

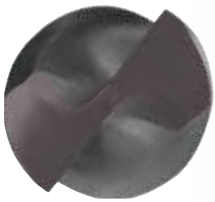
# GUHRING

High performance HSCO and  
HSS-E-PM twist drills:



## GU 500

Universal tool for particularly  
dimensionally accurate holes



## GT 500

Efficient tool for the machining of  
high-alloyed and high tensile steels  
and tool materials



**GU 500 / GT 500** Universal  
and highly efficient

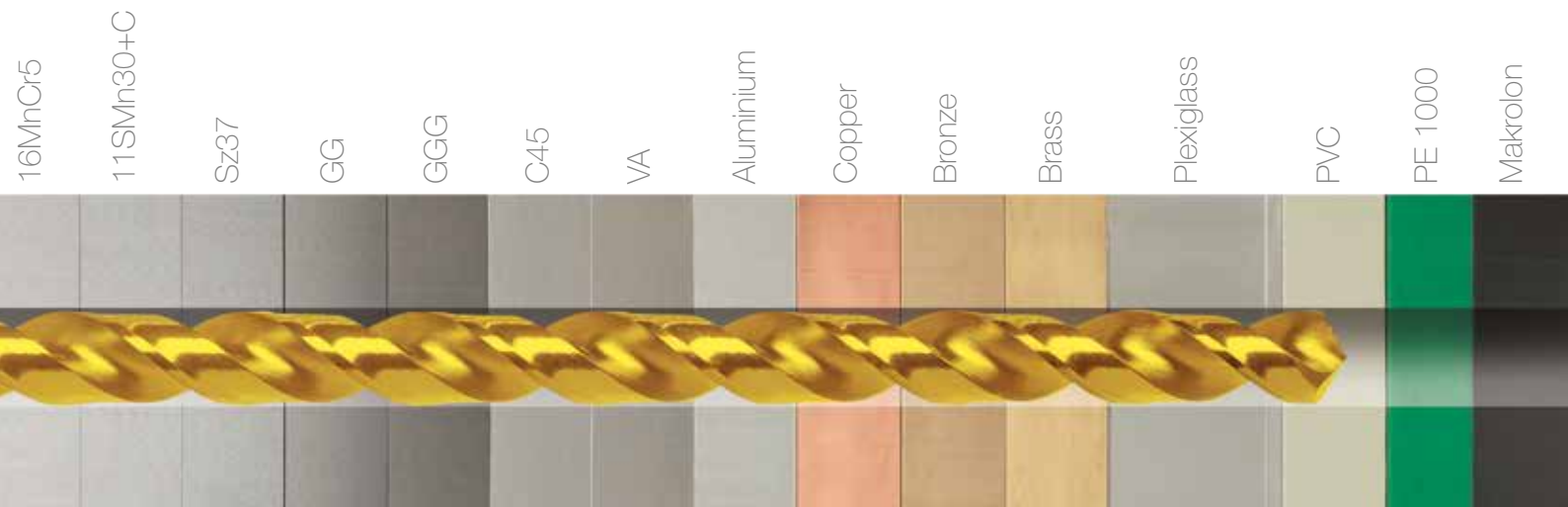
GUHRING - YOUR WORLD-WIDE PARTNER

# GU 500

## Universal HSCO drill

### Advantages and application:

- Universal application in most materials
- 4-facet point grind for excellent self-centering and especially dimensionally accurate holes
- Low feed forces and torque values thanks to precision ground geometry
- Optimal chip evacuation thanks to rolled flute geometry



GU 500 – universal application in most materials:

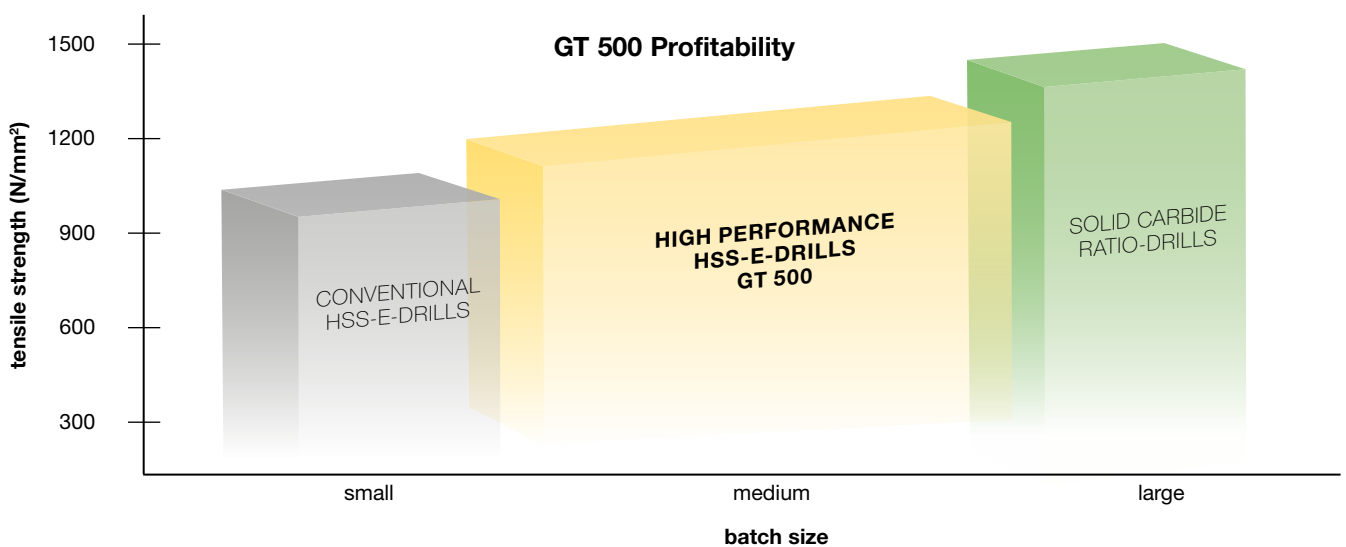
Structural steels and carbon steels · high-alloyed steels up to 850 N/mm<sup>2</sup> · stainless steels · cast materials  
· non-ferrous metals · aluminium · magnesium-alloys · plastics

# GT 500

## Efficient HSS-E-PM drill

### Advantages and application:

- Maximum wear-resistance thanks to powder-metallurgical HSS-E-PM steel and Fire- or TiN-coating
- Especially for the machining of high-alloyed and high tensile steels and materials
- High cutting edge stability thanks to special point thinning and rake angle correction



GT 500 – ideally suited for the machining of high-alloyed steels and materials in medium batch sizes.

# Twist drills with straight shank

P	M	K	N	S	H	Tool description	Drilling depth	Standard	Type	Tool material	Surface finish	d1	Guhring no.	Discount group	Page
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## Stub drills

•	•	•	•				3xD	DIN 1897	GU500 DZ	HSCO	○	1.00 - 14.00	5524	159	6
•	•	•	•				3xD	DIN 1897	GU500 DZ	HSCO	Ⓢ	1.00 - 14.00	5520	159	6
•	○	○	○	○	○		3xD	DIN 1897	GT500 DZ	HSS-E-PM	Ⓢ	1.00 - 14.00	5521	159	8
•	○	○	○	○	○		3xD	DIN 1897	GT500	HSS-E-PM	ⓕ	1.00 - 14.29	515	115	10

## Jobber drills

•	•	•	•				5xD	DIN 338	GU500 DZ	HSCO	○	1.00 - 14.00	5523	159	12
•	•	•	•				5xD	DIN 338	GU500 DZ	HSCO	Ⓢ	1.00 - 14.00	5519	159	12
•	○	○	○	○	○		5xD	DIN 338	GT500 DZ	HSS-E-PM	Ⓢ	1.00 - 14.00	5522	159	14

## Long series twist drills

•	•	•	•				10xD	DIN 340	GU500 DZ	HSCO	○	1.00 - 14.00	5536	159	16
•	•	•	•				10xD	DIN 340	GU500 DZ	HSCO	Ⓢ	1.00 - 14.00	5537	159	16

## ISO code

P	Steel, high alloyed steel
M	Stainless steel
K	Grey cast iron, spheroid./malleable cast iron
N	Aluminium and other non-ferrous metals
S	Special-, super- and Ti-alloys
H	Hardened steel and hard cast iron

## Coatings




- bright
- ⓕ FIRE/nanoFIRE
- Ⓢ TiN

## Pictograms


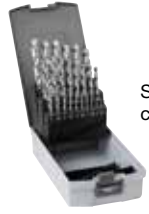
Tool material	HSCO	HSS-E-PM				
Point angle	118°	130°				
Standard	DIN 338	DIN 340	DIN 1897	to DIN	G	to Guhring standard
Drilling depth	3xD	5xD	10xD			
Ø tolerance	h8					
Type	GU500 DZ	GT500 DZ	GT500	GU500		
Cutting direction	R	right				



# Twist drills with re-inforced shank

P	M	K	N	S	H	Tool description	Drilling depth	Standard	Type	Tool material	Surface finish	d1	Guhring no.	Discount group	Page
•	•	•	•				3xD	G	GU500	HSCO	S	2.00 - 20.00	512	115	18
•	•	•	•				5xD	G	GU500	HSCO	S	2.00 - 20.00	511	115	20
•	○	•	○	○	○		5xD	G	GT500	HSS-E-PM	F	2.00 - 13.00	513	115	22

## Twist drills sets

•	•	•	•				Set in case, consisting of Guhring no. 5523	5xD	DIN 338	GU500 DZ	HSCO	○	1.00 - 10.50	201	159	23
•	•	•	•				Set in case, consisting of Guhring no. 5523	5xD	DIN 338	GU500 DZ	HSCO	○	1.00 - 13.00	201	159	23
•	•	•	•				Set without case, consisting of Guhring no. 5523	5xD	DIN 338	GU500 DZ	HSCO	○	1.00 - 10.50	200	159	23
•	•	•	•				Set without case, consisting of Guhring no. 5523	5xD	DIN 338	GU500 DZ	HSCO	○	1.00 - 13.00	200	159	23

