

# LPNT

Compatible  
Workpiece Materials



Steel

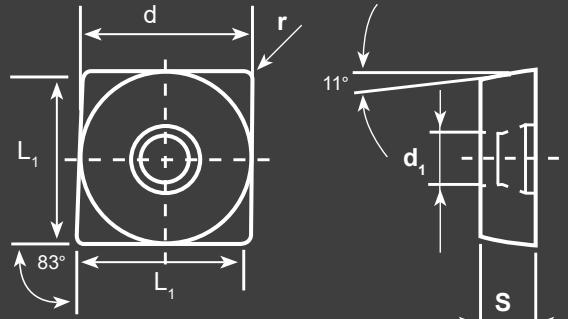


Stainless Steel



Stainless Steel

SKU#	ANSI# / ISO#	L <sub>1</sub>	d	S	d <sub>1</sub>	r
424-2105	LPNT040104ER	0.157	0.177	0.071	0.083	0.016
424-2106	LPNT050204EN	0.197	0.228	0.083	0.089	0.016
424-2107	LPNT060204EN	0.236	0.256	0.094	0.098	0.016
424-2108	LPNT070304EN	0.276	0.299	0.125	0.110	0.016
424-2109	LPNT080304EN	0.315	0.335	0.125	0.134	0.016



## APPLICATION RECOMMENDATIONS

### MAXIMUM DRILLING DEPTH

NOMINAL TOOL DIA. [in]	2.25 X D	NOMINAL TOOL DIA. D [in]	DRILLING DIA. D <sub>min</sub> [in]	DRILLING DIA. D <sub>max</sub> [in]
0.315 in	0.709 in	0.315 in	0.309 in	0.327 in
0.394 in	0.866 in	0.394 in	0.388 in	0.413 in
0.472 in	1.063 in	0.472 in	0.467 in	0.492 in
0.551 in	1.240 in	0.551 in	0.545 in	0.571 in
0.630 in	1.417 in	0.630 in	0.624 in	0.650 in

### DEPTH OF CUT AND FEED RATE

#### DRILLING

NOMINAL TOOL DIA. [in]	2.25 X D f [in/rev]	NOMINAL TOOL DIA. [in]	2.25 X D ap [in]	f [in/rev]
0.315 in	0.0004-0.0016	0.315 in	0.059	0.0028
0.394 in	0.0004-0.0020	0.394 in	0.079	0.0047
0.472 in	0.0004-0.0020	0.472 in	0.098	0.0055
0.551 in	0.0004-0.0028	0.551 in	0.118	0.0059
0.630 in	0.0008-0.0031	0.630 in	0.138	0.0063

#### TURNING

NOMINAL TOOL DIA. [in]	DEPTH OF CUT AP [IN]	0.039	0.079	0.098	0.118	0.138	0.157	0.197	0.236	0.276
	FEED RATE F [IN/REV]									
0.315 in		0.005	0.004	0.000	--	--	--	--	--	--
0.394 in		0.006	0.005	--	0.004	--	--	--	--	--
0.472 in		0.007	0.006	--	0.005	0.004	--	--	--	--
0.551 in		0.006	0.007	--	0.006	0.004	--	--	--	--
0.630 in		0.008	0.008	--	0.006	--	0.005	--	--	--

# LPET

Compatible  
Workpiece Materials



Cast Iron

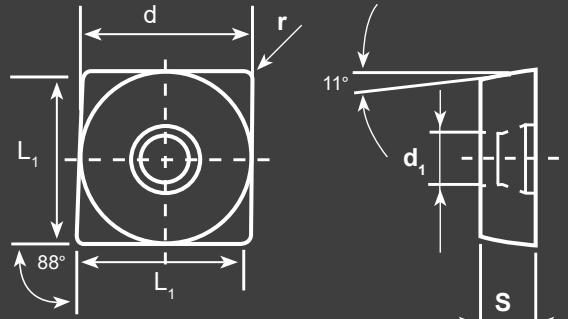


Aluminum



Stainless Steel

SKU#	ANSI# / ISO#	L <sub>1</sub>	d	s	d <sub>1</sub>	r
424-2114	LPET040104FR-AWI	0.157	0.177	0.071	0.083	0.016
424-2116	LPET050204FN-AWI	0.197	0.228	0.083	0.089	0.016
424-2117	LPET060204FN-AWI	0.236	0.256	0.094	0.098	0.016
424-2118	LPET070304FN-AWI	0.276	0.299	0.125	0.110	0.016
424-2119	LPET080304FN-AWI	0.315	0.335	0.125	0.134	0.016



