

YU-YBD21 AMERICA

BEST VALUE IN THE WORLD OF CUTTING TOOLS



YG-1 CO., LTD.

YG-1 USA

730 Corporate Woods Parkway, Vernon Hills, IL 60061 U.S.A.

Phone: +1-800-765-8665

Technical Assistance: +1-888-868-5988

E-mail: info@yg1usa.com

www.yg1usa.com

YG-1 CANADA INC.

3375 North Service Road, Unit A8, Burlington, ON, CANADA, L7N 3G2

Phone: +1-905-335-2500

Fax: +1-905-335-4003

E-mail: orders@yg1.ca

www.yg1.ca

YG-1 TOOLS MEXICO

Parque Industrial Advance Aeropuerto Modulo 4 Edif A, Col. Navajas, El Marques, Querétaro, México CP 76260

Phone: +52 442 348 12 70

E-mail: ventas@yg1mexico.com

www.yg1mexico.com

HEAD OFFICE

13-40, Songdogwahak-ro 16beon-gil, Yeonsu-gu, Incheon 21984, South Korea

Notice YG-1 Global head office is relocating from December 2020 to a new address as above;

Phone: +82-32-526-0909

E-mail: yg1@yg1.kr

www.yg1.kr

Note The information is provided for reference only. Tool specifications are subject to change without prior notice. Although we endeavor to supply accurate and timely information, there can be no guarantee to cover every particular application. YG-1 or publishers are not liable for any damage for use of the information.



Search 'YG-1' on social media outlets

YG1YUYBD210218001



YG

YGBasix

**Solid Carbide YGBasix Drills
For General Purpose**

PRODUCT FEATURES

Solid Carbide YGBasix Drills for General Purpose

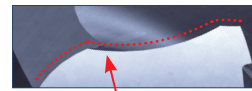
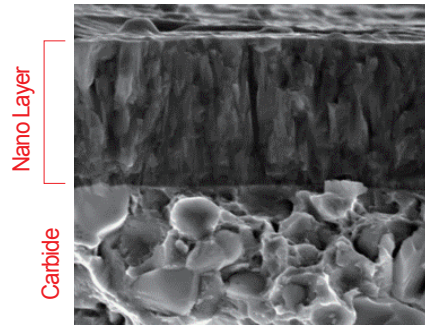


TiAlN Coating

(Upgraded Titanium Aluminum Nitride: nano-Layer coating)

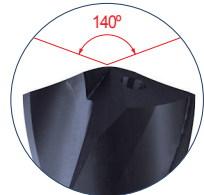
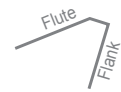
- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality

Special surface treatment after coating to reduce friction and better chip flow.



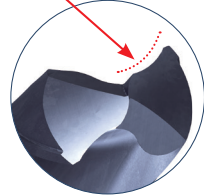
K-Land (negative rake angle)

K-Land (negative rake angle) on the cutting edge for Reliable Tool Life



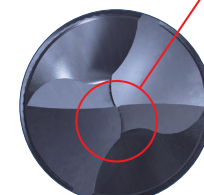
Wave Shape

140 Degree Point Angle for good centering and low thrust

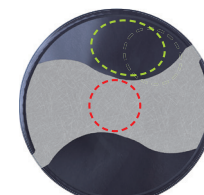


Wave shape Cutting Edge will allow low thrust, stable torque and long tool life

Radius Thinning



Radius Thinning for Self Centering and Chip Breaking



Optimized flute shape for strength of drill and smooth chip evacuation

CASE STUDY

CUTTING CONDITION	
Tool	YGBasix Drills(5xD)
Size	Ø8.5(.3346)
Work Material	4140 28-32 RC
SFM	300
IPR	.008"
Drilling Depth	1.625"
Drilling Method	Blind Hole
Coolant	Wet Cut
Machine	Machining Center

