



Leading Through Innovation



Global Cutting Tool Leader **YG-1**



HOLEMAKING



HSS & HSS-E

GOLD-P DRILLS

GOLD-P BOHRER

- Same Performance as Full TiN-coated Drills
- Gleiche Leistung, wie bei voll TiN-beschichteten Bohrern

SELECTION GUIDE



SERIES	D1GP125	D1GP165
STANDARD	DIN338	DIN338
LENGTH	JOBBER	JOBBER
SIZE MIN	D1.0	D1.6
SIZE MAX	D13.0	D13.0
PAGE	206	209

SURFACE TREATMENT

TiN

HSS & HSS-E GOLD-P DRILLS

Same Performance as Full TiN-coated Drills



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.219

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	
P	1	Non-alloy steel	About 0.15% C Annealed	125		
	2		About 0.45% C Annealed	190	13	
	3		About 0.45% C Quenched & Tempered	250	25	
	4		About 0.75% C Annealed	270	28	
	5		About 0.75% C Quenched & Tempered	300	32	
	6	Low alloy steel	Annealed	180	10	
	7		Quenched & Tempered	275	29	
	8		Quenched & Tempered	300	32	
	9		Quenched & Tempered	350	38	
	10		High alloyed steel, and tool steel	Annealed	200	15
	11			Quenched & Tempered	325	35
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	
	13		Martensitic Quenched & Tempered	240	23	
	14	Austenitic	180	10		
K	15	Grey cast iron	Pearlitic / ferritic	180	10	
	16		Pearlitic (Martensitic)	260	26	
	17	Nodular cast iron	Ferritic	160	3	
	18		Pearlitic	250	25	
	19	Malleable cast iron	Ferritic	130		
	20		Pearlitic	230	21	
N	21	Aluminum-wrought alloy	Not Curable	60		
	22		Curable Hardened	100		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		
	24		≤ 12% Si, Curable Hardened	90		
	25		> 12% Si, Not Curable	130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		
	27		CuZn, CuSnZn (Brass)	90		
	28	Non Metallic Materials	CuSn, lead-free copper and electrolytic copper	100		
	29		Duroplastic, Fiber Reinforced Plastic			
	30	Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	
	32		Cured	280	30	
	33		Annealed	250	25	
	34		Ni or Co Based	Cured	350	38
	35			Cast	320	34
	36	Titanium Alloys	Pure Titanium	400 Rm		
	37		Alpha + Beta Alloys Hardened	1050 Rm		
H	38	Hardened steel	Hardened	550	55	
	39		Hardened	630	60	
	40	Chilled Cast Iron	Cast	400	42	
	41		Hardened	550	55	

SERIES	DLGP195	DLGP506
STANDARD	DIN338	DIN338
LENGTH	JOBBER	JOBBER
SIZE MIN	D1.0	D2.0
SIZE MAX	D13.0	D13.0
PAGE	212	215

TiN



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	
P	1	Non-alloy steel	About 0.15% C Annealed	125		
	2		About 0.45% C Annealed	190	13	
	3		About 0.45% C Quenched & Tempered	250	25	
	4		About 0.75% C Annealed	270	28	
	5		About 0.75% C Quenched & Tempered	300	32	
	6	Low alloy steel	Annealed	180	10	
	7		Quenched & Tempered	275	29	
	8		Quenched & Tempered	300	32	
	9		Quenched & Tempered	350	38	
	10		High alloyed steel, and tool steel	Annealed	200	15
	11			Quenched & Tempered	325	35
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	
	13		Martensitic Quenched & Tempered	240	23	
	14	Austenitic	180	10		
K	15	Grey cast iron	Pearlitic / ferritic	180	10	
	16		Pearlitic (Martensitic)	260	26	
	17	Nodular cast iron	Ferritic	160	3	
	18		Pearlitic	250	25	
	19	Malleable cast iron	Ferritic	130		
	20		Pearlitic	230	21	
N	21	Aluminum-wrought alloy	Not Curable	60		
	22		Curable Hardened	100		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		
	24		≤ 12% Si, Curable Hardened	90		
	25		> 12% Si, Not Curable	130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		
	27		CuZn, CuSnZn (Brass)	90		
	28	Non Metallic Materials	CuSn, lead-free copper and electrolytic copper	100		
	29		Duroplastic, Fiber Reinforced Plastic			
	30	Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	
	32		Cured	280	30	
	33		Annealed	250	25	
	34		Ni or Co Based	Cured	350	38
	35			Cast	320	34
	36	Titanium Alloys	Pure Titanium	400 Rm		
	37		Alpha + Beta Alloys Hardened	1050 Rm		
H	38	Hardened steel	Hardened	550	55	
	39		Hardened	630	60	
	40	Chilled Cast Iron	Cast	400	42	
	41		Hardened	550	55	

GOLD-P DRILL SETS

SET1	SET2	SET3	SET4
19pcs	25pcs	24pcs	91pcs
1.0mm ~ 10.0mm × 0.5mm step	1.0mm ~ 13.0mm × 0.5mm step	1.0mm ~ 10.5mm × 0.5mm step +3.3 +4.2 +6.8 +10.2	1.0mm ~ 10.0mm × 0.1mm step



