

# EMUGE

## EF-DRILLS

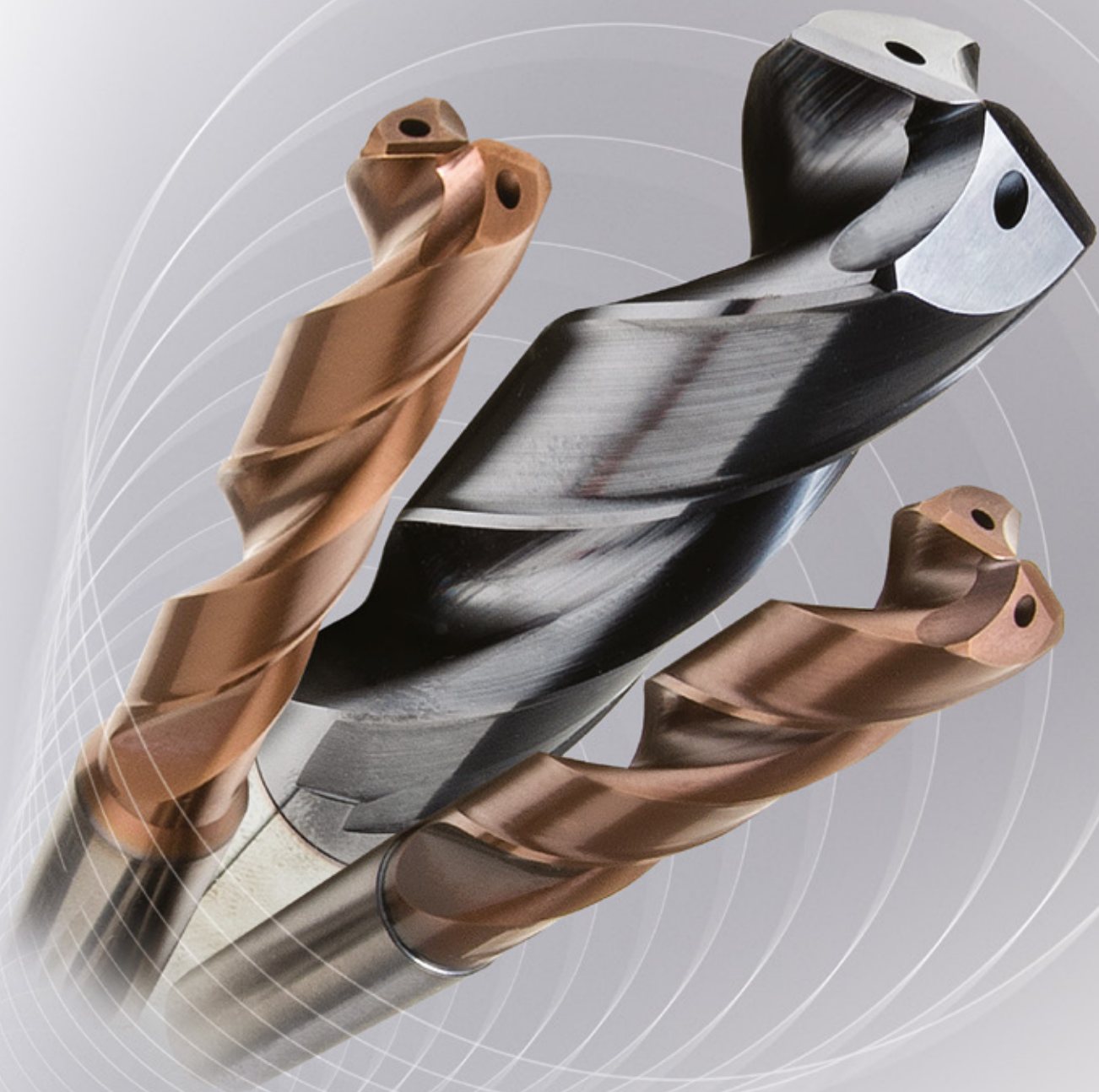


## HIGH PERFORMANCE CARBIDE DRILLS

*A Full Line of High  
Performance Drilling Tools*



# You Know **EMUGE** Now *Know their Drills*



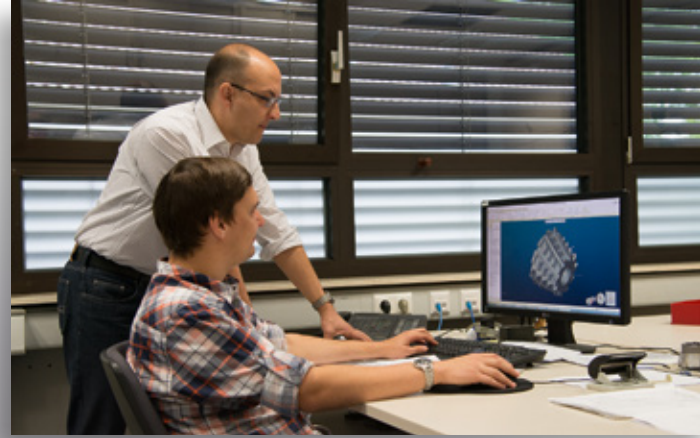
**N**ow Emuge's legendary threadmaking tool quality is available in a complete line of **NEW High Penetration Rate Carbide Drills** making their North American debut. German made and engineered through years of expertise. Get to know the best drills for making the world's most accurate holes.

# INTRODUCING

## *EMUGE High Performance Drills!*

Emuge is widely recognized in the industry as the leader in designing, engineering and manufacturing exceptionally high performance quality taps and thread mills. So it stands to reason that Emuge knows what is required to machine the world's most accurate holes, and how to design the best drills to make them.

This is also why it's no surprise that new Emuge Drills feature a unique geometry, carbide grade and PVD coating design not found in other drills. Emuge Drills are the result of extensive development, incorporating the latest in drilling technology. And Emuge Drills have a 3-5 times faster penetration rate than conventional carbide and cobalt drills.



***You trust Emuge Taps and Thread Mills for the highest quality threads. Now you can rely on Emuge Drills to make the best holes.***

### **New Emuge EF Solid Carbide Drills feature:**

- **Double Margin Flute Design** for added stability and rounder/ straighter holes, in addition to single margin design for stainless and titanium applications
- **Unique Flute Construction Design** for superb chip evacuation
- **Self-Centering Design** allows drilling in one shot, eliminating peck cycles and pre-spot operations.
- **Special Sub-Micron Grain Carbide Grade** for abrasion resistance and durability
- **Unique Multi-Layer PVD Coating** resists chipping/ cracking, for exceptionally long tool life
- **Full Range of Product:** 3XD, 5XD, 8XD drill styles in solid & coolant-fed designs, for convenience and application versatility

***German engineered and made,  
with unsurpassed Emuge quality***

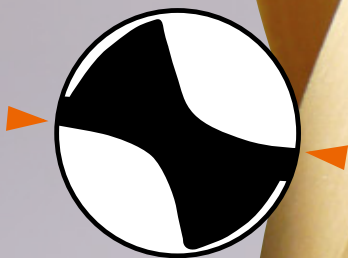
# EMUGE EF-DRILLS

*For Better Holes + Performance*

- Unique Geometry
- Unique Carbide Grade
- Emuge PVD Coating

## Unique Flute Construction

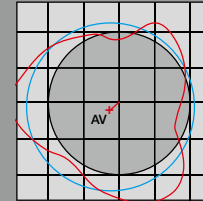
- Enables uniform chip removal throughout the hole



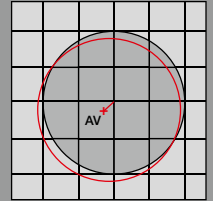
Single margin for Stainless Steel and Titanium Alloys

## Rounder Holes

- Double margin design produces better hole quality and tap performance

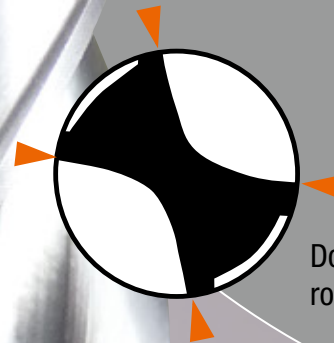


HSS & HSSE Drilling



EMUGE Carbide EF-Drilling straighter/rounder holes

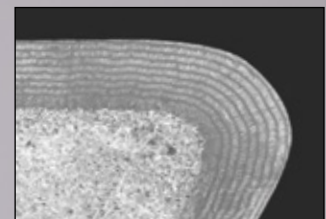
- Double margins improve guiding and add stability during breakout



Double margin for rounder holes

## Longer Life

- Special carbide grade and multi-layered PVD coating for superb heat and wear resistance



- Highly polished coating surface maximizes chip flow

## Eliminate Operations

- Chisel edge, self-centering design means one-shot ops with no spot or peck drilling

## Higher Penetration

- 3 to 5+ times the penetration rate with less torque and power consumption than regular carbide drills

## More Cutting Edge Support

- 4 facet point design

## Enhanced Shank Design

- Conical slotted end for optimized coolant flow and reliable tool setting

## Make Short, Consistent 6 & 9 Chips

- Short, consistent chips provide quick evacuation and eliminate bird nesting



## Product finder and cutting data

**Please note:**

Drill suitability is identified in the respective columns as follows:

- = very suitable
- = suitable

The appropriate cutting speeds  $V_c$  (SFM) and feed per revolution values  $f$  (in/rev.) are to be found on pages 8-11.

Application – Material		Hardness Range			Material Examples	
		HRC	BHN	N/mm <sup>2</sup>		
<b>Steel materials</b>						
P	1.1	Cold-extrusion steels, Construction steels, Free-cutting steels, etc.		≤ 180	≤ 600	1010 / 1018 / 1020 / 12L14 / 12L15 / A36 / T1
	2.1	Construction steels, Cementation steels, Steel castings, etc.	≤ 22	≤ 235	≤ 800	A36 / T1 / 1030-1095 / 4140 / 4340 / 8620
	3.1	Cementation steels, Heat-treatable steels, Cold work steels, etc.	≤ 31	≤ 295	≤ 1000	4140 / 4340 / 8620 / P20 / H13 / D2 / A2 / S7 / H1150
	4.1	Heat-treatable steels, Cold work steels, Nitriding steels, etc.	≤ 38	≤ 355	≤ 1200	4140 / 4340 / 8620 / P20 / H13 / D2 / 300M / 52100 / M1-M42
	5.1	High-alloyed steels, Cold work steels, Hot work steels, etc.	≤ 44	≤ 415	≤ 1400	4140 / 4340 / 8620 / P20 / H13 / D2 / 300M / 52100
<b>Stainless steel materials</b>						
M	1.1	Ferritic, martensitic	≤ 29	≤ 280	≤ 950	410 / 440 / 440C / 17-4 PH
	2.1	Austenitic	≤ 29	≤ 280	≤ 950	303 / 304 / 316 / 316L / 321
	3.1	Austenitic-ferritic (Duplex)	≤ 35	≤ 325	≤ 1100	
	4.1	Austenitic-ferritic heat-resistant (Super Duplex)	≤ 39	≤ 370	≤ 1250	
<b>Cast materials</b>						
K	1.1	Cast iron with lamellar graphite (GJL)		30 - 75	100 - 250	Grey cast irons G10-GG40
	1.2			75 - 135	250 - 450	
	2.1	Cast iron with nodular graphite (GJS)		105 - 150	350 - 500	Nodular GGG40-GGG70
	2.2			150 - 265	500 - 900	
	3.1	Cast iron with vermicular graphite (GJV)		90 - 120	300 - 400	Compact graphite iron (CGI)
	3.2			120 - 150	400 - 500	
	4.1	Malleable cast iron (GTMW, GTMB)		70 - 145	250 - 500	White iron
4.2			150 - 235	500 - 800		
<b>Non ferrous materials</b>						
<b>Aluminium alloys</b>						
N	1.1	Aluminium wrought alloys		≤ 60	≤ 200	7075
	1.2			≤ 105	≤ 350	6061-T6 / 2024-T4
	1.3			≤ 165	≤ 550	
	1.4	Aluminium cast alloys Si ≤ 7%				
	1.5		Aluminium cast alloys 7% < Si ≤ 12%			
	1.6		Aluminium cast alloys 12% < Si ≤ 17%			
<b>Copper alloys</b>						
N	2.1	Pure copper, low-alloyed copper		≤ 120	≤ 400	
	2.2	Copper-zinc alloys (brass, long-chipping)		≤ 165	≤ 550	
	2.3	Copper-zinc alloys (brass, short-chipping)		≤ 165	≤ 550	
	2.4	Copper-aluminium alloys (alu bronze, long-chipping)		≤ 235	≤ 800	
	2.5	Copper-tin alloys (tin bronze, long-chipping)		≤ 205	≤ 700	
	2.6	Copper-tin alloys (tin bronze, short-chipping)		≤ 120	≤ 400	
	2.7	Special copper alloys		≤ 180	≤ 600	
	2.8			≤ 44	≤ 415	≤ 1400
<b>Magnesium alloys</b>						
N	3.1	Magnesium wrought alloys		≤ 150	≤ 500	
	3.2	Magnesium cast alloys		≤ 150	≤ 500	
<b>Synthetics</b>						
N	4.1	Duroplastics (short-chipping)				
	4.2	Thermoplastics (long-chipping)				
	4.3	Fibre-reinforced synthetics (fibre content ≤ 30%)				
	4.4	Fibre-reinforced synthetics (fibre content > 30%)				
<b>Special materials</b>						
N	5.1	Graphite				
	5.2	Tungsten-copper alloys				
5.3	Composite materials					
<b>Special materials</b>						
<b>Titanium alloys</b>						
S	1.1	Pure titanium		≤ 135	≤ 450	CP1 / CP2
	1.2	Titanium alloys		≤ 265	≤ 900	6AL4V
	1.3			≤ 39	≤ 370	≤ 1250
<b>Nickel alloys, cobalt alloys and iron alloys</b>						
S	2.1	Pure nickel		≤ 180	≤ 600	
	2.2	Nickel-base alloys		≤ 295	≤ 1000	Monel 500
	2.3			≤ 49	≤ 475	718 Inconel
	2.4	Cobalt-base alloys		≤ 31	≤ 295	≤ 1000
	2.5			≤ 49	≤ 475	≤ 1600
	2.6	Iron-base alloys		≤ 46	≤ 445	≤ 1500
<b>Hard materials</b>						
H	1.1	High strength steels, hardened steels, hard castings		44 - 50		
	1.2			50 - 55		
	1.3			55 - 60		
	1.4			60 - 63		
	1.5			63 - 66		

Coolant-lubricant recommendation				EF-Drill		EF-Drill-VA		HCUT	Type		
				3 x D	3 x D	5 x D	8 x D	3 x D	5 x D	4 x D	Drill depth
Emulsion	Oil	Minimum quantity lubrication (MQL)	Dry / Pressurized air	12-15	16-19	20-23	24-27	28-31	32-35	36	Page(s)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				1.1
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2.1
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				5.1
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<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				1.1
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				1.2
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				2.1
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2.2
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<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				3.2
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				4.1
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				4.2
<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				1.1
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<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2.3
<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2.4
<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2.5
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											3.1
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											4.1
											4.2
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											4.4
			<input checked="" type="checkbox"/>	<input type="checkbox"/>							5.1
											5.2
											5.3
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<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		1.2
<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		1.3
											2.1
<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		2.2
<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		2.3
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<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		2.5
<input checked="" type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>		2.6
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<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	1.2
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							<input checked="" type="checkbox"/>	1.3
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							<input checked="" type="checkbox"/>	1.4
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							<input checked="" type="checkbox"/>	1.5



EF-Drill  
3 x D

EF-Drill  
3 x D

EF-Drill  
5 x D

EF-Drill  
8 x D

Cutting speed  $v_c$  [SFM]

		EF-Drill 3 x D			EF-Drill 3 x D			EF-Drill 5 x D			EF-Drill 8 x D		
		min.	rec.	max.	min.	rec.	max.	min.	rec.	max.	min.	rec.	max.
P	1.1	329	<b>394</b>	460	460	<b>526</b>	657	460	<b>526</b>	657	394	<b>460</b>	526
	2.1	279	<b>329</b>	378	394	<b>476</b>	558	394	<b>476</b>	558	312	<b>378</b>	443
	3.1	230	<b>279</b>	329	329	<b>394</b>	460	329	<b>394</b>	460	296	<b>329</b>	378
	4.1	197	<b>230</b>	263	263	<b>329</b>	394	263	<b>329</b>	394	230	<b>279</b>	329
	5.1	148	<b>181</b>	214	197	<b>230</b>	263	197	<b>230</b>	263	164	<b>197</b>	230
M	1.1				197	<b>263</b>	329	197	<b>263</b>	329	181	<b>230</b>	296
	2.1												
	3.1												
	4.1												
K	1.1	394	<b>493</b>	591	427	<b>526</b>	624	427	<b>526</b>	624	378	<b>460</b>	542
	1.2	329	<b>427</b>	493	361	<b>460</b>	526	361	<b>460</b>	526	312	<b>411</b>	460
	2.1	329	<b>427</b>	526	361	<b>460</b>	558	361	<b>460</b>	558	312	<b>411</b>	493
	2.2	329	<b>394</b>	460	394	<b>460</b>	526	394	<b>460</b>	526	345	<b>411</b>	460
	3.1	230	<b>263</b>	296	230	<b>296</b>	329	230	<b>296</b>	329	197	<b>263</b>	296
	3.2	230	<b>263</b>	296	230	<b>296</b>	329	230	<b>296</b>	329	197	<b>263</b>	296
	4.1	361	<b>427</b>	493	394	<b>460</b>	526	394	<b>460</b>	526	345	<b>411</b>	460
4.2	296	<b>361</b>	427	329	<b>394</b>	460	329	<b>394</b>	460	296	<b>345</b>	411	
N	1.1	690	<b>788</b>	887	723	<b>854</b>	920	723	<b>854</b>	920	641	<b>756</b>	805
	1.2	690	<b>788</b>	887	723	<b>854</b>	920	723	<b>854</b>	920	641	<b>756</b>	805
	1.3	591	<b>657</b>	723	657	<b>756</b>	854	657	<b>756</b>	854	575	<b>657</b>	756
	1.4	591	<b>657</b>	723	657	<b>756</b>	854	657	<b>756</b>	854	575	<b>657</b>	756
	1.5	493	<b>558</b>	591	542	<b>608</b>	657	542	<b>608</b>	657	476	<b>542</b>	575
	1.6												
	2.1	361	<b>427</b>	526	378	<b>443</b>	558	378	<b>443</b>	558	329	<b>394</b>	493
	2.2	493	<b>526</b>	558	526	<b>575</b>	624	526	<b>575</b>	624	460	<b>509</b>	542
	2.3	591	<b>690</b>	788	624	<b>723</b>	821	624	<b>723</b>	821	542	<b>641</b>	723
	2.4	197	<b>263</b>	296	230	<b>296</b>	361	230	<b>296</b>	361	197	<b>263</b>	312
	2.5												
	2.6	296	<b>329</b>	361	329	<b>378</b>	427	329	<b>378</b>	427	296	<b>329</b>	378
	2.7	164	<b>181</b>	197	197	<b>214</b>	230	197	<b>214</b>	230	164	<b>181</b>	197
	2.8	164	<b>181</b>	197	214	<b>230</b>	246	214	<b>230</b>	246	181	<b>197</b>	214
	3.1												
	3.2												
4.1													
4.2													
4.3													
4.4													
5.1	230	<b>296</b>	394										
5.2													
5.3													
S	1.1												
	1.2												
	1.3												
	2.1												
	2.2												
	2.3												
H	1.1	99	<b>115</b>	131	115	<b>131</b>	148	115	<b>131</b>	148			
	1.2												
	1.3												
	1.4												
	1.5												







EF-Drill-VA  
3 x D



EF-Drill-VA  
5 x D



HCUT  
4 x D

Cutting speed  $v_c$  [SFM]

		min.	rec.	max.	min.	rec.	max.	min.	rec.	max.
P	1.1									
	2.1									
	3.1									
	4.1									
	5.1									
M	1.1	197	<b>263</b>	329	197	<b>263</b>	329			
	2.1	131	<b>164</b>	197	131	<b>164</b>	197			
	3.1	115	<b>131</b>	148	115	<b>131</b>	148			
	4.1	99	<b>115</b>	131	99	<b>115</b>	131			
K	1.1									
	1.2									
	2.1									
	2.2									
	3.1									
	3.2									
	4.1									
	4.2									
N	1.1									
	1.2									
	1.3									
	1.4									
	1.5									
	1.6									
	2.1									
	2.2									
	2.3									
	2.4									
	2.5									
	2.6									
	2.7									
	2.8									
	3.1									
	3.2									
4.1										
4.2										
4.3										
4.4										
5.1										
5.2										
5.3										
S	1.1	148	<b>181</b>	214	148	<b>181</b>	214			
	1.2	99	<b>148</b>	181	99	<b>148</b>	181			
	1.3	99	<b>115</b>	131	99	<b>115</b>	131			
	2.1									
	2.2	33	<b>66</b>	99	33	<b>66</b>	99			
	2.3									
2.4	99	<b>148</b>	181	99	<b>148</b>	181				
2.5										
2.6	99	<b>115</b>	131	99	<b>115</b>	131				
H	1.1							99	<b>115</b>	131
	1.2							66	<b>82</b>	99
	1.3							49	<b>66</b>	82
	1.4							33	<b>49</b>	66
	1.5							26	<b>39</b>	49





## Stub Length

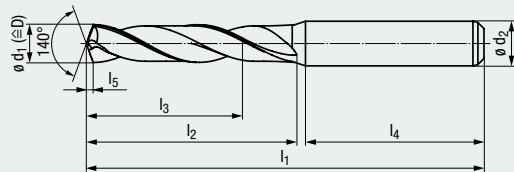
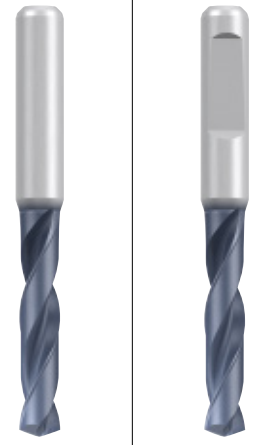
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **2FF**

