Registered
ISO 9001:2015 / ISO 14001:2015

YGBasiX

Solid Carbide YGBasix Drills
For General Purpose

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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.
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YouTube
Search 'YG-1' on social media outlets

YU-YGB210217001

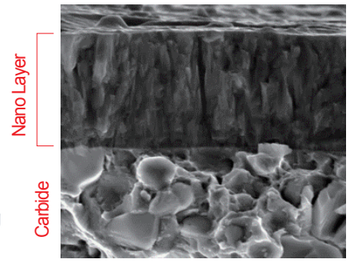
PRODUCT FEATURES

Solid Carbide YGBasix Drills for General Purpose

TiAlN Coating

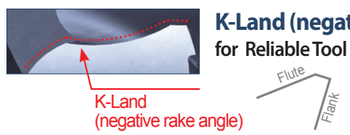
(Upgraded **Ti**tanium **Al**uminum **N**itride : **nano-Layer coating)**

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



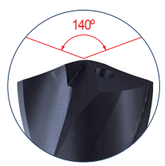
Special surface treatment after coating

to reduce friction and better chip flow.



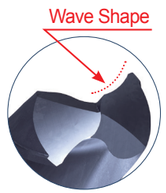
K-Land (negative rake angle) on the cutting edge

for Reliable Tool Life



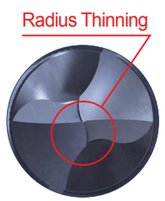
140 Degree Point Angle

for good centering and low thrust



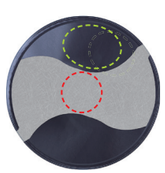
Wave shape Cutting Edge

will allow low thrust , stable torque and long tool life



Radius Thinning

for Self Centering and Chip Breaking



Optimized flute shape

for strength of drill and smooth chip evacuation

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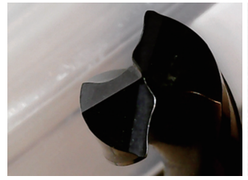
CASE STUDY

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: DIN 6539, DIN 6537

Tool Material: CARBIDE

Tolerance of Dimension: h6, m7, h7

Point Angle: 140°

Coating: TiAlN

Cutting Condition Page

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SELECTION GUIDE

YGBasiX

Solid Carbide YGBasix Drills
For General Purpose

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	

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.10~11

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRC	DB301	DB501
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		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		Ni or Co Based	Annealed	250	25		
	34			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		

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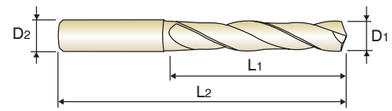
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS
FOR GENERAL PURPOSE (3XD)

DB301 SERIES

STUB
3 × D
D1=D2

- ▶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



DIN 6539 | CARBIDE | h6 | h7 | 140° | TiAlN | P.10~11

MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length	EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
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	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	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																					

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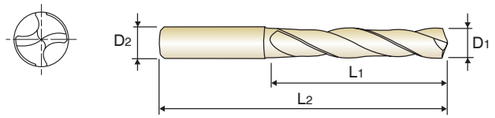
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS
FOR GENERAL PURPOSE (3XD)

DB301 SERIES

STUB
3×D
D1=D2

- ▶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



DIN 6539 | CARBIDE | h6 | h7 | 140° | TiAlN | P.10~11

MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAlN	D1 = D2		L1	L2
DB301082	8.2	.3228	37	79
DB301083	8.3	.3268	37	79
DB301084	8.4	.3307	37	79
DB301085	8.5	.3346	37	79
DB301086	8.6	.3386	40	84
DB301087	8.7	.3425	40	84
DB301088	8.8	.3465	40	84
DB301089	8.9	.3504	40	84
DB301090	9.0	.3543	40	84
DB301091	9.1	.3583	40	84
DB301092	9.2	.3622	40	84
DB301093	9.3	.3661	40	84
DB301094	9.4	.3701	40	84
DB301095	9.5	.3740	40	84
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

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAlN	D1 = D2		L1	L2
DB301140	14.0	.5512	54	107
DB301145	14.5	.5708	56	111
DB301150	15.0	.5905	56	111
DB301155	15.5	.6102	58	115
DB301160	16.0	.6299	58	115
DB301165	16.5	.6495	60	119
DB301170	17.0	.6692	60	119
DB301175	17.5	.6889	62	123
DB301180	18.0	.7087	62	123
DB301185	18.5	.7283	64	127
DB301190	19.0	.7480	64	127
DB301195	19.5	.7676	66	131
DB301200	20.0	.7874	66	131

▶ Other shank types are available on your request.

