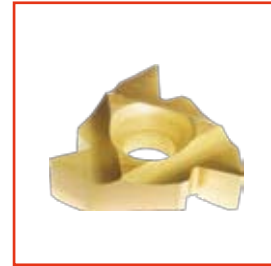


# Gewindewerkzeuge *Threading Tools*

# 6



Fräswerkzeuge  
Milling Tools

HDS-/VHM- Fräser  
HDS-/ Solid Carbide  
Endmills



Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools



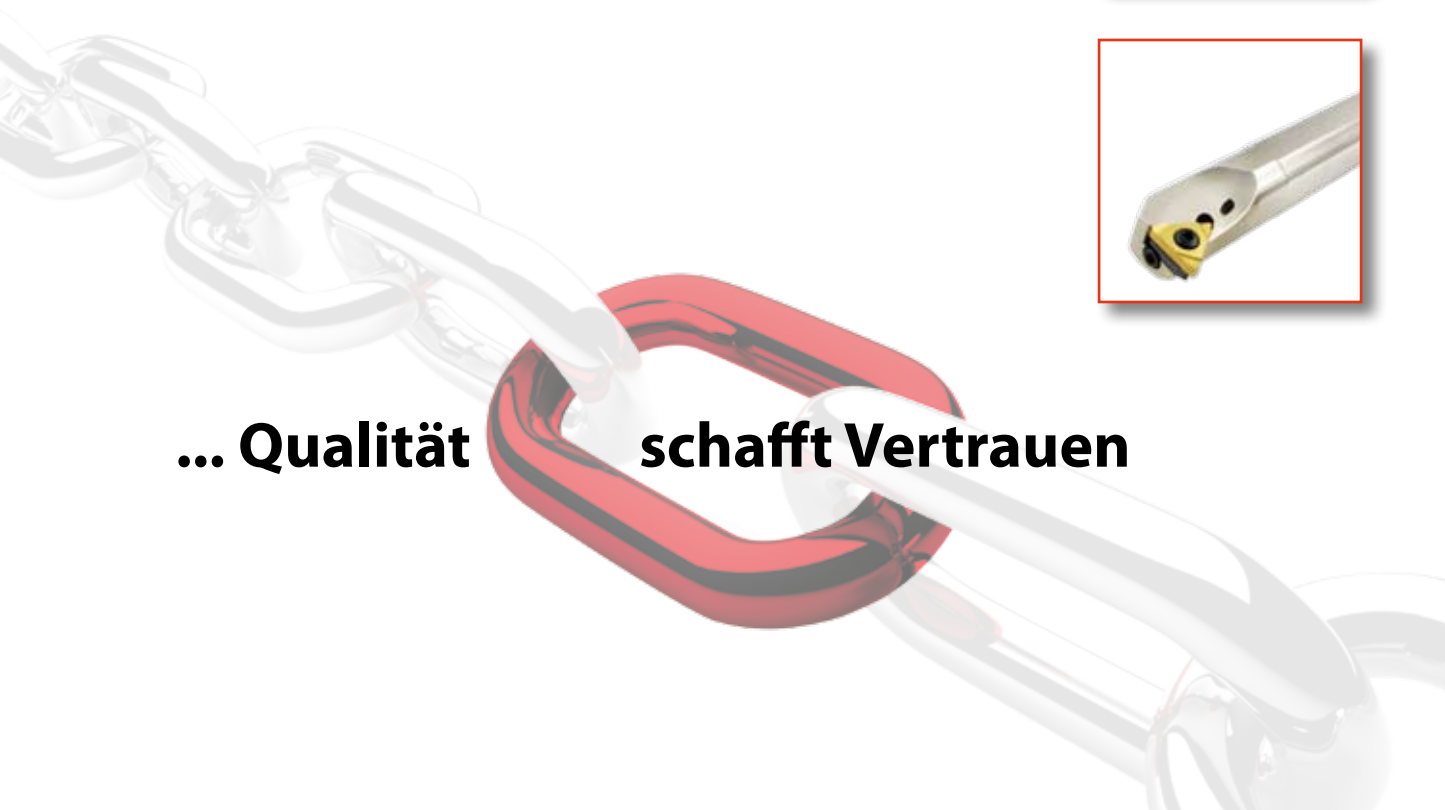
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools



Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Gewinde-  
werkzeuge  
Threading Tools

**... Qualität schafft Vertrauen**



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stechdreh-  
werkzeuge  
Grooving Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendeplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

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Wendeschnidplatten für <b>Außen - Gewindedrehen</b> <i>Indexable Inserts for External Threading</i> 	
<span style="background-color: yellow; border: 1px solid black; padding: 2px;"><b>new!</b></span> <b>DP-Wendeschnidplatten mit eingepresstem Spanbrecher, Teil- und Vollprofil</b> <i>DP-Inserts with directly pressed chipbreaker, partial and full profile</i>	6.06
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Wendeschnidplatten für <b>Innen - Gewindedrehen</b> <i>Indexable Inserts for Internal Threading</i> 	
<span style="background-color: yellow; border: 1px solid black; padding: 2px;"><b>new!</b></span> <b>DP-Wendeschnidplatten mit eingepresstem Spanbrecher, Teil- und Vollprofil</b> <i>DP-Inserts with directly pressed chipbreaker, partial and full profile</i>	6.15

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<b>Vollprofil, rechts und links, BSW 55°</b> <i>Partial Profile, right and left, BSW 55°</i>	<b>6.21</b>
<b>Vollprofil, rechts und links, UN 60°</b> <i>Full Profile, right and left, UN 60°</i>	<b>6.22</b>
<b>Vollprofil, rechts und links, RD DIN 405</b> <i>Full Profile, right and left, RD DIN 405</i>	<b>6.23</b>
<b>Vollprofil, rechts und links, TR DIN 103</b> <i>Full Profile, right and left, TR DIN 103</i>	<b>6.23</b>
<b>Vollprofil, rechts und links, ACME</b> <i>Full Profile, right and left, ACME</i>	<b>6.24</b>
<b>Vollprofil, rechts und links, NPT 60°</b> <i>Full Profile, right and left, NPT 60°</i>	<b>6.24</b>
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Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

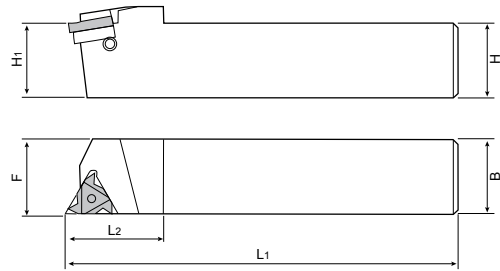
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# AL NL

## zum Außen-Gewindedrehen / for External Threading



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stechdreh-  
werkzeuge  
Grooving Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

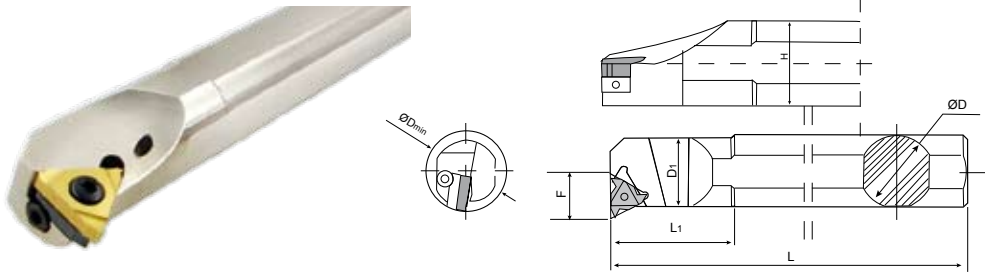
Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock	Bezeichnung Part Number	Lager Stock	Maße [mm] Dimensions					Ersatzteile Spare Parts					
				H <sub>1</sub> = H=B	F	L <sub>1</sub>	L <sub>2</sub>							
NL 08 - 2	○	NL 08 - 2 LH	●	8	11	100	17	11 ER/EL	75.20.118	-	-	-	56.33.612	
NL 10 - 2	●	NL 10 - 2 LH	○	10	11	100	17							
NL 12 - 3	●	NL 12 - 3 LH	○	12	16	100	22	16 ER/EL	75.20.119	-	-	-	75.20.618	
AL 16 - 3	●	AL 16 - 3 LH	●	16	16	100	22							
AL 20 - 3	●	AL 20 - 3 LH	●	20	20	125	30							
AL 25 - 3	●	AL 25 - 3 LH	○	25	25	150	30							
AL 32 - 3	●	AL 32 - 3 LH	●	32	32	170	30							
AL 25 - 4	●	AL 25 - 4 LH	○	25	25	150	36	22 ER/EL	75.20.122	22 ER: 75.10.203 +1,5°(Standard) 22 EL: 75.20.202 +1,5°(Standard)	+4,5° +3,5° +2,5° Standard +0,5° -0,5° -1,5°	75.20.128	75.20.129	56.33.614
AL 32 - 4	○	AL 32 - 4 LH	●	32	32	170	36							
AL 40 - 4	●	AL 40 - 4 LH	○	40	40	200	36							
AL 25 - 5	○	AL 25 - 5 LH	○	25	25	150	36	27 ER/EL	75.20.124	27 ER: 75.10.204 +1,5°(Standard) 27 EL: 75.20.203 +1,5°(Standard)	+4,5° +3,5° +2,5° Standard +0,5° -0,5° -1,5°	75.20.127	56.33.613	
AL 32 - 5	○	AL 32 - 5 LH	●	32	32	170	40							
AL 40 - 5	○	AL 40 - 5 LH	○	40	40	200	40							

**AVR NVR**

zum Innen-Gewindedrehen / for Internal Threading



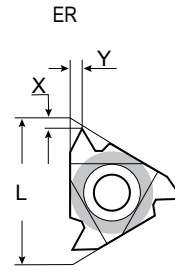
Bezeichnung Part Number	Lager Stock	Bezeichnung Part Number	Lager Stock	Maße [mm] Dimensions								Ersatzteile Spare Parts				
				D	D <sub>1</sub>	L	L <sub>1</sub>	F	D <sub>min</sub>	H						
Rechter Halter RH-Holder		Linke Halter LH-Holder														
NVR 05 - 0	○	NVR 05 - 0 LH	○	12	5,1	100	12	4,3	6,0	11	06 IR/IL	75.20.102	-	-	75.20.621	
NVR 07 - 1	○	NVR 07 - 1 LH	●	16	6,6	125	18	5,3	7,8	14	08 IR/IL	75.20.101	-	-	75.20.621	
NVR 10 - 2 IK	●	NVR 10 - 2 IK LH	○	16	10	125	25	7,4	12	14	11 IR/IL	75.20.118	-	-	56.33.612	
NVR 10 D - 2	●	NVR 10 D - 2 LH	○	10	9,6	100	25	7,4	12	9						
NVR 12 - 2 E	○	NVR 12 - 2 E LH		12	12	170	-	8,4	15	11						
NVR 13 - 2 IK	●	NVR 13 - 2 IK LH	○	16	13	150	32	8,9	15	14						
NVR 13 - 3 IK	●	NVR 13 - 3 IK LH	○	16	13	150	32	10,2	16	14						
NVR 16 - 3 IK	●	NVR 16 - 3 IK LH	○	20	16	170	40	11,7	19	18		75.20.119	-	-		
NVR 16 - 3 E	○	NVR 16 - 3 E LH		16	16	200	-	11,7	19	14						
AVR 20 - 3 IK	●	AVR 20 - 3 IK LH	●	20	20	170	-	13,7	24	18	16 IR/IL	75.20.120	16 IR: 75.20.201 +1,5°(Standard) +4,5° +3,5° +2,5° Standard +0,5° -0,5° -1,5°	75.20.128	75.20.618	
AVR 20 - 3 E	○	AVR 20 - 3 E LH		20	20	250	-	13,7	23	18						
AVR 25 D - 3 IK	●	AVR 25 D - 3 IK LH	●	25	25	200	-	16,2	29	22,5						
AVR 32 - 3 IK	●	AVR 32 - 3 IK LH	●	32	32	250	-	19,7	36	29						
AVR 40 - 3	●	AVR 40 - 3 LH	●	40	40	300	-	23,7	44	36						
NVR 20 - 4	●	NVR 20 - 4 LH	○	20	20	170	-	15,6	24	18	22 IR/IL	75.20.121	-	-	56.33.614	
AVR 25 - 4 IK	●	AVR 25 - 4 IK LH	●	25	25	200	-	18,1	29	22,5		75.20.122	22 IR: 75.20.202 +1,5°(Standard) +4,5° +3,5° +2,5° Standard +0,5° -0,5° -1,5°	75.20.129		
AVR 32 - 4 IK	●	AVR 32 - 4 IK LH	○	32	32	250	-	21,5	39	29						
AVR 40 - 4	●	AVR 40 - 4 LH	○	40	40	300	-	25,6	46	36						
AVR 32 - 5	○	AVR 32 - 5 LH	○	32	32	250	-	22,6	40	29	27 IR/IL	75.20.124	27 IR: 75.20.203 +1,5°(Standard) +4,5° +3,5° +2,5° Standard +0,5° -0,5° -1,5°	75.20.127	75.20.622	
AVR 40 - 5	○	AVR 40 - 5 LH	○	40	40	300	-	26,6	48	36						
AVR 50 - 5	○	AVR 50 - 5 LH	○	50	50	350	-	31,6	58	45						
AVR 60 - 5	○	AVR 60 - 5 LH	○	60	60	400	-	36,6	68	54						

