool holder FT17

▲ Tool holder for FreeTurn indexable insert
▲ DirectCooling coolant supply

Scope of supply:

Toolholder with one clamping screw and one screwdriver





Designation	Adapter	LPR inch	LH inch	LU inch	Insert	DirectCooling 74 701 ...
PSC-63-100-FT17 808080	PSC 63	3.937	2.728	1.575	FT17 . 808080...	**00793**
PSC-63-125-FT17 808080	PSC 63	4.921	3.713	2.559	FT17 . 808080...	**00893**


Screwdriver


Clamping screw

Spare parts		Screwdriver 80 950 ...		Clamping screw 70 950 ...	
Adapter					
PSC 63	T20 - IP	**121**	M4.5x18 - IP	**25900**	

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength lbf/in²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0.15 % C	Annealed	60900 lbf/in² / 125 HB	1.0401	1015	1.0301	1010
		P.1.2	< 0.45 % C	Annealed	92800 lbf/in² / 190 HB	1.1191	1045	1.0737	12L14
		P.1.3		Tempered	121800 lbf/in² / 250 HB	1.1191	1045	1.0503	1043
		P.1.4	< 0.75 % C	Annealed	132000 lbf/in² / 270 HB	1.1223	1060	1.0535	1055
		P.1.5		Tempered	146500 lbf/in² / 300 HB	1.1223	1060	1.1274	1095
	Low-alloy steel	P.2.1		Annealed	88500 lbf/in² / 180 HB	1.7131	5115	1.6523	8620
		P.2.2		Tempered	134900 lbf/in² / 275 HB	1.7131	5115	1.6582	4340
		P.2.3		Tempered	146500 lbf/in² / 300 HB	1.7225	4142	1.7131	5115
		P.2.4		Tempered	174000 lbf/in² / 375 HB	1.7225	4142	17223	4140
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	98600 lbf/in² / 200 HB	1.4021	420	1.2379	D2
		P.3.2		Hardened and tempered	159500 lbf/in² / 300 HB	1.2343	H11	1.3343	M2
		P.3.3		Hardened and tempered	188500 lbf/in² / 400 HB	1.2343	H11	1.2363	A2
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	98600 lbf/in² / 200 HB	1.4016	430	1.4125	440C
		P.4.2	Martensitic	Tempered	117500 lbf/in² / 250 HB	1.4112	S44003	1.4021	420
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	88500 lbf/in² / 200 HB	1.4301	304	1.4401	316
		M.2.1	Austenitic	Tempered	300 HB	1.4841	314	1.4568	17-7 PH
		M.3.1	Austenitic / ferritic (Duplex)		113100 lbf/in² / 230 HB	1.4462	S32205	1.4410	S32750
K	Grey cast iron	K.1.1	Pearlitic / ferritic		88500 lbf/in² / 180 HB	0.6010	A48-20B	0.6025	A48-40 B
		K.1.2	Pearlitic (martensitic)		127600 lbf/in² / 260 HB	0.6030	A48-45B	0.6040	A48-60 B
	Spherulitic graphite cast iron	K.2.1	Ferritic		78300 lbf/in² / 160 HB	0.7040	60-40-18	0.7050	65-45-12
		K.2.2	Pearlitic		122600 lbf/in² / 250 HB	0.7070	100-70-03	0.7660	A439 Type D2
	Malleable iron	K.3.1	Ferritic		63800 lbf/in² / 130 HB	0.8035	GTW-35-04		
		K.3.2	Pearlitic		113100 lbf/in² / 230 HB	0.8170	70003		
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	A91060	3.0255	A91060
		N.1.2	Hardenable		49300 lbf/in² / 100 HB	3.1355	2024	3.1355	2024
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		36300 lbf/in² / 75 HB	3.2581	A04130 / A413-0	3.2581	A04130 / A413-0
		N.2.2	≤ 12 % Si, hardenable		43500 lbf/in² / 90 HB	3.2134	G-AlSi5Cu1Mg		
		N.2.3	> 12 % Si, non-hardenable		63800 lbf/in² / 130 HB		G-AlSi17Cu4Mg		
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		54400 lbf/in² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0380	C37700
		N.3.2	CuZn, CuSnZn		43500 lbf/in² / 90 HB	2.0331	CuZn15	2.0331	C34000
		N.3.3	CuSn, lead-free copper and electrolytic copper		49300 lbf/in² / 100 HB	2.0060	E-Cu57		
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn		
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	98600 lbf/in² / 200 HB	1.4864	X12NiCrSi 36-16	1.4864	330
		S.1.2			137800 lbf/in² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4980	S66286
		S.2.1	Ni or Co basis	Annealed	121800 lbf/in² / 250 HB	2.4856	Inconel 625	2.4812	Hastelloy C
		S.2.2			171100 lbf/in² / 350 HB	2.4952	Nimonic 80A	2.4668	Inconel 718
		S.2.3		Cast	156600 lbf/in² / 320 HB	2.4674	Nimocast PK24	2.4670	Nimocast 713
	Titanium alloys	S.3.1	Pure titanium		5800 lbf/in²	3.7025	Ti99,8		
		S.3.2	Alpha + beta alloys		152300 lbf/in²	3.7165	TiAl6V4		
		S.3.3	Beta alloys		203100 lbf/in² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr		
H	Hardened steel	H.1.1		Hardened and tempered	46-55 HRC				
		H.1.2		Hardened and tempered	56-60 HRC				
		H.1.3		Hardened and tempered	61-65 HRC				
		H.1.4		Hardened and tempered	66-70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 21800 lbf/in²				
		O.1.2	Plastics, thermoplastic		≤ 14500 lbf/in²				
		O.2.1	Aramid fibre-reinforced		≤ 145000 lbf/in²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 145000 lbf/in²				
		O.3.1	Graphite						

*** Tensile Strength at Rupture (Rm)**

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Cutting data standard values for EcoCut

Index		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN
	EcoCut Mini CTWN425	EcoCut Mini CTPP435	EcoCut Classic CTCP425-P	EcoCut Classic CTCP435-P	EcoCut Classic CTPP430	EcoCut Classic H210T	EcoCut Classic H216T	EcoCut ProfileMaster CTPP430
	v_c in ft/min							
P.1.1		**480**	**890**	**760**	**600**			**561**
P.1.2		**410**	**780**	**660**	**510**			**470**
P.1.3		**350**	**660**	**545**	**440**			**380**
P.1.4		**330**	**630**	**510**	**430**			**350**
P.1.5		**300**	**580**	**460**	**370**			**310**
P.2.1		**420**	**790**	**660**	**530**			**480**
P.2.2		**320**	**610**	**510**	**400**			**340**
P.2.3		**300**	**580**	**460**	**370**			**310**
P.2.4		**220**	**430**	**350**	**270**			**200**
P.3.1		**340**	**610**	**530**	**380**			**370**
P.3.2		**220**	**450**	**360**	**280**			**250**
P.3.3		**100**	**265**	**200**	**190**			**130**
P.4.1		**340**	**510**	**470**	**380**			**370**
P.4.2		**280**	**610**	**530**	**330**			**310**
M.1.1		**340**	530	530	**380**			**370**
M.2.1		**220**			**280**			**250**
M.3.1		**310**			**350**			**340**
K.1.1	460	460	680	610	530	360	**560**	590
K.1.2	380	400	680	610	460	300	**430**	860
K.2.1	500	460	660	590	530	400	**590**	530
K.2.2	360	400	660	590	460	280	**430**	830
K.3.1	560	500	640	580	410	460	**630**	430
K.3.2	460	410	640	580	360	360	**530**	760
N.1.1	**990**	130			130	**130**	**200**	990
N.1.2	**170**	960			960	**960**	**1020**	660
N.2.1	**990**	960			960	**960**	**200**	990
N.2.2	**990**	630			630	**630**	**1520**	660
N.2.3	**1490**	1120			1120	**1120**	**200**	500
N.3.1	**1160**	790			790	**790**	**1520**	990
N.3.2	**1160**	790			790	**790**	**1520**	990
N.3.3	**830**	630			630	**630**	**1190**	660
N.4.1	**660**	460			460	**460**	**860**	660
S.1.1	132	**120**		120	180	**110**	140	**120**
S.1.2	90	**100**		100	180	**80**	110	**100**
S.2.1	90	**60**		60	180	**80**	110	**70**
S.2.2	80	**50**		50	180	**70**	80	**50**
S.2.3	70	**50**		50	180	**70**	70	**50**
S.3.1	300	**280**		280	230	**210**	360	**280**
S.3.2	180	**130**		130	200	**140**	230	**130**
S.3.3	130	**100**		100	130	**100**	170	**100**
H.1.1								
H.1.2								
H.1.3								
H.1.4								
H.2.1								
H.3.1								
O.1.1	430	360			360	360	510	430
O.1.2								
O.2.1	350	310			310	310	460	350
O.2.2								
O.3.1								

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Cutting data standard values for EcoCut

Index		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN			DRAGONSKIN
	EcoCut Mini CTWN425	EcoCut Mini CTPP435	EcoCut Classic CTCP425-P	EcoCut Classic CTCP435-P	EcoCut Classic CTPP430	EcoCut Classic H210T	EcoCut Classic H216T	EcoCut ProfileMaster CTPP430
	v_c in m/min							
P.1.1		**145**	**270**	**230**	**180**			**170**
P.1.2		**125**	**235**	**200**	**155**			**140**
P.1.3		**105**	**200**	**165**	**130**			**115**
P.1.4		**100**	**190**	**155**	**125**			**105**
P.1.5		**90**	**175**	**140**	**110**			**95**
P.2.1		**130**	**240**	**200**	**160**			**145**
P.2.2		**100**	**185**	**155**	**120**			**105**
P.2.3		**90**	**175**	**140**	**110**			**95**
P.2.4		**70**	**130**	**105**	**80**			**60**
P.3.1		**105**	**185**	**160**	**115**			**110**
P.3.2		**70**	**135**	**110**	**85**			**75**
P.3.3		**30**	**80**	**60**	**55**			**40**
P.4.1		**105**	**185**	**160**	**115**			**110**
P.4.2		**85**	**160**	**130**	**100**			**95**
M.1.1		**105**	160	160	**115**			**110**
M.2.1		**65**			**85**			**75**
M.3.1		**95**			**110**			**100**
K.1.1	140	140	205	185	160	110	**170**	180
K.1.2	115	120	205	185	140	90	**130**	260
K.2.1	150	140	200	180	160	120	**180**	160
K.2.2	110	120	200	180	140	85	**130**	250
K.3.1	170	150	195	175	125	140	**190**	130
K.3.2	140	125	195	175	110	110	**160**	230
N.1.1	**300**	40			40	**40**	**60**	300
N.1.2	**50**	290			290	**290**	**310**	200
N.2.1	**300**	290			290	**290**	**60**	300
N.2.2	**300**	190			190	**190**	**460**	200
N.2.3	**450**	340			340	**340**	**60**	150
N.3.1	**350**	240			240	**240**	**460**	300
N.3.2	**350**	240			240	**240**	**460**	300
N.3.3	**250**	190			190	**190**	**360**	200
N.4.1	**200**	140			140	**140**	**260**	200
S.1.1	40	**35**		35	55	**35**	45	**35**
S.1.2	30	**30**		30	55	**25**	35	**30**
S.2.1	30	**20**		20	55	**25**	35	**20**
S.2.2	25	**15**		15	55	**20**	25	**15**
S.2.3	20	**15**		15	55	**20**	20	**15**
S.3.1	90	**85**		85	70	**65**	110	**85**
S.3.2	55	**40**		40	60	**45**	70	**40**
S.3.3	40	**30**		30	40	**30**	50	**30**
H.1.1								
H.1.2								
H.1.3								
H.1.4								
H.2.1								
H.3.1								
O.1.1	130	110			110	110	155	130
O.1.2								
O.2.1	105	95			95	95	140	105
O.2.2								
O.3.1								

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

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Cutting data standard values for FreeTurn

Index	F		M		-28P
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
	CTCP125	CTPM125	CTCP125	CTPM125	H216T
	v_c in ft/min				
P.1.1	**980**	670	**980**	670	
P.1.2	**830**	560	**830**	560	
P.1.3	**700**	470	**700**	470	
P.1.4	**660**	440	**660**	440	
P.1.5	**590**	390	**590**	390	
P.2.1	**850**	580	**850**	580	
P.2.2	**650**	430	**650**	430	
P.2.3	**590**	390	**590**	390	
P.2.4	**430**	270	**430**	270	
P.3.1	**560**	470	**560**	470	
P.3.2	**350**	320	**350**	320	
P.3.3	**140**	170	**140**	170	
P.4.1	**560**	470	**560**	470	
P.4.2	**450**	390	**450**	390	
M.1.1		**470**		**470**	
M.2.1		**320**		**320**	
M.3.1		**420**		**420**	
K.1.1	560		560		560
K.1.2	530		530		430
K.2.1	590		590		590
K.2.2	530		530		430
K.3.1	660		660		630
K.3.2	530		530		530
N.1.1					**5450**
N.1.2					**4460**
N.2.1					**3960**
N.2.2					**3630**
N.2.3					**1980**
N.3.1					**1730**
N.3.2					**1650**
N.3.3					**1240**
N.4.1					**910**
S.1.1					150
S.1.2					115
S.2.1					115
S.2.2					85
S.2.3					65
S.3.1					360
S.3.2					230
S.3.3					165
H.1.1					
H.1.2					
H.1.3					
H.1.4					
H.2.1					
H.3.1					
O.1.1					530
O.1.2					
O.2.1					460
O.2.2					
O.3.1					

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Cutting data standard values for FreeTurn

