

Programme Extension

EcoCut – Mini Ø 2–3.5 mm

DRAGONSKIN



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EcoCut adapter Mini



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EcoCut – Mini adapter with coolant connection thread



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CERATIZIT \ Performance

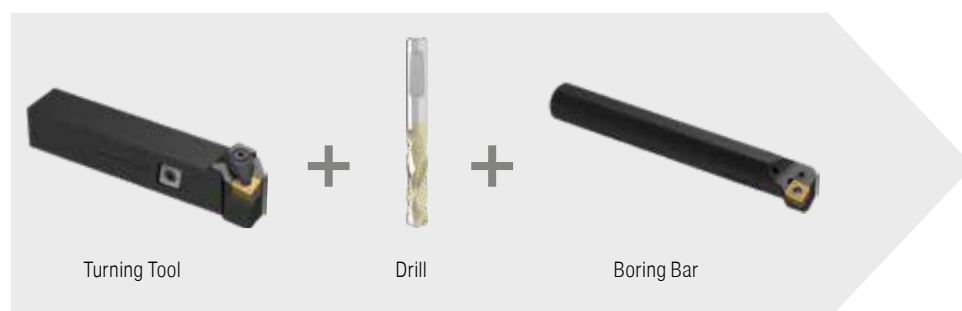
Premium quality tools for high performance.

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.

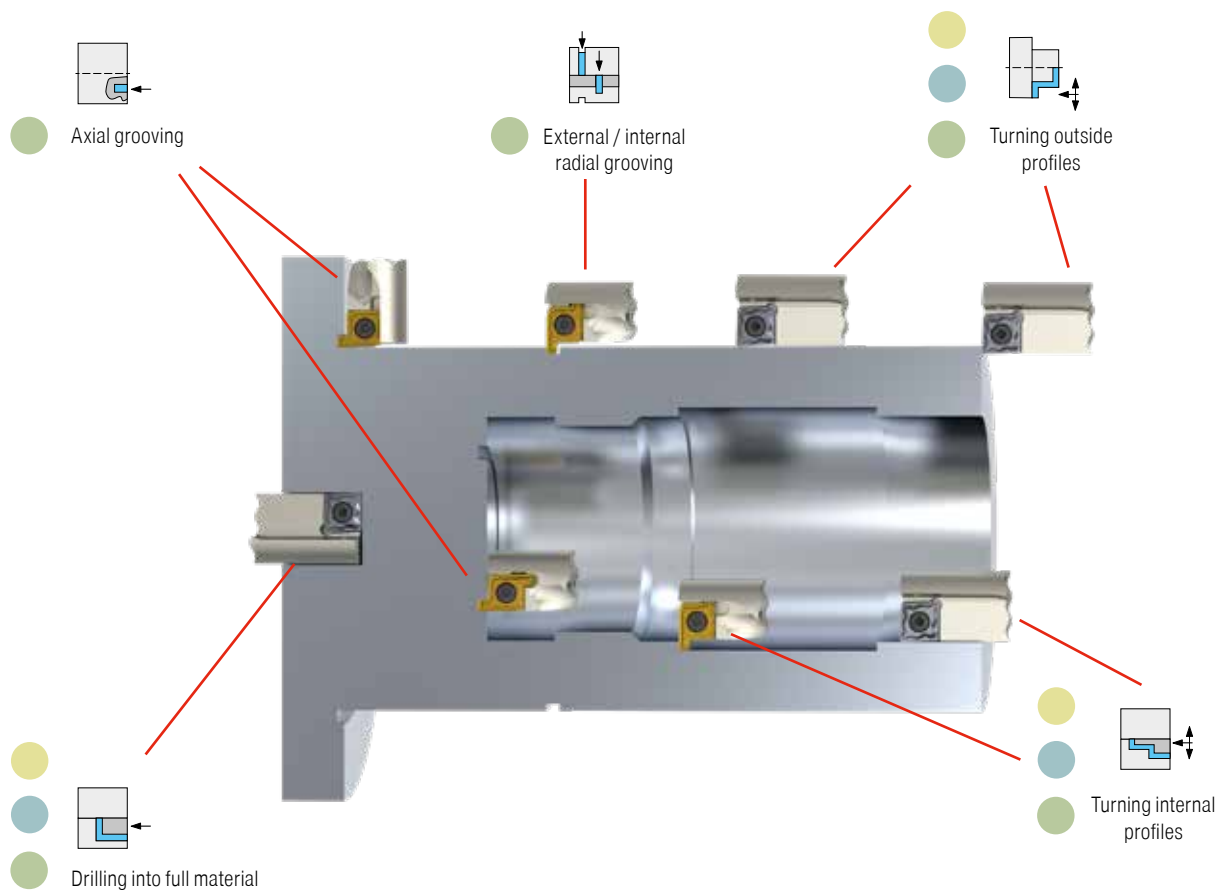
More productive thanks to EcoCut – continuous cost savings

Advantages with 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



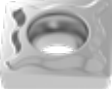
Toolfinder



Tools:			Applications					Pages
Dimension	Hole Ø mm	max. hole depth mm						
EcoCut Mini	2,25xD	2-8	4,5-18	✓	✓	✓		5
	4xD	2-8	8-32	✓	✓	✓		5
EcoCut Classic	1,5xD	8-32	12-48	✓	✓	✓		9
	2,25xD	8-32	18-72	✓	✓	✓		10
	3xD	8-32	24-96	✓	✓	✓		11
EcoCut ProfileMaster	1,5xD	10-32	15-48	✓	✓	✓	✓	13
	2,25xD	10-32	22,5-72	✓	✓	✓	✓	14
EcoCut HSK-T	2,25xD	25-32	56,2-72	✓	✓	✓	i see → Chapter 16, Adapters.	

i EcoCut tools are suitable for off-centre drilling.
This permits certain deviations from the nominal tool diameter to be achieved → **For details, see the technical information.**

Overview EcoCut Mini and EcoCut Inserts

Type	Smooth cut	Irregular cutting depth	Interrupted cut	Grade	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant alloys	Tempered steel	Radius RE in mm	coated	uncoated	Pages
EcoCut Mini														
DRAGONSKIN				CTPP435	●	●	○	●						
				HCN1435							0,1-0,2	■		5
				CTWN425	●	●	○	●						
				CWK4425							0,1-0,2	□		5
EcoCut Classic														
DRAGONSKIN				CTCP425	●	○	●	●						
				HCR1425							0,2-0,8	■		8
DRAGONSKIN				CTCP435	●	○	●	●						
				HCR1435							0,2-0,8	■		8
DRAGONSKIN				CTPP430	●	●	○	○	●					
				HCN2430							0,2-0,8	■		8
				H216T	●	●	○	●						
				CWK26							0,2-0,8	□		8
				H210T	●	○	●	●						
				CWK20							0,2-0,8	□		8
EcoCut ProfileMaster														
DRAGONSKIN				CTPP430	●	●	○	○	●					
				HCN2430							0,4	■		12

● = Main Application
○ = Extended application

EcoCut – Mini

▲ Drilling and turning tool for small diameters

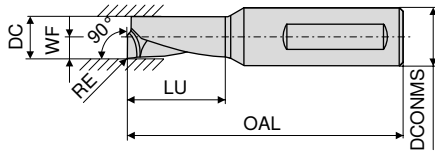
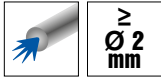
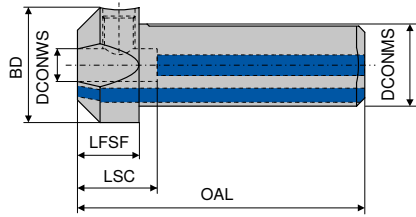


Diagram shows right hand version

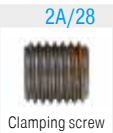
Designation	DC	DCONMS	OAL	LU	WF	RE	Solid carbide Left-hand 2B/20 Article no. 70 805 ...		Solid carbide Right-hand 2B/20 Article no. 70 804 ...		Solid carbide Left-hand 2B/20 Article no. 70 805 ...		Solid carbide Right-hand 2B/20 Article no. 70 804 ...	
							£		£		£		£	
ECM 02 R/L 2,25D	2.0	4	28	4.50	1.00	0.1	46.33	320	46.33	320				
ECM 02 R/L 2,25D AL	2.0	4	28	4.50	1.00	0.1					40.85	420	40.85	420
ECM 02 R/L 4,00D	2.0	4	31	8.00	1.00	0.1	48.60	321	48.60	321	42.83	421	42.83	421
ECM 02 R/L 4,00D AL	2.0	4	31	8.00	1.00	0.1					42.07	425	42.07	425
ECM 02,5 R/L 2,25D	2.5	4	29	5.63	1.25	0.1	47.75	325	47.75	325				
ECM 02,5 R/L 2,25D AL	2.5	4	29	5.63	1.25	0.1					44.15	426	44.15	426
ECM 02,5 R/L 4,00D	2.5	4	33	10.00	1.25	0.1	50.11	326	50.11	326				
ECM 02,5 R/L 4,00D AL	2.5	4	33	10.00	1.25	0.1	49.25	330	49.25	330	43.40	430	43.40	430
ECM 03 R/L 2,25D	3.0	4	31	6.75	1.50	0.1					45.57	431	45.57	431
ECM 03 R/L 2,25D AL	3.0	4	31	6.75	1.50	0.1								
ECM 03 R/L 4,00D	3.0	4	35	12.00	1.50	0.1	51.72	331	51.72	331	45.10	435	45.10	435
ECM 03 R/L 4,00D AL	3.0	4	35	12.00	1.50	0.1					47.36	436	47.36	436
ECM 03,5 R/L 2,25D	3.5	4	32	7.88	1.75	0.1	51.15	335	51.15	335				
ECM 03,5 R/L 2,25D AL	3.5	4	32	7.88	1.75	0.1					47.85	450	47.85	450
ECM 03,5 R/L 4,00D	3.5	4	37	14.00	1.75	0.1	53.70	336	53.70	336	50.25	451	50.25	451
ECM 03,5 R/L 4,00D AL	3.5	4	37	14.00	1.75	0.1					49.20	452	49.20	452
ECM 04 R/L 2,25D	4.0	6	35	9.00	2.00	0.2	54.32	300	54.32	300				
ECM 04 R/L 2,25D AL	4.0	6	35	9.00	2.00	0.2					51.60	453	51.60	453
ECM 04 R/L 4,00D	4.0	6	41	16.00	2.00	0.2	57.02	301	57.02	301	50.87	456	50.87	456
ECM 04 R/L 4,00D AL	4.0	6	41	16.00	2.00	0.2					53.17	462	53.17	462
ECM 05 R/L 2,25D	5.0	6	37	11.25	2.50	0.2	56.20	302	56.20	302				
ECM 05 R/L 2,25D AL	5.0	6	37	11.25	2.50	0.2					52.44	458	52.44	458
ECM 05 R/L 4,00D	5.0	6	45	20.00	2.50	0.2	58.80	303	58.80	303	54.84	464	54.84	464
ECM 05 R/L 4,00D AL	5.0	6	45	20.00	2.50	0.2					53.90	460	53.90	460
ECM 06 R/L 2,25D	6.0	8	38	13.50	3.00	0.2	57.65	306	57.65	306				
ECM 06 R/L 2,25D AL	6.0	8	38	13.50	3.00	0.2					56.50	466	56.50	466
ECM 06 R/L 4,00D	6.0	8	49	24.00	3.00	0.2	60.56	312	60.56	312				
ECM 06 R/L 4,00D AL	6.0	8	49	24.00	3.00	0.2								
ECM 07 R/L 2,25D	7.0	8	42	15.75	3.50	0.2	59.43	308	59.43	308				
ECM 07 R/L 2,25D AL	7.0	8	42	15.75	3.50	0.2								
ECM 07 R/L 4,00D	7.0	8	53	28.00	3.50	0.2	62.55	314	62.55	314				
ECM 07 R/L 4,00D AL	7.0	8	53	28.00	3.50	0.2								
ECM 08 R/L 2,25D	8.0	8	45	18.00	4.00	0.2	61.40	310	61.40	310				
ECM 08 R/L 2,25D AL	8.0	8	45	18.00	4.00	0.2								
ECM 08 R/L 4,00D	8.0	8	57	32.00	4.00	0.2	64.32	316	64.32	316				
ECM 08 R/L 4,00D AL	8.0	8	57	32.00	4.00	0.2								
Steel							●		●					
Stainless steel							●		●					
Cast iron							○		○		○		○	
Non ferrous metals											●		●	
Heat resistant alloys							●		●					

