

# Spiralbohrer

## Twist Drills

ALIX  
PRECISION



ALIX<sup>®</sup>  
PRECISION



# Spiralbohrer



## Twist Drills

### ► Zeichenerklärung Key to symbols

#### SCHNEIDSTOFF / TOOL MATERIAL



HSS-Co



HSS-Co-8



HSS



K 10-20F

VHM / Feinstkorn  
Solid carbide / Micro grain

#### BESCHICHTUNG / COATING



Unbeschichtet  
Blank



TiN



TiAlN  
Futura



TiCN



TiNOX

#### OBERFLÄCHENBEHANDLUNG / SURFACE TREATMENT



Vaporisiert  
Vaporized










































Fasennitriert  
Nitrided lands

## ► Werkzeug-Auswahlhilfe Tool selection guide



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - N

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>6156</b>	3xD	<b>1897</b>	0,5 ÷ 32,0	h8			-
							
<b>6159</b>	3xD	<b>1897</b>	0,5 ÷ 32,0	h8			-
							
<b>6151</b>	8xD	<b>338</b>	0,2 ÷ 25,4	h8			-
							
<b>6172</b>	8xD	<b>338</b>	1,5÷6,5 1,0÷13,0	h8			-
							
<b>6158</b>	8xD	<b>338</b>	0,2 ÷ 20,0	h8			-
							
<b>6106</b>	8xD	<b>338</b> mit Zapfen with tang	3,0 ÷ 10,0	h8			-
							
<b>6202</b>	8xD	<b>339</b> mit Zapfen with tang	1,0 ÷ 12,0	h8			-
							
<b>6165</b>	12xD	<b>340</b>	0,5 ÷ 25,0	h8			-
							
<b>6108</b>	12xD	<b>340</b> mit Zapfen with tang	3,0 ÷ 10,0	h8			-
							
<b>6217/1</b>	16xD	<b>1869-1</b>	2,0 ÷ 10,0	h8			-
							
<b>6217/2</b>	22xD	<b>1869-2</b>	3,0 ÷ 10,0	h8			-
							
<b>6217/3</b>	30xD	<b>1869-3</b>	3,5 ÷ 10,0	h8			-
							
<b>6168</b>	8xD	<b>345</b>	3,0 ÷ 100,0	h8			-
							






























## SPIRALBOHRER TYP / TWIST DRILLS TYPE - N

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS	●	○	●	●	-	-	180
-		HSS	●	○	●	●	-	-	180
TN		HSS	●	○	●	●	-	-	191
-		HSS	●	○	●	●	-	-	207
-		HSS	●	○	●	●	-	-	191
-		HSS	●	○	●	●	-	-	191
-		HSS	●	○	●	●	-	-	224
TN		HSS	●	○	●	●	-	-	226
-		HSS	●	○	●	●	-	-	226
-		HSS	●	○	●	●	-	-	232
-		HSS	●	○	●	●	-	-	234
-		HSS	●	○	●	●	-	-	235
TN		HSS	●	○	●	●	-	-	237



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - N, NK, H

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>N</b>							
6176	8xD	346	10,0 ÷ 50,0	h8			-
							
6233	12xD	341	5,0 ÷ 50,0	h8			-
							
6220/1	16xD	1870-1	8,0 ÷ 50,0	h8			-
							
6220/2	22xD	1870-2	8,0 ÷ 50,0	h8			-
							
<b>NK ■ Doppelseitig / Double end</b>							
6109	-	1897*	2,0 ÷ 10,0	h8			-
							
<b>H</b>							
6186	3xD	1897	1,0 ÷ 22,0	h8			-
							
6187	8xD	338	0,35 ÷ 16,0	h8			-
							
6190	8xD	338	0,4 ÷ 16,0	h8			-
							
6192	12xD	340	1,0 ÷ 10,0	h8			-
							







## SPIRALBOHRER TYP / TWIST DRILLS TYPE - N, NK, H

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS	●	○	●	●	-	-	253
-		HSS	●	○	●	●	-	-	254
-		HSS	●	○	●	●	-	-	256
-		HSS	●	○	●	●	-	-	257
-		HSS	●	○	●	●	-	-	180
-		HSS	-	-	-	●	-	-	180
-		HSS	-	-	-	●	-	-	191
-		HSS	-	-	-	●	-	-	191
-		HSS	-	-	-	●	-	-	226



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - W, STL

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>W</b>							
6197	8xD	338	0,5 ÷ 16,0	h8			-
							
6199	8xD	338	0,5 ÷ 12,0	h8			-
							
6200	12xD	340	1,0 ÷ 12,0	h8			-
							
6201	8xD	345	10,0 ÷ 32,0	h8			-
							
<b>STL</b>							
6210	8xD	338	1,0 ÷ 16,0	h8			-
							
6209	8xD	338	1,500 ÷ 12,700	h8			-
							
6173	12xD	340	1,0 ÷ 12,700	h8			-
							
6184	12xD	340	2,0 ÷ 11,0	h8			-
							
6216/1	16xD	1869/1	2,0 ÷ 12,7	h8			-
							
6216/2	22xD	1869/2	3,0 ÷ 12,0	h8			-
							
6216/3	30xD	1869/3	3,5 ÷ 12,0	h8			-
							
6130	60/70xD	ILIX NORM	6,0 ÷ 14,0	h8			-
							





## SPIRALBOHRER TYP / TWIST DRILLS TYPE - W, STL

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS	○	-	-	●	-	-	191
-		HSS	○	-	-	●	-	-	191
-		HSS	○	-	-	●	-	-	226
-		HSS	○	-	-	●	-	-	237
		HSS	●	-	●	●	-	-	191
-		HSS	●	-	●	●	-	-	191
		HSS	●	-	●	●	-	-	226
-		HSS	●	-	●	●	-	-	226
-		HSS	●	-	●	●	-	-	232
-		HSS	●	-	●	●	-	-	234
-		HSS	●	-	●	●	-	-	235
-		HSS	●	-	●	●	-	-	236



SPIRALBOHRER TYP / TWIST DRILLS TYPE - STL

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>6212</b>	8xD	<b>345</b>	10,0 ÷ 30,0	h8			-
<b>6222</b>	12xD	<b>341</b>	10,0 ÷ 31,0	h8			-
<b>6221/1</b>	16xD	<b>1870/1</b>	12,0 ÷ 30,0	h8			-
<b>6221/2</b>	22xD	<b>1870/2</b>	8,0 ÷ 40,0	h8			-
<b>6150</b>	40xD	<b>ILIX NORM</b>	10,0 ÷ 22,0	h8			-

**HSS-Co**

SPIRALBOHRER TYP / TWIST DRILLS TYPE - N, STL

**N**

<b>6153</b>	8xD	<b>338</b>	0,3 ÷ 16,0	h8			-
<b>6154</b>	8xD	<b>338</b>	0,5 ÷ 16,0	h8			-
<b>6166</b>	12xD	<b>340</b>	0,5 ÷ 17,0	h8			-

**STL**

<b>6131</b>	3xD	<b>1897</b>	1,0 ÷ 20,0	h8			-
<b>6132</b>	3xD	<b>ILIX NORM</b>	1,0 ÷ 20,0	h8			-



SPIRALBOHRER TYP / TWIST DRILLS TYPE - STL

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
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-		HSS	●	-	●	●	-	-	237
-		HSS	●	-	●	●	-	-	254
-		HSS	●	-	●	●	-	-	256
-		HSS	●	-	●	●	-	-	257
-		HSS	●	-	●	●	-	-	258

HSS-Co

SPIRALBOHRER TYP / TWIST DRILLS TYPE - N, STL

		HSS-Co	●	○	●	●	-	-	208
-		HSS-Co8	●	○	●	●	-	-	208
-		HSS-Co	●	○	●	●	-	-	226
-		HSS-Co	●	-	○	●	-	-	180
		HSS-Co	●	-	○	●	-	-	180



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - STL, NS, VA

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>STL</b>							
6218/1	16xD	1869-1	2,0 ÷ 12,0	h8			-
6218/2	22xD	1869-2	3,0 ÷ 12,0	h8			-
6219/1	16xD	1870-1	10,5 ÷ 30,0	h8			-
6219/2	22xD	1870-2	10,0 ÷ 30,0	h8			-
<b>NS</b>							
6246	3xD	1897	0,4 ÷ 12,0	h8			-
6247	8xD	338	1,0 ÷ 15,0	h8			-
6240	3xD	ILIX NORM	10 ÷ 30,0	h8			-
6204	8xD	345	10 ÷ 32,0	h8			-
<b>VA</b>							
6135	3xD	1897	1,0 ÷ 12,0	h8			-
6234	8xD	338	0,3 ÷ 15,0	h8			-
6112	12xD	340	1,0 ÷ 12,0	h8			-



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - STL, NS, VA

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS-Co	●	-	●	●	-	-	232
-		HSS-Co	●	-	●	●	-	-	234
-		HSS-Co	●	-	●	●	-	-	256
-		HSS-Co	●	-	●	●	-	-	257
-		HSS-Co	●	○	●	●	○	-	180
-		HSS-Co	●	○	●	●	○	-	208
-		HSS-Co	●	○	●	●	○	-	252
-		HSS-Co	●	○	●	●	○	-	250
TX		HSS-Co	○	●	○	●	●	-	180
TX		HSS-Co	○	●	○	●	●	-	208
-		HSS-Co	○	●	○	●	●	-	226



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - VA, RECORD VA, HD, RECORD GG

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>VA</b>							
6114	8xD	345	10,0 ÷ 32,0	h8			-
							
6116	8xD	346	12,0 ÷ 29,5	h8			-
							
<b>RECORD VA</b>							
6140	8xD	338	1,0 ÷ 16,0	h8			-
							
<b>HD</b>							
6111	8xD	338	1,0 ÷ 16,0	h8			-
							
6113	12xD	340	1,0 ÷ 12,0	h8			-
							
6115	8xD	345	10,0 ÷ 50,0	h8			-
							
6119	12xD	341	10,0 ÷ 31,0	h8			-
							
<b>RECORD GG</b>							
6110	8xD	338	4,0 ÷ 16,0	h8			-
							



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - VA, RECORD VA, HD, RECORD GG

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS-Co	○	●	○	●	●	-	250
-		HSS-Co	○	●	○	●	●	-	253
<b>TX</b>		HSS-Co	○	●	○	○	●	-	208
<b>TN</b> <b>TC</b>		HSS-Co	●	-	●	●	-	-	208
-		HSS-Co	●	-	●	●	-	-	226
-		HSS-Co	●	-	●	●	-	-	250
-		HSS-Co	●	-	●	●	-	-	254
<b>TF</b>		HSS-Co	-	-	●	-	-	-	208



## SPIRALBOHRER TYP / TWIST DRILLS TYPE - MICRODRILL, N, VHM / SOLID CARBIDE

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
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### MICRODRILL

<b>6511</b>	8xD	<b>1899A</b>	0,05 ÷ 1,45	h8			-
<b>6513</b>	8xD	<b>1899A</b>	0,08 ÷ 1,45	h8			-
<b>6516</b>	8xD	<b>ILIX NORM</b>	0,10 ÷ 2,95	h8			-
<b>6230</b>	10xD	<b>ILIX NORM</b>	1,0 ÷ 3,0	h8			-

### N

<b>6149</b>	3xD	<b>1897</b>	1,0 ÷ 10,0	h8			-
<b>6214</b>	8xD	<b>338</b>	0,6 ÷ 12,0	h8			-

### VHM / Solid Carbide ■ HM bestückt / Carbide tipped twist drills

<b>6120</b>	8xD	<b>338</b>	3,0 ÷ 13,0	h8			-
<b>6211</b>	5xD	<b>8037</b>	3,0 ÷ 16,0	h8			-
<b>6231</b>	5xD	<b>8041</b>	8,0 ÷ 32,0	h8			-





## SPIRALBOHRER TYP / TWIST DRILLS TYPE - MICRODRILL, N, VHM / SOLID CARBIDE







BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
-		HSS-Co	●	●	●	-	-	-	220
-		HSS-Co	●	●	●	-	-	-	220
-		K 10-20	●	●	●	-	-	-	222
-		K 10-20	-	-	-	●	-	-	217
-		K 10-20	○	○	●	●	-	-	180
-		K 10-20	○	○	●	●	-	-	215
-		K 10-20	-	-	●	-	-	●	215
-		K 10-20	-	-	●	-	-	●	218
-		K 10-20	-	-	●	-	-	●	219





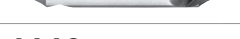

## ZENTRIERBOHRER / CENTRE DRILLS TYPE - VHM - HSS

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
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### HSS - VHM / Solid Carbide ■ Zentrierbohrer Form A- 60° / Center drills with

<b>6296</b> 		<b>333A</b>	0,5 ÷ 6,3	-	-	-	-
<b>6290</b> 		<b>333 A</b>	0,5 ÷ 12,5	-	-	-	-
<b>6162</b> 		<b>333 A alte Norm former standard</b>	0,63 ÷ 6,0	-	-	-	-
<b>6294</b> 		<b>333 A</b>	0,5 ÷ 6,3	-	-	-	-
<b>6164</b> 		<b>ANSI B 94.11 M-1979</b>	0,64 ÷ 7,94	-	-	-	-
<b>6142</b> 		<b>B.S. 328</b>	1,19 ÷ 7,94	-	-	-	-

### HSS ■ Zentrierbohrer mit Radius Form R / Center drills with radius form R

<b>6292</b> 		<b>333 R</b>	0,50 ÷ 12,5	-	-	-	-
<b>6223</b> 		<b>333 R alte Norm former standard</b>	1,0 ÷ 4,0	-	-	-	-
<b>6295</b> 		<b>333 R</b>	1,0 ÷ 4,0	-	-	-	-
<b>6160</b> 		<b>ANSI B 94.11 M-1979</b>	0,64 ÷ 4,76	-	-	-	-



## ZENTRIERBOHRER / CENTRE DRILLS TYPE - VHM - HSS

BESCHICHTUNG  
COATING

SCHNEIDRICHTUNG  
CUTTING DIRECT.

SCHNEIDSTOFF  
TOOL MATERIAL

**P**

**M**

**K**

**N**

**S**

**H**

Seite  
Page

included angle form A – 60°

-		K 10-20	●	●	●	●	●	-	265
TN		HSS	●	●	●	●	●	-	265
TN		HSS	●	●	●	●	●	-	266
-		HSS	●	●	●	●	●	-	265
-		HSS	●	●	●	●	●	-	269
-		HSS	●	●	●	●	●	-	270
TN		HSS	●	●	●	●	●	-	265
TN		HSS	●	●	●	●	●	-	266
-		HSS	●	●	●	●	●	-	265
-		HSS	●	●	●	●	●	-	269



ZENTRIERBOHRER / CENTRE DRILLS TYPE - HSS, HSS-CO

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
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**HSS** ■ Zentrierbohrer mit Schutzsenkung und Senkwinkel Form B 60/120° / Center drills

6297		333 B	1,0 ÷ 10,0	-	-	-	-
6298 B		333 B	1,0 ÷ 6,3	-	-	-	-
6289		333 B	1,6 ÷ 10,0	-	-	-	-

**HSS-Co** ■ Zentrierbohrer mit Senkwinkel Form A – 60° / Center drills included angle

6291		333 A mit Fläche with flat	1,6 ÷ 5,0	-	-	-	-
6299		333 A	1,0 ÷ 12,5	-	-	-	-
6144		ILIX NORM*	0,75 ÷ 4,0	-	-	-	-

**HSS-Co** ■ Zentrierbohrer mit Radius Form R / Center drills with radius Form R

6293		333 R con piano with flat	1,6 ÷ 5,0	-	-	-	-
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**HSS**  
NC-ANBOHRER / NC-SPOTTING AND CHAMFERING DRILLS

**HSS**

6148		1897*	4,0 ÷ 20,0	-			-
6147		1897*	4,0 ÷ 20,0	-			-

\* Taglienti più corti del DIN 1897 / Flutes shorter than DIN 1897



ZENTRIERBOHRER / CENTRE DRILLS TYPE - HSS, HSS-CO

BESCHICHTUNG  
COATING

SCHNEIDRICHTUNG  
CUTTING DIRECT.

SCHNEIDSTOFF  
TOOL MATERIAL

P

M

K

N

S

H

Seite  
Page

included angle Form B 60/120°

-		HSS	●	●	●	●	●	-	267
-		HSS	●	●	●	●	●	-	267
-		HSS	●	●	●	●	●	-	267

form A - 60°

-		HSS-Co	●	●	●	●	●	-	265
-		HSS-Co	●	●	●	●	●	-	265
-		HSS-Co	●	●	●	●	●	-	268
-		HSS-Co	●	●	●	●	●	-	265







HSS

NC-ANBOHRER / NC-SPOTTING AND CHAMFERING DRILLS







TN		HSS	●	●	●	●	●	-	189
TN		HSS	●	●	●	●	●	-	189



## NC-ANBOHRER / NC-SPOTTING AND CHAMFERING DRILLS HSS, VHM / SOLID CARBIDE













KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
<b>6100</b> 		<b>1897*</b>	6,0 ÷ 20,0	-			-
<b>6102</b> 		<b>ILIX NORM</b>	4,0 ÷ 20,0	-			-
<b>6103</b> 		<b>ILIX NORM</b>	4,0 ÷ 20,0	-			-

## HSS ■ Stufenbohrer für Zentrierbohrungen nach DIN 332 / Step drills for center holes acc.

<b>6249</b>  Senkwinkel 60° Chamfer 60°		<b>ILIX NORM</b>	3,3 ÷ 21,0	-			-
<b>6250</b>  Radius Radius		<b>ILIX NORM</b>	3,3 ÷ 21,0	-			-

## HSS MEHRFASEN-STUFENBOHRER / SUBLAND DRILLS - HSS

### HSS

<b>6281</b>  90°		<b>8374</b>	M3 ÷ M10	-			-
<b>6282</b>  90°		<b>8378</b>	M3 ÷ M12	-			-
<b>6283</b>  180°		<b>8376</b>	M3 ÷ M10	-			-
<b>6284</b>  90°		<b>8375</b>	M5 ÷ M16	-			-

\* Taglienti più corti del DIN 1897 / Flutes shorter than DIN 1897



## NC-ANBOHRER / NC-SPOTTING AND CHAMFERING DRILLS HSS, VHM / SOLID CARBIDE

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
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-		HSS	●	●	●	●	●	-	189
TN		K 10-20	●	●	●	●	●	●	190
TN		K 10-20	●	●	●	●	●	●	190

To din 332

-		HSS	●	●	●	●	●	-	271
-		HSS	●	●	●	●	●	-	271

## HSS MEHRFASEN-STUFENBOHRER / SUBLAND DRILLS - HSS







-		HSS	●	●	●	●	●	-	260
-		HSS	●	●	●	●	●	-	259
-		HSS	●	●	●	●	●	-	261
-		HSS	●	●	●	●	●	-	263









## MEHRFASEN-STUFENBOHRER / SUBLAND DRILLS - HSS

KAT.-NR. ITEM	LÄNGE LENGTH	DIN	Ø mm	TOLERANZ TOLERANCE	SPITZENWINKEL POINT ANGLE	SCHAFT SHANK	KÜHLUNG INTERNAL COOLANT
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### HSS

<b>6285</b>	 90°	<b>8379</b>	M8 ÷ M20	-			-
<b>6286</b>	 180°	<b>8377</b>	M5 ÷ M20	-			-

### HSS ■ Stiftlochbohrer / Taper pin drills

<b>6501</b>		<b>1898 A</b>	1,25 ÷ 12,0	-			-
<b>6502</b>		<b>1898 B</b>	5,0 ÷ 6,0	-			-





## MEHRFASEN-STUFENBOHRER / SUBLAND DRILLS - HSS

BESCHICHTUNG COATING	SCHNEIDRICHTUNG CUTTING DIRECT.	SCHNEIDSTOFF TOOL MATERIAL	P	M	K	N	S	H	Seite Page
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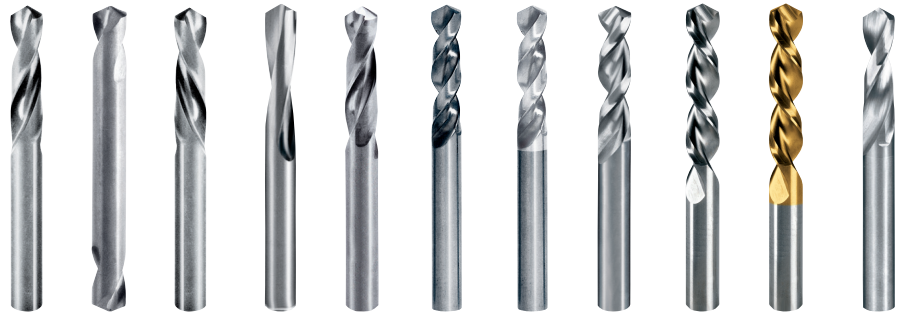
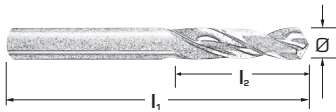
-		HSS	●	●	●	●	●	-	262
-		HSS	●	●	●	●	●	-	264
-		HSS	●	●	●	●	●	-	272
-		HSS	●	●	●	●	●	-	273



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank  
made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
0,400			19	2		-	-	-	-	●	-	-	-	-	-	-	
0,500			20	3		●	-	●	-	●	-	-	-	-	-	-	
0,550			21	3		●	-	●	-	-	-	-	-	-	-	-	
0,600			21	3		●	-	●	-	●	-	-	-	-	-	-	
0,650			22	4		-	-	●	-	-	-	-	-	-	-	-	
0,700			23	4		●	-	●	-	●	-	-	-	-	-	-	
0,750			23	4		●	-	●	-	-	-	-	-	-	-	-	
0,800			24	5		●	-	●	-	●	-	-	-	-	-	-	
0,850			24	5		●	-	●	-	-	-	-	-	-	-	-	
0,900			25	5		●	-	●	-	●	-	-	-	-	-	-	
0,950			25	5		●	-	●	-	-	-	-	-	-	-	-	
1,000			26	6	8	●	-	●	●	●	●	●	●	●	●	●	
1,016		60	26	6		-	-	-	-	-	-	-	●	-	-	-	
1,041		59	26	6		-	-	-	-	-	-	-	●	-	-	-	
1,050			26	6		●	-	●	-	-	-	-	-	-	-	-	
1,067		58	26	6		-	-	-	-	-	-	-	●	-	-	-	
1,092		57	26	7		-	-	-	-	-	-	-	●	-	-	-	
1,100			28	7	9	●	-	●	●	●	■	■	●	●	●	●	
1,150			28	7		●	-	●	-	-	-	-	-	-	-	-	
1,181		56	30	8		-	-	-	-	-	-	-	●	-	-	-	
1,191	3/64		30	8		-	-	-	-	-	-	-	●	-	-	-	
1,200			30	8	10	●	-	●	●	●	●	●	●	●	●	●	
1,250			30	8		●	-	●	-	-	-	-	-	-	-	-	
1,300			30	8	10	●	-	●	●	●	●	●	●	●	●	●	
1,321		55	32	9		-	-	-	-	-	-	-	●	-	-	-	
1,350			32	9		●	-	●	-	-	-	-	-	-	-	-	
1,397		54	32	9		-	-	-	-	-	-	-	●	-	-	-	
1,400			32	9	12	●	-	●	●	●	●	●	●	●	●	●	
1,450			32	9		●	-	●	-	-	-	-	-	-	-	-	
1,500			32	9	12	●	-	●	●	●	●	●	●	●	●	●	
1,511		53	34	10		-	-	-	-	-	-	-	●	-	-	-	
1,550			34	10		●	-	●	●	-	-	-	-	-	-	-	
1,588	1/16		34	10		-	-	-	-	-	-	-	●	-	-	-	
1,600			34	10	13	●	-	●	●	●	●	●	●	●	●	●	
1,613		52	34	10		-	-	-	-	-	-	-	●	-	-	-	
1,650			34	10		●	-	●	-	-	-	-	-	-	-	-	
1,700			34	10	13	●	-	●	●	●	●	●	●	●	●	●	
1,702		51	36	11		-	-	-	-	-	-	-	●	-	-	-	
1,750			36	11		●	-	●	●	-	-	-	-	-	-	-	

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## SERIE EXTRA CORTA / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
1,778		50	36	11		-	-	-	-	-	-	-	●	-	-	-	
1,800			36	11	14	●	-	●	●	●	■	■	●	●	●	●	
1,850			36	11		●	-	●	●	-	-	-	-	-	-	-	
1,854		49	36	11		-	-	-	-	-	-	-	●	-	-	-	
1,900			36	11	14	●	-	●	●	●	●	●	●	●	●	●	
1,930		48	38	12		-	-	-	-	-	-	-	●	-	-	-	
1,950			38	12		●	-	●	●	-	-	-	-	-	-	-	
1,984		5/64	38	12		-	-	-	-	-	-	-	●	-	-	-	
1,994		47	38	12		-	-	-	-	-	-	-	●	-	-	-	
2,000			38	12	16	●	●	●	●	●	●	●	●	●	●	●	
2,050			38	12		●	-	●	●	-	-	-	-	-	-	-	
2,057		46	38	12		-	-	-	-	-	-	-	●	-	-	-	
2,083		45	38	12		-	-	-	-	-	-	-	●	-	-	-	
2,100			38	12	16	●	●	●	●	●	■	■	●	●	●	●	
2,150			40	13		●	-	●	-	-	-	-	-	-	-	-	
2,184		44	40	13		-	-	-	-	-	-	-	●	-	-	-	
2,200			40	13	17	●	■	●	●	●	●	●	●	●	●	●	
2,250			40	13		●	-	●	●	-	-	-	-	-	-	-	
2,261		43	40	13		-	-	-	-	-	-	-	●	-	-	-	
2,300			40	13	17	●	●	●	●	●	●	●	●	●	●	●	
2,350			40	13		●	-	●	●	-	-	-	-	-	-	-	
2,375		42	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,383		3/32	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,400			43	14	18	●	●	●	●	●	●	●	●	●	●	●	
2,438		41	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,450			43	14		●	-	●	●	-	-	-	-	-	-	-	
2,489		40	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,500			43	14	18	●	●	●	●	●	●	●	●	●	●	●	
2,527		39	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,550			43	14		●	-	●	●	-	-	-	-	-	-	-	
2,578		38	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,600			43	14	18	●	●	●	●	●	●	●	●	●	●	●	
2,642		37	43	14		-	-	-	-	-	-	-	●	-	-	-	
2,650			43	14		●	-	●	-	-	-	-	-	-	-	-	
2,700			46	16	21	●	●	●	●	●	●	●	●	●	●	●	
2,705		36	46	16		-	-	-	-	-	-	-	●	-	-	-	
2,750			46	16		●	-	●	-	-	-	-	-	-	-	-	
2,779		7/64	46	16		-	-	-	-	-	-	-	●	-	-	-	
2,794		35	46	16		-	-	-	-	-	-	-	●	-	-	-	
2,800			46	16	21	●	●	●	●	●	●	●	●	●	●	●	

