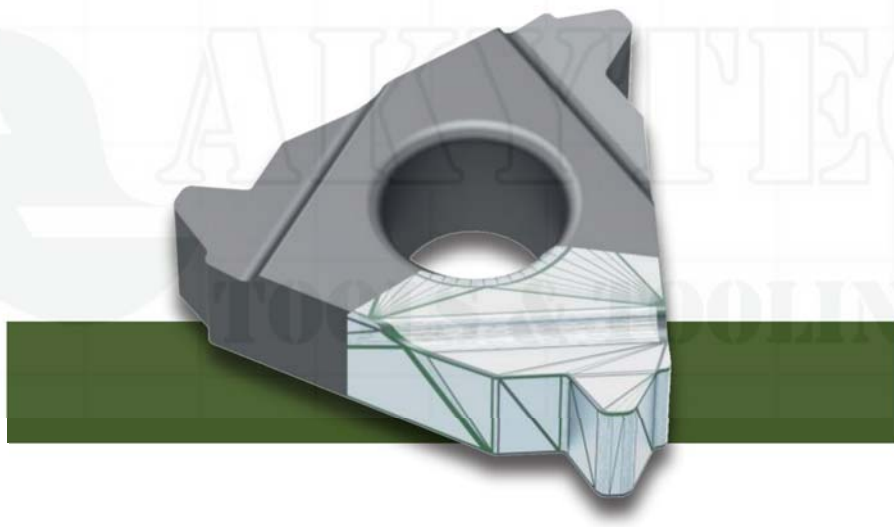


# THREAD TURNING



## Insert Ordering Code

Lamina threading line provides a large range of high quality standard threading inserts.

ISO	1.5	Multitooth	ER	16	V	Grade																																						
<b>Profile</b> <b>Partial Profile</b> 60° 55° <b>Full Profile</b> ISO METRIC UN WHITWORTH BSPT MJ NPT NPTF TRAPEZ ACME STUB ACME AM. BUTTRESS ROUND (DIN 405) DIN 20400 PG SAGENGWINDE UNJ API API ROUND BUT. CASING EXTREME LINE	<b>Pitch</b> <b>Partial Profile</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>mm</th> <th>tpi</th> </tr> </thead> <tbody> <tr> <td><b>A</b></td> <td>0.5-1.5</td> <td>48-16</td> </tr> <tr> <td><b>G</b></td> <td>1.75-3.0</td> <td>14-8</td> </tr> <tr> <td><b>AG</b></td> <td>0.5-3.0</td> <td>48-8</td> </tr> <tr> <td><b>N</b></td> <td>3.5-5.0</td> <td>7-5</td> </tr> <tr> <td><b>Q</b></td> <td>5.5-6.0</td> <td>4.5-4</td> </tr> </tbody> </table> <b>Full Profile</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>mm</th> <th>tpi</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.35-6.0</td> <td>72-4</td> </tr> </tbody> </table>		mm	tpi	<b>A</b>	0.5-1.5	48-16	<b>G</b>	1.75-3.0	14-8	<b>AG</b>	0.5-3.0	48-8	<b>N</b>	3.5-5.0	7-5	<b>Q</b>	5.5-6.0	4.5-4		mm	tpi		0.35-6.0	72-4	2M 3M	<b>Type of insert</b> <b>HER</b> External right handed  <b>HEL</b> External left handed  <b>HIR</b> Internal right handed  <b>HIL</b> Internal left handed	<b>Insert size</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>L</th> <th>I.C.</th> </tr> </thead> <tbody> <tr> <td>06</td> <td>4.00</td> </tr> <tr> <td>08</td> <td>5.00</td> </tr> <tr> <td>11</td> <td>6.35</td> </tr> <tr> <td>16</td> <td>9.525</td> </tr> <tr> <td>22</td> <td>12.70</td> </tr> <tr> <td>27</td> <td>15.875</td> </tr> </tbody> </table>	L	I.C.	06	4.00	08	5.00	11	6.35	16	9.525	22	12.70	27	15.875	Vertical	LT 10
	mm	tpi																																										
<b>A</b>	0.5-1.5	48-16																																										
<b>G</b>	1.75-3.0	14-8																																										
<b>AG</b>	0.5-3.0	48-8																																										
<b>N</b>	3.5-5.0	7-5																																										
<b>Q</b>	5.5-6.0	4.5-4																																										
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16	9.525																																											
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### Partial and Full Profiles

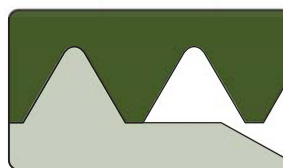


#### Partial Profile:

Most economical solution.