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EcoCut – Adapter Mini



Designation	DCONWS	DCONMS	BD	OAL	LFSF	LSC	2B/20	
	mm	mm	mm	mm	mm	mm	Article no. 70 800 ...	£
EC-ADX16-04	4	16.00	22	59.0	14	18	171.64	716
EC-ADX12-04-E	4	19.05	25	63.5	14	18	171.64	719
EC-ADX20-04	4	20.00	25	64.0	14	18	171.64	720
EC-ADX16-06	6	16.00	22	59.0	14	18	171.64	976
EC-ADX12-06-E	6	19.05	25	63.5	14	18	171.64	986
EC-ADX20-06	6	20.00	25	64.0	14	18	171.64	996
EC-ADX16-08	8	16.00	22	59.0	14	18	171.64	978
EC-ADX12-08-E	8	19.05	25	63.5	14	18	171.64	988
EC-ADX20-08	8	20.00	25	64.0	14	18	171.64	998

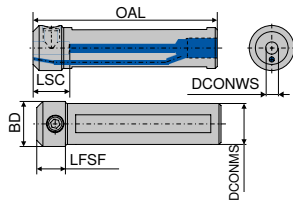


Spare parts

for Article no.

		Article no. 70 950 ...	
		£	
70 800 716	M5x10 ISO 4026	2.71	867
70 800 719	M5x10 ISO 4026	2.71	867
70 800 720	M5x10 ISO 4026	2.71	867
70 800 976	M8x1x8 - SW4	2.71	123
70 800 986	M8x1x8 - SW4	2.71	123
70 800 996	M8x1x8 - SW4	2.71	123
70 800 978	M8x1x8 - SW4	2.71	123
70 800 988	M8x1x8 - SW4	2.71	123
70 800 998	M8x1x8 - SW4	2.71	123

EcoCut – Mini adapter with coolant connection thread



Designation	DCONWS	DCONMS	BD	OAL	LFSF	LSC	Thread	2B/20	
								Article no. 70 801 ...	£
ECA 16-04	4	16.00	20.0	75	14	18	G 1/8	91.64	716
ECA 0750-04	4	19.05	20.0	100	14	18	G 1/8	93.55	719
ECA 20-04	4	20.00	19.6	90	14	18	G 1/8	93.55	720
ECA 22-04	4	22.00	21.6	110	14	18	G 1/8	96.36	722
ECA 25-04	4	25.00	24.6	110	14	18	G 1/8	97.27	725
ECA 1000-04	4	25.40	25.0	110	14	18	G 1/8	97.27	726
ECA 16-06	6	16.00	22.0	75	14	18	G 1/8	91.64	816
ECA 0750-06	6	19.05	22.0	100	14	18	G 1/8	93.55	819
ECA 20-06	6	20.00	22.0	90	14	18	G 1/8	93.55	820
ECA 22-06	6	22.00	21.6	110	14	18	G 1/8	96.36	822
ECA 25-06	6	25.00	24.6	110	14	18	G 1/8	97.27	825
ECA 1000-06	6	25.40	25.0	110	14	18	G 1/8	97.27	826
ECA 16-08	8	16.00	22.0	75	14	18	G 1/8	91.64	916
ECA 0750-08	8	19.05	22.0	100	14	18	G 1/8	93.55	919
ECA 20-08	8	20.00	22.0	90	14	18	G 1/8	93.55	920
ECA 22-08	8	22.00	21.6	110	14	18	G 1/8	96.36	922
ECA 25-08	8	25.00	24.6	110	14	18	G 1/8	97.27	925
ECA 1000-08	8	25.40	25.0	110	14	18	G 1/8	97.27	926

2A/28



Clamping screw

Spare parts

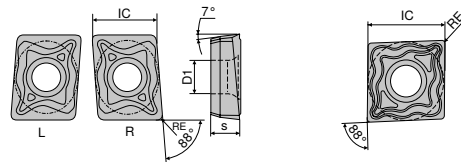
for Article no.

for Article no.		Article no. 70 950 ...	
		£	
70 801 716	M5X8 - DIN 913	1.36	13200
70 801 719	M5X8 - DIN 913	1.36	13200
70 801 720	M5X8 - DIN 913	1.36	13200
70 801 722	M5X8 - DIN 913	1.36	13200
70 801 725	M5x10 ISO 4026	2.71	867
70 801 726	M5x10 ISO 4026	2.71	867
70 801 816	M8x1x8 - SW4	2.71	123
70 801 819	M8x1x8 - SW4	2.71	123
70 801 820	M8x1x8 - SW4	2.71	123
70 801 822	M8x1x8 - SW4	2.71	123
70 801 825	M8x1x8 - SW4	2.71	123
70 801 826	M8x1x8 - SW4	2.71	123
70 801 916	M8x1x8 - SW4	2.71	123
70 801 919	M8x1x8 - SW4	2.71	123
70 801 920	M8x1x8 - SW4	2.71	123
70 801 922	M8x1x8 - SW4	2.71	123
70 801 925	M8x1x8 - SW4	2.71	123
70 801 926	M8x1x8 - SW4	2.71	123

10

XCNT / XCET

Designation	S	D1	IC
	mm	mm	mm
XC.T 0401..	1.80	2.10	4.5
XC.T 0502..	2.10	2.25	5.8
XC.T 0602..	2.38	2.50	6.5
XC.T 0703..	3.18	2.80	7.6
XC.T 0803..	3.18	3.40	8.5
XC.T 09T3..	3.97	3.40	9.6
XC.T 10T3..	3.97	4.40	10.6
XC.T 1304..	4.76	5.30	13.5
XC.T 1705..	5.56	5.30	17.5



XCNT / XCET



ISO	RE	XCNT		XCNT		XCNT		XCNT		XCET		XCET	
		1D/19	Article no.	1D/19	Article no.	1D/19	Article no.	1D/19	Article no.	1D/19	Article no.	1D/19	Article no.
	mm	£	70 386 ...	£	70 386 ...	£	70 386 ...	£	70 386 ...	£	70 286 ...	£	70 286 ...
040102EL	0.2	14.07	720			14.07	820	14.07	920				
040102ER	0.2	14.07	722			14.07	822	14.07	922				
040102FL	0.2									15.75	620	16.37	120
040102FR	0.2									15.75	622	16.37	122
040104EL	0.4	14.07	700	14.68	750	14.07	800	14.07	900				
040104ER	0.4	14.07	702	14.68	752	14.07	802	14.07	902				
040104FL	0.4									15.75	600	16.37	100
040104FR	0.4									15.75	602	16.37	102
050202EN	0.2	14.07	723			14.07	823	14.07	923				
050202FN	0.2									15.75	623	16.37	123
050204EN	0.4	14.07	703	14.68	753	14.07	803	14.07	903				
050204FN	0.4									15.75	603	16.37	103
060202EN	0.2	14.07	724			14.07	824	14.07	924				
060202FN	0.2									15.75	624	16.37	124
060204EN	0.4	14.07	704	14.68	754	14.07	804	14.07	904				
060204FN	0.4									15.75	604	16.37	104
070304EN	0.4	14.07	705	14.68	755	14.07	805	14.07	905				
070304FN	0.4									15.75	605	16.37	105
080304EN	0.4	14.28	706	14.91	756	14.28	806	14.28	906				
080304FN	0.4									15.96	606	16.57	106
09T304EN	0.4	14.49	707	15.22	757	14.49	807	14.49	907				
09T304FN	0.4									16.05	607	16.68	107
10T304EN	0.4	15.22	708	15.85	758	15.22	808	15.22	908				
10T304FN	0.4									16.37	608	17.21	108
10T308EN	0.8	15.22	738	15.85	788	15.22	838	15.22	938				
10T308FN	0.8									16.37	628	17.21	128
130404EN	0.4	17.41	710	18.24	760	17.41	810	17.41	910				
130404FN	0.4									20.03	610	20.85	110
130408EN	0.8	17.41	740	18.24	790	17.41	840	17.41	940				
130408FN	0.8									20.03	611	20.85	111
170508EN	0.8	18.35	712	19.29	762	18.35	812	18.35	912				
170508FN	0.8									20.32	612	21.36	112

