

TURNING CHIPBREAKERS OVERVIEW IN CAST IRON OPERATION



CAST IRON

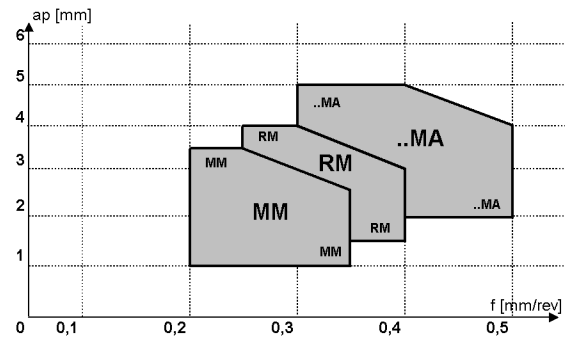
NEGATIVE INSERTS

CHIPBREAKERS	OPERATION		
	FINISHING / SEMIFINISHING	MEDIUM	ROUGHING
	MM	RM	..MA

	MM	RM	..MA	
$ap_{min}=re \times \dots$	1,20	2,00	2,50	[mm]
$ap_{max}=l \times \dots$	0,30	0,35	0,42	[mm]
$f_{min}=re \times \dots$	0,28	0,32	0,37	[mm]
$f_{max}=re \times \dots$	0,50	0,50	0,62	[mm]
$A_{max}=ap_{max} \times f_{max}$	0,70	0,75	0,75	[mm ²]

Ex: CNMG 120408-RM for GG25 / $K_r = 95^\circ$

$ap_{min} = 0.80 \times 2.00 = 1,60$ [mm] » $1.6/25.4 = 0,06$ [inch]
 $ap_{max} = 12 \times 0.35 = 4,20$ [mm] » $4.2/25.4 = 0,19$ [inch]
 $f_{min} = 0.80 \times 0.32 = 0,25$ [mm] » $0.25/25.4 = 0,01$ [inch]
 $f_{max} = 0.80 \times 0.50 = 0,40$ [mm] » $0.4/25.4 = 0,02$ [inch]
 $A_{max} = 4.80 \times 0.52 \times 0.75 = 1,74$ [mm²] » $1.74/25.4^2 = 0,003$ [inch²]



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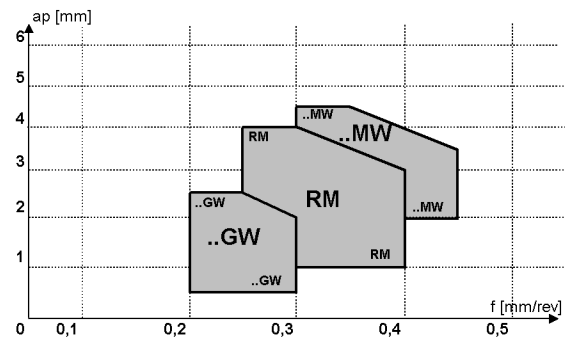
POSITIVE INSERTS

CHIPBREAKERS	OPERATION		
	FINISHING / SEMIFINISHING	MEDIUM	ROUGHING
	..GW	RM	..MW

	..GW	RM	..MW	
$ap_{min}=re \times \dots$	2,50	1,25	2,50	[mm]
$ap_{max}=l \times \dots$	0,42	0,33	0,42	[mm]
$f_{min}=re \times \dots$	0,37	0,28	0,37	[mm]
$f_{max}=re \times \dots$	0,62	0,52	0,62	[mm]
$A_{max}=ap_{max} \times f_{max}$	0,75	0,75	0,75	[mm ²]

Ex: CNMG 120408-RM for GG25 / $K_r = 95^\circ$

$ap_{min} = 0.80 \times 1.25 = 1,00$ [mm] » $1.00/25.4 = 0,04$ [inch]
 $ap_{max} = 12 \times 0.33 = 4,00$ [mm] » $4.00/25.4 = 0,16$ [inch]
 $f_{min} = 0.80 \times 0.28 = 0,23$ [mm] » $0.23/25.4 = 0,01$ [inch]
 $f_{max} = 0.80 \times 0.45 = 0,36$ [mm] » $0.36/25.4 = 0,01$ [inch]
 $A_{max} = 4.00 \times 0.42 \times 0.75 = 1,26$ [mm²] » $1.26/25.4^2 = 0,020$ [inch²]



General Formulas

Vc:	Cutting speed	[mm/n or	[inch/min]
d1:	Diameter	[mm] or	[inch]
f:	Feed	[mm] or	[inch]
n:	Revolutions/min	[rev./min.]	
Vf:	Feed rate	[mm/n or	[inch/min]
ap:	depth of cut	[mm] or	[inch]
1 inch =	25.4mm	1m/mi	3.28sfm
1 mm =	0.04inch	1 sfm	0.305m/min

$$Vc = \frac{\pi \times d1 \times n}{1000} \quad \text{[mm/min] if Dc in [mm]}$$

$$n = \frac{Vc \times 1000}{\pi \times d1} \quad \text{[rev./min.]}$$

$$Vf = f \cdot N \quad \text{[mm/min] if f in [mm]}$$

IMPORTANT:

The information you will find is based on our actual knowledge and experience. Seen the influence of some parameters by using our products, the user is not dispensed from making previous tests or verifications. No legal responsibility may be associated with the characteristics or recommendations of a product for a case of application. The user has, under his own responsibility, to respect all valid rights, laws and guidelines by using our products.