**140°** **IT9-IT10**

**DIN 6535**  
 HA   
 HE 



$l_3$  = Max Effective Drill Depth

## 3 x D

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **K 1.1-4.2** **N 1.1-5**  
**N 2.1-8** **N 5.1** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA103324 HA SHANK	EF-Drill TA403324 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.1102			2.800	#6-32UNC	M3	57	16	11	36	0.6	6	TA103324.0280	TA403324.0280
0.1142			2.900	#6-32UNJC	#5-40UNC	57	16	11	36	0.6	6	TA103324.0290	TA403324.0290
0.1150			2.920		#5-44UNF	57	16	11	36	0.6	6	TA103324.0292	TA403324.0292
0.1181			3.000	#6-40UNF		62	20	14	36	0.6	6	TA103324.0300	TA403324.0300
0.1220			3.100	STI-#4-40		62	20	14	36	0.6	6	TA103324.0310	TA403324.0310
0.1240			3.150	M3.5x0.35	#6-32UNC	62	20	14	36	0.7	6	TA103324.0315	TA403324.0315
0.1250	1/8		3.175			62	20	14	36	0.7	6	TA103324.0318	TA403324.0318
0.1260			3.200	BSW 5/32-32	#6-40UNF	62	20	14	36	0.7	6	TA103324.0320	TA403324.0320
0.1280			3.250		M3.5	62	20	14	36	0.7	6	TA103324.0325	TA403324.0325
0.1299			3.300	M4		62	20	14	36	0.7	6	TA103324.0330	TA403324.0330
0.1331			3.380		M3.5x0.35	62	20	14	36	0.7	6	TA103324.0338	TA403324.0338
0.1339			3.400	MJ4x0.7		62	20	14	36	0.7	6	TA103324.0340	TA403324.0340
0.1378			3.500	#8-32UNC		62	20	14	36	0.7	6	TA103324.0350	TA403324.0350
0.1406	9/64	#28	3.571			62	20	14	36	0.7	6	TA103324.0357	TA403324.0357
0.1417			3.600	#8-36UNJF		62	20	14	36	0.7	6	TA103324.0360	TA403324.0360
0.1457			3.700	M4.5	M4	62	20	14	36	0.8	6	TA103324.0370	TA403324.0370
0.1496		#25	3.800	STI-#6-32	#8-32UNC	66	24	17	36	0.8	6	TA103324.0380	TA403324.0380
0.1516			3.850		#8-36UNF	66	24	17	36	0.8	6	TA103324.0385	TA403324.0385
0.1535			3.900	#10-24UNC		66	24	17	36	0.8	6	TA103324.0390	TA403324.0390
0.1563	5/32		3.970			66	24	17	36	0.8	6	TA103324.0397	TA403324.0397
0.1575			4.000	M4.5x0.5		66	24	17	36	0.8	6	TA103324.0400	TA403324.0400
0.1590		#21	4.038			66	24	17	36	0.8	6	TA103324.0404	TA403324.0404
0.1614			4.100	#10-32UNF		66	24	17	36	0.8	6	TA103324.0410	TA403324.0410
0.1654			4.200	M5, STI-M4	M4.5	66	24	17	36	0.9	6	TA103324.0420	TA403324.0420
0.1693		#18	4.300	MJ5x0.8		66	24	17	36	0.9	6	TA103324.0430	TA403324.0430
0.1713			4.350		#10-24UNC	66	24	17	36	0.9	6	TA103324.0435	TA403324.0435
0.1719	11/64		4.366			66	24	17	36	0.9	6	TA103324.0437	TA403324.0437
0.1732			4.400	M5x0.75		66	24	17	36	0.9	6	TA103324.0440	TA403324.0440
0.1752			4.450		#10-32UNF	66	24	17	36	0.9	6	TA103324.0445	TA403324.0445
0.1772			4.500	#12-24UNC		66	24	17	36	0.9	6	TA103324.0450	TA403324.0450
0.1811			4.600	#12-28UNF		66	24	17	36	0.9	6	TA103324.0460	TA403324.0460
0.1831			4.650	#12-24UNJC	M5	66	24	17	36	0.9	6	TA103324.0465	TA403324.0465
0.1850		#13	4.700	LK-UNC#12-24		66	24	17	36	1.0	6	TA103324.0470	TA403324.0470
0.1875	3/16		4.763	#12-28UNJF		66	28	20	36	1.0	6	TA103324.0476	TA403324.0476
0.1890		#12	4.800	#12-32UNEF	M5x0.5, STI-M5	66	28	20	36	1.0	6	TA103324.0480	TA403324.0480
0.1929			4.900			66	28	20	36	1.0	6	TA103324.0490	TA403324.0490
0.1969			5.000	M6	#12-24UNC	66	28	20	36	1.0	6	TA103324.0500	TA403324.0500
0.2008			5.100	MJ6x1	#12-28UNF	66	28	20	36	1.0	6	TA103324.0510	TA403324.0510
0.2010		#7	5.106			66	28	20	36	1.0	6	TA103324.0511	TA403324.0511
0.2031	13/64		5.159			66	28	20	36	1.0	6	TA103324.0516	TA403324.0516
0.2047			5.200	1/4-20UNC		66	28	20	36	1.0	6	TA103324.0520	TA403324.0520
0.2087			5.300	1/4-20UNJC		66	28	20	36	1.1	6	TA103324.0530	TA403324.0530
0.2126			5.400			66	28	20	36	1.1	6	TA103324.0540	TA403324.0540
0.2130		#3	5.410			66	28	20	36	1.1	6	TA103324.0541	TA403324.0541

**Stub Length**

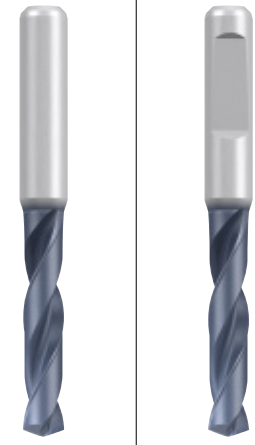
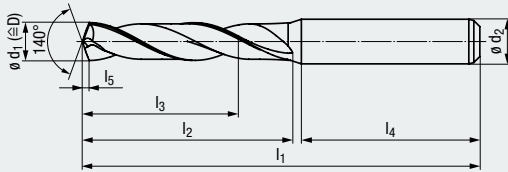
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **2FF**

**140°** **IT9-IT10**

**DIN 6535**  
HA HE



$l_3$  = Max Effective Drill Depth

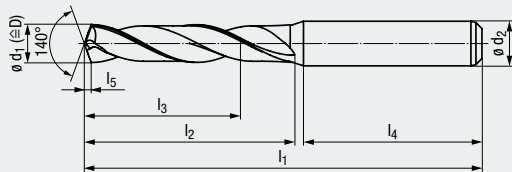
**3 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **K 1.1-4.2** **N 1.1-5**  
**N 2.1-8** **N 5.1** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA103324 HA SHANK	EF-Drill TA403324 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.2165			5.500	1/4-28 UNF		66	28	20	36	1.1	6	TA103324.0550	TA403324.0550
0.2187	7/32		5.556	1/4-28 UNJF		66	28	20	36	1.1	6	TA103324.0556	TA403324.0556
0.2205			5.600	1/4-32 UNEF	M6	66	28	20	36	1.1	6	TA103324.0560	TA403324.0560
0.2264			5.750		1/4-20 UNC	66	28	20	36	1.1	6	TA103324.0575	TA403324.0575
0.2283			5.800		M6x0.5	66	28	20	36	1.2	6	TA103324.0580	TA403324.0580
0.2323			5.900			66	28	20	36	1.2	6	TA103324.0590	TA403324.0590
0.2344	15/64		5.954		1/4-28 UNF	66	28	20	36	1.2	6	TA103324.0595	TA403324.0595
0.2362			6.000	M7, Rd 8x1/10		66	28	20	36	1.2	6	TA103324.0600	TA403324.0600
0.2402			6.100	MJ7x1		79	34	24	36	1.2	8	TA103324.0610	TA403324.0610
0.2441			6.200	M7x0.75		79	34	24	36	1.2	8	TA103324.0620	TA403324.0620
0.2480			6.300	M7x0.5, STI-M6		79	34	24	36	1.3	8	TA103324.0630	TA403324.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		79	34	24	36	1.3	8	TA103324.0635	TA403324.0635
0.2520			6.400			79	34	24	36	1.3	8	TA103324.0640	TA403324.0640
0.2559			6.500	BSW 5/16-18		79	34	24	36	1.3	8	TA103324.0650	TA403324.0650
0.2570		F	6.528			79	34	24	36	1.3	8	TA103324.0653	TA403324.0653
0.2598			6.600	5/16-18 UNC	M7	79	34	24	36	1.3	8	TA103324.0660	TA403324.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	79	34	24	36	1.3	8	TA103324.0670	TA403324.0670
0.2656	17/64		6.746			79	34	24	36	1.4	8	TA103324.0675	TA403324.0675
0.2677			6.800	M8, G 1/16		79	34	24	36	1.4	8	TA103324.0680	TA403324.0680
0.2717			6.900	5/16-24 UNF		79	34	24	36	1.4	8	TA103324.0690	TA403324.0690
0.2756			7.000	5/16-24 UNJF		79	34	24	36	1.4	8	TA103324.0700	TA403324.0700
0.2795			7.100	MJ8x1		79	41	29	36	1.4	8	TA103324.0710	TA403324.0710
0.2813	9/32	K	7.145			79	41	29	36	1.4	8	TA103324.0715	TA403324.0715
0.2835			7.200	5/16-32 UNEF		79	41	29	36	1.5	8	TA103324.0720	TA403324.0720
0.2854			7.250		5/16-18 UNC	79	41	29	36	1.5	8	TA103324.0725	TA403324.0725
0.2874			7.300			79	41	29	36	1.5	8	TA103324.0730	TA403324.0730
0.2913			7.400			79	41	29	36	1.5	8	TA103324.0740	TA403324.0740
0.2933			7.450		5/16-24 UNF, M8	79	41	29	36	1.5	8	TA103324.0745	TA403324.0745
0.2953			7.500		M8x0.5	79	41	29	36	1.5	8	TA103324.0750	TA403324.0750
0.2969	19/64		7.541			79	41	29	36	1.5	8	TA103324.0754	TA403324.0754
0.2992			7.600	Tr 9x1.5	M8x1, STI-M8	79	41	29	36	1.5	8	TA103324.0760	TA403324.0760
0.3031			7.700		M8x0.75	79	41	29	36	1.5	8	TA103324.0770	TA403324.0770
0.3071			7.800		M9	79	41	29	36	1.5	8	TA103324.0780	TA403324.0780
0.3110			7.900	BSW 3/8-16		79	41	29	36	1.6	8	TA103324.0790	TA403324.0790
0.3125	5/16		7.938			79	41	29	36	1.6	8	TA103324.0794	TA403324.0794
0.3150			8.000	3/8-16 UNC		79	41	29	36	1.6	8	TA103324.0800	TA403324.0800
0.3189			8.100	3/8-16 UNJC		89	47	35	40	1.6	10	TA103324.0810	TA403324.0810
0.3228			8.200	M9x0.75		89	47	35	40	1.6	10	TA103324.0820	TA403324.0820
0.3268			8.300	LK-UNC 3/8-16		89	47	35	40	1.6	10	TA103324.0830	TA403324.0830
0.3281	21/64		8.334			89	47	35	40	1.6	10	TA103324.0833	TA403324.0833
0.3307			8.400	STI-5/16-18		89	47	35	40	1.7	10	TA103324.0840	TA403324.0840
0.3346			8.500	3/8-24 UNF, M10		89	47	35	40	1.7	10	TA103324.0850	TA403324.0850
0.3386			8.600	3/8-24 UNJF	M9x1	89	47	35	40	1.7	10	TA103324.0860	TA403324.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	89	47	35	40	1.7	10	TA103324.0870	TA403324.0870

## Stub Length



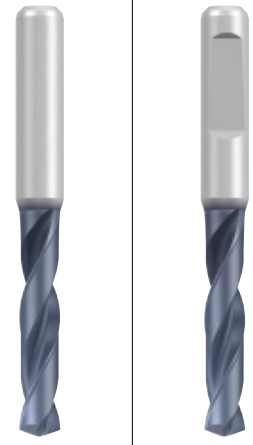
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **2FF**

**140°** **IT9-IT10**

**DIN 6535**  
 HA   
 HE



$l_3$  = Max Effective Drill Depth

## 3 x D

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **K 1.1-4.2** **N 1.1-5**  
**N 2.1-8** **N 5.1** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA103324 HA SHANK	EF-Drill TA403324 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.3438	11/32		8.733	1/8-27 NPSC		89	47	35	40	1.7	10	TA103324.0873	TA403324.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	89	47	35	40	1.7	10	TA103324.0880	TA403324.0880
0.3504			8.900	MJ10x1.25		89	47	35	40	1.8	10	TA103324.0890	TA403324.0890
0.3543			9.000	M10x1		89	47	35	40	1.8	10	TA103324.0900	TA403324.0900
0.3563			9.050		3/8-24 UNF	89	47	35	40	1.8	10	TA103324.0905	TA403324.0905
0.3583			9.100	1/8-27 NPSM		89	47	35	40	1.8	10	TA103324.0910	TA403324.0910
0.3594	23/64		9.129			89	47	35	40	1.8	10	TA103324.0913	TA403324.0913
0.3622			9.200	M10x0.75		89	47	35	40	1.8	10	TA103324.0920	TA403324.0920
0.3642			9.250			89	47	35	40	1.8	10	TA103324.0925	TA403324.0925
0.3661			9.300			89	47	35	40	1.8	10	TA103324.0930	TA403324.0930
0.3681			9.350		M10	89	47	35	40	1.8	10	TA103324.0935	TA403324.0935
0.3701			9.400	7/16-14 UNC		89	47	35	40	1.9	10	TA103324.0940	TA403324.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	89	47	35	40	1.9	10	TA103324.0950	TA403324.0950
0.3750	3/8		9.525			89	47	35	40	1.9	10	TA103324.0953	TA403324.0953
0.3780			9.600		M10x1	89	47	35	40	1.9	10	TA103324.0960	TA403324.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	89	47	35	40	1.9	10	TA103324.0970	TA403324.0970
0.3858			9.800	STI-3/8-24		89	47	35	40	1.9	10	TA103324.0980	TA403324.0980
0.3898			9.900	7/16-20 UNF		89	47	35	40	2.0	10	TA103324.0990	TA403324.0990
0.3906	25/64		9.921			89	47	35	40	2.0	10	TA103324.0992	TA403324.0992
0.3937			10.000	7/16-20 UNJF		89	47	35	40	2.0	10	TA103324.1000	TA403324.1000
0.3976			10.100			102	55	40	45	2.0	12	TA103324.1010	TA403324.1010
0.4016			10.200	7/16-28 UNEF		102	55	40	45	2.0	12	TA103324.1020	TA403324.1020
0.4035			10.250		7/16-14 UNC	102	55	40	45	2.0	12	TA103324.1025	TA403324.1025
0.4055			10.300			102	55	40	45	2.0	12	TA103324.1030	TA403324.1030
0.4063	13/32		10.320			102	55	40	45	2.0	12	TA103324.1032	TA403324.1032
0.4134			10.500	M12x1.5		102	55	40	45	2.1	12	TA103324.1050	TA403324.1050
0.4154			10.550		7/16-20 UNF	102	55	40	45	2.1	12	TA103324.1055	TA403324.1055
0.4213			10.700	LK-M12		102	55	40	45	2.1	12	TA103324.1070	TA403324.1070
0.4219	27/64		10.716	1/2-13 UNC		102	55	40	45	2.1	12	TA103324.1072	TA403324.1072
0.4252			10.800	M12x1.25		102	55	40	45	2.1	12	TA103324.1080	TA403324.1080
0.4291			10.900	1/2-13 UNJC		102	55	40	45	2.1	12	TA103324.1090	TA403324.1090
0.4331			11.000	M12x1		102	55	40	45	2.2	12	TA103324.1100	TA403324.1100
0.4370			11.100	BSF 1/2-16		102	55	40	45	2.2	12	TA103324.1110	TA403324.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		102	55	40	45	2.2	12	TA103324.1111	TA403324.1111
0.4409			11.200			102	55	40	45	2.2	12	TA103324.1120	TA403324.1120
0.4429			11.250	M12x0.75	M12	102	55	40	45	2.2	12	TA103324.1125	TA403324.1125
0.4469			11.350	Pg7	M12x1.5	102	55	40	45	2.2	12	TA103324.1135	TA403324.1135
0.4488			11.400	1/4-18 NPSC		102	55	40	45	2.2	12	TA103324.1140	TA403324.1140
0.4508			11.450		M12x1.25	102	55	40	45	2.2	12	TA103324.1145	TA403324.1145
0.4528			11.500	1/2-20 UNF		102	55	40	45	2.3	12	TA103324.1150	TA403324.1150
0.4531	29/64		11.509			102	55	40	45	2.3	12	TA103324.1151	TA403324.1151
0.4567			11.600	1/2-20 UNJF	M12x1	102	55	40	45	2.3	12	TA103324.1160	TA403324.1160
0.4606			11.700			102	55	40	45	2.3	12	TA103324.1170	TA403324.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	102	55	40	45	2.3	12	TA103324.1180	TA403324.1180



**Stub Length**

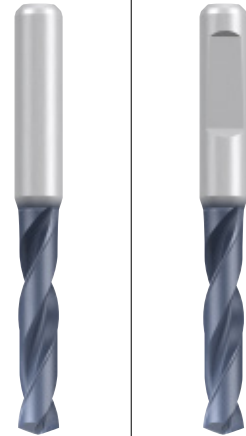
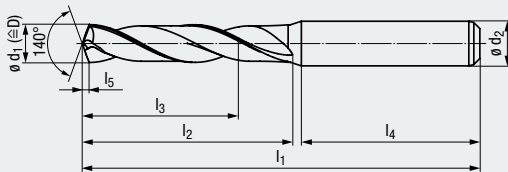
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **2FF**

**140°** **IT9-IT10**

**DIN 6535**  
 HA   
 HE 





$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **K 1.1-4.2** **N 1.1-5**  
**N 2.1-8** **N 5.1** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7						mm					$\varnothing d_2$ h6	EF-Drill TA103324 HA SHANK	EF-Drill TA403324 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$			
0.4685			11.900			102	55	40	45	2.3	12	TA103324.1190	TA403324.1190
0.4688	15/32		11.908			102	55	40	45	2.3	12	TA103324.1191	TA403324.1191
0.4724			12.000	M14		102	55	40	45	2.4	12	TA103324.1200	TA403324.1200
0.4783			12.150		1/2-20 UNF	102	55	40	45	2.4	12	TA103324.1215	TA403324.1215
0.4803			12.200	Tr 14x2		102	55	40	45	2.4	14	TA103324.1220	TA403324.1220
0.4844	31/64		12.304	9/16-12 UNC		102	55	40	45	2.4	14	TA103324.1230	TA403324.1230
0.4921			12.500	M14x1.5		102	55	40	45	2.4	14	TA103324.1250	TA403324.1250
0.4941			12.550		G1/4-19	102	55	40	45	2.4	14	TA103324.1255	TA403324.1255
0.5000	1/2		12.700	LK-UNC 9/16-12		102	55	40	45	2.5	14	TA103324.1270	TA403324.1270
0.5039			12.800	M14x1.25		102	55	40	45	2.5	14	TA103324.1280	TA403324.1280
0.5118			13.000	9/16-18 UNJF		102	55	40	45	2.5	14	TA103324.1300	TA403324.1300
0.5157			13.100	STI-1/2-20	M14	102	55	40	45	2.6	14	TA103324.1310	TA403324.1310
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	102	55	40	45	2.6	14	TA103324.1330	TA403324.1330
0.5256			13.350		M14x1.5	102	55	40	45	2.6	14	TA103324.1335	TA403324.1335
0.5295			13.450		M14x1.25	102	55	40	45	2.6	14	TA103324.1345	TA403324.1345
0.5313	17/32		13.495	5/8-11 UNC		102	55	40	45	2.6	14	TA103324.1349	TA403324.1349
0.5315			13.500			102	55	40	45	2.6	14	TA103324.1350	TA403324.1350
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	102	55	40	45	2.7	14	TA103324.1365	TA403324.1365
0.5394			13.700			102	55	40	45	2.7	14	TA103324.1370	TA403324.1370
0.5469	35/64		13.891			102	55	40	45	2.7	14	TA103324.1389	TA403324.1389
0.5512			14.000	M16, M15x1		102	55	40	45	2.7	14	TA103324.1400	TA403324.1400
0.5551			14.100			115	65	45	48	2.8	16	TA103324.1410	TA403324.1410
0.5625	9/16		14.288			115	65	45	48	2.8	16	TA103324.1429	TA403324.1429
0.5709			14.500	5/8-18 UNF		115	65	45	48	2.8	16	TA103324.1450	TA403324.1450
0.5748			14.600	5/8-18 UNJF	M15x1	115	65	45	48	2.9	16	TA103324.1460	TA403324.1460
0.5781	37/64		14.684	3/8-18 NPSC		115	65	45	48	2.9	16	TA103324.1468	TA403324.1468
0.5827			14.800		5/8-11 UNC	115	65	45	48	2.9	16	TA103324.1480	TA403324.1480
0.5906			15.000	M16x1		115	65	45	48	2.9	16	TA103324.1500	TA403324.1500
0.5938	19/32		15.083			115	65	45	48	2.9	16	TA103324.1508	TA403324.1508
0.5945			15.100		M16	115	65	45	48	2.9	16	TA103324.1510	TA403324.1510
0.6102			15.500	M18		115	65	45	48	3.0	16	TA103324.1550	TA403324.1550
0.6142			15.600		M16x1	115	65	45	48	3.0	16	TA103324.1560	TA403324.1560
0.6250	5/8		15.875			115	65	45	48	3.1	16	TA103324.1588	TA403324.1588
0.6299			16.000	M18x2		115	65	45	48	3.1	16	TA103324.1600	TA403324.1600
0.6406	41/64		16.272			123	73	51	48	3.1	18	TA103324.1627	TA403324.1627
0.6496			16.500	STI-5/8-11		123	73	51	48	3.2	18	TA103324.1650	TA403324.1650
0.6563	21/32		16.669	3/4-10 UNC		123	73	51	48	3.2	18	TA103324.1667	TA403324.1667
0.6693			17.000	M18x1		123	73	51	48	3.3	18	TA103324.1700	TA403324.1700
0.6875	11/16		17.463			123	73	51	48	3.3	18	TA103324.1746	TA403324.1746
0.6890			17.500	3/4-16 UNF, M20		123	73	51	48	3.4	18	TA103324.1750	TA403324.1750
0.7087			18.000	M20x2, LK-M16		123	73	51	48	3.5	18	TA103324.1800	TA403324.1800
0.7480			19.000	M20x1		131	79	55	50	3.7	20	TA103324.1900	TA403324.1900
0.7500	3/4		19.050			131	79	55	50	3.7	20	TA103324.1905	TA403324.1905
0.7874			20.000	M22x2	G1/2-14	131	79	55	50	3.9	20	TA103324.2000	TA403324.2000



**Stub Length  
Coolant Fed**

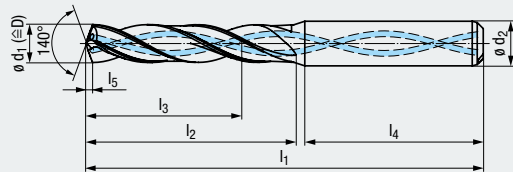
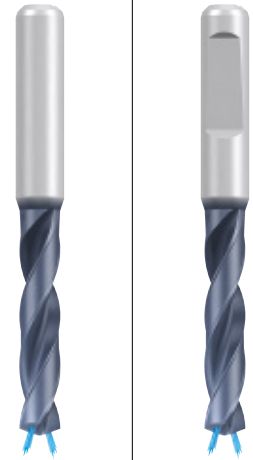
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **4FF**

**140°** **IT8-IT10**

**DIN 6535**  
HA   
HE 



$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**  
**N 1.1-5** **N 2.1-8** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA203344 HA SHANK	EF-Drill TA503344 HE SHANK	
inch	Fraction	Wire letter			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6			
0.1102			2.800	#6-32UNC	M3	57	16	11	36	0.6	6	TA203344.0280	TA503344.0280
0.1142			2.900	#6-32UNJC	#5-40UNC	57	16	11	36	0.6	6	TA203344.0290	TA503344.0290
0.1150			2.920		#5-44UNF	57	16	11	36	0.6	6	TA203344.0292	TA503344.0292
0.1181			3.000	#6-40UNF		62	20	14	36	0.6	6	TA203344.0300	TA503344.0300
0.1220			3.100	STI-#4-40		62	20	14	36	0.6	6	TA203344.0310	TA503344.0310
0.1240			3.150	M3.5x0.35	#6-32UNC	62	20	14	36	0.7	6	TA203344.0315	TA503344.0315
0.1250	1/8		3.175			62	20	14	36	0.7	6	TA203344.0318	TA503344.0318
0.1260			3.200	BSW5/32-32	#6-40UNF	62	20	14	36	0.7	6	TA203344.0320	TA503344.0320
0.1280			3.250		M3.5	62	20	14	36	0.7	6	TA203344.0325	TA503344.0325
0.1299			3.300	M4		62	20	14	36	0.7	6	TA203344.0330	TA503344.0330
0.1331			3.380		M3.5x0.35	62	20	14	36	0.7	6	TA203344.0338	TA503344.0338
0.1339			3.400	MJ4x0.7		62	20	14	36	0.7	6	TA203344.0340	TA503344.0340
0.1378			3.500	#8-32UNC		62	20	14	36	0.7	6	TA203344.0350	TA503344.0350
0.1406	9/64	#28	3.571			62	20	14	36	0.7	6	TA203344.0357	TA503344.0357
0.1417			3.600	#8-36UNJF		62	20	14	36	0.7	6	TA203344.0360	TA503344.0360
0.1457			3.700	M4.5	M4	62	20	14	36	0.8	6	TA203344.0370	TA503344.0370
0.1496		#25	3.800	STI-#6-32	#8-32UNC	66	24	17	36	0.8	6	TA203344.0380	TA503344.0380
0.1516			3.850		#8-36UNF	66	24	17	36	0.8	6	TA203344.0385	TA503344.0385
0.1535			3.900	#10-24UNC		66	24	17	36	0.8	6	TA203344.0390	TA503344.0390
0.1563	5/32		3.970			66	24	17	36	0.8	6	TA203344.0397	TA503344.0397
0.1575			4.000	M4.5x0.5		66	24	17	36	0.8	6	TA203344.0400	TA503344.0400
0.1590		#21	4.038			66	24	17	36	0.8	6	TA203344.0404	TA503344.0404
0.1614			4.100	#10-32UNF		66	24	17	36	0.8	6	TA203344.0410	TA503344.0410
0.1654			4.200	M5, STI-M4	M4.5	66	24	17	36	0.9	6	TA203344.0420	TA503344.0420
0.1693		#18	4.300	MJ5x0.8		66	24	17	36	0.9	6	TA203344.0430	TA503344.0430
0.1713			4.350		#10-24UNC	66	24	17	36	0.9	6	TA203344.0435	TA503344.0435
0.1719	11/64		4.366			66	24	17	36	0.9	6	TA203344.0437	TA503344.0437
0.1732			4.400	M5x0.75		66	24	17	36	0.9	6	TA203344.0440	TA503344.0440
0.1752			4.450		#10-32UNF	66	24	17	36	0.9	6	TA203344.0445	TA503344.0445
0.1772			4.500	#12-24UNC		66	24	17	36	0.9	6	TA203344.0450	TA503344.0450
0.1811			4.600	#12-28UNF		66	24	17	36	0.9	6	TA203344.0460	TA503344.0460
0.1831			4.650	#12-24UNJC	M5	66	24	17	36	0.9	6	TA203344.0465	TA503344.0465
0.1850		#13	4.700	LK-UNC#12-24		66	24	17	36	1.0	6	TA203344.0470	TA503344.0470
0.1875	3/16		4.763	#12-28UNJF		66	28	20	36	1.0	6	TA203344.0476	TA503344.0476
0.1890		#12	4.800	#12-32UNEF	M5x0.5, STI-M5	66	28	20	36	1.0	6	TA203344.0480	TA503344.0480
0.1929			4.900			66	28	20	36	1.0	6	TA203344.0490	TA503344.0490
0.1969			5.000	M6	#12-24UNC	66	28	20	36	1.0	6	TA203344.0500	TA503344.0500
0.2008			5.100	MJ6x1	#12-28UNF	66	28	20	36	1.0	6	TA203344.0510	TA503344.0510
0.2010		#7	5.106			66	28	20	36	1.0	6	TA203344.0511	TA503344.0511
0.2031	13/64		5.159			66	28	20	36	1.0	6	TA203344.0516	TA503344.0516
0.2047			5.200	1/4-20UNC		66	28	20	36	1.0	6	TA203344.0520	TA503344.0520
0.2087			5.300	1/4-20UNJC		66	28	20	36	1.1	6	TA203344.0530	TA503344.0530
0.2126			5.400			66	28	20	36	1.1	6	TA203344.0540	TA503344.0540
0.2130		#3	5.410			66	28	20	36	1.1	6	TA203344.0541	TA503344.0541



