

ICT

T-SLOT MILLING CUTTERS FREZY T-OWE



T-Slot milling cutters can easily cut accurate keyways, T-slots and similar applications in the material.

Frezy T-owe w łatwy sposób mogą wykonywać dokładne rowki prowadzące, rowki T-owe oraz inne podobne operacje w materiale.







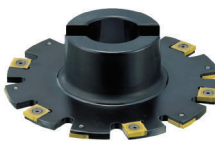







IMPLEMENTS

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T-SLOT MILLING CUTERS FREZY T-OWE

<p>M712</p>  <p>LNKX</p> <p>CIRCULAR SAW BLADES FREZ TARCZOWY</p>	<p>9-16</p>	<p>M725</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>19</p>	<p>M725</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>20</p>
<p>M725</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>21</p>	<p>M725</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>22</p>	<p>M725</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>24</p>
<p>M748</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>29</p>	<p>M749</p>  <p>SNEX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>30</p>	<p>M747</p>  <p>SNHT</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>31</p>
<p>M750</p>  <p>RDNW RDKT RPKT</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>31</p>	<p>M715</p>  <p>LNKX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>33-34</p>	<p>M718</p>  <p>SNEX</p> <p>T-SLOT MILLING CUTERS FREZY T-OWE</p>	<p>49</p>

T-SLOT MILLING CUTTERS FREZY T-OWE

<p>M745 52</p>  <p>SNEX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>	<p>M743 61</p>  <p>LNGX</p> <p>DISC MILLING CUTTERS FREZY TARCZOWE</p>	<p>M744 62</p>  <p>LNGX</p> <p>T-SLOT TRANSFORMER SERIES FREZY T-OWE SERIA Z CONVERTEREM</p>
<p>M730 67</p>  <p>SNEX</p> <p>DISC MILLING CUTTERS FREZY TARCZOWE</p>	<p>M732 69</p>  <p>SNEX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>	<p>M734 70</p>  <p>SNEX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>
<p>M739 72</p>  <p>LNGX</p> <p>DISC MILLING CUTTERS FREZY TARCZOWE</p>	<p>M740 73-74</p>  <p>LNGX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>	<p>M746 76</p>  <p>LNGX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>
<p>M753 77</p>  <p>LNGX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>	<p>M754 77</p>  <p>LNGX</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>	<p>TLC 82</p>  <p>TRTF</p> <p>T-SLOT MILLING CUTTERS FREZY T-OWE</p>

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PRODUCT INTRODUCTION WPROWADZENIE DO PRODUKTU

New developed indexable precision saw blades.

Nowo opracowane piły tarczowe z wymiennymi płytkami.

NEW**Nowe rozwiązanie**

1. Machining (cutting) speed increases 300% - 500%
1. Prędkość obróbki wzrasta 300%-500%
2. Extending insert life with TiALN coating
2. Wydłużona żywotność płytki pokrytej powłoką TiALN
3. Cut down the cost of cutting tools
3. Obniżenie kosztów narzędzi skrawających

**OLD****Stare rozwiązanie**

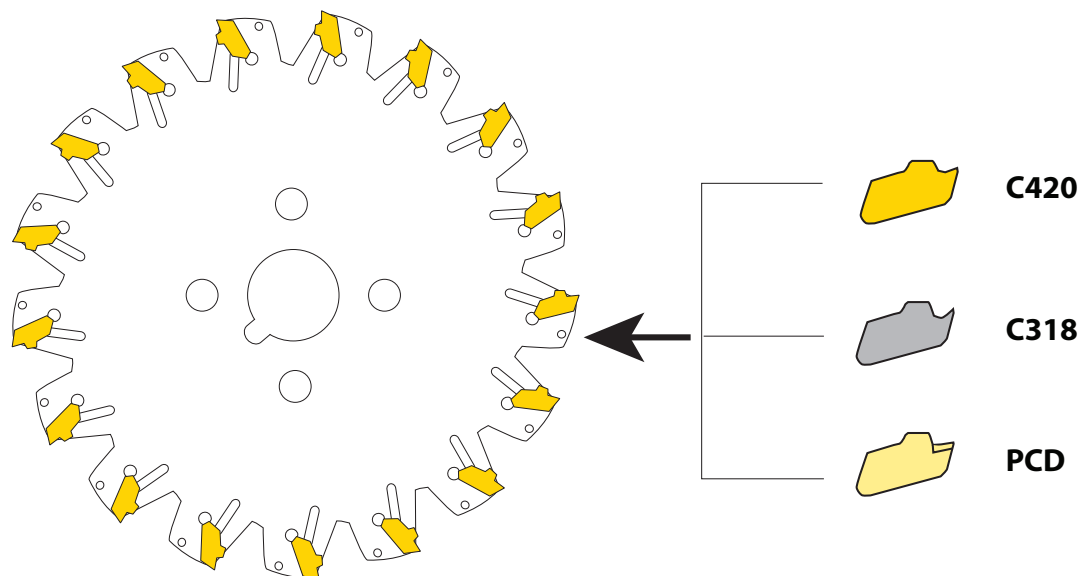
Other brands' saw blades in different raw material and insert assembly

1. HSS saw blades: process speed will slow down. if speed up. the blade will be damaged easily.
1. Piły tarczowe HSS: niska prędkość skrawania. Przy zwiększeniu, żywotność piły znacznie zmniejsza się.
2. TCT saw blades : insert welded by high temperature, the raw material carbide will be damaged easily.
2. Piły tarczowe z ostrzami węglowymi: wlu-towane ostrza węglowe pod wpływem wysokiej temperatury można łatwo uszkodzić.



INSERT GEOMETRIES GEOMETRIA PŁYTKI

Multipurpose saw blades applications
Piły tarczowe do uniwersalnego zastosowania



For metal
Do metalu



x LNKX 3030 C325
x LNKX 3030 C326

For aluminium & woodworking
Do aluminium i drewna



x LNGT-3030 C432
x LNGT-3030 C433

For plastic & woodworking
Do plastiku i drewna



x LNGT-3032 C432
x LNGT-3032 C433
xx PCD

Attention Uwaga
x Insert material: solid carbide
Materiał płytki: węglik
xx Insert material: PCD
Materiał płytki: PCD

TECHNICAL INFO INFORMACJA TECHNICZNA

Change the insert

Zmiana płytki

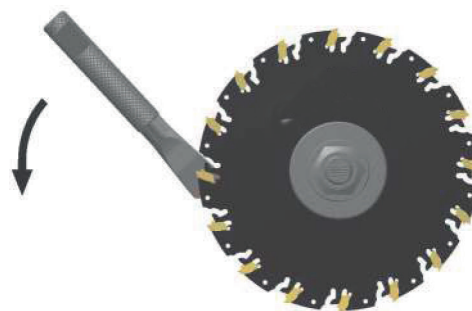
Insert fit-on

Zakładanie płytki



Insert fit-off

Zdejmowanie płytki

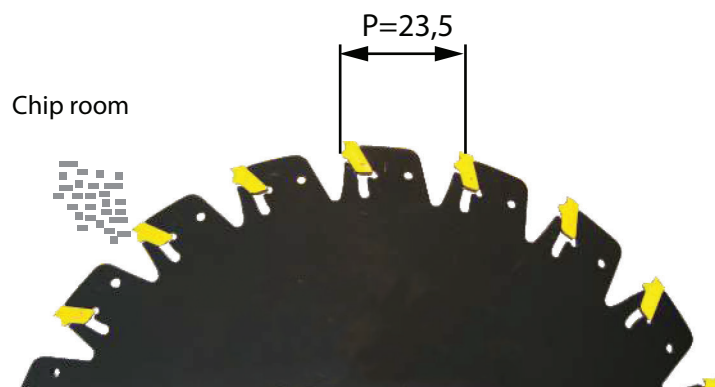


Each slot can load/unload insert for up to 300 times
 Każde gniazdo może zamontować i wymontować płytkę do 300 razy

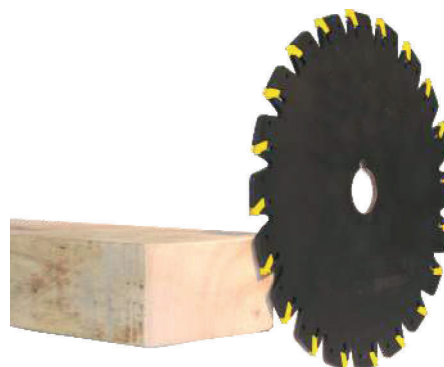


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Application of the close pitch saw blade Zastosowanie pił tarczowych z ciasną podziałką



Thickness under 5mm thin stainless pipe cutting
Rury nierdzewne o grubości ścianki poniżej 5mm



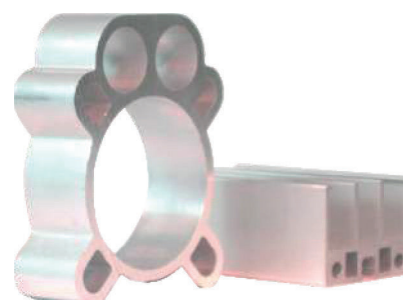
The log transverse cutting
Cięcie w poprzek słożów



Thickness under 5mm thin aluminium pipe cutting
Rury aluminiowe o grubości ścianki poniżej 5mm



The solid material cutting with supporting point
Cięcie pełnego materiału z podparciem



The forming aluminium parts which thickness under 5mm
Profile aluminiowe o grubości ścianki poniżej 5mm

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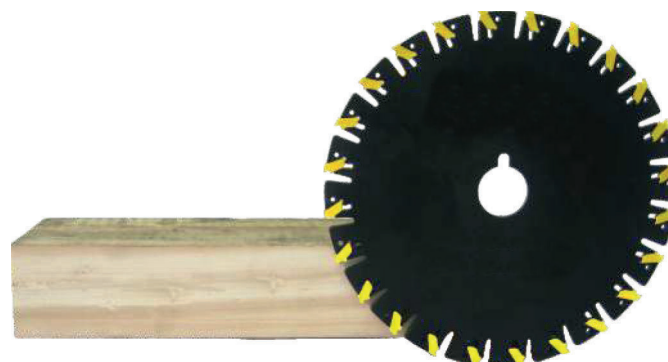
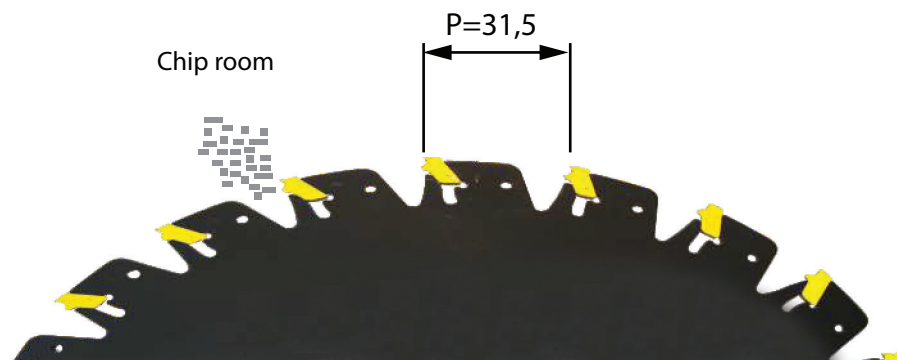
RB

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TECHNICAL INFO INFORMACJA TECHNICZNA

Application of the close pitch saw blade
Zastosowanie pił tarczowych z grubą podziałką

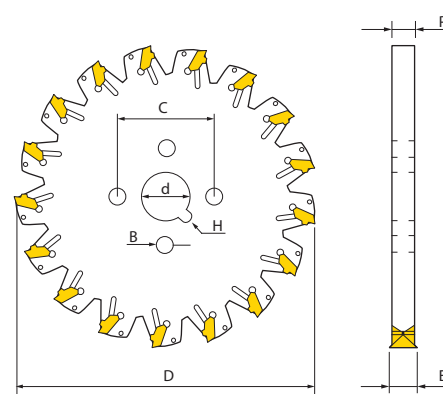
The log lengthwise cutting
Cięcie wzdłuż słoju



The saw blade can be used to cut large diameter material such as aluminum, steel and log cutting applications
Cięcie dużych bloków materiału takich jak aluminium, stal, słojuje materiały

CIRCULAR SAW BLADES FREZ TARCZOWY

M712



EDP No	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Wrench Klucz
M712B0500413009LN10	50	1.0-1.1	0.85	13	-	-	4	-	0.1	12000	LNKX 1010-1011	W220
M712B0630616009LN10	63	1.0-1.1	0.85	16	-	-	6	-	0.1	11000	LNKX 1010-1011	W220
M712B0800822009LN10	80	1.0-1.1	0.85	22	-	-	8	-	0.15	8000	LNKX 1010-1011	W220
M712B1001022009LN10	100	1.0-1.1	0.85	22	-	-	10	6.35	0.15	6300	LNKX 1010-1011	W220
M712B1251222009LN10	125	1.0-1.1	0.85	22	-	-	12	6.35	0.2	5000	LNKX 1010-1011	W220
M712B0500413010LN12	50	1.2-1.3	1	13	-	-	4	6.35	0.1	12000	LNKX 1212-1213	W220
M712B0630616010LN12	63	1.2-1.3	1	16	-	-	6	6.35	0.1	11000	LNKX 1212-1213	W220
M712B0800822010LN12	80	1.2-1.3	1	22	-	-	8	6.35	0.15	8000	LNKX 1212-1213	W220
M712B1001022010LN12	100	1.2-1.3	1	22	-	-	10	6.35	0.15	6300	LNKX 1212-1213	W220
M712B1251222010LN12	125	1.2-1.3	1	22	-	-	12	6.35	0.2	5000	LNKX 1212-1213	W220
M712B0500413012LN14	50	1.4-1.5	1.2	13	-	-	4	-	0.1	12000	LNKX 1414-1415	W220
M712B0630616012LN14	63	1.4-1.5	1.2	16	-	-	6	-	0.1	11000	LNKX 1414-1415	W220
M712B0800822012LN14	80	1.4-1.5	1.2	22	-	-	8	6.35	0.15	8000	LNKX 1414-1415	W220
M712B1001022012LN14	100	1.4-1.5	1.2	22	-	-	10	6.35	0.15	6300	LNKX 1414-1415	W220
M712B1251222012LN14	125	1.4-1.5	1.2	22	-	-	12	6.35	0.2	5000	LNKX 1414-1415	W220
M712B0500413014LN16	50	1.6	1.4	13	-	-	4	-	0.1	12000	LNKX 1616	W220
M712B0630616014LN16	63	1.6	1.4	16	-	-	6	-	0.1	11000	LNKX 1616	W220
M712B0800822014LN16	80	1.6	1.4	22	-	-	8	6.35	0.15	8000	LNKX 1616	W220
M712B1001022014LN16	100	1.6	1.4	22	-	-	10	6.35	0.15	6300	LNKX 1616	W220
M712B1251222014LN16	125	1.6	1.4	22	-	-	12	6.35	0.2	5000	LNKX 1616	W220
M712B1601222014LN16	160	1.6	1.4	22	-	-	12	6.35	0.25	5000	LNKX 1616	W220
M712B1601632014LN16	160	1.6	1.4	32	63	11	16	8	0.25	4000	LNKX 1616	W220
M712B0500413016LN18	50	1.8	1.6	13	-	-	4	-	0.1	12000	LNKX 1818	W220
M712B0630616016LN18	63	1.8	1.6	16	-	-	6	-	0.1	11000	LNKX 1818	W220
M712B0800822016LN18	80	1.8	1.6	22	-	-	8	6.35	0.15	8000	LNKX 1818	W220
M712B1001022016LN18	100	1.8	1.6	22	-	-	10	6.35	0.15	6300	LNKX 1818	W220

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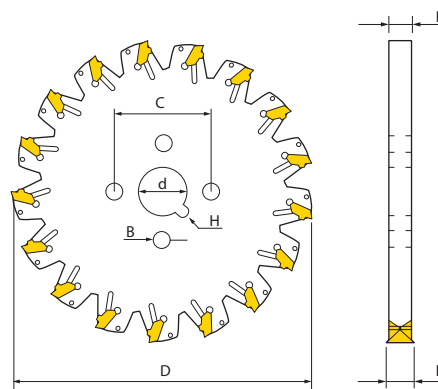
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CIRCULAR SAW BLADES FREZ TARCZOWY

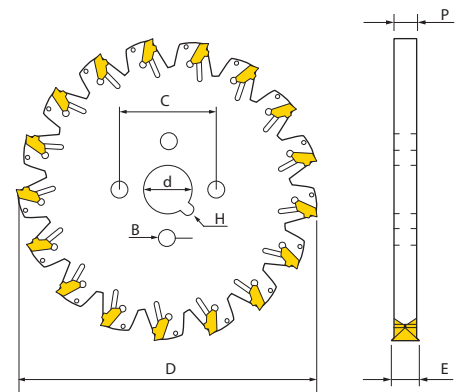
M712



EDP No	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Wrench Klucz
M712B0500413009LN10	50	1.0-1.1	0.85	13	-	-	4	-	0.1	12000	LNKX 1010-1011	W220
M712B0630616009LN10	63	1.0-1.1	0.85	16	-	-	6	-	0.1	11000	LNKX 1010-1011	W220
M712B0800822009LN10	80	1.0-1.1	0.85	22	-	-	8	-	0.15	8000	LNKX 1010-1011	W220
M712B1001022009LN10	100	1.0-1.1	0.85	22	-	-	10	6.35	0.15	6300	LNKX 1010-1011	W220
M712B1251222009LN10	125	1.0-1.1	0.85	22	-	-	12	6.35	0.2	5000	LNKX 1010-1011	W220
M712B0500413010LN12	50	1.2-1.3	1	13	-	-	4	6.35	0.1	12000	LNKX 1212-1213	W220
M712B0630616010LN12	63	1.2-1.3	1	16	-	-	6	6.35	0.1	11000	LNKX 1212-1213	W220
M712B0800822010LN12	80	1.2-1.3	1	22	-	-	8	6.35	0.15	8000	LNKX 1212-1213	W220
M712B1001022010LN12	100	1.2-1.3	1	22	-	-	10	6.35	0.15	6300	LNKX 1212-1213	W220
M712B1251222010LN12	125	1.2-1.3	1	22	-	-	12	6.35	0.2	5000	LNKX 1212-1213	W220
M712B0500413012LN14	50	1.4-1.5	1.2	13	-	-	4	-	0.1	12000	LNKX 1414-1415	W220
M712B0630616012LN14	63	1.4-1.5	1.2	16	-	-	6	-	0.1	11000	LNKX 1414-1415	W220
M712B0800822012LN14	80	1.4-1.5	1.2	22	-	-	8	6.35	0.15	8000	LNKX 1414-1415	W220
M712B1001022012LN14	100	1.4-1.5	1.2	22	-	-	10	6.35	0.15	6300	LNKX 1414-1415	W220
M712B1251222012LN14	125	1.4-1.5	1.2	22	-	-	12	6.35	0.2	5000	LNKX 1414-1415	W220
M712B0500413014LN16	50	1.6	1.4	13	-	-	4	-	0.1	12000	LNKX 1616	W220
M712B0630616014LN16	63	1.6	1.4	16	-	-	6	-	0.1	11000	LNKX 1616	W220
M712B0800822014LN16	80	1.6	1.4	22	-	-	8	6.35	0.15	8000	LNKX 1616	W220
M712B1001022014LN16	100	1.6	1.4	22	-	-	10	6.35	0.15	6300	LNKX 1616	W220
M712B1251222014LN16	125	1.6	1.4	22	-	-	12	6.35	0.2	5000	LNKX 1616	W220
M712B1601222014LN16	160	1.6	1.4	22	-	-	12	6.35	0.25	5000	LNKX 1616	W220
M712B1601632014LN16	160	1.6	1.4	32	63	11	16	8	0.25	4000	LNKX 1616	W220
M712B0500413016LN18	50	1.8	1.6	13	-	-	4	-	0.1	12000	LNKX 1818	W220
M712B0630616016LN18	63	1.8	1.6	16	-	-	6	-	0.1	11000	LNKX 1818	W220
M712B0800822016LN18	80	1.8	1.6	22	-	-	8	6.35	0.15	8000	LNKX 1818	W220
M712B1001022016LN18	100	1.8	1.6	22	-	-	10	6.35	0.15	6300	LNKX 1818	W220
M712B1251222016LN18	125	1.8	1.6	22	-	-	12	6.35	0.2	5000	LNKX 1818	W220
M712B1601632016LN18	160	1.8	1.6	32	63	11	16	8	0.25	4000	LNKX 1818	W220
M712B1801820016LN18	180	1.8	1.6	20	-	-	18	-	0.25	3600	LNKX 1818	W220

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M712B0500413009LN10	50	1.0-1.1	0.85	13	-	-	4	-	0.1	12000	LNKX 1010-1011	W220
M712B0630616009LN10	63	1.0-1.1	0.85	16	-	-	6	-	0.1	11000	LNKX 1010-1011	W220
M712B0800822009LN10	80	1.0-1.1	0.85	22	-	-	8	-	0.15	8000	LNKX 1010-1011	W220
M712B1001022009LN10	100	1.0-1.1	0.85	22	-	-	10	6.35	0.15	6300	LNKX 1010-1011	W220
M712B1251222009LN10	125	1.0-1.1	0.85	22	-	-	12	6.35	0.2	5000	LNKX 1010-1011	W220
M712B0500413010LN12	50	1.2-1.3	1	13	-	-	4	6.35	0.1	12000	LNKX 1212-1213	W220
M712B0630616010LN12	63	1.2-1.3	1	16	-	-	6	6.35	0.1	11000	LNKX 1212-1213	W220
M712B0800822010LN12	80	1.2-1.3	1	22	-	-	8	6.35	0.15	8000	LNKX 1212-1213	W220
M712B1001022010LN12	100	1.2-1.3	1	22	-	-	10	6.35	0.15	6300	LNKX 1212-1213	W220
M712B1251222010LN12	125	1.2-1.3	1	22	-	-	12	6.35	0.2	5000	LNKX 1212-1213	W220
M712B0500413012LN14	50	1.4-1.5	1.2	13	-	-	4	-	0.1	12000	LNKX 1414-1415	W220
M712B0630616012LN14	63	1.4-1.5	1.2	16	-	-	6	-	0.1	11000	LNKX 1414-1415	W220
M712B0800822012LN14	80	1.4-1.5	1.2	22	-	-	8	6.35	0.15	8000	LNKX 1414-1415	W220
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M712B1601632014LN16	160	1.6	1.4	32	63	11	16	8	0.25	4000	LNKX 1616	W220
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M712B1001022016LN18	100	1.8	1.6	22	-	-	10	6.35	0.15	6300	LNKX 1818	W220

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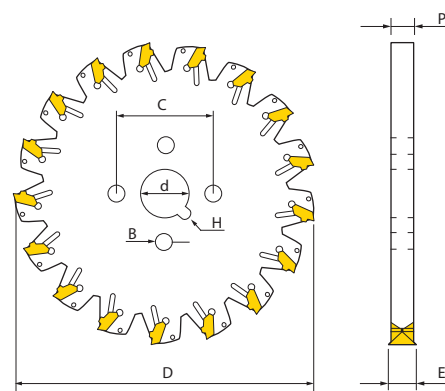
CBN

HSS

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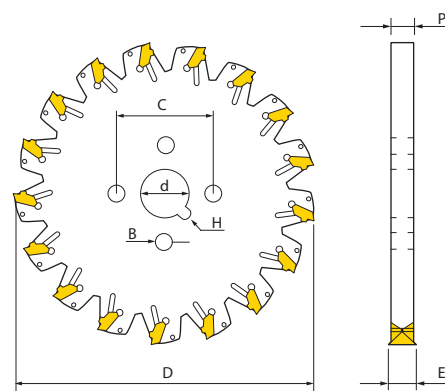
M712



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M712B0630616009LN10	63	1.0-1.1	0.85	16	-	-	6	-	0.1	11000	LNKX 1010-1011	W220
M712B0800822009LN10	80	1.0-1.1	0.85	22	-	-	8	-	0.15	8000	LNKX 1010-1011	W220
M712B1001022009LN10	100	1.0-1.1	0.85	22	-	-	10	6.35	0.15	6300	LNKX 1010-1011	W220
M712B1251222009LN10	125	1.0-1.1	0.85	22	-	-	12	6.35	0.2	5000	LNKX 1010-1011	W220
M712B0500413010LN12	50	1.2-1.3	1	13	-	-	4	6.35	0.1	12000	LNKX 1212-1213	W220
M712B0630616010LN12	63	1.2-1.3	1	16	-	-	6	6.35	0.1	11000	LNKX 1212-1213	W220
M712B0800822010LN12	80	1.2-1.3	1	22	-	-	8	6.35	0.15	8000	LNKX 1212-1213	W220
M712B1001022010LN12	100	1.2-1.3	1	22	-	-	10	6.35	0.15	6300	LNKX 1212-1213	W220
M712B1251222010LN12	125	1.2-1.3	1	22	-	-	12	6.35	0.2	5000	LNKX 1212-1213	W220
M712B0500413012LN14	50	1.4-1.5	1.2	13	-	-	4	-	0.1	12000	LNKX 1414-1415	W220
M712B0630616012LN14	63	1.4-1.5	1.2	16	-	-	6	-	0.1	11000	LNKX 1414-1415	W220
M712B0800822012LN14	80	1.4-1.5	1.2	22	-	-	8	6.35	0.15	8000	LNKX 1414-1415	W220
M712B1001022012LN14	100	1.4-1.5	1.2	22	-	-	10	6.35	0.15	6300	LNKX 1414-1415	W220
M712B1251222012LN14	125	1.4-1.5	1.2	22	-	-	12	6.35	0.2	5000	LNKX 1414-1415	W220
M712B0500413014LN16	50	1.6	1.4	13	-	-	4	-	0.1	12000	LNKX 1616	W220
M712B0630616014LN16	63	1.6	1.4	16	-	-	6	-	0.1	11000	LNKX 1616	W220
M712B0800822014LN16	80	1.6	1.4	22	-	-	8	6.35	0.15	8000	LNKX 1616	W220
M712B1001022014LN16	100	1.6	1.4	22	-	-	10	6.35	0.15	6300	LNKX 1616	W220
M712B1251222014LN16	125	1.6	1.4	22	-	-	12	6.35	0.2	5000	LNKX 1616	W220
M712B1601222014LN16	160	1.6	1.4	22	-	-	12	6.35	0.25	5000	LNKX 1616	W220
M712B1601632014LN16	160	1.6	1.4	32	63	11	16	8	0.25	4000	LNKX 1616	W220
M712B0500413016LN18	50	1.8	1.6	13	-	-	4	-	0.1	12000	LNKX 1818	W220
M712B0630616016LN18	63	1.8	1.6	16	-	-	6	-	0.1	11000	LNKX 1818	W220
M712B0800822016LN18	80	1.8	1.6	22	-	-	8	6.35	0.15	8000	LNKX 1818	W220
M712B1001022016LN18	100	1.8	1.6	22	-	-	10	6.35	0.15	6300	LNKX 1818	W220