Steel	●	●	●	●
Stainless steel	○	○	○	●
Cast iron	●	●	●	○
Non ferrous metals				○
Heat resistant alloys				●

EcoCut – Classic 1.5xD

▲ Drilling and turning tool

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

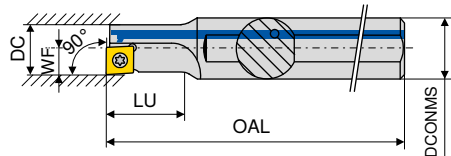
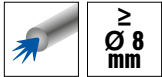


Diagram shows right hand version



Left-hand
2B/20

Right-hand
2B/20

Designation	DC	DCONMS	OAL	LU	WF	torque moment	Insert	Article no. 70 805 ...	Article no. 70 804 ...
	mm	mm	mm	mm	mm	Nm		£	£
ECC 08 L 1,5D 04	8	12	80	12.0	4.0	0,4	XC.T 0401..EL	144.64	008 ²⁾
ECC 08 R 1,5D 04	8	12	80	12.0	4.0	0,4	XC.T 0401..ER		144.64 008 ¹⁾
ECC 10 R/L 1,5D 05	10	12	90	15.0	5.0	0,7	XC.T 0502..	144.64	010 144.64 010
ECC 12 R/L 1,5D 06	12	16	100	18.0	6.0	1,0	XC.T 0602..	147.00	012 147.00 012
ECC 14 R/L 1,5D 07	14	16	110	21.0	7.0	1,2	XC.T 0703..	150.55	014 150.55 014
ECC 16 R/L 1,5D 08	16	20	125	24.0	8.0	2,2	XC.T 0803..	152.91	016 152.91 016
ECC 18 R/L 1,5D 09	18	25	135	27.0	9.0	2,2	XC.T 09T3..	176.36	018 176.36 018
ECC 20 R/L 1,5D 10	20	25	150	30.0	10.0	3,2	XC.T 10T3..	198.82	020 198.82 020
ECC 25 R/L 1,5D 13	25	32	180	37.5	12.5	5,0	XC.T 1304..	229.27	025 229.27 025
ECC 32 R/L 1,5D 17	32	40	200	48.0	16.0	5,0	XC.T 1705..	259.91	032 259.91 032

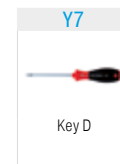
1) Note! Right-hand insert on right-hand tool → Page 26

2) Note! Left-hand insert on left-hand tool → Page 26

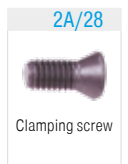
Spare parts

for Article no.

	Article no. 80 950 ...	Article no. 70 950 ...
	£	£
70 805 008	T06 - IP 13.68 123	M1,8x3,6 - IP 3.35 862
70 804 008	T06 - IP 13.68 123	M1,8x3,6 - IP 3.35 862
70 805 010 / 70 804 010	T06 - IP 13.68 123	M2x4,3 - IP 2.98 863
70 805 012 / 70 804 012	T07 - IP 13.49 124	M2,2x5 - IP 2.89 856
70 805 014 / 70 804 014	T08 - IP 13.49 125	M2,5x6 - IP 3.72 857
70 805 016 / 70 804 016	T09 - IP 14.77 126	M3x7 - IP 2.85 819
70 805 018 / 70 804 018	T09 - IP 14.77 126	M3x7 - IP 2.85 819
70 805 020 / 70 804 020	T15 - IP 15.77 128	M3,5x8,6 - IP 2.85 859
70 805 025 / 70 804 025	T20 - IP 16.56 129	M4,5x10,5 - IP 2.85 864
70 805 032 / 70 804 032	T20 - IP 16.56 129	M4,5x10,5 - IP 2.85 864



Key D



Clamping screw

EcoCut – Classic 2.25xD

▲ Drilling and turning tool

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

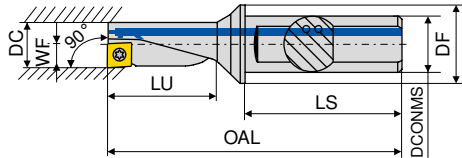
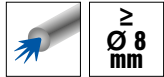


Diagram shows right hand version



Designation	DC	DCONMS	DF	OAL	LU	LS	WF	torque moment Nm	Insert	Left-hand 2B/20		Right-hand 2B/20	
										Article no. 70 805 ...		Article no. 70 804 ...	
										£		£	
ECC 08 L 2,25D 04	8	10	12	60.0	18.0	38	4.0	0,4	XC.T 0401..EL	215.18	108 ²⁾	215.18	108 ¹⁾
ECC 08 R 2,25D 04	8	10	12	60.0	18.0	38	4.0	0,4	XC.T 0401..ER			215.18	110
ECC 10 R/L 2,25D 05	10	12	16	69.5	22.5	42	5.0	0,7	XC.T 0502..	215.18	110	215.18	110
ECC 12 R/L 2,25D 06	12	16	20	78.0	27.0	45	6.0	1,0	XC.T 0602..	221.09	112	221.09	112
ECC 14 R/L 2,25D 07	14	16	20	83.5	31.5	45	7.0	1,2	XC.T 0703..	225.91	114	225.91	114
ECC 16 R/L 2,25D 08	16	20	25	94.0	36.0	50	8.0	2,2	XC.T 0803..	230.64	116	230.64	116
ECC 18 R/L 2,25D 09	18	25	32	109.5	40.5	56	9.0	2,2	XC.T 09T3..	254.09	118	254.09	118
ECC 20 R/L 2,25D 10	20	25	32	111.0	45.0	56	10.0	3,2	XC.T 10T3..	276.55	120	276.55	120
ECC 25 R/L 2,25D 13	25	32	40	129.0	56.5	60	12.5	5,0	XC.T 1304..	321.09	125	321.09	125
ECC 32 R/L 2,25D 17	32	40	50	158.0	72.0	70	16.0	5,0	XC.T 1705..	361.00	132	361.00	132

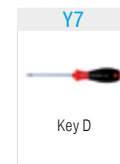
1) Note! Right-hand insert on right-hand tool → Page 26

2) Note! Left-hand insert on left-hand tool → Page 26

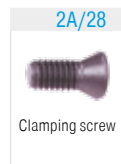
Spare parts

for Article no.

for Article no.		Article no. 80 950 ...		Article no. 70 950 ...	
		£		£	
70 805 108	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 804 108	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 805 110 / 70 804 110	T06 - IP	13.68	123	M2x4,3 - IP	2.98 863
70 805 112 / 70 804 112	T07 - IP	13.49	124	M2,2x5 - IP	2.89 856
70 805 114 / 70 804 114	T08 - IP	13.49	125	M2,5x6 - IP	3.72 857
70 805 116 / 70 804 116	T09 - IP	14.77	126	M3x7 - IP	2.85 819
70 805 118 / 70 804 118	T09 - IP	14.77	126	M3x7 - IP	2.85 819
70 805 120 / 70 804 120	T15 - IP	15.77	128	M3,5x8,6 - IP	2.85 859
70 805 125 / 70 804 125	T20 - IP	16.56	129	M4,5x10,5 - IP	2.85 864
70 805 132 / 70 804 132	T20 - IP	16.56	129	M4,5x10,5 - IP	2.85 864



Key D



Clamping screw

i The EcoCut Classic 2.25xD is also available as a Monoblock HSK-T version. See → Chapter 16, Adapters.

EcoCut – Classic 3xD – Heavy metal

- ▲ Drilling and turning tool
- ▲ vibration-damped

Scope of supply:

Toolholder with 1 clamping screw + 2 spare screws and screwdriver

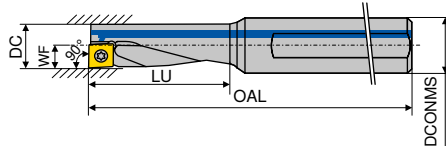
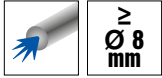


Diagram shows right hand version



Designation	DC	DCONMS	OAL	LU	WF	torque moment Nm	Insert	Left-hand 2B/20		Right-hand 2B/20	
								Article no. 70 805 ...	Article no. 70 804 ...	Article no. 70 805 ...	Article no. 70 804 ...
ECC 08 L 3,00D 04 H	8	12	80	24	4.0	0,4	XC.T 0401..EL	£ 530.64	608 2)	£ 530.64	608 1)
ECC 08 R 3,00D 04 H	8	12	80	24	4.0	0,4	XC.T 0401..ER			£ 530.64	608 1)
ECC 10 R/L 3,00D 05 H	10	12	85	30	5.0	0,7	XC.T 0502..	£ 533.00	610	£ 533.00	610
ECC 12 R/L 3,00D 06 H	12	16	95	36	6.0	1,0	XC.T 0602..	£ 575.27	612	£ 575.27	612
ECC 14 R/L 3,00D 07 H	14	16	100	42	7.0	1,2	XC.T 0703..	£ 588.64	614	£ 588.64	614
ECC 16 R/L 3,00D 08 H	16	20	110	48	8.0	2,2	XC.T 0803..	£ 645.45	616	£ 645.45	616
ECC 18 R/L 3,00D 09 H	18	25	125	54	9.0	2,2	XC.T 09T3..	£ 781.36	618	£ 781.36	618
ECC 20 R/L 3,00D 10 H	20	25	130	60	10.0	3,2	XC.T 10T3..	£ 797.18	620	£ 797.18	620
ECC 25 R/L 3,00D 13 H	25	32	150	75	12.5	5,0	XC.T 1304..	£ 1,015.45	625	£ 1,015.45	625
ECC 32 R/L 3,00D 17 H	32	40	185	96	16.0	5,0	XC.T 1705..	£ 1,329.09	632	£ 1,329.09	632

1) Note! Right-hand insert on right-hand tool → Page 26

2) Note! Left-hand insert on left-hand tool → Page 26

10

Spare parts

for Article no.

