



**FILETAGE**



**GEWINDEN**

**THREADING**



**FILETTATURA**



**MENET**

S1.20x0

**SELECTION OF THREADING TOOLS** **278**



**MICRO CUTTING TAPS** **286**



**MICRO THREAD FORMERS** **289**



**THREAD GAUGES** **291**



**WHIRLING TOOLS** **293**



**DRILLING THREAD WHIRLERS** **299**



**SELF LOCKING THREAD** **301**



**HOB CUTTERS** **304**



**THREAD MILLS** **305**




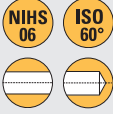

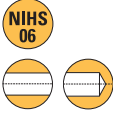


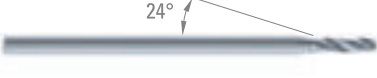
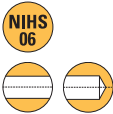
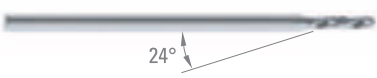


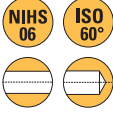

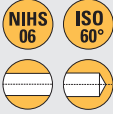








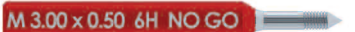



**INFORMATION** **315**



**CUTTING CONDITIONS** **320**

## SELECTION OF THREADING TOOLS

✓ = item from stock

		Z	Page		<input type="checkbox"/> CARBIDE	<input checked="" type="checkbox"/> DI-TOP				
<b>MICRO CUTTING TAPS</b>										
<b>DIXI 1712 R</b> S 0.30 - M 2.00		3	286		✓					
<b>DIXI 1712 L</b> S 0.60 - S 1.00		3	286		✓					
<b>DIXI 1713</b> S 0.40 - S 1.40		3	287		✓					
<b>DIXI 1708</b> S 0.30 - S 1.40		3	287		✓	✓				
<b>DIXI 1710</b> S 0.30 - S 1.40		3	288		✓					
<b>MICRO THREAD FORMERS</b>										
<b>DIXI 1715</b> S 0.40 - S 1.40 M 1.00 - M 2.20		-	289			✓				
<b>DIXI 1716</b> S 0.40 - S 1.40 M 1.00 - M 1.40		-	290			✓				
<b>THREAD GAUGES</b>										
<b>DIXI 1718-NT R+L</b> R S 0.30 - S 1.40 L S 0.50 - S 1.20		-	291		✓					
<b>DIXI 1718-RT</b> S 0.30 - S 1.40		-	291		✓					
<b>DIXI 1719-NT/RT R+L</b> R S 0.30 - S 1.40 L S 0.50 - S 1.20		-	291		✓					
<b>DIXI 1718-M</b> M 1.00 - M 3.00		-	292		✓					
<b>DIXI 1719-M</b> M 1.00 - M 3.00		-	292		✓					
<b>GAUGES SET</b>		-	293		✓					

○ good      ⊙ excellent

Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Steel Hardened cast iron 45-65 HRC	Cast iron	Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
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## SELECTION OF THREADING TOOLS

✓ = item from stock

		Z	Page		<input type="checkbox"/> CARBIDE	<input checked="" type="checkbox"/> TiAIN	<input checked="" type="checkbox"/> CUTINOX	<input checked="" type="checkbox"/> DI-TOP	<input checked="" type="checkbox"/> DAC
<b>WHIRLING TOOLS</b>									
<b>DIXI 1739</b> S 0.30 - S 1.40	 Partial profile	1	293		✓				
<b>DIXI 1738</b> S 0.70 - M 3.00	 Partial profile	3	294	 	✓		✓		
<b>DIXI 1730</b> M 0.80 - M 10.00		3 - 6	295		✓	✓			
<b>DIXI 1731</b> M 0.80 - M 10.00		3 - 6	296		✓	✓			
<b>DIXI 1735</b> UNF N°1 - UNC 1/2"		3 - 6	297		✓	✓			
<b>DIXI 1736</b> UNF N°1 - UNC 1/2"		3 - 6	298		✓	✓			
<b>DRILLING THREAD WHIRLERS</b>									
<b>DIXI 1740</b> S 0.80 - M 10.00		1 - 3	299	 	✓		✓		
<b>DIXI 1742</b> M 5.00 - M 10.00		2	300	 					✓
<b>DIXI 1744</b> M 5.00 - M 10.00		4	300	 			✓		
<b>SELF LOCKING THREAD</b>									
<b>DIXI 1712-AF/BT</b> S 0.70 - M 1.40		3	301	 	✓				
<b>DIXI 1716-AF/BT</b> S 0.70 - M 1.40		-	301	 				✓	
<b>DIXI 1738-AF/BT</b> S 0.70 - M 3.00		3	302		✓				
<b>DIXI 1740-AF/BT</b> S 0.80 - M 3.00		1 - 2	302		✓				

○ good    ⊙ excellent

Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Steel Hardened cast iron > 45 HRC	Cast iron	Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
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## SELECTION OF THREADING TOOLS

✓ = item from stock

	Z	Page		<input type="checkbox"/> CARBIDE	<input checked="" type="checkbox"/> TiAIN	<input checked="" type="checkbox"/> CUTINOX			
<b>SELF LOCKING THREAD</b>									
<b>DIXI 1718-AF/BT</b> S 0.70 - M 3.00 	-	303		✓					
<b>DIXI 1719-AF/BT</b> S 0.70 - M 3.00 	-	303		✓					
<b>HOB CUTTERS</b>									
<b>DIXI 1660</b> S 0.40 - S 1.40 	94	304		✓					
<b>THREAD MILLS</b>									
<b>DIXI 7910</b> M 1.4 - M 24.0 	2 - 4	305		✓	✓				
<b>DIXI 7908</b> M 2.0 - M 24.0 	3 - 6	306		✓	✓				
<b>DIXI 7913</b> M 10 - M 30 	4 - 5	307	 	✓		✓			
<b>DIXI 7920</b> UNC N°2 - UNC 3/4" 	2 - 4	308		✓	✓				
<b>DIXI 7918</b> UNF N°2 - UNC 3/4" 	3 - 5	309		✓	✓				
<b>DIXI 7923</b> UNJF N°10 - UNJF 1/2" 	3 - 4	310	 	✓					
<b>DIXI 7940</b> G1/16" - G1" 	3 - 4	310		✓					
<b>DIXI 7946</b> R1/16" - R2-1/2" 	3 - 4	311		✓					
<b>DIXI 7950</b> NPT 1/16" - NPT 2" 	3 - 4	311		✓					
<b>DIXI 7956</b> NPTF 1/16" - NPTF 2" 	3 - 4	312		✓					

○ good    ⊙ excellent

Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Steel Hardened cast iron > 45 HRC	Cast iron	Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
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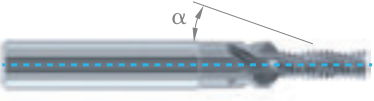




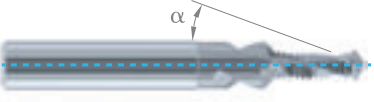



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## SELECTION OF THREADING TOOLS

✓ = item from stock

				□ CARBIDE	■ CUTINOX				
THREAD MILLS WITH COUNTERSINK				Z	Page				
<b>DIXI 7915</b> M 4.0 - M 16.0		3 - 4	312	 	✓	✓			
<b>DIXI 7925</b> UNC N°8 - UNC 5/8"		3 - 4	313	 	✓	✓			
DRILLING THREAD MILLS WITH COUNTERSINK									
<b>DIXI 7985</b> M 4.0 - M 16.0		2	314	 	✓	✓			



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Steel Hardened cast iron > 45 HRC	Cast iron	Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
⊙	○	○	○		⊙		○	⊙	⊙	⊙		⊙
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					⊙			⊙	⊙	⊙		



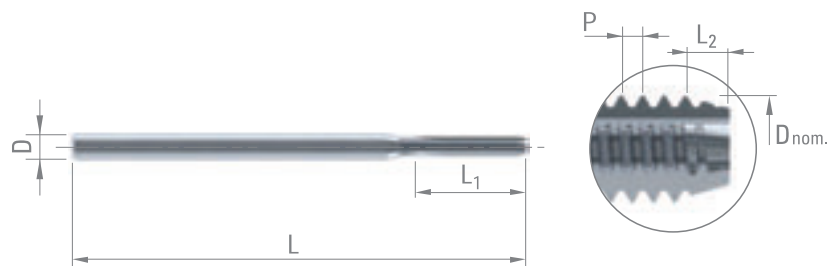
## DIXI 1712 R

### MICRO CUTTING TAPS

Z = 3



P. 315  
P. 318



Steel  
+ Pb

Cu alloy  
Silver  
Gold

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3G CARBIDE	NIHS-3G+ CARBIDE	ISO2-6H CARBIDE
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	62326		
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	965342		
S 0.40	0.10	0.32	0.33	2.0	0.30	1.5	30	62327	62328	
S 0.50	0.125	0.40	0.42	2.5	0.38	1.5	30	62329	62330	
S 0.60	0.15	0.48	0.50	3.0	0.45	1.5	30	62331	62332	
S 0.70	0.175	0.56	0.58	3.0	0.52	1.5	30	62334	62335	
S 0.80	0.20	0.64	0.66	3.5	0.60	1.5	30	62337	62338	
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	62342	62343	
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	62345	62346	
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	62348		
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	62351		
M 1.50	0.30	1.26	1.28	6.0	0.85	2.0	38			62353
M 2.00	0.40	1.65	1.68	11.0	1.00	2.5	43			62354

n Rotation speed [rev/min]

500 - 2500

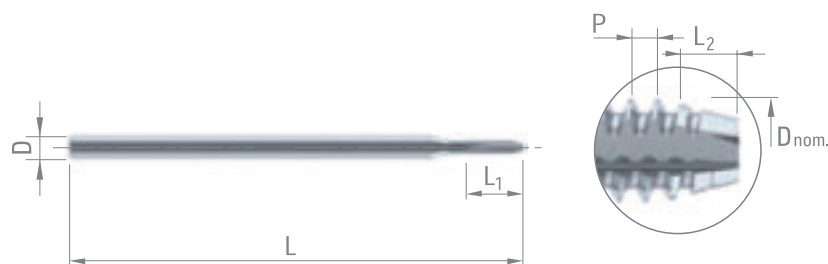
## DIXI 1712 L

### MICRO CUTTING TAPS LEFT HAND CUTTING

Z = 3



P. 315  
P. 318



Steel  
+ Pb

Cu alloy  
Silver  
Gold

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3G CARBIDE
S 0.60	0.15	0.49	0.51	4.0	0.45	1.5	30	969369
S 0.70	0.175	0.57	0.59	4.0	0.52	1.5	30	969370
S 0.80	0.20	0.65	0.67	4.0	0.60	1.5	30	969371
S 0.90	0.225	0.73	0.75	4.0	0.67	1.5	30	969372
S 1.00	0.25	0.81	0.83	4.0	0.75	1.5	30	969373

n Rotation speed [rev/min]

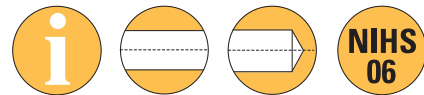
500 - 2500



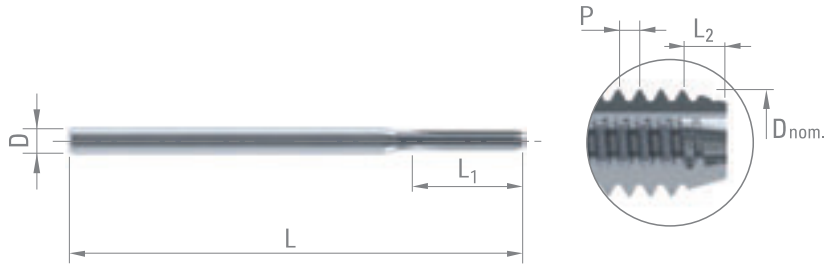
## DIXI 1713

HIGH PERFORMANCE MICRO CUTTING TAPS

Z = 3



P. 315  
P. 318



Steel + Pb	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
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D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3G CARBIDE
S 0.40	0.10	0.33	0.34	2.5	0.30	2.0	30	969795
S 0.50	0.125	0.41	0.43	3.5	0.38	2.0	30	969474
S 0.60	0.15	0.49	0.51	4.0	0.45	2.0	30	969497
S 0.70	0.175	0.57	0.59	4.0	0.52	2.0	30	969498
S 0.80	0.20	0.65	0.67	4.0	0.60	2.0	30	969499
S 0.90	0.225	0.73	0.75	4.0	0.67	2.0	30	969500
S 1.00	0.25	0.81	0.83	4.0	0.76	2.0	30	969501
S 1.20	0.25	1.01	1.03	5.0	0.76	2.0	30	969502
S 1.40	0.30	1.16	1.18	5.0	0.85	2.0	30	969503

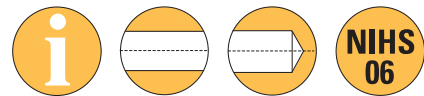
n Rotation speed [rev/min]

500 - 2500

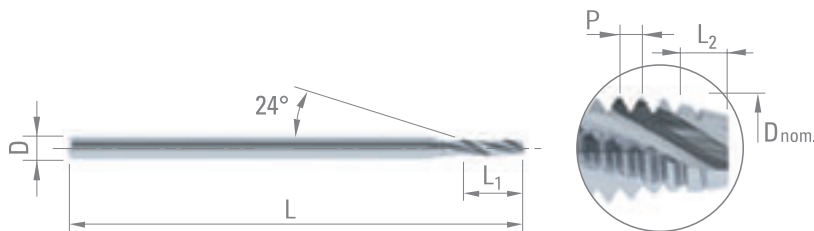
## DIXI 1708

MICRO CUTTING TAPS  
RIGHT HAND SPIRAL  
RIGHT HAND CUTTING

Z = 3



P. 315  
P. 318



Lead alloyed steel	Cu alloy Silver Gold	Cu alloy difficult to machine
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D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3G CARBIDE	NIHS-3G DI-TOP
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	986881	303483
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	986882	303484
S 0.40	0.10	0.32	0.33	2.5	0.30	1.5	30	986883	303485
S 0.50	0.125	0.40	0.42	3.5	0.38	1.5	30	984405	303486
S 0.60	0.15	0.48	0.50	4.0	0.45	1.5	30	983633	303487
S 0.70	0.175	0.56	0.58	4.0	0.52	1.5	30	986884	303488
S 0.80	0.20	0.64	0.66	4.0	0.60	1.5	30	986885	303489
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	986886	303490
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	986887	303491
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	986888	303492
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	986889	303493

n Rotation speed [rev/min]

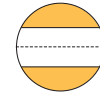
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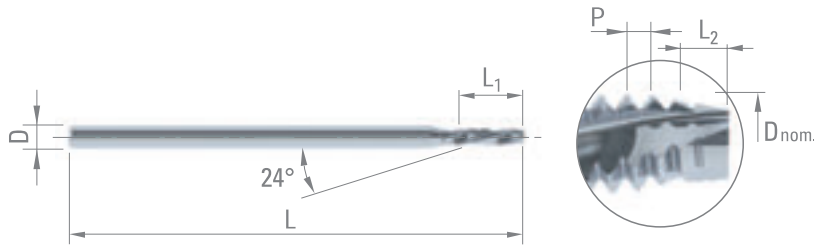
# DIXI 1710

MICRO CUTTING TAPS  
LEFT HAND SPIRAL  
RIGHT HAND CUTTING

Z = 3



P. 315  
P. 318



Lead alloyed steel

Cu alloy Silver Gold

Cu alloy difficult to machine

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3G CARBIDE
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	986890
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	986891
S 0.40	0.10	0.32	0.33	2.5	0.30	1.5	30	986892
S 0.50	0.125	0.40	0.42	3.5	0.38	1.5	30	986893
S 0.60	0.15	0.48	0.50	4.0	0.45	1.5	30	986894
S 0.70	0.175	0.56	0.58	4.0	0.52	1.5	30	986895
S 0.80	0.20	0.64	0.66	4.0	0.60	1.5	30	986896
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	986897
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	986898
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	986899
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	986900

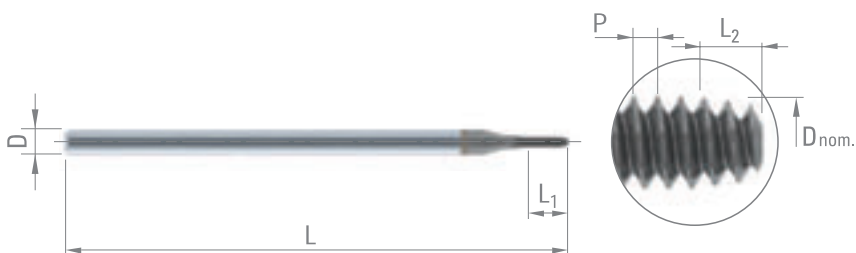
n Rotation speed [rev/min]

500 - 2500

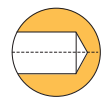
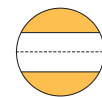


# DIXI 1715 DI-TOP

## MICRO THREAD FORMERS



P. 315  
P. 318



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cu alloy Silver Gold
Cu alloy difficult to machine	Al			

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3GX CARBIDE
S 0.40	0.10	0.36 - 0.37	0.37 - 0.38	1.6	0.30	1.5	30	974654
S 0.50	0.125	0.45 - 0.46	0.46 - 0.47	2.0	0.37	1.5	30	972407
S 0.60	0.15	0.54 - 0.55	0.55 - 0.56	2.4	0.45	1.5	30	970899
S 0.70	0.175	0.62 - 0.63	0.63 - 0.64	2.8	0.52	1.5	30	970900
S 0.80	0.20	0.70 - 0.71	0.71 - 0.72	3.2	0.60	1.5	30	970901
S 0.90	0.225	0.81 - 0.82	0.82 - 0.83	3.6	0.67	1.5	30	970902
S 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.75	1.5	30	305793
S 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.60	1.5	30	305794
S 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.75	1.5	30	305795
S 1.40	0.20	1.30 - 1.32	1.32 - 1.33	5.6	0.60	1.5	30	305796
S 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.90	1.5	30	305797

