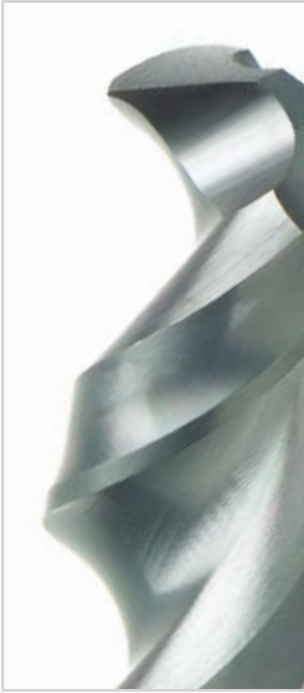


The Right Tool at the Right Time



高性能 HSCo 深孔钻头

高性能 HSCo 深孔钻头

特性和优点

材料

选用 HSCo 含钴高速钢作为刀具基体，由于其较高的红硬性和韧性，可得较好的切削加工性能。

表面处理

对于这一产品系列，无论何种长度标准均可提供光亮表面的钻头。对于长度标准为 DIN 1897、DIN 338 和 DIN 340 的，还可提供带 Smooth-Flow 涂层的。Smooth-Flow 涂层可降低摩擦系数，可得有效的排屑效果，还可得稳定的、较长的刀具寿命。

刀槽几何形状

这种钻头为抛物线槽形设计，加上较大的螺旋角，可增大容屑空间，有利于断屑，并有助于切屑沿刀槽从切削区域排出。这种钻头在加工时不需反复退刀，即可达到较大的钻孔深度，最大可达 10 x D。

心部设计

较厚的心部设计，可提高钻头的构造强度，这样可有较高的刚性，因此可最大程度地减少钻头的断裂风险。

柄部

所有的型号均为直柄。

长度

可提供公制尺寸钻头，包括短型 (DIN 1897)、普通型 (DIN 338)、长系列 (DIN 340) 和超长系列 (DIN 1869/1、1869/2 和 1869/3)。也提供符合 ANSI 标准的英制尺寸钻头。

钻尖几何形状

顶角为 130° 的特殊钻尖几何形状，可有较好的定心能力，并可减少加工时所需的推力，在整个钻孔深度上都可确保钻削精度。

钻孔深度

钻孔深度分别可达 3 x D (A920、A921)、6 x D (A900、A901)、10 x D (A940、A941) 和 15 x D (A976、A977、A978)。

钻头的夹持

对于此系列中的每种型号，都建议采用 ER 弹簧夹头。

尺寸范围

A920	1.0 - 20.0、1/16 - 1/2"
A921	2.5 - 16.0
A900	1.0 - 20.0、1/16 - 1/2"
A901	1.5 - 16.0
A940	1.0 - 20.0、1/16 - 3/4"
A941	1.0 - 16.0
A976	1.5 - 14.0、1/8 - 1/2"
A977	1.5 - 14.0、1/16 - 11/32"
A978	3.0 - 10.0、1/4"

A921

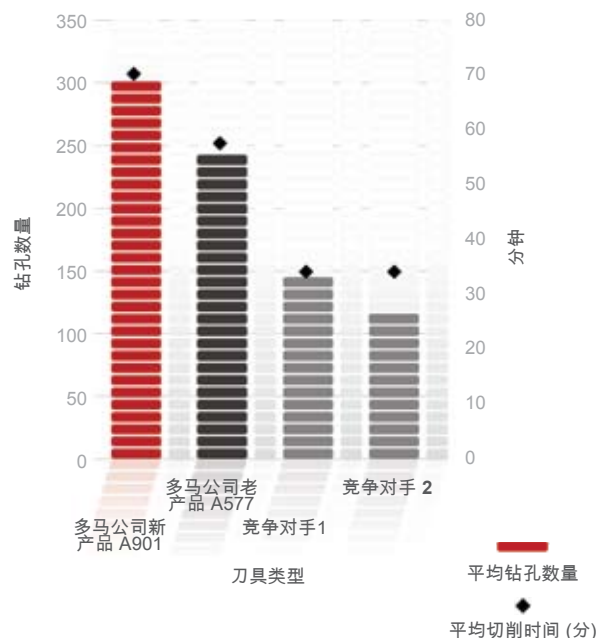
A941



用户可得如下好处

- 在进行深孔钻削时，不需反复退刀即可钻至 $10 \times D$ 的深度 — 可缩短加工时间。
- 在加工范围广泛的工件材料时，都有较高的生产率。
- 由于钻头为抛物线槽型，并带有 Smooth-Flow 涂层，可进行有效的排屑，所以可得到不间断的钻削过程。
- 拥有出色的刀具寿命，尤其是带有 Smooth-Flow 涂层的钻头系列。
- 可得到稳定的钻孔尺寸和钻孔质量。
- 钻削时所需的推力较低，可减少机床功率的要求。

测试结果



此图对以下钻头的磨损情况作了比较，有多马公司带 Smooth-Flow 涂层的新产品 A901、多马公司带 TiAlN 涂层的老产品 A577，以及二个竞争对手的带涂层的钻头。

测试工件材料为 AMG 1.5 (W.nr. 1.2312)，所有测试钻头的直径都是 8 mm，均符合 DIN 338 标准，带 PVD 涂层，钻削深度为 45 mm。

图中显示了到钻头损坏为止所钻的孔数和钻削持续时间。在钻削此工件材料时，若以钻头损坏作为评定标准，则多马公司的新产品 A901 所钻的孔数，是与之最接近的竞争对手钻头所钻孔的二倍。



A900



A901



A940



A920


适用材料分组 (AMG)

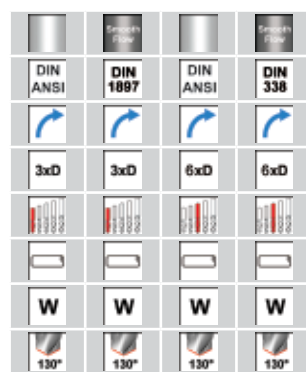
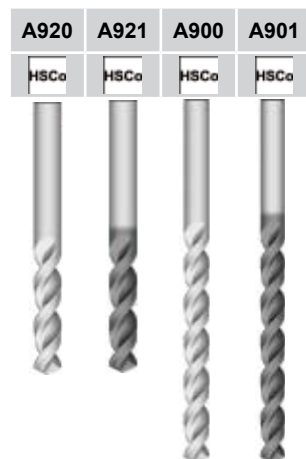
- 性能优异
- 性能良好

实例

40 = 外缘处的切削速度, 米/分 +/- 10%

J = 进给量

 F_n	\varnothing mm											
	1	2	3	4	5	6	8	10	12	15	16	20
A	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110
B	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135
C	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160
D	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188
E	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215
F	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248
G	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280
H	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320
I	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360
J	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405
K	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450
L	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485
M	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520
N	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555
mm/转 +/- 25%												






























1.0 - 20.0 2.5 - 16.0 1.0 - 20.0 1.5 - 16.0

NEW 2009.09 NEW 2009.09 NEW 2009.09 NEW 2009.09

6	8	10	12
■40J ■34J ■32I ■32I ■23E ■19E	■60M ■52M ■53J ■53J ■38G ■30G	■38H ■33H ■26H ■26H ■21E ■16E	■60J ■50J ■44I ■44I ■33G ■26G
■15F ■7F ■9D	■17F ■9F ■11D	■15E ■7E ■9C	■17E ■9E ■11C
●34L ●26L ●26L ●19J ■30G ■18G ■10C ■15I ■9G ■6E	■53L ■42L ■42L ■36J ●48I ●29I ●16E ●24L ●14I ●10G	●24J ●19J ●19J ●14I ■22E ■15E ■6C ■14G ■7G ■6C	■58I ■47I ■34J ■28I ●35G ●24G ●10E ●22I ●11I ●10E
●65H ●66J ●40J ●31G ●75L ■45N ●40N ●36J ●55J ●40H		●65G ●53I ●34H ●30G ●60J ■45N ●40N ●28I ●55I ●40G	●56I ●48I

适用材料分组 (AMG)