### GUHRINGNAVIGATOR

• application recommendations see page 25-27

# Twist drills with straight shank

## Stub drills

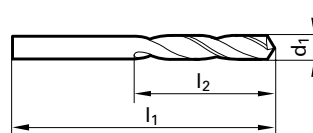


Tool material	<b>HSCO</b>
Surface finish	○ <b>S</b>
Type	<b>GU 500 DZ</b>

- |          |   |                               |
|----------|---|-------------------------------|
| <b>P</b> | ● | • Co-alloyed high speed steel |
| <b>M</b> | ● | • low feed force necessary    |
| <b>K</b> | ● | • low torque required         |
| <b>N</b> | ● | • higher wear resistance      |
| <b>S</b> | ● | • universally applicable      |
| <b>H</b> |   |                               |

## GUHRINGNAVIGATOR

• application recommendations see page 25



Guhring no.				5524	5520	Guhring no.				5524	5520
Discount group				159	159	Discount group				159	159
d1		l1	l2	Availability		d1		l1	l2	Availability	
mm	inch	mm	mm			mm	inch	mm	mm		
1.000		26.00	6.00	●	●	5.100		62.00	26.00	●	●
1.100		28.00	7.00	●	●	5.160	13/64	62.00	26.00	●	●
1.200		30.00	8.00	●	●	5.200		62.00	26.00	●	●
1.300		30.00	8.00	●	●	5.300		62.00	26.00	●	●
1.400		32.00	9.00	●	●	5.400		66.00	28.00	●	●
1.500		32.00	9.00	●	●	5.500		66.00	28.00	●	●
1.600		34.00	10.00	●	●	5.560	7/32	66.00	28.00	●	●
1.700		34.00	10.00	●	●	5.600		66.00	28.00	●	●
1.800		36.00	11.00	●	●	5.700		66.00	28.00	●	●
1.900		36.00	11.00	●	●	5.800		66.00	28.00	●	●
2.000		38.00	12.00	●	●	5.900		66.00	28.00	●	●
2.100		38.00	12.00	●	●	5.950	15/64	66.00	28.00	●	●
2.200		40.00	13.00	●	●	6.000		66.00	28.00	●	●
2.300		40.00	13.00	●	●	6.100		70.00	31.00	●	●
2.380	3/32	43.00	14.00	●	●	6.200		70.00	31.00	●	●
2.400		43.00	14.00	●	●	6.300		70.00	31.00	●	●
2.500		43.00	14.00	●	●	6.350	1/4	70.00	31.00	●	●
2.600		43.00	14.00	●	●	6.400		70.00	31.00	●	●
2.700		46.00	16.00	●	●	6.500		70.00	31.00	●	●
2.780	7/64	46.00	16.00	●	●	6.600		70.00	31.00	●	●
2.800		46.00	16.00	●	●	6.700		70.00	31.00	●	●
2.900		46.00	16.00	●	●	6.800		74.00	34.00	●	●
3.000		46.00	16.00	●	●	6.900		74.00	34.00	●	●
3.100		49.00	18.00	●	●	7.000		74.00	34.00	●	●
3.170	1/8	49.00	18.00	●	●	7.100		74.00	34.00	●	●
3.200		49.00	18.00	●	●	7.140	9/32	74.00	34.00	●	●
3.300		49.00	18.00	●	●	7.200		74.00	34.00	●	●
3.400		52.00	20.00	●	●	7.300		74.00	34.00	●	●
3.500		52.00	20.00	●	●	7.400		74.00	34.00	●	●
3.570	9/64	52.00	20.00	●	●	7.500		74.00	34.00	●	●
3.600		52.00	20.00	●	●	7.600		79.00	37.00	●	●
3.700		52.00	20.00	●	●	7.700		79.00	37.00	●	●
3.800		55.00	22.00	●	●	7.800		79.00	37.00	●	●
3.900		55.00	22.00	●	●	7.900		79.00	37.00	●	●
3.970	5/32	55.00	22.00	●	●	7.940	5/16	79.00	37.00	●	●
4.000		55.00	22.00	●	●	8.000		79.00	37.00	●	●
4.100		55.00	22.00	●	●	8.100		79.00	37.00	●	●
4.200		55.00	22.00	●	●	8.200		79.00	37.00	●	●
4.300		58.00	24.00	●	●	8.300		79.00	37.00	●	●
4.370	11/64	58.00	24.00	●	●	8.400		79.00	37.00	●	●
4.400		58.00	24.00	●	●	8.500		79.00	37.00	●	●
4.500		58.00	24.00	●	●	8.600		84.00	40.00	●	●
4.600		58.00	24.00	●	●	8.700		84.00	40.00	●	●
4.700		58.00	24.00	●	●	8.730	11/32	84.00	40.00	●	●
4.760	3/16	62.00	26.00	●	●	8.800		84.00	40.00	●	●
4.800		62.00	26.00	●	●	8.900		84.00	40.00	●	●
4.900		62.00	26.00	●	●	9.000		84.00	40.00	●	●
5.000		62.00	26.00	●	●	9.100		84.00	40.00	●	●



# Twist drills with straight shank

## Stub drills

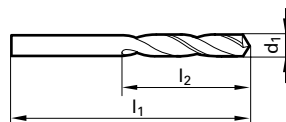


Tool material **HSS-E-PM**  
 Surface finish **S**  
 Type **GT 500 DZ**

- P** ● • PM-Co-alloyed high speed steel
- M** ○ • particularly high stability
- K** ● • particularly high wear resistance
- N** ○
- S** ○
- H** ○

## GUHRINGNAVIGATOR

• application recommendations see page 25



Guhring no. 5521				Guhring no. 5521					
Discount group 159				Discount group 159					
d1		l1	l2	Availability	d1		l1	l2	Availability
mm	inch	mm	mm		mm	inch	mm	mm	
1.000		26.00	6.00	●	5.100		62.00	26.00	●
1.100		28.00	7.00	●	5.160	13/64	62.00	26.00	●
1.200		30.00	8.00	●	5.200		62.00	26.00	●
1.300		30.00	8.00	●	5.300		62.00	26.00	●
1.400		32.00	9.00	●	5.400		66.00	28.00	●
1.500		32.00	9.00	●	5.500		66.00	28.00	●
1.600		34.00	10.00	●	5.560	7/32	66.00	28.00	●
1.700		34.00	10.00	●	5.600		66.00	28.00	●
1.800		36.00	11.00	●	5.700		66.00	28.00	●
1.900		36.00	11.00	●	5.800		66.00	28.00	●
2.000		38.00	12.00	●	5.900		66.00	28.00	●
2.100		38.00	12.00	●	5.950	15/64	66.00	28.00	●
2.200		40.00	13.00	●	6.000		66.00	28.00	●
2.300		40.00	13.00	●	6.100		70.00	31.00	●
2.380	3/32	43.00	14.00	●	6.200		70.00	31.00	●
2.400		43.00	14.00	●	6.300		70.00	31.00	●
2.500		43.00	14.00	●	6.350	1/4	70.00	31.00	●
2.600		43.00	14.00	●	6.400		70.00	31.00	●
2.700		46.00	16.00	●	6.500		70.00	31.00	●
2.780	7/64	46.00	16.00	●	6.600		70.00	31.00	●
2.800		46.00	16.00	●	6.700		70.00	31.00	●
2.900		46.00	16.00	●	6.800		74.00	34.00	●
3.000		46.00	16.00	●	6.900		74.00	34.00	●
3.100		49.00	18.00	●	7.000		74.00	34.00	●
3.170	1/8	49.00	18.00	●	7.100		74.00	34.00	●
3.200		49.00	18.00	●	7.140	9/32	74.00	34.00	●
3.300		49.00	18.00	●	7.200		74.00	34.00	●
3.400		52.00	20.00	●	7.300		74.00	34.00	●
3.500		52.00	20.00	●	7.400		74.00	34.00	●
3.570	9/64	52.00	20.00	●	7.500		74.00	34.00	●
3.600		52.00	20.00	●	7.600		79.00	37.00	●
3.700		52.00	20.00	●	7.700		79.00	37.00	●
3.800		55.00	22.00	●	7.800		79.00	37.00	●
3.900		55.00	22.00	●	7.900		79.00	37.00	●
3.970	5/32	55.00	22.00	●	7.940	5/16	79.00	37.00	●
4.000		55.00	22.00	●	8.000		79.00	37.00	●
4.100		55.00	22.00	●	8.100		79.00	37.00	●
4.200		55.00	22.00	●	8.200		79.00	37.00	●
4.300		58.00	24.00	●	8.300		79.00	37.00	●
4.370	11/64	58.00	24.00	●	8.400		79.00	37.00	●
4.400		58.00	24.00	●	8.500		79.00	37.00	●
4.500		58.00	24.00	●	8.730	11/32	84.00	40.00	●
4.600		58.00	24.00	●	8.800		84.00	40.00	●
4.700		58.00	24.00	●	9.000		84.00	40.00	●
4.760	3/16	62.00	26.00	●	9.300		84.00	40.00	●
4.800		62.00	26.00	●	9.500		84.00	40.00	●
4.900		62.00	26.00	●	9.800		89.00	43.00	●
5.000		62.00	26.00	●	10.000		89.00	43.00	●





# Twist drills with straight shank

## Stub drills



Tool material **HSS-E-PM**

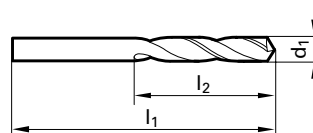
Surface finish

Type **GT 500**

- P** ● • PM-Co-alloyed high speed steel
- M** ○ • particularly high stability
- K** ● • particularly high wear resistance
- N** ○
- S** ○
- H** ○

