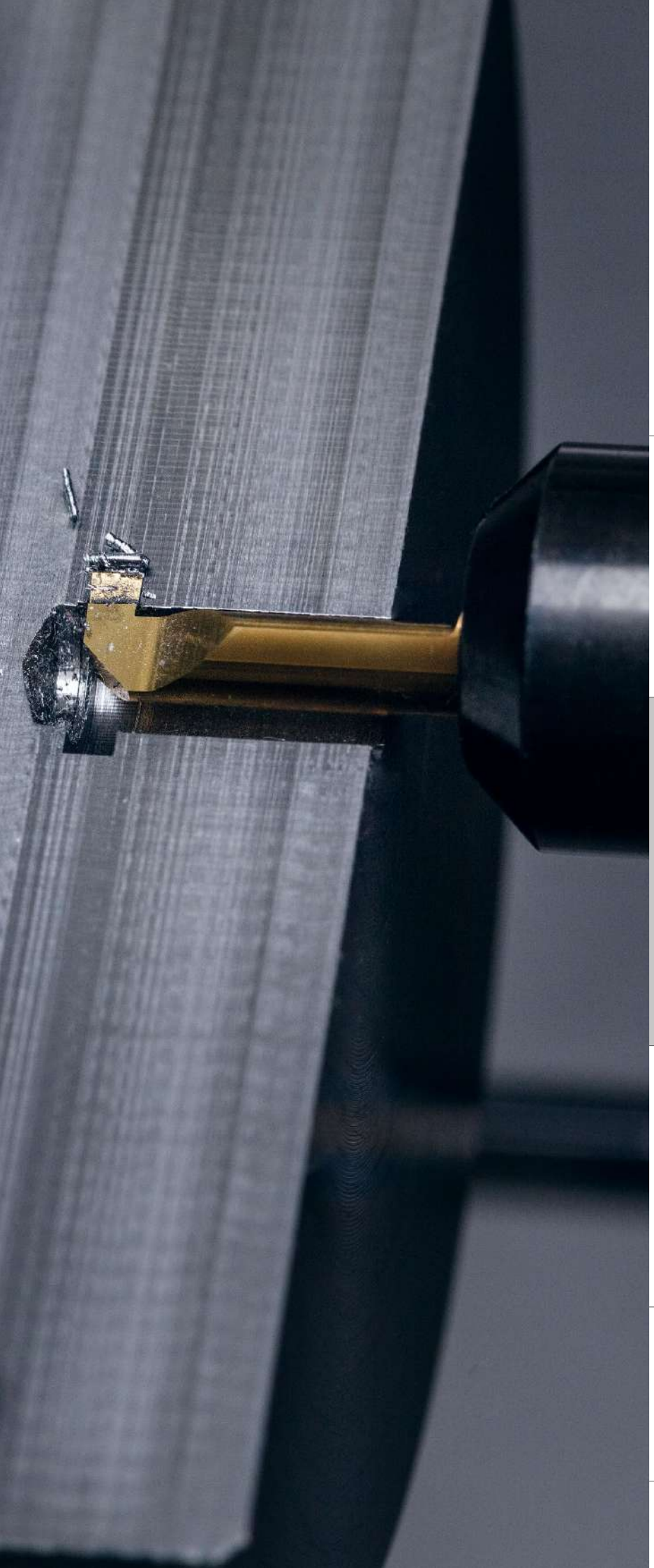


Table of contents

WNT \ Performance

Premium quality tools for high performance.

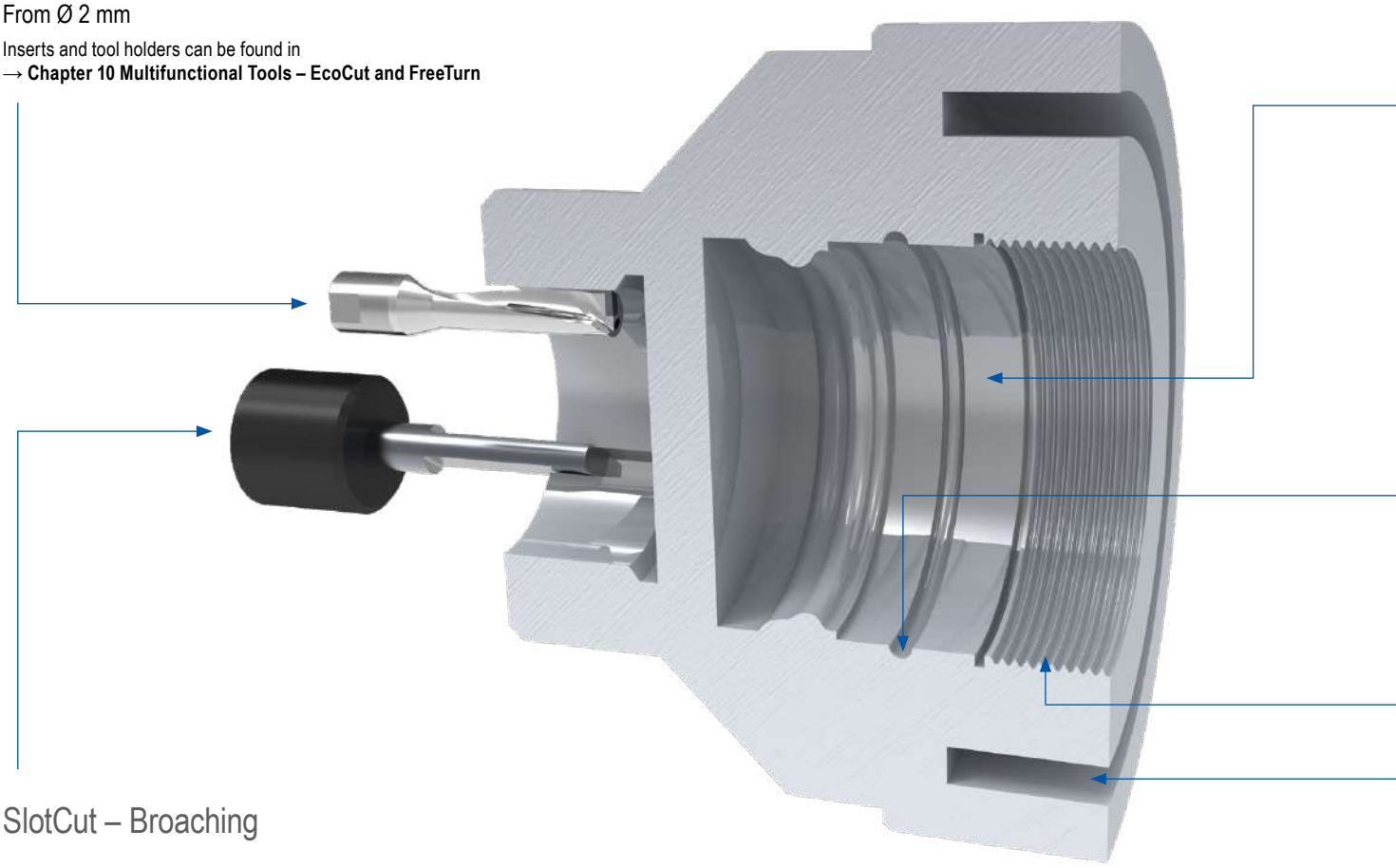
The premium quality tools from the **WNT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools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

Toolfinder

EcoCut Mini

From Ø 2 mm

Inserts and tool holders can be found in
→ **Chapter 10 Multifunctional Tools – EcoCut and FreeTurn**



SlotCut – Broaching

Inserts + Holder DIN138 54–57

Symbol explanation

 Internal machining

 Internal grooving

 Internal thread turning

 Axial machining

System overview

UltraMini

- ▲ from Ø 0.5 mm
- ▲ flexible system
- ▲ ground inserts
- ▲ high repeatability
- ▲ coolant supply to the cutting edge

MiniCut

- ▲ from Ø 7.8 mm
- ▲ stable three-rib interface
- ▲ easy handling
- ▲ coolant supply to the cutting edge
- ▲ precise cutting edge position

SlotCut

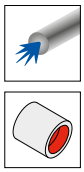
- ▲ broaching directly on the machine
- ▲ usable from Ø 6 mm
- ▲ low machine load
- ▲ variety of tolerance classes

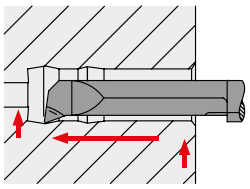
		UltraMini									MiniCut				
Hole diameter (mm)		**≥ 0,5**	**≥ 2**	**≥ 2,4**	**≥ 2,8**	**≥ 3**	**≥ 4**	**≥ 5**	**≥ 6**	**≥ 8**	**≥ 16**	**≥ 8**	**≥ 9**	**≥ 11**	**≥ 14**	**≥ 16**
Internal turning and profiling		6–9	6–9	6–9	6–9		6–9	6–9	6–9			35	35	35	35	35
Internal turning and profiling – hard turning			10		10		10	10	10			36		36	36	36
High-feed turning			11			11	11	11	11							
Internal turning					12		12	12				37	37	37	37	37
Back boring						13	13	13	13			38	38	38	38	
Turning and chamfering								14	14			38	38	38	38	
Pre-parting and chamfering							14	14	14			39	39	39	39	39
Internal Undercuts			18		18		18	18	18			42	42	42	42	42
Groove turning			15–17			15–17	15–17	15–17	15–17			40+41	40+41	40+41	40+41	40+41
Groove and profile turning							19	19	19			43	43	43	43	43
Internal thread turning				20–22			20–22	20–22	20–22			44–47	44–47	44–47	44–47	44–47
Axial grooving								23–28	23–28	23–28	23–28	48+49	48+49	48+49	48+49	48+49
suitable holder		31–34										50–53				
Sets		29+30										49				

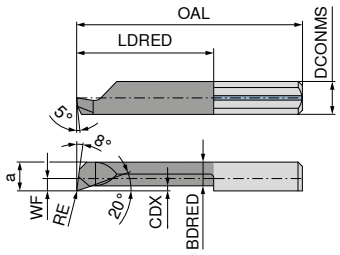
12

UltraMini – Inserts for internal turning and profiling

▲ CDX = Maximum depth of cut when turning outwards







Illustrations show right-hand versions

TiN	TiN	TiAlN	TiAlN
			
Left-hand	Right-hand	Left-hand	Right-hand
73 005 ...	**73 004 ...**	**73 005 ...**	**73 004 ...**

ISO designation	DCONMS $_{h6}$	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	£ Y5		£ Y5		£ Y5		£ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm								
R/L 050.05-2	4		0.5	0.4	20	2	0.03	0.32	0.02	78.36	500	78.36	500				
R/L 050.06-2	4		0.6	0.5	20	2	0.05	0.40	0.04	78.36	510	78.36	510				
R/L 050.06-3	4		0.6	0.5	20	3	0.05	0.40	0.04	80.91	511	80.91	511				
R/L 050.08-4	4		0.8	0.7	20	4	0.05	0.60	0.04					78.87	812	78.87	812
R/L 050.1-8	4		1.0	0.9	22	8	0.10	0.75	0.05					78.11	813	78.11	813
R/L 050.15-5	4		1.5	1.3	19	5	0.10	1.15	0.05	74.74	515	74.74	515				
R/L 050.15-10	4		1.5	1.3	24	10	0.10	1.15	0.05	75.45	516	75.45	516				
R/L 050.15-12	4		1.5	1.3	26	12	0.10	1.15	0.05					78.11	818	78.11	818
R/L 050.2-5	4		2.0	1.7	19	5	0.10	1.50	0.05	63.52	520	58.27	520				
R/L 050.2-10	4		2.0	1.7	24	10	0.10	1.50	0.05	64.25	521	63.52	521				
R/L 050.2-15	4		2.0	1.7	29	15	0.10	1.50	0.05	68.98	522	62.98	522				
R/L 050.3-10	4	0.6	2.8	2.6	24	10	0.20	2.30	0.10	68.98	531	66.98	531				
R/L 050.3-16	4	0.6	2.8	2.6	30	16	0.20	2.30	0.10	75.65	530	73.48	530				
R/L 050.3-20	4	0.6	2.8	2.6	34	20	0.20	2.30	0.10	71.85	532	73.37	532				
R/L 050.35-10	4	1.1	3.5	3.1	24	10	0.25	2.80	0.10					61.77	835	61.77	835
R/L 050.35-16	4	1.1	3.5	3.1	30	16	0.25	2.80	0.10					65.11	836	65.11	836
R/L 050.35-20	4	1.1	3.5	3.1	34	20	0.25	2.80	0.10					78.25	837	78.25	837
R/L 050.35-24	4	1.1	3.5	3.1	38	24	0.25	2.80	0.10					85.72	838	85.72	838
R/L 050.4-10	4	1.5	4.0	3.5	24	10	0.30	3.00	0.10	69.33	541	66.04	541	63.35	841	63.35	841
R/L 050.4-16	4	1.5	4.0	3.5	30	16	0.30	3.00	0.10	69.33	540	66.04	540	66.98	840	66.98	840
R/L 050.4-20	4	1.5	4.0	3.5	34	20	0.30	3.00	0.10	70.83	542	70.39	542	74.92	842	74.92	842
R/L 050.4-24	4	1.5	4.0	3.5	38	24	0.30	3.00	0.10	85.05	545	82.51	545	85.05	845	85.05	845
R/L 050.4-28	4	1.5	4.0	3.5	42	28	0.30	3.00	0.10	94.66	546	90.37	546	94.66	846	94.66	846
R/L 050.5-10	5	1.9	5.0	4.4	25	10	0.50	3.80	0.15	68.54	551	62.49	551	59.35	851	59.35	851
R/L 050.5-15	5	1.9	5.0	4.4	30	15	0.50	3.80	0.15	69.59	552	66.57	552	63.35	852	63.35	852
R/L 050.5-20	5	1.9	5.0	4.4	35	20	0.50	3.80	0.15	70.13	550	68.35	550	72.93	850	72.93	850
R/L 050.5-25	5	1.9	5.0	4.4	40	25	0.50	3.80	0.15	80.78	553	77.20	553	82.51	853	82.51	853
R/L 050.5-30	5	1.9	5.0	4.4	45	30	0.50	3.80	0.15	87.05	554	84.88	554	93.03	854	93.03	854
R/L 050.5-35	5	1.9	5.0	4.4	50	35	0.50	3.80	0.15	103.15	556	98.52	556	103.15	856	103.15	856
R/L 050.5-40	5	1.9	5.0	4.4	55	40	0.50	3.80	0.15					112.12	857	112.12	857
R/L 050.6-15	6	2.3	6.0	5.3	30	15	0.50	4.50	0.15	71.29	561	65.34	561	63.35	861	63.35	861
R/L 050.6-22	6	2.3	6.0	5.3	37	22	0.50	4.50	0.15	73.10	560	71.14	560	72.93	860	72.93	860
R/L 050.6-25	6	2.3	6.0	5.3	40	25	0.50	4.50	0.15	82.73	562	75.65	562	82.51	862	82.51	862
R/L 050.6-30	6	2.3	6.0	5.3	45	30	0.50	4.50	0.15	88.35	563	85.97	563	93.03	863	93.03	863
R/L 050.6-35	6	2.3	6.0	5.3	50	35	0.50	4.50	0.15	103.15	564	98.52	564	103.15	864	103.15	864
R/L 050.6-42	6	2.3	6.0	5.3	57	42	0.50	4.50	0.15	115.29	565	112.04	565	115.29	865	115.29	865
R/L 050.7-20	7	2.8	6.8	6.3	35	20	0.60	5.50	0.15	74.74	572	72.59	572	71.90	872	71.90	872
R/L 050.7-25	7	2.8	6.8	6.3	40	25	0.60	5.50	0.15	93.55	573	89.75	573	83.44	873	83.44	873
R/L 050.7-30	7	2.8	6.8	6.3	45	30	0.60	5.50	0.15	93.21	574	91.01	574	92.65	874	92.65	874
R/L 050.7-35	7	2.8	7.0	6.3	50	35	0.60	5.50	0.15	104.94	575	104.94	575	104.94	875	104.94	875
R/L 050.7-40	7	2.8	7.0	6.3	55	40	0.60	5.50	0.15	116.89	576	116.89	576	116.89	876	116.89	876
R/L 050.7-45	7	2.8	7.0	6.3	60	45	0.60	5.50	0.15	121.60	577	121.60	577	121.60	877	121.60	877
R/L 050.7-50	7	2.8	7.0	6.3	65	50	0.60	5.50	0.15	133.35	578	133.35	578	133.35	878	133.35	878

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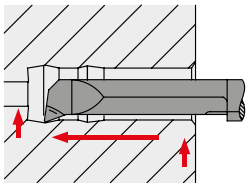
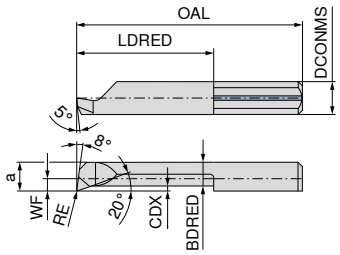
K	●	●	●	●
N	●	●	●	●
S	○	○	●	●
H	○	○	●	●
O	●	●	●	●

→ v_c Page 59

UltraMini – Inserts for internal turning and profiling

▲ CDX = Maximum depth of cut when turning outwards





K10F

K10F

ISO designation	DCONMS $_{h6}$	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	Left-hand 73 005 ... £ Y5		Right-hand 73 004 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 050.2-5	4		2.0	1.7	19	5	0.1	1.5	0.05	50.78	**020**	50.78	**020**
R/L 050.2-10	4		2.0	1.7	24	10	0.1	1.5	0.05	53.22	**021**	53.22	**021**
R/L 050.2-15	4		2.0	1.7	29	15	0.1	1.5	0.05	56.83	**022**	56.83	**022**
R/L 050.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.10	53.77	**031**	53.77	**031**
R/L 050.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.10	61.96	**030**	61.96	**030**
R/L 050.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.10	63.50	**032**	63.50	**032**
R/L 050.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.10	53.92	**041**	53.92	**041**
R/L 050.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.10	55.93	**040**	55.93	**040**
R/L 050.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.10	59.35	**042**	58.61	**042**
R/L 050.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.15	54.32	**051**	54.32	**051**
R/L 050.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.15	57.17	**052**	57.17	**052**
R/L 050.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.15	59.18	**050**	59.18	**050**
R/L 050.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	0.15	68.54	**053**	68.54	**053**
R 050.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.05			75.19	**054**
L 050.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.15	74.20	**054**		
R/L 050.6-15	6	2.3	6.0	5.3	30	15	0.5	4.5	0.15	58.61	**061**	58.61	**061**
R/L 050.6-22	6	2.3	6.0	5.3	37	22	0.5	4.5	0.15	59.65	**060**	59.65	**060**
R/L 050.6-25	6	2.3	6.0	5.3	40	25	0.5	4.5	0.15	70.83	**062**	70.83	**062**
R/L 050.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	0.15	76.38	**063**	75.27	**063**
R/L 050.7-20	7	2.8	6.8	6.3	35	20	0.6	5.5	0.15	62.98	**072**	62.98	**072**
R/L 050.7-25	7	2.8	6.8	6.3	40	25	0.6	5.5	0.15	71.90	**073**	71.90	**073**
R/L 050.7-30	7	2.8	6.8	6.3	45	30	0.6	5.5	0.15	83.96	**074**	77.20	**074**

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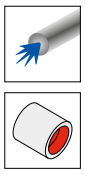
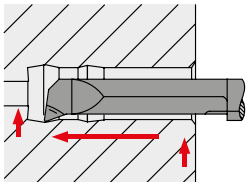
→ v_c Page 59

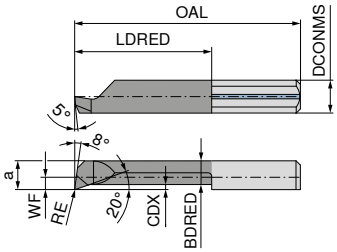
12

UltraMini – Inserts for internal turning and profiling

▲ with corner radius ≤ 0.05 mm
▲ CDX = Maximum depth of cut when turning outwards







Illustrations show right-hand versions

										Left-hand		Right-hand		Left-hand		Right-hand	
										73 021 ...		**73 020 ...**		**73 023 ...**		**73 022 ...**	
ISO designation	DCONMS $_{h6}$	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	£ Y5		£ Y5		£ Y5		£ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm								
R/L 053.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.03	68.41	**310**	68.41	**310**				
R/L 053.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.03	72.02	**316**	72.02	**316**				
R/L 053.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.03	83.79	**320**	83.79	**320**				
R/L 053.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.03	68.41	**410**	68.41	**410**				
R/L 053.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.03	72.02	**416**	72.02	**416**				
R/L 053.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.03	81.46	**420**	81.46	**420**				
R/L 053.4-24	4	1.5	4.0	3.5	38	24	0.3	3.0	0.03	90.13	**424**	90.13	**424**				
R/L 053.4-28	4	1.5	4.0	3.5	42	28	0.3	3.0	0.03	98.00	**428**	98.00	**428**				
R/L 055.2-10	4		2.0	1.7	24	10	0.1	1.5	0.05					69.08	**210**	69.08	**210**
R/L 055.2-15	4		2.0	1.7	29	15	0.1	1.5	0.05					73.83	**215**	73.83	**215**
R/L 055.2-5	4		2.0	1.7	19	5	0.1	1.5	0.05					68.41	**205**	68.41	**205**
R/L 055.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.05					68.41	**310**	68.41	**310**
R/L 055.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.05					72.02	**316**	72.02	**316**
R/L 055.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.05					85.60	**320**	85.60	**320**
R/L 055.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.05					68.41	**410**	68.41	**410**
R/L 055.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.05					72.02	**416**	72.02	**416**
R/L 055.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.05					81.46	**420**	81.46	**420**
R/L 055.4-24	4	1.5	4.0	3.5	38	24	0.3	3.0	0.05					90.13	**424**	90.13	**424**
R/L 055.4-28	4	1.5	4.0	3.5	42	28	0.3	3.0	0.05					98.00	**428**	98.00	**428**
R/L 055.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.05					64.58	**510**	61.54	**510**
R/L 055.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.05					68.41	**515**	68.41	**515**
R/L 055.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.05					77.83	**520**	77.83	**520**
R/L 055.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	0.05					86.09	**525**	86.09	**525**
R/L 055.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.05					97.93	**530**	97.93	**530**
R/L 055.5-35	5	1.9	5.0	4.4	50	35	0.5	3.8	0.05					108.21	**535**	108.21	**535**
R/L 055.6-15	6	2.3	6.0	5.3	30	15	0.5	4.5	0.05					68.41	**615**	68.41	**615**
R/L 055.6-22	6	2.3	6.0	5.3	37	22	0.5	4.5	0.05					76.17	**622**	76.17	**622**
R/L 055.6-25	6	2.3	6.0	5.3	40	25	0.5	4.5	0.05					86.09	**625**	86.09	**625**
R/L 055.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	0.05					97.93	**630**	97.93	**630**
R/L 055.6-35	6	2.3	6.0	5.3	50	35	0.5	4.5	0.05					108.21	**635**	108.21	**635**
R/L 055.6-42	6	2.3	6.0	5.3	57	42	0.5	4.5	0.05					118.06	**642**	118.06	**642**

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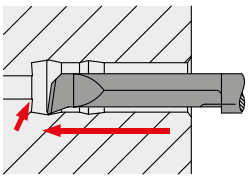
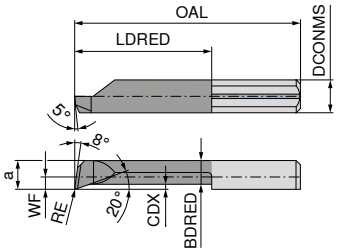
→ v_c Page 59

UltraMini – Inserts for internal turning and profiling

▲ with chip former
▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

TiAlN

TiAlN

ISO designation	DCONMS $_{h6}$	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	Left-hand 73 017 ... £ Y5		Right-hand 73 016 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 050.4-10C	4	1.5	4	3.5	24	10	0.3	3.0	0.2	63.35	**410**	63.35	**410**
R/L 050.4-16C	4	1.5	4	3.5	30	16	0.3	3.0	0.2	66.98	**416**	66.98	**416**
R/L 050.4-20C	4	1.5	4	3.5	34	20	0.3	3.0	0.2	74.92	**420**	74.92	**420**
R/L 050.4-24C	4	1.5	4	3.5	38	24	0.3	3.0	0.2	85.05	**424**	85.05	**424**
R/L 050.4-28C	4	1.5	4	3.5	42	28	0.3	3.0	0.2	94.66	**428**	94.66	**428**
R/L 050.5-10C	5	1.9	5	4.4	25	10	0.5	3.8	0.2	59.35	**510**	59.35	**510**
R/L 050.5-15C	5	1.9	5	4.4	30	15	0.5	3.8	0.2	63.35	**515**	63.35	**515**
R/L 050.5-20C	5	1.9	5	4.4	35	20	0.5	3.8	0.2	72.93	**520**	72.93	**520**
R/L 050.5-25C	5	1.9	5	4.4	40	25	0.5	3.8	0.2	82.51	**525**	82.51	**525**
R/L 050.5-30C	5	1.9	5	4.4	45	30	0.5	3.8	0.2	93.03	**530**	93.03	**530**
R/L 050.5-35C	5	1.9	5	4.4	50	35	0.5	3.8	0.2	103.15	**535**	103.15	**535**
R/L 050.6-15C	6	2.3	6	5.3	30	15	0.5	4.5	0.2	63.35	**615**	63.35	**615**
R/L 050.6-22C	6	2.3	6	5.3	37	22	0.5	4.5	0.2	72.93	**622**	72.93	**622**
R/L 050.6-25C	6	2.3	6	5.3	40	25	0.5	4.5	0.2	82.51	**625**	82.51	**625**
R/L 050.6-30C	6	2.3	6	5.3	45	30	0.5	4.5	0.2	93.03	**630**	93.03	**630**
R/L 050.6-35C	6	2.3	6	5.3	50	35	0.5	4.5	0.2	103.15	**635**	103.15	**635**
R/L 050.6-42C	6	2.3	6	5.3	57	42	0.5	4.5	0.2	115.29	**642**	115.29	**642**
R/L 050.7-20C	7	2.8	7	6.3	35	20	0.6	5.5	0.2	71.90	**720**	71.90	**720**
R/L 050.7-25C	7	2.8	7	6.3	40	25	0.6	5.5	0.2	83.44	**725**	83.44	**725**
R/L 050.7-30C	7	2.8	7	6.3	45	30	0.6	5.5	0.2	92.65	**730**	92.65	**730**
R/L 050.7-35C	7	2.8	7	6.3	50	35	0.6	5.5	0.2	104.94	**735**	104.94	**735**
R/L 050.7-40C	7	2.8	7	6.3	55	40	0.6	5.5	0.2	116.89	**740**	116.89	**740**
R/L 050.7-45C	7	2.8	7	6.3	60	45	0.6	5.5	0.2	121.60	**745**	121.60	**745**
R/L 050.7-50C	7	2.8	7	6.3	65	50	0.6	5.5	0.2	133.35	**750**	133.35	**750**