D1GP125 SERIES

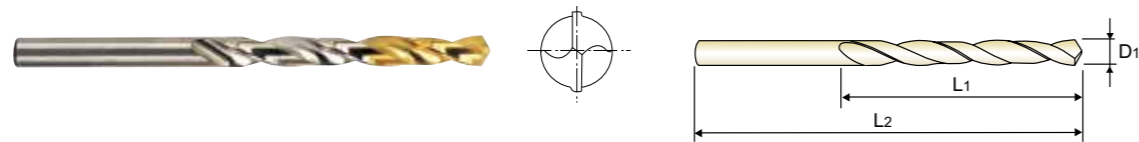
HSS, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- HSS SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS queue cylindrique revêtus, série courte
- PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

KURZ
COURTE
CORTA

- Flute Geometry** : Right hand helix
- Point Angle** : 118°, Normal point
- Surface treatment** : Bright body, TiN coating on working area
- Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- Nutenform** : Rechtsspirale
- Spitzenwinkel** : 118° Normalanschliff
- Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter			Flute Length			Overall Length		
	D1	L1	L2	D1	L1	L2	D1	L1	L2
D1GP125010	1.0	12	34	D1GP125036	3.6	39	70		
D1GP125011	1.1	14	36	D1GP125037	3.7	39	70		
D1GP125012	1.2	16	38	D1GP125038	3.8	43	75		
D1GP125013	1.3	16	38	D1GP125039	3.9	43	75		
D1GP125014	1.4	18	40	D1GP125040	4.0	43	75		
D1GP125015	1.5	18	40	D1GP125041	4.1	43	75		
D1GP125016	1.6	20	43	D1GP125042	4.2	43	75		
D1GP125017	1.7	20	43	D1GP125043	4.3	47	80		
D1GP125018	1.8	22	46	D1GP125044	4.4	47	80		
D1GP125019	1.9	22	46	D1GP125045	4.5	47	80		
D1GP125020	2.0	24	49	D1GP125046	4.6	47	80		
D1GP125021	2.1	24	49	D1GP125047	4.7	47	80		
D1GP125022	2.2	27	53	D1GP125048	4.8	52	86		
D1GP125023	2.3	27	53	D1GP125049	4.9	52	86		
D1GP125024	2.4	30	57	D1GP125050	5.0	52	86		
D1GP125025	2.5	30	57	D1GP125051	5.1	52	86		
D1GP125026	2.6	30	57	D1GP125052	5.2	52	86		
D1GP125027	2.7	33	61	D1GP125053	5.3	52	86		
D1GP125028	2.8	33	61	D1GP125054	5.4	57	93		
D1GP125029	2.9	33	61	D1GP125055	5.5	57	93		
D1GP125030	3.0	33	61	D1GP125056	5.6	57	93		
D1GP125031	3.1	36	65	D1GP125057	5.7	57	93		
D1GP125032	3.2	36	65	D1GP125058	5.8	57	93		
D1GP125033	3.3	36	65	D1GP125059	5.9	57	93		
D1GP125034	3.4	39	70	D1GP125060	6.0	57	93		
D1GP125035	3.5	39	70	D1GP125061	6.1	63	101		

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ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron			Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	38	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	◎	○	○	○	○	○	○	○	○	○	○

ISO	N							S							H						
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials			Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	40	55	60	42	55	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○													○					



D1GP125 SERIES

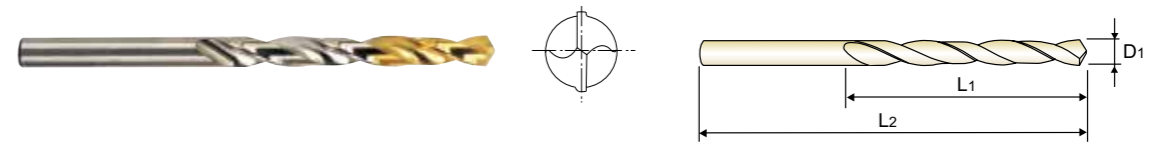
HSS, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- HSS SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS queue cylindrique revêtus, série courte
- PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

KURZ
COURTE
CORTA

- Flute Geometry** : Right hand helix
- Point Angle** : 118°, Normal point
- Surface treatment** : Bright body, TiN coating on working area
- Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- Nutenform** : Rechtsspirale
- Spitzenwinkel** : 118° Normalanschliff
- Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter			Flute Length			Overall Length		
	D1	L1	L2	D1	L1	L2	D1	L1	L2
D1GP125062	6.2	63	101	D1GP125088	8.8	81	125		
D1GP125063	6.3	63	101	D1GP125089	8.9	81	125		
D1GP125064	6.4	63	101	D1GP125090	9.0	81	125		
D1GP125065	6.5	63	101	D1GP125091	9.1	81	125		
D1GP125066	6.6	63	101	D1GP125092	9.2	81	125		
D1GP125067	6.7	63	101	D1GP125093	9.3	81	125		
D1GP125068	6.8	69	109	D1GP125094	9.4	81	125		
D1GP125069	6.9	69	109	D1GP125095	9.5	81	125		
D1GP125070	7.0	69	109	D1GP125096	9.6	87	133		
D1GP125071	7.1	69	109	D1GP125097	9.7	87	133		
D1GP125072	7.2	69	109	D1GP125098	9.8	87	133		
D1GP125073	7.3	69	109	D1GP125099	9.9	87	133		
D1GP125074	7.4	69	109	D1GP125100	10.0	87	133		
D1GP125075	7.5	69	109	D1GP125101	10.1	87	133		
D1GP125076	7.6	75	117	D1GP125102	10.2	87	133		
D1GP125077	7.7	75	117	D1GP125103	10.3	87	133		
D1GP125078	7.8	75	117	D1GP125104	10.4	87	133		
D1GP125079	7.9	75	117	D1GP125105	10.5	87	133		
D1GP125080	8.0	75	117	D1GP125106	10.6	87	133		
D1GP125081	8.1	75	117	D1GP125107	10.7	94	142		
D1GP125082	8.2	75	117	D1GP125108	10.8	94	142		
D1GP125083	8.3	75	117	D1GP125109	10.9	94	142		
D1GP125084	8.4	75	117	D1GP125110	11.0	94	142		
D1GP125085	8.5	75	117	D1GP125111	11.1	94	142		
D1GP125086	8.6	81	125	D1GP125112	11.2	94	142		
D1GP125087	8.7	81	125	D1GP125113	11.3	94	142		

