



**MDC - Diamond graphite
Alu mills**




MDC - Alu mills

 MDC Diamond, micro grain carbide, geometry specifically designed to machine graphite and new coating MDC-Diamond with increased thickness to achieve an even longer tool life.


ALU MILLS, for Aluminium and alloy, made of micro grain carbide and HSS/Co, geometry specifically designed and polished flutes, ensure long tool life, outstanding surface finishing and accuracy even at ultra fast cutting speed.

 MDC Diamond, metallo duro micrograna, con geometria specifica per la lavorazione di grafite e nuovo rivestimento diamante MDC a spessore maggiorato per garantire una durata ancor più lunga.

ALU MILLS, per Alluminio e leghe, in metallo duro micrograna e HSS/Co, con geometria specifica e gole lappate, garantiscono lunga durata, finitura eccezionale e taglio preciso anche alle altissime velocità.

 MDC Diamond aus Hartmetall Mikrokorn, mit Spezialgeometrie entworfen für das Fresen von Graphit. Dank der neuen extrastarken MDC Diamant Beschichtung, wird eine noch längere Lebensdauer garantiert.

ALU MILLS, für Aluminium und legierungen, Fräser aus Hartmetall Mikrokorn und HSS/Co, mit Spezialgeometrie und das Reibschleifen von Rillen. Diese Fräser garantieren Lebensdauer, hervorragende Fertigungsqualität und einen genauen Schnitt auch bei Hochgeschwindigkeiten.

 MDC Diamond, carbure micro grain revêtu monobloc, avec géométrie spécifique pour l'usinage de la graphite et nouveau revêtement diamant MDC à grande épaisseur, pour une durée encore plus longue.

ALU MILLS, pour Aluminium et alliages, en carbure micro grain revêtu monobloc et HSS/Co, avec géométrie spécifique et goujures polies, garantissent une longue durée, une finition exceptionnelle et une coupe très précise, même à vitesse de coupe très élevée.

	OSAWA NORM
PAGE 249	

MDC2253 - MDC2251

Ø mm	~ 12
tol. D µ	0 / -20
tol. R µ	±10



D	d(h6)	l	l1	L	Stock	Stock
mm						
0.6	3	0.6	3	40	○	
0.8	3	0.8	4	40	○	
1	3	1	5	40	○	
1.2	3	1.2	6	50	○	
1.5	3	1.5	7.5	50	○	
2	3	2.2	10	60	○	
2	4	10	20	80		○
3	4	15	25	80		○
4	4	20	30	80		○
5	6	30	50	100		○
6	6	30	50	100		○
8	8	40	60	110		○
10	10	50	70	120		○
12	12	55	75	130		○

● stock standard ○ non-standard stock EX stock exhaustion

	OSAWA NORM
PAGE 248-249	

MDC2203

Ø mm	~2
tol. D µ	0 / -15
tol. R µ	±10

MDC3311

Ø mm	~12
tol. D µ	0 / -30
tol. R µ	±10



D	d(h6)	l	l1	L	Stock	Stock		
mm								
0.6	R0.05	3	0.9	3	40	○		
0.8	R0.05	3	1.2	4	40	○		
1	R0.1	3	1.4	5	40	○		
1.2	R0.1	3	1.8	6	50	○		
1.5	R0.15		2.2	7.5	50	○		
2	R0.15	3	2.2	10	60	○		
2	R0.15	2	9		60		○	
3	R0.15	3	30		60		○	
4	R0.2	4	30		60		○	
5	R0.3	5	35		70		○	
6	R0.3	6	40		100		○	
8	R0.5	8	40		100		○	
10	R0.5	10	40		100		○	
12	R0.5	12	45		100		○	

● stock standard ○ non-standard stock EX stock exhaustion

n **Vf**
PAGE 250

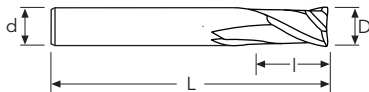
**OSAWA
NORM**

MDCSA2



MDCSA2

Ø mm	3~20
tol. D µ	0 / -30



D	d(h6)	l	L	Stock
mm 3	6	8	57	●
4	6	11	57	●
5	6	13	57	●
6	6	13	57	●
8	8	19	63	●
10	10	22	72	●
12	12	26	83	●
14	14	26	83	●
16	16	32	92	●
18	18	32	92	●
20	20	38	104	●