 "E" = HM-Schaft mit Innenkühlung  
Carbide Shank with Inner Coolant

 "IK" = Innenkühlung  
Inner Coolant

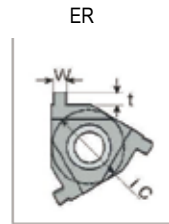
# Außengewinde / External Thread „DP“

55° / 60°



Profile Profiles	Bezeichnung Part Number	Lager Stock TU 5125	Steigung Pitch mm /TPI	L mm	X mm	Y mm	
<b>Teilprofil Partial Profile</b>	<b>60°</b>	16 ER -T- A 60 - DP	● 0.5 - 1.5	16	0.8	0.9	
		16 ER -T- G 60 - DP	● 1.75 - 3.0	16	1.2	1.7	
		16 ER -T- AG 60 - DP	● 0.5 - 3.0	16	1.2	1.7	
		22 ER -T- N 60 - DP	● 3.5 - 5.0	22	1.7	2.5	
	<b>55°</b>	16 ER -T- A 55 - DP	● 48 - 16	16	0.8	0.9	
		16 ER -T- G 55 - DP	● 14 - 8	16	1.2	1.7	
		16 ER -T- AG 55 - DP	● 48 - 8	16	1.2	1.7	
	<b>Vollprofil Full profile</b>	<b>ISO 60°</b>	16 ER -V- ISO 1.00 - DP	● 1.00	16	0.7	0.7
			16 ER -V- ISO 1.25 - DP	● 1.25	16	0.8	0.9
16 ER -V- ISO 1.50 - DP			● 1.50	16	0.8	1.0	
16 ER -V- ISO 1.75 - DP			● 1.75	16	0.9	1.2	
16 ER -V- ISO 2.00 - DP			● 2.00	16	1.0	1.3	
16 ER -V- ISO 2.50 - DP			● 2.50	16	1.1	1.5	
16 ER -V- ISO 3.00 - DP			● 3.00	16	1.2	1.6	
<b>BSW 55°</b>		16 ER -V- BSW 19 - DP	● 19	16	0.8	1.0	
		16 ER -V- BSW 14 - DP	● 14	16	1.0	1.2	
		16 ER -V- BSW 11 - DP	● 11	16	1.1	1.5	
<b>NPT 60°</b>		16 ER -V- NPT 18 - DP	● 18	16	0.8	1.0	
		16 ER -V- NPT 14 - DP	● 14	16	0.9	1.2	
		16 ER -V- NPT 11.5 - DP	● 11.5	16	1.1	1.5	
<b>UN 60°</b>		16 ER -V- UN 12 - DP	● 12	16	1.1	1.4	
		16 ER -V- UN 16 - DP	● 16	16	0.9	1.1	
		16 ER -V- UN 18 - DP	● 18	16	0.8	1.0	
		16 ER -V- UN 20 - DP	● 20	16	0.8	0.9	
<b>ISO 60°</b>		22 ER -V- ISO 4.00 - DP	● 4.00	22	1.6	2.3	
		22 ER -V- ISO 5.00 - DP	● 5.00	22	1.7	2.5	
		22 ER -V- ISO 6.00 - DP	● 6.00	22	1.9	2.7	

## Präzisions-Einstecken Außen / Grooving External



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock	Bezeichnung Part Number	Lager Stock	IC	L	W <small>+0,05 +0,10</small>	t <small>±0,10</small>
Rechte WSP RH Inserts	TU 5330	Linke WSP LH Inserts	TU 5330	mm	mm	mm	mm
<b>60° außen / external</b>		<b>60° außen / external</b>					
16 ER -1.10- T1.30	●	16 EL -1.10- T1.30	○			1.10	1.30
16 ER -1.30- T1.50	●	16 EL -1.30- T1.30	○			1.30	1.50
16 ER -1.60- T1.85	●	16 EL -1.60- T1.85	○	9.525 (3/8")	16	1.60	1.85
16 ER -1.85- T2.00	●	16 EL -1.85- T2.00	○			1.85	2.00
16 ER -2.15- T2.50	●	16 EL -2.15- T2.50	○			2.15	2.25

## Set Präzisions - Einstecken Grooving

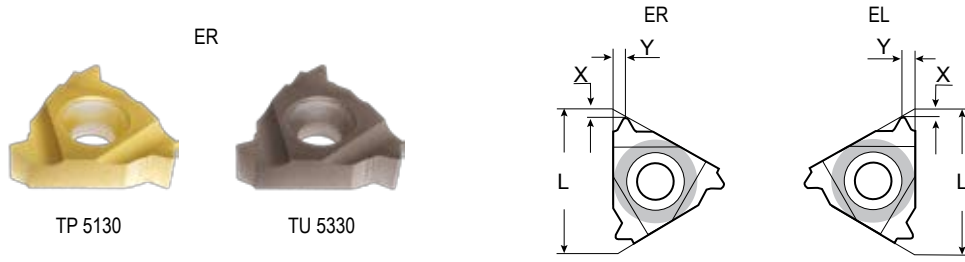


16ER 1.10-2.15/TU 5330

bestehend aus:  
consisting of:  
je 2 Stechplatten in den Breiten  
each 2 grooving inserts in size  
1.10, 1.30, 1.60, 1.85, 2.15 mm

# Außengewinde / External Thread

## Teilprofil 60° Partial Profile 60°

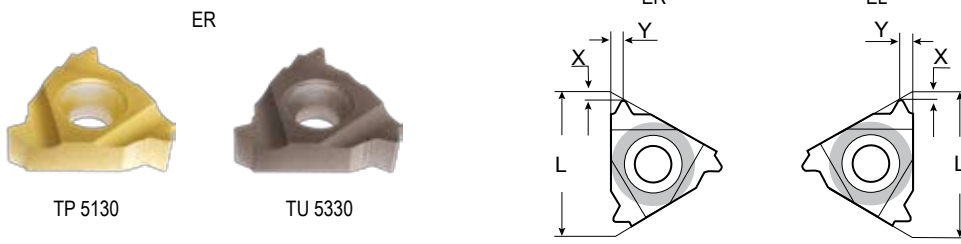


Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch mm	L mm	X mm	Y mm
	TP 5130	TU 5330		Linke WSP LH Inserts	TP 5130				
<b>60° außen / external</b>			<b>60° außen / external</b>						
<b>11 ER -T- A 60</b>	○		<b>11 EL -T- A 60</b>			0.5 - 1.5	11	0.8	0.9
<b>16 ER -T- A 60</b>	●		<b>16 EL -T- A 60</b>	○		0.5 - 1.5	16	0.8	0.9
<b>16 ER -T- G 60</b>	●		<b>16 EL -T- G 60</b>	●		1.75 - 3.0	16	1.2	1.7
<b>16 ER -T- AG 60</b>	●	●	<b>16 EL -T- AG 60</b>	●		0.5 - 3.0	16	1.2	1.7
<b>22 ER -T- N 60</b>	●		<b>22 EL -T- N 60</b>			3.5 - 5.0	22	1.7	2.5
<b>27 ER -T- Q 60</b>			<b>27 EL -T- Q 60</b>			5.5 - 6.0	27	2.1	3.1



# Außengewinde / External Thread

## Teilprofil 55° Partial Profile 55°



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			mm	mm	mm	mm
<b>55° außen / external</b>			<b>55° außen / external</b>						
<b>11 ER -T- A 55</b>	○		<b>11 EL -T- A 55</b>			48 - 16	11	0.8	0.9
<b>16 ER -T- A 55</b>	●		<b>16 EL -T- A 55</b>	●		48 - 16	16	0.8	0.9
<b>16 ER -T- G 55</b>	●		<b>16 EL -T- G 55</b>	○		14 - 8	16	1.2	1.7
<b>16 ER -T- AG 55</b>	●		<b>16 EL -T- AG 55</b>	●		48 - 168	16	1.2	1.7
<b>22 ER -T- N 55</b>	●		<b>22 EL -T- N 55</b>			7 - 5	22	1.7	2.5
<b>27 ER -T- Q 55</b>			<b>27 EL -T- Q 55</b>			4.5 - 4	27	2.0	2.9

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

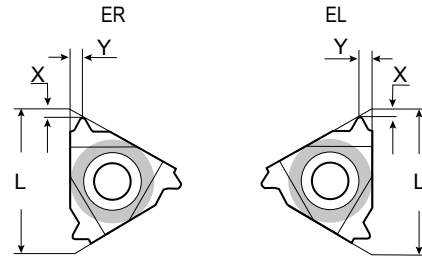
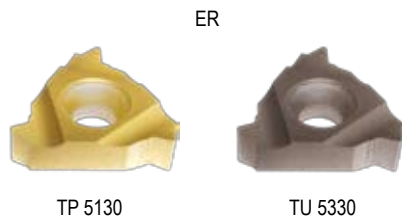
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# Außengewinde / External Thread

