

A - TURNING

B - THREADING

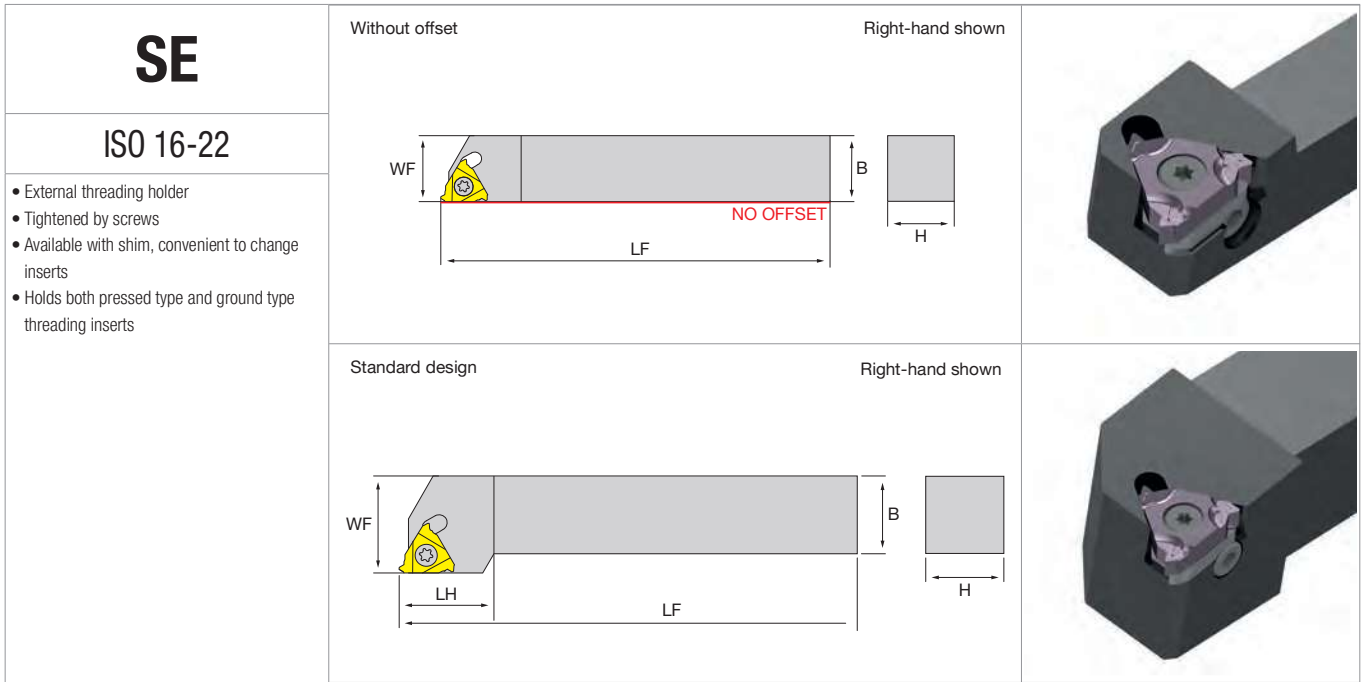
C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

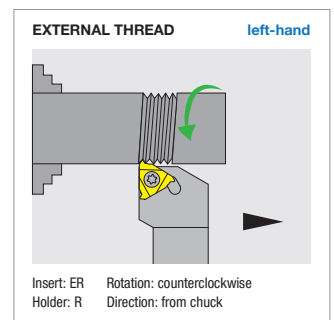
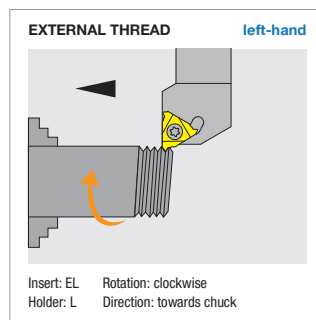
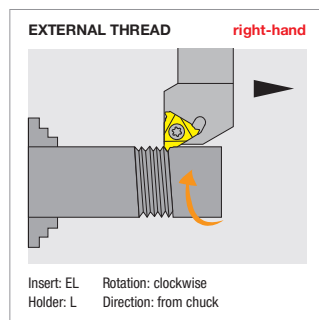
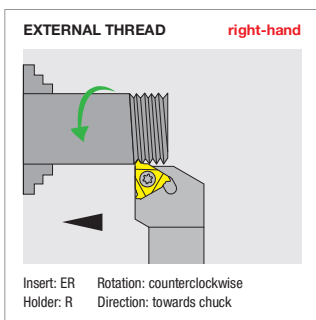
G - SPARE PARTS



Designation	Stock		H	B	WF	LF	LH				MIID
	L	R									
<b>WITHOUT OFFSET</b>											
NT-SE <sup>1/8</sup> 1212H16N	○	○	12	12	12	100	-				16EL/R <sup>000</sup>
NT-SE <sup>1/8</sup> 1616H16N	○	○	16	16	16	100	-				16EL/R <sup>000</sup>
<b>STANDARD DESIGN</b>											
NT-SE <sup>1/8</sup> 1616H16	●	●	16	16	20	100	22				16EL/R <sup>000</sup>
NT-SE <sup>1/8</sup> 2020K16	●	●	20	20	25	125	25				16EL/R <sup>000</sup>
NT-SE <sup>1/8</sup> 2525M16	●	●	25	25	32	150	25				16EL/R <sup>000</sup>
NT-SE <sup>1/8</sup> 2525M22		●	25	25	32	150	29				22ER <sup>000</sup>
NT-SE <sup>1/8</sup> 3232M22		●	32	32	40	170	32				22ER <sup>000</sup>

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Shim	Shim	Locking screws	L wrench	Insert screws	Flag wrenches
NT-SEL <sup>000000</sup> 16 <sup>0</sup>	NT-SH065	-	NT-SC003	NT-WR025	NT-ST35115T15	NT-FT15
NT-SER <sup>000000</sup> 16 <sup>0</sup>	-	NT-SH060	NT-SC003	NT-WR025	NT-ST35115T15	NT-FT15
NT-SER <sup>000000</sup> 22 <sup>0</sup>	-	NT-SH066	NT-SC004	NT-WR030	NT-ST40140T15	NT-FT15