CIRCULAR SAW BLADES FREZ TARCZOWY

M712



EDP No	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Wrench Klucz
M712B0500413009LN10	50	1.0-1.1	0.85	13	-	-	4	-	0.1	12000	LNKX 1010-1011	W220
M712B0630616009LN10	63	1.0-1.1	0.85	16	-	-	6	-	0.1	11000	LNKX 1010-1011	W220
M712B0800822009LN10	80	1.0-1.1	0.85	22	-	-	8	-	0.15	8000	LNKX 1010-1011	W220
M712B1001022009LN10	100	1.0-1.1	0.85	22	-	-	10	6.35	0.15	6300	LNKX 1010-1011	W220
M712B1251222009LN10	125	1.0-1.1	0.85	22	-	-	12	6.35	0.2	5000	LNKX 1010-1011	W220
M712B0500413010LN12	50	1.2-1.3	1	13	-	-	4	6.35	0.1	12000	LNKX 1212-1213	W220
M712B0630616010LN12	63	1.2-1.3	1	16	-	-	6	6.35	0.1	11000	LNKX 1212-1213	W220
M712B0800822010LN12	80	1.2-1.3	1	22	-	-	8	6.35	0.15	8000	LNKX 1212-1213	W220
M712B1001022010LN12	100	1.2-1.3	1	22	-	-	10	6.35	0.15	6300	LNKX 1212-1213	W220
M712B1251222010LN12	125	1.2-1.3	1	22	-	-	12	6.35	0.2	5000	LNKX 1212-1213	W220
M712B0500413012LN14	50	1.4-1.5	1.2	13	-	-	4	-	0.1	12000	LNKX 1414-1415	W220
M712B0630616012LN14	63	1.4-1.5	1.2	16	-	-	6	-	0.1	11000	LNKX 1414-1415	W220
M712B0800822012LN14	80	1.4-1.5	1.2	22	-	-	8	6.35	0.15	8000	LNKX 1414-1415	W220
M712B1001022012LN14	100	1.4-1.5	1.2	22	-	-	10	6.35	0.15	6300	LNKX 1414-1415	W220
M712B1251222012LN14	125	1.4-1.5	1.2	22	-	-	12	6.35	0.2	5000	LNKX 1414-1415	W220
M712B0500413014LN16	50	1.6	1.4	13	-	-	4	-	0.1	12000	LNKX 1616	W220
M712B0630616014LN16	63	1.6	1.4	16	-	-	6	-	0.1	11000	LNKX 1616	W220
M712B0800822014LN16	80	1.6	1.4	22	-	-	8	6.35	0.15	8000	LNKX 1616	W220
M712B1001022014LN16	100	1.6	1.4	22	-	-	10	6.35	0.15	6300	LNKX 1616	W220
M712B1251222014LN16	125	1.6	1.4	22	-	-	12	6.35	0.2	5000	LNKX 1616	W220
M712B1601222014LN16	160	1.6	1.4	22	-	-	12	6.35	0.25	5000	LNKX 1616	W220
M712B1601632014LN16	160	1.6	1.4	32	63	11	16	8	0.25	4000	LNKX 1616	W220
M712B0500413016LN18	50	1.8	1.6	13	-	-	4	-	0.1	12000	LNKX 1818	W220
M712B0630616016LN18	63	1.8	1.6	16	-	-	6	-	0.1	11000	LNKX 1818	W220
M712B0800822016LN18	80	1.8	1.6	22	-	-	8	6.35	0.15	8000	LNKX 1818	W220
M712B1001022016LN18	100	1.8	1.6	22	-	-	10	6.35	0.15	6300	LNKX 1818	W220

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Standard keyway and pin hole figures

Standardowe otwory mocujące

Fig.1 Typ 1

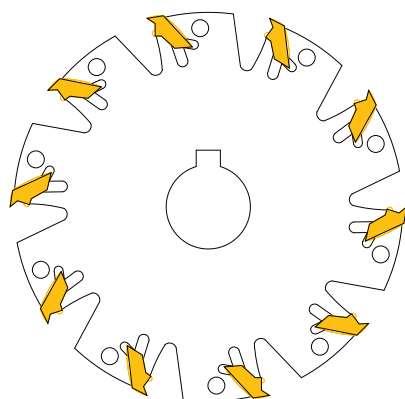


Fig.2 Typ 2

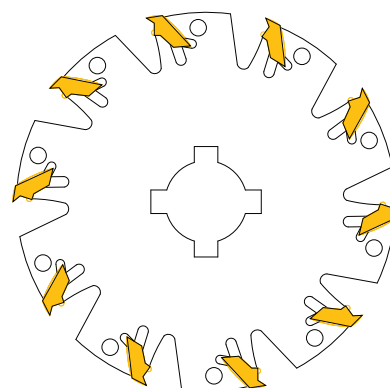
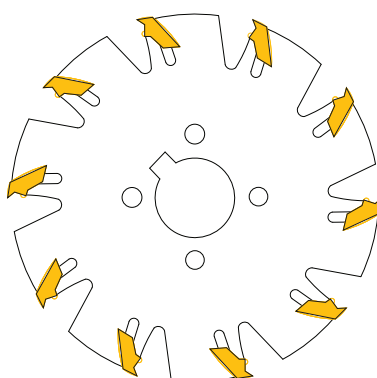


Fig.3 Typ 3

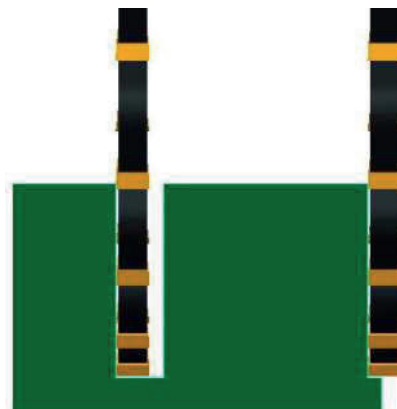


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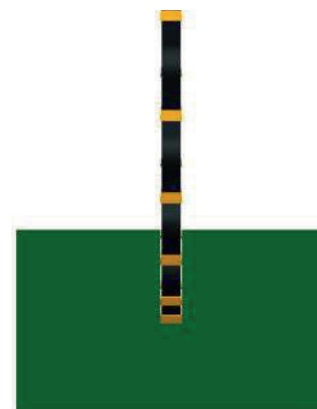
How to use saw blade correctly Jak poprawnie używać pił tarczowych



Wrong
Błędnie

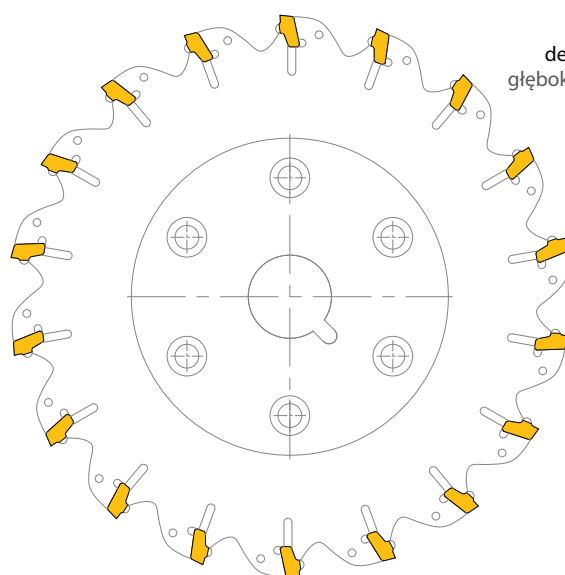


Correct
Poprawnie

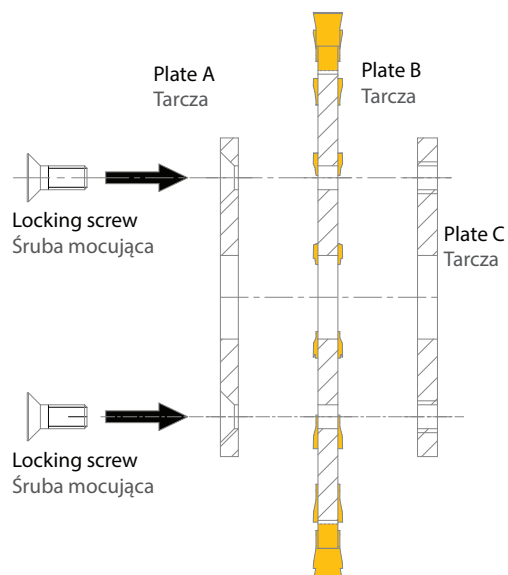


TECHNICAL INFO INFORMACJA TECHNICZNA

Vibrations isolation Izolacja drgań



deep of cut
głębokość skrawnia



- Improve the stability of cutter and workpiece
Zwiększa stabilność cięcia
- Minimize tool overhang
Minimalizuje wysięg narzędzia
- Improve Tool life problems
Ulepsza żywotność narzędzia
- Custom machining cutter service
Lepsza obsługa narzędzia

V-TYPE INSERTS PŁYTKI TYPU V

V-cut	Material Material	D mm	Z	Vc [m/min]	fz [mm]	ap [mm]	RMP [min-1]	FEED [mm/min]			
	Material group NO.	100	8	1860	0.110	0.2	6000	5000			
	Plastic Plastik			100	8		3720	0.105	12000	10000	
							10	4960	0.118	16000	15000
			10					1860	0.085	6000	5000
					13			3100	0.100	10000	10000
							4340	0.108	14000	15000	
			120		13		1240	0.09	4000	5000	
				2480			0.097	8000	10000		
				3720			0.097	12000	15000		
				10	2220		0.085	6000	5000		
					12		3720	0.100	10000	10000	
							1488	0.11	4000	5000	
		120	12	2970			0.10	8000	10000		
	13			4460	0.11		13000	15000			
				1488	0.08		4000	5000			
			13	2230	0.10		8000	10000			
	3720			0.09	10000		15000				
	4460			0.10	13000		20000				
		Material group No.	100	8	2480		0.078	0.6	8000	5000	
		Plastic Plastik			100		8		4960	0.078	16000
				10					1860	0.085	6000
							10		3720	0.085	12000
				13					1860	0.075	6000
							13		3100	0.078	10000
120				10		2230			0.085	6000	5000
					4460	0.085	13000		10000		
				12	2230	0.07	6000		5000		
					3720	0.086	10000		10000		
				16	1488	0.08	4000		5000		
					2970	0.08	8000		10000		
4450			0.08	13000	15000						

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T-SLOT MILLING CUTTERS FREZY T-OWE

PRODUCT INTRODUCTION

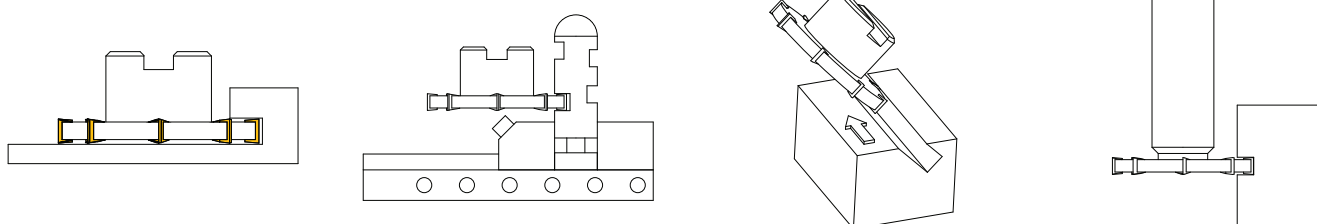
WPROWADZENIE DO PRODUKTU

Full series of groove & slot milling cutter
Seria frezów do rowków i kieszeni

M725 T-slot milling cutters Frezy T-owe

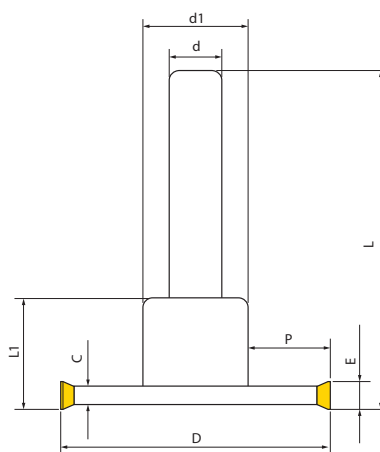


1. Machining (cutting) speed increases 300%- 500%
Prędkość obróbki wzrasta 300%-500%
2. Extending insert life with TiALN coating
2. Wydłużowa żywotność płytki pokrytej powłoką TiALN
3. Cut down the cost of cutting tools
3. Obniżenie kosztów narzędzi skrawających



T-SLOT MILLING CUTTERS FREZY T-OWE

M725



EDP No.	D	E	P	C	d	L	d1	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz
M725B03002T10009LN10	30	1.0 - 1.1	7	0.85	10	70	14	2	0.1	8000	LNKX 1010-1011	W220
M725B03002T12009LN10	30	1.0 - 1.1	7	0.85	12	70	14	2	0.1	8000	LNKX 1010-1011	W220
M725B03002T10010LN12	30	1.2 - 1.3	7	1.0	10	70	14	2	0.1	8000	LNKX 1212-1213	W220
M725B03002T12010LN12	30	1.2 - 1.3	7	1.0	12	70	14	2	0.1	8000	LNKX 1212-1213	W220
M725B03002T10012LN14	30	1.4 - 1.5	7	1.2	10	70	14	2	0.1	8000	LNKX 1414-1415	W220
M725B03002T12012LN14	30	1.4 - 1.5	7	1.2	12	70	14	2	0.1	8000	LNKX 1414-1415	W220
M725B03002T10014LN16	30	1.6	7	1.4	10	70	14	2	0.1	8000	LNKX 1616	W220
M725B03002T12014LN16	30	1.6	7	1.4	12	70	14	2	0.1	8000	LNKX 1616	W220
M725B03002T10016LN18	30	1.8	7	1.6	10	70	14	2	0.1	8000	LNKX 1818	W220
M725B03002T12016LN18	30	1.8	7	1.6	12	70	14	2	0.1	8000	LNKX 1818	W220
M725B03002T10017LN20	30	2.0 - 2.2 - 2.5	7	1.7	10	70	14	2	0.1	8000	LNKX 2020-2022-2025	W220
M725B03002T12017LN20	30	2.0 - 2.2 - 2.5	7	1.7	12	70	14	2	0.1	8000	LNKX 2020-2022-2025	W220
M725B03002T10022LN25	30	2.5 - 2.7 - 3.0	7	2.2	10	70	14	2	0.12	8000	LNKX 2525-2527-2530	W220
M725B03002T12022LN25	30	2.5 - 2.7 - 3.0	7	2.2	12	70	14	2	0.12	8000	LNKX 2525-2527-2530	W220
M725B03002T10027LN30	30	3.0 - 3.2 - 3.5	7	2.7	10	70	14	2	0.12	8000	LNKX 3030-3032-3035	W220
M725B03002T12027LN30	30	3.0 - 3.2 - 3.5	7	2.7	12	70	14	2	0.12	8000	LNKX 3030-3032-3035	W220
M725B03002T10037LN40	30	4.0 - 4.2 - 4.5	7	3.7	10	70	14	2	0.12	8000	LNKX 4040-4042-4045	W220
M725B03002T12037LN40	30	4.0 - 4.2 - 4.5	7	3.7	12	70	14	2	0.12	8000	LNKX 4040-4042-4045	W220

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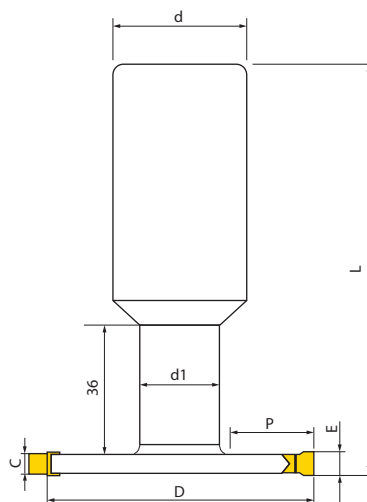
CBN

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ICT

T-SLOT MILLING CUTTERS FREZY T-OWE

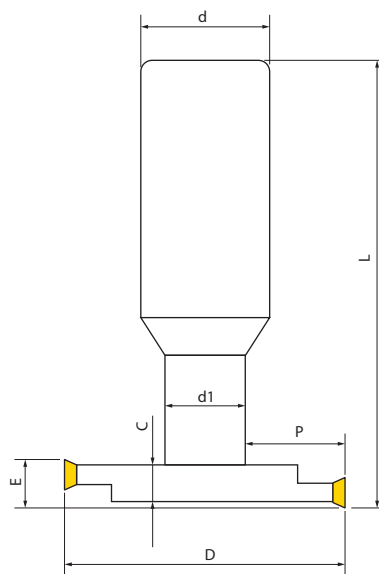
M725



EDP No.	D	E	P	C	d	L	d1	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz
M725B03002T20009LN10	30	1.0 - 1.1	6.0	0.85	20	100	16	2	0.3	8000	LNKX 1010-1011	W220
M725B03502T20009LN10	35	1.0 - 1.1	8.5	0.85	20	100	16	2	0.4	8000	LNKX 1010-1011	W220
M725B04004T20009LN10	40	1.0 - 1.1	11	0.85	20	100	16	4	0.5	8000	LNKX 1010-1011	W220
M725B03002T20010LN12	30	1.2-1.3	6.0	1.0	20	100	16	2	0.3	8000	LNKX 1212-1213	W220
M725B03502T20010LN12	35	1.2-1.3	8.5	1.0	20	100	16	2	0.4	8000	LNKX 1212-1213	W220
M725B04004T20010LN12	40	1.2-1.3	11	1.0	20	100	16	4	0.5	8000	LNKX 1212-1213	W220
M725B03002T20012LN14	30	1.4 - 1.5	6.0	1.2	20	100	16	2	0.3	8000	LNKX 1414-1415	W220
M725B03502T20012LN14	35	1.4 - 1.5	8.5	1.2	20	100	16	2	0.4	8000	LNKX 1414-1415	W220
M725B04004T20012LN14	40	1.4 - 1.5	11	1.2	20	100	16	4	0.5	8000	LNKX 1414-1415	W220
M725B03002T20014LN16	30	1.6	6.0	1.4	20	100	16	2	0.3	8000	LNKX 1616	W220
M725B03502T20014LN16	35	1.6	8.5	1.4	20	100	16	2	0.4	8000	LNKX 1616	W220
M725B04004T20014LN16	40	1.6	11	1.4	20	100	16	4	0.5	8000	LNKX 1616	W220
M725B03002T20016LN18	30	1.8	6.0	1.6	20	100	16	2	0.3	8000	LNKX 1818	W220
M725B03502T20016LN18	35	1.8	8.5	1.6	20	100	16	2	0.4	8000	LNKX 1818	W220
M725B04004T20016LN18	40	1.8	11	1.6	20	100	16	4	0.5	8000	LNKX 1818	W220
M725B03002T20017LN20	30	2.0 - 2.2 - 2.5	6.0	1.7	20	100	16	2	0.3	8000	LNKX 2020-2022-2025	W220
M725B03502T20017LN20	35	2.0 - 2.2 - 2.5	8.5	1.7	20	100	16	2	0.4	8000	LNKX 2020-2022-2025	W220
M725B04004T20017LN20	40	2.0 - 2.2 - 2.5	11	1.7	20	100	16	4	0.5	8000	LNKX 2020-2022-2025	W220
M725B03002T20022LN25	30	2.5 - 2.7 - 3.0	6.0	2.2	20	100	16	2	0.3	8000	LNKX 2525-2527-2530	W220
M725B03502T20022LN25	35	2.5 - 2.7 - 3.0	8.5	2.2	20	100	16	2	0.4	8000	LNKX 2525-2527-2530	W220
M725B04004T20022LN25	40	2.5 - 2.7 - 3.0	11	2.2	20	100	16	4	0.5	8000	LNKX 2525-2527-2530	W220
M725B03002T20027LN30	30	3.0 - 3.2 - 3.5	6.0	2.7	20	100	16	2	0.3	8000	LNKX 3030-3032-3035	W220
M725B03502T20027LN30	35	3.0 - 3.2 - 3.5	8.5	2.7	20	100	16	2	0.4	8000	LNKX 3030-3032-3035	W220
M725B04004T20027LN30	40	3.0 - 3.2 - 3.5	11	2.7	20	100	16	4	0.5	8000	LNKX 3030-3032-3035	W220
M725B03002T20037LN40	30	4.0 - 4.2 - 4.5	6.0	3.7	20	100	16	2	0.4	8000	LNKX 4040-4042-4045	W220
M725B03502T20037LN40	35	4.0 - 4.2 - 4.5	8.5	3.7	20	100	16	2	0.4	8000	LNKX 4040-4042-4045	W220
M725B04004T20037LN40	40	4.0 - 4.2 - 4.5	11	3.7	20	100	16	4	0.5	8000	LNKX 4040-4042-4045	W220
M725B03002T20045LN50	30	5.0 - 5.2 - 5.5	6.0	4.5	20	100	16	2	0.45	8000	LNKX 5050-5052-5055	W220
M725B03502T20045LN50	35	5.0 - 5.2 - 5.5	8.5	4.5	20	100	16	2	0.45	8000	LNKX 5050-5052-5055	W220
M725B04004T20045LN50	40	5.0 - 5.2 - 5.5	11	4.5	20	100	16	4	0.5	8000	LNKX 5050-5052-5055	W220

T-SLOT MILLING CUTTERS FREZY T-OWE

M725



EDP No.	D	E	P	C	d	L	d1	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz
M725B03002T20055LN50	30	6.0	6.0	5.5	20	100	16	2	0.4	8000	LNKX 5050	W220
M725B03502T20055LN50	35	6.0	8.5	5.5	20	100	16	2	0.5	8000	LNKX 5050	W220
M725B04004T20055LN50	40	6.0	11	5.5	20	100	16	4	0.6	8000	LNKX 5050	W220
M725B03002T20065LN50	30	7.0	6.0	6.5	20	100	16	2	0.5	8000	LNKX 5050	W220
M725B03502T20065LN50	35	7.0	8.5	6.5	20	100	16	2	0.5	8000	LNKX 5050	W220
M725B04004T20065LN50	40	7.0	11	6.5	20	100	16	4	0.6	8000	LNKX 5050	W220
M725B03002T20075LN50	30	8.0	6.0	7.5	20	100	16	2	0.55	8000	LNKX 5050	W220
M725B03502T20075LN50	35	8.0	8.5	7.5	20	100	16	2	0.6	8000	LNKX 5050	W220
M725B04004T20075LN50	40	8.0	11	7.5	20	100	16	4	0.7	8000	LNKX 5050	W220

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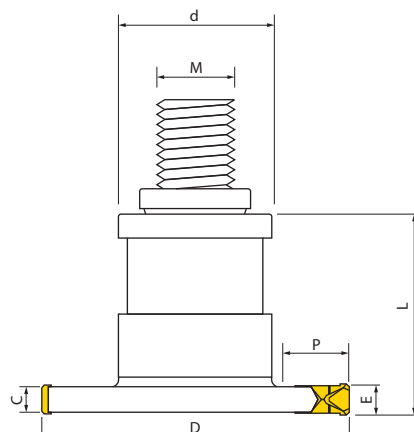
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T-SLOT MILLING CUTTERS FREZY T-OWE

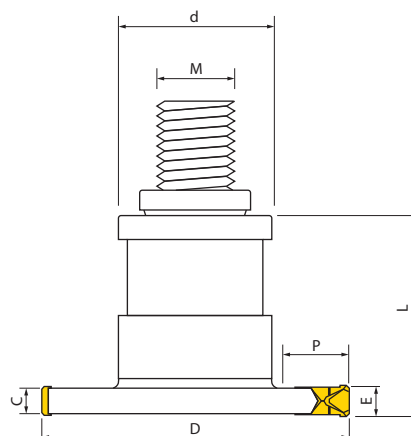
M725



EDP No.	D	E	P	C	d	L	M	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz
M725B04004M10010LN10	40	1.0 - 1.1	9.5	0.85	19	30	10	4	0.3	8000	LNKX 1010-1011	W220
M725B05004M12010LN10	50	1.0 - 1.1	12	0.85	24	40	12	4	0.4	8000	LNKX 1010-1011	W220
M725B06006M16010LN10	60	1.0 - 1.1	13	0.85	31	40	16	6	0.5	8000	LNKX 1010-1011	W220
M725B04004M10012LN12	40	1.2 - 1.3	9.5	1.0	19	30	10	4	0.3	8000	LNKX 1212-1213	W220
M725B05004M12012LN12	50	1.2 - 1.3	12	1.0	24	40	12	4	0.4	8000	LNKX 1212-1213	W220
M725B06006M16012LN12	60	1.2 - 1.3	13	1.0	31	40	16	6	0.5	8000	LNKX 1212-1213	W220
M725B04004M10014LN14	40	1.4 - 1.5	9.5	1.2	19	30	10	4	0.3	8000	LNKX 1414-1415	W220
M725B05004M12014LN14	50	1.4 - 1.5	12	1.2	24	40	12	4	0.4	8000	LNKX 1414-1415	W220
M725B06006M16014LN14	60	1.4 - 1.5	13	1.2	31	40	16	6	0.5	8000	LNKX 1414-1415	W220
M725B04004M10016LN16	40	1.6	9.5	1.4	19	30	10	4	0.3	8000	LNKX 1616	W220
M725B05004M12016LN16	50	1.6	12	1.4	24	40	12	4	0.4	8000	LNKX 1616	W220
M725B06006M16016LN16	60	1.6	13	1.4	31	40	16	6	0.5	8000	LNKX 1616	W220
M725B04004M10018LN18	40	1.8	9.5	1.6	19	30	10	4	0.3	8000	LNKX 1818	W220
M725B05004M12018LN18	50	1.8	12	1.6	24	40	12	4	0.4	8000	LNKX 1818	W220
M725B06006M16018LN18	60	1.8	13	1.6	31	40	16	6	0.5	8000	LNKX 1818	W220
M725B04004M10020LN20	40	2.0 - 2.2 - 2.5	9.5	1.7	19	30	10	4	0.3	8000	LNKX 2020-2022-2025	W220
M725B05004M12020LN20	50	2.0 - 2.2 - 2.5	12	1.7	24	40	12	4	0.4	8000	LNKX 2020-2022-2025	W220
M725B06006M16020LN20	60	2.0 - 2.2 - 2.5	13	1.7	31	40	16	6	0.5	8000	LNKX 2020-2022-2025	W220

T-SLOT MILLING CUTTERS FREZY T-OWE

M725



EDP No.	D	E	P	C	d	L	M	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz
M725B04004M10025LN25	40	2.5 - 2.7 - 3.0	9.5	2.2	19	30	10	4	0.3	8000	LNKX 2525-2527-2530	W220
M725B05004M12025LN25	50	2.5 - 2.7 - 3.0	12	2.2	24	40	12	4	0.4	8000	LNKX 2525-2527-2530	W220
M725B06006M16025LN25	60	2.5 - 2.7 - 3.0	13	2.2	31	40	16	6	0.5	8000	LNKX 2525-2527-2530	W220
M725B04004M10030LN30	40	3.0 - 3.2 - 3.5	9.5	2.7	19	30	10	4	0.3	8000	LNKX 3030-3032-3035	W220
M725B05004M12030LN30	50	3.0 - 3.2 - 3.5	12	2.7	24	40	12	4	0.4	8000	LNKX 3030-3032-3035	W220
M725B06006M16030LN30	60	3.0 - 3.2 - 3.5	13	2.7	31	40	16	6	0.5	8000	LNKX 3030-3032-3035	W220
M725B04004M10040LN40	40	4.0 - 4.2 - 4.5	9.5	3.7	19	30	10	4	0.3	8000	LNKX 4040-4042-4045	W220
M725B05004M12040LN40	50	4.0 - 4.2 - 4.5	12	3.7	24	40	12	4	0.4	8000	LNKX 4040-4042-4045	W220
M725B06006M16040LN40	60	4.0 - 4.2 - 4.5	13	3.7	31	40	16	6	0.5	8000	LNKX 4040-4042-4045	W220
M725B04004M10050LN50	40	5.0 - 5.2 - 5.5	9.5	4.5	19	30	10	4	0.4	8000	LNKX 5050-5052-5055	W220
M725B05004M12050LN50	50	5.0 - 5.2 - 5.5	12	4.5	24	40	12	4	0.5	8000	LNKX 5050-5052-5055	W220
M725B06006M16050LN50	60	5.0 - 5.2 - 5.5	13	4.5	31	40	16	6	0.6	8000	LNKX 5050-5052-5055	W220
M725B04004M10060LN50	40	6.0	9.5	5.5	19	30	10	4	0.4	8000	LNKX 5050	W220

UFG

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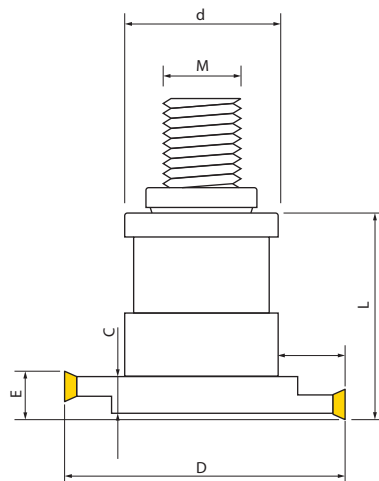
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T-SLOT MILLING CUTTERS FREZY T-OWE

