



Leading Through Innovation



HSS-PM

MULTI-1 DRILLS

MULTI-1 BOHRER

- Premium HSS-PM Drills
For Wide Range of Applications Particularly Stainless Steels and Titanium
- HSS-PM Bohrer
Für ein breites Anwendungsspektrum, insbesondere Edelstahl und Titan

SELECTION GUIDE



SERIES	CDRA03	CDRA04
LENGTH	STUB	JOBBER
SIZE MIN	D1.0	D2.0
SIZE MAX	D13.0	D13.0
PAGE	A163	A166

SURFACE TREATMENT

TiAIN

HSS-PM

MULTI-1 DRILLS

Premium HSS-PM Drills
for Wide Range of Applications Particularly Stainless Steels and Titanium



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A169

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	CDRA03	CDRA04	
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			

YG MULTI-1 DRILLS

CDRA03 SERIES

HSS-PM, MULTI-1 DRILLS

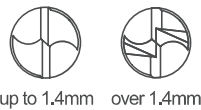
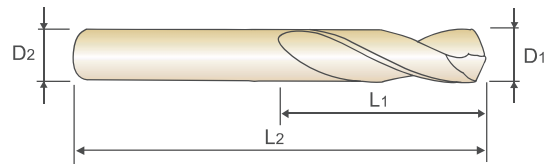
STUB

- HSS-PM MULTI-1 BOHRER
- Forets MULTI-1 HSS-PM Premium, série extra-courte
- PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM

EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

- **Application** : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRc30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.
- **Advantage** : Point shape to maximize self-centering. Flute design for the best chip evacuation. Premium powder materials with excellent toughness.

- **Anwendung** : Baustähle, Kohlenstoffstähle, legierte Stähle, vorgehärtete Stähle, Formstähle, rostfreie Stähle, gehärtete Stähle (HRc30~45), Gusseisen, Aluminiumlegierungen, Nichteisen Legierungen, Titan.
- **Vorteile** : Maximale Selbstzentrierung durch besonderen Spitzenanschliff
Bohrergeometrie für optimale Spanabfuhr.
Premium Pulverstahl mit ausgezeichneter Zähigkeit.



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Plain Shank
 Recommended ToolHolder
 HYDRAULIC CHUCK

up to 1.9mm over 1.9mm

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
CDRA03058	5.8	6	28	72
CDRA03059	5.9	6	28	72
CDRA03060	6.0	6	28	72
CDRA03061	6.1	8	31	75
CDRA03062	6.2	8	31	75
CDRA03063	6.3	8	31	75
CDRA03064	6.4	8	31	75
CDRA03065	6.5	8	31	75
CDRA03066	6.6	8	31	75
CDRA03067	6.7	8	31	75
CDRA03068	6.8	8	34	78
CDRA03069	6.9	8	34	78
CDRA03070	7.0	8	34	78
CDRA03071	7.1	8	34	78
CDRA03072	7.2	8	34	78
CDRA03073	7.3	8	34	78
CDRA03074	7.4	8	34	78
CDRA03075	7.5	8	34	78
CDRA03076	7.6	8	37	81
CDRA03077	7.7	8	37	81
CDRA03078	7.8	8	37	81
CDRA03079	7.9	8	37	81
CDRA03080	8.0	8	37	81
CDRA03081	8.1	10	37	87

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
CDRA03082	8.2	10	37	87
CDRA03083	8.3	10	37	87
CDRA03084	8.4	10	37	87
CDRA03085	8.5	10	37	87
CDRA03086	8.6	10	40	90
CDRA03087	8.7	10	40	90
CDRA03088	8.8	10	40	90
CDRA03089	8.9	10	40	90
CDRA03090	9.0	10	40	90
CDRA03091	9.1	10	40	90
CDRA03092	9.2	10	40	90
CDRA03093	9.3	10	40	90
CDRA03094	9.4	10	40	90
CDRA03095	9.5	10	40	90
CDRA03096	9.6	10	43	93
CDRA03097	9.7	10	43	93
CDRA03098	9.8	10	43	93
CDRA03099	9.9	10	43	93
CDRA03100	10.0	10	43	93
CDRA03101	10.1	12	43	100
CDRA03102	10.2	12	43	100
CDRA03103	10.3	12	43	100
CDRA03104	10.4	12	43	100
CDRA03105	10.5	12	43	100

► 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		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		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	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○												○					



HSS-PM, MULTI-1 DRILLS

JOBBER

● HSS-PM MULTI-1 BOHRER

KURZ

● Forets MULTI-1 HSS-PM Premium, série courte

COURTE

● PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM

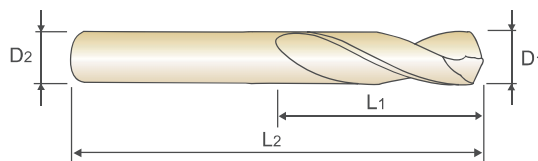
CORTA

► **Application** : Structural steels, Carbon steels, Alloy steels, Pre-hardened steels, Mold steels, Stainless steels, Hardened steels(HRC30~45), Cast iron, Aluminum alloys, Nonferrous alloys, Titanium.