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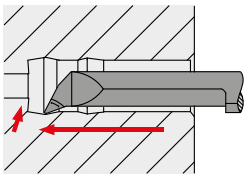
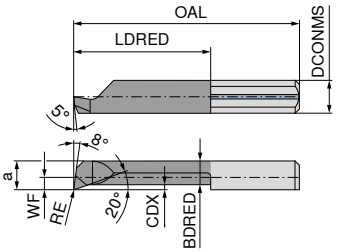
12

→ v_c Page 59

UltraMini – Inserts for internal turning and profiling – hard turning

▲ 46 to 65 HRC
▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

TiAlN+

TiAlN+

ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	Left-hand 73 025 ... £		Right-hand 73 024 ... £	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Y5		Y5	
R/L 050.2-5	4		2.0	1.7	19	5	0.1	1.5	0.05	94.25	**920**	94.25	**920**
R/L 050.2-10	4		2.0	1.7	24	10	0.1	1.5	0.05	95.99	**921**	95.99	**921**
R/L 050.2-15	4		2.0	1.7	29	15	0.1	1.5	0.05	99.60	**922**	99.60	**922**
R/L 050.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.10	93.93	**931**	93.93	**931**
R/L 050.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.10	97.89	**930**	97.89	**930**
R/L 050.3-20	4	0.6	2.8	2.6	34	20	0.2	2.3	0.10	112.02	**932**	112.02	**932**
R/L 050.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.10	93.93	**941**	93.93	**941**
R/L 050.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.10	97.89	**940**	97.89	**940**
R/L 050.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	0.10	107.77	**942**	107.77	**942**
R/L 050.4-24	4	1.5	4.0	3.5	38	24	0.3	3.0	0.10	117.22	**945**	117.22	**945**
R/L 050.4-28	4	1.5	4.0	3.5	42	28	0.3	3.0	0.10	127.24	**946**	127.24	**946**
R/L 050.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.15	91.11	**951**	91.11	**951**
R/L 050.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.15	95.35	**952**	95.35	**952**
R/L 050.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.15	105.58	**950**	105.58	**950**
R/L 050.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	0.15	115.94	**953**	115.94	**953**
R/L 050.5-30	5	1.9	5.0	4.4	45	30	0.5	3.8	0.15	127.09	**954**	127.09	**954**
R/L 050.5-35	5	1.9	5.0	4.4	50	35	0.5	3.8	0.15	137.79	**956**	137.79	**956**
R/L 050.6-15	6	2.3	6.0	5.3	30	15	0.5	4.5	0.15	96.76	**961**	96.76	**961**
R/L 050.6-22	6	2.3	6.0	5.3	37	22	0.5	4.5	0.15	106.97	**960**	106.97	**960**
R/L 050.6-25	6	2.3	6.0	5.3	40	25	0.5	4.5	0.15	117.34	**962**	117.34	**962**
R/L 050.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	0.15	128.50	**963**	128.50	**963**
R/L 050.6-35	6	2.3	6.0	5.3	50	35	0.5	4.5	0.15	139.50	**964**	139.50	**964**
R/L 050.6-42	6	2.3	6.0	5.3	57	42	0.5	4.5	0.15	151.92	**965**	151.92	**965**
R/L 050.7-20	7	2.8	6.8	6.3	35	20	0.6	5.5	0.15	108.10	**972**	108.10	**972**
R/L 050.7-25	7	2.8	6.8	6.3	40	25	0.6	5.5	0.15	119.08	**973**	119.08	**973**
R/L 050.7-30	7	2.8	6.8	6.3	45	30	0.6	5.5	0.15	130.72	**974**	130.72	**974**
R/L 050.7-35	7	2.8	6.8	6.3	50	35	0.6	5.5	0.15	141.72	**975**	141.72	**975**
R/L 050.7-40	7	2.8	6.8	6.3	55	40	0.6	5.5	0.15	154.74	**976**	154.74	**976**
R/L 050.7-45	7	2.8	6.8	6.3	60	45	0.6	5.5	0.15	162.13	**977**	162.13	**977**
R/L 050.7-50	7	2.8	6.8	6.3	65	50	0.6	5.5	0.15	172.35	**978**	172.35	**978**

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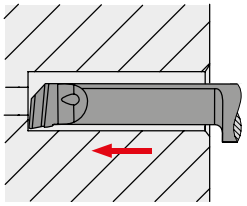
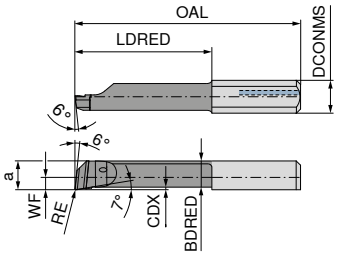
→ v_c Page 59

Machining with cooling is recommended.

UltraMini – Inserts for internal turning

▲ with chip former
▲ High-feed internal turning
▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

DPX77S
DRAGONSKIN

Left-hand

DPX77S
DRAGONSKIN

Right-hand

ISO designation	DCONMS $_{h6}$	WF	DMIN	a	OAL	LDRED	CDX	BDRED	RE	73 001 ... £		73 000 ... £	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Y5		Y5	
R/L X050.1-5	4		1.0	0.90	20	5	0.03	0.85	0.05	56.70	**121**	56.70	**121**
R/L X050.15-7	4		1.5	1.35	22	7	0.05	1.25	0.10	64.81	**233**	64.81	**233**
R/L X050.2-5	4		2.0	1.80	19	5	0.10	1.60	0.15	49.31	**245**	49.31	**245**
R/L X050.2-10	4		2.0	1.80	24	10	0.10	1.60	0.05	50.60	**215**	50.60	**215**
R/L X050.2-10	4		2.0	1.80	24	10	0.10	1.60	0.15	50.60	**241**	50.60	**241**
R/L X050.3-10	4	0.7	3.0	2.70	24	10	0.15	2.55	0.05	49.17	**341**	49.17	**341**
R/L X050.3-10	4	0.7	3.0	2.70	24	10	0.15	2.55	0.20	49.17	**347**	49.17	**347**
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.05	51.87	**371**	51.87	**371**
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.10	51.87	**373**	51.87	**373**
R/L X050.3-16	4	0.7	3.0	2.70	30	16	0.15	2.55	0.20	51.87	**377**	51.87	**377**
R/L X050.4-10	4	1.6	4.0	3.60	24	10	0.20	3.20	0.10	49.17	**403**	49.17	**403**
R/L X050.4-10	4	1.6	4.0	3.60	24	10	0.20	3.20	0.20	49.17	**407**	49.17	**407**
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.05	51.87	**431**	51.87	**431**
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.10	51.87	**433**	51.87	**433**
R/L X050.4-16	4	1.6	4.0	3.60	30	16	0.20	3.20	0.20	51.87	**437**	51.87	**437**
R/L X050.4-24	4	1.6	4.0	3.60	38	24	0.20	3.20	0.10	65.95	**463**	65.95	**463**
R/L X050.4-24	4	1.6	4.0	3.60	38	24	0.20	3.20	0.20	65.95	**467**	65.95	**467**
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.05	49.17	**511**	49.17	**511**
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.10	49.17	**513**	49.17	**513**
R/L X050.5-15	5	2.1	5.0	4.60	30	15	0.30	4.05	0.20	49.17	**517**	49.17	**517**
R/L X050.5-25	5	2.1	5.0	4.60	40	25	0.30	4.05	0.10	64.09	**543**	64.09	**543**
R/L X050.5-25	5	2.1	5.0	4.60	40	25	0.30	4.05	0.20	64.09	**547**	64.09	**547**
R/L X050.5-30	5	2.1	5.0	4.60	45	30	0.30	4.05	0.10	72.48	**553**	72.48	**553**
R/L X050.5-30	5	2.1	5.0	4.60	45	30	0.30	4.05	0.20	72.48	**557**	72.48	**557**
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.05	49.17	**611**	49.17	**611**
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.10	49.17	**613**	49.17	**613**
R/L X050.6-15	6	2.5	6.0	5.50	30	15	0.40	4.90	0.20	49.17	**617**	49.17	**617**
R/L X050.6-22	6	2.5	6.0	5.50	37	22	0.40	4.90	0.20	56.57	**637**	56.57	**637**
R/L X050.6-30	6	2.5	6.0	5.50	45	30	0.40	4.90	0.20	72.48	**657**	72.48	**657**
R/L X050.6-35	6	2.5	6.0	5.50	50	35	0.40	4.90	0.20	80.14	**667**	80.14	**667**
R/L X050.6-50	6	2.5	6.0	5.50	65	50	0.40	4.90	0.20	99.78	**697**	99.78	**697**
R/L X050.7-25	7	3.0	7.0	6.50	40	25	0.50	5.90	0.20	65.08	**747**	65.08	**747**
R/L X050.7-30	7	3.0	7.0	6.50	45	30	0.50	5.90	0.20	73.34	**757**	73.34	**757**

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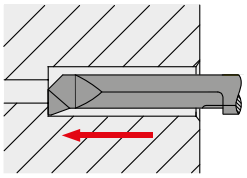
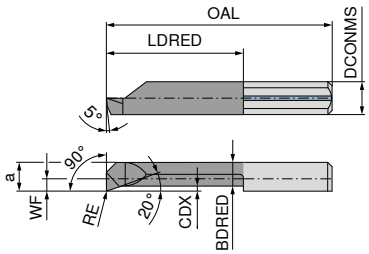
→ v_c Page 60+61

12

UltraMini – Inserts for internal turning

▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

TiN

Left-hand

TiN

Right-hand

ISO designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	73 015 ... £ Y5		73 014 ... £ Y5	
R/L 090.3-10	4	0.6	2.8	2.6	24	10	0.2	2.3	0.2	63.35	**541**	63.35	**541**
R/L 090.3-16	4	0.6	2.8	2.6	30	16	0.2	2.3	0.2	67.14	**542**	67.14	**542**
R/L 090.4-10	4	1.5	4.0	3.5	24	10	0.3	3.0	0.2	63.35	**545**	63.35	**545**
R/L 090.4-16	4	1.5	4.0	3.5	30	16	0.3	3.0	0.2	67.14	**546**	67.14	**546**
R/L 090.5-10	5	1.9	5.0	4.4	25	10	0.5	3.8	0.2	63.35	**550**	63.35	**550**
R/L 090.5-15	5	1.9	5.0	4.4	30	15	0.5	3.8	0.2	67.14	**551**	67.14	**551**
R/L 090.5-20	5	1.9	5.0	4.4	35	20	0.5	3.8	0.2	72.93	**552**	72.93	**552**

P	●	●
M	●	●
K	●	●
N	●	●
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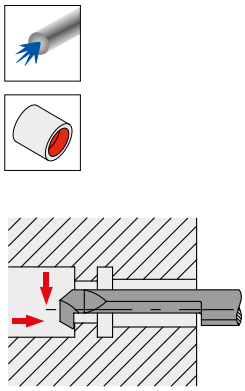
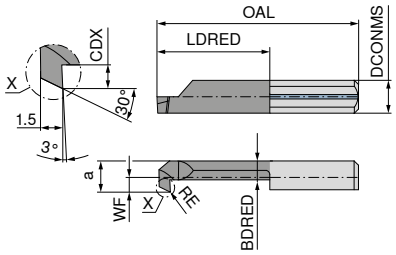
H	○	○
O	●	●

→ v_c Page 59

UltraMini – Inserts for back boring

▲ CDX = Maximum depth of cut when turning outwards





Illustrations show right-hand versions

TiN

Left-hand

TiN

Right-hand

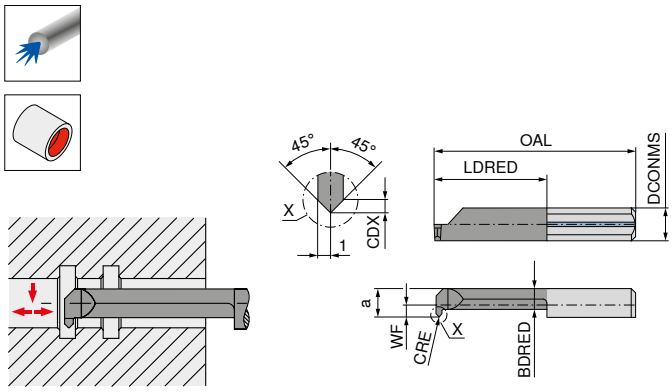
ISO designation	DCONMS h6 mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	RE mm	73 013 ... £ Y5		73 012 ... £ Y5	
R/L 080.0003-15	4	0.6	3	2.6	29	15	0.5	2.0	0.10	77.44	**542**	77.44	**542**
R/L 080.0003-20	4	0.6	3	2.6	34	20	0.5	2.0	0.10	92.31	**544**	92.31	**544**
R/L 080.0004-15	4	1.5	4	3.5	29	15	0.8	2.4	0.15	77.44	**546**	77.44	**546**
R/L 080.0004-25	4	1.5	4	3.5	39	25	0.8	2.4	0.15	86.82	**548**	86.82	**548**
R/L 080.0005-20	5	1.9	5	4.4	35	20	1.0	3.3	0.20	79.12	**554**	79.12	**554**
R/L 080.0005-30	5	1.9	5	4.4	45	30	1.0	3.3	0.20	82.19	**558**	82.19	**558**
R/L 080.0006-20	6	2.3	6	5.3	35	20	1.8	3.4	0.20	82.51	**564**	82.51	**564**
R/L 080.0006-30	6	2.3	6	5.3	45	30	1.8	3.4	0.20	98.79	**568**	98.79	**568**
R/L 080.0007-20	7	2.7	7	6.3	35	20	2.5	3.8	0.20	82.51	**574**	82.51	**574**
R/L 080.0007-30	7	2.7	7	6.3	45	30	2.5	3.8	0.20	98.79	**578**	98.79	**578**
P										●		●	
M										●		●	
K										●		●	
N										●		●	
S										○		○	
H										○		○	
O										●		●	

→ v_c Page 59

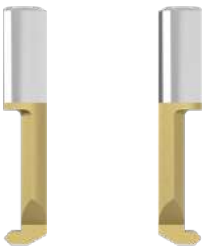
12

UltraMini – Inserts for internal turning and chamfering

▲ CDX = Maximum depth of cut when turning outwards



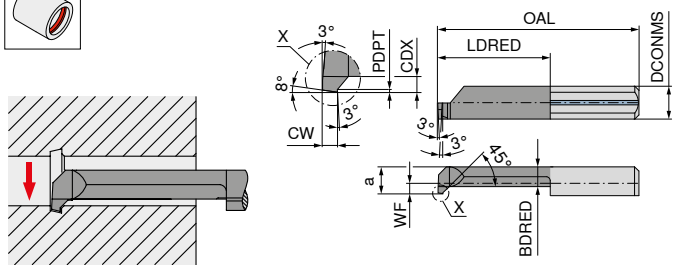
Illustrations show right-hand versions



ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	CRE	Left-hand 73 007 ... £ Y5		Right-hand 73 006 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 060.5-15	5	1.9	5.0	4.4	30	15	0.7	3.3	0.2	64.25	**551**	59.70	**551**
R/L 060.5-20	5	1.9	5.0	4.4	35	20	0.7	3.3	0.2	66.74	**550**	66.45	**550**
R/L 060.7-20	7	2.7	6.8	6.3	35	20	0.7	3.8	0.2	74.92	**570**	69.33	**570**
P											●		●
M											●		●
K											●		●
N											●		●
S											○		○
H											○		○
O											●		●

→ v_c Page 59

UltraMini – Inserts for internal chamfering for subsequent parting off

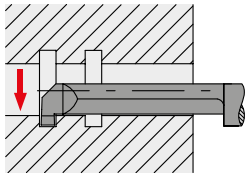


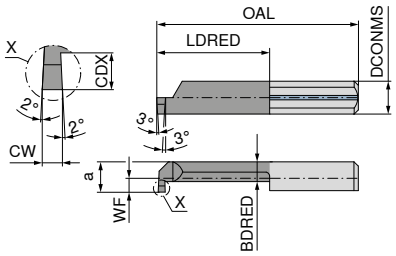
Illustrations show right-hand versions

ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	CW	PDPT	Left-hand 73 009 ... £ Y5		Right-hand 73 008 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 070.4-10	4	1.5	4	3.5	25	10	0.8	2.4	1	0.2	66.51	**410**	66.51	**410**
R/L 070.4-16	4	1.5	4	3.5	30	16	0.8	2.4	1	0.2	68.49	**416**	68.49	**416**
R/L 070.5-15	5	1.9	5	4.4	30	15	1.0	3.3	1	0.2	65.69	**551**	65.69	**551**
R/L 070.5-20	5	1.9	5	4.4	35	20	1.0	3.3	1	0.2	69.33	**550**	69.33	**550**
R/L 070.5-30	5	1.9	5	4.4	45	30	1.0	3.3	1	0.2	92.59	**530**	92.59	**530**
R/L 070.6-30	6	2.3	6	5.3	45	30	1.0	4.2	1	0.2	92.59	**630**	92.59	**630**
R/L 070.6-42	6	2.3	6	5.3	57	42	1.0	4.2	1	0.2	108.31	**642**	108.31	**642**
P												●		●
M												●		●
K												●		●
N												●		●
S												○		○
H												○		○
O												●		●

→ v_c Page 59

UltraMini – Inserts for Internal Grooving





Illustrations show right-hand versions

TiN

TiN

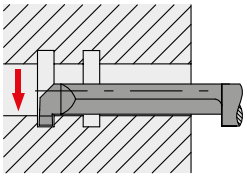
										Left-hand		Right-hand	
										73 003 ...		**73 002 ...**	
ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	CW	£ Y5		£ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 004.0100-10	4	1.5	4.0	3.5	24	10	0.8	2.4	1.0	60.18	**540**	58.83	**540**
R/L 004.0100-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	73.83	**541**	71.85	**541**
R/L 004.0100-20	4	1.5	4.0	3.5	34	20	0.8	2.4	1.0	79.65	**542**	77.44	**542**
R/L 005.0100-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.0	61.54	**650**	57.88	**650**
R/L 005.0150-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.5	61.54	**654**	59.92	**654**
R/L 005.0200-10	5	1.9	5.0	4.4	25	10	1.0	3.3	2.0	61.54	**658**	59.92	**658**
R/L 005.0100-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.0	71.14	**651**	67.80	**651**
R/L 005.0150-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.5	71.14	**655**	67.80	**655**
R/L 005.0200-15	5	1.9	5.0	4.4	30	15	1.0	3.3	2.0	71.14	**659**	67.80	**659**
R/L 005.0100-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	77.20	**551**	76.76	**551**
R/L 005.0150-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	77.20	**552**	76.76	**552**
R/L 005.0200-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	77.20	**553**	76.76	**553**
R/L 005.0100-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.0	87.41	**652**	85.05	**652**
R/L 005.0150-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.5	87.41	**656**	85.05	**656**
R/L 005.0200-25	5	1.9	5.0	4.4	40	25	1.0	3.3	2.0	87.95	**750**	85.60	**750**
R/L 005.0100-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.0	97.36	**653**	94.66	**653**
R/L 005.0150-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.5	97.36	**657**	94.66	**657**
R/L 005.0200-30	5	1.9	5.0	4.4	45	30	1.0	3.3	2.0	97.93	**751**	95.38	**751**
R/L 005.0100-35	5	1.9	5.0	4.4	50	35	1.0	3.3	1.0	108.21	**680**	103.32	**680**
R/L 006.0100-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.0	60.72	**660**	58.95	**660**
R/L 006.0150-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.5	60.72	**664**	56.45	**664**
R/L 006.0200-10	6	2.3	6.0	5.3	25	10	1.8	3.4	2.0	60.72	**668**	58.95	**668**
R/L 006.0100-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.0	70.13	**661**	68.35	**661**
R/L 006.0150-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.5	70.13	**665**	68.35	**665**
R/L 006.0200-15	6	2.3	6.0	5.3	30	15	1.8	3.4	2.0	70.13	**669**	68.35	**669**
R/L 006.0100-22	6	2.3	6.0	5.3	37	22	1.8	3.4	1.0	77.94	**561**	77.30	**561**
R/L 006.0150-22	6	2.3	6.0	5.3	37	22	1.8	3.4	1.5	77.94	**562**	77.30	**562**
R/L 006.0200-22	6	2.3	6.0	5.3	37	22	1.8	3.4	2.0	77.94	**563**	77.30	**563**
R/L 006.0100-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	87.95	**662**	85.60	**662**
R/L 006.0150-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	87.95	**666**	85.60	**666**
R/L 006.0200-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	87.95	**760**	85.60	**760**
R/L 006.0100-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.0	97.93	**663**	95.38	**663**
R/L 006.0150-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.5	97.93	**667**	95.38	**667**
R/L 006.0200-30	6	2.3	6.0	5.3	45	30	1.8	3.4	2.0	97.93	**761**	95.38	**761**
R/L 006.0100-35	6	2.3	6.0	5.3	50	35	1.8	3.4	1.0	108.21	**682**	103.32	**682**
R/L 006.0150-35	6	2.3	6.0	5.3	50	35	1.8	3.4	1.5	108.21	**684**	103.32	**684**
R/L 006.0100-42	6	2.3	6.0	5.3	57	42	1.8	3.4	1.0	119.43	**685**	116.01	**685**
R/L 007.0100-10	7	2.7	6.8	6.3	25	10	2.5	3.8	1.0	61.26	**570**	59.92	**570**
R/L 007.0150-10	7	2.7	6.8	6.3	25	10	2.5	3.8	1.5	61.26	**575**	59.92	**575**
R/L 007.0200-10	7	2.7	6.8	6.3	25	10	2.5	3.8	2.0	61.26	**670**	59.92	**670**
R/L 007.0100-15	7	2.7	6.8	6.3	30	15	2.5	3.8	1.0	70.83	**571**	69.08	**571**
R/L 007.0150-15	7	2.7	6.8	6.3	30	15	2.5	3.8	1.5	70.83	**576**	69.08	**576**
R/L 007.0200-15	7	2.7	6.8	6.3	30	15	2.5	3.8	2.0	70.83	**671**	66.06	**671**
R/L 007.0100-22	7	2.7	6.8	6.3	37	22	2.5	3.8	1.0	79.71	**572**	78.90	**572**
R/L 007.0150-22	7	2.7	6.8	6.3	37	22	2.5	3.8	1.5	79.71	**577**	78.90	**577**
R/L 007.0200-22	7	2.7	6.8	6.3	37	22	2.5	3.8	2.0	79.71	**672**	78.90	**672**
R/L 007.0100-25	7	2.7	6.8	6.3	40	25	2.5	3.8	1.0	88.87	**573**	86.51	**573**
R/L 007.0150-25	7	2.7	6.8	6.3	40	25	2.5	3.8	1.5	88.87	**578**	86.51	**578**
R/L 007.0200-25	7	2.7	6.8	6.3	40	25	2.5	3.8	2.0	88.87	**673**	85.25	**673**
R/L 007.0100-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.0	98.00	**574**	97.00	**574**
R/L 007.0150-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.5	98.00	**579**	93.89	**579**
R/L 007.0200-30	7	2.7	6.8	6.3	45	30	2.5	3.8	2.0	98.00	**674**	91.01	**674**
R/L 007.0100-35	7	2.7	7.0	6.3	50	35	2.5	3.8	1.0	109.29	**688**	106.23	**688**
R/L 007.0150-35	7	2.7	7.0	6.3	50	35	2.5	3.8	1.5	109.29	**690**	106.23	**690**
R/L 007.0200-35	7	2.7	7.0	6.3	50	35	2.5	3.8	2.0	109.29	**692**	106.23	**692**
R/L 007.0100-40	7	2.7	7.0	6.3	55	40	2.5	3.8	1.0	121.24	**700**	117.80	**700**
R/L 007.0150-40	7	2.7	7.0	6.3	55	40	2.5	3.8	1.5	121.24	**702**	117.80	**702**
R/L 007.0100-45	7	2.7	7.0	6.3	60	45	2.5	3.8	1.0	131.56	**712**	127.96	**712**
R/L 007.0100-50	7	2.7	7.0	6.3	65	50	2.5	3.8	1.0	140.97	**714**	136.81	**714**

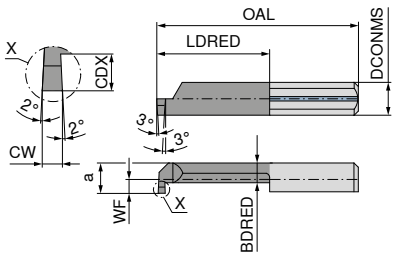
P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