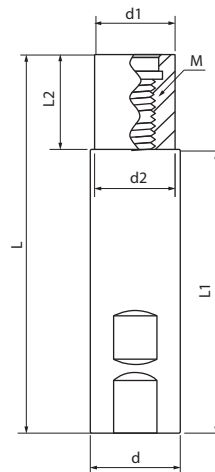
M725



EDP No.	D	E	P	C	d	L	M	Z	KG	MAX RPM	Insert Płytką	Wrench Klucz
M725B05004M12060LN50	50	6.0	12	5.5	24	40	12	4	0.5	8000	LNKX 5050	W220
M725B06006M16060LN50	60	6.0	13	5.5	31	40	16	6	0.6	8000	LNKX 5050	W220
M725B04004M10070LN50	40	7.0	9.5	6.5	19	30	10	4	0.4	8000	LNKX 5050	W220
M725B05000M12070LN50	50	7.0	12	6.5	24	40	12		0.5	8000	LNKX 5050	W220
M725B06006M16070LN50	60	7.0	13	6.5	31	40	16	6	0.6	8000	LNKX 5050	W220
M725B04004M10080LN50	40	8.0	9.5	7.5	19	30	10	4	0.4	8000	LNKX 5050	W220
M725B05004M12080LN50	50	8.0	12	7.5	24	40	12	4	0.5	8000	LNKX 5050	W220
M725B06006M16080LN50	60	8.0	13	7.5	31	40	16	6	0.6	8000	LNKX 5050	W220

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ALTERNATIVE HOLDERS UCHWYT ALTERNATYWNY

EXT


Weldon

EDP No.	d	d1	d2	L1	L2	L	M
EXT-1010-80	10.0	10	10	-	-	60	M6
EXT-1009-100	10.0	9	9	60	20	80	M6
EXT-1212-80	12.0	12	12	-	-	60	M6
EXT-1211-100	12.0	11	11	60	20	80	M6
EXT-1211-120	12.0	11	11	80	20	100	M6
EXT-1211-140	12.0	11	11	100	20	120	M6
EXT-1616-100	16.0	16	16	-	-	70	M8
EXT-1615-120	16.0	15	15	70	20	90	M8
EXT-1615-150	16.0	15	15	95	25	120	M8
EXT-2020-100	20.0	20	20	-	-	70	M10
EXT-2019-120	20.0	19	19	70	20	90	M10
EXT-2019-160	20.0	19	19	95	25	120	M10
EXT-2525-110	25.0	25	25	-	-	70	M12
EXT-2523-130	25.0	23	23	70	20	90	M12
EXT-2523-170	25.0	23	23	100	30	130	M12
EXT-2523-210	25.0	23	23	140	30	170	M12
EXT-2523-240	25.0	23	23	170	30	200	M12
EXT-3232-120	32.0	32	32	-	-	80	M16
EXT-3230-140	32.0	30	30	80	20	100	M16
EXT-3230-200	32.0	30	30	130	30	160	M16
EXT-3230-240	32.0	30	30	170	30	200	M16
EXT-3230-300	32.0	30	30	210	50	260	M16
EXT-4240-220	42.0	40	40	130	20	150	M18
EXT-50.849-215	50.8	49	49	130	20	150	M25
EXT-50.849-265	50.8	49	49	170	30	200	M25

UFG

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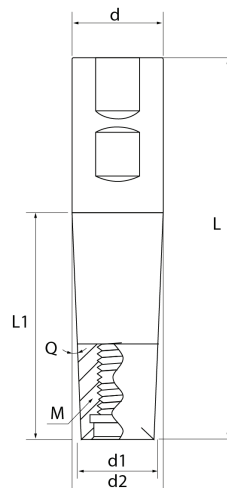
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HOLDERS UCHWYT

EXT



Cylindrical Cylindryczny

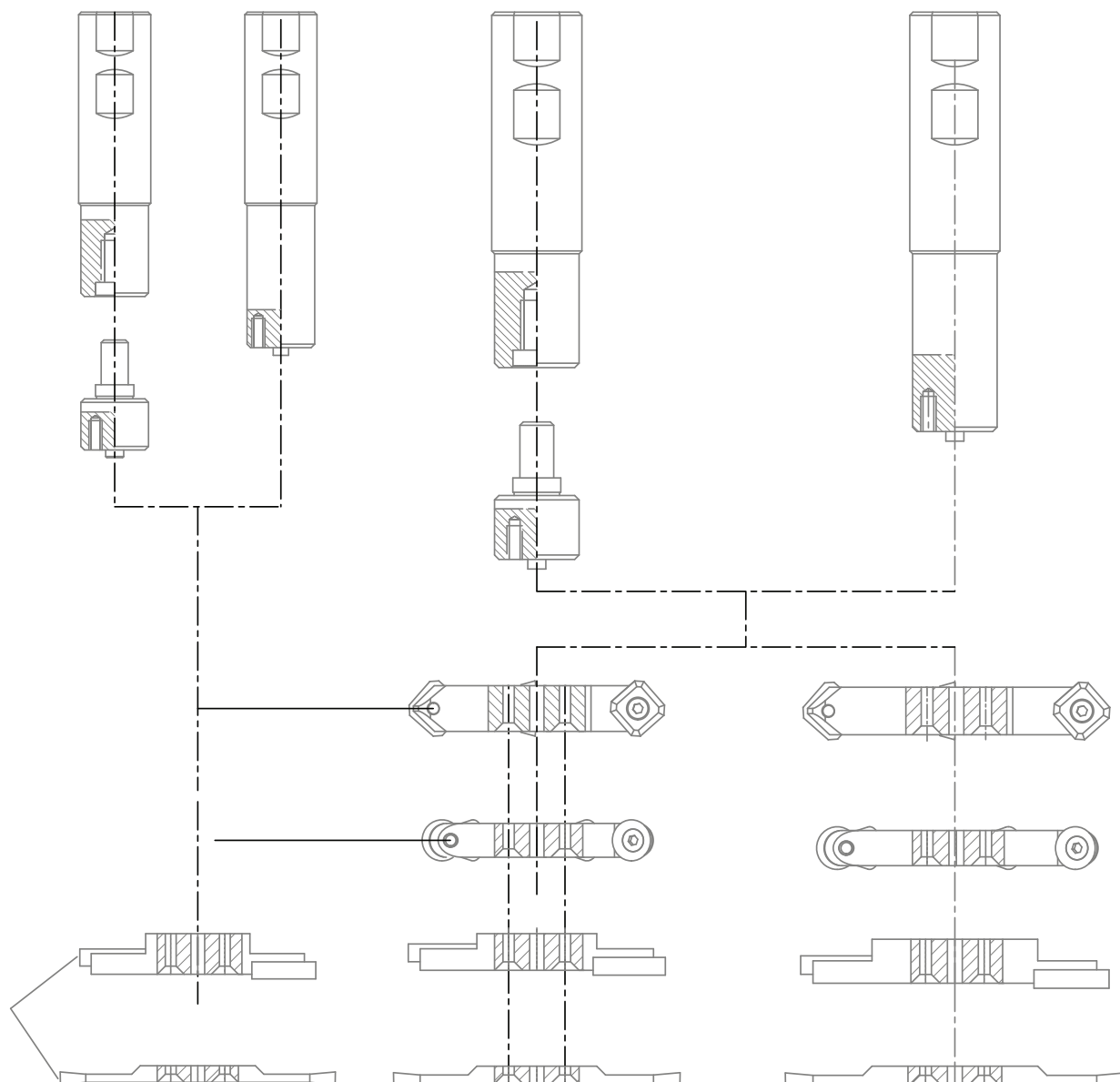
EDP No.	d	d1	d2	L1	L	M	Q
EXT-1209-120	12	9	11,9	40	100	M6	2°
EXT-1611-120	16	11	15,5	40	100	M6	2°
EXT-1611-150	16	11	15,5	60	130	M6	2.5°
EXT-2015-160	20	15	19,5	60	130	M8	2°
EXT-2015-180	20	15	19,5	70	150	M8	2°
EXT-2015-230	20	15	19,5	80	200	M8	2°
EXT-2519-180	25	19	24	70	150	M10	2°
EXT-2519-220	25	19	24	90	190	M10	2°
EXT-3223-200	32	23	28	75	160	M12	2°
EXT-3223-240	32	23	31,5	80	200	M12	2°
EXT-3230-240	32	30	39	80	200	M16	2.5°
EXT-3230-280	32	30	39	110	240	M16	2°
EXT-4232-280	42	31	41,5	110	240	M16	2°
EXT-4232-340	42	31	41,5	120	300	M16	2°
EXT-4232-410	42	31	41,5	150	370	M16	2°

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T-SLOT MILLING CUTTERS FREZY T-OWE

PRODUCT INTRODUCTION
WPROWADZENIE DO PRODUKTU

Dia. range 50-80mm
 AE 1-12mm



UFG

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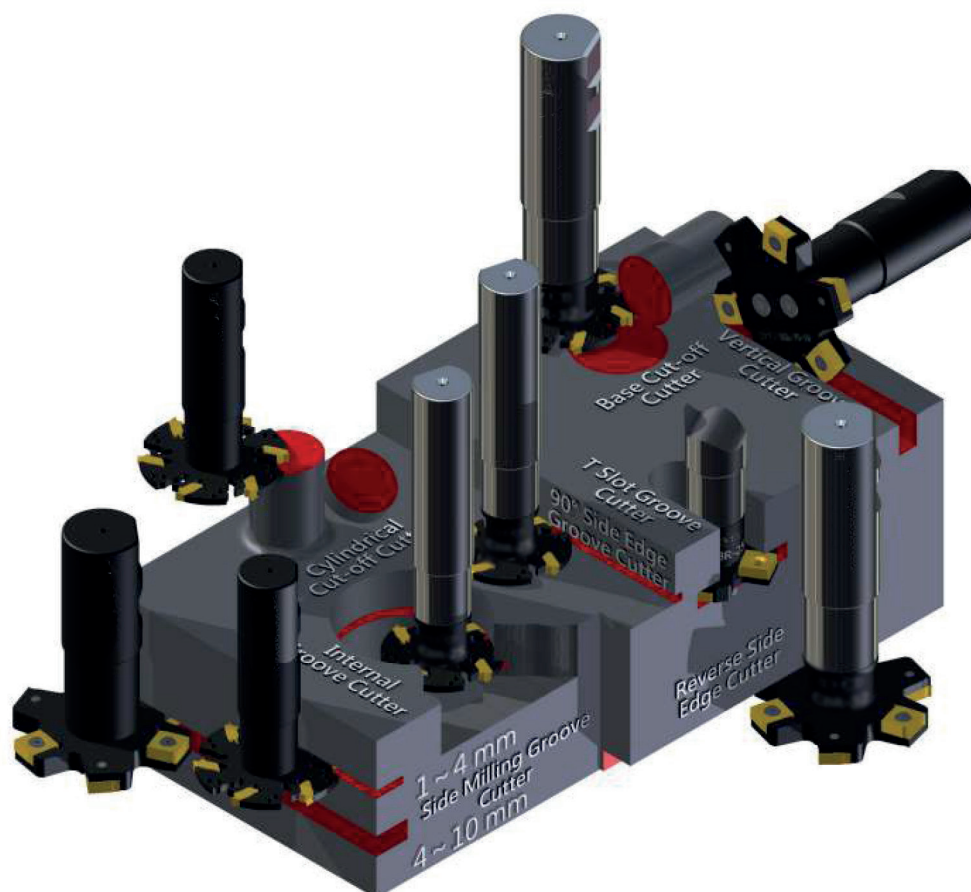
ICT

T-SLOT MILLING CUTTERS FREZY T-OWE

PRODUCT INTRODUCTION

WPROWADZENIE DO PRODUKTU

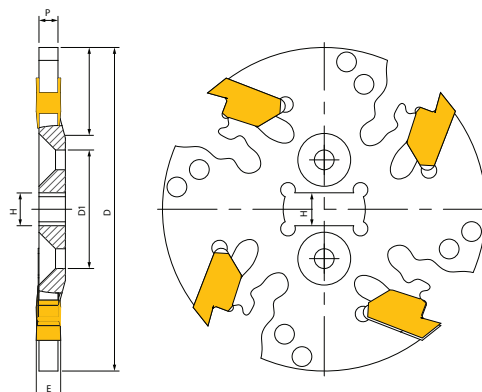
Dia. range 50-80mm
AE 1-12mm



Machining (cutting) speed increases 300%- 500%
Zwiększenie prędkości skrawania o 300%-500%

T-SLOT MILLING CUTTERS FREZY T-OWE

M748



EDP No.	D	E	AR	P	d	H	Z	KG	MAX RPM	Insert Płytki	Wrench Klucz	
M748B05004240009LN10	50	1,0-1,1	9	0,85	24	6	4	0,1	9000	LNKX 1010/1011	W220	
M748B05004240010LN12	50	1.2 1.3	9	1,0	24	6	4		9000	LNKX1212/1213	W220	
M748B05004240012LN14	50	1,4-1,5	9	1,2	24	6	4		9000	LNKX1414/1415	W220	
M748B05004240014LN16	50	1,6	9	1,4	24	6	4		9000	LNKX1616	W220	
M748B05004240016LN18	50	1,8	9	1,6	24	6	4		9000	LNKX1818	W220	
M748B05004240018LN20	50	2.0-2.5	9	1,75	24	6	4		9000	LNKX2020/2022/2025	W220	
M748B05004240023LN25	50	2.5-2.1	9	2,25	24	6	4		9000	LNKX2525/2527/2530	W220	
M748B05004240027LN30	50	3.0-3.2	9	2,7	24	6	4		9000	LNKX3030/3032/3035	W220	
M748B06006300009LN10	60	1,0-1,1	14	0,85	30	6	6		0,15	9000	LNKX 1010/1011	W220
M748B08008300009LN10	80	1,0-1,1	24	0,85	30	6	8			9000	LNKX 1010/1011	W220
M748B06006300010LN12	60	1.2 1.3	14	1,0	30	6	6			9000	LNKX1212/1213	W220
M748B08008300010LN12	80	1.2 1.3	24	1,0	30	6	8			9000	LNKX1212/1213	W220
M748B06006300012LN14	60	1,4-1,5	14	1,2	30	6	6			9000	LNKX1414/1415	W220
M748B08008300012LN14	80	1,4-1,5	24	1,2	30	6	8			9000	LNKX1414/1415	W220
M748B06006300014LN16	60	1,6	14	1,4	30	6	6			9000	LNKX1616	W220
M748B08008300014LN16	80	1,6	24	1,4	30	6	8			9000	LNKX1616	W220
M748B06006300016LN18	60	1,8	14	1,6	30	6	6	9000		LNKX1818	W220	
M748B08008300016LN18	80	1,8	24	1,6	30	6	8	9000		LNKX1818	W220	
M748B06006300018LN20	60	2.0-2.5	14	1,75	30	6	6	9000		LNKX2020/2022/2025	W220	
M748B08008300018LN20	80	2.0-2.5	24	1,75	30	6	8	9000		LNKX2020/2022/2025	W220	
M748B06006300023LN25	60	2.5-3.0	14	2,25	30	6	6	9000		LNKX2525/2527/2530	W220	
M748B08008300023LN25	80	2.5-3.0	24	2,25	30	6	8	9000		LNKX2525/2527/2530	W220	
M748B06006300027LN30	60	3.0-3.5	14	2,7	30	6	6	9000		LNKX3030/3032/3035	W220	
M748B08008300027LN30	80	3.0-3.5	24	2,7	30	6	8	9000		LNKX3030/3032/3035	W220	

UFG

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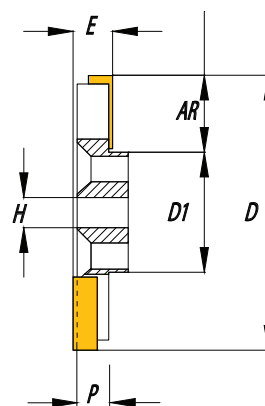
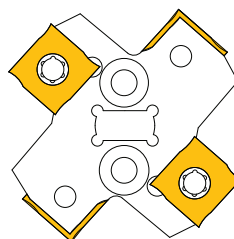
CBN

HSS

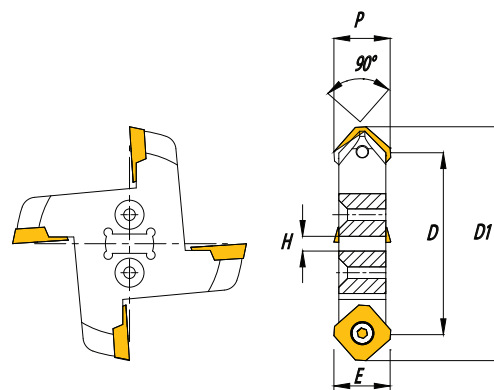
ICT

T-SLOT MILLING CUTTERS FREZY T-OWE

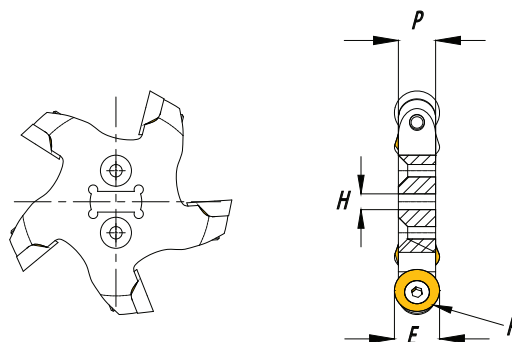
M749



EDP No.	D	E	AR	P	d	H	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M749B05002240034SN11	50	4	11	3,4	24	6	2	0,1	17000	SNEX1102	SC329	W218
M749B05002240042SN11	50	5	11	4,2	24	6	2		17000	SNEX1103	SC330	W254
M749B05002240050SN12	50	6	11	5,0	24	6	2		17000	SNEX1203	SC482	W249
M749B05002240060SN12	50	7	11	6,0	24	6	2		17000	SNEX1204	SC478	W249
M749B05002240070SN12	50	8	11	7,0	24	6	2		17000	SNEX12045	SC479	W249
M749B05002240090SN12	50	10	11	9,0	24	6	2	0,15	17000	SNEX1205	SC480	W249
M749B05002240110SN12	50	12	11	11	24	6	2		17000	SNEX1207	SC481	W249
M749B06003300034SN11	60	4	14	3,4	30	6	3	0,1	15000	SNEX1102	SC329	W218
M749B08004300034SN11	80	4	24	3,4	30	6	4	0,15	13700	SNEX1102	SC329	W218
M749B06003300042SN11	60	5	14	4,2	30	6	3	0,1	15000	SNEX1103	SC330	W254
M749B08004300042SN11	80	5	24	4,2	30	6	4	0,15	13700	SNEX1103	SC330	W254
M749B06003300050SN11	60	6	14	5,0	30	6	3	0,1	15000	SNEX1103	SC482	W249
M749B08004300050SN11	80	6	24	5,0	30	6	4	0,15	13700	SNEX1103	SC482	W249
M749B06003300060SN12	60	7	14	6,0	30	6	3	0,1	15000	SNEX1204	SC478	W249
M749B08004300060SN12	80	7	24	6,0	30	6	4	0,15	13700	SNEX1204	SC478	W249
M749B06003300070SN12	60	8	14	7,0	30	6	3	0,1	15000	SNEX12045	SC479	W249
M749B08004300070SN12	80	8	24	7,0	30	6	4	0,15	13700	SNEX12045	SC479	W249
M749B06003300090SN12	60	10	14	9,0	30	6	3	0,1	15000	SNEX1205	SC480	W249
M749B08004300090SN12	80	10	24	9,0	30	6	4	0,15	13700	SNEX1205	SC480	W249
M749B06003300110SN12	60	12	14	11	30	6	3	0,1	15000	SNEX1207	SC481	W249
M749B08004300110SN12	80	12	24	11	30	6	4	0,15	13700	SNEX1207	SC481	W249

T-SLOT MILLING CHAMFER CUTERS FREZY T-OWE
M747


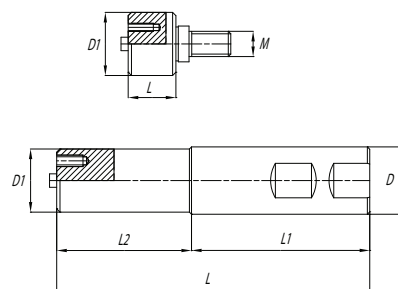
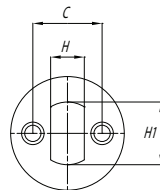
EDP No.	D	E	P	d	H	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M747B0600576160SE13	60	16	13	76	6	5	0,3	11000	SEHT 13T3	W249	SR232
M747B0800696160SE13	80	16	13	96	6	6	0,4	8500	SEHT 13T3	W249	SR232

T-SLOT MILLING HALF-ROUND GROOVE CUTERS FREZY T-OWE
M750


EDP No.	D	E	P	d	H	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M750B06006062RD80	60	8	6,2	6	6	6	0.3	13000	RDNW803	SC473	W254
M750B08008062RD80	80	8	6,2	6	6	8	0.4	11000	RDNW803	SC473	W254
M750B06004080RD10	60	10	8,0	6	6	4	0.35	13000	RDKT10T3	SC474	W218
M750B08006080RD10	80	10	8,0	6	6	6	0.5	11000	RDKT10T3	SC474	W218
M750B06004100RP12	60	12	10	6	6	4	0.5	9500	RPKT1204	SC475	W249
M750B08006100RP12	80	12	10	6	6	6	0.6	9000	RPKT1204	SC475	W249

ALTERNATIVE HOLDERS UCHWYT ALTERNATYWNY

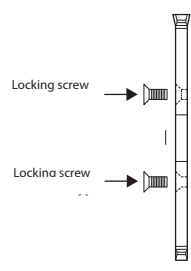
HLR



Weldon

EDP No.	D	d1	L	L1	L2	C	H	H1	B	M
HLR02524040	25	24	40	63	37	17	6	12	5	12
HLR02523100	25	23	100							12
HLR02531040	25	31	40							16
HLR03230100	32	30	100							16

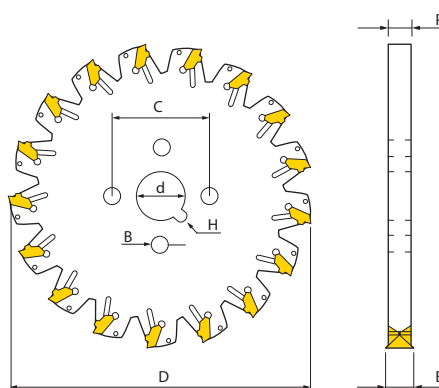
Holders Uchwyty	Screw Śruba
M748B05004240009LN10 - M748B05004240027LN30	SC459
M749B05002240034SN11 - M749B05002240050SN12	SC460
M749B05002240060SN12 - M749B05002240110SN12	SC461
M748B06006300009LN10 - M748B06006300027LN30	SC459
M748B08008300009LN10 - M748B08008300027LN30	
M749B06003300034SN11 - M749B06003300050SN11	SC460
M749B08004300034SN11 - M749B08004300050SN11	
M749B06003300060SN12 - M749B06003300110SN12	SC461
M749B08004300060SN12 - M749B08004300110SN12	
M747B06005760130SE13 - M747B08006960130SE13	SC461
M750B06006600000RD80 - M750B08008600000RD80	SC462
M750B06004600000RD10 - M750B08006600000RD10	
M750B06004600000RD12 - M750B08006600000RD12	SC461



UFG
UFX
UFJ
UFD
UFA
UFC
PMT
RB
CBN
HSS
ICT

T-SLOT MILLING CUTTERS FREZY T-OWE

M715



EDP No.	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Wrench Klucz
M715B08000220009LN10	80	1.0 - 1.1	0.85	22	34	4.5	8	6	0.15	8000	LNKX 1010-1011	W220
M715B08000220010LN12	80	1.2 - 1.3	1.0	22	34	4.5	8	6	0.15	8000	LNKX 1212-1213	W220
M715B08000220012LN14	80	1.4 - 1.5	1.2	22	34	4.5	8	6	0.15	8000	LNKX 1414-1415	W220
M715B08000220014LN16	80	1.6	1.4	22	34	4.5	8	6	0.15	8000	LNKX 1616	W220
M715B08000220016LN18	80	1.8	1.6	22	34	4.5	8	6	0.15	8000	LNKX 1818	W220
M715B08000220018LN20	80	2.0 - 2.2 - 2.5	1.75	22	34	4.5	8	6	0.15	8000	LNKX 2020-2022-2025	W220
M715B08000220023LN25	80	2.5 - 2.7 - 3.0	2.25	22	34	4.5	8	6	0.15	8000	LNKX 2525-2527-2530	W220
M715B08000220027LN30	80	3.0 - 3.2 - 3.5	2.7	22	34	4.5	8	6	0.17	8000	LNKX 3030-3032-3035	W220
M715B08000220037LN40	80	4.0 - 4.2 - 4.5	3.7	22	34	4.5	8	6	0.2	8000	LNKX 4040-4042-4045	W220
M715B08000220045LN50	80	5.0 - 5.2 - 5.5	4.5	22	34	4.5	8	6	0.22	8000	LNKX 5050-5052-5055	W220
M715B10000220009LN10	100	1.0 - 1.1	0.85	22	34	4.5	10	6	0.15	6300	LNKX 1010-1011	W220
M715B10000220010LN12	100	1.2 - 1.3	1.0	22	34	4.5	10	6	0.15	6300	LNKX 1212-1213	W220
M715B10000220012LN14	100	1.4 - 1.5	1.2	22	34	4.5	10	6	0.15	6300	LNKX 1414-1415	W220
M715B10000220014LN16	100	1.6	1.4	22	34	4.5	10	6	0.15	6300	LNKX 1616	W220
M715B10000220016LN18	100	1.8	1.6	22	34	4.5	10	6	0.15	6300	LNKX 1818	W220
M715B10000220018LN20	100	2.0 2.2 2.5	1.75	22	34	4.5	10	6	0.15	6300	LNKX 2020-2022-2025	W220
M715B10000220023LN25	100	2.5 2.7 3.0	2.25	22	34	4.5	10	6	0.15	6300	LNKX 2525-2527-2530	W220
M715B10000220027LN30	100	3.0 3.2 3.5	2.7	22	34	4.5	10	6	0.17	6300	LNKX 3030-3032-3035	W220
M715B10000220037LN40	100	4.0 4.2 4.5	3.7	22	34	4.5	10	6	0.2	6300	LNKX 4040-4042-4045	W220
M715B10000220045LN50	100	5.0 5.2 5.5	4.5	22	34	4.5	10	6	0.22	6300	LNKX 5050-5052-5055	W220
M715B12500320009LN10	125	1.0 1.1	0.85	32	44	5.5	12	6	0.2	5000	LNKX 1010-1011	W220
M715B12500320010LN12	125	1.2 1.3	1.0	32	44	5.5	12	6	0.2	5000	LNKX 1212-1213	W220
M715B12500320012LN14	125	1.4 1.5	1.2	32	44	5.5	12	6	0.2	5000	LNKX 1414-1415	W220
M715B12500320014LN16	125	1.6	1.4	32	44	5.5	12	6	0.2	5000	LNKX 1616	W220
M715B12500320016LN18	125	1.8	1.6	32	44	5.5	12	6	0.2	5000	LNKX 1818	W220
M715B12500320018LN20	125	2.0 2.2 2.5	1.75	32	44	5.5	12	6	0.2	5000	LNKX 2020-2022-2025	W220
M715B12500320023LN25	125	2.5 2.7 3.0	2.25	32	44	5.5	12	6	0.2	5000	LNKX 2525-2527-2530	W220
M715B12500320027LN30	125	3.0 3.2 3.5	2.7	32	44	5.5	12	6	0.22	5000	LNKX 3030-3032-3035	W220
M715B12500320037LN40	125	4.0 4.2 4.5	3.7	32	44	5.5	12	6	0.25	5000	LNKX 4040-4042-4045	W220