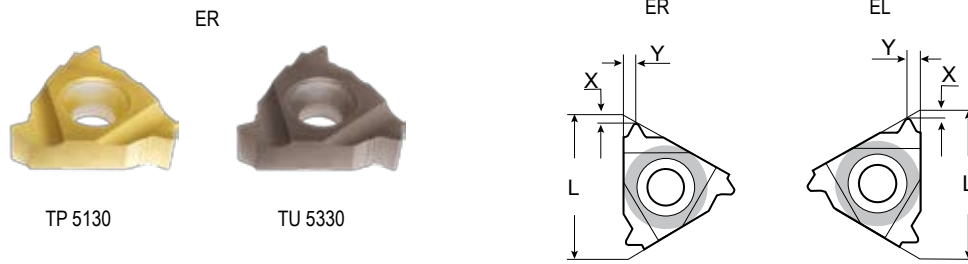
Vollprofil ISO 60° Full Profile ISO 60°



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch mm	L mm	X mm	Y mm
	TP 5130	TU 5330		TP 5130	TU 5330				
11 ER - V - ISO 0.35			11 EL - V - ISO 0.35			0.35		0.8	0.4
11 ER - V - ISO 0.4			11 EL - V - ISO 0.4			0.4		0.7	0.4
11 ER - V - ISO 0.45			11 EL - V - ISO 0.45			0.45		0.7	0.4
11 ER - V - ISO 0.5	○		11 EL - V - ISO 0.5			0.5		0.6	0.6
11 ER - V - ISO 0.6	○		11 EL - V - ISO 0.6			0.6		0.6	0.6
11 ER - V - ISO 0.7	○		11 EL - V - ISO 0.7			0.7		0.6	0.6
11 ER - V - ISO 0.75	○		11 EL - V - ISO 0.75			0.75	11	0.6	0.6
11 ER - V - ISO 0.8	○		11 EL - V - ISO 0.8			0.8		0.6	0.6
11 ER - V - ISO 1.0	●		11 EL - V - ISO 1.0			1.0		0.7	0.7
11 ER - V - ISO 1.25	○		11 EL - V - ISO 1.25			1.25		0.8	0.9
11 ER - V - ISO 1.5	●		11 EL - V - ISO 1.5			1.5		0.8	1.0
11 ER - V - ISO 1.75	○		11 EL - V - ISO 1.75			1.75		0.8	1.1
16 ER - V - ISO 0.35			16 EL - V - ISO 0.35			0.35		0.8	0.4
16 ER - V - ISO 0.4			16 EL - V - ISO 0.4			0.4		0.7	0.4
16 ER - V - ISO 0.45			16 EL - V - ISO 0.45			0.45		0.7	0.4
16 ER - V - ISO 0.5	●		16 EL - V - ISO 0.5	●		0.5		0.6	0.6
16 ER - V - ISO 0.6	○		16 EL - V - ISO 0.6			0.6		0.6	0.6
16 ER - V - ISO 0.7	●		16 EL - V - ISO 0.7			0.7		0.6	0.6
16 ER - V - ISO 0.75	●	●	16 EL - V - ISO 0.75	●		0.75		0.6	0.6
16 ER - V - ISO 0.8	●	●	16 EL - V - ISO 0.8			0.8	16	0.6	0.6
16 ER - V - ISO 1.0	●	●	16 EL - V - ISO 1.0	●		1.0		0.7	0.7
16 ER - V - ISO 1.25	●	●	16 EL - V - ISO 1.25	●		1.25		0.8	0.9
16 ER - V - ISO 1.5	●	●	16 EL - V - ISO 1.5	●		1.5		0.8	1.0
16 ER - V - ISO 1.75	●	●	16 EL - V - ISO 1.75	●		1.75		0.9	1.2
16 ER - V - ISO 2.0	●	●	16 EL - V - ISO 2.0	●		2.0		1.0	1.3
16 ER - V - ISO 2.5	●	●	16 EL - V - ISO 2.5	●		2.5		1.1	1.5
16 ER - V - ISO 3.0	●	●	16 EL - V - ISO 3.0	●		3.0		1.2	1.6
16 ER - V - ISO 3.5	●	●	16 EL - V - ISO 3.5			3.5		1.2	1.7
22 ER - V - ISO 3.5	●		22 EL - V - ISO 3.5			3.5		1.6	2.3
22 ER - V - ISO 4.0	●		22 EL - V - ISO 4.0			4.0		1.6	2.3
22 ER - V - ISO 4.5	●		22 EL - V - ISO 4.5			4.5		1.7	2.4
22 ER - V - ISO 5.0	●		22 EL - V - ISO 5.0			5.0	22	1.7	2.5
22 ER - V - ISO 5.5	●		22 EL - V - ISO 5.5			5.5		1.7	2.6
22 ER - V - ISO 6.0	●		22 EL - V - ISO 6.0			6.0		1.9	2.7
27 ER - V - ISO 5.5	○		27 EL - V - ISO 5.5			5.5	27	1.9	2.7
27 ER - V - ISO 6.0	○		27 EL - V - ISO 6.0			6.0		2.0	2.9

# Außengewinde / External Thread

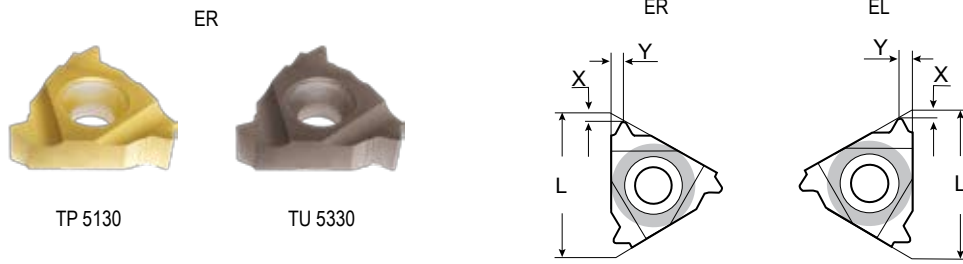
**Vollprofil 55° Full Profile 55°**  
BSW, BSF, BSP, BSB, Whitworth



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
11 ER - V - BSW 40			11 EL - V - BSW 40			40		0.6	0.6
11 ER - V - BSW 36			11 EL - V - BSW 36			36		0.6	0.6
11 ER - V - BSW 32	○		11 EL - V - BSW 32			32		0.6	0.6
11 ER - V - BSW 28	○		11 EL - V - BSW 28			28		0.6	0.7
11 ER - V - BSW 26	○		11 EL - V - BSW 26			26		0.7	0.8
11 ER - V - BSW 24	○		11 EL - V - BSW 24			24		0.7	0.8
11 ER - V - BSW 22	○		11 EL - V - BSW 22			22	11	0.8	0.9
11 ER - V - BSW 20	○		11 EL - V - BSW 20			20		0.8	0.9
11 ER - V - BSW 19	○		11 EL - V - BSW 19			19		0.8	1.0
11 ER - V - BSW 18	○		11 EL - V - BSW 18			18		0.8	1.0
11 ER - V - BSW 16	○		11 EL - V - BSW 16			16		0.9	1.1
11 ER - V - BSW 14	○		11 EL - V - BSW 14			14		1.0	1.2
16 ER - V - BSW 40			16 EL - V - BSW 40			40		0.6	0.6
16 ER - V - BSW 36			16 EL - V - BSW 36			36		0.6	0.6
16 ER - V - BSW 32	○		16 EL - V - BSW 32			32		0.6	0.6
16 ER - V - BSW 28	●		16 EL - V - BSW 28			28		0.6	0.7
16 ER - V - BSW 26	○		16 EL - V - BSW 26			26		0.7	0.8
16 ER - V - BSW 24	○		16 EL - V - BSW 24			24		0.7	0.8
16 ER - V - BSW 22	○		16 EL - V - BSW 22			22		0.8	0.9
16 ER - V - BSW 20	○		16 EL - V - BSW 20			20		0.8	0.9
16 ER - V - BSW 19	●	●	16 EL - V - BSW 19	●		19	16	0.8	1.0
16 ER - V - BSW 18	●		16 EL - V - BSW 18			18		0.8	1.0
16 ER - V - BSW 16	●		16 EL - V - BSW 16			16		0.9	1.1
16 ER - V - BSW 14	●	●	16 EL - V - BSW 14	●		14		1.0	1.2
16 ER - V - BSW 12	●		16 EL - V - BSW 12			12		1.1	1.4
16 ER - V - BSW 11	●	●	16 EL - V - BSW 11	●		11		1.1	1.5
16 ER - V - BSW 10	●		16 EL - V - BSW 10			10		1.1	1.5
16 ER - V - BSW 9	●		16 EL - V - BSW 9			9		1.2	1.7
16 ER - V - BSW 8	●		16 EL - V - BSW 8			8		1.2	1.5
22 ER - V - BSW 7	○	○	22 EL - V - BSW 7			7		1.6	2.3
22 ER - V - BSW 6	○	○	22 EL - V - BSW 6			6	22	1.6	2.3
22 ER - V - BSW 5	○	○	22 EL - V - BSW 5			5		1.7	2.4
27 ER - V - BSW 4.5			27 EL - V - BSW 4.5			4.5		1.8	2.6
27 ER - V - BSW 4			27 EL - V - BSW 4			4		2.0	2.9

# Außengewinde / External Thread

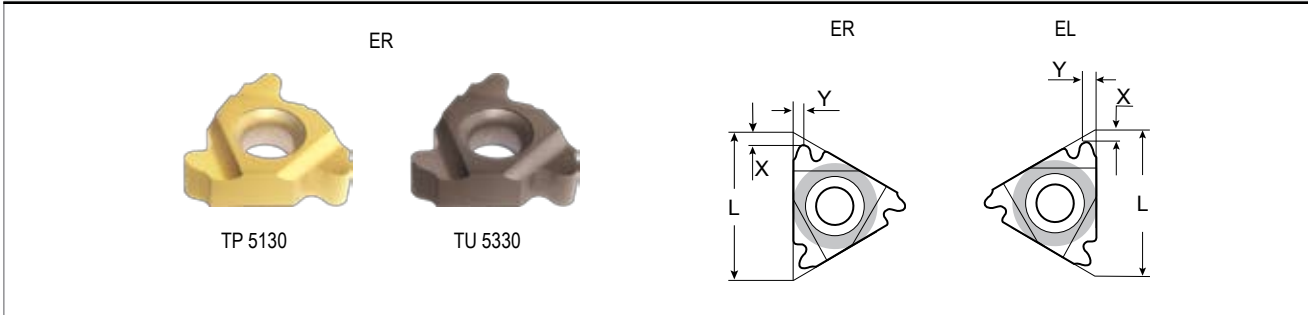
Vollprofil 60° Full Profile 60°  
UN, UNC, UNEF, UNS



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
11 ER - V - UN 40			11 EL - V - UN 40			40		0.6	0.6
11 ER - V - UN 36			11 EL - V - UN 36			36		0.6	0.6
11 ER - V - UN 32	○		11 EL - V - UN 32			32		0.6	0.6
11 ER - V - UN 28	○		11 EL - V - UN 28			28		0.6	0.7
11 ER - V - UN 27	○		11 EL - V - UN 27			27	11	0.7	0.8
11 ER - V - UN 24	○		11 EL - V - UN 24			24		0.7	0.8
11 ER - V - UN 20	○		11 EL - V - UN 20			20		0.8	0.9
11 ER - V - UN 18	○		11 EL - V - UN 18			18		0.8	1.0
11 ER - V - UN 16	○		11 EL - V - UN 16			16		0.9	1.1
11 ER - V - UN 14	○		11 EL - V - UN 14			14		0.9	1.1
16 ER - V - UN 40	○		16 EL - V - UN 40			40		0.6	0.6
16 ER - V - UN 36	○		16 EL - V - UN 36			36		0.6	0.6
16 ER - V - UN 32	○		16 EL - V - UN 32			32		0.6	0.6
16 ER - V - UN 28	○		16 EL - V - UN 28			28		0.6	0.7
16 ER - V - UN 27	○		16 EL - V - UN 27			27		0.7	0.8
16 ER - V - UN 24	○		16 EL - V - UN 24			24		0.7	0.8
16 ER - V - UN 20	○		16 EL - V - UN 20			20		0.8	0.9
16 ER - V - UN 18	○		16 EL - V - UN 18			18	16	0.8	1.0
16 ER - V - UN 16	○		16 EL - V - UN 16			16		0.9	1.1
16 ER - V - UN 14	○		16 EL - V - UN 14			14		1.0	1.2
16 ER - V - UN 13	○		16 EL - V - UN 13			13		1.0	1.3
16 ER - V - UN 12	○		16 EL - V - UN 12			12		1.1	1.4
16 ER - V - UN 11	○		16 EL - V - UN 11			11		1.1	1.5
16 ER - V - UN 10	○		16 EL - V - UN 10			10		1.1	1.5
16 ER - V - UN 9	○		16 EL - V - UN 9			9		1.2	1.7
16 ER - V - UN 8	○		16 EL - V - UN 8			8		1.2	1.6
22 ER - V - UN 7	○		22 EL - V - UN 7			7		1.6	2.3
22 ER - V - UN 6	○		22 EL - V - UN 6			6	22	1.6	2.3
22 ER - V - UN 5	○		22 EL - V - UN 5			5		1.7	2.5
27 ER - V - UN 4.5			27 EL - V - UN 4.5			4.5	27	1.9	2.7
27 ER - V - UN 4			27 EL - V - UN 4			4		2.1	3.0