		硬度 HB	抗拉强度 N/mm ²
1. 钢	1.1 铁磁性低碳钢	<120	<400
	1.2 结构钢, 表面渗碳钢	<200	<700
	1.3 普通碳钢	<250	<850
	1.4 合金钢	<250	<850
	1.5 合金钢, 淬火回火钢	>250 <350	>850 <1200
	1.6 合金钢, 淬火回火钢	>350	>1200 <1620
	1.7 热处理合金钢	49-55HRC	>1620
	1.8 淬火合金钢, 耐磨钢	55-63HRC	<1960
2. 不锈钢	2.1 易切削不锈钢	<250	<850
	2.2 奥氏体不锈钢	<320	<1100
	2.3 铁素体 + 奥氏体, 马氏体不锈钢	<300	<1000
	2.4 沉淀硬化不锈钢	>320 <410	>1100 <1400
3. 铸铁	3.1 灰铸铁	<150	<500
	3.2 灰铸铁	>150 <300	>500 <1000
	3.3 球墨铸铁, 可锻铸铁	<200	<700
	3.4 球墨铸铁, 可锻铸铁	>200 <300	>700 <1000
4. 钛	4.1 纯钛	<200	<700
	4.2 钛合金	<270	<900
	4.3 钛合金	>270 <350	>900 <1250
5. 镍	5.1 纯镍	<150	<500
	5.2 镍合金	<270	<900
	5.3 镍合金	>270 <350	>900 <1200
6. 铜	6.1 紫铜	<100	<350
	6.2 β 黄铜, 青铜	<200	<700
	6.3 α 黄铜	<200	<700
	6.4 高强度青铜	<470	<1500
7. 铝 镁	7.1 纯铝, 纯镁	<100	<350
	7.2 铝合金, 硅含量<0.5%	<150	<500
	7.3 铝合金, 硅含量>0.5%<10%	<120	<400
	7.4 铝合金, 硅含量>10% 晶须增强铝合金, 镁合金	<120	<400
8. 合成材料	8.1 热塑性塑料	---	---
	8.2 热固性塑料	---	---
	8.3 增强塑料	---	---
9. 硬质材料	9.1 金属陶瓷	<550	<1700
10. 石墨	10.1 标准石墨	---	<100

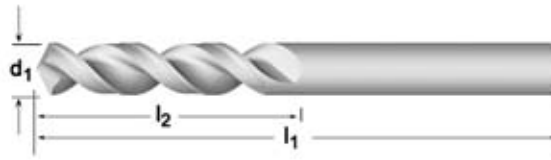
	A940	A941	A976	A977	A978
	HSCo	HSCo	HSCo	HSCo	HSCo
					
					
					
	10XD	10XD	15XD	15XD	15XD
					
	W	W	W	W	W
					
	1.0 - 20.0	1.0 - 16.0	1.5 - 14.0	1.5 - 14.0	3.0 - 10.0
					
	2009.09	2009.09			
	14	16	18	19	19
1.1	■38F	■53G	●31C	●31B	●31A
1.2	■33F	■46G	●26C	●26B	●26A
1.3	■22G	■36G	■22C	■22B	■22A
1.4	■22G	■36G	■22C	■22B	■22A
1.5	■17C	■23D	■12A	■12A	■12A
1.6	■12C	■17D	■10A	■10A	■10A
1.7					
1.8					
2.1	■15C	■17C	●12B	●12B	●12A
2.2	■7E	■9E	●7C	●7B	●7A
2.3	■9B	■11B	●8A	●8A	●8A
2.4					
3.1		■36I			
3.2	●16I	■30I	●23C	●23B	●23A
3.3	●16I	■30I	●16C	●16B	●16A
3.4	●12H	■24H	●11A	●11A	●11A
4.1	■18E	●25F	●15C	●15B	●15A
4.2	■13C	●18D	●11A	●11A	●11A
4.3	■6C	●8D	●5A	●5A	●5A
5.1					
5.2					
5.3					
6.1	●65F				
6.2	●70F				
6.3	●34G	●48H	●30D	●30C	●30B
6.4	●30G	●42H	●27D	●27C	●27B
7.1	●53H				
7.2	■45N				
7.3	●40N				
7.4	●30G	■42H	●27D	●27C	●27B
8.1	●55H				
8.2	●40F				
8.3					
9.1					
10.1					

A920 替代了 A927
 A921 替代了 A597
 A900 替代了 A907
 A901 替代了 A577
 A940 替代了 A916
 A941 替代了 A578

A920

- 短型钻头

NEW
2009.09



A920



■	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	4.1	4.2	4.3	5.1	5.2	5.3	7.2
●	3.1	3.2	3.3	3.4	6.1	6.2	6.3	6.4	7.1	7.3	7.4	8.1	8.2			

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
	1.00	0.0393	6	26	A9201.0
	1.10	0.0433	7	28	A9201.1
	1.20	0.0472	8	30	A9201.2
	1.30	0.0511	8	30	A9201.3
	1.40	0.0551	9	32	A9201.4
	1.50	0.0590	9	32	A9201.5
1/16	1.59	0.0625	16	41	A9201/16
	1.60	0.0629	10	34	A9201.6
	1.70	0.0669	10	34	A9201.7
	1.80	0.0708	11	36	A9201.8
	1.90	0.0748	11	36	A9201.9
5/64	1.98	0.0779	17	43	A9205/64
	2.00	0.0787	12	38	A9202.0
	2.10	0.0826	12	38	A9202.1
	2.20	0.0866	13	40	A9202.2
	2.30	0.0905	13	40	A9202.3
3/32	2.38	0.0937	19	41	A9203/32
	2.40	0.0944	14	43	A9202.4
	2.50	0.0984	14	43	A9202.5
	2.60	0.1023	14	43	A9202.6
	2.70	0.1062	16	46	A9202.7
7/64	2.78	0.1094	21	46	A9207/64
	2.80	0.1102	16	46	A9202.8
	2.90	0.1141	16	46	A9202.9
	3.00	0.1181	16	46	A9203.0
	3.10	0.1220	18	49	A9203.1
1/8	3.18	0.1251	22	48	A9201/8
	3.20	0.1259	18	49	A9203.2
	3.30	0.1299	18	49	A9203.3
	3.40	0.1338	20	52	A9203.4
	3.50	0.1377	20	52	A9203.5
9/64	3.57	0.1405	24	49	A9209/64
	3.60	0.1417	20	52	A9203.6
	3.70	0.1456	20	52	A9203.7
	3.80	0.1496	22	55	A9203.8
	3.90	0.1535	22	55	A9203.9
5/32	3.97	0.1562	25	52	A9205/32
	4.00	0.1574	22	55	A9204.0
	4.10	0.1614	22	55	A9204.1
	4.20	0.1653	22	55	A9204.2

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
	4.30	0.1692	24	58	A9204.3
11/64	4.37	0.1720	27	54	A92011/64
	4.40	0.1732	24	58	A9204.4
	4.50	0.1771	24	58	A9204.5
	4.60	0.1811	24	58	A9204.6
	4.70	0.1850	24	58	A9204.7
3/16	4.76	0.1874	29	56	A9203/16
	4.80	0.1889	26	62	A9204.8
	4.90	0.1929	26	62	A9204.9
	5.00	0.1968	26	62	A9205.0
	5.10	0.2007	26	62	A9205.1
13/64	5.16	0.2031	30	57	A92013/64
	5.20	0.2047	26	62	A9205.2
	5.30	0.2086	26	62	A9205.3
	5.40	0.2125	28	66	A9205.4
	5.50	0.2165	28	66	A9205.5
7/32	5.56	0.2188	32	60	A9207/32
	5.60	0.2204	28	66	A9205.6
	5.70	0.2244	28	66	A9205.7
	5.80	0.2283	28	66	A9205.8
	5.90	0.2322	28	66	A9205.9
15/64	5.95	0.2342	33	62	A92015/64
	6.00	0.2362	28	66	A9206.0
	6.10	0.2401	31	70	A9206.1
	6.20	0.2440	31	70	A9206.2
	6.30	0.2480	31	70	A9206.3
1/4	6.35	0.2500	35	64	A9201/4
	6.40	0.2519	31	70	A9206.4
	6.50	0.2559	31	70	A9206.5
	6.60	0.2598	31	70	A9206.6
	6.70	0.2637	31	70	A9206.7
17/64	6.75	0.2657	37	67	A92017/64
	6.80	0.2677	34	74	A9206.8
	6.90	0.2716	34	74	A9206.9
	7.00	0.2755	34	74	A9207.0
	7.10	0.2795	34	74	A9207.1
9/32	7.14	0.2811	38	68	A9209/32
	7.20	0.2834	34	74	A9207.2
	7.30	0.2874	34	74	A9207.3
	7.40	0.2913	34	74	A9207.4