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

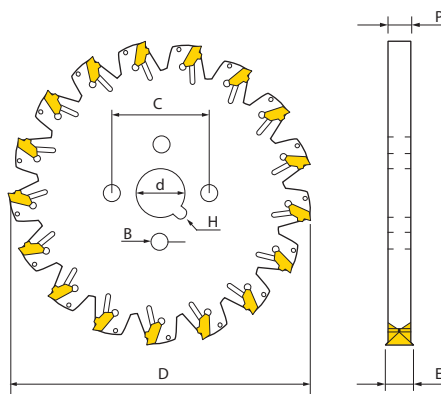
CBN

HSS

ICT

T-SLOT MILLING CUTTERS FREZY T-OWE

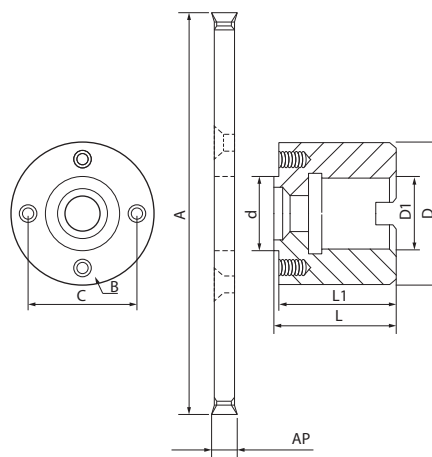
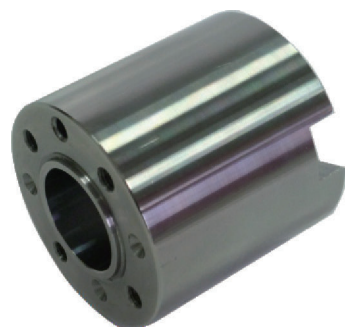
M715



EDP No.	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Wrench Klucz
M715B12500320045LN50	125	5.0 5.2 5.5	4.5	32	44	5.5	12	6	0.3	5000	LNKX 5050-5052-5055	W220
M715B16000320012LN14	160	1.4 1.5	1.2	32	44	5.5	16	6	0.28	4000	LNKX 1414-1415	W220
M715B16000320014LN16	160	1.6	1.4	32	44	5.5	16	6	0.28	4000	LNKX 1616	W220
M715B16000320016LN18	160	1.8	1.6	32	44	5.5	16	6	0.28	4000	LNKX 1818	W220
M715B16000320018LN20	160	2.0 2.2 2.5	1.75	32	44	5.5	16	6	0.28	4000	LNKX 2020-2022-2025	W220
M715B16000320023LN25	160	2.5 2.7 3.0	2.25	32	44	5.5	16	6	0.28	4000	LNKX 2525-2527-2530	W220
M715B16000320027LN30	160	3.0 3.2 3.5	2.7	32	44	5.5	16	6	0.30	4000	LNKX 3030-3032-3035	W220
M715B16000320037LN40	160	4.0 4.2 4.5	3.7	32	44	5.5	16	6	0.35	4000	LNKX 4040-4042-4045	W220
M715B16000320045LN50	160	5.0 5.2 5.5	4.5	32	44	5.5	16	6	0.38	4000	LNKX 5050-5052-5055	W220

DISC MILLING CUTTERS HOLDER UCHWYTY FREZARSKIE Dyskowe

DM



EDP No.	D	D1	d	C	B	L	L1	A	Screw Śruba	KG	ap
DM04202222	42	22	22	34	4	41	40	80 100	SC321	0.4	1-2 mm
DM04225422	55	32	32	44	5	41	40	125 160	SC322	0.55	1-2 mm
DM05503232	42	22	22	34	4	42.5	40	80 100	SC321	0.4	2,5-5 mm
DM05531732	55	32	32	44	5	42.5	40	125 160	SC322	0.55	2,5-5 mm

Spare parts Części zamienne

For Do	For Do	Screw Śruba	Arbor screw Śruba osiowa
DMM04202222	DMM04225422	SC321	SC323
DMM05503232	DMM05531732	SC321	SC324

Locking screw Śruba blokująca →

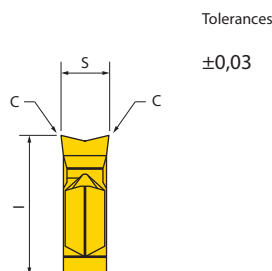
Arbor screw Śruba osiowa →



Locking screw Śruba blokująca →

INSERT PŁYTKI

Milling Inserts Płytki do frezowania

LNKX



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated			
			S	I	C	P322	P323	P324	P326	P327	P329				
 C320		LNKX 1616 C320	1.6	9	0.03			•							
		LNKX 1818 C320	1.8	9	0.03			•							
		LNKX 2020 C320	2.0	9	0.03			•							
		LNKX 2022 C320	2.2	9	0.03			•							
		LNKX 2025 C320	2.5	9	0.03			•							
		LNKX 2525 C320	2.5	9	0.05			•							
		LNKX 2527 C320	2.7	9	0.05			•							
		LNKX 2530 C320	3.0	9	0.05			•							
		LNKX 3030 C320	3.0	9	0.05			•							
		LNKX 3032 C320	3.2	9	0.05			•							
		LNKX 3035 C320	3.5	9	0.05			•							
		LNKX 4040 C320	4.0	9	0.05			•							
		LNKX 4042 C320	4.2	9	0.05			•							
		LNKX 4045 C320	4.5	9	0.05			•							
		LNKX 5050 C320	5.0	9	0.05			•							
LNKX 5052 C320	5.2	9	0.05			•									
LNKX 5055 C320	5.5	9	0.05			•									

Material Material

Wood Drewno
Calcium Silicate Płyta gipsowa
Gypsum Gips
Bakelite Bakelit

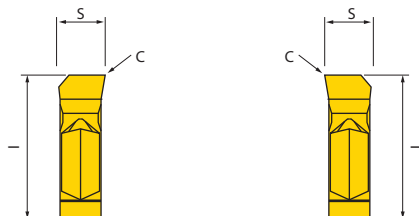
INSERT PŁYTKI




Milling Inserts Płytki do frezowania

LNKX

Tolerances

±0,03



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated				
			S	I	C	P322	P323	P324	P326	P327	P329					
 C321		LNKX 1010 C321	1.0	9	0.03			•								
		LNKX 1011 C321	1.1	9	0.03			•								
		LNKX 1212 C321	1.2	9	0.03			•								
		LNKX 1213 C321	1.3	9	0.03			•								
		LNKX 1414 C321	1.4	9	0.03			•								
		LNKX 1415 C321	1.5	9	0.03			•								
		LNKX 1616 C321	1.6	9	0.03			•								
		LNKX 1818 C321	1.8	9	0.03			•								
 C322		LNKX 1010 C322	1.0	9	0.03			•								
		LNKX 1011 C322	1.1	9	0.03			•								
		LNKX 1212 C322	1.2	9	0.03			•								
		LNKX 1213 C322	1.3	9	0.03			•								
		LNKX 1414 C322	1.4	9	0.03			•								
		LNKX 1415 C322	1.5	9	0.03			•								
		LNKX 1616 C322	1.6	9	0.03			•								
		LNKX 1818 C322	1.8	9	0.03			•								

Material Materiał

Wood Drewno	Copper Miedź
Aluminium Aluminium	Copper pipe Miedziana rura
Aluminium pipe Rury aluminium	
Bakelite Bakelit	
Bakelite pipe	
Acrylic Akryl	
Plastic Plastik	
Plastic pipe Plastikowa rura	
Paper Papier	
Draperies Draperia	



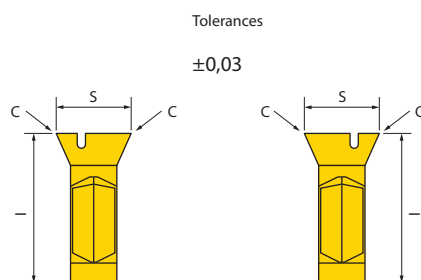
A For over 1mm pipe cut

UFG
UFX
UFJ
UFD
UFA
UFC
PMT
RB
CBN
HSS
ICT

INSERT PŁYTKI

Milling Inserts Płytki do frezowania

LNKX



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated			
			S	I	C	P322	P323	P324	P326			P327	P329		
 C321		LNKX 2020 C321	2.0	9	0.05				•				•		
		LNKX 2022 C321	2.2	9	0.05				•				•		
		LNKX 2025 C321	2.5	9	0.05				•				•		
		LNKX 2525 C321	2.5	9	0.05				•				•		
		LNKX 2527 C321	2.7	9	0.05				•				•		
		LNKX 2530 C321	3.0	9	0.05				•				•		
		LNKX 3030 C321	3.0	9	0.05				•				•		
		LNKX 3032 C321	3.2	9	0.05				•				•		
		LNKX 3035 C321	3.5	9	0.05				•				•		
		LNKX 4040 C321	4.0	9	0.05				•				•		
		LNKX 4042 C321	4.2	9	0.05				•				•		
		LNKX 4045 C321	4.5	9	0.05				•				•		
		LNKX 5050 C321	5.0	9	0.05				•				•		
LNKX 5052 C321	5.2	9	0.05				•				•				
LNKX 5055 C321	5.5	9	0.05				•				•				
 C322		LNKX 2020 C322	2.0	9	0.05				•				•		
		LNKX 2022 C322	2.2	9	0.05				•				•		
		LNKX 2025 C322	2.5	9	0.05				•				•		
		LNKX 2525 C322	2.5	9	0.05				•				•		
		LNKX 2527 C322	2.7	9	0.05				•				•		
		LNKX 2530 C322	3.0	9	0.05				•				•		
		LNKX 3030 C322	3.0	9	0.05				•				•		
		LNKX 3032 C322	3.2	9	0.05				•				•		
		LNKX 3035 C322	3.5	9	0.05				•				•		
		LNKX 4040 C322	4.0	9	0.05				•				•		
		LNKX 4042 C322	4.2	9	0.05				•				•		
		LNKX 4045 C322	4.5	9	0.05				•				•		
		LNKX 5050 C322	5.0	9	0.05				•				•		
LNKX 5052 C322	5.2	9	0.05				•				•				
LNKX 5055 C322	5.5	9	0.05				•				•				

Material Materiał

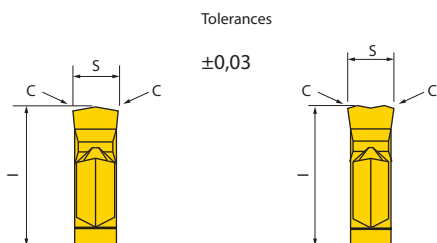
Wood Drewno	Plastic pipe Plastikowa rura
Aluminium Aluminium	Paper Papier
Aluminium pipe Rury aluminium	Draperies Draperia
Bakelite Bakelit	Copper Miedź
Bakelite pipe	Copper pipe Miedziana rura
Acrylic Akryl	
Plastic Plastik	


 A For over 1mm pipe cut
Cięcie rury o grubości powyżej 1mm

INSERT PŁYTKI

Milling Inserts Płytki do frezowania

LNKX



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated			
			S	I	C	P322	P323	P324	P326			P327	P329		
 C394		LNKX 2020 C394	2.0	9	0.05				•						
		LNKX 2025 C394	2.5	9	0.05				•						
		LNKX 2530 C394	3.0	9	0.05				•						
		LNKX 4040 C394	4.0	9	0.05				•						
		LNKX 5050 C394	5.0	9	0.05				•						
 C324		LNKX 2020 C324	2.0	9	0.05				•						
		LNKX 2025 C324	2.5	9	0.05				•						
		LNKX 2530 C324	3.0	9	0.05				•						
		LNKX 4040 C324	4.0	9	0.05				•						
		LNKX 5050 C324	5.0	9	0.05				•						

Material Materiał

Stainless steel Stal nierdzewna
Stainless steel pipe Rura ze stali nierdzewnej
Difficult cutting material Trudno obrabialne materiały



A For over 1mm pipe cut

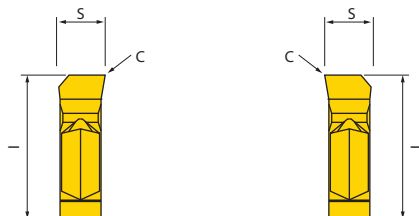
INSERT PYTKI




Milling Inserts Płytki do frezowania

LNKX

Tolerances

±0,03



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated					
			S	I	C	P322	P323	P324	P326			P327	P329				
 C325		LNKX 1010 C325	1.0	9	0.03				•								
		LNKX 1011 C325	1.1	9	0.03				•								
		LNKX 1212 C325	1.2	9	0.03				•								
		LNKX 1213 C325	1.3	9	0.03				•								
		LNKX 1414 C325	1.4	9	0.03				•								
		LNKX 1415 C325	1.5	9	0.03				•								
		LNKX 1616 C325	1.6	9	0.03				•								
		LNKX 1818 C325	1.8	9	0.03				•								
 C326		LNKX 1010 C326	1.0	9	0.03				•								
		LNKX 1011 C326	1.1	9	0.03				•								
		LNKX 1212 C326	1.2	9	0.03				•								
		LNKX 1213 C326	1.3	9	0.03				•								
		LNKX 1414 C326	1.4	9	0.03				•								
		LNKX 1415 C326	1.5	9	0.03				•								
		LNKX 1616 C326	1.6	9	0.03				•								
		LNKX 1818 C326	1.8	9	0.03				•								

Material Materiał

Steel Stal
Stainless steel Stal nierdzewna
Cast Iron Żeliwo
Difficult cutting material Trudno obrabialne materiały

UFG
UFX
UFJ
UFD
UFA
UFC
PMT
RB
CBN
HSS
ICT

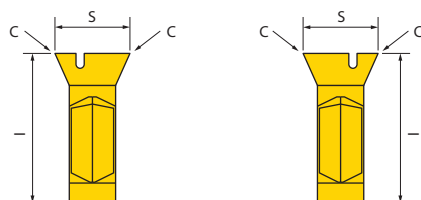
INSERT PYTKI

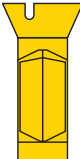

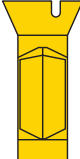

Milling Inserts Płytki do frezowania

LNKX

Tolerances

±0,03



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated			
			S	I	C	P322	P323	P324	P326			P327	P329		
 C421		LNKX 2020 C412	2.0	9	0.05			•	•						
		LNKX 2022 C412	2.2	9	0.05			•	•						
		LNKX 2025 C412	2.5	9	0.05			•	•						
		LNKX 2525 C412	2.5	9	0.05			•	•						
		LNKX 2527 C412	2.7	9	0.05			•	•						
		LNKX 2530 C412	3.0	9	0.05			•	•						
		LNKX 3030 C412	3.0	9	0.05			•	•						
		LNKX 3032 C412	3.2	9	0.05			•	•						
		LNKX 3035 C412	3.5	9	0.05			•	•						
		LNKX 4040 C412	4.0	9	0.05			•	•						
		LNKX 4042 C412	4.2	9	0.05			•	•						
		LNKX 4045 C412	4.5	9	0.05			•	•						
		LNKX 5050 C412	5.0	9	0.05			•	•						
		LNKX 5052 C412	5.2	9	0.05			•	•						
LNKX 5055 C412	5.5	9	0.05			•	•								
 C414		LNKX 2020 C414	2.0	9	0.05			•	•						
		LNKX 2022 C414	2.2	9	0.05			•	•						
		LNKX 2025 C414	2.5	9	0.05			•	•						
		LNKX 2525 C414	2.5	9	0.05			•	•						
		LNKX 2527 C414	2.7	9	0.05			•	•						
		LNKX 2530 C414	3.0	9	0.05			•	•						
		LNKX 3030 C414	3.0	9	0.05			•	•						
		LNKX 3032 C414	3.2	9	0.05			•	•						
		LNKX 3035 C414	3.5	9	0.05			•	•						
		LNKX 4040 C414	4.0	9	0.05			•	•						
		LNKX 4042 C414	4.2	9	0.05			•	•						
		LNKX 4045 C414	4.5	9	0.05			•	•						
		LNKX 5050 C414	5.0	9	0.05			•	•						
		LNKX 5052 C414	5.2	9	0.05			•	•						
LNKX 5055 C414	5.5	9	0.05			•	•								

Material Materiał

Steel Stal Stal
Steel pipe Stalowa rura
Stainless steel Stal nierdzewna
Stainless steel pipe Rura ze stali nierdzewnej
Cast Iron Żeliwo
Difficult cutting material Trudno obrabialne materiały



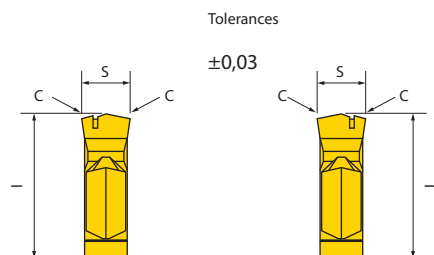
A For over 1mm pipe cut


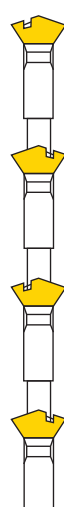

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INSERT PYTKI

Milling Inserts Płytki do frezowania

LNKX



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated			
			S	I	C	P322	P323	P324	P326			P327	P329		
 C327		LNKX 2020 C327	2.0	9	0.05				•						
		LNKX 2022 C327	2.2	9	0.05				•						
		LNKX 2025 C327	2.5	9	0.05				•						
		LNKX 2525 C327	2.5	9	0.05				•						
		LNKX 2527 C327	2.7	9	0.05				•						
		LNKX 2530 C327	3.0	9	0.05				•						
		LNKX 3030 C327	3.0	9	0.05				•						
		LNKX 3032 C327	3.2	9	0.05				•						
		LNKX 3035 C327	3.5	9	0.05				•						
		LNKX 4040 C327	4.0	9	0.05				•						
		LNKX 4042 C327	4.2	9	0.05				•						
		LNKX 4045 C327	4.5	9	0.05				•						
		LNKX 5050 C327	5.0	9	0.05				•						
		LNKX 5052 C327	5.2	9	0.05				•						
LNKX 5055 C327		5.5	9	0.05				•							
 C328		LNKX 2020 C328	2.0	9	0.05				•						
		LNKX 2022 C328	2.2	9	0.05				•						
		LNKX 2025 C328	2.5	9	0.05				•						
		LNKX 2525 C328	2.5	9	0.05				•						
		LNKX 2527 C328	2.7	9	0.05				•						
		LNKX 2530 C328	3.0	9	0.05				•						
		LNKX 3030 C328	3.0	9	0.05				•						
		LNKX 3032 C328	3.2	9	0.05				•						
		LNKX 3035 C328	3.5	9	0.05				•						
		LNKX 4040 C328	4.0	9	0.05				•						
		LNKX 4042 C328	4.2	9	0.05				•						
		LNKX 4045 C328	4.5	9	0.05				•						
		LNKX 5050 C328	5.0	9	0.05				•						
		LNKX 5052 C328	5.2	9	0.05				•						
		LNKX 5055 C328	5.5	9	0.05				•						

Material Material

Steel Stal
Steel pipe Stalowa rura
Stainless steel Stal nierdzewna
Stainless steel pipe Rura ze stali nierdzewnej
Cast Iron Żeliwo
Difficult cutting material Trudno obrabialne materiały



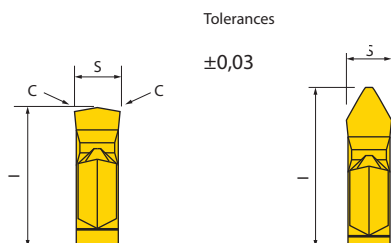
A For over 5mm pipe cut


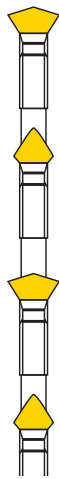

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INSERT PYTKI

Milling Inserts Płytki do frezowania

LNKX



Insert shape Kształt płytki	Insert arrangement Układ płytek	Type Typ	Dimensions Wymiary (mm)			Coating				Cermet		Uncoated			
			S	L	C	P322	P323	P324	P326	P327	P329				
 C323		LNKX 2020 C323	2.0	9	0.05				•						
		LNKX 2022 C323	2.2	9	0.05				•						
		LNKX 2025 C323	2.5	9	0.05				•						
		LNKX 2525 C323	2.5	9	0.05				•						
		LNKX 2527 C323	2.7	9	0.05				•						
		LNKX 2530 C323	3.0	9	0.05				•						
 C330		LNKX 2020 C330	2.0	9	0.05				•						
		LNKX 2022 C330	2.2	9	0.05				•						
		LNKX 2025 C330	2.5	9	0.05				•						
		LNKX 2525 C330	2.5	9	0.05				•						
		LNKX 2527 C330	2.7	9	0.05				•						
		LNKX 2530 C330	3.0	9	0.05				•						

Material Materiał

Steel pipe Stalowa rura Rura stalowa
Stainless steel pipe Rura ze stali nierdzewnej
Difficult cutting material Trudno obrabialne materiały



A For over 5mm pipe cut

TECHNICAL INFO INFORMACJA TECHNICZNA

Series Seria - LNKX				
Material Materiał	Material group No.	Recom. feed fz mm/tooth ae/ Dc=10%	LNKX-C326	LNKX-C332
Steel Stal	1	0.04-0.12	P323/P326	
	2	0.04-0.10	P323/P326	
	3	0.04-0.10	P323/P326	
	4	0.04-0.10	P323/P326	
	5	0.04-0.08	P323/P326	
	6	0.04-0.07	P323/P326	
Hardened Steel Stal hartowana	7	0.03-0.06	P323/P326	
Stainless Steel Stal nierdzewna	8	0.04-0.12	P323/P326	
	9	0.04-0.10	P323/P326	
	10	0.04-0.09	P323/P326	
	11	0.04-0.08	P323/P326	
Cast Iron Żeliwo	12	0.04-0.12	P327/P324	
	13	0.04-0.12	P327/P324	
	14	0.04-0.11	P327/P324	
	15	0.04-0.10	P327/P324	
Non-ferrous materials Materiały nieżelazne	16	0.06-0.13		P324
	17	0.06-0.12		P324
Plastics Tworzywa Sztuczne	20	0.06-0.08	P323/P326	
	21	0.04-0.06	P323/P326	
	22	0.04-0.07	P323/P326	

TECHNICAL INFO INFORMACJA TECHNICZNA

Cutting Conditions / Parametry skrawania (ae/De=10%)

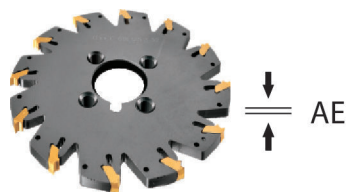
Material Material	Group № N° Grup	Grade Gatunek															
		P321			P323			P324			P326			P329			
		Vc (m/min)															
Steel Stal	1	-	-	-	-	-	-	-	-	-	-	179	161	140	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	140	126	113	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	126	113	102	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	112	102	91	-	-	-
	5	-	-	-	-	-	-	-	-	-	-	101	91	81	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	91	-	-	-	-	-
Hardened Steel Stal hartowana	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stainless Steel Stal nierdzewna	8	-	-	-	-	-	-	-	-	-	128	109	99	-	-	-	-
	9	-	-	-	-	-	-	-	-	-	112	96	86	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	96	80	74	-	-	-	-
	11	-	-	-	-	-	-	-	-	-	74	64	-	-	-	-	-
Cast Iron Żeliwo	12	-	-	-	-	-	-	140	119	105	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	126	105	98	-	-	-	-	-	-	-
	14	-	-	-	-	-	-	112	98	91	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	88	81	-	-	-	-	-	-	-	-
Non-ferrous materials Materiały nieżelazne	16	-	-	-	-	-	-	1150	950	850	-	-	-	1150	950	850	-
	17	-	-	-	-	-	-	950	780	700	-	-	-	950	750	700	-
Plastics Tworzywa Sztuczne	20	-	-	-	-	-	-	30	25	-	50	45	-	-	-	-	-
	21	-	-	-	-	-	-	20	15	-	35	40	-	-	-	-	-
	22	-	-	-	-	-	-	30	25	-	50	45	-	-	-	-	-

Cutting Conditions / Parametry skrawania

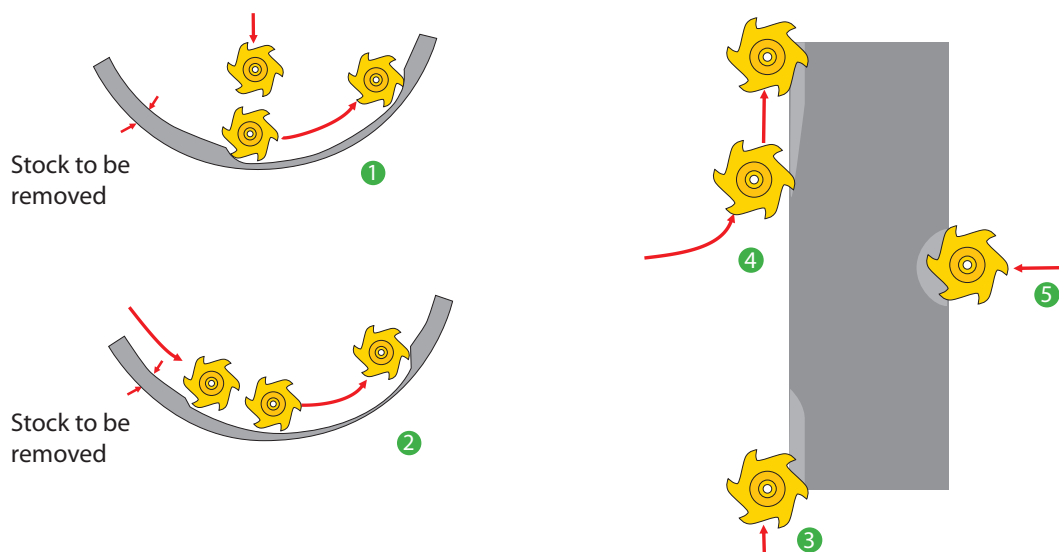
Operations Operacje	ae/De	fz mm/tooth			Speed factor Współczynnik prędkości
Radial infeed Zagłębianie	-	0,05	0,10	0,14	0,65
Side milling Frezowanie boczne	2%	0,21	0,44	0,65	1,20
	5%	0,14	0,28	0,41	1,10
	10%	0,10	0,20	0,30	1,00
	20%	0,07	0,14	0,21	0,90
	30%	0,06	0,12	0,18	0,85
Average chip thickness hm Średni przekrój wióra		0,03	0,06	0,09	-

TECHNICAL INFO INFORMACJA TECHNICZNA

fz (mm/tooth)



AE	Feed Posuw fz					
	Material group Grupa materiału					
	1 2 3 4	5 6	8 9 10 11	12 13 14 15	16 17	20 21 22
1.0-1.3mm	0.015-0.025	0.015-0.02	0.015-0.02	0.02-0.03	0.01-0.03	0.01-0.015
1.4-1.7mm	0.02-0.03	0.015-0.025	0.02-0.03	0.02-0.04	0.02-0.04	0.015-0.025
1.8-2.2mm	0.03-0.05	0.03-0.04	0.02-0.03	0.03-0.06	0.03-0.08	0.02-0.03
2.5-3.0mm	0.03-0.06	0.03-0.05	0.03-0.05	0.03-0.08	0.03-0.1	0.03-0.04
3.0-3.5mm	0.04-0.08	0.03-0.06	0.03-0.06	0.04-0.1	0.04-0.1	0.03-0.05
4.0-4.5mm	0.04-0.08	0.03-0.06	0.03-0.06	0.04-0.1	0.04-0.1	0.03-0.05
5.0-5.5mm	0.05-0.1	0.04-0.08	0.04-0.07	0.05-0.12	0.05-0.17	0.04-0.06