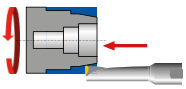
Index	F		M		-28P
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
	CTCP125	CTPM125	CTCP125	CTPM125	H216T
	v_c in m/min				
P.1.1	**295**	205	**295**	205	
P.1.2	**255**	170	**255**	170	
P.1.3	**215**	140	**215**	140	
P.1.4	**200**	130	**200**	130	
P.1.5	**180**	120	**180**	120	
P.2.1	**260**	175	**260**	175	
P.2.2	**195**	130	**195**	130	
P.2.3	**180**	120	**180**	120	
P.2.4	**130**	80	**130**	80	
P.3.1	**170**	140	**170**	140	
P.3.2	**105**	95	**105**	95	
P.3.3	**45**	50	**45**	50	
P.4.1	**170**	140	**170**	140	
P.4.2	**140**	120	**140**	120	
M.1.1		**140**		**140**	
M.2.1		**100**		**100**	
M.3.1		**130**		**130**	
K.1.1	170		170		170
K.1.2	160		160		130
K.2.1	180		180		180
K.2.2	160		160		130
K.3.1	200		200		190
K.3.2	160		160		160
N.1.1					**1650**
N.1.2					**1350**
N.2.1					**1200**
N.2.2					**1100**
N.2.3					**600**
N.3.1					**525**
N.3.2					**500**
N.3.3					**375**
N.4.1					**275**
S.1.1					45
S.1.2					35
S.2.1					35
S.2.2					25
S.2.3					20
S.3.1					110
S.3.2					70
S.3.3					50
H.1.1					
H.1.2					
H.1.3					
H.1.4					
H.2.1					
H.3.1					
O.1.1					160
O.1.2					
O.2.1					140
O.2.2					
O.3.1					

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

Depth of Cut and Feedrate for EcoCut Mini

Turning

2.25xD

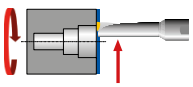


EcoCut Mini Size	Depth of Cut a_p in inch									
	0.010	0.020	0.030	0.040	0.060	0.080	0.100	0.120	0.140	0.160
	Feed rate f in inch/rev.									
ECM 02..	.0008–.0028	.0008–.0028								
ECM 02.5..	.0008–.0028	.0008–.0028	.0008–.0020							
ECM 03..	.0008–.0028	.0008–.0028	.0008–.0020	.0008–.0020						
ECM 03.5..	.0008–.0028	.0008–.0028	.0008–.0020	.0008–.0020	.0008–.0020					
ECM 04..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0028	.0004–.0020				
ECM 05..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0008–.0024	.0004–.0016			
ECM 06..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0008–.0024	.0004–.0016		
ECM 07..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0008–.0024	.0004–.0016	
ECM 08..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0008–.0024	.0004–.0016

4xD

EcoCut Mini Size	Depth of Cut a_p in inch									
	0.010	0.020	0.030	0.040	0.060	0.080	0.100	0.120	0.140	0.160
	Feed rate f in inch/rev.									
ECM 02..	.0008–.0020	.0004–.0020								
ECM 02.5..	.0008–.0020	.0004–.0020								
ECM 03..	.0008–.0020	.0008–.0020	.0004–.0020							
ECM 03.5..	.0008–.0020	.0008–.0020	.0008–.0020	.0004–.0020						
ECM 04..	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0004–.0020					
ECM 05..	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.00325	.0008–.0024	.0004–.0016				
ECM 06..	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.00325	.0008–.0024	.0004–.0016				
ECM 07..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0012–.0032	.0008–.0024	.0004–.0016			
ECM 08..	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.0040	.0016–.00365	.0012–.0032	.0008–.0024	.0004–.0016		

Face turning

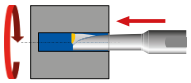


EcoCut Mini Size	2.25xD		4xD	
	$a_{p\ max.}$ in inch	f in inch/rev.	$a_{p\ max.}$ in inch	f in inch/rev.
ECM 02..	0.012	.0004–.0020	0.012	.0004–.0012
ECM 02.5..	0.012	.0004–.0020	0.012	.0004–.0012
ECM 03..	0.020	.0004–.0024	0.020	.0004–.0016
ECM 03.5..	0.020	.0004–.0024	0.020	.0004–.0016
ECM 04..	0.028	.0012–.0028	0.028	.0008–.0020
ECM 05..	0.028	.0012–.0028	0.028	.0008–.0020
ECM 06..	0.028	.0012–.0028	0.028	.0008–.0020
ECM 07..	0.039	.0016–.0032	0.039	.0012–.0024
ECM 08..	0.039	.0016–.0032	0.039	.0012–.0024

Depth of Cut and Feedrate for EcoCut Mini

Drilling

Feed rate



EcoCut Mini Size	2.25xD	4xD
	f in inch/rev.	f in inch/rev.
ECM 02..	.0001–.0003	.0001–.0002
ECM 02.5..	.0001–.0004	.0001–.0002
ECM 03..	.0001–.0005	.0001–.0004
ECM 03.5..	.0001–.0006	.0001–.0004
ECM 04..	.0002–.0012	.0002–.0005
ECM 05..	.0002–.0012	.0002–.0006
ECM 06..	.0002–.0012	.0002–.0008
ECM 07..	.0002–.0014	.0002–.0010
ECM 08..	.0002–.0016	.0002–.0012

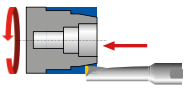
max. bore depth

EcoCut Mini Size	2.25xD	4xD
	Max. hole depth in inch	Max. hole depth in inch
ECM 02..	0.177	0.315
ECM 02.5..	0.222	0.394
ECM 03..	0.266	0.472
ECM 03.5..	0.310	0.551
ECM 04..	0.354	0.630
ECM 05..	0.443	0.787
ECM 06..	0.531	0.945
ECM 07..	0.620	1.102
ECM 08..	0.709	1.260

Depth of Cut and Feedrate for EcoCut Mini

Turning

2.25xD

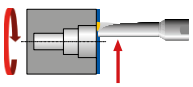


EcoCut Mini Size	Depth of Cut a_p in mm									
	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	Feed rate f in mm/rev.									
ECM 02..	0.02–0.07	0.02–0.07								
ECM 02,5..	0.02–0.07	0.02–0.07	0.02–0.05							
ECM 03..	0.02–0.07	0.02–0.07	0.02–0.05	0.02–0.05						
ECM 03,5..	0.02–0.07	0.02–0.07	0.02–0.05	0.02–0.05	0.02–0.05					
ECM 04..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.07	0.01–0.05				
ECM 05..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.02–0.06	0.01–0.04			
ECM 06..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.02–0.06	0.01–0.04		
ECM 07..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.02–0.06	0.01–0.04	
ECM 08..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.02–0.06	0.01–0.04

4xD

EcoCut Mini Size	Depth of Cut a_p in mm									
	0.25	0.5	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	Feed rate f in mm/rev.									
ECM 02..	0.02–0.05	0.01–0.05								
ECM 02,5..	0.02–0.05	0.01–0.05								
ECM 03..	0.02–0.05	0.02–0.05	0.01–0.05							
ECM 03,5..	0.02–0.05	0.02–0.05	0.02–0.05	0.01–0.05						
ECM 04..	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.01–0.05					
ECM 05..	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.085	0.02–0.06	0.01–0.04				
ECM 06..	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.085	0.02–0.06	0.01–0.04				
ECM 07..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.03–0.08	0.02–0.06	0.01–0.04			
ECM 08..	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.1	0.04–0.095	0.03–0.08	0.02–0.06	0.01–0.04		

Face turning

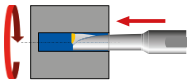


EcoCut Mini Size	2.25xD		4xD	
	$a_{p\,max.}$ in mm	f in mm/rev.	$a_{p\,max.}$ in mm	f in mm/rev.
ECM 02..	0.30	0.01–0.05	0.30	0.01–0.03
ECM 02,5..	0.30	0.01–0.05	0.30	0.01–0.03
ECM 03..	0.50	0.01–0.06	0.50	0.01–0.04
ECM 03,5..	0.50	0.01–0.06	0.50	0.01–0.04
ECM 04..	0.70	0.03–0.07	0.70	0.02–0.05
ECM 05..	0.70	0.03–0.07	0.70	0.02–0.05
ECM 06..	0.70	0.03–0.07	0.70	0.02–0.05
ECM 07..	1.00	0.04–0.08	1.00	0.03–0.06
ECM 08..	1.00	0.04–0.08	1.00	0.03–0.06

Depth of Cut and Feedrate for EcoCut Mini

Drilling

Feed rate



EcoCut Mini Size	2.25xD	4xD
	f in mm/rev.	f in mm/rev.
ECM 02..	0.0025–0.0075	0.0025–0.005
ECM 02.5..	0.0025–0.010	0.0025–0.005
ECM 03..	0.0025–0.0125	0.0025–0.010
ECM 03.5..	0.0025–0.0150	0.0025–0.010
ECM 04..	0.005–0.030	0.005–0.0125
ECM 05..	0.005–0.030	0.005–0.015
ECM 06..	0.005–0.030	0.005–0.020
ECM 07..	0.005–0.035	0.005–0.025
ECM 08..	0.005–0.040	0.005–0.030

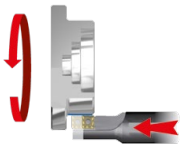
max. bore depth

EcoCut Mini Size	2.25xD	4xD
	Max. hole depth in mm	Max. hole depth in mm
ECM 02..	4.50	8.0
ECM 02.5..	5.63	10.0
ECM 03..	6.75	12.0
ECM 03.5..	7.88	14.0
ECM 04..	9.0	16.0
ECM 05..	11.25	20.0
ECM 06..	13.5	24.0
ECM 07..	15.75	28.0
ECM 08..	18.0	32.0

Depth of Cut and Feedrate for EcoCut Classic

Turning

1.5xD



EcoCut Classic Size	Depth of Cut a_p in inch											
	0.039	0.079	0.118	0.157	0.197	0.236	0.276	0.315	0.354	0.394	0.472	0.551
	Feed rate f in inch/rev.											
ECC 08	.0024–.0048	.0024–.0048	.0016–.0040	.0008–.0032								
ECC 10	.0028–.0060	.0028–.0060	.0020–.0052	.0016–.0043	.0008–.0036							
ECC 12	.0032–.0064	.0032–.0064	.0032–.0064	.0024–.0056	.0016–.0048	.0008–.0040						
ECC 14	.0036–.0072	.0036–.0072	.0036–.0072	.0036–.0072	.0028–.0064	.0020–.0056	.0008–.0043					
ECC 16	.0040–.0080	.0040–.0080	.0040–.0080	.0040–.0080	.0032–.0072	.0024–.0064	.0016–.0056	.0008–.0048				
ECC 18	.0043–.0088	.0043–.0088	.0043–.0088	.0043–.0088	.0043–.0088	.0036–.0080	.0028–.0072	.0020–.0064	.0012–.0052			
ECC 20	.0048–.0096	.0048–.0096	.0048–.0096	.0048–.0096	.0048–.0096	.0043–.0092	.0036–.0084	.0028–.0076	.0020–.0066	.0012–.0060		
ECC 25	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0043–.0096	.0036–.0088	.0028–.0080	.0012–.0064	
ECC 32	.0060–.0120	.0060–.0120	.0060–.0120	.0060–.0120	.0060–.0120	.0056–.0120	.0060–.0120	.0060–.0120	.0052–.0110	.0043–.0102	.0028–.0088	.0012–.0072

Feed f may be increased by 50–75 % when using -M50Q and -27Q.

2.25xD

EcoCut Classic Size	Depth of Cut a_p in inch										
	0.039	0.079	0.098	0.118	0.138	0.157	0.177	0.197	0.217	0.236	0.276
	Feed rate f in inch/rev.										
ECC 08	.0024–.0048	.0016–.0040	.0008–.0032								
ECC 10	.0028–.0060	.0020–.0052	.0012–.0043	.0008–.0036							
ECC 12	.0032–.0064	.0032–.0064	.0024–.0056	.0016–.0048	.0008–.0040						
ECC 14	.0036–.0072	.0036–.0072	.0028–.0064	.0020–.0056	.0016–.0052	.0008–.0043					
ECC 16	.0040–.0080	.0040–.0080	.0036–.0076	.0028–.0066	.0020–.0060	.0012–.0052					
ECC 18	.0043–.0088	.0043–.0088	.0043–.0088	.0036–.0080	.0028–.0072	.0020–.0064	.0012–.0056				
ECC 20	.0048–.0096	.0048–.0096	.0048–.0096	.0048–.0096	.0040–.0088	.0032–.0080	.0024–.0072	.0016–.0064			
ECC 25	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0052–.0102	.0048–.0100	.0040–.0092	.0032–.0084	.0024–.0076	.0016–.0066	
ECC 32	.0060–.0120	.0060–.0120	.0060–.0120	.0060–.0120	.0060–.0120	.0060–.0120	.0056–.0114	.0048–.0106	.0040–.0100	.0032–.0092	.0020–.0080

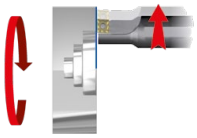
Feed f may be increased by 50–75 % when using -M50Q and -27Q.