Used for wide range of pitches.

It is partial because the exterior major or internal minor diameter is not machined.

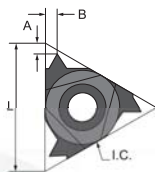


#### Full profile:

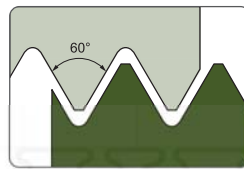
Cuts all thread shapes, according to the requirements.

Wide range of inserts needed in order to fit each standard and range of pitches.

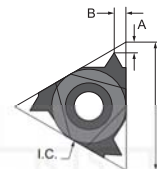
Partial Profile 60°								
Designation		Pitch Range		Dimensions			Catalog Nr.	
EX / IN	Grade	mm	TPI	L mm	I.C.	A	B	
A60 IR11	LT 10	0.5 - 1.5	48 - 16	11	6.35	0.8	0.9	TH000001
A60 ER16	LT 10	0.5 - 1.5	48 - 16	16	9.525	0.8	0.9	TH000004
A60 IR16	LT 10	0.5 - 1.5	48 - 16	16	9.525	0.8	0.9	TH000007
G60 ER16	LT 10	1.75 - 3.0	14 - 8	16	9.525	1.2	1.7	TH000010
G60 IR16	LT 10	1.75 - 3.0	14 - 8	16	9.525	1.2	1.7	TH000013
AG60 ER16	LT 10	0.5 - 3.0	48 - 8	16	9.525	1.2	1.7	TH000016
AG60 IR16	LT 10	0.5 - 3.0	48 - 8	16	9.525	1.2	1.7	TH000019



External Right

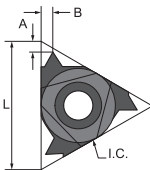


Partial Profile 60°

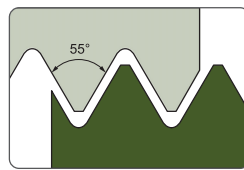


Internal Right

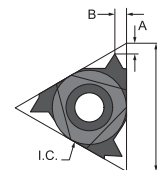
Partial Profile 55°								
Designation		Pitch Range		Dimensions			Catalog Nr.	
EX / IN	Grade	mm	TPI	L mm	I.C.	A	B	
AG55 ER16	LT 10	0.5 - 3.0	48 - 8	16	9.525	1.2	1.7	TH000022
AG55 IR16	LT 10	0.5 - 3.0	48 - 8	16	9.525	1.2	1.7	TH000025
N55 ER22	LT 10	3.5 - 5.0	7 - 5	22	12.70	1.7	2.5	TH000120
N55 IR22	LT 10	3.5 - 5.0	7 - 5	22	12.70	1.7	2.5	TH000121