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ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron			Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	38	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	◎	○	○	○	○	○	○	○	○	○	○

ISO	N							S							H						
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)		Non Metallic Materials			Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron		
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	40	55	60	42	55	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○													○					

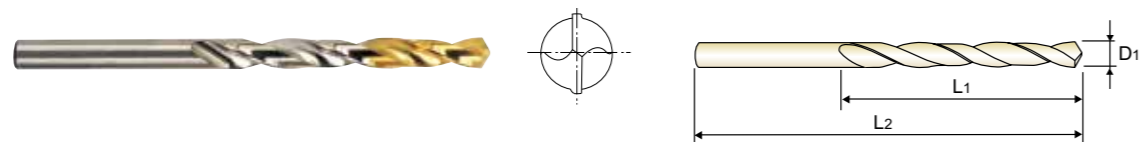
HSS, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

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KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 118°, Normal point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 118° Normalanschiff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂		D ₁	L ₁	L ₂
D1GP125114	11.4	94	142	D1GP125123	12.3	101	151
D1GP125115	11.5	94	142	D1GP125124	12.4	101	151
D1GP125116	11.6	94	142	D1GP125125	12.5	101	151
D1GP125117	11.7	94	142	D1GP125126	12.6	101	151
D1GP125118	11.8	94	142	D1GP125127	12.7	101	151
D1GP125119	11.9	101	151	D1GP125128	12.8	101	151
D1GP125120	12.0	101	151	D1GP125129	12.9	101	151
D1GP125121	12.1	101	151	D1GP125130	13.0	101	151
D1GP125122	12.2	101	151				

Unit : mm

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	130	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc						15	30	25	38	34	15	30	25	38	34	55	60	42	55	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

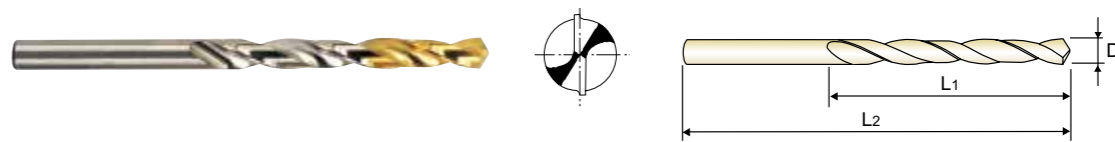
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KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand helix
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- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 118° Kreuzanschiff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
	D ₁	L ₁	L ₂		D ₁	L ₁	L ₂
D1GP165016	1.6	20	43	D1GP165042	4.2	43	75
D1GP165017	1.7	20	43	D1GP165043	4.3	47	80
D1GP165018	1.8	22	46	D1GP165044	4.4	47	80
D1GP165019	1.9	22	46	D1GP165045	4.5	47	80
D1GP165020	2.0	24	49	D1GP165046	4.6	47	80
D1GP165021	2.1	24	49	D1GP165047	4.7	47	80
D1GP165022	2.2	27	53	D1GP165048	4.8	52	86
D1GP165023	2.3	27	53	D1GP165049	4.9	52	86
D1GP165024	2.4	30	57	D1GP165050	5.0	52	86
D1GP165025	2.5	30	57	D1GP165051	5.1	52	86
D1GP165026	2.6	30	57	D1GP165052	5.2	52	86
D1GP165027	2.7	33	61	D1GP165053	5.3	52	86
D1GP165028	2.8	33	61	D1GP165054	5.4	57	93
D1GP165029	2.9	33	61	D1GP165055	5.5	57	93
D1GP165030	3.0	33	61	D1GP165056	5.6	57	93
D1GP165031	3.1	36	65	D1GP165057	5.7	57	93
D1GP165032	3.2	36	65	D1GP165058	5.8	57	93
D1GP165033	3.3	36	65	D1GP165059	5.9	57	93
D1GP165034	3.4	39	70	D1GP165060	6.0	57	93
D1GP165035	3.5	39	70	D1GP165061	6.1	63	101
D1GP165036	3.6	39	70	D1GP165062	6.2	63	101
D1GP165037	3.7	39	70	D1GP165063	6.3	63	101
D1GP165038	3.8	43	75	D1GP165064	6.4	63	101
D1GP165039	3.9	43	75	D1GP165065	6.5	63	101
D1GP165040	4.0	43	75	D1GP165066	6.6	63	101
D1GP165041	4.1	43	75	D1GP165067	6.7	63	101

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	130	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc						15	30	25	38	34	15	30	25	38	34	55	60	42	55	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