3xD

EcoCut Classic Size	Depth of Cut a_p in inch								
	0.039	0.079	0.098	0.118	0.138	0.157	0.197	0.236	0.276
	Feed rate f in inch/rev.								
ECC 08	.0020–.0040	.0008–.0024							
ECC 10	.0024–.0043	.0012–.0028							
ECC 12	.0024–.0048	.0016–.0040	.0008–.0032						
ECC 14	.0028–.0052	.0020–.0043	.0008–.0036						
ECC 16	.0028–.0060	.0024–.0056	.0016–.0048	.0008–.0036					
ECC 18	.0032–.0064	.0032–.0064	.0024–.0056	.0016–.0048					
ECC 20	.0036–.0072	.0036–.0072	.0036–.0072	.0028–.0064	.0020–.0056	.0012–.0048			
ECC 25	.0040–.0076	.0040–.0076	.0040–.0076	.0032–.0066	.0024–.0060	.0012–.0052			
ECC 32	.0043–.0088	.0043–.0088	.0043–.0088	.0043–.0088	.0036–.0080	.0028–.0072	.0012–.0056		

Depth of Cut and Feedrate for EcoCut Classic

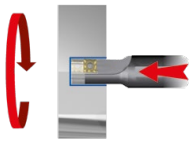
Face turning



EcoCut Classic Size	1.5xD		2.25xD		3xD	
	a_p inch	f in inch/rev.	a_p inch	f in inch/rev.	a_p inch	f in inch/rev.
ECC 08	0.079	.0020–.0040	0.075	.0016–.0036	0.043	.0016–.0028
ECC 10	0.098	.0024–.0048	0.087	.0020–.0040	0.047	.0016–.0036
ECC 12	0.118	.0028–.0056	0.102	.0024–.0048	0.055	.0020–.0044
ECC 14	0.138	.0032–.0064	0.118	.0028–.0056	0.063	.0024–.0048
ECC 16	0.157	.0036–.0072	0.134	.0032–.0064	0.075	.0024–.0052
ECC 18	0.177	.0040–.0080	0.150	.0036–.0072	0.079	.0028–.0056
ECC 20	0.197	.0044–.0088	0.165	.0040–.0080	0.087	.0032–.0060
ECC 25	0.236	.0048–.0094	0.197	.0044–.0088	0.102	.0036–.0072
ECC 32	0.315	.0052–.0106	0.236	.0048–.0100	0.118	.0040–.0080

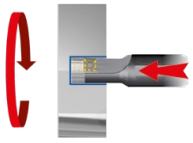
Drilling

Feed rate



EcoCut Classic Size	1.5xD	2.25xD	3xD
	f in inch/rev.	f in inch/rev.	f in inch/rev.
ECC 08	.0004–.0016	.0004–.0016	.0004–.0008
ECC 10	.0004–.0020	.0004–.0020	.0004–.0012
ECC 12	.0004–.0020	.0004–.0020	.0004–.0016
ECC 14	.0004–.0028	.0004–.0028	.0004–.0020
ECC 16	.0008–.0032	.0008–.0032	.0008–.0024
ECC 18	.0012–.0036	.0012–.0036	.0012–.0028
ECC 20	.0012–.0040	.0012–.0040	.0012–.0032
ECC 25	.0012–.0048	.0012–.0048	.0016–.0036
ECC 32	.0020–.0060	.0020–.0060	.0020–.0044

max. bore depth

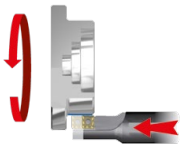


EcoCut Classic Size	1.5xD	2.25xD	3xD
	Max. hole depth in inch	Max. hole depth in inch	Max. hole depth in inch
ECC 08	0.472	0.709	0.945
ECC 10	0.591	0.886	1.181
ECC 12	0.709	1.063	1.417
ECC 14	0.827	1.240	1.654
ECC 16	0.945	1.417	1.890
ECC 18	1.063	1.594	2.126
ECC 20	1.181	1.772	2.362
ECC 25	1.476	2.224	2.953
ECC 32	1.890	2.835	3.780

Depth of Cut and Feedrate for EcoCut Classic

Turning

1.5xD



EcoCut Classic Size	Depth of Cut a_p in mm											
	1	2	3	4	5	6	7	8	9	10	12	14
	Feed rate f in mm/rev.											
ECC 08	0.06–0.12	0.06–0.12	0.04–0.10	0.02–0.08								
ECC 10	0.07–0.15	0.07–0.15	0.05–0.13	0.04–0.11	0.02–0.09							
ECC 12	0.08–0.16	0.08–0.16	0.08–0.16	0.06–0.14	0.04–0.12	0.02–0.10						
ECC 14	0.09–0.18	0.09–0.18	0.09–0.18	0.09–0.18	0.07–0.16	0.05–0.14	0.02–0.11					
ECC 16	0.10–0.20	0.10–0.20	0.10–0.20	0.10–0.20	0.08–0.18	0.06–0.16	0.04–0.14	0.02–0.12				
ECC 18	0.11–0.22	0.11–0.22	0.11–0.22	0.11–0.22	0.11–0.22	0.09–0.20	0.07–0.18	0.05–0.16	0.03–0.13			
ECC 20	0.12–0.24	0.12–0.24	0.12–0.24	0.12–0.24	0.12–0.24	0.11–0.23	0.09–0.21	0.07–0.19	0.05–0.17	0.03–0.15		
ECC 25	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.11–0.24	0.09–0.22	0.07–0.20	0.03–0.16	
ECC 32	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.14–0.30	0.15–0.30	0.15–0.30	0.13–0.28	0.11–0.26	0.07–0.22	0.03–0.18

Feed f may be increased by 50–75 % when using -M50Q and -27Q.

2.25xD

EcoCut Classic Size	Depth of Cut a_p in mm										
	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0
	Feed rate f in mm/rev.										
ECC 08	0.06–0.12	0.04–0.10	0.02–0.08								
ECC 10	0.07–0.15	0.05–0.13	0.03–0.11	0.02–0.09							
ECC 12	0.08–0.16	0.08–0.16	0.06–0.14	0.04–0.12	0.02–0.10						
ECC 14	0.09–0.18	0.09–0.18	0.07–0.16	0.05–0.14	0.04–0.13	0.02–0.11					
ECC 16	0.10–0.20	0.10–0.20	0.09–0.19	0.07–0.17	0.05–0.15	0.03–0.13					
ECC 18	0.11–0.22	0.11–0.22	0.11–0.22	0.09–0.20	0.07–0.18	0.05–0.16	0.03–0.14				
ECC 20	0.12–0.24	0.12–0.24	0.12–0.24	0.12–0.24	0.10–0.22	0.08–0.20	0.06–0.18	0.04–0.16			
ECC 25	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.13–0.26	0.12–0.25	0.10–0.23	0.08–0.21	0.06–0.19	0.04–0.17	
ECC 32	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.14–0.29	0.12–0.27	0.10–0.25	0.08–0.23	0.05–0.20

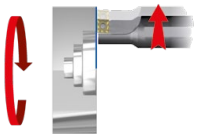
Feed f may be increased by 50–75 % when using -M50Q and -27Q.

3xD

EcoCut Classic Size	Depth of Cut a_p in mm								
	1.0	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.0
	Feed rate f in mm/rev.								
ECC 08	0.05–0.10	0.02–0.06							
ECC 10	0.06–0.11	0.03–0.07							
ECC 12	0.06–0.12	0.04–0.10	0.02–0.08						
ECC 14	0.07–0.13	0.05–0.11	0.02–0.09						
ECC 16	0.07–0.15	0.06–0.14	0.04–0.12	0.02–0.09					
ECC 18	0.08–0.16	0.08–0.16	0.06–0.14	0.04–0.12					
ECC 20	0.09–0.18	0.09–0.18	0.09–0.18	0.07–0.16	0.05–0.14	0.03–0.12			
ECC 25	0.10–0.19	0.10–0.19	0.10–0.19	0.08–0.17	0.06–0.15	0.03–0.13			
ECC 32	0.11–0.22	0.11–0.22	0.11–0.22	0.11–0.22	0.09–0.20	0.07–0.18	0.03–0.14		

Depth of Cut and Feedrate for EcoCut Classic

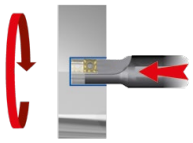
Face turning



EcoCut Classic Size	1.5xD		2.25xD		3xD	
	a_p mm	f in mm/rev.	a_p mm	f in mm/rev.	a_p mm	f in mm/rev.
ECC 08	2.00	0.05–0.10	1.90	0.04–0.09	1.10	0.04–0.07
ECC 10	2.50	0.06–0.12	2.20	0.05–0.10	1.20	0.04–0.09
ECC 12	3.00	0.07–0.14	2.60	0.06–0.12	1.40	0.05–0.11
ECC 14	3.50	0.08–0.16	3.00	0.07–0.14	1.60	0.06–0.12
ECC 16	4.00	0.09–0.18	3.40	0.08–0.16	1.90	0.06–0.13
ECC 18	4.50	0.10–0.20	3.80	0.09–0.18	2.00	0.07–0.14
ECC 20	5.00	0.11–0.22	4.20	0.10–0.20	2.20	0.08–0.15
ECC 25	6.00	0.12–0.24	5.00	0.11–0.22	2.60	0.09–0.18
ECC 32	8.00	0.13–0.27	6.00	0.12–0.25	3.00	0.10–0.20

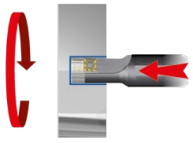
Drilling

Feed rate



EcoCut Classic Size	1.5xD	2.25xD	3xD
	f in mm/rev.	f in mm/rev.	f in mm/rev.
ECC 08	0.01–0.04	0.01–0.04	0.01–0.02
ECC 10	0.01–0.05	0.01–0.05	0.01–0.03
ECC 12	0.01–0.05	0.01–0.05	0.01–0.04
ECC 14	0.01–0.07	0.01–0.07	0.01–0.05
ECC 16	0.02–0.08	0.02–0.08	0.02–0.06
ECC 18	0.03–0.09	0.03–0.09	0.03–0.07
ECC 20	0.03–0.10	0.03–0.10	0.03–0.08
ECC 25	0.03–0.12	0.03–0.12	0.04–0.09
ECC 32	0.05–0.15	0.05–0.15	0.05–0.11

max. bore depth

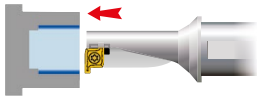


EcoCut Classic Size	1.5xD	2.25xD	3xD
	Max. hole depth in mm	Max. hole depth in mm	Max. hole depth in mm
ECC 08	12.0	18.0	24.0
ECC 10	15.0	22.5	30.0
ECC 12	18.0	27.0	36.0
ECC 14	21.0	31.5	42.0
ECC 16	24.0	36.0	48.0
ECC 18	27.0	40.5	54.0
ECC 20	30.0	45.0	60.0
ECC 25	37.5	56.5	75.0
ECC 32	48.0	72.0	96.0

Depth of Cut and Feedrate for EcoCut ProfileMaster 90°

Turning

1.5xD



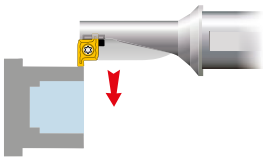
EcoCut ProfileMaster Size	Depth of Cut a_p in inch							
	0.039	0.079	0.118	0.157	0.197	0.236	0.276	0.315
	Feed rate f in inch/rev.							
EC PM 10	.0028–.0080	.0020–.0068	.0008–.0048					
EC PM 12	.0028–.0080	.0020–.0068	.0008–.0048					
EC PM 16	.0040–.0100	.0028–.0092	.0020–.0084	.0008–.0068				
EC PM 20	.0048–.0108	.0040–.0104	.0027–.0096	.0020–.0080	.0008–.0056			
EC PM 25	.0060–.0118	.0060–.0118	.0052–.0110	.0040–.0104	.0020–.0088	.0008–.0072		
EC PM 32	.0060–.0118	.0060–.0118	.0060–.0118	.0060–.0118	.0040–.0108	.0028–.0096	.0020–.0084	.0008–.0060

2.25xD

EcoCut ProfileMaster Size	Depth of Cut a_p in inch							
	0.039	0.079	0.118	0.157	0.197	0.236	0.276	0.315
	Feed rate f in inch/rev.							
EC PM 10	.0028–.0076	.0008–.0052						
EC PM 12	.0028–.0076	.0008–.0052						
EC PM 16	.0040–.0100	.0028–.0084	.0008–.0052					
EC PM 20	.0048–.0108	.0028–.0096	.0020–.0076					
EC PM 25	.0060–.0118	.0040–.0108	.0028–.0092	.0008–.0060				
EC PM 32	.0060–.0118	.0060–.0118	.0040–.0108	.0028–.0092	.0008–.0060			

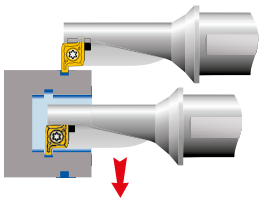
Face turning

1.5xD and 2.25xD



EcoCut ProfileMaster Size	Depth of Cut a_p in inch					
	0.039	0.059	0.079	0.098	0.118	0.138
	Feed rate f in inch/rev.					
EC PM 10	.0008–.0060	.0008–.0060				
EC PM 12	.0008–.0060	.0008–.0060				
EC PM 16	.0020–.0080	.0020–.0080	.0020–.0080			
EC PM 20	.0032–.0088	.0032–.0088	.0032–.0088	.0032–.0088		
EC PM 25	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	
EC PM 32	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100

Internal + external – radial grooving

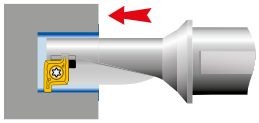


EcoCut ProfileMaster Size	1.5xD
	f in inch/rev.
EC PM 10	.0004–.0032
EC PM 12	.0008–.0040
EC PM 16	.0016–.0060
EC PM 20	.0016–.0064
EC PM 25	.0028–.0080
EC PM 32	.0032–.0088

EcoCut ProfileMaster Size	2.25xD
	f in inch/rev.
EC PM 10	.0004–.0032
EC PM 12	.0008–.0040
EC PM 16	.0016–.0060
EC PM 20	.0016–.0064
EC PM 25	.0028–.0080
EC PM 32	.0032–.0088