**Stub Length  
Coolant Fed**

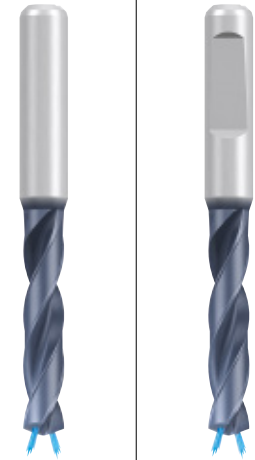
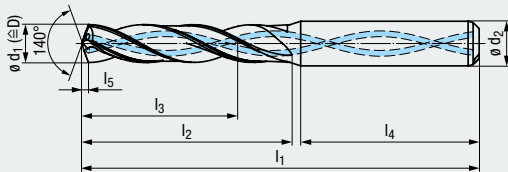
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **4FF**

**140°** **IT8-IT10**

**DIN 6535**  
HA HE



$l_3$  = Max Effective Drill Depth



**3 x D**

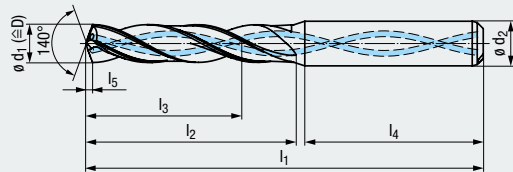
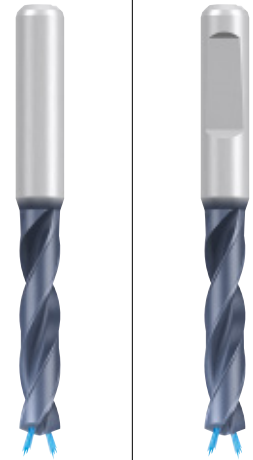
Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**  
**N 1.1-5** **N 2.1-8** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill TA203344 HA SHANK	EF-Drill TA503344 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.2165			5.500	1/4-28 UNF		66	28	20	36	1.1	6	TA203344.0550	TA503344.0550
0.2187	7/32		5.556	1/4-28 UNJF		66	28	20	36	1.1	6	TA203344.0556	TA503344.0556
0.2205			5.600	1/4-32 UNEF	M6	66	28	20	36	1.1	6	TA203344.0560	TA503344.0560
0.2264			5.750		1/4-20 UNC	66	28	20	36	1.1	6	TA203344.0575	TA503344.0575
0.2283			5.800		M6x0.5	66	28	20	36	1.2	6	TA203344.0580	TA503344.0580
0.2323			5.900			66	28	20	36	1.2	6	TA203344.0590	TA503344.0590
0.2344	15/64		5.954		1/4-28 UNF	66	28	20	36	1.2	6	TA203344.0595	TA503344.0595
0.2362			6.000	M7, Rd 8x1/10		66	28	20	36	1.2	6	TA203344.0600	TA503344.0600
0.2402			6.100	MJ7x1		79	34	24	36	1.2	8	TA203344.0610	TA503344.0610
0.2441			6.200	M7x0.75		79	34	24	36	1.2	8	TA203344.0620	TA503344.0620
0.2480			6.300	M7x0.5, STI-M6		79	34	24	36	1.3	8	TA203344.0630	TA503344.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		79	34	24	36	1.3	8	TA203344.0635	TA503344.0635
0.2520			6.400			79	34	24	36	1.3	8	TA203344.0640	TA503344.0640
0.2559			6.500	BSW 5/16-18		79	34	24	36	1.3	8	TA203344.0650	TA503344.0650
0.2570		F	6.528			79	34	24	36	1.3	8	TA203344.0653	TA503344.0653
0.2598			6.600	5/16-18 UNC	M7	79	34	24	36	1.3	8	TA203344.0660	TA503344.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	79	34	24	36	1.3	8	TA203344.0670	TA503344.0670
0.2656	17/64		6.746			79	34	24	36	1.4	8	TA203344.0675	TA503344.0675
0.2677			6.800	M8, G 1/16		79	34	24	36	1.4	8	TA203344.0680	TA503344.0680
0.2717			6.900	5/16-24 UNF		79	34	24	36	1.4	8	TA203344.0690	TA503344.0690
0.2756			7.000	5/16-24 UNJF		79	34	24	36	1.4	8	TA203344.0700	TA503344.0700
0.2795			7.100	MJ8x1		79	41	29	36	1.4	8	TA203344.0710	TA503344.0710
0.2813	9/32	K	7.145			79	41	29	36	1.4	8	TA203344.0715	TA503344.0715
0.2835			7.200	5/16-32 UNEF		79	41	29	36	1.5	8	TA203344.0720	TA503344.0720
0.2854			7.250		5/16-18 UNC	79	41	29	36	1.5	8	TA203344.0725	TA503344.0725
0.2874			7.300			79	41	29	36	1.5	8	TA203344.0730	TA503344.0730
0.2913			7.400			79	41	29	36	1.5	8	TA203344.0740	TA503344.0740
0.2933			7.450		5/16-24 UNF, M8	79	41	29	36	1.5	8	TA203344.0745	TA503344.0745
0.2953			7.500		M8x0.5	79	41	29	36	1.5	8	TA203344.0750	TA503344.0750
0.2969	19/64		7.541			79	41	29	36	1.5	8	TA203344.0754	TA503344.0754
0.2992			7.600	Tr 9x1.5	M8x1, STI-M8	79	41	29	36	1.5	8	TA203344.0760	TA503344.0760
0.3031			7.700		M8x0.75	79	41	29	36	1.5	8	TA203344.0770	TA503344.0770
0.3071			7.800		M9	79	41	29	36	1.5	8	TA203344.0780	TA503344.0780
0.3110			7.900	BSW 3/8-16		79	41	29	36	1.6	8	TA203344.0790	TA503344.0790
0.3125	5/16		7.938			79	41	29	36	1.6	8	TA203344.0794	TA503344.0794
0.3150			8.000	3/8-16 UNC		79	41	29	36	1.6	8	TA203344.0800	TA503344.0800
0.3189			8.100	3/8-16 UNJC		89	47	35	40	1.6	10	TA203344.0810	TA503344.0810
0.3228			8.200	M9x0.75		89	47	35	40	1.6	10	TA203344.0820	TA503344.0820
0.3268			8.300	LK-UNC 3/8-16		89	47	35	40	1.6	10	TA203344.0830	TA503344.0830
0.3281	21/64		8.334			89	47	35	40	1.6	10	TA203344.0833	TA503344.0833
0.3307			8.400	STI-5/16-18		89	47	35	40	1.7	10	TA203344.0840	TA503344.0840
0.3346			8.500	3/8-24 UNF, M10		89	47	35	40	1.7	10	TA203344.0850	TA503344.0850
0.3386			8.600	3/8-24 UNJF	M9x1	89	47	35	40	1.7	10	TA203344.0860	TA503344.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	89	47	35	40	1.7	10	TA203344.0870	TA503344.0870

**Stub Length  
Coolant Fed**

<b>Carbide</b>	<b>TIALN T14</b>
<b>DIN 6537 K</b>	<b>R30</b>
<b>Z2</b>	<b>4FF</b>
<b>140°</b>	<b>IT8-IT10</b>
<b>DIN 6535</b>	
HA 	
HE 	





$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-9

<b>P 1.1-5.1</b>	<b>M 1.1</b>	<b>K 1.1-4.2</b>
<b>N 1.1-5</b>	<b>N 2.1-8</b>	<b>H 1.1-2</b>

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA203344 HA SHANK	EF-Drill TA503344 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.3438	11/32		8.733	1/8-27 NPSC		89	47	35	40	1.7	10	TA203344.0873	TA503344.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	89	47	35	40	1.7	10	TA203344.0880	TA503344.0880
0.3504			8.900	MJ10x1.25		89	47	35	40	1.8	10	TA203344.0890	TA503344.0890
0.3543			9.000	M10x1		89	47	35	40	1.8	10	TA203344.0900	TA503344.0900
0.3563			9.050		3/8-24 UNF	89	47	35	40	1.8	10	TA203344.0905	TA503344.0905
0.3583			9.100	1/8-27 NPSM		89	47	35	40	1.8	10	TA203344.0910	TA503344.0910
0.3594	23/64		9.129			89	47	35	40	1.8	10	TA203344.0913	TA503344.0913
0.3622			9.200	M10x0.75		89	47	35	40	1.8	10	TA203344.0920	TA503344.0920
0.3642			9.250			89	47	35	40	1.8	10	TA203344.0925	TA503344.0925
0.3661			9.300			89	47	35	40	1.8	10	TA203344.0930	TA503344.0930
0.3681			9.350		M10	89	47	35	40	1.8	10	TA203344.0935	TA503344.0935
0.3701			9.400	7/16-14 UNC		89	47	35	40	1.9	10	TA203344.0940	TA503344.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	89	47	35	40	1.9	10	TA203344.0950	TA503344.0950
0.3750	3/8		9.525			89	47	35	40	1.9	10	TA203344.0953	TA503344.0953
0.3780			9.600		M10x1	89	47	35	40	1.9	10	TA203344.0960	TA503344.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	89	47	35	40	1.9	10	TA203344.0970	TA503344.0970
0.3858			9.800	STI-3/8-24		89	47	35	40	1.9	10	TA203344.0980	TA503344.0980
0.3898			9.900	7/16-20 UNF		89	47	35	40	2.0	10	TA203344.0990	TA503344.0990
0.3906	25/64		9.921			89	47	35	40	2.0	10	TA203344.0992	TA503344.0992
0.3937			10.000	7/16-20 UNJF		89	47	35	40	2.0	10	TA203344.1000	TA503344.1000
0.3976			10.100			102	55	40	45	2.0	12	TA203344.1010	TA503344.1010
0.4016			10.200	7/16-28 UNEF		102	55	40	45	2.0	12	TA203344.1020	TA503344.1020
0.4035			10.250		7/16-14 UNC	102	55	40	45	2.0	12	TA203344.1025	TA503344.1025
0.4055			10.300			102	55	40	45	2.0	12	TA203344.1030	TA503344.1030
0.4063	13/32		10.320			102	55	40	45	2.0	12	TA203344.1032	TA503344.1032
0.4134			10.500	M12x1.5		102	55	40	45	2.1	12	TA203344.1050	TA503344.1050
0.4154			10.550		7/16-20 UNF	102	55	40	45	2.1	12	TA203344.1055	TA503344.1055
0.4213			10.700	LK-M12		102	55	40	45	2.1	12	TA203344.1070	TA503344.1070
0.4219	27/64		10.716	1/2-13 UNC		102	55	40	45	2.1	12	TA203344.1072	TA503344.1072
0.4252			10.800	M12x1.25		102	55	40	45	2.1	12	TA203344.1080	TA503344.1080
0.4291			10.900	1/2-13 UNJC		102	55	40	45	2.1	12	TA203344.1090	TA503344.1090
0.4331			11.000	M12x1		102	55	40	45	2.2	12	TA203344.1100	TA503344.1100
0.4370			11.100	BSF 1/2-16		102	55	40	45	2.2	12	TA203344.1110	TA503344.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		102	55	40	45	2.2	12	TA203344.1111	TA503344.1111
0.4409			11.200			102	55	40	45	2.2	12	TA203344.1120	TA503344.1120
0.4429			11.250	M12x0.75	M12	102	55	40	45	2.2	12	TA203344.1125	TA503344.1125
0.4469			11.350	Pg7	M12x1.5	102	55	40	45	2.2	12	TA203344.1135	TA503344.1135
0.4488			11.400	1/4-18 NPSC		102	55	40	45	2.2	12	TA203344.1140	TA503344.1140
0.4508			11.450		M12x1.25	102	55	40	45	2.2	12	TA203344.1145	TA503344.1145
0.4528			11.500	1/2-20 UNF		102	55	40	45	2.3	12	TA203344.1150	TA503344.1150
0.4531	29/64		11.509			102	55	40	45	2.3	12	TA203344.1151	TA503344.1151
0.4567			11.600	1/2-20 UNJF	M12x1	102	55	40	45	2.3	12	TA203344.1160	TA503344.1160
0.4606			11.700			102	55	40	45	2.3	12	TA203344.1170	TA503344.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	102	55	40	45	2.3	12	TA203344.1180	TA503344.1180

**Stub Length  
Coolant Fed**

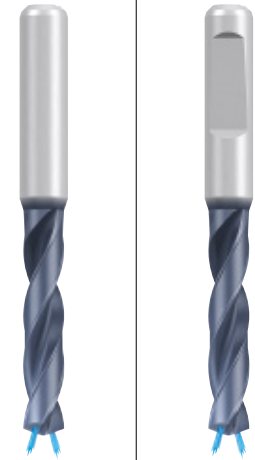
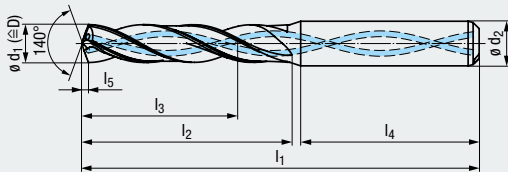
**Carbide** **TIALN T14**

**DIN 6537 K** **R30**

**Z2** **4FF**

**140°** **IT8-IT10**

**DIN 6535**  
HA   
HE



$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**  
**N 1.1-5** **N 2.1-8** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill TA203344 HA SHANK	EF-Drill TA503344 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.4685			11.900			102	55	40	45	2.3	12	TA203344.1190	TA503344.1190
0.4688	15/32		11.908			102	55	40	45	2.3	12	TA203344.1191	TA503344.1191
0.4724			12.000	M14		102	55	40	45	2.4	12	TA203344.1200	TA503344.1200
0.4783			12.150		1/2-20 UNF	102	55	40	45	2.4	12	TA203344.1215	TA503344.1215
0.4803			12.200	Tr 14x2		102	55	40	45	2.4	14	TA203344.1220	TA503344.1220
0.4844	31/64		12.304	9/16-12 UNC		102	55	40	45	2.4	14	TA203344.1230	TA503344.1230
0.4921			12.500	M14x1.5		102	55	40	45	2.4	14	TA203344.1250	TA503344.1250
0.4941			12.550		G1/4-19	102	55	40	45	2.4	14	TA203344.1255	TA503344.1255
0.5000	1/2		12.700	LK-UNC 9/16-12		102	55	40	45	2.5	14	TA203344.1270	TA503344.1270
0.5039			12.800	M14x1.25		102	55	40	45	2.5	14	TA203344.1280	TA503344.1280
0.5118			13.000	9/16-18 UNJF		102	55	40	45	2.5	14	TA203344.1300	TA503344.1300
0.5157			13.100	STI-1/2-20	M14	102	55	40	45	2.6	14	TA203344.1310	TA503344.1310
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	102	55	40	45	2.6	14	TA203344.1330	TA503344.1330
0.5256			13.350		M14x1.5	102	55	40	45	2.6	14	TA203344.1335	TA503344.1335
0.5295			13.450		M14x1.25	102	55	40	45	2.6	14	TA203344.1345	TA503344.1345
0.5313	17/32		13.495	5/8-11 UNC		102	55	40	45	2.6	14	TA203344.1349	TA503344.1349
0.5315			13.500			102	55	40	45	2.6	14	TA203344.1350	TA503344.1350
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	102	55	40	45	2.7	14	TA203344.1365	TA503344.1365
0.5394			13.700			102	55	40	45	2.7	14	TA203344.1370	TA503344.1370
0.5469	35/64		13.891			102	55	40	45	2.7	14	TA203344.1389	TA503344.1389
0.5512			14.000	M16, M15x1		102	55	40	45	2.7	14	TA203344.1400	TA503344.1400
0.5551			14.100			115	65	45	48	2.8	16	TA203344.1410	TA503344.1410
0.5625	9/16		14.288			115	65	45	48	2.8	16	TA203344.1429	TA503344.1429
0.5709			14.500	5/8-18 UNF		115	65	45	48	2.8	16	TA203344.1450	TA503344.1450
0.5748			14.600	5/8-18 UNJF	M15x1	115	65	45	48	2.9	16	TA203344.1460	TA503344.1460
0.5781	37/64		14.684	3/8-18 NPSC		115	65	45	48	2.9	16	TA203344.1468	TA503344.1468
0.5827			14.800		5/8-11 UNC	115	65	45	48	2.9	16	TA203344.1480	TA503344.1480
0.5906			15.000	M16x1		115	65	45	48	2.9	16	TA203344.1500	TA503344.1500
0.5938	19/32		15.083			115	65	45	48	2.9	16	TA203344.1508	TA503344.1508
0.5945			15.100		M16	115	65	45	48	2.9	16	TA203344.1510	TA503344.1510
0.6102			15.500	M18		115	65	45	48	3.0	16	TA203344.1550	TA503344.1550
0.6142			15.600		M16x1	115	65	45	48	3.0	16	TA203344.1560	TA503344.1560
0.6250	5/8		15.875			115	65	45	48	3.1	16	TA203344.1588	TA503344.1588
0.6299			16.000	M18x2		115	65	45	48	3.1	16	TA203344.1600	TA503344.1600
0.6406	41/64		16.272			123	73	51	48	3.1	18	TA203344.1627	TA503344.1627
0.6496			16.500	STI-5/8-11		123	73	51	48	3.2	18	TA203344.1650	TA503344.1650
0.6563	21/32		16.669	3/4-10 UNC		123	73	51	48	3.2	18	TA203344.1667	TA503344.1667
0.6693			17.000	M18x1		123	73	51	48	3.3	18	TA203344.1700	TA503344.1700
0.6875	11/16		17.463			123	73	51	48	3.3	18	TA203344.1746	TA503344.1746
0.6890			17.500	3/4-16 UNF, M20		123	73	51	48	3.4	18	TA203344.1750	TA503344.1750
0.7087			18.000	M20x2, LK-M16		123	73	51	48	3.5	18	TA203344.1800	TA503344.1800
0.7480			19.000	M20x1		131	79	55	50	3.7	20	TA203344.1900	TA503344.1900
0.7500	3/4		19.050			131	79	55	50	3.7	20	TA203344.1905	TA503344.1905
0.7874			20.000	M22x2	G1/2-14	131	79	55	50	3.9	20	TA203344.2000	TA503344.2000

## Standard Length Coolant Fed


**Carbide**      **TIALN T14**


**DIN 6537 L**      **R30**

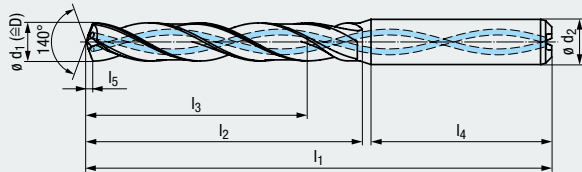
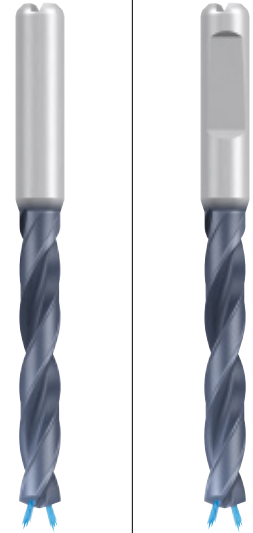
**Z2**      **4FF**

**140°**      **IT9-IT10**

**DIN 6535**

HA 

HE 





$l_3$  = Max Effective Drill Depth

## 5 x D

Range of Application: See Pgs. 6-9

**P 1.1-5.1**   **M 1.1**   **K 1.1-4.2**

**N 1.1-5**   **N 2.1-8**   **H 1.1-2**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA213344 HA SHANK	EF-Drill TA513344 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.1102			2.800	#6-32UNC	M3	61	22	17	36	0.6	6	TA213344.0280	TA513344.0280
0.1142			2.900	#6-32UNJC	#5-40UNC	61	22	17	36	0.6	6	TA213344.0290	TA513344.0290
0.1150			2.920		#5-44UNF	61	22	17	36	0.6	6	TA213344.0292	TA513344.0292
0.1181			3.000	#6-40UNF		66	28	23	36	0.6	6	TA213344.0300	TA513344.0300
0.1220			3.100	STI-#4-40		66	28	23	36	0.6	6	TA213344.0310	TA513344.0310
0.1240			3.150	M3.5x0.35	#6-32UNC	66	28	23	36	0.6	6	TA213344.0315	TA513344.0315
0.1250	1/8		3.175			66	28	23	36	0.6	6	TA213344.0318	TA513344.0318
0.1260			3.200	BSW 5/32-32	#6-40UNF	66	28	23	36	0.6	6	TA213344.0320	TA513344.0320
0.1280			3.250		M3.5	66	28	23	36	0.7	6	TA213344.0325	TA513344.0325
0.1299			3.300	M4		66	28	23	36	0.7	6	TA213344.0330	TA513344.0330
0.1331			3.380		M3.5x0.35	66	28	23	36	0.7	6	TA213344.0338	TA513344.0338
0.1339			3.400	MJ4x0.7		66	28	23	36	0.7	6	TA213344.0340	TA513344.0340
0.1378			3.500	#8-32UNC		66	28	23	36	0.7	6	TA213344.0350	TA513344.0350
0.1406	9/64	#28	3.571			66	28	23	36	0.7	6	TA213344.0357	TA513344.0357
0.1417			3.600	#8-36UNJF		66	28	23	36	0.7	6	TA213344.0360	TA513344.0360
0.1457			3.700	M4.5	M4	66	28	23	36	0.7	6	TA213344.0370	TA513344.0370
0.1496		#25	3.800	STI-#6-32	#8-32UNC	74	36	29	36	0.8	6	TA213344.0380	TA513344.0380
0.1516			3.850		#8-36UNF	74	36	29	36	0.8	6	TA213344.0385	TA513344.0385
0.1535			3.900	#10-24UNC		74	36	29	36	0.8	6	TA213344.0390	TA513344.0390
0.1563	5/32		3.970			74	36	29	36	0.8	6	TA213344.0397	TA513344.0397
0.1575			4.000	M4.5x0.5		74	36	29	36	0.8	6	TA213344.0400	TA513344.0400
0.1590		#21	4.038			74	36	29	36	0.8	6	TA213344.0404	TA513344.0404
0.1614			4.100	#10-32UNF		74	36	29	36	0.8	6	TA213344.0410	TA513344.0410
0.1654			4.200	M5, STI-M4	M4.5	74	36	29	36	0.8	6	TA213344.0420	TA513344.0420
0.1693		#18	4.300	MJ5x0.8		74	36	29	36	0.8	6	TA213344.0430	TA513344.0430
0.1713			4.350		#10-24UNC	74	36	29	36	0.8	6	TA213344.0435	TA513344.0435
0.1719	11/64		4.366			74	36	29	36	0.8	6	TA213344.0437	TA513344.0437
0.1732			4.400	M5x0.75		74	36	29	36	0.8	6	TA213344.0440	TA513344.0440
0.1752			4.450		#10-32UNF	74	36	29	36	0.9	6	TA213344.0445	TA513344.0445
0.1772			4.500	#12-24UNC		74	36	29	36	0.9	6	TA213344.0450	TA513344.0450
0.1811			4.600	#12-28UNF		74	36	29	36	0.9	6	TA213344.0460	TA513344.0460
0.1831			4.650	#12-24UNJC	M5	74	36	29	36	0.9	6	TA213344.0465	TA513344.0465
0.1850		#13	4.700	LK-UNC#12-24		74	36	29	36	0.9	6	TA213344.0470	TA513344.0470
0.1875	3/16		4.763	#12-28UNJF		82	44	35	36	1.0	6	TA213344.0476	TA513344.0476
0.1890		#12	4.800	#12-32UNEF	M5x0.5, STI-M5	82	44	35	36	1.0	6	TA213344.0480	TA513344.0480
0.1929			4.900			82	44	35	36	1.0	6	TA213344.0490	TA513344.0490
0.1969			5.000	M6	#12-24UNC	82	44	35	36	1.0	6	TA213344.0500	TA513344.0500
0.2008			5.100	MJ6x1	#12-28UNF	82	44	35	36	1.0	6	TA213344.0510	TA513344.0510
0.2010		#7	5.106			82	44	35	36	1.0	6	TA213344.0511	TA513344.0511
0.2031	13/64		5.159			82	44	35	36	1.0	6	TA213344.0516	TA513344.0516
0.2047			5.200	1/4-20UNC		82	44	35	36	1.0	6	TA213344.0520	TA513344.0520
0.2087			5.300	1/4-20UNJC		82	44	35	36	1.1	6	TA213344.0530	TA513344.0530
0.2126			5.400			82	44	35	36	1.1	6	TA213344.0540	TA513344.0540
0.2130		#3	5.410			82	44	35	36	1.1	6	TA213344.0541	TA513344.0541