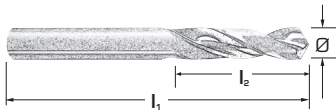
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N
Schneidrichtung Cutting direction																
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149
2,819		34	46	16		-	-	-	-	-	-	-	●	-	-	-
2,850			46	16		●	-	●	-	-	-	-	-	-	-	-
2,870		33	46	16		-	-	-	-	-	-	-	●	-	-	-
2,900			46	16	21	●	●	●	●	●	●	●	●	●	●	●
2,946		32	46	16		-	-	-	-	-	-	-	●	-	-	-
2,950			46	16		●	-	●	●	-	-	-	-	-	-	-
3,000			46	16	21	●	●	●	●	●	●	●	●	●	●	●
3,048		31	49	18		-	-	-	-	-	-	-	●	-	-	-
3,100			49	18	23	●	●	●	●	●	-	-	●	●	●	●
3,175	1/8		49	18		-	-	-	-	-	-	-	●	-	-	-
3,200			49	18	23	●	●	●	●	●	●	●	●	●	●	●
3,250			49	18		●	-	●	●	-	-	-	-	-	-	-
3,264		30	49	18		-	-	-	-	-	-	-	●	-	-	-
3,300			49	18	23	●	●	●	●	●	●	●	●	●	●	●
3,400			52	20	26	●	●	●	●	●	●	●	●	●	●	●
3,454		29	52	20		-	-	-	-	-	-	-	●	-	-	-
3,500			52	20	26	●	●	●	●	●	●	●	●	●	●	●
3,569		28	52	20		-	-	-	-	-	-	-	●	-	-	-
3,571	9/64		52	20		-	-	-	-	-	-	-	●	-	-	-
3,600			52	20	26	●	●	●	●	●	●	●	●	●	●	●
3,658		27	52	20		-	-	-	-	-	-	-	●	-	-	-
3,700			52	20	26	●	●	●	●	●	●	●	●	●	●	●
3,734		26	52	20		-	-	-	-	-	-	-	●	-	-	-
3,750			52	20		●	-	●	-	-	-	-	-	-	-	-
3,797		25	55	22		-	-	-	-	-	-	-	●	-	-	-
3,800			55	22	29	●	●	●	●	●	■	■	●	●	●	●
3,861		24	55	22		-	-	-	-	-	-	-	●	-	-	-
3,900			55	22	29	●	■	●	●	●	●	●	●	●	●	●
3,912		23	55	22		-	-	-	-	-	-	-	●	-	-	-
3,970	5/32		55	22		●	-	-	-	-	-	-	●	-	-	-
3,988		22	55	22		-	-	-	-	-	-	-	●	-	-	-
4,000			55	22	29	●	-	●	●	●	●	●	●	●	●	●
4,039		21	55	22		-	-	-	-	-	-	-	●	-	-	-
4,089		20	55	22		-	-	-	-	-	-	-	●	-	-	-
4,100			55	22	29	●	●	●	●	●	●	●	●	●	●	●
4,200			55	22	29	●	●	●	●	●	■	■	●	●	●	●
4,216		19	55	22		-	-	-	-	-	-	-	●	-	-	-
4,250			55	22		●	-	●	●	-	-	-	-	-	-	-
4,300			58	24	31	●	●	●	●	●	●	●	●	●	●	●
4,305		18	58	24		-	-	-	-	-	-	-	●	-	-	-

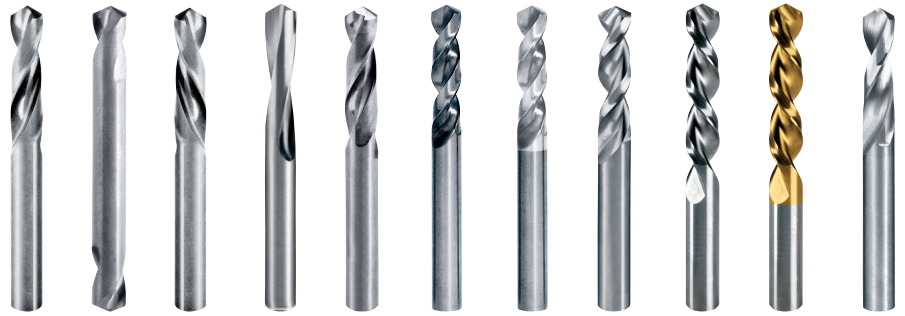
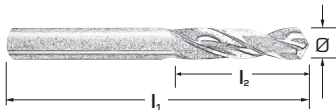
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø " "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
4,366	11/64		58	24		-	-	-	-	-	-	-	●	-	-	-	
4,394		17	58	24		■	-	-	-	-	-	-	●	-	-	-	
4,400			58	24	31	●	●	●	●	●	■	■	●	●	●	●	
4,496		16	58	24		-	-	-	-	-	-	-	●	-	-	-	
4,500			58	24	31	●	●	●	●	●	●	●	●	●	●	●	
4,572		15	58	24		-	-	-	-	-	-	-	●	-	-	-	
4,600			58	24	31	●	●	●	●	●	●	●	●	●	●	●	
4,623		14	58	24		-	-	-	-	-	-	-	●	-	-	-	
4,699		13	58	24		-	-	-	-	-	-	-	●	-	-	-	
4,700			58	24	31	●	●	●	●	●	●	●	●	●	●	●	
4,750			58	24		●	-	●	-	-	-	-	-	-	-	-	
4,763	3/16		62	26		-	-	-	-	-	-	-	●	-	-	-	
4,800			62	26	34	●	●	●	●	●	●	●	●	●	●	●	
4,801		12	62	26		-	-	-	-	-	-	-	●	-	-	-	
4,851		11	62	26		-	-	-	-	-	-	-	●	-	-	-	
4,900			62	26	34	●	●	●	●	●	-	●	●	●	●	●	
4,915		10	62	26		-	-	-	-	-	-	-	●	-	-	-	
4,978		9	62	26		-	-	-	-	-	-	-	●	-	-	-	
5,000			62	26	34	●	●	●	●	●	●	●	●	●	●	●	
5,055		8	62	26		-	-	-	-	-	-	-	●	-	-	-	
5,100			62	26	34	●	●	●	●	●	●	●	●	●	●	●	
5,105		7	62	26		-	-	-	-	-	-	-	●	-	-	-	
5,159	13/64		62	26		-	-	-	-	-	-	-	●	-	-	-	
5,182		6	62	26		-	-	-	-	-	-	-	●	-	-	-	
5,200			62	26	34	●	●	●	●	●	●	●	●	●	●	●	
5,220		5	62	26		-	-	-	-	-	-	-	●	-	-	-	
5,250			62	26		●	-	●	-	-	-	-	-	-	-	-	
5,300			62	26	34	●	●	●	●	●	●	●	●	●	●	●	
5,309		4	66	28		-	-	-	-	-	-	-	●	-	-	-	
5,400			66	28	36	●	●	●	●	●	●	●	●	●	●	●	
5,410		3	66	28		-	-	-	-	-	-	-	●	-	-	-	
5,500			66	28	36	●	●	●	●	●	●	●	●	●	●	●	
5,556	7/32		66	28		-	-	-	-	-	-	-	●	-	-	-	
5,600			66	28	36	●	●	●	●	●	●	●	●	●	●	●	
5,613		2	66	28		-	-	-	-	-	-	-	●	-	-	-	
5,700			66	28	36	●	●	●	●	●	●	●	●	●	●	●	
5,750			66	28		●	-	●	-	-	-	-	-	-	-	-	
5,791		1	66	28		-	-	-	-	-	-	-	●	-	-	-	
5,800			66	28	36	●	●	●	●	●	●	●	●	●	●	●	
5,900			66	28	36	●	-	●	●	●	●	●	●	●	●	●	

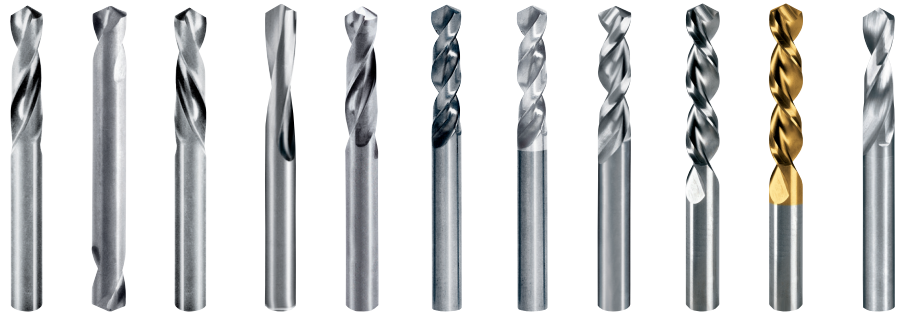
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank  
made of HSS, HSS-Co and solid carbide



Typ / Type		Schneidrichtung Cutting direction		Schneidstoff/Material		N	NK	N	H	NS	VA	VA	STL	STL	STL	N
						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20
Ø mm h8	Ø " No.	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2mm</sub> 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149
5,954	15/64		66	28		-	-	-	-	-	-	-	●	-	-	-
6,000			66	28	36	●	●	●	●	●	●	●	●	●	●	●
6,100			70	31	40	●	●	●	●	●	●	●	●	●	●	●
6,200			70	31	40	●	●	●	●	●	●	●	●	●	●	●
6,250			70	31		●	-	●	-	-	-	-	-	-	-	-
6,300			70	31	40	●	●	●	●	●	●	●	●	●	●	●
6,350	1/4		70	31	40	-	-	-	-	-	-	-	●	●	●	-
6,400			70	31	40	●	●	●	●	●	●	●	●	●	●	●
6,500			70	31	40	●	●	●	●	●	●	●	●	●	●	●
6,600			70	31	40	●	■	●	●	●	●	●	●	●	●	●
6,700			70	31	40	●	●	●	-	●	●	●	●	●	●	●
6,746	17/64		74	34		-	-	-	-	-	-	-	●	-	-	-
6,750			74	34		●	-	●	●	-	-	-	-	-	-	-
6,800			74	34	44	●	●	●	●	●	●	●	●	●	●	●
6,900			74	34	44	●	●	●	-	●	-	●	●	●	●	●
7,000			74	34	44	●	●	●	●	●	●	●	●	●	●	●
7,100			74	34	44	●	-	●	-	●	-	●	●	●	●	●
7,144	9/32		74	34		-	-	-	-	-	-	-	●	-	-	-
7,200			74	34	44	●	-	●	●	●	●	●	●	●	●	●
7,250			74	34		●	-	●	●	-	-	-	-	-	-	-
7,300			74	34	44	●	-	●	-	●	-	●	●	●	●	●
7,400			74	34	44	●	-	●	-	●	-	●	●	●	●	●
7,500			74	34	44	●	●	●	●	●	●	●	●	●	●	●
7,541	19/64		79	37		-	-	-	-	-	-	-	●	-	-	-
7,600			79	37	48	●	-	●	-	●	-	●	●	●	●	●
7,700			79	37	48	●	-	●	-	●	●	●	●	●	●	●
7,750			79	37		●	-	●	-	-	-	-	-	-	-	-
7,800			79	37	48	●	-	●	-	●	-	●	●	●	●	●
7,900			79	37	48	●	-	●	-	●	●	●	●	●	●	●
7,938	5/16		79	37		-	-	-	-	-	-	-	●	-	-	-
7,950			79	37	48	●	■	-	-	-	-	-	-	-	-	-
8,000			79	37	48	●	●	●	●	●	●	●	●	●	●	●
8,100			79	37	48	●	-	●	●	●	■	■	●	●	●	●
8,200			79	37	48	●	-	●	●	●	●	●	●	●	●	●
8,250			79	37		●	-	●	-	-	-	-	-	-	-	-
8,300			79	37	48	●	-	●	-	●	●	●	●	●	●	●
8,334	21/64		79	37		-	-	-	-	-	-	-	●	-	-	-
8,400			79	37	48	●	-	●	●	●	●	●	●	●	●	●
8,500			79	37	48	●	●	●	●	●	●	●	●	●	●	●
8,600			84	40	52	●	-	●	-	●	●	●	●	●	●	●
8,700			84	40	52	●	-	●	■	●	●	●	●	●	●	●

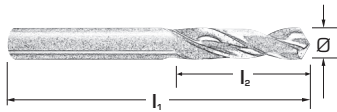
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø " No.	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
8,733	11/32		84	40		-	-	-	-	-	-	-	●	-	-	-	
8,750			84	40		●	-	●	-	-	-	-	-	-	-	-	
8,800			84	40	52	●	-	●	-	●	●	●	●	●	●	●	
8,900			84	40	52	●	-	●	-	●	-	-	●	●	●	●	
9,000			84	40	52	●	●	●	●	●	●	●	●	●	●	●	
9,100			84	40	52	●	-	●	-	●	-	-	●	●	●	●	
9,129	23/64		84	40		-	-	-	-	-	-	-	●	-	-	-	
9,200			84	40	52	●	-	●	●	●	●	●	●	●	●	●	
9,250			84	40		●	-	●	-	-	-	-	-	-	-	-	
9,300			84	40	52	●	-	●	-	●	●	●	●	●	●	●	
9,400			84	40	52	●	-	●	-	●	-	-	●	●	●	●	
9,500			84	40	52	●	●	●	●	●	●	●	●	●	●	●	
9,525	3/8		89	43		-	-	-	-	-	-	-	●	-	-	-	
9,600			89	43	56	●	-	●	-	●	-	-	●	●	●	●	
9,700			89	43	56	●	-	●	-	●	-	-	●	●	●	●	
9,750			89	43		●	-	●	-	-	-	-	-	-	-	-	
9,800			89	43	56	●	-	●	●	●	●	●	●	●	●	●	
9,900			89	43	56	●	-	●	-	●	-	-	●	●	●	●	
9,921	25/64		89	43		-	-	-	-	-	-	-	●	-	-	-	
10,000			89	43	56	●	●	●	●	●	●	●	●	●	●	●	
10,100			89	43		●	-	●	-	-	-	-	-	-	-	-	
10,200			89	43	56	●	-	●	●	-	●	●	●	●	●	-	
10,250			89	43		●	-	●	-	-	-	-	-	-	-	-	
10,300			89	43		●	-	●	-	-	-	-	-	-	-	-	
10,320	13/32		89	43		-	-	-	-	-	-	-	●	-	-	-	
10,400			89	43		●	-	●	-	-	-	-	-	-	-	-	
10,500			89	43	56	●	-	●	●	●	●	●	●	●	●	-	
10,600			89	43		●	-	●	-	-	-	-	-	-	-	-	
10,700			95	47		●	-	●	●	-	-	-	-	-	-	-	
10,716	27/64		95	47		-	-	-	-	-	-	-	●	-	-	-	
10,750			95	47		●	-	●	-	-	-	-	-	-	-	-	
10,800			95	47	61	●	-	●	-	-	-	-	●	●	●	-	
10,900			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,000			95	47	61	●	-	●	●	●	●	●	●	●	●	-	
11,100			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,113	7/16		95	47		-	-	-	-	-	-	-	●	-	-	-	
11,200			95	47		●	-	●	-	-	-	-	●	-	-	-	
11,250			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,300			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,400			95	47		●	-	●	-	-	-	-	-	-	-	-	

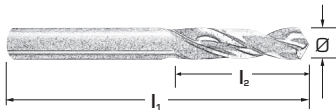
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank  
made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
11,500			95	47	61	●	-	●	●	●	●	●	●	●	●	-	
11,509	29/64		95	47		-	-	-	-	-	-	-	●	-	-	-	
11,600			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,700			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,750			95	47		●	-	●	-	-	-	-	-	-	-	-	
11,800			95	47		●	-	●	-	-	-	-	●	-	-	-	
11,900			102	51		●	-	●	-	-	-	-	-	-	-	-	
11,908	15/32		102	51		-	-	-	-	-	-	-	●	-	-	-	
12,000			102	51	66	●	-	●	●	●	●	●	●	●	●	-	
12,100			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,200			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,250			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,300			102	51		●	-	●	■	-	-	-	-	-	-	-	
12,304	31/64		102	51		-	-	-	-	-	-	-	●	-	-	-	
12,400			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,500			102	51	66	●	-	●	●	-	-	-	●	●	●	-	
12,600			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,700			102	51	66	●	-	●	●	-	-	-	-	●	●	-	
12,700	1/2		102	51		-	-	-	-	-	-	-	●	-	-	-	
12,750			102	51		●	-	●	-	-	-	-	-	-	-	-	
12,800			102	51		●	-	●	-	-	-	-	●	-	-	-	
12,900			102	51		●	-	●	-	-	-	-	-	-	-	-	
13,000			102	51	66	●	-	●	●	-	-	-	●	●	●	-	
13,100			102	51		●	-	●	-	-	-	-	-	-	-	-	
13,200			102	51		●	-	●	-	-	-	-	-	-	-	-	
13,250			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,300			107	54		●	-	●	-	-	-	-	●	-	-	-	
13,400			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,500			107	54	70	●	-	●	●	-	-	-	●	●	●	-	
13,600			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,700			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,750			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,800			107	54		●	-	●	-	-	-	-	-	-	-	-	
13,900			107	54		●	-	●	-	-	-	-	-	-	-	-	
14,000			107	54	70	●	-	●	●	-	-	-	●	●	●	-	
14,100			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,200			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,250			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,300			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,400			111	56		●	-	●	-	-	-	-	-	-	-	-	

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items

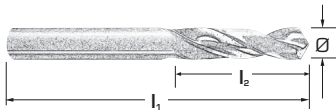




## EXTRA KURZ / STUB LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS, HSS-Co und VHM

Twist drills with straight shank made of HSS, HSS-Co and solid carbide



Typ / Type						N	NK	N	H	NS	VA	VA	STL	STL	STL	N	
Schneidrichtung Cutting direction																	
Schneidstoff/Material						HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	K10/20	
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>2</sub> mm 6132	6156	6109	6159	6186	6246	6135	6135 TX	6131	6132	6132 TN	6149	
14,500			111	56	73	●	-	●	●	-	-	-	●	●	●	-	
14,600			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,700			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,750			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,800			111	56		●	-	●	-	-	-	-	-	-	-	-	
14,900			111	56		●	-	●	-	-	-	-	-	-	-	-	
15,000			111	56	73	●	-	●	●	-	-	-	●	●	●	-	
15,300			115	58		-	-	-	-	-	-	-	●	-	-	-	
15,500			115	58	75	●	-	●	-	-	-	-	●	●	●	-	
16,000			115	58	75	●	-	●	●	-	-	-	●	●	●	-	
16,500			115	58		●	-	●	-	-	-	-	●	-	-	-	
16,800			119	60		-	-	-	-	-	-	-	-	-	-	-	
16,900			119	60		-	-	-	-	-	-	-	-	-	-	-	
17,000			119	60	78	●	-	●	●	-	-	-	●	●	●	-	
17,500			123	62		●	-	●	-	-	-	-	●	-	-	-	
18,000			123	62	81	●	-	●	●	-	-	-	●	●	●	-	
18,500			127	64		●	-	●	-	-	-	-	●	-	-	-	
19,000			127	64	83	●	-	●	●	-	-	-	●	●	●	-	
19,500			131	66		●	-	●	-	-	-	-	●	-	-	-	
20,000			131	66	86	●	-	●	●	-	-	-	●	●	●	-	
20,500			136	68		●	-	●	-	-	-	-	-	-	-	-	
21,000			136	68		●	-	●	■	-	-	-	-	-	-	-	
21,500			141	70		●	-	●	-	-	-	-	-	-	-	-	
22,000			141	70		●	-	●	■	-	-	-	-	-	-	-	
22,500			146	72		●	-	●	-	-	-	-	-	-	-	-	
23,000			146	72		●	-	●	-	-	-	-	-	-	-	-	
23,500			146	72		●	-	●	-	-	-	-	-	-	-	-	
24,000			151	75		●	-	●	-	-	-	-	-	-	-	-	
24,500			151	75		●	-	●	-	-	-	-	-	-	-	-	
25,000			151	75		●	-	●	-	-	-	-	-	-	-	-	
25,500			156	78		●	-	●	-	-	-	-	-	-	-	-	
26,000			156	78		●	-	●	-	-	-	-	-	-	-	-	
26,500			156	78		●	-	●	-	-	-	-	-	-	-	-	
27,000			162	81		●	-	●	-	-	-	-	-	-	-	-	
27,500			162	81		●	-	-	-	-	-	-	-	-	-	-	
28,000			162	81		●	-	●	-	-	-	-	-	-	-	-	
28,500			168	84		●	-	-	-	-	-	-	-	-	-	-	
29,000			168	84		●	-	●	-	-	-	-	-	-	-	-	
29,500			168	84		●	-	-	-	-	-	-	-	-	-	-	
30,000			168	84		●	-	●	-	-	-	-	-	-	-	-	

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items





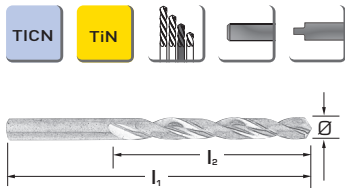




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
0,200			19	2,5	●	-	-	-	-	-	-	-	●	-	-	-
0,210			19	2,5	●	-	-	-	-	-	-	-	-	-	-	-
0,220			19	2,5	●	-	-	-	-	-	-	-	-	-	-	-
0,230			19	2,5	●	-	-	-	-	-	-	-	-	-	-	-
0,240			19	2,5	●	-	-	-	-	-	-	-	-	-	-	-
0,250			19	3,0	●	-	-	-	-	-	-	-	●	-	-	-
0,260			19	3,0	●	-	-	-	-	-	-	-	-	-	-	-
0,270			19	3,0	●	-	-	-	-	-	-	-	-	-	-	-
0,280			19	3,0	●	-	-	-	-	-	-	-	-	-	-	-
0,290			19	3,0	●	-	-	-	-	-	-	-	-	-	-	-
0,300			19	3,0	●	-	-	-	-	-	-	-	●	-	-	-
0,305		83	19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,310			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,318		82	19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,320			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,330			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,330		81	19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,340			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,343		80	19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,350			19	4,0	●	-	-	●	-	-	-	-	●	-	-	-
0,360			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,368		79	19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,370			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,380			19	4,0	●	-	-	-	-	-	-	-	-	-	-	-
0,390			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,396	1/64		20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,400			20	5,0	●	-	-	●	-	-	-	-	●	●	-	-
0,406		78	20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,410			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,420			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,430			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,440			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,450			20	5,0	●	-	-	●	-	-	-	-	●	-	-	-
0,457		77	20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,460			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,470			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,480			20	5,0	●	-	-	-	-	-	-	-	-	-	-	-
0,490			22	6,0	●	-	-	-	-	-	-	-	-	-	-	-
0,500			22	6,0	●	●	-	●	●	-	-	-	●	■	●	-
0,508		76	22	6,0	●	-	-	-	-	-	-	-	-	-	-	-

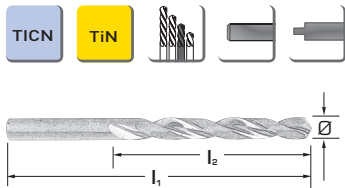
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
0,510			22	6,0	●	-	-	-	-	-	-	-	-	-	-	-
0,520			22	6,0	●	-	-	-	-	-	-	-	-	-	-	-
0,530			22	6,0	●	-	-	-	-	-	-	-	-	-	-	-
0,533		75	24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,540			24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,550			24	7,0	●	-	-	●	●	-	-	-	●	-	-	-
0,560			24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,570			24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,572		74	24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,580			24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,590			24	7,0	●	-	-	-	-	-	-	-	-	-	-	-
0,600			24	7,0	●	●	-	●	●	-	-	-	●	■	●	-
0,610			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,610		73	26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,620			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,630			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,635		72	26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,640			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,650			26	8,0	●	-	-	●	●	-	-	-	●	-	-	-
0,660			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,660		71	26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,670			26	8,0	●	-	-	-	-	-	-	-	-	-	-	-
0,680			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,690			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,700			28	9,0	●	●	-	●	●	-	-	-	●	■	■	-
0,710			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,711		70	28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,720			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,730			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,740			28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,742		69	28	9,0	●	-	-	-	-	-	-	-	-	-	-	-
0,750			28	9,0	●	-	-	●	●	-	-	-	●	-	-	-
0,760			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,770			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,780			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,787		68	30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,790			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,795		1/32	30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,800			30	10,0	●	●	-	●	●	-	-	-	●	■	●	-
0,810			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-

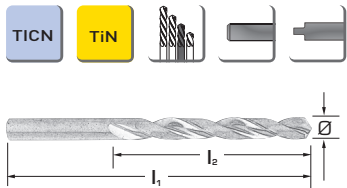
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
0,813		67	30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,820			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,830			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,838		66	30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,840			30	10,0	●	-	-	-	-	-	-	-	-	-	-	-
0,850			30	10,0	●	-	-	●	●	-	-	-	●	-	-	-
0,860			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,870			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,880			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,889		65	32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,890			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,900			32	11,0	●	●	-	●	●	-	-	-	●	■	●	-
0,910			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,914		64	32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,920			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,930			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,940			32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,940		63	32	11,0	●	-	-	-	-	-	-	-	-	-	-	-
0,950			32	11,0	●	-	-	●	●	-	-	-	●	-	-	-
0,960			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
0,965		62	34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
0,970			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
0,980			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
0,990			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
0,991		61	34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,000			34	12,0	●	●	-	●	●	●	●	●	●	●	●	-
1,010			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,016		60	34	12,0	●	-	-	-	-	●	●	●	-	-	-	-
1,020			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,030			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,040			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,041		59	34	12,0	●	-	-	-	-	●	●	●	-	-	-	-
1,050			34	12,0	●	-	-	●	●	-	-	-	●	■	-	-
1,060			34	12,0	●	-	-	-	-	-	-	-	-	-	-	-
1,067		58	36	14,0	●	-	-	-	-	●	●	●	-	-	-	-
1,070			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,080			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,090			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,092		57	36	14,0	●	-	-	-	-	●	●	●	-	-	-	-
1,100			36	14,0	●	●	-	●	●	●	●	●	●	■	●	-

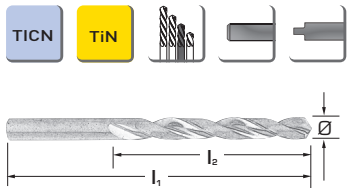
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
1,110			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,120			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,130			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,140			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,150			36	14,0	●	-	-	●	●	-	-	-	●	●	-	-
1,160			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,170			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,180			36	14,0	●	-	-	-	-	-	-	-	-	-	-	-
1,181		56	38	16,0	●	-	-	-	-	●	●	●	-	-	-	-
1,190			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,191	3/64		38	16,0	●	-	-	-	-	●	●	●	-	-	-	-
1,200			38	16,0	●	●	-	●	●	●	●	●	●	●	●	-
1,210			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,220			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,230			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,240			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,250			38	16,0	●	-	-	●	●	-	-	-	●	■	●	-
1,260			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,270			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,280			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,290			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,300			38	16,0	●	●	-	●	●	●	●	●	●	■	●	-
1,310			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,320			38	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,321		55	40	18,0	●	-	-	-	-	●	●	●	-	-	-	-
1,330			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,340			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,350			40	18,0	●	-	-	●	●	-	-	-	●	■	-	-
1,360			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,370			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,380			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,390			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,397		54	40	18,0	●	-	-	-	-	●	●	●	-	-	-	-
1,400			40	18,0	●	●	-	●	●	●	●	●	●	●	●	-
1,410			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,420			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,430			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,440			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,450			40	18,0	●	-	-	●	●	-	-	-	●	■	-	-
1,460			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-