→ v_c Page 59

12

UltraMini – Inserts for Internal Grooving





Illustrations show right-hand versions

TiAlN

Left-hand

TiAlN

Right-hand

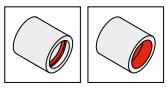
ISO designation	DCONMS $_{h6}$ mm	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	CDX mm	BDRED mm	CW mm	73 003 ... £ Y5		73 002 ... £ Y5	
R/L 002.0050-5	4		2	1.8	19	5	0.4	1.2	0.5	75.65	**820**	75.65	**820**
R/L 002.0050-10	4		2	1.8	24	10	0.4	1.2	0.5	76.17	**821**	76.17	**821**
R/L 002.0050-15	4		2	1.8	29	15	0.4	1.2	0.5	83.79	**822**	83.79	**822**
R/L 003.0070-5	4	0.7	3	2.7	19	5	0.6	1.9	0.7	70.13	**830**	70.13	**830**
R/L 003.0070-10	4	0.7	3	2.7	24	10	0.6	1.9	0.7	80.91	**831**	80.91	**831**
R/L 003.0070-16	4	0.7	3	2.7	30	16	0.6	1.9	0.7	90.13	**832**	90.13	**832**

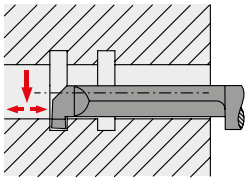
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

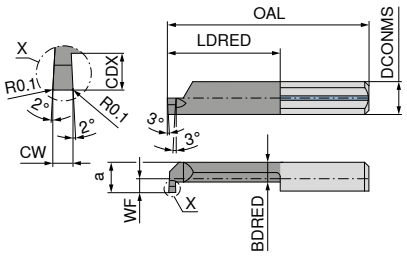
→ v_c Page 59

UltraMini – Inserts for Internal Grooving

▲ with corner radius







Illustrations show right-hand versions

TiAlN

TiAlN

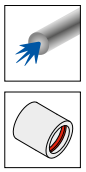
ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	CW	Left-hand 73 203 ... £ Y5		Right-hand 73 202 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 004M0100-10	4	1.5	4.0	3.5	24	10	0.8	2.4	1.0	64.67	800	64.67	800
R/L 004M0100-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	73.83	802	73.83	802
R/L 004M0100-20	4	1.5	4.0	3.5	34	20	0.8	2.4	1.0	81.32	804	81.32	804
R/L 005M0100-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.0	61.04	806	61.04	806
R/L 005M0150-10	5	1.9	5.0	4.4	25	10	1.0	3.3	1.5	61.04	816	61.04	816
R/L 005M0200-10	5	1.9	5.0	4.4	25	10	1.0	3.3	2.0	61.04	826	61.04	826
R/L 005M0100-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.0	69.98	808	69.98	808
R/L 005M0150-15	5	1.9	5.0	4.4	30	15	1.0	3.3	1.5	69.98	818	69.98	818
R/L 005M0200-15	5	1.9	5.0	4.4	30	15	1.0	3.3	2.0	69.98	828	69.98	828
R/L 005M0100-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	78.19	810	78.19	810
R/L 005M0150-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	78.19	820	78.19	820
R/L 005M0200-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	78.19	830	78.19	830
R/L 005M0100-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.0	84.92	812	84.92	812
R/L 005M0150-25	5	1.9	5.0	4.4	40	25	1.0	3.3	1.5	84.92	822	84.92	822
R/L 005M0200-25	5	1.9	5.0	4.4	40	25	1.0	3.3	2.0	84.92	832	84.92	832
R/L 005M0100-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.0	94.12	814	94.12	814
R/L 005M0150-30	5	1.9	5.0	4.4	45	30	1.0	3.3	1.5	94.12	824	94.12	824
R/L 005M0200-30	5	1.9	5.0	4.4	45	30	1.0	3.3	2.0	94.12	834	94.12	834
R/L 006M0100-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.0	61.04	836	61.04	836
R/L 006M0150-10	6	2.3	6.0	5.3	25	10	1.8	3.4	1.5	61.04	846	61.04	846
R/L 006M0200-10	6	2.3	6.0	5.3	25	10	1.8	3.4	2.0	61.04	856	61.04	856
R/L 006M0100-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.0	69.98	838	69.98	838
R/L 006M0150-15	6	2.3	6.0	5.3	30	15	1.8	3.4	1.5	69.98	848	69.98	848
R/L 006M0200-15	6	2.3	6.0	5.3	30	15	1.8	3.4	2.0	69.98	858	69.98	858
R/L 006M0100-20	6	2.3	6.0	5.3	35	22	1.8	3.4	1.0	78.19	840	78.19	840
R/L 006M0150-20	6	2.3	6.0	5.3	37	22	1.8	3.4	1.5	78.19	850	78.19	850
R/L 006M0200-20	6	2.3	6.0	5.3	37	22	1.8	3.4	2.0	78.19	860	78.19	860
R/L 006M0100-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	84.92	842	84.92	842
R/L 006M0150-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	84.92	852	84.92	852
R/L 006M0200-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	84.92	862	84.92	862
R/L 006M0100-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.0	94.12	844	94.12	844
R/L 006M0150-30	6	2.3	6.0	5.3	45	30	1.8	3.4	1.5	94.12	854	94.12	854
R/L 006M0200-30	6	2.3	6.0	5.3	45	30	1.8	3.4	2.0	94.12	864	94.12	864
R/L 007M0100-10	7	2.7	6.8	6.3	25	10	2.5	3.7	1.0	61.04	866	61.04	866
R/L 007M0150-10	7	2.7	6.8	6.3	25	10	2.5	3.7	1.5	61.04	876	61.04	876
R/L 007M0200-10	7	2.7	6.8	6.3	25	10	2.5	3.7	2.0	61.04	886	61.04	886
R/L 007M0100-15	7	2.7	6.8	6.3	30	15	2.5	3.7	1.0	69.98	868	69.98	868
R/L 007M0150-15	7	2.7	6.8	6.3	30	15	2.5	3.7	1.5	69.98	878	69.98	878
R/L 007M0200-15	7	2.7	6.8	6.3	30	15	2.5	3.7	2.0	69.98	888	69.98	888
R/L 007M0100-22	7	2.7	6.8	6.3	37	22	2.5	3.7	1.0	78.19	870	78.19	870
R/L 007M0150-22	7	2.7	6.8	6.3	37	22	2.5	3.7	1.5	78.19	880	78.19	880
R/L 007M0200-22	7	2.7	6.8	6.3	37	22	2.5	3.7	2.0	78.19	890	78.19	890
R/L 007M0100-25	7	2.7	6.8	6.3	40	25	2.5	3.7	1.0	84.92	872	84.92	872
R/L 007M0150-25	7	2.7	6.8	6.3	40	25	2.5	3.7	1.5	84.92	882	84.92	882
R/L 007M0200-25	7	2.7	6.8	6.3	40	25	2.5	3.7	2.0	84.92	892	84.92	892
R/L 007M0100-30	7	2.7	6.8	6.3	45	30	2.5	3.7	1.0	94.82	874	94.82	874
R/L 007M0150-30	7	2.7	6.8	6.3	45	30	2.5	3.7	1.5	94.82	884	94.82	884
R/L 007M0200-30	7	2.7	6.8	6.3	45	30	2.5	3.7	2.0	94.82	894	94.82	894
P											●		●
M											●		●
K											●		●
N											●		●
S											●		●
H											●		●
O											●		●

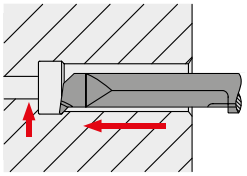
→ v_c Page 59

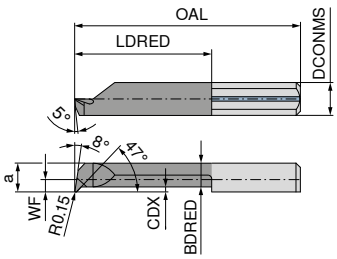
12

UltraMini – Inserts for internal undercuts

▲ CDX = Maximum depth of cut when turning outwards







Illustrations show right-hand versions

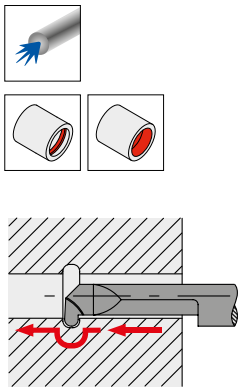
ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	Left-hand 73 011 ... £ Y5		Right-hand 73 010 ... £ Y5		Left-hand 73 011 ... £ Y5		Right-hand 73 010 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm								
R/L 047.2-10	4		2.0	1.7	24	10	0.4	1.2					71.22	**221**	71.22	**221**
R/L 047.3-15	4	0.6	2.8	2.6	29	15	0.6	1.9					74.14	**231**	74.14	**231**
R/L 047.4-10	4	1.5	4.0	3.5	24	10	0.6	2.8					67.89	**241**	67.89	**241**
R/L 047.T4-20	4	1.5	4.0	3.5	34	20	0.6	2.8					79.63	**242**	79.63	**242**
R/L 047.4-20	4	1.5	4.0	3.5	34	20	0.3	3.0	76.56	**542**	75.47	**542**				
R/L 047.5-15	5	1.9	5.0	4.4	30	15	0.8	3.5					76.41	**251**	76.41	**251**
R/L 047.T5-25	5	1.9	5.0	4.4	40	25	0.8	3.5					80.83	**252**	80.83	**252**
R/L 047.5-25	5	1.9	5.0	4.4	40	25	0.5	3.8	76.17	**552**	76.17	**552**				
R/L 047.T6-22	6	2.3	6.0	5.3	37	22	1.8	3.4					78.25	**262**	78.25	**262**
R/L 047.T6-30	6	2.3	6.0	5.3	45	30	1.8	3.4					104.18	**263**	82.69	**263**
R/L 047.6-30	6	2.3	6.0	5.3	45	30	0.5	4.5	77.94	**562**	79.12	**562**				

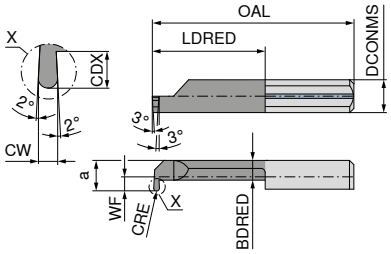
P	●	●	●	●
M	●	●	●	●
K	●	●	●	●
N	●	●	●	●
S	○	○	●	●
H	○	○	●	●
O	●	●	●	●

→ v_c Page 59

UltraMini – Inserts for internal grooving and turning

▲ CDX = Maximum depth of cut when turning outwards





TiN

TiN

Illustrations show right-hand versions

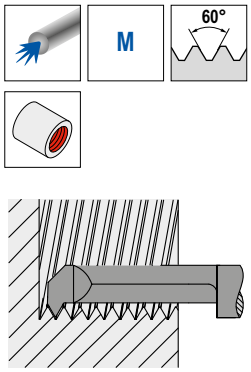
ISO designation	DCONMS h6	WF	DMIN	a	OAL	LDRED	CDX	BDRED	CW	CRE	Left-hand 73 019 ... £ Y5		Right-hand 73 018 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 006-0.75-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.5	0.75	80.35	**564**	80.35	**564**
R/L 004-0.50-16	4	1.5	4.0	3.5	30	16	0.8	2.4	1.0	0.50	74.36	**541**	71.14	**541**
R/L 005-0.50-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.0	0.50	78.55	**552**	78.55	**552**
R/L 005-0.75-20	5	1.9	5.0	4.4	35	20	1.0	3.3	1.5	0.75	78.55	**554**	78.55	**554**
R/L 005-1.00-20	5	1.9	5.0	4.4	35	20	1.0	3.3	2.0	1.00	78.55	**556**	78.55	**556**
R/L 006-0.50-25	6	2.3	6.0	5.3	40	25	1.8	3.4	1.0	0.50	80.35	**562**	80.35	**562**
R/L 006-1.00-25	6	2.3	6.0	5.3	40	25	1.8	3.4	2.0	1.00	80.35	**566**	79.12	**566**
R/L 007-0.50-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.0	0.50	82.88	**572**	79.01	**572**
R/L 007-0.75-30	7	2.7	6.8	6.3	45	30	2.5	3.8	1.5	0.75	82.88	**574**	82.88	**574**
R/L 007-1.00-30	7	2.7	6.8	6.3	45	30	2.5	3.8	2.0	1.00	82.88	**576**	82.88	**576**

P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

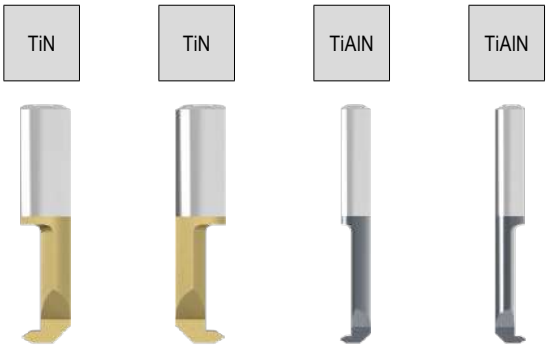
→ v_c Page 59

12

UltraMini – Inserts for internal threading (Partial profile)



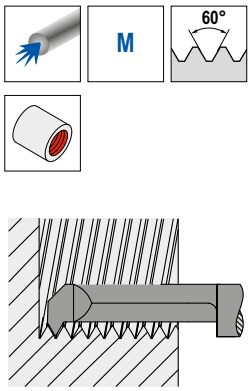
Illustrations show right-hand versions



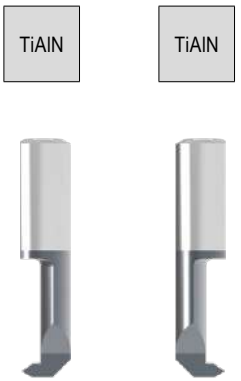
											Left-hand		Right-hand		Left-hand		Right-hand	
											73 101 ...		73 100 ...		73 101 ...		73 100 ...	
ISO designation	DCONMS h6	TP	WF	DMIN	a	OAL	LDRED	BDRED	PDPT	PDX	£ Y5		£ Y5		£ Y5		£ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm								
R/L 003.0105-8	4	0,5 - 0,7	0.30	2.4	2.3	22	8	1.8	0.27	0.33					71.98	551	71.98	551
R/L 004.0408-15	4	0,8 - 1,0	1.75	4.0	3.5	30	15	2.4	0.43	0.45					75.05	552	75.05	552
R/L 005.0510-20	5	1,0 - 1,25	1.90	4.8	4.4	35	20	3.3	0.55	0.55	69.40	544	69.13	544				
R/L 005.0510-15	5	1,0 - 1,25	1.90	4.8	4.4	30	15	3.3	0.55	0.55	68.46	545	66.35	545				
R/L 006.0612-22	6	1,25 - 1,5	2.30	6.0	5.3	37	22	3.4	0.68	0.65	70.33	546	68.63	546				
R/L 006.0612-15	6	1,25 - 1,5	2.30	6.0	5.3	30	15	3.4	0.68	0.65	67.10	547	66.35	547				
R/L 006.0815-15	6	1,5 - 1,75	2.30	6.0	5.3	30	15	3.4	0.81	0.75	68.46	549	67.22	549				
R/L 006.0815-22	6	1,5 - 1,75	2.30	6.0	5.3	37	22	3.4	0.81	0.75	70.33	548	68.63	548				
R/L 007.0815-15	7	1,5 - 1,75	2.70	7.0	6.3	30	15	3.8	0.81	0.75	68.04	550	68.63	550				
P											●		●		●		●	
M											●		●		●		●	
K											●		●		●		●	
N											●		●		●		●	
S											○		○		●		●	
H											○		○		●		●	
O											●		●		●		●	

→ v_c Page 59

UltraMini – Inserts for Internal thread turning (Full profile)



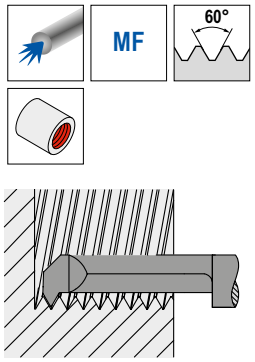
Illustrations show right-hand versions

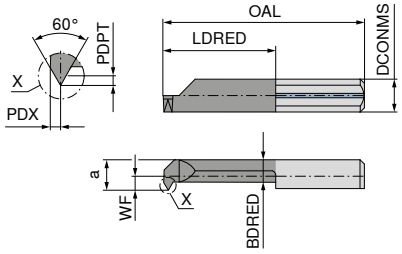


												Left-hand		Right-hand	
												73 209 ...		73 208 ...	
ISO designation	DCONMS h6	TP	WF	DMIN	a	OAL	LDRED	BDRED	PDPT	PDX	CW	£ Y5		£ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 105.0408-15	5	0.80	1.9	4.8	4.4	30	15	3.3	0.43	0.50	0.10	77.80	799	77.80	799
R/L 105.510-15	5	1.00	1.9	4.8	4.4	30	15	3.3	0.54	0.55	0.12	71.90	800	71.90	800
R/L 106.612-15	6	1.25	2.3	6.0	5.3	30	15	3.4	0.67	0.65	0.15	71.90	802	71.90	802
R/L 106.815-15	6	1.50	2.3	6.0	5.3	30	15	3.4	0.81	0.75	0.18	71.90	804	71.90	804
R/L 106.815-15	7	1.50	2.7	7.0	6.3	30	15	3.8	0.81	0.75	0.18	71.90	806	71.90	806
P												●		●	
M												●		●	
K												●		●	
N												●		●	
S												●		●	
H												●		●	
O												●		●	

→ v_c Page 59

UltraMini – Inserts for internal thread turning (Partial profile)



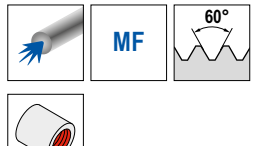


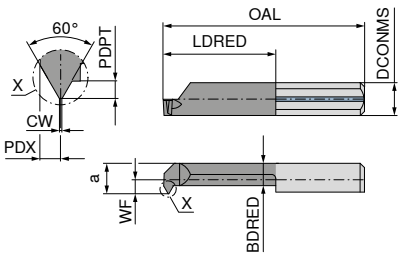
Illustrations show right-hand versions

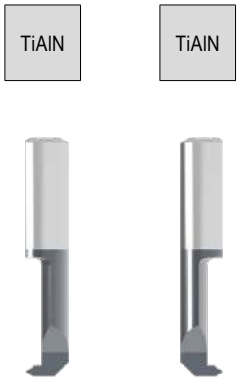
ISO designation	DCONMS h6	TP	WF	DMIN	a	OAL	LDRED	BDRED	PDPT	PDX	Left-hand 73 103 ... £ Y5		Right-hand 73 102 ... £ Y5		Left-hand 73 103 ... £ Y5		Right-hand 73 102 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm								
R/L 004.0205-15	4	0,5 - 0,75	1.5	4.0	3.5	30	15	2.4	0.27	0.35	70.90	510	70.90	510				
R/L 004.0105-10	4	0,5 - 0,75	1.0	3.2	3.0	24	10	2.3	0.27	0.44					70.93	509	70.93	509
R/L 005.0205-15	5	0,5 - 0,75	1.9	5.0	4.4	30	15	3.3	0.27	0.35	68.46	539	68.46	539				
R/L 005.0205-20	5	0,5 - 0,75	1.9	5.0	4.4	35	20	3.3	0.27	0.35	69.40	540	69.40	540				
L 005.0407-15	5	0,75 - 1,0	1.9	5.0	4.4	30	15	3.3	0.40	0.45	68.46	541						
R 005.0407-15	5	0,75 - 1,0	1.9	5.0	4.4	30	15	3.3	0.40	0.45			68.46	541				
R/L 005.0407-20	5	0,75 - 1,0	1.9	5.0	4.4	35	20	3.3	0.40	0.45	69.40	542	69.40	542				
R/L 006.0510-22	6	1,0 - 1,25	2.3	6.0	5.3	37	22	3.4	0.55	0.55	70.33	544	70.33	544				
R/L 006.0510-15	6	1,0 - 1,25	2.3	6.0	5.3	30	15	3.4	0.55	0.55	68.46	543	68.46	543				
P											●		●		●		●	
M											●		●		●		●	
K											●		●		●		●	
N											●		●		●		●	
S											○		○		●		●	
H											○		○		●		●	
O											●		●		●		●	

→ v_c Page 59

UltraMini – Inserts for Internal thread turning (Full profile)







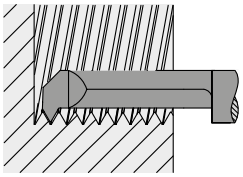
Illustrations show right-hand versions

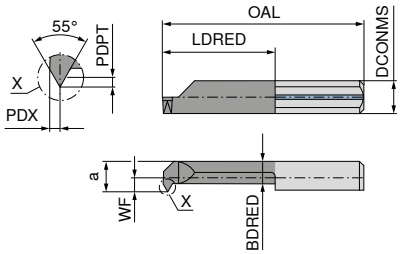
ISO designation	DCONMS h6	TP	WF	DMIN	a	OAL	LDRED	BDRED	PDPT	PDX	CW	Left-hand 73 207 ... £ Y5		Right-hand 73 206 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				
R/L 104.0205-15	5	0.50	1.5	4	3.5	30	15	2.4	0.27	0.35	0.06	75.77	800	75.77	800
R/L 105.0205-15	5	0.50	1.9	5	4.4	30	15	3.3	0.27	0.35	0.06	71.90	802	71.90	802
R/L 105.0407-15	5	0.75	1.9	5	4.4	30	15	3.3	0.40	0.45	0.09	71.90	804	71.90	804
R/L 106.0510-15	6	1.00	2.3	6	5.3	30	15	3.4	0.54	0.55	0.12	71.90	806	71.90	806
P												●		●	
M												●		●	
K												●		●	
N												●		●	
S												●		●	
H												●		●	
O												●		●	

→ v_c Page 59

12

UltraMini – Inserts for internal thread turning (Partial profile)





Illustrations show right-hand versions

TiN

Left-hand

73 105 ...

TiN

Right-hand

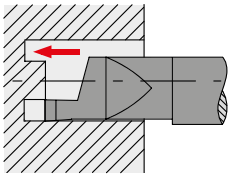
73 104 ...