## Außengewinde / External Thread

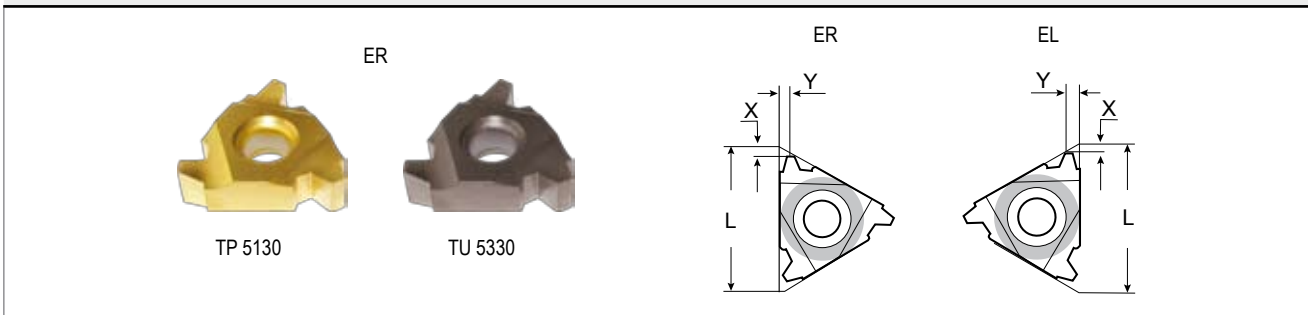
### Vollprofil RD DIN 405 Full Profile RD DIN 405



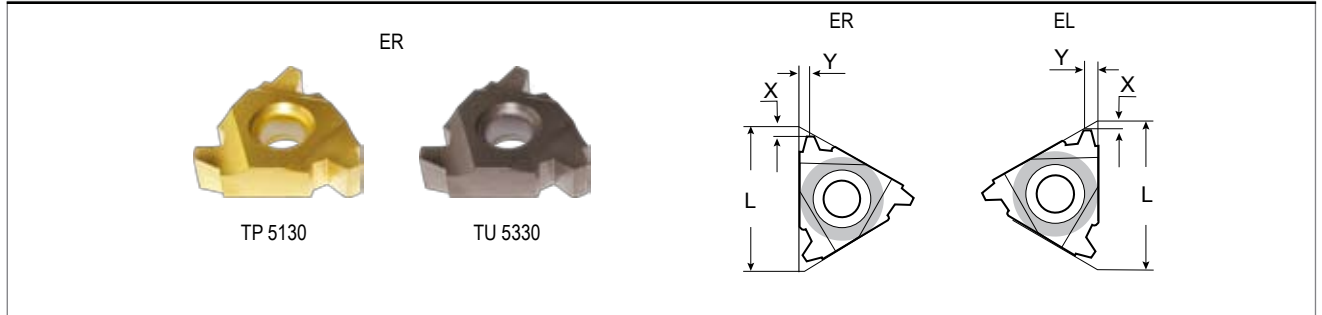
Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
16 ER -V- RD 405/10	○		16 EL -V- RD 405/10			10		1.1	1.2
16 ER -V- RD 405/8	○		16 EL -V- RD 405/8			8	16	1.4	1.3
16 ER -V- RD 405/6	●		16 EL -V- RD 405/6			6		1.5	1.7
22 ER -V- RD 405/6	●		22 EL -V- RD 405/6			6	22	1.5	1.7
22 ER -V- RD 405/4	●		22 EL -V- RD 405/4			4		2.2	2.3
27 ER -V- RD 405/4			27 EL -V- RD 405/4			4	27	2.3	2.3

## Außengewinde / External Thread

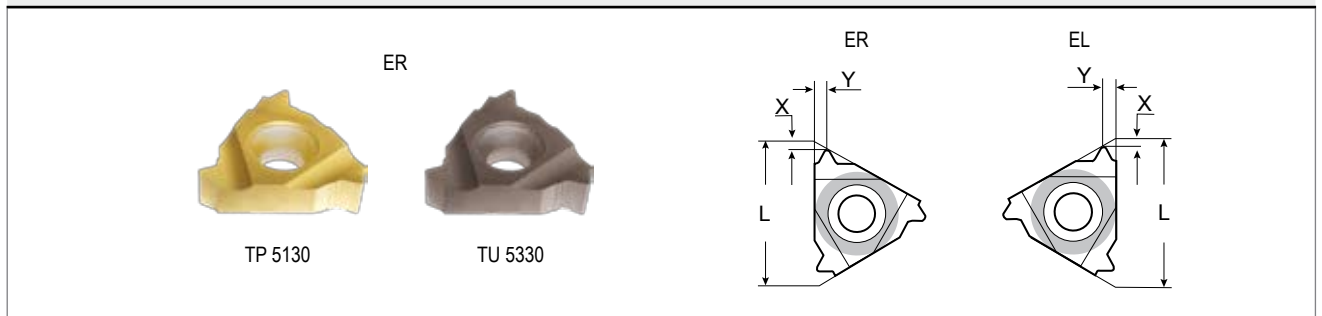
### Vollprofil TR DIN 103 Full Profile TR DIN 103



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			mm	mm	mm	mm
11 ER -V- TR 103/1.5			11 EL -V- TR 103/1.5			1.5	11	0.8	0.9
16 ER -V- TR 103/1.5	○		16 EL -V- TR 103/1.5			1.5		1.0	1.1
16 ER -V- TR 103/2	●		16 EL -V- TR 103/2			2	16	1.0	1.3
16 ER -V- TR 103/3	●		16 EL -V- TR 103/3			3		1.3	1.5
22 ER -V- TR 103/4	●		22 EL -V- TR 103/4			4		1.7	1.9
22 ER -V- TR 103/5	●		22 EL -V- TR 103/5			5	22	2.1	2.5
22 ER -V- TR 103/6	●		22 EL -V- TR 103/6			6		2.3	2.7
27 ER -V- TR 103/6			27 EL -V- TR 103/6			6	27	2.3	2.7

**Außengewinde / External Thread**
**Vollprofil ACME Full Profile ACME**


Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
<b>11 ER - V - ACME 16</b>	○		<b>11 EL - V - ACME 16</b>			16	11	0.9	1.0
<b>16 ER - V - ACME 16</b>	○		<b>16 EL - V - ACME 16</b>			16		1.0	1.1
<b>16 ER - V - ACME 14</b>	○		<b>16 EL - V - ACME 14</b>			14		1.0	1.2
<b>16 ER - V - ACME 12</b>	○		<b>16 EL - V - ACME 12</b>			12	16	1.1	1.2
<b>16 ER - V - ACME 10</b>	○		<b>16 EL - V - ACME 10</b>			10		1.3	1.3
<b>16 ER - V - ACME 8</b>	○		<b>16 EL - V - ACME 8</b>			8		1.5	1.5
<b>22 ER - V - ACME 6</b>			<b>22 EL - V - ACME 6</b>			6	22	1.8	2.1
<b>22 ER - V - ACME 5</b>			<b>22 EL - V - ACME 5</b>			5		2.0	2.3
<b>27 ER - V - ACME 4</b>			<b>27 EL - V - ACME 4</b>			4	27	2.7	2.7

**Außengewinde / External Thread**
**Vollprofil NPT 60° Full Profile NPT 60°**


Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
<b>11 ER - V - NPT 27</b>	○		<b>11 EL - V - NPT 27</b>			27		0.7	0.8
<b>11 ER - V - NPT 18</b>	○		<b>11 EL - V - NPT 18</b>			18	11	0.8	1.0
<b>11 ER - V - NPT 14</b>	○		<b>11 EL - V - NPT 14</b>			14		0.8	1.0
<b>16 ER - V - NPT 27</b>	○		<b>16 EL - V - NPT 27</b>			27		0.7	0.8
<b>16 ER - V - NPT 18</b>	○		<b>16 EL - V - NPT 18</b>			18		0.8	1.0
<b>16 ER - V - NPT 14</b>	○		<b>16 EL - V - NPT 14</b>			14	16	0.9	1.2
<b>16 ER - V - NPT 11.5</b>	○		<b>16 EL - V - NPT 11.5</b>			11.5		1.1	1.5
<b>16 ER - V - NPT 8</b>	○		<b>16 EL - V - NPT 8</b>			8		1.3	1.8



# Innengewinde / Internal Thread „DP“

55° / 60°

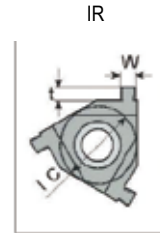


TU 5125

Profile Profiles	Bezeichnung Part Number	Lager Stock TU 5125	Steigung Pitch mm / TPI	L mm	X mm	Y mm		
<b>Teilprofil</b> Partial Profile	<b>60°</b>	11 IR -T- A 60 -DP	●	0.5 - 1.5	11	0.8	0.9	
		16 IR -T- A 60 -DP	●	0.5 - 1.5	16	0.8	0.9	
		16 IR -T- G 60 -DP	●	1.75 - 3.0	16	1.2	1.7	
		16 IR -T- AG 60 -DP	●	0.5 - 3.0	16	1.2	1.7	
		22 IR -T- N 60 -DP	●	3.5 - 5.0	22	1.7	2.5	
	<b>55°</b>	16 IR -T- A 55 -DP	●	48 - 16	16	0.8	0.9	
		16 IR -T- G 55 -DP	●	14 - 8	16	1.2	1.7	
		16 IR -T- AG 55 -DP	●	48 - 8	16	1.2	1.7	
	<b>Vollprofil</b> Full profile	<b>ISO 60°</b>	11 IR -V- ISO 1.00 -DP	●	1.00	11	0.6	0.7
			11 IR -V- ISO 1.25 -DP	●	1.25	11	0.8	0.9
11 IR -V- ISO 1.50 -DP			●	1.50	11	0.8	1.0	
16 IR -V- ISO 1.00 -DP			●	1.00	16	0.6	0.7	
16 IR -V- ISO 1.25 -DP			●	1.25	16	0.8	0.9	
16 IR -V- ISO 1.50 -DP			●	1.50	16	0.8	1.0	
16 IR -V- ISO 1.75 -DP			●	1.75	16	0.9	1.2	
16 IR -V- ISO 2.00 -DP			●	2.00	16	1.0	1.3	
16 IR -V- ISO 2.50 -DP			●	2.50	16	1.1	1.5	
16 IR -V- ISO 3.00 -DP			●	3.00	16	1.1	1.5	
<b>BSW 55°</b>			16 IR -V- BSW 19 -DP	●	19	16	0.8	1.0
			16 IR -V- BSW 14 -DP	●	14	16	1.0	1.2
			16 IR -V- BSW 12 -DP	●	12	16	1.1	1.4
			16 IR -V- BSW 11 -DP	●	11	16	1.1	1.5
<b>NPT 60°</b>		16 IR -V- NPT 18 -DP	●	18	16	0.8	1.0	
		16 IR -V- NPT 14 -DP	●	14	16	0.9	1.2	
		16 IR -V- NPT 11.5 -DP	●	11.50	16	1.1	1.5	
<b>UN 60°</b>		16 IR -V- UN 12 -DP	●	12	16	1.1	1.4	
		16 IR -V- UN 16 -DP	●	16	16	0.9	1.1	
		16 IR -V- UN 18 -DP	●	18	16	0.8	1.0	
		16 IR -V- UN 20 -DP	●	20	16	0.8	0.9	
<b>ISO 60°</b>		22 IR -V- ISO 3.50 -DP	●	3.50	22	1.6	2.3	
		22 IR -V- ISO 4.00 -DP	●	4.00	22	1.6	2.3	
		22 IR -V- ISO 5.00 -DP	●	5.00	22	1.6	2.3	
		22 IR -V- ISO 6.00 -DP	●	6.00	22	1.6	2.4	

- Drehen  
Turning
- Fräswerkzeuge  
Milling Tools
- HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills
- Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools
- Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools
- Gewinde-  
werkzeuge  
Threading tools
- Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

## Präzisions-Einstecken Innen / Grooving Internal



Bezeichnung Part Number	Lager Stock	Bezeichnung Part Number	Lager Stock	IC	L	W +0,05 +0,10	t ±0,10
Rechte WSP RH Inserts	TU 5330	Linke WSP LH Inserts	TU 5330	mm	mm	mm	mm
<b>60° innen / internal</b>		<b>60° innen / internal</b>					
<b>16 IR -1.10- T1.30</b>	●	<b>16 IL -1.10- T1.30</b>	○			1.10	1.30
<b>16 IR -1.30- T1.30</b>	●	<b>16 IL -1.30- T1.30</b>	○			1.30	1.50
<b>16 IR -1.60- T1.85</b>	●	<b>16 IL -1.60- T1.85</b>	○	9.525 (3/8")	16	1.60	1.85
<b>16 IR -1.85- T2.00</b>	●	<b>16 IL -1.85- T2.00</b>	○			1.85	2.00
<b>16 IR -2.15- T2.50</b>	●	<b>16 IL -2.15- T2.50</b>	○			2.15	2.25