1. Plugging to mill Fz-50%
2. Ramping to mill Fz-100%
3. Mill Fz-100%
4. Ramping Fz-100%
5. Plugging o mill Fz-50%

TECHNICAL INFO INFORMACJA TECHNICZNA

SAW BLADE FREZ TARCZOWY								
Material Materiał	Group № N° Grup	D [mm]	Z	Vc [m/min]	fz [mm]	[mm]	RPM [min1]	FEED [mm/ min]
Alloy Steel Stal stopowa	1 2 3 4	80	8	160	0.06	12	636	305
		100	10	160	0.06	15	509	305
		125	12	160	0.06	18	407	293
		160	16	160	0.06	24	318	305
		200	20	160	0.06	30	255	306
		250	26	160	0.06	37	203	316
		300	30	160	0.06	45	170	306
		350	36	160	0.06	52	145	313
		400	40	160	0.06	60	127	305
High Alloy Steel Stal wysokosto- powa	5 6	80	8	120	0.05	12	500	200
		100	10	120	0.05	15	400	200
		125	12	120	0.05	18	320	230
		160	16	120	0.05	24	250	200
		200	20	120	0.05	30	200	200
		250	26	120	0.05	37	160	208
		300	30	120	0.05	45	130	195
		350	36	120	0.05	52	115	207
		400	40	120	0.05	60	100	200
Stainless steel Stal nierdzewna	8 9 10	80	8	70	0.06	12	278	133
		100	10	70	0.06	15	222	133
		125	12	70	0.06	18	178	128
		160	16	70	0.06	24	139	133
		200	20	70	0.06	30	111	133
		250	26	70	0.06	37	89	138
		300	30	70	0.06	45	74	133
		350	36	70	0.06	52	63	136
		400	40	70	0.06	60	55	132
Grey Cast Iron Żeliwo szare	12 13 14	80	8	120	0.1	12	500	400
		100	10	120	0.1	15	400	400
		125	12	120	0.1	18	320	380
		160	16	120	0.1	24	250	400
		200	20	120	0.1	30	200	400
		250	26	120	0.1	37	160	410
		300	30	120	0.1	45	130	390
		350	36	120	0.1	52	110	390
		400	40	120	0.1	60	100	400
450	46	120	0.1	67	85	390		

UFG

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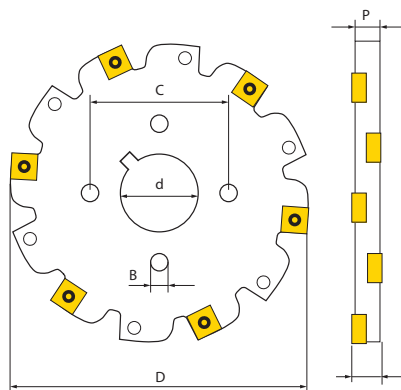
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TECHNICAL INFO INFORMACJA TECHNICZNA

SAW BLADE FREZ TARCZOWY								
Material Materiał	Group № N° Grup	D [mm]	Z	Vc [m/min]	fz [mm]	[mm]	RPM [min1]	FEED [mm/ min]
Aluminium Aluminium	16 17	80	8	1100	0.1	12	4500	3600
		100	10	1100	0.1	15	3600	3600
		125	12	1100	0.1	18	2900	3480
		160	16	1100	0.1	24	2500	4000
		200	20	1100	0.1	30	1800	3600
		250	26	1100	0.1	37	1400	3600
		300	30	1100	0.1	45	1210	3630
		350	36	1100	0.1	52	1030	3700
		400	40	1100	0.1	60	910	3640
		450	46	1100	0.1	67	810	3720
Ti alloy Stop tytanu	20 21 22	80	8	40	0.05	12	160	64
		100	10	40	0.05	15	130	65
		125	12	40	0.05	18	105	63
		160	16	40	0.05	24	82	65
		200	20	40	0.05	30	65	65
		250	26	40	0.05	37	52	67
		300	30	40	0.05	45	43	64
		350	36	40	0.05	52	38	68
		400	40	40	0.05	60	33	66
		450	46	40	0.05	67	29	66
Wood Drewno		80	8	1600	0.12	12	6500	6800
		100	10	1600	0.12	15	5300	6300
		125	12	1600	0.12	18	4250	6100
		160	16	1600	0.12	24	3320	6350
		200	20	1600	0.12	30	2650	6300
		250	26	1600	0.12	37	2100	6500
		300	30	1600	0.12	45	1750	6300
		350	36	1600	0.12	52	1510	6500
		400	40	1600	0.12	60	1320	6300
		450	46	1600	0.12	67	1160	6400
Plastics Tworzywa Sztuczne		80	8	1800	0.1	12	7500	6000
		100	10	1800	0.1	15	6000	6000
		125	12	1800	0.1	18	4800	5760
		160	16	1800	0.1	24	3750	6000
		200	20	1800	0.1	30	3000	6000
		250	26	1800	0.1	37	2400	6240
		300	30	1800	0.1	45	2000	6000
		350	36	1800	0.1	52	1700	6120
		400	40	1800	0.1	60	1500	6000
		450	46	1800	0.1	67	1320	6000

T-SLOT MILLING CUTTERS FREZY T-OWE

M718



EDP No.	D	E	P	d	C	B	Z	H	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M718B0800822003SN11	80	4	3.4	22	34	4.5	8	6	0.2	13700	SNEX 1102	SC329	W218
M718B0800822004SN11	80	5	4.2	22	34	4.5	8	6	0.2	13700	SNEX 1103	SC330	W254
M718B1001022003SN11	100	4	3.4	22	34	4.5	10	6	0.5	12000	SNEX 1102	SC329	W218
M718B1001022004SN11	100	5	4.2	22	34	4.5	10	6	0.5	12000	SNEX 1103	SC330	W254
M718B1251232003SN11	125	4	3.4	32	44	5.5	12	6	0.6	10900	SNEX 1102	SC329	W218
M718B1251232004SN11	125	5	4.2	32	44	5.5	12	6	0.6	10900	SNEX 1103	SC330	W254
M718B1601632003SN11	160	4	3.4	32	44	5.5	16	6	0.7	8300	SNEX 1102	SC329	W218
M718B1601632004SN11	160	5	4.2	32	44	5.5	16	6	0.7	8300	SNEX 1103	SC330	W254

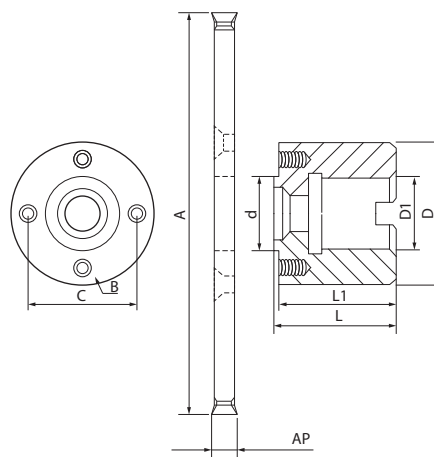
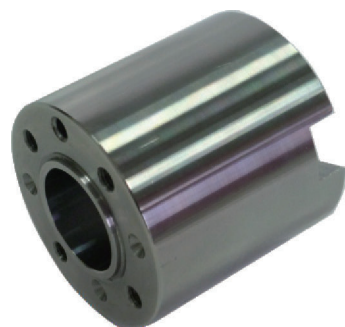
Accessories / Akcesoria

Tool Narzędzie	Insert Płytki	Screw Śruba	Wrench Klucz					
M718	LNKT 1102	SC329	W218					
	LNKT 1103	SC330	W218					

UFG
UFX
UFJ
UFD
UFA
UFC
PMT
RB
CBN
HSS
ICT

DISC MILLING CUTTERS HOLDER UCHWYTY FREZARSKIE DYSKOWE

DM



EDP No.	D	D1	d	C	B	L	L1	A	Screw Śruba	KG	ap
DM04202222	42	22	22	34	4	41	40	80 100	SC321	0.4	1-2 mm
DM04225422	55	32	32	44	5	41	40	125 160	SC322	0.55	1-2 mm
DM05503232	42	22	22	34	4	42.5	40	80 100	SC321	0.4	2,5-5 mm
DM05531732	55	32	32	44	5	42.5	40	125 160	SC322	0.55	2,5-5 mm

Spare parts Części zamienne

For Do	For Do	Screw Śruba	Arbor screw Śruba osiowa
DMM04202222	DMM04225422	SC321	SC323
DMM05503232	DMM05531732	SC321	SC324

Locking screw →

Arbor screw →

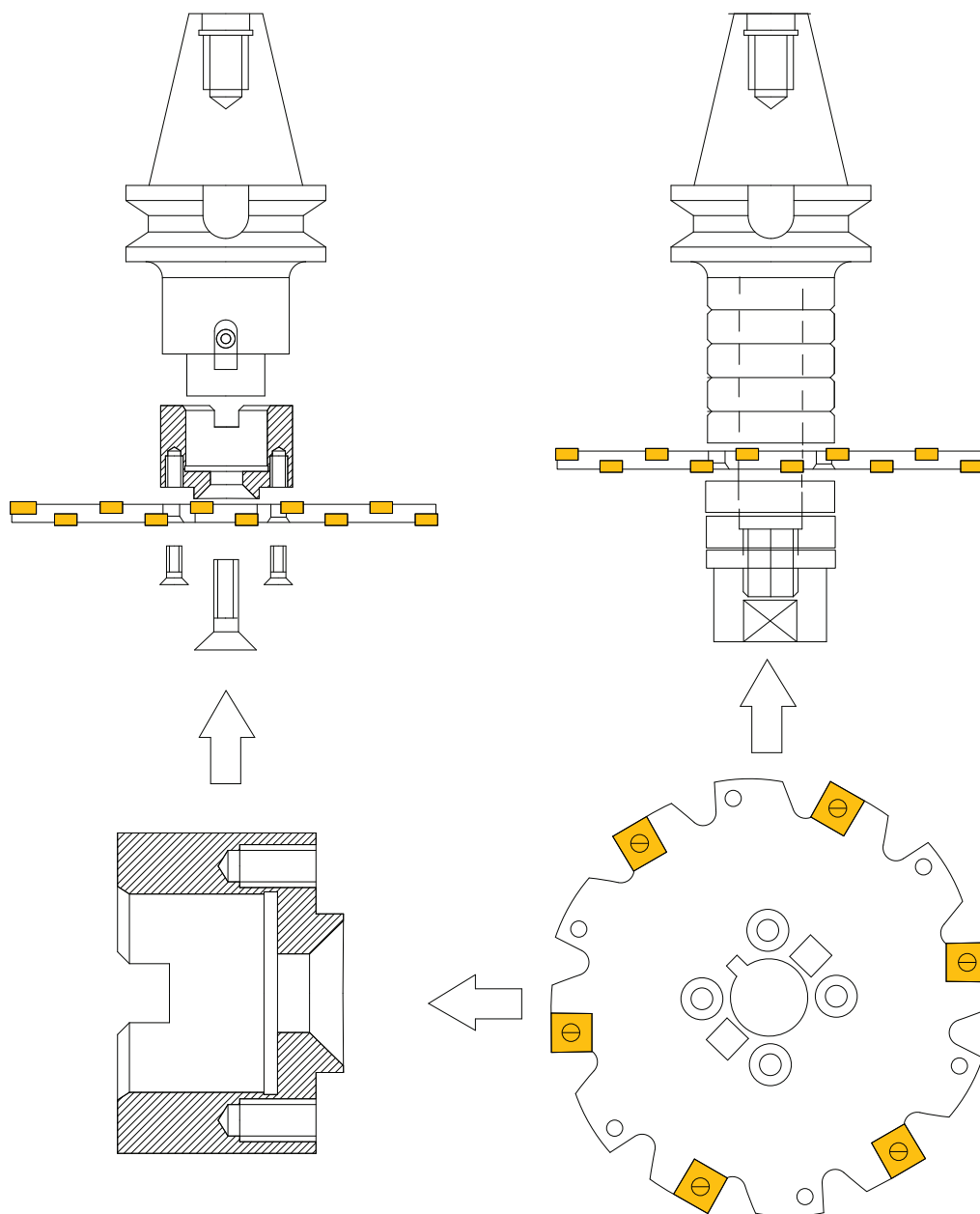
Locking screw →

T-SLOT MILLING CUTTERS FREZY T-OWE

PRODUCT INTRODUCTION
WPROWADZENIE DO PRODUKTU

M745 T-slot transformer series
Seria T-owa z converterem

Dia. range 160-250mm AE 6-30mm



UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

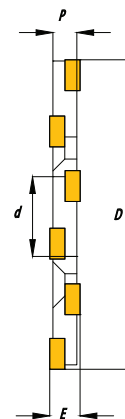
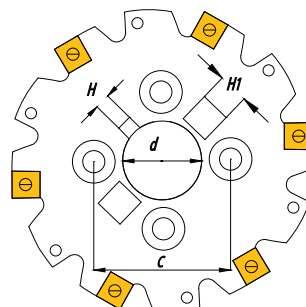
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ICT

DISC MILLING CUTTERS FREZY TARCZOWE

M745

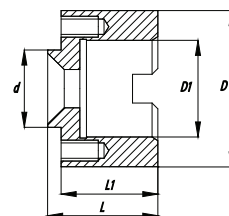
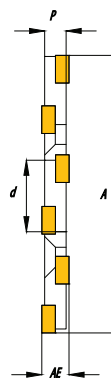
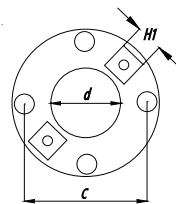


EDP No.	D	E	P	C	H	d	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M745B16016320050SN12	160	6	5	52	8	32	16	8	0,8	8300	SNEX1203	SC482	W249
M745B16016320070SN12	160	8	7	52	8	32	16	8	0,8	8300	SNEX12045	SC479	W249
M745B16016320090SN12	160	10	9	52	8	32	16	8	1,1	8300	SNEX1205	SC480	W249
M745B16016320110SN12	160	12	11	52	8	32	16	8	1,3	8300	SNEX1207	SC481	W249
M745B20018400050SN12	200	6	5	70	10	40	18	9	1,6	4200	SNEX1203	SC482	W249
M745B20018400070SN12	200	8	7	70	10	40	18	9	1,7	4200	SNEX12045	SC479	W249
M745B20018400090SN12	200	10	9	70	10	40	18	9	1,8	4200	SNEX1205	SC480	W249
M745B20018400110SN12	200	12	11	70	10	40	18	9	2,1	4200	SNEX1207	SC481	W249
M745B25024400050SN12	250	6	5	70	10	40	24	12	3,3	3800	SNEX1203	SC482	W249
M745B25024400070SN12	250	8	7	70	10	40	24	12	3,5	3800	SNEX12045	SC479	W249
M745B25024400090SN12	250	10	9	70	10	40	24	12	3,7	3800	SNEX1205	SC480	W249
M745B25024400110SN12	250	12	11	70	10	40	24	12	3,9	3800	SNEX1207	SC481	W249

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DISC MILLING CUTTERS HOLDER UCHWYTY FREZARSKIE Dyskowe

DNM



EDP No.	D	D1	d	C	B	L	L1	A	KG
DNM065320045	65	32	32	52	8	45	39,5	160	0,8
DNM065318045	65	31,75	32	52		45	39,5	160	
DNM065400045	65	40	32	52		45	39,5	160	
DNM065381045	65	38,1	32	52		45	39,5	160	
DNM090400050	90	40	40	70	8	50	44,5	200 250	1,2
DNM090381050	90	38,1	40	70		50	44,5	200 250	
DNM090508050	90	50,8	40	70		50	44,5	200 250	

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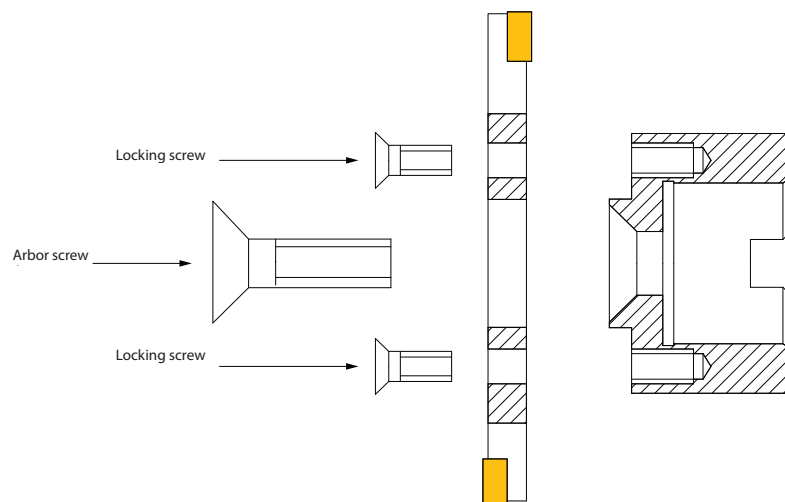
PMT

RB

CBN

HSS

ICT

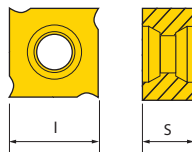
MILLING CUTTER SPARE PARTS CZĘŚCI ZAMIENNE FREZÓW

Spare parts Części zamienne



Holders Uchwyty	Screw Śruba	Arbor Screw Śruba osiowa	Holders Uchwyty	Screw Śruba	Arbor Screw Śruba osiowa
M745B16016320050SN12	SC463	SC472	M743B16016320125SN10	SC464	SC472
M745B16016320070SN12			M743B16016320145SN10		
M745B16016320090SN12	SC464		M743B16016320165SN13	SC465	
M745B16016320110SN12			M743B16016320185SN13		
M745B20018400050SN12	SC463		M743B16016320205SN13	SC466	
M745B20018400070SN12			M743B16016320235SN16		
M745B20018400090SN12	SC464		M743B16016320285SN16	SC467	
M745B20018400110SN12			M743B20020400125SN10		
M745B25024400050SN12	SC463		M743B20020400145SN10	SC464	
M745B25024400070SN12			M743B20020400165SN13		
M745B25024400090SN12	SC464		M743B20020400185SN13	SC465	
M745B25024400110SN12			M743B20020400205SN13		
M744B16016320000LN13	SC465		M743B20020400235SN16	SC466	
M744B20020400000LN13			M743B20020400285SN16		
M744B25024400000LN13			M743B25024400125SN10	SC464	
			M743B25024400145SN10		
		M743B25024400165SN13	SC465		
		M743B25024400185SN13			
		M743B25024400205SN13	SC466		
		M743B25024400235SN16			
		M743B25024400285SN16	SC467		

INSERT PYTKI

Milling Inserts Płytki do frezowania

SNEX



Insert shape Kształt płytki	Type Typ	Dimensions Wymiary (mm)		Coating				Cermet				Uncoated			
		Cutting rake Kąt cięcia	S	I	P322	P323	P324	P326	P327	P329					
 C331	SNEX 1102 C331	25°	2.3	11.0			•								
	SNEX 1103 C331		2.7	11.0			•								
	SNEX 1203 C331		3.2	12.7			•								
	SNEX 1204 C331		4.0	12.7			•								
	SNEX 1204 C331		4.5	12.7			•								
	SNEX 1205 C331		5.4	12.7			•								
	SNEX 1207 C331		7.0	12.7			•								
 C337	SNEX 1102 C337	15°	2.3	11.0			•		•						
	SNEX 1103 C337		2.7	11.0			•		•						
	SNEX 1203 C337		3.2	12.7			•		•						
	SNEX 1204 C337		4.0	12.7			•		•						
	SNEX 1204 C337		4.5	12.7			•		•						
	SNEX 1205 C337		5.4	12.7			•		•						
	SNEX 1207 C337		7.0	12.7			•		•						

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TECHNICAL INFO INFORMACJA TECHNICZNA

Series Serie - SNEX				
Material Materiał	Material group No.	Recom. feed fz mm/tooth ae/ Dc=10%	SNEX-C326	SNEX-C332
Steel Stal	1	0.14-0.30	P323/P326	
	2	0.14-0.25	P323/P326	
	3	0.14-0.22	P323/P326	
	4	0.14-0.22	P323/P326	
	5	0.14-0.20	P323/P326	
	6	0.10-0.15	P323/P326	
Hardened Steel Stal hartowana	7	0.10-0.13	P323/P326	
Stainless Steel Stal nierdzewna	8	0.14-0.25	P323/P326	
	9	0.14-0.22	P323/P326	
	10	0.14-0.20	P323/P326	
	11	0.10-0.15	P323/P326	
Cast Iron Żeliwo	12	0.14-0.30	P327/P324	
	13	0.14-0.22	P327/P324	
	14	0.14-0.20	P327/P324	
	15	0.10-0.15	P327/P324	
Non-ferrous materials Materiały nieżelazne	16	0.16-0.30		P324
	17	0.16-0.25		P324
Plastics Tworzywa Sztuczne	20	0.14-0.20	P323/P326	
	21	0.10-0.13	P323/P326	
	22	0.14-0.20	P323/P326	

TECHNICAL INFO INFORMACJA TECHNICZNA
Cutting Conditions / Parametry skrawania (ae/De=10%)

Material Materiał	Group № N° Grup	Grade Gatunek											
		P323			P327			P324			P326		
		Vc (m/min)											
		0,10	0,20	0,30	0,10	0,20	0,30	0,10	0,20	0,30	0,10	0,20	0,30
Steel Stal	1	205	175	155	-	-	-	232	208	188	-	-	-
	2	180	155	135	-	-	-	210	188	169	-	-	-
	3	150	125	115	-	-	-	189	170	153	-	-	-
	4	140	115	105	-	-	-	170	153	138	-	-	-
	5	110	100	90	-	-	-	150	138	124	-	-	-
	6	85	70	-	-	-	-	115	98	-	-	-	-
Hardened Steel Stal hartowana	7	40	-	-	-	-	-	-	-	-	-	-	-
Stainless Steel Stal nierdzewna	8	200	170	155	-	-	-	-	-	-	-	-	-
	9	175	150	135	-	-	-	-	-	-	-	-	-
	10	150	125	115	-	-	-	-	-	-	-	-	-
	11	115	100	-	-	-	-	-	-	-	-	-	-
Cast Iron Żeliwo	12	-	-	-	-	-	-	200	170	150	-	-	-
	13	-	-	-	-	-	-	180	150	140	-	-	-
	14	-	-	-	-	-	-	170	140	130	-	-	-
	15	-	-	-	-	-	-	130	125	-	-	-	-
Non-ferrous materials Materiały nieżelazne	16	-	-	-	-	-	-	1150	950	850	-	-	-
	17	-	-	-	-	-	-	950	780	700	-	-	-
Plastics Tworzywa Sztuczne	20	50	45	-	-	-	-	-	-	-	55	45	-
	21	30	30	--	-	-	-	-	-	-	46	38	-
	22	50	45	-	-	-	-	-	-	-	55	45	-

Cutting Conditions / Parametry skrawania

	ae/De	fz mm/tooth			Speed factor Współczynnik prędkości
Radial infeed Zagłębianie	-	0.05	0.10	0.14	0.65
Side milling Frezowanie boczne	2%	0.21	0.44	0.65	1.20
	5%	0.14	0.28	0.41	1.10
	10%	0.10	0.20	0.30	1.00
	20%	0.07	0.14	0.21	0.90
	30%	0.06	0.12	0.18	0.85
Average chip thickness hm Średni przekrój wióra		0,03	0,06	0,09	-

TECHNICAL INFO INFORMACJA TECHNICZNA

T-SLOT MILLING CUTTERS FREZY T-OWE

Material Material	D mm	Z	Vc [m/min]	fz [mm]	ap [mm]	RMP [min-1]	FEED [mm/ min]
Alloy Steel Stal stopowa	50	2	160	0.18	5	1019	366
	63	2			6	808	290
	80	4			8	636	457
	100	5			10	509	450
	125	6			12	407	439
	160	8			16	318	457
	200	9			20	254	411
	250	12			25	203	438
High Alloy Steel Stal wysokostopowa	50	2	120	0.15	5	764	229
	63	2			6	606	181
	80	4			8	477	286
	100	5			10	382	286
	125	6			12	305	274
	160	8			16	238	285
	200	9			20	191	258
	250	12			25	152	273
Stainless steel Stal nierdzewna	50	2	70	0.18	5	445	160
	63	2			6	353	127
	80	4			8	278	200
	100	5			10	222	200
	125	6			12	178	192
	160	8			16	139	200
	200	9			20	111	179
	250	12			25	89	192
Grey Cast Iron Żeliwo szare	50	2	120	0.18	5	764	275
	63	2			6	606	318
	80	4			8	477	343
	100	5			10	382	343
	125	6			12	305	329
	160	8			16	238	342
	200	9			20	191	309
	250	12			25	152	328
Aluminium Aluminium	50	2	900	0.2	5	6 000	2400
	63	2			6	4 700	1880
	80	4			8	3 750	3000
	100	5			10	3 000	3000
	125	6			12	2 400	2 880
	160	8			16	1 850	3000
	200	9			20	1 500	2900
	250	12			25	1 200	2880

TECHNICAL INFO INFORMACJA TECHNICZNA

T-SLOT MILLING CUTTERS FREZY T-OWE

Material Materiał	D mm	Z	Vc [m/min]	fz [mm]	ap [mm]	RMP [min-1]	FEED [mm/ min]
Ti alloy Stop tytanu	50	2	45	0.12	5	300	72
	63	2			6	235	56
	80	4			8	189	90
	100	5			10	150	90
	125	6			12	120	86
	160	8			16	94	90
	200	9			20	75	86
	250	12			25	60	86
Wood Drewno	50	2	1600	0.12	5	10 500	2500
	63	2			6	8 400	2000
	80	4			8	6600	3100
	100	5			10	5300	3100
	125	6			12	4200	3000
	160	8			16	3300	3400
	200	9			20	2600	2800
	250	12			25	2100	3000
Plastics Tworzywa Sztuczne	50	2	1800	0.14	5	12000	3360
	63	2			6	9400	2600
	80	4			8	7500	5700
	100	5			10	6000	4200
	125	6			12	4800	4000
	160	8			16	3750	3900
	200	9			20	3000	3780
	250	12			25	2400	4000

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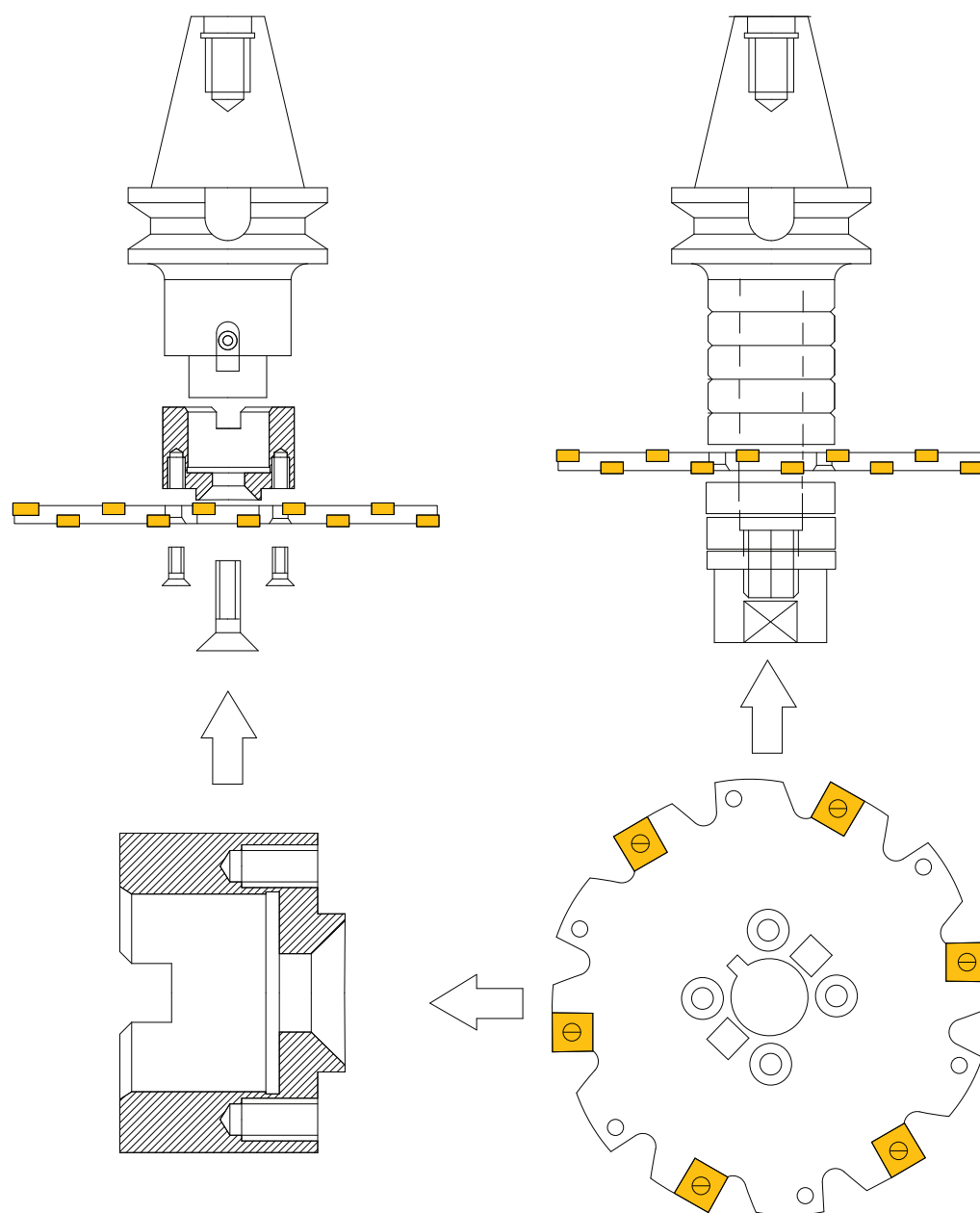
T-SLOT MILLING CUTTERS FREZY T-OWE