A920

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
19/64	7.50	0.2952	34	74	A9207.5
	7.54	0.2968	40	70	A92019/64
	7.60	0.2992	37	79	A9207.6
	7.70	0.3031	37	79	A9207.7
	7.80	0.3070	37	79	A9207.8
5/16	7.90	0.3110	37	79	A9207.9
	7.94	0.3125	41	71	A9205/16
	8.00	0.3149	37	79	A9208.0
	8.10	0.3188	37	79	A9208.1
	8.20	0.3228	37	79	A9208.2
21/64	8.30	0.3267	37	79	A9208.3
	8.33	0.3279	43	75	A92021/64
	8.40	0.3307	37	79	A9208.4
	8.50	0.3346	37	79	A9208.5
	8.60	0.3385	40	84	A9208.6
11/32	8.70	0.3425	40	84	A9208.7
	8.73	0.3437	43	76	A92011/32
	8.80	0.3464	40	84	A9208.8
	8.90	0.3503	40	84	A9208.9
	9.00	0.3543	40	84	A9209.0
23/64	9.10	0.3582	40	84	A9209.1
	9.13	0.3594	44	78	A92023/64
	9.20	0.3622	40	84	A9209.2
	9.30	0.3661	40	84	A9209.3
	9.40	0.3700	40	84	A9209.4
3/8	9.50	0.3740	40	84	A9209.5
	9.53	0.3751	46	79	A9203/8
	9.60	0.3779	43	89	A9209.6
	9.70	0.3818	43	89	A9209.7
	9.80	0.3858	43	89	A9209.8
25/64	9.90	0.3897	43	89	A9209.9
	9.92	0.3905	48	83	A92025/64
	10.00	0.3937	43	89	A92010.0
	10.20	0.4015	43	89	A92010.2

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
13/32	10.30	0.4055	43	89	A92010.3
	10.32	0.4062	49	84	A92013/32
	10.40	0.4094	43	89	A92010.4
27/64	10.50	0.4133	43	89	A92010.5
	10.72	0.4220	51	86	A92027/64
	10.80	0.4251	47	95	A92010.8
7/16	11.00	0.4330	47	95	A92011.0
	11.11	0.4374	52	87	A9207/16
	11.20	0.4409	47	95	A92011.2
29/64	11.50	0.4527	47	95	A92011.5
	11.51	0.4531	54	90	A92029/64
	11.80	0.4645	47	95	A92011.8
15/32	11.91	0.4688	54	92	A92015/32
	12.00	0.4724	51	102	A92012.0
	12.20	0.4803	51	102	A92012.2
31/64	12.30	0.4842	56	94	A92031/64
	12.50	0.4921	51	102	A92012.5
	12.70	0.5000	57	95	A9201/2
1/2	12.80	0.5039	51	102	A92012.8
	13.00	0.5118	51	102	A92013.0
	13.50	0.5314	54	107	A92013.5
	14.00	0.5511	54	107	A92014.0
	14.50	0.5708	56	111	A92014.5
	15.00	0.5905	56	111	A92015.0
	15.50	0.6102	58	115	A92015.5
	16.00	0.6299	58	115	A92016.0
	17.00	0.6692	60	119	A92017.0
	17.50	0.6889	62	123	A92017.5
	18.00	0.7086	62	123	A92018.0
	19.00	0.7480	64	127	A92019.0
	20.00	0.7874	66	131	A92020.0

A921

- 短型钻头

NEW
2009.09



A921



■	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	3.1	3.2	3.3	3.4	7.4
●	4.1	4.2	4.3	5.1	5.2	5.3	6.3	6.4						

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
2.50	0.0984	14	43	A9212.5
2.60	0.1023	14	43	A9212.6
3.00	0.1181	16	46	A9213.0
3.10	0.1220	18	49	A9213.1
3.20	0.1259	18	49	A9213.2
3.30	0.1299	18	49	A9213.3
3.40	0.1338	20	52	A9213.4
3.50	0.1377	20	52	A9213.5
3.60	0.1417	20	52	A9213.6
3.70	0.1456	20	52	A9213.7
3.80	0.1496	22	55	A9213.8
3.90	0.1535	22	55	A9213.9
4.00	0.1574	22	55	A9214.0
4.10	0.1614	22	55	A9214.1
4.20	0.1653	22	55	A9214.2
4.30	0.1692	24	58	A9214.3
4.40	0.1732	24	58	A9214.4
4.50	0.1771	24	58	A9214.5
4.60	0.1811	24	58	A9214.6
4.70	0.1850	24	58	A9214.7
4.80	0.1889	26	62	A9214.8
4.90	0.1929	26	62	A9214.9
5.00	0.1968	26	62	A9215.0
5.10	0.2007	26	62	A9215.1
5.20	0.2047	26	62	A9215.2
5.30	0.2086	26	62	A9215.3
5.40	0.2125	28	66	A9215.4
5.50	0.2165	28	66	A9215.5
5.60	0.2204	28	66	A9215.6
5.70	0.2244	28	66	A9215.7
5.80	0.2283	28	66	A9215.8
5.90	0.2322	28	66	A9215.9
6.00	0.2362	28	66	A9216.0
6.10	0.2401	31	70	A9216.1
6.20	0.2440	31	70	A9216.2
6.30	0.2480	31	70	A9216.3
6.40	0.2519	31	70	A9216.4
6.50	0.2559	31	70	A9216.5
6.60	0.2598	31	70	A9216.6
6.70	0.2637	31	70	A9216.7

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
6.80	0.2677	34	74	A9216.8
6.90	0.2716	34	74	A9216.9
7.00	0.2755	34	74	A9217.0
7.10	0.2795	34	74	A9217.1
7.20	0.2834	34	74	A9217.2
7.30	0.2874	34	74	A9217.3
7.40	0.2913	34	74	A9217.4
7.50	0.2952	34	74	A9217.5
7.60	0.2992	37	79	A9217.6
7.70	0.3031	37	79	A9217.7
7.80	0.3070	37	79	A9217.8
7.90	0.3110	37	79	A9217.9
8.00	0.3149	37	79	A9218.0
8.10	0.3188	37	79	A9218.1
8.20	0.3228	37	79	A9218.2
8.30	0.3267	37	79	A9218.3
8.40	0.3307	37	79	A9218.4
8.50	0.3346	37	79	A9218.5
8.60	0.3385	40	84	A9218.6
8.70	0.3425	40	84	A9218.7
8.80	0.3464	40	84	A9218.8
8.90	0.3503	40	84	A9218.9
9.00	0.3543	40	84	A9219.0
9.10	0.3582	40	84	A9219.1
9.20	0.3622	40	84	A9219.2
9.30	0.3661	40	84	A9219.3
9.40	0.3700	40	84	A9219.4
9.50	0.3740	40	84	A9219.5
9.60	0.3779	43	89	A9219.6
9.70	0.3818	43	89	A9219.7
9.80	0.3858	43	89	A9219.8
9.90	0.3897	43	89	A9219.9
10.00	0.3937	43	89	A92110.0
10.20	0.4015	43	89	A92110.2
10.30	0.4055	43	89	A92110.3
10.40	0.4094	43	89	A92110.4
10.50	0.4133	43	89	A92110.5
10.80	0.4251	47	95	A92110.8
11.00	0.4330	47	95	A92111.0
11.20	0.4409	47	95	A92111.2

A921

d_1 $\varnothing h_3$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
11.50	0.4527	47	95	A92111.5
11.80	0.4645	47	95	A92111.8
12.00	0.4724	51	102	A92112.0
12.20	0.4803	51	102	A92112.2
12.50	0.4921	51	102	A92112.5
12.80	0.5039	51	102	A92112.8
13.00	0.5118	51	102	A92113.0
13.50	0.5314	54	107	A92113.5

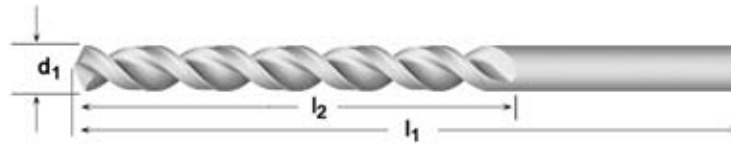
d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
14.00	0.5511	54	107	A92114.0
14.50	0.5708	56	111	A92114.5
15.00	0.5905	56	111	A92115.0
15.50	0.6102	58	115	A92115.5
16.00	0.6299	58	115	A92116.0