**Standard Length  
Coolant Fed**


**Carbide**      **TIALN T14**


**DIN 6537 L**      **R30**

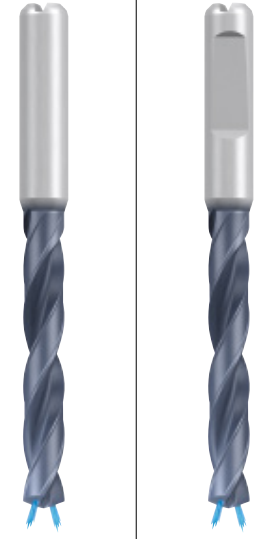
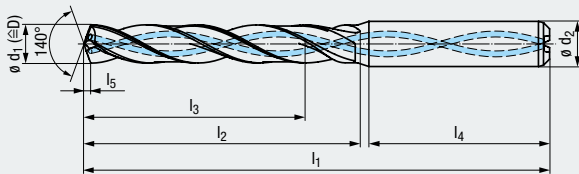
**Z2**      **4FF**

**140°**      **IT9-IT10**

**DIN 6535**

HA 

HE 





$l_3$  = Max Effective Drill Depth

**5 x D**



Range of Application: See Pgs. 6-9

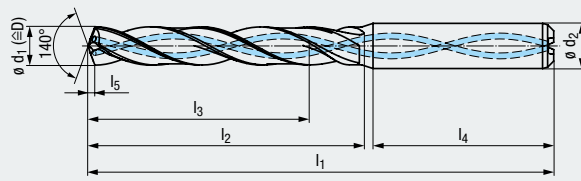
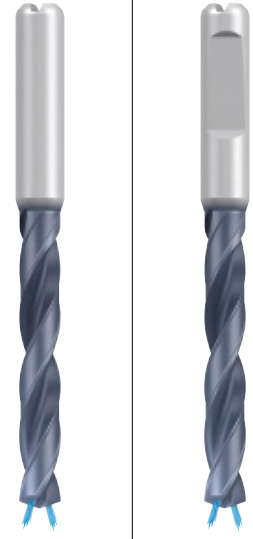
**P 1.1-5.1**   **M 1.1**   **K 1.1-4.2**

**N 1.1-5**   **N 2.1-8**   **H 1.1-2**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill TA213344 HA SHANK	EF-Drill TA513344 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.2165			5.500	1/4-28 UNF		82	44	35	36	1.1	6	TA213344.0550	TA513344.0550
0.2187	7/32		5.556	1/4-28 UNJF		82	44	35	36	1.1	6	TA213344.0556	TA513344.0556
0.2205			5.600	1/4-32 UNEF	M6	82	44	35	36	1.1	6	TA213344.0560	TA513344.0560
0.2264			5.750		1/4-20 UNC	82	44	35	36	1.2	6	TA213344.0575	TA513344.0575
0.2283			5.800		M6x0.5	82	44	35	36	1.2	6	TA213344.0580	TA513344.0580
0.2323			5.900			82	44	35	36	1.2	6	TA213344.0590	TA513344.0590
0.2344	15/64		5.954		1/4-28 UNF	82	44	35	36	1.2	6	TA213344.0595	TA513344.0595
0.2362			6.000	M7, Rd 8x1/10		82	44	35	36	1.2	6	TA213344.0600	TA513344.0600
0.2402			6.100	MJ7x1		91	53	43	36	1.2	8	TA213344.0610	TA513344.0610
0.2441			6.200	M7x0.75		91	53	43	36	1.2	8	TA213344.0620	TA513344.0620
0.2480			6.300	M7x0.5, STI-M6		91	53	43	36	1.3	8	TA213344.0630	TA513344.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		91	53	43	36	1.3	8	TA213344.0635	TA513344.0635
0.2520			6.400			91	53	43	36	1.3	8	TA213344.0640	TA513344.0640
0.2559			6.500	BSW 5/16-18		91	53	43	36	1.3	8	TA213344.0650	TA513344.0650
0.2570		F	6.528			91	53	43	36	1.3	8	TA213344.0653	TA513344.0653
0.2598			6.600	5/16-18 UNC	M7	91	53	43	36	1.3	8	TA213344.0660	TA513344.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	91	53	43	36	1.3	8	TA213344.0670	TA513344.0670
0.2656	17/64		6.746			91	53	43	36	1.3	8	TA213344.0675	TA513344.0675
0.2677			6.800	M8, G 1/16		91	53	43	36	1.4	8	TA213344.0680	TA513344.0680
0.2717			6.900	5/16-24 UNF		91	53	43	36	1.4	8	TA213344.0690	TA513344.0690
0.2756			7.000	5/16-24 UNJF		91	53	43	36	1.4	8	TA213344.0700	TA513344.0700
0.2795			7.100	MJ8x1		91	53	49	36	1.4	8	TA213344.0710	TA513344.0710
0.2813	9/32	K	7.145			91	53	49	36	1.4	8	TA213344.0715	TA513344.0715
0.2835			7.200	5/16-32 UNEF		91	53	49	36	1.4	8	TA213344.0720	TA513344.0720
0.2854			7.250		5/16-18 UNC	91	53	49	36	1.5	8	TA213344.0725	TA513344.0725
0.2874			7.300			91	53	49	36	1.5	8	TA213344.0730	TA513344.0730
0.2913			7.400			91	53	49	36	1.5	8	TA213344.0740	TA513344.0740
0.2933			7.450		5/16-24 UNF, M8	91	53	49	36	1.5	8	TA213344.0745	TA513344.0745
0.2953			7.500		M8x0.5	91	53	49	36	1.5	8	TA213344.0750	TA513344.0750
0.2969	19/64		7.541			91	53	49	36	1.5	8	TA213344.0754	TA513344.0754
0.2992			7.600	Tr9x1.5	M8x1, STI-M8	91	53	49	36	1.5	8	TA213344.0760	TA513344.0760
0.3031			7.700		M8x0.75	91	53	49	36	1.5	8	TA213344.0770	TA513344.0770
0.3071			7.800		M9	91	53	49	36	1.6	8	TA213344.0780	TA513344.0780
0.3110			7.900	BSW 3/8-16		91	53	49	36	1.6	8	TA213344.0790	TA513344.0790
0.3125	5/16		7.938			91	53	49	36	1.6	8	TA213344.0794	TA513344.0794
0.3150			8.000	3/8-16 UNC		91	53	49	36	1.6	8	TA213344.0800	TA513344.0800
0.3189			8.100	3/8-16 UNJC		103	61	49	40	1.6	10	TA213344.0810	TA513344.0810
0.3228			8.200	M9x0.75		103	61	49	40	1.6	10	TA213344.0820	TA513344.0820
0.3268			8.300	LK-UNC 3/8-16		103	61	49	40	1.7	10	TA213344.0830	TA513344.0830
0.3281	21/64		8.334			103	61	49	40	1.7	10	TA213344.0833	TA513344.0833
0.3307			8.400	STI-5/16-18		103	61	49	40	1.7	10	TA213344.0840	TA513344.0840
0.3346			8.500	3/8-24 UNF, M10		103	61	49	40	1.7	10	TA213344.0850	TA513344.0850
0.3386			8.600	3/8-24 UNJF	M9x1	103	61	49	40	1.7	10	TA213344.0860	TA513344.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	103	61	49	40	1.7	10	TA213344.0870	TA513344.0870

## Standard Length Coolant Fed

<b>Carbide</b>	<b>TIALN T14</b>
<b>DIN 6537 L</b>	<b>R30</b>
<b>Z2</b>	<b>4FF</b>
<b>140°</b>	<b>IT9-IT10</b>
<b>DIN 6535</b>	
HA 	
HE 	



$l_3$  = Max Effective Drill Depth

## 5 x D

Range of Application: See Pgs. 6-9

<b>P 1.1-5.1</b>	<b>M 1.1</b>	<b>K 1.1-4.2</b>
<b>N 1.1-5</b>	<b>N 2.1-8</b>	<b>H 1.1-2</b>

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA213344 HA SHANK	EF-Drill TA513344 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.3438	11/32		8.733	1/8-27 NPSC		103	61	49	40	1.7	10	TA213344.0873	TA513344.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	103	61	49	40	1.8	10	TA213344.0880	TA513344.0880
0.3504			8.900	MJ10x1.25		103	61	49	40	1.8	10	TA213344.0890	TA513344.0890
0.3543			9.000	M10x1		103	61	49	40	1.8	10	TA213344.0900	TA513344.0900
0.3563			9.050		3/8-24 UNF	103	61	49	40	1.8	10	TA213344.0905	TA513344.0905
0.3583			9.100	1/8-27 NPSM		103	61	49	40	1.8	10	TA213344.0910	TA513344.0910
0.3594	23/64		9.129			103	61	49	40	1.8	10	TA213344.0913	TA513344.0913
0.3622			9.200	M10x0.75		103	61	49	40	1.8	10	TA213344.0920	TA513344.0920
0.3642			9.250			103	61	49	40	1.9	10	TA213344.0925	TA513344.0925
0.3661			9.300			103	61	49	40	1.9	10	TA213344.0930	TA513344.0930
0.3681			9.350		M10	103	61	49	40	1.9	10	TA213344.0935	TA513344.0935
0.3701			9.400	7/16-14 UNC		103	61	49	40	1.9	10	TA213344.0940	TA513344.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	103	61	49	40	1.9	10	TA213344.0950	TA513344.0950
0.3750	3/8		9.525			103	61	49	40	1.9	10	TA213344.0953	TA513344.0953
0.3780			9.600		M10x1	103	61	49	40	1.9	10	TA213344.0960	TA513344.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	103	61	49	40	1.9	10	TA213344.0970	TA513344.0970
0.3858			9.800	STI-3/8-24		103	61	49	40	2.0	10	TA213344.0980	TA513344.0980
0.3898			9.900	7/16-20 UNF		103	61	49	40	2.0	10	TA213344.0990	TA513344.0990
0.3906	25/64		9.921			103	61	49	40	2.0	10	TA213344.0992	TA513344.0992
0.3937			10.000	7/16-20 UNJF		103	61	49	40	2.0	10	TA213344.1000	TA513344.1000
0.3976			10.100			118	71	56	45	2.0	12	TA213344.1010	TA513344.1010
0.4016			10.200	7/16-28 UNEF		118	71	56	45	2.0	12	TA213344.1020	TA513344.1020
0.4035			10.250		7/16-14 UNC	118	71	56	45	2.1	12	TA213344.1025	TA513344.1025
0.4055			10.300			118	71	56	45	2.1	12	TA213344.1030	TA513344.1030
0.4063	13/32		10.320			118	71	56	45	2.1	12	TA213344.1032	TA513344.1032
0.4134			10.500	M12x1.5		118	71	56	45	2.1	12	TA213344.1050	TA513344.1050
0.4154			10.550		7/16-20 UNF	118	71	56	45	2.1	12	TA213344.1055	TA513344.1055
0.4213			10.700	LK-M12		118	71	56	45	2.1	12	TA213344.1070	TA513344.1070
0.4219	27/64		10.716	1/2-13 UNC		118	71	56	45	2.1	12	TA213344.1072	TA513344.1072
0.4252			10.800	M12x1.25		118	71	56	45	2.2	12	TA213344.1080	TA513344.1080
0.4291			10.900	1/2-13 UNJC		118	71	56	45	2.2	12	TA213344.1090	TA513344.1090
0.4331			11.000	M12x1		118	71	56	45	2.2	12	TA213344.1100	TA513344.1100
0.4370			11.100	BSF 1/2-16		118	71	56	45	2.2	12	TA213344.1110	TA513344.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		118	71	56	45	2.2	12	TA213344.1111	TA513344.1111
0.4409			11.200			118	71	56	45	2.2	12	TA213344.1120	TA513344.1120
0.4429			11.250	M12x0.75	M12	118	71	56	45	2.3	12	TA213344.1125	TA513344.1125
0.4469			11.350	Pg7	M12x1.5	118	71	56	45	2.3	12	TA213344.1135	TA513344.1135
0.4488			11.400	1/4-18 NPSC		118	71	56	45	2.3	12	TA213344.1140	TA513344.1140
0.4508			11.450		M12x1.25	118	71	56	45	2.3	12	TA213344.1145	TA513344.1145
0.4528			11.500	1/2-20 UNF		118	71	56	45	2.3	12	TA213344.1150	TA513344.1150
0.4531	29/64		11.509			118	71	56	45	2.3	12	TA213344.1151	TA513344.1151
0.4567			11.600	1/2-20 UNJF	M12x1	118	71	56	45	2.3	12	TA213344.1160	TA513344.1160
0.4606			11.700			118	71	56	45	2.3	12	TA213344.1170	TA513344.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	118	71	56	45	2.4	12	TA213344.1180	TA513344.1180

**Standard Length  
Coolant Fed**

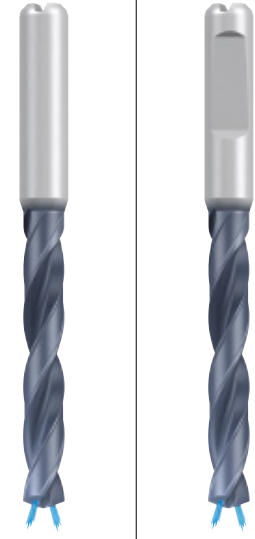
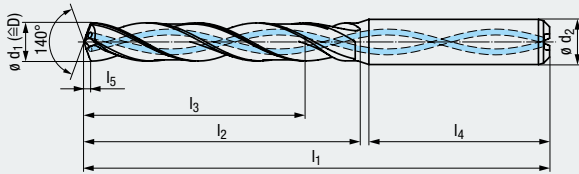
**Carbide** **TIALN T14**

**DIN 6537 L** **R30**

**Z2** **4FF**

**140°** **IT9-IT10**

**DIN 6535**  
HA  HE



$l_3$  = Max Effective Drill Depth

**5 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**  
**N 1.1-5** **N 2.1-8** **H 1.1-2**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill TA213344 HA SHANK	EF-Drill TA513344 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.4685			11.900			118	71	56	45	2.4	12	TA213344.1190	TA513344.1190
0.4688	15/32		11.908			118	71	56	45	2.4	12	TA213344.1191	TA513344.1191
0.4724			12.000	M14		118	71	56	45	2.4	12	TA213344.1200	TA513344.1200
0.4783			12.150		1/2-20 UNF	118	71	56	45	2.4	14	TA213344.1215	TA513344.1215
0.4803			12.200	Tr 14x2		118	71	56	45	2.4	14	TA213344.1220	TA513344.1220
0.4844	31/64		12.304	9/16-12 UNC		118	71	56	45	2.4	14	TA213344.1230	TA513344.1230
0.4921			12.500	M14x1.5		124	77	60	45	2.5	14	TA213344.1250	TA513344.1250
0.4941			12.550		G1/4-19	124	77	60	45	2.5	14	TA213344.1255	TA513344.1255
0.5000	1/2		12.700	LK-UNC 9/16-12		124	77	60	45	2.5	14	TA213344.1270	TA513344.1270
0.5039			12.800	M14x1.25		124	77	60	45	2.6	14	TA213344.1280	TA513344.1280
0.5118			13.000	9/16-18 UNJF		124	77	60	45	2.6	14	TA213344.1300	TA513344.1300
0.5157			13.100	STI-1/2-20	M14	124	77	60	45	2.6	14	TA213344.1310	TA513344.1310
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	124	77	60	45	2.7	14	TA213344.1330	TA513344.1330
0.5256			13.350		M14x1.5	124	77	60	45	2.7	14	TA213344.1335	TA513344.1335
0.5295			13.450		M14x1.25	124	77	60	45	2.7	14	TA213344.1345	TA513344.1345
0.5313	17/32		13.495	5/8-11 UNC		124	77	60	45	2.7	14	TA213344.1349	TA513344.1349
0.5315			13.500			124	77	60	45	2.7	14	TA213344.1350	TA513344.1350
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	124	77	60	45	2.7	14	TA213344.1365	TA513344.1365
0.5394			13.700			124	77	60	45	2.7	14	TA213344.1370	TA513344.1370
0.5469	35/64		13.891			124	77	60	45	2.7	14	TA213344.1389	TA513344.1389
0.5512			14.000	M16, M15x1		124	77	60	45	2.8	14	TA213344.1400	TA513344.1400
0.5551			14.100			124	77	60	45	2.8	16	TA213344.1410	TA513344.1410
0.5625	9/16		14.288			124	77	60	45	2.8	16	TA213344.1429	TA513344.1429
0.5709			14.500	5/8-18 UNF		133	83	63	48	2.9	16	TA213344.1450	TA513344.1450
0.5748			14.600	5/8-18 UNJF	M15x1	133	83	63	48	2.9	16	TA213344.1460	TA513344.1460
0.5781	37/64		14.684	3/8-18 NPSC		133	83	63	48	2.9	16	TA213344.1468	TA513344.1468
0.5827			14.800		5/8-11 UNC	133	83	63	48	2.9	16	TA213344.1480	TA513344.1480
0.5906			15.000	M16x1		133	83	63	48	3.0	16	TA213344.1500	TA513344.1500
0.5938	19/32		15.083			133	83	63	48	3.0	16	TA213344.1508	TA513344.1508
0.5945			15.100		M16	133	83	63	48	3.0	16	TA213344.1510	TA513344.1510
0.6102			15.500	M18		133	83	63	48	3.1	16	TA213344.1550	TA513344.1550
0.6142			15.600		M16x1	133	83	63	48	3.1	16	TA213344.1560	TA513344.1560
0.6250	5/8		15.875			133	83	63	48	3.1	16	TA213344.1588	TA513344.1588
0.6299			16.000	M18x2		133	83	63	48	3.2	16	TA213344.1600	TA513344.1600
0.6406	41/64		16.272			143	93	71	48	3.3	18	TA213344.1627	TA513344.1627
0.6496			16.500	STI-5/8-11		143	93	71	48	3.4	18	TA213344.1650	TA513344.1650
0.6563	21/32		16.669	3/4-10 UNC		143	93	71	48	3.4	18	TA213344.1667	TA513344.1667
0.6693			17.000	M18x1		143	93	71	48	3.5	18	TA213344.1700	TA513344.1700
0.6875	11/16		17.463			143	93	71	48	3.5	18	TA213344.1746	TA513344.1746
0.6890			17.500	3/4-16 UNF, M20		143	93	71	48	3.5	18	TA213344.1750	TA513344.1750
0.7087			18.000	M20x2, LK-M16		143	93	71	48	3.6	18	TA213344.1800	TA513344.1800
0.7480			19.000	M20x1		153	101	77	50	3.7	20	TA213344.1900	TA513344.1900
0.7500	3/4		19.050			153	101	77	50	3.7	20	TA213344.1905	TA513344.1905
0.7874			20.000	M22x2	G1/2-14	153	101	77	50	3.8	20	TA213344.2000	TA513344.2000

**Long Length  
Coolant Fed**

**Carbide** **TIALN T14**

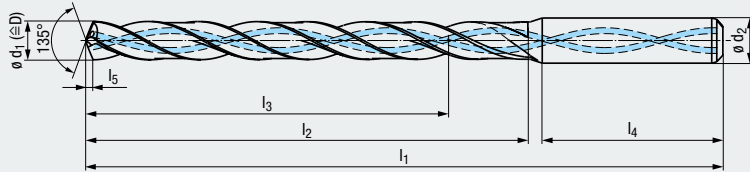
**R30**

**Z2** **4FF**

**135°** **IT9-IT11**

**DIN 6535**

**HA**



Preparatory centering with a centering drill (p.ex. EF-Drill acc. DIN 6537 K) is recommended

