

ALLGEMEINE STAHLBEABREITUNG BIS $\sim 1200 \text{ N/mm}^2$

▼ UNIVERSELLE ANWENDUNG

TS 100 T

▼ VORTEILE UND EIGENSCHAFTEN

- ▼ **spiralisierter Tieflochbohrer** für Bohrtiefen bis **40xD** in unlegierten und legierten Stählen, insbesondere auch in Kurbelwellenstahl
- ▼ optimierter Nutquerschnitt, maximaler Kühlkanalquerschnitt und blanke, besonders glatte Nuten führen zu einer **optimalen Spanabfuhr aus tiefen Bohrungen**
- ▼ **höchste Vorschübe und Schnittgeschwindigkeiten** führen zu einer deutlichen **Verkürzung der Fertigungszeiten**
- ▼ zusätzlich zum Lagerprogramm sind **Zwischenabmessungen** bei einer maximalen Bohrtiefe bis **40xD** bzw. einer maximalen **Gesamtlänge bis 500 mm** realisierbar
- ▼ **Sonderausführung** für die **Aluminiumbearbeitung** auf Anfrage erhältlich 



die **Werkzeuggeometrie** ist für den universellen Einsatz in nahezu allen Werkstoffen ausgelegt

Spezialausspitzung für präzise Bohrungen und geringen Mittenverlauf

maximaler Kühlkanalquerschnitt sichert eine effektive Schmiermittelversorgung der Schneide sowie eine ausgezeichnete Spanabfuhr

vier Führungsfasen für optimale Abstützung in der Bohrung

optimaler Nutquerschnitt sorgt im vorderen Werkzeugbereich für eine optimale Spanbildung und im hinteren Bereich für eine gute Spanabfuhr

polierte Nuten für perfekte Spanabfuhr – auch bei extremen Bohrtiefen

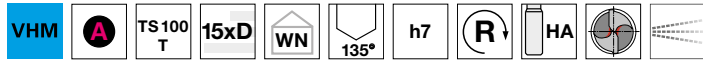


TS-Drills mit Innenkühlung

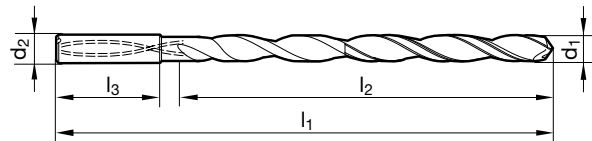
Artikel-Nr. 86509



P	M	K	N	S	H
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Ausspitzung ≥ Ø 3,000 • Kegelmantelschliff • Kopfbeschichtung • Hauptschneidenform konkav • optimierter Nutquerschnitt • maximaler Kühlkanalquerschnitt • Kühlmitteldruck beachten
Bau- und Einsatzstähle • Automatenstähle, Vergütungsstähle • legierte Stähle bis 1200 N/mm² • rostfreie Stähle • Gusswerkstoffe



d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	95,000	55,000	36,000
3,100		6,000	106,000	66,000	36,000
3,170	1/8	6,000	106,000	66,000	36,000
3,200		6,000	106,000	66,000	36,000
3,300		6,000	106,000	66,000	36,000
3,500		6,000	116,000	76,000	36,000
3,570	9/64	6,000	116,000	76,000	36,000
3,700		6,000	116,000	76,000	36,000
3,800		6,000	116,000	76,000	36,000
3,970	5/32	6,000	116,000	76,000	36,000
4,000		6,000	116,000	76,000	36,000
4,200		6,000	133,000	93,000	36,000
4,300		6,000	133,000	93,000	36,000
4,370	11/64	6,000	133,000	93,000	36,000
4,500		6,000	133,000	93,000	36,000
4,600		6,000	133,000	93,000	36,000
4,760	3/16	6,000	133,000	93,000	36,000
4,800		6,000	133,000	93,000	36,000
5,000		6,000	133,000	93,000	36,000
5,100		6,000	150,000	110,000	36,000
5,160	13/64	6,000	150,000	110,000	36,000
5,410		6,000	150,000	110,000	36,000
5,500		6,000	150,000	110,000	36,000
5,560	7/32	6,000	150,000	110,000	36,000
5,600		6,000	150,000	110,000	36,000
5,800		6,000	150,000	110,000	36,000
5,950	15/64	6,000	150,000	110,000	36,000
6,000		6,000	150,000	110,000	36,000
6,300		8,000	167,000	127,000	36,000
6,350	1/4	8,000	167,000	127,000	36,000
6,500		8,000	167,000	127,000	36,000
6,750	17/64	8,000	167,000	127,000	36,000
6,800		8,000	167,000	127,000	36,000
7,000		8,000	167,000	127,000	36,000
7,140	9/32	8,000	183,000	143,000	36,000
7,500		8,000	183,000	143,000	36,000