A900

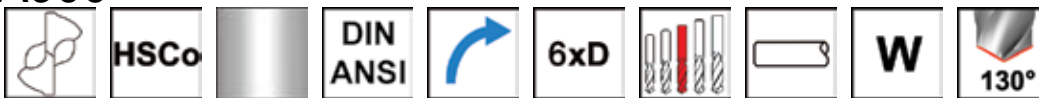
- 普通长度钻头

NEW

2009.09



A900



■	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	4.1	4.2	4.3	5.1	5.2	5.3	7.2
●	3.1	3.2	3.3	3.4	6.1	6.2	6.3	6.4	7.1	7.3	7.4	8.1	8.2			

d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code	d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
	1.00	0.0393	12	34	A9001.0		4.30	0.1692	47	80	A9004.3
	1.10	0.0433	14	36	A9001.1	11/64	4.37	0.1720	54	83	A90011/64
	1.20	0.0472	16	38	A9001.2		4.40	0.1732	47	80	A9004.4
	1.30	0.0511	16	38	A9001.3		4.50	0.1771	47	80	A9004.5
	1.40	0.0551	18	40	A9001.4		4.60	0.1811	47	80	A9004.6
	1.50	0.0590	18	40	A9001.5		4.70	0.1850	47	80	A9004.7
1/16	1.59	0.0625	22	48	A9001/16	3/16	4.76	0.1874	59	89	A9003/16
	1.60	0.0629	20	43	A9001.6		4.80	0.1889	52	86	A9004.8
	1.70	0.0669	20	43	A9001.7		4.90	0.1929	52	86	A9004.9
	1.80	0.0708	22	46	A9001.8		5.00	0.1968	52	86	A9005.0
	1.90	0.0748	22	46	A9001.9		5.10	0.2007	52	86	A9005.1
5/64	1.98	0.0779	25	51	A9005/64	N7	5.11	0.2010	62	92	A900N7
	2.00	0.0787	24	49	A9002.0	13/64	5.16	0.2031	62	92	A90013/64
	2.10	0.0826	24	49	A9002.1		5.20	0.2047	52	86	A9005.2
	2.20	0.0866	27	53	A9002.2		5.30	0.2086	52	86	A9005.3
	2.30	0.0905	27	53	A9002.3		5.40	0.2125	57	93	A9005.4
3/32	2.38	0.0937	32	57	A9003/32		5.50	0.2165	57	93	A9005.5
	2.40	0.0944	30	57	A9002.4	7/32	5.56	0.2188	64	95	A9007/32
	2.50	0.0984	30	57	A9002.5		5.60	0.2204	57	93	A9005.6
	2.60	0.1023	30	57	A9002.6		5.70	0.2244	57	93	A9005.7
7/64	2.70	0.1062	33	61	A9002.7		5.80	0.2283	57	93	A9005.8
	2.78	0.1094	38	67	A9007/64		5.90	0.2322	57	93	A9005.9
	2.80	0.1102	33	61	A9002.8	15/64	5.95	0.2342	67	98	A90015/64
	2.90	0.1141	33	61	A9002.9		6.00	0.2362	57	93	A9006.0
	3.00	0.1181	33	61	A9003.0		6.10	0.2401	63	101	A9006.1
	3.10	0.1220	36	65	A9003.1		6.20	0.2440	63	101	A9006.2
1/8	3.18	0.1251	41	70	A9001/8		6.30	0.2480	63	101	A9006.3
	3.20	0.1259	36	65	A9003.2	1/4	6.35	0.2500	70	102	A9001/4
	3.30	0.1299	36	65	A9003.3		6.40	0.2519	63	101	A9006.4
	3.40	0.1338	39	70	A9003.4		6.50	0.2559	63	101	A9006.5
	3.50	0.1377	39	70	A9003.5	F	6.53	0.2570	73	105	A900F
9/64	3.57	0.1405	44	73	A9009/64		6.60	0.2598	63	101	A9006.6
	3.60	0.1417	39	70	A9003.6		6.70	0.2637	63	101	A9006.7
	3.70	0.1456	39	70	A9003.7	17/64	6.75	0.2657	73	105	A90017/64
	3.80	0.1496	43	75	A9003.8		6.80	0.2677	69	109	A9006.8
	3.90	0.1535	43	75	A9003.9		6.90	0.2716	69	109	A9006.9
5/32	3.97	0.1562	51	79	A9005/32	I	6.91	0.2720	73	105	A900I
	4.00	0.1574	43	75	A9004.0		7.00	0.2755	69	109	A9007.0
	4.10	0.1614	43	75	A9004.1		7.10	0.2795	69	109	A9007.1
	4.20	0.1653	43	75	A9004.2	9/32	7.14	0.2811	75	108	A9009/32

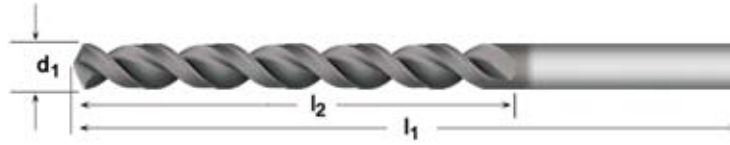
A900

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
	7.20	0.2834	69	109	A9007.2
	7.30	0.2874	69	109	A9007.3
	7.40	0.2913	69	109	A9007.4
	7.50	0.2952	69	109	A9007.5
19/64	7.54	0.2968	78	111	A90019/64
	7.60	0.2992	75	117	A9007.6
	7.70	0.3031	75	117	A9007.7
	7.80	0.3070	75	117	A9007.8
	7.90	0.3110	75	117	A9007.9
5/16	7.94	0.3125	81	114	A9005/16
	8.00	0.3149	75	117	A9008.0
	8.10	0.3188	75	117	A9008.1
	8.20	0.3228	75	117	A9008.2
	8.30	0.3267	75	117	A9008.3
21/64	8.33	0.3279	84	117	A90021/64
	8.40	0.3307	75	117	A9008.4
Q	8.43	0.3320	87	121	A900Q
	8.50	0.3346	75	117	A9008.5
	8.60	0.3385	81	125	A9008.6
R	8.61	0.3390	87	121	A900R
	8.70	0.3425	81	125	A9008.7
11/32	8.73	0.3437	87	121	A90011/32
	8.80	0.3464	81	125	A9008.8
	8.90	0.3503	81	125	A9008.9
	9.00	0.3543	81	125	A9009.0
	9.10	0.3582	81	125	A9009.1
23/64	9.13	0.3594	89	124	A90023/64
	9.20	0.3622	81	125	A9009.2
	9.30	0.3661	81	125	A9009.3
	9.40	0.3700	81	125	A9009.4
	9.50	0.3740	81	125	A9009.5
3/8	9.53	0.3751	92	127	A9003/8
	9.60	0.3779	87	133	A9009.6
	9.70	0.3818	87	133	A9009.7
	9.80	0.3858	87	133	A9009.8
	9.90	0.3897	87	133	A9009.9

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
25/64	9.92	0.3905	95	130	A90025/64
	10.00	0.3937	87	133	A90010.0
	10.20	0.4015	87	133	A90010.2
	10.30	0.4055	87	133	A90010.3
13/32	10.32	0.4062	98	133	A90013/32
	10.40	0.4094	87	133	A90010.4
	10.50	0.4133	87	133	A90010.5
27/64	10.72	0.4220	100	137	A90027/64
	10.80	0.4251	94	142	A90010.8
	11.00	0.4330	94	142	A90011.0
7/16	11.11	0.4374	103	140	A9007/16
	11.20	0.4409	94	142	A90011.2
	11.50	0.4527	94	142	A90011.5
29/64	11.51	0.4531	106	143	A90029/64
	11.80	0.4645	94	142	A90011.8
15/32	11.91	0.4688	110	146	A90015/32
	12.00	0.4724	101	151	A90012.0
	12.20	0.4803	101	151	A90012.2
31/64	12.30	0.4842	111	149	A90031/64
	12.50	0.4921	101	151	A90012.5
1/2	12.70	0.5000	114	152	A9001/2
	12.80	0.5039	101	151	A90012.8
	13.00	0.5118	101	151	A90013.0
	13.50	0.5314	108	160	A90013.5
	14.00	0.5511	108	160	A90014.0
	14.50	0.5708	114	169	A90014.5
	15.00	0.5905	114	169	A90015.0
	15.50	0.6102	120	178	A90015.5
	16.00	0.6299	120	178	A90016.0
	17.00	0.6693	125	184	A90017.0
	17.50	0.6890	130	191	A90017.5
	18.00	0.7087	130	191	A90018.0
	19.00	0.7480	135	198	A90019.0
	20.00	0.7874	140	205	A90020.0

A901

- 普通长度钻头



NEW
2009.09

A901



■	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	3.1	3.2	3.3	3.4	7.4
●	4.1	4.2	4.3	5.1	5.2	5.3	6.3	6.4						