External Right



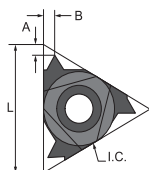
Partial Profile 55°



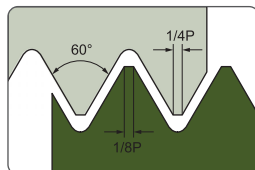
Internal Right

THREAD TURNING

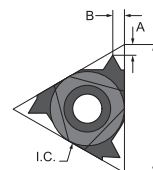
ISO METRIC								Catalog Nr.
Designation		Pitch		Dimensions				
EX / IN	Grade	mm	L mm	I.C.	A	B		
ISO 0.5 ER16	LT10	0.50	16	9.525	0.6	0.4	TH000122	
ISO 0.5 IR16	LT10	0.50	16	9.525	0.6	0.4	TH000128	
ISO 0.6 ER16	LT10	0.60	16	9.525	0.6	0.4	TH000123	
ISO 0.6 IR16	LT10	0.60	16	9.525	0.6	0.6	TH000129	
ISO 0.7 ER16	LT10	0.70	16	9.525	0.6	0.4	TH000124	
ISO 0.7 IR16	LT10	0.70	16	9.525	0.6	0.6	TH000130	
ISO 0.75 ER16	LT10	0.75	16	9.525	0.6	0.6	TH000125	
ISO 0.75 IR16	LT10	0.75	16	9.525	0.6	0.6	TH000131	
ISO 0.8 IR16	LT10	0.80	16	9.525	0.6	0.6	TH000132	
ISO 1.0 ER16	LT10	1.00	16	9.525	0.7	0.7	TH000037	
ISO 1.0 IR11	LT10	1.00	11	6.350	0.7	0.7	TH000028	
ISO 1.5 IR11	LT10	1.50	11	6.350	0.8	1.0	TH000031	
ISO 2.0 IR11	LT10	2.00	11	6.350	0.8	0.9	TH000034	
ISO 1.0 ER16	LT10	1.00	16	9.525	0.7	0.7	TH000037	
ISO 1.0 IR16	LT10	1.00	16	9.525	0.7	0.7	TH000040	
ISO 1.25 ER16	LT10	1.25	16	9.525	0.8	0.9	TH000043	
ISO 1.25 IR16	LT10	1.25	16	9.525	0.8	0.9	TH000046	
ISO 1.5 ER16	LT10	1.50	16	9.525	0.8	1.0	TH000049	
ISO 1.5 IR16	LT10	1.50	16	9.525	0.8	1.0	TH000052	
ISO 1.75 ER16	LT10	1.75	16	9.525	0.9	1.2	TH000055	
ISO 1.75 IR16	LT10	1.75	16	9.525	0.9	1.2	TH000056	
ISO 2.0 ER16	LT10	2.00	16	9.525	1.0	1.3	TH000058	
ISO 2.0 IR16	LT10	2.00	16	9.525	1.0	1.3	TH000061	
ISO 2.5 ER16	LT10	2.50	16	9.525	1.1	1.5	TH000064	
ISO 2.5 IR16	LT10	2.50	16	9.525	1.1	1.5	TH000067	
ISO 3.0 ER16	LT10	3.00	16	9.525	1.2	1.5	TH000070	
ISO 3.0 IR16	LT10	3.00	16	9.525	1.2	1.5	TH000073	
ISO 3.5 ER22	LT10	3.50	22	12.70	1.6	2.3	TH000126	
ISO 4.0 ER22	LT10	4.00	22	12.70	1.6	2.3	TH000127	
ISO 4.0 IR22	LT10	4.00	22	12.70	1.6	2.3	TH000133	



External Right

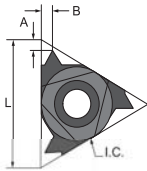


ISO Metric ISO 965-1:1999-11  
DIN 13: 2005-08

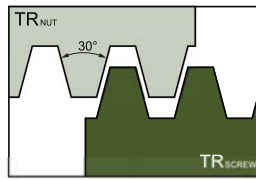


Internal Right

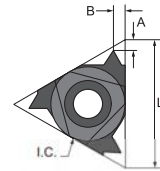
TRAPEZ							
Designation		Pitch		Dimensions			Catalog Nr.
EX / IN	Grade	mm	L mm	I.C.	A	B	
TR3.0 ER16	LT10	3.00	16	9.525	1.3	1.5	TH000149
TR3.0 IR16	LT10	3.00	16	9.525	1.3	1.5	TH000151
TR4.0 ER16	LT10	4.00	22	12.70	1.7	1.9	TH000150
TR4.0 IR16	LT10	4.00	22	12.70	1.7	1.9	TH000152



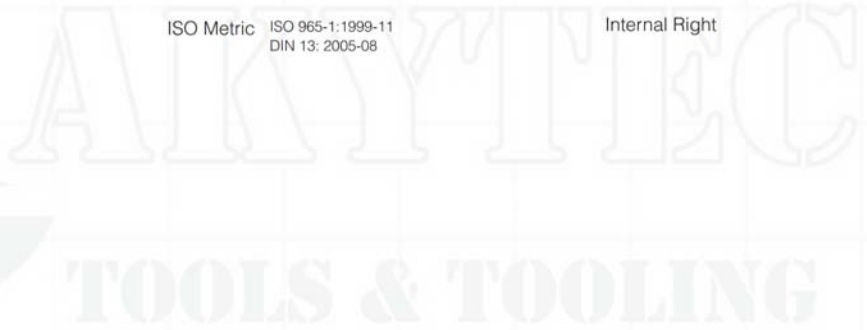
External Right



ISO Metric ISO 965-1:1999-11  
DIN 13: 2005-08

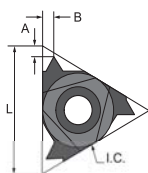


Internal Right

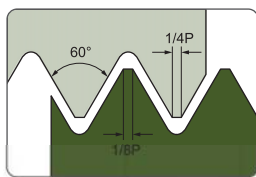


THREAD TURNING

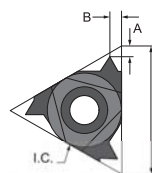
UN							
Designation		Pitch		Dimensions			Catalog Nr.
EX / IN	Grade	TPI	L mm	I.C.	A	B	
UN 20 ER16	LT10	20	16	9.525	0.8	0.9	TH000076
UN 20 IR16	LT10	20	16	9.525	0.8	0.9	TH000079
UN 16 ER16	LT10	16	16	9.525	0.9	1.1	TH000082
UN 16 IR16	LT10	16	16	9.525	0.9	1.1	TH000085
UN 12 ER16	LT10	12	16	9.525	1.1	1.4	TH000088
UN 12 IR16	LT10	12	16	9.525	1.1	1.4	TH000091