## Set Präzisions - Einstecken Grooving



16IR 1.10-2.15/TU 5330

bestehend aus:

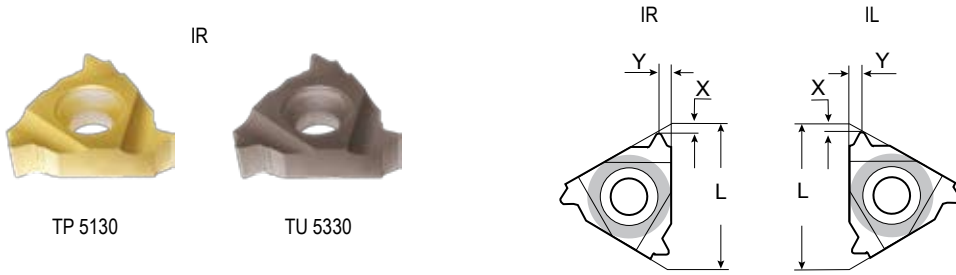
consisting of:

je 2 Stechplatten in den Breiten  
each 2 grooving inserts in size  
1.10, 1.30, 1.60, 1.85, 2.15 mm



# Innengewinde / Internal Thread

## Teilprofil 60° Partial Profile 60°



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			mm	mm	mm	mm
<b>60° innen / internal</b>			<b>60° innen / internal</b>						
<b>06 IR -T- A 60</b>	○		<b>06 IL -T- A 60</b>			0.5 - 1.25	6	0.6	0.6
<b>08 IR -T- A 60</b>	○		<b>08 IL -T- A 60</b>			0.5 - 1.5	8	0.6	0.7
<b>11 IR -T- A 60</b>	●		<b>11 IL -T- A 60</b>			0.5 - 1.5	11	0.8	0.9
<b>16 IR -T- A 60</b>	●		<b>16 IL -T- A 60</b>	○		0.5 - 1.5	16	0.8	0.9
<b>16 IR -T- G 60</b>	●		<b>16 IL -T- G 60</b>	○		1.75 - 3.0	16	1.2	1.7
<b>16 IR -T- AG 60</b>	●	●	<b>16 IL -T- AG 60</b>	○		0.5 - 3.0	16	1.2	1.7
<b>22 IR -T- N 60</b>	○		<b>22 IL -T- N 60</b>			3.5 - 5.0	22	1.7	2.5
<b>27 IR -T- Q 60</b>			<b>27 IL -T- Q 60</b>			5.5 - 6.0	27	1.8	2.7

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

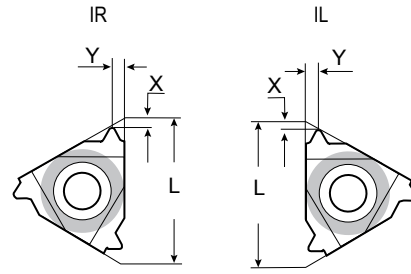
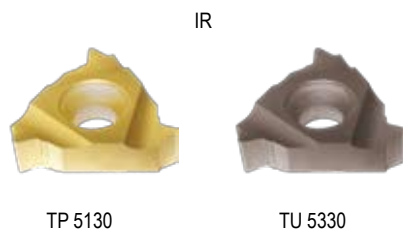
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# Innengewinde / Internal Thread

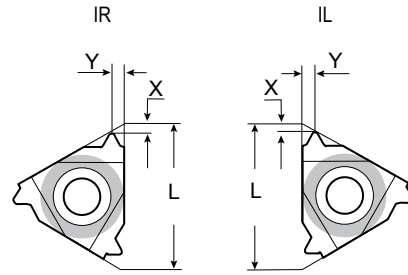
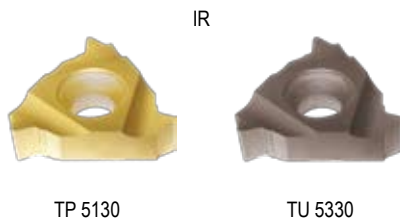
Teilprofil 55° Partial Profile 55°



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch mm	L mm	X mm	Y mm
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts						
<b>55° innen / internal</b>			<b>55° innen / internal</b>						
<b>06 IR -T- A55</b>	○		<b>06 IL -T- A55</b>			48-20	6	0.6	0.6
<b>08 IR -T- A55</b>	○		<b>08 IL -T- A55</b>			48-16	8	0.6	0.7
<b>11 IR -T- A55</b>	●		<b>11 IL -T- A55</b>			48-16	11	0.8	0.9
<b>16 IR -T- A55</b>	●		<b>16 IL -T- A55</b>	○		48-16	16	0.8	0.9
<b>16 IR -T- G55</b>	●		<b>16 IL -T- G55</b>	○		14-8	16	1.2	1.7
<b>16 IR -T- AG55</b>	●		<b>16 IL -T- AG55</b>	○		48-8	16	1.2	1.7
<b>22 IR -T- N55</b>			<b>22 IL -T- N55</b>			7-5	22	1.7	2.5
<b>27 IR -T- Q55</b>			<b>27 IL -T- Q55</b>			4.5-4	27	2.0	2.9

# Innengewinde / Internal Thread

Vollprofil ISO 60° Full Profile ISO 60°



Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

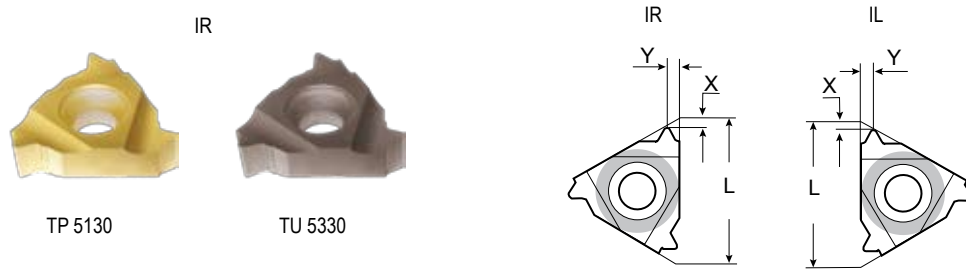
Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
06 IR - V - ISO 0.5	○		06 IL - V - ISO 0.5			0.5		0.9	0.5
06 IR - V - ISO 0.75	○		06 IL - V - ISO 0.75			0.75		0.8	0.5
06 IR - V - ISO 1.0	○		06 IL - V - ISO 1.0			1.0	6	0.7	0.6
06 IR - V - ISO 1.25	○		06 IL - V - ISO 1.25			1.25		0.6	0.6
06 IR - V - ISO 1.5	○		06 IL - V - ISO 1.5			1.5		0.5	0.6
08 IR - V - ISO 0.5	○		08 IL - V - ISO 0.5			0.5		0.6	0.5
08 IR - V - ISO 0.75	○		08 IL - V - ISO 0.75			0.75		0.6	0.5
08 IR - V - ISO 1.0	○		08 IL - V - ISO 1.0			1.0	8	0.6	0.6
08 IR - V - ISO 1.25	○		08 IL - V - ISO 1.25			1.25		0.6	0.7
08 IR - V - ISO 1.5	○		08 IL - V - ISO 1.5			1.5		0.6	0.7
08 IR - V - ISO 1.75	○		08 IL - V - ISO 1.75			1.75		0.6	0.8
11 IR - V - ISO 0.35			11 IL - V - ISO 0.35			0.35		0.8	0.3
11 IR - V - ISO 0.4			11 IL - V - ISO 0.4			0.4		0.8	0.4
11 IR - V - ISO 0.45			11 IL - V - ISO 0.45			0.45		0.8	0.4
11 IR - V - ISO 0.5	○		11 IL - V - ISO 0.5			0.5		0.6	0.6
11 IR - V - ISO 0.6	○		11 IL - V - ISO 0.6			0.6		0.6	0.6
11 IR - V - ISO 0.7	○		11 IL - V - ISO 0.7			0.7		0.6	0.6
11 IR - V - ISO 0.75	●		11 IL - V - ISO 0.75			0.75	11	0.6	0.6
11 IR - V - ISO 0.8	○		11 IL - V - ISO 0.8			0.8		0.6	0.6
11 IR - V - ISO 1.0	●		11 IL - V - ISO 1.0			1.0		0.6	0.7
11 IR - V - ISO 1.25	●		11 IL - V - ISO 1.25			1.25		0.8	0.9
11 IR - V - ISO 1.5	●		11 IL - V - ISO 1.5			1.5		0.8	1.0
11 IR - V - ISO 1.75	●		11 IL - V - ISO 1.75			1.75		0.9	1.1
11 IR - V - ISO 2.0	●		11 IL - V - ISO 2.0			2.0		0.8	0.9
11 IR - V - ISO 2.5	●		11 IL - V - ISO 2.5			2.5		0.8	1.2

# Innengewinde / Internal Thread

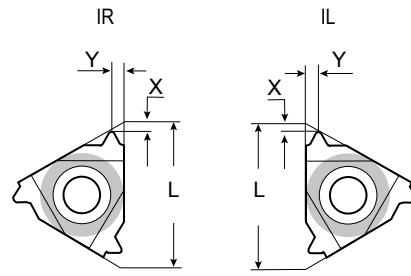
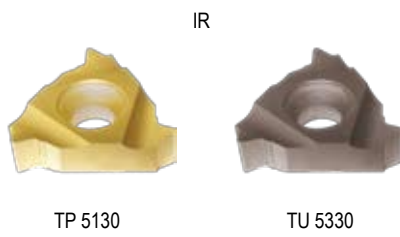
Vollprofil ISO 60° Full Profile ISO 60°



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	Rechte WSP RH Inserts	TP 5130 TU 5330		Linke WSP LH Inserts	TP 5130 TU 5330				
16 IR - V - ISO 0.35			16 IL - V - ISO 0.35			0.35		0.8	0.3
16 IR - V - ISO 0.4			16 IL - V - ISO 0.4			0.4		0.8	0.4
16 IR - V - ISO 0.45			16 IL - V - ISO 0.45			0.45		0.8	0.4
16 IR - V - ISO 0.5	●		16 IL - V - ISO 0.5	○		0.5		0.6	0.6
16 IR - V - ISO 0.6	○		16 IL - V - ISO 0.6			0.6		0.6	0.6
16 IR - V - ISO 0.7	●		16 IL - V - ISO 0.7			0.7		0.6	0.6
16 IR - V - ISO 0.75	●		16 IL - V - ISO 0.75	○		0.75		0.6	0.6
16 IR - V - ISO 0.8	●		16 IL - V - ISO 0.8			0.8	16	0.6	0.6
16 IR - V - ISO 1.0	●	●	16 IL - V - ISO 1.0	●		1.0		0.6	0.7
16 IR - V - ISO 1.25	●	●	16 IL - V - ISO 1.25	○		1.25		0.8	0.9
16 IR - V - ISO 1.5	●	●	16 IL - V - ISO 1.5	●		1.5		0.8	1.0
16 IR - V - ISO 1.75	●	●	16 IL - V - ISO 1.75	●		1.75		0.9	1.2
16 IR - V - ISO 2.0	●	●	16 IL - V - ISO 2.0	●		2.0		1.0	1.3
16 IR - V - ISO 2.5	●	●	16 IL - V - ISO 2.5	●		2.5		1.1	1.5
16 IR - V - ISO 3.0	●	●	16 IL - V - ISO 3.0	●		3.0		1.1	1.5
16 IR - V - ISO 3.5	●	●	16 IL - V - ISO 3.5			3.5		1.2	1.7
22 IR - V - ISO 3.5	●		22 IL - V - ISO 3.5			3.5		1.6	2.3
22 IR - V - ISO 4.0	●		22 IL - V - ISO 4.0			4.0		1.6	2.3
22 IR - V - ISO 4.5	●		22 IL - V - ISO 4.5			4.5		1.6	2.4
22 IR - V - ISO 5.0	●		22 IL - V - ISO 5.0			5.0	22	1.6	2.3
22 IR - V - ISO 5.5	●		22 IL - V - ISO 5.5			5.5		1.6	2.3
22 IR - V - ISO 6.0	●		22 IL - V - ISO 6.0			6.0		1.6	2.4
27 IR - V - ISO 5.5	○		27 IL - V - ISO 5.5			5.5		1.6	2.3
27 IR - V - ISO 6.0	○		27 IL - V - ISO 6.0			6.0	27	1.8	2.5