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	4HX CARBIDE	5HX CARBIDE	6HX CARBIDE
M 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.75	1.5	30		970903	
M 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.60	1.5	30	978772		
M 1.20	0.25	1.09 - 1.10	1.10 - 1.11	4.8	0.75	1.5	30		970904	
M 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.60	1.5	30	973645		
M 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.90	1.5	38		970905	
M 1.50	0.30	1.37 - 1.38	1.38 - 1.39	6.0	0.90	2.0	38			971650
M 1.60	0.35	1.45 - 1.46	1.46 - 1.47	6.0	1.05	2.0	38			970906
M 1.80	0.20	1.71 - 1.72	1.72 - 1.73	7.0	0.60	2.0	38	975090		
M 2.00	0.20	1.91 - 1.92	1.92 - 1.93	8.0	0.60	2.5	43	976259		
M 2.00	0.40	1.83 - 1.84	1.83 - 1.84	8.0	1.20	2.5	43			970907
M 2.20	0.25	2.09 - 2.10	2.10 - 2.11	8.0	0.75	2.5	43		974959	

n Rotation speed [rev/min]

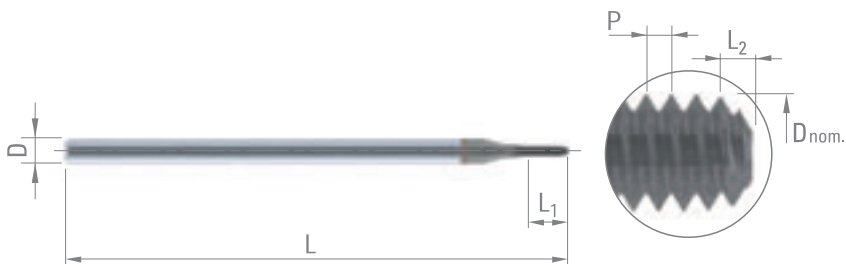
500 - 2500

# DIXI 1716 DI-TOP

## MICRO THREAD FORMERS



P. 315  
P. 318



Steel + Pb	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
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D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	NIHS-3GX DI-TOP
S 0.40	0.10	0.36 - 0.37	0.37 - 0.38	1.6	0.20	1.5	30	992498
S 0.50	0.125	0.45 - 0.46	0.46 - 0.47	2.0	0.25	1.5	30	992509
S 0.60	0.15	0.54 - 0.55	0.55 - 0.56	2.4	0.30	1.5	30	992514
S 0.70	0.175	0.62 - 0.63	0.63 - 0.64	2.8	0.35	1.5	30	992515
S 0.80	0.20	0.70 - 0.71	0.71 - 0.72	3.2	0.40	1.5	30	992516
S 0.90	0.225	0.81 - 0.82	0.82 - 0.83	3.6	0.45	1.5	30	992517
S 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.50	1.5	30	305799
S 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.40	1.5	30	305800
S 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.50	1.5	30	305801
S 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.40	1.5	30	305802
S 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.60	1.5	30	305804

D nom.	Pitch P	Drill. Ø brass	Drill. Ø steel	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	4HX DI-TOP	5HX DI-TOP
M 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.50	1.5	30		992518
M 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.40	1.5	30	992519	
M 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.50	1.5	30		992520
M 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.40	1.5	30	992521	
M 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.60	1.5	38		992522

**n** Rotation speed [rev/min]

**500 - 2500**

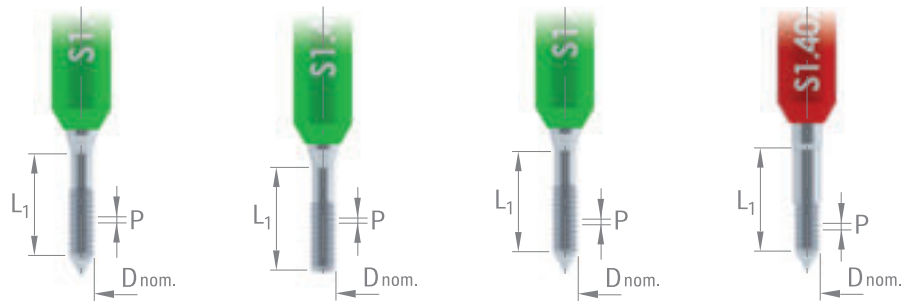


## DIXI 1718-NT, -RT - DIXI 1719-NT/RT

THREAD GAUGES  
"GO" - "NO GO"  
RIGHT HAND THREADS



P. 316



D nom.	Pitch P	L <sub>1</sub>	1718-NT GO	1718-NT (blind hole) GO	1718-RT GO	1719-NT/RT NO GO
S 0.30	0.08	1.0	965295	978958	983114	965312
S 0.35	0.09	1.3	965296	978959	983468	965313
S 0.40	0.10	2.0	965297	978960	983115	965314
S 0.50	0.125	2.5	965298	978961	983116	965315
S 0.60	0.15	3.0	965299	978962	983117	965316
S 0.70	0.175	3.0	965300	978963	983236	965317
S 0.80	0.20	3.5	965301	978964	983118	965318
S 0.90	0.225	4.0	965302	978965	983119	965319
S 1.00	0.25	4.0	965303	978966	983120	965320
S 1.20	0.25	5.0	965304	978967	983121	965321
S 1.40	0.30	5.0	965305	978968	983122	965322

## DIXI 1718-NT L - DIXI 1719-NT/RT L

THREAD GAUGES  
"GO" - "NO GO"  
LEFT HAND THREADS



P. 316



D nom.	Pitch P	L <sub>1</sub>	1718-NT L GO	1719-NT/RT L NO GO
S 0.50	0.125	2.5	968369	968370
S 0.60	0.15	3.0	968345	968346
S 0.70	0.175	3.0	968344	968347
S 0.80	0.20	3.5	968343	968348
S 0.90	0.225	4.0	968925	968926
S 1.00	0.25	4.0	969395	969396
S 1.20	0.25	5.0	982638	982639

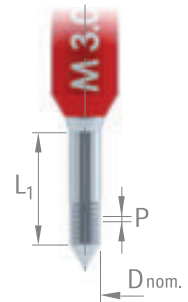
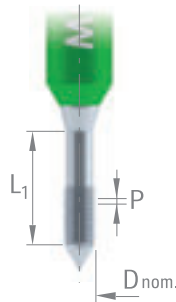
Each thread plug gauge is delivered with its pitch diameter measurement





# DIXI 1718-M - DIXI 1719-M

THREAD GAUGES  
"GO" - "NO GO"



D nom.	Pitch P	L <sub>1</sub>	Tol.	1718-M GO	1719-M NO GO
M 1.00	0.25	5.0	5H	976633	976635
M 1.20	0.20	5.0	4H	305894	305900
M 1.20	0.20	5.0	5H	980934	980935
M 1.20	0.25	5.0	5H	976634	976636
M 1.40	0.20	5.0	4H	305895	305901
M 1.40	0.30	6.0	5H	976693	976710
M 1.50	0.30	6.0	6H	976694	976711
M 1.60	0.20	5.0	4H	305896	305902
M 1.60	0.20	5.0	5H	976695	976713
M 1.60	0.35	6.0	6H	975716	975717
M 1.80	0.20	5.0	4H	305897	305903
M 1.80	0.35	6.0	6H	976024	976026
M 2.00	0.20	5.0	4H	305898	305904
M 2.00	0.40	6.0	6H	976699	976716
M 2.20	0.20	5.0	4H	305899	305905
M 2.20	0.25	5.0	5H	976701	976718
M 2.20	0.45	8.0	6H	976702	976719
M 2.50	0.20	5.0	5H	976703	976720
M 2.50	0.25	5.0	5H	976706	976707
M 2.50	0.35	6.0	6H	303652	303653
M 2.50	0.45	8.0	6H	976704	976721
M 3.00	0.50	8.0	6H	976705	976722

Each thread plug gauge is delivered with its pitch diameter measurement



## DIXI 1718 - SET

THREAD GAUGES  
"GO" - "NO GO"



P. 316



Content	Art.
DIXI 1718-NT <b>GO</b> (S0.30-S1.40)	305989
DIXI 1719-NT/RT <b>NO GO</b> (S0.30-S1.40)	
DIXI 1718-RT <b>GO</b> (S0.30-S1.40)	305990
DIXI 1719-NT/RT <b>NO GO</b> (S0.30-S1.40)	
DIXI 1718-NT <b>GO</b> (S0.30-S1.40)	305991
DIXI 1718-RT <b>GO</b> (S0.30-S1.40)	
DIXI 1719-NT/RT <b>NO GO</b> (S0.30-S1.40)	



Customize your own selection of gauges.

NB: 2 x 11 items or 3 x 11 items max.

## DIXI 1739

WHIRLING TOOLS  
PARTIAL PROFILE

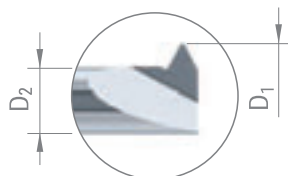
Z = 1



P. 318



P. 320



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Titanium, titanium alloy
Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic	

D nom.	Pitch P	Drilling Ø	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	CARBIDE
S 0.30	0.08	0.23	0.22	0.70	0.13	3	38	961147
S 0.35	0.09	0.27	0.25	0.90	0.15	3	38	984299
S 0.40	0.10	0.32	0.30	0.90	0.19	3	38	961149
S 0.50	0.125	0.40	0.38	1.20	0.24	3	38	961163
S 0.60	0.15	0.48	0.46	1.50	0.29	3	38	961164
S 0.70	0.175	0.56	0.54	1.80	0.34	3	38	961165
S 0.80	0.20	0.64	0.60	2.00	0.37	3	38	961166
S 0.90	0.225	0.72	0.68	2.20	0.42	3	38	961167
S 1.00	0.25	0.80	0.76	2.40	0.48	3	38	961168
S 1.20	0.25	1.00	0.94	3.00	0.66	3	38	961169
S 1.40	0.30	1.15	1.10	3.30	0.76	3	38	961170



# DIXI 1738

## WHIRLING TOOLS PARTIAL PROFILE

Z = 3



P. 318



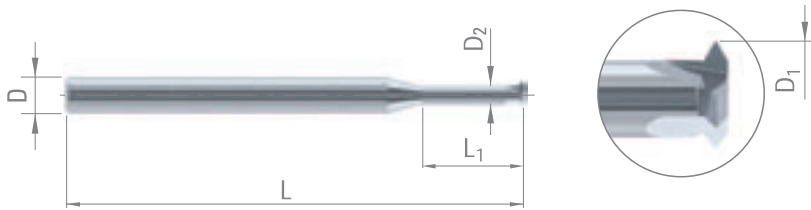
P. 320



NIHS  
06



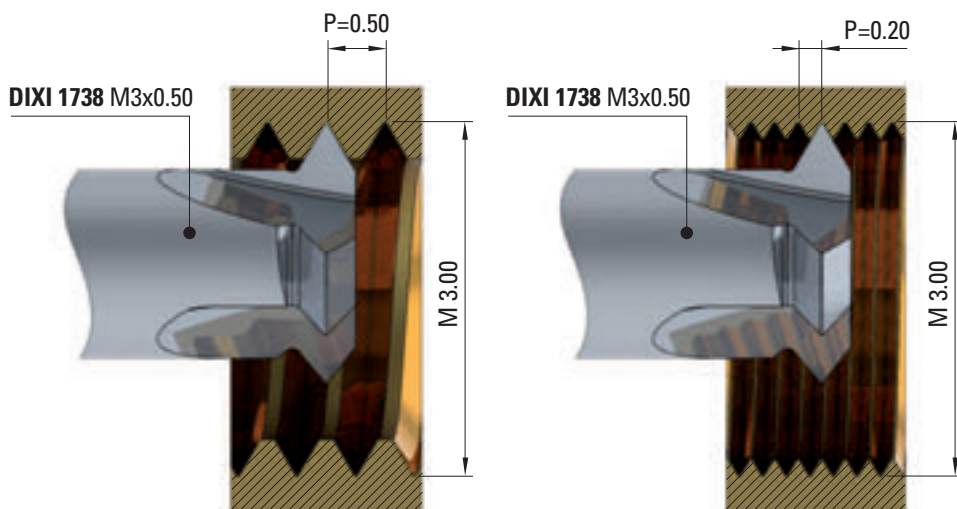
ISO  
60°



- High alloyed steel
- DUPLEX stainless steel
- Refractory alloy
- Titanium, titanium alloy

D nom.	Pitch P	Drilling Ø		D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	CARBIDE CUTINOX		
		ISO	NIHS								
S 0.70	0.175		0.56	0.54	1.80	0.33	3	38	984319	985156	
S 0.80	0.20		0.64	0.62	2.30	0.38	3	38	965997	966008	
S 0.90	0.225		0.72	0.70	2.50	0.43	3	38	965996	966007	
M 1.00	S 1.00	0.25	0.75	0.80	0.78	2.80	0.44	3	964485	966006	
M 1.20	S 1.20	0.25	0.95	1.00	0.98	3.40	0.64	3	965664	965943	
M 1.40	S 1.40	0.30	1.10	1.15	1.12	4.00	0.71	3	965988	965999	
M 1.40		0.20	1.22		1.18	4.00	0.74	3	965989	965998	
M 1.60		0.35	1.30		1.26	4.50	0.72	3	965990	966000	
M 1.80		0.35	1.50		1.45	5.10	0.77	3	38	965991	966001
		(0.20)	1.60								
M 2.00		0.40	1.65		1.60	5.60	0.85	3	38	965992	966002
		(0.20)	1.80								
M 2.20		0.45	1.80		1.70	6.20	0.91	3	38	965993	966003
		(0.25)	1.95								
M 2.50		0.45	2.10		2.00	7.00	1.20	3	38	965994	966004
		(0.35)	2.15								
		(0.25)	2.25								
		(0.20)	2.30								
M 3.00		0.50	2.50		2.40	8.40	1.60	3	38	965995	966005
		(0.35)	2.65								
		(0.25)	2.75								
		(0.20)	2.80								

A single tool for many pitches (example, from 0.20 to 0.50)



# DIXI 1730

## WHIRLING TOOLS FULL PROFILE

Z = 3-6



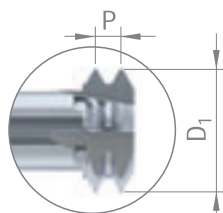
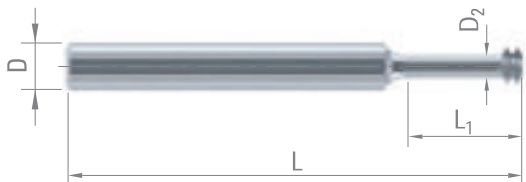
P. 318



P. 320



$L_1 = 2 \times \emptyset$  nom.



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Alu
Graphite	Plastic			

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
M 0.80	0.20	0.60	1.85	0.27	3	38	3	958853	960446
M 0.90	0.225	0.66	2.10	0.33	3	38	3	953216	960117
M 1.00	0.25	0.73	2.30	0.34	3	38	3	953217	960118
M 1.20	0.25	0.92	2.80	0.53	3	38	3	953218	960450
M 1.40	0.30	1.05	3.20	0.60	3	38	3	953219	960451
M 1.60	0.35	1.21	3.70	0.69	3	38	3	953220	960453
M 1.80	0.20	1.41	4.10	0.89	3	38	3	961128	961130
M 1.80	0.35	1.41	4.10	0.89	3	38	3	953221	960454
M 2.00	0.40	1.55	4.60	0.96	3	38	3	953222	960455
M 2.20	0.20	1.72	5.10	1.08	3	38	3	961129	961132
M 2.20	0.45	1.72	5.10	1.08	3	38	3	953223	960456
M 2.50	0.25	2.00	5.80	1.35	3	38	3	960062	960459
M 2.50	0.35	2.00	5.80	1.35	3	38	3	960063	960460
M 2.50	0.45	2.00	5.80	1.35	3	38	3	953225	960461
M 3.00	0.50	2.44	7.00	1.70	4	42	3	955698	960462
M 4.00	0.70	3.20	9.30	2.25	4	42	3	955699	960463
M 5.00	0.80	4.00	11.50	2.80	6	57	4	957925	960464
M 6.00	1.00	4.85	13.80	3.15	6	57	4	957982	960465
M 8.00	1.25	6.50	18.40	4.65	8	75	6	958039	960466
M 10.00	1.50	7.90	23.00	5.60	8	75	6	958040	960467



# DIXI 1731

## WHIRLING TOOLS FULL PROFILE

Z = 3-6



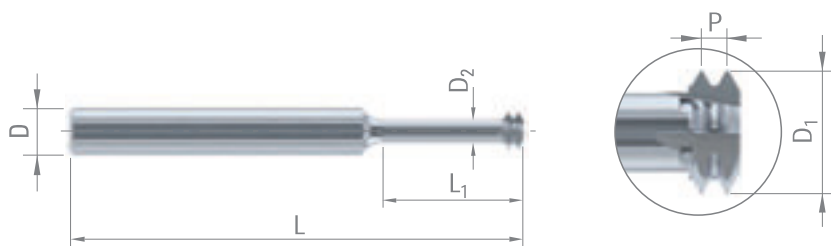
P. 318



P. 320



$L_1 = 3 \times \emptyset$  nom.



