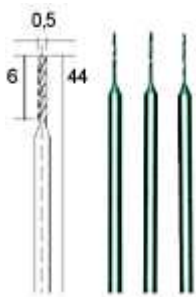
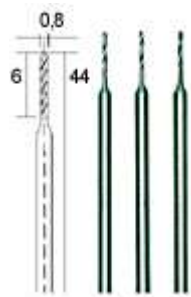




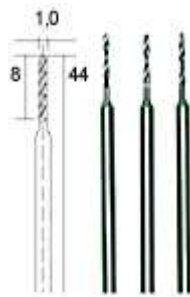
Tool sets for industry and dentistry Drills



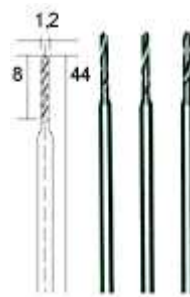
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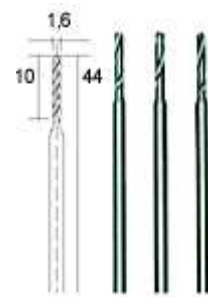
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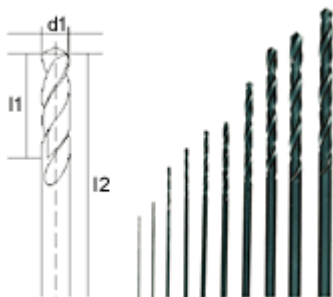
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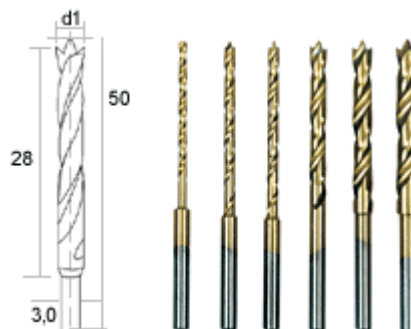
NO 28 858

HSS drill bits

Selected steel quality. Purpose-made stable construction with high concentricity. Shaft and bit are manufactured from a one-piece blank. High hardness for optimum life expectancy and elasticity. For drilling metal, non-ferrous metals, plastic, PC cards and wood. Work speeds: soft materials approx. 8,000rpm, hard materials approx. 3,000rpm. Ø shanks 2.35mm. Rotational speed see table.



NO 28 874



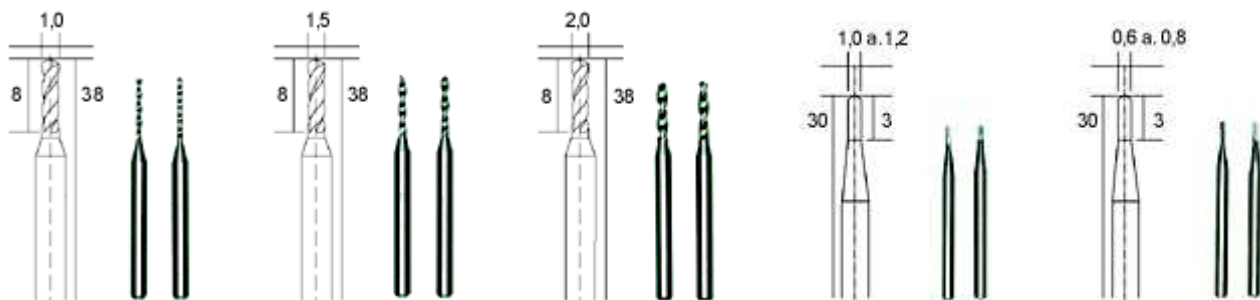
NO 28 876

HSS twist drill set to DIN 338

One each of 0.3 - 0.5 - 0.8 - 1.0 - 1.2 - 1.5 - 2.0 - 2.5 - 3.0 - 3.2mm diameter. For drilling non-ferrous metals, steel, high-quality steel. 10 pieces. Rotational speed see table.

HSS twist drill set with centring pin

Ø 1.5 - 2.0 - 2.5 - 3.0 - 3.5 - 4.0 mm. For precision tapping of wood and plastics; also non-ferrous metal, steel and stainless steel sheets. Titanium coating reduces friction and increases service life. Shaft Ø 3mm, 6-piece set. Rotational speed see table.



NO 28 324

NO 28 326

NO 28 328

NO 28 320

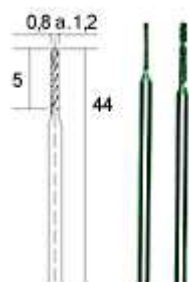
NO 28 321

Tungsten carbide drills

Made of wear-resistant tungsten carbide. For drilling glass, semiprecious stones, porcelain, ceramics, marble and other hard stones. The hard stones are subdivided according to the degree of hardness from 1 - 10. Tungsten carbide can be used up to hardness degree 6. Drilling hard stones with a hardness degree of more than 6 calls for the use of diamond tools. Shaft Ø 3.0mm. With ideal cutting angle of 6°. Rotational speed see table.

Tungsten carbide milling drills (spear drills)

For drilling, milling and cutting fibre glass or PERTINAX circuit boards. Also for drilling pearls and similar. Shaft Ø 2.35mm. Rotational speed see table.



NO 28 255

Diamond twist drills

For drilling holes in (semi) precious stones, etc. Shaft Ø 2.35mm.

Rotational speed for spiral drills of HSS and tungsten carbide in rpm

Drill	Wood		Aluminium		Brass		Steel		Stainless Steel		Plastics	
Ø	HSS	TC	HSS	TC	HSS	TC	HSS	TC	HSS	TC	HSS	TC
0.5	20000	23000	35000	60000	25000	40000	15000	30000	9000	22000	19000	33000
1.0	12000	17000	22000	45000	15000	25000	8000	18000	5000	10000	11000	20000
1.5	9000	12000	14000	30000	10000	15000	5500	13000	3500	9000	8000	15000
2.0	7000	9000	11000	23000	8000	12000	4000	9000	3000	8000	6000	10000
2.5	6000	7000	9000	19000	6000	10000	3500	7500	2500	7000	5000	8000
3.0	5000	6000	7500	15000	5000	8000	3000	6500	2000	6000	4000	7000
3.5	4000	5000	6000	13000	4500	7000	2500	5500	1500	4500	3500	6000
4.0	3000	4500	5500	10000	4000	6000	2000	4500	1000	3000	3000	5000

The specified rotational speeds are approximate values for spiral drills made of HSS and tungsten carbide. They must be appropriate for the material of the workpiece. The use of coolant is recommended for aluminium, brass, steel and stainless steel. Plastic can be cooled with compressed air to prevent the drilling chips from fusing. The hardness of derived timber products varies distinctly, therefore only an approximate value can be specified. The harder the wood, the lower the rotational speed!