● Standardartikel / Items available ex stock

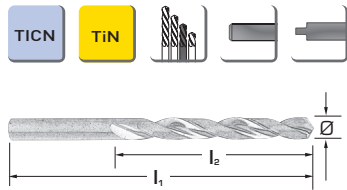




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
1,470			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,480			40	18,0	●	-	-	-	-	-	-	-	-	-	-	-
1,490			40	16,0	●	-	-	-	-	-	-	-	-	-	-	-
1,500			40	18,0	●	●	-	●	●	●	●	●	●	■	■	●
1,510			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,511	53		43	20,0	●	-	-	-	-	●	●	●	-	-	-	-
1,520			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,530			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,540			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,550			43	20,0	●	-	-	●	●	-	-	-	●	●	-	-
1,560			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,570			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,580			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,588	1/16		43	20,0	●	-	-	-	-	●	●	●	-	-	-	●
1,590			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,600			43	20,0	●	●	-	●	●	●	●	●	●	■	●	●
1,610			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,613	52		43	20,0	●	-	-	-	-	●	●	●	-	-	-	●
1,620			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,630			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,640			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,650			43	20,0	●	-	-	●	●	-	-	-	●	●	-	-
1,660			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,670			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,680			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,690			43	20,0	●	-	-	-	-	-	-	-	-	-	-	-
1,700			43	20,0	●	●	-	●	●	●	●	●	●	●	●	●
1,702	51		46	22,0	●	-	-	-	-	●	●	●	-	-	-	●
1,710			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,720			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,730			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,740			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,750			46	22,0	●	-	-	●	●	-	-	-	●	■	■	-
1,760			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,770			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,778	50		46	22,0	●	-	-	-	-	●	●	●	-	-	-	●
1,780			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,790			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,800			46	22,0	●	●	-	●	●	●	●	●	●	■	●	●
1,810			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-

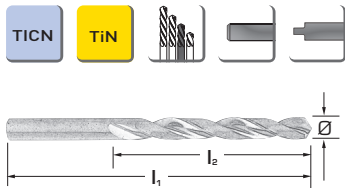
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
1,820			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,830			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,840			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,850			46	22,0	●	-	-	●	●	-	-	-	●	●	-	-
1,854		49	46	22,0	●	-	-	-	-	●	●	●	-	-	-	●
1,860			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,870			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,880			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,890			46	22,0	●	-	-	-	-	-	-	-	-	-	-	-
1,900			46	22,0	●	●	-	●	●	●	●	●	●	●	●	●
1,910			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,920			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,930			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,930		48	49	24,0	●	-	-	-	-	●	●	●	-	-	-	●
1,940			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,950			49	24,0	●	-	-	●	●	-	-	-	●	●	-	-
1,960			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,970			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,980			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,984		5/64	49	24,0	●	-	-	-	-	●	●	●	-	-	-	●
1,990			49	24,0	●	-	-	-	-	-	-	-	-	-	-	-
1,994		47	49	24,0	●	-	-	-	-	●	●	●	-	-	-	●
2,000			49	24,0	●	●	-	●	●	●	●	●	●	●	●	●
2,050			49	24,0	●	-	-	●	●	-	-	-	●	●	-	-
2,057		46	49	24,0	●	-	-	-	-	●	●	●	-	-	-	●
2,083		45	49	24,0	●	-	-	-	-	●	●	●	-	-	-	●
2,100			49	24,0	●	●	-	●	●	●	●	●	●	■	●	●
2,150			53	27,0	●	-	-	●	●	-	-	-	●	■	-	-
2,184		44	53	27,0	●	-	-	-	-	●	●	●	-	-	-	●
2,200			53	27,0	●	●	-	●	●	●	●	●	●	■	●	●
2,250			53	27,0	●	-	-	●	●	-	-	-	●	■	●	-
2,261		43	53	27,0	●	-	-	-	-	●	●	●	-	-	-	●
2,300			53	27,0	●	●	-	●	●	●	●	●	-	■	●	●
2,350			53	27,0	●	-	-	●	●	-	-	-	●	●	-	-
2,375		42	57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,381		3/32	57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,400			57	30,0	●	●	-	●	●	●	●	●	●	■	●	●
2,438		41	57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,450			57	30,0	●	-	-	●	●	-	-	-	●	■	-	-
2,489		40	57	30,0	●	-	-	-	-	●	●	●	-	-	-	●

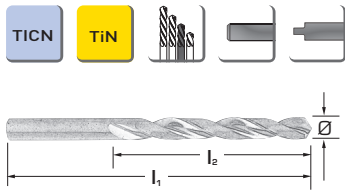
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
2,500			57	30,0	●	●	-	●	●	●	●	●	●	●	●	●
2,527	39		57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,550			57	30,0	●	-	-	●	●	-	-	-	●	■	-	-
2,578	38		57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,600			57	30,0	●	●	-	●	●	●	●	●	●	■	●	●
2,642	37		57	30,0	●	-	-	-	-	●	●	●	-	-	-	●
2,650			57	30,0	●	-	-	●	●	-	-	-	●	■	-	-
2,700			61	33,0	●	●	-	●	●	●	●	●	●	■	●	●
2,705	36		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,750			61	33,0	●	-	-	●	●	-	-	-	●	●	●	-
2,779	7/64		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,794	35		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,800			61	33,0	●	●	-	●	●	●	●	●	●	●	●	●
2,819	34		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,850			61	33,0	●	-	-	●	●	-	-	-	●	●	-	-
2,870	33		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,900			61	33,0	●	●	-	●	●	●	●	●	●	■	●	●
2,946	32		61	33,0	●	-	-	-	-	●	●	●	-	-	-	●
2,950			61	33,0	●	-	-	●	●	-	-	-	●	●	-	-
3,000			61	33,0	●	●	●	●	●	●	●	●	●	●	●	●
3,048	31		65	36,0	●	-	-	-	-	●	●	●	-	-	-	●
3,050			65	36,0	●	-	-	●	-	-	-	-	●	●	-	-
3,100			65	36,0	●	●	-	●	●	●	●	●	●	■	●	●
3,150			65	36,0	●	-	-	●	-	-	-	-	●	■	-	-
3,175	1/8		65	36,0	●	-	-	-	-	●	●	●	-	-	-	●
3,200			65	36,0	●	●	●	●	●	●	●	●	●	●	■	●
3,250			65	36,0	●	-	-	●	●	-	-	-	●	●	-	-
3,264	30		65	36,0	●	-	-	-	-	●	●	●	-	-	-	●
3,300			65	36,0	●	●	-	●	●	●	●	●	●	●	■	●
3,350			65	36,0	●	-	-	●	-	-	-	-	●	■	-	-
3,400			70	39,0	●	●	-	●	●	●	●	●	●	■	●	●
3,450			70	39,0	●	-	-	●	-	-	-	-	●	●	-	-
3,454	29		70	39,0	●	-	-	-	-	●	●	●	-	-	-	-
3,500			70	39,0	●	●	●	●	●	●	●	●	●	●	●	●
3,550			70	39,0	●	-	-	●	-	-	-	-	●	■	-	-
3,569	28		70	39,0	●	-	-	-	-	●	-	●	-	-	-	●
3,571	9/64		70	39,0	●	-	-	-	-	●	●	●	-	-	-	●
3,600			70	39,0	●	●	-	●	●	●	●	●	●	■	●	●
3,650			70	39,0	●	-	-	●	●	-	-	-	●	●	-	-
3,658	27		70	39,0	●	-	-	-	-	●	●	●	-	-	-	●

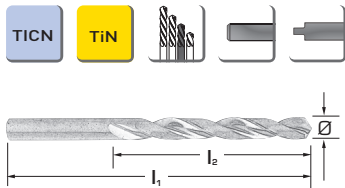
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
3,700			70	39,0	●	●	-	●	●	●	●	●	●	■	●	●
3,734	26		70	39,0	●	-	-	-	-	●	●	●	-	-	-	●
3,750			70	39,0	●	-	-	●	●	-	-	-	●	●	-	-
3,797	25		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
3,800			75	43,0	●	●	●	●	●	●	●	●	●	■	●	●
3,850			75	43,0	●	-	-	●	-	-	-	-	●	■	-	-
3,861	24		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
3,900			75	43,0	●	●	-	●	●	●	●	●	●	■	●	●
3,912	23		75	43,0	●	-	-	-	-	●	-	-	-	-	-	●
3,950			75	43,0	●	-	-	●	-	-	-	-	●	●	-	-
3,970	5/32		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
3,988	22		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
4,000			75	43,0	●	●	●	●	●	●	●	●	●	●	■	●
4,039	21		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
4,050			75	43,0	●	-	-	-	-	-	-	-	●	-	-	-
4,089	20		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
4,100			75	43,0	●	●	-	●	●	●	●	●	●	■	●	●
4,150			75	43,0	●	-	-	-	-	-	-	-	●	-	-	-
4,200			75	43,0	●	●	●	●	●	●	●	●	●	■	●	●
4,216	19		75	43,0	●	-	-	-	-	●	●	●	-	-	-	●
4,250			75	43,0	●	-	-	●	●	-	-	-	●	■	-	-
4,300			80	47,0	●	●	-	●	●	●	●	●	●	■	●	●
4,305	18		80	47,0	●	-	-	-	-	●	●	●	-	-	-	-
4,350			80	47,0	●	-	-	-	-	-	-	-	●	-	-	-
4,366	11/64		80	47,0	●	-	-	-	-	●	●	●	-	-	-	■
4,394	17		80	47,0	●	-	-	-	-	●	●	●	-	-	-	-
4,400			80	47,0	●	●	-	●	●	●	●	●	●	■	●	●
4,450			80	47,0	●	-	-	-	-	-	-	-	●	-	-	-
4,496	16		80	47,0	●	-	-	-	-	●	●	●	-	-	-	-
4,500			80	47,0	●	●	●	●	●	●	●	●	●	■	●	●
4,550			80	47,0	●	-	-	-	-	-	-	-	-	■	-	-
4,572	15		80	47,0	●	-	-	-	-	●	●	●	-	-	-	●
4,600			80	47,0	●	-	-	●	●	●	●	●	●	●	●	●
4,623	14		80	47,0	●	-	-	-	-	●	●	●	-	-	-	●
4,650			80	47,0	●	-	-	-	-	-	-	-	●	-	-	-
4,699	13		80	47,0	●	-	-	-	-	●	●	●	-	-	-	●
4,700			80	47,0	●	●	-	●	●	●	●	●	●	■	●	●
4,750			80	47,0	●	-	-	●	●	-	-	-	●	●	-	-
4,763	3/16		86	52,0	●	-	-	-	-	●	●	●	-	-	-	●
4,800			86	52,0	●	●	●	●	●	●	●	●	●	■	●	●

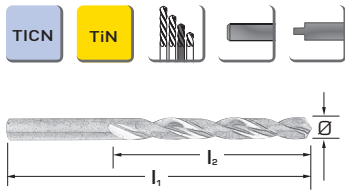
● Standardartikel / Items available ex stock ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
4,801		12	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
4,850			86	52,0	●	-	-	-	-	-	-	-	●	-	-	-
4,851		11	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
4,900			86	52,0	●	●	-	●	●	●	●	●	●	■	●	●
4,915		10	86	52,0	●	-	-	-	-	●	●	●	-	-	-	●
4,950			86	52,0	●	-	-	-	-	-	-	-	●	-	-	-
4,978		9	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
5,000			86	52,0	●	●	●	●	●	●	●	●	●	●	●	●
5,050			86	52,0	●	-	-	-	-	-	-	-	-	-	-	-
5,055		8	86	52,0	●	-	-	-	-	●	●	●	-	-	-	●
5,100			86	52,0	●	●	-	●	●	●	●	●	●	■	-	●
5,105		7	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
5,150			86	52,0	●	-	-	-	-	-	-	-	-	-	-	-
5,159	13/64		86	52,0	●	-	-	-	-	●	●	●	-	-	-	●
5,182		6	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
5,200			86	52,0	●	●	●	●	●	●	●	●	●	●	-	●
5,220		5	86	52,0	●	-	-	-	-	●	●	●	-	-	-	-
5,250			86	52,0	●	-	-	●	●	-	-	-	●	■	-	-
5,300			86	52,0	●	●	-	●	●	●	●	●	●	■	-	●
5,309		4	93	57,0	●	-	-	-	-	●	●	●	-	-	-	-
5,350			93	57,0	●	-	-	-	-	-	-	-	-	■	-	-
5,400			93	57,0	●	●	-	●	●	●	●	●	●	■	-	●
5,410		3	93	57,0	●	-	-	-	-	●	●	●	-	-	-	-
5,450			93	57,0	●	-	-	-	-	-	-	-	-	■	-	-
5,500			93	57,0	●	●	●	●	●	●	●	●	●	■	●	●
5,550			93	57,0	●	-	-	-	-	-	-	-	-	■	-	-
5,558	7/32		93	57,0	●	-	-	-	-	-	●	●	-	-	-	●
5,600			93	57,0	●	●	-	●	●	●	●	●	●	■	-	●
5,613		2	93	57,0	●	-	-	-	-	●	●	●	-	-	-	●
5,650			93	57,0	●	-	-	-	-	-	-	-	-	■	-	-
5,700			93	57,0	●	●	-	●	●	●	●	●	●	●	-	●
5,750			93	57,0	●	-	-	●	●	-	-	-	●	●	-	-
5,791		1	93	57,0	●	-	-	-	-	●	●	●	-	-	-	-
5,800			93	57,0	●	●	●	●	●	●	●	●	●	●	-	●
5,850			93	57,0	●	-	-	-	-	-	-	-	-	-	-	-
5,900			93	57,0	●	●	-	●	●	●	●	●	●	●	-	●
5,944		A	93	57,0	●	-	-	-	-	●	●	●	-	-	-	-
5,950			93	57,0	●	-	-	-	-	-	-	-	-	-	-	-
5,954	15/64		93	57,0	●	-	-	-	-	●	●	●	-	-	-	●
6,000			93	57,0	●	●	●	●	●	●	●	●	●	■	●	●

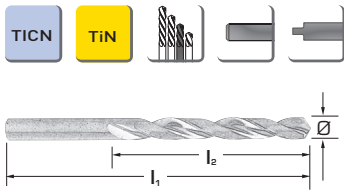
● Standardartikel / Items available ex stock ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm h8	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
6,045		B	101	63,0	●	-	-	-	-	●	●	●	-	-	-	-
6,050			101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,100			101	63,0	●	●	-	●	●	●	●	●	●	■	-	●
6,147		C	101	63,0	●	-	-	-	-	●	●	●	-	-	-	-
6,150			101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,200			101	63,0	●	●	●	●	●	●	●	●	●	■	-	●
6,248		D	101	63,0	●	-	-	-	-	●	●	●	-	-	-	-
6,250			101	63,0	●	-	-	●	●	-	-	-	●	●	-	-
6,300			101	63,0	●	●	-	●	●	●	●	●	●	●	-	●
6,350		E	101	63,0	●	-	-	-	-	●	●	●	-	-	-	●
6,350	1/4		101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,400			101	63,0	●	●	-	●	●	●	●	●	●	●	-	●
6,450			101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,500			101	63,0	●	●	●	●	●	●	●	●	●	●	●	●
6,528		F	101	63,0	●	-	-	-	-	●	●	●	-	-	-	-
6,550			101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,600			101	63,0	●	●	-	●	●	●	●	●	●	●	-	●
6,629		G	101	63,0	●	-	-	-	-	●	●	●	-	-	-	-
6,650			101	63,0	●	-	-	-	-	-	-	-	-	-	-	-
6,700			101	63,0	●	●	-	●	●	●	●	●	●	●	-	●
6,746	17/64		109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
6,750			109	69,0	●	-	-	●	●	-	-	-	●	●	-	-
6,756		H	109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
6,800			109	69,0	●	●	●	●	●	●	●	●	●	■	-	●
6,850			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
6,900			109	69,0	●	●	-	●	●	●	●	●	●	●	-	●
6,909		I	109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
6,950			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
7,000			109	69,0	●	●	●	●	●	●	●	●	●	●	■	●
7,036		J	109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
7,050			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
7,100			109	69,0	●	●	-	●	●	●	●	●	●	■	-	●
7,137		K	109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
7,145	9/32		109	69,0	●	-	-	-	-	●	●	●	-	-	-	●
7,150			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
7,200			109	69,0	●	●	-	●	●	●	●	●	●	●	-	●
7,250			109	69,0	●	-	-	●	●	-	-	-	●	-	-	-
7,300			109	69,0	●	●	-	●	●	●	●	●	●	●	-	●
7,350			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
7,366		L	109	69,0	●	-	-	-	-	●	●	●	-	-	-	-

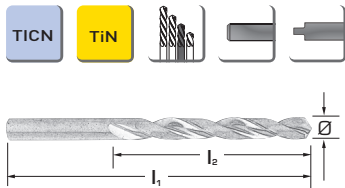
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
7,400			109	69,0	●	●	-	●	●	●	●	●	●	●	-	●
7,450			109	69,0	●	-	-	-	-	-	-	-	-	-	-	-
7,493	M		109	69,0	●	-	-	-	-	●	●	●	-	-	-	-
7,500			109	69,0	●	●	●	●	●	●	●	●	●	●	●	●
7,541	19/64		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
7,550			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
7,600			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
7,650			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
7,671	N		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
7,700			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
7,750			117	75,0	●	-	-	●	●	-	-	-	●	-	-	-
7,800			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
7,850			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
7,900			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
7,938	5/16		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
7,950			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
8,000			117	75,0	●	●	●	●	●	●	●	●	●	■	●	●
8,026	O		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
8,050			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
8,100			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
8,150			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
8,200			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
8,204	P		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
8,250			117	75,0	●	-	-	●	●	-	-	-	●	-	-	-
8,300			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
8,334	21/64		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
8,350			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
8,400			117	75,0	●	●	-	●	●	●	●	●	●	-	-	●
8,433	Q		117	75,0	●	-	-	-	-	●	●	●	-	-	-	-
8,450			117	75,0	●	-	-	-	-	-	-	-	-	-	-	-
8,500			117	75,0	●	●	●	●	●	●	●	●	●	●	●	●
8,550			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
8,600			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
8,611	R		125	81,0	●	-	-	-	-	●	●	●	-	-	-	-
8,650			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
8,700			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
8,731	11/32		125	81,0	●	-	-	-	-	●	●	●	-	-	-	●
8,750			125	81,0	●	-	-	●	●	-	-	-	●	-	-	-
8,800			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
8,839	S		125	81,0	●	-	-	-	-	●	●	●	-	-	-	-

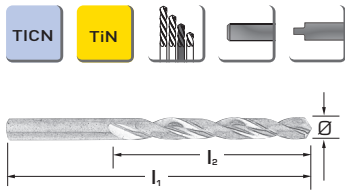
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
8,850			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
8,900			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
8,950			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
9,000			125	81,0	●	●	●	●	●	●	●	●	●	■	●	●
9,050			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
9,093	T		125	81,0	●	-	-	-	-	●	●	●	-	-	-	-
9,100			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
9,129	23/64		125	81,0	●	-	-	-	-	●	●	●	-	-	-	-
9,150			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
9,200			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
9,250			125	81,0	●	-	-	●	●	-	-	-	●	-	-	-
9,300			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
9,347	U		125	81,0	●	-	-	-	-	●	●	●	-	-	-	-
9,350			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
9,400			125	81,0	●	●	-	●	●	●	●	●	●	-	-	●
9,450			125	81,0	●	-	-	-	-	-	-	-	-	-	-	-
9,500			125	81,0	●	●	●	●	●	●	●	●	●	●	●	●
9,525	3/8		133	87,0	●	-	-	-	-	●	●	●	-	-	-	●
9,550			133	87,0	●	-	-	-	-	-	-	-	-	-	-	-
9,576	V		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-
9,600			133	87,0	●	●	-	●	●	●	●	●	●	-	-	●
9,650			133	87,0	●	-	-	-	-	-	-	-	-	-	-	-
9,700			133	87,0	●	●	-	●	●	●	●	●	●	-	-	●
9,750			133	87,0	●	-	-	●	●	-	-	-	●	-	-	-
9,800			133	87,0	●	●	-	●	●	●	●	●	●	-	-	●
9,804	W		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-
9,850			133	87,0	●	-	-	-	-	-	-	-	-	-	-	-
9,900			133	87,0	●	●	-	●	●	●	●	●	●	-	-	●
9,921	25/64		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-
9,950			133	87,0	●	-	-	-	-	-	-	-	-	-	-	-
10,000			133	87,0	●	●	●	●	●	●	●	●	●	■	●	●
10,084	X		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-
10,100			133	87,0	●	-	-	-	-	-	-	-	●	-	-	-
10,200			133	87,0	●	●	-	-	●	●	●	●	●	-	-	●
10,250			133	87,0	●	-	-	-	-	-	-	-	●	-	-	-
10,262	Y		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-
10,300			133	87,0	●	-	-	-	-	-	-	-	●	-	-	-
10,320	13/32		133	87,0	●	-	-	-	-	●	●	●	-	-	-	●
10,400			133	87,0	●	-	-	-	-	-	-	-	●	-	-	-
10,490	Z		133	87,0	●	-	-	-	-	●	●	●	-	-	-	-

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items

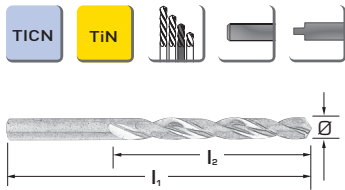




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
10,500			133	87,0	●	●	-	●	●	●	●	●	●	-	●	●
10,600			133	87,0	●	-	-	-	-	-	-	-	●	-	-	-
10,700			142	94,0	●	-	-	-	-	-	-	-	■	-	-	-
10,716	27/64		142	94,0	●	-	-	-	-	●	●	●	-	-	-	-
10,750			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
10,800			142	94,0	●	-	-	-	-	●	●	●	●	-	-	●
10,900			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,000			142	94,0	●	●	-	●	●	●	●	●	●	●	■	●
11,100			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,113	7/16		142	94,0	●	-	-	-	-	●	●	●	-	-	-	●
11,200			142	94,0	●	-	-	-	●	●	●	●	●	-	-	●
11,250			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,300			142	94,0	●	-	-	-	●	-	-	-	●	-	-	-
11,400			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,500			142	94,0	●	●	-	●	●	●	●	●	●	-	●	●
11,509	29/64		142	94,0	●	-	-	-	-	●	●	●	-	-	-	-
11,600			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,700			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,750			142	94,0	●	-	-	-	-	-	-	-	●	-	-	-
11,800			142	94,0	●	-	-	-	-	●	●	●	●	-	-	●
11,900			151	101,0	●	-	-	-	-	-	-	-	●	-	-	●
11,906	15/32		151	101,0	●	-	-	-	-	●	●	●	-	-	-	●
12,000			151	101,0	●	●	-	●	●	●	●	●	●	●	●	●
12,100			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,200			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,250			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,300			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,304	31/64		151	101,0	●	-	-	-	-	●	●	●	-	-	-	●
12,400			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,500			151	101,0	●	●	-	●	●	●	●	●	●	-	-	-
12,600			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,700			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,700	1/2		151	101,0	●	-	-	-	-	●	●	●	-	-	-	●
12,750			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,800			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
12,900			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-
13,000			151	101,0	●	●	-	●	●	●	●	●	●	●	-	-
13,096	33/64		151	101,0	●	-	-	-	-	-	-	-	-	-	-	-
13,100			151	101,0	●	-	-	-	-	●	●	●	●	-	-	-
13,200			151	101,0	●	-	-	-	-	-	-	-	●	-	-	-

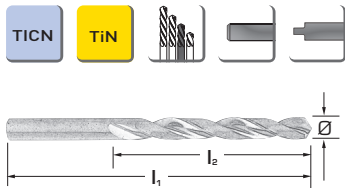
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
13,250			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,300			160	108,0	●	-	-	-	-	●	●	●	●	-	-	-
13,400			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,495	17/32		160	108,0	●	-	-	-	-	-	-	-	-	-	-	-
13,500			160	108,0	●	●	-	-	●	●	●	●	●	-	-	-
13,600			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,700			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,750			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,800			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
13,891	35/64		160	108,0	●	-	-	-	-	-	-	-	-	-	-	-
13,900			160	108,0	●	-	-	-	-	-	-	-	●	-	-	-
14,000			160	108,0	●	●	-	●	●	●	●	●	●	●	-	-
14,100			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,200			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,250			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,288	9/16		169	114,0	●	-	-	-	-	-	-	-	-	-	-	-
14,300			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,400			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,500			169	114,0	●	●	-	-	●	●	●	●	●	-	-	-
14,600			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,684	37/64		169	114,0	●	-	-	-	-	-	-	-	-	-	-	-
14,700			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,750			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
14,800			169	114,0	●	-	-	-	-	-	-	-	-	-	-	-
14,900			169	114,0	●	-	-	-	-	-	-	-	●	-	-	-
15,000			169	114,0	●	●	-	●	●	●	●	●	●	■	-	-
15,083	19/32		178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,100			178	120,0	●	-	-	-	-	●	●	●	-	-	-	-
15,200			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,250			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,300			178	120,0	●	-	-	-	●	●	●	●	-	-	-	-
15,400			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,479	39/64		178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,500			178	120,0	●	-	-	-	●	●	●	●	●	-	-	-
15,600			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,700			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,750			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,800			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,875	5/8		178	120,0	●	-	-	-	-	-	-	-	-	-	-	-
15,900			178	120,0	●	-	-	-	-	-	-	-	-	-	-	-

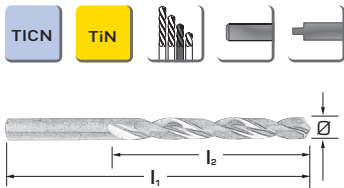
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS

Twist drills with straight shank made of HSS



Typ / Type					N	N	N ML	H	W	STL	STL	STL	N	H	W	STL
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
Ø mm	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6151	6151 TN	6106	6187	6197	6210	6210 TN	6210 TC	6158	6190	6199	6209
16,000			178	120,0	●	●	-	●	●	●	●	●	●	●	-	-
16,100			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,200			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,250			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,271	41/64		184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,300			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,400			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,500			184	125,0	●	-	-	-	-	-	-	-	●	-	-	-
16,600			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,670	21/32		184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,700			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,750			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,800			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
16,900			184	125,0	●	-	-	-	-	-	-	-	-	-	-	-
17,000			184	125,0	●	-	-	-	-	-	-	-	●	-	-	-
17,066	43/64		191	130,0	●	-	-	-	-	-	-	-	-	-	-	-
17,250			191	130,0	●	-	-	-	-	-	-	-	-	-	-	-
17,463	11/16		191	130,0	●	-	-	-	-	-	-	-	-	-	-	-
17,500			191	130,0	●	-	-	-	-	-	-	-	●	-	-	-
17,750			191	130,0	●	-	-	-	-	-	-	-	-	-	-	-
17,859	45/64		191	130,0	●	-	-	-	-	-	-	-	-	-	-	-
18,000			191	130,0	●	-	-	-	-	-	-	-	●	-	-	-
18,250			198	135,0	●	-	-	-	-	-	-	-	-	-	-	-
18,258	23/32		198	135,0	●	-	-	-	-	-	-	-	-	-	-	-
18,500			198	135,0	●	-	-	-	-	-	-	-	●	-	-	-
18,654	47/64		198	135,0	●	-	-	-	-	-	-	-	-	-	-	-
18,750			198	135,0	●	-	-	-	-	-	-	-	-	-	-	-
19,000			198	135,0	●	-	-	-	-	-	-	-	●	-	-	-
19,050	3/4		205	140,0	●	-	-	-	-	-	-	-	-	-	-	-
19,250			205	140,0	●	-	-	-	-	-	-	-	-	-	-	-
19,446	49/64		205	140,0	●	-	-	-	-	-	-	-	-	-	-	-
19,500			205	140,0	●	-	-	-	-	-	-	-	●	-	-	-
19,750			205	140,0	●	-	-	-	-	-	-	-	-	-	-	-
19,845	25/32		205	140,0	●	-	-	-	-	-	-	-	-	-	-	-
20,000			205	140,0	●	-	-	-	-	-	-	-	●	-	-	-
20,241	51/64		213	145,0	●	-	-	-	-	-	-	-	-	-	-	-
20,638	13/16		213	145,0	●	-	-	-	-	-	-	-	-	-	-	-
21,000			213	145,0	●	-	-	-	-	-	-	-	-	-	-	-
21,034	53/64		213	145,0	●	-	-	-	-	-	-	-	-	-	-	-
21,433	27/32		221	150,0	●	-	-	-	-	-	-	-	-	-	-	-

● Standardartikel / Items available ex stock



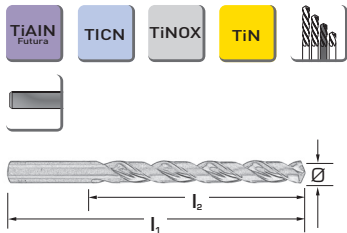




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank  
made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
0,300			19	3	●	-	-	●	●	-	-	-	-	-	-	-
0,350			19	4	-	-	-	●	●	-	-	-	-	-	-	-
0,396	1/64		20	5	-	-	-	●	●	-	-	-	-	-	-	-
0,400			20	5	●	-	-	●	●	-	-	-	-	-	-	-
0,406		78	20	5	-	-	-	●	●	-	-	-	-	-	-	-
0,450			20	5	-	-	-	●	●	-	-	-	-	-	-	-
0,457		77	20	5	-	-	-	●	●	-	-	-	-	-	-	-
0,500			22	6	●	-	●	●	●	-	-	-	-	-	-	-
0,508		76	22	6	-	-	-	●	●	-	-	-	-	-	-	-
0,533		75	24	7	-	-	-	●	●	-	-	-	-	-	-	-
0,550			24	7	-	-	-	●	●	-	-	-	-	-	-	-
0,572		74	24	7	-	-	-	●	●	-	-	-	-	-	-	-
0,600			24	7	●	-	-	●	●	-	-	-	-	-	-	-
0,610		73	26	8	-	-	-	●	●	-	-	-	-	-	-	-
0,635		72	26	8	-	-	-	●	●	-	-	-	-	-	-	-
0,650			26	8	-	-	-	●	●	-	-	-	-	-	-	-
0,660		71	26	8	-	-	-	●	●	-	-	-	-	-	-	-
0,700			28	9	●	-	-	●	●	-	-	-	-	-	-	-
0,711		70	28	9	-	-	-	●	●	-	-	-	-	-	-	-
0,742		69	28	9	-	-	-	●	●	-	-	-	-	-	-	-
0,750			28	9	●	-	-	●	●	-	-	-	-	-	-	-
0,787		68	30	10	-	-	-	●	●	-	-	-	-	-	-	-
0,795	1/32		30	10	-	-	-	●	●	-	-	-	-	-	-	-
0,800			30	10	●	-	-	●	●	-	-	-	-	-	-	-
0,813		67	30	10	-	-	-	●	●	-	-	-	-	-	-	-
0,838		66	30	10	-	-	-	●	●	-	-	-	-	-	-	-
0,850			30	10	-	-	-	●	●	-	-	-	-	-	-	-
0,889		65	32	11	-	-	-	●	●	-	-	-	-	-	-	-
0,900			32	11	●	-	●	●	●	-	-	-	-	-	-	-
0,914		64	32	11	-	-	-	●	●	-	-	-	-	-	-	-
0,940		63	32	11	-	-	-	●	●	-	-	-	-	-	-	-
0,950			32	11	●	-	-	●	●	-	-	-	-	-	-	-
0,965		62	34	12	-	-	-	●	●	-	-	-	-	-	-	-
0,991		61	34	12	-	-	-	●	●	-	-	-	-	-	-	-
1,000			34	12	●	●	●	●	●	●	●	-	●	●	●	●
1,016		60	34	12	-	-	-	●	●	-	-	-	-	-	-	-
1,041		59	34	12	-	-	-	●	●	-	-	-	-	-	-	-
1,050			34	12	●	-	-	●	●	-	-	-	-	-	-	●
1,067		58	36	14	-	-	-	●	●	-	-	-	-	-	-	-
1,092		57	36	14	-	-	-	●	●	-	-	-	-	-	-	-

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

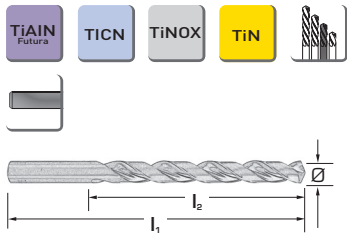
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank  
made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
1,100			36	14	●	●	●	●	●	●	●	-	●	●	●	●
1,150			36	14	-	-	-	●	●	-	-	-	-	-	-	●
1,181		56	38	16	-	-	-	●	●	-	-	-	-	-	-	-
1,191	3/64		38	16	-	-	-	●	●	-	-	-	-	-	-	-
1,200			38	16	●	●	●	●	●	●	●	-	●	●	●	●
1,250			38	16	●	-	-	●	●	-	-	-	-	-	-	●
1,300			38	16	●	●	●	●	●	●	●	-	●	●	●	●
1,321		55	40	18	-	-	-	●	●	-	-	-	-	-	-	-
1,350			40	18	●	-	-	●	●	-	-	-	-	-	-	●
1,397		54	40	18	-	-	-	●	●	-	-	-	-	-	-	-
1,400			40	18	●	●	●	●	●	●	●	-	●	●	●	●
1,450			40	18	●	-	-	●	●	-	-	-	-	-	-	●
1,500			40	18	●	●	●	●	●	●	●	-	●	●	●	●
1,511		53	43	20	-	-	-	●	●	-	-	-	-	-	-	-
1,550			43	20	●	-	-	●	●	-	-	-	-	-	-	●
1,588	1/16		43	20	-	-	-	●	●	-	-	-	-	-	-	-
1,600			43	20	●	●	●	●	●	●	●	-	●	●	●	●
1,613		52	43	20	-	-	-	●	●	-	-	-	-	-	-	-
1,650			43	20	●	-	-	●	●	-	-	-	-	-	-	●
1,700			43	20	●	●	●	●	●	●	●	-	●	●	●	●
1,702		51	46	22	-	-	-	●	●	-	-	-	-	-	-	-
1,750			46	22	●	-	-	●	●	-	-	-	-	-	-	●
1,778		50	46	22	-	-	-	●	●	-	-	-	-	-	-	-
1,800			46	22	●	●	●	●	●	●	●	-	●	●	●	●
1,850			46	22	●	-	-	●	●	-	-	-	-	-	-	●
1,854		49	46	22	-	-	-	●	●	-	-	-	-	-	-	-
1,900			46	22	●	●	●	●	●	●	●	-	●	●	●	●
1,930		48	49	24	-	-	-	●	●	-	-	-	-	-	-	-
1,950			49	24	●	-	-	●	●	-	-	-	-	-	-	●
1,984	5/64		49	24	-	-	-	●	●	-	-	-	-	-	-	-
1,994		47	49	24	-	-	-	●	●	-	-	-	-	-	-	-
2,000			49	24	●	●	●	●	●	●	●	-	●	●	●	●
2,050			49	24	●	-	-	●	●	-	-	-	-	-	-	●
2,057		46	49	24	-	-	-	●	●	-	-	-	-	-	-	-
2,083		45	49	24	-	-	-	●	●	-	-	-	-	-	-	-
2,100			49	24	●	●	●	●	●	●	●	-	●	●	●	●
2,150			53	27	●	-	-	●	●	-	-	-	-	-	-	●
2,184		44	53	27	-	-	-	●	●	-	-	-	-	-	-	-
2,200			53	27	●	●	●	●	●	●	●	-	●	●	●	●
2,250			53	27	●	-	-	●	●	-	-	-	-	-	-	●

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

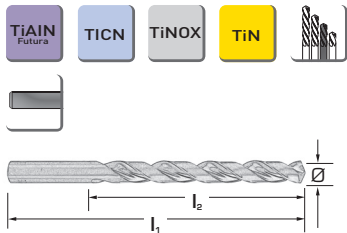
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank  
made of HSS-Co and HSS-Co8



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
2,261		43	53	27	-	-	-	●	●	-	-	-	-	-	-	-
2,300			53	27	●	●	●	●	●	●	●	-	●	●	●	●
2,350			53	27	●	-	-	●	●	-	-	-	-	-	-	●
2,375		42	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,383	3/32		57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,400			57	30	●	●	●	●	●	●	●	-	●	●	●	●
2,438		41	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,450			57	30	●	-	-	●	●	-	-	-	-	-	-	●
2,489		40	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,500			57	30	●	●	●	●	●	●	●	-	●	●	●	●
2,527		39	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,550			57	30	●	-	-	●	●	-	-	-	-	-	-	●
2,578		38	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,600			57	30	●	●	●	●	●	●	●	-	●	●	●	●
2,642		37	57	30	-	-	-	●	●	-	-	-	-	-	-	-
2,650			57	30	●	-	-	●	●	-	-	-	-	-	-	●
2,700		61	33	33	●	●	●	●	●	●	●	-	●	●	●	●
2,705		36	61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,750			61	33	●	-	-	●	●	-	-	-	-	-	-	●
2,779	7/64		61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,794		35	61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,800			61	33	●	●	●	●	●	●	●	-	●	●	●	●
2,819		34	61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,850			61	33	●	-	-	●	●	-	-	-	-	-	-	●
2,870		33	61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,900			61	33	●	●	●	●	●	●	●	-	●	●	●	●
2,946		32	61	33	-	-	-	●	●	-	-	-	-	-	-	-
2,950			61	33	●	-	-	●	●	-	-	-	-	-	-	●
3,000			61	33	●	●	●	●	●	●	●	-	●	●	●	●
3,048		31	65	36	-	-	-	●	●	-	-	-	-	-	-	-
3,100			65	36	●	●	●	●	●	●	●	-	●	●	●	●
3,150			65	36	●	-	-	-	-	-	-	-	-	-	-	●
3,175	1/8		65	36	-	-	-	●	●	-	-	-	-	-	-	-
3,200			65	36	●	●	●	●	●	●	●	-	●	●	●	●
3,264		30	65	36	-	-	-	●	●	-	-	-	-	-	-	-
3,300			65	36	●	●	●	●	●	●	●	-	●	●	●	●
3,400			70	39	●	●	●	●	●	●	●	-	●	●	●	●
3,454		29	70	39	-	-	-	●	●	-	-	-	-	-	-	-
3,500			70	39	●	●	●	●	●	●	●	-	●	●	●	●
3,569		28	70	39	-	-	-	●	●	-	-	-	-	-	-	-

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

● Standardartikel / Items available ex stock

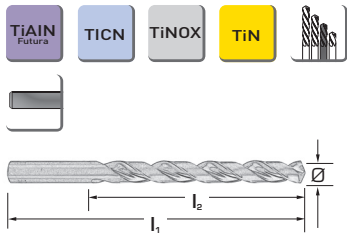




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank  
made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
3,571	9/64		70	39	-	-	-	●	●	-	-	-	-	-	-	-
3,600			70	39	●	●	●	●	●	●	●	-	●	●	●	●
3,650			70	39	-	-	-	●	●	-	-	-	-	-	-	-
3,658	27		70	39	-	-	-	●	●	-	-	-	-	-	-	-
3,700			70	39	●	●	●	●	●	●	●	-	●	●	●	●
3,734	26		70	39	-	-	-	●	●	-	-	-	-	-	-	-
3,797	25		75	43	-	-	-	●	●	-	-	-	-	-	-	-
3,800			75	43	●	●	●	●	●	●	●	-	●	●	●	●
3,861	24		75	43	-	-	-	●	●	-	-	-	-	-	-	-
3,900			75	43	●	●	●	●	●	●	●	-	●	●	●	●
3,912	23		75	43	-	-	-	●	●	-	-	-	-	-	-	-
3,970	5/32		75	43	-	-	-	●	●	-	-	-	-	-	-	-
3,988	22		75	43	-	-	-	●	●	-	-	-	-	-	-	-
4,000			75	43	●	●	●	●	●	●	●	■	●	●	●	●
4,039	21		75	43	-	-	-	●	●	-	-	-	-	-	-	-
4,089	20		75	43	-	-	-	●	●	-	-	-	-	-	-	-
4,100			75	43	●	●	●	●	●	●	●	■	●	●	●	●
4,200			75	43	●	●	●	●	●	●	●	-	●	●	●	●
4,216	19		75	43	-	-	-	●	●	-	-	-	-	-	-	-
4,300			80	47	●	●	●	●	●	●	●	■	●	●	●	●
4,305	18		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,366	11/64		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,394	17		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,400			80	47	●	●	●	●	●	●	●	■	●	●	●	●
4,496	16		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,500			80	47	●	●	●	●	●	●	●	■	●	●	●	●
4,572	15		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,600			80	47	●	●	●	●	●	●	●	■	●	●	●	●
4,623	14		80	47	-	-	-	●	●	-	-	-	-	-	-	-
4,699	13		80	47	-	-	-	●	●	-	-	-	●	-	-	-
4,700			80	47	●	●	●	●	●	●	●	■	●	●	●	●
4,763	3/16		86	52	-	-	-	●	●	-	-	-	-	-	-	-
4,800			86	52	●	●	●	●	●	●	●	■	●	●	●	●
4,801	12		86	52	-	-	-	●	●	-	-	-	-	-	-	-
4,851	11		86	52	-	-	-	●	●	-	-	-	-	-	-	-
4,900			86	52	●	●	●	●	●	●	●	■	●	●	●	●
4,915	10		86	52	-	-	-	●	●	-	-	-	-	-	-	-
4,978	9		86	52	-	-	-	●	●	-	-	-	-	-	-	-
5,000			86	52	●	●	●	●	●	●	●	-	●	●	●	●
5,055	8		86	52	-	-	-	●	●	-	-	-	-	-	-	-

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

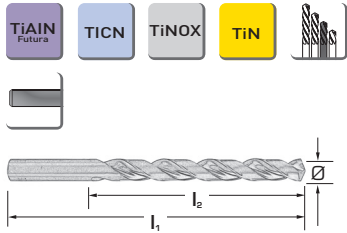
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
5,100			86	52	●	●	●	●	●	●	●	-	●	●	●	●
5,105		7	86	52	-	-	-	●	●	-	-	-	-	-	-	-
5,159	13/64		86	52	-	-	-	●	●	-	-	-	●	●	●	-
5,182		6	86	52	-	-	-	●	●	-	-	-	-	-	-	-
5,200			86	52	●	●	●	●	●	●	●	-	●	●	●	●
5,220		5	86	52	-	-	-	●	●	-	-	-	-	-	-	-
5,300			86	52	●	●	●	●	●	●	●	■	●	●	●	●
5,309		4	93	57	-	-	-	●	●	-	-	-	-	-	-	-
5,400			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,410		3	93	57	-	-	-	●	●	-	-	-	-	-	-	-
5,500			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,558	7/32		93	57	-	-	-	●	●	-	-	-	-	-	-	-
5,600			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,613		2	93	57	-	-	-	●	●	-	-	-	-	-	-	-
5,700			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,791		1	93	57	-	-	-	●	●	-	-	-	-	-	-	-
5,800			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,900			93	57	●	●	●	●	●	●	●	■	●	●	●	●
5,954	15/64		93	57	-	-	-	●	●	-	-	-	-	-	-	-
6,000			93	57	●	●	●	●	●	●	●	■	●	●	●	●
6,100			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,200			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,300			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,350	1/4		101	63	-	-	-	●	●	-	-	-	-	-	-	-
6,400			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,500			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,600			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,700			101	63	●	●	●	●	●	●	●	■	●	●	●	●
6,746	17/64		109	69	-	-	-	●	●	-	-	-	-	-	-	-
6,800			109	69	●	●	●	●	●	●	●	■	●	●	●	●
6,900			109	69	●	●	●	●	●	●	●	-	●	●	●	●
7,000			109	69	●	●	●	●	●	●	●	-	●	●	●	●
7,100			109	69	●	●	●	●	●	●	●	■	●	●	●	●
7,144	9/32		109	69	-	-	-	●	●	-	-	-	-	-	-	-
7,200			109	69	●	●	●	●	●	●	●	■	●	●	●	●
7,300			109	69	●	●	●	●	●	●	●	■	●	●	●	●
7,400			109	69	●	●	●	●	●	●	●	■	●	●	●	●
7,500			109	69	●	●	●	●	●	●	●	■	●	●	●	●
7,541	19/64		117	75	-	-	-	●	●	-	-	-	-	-	-	-
7,600			117	75	●	●	●	●	●	●	●	■	●	●	●	●

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

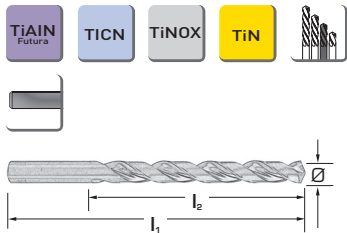
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
7,700			117	75	●	●	●	●	●	●	●	■	●	●	●	●
7,800			117	75	●	●	●	●	●	●	●	■	●	●	●	●
7,900			117	75	●	●	●	●	●	●	●	■	●	●	●	●
7,938	5/16		117	75	-	-	-	●	●	-	-	-	-	-	-	-
8,000			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,100			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,200			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,300			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,334	21/64		117	75	-	-	-	●	●	-	-	-	-	-	-	-
8,400			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,500			117	75	●	●	●	●	●	●	●	■	●	●	●	●
8,600			125	81	●	●	●	●	●	●	●	■	●	●	●	●
8,700			125	81	●	●	●	●	●	●	●	■	●	●	●	●
8,733	11/32		125	81	-	-	-	●	●	-	-	-	●	●	●	-
8,800			125	81	●	●	●	●	●	●	●	■	●	●	●	●
8,900			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,000			125	81	●	●	●	●	●	●	●	-	●	●	●	●
9,100			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,129	23/64		125	81	-	-	-	●	●	-	-	-	-	-	-	-
9,200			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,300			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,400			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,500			125	81	●	●	●	●	●	●	●	■	●	●	●	●
9,525	3/8		133	87	-	-	-	●	●	-	-	-	-	-	-	-
9,600			133	87	●	●	●	●	●	●	●	■	●	●	●	●
9,700			133	87	●	●	●	●	●	●	●	■	●	●	●	●
9,800			133	87	●	●	●	●	●	●	●	■	●	●	●	●
9,900			133	87	●	●	●	●	●	●	●	■	●	●	●	●
9,921	25/64		133	87	-	-	-	●	●	-	-	-	-	-	-	-
10,000			133	87	●	●	●	●	●	●	●	■	●	●	●	●
10,100			133	87	●	●	-	-	-	-	-	-	-	-	-	-
10,200			133	87	●	●	●	●	●	●	●	■	●	●	●	●
10,300			133	87	●	●	-	-	-	-	-	-	-	-	-	-
10,320	13/32		133	87	-	-	-	●	●	-	-	-	-	-	-	-
10,400			133	87	●	●	-	-	-	-	-	-	-	-	-	-
10,500			133	87	●	●	●	●	●	●	●	-	●	●	●	●
10,600			133	87	●	-	-	-	-	-	-	-	-	-	-	-
10,700			142	94	●	-	-	-	-	-	-	-	-	-	-	-
10,716	27/64		142	94	-	-	-	●	●	-	-	-	-	-	-	-
10,800			142	94	●	●	-	-	-	-	-	-	●	●	●	●

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

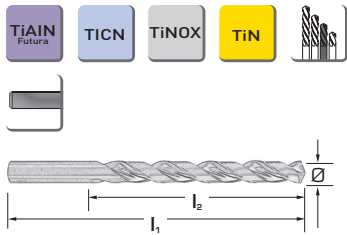
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus HSS-Co und HSS-Co8

Twist drills with straight shank  
made of HSS-Co and HSS-Co8



Typ / Type					N	N	N	VA	VA	Record VA	Record VA	Record GG	HD	HD	HD	NS
Schneidrichtung Cutting direction																
Schneidstoff/Material					HSS-Co	HSS-Co	HSS-Co8	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co	HSS-Co
Ø mm	Ø"	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6153*	6153 TN	6154	6234	6234 TX	6140	6140 TX	6110 TF	6111	6111 TN	6111 TC	6247
10,900			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,000			142	94	●	●	●	●	●	●	●	■	●	●	●	●
11,100			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,113	7/16		142	94	-	-	-	●	●	-	-	-	-	-	-	-
11,200			142	94	●	●	-	●	●	●	●	■	●	●	●	-
11,300			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,400			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,500			142	94	●	●	●	●	●	●	●	-	●	●	●	●
11,509	29/64		142	94	-	-	-	●	●	-	-	-	-	-	-	-
11,600			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,700			142	94	●	-	-	-	-	-	-	-	-	-	-	-
11,800			142	94	●	-	-	-	-	-	-	-	●	●	●	●
11,900			151	101	●	-	-	-	-	-	-	-	-	-	-	-
11,906	15/32		151	101	-	-	-	●	●	-	-	-	-	-	-	-
12,000			151	101	●	●	●	●	●	●	●	-	●	●	●	●
12,100			151	101	●	●	-	-	-	-	-	-	-	-	-	-
12,200			151	101	●	-	-	-	-	-	-	-	-	-	-	●
12,300			151	101	●	-	-	-	-	-	-	-	-	-	-	-
12,304	31/64		151	101	-	-	-	●	●	-	-	-	-	-	-	-
12,400			151	101	●	-	-	-	-	-	-	-	-	-	-	-
12,500			151	101	●	●	●	●	●	●	●	-	●	●	●	●
12,600			151	101	●	-	-	-	-	-	-	-	-	-	-	-
12,700			151	101	-	-	-	-	-	-	-	-	-	-	-	-
12,700	1/2		151	101	●	●	●	●	●	-	-	-	-	-	-	-
12,800			151	101	●	-	-	-	-	-	-	-	-	-	-	●
12,900			151	101	●	-	-	-	-	-	-	-	-	-	-	-
13,000			151	101	●	●	●	●	●	●	●	-	●	●	●	●
13,100			151	101	-	-	-	-	-	-	-	-	●	●	●	-
13,300			160	108	-	-	-	-	-	-	-	-	●	●	●	-
13,500			160	108	●	●	●	●	●	●	●	■	●	●	●	●
13,800			160	108	●	-	-	-	-	-	-	■	-	-	-	-
14,000			160	108	●	●	●	●	●	●	●	-	●	●	●	●
14,500			169	114	●	●	-	●	●	●	●	■	●	●	●	●
14,800			169	114	-	-	-	-	-	-	-	-	-	-	-	-
15,000			169	114	●	●	●	●	●	●	●	■	●	●	●	●
15,100			178	120	-	-	-	-	-	-	-	-	●	●	●	-
15,300			178	120	-	-	-	-	-	-	-	-	●	●	●	-
15,500			178	120	●	●	●	-	-	●	●	■	●	●	●	-
15,800			178	120	-	-	-	-	-	-	-	-	-	-	-	-
16,000			178	120	●	●	●	-	-	●	●	■	●	●	●	-

\* Katalog Nr. 6153 ist blank bis Ø 2,36 / vaporisiert ab Ø 2,37 / Item 6153 is blank till Ø 2,36 / from Ø 2,37 is vaporised

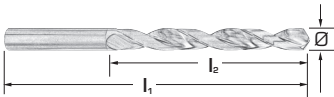
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel/discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Zylinderschaft aus VHM

Twist drills with straight shank made of solid carbide



Typ / Type			N	HM
Schneidrichtung Cutting direction				
Schneidstoff Material			K10/20	K10/20
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	6214	6120*
0,6	24	7	●	-
0,7	28	9	●	-
0,8	30	10	●	-
0,9	32	11	●	-
1,0	34	12	●	-
1,1	36	14	●	-
1,2	38	16	●	-
1,3	38	16	●	-
1,4	40	18	●	-
1,5	40	18	●	-
1,6	43	20	●	-
1,7	43	20	●	-
1,8	46	22	●	-
1,9	46	22	●	-
2,0	49	24	●	-
2,1	49	24	●	-
2,2	53	27	●	-
2,3	53	27	●	-
2,4	57	30	●	-
2,5	57	30	●	-
2,6	57	30	●	-
2,7	61	33	●	-
2,8	61	33	●	-
2,9	61	33	●	-
3,0	61	33	●	●
3,1	65	36	●	●
3,2	65	36	●	●
3,3	65	36	●	●
3,4	70	39	●	●
3,5	70	39	●	●
3,6	70	39	●	●
3,7	70	39	●	●
3,8	75	43	●	●
3,9	75	43	●	●
4,0	75	43	●	●
4,1	75	43	●	●
4,2	75	43	●	●
4,3	80	47	●	●
4,4	80	47	●	●
4,5	80	47	●	●

Typ / Type			N	HM
Schneidrichtung Cutting direction				
Schneidstoff Material			K10/20	K10/20
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	6214	6120*
4,6	80	47	●	●
4,7	80	47	●	●
4,8	86	52	●	●
4,9	86	52	●	●
5,0	86	52	●	●
5,1	86	52	●	●
5,2	86	52	●	●
5,3	86	52	●	●
5,4	93	57	●	●
5,5	93	57	●	●
5,6	93	57	●	●
5,7	93	57	●	●
5,8	93	57	●	●
5,9	93	57	●	●
6,0	93	57	●	●
6,1	101	63	●	●
6,2	101	63	●	●
6,3	101	63	●	●
6,4	101	63	●	●
6,5	101	63	●	●
6,6	101	63	●	●
6,7	101	63	●	●
6,8	109	69	●	●
6,9	109	69	●	●
7,0	109	69	●	●
7,1	109	69	●	●
7,2	109	69	●	●
7,3	109	69	●	●
7,4	109	69	●	●
7,5	109	69	●	●
7,6	117	75	●	●
7,7	117	75	●	●
7,8	117	75	●	●
7,9	117	75	●	●
8,0	117	75	●	●
8,1	117	75	●	●
8,2	117	75	●	●
8,3	117	75	●	●
8,4	117	75	●	●
8,5	117	75	●	●