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Alu
Graphite	Plastic			

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
M 0.80	0.20	0.60	2.60	0.27	3	38	3	961148	961176
M 0.90	0.225	0.66	2.90	0.33	3	38	3	961150	961177
M 1.00	0.25	0.73	3.20	0.34	3	38	3	961151	961178
M 1.20	0.25	0.92	3.85	0.53	3	38	3	961152	961179
M 1.40	0.30	1.05	4.50	0.60	3	38	3	961153	961180
M 1.60	0.35	1.21	5.10	0.69	3	38	3	961154	961181
M 1.80	0.20	1.41	5.80	0.89	3	38	3	961155	961182
M 1.80	0.35	1.41	5.80	0.89	3	38	3	961156	961183
M 2.00	0.40	1.55	6.40	0.96	3	38	3	961157	961184
M 2.20	0.20	1.72	7.10	1.08	3	38	3	961158	961185
M 2.20	0.45	1.72	7.10	1.08	3	38	3	961159	961186
M 2.50	0.25	2.00	8.00	1.35	3	38	3	961160	961187
M 2.50	0.35	2.00	8.00	1.35	3	38	3	961161	961188
M 2.50	0.45	2.00	8.00	1.35	3	38	3	961162	961189
M 3.00	0.50	2.44	9.60	1.70	4	42	3	961171	961190
M 4.00	0.70	3.20	12.80	2.25	4	42	3	961172	961191
M 5.00	0.80	4.00	16.00	2.80	6	57	4	961173	961192
M 6.00	1.00	4.85	19.20	3.15	6	57	4	961174	961193
M 8.00	1.25	6.50	25.60	4.65	8	75	6	961175	961194
M 10.00	1.50	7.90	32.00	5.60	8	75	6	960883	961195



# DIXI 1735

## WHIRLING TOOLS FULL PROFILE

Z = 3-6



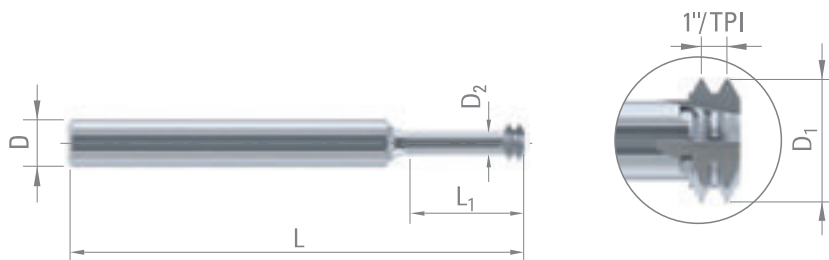
P. 318



P. 320



$L_1 = 2 \times \emptyset$  nom.



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Alu
Graphite	Plastic			

UNC	UNF	UNEF	UN	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
	N°1			72	1.40	4.3	0.85	3	38	3	966664	966833
N°1	N°2			64	1.40	4.3	0.80	3	38	3	966663	966834
N°2	N°3			56	1.65	5.0	0.95	3	38	3	966662	966835
N°3	N°4			48	1.90	5.8	1.10	3	38	3	966661	966836
	N°5			44	2.00	7.3	1.15	3	38	3	966660	966837
N°4				40	2.10	6.6	1.17	4	42	3	966659	966838
N°5	N°6			40	2.45	7.3	1.52	4	42	3	966658	966839
	N°8			36	3.30	9.6	2.15	4	42	3	966657	966841
N°6				32	2.55	8.1	1.30	4	42	3	960656	966840
N°8	N°10	N°12		32	3.10	9.6	1.90	4	55	3	960205	960628
	N°12		5/16"	28	4.20	12.6	2.85	6	63	3	966655	966842
	1/4"	7/16"	5/16"	28	5.00	14.6	3.55	6	63	4	966654	966843
N°10				24	3.40	11.1	1.90	4	55	3	960395	960629
N°12	5/16"			24	4.10	12.6	2.70	6	57	4	960396	960360
1/4"			5/16"	20	4.70	14.6	2.90	6	57	4	960397	960631
5/16"	9/16"			18	6.10	18.2	4.00	8	63	6	960398	960635
3/8"			7/16"	16	7.50	21.9	5.30	8	63	6	960399	960636
7/16"	7/8"			14	8.70	25.6	6.20	10	75	6	960400	960637
1/2"				13	10.00	29.2	7.30	12	75	6	960402	960638



## WHIRLING TOOLS FULL PROFILE

Z = 3-6



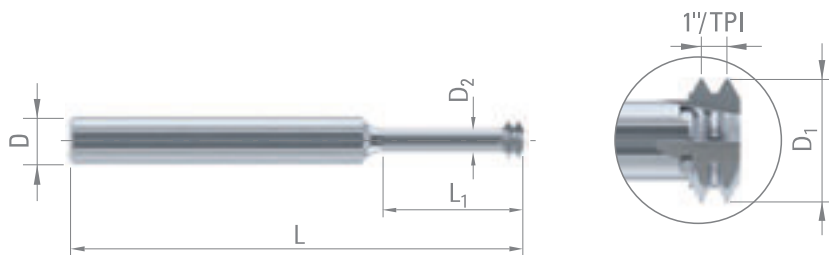
P. 318



P. 320



$L_1 = 3 \times \emptyset$  nom.



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Alu
Graphite	Plastic			

UNC	UNF	UNEF	UN	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAlN
	N°1			72	1.40	6.0	0.85	3	38	3	96653	96652
N°1	N°2			64	1.40	6.0	0.80	3	38	3	96652	96651
N°2	N°3			56	1.65	7.0	0.95	3	38	3	96651	96650
N°3	N°4			48	1.90	8.1	1.10	3	38	3	96650	96649
	N°5			44	2.00	10.2	1.15	3	42	3	96649	96648
N°4				40	2.10	9.1	1.17	4	42	3	96648	96647
N°5	N°6			40	2.45	10.2	1.52	4	42	3	96647	96646
	N°8			36	3.30	13.4	2.15	4	42	3	96646	96645
N°6				32	2.55	11.3	1.30	4	42	3	96645	96644
N°8	N°10	N°12		32	3.10	13.4	1.90	4	55	3	961020	961062
	N°12	7/16''	5/16''	28	4.20	17.6	2.85	6	63	3	96644	96643
	1/4''	7/16''	5/16''	28	5.00	20.3	3.55	6	63	4	96641	96642
N°10				24	3.40	15.5	1.90	4	55	3	961052	961063
N°12	5/16''	9/16''		24	4.10	17.6	2.70	6	57	4	961053	961082
1/4''	1/2''		5/16''	20	4.70	20.3	2.90	6	63	4	961054	961085
5/16''	9/16''			18	6.10	25.4	4.00	8	75	6	961055	961086
3/8''	3/4''		7/16''	16	7.50	30.5	5.30	8	75	6	961056	961087
7/16''	7/8''			14	8.70	35.5	6.20	10	86	6	961057	961088
1/2''				13	10.00	40.6	7.30	12	93	6	961058	961060





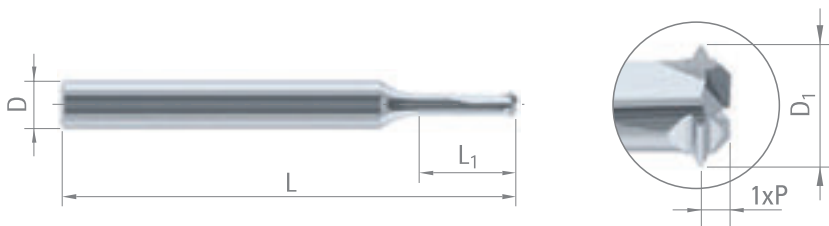
P. 318



P. 322



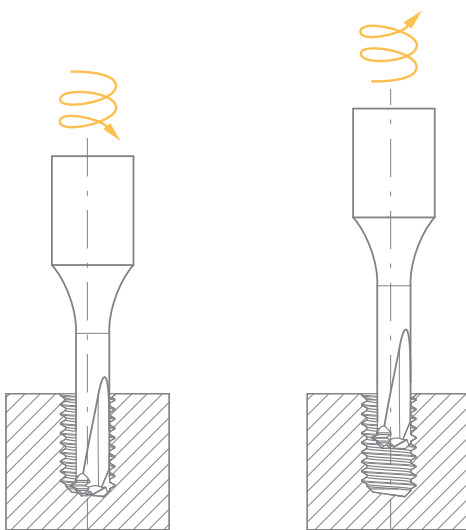
ISO  
60°



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Graphite	Plastic			

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	CUTINOX
S 0.80	0.20	0.60	2.4	3	38	1	977703	977716
S 0.90	0.225	0.66	2.7	3	38	1	977704	977717
M 1.00	0.20	0.80	3.0	3	38	1	985121	985134
M 1.00	0.25	0.73	3.0	3	38	1	977656	977698
M 1.20	0.20	1.00	3.6	3	38	1	985136	985143
M 1.20	0.25	0.92	3.6	3	38	1	977705	977718
M 1.40	0.20	1.20	4.2	3	38	1	985144	985145
M 1.40	0.30	1.05	4.2	3	38	1	977706	977719
M 1.60	0.35	1.21	4.8	3	38	1	977707	977720
M 2.00	0.40	1.55	6.0	3	38	2	977708	977721
M 2.50	0.45	2.00	7.5	3	38	2	977709	977722
M 3.00	0.50	2.44	9.0	6	57	2	977710	977723
M 4.00	0.70	3.20	12.0	6	57	2	977711	977724
M 5.00	0.80	4.00	15.0	6	57	2	977712	977725
M 6.00	1.00	4.85	18.0	6	57	3	977713	977726
M 8.00	1.25	6.50	24.0	8	75	3	977714	977727
M 10.00	1.50	7.90	30.0	8	75	3	977715	977728

Example for difficult to machine materials (titanium, stainless steel).  
For easy to machine materials, step n° 2 is not necessary.



1

Approach X0 Y0 Z0.10  
then angular plunging  
on 2 axis (XZ)

2

Circular interpolation  
on 1 rotation  
(Ø of hole is chamfered)





## DIXI 1742

### DRILLING THREAD WHIRLERS WITH THROUGH COOLANT

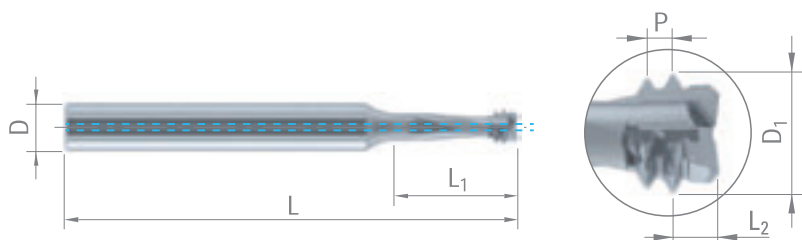
Z = 2



P. 318



P. 324



Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Graphite	Plastic
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D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	DAC
M 5.00	0.80	4.00	12.5	1.50	8	75	303475
M 6.00	1.00	4.80	15.0	1.85	8	75	303476
M 8.00	1.25	6.40	20.0	2.30	8	75	303477
M 10.00	1.50	7.80	25.0	2.75	8	75	303478

## DIXI 1744

### DRILLING THREAD WHIRLERS WITH THROUGH COOLANT

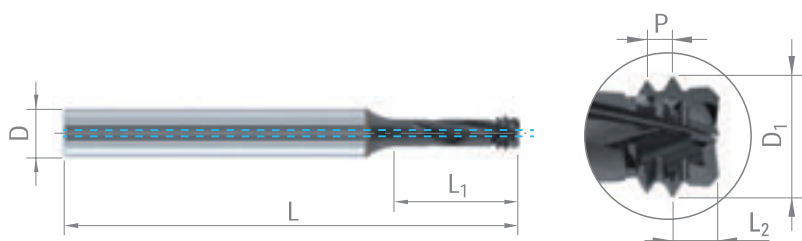
Z = 4



P. 318



P. 324



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy			

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	CUTINOX
M 5.00	0.80	4.00	12.5	1.50	8	75	303479
M 6.00	1.00	4.80	15.0	1.85	8	75	303480
M 8.00	1.25	6.40	20.0	2.30	8	75	303481
M 10.00	1.50	7.80	25.0	2.75	8	75	303482



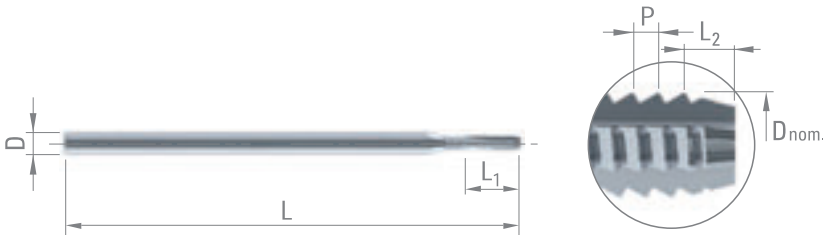
## DIXI 1712-AF/BT

MICRO CUTTING TAPS  
SELF LOCKING PROFILE

Z = 3



P. 317



Steel  
+ Pb

Cu alloy  
Silver  
Gold

D nom.	Pitch P	Drilling Ø	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	CARBIDE
S 0.70	0.175	0.59	3.0	0.35	1.5	30	995574
S 0.80	0.20	0.68	3.5	0.40	1.5	30	995676
S 0.90	0.225	0.76	4.0	0.45	1.5	30	995677
M 1.00	0.25	0.84	4.0	0.50	1.5	30	995678
M 1.20	0.25	1.04	5.0	0.50	1.5	30	995679
M 1.40	0.30	1.21	5.0	0.60	1.5	30	995680

n Rotation speed [rev/min]

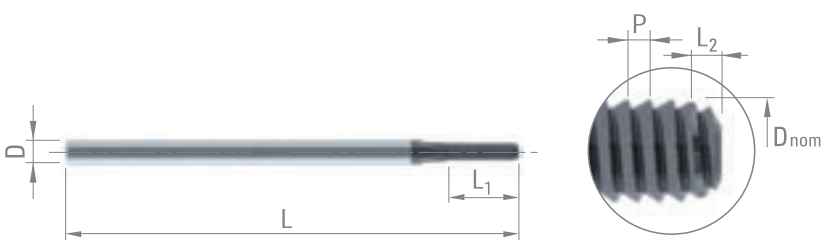
500 - 2500

## DIXI 1716-AF/BT

THREAD FORMERS  
SELF LOCKING PROFILE



P. 317



Steel  
+ Pb

Cu alloy  
Silver  
Gold

Cu alloy  
difficult  
to machine

Al

D nom.	Pitch P	Drilling Ø	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	DI-TOP
S 0.70	0.175	0.65	2.8	0.35	1.5	30	995723
S 0.80	0.20	0.74	3.2	0.40	1.5	30	995745
S 0.90	0.225	0.83	3.6	0.45	1.5	30	995746
M 1.00	0.25	0.92	4.0	0.50	1.5	30	995747
M 1.20	0.25	1.12	4.8	0.50	1.5	30	995748
M 1.40	0.30	1.31	5.6	0.60	1.0	30	995749

n Rotation speed [rev/min]

500 - 2500



## DIXI 1738-AF/BT

WHIRLING TOOLS  
SELF LOCKING PROFILE

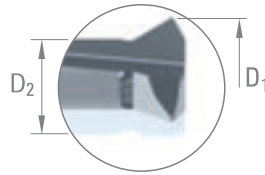
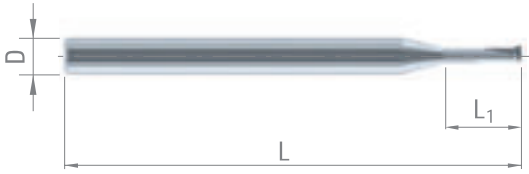
Z = 3



P. 317



P. 320



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Refractory alloy
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Alu	Plastic

D nom.	Pitch P	Drilling Ø	D <sub>1</sub>	L <sub>1</sub>	D <sub>2</sub>	D <sub>h5</sub>	L	CARBIDE
S 0.70	0.175	0.59	0.54	1.8	0.34	3	38	995725
S 0.80	0.20	0.68	0.62	2.3	0.39	3	38	995880
S 0.90	0.225	0.76	0.70	2.5	0.44	3	38	995881
M 1.00	0.25	0.84	0.80	2.8	0.51	3	38	995882
M 1.20	0.25	1.04	0.98	3.4	0.69	3	38	995883
M 1.40	0.30	1.21	1.12	4.0	0.77	3	38	995884
M 1.60	0.35	1.38	1.26	4.5	0.86	3	38	995885
M 2.00	0.40	1.75	1.60	5.6	1.14	3	38	995886
M 2.20	0.45	1.91	1.70	6.2	1.18	3	38	995887
M 3.00	0.50	2.68	2.40	8.4	1.82	3	38	995888

## DIXI 1740-AF/BT

DRILLING THREAD WHIRLERS  
SELF LOCKING PROFILE

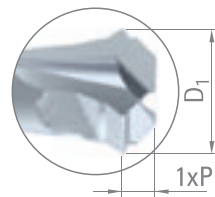
Z = 1-2



P. 317



P. 322



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Refractory alloy	Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al
Graphite	Plastic			

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
S 0.80	0.20	0.60	2.4	3	38	1	300295
S 0.90	0.225	0.66	2.7	3	38	1	300435
M 1.00	0.25	0.73	3.0	3	38	1	300436
M 1.20	0.25	0.92	3.6	3	38	1	300437
M 1.40	0.30	1.05	4.2	3	38	1	300438
M 1.60	0.35	1.21	4.8	3	38	1	300439
M 2.00	0.40	1.55	6.0	3	38	2	300440
M 2.20	0.45	1.70	6.6	3	38	2	300441
M 2.50	0.45	2.00	7.5	3	38	2	300444
M 3.00	0.50	2.44	9.0	6	57	2	300445

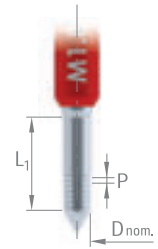
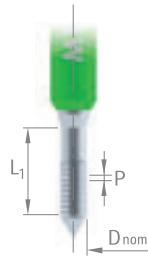


# DIXI 1718-AF/BT - DIXI 1719-AF/BT

THREAD GAUGES  
 "GO" - "NO GO"  
 SELF LOCKING PROFILE



P. 317

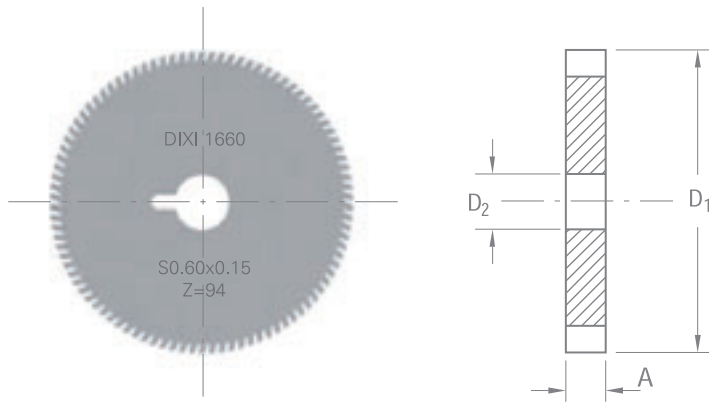


D nom.	Pitch P	L <sub>1</sub>	1718-AF/BT <b>GO</b>	1719-AF/BT <b>NO GO</b>
S 0.70	0.175	3.0	995572	995573
S 0.80	0.20	3.5	995615	995664
S 0.90	0.225	4.0	995616	995665
M 1.00	0.25	4.0	995617	995666
M 1.20	0.25	5.0	995619	995667
M 1.40	0.30	5.0	995620	995668
M 1.60	0.35	6.0	995621	995669
M 1.80	0.35	6.0	995622	995670
M 2.00	0.40	6.0	995623	995671
M 2.20	0.45	8.0	995624	995672
M 2.50	0.45	8.0	995631	995674
M 3.00	0.50	8.0	995626	995675



