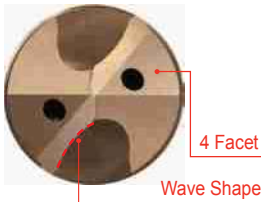


NEW
DREAM DRILLS PRO

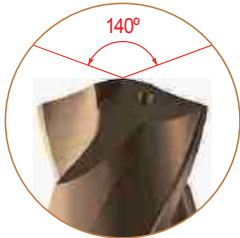


Performance Upgrade with Faster Cutting Speed



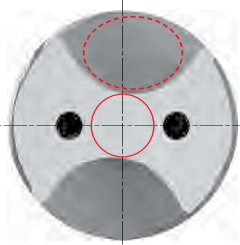
Wave Shape Cutting Edge

- Improve chip formation
- Low Cutting Force



140 Degree Point Angle

- Provides edge strength and Exceptional tool life
- Good Self Centering
- Low Torque



Micro-grained Carbide

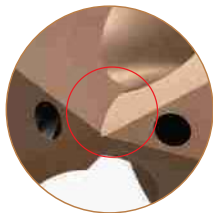
- Achieving Excellent Wear Resistance
- Maximum Tool Life and High Performance

Optimized wide flute design

The unique flute structure provides good surface finish, longer tool life and requires less cutting force



Radius Shape



Helical Thinning

- Low Thrust
- Stable Torque
- Good Chip Breakage

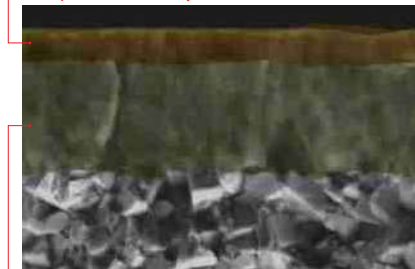
Higher & Improved cutting conditions due to

YG-1 Special Z-Coating Technology

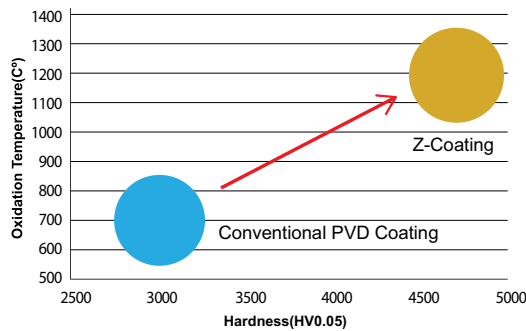
(YG-1's Unique Silicon Based Coating: Nano-Layer Coating)

- Extremely High Hardness and Heat Resistance

Superhard Ti/SiNx layer for Wear Resistance

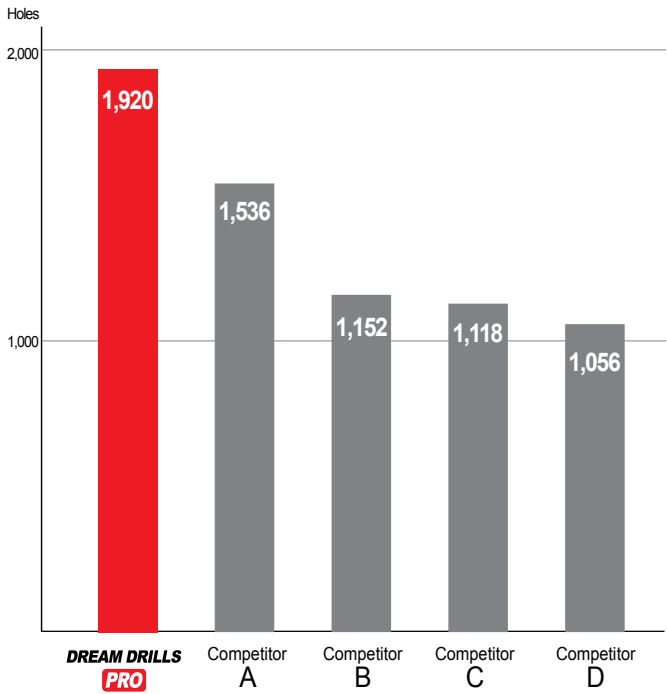


Multilayer for higher toughness and Heat Resistance



CASE STUDY

► SOLID CARBIDE DREAM DRILLS - PRO with Coolant Holes



CUTTING CONDITION	
Work Material	DIN: 42CrMo4 ANSI: 4140 JIS: SCM440 Hardness: HRC30 (HB286)
O.D SIZE(mm)	Ø10.0 (.3937 inch)
RPM	4,458 rev./min.
SFM	140 ft/min.
Feed	0.012inch/rev.
Drilling Depth	1.77" (4.5xD)
Coolant	Internal Cooling (20 bar) Water Soluble (9% Emulsion)
Machine	Machining Center