PRODUCT INTRODUCTION

WPROWADZENIE DO PRODUKTU

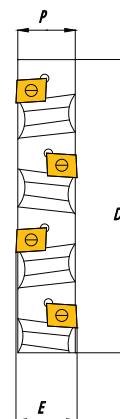
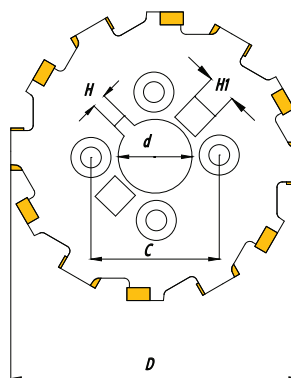
M743 M744 T-slot transformer series
 Seria T-owa z converterem

Dia. range 160-250mm AE 6-30mm



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DISC MILLING CUTTERS FREZY TARCZOWE

M743


EDP No.	D	E	P	C	H	d	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M743B16016320125SN10	160	14	12,5	52	8	32	16	8	1,7	6900	SNEX1005	SR232	W249
M743B16016320145SN10	160	16	14,5	52	8	32	16	8	1,7	6900	SNEX1005	SR232	W249
M743B16016320165SN13	160	18	16,5	52	8	32	16	8	1,9	6900	SNEX1305	SR232	W249
M743B16016320185SN13	160	20	18,5	52	8	32	16	8	2,0	6900	SNEX1305	SR232	W249
M743B16016320205SN13	160	22	20,5	52	8	32	16	8	2,1	6900	SNEX1305	SR232	W249
M743B16016320235SN16	160	25	23,5	52	8	32	16	8	2,3	6900	SNEX1605	SR232	W249
M743B16016320285SN16	160	30	28,5	52	8	32	16	8	2,5	6900	SNEX1605	SR232	W249
M743B20020400125SN10	200	14	12,5	70	10	40	20	10	1,9	6100	SNEX1005	SR232	W249
M743B20020400145SN10	200	16	14,5	70	10	40	20	10	2,1	6100	SNEX1005	SR232	W249
M743B20020400165SN13	200	18	16,5	70	10	40	20	10	2,3	6100	SNEX1305	SR232	W249
M743B20020400185SN13	200	20	18,5	70	10	40	20	10	2,5	6100	SNEX1305	SR232	W249
M743B20020400205SN13	200	22	20,5	70	10	40	20	10	2,7	6100	SNEX1305	SR232	W249
M743B20020400235SN16	200	25	23,5	70	10	40	20	10	3,0	6100	SNEX1605	SR232	W249
M743B20020400285SN16	200	30	28,5	70	10	40	20	10	3,5	6100	SNEX1605	SR232	W249
M743B25024400125SN10	250	14	12,5	70	10	40	24	12	2,9	5500	SNEX1005	SR232	W249
M743B25024400145SN10	250	16	14,5	70	10	40	24	12	3,1	5500	SNEX1005	SR232	W249
M743B25024400165SN13	250	18	16,5	70	10	40	24	12	3,2	5500	SNEX1305	SR232	W249
M743B25024400185SN13	250	20	18,5	70	10	40	24	12	3,5	5500	SNEX1305	SR232	W249
M743B25024400205SN13	250	22	20,5	70	10	40	24	12	3,9	5500	SNEX1305	SR232	W249
M743B25024400235SN16	250	25	23,5	70	10	40	24	12	4,2	5500	SNEX1605	SR232	W249
M743B25024400285SN16	250	30	28,5	70	10	40	24	12	4,5	5500	SNEX1605	SR232	W249

UFG

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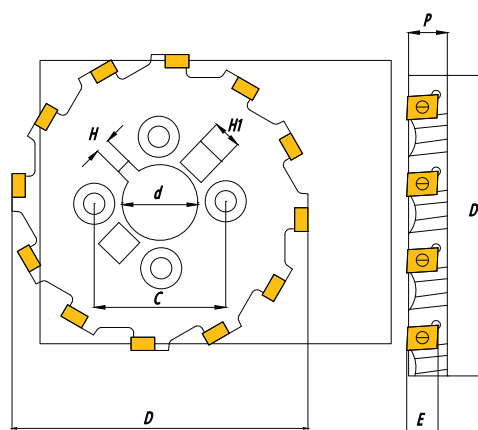
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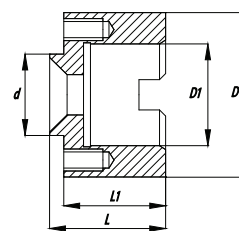
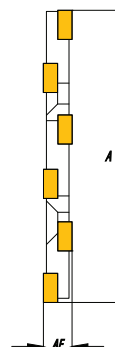
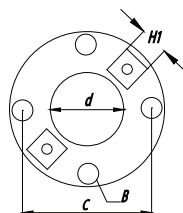
T-SLOT TRANSFORMER SERIES FREZY T-OWE SERIA Z CONVERTEREM
M744


EDP No.	D	E	C	H	d	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M744B16016320000LN13	160	12	52	8	32	16	1,9	6900	LNGX 1305	SR232	W249
M744B20020400000LN13	200	12	70	10	40	20	2,3	6100	LNGX 1306	SR235	W249
M744B25024400000LN13	250	12	70	10	40	24	3,2	5500	LNGX 1307	SC476	W249

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DISC MILLING CUTTERS HOLDER UCHWYTY FREZARSKIE Dyskowe

DNM



EDP No.	D	D1	d	C	B	L	L1	A	KG
DNM065320045	65	32	32	52	8	45	39,5	160	0,8
DNM065318045	65	31,75	32	52		45	39,5	160	
DNM065400045	65	40	32	52		45	39,5	160	
DNM065381045	65	38,1	32	52		45	39,5	160	
DNM090400050	90	40	40	70	8	50	44,5	200 250	1,2
DNM090381050	90	38,1	40	70		50	44,5	200 250	
DNM090508050	90	50,8	40	70		50	44,5	200 250	

UFG

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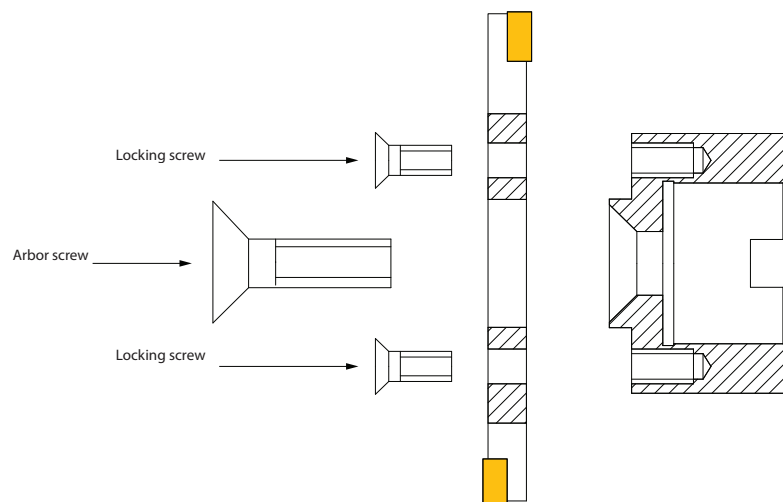
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MILLING CUTTER SPARE PARTS CZĘŚCI ZAMIENNE FREZÓW

Spare parts Części zamienne

Holders Uchwyty	Screw Śruba	Arbor Screw Śruba osiowa	Holders Uchwyty	Screw Śruba	Arbor Screw Śruba osiowa
M745B16016320050SN12	SC463	SC472	M743B16016320125SN10	SC464	SC472
M745B16016320070SN12			M743B16016320145SN10		
M745B16016320090SN12	SC464		M743B16016320165SN13	SC465	
M745B16016320110SN12			M743B16016320185SN13		
M745B20018400050SN12	SC463		M743B16016320205SN13	SC466	
M745B20018400070SN12			M743B16016320235SN16		
M745B20018400090SN12	SC464		M743B16016320285SN16	SC467	
M745B20018400110SN12			M743B20020400125SN10		
M745B25024400050SN12	SC463		M743B20020400145SN10	SC464	
M745B25024400070SN12			M743B20020400165SN13		
M745B25024400090SN12	SC464		M743B20020400185SN13	SC465	
M745B25024400110SN12			M743B20020400205SN13		
M744B16016320000LN13	SC465		M743B20020400235SN16	SC466	
M744B20020400000LN13			M743B20020400285SN16		
M744B25024400000LN13			M743B25024400125SN10	SC467	
			M743B25024400145SN10		
		M743B25024400165SN13	SC464		
		M743B25024400185SN13			
		M743B25024400205SN13	SC465		
		M743B25024400235SN16			
		M743B25024400285SN16	SC466		
			SC467		

PRODUCT INTRODUCTION WPROWADZENIE DO PRODUKTU

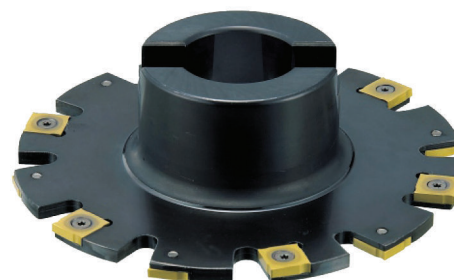
The inserts of groove & back milling cutter series can be used up to 4 times and 8 times.
Płytki do rowkowania oraz frezowania od tyłu mogą być użyte od 4 do 8 razy.

M730

Disc milling cutters
Frezy tarczowe

**M732**

T-slot milling cutters
Frezy T-owe

**M734**

T-slot milling cutters
Frezy T-owe



1. Machining (cutting) speed increases 300% - 500%
1. Prędkość obróbki wzrasta 300%-500%
2. Extending insert life with TiAlN coating
2. Wydłużona żywotność płytki pokrytej powłoką TiAlN
3. Cut down the cost of cutting tools
3. Obniżenie kosztów narzędzi skrawających

UFG

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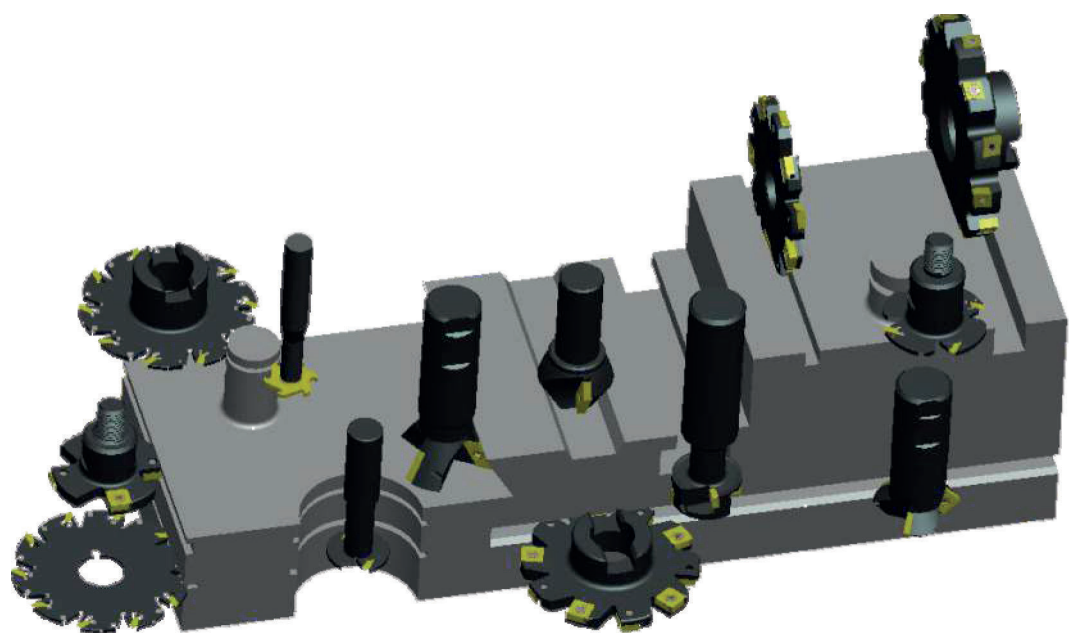
HSS

ICT

PRODUCT INTRODUCTION WPROWADZENIE DO PRODUKTU

Slotting & grooving empire
Imprimerium rowkowania

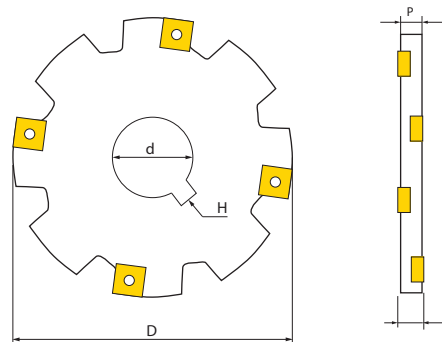
Dia. range 12-600mm
Ae 0.5-30mm



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ICT

DISC MILLING CUTTERS FREZY TARCZOWE

M730



EDP No.	D	E	P	H	d1	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M730B08008220034SN11	80	4	3,4	6,4	22	8	4	0,2	13700	SNEX1102	SC329	W218
M730B08008220042SN11	80	5	4,2	6,4	22	8	4	0,2	13700	SNEX1103	SC330	W254
M730B08008220050SN12	80	6	5	6,4	22	8	4	0,3	13700	SNEX1203	SC482	W249
M730B08008220060SN12	80	7	6	6,4	22	8	4	0,3	13700	SNEX1204	SC478	W249
M730B08008220070SN12	80	8	7	6,4	22	8	4	0,3	13700	SNEX12045	SC479	W249
M730B08008220090SN12	80	10	9	6,4	22	8	4	0,4	13700	SNEX1205	SC480	W249
M730B08008220110SN12	80	12	11	6,4	22	8	4	0,7	13700	SNEX1207	SC481	W249
M730B10010270034SN11	100	4	3,4	7	27	10	5	0,5	12000	SNEX1102	SC329	W218
M730B10010270042SN11	100	5	4,2	7	27	10	5	0,5	12000	SNEX1103	SC330	W254
M730B10010270050SN12	100	6	5	7	27	10	5	0,6	12000	SNEX1203	SC482	W249
M730B10010270060SN12	100	7	6	7	27	10	5	0,7	12000	SNEX1204	SC478	W249
M730B10010270070SN12	100	8	7	7	27	10	5	0,8	12000	SNEX12045	SC479	W249
M730B10010270090SN12	100	10	9	7	27	10	5	0,9	12000	SNEX1205	SC480	W249
M730B10010270110SN12	100	12	11	7	27	10	5	1,0	12000	SNEX1207	SC481	W249
M730B12512320034SN11	125	4	3,4	8	32	12	6	0,5	10900	SNEX1102	SC329	W218
M730B12512320042SN11	125	5	4,2	8	32	12	6	0,5	10900	SNEX1103	SC330	W254
M730B12512320050SN12	125	6	5	8	32	12	6	0,6	10900	SNEX1203	SC482	W249
M730B12512320060SN12	125	7	6	8	32	12	6	0,7	10900	SNEX1204	SC478	W249
M730B12512320070SN12	125	8	7	8	32	12	6	0,7	10900	SNEX12045	SC479	W249
M730B12512320090SN12	125	10	9	8	32	12	6	0,8	10900	SNEX1205	SC480	W249
M730B12512320110SN12	125	12	11	8	32	12	6	0,9	10900	SNEX1207	SC481	W249
M730B16016320034SN11	160	4	3,4	8	32	16	8	0,7	8300	SNEX1102	SC329	W218
M730B16016320042SN11	160	5	4,2	8	32	16	8	0,7	8300	SNEX1103	SC330	W254
M730B16016320050SN12	160	6	5	8	32	16	8	0,8	8300	SNEX1203	SC482	W249
M730B16016320060SN12	160	7	6	8	32	16	8	0,8	8300	SNEX1204	SC478	W249
M730B16016320070SN12	160	8	7	8	32	16	8	0,8	8300	SNEX12045	SC479	W249
M730B16016320090SN12	160	10	9	8	32	16	8	1,1	8300	SNEX1205	SC480	W249
M730B16016320110SN12	160	12	11	8	32	16	8	1,3	8300	SNEX1207	SC481	W249
M730B08008254034SN11	80	4	3,4	6,3	25,4	8	4	0,2	13700	SNEX1102	SC329	W218
M730B08008254042SN11	80	5	4,2	6,3	25,4	8	4	0,2	13700	SNEX1103	SC330	W254
M730B08008254050SN12	80	6	5	6,3	25,4	8	4	0,3	13700	SNEX1203	SC482	W249
M730B08008254060SN12	80	7	6	6,3	25,4	8	4	0,3	13700	SNEX1204	SC478	W249
M730B08008254070SN12	80	8	7	6,3	25,4	8	4	0,3	13700	SNEX12045	SC479	W249
M730B08008254090SN12	80	10	9	6,3	25,4	8	4	0,4	13700	SNEX1205	SC480	W249

UFG

UFX

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UFC

PMT

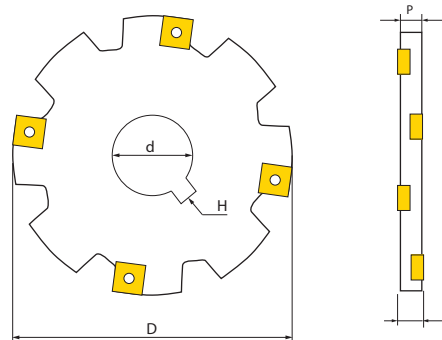
RB

CBN

HSS

ICT

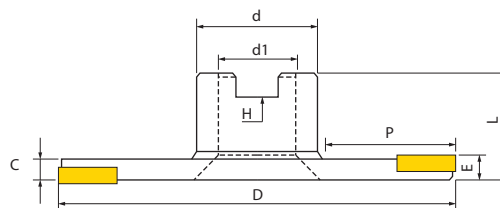
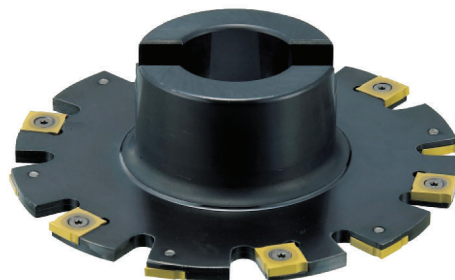
DISC MILLING CUTTERS FREZY TARCZOWE

M730


EDP No.	D	E	P	H	d1	Z	Zc	KG	MAX RPM	Insert Płytką	Screw Śruba	Wrench Klucz
M730B08008254110SN12	80	12	11	6,3	25,4	8	4	0,7	13700	SNEX1207	SC481	W249
M730B10010254034SN11	100	4	3,4	6,3	25,4	10	5	0,5	12000	SNEX1102	SC329	W218
M730B10010254042SN11	100	5	4,2	6,3	25,4	10	5	0,5	12000	SNEX1103	SC330	W254
M730B10010254050SN12	100	6	5	6,3	25,4	10	5	0,6	12000	SNEX1203	SC482	W249
M730B10010254060SN12	100	7	6	6,3	25,4	10	5	0,7	12000	SNEX1204	SC478	W249
M730B10010254070SN12	100	8	7	6,3	25,4	10	5	0,8	12000	SNEX12045	SC479	W249
M730B10010254090SN12	100	10	9	6,3	25,4	10	5	0,9	12000	SNEX1205	SC480	W249
M730B10010254110SN12	100	12	11	6,3	25,4	10	5	1,0	12000	SNEX1207	SC481	W249
M730B12512254034SN11	125	4	3,4	6,3	25,4	12	6	0,5	10900	SNEX1102	SC329	W218
M730B12512254042SN11	125	5	4,2	6,3	25,4	12	6	0,5	10900	SNEX1103	SC330	W254
M730B12512254050SN12	125	6	5	6,3	25,4	12	6	0,6	10900	SNEX1203	SC482	W249
M730B12512254060SN12	125	7	6	6,3	25,4	12	6	0,7	10900	SNEX1204	SC478	W249
M730B12512254070SN12	125	8	7	6,3	25,4	12	6	0,7	10900	SNEX12045	SC479	W249
M730B12512254090SN12	125	10	9	6,3	25,4	12	6	0,8	10900	SNEX1205	SC480	W249
M730B12512254110SN12	125	12	11	6,3	25,4	12	6	0,9	10900	SNEX1207	SC481	W249
M730B16016254034SN11	160	4	3,4	8	25,4	16	8	0,7	8300	SNEX1102	SC329	W218
M730B16016254042SN11	160	5	4,2	8	25,4	16	8	0,7	8300	SNEX1103	SC330	W254
M730B16016254050SN12	160	6	5	8	25,4	16	8	0,8	8300	SNEX1203	SC482	W249
M730B16016254060SN12	160	7	6	8	25,4	16	8	0,8	8300	SNEX1204	SC478	W249
M730B16016254070SN12	160	8	7	8	25,4	16	8	0,8	8300	SNEX12045	SC479	W249
M730B16016254090SN12	160	10	9	8	25,4	16	8	1,1	8300	SNEX1205	SC480	W249
M730B16016254110SN12	160	12	11	8	25,4	16	8	1,3	8300	SNEX1207	SC481	W249
M730B16016318034SN11	160	4	3,4	8	31,75	16	8	0,7	8300	SNEX1102	SC329	W218
M730B16016318042SN11	160	5	4,2	8	31,75	16	8	0,7	8300	SNEX1103	SC330	W254
M730B16016318050SN12	160	6	5	8	31,75	16	8	0,8	8300	SNEX1203	SC482	W249
M730B16016318060SN12	160	7	6	8	31,75	16	8	0,8	8300	SNEX1204	SC478	W249
M730B16016318070SN12	160	8	7	8	31,75	16	8	0,8	8300	SNEX12045	SC479	W249
M730B16016318090SN12	160	10	9	8	31,75	16	8	1,1	8300	SNEX1205	SC480	W249
M730B16016318110SN12	160	12	11	8	31,75	16	8	1,3	8300	SNEX1207	SC481	W249

T-SLOT MILLING CUTTERS FREZY T-OWE

M732



EDP No.	D	E	P	C	H	d1	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M732B0800822050SN12	80	6	16.5	5	40	22	8	4	0.6	13700	SNEX 1203	SC331	W222
M732B0800822060SN12	80	7	16.5	6	40	22	8	4	0.6	13700	SNEX 1204	SC332	W222
M732B0800822070SN12	80	8	16.5	7	40	22	8	4	0.6	13700	SNEX 12045	SC332	W222
M732B0800822090SN12	80	10	16.5	9	40	22	8	4	0.8	13700	SNEX 1205	SC333	W222
M732B1001027050SN12	100	6	26.5	5	40	27	10	5	0.7	12000	SNEX 1203	SC331	W222
M732B1001027060SN12	100	7	26.5	6	40	27	10	5	0.7	12000	SNEX 1204	SC332	W222
M732B1001027070SN12	100	8	26.5	7	40	27	10	5	0.8	12000	SNEX 12045	SC332	W222
M732B1001027090SN12	100	10	26.5	9	40	27	10	5	0.8	12000	SNEX 1205	SC333	W222
M732B10010270110SN1	100	12	26.5	11	40	27	10	5	0.9	12000	SNEX 1207	SC334	W222
M732B1251232050SN12	125	6	30.5	5	55	32	12	6	1.5	10900	SNEX 1203	SC331	W222
M732B1251232060SN12	125	7	30.5	6	55	32	12	6	1.5	10900	SNEX 1204	SC332	W222
M732B1251232070SN12	125	8	30.5	7	55	32	12	6	1.5	10900	SNEX 12045	SC332	W222
M732B1251232090SN12	125	10	30.5	9	55	32	12	6	1.6	10900	SNEX 1205	SC333	W222
M732B1251232110SN12	125	12	30.5	11	55	32	12	6	1.6	10900	SNEX 1207	SC334	W222
M732B1601632050SN12	160	6	48.0	5	55	32	16	8	2.0	8300	SNEX 1203	SC331	W222
M732B1601632060SN12	160	7	48.0	6	55	32	16	8	2.0	8300	SNEX 1204	SC332	W222
M732B1601632070SN12	160	8	48.0	7	55	32	16	8	2.0	8300	SNEX 12045	SC332	W222
M732B1601632090SN12	160	10	48.0	9	55	32	16	8	2.1	8300	SNEX 1205	SC333	W222
M732B1601632110SN12	160	12	48.0	11	55	32	16	8	2.1	8300	SNEX 1207	SC334	W222

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

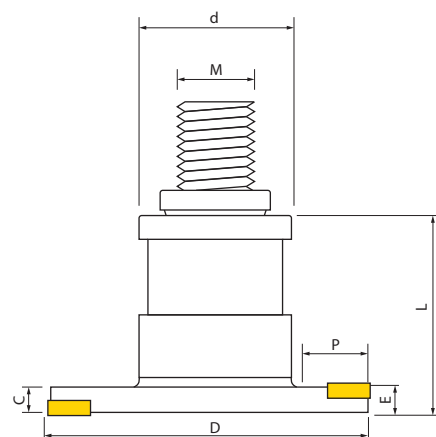
CBN

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T-SLOT MILLING CUTTERS FREZY T-OWE

M734



EDP No.	D	E	P	C	d	M	L	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M734B05004M12034SN11	50	4	13	3.4	24	12	25	4	2	0.2	17000	SNEX -1102	SC329	W221
M734B05004M12042SN11	50	5	13	4.2	24	12	25	4	2	0.2	17000	SNEX -1103	SC330	W221
M734B05004M12050SN12	50	6	13	5.0	24	12	25	4	2	0.2	17000	SNEX -1203	SC331	W222
M734B05004M12070SN12	50	7/8	13	7.0	24	12	25	4	2	0.6	17000	SNEX -12045	SC332	W222
M734B05004M12090SN12	50	10	13	9.0	24	12	25	4	2	0.8	17000	SNEX -1205	SC333	W222
M734B06304M16034SN11	63	4	16	3.4	31	16	25	4	2	0.2	15000	SNEX -1102	SC329	W221
M734B06304M16042SN11	63	5	16	4.2	31	16	25	4	2	0.3	15000	SNEX -1103	SC330	W221
M734B06304M16050SN12	63	6	16	5.0	31	16	25	4	2	0.3	15000	SNEX -1203	SC331	W222
M734B06304M16070SN12	63	7/8	16	7.0	31	16	25	4	2	0.6	15000	SNEX -12045	SC332	W222
M734B06304M16090SN12	63	10	16	9.0	31	16	25	4	2	0.8	15000	SNEX -1205	SC333	W222

PRODUCT INTRODUCTION WPROWADZENIE DO PRODUKTU

The inserts of groove & back milling cutter series can be used up to 4 times.

Płytki do rowkowania oraz frezowania od tyłu mogą być użyte 4razy.