## APPLICATION RECOMMENDATIONS

### MAXIMUM DRILLING DEPTH

### DRILLING OFF CENTER

NOMINAL TOOL DIA. [in]	2.25 X D	NOMINAL TOOL DIA. D [in]	DRILLING DIA. D <sub>min</sub> [in]	D <sub>max</sub> [in]
0.315 in	0.709 in	0.315 in	0.309 in	0.327 in
0.394 in	0.866 in	0.394 in	0.388 in	0.413 in
0.472 in	1.063 in	0.472 in	0.467 in	0.492 in
0.551 in	1.240 in	0.551 in	0.545 in	0.571 in
0.630 in	1.417 in	0.630 in	0.624 in	0.650 in

### DEPTH OF CUT AND FEED RATE

#### DRILLING

#### FACING

NOMINAL TOOL DIA. [in]	2.25 X D f [in/rev]	NOMINAL TOOL DIA. [in]	2.25 X D ap [in]	f [in/rev]
0.315 in	0.0004-0.0016	0.315 in	0.059	0.0028
0.394 in	0.0004-0.0020	0.394 in	0.079	0.0047
0.472 in	0.0004-0.0020	0.472 in	0.098	0.0055
0.551 in	0.0004-0.0028	0.551 in	0.118	0.0059
0.630 in	0.0008-0.0031	0.630 in	0.138	0.0063

### TURNING

NOMINAL TOOL DIA. [in]	DEPTH OF CUT AP [IN]			
	0.039	0.079	0.098	0.118
FEED RATE F [IN/REV]				
0.315 in	0.005	0.004	0.000	--
0.394 in	0.006	0.005	--	0.004
0.472 in	0.007	0.006	--	0.005
0.551 in	0.006	0.007	--	0.006
0.630 in	0.008	0.008	--	0.006

ISO

## MATERIAL

TENSILE  
STRENGTH  
[MM<sup>2</sup>]CUTTING SPEED Vc  
[ft/min]

AM5035

AK10

P

M

K

N

S

H

<b>Unalloyed steel and cast steel</b>	ca. 0.15% C	340	390-750	-
	ca. 0.45% C	640	260-520	-
	ca. 0.45% C	830	260-520	-
	ca. 0.75% C	900	200-430	-
	ca. 0.75% C	1000	160-430	-
	<b>Low alloyed steel and cast steel</b>	annealed  hardened and tempered	600  920	260-520  200-430
<b>High alloyed steel, high alloyed toolsteel and cast steel</b>	annealed	670	260-460	-
	hardened and tempered	1100	160-330	-
<b>Stainless steel and cast steel</b>	ferritic / martensitic, annealed	670	160-660	-
	martensitic, hardened and tempered	1000	160-490	-
<b>Stainless steel and cast steel</b>	austenitic and austenitic/ferritic,	450-600	160-620	-
	chilled	600-900	160-330	-
<b>Cast iron</b>	pearlitic, ferritic	500-700	-	330-490
	pearlitic, martensitic	700-850	-	330-490
		800-1100	-	260-390
<b>Cast iron with nodular graphite</b>	ferritic	550	-	330-460
	pearlitic	800	-	330-460
<b>Malleable cast iron</b>	ferritic	450	-	330-520
	pearlitic	750	-	330-520
<b>Aluminium alloys, long chipping</b>	not heat treatable	200	-	330-1640
	heat treatable, heat - treated	350	-	330-980
<b>Casted aluminium alloys</b>	≤ 12% Si, hardened	250	-	330-1640
	≤ 12% Si, heat treatable, hardened	300	-	330-980
	≤ 12% Si, not heat treatable	450	-	330-980
<b>Copper and copper alloys (brass / bronze)</b>	Lead alloys, Pb > 1%	400	-	330-1640
	Brass, bronze	300	-	330-1640
	Aluminium bronze	500	-	330-980
	Copper and electrolyte copper	200	-	330-980
<b>Non ferrous materials</b>	Duroplastics		-	260-590
	Re - inforced plastics		-	200-490
	Hard rubber		-	330-820
<b>High temperature resistant alloys</b>	Fe-alloyed	annealed	700	70-160
		heat - treated	950	70-130
	Ni- or	annealed	800	50-80
	Co based	casting	1100	30-70
		heat - treated	1200	30-70
<b>Titanium alloys, high strength Alpha- and Beta- alloys, hardened</b>	Pure titan	500-700	160-390	160-390
		700-1000	100-160	100-160
<b>Hardened steel</b>	hardened and tempered	1000-1350	-	-
	hardened and tempered	1350-1700	-	-
<b>Hard cast iron</b>	casting	1350	-	-
<b>Hardened cast iron</b>	hardened and tempered	1900	-	-