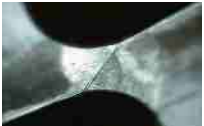
DREAM DRILLS PRO

Total Drilling 1,920 Holes



Competitor A

Total Drilling 1,536 Holes



Competitor B

Total Drilling 1,152 Holes



Competitor C

Total Drilling 1,118 Holes



Competitor D

Total Drilling 1,056 Holes



Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (3XD)

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology



SHORT
3 × D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN506030	3.0		0.1181	6	20	62	DGN506011F	4.366	11/64	0.1719	6	24	66
DGN506031	3.1		0.1220	6	20	62	DGN506044	4.4		0.1732	6	24	66
DGN506008F	3.175	1/8	0.1250	6	20	62	DGN5060446	4.46		0.1754	6	24	66
DGN506032	3.2		0.1260	6	20	62	DGN506045	4.5		0.1772	6	24	66
DGN506033	3.3		0.1299	6	20	62	DGN506046	4.6		0.1811	6	24	66
DGN5060336	3.36		0.1323	6	20	62	DGN5060466	4.66		0.1835	6	24	66
DGN506034	3.4		0.1339	6	20	62	DGN506047	4.7		0.1850	6	24	66
DGN5060344	3.44		0.1356	6	20	62	DGN506012F	4.763	3/16	0.1875	6	28	66
DGN506035	3.5		0.1378	6	20	62	DGN506048	4.8		0.1890	6	28	66
DGN5060352	3.52		0.1387	6	20	62	DGN506049	4.9		0.1929	6	28	66
DGN5060357	3.57		0.1405	6	20	62	DGN506050	5.0		0.1969	6	28	66
DGN506036	3.6		0.1417	6	20	62	DGN506051	5.1		0.2008	6	28	66
DGN506037	3.7		0.1457	6	20	62	DGN5060515	5.15		0.2029	6	28	66
DGN5060377	3.77		0.1484	6	24	66	DGN506013F	5.159	13/64	0.2031	6	28	66
DGN506038	3.8		0.1496	6	24	66	DGN506052	5.2		0.2047	6	28	66
DGN5060386	3.86		0.1521	6	24	66	DGN5060526	5.26		0.2070	6	28	66
DGN506039	3.9		0.1535	6	24	66	DGN506053	5.3		0.2087	6	28	66
DGN506010F	3.969	5/32	0.1563	6	24	66	DGN506054	5.4		0.2126	6	28	66
DGN506040	4.0		0.1575	6	24	66	DGN506003G	5.41	#3	0.2130	6	28	66
DGN5060405	4.05		0.1596	6	24	66	DGN5060547	5.47		0.2152	6	28	66
DGN506020G	4.09	#20	0.1610	6	24	66	DGN506055	5.5		0.2165	6	28	66
DGN506041	4.1		0.1614	6	24	66	DGN506014F	5.556	7/32	0.2188	6	28	66
DGN5060416	4.16		0.1636	6	24	66	DGN506056	5.6		0.2205	6	28	66
DGN506042	4.2		0.1654	6	24	66	DGN506057	5.7		0.2244	6	28	66
DGN5060427	4.27		0.1681	6	24	66	DGN506058	5.8		0.2283	6	28	66
DGN506043	4.3		0.1693	6	24	66	DGN506059	5.9		0.2323	6	28	66

▶ NEXT PAGE

ISO Material Description	P										M					K				
	Non-alloy steel					Low alloy steel					Stainless steel					Grey 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)					Non Metallic Materials				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRc											15	30	25	38	34			55	60	42
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400
Recommended																		○		

◎ : Excellent ○ : Good

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (3XD)