# Innengewinde / Internal Thread

**Vollprofil 55° Full Profile 55°**  
BSW, BSF, BSP, BSB, Whitworth



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		Linke WSP LH Inserts	TP 5130				
Rechte WSP RH Inserts	TP 5130	TU 5330	Linke WSP LH Inserts	TP 5130	TU 5330	TPI	mm	mm	mm
11 IR - V - BSW 40			11 IL - V - BSW 40			40		0.6	0.6
11 IR - V - BSW 36			11 IL - V - BSW 36			36		0.6	0.6
11 IR - V - BSW 32			11 IL - V - BSW 32			32		0.6	0.6
11 IR - V - BSW 28	○		11 IL - V - BSW 28			28		0.6	0.7
11 IR - V - BSW 26	○		11 IL - V - BSW 26			26		0.7	0.7
11 IR - V - BSW 24	○		11 IL - V - BSW 24			24		0.7	0.8
11 IR - V - BSW 22	○		11 IL - V - BSW 22			22	11	0.8	0.9
11 IR - V - BSW 20	○		11 IL - V - BSW 20			20		0.8	0.9
11 IR - V - BSW 19	●	○	11 IL - V - BSW 19			19		0.8	1.0
11 IR - V - BSW 18	○	○	11 IL - V - BSW 18			18		0.8	1.0
11 IR - V - BSW 16	○		11 IL - V - BSW 16			16		0.9	1.1
11 IR - V - BSW 14	●	○	11 IL - V - BSW 14			14		0.9	1.1
16 IR - V - BSW 40			16 IL - V - BSW 40			40		0.6	0.6
16 IR - V - BSW 36			16 IL - V - BSW 36			36		0.6	0.6
16 IR - V - BSW 32			16 IL - V - BSW 32			32		0.6	0.6
16 IR - V - BSW 28	○		16 IL - V - BSW 28			28		0.6	0.7
16 IR - V - BSW 26	●		16 IL - V - BSW 26			26		0.7	0.8
16 IR - V - BSW 24	○		16 IL - V - BSW 24			24		0.7	0.8
16 IR - V - BSW 22	○		16 IL - V - BSW 22			22		0.8	0.9
16 IR - V - BSW 20	●		16 IL - V - BSW 20			20		0.8	0.9
16 IR - V - BSW 19	●		16 IL - V - BSW 19			19	16	0.8	1.0
16 IR - V - BSW 18	●		16 IL - V - BSW 18			18		0.8	1.0
16 IR - V - BSW 16	●		16 IL - V - BSW 16			16		0.9	1.1
16 IR - V - BSW 14	●	●	16 IL - V - BSW 14			14		1.0	1.2
16 IR - V - BSW 12	○	○	16 IL - V - BSW 12			12		1.1	1.4
16 IR - V - BSW 11	●	●	16 IL - V - BSW 11			11		1.1	1.5
16 IR - V - BSW 10	●		16 IL - V - BSW 10			10		1.1	1.5
16 IR - V - BSW 9	●		16 IL - V - BSW 9			9		1.2	1.7
16 IR - V - BSW 8	●		16 IL - V - BSW 8			8		1.2	1.5
22 IR - V - BSW 7	○		22 IL - V - BSW 7			7		1.6	2.3
22 IR - V - BSW 6	○		22 IL - V - BSW 6			6	22	1.6	2.3
22 IR - V - BSW 5	○		22 IL - V - BSW 5			5		1.7	2.4
27 IR - V - BSW 4.5			27 IL - V - BSW 4.5			4.5		1.8	2.6
27 IR - V - BSW 4			27 IL - V - BSW 4			4	27	2.0	2.9

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/Solid Carbide  
Endmills

Stech- und  
Abstechwerkzeuge  
Grooving and  
Parting off Tools

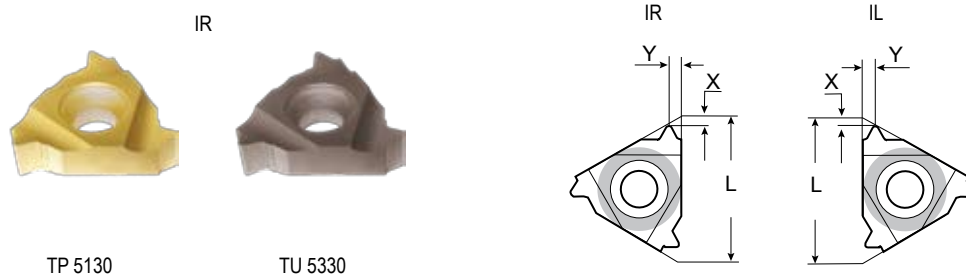
Mini/ Micro  
Schneidwerkzeuge  
Mini/ Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendepplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills

# Innengewinde / Internal Thread

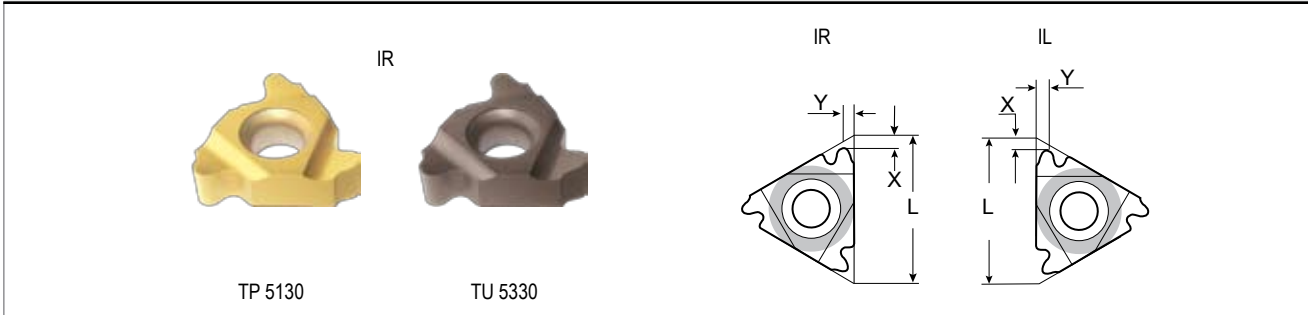
**Vollprofil 60° Full Profile 60°**  
UN, UNC, UNF, UNEF, UNS



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L mm	X mm	Y mm
	Rechte WSP RH Inserts	TP 5130 TU 5330		Linke WSP LH Inserts	TP 5130 TU 5330				
11 IR - V - UN 40			11 IL - V - UN 40			40		0.6	0.6
11 IR - V - UN 36			11 IL - V - UN 36			36		0.6	0.6
11 IR - V - UN 32	○		11 IL - V - UN 32			32		0.6	0.6
11 IR - V - UN 28	○		11 IL - V - UN 28			28		0.6	0.7
11 IR - V - UN 27	○		11 IL - V - UN 27			27		0.7	0.8
11 IR - V - UN 24	○		11 IL - V - UN 24			24	11	0.7	0.8
11 IR - V - UN 20	○		11 IL - V - UN 20			20		0.8	0.9
11 IR - V - UN 18	○		11 IL - V - UN 18			18		0.8	1.0
11 IR - V - UN 16	○		11 IL - V - UN 16			16		0.9	1.1
11 IR - V - UN 14	○		11 IL - V - UN 14			14		0.9	1.1
16 IR - V - UN 40			16 IL - V - UN 40			40		0.6	0.6
16 IR - V - UN 36			16 IL - V - UN 36			36		0.6	0.6
16 IR - V - UN 32	○		16 IL - V - UN 32			32		0.6	0.6
16 IR - V - UN 28	●		16 IL - V - UN 28			28		0.6	0.7
16 IR - V - UN 27	○		16 IL - V - UN 27			27		0.7	0.8
16 IR - V - UN 24	●		16 IL - V - UN 24			24		0.7	0.8
16 IR - V - UN 20	●		16 IL - V - UN 20			20		0.8	0.9
16 IR - V - UN 18	●		16 IL - V - UN 18			18	16	0.8	1.0
16 IR - V - UN 16	●		16 IL - V - UN 16			16		0.9	1.1
16 IR - V - UN 14	●		16 IL - V - UN 14			14		0.9	1.2
16 IR - V - UN 13	○		16 IL - V - UN 13			13		1.0	1.3
16 IR - V - UN 12	●		16 IL - V - UN 12			12		1.1	1.4
16 IR - V - UN 11	○		16 IL - V - UN 11			11		1.1	1.5
16 IR - V - UN 10	○		16 IL - V - UN 10			10		1.1	1.5
16 IR - V - UN 9	●		16 IL - V - UN 9			9		1.2	1.7
16 IR - V - UN 8	●		16 IL - V - UN 8			8		1.1	1.5
22 IR - V - UN 7	○		22 IL - V - UN 7			7		1.6	2.3
22 IR - V - UN 6	○		22 IL - V - UN 6			6	22	1.6	2.3
22 IR - V - UN 5	○		22 IL - V - UN 5			5		1.6	2.3
27 IR - V - UN 4.5			27 IL - V - UN 4.5			4.5		1.7	2.4
27 IR - V - UN 4			27 IL - V - UN 4			4	27	1.8	2.7

## Innengewinde / Internal Thread

### Vollprofil RD DIN 405 Full Profile RD DIN 405



Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
16 IR - V - RD 405 / 10	○		16 IL - V - RD 405 / 10			10		1.1	1.2
16 IR - V - RD 405 / 8	●		16 IL - V - RD 405 / 8			8	16	1.4	1.4
16 IR - V - RD 405 / 6	○		16 IL - V - RD 405 / 6			6		1.4	1.5
22 IR - V - RD 405 / 6	○		22 IL - V - RD 405 / 6			6	22	1.5	1.7
22 IR - V - RD 405 / 4	○		22 IL - V - RD 405 / 4			4		2.2	2.3
27 IR - V - RD 405 / 4			27 IL - V - RD 405 / 4			4	27	2.2	2.3