### GÜHRINGNAVIGATOR

• application recommendations see page 25



Guhring no. 515				Guhring no. 515					
Discount group				Discount group					
d1		l1	l2	Availability	d1		l1	l2	Availability
mm	inch	mm	mm		mm	inch	mm	mm	
1.000		26.00	6.00	●	2.820		46.00	16.00	●
1.020		26.00	6.00	●	2.870		46.00	16.00	●
1.040		26.00	6.00	●	2.900		46.00	16.00	●
1.070		28.00	7.00	●	2.950		46.00	16.00	●
1.090		28.00	7.00	●	3.000		46.00	16.00	●
1.100		28.00	7.00	●	3.050		49.00	18.00	●
1.180		28.00	7.00	●	3.100		49.00	18.00	●
1.190	3/64	30.00	8.00	●	3.170	1/8	49.00	18.00	●
1.200		30.00	8.00	●	3.200		49.00	18.00	●
1.300		30.00	8.00	●	3.260		49.00	18.00	●
1.320		30.00	8.00	●	3.300		49.00	18.00	●
1.400		32.00	9.00	●	3.400		52.00	20.00	●
1.500		32.00	9.00	●	3.450		52.00	20.00	●
1.510		34.00	10.00	●	3.500		52.00	20.00	●
1.590	1/16	34.00	10.00	●	3.570	9/64	52.00	20.00	●
1.600		34.00	10.00	●	3.600		52.00	20.00	●
1.610		34.00	10.00	●	3.660		52.00	20.00	●
1.700		34.00	10.00	●	3.700		52.00	20.00	●
1.780		36.00	11.00	●	3.730		52.00	20.00	●
1.800		36.00	11.00	●	3.800		55.00	22.00	●
1.850		36.00	11.00	●	3.860		55.00	22.00	●
1.900		36.00	11.00	●	3.900		55.00	22.00	●
1.930		38.00	12.00	●	3.910		55.00	22.00	●
1.980	5/64	38.00	12.00	●	3.970	5/32	55.00	22.00	●
1.990		38.00	12.00	●	3.990		55.00	22.00	●
2.000		38.00	12.00	●	4.000		55.00	22.00	●
2.060		38.00	12.00	●	4.040		55.00	22.00	●
2.080		38.00	12.00	●	4.090		55.00	22.00	●
2.100		38.00	12.00	●	4.100		55.00	22.00	●
2.180		40.00	13.00	●	4.200		55.00	22.00	●
2.200		40.00	13.00	●	4.220		55.00	22.00	●
2.260		40.00	13.00	●	4.300		58.00	24.00	●
2.300		40.00	13.00	●	4.370	11/64	58.00	24.00	●
2.370		43.00	14.00	●	4.390		58.00	24.00	●
2.380	3/32	43.00	14.00	●	4.400		58.00	24.00	●
2.400		43.00	14.00	●	4.500		58.00	24.00	●
2.440		43.00	14.00	●	4.570		58.00	24.00	●
2.490		43.00	14.00	●	4.600		58.00	24.00	●
2.500		43.00	14.00	●	4.620		58.00	24.00	●
2.530		43.00	14.00	●	4.650		58.00	24.00	●
2.580		43.00	14.00	●	4.700		58.00	24.00	●
2.600		43.00	14.00	●	4.760	3/16	62.00	26.00	●
2.640		43.00	14.00	●	4.800		62.00	26.00	●
2.700		46.00	16.00	●	4.850		62.00	26.00	●
2.710		46.00	16.00	●	4.900		62.00	26.00	●
2.780	7/64	46.00	16.00	●	4.920		62.00	26.00	●
2.790		46.00	16.00	●	4.980		62.00	26.00	●
2.800		46.00	16.00	●	5.000		62.00	26.00	●

# Twist drills with straight shank

Guhring no.				515	Guhring no.				515
Discount group				115	Discount group				115
d1		l1	l2	Availability	d1		l1	l2	Availability
mm	inch	mm	mm		mm	inch	mm	mm	
5.060		62.00	26.00	●	7.940	5/16	79.00	37.00	●
5.100		62.00	26.00	●	8.000		79.00	37.00	●
5.110		62.00	26.00	●	8.030		79.00	37.00	●
5.160	13/64	62.00	26.00	●	8.100		79.00	37.00	●
5.180		62.00	26.00	●	8.200		79.00	37.00	●
5.200		62.00	26.00	●	8.300		79.00	37.00	●
5.220		62.00	26.00	●	8.330	21/64	79.00	37.00	●
5.300		62.00	26.00	●	8.400		79.00	37.00	●
5.310		66.00	28.00	●	8.430		79.00	37.00	●
5.400		66.00	28.00	●	8.500		79.00	37.00	●
5.410		66.00	28.00	●	8.610		84.00	40.00	●
5.500		66.00	28.00	●	8.730	11/32	84.00	40.00	●
5.560	7/32	66.00	28.00	●	8.800		84.00	40.00	●
5.600		66.00	28.00	●	8.840		84.00	40.00	●
5.610		66.00	28.00	●	8.900		84.00	40.00	●
5.700		66.00	28.00	●	9.000		84.00	40.00	●
5.790		66.00	28.00	●	9.090		84.00	40.00	●
5.800		66.00	28.00	●	9.130	23/64	84.00	40.00	●
5.900		66.00	28.00	●	9.200		84.00	40.00	●
5.940		66.00	28.00	●	9.300		84.00	40.00	●
5.950	15/64	66.00	28.00	●	9.340		84.00	40.00	●
6.000		66.00	28.00	●	9.350		84.00	40.00	●
6.040		70.00	31.00	●	9.400		84.00	40.00	●
6.100		70.00	31.00	●	9.500		84.00	40.00	●
6.150		70.00	31.00	●	9.520	3/8	89.00	43.00	●
6.200		70.00	31.00	●	9.580		89.00	43.00	●
6.250		70.00	31.00	●	9.600		89.00	43.00	●
6.300		70.00	31.00	●	9.700		89.00	43.00	●
6.350	1/4	70.00	31.00	●	9.800		89.00	43.00	●
6.400		70.00	31.00	●	9.920	25/64	89.00	43.00	●
6.500		70.00	31.00	●	10.000		89.00	43.00	●
6.530		70.00	31.00	●	10.080		89.00	43.00	●
6.600		70.00	31.00	●	10.200		89.00	43.00	●
6.630		70.00	31.00	●	10.260		89.00	43.00	●
6.700		70.00	31.00	●	10.320	13/32	89.00	43.00	●
6.750	17/64	74.00	34.00	●	10.490		89.00	43.00	●
6.800		74.00	34.00	●	10.500		89.00	43.00	●
6.900		74.00	34.00	●	10.720	27/64	95.00	47.00	●
7.000		74.00	34.00	●	11.000		95.00	47.00	●
7.030		74.00	34.00	●	11.110	7/16	95.00	47.00	●
7.100		74.00	34.00	●	11.500		95.00	47.00	●
7.140	9/32	74.00	34.00	●	11.510	29/64	95.00	47.00	●
7.200		74.00	34.00	●	11.800		95.00	47.00	●
7.300		74.00	34.00	●	11.910	15/32	102.00	51.00	●
7.370		74.00	34.00	●	12.000		102.00	51.00	●
7.400		74.00	34.00	●	12.300	31/64	102.00	51.00	●
7.490		74.00	34.00	●	12.500		102.00	51.00	●
7.500		74.00	34.00	●	12.700	1/2	102.00	51.00	●
7.540	19/64	79.00	37.00	●	13.000		102.00	51.00	●
7.600		79.00	37.00	●	13.100	33/64	102.00	51.00	●
7.670		79.00	37.00	●	13.490	17/32	107.00	54.00	●
7.700		79.00	37.00	●	13.500		107.00	54.00	●
7.800		79.00	37.00	●	14.000		107.00	54.00	●
7.900		79.00	37.00	●	14.290	9/16	111.00	56.00	●

# Twist drills with straight shank

## Jobber drills

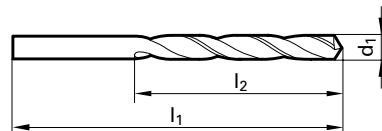


Tool material **HSCO**  
 Surface finish   
 Type **GU 500 DZ**

- |   |   |                               |
|---|---|-------------------------------|
| P | • | • Co-alloyed high speed steel |
| M | • | • low feed force necessary    |
| K | • | • low torque required         |
| N | • | • higher wear resistance      |
| S | • | • universally applicable      |
| H |   |                               |