External Right

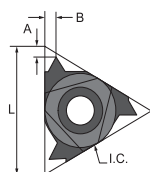


UNC, UNF, UNEF  
ANSI B1.1-1982

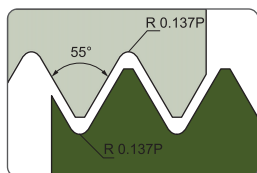


Internal Right

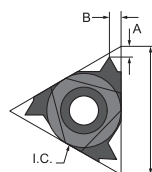
WHITWORTH							
Designation		Pitch		Dimensions			Catalog Nr.
EX / IN	Grade	TPI	L mm	I.C.	A	B	
W 11 ER16	LT10	11	16	9.525	1.1	1.5	TH000100
W 11 IR16	LT10	11	16	9.525	1.1	1.5	TH000103
W 14 ER16	LT10	14	16	9.525	1.0	1.2	TH000094
W 14 IR16	LT10	14	16	9.525	1.0	1.2	TH000097
W 19 ER16	LT10	19	16	9.525	0.8	1.0	TH000134
W 19 IR16	LT10	19	16	9.525	0.8	1.0	TH000135



External Right

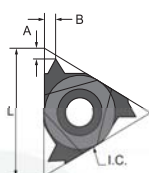


BSW, BSF, BSP  
B.S.84: 1956  
ISO 228-1: 1994

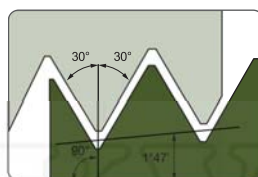


Internal Right

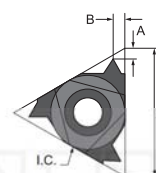
NPT							
Designation		Pitch		Dimensions			Catalog Nr.
EX / IN	Grade	TPI	L mm	I.C.	A	B	
NPT8 ER16	LT10	8	16	9.525	1.3	1.8	TH000145
NPT8 IR16	LT10	8	16	9.525	1.3	1.8	TH000148
NPT11.5 ER	LT10	11.5	16	9.525	1.1	1.5	TH000144
NPT11.5 IR	LT10	11.5	16	9.525	1.1	1.5	TH000147
NPT14 ER	LT10	14	16	9.525	0.9	1.2	TH000143
NPT 14 IR	LT10	14	16	9.525	0.9	1.2	TH000146
NPT 18 ER	LT10	18	16	9.525	0.8	1.0	TH000142



External Right

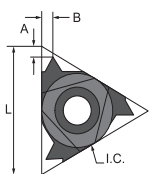


UNC, UNF, UNEF  
ANSI B1.1-1982

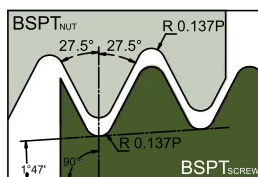


Internal Right

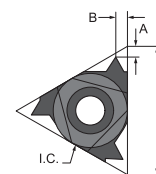
BSPT							
Designation		Pitch		Dimensions			Catalog Nr.
EX / IN	Grade	TPI	L mm	I.C.	A	B	
BSPT19 ER16	LT10	11	16	9.525	1.1	1.5	TH000138
BSPT19 IR16	LT10	11	16	9.525	1.1	1.5	TH000141
BSPT14 ER16	LT10	14	16	9.525	1.0	1.2	TH000137
BSPT14 IR16	LT10	14	16	9.525	1.0	1.2	TH000140
BSPT19 ER16	LT10	19	16	9.525	0.8	0.9	TH000136
BSPT19 IR16	LT10	19	16	9.525	0.8	0.9	TH000139