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
1.50	0.0590	18	40	A9011.5
2.00	0.0787	24	49	A9012.0
2.50	0.0984	30	57	A9012.5
2.60	0.1023	30	57	A9012.6
3.00	0.1181	33	61	A9013.0
3.10	0.1220	36	65	A9013.1
3.20	0.1259	36	65	A9013.2
3.30	0.1299	36	65	A9013.3
3.40	0.1338	39	70	A9013.4
3.50	0.1377	39	70	A9013.5
3.60	0.1417	39	70	A9013.6
3.70	0.1456	39	70	A9013.7
3.80	0.1496	43	75	A9013.8
3.90	0.1535	43	75	A9013.9
4.00	0.1574	43	75	A9014.0
4.10	0.1614	43	75	A9014.1
4.20	0.1653	43	75	A9014.2
4.30	0.1692	47	80	A9014.3
4.40	0.1732	47	80	A9014.4
4.50	0.1771	47	80	A9014.5
4.60	0.1811	47	80	A9014.6
4.70	0.1850	47	80	A9014.7
4.80	0.1889	52	86	A9014.8
4.90	0.1929	52	86	A9014.9
5.00	0.1968	52	86	A9015.0
5.10	0.2007	52	86	A9015.1
5.20	0.2047	52	86	A9015.2
5.30	0.2086	52	86	A9015.3
5.40	0.2125	57	93	A9015.4
5.50	0.2165	57	93	A9015.5
5.60	0.2204	57	93	A9015.6
5.70	0.2244	57	93	A9015.7
5.80	0.2283	57	93	A9015.8
5.90	0.2322	57	93	A9015.9
6.00	0.2362	57	93	A9016.0
6.10	0.2401	63	101	A9016.1
6.20	0.2440	63	101	A9016.2
6.30	0.2480	63	101	A9016.3
6.40	0.2519	63	101	A9016.4
6.50	0.2559	63	101	A9016.5

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
6.60	0.2598	63	101	A9016.6
6.70	0.2637	63	101	A9016.7
6.80	0.2677	69	109	A9016.8
6.90	0.2716	69	109	A9016.9
7.00	0.2755	69	109	A9017.0
7.10	0.2795	69	109	A9017.1
7.20	0.2834	69	109	A9017.2
7.30	0.2874	69	109	A9017.3
7.40	0.2913	69	109	A9017.4
7.50	0.2952	69	109	A9017.5
7.60	0.2992	75	117	A9017.6
7.70	0.3031	75	117	A9017.7
7.80	0.3070	75	117	A9017.8
7.90	0.3110	75	117	A9017.9
8.00	0.3149	75	117	A9018.0
8.10	0.3188	75	117	A9018.1
8.20	0.3228	75	117	A9018.2
8.30	0.3267	75	117	A9018.3
8.40	0.3307	75	117	A9018.4
8.50	0.3346	75	117	A9018.5
8.60	0.3385	81	125	A9018.6
8.70	0.3425	81	125	A9018.7
8.80	0.3464	81	125	A9018.8
8.90	0.3503	81	125	A9018.9
9.00	0.3543	81	125	A9019.0
9.10	0.3582	81	125	A9019.1
9.20	0.3622	81	125	A9019.2
9.30	0.3661	81	125	A9019.3
9.40	0.3700	81	125	A9019.4
9.50	0.3740	81	125	A9019.5
9.60	0.3779	87	133	A9019.6
9.70	0.3818	87	133	A9019.7
9.80	0.3858	87	133	A9019.8
9.90	0.3897	87	133	A9019.9
10.00	0.3937	87	133	A90110.0
10.20	0.4015	87	133	A90110.2
10.30	0.4055	87	133	A90110.3
10.40	0.4094	87	133	A90110.4
10.50	0.4133	87	133	A90110.5
10.80	0.4251	94	142	A90110.8

A901

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
11.00	0.4330	94	142	A90111.0
11.20	0.4409	94	142	A90111.2
11.50	0.4527	94	142	A90111.5
11.80	0.4645	94	142	A90111.8
12.00	0.4724	101	151	A90112.0
12.20	0.4803	101	151	A90112.2
12.50	0.4921	101	151	A90112.5
12.80	0.5039	101	151	A90112.8

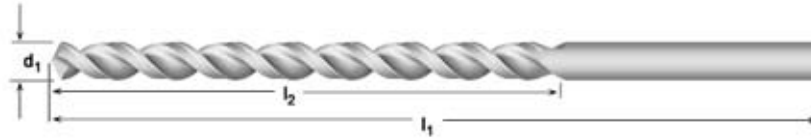
d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
13.00	0.5118	101	151	A90113.0
13.50	0.5314	108	160	A90113.5
14.00	0.5511	108	160	A90114.0
14.50	0.5708	114	169	A90114.5
15.00	0.5905	114	169	A90115.0
15.50	0.6102	120	178	A90115.5
16.00	0.6299	120	178	A90116.0

A940

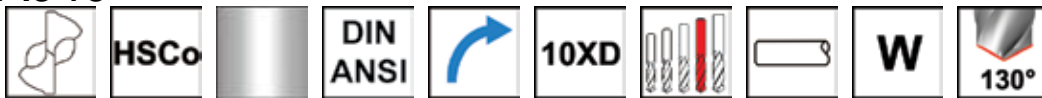
- 长系列钻头

NEW

2009.09



A940



■	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	4.1	4.2	4.3	7.2
●	3.2	3.3	3.4	6.1	6.2	6.3	6.4	7.1	7.3	7.4	8.1	8.2	

d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
	1.00	0.0393	33	56	A9401.0
	1.10	0.0433	37	60	A9401.1
	1.20	0.0472	41	65	A9401.2
	1.30	0.0511	41	65	A9401.3
	1.40	0.0551	45	70	A9401.4
	1.50	0.0590	45	70	A9401.5
1/16	1.59	0.0625	44	76	A9401/16
	1.60	0.0629	50	76	A9401.6
	1.70	0.0669	50	76	A9401.7
	1.80	0.0708	53	80	A9401.8
	1.90	0.0748	53	80	A9401.9
5/64	1.98	0.0779	51	95	A9405/64
	2.00	0.0787	56	85	A9402.0
	2.10	0.0826	56	85	A9402.1
	2.20	0.0866	59	90	A9402.2
	2.30	0.0905	59	90	A9402.3
3/32	2.38	0.0937	57	108	A9403/32
	2.40	0.0944	62	95	A9402.4
	2.50	0.0984	62	95	A9402.5
	2.60	0.1023	62	95	A9402.6
	2.70	0.1062	66	100	A9402.7
7/64	2.78	0.1094	64	117	A9407/64
	2.80	0.1102	66	100	A9402.8
	2.90	0.1141	66	100	A9402.9
	3.00	0.1181	66	100	A9403.0
	3.10	0.1220	69	106	A9403.1
1/8	3.18	0.1251	70	130	A9401/8
	3.20	0.1259	69	106	A9403.2
	3.30	0.1299	69	106	A9403.3
	3.40	0.1338	73	112	A9403.4
	3.50	0.1377	73	112	A9403.5
9/64	3.57	0.1405	76	137	A9409/64
	3.60	0.1417	73	112	A9403.6
	3.70	0.1456	73	112	A9403.7
	3.80	0.1496	78	119	A9403.8
	3.90	0.1535	78	119	A9403.9
5/32	3.97	0.1562	76	137	A9405/32
	4.00	0.1574	78	119	A9404.0
	4.10	0.1614	78	119	A9404.1
	4.20	0.1653	78	119	A9404.2

d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
	4.30	0.1692	82	126	A9404.3
11/64	4.37	0.1720	86	146	A94011/64
	4.40	0.1732	82	126	A9404.4
	4.50	0.1771	82	126	A9404.5
	4.60	0.1811	82	126	A9404.6
	4.70	0.1850	82	126	A9404.7
3/16	4.76	0.1874	86	146	A9403/16
	4.80	0.1889	87	132	A9404.8
	4.90	0.1929	87	132	A9404.9
	5.00	0.1968	87	132	A9405.0
	5.10	0.2007	87	132	A9405.1
13/64	5.16	0.2031	92	152	A94013/64
	5.20	0.2047	87	132	A9405.2
	5.30	0.2086	87	132	A9405.3
	5.40	0.2125	91	139	A9405.4
	5.50	0.2165	91	139	A9405.5
7/32	5.56	0.2188	92	152	A9407/32
	5.60	0.2204	91	139	A9405.6
	5.70	0.2244	91	139	A9405.7
	5.80	0.2283	91	139	A9405.8
	5.90	0.2322	91	139	A9405.9
15/64	5.95	0.2342	95	156	A94015/64
	6.00	0.2362	91	139	A9406.0
	6.10	0.2401	97	148	A9406.1
	6.20	0.2440	97	148	A9406.2
	6.30	0.2480	97	148	A9406.3
1/4	6.35	0.2500	95	156	A9401/4
	6.40	0.2519	97	148	A9406.4
	6.50	0.2559	97	148	A9406.5
	6.60	0.2598	97	148	A9406.6
	6.70	0.2637	97	148	A9406.7
17/64	6.75	0.2657	98	159	A94017/64
	6.80	0.2677	102	156	A9406.8
	6.90	0.2716	102	156	A9406.9
	7.00	0.2755	102	156	A9407.0
	7.10	0.2795	102	156	A9407.1
9/32	7.14	0.2811	98	159	A9409/32
	7.20	0.2834	102	156	A9407.2
	7.30	0.2874	102	156	A9407.3
	7.40	0.2913	102	156	A9407.4