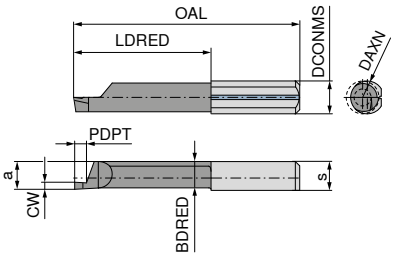
ISO designation	DCONMS $_{h6}$ mm	TPI 1/"	WF mm	DMIN mm	a mm	OAL mm	LDRED mm	BDRED mm	PDPT mm	PDX mm	£ Y5		£ Y5	
R/L 005.5548-15	5	48 - 24	1.9	4.8	4.4	30	15	3.3	0.40	0.45	73.14	**552**	73.14	**552**
R/L 006.5548-15	6	48 - 24	2.3	6.0	5.3	30	15	3.4	0.40	0.45	73.14	**562**	73.14	**562**
R/L 006.5524-15	6	24 - 16	2.3	6.0	5.3	30	15	3.4	0.81	0.75	73.14	**563**	73.14	**563**
R/L 007.5524-15	7	24 - 16	2.7	7.0	6.3	30	15	3.8	0.81	0.75	73.14	**572**	73.14	**572**

P	●	●
M	●	●
K	●	●
N	●	●
S	○	○
H	○	○
O	●	●

→ v_c Page 59

UltraMini – Inserts for axial grooving





Illustrations show right-hand versions

TiAlN

TiAlN

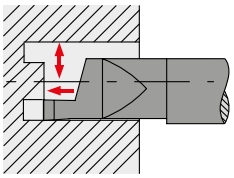
ISO designation	DCONMS h6	a	DAXN	s	OAL	LDRED	PDPT	BDRED	CW	Left-hand 73 053 ... £		Right-hand 73 052 ... £	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	Y5		Y5	
R/L 010.1006-10	6	5.2	6	5.3	26	11	1.5	4.9	1.0	75.65	**561**	75.65	**561**
R/L 010.1506-10	6	5.2	6	5.3	26	11	2.0	4.9	1.5	75.65	**563**	75.65	**563**
R/L 010.1008-10	7	5.9	8	6.3	26	11	1.5	5.6	1.0	77.44	**571**	77.44	**571**
R/L 010.1008-20	7	5.9	8	6.3	35	20	1.5	5.6	1.0	82.73	**671**	82.73	**671**
R/L 010.1008-30	7	5.9	8	6.3	45	30	1.5	5.6	1.0	85.58	**771**	85.58	**771**
R/L 010.1508-10	7	5.9	8	6.3	26	11	2.5	5.6	1.5	77.44	**573**	77.44	**573**
R/L 010.1508-20	7	5.9	8	6.3	35	20	2.5	5.6	1.5	82.73	**673**	82.73	**673**
R/L 010.1508-30	7	5.9	8	6.3	45	30	2.5	5.6	1.5	85.58	**773**	85.58	**773**
R/L 010.2008-10	7	5.9	8	6.3	26	11	3.0	5.6	2.0	77.44	**575**	77.44	**575**
R/L 010.2008-20	7	5.9	8	6.3	35	20	3.0	5.6	2.0	82.73	**675**	82.73	**675**
R/L 010.2008-30	7	5.9	8	6.3	45	30	3.0	5.6	2.0	85.58	**775**	85.58	**775**
R/L 010.2508-10	7	5.9	8	6.3	26	11	3.5	5.6	2.5	77.44	**577**	77.44	**577**
R/L 010.2508-20	7	5.9	8	6.3	35	20	3.5	5.6	2.5	82.73	**677**	82.73	**677**
R/L 010.2508-30	7	5.9	8	6.3	45	30	3.5	5.6	2.5	85.58	**777**	85.58	**777**
R/L 010.3008-10	7	5.9	8	6.3	26	11	3.5	5.6	3.0	77.44	**579**	77.44	**579**
R/L 010.3008-20	7	5.9	8	6.3	35	20	3.5	5.6	3.0	82.73	**679**	82.73	**679**
R/L 010.3008-30	7	5.9	8	6.3	45	30	3.5	5.6	3.0	85.58	**779**	85.58	**779**
P										●		●	
M										●		●	
K										●		●	
N										●		●	
S										●		●	
H										●		●	
O										●		●	

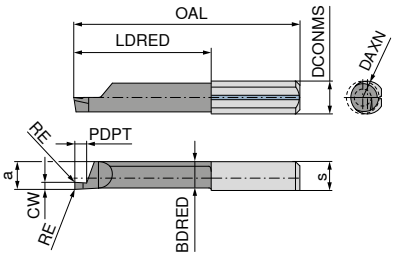
→ v_c Page 59

12

UltraMini – Inserts for axial grooving

▲ with corner radius





Illustrations show right-hand versions

TiAlN

Left-hand

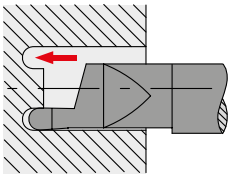
TiAlN

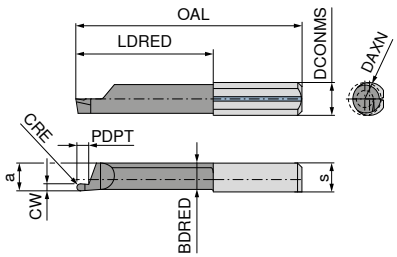
Right-hand

ISO designation	DCONMS $_{h6}$	a	DAXN	s	OAL	LDRED	PDPT	BDRED	CW	RE	73 253 ... £		73 252 ... £	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Y5		Y5	
R/L 510M1008-10	5	4.3	5	6.3	26	11	2	4.0	1.0	0.05	92.30	**510**	92.30	**510**
R/L 510M1008-20	5	4.3	5	6.3	35	20	2	4.0	1.0	0.05	97.47	**610**	97.47	**610**
R/L 510M1508-10	5	4.3	5	6.3	26	11	3	4.0	1.5	0.05	92.30	**515**	92.30	**515**
R/L 510M1508-20	5	4.3	5	6.3	35	20	3	4.0	1.5	0.05	97.47	**615**	97.47	**615**
R/L 510M2008-10	5	4.3	5	6.3	26	11	4	4.0	2.0	0.05	92.30	**520**	92.30	**520**
R/L 510M2008-20	5	4.3	5	6.3	35	20	4	4.0	2.0	0.05	97.47	**620**	97.47	**620**
R/L 010M1008-10	7	5.9	8	6.3	26	11	2	5.6	1.0	0.10	85.40	**800**	85.40	**800**
R/L 010M1008-20	7	5.9	8	6.3	35	20	2	5.6	1.0	0.10	90.22	**810**	90.22	**810**
R/L 010M1008-30	7	5.9	8	6.3	45	30	2	5.6	1.0	0.10	94.33	**820**	94.33	**820**
R/L 010M1508-10	7	5.9	8	6.3	26	11	3	5.6	1.5	0.10	85.40	**802**	85.40	**802**
R/L 010M1508-20	7	5.9	8	6.3	35	20	3	5.6	1.5	0.10	90.22	**812**	90.22	**812**
R/L 010M1508-30	7	5.9	8	6.3	45	30	3	5.6	1.5	0.10	94.33	**822**	94.33	**822**
R/L 010M2008-10	7	5.9	8	6.3	26	11	4	5.6	2.0	0.10	85.40	**804**	85.40	**804**
R/L 010M2008-20	7	5.9	8	6.3	35	20	4	5.6	2.0	0.10	90.22	**814**	90.22	**814**
R/L 010M2008-30	7	5.9	8	6.3	45	30	4	5.6	2.0	0.10	94.33	**824**	94.33	**824**
R/L 010M2508-10	7	5.9	8	6.3	26	11	5	5.6	2.5	0.10	85.40	**806**	85.40	**806**
R/L 010M2508-20	7	5.9	8	6.3	35	20	5	5.6	2.5	0.10	90.22	**816**	90.22	**816**
R/L 010M2508-30	7	5.9	8	6.3	45	30	5	5.6	2.5	0.10	94.33	**826**	94.33	**826**
R/L 010M3008-10	7	5.9	8	6.3	26	11	6	5.6	3.0	0.10	85.40	**808**	85.40	**808**
R/L 010M3008-20	7	5.9	8	6.3	35	20	6	5.6	3.0	0.10	90.22	**818**	90.22	**818**
R/L 010M3008-30	7	5.9	8	6.3	45	30	6	5.6	3.0	0.10	94.33	**828**	94.33	**828**
P											●		●	
M											●		●	
K											●		●	
N											●		●	
S											●		●	
H											●		●	
O											●		●	

→ v_c Page 59

UltraMini – Inserts for axial grooving (Full radius)





Illustrations show right-hand versions

TiAlN

TiAlN

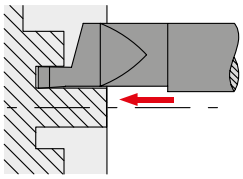
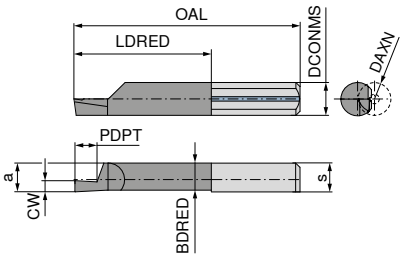
ISO designation	DCONMS h6	a	DAXN	s	OAL	LDRED	PDPT	BDRED	CW	CRE	Left-hand		Right-hand	
											73 059 ...		73 058 ...	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	£ Y5		£ Y5	
R/L 610.1005-10	6	5.2	6	5.3	26	11	2	4.9	1.0	0.50	93.94	071	93.94	071
R/L 610.1005-20	6	5.2	6	5.3	35	20	2	4.9	1.0	0.50	99.46	171	99.46	171
R/L 610.1608-10	6	5.2	6	5.3	26	11	3	4.9	1.6	0.80	93.94	073	93.94	073
R/L 610.1608-20	6	5.2	6	5.3	35	20	3	4.9	1.6	0.80	99.46	173	99.46	173
R/L 610.2010-10	6	5.2	6	5.3	26	11	4	4.9	2.0	1.00	93.94	075	93.94	075
R/L 610.2010-20	6	5.2	6	5.3	35	20	4	4.9	2.0	1.00	99.46	175	99.46	175
R/L 610.2512-10	6	5.2	6	5.3	26	11	5	4.9	2.5	1.25	93.94	077	93.94	077
R/L 610.2512-20	6	5.2	6	5.3	35	20	5	4.9	2.5	1.25	99.46	177	99.46	177
R/L 610.3015-10	6	5.2	6	5.3	26	11	6	4.9	3.0	1.50	93.94	079	93.94	079
R/L 610.3015-20	6	5.2	6	5.3	35	20	6	4.9	3.0	1.50	99.46	179	99.46	179
R/L 010.1005-10	7	5.9	8	6.3	26	11	2	5.6	1.0	0.50	90.13	571	90.13	571
R/L 010.1005-20	7	5.9	8	6.3	35	20	2	5.6	1.0	0.50	95.38	671	95.38	671
R/L 010.1608-10	7	5.9	8	6.3	26	11	3	5.6	1.6	0.80	90.13	573	90.13	573
R/L 010.1608-20	7	5.9	8	6.3	35	20	3	5.6	1.6	0.80	95.38	673	95.38	673
R/L 010.2010-10	7	5.9	8	6.3	26	11	4	5.6	2.0	1.00	90.13	575	90.13	575
R/L 010.2010-20	7	5.9	8	6.3	35	20	4	5.6	2.0	1.00	95.38	675	95.38	675
R/L 010.2512-10	7	5.9	8	6.3	26	11	5	5.6	2.5	1.25	90.13	577	90.13	577
R/L 010.2512-20	7	5.9	8	6.3	35	20	5	5.6	2.5	1.25	95.38	677	95.38	677
R/L 010.3015-10	7	5.9	8	6.3	26	11	6	5.6	3.0	1.50	90.13	579	90.13	579
R/L 010.3015-20	7	5.9	8	6.3	35	20	6	5.6	3.0	1.50	95.38	679	95.38	679
P											●		●	
M											●		●	
K											●		●	
N											●		●	
S											●		●	
H											●		●	
O											●		●	

→ v_c Page 59

12

UltraMini – Inserts for axial grooving over a spigot



Illustrations show right-hand versions

ISO designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	Left-hand 73 061 ... £ Y5		Right-hand 73 060 ... £ Y5	
R/L 620.1006-20	6	5.2	6	5.3	35	20	2	4.9	1.0	95.38	**561**	95.38	**561**
R/L 620.1506-20	6	5.2	6	5.3	35	20	3	4.9	1.5	95.38	**563**	95.38	**563**
R/L 620.2006-20	6	5.2	6	5.3	35	20	4	4.9	2.0	95.38	**565**	95.38	**565**
R/L 620.2506-20	6	5.2	6	5.3	35	20	5	4.9	2.5	95.38	**567**	95.38	**567**
R/L 620.3006-20	6	5.2	6	5.3	35	20	6	4.9	3.0	95.38	**569**	95.38	**569**

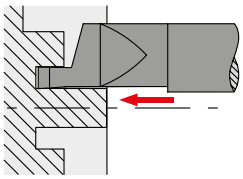
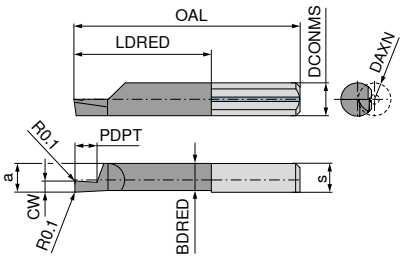
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 59

UltraMini – Inserts for axial grooving over a spigot

▲ with corner radius



Illustrations show right-hand versions

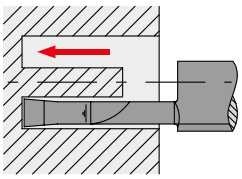
ISO designation	DCONMS h6 mm	a mm	DAXN mm	s mm	OAL mm	LDRED mm	PDPT mm	BDRED mm	CW mm	Left-hand 73 261 ... £ Y5		Right-hand 73 260 ... £ Y5	
R/L 620M1006-20	6	5.2	6	5.3	35	20	2	4.9	1.0	91.21	**800**	91.21	**800**
R/L 620M1506-20	6	5.2	6	5.3	35	20	3	4.9	1.5	91.21	**802**	91.21	**802**
R/L 620M2006-20	6	5.2	6	5.3	35	20	4	4.9	2.0	91.21	**804**	91.21	**804**
R/L 620M2506-20	6	5.2	6	5.3	35	20	5	4.9	2.5	91.21	**806**	91.21	**806**
R/L 620M3006-20	6	5.2	6	5.3	35	20	6	4.9	3.0	91.21	**808**	91.21	**808**

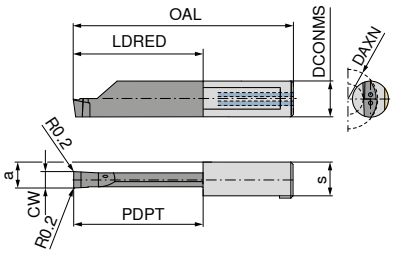
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 59

UltraMini – Inserts for axial grooving

▲ up to 70 bar
▲ dual cooling channel





Illustrations show right-hand versions

TiAlN

TiAlN

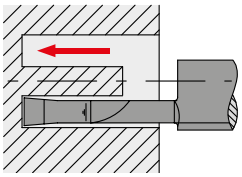
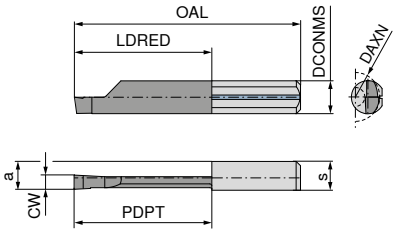
ISO designation	DCONMS h6	a	DAXN	s	OAL	LDRED	PDPT	CW	Left-hand 73 263 ... £		Right-hand 73 262 ... £	
	mm	mm	mm	mm	mm	mm	mm	mm	Y5		Y5	
R/L 012.0200-10	8	5.00	12	7.3	30	10	10	2.0	84.39	**700**	84.39	**700**
R/L 012.0200-15	8	5.00	12	7.3	35	15	15	2.0	86.04	**702**	86.04	**702**
R/L 012.0250-10	8	5.25	12	7.3	30	10	10	2.5	84.39	**704**	84.39	**704**
R/L 012.0250-20	8	5.25	12	7.3	40	20	20	2.5	87.58	**706**	87.58	**706**
R/L 016.0300-10	8	5.50	16	7.3	30	10	10	3.0	119.66	**800**	119.66	**800**
R/L 016.0300-20	8	5.50	16	7.3	40	20	20	3.0	122.84	**802**	122.84	**802**
R/L 020.0300-25	8	5.50	20	7.3	45	25	25	3.0	124.51	**804**	124.51	**804**
R/L 020.0300-30	8	5.50	20	7.3	50	30	30	3.0	124.51	**806**	124.51	**806**
R/L 020.0300-35	8	5.50	20	7.3	55	35	35	3.0	127.40	**808**	127.40	**808**
R/L 020.0300-40	8	5.50	20	7.3	60	40	40	3.0	127.40	**810**	127.40	**810**
R/L 016.0400-10	8	6.00	16	7.3	30	10	10	4.0	119.66	**812**	119.66	**812**
R/L 016.0400-20	8	6.00	16	7.3	40	20	20	4.0	122.84	**814**	122.84	**814**
R/L 020.0400-25	8	6.00	20	7.3	45	25	25	4.0	124.51	**816**	124.51	**816**
R/L 020.0400-30	8	6.00	20	7.3	50	30	30	4.0	124.51	**818**	124.51	**818**
R/L 020.0400-35	8	6.00	20	7.3	55	35	35	4.0	127.40	**820**	127.40	**820**
R/L 020.0400-40	8	6.00	20	7.3	60	40	40	4.0	127.40	**822**	127.40	**822**
R/L 020.0500.20	8	6.50	20	7.3	40	20	20	5.0	119.66	**824**	119.66	**824**
R/L 020.0500.25	8	6.50	20	7.3	45	25	25	5.0	121.12	**826**	121.12	**826**
R/L 020.0500.30	8	6.50	20	7.3	50	30	30	5.0	121.12	**828**	121.12	**828**
R/L 020.0500.35	8	6.50	20	7.3	55	35	35	5.0	124.51	**830**	124.51	**830**
R/L 020.0500.40	8	6.50	20	7.3	60	40	40	5.0	121.08	**832**	121.08	**832**
P									●		●	
M									●		●	
K									●		●	
N									●		●	
S									●		●	
H									●		●	
O									●		●	

12

→ v_c Page 59

UltraMini – Inserts for axial grooving



Illustrations show right-hand versions

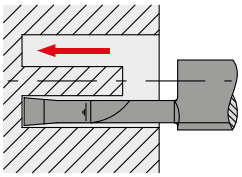
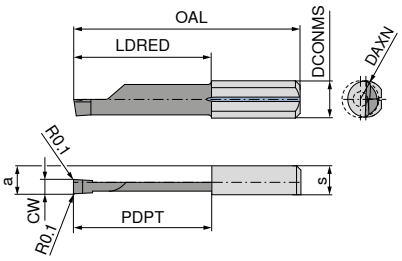
ISO designation	DCONMS h6	a	DAXN	s	OAL	LDRED	PDPT	CW	Left-hand 73 057 ...		Right-hand 73 056 ...	
	mm	mm	mm	mm	mm	mm	mm	mm	£ Y5		£ Y5	
R/L 015.2515-20	7	5.9	15	6.3	35	20	20	2.5	103.87	**572**	103.87	**572**
R/L 015.3015-20	7	5.9	15	6.3	35	20	20	3.0	103.87	**574**	103.87	**574**
R/L 015.3015-30	7	5.9	15	6.3	45	30	30	3.0	114.54	**674**	114.54	**674**
P									●		●	
M									●		●	
K									●		●	
N									●		●	
S									●		●	
H									●		●	
O									●		●	

→ v_c Page 59

UltraMini – Inserts for axial grooving

▲ with corner radius



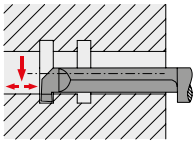
Illustrations show right-hand versions

ISO designation	DCONMS h6	a	DAXN	s	OAL	LDRED	PDPT	CW	Left-hand 73 257 ...		Right-hand 73 256 ...	
	mm	mm	mm	mm	mm	mm	mm	mm	£ Y5		£ Y5	
R/L 015M2515-20	7	5.9	8	6.3	35	20	20	2.5	99.90	**800**	99.90	**800**
R/L 015M3015-20	7	5.9	8	6.3	35	20	20	3.0	99.90	**802**	99.90	**802**
R/L 015M3015-30	7	5.9	8	6.3	45	30	30	3.0	109.29	**804**	109.29	**804**
P									●		●	
M									●		●	
K									●		●	
N									●		●	
S									●		●	
H									●		●	
O									●		●	

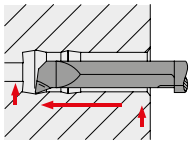
→ v_c Page 59

UltraMini – Set: Internal turning, grooving and chamfering, right hand

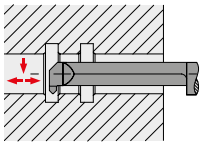
▲ extensive assortment of right-hand tools
▲ K10F - TiN



Grooving (E)



Profile turn (A)

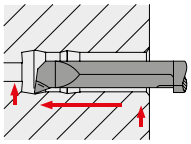


Chamfers (F)

Tool	Designation	Article no.	Bore Ø mm	Boring depth mm	Grooving depth mm	Groove width mm	Piece	fig.	73 085 ... £ Y5	
Inserts	**R 004.0100-16**	**73 002 541**	4	16	0,8	1,0	1	E		
Inserts	**R 005.0150-20**	**73 002 552**	5	20	1,0	1,5	1	E		
Inserts	**R 005.0200-20**	**73 002 553**	5	20	1,0	2,0	1	E		
Inserts	**R 006.0150-22**	**73 002 562**	6	22	1,8	1,5	1	E		
Inserts	**R 006.0200-22**	**73 002 563**	6	22	1,8	2,0	1	E		
Inserts	**R 050.3-16**	**73 004 530**	3	16			1	A	1,210.40	**999**
Inserts	**R 050.4-16**	**73 004 540**	4	16			1	A		
Inserts	**R 050.5-20**	**73 004 550**	5	20			1	A		
Inserts	**R 050.6-22**	**73 004 560**	6	22			1	A		
Inserts	**R 060.5-20**	**73 006 550**	5	20			1	F		
Tool holder	**645.0016-D**	**73 080 164**					1			
Tool holder	**676.0016-D**	**73 080 166**					1			
Tightening Key	**110.645**	**70 950 175**					1			

UltraMini – Set: Internal Turning

▲ extensive assortment of right-hand tools
▲ K10F - TiN



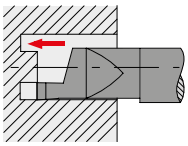
Tool	Designation	Article no.	Bore Ø mm	Boring depth mm	Piece	73 085 ... £ Y5	
Inserts	R 050.3-16	73 004 530	3	16	1		
Inserts	R 050.4-16	73 004 540	4	16	1		
Inserts	R 050.5-20	73 004 550	5	20	1	760.73	**994**
Inserts	R 050.6-22	73 004 560	6	22	1		
Tool holder	645.0016-D	73 080 164			1		
Tool holder	676.0016-D	73 080 166			1		
Tightening Key	110.645	70 950 175			1		

UltraMini – Set: Holder

Tool	Designation	Article no.	for cutting insert Ø mm	Piece	73 085 ... £ Y5	
Tool holder	**645.0016-D**	**73 080 164**	3 / 4 / 5	1		
Tool holder	**676.0016-D**	**73 080 166**	6 / 7	1	474.30	**990**
Tightening Key	**110.645**	**70 950 175**		1		

UltraMini – Set: Axial Grooving

▲ extensive assortment of right-hand tools
▲ K10F - TiN



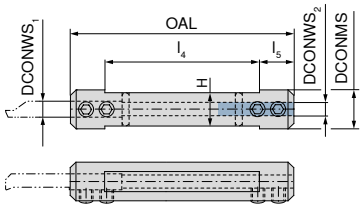
73 085 ...

Tool	Designation	Article no.	Bore Ø mm	Boring depth mm	Grooving depth mm	Groove width mm	Piece	£ Y5	
Inserts	**R 010.1008-10**	**73 050 571**	8	10	1,5	1,0	1		
Inserts	**R 010.1508-10**	**73 050 573**	8	10	2,5	1,5	1		
Inserts	**R 010.2008-10**	**73 050 575**	8	10	3,0	2,0	1	614.16	**996**
Inserts	**R 010.2508-20**	**73 050 677**	8	20	3,5	2,5	1		
Inserts	**R 010.3008-20**	**73 050 679**	8	20	3,5	3,0	1		
Tool holder	**676.0016-D**	**73 080 166**					1		
Tightening Key	**110.645**	**70 950 175**					1		

UltraMini – Standard tool holder for cutting inserts

▲ double ended
▲ Machining diameter from Ø 0.5 mm

Scope of supply:
Tool holder with allen key



Designation	$DCONWS_1$ mm	$DCONWS_2$ mm	DCONMS mm	OAL mm	l_4 mm	l_5 mm	H mm	73 080 ... £ Y5	
645.0012-D	4	5	12.00	75	55	10	10.3	219.68	**163**
645.0016-D	4	5	16.00	75	55	10	14.0	230.74	**164**
645.001905-D	4	5	19.05	90	70	10	17.2	192.24	**170**
645.0020-D	4	5	20.00	90	70	10	18.0	248.47	**165**
645.0022-D	4	5	22.00	90	70	10	20.0	200.47	**171**
645.00254-D	4	5	25.40	95	75	10	23.4	212.83	**172**
676.0016-D	6	7	16.00	75	55	10	14.0	230.74	**166**
676.001905-D	6	7	19.05	90	70	10	17.2	192.24	**173**
676.0020-D	6	7	20.00	90	70	10	18.0	248.47	**167**
676.0022-D	6	7	22.00	90	70	10	20.0	200.47	**174**
676.00254-D	6	7	25.40	95	75	10	23.4	212.83	**175**
687.0016-D	7	8	16.00	75	55	10	14.0	267.58	**168**
687.0020-D	7	8	20.00	90	70	10	18.0	286.39	**169**


Key I

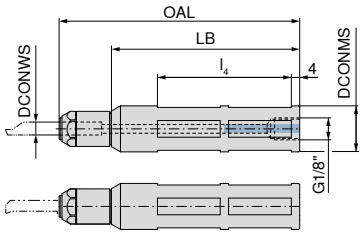

Clamping screw

Spare parts for Article no.	70 950 ...	£ 2A/28		73 082 ...	£ Y5	
73 080 163	SW2,5	2.83	**175**	M5x4	8.88	**013**
73 080 164	SW2,5	2.83	**175**	M5x6	7.29	**001**
73 080 170	SW2,5	2.83	**175**	M5x6	7.29	**001**
73 080 165	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 171	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 172	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 166	SW2,5	2.83	**175**	M5x6	7.29	**001**
73 080 173	SW2,5	2.83	**175**	M5x6	7.29	**001**
73 080 167	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 174	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 175	SW2,5	2.83	**175**	M5x8	8.85	**008**
73 080 168	SW2,5	2.83	**175**	M6x6	10.38	**014**
73 080 169	SW2,5	2.83	**175**	M6x6	10.38	**014**

UltraMini – Quick change tool holder for cutting inserts

Scope of supply:

Tool holder, lock nut and clamping wedge



Designation	DCONWS	DCONMS $_{g6}$	OAL	LB	l_4	73 089 ... £ Y5	
	mm	mm	mm	mm	mm		
UM600H.0012.4	4	12.00	115	90	64	414.67	**124**
UM600H.0016.4	4	16.00	115	90	64	376.21	**164**
UM600H.001905.4	4	19.05	115	90	64	403.69	**194**
UM600H.0020.4	4	20.00	115	90	64	398.20	**204**
UM600H.0022.4	4	22.00	115	90	64	405.06	**224**
UM600H.0025.4	4	25.00	115	90	64	413.30	**254**
UM600H.00254.4	4	25.40	115	90	64	421.54	**264**
UM600H.0028.4	4	28.00	115	90	64	421.54	**284**
UM600H.0012.5	5	12.00	115	90	64	414.67	**125**
UM600H.0016.5	5	16.00	115	90	64	376.21	**165**
UM600H.001905.5	5	19.05	115	90	64	403.69	**195**
UM600H.0020.5	5	20.00	115	90	64	398.20	**205**
UM600H.0022.5	5	22.00	115	90	64	405.06	**225**
UM600H.0025.5	5	25.00	115	90	64	413.30	**255**
UM600H.00254.5	5	25.40	115	90	64	421.54	**265**
UM600H.0028.5	5	28.00	115	90	64	421.54	**285**
UM600H.0012.6	6	12.00	115	90	64	414.67	**126**
UM600H.0016.6	6	16.00	115	90	64	376.21	**166**
UM600H.001905.6	6	19.05	115	90	64	403.69	**196**
UM600H.0020.6	6	20.00	115	90	64	398.20	**206**
UM600H.0022.6	6	22.00	115	90	64	405.06	**226**
UM600H.0025.6	6	25.00	115	90	64	413.30	**256**
UM600H.00254.6	6	25.40	115	90	64	421.54	**266**
UM600H.0028.6	6	28.00	115	90	64	421.54	**286**
UM600H.0012.7	7	12.00	115	90	64	414.67	**127**
UM600H.0016.7	7	16.00	115	90	64	376.21	**167**
UM600H.001905.7	7	19.05	115	90	64	403.69	**197**
UM600H.0020.7	7	20.00	115	90	64	398.20	**207**
UM600H.0022.7	7	22.00	115	90	64	405.06	**227**
UM600H.0025.7	7	25.00	115	90	64	413.30	**257**
UM600H.00254.7	7	25.40	115	90	64	421.54	**267**
UM600H.0028.7	7	28.00	115	90	64	421.54	**287**

Avoid pulling cuts. Ensure a suitable clamping force is used when using thro' coolant supply. Can be tightened using a key.