\* Kat.-Nr. 6120 Hartmetall bestückt / Ref. 6120 carbide tipped

● Standardartikel / Items available ex stock









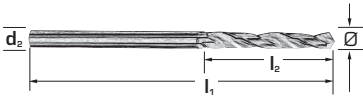




## KLEINSTBOHRER HSS-Co / MICRO DRILLS HSS-Co

Herstellungstoleranzen / Drill diameter tolerances

- bis / Until – 1,00 mm: +0  
- 0,004 mm
- über / Over > 1,00 mm: +0  
- 0,005 mm



Typ / Type				N	N
Schneidrichtung Cutting direction					
Schneidstoff Material				HSS-Co	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	6511	6513
0,05	25	0,40	1	●	-
0,06	25	0,40	1	●	-
0,07	25	0,40	1	●	-
0,08	25	0,50	1	●	■
0,09	25	0,50	1	●	-
0,10	25	0,70	1	●	-
0,11	25	0,70	1	●	■
0,12	25	0,70	1	●	-
0,13	25	1,00	1	●	●
0,14	25	1,00	1	●	●
0,15	25	1,00	1	●	●
0,16	25	1,40	1	●	●
0,17	25	1,40	1	●	●
0,18	25	1,40	1	●	●
0,19	25	1,40	1	●	●
0,20	25	1,80	1	●	●
0,21	25	1,80	1	●	●
0,22	25	1,80	1	●	●
0,23	25	1,80	1	●	●
0,24	25	1,80	1	●	●
0,25	25	2,20	1	●	●
0,26	25	2,20	1	●	●
0,27	25	2,20	1	●	●
0,28	25	2,20	1	●	●
0,29	25	2,20	1	●	●
0,30	25	2,20	1	●	●
0,31	25	2,80	1	●	●
0,32	25	2,80	1	●	●
0,33	25	2,80	1	●	●
0,34	25	2,80	1	●	●
0,35	25	2,80	1	●	●
0,36	25	2,80	1	●	●
0,37	25	2,80	1	●	●
0,38	25	2,80	1	●	●
0,39	25	3,60	1	●	●
0,40	25	3,60	1	●	●
0,41	25	3,60	1	●	●
0,42	25	3,60	1	●	●
0,43	25	3,60	1	●	●
0,44	25	3,60	1	●	●

Typ / Type				N	N
Schneidrichtung Cutting direction					
Schneidstoff Material				HSS-Co	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2</sub> mm	6511	6513
0,45	25	3,60	1	●	●
0,46	25	3,60	1	●	●
0,47	25	3,60	1	●	●
0,48	25	3,60	1	●	●
0,49	25	4,00	1	●	●
0,50	25	4,00	1	●	●
0,51	25	4,00	1	●	●
0,52	25	4,00	1	●	●
0,53	25	4,00	1	●	●
0,54	25	4,50	1	●	●
0,55	25	4,50	1	●	●
0,56	25	4,50	1	●	●
0,57	25	4,50	1	●	●
0,58	25	4,50	1	●	●
0,59	25	4,50	1	●	●
0,60	25	4,50	1	●	●
0,61	25	5,00	1	●	●
0,62	25	5,00	1	●	●
0,63	25	5,00	1	●	●
0,64	25	5,00	1	●	●
0,65	25	5,00	1	●	●
0,66	25	5,00	1	●	●
0,67	25	5,00	1	●	●
0,68	25	5,60	1	●	●
0,69	25	5,60	1	●	●
0,70	25	5,60	1	●	●
0,71	25	5,60	1	●	●
0,72	25	5,60	1	●	●
0,73	25	5,60	1	●	●
0,74	25	5,60	1	●	●
0,75	25	5,60	1	●	●
0,76	25	6,30	1	●	●
0,77	25	6,30	1	●	●
0,78	25	6,30	1	●	●
0,79	25	6,30	1	●	●
0,80	25	6,30	1,5	●	●
0,81	25	6,30	1,5	●	●
0,82	25	6,30	1,5	●	●
0,83	25	6,30	1,5	●	●
0,84	25	6,30	1,5	●	●

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items

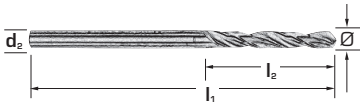




## KLEINSTBOHRER VHM / MICRO DRILLS SC

Herstellungstoleranzen / Drill diameter tolerances

- bis / Until – 1,00 mm: +0  
– 0,004 mm
- über / Over > 1,00 mm: +0  
– 0,005 mm



Typ / Type					N
Schneidrichtung Cutting direction					
Schneidstoff Material					K10
Ø mm h5	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2MM</sub> h6	6516	
0,10	30	0,7	1	●	
0,11	30	0,7	1	●	
0,12	30	0,7	1	●	
0,13	30	0,7	1	●	
0,14	30	0,7	1	●	
0,15	30	1,0	1	●	
0,16	30	1,0	1	●	
0,17	30	1,0	1	●	
0,18	30	1,0	1	●	
0,19	30	1,0	1	●	
0,20	30	1,0	1	●	
0,21	30	1,0	1	●	
0,22	30	1,0	1	●	
0,23	30	1,0	1	●	
0,24	30	1,0	1	●	
0,25	30	1,0	1	●	
0,26	30	1,0	1	●	
0,27	30	1,0	1	●	
0,28	30	1,0	1	●	
0,29	30	1,0	1	●	
0,30	30	1,5	1	●	
0,31	30	1,5	1	●	
0,32	30	1,5	1	●	
0,33	30	1,5	1	●	
0,34	30	1,5	1	●	
0,35	30	1,5	1	●	
0,36	30	1,5	1	●	
0,37	30	1,5	1	●	
0,38	30	1,5	1	●	
0,39	30	1,5	1	●	
0,40	30	2,0	1	●	
0,41	30	2,0	1	●	
0,42	30	2,0	1	●	
0,43	30	2,0	1	●	
0,44	30	2,0	1	●	
0,45	30	3,5	1	●	
0,46	30	3,5	1	●	
0,47	30	3,5	1	●	
0,48	30	3,5	1	●	
0,49	30	4,0	1	●	

Typ / Type					N
Schneidrichtung Cutting direction					
Schneidstoff Material					K10
Ø mm h5	l <sub>1</sub> mm	l <sub>2</sub> mm	d <sub>2MM</sub> h6	6516	
0,50	30	4,0	1	●	
0,51	30	4,0	1	●	
0,52	30	4,0	1	●	
0,53	30	4,0	1	●	
0,54	30	4,5	1	●	
0,55	30	4,5	1	●	
0,56	30	4,5	1	●	
0,57	30	4,5	1	●	
0,58	30	4,5	1	●	
0,59	30	4,5	1	●	
0,60	30	4,5	1	●	
0,61	30	5,0	1	●	
0,62	30	5,0	1	●	
0,63	30	5,0	1	●	
0,64	30	5,0	1	●	
0,65	30	5,0	1	●	
0,66	30	5,0	1	●	
0,67	30	5,0	1	●	
0,68	30	5,5	1	●	
0,69	30	5,6	1	●	
0,70	30	5,6	1	●	
0,71	30	5,6	1	●	
0,72	30	5,6	1	●	
0,73	30	5,6	1	●	
0,74	30	5,6	1	●	
0,75	30	5,6	1	●	
0,76	30	6,5	1	●	
0,77	30	6,5	1	●	
0,78	30	6,5	1	●	
0,79	30	6,5	1	●	
0,80	30	6,5	1,5	●	
0,81	30	6,5	1,5	●	
0,82	30	6,5	1,5	●	
0,83	30	6,5	1,5	●	
0,84	30	6,5	1,5	●	
0,85	30	6,5	1,5	●	
0,86	30	7,0	1,5	●	
0,87	30	7,0	1,5	●	
0,88	30	7,0	1,5	●	
0,89	30	7,0	1,5	●	

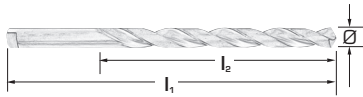
● Standardartikel / Items available ex stock





## Lange Spiralbohrer mit Zylinderschaft aus HSS zum Bohren mit Vorrichtungen

Twist drills with straight shank made of HSS for drilling with jigs, bushings and tenon drive



Typ / Type			N
Schneidrichtung Cutting direction			
Schneidstoff Material			HSS
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	6202
1,00	48	26	●
1,10	50	28	●
1,20	52	30	●
1,25	52	30	■
1,30	52	30	●
1,35	55	33	■
1,40	55	33	●
1,50	55	33	●
1,60	58	35	●
1,70	58	35	●
1,80	62	38	●
1,90	62	38	●
2,00	66	41	●
2,10	66	41	●
2,20	70	44	●
2,30	70	44	●
2,35	70	44	■
2,40	74	47	●
2,50	74	47	●
2,60	74	47	●
2,70	79	51	●
2,75	79	51	■
2,80	79	51	■
2,90	79	51	●
3,00	79	51	●
3,10	84	55	●
3,20	84	55	●
3,30	84	55	●
3,40	91	60	●
3,50	91	60	●
3,60	91	60	●
3,70	91	60	●
3,80	96	64	●
3,90	96	64	●
4,00	96	64	●
4,10	96	64	●
4,20	96	64	●
4,30	102	69	●
4,40	102	69	●
4,50	102	69	●

Typ / Type			N
Schneidrichtung Cutting direction			
Schneidstoff Material			HSS
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	6202
4,60	102	69	●
4,70	102	69	●
4,80	108	74	●
4,90	108	74	●
5,00	108	74	●
5,10	108	74	●
5,20	108	74	●
5,30	108	74	●
5,40	116	80	●
5,50	116	80	●
5,60	116	80	●
5,70	116	80	●
5,80	116	80	●
5,90	116	80	●
6,00	116	80	●
6,10	124	86	●
6,20	124	86	●
6,30	124	86	●
6,40	124	86	●
6,50	124	86	●
6,60	124	86	●
6,70	124	86	●
6,80	133	93	●
6,90	133	93	●
7,00	133	93	●
7,10	133	93	●
7,20	133	93	●
7,30	133	93	●
7,40	133	93	●
7,50	133	93	●
7,60	142	100	●
7,70	142	100	●
7,80	142	100	●
7,90	142	100	●
8,00	142	100	●
8,10	142	100	●
8,20	142	100	●
8,30	142	100	●
8,40	142	100	●
8,50	142	100	●

Katalog Nr. 6202 blank bis Ø 3,0 mm / Mitnehmer nach DIN 1809 ab Ø 3,0 mm / Item 6202 is blank till Ø 3, with tenon DIN 1809 from Ø 3

● Standardartikel / Items available ex stock - ■ Auslaufender Artikel/discontinued items

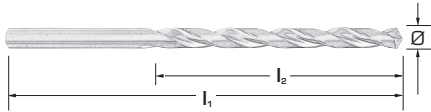




## LANG / LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD
Schneidrichtung Cutting direction														
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113
0,500		32	12	●	-	-	-	-	-	-	-	●	-	-
0,600		35	15	●	-	-	-	-	-	-	-	●	-	-
0,700		42	21	■	●	-	-	-	-	-	-	●	-	-
0,800		46	25	●	-	-	-	-	-	-	-	●	-	-
0,900		51	29	●	-	-	-	-	-	-	-	●	-	-
1,000		56	33	●	●	-	●	●	●	●	-	●	●	●
1,050		56	33	●	-	-	-	-	-	-	-	-	-	-
1,100		60	37	●	-	-	●	●	●	●	-	●	●	●
1,150		60	37	●	-	-	-	-	-	-	-	●	-	-
1,200		65	41	●	-	-	-	●	●	●	-	●	●	●
1,250		65	41	●	-	-	-	●	-	-	-	●	-	-
1,300		65	41	●	-	-	-	●	●	●	-	●	●	●
1,350		70	45	●	-	-	-	-	-	-	-	●	-	-
1,400		70	45	●	-	-	●	●	●	●	-	●	●	●
1,450		70	45	●	-	-	-	-	-	-	-	●	-	-
1,500		70	45	●	●	-	●	●	●	●	-	●	●	●
1,550		76	50	●	-	-	-	-	-	-	-	●	-	-
1,600		76	50	●	-	-	●	●	●	●	-	●	●	●
1,650		76	50	●	-	-	-	-	-	-	-	●	-	-
1,700		76	50	●	-	-	●	●	●	●	-	●	●	●
1,750		80	53	●	-	-	-	●	-	-	-	-	-	-
1,800		80	53	●	-	-	●	●	●	●	-	●	●	●
1,850		80	53	●	-	-	-	-	-	-	-	-	-	-
1,900		80	53	●	-	-	●	●	●	●	-	●	●	●
1,950		85	56	●	-	-	-	-	-	-	-	●	-	-
1,984	5/64	85	56	-	-	-	-	-	●	-	-	-	-	-
2,000		85	56	●	●	-	●	●	●	●	■	●	●	●
2,050		85	56	●	-	-	-	-	-	-	-	●	-	-
2,100		85	56	●	-	-	●	●	●	●	-	●	●	●
2,150		90	59	●	-	-	-	-	-	-	-	-	-	-
2,200		90	59	●	-	-	●	●	●	●	-	●	●	●
2,250		90	59	●	-	-	-	●	-	-	-	-	-	-
2,300		90	59	●	-	-	●	●	●	●	-	●	●	●
2,350		90	59	●	-	-	-	-	-	-	-	-	-	-
2,383	3/32	95	62	-	-	-	-	-	●	-	-	-	-	-
2,400		95	62	●	-	-	●	●	●	●	-	●	●	●
2,450		95	62	●	-	-	-	-	-	-	-	-	-	-
2,500		95	62	●	●	-	●	●	●	●	-	●	●	●
2,550		95	62	●	-	-	-	-	-	-	-	■	-	-
2,600		95	62	●	-	-	●	●	●	●	-	●	●	●

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



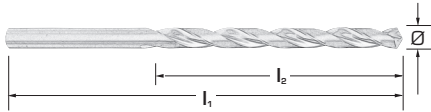
# DIN 340



## LANG / LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD
Schneidrichtung Cutting direction														
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113
2,650		95	62	●	-	-	-	-	-	-	-	-	-	-
2,700		100	66	●	-	-	●	●	●	●	-	■	●	●
2,750		100	66	●	-	-	-	●	-	-	-	-	-	-
2,779	7/64	100	66	-	-	-	-	-	●	-	-	-	-	-
2,800		100	66	●	-	-	●	●	●	●	-	●	●	●
2,850		100	66	●	-	-	-	-	-	-	-	-	-	-
2,900		100	66	●	-	-	●	●	●	●	-	●	●	●
2,950		100	66	●	-	-	-	-	-	-	-	-	-	-
3,000		100	66	●	●	●	●	●	●	●	■	●	●	●
3,050		106	69	●	-	-	-	-	-	-	-	-	-	-
3,100		106	69	●	-	-	●	●	●	●	-	●	●	●
3,150		106	69	●	-	-	-	-	-	-	-	●	-	-
3,175	1/8	106	69	■	-	-	-	-	●	-	-	-	-	-
3,200		106	69	●	●	●	●	●	●	●	-	●	●	●
3,250		106	69	●	-	-	-	●	-	-	-	-	-	-
3,300		106	69	●	●	-	●	●	●	●	-	●	●	●
3,350		106	69	●	-	-	-	-	-	-	-	-	-	-
3,400		112	73	●	-	-	●	●	●	●	-	●	●	●
3,450		112	73	●	-	-	-	-	-	-	-	-	-	-
3,500		112	73	●	●	●	●	●	●	●	■	●	●	●
3,550		112	73	●	-	-	-	-	-	-	-	-	-	-
3,571	9/64	112	73	-	-	-	-	-	●	-	-	-	-	-
3,600		112	73	●	-	-	-	●	●	●	-	■	●	●
3,650		112	73	●	-	-	-	-	-	-	-	-	-	-
3,700		112	73	●	-	-	-	●	●	●	-	●	●	●
3,750		112	73	●	-	-	-	●	-	-	-	-	-	-
3,800		119	78	●	-	●	-	●	●	●	-	●	●	●
3,850		119	78	●	-	-	-	-	-	-	-	-	-	-
3,900		119	78	●	-	-	-	●	●	●	-	●	●	●
3,950		119	78	●	-	-	-	-	-	-	-	-	-	-
3,970	5/32	119	78	-	-	-	-	-	●	-	-	-	-	-
4,000		119	78	●	●	●	●	●	●	●	-	●	●	●
4,050		119	78	●	-	-	-	-	-	-	-	-	-	-
4,100		119	78	●	-	-	-	●	●	●	-	●	●	●
4,150		119	78	●	-	-	-	-	-	-	-	-	-	-
4,200		119	78	●	●	●	-	●	●	●	-	●	●	●
4,250		119	78	●	-	-	-	●	-	-	-	-	-	-
4,300		126	82	●	-	-	-	●	●	●	-	●	●	●
4,350		126	82	●	-	-	-	-	-	-	-	-	-	-
4,366	11/64	126	82	-	-	-	-	-	●	-	-	-	-	-

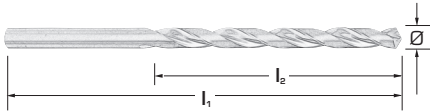
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## LANG / LONG SERIES

**Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co**

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD
Schneidrichtung Cutting direction														
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113
4,400		126	82	●	-	-	-	●	●	●	-	●	●	●
4,450		126	82	●	-	-	-	-	-	-	-	-	-	-
4,500		126	82	●	●	●	●	●	●	●	-	●	●	●
4,550		126	82	●	-	-	-	-	-	-	-	-	-	-
4,600		126	82	●	-	-	-	●	●	●	-	●	●	●
4,650		126	82	●	-	-	-	-	-	-	-	-	-	-
4,700		126	82	●	-	-	-	●	●	●	-	●	●	●
4,750		126	82	●	-	-	-	●	-	-	-	-	-	-
4,763	3/16	132	87	■	-	-	-	-	●	-	-	-	-	-
4,800		132	87	●	-	●	-	●	●	●	-	●	●	●
4,850		132	87	●	-	-	-	-	-	-	-	-	-	-
4,900		132	87	●	-	-	-	●	●	●	-	●	●	●
4,950		132	87	●	-	-	-	-	-	-	-	-	-	-
5,000		132	87	●	●	●	●	●	●	●	-	●	●	●
5,100		132	87	●	-	-	-	●	●	●	-	●	●	●
5,159	13/64	132	87	-	-	-	-	-	●	-	-	-	-	-
5,200		132	87	●	-	●	-	●	●	●	-	●	●	●
5,250		132	87	●	-	-	-	-	-	-	-	-	-	-
5,300		132	87	●	-	-	-	●	●	●	-	●	●	●
5,400		139	91	●	-	-	-	●	●	●	-	●	●	●
5,500		139	91	●	●	●	●	●	●	●	-	●	●	●
5,558	7/62	139	91	-	-	-	-	-	●	-	-	-	-	-
5,600		139	91	●	-	-	-	●	●	●	-	●	●	●
5,700		139	91	●	-	-	-	●	●	●	-	●	●	●
5,750		139	91	●	-	-	-	-	-	-	-	-	-	-
5,800		139	91	●	-	●	-	●	●	●	-	●	●	●
5,900		139	91	●	-	-	-	●	●	●	-	●	●	●
5,954	15/64	139	91	-	-	-	-	-	●	-	-	-	-	-
6,000		139	91	●	●	●	●	●	●	●	-	●	●	●
6,100		148	97	●	-	-	-	●	●	●	-	●	●	●
6,200		148	97	●	-	●	-	●	●	●	-	●	●	●
6,250		148	97	●	-	-	-	-	-	-	-	-	-	-
6,300		148	97	●	-	-	-	●	●	●	-	●	●	●
6,350	1/4	148	97	-	-	-	-	-	●	-	-	-	-	-
6,400		148	97	●	-	-	-	●	●	●	-	●	●	●
6,500		148	97	●	●	●	●	●	●	●	-	●	●	●
6,600		148	97	●	-	-	-	●	●	●	-	●	●	●
6,700		148	97	●	-	-	-	●	●	●	-	●	●	●
6,746	17/64	156	102	-	-	-	-	-	●	-	-	-	-	-
6,750		156	102	●	-	-	-	-	-	-	-	-	-	-

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items

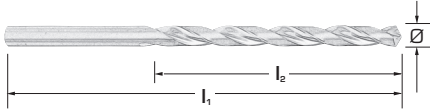
# DIN 340



## LANG / LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD
Schneidrichtung Cutting direction														
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113
6,800		156	102	●	-	●	-	●	●	●	-	●	●	●
6,900		156	102	●	-	-	-	●	●	●	-	●	●	●
7,000		156	102	●	●	●	●	●	●	●	■	●	●	●
7,100		156	102	●	-	-	-	-	●	●	-	-	●	●
7,145	9/32	156	102	-	-	-	-	-	●	-	-	-	-	-
7,200		156	102	●	-	-	-	-	●	●	-	-	●	●
7,250		156	102	●	-	-	-	■	-	-	-	-	-	-
7,300		156	102	●	-	-	-	-	●	●	-	●	●	●
7,400		156	102	●	-	-	-	-	●	●	-	-	●	●
7,500		156	102	●	●	●	-	●	●	●	■	●	●	●
7,541	19/64	165	109	-	-	-	-	-	●	-	-	-	-	-
7,600		165	109	●	-	-	-	-	●	●	-	●	●	●
7,700		165	109	●	-	-	-	-	●	●	-	●	●	●
7,750		165	109	●	-	-	-	-	-	-	-	-	-	-
7,800		165	109	●	-	-	-	-	●	●	-	●	●	●
7,900		165	109	●	-	-	-	-	●	●	-	●	●	●
7,938	5/16	165	109	-	-	-	-	-	●	-	-	-	-	-
8,000		165	109	●	●	●	●	●	●	●	-	●	●	●
8,100		165	109	●	-	-	-	-	●	-	-	●	●	●
8,200		165	109	●	-	-	-	-	●	-	-	●	●	●
8,250		165	109	●	-	-	-	-	-	-	-	-	-	-
8,300		165	109	●	-	-	-	-	●	-	-	-	●	●
8,334	21/64	165	109	-	-	-	-	-	●	-	-	-	-	-
8,400		165	109	●	-	-	-	-	●	-	-	-	●	●
8,500		165	109	●	●	●	-	●	●	●	■	●	●	●
8,600		175	115	●	-	-	-	-	●	-	-	●	●	●
8,700		175	115	●	-	-	-	-	●	-	-	●	●	●
8,733	11/32	175	115	-	-	-	-	-	●	-	-	-	-	-
8,750		175	115	●	-	-	-	-	-	-	-	-	-	-
8,800		175	115	●	-	-	-	-	●	-	-	●	●	●
8,900		175	115	●	-	-	-	-	●	-	-	-	●	●
9,000		175	115	●	●	●	●	●	●	●	-	●	●	●
9,100		175	115	●	-	-	-	-	●	-	-	●	●	●
9,129	23/64	175	115	-	-	-	-	-	●	-	-	-	-	-
9,200		175	115	●	-	-	-	-	●	-	-	●	●	●
9,250		175	115	●	-	-	-	-	-	-	-	-	-	-
9,300		175	115	●	-	-	-	-	●	-	-	●	●	●
9,400		175	115	●	-	-	-	-	●	-	-	-	●	●
9,500		175	115	●	-	●	-	●	●	●	■	●	●	●
9,525	3/8	184	121	-	-	-	-	-	●	-	-	-	-	-

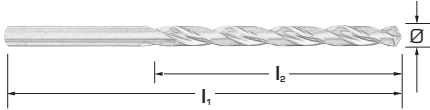
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## LANG / LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD
Schneidrichtung Cutting direction														
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113
9,600		184	121	●	-	-	-	-	●	-	-	●	●	●
9,700		184	121	●	-	-	-	-	●	-	-	●	●	●
9,750		184	121	●	-	-	-	-	-	-	-	-	-	-
9,800		184	121	●	-	-	-	-	●	-	-	●	●	●
9,900		184	121	●	-	-	-	-	●	-	-	●	●	●
9,921	25/64	184	121	-	-	-	-	-	●	-	-	-	-	-
10,000		184	121	●	●	●	●	●	●	●	-	●	●	●
10,100		184	121	●	-	-	-	-	-	-	-	●	-	-
10,200		184	121	●	-	-	-	-	●	●	-	●	●	●
10,300		184	121	●	-	-	-	-	-	-	-	●	-	-
10,320	13/32	184	121	-	-	-	-	-	●	-	-	-	-	-
10,400		184	121	●	-	-	-	-	-	-	-	-	-	-
10,500		184	121	●	-	-	-	●	●	●	-	●	●	●
10,600		184	121	●	-	-	-	-	-	-	-	-	-	-
10,700		195	128	●	-	-	-	-	-	-	-	-	-	-
10,716	27/64	195	128	-	-	-	-	-	●	-	-	-	-	-
10,800		195	128	●	-	-	-	-	●	●	-	-	●	●
10,900		195	128	●	-	-	-	-	-	-	-	-	-	-
11,000		195	128	●	-	-	-	●	●	●	■	●	●	●
11,113	7/16	195	128	-	-	-	-	-	●	-	-	-	-	-
11,200		195	128	●	-	-	-	-	●	●	-	●	●	●
11,500		195	128	●	-	-	-	●	●	●	-	●	●	●
11,509	29/64	195	128	-	-	-	-	-	●	-	-	-	-	-
11,800		195	128	●	-	-	-	-	●	●	-	■	●	●
11,908	15/32	205	134	■	-	-	-	-	●	-	-	-	-	-
12,000		205	134	●	-	-	-	●	●	●	-	●	●	●
12,200		205	134	●	-	-	-	-	-	-	-	-	-	-
12,304	31/64	205	134	-	-	-	-	-	●	-	-	-	-	-
12,500		205	134	●	-	-	-	-	-	-	-	●	-	-
12,700	1/14	205	134	-	-	-	-	-	●	-	-	●	-	-
12,800		205	134	●	-	-	-	-	-	-	-	■	-	-
13,000		205	134	●	-	-	-	-	-	-	-	●	-	-
13,200		205	134	●	-	-	-	-	-	-	-	-	-	-
13,500		214	140	●	-	-	-	-	-	-	-	●	-	-
13,800		214	140	●	-	-	-	-	-	-	-	-	-	-
14,000		214	140	●	-	-	-	-	-	-	-	●	-	-
14,500		220	144	●	-	-	-	-	-	-	-	-	-	-
15,000		220	144	●	-	-	-	-	-	-	-	●	-	-
15,500		227	149	●	-	-	-	-	-	-	-	-	-	-
16,000		227	149	●	-	-	-	-	-	-	-	●	-	-