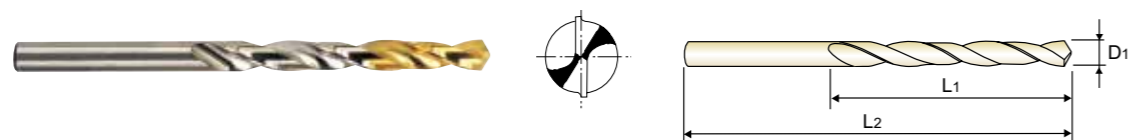
HSS, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- HSS SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS queue cylindrique revêtus, série courte
- PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

**KURZ
COURTE
CORTA**

- Flute Geometry** : Right hand helix
- Point Angle** : 118°, Split point
- Surface treatment** : Bright body, TiN coating on working area
- Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- Nutenform** : Rechtsspirale
- Spitzenwinkel** : 118° Kreuzanschliff
- Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1GP165069	6.9	69	109	D1GP165095	9.5	81	125
D1GP165070	7.0	69	109	D1GP165096	9.6	87	133
D1GP165071	7.1	69	109	D1GP165097	9.7	87	133
D1GP165072	7.2	69	109	D1GP165098	9.8	87	133
D1GP165073	7.3	69	109	D1GP165099	9.9	87	133
D1GP165074	7.4	69	109	D1GP165100	10.0	87	133
D1GP165075	7.5	69	109	D1GP165101	10.1	87	133
D1GP165076	7.6	75	117	D1GP165102	10.2	87	133
D1GP165077	7.7	75	117	D1GP165103	10.3	87	133
D1GP165078	7.8	75	117	D1GP165104	10.4	87	133
D1GP165079	7.9	75	117	D1GP165105	10.5	87	133
D1GP165080	8.0	75	117	D1GP165106	10.6	87	133
D1GP165081	8.1	75	117	D1GP165107	10.7	94	142
D1GP165082	8.2	75	117	D1GP165108	10.8	94	142
D1GP165083	8.3	75	117	D1GP165109	10.9	94	142
D1GP165084	8.4	75	117	D1GP165110	11.0	94	142
D1GP165085	8.5	75	117	D1GP165111	11.1	94	142
D1GP165086	8.6	81	125	D1GP165112	11.2	94	142
D1GP165087	8.7	81	125	D1GP165113	11.3	94	142
D1GP165088	8.8	81	125	D1GP165114	11.4	94	142
D1GP165089	8.9	81	125	D1GP165115	11.5	94	142
D1GP165090	9.0	81	125	D1GP165116	11.6	94	142
D1GP165091	9.1	81	125	D1GP165117	11.7	94	142
D1GP165092	9.2	81	125	D1GP165118	11.8	94	142
D1GP165093	9.3	81	125	D1GP165119	11.9	101	151

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	◎	○	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	42	42	55	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○						○							○					

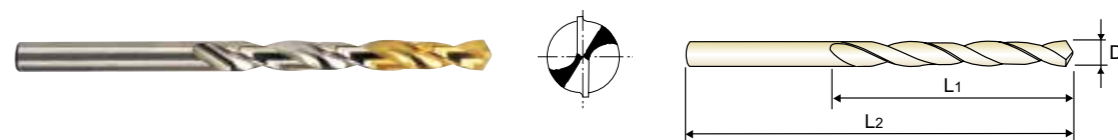
HSS, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- HSS SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS queue cylindrique revêtus, série courte
- PUNTE IN HSS, GAMBO CILINDRICO, GOLD-P

**KURZ
COURTE
CORTA**

- Flute Geometry** : Right hand helix
- Point Angle** : 118°, Split point
- Surface treatment** : Bright body, TiN coating on working area
- Application** : Drilling steels, Cast steels alloyed and Non-alloyed, Grey cast iron, Graphite, Malleable cast iron
- Nutenform** : Rechtsspirale
- Spitzenwinkel** : 118° Kreuzanschliff
- Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- Anwendung** : Stahl, legierter und unlegierter Stahlguss, Grauguss, Graphit, Temperguss



EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
D1GP165121	12.1	101	151	D1GP165127	12.7	101	151
D1GP165122	12.2	101	151	D1GP165128	12.8	101	151
D1GP165123	12.3	101	151	D1GP165129	12.9	101	151
D1GP165124	12.4	101	151	D1GP165130	13.0	101	151
D1GP165125	12.5	101	151				

HSS-E, STRAIGHT SHANK DRILLS, GOLD-P COATED

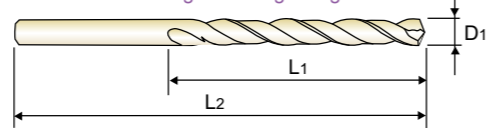
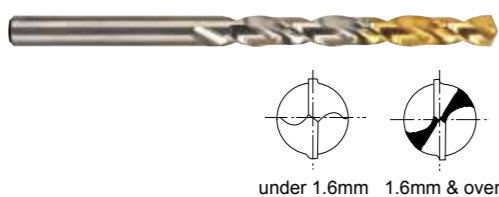
JOBBER

- HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS-E queue cylindrique revêtus, série courte
- PUNTE IN HSS-E, GAMBO CILINDRICO, GOLD-P

KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°, under 1.6mm : Normal point
1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling stainless steels, difficult to cut materials such as titanium alloys and inconel.

- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 135°, unter 1.6mm : Normalanschliff
1.6mm & über : Kreuzanschliff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



under 1.6mm 1.6mm & over



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP195011	1.1	14	36	DLGP195037	3.7	39	70
DLGP195012	1.2	16	38	DLGP195038	3.8	43	75
DLGP195013	1.3	16	38	DLGP195039	3.9	43	75
DLGP195014	1.4	18	40	DLGP195040	4.0	43	75
DLGP195015	1.5	18	40	DLGP195041	4.1	43	75
DLGP195016	1.6	20	43	DLGP195042	4.2	43	75
DLGP195017	1.7	20	43	DLGP195043	4.3	47	80
DLGP195018	1.8	22	46	DLGP195044	4.4	47	80
DLGP195019	1.9	22	46	DLGP195045	4.5	47	80
DLGP195020	2.0	24	49	DLGP195046	4.6	47	80
DLGP195021	2.1	24	49	DLGP195047	4.7	47	80
DLGP195022	2.2	27	53	DLGP195048	4.8	52	86
DLGP195023	2.3	27	53	DLGP195049	4.9	52	86
DLGP195024	2.4	30	57	DLGP195050	5.0	52	86
DLGP195025	2.5	30	57	DLGP195051	5.1	52	86
DLGP195026	2.6	30	57	DLGP195052	5.2	52	86
DLGP195027	2.7	33	61	DLGP195053	5.3	52	86
DLGP195028	2.8	33	61	DLGP195054	5.4	57	93
DLGP195029	2.9	33	61	DLGP195055	5.5	57	93
DLGP195030	3.0	33	61	DLGP195056	5.6	57	93
DLGP195031	3.1	36	65	DLGP195057	5.7	57	93
DLGP195032	3.2	36	65	DLGP195058	5.8	57	93
DLGP195033	3.3	36	65	DLGP195059	5.9	57	93
DLGP195034	3.4	39	70	DLGP195060	6.0	57	93
DLGP195035	3.5	39	70	DLGP195061	6.1	63	101

► NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron	Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron								
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	42	42	55	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○								○					○					

HSS-E, STRAIGHT SHANK DRILLS, GOLD-P COATED

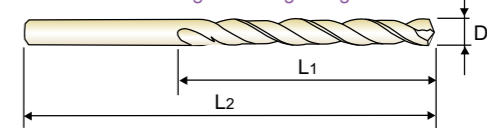
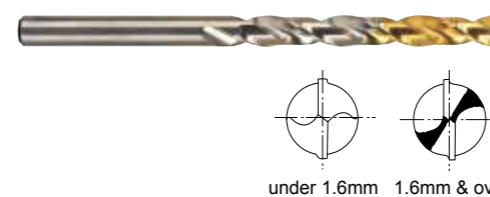
JOBBER

- HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS-E queue cylindrique revêtus, série courte
- PUNTE IN HSS-E, GAMBO CILINDRICO, GOLD-P

KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°, under 1.6mm : Normal point
1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling stainless steels, difficult to cut materials such as titanium alloys and inconel.

- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 135°, unter 1.6mm : Normalanschliff
1.6mm & über : Kreuzanschliff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



under 1.6mm 1.6mm & over



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2	EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP195063	6.3	63	101	DLGP195089	8.9	81	125
DLGP195064	6.4	63	101	DLGP195090	9.0	81	125
DLGP195065	6.5	63	101	DLGP195091	9.1	81	125
DLGP195066	6.6	63	101	DLGP195092	9.2	81	125
DLGP195067	6.7	63	101	DLGP195093	9.3	81	125
DLGP195068	6.8	69	109	DLGP195094	9.4	81	125
DLGP195069	6.9	69	109	DLGP195095	9.5	81	125
DLGP195070	7.0	69	109	DLGP195096	9.6	87	133
DLGP195071	7.1	69	109	DLGP195097	9.7	87	133
DLGP195072	7.2	69	109	DLGP195098	9.8	87	133
DLGP195073	7.3	69	109	DLGP195099	9.9	87	133
DLGP195074	7.4	69	109	DLGP195100	10.0	87	133
DLGP195075	7.5	69	109	DLGP195101	10.1	87	133
DLGP195076	7.6	75	117	DLGP195102	10.2	87	133
DLGP195077	7.7	75	117	DLGP195103	10.3	87	133
DLGP195078	7.8	75	117	DLGP195104	10.4	87	133
DLGP195079	7.9	75	117	DLGP195105	10.5	87	133
DLGP195080	8.0	75	117	DLGP195106	10.6	87	133
DLGP195081	8.1	75	117	DLGP195107	10.7	94	142
DLGP195082	8.2	75	117	DLGP195108	10.8	94	142
DLGP195083	8.3	75	117	DLGP195109	10.9	94	142
DLGP195084	8.4	75	117	DLGP195110	11.0	94	142
DLGP195085	8.5	75	117	DLGP195111	11.1	94	142
DLGP195086	8.6	81	125	DLGP195112	11.2	94	142
DLGP195087	8.7	81	125	DLGP195113	11.3	94	142

► NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron	Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron								
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	42	42	55	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○								○					○					

JOBBER

KURZ
COURTE
CORTA

DLGP195 SERIES

HSS-E, STRAIGHT SHANK DRILLS, GOLD-P COATED



Unit : mm

EDP No.	Drill Diameter D1	Flute Length L1	Overall Length L2
DLGP195063	6.3	63	101
DLGP195064	6.4	63	101
DLGP195065	6.5	63	101
DLGP195066	6.6	63	101
DLGP195067	6.7	63	101
DLGP195068	6.8	69	109
DLGP195069	6.9	69	109
DLGP195070	7.0	69	109
DLGP195071	7.1	69	109
DLGP195072	7.2	69	109
DLGP195073	7.3	69	109
DLGP195074	7.4	69	109
DLGP195075	7.5	69	109
DLGP195076	7.6	75	117
DLGP195077	7.7	75	117
DLGP195078	7.8	75	117
DLGP195079	7.9	75	117
DLGP195080	8.0	75	117
DLGP195081	8.1	75	117
DLGP195082	8.2	75	117
DLGP195083	8.3	75	117
DLGP195084	8.4	75	117
DLGP195085	8.5	75	117
DLGP195086	8.6	81	125
DLGP195087	8.7	81	125