### GUHRINGNAVIGATOR

• application recommendations see page 27

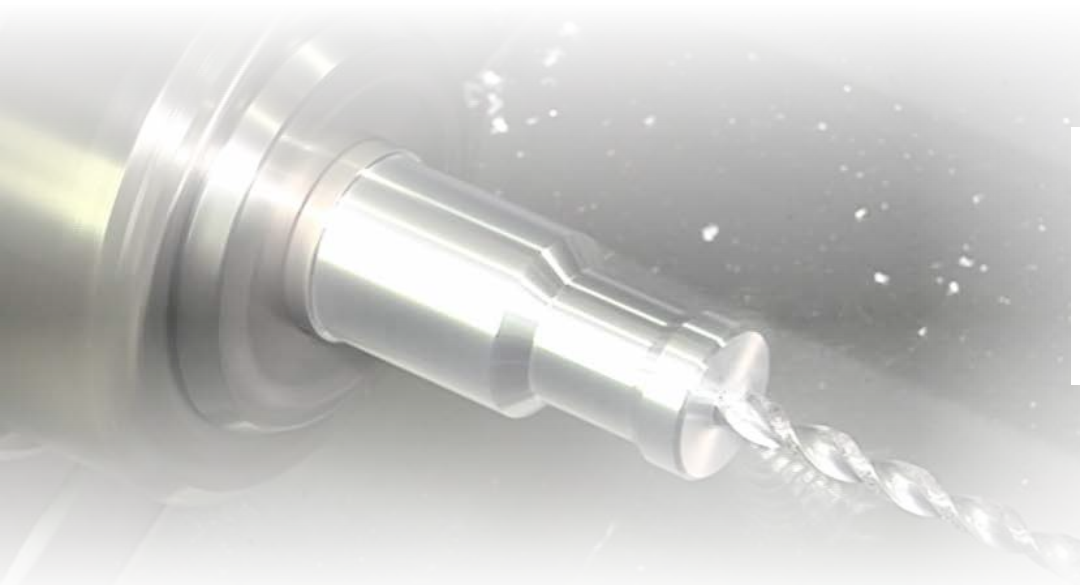


Guhring no.				5523	5519	Guhring no.				5523	5519
Discount group				159	159	Discount group				159	159
d1		l1	l2	Availability		d1		l1	l2	Availability	
mm	inch	mm	mm			mm	inch	mm	mm		
1.000		34.00	12.00	•	•	5.100		86.00	52.00	•	•
1.100		36.00	14.00	•	•	5.160	13/64	86.00	52.00	•	•
1.200		38.00	16.00	•	•	5.200		86.00	52.00	•	•
1.300		38.00	16.00	•	•	5.300		86.00	52.00	•	•
1.400		40.00	18.00	•	•	5.400		93.00	57.00	•	•
1.500		40.00	18.00	•	•	5.500		93.00	57.00	•	•
1.600		43.00	20.00	•	•	5.560	7/32	93.00	57.00	•	•
1.700		43.00	20.00	•	•	5.600		93.00	57.00	•	•
1.800		46.00	22.00	•	•	5.700		93.00	57.00	•	•
1.900		46.00	22.00	•	•	5.800		93.00	57.00	•	•
2.000		49.00	24.00	•	•	5.900		93.00	57.00	•	•
2.100		49.00	24.00	•	•	5.950	15/64	93.00	57.00	•	•
2.200		53.00	27.00	•	•	6.000		93.00	57.00	•	•
2.300		53.00	27.00	•	•	6.100		101.00	63.00	•	•
2.380	3/32	57.00	30.00	•	•	6.200		101.00	63.00	•	•
2.400		57.00	30.00	•	•	6.300		101.00	63.00	•	•
2.500		57.00	30.00	•	•	6.350	1/4	101.00	63.00	•	•
2.600		57.00	30.00	•	•	6.400		101.00	63.00	•	•
2.700		61.00	33.00	•	•	6.500		101.00	63.00	•	•
2.780	7/64	61.00	33.00	•	•	6.600		101.00	63.00	•	•
2.800		61.00	33.00	•	•	6.700		101.00	63.00	•	•
2.900		61.00	33.00	•	•	6.800		109.00	69.00	•	•
3.000		61.00	33.00	•	•	6.900		109.00	69.00	•	•
3.100		65.00	36.00	•	•	7.000		109.00	69.00	•	•
3.170	1/8	65.00	36.00	•	•	7.100		109.00	69.00	•	•
3.200		65.00	36.00	•	•	7.140	9/32	109.00	69.00	•	•
3.300		65.00	36.00	•	•	7.200		109.00	69.00	•	•
3.400		70.00	39.00	•	•	7.300		109.00	69.00	•	•
3.500		70.00	39.00	•	•	7.400		109.00	69.00	•	•
3.570	9/64	70.00	39.00	•	•	7.500		109.00	69.00	•	•
3.600		70.00	39.00	•	•	7.600		117.00	75.00	•	•
3.700		70.00	39.00	•	•	7.700		117.00	75.00	•	•
3.800		75.00	43.00	•	•	7.800		117.00	75.00	•	•
3.900		75.00	43.00	•	•	7.900		117.00	75.00	•	•
3.970	5/32	75.00	43.00	•	•	7.940	5/16	117.00	75.00	•	•
4.000		75.00	43.00	•	•	8.000		117.00	75.00	•	•
4.100		75.00	43.00	•	•	8.100		117.00	75.00	•	•
4.200		75.00	43.00	•	•	8.200		117.00	75.00	•	•
4.300		80.00	47.00	•	•	8.300		117.00	75.00	•	•
4.370	11/64	80.00	47.00	•	•	8.400		117.00	75.00	•	•
4.400		80.00	47.00	•	•	8.500		117.00	75.00	•	•
4.500		80.00	47.00	•	•	8.600		125.00	81.00	•	•
4.600		80.00	47.00	•	•	8.700		125.00	81.00	•	•
4.700		80.00	47.00	•	•	8.730	11/32	125.00	81.00	•	•
4.760	3/16	86.00	52.00	•	•	8.800		125.00	81.00	•	•
4.800		86.00	52.00	•	•	9.000		125.00	81.00	•	•
4.900		86.00	52.00	•	•	9.100		125.00	81.00	•	•
5.000		86.00	52.00	•	•	9.200		125.00	81.00	•	•



# Twist drills with straight shank

Guhring no. 5523 5519				Guhring no. 5523 5519			
Discount group				Discount group			
d1		l1	l2	d1		l1	l2
mm	inch	mm	mm	mm	inch	mm	mm
9.300		125.00	81.00	10.500		133.00	87.00
9.400		125.00	81.00	11.000		142.00	94.00
9.500		125.00	81.00	11.110	7/16	142.00	94.00
9.600		133.00	87.00	11.500		142.00	94.00
9.700		133.00	87.00	12.000		151.00	101.00
9.800		133.00	87.00	12.500		151.00	101.00
9.900		133.00	87.00	13.000		151.00	101.00
10.000		133.00	87.00	13.500		160.00	108.00
10.100		133.00	87.00	14.000		160.00	108.00
10.200		133.00	87.00				
10.300		133.00	87.00				
10.400		133.00	87.00				



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Navigator integrated in our E-shop can also be found via a separate online search on the internet. In addition, it can also be downloaded to your computer as an offline version so our cutting rate recommendations are always available.

Films about Guhring tools and services can be found on our YouTube channel.

# Twist drills with straight shank

## Jobber drills

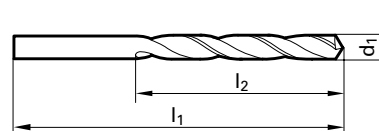


Tool material **HSS-E-PM**  
 Surface finish **S**  
 Type **GT 500 DZ**

- P** ● PM-Co-alloyed high speed steel
- M** ○ particularly high stability
- K** ● particularly high wear resistance
- N** ○
- S** ○
- H** ○

### GÜHRINGNAVIGATOR

• application recommendations see page 27



Guhring no. 5522				Guhring no. 5522					
Discount group 159				Discount group 159					
d1		l1	l2	Availability					
mm	inch	mm	mm						
1.000		34.00	12.00	●	5.100		86.00	52.00	●
1.100		36.00	14.00	●	5.160	13/64	86.00	52.00	●
1.200		38.00	16.00	●	5.200		86.00	52.00	●
1.300		38.00	16.00	●	5.300		86.00	52.00	●
1.400		40.00	18.00	●	5.400		93.00	57.00	●
1.500		40.00	18.00	●	5.500		93.00	57.00	●
1.600		43.00	20.00	●	5.560	7/32	93.00	57.00	●
1.700		43.00	20.00	●	5.600		93.00	57.00	●
1.800		46.00	22.00	●	5.700		93.00	57.00	●
1.900		46.00	22.00	●	5.800		93.00	57.00	●
2.000		49.00	24.00	●	5.900		93.00	57.00	●
2.100		49.00	24.00	●	5.950	15/64	93.00	57.00	●
2.200		53.00	27.00	●	6.000		93.00	57.00	●
2.300		53.00	27.00	●	6.100		101.00	63.00	●
2.380	3/32	57.00	30.00	●	6.200		101.00	63.00	●
2.400		57.00	30.00	●	6.300		101.00	63.00	●
2.500		57.00	30.00	●	6.350	1/4	101.00	63.00	●
2.600		57.00	30.00	●	6.400		101.00	63.00	●
2.700		61.00	33.00	●	6.500		101.00	63.00	●
2.780	7/64	61.00	33.00	●	6.600		101.00	63.00	●
2.800		61.00	33.00	●	6.700		101.00	63.00	●
2.900		61.00	33.00	●	6.800		109.00	69.00	●
3.000		61.00	33.00	●	6.900		109.00	69.00	●
3.100		65.00	36.00	●	7.000		109.00	69.00	●
3.170	1/8	65.00	36.00	●	7.100		109.00	69.00	●
3.200		65.00	36.00	●	7.140	9/32	109.00	69.00	●
3.300		65.00	36.00	●	7.200		109.00	69.00	●
3.400		70.00	39.00	●	7.300		109.00	69.00	●
3.500		70.00	39.00	●	7.400		109.00	69.00	●
3.570	9/64	70.00	39.00	●	7.500		109.00	69.00	●
3.600		70.00	39.00	●	7.600		117.00	75.00	●
3.700		70.00	39.00	●	7.700		117.00	75.00	●
3.800		75.00	43.00	●	7.800		117.00	75.00	●
3.900		75.00	43.00	●	7.900		117.00	75.00	●
3.970	5/32	75.00	43.00	●	7.940	5/16	117.00	75.00	●
4.000		75.00	43.00	●	8.000		117.00	75.00	●
4.100		75.00	43.00	●	8.100		117.00	75.00	●
4.200		75.00	43.00	●	8.200		117.00	75.00	●
4.300		80.00	47.00	●	8.300		117.00	75.00	●
4.370	11/64	80.00	47.00	●	8.400		117.00	75.00	●
4.400		80.00	47.00	●	8.500		117.00	75.00	●
4.500		80.00	47.00	●	8.730	11/32	125.00	81.00	●
4.600		80.00	47.00	●	8.800		125.00	81.00	●
4.700		80.00	47.00	●	9.000		125.00	81.00	●
4.760	3/16	86.00	52.00	●	9.300		125.00	81.00	●
4.800		86.00	52.00	●	9.500		125.00	81.00	●
4.900		86.00	52.00	●	9.800		133.00	87.00	●
5.000		86.00	52.00	●	10.000		133.00	87.00	●



# Twist drills with straight shank

## Long series twist drills

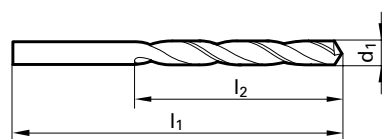


Tool material	HSCO
Surface finish	○ S
Type	GU 500 DZ

P	●	• Co-alloyed high speed steel
M	●	• low feed force necessary
K	●	• low torque required
N	●	• higher wear resistance
S	●	• universally applicable
H		