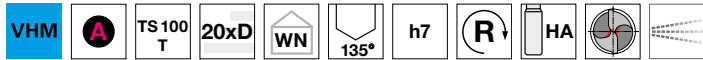
d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
7,540	19/64	8,000	183,000	143,000	36,000
7,800		8,000	183,000	143,000	36,000
7,940	5/16	8,000	183,000	143,000	36,000
8,000		8,000	183,000	143,000	36,000
8,330	21/64	10,000	204,000	160,000	40,000
8,500		10,000	204,000	160,000	40,000
8,730	11/32	10,000	204,000	160,000	40,000
8,800		10,000	204,000	160,000	40,000
9,000		10,000	204,000	160,000	40,000
9,130	23/64	10,000	221,000	177,000	40,000
9,500		10,000	221,000	177,000	40,000
9,520	3/8	10,000	221,000	177,000	40,000
9,800		10,000	221,000	177,000	40,000
9,920	25/64	10,000	221,000	177,000	40,000
10,000		10,000	221,000	177,000	40,000
10,320	13/32	12,000	247,000	198,000	45,000
10,500		12,000	247,000	198,000	45,000
10,720	27/64	12,000	247,000	198,000	45,000
11,000		12,000	247,000	198,000	45,000
11,110	7/16	12,000	263,000	214,000	45,000
11,510	29/64	12,000	263,000	214,000	45,000
11,800		12,000	263,000	214,000	45,000
11,910	15/32	12,000	263,000	214,000	45,000
12,000		12,000	263,000	214,000	45,000
12,300	31/64	14,000	297,000	248,000	45,000
12,500		14,000	297,000	248,000	45,000
12,700	1/2	14,000	297,000	248,000	45,000
13,000		14,000	297,000	248,000	45,000
13,100	33/64	14,000	297,000	248,000	45,000
13,490	17/32	14,000	297,000	248,000	45,000
13,890	35/64	14,000	297,000	248,000	45,000
14,000		14,000	297,000	248,000	45,000
14,290	9/16	16,000	333,000	281,000	48,000
15,000		16,000	333,000	281,000	48,000
15,870	5/8	16,000	333,000	281,000	48,000
16,000		16,000	333,000	281,000	48,000

TS-Drills mit Innenkühlung

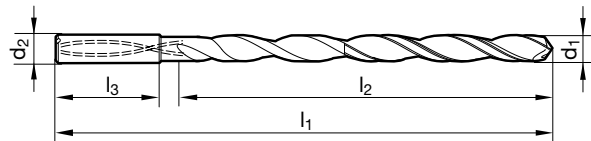
Artikel-Nr. 86511



P	M	K	N	S	H
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Ausspitzung ≥ Ø 3,000 • Kegelmantelschliff • Kopfbeschichtung • Hauptschneidenform konkav • optimierter Nutquerschnitt • maximaler Kühlkanalquerschnitt • Kühlmitteldruck beachten
Bau- und Einsatzstähle • Automatenstähle, Vergütungsstähle • legierte Stähle bis 1200 N/mm² • rostfreie Stähle • Gusswerkstoffe