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
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SHORT
3 × D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN506015F	5.953	15/64	0.2344	6	28	66	DGN506076	7.6		0.2992	8	41	79
DGN506060	6.0		0.2362	6	28	66	DGN506077	7.7		0.3031	8	41	79
DGN506061	6.1		0.2402	8	34	79	DGN506078	7.8		0.3071	8	41	79
DGN506003L	6.147	C	0.2420	8	34	79	DGN506079	7.9		0.3110	8	41	79
DGN506062	6.2		0.2441	8	34	79	DGN506020F	7.938	5/16	0.3125	8	41	79
DGN506063	6.3		0.2480	8	34	79	DGN506080	8.0		0.3150	8	41	79
DGN506016F	6.350	1/4	0.2500	8	34	79	DGN506081	8.1		0.3189	10	47	89
DGN506064	6.4		0.2520	8	34	79	DGN5060815	8.15		0.3210	10	47	89
DGN506065	6.5		0.2559	8	34	79	DGN506082	8.2		0.3228	10	47	89
DGN506006L	6.528	F	0.2570	8	34	79	DGN506083	8.3		0.3268	10	47	89
DGN506066	6.6		0.2598	8	34	79	DGN506021F	8.334	21/64	0.3281	10	47	89
DGN5060665	6.65		0.2620	8	34	79	DGN506084	8.4		0.3307	10	47	89
DGN506067	6.7		0.2638	8	34	79	DGN506017L	8.430	Q	0.3320	10	47	89
DGN506017F	6.747	17/64	0.2656	8	34	79	DGN506085	8.5		0.3346	10	47	89
DGN506068	6.8		0.2677	8	34	79	DGN5060856	8.56		0.3371	10	47	89
DGN5060686	6.86		0.2701	8	34	79	DGN506086	8.6		0.3386	10	47	89
DGN506069	6.9		0.2717	8	34	79	DGN5060864	8.64		0.3402	10	47	89
DGN506070	7.0		0.2756	8	34	79	DGN506087	8.7		0.3425	10	47	89
DGN506010L	7.036	J	0.2770	8	41	79	DGN506022F	8.731	11/32	0.3438	10	47	89
DGN506071	7.1		0.2795	8	41	79	DGN506088	8.8		0.3465	10	47	89
DGN506018F	7.144	9/32	0.2812	8	41	79	DGN5060886	8.86		0.3488	10	47	89
DGN506072	7.2		0.2835	8	41	79	DGN506089	8.9		0.3504	10	47	89
DGN506073	7.3		0.2874	8	41	79	DGN506090	9.0		0.3543	10	47	89
DGN506074	7.4		0.2913	8	41	79	DGN506091	9.1		0.3583	10	47	89
DGN506075	7.5		0.2953	8	41	79	DGN506023F	9.128	23/64	0.3594	10	47	89
DGN506019F	7.541	19/64	0.2969	8	41	79	DGN506092	9.2		0.3622	10	47	89

▶ NEXT PAGE

◎ : Excellent ○ : Good																							
ISO	P										M				K								
Material Description	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	N										S										H		
Material Description	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			
HRc											15	30	25	38	34			55	60	42			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400			
Recommended																		○					

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (3XD)

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
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SHORT
3 × D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN506093	9.3		0.3661	10	47	89	DGN506113	11.3		0.4448	12	55	102
DGN506094	9.4		0.3701	10	47	89	DGN506114	11.4		0.4488	12	55	102
DGN506095	9.5		0.3740	10	47	89	DGN506115	11.5		0.4527	12	55	102
DGN506024F	9.525	3/8	0.3750	10	47	89	DGN506029F	11.509	29/64	0.4531	12	55	102
DGN506096	9.6		0.3780	10	47	89	DGN506116	11.6		0.4566	12	55	102
DGN506097	9.7		0.3819	10	47	89	DGN506117	11.7		0.4606	12	55	102
DGN506098	9.8		0.3858	10	47	89	DGN506118	11.8		0.4645	12	55	102
DGN506099	9.9		0.3898	10	47	89	DGN506119	11.9		0.4685	12	55	102
DGN506025F	9.922	25/64	0.3906	10	47	89	DGN506030F	11.906	15/32	0.4688	12	55	102
DGN506100	10.0		0.3937	10	47	89	DGN506120	12.0		0.4724	12	55	102
DGN506101	10.1		0.3976	12	55	102	DGN506121	12.1		0.4764	14	60	107
DGN506102	10.2		0.4016	12	55	102	DGN506122	12.2		0.4803	14	60	107
DGN506103	10.3		0.4055	12	55	102	DGN506123	12.3		0.4843	14	60	107
DGN506026F	10.319	13/32	0.4062	12	55	102	DGN506031F	12.303	31/64	0.4844	14	60	107
DGN506104	10.4		0.4094	12	55	102	DGN506124	12.4		0.4882	14	60	107
DGN506105	10.5		0.4134	12	55	102	DGN506125	12.5		0.4921	14	60	107
DGN506106	10.6		0.4173	12	55	102	DGN506126	12.6		0.4961	14	60	107
DGN506107	10.7		0.4212	12	55	102	DGN506032F	12.7	1/2	0.5000	14	60	107
DGN506027F	10.716	27/64	0.4219	12	55	102	DGN506129	12.9		0.5079	14	60	107
DGN506108	10.8		0.4252	12	55	102	DGN506130	13.0		0.5118	14	60	107
DGN5061086	10.86		0.4276	12	55	102	DGN506131	13.1		0.5157	14	60	107
DGN506109	10.9		0.4291	12	55	102	DGN506132	13.2		0.5197	14	60	107
DGN506110	11.0		0.4330	12	55	102	DGN506133	13.3		0.5236	14	60	107
DGN506111	11.1		0.4370	12	55	102	DGN506134	13.4		0.5276	14	60	107
DGN506028F	11.113	7/16	0.4375	12	55	102	DGN506034F	13.49	17/32	0.5312	14	60	107
DGN506112	11.2		0.4409	12	55	102	DGN506135	13.5		0.5314	14	60	107