### GÜHRINGNAVIGATOR

• application recommendations see page 27



Gühring no.			5536	5537	Gühring no.			5536	5537
Discount group			159	159	Discount group			159	159
d1	l1	l2	Availability		d1	l1	l2	Availability	
mm	mm	mm			mm	mm	mm		
1.000	56.000	33.000	●	●	5.200	132.000	87.000	●	●
1.100	60.000	37.000	●	●	5.300	132.000	87.000	●	●
1.200	65.000	41.000	●	●	5.400	139.000	91.000	●	●
1.300	65.000	41.000	●	●	5.500	139.000	91.000	●	●
1.400	70.000	45.000	●	●	5.600	139.000	91.000	●	●
1.500	70.000	45.000	●	●	5.700	139.000	91.000	●	●
1.600	76.000	50.000	●	●	5.800	139.000	91.000	●	●
1.700	76.000	50.000	●	●	5.900	139.000	91.000	●	●
1.800	80.000	53.000	●	●	6.000	139.000	91.000	●	●
1.900	80.000	53.000	●	●	6.100	148.000	97.000	●	●
2.000	85.000	56.000	●	●	6.200	148.000	97.000	●	●
2.100	85.000	56.000	●	●	6.300	148.000	97.000	●	●
2.200	90.000	59.000	●	●	6.400	148.000	97.000	●	●
2.300	90.000	59.000	●	●	6.500	148.000	97.000	●	●
2.400	95.000	62.000	●	●	6.600	148.000	97.000	●	●
2.500	95.000	62.000	●	●	6.700	148.000	97.000	●	●
2.600	95.000	62.000	●	●	6.800	156.000	102.000	●	●
2.700	100.000	66.000	●	●	6.900	156.000	102.000	●	●
2.800	100.000	66.000	●	●	7.000	156.000	102.000	●	●
2.900	100.000	66.000	●	●	7.100	156.000	102.000	●	●
3.000	100.000	66.000	●	●	7.200	156.000	102.000	●	●
3.100	106.000	69.000	●	●	7.300	156.000	102.000	●	●
3.200	106.000	69.000	●	●	7.400	156.000	102.000	●	●
3.300	106.000	69.000	●	●	7.500	156.000	102.000	●	●
3.400	112.000	73.000	●	●	7.600	165.000	109.000	●	●
3.500	112.000	73.000	●	●	7.700	165.000	109.000	●	●
3.600	112.000	73.000	●	●	7.800	165.000	109.000	●	●
3.700	112.000	73.000	●	●	7.900	165.000	109.000	●	●
3.800	119.000	78.000	●	●	8.000	165.000	109.000	●	●
3.900	119.000	78.000	●	●	8.100	165.000	109.000	●	●
4.000	119.000	78.000	●	●	8.200	165.000	109.000	●	●
4.100	119.000	78.000	●	●	8.300	165.000	109.000	●	●
4.200	119.000	78.000	●	●	8.400	165.000	109.000	●	●
4.300	126.000	82.000	●	●	8.500	165.000	109.000	●	●
4.400	126.000	82.000	●	●	8.600	175.000	115.000	●	●
4.500	126.000	82.000	●	●	8.700	175.000	115.000	●	●
4.600	126.000	82.000	●	●	8.800	175.000	115.000	●	●
4.700	126.000	82.000	●	●	8.900	175.000	115.000	●	●
4.800	132.000	87.000	●	●	9.000	175.000	115.000	●	●
4.900	132.000	87.000	●	●	9.100	175.000	115.000	●	●
5.000	132.000	87.000	●	●	9.200	175.000	115.000	●	●
5.100	132.000	87.000	●	●	9.300	175.000	115.000	●	●





# Twist drills with re-inforced shank

## Twist drills with re-inforced shank



Tool material **HSCO**

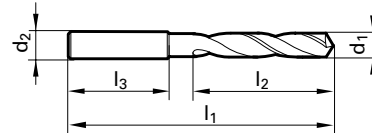
Surface finish **S**

Type **GU 500**

<b>P</b>	●	• Co-alloyed high speed steel
<b>M</b>	●	• low feed force necessary
<b>K</b>	●	• low torque required
<b>N</b>	●	• higher wear resistance
<b>S</b>	●	• universally applicable
<b>H</b>		

### GUHRINGNAVIGATOR

• application recommendations see page 25



Guhring no. 512					Guhring no. 512						
Discount group					Discount group						
d1	d2 h6	l1	l2	l3	Availability	d1	d2 h6	l1	l2	l3	Availability
mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	
2.000	3.000	44.00	12.00	28.00	●	6.200	8.000	75.00	31.00	36.00	●
2.100	3.000	44.00	12.00	28.00	●	6.300	8.000	75.00	31.00	36.00	●
2.200	3.000	45.00	13.00	28.00	●	6.350	8.000	75.00	31.00	36.00	●
2.300	3.000	45.00	13.00	28.00	●	6.400	8.000	75.00	31.00	36.00	●
2.380	3.000	46.00	14.00	28.00	●	6.500	8.000	75.00	31.00	36.00	●
2.400	3.000	46.00	14.00	28.00	●	6.600	8.000	75.00	31.00	36.00	●
2.500	3.000	46.00	14.00	28.00	●	6.750	8.000	78.00	34.00	36.00	●
2.600	3.000	46.00	14.00	28.00	●	6.800	8.000	78.00	34.00	36.00	●
2.700	3.000	48.00	16.00	28.00	●	6.900	8.000	78.00	34.00	36.00	●
2.780	3.000	48.00	16.00	28.00	●	7.000	8.000	78.00	34.00	36.00	●
2.800	3.000	48.00	16.00	28.00	●	7.100	8.000	78.00	34.00	36.00	●
2.900	3.000	48.00	16.00	28.00	●	7.140	8.000	78.00	34.00	36.00	●
3.000	3.000	48.00	16.00	28.00	●	7.200	8.000	78.00	34.00	36.00	●
3.100	4.000	50.00	18.00	28.00	●	7.300	8.000	78.00	34.00	36.00	●
3.170	4.000	50.00	18.00	28.00	●	7.500	8.000	78.00	34.00	36.00	●
3.200	4.000	50.00	18.00	28.00	●	7.540	8.000	81.00	37.00	36.00	●
3.300	4.000	50.00	18.00	28.00	●	7.600	8.000	81.00	37.00	36.00	●
3.400	4.000	52.00	20.00	28.00	●	7.800	8.000	81.00	37.00	36.00	●
3.500	4.000	52.00	20.00	28.00	●	7.900	8.000	81.00	37.00	36.00	●
3.570	4.000	52.00	20.00	28.00	●	7.940	8.000	81.00	37.00	36.00	●
3.600	4.000	52.00	20.00	28.00	●	8.000	8.000	81.00	37.00	36.00	●
3.700	4.000	52.00	20.00	28.00	●	8.100	10.000	87.00	37.00	40.00	●
3.800	4.000	54.00	22.00	28.00	●	8.200	10.000	87.00	37.00	40.00	●
3.900	4.000	54.00	22.00	28.00	●	8.300	10.000	87.00	37.00	40.00	●
4.000	4.000	54.00	22.00	28.00	●	8.330	10.000	87.00	37.00	40.00	●
4.100	6.000	66.00	22.00	36.00	●	8.500	10.000	87.00	37.00	40.00	●
4.200	6.000	66.00	22.00	36.00	●	8.600	10.000	91.00	40.00	40.00	●
4.300	6.000	68.00	24.00	36.00	●	8.730	10.000	91.00	40.00	40.00	●
4.370	6.000	68.00	24.00	36.00	●	8.900	10.000	91.00	40.00	40.00	●
4.400	6.000	68.00	24.00	36.00	●	9.000	10.000	91.00	40.00	40.00	●
4.500	6.000	68.00	24.00	36.00	●	9.100	10.000	91.00	40.00	40.00	●
4.700	6.000	68.00	24.00	36.00	●	9.130	10.000	91.00	40.00	40.00	●
4.760	6.000	70.00	26.00	36.00	●	9.400	10.000	91.00	40.00	40.00	●
4.800	6.000	70.00	26.00	36.00	●	9.520	10.000	93.00	43.00	40.00	●
4.900	6.000	70.00	26.00	36.00	●	9.900	10.000	93.00	43.00	40.00	●
5.000	6.000	70.00	26.00	36.00	●	9.920	10.000	93.00	43.00	40.00	●
5.100	6.000	70.00	26.00	36.00	●	10.000	10.000	93.00	43.00	40.00	●
5.200	6.000	70.00	26.00	36.00	●	10.100	12.000	100.00	43.00	45.00	●
5.300	6.000	70.00	26.00	36.00	●	10.200	12.000	100.00	43.00	45.00	●
5.400	6.000	72.00	28.00	36.00	●	10.300	12.000	100.00	43.00	45.00	●
5.500	6.000	72.00	28.00	36.00	●	10.320	12.000	100.00	43.00	45.00	●
5.560	6.000	72.00	28.00	36.00	●	10.500	12.000	100.00	43.00	45.00	●
5.600	6.000	72.00	28.00	36.00	●	10.900	12.000	104.00	47.00	45.00	●
5.800	6.000	72.00	28.00	36.00	●	11.000	12.000	104.00	47.00	45.00	●
5.900	6.000	72.00	28.00	36.00	●	11.100	12.000	104.00	47.00	45.00	●
5.950	6.000	72.00	28.00	36.00	●	11.110	12.000	104.00	47.00	45.00	●
6.000	6.000	72.00	28.00	36.00	●	11.200	12.000	104.00	47.00	45.00	●
6.100	8.000	75.00	31.00	36.00	●	11.300	12.000	104.00	47.00	45.00	●



# Twist drills with re-inforced shank

## Twist drills with re-inforced shank



Tool material **HSCO**

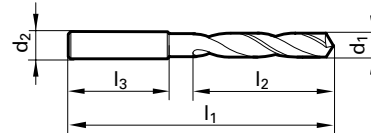
Surface finish **S**

Type **GU 500**

<b>P</b>	●	• Co-alloyed high speed steel
<b>M</b>	●	• low feed force necessary
<b>K</b>	●	• low torque required
<b>N</b>	●	• higher wear resistance
<b>S</b>	●	• universally applicable
<b>H</b>		