**M - External ISO-metric threads**

TP	6.00	5.50	5.00	4.50	4.00	3.50	3.00	2.50	2.00	1.75	1.50	1.25	1.00	0.80	0.75	0.70	0.50	
NO. OF INFEEDS	RADIAL INFEED PER PASS																	
1	0.46	0.43	0.41	0.37	0.34	0.34	0.28	0.27	0.24	0.22	0.22	0.21	0.18	0.17	0.16	0.14	0.11	
2	0.43	0.40	0.39	0.34	0.32	0.31	0.26	0.24	0.22	0.20	0.17	0.16	0.15	0.14	0.12	0.10	0.09	
3	0.35	0.32	0.32	0.28	0.25	0.25	0.21	0.20	0.18	0.17	0.17	0.14	0.12	0.12	0.11	0.10	0.07	
4	0.30	0.28	0.27	0.24	0.22	0.21	0.18	0.17	0.16	0.14	0.14	0.11	0.11	0.08	0.07	0.07	0.06	
5	0.29	0.26	0.24	0.22	0.20	0.18	0.16	0.15	0.14	0.12	0.12	0.10	0.08	-	-	-	-	
6	0.26	0.24	0.24	0.22	0.18	0.18	0.15	0.15	0.12	0.10	0.08	0.08	-	-	-	-	-	
7	0.24	0.21	0.22	0.20	0.17	0.16	0.14	0.12	0.11	0.10	-	-	-	-	-	-	-	
8	0.23	0.20	0.20	0.18	0.15	0.15	0.13	0.11	0.08	0.08	-	-	-	-	-	-	-	
9	0.22	0.19	0.19	0.17	0.14	0.14	0.12	0.11	-	-	-	-	-	-	-	-	-	
10	0.19	0.18	0.18	0.16	0.13	0.12	0.11	0.08	-	-	-	-	-	-	-	-	-	
11	0.18	0.17	0.16	0.14	0.12	0.11	0.10	-	-	-	-	-	-	-	-	-	-	
12	0.16	0.15	0.15	0.13	0.12	0.08	0.08	-	-	-	-	-	-	-	-	-	-	
13	0.15	0.14	0.12	0.12	0.11	-	-	-	-	-	-	-	-	-	-	-	-	
14	0.13	0.13	0.10	0.10	0.08	-	-	-	-	-	-	-	-	-	-	-	-	
15	0.13	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>TOTAL INFEED</b>	3.82	3.52	3.19	2.87	2.53	2.23	1.92	1.60	1.25	1.13	0.93	0.81	0.65	0.52	0.48	0.43	0.33	

green background are standard items all other sizes can make specials

**W - External Whitworth threads**

TP	4	4.5	5	6	7	8	9	10	11	12	14	16	18	19	20	26	28	
NO. OF INFEEDS	RADIAL INFEED PER PASS																	
1	0.49	0.46	0.45	0.38	0.37	0.32	0.30	0.29	0.28	0.28	0.24	0.24	0.23	0.22	0.21	0.19	0.18	
2	0.46	0.43	0.43	0.36	0.35	0.30	0.28	0.27	0.26	0.26	0.22	0.22	0.22	0.22	0.21	0.18	0.17	
3	0.38	0.38	0.38	0.30	0.29	0.24	0.23	0.22	0.22	0.22	0.18	0.19	0.19	0.18	0.17	0.15	0.14	
4	0.36	0.33	0.32	0.26	0.25	0.21	0.20	0.19	0.19	0.18	0.15	0.16	0.16	0.14	0.14	0.12	0.12	
5	0.34	0.29	0.28	0.22	0.22	0.19	0.18	0.17	0.16	0.16	0.13	0.13	0.13	0.12	0.11	0.08	0.08	
6	0.31	0.25	0.25	0.21	0.19	0.17	0.15	0.15	0.14	0.14	0.11	0.11	0.08	0.08	0.08	-	-	
7	0.29	0.24	0.22	0.19	0.18	0.15	0.14	0.14	0.13	0.13	0.09	0.08	-	-	-	-	-	
8	0.27	0.22	0.20	0.17	0.16	0.14	0.13	0.13	0.12	0.08	0.08	-	-	-	-	-	-	
9	0.24	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.08	-	-	-	-	-	-	-	-	
10	0.22	0.18	0.18	0.15	0.14	0.12	0.12	0.08	-	-	-	-	-	-	-	-	-	
11	0.20	0.17	0.17	0.14	0.12	0.12	0.08	-	-	-	-	-	-	-	-	-	-	
12	0.19	0.16	0.15	0.14	0.08	0.08	-	-	-	-	-	-	-	-	-	-	-	
13	0.17	0.15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	0.15	0.14	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>TOTAL INFEED</b>	4.29	3.82	3.44	2.90	2.50	2.17	1.93	1.76	1.58	1.45	1.20	1.13	1.01	0.96	0.92	0.72	0.69	

green background are standard items all other sizes can make specials

- A - TURNING
- B - THREADING
- C - GROOVING
- D - MILLING
- E - DRILLING
- F - ACCESSORIES
- G - SPARE PARTS

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

**UN - External UN threads**

TP	4	4.5	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
<b>NO. OF INFEEDES</b>	<b>RADIAL INFEEDE PER PASS</b>																	
1	0.47	0.45	0.43	0.36	0.35	0.30	0.28	0.27	0.27	0.27	0.25	0.23	0.22	0.23	0.20	0.19	0.17	0.17
2	0.44	0.41	0.40	0.34	0.33	0.28	0.26	0.26	0.25	0.26	0.24	0.22	0.21	0.21	0.19	0.17	0.15	0.15
3	0.40	0.39	0.36	0.27	0.26	0.25	0.21	0.20	0.20	0.20	0.18	0.17	0.16	0.16	0.15	0.14	0.11	0.13
4	0.36	0.31	0.31	0.23	0.22	0.21	0.20	0.17	0.19	0.18	0.17	0.15	0.14	0.14	0.12	0.12	0.09	0.08
5	0.32	0.26	0.26	0.22	0.21	0.18	0.17	0.16	0.16	0.15	0.14	0.13	0.13	0.12	0.10	0.08	0.08	-
6	0.27	0.23	0.23	0.20	0.19	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.11	0.08	0.08	-	-	-
7	0.25	0.21	0.20	0.18	0.17	0.14	0.14	0.14	0.12	0.12	0.11	0.10	0.08	-	-	-	-	-
8	0.23	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.11	0.08	0.08	0.08	-	-	-	-	-	-
9	0.22	0.18	0.19	0.15	0.14	0.12	0.12	0.11	0.08	-	-	-	-	-	-	-	-	-
10	0.21	0.17	0.18	0.14	0.12	0.12	0.11	0.08	-	-	-	-	-	-	-	-	-	-
11	0.19	0.16	0.17	0.13	0.11	0.11	0.08	-	-	-	-	-	-	-	-	-	-	-
12	0.18	0.15	0.15	0.12	0.08	0.08	-	-	-	-	-	-	-	-	-	-	-	-
13	0.16	0.14	0.12	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	0.15	0.14	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL INFEEDE</b>	4.07	3.62	3.29	2.71	2.33	2.08	1.84	1.66	1.52	1.39	1.29	1.19	1.05	0.94	0.84	0.70	0.60	0.53