◎ : 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	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																					

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

DB501 SERIES

LONG
5×D

- ▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
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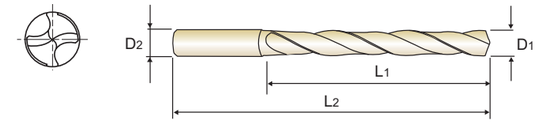
- ▶Optimized flute shape for strength of drilling and smooth chip evacuation



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

MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DB501010	1.0	.0394	3	8	55
DB501011	1.1	.0433	3	12	55
DB501012	1.2	.0472	3	12	55
DB501013	1.3	.0512	3	12	55
DB501014	1.4	.0551	3	12	55
DB501015	1.5	.0591	3	16	55
DB501016	1.6	.0630	3	16	55
DB501017	1.7	.0669	3	16	55
DB501018	1.8	.0709	3	16	55
DB501019	1.9	.0748	3	16	55
DB501020	2.0	.0787	4	21	57
DB501021	2.1	.0827	4	21	57
DB501022	2.2	.0866	4	21	57
DB501023	2.3	.0906	4	21	57
DB501024	2.4	.0945	4	21	57
DB501025	2.5	.0984	4	21	57
DB501026	2.6	.1024	4	21	57
DB501027	2.7	.1063	4	21	57
DB501028	2.8	.1102	4	21	57
DB501029	2.9	.1142	4	21	57
DB501030	3.0	.1181	6	28	66
DB501031	3.1	.1220	6	28	66
DB501032	3.2	.1260	6	28	66
DB501033	3.3	.1299	6	28	66
DB501034	3.4	.1339	6	28	66
DB501035	3.5	.1378	6	28	66

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DB501036	3.6	.1417	6	28	66
DB501037	3.7	.1457	6	28	66
DB501038	3.8	.1496	6	36	74
DB501039	3.9	.1535	6	36	74
DB501040	4.0	.1575	6	36	74
DB501041	4.1	.1614	6	36	74
DB501042	4.2	.1654	6	36	74
DB501043	4.3	.1693	6	36	74
DB501044	4.4	.1732	6	36	74
DB501045	4.5	.1772	6	36	74
DB501046	4.6	.1811	6	36	74
DB501047	4.7	.1850	6	36	74
DB501048	4.8	.1890	6	44	82
DB501049	4.9	.1929	6	44	82
DB501050	5.0	.1969	6	44	82
DB501051	5.1	.2008	6	44	82
DB501052	5.2	.2047	6	44	82
DB501053	5.3	.2087	6	44	82
DB501054	5.4	.2126	6	44	82
DB501055	5.5	.2165	6	44	82
DB501056	5.6	.2205	6	44	82
DB501057	5.7	.2244	6	44	82
DB501058	5.8	.2283	6	44	82
DB501059	5.9	.2323	6	44	82
DB501060	6.0	.2362	6	44	82
DB501061	6.1	.2402	8	53	91

▶ Other shank types are available on your request.

▶ 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	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	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																					

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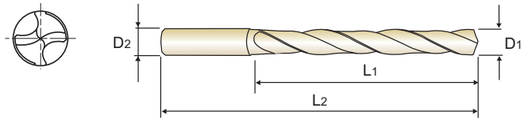
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS
FOR GENERAL PURPOSE (5XD)

DB501 SERIES

LONG
5×D

- ▶ 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



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

MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DB501062	6.2	.2441	8	53	91
DB501063	6.3	.2480	8	53	91
DB501064	6.4	.2520	8	53	91
DB501065	6.5	.2559	8	53	91
DB501066	6.6	.2598	8	53	91
DB501067	6.7	.2638	8	53	91
DB501068	6.8	.2677	8	53	91
DB501069	6.9	.2717	8	53	91
DB501070	7.0	.2756	8	53	91
DB501071	7.1	.2795	8	53	91
DB501072	7.2	.2835	8	53	91
DB501073	7.3	.2874	8	53	91
DB501074	7.4	.2913	8	53	91
DB501075	7.5	.2953	8	53	91
DB501076	7.6	.2992	8	53	91
DB501077	7.7	.3031	8	53	91
DB501078	7.8	.3071	8	53	91
DB501079	7.9	.3110	8	53	91
DB501080	8.0	.3150	8	53	91
DB501081	8.1	.3189	10	61	103
DB501082	8.2	.3228	10	61	103
DB501083	8.3	.3268	10	61	103
DB501084	8.4	.3307	10	61	103
DB501085	8.5	.3346	10	61	103
DB501086	8.6	.3386	10	61	103
DB501087	8.7	.3425	10	61	103

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DB501088	8.8	.3465	10	61	103
DB501089	8.9	.3504	10	61	103
DB501090	9.0	.3543	10	61	103
DB501091	9.1	.3583	10	61	103
DB501092	9.2	.3622	10	61	103
DB501093	9.3	.3661	10	61	103
DB501094	9.4	.3701	10	61	103
DB501095	9.5	.3740	10	61	103
DB501096	9.6	.3780	10	61	103
DB501097	9.7	.3819	10	61	103
DB501098	9.8	.3858	10	61	103
DB501099	9.9	.3898	10	61	103
DB501100	10.0	.3937	10	61	103
DB501101	10.1	.3976	12	71	118
DB501102	10.2	.4016	12	71	118
DB501103	10.3	.4055	12	71	118
DB501104	10.4	.4094	12	71	118
DB501105	10.5	.4134	12	71	118
DB501106	10.6	.4173	12	71	118
DB501107	10.7	.4213	12	71	118
DB501108	10.8	.4252	12	71	118
DB501109	10.9	.4291	12	71	118
DB501110	11.0	.4331	12	71	118
DB501111	11.1	.4370	12	71	118
DB501112	11.2	.4409	12	71	118
DB501113	11.3	.4449	12	71	118

▶ Other shank types are available on your request.