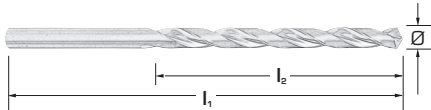
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## LANG / LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank made of HSS and HSS-Co



Typ / Type				N	N	N ML	H	W	STL	STL	STL	N	VA	HD	
Schneidrichtung Cutting direction															
Schneidstoff/Material				HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-Co	HSS-Co	HSS-Co	
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	6165	6165 TN	6108	6192	6200	6173	6173 TN	6184	6166	6112	6113	
17,000		235	154	●	-	-	-	-	-	-	-	■	-	-	
18,000		241	158	●	-	-	-	-	-	-	-	-	-	-	
19,000		247	162	●	-	-	-	-	-	-	-	-	-	-	
20,000		254	166	●	-	-	-	-	-	-	-	-	-	-	
21,000		261	171	●	-	-	-	-	-	-	-	-	-	-	
22,000		268	176	●	-	-	-	-	-	-	-	-	-	-	
23,000		275	180	●	-	-	-	-	-	-	-	-	-	-	
24,000		282	185	●	-	-	-	-	-	-	-	-	-	-	
25,000		282	185	●	-	-	-	-	-	-	-	-	-	-	

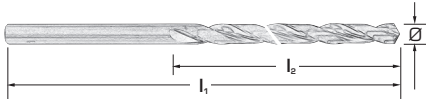
● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items



## ÜBERLANG / EXTRA LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank  
made of HSS and HSS-Co



Typ / Type					N	STL	STL
Schneidrichtung Cutting direction							
Schneidstoff Material					HSS	HSS	HSS-Co
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6217/1	6216/1	6218/1
2,000			125	85	●	●	●
2,100			125	85	●	●	●
2,200			135	90	●	●	●
2,300			135	90	●	●	●
2,383	3/32		140	95	-	●	-
2,400			140	95	●	●	●
2,489	40		140	95	-	●	-
2,500			140	95	●	●	●
2,527	39		140	95	-	●	-
2,578	38		140	95	-	●	-
2,600			140	95	●	●	●
2,642	37		140	95	-	●	-
2,700			150	100	●	●	●
2,705	36		150	100	-	●	-
2,779	7/64		150	100	-	●	-
2,794	35		150	100	-	●	-
2,800			150	100	●	●	●
2,819	34		150	100	-	●	-
2,870	33		150	100	-	●	-
2,900			150	100	●	●	●
2,946	32		150	100	-	●	-
3,000			150	100	●	●	●
3,048	31		155	105	-	●	-
3,100			155	105	●	●	●
3,175	1/8		155	105	-	●	-
3,200			155	105	●	●	●
3,264	30		155	105	-	●	-
3,300			155	105	●	●	●
3,400			165	115	●	●	●
3,454	29		165	115	-	●	-
3,500			165	115	●	●	●
3,569	28		165	115	-	●	-
3,571	9/64		165	115	-	●	-
3,600			165	115	●	●	●
3,658	27		165	115	-	●	-
3,700			165	115	●	●	●
3,734	26		165	115	-	●	-
3,797	25		175	120	-	●	-
3,800			175	120	●	●	●
3,861	24		175	120	-	●	-

Typ / Type					N	STL	STL
Schneidrichtung Cutting direction							
Schneidstoff Material					HSS	HSS	HSS-Co
Ø mm h8	Ø "	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6217/1	6216/1	6218/1
3,900			175	120	●	●	●
3,912		23	175	120	-	●	-
3,970	5/32		175	120	-	●	-
3,988	22		175	120	-	●	-
4,000			175	120	●	●	●
4,039	21		175	120	-	●	-
4,089	20		175	120	-	●	-
4,100			175	120	●	●	●
4,200			175	120	●	●	●
4,216	19		175	120	-	●	-
4,300			185	125	●	●	●
4,305	18		185	125	-	●	-
4,366	11/64		185	125	-	●	-
4,394	17		185	125	-	●	-
4,400			185	125	●	●	●
4,496	16		185	125	-	●	-
4,500			185	125	●	●	●
4,572	15		185	125	-	●	-
4,600			185	125	●	●	●
4,623	14		185	125	-	●	-
4,699	13		185	125	-	●	-
4,700			185	125	●	●	●
4,763	3/16		195	135	-	●	-
4,800			195	135	●	●	●
4,801	12		195	135	-	●	-
4,851	11		195	135	-	●	-
4,900			195	135	●	●	●
4,915	10		195	135	-	●	-
4,978	9		195	135	-	●	-
5,000			195	135	●	●	●
5,055	8		195	135	-	●	-
5,100			195	135	●	●	●
5,105	7		195	135	-	●	-
5,159	13/64		195	135	-	●	-
5,182	6		195	135	-	●	-
5,200			195	135	●	●	●
5,220	5		195	135	-	●	-
5,300			195	135	●	●	●
5,309	4		205	140	-	●	-
5,400			205	140	●	●	●

● Standardartikel / Items available ex stock



## ÜBERLANG / EXTRA LONG SERIES

### Spiralbohrer mit Zylinderschaft aus HSS und HSS-Co

Twist drills with straight shank  
made of HSS and HSS-Co



Typ / Type					N	STL	STL
Schneidrichtung Cutting direction							
Schneidstoff Material					HSS	HSS	HSS-Co
Ø mm h8	Ø " mm	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6217/1	6216/1	6218/1
5,410		3	205	140	-	●	-
5,500			205	140	●	●	●
5,558	7/32		205	140	-	●	-
5,600			205	140	●	●	●
5,613		2	205	140	-	●	-
5,700			205	140	●	●	●
5,791		1	205	140	-	●	-
5,800			205	140	●	●	●
5,900			205	140	●	●	●
5,954	15/64		205	140	-	●	-
6,000			205	140	●	●	●
6,100			215	150	●	●	●
6,200			215	150	●	●	●
6,300			215	150	●	●	●
6,350	1/4		215	150	-	●	-
6,400			215	150	●	●	●
6,500			215	150	●	●	●
6,600			215	150	●	●	●
6,700			215	150	●	●	●
6,746	17/64		225	155	-	●	-
6,800			225	155	●	●	●
6,900			225	155	●	●	●
7,000			225	155	●	●	●
7,100			225	155	●	●	●
7,145	9/32		225	155	-	●	-
7,200			225	155	●	●	●
7,300			225	155	●	●	●
7,400			225	155	●	●	●
7,500			225	155	●	●	●
7,541	19/64		240	165	-	●	-
7,600			240	165	●	●	●
7,700			240	165	●	●	●
7,800			240	165	●	●	●
7,900			240	165	●	●	●
7,938	5/16		240	165	-	●	-
8,000			240	165	●	●	●
8,100			240	165	●	●	●
8,200			240	165	●	●	●
8,300			240	165	●	●	●
8,334	21/64		240	165	-	●	-

Typ / Type					N	STL	STL
Schneidrichtung Cutting direction							
Schneidstoff Material					HSS	HSS	HSS-Co
Ø mm h8	Ø " mm	Ø No. mm	l <sub>1</sub> mm	l <sub>2</sub> mm	6217/1	6216/1	6218/1
8,400			240	165	●	●	●
8,500			240	165	●	●	●
8,600			250	175	●	●	●
8,700			250	175	●	●	●
8,733	11/32		250	175	-	●	-
8,800			250	175	●	●	●
8,900			250	175	●	●	●
9,000			250	175	●	●	●
9,100			250	175	●	●	●
9,129	23/64		250	175	-	●	-
9,200			250	175	●	●	●
9,300			250	175	●	●	●
9,400			250	175	●	●	●
9,500			250	175	●	●	●
9,525	3/8		265	185	-	●	-
9,600			265	185	●	●	●
9,700			265	185	●	●	●
9,800			265	185	●	●	●
9,900			265	185	●	●	●
9,921	25/64		265	185	-	●	-
10,000			265	185	●	●	●
10,320	13/32		265	185	-	●	-
10,500			265	185	-	●	●
10,716	27/64		280	195	-	●	-
11,000			280	195	-	●	●
11,113	7/16		280	195	-	●	-
11,500			280	195	-	●	●
11,509	29/64		280	195	-	●	-
11,908	15/32		295	205	-	●	-
12,000			295	205	-	●	●
12,304	31/64		295	205	-	●	-
12,700	1/2		295	205	-	●	-

● Standardartikel / Items available ex stock







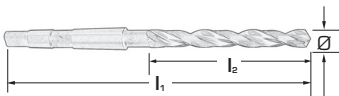




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
3,000		114	33	1	●	-	-	-
3,175	1/8	117	36	1	●	-	-	-
3,250		117	36	1	●	-	-	-
3,500		120	39	1	●	-	-	-
3,571	9/64	120	39	1	●	-	-	-
3,750		120	39	1	●	-	-	-
3,970	5/32	124	43	1	●	-	-	-
4,000		124	43	1	●	-	-	-
4,100		124	43	1	●	-	-	-
4,200		124	43	1	●	-	-	-
4,250		124	43	1	●	-	-	-
4,300		128	47	1	●	-	-	-
4,366	11/64	128	47	1	●	-	-	-
4,400		128	47	1	●	-	-	-
4,500		128	47	1	●	-	-	-
4,600		128	47	1	●	-	-	-
4,700		128	47	1	●	-	-	-
4,750		128	47	1	●	-	-	-
4,763	3/16	133	52	1	●	-	-	-
4,800		133	52	1	●	-	-	-
4,900		133	52	1	●	-	-	-
5,000		133	52	1	●	●	-	-
5,100		133	52	1	●	-	-	-
5,159	13/64	133	52	1	●	-	-	-
5,200		133	52	1	●	-	-	-
5,250		133	52	1	●	-	-	-
5,300		133	52	1	●	-	-	-
5,400		138	57	1	●	-	-	-
5,500		138	57	1	●	-	-	-
5,558	7/32	138	57	1	●	-	-	-
5,600		138	57	1	●	-	-	-
5,700		138	57	1	●	-	-	-
5,750		138	57	1	●	-	-	-
5,800		138	57	1	●	-	-	-
5,900		138	57	1	●	-	-	-
5,954	15/64	138	57	1	●	-	-	-
6,000		138	57	1	●	●	-	-
6,100		144	63	1	●	-	-	-
6,200		144	63	1	●	-	-	-
6,250		144	63	1	●	-	-	-

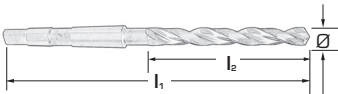
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
6,300		144	63	1	●	-	-	-
6,350	4/14	144	63	1	●	-	-	-
6,400		144	63	1	●	-	-	-
6,500		144	63	1	●	●	-	-
6,600		144	63	1	●	-	-	-
6,700		144	63	1	●	-	-	-
6,746	17/64	150	69	1	●	-	-	-
6,750		150	69	1	●	-	-	-
6,800		150	69	1	●	●	-	-
6,900		150	69	1	●	-	-	-
7,000		150	69	1	●	●	-	-
7,100		150	69	1	●	-	-	-
7,145	9/32	150	69	1	●	-	-	-
7,200		150	69	1	●	-	-	-
7,250		150	69	1	●	-	-	-
7,300		150	69	1	●	-	-	-
7,400		150	69	1	●	-	-	-
7,500		150	69	1	●	-	-	-
7,541	19/64	156	75	1	●	-	-	-
7,600		156	75	1	●	-	-	-
7,700		156	75	1	●	-	-	-
7,750		156	75	1	●	--	-	-
7,800		156	75	1	●	-	-	-
7,900		156	75	1	●	-	-	-
7,938	5/16	156	75	1	●	-	-	-
8,000		156	75	1	●	●	-	-
8,100		156	75	1	●	-	-	-
8,200		156	75	1	●	-	-	-
8,250		156	75	1	●	-	-	-
8,300		156	75	1	●	-	-	-
8,334	21/64	156	75	1	●	-	-	-
8,400		156	75	1	●	-	-	-
8,500		156	75	1	●	●	-	-
8,600		162	81	1	●	-	-	-
8,700		162	81	1	●	-	-	-
8,733	11/32	162	81	1	●	-	-	-
8,750		162	81	1	●	-	-	-
8,800		162	81	1	●	-	-	-
8,900		162	81	1	●	-	-	-
9,000		162	81	1	●	●	-	-

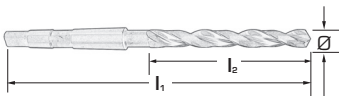
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
9,100		162	81	1	●	-	-	-
9,129	23/64	162	81	1	●	-	-	-
9,200		162	81	1	●	-	-	-
9,250		162	81	1	●	-	-	-
9,300		162	81	1	●	-	-	-
9,400		162	81	1	●	-	-	-
9,500		162	81	1	●	●	-	-
9,525	3/8	168	87	1	●	-	-	-
9,600		168	87	1	●	-	-	-
9,700		168	87	1	●	-	-	-
9,750		168	87	1	●	-	-	-
9,800		168	87	1	●	-	-	-
9,900		168	87	1	●	-	-	-
9,921	25/64	168	87	1	●	-	-	-
10,000		168	87	1	●	●	●	●
10,100		168	87	1	●	-	-	-
10,200		168	87	1	●	●	-	●
10,250		168	87	1	●	-	-	-
10,300		168	87	1	●	-	-	-
10,320	13/32	168	87	1	●	-	-	-
10,400		168	87	1	●	-	-	-
10,500		168	87	1	●	●	-	●
10,600		168	87	1	●	-	-	-
10,700		175	94	1	●	-	-	-
10,716	27/64	175	94	1	●	-	-	-
10,750		175	94	1	●	-	-	-
10,800		175	94	1	●	-	-	●
10,900		175	94	1	●	-	-	-
11,000		175	94	1	●	●	●	●
11,100		175	94	1	●	-	-	-
11,113	7/16	175	94	1	●	-	-	-
11,200		175	94	1	●	-	-	●
11,250		175	94	1	●	-	-	-
11,300		175	94	1	●	-	■	-
11,400		175	94	1	●	-	-	-
11,500		175	94	1	●	●	■	●
11,509	29/64	175	94	1	●	-	-	-
11,600		175	94	1	●	-	-	-
11,700		175	94	1	●	-	-	-
11,750		175	94	1	●	-	-	-

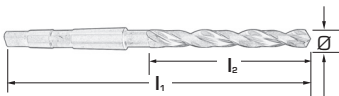
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
11,800		175	94	1	●	-	-	●
11,900		182	101	1	●	-	-	-
11,908	15/32	182	101	1	●	-	-	-
12,000		182	101	1	●	●	●	●
12,100		182	101	1	●	-	-	-
12,200		182	101	1	●	-	-	●
12,250		182	101	1	●	-	-	-
12,300		182	101	1	●	-	-	-
12,304	31/64	182	101	1	●	-	-	-
12,400		182	101	1	●	-	-	-
12,500		182	101	1	●	●	-	●
12,600		182	101	1	●	-	-	-
12,700		182	101	1	●	-	-	-
12,700	1/2	182	101	1	●	-	-	-
12,750		182	101	1	●	-	-	-
12,800		182	101	1	●	-	-	●
12,900		182	101	1	●	-	-	-
13,000		182	101	1	●	●	●	●
13,096	33/64	182	101	1	●	-	-	-
13,100		182	101	1	●	-	-	-
13,200		182	101	1	●	-	-	●
13,250		189	108	1	●	-	-	-
13,300		189	108	1	●	-	■	-
13,400		189	108	1	●	-	-	-
13,495	17/32	189	108	1	●	-	-	-
13,500		189	108	1	●	●	-	●
13,600		189	108	1	●	-	-	-
13,700		189	108	1	●	-	-	-
13,750		189	108	1	●	-	-	-
13,800		189	108	1	●	-	-	-
13,891	35/64	189	108	1	●	-	-	-
13,900		189	108	1	●	-	-	-
14,000		189	108	1	●	●	●	●
14,100		212	114	2	●	-	-	-
14,200		212	114	2	●	-	-	-
14,250		212	114	2	●	-	-	-
14,288	9/16	212	114	2	●	-	-	-
14,300		212	114	2	●	-	-	-
14,400		212	114	2	●	-	-	-
14,500		212	114	2	●	●	-	●

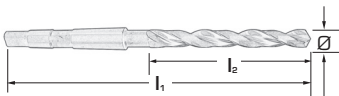
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel / discontinued items



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
14,600		212	114	2	●	-	-	-
14,684	37/64	212	114	2	●	-	-	-
14,700		212	114	2	●	-	-	-
14,750		212	114	2	●	-	-	-
14,800		212	114	2	●	-	-	-
14,900		212	114	2	●	-	-	-
15,000		212	114	2	●	●	●	●
15,083	19/32	218	120	2	●	-	-	-
15,100		218	120	2	●	-	-	-
15,200		218	120	2	●	-	-	-
15,250		218	120	2	●	-	-	●
15,300		218	120	2	●	-	-	-
15,400		218	120	2	●	-	-	-
15,479	39/64	218	120	2	●	-	-	-
15,500		218	120	2	●	●	-	●
15,600		218	120	2	●	-	-	-
15,700		218	120	2	●	-	-	-
15,750		218	120	2	●	-	-	-
15,800		218	120	2	●	-	-	-
15,875	5/8	218	120	2	●	-	-	-
15,900		218	120	2	●	-	-	-
16,000		218	120	2	●	●	●	●
16,100		223	125	2	●	-	-	-
16,200		223	125	2	●	-	-	-
16,250		223	125	2	●	-	-	-
16,271	41/64	223	125	2	●	-	-	-
16,300		223	125	2	●	-	-	-
16,400		223	125	2	●	-	-	-
16,500		223	125	2	●	●	-	●
16,600		223	125	2	●	-	-	-
16,670	21/32	223	125	2	●	-	-	-
16,700		223	125	2	●	-	-	-
16,750		223	125	2	●	-	-	-
16,800		223	125	2	●	-	-	-
16,900		223	125	2	●	-	-	-
17,000		223	125	2	●	●	●	●
17,066	43/64	228	130	2	●	-	-	-
17,100		228	130	2	●	-	-	-
17,200		228	130	2	●	-	-	-
17,250		228	130	2	●	-	-	-

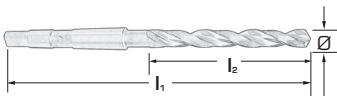
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
17,300		228	130	2	●	-	-	-
17,400		228	130	2	●	-	-	-
17,463	11/16	228	130	2	●	-	-	-
17,500		228	130	2	●	●	-	●
17,600		228	130	2	●	-	-	-
17,700		228	130	2	●	-	-	-
17,750		228	130	2	●	-	-	●
17,800		228	130	2	●	-	-	-
17,859	45/64	228	130	2	●	-	-	-
17,900		228	130	2	●	-	-	-
18,000		228	130	2	●	●	●	●
18,100		233	135	2	●	-	-	-
18,200		233	135	2	●	-	-	-
18,250		233	135	2	●	-	-	-
18,258	23/32	233	135	2	●	-	-	-
18,300		233	135	2	●	-	-	-
18,400		233	135	2	●	-	-	-
18,500		233	135	2	●	●	-	●
18,600		233	135	2	●	-	-	-
18,654	47/64	233	135	2	●	-	-	-
18,700		233	135	2	●	-	-	-
18,750		233	135	2	●	-	-	-
18,800		233	135	2	●	-	-	-
18,900		233	135	2	●	-	-	-
19,000		233	135	2	●	●	●	●
19,050	3/4	238	140	2	●	-	-	-
19,100		238	140	2	●	-	-	-
19,200		238	140	2	●	-	-	-
19,250		238	140	2	●	-	-	-
19,300		238	140	2	●	-	-	-
19,400		238	140	2	●	-	-	-
19,446	49/64	238	140	2	●	-	-	-
19,500		238	140	2	●	●	-	●
19,600		238	140	2	●	-	-	-
19,700		238	140	2	●	-	-	-
19,750		238	140	2	●	-	-	-
19,800		238	140	2	●	-	-	-
19,845	25/32	238	140	2	●	-	-	-
19,900		238	140	2	●	-	-	-
20,000		238	140	2	●	●	●	●

● Standardartikel / Items available ex stock

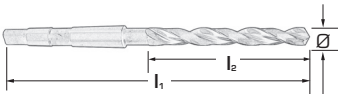




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
20,100		243	145	2	●	-	-	-
20,200		243	145	2	●	-	-	-
20,241	51/64	243	145	2	●	-	-	-
20,250		243	145	2	●	-	-	-
20,300		243	145	2	●	-	-	-
20,400		243	145	2	●	-	-	-
20,500		243	145	2	●	●	-	●
20,600		243	145	2	●	-	-	-
20,638	13/16	243	145	2	●	-	-	-
20,700		243	145	2	●	-	-	-
20,750		243	145	2	●	-	-	-
20,800		243	145	2	●	-	-	-
20,900		243	145	2	●	-	-	-
21,000		243	145	2	●	●	-	●
21,034	53/64	243	145	2	●	-	-	-
21,100		243	145	2	●	-	-	-
21,200		243	145	2	●	-	-	-
21,250		248	150	2	●	-	-	-
21,300		248	150	2	●	-	-	-
21,400		248	150	2	●	-	-	-
21,433	27/32	248	150	2	●	-	-	-
21,500		248	150	2	●	●	-	-
21,600		248	150	2	●	-	-	-
21,700		248	150	2	●	-	-	-
21,750		248	150	2	●	-	-	-
21,800		248	150	2	●	-	-	-
21,829	55/64	248	150	2	●	-	-	-
21,900		248	150	2	●	-	-	-
22,000		248	150	2	●	●	●	●
22,100		248	150	2	●	-	-	-
22,200		248	150	2	●	-	-	-
22,225	7/8	248	150	2	●	-	-	-
22,250		248	150	2	●	-	-	-
22,300		248	150	2	●	-	-	-
22,400		248	150	2	●	-	-	-
22,500		253	155	2	●	●	-	●
22,600		253	155	2	●	-	-	-
22,621	57/64	253	155	2	●	-	-	-
22,700		253	155	2	●	-	-	-
22,750		253	155	2	●	-	-	-

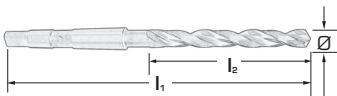
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
22,800		253	155	2	●	-	-	-
22,900		253	155	2	●	-	-	-
23,000		253	155	2	●	●	●	●
23,020	29/32	253	155	2	●	-	-	-
23,250		276	155	3	●	-	-	-
23,416	59/64	276	155	3	●	-	-	-
23,500		276	155	3	●	-	-	-
23,750		281	160	3	●	-	-	-
23,813	15/16	281	160	3	●	-	-	-
24,000		281	160	3	●	●	●	●
24,209	61/64	281	160	3	●	-	-	-
24,250		281	160	3	●	-	-	-
24,500		281	160	3	●	-	-	●
24,608	31/32	281	160	3	●	-	-	-
24,750		281	160	3	●	-	-	-
25,000		281	160	3	●	●	●	●
25,004	63/64	281	160	3	●	-	-	-
25,250		286	165	3	●	-	-	-
25,400	1	286	165	3	●	-	-	-
25,500		286	165	3	●	-	-	-
25,750		286	165	3	●	-	-	-
25,796	1 1/64	286	165	3	●	-	-	-
26,000		286	165	3	●	●	●	●
26,195	1 1/32	286	165	3	●	-	-	-
26,250		286	165	3	●	-	-	-
26,500		286	165	3	●	-	-	-
26,591	1 3/64	291	170	3	●	-	-	-
26,750		291	170	3	●	-	-	-
26,988	1 1/16	291	170	3	●	-	-	-
27,000		291	170	3	●	●	●	●
27,250		291	170	3	●	-	-	-
27,384	1 5/64	291	170	3	●	-	-	-
27,500		291	170	3	●	-	-	-
27,750		291	170	3	●	-	-	-
27,783	1 3/32	291	170	3	●	-	-	-
28,000		291	170	3	●	●	●	●
28,179	1 7/64	296	175	3	●	-	-	-
28,250		296	175	3	●	-	-	-
28,500		296	175	3	●	-	-	-
28,575	1 1/8	296	175	3	●	-	-	-

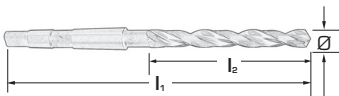
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



N	N	W	STL
HSS	HSS	HSS	HSS

Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
28,750		296	175	3	●	-	-	-
28,971	1 9/64	296	175	3	●	-	-	-
29,000		296	175	3	●	●	●	●
29,250		296	175	3	●	-	-	-
29,370	1 5/32	296	175	3	●	-	-	-
29,500		296	175	3	●	-	-	-
29,750		296	175	3	●	-	-	-
29,766	1 11/64	296	175	3	●	-	-	-
30,000		296	175	3	●	●	●	●
30,163	1 3/16	301	180	3	●	-	-	-
30,250		301	180	3	●	-	-	-
30,500		301	180	3	●	-	-	-
30,559	1 13/64	301	180	3	●	-	-	-
30,750		301	180	3	●	-	-	-
30,958	1 7/32	301	180	3	●	-	-	-
31,000		301	180	3	●	-	●	-
31,250		301	180	3	●	-	-	-
31,354	1 15/64	301	180	3	●	-	-	-
31,500		301	180	3	●	-	-	-
31,750		306	185	3	●	-	-	-
31,750	1 1/4	306	185	3	●	-	-	-
32,000		334	185	4	●	-	●	-
32,146	1 17/64	334	185	4	●	-	-	-
32,500		334	185	4	●	-	-	-
32,545	1 9/32	334	185	4	●	-	-	-
32,941	1 19/64	334	185	4	●	-	-	-
33,000		334	185	4	●	-	-	-
33,338	1 5/16	334	185	4	●	-	-	-
33,500		334	185	4	●	-	-	-
33,734	1 21/64	339	190	4	●	-	-	-
34,000		339	190	4	●	-	-	-
34,133	1 11/32	339	190	4	●	-	-	-
34,500		339	190	4	●	-	-	-
34,529	1 23/64	339	190	4	●	-	-	-
34,925	1 3/8	339	190	4	●	-	-	-
35,000		339	190	4	●	-	-	-
35,321	1 25/64	339	190	4	●	-	-	-
35,500		339	190	4	●	-	-	-
35,720	1 13/32	344	195	4	●	-	-	-
36,000		344	195	4	●	-	-	-