YGBasix Drills



350 Drilling Holes



Competitor



350 Drilling Holes



Long chip and center wear noted

ICON GUIDE

Standard of Tools



Tool Material



Tolerance of Dimension



Point Angle



Coating



Cutting Condition Page



SELECTION GUIDE



**Solid Carbide YGBasiX Drills
For General Purpose**



Please visit
globalyg1.com/mat
for material search

SERIES	DB301	DB501
DRILLING DEPTH / STANDARD	3XD	5XD
LENGTH	SHORT	LONG
SIZE MIN	D.1181	D.0394
SIZE MAX	D.7874	D.7874
PAGE	5	7
SURFACE TREATMENT	TiAlN	

◎ : Excellent ○ : Good

Recommended cutting conditions : P.10~11

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		Ferritic	130		◎	◎	
20	Malleable cast iron	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		Cutting Alloys, PB>1%	110				
	27		Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)	90			
	28			CuSn, lead-free copper and electrolytic copper	100			
	29		Non Metallic Materials	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 Cast Iron	Hardened	550	55			

TIAlN-COATED SOLID CARBIDE YGBASIX DRILLS FOR GENERAL PURPOSE (3XD)

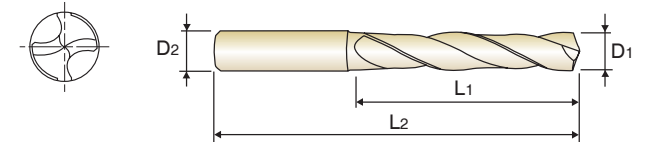
DB301 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

STUB

3 × D

D1=D2



MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter		Flute Length	Overall Length	EDP No.	Drill Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiAlN	D1 = D2		L1	L2	TiAlN	D1 = D2		L1	L2
DB301030	3.0	.1181	16	46	DB301056	5.6	.2205	28	66
DB301031	3.1	.1220	18	49	DB301057	5.7	.2244	28	66
DB301032	3.2	.1260	18	49	DB301058	5.8	.2283	28	66
DB301033	3.3	.1299	18	49	DB301059	5.9	.2323	28	66
DB301034	3.4	.1339	20	52	DB301060	6.0	.2362	28	66
DB301035	3.5	.1378	20	52	DB301061	6.1	.2402	31	70
DB301036	3.6	.1417	20	52	DB301062	6.2	.2441	31	70
DB301037	3.7	.1457	20	52	DB301063	6.3	.2480	31	70
DB301038	3.8	.1496	22	55	DB301064	6.4	.2520	31	70
DB301039	3.9	.1535	22	55	DB301065	6.5	.2559	31	70
DB301040	4.0	.1575	22	55	DB301066	6.6	.2598	31	70
DB301041	4.1	.1614	22	55	DB301067	6.7	.2638	31	70
DB301042	4.2	.1654	22	55	DB301068	6.8	.2677	34	74
DB301043	4.3	.1693	24	58	DB301069	6.9	.2717	34	74
DB301044	4.4	.1732	24	58	DB301070	7.0	.2756	34	74
DB301045	4.5	.1772	24	58	DB301071	7.1	.2795	34	74
DB301046	4.6	.1811	24	58	DB301072	7.2	.2835	34	74
DB301047	4.7	.1850	24	58	DB301073	7.3	.2874	34	74
DB301048	4.8	.1890	26	62	DB301074	7.4	.2913	34	74
DB301049	4.9	.1929	26	62	DB301075	7.5	.2953	34	74
DB301050	5.0	.1969	26	62	DB301076	7.6	.2992	37	79
DB301051	5.1	.2008	26	62	DB301077	7.7	.3031	37	79
DB301052	5.2	.2047	26	62	DB301078	7.8	.3071	37	79
DB301053	5.3	.2087	26	62	DB301079	7.9	.3110	37	79
DB301054	5.4	.2126	28	66	DB301080	8.0	.3150	37	79
DB301055	5.5	.2165	28	66	DB301081	8.1	.3189	37	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : 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	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	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				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
HB		60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																						

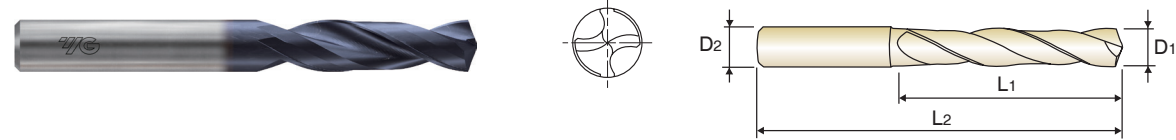
TIAlN-COATED SOLID CARBIDE YGBASIX DRILLS FOR GENERAL PURPOSE (3XD)