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO Material Description	P										M					K				
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel					Stainless steel				
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)					Non Metallic Materials				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRc											15	30	25	38	34			55	60	42
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400
Recommended																		○		

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PRO with Coolant Holes (3XD)

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SHORT
3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN506136	13.6		0.5354	14	60	107	DGN506159	15.9		0.6260	16	65	115
DGN506137	13.7		0.5394	14	60	107	DGN506160	16		0.6299	16	65	115
DGN506138	13.8		0.5433	14	60	107	DGN506165	16.5		0.6495	18	73	123
DGN506139	13.9		0.5472	14	60	107	DGN506042F	16.67	21/32	0.6563	18	73	123
DGN506140	14.0		0.5512	14	60	107	DGN506170	17.0		0.6692	18	73	123
DGN506141	14.1		0.5551	16	65	115	DGN506175	17.5		0.6889	18	73	123
DGN506142	14.2		0.5591	16	65	115	DGN5061761	17.61		0.6932	18	73	123
DGN506036F	14.288	9/16	0.5625	16	65	115	DGN5061773	17.73		0.6980	18	73	123
DGN506143	14.3		0.5630	16	65	115	DGN506180	18.0		0.7087	18	73	123
DGN506144	14.4		0.5669	16	65	115	DGN506185	18.5		0.7283	20	79	131
DGN506145	14.5		0.5708	16	65	115	DGN5061864	18.64		0.7339	20	79	131
DGN506146	14.6		0.5748	16	65	115	DGN506190	19.0		0.7480	20	79	131
DGN506037F	14.68	37/64	0.5781	16	65	115	DGN506048F	19.05	3/4	0.7500	20	79	131
DGN506147	14.7		0.5787	16	65	115	DGN506195	19.5		0.7676	20	79	131
DGN506148	14.8		0.5827	16	65	115	DGN5061966	19.66		0.7740	20	79	131
DGN506149	14.9		0.5866	16	65	115	DGN5061973	19.73		0.7766	20	79	131
DGN506150	15.0		0.5905	16	65	115	DGN506200	20.0		0.7874	20	79	131
DGN506151	15.1		0.5945	16	65	115							
DGN506152	15.2		0.5984	16	65	115							
DGN506153	15.3		0.6024	16	65	115							
DGN506154	15.4		0.6063	16	65	115							
DGN506155	15.5		0.6102	16	65	115							
DGN506156	15.6		0.6142	16	65	115							
DGN506157	15.7		0.6181	16	65	115							
DGN506158	15.8		0.6220	16	65	115							
DGN506040F	15.875	5/8	0.6250	16	65	115							

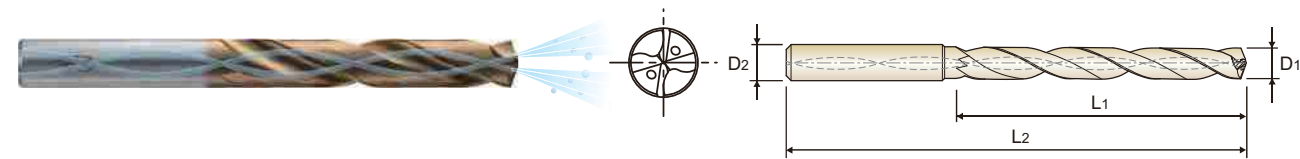
◎ : Excellent ○ : Good

ISO	P										M					K							
Material Description	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	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	N										S										H		
Material Description	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			
HRC											15	30	25	38	34			55	60	42			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400			
Recommended																		○					