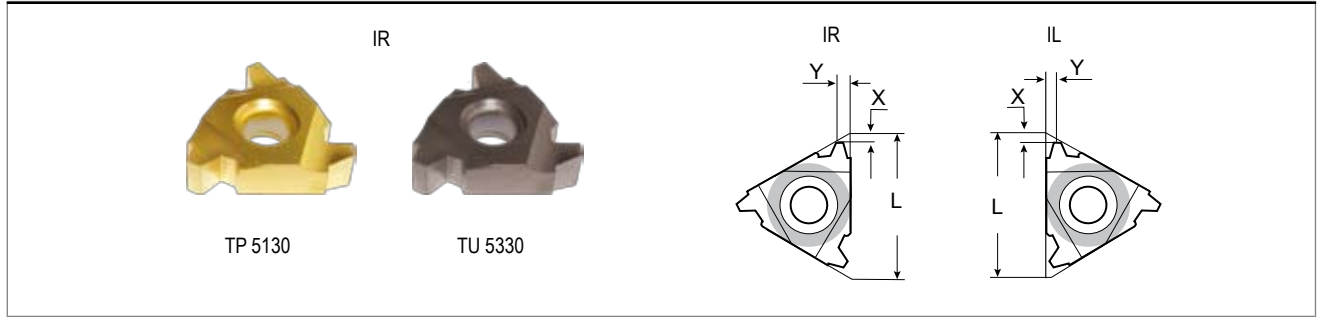
## Innengewinde / Internal Thread

### Vollprofil TR DIN 103 Full Profile TR DIN 103



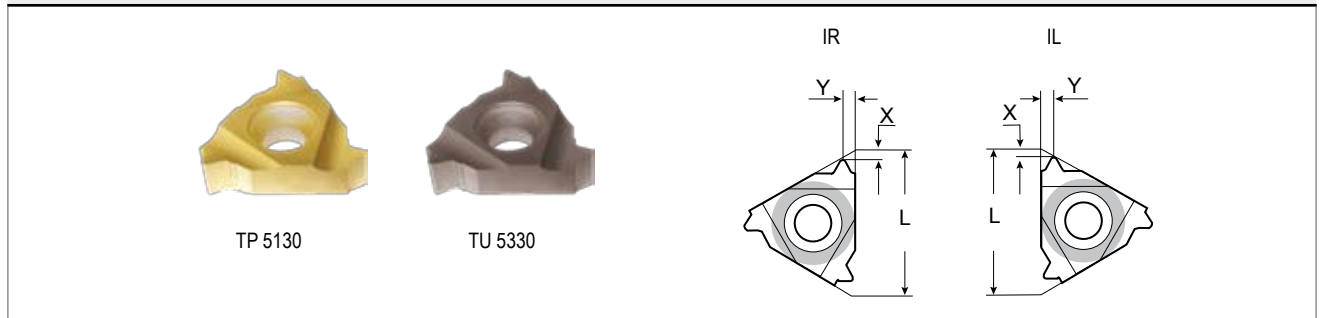
Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	TP 5130	TU 5330		TP 5130	TU 5330				
Rechte WSP RH Inserts			Linke WSP LH Inserts			TPI	mm	mm	mm
11 IR - V - TR 103 / 1.5			11 IL - V - TR 103 / 1.5			1.5	11	0.8	0.9
16 IR - V - TR 103 / 1.5	○		16 IL - V - TR 103 / 1.5			1.5		1.0	1.1
16 IR - V - TR 103 / 2	●		16 IL - V - TR 103 / 2			2	16	1.0	1.3
16 IR - V - TR 103 / 3	●		16 IL - V - TR 103 / 3			3		1.3	1.5
22 IR - V - TR 103 / 4	●		22 IL - V - TR 103 / 4			4		1.7	1.9
22 IR - V - TR 103 / 5	●		22 IL - V - TR 103 / 5			5	22	2.1	2.5
22 IR - V - TR 103 / 6	●		22 IL - V - TR 103 / 6			6		2.3	2,7
27 IR - V - TR 103 / 6			27 IL - V - TR 103 / 6			6	27	2.3	2,7

## Innengewinde / Internal Thread

**Vollprofil ACME Full Profile ACME**


Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	Rechte WSP RH Inserts	TP 5130 TU 5330		Linke WSP LH Inserts	TP 5130 TU 5330				
11 IR - V - ACME16	○		11 IL - V - ACME16			16	11	0.9	1.0
16 IR - V - ACME16	○		16 IL - V - ACME16			16		0.9	1.0
16 IR - V - ACME14	○		16 IL - V - ACME14			14		1.0	1.2
16 IR - V - ACME12	○		16 IL - V - ACME12			12	16	1.1	1.2
16 IR - V - ACME10	○		16 IL - V - ACME10			10		1.3	1.3
16 IR - V - ACME8	○		16 IL - V - ACME8			8		1.5	1.5
22 IR - V - ACME6	○		22 IL - V - ACME6			6		1.8	2.1
22 IR - V - ACME5	●		22 IL - V - ACME5			5	22	2.0	2.3
27 IR - V - ACME 4			27 IL - V - ACME 4			4	27	2.3	2.6

## Innengewinde / Internal Thread

**Vollprofil NPT 60° Full Profile NPT 60°**


Bezeichnung Part Number	Lager Stock		Bezeichnung Part Number	Lager Stock		Steigung Pitch	L	X	Y
	Rechte WSP RH Inserts	TP 5130 TU 5330		Linke WSP LH Inserts	TP 5130 TU 5330				
11 IR - V - NPT 27	○		11 IL - V - NPT 27			27		0.7	0.8
11 IR - V - NPT 18	○		11 IL - V - NPT 18			18	11	0.8	1.0
11 IR - V - NPT 14	○		11 IL - V - NPT 14			14		0.8	1.0
16 IR - V - NPT 27	○		16 IL - V - NPT 27			27		0.7	0.8
16 IR - V - NPT 18	●		16 IL - V - NPT 18			18		0.8	1.0
16 IR - V - NPT 14	●		16 IL - V - NPT 14			14	16	0.9	1.2
16 IR - V - NPT 11.5	●		16 IL - V - NPT 11.5			11.5		1.1	1.5
16 IR - V - NPT 8	●		16 IL - V - NPT 8			8		1.3	1.8

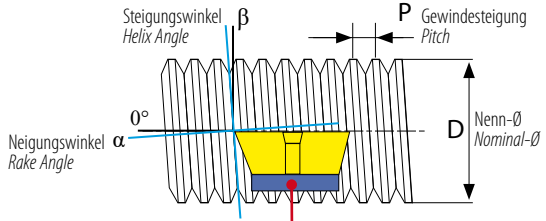


# Gewindedrehen - Technische Information

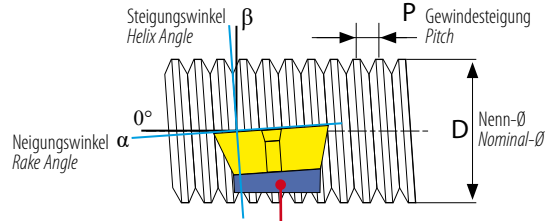
## Threading - Technical Information

Zugunsten einer größtmöglichen Profilgenauigkeit, bester Oberflächengüte sowie einem gleichmäßigen Verschleiß und der damit verbundenen längeren Standzeit der Wendeschneidplatte, muss der **Wendepplatten-Neigungswinkel "α"** mit dem **Gewinde-Steigungswinkel "β"** möglichst exakt übereinstimmen.

*In favor of high level on accuracy of the profile, best surface finish as well as simultaneously wear and longer tool life of the insert, the rake angle "α" of the insert and the helix angle "β" of the thread have to agree.*



Unterlegplatte mit falschem Neigungswinkel  
Shim with incorrect rake angle

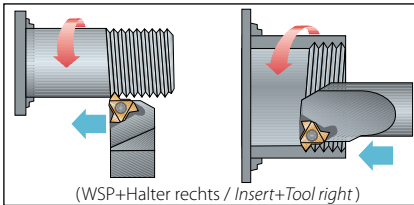


Unterlegplatte mit richtigem Neigungswinkel  
Shim with correct rake angle

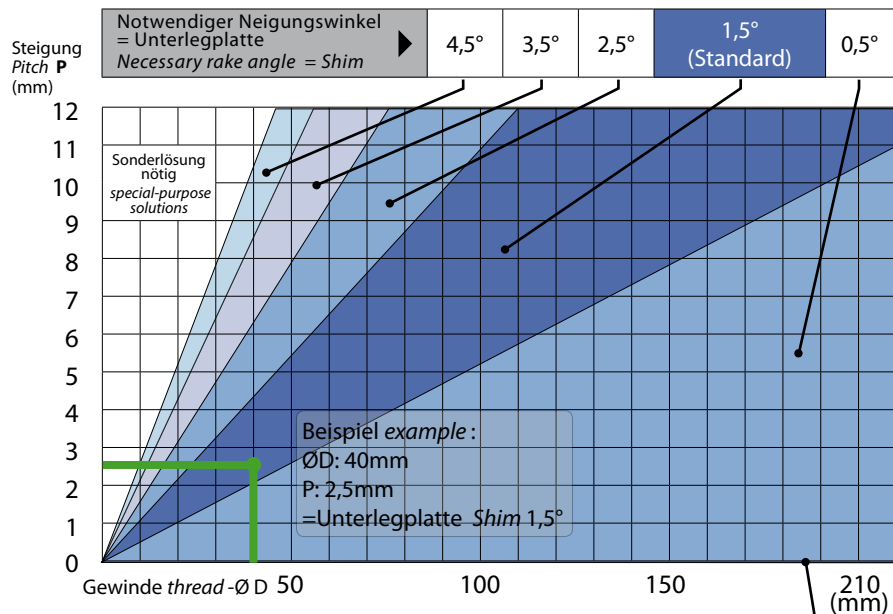
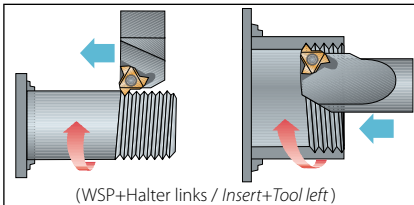
### Steigungswinkeldiagramm zum Austausch der Unterlegplatten für metrisches Gewinde

#### Vorschub in Richtung Futter Movement to Chuck

##### Rechtsgewinde Right Thread:

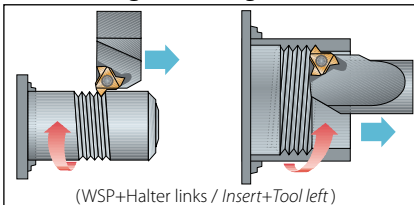


##### Linksgewinde Left Thread:

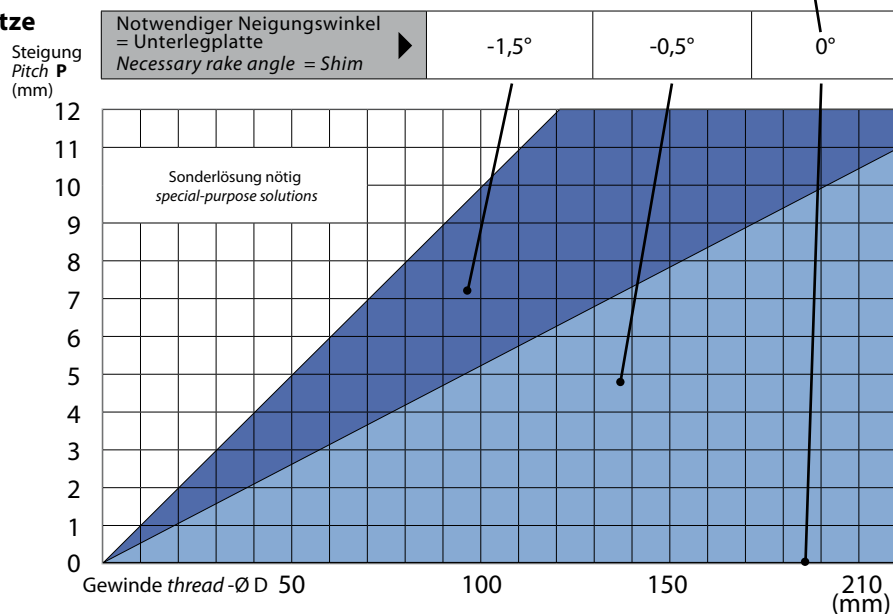
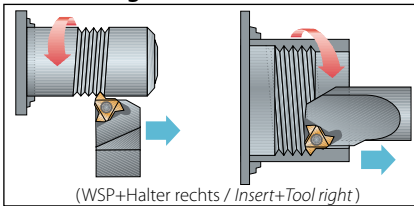