DB301 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

STUB**3×D**

D1=D2

**MADE IN KOREA & MEXICO**

EDP No.	Drill Diameter		Flute Length	Overall Length	EDP No.	Drill Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TIAlN	D1 = D2		L1	L2	TIAlN	D1 = D2		L1	L2
DB301082	8.2	.3228	37	79	DB301140	14.0	.5512	54	107
DB301083	8.3	.3268	37	79	DB301145	14.5	.5708	56	111
DB301084	8.4	.3307	37	79	DB301150	15.0	.5905	56	111
DB301085	8.5	.3346	37	79	DB301155	15.5	.6102	58	115
DB301086	8.6	.3386	40	84	DB301160	16.0	.6299	58	115
DB301087	8.7	.3425	40	84	DB301165	16.5	.6495	60	119
DB301088	8.8	.3465	40	84	DB301170	17.0	.6692	60	119
DB301089	8.9	.3504	40	84	DB301175	17.5	.6889	62	123
DB301090	9.0	.3543	40	84	DB301180	18.0	.7087	62	123
DB301091	9.1	.3583	40	84	DB301185	18.5	.7283	64	127
DB301092	9.2	.3622	40	84	DB301190	19.0	.7480	64	127
DB301093	9.3	.3661	40	84	DB301195	19.5	.7676	66	131
DB301094	9.4	.3701	40	84	DB301200	20.0	.7874	66	131
DB301095	9.5	.3740	40	84	▶ Other shank types are available on your request.				
DB301096	9.6	.3780	43	89					
DB301097	9.7	.3819	43	89					
DB301098	9.8	.3858	43	89					
DB301099	9.9	.3898	43	89					
DB301100	10.0	.3937	43	89					
DB301102	10.2	.4016	43	89					
DB301105	10.5	.4134	43	89					
DB301110	11.0	.4331	47	95					
DB301115	11.5	.4528	47	95					
DB301120	12.0	.4724	51	102					
DB301130	13.0	.5118	51	102					
DB301135	13.5	.5314	54	107					

Unit : mm

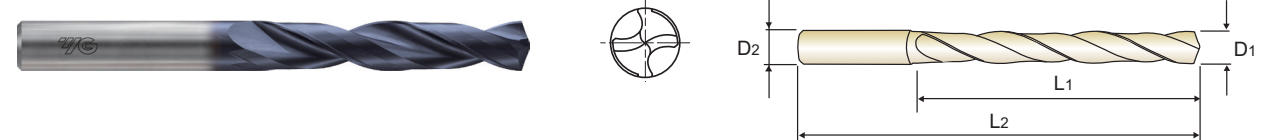
◎ : Excellent ○ : Good

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	13	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											15	30	25	38	34			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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

TIAlN-COATED SOLID CARBIDE YGBASIX DRILLS FOR GENERAL PURPOSE (5XD)