HOB CUTTERS  
FOR NIHS SCREWS

Z = 94



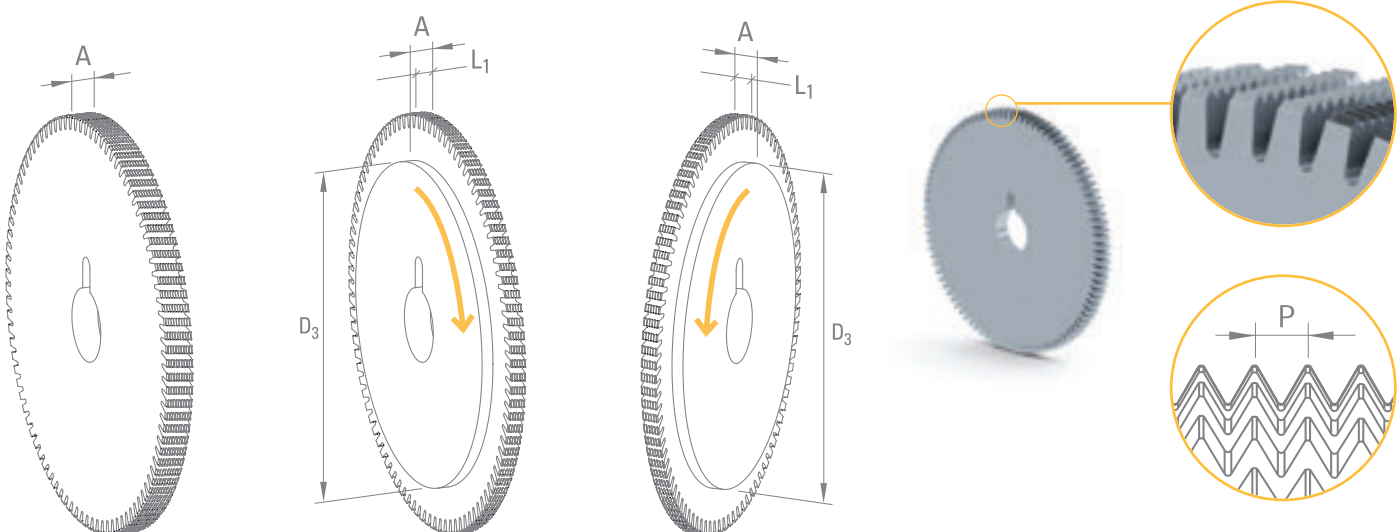
- Steel + Pb
- Low alloyed steel
- High alloyed steel
- DUPLEX stainless steel
- Titanium, titanium alloy
- Cu alloy  
Silver  
Gold
- Cu alloy difficult to machine

D nom.	Pitch P	D <sub>1</sub> ±0.03	D <sub>2</sub> h5	D <sub>3</sub>	A	L <sub>1</sub>	Ref.	CARBIDE
S 0.40	0.10	45	8	3	1.00	35	B	301926
					1.00	35	C	301927
S 0.50	0.125	45	8	3	1.10	35	B	301928
					1.10	35	C	301929
S 0.60	0.15	45	8	3	1.35	35	B	301930
					1.35	35	C	301305
					3.00	-	A	301931
S 0.70	0.175	45	8	3	1.60	35	B	301932
					1.60	35	C	301943
					3.00	-	A	301945
S 0.80	0.20	45	8	3	1.80	35	B	301946
					1.80	35	C	301947
					3.00	-	A	301948
S 0.90	0.225	45	8	3	2.00	35	B	301949
					2.00	35	C	301950
					3.00	-	A	301951
S 1.00	0.25	45	8	3	3.00	-	A	301952
S 1.40	0.30	45	8	3	3.00	-	A	301953

Ref. A

Ref. B

Ref. C



# DIXI 7910

## THREAD MILLS

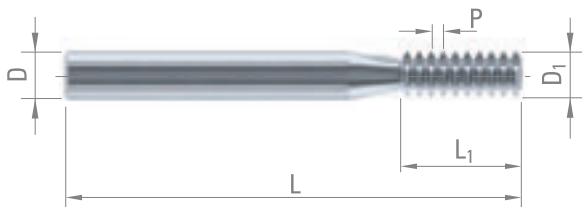
Z = 2-4



P. 318



P. 326



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TAIN
M 1.4	0.30	0.90	2.10	3	38	2	41565	56990
M 1.6	0.35	1.00	2.45	3	38	2	41566	56991
M 2.0	0.40	1.30	3.20	3	38	2	41568	56993
M 2.3	0.40	1.50	3.20	3	38	2	41569	56994
M 2.5	0.35	1.30	2.80	3	38	2	41567	56992
M 2.5	0.45	1.50	3.60	3	38	2	41570	56995
M 3.0	0.50	2.10	4.50	3	38	3	41571	56996
M 4.0	0.50	2.60	5.50	3	38	3	41572	56997
M 4.0	0.70	2.60	6.30	3	38	3	41573	56998
M 4.5	0.75	3.00	6.75	4	42	3	41574	56999
M 5.0	0.80	3.60	8.00	4	42	3	41576	57001
M 6.0	1.00	4.00	9.00	6	57	3	42578	55510
M 8.0	0.75	5.90	15.00	6	57	3	42577	57000
M 8.0	1.25	5.00	12.50	6	57	3	42579	57003
M 10.0	1.50	5.90	15.00	6	57	3	42580	57004
M 12.0	1.00	7.90	20.00	8	63	4	42554	57002
M 12.0	1.75	7.90	19.25	8	63	4	42590	57007
M 14.0	1.50	9.90	24.00	10	72	4	42561	57005
M 14.0	2.00	9.90	24.00	10	72	4	42591	57008
M 18.0	1.50	11.90	30.00	12	83	4	42589	57006
M 18.0	2.00	11.90	30.00	12	83	4	42592	57009
M 18.0	2.50	11.90	30.00	12	83	4	42593	57010
M 24.0	3.00	15.90	36.00	16	92	4	42594	

### DIXI 7910 E = External

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TAIN
M 3.0	0.50	5.90	15.00	6	57	3	42597	57013
M 4.5	0.75	7.90	19.50	8	63	4	42598	57014
M 6.0	1.00	9.90	24.00	10	72	4	41471	57015
M 10.0	1.50	11.90	30.00	12	83	4	41472	57016
M 14.0	2.00	11.90	30.00	12	83	4	41473	57017



# DIXI 7908

## HELICAL THREAD MILLS

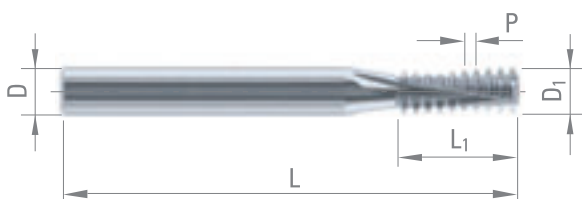
Z = 3-6



P. 318



P. 328



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TAIN
M 2.0	0.40	1.30	3.20	3	38	3	67417	952932
M 2.3	0.40	1.50	3.20	3	38	3	951593	952933
M 2.5	0.45	1.50	3.60	3	38	3	67419	952937
M 3.0	0.50	2.10	4.50	3	38	3	67420	952938
M 4.0	0.50	2.60	5.50	3	38	3	951594	952939
M 4.0	0.70	2.60	6.30	3	38	3	67452	952940
M 4.5	0.75	3.00	6.75	4	42	3	67453	952941
M 5.0	0.80	3.60	8.00	4	42	3	67454	952942
M 6.0	1.00	4.00	9.00	6	57	3	67455	952013
M 8.0	0.75	5.90	15.00	6	57	5	67461	952944
M 8.0	1.25	5.00	12.50	6	57	3	67274	952014
M 10.0	1.50	5.90	15.00	6	57	5	67456	952015
M 12.0	0.50	9.90	10.00	10	50	5	957036	957037
M 12.0	1.00	7.90	20.00	8	63	5	67462	952946
M 12.0	1.75	7.90	19.25	8	63	5	67457	952016
M 14.0	1.50	9.90	24.00	10	72	5	67463	952948
M 14.0	2.00	9.90	24.00	10	72	5	67459	952949
M 18.0	1.50	11.90	30.00	12	83	5	67464	952951
M 18.0	2.00	11.90	30.00	12	83	5	67465	952956
M 18.0	2.50	11.90	30.00	12	83	5	67458	952851
M 24.0	3.00	15.90	36.00	16	92	6	67460	952953

### DIXI 7908 E = External

D nom.	Pitch P	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TAIN
M 3.0	0.50	5.90	15.00	6	57	5	67466	952943
M 4.5	0.75	7.90	19.50	8	63	5	67467	952945
M 6.0	1.00	9.90	24.00	10	72	5	67468	952947
M 10.0	1.50	11.90	30.00	12	83	5	67469	952950
M 14.0	2.00	11.90	30.00	12	83	5	67470	952952



# DIXI 7913

## ISO THREAD MILLS, FINE PITCH WITH THROUGH COOLANT

Z = 4-5



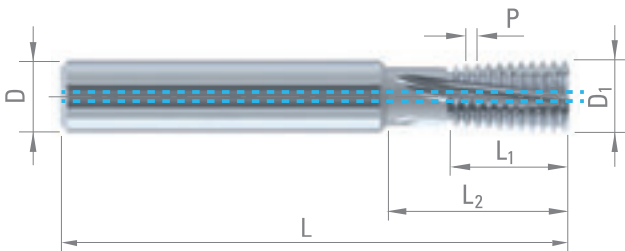
P. 318



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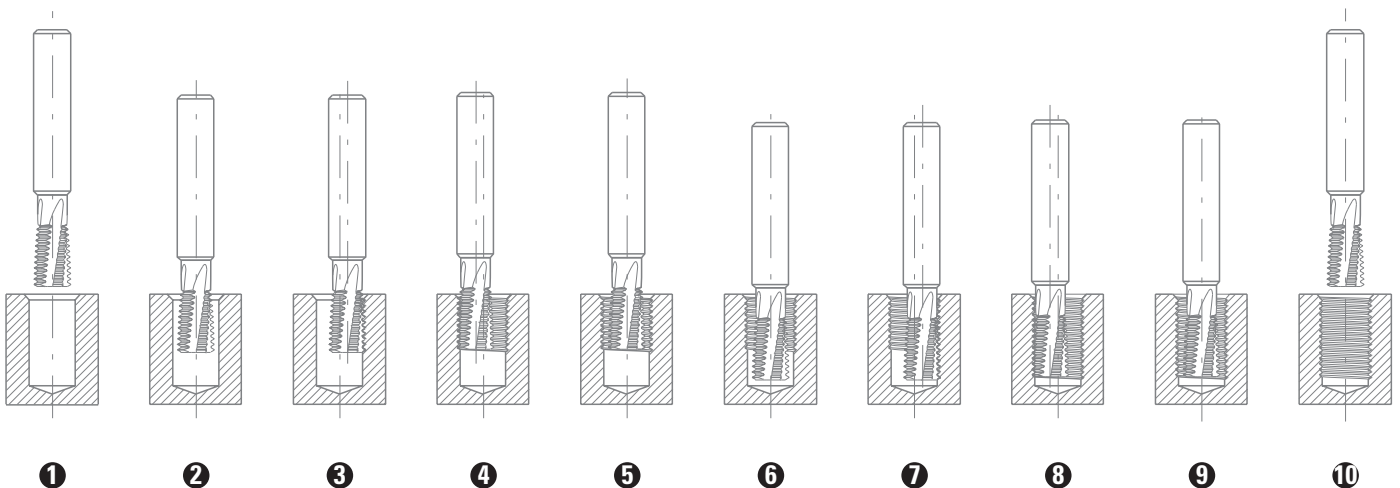


ISO 60°



Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

Pitch P	D nom.	D <sub>1</sub>	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	CUTINOX
0.50	M 10	7.95	16	-	8	64	4	303435	303455
	M 14	11.95	20	31	12	80	4	303436	303456
0.75	M 10	7.95	16	-	8	64	4	303437	303457
	M 12	9.95	16	25	10	70	4	303438	303458
1.00	M 14	11.95	20	31	12	80	4	303439	303459
	M 12	9.95	16	25	10	70	4	303440	303460
	M 16	11.95	20	31	12	80	4	303441	303461
	M 20	15.95	25	40	16	90	5	303442	303462
1.25	M 24	19.95	33	50	20	105	5	303443	303463
	M 14	9.95	16	25	10	70	4	303444	303464
1.50	M 16	11.95	20	31	12	80	4	303445	303465
	M 14	9.95	16	25	10	70	4	303446	303466
	M 16	11.95	20	31	12	80	4	303447	303467
	M 22	15.95	25	40	16	90	5	303448	303468
2.00	M 26	19.95	33	50	20	105	5	303449	303469
	M 16	11.95	20	31	12	80	4	303450	303470
	M 22	15.95	25	40	16	90	5	303451	303471
2.50	M 27	19.95	33	50	20	105	5	303452	303472
	M 22	15.95	25	40	16	90	5	303453	303473
	M 30	19.95	33	50	20	105	5	303454	303474





## THREAD MILLS

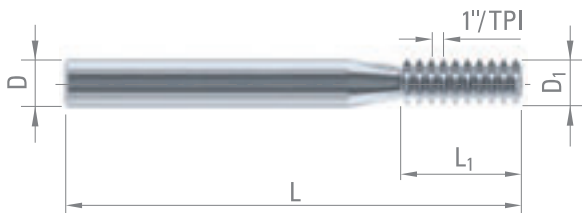
Z = 2-4



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

UNC	UNF	UNEF	UN	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
N°2	N°3			56	1.50	3.17	3	38	2	41581	953797
N°3	N°4			48	1.50	3.17	3	38	2	39808	953796
N°5	N°6			40	2.10	4.44	3	38	3	41582	953798
	N°8			36	3.00	6.35	4	42	3	39811	953799
N°8	N°10	N°12		32	3.00	6.35	4	42	3	41583	65997
		5/16"	7/16"	32	5.90	14.28	6	57	3	39813	953806
			5/16"	28	3.60	8.16	4	42	3	41584	64133
		7/16"	9/16"	28	7.90	19.95	8	63	4	39815	953812
N°12	5/16"			24	4.00	8.46	6	57	3	41585	953802
1/4"			5/16"	20	4.00	10.16	6	57	3	42599	953800
	1/2"	3/4"	9/16"	20	9.90	22.86	10	72	4	41475	953819
5/16"				18	5.00	12.70	6	57	3	41587	953803
	9/16"			18	9.90	23.98	10	72	4	41476	953817
3/8"			7/16"	16	5.90	14.28	6	57	3	42600	953804
			5/8"	16	11.90	28.57	12	83	4	42601	63605
7/16"				14	7.90	16.33	8	63	4	41478	953808
1/2"				13	7.90	19.53	8	63	4	39824	953807
9/16"			5/8"	12	9.90	23.28	10	72	4	39825	953815
	1"		1-1/16"	12	11.90	29.63	12	83	4	39826	63606
5/8"				11	9.90	23.09	10	72	4	39827	953814
3/4"				10	11.90	27.94	12	83	4	39828	953820

### DIXI 7920 E = External

D nom.	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
UNC N°6	32	5.90	14.28	6	57	3	39850	953805
UNF N°12	28	7.90	19.95	8	63	4	39851	953810
UNC 1/4"	20	9.90	22.86	10	72	4	39852	953818
UNC 5/16"	18	9.90	23.98	10	72	4	39853	953816
UNC 3/8"	16	11.90	28.57	12	83	4	39854	953822
UNC 9/16"	12	11.90	29.63	12	83	4	39855	953821



# DIXI 7918

## HELICAL THREAD MILLS

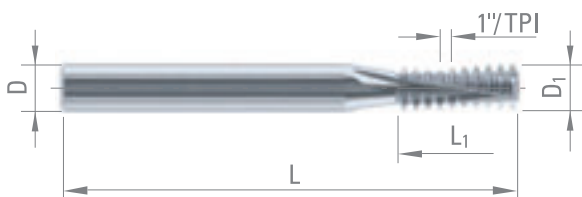
Z = 3-5



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

UNC	UNF	UNEF	UN	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
	N°2			64	1.50	3.17	3	38	3	951595	952964
N°2	N°3			56	1.50	3.17	3	38	3	67489	952963
N°3	N°4			48	1.50	3.17	3	38	3	67490	952962
	N°5			44	2.10	4.62	3	38	3	951482	952966
N°5	N°6			40	2.10	4.44	3	38	3	67491	952965
	N°8			36	3.00	6.35	4	42	3	67492	952968
N°8	N°10	N°12		32	3.00	6.35	4	42	3	67493	952967
		5/16"	7/16"	32	5.90	14.28	6	57	5	67497	952975
	N°12		5/16"	28	3.60	8.16	4	42	3	67494	952969
		7/16"	9/16"	28	7.90	19.95	8	63	5	67498	952979
N°12	5/16"	5/8"		24	4.00	8.46	6	57	3	67495	952971
1/4"			5/16"	20	4.00	10.16	6	57	3	67496	952970
	1/2"	3/4"	9/16"	20	9.90	22.86	10	72	5	67499	952985
5/16"				18	5.00	12.70	6	57	3	67500	952972
	9/16"			18	9.90	23.98	10	72	5	67501	952983
3/8"			7/16"	16	5.90	14.28	6	57	5	67502	952973
			5/8"	16	11.90	28.57	12	83	5	67503	952990
7/16"				14	7.90	16.33	8	63	5	67504	952977
1/2"				13	7.90	19.53	8	63	5	67505	952976
9/16"				12	9.90	23.28	10	72	5	67512	952981
	1"		1-1/16"	12	11.90	29.63	12	83	5	67506	952988
5/8"				11	9.90	23.09	10	72	5	951597	952980
3/4"				10	11.90	27.94	12	83	5	951667	952986