● stock standard ○ non-standard stock EX stock exhaustion

n **Vf**
PAGE 250

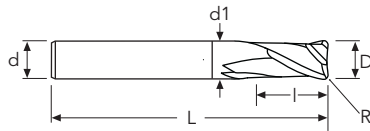
**OSAWA
NORM**

MCA212R



MCA212R

Ø mm	2~12
tol. D µ	0 / -30
tol. R µ	±



d1 < D



D	d(h6)	l	l1	L	Stock
mm 2 xR0.2	3	3	6	40	●
3 xR0.2	3	4	8	40	●
4 xR0.2	4	5	12	50	●
5 xR0.2	5	8	14	50	●
6 xR0.2	6	8	18	65	●
8 xR0.2	8	10	22	70	●
10 xR0.2	10	14	28	80	●
12 xR0.2	12	16	35	90	●

● stock standard ○ non-standard stock EX stock exhaustion

n **Vf**
PAGE 251

OSAWA
NORM

MDCSA3

Ø mm	~6	8~12	16~20
tol. D µ	0 / -20	0 / -25	0 / -30

MDA310 - MDA311 - MDA312

Ø mm	~6	8~12	16~20
tol. D µ	0 / -30	0 / -35	0 / -40



d1 < D

Z3

MG

LAPPED

ALU

55°

Z3

MG

LAPPED

ALU

45°

Z3

MG

LAPPED

ALU

45°

Z3

MG

LAPPED

ALU

45°

D	d(h6)	l	L	Stock	Stock	Stock	Stock
mm 1	4	3	50	●			
1.5	4	4.5	50	●			
2	4	6	50	●			
3	4	8	50	●			
3	6	12	75		●		
3	6	15	100			●	
4	4	11	50	●			
4	6	16	75		●		
4	6	20	100			●	
5	6	13	50	●			
5	6	20	75		●		
5	6	30	100			●	
6	6	15	50	●			
6	6	30	75		●		
8	8	20	60	●			
8	8	35	100			●	
8	8	40	150				●
10	10	25	75	●			
10	10	40	100			●	
10	10	50	150				●
12	12	30	75	●			
12	12	45	100			●	●
12	12	50	150				
16	16	40	100	●			
16	16	70	150				●
20	20	40	100	●			
20	20	80	150				●

● stock standard ○ non-standard stock EX stock exhaustion


 PAGE 251

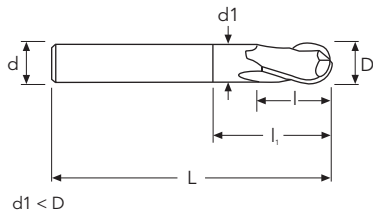
OSAWA
NORM

MDCAB2

Ø mm	~6	8-12
tol. D µ	0 / -20	0 / -25
tol. R µ	± 10	± 10

NEW

MDCAB2



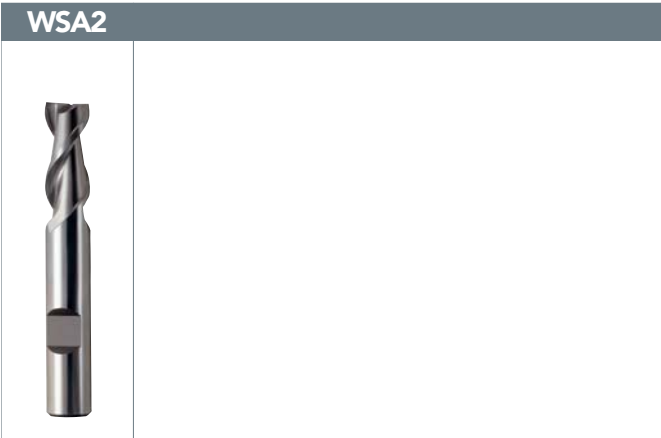
-  Z2 BALL
-  MG LAPPED
-  ALU BALL NOSE
-  40°