► NEXT PAGE

◎ : Excellent ○ : Good

ISO	P										M				K				
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron	Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

HSS-E, STRAIGHT SHANK DRILLS, GOLD-P COATED

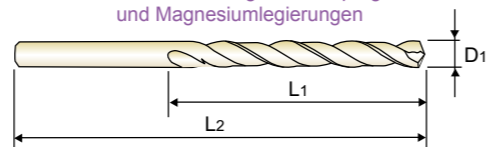
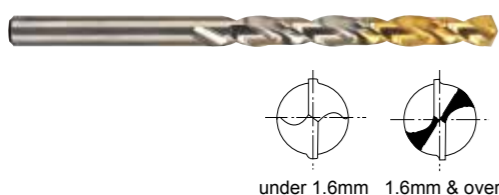
JOBBER

- HSS-E SPIRALBOHRER, GOLD-P BESCHICHTET
- Forets GOLD-P HSS-E queue cylindrique revêtus, série courte
- PUNTE IN HSS-E, GAMBO CILINDRICO, GOLD-P

KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°, under 1.6mm : Normal point
1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling stainless steels, difficult to cut materials such as titanium alloys and inconel.

- **Nutenform** : Rechtsspirale
- **Spitzenwinkel** : 135°, unter 1.6mm : Normalanschliff
1.6mm & über : Kreuzanschliff
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



under 1.6mm 1.6mm & over



EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
DLGP195114	11.4	94	142
DLGP195115	11.5	94	142
DLGP195116	11.6	94	142
DLGP195117	11.7	94	142
DLGP195118	11.8	94	142
DLGP195119	11.9	101	151
DLGP195120	12.0	101	151
DLGP195121	12.1	101	151
DLGP195122	12.2	101	151

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
DLGP195123	12.3	101	151
DLGP195124	12.4	101	151
DLGP195125	12.5	101	151
DLGP195126	12.6	101	151
DLGP195127	12.7	101	151
DLGP195128	12.8	101	151
DLGP195129	12.9	101	151
DLGP195130	13.0	101	151

◎ : Excellent ○ : Good

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	19	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○								○					○					

HSS-E, DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED

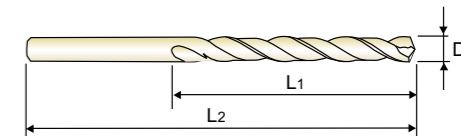
JOBBER

- HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET
- Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte
- PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P

KURZ
COURTE
CORTA

- **Flute Geometry** : Right hand, 38° helix, DH100 worm pattern type.
- **Point Angle** : 130°, Split point giving higher chip removal.
- **Surface treatment** : Bright body, TiN coating on working area.
- **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, or magnesium alloys.

- **Nutenform** : 38° Rechtsspirale, DH 100 Flachnut
- **Spitzenwinkel** : Durch 130° Kreuzanschliff Gute Spanabfuhr
- **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
- **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



► DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
DLGP506020	2.0	24	49
DLGP506021	2.1	24	49
DLGP506022	2.2	27	53
DLGP506023	2.3	27	53
DLGP506024	2.4	30	57
DLGP506025	2.5	30	57
DLGP506026	2.6	30	57
DLGP506027	2.7	33	61
DLGP506028	2.8	33	61
DLGP506029	2.9	33	61
DLGP506030	3.0	33	61
DLGP506031	3.1	36	65
DLGP506032	3.2	36	65
DLGP506033	3.3	36	65
DLGP506034	3.4	39	70
DLGP506035	3.5	39	70
DLGP506036	3.6	39	70
DLGP506037	3.7	39	70
DLGP506038	3.8	43	75
DLGP506039	3.9	43	75
DLGP506040	4.0	43	75
DLGP506041	4.1	43	75
DLGP506042	4.2	43	75
DLGP506043	4.3	47	80
DLGP506044	4.4	47	80
DLGP506045	4.5	47	80

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
DLGP506046	4.6	47	80
DLGP506047	4.7	47	80
DLGP506048	4.8	52	86
DLGP506049	4.9	52	86
DLGP506050	5.0	52	86
DLGP506051	5.1	52	86
DLGP506052	5.2	52	86
DLGP506053	5.3	52	86
DLGP506054	5.4	57	93
DLGP506055	5.5	57	93
DLGP506056	5.6	57	93
DLGP506057	5.7	57	93
DLGP506058	5.8	57	93
DLGP506059	5.9	57	93
DLGP506060	6.0	57	93
DLGP506061	6.1	63	101
DLGP506062	6.2	63	101
DLGP506063	6.3	63	101
DLGP506064	6.4	63	101
DLGP506065	6.5	63	101
DLGP506066	6.6	63	101
DLGP506067	6.7	63	101
DLGP506068	6.8	69	109
DLGP506069	6.9	69	109
DLGP506070	7.0	69	109
DLGP506071	7.1	69	109