### DIXI 7918 E = External

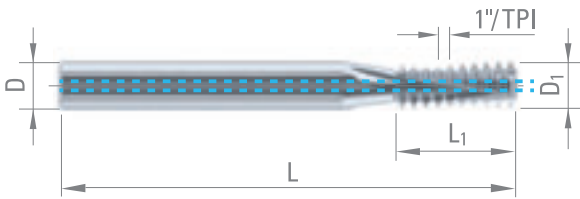
D nom.	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE	TiAIN
UNC N°6	32	5.90	14.28	6	57	5	67507	952974
UNF N°12	28	7.90	19.95	8	63	5	67508	952978
UNC 1/4"	20	9.90	22.86	10	72	5	67509	952984
UNC 5/16"	18	9.90	23.98	10	72	5	67510	952982
UNC 3/8"	16	11.90	28.57	12	83	5	67511	952989
UNC 9/16"	12	11.90	29.63	12	83	5	951668	952987



## DIXI 7923

### HELICAL THREAD MILLS WITH THROUGH COOLANT

$$L_1 = 2 \times \varnothing \text{ nom.}$$



Z = 3-4



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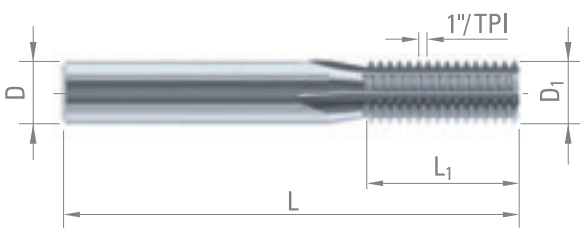


Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

UNJF	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
N°10	32	3.90	11.50	6	54	3	303381
1/4"	28	5.20	14.00	6	54	3	303382
5/16"	24	5.95	17.40	6	54	3	303383
3/8"	24	7.95	20.60	8	64	4	303384
7/16"	20	7.95	24.70	8	64	4	303385
1/2"	20	9.95	27.30	10	74	4	303386

## DIXI 7940

### THREAD MILLS



Z = 3-4



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

BSP	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
G1/16" – G1/8"	28	5.90	14.51	6	57	3	42603
G1/4" – G3/8"	19	7.90	18.71	8	63	4	42604
G1/2" – G5/8" – G3/4" – G7/8"	14	11.90	29.02	12	83	4	42605
G1"	11	15.90	34.63	16	92	4	42606

For internal and external threading



## DIXI 7946

### THREAD MILLS

Z = 3-4



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic



BSPT	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
R1/16" – R1/8"	28	5.34	9.97	6	57	3	42607
R1/4" – R3/8"	19	7.07	14.70	8	63	4	42608
R1/2" – R5/8" – R3/4" – R7/8"	14	10.77	19.95	12	83	4	41590
R1" => R2-1/2"	11	14.32	27.70	16	92	4	42610

For internal and external threading

## DIXI 7950

### THREAD MILLS

Z = 3-4



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic



NPT	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
1/16" – 1/8"	27	5.37	9.40	6	57	3	39789
1/4" – 3/8"	18	7.10	14.11	8	63	4	41592
1/2" – 3/4"	14	10.65	19.95	12	83	4	42611
1" – 1-1/4" – 1-1/2" – 2"	11.5	14.38	26.50	16	92	4	39792

For internal and external threads



## DIXI 7956

### THREAD MILLS

Z = 3-4



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

NPTF	TPI	D <sub>1</sub>	L <sub>1</sub>	D <sub>h5</sub>	L	Z	CARBIDE
1/16" – 1/8"	27	5.37	9.40	6	57	3	39794
1/4" – 3/8"	18	7.10	14.11	8	63	4	39795
1/2" – 3/4"	14	10.65	19.95	12	83	4	39796
1" – 1-1/4" – 1-1/2" – 2"	11.5	14.38	26.50	16	92	4	41591

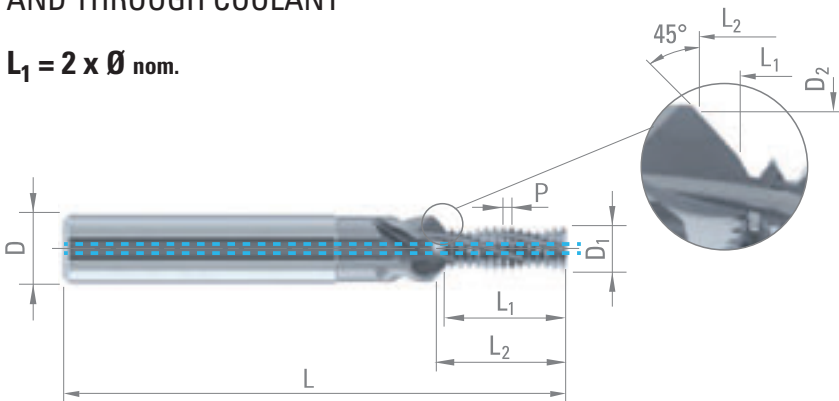
For internal and external threads

## DIXI 7915

### THREAD MILLS WITH COUNTERSINK AND THROUGH COOLANT

Z = 3-4

L<sub>1</sub> = 2 x Ø nom.



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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

D nom.	Pitch P	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	CUTINOX
M 4.0	0.70	3.10	4.2	8.70	9.3	6	48	3	303387	303394
M 5.0	0.80	3.90	5.3	10.70	11.5	6	54	3	303388	303395
M 6.0	1.00	4.70	6.3	13.40	14.3	8	62	3	303389	303396
M 8.0	1.25	6.40	8.4	18.10	19.1	10	74	3	303390	303397
M 10.0	1.50	8.10	10.5	21.70	22.9	12	80	4	303391	303398
M 12.0	1.75	9.95	12.6	25.30	26.7	14	90	4	303392	303399
M 16.0	2.00	13.40	16.8	34.90	36.6	18	102	4	303393	303400



# DIXI 7925

## THREAD MILLS WITH COUNTERSINK AND THROUGH COOLANT

$L_1 = 2 \times \emptyset \text{ nom.}$

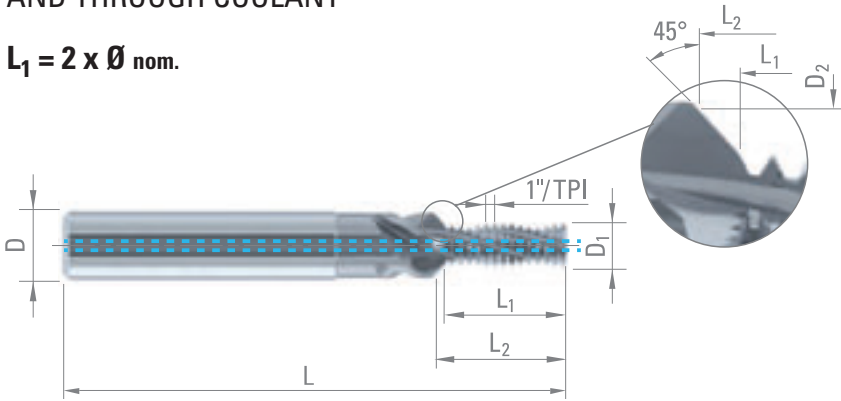
Z = 3-4



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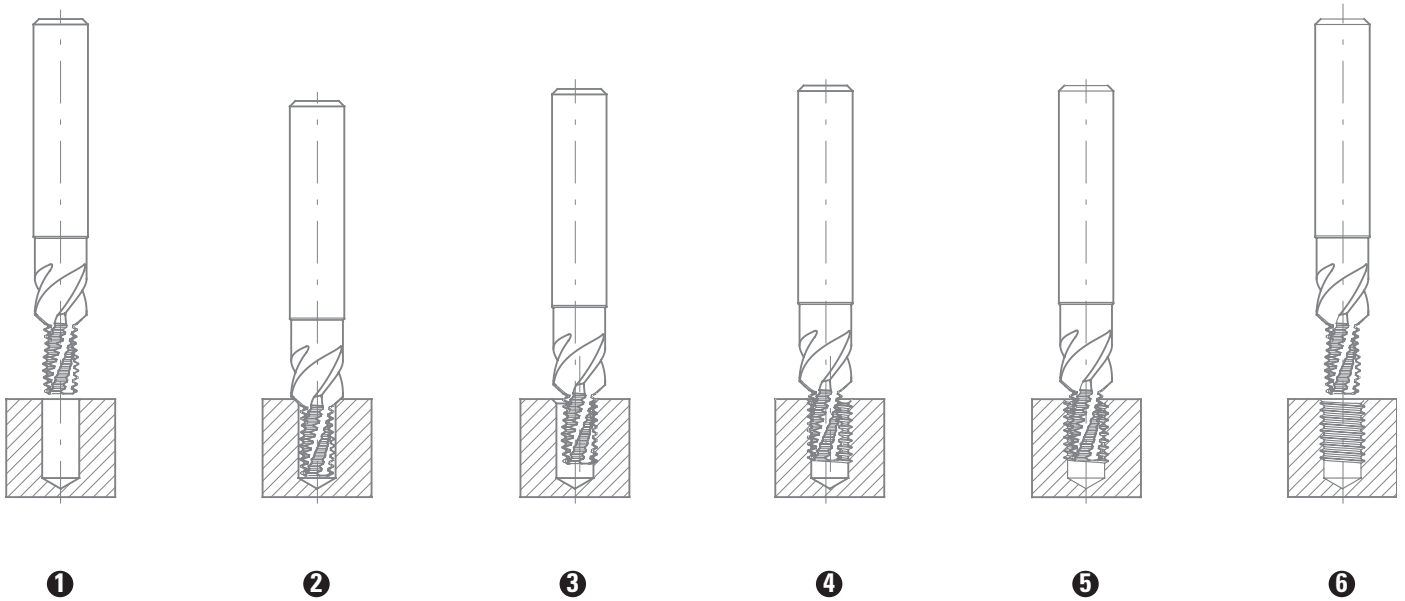


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Steel + Pb	Low alloyed steel	High alloyed steel	DUPLEX stainless steel	Cast iron
Titanium, titanium alloy	Cu alloy Silver Gold	Cu alloy difficult to machine	Al	Plastic

UNC	TPI	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	D <sub>h5</sub>	L	Z	CARBIDE	CUTINOX
N°8	32	3.10	4.4	9.10	9.7	6	48	3	303401	303411
N°10	24	3.60	5.1	11.00	11.9	6	54	3	303402	303412
N°12	24	4.10	5.8	12.10	13.0	6	54	3	303403	303413
1/4"	20	4.80	6.7	14.50	15.6	8	62	3	303404	303414
5/16"	18	5.95	8.3	17.60	18.7	10	74	3	303405	303415
3/8"	16	7.50	10.0	21.40	22.6	12	80	4	303406	303416
7/16"	14	8.80	11.7	24.40	25.9	12	80	4	303407	303417
1/2"	13	10.30	13.3	28.20	29.8	14	90	4	303408	303418
9/16"	12	10.80	15.0	30.60	32.3	16	102	4	303409	303419
5/8"	11	11.90	16.7	35.70	37.6	18	102	4	303410	303420



# DIXI 7985

## DRILLING THREAD MILLS WITH COUNTERSINK AND THROUGH COOLANT

$L_1 = 2 \times \varnothing \text{ nom.}$

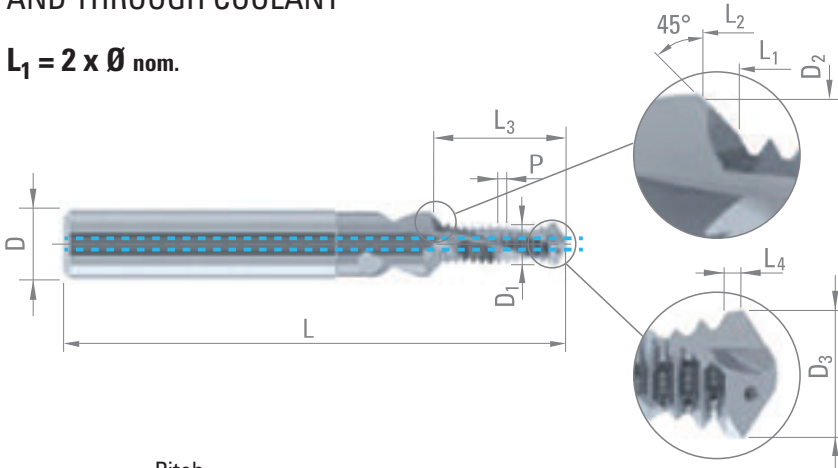
Z = 2



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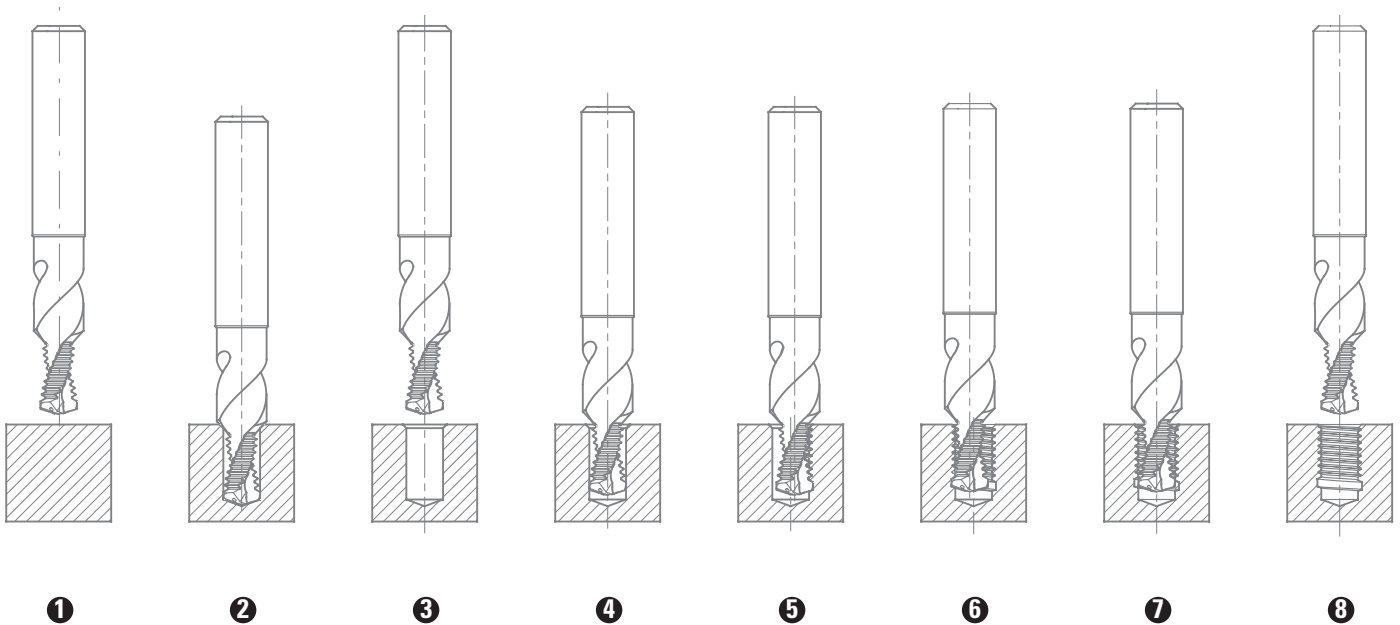


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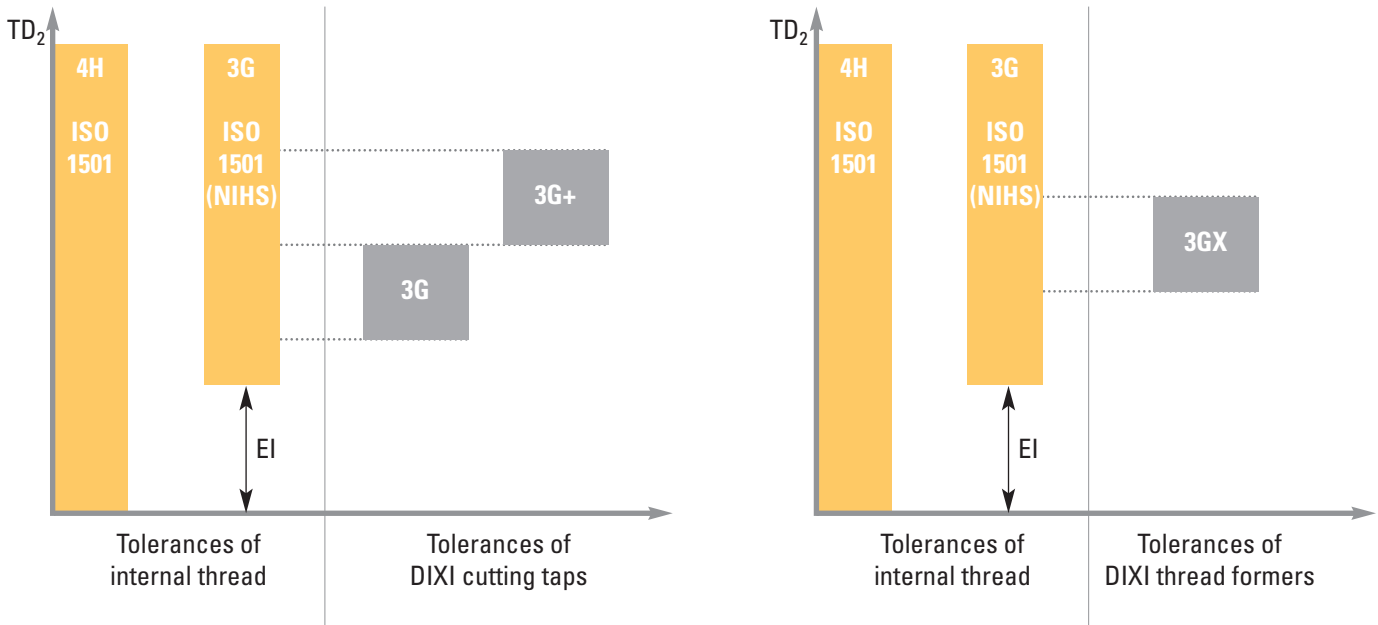
- Cast iron
- Cu alloy  
Silver  
Gold
- Cu alloy  
difficult  
to machine
- Al