		Article no. 80 950 ...		Article no. 70 950 ...	
		£		£	
70 805 608	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 804 608	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 805 610 / 70 804 610	T06 - IP	13.68	123	M2x4,3 - IP	2.98 863
70 805 612 / 70 804 612	T07 - IP	13.49	124	M2,2x5 - IP	2.89 856
70 805 614 / 70 804 614	T08 - IP	13.49	125	M2,5x6 - IP	3.72 857
70 805 616 / 70 804 616	T09 - IP	14.77	126	M3x7 - IP	2.85 819
70 805 618 / 70 804 618	T09 - IP	14.77	126	M3x7 - IP	2.85 819
70 805 620 / 70 804 620	T15 - IP	15.77	128	M3,5x8,6 - IP	2.85 859
70 805 625 / 70 804 625	T20 - IP	16.56	129	M4,5x10,5 - IP	2.85 864
70 805 632 / 70 804 632	T20 - IP	16.56	129	M4,5x10,5 - IP	2.85 864

Y7



Key D

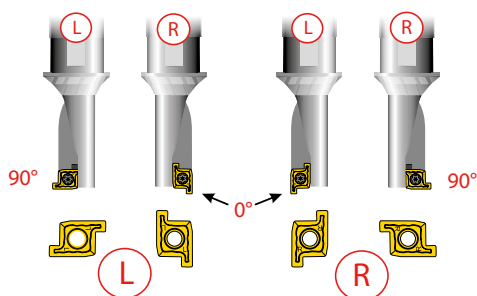
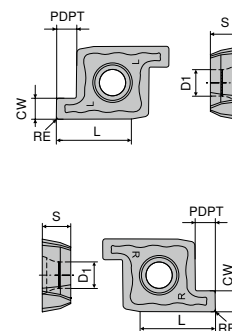
2A/28



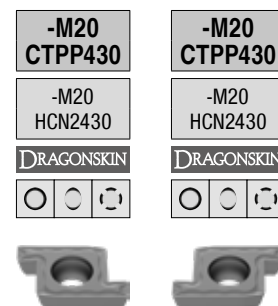
Clamping screw

PM-R / PM-L

Designation	CW	PDPT	L	S	D1
	mm	mm	mm	mm	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-R / PM-L



ISO	RE	PM-R		PM-L	
		1F/P2	1F/P2	1F/P2	1F/P2
	mm	Article no.	Article no.	Article no.	Article no.
		70 289 ...	70 289 ...	70 289 ...	70 289 ...
PM 10 G 201504	0.4	£ 15.15	511	£ 15.15	510
PM 12 G 201804	0.4	£ 15.27	516	£ 15.27	515
PM 16 G 252004	0.4	£ 15.45	521	£ 15.45	520
PM 20 G 302504	0.4	£ 16.17	526	£ 16.17	525
PM 25 G 353004	0.4	£ 18.00	531	£ 18.00	530
PM 32 G 404004	0.4	£ 19.43	536	£ 19.43	535
Steel		●	●	●	●
Stainless steel		●	●	●	●
Cast iron		○	○	○	○
Non ferrous metals		○	○	○	○
Heat resistant alloys		●	●	●	●

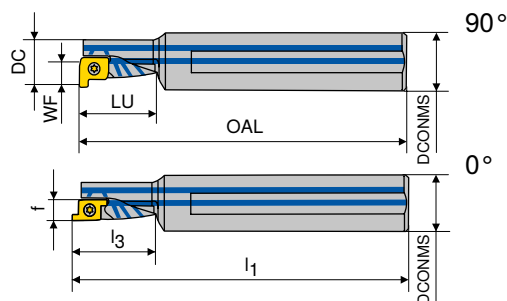
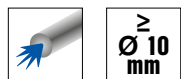
→ v_c Page 22

EcoCut – ProfileMaster 1.5xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver

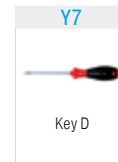


Diagrams show right hand versions

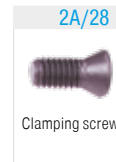


Designation	DC	DCONMS	OAL	LU	WF	l_1 (0°)	l_3 (0°)	f (0°)	torque moment Nm	Insert	Left-hand 2G/P1		Right-hand 2G/P1	
											Article no. 70 821 ...		Article no. 70 820 ...	
											£		£	
PMC 10 R/L 1,5D	10	12	80	15.0	5.0				0,4	PM 10R/L	155.91	010 ¹⁾	155.91	010 ¹⁾
PMC 12 R/L 1,5D	12	16	90	18.0	6.0				1,0	PM 12R/L	161.64	012 ¹⁾	161.64	012 ¹⁾
PMC 16 R/L 1,5D	16	20	125	24.0	8.0	127.3	26.3	5.7	2,2	PM 16R/L	171.00	016	171.00	016
PMC 20 R/L 1,5D	20	25	150	30.0	10.0	152.8	32.8	7.2	2,2	PM 20R/L	211.00	020	211.00	020
PMC 25 R/L 1,5D	25	32	180	37.5	12.5	183.3	40.8	9.2	3,2	PM 25R/L	239.82	025	239.82	025
PMC 32 R/L 1,5D	32	40	200	48.0	16.0	204.3	52.3	11.7	5,0	PM 32R/L	274.27	032	274.27	032

1) only usable as 90° version



Key D



Clamping screw

Spare parts

for Article no.

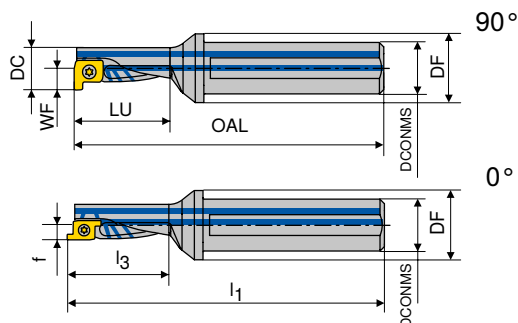
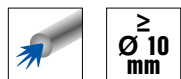
		Article no. 80 950 ...		Article no. 70 950 ...	
		£		£	
70 820 010 / 70 821 010	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 820 012 / 70 821 012	T07 - IP	13.49	124	M2,2x4,2 - IP	2.89 137
70 820 016 / 70 821 016	T09 - IP	14.77	126	M3x5,7 - IP	2.85 008
70 820 020 / 70 821 020	T15 - IP	15.77	128	M3x5,7 - IP	2.85 009
70 820 025 / 70 821 025	T15 - IP	15.77	128	M3,5x8,6 - IP	2.85 859
70 820 032 / 70 821 032	T20 - IP	16.56	129	M5x10,8 - IP	7.42 010

EcoCut – ProfileMaster 2.25xD

▲ Drilling, turning and grooving tool

Scope of supply:

Toolholder with one clamping screw and one screwdriver



Diagrams show right hand versions



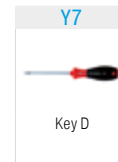
Designation	DC	DCONMS	DF	OAL	LU	WF					torque moment	Insert	Left-hand		Right-hand	
							2G/P1		2G/P1							
							Article no.		Article no.							
							70 821 ...		70 820 ...							
mm	mm	mm	mm	mm	mm	I ₁ (0°) mm	I ₃ (0°) mm	f (0°) mm	Nm		£		£			
PMC 10 R/L 2,25D	10	12	18	72.4	22.5	5.0				0,4	PM 10R/L	229.36	110 ¹⁾	229.36	110 ¹⁾	
PMC 12 R/L 2,25D	12	16	22	78.0	27.0	6.0				1,0	PM 12R/L	234.18	112 ¹⁾	234.18	112 ¹⁾	
PMC 16 R/L 2,25D	16	20	28	96.5	36.0	8.0	98.8	38.3	5.7	2,2	PM 16R/L	246.73	116	246.73	116	
PMC 20 R/L 2,25D	20	25	35	111.0	45.0	10.0	113.8	47.8	7.2	2,2	PM 20R/L	294.82	120	294.82	120	
PMC 25 R/L 2,25D	25	32	44	132.6	56.3	12.5	135.9	59.6	9.2	3,2	PM 25R/L	338.55	125	338.55	125	
PMC 32 R/L 2,25D	32	40	54	158.0	72.0	16.0	162.3	76.3	11.7	5,0	PM 32R/L	379.82	132	379.82	132	

1) only usable as 90° version

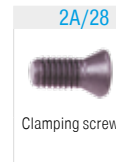
Spare parts

for Article no.

		Article no. 80 950 ...		Article no. 70 950 ...	
70 820 110 / 70 821 110	T06 - IP	13.68	123	M1,8x3,6 - IP	3.35 862
70 820 112 / 70 821 112	T07 - IP	13.49	124	M2,2x4,2 - IP	2.89 137
70 820 116 / 70 821 116	T09 - IP	14.77	126	M3x5,7 - IP	2.85 008
70 820 120 / 70 821 120	T15 - IP	15.77	128	M3x5,7 - IP	2.85 009
70 820 125 / 70 821 125	T15 - IP	15.77	128	M3,5x8,6 - IP	2.85 859
70 820 132 / 70 821 132	T20 - IP	16.56	129	M5x10,8 - IP	7.42 010



Key D

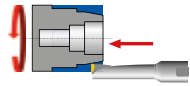


Clamping screw

Depth of cut and feed rate for EcoCut Mini

Turning

2.25xD



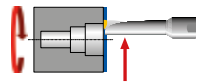
EcoCut Mini Size	Depth of cut a_p in mm									
	0,25	0,5	0,75	1,0	1,5	2,0	2,5	3,0	3,5	4,0
	Feed rate f in mm/rev.									
ECM 02..	0,02-0,07	0,02-0,07								
ECM 02,5..	0,02-0,07	0,02-0,07	0,02-0,05							
ECM 03..	0,02-0,07	0,02-0,07	0,02-0,05	0,02-0,05						
ECM 03,5..	0,02-0,07	0,02-0,07	0,02-0,05	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	0,03-0,8	0,02-0,06	0,01-0,04		

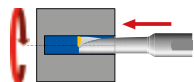
10

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 feed rate 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 feed rate 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

i Feed f may be increased by 50–75 % when using M50Q and ALQ.