### GÜHRINGNAVIGATOR

• application recommendations see page 27



Guhring no. 511					Guhring no. 511						
Discount group					Discount group						
d1	d2 h6	l1	l2	l3	Availability	d1	d2 h6	l1	l2	l3	Availability
mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	
2.000	3.000	56.00	24.00	28.00	●	6.600	8.000	107.00	63.00	36.00	●
2.100	3.000	56.00	24.00	28.00	●	6.700	8.000	107.00	63.00	36.00	●
2.300	3.000	59.00	27.00	28.00	●	6.750	8.000	113.00	69.00	36.00	●
2.380	3.000	62.00	30.00	28.00	●	6.800	8.000	113.00	69.00	36.00	●
2.400	3.000	62.00	30.00	28.00	●	6.900	8.000	113.00	69.00	36.00	●
2.500	3.000	62.00	30.00	28.00	●	7.000	8.000	113.00	69.00	36.00	●
2.600	3.000	62.00	30.00	28.00	●	7.100	8.000	113.00	69.00	36.00	●
2.780	3.000	65.00	33.00	28.00	●	7.140	8.000	113.00	69.00	36.00	●
2.800	3.000	65.00	33.00	28.00	●	7.200	8.000	113.00	69.00	36.00	●
2.900	3.000	65.00	33.00	28.00	●	7.300	8.000	113.00	69.00	36.00	●
3.000	3.000	65.00	33.00	28.00	●	7.400	8.000	113.00	69.00	36.00	●
3.100	4.000	68.00	36.00	28.00	●	7.500	8.000	113.00	69.00	36.00	●
3.200	4.000	68.00	36.00	28.00	●	7.540	8.000	119.00	75.00	36.00	●
3.300	4.000	68.00	36.00	28.00	●	7.550	8.000	119.00	75.00	36.00	●
3.400	4.000	71.00	39.00	28.00	●	7.600	8.000	119.00	75.00	36.00	●
3.500	4.000	71.00	39.00	28.00	●	7.700	8.000	119.00	75.00	36.00	●
3.570	4.000	71.00	39.00	28.00	●	7.900	8.000	119.00	75.00	36.00	●
3.900	4.000	75.00	43.00	28.00	●	7.940	8.000	119.00	75.00	36.00	●
3.970	4.000	75.00	43.00	28.00	●	8.000	8.000	119.00	75.00	36.00	●
4.000	4.000	75.00	43.00	28.00	●	8.100	10.000	125.00	75.00	40.00	●
4.200	6.000	87.00	43.00	36.00	●	8.200	10.000	125.00	75.00	40.00	●
4.300	6.000	91.00	47.00	36.00	●	8.300	10.000	125.00	75.00	40.00	●
4.370	6.000	91.00	47.00	36.00	●	8.330	10.000	125.00	75.00	40.00	●
4.400	6.000	91.00	47.00	36.00	●	8.500	10.000	125.00	75.00	40.00	●
4.500	6.000	91.00	47.00	36.00	●	8.600	10.000	131.00	81.00	40.00	●
4.600	6.000	91.00	47.00	36.00	●	8.730	10.000	131.00	81.00	40.00	●
4.650	6.000	91.00	47.00	36.00	●	8.800	10.000	131.00	81.00	40.00	●
4.700	6.000	91.00	47.00	36.00	●	8.900	10.000	131.00	81.00	40.00	●
4.760	6.000	96.00	52.00	36.00	●	9.000	10.000	131.00	81.00	40.00	●
4.800	6.000	96.00	52.00	36.00	●	9.100	10.000	131.00	81.00	40.00	●
4.900	6.000	96.00	52.00	36.00	●	9.130	10.000	131.00	81.00	40.00	●
5.000	6.000	96.00	52.00	36.00	●	9.400	10.000	131.00	81.00	40.00	●
5.100	6.000	96.00	52.00	36.00	●	9.500	10.000	131.00	81.00	40.00	●
5.160	6.000	96.00	52.00	36.00	●	9.520	10.000	137.00	87.00	40.00	●
5.200	6.000	96.00	52.00	36.00	●	9.550	10.000	137.00	87.00	40.00	●
5.300	6.000	96.00	52.00	36.00	●	9.600	10.000	137.00	87.00	40.00	●
5.400	6.000	101.00	57.00	36.00	●	9.700	10.000	137.00	87.00	40.00	●
5.500	6.000	101.00	57.00	36.00	●	9.900	10.000	137.00	87.00	40.00	●
5.600	6.000	101.00	57.00	36.00	●	9.920	10.000	137.00	87.00	40.00	●
5.800	6.000	101.00	57.00	36.00	●	10.000	10.000	137.00	87.00	40.00	●
5.900	6.000	101.00	57.00	36.00	●	10.100	12.000	144.00	87.00	45.00	●
5.950	6.000	101.00	57.00	36.00	●	10.200	12.000	144.00	87.00	45.00	●
6.000	6.000	101.00	57.00	36.00	●	10.400	12.000	144.00	87.00	45.00	●
6.100	8.000	107.00	63.00	36.00	●	10.500	12.000	144.00	87.00	45.00	●
6.300	8.000	107.00	63.00	36.00	●	10.600	12.000	144.00	87.00	45.00	●
6.350	8.000	107.00	63.00	36.00	●	10.700	12.000	151.00	94.00	45.00	●
6.400	8.000	107.00	63.00	36.00	●	10.800	12.000	151.00	94.00	45.00	●
6.500	8.000	107.00	63.00	36.00	●	10.900	12.000	151.00	94.00	45.00	●



# Twist drills with re-inforced shank

## Twist drills with re-inforced shank



Tool material **HSS-E-PM**

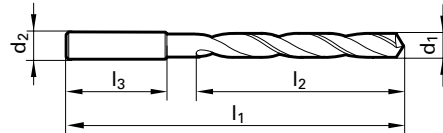
Surface finish

Type **GT 500**

- |   |   |                                     |
|---|---|-------------------------------------|
| P | ● | • PM-Co-alloyed high speed steel    |
| M | ○ | • particularly high stability       |
| K | ● | • particularly high wear resistance |
| N | ○ |                                     |
| S | ○ |                                     |
| H | ○ |                                     |

### GUHRINGNAVIGATOR

- application recommendations see page 27



Guhring no.					513	Guhring no.					513
Discount group					115	Discount group					115
d1	d2 h6	l1	l2	l3	Availability	d1	d2 h6	l1	l2	l3	Availability
mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	
2.000	3.000	56.00	24.00	28.00	●	9.500	10.000	131.00	81.00	40.00	●
2.100	3.000	56.00	24.00	28.00	●	9.520	10.000	137.00	87.00	40.00	●
2.300	3.000	59.00	27.00	28.00	●	9.600	10.000	137.00	87.00	40.00	●
2.380	3.000	62.00	30.00	28.00	●	9.700	10.000	137.00	87.00	40.00	●
2.500	3.000	62.00	30.00	28.00	●	9.800	10.000	137.00	87.00	40.00	●
2.780	3.000	65.00	33.00	28.00	●	9.920	10.000	137.00	87.00	40.00	●
3.000	3.000	65.00	33.00	28.00	●	10.000	10.000	137.00	87.00	40.00	●
3.170	4.000	68.00	36.00	28.00	●	10.200	12.000	144.00	87.00	45.00	●
3.300	4.000	68.00	36.00	28.00	●	10.400	12.000	144.00	87.00	45.00	●
3.500	4.000	71.00	39.00	28.00	●	10.500	12.000	144.00	87.00	45.00	●
3.570	4.000	71.00	39.00	28.00	●	10.600	12.000	144.00	87.00	45.00	●
3.970	4.000	75.00	43.00	28.00	●	10.700	12.000	151.00	94.00	45.00	●
4.000	4.000	75.00	43.00	28.00	●	10.900	12.000	151.00	94.00	45.00	●
4.200	6.000	87.00	43.00	36.00	●	11.000	12.000	151.00	94.00	45.00	●
4.370	6.000	91.00	47.00	36.00	●	11.100	12.000	151.00	94.00	45.00	●
4.500	6.000	91.00	47.00	36.00	●	11.300	12.000	151.00	94.00	45.00	●
4.650	6.000	91.00	47.00	36.00	●	11.400	12.000	151.00	94.00	45.00	●
4.760	6.000	96.00	52.00	36.00	●	11.500	12.000	151.00	94.00	45.00	●
4.800	6.000	96.00	52.00	36.00	●	11.700	12.000	151.00	94.00	45.00	●
5.000	6.000	96.00	52.00	36.00	●	11.900	12.000	158.00	101.00	45.00	●
5.100	6.000	96.00	52.00	36.00	●	12.000	12.000	158.00	101.00	45.00	●
5.160	6.000	96.00	52.00	36.00	●	12.200	14.000	161.00	101.00	45.00	●
5.200	6.000	96.00	52.00	36.00	●	12.300	14.000	161.00	101.00	45.00	●
5.300	6.000	96.00	52.00	36.00	●	12.400	14.000	161.00	101.00	45.00	●
5.500	6.000	101.00	57.00	36.00	●	12.500	14.000	161.00	101.00	45.00	●
5.800	6.000	101.00	57.00	36.00	●	12.600	14.000	161.00	101.00	45.00	●
6.000	6.000	101.00	57.00	36.00	●	12.700	14.000	161.00	101.00	45.00	●
6.100	8.000	107.00	63.00	36.00	●	12.800	14.000	161.00	101.00	45.00	●
6.350	8.000	107.00	63.00	36.00	●	12.900	14.000	161.00	101.00	45.00	●
6.500	8.000	107.00	63.00	36.00	●	13.000	14.000	161.00	101.00	45.00	●
6.600	8.000	107.00	63.00	36.00	●						
6.750	8.000	113.00	69.00	36.00	●						
6.800	8.000	113.00	69.00	36.00	●						
7.000	8.000	113.00	69.00	36.00	●						
7.140	8.000	113.00	69.00	36.00	●						
7.400	8.000	113.00	69.00	36.00	●						
7.500	8.000	113.00	69.00	36.00	●						
7.540	8.000	119.00	75.00	36.00	●						
7.800	8.000	119.00	75.00	36.00	●						
7.940	8.000	119.00	75.00	36.00	●						
8.000	8.000	119.00	75.00	36.00	●						
8.330	10.000	125.00	75.00	40.00	●						
8.500	10.000	125.00	75.00	40.00	●						
8.730	10.000	131.00	81.00	40.00	●						
8.800	10.000	131.00	81.00	40.00	●						
9.000	10.000	131.00	81.00	40.00	●						
9.130	10.000	131.00	81.00	40.00	●						
9.300	10.000	131.00	81.00	40.00	●						





# Application recommendations GU 500 / GT 500

Tools with **bold** feed column no. are preferred choice.