green background are standard items all other sizes can make specials

**NPT - External NPT threads**

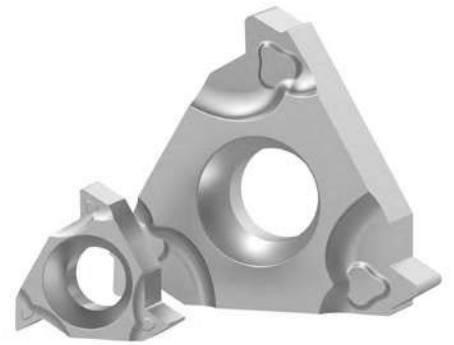
TP	8	11.5	14	18	27
<b>NO. OF INFEEDES</b>	<b>RADIAL INFEEDE PER PASS</b>				
1	0.28	0.25	0.24	0.22	0.19
2	0.25	0.22	0.22	0.18	0.15
3	0.22	0.18	0.17	0.15	0.13
4	0.19	0.16	0.15	0.14	0.11
5	0.18	0.16	0.14	0.13	0.09
6	0.18	0.14	0.13	0.12	0.08
7	0.17	0.14	0.12	0.10	-
8	0.17	0.12	0.10	0.08	-
9	0.16	0.12	0.10	-	-
10	0.16	0.10	0.08	-	-
11	0.14	0.09	-	-	-
12	0.13	0.08	-	-	-
13	0.12	-	-	-	-
14	0.11	-	-	-	-
15	0.08	-	-	-	-
<b>TOTAL INFEEDE</b>	2.54	1.76	1.45	1.12	0.75

green background are standard items all other sizes can make specials

**BSPT - British tapered pipe threads**

TP	11	14	19	28
<b>NO. OF INFEEDES</b>	<b>RADIAL INFEEDE PER PASS</b>			
1	0.25	0.24	0.22	0.17
2	0.23	0.20	0.19	0.14
3	0.21	0.17	0.15	0.11
4	0.18	0.14	0.12	0.10
5	0.16	0.12	0.12	0.06
6	0.14	0.12	0.06	-
7	0.13	0.11	-	-
8	0.12	0.06	-	-
9	0.06	-	-	-
<b>TOTAL INFEEDE</b>	1.58	1.20	0.86	0.58

green background are standard items all other sizes can make specials



## THREADING Internal threads

Inserts Micro .B14

Holders Micro .B15

Inserts ISO 11 - 16 - 22 .B16

Holders ISO 11 - 16 - 22 .B21

Table "Number of passes" .B23

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

<h1>Internal</h1>	HF: Micrograin carbide PVD: Physical vapour deposition		HF PVD
	<h2>Micro 07</h2>		<b>JP5125</b>
<ul style="list-style-type: none"> <li><b>M</b>: metric threads</li> <li><b>W</b>: parallel pipe threads (whitworth)</li> <li><b>UN</b>: unified inch threads</li> <li><b>NPT</b>: American national tapered pipe threads</li> <li><b>BSPT</b>: tapered pipe threads</li> <li>Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut	● 1 <sup>st</sup> choice ○ suitable	○
	General machining, medium cut	● 1 <sup>st</sup> choice ○ suitable	●
	Unstable machining, heavy cut	● 1 <sup>st</sup> choice ○ suitable	●
	<b>Dimensions</b>		<b>ISO</b>
		<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>	
		<b>P</b>	70 180
		<b>M</b>	50 140
		<b>K</b>	60 180
		<b>N</b>	
		<b>S</b>	
		<b>H</b>	

Designation		RE	TP	PDX	PDY	IC	Stock
PARTIAL PROFILE 60° <b>P M K</b>		0.08	-	0.7	0.6	4.762	●
	07IRA60-TPM						
PARTIAL PROFILE 55° <b>P M K</b>		0.08	-	0.7	0.6	4.762	●
	07IRA55-TPG						

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

**PARTIAL PROFILE**

- Partial profile insert works without cuts the outer diameter of the thread.
- The same insert can be used for a broad range of different thread pitches.
- Can produce burr that must be taken away.

**PARTIAL PROFILE 07IR PITCH RANGES**

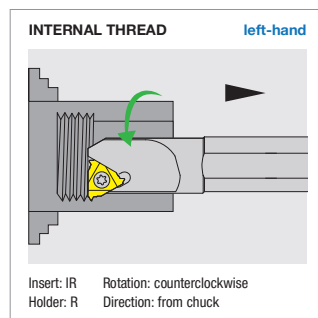
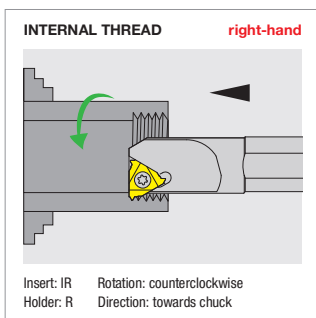
	M	UN
A60	0.50÷1.50	48÷16
BSW-BSF-BSP		
A55	48÷16	

<h1>V SI</h1>		
<h2>Micro 07</h2>		
<ul style="list-style-type: none"> <li>• Internal threading holder</li> <li>• Vortex boring bar (High standard steel)</li> <li>• Special chip evacuation path</li> <li>• With coolant through</li> </ul>		

Designation	Stock		DMIN	DCON	WF	LF	LH	GAMO				MIID
	L	R										
<b>NT-V10H-SI/07-08</b>		●	8	10	4	100	20	21°				07IR <sup>∞</sup>

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Insert screws	Flag wrenches
	<b>NT-V10H-SIR07-08</b>	 NT-ST22049T07



A - TURNING

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D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

<h1>Internal</h1>	HF: Micrograin carbide BL: Low volume CBN DP: Polycrystalline diamond PVD: Physical vapour deposition				HF PVD	HF PVD	BL PVD	DP	
	<h2>ISO 11-16-22</h2>					<b>JP5120</b>	<b>JP5125</b>	<b>NBL350C</b>	<b>ND050</b>
<ul style="list-style-type: none"> <li><b>M</b>: metric threads</li> <li><b>W</b>: parallel pipe threads (whitworth)</li> <li><b>UN</b>: unified inch threads</li> <li><b>NPT</b>: American national tapered pipe threads</li> <li><b>BSPT</b>: tapered pipe threads</li> <li>Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut ● 1 <sup>st</sup> choice ○ suitable	General machining, medium cut ● 1 <sup>st</sup> choice ○ suitable	Unstable machining, heavy cut ▲ 1 <sup>st</sup> choice ▼ suitable						
	<b>Dimensions</b>				<b>ISO</b>				
	<p>TP: thread pitch</p> <p>S D1 11  3.18 3.20 16  3.65 4.00 22  4.71 5.00</p>				<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>				
					<b>P</b>	90 200	70 180		
<b>M</b>	60 150	50 140							
<b>K</b>	90 190	60 180							
<b>N</b>					400 1600				
<b>S</b>					50 100				
<b>H</b>				60 140					