D nom.	Pitch P	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	D <sub>h5</sub>	L	CARBIDE CUTINOX
M 4.0	0.70	3.20	4.2	3.30	8.90	8.9	9.5	0.7	6	48	303421 303428
M 5.0	0.80	4.00	5.3	4.20	11.10	11.0	11.8	0.8	6	54	303422 303429
M 6.0	1.00	4.75	6.3	5.00	13.85	13.7	14.6	1.0	8	62	303423 303430
M 8.0	1.25	6.35	8.4	6.75	18.60	18.4	19.6	1.3	10	74	303424 303431
M 10.0	1.50	7.95	10.5	8.50	22.40	22.2	23.7	1.5	12	80	303425 303432
M 12.0	1.75	9.95	12.6	10.25	26.00	25.5	27.4	1.5	14	90	303426 303433
M 16.0	2.00	13.20	16.8	14.00	35.90	35.1	37.6	1.5	18	102	303427 303434

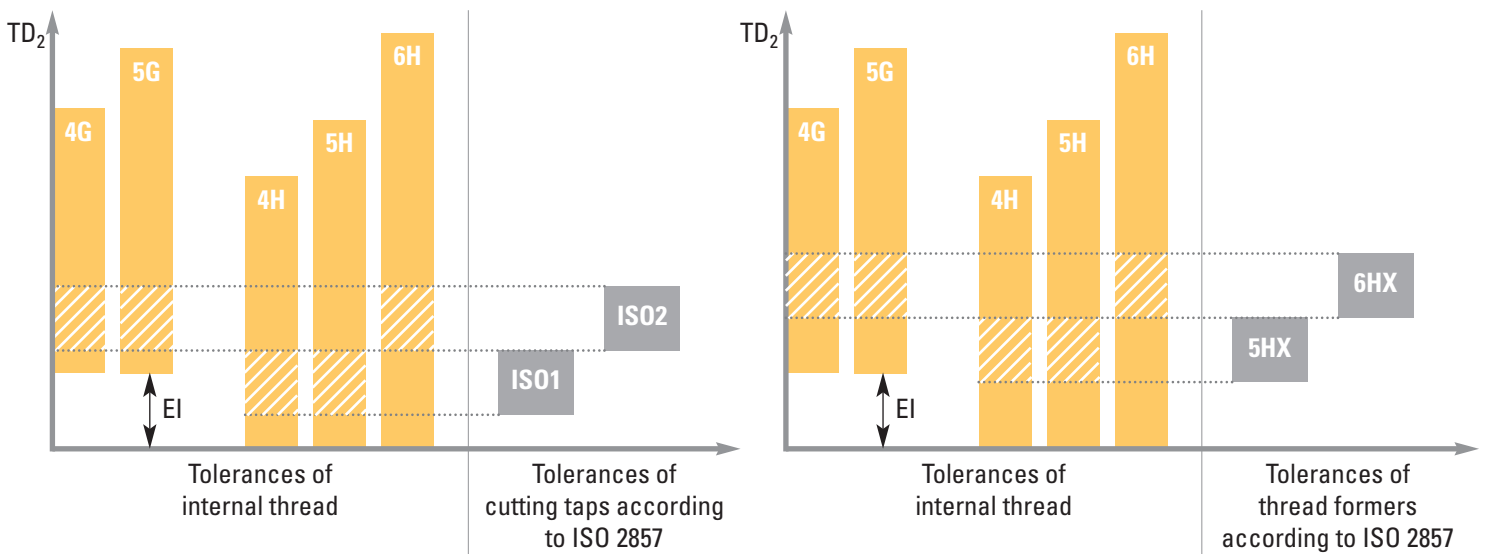




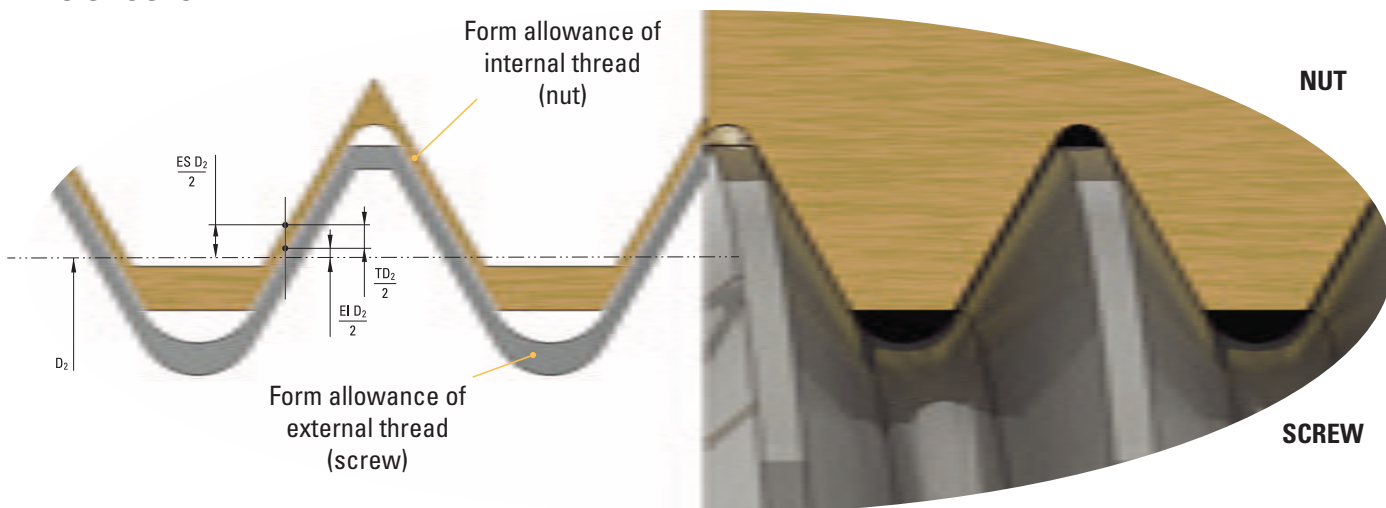
## TOLERANCE ZONES OF PITCH DIAMETERS ON "S" MINIATURE THREADS (ISO 1501 / NIHS 06-05 / DIN 14)



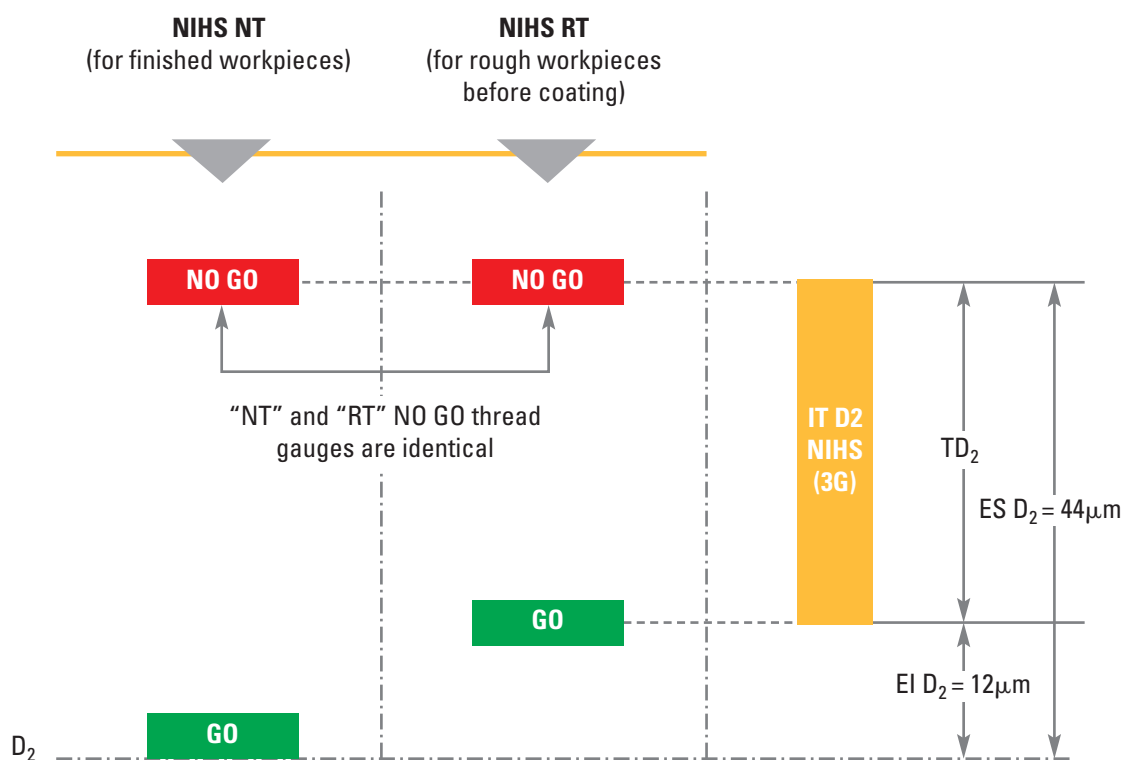
## TOLERANCE ZONES OF PITCH DIAMETERS ON METRIC INTERNAL THREADS (ISO 965 / NIHS 06-06 / DIN 13)







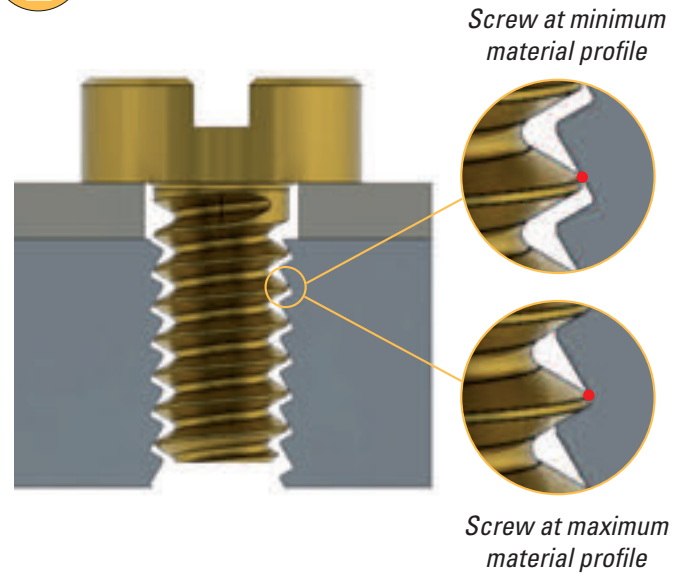
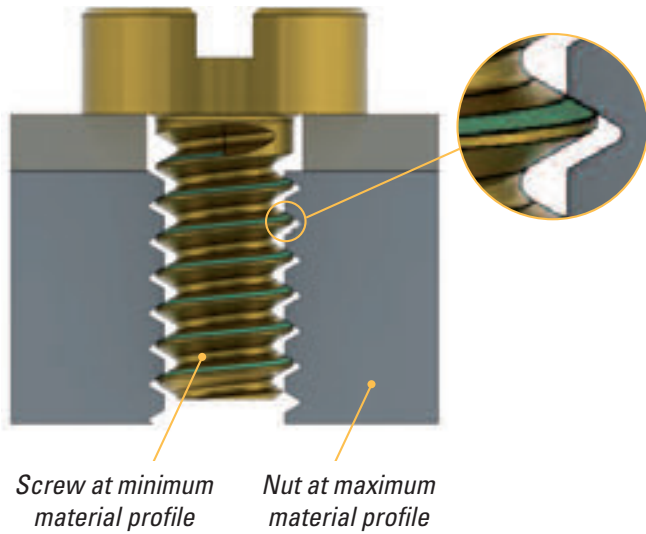
$D_2$	Pitch diameter
$EI D_2$ deviation	Lower deviation of pitch diameter $D_2$ .
$ES D_2$ deviation	Upper deviation of pitch diameter $D_2$ .
$TD_2$ allowance	Pitch diameter ( $D_2$ ) allowance. $TD_2 = ES D_2 - EI D_2$ .
NIHS NT allowance criteria	NT is abbreviation of "Normal Tolerance". This criteria is used to control NIHS threads on finished workpieces (with or without coating).
NIHS RT allowance criteria	RT is abbreviation of "Reduced Tolerance". This criteria is used to control NIHS threads on rough workpieces in production (before coating).
NO GO thread gauge	NO GO thread gauges are identical (NT or RT allowance criteria). They are used to check rough workpieces (production stage) or finished workpieces (with or without coating).



GO and NO GO thread gauges tolerances - Example for a 0.25 mm pitch



## AF THREAD - TECHNICAL ADVANTAGES



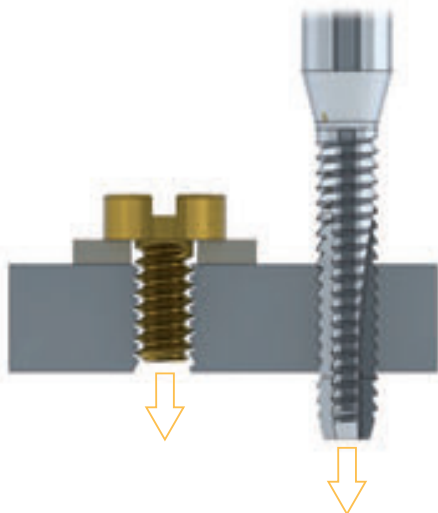
On a S1.00x0.25 assembly, there can be up to 0.05mm free space between the screw crest diameter and the nut root diameter. That clearance allows a freedom of movement that could cause vibration loosening. This phenomenon is accentuated by the narrow theoretical contact surface between the flanks of both screw and nut. In some cases, adhesives can be used to avoid vibration loosening. This solution is inappropriate for assemblies on which visual aspects are key (watch industry).

Whatever the screw size (minimum or maximum material profile), the contact line is guaranteed to be the same. Thus the manufacturing tolerances do not influence the assembly quality.

**Thanks to AF thread profile, no need to use adhesive anymore.**

## PROFILE DIRECTION - MACHINING DIRECTION

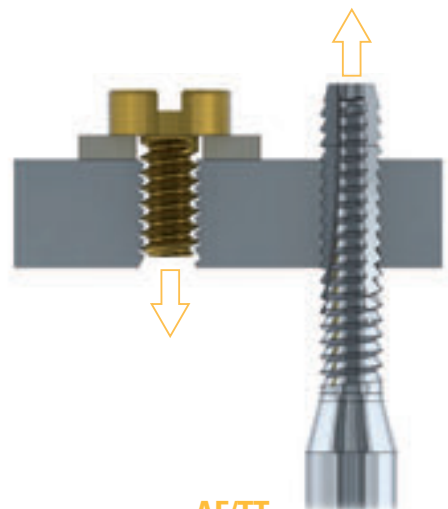
Unlike 60° thread, AF thread is made of an asymmetric profile. Depending on the tool machining direction, the cutting profile is reversed.



### AF/BT

The tool and the screw have the same screwing direction.

**Tools from stock**



### AF/TT

The tool and the screw have opposite screwing direction.

**Tools on request**





## DRILLING Ø BEFORE TAPPING OR INTERNAL WHIRLING OPERATION

### NIHS 06 (ISO 1501 / DIN 14)

Nominal Ø	Pitch	Brass (3G5)			Steel (3G6)		
		Minor Ø min.	Drilling Ø max.	Drilling Ø	Internal Ø min.	Internal Ø max.	Drilling Ø
S 0.30	0.08	0.223	0.240	<b>0.23</b>	-	-	-
S 0.35	0.09	0.264	0.286	<b>0.275</b>	-	-	-
S 0.40	0.10	0.304	0.330	<b>0.32</b>	0.304	0.342	<b>0.34</b>
S 0.50	0.125	0.380	0.415	<b>0.40</b>	0.380	0.435	<b>0.42</b>
S 0.60	0.15	0.456	0.502	<b>0.48</b>	0.456	0.522	<b>0.50</b>
S 0.70	0.175	0.532	0.585	<b>0.56</b>	0.532	0.605	<b>0.58</b>
S 0.80	0.20	0.608	0.665	<b>0.64</b>	0.608	0.685	<b>0.66</b>
S 0.90	0.225	0.684	0.745	<b>0.72</b>	0.684	0.765	<b>0.74</b>
S 1.00	0.25	0.760	0.825	<b>0.80</b>	0.760	0.845	<b>0.82</b>
S 1.20	0.25	0.960	1.025	<b>1.00</b>	0.960	1.045	<b>1.02</b>
S 1.40	0.30	1.112	1.185	<b>1.15</b>	1.112	1.205	<b>1.17</b>

### ISO 965 (DIN 13)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
M 0.8	0.20	-	0.608	0.685	<b>0.65</b>
M 0.9	0.225	-	0.684	0.765	<b>0.70</b>
M 1.0	0.25	5H	0.729	0.785	<b>0.75</b>
M 1.1	0.25	5H	0.829	0.885	<b>0.85</b>
M 1.2	0.25	5H	0.929	0.985	<b>0.95</b>
M 1.4	0.30	6H	1.075	1.142	<b>1.10</b>
M 1.6	0.35	6H	1.221	1.321	<b>1.25</b>
M 1.7	0.35	6H	1.321	1.421	<b>1.35</b>
M 1.8	0.35	6H	1.421	1.521	<b>1.45</b>
M 2.0	0.40	6H	1.567	1.679	<b>1.60</b>
M 2.2	0.45	6H	1.713	1.838	<b>1.75</b>
M 2.5	0.45	6H	2.013	2.138	<b>2.05</b>
M 3.0	0.50	6H	2.459	2.599	<b>2.50</b>
M 3.5	0.60	6H	2.850	3.010	<b>2.90</b>
M 4.0	0.70	6H	3.242	3.422	<b>3.30</b>
M 4.5	0.75	6H	3.688	3.878	<b>3.70</b>
M 5.0	0.80	6H	4.134	4.334	<b>4.20</b>
M 6.0	1.00	6H	4.917	5.153	<b>5.00</b>
M 7.0	1.00	6H	5.917	6.153	<b>6.00</b>
M 8.0	1.25	6H	6.647	6.912	<b>6.80</b>
M 9.0	1.25	6H	7.647	7.912	<b>7.80</b>
M 10.0	1.50	6H	8.376	8.676	<b>8.50</b>
M 11.0	1.50	6H	9.376	9.676	<b>9.50</b>
M 12.0	1.75	6H	10.106	10.441	<b>10.20</b>
M 14.0	2.00	6H	11.835	12.210	<b>12.00</b>
M 16.0	2.00	6H	13.835	14.210	<b>14.00</b>
M 18.0	2.50	6H	15.294	15.744	<b>15.50</b>
M 20.0	2.50	6H	17.294	17.744	<b>17.50</b>
M 22.0	2.50	6H	19.294	19.744	<b>19.50</b>
M 24.0	3.00	6H	20.752	21.252	<b>21.00</b>
M 27.0	3.00	6H	23.752	24.252	<b>24.00</b>