A940

d ₁ Øh ₃ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
19/64	7.50	0.2952	102	156	A9407.5
	7.54	0.2968	102	162	A94019/64
	7.60	0.2992	109	165	A9407.6
	7.70	0.3031	109	165	A9407.7
	7.80	0.3070	109	165	A9407.8
5/16	7.90	0.3110	109	165	A9407.9
	7.94	0.3125	102	162	A9405/16
	8.00	0.3149	109	165	A9408.0
	8.10	0.3188	109	165	A9408.1
	8.20	0.3228	109	165	A9408.2
21/64	8.30	0.3267	109	165	A9408.3
	8.33	0.3279	105	165	A94021/64
	8.40	0.3307	109	165	A9408.4
	8.50	0.3346	109	165	A9408.5
	8.60	0.3385	115	175	A9408.6
11/32	8.70	0.3425	115	175	A9408.7
	8.73	0.3437	105	165	A94011/32
	8.80	0.3464	115	175	A9408.8
	8.90	0.3503	115	175	A9408.9
	9.00	0.3543	115	175	A9409.0
23/64	9.10	0.3582	115	175	A9409.1
	9.13	0.3594	108	171	A94023/64
	9.20	0.3622	115	175	A9409.2
	9.30	0.3661	115	175	A9409.3
	9.40	0.3700	115	175	A9409.4
3/8	9.50	0.3740	115	175	A9409.5
	9.53	0.3751	108	171	A9403/8
	9.60	0.3779	121	184	A9409.6
	9.70	0.3818	121	184	A9409.7
	9.80	0.3858	121	184	A9409.8
25/64	9.90	0.3897	121	184	A9409.9
	9.92	0.3905	111	178	A94025/64
	10.00	0.3937	121	184	A94010.0
	10.20	0.4015	121	184	A94010.2
	10.30	0.4055	121	184	A94010.3
13/32	10.32	0.4062	111	178	A94013/32
	10.40	0.4094	121	184	A94010.4
	10.50	0.4133	121	184	A94010.5
27/64	10.72	0.4220	117	184	A94027/64
	10.80	0.4251	128	195	A94010.8

d ₁ Øh ₃ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
7/16	11.00	0.4330	128	195	A94011.0
	11.11	0.4374	117	184	A9407/16
	11.20	0.4409	128	195	A94011.2
	11.50	0.4527	128	195	A94011.5
	11.51	0.4531	121	190	A94029/64
29/64	11.80	0.4645	128	195	A94011.8
	11.91	0.4688	121	190	A94015/32
	12.00	0.4724	134	205	A94012.0
15/32	12.20	0.4803	134	205	A94012.2
	12.30	0.4842	121	197	A94031/64
	12.50	0.4921	134	205	A94012.5
	12.70	0.5000	121	197	A9401/2
	12.80	0.5039	134	205	A94012.8
33/64	13.00	0.5118	134	205	A94013.0
	13.10	0.5156	121	203	A94033/64
	13.49	0.5312	121	203	A94017/32
	13.50	0.5314	140	214	A94013.5
	14.00	0.5511	140	214	A94014.0
9/16	14.29	0.5625	124	210	A9409/16
	14.50	0.5708	144	220	A94014.5
	14.68	0.5781	124	222	A94037/64
37/64	15.00	0.5905	144	220	A94015.0
	15.08	0.5938	124	222	A94019/32
	15.50	0.6102	149	227	A94015.5
5/8	15.88	0.6250	124	222	A9405/8
	16.00	0.6299	149	227	A94016.0
	16.50	0.6496	154	235	A94016.5
21/32	16.67	0.6562	130	229	A94021/32
	17.00	0.6693	154	235	A94017.0
	17.46	0.6875	137	235	A94011/16
11/16	17.50	0.6890	158	241	A94017.5
	17.86	0.7031	143	241	A94045/64
	18.00	0.7087	158	241	A94018.0
23/32	18.27	0.7188	143	241	A94023/32
	18.65	0.7344	149	248	A94047/64
	19.00	0.7480	162	247	A94019.0
3/4	19.05	0.75	149	248	A9403/4
	20.00	0.7874	166	254	A94020.0

A941

- 长系列钻头

NEW
2009.09



A941



- 1.1 1.2 1.3 1.4 1.5 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 7.4
- 4.1 4.2 4.3 6.3 6.4

d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
1.00	0.0393	33	56	A9411.0
1.50	0.0590	45	70	A9411.5
2.00	0.0787	56	85	A9412.0
2.50	0.0984	62	95	A9412.5
3.00	0.1181	66	100	A9413.0
3.10	0.1220	69	106	A9413.1
3.20	0.1259	69	106	A9413.2
3.30	0.1299	69	106	A9413.3
3.40	0.1338	73	112	A9413.4
3.50	0.1377	73	112	A9413.5
3.60	0.1417	73	112	A9413.6
3.70	0.1456	73	112	A9413.7
3.80	0.1496	78	119	A9413.8
3.90	0.1535	78	119	A9413.9
4.00	0.1574	78	119	A9414.0
4.10	0.1614	78	119	A9414.1
4.20	0.1653	78	119	A9414.2
4.30	0.1692	82	126	A9414.3
4.40	0.1732	82	126	A9414.4
4.50	0.1771	82	126	A9414.5
4.60	0.1811	82	126	A9414.6
4.70	0.1850	82	126	A9414.7
4.80	0.1889	87	132	A9414.8
4.90	0.1929	87	132	A9414.9
5.00	0.1968	87	132	A9415.0
5.10	0.2007	87	132	A9415.1
5.20	0.2047	87	132	A9415.2
5.30	0.2086	87	132	A9415.3
5.40	0.2125	91	139	A9415.4
5.50	0.2165	91	139	A9415.5
5.60	0.2204	91	139	A9415.6
5.70	0.2244	91	139	A9415.7
5.80	0.2283	91	139	A9415.8
5.90	0.2322	91	139	A9415.9
6.00	0.2362	91	139	A9416.0
6.10	0.2401	97	148	A9416.1
6.20	0.2440	97	148	A9416.2
6.30	0.2480	97	148	A9416.3
6.40	0.2519	97	148	A9416.4
6.50	0.2559	97	148	A9416.5

d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
6.60	0.2598	97	148	A9416.6
6.70	0.2637	97	148	A9416.7
6.80	0.2677	102	156	A9416.8
6.90	0.2716	102	156	A9416.9
7.00	0.2755	102	156	A9417.0
7.10	0.2795	102	156	A9417.1
7.20	0.2834	102	156	A9417.2
7.30	0.2874	102	156	A9417.3
7.40	0.2913	102	156	A9417.4
7.50	0.2952	102	156	A9417.5
7.60	0.2992	109	165	A9417.6
7.70	0.3031	109	165	A9417.7
7.80	0.3070	109	165	A9417.8
7.90	0.3110	109	165	A9417.9
8.00	0.3149	109	165	A9418.0
8.10	0.3188	109	165	A9418.1
8.20	0.3228	109	165	A9418.2
8.30	0.3267	109	165	A9418.3
8.40	0.3307	109	165	A9418.4
8.50	0.3346	109	165	A9418.5
8.60	0.3385	115	175	A9418.6
8.70	0.3425	115	175	A9418.7
8.80	0.3464	115	175	A9418.8
8.90	0.3503	115	175	A9418.9
9.00	0.3543	115	175	A9419.0
9.10	0.3582	115	175	A9419.1
9.20	0.3622	115	175	A9419.2
9.30	0.3661	115	175	A9419.3
9.40	0.3700	115	175	A9419.4
9.50	0.3740	115	175	A9419.5
9.60	0.3779	121	184	A9419.6
9.70	0.3818	121	184	A9419.7
9.80	0.3858	121	184	A9419.8
9.90	0.3897	121	184	A9419.9
10.00	0.3937	121	184	A94110.0
10.20	0.4015	121	184	A94110.2
10.30	0.4055	121	184	A94110.3
10.40	0.4094	121	184	A94110.4
10.50	0.4133	121	184	A94110.5
10.80	0.4251	128	195	A94110.8