$l_3$  = Max Effective Drill Depth

**8 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**

**N 1.1-5** **N 2.1-8**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA223344 HA SHANK	
inch	Fraction	Wire letter			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.1102			2.800	#6-32UNC	M3	70	30	24	36	0.6	6	TA223344.0280
0.1142			2.900	#6-32UNJC	#5-40UNC	70	30	24	36	0.6	6	TA223344.0290
0.1150			2.920		#5-44UNF	70	30	24	36	0.6	6	TA223344.0292
0.1181			3.000	#6-40UNF		78	38	30	36	0.6	6	TA223344.0300
0.1220			3.100	STI-#4-40		78	38	30	36	0.6	6	TA223344.0310
0.1240			3.150	M3.5x0.35	#6-32UNC	78	38	30	36	0.7	6	TA223344.0315
0.1250	1/8		3.175			78	38	30	36	0.7	6	TA223344.0318
0.1260			3.200	BSW 5/32-32	#6-40UNF	78	38	30	36	0.7	6	TA223344.0320
0.1280			3.250		M3.5	78	38	30	36	0.7	6	TA223344.0325
0.1299			3.300	M4		78	38	30	36	0.7	6	TA223344.0330
0.1331			3.380		M3.5x0.35	78	38	30	36	0.7	6	TA223344.0338
0.1339			3.400	MJ4x0.7		78	38	30	36	0.7	6	TA223344.0340
0.1378			3.500	#8-32UNC		78	38	30	36	0.7	6	TA223344.0350
0.1406	9/64	#28	3.571			78	38	30	36	0.7	6	TA223344.0357
0.1417			3.600	#8-36UNJF		78	38	30	36	0.7	6	TA223344.0360
0.1457			3.700	M4.5	M4	78	38	30	36	0.8	6	TA223344.0370
0.1496		#25	3.800	STI-#6-32	#8-32UNC	88	48	38	36	0.8	6	TA223344.0380
0.1516			3.850		#8-36UNF	88	48	38	36	0.8	6	TA223344.0385
0.1535			3.900	#10-24UNC		88	48	38	36	0.8	6	TA223344.0390
0.1563	5/32		3.970			88	48	38	36	0.8	6	TA223344.0397
0.1575			4.000	M4.5x0.5		88	48	38	36	0.8	6	TA223344.0400
0.1590		#21	4.038			88	48	38	36	0.8	6	TA223344.0404
0.1614			4.100	#10-32UNF		88	48	38	36	0.8	6	TA223344.0410
0.1654			4.200	M5, STI-M4	M4.5	88	48	38	36	0.9	6	TA223344.0420
0.1693		#18	4.300	MJ5x0.8		88	48	38	36	0.9	6	TA223344.0430
0.1713			4.350		#10-24UNC	88	48	38	36	0.9	6	TA223344.0435
0.1719	11/64		4.366			88	48	38	36	0.9	6	TA223344.0437
0.1732			4.400	M5x0.75		88	48	38	36	0.9	6	TA223344.0440
0.1752			4.450		#10-32UNF	88	48	38	36	0.9	6	TA223344.0445
0.1772			4.500	#12-24UNC		88	48	38	36	0.9	6	TA223344.0450
0.1811			4.600	#12-28UNF		88	48	38	36	1.0	6	TA223344.0460
0.1831			4.650	#12-24UNJC	M5	88	48	38	36	1.0	6	TA223344.0465
0.1850		#13	4.700	LK-UNC#12-24		88	48	38	36	1.0	6	TA223344.0470
0.1875	3/16		4.763	#12-28UNJF		88	48	38	36	1.0	6	TA223344.0476
0.1890		#12	4.800	#12-32UNEF	M5x0.5, STI-M5	97	60	48	36	1.0	6	TA223344.0480
0.1929			4.900			97	60	48	36	1.0	6	TA223344.0490
0.1969			5.000	M6	#12-24UNC	97	60	48	36	1.0	6	TA223344.0500
0.2008			5.100	MJ6x1	#12-28UNF	97	60	48	36	1.1	6	TA223344.0510
0.2010		#7	5.106			97	60	48	36	1.1	6	TA223344.0511
0.2031	13/64		5.159			97	60	48	36	1.1	6	TA223344.0516
0.2047			5.200	1/4-20UNC		97	60	48	36	1.1	6	TA223344.0520
0.2087			5.300	1/4-20UNJC		97	60	48	36	1.1	6	TA223344.0530
0.2126			5.400			97	60	48	36	1.1	6	TA223344.0540
0.2130		#3	5.410			97	60	48	36	1.1	6	TA223344.0541



**Long Length  
Coolant Fed**

**Carbide** **TIALN T14**

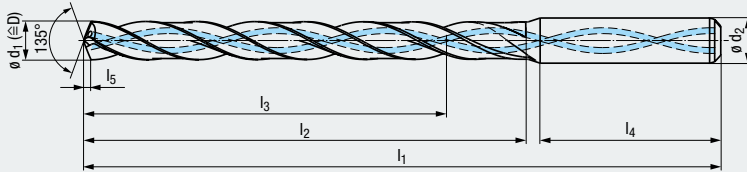
**R30**

**Z2** **4FF**

**135°** **IT9-IT11**

**DIN 6535**

**HA**



Preparatory centering with a centering drill (p.ex. EF-Drill acc. DIN 6537 K) is recommended

$l_3$  = Max Effective Drill Depth

**8 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**

**N 1.1-5** **N 2.1-8**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill TA223344 HA SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6	
0.2165			5.500	1/4-28 UNF		97	60	48	36	1.1	6	TA223344.0550
0.2187	7/32		5.556	1/4-28 UNJF		97	60	48	36	1.1	6	TA223344.0556
0.2205			5.600	1/4-32 UNEF	M6	97	60	48	36	1.2	6	TA223344.0560
0.2264			5.750		1/4-20 UNC	97	60	48	36	1.2	6	TA223344.0575
0.2283			5.800		M6x0.5	97	60	48	36	1.2	6	TA223344.0580
0.2323			5.900			97	60	48	36	1.2	6	TA223344.0590
0.2344	15/64		5.954		1/4-28 UNF	97	60	48	36	1.2	6	TA223344.0595
0.2362			6.000	M7, Rd 8x1/10		97	60	48	36	1.2	6	TA223344.0600
0.2402			6.100	MJ7x1		107	70	56	36	1.3	8	TA223344.0610
0.2441			6.200	M7x0.75		107	70	56	36	1.3	8	TA223344.0620
0.2480			6.300	M7x0.5, STI-M6		107	70	56	36	1.3	8	TA223344.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		107	70	56	36	1.3	8	TA223344.0635
0.2520			6.400			107	70	56	36	1.3	8	TA223344.0640
0.2559			6.500	BSW 5/16-18		107	70	56	36	1.3	8	TA223344.0650
0.2570		F	6.528			107	70	56	36	1.3	8	TA223344.0653
0.2598			6.600	5/16-18 UNC	M7	107	70	56	36	1.4	8	TA223344.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	107	70	56	36	1.4	8	TA223344.0670
0.2656	17/64		6.746			107	70	56	36	1.4	8	TA223344.0675
0.2677			6.800	M8, G 1/16		107	70	56	36	1.4	8	TA223344.0680
0.2717			6.900	5/16-24 UNF		107	70	56	36	1.4	8	TA223344.0690
0.2756			7.000	5/16-24 UNJF		107	70	56	36	1.4	8	TA223344.0700
0.2795			7.100	MJ8x1		117	80	64	36	1.5	8	TA223344.0710
0.2813	9/32	K	7.145			117	80	64	36	1.5	8	TA223344.0715
0.2835			7.200	5/16-32 UNEF		117	80	64	36	1.5	8	TA223344.0720
0.2854			7.250		5/16-18 UNC	117	80	64	36	1.5	8	TA223344.0725
0.2874			7.300			117	80	64	36	1.5	8	TA223344.0730
0.2913			7.400			117	80	64	36	1.5	8	TA223344.0740
0.2933			7.450		5/16-24 UNF, M8	117	80	64	36	1.5	8	TA223344.0745
0.2953			7.500		M8x0.5	117	80	64	36	1.6	8	TA223344.0750
0.2969	19/64		7.541			117	80	64	36	1.6	8	TA223344.0754
0.2992			7.600	Tr9x1.5	M8x1, STI-M8	117	80	64	36	1.6	8	TA223344.0760
0.3031			7.700		M8x0.75	117	80	64	36	1.6	8	TA223344.0770
0.3071			7.800		M9	117	80	64	36	1.6	8	TA223344.0780
0.3110			7.900	BSW 3/8-16		117	80	64	36	1.6	8	TA223344.0790
0.3125	5/16		7.938			117	80	64	36	1.6	8	TA223344.0794
0.3150			8.000	3/8-16 UNC		117	80	64	36	1.7	8	TA223344.0800
0.3189			8.100	3/8-16 UNJC		141	100	80	40	1.7	10	TA223344.0810
0.3228			8.200	M9x0.75		141	100	80	40	1.7	10	TA223344.0820
0.3268			8.300	LK-UNC 3/8-16		141	100	80	40	1.7	10	TA223344.0830
0.3281	21/64		8.334			141	100	80	40	1.7	10	TA223344.0833
0.3307			8.400	STI-5/16-18		141	100	80	40	1.7	10	TA223344.0840
0.3346			8.500	3/8-24 UNF, M10		141	100	80	40	1.8	10	TA223344.0850
0.3386			8.600	3/8-24 UNJF	M9x1	141	100	80	40	1.8	10	TA223344.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	141	100	80	40	1.8	10	TA223344.0870

**Long Length  
Coolant Fed**

**Carbide** **TIALN T14**

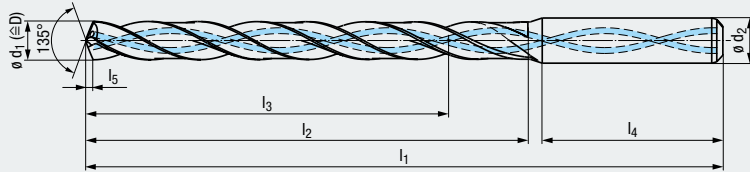
**R30**

**Z2** **4FF**

**135°** **IT9-IT11**

**DIN 6535**

**HA**



Preparatory centering with a centering drill (p.ex. EF-Drill acc. DIN 6537 K) is recommended

$l_3$  = Max Effective Drill Depth

**8 x D**

Range of Application: See Pgs. 6-9

**P 1.1-5.1** **M 1.1** **K 1.1-4.2**

**N 1.1-5** **N 2.1-8**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill TA223344 HA SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6	
0.3438	11/32		8.733	1/8-27 NPSC		141	100	80	40	1.8	10	TA223344.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	141	100	80	40	1.8	10	TA223344.0880
0.3504			8.900	MJ10x1.25		141	100	80	40	1.8	10	TA223344.0890
0.3543			9.000	M10x1		141	100	80	40	1.9	10	TA223344.0900
0.3563			9.050		3/8-24 UNF	141	100	80	40	1.9	10	TA223344.0905
0.3583			9.100	1/8-27 NPSM		141	100	80	40	1.9	10	TA223344.0910
0.3594	23/64		9.129			141	100	80	40	1.9	10	TA223344.0913
0.3622			9.200	M10x0.75		141	100	80	40	1.9	10	TA223344.0920
0.3642			9.250			141	100	80	40	1.9	10	TA223344.0925
0.3661			9.300			141	100	80	40	1.9	10	TA223344.0930
0.3681			9.350		M10	141	100	80	40	1.9	10	TA223344.0935
0.3701			9.400	7/16-14 UNC		141	100	80	40	1.9	10	TA223344.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	141	100	80	40	2.0	10	TA223344.0950
0.3750	3/8		9.525			141	100	80	40	2.0	10	TA223344.0953
0.3780			9.600		M10x1	141	100	80	40	2.0	10	TA223344.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	141	100	80	40	2.0	10	TA223344.0970
0.3858			9.800	STI-3/8-24		141	100	80	40	2.0	10	TA223344.0980
0.3898			9.900	7/16-20 UNF		141	100	80	40	2.1	10	TA223344.0990
0.3906	25/64		9.921			141	100	80	40	2.1	10	TA223344.0992
0.3937			10.000	7/16-20 UNJF		141	100	80	40	2.1	10	TA223344.1000
0.3976			10.100			166	120	96	45	2.1	12	TA223344.1010
0.4016			10.200	7/16-28 UNEF		166	120	96	45	2.1	12	TA223344.1020
0.4035			10.250		7/16-14 UNC	166	120	96	45	2.1	12	TA223344.1025
0.4055			10.300			166	120	96	45	2.1	12	TA223344.1030
0.4063	13/32		10.320			166	120	96	45	2.1	12	TA223344.1032
0.4134			10.500	M12x1.5		166	120	96	45	2.2	12	TA223344.1050
0.4154			10.550		7/16-20 UNF	166	120	96	45	2.2	12	TA223344.1055
0.4213			10.700	LK-M12		166	120	96	45	2.2	12	TA223344.1070
0.4219	27/64		10.716	1/2-13 UNC		166	120	96	45	2.2	12	TA223344.1072
0.4252			10.800	M12x1.25		166	120	96	45	2.2	12	TA223344.1080
0.4291			10.900	1/2-13 UNJC		166	120	96	45	2.3	12	TA223344.1090
0.4331			11.000	M12x1		166	120	96	45	2.3	12	TA223344.1100
0.4370			11.100	BSF 1/2-16		166	120	96	45	2.3	12	TA223344.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		166	120	96	45	2.3	12	TA223344.1111
0.4409			11.200			166	120	96	45	2.3	12	TA223344.1120
0.4429			11.250	M12x0.75	M12	166	120	96	45	2.3	12	TA223344.1125
0.4469			11.350	Pg7	M12x1.5	166	120	96	45	2.4	12	TA223344.1135
0.4488			11.400	1/4-18 NPSC		166	120	96	45	2.4	12	TA223344.1140
0.4508			11.450		M12x1.25	166	120	96	45	2.4	12	TA223344.1145
0.4528			11.500	1/2-20 UNF		166	120	96	45	2.4	12	TA223344.1150
0.4531	29/64		11.509			166	120	96	45	2.4	12	TA223344.1151
0.4567			11.600	1/2-20 UNJF	M12x1	166	120	96	45	2.4	12	TA223344.1160
0.4606			11.700			166	120	96	45	2.4	12	TA223344.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	166	120	96	45	2.4	12	TA223344.1180

**Long Length  
Coolant Fed**

Carbide

TIALN  
T14

R30

Z2

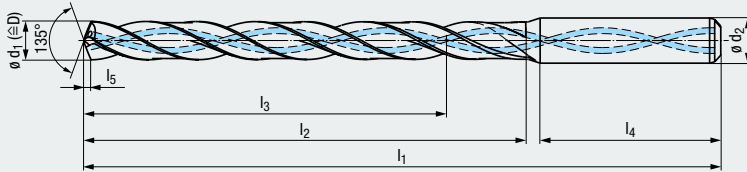
4FF

135°

IT9-IT11

DIN 6535

HA



Preparatory centering with a centering drill (p.ex. EF-Drill acc. DIN 6537 K) is recommended

$l_3$  = Max Effective Drill Depth

**8 x D**

Range of Application: See Pgs. 6-9

P 1.1-5.1 M 1.1 K 1.1-4.2  
N 1.1-5 N 2.1-8

Nominal Size $\phi d_1$ m7				Image 1	Image 2	mm					$\phi d_2$ h6	EF-Drill TA223344 HA SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$		
0.4685			11.900			166	120	96	45	2.5	12	TA223344.1190
0.4688	15/32		11.908			166	120	96	45	2.5	12	TA223344.1191
0.4724			12.000	M14		166	120	96	45	2.5	12	TA223344.1200
0.4783			12.150		1/2-20 UNF	166	120	96	45	2.5	14	TA223344.1215
0.4803			12.200	Tr 14x2		166	120	96	45	2.5	14	TA223344.1220
0.4844	31/64		12.304	9/16-12 UNC		166	120	96	45	2.5	14	TA223344.1230
0.4921			12.500	M14x1.5		186	140	112	45	2.6	14	TA223344.1250
0.4941			12.550		G1/4-19	186	140	112	45	2.6	14	TA223344.1255
0.5000	1/2		12.700	LK-UNC 9/16-12		186	140	112	45	2.6	14	TA223344.1270
0.5039			12.800	M14x1.25		186	140	112	45	2.7	14	TA223344.1280
0.5118			13.000	9/16-18 UNJF		186	140	112	45	2.7	14	TA223344.1300
0.5157			13.100	STI-1/2-20	M14	186	140	112	45	2.7	14	TA223344.1310
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	186	140	112	45	2.8	14	TA223344.1330
0.5256			13.350		M14x1.5	186	140	112	45	2.8	14	TA223344.1335
0.5295			13.450		M14x1.25	186	140	112	45	2.8	14	TA223344.1345
0.5313	17/32		13.495	5/8-11 UNC		186	140	112	45	2.8	14	TA223344.1349
0.5315			13.500			186	140	112	45	2.8	14	TA223344.1350
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	186	140	112	45	2.8	14	TA223344.1365
0.5394			13.700			186	140	112	45	2.8	14	TA223344.1370
0.5469	35/64		13.891			186	140	112	45	2.8	14	TA223344.1389
0.5512			14.000	M16, M15x1		186	140	112	45	2.9	14	TA223344.1400
0.5551			14.100			186	140	112	45	2.9	16	TA223344.1410
0.5625	9/16		14.288			186	140	112	45	2.9	16	TA223344.1429
0.5709			14.500	5/8-18 UNF		209	160	128	48	3.0	16	TA223344.1450
0.5748			14.600	5/8-18 UNJF	M15x1	209	160	128	48	3.0	16	TA223344.1460
0.5781	37/64		14.684	3/8-18 NPSC		209	160	128	48	3.0	16	TA223344.1468
0.5827			14.800		5/8-11 UNC	209	160	128	48	3.0	16	TA223344.1480
0.5906			15.000	M16x1		209	160	128	48	3.1	16	TA223344.1500
0.5938	19/32		15.083			209	160	128	48	3.1	16	TA223344.1508
0.5945			15.100		M16	209	160	128	48	3.1	16	TA223344.1510
0.6102			15.500	M18		209	160	128	48	3.2	16	TA223344.1550
0.6142			15.600		M16x1	209	160	128	48	3.2	16	TA223344.1560
0.6250	5/8		15.875			209	160	128	48	3.2	16	TA223344.1588
0.6299			16.000	M18x2		209	160	128	48	3.3	16	TA223344.1600
0.6406	41/64		16.272			230	180	144	48	3.4	18	TA223344.1627
0.6496			16.500	STI-5/8-11		230	180	144	48	3.4	18	TA223344.1650
0.6563	21/32		16.669	3/4-10 UNC		230	180	144	48	3.5	18	TA223344.1667
0.6693			17.000	M18x1		230	180	144	48	3.5	18	TA223344.1700
0.6875	11/16		17.463			230	180	144	48	3.6	18	TA223344.1746
0.6890			17.500	3/4-16 UNF, M20		230	180	144	48	3.6	18	TA223344.1750
0.7087			18.000	M20x2, LK-M16		230	180	144	48	3.7	18	TA223344.1800
0.7480			19.000	M20x1		280	229	160	50	3.9	20	TA223344.1900
0.7500	3/4		19.050			280	229	160	50	3.9	20	TA223344.1905
0.7874			20.000	M22x2	G1/2-14	280	229	160	50	4.0	20	TA223344.2000

**Stub Length  
Coolant Fed**



**For the machining of stainless steel materials**

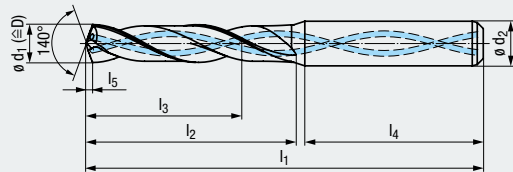
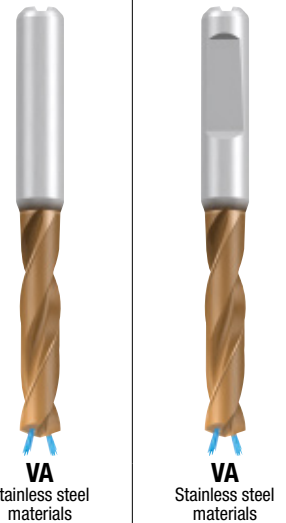
**Carbide**      **ALCR T37**

**DIN 6537 K**      **R30**

**Z2**      **2FF**

**140°**      **IT8-IT10**

**DIN 6535**  
HA   
HE 





$l_3$  = Max Effective Drill Depth

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

## 3 x D

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill-VA TA204524 HA SHANK	EF-Drill-VA TA504524 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.1102			2.800	#6-32 UNC	M3	57	16	11	36	0.6	6	TA204524.0280	TA504524.0280
0.1142			2.900	#6-32 UNJC	#5-40 UNC	57	16	11	36	0.6	6	TA204524.0290	TA504524.0290
0.1150			2.920		#5-44 UNF	57	16	11	36	0.6	6	TA204524.0292	TA504524.0292
0.1181			3.000	#6-40 UNF		62	20	14	36	0.6	6	TA204524.0300	TA504524.0300
0.1220			3.100	STI-#4-40		62	20	14	36	0.6	6	TA204524.0310	TA504524.0310
0.1240			3.150	M3.5x0.35	#6-32 UNC	62	20	14	36	0.7	6	TA204524.0315	TA504524.0315
0.1250	1/8		3.175			62	20	14	36	0.7	6	TA204524.0318	TA504524.0318
0.1260			3.200	BSW 5/32-32	#6-40 UNF	62	20	14	36	0.7	6	TA204524.0320	TA504524.0320
0.1280			3.250		M3.5	62	20	14	36	0.7	6	TA204524.0325	TA504524.0325
0.1299			3.300	M4		62	20	14	36	0.7	6	TA204524.0330	TA504524.0330
0.1331			3.380		M3.5x0.35	62	20	14	36	0.7	6	TA204524.0338	TA504524.0338
0.1339			3.400	MJ4x0.7		62	20	14	36	0.7	6	TA204524.0340	TA504524.0340
0.1378			3.500	#8-32 UNC		62	20	14	36	0.7	6	TA204524.0350	TA504524.0350
0.1406	9/64	#28	3.571			62	20	14	36	0.7	6	TA204524.0357	TA504524.0357
0.1417			3.600	#8-36 UNJF		62	20	14	36	0.7	6	TA204524.0360	TA504524.0360
0.1457			3.700	M4.5	M4	62	20	14	36	0.8	6	TA204524.0370	TA504524.0370
0.1496		#25	3.800	STI-#6-32	#8-32 UNC	66	24	17	36	0.8	6	TA204524.0380	TA504524.0380
0.1516			3.850		#8-36 UNF	66	24	17	36	0.8	6	TA204524.0385	TA504524.0385
0.1535			3.900	#10-24 UNC		66	24	17	36	0.8	6	TA204524.0390	TA504524.0390
0.1563	5/32		3.970			66	24	17	36	0.8	6	TA204524.0397	TA504524.0397
0.1575			4.000	M4.5x0.5		66	24	17	36	0.8	6	TA204524.0400	TA504524.0400
0.1590		#21	4.038			66	24	17	36	0.8	6	TA204524.0404	TA504524.0404
0.1614			4.100	#10-32 UNF		66	24	17	36	0.8	6	TA204524.0410	TA504524.0410
0.1654			4.200	M5, STI-M4	M4.5	66	24	17	36	0.9	6	TA204524.0420	TA504524.0420
0.1693		#18	4.300	MJ5x0.8		66	24	17	36	0.9	6	TA204524.0430	TA504524.0430
0.1713			4.350		#10-24 UNC	66	24	17	36	0.9	6	TA204524.0435	TA504524.0435
0.1719	11/64		4.366			66	24	17	36	0.9	6	TA204524.0437	TA504524.0437
0.1732			4.400	M5x0.75		66	24	17	36	0.9	6	TA204524.0440	TA504524.0440
0.1752			4.450		#10-32 UNF	66	24	17	36	0.9	6	TA204524.0445	TA504524.0445
0.1772			4.500	#12-24 UNC		66	24	17	36	0.9	6	TA204524.0450	TA504524.0450
0.1811			4.600	#12-28 UNF		66	24	17	36	0.9	6	TA204524.0460	TA504524.0460
0.1831			4.650	#12-24 UNJC	M5	66	24	17	36	0.9	6	TA204524.0465	TA504524.0465
0.1850		#13	4.700	LK-UNC #12-24		66	24	17	36	1.0	6	TA204524.0470	TA504524.0470
0.1875	3/16		4.763	#12-28 UNJF		66	28	20	36	1.0	6	TA204524.0476	TA504524.0476
0.1890		#12	4.800	#12-32 UNEF	M5x0.5, STI-M5	66	28	20	36	1.0	6	TA204524.0480	TA504524.0480
0.1929			4.900			66	28	20	36	1.0	6	TA204524.0490	TA504524.0490
0.1969			5.000	M6	#12-24 UNC	66	28	20	36	1.0	6	TA204524.0500	TA504524.0500
0.2008			5.100	MJ6x1	#12-28 UNF	66	28	20	36	1.0	6	TA204524.0510	TA504524.0510
0.2010		#7	5.106			66	28	20	36	1.0	6	TA204524.0511	TA504524.0511
0.2031	13/64		5.159			66	28	20	36	1.0	6	TA204524.0516	TA504524.0516
0.2047			5.200	1/4-20 UNC		66	28	20	36	1.0	6	TA204524.0520	TA504524.0520
0.2087			5.300	1/4-20 UNJC		66	28	20	36	1.1	6	TA204524.0530	TA504524.0530
0.2126			5.400			66	28	20	36	1.1	6	TA204524.0540	TA504524.0540
0.2130		#3	5.410			66	28	20	36	1.1	6	TA204524.0541	TA504524.0541

**Stub Length  
Coolant Fed**

**For the machining of stainless steel materials**

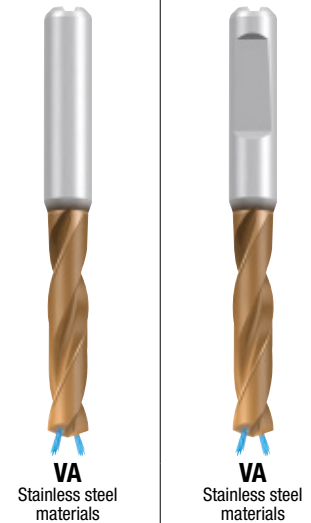
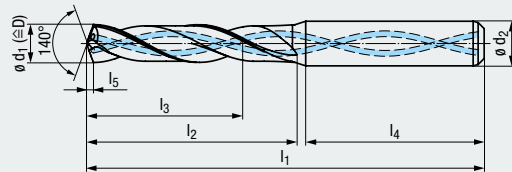
**Carbide**    **ALCR T37**