External Right



BSW, BSF, BSP  
B.S.84: 1956  
ISO 228-1: 1994



Internal Right

## Tool Holder Ordering Code

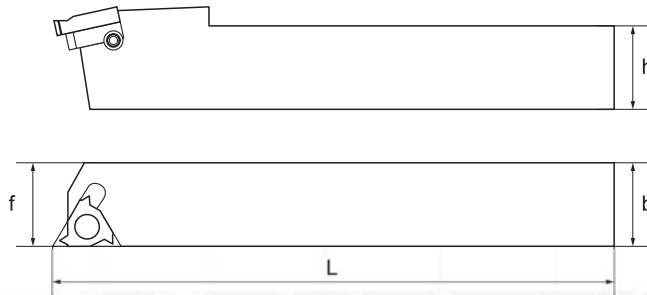
HER	2020	K	16	V-Vertical
<b>Holder type</b>	<b>Shank</b>	<b>Tool length</b>	<b>Insert size</b>	
<b>HER</b> External right handed	External Toolholders Square Shank			
<b>HEL</b> External left handed	8	H - 100	<b>L</b>   <b>I.C.</b>	
<b>HIR</b> Internal right handed	10	K - 125	06   4.00	
<b>HIL</b> Internal left handed	12	L - 140	08   5.00	
	16	M - 150	11   6.35	
	20	P - 170	16   9.525	
	25	R - 200	22   12.70	
	32	S - 250	27   15.875	
	Internal Toolholders round shank	T - 300		
	10			
	12			
	16			
	20			
	25			
	32			
	40			





External Tool Holders ER16						
Designation	Insert Type	h	b	f	l	Catalog Nr.
LT-HER 1616 H16	ER16	16	16	16	100	TH200001
LT-HER 2020 K16	ER16	20	20	20	125	TH200004
LT-HER 2525 M16	ER16	25	25	25	150	TH200007

Accessories: On request



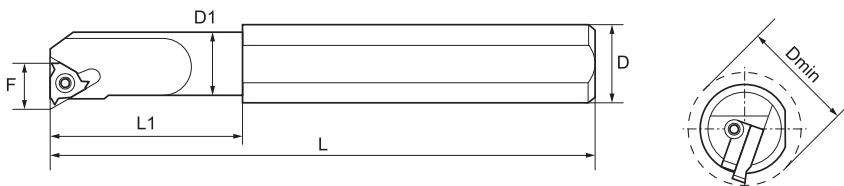
The holders are made for 1.5 helix angle. In case higher helix is required, it should be replaced by other shim.

Internal Tool Holders IR11								
Designation	Insert Type	D	D1	Dmin	L	L1	F	Catalog Nr.
LT-HIR 0010 H11	IR11	10	10	12.5	100	-	7.3	TH200010
LT-HIR 0010 K11	IR11	16	10	12.5	125	25	7.3	TH200013

Accessories: On request

Internal Tool Holders IR16								
Designation	Insert Type	D	D1	Dmin	L	L1	F	Catalog Nr.
LT-HIR 0013 M16	IR16	16	13	16.5	150	32	10.4	TH200016
LT-HIR 0016 P16	IR16	20	16	19.5	170	40	11.6	TH200019
LT-HIR 0020 P16	IR16	20	20	23.5	170	-	13.6	TH200022
LT-HIR 0025 R16	IR16	25	25	28.5	200	-	16.3	TH200025

Accessories: On request



The holders are made for 1.5 helix angle. In case higher helix is required, it should be replaced by other shim.

THREAD TURNING

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	V <sub>c</sub> [m/min]			
					min	max		
Stahl	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	80	130		
		2		190 HB	70	110		
		3		250 HB	60	100		
	Niedriglegiert	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	70	110	
			4,6		230 HB	70	110	
			5,7		280 HB	60	100	
			8		350 HB	50	80	
	Hochlegiert	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	70	110	
			10		280 HB	60	100	
			11		320 HB	50	80	
			11		350 HB	50	70	
	Edelstahl	4	14	304, 316, X5CrNi18-9	180 HB	70	110	
240 HB					60	90		
Duplex	5	14	X2CrNiN23-4, S31500	290 HB	60	80		
				310 HB	60	80		
Ferritisch & Martensitisch	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	70	90		
				13	42 HRc	60	80	
Gussstahl	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	60	110		
				200 HB	70	110		
				250 HB	60	90		
Sphäroguss	8	17,19	GGG40, GGG70, 50005	150 HB	60	110		
				200 HB	60	90		
				250 HB	60	90		
Superleg.	9	31,32	Incoloy 800	240 HB	40	60		
				33	Inconel 700	250 HB	30	50
						34	Stellite 21	350 HB
	10	36	TiAl6V4	-	40	70		
				37	T40	-	25	50
Gehärtetes Mat.	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	30	50		
				50 HRc	25	50		
				55 HRc	25	40		
		40	Ni-Hard 2	400 HB	25	40		
		41	G-X300CrMo15	55 HRc	25	40		
NE	12	25	AlSi12	130 HB	80	300		

Pitch		Passes	
mm	TPI	min	max
0.5	48	4	6
1.0	24	4	9
1.5	16	5	11
2.0	12	7	12
2.5	10	8	15
3.0	8	12	22