FULL PROFILE	Designation	RE	TP	PDX	PDY	IC	Stock			
							●	○	▲	▼
<p><b>TPM pressed type</b> chip control oriented</p>	11IR100ISO-TPM	0.07	1	0.7	0.8	6.35	●			
	11IR125ISO-TPM	0.09	1.25	0.9	0.8	6.35	●			
	11IR150ISO-TPM	0.11	1.5	1	0.8	6.35	●			
	11IR175ISO-TPM	0.13	1.75	1.1	0.9	6.35	●			
	11IR200ISO-TPM	0.15	2	1.1	0.9	6.35	●			
	16IR100ISO-TPM	0.07	1	0.7	0.8	9.525	● ●			
	16IR125ISO-TPM	0.09	1.25	0.9	0.8	9.525	● ●			
	16IR150ISO-TPM	0.11	1.5	1	0.8	9.525	● ●			
	16IR175ISO-TPM	0.13	1.75	1.2	1.2	9.525	● ●			
	16IR200ISO-TPM	0.15	2	1.3	1.2	9.525	● ●			
	16IR250ISO-TPM	0.18	2.5	1.5	1.2	9.525	● ●			
	16IR300ISO-TPM	0.22	3	1.5	1.2	9.525	● ●			
	22IR350ISO-TPM	0.22	3.5	2.3	1.6	12.7	●			
	22IR400ISO-TPM	0.25	4	2.3	1.6	12.7	●			
	22IR450ISO-TPM	0.28	4.5	2.4	1.6	12.7	●			
	22IR500ISO-TPM	0.32	5	2.3	1.6	12.7	●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▼ stock exhaustion

**FULL PROFILE**



- Full profile insert will form a complete thread profile including the crest.
- The distance between root and crest is controlled.
- The insert can produce only one pitch.
- Higher tool pressure compared to partial profile.

**PRESSED VS GROUND**

**TPM pressed**

- Improves the chip control
- Strongly recommended in internal application especially for difficult materials
- Best cost-performance ratio

**Precision ground**

- Achieves the higher precision
- A sharper cutting edge can guarantee very smooth cutting action
- Every kind of thread's standard can be easily produced using the same blank

<h1>Internal</h1>	HF: Micrograin carbide BL: Low volume CBN DP: Polycrystalline diamond PVD: Physical vapour deposition				HF	HF	BL	DP				
	ISO 11-16-22				PVD	PVD	PVD					
<ul style="list-style-type: none"> <li><b>M</b>: metric threads</li> <li><b>W</b>: parallel pipe threads (whitworth)</li> <li><b>UN</b>: unified inch threads</li> <li><b>NPT</b>: American national tapered pipe threads</li> <li><b>BSPT</b>: tapered pipe threads</li> <li>Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut ● 1 <sup>st</sup> choice ○ suitable General machining, medium cut ● 1 <sup>st</sup> choice ○ suitable Unstable machining, heavy cut ⚡ 1 <sup>st</sup> choice ○ suitable	<b>Dimensions</b>		<b>ISO</b>				<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>				
			TP: thread pitch S D1 11I 3.18 3.20 16I 3.65 4.00 22I 4.71 5.00		<b>P</b> 90 70 200 180							
					<b>M</b> 60 50 150 140							
				<b>K</b> 90 60 190 180								
				<b>N</b>				400 1600				
				<b>S</b>				50 100				
				<b>H</b>		60 140						

FULL PROFILE	Designation	RE	TP	PDX	PDY	IC	Stock				
							●	○	▲	▽	
<p>precision ground sharpness oriented</p>	11IR050ISO	0.036	0.5	0.6	0.6	6.35	●				
	11IR075ISO	0.05	0.75	0.6	0.6	6.35	●				
	11IR100ISO	0.072	1	0.7	0.6	6.35	●				
	11IR125ISO	0.09	1.25	0.9	0.8	6.35	●				
	11IR150ISO	0.11	1.5	1	0.8	6.35	●				
	11IR175ISO	0.13	1.75	1.1	0.9	6.35	●				
	11IR200ISO	0.15	2	1.3	1	6.35	●				
	16IR100ISO	0.072	1	0.7	0.6	9.525	●				
	16IR125ISO	0.09	1.25	0.9	0.8	9.525	●				
	16IR150ISO	0.11	1.5	1	0.8	9.525	●				
	16IR175ISO	0.13	1.75	1.2	0.9	9.525	●				
	16IR200ISO	0.14	2	1.3	1	9.525	●				
	16IR250ISO	0.18	2.5	1.5	1.1	9.525	●				
	16IR300ISO	0.22	3	1.5	1.1	9.525	●				
	<p>precision ground left-hand</p>	11IL050ISO	0.036	0.5	0.6	0.6	6.35	●			
		11IL075ISO	0.05	0.75	0.6	0.6	6.35	●			
11IL100ISO		0.072	1	0.7	0.6	6.35	●				
11IL125ISO		0.09	1.25	0.9	0.8	6.35	●				
11IL150ISO		0.11	1.5	1	0.8	6.35	●				
11IL175ISO		0.13	1.75	1.1	0.9	6.35	●				
11IL200ISO		0.14	2	1.3	1	6.35	●				
16IL100ISO		0.072	1	0.7	0.6	9.525	●				
16IL125ISO		0.09	1.25	0.9	0.8	9.525	●				
16IL150ISO		0.11	1.5	1	0.8	9.525	●				
16IL175ISO		0.13	1.75	1.2	0.9	9.525	●				
16IL200ISO		0.14	2	1.3	1	9.525	●				
16IL250ISO		0.18	2.5	1.5	1.1	9.525	●				
16IL300ISO		0.22	3	1.5	1.1	9.525	●				

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

**FULL PROFILE**

- Full profile insert will form a complete thread profile including the crest.
- The distance between root and crest is controlled.
- The insert can produce only one pitch.
- Higher tool pressure compared to partial profile.