**Gühring no.**

**Standard/DIN**

**Tool material**

**Surface finish**

**Type**

Drill Ø mm	Feed column no.								
	1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
<b>0,50</b>	0,004	0,006	0,007	0,008	0,010	0,012	0,014	0,016	0,019
<b>1,00</b>	0,006	0,008	0,012	0,014	0,016	0,018	0,020	0,023	0,025
<b>2,00</b>	0,020	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125
<b>2,50</b>	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160
<b>3,15</b>	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,160
<b>4,00</b>	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,200
<b>5,00</b>	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250
<b>6,30</b>	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315
<b>8,00</b>	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,315
<b>10,00</b>	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,400
<b>12,50</b>	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500
<b>16,00</b>	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630
<b>20,00</b>	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,630
<b>25,00</b>	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	0,800
<b>31,50</b>	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000
<b>40,00</b>	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	1,250
<b>50,00</b>	0,250	0,310	0,400	0,500	0,630	0,800	1,000	1,250	1,250
<b>63,00</b>	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600
<b>80,00</b>	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	2,000

Coolant:

- Air
- Neat oil
- ◐ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm <sup>2</sup> )	Hardness	Coolant
Common structural steels	<b>1.0035</b> S185(St33), <b>1.0486</b> P275N(StE285), <b>1.0345</b> P235GH(H1), <b>1.0425</b> P265GH(H2) <b>1.0050</b> E295 (St50-2), <b>1.0070</b> E360 (St70-2), <b>1.8937</b> P500NH (WStE500)	≤500 ≤1000		○
Free-cutting steels	<b>1.0718</b> 11SMnPb30 (9SMnPb28), <b>1.0736</b> 11SMn37 (9SMn36) <b>1.0727</b> 46S20 (45S20), <b>1.0728</b> (60S20), <b>1.0757</b> 46SPb20 (45SPb20)	≤850 ≤1000		○
Unalloyed heat-treatable steels	<b>1.0402</b> C22, <b>1.1178</b> C30E (Ck30) <b>1.0503</b> C45, <b>1.1191</b> C45E (Ck45) <b>1.0601</b> C60, <b>1.1221</b> C60E (Ck60)	≤700 ≤850 ≤1000		○
Alloyed heat-treatable steels	<b>1.5131</b> 50MnSi4, <b>1.7003</b> 38Cr2, <b>1.7030</b> 28Cr4 <b>1.5710</b> 36NiCr6, <b>1.7035</b> 41Cr4, <b>1.7225</b> 42CrMo4	≤1000 ≤1400		○
Unalloyed case hardened steels	<b>1.0301</b> (C10), <b>1.1121</b> C10E (Ck10)	≤850		○
Alloyed case hardened steels	<b>1.7276</b> 10CrMo11, <b>1.5125</b> 11MnSi6 <b>1.5752</b> 15NiCr13, <b>1.7131</b> 16MnCr5, <b>1.7264</b> 20CrMo5	≤1000 ≤1400		●
Nitriding steels	<b>1.8504</b> 34CrAl6 <b>1.8519</b> 31CrMoV9, <b>1.8550</b> 34CrAlNi7	≤1000 ≤1400		○
Tool steels	<b>1.1750</b> C75W, <b>1.2067</b> 102Cr6, <b>1.2307</b> 29CrMoV9 <b>1.2080</b> X210Cr12, <b>1.2083</b> X42Cr13, <b>1.2419</b> 105WCr6, <b>1.2767</b> X45NiCrMo4	≤850 ≤1400		○
High speed steels	<b>1.3243</b> S 6-5-2-5, <b>1.3343</b> S 6-5-2, <b>1.3344</b> S 6-5-3	≤1400		●
Spring steels	<b>1.5026</b> 55Si7, <b>1.7176</b> 55Cr3, <b>1.8159</b> 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	<b>1.4005</b> X12CrS13, <b>1.4104</b> X14CrMoS17, <b>1.4105</b> X6CrMoS17, <b>1.4305</b> X8CrNiS18-9	≤900		●
austenitic	<b>1.4301</b> X5CrNi18-10 (V2A), <b>1.4541</b> X6CrNiTi18-10, <b>1.4571</b> X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	<b>1.4057</b> X20CrNi172 (X17CrNi16-2), <b>1.4122</b> X39CrMo17-1, <b>1.4521</b> X2CrMoTi18-2	≤1500		●
Hardened steels	-		≤48 HRC ≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	<b>0.6010</b> EN-GJL-100 (GG10), <b>0.6020</b> EN-GJL-200 (GG20) <b>0.6025</b> EN-GJL-250 (GG25), <b>0.6035</b> EN-GJL-350 (GG35)		≤240 HB ≤350 HB	○
Spheroidal graphite iron and malleable cast iron	<b>0.7050</b> EN-GJS-500-7 (GGG50), <b>0.8035</b> EN-GJMW-350-4 (GTW35) <b>0.7070</b> EN-GJS-700-2 (GGG70), <b>0.8170</b> EN-GJMB-700-2 (GTS70)		≤240 HB ≤350 HB	○
Chilled cast iron	-		≤350 HB	○
Ti and Ti-alloys	<b>3.7024</b> Ti99,5, <b>3.7114</b> TiAl5Sn2,5, <b>3.7124</b> TiCu2 <b>3.7154</b> TiAl6Zr5, <b>3.7165</b> TiAl6V4, <b>3.7184</b> TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤850 ≤1400		●
Aluminium and Al-alloys	<b>3.0255</b> Al99,5, <b>3.2315</b> AlMgSi1, <b>3.3515</b> AlMg1	≤400		○
Al wrought alloys	<b>3.0615</b> AlMgSiPb, <b>3.1325</b> AlCuMg1, <b>3.3245</b> AlMg3Si, <b>3.4365</b> AlZnMgCu1,5	≤650		○
Al cast alloys ≤ 10 % Si	<b>3.2131</b> G-AlSi5Cu1, <b>3.2153</b> G-AlSi7Cu3, <b>3.2573</b> G-AlSi9	≤600		○
≤ 24 % Si	<b>3.2581</b> G-AlSi12, <b>3.2583</b> G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		○
Magnesium alloys	<b>3.5200</b> MgMn2, <b>3.5812.05</b> G-MgAl8Zn1, <b>3.5612.05</b> G-MgAl6Zn1	≤400		○
Copper, low-alloyed	<b>2.0070</b> SE-Cu, <b>2.1020</b> CuSn6, <b>2.1096</b> G-CuSn5ZnPb	≤500		○
Brass, short-chipping	<b>2.0380</b> CuZn39Pb2, <b>2.0401</b> CuZn39Pb3, <b>2.0410</b> CuZn43Pb2	≤600		○
long-chipping	<b>2.0250</b> CuZn20, <b>2.0280</b> CuZn33, <b>2.0332</b> CuZn37Pb0,5	≤600		○
Bronze, short-chipping	<b>2.1090</b> CuSn7ZnPb, <b>2.1170</b> CuPb5Sn5, <b>2.1176</b> CuPb10Sn <b>2.0790</b> CuNi18Zn19Pb	≤600 ≤850		●
Bronze, long-chipping	<b>2.0916</b> CuAl5, <b>2.0960</b> CuAl9Mn, <b>2.1050</b> CuSn10 <b>2.0980</b> CuAl11Ni, <b>2.1247</b> CuBe2	≤850 ≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglas, Hostalen, Novodur, Makralon	≤100		○
New cast materials CGI	<b>EN-GJV250</b> (GGV25), <b>EN-GJV350</b> (GGV35) <b>EN-GJV400</b> (GGV40), <b>EN-GJV500</b> (GGV50), SiMo 6		≤220 HB ≤300 HB	○
New cast materials ADI	<b>EN-GJS-800-8</b> (ADI800), <b>EN-GJS-1000-5</b> (ADI1000) <b>EN-GJS-1200-2</b> (ADI1200), <b>EN-GJS-1400-1</b> (ADI1400)	≤1000 ≤1400		○
Kevlar	Kevlar	≤1000		○
Glass, carbon concent. plastics	GRP/CFRP	≤1000		○

# ≤3xD Drilling depth

**5524**  
1897  
**HSCO**  
○  
GU 500 DZ

**5520**      **512**  
1897      WN  
**HSCO**      **HSCO**  
Ⓢ      Ⓢ  
GU 500 DZ      GU 500

**5521**  
1897  
**HSS-E-PM**  
Ⓢ  
GT 500 DZ

**515**  
1897  
**HSS-E-PM**  
Ⓢ  
GT 500



v <sub>c</sub> m/min	Feed col. no.
35	6
30	5
40	6
30	6
32	6
28	6
20	5
15	4
13	3
30	6
16	4
12	3
15	4
10	3
15	4
10	3
10	3
14	4
10	4
12	4
36	6
30	6
30	6
22	6
50	7
50	7
65	7
60	6
60	6
70	5
45	5
30	5
36	4
30	4
30	4
25	4
20	4
15	4

v <sub>c</sub> m/min	Feed col. no.	Feed col. no.
45	6	6
35	5	5
40	6	6
40	6	6
44	6	6
44	6	6
40	5	5
27	4	4
22	3	3
44	6	6
22	4	4
18	3	3
22	4	4
16	3	3
20	4	4
15	3	3
13	3	3
9	2	2
20	4	4
16	4	4
18	4	4
45	6	6
40	6	6
40	6	6
30	6	6
70	7	7
70	7	7
85	7	7
70	6	6
80	6	6
80	5	5
77	5	5
44	5	5
50	4	4
40	4	4
32	4	4
28	4	4
25	4	4
27	4	4

v <sub>c</sub> m/min	Feed col. no.
40	6
32	5
45	6
40	5
42	6
40	5
28	4
25	4
20	3
40	4
22	4
18	3
20	4
15	3
21	4
16	3
15	3
12	2
15	4
10	3
12	3
5	2
50	6
40	6
44	6
32	6
8	3
80	5
60	5
50	5
45	4
40	4
32	4
25	4

v <sub>c</sub> m/min	Feed col. no.
42	6
37	5
47	7
44	6
47	6
47	6
44	5
30	4
25	3
47	4
25	5
20	4
25	5
18	4
22	5
17	4
17	4
12	2
22	4
18	3
20	3
6	2
50	7
45	7
44	7
33	7
16	4
80	5
60	5
50	5
44	5
33	5
28	5
25	4

# Application recommendations GU 500 / GT 500

Tools with **bold** feed column no. are preferred choice.