DB501 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

LONG**5×D****MADE IN KOREA & MEXICO**

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Inch					Metric	Inch			
TIAlN	D1		D2	L1	L2	TIAlN	D1		D2	L1	L2
DB501010	1.0	.0394	3	8	55	DB501036	3.6	.1417	6	28	66
DB501011	1.1	.0433	3	12	55	DB501037	3.7	.1457	6	28	66
DB501012	1.2	.0472	3	12	55	DB501038	3.8	.1496	6	36	74
DB501013	1.3	.0512	3	12	55	DB501039	3.9	.1535	6	36	74
DB501014	1.4	.0551	3	12	55	DB501040	4.0	.1575	6	36	74
DB501015	1.5	.0591	3	16	55	DB501041	4.1	.1614	6	36	74
DB501016	1.6	.0630	3	16	55	DB501042	4.2	.1654	6	36	74
DB501017	1.7	.0669	3	16	55	DB501043	4.3	.1693	6	36	74
DB501018	1.8	.0709	3	16	55	DB501044	4.4	.1732	6	36	74
DB501019	1.9	.0748	3	16	55	DB501045	4.5	.1772	6	36	74
DB501020	2.0	.0787	4	21	57	DB501046	4.6	.1811	6	36	74
DB501021	2.1	.0827	4	21	57	DB501047	4.7	.1850	6	36	74
DB501022	2.2	.0866	4	21	57	DB501048	4.8	.1890	6	44	82
DB501023	2.3	.0906	4	21	57	DB501049	4.9	.1929	6	44	82
DB501024	2.4	.0945	4	21	57	DB501050	5.0	.1969	6	44	82
DB501025	2.5	.0984	4	21	57	DB501051	5.1	.2008	6	44	82
DB501026	2.6	.1024	4	21	57	DB501052	5.2	.2047	6	44	82
DB501027	2.7	.1063	4	21	57	DB501053	5.3	.2087	6	44	82
DB501028	2.8	.1102	4	21	57	DB501054	5.4	.2126	6	44	82
DB501029	2.9	.1142	4	21	57	DB501055	5.5	.2165	6	44	82
DB501030	3.0	.1181	6	28	66	DB501056	5.6	.2205	6	44	82
DB501031	3.1	.1220	6	28	66	DB501057	5.7	.2244	6	44	82
DB501032	3.2	.1260	6	28	66	DB501058	5.8	.2283	6	44	82
DB501033	3.3	.1299	6	28	66	DB501059	5.9	.2323	6	44	82
DB501034	3.4	.1339	6	28	66	DB501060	6.0	.2362	6	44	82
DB501035	3.5	.1378	6	28	66	DB501061	6.1	.2402	8	53	91

Unit : mm

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : 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	13	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											15	30	25	38	34			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	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

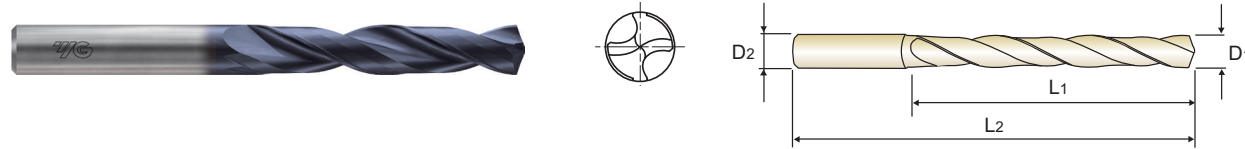
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS FOR GENERAL PURPOSE (5XD)

DB501 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

LONG

5 × D



MADE IN KOREA & MEXICO

DIN 6537 CARBIDE h6 m7 140° TIAIN P.10~11

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Inch					Metric	Inch			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DB501062	6.2	.2441	8	53	91	DB501088	8.8	.3465	10	61	103
DB501063	6.3	.2480	8	53	91	DB501089	8.9	.3504	10	61	103
DB501064	6.4	.2520	8	53	91	DB501090	9.0	.3543	10	61	103
DB501065	6.5	.2559	8	53	91	DB501091	9.1	.3583	10	61	103
DB501066	6.6	.2598	8	53	91	DB501092	9.2	.3622	10	61	103
DB501067	6.7	.2638	8	53	91	DB501093	9.3	.3661	10	61	103
DB501068	6.8	.2677	8	53	91	DB501094	9.4	.3701	10	61	103
DB501069	6.9	.2717	8	53	91	DB501095	9.5	.3740	10	61	103
DB501070	7.0	.2756	8	53	91	DB501096	9.6	.3780	10	61	103
DB501071	7.1	.2795	8	53	91	DB501097	9.7	.3819	10	61	103
DB501072	7.2	.2835	8	53	91	DB501098	9.8	.3858	10	61	103
DB501073	7.3	.2874	8	53	91	DB501099	9.9	.3898	10	61	103
DB501074	7.4	.2913	8	53	91	DB501100	10.0	.3937	10	61	103
DB501075	7.5	.2953	8	53	91	DB501101	10.1	.3976	12	71	118
DB501076	7.6	.2992	8	53	91	DB501102	10.2	.4016	12	71	118
DB501077	7.7	.3031	8	53	91	DB501103	10.3	.4055	12	71	118
DB501078	7.8	.3071	8	53	91	DB501104	10.4	.4094	12	71	118
DB501079	7.9	.3110	8	53	91	DB501105	10.5	.4134	12	71	118
DB501080	8.0	.3150	8	53	91	DB501106	10.6	.4173	12	71	118
DB501081	8.1	.3189	10	61	103	DB501107	10.7	.4213	12	71	118
DB501082	8.2	.3228	10	61	103	DB501108	10.8	.4252	12	71	118
DB501083	8.3	.3268	10	61	103	DB501109	10.9	.4291	12	71	118
DB501084	8.4	.3307	10	61	103	DB501110	11.0	.4331	12	71	118
DB501085	8.5	.3346	10	61	103	DB501111	11.1	.4370	12	71	118
DB501086	8.6	.3386	10	61	103	DB501112	11.2	.4409	12	71	118
DB501087	8.7	.3425	10	61	103	DB501113	11.3	.4449	12	71	118