**PRESSED VS GROUND**

**TPM pressed**

- Improves the chip control
- Strongly recommended in internal application especially for difficult materials
- Best cost-performance ratio

**Precision ground**

- Achieves the higher precision
- A sharper cutting edge can guarantee very smooth cutting action
- Every kind of thread's standard can be easily produced using the same blank

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS



A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

<h1>Internal</h1>	HF: Micrograin carbide BL: Low volume CBN DP: Polycrystalline diamond PVD: Physical vapour deposition				HF PVD	HF PVD	BL PVD	DP	
	<h2>ISO 11-16-22</h2>					<b>JP5120</b>	<b>JP5125</b>	<b>NBL350C</b>	<b>ND050</b>
<ul style="list-style-type: none"> <li><b>M</b>: metric threads</li> <li><b>W</b>: parallel pipe threads (whitworth)</li> <li><b>UN</b>: unified inch threads</li> <li><b>NPT</b>: American national tapered pipe threads</li> <li><b>BSPT</b>: tapered pipe threads</li> <li>Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut ● 1 <sup>st</sup> choice ○ suitable	General machining, medium cut ● 1 <sup>st</sup> choice ○ suitable	Unstable machining, heavy cut ● 1 <sup>st</sup> choice ○ suitable						
	<b>Dimensions</b>				<b>ISO</b>				
	<p>TP: thread pitch</p> <p>S D1 11  3.18 3.20 16  3.65 4.00 22  4.71 5.00</p>				<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>				
					<b>P</b>	90 200	70 180		
	<b>M</b>	60 150	50 140						
	<b>K</b>	90 190	60 180						
	<b>N</b>					400 1600			
	<b>S</b>					50 100			
	<b>H</b>					60 140			

FULL PROFILE	Designation	RE	TP	PDX	PDY	IC	Stock			
							●	○	▲	▽
<p>PCD carbide backed single edge</p>	16IR100ISO-1C	0.08	1	0.7	0.8	9.525				●
	16IR125ISO-1C	0.09	1.25	0.9		9.525				●
	16IR150ISO-1C	0.11	1.5	1		9.525				●
	16IR175ISO-1C	0.13	1.75	1.2		9.525				●
	16IR200ISO-1C	0.15	2	1.3		9.525				●
	16IR250ISO-1C	0.18	2.5	1.5		9.525				●
	16IR300ISO-1C	0.22	3	1.5		9.525				●
<p>PCBN solid brazing single edge</p>	16IR100ISO-1S	0.08	1	0.7	0.8	9.525				●
	16IR125ISO-1S	0.09	1.25	0.9		9.525				●
	16IR150ISO-1S	0.11	1.5	1		9.525				●
	16IR175ISO-1S	0.13	1.75	1.2		9.525				●
	16IR200ISO-1S	0.15	2	1.3		9.525				●
	16IR250ISO-1S	0.18	2.5	1.5		9.525				●
	16IR300ISO-1S	0.22	3	1.5		9.525				●
<p>TPM pressed type chip control oriented</p>	11IR14W-TPM	0.24	14	1.1	0.9	6.35				●
	16IR11W-TPM	0.3	11	1.5	1.2	9.525	●	●		
	16IR14W-TPM	0.24	14	1.5	1.2	9.525	●	●		
	16IR19W-TPM	0.17	19	1	0.8	9.525				●
<p>TPM pressed type chip control oriented</p>	16IR08UN-TPM	0.23	8	1.7	1.3	9.525				●
	16IR12UN-TPM	0.16	12	1.5	1.2	9.525				●
	16IR14UN-TPM	0.13	14	1.5	1.2	9.525				●
	16IR16UN-TPM	0.12	16	1.1	0.9	9.525				●
	16IR18UN-TPM	0.1	18	1	0.8	9.525				●
	16IR20UN-TPM	0.09	20	0.9	0.8	9.525				●
	16IR24UN-TPM	0.08	24	0.8	0.8	9.525				●

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

**FULL PROFILE**

- Full profile insert will form a complete thread profile including the crest.
- The distance between root and crest is controlled.
- The insert can produce only one pitch.
- Higher tool pressure compared to partial profile.

**ADVANCED THREADING**

**PCBN for ISO H**

Please increase the number of passes when machining hardened steel with PCBN inserts. Keep the maximum infeed value lower than 0.10 mm

**PRESSED VS GROUND**

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<h1>Internal</h1>	HF: Micrograin carbide BL: Low volume CBN DP: Polycrystalline diamond PVD: Physical vapour deposition				HF PVD	HF PVD	BL PVD	DP	
	ISO 11-16-22				<b>JP5120</b>	<b>JP5125</b>	<b>NBL350C</b>	<b>ND050</b>	
<ul style="list-style-type: none"> <li>● <b>M</b>: metric threads</li> <li>● <b>W</b>: parallel pipe threads (whitworth)</li> <li>● <b>UN</b>: unified inch threads</li> <li>● <b>NPT</b>: American national tapered pipe threads</li> <li>● <b>BSPT</b>: tapered pipe threads</li> <li>● Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut ● 1 <sup>st</sup> choice ○ suitable	General machining, medium cut ● 1 <sup>st</sup> choice ○ suitable	Unstable machining, heavy cut ● 1 <sup>st</sup> choice ○ suitable						
	<b>Dimensions</b>				<b>ISO</b>				
					<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>				
					<b>P</b>	90 200	70 180		
	<b>M</b>	60 150	50 140						
	<b>K</b>	90 190	60 180						
	<b>N</b>				400 1600				
	<b>S</b>				50 100				
	<b>H</b>					60 140			

	Designation	RE	TP	PDX	PDY	IC	Stock				
							●	○	▲	▽	
FULL PROFILE	<b>NPT P M K</b> 										
	16IR11.5NPT-TPM	0.25	11.5	1.5	1.2	9.525	●				
	16IR14NPT-TPM	0.22	14	1.5	1.2	9.525	●				
	<b>TPM pressed type</b> chip control oriented										
	16IR18NPT-TPM	0.2	18	1	0.8	9.525	●				
FULL PROFILE	<b>NPT P M K</b> 										
	16IR11.5NPT	0.07	11.5	1.5	1.1	9.525	●				
	<b>precision ground</b> sharpness oriented										
	16IR14NPT	0.06	14	1	0.8	9.525	●				
FULL PROFILE	<b>BSPT P M K</b> 										
	16IR11BSPT-TPM	0.3	11	1.5	1.2	9.525	●				
	16IR14BSPT-TPM	0.24	14	1.5	1.2	9.525	●				
	16IR19BSPT-TPM	0.17	19	1	0.8	9.525	●				
	<b>TPM pressed type</b> chip control oriented										
	16IR28BSPT-TPM	0.11	28	0.8	0.7	9.525	●				
PARTIAL PROFILE	<b>60° P M K</b> 										
	11IRA60-TPM	0.08	-	0.9	0.8	6.35	●				
	16IRA60-TPM	0.08	-	0.9	0.8	9.525	●				
	16IRAG60-TPM	0.08	-	1.5	1.1	9.525	●				
	16IRG60-TPM	0.13	-	1.7	1.2	9.525	●				
	<b>TPM pressed type</b> chip control oriented										
	22IRN60-TPM	0.25	-	2.5	1.7	12.7	●				

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

**FULL PROFILE**

- Full profile insert will form a complete thread profile including the crest.
- The distance between root and crest is controlled.
- The insert can produce only one pitch.
- Higher tool pressure compared to partial profile.