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

i Feed f may be increased by 50–75 % when using M50Q and ALQ.

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 feed rate for EcoCut Classic

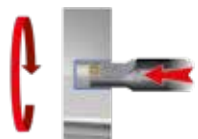
Face turning



EcoCut Classic Size	1,5xD		2,25xD		3xD	
	a _p in mm	f in mm/rev.	a _p in mm	f in mm/rev.	a _p in 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

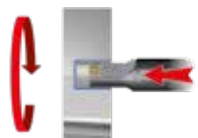
Drilling

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

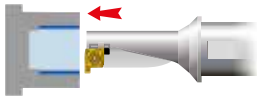


EcoCut Classic Size	1,5xD	2,25xD	3xD
	Max. hole depth in mm	Max. hole depth in mm	Max. hole depth in mm
ECC 08	12,0	18,0	24,0
ECC 10	15,0	22,5	30,0
ECC 12	18,0	27,0	36,0
ECC 14	21,0	31,5	42,0
ECC 16	24,0	36,0	48,0
ECC 18	27,0	40,5	54,0
ECC 20	30,0	45,0	60,0
ECC 25	37,5	56,5	75,0
ECC 32	48,0	72,0	96,0

Depth of cut and feed rate for EcoCut ProfileMaster 90°

Turning

1,5xD



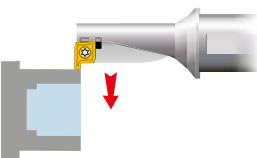
EcoCut ProfileMaster Size	Depth of cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
PMC 10	0,07-0,20	0,05-0,17	0,02-0,12					
PMC 12	0,07-0,20	0,05-0,17	0,02-0,12					
PMC 16	0,10-0,25	0,07-0,23	0,05-0,21	0,02-0,17				
PMC 20	0,12-0,27	0,10-0,26	0,007-0,24	0,05-0,20	0,02-0,14			
PMC 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		
PMC 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

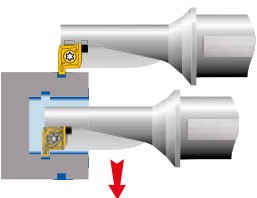
EcoCut ProfileMaster Size	Depth of cut a_p in mm							
	1	2	3	4	5	6	7	8
	Feed rate f in mm/rev.							
PMC 10	0,07-0,19	0,02-0,13						
PMC 12	0,07-0,19	0,02-0,13						
PMC 16	0,10-0,25	0,07-0,21	0,02-0,13					
PMC 20	0,12-0,27	0,07-0,24	0,05-0,19					
PMC 25	0,15-0,30	0,10-0,27	0,07-0,23	0,02-0,15				
PMC 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.					
PMC 10	0,02-0,15	0,02-0,15				
PMC 12	0,02-0,15	0,02-0,15				
PMC 16	0,05-0,20	0,05-0,20	0,05-0,20			
PMC 20	0,08-0,22	0,08-0,22	0,08-0,22	0,08-0,22		
PMC 25	0,10-0,25	0,10-0,25	0,10-0,25	0,10-0,25	0,10-0,25	
PMC 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

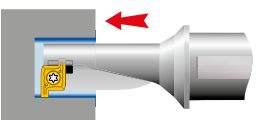
Internal + external –
radial grooving

EcoCut ProfileMaster Size	1,5xD
	f in mm/rev.
PMC 10	0,01-0,08
PMC 12	0,02-0,10
PMC 16	0,04-0,15
PMC 20	0,04-0,16
PMC 25	0,07-0,20
PMC 32	0,08-0,22

EcoCut ProfileMaster Size	2,25xD
	f in mm/rev.
PMC 10	0,01-0,08
PMC 12	0,02-0,10
PMC 16	0,04-0,15
PMC 20	0,04-0,16
PMC 25	0,07-0,20
PMC 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
PMC 10	0,01-0,05	15,0
PMC 12	0,01-0,06	18,0
PMC 16	0,02-0,09	24,0
PMC 20	0,03-0,10	30,0
PMC 25	0,04-0,12	37,5
PMC 32	0,04-0,14	48,0

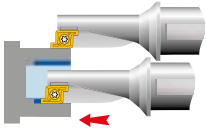
EcoCut ProfileMaster Size	2,25xD	
	f in mm/rev.	Max. hole depth in mm
PMC 10	0,01-0,05	22,5
PMC 12	0,01-0,06	27,0
PMC 16	0,02-0,09	36,0
PMC 20	0,03-0,10	45,0
PMC 25	0,04-0,12	56,3
PMC 32	0,04-0,14	72,0

Depth of cut and feed rate for EcoCut ProfileMaster 0°

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

Turning

1,5xD



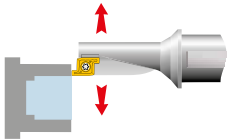
EcoCut ProfileMaster Size	Depth of cut a_p in mm					
	1,0	1,5	2,0	2,5	3,0	3,5
	Feed rate f in mm/rev.					
PMC 16	0,04–0,20	0,04–0,20	0,04–0,20			
PMC 20	0,06–0,22	0,06–0,22	0,06–0,22	0,06–0,22		
PMC 25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	
PMC 32	0,10–0,28	0,10–0,28	0,10–0,28	0,10–0,28	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.					
PMC 16	0,04–0,20	0,04–0,20	0,04–0,20			
PMC 20	0,06–0,22	0,06–0,22	0,06–0,22	0,06–0,22		
PMC 25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	0,08–0,25	
PMC 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

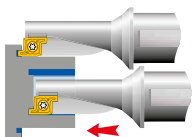
1,5xD



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.						
PMC 16	0,05–0,20	0,05–0,20	0,05–0,20				
PMC 20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20			
PMC 25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25		
PMC 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.						
PMC 16	0,05–0,20	0,05–0,20	0,05–0,20				
PMC 20	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20			
PMC 25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25	0,10–0,25		
PMC 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.
PMC 16	0,02–0,12
PMC 20	0,04–0,14
PMC 25	0,06–0,18
PMC 32	0,08–0,20

EcoCut ProfileMaster Size	2,25xD
	Feed rate f in mm/rev.
PMC 16	0,02–0,12
PMC 20	0,04–0,14
PMC 25	0,06–0,18
PMC 32	0,08–0,20