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (5XD)

NEW DGN508 SERIES

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRC30-50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology



DIN 6537 CARBIDE h6 m7 140° 20 bar P.16

LONG 5 x D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN508010	1.0		0.0394	3	8	55	DGN508008F	3.175	1/8	0.1250	6	28	66
DGN508011	1.1		0.0433	3	12	55	DGN508032	3.2		0.1260	6	28	66
DGN508012	1.2		0.0472	3	12	55	DGN508033	3.3		0.1299	6	28	66
DGN508013	1.3		0.0512	3	12	55	DGN508034	3.4		0.1339	6	28	66
DGN508014	1.4		0.0551	3	12	55	DGN508035	3.5		0.1378	6	28	66
DGN508015	1.5		0.0591	3	16	55	DGN508009F	3.572	9/64	0.1406	6	28	66
DGN508004F	1.588	1/16	0.0625	3	16	55	DGN508036	3.6		0.1417	6	28	66
DGN508016	1.6		0.0630	3	16	55	DGN508037	3.7		0.1457	6	28	66
DGN508017	1.7		0.0669	3	16	55	DGN508038	3.8		0.1496	6	36	74
DGN508018	1.8		0.0709	3	16	55	DGN508039	3.9		0.1535	6	36	74
DGN508019	1.9		0.0748	3	16	55	DGN508010F	3.969	5/32	0.1563	6	36	74
DGN508005F	1.984	5/64	0.0781	3	16	55	DGN508040	4.0		0.1575	6	36	74
DGN508020	2.0		0.0787	4	21	57	DGN508020G	4.09	#20	0.1610	6	36	74
DGN508021	2.1		0.0827	4	21	57	DGN508041	4.1		0.1614	6	36	74
DGN508022	2.2		0.0866	4	21	57	DGN508042	4.2		0.1654	6	36	74
DGN508023	2.3		0.0906	4	21	57	DGN508043	4.3		0.1693	6	36	74
DGN508006F	2.381	3/32	0.0938	4	21	57	DGN508011F	4.366	11/64	0.1719	6	36	74
DGN508024	2.4		0.0945	4	21	57	DGN508044	4.4		0.1732	6	36	74
DGN508025	2.5		0.0984	4	21	57	DGN508045	4.5		0.1772	6	36	74
DGN508026	2.6		0.1024	4	21	57	DGN508046	4.6		0.1811	6	36	74
DGN508027	2.7		0.1063	4	21	57	DGN508047	4.7		0.1850	6	36	74
DGN508007F	2.778	7/64	0.1094	4	21	57	DGN508012F	4.763	3/16	0.1875	6	44	82
DGN508028	2.8		0.1102	4	21	57	DGN508048	4.8		0.1890	6	44	82
DGN508029	2.9		0.1142	4	21	57	DGN508049	4.9		0.1929	6	44	82
DGN508030	3.0		0.1181	6	28	66	DGN508050	5.0		0.1969	6	44	82
DGN508031	3.1		0.1220	6	28	66	DGN508051	5.1		0.2008	6	44	82

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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				
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)					Non Metallic Materials				
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRC																				
HB	60	100	75	90	130	110	90	100			15	30	25	38	34	320	400 Rm	550	60	42
Recommended																				

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (5XD)

NEW DGN508 SERIES

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRC30-50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology



DIN 6537 CARBIDE h6 m7 140° 20 bar P.16

LONG 5 x D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN508013F	5.159	13/64	0.2031	6	44	82	DGN508071	7.1		0.2795	8	53	91
DGN508052	5.2		0.2047	6	44	82	DGN508018F	7.144	9/32	0.2812	8	53	91
DGN508053	5.3		0.2087	6	44	82	DGN508072	7.2		0.2835	8	53	91
DGN508054	5.4		0.2126	6	44	82	DGN508073	7.3		0.2874	8	53	91
DGN508003G	5.41	#3	0.2130	6	44	82	DGN508074	7.4		0.2913	8	53	91
DGN508055	5.5		0.2165	6	44	82	DGN508075	7.5		0.2953	8	53	91
DGN508014F	5.556	7/32	0.2188	6	44	82	DGN508019F	7.541	19/64	0.2969	8	53	91
DGN508056	5.6		0.2205	6	44	82	DGN508076	7.6		0.2992	8	53	91
DGN508057	5.7		0.2244	6	44	82	DGN508077	7.7		0.3031	8	53	91
DGN508058	5.8		0.2283	6	44	82	DGN508078	7.8		0.3071	8	53	91
DGN508059	5.9		0.2323	6	44	82	DGN508079	7.9		0.3110	8	53	91
DGN508015F	5.953	15/64	0.2344	6	44	82	DGN508020F	7.938	5/16	0.3125	8	53	91
DGN508060	6.0		0.2362	6	44	82	DGN508080	8.0		0.3150	8	53	91
DGN508061	6.1		0.2402	8	53	91	DGN508081	8.1		0.3189	10	61	103
DGN508062	6.2		0.2441	8	53	91	DGN508082	8.2		0.3228	10	61	103
DGN508063	6.3		0.2480	8	53	91	DGN508083	8.3		0.3268	10	61	103
DGN508016F	6.350	1/4	0.2500	8	53	91	DGN508021F	8.334	21/64	0.3281	10	61	103
DGN508064	6.4		0.2520	8	53	91	DGN508084	8.4		0.3307	10	61	103
DGN508065	6.5		0.2559	8	53	91	DGN508017L	8.430	Q	0.3320	10	61	103
DGN508006L	6.528	F	0.2570	8	53	91	DGN508085	8.5		0.3346	10	61	103
DGN508066	6.6		0.2598	8	53	91	DGN508086	8.6		0.3386	10	61	103
DGN508067	6.7		0.2638	8	53	91	DGN508087	8.7		0.3425	10	61	103
DGN508017F	6.747	17/64	0.2656	8	53	91	DGN508022F	8.731	11/32	0.3438	10	61	103
DGN508068	6.8		0.2677	8	53	91	DGN508088	8.8		0.3465	10	61	103
DGN508069	6.9		0.2717	8	53	91	DGN508089	8.9		0.3504	10	61	103
DGN508070	7.0		0.2756	8	53	91	DGN508090	9.0		0.3543	10	61	103

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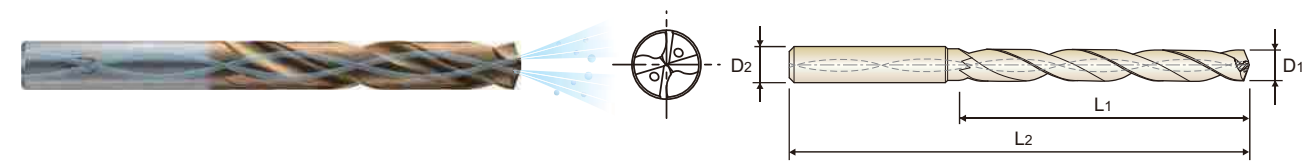
◎ : Excellent ○ : Good

ISO	P										M					K				
Material Description	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		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	N										S										H			
Material Description	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	36	37	55	60	42	55			
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550			
Recommended																		○						

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (5XD)

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRC30-50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
- ▶ Helical thinning for low thrust, stable torque and good chip breakage
- ▶ Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology



LONG

5 x D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN508091	9.1		0.3583	10	61	103	DGN508028F	11.113	7/16	0.4375	12	71	118
DGN508023F	9.128	23/64	0.3594	10	61	103	DGN508112	11.2		0.4409	12	71	118
DGN508092	9.2		0.3622	10	61	103	DGN508113	11.3		0.4448	12	71	118
DGN508093	9.3		0.3661	10	61	103	DGN508114	11.4		0.4488	12	71	118
DGN508094	9.4		0.3701	10	61	103	DGN508115	11.5		0.4527	12	71	118
DGN508095	9.5		0.3740	10	61	103	DGN508029F	11.509	29/64	0.4531	12	71	118
DGN508024F	9.525	3/8	0.3750	10	61	103	DGN508116	11.6		0.4566	12	71	118
DGN508096	9.6		0.3780	10	61	103	DGN508117	11.7		0.4606	12	71	118
DGN508097	9.7		0.3819	10	61	103	DGN508118	11.8		0.4645	12	71	118
DGN508098	9.8		0.3858	10	61	103	DGN508119	11.9		0.4685	12	71	118
DGN508099	9.9		0.3898	10	61	103	DGN508030F	11.906	15/32	0.4688	12	71	118
DGN508025F	9.922	25/64	0.3906	10	61	103	DGN508120	12.0		0.4724	12	71	118
DGN508100	10.0		0.3937	10	61	103	DGN508121	12.1		0.4764	14	77	124
DGN508101	10.1		0.3976	12	71	118	DGN508123	12.3		0.4843	14	77	124
DGN508102	10.2		0.4016	12	71	118	DGN508031F	12.303	31/64	0.4844	14	77	124
DGN508103	10.3		0.4055	12	71	118	DGN508124	12.4		0.4882	14	77	124
DGN508026F	10.319	13/32	0.4062	12	71	118	DGN508125	12.5		0.4921	14	77	124
DGN508104	10.4		0.4094	12	71	118	DGN508126	12.6		0.4961	14	77	124
DGN508105	10.5		0.4134	12	71	118	DGN508032F	12.7	1/2	0.5000	14	77	124
DGN508106	10.6		0.4173	12	71	118	DGN508129	12.9		0.5079	14	77	124
DGN508107	10.7		0.4212	12	71	118	DGN508130	13.0		0.5118	14	77	124
DGN508027F	10.716	27/64	0.4219	12	71	118	DGN508132	13.2		0.5197	14	77	124
DGN508108	10.8		0.4252	12	71	118	DGN508133	13.3		0.5236	14	77	124
DGN508109	10.9		0.4291	12	71	118	DGN508134	13.4		0.5276	14	77	124
DGN508110	11.0		0.4330	12	71	118	DGN508034F	13.49	17/32	0.5312	14	77	124
DGN508111	11.1		0.4370	12	71	118	DGN508135	13.5		0.5314	14	77	124

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

ISO	N										S					H				
	Aluminum-wrought alloy					Aluminum-cast, alloyed					Copper and Copper Alloys (Bronze / Brass)					Non Metallic Materials				
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRC	60	100	75	90	130	110	90	100			15	30	25	38	34	320	400 Rm	550	630	400
HB																				
Recommended																				

Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (5XD)

- ▶ Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRC30-50), Cast Iron
- ▶ Wave shape cutting edge to improve chip formation for low cutting force
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LONG

5 x D

Unit : mm													
EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2	Z-Coating	D1			D2	L1	L2
DGN508140	14.0		0.5512	14	77	124	DGN508040F	15.875	5/8	0.6250	16	83	133
DGN508141	14.1		0.5551	16	83	133	DGN508159	15.9		0.6260	16	83	133
DGN508036F	14.288	9/16	0.5625	16	83	133	DGN508160	16.0		0.6299	16	83	133
DGN508143	14.3		0.5630	16	83	133	DGN508165	16.5	21/32	0.6495	18	93	143
DGN508144	14.4		0.5669	16	83	133	DGN508042F	16.67		0.6563	18	93	143
DGN508145	14.5		0.5708	16	83	133	DGN508170	17.0		0.6692	18	93	143
DGN508146	14.6		0.5748	16	83	133	DGN508175	17.5		0.6889	18	93	143
DGN508149	14.9		0.5866	16	83	133	DGN508180	18.0		0.7087	18	93	143
DGN508150	15.0		0.5905	16	83	133	DGN508185	18.5		0.7283	20	101	153
DGN508153	15.3		0.6024	16	83	133	DGN508190	19.0		0.7480	20	101	153
DGN508154	15.4		0.6063	16	83	133	DGN508048F	19.05	3/4	0.7500	20	101	153
DGN508155	15.5		0.6102	16	83	133	DGN508195	19.5		0.7676	20	101	153
DGN508156	15.6		0.6142	16	83	133	DGN508200	20.0		0.7874	20	101	153
DGN508157	15.7		0.6181	16	83	133							

◎ : Excellent ○ : Good

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

ISO	N										S					H				
	Aluminum-wrought alloy					Aluminum-cast, alloyed					Copper and Copper Alloys (Bronze / Brass)					Non Metallic Materials				
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
HRC	60	100	75	90	130	110	90	100			15	30	25	38	34	320	400 Rm	550	630	400
HB																				
Recommended																				