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◎ : Excellent ○ : Good

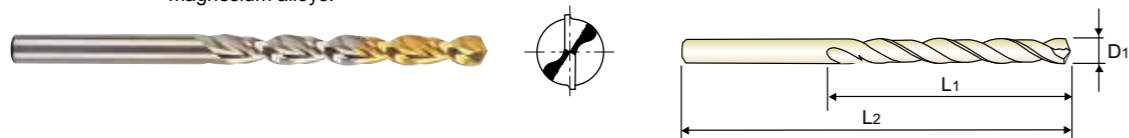
ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	19	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	◎	○	○	○	○	○	○	○	○	○

ISO	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Non Metallic Materials		Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron						
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○								○					○					

HSS-E, DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED **JOBBER**

● HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET **KURZ**
● Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte **COURTE**
● PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P **CORTA**

- ▶ **Flute Geometry** : Right hand, 38° helix, DH100 worm pattern type.
 - ▶ **Point Angle** : 130°, Split point giving higher chip removal.
 - ▶ **Surface treatment** : Bright body, TiN coating on working area.
 - ▶ **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, or magnesium alloys.
- ▶ **Nutenform** : 38° Rechtsspirale, DH 100 Flachnut
 - ▶ **Spitzenwinkel** : Durch 130° Kreuzanschliff Gute Spanabfuhr
 - ▶ **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 - ▶ **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



▶ DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter			EDP No.	Drill Diameter		
	D1	L1	L2		D1	L1	L2
DLGP506072	7.2	69	109	DLGP506098	9.8	87	133
DLGP506073	7.3	69	109	DLGP506099	9.9	87	133
DLGP506074	7.4	69	109	DLGP506100	10.0	87	133
DLGP506075	7.5	69	109	DLGP506101	10.1	87	133
DLGP506076	7.6	75	117	DLGP506102	10.2	87	133
DLGP506077	7.7	75	117	DLGP506103	10.3	87	133
DLGP506078	7.8	75	117	DLGP506104	10.4	87	133
DLGP506079	7.9	75	117	DLGP506105	10.5	87	133
DLGP506080	8.0	75	117	DLGP506106	10.6	87	133
DLGP506081	8.1	75	117	DLGP506107	10.7	94	142
DLGP506082	8.2	75	117	DLGP506108	10.8	94	142
DLGP506083	8.3	75	117	DLGP506109	10.9	94	142
DLGP506084	8.4	75	117	DLGP506110	11.0	94	142
DLGP506085	8.5	75	117	DLGP506111	11.1	94	142
DLGP506086	8.6	81	125	DLGP506112	11.2	94	142
DLGP506087	8.7	81	125	DLGP506113	11.3	94	142
DLGP506088	8.8	81	125	DLGP506114	11.4	94	142
DLGP506089	8.9	81	125	DLGP506115	11.5	94	142
DLGP506090	9.0	81	125	DLGP506116	11.6	94	142
DLGP506091	9.1	81	125	DLGP506117	11.7	94	142
DLGP506092	9.2	81	125	DLGP506118	11.8	94	142
DLGP506093	9.3	81	125	DLGP506119	11.9	101	151
DLGP506094	9.4	81	125	DLGP506120	12.0	101	151
DLGP506095	9.5	81	125	DLGP506121	12.1	101	151
DLGP506096	9.6	87	133	DLGP506122	12.2	101	151
DLGP506097	9.7	87	133	DLGP506123	12.3	101	151

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◎ : Excellent ○ : Good

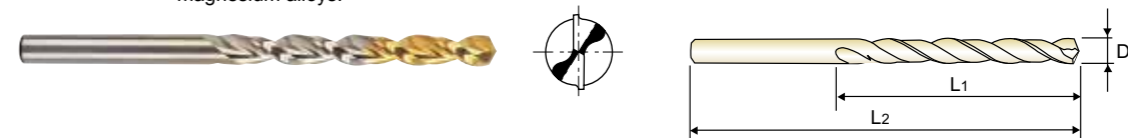
ISO Material Description	P									M					K					
	Non-alloy steel			Low alloy steel			High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ISO Material Description	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron		Hardened Cast Iron							
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

HSS-E, DH100 STRAIGHT SHANK DRILLS for DEEP HOLES, GOLD-P COATED **JOBBER**

● HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET **KURZ**
● Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte **COURTE**
● PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P **CORTA**

- ▶ **Flute Geometry** : Right hand, 38° helix, DH100 worm pattern type.
 - ▶ **Point Angle** : 130°, Split point giving higher chip removal.
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 - ▶ **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, or magnesium alloys.
- ▶ **Nutenform** : 38° Rechtsspirale, DH 100 Flachnut
 - ▶ **Spitzenwinkel** : Durch 130° Kreuzanschliff Gute Spanabfuhr
 - ▶ **Oberfläche** : Blank mit TiN-Beschichtung im Arbeitsbereich
 - ▶ **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



▶ DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter			EDP No.	Drill Diameter		
	D1	L1	L2		D1	L1	L2
DLGP506124	12.4	101	151	DLGP506128	12.8	101	151
DLGP506125	12.5	101	151	DLGP506129	12.9	101	151
DLGP506126	12.6	101	151	DLGP506130	13.0	101	151
DLGP506127	12.7	101	151				

◎ : Excellent ○ : Good

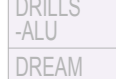
ISO Material Description	P									M					K					
	Non-alloy steel			Low alloy steel			High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ISO Material Description	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron		Hardened Cast Iron							
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