Drilling

Feed and max. hole depth



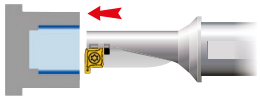
EcoCut ProfileMaster Size	1.5xD	
	f in inch/rev.	Max. hole depth in inch
EC PM 10	.0004–.0020	0.59
EC PM 12	.0004–.0024	0.71
EC PM 16	.0008–.0036	0.94
EC PM 20	.0012–.0040	1.18
EC PM 25	.0016–.0048	1.48
EC PM 32	.0016–.0056	1.89

EcoCut ProfileMaster Size	2.25xD	
	f in inch/rev.	Max. hole depth in inch
EC PM 10	.0004–.0020	0.89
EC PM 12	.0004–.0024	1.06
EC PM 16	.0008–.0036	1.42
EC PM 20	.0012–.0040	1.77
EC PM 25	.0016–.0048	2.22
EC PM 32	.0016–.0056	2.83

Depth of Cut and Feedrate for EcoCut ProfileMaster 90°

Turning

1.5xD



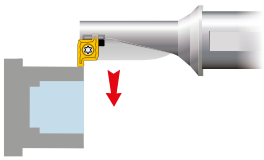
EcoCut ProfileMaster Size	Depth of Cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
EC PM 10	0.07–0.20	0.05–0.17	0.02–0.12					
EC PM 12	0.07–0.20	0.05–0.17	0.02–0.12					
EC PM 16	0.10–0.25	0.07–0.23	0.05–0.21	0.02–0.17				
EC PM 20	0.12–0.27	0.10–0.26	0.007–0.24	0.05–0.20	0.02–0.14			
EC PM 25	0.15–0.30	0.15–0.30	0.13–0.28	0.10–0.26	0.05–0.22	0.02–0.18		
EC PM 32	0.15–0.30	0.15–0.30	0.15–0.30	0.15–0.30	0.10–0.27	0.07–0.24	0.05–0.21	0.02–0.15

2.25xD

EcoCut ProfileMaster Size	Depth of Cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
EC PM 10	0.07–0.19	0.02–0.13						
EC PM 12	0.07–0.19	0.02–0.13						
EC PM 16	0.10–0.25	0.07–0.21	0.02–0.13					
EC PM 20	0.12–0.27	0.07–0.24	0.05–0.19					
EC PM 25	0.15–0.30	0.10–0.27	0.07–0.23	0.02–0.15				
EC PM 32	0.15–0.30	0.15–0.30	0.10–0.27	0.07–0.23	0.02–0.15			

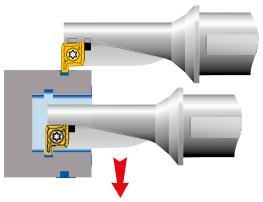
Face turning

1.5xD and 2.25xD



EcoCut ProfileMaster Size	Depth of Cut a_p in mm					
	1.0	1.5	2.0	2.5	3.0	3.5
	Feed rate f in mm/rev.					
EC PM 10	0.02–0.15	0.02–0.15				
EC PM 12	0.02–0.15	0.02–0.15				
EC PM 16	0.05–0.20	0.05–0.20	0.05–0.20			
EC PM 20	0.08–0.22	0.08–0.22	0.08–0.22	0.08–0.22		
EC PM 25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	
EC PM 32	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25

Internal + external – radial grooving

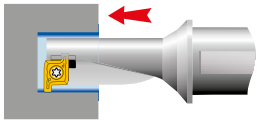


EcoCut ProfileMaster Size	1.5xD
	f in mm/rev.
EC PM 10	0.01–0.08
EC PM 12	0.02–0.10
EC PM 16	0.04–0.15
EC PM 20	0.04–0.16
EC PM 25	0.07–0.20
EC PM 32	0.08–0.22

EcoCut ProfileMaster Size	2.25xD
	f in mm/rev.
EC PM 10	0.01–0.08
EC PM 12	0.02–0.10
EC PM 16	0.04–0.15
EC PM 20	0.04–0.16
EC PM 25	0.07–0.20
EC PM 32	0.08–0.22

Drilling

Feed and max. hole depth



EcoCut ProfileMaster Size	1.5xD	
	f in mm/rev.	Max. hole depth in mm
EC PM 10	0.01–0.05	15.0
EC PM 12	0.01–0.06	18.0
EC PM 16	0.02–0.09	24.0
EC PM 20	0.03–0.10	30.0
EC PM 25	0.04–0.12	37.5
EC PM 32	0.04–0.14	48.0

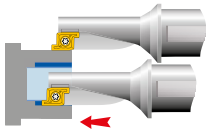
EcoCut ProfileMaster Size	2.25xD	
	f in mm/rev.	Max. hole depth in mm
EC PM 10	0.01–0.05	22.5
EC PM 12	0.01–0.06	27.0
EC PM 16	0.02–0.09	36.0
EC PM 20	0.03–0.10	45.0
EC PM 25	0.04–0.12	56.3
EC PM 32	0.04–0.14	72.0

Depth of Cut and Feedrate for EcoCut ProfileMaster 0°

EcoCut ProfileMaster Sizes 10 and 12 can not be used as 0° version.

Turning

1.5xD



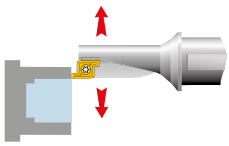
EcoCut ProfileMaster Size	Depth of cut a_p in inch					
	0.039	0.059	0.079	0.098	0.118	0.138
	Feed rate f in inch/rev.					
EC PM 16	.0016–.0080	.0016–.0080	.0016–.0080			
EC PM 20	.0024–.0088	.0024–.0088	.0024–.0088	.0024–.0088		
EC PM 25	.0032–.0100	.0032–.0100	.0032–.0100	.0032–.0100	.0032–.0100	
EC PM 32	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112

2.25xD

EcoCut ProfileMaster Size	Depth of cut a_p in inch					
	0.039	0.059	0.079	0.098	0.118	0.138
	Feed rate f in inch/rev.					
EC PM 16	.0016–.0080	.0016–.0080	.0016–.0080			
EC PM 20	.0024–.0088	.0024–.0088	.0024–.0088	.0024–.0088		
EC PM 25	.0032–.0100	.0032–.0100	.0032–.0100	.0032–.0100	.0032–.0100	
EC PM 32	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112	.0040–.0112

Face turning

1.5xD

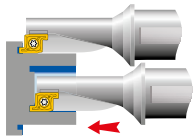


EcoCut ProfileMaster Size	Depth of cut a_p in inch						
	0.039	0.059	0.079	0.098	0.118	0.138	0.157
	Feed rate f in inch/rev.						
EC PM 16	.0020–.0080	.0020–.0080	.0020–.0080				
EC PM 20	.0020–.0080	.0020–.0080	.0020–.0080	.0020–.0080			
EC PM 25	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100		
EC PM 32	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100

2.25xD

EcoCut ProfileMaster Size	Depth of cut a_p in inch						
	0.039	0.059	0.079	0.098	0.118	0.138	0.157
	Feed rate f in inch/rev.						
EC PM 16	.0020–.0080	.0020–.0080	.0020–.0080				
EC PM 20	.0020–.0080	.0020–.0080	.0020–.0080	.0020–.0080			
EC PM 25	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100		
EC PM 32	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100	.0040–.0100

Axial grooving external + internal



EcoCut ProfileMaster Size	1.5xD
	Feed rate f in inch/rev.
EC PM 16	.0008–.0048
EC PM 20	.0016–.0056
EC PM 25	.0024–.0072
EC PM 32	.0032–.0080

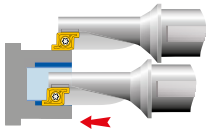
EcoCut ProfileMaster Size	2.25xD
	Feed rate f in inch/rev.
EC PM 16	.0008–.0048
EC PM 20	.0016–.0056
EC PM 25	.0024–.0072
EC PM 32	.0032–.0080

Depth of Cut and Feedrate for EcoCut ProfileMaster 0°

EcoCut ProfileMaster Sizes 10 and 12 can not be used as 0° version.

Turning

1.5xD



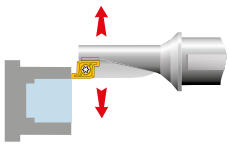
EcoCut ProfileMaster Size	Depth of cut a_p in mm					
	1.0	1.5	2.0	2.5	3.0	3.5
	Feed rate f in mm/rev.					
EC PM 16	0.04–0.20	0.04–0.20	0.04–0.20			
EC PM 20	0.06–0.22	0.06–0.22	0.06–0.22	0.06–0.22		
EC PM 25	0.08–0.25	0.08–0.25	0.08–0.25	0.08–0.25	0.08–0.25	
EC PM 32	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28

2.25xD

EcoCut ProfileMaster Size	Depth of cut a_p in mm					
	1.0	1.5	2.0	2.5	3.0	3.5
	Feed rate f in mm/rev.					
EC PM 16	0.04–0.20	0.04–0.20	0.04–0.20			
EC PM 20	0.06–0.22	0.06–0.22	0.06–0.22	0.06–0.22		
EC PM 25	0.08–0.25	0.08–0.25	0.08–0.25	0.08–0.25	0.08–0.25	
EC PM 32	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28	0.10–0.28

Face turning

1.5xD

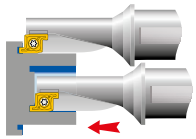


EcoCut ProfileMaster Size	Depth of cut a_p in mm						
	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	Feed rate f in mm/rev.						
EC PM 16	0.05–0.20	0.05–0.20	0.05–0.20				
EC PM 20	0.05–0.20	0.05–0.20	0.05–0.20	0.05–0.20			
EC PM 25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25		
EC PM 32	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25

2.25xD

EcoCut ProfileMaster Size	Depth of cut a_p in mm						
	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	Feed rate f in mm/rev.						
EC PM 16	0.05–0.20	0.05–0.20	0.05–0.20				
EC PM 20	0.05–0.20	0.05–0.20	0.05–0.20	0.05–0.20			
EC PM 25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25		
EC PM 32	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25	0.10–0.25

Axial grooving external + internal



EcoCut ProfileMaster Size	1.5xD
	Feed rate f in mm/rev.
EC PM 16	0.02–0.12
EC PM 20	0.04–0.14
EC PM 25	0.06–0.18
EC PM 32	0.08–0.20

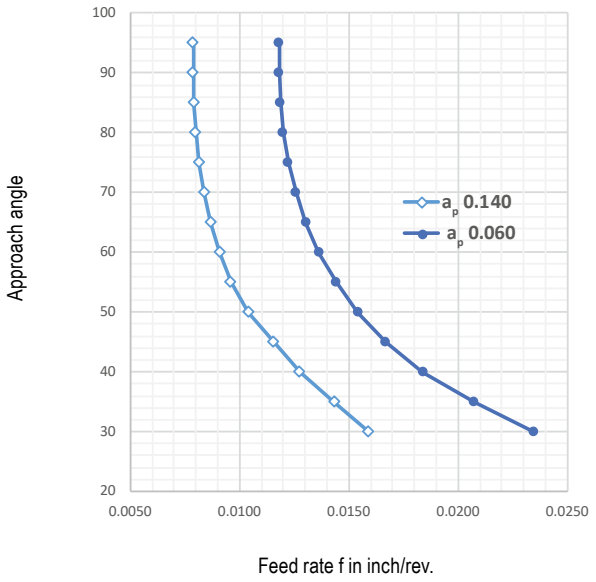
EcoCut ProfileMaster Size	2.25xD
	Feed rate f in mm/rev.
EC PM 16	0.02–0.12
EC PM 20	0.04–0.14
EC PM 25	0.06–0.18
EC PM 32	0.08–0.20

10

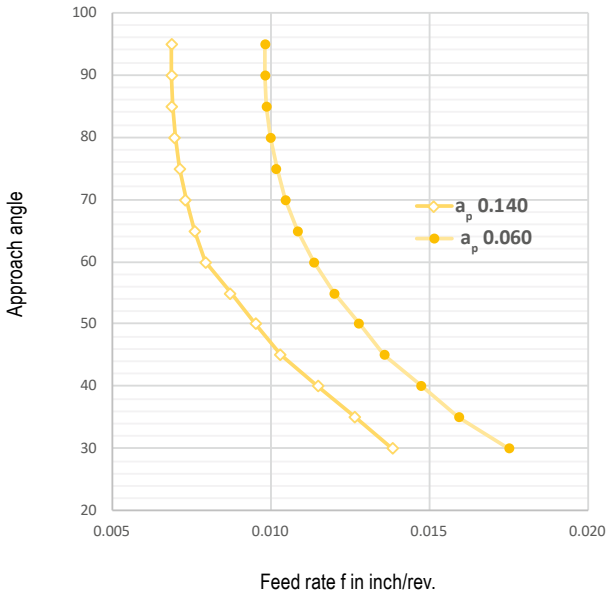
Initial curves for FreeTurn

	Material				Inserts		v_c in ft/min	Cooling
Steel	1.7225	42CrMo4	1010 N/mm²	P.2.3	FT1x M 80xxxxR08 -M	CTCP125	660	Emulsion
Stainless steel	1.4301	X5CrNi18-10	610 N/mm²	M.1.1	FT1x M 80xxxxR08 -M	CTPM125	320	dry
Non-ferrous metals	3.2341	G-AlSi 5 Mg	200 N/mm²	N2.2	FT1x G 35xxxxR08-28P	H210T	1320	Emulsion