M739

Disc milling cutters

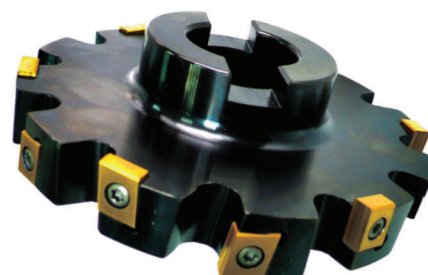
Frezy tarczowe



M740

T-slot milling cutters

Frezy T-owe



1. Machining (cutting) speed increases 300% - 500%
1. Prędkość obróbki wzrasta 300%-500%
2. Extending insert life with TiAlN coating
2. Wydłużowa żywotność płytki pokrytej powłoką TiAlN
3. Cut down the cost of cutting tools
3. Obniżenie kosztów narzędzi skrawających

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

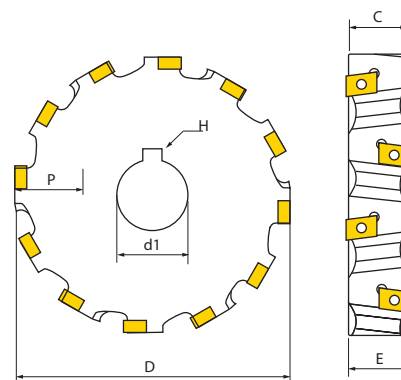
CBN

HSS

ICT

DISC MILLING CUTTERS FREZY TARCZOWE

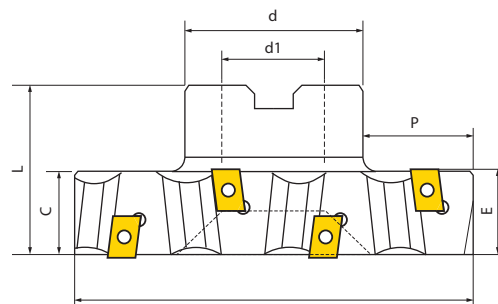
M739



EDP No.	D	E	P	C	H	d1	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M739B0800822140LN10	80	14	16	12.5	7	22	8	4	0.65	13700	LNGX 1005	SC336	W218
M739B0800822160LN10	80	16	16	14.5	7	22	8	4	0.7	13700	LNGX 1005	SC336	W218
M739B0800822180LN10	80	18	16	16.5	7	22	8	4	0.8	13700	LNGX 1305	SC336	W218
M739B0800822200LN13	80	20	16	18.5	7	22	8	4	1.0	13700	LNGX 1305	SC336	W218
M739B0800822220LN13	80	22	16	20.5	7	22	8	4	1.2	13700	LNGX 1305	SC336	W218
M739B0800822250LN16	80	25	16	23.5	7	22	8	4	1.4	13700	LNGX 1605	SC336	W218
M739B0800822300LN16	80	30	16	28.5	7	22	8	4	1.5	13700	LNGX 1605	SC336	W218
M739B1001027140LN10	100	14	26	12.5	7	27	10	5	0.9	12000	LNGX 1005	SC336	W218
M739B1001027160LN10	100	16	26	14.5	7	27	10	5	1.0	12000	LNGX 1005	SC336	W218
M739B1001027180LN10	100	18	26	16.5	7	27	10	5	1.1	12000	LNGX 1305	SC336	W218
M739B1001027200LN13	100	20	26	18.5	7	27	10	5	1.2	12000	LNGX 1305	SC336	W218
M739B1001027220LN13	100	22	26	20.5	7	27	10	5	1.4	12000	LNGX 1305	SC336	W218
M739B1001027250LN16	100	25	26	23.5	7	27	10	5	1.6	12000	LNGX 1605	SC336	W218
M739B1001027300LN16	100	30	26	28.5	7	27	10	5	1.9	12000	LNGX 1605	SC336	W218
M739B1251232140LN10	125	14	30	12.5	8	32	12	6	1.3	10900	LNGX 1005	SC336	W218
M739B1251232160LN10	125	16	30	14.5	8	32	12	6	1.5	10900	LNGX 1005	SC336	W218
M739B1251232180LN10	125	18	30	16.5	8	32	12	6	1.7	10900	LNGX 1305	SC336	W218
M739B1251232200LN13	125	20	30	18.5	8	32	12	6	1.9	10900	LNGX 1305	SC336	W218
M739B1251232220LN13	125	22	30	20.5	8	32	12	6	2.3	10900	LNGX 1305	SC336	W218
M739B1251232250LN16	125	25	30	23.5	8	32	12	6	2.5	10900	LNGX 1605	SC336	W218
M739B1251232300LN16	125	30	30	28.5	8	32	12	6	2.8	10900	LNGX 1605	SC336	W218

T-SLOT MILLING CUTTERS FREZY T-OWE

M740



EDP No.	D	E	P	C	d	d1	L	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M740B0800822125LN10	80	14	16.5	12.5	40	22	35	8	4	0.75	13700	LNGX 1005	SC336	W218
M740B0800822145LN10	80	16	16.5	14.5	40	22	35	8	4	0.8	13700	LNGX 1005	SC336	W218
M740B0800822165LN10	80	18	16.5	16.5	40	22	35	8	4	0.9	13700	LNGX 1305	SC336	W218
M740B0800822185LN13	80	20	16.5	18.5	40	22	35	8	4	1.1	13700	LNGX 1305	SC336	W218
M740B0800822205LN13	80	22	16.5	20.5	40	22	35	8	4	1.3	13700	LNGX 1305	SC336	W218
M740B0800822235LN16	80	25	16.5	23.5	40	22	35	8	4	1.55	13700	LNGX 1605	SC336	W218
M740B0800822285LN16	80	30	16.6	28.5	40	22	40	8	4	1.7	13700	LNGX 1605	SC336	W218
M740B1001027125LN10	100	14	26.5	12.5	45	27	35	10	5	1.0	12000	LNGX 1005	SC336	W218
M740B1001027145LN10	100	16	26.5	14.5	45	27	35	10	5	1.1	12000	LNGX 1005	SC336	W218
M740B1001027165LN10	100	18	26.5	16.5	45	27	35	10	5	1.2	12000	LNGX 1305	SC336	W218
M740B1001027185LN13	100	20	26.5	18.5	45	27	35	10	5	1.3	12000	LNGX 1305	SC336	W218
M740B1001027205LN13	100	22	26.5	20.5	45	27	35	10	5	1.6	12000	LNGX 1305	SC336	W218
M740B1001027235LN16	100	25	26.5	23.5	45	27	35	10	5	1.8	12000	LNGX 1605	SC336	W218
M740B1001027285LN16	100	30	26.5	28.5	45	27	40	10	5	2.3	12000	LNGX 1605	SC336	W218
M740B1251232125LN10	125	14	30	12.5	55	32	35	12	6	1.5	10900	LNGX 1005	SC336	W218
M740B1251232145LN10	125	16	30	14.5	55	32	35	12	6	1.7	10900	LNGX 1005	SC336	W218
M740B1251232165LN10	125	18	30	16.5	55	32	35	12	6	1.9	10900	LNGX 1305	SC336	W218
M740B1251232185LN13	125	20	30	18.5	55	32	35	12	6	2.1	10900	LNGX 1305	SC336	W218
M740B1251232205LN13	125	22	30	20.5	55	32	35	12	6	2.5	10900	LNGX 1305	SC336	W218
M740B1251232235LN16	125	25	30	23.5	55	32	35	12	6	2.8	10900	LNGX 1605	SC336	W218
M740B1251232285LN16	125	30	30	28.5	55	32	40	12	6	3.4	10900	LNGX 1605	SC336	W218
M740B1601632125LN10	160	14	48	12.5	60	32	35	16	8	1.5	6900	LNGX 1005	SC336	W218
M740B1601632145LN10	160	16	48	14.5	60	32	35	16	8	1.8	6900	LNGX 1005	SC336	W218
M740B1601632165LN10	160	18	48	16.5	60	32	35	16	8	2.0	6900	LNGX 1305	SC336	W218
M740B1601632185LN13	160	20	48	18.5	60	32	35	16	8	2.3	6900	LNGX 1305	SC336	W218
M740B1601632205LN13	160	22	48	20.5	60	32	35	16	8	2.7	6900	LNGX 1305	SC336	W218

UFG

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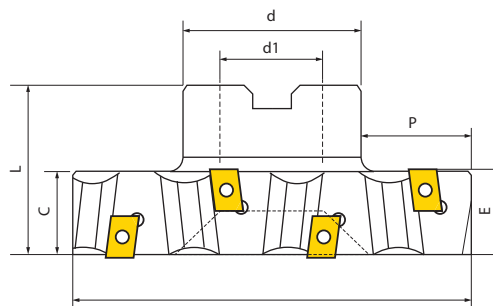
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T-SLOT MILLING CUTTERS FREZY T-OWE

M740

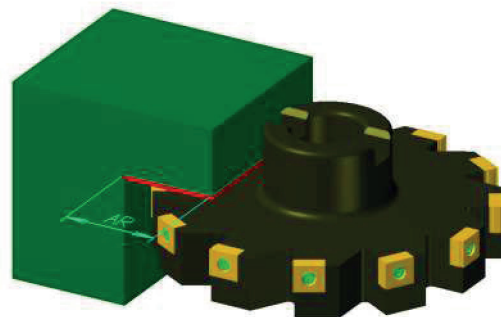


EDP No.	D	E	P	C	d	d1	L	Z	Zc	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M740B1601632235LN16	160	25	48	23.5	60	32	35	16	8	3.0	6900	LNGX 1605	SC336	W218
M740B1601632285LN16	160	30	48	28.5	60	32	40	16	8	3.3	6900	LNGX 1605	SC336	W218
M740B2002040125LN10	200	14	65	12.5	70	40	40	20	10	2.2	6100	LNGX 1005	SC336	W218
M740B2002040145LN10	200	16	65	14.5	70	40	40	20	10	2.4	6100	LNGX 1005	SC336	W218
M740B2002040165LN10	200	18	65	16.5	70	40	40	20	10	2.8	6100	LNGX 1305	SC336	W218
M740B2002040185LN13	200	20	65	18.5	70	40	40	20	10	3.2	6100	LNGX 1305	SC336	W218
M740B2002040205LN13	200	22	65	20.5	70	40	40	20	10	3.5	6100	LNGX 1305	SC336	W218
M740B2002040235LN16	200	25	65	23.5	70	40	40	20	10	3.7	6100	LNGX 1605	SC336	W218
M740B2002040285LN16	200	30	65	28.5	70	40	40	20	10	4.0	6100	LNGX 1605	SC336	W218
M740B2502440125LN10	250	14	82	12.5	85	40	40	24	12	3.5	5500	LNGX 1005	SC336	W218
M740B2502440145LN10	250	16	82	14.5	85	40	40	24	12	3.8	5500	LNGX 1005	SC336	W218
M740B2502440165LN10	250	18	82	16.5	85	40	40	24	12	4.2	5500	LNGX 1305	SC336	W218
M740B2502440185LN13	250	20	82	18.5	85	40	40	24	12	4.5	5500	LNGX 1305	SC336	W218
M740B2502440205LN13	250	22	82	20.5	85	40	40	24	12	4.8	5500	LNGX 1305	SC336	W218
M740B2502440235LN16	250	25	82	23.5	85	40	40	24	12	5.0	5500	LNGX 1605	SC336	W218
M740B2502440285LN16	250	30	82	28.5	85	40	40	24	12	5.5	5500	LNGX 1605	SC336	W218

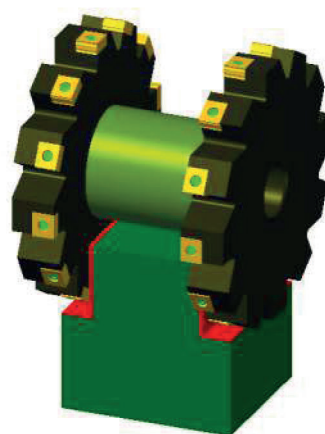
PRODUCT INTRODUCTION WPROWADZENIE DO PRODUKTU

The inserts of back milling and side grooving cutter can be used up to 4 times
Płytki do rowkowania oraz frezowania od tyłu mogą być użyte 4 razy.

M746 T-slot transformer series - reverse side cutter
Frezy T-owe z serii z converterem- odwrotna strona freza



M753 M754 T-slot transformer series - double side groove cutter
Frezy T-owe z serii - frezy dwustronne



UFG

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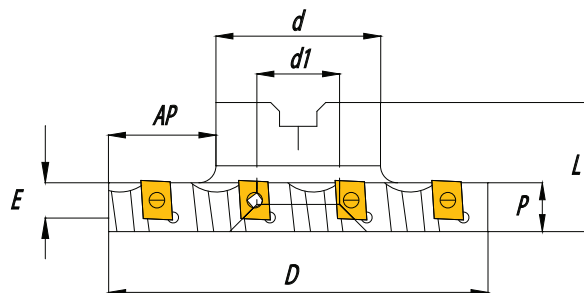
CBN

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T-SLOT TRANSFORMER SERIES - REVERSE SIDE CUTTER

M746

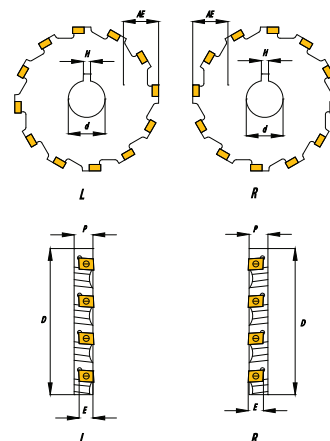


EDP No.	D	E	P	d	d1	L	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M746B10010450165LN13	100	12	16,5	45	27	35	10	1,3	12000	LNGX1305	SR232	W249
M746B12512550165LN13	125	12	16,5	55	32	35	12	1,9	10900	LNGX1305	SR235	W249

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T-SLOT TRANSFORMER SERIES - DOUBLE SIDE GROOVE CUTTER

M753
M754



EDP No.	D	E	P	d	H	L/R	Z	KG	MAX RPM	Insert Płytki	Screw Śruba	Wrench Klucz
M753B10010270165LN13	100	12	16,5	27	7	L	10	1,1	12000	LNGX1305	SR232	W249
M753B10010270165LN13	100	12	16,5	27	7	R	10		12000	LNGX1305	SR232	W249
M753B12512320165LN13	125	12	16,5	32	8	L	12	1,7	10900	LNGX1305	SR232	W249
M754B12512320165LN13	125	12	16,5	32	8	R	12		10900	LNGX1305	SR232	W249
M753B16016400165LN13	160	12	16,5	40	10	L	16	1,9	6900	LNGX1305	SR232	W249
M754B16016400165LN13	160	12	16,5	40	10	R	16		6900	LNGX1305	SR232	W249

UFG

UFX

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UFD

UFA

UFC

PMT

RB

CBN

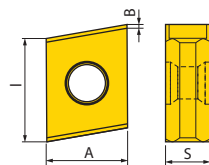
HSS



ICT

INSERT PYTKI

Milling Inserts Płytki do frezowania

LNGX



Insert shape Kształt płytki	Type Typ	Dimensions Wymiary (mm)			Coating			Cermet			Uncoated		
		Cutting rake Kąt cięcia	S	I	A	P322	P323	P324	P326	P327	P329		
 C331	LNGX 1005 C331	20°	5.4	10.0	10			•					
	LNGX 1305 C331		5.4	12.7	10			•					
	LNGX 1605 C331		5.4	16.0	10			•					
 C337	LNGX 1005 C337	15°	5.4	10.0	10			•	•				
	LNGX 1305 C337		5.4	12.7	10			•	•				
	LNGX 1305 C337		5.4	16.0	10			•	•				

UFG
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TECHNICAL INFO INFORMACJA TECHNICZNA

Series Seria - LNGX

Material Materiał	Material group No.	Recom. feed fz mm/tooth ae/ Dc=10%	LNGX 1005	LNGX 1305		
Steel Stal	1	0.2-0.4	LNGX 1005T-C420,P323 LNGX 1005T-C420,P326	LNGX 1305T-C420P323 LNGX 1305T-C420P326		
	2					
	3	0.2-0.35				
	4					
	5	0.2-0.32			LNGX 1005T-C420.P326	LNGX 1305T-C420.P326
	6					
Hardened Steel Stal hartowana	7	0.15-0.3				
Stainless Steel Stal nierdzewna	8	0.2-0.4	LNGX 1005T-C420.P326	LNGX 1305T-C420.P326		
	9					
	10	0.2-0.33				
	11					
Cast Iron Żeliwo	12	0.22-0.4	LNGX 1005T-C420.P324	LNGX 1305T-C420.P324		
	13					
	14	0.2-0.35				
	15					
Non-ferrous materials Materiały nieżelazne	16	0.22-0.42	LNGX 1005T-C318.P324	LNGX 1305T-C318.P324		
	17					
Plastics Tworzywa Sztuczne	20	0.2-0.3	LNGX 1005T-C420.P323 LNGX 1005T-C420,P326	LNGX 1305T-C420.P323 LNGX 1305T-C420,P326		
	21	0.15-0.25				
	22	0.2-0.25				

Cutting data- 10% engagement width(ac/De=10%)

Dane skrawania -10%

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

CBN

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TECHNICAL INFO INFORMACJA TECHNICZNA
Cutting Conditions / Parametry skrawania (ae/De=10%)

Material Materiał	Group № N° Grup	Grade Gatunek														
		P321			P323			P324			P324-C318			P326		
		Vc (m/min)														
		0,15	0,20	0,40	0,15	0,20	0,40	0,15	0,20	0,40	0,15	0,20	0,40	0,15	0,20	0,40
Steel Stal	1	-	-	-	162	140	123	-	-	-	-	-	-	162	140	123
	2	-	-	-	146	123	109	-	-	-	-	-	-	146	123	105
	3	-	-	-	120	101	92	-	-	-	-	-	-	120	101	92
	4	-	-	-	109	92	84	-	-	-	-	-	-	109	92	84
	5	-	-	-	90	78	70	-	-	-	-	-	-	90	78	70
	6	-	-	-	64	56	-	-	-	-	-	-	-	63	56	-
Hardened Steel Stal hartowana	7	-	-	-	28	-	-	-	-	-	-	-	-	-	-	-
Stainless Steel Stal nierdzewna	8	-	-	-	112	95	87	-	-	-	-	-	-	112	95	87
	9	-	-	-	98	84	76	-	-	-	-	-	-	98	84	76
	10	-	-	-	84	70	64	-	-	-	-	-	-	84	70	64
	11	-	-	-	64	56	-	-	-	-	-	-	-	64	56	-
Cast Iron Żeliwo	12	-	-	-	-	-	-	140	119	105	-	-	-	-	-	-
	13	-	-	-	-	-	-	126	105	98	-	-	-	-	-	-
	14	-	-	-	-	-	-	119	98	91	-	-	-	-	-	-
	15	-	-	-	-	-	-	91	84	-	-	-	-	-	-	-
Non-ferrous materials Materiały nieżelazne	16	-	-	-	-	-	-	-	-	-	800	680	610	-	-	-
	17	-	-	-	-	-	-	-	-	-	465	550	490	-	-	-
Plastics Tworzywa Sz- tuczne	20	-	-	-	40	37	-	-	-	-	-	-	-	40	37	-
	21	-	-	-	35	30	-	-	-	-	-	-	-	35	30	-
	22	-	-	-	40	37	-	-	-	-	-	-	-	40	37	-

Cutting Conditions / Parametry skrawania

Operations Operacje	ae/De	fz mm/tooth			Speed factor Współczynnik prędkości
Radial infeed zagłębianie	-	0.08	0.12	0.20	0.65
Side milling Frezowanie boczne	2%	0.35	0.55	0.92	1.20
	5%	0.23	0.35	0.59	1.10
	10%	0.16	0.25	0.42	1.00
	20%	0.12	0.18	0.30	0.90
	30%	0.10	0.15	0.25	0.85
Average chip thickness hm Średni przekrój wióra		0.05	0.08	0.13	-

TECHNICAL INFO INFORMACJA TECHNICZNA

T-SLOT MILLING CUTTERS FREZY T-OWE

Material Materiał	D mm	Z	Vc [m/min]	fz [mm]	ap [mm]	RMP [min-1]	FEED [mm/min]
Alloy Steel Stal stopowa	80	4	160	0.2	15	636	509
	100	5				509	509
	125	6				407	489
	160	8			20	318	509
	200	10				254	509
	250	12				203	489
High Alloy Steel Stal wysokostopowa	80	4	120	0.18	15	477	343
	100	5				382	343
	125	6				305	330
	160	8			20	238	343
	200	10				191	343
	250	12				152	330
Stainless steel Stal nierdzewna	80	4	70	0.2	15	278	222
	100	5				222	222
	125	6				178	214
	160	8			20	139	222
	200	10				111	222
	250	12				89	214
Grey Cast Iron Żeliwo szare	80	4	120	0.2	15	477	382
	100	5				382	382
	125	6				305	366
	160	8			20	238	382
	200	10				191	382
	250	12				152	366
Aluminium Aluminium	80	4	800	0.25	15	3200	3200
	100	5				2580	3220
	125	6				2060	3090
	160	8			20	1600	3200
	200	10				1290	3200
	250	12				1032	3090
Ti alloy Stop tytanu	80	4	40	0.12	10	161	77
	100	5				129	77
	125	6				103	74
	160	8			15	80	77
	200	10				64	77
	250	12				51	73

UFG

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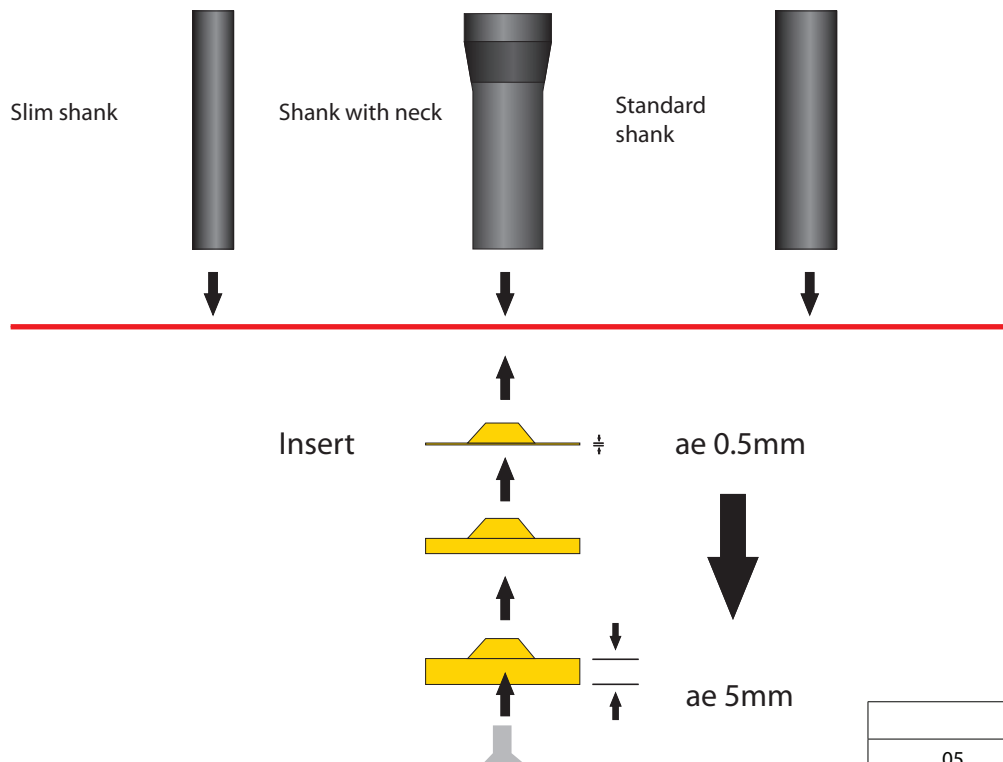
CBN

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TLC MILLING CUTTERS NOŻE FREZARSKIE



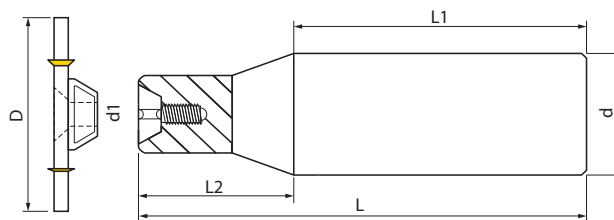
Example insert order code
Przykładowy kod zamówienia płytki

Insert code D s ae Z Chamfer
Kod płytki łamacz

TRTF 12 06 xxx 04 C318

D - insert diameter średnica płytki
AE - insert thickness grubość płytki
Z - number of teeth ilość zębów

AE	
05	0.5
06	0.6
07	0.7
08	0.8
09	0.9
10	1.0
11	1.1
12	1.2
13	1.3
14	1.4
15	1.5
16	1.6
17	1.7
18	1.8
19	1.9
20	2.0
22	2.2
25	2.5
30	3.0
40	4.0
50	5.0

T-SLOT MILLING CUTTERS FREZY T-OWE
TLC Shank with neck Uchwyt z zwężaną szyjką


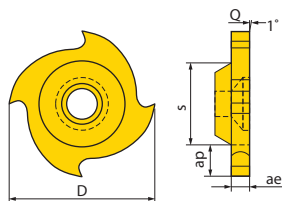
EDP No	AR	D	d	d1	L	L1	Q	Screw Śruba	Wrench Klucz
TLC01206040	2,5	12	6	5,9	40	10	-	SC319	W218
TLC01206055	2,5	12	6	5,9	55	10	-	SC319	W218
TLC01208060	1,5	12	8	7,9	60	10	-	SC319	W218
TLC01208080	1,5	12	8	7,9	80	10	-	SC319	W218
TLC01210070	2,5	12	10	5,9	70	15	1°	SC319	W218
TLC01210100	2,5	12	10	5,9	100	20	1°	SC319	W218
TLC01210101	1,5	12	10	7,9	100	30	1°	SC319	W218
TLC01508040	3	15	8	7,9	40	10	-	SC319	W218
TLC01508055	3	15	8	7,9	55	10	-	SC319	W218
TLC01510070	2	15	10	9,9	70	10	-	SC319	W218
TLC01510090	2	15	10	9,9	90	10	-	SC319	W218
TLC01512090	3	15	12	7,9	90	25	1°	SC319	W218
TLC01512110	3	15	12	7,9	110	30	1°	SC319	W218
TLC01512120	3	15	12	9,9	120	30	1°	SC319	W218
TLC02010050	4,5	20	10	9,9	50	10	-	SC319	W218
TLC02010065	4,5	20	10	9,9	65	10	-	SC319	W218
TLC02012080	3,5	20	12	11,9	80	10	-	SC319	W218
TLC02012100	3,5	20	12	11,9	100	10	-	SC319	W218
TLC02012120	4,5	20	12	9,9	120	30	1°	SC319	W218
TLC02016090	4,5	20	16	9,9	90	25	1°	SC319	W218
TLC02016150	3,5	20	16	11,9	150	30	1°	SC319	W218
TLC02510050	7	25	10	9,9	50	10	-	SC319	W218
TLC02510065	7	25	10	9,9	65	10	-	SC319	W218
TLC02512080	6	25	12	11,9	80	10	-	SC319	W218
TLC02512100	6	25	12	11,9	100	10	-	SC319	W218
TLC02512120	7	25	12	9,9	120	30	1°	SC319	W218
TLC02516090	7	25	16	9,9	90	25	1°	SC319	W218
TLC02516150	6	25	16	11,9	150	30	1°	SC319	W218
TLC03012065	8,5	30	12	11,9	65	15	-	SC319	W218
TLC03012080	8,5	30	12	11,9	80	15	-	SC319	W218
TLC03016120	6,5	30	16	15,9	120	15	-	SC319	W218
TLC03016150	6,5	30	16	15,9	150	15	-	SC319	W218
TLC03016100	8,5	30	16	11,9	100	25	1°	SC319	W218
TLC03016151	8,5	30	16	11,9	150	30	1°	SC319	W218
TLC03020180	6,5	30	20	15,9	180	30	1°	SC319	W218

INSERTS PŁYTKI

Milling Inserts Płytki do frezowania

TRTF

4 teeth-4 zębów 4зубн.