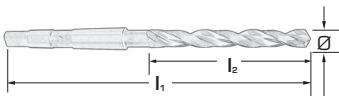
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type						N	N	W	STL
Schneidrichtung Cutting direction									
Schneidstoff/Material						HSS	HSS	HSS	HSS
Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT		6168	6168 TN	6201	6212
36,116	1 27/64	344	195	4		●	-	-	-
36,500		344	195	4		●	-	-	-
36,513	1 7/16	344	195	4		●	-	-	-
36,909	1 29/64	344	195	4		●	-	-	-
37,000		344	195	4		●	-	-	-
37,308	1 15/32	344	195	4		●	-	-	-
37,500		344	195	4		●	-	-	-
37,704	1 31/64	349	200	4		●	-	-	-
38,000		349	200	4		●	-	-	-
38,100	1 1/2	349	200	4		●	-	-	-
38,496	1 33/64	349	200	4		●	-	-	-
38,500		349	200	4		●	-	-	-
38,895	1 17/32	349	200	4		●	-	-	-
39,000		349	200	4		●	-	-	-
39,291	1 35/64	349	200	4		●	-	-	-
39,500		349	200	4		●	-	-	-
39,688	1 9/16	349	200	4		●	-	-	-
40,000		349	200	4		●	-	-	-
40,084	1 37/64	354	205	4		●	-	-	-
40,483	1 19/32	354	205	4		●	-	-	-
40,500		354	205	4		●	-	-	-
40,879	1 39/64	354	205	4		●	-	-	-
41,000		354	205	4		●	-	-	-
41,275	1 5/8	354	205	4		●	-	-	-
41,500		354	205	4		●	-	-	-
41,671	1 41/64	354	205	4		●	-	-	-
42,000		354	205	4		●	-	-	-
42,070	1 21/32	354	205	4		●	-	-	-
42,466	1 43/64	354	205	4		●	-	-	-
42,500		354	205	4		●	-	-	-
42,863	1 11/16	359	210	4		●	-	-	-
43,000		359	210	4		●	-	-	-
43,259	1 45/64	359	210	4		●	-	-	-
43,500		359	210	4		●	-	-	-
43,658	1 23/32	359	210	4		●	-	-	-
44,000		359	210	4		●	-	-	-
44,054	1 47/64	359	210	4		●	-	-	-
44,450	1 3/4	359	210	4		●	-	-	-
44,500		359	210	4		●	-	-	-
45,000		359	210	4		●	-	-	-

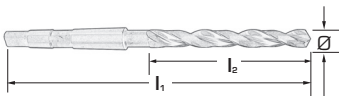
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
45,245	1 25/32	364	215	4	●	-	-	-
45,500		364	215	4	●	-	-	-
46,000		364	215	4	●	-	-	-
46,038	1 13/16	364	215	4	●	-	-	-
46,500		364	215	4	●	-	-	-
46,833	1 27/32	364	215	4	●	-	-	-
47,000		364	215	4	●	-	-	-
47,500		364	215	4	●	-	-	-
47,625	1 7/8	369	220	4	●	-	-	-
48,000		369	220	4	●	-	-	-
48,420	1 29/32	369	220	4	●	-	-	-
48,500		369	220	4	●	-	-	-
49,000		369	220	4	●	-	-	-
49,213	1 15/16	369	220	4	●	-	-	-
49,500		369	220	4	●	-	-	-
50,000		369	220	4	●	-	-	-
50,008	1 31/32	374	225	4	●	-	-	-
50,500		374	225	4	●	-	-	-
50,800	2	374	225	4	●	-	-	-
51,000		412	225	5	●	-	-	-
51,500		412	225	5	●	-	-	-
51,595	2 1/32	412	225	5	●	-	-	-
52,000		412	225	5	●	-	-	-
52,388	2 1/16	412	225	5	●	-	-	-
52,500		412	225	5	●	-	-	-
53,000		412	225	5	●	-	-	-
53,183	2 3/32	417	230	5	●	-	-	-
53,500		417	230	5	●	-	-	-
53,975	2 1/8	417	230	5	●	-	-	-
54,000		417	230	5	●	-	-	-
54,500		417	230	5	●	-	-	-
54,770	2 5/32	417	230	5	●	-	-	-
55,000		417	230	5	●	-	-	-
55,500		417	230	5	●	-	-	-
55,563	2 3/16	417	230	5	●	-	-	-
56,000		417	230	5	●	-	-	-
56,358	2 7/32	422	235	5	●	-	-	-
56,500		422	235	5	●	-	-	-
57,000		422	235	5	●	-	-	-
57,150	2 1/4	422	235	5	●	-	-	-

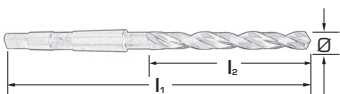
● Standardartikel / Items available ex stock



## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS

Twist drills with Morse taper shank  
made of HSS



Typ / Type

Schneidrichtung  
Cutting direction

Schneidstoff/Material

N	N	W	STL
HSS	HSS	HSS	HSS

Ø mm h8	Ø "	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6168	6168 TN	6201	6212
57,500		422	235	5	●	-	-	-
58,000		422	235	5	●	-	-	-
58,500		422	235	5	●	-	-	-
58,738	2 5/16	422	235	5	●	-	-	-
59,000		422	235	5	●	-	-	-
59,500		422	235	5	●	-	-	-
60,000		422	235	5	●	-	-	-
60,325	2 3/8	427	240	5	●	-	-	-
61,000		427	240	5	●	-	-	-
61,913	2 7/16	427	240	5	●	-	-	-
62,000		427	240	5	●	-	-	-
63,000		427	240	5	●	-	-	-
63,500	2 1/2	432	245	5	●	-	-	-
64,000		432	245	5	●	-	-	-
65,000		432	245	5	●	-	-	-
65,088	2 9/16	432	245	5	●	-	-	-
66,000		432	245	5	●	-	-	-
66,675	2 5/8	432	245	5	●	-	-	-
67,000		432	245	5	●	-	-	-
68,000		437	250	5	●	-	-	-
68,263	2 11/16	437	250	5	●	-	-	-
69,000		437	250	5	●	-	-	-
69,850	2 3/4	437	250	5	●	-	-	-
70,000		437	250	5	●	-	-	-
71,000		437	250	5	●	-	-	-
72,000		442	255	5	●	-	-	-
73,000		442	255	5	●	-	-	-
74,000		442	255	5	●	-	-	-
75,000		442	255	5	●	-	-	-
76,000		447	260	5	●	-	-	-
77,000		514	260	6	●	-	-	-
78,000		514	260	6	●	-	-	-
79,000		514	260	6	●	-	-	-
80,000		514	260	6	●	-	-	-
81,000		519	265	6	●	-	-	-
82,000		519	265	6	●	-	-	-
83,000		519	265	6	●	-	-	-
84,000		519	265	6	●	-	-	-
85,000		519	265	6	●	-	-	-
86,000		524	270	6	●	-	-	-

● Standardartikel / Items available ex stock

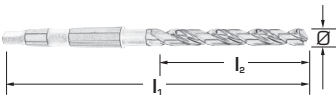




## KURZ / JOBBER LENGTH SERIES

### Spiralbohrer mit Morsekegel aus HSS-Co

Twist drills with Morse taper shank  
made of HSS



Typ / Type				VA	HD	NS
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS-Co	HSS-Co	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6114	6115	6204
10,00	168	87	1	●	●	●
10,20	168	87	1	●	●	●
10,50	168	87	1	●	●	●
10,80	175	94	1	●	●	●
11,00	175	94	1	●	●	●
11,20	175	94	1	●	●	●
11,50	175	94	1	●	●	●
11,80	175	94	1	●	●	●
12,00	182	101	1	●	●	●
12,20	182	101	1	●	●	●
12,50	182	101	1	●	●	●
12,80	182	101	1	●	●	●
13,00	182	101	1	●	●	●
13,20	182	101	1	●	●	●
13,50	189	108	1	●	●	●
13,80	189	108	1	●	●	●
14,00	189	108	1	●	●	●
14,25	212	114	2	●	●	●
14,50	212	114	2	●	●	●
14,75	212	114	2	●	●	●
15,00	212	114	2	●	●	●
15,25	218	120	2	●	●	●
15,50	218	120	2	●	●	●
15,75	218	120	2	●	●	●
16,00	218	120	2	●	●	●
16,25	223	125	2	●	●	●
16,50	223	125	2	●	●	●
16,75	223	125	2	●	●	●
17,00	223	125	2	●	●	●
17,25	228	130	2	●	●	●
17,50	228	130	2	●	●	●
17,75	228	130	2	●	●	●
18,00	228	130	2	●	●	●
18,25	233	135	2	●	●	●
18,50	233	135	2	●	●	●
18,75	233	135	2	●	●	●
19,00	233	135	2	●	●	●
19,25	238	140	2	●	●	●
19,50	238	140	2	●	●	●
19,75	238	140	2	●	●	●

● Standardartikel / Items available ex stock - ■ Auslaufender Artikel / discontinued items



Typ / Type				VA	HD	NS
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS-Co	HSS-Co	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6114	6115	6204
20,00	238	140	2	●	●	●
20,25	243	145	2	●	●	●
20,50	243	145	2	●	●	●
20,75	243	145	2	●	●	●
21,00	243	145	2	●	●	●
21,25	248	150	2	●	●	●
21,50	248	150	2	●	●	●
21,75	248	150	2	●	●	●
22,00	248	150	2	●	●	●
22,25	248	150	2	●	●	●
22,50	253	155	2	●	●	●
22,75	253	155	2	●	●	●
23,00	253	155	2	●	●	●
23,50	276	155	3	●	●	●
24,00	281	160	3	●	●	●
24,50	281	160	3	●	●	●
25,00	281	160	3	●	●	●
25,50	286	165	3	●	●	●
26,00	286	165	3	●	●	●
26,50	286	165	3	●	●	●
27,00	291	170	3	●	●	●
27,50	291	170	3	●	●	●
28,00	291	170	3	●	●	●
28,25	296	175	3	■	-	-
28,50	296	175	3	●	●	●
29,00	296	175	3	●	●	●
29,50	296	175	3	●	●	●
30,00	296	175	3	●	●	●
30,50	301	180	3	●	●	●
30,75	301	180	3	■	●	●
31,00	301	180	3	●	●	●
31,50	301	180	3	●	●	●
32,00	334	185	4	●	●	●
32,50	334	185	4	-	●	-
33,00	334	185	4	-	●	-
33,50	334	185	4	-	●	-
34,00	339	190	4	-	●	-
34,50	339	190	4	-	●	-
35,00	339	190	4	-	●	-
36,00	344	195	4	-	●	-
37,00	344	195	4	-	●	-











## LANG / LONG SERIES

**Spiralbohrer mit Morsekegel aus HSS e HSS-Co**  
Twist drills with Morse taper shank  
made of HSS and HSS-Co



Typ / Type				N	STL	HD
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6233	6222	6119
5,00	155	74	1	●	-	-
5,50	161	80	1	●	-	-
6,00	161	80	1	●	-	-
6,50	167	86	1	●	-	-
6,80	174	93	1	●	-	-
7,00	174	93	1	●	-	-
7,50	174	93	1	●	-	-
8,00	181	100	1	●	-	-
8,10	181	100	1	●	-	-
8,20	181	100	1	●	-	-
8,25	181	100	1	●	-	-
8,30	181	100	1	●	-	-
8,40	181	100	1	●	-	-
8,50	181	100	1	●	-	-
8,60	188	107	1	●	-	-
8,70	188	107	1	●	-	-
8,75	188	107	1	●	-	-
8,80	188	107	1	●	-	-
8,90	188	107	1	●	-	-
9,00	188	107	1	●	-	-
9,10	188	107	1	●	-	-
9,20	188	107	1	●	-	-
9,25	188	107	1	●	-	-
9,30	188	107	1	●	-	-
9,40	188	107	1	●	-	-
9,50	188	107	1	●	-	-
9,60	197	116	1	●	-	-
9,70	197	116	1	●	-	-
9,75	197	116	1	●	-	-
9,80	197	116	1	●	-	-
9,90	197	116	1	●	-	-
10,00	197	116	1	●	●	●
10,10	197	116	1	●	-	-
10,20	197	116	1	●	●	-
10,25	197	116	1	●	-	-
10,30	197	116	1	●	-	-
10,40	197	116	1	●	-	-
10,50	197	116	1	●	●	●
10,60	197	116	1	●	-	-
10,70	206	125	1	●	-	-



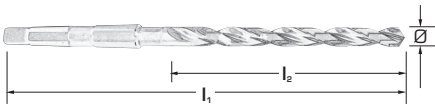
Typ / Type				N	STL	HD
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6233	6222	6119
10,75	206	125	1	●	-	-
10,80	206	125	1	●	●	-
10,90	206	125	1	●	-	-
11,00	206	125	1	●	●	●
11,10	206	125	1	●	-	-
11,20	206	125	1	●	●	-
11,25	206	125	1	●	-	-
11,30	206	125	1	●	-	-
11,40	206	125	1	●	-	-
11,50	206	125	1	●	●	●
11,60	206	125	1	●	-	-
11,70	206	125	1	●	-	-
11,75	206	125	1	●	-	-
11,80	206	125	1	●	●	-
11,90	215	134	1	●	-	-
12,00	215	134	1	●	●	●
12,10	215	134	1	●	-	-
12,20	215	134	1	●	●	-
12,25	215	134	1	●	-	-
12,30	215	134	1	●	-	-
12,40	215	134	1	●	-	-
12,50	215	134	1	●	●	●
12,60	215	134	1	●	-	-
12,70	215	134	1	●	-	-
12,75	215	134	1	●	■	-
12,80	215	134	1	●	●	-
12,90	215	134	1	●	-	-
13,00	215	134	1	●	●	●
13,10	215	134	1	●	-	-
13,20	215	134	1	●	●	-
13,25	223	142	1	●	-	-
13,50	223	142	1	●	●	●
13,75	223	142	1	●	-	-
13,80	223	142	1	●	●	-
13,90	223	142	1	●	-	-
14,00	223	142	1	●	●	●
14,25	245	147	2	●	●	-
14,50	245	147	2	●	●	-
14,75	245	147	2	●	●	-
15,00	245	147	2	●	●	●

● Standardartikel / Items available ex stock - ■ Auslaufender Artikel / discontinued items



## LANG / LONG SERIES

**Spiralbohrer mit Morsekegel aus HSS e HSS-Co**  
Twist drills with Morse taper shank  
made of HSS and HSS-Co



Typ / Type				N	STL	HD
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6233	6222	6119
15,25	251	153	2	●	●	-
15,50	251	153	2	●	●	-
15,75	251	153	2	●	●	-
16,00	251	153	2	●	●	●
16,25	257	159	2	●	●	-
16,50	257	159	2	●	●	-
16,75	257	159	2	●	●	-
17,00	257	159	2	●	●	●
17,25	263	165	2	●	●	-
17,50	263	165	2	●	●	-
17,75	263	165	2	●	●	-
18,00	263	165	2	●	●	●
18,25	269	171	2	●	●	-
18,50	269	171	2	●	●	-
18,75	269	171	2	●	●	-
19,00	269	171	2	●	●	●
19,25	275	177	2	●	●	-
19,50	275	177	2	●	●	-
19,75	275	177	2	●	●	-
20,00	275	177	2	●	●	●
20,25	282	184	2	●	-	-
20,50	282	184	2	●	●	-
20,75	282	184	2	●	-	-
21,00	282	184	2	●	●	●
21,25	289	191	2	●	-	-
21,50	289	191	2	●	●	-
21,75	289	191	2	●	-	-
22,00	289	191	2	●	●	●
22,25	289	191	2	●	-	-
22,50	296	198	2	●	●	-
22,75	296	198	2	●	-	-
23,00	296	198	2	●	●	●
23,50	319	198	3	●	●	-
24,00	327	206	3	●	●	●
24,50	327	206	3	●	●	-
25,00	327	206	3	●	●	●
25,50	335	214	3	●	-	-
26,00	335	214	3	●	●	●
26,50	335	214	3	●	-	-
27,00	343	222	3	●	●	●



Typ / Type				N	STL	HD
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6233	6222	6119
27,50	343	222	3	●	-	-
28,00	343	222	3	●	●	●
28,50	351	230	3	●	■	-
29,00	351	230	3	●	●	●
29,50	351	230	3	●	-	-
30,00	351	230	3	●	●	●
30,50	360	239	3	●	-	-
31,00	360	239	3	●	●	●
31,50	360	239	3	●	-	-
32,00	397	248	4	●	-	-
32,50	397	248	4	●	-	-
33,00	397	248	4	●	-	-
33,50	397	248	4	●	-	-
34,00	406	257	4	●	-	-
34,50	406	257	4	●	-	-
35,00	406	257	4	●	-	-
35,50	406	257	4	●	-	-
36,00	416	267	4	●	-	-
36,50	416	267	4	●	-	-
37,00	416	267	4	●	-	-
37,50	416	267	4	●	-	-
38,00	426	277	4	●	-	-
38,50	426	277	4	●	-	-
39,00	426	277	4	●	-	-
39,50	426	277	4	●	-	-
40,00	426	277	4	●	-	-
41,00	436	287	4	●	-	-
42,00	436	287	4	●	-	-
43,00	447	298	4	●	-	-
44,00	447	298	4	●	-	-
45,00	447	298	4	●	-	-
46,00	459	310	4	●	-	-
47,00	459	310	4	●	-	-
48,00	470	321	4	●	-	-
49,00	470	321	4	●	-	-
50,00	470	321	4	●	-	-

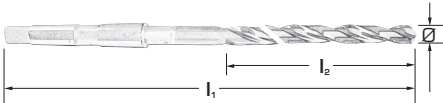
● Standardartikel / Items available ex stock - ■ Auslaufender Artikel / discontinued items





## ÜBERLANG / EXTRA LONG SERIES

**Spiralbohrer mit Morsekegel aus HSS e HSS-Co**  
 Twist drills with Morse taper shank  
 made of HSS and HSS-Co



Typ / Type				N	STL	STL
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6220/2	6221/2	6219/2
8,0	330	210	1	●	●	-
8,5	330	210	1	●	●	-
9,0	345	220	1	●	●	-
9,5	345	220	1	●	-	-
10,0	360	235	1	●	●	●
10,5	360	235	1	●	●	●
11,0	375	250	1	●	●	●
11,5	375	250	1	●	●	●
12,0	395	260	1	●	●	●
12,5	395	260	1	●	●	●
13,0	395	260	1	●	●	●
13,5	410	275	1	●	●	●
14,0	410	275	1	●	●	●
14,5	425	275	2	●	●	●
15,0	425	275	2	●	●	●
15,5	445	295	2	●	●	●
16,0	445	295	2	●	●	●
16,5	445	295	2	●	●	●
17,0	445	295	2	●	●	●
17,5	465	310	2	●	●	●
18,0	465	310	2	●	●	●
18,5	465	310	2	●	●	●
19,0	465	310	2	●	●	●
19,5	490	325	2	●	●	●
20,0	490	325	2	●	●	●
20,5	490	325	2	●	-	■
21,0	490	325	2	●	●	●
21,5	515	345	2	●	-	-
22,0	515	345	2	●	●	●
22,5	515	345	2	●	-	-
23,0	515	345	2	●	●	●
23,5	535	345	3	●	-	-
24,0	555	365	3	●	●	●
24,5	555	365	3	●	-	-
25,0	555	365	3	●	●	●
25,5	555	365	3	●	-	-
26,0	555	365	3	●	●	●
26,5	555	365	3	●	-	-
27,0	580	385	3	●	●	●
27,5	580	385	3	■	-	-



Typ / Type				N	STL	STL
Schneidrichtung Cutting direction						
Schneidstoff Material				HSS	HSS	HSS-Co
Ø mm h8	l <sub>1</sub> mm	l <sub>2</sub> mm	CM MT	6220/2	6221/2	6219/2
28,0	580	385	3	●	●	●
28,5	580	385	3	■	-	-
29,0	580	385	3	●	●	●
29,5	580	385	3	●	-	-
30,0	580	385	3	●	●	●
31,0	610	410	3	●	●	-
32,0	635	410	4	●	●	-
33,0	635	410	4	●	●	-
34,0	665	430	4	●	●	-
35,0	665	430	4	●	●	-
36,0	665	430	4	●	-	-
37,0	665	430	4	●	-	-
38,0	695	460	4	●	●	-
39,0	695	460	4	●	-	-
40,0	695	460	4	●	●	-
41,0	695	460	4	●	-	-
42,0	695	460	4	●	-	-
45,0	735	490	4	●	-	-
48,0	765	510	4	●	-	-
50,0	765	510	4	●	-	-

● Standardartikel / Items available ex stock ■ Auslaufender Artikel / discontinued items







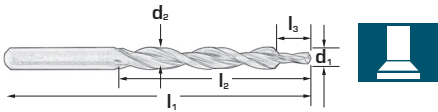


## Mehrfasen-Stufenbohrer mit Zylinderschaft aus HSS

Senkwinkel 90°

Subland drills with straight shank made of HSS

Included angle 90°



Senkwinkel / Included angle

90°

Schneidrichtung  
Cutting direction



Schneidstoff/Material

HSS

Ø mm für Gewinde for thread-Ø	d <sub>2</sub> mm	x	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	6281
M 3	6,0	X	3,2	93	57	9	●
M 4	8,0	X	4,3	117	75	11	●
M 5	10,0	X	5,3	133	87	13	●
M 6	11,5	X	6,4	142	94	15	●
M 8	15,0	X	8,4	169	114	19	●
M 10	19,0	X	10,5	198	135	23	●
<b>Zusatzreihe / additional sizes</b>							
M 3	6,6	X	3,4	101	63	9	●
M 4	9,0	X	4,5	125	81	11	●

### Form A, Ausführung „fein“

Für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 1

Für Schrauben nach DIN 963 – 964 – 965 – 966 – 7513 (F und G) – 7516 (D und E)

Form A, fine grade

For clearance holes acc. to DIN-ISO 273 and counterisink holes acc. to DIN 74, part 1.

For screws acc. to DIN 963 – 964 – 965 – 966 – 7513 (F and G) – 7516 (D and E)

### Form B, Ausführung „mittel“

Für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 1

Für Senkschrauben nach DIN 7991

Form B, medium grade

For clearance holes acc. to DIN-ISO 273 and counterisink holes acc. to DIN 74, part 1. For screws acc. to DIN 7991





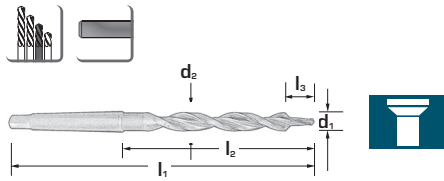


## Mehrfasen-Stufenbohrer mit Morsekegel aus HSS

Senkwinkel 90°

Subland drills with Morse taper shank made of HSS

Included angle 90°



Senkwinkel / Included angle

90°

Schneidrichtung  
Cutting direction



Schneidstoff/Material

HSS

Ø mm für Gewinde for thread-Ø	d <sub>2</sub> mm	x	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	CM MT	6284
M 5	11,0	X	5,5	175	94	13	1	●
M 6	13,0	X	6,6	182	101	15	1	●
M 8	17,2	X	9,0	228	130	19	2	●
M 10	21,5	X	11,0	248	150	23	2	●
Zusatzreihe / additional sizes								
M 12	26,0	X	14,0	286	165	27	3	●
M 14	29,0	X	16,0	296	175	31	3	●
Zusatzreihe / additional sizes								
M 6	11,0	X	6,4	175	94	15	1	●
M 6	11,5	X	6,4	175	94	15	1	●
M 8	15,0	X	8,4	212	114	19	2	●
M 10	19,0	X	10,5	233	135	23	2	●
M 12	23,0	X	13,0	253	155	27	2	●
M 14	26,0	X	15,0	286	165	31	3	●
M 16	30,0	X	17,0	296	175	35	3	●

### Form A und B, Ausführung „mittel“

Für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 1,  
für Schrauben nach DIN 963 – 964 – 965 – 966 – 7513 (F und G) 7516 (D und E) – 7991

Form A und B, medium grade

For through holes acc. to DIN-ISO 273 and screwheads to DIN 74, part 1,  
for screws to DIN 963 – 964 – 965 – 966 – 7513 (F and G) 7516 (D and E) – 7991

### Form B, Ausführung “mittel”

Für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 1,  
für Schrauben nach DIN 7991

Form B, medium grade

For through holes acc. to DIN-ISO 273 and screwhead countersinks acc. to  
DIN 74, part 1, for countersunk screws acc. to DIN 7991

### Form A, Ausführung “fein”

Für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 1,  
für Schrauben nach DIN 963– 964–965–966–7513 (F und G)–7516 (D und E)

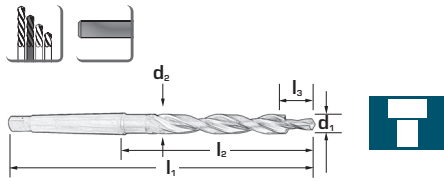
Form A, fine grade

For through holes acc. to DIN-ISO 273 and screwhead countersinks acc.  
to DIN 74, part 1, for screws acc. to DIN 963 – 964 – 965 – 966 – 7513  
(F and G) – 7516 (D und E)



## Mehrfasen-Stufenbohrer mit Morsekegel aus HSS Senkwinkel 180°

Subland drills with Morse taper shank made of HSS  
Included angle 180°



Senkwinkel / Included angle

180°

Schneidrichtung  
Cutting direction



Schneidstoff/Material

HSS

Ø mm für Gewinde for thread-Ø	d <sub>2</sub> mm	x	d <sub>1</sub> mm	l <sub>1</sub> mm	l <sub>2</sub> mm	l <sub>3</sub> mm	CM MT	6286
M 5	10	X	5,5	168	87	13	1	■
M 6	11	X	6,6	175	94	15	1	■
M 10	18	X	11,0	228	130	23	2	■
M 14	24	X	15,5	281	160	31	3	■
M 14*	24	X	16,0	281	160	31	3	■
M 18	30	X	20,0	296	175	39	3	■
M 20	33	X	22,0	334	185	43	4	■
<b>Zusatzreihe / additional sizes</b>								
M 5	10	X	5,3	168	87	13	1	■
M 6	11	X	6,4	175	94	15	1	■
M 10	18	X	10,5	228	130	23	2	■
M 14	24	X	15,0	281	160	31	3	■
M 16	26	X	17,0	186	165	35	3	■

### Form H, J, K Ausführung "mittel"

für Durchgangslöcher nach DIN-ISO 273 und Senkungen nach DIN 74, Teil 2  
für Schrauben nach DIN 84 - 7513 - 7984 - 6912 - 912

Form H, J, K medium grade

for through holes acc. to DIN-ISO 273 and socket screwhead countersinks acc. to DIN 74, part 2 for screws to  
DIN 84 - 7513 - 7984 - 6912 - 912