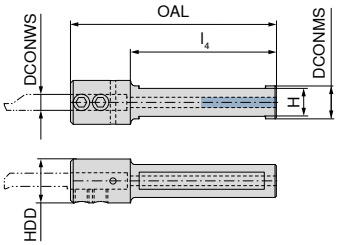
Spare parts DCONWS		Lock nut UM600H 73 950 ... £ Y5		Clamping wedge UM600H 73 950 ... £ Y5	
4	M4	93.37	**104**	60.42	**111**
5	M5	93.37	**105**	60.42	**111**
6	M6	93.37	**106**	60.42	**111**
7	M7	93.37	**107**	60.42	**111**

UltraMini – Toolholder for inserts

▲ single ended

Scope of supply:

Tool holder with allen key



Designation	DCONWS	HDD	DCONMS	OAL	l_4	H	73 081 ... £ Y5	
	mm	mm	mm	mm	mm	mm		
640.0012-D	4	16	12	75	53	10.2	226.56	**264**
650.0012-D	5	16	12	75	53	10.2	226.56	**265**
660.0012-D	6	16	12	75	53	10.2	323.96	**266**
670.0012-D	7	16	12	75	53	10.2	323.96	**267**
680.0012-D	8	16	12	75	53	10.2	323.96	**268**


Key I

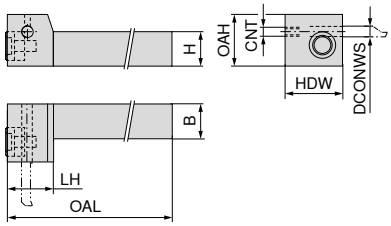

Clamping screw

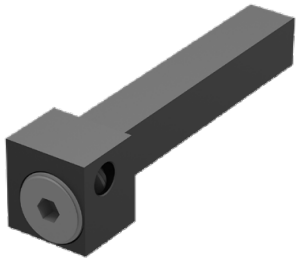
Spare parts DCONWS	70 950 ...			73 082 ...		
		£ 2A/28			£ Y5	
4	SW2,5	2.83	**175**	M5x0,5x6	5.84	**010**
5	SW2,5	2.83	**175**	M5x0,5x6	5.84	**010**
6	SW2,5	2.83	**175**	M5x0,5x6	5.84	**010**
7	SW2,5	2.83	**175**	M5x0,5x6	5.84	**010**
8	SW2,5	2.83	**175**	M5x0,5x6	5.84	**010**

UltraMini – Toolholder for inserts

Scope of supply:

Tool holder with allen key





ISO designation	DCONWS	OAL	LH	B	HDW	H	OAH	CNT	Left-hand 73 083 ... £ Y5		Right-hand 73 084 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm					
R/L .IK.UHCM.1212.4	4	90	17	12	20	12	18	M5	411.83	**124**	411.83	**124**
R/L .IK.UHCM.1212.5	5	90	17	12	20	12	18	M5	411.83	**125**	411.83	**125**
R/L .IK.UHCM.1212.6	6	90	17	12	20	12	21	M5	411.83	**126**	411.83	**126**
R/L .IK.UHCM.1212.7	7	90	17	12	20	12	21	M5	411.83	**127**	411.83	**127**

Suitable coolant connections can be found in our sliding head tooling catalogue.


Clamping key – T

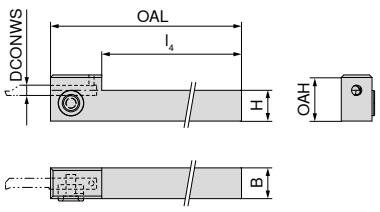

Clamping screw

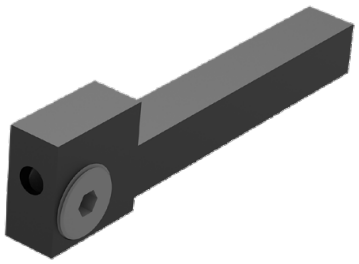
Spare parts DCONWS		80 397 ... £ Y7			73 082 ... £ Y5	
4	SW5	7.73	**050**	UM 12	48.87	**011**
5	SW5	7.73	**050**	UM 12	48.87	**011**
6	SW5	7.73	**050**	UM 16	48.87	**012**
7	SW5	7.73	**050**	UM 16	48.87	**012**

UltraMini – Toolholder for inserts

Scope of supply:

Tool holder with allen key





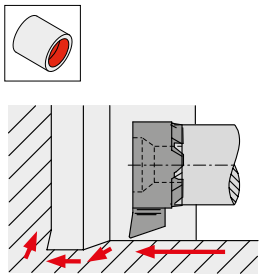
Designation	DCONWS	OAL	l_4	B	H	OAH	73 086 ... £ Y5	
	mm	mm	mm	mm	mm	mm		
UM.1010.4	4	100	75	10	10	20	411.83	**104**
UM.1010.5	5	100	75	10	10	20	411.83	**105**
UM.1212.4	4	100	75	12	12	22	411.83	**124**
UM.1212.5	5	100	75	12	12	22	411.83	**125**
UM.1212.6	6	100	75	12	12	22	411.83	**126**

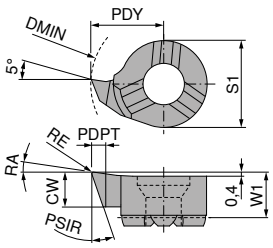

Clamping key – T


Clamping screw

Spare parts DCONWS		80 397 ... £ Y7			73 082 ... £ Y5	
4	SW5	7.73	**050**	UM 12	48.87	**011**
5	SW5	7.73	**050**	UM 12	48.87	**011**
6	SW5	7.73	**050**	UM 16	48.87	**012**

MiniCut – Insert for turning and profiling





CWX500 CWX500

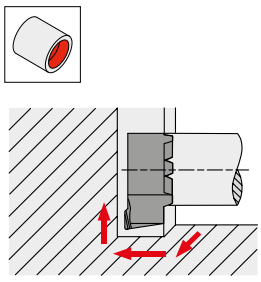
Illustrations show right-hand versions

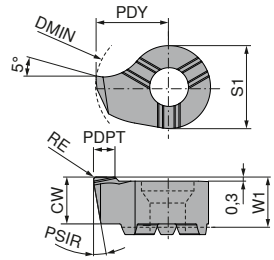
Size	ISO designation	DMIN mm	CW mm	W1 mm	PDY mm	S1 mm	RE mm	PDPT mm	PSIR °	RA °	Left-hand 73 324 ... £ Y5		Right-hand 73 322 ... £ Y5	
08	8,00. R/L .3,30.18°	7.8	3.3	3.5	4.65	6.0	0.20	0.6	18	8	47.06	033	47.06	033
	8,00. R/L .3,50.18°	7.8	3.5	3.5	4.65	6.0	0.05	0.6	18	8	51.10	035	51.10	035
	8,00. R/L .3,50.20°	7.8	3.5	3.5	4.65	6.0	0.20	0.6	20	20	49.42	135	49.42	135
09	9,00. R/L .3,60.18°	9.0	3.6	3.6	5.50	6.2	0.20	0.8	18	8	44.52	136	44.52	136
	9,00. R/L .3,60.20°	9.0	3.6	3.6	5.50	6.2	0.20	0.8	20	20	50.33	236	50.33	236
11	9,80. R/L .3,90.18°	9.8	3.9	4.2	5.50	8.0	0.20	1.0	18	8	47.06	139	47.06	139
	11,00. R/L .3,90.18°	11.0	3.9	4.2	6.70	8.0	0.20	1.0	18	8	46.53	339	46.53	339
	11,00. R/L .4,20.20°	11.0	4.2	4.2	6.70	8.0	0.20	1.0	20	20	50.33	342	50.33	342
14	14,00. R/L .5,00.18°	13.8	5.0	5.1	8.70	9.0	0.20	1.5	18	8	46.53	550	46.53	550
	14,00. R/L .5,30.20°	14.0	5.3	5.3	8.70	9.0	0.20	1.5	20	20	50.33	553	50.33	553
16	15,50. R/L .5,00.18°	15.5	5.0	5.4	9.70	11.0	0.20	1.5	18	8	50.85	750	50.85	750
P												●		●
M												●		●
K												●		●
N												●		●
S												●		●
H												●		●
O												●		●

→ v_c Page 59

MiniCut – Insert for copy turning

▲ with chip breaker





CWX500 CWX500

Illustrations show right-hand versions

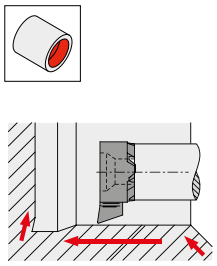
Size	ISO designation	DMIN mm	CW mm	W1 mm	PDY mm	S1 mm	RE mm	PDPT mm	PSIR °	Left-hand 73 388 ... £ Y5		Right-hand 73 386 ... £ Y5	
08	8,00. R/L .3,40.10°	8	3.4	3.5	4.65	6.0	0.2	0.5	10	39.33	13400	39.33	13400
09	9,00. R/L .3,50.10°	9	3.5	3.6	5.50	6.2	0.2	0.5	10	40.97	136	40.97	136
11	11,00. R .4,10.10°	11	4.1	4.2	6.70	8.0	0.2	0.5	10	39.33	14100	39.33	14100
P											●		●
M											●		●
K											●		●
N											●		●
S											●		●
H											●		●
O											●		●

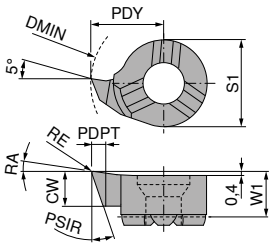
→ v_c Page 59

12

MiniCut – CBN insert for profiling – hard turning

▲ 56 to 65 HRC





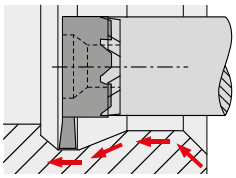
Illustrations show right-hand versions

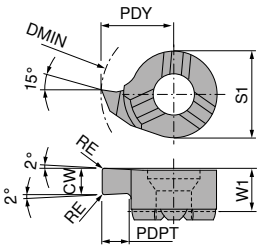
Size	ISO designation	DMIN mm	CW mm	W1 mm	PDY mm	S1 mm	RE mm	PDPT mm	PSIR °	RA °	Left-hand CBN 73 368 ... £ Y5		Right-hand CBN 73 366 ... £ Y5	
08	8,00. R/L .3,30.18°	7.8	3.3	3.5	4.65	6	0.2	0.39	18	8	212.78	033	212.78	033
11	11,00. R/L .3,90.18°	11.0	3.9	4.2	6.70	8	0.2	0.55	18	8	222.70	139	222.70	139
14	14,00. R/L .5,00.18°	13.8	5.0	5.3	8.70	9	0.2	0.69	18	8	235.96	550	235.96	550
16	16,00. R/L .5,00.18°	15.5	5.0	5.4	9.70	11	0.2	0.77	18	8	246.04	750	246.04	750
P														
M														
K														
N														
S												○		○
H												●		●
O														

→ v_c Page 59

MiniCut – Internal turning insert

▲ CDX = ap_{max}





CWX500 CWX500

Illustrations show right-hand versions

Size	ISO designation	DMIN mm	CW +0.05 mm	PDPT mm	W1 mm	PDY mm	S1 mm	RE mm	CDX mm	Left-hand 73 316 ... £ Y5		Right-hand 73 314 ... £ Y5	
08	8,00. R/L .1,50.1,0	8	1.5	1.0	3.3	4.8	6.0	0.2	0.2	47.61	015	47.61	015
	8,00. R/L .2,00.1,0	8	2.0	1.0	3.3	4.8	6.0	0.2	0.2	45.44	020	45.44	020
09	9,00. R/L .1,50.2,0	9	1.5	2.0	3.6	5.5	6.2	0.2	0.2	48.66	115	48.66	115
	9,00. R/L .1,50.3,0	10	1.5	3.0	3.6	6.5	6.2	0.2	0.2	48.66	121	48.66	121
	9,00. R/L .2,00.2,0	9	2.0	2.0	3.6	5.5	6.2	0.2	0.2	43.15	120	43.15	120
	9,00. R/L .2,00.3,0	10	2.0	3.0	3.6	6.5	6.2	0.2	0.2	43.15	122	43.15	122
11	11,00. R/L .1,50.2,3	11	1.5	2.3	4.2	6.7	8.0	0.2	0.2	50.12	315	50.12	315
	11,00. R/L .2,00.2,3	11	2.0	2.3	4.2	6.7	8.0	0.2	0.2	47.06	320	47.06	320
14	14,00. R/L .1,50.4,0	14	1.5	4.0	5.3	9.0	9.0	0.2	0.2	45.96	515	45.96	515
	14,00. R/L .1,50,5,5	16	1.5	5.5	5.2	10.5	9.0	0.2	0.2	58.48	516	58.48	516
	14,00. R/L .1,50.6,5	17	1.5	6.5	5.2	11.5	9.0	0.2	0.2	58.48	517	58.48	517
	14,00. R/L .2,00.4,0	14	2.0	4.0	5.3	9.0	9.0	0.2	0.2	47.06	520	47.06	520
	14,00. R/L .2,00.5,5	16	2.0	5.5	5.2	10.5	9.0	0.2	0.2	58.48	521	58.48	521
	14,00. R/L .2,00.6,5	17	2.0	6.5	5.2	11.5	9.0	0.2	0.2	58.48	522	58.48	522
	14,00. R/L .2,50.5,5	16	2.5	5.5	5.2	10.5	9.0	0.2	0.2	58.48	525	58.48	525
	14,00. R/L .2,50.6,5	17	2.5	6.5	5.2	11.5	9.0	0.2	0.2	58.48	526	58.48	526
	14,00. R/L .3,00.5,5	16	3.0	5.5	5.2	10.5	9.0	0.2	0.2	58.48	530	58.48	530
	14,00. R/L .3,00.6,5	17	3.0	6.5	5.2	11.5	9.0	0.2	0.2	58.48	531	58.48	531
16	16,00. R/L .2,00.4,3	16	2.0	4.3	5.4	10.2	11.0	0.2	0.2	51.31	720	51.31	720

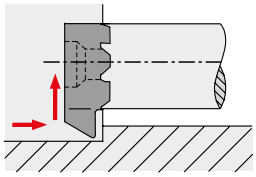
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

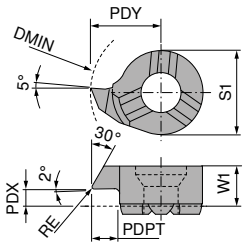
→ v_c Page 59

12

MiniCut – Back boring insert

▲ CDX = ap_{max}





CWX500 CWX500

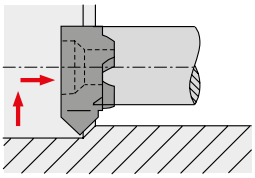
Illustrations show right-hand versions

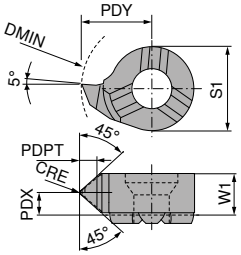
Size	ISO designation	DMIN mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	RE mm	CDX mm	Left-hand 73 332 ... £ Y5		Right-hand 73 330 ... £ Y5	
08	8,00. R/L .30°.1,3	7.8	1.3	3.50	1.0	4.65	6.0	0.2	0.6	54.14	013	54.14	013
09	9,00. R/L .30°.1,7	9.0	1.7	3.55	1.2	5.50	6.2	0.2	0.8	49.42	117	49.42	117
	9,00. R/L .30°.2,3	10.0	2.3	3.55	1.2	6.50	6.2	0.2	0.8	49.42	123	49.42	123
11	11,00. R/L .30°.2,3	11.0	2.3	4.30	1.6	6.70	8.0	0.2	1.0	53.02	323	53.02	323
14	14,00. R/L .30°.3,5	13.8	3.5	5.40	2.4	8.70	9.0	0.2	1.5	54.14	535	54.14	535
P											●		●
M											●		●
K											●		●
N											●		●
S											●		●
H											●		●
O											●		●

→ v_c Page 59

MiniCut – Internal turning and chamfering insert

▲ CDX = ap_{max}





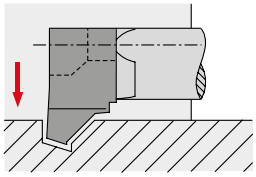
CWX500 CWX500

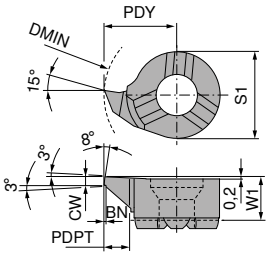
Illustrations show right-hand versions

Size	ISO designation	DMIN mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	CRE mm	CDX mm	Left-hand 73 336 ... £ Y5		Right-hand 73 334 ... £ Y5	
08	8,00. R/L .45°.1,4	8	1.4	3.50	1.8	4.8	6.0	0.2	0.6	45.23	010	45.23	010
09	9,00. R/L .45°.1,3	9	1.3	3.55	1.8	5.5	6.2	0.2	0.8	42.38	110	42.38	110
11	11,00. R/L .45°.1,5	11	1.5	4.30	2.2	6.7	8.0	0.2	1.0	45.23	310	45.23	310
14	14,00. R/L .45°.1,5	14	1.5	5.40	2.8	9.0	9.0	0.2	1.2	48.86	510	48.86	510
P											●		●
M											●		●
K											●		●
N											●		●
S											●		●
H											●		●
O											●		●

→ v_c Page 59

MiniCut – Insert for pregrooving and chamfering





CWX500 CWX500

Illustrations show right-hand versions

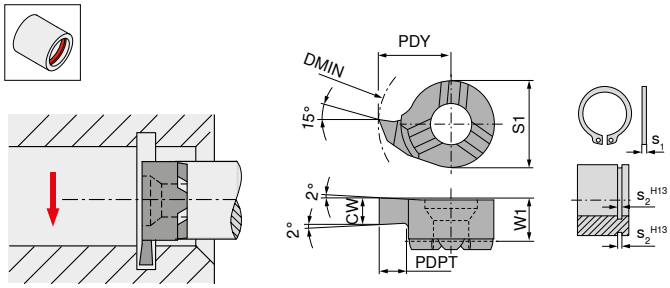
Size	ISO designation	DMIN mm	CW mm	PDPT mm	W1 mm	PDY mm	S1 mm	BN mm	Left-hand 73 340 ... £ Y5		Right-hand 73 338 ... £ Y5	
08	8,00. R/L .1,00.45°	8	1	1.0	3.3	4.8	6.0	0.2	45.97	100	45.97	100
09	9,00. R/L .1,00.45°	9	1	1.5	3.6	5.5	6.2	0.2	43.78	215	43.78	215
11	11,00. R/L .1,00.45°	11	1	1.5	4.2	6.7	8.0	0.2	45.97	315	45.97	315
14	14,00. R/L .1,00.45°	14	1	1.5	5.3	9.0	9.0	0.2	45.97	515	45.97	515
16	16,00. R/L .1,00.45°	16	1	1.5	5.4	10.2	11.0	0.2	45.97	715	45.97	715
P									●		●	
M									●		●	
K									●		●	
N									●		●	
S									●		●	
H									●		●	
O									●		●	

→ v_c Page 59

12

MiniCut – Grooving insert

CWX500 CWX500



Illustrations show right-hand versions

Size	ISO designation	DMIN	CW	PDPT	W1	s_1	$s_{2\ H13}$	PDY	S1	Left-hand 73 312 ... £ Y5		Right-hand 73 310 ... £ Y5	
		mm	mm	mm	mm	mm	mm	mm	mm				
08	8,00. R/L .0,73.1,0	8	0.73	1.0	3.3	0.6	0.7	4.8	6.0	40.66	073	40.66	073
	8,00. R/L .0,83.1,0	8	0.83	1.0	3.3	0.7	0.8	4.8	6.0	40.66	083	40.66	083
	8,00. R/L .0,93.1,0	8	0.93	1.0	3.3	0.8	0.9	4.8	6.0	40.66	093	40.66	093
	8,00. R/L .1,00.1,0	8	1.00	1.0	3.3			4.8	6.0	40.66	110	40.66	110
	8,00. R/L .1,20.1,0	8	1.20	1.0	3.3	1.0	1.1	4.8	6.0	40.66	112	40.66	112
	8,00. R/L .1,40.1,0	8	1.40	1.0	3.3	1.2	1.3	4.8	6.0	40.66	114	40.66	114
	8,00. R/L .1,50.1,0	8	1.50	1.0	3.3			4.8	6.0	40.66	115	40.66	115
	8,00. R/L .1,70.1,0	8	1.70	1.0	3.3	1.5	1.6	4.8	6.0	40.66	117	40.66	117
	8,00. R/L .2,00.1,0	8	2.00	1.0	3.3			4.8	6.0	40.66	120	40.66	120
09	9,00. R/L .0,73.1,2	9	0.73	1.2	3.6	0.6	0.7	5.5	6.2	39.66	173	39.66	173
	9,00. R/L .0,83.1,3	9	0.83	1.3	3.6	0.7	0.8	5.5	6.2	39.66	183	39.66	183
	9,00. R/L .0,93.1,5	9	0.93	1.5	3.6	0.8	0.9	5.5	6.2	39.66	193	39.66	193
	9,00. R/L .1,00.1,8	9	1.00	1.8	3.6			5.5	6.2	39.66	210	39.66	210
	9,00. R/L .1,20.1,8	9	1.20	1.8	3.6	1.0	1.1	5.5	6.2	39.66	212	39.66	212
	9,00. R/L .1,40.1,8	9	1.40	1.8	3.6	1.2	1.3	5.5	6.2	39.66	214	39.66	214
	9,00. R/L .1,50.1,8	9	1.50	1.8	3.6			5.5	6.2	39.66	215	39.66	215
	9,00. R/L .1,70.1,8	9	1.70	1.8	3.6	1.5	1.6	5.5	6.2	39.66	217	39.66	217
	9,00. R/L .2,00.1,8	9	2.00	1.8	3.6			5.5	6.2	39.66	220	39.66	220
	9,00. R/L .2,50.1,8	9	2.50	1.8	3.6			5.5	6.2	39.66	225	39.66	225
	9,00. R/L .3,00.1,8	9	3.00	1.8	3.6			5.5	6.2	39.66	230	39.66	230
11	11,00. R/L .0,73.1,2	11	0.73	1.2	4.2	0.6	0.7	6.7	8.0	40.66	373	40.66	373
	11,00. R/L .0,83.1,3	11	0.83	1.3	4.2	0.7	0.8	6.7	8.0	40.66	383	40.66	383
	11,00. R .0,93.1,5	11	0.93	1.5	4.2	0.9	0.9	6.7	8.0			40.66	393
	11,00. L .0,93.1,5	11	0.93	1.5	4.2	0.8	0.9	6.7	8.0	40.66	393		
	11,00. R/L .1,00.2,3	11	1.00	2.3	4.2			6.7	8.0	40.66	310	40.66	310
	11,00. R/L .1,20.2,3	11	1.20	2.3	4.2	1.0	1.1	6.7	8.0	40.66	312	40.66	312
	11,00. R/L .1,40.2,3	11	1.40	2.3	4.2	1.2	1.3	6.7	8.0	40.66	314	40.66	314
	11,00. R/L .1,50.2,3	11	1.50	2.3	4.2			6.7	8.0	40.66	315	40.66	315
	11,00. R/L .1,70.2,3	11	1.70	2.3	4.2	1.5	1.6	6.7	8.0	40.66	317	40.66	317
	11,00. R/L .2,00.2,3	11	2.00	2.3	4.2			6.7	8.0	40.66	320	40.66	320
	11,00. R/L .2,50.2,3	11	2.50	2.3	4.2			6.7	8.0	40.66	325	40.66	325
	11,00. R/L .3,00.2,3	11	3.00	2.3	4.2			6.7	8.0	40.66	330	40.66	330
14	14,00. R/L .0,73.1,2	14	0.73	1.2	5.3	0.6	0.7	9.0	9.0	40.66	573	40.66	573
	14,00. R/L .0,83.1,3	14	0.83	1.3	5.3	0.7	0.8	9.0	9.0	40.66	583	40.66	583
	14,00. R/L .0,93.1,5	14	0.93	1.5	5.3	0.8	0.9	9.0	9.0	40.66	593	40.66	593
	14,00. R/L .1,20.4,0	14	1.20	4.0	5.3	1.0	1.1	9.0	9.0	40.66	512	40.66	512
	14,00. R/L .1,40.4,0	14	1.40	4.0	5.3	1.2	1.3	9.0	9.0	40.66	514	40.66	514
	14,00. R/L .1,50.4,0	14	1.50	4.0	5.3			9.0	9.0	40.66	515	40.66	515
	14,00. R/L .1,70.4,0	14	1.70	4.0	5.3	1.5	1.6	9.0	9.0	40.66	517	40.66	517
	14,00. R/L .2,00.4,0	14	2.00	4.0	5.3			9.0	9.0	40.66	520	40.66	520
	14,00. R/L .2,50.4,0	14	2.50	4.0	5.3			9.0	9.0	40.66	525	40.66	525
	14,00. R/L .3,00.4,0	14	3.00	4.0	5.3			9.0	9.0	40.66	530	40.66	530
16	16,00. R/L .0,73.1,2	16	0.73	1.2	5.4	0.6	0.7	10.2	11.0	49.53	773	49.53	773
	16,00. R/L .0,83.1,3	16	0.83	1.3	5.4	0.7	0.8	10.2	11.0	49.53	783	49.53	783
	16,00. R/L .0,93.1,5	16	0.93	1.5	5.4	0.8	0.9	10.2	11.0	49.53	793	49.53	793
	16,00. R/L .1,20.4,3	16	1.20	4.3	5.4	1.0	1.1	10.2	11.0	44.73	712	44.73	712
	16,00. R/L .1,40.4,3	16	1.40	4.3	5.4	1.2	1.3	10.2	11.0	44.73	714	44.73	714
	16,00. R/L .1,50.4,3	16	1.50	4.3	5.4			10.2	11.0	44.73	715	44.73	715
	16,00. R/L .1,70.4,3	16	1.70	4.3	5.4	1.5	1.6	10.2	11.0	44.73	717	44.73	717
	16,00. R/L .2,00.4,3	16	2.00	4.3	5.4			10.2	11.0	44.73	720	44.73	720
	16,00. R/L .2,50.4,3	16	2.50	4.3	5.4			10.2	11.0	44.73	725	44.73	725
	16,00. R/L .3,00.4,3	16	3.00	4.3	5.4			10.2	11.0	44.73	730	44.73	730
	16,00. R/L .3,50.4,3	16	3.50	4.3	5.4			10.2	11.0	44.73	735	44.73	735
	16,00. R/L .4,00.4,3	16	4.00	4.3	5.4			10.2	11.0	44.73	740	44.73	740