**Guhring no.**

**Standard/DIN**

**Tool material**

**Surface finish**

**Type**

Drill Ø mm	Feed column no.								
	1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
<b>0,50</b>	0,004	0,006	0,007	0,008	0,010	0,012	0,014	0,016	0,019
<b>1,00</b>	0,006	0,008	0,012	0,014	0,016	0,018	0,020	0,023	0,025
<b>2,00</b>	0,020	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125
<b>2,50</b>	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160
<b>3,15</b>	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,160
<b>4,00</b>	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,200
<b>5,00</b>	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250
<b>6,30</b>	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315
<b>8,00</b>	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,315
<b>10,00</b>	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,400
<b>12,50</b>	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500
<b>16,00</b>	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630
<b>20,00</b>	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,630
<b>25,00</b>	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	0,800
<b>31,50</b>	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000
<b>40,00</b>	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	1,250
<b>50,00</b>	0,250	0,310	0,400	0,500	0,630	0,800	1,000	1,250	1,250
<b>63,00</b>	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600
<b>80,00</b>	0,400	0,500	0,630	0,800	1,000	1,250	1,600	2,000	2,000

Coolant:

- Air
- Neat oil
- ◐ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm <sup>2</sup> )	Hardness	Coolant
Common structural steels	<b>1.0035</b> S185(St33), <b>1.0486</b> P275N(StE285), <b>1.0345</b> P235GH(H1), <b>1.0425</b> P265GH(H2) <b>1.0050</b> E295 (St50-2), <b>1.0070</b> E360 (St70-2), <b>1.8937</b> P500NH (WStE500)	≤500 ≤1000		○
Free-cutting steels	<b>1.0718</b> 11SMnPb30 (9SMnPb28), <b>1.0736</b> 11SMn37 (9SMn36) <b>1.0727</b> 46S20 (45S20), <b>1.0728</b> (60S20), <b>1.0757</b> 46SPb20 (45SPb20)	≤850 ≤1000		○
Unalloyed heat-treatable steels	<b>1.0402</b> C22, <b>1.1178</b> C30E (Ck30) <b>1.0503</b> C45, <b>1.1191</b> C45E (Ck45) <b>1.0601</b> C60, <b>1.1221</b> C60E (Ck60)	≤700 ≤850 ≤1000		○
Alloyed heat-treatable steels	<b>1.5131</b> 50MnSi4, <b>1.7003</b> 38Cr2, <b>1.7030</b> 28Cr4 <b>1.5710</b> 36NiCr6, <b>1.7035</b> 41Cr4, <b>1.7225</b> 42CrMo4	≤1000 ≤1400		○
Unalloyed case hardened steels	<b>1.0301</b> (C10), <b>1.1121</b> C10E (Ck10)	≤850		○
Alloyed case hardened steels	<b>1.7276</b> 10CrMo11, <b>1.5125</b> 11MnSi6 <b>1.5752</b> 15NiCr13, <b>1.7131</b> 16MnCr5, <b>1.7264</b> 20CrMo5	≤1000 ≤1400		●
Nitriding steels	<b>1.8504</b> 34CrAl6 <b>1.8519</b> 31CrMoV9, <b>1.8550</b> 34CrAlNi7	≤1000 ≤1400		○
Tool steels	<b>1.1750</b> C75W, <b>1.2067</b> 102Cr6, <b>1.2307</b> 29CrMoV9 <b>1.2080</b> X210Cr12, <b>1.2083</b> X42Cr13, <b>1.2419</b> 105WCr6, <b>1.2767</b> X45NiCrMo4	≤850 ≤1400		○
High speed steels	<b>1.3243</b> S 6-5-2-5, <b>1.3343</b> S 6-5-2, <b>1.3344</b> S 6-5-3	≤1400		●
Spring steels	<b>1.5026</b> 55Si7, <b>1.7176</b> 55Cr3, <b>1.8159</b> 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	<b>1.4005</b> X12CrS13, <b>1.4104</b> X14CrMoS17, <b>1.4105</b> X6CrMoS17, <b>1.4305</b> X8CrNiS18-9	≤900		●
austenitic	<b>1.4301</b> X5CrNi18-10 (V2A), <b>1.4541</b> X6CrNiTi18-10, <b>1.4571</b> X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	<b>1.4057</b> X20CrNi172 (X17CrNi16-2), <b>1.4122</b> X39CrMo17-1, <b>1.4521</b> X2CrMoTi18-2	≤1500		●
Hardened steels	-		≤48 HRC ≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	<b>0.6010</b> EN-GJL-100 (GG10), <b>0.6020</b> EN-GJL-200 (GG20) <b>0.6025</b> EN-GJL-250 (GG25), <b>0.6035</b> EN-GJL-350 (GG35)		≤240 HB ≤350 HB	○
Spheroidal graphite iron and malleable cast iron	<b>0.7050</b> EN-GJS-500-7 (GGG50), <b>0.8035</b> EN-GJMW-350-4 (GTW35) <b>0.7070</b> EN-GJS-700-2 (GGG70), <b>0.8170</b> EN-GJMB-700-2 (GTS70)		≤240 HB ≤350 HB	○
Chilled cast iron	-		≤350 HB	○
Ti and Ti-alloys	<b>3.7024</b> Ti99,5, <b>3.7114</b> TiAl5Sn2,5, <b>3.7124</b> TiCu2 <b>3.7154</b> TiAl6Zr5, <b>3.7165</b> TiAl6V4, <b>3.7184</b> TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤850 ≤1400		●
Aluminium and Al-alloys	<b>3.0255</b> Al99,5, <b>3.2315</b> AlMgSi1, <b>3.3515</b> AlMg1	≤400		○
Al wrought alloys	<b>3.0615</b> AlMgSiPb, <b>3.1325</b> AlCuMg1, <b>3.3245</b> AlMg3Si, <b>3.4365</b> AlZnMgCu1,5	≤650		○
Al cast alloys ≤ 10 % Si	<b>3.2131</b> G-AlSi5Cu1, <b>3.2153</b> G-AlSi7Cu3, <b>3.2573</b> G-AlSi9	≤600		○
≤ 24 % Si	<b>3.2581</b> G-AlSi12, <b>3.2583</b> G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		○
Magnesium alloys	<b>3.5200</b> MgMn2, <b>3.5812.05</b> G-MgAl8Zn1, <b>3.5612.05</b> G-MgAl6Zn1	≤400		○
Copper, low-alloyed	<b>2.0070</b> SE-Cu, <b>2.1020</b> CuSn6, <b>2.1096</b> G-CuSn5ZnPb	≤500		○
Brass, short-chipping	<b>2.0380</b> CuZn39Pb2, <b>2.0401</b> CuZn39Pb3, <b>2.0410</b> CuZn43Pb2	≤600		○
long-chipping	<b>2.0250</b> CuZn20, <b>2.0280</b> CuZn33, <b>2.0332</b> CuZn37Pb0,5	≤600		○
Bronze, short-chipping	<b>2.1090</b> CuSn7ZnPb, <b>2.1170</b> CuPb5Sn5, <b>2.1176</b> CuPb10Sn <b>2.0790</b> CuNi18Zn19Pb	≤600 ≤850		○
Bronze, long-chipping	<b>2.0916</b> CuAl5, <b>2.0960</b> CuAl9Mn, <b>2.1050</b> CuSn10 <b>2.0980</b> CuAl11Ni, <b>2.1247</b> CuBe2	≤850 ≤1000		○
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglas, Hostalen, Novodur, Makralon	≤100		○
New cast materials CGI	<b>EN-GJV250</b> (GGV25), <b>EN-GJV350</b> (GGV35) <b>EN-GJV400</b> (GGV40), <b>EN-GJV500</b> (GGV50), SiMo 6		≤220 HB ≤300 HB	○
New cast materials ADI	<b>EN-GJS-800-8</b> (ADI800), <b>EN-GJS-1000-5</b> (ADI1000) <b>EN-GJS-1200-2</b> (ADI1200), <b>EN-GJS-1400-1</b> (ADI1400)	≤1000 ≤1400		○
Kevlar	Kevlar	≤1000		○
Glass, carbon concent. plastics	GRP/CFRP	≤1000		○

## ≤5xD Drilling depth

## ≤10xD Drilling depth

<b>5523</b>	<b>5519</b>	<b>511</b>	<b>5522</b>	<b>513</b>	<b>5536</b>	<b>5537</b>
338	338	WN	338	WN	340	340
<b>HSCO</b>	<b>HSCO</b>	<b>HSCO</b>	<b>HSS-E-PM</b>	<b>HSS-E-PM</b>	<b>HSCO</b>	<b>HSCO</b>
○	Ⓢ	Ⓢ	Ⓢ	Ⓡ	○	Ⓢ
GU 500 DZ	GU 500 DZ	GU 500	GT 500 DZ	GT 500	GU 500 DZ	GU 500 DZ



$v_c$ m/min	Feed col. no.	$v_c$ m/min	Feed col. no.		$v_c$ m/min	Feed col. no.	$v_c$ m/min	Feed col. no.	$v_c$ m/min	Feed col. no.	$v_c$ m/min	Feed col. no.
35	6	45	6	6	40	6	42	6	29	5	32	5
30	5	35	5	5	32	5	37	5	22	4	25	4
40	6	50	6	6	45	6	47	6	32	5	35	5
30	6	40	6	5	40	5	44	6	25	5	28	5
32	6	42	6	6	42	6	47	6	25	5	28	5
28	6	35	6	6	40	5	47	6	22	5	25	5
20	5	22	5	5	28	4	44	5	13	4	15	4
15	4	18	4	4	25	4	30	4	12	3	13	3
13	3	15	3	3	20	3	25	3	11	2	12	2
30	6	40	6	6	40	4	47	3	25	5	28	5
16	4	20	4	4	22	4	25	4	12	3	14	3
12	3	15	3	3	18	3	20	3	11	2	12	2
15	4	18	4	4	20	4	25	4	12	3	13	3
10	3	12	3	3	15	3	18	4	7	2	8	2
15	4	18	4	4	25	4	22	5	12	3	13	3
10	3	13	3	3	15	3	17	4	9	2	10	2
10	3	13	3	3	15	3	14	4	9	2	10	2
				2	12	2	10	2				
14	4	18	4	4	15	4	22	4	12	3	13	3
10	4	12	4	4	10	3	18	3	7	3	8	3
12	4	15	4	4	12	3	20	3	11	3	12	3
36	6	45	6	6	50	6	6	2				
30	6	36	6	6	40	6	50	7	29	6	32	6
30	6	40	6	6	45	6	44	7	23	6	26	6
22	6	28	6	6	32	6	44	7	25	6	28	6
					8	3	33	7	18	6	20	6
							16	4				
50	7	70	7						45	7	50	7
50	7	70	7						45	7	50	7
65	7	85	7						54	7	60	7
60	6	70	6						45	6	50	6
60	6	70	6	6					45	6	50	6
25	5	32	5	5	50	5			21	5	24	5
45	5	63	5	5					45	5	50	5
30	5	40	5	5	60	5			45	5	28	5
36	4	50	4	4	50	5	50	5	31	4	35	4
30	4	35	4	4	45	4	44	5	22	4	25	4
30	4	32	4	4	40	4	33	5	22	4	24	4
25	4	28	4	4	32	4	28	5	18	4	20	4
20	4	25	4	4	25	4			16	4	18	4
15	4	15	4	4					11	4	12	4

DRILLING

TAPPING/THREAD MILLING/  
FLUTELESS TAPPING

MILLING

REAMING

PCD



SPECIAL TOOLING  
SOLUTIONS

COUNTERSINKING/  
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TOOL RESTORATION SERVICE

# GUHRING

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