d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	110,000	70,000	36,000
3,100		6,000	123,000	83,000	36,000
3,170	1/8	6,000	123,000	83,000	36,000
3,200		6,000	123,000	83,000	36,000
3,300		6,000	123,000	83,000	36,000
3,500		6,000	136,000	96,000	36,000
3,570	9/64	6,000	136,000	96,000	36,000
3,700		6,000	136,000	96,000	36,000
3,800		6,000	136,000	96,000	36,000
3,970	5/32	6,000	136,000	96,000	36,000
4,000		6,000	136,000	96,000	36,000
4,200		6,000	158,000	118,000	36,000
4,300		6,000	158,000	118,000	36,000
4,370	11/64	6,000	158,000	118,000	36,000
4,500		6,000	158,000	118,000	36,000
4,600		6,000	158,000	118,000	36,000
4,760	3/16	6,000	158,000	118,000	36,000
4,800		6,000	158,000	118,000	36,000
5,000		6,000	158,000	118,000	36,000
5,100		6,000	180,000	140,000	36,000
5,160	13/64	6,000	180,000	140,000	36,000
5,410		6,000	180,000	140,000	36,000
5,500		6,000	180,000	140,000	36,000
5,560	7/32	6,000	180,000	140,000	36,000
5,800		6,000	180,000	140,000	36,000
5,950	15/64	6,000	180,000	140,000	36,000
6,000		6,000	180,000	140,000	36,000
6,350	1/4	8,000	202,000	162,000	36,000
6,500		8,000	202,000	162,000	36,000
6,750	17/64	8,000	202,000	162,000	36,000
6,800		8,000	202,000	162,000	36,000
7,000		8,000	202,000	162,000	36,000
7,140	9/32	8,000	223,000	183,000	36,000
7,500		8,000	223,000	183,000	36,000
7,540	19/64	8,000	223,000	183,000	36,000
7,800		8,000	223,000	183,000	36,000

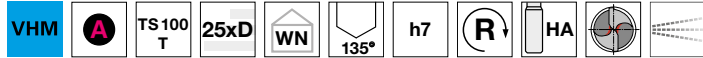
d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
7,940	5/16	8,000	223,000	183,000	36,000
8,000		8,000	223,000	183,000	36,000
8,330	21/64	10,000	249,000	205,000	40,000
8,500		10,000	249,000	205,000	40,000
8,730	11/32	10,000	249,000	205,000	40,000
8,800		10,000	249,000	205,000	40,000
9,000		10,000	249,000	205,000	40,000
9,130	23/64	10,000	271,000	227,000	40,000
9,520	3/8	10,000	271,000	227,000	40,000
9,920	25/64	10,000	271,000	227,000	40,000
10,000		10,000	271,000	227,000	40,000
10,200		12,000	302,000	253,000	45,000
10,320	13/32	12,000	302,000	253,000	45,000
10,500		12,000	302,000	253,000	45,000
10,720	27/64	12,000	302,000	253,000	45,000
11,000		12,000	302,000	253,000	45,000
11,110	7/16	12,000	323,000	274,000	45,000
11,510	29/64	12,000	323,000	274,000	45,000
11,800		12,000	323,000	274,000	45,000
11,910	15/32	12,000	323,000	274,000	45,000
12,000		12,000	323,000	274,000	45,000
12,300	31/64	14,000	367,000	318,000	45,000
12,500		14,000	367,000	318,000	45,000
12,700	1/2	14,000	367,000	318,000	45,000
13,000		14,000	367,000	318,000	45,000
13,100	33/64	14,000	367,000	318,000	45,000
13,490	17/32	14,000	367,000	318,000	45,000
13,890	35/64	14,000	367,000	318,000	45,000
14,000		14,000	367,000	318,000	45,000
14,290	9/16	16,000	413,000	361,000	48,000
15,000		16,000	413,000	361,000	48,000
15,870	5/8	16,000	413,000	361,000	48,000
16,000		16,000	413,000	361,000	48,000

TS-Drills mit Innenkühlung

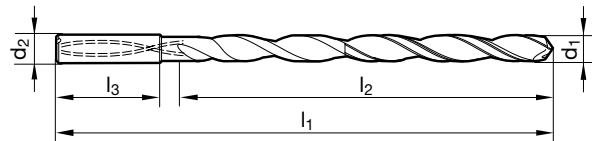
Artikel-Nr. 86512



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Ausspitzung ≥ Ø 3,000 • Kegelmantelschliff • Kopfbeschichtung • Hauptschneidenform konkav • optimierter Nutquerschnitt • maximaler Kühlkanalquerschnitt • Kühlmitteldruck beachten
Bau- und Einsatzstähle • Automatenstähle, Vergütungsstähle • legierte Stähle bis 1200 N/mm² • rostfreie Stähle • Gusswerkstoffe