**DIN 6537 K**    **R30**

**Z2**    **2FF**

**140°**    **IT8-IT10**

**DIN 6535**  
HA HE



$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill-VA TA204524 HA SHANK	EF-Drill-VA TA504524 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.2165			5.500	1/4-28 UNF		66	28	20	36	1.1	6	TA204524.0550	TA504524.0550
0.2187	7/32		5.556	1/4-28 UNJF		66	28	20	36	1.1	6	TA204524.0556	TA504524.0556
0.2205			5.600	1/4-32 UNEF	M6	66	28	20	36	1.1	6	TA204524.0560	TA504524.0560
0.2264			5.750		1/4-20 UNC	66	28	20	36	1.1	6	TA204524.0575	TA504524.0575
0.2283			5.800		M6x0.5	66	28	20	36	1.2	6	TA204524.0580	TA504524.0580
0.2323			5.900			66	28	20	36	1.2	6	TA204524.0590	TA504524.0590
0.2344	15/64		5.954		1/4-28 UNF	66	28	20	36	1.2	6	TA204524.0595	TA504524.0595
0.2362			6.000	M7, Rd 8x1/10		66	28	20	36	1.2	6	TA204524.0600	TA504524.0600
0.2402			6.100	MJ7x1		79	34	24	36	1.2	8	TA204524.0610	TA504524.0610
0.2441			6.200	M7x0.75		79	34	24	36	1.2	8	TA204524.0620	TA504524.0620
0.2480			6.300	M7x0.5, STI-M6		79	34	24	36	1.3	8	TA204524.0630	TA504524.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		79	34	24	36	1.3	8	TA204524.0635	TA504524.0635
0.2520			6.400			79	34	24	36	1.3	8	TA204524.0640	TA504524.0640
0.2559			6.500	BSW 5/16-18		79	34	24	36	1.3	8	TA204524.0650	TA504524.0650
0.2570		F	6.528			79	34	24	36	1.3	8	TA204524.0653	TA504524.0653
0.2598			6.600	5/16-18 UNC	M7	79	34	24	36	1.3	8	TA204524.0660	TA504524.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	79	34	24	36	1.3	8	TA204524.0670	TA504524.0670
0.2656	17/64		6.746			79	34	24	36	1.4	8	TA204524.0675	TA504524.0675
0.2677			6.800	M8, G 1/16		79	34	24	36	1.4	8	TA204524.0680	TA504524.0680
0.2717			6.900	5/16-24 UNF		79	34	24	36	1.4	8	TA204524.0690	TA504524.0690
0.2756			7.000	5/16-24 UNJF		79	34	24	36	1.4	8	TA204524.0700	TA504524.0700
0.2795			7.100	MJ8x1		79	41	29	36	1.4	8	TA204524.0710	TA504524.0710
0.2813	9/32	K	7.145			79	41	29	36	1.4	8	TA204524.0715	TA504524.0715
0.2835			7.200	5/16-32 UNEF		79	41	29	36	1.5	8	TA204524.0720	TA504524.0720
0.2854			7.250		5/16-18 UNC	79	41	29	36	1.5	8	TA204524.0725	TA504524.0725
0.2874			7.300			79	41	29	36	1.5	8	TA204524.0730	TA504524.0730
0.2913			7.400			79	41	29	36	1.5	8	TA204524.0740	TA504524.0740
0.2933			7.450		5/16-24 UNF, M8	79	41	29	36	1.5	8	TA204524.0745	TA504524.0745
0.2953			7.500	M8x0.5		79	41	29	36	1.5	8	TA204524.0750	TA504524.0750
0.2969	19/64		7.541			79	41	29	36	1.5	8	TA204524.0754	TA504524.0754
0.2992			7.600	Tr9x1.5	M8x1, STI-M8	79	41	29	36	1.5	8	TA204524.0760	TA504524.0760
0.3031			7.700		M8x0.75	79	41	29	36	1.5	8	TA204524.0770	TA504524.0770
0.3071			7.800	M9		79	41	29	36	1.5	8	TA204524.0780	TA504524.0780
0.3110			7.900	BSW 3/8-16		79	41	29	36	1.6	8	TA204524.0790	TA504524.0790
0.3125	5/16		7.938			79	41	29	36	1.6	8	TA204524.0794	TA504524.0794
0.3150			8.000	3/8-16 UNC		79	41	29	36	1.6	8	TA204524.0800	TA504524.0800
0.3189			8.100	3/8-16 UNJC		89	47	35	40	1.6	10	TA204524.0810	TA504524.0810
0.3228			8.200	M9x0.75		89	47	35	40	1.6	10	TA204524.0820	TA504524.0820
0.3268			8.300	LK-UNC 3/8-16		89	47	35	40	1.6	10	TA204524.0830	TA504524.0830
0.3281	21/64		8.334			89	47	35	40	1.6	10	TA204524.0833	TA504524.0833
0.3307			8.400	STI-5/16-18		89	47	35	40	1.7	10	TA204524.0840	TA504524.0840
0.3346			8.500	3/8-24 UNF, M10		89	47	35	40	1.7	10	TA204524.0850	TA504524.0850
0.3386			8.600	3/8-24 UNJF	M9x1	89	47	35	40	1.7	10	TA204524.0860	TA504524.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	89	47	35	40	1.7	10	TA204524.0870	TA504524.0870

**Stub Length  
Coolant Fed**



**For the machining of stainless steel materials**

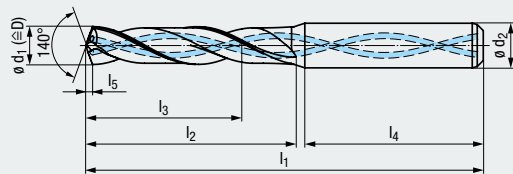
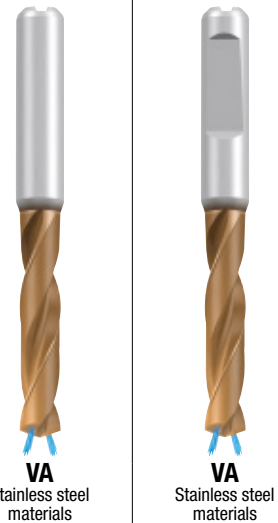
**Carbide**      **ALCR T37**

**DIN 6537 K**      **R30**

**Z2**      **2FF**

**140°**      **IT8-IT10**

**DIN 6535**  
HA   
HE 





$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill-VA TA204524 HA SHANK	EF-Drill-VA TA504524 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.3438	11/32		8.733	1/8-27 NPSC		89	47	35	40	1.7	10	TA204524.0873	TA504524.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	89	47	35	40	1.7	10	TA204524.0880	TA504524.0880
0.3504			8.900	MJ10x1.25		89	47	35	40	1.8	10	TA204524.0890	TA504524.0890
0.3543			9.000	M10x1		89	47	35	40	1.8	10	TA204524.0900	TA504524.0900
0.3563			9.050		3/8-24 UNF	89	47	35	40	1.8	10	TA204524.0905	TA504524.0905
0.3583			9.100	1/8-27 NPSM		89	47	35	40	1.8	10	TA204524.0910	TA504524.0910
0.3594	23/64		9.129			89	47	35	40	1.8	10	TA204524.0913	TA504524.0913
0.3622			9.200	M10x0.75		89	47	35	40	1.8	10	TA204524.0920	TA504524.0920
0.3642			9.250			89	47	35	40	1.8	10	TA204524.0925	TA504524.0925
0.3661			9.300			89	47	35	40	1.8	10	TA204524.0930	TA504524.0930
0.3681			9.350		M10	89	47	35	40	1.8	10	TA204524.0935	TA504524.0935
0.3701			9.400	7/16-14 UNC		89	47	35	40	1.9	10	TA204524.0940	TA504524.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	89	47	35	40	1.9	10	TA204524.0950	TA504524.0950
0.3750	3/8		9.525			89	47	35	40	1.9	10	TA204524.0953	TA504524.0953
0.3780			9.600		M10x1	89	47	35	40	1.9	10	TA204524.0960	TA504524.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	89	47	35	40	1.9	10	TA204524.0970	TA504524.0970
0.3858			9.800	STI-3/8-24		89	47	35	40	1.9	10	TA204524.0980	TA504524.0980
0.3898			9.900	7/16-20 UNF		89	47	35	40	2.0	10	TA204524.0990	TA504524.0990
0.3906	25/64		9.921			89	47	35	40	2.0	10	TA204524.0992	TA504524.0992
0.3937			10.000	7/16-20 UNJF		89	47	35	40	2.0	10	TA204524.1000	TA504524.1000
0.3976			10.100			102	55	40	45	2.0	12	TA204524.1010	TA504524.1010
0.4016			10.200	7/16-28 UNEF		102	55	40	45	2.0	12	TA204524.1020	TA504524.1020
0.4035			10.250		7/16-14 UNC	102	55	40	45	2.0	12	TA204524.1025	TA504524.1025
0.4055			10.300			102	55	40	45	2.0	12	TA204524.1030	TA504524.1030
0.4063	13/32		10.320			102	55	40	45	2.0	12	TA204524.1032	TA504524.1032
0.4134			10.500	M12x1.5		102	55	40	45	2.1	12	TA204524.1050	TA504524.1050
0.4154			10.550		7/16-20 UNF	102	55	40	45	2.1	12	TA204524.1055	TA504524.1055
0.4213			10.700	LK-M12		102	55	40	45	2.1	12	TA204524.1070	TA504524.1070
0.4219	27/64		10.716	1/2-13 UNC		102	55	40	45	2.1	12	TA204524.1072	TA504524.1072
0.4252			10.800	M12x1.25		102	55	40	45	2.1	12	TA204524.1080	TA504524.1080
0.4291			10.900	1/2-13 UNJC		102	55	40	45	2.1	12	TA204524.1090	TA504524.1090
0.4331			11.000	M12x1		102	55	40	45	2.2	12	TA204524.1100	TA504524.1100
0.4370			11.100	BSF 1/2-16		102	55	40	45	2.2	12	TA204524.1110	TA504524.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		102	55	40	45	2.2	12	TA204524.1111	TA504524.1111
0.4409			11.200			102	55	40	45	2.2	12	TA204524.1120	TA504524.1120
0.4429			11.250	M12x0.75	M12	102	55	40	45	2.2	12	TA204524.1125	TA504524.1125
0.4469			11.350	Pg7	M12x1.5	102	55	40	45	2.2	12	TA204524.1135	TA504524.1135
0.4488			11.400	1/4-18 NPSC		102	55	40	45	2.2	12	TA204524.1140	TA504524.1140
0.4508			11.450		M12x1.25	102	55	40	45	2.2	12	TA204524.1145	TA504524.1145
0.4528			11.500	1/2-20 UNF		102	55	40	45	2.3	12	TA204524.1150	TA504524.1150
0.4531	29/64		11.509			102	55	40	45	2.3	12	TA204524.1151	TA504524.1151
0.4567			11.600	1/2-20 UNJF	M12x1	102	55	40	45	2.3	12	TA204524.1160	TA504524.1160
0.4606			11.700			102	55	40	45	2.3	12	TA204524.1170	TA504524.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	102	55	40	45	2.3	12	TA204524.1180	TA504524.1180

**Stub Length  
Coolant Fed**

**For the machining of stainless steel materials**



**Carbide**    **ALCR T37**

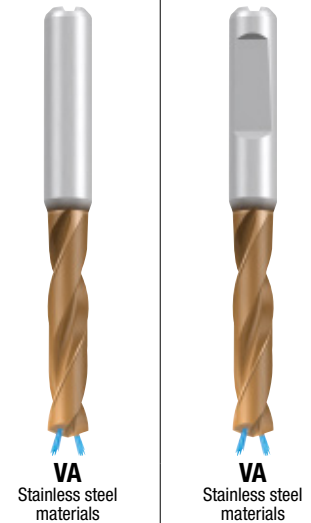
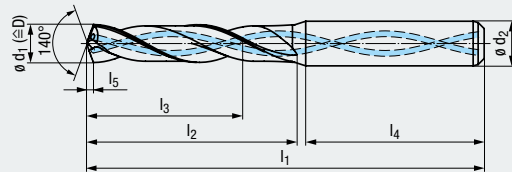
**DIN 6537 K**    **R30**

**Z2**    **2FF**

**140°**    **IT8-IT10**

**DIN 6535**

HA  





$l_3$  = Max Effective Drill Depth

**3 x D**

Range of Application: See Pgs. 6-7, 10-11

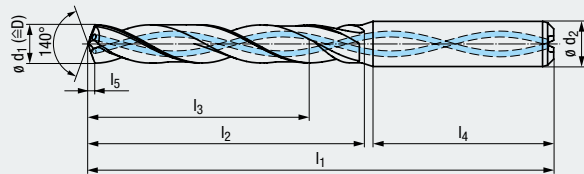
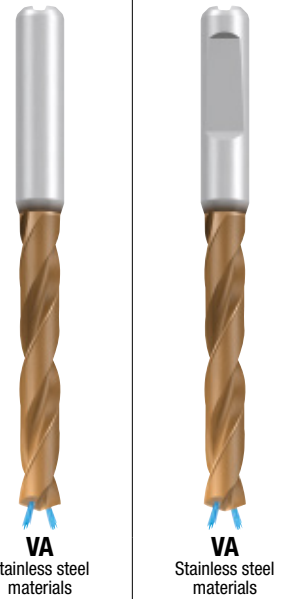
**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

Nominal Size $\varnothing d_1$ m7						mm						EF-Drill-VA TA204524 HA SHANK	EF-Drill-VA TA504524 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.4685			11.900			102	55	40	45	2.3	12	TA204524.1190	TA504524.1190
0.4688	15/32		11.908			102	55	40	45	2.3	12	TA204524.1191	TA504524.1191
0.4724			12.000	M14		102	55	40	45	2.4	12	TA204524.1200	TA504524.1200
0.4783			12.150		1/2-20 UNF	102	55	40	45	2.4	12	TA204524.1215	TA504524.1215
0.4803			12.200	Tr 14x2		102	55	40	45	2.4	14	TA204524.1220	TA504524.1220
0.4844	31/64		12.304	9/16-12 UNC		102	55	40	45	2.4	14	TA204524.1230	TA504524.1230
0.4921			12.500	M14x1.5		102	55	40	45	2.4	14	TA204524.1250	TA504524.1250
0.4941			12.550		G1/4-19	102	55	40	45	2.4	14	TA204524.1255	TA504524.1255
0.5000	1/2		12.700	LK-UNC 9/16-12		102	55	40	45	2.5	14	TA204524.1270	TA504524.1270
0.5039			12.800	M14x1.25		102	55	40	45	2.5	14	TA204524.1280	TA504524.1280
0.5118			13.000	9/16-18 UNJF		102	55	40	45	2.5	14	TA204524.1300	TA504524.1300
0.5157			13.100	STI-1/2-20	M14	102	55	40	45	2.6	14	TA204524.1310	TA504524.1310
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	102	55	40	45	2.6	14	TA204524.1330	TA504524.1330
0.5256			13.350		M14x1.5	102	55	40	45	2.6	14	TA204524.1335	TA504524.1335
0.5295			13.450		M14x1.25	102	55	40	45	2.6	14	TA204524.1345	TA504524.1345
0.5313	17/32		13.495	5/8-11 UNC		102	55	40	45	2.6	14	TA204524.1349	TA504524.1349
0.5315			13.500			102	55	40	45	2.6	14	TA204524.1350	TA504524.1350
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	102	55	40	45	2.7	14	TA204524.1365	TA504524.1365
0.5394			13.700			102	55	40	45	2.7	14	TA204524.1370	TA504524.1370
0.5469	35/64		13.891			102	55	40	45	2.7	14	TA204524.1389	TA504524.1389
0.5512			14.000	M16, M15x1		102	55	40	45	2.7	14	TA204524.1400	TA504524.1400
0.5551			14.100			115	65	45	48	2.8	16	TA204524.1410	TA504524.1410
0.5625	9/16		14.288			115	65	45	48	2.8	16	TA204524.1429	TA504524.1429
0.5709			14.500	5/8-18 UNF		115	65	45	48	2.8	16	TA204524.1450	TA504524.1450
0.5748			14.600	5/8-18 UNJF	M15x1	115	65	45	48	2.9	16	TA204524.1460	TA504524.1460
0.5781	37/64		14.684	3/8-18 NPSC		115	65	45	48	2.9	16	TA204524.1468	TA504524.1468
0.5827			14.800		5/8-11 UNC	115	65	45	48	2.9	16	TA204524.1480	TA504524.1480
0.5906			15.000	M16x1		115	65	45	48	2.9	16	TA204524.1500	TA504524.1500
0.5938	19/32		15.083			115	65	45	48	2.9	16	TA204524.1508	TA504524.1508
0.5945			15.100		M16	115	65	45	48	2.9	16	TA204524.1510	TA504524.1510
0.6102			15.500	M18		115	65	45	48	3.0	16	TA204524.1550	TA504524.1550
0.6142			15.600		M16x1	115	65	45	48	3.0	16	TA204524.1560	TA504524.1560
0.6250	5/8		15.875			115	65	45	48	3.1	16	TA204524.1588	TA504524.1588
0.6299			16.000	M18x2		115	65	45	48	3.1	16	TA204524.1600	TA504524.1600
0.6406	41/64		16.272			123	73	51	48	3.1	18	TA204524.1627	TA504524.1627
0.6496			16.500	STI-5/8-11		123	73	51	48	3.2	18	TA204524.1650	TA504524.1650
0.6563	21/32		16.669	3/4-10 UNC		123	73	51	48	3.2	18	TA204524.1667	TA504524.1667
0.6693			17.000	M18x1		123	73	51	48	3.3	18	TA204524.1700	TA504524.1700
0.6875	11/16		17.463			123	73	51	48	3.3	18	TA204524.1746	TA504524.1746
0.6890			17.500	3/4-16 UNF, M20		123	73	51	48	3.4	18	TA204524.1750	TA504524.1750
0.7087			18.000	M20x2, LK-M16		123	73	51	48	3.5	18	TA204524.1800	TA504524.1800
0.7480			19.000	M20x1		131	79	55	50	3.7	20	TA204524.1900	TA504524.1900
0.7500	3/4		19.050			131	79	55	50	3.7	20	TA204524.1905	TA504524.1905
0.7874			20.000	M22x2	G1/2-14	131	79	55	50	3.9	20	TA204524.2000	TA504524.2000

## Standard Length Coolant Fed

For the machining of stainless steel materials

<b>Carbide</b>	<b>ALCR T37</b>
<b>DIN 6537 L</b>	<b>R30</b>
<b>Z2</b>	<b>2FF</b>
<b>140°</b>	<b>IT9-IT10</b>
<b>DIN 6535</b>	
HA	
HE	



$l_3$  = Max Effective Drill Depth

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1** **S 1.1-3** **S 2.2, 2.4, 2.6**

## 5 x D

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill-VA TA214524 HA SHANK	EF-Drill-VA TA514524 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.1102			2.800	#6-32 UNC	M3	61	22	17	36	0.6	6	TA214524.0280	TA514524.0280
0.1142			2.900	#6-32 UNJC	#5-40 UNC	61	22	17	36	0.6	6	TA214524.0290	TA514524.0290
0.1150			2.920		#5-44 UNF	61	22	17	36	0.6	6	TA214524.0292	TA514524.0292
0.1181			3.000	#6-40 UNF		66	28	23	36	0.6	6	TA214524.0300	TA514524.0300
0.1220			3.100	STI-#4-40		66	28	23	36	0.6	6	TA214524.0310	TA514524.0310
0.1240			3.150	M3.5x0.35	#6-32 UNC	66	28	23	36	0.6	6	TA214524.0315	TA514524.0315
0.1250	1/8		3.175			66	28	23	36	0.6	6	TA214524.0318	TA514524.0318
0.1260			3.200	BSW 5/32-32	#6-40 UNF	66	28	23	36	0.6	6	TA214524.0320	TA514524.0320
0.1280			3.250		M3.5	66	28	23	36	0.7	6	TA214524.0325	TA514524.0325
0.1299			3.300	M4		66	28	23	36	0.7	6	TA214524.0330	TA514524.0330
0.1331			3.380		M3.5x0.35	66	28	23	36	0.7	6	TA214524.0338	TA514524.0338
0.1339			3.400	MJ4x0.7		66	28	23	36	0.7	6	TA214524.0340	TA514524.0340
0.1378			3.500	#8-32 UNC		66	28	23	36	0.7	6	TA214524.0350	TA514524.0350
0.1406	9/64	#28	3.571			66	28	23	36	0.7	6	TA214524.0357	TA514524.0357
0.1417			3.600	#8-36 UNJF		66	28	23	36	0.7	6	TA214524.0360	TA514524.0360
0.1457			3.700	M4.5	M4	66	28	23	36	0.7	6	TA214524.0370	TA514524.0370
0.1496		#25	3.800	STI-#6-32	#8-32 UNC	74	36	29	36	0.8	6	TA214524.0380	TA514524.0380
0.1516			3.850		#8-36 UNF	74	36	29	36	0.8	6	TA214524.0385	TA514524.0385
0.1535			3.900	#10-24 UNC		74	36	29	36	0.8	6	TA214524.0390	TA514524.0390
0.1563	5/32		3.970			74	36	29	36	0.8	6	TA214524.0397	TA514524.0397
0.1575			4.000	M4.5x0.5		74	36	29	36	0.8	6	TA214524.0400	TA514524.0400
0.1590		#21	4.038			74	36	29	36	0.8	6	TA214524.0404	TA514524.0404
0.1614			4.100	#10-32 UNF		74	36	29	36	0.8	6	TA214524.0410	TA514524.0410
0.1654			4.200	M5, STI-M4	M4.5	74	36	29	36	0.8	6	TA214524.0420	TA514524.0420
0.1693		#18	4.300	MJ5x0.8		74	36	29	36	0.8	6	TA214524.0430	TA514524.0430
0.1713			4.350		#10-24 UNC	74	36	29	36	0.8	6	TA214524.0435	TA514524.0435
0.1719	11/64		4.366			74	36	29	36	0.8	6	TA214524.0437	TA514524.0437
0.1732			4.400	M5x0.75		74	36	29	36	0.8	6	TA214524.0440	TA514524.0440
0.1752			4.450		#10-32 UNF	74	36	29	36	0.9	6	TA214524.0445	TA514524.0445
0.1772			4.500	#12-24 UNC		74	36	29	36	0.9	6	TA214524.0450	TA514524.0450
0.1811			4.600	#12-28 UNF		74	36	29	36	0.9	6	TA214524.0460	TA514524.0460
0.1831			4.650	#12-24 UNJC	M5	74	36	29	36	0.9	6	TA214524.0465	TA514524.0465
0.1850		#13	4.700	LK-UNC#12-24		74	36	29	36	0.9	6	TA214524.0470	TA514524.0470
0.1875	3/16		4.763	#12-28 UNJF		82	44	35	36	1.0	6	TA214524.0476	TA514524.0476
0.1890		#12	4.800	#12-32 UNEF	M5x0.5, STI-M5	82	44	35	36	1.0	6	TA214524.0480	TA514524.0480
0.1929			4.900			82	44	35	36	1.0	6	TA214524.0490	TA514524.0490
0.1969			5.000	M6	#12-24 UNC	82	44	35	36	1.0	6	TA214524.0500	TA514524.0500
0.2008			5.100	MJ6x1	#12-28 UNF	82	44	35	36	1.0	6	TA214524.0510	TA514524.0510
0.2010		#7	5.106			82	44	35	36	1.0	6	TA214524.0511	TA514524.0511
0.2031	13/64		5.159			82	44	35	36	1.0	6	TA214524.0516	TA514524.0516
0.2047			5.200	1/4-20 UNC		82	44	35	36	1.0	6	TA214524.0520	TA514524.0520
0.2087			5.300	1/4-20 UNJC		82	44	35	36	1.1	6	TA214524.0530	TA514524.0530
0.2126			5.400			82	44	35	36	1.1	6	TA214524.0540	TA514524.0540
0.2130		#3	5.410			82	44	35	36	1.1	6	TA214524.0541	TA514524.0541