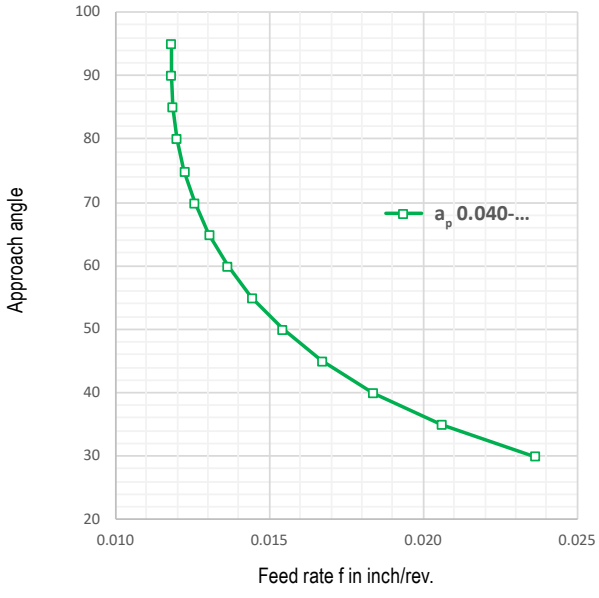
Steel



Stainless steel



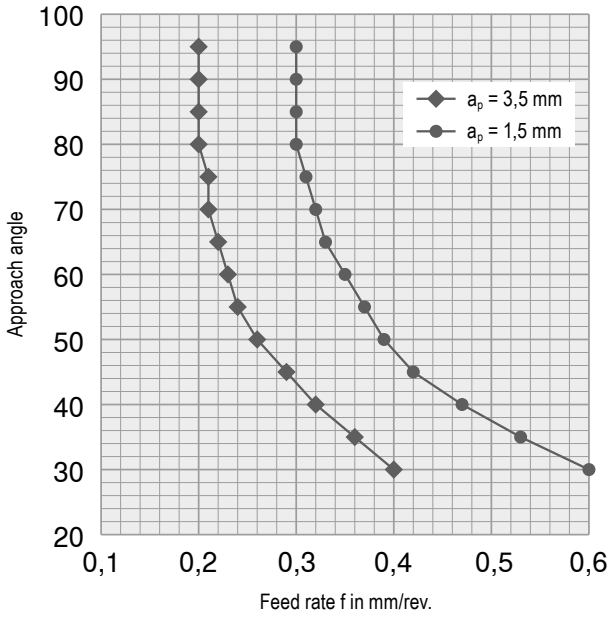
Non-ferrous metals



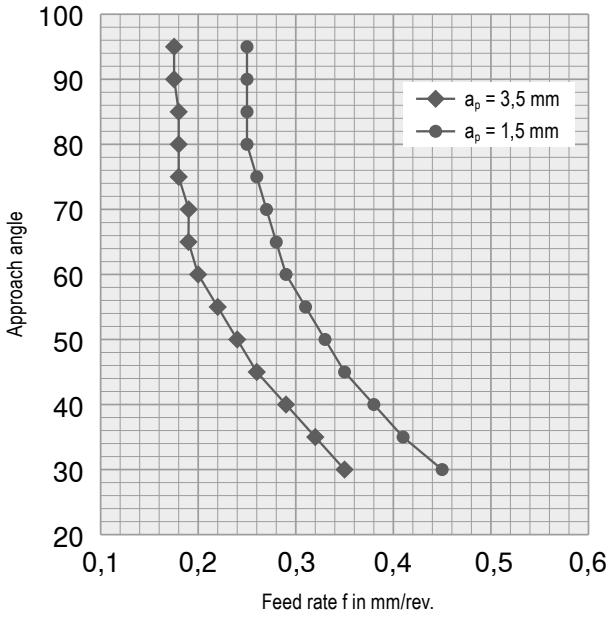
Initial curves for FreeTurn

	Material				Inserts		v_c in m/min	Cooling
Steel	1.7225	42CrMo4	1010 N/mm²	P.2.3	FT1x M 80xxxxR08 -M	CTCP125	200	Emulsion
Stainless steel	1.4301	X5CrNi18-10	610 N/mm²	M.1.1	FT1x M 80xxxxR08 -M	CTPM125	140	Emulsion
Non-ferrous metals	3.2341	G-AlSi 5 Mg	200 N/mm²	N2.2	FT1x G 35xxxxR08-28P	H210T	1100	Emulsion

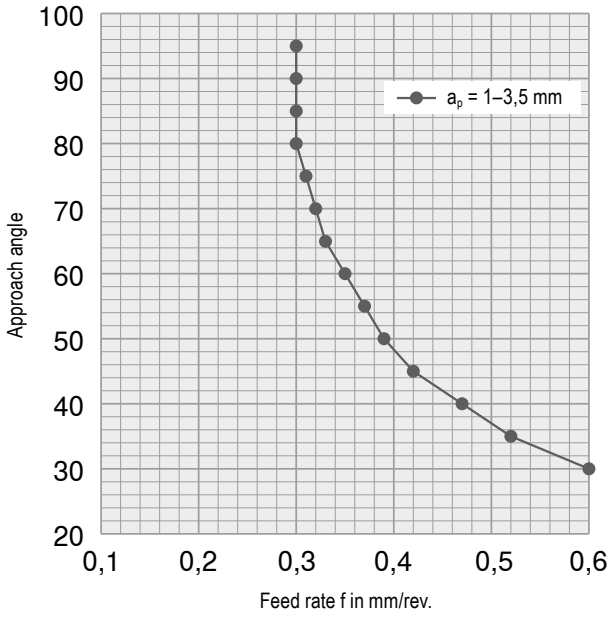
Steel



Stainless steel



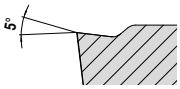
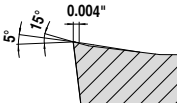
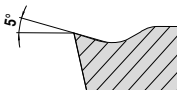
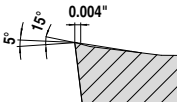
Non-ferrous metals



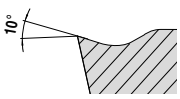
10

Chip Breakers Overview

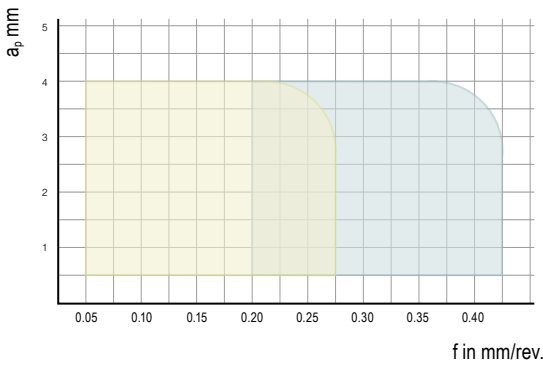
EcoCut Classic

Model	Smooth cut ○	Irregular cutting depth ◔	Interrupted cut ◌	Sectional illustration / Feed f
-EN ▲ Universal geometry ▲ Excellent chip breakage ▲ Positive cutting edge ▲ Low to medium feeds	**CTCP425-P**	**CTCP435-P / CTPP430**	**CTPP430 / CTCP435-P**	
	CTCP425-P / CTPP430	**CTPP430**	**CTPP430**	
	CTCP425-P	CTCP435-P / CTPP430	CTCP435-P	
	CTPP430	CTPP430	CTPP430	
	CTCP435-P / CTPP430	CTCP435-P / CTPP430	CTCP435-P	
				0.002" – 0.011" 0.05 – 0.275 mm
	CTCP435-P / CTPP430	CTCP435-P / CTPP430	CTCP435-P	
-M50Q ▲ With wiper geometry ▲ Excellent surface qualities ▲ Good chip formation ▲ Medium to high feeds	**CTCP425-P**	**CTCP425-P**		
	CTCP425-P			
	CTCP425-P	CTCP425-P		
				0.008" – 0.017" 0.2 – 0.425 mm
-27P ▲ Positive cutting edge ▲ Periphery ground ▲ Polished rake face ▲ First choice for non-ferrous metals				
	H216T	**H216T**	**H216T**	
	H216T	**H216T**	**H216T**	
	H216T	H216T		
				0.004" – 0.016" 0.1 – 0.4 mm
	H216T	H216T		
-27Q ▲ With wiper geometry ▲ Extremely positive geometry ▲ Periphery ground ▲ Low adhesion				
	H210T	H210T		
	H210T	**H210T**		
	H210T	**H210T**		
				0.008" – 0.020" 0.2 – 0.5 mm
	H210T	H210T		

EcoCut ProfileMaster

-M20 ▲ Positive geometry ▲ Universal application ▲ Low to medium feeds	**CTPP430**	**CTPP430**	**CTPP40**	
	CTPP430	**CTPP430**	**CTPP430**	
	CTPP430	CTPP430	CTPP430	
	CTPP430	CTPP430	CTPP430	
	CTPP430	**CTPP430**		
				0.002" – 0.010" 0.05 – 0.25 mm
	CTPP430	CTPP430	CTPP430	

Application area of -EN and -M50Q chip breakers



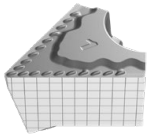
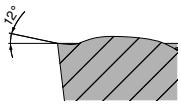
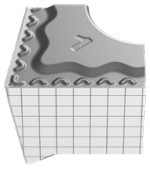
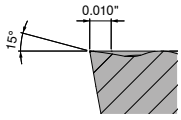
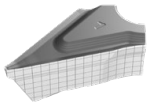
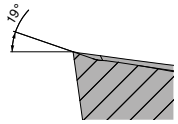
EcoCut Classic 2.25xD – ECC16 – XCNT 080304

= -M50Q

= Standard

Chip Breakers Overview

FreeTurn

	Model	Smooth cut	Irregular cutting depth	Interrupted cut	Sectional illustration
		○	◔	◌	Feed f
-F ▲ Traditional finishing geometry ▲ High surface quality ▲ First choice for finishing steel		**CTCP125** CTCP125	**CTCP125** CTCP125		 0 – 0.236" 0 – 6 mm
-M ▲ Average to rough machining ▲ Aggressive chip breaker		CTPM125 **CTPM125**	CTPM125 **CTPM125**		 0 – 0.236" 0 – 6 mm
-28P ▲ Traditional finishing geometry ▲ Sharp cutting edge ▲ First choice for aluminium		H216T **H216T** H216T H216T	H216T **H216T** H216T H216T	H216T **H216T**	 0 – 0.070" 0 – 1.8 mm

10

EcoCut Classic – Application as the most stable boring tool

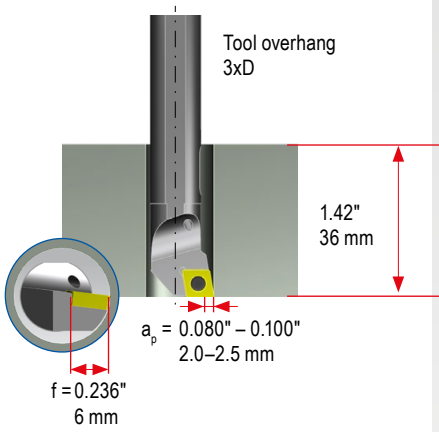
EcoCut can be used not only as a multifunctional tool.
In comparison with a boring bar EcoCut used as a pure boring tool gives the user enormous benefits.

Example: machining bores, 0.629" (16 mm) diameter by 1.420" (36 mm) depth

Differences in the tool

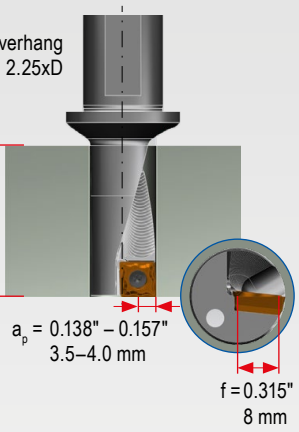
Boring Bar

A12K SCFCR 06



EcoCut Classic

ECC 16R-2.25D 08



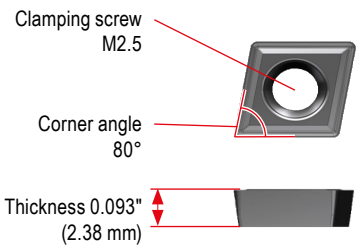
Your Advantages

Large, stable toolholder
- Absorption of high cutting forces
- Low vibration
- Chip Booster for perfect cooling and chip evacuation

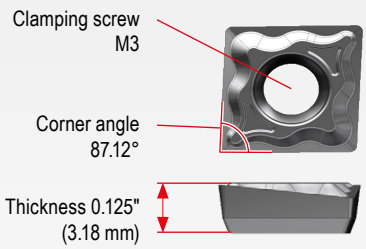
Benefits
- High surface quality
- Perfect chip control
- Max. process security

Differences in the insert

CCMT 060204



XCNT 080304

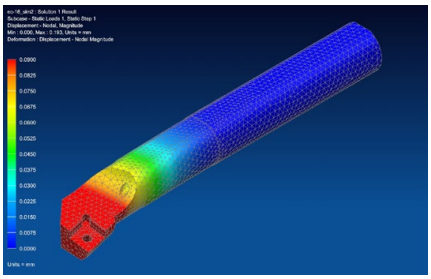


Large and stable insert
- Increased process security
- Enables large depths of cut
- Higher cutting data
- Higher tool life

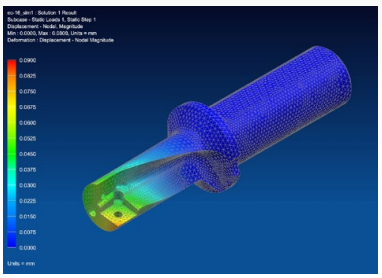
Benefits
- Reduction in machining time
- Increased productivity
- Reduced tooling costs

Stability Comparison

Calculation using FEM
A load of 1000 N on the insert seat corresponds to an approx. a_p of 0.080" (2.0 mm) and f 0.008" (0.2 mm)



Deflection 0.007" (0.19 mm)

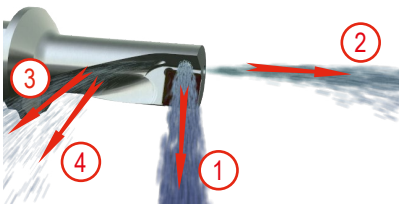


Deflection 0.003" (0.08 mm)

Practical experience shows:

- Reduced machining time by up to **75 %**
- Increase in tool life by **400 %** possible

Innovative chip removal – Chip-Booster



EcoCut tools are equipped with a unique coolant and chip removal system.