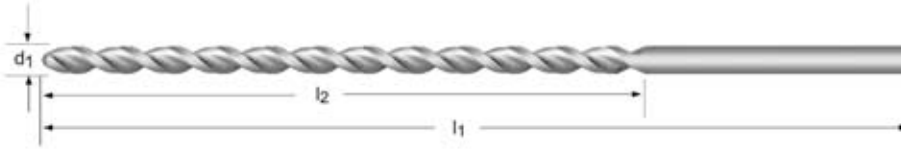
A941

d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
11.00	0.4330	128	195	A94111.0
11.20	0.4409	128	195	A94111.2
11.50	0.4527	128	195	A94111.5
11.80	0.4646	128	195	A94111.8
12.00	0.4724	134	205	A94112.0
12.20	0.4803	134	205	A94112.2
12.50	0.4921	134	205	A94112.5
12.80	0.5039	134	205	A94112.8
13.00	0.5118	134	205	A94113.0

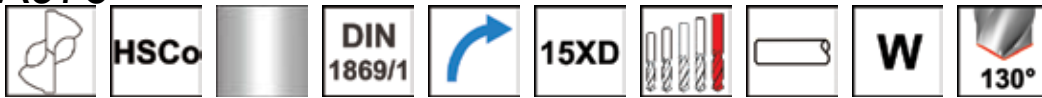
d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
13.50	0.5314	140	214	A94113.5
14.00	0.5511	140	214	A94114.0
14.50	0.5708	144	220	A94114.5
15.00	0.5905	144	220	A94115.0
15.50	0.6102	149	227	A94115.5
16.00	0.6299	149	227	A94116.0

A976

- 超长钻头



A976



■	1.3	1.4	1.5	1.6											
●	1.1	1.2	2.1	2.2	2.3	3.2	3.3	3.4	4.1	4.2	4.3	6.3	6.4	7.4	

d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
	1.50	0.0590	75	115	A9761.5
	2.00	0.0787	85	125	A9762.0X125
	2.10	0.0826	85	125	A9762.1X125
	2.20	0.0866	90	135	A9762.2X135
	2.30	0.0905	90	135	A9762.3X135
	2.40	0.0944	95	140	A9762.4X140
	2.50	0.0984	95	140	A9762.5X140
	2.60	0.1023	95	140	A9762.6X140
	2.70	0.1062	100	150	A9762.7X150
	2.80	0.1102	100	150	A9762.8X150
	2.90	0.1141	100	150	A9762.9X150
	3.00	0.1181	100	150	A9763.0X150
	3.10	0.1220	105	155	A9763.1X155
1/8	3.18	0.1251	105	155	A9761/8
	3.20	0.1259	105	155	A9763.2X155
	3.30	0.1299	105	155	A9763.3X155
	3.40	0.1338	115	165	A9763.4X165
	3.50	0.1377	115	165	A9763.5X165
	3.60	0.1417	115	165	A9763.6X165
	3.70	0.1456	115	165	A9763.7X165
	3.80	0.1496	120	175	A9763.8X175
	3.90	0.1535	120	175	A9763.9X175
5/32	3.97	0.1562	120	175	A9765/32
	4.00	0.1574	120	175	A9764.0X175
	4.10	0.1614	120	175	A9764.1X175
	4.20	0.1653	120	175	A9764.2X175
	4.30	0.1692	125	185	A9764.3X185
	4.40	0.1732	125	185	A9764.4X185
	4.50	0.1771	125	185	A9764.5X185
	4.60	0.1811	125	185	A9764.6X185
	4.70	0.1850	125	185	A9764.7X185
3/16	4.76	0.1874	135	195	A9763/16
	4.80	0.1889	135	195	A9764.8X195
	4.90	0.1929	135	195	A9764.9X195
	5.00	0.1968	135	195	A9765.0X195
	5.10	0.2007	135	195	A9765.1X195
	5.20	0.2047	135	195	A9765.2X195
	5.30	0.2086	135	195	A9765.3X195

d_1 $\varnothing h_8$ Inch	d_1 $\varnothing h_8$ mm	d_1 decimal Inch	l_2 mm	l_1 mm	e-Code
	5.40	0.2125	140	205	A9765.4X205
	5.50	0.2165	140	205	A9765.5X205
	5.60	0.2204	140	205	A9765.6X205
	5.70	0.2244	140	205	A9765.7X205
	5.80	0.2283	140	205	A9765.8X205
	5.90	0.2322	140	205	A9765.9X205
	6.00	0.2362	140	205	A9766.0X205
	6.10	0.2401	150	215	A9766.1X215
	6.20	0.2440	150	215	A9766.2X215
	6.30	0.2480	150	215	A9766.3X215
1/4	6.35	0.2500	140	205	A9761/4 ¹⁾
	6.40	0.2519	150	215	A9766.4X215
	6.50	0.2559	150	215	A9766.5X215
	6.60	0.2598	150	215	A9766.6X215
	6.70	0.2637	150	215	A9766.7X215
	6.80	0.2677	155	225	A9766.8X225
	6.90	0.2716	155	225	A9766.9X225
	7.00	0.2755	155	225	A9767.0X225
	7.50	0.2952	155	225	A9767.5X225
5/16	7.94	0.3125	165	240	A9765/16
	8.00	0.3149	165	240	A9768.0X240
	8.50	0.3346	165	240	A9768.5X240
11/32	8.73	0.3437	175	250	A97611/32
	9.00	0.3543	175	250	A9769.0X250
	9.50	0.3740	175	250	A9769.5X250
3/8	9.53	0.3751	185	265	A9763/8
	10.00	0.3937	185	265	A97610.0X265
	10.50	0.4133	185	265	A97610.5
	11.00	0.4330	195	280	A97611.0 ¹⁾
7/16	11.11	0.4374	195	280	A9767/16 ¹⁾
	11.50	0.4527	195	280	A97611.5 ¹⁾
	12.00	0.4724	205	295	A97612.0 ¹⁾
	12.50	0.4921	205	295	A97612.5 ¹⁾
1/2	12.70	0.5000	205	295	A9761/2 ¹⁾
	13.00	0.5118	205	295	A97613.0 ¹⁾
	14.00	0.5511	215	310	A97614.0 ¹⁾

¹⁾ Dormer 标准

A977

- 超长钻头



A977

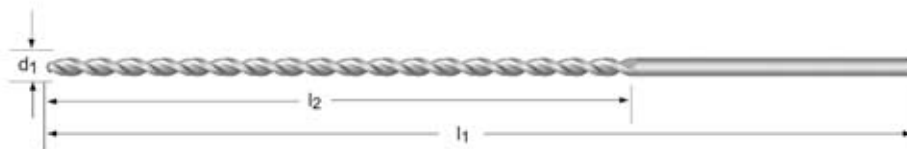


- 1.3 1.4 1.5 1.6
- 1.1 1.2 2.1 2.2 2.3 3.2 3.3 3.4 4.1 4.2 4.3 6.3 6.4 7.4

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
1/16	1.50	0.0590	100	150	A9771.5
	1.59	0.0625	100	150	A9771/16
	2.00	0.0787	110	160	A9772.0
3/32	2.38	0.0937	115	170	A9773/32
	3.00	0.1181	130	190	A9773.0X190
	3.18	0.1251	135	200	A9771/8
1/8	3.50	0.1377	145	210	A9773.5X210
	4.00	0.1574	150	220	A9774.0X220
	4.50	0.1771	160	235	A9774.5X235
3/16	4.76	0.1874	170	245	A9773/16
	5.00	0.1968	170	245	A9775.0X245
	5.50	0.2165	180	260	A9775.5X260
1/4	6.00	0.2362	180	260	A9776.0X260
	6.35	0.2500	180	260	A9771/4 ¹⁾
	6.50	0.2559	190	275	A9776.5X275
	7.00	0.2755	200	290	A9777.0X290