**Standard Length  
Coolant Fed**

For the machining of stainless steel materials

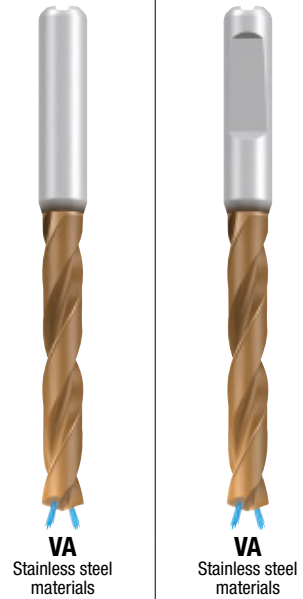
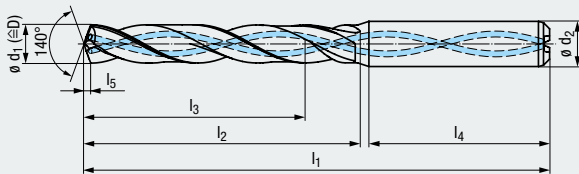
**Carbide**    **ALCR T37**

**DIN 6537 L**    **R30**

**Z2**    **2FF**

**140°**    **IT9-IT10**

**DIN 6535**  
HA HE



$l_3$  = Max Effective Drill Depth

**5 x D**

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

Nominal Size $\varnothing d_1$ m7				mm							EF-Drill-VA TA214524 HA SHANK	EF-Drill-VA TA514524 HE SHANK	
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6		
0.2165			5.500	1/4-28 UNF		82	44	35	36	1.1	6	TA214524.0550	TA514524.0550
0.2187	7/32		5.556	1/4-28 UNJF		82	44	35	36	1.1	6	TA214524.0556	TA514524.0556
0.2205			5.600	1/4-32 UNEF	M6	82	44	35	36	1.1	6	TA214524.0560	TA514524.0560
0.2264			5.750		1/4-20 UNC	82	44	35	36	1.2	6	TA214524.0575	TA514524.0575
0.2283			5.800		M6x0.5	82	44	35	36	1.2	6	TA214524.0580	TA514524.0580
0.2323			5.900			82	44	35	36	1.2	6	TA214524.0590	TA514524.0590
0.2344	15/64		5.954		1/4-28 UNF	82	44	35	36	1.2	6	TA214524.0595	TA514524.0595
0.2362			6.000	M7, Rd 8x1/10		82	44	35	36	1.2	6	TA214524.0600	TA514524.0600
0.2402			6.100	MJ7x1		91	53	43	36	1.2	8	TA214524.0610	TA514524.0610
0.2441			6.200	M7x0.75		91	53	43	36	1.2	8	TA214524.0620	TA514524.0620
0.2480			6.300	M7x0.5, STI-M6		91	53	43	36	1.3	8	TA214524.0630	TA514524.0630
0.2500	1/4	E	6.350	1/16-27 NPSF		91	53	43	36	1.3	8	TA214524.0635	TA514524.0635
0.2520			6.400			91	53	43	36	1.3	8	TA214524.0640	TA514524.0640
0.2559			6.500	BSW 5/16-18		91	53	43	36	1.3	8	TA214524.0650	TA514524.0650
0.2570		F	6.528			91	53	43	36	1.3	8	TA214524.0653	TA514524.0653
0.2598			6.600	5/16-18 UNC	M7	91	53	43	36	1.3	8	TA214524.0660	TA514524.0660
0.2638			6.700	5/16-18 UNJC	M7x0.75	91	53	43	36	1.3	8	TA214524.0670	TA514524.0670
0.2656	17/64		6.746			91	53	43	36	1.3	8	TA214524.0675	TA514524.0675
0.2677			6.800	M8, G 1/16		91	53	43	36	1.4	8	TA214524.0680	TA514524.0680
0.2717			6.900	5/16-24 UNF		91	53	43	36	1.4	8	TA214524.0690	TA514524.0690
0.2756			7.000	5/16-24 UNJF		91	53	43	36	1.4	8	TA214524.0700	TA514524.0700
0.2795			7.100	MJ8x1		91	53	49	36	1.4	8	TA214524.0710	TA514524.0710
0.2813	9/32	K	7.145			91	53	49	36	1.4	8	TA214524.0715	TA514524.0715
0.2835			7.200	5/16-32 UNEF		91	53	49	36	1.4	8	TA214524.0720	TA514524.0720
0.2854			7.250		5/16-18 UNC	91	53	49	36	1.5	8	TA214524.0725	TA514524.0725
0.2874			7.300			91	53	49	36	1.5	8	TA214524.0730	TA514524.0730
0.2913			7.400			91	53	49	36	1.5	8	TA214524.0740	TA514524.0740
0.2933			7.450		5/16-24 UNF, M8	91	53	49	36	1.5	8	TA214524.0745	TA514524.0745
0.2953			7.500	M8x0.5		91	53	49	36	1.5	8	TA214524.0750	TA514524.0750
0.2969	19/64		7.541			91	53	49	36	1.5	8	TA214524.0754	TA514524.0754
0.2992			7.600	Tr9x1.5	M8x1, STI-M8	91	53	49	36	1.5	8	TA214524.0760	TA514524.0760
0.3031			7.700		M8x0.75	91	53	49	36	1.5	8	TA214524.0770	TA514524.0770
0.3071			7.800	M9		91	53	49	36	1.6	8	TA214524.0780	TA514524.0780
0.3110			7.900	BSW 3/8-16		91	53	49	36	1.6	8	TA214524.0790	TA514524.0790
0.3125	5/16		7.938			91	53	49	36	1.6	8	TA214524.0794	TA514524.0794
0.3150			8.000	3/8-16 UNC		91	53	49	36	1.6	8	TA214524.0800	TA514524.0800
0.3189			8.100	3/8-16 UNJC		103	61	49	40	1.6	10	TA214524.0810	TA514524.0810
0.3228			8.200	M9x0.75		103	61	49	40	1.6	10	TA214524.0820	TA514524.0820
0.3268			8.300	LK-UNC 3/8-16		103	61	49	40	1.7	10	TA214524.0830	TA514524.0830
0.3281	21/64		8.334			103	61	49	40	1.7	10	TA214524.0833	TA514524.0833
0.3307			8.400	STI-5/16-18		103	61	49	40	1.7	10	TA214524.0840	TA514524.0840
0.3346			8.500	3/8-24 UNF, M10		103	61	49	40	1.7	10	TA214524.0850	TA514524.0850
0.3386			8.600	3/8-24 UNJF	M9x1	103	61	49	40	1.7	10	TA214524.0860	TA514524.0860
0.3425			8.700	3/8-32 UNEF	M9x0.75	103	61	49	40	1.7	10	TA214524.0870	TA514524.0870

## Standard Length Coolant Fed

For the machining of stainless steel materials

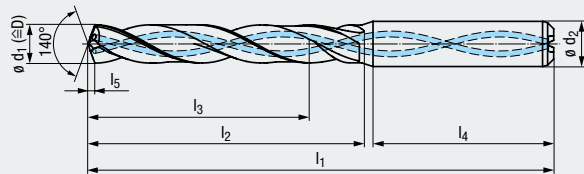
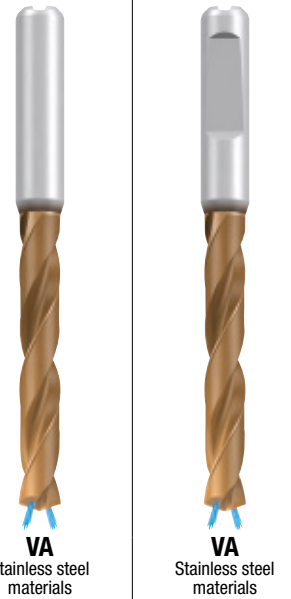
**Carbide**      **ALCR T37**

**DIN 6537 L**      **R30**

**Z2**      **2FF**

**140°**      **IT9-IT10**

**DIN 6535**  
HA HE



$l_3$  = Max Effective Drill Depth

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

## 5 x D

Nominal Size $\varnothing d_1$ m7			mm								EF-Drill-VA TA214524 HA SHANK	EF-Drill-VA TA514524 HE SHANK	
inch	Fraction	Wire letter			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\varnothing d_2$ h6			
0.3438	11/32		8.733	1/8-27 NPSC		103	61	49	40	1.7	10	TA214524.0873	TA514524.0873
0.3465			8.800	M10x1.25	3/8-16 UNC	103	61	49	40	1.8	10	TA214524.0880	TA514524.0880
0.3504			8.900	MJ10x1.25		103	61	49	40	1.8	10	TA214524.0890	TA514524.0890
0.3543			9.000	M10x1		103	61	49	40	1.8	10	TA214524.0900	TA514524.0900
0.3563			9.050		3/8-24 UNF	103	61	49	40	1.8	10	TA214524.0905	TA514524.0905
0.3583			9.100	1/8-27 NPSM		103	61	49	40	1.8	10	TA214524.0910	TA514524.0910
0.3594	23/64		9.129			103	61	49	40	1.8	10	TA214524.0913	TA514524.0913
0.3622			9.200	M10x0.75		103	61	49	40	1.8	10	TA214524.0920	TA514524.0920
0.3642			9.250			103	61	49	40	1.9	10	TA214524.0925	TA514524.0925
0.3661			9.300			103	61	49	40	1.9	10	TA214524.0930	TA514524.0930
0.3681			9.350		M10	103	61	49	40	1.9	10	TA214524.0935	TA514524.0935
0.3701			9.400	7/16-14 UNC		103	61	49	40	1.9	10	TA214524.0940	TA514524.0940
0.3740			9.500	7/16-14 UNJC	STI-M10	103	61	49	40	1.9	10	TA214524.0950	TA514524.0950
0.3750	3/8		9.525			103	61	49	40	1.9	10	TA214524.0953	TA514524.0953
0.3780			9.600		M10x1	103	61	49	40	1.9	10	TA214524.0960	TA514524.0960
0.3819			9.700	LK-UNC 7/16-14	M10x0.75	103	61	49	40	1.9	10	TA214524.0970	TA514524.0970
0.3858			9.800	STI-3/8-24		103	61	49	40	2.0	10	TA214524.0980	TA514524.0980
0.3898			9.900	7/16-20 UNF		103	61	49	40	2.0	10	TA214524.0990	TA514524.0990
0.3906	25/64		9.921			103	61	49	40	2.0	10	TA214524.0992	TA514524.0992
0.3937			10.000	7/16-20 UNJF		103	61	49	40	2.0	10	TA214524.1000	TA514524.1000
0.3976			10.100			118	71	56	45	2.0	12	TA214524.1010	TA514524.1010
0.4016			10.200	7/16-28 UNEF		118	71	56	45	2.0	12	TA214524.1020	TA514524.1020
0.4035			10.250		7/16-14 UNC	118	71	56	45	2.1	12	TA214524.1025	TA514524.1025
0.4055			10.300			118	71	56	45	2.1	12	TA214524.1030	TA514524.1030
0.4063	13/32		10.320			118	71	56	45	2.1	12	TA214524.1032	TA514524.1032
0.4134			10.500	M12x1.5		118	71	56	45	2.1	12	TA214524.1050	TA514524.1050
0.4154			10.550		7/16-20 UNF	118	71	56	45	2.1	12	TA214524.1055	TA514524.1055
0.4213			10.700	LK-M12		118	71	56	45	2.1	12	TA214524.1070	TA514524.1070
0.4219	27/64		10.716	1/2-13 UNC		118	71	56	45	2.1	12	TA214524.1072	TA514524.1072
0.4252			10.800	M12x1.25		118	71	56	45	2.2	12	TA214524.1080	TA514524.1080
0.4291			10.900	1/2-13 UNJC		118	71	56	45	2.2	12	TA214524.1090	TA514524.1090
0.4331			11.000	M12x1		118	71	56	45	2.2	12	TA214524.1100	TA514524.1100
0.4370			11.100	BSF 1/2-16		118	71	56	45	2.2	12	TA214524.1110	TA514524.1110
0.4375	7/16		11.113	LK-UNC 1/2-13		118	71	56	45	2.2	12	TA214524.1111	TA514524.1111
0.4409			11.200			118	71	56	45	2.2	12	TA214524.1120	TA514524.1120
0.4429			11.250	M12x0.75	M12	118	71	56	45	2.3	12	TA214524.1125	TA514524.1125
0.4469			11.350	Pg7	M12x1.5	118	71	56	45	2.3	12	TA214524.1135	TA514524.1135
0.4488			11.400	1/4-18 NPSC		118	71	56	45	2.3	12	TA214524.1140	TA514524.1140
0.4508			11.450		M12x1.25	118	71	56	45	2.3	12	TA214524.1145	TA514524.1145
0.4528			11.500	1/2-20 UNF		118	71	56	45	2.3	12	TA214524.1150	TA514524.1150
0.4531	29/64		11.509			118	71	56	45	2.3	12	TA214524.1151	TA514524.1151
0.4567			11.600	1/2-20 UNJF	M12x1	118	71	56	45	2.3	12	TA214524.1160	TA514524.1160
0.4606			11.700			118	71	56	45	2.3	12	TA214524.1170	TA514524.1170
0.4646			11.800	1/2-28 UNEF	1/2-13 UNC	118	71	56	45	2.4	12	TA214524.1180	TA514524.1180

**Standard Length  
Coolant Fed**

**For the machining of stainless steel materials**



**Carbide**    **ALCR T37**

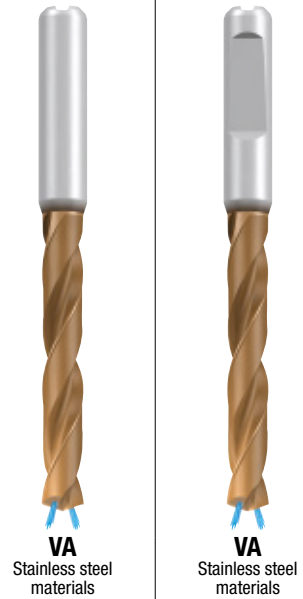
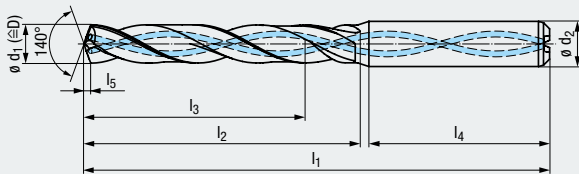
**DIN 6537 L**    **R30**

**Z2**    **2FF**

**140°**    **IT9-IT10**

**DIN 6535**

HA     HE 





$l_3$  = Max Effective Drill Depth

**5 x D**

Range of Application: See Pgs. 6-7, 10-11

**M 1.1-4.1**    **S 1.1-3**    **S 2.2, 2.4, 2.6**

Nominal Size $\varnothing d_1$ m7						mm						$\varnothing d_2$ h6	EF-Drill-VA TA214524 HA SHANK	EF-Drill-VA TA514524 HE SHANK
inch	Fraction	Wire letter	mm			$l_1$	$l_2$	$l_3$	$l_4$	$l_5$				
0.4685			11.900			118	71	56	45	2.4	12	TA214524.1190	TA514524.1190	
0.4688	15/32		11.908			118	71	56	45	2.4	12	TA214524.1191	TA514524.1191	
0.4724			12.000	M14		118	71	56	45	2.4	12	TA214524.1200	TA514524.1200	
0.4783			12.150		1/2-20 UNF	118	71	56	45	2.4	14	TA214524.1215	TA514524.1215	
0.4803			12.200	Tr 14x2		118	71	56	45	2.4	14	TA214524.1220	TA514524.1220	
0.4844	31/64		12.304	9/16-12 UNC		118	71	56	45	2.4	14	TA214524.1230	TA514524.1230	
0.4921			12.500	M14x1.5		124	77	60	45	2.5	14	TA214524.1250	TA514524.1250	
0.4941			12.550		G1/4-19	124	77	60	45	2.5	14	TA214524.1255	TA514524.1255	
0.5000	1/2		12.700	LK-UNC 9/16-12		124	77	60	45	2.5	14	TA214524.1270	TA514524.1270	
0.5039			12.800	M14x1.25		124	77	60	45	2.6	14	TA214524.1280	TA514524.1280	
0.5118			13.000	9/16-18 UNJF		124	77	60	45	2.6	14	TA214524.1300	TA514524.1300	
0.5157			13.100	STI-1/2-20	M14	124	77	60	45	2.6	14	TA214524.1310	TA514524.1310	
0.5236			13.300	9/16-24 UNEF	9/16-12 UNC	124	77	60	45	2.7	14	TA214524.1330	TA514524.1330	
0.5256			13.350		M14x1.5	124	77	60	45	2.7	14	TA214524.1335	TA514524.1335	
0.5295			13.450		M14x1.25	124	77	60	45	2.7	14	TA214524.1345	TA514524.1345	
0.5313	17/32		13.495	5/8-11 UNC		124	77	60	45	2.7	14	TA214524.1349	TA514524.1349	
0.5315			13.500			124	77	60	45	2.7	14	TA214524.1350	TA514524.1350	
0.5374			13.650	5/8-11 UNJC	9/16-18 UNF	124	77	60	45	2.7	14	TA214524.1365	TA514524.1365	
0.5394			13.700			124	77	60	45	2.7	14	TA214524.1370	TA514524.1370	
0.5469	35/64		13.891			124	77	60	45	2.7	14	TA214524.1389	TA514524.1389	
0.5512			14.000	M16, M15x1		124	77	60	45	2.8	14	TA214524.1400	TA514524.1400	
0.5551			14.100			124	77	60	45	2.8	16	TA214524.1410	TA514524.1410	
0.5625	9/16		14.288			124	77	60	45	2.8	16	TA214524.1429	TA514524.1429	
0.5709			14.500	5/8-18 UNF		133	83	63	48	2.9	16	TA214524.1450	TA514524.1450	
0.5748			14.600	5/8-18 UNJF	M15x1	133	83	63	48	2.9	16	TA214524.1460	TA514524.1460	
0.5781	37/64		14.684	3/8-18 NPSC		133	83	63	48	2.9	16	TA214524.1468	TA514524.1468	
0.5827			14.800		5/8-11 UNC	133	83	63	48	2.9	16	TA214524.1480	TA514524.1480	
0.5906			15.000	M16x1		133	83	63	48	3.0	16	TA214524.1500	TA514524.1500	
0.5938	19/32		15.083			133	83	63	48	3.0	16	TA214524.1508	TA514524.1508	
0.5945			15.100		M16	133	83	63	48	3.0	16	TA214524.1510	TA514524.1510	
0.6102			15.500	M18		133	83	63	48	3.1	16	TA214524.1550	TA514524.1550	
0.6142			15.600		M16x1	133	83	63	48	3.1	16	TA214524.1560	TA514524.1560	
0.6250	5/8		15.875			133	83	63	48	3.1	16	TA214524.1588	TA514524.1588	
0.6299			16.000	M18x2		133	83	63	48	3.2	16	TA214524.1600	TA514524.1600	
0.6406	41/64		16.272			143	93	71	48	3.3	18	TA214524.1627	TA514524.1627	
0.6496			16.500	STI-5/8-11		143	93	71	48	3.4	18	TA214524.1650	TA514524.1650	
0.6563	21/32		16.669	3/4-10 UNC		143	93	71	48	3.4	18	TA214524.1667	TA514524.1667	
0.6693			17.000	M18x1		143	93	71	48	3.5	18	TA214524.1700	TA514524.1700	
0.6875	11/16		17.463			143	93	71	48	3.5	18	TA214524.1746	TA514524.1746	
0.6890			17.500	3/4-16 UNF, M20		143	93	71	48	3.5	18	TA214524.1750	TA514524.1750	
0.7087			18.000	M20x2, LK-M16		143	93	71	48	3.6	18	TA214524.1800	TA514524.1800	
0.7480			19.000	M20x1		153	101	77	50	3.7	20	TA214524.1900	TA514524.1900	
0.7500	3/4		19.050			153	101	77	50	3.7	20	TA214524.1905	TA514524.1905	
0.7874			20.000	M22x2	G1/2-14	153	101	77	50	3.8	20	TA214524.2000	TA514524.2000	

**For the machining of hardened steels  
with a hardness of 50-67 HRC**

**Carbide** **TIALN T10**

**R30**

**Z2** **2FF**

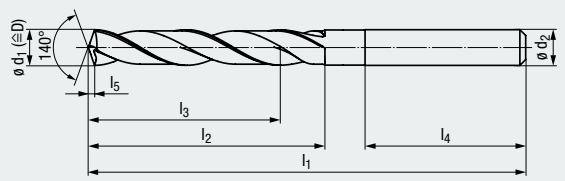
**140°** **IT9-IT10**

**DIN 6535**

**HA**



**HCUT**  
Hardened steels







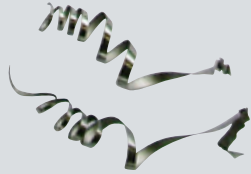


$l_3$  = Max Effective Drill Depth

**4 x D**

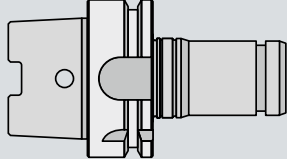
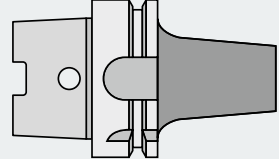
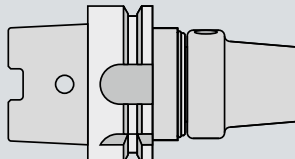
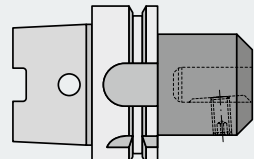
Range of Application: See Pgs. 6-7, 10-11

H 1.1-5

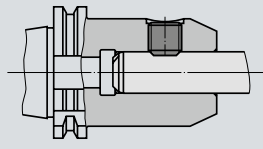
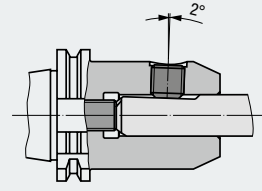
Nominal Size $\phi d_1$ m7			mm	mm	$l_1$	$l_2$	$l_3$	$l_4$	$l_5$	$\phi d_2$ h6	HCUT FZ423130 HA SHANK
inch	Fraction	Wire letter									
0.1102			2.550	M3	44	14	10	28	0.5	3	FZ423130.00255
0.1181			3.000		66	16	12	28	0.6	3	FZ423130.00300
0.1250	1/8		3.175		50	20	16	28	0.6	4	FZ423130.00318
0.1339			3.400	M4	50	20	16	28	0.7	4	FZ423130.00340
0.1378			3.500		50	20	16	28	0.7	4	FZ423130.00350
0.1575			4.000		52	22	15	28	0.8	4	FZ423130.00400
0.1693		#18	4.300	M5	68	28	21	36	0.9	6	FZ423130.00430
0.1772			4.500		68	28	21	36	0.9	6	FZ423130.00450
0.1875	3/16		4.763		68	28	21	36	0.9	6	FZ423130.00476
0.1969			5.000		72	32	25	36	1.0	6	FZ423130.00500
0.2008			5.100	M6	72	32	24	36	1.0	6	FZ423130.00510
0.2165			5.500		75	35	27	36	1.1	6	FZ423130.00550
0.2362			6.000		75	35	27	36	1.2	6	FZ423130.00600
0.2500	1/4	E	6.350		75	35	27	36	1.2	8	FZ423130.00635
0.2559			6.500		80	40	30	36	1.3	8	FZ423130.00650
0.2717			6.900	M8	85	45	35	36	1.4	8	FZ423130.00690
0.2756			7.000		85	45	35	36	1.4	8	FZ423130.00700
0.2795			7.100	M8x1	85	45	33	36	1.4	8	FZ423130.00710
0.2953			7.500		85	45	33	36	1.5	8	FZ423130.00750
0.3125	5/16		7.938		85	45	33	36	1.5	8	FZ423130.00794
0.3150			8.000		98	50	38	36	1.6	8	FZ423130.00800
0.3346			8.500		98	50	45	40	1.7	10	FZ423130.00850
0.3386			8.600	M10	105	57	45	40	1.7	10	FZ423130.00860
0.3465			8.800	G1/8	105	57	45	40	1.7	10	FZ423130.00880
0.3543			9.000		105	57	45	40	1.8	10	FZ423130.00900
0.3583			9.100	M10x1	105	57	45	40	1.8	10	FZ423130.00910
0.3740			9.500		105	57	51	40	1.9	10	FZ423130.00950
0.3937			10.000		111	63	48	40	2.0	10	FZ423130.01000
0.4094			10.400	M12	111	63	48	45	2.0	12	FZ423130.01040
0.4134			10.500		111	63	48	45	2.1	12	FZ423130.01050
0.4173			10.600	M12x1.5	111	63	48	45	2.1	12	FZ423130.01060
0.4331			11.000		119	71	56	45	2.2	12	FZ423130.01110
0.4528			11.500		119	71	56	45	2.3	12	FZ423130.01115
0.4685			11.900	G1/4	119	71	56	45	2.3	12	FZ423130.01119
0.4724			12.000		127	71	56	45	2.4	12	FZ423130.01200
0.4961			12.600	M14x1.5	139	79	62	48	2.5	14	FZ423130.01260
0.5591			14.200	M16	150	90	70	48	2.8	16	FZ423130.01420
0.5748			14.600	M16x1.5	150	90	70	48	2.9	16	FZ423130.01460