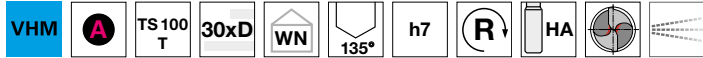
d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	125,000	85,000	36,000
3,100		6,000	141,000	101,000	36,000
3,170	1/8	6,000	141,000	101,000	36,000
3,200		6,000	141,000	101,000	36,000
3,300		6,000	141,000	101,000	36,000
3,500		6,000	156,000	116,000	36,000
3,570	9/64	6,000	156,000	116,000	36,000
3,700		6,000	156,000	116,000	36,000
3,800		6,000	156,000	116,000	36,000
3,970	5/32	6,000	156,000	116,000	36,000
4,000		6,000	156,000	116,000	36,000
4,200		6,000	183,000	143,000	36,000
4,300		6,000	183,000	143,000	36,000
4,370	11/64	6,000	183,000	143,000	36,000
4,500		6,000	183,000	143,000	36,000
4,600		6,000	183,000	143,000	36,000
4,760	3/16	6,000	183,000	143,000	36,000
4,800		6,000	183,000	143,000	36,000
5,000		6,000	183,000	143,000	36,000
5,100		6,000	210,000	170,000	36,000
5,160	13/64	6,000	210,000	170,000	36,000
5,410		6,000	210,000	170,000	36,000
5,500		6,000	210,000	170,000	36,000
5,560	7/32	6,000	210,000	170,000	36,000
5,800		6,000	210,000	170,000	36,000
5,950	15/64	6,000	210,000	170,000	36,000
6,000		6,000	210,000	170,000	36,000
6,300		8,000	237,000	197,000	36,000
6,350	1/4	8,000	237,000	197,000	36,000
6,500		8,000	237,000	197,000	36,000
6,750	17/64	8,000	237,000	197,000	36,000
6,800		8,000	237,000	197,000	36,000
7,000		8,000	237,000	197,000	36,000
7,140	9/32	8,000	263,000	223,000	36,000
7,500		8,000	263,000	223,000	36,000
7,540	19/64	8,000	263,000	223,000	36,000

TS-Drills mit Innenkühlung

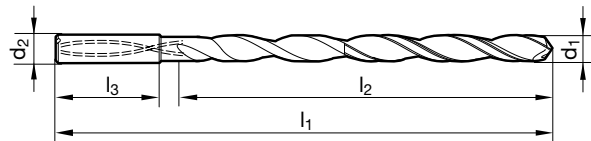
Artikel-Nr. 86513



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Ausspitzung ≥ Ø 3,000 • Kegelmantelschliff • Kopfbeschichtung • Hauptschneidenform konkav • optimierter Nutquerschnitt • maximaler Kühlkanalquerschnitt • Kühlmitteldruck beachten
Bau- und Einsatzstähle • Automatenstähle, Vergütungsstähle • legierte Stähle bis 1200 N/mm² • rostfreie Stähle • Gusswerkstoffe



d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	140,000	100,000	36,000
3,100		6,000	158,000	118,000	36,000
3,170	1/8	6,000	158,000	118,000	36,000
3,200		6,000	158,000	118,000	36,000
3,300		6,000	158,000	118,000	36,000
3,500		6,000	176,000	136,000	36,000
3,570	9/64	6,000	176,000	136,000	36,000
3,700		6,000	176,000	136,000	36,000
3,800		6,000	176,000	136,000	36,000
3,970	5/32	6,000	176,000	136,000	36,000
4,000		6,000	176,000	136,000	36,000
4,200		6,000	208,000	168,000	36,000
4,370	11/64	6,000	208,000	168,000	36,000
4,500		6,000	208,000	168,000	36,000
4,760	3/16	6,000	208,000	168,000	36,000
5,000		6,000	208,000	168,000	36,000
5,100		6,000	240,000	200,000	36,000
5,160	13/64	6,000	240,000	200,000	36,000
5,410		6,000	240,000	200,000	36,000
5,500		6,000	240,000	200,000	36,000
5,560	7/32	6,000	240,000	200,000	36,000
5,950	15/64	6,000	240,000	200,000	36,000
6,000		6,000	240,000	200,000	36,000
6,300		8,000	272,000	232,000	36,000
6,350	1/4	8,000	272,000	232,000	36,000
6,500		8,000	272,000	232,000	36,000
6,750	17/64	8,000	272,000	232,000	36,000
6,800		8,000	272,000	232,000	36,000
7,000		8,000	272,000	232,000	36,000
7,140	9/32	8,000	303,000	263,000	36,000