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
11/32	7.50	0.2952	200	290	A9777.5X290
	8.00	0.3149	210	305	A9778.0X305
	8.50	0.3346	210	305	A9778.5X305
11/32	8.73	0.3437	220	320	A97711/32
	9.00	0.3543	220	320	A9779.0X320
	9.50	0.3740	220	320	A9779.5X320
11/32	10.00	0.3937	235	340	A97710.0X340
	10.50	0.4133	235	340	A97710.5
	11.00	0.4330	250	365	A97711.0 ¹⁾
11/32	11.50	0.4527	250	365	A97711.5 ¹⁾
	12.00	0.4724	260	375	A97712.0 ¹⁾
	12.50	0.4921	260	375	A97712.5 ¹⁾
11/32	13.00	0.5118	260	375	A97713.0 ¹⁾
	14.00	0.5511	270	390	A97714.0 ¹⁾

A978



A978



- 1.3 1.4 1.5 1.6
- 1.1 1.2 2.1 2.2 2.3 3.2 3.3 3.4 4.1 4.2 4.3 6.3 6.4 7.4

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
1/8	3.00	0.1181	160	240	A9783.0
	3.50	0.1377	180	265	A9783.5X265
	4.00	0.1574	190	280	A9784.0X280
1/8	4.50	0.1771	200	295	A9784.5X295
	5.00	0.1968	210	315	A9785.0X315
	5.50	0.2165	225	330	A9785.5X330
1/8	6.00	0.2362	225	330	A9786.0X330
	6.35	0.2500	225	330	A9781/4 ¹⁾

d ₁ Øh ₈ Inch	d ₁ Øh ₈ mm	d ₁ decimal Inch	l ₂ mm	l ₁ mm	e-Code
1/8	6.50	0.2559	235	350	A9786.5X350
	7.00	0.2755	250	370	A9787.0X370
	7.50	0.2952	250	370	A9787.5X370
1/8	8.00	0.3149	265	390	A9788.0X390
	8.50	0.3346	265	390	A9788.5X390
	9.00	0.3543	280	410	A9789.0X410
1/8	9.50	0.3740	280	410	A9789.5X410
	10.00	0.3937	295	430	A97810.0X430

¹⁾ Dormer 标准

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The Right Tool at the Right Time



Dormer Tools
Morse Way
Waverley
Sheffield
S60 5BJ
United Kingdom
T: 0870 850 44 66
F: 0870 850 88 66
Email: dormer.uk@dormertools.com

Dormer Tools International
Morse Way
Waverley
Sheffield
S60 5BJ
United Kingdom
T: +44 114 2933838
F: +44 114 2933839
Email: dormer.int@dormertools.com

Dormer Tools
B.P. 6209
45062 Orleans Cedex 2
France - France
T: +33 (0)2 38 41 40 15
F: +33 (0)2 38 41 40 30
Email: dormer.fr@dormertools.com

Dormer Tools
's-Gravelandsweg 401
NL-3125 BJ Schiedam
Netherlands - Nederland
T: +31 10 2080 240
F: +31 10 2080 282
Email: dormer.nl@dormertools.com

Dormer Tools International
Sandvik in Austria GmbH
Postfach 90
AT-1211 Wien
Street address:
Scheydgasse 44
AT-1211 Wien
Austria - Österreich
T: +43 1 277 37 202
F: +43 1 277 37 203
Email: dormer.int@dormertools.com

responsible for
Austria
Österreich
Belarus
Беларусь
Bulgaria
България
Croatia
Hrvatska
Czech Republic
Česká republika
Hungary
Magyarország
Lithuania
Lietuva
Ukraine
Україна
Bosnia-Herzegovina
Босна и Херцеговина

Dormer Tools
Via Varesina 184
20156 Milano
Italy - Italia
T: +39 02 38 04 51
F: +39 02 38 04 52 43
Email: dormer.it@dormertools.com

Dormer Tools
C/Verneda s/n
Polg. Industrial Can Roca
ES-08107 Martorelles
T: +34 93 571 77 02 (ES)
F: +34 93 571 77 00 (ES)
Email: dormer.es@dormertools.com
Spain - España
T: +351 21 424 54 21 (PT)
F: +351 21 424 54 25 (PT)
Email: dormer.pt@dormertools.com
responsible for
Spain
España
Portugal
Portugal

Dormer Tools
Fountain Plaza
Belgicastraat 5, bus 5/6
BE-1930 Zaventem
Belgium - België/Belgique
T: +32 3 440 59 01
F: +32 3 449 15 43
Email: dormer.be@dormertools.com

Dormer Tools
Sandvik Tooling Deutschland GmbH
Geschäftsbereich Dormer
Heerdter Landstrasse 243
Postfach 10 21 62
DE-40012 Düsseldorf
Germany - Deutschland
T: +49 211 50 27 0
F: +49 211 50 27 504
Email: dormer.de@dormertools.com

Dormer Tools
Box 618
SE-301 16 Halmstad
Sweden - Sverige
T: +46 (0) 35 16 52 00
F: +46 (0) 35 16 52 90
Email: dormer.se@dormertools.com
Kundservice
T: direkt +46 35 16 52 96
F: direkt +46 35 16 52 90

Dormer Tools
PL 52
FI-01511 Vantaa
Finland - Suomi
T: +358 205 44 121
F: +358 205 44 5199
Customer Service
T: direkt 0205 44 7003
F: direkt 0205 44 7004
Email: dormer.fi@dormertools.com

Dormer Tools
Sandvik A/S
Boks 173
NO-1377 Billingstad
Norway - Norge
T: +47 67 17 56 00
F: +47 66 85 96 10
E-mail: dormer.no@dormertools.com
Kundeservice
T: direkt 800 10 113
F: direkt +46 35 16 52 90

Dormer Tools
Sandvik A/S
Postboks 160
DK-2605 Brøndby
Denmark - Danmark
T: +45 43 46 52 80
F: +45 43 46 52 81
Email: dormer.dk@dormertools.com
Kundtjeneste
T: direkt 808 82106
F: direkte + 46 35 16 52 90

Dormer Tools
Sandvik A.E.
294 Kifissias Avenue
152 32 Chalandri
Athens
Greece - Ελλάδα
T: +30 210 6823604
F: +30 210 6823771
Email: dormer.gr@dormertools.com

Dormer Tools
Caixa Postal 413
CEP 01059-970
Sao Paulo SP
Brazil - Brasil
T: +55 (0)11-56 60 30 00
F: +55 (0)11-56 67 22 67
Email: dormer.br@dormertools.com

Precision Dormer
2550 Meadowvale Blvd. Unit 3
Mississauga, ON L5N 8C2
Canada
T: (888) 336 7637
En Français: (888) 368 8457
F: (905) 542 7000
Email: cs@precisiondormer.com

Precision Dormer
301 Industrial Ave.
Crystal Lake, IL 60012
United States of America
T: (800) 877 3745
F: 815 459 2804
Email: cs@precisiondormer.com
responsible for
United States of America
Mexico

Dormer Tools
5 Fowler Road
Dandenong 3175, Victoria
Australia
T: 1300 131 274
F: +61 3 9238 7105
Email: dormer.int@dormertools.com

Dormer Tools
Sandvik New Zealand
269 Ti Rakau Drive
Burswood
Manukau 2013
New Zealand
T: 0800 4 436 763
F: +64 9 2735857
Email: dormer.int@dormertools.com

Dormer Tools
Sandvik South East Asia Pte Ltd
50 Alps Avenue
#04-00 Sandvik Building
Singapore - 498782
T: +65 6477 3765/6
F: +65 6477 3781
Email: dormer.sg@dormertools.com
responsible for
China
Indonesia
Malaysia
Singapore
Taiwan
Hong Kong
Vietnam
Thailand
South Korea

Dormer Tools
No 4555 Yin Du Road
Xin Zhuang Industry Park
Shanghai 201108
China
T: +86 21 2416 0666
F: +86 21 5442 6315
Email: dormer.cn@dormertools.com

Dormer Tools
Sandvik Asia Ltd
Mumbai-Pune Road
Pune 411 012
India
T: +91 20 27 10 47 00
F: +91 20 27 14 57 36
Email: dormer.int@dormertools.com

Dormer Tools
Sandvik
P.O. Box 25038
East Rand 1462
South Africa
T: +27 11 929 5300
F: +27 11 570 9709
Email: dormer.int@dormertools.com

Dormer Tools
Sandvik Argentina S.A.
Rincón 3198
CP B1754BIL
San Justo - Buenos Aires
Argentina
T: 54 (11) 6777-6777
F: 54 (11) 4441-4467
Email: dormer.int@dormertools.com