Material examples referring to the cutting data tables

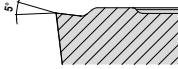
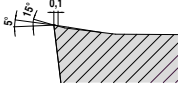
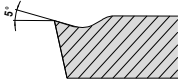
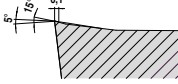
	Index	Material	Strength N/mm ² / HB / HRC	Material number	Material designation	Material number	Material designation	Material number	Material designation
P	1.1	General construction steel	< 800 N/mm ²	1.0402	EN3B				
	1.2	Free cutting steel	< 800 N/mm ²	1.0711	EN1A				
	1.3	Hardened steel, non alloyed	< 800 N/mm ²	1.0401	EN32C				
	1.4	Alloyed hardened steel	< 1000 N/mm ²	1.7325	25 CD4				
	1.5	Tempering steel, unalloyed	< 850 N/mm ²	1.5752	EN36	1.0535	EN9		
	1.6	Tempering steel, unalloyed	< 1000 N/mm ²	1.6582	EN24				
	1.7	Tempering steel, alloyed	< 800 N/mm ²	1.7225	EN19				
	1.8	Tempering steel, alloyed	< 1300 N/mm ²	1.8515	EN40B				
	1.9	Steel castings	< 850 N/mm ²	0.9650	G-X 260 Cr 27	1.6750	GS-20 NiCrMo 3.7	1.6582	GS-34 CrNiMo 6
	1.10	Nitriding steel	< 1000 N/mm ²	1.8509	EN41B				
	1.11	Nitriding steel	< 1200 N/mm ²	1.1186	EN8	1.1160	EN14A		
	1.12	Roller bearing steel	< 1200 N/mm ²	1.3505	534A99				
	1.13	Spring steel	< 1200 N/mm ²		EN45		EN47		EN43
	1.14	High-speed steel	< 1300 N/mm ²	1.3343	M2	1.3249	M34		
	1.15	Cold working tool steel	< 1300 N/mm ²	1.2379	D2	1.2311	P20		
	1.16	Hot working tool steel	< 1300 N/mm ²	1.2344	H13				
M	2.1	Cast steel and sulphured stainless steel	< 850 N/mm ²	1.4581	318				
	2.2	Stainless steel, ferritic	< 750 N/mm ²	1.4000	403				
	2.3	Stainless steel, martensitic	< 900 N/mm ²	1.4057	EN57				
	2.4	Stainless steel, ferritic / martensitic	< 1100 N/mm ²	1.4028	EN56B				
	2.5	Stainless steel, austenitic / ferritic	< 850 N/mm ²	1.4542	17-4PH				
	2.6	Stainless steel, austenitic	< 750 N/mm ²	1.4305	303	1.4401	316	1.4301	304
	2.7	Heat resistant steel	< 1100 N/mm ²	1.4876	Incoloy 800				
K	3.1	Grey cast iron with lamellar graphite	100–350 N/mm ²	0.6015	Grade 150	0.6020	Grade 220	0.6025	Grade 260
	3.2	Grey cast iron with lamellar graphite	300–500 N/mm ²	0.6030	Grade 300	0.6035	Grade 350	0.6040	Grade 400
	3.3	Gray cast iron with spheroidal graphite	300–500 N/mm ²	0.7040	SG 400-12	0.7043	SG 370-17	0.7050	SG 500-7
	3.4	Gray cast iron with spheroidal graphite	500–900 N/mm ²	0.7060	SG 600-3	0.7070	SG 700-2	0.7080	SG 800-2
	3.5	White malleable cast iron	270–450 N/mm ²	0.8035	GTW-35	0.8045	GTW-45		
	3.6	White malleable cast iron	500–650 N/mm ²	0.8055	GTW-55	0.8065	GTW-65		
	3.7	Black malleable cast iron	300–450 N/mm ²	0.8135	GTS-35	0.8145	GTS-45		
	3.8	Black malleable cast iron	500–800 N/mm ²	0.8155	GTS-55	0.8170	GTS-70		
N	4.1	Aluminium (non alloyed, low alloyed)	< 350 N/mm ²	3.0255	1050 A	3.0275	1070 A	3.0285	1080 A (A8)
	4.2	Aluminium alloys < 0.5 % Si	< 500 N/mm ²	3.1325	2017 A (AU4G)	3.4335	7005 (AZ5G)	3.4365	7075 (AZ5GU)
	4.3	Aluminium alloy 0.5–10 % Si	< 400 N/mm ²	3.2315	A-G S1	3.2373	A-S9 G	3.2151	A-S 6 U4
	4.4	Aluminium alloys 10–15 % Si	< 400 N/mm ²	3.2581	A-S12	3.2583	A-S12 U		
	4.5	Aluminum alloys > 15 % Si	< 400 N/mm ²		A-S18	A-S17 U4			
	4.6	Copper (non alloyed, low alloyed)	< 350 N/mm ²	2.0040	Cu-c1	2.0060	Cu-a1	2.0090	Cu-b1
	4.7	Copper wrought alloys	< 700 N/mm ²	2.1247	Cub2 (Beryllium Copper)	2.0855	CuN2S (Nickel Copper)	2.1310	CU-Fe2P
	4.8	Special copper alloys	< 200 HB	2.0916	Cu-A5	2.1525	Cu-S3 M		Ampco 8 (Cu-A6Fe2)
	4.9	Special copper alloys	< 300 HB	2.0978	Cu-A11 Fe5 Ni5		Ampco 18 (Cu- A10 Fe3)		
	4.10	Special copper alloys	> 300 HB	2.1247	Cu Be2		Ampco M4		
	4.11	Short-chipping brass, bronze, red bronze	< 600 N/mm ²	2.0331	Cu Zn36 Pb1,5	2.0380	Cu Zn39 Pb2 (Ms 56)	2.0410	Cu Zn44 Pb2
	4.12	Long-chipping brass	< 600 N/mm ²	2.0335	Cu Zn 36 (Ms63)	2.1293	Cu Cr1 Zr		
	4.13	Thermoplastics		PE	PVC	PS	Polystyrene		Plexiglas
	4.14	Duroplastics		PF	Bakelite		Pertinax		
	4.15	Fibre-reinforced plastics			Carbon Fibre		Fibreglass		Aramid Fibre (Kevlar)
	4.16	Magnesium and magnesium alloys	< 850 N/mm ²	3.5812	Mg A7 Z1	3.5662	Mg A9	3.5105	Mg Tr3 Z2 Zn 1
	4.17	Graphite			R8500X		R8650		Technograph 15
	4.18	Tungsten and tungsten alloys			W-Ni Fe (Densimet)		W- Ni Cu (Inermet)		Denal
	4.19	Molybdenum and molybdenum alloys			TZM		MHQ		Mo W
S	5.1	Pure nickel		2.4066	Ni99 (Nickel 200)	2.4068	Lc Ni99 (Nickel 201)		
	5.2	Nickel alloys		1.3912	Fe-Ni36 (Invar)	1.3917	Fe- Ni42 (N42)	1.3922	Fe-Ni48 (N48)
	5.3	Nickel alloys	< 850 N/mm ²	2.4375	Ni Cu30 Al (Monel K500)	2.4360	Ni Cu30Fe (Monel 400)	2.4668	
	5.4	Nickel molybdenum alloys		2.4600	Ni Mo30Cr2 (Hastelloy B4)	2.4617	Ni Mo28 (Hastelloy B2)	2.4819	Ni Mo16Cr16 Hastell. C276
	5.5	Nickel-chromium alloys	< 1300 N/mm ²	2.4951	Ni Cr20TiAl (Nimonic 80A)	2.4858	Ni Cr21Mo (Inconel 825)	2.4856	Ni Cr22Mo9Nb Inconel 625
	5.6	Cobalt Chrome Alloys	< 1300 N/mm ²	2.4964	Co Cr20 W15 Ni10		Co Cr20 Ni16 Mo7		Co Cr28 Mo 6
	5.7	Heat resistant alloys	< 1300 N/mm ²	1.4718	Z45 C S 9-3	1.4747	Z80 CSN 20-02	1.4845	Z12 CN 25-20
	5.8	Nickel-cobalt-chromium alloys	< 1400 N/mm ²	2.4851	Ni Cr23Fe (Inconel 601)	2.4668	Ni Cr19NbMo (Inconel 718)	2.4602	Ni Cr21Mo14 Hastelloy C22
	5.9	Pure titanium	< 900 N/mm ²	3.7025	T35 (Titanium Grade 1)	3.7034	T40 (Titanium Grade 2)	3.7064	T60 (Titanium Grade 4)
	5.10	Titanium alloys	< 700 N/mm ²		T-A6-Nb7 (367)		T-A5-Sn2-Mo4-Cr4 (Ti17)		T-A3-V2,5 (Gr18)
	5.11	Titanium alloys	< 1200 N/mm ²	3.7165	T-A6-V4 (Ta6V)		T-A4-3V-Mo2-Fe2 (SP700)		T-A5-Sn1-Zr1-V1-Mo (Gr32)
H	6.1		< 45 HRC						
	6.2		46–55 HRC						
	6.3	Tempered steel	56–60 HRC						
	6.4		61–65 HRC						
	6.5		65–70 HRC						

Cutting data approximate values

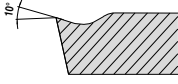
	EcoCut Mini CTWN425 (CWK4425)	EcoCut Mini CTPP435 (HCN1435)	EcoCut Classic CTCP425 (HCR1425)	EcoCut Classic CTCP435 (HCR1435)	EcoCut Classic CTPP430 (HCN2430)	EcoCut Classic H210T (CWK20)	EcoCut Classic H216T (CWK26)	EcoCut ProfileMaster CTPP430 (HCN 2430)
Index	v _c in m/min							
1.1		80–160	120–250	120–240	120–220			120–220
1.2		80–230	150–300	150–300	120–250			120–250
1.3		80–230	120–220	120–220	80–180			80–180
1.4		80–230	100–200	100–180	60–160			60–160
1.5		60–130	120–220	110–200	80–180			80–180
1.6		60–120	100–180	100–180	60–160			60–160
1.7		60–120	120–200	100–180	80–180			80–180
1.8		50–100	80–150	70–140	60–130			60–130
1.9		60–120	110–190	80–150	80–180			80–180
1.10		50–150	100–180	100–180	60–170			60–170
1.11		50–150	80–150	50–150	80–150			80–150
1.12		80–140	90–150	80–150	60–150			60–150
1.13		60–120	70–150	60–140	60–150			60–150
1.14								
1.15		50–150	80–150	80–150	60–150			60–150
1.16		50–150	80–150	80–150	60–150			60–150
2.1		50–200	100–200	100–180	50–160			50–160
2.2		50–180	120–220	100–200	50–180			50–180
2.3		50–180	120–200	100–200	50–150			50–150
2.4		50–180	100–200	100–180	50–160			50–160
2.5		50–100			50–130			50–130
2.6		50–80			50–120			50–120
2.7		50–80			50–120			50–120
3.1	100–150	100–170	130–280	120–250	120–200	140–200	100–150	120–200
3.2	100–150	100–170	130–280	120–250	100–180	100–160	100–150	100–180
3.3	100–140	100–160	120–280	110–250	120–200	160–200	100–140	120–200
3.4	100–140	100–160	120–280	110–250	100–180	110–150	100–140	100–180
3.5	100–160	100–180	110–280	100–250	90–160	160–220	100–160	90–160
3.6	100–160	100–170	110–280	100–250	70–150	140–180	100–160	70–150
3.7	100–160	100–170	110–280	100–250	90–160	160–220	100–160	90–160
3.8	100–160	100–170	110–280	100–250	70–150	140–180	100–160	70–150
4.1	100–2000				100–2000	300–3000	100–500	100–2000
4.2	100–1500				100–1500	200–2500	100–500	100–1500
4.3	100–1500				100–1500	400–2000	100–300	100–1500
4.4	100–1300				100–1300	200–1000	100–300	100–1300
4.5	100–600				100–600	250–800	100–300	100–600
4.6	100–300				100–300	150–400	100–300	100–300
4.7	100–500				100–500	200–400	100–500	100–500
4.8	100–500				100–500	150–400	100–300	100–500
4.9	100–500				100–500	150–400	100–300	100–500
4.10	100–500				100–500	150–400	100–300	100–500
4.11	100–500				100–500	200–800	100–500	100–500
4.12	100–290				100–290	150–600	100–300	100–290
4.13	90–200				90–200	150–280	120–200	90–200
4.14	60–160				60–160	100–220	80–180	60–160
4.15	50–140				50–140	80–200	60–150	50–140
4.16								
4.17								
4.18								
4.19								
5.1		20–50			20–90	30–50		20–90
5.2		15–25			20–90	15–30		20–90
5.3		15–25			20–80	15–25		20–80
5.4		10–20			20–80	15–25		20–80
5.5		10–20			20–80	15–25		20–80
5.6		10–20			20–90	15–30		20–90
5.7		10–20			20–80	15–25		20–80
5.8		10–20			20–80	15–25		20–80
5.9		50–120			40–100	80–140		40–100
5.10		30–50			30–90	40–100		30–90
5.11		30–50				30–60		
6.1	 The cutting data depends largely on the external conditions, e.g. stability of the tools and tool clamping, material and machine type. The indicated values are possible cutting data which have to be increased or reduced according to the application conditions.							
6.2								
6.3								
6.4								
6.5								

