

MEGAMILL BALL APPLICATION DATA

MATERIALS INSERT GRADES: ROUGHING INSERT GRADES: FINISHING SPEEDS FEED RATE		CAST IRON		STEELS			STAINLESS STEELS		NICKEL BASED ALLOYS	TITANIUM	ALUMINUM
		GREY	NODULAR	LOW CARBON up to: 240 BHN 80 Kg / mm ²	HIGH CARBON MEDIUM TENSILE 240-300 BHN/80- 105 Kg / mm ²	HIGH ALLOY TOOL STEEL 300-400 BHN 105-140 Kg / mm ²	300 SERIES 304, 316	400 SERIES 15-5 PH 17-4 PH	INCONEL WASPALLOY HASTALLOY	6AL 4 V	6061 T6 7075 T6
		500-1000 SFM 150-300 M/min	400-800 SFM 120-240 M/min	500-1000 SFM 150-300 M/min	400-800 SFM 120-240 M/min	300-600 SFM 90-180 M/min	300-700 SFM 90-210 M/min	400-800 SFM 120-240 M/min	100-200 SFM 30-60 M/min	200-300 SFM 60-90 M/min	1500-5000 SFM 450-1515 M/min
		K-20	K-20	P-30	P-30	P-30	P-30	K-20	K-20	K-20	K-10
		K-10/K-20		K-10/K-20			K-10/K-20		K-10/K-20	K-10/K-20	K-10
IPR	INCH	.006 / .010 .15 / .25		.006 / .010 .15 / .25		.006 / .010 .15 / .25		.004 / .009 .10 / .22		.005 / .010 .13 / .25	
	METRIC	.006 / .010 .15 / .25		.006 / .010 .15 / .25		.006 / .010 .15 / .25		.004 / .009 .10 / .22		.015 / .030 .38 / .76	

EFFECTIVE CUTTING DIAMETER INFORMATION

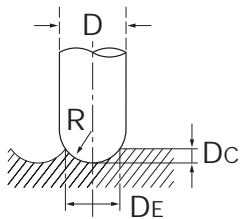
INCH SERIES

Insert Dia.	0.375	0.500	0.625	0.750	1.000	1.250
"DC" Depth of cut	"DE" Effective Cutting Diameter					
0.010	0.121	0.140	0.157	0.172	0.199	0.223
0.015	0.147	0.171	0.191	0.210	0.243	0.272
0.020	0.169	0.196	0.220	0.242	0.280	0.314
0.050	0.255	0.300	0.339	0.374	0.436	0.490
0.075	0.300	0.357	0.406	0.450	0.527	0.504
0.100	0.332	0.400	0.458	0.510	0.600	0.678
0.125	0.354	0.433	0.500	0.559	0.661	0.750
0.156	0.370	0.463	0.541	0.609	0.726	0.826
0.188	0.375	0.484	0.573	0.660	0.781	0.894
0.250	--	0.500	0.612	0.707	0.866	1.000
0.312	--	--	0.625	0.739	0.927	1.082
0.375	--	--	--	0.750	0.968	1.146
0.500	--	--	--	--	1.000	1.225
0.625	--	--	--	--	--	1.250

METRIC SERIES

Insert Dia.	10	12	16	20	25	30	32
"DC" Depth of cut	"DE" Effective Cutting Diameter						
0.25	3.10	3.50	4.00	4.45	5.00	5.45	5.65
0.38	3.80	4.20	4.90	5.45	6.10	6.70	6.95
0.5	4.35	4.80	5.55	6.25	7.00	7.70	7.95
1.25	6.60	7.30	8.60	9.70	10.90	12.00	12.40
2	8.00	8.90	10.60	12.00	13.60	15.00	15.50
2.5	8.65	9.75	11.60	13.20	15.00	16.60	17.20
3.2	9.30	10.60	12.80	14.70	16.70	18.50	19.20
4	9.80	11.30	13.85	16.00	18.30	20.40	21.15
5	10.00	11.80	14.80	17.30	20.00	22.35	23.25
6	--	12.00	15.50	18.30	21.35	24.00	25.00
7	--	--	15.90	19.10	22.45	25.40	26.45
8	--	--	16.00	19.60	23.30	26.55	27.70
10	--	--	--	20.00	24.50	28.30	29.65
12.5	--	--	--	--	25.00	29.60	31.22
15	--	--	--	--	--	30.00	31.60
16	--	--	--	--	--	--	32.00

D = CUTTER DIA.
 DE = EFFECTIVE CUTTING DIA.
 DC = DEPTH OF CUT
 $DE = \sqrt{D^2 - (D - 2DC)^2}$
 $RPM = \frac{SFM \times 3.82}{DE \text{ (INCHES)}}$
 $RPM = \frac{SMM \times 323.4}{DE \text{ (MM)}}$



How to mount the two-hole type insert

1. Insert the tip into holder slot.
2. Turn the end screw A just enough to press the tip down toward shank.
3. Tighten the front end screw B sufficiently.
4. Complete tightening turn the end screw A.
5. Ensure that the tip is well clamped in place.