**PRESSED VS GROUND**

**TPM pressed**

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**Precision ground**

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- A sharper cutting edge can guarantee very smooth cutting action
- Every kind of thread's standard can be easily produced using the same blank

**PARTIAL PROFILE**

- Partial profile insert works without cuts the outer diameter of the thread.
- The same insert can be used for a broad range of different thread pitches.
- Can produce burr that must be taken away.

**PARTIAL PROFILE 60° PITCH RANGES**

	M	UN
A60	0.50÷1.50	48÷16
AG60	0.50÷3.00	48÷8
G60	1.75÷3.00	14÷8
N60	3.50÷5.00	7÷5

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

<h1>Internal</h1>	HF: Micrograin carbide BL: Low volume CBN DP: Polycrystalline diamond PVD: Physical vapour deposition				HF PVD	HF PVD	BL PVD	DP					
	<h2>ISO 11-16-22</h2>					<b>JP5120</b>	<b>JP5125</b>	<b>NB1350C</b>	<b>ND050</b>				
<ul style="list-style-type: none"> <li><b>M</b>: metric threads</li> <li><b>W</b>: parallel pipe threads (whitworth)</li> <li><b>UN</b>: unified inch threads</li> <li><b>NPT</b>: American national tapered pipe threads</li> <li><b>BSPT</b>: tapered pipe threads</li> <li>Partial profile with <b>55°</b> or <b>60°</b> angle, for metric, unified and parallel pipe threads</li> </ul>	Stable machining, light cut ● 1 <sup>st</sup> choice ○ suitable	General machining, medium cut ● 1 <sup>st</sup> choice ○ suitable	Unstable machining, heavy cut ⚡ 1 <sup>st</sup> choice ⚡ suitable										
	<b>Dimensions</b>				<b>ISO</b>								
	<p>TP: thread pitch</p> <p>S D1</p> <p>111 3.18 3.20 161 3.65 4.00 221 4.71 5.00</p>				<b>P</b>		<b>Vc(m/min) - suggested cutting speed range (bold: 1<sup>st</sup> choice)</b>						
					<b>M</b>	<b>K</b>	<b>N</b>	<b>S</b>	<b>H</b>	90 200	70 180	60 150	50 140

PARTIAL PROFILE	Designation	RE	TP	PDX	PDY	IC	Stock			
							●	○	▲	▽
<p><b>TPM pressed type</b> chip control oriented</p>	55° <b>P M K</b> 111RA55-TPM	0.08	-	0.9	0.8	6.35	●			
	161RA55-TPM	0.08	-	0.9	0.8	9.525	●			
	161RAG55-TPM	0.08	-	1.5	1.1	9.525	●			
	161RG55-TPM	0.21	-	1.7	1.2	9.525	●			
	221RN55-TPM	0.44	-	2.5	1.7	12.7	●			

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

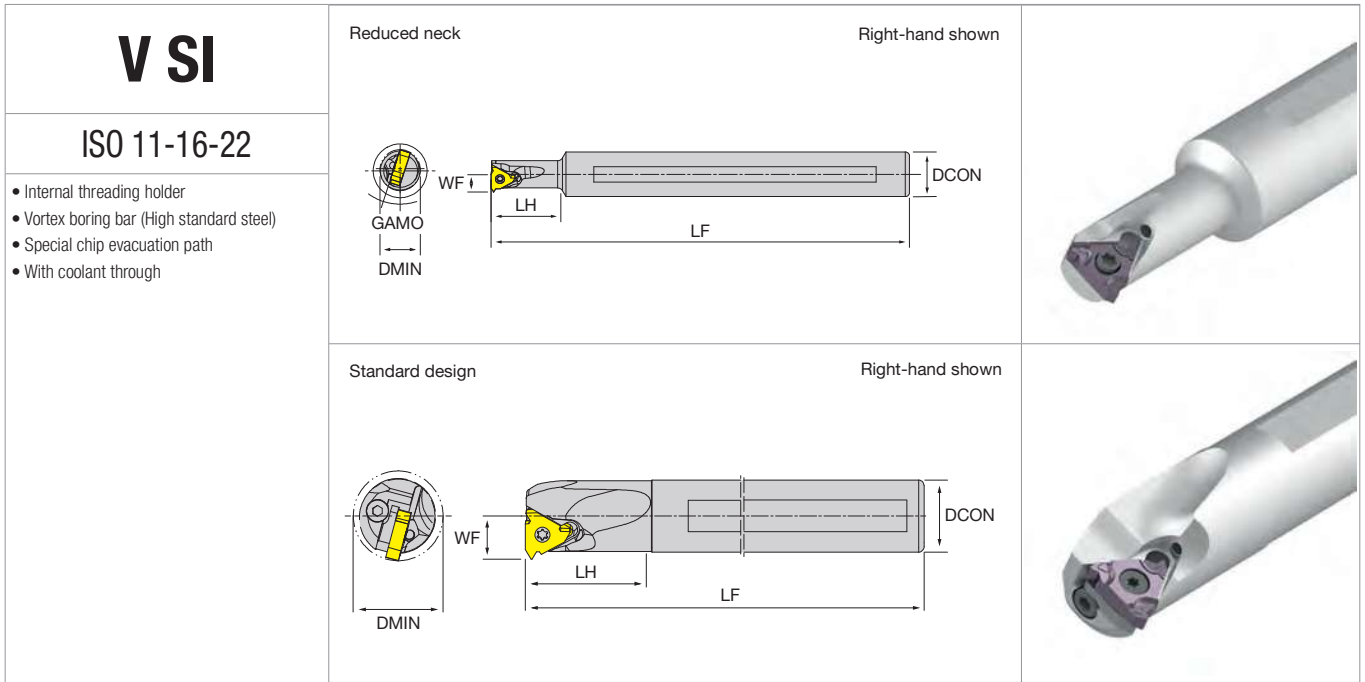
**PARTIAL PROFILE**



- Partial profile insert works without cuts the outer diameter of the thread.
- The same insert can be used for a broad range of different thread pitches.
- Can produce burr that must be taken away.