D	d(h6)	l	l1	L	Stock
mm 1	4	2		50	●
1.5	4	3		50	●
2	4	4		50	●
3	4	6		50	●
4	4	8		50	●
5	6	10		50	●
6	6	12		50	●
8	8	16		60	●
10	10	20		75	●
12	12	24		75	●

● stock standard ○ non-standard stock EX stock exhaustion

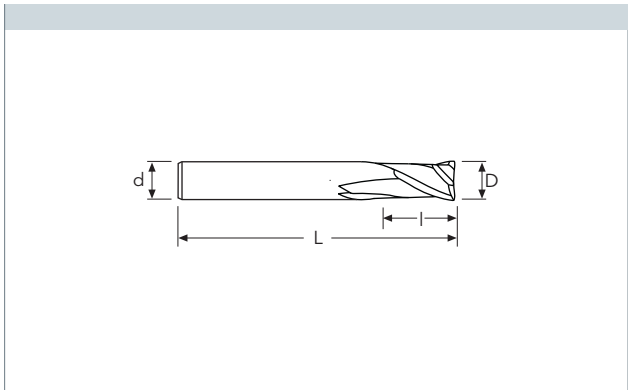
n **Vf**
PAGE 252

DIN 844



WSA2

Ø mm	3~6	7~10	12~18	20~25
tol.D µ	±60	±75	±90	±105

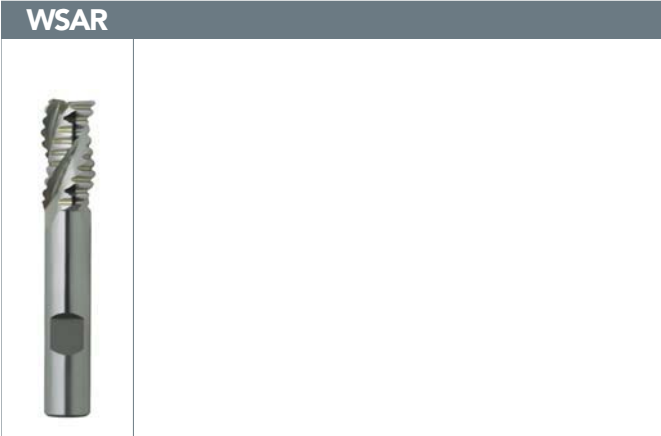


D(e8)	d(h6)	l	L	Stock
mm 2	6	7	51	●
2.5	6	8	52	●
3	6	8	52	●
4	6	11	55	●
5	6	13	57	●
6	6	13	57	●
8	10	19	69	●
10	10	22	72	●
12	12	26	83	●
14	12	26	83	●
16	16	32	92	●
18	16	32	92	●
20	20	38	104	●

● stock standard ○ non-standard stock EX stock exhaustion

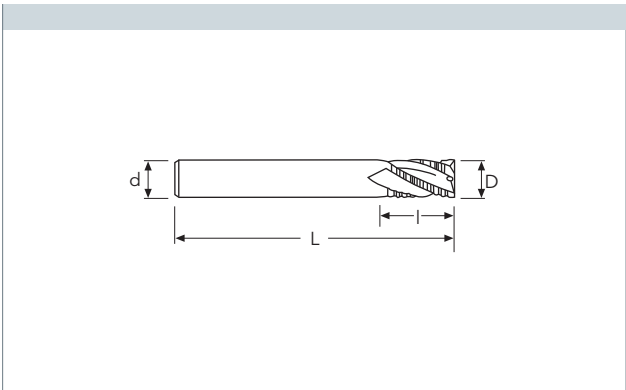
n **Vf**
PAGE 252

DIN 844



WSAR (js12)

Ø mm	3~6	7~10	12~18	20~25
tol.D µ	±60	±75	±90	±105



D(js12)	d(h6)	l	L	Stock
mm 6	6	13	57	●
8	10	19	69	●
10	10	22	72	●
12	12	26	83	●
14	12	26	83	●
16	16	32	92	●
18	16	32	92	●
20	20	38	104	●
25	25	45	121	●

● stock standard ○ non-standard stock EX stock exhaustion