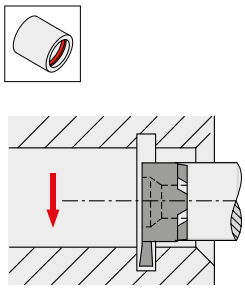
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

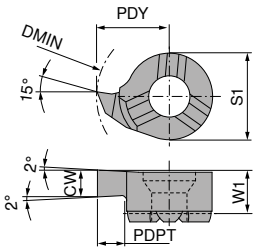
→ v_c Page 59

MiniCut – Grooving insert

▲ large groove depth ($T_{max.}$ 5.5 mm)

CWX500 CWX500





Illustrations show right-hand versions

Size	ISO designation	DMIN mm	CW +0,03 mm	PDPT mm	W1 mm	PDY mm	S1 mm	Left-hand 73 372 ... £ Y5		Right-hand 73 370 ... £ Y5	
14	14,00. R/L .1,50.5,5	16	1.5	5.5	5.2	10.5	9	47.21	715	47.21	715
	14,00. R/L .2,00.5,5	16	2.0	5.5	5.2	10.5	9	47.21	720	47.21	720
	14,00. R/L .2,50.5,5	16	2.5	5.5	5.2	10.5	9	47.21	725	47.21	725
	14,00. R/L .3,00.5,5	16	3.0	5.5	5.2	10.5	9	47.21	730	47.21	730

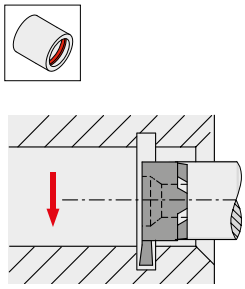
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

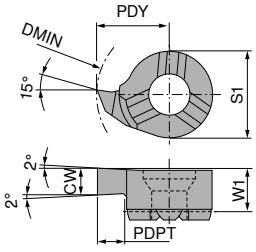
→ v_c Page 59

MiniCut – Grooving insert

▲ large groove depth ($T_{max.}$ 6.5 mm)

CWX500 CWX500





Illustrations show right-hand versions

Size	ISO designation	DMIN mm	CW +0,03 mm	PDPT mm	W1 mm	PDY mm	S1 mm	Left-hand 73 384 ... £ Y5		Right-hand 73 382 ... £ Y5	
14	14,00. R/L .1,50.6,5	17	1.5	6.5	5.2	11.5	9	47.21	515	47.21	515
	14,00. R/L .2,00.6,5	17	2.0	6.5	5.2	11.5	9	47.21	520	47.21	520
	14,00. R/L .2,50.6,5	17	2.5	6.5	5.2	11.5	9	47.21	525	47.21	525
	14,00. R/L .3,00.6,5	17	3.0	6.5	5.2	11.5	9	47.21	530	47.21	530

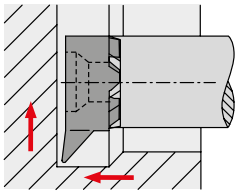
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

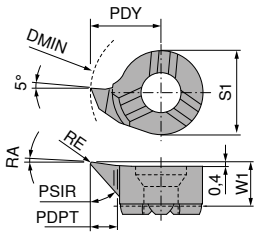
→ v_c Page 59

12

MiniCut – Internal undercut insert

▲ CDX = ap_{max}





CWX500

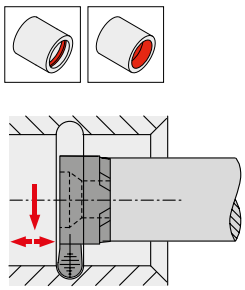
CWX500

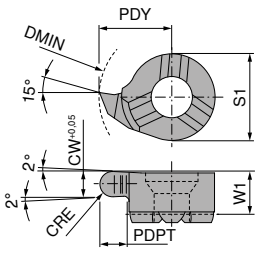
Illustrations show right-hand versions

Size	ISO designation	DMIN mm	PDPT mm	W1 mm	PDY mm	S1 mm	RE mm	CDX mm	PSIR °	RA °	Left-hand 73 328 ... £ Y5		Right-hand 73 326 ... £ Y5	
08	8,00. R/L .30°.1,0	7.8	1.0	3.5	4.65	6.0	0.2	0.4	30	3	54.35	010	54.35	010
	8,00. R/L .47°.1,2	7.8	1.2	3.5	4.65	6.0	0.2	0.4	47	3	47.21	012	47.21	012
09	9,00. R/L .47°.1,5	9.0	1.5	3.6	5.50	6.2	0.2	0.5	47	3	43.78	115	43.78	115
11	11,00. R/L .30°.2,3	11.0	2.3	4.2	6.70	8.0	0.2	0.6	30	3	53.08	423	53.08	423
	11,00. R/L .47°.2,3	11.0	2.3	4.2	6.70	8.0	0.2	0.6	47	3	45.97	323	45.97	323
14	13,70. R/L .47°.3,0	13.7	3.0	5.3	8.70	9.0	0.2	0.8	47	3	47.21	530	47.21	530
	13,70. R/L .30°.4,0	13.7	4.0	5.3	8.70	9.0	0.2	0.8	30	3	54.35	540	54.35	540
16	15,80. R/L .30°.4,3	15.8	4.3	5.4	10.20	11.0	0.2	1.0	30	3	52.75	744	52.75	744
P												●		●
M												●		●
K												●		●
N												●		●
S												●		●
H												●		●
O												●		●

→ v_c Page 59

MiniCut – Full radius grooving and turning insert





CWX500 CWX500

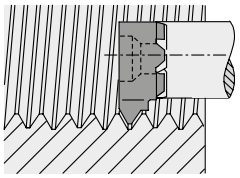
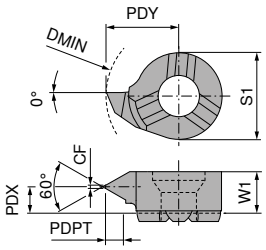
Illustrations show right-hand versions

Size	ISO designation	DMIN mm	CW mm	PDPT mm	W1 mm	PDY mm	S1 mm	CRE mm	Left-hand 73 320 ... £ Y5		Right-hand 73 318 ... £ Y5	
08	8,00. R/L .0,80.1,0	8	0.8	1.0	3.3	4.8	6.0	0.4	50.69	008	50.69	008
	8,00. R/L .1,20.1,0	8	1.2	1.0	3.3	4.8	6.0	0.6	50.69	012	50.69	012
	8,00. R/L .1,80.1,0	8	1.8	1.0	3.3	4.8	6.0	0.9	50.69	018	50.69	018
	8,00. R/L .2,00.1,0	8	2.0	1.0	3.3	4.8	6.0	1.0	46.97	020	46.97	020
09	9,00. R/L .0,80.1,6	9	0.8	1.6	3.6	5.5	6.2	0.4	48.66	108	48.66	108
	9,00. R/L .1,20.1,6	9	1.2	1.6	3.6	5.5	6.2	0.6	48.66	112	48.66	112
	9,00. R/L .1,80.1,6	9	1.8	1.6	3.6	5.5	6.2	0.9	48.66	118	48.66	118
	9,00. R/L .2,00.1,6	9	2.0	1.6	3.6	5.5	6.2	1.0	48.66	120	48.66	120
11	11,00. R/L .0,80.2,3	11	0.8	2.3	4.2	6.7	8.0	0.4	51.31	308	51.31	308
	11,00. R/L .1,20.2,3	11	1.2	2.3	4.2	6.7	8.0	0.6	51.31	312	51.31	312
	11,00. R/L .1,60.2,3	11	1.6	2.3	4.2	6.7	8.0	0.8	48.66	316	48.66	316
	11,00. R/L .1,80.2,3	11	1.8	2.3	4.2	6.7	8.0	0.9	51.31	318	51.31	318
	11,00. R/L .2,00.2,3	11	2.0	2.3	4.2	6.7	8.0	1.0	51.31	320	51.31	320
	11,00. R/L .2,40.2,3	11	2.4	2.3	4.2	6.7	8.0	1.2	48.66	324	48.66	324
	11,00. R/L .3,00.2,3	11	3.0	2.3	4.2	6.7	8.0	1.5	51.31	330	51.31	330
14	14,00. R/L .0,80.4,0	14	0.8	4.0	5.3	9.0	9.0	0.4	50.64	508	50.64	508
	14,00. R/L .1,20.4,0	14	1.2	4.0	5.3	9.0	9.0	0.6	54.32	512	54.32	512
	14,00. R/L .1,80.4,0	14	1.8	4.0	5.3	9.0	9.0	0.9	54.32	518	54.32	518
	14,00. R/L .2,00.4,0	14	2.0	4.0	5.3	9.0	9.0	1.0	54.32	520	54.32	520
	14,00. R/L .2,20.4,0	14	2.2	4.0	5.3	9.0	9.0	1.1	54.32	522	54.32	522
	14,00. R/L .3,00.4,0	14	3.0	4.0	5.3	9.0	9.0	1.5	54.32	530	54.32	530
16	16,00. R/L .1,60.4,3	16	1.6	4.3	5.4	10.2	11.0	0.8	52.01	716	52.01	716
	16,00. R/L .1,80.4,3	16	1.8	4.3	5.4	10.2	11.0	0.9	54.87	718	54.87	718
	16,00. R/L .2,00.4,3	16	2.0	4.3	5.4	10.2	11.0	1.0	52.01	720	52.01	720
	16,00. R/L .2,20.4,3	16	2.2	4.3	5.4	10.2	11.0	1.1	54.87	722	54.87	722
	16,00. R/L .2,40.4,3	16	2.4	4.3	5.4	10.2	11.0	1.2	52.01	724	52.01	724
	16,00. R/L .3,00.4,3	16	3.0	4.3	5.4	10.2	11.0	1.5	54.87	730	54.87	730
	16,00. R/L .3,20.4,3	16	3.2	4.3	5.4	10.2	11.0	1.6	52.01	732	52.01	732
	16,00. R/L .4,00.4,3	16	4.0	4.3	5.4	10.2	11.0	2.0	54.87	740	54.87	740
P										●		●
M										●		●
K										●		●
N										●		●
S										●		●
H										●		●
O										●		●

→ v_c Page 59

12

MiniCut – Threading insert (Partial profile)

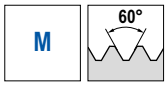
Illustrations show right-hand versions

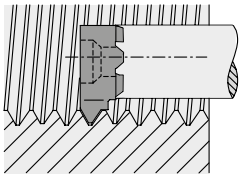
Size	ISO designation	DMIN mm	TP mm	CF mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	Left-hand 73 344 ... £ Y5		Right-hand 73 342 ... £ Y5	
08	8,00. R/L .0,5/0,75.60°	8	0,5 - 0,75	0.06	0.43	3.50	2.7	4.8	6.0	54.87	012	54.87	012
	8,00. R/L .1,0/1,25.60°	8	1,0 - 1,25	0.12	0.70	3.50	2.7	4.8	6.0	54.87	014	54.87	014
	8,00. R/L .1,5/1,75.60°	8	1,5 - 1,75	0.18	0.95	3.50	2.5	4.8	6.0	54.87	010	54.87	010
09	9,00. R/L .0,5/0,75.60°	9	0,5 - 0,75	0.06	0.27	3.55	3.2	5.5	6.2	52.01	112	52.01	112
	9,00. R/L .1,0/1,25.60°	9	1,0 - 1,25	0.12	0.54	3.55	3.0	5.5	6.2	52.01	114	52.01	114
	9,00. R/L .1,5/1,75.60°	9	1,5 - 1,75	0.18	0.81	3.55	2.8	5.5	6.2	52.01	116	52.01	116
	9,00. R/L .1,75/2,0.60°	9	1,75 - 2,0	0.20	0.95	3.55	2.6	5.5	6.2	52.01	118	52.01	118
	9,00. R/L .2,0/2,5.60°	9	2,0 - 2,5	0.25	1.08	3.55	2.5	5.5	6.2	52.01	120	52.01	120
	9,00. R/L .2,5/3,0.60°	9	2,5 - 3,0	0.31	1.35	3.55	2.1	5.5	6.2	52.01	122	52.01	122
	9,00. R/L .3,0/3,5.60°	9	3,0 - 3,5	0.37	1.62	3.55	1.9	5.5	6.2	52.01	124	52.01	124
11	11,00. R/L .0,5/0,75.60°	11	0,5 - 0,75	0.06	0.75	4.30	3.5	6.7	8.0	54.87	312	54.87	312
	11,00. R/L .1,0/1,25.60°	11	1,0 - 1,25	0.12	0.55	4.30	3.5	6.7	8.0	54.87	314	54.87	314
	11,00. R/L .1,5/1,75.60°	11	1,5 - 1,75	0.18	0.81	4.30	3.5	6.7	8.0	54.87	316	54.87	316
	11,00. R/L .2,0/2,5.60°	11	2,0 - 2,5	0.25	1.08	4.30	3.0	6.7	8.0	54.87	310	54.87	310
	11,00. R/L .2,5/3,0.60°	11	2,5 - 3,0	0.31	1.35	4.30	3.0	6.7	8.0	54.87	320	54.87	320
14	14,00. R/L .1,0/1,25.60°	14	1,0 - 1,25	0.12	0.55	5.40	4.7	9.0	9.0	54.87	512	54.87	512
	14,00. R/L .1,5/1,75.60°	14	1,5 - 1,75	0.18	0.81	5.40	4.5	9.0	9.0	54.87	514	54.87	514
	14,00. R/L .2,0/2,5.60°	14	2,0 - 2,5	0.25	1.08	5.40	4.2	9.0	9.0	54.87	510	54.87	510
	14,00. R/L .2,5/3,0.60°	14	2,5 - 3,0	0.31	1.35	5.40	4.7	9.0	9.0	54.87	520	54.87	520
16	16,00. R/L .1,0/1,25.60°	16	1,0 - 1,25	0.12	0.55	5.50	4.7	10.2	11.0	54.87	712	54.87	712
	16,00. R/L .1,5/1,75.60°	16	1,5 - 1,75	0.18	0.81	5.50	4.5	10.2	11.0	54.87	714	54.87	714
	16,00. R/L .2,0/2,5.60°	16	2,0 - 2,5	0.25	1.08	5.50	4.2	10.2	11.0	54.87	716	54.87	716
	16,00. R/L .2,5/3,0.60°	16	2,5 - 3,0	0.31	1.35	5.50	4.2	10.2	11.0	54.87	710	54.87	710

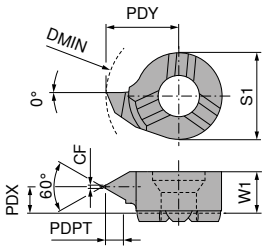
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 59

MiniCut – Threading insert (Full profile)







Illustrations show right-hand versions

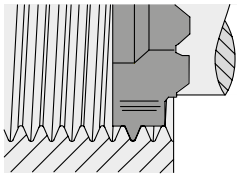
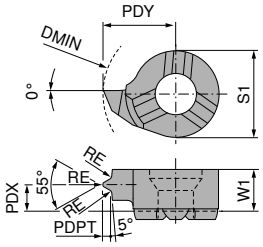
Size	ISO designation	DMIN mm	TP mm	CF mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	Left-hand 73 348 ... £ Y5		Right-hand 73 346 ... £ Y5	
09	9,00. R/L .0,5.60°	9	0.50	0.06	0.27	3.55	3.25	5.5	6.2	57.97	405	57.97	405
	9,00. R/L .1,0.60°	9	1.00	0.12	0.54	3.55	3.00	5.5	6.2	57.97	410	57.97	410
	9,00. R/L .1,5.60°	9	1.50	0.18	0.81	3.55	2.80	5.5	6.2	57.97	415	57.97	415
	9,00. R/L .1,75.60°	9	1.75	0.20	0.95	3.55	2.70	5.5	6.2	57.97	418	57.97	418
	9,00. R/L .2,0.60°	9	2.00	0.25	1.08	3.55	2.60	5.5	6.2	57.97	420	57.97	420
	9,00. R/L .2,5.60°	9	2.50	0.31	1.35	3.55	2.50	5.5	6.2	57.97	425	57.97	425
	9,00. R/L .3,0.60°	9	3.00	0.37	1.62	3.55	2.20	5.5	6.2	57.97	430	57.97	430
11	11,00. R/L .1,0.60°	11	1.00	0.12	0.54	4.30	3.50	6.7	8.0	62.25	314	62.25	314
	11,00. R/L .1,5.60°	11	1.50	0.18	0.81	4.30	3.50	6.7	8.0	61.26	316	62.25	316
	11,00. R/L .2,0.60°	11	2.00	0.25	1.08	4.30	3.20	6.7	8.0	62.25	310	62.25	310
	11,00. R/L .2,5.60°	11	2.50	0.31	1.35	4.30	3.00	6.7	8.0	62.25	320	62.25	320
	11,00. R/L .3,0.60°	11	3.00	0.37	1.62	4.30	2.90	6.7	8.0	62.25	330	62.25	330
14	14,00. R/L .0,5.60°	14	0.50	0.06	0.27	5.40	3.50	9.0	9.0	63.03	510	63.03	510
	14,00. R/L .1,0.60°	14	1.00	0.12	0.54	5.40	3.50	9.0	9.0	57.37	512	57.37	512
	14,00. R/L .1,5.60°	14	1.50	0.18	0.81	5.40	3.30	9.0	9.0	57.37	514	57.37	514
	14,00. R/L .2,0.60°	14	2.00	0.25	1.08	5.40	4.20	9.0	9.0	57.37	610	57.37	610
	14,00. R/L .2,5.60°	14	2.50	0.31	1.35	5.40	4.70	9.0	9.0	57.37	520	57.37	520
16	16,00. R/L .1,0.60°	16	1.00	0.12	0.54	5.50	4.70	10.2	11.0	69.33	712	69.33	712
	16,00. R/L .1,5.60°	16	1.50	0.18	0.81	5.50	4.50	10.2	11.0	69.33	714	69.33	714
	16,00. R/L .2,0.60°	16	2.00	0.25	1.08	5.50	4.20	10.2	11.0	69.33	716	69.33	716
	16,00. R/L .2,5.60°	16	2.50	0.31	1.35	5.50	4.20	10.2	11.0	69.33	710	69.33	710
	16,00. R/L .3,0.60°	16	3.00	0.37	1.62	5.50	4.00	10.2	11.0	69.33	720	69.33	720
	16,00. R/L .3,5.60°	16	3.50	0.43	1.89	5.50	3.80	10.2	11.0	69.33	730	69.33	730
	16,00. R/L .4,0.60°	16	4.00	0.50	2.16	5.50	3.60	10.2	11.0	69.33	740	69.33	740

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

→ v_c Page 59

12

MiniCut – Threading insert (Full profile)

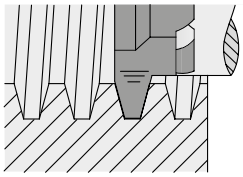
Illustrations show right-hand versions

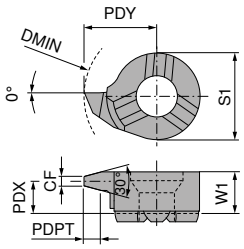
Size	ISO designation	DMIN mm	TP mm	TPI 1/"	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	RE mm	Left-hand 73 352 ... £ Y5		Right-hand 73 350 ... £ Y5	
11	11,00. R/L .1,814.55°	11	1.814	14	1.16	4.30	3.0	6.7	8	0.24	80.78	306	80.78	306
	11,00. R/L .1,337.55°	11	1.337	19	0.85	4.30	2.7	6.7	8	0.18	80.78	304	80.78	304
14	14,00. R/L .1,814.55°	14	1.814	14	1.16	5.35	3.6	9.0	9	0.24	79.71	506	79.71	506
	14,00. R/L .1,337.55°	14	1.337	19	0.85	5.35	3.8	9.0	9	0.18	79.71	504	79.71	504
16	16,00. R/L .2,309.55°	16	2.309	11	1.48	5.50	3.5	10.2	11	0.31	87.95	708	87.95	708
	16,00. R/L .1,814.55°	16	1.814	14	1.16	5.50	3.9	10.2	11	0.24	87.95	706	87.95	706
P											●		●	
M											●		●	
K											●		●	
N											●		●	
S											●		●	
H											●		●	
O											●		●	

→ v_c Page 59

MiniCut – Threading insert (Partial profile)

▲ Trapezoidal thread DIN 103





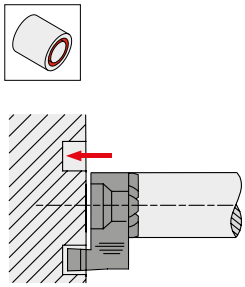
Illustrations show right-hand versions

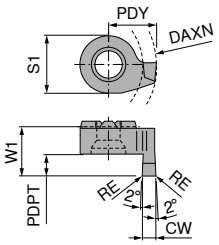
Size	ISO designation	DMIN mm	TP mm	CF mm	PDPT mm	W1 mm	PDX mm	PDY mm	S1 mm	Left-hand 73 356 ... £ Y5		Right-hand 73 354 ... £ Y5	
09	9,00. R/L .1,5.30°	9	1.5	0.47	0.90	3.55	3.00	5.5	6.2	53.54	415	53.54	415
	9,00. R/L .2,0.30°	9	2.0	0.60	1.25	3.55	2.85	5.5	6.2	53.54	420	53.54	420
	9,00. R/L .3,0.30°	9	3.0	0.96	1.75	3.55	2.25	5.5	6.2	53.54	430	53.54	430
	9,00. R/L .4,0.30°	10	4.0	1.33	2.25	3.55	2.25	5.5	6.2	53.54	440	53.54	440
11	11,00. R/L .1,5.30°	11	1.5	0.47	0.90	4.30	3.70	6.7	8.0	56.66	315	56.66	315
	11,00. R/L .2,0.30°	11	2.0	0.60	1.25	4.30	3.50	6.7	8.0	56.66	320	56.66	320
	11,00. R/L .3,0.30°	11	3.0	0.96	1.75	4.30	3.20	6.7	8.0	56.66	330	56.66	330
	11,00. R/L .4,0.30°	11	4.0	1.33	2.25	3.95	2.60	6.7	8.0	54.14	340	54.14	340
14	14,00. R/L .2,0.30°	14	2.0	0.60	1.25	5.30	4.30	9.0	9.0	56.83	520	56.83	520
	14,00. R/L .3,0.30°	14	3.0	0.96	1.75	5.30	4.00	9.0	9.0	56.83	530	56.83	530
	14,00. R/L .4,0.30°	14	4.0	1.33	2.25	5.30	3.60	9.0	9.0	56.83	540	56.83	540
	14,00. R/L .5,0.30°	14	5.0	1.69	2.75	5.30	3.30	9.0	9.0	56.83	550	56.83	550
16	16,00. R/L .2,0.30°	16	2.0	0.60	1.25	5.50	4.50	9.7	11.0	65.69	720	65.69	720
	16,00. R/L .3,0.30°	16	3.0	0.96	1.75	5.50	4.30	9.7	11.0	65.69	730	65.69	730
	16,00. R/L .4,0.30°	16	4.0	1.33	2.25	5.50	4.00	9.7	11.0	65.69	740	65.69	740
	16,00. R/L .5,0.30°	16	5.0	1.69	2.75	5.50	3.55	9.7	11.0	61.41	750	61.41	750
	16,00. R/L .6,0.30°	16	6.0	1.92	3.50	5.50	3.30	10.2	11.0	57.43	760	57.43	760
P											●		●
M											●		●
K											●		●
N											●		●
S											●		●
H											●		●
O											●		●