### UNC (ANSI B1.1 / ISO 5854)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
N°1	64	2B	1.425	1.582	<b>1.50</b>
N°2	56	2B	1.695	1.871	<b>1.80</b>
N°3	48	2B	1.941	2.146	<b>2.00</b>
N°4	40	2B	2.157	2.385	<b>2.25</b>
N°5	40	2B	2.487	2.697	<b>2.60</b>
N°6	32	2B	2.645	2.895	<b>2.75</b>
N°8	32	2B	3.302	3.530	<b>3.50</b>
N°10	24	2B	3.683	3.962	<b>3.80</b>
N°12	24	2B	4.344	4.597	<b>4.50</b>
1/4"	20	2B	4.979	5.257	<b>5.10</b>
5/16"	18	2B	6.401	6.731	<b>6.50</b>
3/8"	16	2B	7.798	8.153	<b>7.90</b>
7/16"	14	2B	9.144	9.550	<b>9.30</b>
1/2"	13	2B	10.592	11.023	<b>10.70</b>
9/16"	12	2B	11.989	12.446	<b>12.30</b>
5/8"	11	2B	13.386	13.868	<b>13.50</b>
3/4"	10	2B	16.307	16.840	<b>16.50</b>

### UNF (ANSI B1.1 / ISO 5854)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
N°1	72	2B	1.474	1.612	<b>1.50</b>
N°2	64	2B	1.756	1.912	<b>1.80</b>
N°3	56	2B	2.025	2.197	<b>2.10</b>
N°4	48	2B	2.271	2.458	<b>2.35</b>
N°5	44	2B	2.551	2.740	<b>2.60</b>
N°6	40	2B	2.820	3.022	<b>2.90</b>
N°8	36	2B	3.404	3.606	<b>3.50</b>
N°10	32	2B	3.963	4.165	<b>4.05</b>
N°12	28	2B	4.496	4.724	<b>4.60</b>
1/4"	28	2B	5.360	5.588	<b>5.50</b>
5/16"	24	2B	6.782	7.035	<b>6.90</b>
3/8"	24	2B	8.382	8.636	<b>8.50</b>
7/16"	20	2B	9.729	10.033	<b>9.80</b>
1/2"	20	2B	11.329	11.607	<b>11.40</b>
9/16"	18	2B	12.751	13.081	<b>12.90</b>
5/8"	18	2B	14.351	14.681	<b>14.50</b>
3/4"	16	2B	17.323	17.678	<b>17.50</b>
7/8"	14	2B	20.270	20.675	<b>20.40</b>

### UN (ANSI B1.1 / ISO 5854)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
5/16"	28	2B	6.955	7.169	<b>7.10</b>
5/16"	20	2B	6.563	6.855	<b>6.70</b>
3/8"	28	2B	8.543	8.756	<b>8.60</b>
3/8"	20	2B	8.150	8.442	<b>8.30</b>
7/16"	32	2B	10.253	10.441	<b>10.30</b>
7/16"	16	2B	9.394	9.752	<b>9.60</b>
1/2"	32	2B	11.841	12.029	<b>11.90</b>
1/2"	16	2B	10.981	11.340	<b>11.20</b>
9/16"	32	2B	13.428	13.616	<b>13.50</b>
9/16"	28	2B	13.305	13.519	<b>13.40</b>
9/16"	20	2B	12.913	13.205	<b>13.10</b>
9/16"	16	2B	12.569	12.927	<b>12.70</b>
5/8"	32	2B	15.016	15.204	<b>15.10</b>
5/8"	28	2B	14.893	15.106	<b>15.00</b>
5/8"	20	2B	14.500	14.792	<b>14.60</b>
5/8"	16	2B	14.156	14.515	<b>14.30</b>
5/8"	12	2B	13.584	14.043	<b>13.80</b>
11/16"	32	2B	16.603	16.791	<b>16.70</b>
11/16"	28	2B	16.480	16.694	<b>16.60</b>
11/16"	20	2B	16.088	16.380	<b>16.20</b>
11/16"	16	2B	15.744	16.102	<b>15.90</b>
11/16"	12	2B	15.171	15.631	<b>15.40</b>
3/4"	32	2B	18.191	18.379	<b>18.30</b>
3/4"	28	2B	18.068	18.281	<b>18.20</b>
3/4"	12	2B	16.759	17.218	<b>17.00</b>
13/16"	32	2B	19.778	19.966	<b>19.90</b>
13/16"	28	2B	19.655	19.869	<b>19.80</b>
13/16"	16	2B	18.919	19.277	<b>19.10</b>
13/16"	12	2B	18.346	18.806	<b>18.60</b>
7/8"	32	2B	21.366	21.554	<b>21.50</b>
7/8"	28	2B	21.243	21.456	<b>21.30</b>
7/8"	16	2B	20.506	20.865	<b>20.70</b>
7/8"	12	2B	19.934	20.393	<b>20.20</b>
15/16"	32	2B	22.953	23.141	<b>23.00</b>
15/16"	28	2B	22.830	23.044	<b>22.90</b>
15/16"	16	2B	22.094	22.452	<b>22.30</b>
15/16"	12	2B	21.521	21.981	<b>21.80</b>
1"	32	2B	24.541	24.729	<b>24.60</b>
1"	28	2B	24.418	24.631	<b>24.50</b>
1"	16	2B	23.681	24.040	<b>23.90</b>
1 1/16"	28	2B	26.005	26.219	<b>26.10</b>
1 1/16"	20	2B	25.613	25.905	<b>25.80</b>
1 1/16"	18	2B	25.460	25.783	<b>25.60</b>
1 1/16"	16	2B	25.269	25.627	<b>25.40</b>
1 1/16"	12	2B	24.696	25.156	<b>24.90</b>



## DRILLING Ø BEFORE TAPPING OR INTERNAL WHIRLING OPERATION

### UNEF (ANSI B1.1 / ISO 5854)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
N°12	32	2B	4.623	4.826	<b>4.70</b>
1/4"	32	2B	5.487	5.689	<b>5.60</b>
5/16"	32	2B	7.087	7.264	<b>7.20</b>
3/8"	32	2B	8.662	8.864	<b>8.75</b>
7/16"	28	2B	10.135	10.337	<b>10.25</b>
1/2"	28	2B	11.710	11.938	<b>11.85</b>
9/16"	24	2B	13.132	13.385	<b>13.20</b>
5/8"	24	2B	14.732	14.986	<b>14.80</b>
11/16"	24	2B	16.307	16.560	<b>16.40</b>
3/4"	20	2B	17.679	17.957	<b>17.80</b>

### UNJF (ISO 3161)

Nominal Ø	Pitch	Tolerance	Minor Ø		Drilling Ø
			min.	max.	
N°10	32	3B	4.054	4.255	<b>4.10</b>
1/4"	28	3B	5.466	5.662	<b>5.55</b>
5/16"	24	3B	6.906	7.109	<b>7.00</b>
3/8"	24	3B	8.494	8.679	<b>8.60</b>
7/16"	20	3B	9.876	10.084	<b>10.00</b>
1/2"	20	3B	11.463	11.661	<b>11.55</b>

### BSP (ISO 228)

Nominal Ø	Pitch	Minor Ø		Drilling Ø
		min.	max.	
G 1/16"	28	6.561	6.843	<b>6.75</b>
G 1/8"	28	8.566	8.848	<b>8.75</b>
G 1/4"	19	11.445	11.890	<b>11.60</b>
G 3/8"	19	14.950	15.395	<b>15.20</b>
G 1/2"	14	18.631	19.172	<b>18.90</b>
G 5/8"	14	20.587	21.128	<b>20.90</b>
G 3/4"	14	24.117	24.658	<b>24.40</b>
G 7/8"	14	27.877	28.418	<b>28.20</b>
hG 1"	11	30.291	30.931	<b>30.70</b>

## COMBINATION OF NOMINAL DIAMETERS AND PITCHES ACCORDING ANSI B1.1 / ISO 5854 NORM

Ø nom.		80	72	64	56	48	44	40	36	32	28	24	20	18	16	14	13	12	11	10	TPI	
inch	mm	0.318	0.353	0.397	0.454	0.529	0.577	0.635	0.706	0.794	0.907	1.058	1.270	1.411	1.588	1.814	1.954	2.117	2.309	2.54	mm	
N°0	1.524	UNF																				
N°1	1.854		UNF	UNC																		
N°2	2.184			UNF	UNC																	
N°3	2.515				UNF	UNC																
N°4	2.845					UNF		UNC														
N°5	3.175						UNF	UNC														
N°6	3.505							UNF		UNC												
N°8	4.166								UNF	UNC												
N°10	4.826									UNF		UNC										
N°12	5.486									UNEF	UNF	UNC										
1/4"	6.350									UNEF	UNF		UNC									
5/16"	7.938									UNEF	UN	UNF	UN	UNC								
3/8"	9.525									UNEF	UN	UNF	UN		UNC							
7/16"	11.113									UN	UNEF	UNF			UN	UNC						
1/2"	12.700									UN	UNEF		UNF		UN		UNC					
9/16"	14.288									UN	UN	UNEF	UN	UNF	UN				UNC			
5/8"	15.875									UN	UN	UNEF	UN	UNF	UN				UN	UNC		
11/16"	17.463									UN	UN	UNEF	UN		UN				UN			
3/4"	19.050									UN	UN		UNEF		UNF				UN			UNC
13/16"	20.638									UN	UN		UNEF		UN				UN			
7/8"	22.225									UN	UN		UNEF		UN	UNF			UN			
15/16"	23.813									UN	UN		UNEF		UN				UN			
1"	25.400									UN	UN		UNEF		UN				UNF			
1-1/16"	26.988										UN		UN	UN	UN				UN			

CUTTING CONDITIONS

MACHINING WITH A FIXED WORKPIECE

Materials to be machined			CARBIDE		TiAlN		CUTINOX	
			Vc [m/min]		Vc [m/min]		Vc [m/min]	
<b>P</b>	Unalloyed steel / Low alloyed steel	< 600 N/mm <sup>2</sup>	<b>65</b>	80	<b>70</b>	100		
<b>P</b>	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm <sup>2</sup>			<b>40</b>	60		
<b>P</b>	High alloyed steel	700 – 1500 N/mm <sup>2</sup>			<b>25</b>	50	<b>60</b>	80
<b>M</b>	Stainless steel	400 – 700 N/mm <sup>2</sup>	<b>35</b>	40	<b>40</b>	60	<b>70</b>	90
<b>M</b>	DUPLEX stainless steel	> 800 N/mm <sup>2</sup>			<b>25</b>	50	<b>60</b>	80
<b>K</b>	Tool steel and cast iron	> 1500 N/mm <sup>2</sup> (50 - 65 HRC)	<b>65</b>	80	<b>70</b>	100		
<b>K</b>	Grey cast iron / Nodular pearlitic iron	< 250 HB	<b>35</b>	40	<b>40</b>	60		
<b>K</b>	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	<b>35</b>	40	<b>40</b>	60		
<b>S</b>	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy			<b>25</b>	50	<b>40</b>	60
<b>S</b>	Titanium, titanium alloys		<b>15</b>	35				
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>80</b>	200				
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	<b>70</b>	150				
<b>N</b>	Gold, silver		<b>80</b>	200				

MACHINING ON A SWISS-TURNING MACHINE - Workpiece turns

Materials to be machined		CARBIDE	fz [mm] Pitch 0.20 - 0.25	fz [mm] Pitch 0.30 - 0.35	fz [mm] Pitch 0.40 - 0.50	fz [mm] Pitch 0.70 - 1.00
		Vc [m/min]				
<b>P</b>	Steel	<b>50 - 100</b>	<b>0.002 - 0.004</b>	<b>0.002 - 0.004</b>	<b>0.003 - 0.006</b>	<b>0.005 - 0.013</b>
<b>M</b>	Stainless steel	<b>40 - 80</b>	<b>0.002 - 0.003</b>	<b>0.002 - 0.004</b>	<b>0.002 - 0.005</b>	<b>0.004 - 0.01</b>
<b>S</b>	Titanium, titanium alloys	<b>50 - 90</b>	<b>0.002 - 0.003</b>	<b>0.002 - 0.004</b>	<b>0.002 - 0.005</b>	<b>0.004 - 0.01</b>
<b>N</b>	Copper alloys	<b>60 - 150</b>	<b>0.002 - 0.005</b>	<b>0.002 - 0.006</b>	<b>0.003 - 0.007</b>	<b>0.005 - 0.013</b>



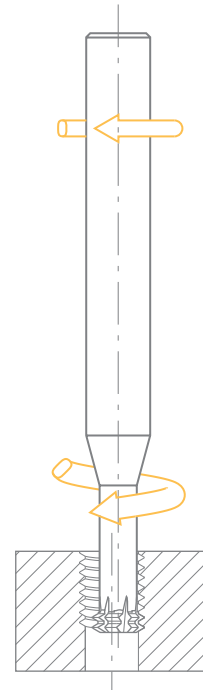
$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times fz \text{ [mm]} \times z$$

Feed per tooth

$fz$  [mm]

$\emptyset D_1$ 0.20 - 0.60	$\emptyset D_1$ 0.60 - 1.20	$\emptyset D_1$ 1.20 - 2.00	$\emptyset D_1$ 2.00 - 3.00	$\emptyset D_1$ 3.00 - 5.00	$\emptyset D_1$ 5.00 - 8.00
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07
0.003 - 0.006	0.004 - 0.01	0.01 - 0.03	0.02 - 0.04	0.03 - 0.05	0.04 - 0.07



### Example for M2 x 0.40 in titanium, DIXI 1730 $\emptyset D_1 = 1.55$

① Tool rotation  $n \text{ (min}^{-1}\text{)} = \frac{1000 \times Vc}{\pi \times \emptyset D_1}$

$$\frac{1000 \times 90}{(\pi \times 1.55)} \Rightarrow 19'000 \text{ min}^{-1}$$

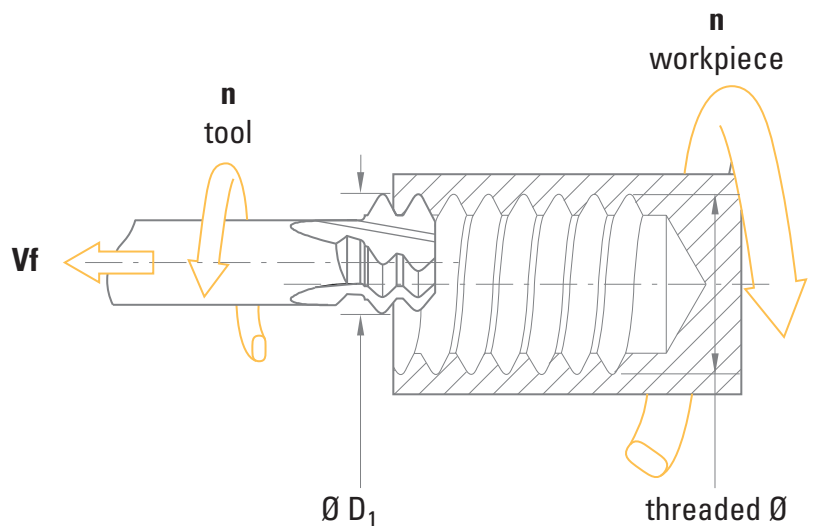
② Feed  $Vf \text{ mm/min} = n \times fz \times z$

$$19'000 \times 0.004 \times 3 = 223 \text{ mm/min}$$

③ Piece rotation  $\text{min}^{-1} = \frac{Vf}{\text{threaded } \emptyset \times \pi}$

$$\frac{223}{M2 \times \pi} \Rightarrow 36 \text{ min}^{-1}$$

When necessary, convert in degrees  $\text{nb}^\circ = \text{min}^{-1} \times 360^\circ \Rightarrow 36 \text{ min}^{-1} \times 360^\circ = 12960^\circ$



CUTTING CONDITIONS

Materials to be machined			CARBIDE		CUTINOX	
			Vc [m/min]		Vc [m/min]	
<b>P</b>	Unalloyed steel / Low alloyed steel	< 600 N/mm <sup>2</sup>	<b>100</b>	150	<b>120</b>	180
<b>P</b>	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm <sup>2</sup>	<b>90</b>	130	<b>110</b>	150
<b>P</b>	Lead alloyed cutting steel		<b>100</b>	180	<b>120</b>	200
<b>P</b>	High alloyed steel	700 – 1500 N/mm <sup>2</sup>	<b>40</b>	70	<b>50</b>	80
<b>M</b>	Stainless steel	400 – 700 N/mm <sup>2</sup>	<b>50</b>	80	<b>60</b>	110
<b>M</b>	DUPLEX stainless steel	> 800 N/mm <sup>2</sup>	<b>35</b>	60	<b>45</b>	75
<b>K</b>	Grey cast iron / Nodular pearlitic iron	< 250 HB	<b>100</b>	200	<b>150</b>	250
<b>K</b>	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	<b>100</b>	140	<b>120</b>	160
<b>K</b>	Nodular ferritic cast iron / Malleable cast iron		<b>70</b>	110	<b>80</b>	140
<b>S</b>	Special alloys / Heat resistant stainless steel	Inconel Nimonic Hastelloy	<b>20</b>	45	<b>30</b>	60
<b>S</b>	Titanium, titanium alloys		<b>40</b>	65	<b>40</b>	65
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>100</b>	200	<b>100</b>	200
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	<b>80</b>	150	<b>80</b>	150
<b>N</b>	Aluminium alloys	Si < 8%	<b>100</b>	250	<b>100</b>	250
<b>N</b>	Cast aluminium	Si > 8%	<b>100</b>	200	<b>100</b>	200
<b>N</b>	Graphite		<b>100</b>	200	<b>100</b>	200
<b>N</b>	Plastic		<b>100</b>	250	<b>100</b>	250
<b>N</b>	Gold, silver		<b>100</b>	200	<b>100</b>	200



$$n \text{ [tr/min]} = \frac{V_c \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$V_f \text{ [mm/min]} = n \text{ [tr/min]} \times f_z \text{ [mm]} \times z$$