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : 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														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
HRc	13	25	28	32	30	29	32	38	35	15	35	23	10	10	26	3	25	25	25	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	260	160	250	130	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

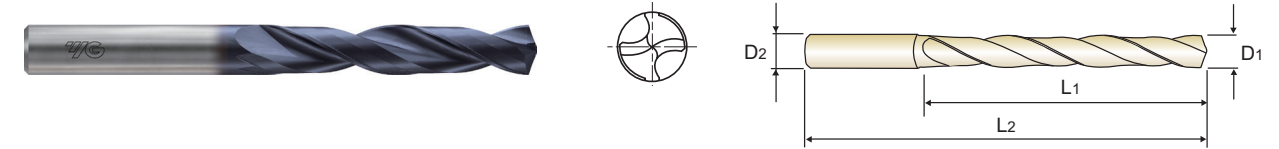
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS FOR GENERAL PURPOSE (5XD)

DB501 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

LONG

5 × D



MADE IN KOREA & MEXICO

DIN 6537 CARBIDE h6 m7 140° TIAIN P.10~11

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Inch					Metric	Inch			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DB501114	11.4	.4488	12	71	118						
DB501115	11.5	.4528	12	71	118						
DB501116	11.6	.4567	12	71	118						
DB501117	11.7	.4606	12	71	118						
DB501118	11.8	.4646	12	71	118						
DB501119	11.9	.4685	12	71	118						
DB501120	12.0	.4724	12	71	118						
DB501125	12.5	.4921	14	77	124						
DB501130	13.0	.5118	14	77	124						
DB501135	13.5	.5315	14	77	124						
DB501140	14.0	.5512	14	77	124						
DB501145	14.5	.5709	16	83	133						
DB501150	15.0	.5906	16	83	133						
DB501155	15.5	.6102	16	83	133						
DB501160	16.0	.6299	16	83	133						
DB501165	16.5	.6496	18	93	143						
DB501170	17.0	.6693	18	93	143						
DB501175	17.5	.6890	18	93	143						
DB501180	18.0	.7087	18	93	143						
DB501185	18.5	.7283	20	101	153						
DB501190	19.0	.7480	20	101	153						
DB501195	19.5	.7677	20	101	153						
DB501200	20.0	.7874	20	101	153						

▶ Other shank types are available on your request.

◎ : 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														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td>32</td> <td>33</td> <td>34</td> <td>35</td> <td>36</td> <td>37</td> <td>38</td> <td>39</td> <td>40</td> <td>41</td> <td>42</td> <td>43</td> <td>44</td> <td>45</td>	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
HRc	13	25	28	32	30	29	32	38	35	15	35	23	10	10	26	3	25	25	25	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	260	160	250	130	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎



RECOMMENDED CUTTING CONDITIONS

YGBasix Drills without Coolant Holes

ISO	VDI 3323	Material Description	Drill Diameter												
			SFM		METRIC									8.0	
			3.0 ~ 20.0	FRACTIONAL	3.0	-	4.0	-	5.0	6.0	-	-	8.0		
			1/8 ~ 3/4	DECIMAL	-	1/8	-	3/16	-	-	1/4	5/16	-		
			.1181 ~ .7874	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150			
P	2	Non-alloy steel	230 ~ 265	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094		
	3		230 ~ 265	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094		
	4		230 ~ 265	FEED	.0016-.0039	.0028-.0051	.0039-.0063	.0047-.0071					.0055-.0079		
	5		180 ~ 210	FEED	.0016-.0039	.0028-.0051	.0039-.0063	.0047-.0071					.0055-.0079		
	6	Low alloy steel	230 ~ 265	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094		
	7		190 ~ 230	FEED	.0024-.0047	.0031-.0055	.0039-.0079	.0047-.0094					.0063-.011		
	8		190 ~ 230	FEED	.0016-.0039	.0028-.0051	.0039-.0063	.0047-.0071					.0055-.0079		
	9		85 ~ 105	FEED	.0012-.0031	.002-.0043	.0031-.0055	.0039-.0063					.0047-.0071		
	10	High alloyed steel, and tool steel	160 ~ 200	FEED	.0016-.0039	.0028-.0051	.0039-.0063	.0047-.0071					.0055-.0079		
	11		85 ~ 105	FEED	.0012-.0031	.002-.0043	.0031-.0055	.0039-.0063					.0047-.0071		
	M	12	Stainless steel	160 ~ 190	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094	
13		100 ~ 120		FEED	.0016-.0039	.0028-.0051	.0039-.0063	.0047-.0071					.0055-.0079		
K	15	Grey cast iron	230 ~ 265	FEED	.0031-.0055	.0047-.0071	.0071-.0094	.0055-.0102					.0063-.011		
	16		190 ~ 210	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094		
	17	Nodular cast iron	230 ~ 265	FEED	.0031-.0055	.0047-.0071	.0071-.0094	.0055-.0102					.0063-.011		
	18		160 ~ 185	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094		
	19		190 ~ 210	FEED	.0031-.0055	.0047-.0071	.0071-.0094	.0055-.0102					.0063-.011		
20	Malleable cast iron	160 ~ 185	FEED	.0024-.0047	.0031-.0055	.0055-.0079	.0063-.0087					.0071-.0094			

RECOMMENDED CUTTING CONDITIONS



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

Drill Diameter										
-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0071-.0094	.0055-.0094	.0055-.0094	.0055-.0094	.0063-.0102	.0071-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126
.0071-.0094	.0055-.0094	.0055-.0094	.0055-.0094	.0063-.0102	.0071-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0079-.0118	.0083-.0118	.0083-.0118	.0083-.0118	.0087-.0138	.0098-.0142	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0071-.0094	.0055-.0094	.0055-.0094	.0055-.0094	.0063-.0102	.0071-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126
.0055-.0079	.0047-.0087	.0047-.0087	.0047-.0087	.0051-.0091	.0055-.0094	.0063-.0102	.0063-.0102	.0063-.0102	.0063-.0102	.0071-.011
.0071-.0094	.0055-.0094	.0055-.0094	.0055-.0094	.0063-.0102	.0071-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126
.0055-.0079	.0047-.0087	.0047-.0087	.0047-.0087	.0051-.0091	.0055-.0094	.0063-.0102	.0063-.0102	.0063-.0102	.0063-.0102	.0071-.011
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0071-.0094	.0055-.0094	.0055-.0094	.0055-.0094	.0063-.0102	.0071-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126
.0094-.0134	.0102-.0142	.0102-.0142	.0102-.0142	.011-.015	.0118-.0157	.0126-.0165	.0126-.0165	.0126-.0165	.0126-.0165	.0134-.0173
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0094-.0134	.0102-.0142	.0102-.0142	.0102-.0142	.011-.015	.0118-.0157	.0126-.0165	.0126-.0165	.0126-.0165	.0126-.0165	.0134-.0173
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157
.0094-.0134	.0102-.0142	.0102-.0142	.0102-.0142	.011-.015	.0118-.0157	.0126-.0165	.0126-.0165	.0126-.0165	.0126-.0165	.0134-.0173
.0087-.011	.0079-.0118	.0079-.0118	.0079-.0118	.0087-.0126	.0094-.0134	.011-.015	.011-.015	.011-.015	.011-.015	.0118-.0157