Chip Breakers Overview

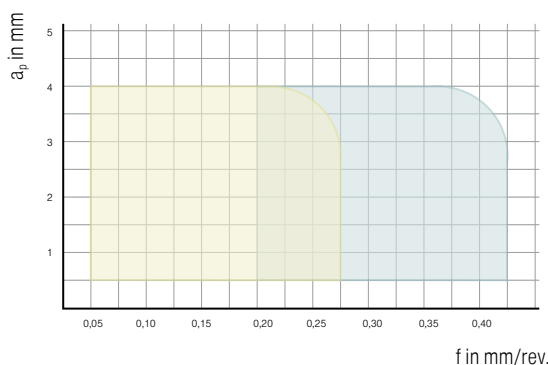
EcoCut Classic

	Model	Smooth cut 	Irregular cutting depth 	Interrupted cut 	Sectional illustration
					f mm
-EN ▲ Universal geometry ▲ Excellent chip breakage ▲ Positive cutting edge ▲ Low to medium feeds		CTCP425 (HCR1425)	CTCP435 (HCR1435)	CTPP430 (HCN2430)	 0,05–0,75
		CTCP435 (HCR1435)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	
		CTCP425 (HCR1425)	CTCP435 (HCR1435)		
		CTPP430 (HCN2430)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	
-M50Q ▲ With wiper geometry ▲ Excellent surface qualities ▲ Good chip formation ▲ Medium to high feeds		CTCP425 (HCR1425)	CTCP425 (HCR1425)		 0,2–0,425
		CTCP425 (HCR1425)			
		CTCP425 (HCR1425)	CTCP425 (HCR1425)		
-27P ▲ Positive cutting edge ▲ Periphery ground ▲ Polished rake face ▲ First choice for non-ferrous metals					 0,1–0,4
		H216T (CWK 26)	H216T (CWK 26)	H216T (CWK 26)	
-ALQ ▲ With wiper geometry ▲ Extremely positive geometry ▲ Periphery ground ▲ Low adhesion					 0,2–0,5
		H210T (CWK 20)	H210T (CWK 20)		

EcoCut ProfileMaster

-M20 ▲ Positive geometry ▲ Universal application ▲ Low to medium feeds		CTPP430 (HCN2430)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	 0,05–0,25
		CTPP430 (HCN2430)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	
		CTPP430 (HCN2430)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	
		CTPP430 (HCN2430)	CTPP430 (HCN2430)	CTPP430 (HCN2430)	
		CTPP430 (HCN2430)	CTPP430 (HCN2430)		

Application area of -EN and -M50Q chip breakers



EcoCut Classic 2.25xD – ECC16 – XCNT 080304

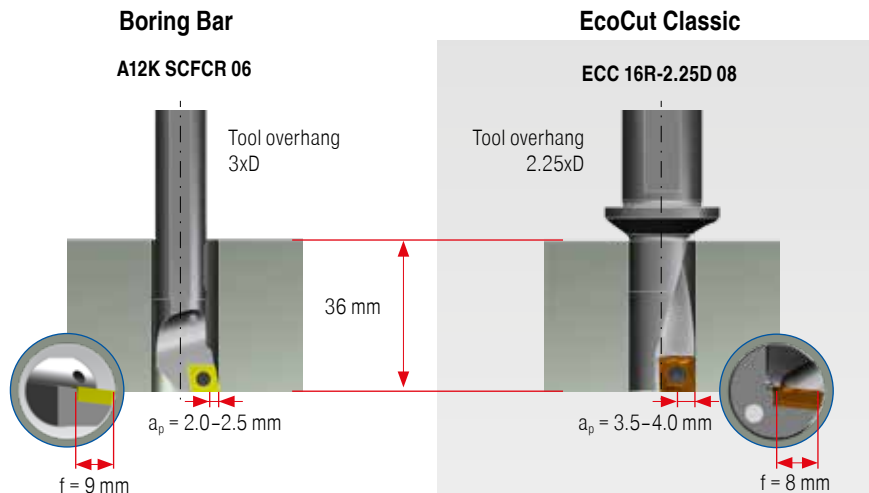
-  = -M50Q
-  = Standard

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, 16 mm diameter by 36 mm depth

Differences in the tool



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



Large and stable insert

- ▲ Increased process security
- ▲ Enables large depths of cut
- ▲ Higher cutting data
- ▲ Higher tool life

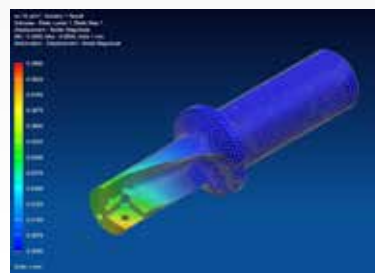
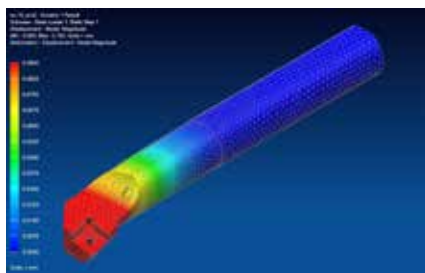
Benefits

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

Stability Comparison

Calculation using FEM

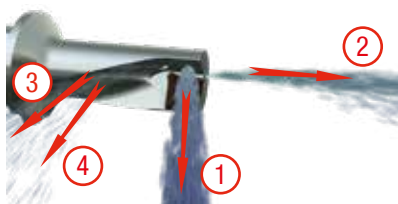
A load of 1000 N on the insert seat corresponds to an approx. a_p of 2.0 mm and f 0.2 mm



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.

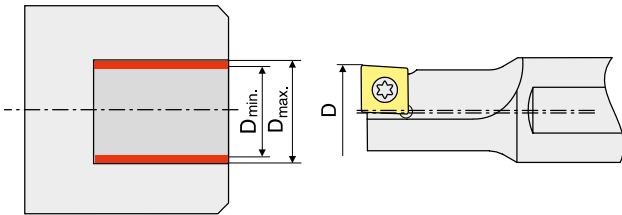
i For maximum chip transport efficiency when drilling, coolant pressure must be 3–6 bar minimum (optimal 7–10 bar).

Application Tips

Drilling Off centre

Due to the special construction of the EcoCut tool and insert, off-centre drilling is possible.

Deviations from the tool nominal $\emptyset$, can be achieved (see adjacent table).



ProfileMaster 0°
Not suitable for drilling!

EcoCut Mini	Tool nominal- $\emptyset$	Work piece bore $\emptyset$	
	D in mm	D _{min.} in mm	D _{max.} in mm
ECM 02 L/R - ...D	2	1,95	2,1
ECM 02,5 L/R - ...D	2,5	2,45	2,6
ECM 03 L/R - ...D	3	2,95	3,15
ECM 03,5 L/R - ...D	3,5	3,45	3,65
ECM 04 R/L - ...D	4	3,90	4,20
ECM 05 R/L - ...D	5	4,90	5,20
ECM 06 R/L - ...D	6	5,90	6,20
ECM 07 R/L - ...D	7	6,90	7,20
ECM 08 R/L - ...D	8	7,90	8,20

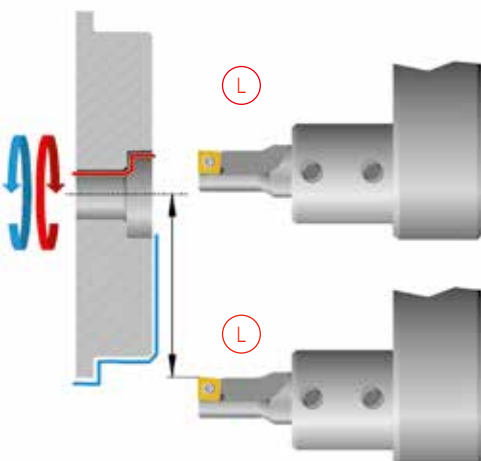
EcoCut Classic	Tool nominal- $\emptyset$	Work piece bore $\emptyset$	
	D in mm	D _{min.} in mm	D _{max.} in mm
ECC 08 R/L - ... 04	8	7,85	8,30
ECC 10 R/L - ... 05	10	9,85	10,50
ECC 12 R/L - ... 06	12	11,85	12,50
ECC 14 R/L - ... 07	14	13,85	14,50
ECC 16 R/L - ... 08	16	15,85	16,50
ECC 18 R/L - ... 09	18	17,85	18,50
ECC 20 R/L - ... 10	20	19,80	20,50
ECC 25 R/L - ... 13	25	24,80	25,80
ECC 32 R/L - ... 17	32	31,80	33,00

EcoCut ProfileMaster	Tool nominal- $\emptyset$	Work piece bore $\emptyset$	
	D in mm	D _{min.} in mm	D _{max.} in mm
PM 10R/L ...	10	9,85	12
PM 12R/L ...	12	11,85	15
PM 16R/L ...	16	15,85	19
PM 20R/L ...	20	19,80	24
PM 25R/L ...	25	24,80	29
PM 32R/L ...	32	31,80	38

Machining over centre

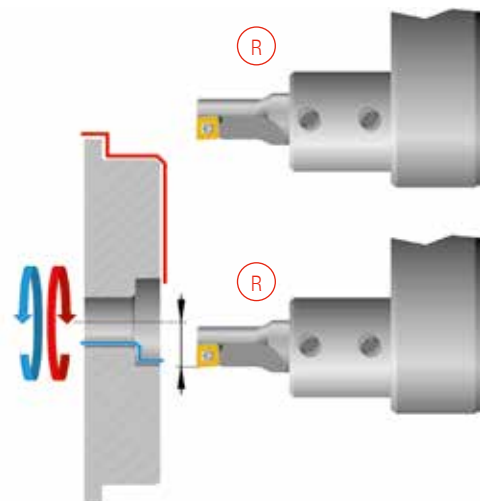
Problem

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.

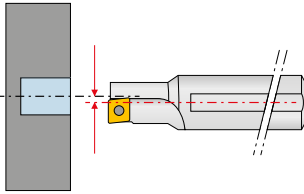


Application Tips

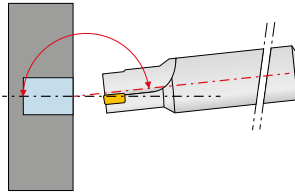
With axial displacement there is the danger of collision!