→ v_c Page 59

12

MiniCut – Axial grooving insert





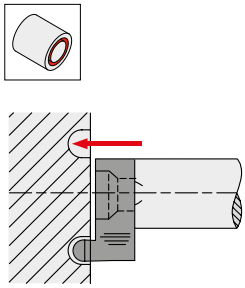
CWX500 CWX500

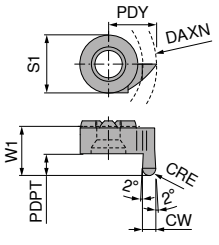
Illustrations show right-hand versions

Size	ISO designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	RE mm	S1 mm	Left-hand 73 364 ... £ Y5		Right-hand 73 362 ... £ Y5	
14	14,00. R/L .1,0.1,5	14	1.0	1.5	8.3	9		9	44.21	510	44.21	510
	14,00. R/L .1,5.2,5	14	1.5	2.5	8.3	9	0.2	9	44.21	515	44.21	515
	14,00. R/L .2,0.3,0	14	2.0	3.0	8.3	9	0.2	9	44.21	520	44.21	520
	14,00. R/L .2,0.5,0	14	2.0	5.0	10.3	9	0.2	9	51.31	620	51.31	620
	14,00. R/L .2,5.3,0	14	2.5	3.0	8.3	9	0.2	9	44.21	525	44.21	525
	14,00. R/L .2,5.5,0	14	2.5	5.0	10.3	9	0.2	9	51.31	625	51.31	625
	14,00. R/L .3,0.3,0	14	3.0	3.0	8.3	9	0.2	9	44.21	530	44.21	530
	14,00. R/L .3,0.5,0	14	3.0	5.0	10.3	9	0.2	9	51.31	630	51.31	630
P										●		●
M										●		●
K										●		●
N										●		●
S										●		●
H										●		●
O										●		●

→ v_c Page 59

MiniCut – Full radius axial grooving insert





CWX500 CWX500

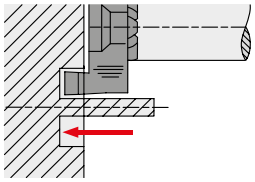
Illustrations show right-hand versions

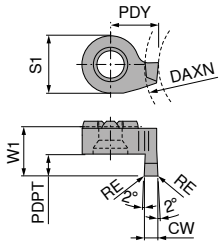
Size	ISO designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	CRE mm	S1 mm	Left-hand 73 376 ... £ Y5		Right-hand 73 374 ... £ Y5	
14	14,00. R/L . 1,0.1,5	14	1.0	1.5	8.3	9	0.5	9	51.10	510	51.10	510
	14,00. R/L . 1,6.2,5	14	1.6	2.5	8.3	9	0.8	9	51.10	516	51.10	516
	14,00. R/L . 2,0.3,0	14	2.0	3.0	8.3	9	1.0	9	51.10	520	51.10	520
	14,00. R/L . 2,5.3,0	14	2.5	3.0	8.3	9	1.2	9	51.10	525	51.10	525
	14,00. R/L . 3,0.3,0	14	3.0	3.0	8.3	9	1.5	9	51.10	530	51.10	530
P										●		●
M										●		●
K										●		●
N										●		●
S										●		●
H										●		●
O										●		●

→ v_c Page 59

MiniCut – Axial grooving insert over a spigot

CWX500 CWX500





Illustrations show right-hand versions

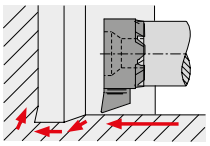
Size	ISO designation	DAXN mm	CW mm	PDPT mm	W1 mm	PDY mm	RE mm	S1 mm	Left-hand 73 360 ... £ Y5		Right-hand 73 358 ... £ Y5	
14	14/12. R/L .1,0.1,5	12	1.0	1.5	8.3	7.0		9	45.97	310	45.97	310
	14/12. R/L .1,5.2,5	12	1.5	2.5	8.3	7.5	0.2	9	47.06	315	47.06	315
	14/12. R/L .2,0.3,0	12	2.0	3.0	8.3	8.0	0.2	9	47.06	320	47.06	320
	14/12. R/L .2,0.5,0	12	2.0	5.0	10.3	8.0	0.2	9	54.86	420	54.86	420
	14/12. R/L .2,5.3,0	12	2.5	3.0	8.3	8.5	0.2	9	47.06	325	47.06	325
	14/12. R/L .2,5.5,0	12	2.5	5.0	10.3	8.5	0.2	9	54.86	425	54.86	425
	14/12. R/L .3,0.3,0	12	3.0	3.0	8.3	9.0	0.2	9	47.06	330	47.06	330
	14/12. R/L .3,0.5,0	12	3.0	5.0	10.3	9.0	0.2	9	54.86	430	54.86	430

P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●
O	●	●

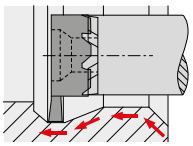
→ v_c Page 59

MiniCut – Set

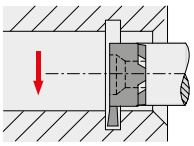
▲ Extensive range of size 9 inserts
▲ CWX 500



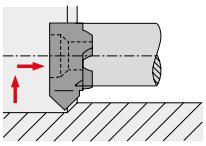
Profile turning (K)



Profile turn (A)



Grooving (E)



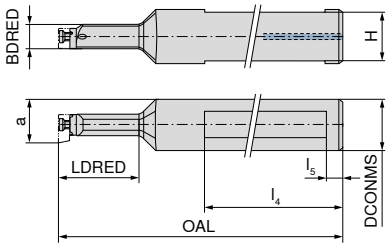
Chamfers (F)

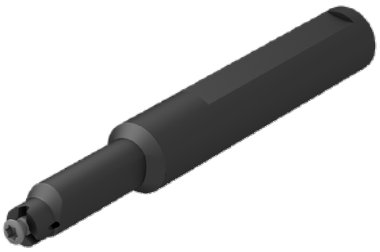
12

Size	Tool	Designation	Article no.	Bore Ø mm	Width mm	Grooving depth mm	Piece	fig.	73 528 ... £ Y5	
09	**Grooving insert**	**9,00. R .1,00.1,8**	**73 310 210**	9	1,00	1,8	1	E		
	NC fine turning insert	**9,00. R .2,00.2,0**	**73 314 120**	9	2,0 +0,05	2,0	1	A		
	Profiling insert	**9,00. R .3,60.10°**	**73 386 136**	9	3,6		1	K		
	Profiling insert	**9,00. R .3,60.20°**	**73 322 236**	9	3,6		1	K	330.98	125
	Chamfering insert	**9,00. R .45°.1,3**	**73 334 110**	9		1,3	1	F		
	Tool holder	**9,00/16.N.25.1,0**	**73 522 125**				1			
	Tightening Key		**70 950 105**				1			

MiniCut – Steel Tool holder

Scope of supply:
Holder with clamping screw





Size	Designation	a	DCONMS f7	OAL	l_4	LDRED	BDRED	H	l_5	73 522 ... £ Y5	
		mm	mm	mm	mm	mm	mm	mm	mm		
08	8,00/16.N.12.1,0	7.8	16	80	60	12		15.0	5	243.19	012
	8,00/16.N.22.1,0	7.8	16	90	60	22	7.0	15.0	5	279.05	122
09	9,00/16.N.14.1,8	8.6	16	95	60	14	7.4	15.0	5	220.56	014
	9,00/16.N.25.1,8	8.6	16	105	60	25	7.4	15.0	5	252.90	125
11	11,00/16.N.16.2,3	10.7	16	97	60	16		14.5	5	243.19	016
	11,00/16.N.29.2,3	10.7	16	110	60	29	9.5	14.5	5	279.05	129
14	14,00/16.N.18.4,0	13.8	16	100	60	18	11.0	14.5	5	279.05	018
	14,00/16.N.38.4,0	13.8	16	120	60	38	11.0	14.5	5	279.05	138
16	16,00/16.N.22.4,3	15.7	16	100	60	22		14.5	5	243.19	022
	16,00/16.N.42.4,3	15.7	16	120	60	42	13.5	14.5	5	279.05	142

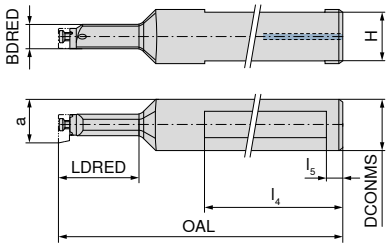

Key D


Clamping screw

Spare parts Size	80 950 ...			73 082 ...		
		£ Y7			£ Y5	
08	T08	13.09	110	M2,6	9.08	002
09	T08	13.09	110	M2,6	9.08	002
11	T10	15.30	112	M3,5	9.08	003
14	T15	15.56	113	M4	9.08	004
16	T20	16.66	114	M5	9.08	005

MiniCut – Solid Carbide Tool holder – vibration damped

Scope of supply:
Holder with clamping screw



Size	Designation	a	DCONMS f7	OAL	l_4	LU	BDRED	H	l_5	73 520 ... £ Y5	
		mm	mm	mm	mm	mm	mm	mm	mm		
08	8,00/12.N.21.1,0 HM	7.8	12	80	50	22.60		11.0	5	393.42	021
	8,00/12.N.30.1,0 HM	7.8	12	90	54	30.80		11.0	5	425.44	030
	8,00/12.N.42.1,0 HM	7.8	12	100	54	42.80		11.0	5	500.52	042
	8,00/12.N.50.1,0 HM	7.8	12	115	48	51.60	7.2	11.0	5	571.81	050
09	9,00/12.N.22.1,0 HM	8.6	12	90	60	23.60	7.4	11.0	5	395.37	222
	9,00/12.N.30.2,0 HM	8.6	12	98	60	30.54	7.4	11.0	5	461.24	230
	9,00/12.N.42.3,0 HM	8.6	12	110	60	43.60	7.4	11.0	5	518.89	242
	9,00/12.N.56.4,0 HM	8.6	12	122	56	57.60	7.4	11.0	5	587.53	256
11	11,00/12.N.29.2,3 HM	10.7	12	95	60	26.40		10.5	5	393.42	129
	11,00/12.N.42.2,3 HM	10.7	12	110	56	42.50		10.5	5	425.44	142
	11,00/12.N.56.2,3 HM	10.7	12	120	56	57.60		10.5	5	500.52	156
	11,00/12.N.64.2,3 HM	10.7	12	130	56	65.60	9.5	10.5	5	571.81	164
14	14,00/12.N.34.4,0 HM	13.8	12	100	59	35.00	11.0	10.5	5	478.80	234
	14,00/12.N.45.4,0 HM	13.8	12	110	59	46.25	11.0	10.5	5	539.60	245
	14,00/12.N.64.4,0 HM	13.8	12	130	60	65.25	11.0	10.5	5	636.23	264
	14,00/16.N.34.4,0 HM	13.8	16	100	59	35.60	11.0	14.5	5	561.15	334
	14,00/16.N.45.4,0 HM	13.8	16	110	56	46.60	11.0	14.5	5	639.69	345
	14,00/16.N.64.4,0 HM	13.8	16	130	59	65.40	11.0	14.5	5	735.77	364
	14,00/16.N.75.4,0 HM	13.8	16	145	56	81.60	11.0	14.5	5	786.04	375
16	16,00/12.N.40.4,3 HM	15.7	12	130	60	41.25		10.5	5	507.58	440
	16,00/12.N.56.4,3 HM	15.7	12	130	60	57.25		10.5	5	539.60	456
	16,00/12.N.80.4,3 HM	15.7	12	150	60	81.06		10.5	5	636.23	480
	16,00/16.N.56.4,3 HM	15.7	16	130	60	57.60		14.5	5	639.69	556
	16,00/16.N.40.4,3 HM	15.7	16	130	60	41.60		14.5	5	618.34	540
	16,00/16.N.80.4,3 HM	15.7	16	150	60	81.60		14.5	5	735.77	580

12

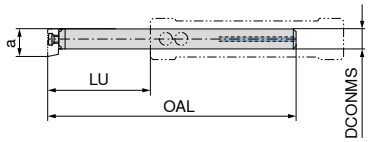

Key D


Clamping screw

Spare parts Size	80 950 ... £ Y7		73 082 ... £ Y5	
08	T08	13.09 110	M2,6	9.08 002
09	T08	13.09 110	M2,6	9.08 002
11	T10	15.30 112	M3,5	9.08 003
14	T15	15.56 113	M4	9.08 004
16	T20	16.66 114	M5	9.08 005

MiniCut – HM – Flexoholder

Scope of supply:
Holder with clamping screw



Size	Designation	DCONMS mm	OAL mm	LU mm	a mm	73 525 ... £ Y5	
08	8,0/6.N16/2	6	65	18	8	557.34	818
	8,0/6.N40/4	6	103	40	8	634.20	840
11	11,0/8.N20/2	8	79	20	11	705.60	120 1)
	11,0/8.N50/4	8	129	50	11	801.69	150 1)

1) with thro' coolant

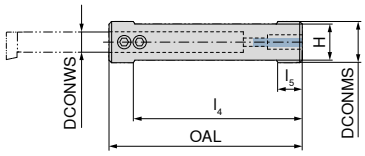

Key D


Clamping screw

Spare parts Size		80 950 ... £ Y7			73 082 ... £ Y5	
08	T08	13.09	110	M2,6	9.08	002
11	T10	15.30	112	M3,5	9.08	003

MiniCut – Base holder for solid carbide Flexoholder

Scope of supply:
Holder with clamping screw



Size	Designation	DCONWS mm	DCONMS mm	H mm	OAL mm	l_4 mm	l_5 mm	73 526 ... £ Y5	
08	8/16.75	6	16	14	75	55	10	334.96	816
	8/20.75	6	20	18	75	70	10	334.96	820
11	11/16.75	8	16	14	75	55	10	334.96	116
	11/20.75	8	20	18	75	70	10	334.96	120


Key I

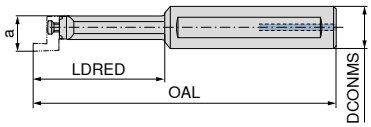

Clamping screw

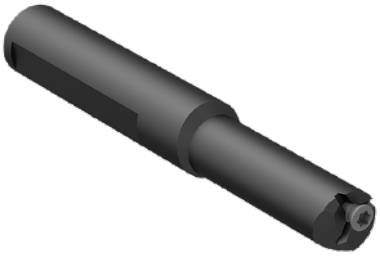
Spare parts for Article no.		70 950 ... £ 2A/28			73 082 ... £ Y5	
73 526 816	SW2,5	2.83	175	M5x0,5x6	5.84	010
73 526 820	SW2,5	2.83	175	M5x0,5x6	5.84	010
73 526 116	SW2,5	2.83	175	M5x0,5x4	5.84	009
73 526 120	SW2,5	2.83	175	M5x0,5x6	5.84	010

MiniCut – Steel holder

▲ for axial machining

Scope of supply:
Holder with clamping screw





Size	Designation	a mm	DCONMS mm	OAL mm	LDRED mm	Left-hand 73 523 ... £ Y5		Right-hand 73 524 ... £ Y5	
14	14,0/16. L .25.1,0	13.5	16	90	25	299.26	025		
	14,0/16. R .25.1,0	13.5	16	90	25			299.26	025
	14,0/16. L .45.1,0	13.5	16	110	45	318.47	145		
	14,0/16. R .45.1,0	13.5	16	110	45			318.47	145


Key D

80 950 ...


Clamping screw

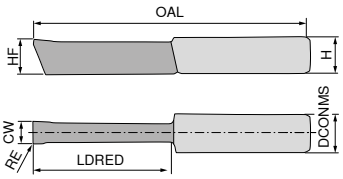
73 082 ...

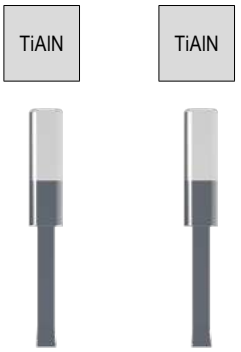
Spare parts Size		Key D £ Y7			Clamping screw £ Y5	
14	T15	15.56	113	M4	9.08	004

12

SlotCut – Inserts – DIN 138

▲ b_1 = Groove width





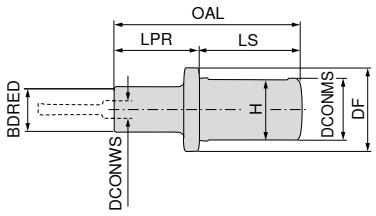
Designation	$b_{1\ P9/JS9}$	CW	HF	RE	OAL	LDRED	DMIN	DCONMS $_{h6}$	H	73 601 ... £ Y5		73 602 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
NPU.0198.01.1	2	1.98	5.5	0.1	38	12.5	6	7	6.3			103.15	**099**
NPU.0200.01.1	2	2.01	5.5	0.1	38	12.5	6	7	6.3	103.15	**099**		
NPU.0298.01.1	3	2.98	6.2	0.1	38	12.5	7	7	6.3			103.15	**100**
NPU.0300.01.1	3	3.01	6.2	0.1	38	12.5	7	7	6.3	103.15	**100**		
NPU.0398.01.1	4	3.98	6.2	0.1	40	15.0	7	7	6.3			90.50	**101**
NPU.0398.02.2	4	3.98	6.2	0.2	50	25.0	7	7	6.3			118.74	**102**
NPU.0400.01.1	4	4.01	6.2	0.1	40	15.0	7	7	6.3	90.50	**101**		
NPU.0400.02.1	4	4.01	6.2	0.2	40	15.0	7	7	6.3	90.50	**102**		
NPU.0400.02.2	4	4.01	6.2	0.2	50	25.0	7	7	6.3	118.74	**103**		
NPU.0498.02.2	5	4.98	5.8	0.2	50	25.0	7	7	6.3			118.74	**103**
NPU.0500.02.2	5	5.01	5.8	0.2	50	25.0	8	7	6.3	118.74	**104**		

Tolerance **JS 9** for 73 601, Tolerance **P 9** for 73 602

SlotCut – Toolholder for broaching inserts

Scope of supply:

Tool holder with clamping screw, without insert



Designation	DCONWS	BDRED	DCONMS $_{g6}$	DF	OAL	LS	LPR	H	73 610 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm		
NHU.25	7	18	25	33	73	40	33	23	494.40	**025**
NHU.32	7	20	32	40	73	40	33	30	518.08	**032**

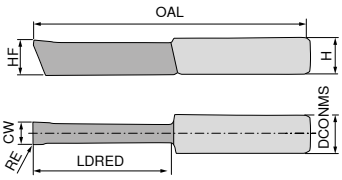

Key I

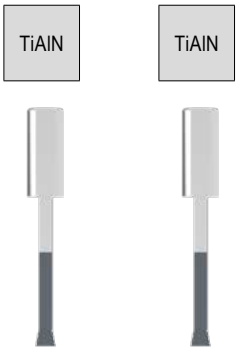

Clamping screw

Spare parts DCONMS		70 950 ... £ 2A/28			73 082 ... £ Y5	
25	SW2,5	2.83	**175**	M5x6	7.29	**001**
32	SW2,5	2.83	**175**	M5x6	7.29	**001**

SlotCut – Inserts – DIN 138

▲ b_1 = Groove width



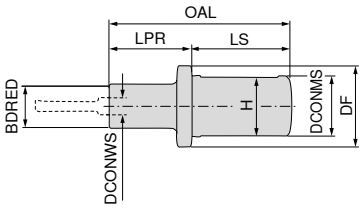


Designation	$b_{1\ JS\ 9/P\ 9}$	CW	HF	RE	OAL	LDRED	DMIN	$DCONMS_{h6}$	H	73 607 ... £ Y5		73 608 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm	mm				
NP10.398.02.2	4	3.98	9	0.2	50	25	10	10	9.2	144.78	**101**		
NP10.398.02.3	4	3.98	9	0.2	66	41	10	10	9.2	180.96	**102**		
NP10.400.02.2	4	4.01	9	0.2	50	25	10	10	9.2			144.78	**101**
NP10.400.02.3	4	4.01	9	0.2	66	41	10	10	9.2			180.96	**102**
NP10.498.02.2	5	4.98	9	0.2	50	25	10	10	9.2	144.78	**103**		
NP10.498.02.3	5	4.98	9	0.2	66	41	10	10	9.2	180.96	**104**		
NP10.500.02.2	5	5.01	9	0.2	50	25	10	10	9.2			144.78	**103**
NP10.500.02.3	5	5.01	9	0.2	66	41	10	10	9.2			180.96	**104**

Tolerance **P 9** for 73 607, Tolerance **JS 9** for 73 608

SlotCut – Toolholder for Cutting Inserts

Scope of supply:
Tool holder with clamping screw, without insert



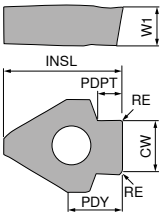
Designation	DCONWS	BDRED	$DCONMS_{g6}$	DF	OAL	LS	LPR	H	73 612 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm		
NH10.0025.1	10	20	25	33	73	40	33	23	562.78	**025**
NH10.0032.1	10	20	32	40	73	40	33	30	562.78	**032**

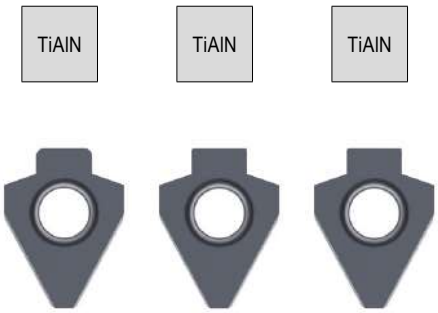
Spare parts DCONMS		70 950 ... £ 2A/28			70 950 ... £ Y5	
25	SW3	2.83	**176**	M6x5,5	9.08	**031**
32	SW3	2.83	**176**	M6x5,5	9.08	**031**

12

SlotCut – Inserts – DIN 138

▲ b_1 = Groove width



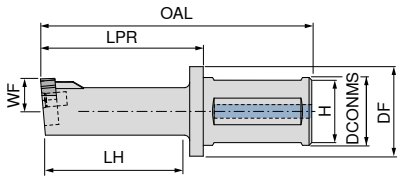


Designation	$b_{1\ P\,9/JS\,9/C\,11}$	CW	RE	PDY	INSL	PDPT	DMIN	W1	73 603 ... £ Y5		73 604 ... £ Y5		73 605 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm						
NPV.1202.05	20	12.02	0.50	10.9	20.2	8.5	40	5.3			92.31	**105**		
NPV.0498.02	5	4.98	0.20	8.0	17.3	2.7	22	5.3					92.31	**100**
NPV.0598.02	6	5.98	0.20	8.0	17.3	3.4	22	5.3					83.60	**101**
NPV.0798.02	8	7.98	0.20	8.0	17.3	4.1	22	5.3					83.60	**102**
NPV.0998.03	10	9.98	0.30	8.0	17.3	4.2	30	5.3					83.60	**103**
NPV.1197.03	12	11.97	0.30	10.9	20.2	5.7	40	5.3					92.31	**104**
NPV.1397.03	14	13.97	0.30	10.9	20.1	7.5	45	5.3					107.67	**106**
NPV.1597.03	16	15.97	0.30	10.9	20.1	7.5	45	5.3					107.67	**107**
NPV.1797.05	18	17.97	0.50	10.9	20.1	9.5	45	5.3					107.67	**108**
NPV.1997.05	20	19.97	0.50	10.9	20.1	10.0	45	5.3					107.67	**109**
NV15.0398.02	4	3.98	0.20	6.5	13.0	2.3	15	3.2					95.03	**110**
NV15.0498.02	5	4.98	0.20	6.5	13.0	2.8	15	3.2					95.03	**111**
NV15.0598.02	6	5.98	0.20	6.5	13.0	3.3	15	3.2					95.03	**112**
NPV.0501.02	5	5.01	0.20	8.0	17.3	2.7	22	5.3			92.31	**100**		
NPV.0601.02	6	6.01	0.20	8.0	17.3	3.4	22	5.3			83.60	**101**		
NPV.0801.02	8	8.01	0.20	8.0	17.3	4.1	22	5.3			83.60	**102**		
NPV.1001.03	10	10.01	0.30	8.0	17.3	4.2	30	5.3			83.60	**103**		
NPV.1202.03	12	12.02	0.30	10.9	20.2	5.7	40	5.3			92.31	**104**		
NPV.1402.03	14	14.02	0.30	10.9	20.1	7.5	45	5.3			107.67	**106**		
NPV.1602.03	16	16.02	0.30	10.9	20.1	7.5	45	5.3			107.67	**107**		
NPV.1802.05	18	18.02	0.50	10.9	20.1	9.5	45	5.3			107.67	**108**		
NPV.2002.05	20	20.02	0.50	10.9	20.1	10.0	45	5.3			107.67	**109**		
NV15.0401.02	4	4.01	0.20	6.5	13.0	2.3	15	3.2			95.03	**110**		
NV15.0501.02	5	5.01	0.20	6.5	13.0	2.8	15	3.2			95.03	**111**		
NV15.0601.02	6	6.01	0.20	6.5	13.0	3.3	15	3.2			95.03	**112**		
NPV.0612.085	6	6.12	0.85	8.0	17.3	2.6	22	5.3	83.60	**101**				
NPV.0713.085	7	7.13	0.85	8.0	17.3	3.3	22	5.3	83.60	**102**				
NPV.0813.105	8	8.13	1.05	8.0	17.3	3.4	22	5.3	83.60	**103**				
NPV.1013.105	10	10.13	1.05	10.9	20.2	4.2	40	5.3	83.60	**104**				
NPV.1215.135	12	12.15	1.35	10.9	20.2	5.1	40	5.3	92.31	**105**				
NPV.1215.175	16	12.15	1.75	10.9	20.2	6.6	40	5.3	92.31	**106**				
NPV.1215.225	24	12.15	2.25	10.9	20.2	8.5	40	5.3	92.31	**107**				
NV15.0410.050	4	4.10	0.50	6.5	13.0	2.2	15	3.2	95.03	**108**				
NV15.0510.050	5	5.10	0.50	6.5	13.0	2.5	15	3.2	95.03	**109**				
NV15.0612.085	6	6.12	0.85	6.5	13.0	2.6	15	3.2	95.03	**110**				

Tolerance **C 11** for 73 603, Tolerance **JS 9** for 73 604, Tolerance **P 9** for 73 605

SlotCut – Toolholder for inserts

Scope of supply:
Tool holder with clamping screw, without insert



Designation	DCONMS g6	DMIN	DF	OAL	LH	LPR	H	WF	73 613 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm		
NHV.15.1	25	15	33	75	25	35	23	8.4	483.21	**025**
NHV.15.2	25	15	33	90	40	50	23	8.4	529.87	**125**
NHV.15.3	25	15	33	110	60	70	23	8.4	604.01	**225**


Key D

80 950 ...