#### Vorschub in Richtung Drehbankspitze Movement to Center

##### Rechtsgewinde Right Thread:



##### Linksgewinde Left Thread:



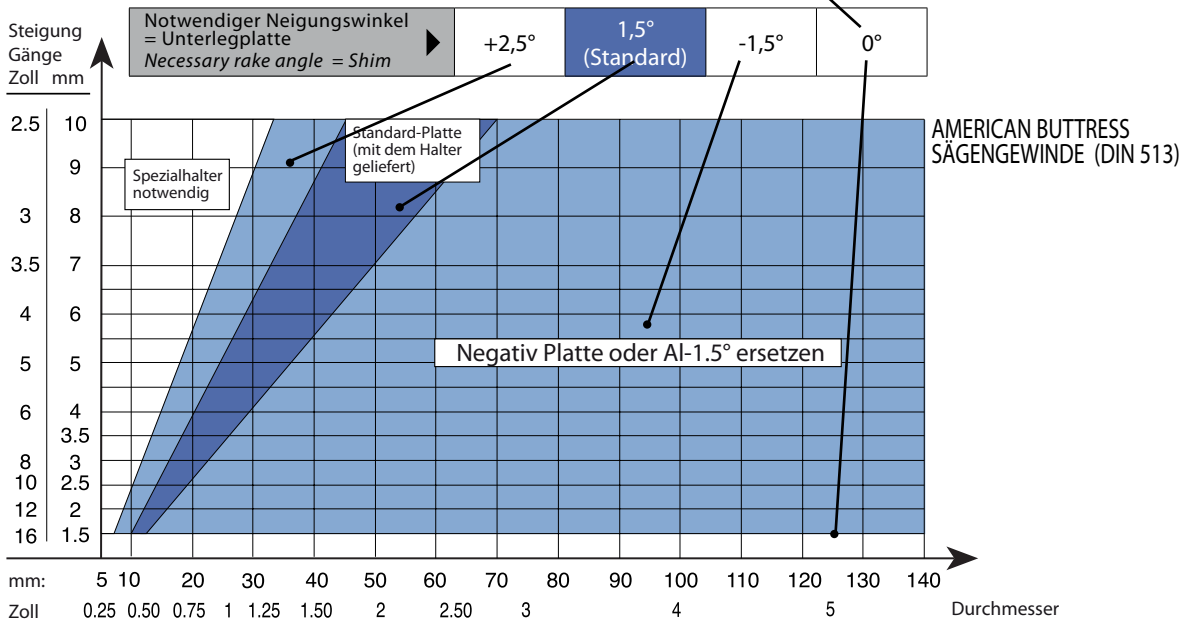
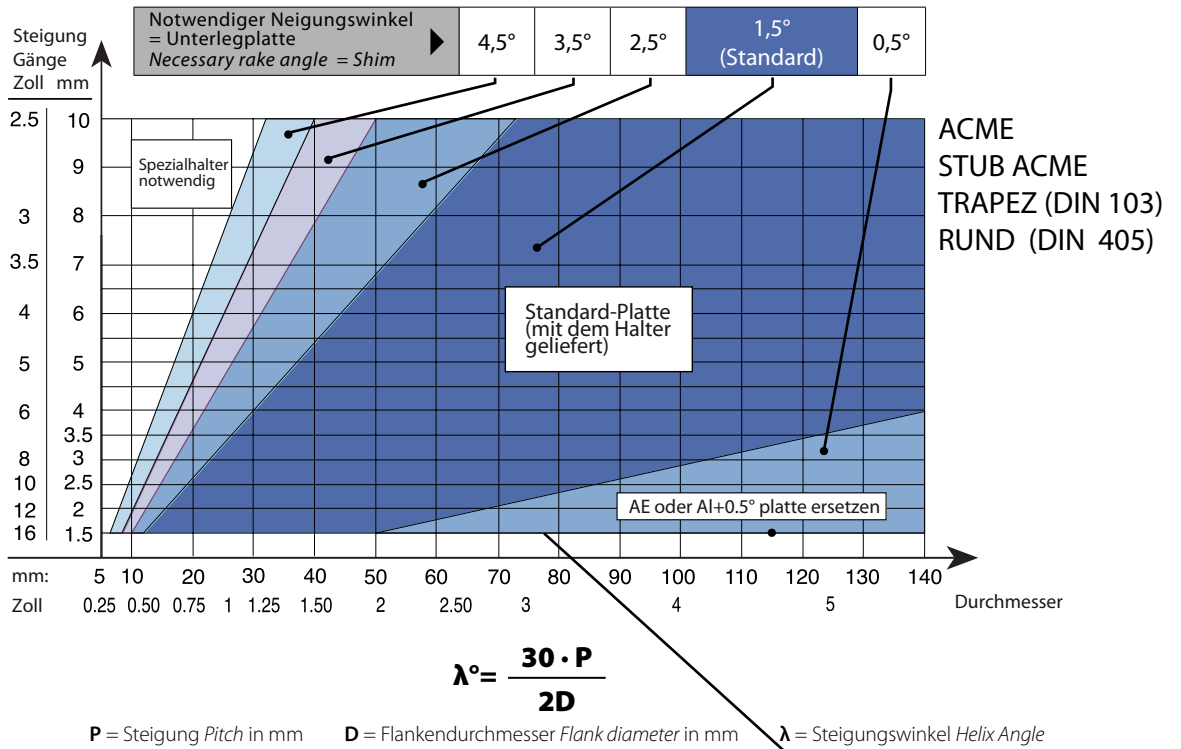
$$\lambda^\circ = \frac{20 \cdot P}{D} \quad \text{tg } \lambda = \frac{P}{3,14 \cdot D}$$

P = Steigung Pitch in mm

D = Flankendurchmesser Flank diameter in mm

λ = Steigungswinkel Helix Angle

**Steigungswinkeldiagramm zum Austausch der Unterlegplatten**



**Richtwerte für die Anzahl der Gewindedurchgänge \***  
**Guide Lines for the Number of Threading Passes \***

Steigung Pitch	mm	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.5	3.0	4.0	5.0	6.0
	G/1" TPI	48	32	24	20	16	14	12	10	8	6	5	4
Zahl der Durchgänge No. of passes		4-6	4-7	4-8	5-9	6-10	7-12	7-12	8-14	10-16	11-18	12-20	12-20

\*abhängig von Werkstoff und Schnittbedingungen depends on material and cutting conditions

## Unterschiede zwischen Voll- und Teilprofil-Gewindeschneidplatten Differences between Full and Partial Profile Threading Inserts

### Vollprofil - Gewindeschneidplatte



### Full Profile - Threading Insert

#### Vorteile / Advantages

Das gesamte Gewindeprofil einschließlich Gewindespitze wird normhaltig bearbeitet - für Serienfertigung geeignet.  
*The complete thread profile including tip of thread is machined complying with the norm - suitable for series production.*  
Die Gewindespitzen sind gratfrei.  
*The tips of thread are burr-free.*

#### Nachteile / Disadvantages

Für jede Steigung wird eine andere Wendeschneidplatte benötigt.  
*For every pitch a different insert is required.*

### Teilprofil - Gewindeschneidplatte



### Partial Profile - Threading Insert

#### Vorteile / Advantages

Mit wenigen Wendeschneidplatten können die meisten Steigungen gefertigt werden.  
*With only a few inserts it is possible to machine most of the different pitches.*

#### Nachteile / Disadvantages

Das Gewindeprofil weicht geringfügig von der Norm ab.  
*The profile of thread differs slightly from the norm.*  
Die Gewindespitzen müssen häufig nachträglich entgratet werden.  
*The tips of thread often have to be de-burred.*

## Schnittdaten-Empfehlungen zum Gewindedrehen Cutting Data Recommendations for Threading

	Werkstückwerkstoff Material	Festigkeit Tensile strength	Schnittgeschwindigkeiten / Cutting speeds $v_c$ [m/min]	
			TP 5130 (P/M30/K20C)	TU 5330 (P30C)
A (P)	unlegierter Stahl mild steel	< 650 N/mm <sup>2</sup>	70 - 200	70 - 220
		650 - 850 N/mm <sup>2</sup>	70 - 160	70 - 160
R (M)	legierter Stahl alloyed steel	700 - 1000 N/mm <sup>2</sup>	90 - 160	90 - 180
		1000 - 1300 N/mm <sup>2</sup>	70 - 120	70 - 120
R (M)	rostfreier Stahl stainless steel	500 - 700 N/mm <sup>2</sup> (austenitisch /austenitic)	80 - 160	50 - 240
		500 - 900 N/mm <sup>2</sup> (ferritisch /ferritic)	100 - 160	50 - 200
F (K)	Grauguss grey cast iron	110 - 150 HB	150 - 220	60 - 230
		> 150 HB	100 - 160	60 - 160
N	Aluminium und Kupferlegierungen aluminium and copper alloys	50 - 160 HB	80 - 360	100 - 500

## Symbolerklärung Explanation of Symbols



Metrisches ISO-Regelgewinde DIN 13  
ISO Metric Coarse Thread DIN 13



Für universellen Einsatz  
For universal use



Sackloch  
Blind Hole



Vaporisiert  
Steam treatment



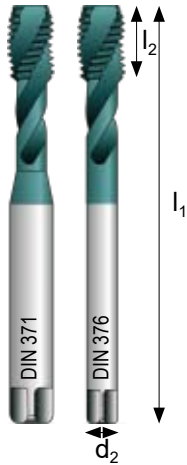
Durchgangsloch  
Through Hole

## Schnittdaten-Richtwerte ( bei Verwendung von Emulsion / Schneidöl ) Cutting Data Recommendations ( when using emulsion / cutting oil )

Werkstückwerkstoff Material	Festigkeit Tensile strength	Schnittgeschwindigkeiten / Cutting feeds $v_c$ [m/min]	
		JD 4126	JD 4226
<b>A</b> Unlegierter Stahl Mild steel	< 650 N/mm <sup>2</sup>	08 - 12	10 - 15
		08 - 10	10 - 12
	650 - 850 N/mm <sup>2</sup>	06 - 08	08 - 10
		08 - 10	
Legierter Stahl Alloyed steel	700 - 1000 N/mm <sup>2</sup>	06 - 08	08 - 10
	1000 - 1300 N/mm <sup>2</sup>		
<b>R</b> Rostfreier Stahl Stainless steel	500 - 700 N/mm <sup>2</sup> (austenitisch / austenitic)	05 - 06	06 - 08
		05 - 06	06 - 08
	500 - 900 N/mm <sup>2</sup> (ferritisch / ferritic)	05 - 06	06 - 08
<b>F</b> Grauguss Grey cast iron	110 - 150 HB	10 - 12	12 - 15
		08 - 10	10 - 12
	> 150 HB	10 - 12	
<b>N</b> Aluminium Aluminium		12 - 15	15 - 18
	Kupferlegierungen Copper alloys	08 - 12	08 - 15

## Maschinengewindebohrer / Machine Taps

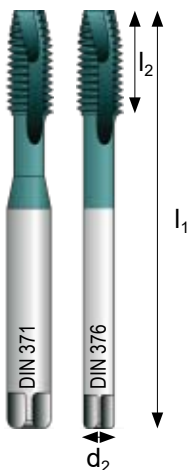
Typ Type VA/UNI
DIN 371 376
M
40°
SL
Form C 2-3
Tol. 6 H ISO 2
HSS-E
vapor.



Bezeichnung Part Number	DIN	Nennmaß Size	Lager Stock	Maße [mm] Dimensions					Z
				Steigung Pitch	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a	
JD 4126 M3		M3	●	0.50	56	5	3.50	2.7	
JD 4126 M4		M4	●	0.70	63	7	4.50	3.4	
JD 4126 M5	371	M5	●	0.80	70	8	6.00	4.9	
JD 4126 M6		M6	●	1.00	80	10	6.00	4.9	3
JD 4126 M8		M8	●	1.25	90	13	8.00	6.2	
JD 4126 M10		M10	●	1.50	100	15	10.00	8.0	
JD 4126 M12		M12	●	1.75	110	18	9.00	7.0	
JD 4126 M14	376	M14	○	2.00	110	20	11.00	9.0	
JD 4126 M16		M16	○	2.00	110	20	12.00	9.0	4

## Maschinengewindebohrer / Machine Taps

Typ Type VA/UNI
DIN 371 376
M
DL
Form B 3-5
Tol. 6 H ISO 2
HSS-E
vapor.



Bezeichnung Part Number	DIN	Nennmaß Size	Lager Stock	Maße [mm] Dimensions					Z
				Steigung Pitch	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	a	
JD 4226 M3		M3	●	0.50	56	9	3.50	2.7	
JD 4226 M4		M4	●	0.70	63	12	4.50	3.4	
JD 4226 M5	371	M5	●	0.80	70	13	6.00	4.9	
JD 4226 M6		M6	●	1.00	80	15	6.00	4.9	
JD 4226 M8		M8	●	1.25	90	18	8.00	6.2	3
JD 4226 M10		M10	●	1.50	100	20	10.00	8.0	
JD 4226 M12		M12	●	1.75	110	23	9.00	7.0	
JD 4226 M14	376	M14	○	2.00	110	25	11.00	9.0	
JD 4226 M16		M16	●	2.00	110	25	12.00	9.0	

Drehen  
Turning

Fräswerkzeuge  
Milling Tools

HDS-/VHM-Fräser  
HDS-/ Solid Carbide  
Endmills

Stechdreh-  
werkzeuge  
Grooving Tools

Mini/Micro  
Schneidwerkzeuge  
Mini/Micro Tools

Gewinde-  
werkzeuge  
Threading Tools

Wendeplattenbohrer  
VHM-Bohrer  
Indexable Drills  
Solid Carbide Drills