Feed per tooth **fz [mm]**

$\emptyset D_1$ 0.60 - 1.00	$\emptyset D_1$ 1.00 - 1.50	$\emptyset D_1$ 1.50 - 2.00	$\emptyset D_1$ 2.00 - 3.00	$\emptyset D_1$ 3.00 - 5.00	$\emptyset D_1$ 5.00 - 9.00
0.008 - 0.015	0.010 - 0.025	0.015 - 0.030	0.020 - 0.050	0.030 - 0.070	
0.005 - 0.012	0.008 - 0.020	0.013 - 0.025	0.020 - 0.045	0.025 - 0.060	
0.012 - 0.030	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.035 - 0.080	
0.002 - 0.011	0.008 - 0.015	0.012 - 0.023	0.015 - 0.038	0.023 - 0.060	
0.003 - 0.016	0.011 - 0.023	0.018 - 0.034	0.023 - 0.056	0.034 - 0.090	
0.002 - 0.009	0.007 - 0.014	0.011 - 0.020	0.014 - 0.034	0.020 - 0.054	
0.012 - 0.030	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.005 - 0.012	0.008 - 0.020	0.013 - 0.025	0.020 - 0.045	0.025 - 0.060	
0.005 - 0.012	0.008 - 0.020	0.013 - 0.025	0.020 - 0.045	0.025 - 0.060	
0.001 - 0.007	0.005 - 0.010	0.008 - 0.015	0.010 - 0.025	0.015 - 0.040	
0.008 - 0.015	0.010 - 0.020	0.015 - 0.040	0.030 - 0.060	0.040 - 0.080	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.050	0.030 - 0.070	0.050 - 0.100	
0.012 - 0.030	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	
0.015 - 0.035	0.020 - 0.040	0.025 - 0.055	0.030 - 0.070	0.050 - 0.100	





CUTTING CONDITIONS

Materials to be machined

Materials to be machined		DAC	Vc [m/min]
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>200</b>
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze (CuAlFe) (Ampco)		<b>150</b>
<b>N</b>	Aluminium alloys Si < 8%		<b>250</b>
<b>N</b>	Cast aluminium Si > 8%		<b>200</b>
<b>N</b>	Graphite		<b>200</b>
<b>N</b>	Plastic		<b>250</b>
<b>N</b>	Gold, silver		<b>200</b>

CUTTING CONDITIONS

Materials to be machined

Materials to be machined		CUTINOX	Vc [m/min]
<b>P</b>	Unalloyed steel / Low alloyed steel < 600 N/mm <sup>2</sup>		<b>150</b>
<b>P</b>	Unalloyed steel / Low alloyed steel 600 – 1500 N/mm <sup>2</sup>		<b>120</b>
<b>P</b>	Lead alloyed cutting steel		<b>160</b>
<b>P</b>	High alloyed steel 700 – 1500 N/mm <sup>2</sup>		<b>70</b>
<b>M</b>	Stainless steel 400 – 700 N/mm <sup>2</sup>		<b>90</b>
<b>M</b>	DUPLEX stainless steel > 800 N/mm <sup>2</sup>		<b>60</b>
<b>K</b>	Grey cast iron / Nodular pearlitic iron < 250 HB		<b>200</b>
<b>K</b>	Alloyed cast iron / Nodular pearlitic iron > 250 HB		<b>130</b>
<b>K</b>	Nodular ferritic cast iron / Malleable cast iron		<b>110</b>
<b>S</b>	Special alloys / Heat resistant stainless steel Inconel Nimonic Hastelloy		<b>50</b>
<b>S</b>	Titanium, titanium alloys		<b>60</b>



$$n \text{ [tr/min]} = \frac{V_c \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

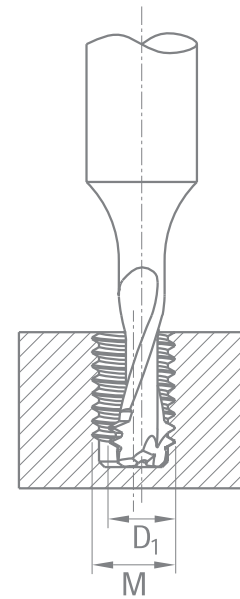
$$V_f \text{ [mm/min]} = n \text{ [tr/min]} \times f_z \text{ [mm]} \times z$$

Feed at tool centre

$V_f$  [mm/min]

M5	M6	M8	M10
1000	1000	1000	1000
1000	1000	1000	1000
1000	1000	1000	1000
1000	1000	1000	1000
1000	1000	1000	1000
1000	1000	1000	1000
1000	1000	1000	1000

$$V_f \text{ tool centre} = V_f \times \left(1 - \frac{M}{D_1}\right)$$



Feed at tool centre

$V_f$  [mm/min]

M5	M6	M8	M10
800	600	500	500
600	500	350	350
1200	1000	800	800
450	400	250	250
500	450	350	350
400	300	200	200
1000	800	500	500
600	500	350	350
550	450	300	300
250	200	150	150
300	250	200	200



CUTTING CONDITIONS

Materials to be machined			CARBIDE		TiALN	
			Vc [m/min]		Vc [m/min]	
<b>P</b>	Unalloyed steel / Low alloyed steel	< 600 N/mm <sup>2</sup>	<b>70</b>	100	<b>90</b>	110
<b>P</b>	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm <sup>2</sup>			<b>70</b>	90
<b>P</b>	Lead alloyed cutting steel		<b>70</b>	100	<b>90</b>	110
<b>P</b>	High alloyed steel	700 – 1500 N/mm <sup>2</sup>			<b>40</b>	55
<b>M</b>	Stainless steel	400 – 700 N/mm <sup>2</sup>	<b>40</b>	60	<b>70</b>	90
<b>M</b>	DUPLEX stainless steel	> 800 N/mm <sup>2</sup>			<b>40</b>	55
<b>K</b>	Grey cast iron / Nodular pearlitic iron	< 250 HB	<b>70</b>	100	<b>90</b>	110
<b>K</b>	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	<b>40</b>	70	<b>70</b>	90
<b>K</b>	Nodular ferritic cast iron / Malleable cast iron		<b>70</b>	100	<b>90</b>	110
<b>S</b>	Titanium, titanium alloys		<b>30</b>	45	<b>40</b>	60
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>140</b>	160	<b>200</b>	220
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	<b>120</b>	140	<b>170</b>	190
<b>N</b>	Aluminium alloys	Si < 8%	<b>180</b>	260	<b>230</b>	340
<b>N</b>	Cast aluminium	Si > 8%	<b>140</b>	160	<b>210</b>	230
<b>N</b>	Plastic		<b>240</b>	260	<b>300</b>	340
<b>N</b>	Gold, silver		<b>140</b>	160	<b>200</b>	220



$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times fz \text{ [mm]} \times z$$

Feed per tooth **fz [mm]**

$\emptyset D_1$ 0.90 - 1.50	$\emptyset D_1$ 1.50 - 2.00	$\emptyset D_1$ 2.00 - 2.50	$\emptyset D_1$ 2.50 - 3.00	$\emptyset D_1$ 3.00 - 4.00	$\emptyset D_1$ 4.00 - 6.00	$\emptyset D_1$ 6.00 - 8.00	$\emptyset D_1$ 8.00 - 10.00	$\emptyset D_1$ 10.00 - 12.00	$\emptyset D_1$ 12.00 - 16.00
		<b>0.008</b> - 0.02	<b>0.010</b> - 0.02	<b>0.012</b> - 0.03	<b>0.016</b> - 0.04	<b>0.024</b> - 0.06	<b>0.03</b> - 0.07	<b>0.04</b> - 0.08	<b>0.05</b> - 0.11
		<b>0.006</b> - 0.01	<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
<b>0.005</b> - 0.015	<b>0.008</b> - 0.020	<b>0.010</b> - 0.03	<b>0.013</b> - 0.03	<b>0.015</b> - 0.04	<b>0.020</b> - 0.06	<b>0.030</b> - 0.08	<b>0.04</b> - 0.10	<b>0.05</b> - 0.12	<b>0.06</b> - 0.16
			<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
		<b>0.006</b> - 0.01	<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
			<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
		<b>0.008</b> - 0.02	<b>0.010</b> - 0.02	<b>0.012</b> - 0.03	<b>0.016</b> - 0.04	<b>0.024</b> - 0.06	<b>0.03</b> - 0.07	<b>0.04</b> - 0.08	<b>0.05</b> - 0.11
			<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
	<b>0.006</b> - 0.014	<b>0.008</b> - 0.02	<b>0.010</b> - 0.02	<b>0.012</b> - 0.03	<b>0.016</b> - 0.04	<b>0.024</b> - 0.06	<b>0.03</b> - 0.07	<b>0.04</b> - 0.08	<b>0.05</b> - 0.11
		<b>0.006</b> - 0.01	<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
<b>0.005</b> - 0.015	<b>0.008</b> - 0.020	<b>0.010</b> - 0.03	<b>0.013</b> - 0.03	<b>0.015</b> - 0.04	<b>0.020</b> - 0.06	<b>0.030</b> - 0.08	<b>0.04</b> - 0.10	<b>0.05</b> - 0.12	<b>0.06</b> - 0.16
<b>0.003</b> - 0.008	<b>0.005</b> - 0.010	<b>0.006</b> - 0.01	<b>0.008</b> - 0.01	<b>0.009</b> - 0.02	<b>0.012</b> - 0.03	<b>0.018</b> - 0.04	<b>0.02</b> - 0.05	<b>0.03</b> - 0.06	<b>0.04</b> - 0.08
<b>0.005</b> - 0.015	<b>0.008</b> - 0.020	<b>0.010</b> - 0.03	<b>0.013</b> - 0.03	<b>0.015</b> - 0.04	<b>0.020</b> - 0.06	<b>0.030</b> - 0.08	<b>0.04</b> - 0.10	<b>0.05</b> - 0.12	<b>0.06</b> - 0.16
<b>0.005</b> - 0.015	<b>0.008</b> - 0.020	<b>0.010</b> - 0.03	<b>0.013</b> - 0.03	<b>0.015</b> - 0.04	<b>0.020</b> - 0.06	<b>0.030</b> - 0.08	<b>0.04</b> - 0.10	<b>0.05</b> - 0.12	<b>0.06</b> - 0.16
<b>0.006</b> - 0.023	<b>0.011</b> - 0.030	<b>0.014</b> - 0.04	<b>0.018</b> - 0.04	<b>0.021</b> - 0.06	<b>0.028</b> - 0.09	<b>0.042</b> - 0.12	<b>0.06</b> - 0.15	<b>0.07</b> - 0.18	<b>0.08</b> - 0.24
<b>0.005</b> - 0.015	<b>0.008</b> - 0.020	<b>0.010</b> - 0.03	<b>0.013</b> - 0.03	<b>0.015</b> - 0.04	<b>0.020</b> - 0.06	<b>0.030</b> - 0.08	<b>0.04</b> - 0.10	<b>0.05</b> - 0.12	<b>0.06</b> - 0.16



CUTTING CONDITIONS

Materials to be machined			CARBIDE		TiALN	
			Vc [m/min]		Vc [m/min]	
<b>P</b>	Unalloyed steel / Low alloyed steel	< 600 N/mm <sup>2</sup>	<b>70</b>	100	<b>90</b>	110
<b>P</b>	Unalloyed steel / Low alloyed steel	600 – 1500 N/mm <sup>2</sup>	<b>40</b>	60	<b>70</b>	90
<b>P</b>	Lead alloyed cutting steel		<b>70</b>	100	<b>90</b>	110
<b>P</b>	High alloyed steel	700 – 1500 N/mm <sup>2</sup>	<b>40</b>	60	<b>70</b>	90
<b>M</b>	Stainless steel	400 – 700 N/mm <sup>2</sup>	<b>30</b>	45	<b>40</b>	55
<b>M</b>	DUPLEX stainless steel	> 800 N/mm <sup>2</sup>	<b>40</b>	60	<b>70</b>	90
<b>K</b>	Grey cast iron / Nodular pearlitic iron	< 250 HB	<b>70</b>	100	<b>90</b>	110
<b>K</b>	Alloyed cast iron / Nodular pearlitic iron	> 250 HB	<b>40</b>	70	<b>70</b>	90
<b>K</b>	Nodular ferritic cast iron / Malleable cast iron		<b>70</b>	100	<b>90</b>	110
<b>S</b>	Titanium, titanium alloys		<b>30</b>	45	<b>40</b>	60
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>140</b>	160	<b>200</b>	220
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	<b>120</b>	140	<b>170</b>	190
<b>N</b>	Aluminium alloys	Si < 8%	<b>180</b>	260	<b>230</b>	270
<b>N</b>	Cast aluminium	Si > 8%	<b>140</b>	160	<b>210</b>	230
<b>N</b>	Plastic		<b>240</b>	260	<b>300</b>	340
<b>N</b>	Gold, silver		<b>140</b>	160	<b>200</b>	220



$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times fz \text{ [mm]} \times z$$

Feed per tooth **fz [mm]**

$\emptyset D_1$ 0.90 - 1.50	$\emptyset D_1$ 1.50 - 2.00	$\emptyset D_1$ 2.00 - 2.50	$\emptyset D_1$ 2.50 - 3.00	$\emptyset D_1$ 3.00 - 4.00	$\emptyset D_1$ 4.00 - 6.00	$\emptyset D_1$ 6.00 - 8.00	$\emptyset D_1$ 8.00 - 10.00	$\emptyset D_1$ 10.00 - 12.00	$\emptyset D_1$ 12.00 - 16.00
0.005 - 0.012	0.009 - 0.016	0.012 - 0.02	0.015 - 0.02	0.018 - 0.03	0.024 - 0.05	0.036 - 0.06	0.05 - 0.08	0.06 - 0.10	0.07 - 0.13
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.006 - 0.018	0.011 - 0.024	0.014 - 0.03	0.018 - 0.03	0.021 - 0.05	0.028 - 0.07	0.042 - 0.10	0.06 - 0.12	0.07 - 0.14	0.08 - 0.19
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.005 - 0.012	0.009 - 0.016	0.012 - 0.02	0.015 - 0.02	0.018 - 0.03	0.024 - 0.05	0.036 - 0.06	0.05 - 0.08	0.06 - 0.10	0.07 - 0.13
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.005 - 0.012	0.009 - 0.016	0.012 - 0.02	0.015 - 0.02	0.018 - 0.03	0.024 - 0.05	0.036 - 0.06	0.05 - 0.08	0.06 - 0.10	0.07 - 0.13
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.006 - 0.018	0.011 - 0.024	0.014 - 0.03	0.018 - 0.03	0.021 - 0.05	0.028 - 0.07	0.042 - 0.10	0.06 - 0.12	0.07 - 0.14	0.08 - 0.19
0.004 - 0.009	0.006 - 0.012	0.008 - 0.02	0.010 - 0.02	0.012 - 0.02	0.016 - 0.04	0.024 - 0.05	0.03 - 0.06	0.04 - 0.07	0.05 - 0.10
0.006 - 0.018	0.011 - 0.024	0.014 - 0.03	0.018 - 0.03	0.021 - 0.05	0.028 - 0.07	0.042 - 0.10	0.06 - 0.12	0.07 - 0.14	0.08 - 0.19
0.006 - 0.018	0.011 - 0.024	0.014 - 0.03	0.018 - 0.03	0.021 - 0.05	0.028 - 0.07	0.042 - 0.10	0.06 - 0.12	0.07 - 0.14	0.08 - 0.19
0.007 - 0.027	0.012 - 0.036	0.016 - 0.05	0.020 - 0.05	0.024 - 0.07	0.032 - 0.11	0.048 - 0.14	0.06 - 0.18	0.08 - 0.22	0.10 - 0.29
0.006 - 0.018	0.011 - 0.024	0.014 - 0.03	0.018 - 0.03	0.021 - 0.05	0.028 - 0.07	0.042 - 0.10	0.06 - 0.12	0.07 - 0.14	0.08 - 0.19



CUTTING CONDITIONS

Materials to be machined

			CARBIDE		CUTINOX	
			Vc [m/min]		Vc [m/min]	
<b>K</b>	Grey cast iron / Nodular pearlitic iron	< 250 HB	<b>80</b>	140	<b>100</b>	200
<b>N</b>	Copper alloys - easy to machine (brass - bronze)		<b>100</b>	250	<b>150</b>	350
<b>N</b>	Copper alloys - difficult to machine / Aluminium bronze	(CuAlFe) (Ampco)	<b>100</b>	250	<b>150</b>	350
<b>N</b>	Aluminium alloys	Si < 8%	<b>100</b>	200	<b>150</b>	350
<b>N</b>	Cast aluminium	Si > 8%			<b>150</b>	350



$$n \text{ [tr/min]} = \frac{Vc \text{ [m/min]} \times 1000}{\pi \times D_1 \text{ [mm]}}$$

### DRILLING

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times f \text{ [mm]}$$

Feed per tooth (f)

$\emptyset D_1$ 3.00 - 700	$\emptyset D_1$ 7.00 - 14.00
<b>0.08</b> - 0.24	<b>0.18</b> - 0.40
<b>0.08</b> - 0.18	<b>0.14</b> - 0.30
<b>0.14</b> - 0.28	<b>0.18</b> - 0.40
<b>0.14</b> - 0.28	<b>0.18</b> - 0.40
<b>0.14</b> - 0.28	<b>0.18</b> - 0.40

### THREADING

$$Vf \text{ [mm/min]} = n \text{ [tr/min]} \times fz \text{ [mm]} \times z$$

Feed per tooth (fz)

$\emptyset D_1$ 3.00 - 700	$\emptyset D_1$ 7.00 - 14.00
<b>0.03</b> - 0.07	<b>0.05</b> - 0.12
<b>0.04</b> - 0.07	<b>0.06</b> - 0.15
<b>0.04</b> - 0.07	<b>0.05</b> - 0.15
<b>0.03</b> - 0.07	<b>0.06</b> - 0.15
<b>0.03</b> - 0.07	<b>0.06</b> - 0.15