\*nicht mehr genormt/ former standard

■ Auslaufender Artikel / discontinued items

























# Spiralbohrer

Twist Drills



► **Technische Daten**  
Technical Guide

# TECHNISCHE DATEN

## TECHNICAL DATA



Typ Type	N	NK	N	H	NS	VA	VA	STL	STL	STL	N	N												
ILIX Typ-siehe Seite Ilrix Type -See page	158	160	158	160	166	166	166	164	164	164	170	158												
DIN	1897																							
Bohrtiefe Drilling depth	3xd																							
Schneidrichtung Cutting direction																								
Schneidstoff Material	HSS	HSS	HSS	HSS	HSS-CO	HSS-CO	HSS-CO	HSS-CO	HSS-CO	HSS-CO	K10/20	HSS												
Spitzenwinkel Point angle	120°	120°	120°	130°	120°	130°	130°	130°	130°	130°	120°	120°												
Beschichtung Coating	VP	BL	BL	BL	BL	BL	TX	FASE NIT.	FASE NIT.	TN	BL	VP												
Innenliegende Kühlkanäle Internal coolant	-	-	-	-	-	-	-	-	-	-	-	-												
Verstärkter Schaft Reinforced shank	-	-	-	-	-	-	-	-	-	-	-	-												
	<b>6156</b>		<b>6109</b>		<b>6159</b>		<b>6186</b>		<b>6246</b>		<b>6135</b>		<b>6135 TX</b>		<b>6131</b>		<b>6132</b>		<b>6132 TN</b>		<b>6149</b>		<b>6151</b>	
	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*
<b>P</b> < 800 N/mm <sup>2</sup>	25	10	25	10	25	10	-	-	30	10	30	9	35	9	30	9	30	9	35	10	50	6	25	9
<b>P</b> 700-1000 N/mm <sup>2</sup>	20	9	20	9	20	9	-	-	25	9	25	8	27	8	25	8	25	8	30	9	-	-	20	8
<b>P</b> 1000-1300 N/mm <sup>2</sup>	10	8	12	8	12	8	-	-	15	7	-	-	-	-	15	7	15	7	20	8	-	-	10	7
<b>M</b> Austenitisch	10	5	10	5	10	5	-	-	12	6	15	6	17	5	-	-	-	-	-	-	30	5	8	5
<b>M</b> Austenitisch / ferritisch	-	-	-	-	-	-	-	-	-	-	10	4	12	4	-	-	-	-	-	-	-	-	-	-
<b>K</b> GG	25	10	25	10	25	10	-	-	25	8	-	-	-	-	30	8	30	8	32	8	35	6	20	8
<b>K</b> GGG	15	9	15	9	15	9	-	-	15	7	-	-	-	-	20	7	20	7	22	7	45	5	10	7
<b>N</b> Aluminium	37	12	37	12	37	12	50	10	40	12	45	10	47	10	40	10	40	10	33	12	80	10	35	10
<b>N</b> NE-Metalle	32	9	32	9	32	9	50	10	35	9	35	8	37	8	35	8	35	8	27	9	70	10	30	8
<b>S</b> Titan	-	-	-	-	-	-	-	-	7	4	8	4	8	4	-	-	-	-	-	-	-	-	-	-
<b>S</b> Sonderlegierungen basiert auf Ni	-	-	-	-	-	-	-	-	-	-	5	3	5	3	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 38 / 48 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 48 / 58 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 58 / 68 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# TECHNISCHE DATEN

## TECHNICAL DATA



N	N-ML	H	W	STL	STL	STL	N	H	W	STL	N	N	N	VA	VA
158	158	160	162	162	162	162	158	160	162	162	164	164	164	166	166

### 338

#### 8xd

HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-CO	HSS-CO	HSS-CO8	HSS-CO	HSS-CO
120°	120°	130°	130°	130°	130°	130°	120°	130°	130°	130°	120°	120°	120°	130°	130°
TN	VP	BL	BL	FASE NIT.	TN	TC	VP	BL	BL	FASE NIT.	BL	TN	BL	BL	TX
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

<b>6151 TN</b>	<b>6106</b>	<b>6187</b>	<b>6197</b>	<b>6210</b>	<b>6210 TN</b>	<b>6210 TC</b>	<b>6158</b>	<b>6190</b>	<b>6199</b>	<b>6209</b>	<b>6153</b>	<b>6153 TN</b>	<b>6154</b>	<b>6234</b>	<b>6234 TX</b>
----------------	-------------	-------------	-------------	-------------	----------------	----------------	-------------	-------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*
25	9	25	9	-	-	30	9	25	8	28	8	28	8	25	9	-	-	30	10	30	8	30	9	32	9	32	9	33	9	35	9
20	8	20	8	-	-	-	-	20	7	22	7	22	7	20	8	-	-	-	-	25	7	25	8	28	8	28	8	22	8	25	8
10	7	10	7	-	-	-	-	10	6	12	6	12	6	10	7	-	-	-	-	15	6	15	7	17	7	17	7	-	-	-	-
10	5	8	5	-	-	-	-	-	-	-	-	-	-	8	5	-	-	-	-	8	5	10	5	13	5	13	5	13	5	15	5
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	4	12	4
25	9	20	8	-	-	-	-	30	7	32	9	35	9	20	8	-	-	-	-	30	7	30	8	30	9	30	9	25	7	25	7
12	7	10	7	-	-	-	-	15	6	18	7	20	7	10	7	-	-	-	-	15	6	15	7	15	8	15	8	-	-	-	-
40	10	35	10	50	10	50	10	35	10	40	10	40	10	35	10	50	10	50	10	35	10	40	10	45	10	45	10	40	10	42	10
35	8	30	8	40	10	40	10	30	8	35	8	35	8	30	8	40	10	40	10	30	8	33	8	38	8	38	8	33	8	35	8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	8	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	5	3
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

# TECHNISCHE DATEN

## TECHNICAL DATA



Typ Type	RECORD VA	RECORD VA	HD	HD	HD	NS	HM	HM	N	N	N-ML											
ILIX Typ-siehe Seite Ilix Type -See page	168	168	168	168	168	166	170	170	158	158	158											
DIN	338							8037														
Bohrtiefe Drilling depth	8xd																					
Schneidrichtung Cutting direction																						
Schneidstoff Material	HSS-CO	HSS-CO	HSS-CO	HSS-CO	HSS-CO	HSS-CO	Schneide VHM	Schneide VHM	HSS	HSS	HSS											
Spitzenwinkel Point angle	130°	130°	130°	130°	130°	120°	130°	120°	120°	120°	120°											
Beschichtung Coating	BL	TX	FASE NIT.	TN	TC	VP	BL	BL	VP	TN	BL											
Innenliegende Kühlkanäle Internal coolant	-	-	-	-	-	-	-	-	-	-	-											
Verstärkter Schaft Reinforced shank	-	-	-	-	-	-	-	-	-	-	-											
	6140		6140 TX		6111		6111 TN		6111 TC		6247		6120		6211		6165		6165 TN		6108	
	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*
<b>P</b> < 800 N/mm <sup>2</sup>	33	9	35	9	33	10	35	10	35	10	33	9	-	-	-	-	20	8	23	8	20	8
<b>P</b> 700-1000 N/mm <sup>2</sup>	22	8	25	8	25	9	30	9	30	9	22	8	-	-	-	-	15	7	20	7	15	7
<b>P</b> 1000-1300 N/mm <sup>2</sup>	-	-	-	-	20	8	22	8	22	8	12	6	-	-	-	-	7	6	10	6	7	6
<b>M</b> Austenitisch	15	5	16	5	-	-	-	-	-	-	10	5	-	-	-	-	6	4	8	4	6	4
<b>M</b> Austenitisch / ferritisch	12	4	14	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>K</b> GG	25	7	25	7	35	10	37	10	37	10	25	7	35	9	35	9	15	7	20	8	18	8
<b>K</b> GGG	-	-	-	-	20	8	22	8	22	8	15	6	27	8	27	8	7	6	10	6	7	7
<b>N</b> Aluminium	42	10	45	10	30	12	33	12	33	12	35	10	-	-	-	-	30	10	35	10	30	10
<b>N</b> NE-Metalle	35	8	37	8	25	9	27	9	27	9	30	8	-	-	-	-	25	7	30	7	25	7
<b>S</b> Titan	8	4	9	4	-	-	-	-	-	-	7	3	-	-	-	-	-	-	-	-	-	-
<b>S</b> Sonderlegierungen basiert auf Ni	6	3	7	3	-	-	-	-	-	-	5	2	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 38 / 48 HRC	-	-	-	-	-	-	-	-	-	-	-	-	10	3	10	3	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 48 / 58 HRC	-	-	-	-	-	-	-	-	-	-	-	-	8	2	8	2	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 58 / 68 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# TECHNISCHE DATEN



## TECHNICAL DATA

H		W		STL		STL		STL		N		VA		HD		N		STL		STL		N		STL		STL		N		STL	
160		162		162		162		162		164		166		168		158		162		166		158		162		166		158		162	
340								1869-1						1869-2						1869-3											
12xd								16xd						22xd						30xd											
HSS		HSS		HSS		HSS		HSS		HSS-CO		HSS-CO		HSS-CO		HSS		HSS		HSS-CO		HSS		HSS		HSS-CO		HSS		HSS	
130°		130°		130°		130°		130°		120°		130°		130°		120°		130°		130°		120°		130°		130°		120°		130°	
BL		BL		FASE NIT.		TN		FASE NIT.		BL		BL		FASE NIT.		VP		FASE NIT.		FASE NIT.		VP		FASE NIT.		FASE NIT.		VP		FASE VAP.	
-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
6192		6200		6173		6173 TN		6184		6166		6112		6113		6217/1		6216/1		6218/1		6217/2		6216/2		6218/2		6217/3		6216/3	
VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*
-	-	25	9	25	8	30	8	25	8	28	8	29	8	30	9	20	7	22	7	23	8	19	7	21	7	21	8	18	7	20	8
-	-	-	-	20	7	25	7	20	7	23	7	18	7	25	8	13	6	16	6	18	7	12	6	16	6	21	7	11	6	16	7
-	-	-	-	12	6	15	6	12	6	13	6	-	-	15	7	6	5	10	5	14	6	5	5	12	9	12	6	4	5	9	6
-	-	-	-	-	-	-	-	-	-	10	4	9	4	-	-	4	4	-	-	-	-	3	4	-	-	-	-	3	3	-	-
-	-	-	-	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	25	7	27	7	25	7	30	7	20	7	30	9	13	6	20	7	25	7	12	6	20	6	23	-	11	7	20	5
-	-	-	-	10	6	12	6	10	6	15	6	-	-	15	7	7	5	10	5	15	6	6	5	10	4	20	6	5	5	10	3
45	10	45	9	30	10	35	10	30	10	38	9	35	10	30	10	28	6	30	6	30	10	27	6	30	6	35	10	26	9	30	10
35	10	35	9	25	7	30	7	25	7	34	7	29	7	25	8	21	5	25	5	25	7	20	5	22	5	30	7	19	5	25	7
-	-	-	-	-	-	-	-	-	-	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

# TECHNISCHE DATEN

## TECHNICAL DATA



Typ Type	STL	NS	HM	N	N	W	STL	NS	VA	HD	N	VA												
ILIX Typ-siehe Seite Ilix Type -See page	162	166	170	158	158	162	164	166	168	168	160	168												
DIN	Ilix Norm.	Ilix Norm.	8041	345						346														
Bohrtiefe Drilling depth	60/70 xd	3xd			8xd																			
Schneidrichtung Cutting direction																								
Schneidstoff Material	HSS	HSS-CO	Schneide VHM	HSS	HSS	HSS	HSS	HSS	HSS-CO	HSS-CO	HSS	HSS-CO												
Spitzenwinkel Point angle	130°	130°	130°	120°	120°	130°	130°	130°	130°	130°	120°	130°												
Beschichtung Coating	FASE NIT.	VAP	BL	VP	TN	BL	FASE NIT.	VAP	BL	FASE NIT.	VP	BL												
Innenliegende Kühlkanäle Internal coolant	-	-	-	-	-	-	-	-	-	-	-	-												
Verstärkter Schaft Reinforced shank	-	-	-	-	-	-	-	-	-	-	-	-												
	<b>6130</b>	<b>6240</b>	<b>6231</b>	<b>6168</b>	<b>6168</b>	<b>6201</b>	<b>6212</b>	<b>6204</b>	<b>6114</b>	<b>6115</b>	<b>6176</b>	<b>6116</b>												
	<b>TN</b>																							
	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*		
<b>P</b> < 800 N/mm <sup>2</sup>	14	6	30	9	-	-	25	8	28	9	30	9	28	9	30	9	33	9	30	9	25	8	33	8
<b>P</b> 700-1000 N/mm <sup>2</sup>	9	5	25	8	-	-	20	7	23	8	-	-	23	8	25	8	22	8	25	8	20	7	22	7
<b>P</b> 1000-1300 N/mm <sup>2</sup>	4	4	15	6	-	-	10	6	-	7	-	-	18	7	15	6	-	-	20	7	10	6	-	-
<b>M</b> Austenitisch	5	-	10	5	-	-	8	4	10	5	-	-	-	-	10	5	13	5	10	-	8	4	13	5
<b>M</b> Austenitisch / ferritisch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	4	8	-	-	-	10	4
<b>K</b> GG	18	5	25	8	35	9	17	8	20	9	-	-	25	8	25	7	25	8	35	10	17	8	25	8
<b>K</b> GGG	9	3	15	6	-	-	10	7	12	8	-	-	15	6	15	6	-	-	20	8	10	7	-	-
<b>N</b> Aluminium	20	6	40	10	-	-	30	10	35	10	40	10	35	10	-	-	40	10	40	10	30	10	40	10
<b>N</b> NE-Metalle	20	5	30	8	-	-	25	7	28	8	35	8	25	8	30	8	33	8	30	8	25	7	33	7
<b>S</b> Titan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	-	-	-	-	8	4
<b>S</b> Sonderlegierungen basiert auf Ni	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	-	-	-	-	5	3
<b>H</b> Gehärteter Stahl 38 / 48 HRC	-	-	-	-	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 48 / 58 HRC	-	-	-	-	8	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 58 / 68 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

# TECHNISCHE DATEN



TECHNICAL DATA



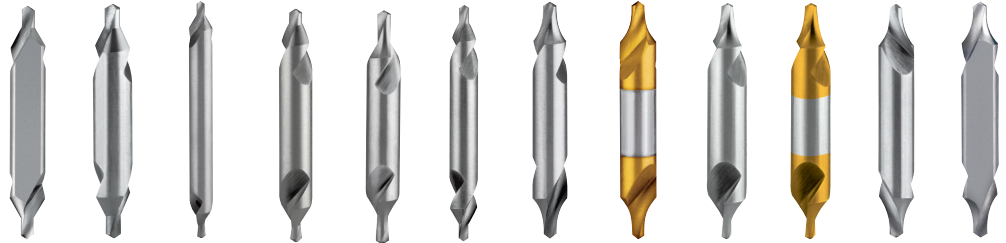
N			W			HD			N			STL			STL			N			STL			STL			STL			A		A		A		A		A					
160			164			168			160			164			166			160			164			166			164			172		172		172		172		172					
<b>341</b>						<b>1870-1</b>						<b>1870-2</b>						<b>Illox Norm.</b>		<b>333 A</b>																							
<b>12xd</b>						<b>16xd</b>						<b>22xd</b>						<b>40xd</b>		-																							
HSS			HSS			HSS-CO			HSS			HSS			HSS-CO			HSS			HSS			HSS-CO			HSS-CO			VHM		HSS		HSS		HSS		HSS					
120°			130°			130°			120°			130°			130°			120°			130°			130°			130°			-		-		-		-		-					
VP			FASE NIT.			FASE NIT.			VP			FASE NIT.			FASE NIT.			VP			FASE NIT.			VAP			FASE NIT.			BL		BL		TN		BL		TN		BL			
-			-			-			-			-			-			-			-			-			-			-		-		-		-		-		-			
-			-			-			-			-			-			-			-			-			-			-		-		-		-		-		-			
<b>6233</b>			<b>6222</b>			<b>6119</b>			<b>6220/1</b>			<b>6221/1</b>			<b>6219/1</b>			<b>6220/2</b>			<b>6221/2</b>			<b>6219/2</b>			<b>6150</b>			<b>6296</b>		<b>6290</b>		<b>6290 TN</b>		<b>6162</b>		<b>6162 TN</b>		<b>6294</b>			
VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*		VC		F*	
20	7	25	8	28	9	18	7	20	7	22	8	15	6	17	6	20	7	20	7	45	7	30	5	35	6	30	5	35	6	30	5	35	6	30	5	35	6	30	5				
15	6	-	-	23	8	10	6	12	6	15	7	8	5	9	5	13	6	15	6	35	6	20	4	25	5	20	4	25	5	20	4	25	5	20	4	25	5	20	4				
8	5	-	-	19	7	6	5	8	5	10	6	5	4	6	4	8	4	11	5	30	5	12	3	18	4	12	3	18	4	12	3	18	4	12	3	18	4	12	3				
6	3	-	-	-	-	4	3	-	-	-	-	3	2	-	-	-	-	-	-	28	4	10	3	15	4	10	3	15	4	10	3	15	4	10	3	15	4	10	3				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	3	8	2	12	3	8	2	12	3	8	2	12	3	8	2	12	3	8	2				
17	8	-	-	-	-	15	7	20	7	25	7	13	6	13	7	15	7	13	7	40	6	25	4	27	5	25	4	27	5	25	4	27	5	25	4	27	5	25	4				
8	7	-	-	-	-	7	5	12	6	15	6	6	4	8	6	10	6	8	6	35	5	20	3	23	4	20	3	23	4	20	3	23	4	20	3	23	4	20	3				
35	9	30	10	35	11	35	8	37	8	40	9	30	7	33	7	37	8	28	6	100	7	50	5	55	6	50	5	55	6	50	5	55	6	50	5	55	6	50	5				
25	7	25	7	28	8	17	6	20	6	22	7	14	5	16	5	20	6	21	5	90	6	40	5	45	5	40	5	45	5	40	5	45	5	40	5	45	5	40	5				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	3	4	3	5	3	4	3	5	3	4	3	5	3	4	3	5	3	4	3				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2	3	2	2	2				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

# TECHNISCHE DATEN

## TECHNICAL DATA



Alte Norm  
Former standard

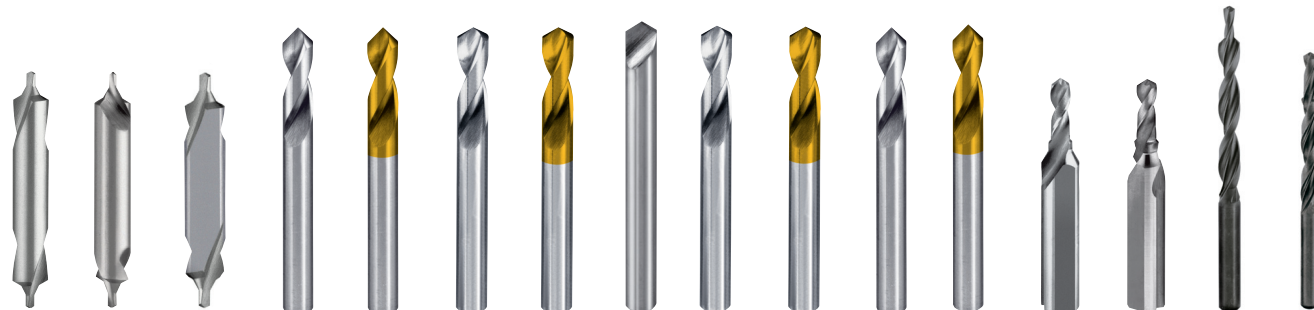


Typ Type	A		A		A		A		R		A		R		R		R		R		R		R	
ILIX Typ-siehe Seite Ilux Type -See page	174		174		174		172		172		172		172		172		172		172		172		174	
DIN	333 A						ANSI B 94.11 1979				B.S. 328		333 R											
Bohrtiefe Drilling depth	-						-				-		-											
Schneidrichtung Cutting direction																								
Schneidstoff Material	HSS-CO		HSS-CO		HSS-CO		HSS		HSS		HSS		HSS		HSS		HSS		HSS		HSS		HSS-CO	
Spitzenwinkel Point angle	-		-		-		-		-		-		-		-		-		-		-		-	
Beschichtung Coating	BL		BL		BL		BL		BL		BL		BL		TN		BL		TN		TN		BL	
Innenliegende Kühlkanäle Internal coolant	-		-		-		-		-		-		-		-		-		-		-		-	
Verstärkter Schaft Reinforced shank	-		-		-		-		-		-		-		-		-		-		-		-	
	6291		6299		6144		6164		6160		6142		6292		6292 TN		6223		6223 TN		6295		6293	
	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*
<b>P</b> < 800 N/mm <sup>2</sup>	35	6	35	6	35	6	30	5	30	5	30	5	30	5	35	6	30	5	35	6	30	5	35	6
<b>P</b> 700-1000 N/mm <sup>2</sup>	25	5	25	5	25	5	20	4	20	4	20	4	20	4	25	5	20	4	25	5	20	4	25	5
<b>P</b> 1000-1300 N/mm <sup>2</sup>	18	4	18	4	18	4	12	3	12	3	12	3	12	3	18	4	12	3	18	4	12	3	18	4
<b>M</b> Austenitisch	15	4	15	4	15	4	10	3	10	3	10	3	10	3	15	4	10	3	15	4	10	3	15	4
<b>M</b> Austenitisch / ferritisch	12	3	12	3	12	3	8	2	8	2	8	2	8	2	12	3	8	2	12	3	8	2	12	3
<b>K</b> GG	27	5	27	5	27	5	25	4	25	4	25	4	25	4	27	5	25	4	27	5	25	4	27	5
<b>K</b> GGG	23	4	23	4	23	4	20	3	20	3	20	3	20	3	23	4	20	3	23	4	20	3	23	4
<b>N</b> Aluminium	55	6	55	6	55	6	50	5	50	5	50	5	50	5	55	6	50	5	55	6	50	5	55	6
<b>N</b> NE-Metalle	45	5	45	5	45	5	40	5	40	5	40	5	40	5	45	5	40	5	45	5	40	5	45	5
<b>S</b> Titan	5	3	5	3	5	3	4	3	4	3	4	3	4	3	5	3	4	3	5	3	4	3	5	3
<b>S</b> Sonderlegierungen basiert auf Ni	3	2	3	2	3	2	2	2	2	2	2	2	2	2	3	2	2	2	3	2	2	2	3	2
<b>H</b> Gehärteter Stahl 38 / 48 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 48 / 58 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>H</b> Gehärteter Stahl 58 / 68 HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



# TECHNISCHE DATEN

## TECHNICAL DATA



B			NC			NC			NC			R			NC			NC			-			-																	
174			174			174			174			176			176			176			176			176			176														
333 B						Illox Norm.										332				8374		8378																			
-						-										-				-		-																			
HSS			HSS			HSS			HSS			VHM			VHM			HSS			HSS			HSS			HSS														
-			-			-			90°			90°			120°			120°			120°			-			120°			60°			R			90°			90°		
BL			BL			BL			BL			TN			BL			TN			BL			BL			NC			BL			BL			VP			VP		
-			-			-			-			-			-			-			-			-			-			-			-			-			-		
-			-			-			-			-			-			-			-			-			-			-			-			-			-		
6297		6298		6289		6148		6148		6147		6147		6100		6102		6102		6103		6103		6249		6250		6281		6282											
B						TN						TN						TN																							
VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*						
30	5	30	5	30	5	32	6	35	6	32	6	35	6	32	6	50	7	55	7	50	7	55	7	30	6	30	6	30	8	30	8										
20	4	20	4	20	4	25	5	27	5	25	5	27	5	25	5	30	6	35	6	30	6	35	6	22	5	22	5	27	7	27	7										
12	3	12	3	12	3	18	4	20	4	18	4	20	4	18	4	25	5	28	5	25	5	28	5	15	4	15	4	15	6	15	6										
10	3	10	3	10	3	15	4	17	4	15	4	17	4	15	4	23	5	25	5	25	5	25	5	12	4	12	4	10	4	10	4										
8	2	8	2	8	2	12	3	14	3	12	3	14	3	12	3	20	4	22	4	20	4	22	4	9	3	9	3	8	3	8	3										
25	4	25	4	25	4	30	5	32	5	30	5	32	5	30	5	40	6	43	6	40	6	43	6	25	5	25	5	30	8	30	8										
20	3	20	3	20	3	25	4	27	4	25	4	27	4	25	4	30	5	33	5	30	5	33	5	20	4	20	4	25	7	25	7										
50	5	50	5	50	5	55	6	58	6	55	6	58	6	55	6	70	7	75	7	70	7	75	7	50	6	50	6	40	9	40	9										
40	5	40	5	40	5	45	5	47	5	45	5	47	5	45	5	60	6	65	6	60	6	65	6	40	5	40	5	33	8	33	8										
5	3	5	3	5	3	5	3	6	3	5	3	6	3	5	3	8	4	9	4	8	4	9	4	-	-	-	-	5	3	5	3										
2	2	2	2	2	2	3	2	4	2	3	2	4	2	3	2	6	3	7	3	6	3	7	3	-	-	-	-	2	2	2	2										
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										

# TECHNISCHE DATEN

## TECHNICAL DATA



Typ Type	-	-	-	-	-	-												
ILIX Typ-siehe Seite Ilix Type -See page	176	176	178	178	178	178												
DIN	<b>8376</b>	<b>8376</b>	<b>8375</b>	<b>8377</b>	<b>1898 A</b>													
Bohrtiefe Drilling depth	-	-	-	-	-	-												
Schneidrichtung Cutting direction																		
Schneidstoff Material	HSS	HSS	HSS	HSS	HSS	HSS												
Spitzenwinkel Point angle	180°	90°	90°	180°	120°	120°												
Beschichtung Coating	VP	VP	VP	VP	VP	VP												
Innenliegende Kühlkanäle Internal coolant	-	-	-	-	-	-												
Verstärkter Schaft Reinforced shank	-	-	-	-	-	-												
	<b>6283</b>	<b>6284</b>	<b>6285</b>	<b>6286</b>	<b>6501</b>	<b>6502</b>												
	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*	VC	F*						
<b>P</b> < 800 N/mm <sup>2</sup>	30	8	30	8	30	8	30	8	30	8	30	8						
<b>P</b> 700-1000 N/mm <sup>2</sup>	27	7	27	7	27	7	27	7	27	7	27	7						
<b>P</b> 1000-1300 N/mm <sup>2</sup>	15	6	15	6	15	6	15	6	15	6	15	6						
<b>M</b> Austenitisch	10	4	10	4	10	4	10	4	10	4	10	4						
<b>M</b> Austenitisch / ferritisch	8	3	8	3	8	3	8	3	8	3	8	3						
<b>K</b> GG	30	8	30	8	30	8	30	8	30	8	30	8						
<b>K</b> GGG	25	7	25	7	25	7	25	7	25	7	25	7						
<b>N</b> Aluminium	40	9	40	9	40	9	40	9	40	9	40	9						
<b>N</b> NE-Metalle	33	8	33	8	33	8	33	8	33	8	33	8						
<b>S</b> Titan	5	3	5	3	5	3	5	3	5	3	5	3						
<b>S</b> Sonderlegierungen basiert auf Ni	2	2	2	2	2	2	2	2	2	2	2	2						
<b>H</b> Gehärteter Stahl 38 / 48 HRC	-	-	-	-	-	-	-	-	-	-	-	-						
<b>H</b> Gehärteter Stahl 48 / 58 HRC	-	-	-	-	-	-	-	-	-	-	-	-						
<b>H</b> Gehärteter Stahl 58 / 68 HRC	-	-	-	-	-	-	-	-	-	-	-	-						