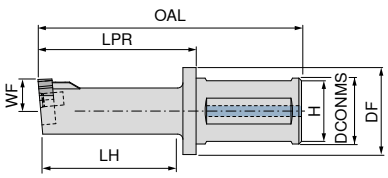

Clamping screw

73 950 ...

Spare parts DCONMS		80 950 ... £ Y7			73 950 ... £ Y5	
25	T15	15.56	**113**	M4x10	12.36	**029**

SlotCut – Toolholder for inserts

Scope of supply:
Tool holder with clamping screw, without insert



12

Designation	DCONMS g6	DMIN	DF	OAL	LH	LPR	H	WF	73 611 ... £ Y5	
	mm	mm	mm	mm	mm	mm	mm	mm		
NHV.22	25	22	33	100	50	60	23	12.0	463.59	**025**
NHV.30	32	30	45	100	50	60	30	16.5	463.59	**032**
NHV.30	32	30	45	125	75	85	30	16.5	528.43	**532**
NHV.38	32	38	45	100	50	60	30	22.0	463.59	**132**
NHV.38	32	38	45	125	75	85	30	22.0	528.43	**632**
NHV.45	40	45	55	175	105	115	38	24.0	966.39	**140**
NHV.45	40	45	55	120	50	60	38	24.0	713.84	**040**
NHV.45	40	45	55	225	155	165	38	24.0	1,089.95	**240**

Key D

80 950 ...


Clamping screw

73 082 ...

Spare parts DCONMS		80 950 ... £ Y7			73 082 ... £ Y5	
25	T20	16.66	**114**	M5x13	9.53	**007**
32	T20	16.66	**114**	M5x13	9.53	**007**
40	T20	16.66	**114**	M5x13	9.53	**007**

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
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		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

Cutting data standard values

Index	UltraMini K10F uncoated	UltraMini TiN	UltraMini TiAlN	UltraMini TiAlN+	MiniCut CWX500	MiniCut CBN
	v_c in m/min					
P.1.1		**90**	**110**	110	**160**	
P.1.2		**80**	**100**	100	**140**	
P.1.3		**60**	**80**	80	**140**	
P.1.4		**60**	**80**	80	**110**	
P.1.5		**60**	**60**	60	**100**	
P.2.1		**60**	**80**	80	**110**	
P.2.2		**60**	**60**	60	**100**	
P.2.3		**50**	**60**	60	**90**	
P.2.4		**50**	**60**	60	**80**	
P.3.1		**50**	**60**	60	**80**	
P.3.2		**30**	**50**	50	**70**	
P.3.3		**30**	**30**	30	**50**	
P.4.1		**60**	**70**	70	**100**	
P.4.2		**50**	**60**	60	**90**	
M.1.1		**60**	**80**	80	**80**	
M.2.1		**50**	**60**	60	**70**	
M.3.1		**40**	**50**	50	**60**	
K.1.1		**80**	**100**	100	**90**	
K.1.2		**60**	**70**	70	**100**	
K.2.1		**60**	**60**	60	**80**	
K.2.2		**50**	**60**	60	**70**	
K.3.1		**80**	**100**	100	**120**	
K.3.2		**70**	**80**	80	**100**	
N.1.1	100	**200**	**230**	230	**290**	
N.1.2	100	**180**	**220**	220	**280**	
N.2.1	90	**160**	**190**	190	**240**	
N.2.2	70	**140**	**170**	170	**200**	
N.2.3	50	**80**	**100**	100	**120**	
N.3.1	80	**140**	**170**	170	**210**	
N.3.2	70	**120**	**140**	140	**180**	
N.3.3	50	**100**	**120**	120	**130**	
N.4.1	50	**100**	**120**	120	**100**	
S.1.1		30	**50**	50	**50**	
S.1.2		30	**30**	30	**30**	30
S.2.1		30	**50**	50	**50**	50
S.2.2		30	**30**	30	**40**	30
S.2.3			**30**	30	**30**	30
S.3.1		30	**50**	50	**50**	
S.3.2		20	**30**	30	**40**	
S.3.3			**20**	20	**30**	20
H.1.1		30	**40**	**40**	**50**	**40**
H.1.2			30	**30**	40	**30**
H.1.3				**30**		**30**
H.1.4						
H.2.1						
H.3.1		20	**30**	**30**	**40**	**30**
O.1.1	**50**	**90**	**110**	110	**150**	
O.1.2	**50**	**100**	**120**	120	**150**	
O.2.1		**90**	**110**	110	**130**	
O.2.2		**60**	**80**	80	**100**	
O.3.1	50	**100**	**120**	120	**150**	

	UltraMini	MiniCut
	f in mm/rev.	
Internal turning and profiling	0,02–0,05	0,03–0,10
Internal turning and profiling - hard turning	0,02–0,06	0,03–0,10
Internal turning	0,02–0,05	0,01–0,03
Back boring	0,02–0,04	0,03–0,10
Turning and chamfering	0,01–0,03	0,03–0,10
Pre-parting and chamfering	0,01–0,02	0,01–0,03
Groove turning	0,01–0,02	0,01–0,03
Internal Undercuts	0,01–0,03	0,03–0,08
Groove and profile turning	0,01–0,02	0,01–0,03
Axial grooving	0,02–0,05	0,02–0,05

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.

12

Cutting data standard values – 73 000 .../ 73 001 ...

Index	UltraMini DPX77S	Roughing										
		Ø ≤ 2 mm Corner radius in mm			Ø 2,5–4 mm Corner radius in mm				Ø ≥ 5 mm Corner radius in mm			
		0,05	0,1	0,15	0,05	0,1	0,15	0,2 / 0,4	0,05	0,1	0,15	0,2 / 0,4
	v_c in m/min	f in mm/rev.			f in mm/rev.				f in mm/rev.			
P.1.1	110	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.2	100	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.3	80	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
P.1.4	80	0,023–0,065	0,025–0,071	0,026–0,076	0,046–0,13	0,05–0,142	0,053–0,151	0,055–0,158	0,085–0,244	0,093–0,266	0,099–0,284	0,104–0,297
P.1.5	60	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
P.2.1	80	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
P.2.2	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
P.2.3	60	0,019–0,054	0,021–0,059	0,022–0,063	0,038–0,109	0,042–0,119	0,044–0,127	0,046–0,132	0,071–0,204	0,078–0,222	0,083–0,238	0,087–0,248
P.2.4	60	0,018–0,051	0,02–0,056	0,021–0,06	0,036–0,103	0,039–0,112	0,042–0,12	0,044–0,125	0,067–0,193	0,074–0,21	0,079–0,224	0,082–0,235
P.3.1	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
P.3.2	50	0,02–0,057	0,022–0,063	0,023–0,067	0,04–0,115	0,044–0,125	0,047–0,134	0,049–0,14	0,075–0,215	0,082–0,235	0,088–0,251	0,092–0,262
P.3.3	30	0,016–0,045	0,017–0,049	0,018–0,053	0,032–0,091	0,035–0,099	0,037–0,106	0,039–0,11	0,06–0,17	0,065–0,185	0,069–0,198	0,072–0,207
P.4.1	70	0,022–0,064	0,024–0,069	0,026–0,074	0,044–0,127	0,048–0,138	0,052–0,148	0,054–0,155	0,083–0,238	0,091–0,26	0,097–0,277	0,101–0,29
P.4.2	60	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
M.1.1	80	0,015–0,042	0,016–0,046	0,017–0,049	0,03–0,085	0,032–0,092	0,034–0,099	0,036–0,103	0,056–0,159	0,061–0,173	0,065–0,185	0,068–0,193
M.2.1	60	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
M.3.1	50	0,014–0,039	0,015–0,043	0,016–0,046	0,028–0,079	0,03–0,086	0,032–0,092	0,033–0,096	0,052–0,147	0,056–0,161	0,06–0,172	0,063–0,179
K.1.1	100	0,026–0,076	0,029–0,082	0,031–0,088	0,053–0,151	0,058–0,165	0,062–0,176	0,064–0,184	0,099–0,284	0,108–0,309	0,116–0,33	0,121–0,345
K.1.2	70	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
K.2.1	60	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
K.2.2	60	0,021–0,059	0,022–0,064	0,024–0,069	0,041–0,118	0,045–0,129	0,048–0,137	0,05–0,144	0,077–0,221	0,084–0,241	0,09–0,257	0,094–0,269
K.3.1	100	0,025–0,073	0,028–0,079	0,03–0,084	0,051–0,145	0,055–0,158	0,059–0,169	0,062–0,177	0,095–0,272	0,104–0,297	0,111–0,317	0,116–0,331
K.3.2	80	0,021–0,06	0,023–0,066	0,025–0,07	0,042–0,121	0,046–0,132	0,049–0,141	0,052–0,147	0,079–0,227	0,087–0,247	0,092–0,264	0,097–0,276
N.1.1	230	0,032–0,091	0,035–0,099	0,037–0,106	0,064–0,181	0,069–0,198	0,074–0,211	0,077–0,221	0,119–0,34	0,13–0,371	0,139–0,396	0,145–0,414
N.1.2	220	0,031–0,089	0,034–0,097	0,036–0,104	0,062–0,178	0,068–0,194	0,073–0,208	0,076–0,217	0,117–0,335	0,128–0,365	0,136–0,389	0,142–0,407
N.2.1	190	0,03–0,085	0,032–0,092	0,034–0,099	0,059–0,169	0,065–0,185	0,069–0,197	0,072–0,206	0,111–0,318	0,121–0,346	0,129–0,37	0,135–0,386
N.2.2	170	0,029–0,083	0,032–0,091	0,034–0,097	0,058–0,166	0,063–0,181	0,068–0,194	0,071–0,202	0,109–0,312	0,119–0,34	0,127–0,363	0,133–0,38
N.2.3	100	0,029–0,082	0,031–0,089	0,033–0,095	0,057–0,163	0,062–0,178	0,067–0,19	0,07–0,199	0,107–0,306	0,117–0,334	0,125–0,356	0,13–0,373
N.3.1	170	0,03–0,085	0,032–0,092	0,034–0,099	0,059–0,169	0,065–0,185	0,069–0,197	0,072–0,206	0,111–0,318	0,121–0,346	0,129–0,37	0,135–0,386
N.3.2	140	0,028–0,08	0,031–0,087	0,033–0,093	0,056–0,16	0,061–0,175	0,065–0,187	0,068–0,195	0,105–0,301	0,115–0,328	0,122–0,35	0,128–0,366
N.3.3	120	0,027–0,077	0,029–0,084	0,031–0,09	0,054–0,154	0,059–0,168	0,063–0,18	0,066–0,188	0,101–0,289	0,11–0,315	0,118–0,337	0,123–0,352
N.4.1	120	0,027–0,077	0,029–0,084	0,031–0,09	0,054–0,154	0,059–0,168	0,063–0,18	0,066–0,188	0,101–0,289	0,11–0,315	0,118–0,337	0,123–0,352
S.1.1	50	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
S.1.2	30	0,019–0,053	0,02–0,058	0,022–0,062	0,037–0,106	0,04–0,115	0,043–0,123	0,045–0,129	0,069–0,198	0,076–0,216	0,081–0,231	0,085–0,242
S.2.1	50	0,018–0,051	0,02–0,056	0,021–0,06	0,036–0,103	0,039–0,112	0,042–0,12	0,044–0,125	0,067–0,193	0,074–0,21	0,079–0,224	0,082–0,235
S.2.2	30	0,014–0,039	0,015–0,043	0,016–0,046	0,028–0,079	0,03–0,086	0,032–0,092	0,033–0,096	0,052–0,147	0,056–0,161	0,06–0,172	0,063–0,179
S.2.3	30	0,015–0,042	0,016–0,046	0,017–0,049	0,03–0,085	0,032–0,092	0,034–0,099	0,036–0,103	0,056–0,159	0,061–0,173	0,065–0,185	0,068–0,193
S.3.1	50	0,024–0,068	0,026–0,074	0,028–0,079	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166	0,089–0,255	0,097–0,278	0,104–0,297	0,109–0,311
S.3.2	30	0,019–0,054	0,021–0,059	0,022–0,063	0,038–0,109	0,042–0,119	0,044–0,127	0,046–0,132	0,071–0,204	0,078–0,222	0,083–0,238	0,087–0,248
S.3.3	20	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
H.1.1	40	0,013–0,038	0,014–0,041	0,015–0,044	0,026–0,076	0,029–0,082	0,031–0,088	0,032–0,092	0,05–0,142	0,054–0,155	0,058–0,165	0,06–0,173
H.1.2	30	0,011–0,03	0,012–0,033	0,012–0,035	0,021–0,06	0,023–0,066	0,025–0,07	0,026–0,074	0,036–0,102	0,039–0,111	0,042–0,119	0,043–0,124
H.1.3												
H.1.4												
H.2.1	30	0,014–0,041	0,016–0,044	0,017–0,048	0,029–0,082	0,031–0,089	0,033–0,095	0,035–0,099	0,054–0,153	0,058–0,167	0,062–0,178	0,065–0,186
H.3.1	30	0,013–0,036	0,014–0,04	0,015–0,042	0,025–0,073	0,028–0,079	0,03–0,084	0,031–0,088	0,048–0,136	0,052–0,148	0,055–0,158	0,058–0,166
O.1.1	110	0,031–0,089	0,034–0,097	0,036–0,104	0,062–0,178	0,068–0,194	0,073–0,208	0,076–0,217	0,117–0,335	0,128–0,365	0,136–0,389	0,142–0,407
O.1.2	120	0,028–0,079	0,03–0,086	0,032–0,092	0,055–0,157	0,06–0,171	0,064–0,183	0,067–0,191	0,103–0,295	0,112–0,321	0,12–0,343	0,126–0,359
O.2.1	110	0,017–0,05	0,019–0,054	0,02–0,058	0,035–0,1	0,038–0,109	0,041–0,116	0,043–0,121	0,065–0,187	0,071–0,204	0,076–0,218	0,08–0,228
O.2.2	80	0,017–0,048	0,018–0,053	0,02–0,056	0,034–0,097	0,037–0,105	0,039–0,113	0,041–0,118	0,064–0,181	0,069–0,198	0,074–0,211	0,077–0,221
O.3.1	120											

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.

Index	Finishing												
	Ø ≤ 2 mm Corner radius in mm			Ø 2,5–4 mm Corner radius in mm					Ø ≥ 5 mm Corner radius in mm				
	0,05	0,1	0,15	0,05	0,1	0,15	0,2	0,4	0,05	0,1	0,15	0,2	0,4
	f in mm/rev.			f in mm/rev.					f in mm/rev.				
P.1.1	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.2	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.3	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
P.1.4	0,006–0,016	0,007–0,019	0,008–0,022	0,015–0,042	0,017–0,05	0,02–0,056	0,022–0,061	0,028–0,079	0,023–0,065	0,027–0,077	0,03–0,086	0,033–0,095	0,043–0,122
P.1.5	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
P.2.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
P.2.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
P.2.3	0,005–0,014	0,006–0,016	0,006–0,018	0,012–0,036	0,015–0,042	0,016–0,047	0,018–0,051	0,023–0,066	0,019–0,055	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102
P.2.4	0,005–0,013	0,005–0,015	0,006–0,017	0,012–0,034	0,014–0,039	0,015–0,044	0,017–0,049	0,022–0,063	0,018–0,052	0,021–0,061	0,024–0,068	0,026–0,075	0,034–0,097
P.3.1	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
P.3.2	0,005–0,014	0,006–0,017	0,007–0,019	0,013–0,038	0,015–0,044	0,017–0,049	0,019–0,054	0,025–0,07	0,02–0,058	0,024–0,068	0,027–0,076	0,029–0,084	0,038–0,108
P.3.3	0,004–0,011	0,005–0,013	0,005–0,015	0,01–0,03	0,012–0,035	0,014–0,039	0,015–0,043	0,019–0,055	0,016–0,046	0,019–0,053	0,021–0,06	0,023–0,066	0,03–0,085
P.4.1	0,006–0,016	0,007–0,019	0,007–0,021	0,015–0,041	0,017–0,049	0,019–0,055	0,021–0,06	0,027–0,078	0,022–0,064	0,026–0,075	0,029–0,084	0,032–0,092	0,042–0,119
P.4.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
M.1.1	0,004–0,011	0,004–0,012	0,005–0,014	0,01–0,028	0,011–0,032	0,013–0,036	0,014–0,04	0,018–0,052	0,015–0,043	0,017–0,05	0,02–0,056	0,022–0,062	0,028–0,08
M.2.1	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
M.3.1	0,003–0,01	0,004–0,012	0,005–0,013	0,009–0,026	0,011–0,03	0,012–0,034	0,013–0,037	0,017–0,048	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074
K.1.1	0,007–0,019	0,008–0,022	0,009–0,025	0,017–0,049	0,02–0,058	0,023–0,065	0,025–0,072	0,032–0,092	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
K.1.2	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
K.2.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
K.2.2	0,005–0,015	0,006–0,017	0,007–0,02	0,013–0,039	0,016–0,045	0,018–0,051	0,02–0,056	0,025–0,072	0,021–0,059	0,024–0,069	0,027–0,078	0,03–0,086	0,039–0,111
K.3.1	0,006–0,018	0,007–0,021	0,008–0,024	0,017–0,047	0,019–0,056	0,022–0,062	0,024–0,069	0,031–0,089	0,026–0,073	0,03–0,085	0,034–0,096	0,037–0,106	0,048–0,136
K.3.2	0,005–0,015	0,006–0,018	0,007–0,02	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074	0,021–0,061	0,025–0,071	0,028–0,08	0,031–0,088	0,04–0,114
N.1.1	0,008–0,023	0,009–0,027	0,011–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.1.2	0,008–0,022	0,009–0,026	0,01–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.1	0,007–0,021	0,009–0,025	0,01–0,028	0,019–0,055	0,023–0,065	0,025–0,073	0,028–0,08	0,036–0,103	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.2	0,007–0,021	0,009–0,024	0,01–0,028	0,019–0,054	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.2.3	0,007–0,021	0,008–0,024	0,009–0,027	0,019–0,053	0,022–0,062	0,025–0,07	0,027–0,077	0,035–0,1	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.1	0,007–0,021	0,009–0,025	0,01–0,028	0,019–0,055	0,023–0,065	0,025–0,073	0,028–0,08	0,036–0,103	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.2	0,007–0,02	0,008–0,024	0,009–0,027	0,018–0,052	0,021–0,061	0,024–0,069	0,027–0,076	0,034–0,098	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.3.3	0,007–0,019	0,008–0,023	0,009–0,026	0,018–0,05	0,021–0,059	0,023–0,066	0,026–0,073	0,033–0,094	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
N.4.1	0,007–0,019	0,008–0,023	0,009–0,026	0,018–0,05	0,021–0,059	0,023–0,066	0,026–0,073	0,033–0,094	0,027–0,078	0,032–0,091	0,036–0,102	0,039–0,112	0,051–0,145
S.1.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
S.1.2	0,005–0,013	0,005–0,016	0,006–0,018	0,012–0,035	0,014–0,04	0,016–0,046	0,018–0,05	0,023–0,065	0,019–0,053	0,022–0,062	0,025–0,07	0,027–0,077	0,035–0,099
S.2.1	0,005–0,013	0,005–0,015	0,006–0,017	0,012–0,034	0,014–0,039	0,015–0,044	0,017–0,049	0,022–0,063	0,018–0,052	0,021–0,061	0,024–0,068	0,026–0,075	0,034–0,097
S.2.2	0,003–0,01	0,004–0,012	0,005–0,013	0,009–0,026	0,011–0,03	0,012–0,034	0,013–0,037	0,017–0,048	0,014–0,04	0,016–0,046	0,018–0,052	0,02–0,057	0,026–0,074
S.2.3	0,004–0,011	0,004–0,012	0,005–0,014	0,01–0,028	0,011–0,032	0,013–0,036	0,014–0,04	0,018–0,052	0,015–0,043	0,017–0,05	0,02–0,056	0,022–0,062	0,028–0,08
S.3.1	0,006–0,017	0,007–0,02	0,008–0,023	0,016–0,044	0,018–0,052	0,02–0,059	0,023–0,064	0,029–0,083	0,024–0,068	0,028–0,08	0,032–0,09	0,035–0,099	0,045–0,128
S.3.2	0,005–0,014	0,006–0,016	0,006–0,018	0,012–0,036	0,015–0,042	0,016–0,047	0,018–0,051	0,023–0,066	0,019–0,055	0,022–0,064	0,025–0,072	0,028–0,079	0,036–0,102
S.3.3	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
H.1.1	0,003–0,01	0,004–0,011	0,004–0,013	0,009–0,025	0,01–0,029	0,011–0,033	0,013–0,036	0,016–0,046	0,013–0,038	0,016–0,045	0,018–0,05	0,019–0,055	0,025–0,071
H.1.2	0,003–0,008	0,003–0,009	0,004–0,01	0,007–0,02	0,008–0,023	0,009–0,026	0,01–0,029	0,013–0,037	0,011–0,03	0,012–0,036	0,014–0,04	0,015–0,044	0,02–0,057
H.1.3													
H.1.4													
H.2.1	0,004–0,01	0,004–0,012	0,005–0,014	0,009–0,027	0,011–0,031	0,012–0,035	0,014–0,039	0,017–0,05	0,014–0,041	0,017–0,048	0,019–0,054	0,021–0,059	0,027–0,077
H.3.1	0,003–0,009	0,004–0,011	0,004–0,012	0,008–0,024	0,01–0,028	0,011–0,031	0,012–0,034	0,016–0,044	0,013–0,036	0,015–0,043	0,017–0,048	0,018–0,053	0,024–0,068
O.1.1	0,008–0,022	0,009–0,026	0,01–0,03	0,02–0,058	0,024–0,068	0,027–0,077	0,03–0,084	0,038–0,109	0,027–0,076	0,031–0,089	0,035–0,1	0,039–0,11	0,05–0,142
O.1.2	0,007–0,02	0,008–0,023	0,009–0,026	0,018–0,051	0,021–0,06	0,024–0,068	0,026–0,074	0,034–0,096	0,028–0,079	0,032–0,093	0,036–0,104	0,04–0,114	0,052–0,148
O.2.1	0,004–0,013	0,005–0,015	0,006–0,017	0,011–0,033	0,013–0,038	0,015–0,043	0,017–0,047	0,021–0,061	0,018–0,05	0,021–0,059	0,023–0,066	0,025–0,073	0,033–0,094
O.2.2	0,004–0,012	0,005–0,014	0,006–0,016	0,011–0,032	0,013–0,037	0,015–0,042	0,016–0,046	0,021–0,059	0,017–0,049	0,02–0,057	0,022–0,064	0,025–0,07	0,032–0,091
O.3.1													

12

Broaching – Recommendations for Correct Use

SlotCut

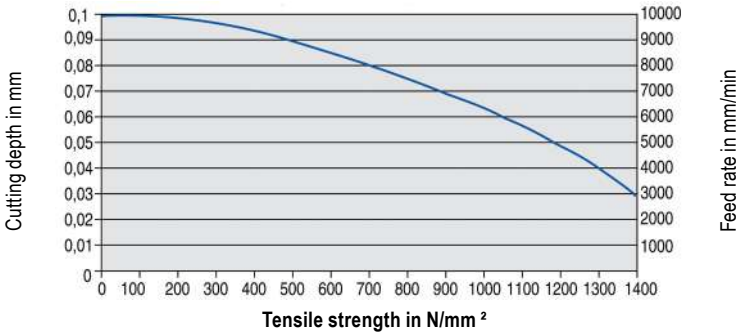
More and more often small and medium sized batch sizes are manufactured with precision grooves.

To directly machine such grooves in one set-up on one machine, it requires a special application of "Broaching" tools.

The SlotCut system can produce grooves with the most common groove tolerances.
To this end, there are four options. Two concepts are based on a solid carbide solution, which gives great success with small diameters.
For larger diameters, the concept with screw-on inserts is more suitable.

Broaching, on both lathes and machining centers is now economical, and provides highly accurate results in the shortest possible time.

Appoximate values when broaching



The data depends strongly on the conditions and represent only an appoximate value, factors such as machine stability, application and material may require adjustment of the data upward or downward.

Tips for the User

- ▲ Avoid interrupted cuts.
- ▲ Where possible, orientate the part so the groove is at the top, so the chips fall away!
- ▲ Ensure there is a relief at the end of the groove.
- ▲ Lift the tool out of the groove when retracting.
- ▲ Use coolant
  This will increase tool life and surface quality.
- ▲ Adjustment of the tool is essential, therefore the tool diameter must be considered.

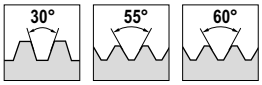
Coatings

TiAlN+	▲ TiAlN multilayer coating ▲ Maximum application temperature: 1000°C
TiN	▲ TiN coating ▲ Maximum application temperature: 450°C
TiAlN	▲ TiAlN multilayer coating ▲ Maximum application temperature: 900°C
CWX500	▲ Carbide, TiAlN-coated ▲ The universal carbide grade for almost all materials
DPX77S	▲ TiAlN+X-coating ▲ Maximum application temperature: 900°C
DPX57S	▲ TiCrN coating ▲ Maximum application temperature: 900°C

Thread types

M	Metric ISO standard thread
MF	Metric ISO fine thread
G	Whitworth thread
Tr	Metric ISO trapezoidal fine thread

Thread flank angle



Cooling

with thro' coolant

12