d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
7,500		8,000	303,000	263,000	36,000
7,540	19/64	8,000	303,000	263,000	36,000
7,940	5/16	8,000	303,000	263,000	36,000
8,000		8,000	303,000	263,000	36,000
8,330	21/64	10,000	339,000	295,000	40,000
8,500		10,000	339,000	295,000	40,000
8,730	11/32	10,000	339,000	295,000	40,000
8,800		10,000	339,000	295,000	40,000
9,000		10,000	339,000	295,000	40,000
9,130	23/64	10,000	371,000	327,000	40,000
9,520	3/8	10,000	371,000	327,000	40,000
9,920	25/64	10,000	371,000	327,000	40,000
10,000		10,000	371,000	327,000	40,000
10,320	13/32	12,000	412,000	363,000	45,000
10,720	27/64	12,000	412,000	363,000	45,000
11,000		12,000	412,000	363,000	45,000
11,110	7/16	12,000	443,000	394,000	45,000
11,510	29/64	12,000	443,000	394,000	45,000
11,910	15/32	12,000	443,000	394,000	45,000
12,000		12,000	443,000	394,000	45,000
12,300	31/64	14,000	507,000	458,000	45,000
12,700	1/2	14,000	507,000	458,000	45,000
13,000		14,000	507,000	458,000	45,000
13,100	33/64	14,000	507,000	458,000	45,000
13,490	17/32	14,000	507,000	458,000	45,000
13,890	35/64	14,000	507,000	458,000	45,000
14,000		14,000	507,000	458,000	45,000



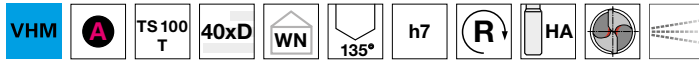
HARTNER

TS-Drills mit Innenkühlung

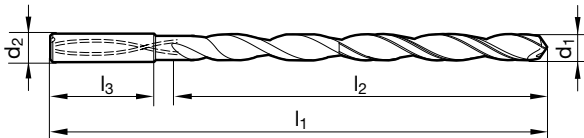
Artikel-Nr. 86514



P	M	K	N	S	H
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Ausspitzung $\geq \varnothing 3,000$ • Kegelmantelanschliff • Kopfbeschichtung • Hauptschneidenform konkav • optimierter Nutquerschnitt
 • maximaler Kühlkanalquerschnitt • Kühlmitteldruck beachten
 Bau- und Einsatzstähle • Automatenstähle, Vergütungsstähle • legierte Stähle bis 1200 N/mm² • rostfreie Stähle • Gusswerkstoffe



d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 h6 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	170,000	130,000	36,000	5,500		6,000	280,000	240,000	36,000
3,100		6,000	193,000	153,000	36,000	5,560	7/32	6,000	300,000	260,000	36,000
3,170	1/8	6,000	193,000	153,000	36,000	5,950	15/64	6,000	300,000	260,000	36,000
3,200		6,000	193,000	153,000	36,000	6,000		6,000	300,000	260,000	36,000
3,300		6,000	193,000	153,000	36,000	6,300		8,000	322,000	282,000	36,000
3,500		6,000	193,000	153,000	36,000	6,350	1/4	8,000	322,000	282,000	36,000
3,570	9/64	6,000	216,000	176,000	36,000	6,500		8,000	322,000	282,000	36,000
3,800		6,000	216,000	176,000	36,000	6,750	17/64	8,000	342,000	302,000	36,000
3,970	5/32	6,000	216,000	176,000	36,000	6,800		8,000	342,000	302,000	36,000
4,000		6,000	216,000	176,000	36,000	7,000		8,000	342,000	302,000	36,000
4,200		6,000	238,000	198,000	36,000	7,140	9/32	8,000	363,000	323,000	36,000
4,370	11/64	6,000	238,000	198,000	36,000	7,500		8,000	363,000	323,000	36,000
4,500		6,000	238,000	198,000	36,000	7,540	19/64	8,000	383,000	343,000	36,000
4,760	3/16	6,000	258,000	218,000	36,000	7,940	5/16	8,000	383,000	343,000	36,000
5,000		6,000	258,000	218,000	36,000	8,000		8,000	383,000	343,000	36,000
5,100		6,000	280,000	240,000	36,000	8,500		10,000	409,000	365,000	40,000
5,160	13/64	6,000	280,000	240,000	36,000	9,000		10,000	429,000	386,000	40,000
5,410		6,000	280,000	240,000	36,000	10,000		10,000	471,000	427,000	40,000