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Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
CDRA04020	2.0	3	24	56
CDRA04021	2.1	3	24	56
CDRA04022	2.2	3	25	56
CDRA04023	2.3	3	25	56
CDRA04024	2.4	3	30	61
CDRA04025	2.5	3	30	61
CDRA04026	2.6	3	30	61
CDRA04027	2.7	3	33	64
CDRA04028	2.8	3	33	64
CDRA04029	2.9	3	33	64
CDRA04030	3.0	3	33	64
CDRA04031	3.1	4	36	68
CDRA04032	3.2	4	36	68
CDRA04033	3.3	4	36	68
CDRA04034	3.4	4	39	71
CDRA04035	3.5	4	39	71
CDRA04036	3.6	4	39	71
CDRA04037	3.7	4	39	71
CDRA04038	3.8	4	43	75
CDRA04039	3.9	4	43	75
CDRA04040	4.0	4	43	75
CDRA04041	4.1	6	43	85
CDRA04042	4.2	6	43	85
CDRA04043	4.3	6	47	89

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
CDRA04044	4.4	6	47	89
CDRA04045	4.5	6	47	89
CDRA04046	4.6	6	47	89
CDRA04047	4.7	6	47	89
CDRA04048	4.8	6	52	94
CDRA04049	4.9	6	52	94
CDRA04050	5.0	6	52	94
CDRA04051	5.1	6	52	94
CDRA04052	5.2	6	52	94
CDRA04053	5.3	6	52	94
CDRA04054	5.4	6	57	99
CDRA04055	5.5	6	57	99
CDRA04056	5.6	6	57	99
CDRA04057	5.7	6	57	99
CDRA04058	5.8	6	57	99
CDRA04059	5.9	6	57	99
CDRA04060	6.0	6	57	99
CDRA04061	6.1	8	63	107
CDRA04062	6.2	8	63	107
CDRA04063	6.3	8	63	107
CDRA04064	6.4	8	63	107
CDRA04065	6.5	8	63	107
CDRA04066	6.6	8	63	107
CDRA04067	6.7	8	63	107

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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)			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	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○												○					



HSS-PM, MULTI-1 DRILLS

JOBBER

● **HSS-PM MULTI-1 BOHRER**

KURZ

● **Forets MULTI-1 HSS-PM Premium, série courte**

COURTE

● **PUNTA GAMBO CILINDRICO MULTI-1, HSS-PM**

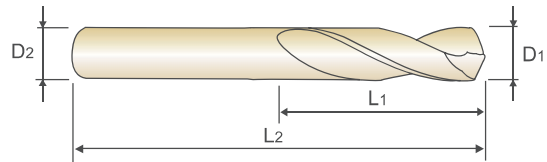
CORTA

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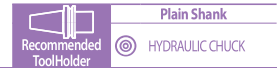
► **Anwendung** : Baustähle, Kohlenstoffstähle, legierte Stähle, vorgehärtete Stähle, Formstähle, rostfreie Stähle, gehärtete Stähle (HRC30~45), Gusseisen, Aluminiumlegierungen, Nichteisen Legierungen, Titan.

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Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length		Overall Length
	D1	D2	L1	L2	L2
TiAlN					
CDRA04116	11.6	12	94	151	151
CDRA04117	11.7	12	94	151	151
CDRA04118	11.8	12	94	151	151
CDRA04119	11.9	12	101	158	158
CDRA04120	12.0	12	101	158	158
CDRA04121	12.1	12	101	158	158
CDRA04122	12.2	12	101	158	158
CDRA04123	12.3	12	101	158	158

EDP No.	Drill Diameter	Shank Diameter	Flute Length		Overall Length
	D1	D2	L1	L2	L2
TiAlN					
CDRA04124	12.4	12	101	158	158
CDRA04125	12.5	12	101	158	158
CDRA04126	12.6	12	101	158	158
CDRA04127	12.7	12	101	158	158
CDRA04128	12.8	12	101	158	158
CDRA04129	12.9	12	101	158	158
CDRA04130	13.0	12	101	158	158

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	
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		Heat Resistant Super Alloys							Titanium Alloys		Hardened steel	Chilled 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	400Rm	1050Rm	550	630	400	550
Recommended	◎	◎	○	○												○					

◎ : Excellent ○ : Good



Global Cutting Tool Leader **YG-1**



HOLEMAKING