JOBBER

● HSS-E DH100 SPIRALBOHRER, für TIEFLOCH mit ZYLINDERSCHAFT, GOLD-P BESCHICHTET **KURZ**
● Forets GOLD-P HSS-E queue cylindrique revêtus, DH100 pour perçage profond, série courte **COURTE**
● PUNTE GAMBO CILINDRICO DH100 IN HSS-E, PER FORI PROFONDI, GOLD-P **CORTA**

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 - ▶ **Anwendung** : Tiefe Bohrungen in unlegierten und legierten Stählen, Grauguss, Temperguss, Aluminium- und Magnesiumlegierungen



▶ DH100 worm pattern drills

Unit : mm

EDP No.	Drill Diameter			EDP No.	Drill Diameter		
	D1	L1	L2		D1	L1	L2
DLGP506124	12.4	101	151	DLGP506128	12.8	101	151
DLGP506125	12.5	101	151	DLGP506129	12.9	101	151
DLGP506126	12.6	101	151	DLGP506130	13.0	101	151
DLGP506127	12.7	101	151				

◎ : Excellent ○ : Good

ISO Material Description	P									M					K					
	Non-alloy steel			Low alloy steel			High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	○	○	◎	○	○	○	○	○	○	○	○	○	○	○	○	○	○

ISO Material Description	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed		Copper and Copper Alloys (Bronze / Brass)	Heat Resistant Super Alloys			Titanium Alloys		Hardened steel	Chilled Cast Iron		Hardened Cast Iron							
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc	60	100	75	90	130	110	90	100			15	30	25	38	34	400Rm	1050Rm	55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

GOLD-P COATED DRILL SETS

- GOLD-P BESCHICHTET BOHRER SATS
- Coffrets de Forets GOLD-P revêtus
- SET DI PUNTE GOLD-P



DIN338 DRILL SETS JOBBER LENGTH Gold-P coated Drills

EDP No.	DESCRIPTON	SIZE	Q'TY
D1GP165SET1	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.5mm step	19 pcs
D1GP165SET2	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-13.0x0.5mm step	25 pcs
D1GP165SET3	HSS Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.5x0.5mm step +3.3 +4.2 +6.8 +10.2	24 pcs
DLGP195SET1	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.5mm step	19 pcs
DLGP195SET2	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-13.0x0.5mm step	25 pcs
DLGP195SET3	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.5x0.5mm step +3.3 +4.2 +6.8 +10.2	24 pcs
DLGPSET982	HSS-E Straight Shank, Split Point (Ø1.0 & Ø1.5 : NORMAL point)	1.0-10.0x0.1mm step	91 pcs

**RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER**

D1GP125, D1GP165, DLGP195, DLGP506 SERIES HSS & HSS-E GOLD-P DRILLS RPM = rev./min. FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)							
					2.0	3.0	4.0	6.0	8.0	10.0	13.0	
P	1	Non-alloy steel	40	RPM	6370	4240	3180	2120	1590	1270	980	
	2		FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24		
	3		RPM	5570	3710	2790	1860	1390	1110	860		
	4		FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24		
	5		RPM	4770	3180	2390	1590	1190	950	730		
	6	Low alloy steel	30	FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24	
	7		RPM	4770	3180	2390	1590	1190	950	730		
	8		FEED	0.02-0.05	0.02-0.06	0.04-0.08	0.04-0.10	0.06-0.12	0.08-0.14	0.12-0.18		
	9		RPM	3180	2120	1590	1060	800	640	490		
	10	High alloyed steel, and tool steel	20	FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24	
	11		RPM	3180	2120	1590	1060	800	640	490		
M	12	Stainless steel	25	RPM	3980	2650	1990	1330	990	800	610	
	13		FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24		
	14		RPM	3180	2120	1590	1060	800	640	490		
K	15	Grey cast iron	40	RPM	2390	1590	1190	800	600	480	370	
	16		FEED	0.02-0.05	0.02-0.06	0.04-0.08	0.04-0.10	0.06-0.12	0.08-0.14	0.12-0.18		
	17	Nodular cast iron	40	RPM	6370	4240	3180	2120	1590	1270	980	
	18		FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24		
	19	Malleable cast iron	35	RPM	6370	4240	3180	2120	1590	1270	980	
	20		FEED	0.02-0.05	0.02-0.06	0.04-0.08	0.04-0.10	0.06-0.12	0.08-0.14	0.12-0.18		
	N	21	Aluminum-wrought alloy	65	RPM	6370	4240	3180	2120	1590	1270	980
		22		FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24	
23		Aluminum-cast, alloyed	50	RPM	6370	4240	3180	2120	1590	1270	980	
24			FEED	0.04-0.08	0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24		
25		Copper and Copper Alloys (Bronze / Brass)		RPM	10350	6900	5170	3450	2590	2070	1590	
26			FEED	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.22-0.28		
27			RPM	10350	6900	5170	3450	2590	2070	1590		
28		Non Metallic Materials		FEED	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.22-0.28	
29			RPM	7960	5310	3980	2650	1990	1590	1220		
30			FEED	0.05-0.09	0.07-0.11	0.12-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.22-0.28		
S	31	Heat Resistant Super Alloys										
	32											
	33											
	34											
	35											
	36		Titanium Alloys	20	RPM	4770	3180	2390	1590	1190	950	730
37	FEED	0.04-0.08		0.06-0.10	0.08-0.12	0.12-0.16	0.12-0.18	0.16-0.22	0.18-0.24			
H	38	Hardened steel										
	39											
	40		Chilled Cast Iron									
	41			Hardened Cast Iron								