Problems

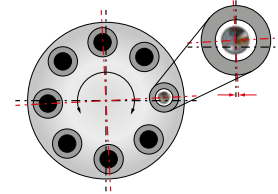
Displacement in x-direction:



Angular error:



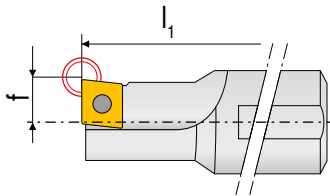
Turret position error:



Remedy

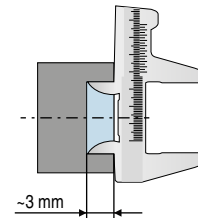
When pre-setting the tool:

- ▲ Definition as an internal turning tool for programming



At the machine:

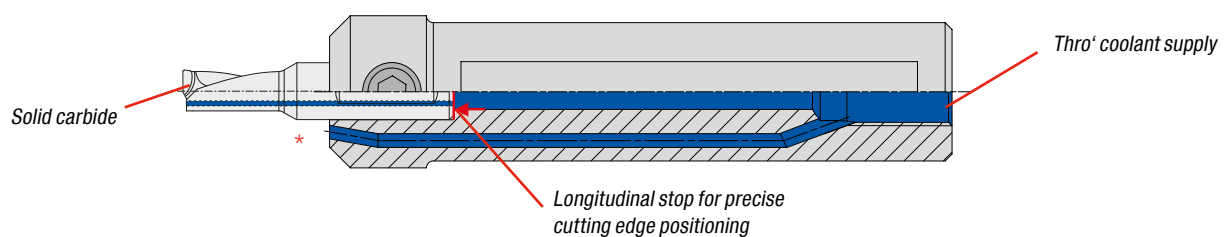
- ▲ Make measuring cut, approx. 3 mm deep
- ▲ Measure drilled diameter produced



- ▲ Enter the tool nominal $\varnothing$ as bore target $\varnothing$

- ▲ If necessary correct drilling $\varnothing$
- ▲ Start machining

EcoCut Mini adapter – Design



* Cross-section rotated by 90° for clarity

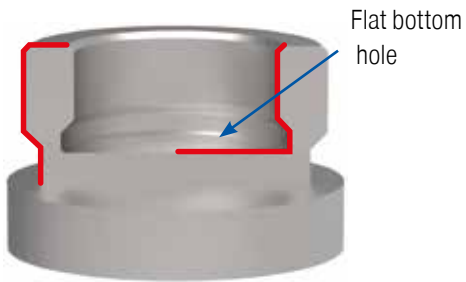
Mounting of the insert for EcoCut Classic

For tools up to $\varnothing$ 8 mm right and left handed inserts are required.
From $\varnothing$ 10–32 mm mm neutral inserts are used.

Note!
Ensure correct installation position.



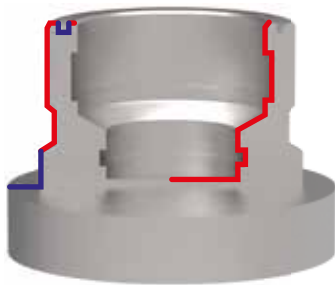
EcoCut ProfileMaster – the highlight with regard to efficiency



Right hand tools



Right hand insert



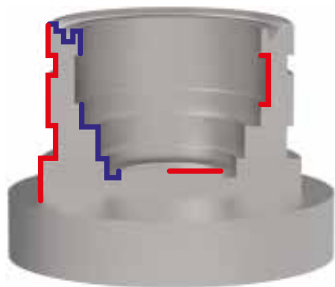
Right hand tools



Left hand insert



Right hand insert



Left hand tool



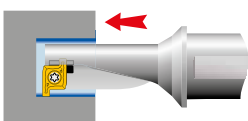
Right hand tools



Right hand insert

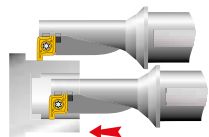
10

Version 90°



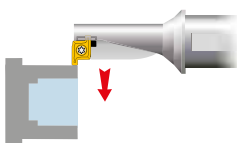
Drilling into solid material with flat bottom hole

Drilling

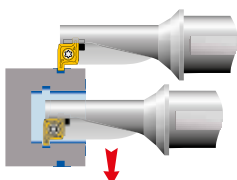


Turning External Diameters

Turning Internal Diameters



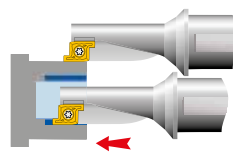
Turning Profiles



External radial grooving

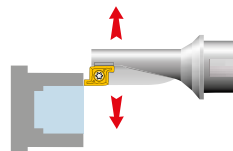
Internal radial grooving

Version 0°

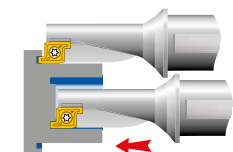


Turning External Diameters

Turning Internal Diameters



Turning Profiles



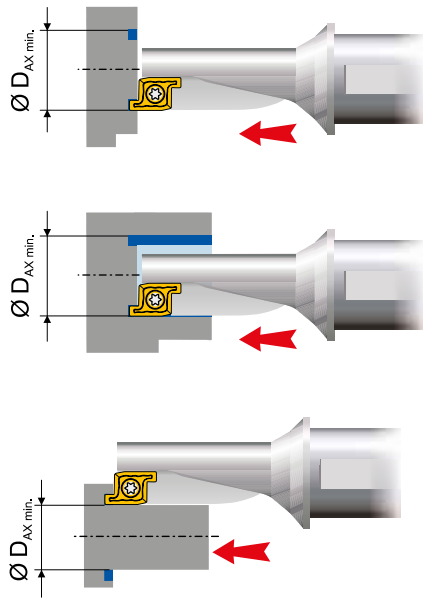
Axial grooving external

Axial grooving internal

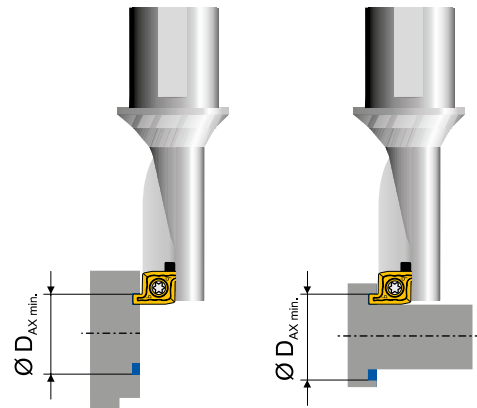
i For maximum chip transport efficiency when drilling, coolant pressure must be 3–6 bar minimum (optimal 7–10 bar).

EcoCut ProfileMaster – Axial Grooving

0° (from Ø 16 mm)

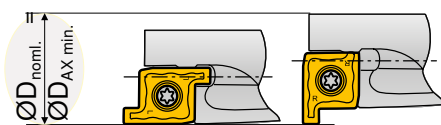


90°

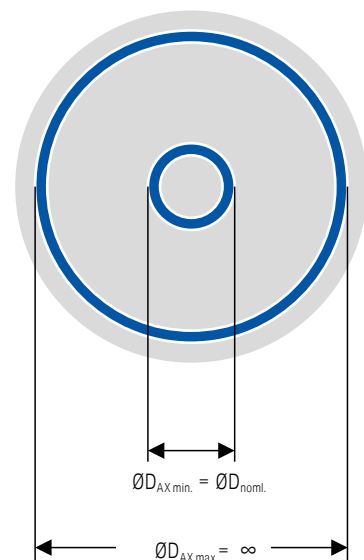


EcoCut ProfileMaster	ØD _{noml.} mm	ØD _{AX min.} mm	ØD _{AX max.} mm
PM 10R/L 1,5D	10	10	> 10
PM 10R/L 2,25D	10	10	> 10
PM 12R/L 1,5D	12	12	> 12
PM 12R/L 2,25D	12	12	> 12
PM 16R/L 1,5D	16	16	> 16
PM 16R/L 2,25D	16	16	> 16
PM 20R/L 1,5D	20	20	> 20
PM 20R/L 2,25D	20	20	> 20
PM 25R/L 1,5D	25	25	> 25
PM 25R/L 2,25D	25	25	> 25
PM 32R/L 1,5D	32	32	> 32
PM 32R/L 2,25D	32	32	> 32

$$\text{ØD}_{\text{AX min.}} = \text{ØD}_{\text{noml.}}$$



- 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		Swarf control		Remedy measures	Cutting data	
Edge breakage	Built-up edge	Wear on clearance face	Plastic deformation	Vibration	Surface quality	Chip too long (snarl chip)	Chip too short (fragmented chip)			
	↑	↓	↓	↓	↑	↓			Cutting speed	
↓		~	↓	↑	↓	↑	↓		Feed rate	
↑		↑	↑	↓	↑				Insert selection	Corner radius
↓		↑	↑							Tap Material
~				~	~				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

larger
↑
smaller
↓
wear resistance
↑
toughness
↓

Grades Overview

EcoCut Classic

CTCP425

- ▲ Carbide, Ti+Al₂O₃-coated
- ▲ ISO | **P25** | **K30** | M20
- ▲ The wear-resistant choice for steel and cast iron materials under stable conditions and at high cutting speeds

HCR1425

CTCP435

- ▲ Carbide, Ti+Al₂O₃-coated
- ▲ ISO | **P35** | **K40** | M30
- ▲ The reliable choice for steel and cast iron materials under unstable conditions

HCR1435

CTPP430

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P30** | **M25** | **S25** | K30 | N25
- ▲ The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

HCN2430

H210T

- ▲ Carbide, uncoated
- ▲ ISO | **N10** | **S10** | K10
- ▲ The wear-resistant carbide grade for machining aluminium and other non-ferrous metals

CWK20

H216T

- ▲ Carbide, uncoated
- ▲ ISO | **K15** | **N15**
- ▲ The uncoated carbide grade for machining aluminium and other non-ferrous metals
- ▲ Also highly suitable for HSC machining

CWK26

EcoCut Mini

CTPP435

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P35** | **M30** | **S30** | K30
- ▲ The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

HCN1435

CTWN425

- ▲ Carbide, uncoated
- ▲ ISO | **N25** | K20
- ▲ The uncoated carbide grade for machining aluminium and other non-ferrous metals

CWK4425

EcoCut ProfileMaster

CTPP430

- ▲ Carbide, TiAlN-coated
- ▲ ISO | **P30** | **M25** | **S25** | K30 | N25
- ▲ The universal high-performance grade for steel, austenitic steel and heat-resistant alloys

HCN2430

Application