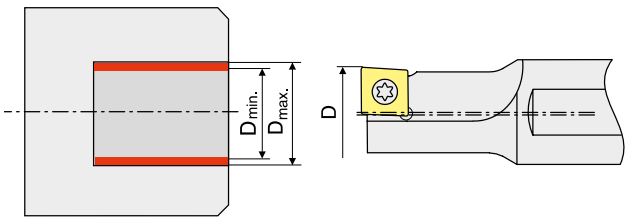
1. Cooling of the indexable insert
2. General coolant stream
3. Chip booster for improved chip transport
4. Chip booster prevents chips from getting stuck between tool and workpiece

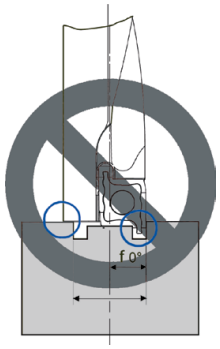
For maximum chip transport efficiency when drilling, coolant pressure must be 3–6 bar minimum (optimal 7–10 bar).

Application Tips

Drilling off-center

Due to the special construction of the EcoCut tool and insert, off-centre drilling is possible. Deviations from the tool nominal Ø, can be achieved (see adjacent table).





ProfileMaster 0°
Not suitable for drilling!

EcoCut Mini	Tool nominal-Ø		Work piece bore Ø			
	D		Dmin		Dmax	
ECM 02 L/R - …D	0.079"	2 mm	0.077"	1.95 mm	0.083"	2.1 mm
ECM 02.5 L/R - …D	0.098"	2.5 mm	0.096"	2.45 mm	0.102"	2.6 mm
ECM 03 L/R - …D	0.118"	3 mm	0.116"	2.95 mm	0.124"	3.15 mm
ECM 03.5 L/R - …D	0.138"	3.5 mm	0.136"	3.45 mm	0.144"	3.65 mm
ECM 04 R/L - ...D	0.157"	4 mm	0.154"	3.90 mm	0.165"	4.20 mm
ECM 05 R/L - ...D	0.197"	5 mm	0.193"	4.90 mm	0.205"	5.20 mm
ECM 06 R/L - ...D	0.236"	6 mm	0.232"	5.90 mm	0.244"	6.20 mm
ECM 07 R/L - ...D	0.276"	7 mm	0.272"	6.90 mm	0.283"	7.20 mm
ECM 08 R/L - ...D	0.315"	8 mm	0.311"	7.90 mm	0.323"	8.20 mm

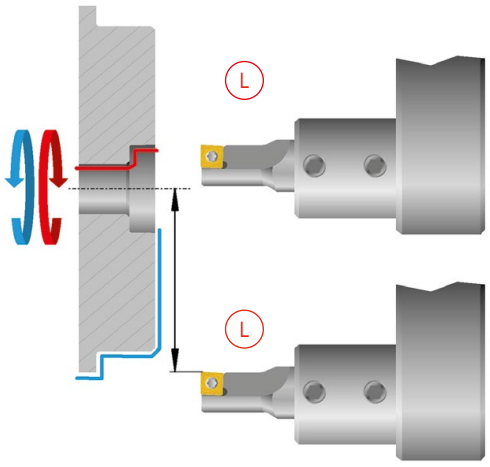
EcoCut Classic	Tool nominal-Ø		Work piece bore Ø			
	D		Dmin		Dmax	
ECC 08 R/L - ... 04	0.315"	8 mm	0.309"	7.85 mm	0.327"	8.3 mm
ECC 10 R/L - ... 05	0.394"	10 mm	0.388"	9.85 mm	0.413"	10.5 mm
ECC 12 R/L - ... 06	0.472"	12 mm	0.467"	11.85 mm	0.492"	12.5 mm
ECC 14 R/L - ... 07	0.551"	14 mm	0.545"	13.85 mm	0.571"	14.5 mm
ECC 16 R/L - ... 08	0.630"	16 mm	0.624"	15.85 mm	0.650"	16.5 mm
ECC 18 R/L - ... 09	0.709"	18 mm	0.703"	17.85 mm	0.728"	18.5 mm
ECC 20 R/L - ... 10	0.787"	20 mm	0.780"	19.80 mm	0.807"	20.5 mm
ECC 25 R/L - ... 13	0.984"	25 mm	0.976"	24.80 mm	1.016"	25.8 mm
ECC 32 R/L - ... 17	1.260"	32 mm	1.252"	31.80 mm	1.299"	33.0 mm

EcoCut ProfileMaster	Tool nominal-Ø		Work piece bore Ø			
	D		Dmin		Dmax	
PM 10R/L ...	0.394"	10 mm	0.388"	9.85 mm	0.472"	12 mm
PM 12R/L ...	0.472"	12 mm	0.467"	11.85 mm	0.591"	15 mm
PM 16R/L ...	0.630"	16 mm	0.624"	15.85 mm	0.748"	19 mm
PM 20R/L ...	0.787"	20 mm	0.780"	19.80 mm	0.945"	24 mm
PM 25R/L ...	0.984"	25 mm	0.976"	24.80 mm	1.142"	29 mm
PM 32R/L ...	1.260"	32 mm	1.252"	31.80 mm	1.496"	38 mm

Machining over center

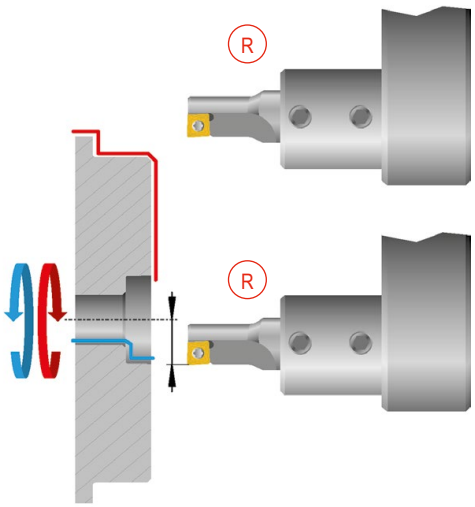
Problem

In case of insufficient movement of the machine across the centre line, the external diameter can not be machined with the same tool.



Solution

Use a right hand EcoCut tool.

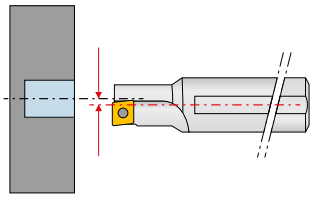


Application Tips

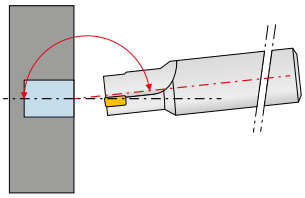
With axial displacement there is the danger of collision!

Problems

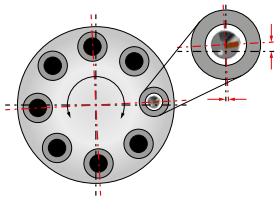
Displacement in x-direction:



Angular error:



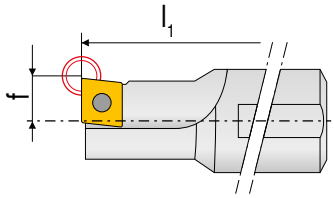
Turret position error:



Remedy

When pre-setting the tool:

▲ Definition as an internal turning tool for programming

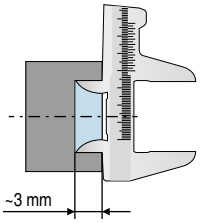


▲ Enter the tool nominal Ø as bore target Ø

At the machine:

▲ Make measuring cut, approx. 0.120" (3 mm) deep

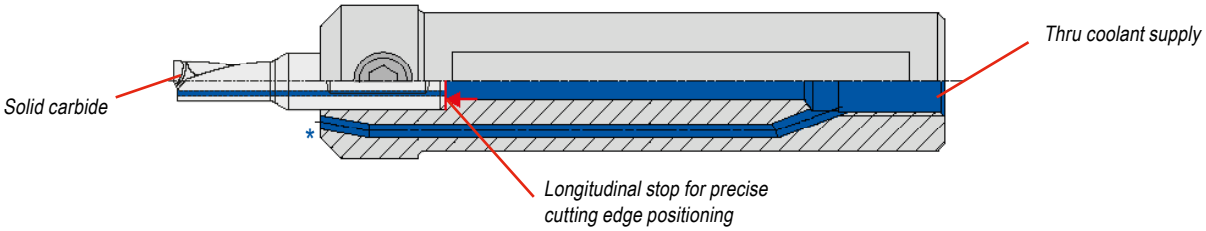
▲ Measure drilled diameter produced



▲ If necessary correct drilling Ø

▲ Start machining

EcoCut Mini adapter – Design



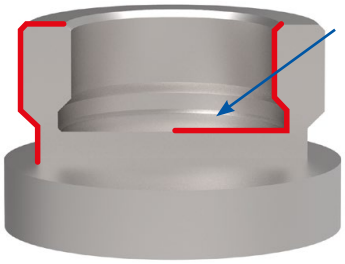
* Cross-section rotated by 90° for clarity

Mounting of the insert for EcoCut Classic

For tools up to Ø 0.315" right and left handed inserts are required.
From Ø 0.394"-1.260"neutral inserts are used.

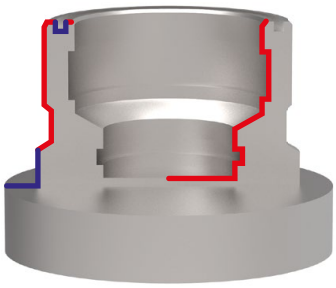
Note!
Ensure correct installation position.

EcoCut ProfileMaster – the highlight with regard to efficiency

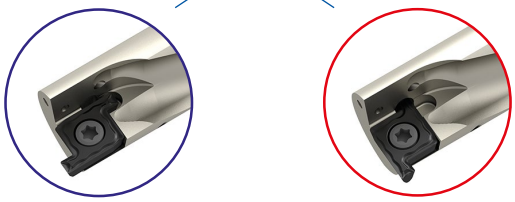


Right hand tool

right hand insert

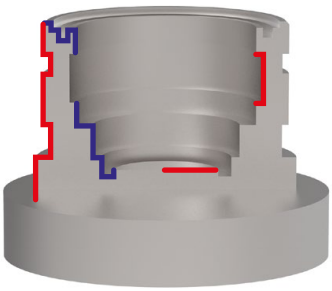


Right hand tool



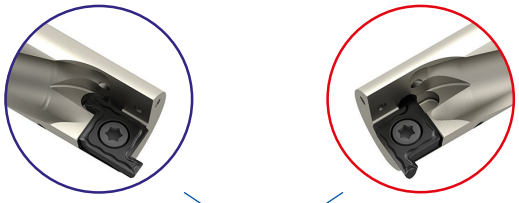
left hand insert

right hand insert



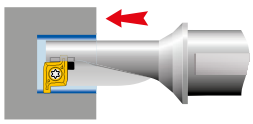
Left hand tool

Right hand tool



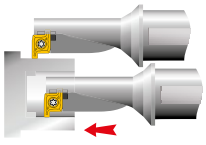
right hand insert

Version 90°



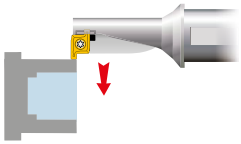
Drilling into solid material with flat bottom hole

Boring

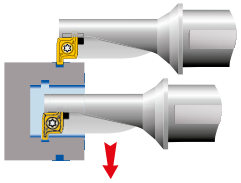


Turning External Diameters

Turning Internal Diameters



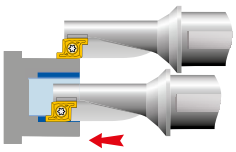
Turning Profiles



External radial grooving

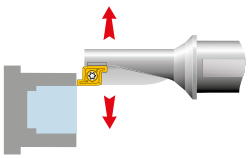
Internal radial grooving

Version 0°

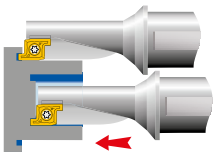


Turning External Diameters

Turning Internal Diameters



Turning Profiles



Axial grooving external

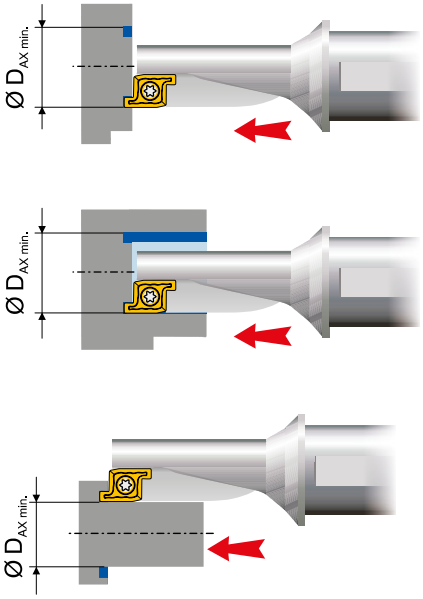
Axial grooving internal

For maximum chip transport efficiency when drilling, coolant pressure must be 3–6 bar minimum (optimal 7–10 bar).