**PARTIAL PROFILE 55° PITCH RANGES**

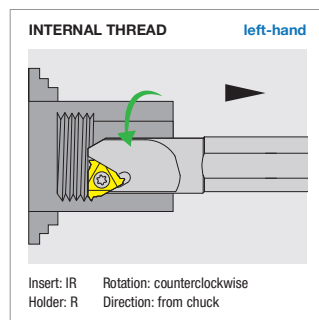
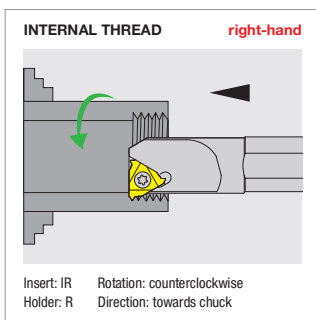
	BSW-BSF-BSP
<b>A55</b>	48÷16
<b>AG55</b>	48÷8
<b>G55</b>	14÷8
<b>N55</b>	7÷5



Designation	Stock		DMIN	DCON	WF	LF	LH	GAMO			MIID
	L	R									
<b>REDUCED NECK</b>											
NT-V16M-SI/11-12		●	12	16	6.3	150	25	18°			11IR000
NT-V16M-SI/11-15		●	15	16	7.5	150	25	18°			11IR000
<b>STANDARD DESIGN</b>											
NT-V10M-SI/11-10		●	10	10	5.2	150	25	21°			11IR000
NT-V16M-SI/16-20		●	20	16	10	150	35	15°			16IR000
NT-V20Q-SI/16-24		●	24	20	12	180	35	15°			16IR000
NT-V25R-SI/16-30		●	30	25	15	200	35	15°			16IR000
NT-V32S-SI/16-37		●	37	32	18.5	250	35	15°			16IR000

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Shim	Locking screws	L wrench	Insert screws	Flag wrenches
NT-V00M-SIR11-∞	-	-	-	NT-ST25059T08	NT-FT08
NT-V16M-SIR16-20	-	-	-	NT-ST35089T15	NT-FT15
NT-V20Q-SIR16-24	NT-SH065	NT-SC003	NT-WR025	NT-ST35120T15	NT-FT15
NT-V25R-SIR16-30	NT-SH065	NT-SC003	NT-WR025	NT-ST35120T15	NT-FT15
NT-V32S-SIR16-37	NT-SH065	NT-SC003	NT-WR025	NT-ST35120T15	NT-FT15



A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

A - TURNING

B - THREADING

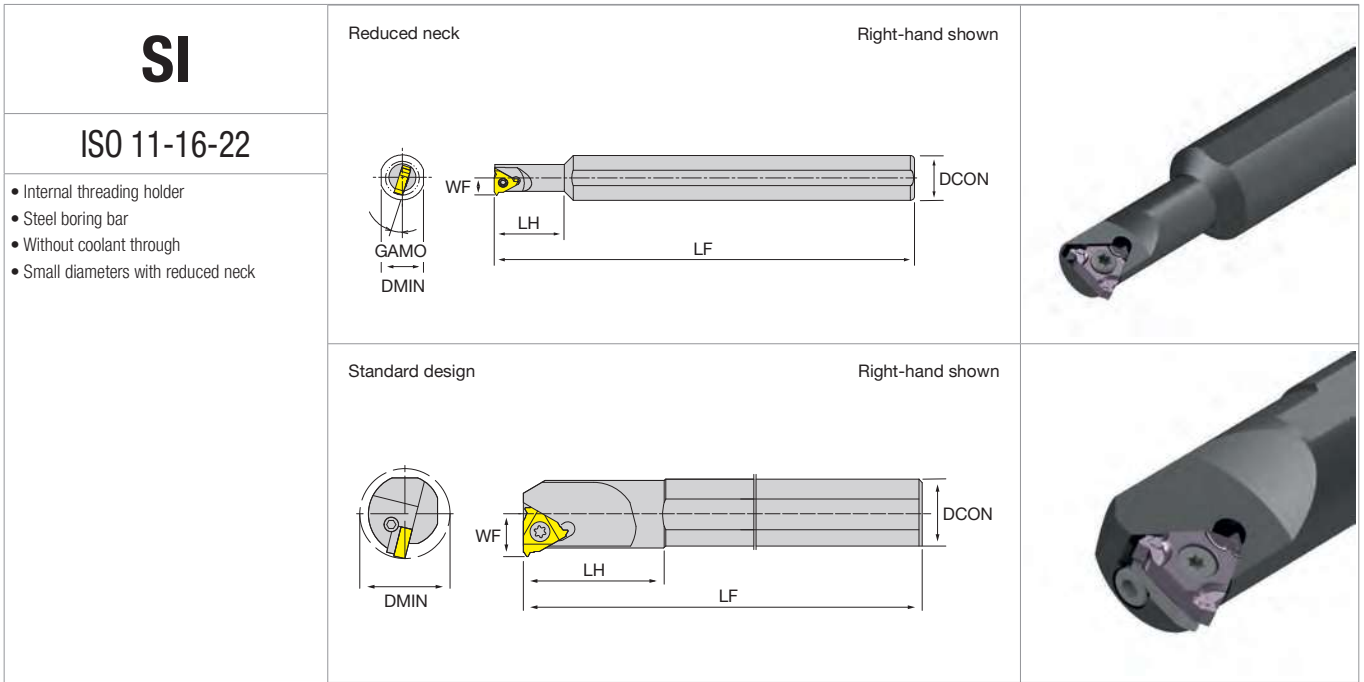
C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

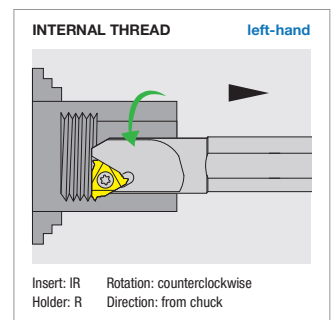
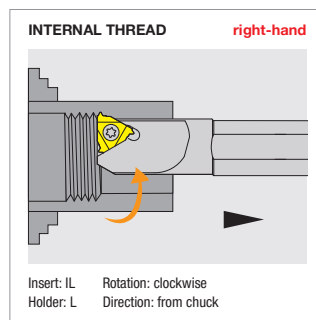
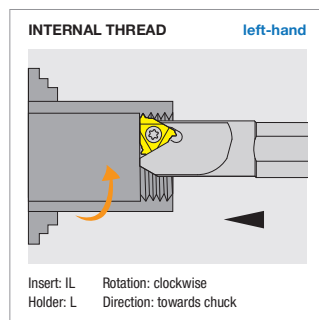
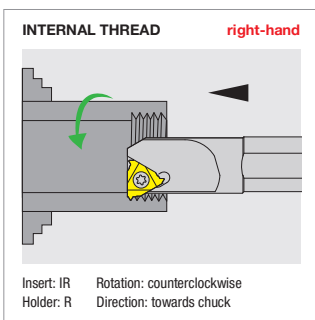
G - SPARE PARTS