	<p><b>Start-of-drilling chip</b> This chip type is produced in the start of the drilling process, before the cutting corners are engaged.</p>
	<p><b>Optimal drilling chip</b> This chip type is created when the cutting data are correctly chosen.</p>
	<p><b>Drill-through chip</b> <b>Note:</b> There is need for increased space between workpiece and tool holder.</p>
	<p><b>Drill-through cap</b> <b>Note:</b> There is need for increased space for chips and lid in drilling through!</p>
	<p><b>Chamfer chip</b> This chip type is created in the production of the chamfer.</p>
	<p><b>Step-drill chip</b> The length of this chip type can be controlled by means of dwell times in long-chipping material.</p>
	<p><b>Hooked chips</b> These chips are produced especially in long-chipping materials, or when cutting data are not optimally chosen. Single entangled chips are not such a big issue, but when the entanglement of the chips becomes permanent it will soon lead to chip clogging, and with it to drill breakage.</p>
	<p><b>Ribbon chip / flow chip</b> <b>Note:</b> When you observe this chip type, the drill already has serious damage on primary cutting edge and chisel edge! This means an end to tool life.</p>

**Tool clamping**

	<p><b>Collet holders type PGR</b>  <b>Concentricity &lt; 3 µm</b></p> <ul style="list-style-type: none"> <li>• Slender construction</li> <li>• Reduced vibrations</li> </ul>		<p><b>Shrink-fit chucks</b>  <b>Concentricity &lt; 3 µm</b></p> <ul style="list-style-type: none"> <li>• Slender construction</li> </ul>
	<p><b>Hydraulic expansion chucks</b>  <b>Concentricity &lt; 3 µm</b></p> <ul style="list-style-type: none"> <li>• Reduced vibrations</li> </ul>		<p><b>Tool holders for straight shanks with inclined clamping flat</b>  <b>Concentricity &lt; 15 µm</b></p> <ul style="list-style-type: none"> <li>• Economically efficient</li> </ul>

**Differences in tool clamping with lateral driving flat and inclined clamping flat**

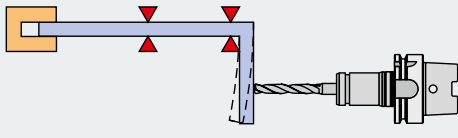
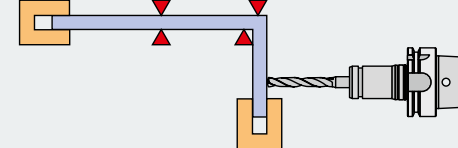
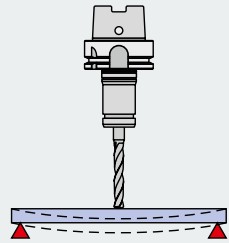
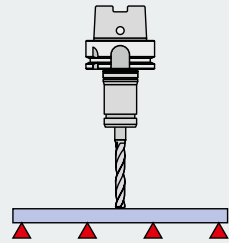
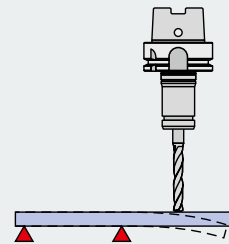
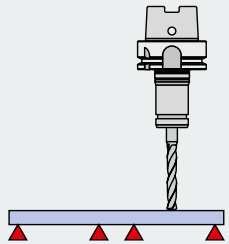
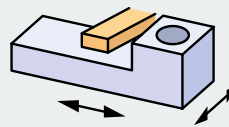
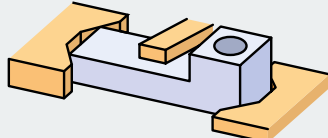
 <p><b>Lateral driving flat</b>          Clamping of tools with lateral driving flat acc. DIN 6535 HB resp. DIN 1835 B.          This type of clamping has <b>no</b> axial support and is therefore <b>not</b> suitable for drilling operations.</p>	 <p><b>Inclined clamping flat</b>          Clamping of tools with inclined clamping flat acc. DIN 6535 HE resp. DIN 1835 E.</p>
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**Workpiece clamping**

**Solid carbide twist drills are extremely sensitive to bending stress!**

**Basic conditions for the use of twist drills:**

- The workpiece must be firmly supported, without a chance to bounce or bend
- Additional support points will help
- With thin-walled workpieces, feed must be reduced

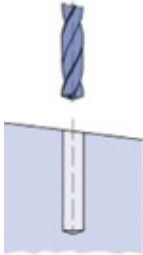
Wrong workpiece clamping	Correct workpiece clamping
	
	
	
	

**Reduce feed on angled entry/exit surfaces**

The EMUGE double margin design provides excellent guiding ability that is especially effective in work with transverse holes or angled exits.

The EMUGE EF-Drill self-centers primarily by means of the chisel edge. With slanted, concave, convex or very rough entry surfaces, the tool is being deflected. That is why feed must be reduced in the first drilling stage.

**Angled entry surfaces**



Feed must be reduced during the first drilling stage:

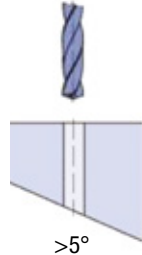
DIN 6537 short (3 x d1)

- 1...2°: **by 20%**
- 2...3°: **by 40%**
- 3...4°: **by 50%**
- 4...5°: **by 70%**

DIN 6537 long (5 x d1)

- < 1°: **by 30%**
- 1...2°: **by 40%**
- 2...3°: **by 50%**

**Angled or rounded exit surfaces**



Feed must be reduced during the breaking through stage:

For EF-Drill with single margin **by 70%**

For EF-Drill with double margins **by 50%**

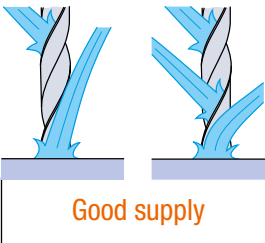
>5°

**Proper external coolant use**

It is important to provide not only sufficient coolant-lubricant pressure, but also the right direction for the coolant-lubricant supply. Wherever possible, make arrangements for 3 coolant-lubricant jets to hit the drill.


**Vertical machining**

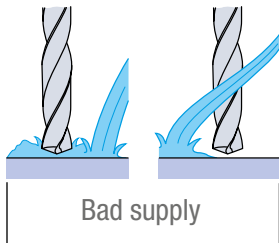
good



Good supply

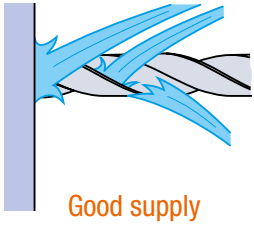
better



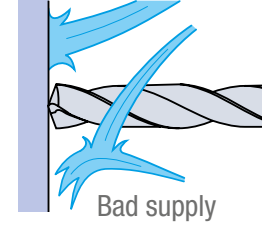


Bad supply

**Horizontal machining**




Good supply



Bad supply

**Proper edge preparation (honing)**

Every drill has an edge preparation (hone) which is in relation to the drill diameter and material to be cut. The edge preparation is for stabilizing the cutting edge. The feed is in relation to the edge preparation and material.



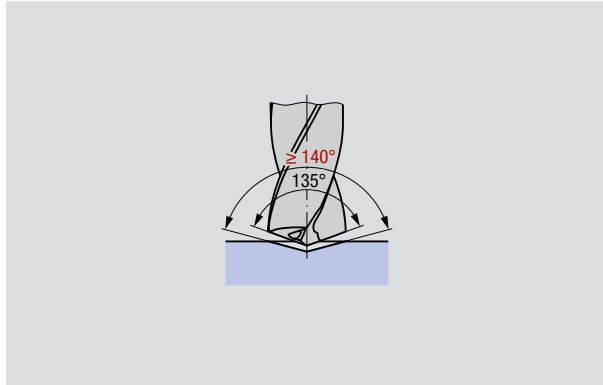
**Good feed**

**Too low feed**

**Point angle**

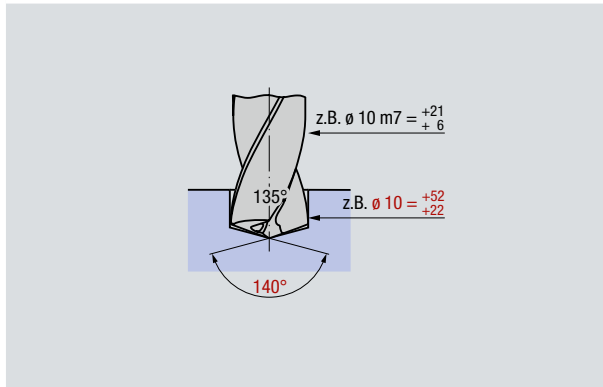
**Centering and pilot hole**

With large clamping-related extension lengths, it is necessary to provide either a centering or a pilot hole. With tool lengths exceeding 8 x D, it is highly recommended to either start drilling with reduced feed, or to provide a centering or a pilot hole.



**Centering / Spot Drilling**

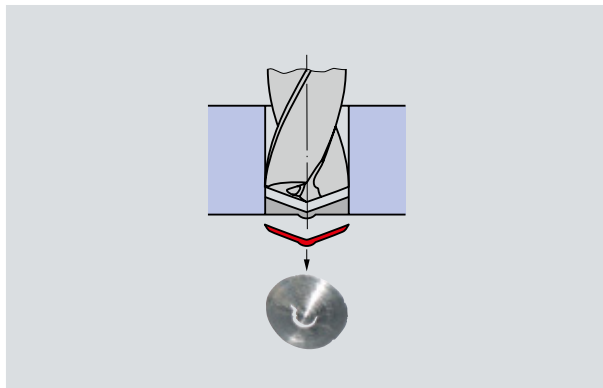
Please note that the point angle of the first, or preparatory drill must be larger than that of the subsequent drill. We recommend our twist drills EF-Drill acc. DIN 6537 K. The centering should not be deeper than the point length  $l_5$ .



**Pilot hole**

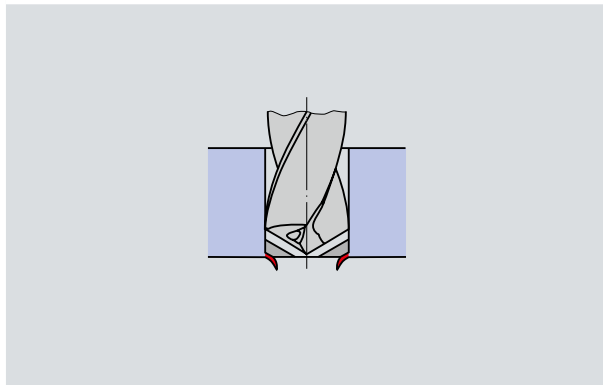
Please note that the point angle and the diameter of the pilot drill must be larger than those of the subsequent drill. For the pilot hole, a depth of 1 x D is sufficient.

**Influence of the point angle**



**Standard point angle 140° (EF-Drill)**

- Stable point
- Short chips
- Good centering
- Reduced power consumption
- Reduced torque
- Formation of slug
- Minimal burr formation
- Long tool life

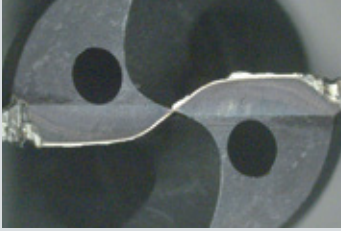


**Point angle 118°**

- Unstable point
- High torque
- High power consumption
- Unstable primary cutting edges
- Slug formation very much reduced
- Formation of burr during the exit of the drill



**Problems, possible causes and solutions in drilling**



**Problems:**

- Excessive wear on the corners
- Built-up edge
- Wear on the margins

**Possible causes:**

- Excessive machining times
- High temperature and/or friction
- Concentricity run-out > 0.02 mm
- Unstable clamping of workpiece or tool
- Coolant-lubricant too dry

**Solutions:**

- Exchange twist drill in time and regrind
- Increase coolant-lubricant volume
- Use coolant-lubricant with higher oil content, or additives
- Reduce cutting speed
- Reduce feed for drilling through



**Problem:**

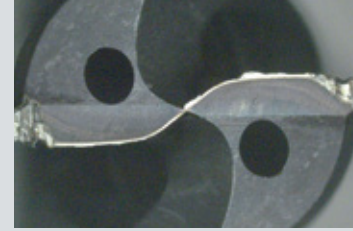
- Chipping on the cutting corners

**Possible causes:**

- Excessive feed
- Workpiece moves when the drill breaks through
- Machine is unstable
- Twist drill slips due to unsatisfactory tool clamping
- Concentricity run-out > 0.02 mm

**Solutions:**

- Improve workpiece clamping
- Use a different clamping tool, e.g. clamping system PGR or hydraulic expansion chuck
- Reduce feed



**Problem:**

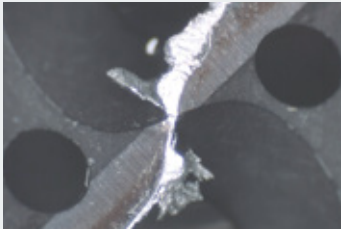
- Coating coming off on the margins

**Possible causes:**

- Excessive friction
- Slanted exit
- Adhesive workpiece material
- Reground too many times (excessive coating thickness)

**Solutions:**

- Use coolant-lubricant with higher oil content, or additives
- Reduce feed for exiting
- Reduce the number of times you regrind your drills



**Problem:**

- Built-up edge on the primary cutting edge

**Possible causes:**

- Wrong cutting data
- Excessive wear on relief surfaces
- Damage on the cutting edges
- Bad coolant-lubricant supply

**Solutions:**

- Use coolant-lubricant with higher oil content, or additives
- Increase cutting speed
- Reduce feed
- Exchange tools



**Problem:**

- Splintering on the chisel edge

**Possible causes:**

- Vibrations
- Concentricity run-out > 0.02 mm
- Rough or slanted workpiece surface

**Solutions:**

- Reduce feed
- Use a different clamping tool, e.g. clamping system PGR or hydraulic expansion chuck
- Improve workpiece surface (e.g. by spot-facing)



NPSF	Rp (BSPP)	G	STI-UNC	STI-UNF	STI-M	LK-UNC	LK-M	BSW	BSF	Pg	Tr	Tr-F	Rd
						LK-UNC#6-32							
			STI-#4-40	STI-#4-48	STI-M3			BSW <sup>5</sup> / <sub>32</sub> -32					
						LK-UNC#8-32							
			STI-#6-32	STI-#6-40				BSW <sup>3</sup> / <sub>16</sub> -24					
						LK-UNC#10-24							
					STI-M4								
			STI-#8-32	STI-#8-36			LK-M5						
						LK-UNC#12-24							
				STI-#10-32				BSW <sup>1</sup> / <sub>4</sub> -20					
			STI-#10-24		STI-M5	LK-UNC 1/4-20	LK-M6		BSF 1/4-26				
													Rd 8x1/10
1/16-27 NPSF					STI-M6								
								BSW <sup>5</sup> / <sub>16</sub> -18			Tr 8x1.5		
		G 1/16	STI-1/4-20	STI-1/4-28		LK-UNC 5/16-18			BSF 5/16-22				
							LK-M8						Rd 9x1/10
											Tr 9x2		
												Tr 9x1.5	
								BSW <sup>3</sup> / <sub>8</sub> -16					Rd 10x1/10
						LK-UNC 3/8-16					Tr 10x2		
			STI-5/16-18		STI-M8				BSF 3/8-20				
1/8-27 NPSF	Rp 1/8-28												Tr 10x1.5



	NPSF	Rp (BSPP)	G	STI-UNC	STI-UNF	STI-M	LK-UNC	LK-M	BSW	BSF	Pg	Tr	Tr-F	Rd
			G <sup>1/8</sup>					LK-M10						Rd11x1/10
													Tr11x2	
					STI-3/8-24		LK-UNC <sup>7/16-14</sup>			BSF <sup>7/16-18</sup>				
				STI-3/8-16										Rd12x1/10
													Tr12x2	
						STI-M10			BSW <sup>1/2-12</sup>					
								LK-M12						
							LK-UNC <sup>1/2-13</sup>			BSF <sup>1/2-16</sup>				
1/4-18NPSF												Tr14x3		
											Pg7			
		Rp <sup>1/4-19</sup>			STI-7/16-20									Rd14x1/8
				STI-7/16-14										
			G <sup>1/4</sup>											
									BSW <sup>9/16-12</sup>					
						STI-M12		LK-M14					Tr14x2	
							LK-UNC <sup>9/16-12</sup>							
				STI-1/12-13	STI-1/2-20									
									BSW <sup>5/8-11</sup>					Rd16x1/8
							LK-UNC <sup>5/8-11</sup>			BSF <sup>5/8-14</sup>				
						STI-M14		LK-M16						
3/8-18NPSF					STI-9/16-18									
		Rp <sup>3/8-19</sup>		STI-9/16-12										Rd18x1/8
				STI-5/8-11		STI-M16								
							LK-UNC <sup>3/4-10</sup>							
								LK-M16						Rd20x1/8
			G <sup>1/2</sup>											

Nominal Size $\phi d_1$				UNC	UNF	M	MF	G	STI-M
inch	Fraction	Wire letter	mm						
0.1102			2.800			M3			
0.1142			2.900	#5-40 UNC					
0.1150			2.920		#5-44 UNF				
0.1181			3.000						
0.1220			3.100						
0.1240			3.150	#6-32 UNC					
0.1250	1/8		3.175						
0.1260			3.200		#6-40 UNF				
0.1280			3.250			M3.5			
0.1299			3.300				M3.5x0.35		
0.1331			3.380						
0.1339			3.400						
0.1378			3.500						
0.1406	9/64	#28	3.571						
0.1417			3.600						
0.1457			3.700			M4			
0.1496		#25	3.800	#8-32 UNC			M4x0.5		STI-M4
0.1516			3.850		#8-36 UNF				
0.1535			3.900						
0.1563	5/32		3.970						
0.1575			4.000						
0.1590		#21	4.038						
0.1614			4.100						
0.1654			4.200			M4.5			
0.1693		#18	4.300						
0.1713			4.350	#10-24 UNC					
0.1719	11/64		4.366						
0.1732			4.400						
0.1752			4.450		#10-32 UNF				
0.1772			4.500						
0.1811			4.600						
0.1831			4.650			M5			
0.1850		#13	4.700						
0.1875	3/16		4.763						
0.1890		#12	4.800				M5x0.5		STI-M5
0.1929			4.900						
0.1969			5.000	#12-24 UNC					
0.2008			5.100		#12-28 UNF	M5.5			
0.2010		#7	5.106						
0.2031	13/64		5.159						
0.2047			5.200						
0.2087			5.300						
0.2126			5.400						
0.2130		#3	5.410						
0.2165			5.500						
0.2187	7/32		5.556						
0.2205			5.600			M6			
0.2264			5.750	1/4-20 UNC					
0.2283			5.800				M6x0.5		
0.2323			5.900						
0.2344	15/64		5.954		1/4-28 UNF				
0.2362			6.000						
0.2402			6.100						
0.2441			6.200						
0.2480			6.300						
0.2500	1/4	E	6.350						
0.2520			6.400						
0.2559			6.500						
0.2570		F	6.528						
0.2598			6.600			M7			
0.2638			6.700				M7x0.75		
0.2656	17/64		6.746						
0.2677			6.800						
0.2717			6.900						
0.2756			7.000						
0.2795			7.100						
0.2813	9/32	K	7.145						
0.2835			7.200						
0.2854			7.250	5/16-18 UNC					
0.2874			7.300						
0.2913			7.400						
0.2933			7.450		5/16-24 UNF	M8			
0.2953			7.500						
0.2969	19/64		7.541						
0.2992			7.600				M8x1		STI-M8
0.3031			7.700				M8x0.75		
0.3071			7.800						
0.3110			7.900						
0.3125	5/16		7.938						
0.3150			8.000						
0.3189			8.100						
0.3228			8.200						
0.3268			8.300						
0.3281	21/64		8.334						
0.3307			8.400						
0.3346			8.500						
0.3386			8.600						
0.3425			8.700				M9x1		
							M9x0.75		

Nominal Size $\phi d_1$				UNC	UNF	M	MF	G	STI-M
inch	Fraction	Wire letter	mm						
0.3438	11/32		8.733						
0.3465			8.800	3/8-16 UNC					
0.3504			8.900						
0.3543			9.000						
0.3563			9.050		3/8-24 UNF				
0.3583			9.100						
0.3594	23/64		9.129						
0.3622			9.200						
0.3642			9.250						
0.3661			9.300						
0.3681			9.350			M10			
0.3701			9.400						
0.3740			9.500						STI-M10
0.3750	3/8		9.525						
0.3780			9.600				M10x1		
0.3819			9.700				M10x0.75		
0.3858			9.800						
0.3898			9.900						
0.3906	25/64		9.921						
0.3937			10.000						
0.3976			10.100						
0.4016			10.200						
0.4035			10.250	7/16-14 UNC					
0.4055			10.300						
0.4063	13/32		10.320						
0.4134			10.500						
0.4154			10.550		7/16-20 UNF				
0.4213			10.700						
0.4219	27/64		10.716						
0.4252			10.800						
0.4291			10.900						
0.4331			11.000						
0.4370			11.100						
0.4375	7/16		11.113						
0.4409			11.200						
0.4429			11.250			M12			
0.4469			11.350				M12x1.5		
0.4488			11.400						
0.4508			11.450				M12x1.25		
0.4528			11.500						
0.4531	29/64		11.509						
0.4567			11.600				M12x1		
0.4606			11.700						
0.4646			11.800	1/2-13 UNC					
0.4685			11.900						
0.4688	15/32		11.908						
0.4724			12.000						
0.4783			12.150		1/2-20 UNF				
0.4803			12.200						
0.4844	31/64		12.304						
0.4921			12.500						
0.4941			12.550					G1/4-19	
0.5000	1/2		12.700						
0.5039			12.800						
0.5118			13.000						
0.5157			13.100			M14			
0.5236			13.300	9/16-12 UNC					
0.5256			13.350						
0.5295			13.450				M14x1.5		
0.5313	17/32		13.495				M14x1.25		
0.5315			13.500						
0.5374			13.650		9/16-18 UNF				
0.5394			13.700						
0.5469	35/64		13.891						
0.5512			14.000						
0.5551			14.100						
0.5625	9/16		14.288						
0.5709			14.500						
0.5748			14.600						
0.5781	37/64		14.684				M15x1		
0.5827			14.800	5/8-11 UNC					
0.5906			15.000						
0.5938	19/32		15.083						
0.5945			15.100			M16			
0.6102			15.500						
0.6142			15.600						
0.6250	5/8		15.875				M16x1		
0.6299			16.000						
0.6406	41/64		16.272						
0.6496			16.500						
0.6563	21/32		16.669						
0.6693			17.000						
0.6875	11/16		17.463						
0.6890			17.500						
0.7087			18.000						
0.7480			19.000						
0.7500	3/4		19.050						
0.7874			20.000					G1/2-14	

# EMUGE HIGH PERFORMANCE TOOLS

**Emuge Corp Technology Center**  
West Boylston, MA, USA



**Emuge Corp.** is a wholly owned subsidiary of EMUGE-Werk Richard Glimpel GmbH & Co. KG (Lauf, Germany) that has been the product technology and performance leader in their field for nearly 100 years. Emuge manufactures an extensive line of taps, thread mills, end mills, toolholders, clamping devices and other rotary cutting tools, over 100,000 items sold through distributors worldwide. Emuge also offers end-user technical support through a network of in-the-field engineers and in-house product specialists, all with extensive tooling and application experience.



## **Emuge Drill Reconditioning Services**

Emuge offers drill grinding / reconditioning services for all drill products. Also, beginning Q4 2015, Emuge will offer USA Reconditioning Services *at our West Boylston, MA facility.*

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