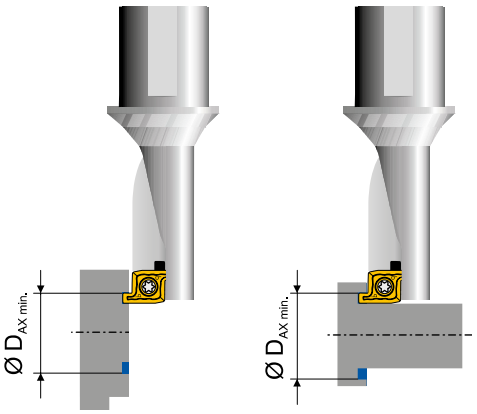
10

EcoCut ProfileMaster – Axial Grooving

0° (from Ø .629" / 16 mm)

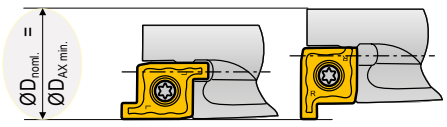


90°



EcoCut ProfileMaster	$ØD_{noml.}$		$ØD_{AX\ min.}$		$ØD_{AX\ max.}$	
	inch	mm	inch	mm	inch	mm
PM 10R/L 1.5D	0.394	10	0.394	10	> 0.394	> 10
PM 10R/L 2.25D	0.394	10	0.394	10	> 0.394	> 10
PM 12R/L 1.5D	0.472	12	0.472	12	> 0.472	> 12
PM 12R/L 2.25D	0.472	12	0.472	12	> 0.472	> 12
PM 16R/L 1.5D	0.630	16	0.630	16	> 0.630	> 16
PM 16R/L 2.25D	0.630	16	0.630	16	> 0.630	> 16
PM 20R/L 1.5D	0.787	20	0.787	20	> 0.787	> 20
PM 20R/L 2.25D	0.787	20	0.787	20	> 0.787	> 20
PM 25R/L 1.5D	0.984	25	0.984	25	> 0.984	> 25
PM 25R/L 2.25D	0.984	25	0.984	25	> 0.984	> 25
PM 32R/L 1.5D	1.260	32	1.260	32	> 1.260	> 32
PM 32R/L 2.25D	1.260	32	1.260	32	> 1.260	> 32

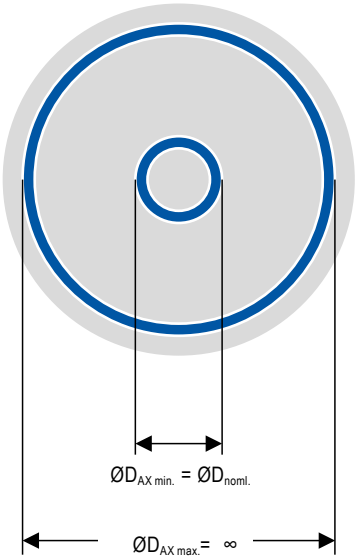
$ØD_{AX\ min.} = ØD_{noml.}$



$ØD_{noml.}$ = Nominal tool diameter

$ØD_{AX\ min.}$ = smallest diameter for axial grooving

$ØD_{AX\ max.}$ = largest diameter for axial grooving



Application Tips

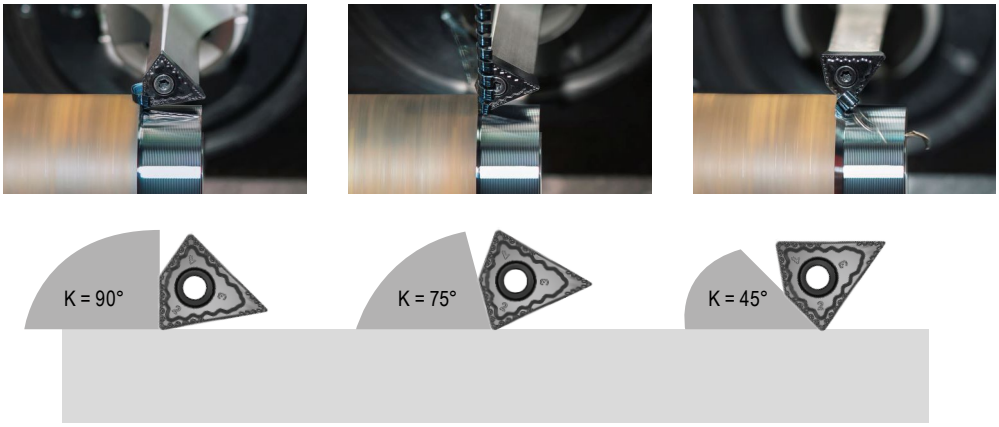
Recommendation for Optimum Results

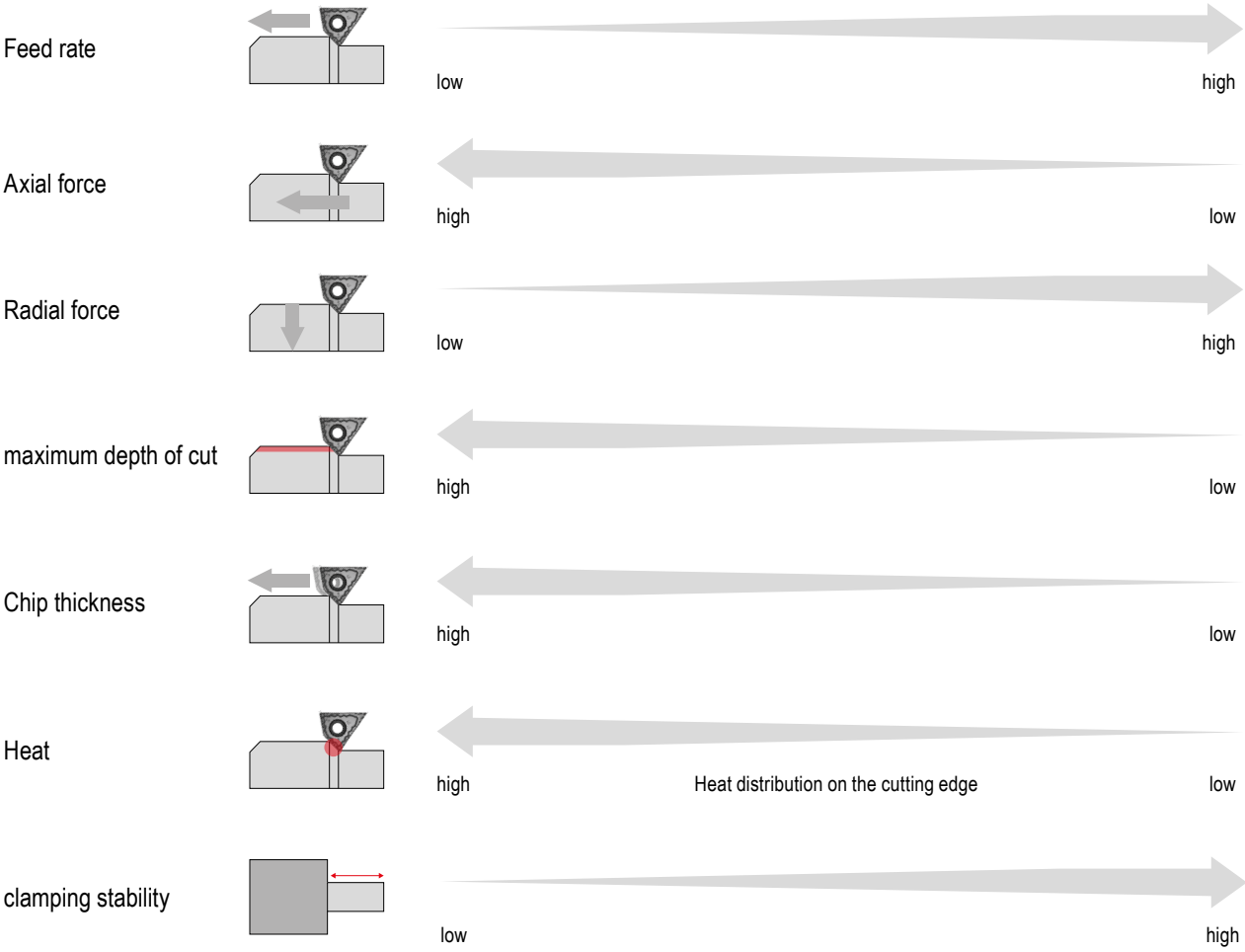
Type of problem										
Type of wear				Work piece problems		Chip control				
Edge breakage	Built-up edge	Wear on clearance face	Plastic deformation	Vibration	Surface quality	Chip too long (snarl chip)	Chip too short (fragmented chip)	Remedy measures		
	▲	▼	▼	↓	↑	↓			Cutting data	Cutting speed
▼		~	↓	↑	▼	▲	▼			Feed rate
▲		▲	▲	↓	↑				Insert selection	Corner radius (larger ↑ / smaller ↓)
▼		▲	▲							Tool Material (Wear resistance ↑ / toughness ↓)
~				~	~				General criteria	Tool clamping
~				~	~					Work piece clamping
~				~	↓					Overhang
~		~		~	~					Tip height
	●	●	●		●	●				Cooling lubricant

▲ raise, increase large influence
↑ raise, increase small influence
▼ avoid, reduce large influence
↓ avoid, reduce small influence
~ control, optimize
● use

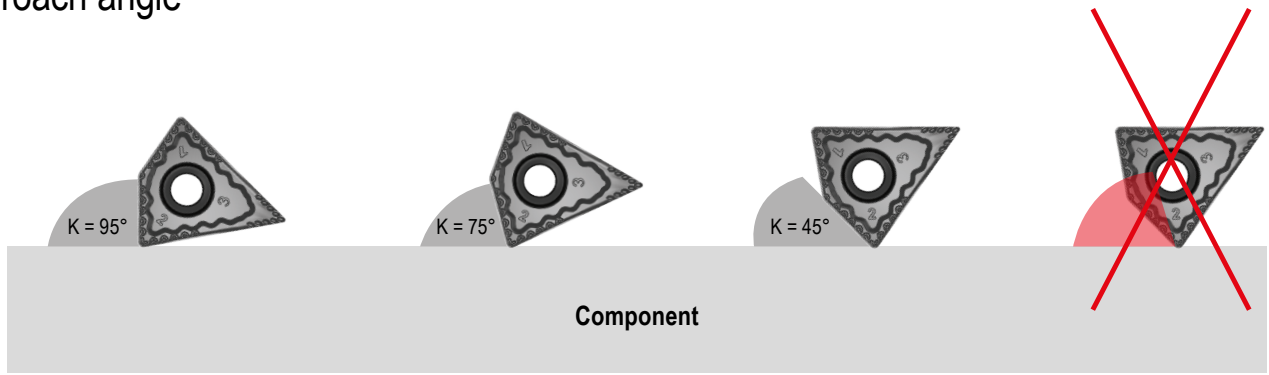
10

Factors influencing the selection of the correct cutting angle



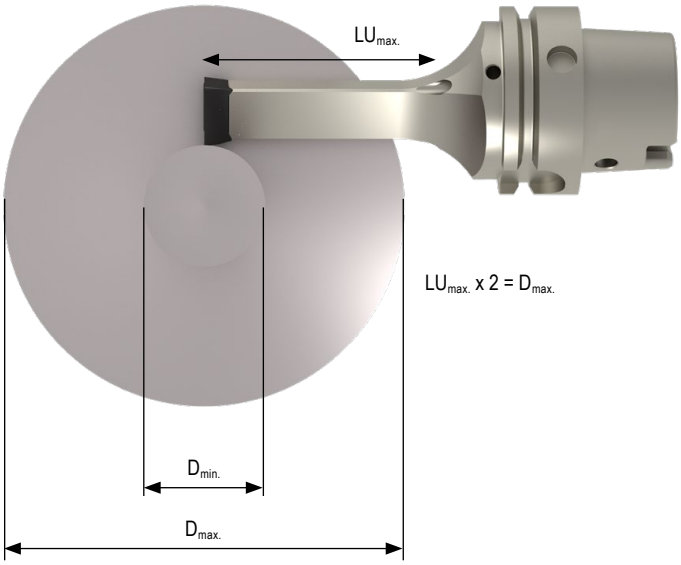


Approach angle



The approach angle always works from the edge of the component to the main cutting edge (tool).

Tool / workpiece length ratio

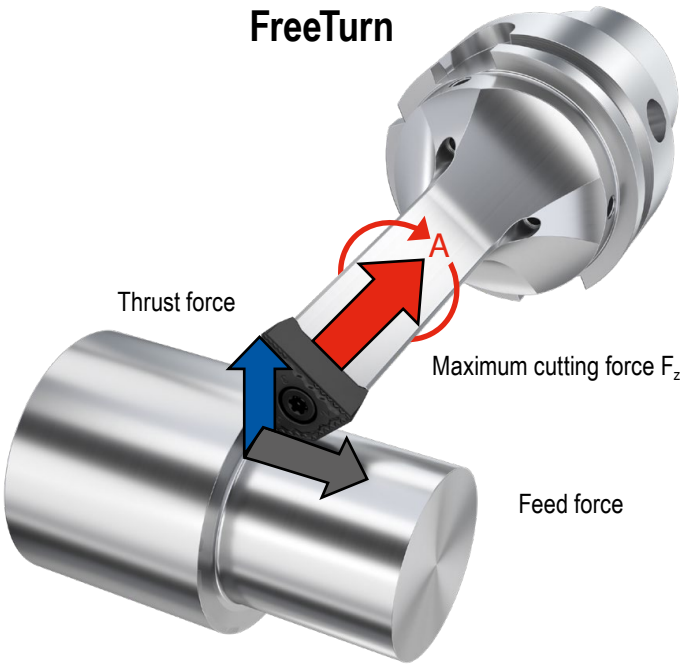


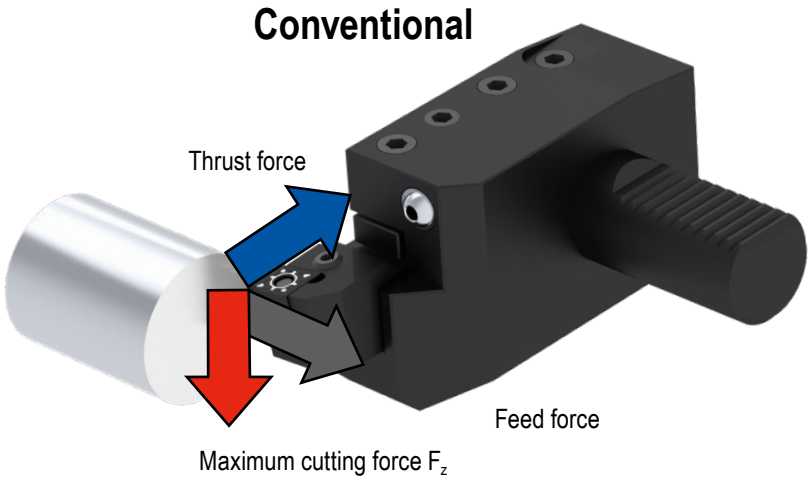
This table shows the diameter ranges you can work in with the different tool lengths.