Designation	Stock		DMIN	DCON	WF	LF	LH	GAMO			MIID
	L	R									
<b>REDUCED NECK</b>											
NT-SI/r1012-11		●	10	12	5.2	150	25	21°			11IRoo
NT-SI/r1216-11		●	12	16	6.3	150	25	18°			11IRoo
NT-SI/r1516-11		●	15	16	7.5	150	25	15°			11IRoo
<b>STANDARD DESIGN</b>											
NT-SI/r2016-16	●	●	20	16	10	150	35	15°			16IL/Roo
NT-SI/r2420S-16	●	●	24	20	12	180	35	15°			16IL/Roo
NT-SI/r3025S-16	●	●	30	25	15	200	35	15°			16IL/Roo
NT-SI/r3732S-16	●	●	37	32	18.5	250	35	15°			16IL/Roo
NT-SI/r3025S-22		●	30	25	16	200	35	15°			22IRoo
NT-SI/r3732S-22		●	37	32	19.5	250	35	15°			22IRoo
NT-SI/r4440S-22		●	44	40	24.5	300	35	15°			22IRoo

● stock standard, ○ non-standard stock, ▲ upcoming introduction, ▽ stock exhaustion

Spare parts	Shim	Shim	Locking screws	L wrench	Insert screws	Flag wrenches
NT-SI/r0000-11	-	-	-	-	NT-ST25059T08	NT-FT08
NT-SI/r0000-16	-	-	-	-	NT-ST35089T15	NT-FT15
NT-SIL0000S-16	NT-SH060	-	NT-SC003	NT-WR025	NT-ST35115T15	NT-FT15
NT-SIR0000S-16	-	NT-SH065	NT-SC003	NT-WR025	NT-ST35115T15	NT-FT15
NT-SIR0000S-22	-	NT-SH067	NT-SC004	NT-WR030	NT-ST40140T15	NT-FT15



**M - Internal ISO-metric threads**

TP	6.00	5.50	5.00	4.50	4.00	3.50	3.00	2.50	2.00	1.75	1.50	1.25	1.00	0.80	0.75	0.70	0.50	
NO. OF INFEEDS	RADIAL INFEED PER PASS																	
1	0.46	0.43	0.42	0.37	0.34	0.32	0.28	0.26	0.23	0.22	0.20	0.17	0.17	0.17	0.16	0.13	0.10	
2	0.43	0.40	0.40	0.34	0.31	0.30	0.26	0.25	0.21	0.20	0.18	0.17	0.15	0.14	0.13	0.12	0.08	
3	0.35	0.33	0.32	0.28	0.24	0.24	0.21	0.18	0.17	0.15	0.15	0.14	0.11	0.11	0.10	0.10	0.07	
4	0.30	0.26	0.26	0.23	0.21	0.19	0.16	0.15	0.15	0.13	0.13	0.10	0.09	0.07	0.07	0.07	0.06	
5	0.26	0.22	0.22	0.21	0.18	0.17	0.14	0.13	0.12	0.10	0.11	0.09	0.08	-	-	-	-	
6	0.22	0.20	0.20	0.19	0.15	0.15	0.13	0.12	0.11	0.09	0.08	0.08	-	-	-	-	-	
7	0.20	0.18	0.17	0.16	0.14	0.14	0.12	0.11	0.10	0.08	-	-	-	-	-	-	-	
8	0.19	0.17	0.16	0.15	0.13	0.13	0.11	0.10	0.08	0.08	-	-	-	-	-	-	-	
9	0.18	0.16	0.16	0.14	0.12	0.12	0.10	0.10	-	-	-	-	-	-	-	-	-	
10	0.16	0.15	0.15	0.13	0.12	0.11	0.10	0.08	-	-	-	-	-	-	-	-	-	
11	0.15	0.14	0.14	0.12	0.11	0.10	0.09	-	-	-	-	-	-	-	-	-	-	
12	0.15	0.14	0.14	0.12	0.10	0.08	0.08	-	-	-	-	-	-	-	-	-	-	
13	0.14	0.13	0.12	0.11	0.10	-	-	-	-	-	-	-	-	-	-	-	-	
14	0.13	0.12	0.10	0.10	0.08	-	-	-	-	-	-	-	-	-	-	-	-	
15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>TOTAL INFEED</b>	3.54	3.25	2.96	2.65	2.33	2.05	1.78	1.48	1.17	1.05	0.85	0.75	0.60	0.49	0.46	0.42	0.31	

green background are standard items all other sizes can make specials

**W - Internal Whitworth threads**

TP	4	4.5	5	6	7	8	9	10	11	12	14	16	18	19	20	26	28	
NO. OF INFEEDS	RADIAL INFEED PER PASS																	
1	0.49	0.46	0.45	0.38	0.37	0.32	0.30	0.29	0.28	0.28	0.24	0.24	0.23	0.22	0.21	0.19	0.18	
2	0.46	0.43	0.43	0.36	0.35	0.30	0.28	0.27	0.26	0.26	0.22	0.22	0.22	0.22	0.21	0.18	0.17	
3	0.38	0.38	0.38	0.30	0.29	0.24	0.23	0.22	0.22	0.22	0.18	0.19	0.19	0.18	0.17	0.15	0.14	
4	0.36	0.33	0.32	0.26	0.25	0.21	0.20	0.19	0.19	0.18	0.15	0.16	0.16	0.14	0.14	0.12	0.12	
5	0.34	0.29	0.28	0.22	0.22	0.19	0.18	0.17	0.16	0.16	0.13	0.13	0.13	0.12	0.11	0.08	0.08	
6	0.31	0.25	0.25	0.21	0.19	0.17	0.15	0.15	0.14	0.14	0.11	0.11	0.08	0.08	0.08	-	-	
7	0.29	0.24	0.22	0.19	0.18	0.15	0.14	0.14	0.13	0.13	0.09	0.08	-	-	-	-	-	
8	0.27	0.22	0.20	0.17	0.16	0.14	0.13	0.13	0.12	0.08	0.08	-	-	-	-	-	-	
9	0.24	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.08	-	-	-	-	-	-	-	-	
10	0.22	0.18	0.18	0.15	0.14	0.12	0.12	0.08	-	-	-	-	-	-	-	-	-	
11	0.20	0.17	0.17	0.14	0.12	0.12	0.08	-	-	-	-	-	-	-	-	-	-	
12	0.19	0.16	0.15	0.14	0.08	0.08	-	-	-	-	-	-	-	-	-	-	-	
13	0.17	0.15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	
14	0.15	0.14	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	0.12	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
16	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>TOTAL INFEED</b>	4.29	3.82	3.44	2.90	2.50	2.17	1.93	1.76	1.58	1.45	1.20	1.13	1.01	0.96	0.92	0.72	0.69	

green background are standard items all other sizes can make specials

- A - TURNING
- B - THREADING
- C - GROOVING
- D - MILLING
- E - DRILLING
- F - ACCESSORIES
- G - SPARE PARTS