DGN506, DGN508 SERIES with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter					
			1.0 ~ 2.9	METRIC	1.0	2.0	3.0 ~ 20.0	METRIC	3.0	-	4.0	-	5.0
			-	FRACTIONAL	-	-	1/8 ~ 3/4	FRACTIONAL	-	1/8	-	3/16	-
			.0394 ~ .0787	DECIMAL	.0394	.0787	.1181 ~ .7874	DECIMAL	.1181	.1250	.1575	.1875	.1969
P	2	Non-alloy steel	312	RPM	30240	15120	427	RPM	13790	10350	8280		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	3		312	RPM	30240	15120	427	RPM	13790	10350	8280		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	4		312	RPM	30240	15120	427	RPM	13790	10350	8280		
			FEED		.0012- .002	.002- .0028		FEED	.0016- .0039	.0028- .0051	.0039- .0063		
	5		279	RPM	27060	13530	361	RPM	11670	8750	7000		
			FEED		.0012- .002	.002- .0028		FEED	.0016- .0039	.0028- .0051	.0039- .0063		
	6	Low alloy steel	312	RPM	30240	15120	427	RPM	13790	10350	8280		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	7		279	RPM	27060	13530	361	RPM	11670	8750	7000		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0039- .0079		
	8		312	RPM	30240	15120	361	RPM	11670	8750	7000		
			FEED		.0008- .0016	.0012- .002		FEED	.0016- .0039	.0028- .0051	.0039- .0063		
	9		164	RPM	15920	7960	197	RPM	6370	4770	3820		
			FEED		.0008- .0016	.0012- .002		FEED	.0012- .0031	.002- .0043	.0031- .0055		
	10	High alloyed steel, and tool steel	230	RPM	22280	11140	295	RPM	9550	7160	5730		
			FEED		.0012- .002	.002- .0028		FEED	.0016- .0039	.0028- .0051	.0039- .0063		
	11		148	RPM	14320	7160	164	RPM	5310	3980	3180		
			FEED		.0008- .0016	.0012- .002		FEED	.0012- .0031	.002- .0043	.0031- .0055		
M	12	Stainless steel	246	RPM	23870	11940	311	RPM	10080	7560	6050		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	13		180	RPM	17510	8750	213	RPM	6900	5170	4140		
			FEED		.0008- .0016	.0012- .002		FEED	.0016- .0039	.0028- .0051	.0039- .0063		
K	15	Grey cast iron	312	RPM	30240	15120	427	RPM	13790	10350	8280		
			FEED		.0016- .0024	.0016- .0024		FEED	.0031- .0055	.0047- .0071	.0071- .0094		
	16		295	RPM	28650	14320	377	RPM	12200	9150	7320		
			FEED		.0016- .0024	.0016- .0024		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	17	Nodular cast iron	361	RPM	35010	17510	475	RPM	15380	11540	9230		
			FEED		.0016- .0024	.0016- .0024		FEED	.0031- .0055	.0047- .0071	.0071- .0094		
	18		246	RPM	23870	11940	312	RPM	10080	7560	6050		
			FEED		.0016- .0024	.0016- .0024		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
	19	Malleable cast iron	279	RPM	27060	13530	361	RPM	11670	8750	7000		
			FEED		.0016- .0024	.0016- .0024		FEED	.0031- .0055	.0047- .0071	.0071- .0094		
	20		246	RPM	23870	11940	312	RPM	10080	7560	6050		
			FEED		.0012- .002	.002- .0028		FEED	.0024- .0047	.0031- .0055	.0055- .0079		
H	38	Hardened steel	99	RPM	11140	5570	99	RPM	3710	2790	2230		
			FEED		.0004- .0008	.0004- .0012		FEED	.0004- .0012	.0004- .0016	.0008- .002		

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

Drill Diameter														
6.0	-	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
-	1/4	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
.2362	.2500	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0094		.0063- .011		.0079- .0118		.0083- .0118	.0087- .0138	.0087- .0138		.0098- .0142		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
3180		2390		1910		1590	1510	1360		1190		1060	1010	950
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0051- .0091	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
4770		3580		2860		2390	2260	2050		1790		1590	1510	1430
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
2650		1990		1590		1330	1260	1140		990		880	840	800
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0051- .0091	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
5040		3780		3020		2520	2380	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
3450		2590		2070		1720	1630	1480		1290		1150	1090	1030
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
6100		4580		3660		3050	2890	2610		2290		2030	1930	1830
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
7690		5770		4620		3850	3630	3300		2880		2560	2420	2310
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
5040		3780		3020		2520	2390	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
5040		3780		3020		2520	2390	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
1860		1390		1110		930	880	800		700		620	580	560
.0012- .0024		.0012- .0024		.0016- .0028		.0016- .0031	.0016- .0031	.002- .0035		.002- .0035		.002- .0039	.002- .0039	.002- .0039