Tool	$D_{max.}$ in inch	7.87	7.48	7.09	6.69	6.30	5.91	5.51	5.12	4.72	4.33	3.94	3.54	3.15
PSC-63-**100**-FT 808055	$D_{min.}$ in inch					5.00	4.53	4.02	3.46	2.87	2.20	1.34	0.00	0.00
PSC-63-**125**-FT 808055	$D_{min.}$ in inch	5.43	4.92	4.33	3.54	2.76	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Tool	$D_{max.}$ in mm	200	190	180	170	160	150	140	130	120	110	100	90	80
PSC-63-**100**-FT 808055	$D_{min.}$ in mm					127	115	102	88	73	56	34	0	0
PSC-63-**125**-FT 808055	$D_{min.}$ in mm	138	125	110	90	70	42	0	0	0	0	0	0	0

Force data from the process





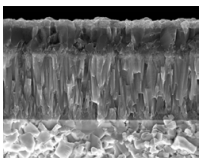
Practical test	
Steel machining shaft Ø 60 mm 1.7227 / 42CrMoS4 R_m 850 Nm	Cutting data: v_c = 175 m/min. f = 0.3 mm/rev. a_p = 3.0 mm K = 95°
Steel machining shaft Ø 2.36" 4140 material Rm 850 Nm	Cutting data: v_c = 575 ft/min. f = 0.012 inch/rev. a_p = 0.120" K = 95°

FreeTurn		Conventional
2136 N	F XYZ	2206 N
920 N	F XY (feed force)	2143 N
1928 N	Maximum cutting force F_z	526 N

Grade description

EcoCut Classic

CTCP425-P

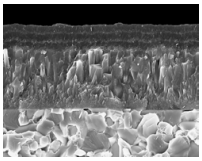


ISO **P25** | M20 | K30

Specification:
Composition: Co 7.0%; mixed carbides 8.1%; WC balance | Grain size: 1-2 µm | Hardness: HV_{30} 1470 |
Coating specification: CVD Ti(CN) + Al_2O_3 multi-layer

Recommended application:
The wear-resistant solution for steel and cast iron under stable conditions and with high cutting speed

CTCP435-P

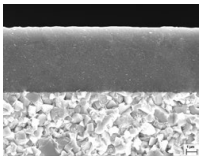


ISO **P35** | M30 | K40 | S25

Specification:
Composition: Co 9.6%; mixed carbides 7.8%; others 0.4%; WC balance | Grain size: 1-2 µm | Hardness: HV_{30} 1400 |
Coating specification: CVD Ti(C,N) + Al_2O_3 multi-layer

Recommended application:
The reliable choice when machining steel and cast iron under unstable conditions.

CTPP430

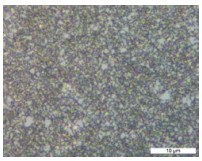


ISO | **P30** | **M25** | K30 | N25 | S25 | O25

Specification:
Composition: Co 9.0%; others 0.75%; WC balance | Grain size: 0.85 µm | Hardness: HV_{30} 1590 | Coating specification: PVD TiAlN

Recommended application:
The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

H210T

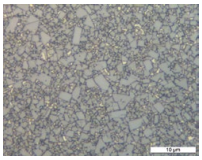


ISO | K10 | **N10** | **S10** | O10

Specification:
Composition: Co 6.0%; WC balance | Grain size: 0.8 µm | Hardness: HV_{30} 1850

Recommended application:
The wear-resistant uncoated carbide grade for the machining of aluminium and other non-ferrous metals.

H216T



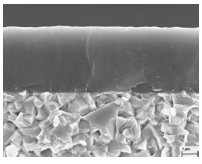
ISO | K15 | **N15** | S15 | O10

Specification:
Composition: Co 6.0%; WC balance | Grain size: 1 µm | Hardness: HV_{30} 1630

Recommended application:
The uncoated carbide grade for the machining of aluminium and other non-ferrous metals

EcoCut Mini

CTPP435

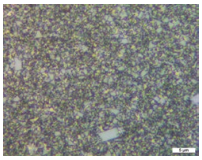


ISO **P35** | **M30** | K30 | N30 | **S30** | O30

Specification:
Composition: Co 10.3%; others 1.2%; WC balance | Grain size: 0.7 µm | Hardness: HV_{30} 1600 | Coating specification: PVD TiN / TiAlN

Recommended application:
The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

CTWN425



ISO K20 | **N25** | S25 | O25

Specification:
Composition: Co 10.3%; others 1.2%; WC balance | Grain size: 0.7 µm (submicron grade) | Hardness: HV_{30} 1600

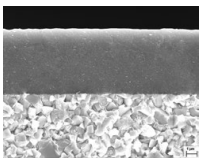
Recommended application:
The uncoated carbide grade for the machining of aluminium and other non-ferrous metals.

10

Grade description

EcoCut ProfileMaster

CTPP430



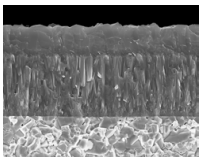
ISO | **P30** | **M25** | K30 | N25 | S25 | O25

Specification:
Composition: Co 9.0%; others 0.75%; WC balance | Grain size: 0.85 µm | Hardness: HV_{30} 1590 | Coating specification: PVD TiAlN

Recommended application:
The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

FreeTurn

CTCP125

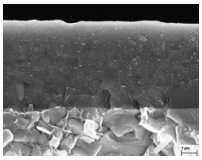


ISO | **P25** | K25

Specification:
Composition: Co 7.0%; mixed carbides 8.0%; WC balance | Grain size: 1 - 2 µm | Hardness: HV_{30} 1450 | Coating specification: CVD TiCN-Al_2O_3

Recommended application:
The first choice for the universal machining of steel

CTPM125

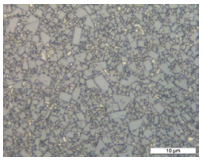


ISO | P35 | **M25**

Specification:
Composition: Co 9.6%; mixed carbides 7.8%; others 0.4%; WC balance | Grain size: 1 - 2 µm | Hardness: HV_{30} 1460 | Coating specification: PVD TiAlTaN

Recommended application:
The first choice for the machining of austenitic steels

H216T

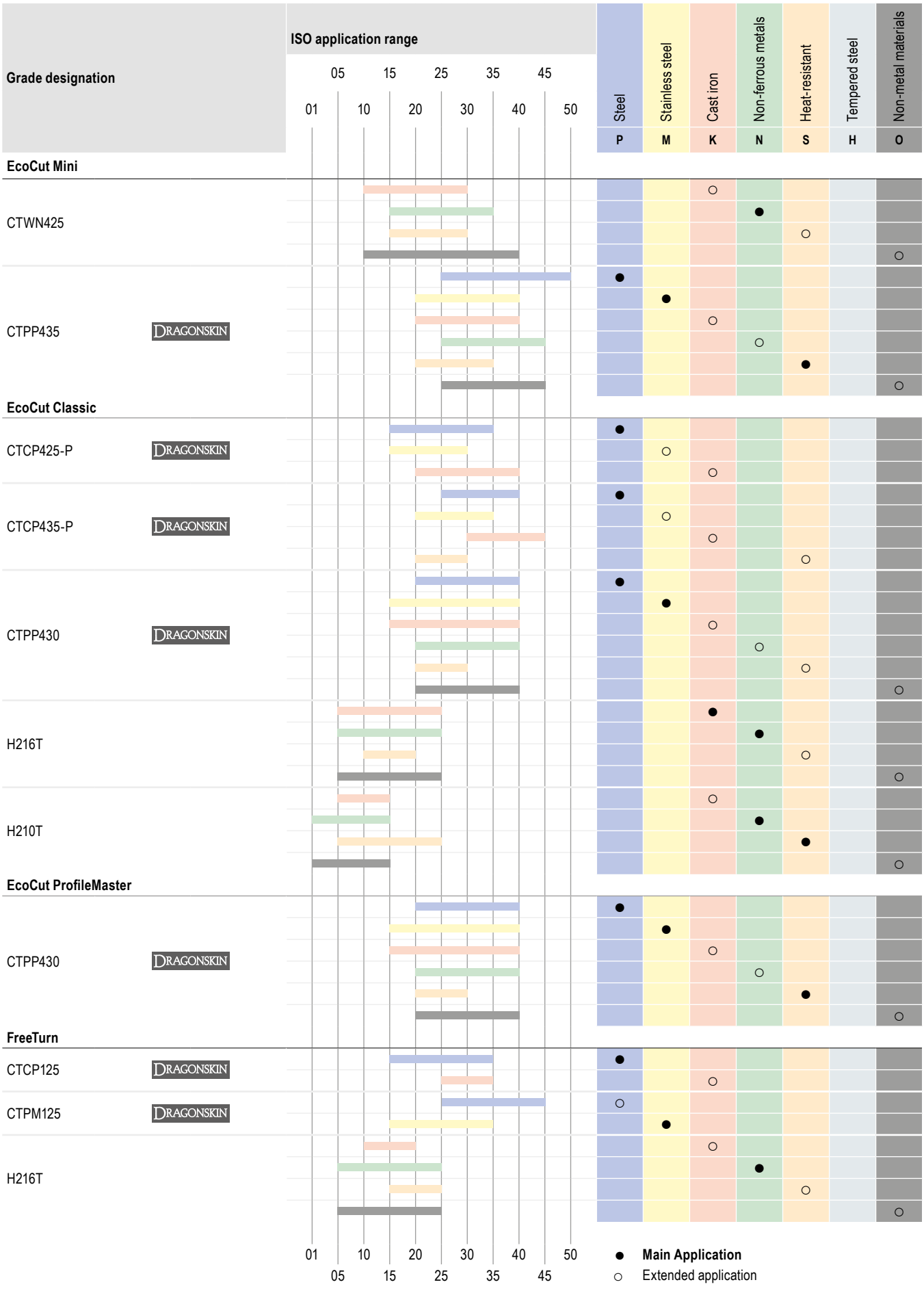


ISO | K15 | **N15** | S15 | O10

Specification:
Composition: Co 6.0%; WC balance | Grain size: 1 µm | Hardness: HV_{30} 1630

Recommended application:
The uncoated carbide grade for the machining of aluminium and other non-ferrous metals

Application

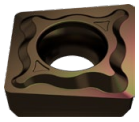


10

Designation System

EcoCut – indexable insert designation

X	C	E	T	17	05	08	F	N	-	27P
1	2	3	4	5	6	7	8	9		10



1 Insert shape
2 Clearance angle
3 Tolerances
4 Characteristics
5 Cutting length
6 Insert thickness
7 Corner radius
8 Cutting edge
9 Direction of cut
10 Chip groove

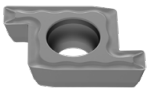
EcoCut – holder designation

ECC	32	R	-	3.0D	17	H	-	E
1	2	3		4	5	6		7

1 System
2 Nominal diameter in mm
3 Direction of cut
4 maximum hole depth
5 insert size
6 Tool holder version in Densimet
7 Inch size shank

EcoCut ProfileMaster – indexable insert designation

PM	25	R	G	35	30	04	-	M20
1	2	3	4	5	6	7		8



1 ProfileMaster
2 Nominal diameter in mm
3 Direction of cut
4 Version
5 Groove width in mm/10
6 Groove depth in mm/10
7 Corner radius
8 Chip groove

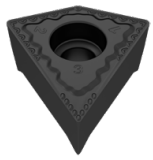
EcoCut ProfileMaster – holder designation

PMC	25	R	-	2.25D	-	E
1	2	3		4		5

1 ProfileMaster
2 Nominal diameter in mm
3 Direction of cut
4 maximum hole depth
5 Inch size shank

Designation System

FreeTurn – indexable insert designation



FT15 M/G 808055R080804 Q MMF CTCP125

1 2 3 4 5 6 7 8 9 10 11 12

1 FreeTurn
2 Nominal diameter in mm
3 ISO tolerance (M = sintered, G = polished)
4 Cutter angle 1 in degrees
5 Cutter angle 2 in degrees
6 Cutter angle 3 in degrees
7 Corner radius 1 in mm
8 Corner radius 2 in mm
9 Corner radius 3 in mm
10 Wiper geometry
11 Chip breaker (M = medium, F = fine)
12 Carbide Grade

FreeTurn – holder designation

HSK - T63 - 100 - FT15 808055

1 2 3 4 5 6 7 8

1 System
2 Size
3 Overhang length
4 FreeTurn
5 Nominal diameter in mm
6 Cutter angle 1 in degrees
7 Cutter angle 2 in degrees
8 Cutter angle 3 in degrees