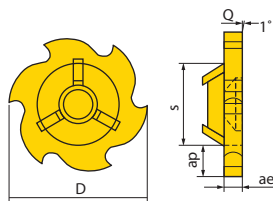


Insert Shape	Type	Basic Dimensions (mm)					Coating				Cermet				Uncoated				
		D	s	ae	ap	Z	P321	P322	P323	P324	P325	P326	P327	P328					
	TRTF120604-C318	12	5,9	0,5-3,0	2,5	4													
	TRTF120604-C319	12	5,9	0,5-3,0	2,5	4				•									
	TRTF150804-C318	15	7,9	0,5-3,0	3,0	4													
	TRTF150804-C319	15	7,9	0,5-3,0	3,0	4				•									

Milling Inserts Płytki do frezowania

TRTF

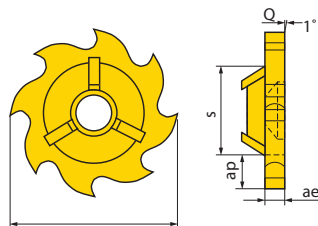
6 teeth-6 zębów



Insert Shape	Type	Basic Dimensions (mm)					Coating				Cermet				Uncoated				
		D	s	ae	ap	Z	P321	P322	P323	P324	P325	P326	P327	P328					
	TRTF201006-C318	20	9,9	0,5-5,0	4,5	6													
	TRTF201006-C319	20	9,9	0,5-5,0	4,5	6				•									
	TRTF251006-C318	25	9,9	0,5-5,0	7,0	6													
	TRTF251006-C319	25	9,9	0,5-5,0	7,0	6				•									

INSERTS PŁYTKI

Milling Inserts Płytki do frezowania



TRTF
8 teeth-8 zębów



Insert Shape	Type	Basic Dimensions (mm)					Z	Coating				Cermet			Uncoated			
		D	s	ae	ap			P321	P322	P323	P324	P325	P326	P327	P328			
	TRTF301208-C318	30	11,9	0,8 -5,0	8,0	8												
	TRTF301208-C319	30	11,9	0,8 -5,0	8,0	8												



Material Materiał

Aluminium Aluminium
Bakelite Bakelit
Acrylic Akryl
Plastic Plastik
Paper Papier
Copper Miedź



Material Materiał

Steel Stal
Stainless steel Stal nierdzewna
Stainless steel pipe Rura ze stali nierdzewnej
Cast Iron Żeliwo
Difficult cutting material Trudno obrabialne materiały

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

CBN

HSS

ICT

TECHNICAL INFO INFORMACJA TECHNICZNA

Series Seria - TLC				
Material Materiał	Material group No.	Recom. feed fz mm/tooth ae/ Dc=10%	TRTF C318	TRTF C319
Steel Stal	1	0.14-0.30	P326	
	2	0.14-0.25	P326	
	3	0.14-0.22	P326	
	4	0.14-0.22	P326	
	5	0.14-0.20	P326	
	6	0.10-0.15	P326	
Hardened Steel Stal hartowana	7	0.10-0.13	P326	
Stainless Steel Stal nierdzewna	8	0.14-0.25	P326	
	9	0.14-0.22	P326	
	10	0.14-0.20	P326	
	11	0.10-0.15	P326	
Cast Iron Żeliwo	12	0.14-0.30	P324	
	13	0.14-0.22	P324	
	14	0.14-0.20	P324	
	15	0.10-0.15	P324	
Non-ferrous materials Materiały nieżelazne	16	0.16-0.30		P324
	17	0.16-0.25		P324
Plastics Tworzywa Sztuczne	20	0.14-0.20	P326	
	21	0.10-0.13	P326	
	22	0.14-0.20	P326	

TECHNICAL INFO INFORMACJA TECHNICZNA
Cutting Conditions / Parametry skrawania (ae/De=10%)

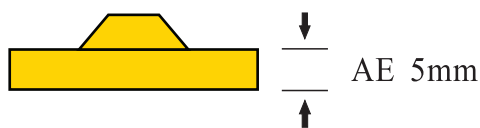
Material Material	Group № N° Grup	Grade Gatunek														
		P321			P323			P324			P326			P327		
		Vc (m/min)														
Steel Stal	1	-	-	-	-	-	-	-	-	-	255	230	200	-	-	-
	2	-	-	-	-	-	-	-	-	-	200	180	162	-	-	-
	3	-	-	-	-	-	-	-	-	-	180	162	145	-	-	-
	4	-	-	-	-	-	-	-	-	-	160	145	130	-	-	-
	5	-	-	-	-	-	-	-	-	-	144	130	116	-	-	-
	6	-	-	-	-	-	-	-	-	-	130	117	105	-	-	-
Hardened Steel Stal hartowana	7	-	-	-	-	-	-	-	-	40	-	-	-	-	-	
Stainless Steel Stal nierdzewna	8	-	-	-	-	-	-	-	-	180	162	145	-	-	-	
	9	-	-	-	-	-	-	-	-	130	118	105	-	-	-	
	10	-	-	-	-	-	-	-	-	95	86	77	-	-	-	
	11	-	-	-	-	-	-	-	-	70	63	56	-	-	-	
Cast Iron Żeliwo	12	-	-	-	-	-	-	200	170	150	-	-	-	-	-	
	13	-	-	-	-	-	-	180	150	140	-	-	-	-	-	
	14	-	-	-	-	-	-	160	140	130	-	-	-	-	-	
	15	-	-	-	-	-	-	125	115	-	-	-	-	-	-	
Non-ferrous materials Materiały nieżelazne	16	-	-	-	-	-	-	-	-	-	-	-	1150	950	850	
	17	-	-	-	-	-	-	-	-	-	-	-	950	780	700	
Plastics Tworzywa Sz- tuczne	20	-	-	-	-	-	-	-	-	-	50	45	-	-	-	
	21	-	-	-	-	-	-	-	-	-	35	40	-	-	-	
	22	-	-	-	-	-	-	-	-	-	50	45	-	-	-	

Cutting Conditions / Parametry skrawania

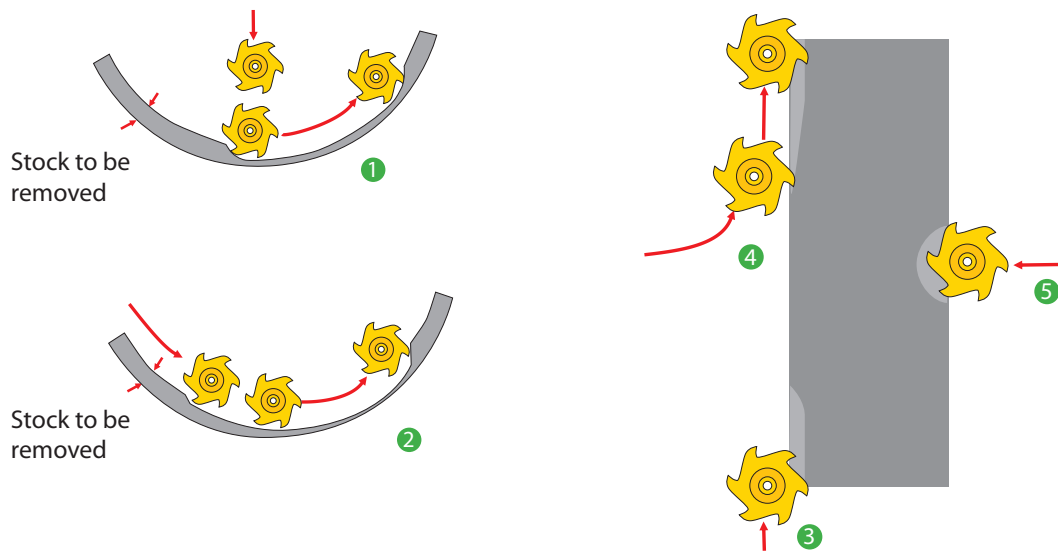
Operations Operacje	ae/De	fz mm/tooth			Speed factor Współczynnik prędkości
Radial infeed zagłębianie	-	0,05	0,10	0,14	0,65
Side milling Frezowanie boczne	2%	0,21	0,44	0,65	1,20
	5%	0,14	0,28	0,41	1,10
	10%	0,10	0,20	0,30	1,00
	20%	0,07	0,14	0,21	0,90
	30%	0,06	0,12	0,18	0,85
		0,03	0,06	0,09	-
Average chip thickness hm Średni przekrój wióra		0,03	0,06	0,09	-

TECHNICAL INFO INFORMACJA TECHNICZNA

fz (mm/tooth)



AE	Feed Posuw fz					
	Material group Grupa materiału					
	1 2 3 4	5 6	8 9 10 11	12 13 14 15	16 17	20 21 22
0.5-0.7mm	0.01-0.02	0.01-0.015	0.01-0.02	0.015-0.02	0.02-0.03	0.01-0.015
0.8-1.0mm	0.01-0.025	0.01-0.02	0.01-0.025	0.015-0.025	0.02-0.035	0.01-0.02
1.1-1.3mm	0.015-0.03	0.015-0.025	0.015-0.03	0.02-0.03	0.02-0.04	0.015-0.025
1.4-1.6mm	0.02-0.035	0.02-0.03	0.02-0.035	0.025-0.04	0.03-0.05	0.02-0.03
1.7-2.2mm	0.02-0.04	0.02-0.04	0.02-0.04	0.03-0.05	0.03-0.06	0.02-0.035
2.5-3.0mm	0.03-0.05	0.03-0.045	0.03-0.04	0.03-0.06	0.04-0.07	0.025-0.04
3.5-4.0mm						
4.2-5.0mm	0.04-0.07	0.03-0.06	0.04-0.07	0.05-0.09	0.05-0.10	0.025-0.05



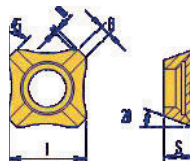
1. Plugging to mill Pionowe wcięcie Fz-50%
2. Ramping to mill Wcięcie po łuku Fz-100%
3. Mill Frezowanie Fz-100%
4. Ramping Zagłębianie Fz-100%
5. Plugging on mill Wcięcie proste Fz-50%


UFG
UFX
UFJ
UFD
UFA
UFC
PMT
RB
CBN
HSS
ICT

INSERT PYTKI

Milling Inserts Płytki do frezowania

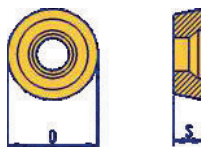
SNHT







Insert shape Kształt płytki	Type Typ	Dimensions Wymiary (mm)			Coating				Cermet				Uncoated				
		S	I		P322	P323	P324		P326					P327	P329		
 C421	SNHT 13T3 C421	3,97	13,4			•	•		•								

Milling Inserts Płytki do frezowania

RDKW
RDKT
RPKT



Insert shape Kształt płytki	Type Typ	Dimensions Wymiary (mm)			Coating				Cermet				Uncoated			
		S	D	R	P322	P323	P324		P326				P327	P329		
   	RDKW 0800 C410	2,2	8	4					•							
	RDKT 10T3 C422	3,97	10	5					•	•						
	RPKT 1204 C410	4,7	12	6					•	•						
	RPKT 1204 C422	4,7	12	6					•	•						

TECHNICAL INFO INFORMACJA TECHNICZNA

Insert Grades Gatunki Płytek

	Grades Gatunki	P					M					K					N				S				H												
		P01	P10	P20	P30	P40	P50	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	M20	N30	S01	S10	S20	S30	H01	H10	H20	H30								
PVD	P332																																				
	P321																																				
	P333																																				
	P322																																				
	P323																																				
	P326																																				
	P324																																				

	P331 P332 P333	Hard and wear resistant grade for milling in aluminium and nonferrous alloys. Excellent grade, in combination with protected cutting edges, for high speed machining in hardened steel. Twardy i odporny na ścieranie materiał do frezowania w aluminium i stopach metali nieżelaznych. Doskonały gatunek chroniący krawędź tnącą przy obróbce szybkościowej w stali hartowanej. (Ti,Al) N-TiN
	P322	Tough grade for rough milling in tool steels. Twardy gatunek do obróbki zgrubnej stali narzędzowej. (Ti,Al) N-TiN
	P324	This substrate is in accordance to the ISO K classification. For application in Cast Iron, Aluminum, Copper or Plastic etc.. Gatunek zgodny z klasyfikacją ISO K. Stosowany do żeliwa, aluminium, miedzi, lub tworzywa sztucznego itp. (Ti,Al) N-TiN
	P323	This substrate is in the ISO P20-P35 application areas. It has a tough substrate and suitable for hardened steels. Gatunek z przedziału ISO P20-P35. Twardy gatunek z zastosowaniem obróbki stali hartowanej. (Ti,Al) N-TiN
	P326	Cermet grade is oxidation resistant and wear resistant for fine to medium rough milling of steel at high cutting speed and for finishing in austenitic stainless steel. First choice for high demand on surface finishes. Garunek cermet - odporny na utlenianie oraz na ścieranie. Przeznaczony do obróbki średnio zgrubnej stali, przy wysokich prędkościach skrawania oraz do obróbki wykańczającej stali austenitycznej. Pierwszy wybór dla osiągnięcia powierzchni wykańczającej. (Ti,Al) N-TiN
	P330	Polycrystalline diamond for milling aluminium alloys and graphite. Diament polikrystaliczny do frezowania stopów aluminium oraz grafitu.

TECHNICAL INFO INFORMACJA TECHNICZNA



C434

Negative and very protected cutting edge
Łamacz ujemny z dobrze zabezpieczoną krawędzią cięcia.



C434

Negative and very protected cutting edge
Łamacz ujemny z dobrze zabezpieczoną krawędzią cięcia.



C421

Positive and very protected cutting edge
Łamacz dodatni z dobrze zabezpieczoną krawędzią cięcia.



C437

Positive and very protected cutting edge
Łamacz dodatni z dobrze zabezpieczoną krawędzią cięcia.



C438

Positive and very sharp cutting edge
Łamacz dodatni z bardzo ostrą krawędzią cięcia. кромкой.

UFG

UFX

UFJ

UFD

UFA

UFC

PMT

RB

CBN

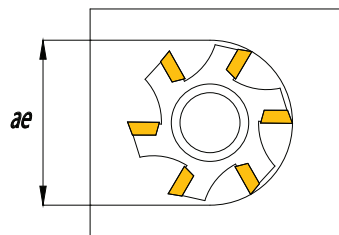
HSS

ICT

TECHNICAL INFO INFORMACJA TECHNICZNA

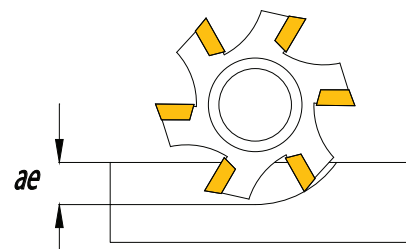
Slot milling compared with side milling

Zestawienie frezowania rowków z frezowaniem bocznym



Slot milling
Frezowanie kieszeni

Relative engagement of the cutter diameter / Względne zaangażowanie średnicy freza (ac/D%)	Multiply the feed per tooth by the following factor / Pomnóż posuw na ząb przez następujący czynnik
30%	1.25
20%	1.5
10%	2
5%	3



Side milling
Frezowanie boczne

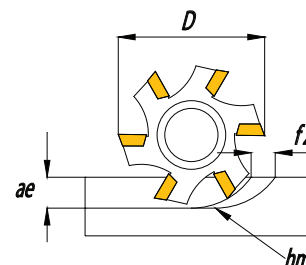
Calculation of feed per tooth and cutting speed for side milling operations. When using side milling it is necessary to increase the feed per tooth to keep the chip thickness at the same value. It is also possible to increase the cutting speed and keep the same tool life. Use the tables below.

Obliczenie posuwu na ząb i szybkości cięcia frezowania bocznego. Podczas frezowania bocznego, konieczne jest zwiększenie 1 he posuwu na ząb, aby utrzymać tą samą grubość wiórów. Możliwe jest również zwiększenie prędkości skrawania, a tym samym zachować trwałość narzędzia. Użyj 1be z tabeli poniżej.

ae/D %	Feed per tooth Posuw na ząb mm/ząb, mm/tooth (fz)													Speed factor
	0,03	0,06	0,08	0,10	0,15	0,20	0,25	0,30	0,40	0,50	0,60	0,80	1,00	
Average chip thickness / Średnia grubość wiórów, mm (hm)														
Width of cut up to and including D/2 / Szerokość cięcia równy lub większy niż D/2														
2 (0.02)					0,02	0,03	0,04	0,04	0,06	0,07	0,08	0,11	0,14	1,8
3 (0.03)				0,02	0,03	0,03	0,04	0,05	0,07	0,09	0,10	0,14	0,17	1,7
5 (0.05)			0,02	0,02	0,03	0,04	0,06	0,07	0,09	0,11	0,13	0,18	0,22	1,6
10 (0.10)		0,02	0,02	0,03	0,05	0,06	0,08	0,09	0,12	0,16	0,19	0,25	0,31	1,5
15 (0.15)	0,011	0,02	0,03	0,04	0,06	0,08	0,09	0,11	0,15	0,19	0,23	0,30		1,4
20(0.20)	0,013	0,03	0,03	0,04	0,06	0,09	0,11	0,13	0,17	0,22	0,26			1,35
30(0.30)	0,016	0,03	0,04	0,05	0,08	0,10	0,13	0,16	0,21	0,26	0,31			1,3
40(0.40)	0,018	0,04	0,05	0,06	0,09	0,12	0,15	0,18	0,23	0,29				1,25
50 (0.50)	0,02	0,04	0,05	0,06	0,10	0,13	0,16	0,19	0,25	0,32				1,2
Slotting(Width of cut = D) / Rowkowanie (Szerokosc = D)														
100(1.00)	0,02	0,04	0,05	0,06	0,10	0,13	0,16	0,19	0,25	0,32				1,0

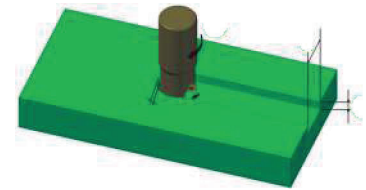
=Feed per tooth correction example: at .20% engagement also increase speed by 1.35.
=Poprawny posuw na ząb przykładowo: 20% zwiększa prędkość 1,3s

Instead of using the table above for calculating hm and fz the following formula could be used if ae/D<30%
Zamiast korzystania z powyższej tabeli do obliczenia hm i fz można użyć formuły ae / D <30%



Cutting data calculation

Obliczanie parametrów skrawania



Nomenclature and formula

Nomenklatura i wzór

RPM (rev/min) $n = (vc \times 1000) / (\pi \times D)$

Cutting speed (m/min)
Prędkość skrawania $vc = (n \times \pi \times D) / 1000$

Feed speed (mm/mim)
Prędkość posuwu $vf = n \times z \times fz$
 $vf = n \times k \times fz$

Feed per revolution (mm/rev)
Posuw na obrót $f = z \times fz$
 $f = k \times fz$

Metal removal rate (cm3/min)
Wydajność skrawania $Q = (ae \times ap \times vf) / 1000$

ae = Width of cut mm/radial depth of cut (mm)
Szerokość cięcia mm/głębokość skrawania (mm)
ap = Depth of cut mm/axial depth of cut (mm)
Głębokość skrawania/osiowa głębokość skrawania (mm)
D= cutter diameter (mm)/średnica freza
f =Feed per revolution (mm/obr)
Posuw na obrót (mm/obr)
fz = feed per tooth (mm/tooth)
Posuw na ząb (mm/z)
K= Effective No. of teeth for calculation of feed per rev
Efektywna liczba zębów do obliczenia posuwu
n=RPM
Q = Material removal rate (cm3/min)
Wydajność usuwania materiału
vc=Cutting speed / prędkość skrawania
z = No of teeth / liczba zębów

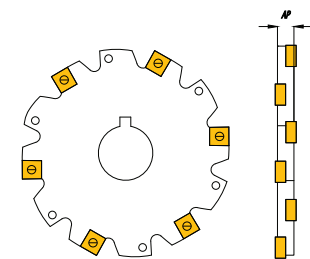
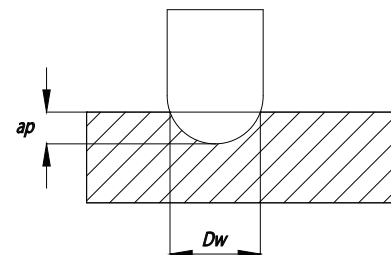
Cutting speed and RPM for copying

Prędkość skrawanie oraz RPM dla kopiowania

$vc = (n \times \pi \times Dw) / 1000$ (m/min)

$vc = (n \times 1000) / (\pi \times Dw)$ (RPM)

$Dw = 2 \sqrt{ap(D - ap)}$ (mm)



Effective No. of teeth {K} The effective No. of teeth (K) is used to calculate the feed speed (vf) and the feed per revolution (f). For most of the cutters the effective No. of teeth (K) ia equal to the No. of teeth in the cutter (z), but for some of the cutters K. is less than z.

Efektywna liczba zębów {K} Efektywną liczbę zębów (K) stosuje się do obliczenia prędkości posuwu(vf) oraz do posuwu na obrót (f). W większości noży efektywna liczba zębów (K) jest liczona jako liczba zębów (z) ale niektóre w niektórych nożazch K jest mniejsza niż z.

Example: Disc mill

Total No. of teeth(z)= 12 Effective No. of teeth(K)=6
Explanation: 6 inserts on one side of the cutter and 6 overlapping inserts on the on the other side are used to get tho full width (ap), which means K=6.

Przykład: Tarcza frezująca

Ilość zębów (z) = 12 Skuteczne Liczba zębów (K) = 6
Objaśnienie: 6 płytek po jednej stronie noża i 6 płytek na drugiej stronie aby frezowanie było na pełnej szerokości (ap), co oznacza K = 6.

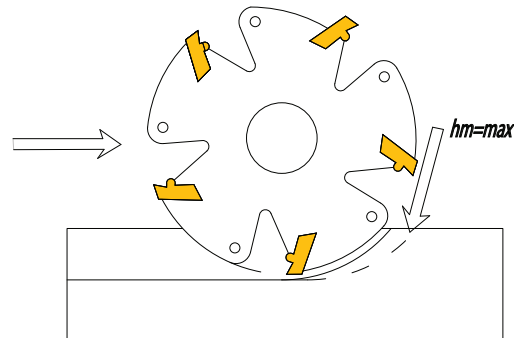
TECHNICAL INFO INFORMACJA TECHNICZNA

Climb & conventional milling

Frezowanie współbieżne i przeciwbieżne

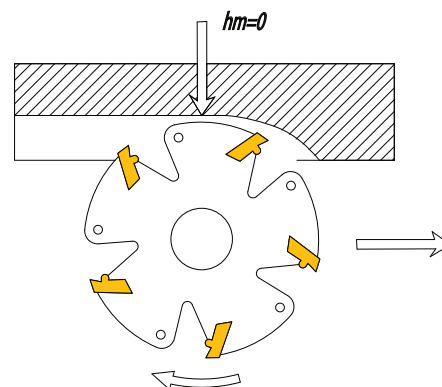
Mould and Die.
Climb milling or down milling.
Obróbka form i stempli.
Frezowanie współbieżne lub dolne.

The only alternative in difficult stainless steels and superalloys.
Jedyna alternatywa obróbki trudnej stali i stali nietypowych.



Climb milling: ($ae < 0,5 * D$) Entrance with max. chip thickness.
Frezowanie współbieżne: ($ae < 0,5 * D$) wejście z maks. grubością wióra.

Mould and Die.
Conventional milling or Up milling.
Obróbka form i stempli.
Frezowanie przeciwbieżne lub górne.



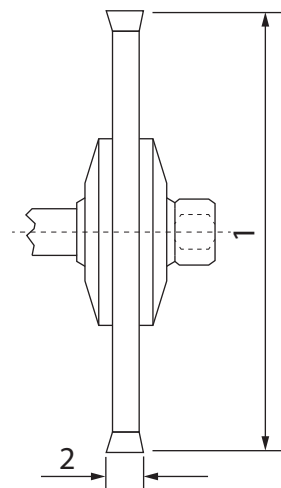
Conventional milling: Entrance with chip thickness 0mm.
Frezowanie przeciwbieżne: Wejście z grubością wióra 0mm

Trouble shooting

Rozwiązywanie problemów

The strategy for vibrations and unstable machining

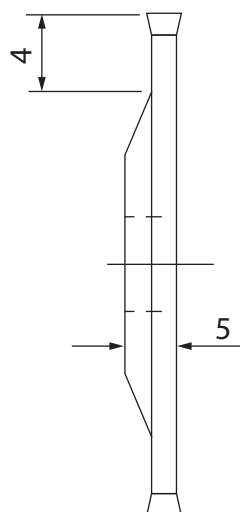
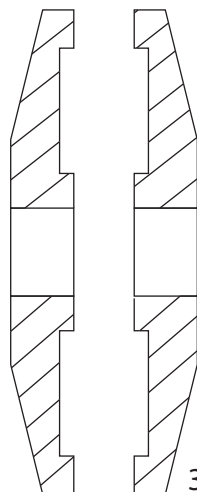
Strategia przeciw wibracji i obróbki niestabilnej.



1. Reduce the diameter of the saw blades
Zmniejsz średnice tarczy tnącej

2. Increase the thickness of the saw blades
Zwiększenie grubości tarcz tnących

3. Change to bigger flange
Zmiana na większy kołnierz



4. Reduce the length of the efficient blade
Zmniejszenie długości efektywnej narzędzia

5. Increase body thickness
Zwiększenie grubości oprawki

*Attention / Uwaga

Please follow the trouble shooting above in order to obtain better cutting surfaces.

Must conform to the speed factor.

Proszę przestrzegać powyższych wskazówek w celu uzyskania lepszej powierzchni cięcia.

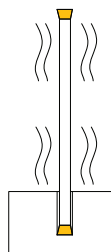
Musi zostać zachowany współczynnik prędkości.

TECHNICAL INFO INFORMACJA TECHNICZNA

Trouble shooting

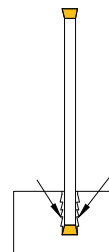
Rozwiązywanie problemów

Vibrations



- Improve the stability of cutter and workpiece.
- Change cutter positioning.
- Minimize tool overhang.
- Reduce the cutting speed.
- Increase the feed rate.
- Reduce the depth of cut.
- Poprawa stabilności noża i przedmiotu obrabianego.
- Zmiana ustawienia noża.
- Minimalizacja wysięgu narzędzia.
- Zmniejszenie prędkości skrawania.
- Zwiększenie posuwu.
- Zmniejszenie głębokości cięcia.

Poor surface finish



- Improve the stability of cutter and workpiece.
- Minimize tool overhang.
- Reduce the feed rate.
- Increase the cutting speed..
- Use a coolant.
- Use wiper inserts.
- Poprawa stabilności noża i przedmiotu obrabianego.
- Minimalizacja wysięgu narzędzia.
- Redukcja posuwu skrawania.
- Zwiększenie prędkości skrawania.
- Zastosowanie chłodzenia.
- Użycie płytek wiper.

Tool life problems

Problemy żywotności narzędzia

<p>Rapid flank wear Szybkie zużycie powierzchni przyłożenia</p>	<ul style="list-style-type: none"> • Reduce the cutting speed. • Increase the feed rate. • Climb milling. 	<p>Comb cracks Pęknięcia zębowe</p>	<ul style="list-style-type: none"> • Reduce the cutting speed . • Reduce the feed rate. • No coolant. • Change cutter positioning.
	<ul style="list-style-type: none"> • Zmniejszenie prędkości skrawania. • Zwiększenie posuwu. • Frezowanie współbieżne. 		<ul style="list-style-type: none"> • Zmniejszenie prędkości skrawania. • Zmniejszenie posuwu. • Brak chłodzenia. • Zmiana ustawienia noża.
<p>Rapid notch wear Szybkie uszczerbienie</p>	<ul style="list-style-type: none"> • Reduce the cutting speed. • Reduce the feed rate. • No coolant. • Change cutter positioning. 	<p>Built up edge Wyrobienie krawędzi</p>	<ul style="list-style-type: none"> • Increase the cutting speed. • Increase the feed rate. • No coolant. • Climb milling. • Change cutter positioning.
	<ul style="list-style-type: none"> • Zmniejszenie prędkości skrawania. • Zmniejszenie posuwu. • Brak chłodzenia. • Zmiana ustawienia noża. 		<ul style="list-style-type: none"> • Zwiększenie prędkości skrawania. • Zwiększenie posuwu. • Brak chłodzenia. • Frezowanie współbieżne. • Zmiana ustawienia noża.
<p>Chipping Odpryskiwanie</p>	<ul style="list-style-type: none"> • Increase the cutting speed. • Reduce the feed rate. • Conventional milling. • Improve chip evacuation. • Change cutter positioning. • Minimize tool overhang. • Improve stability. • Zwiększenie prędkości skrawania. • Redukcja posuwu skrawania. • Frezowania przeciwbieżne. • Ulepszone odprowadzanie wiórów. • Zmiana ustawienia noża. • Minimalizacja wysięgu narzędzia. • Poprawa stabilności. 		