▶ 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	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	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																					

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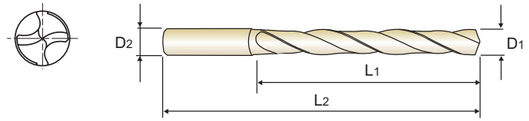
TIAIN-COATED SOLID CARBIDE YGBASIX DRILLS
FOR GENERAL PURPOSE (5XD)

DB501 SERIES

LONG
5×D

- ▶ 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



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

MADE IN KOREA & MEXICO

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Shank Diameter	Flute Length	Overall Length
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	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	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																					

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YGBasix Drills without Coolant Holes

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

ISO	VDI 3323	Material Description	SFM	Drill Diameter																			
			3.0 ~ 20.0	METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
			1/8 ~ 3/4	FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
			.1181 ~ .7874	DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
P	2	Non-alloy steel	**230 ~ 265**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
P	3	Non-alloy steel	**230 ~ 265**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
P	4	Non-alloy steel	**230 ~ 265**	FEED	.0016- .0039		.0028- .0051	.0039- .0063		.0047- .0071		.0055- .0079		.0071- .0094	.0055- .0094	.0055- .0094	.0055- .0094	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
P	5	Non-alloy steel	**180 ~ 210**	FEED	.0016- .0039		.0028- .0051	.0039- .0063		.0047- .0071		.0055- .0079		.0071- .0094	.0055- .0094	.0055- .0094	.0055- .0094	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
P	6	Low alloy steel	**230 ~ 265**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
P	7	Low alloy steel	**190 ~ 230**	FEED	.0024- .0047		.0031- .0055	.0039- .0079		.0047- .0094		.0063- .011		.0079- .0118	.0083- .0118	.0083- .0118	.0083- .0118	.0087- .0138		.0098- .0142		.011- .015	.011- .015	.0118- .0157
P	8	Low alloy steel	**190 ~ 230**	FEED	.0016- .0039		.0028- .0051	.0039- .0063		.0047- .0071		.0055- .0079		.0071- .0094	.0055- .0094	.0055- .0094	.0055- .0094	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
P	9	Low alloy steel	**85 ~ 105**	FEED	.0012- .0031		.002- .0043	.0031- .0055		.0039- .0063		.0047- .0071		.0055- .0079	.0047- .0087	.0047- .0087	.0047- .0087	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
P	10	High alloyed steel, and tool steel	**160 ~ 200**	FEED	.0016- .0039		.0028- .0051	.0039- .0063		.0047- .0071		.0055- .0079		.0071- .0094	.0055- .0094	.0055- .0094	.0055- .0094	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
P	11	High alloyed steel, and tool steel	**85 ~ 105**	FEED	.0012- .0031		.002- .0043	.0031- .0055		.0039- .0063		.0047- .0071		.0055- .0079	.0047- .0087	.0047- .0087	.0047- .0087	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
M	12	Stainless steel	**160 ~ 190**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
M	13	Stainless steel	**100 ~ 120**	FEED	.0016- .0039		.0028- .0051	.0039- .0063		.0047- .0071		.0055- .0079		.0071- .0094	.0055- .0094	.0055- .0094	.0055- .0094	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
K	15	Grey cast iron	**230 ~ 265**	FEED	.0031- .0055		.0047- .0071	.0071- .0094		.0055- .0102		.0063- .011		.0094- .0134	.0102- .0142	.0102- .0142	.0102- .0142	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
K	16	Grey cast iron	**190 ~ 210**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
K	17	Nodular cast iron	**230 ~ 265**	FEED	.0031- .0055		.0047- .0071	.0071- .0094		.0055- .0102		.0063- .011		.0094- .0134	.0102- .0142	.0102- .0142	.0102- .0142	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
K	18	Nodular cast iron	**160 ~ 185**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
K	19	Malleable cast iron	**190 ~ 210**	FEED	.0031- .0055		.0047- .0071	.0071- .0094		.0055- .0102		.0063- .011		.0094- .0134	.0102- .0142	.0102- .0142	.0102- .0142	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
K	20	Malleable cast iron	**160 ~ 185**	FEED	.0024- .0047		.0031- .0055	.0055- .0079		.0063- .0087		.0071- .0094		.0087- .011	.0079- .0118	.0079- .0118	.0079- .0118	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157

RECOMMENDED CUTTING CONDITIONS