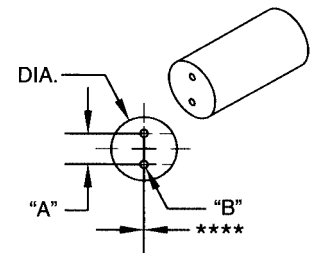


# 2 Straight Hole Round Carbide Rod

R.S.#	Extruded Diameter	O.D. Tolerance	"A" Dim.	Bolt circle tolerance	"B" Dim.	Coolant Hole Tolerance
10-15-09	0.176	+/-0.006	0.059	-0.006	0.035	+/-0.004
10-18-09	0.176	+/-0.006	0.071	-0.006	0.035	+/-0.004
12.5-18-08	0.223	+/-0.006	0.071	-0.006	0.031	+/-0.004
12.5-20-09	0.223	+/-0.006	0.079	-0.006	0.035	+/-0.004
15-11-05	0.254	+/-0.006	0.043	-0.006	0.020	+/-0.004
15-15-09	0.254	+/-0.006	0.059	-0.006	0.035	+/-0.004
15-17-08	0.254	+/-0.006	0.067	-0.006	0.031	+/-0.004
15-20-09	0.254	+/-0.006	0.079	-0.006	0.035	+/-0.004
15-23-09	0.254	+/-0.006	0.091	-0.008	0.035	+/-0.004
15-24-12	0.254	+/-0.006	0.094	-0.008	0.047	+/-0.006
15-30-09	0.254	+/-0.006	0.118	-0.008	0.035	+/-0.004
15-30-12	0.254	+/-0.006	0.118	-0.008	0.047	+/-0.006
18-18-08	0.301	+/-0.006	0.071	-0.006	0.031	+/-0.004
18-20-09	0.301	+/-0.006	0.079	-0.006	0.035	+/-0.004
18-30-12	0.301	+/-0.006	0.118	-0.008	0.047	+/-0.006
18-35-09	0.301	+/-0.006	0.138	-0.008	0.035	+/-0.004
20-11-05	0.333	+/-0.006	0.043	-0.006	0.020	+/-0.004
20-17-08	0.333	+/-0.006	0.067	-0.006	0.031	+/-0.004
20-20-09	0.333	+/-0.006	0.079	-0.006	0.035	+/-0.004
20-26-12	0.333	+/-0.006	0.102	-0.008	0.047	+/-0.006
20-30-12	0.333	+/-0.006	0.118	-0.008	0.047	+/-0.006
20-33-09	0.333	+/-0.006	0.130	-0.008	0.035	+/-0.004
20-35-15	0.333	+/-0.006	0.138	-0.008	0.059	+/-0.006
20-40-09	0.333	+/-0.006	0.157	-0.012	0.035	+/-0.004
23-20-09	0.379	+/-0.006	0.079	-0.006	0.035	+/-0.004
23-26-12	0.379	+/-0.006	0.102	-0.008	0.047	+/-0.006
23-35-15	0.379	+/-0.006	0.138	-0.008	0.059	+/-0.006
23-40-12	0.379	+/-0.006	0.157	-0.012	0.047	+/-0.006
25-17-08	0.411	+/-0.008	0.067	-0.006	0.031	+/-0.004
25-26-12	0.411	+/-0.008	0.102	-0.008	0.047	+/-0.006
25-35-15	0.411	+/-0.008	0.138	-0.008	0.059	+/-0.006
25-40-15	0.411	+/-0.008	0.157	-0.012	0.059	+/-0.006
25-50-12	0.411	+/-0.008	0.197	-0.012	0.047	+/-0.006
25-50-20	0.411	+/-0.008	0.197	-0.012	0.079	+/-0.008
27-75-15	0.447	+/-0.008	0.295	-0.012	0.059	+/-0.006
28-26-12	0.463	+/-0.008	0.102	-0.008	0.047	+/-0.006
28-35-15	0.463	+/-0.008	0.138	-0.008	0.059	+/-0.006
28-46-20	0.463	+/-0.008	0.181	-0.012	0.079	+/-0.008

R.S.#	Extruded Diameter	O.D. Tolerance	"A" Dim.	Bolt circle tolerance	"B" Dim.	Coolant Hole Tolerance
28-50-12	0.463	+/-0.008	0.197	-0.012	0.047	+/-0.006
28-50-20	0.463	+/-0.008	0.197	-0.012	0.079	+/-0.008
29-62-20	0.494	+/-0.008	0.244	-0.012	0.079	+/-0.008
30-35-09	0.494	+/-0.008	0.138	-0.008	0.035	+/-0.004
30-35-15	0.494	+/-0.008	0.138	-0.008	0.059	+/-0.006
30-40-15	0.494	+/-0.008	0.157	-0.012	0.059	+/-0.006
30-44-20	0.494	+/-0.008	0.173	-0.012	0.079	+/-0.006
30-50-20	0.494	+/-0.008	0.197	-0.012	0.079	+/-0.008
30-62-15	0.494	+/-0.008	0.244	-0.012	0.059	+/-0.006
30-62-20	0.494	+/-0.008	0.244	-0.012	0.079	+/-0.008
32-35-10	0.525	+/-0.008	0.138	-0.008	0.039	+/-0.006
32-35-15	0.525	+/-0.008	0.138	-0.008	0.059	+/-0.006
32-50-20	0.525	+/-0.008	0.197	-0.012	0.079	+/-0.008
32-62-15	0.525	+/-0.008	0.244	-0.012	0.059	+/-0.006
32-62-20	0.525	+/-0.008	0.244	-0.012	0.079	+/-0.008
35-26-09	0.572	+/-0.008	0.102	-0.008	0.035	+/-0.004
35-35-15	0.572	+/-0.008	0.138	-0.008	0.059	+/-0.006
35-50-20	0.572	+/-0.008	0.197	-0.012	0.079	+/-0.008
35-70-15	0.572	+/-0.008	0.276	-0.012	0.059	+/-0.006
35-70-20	0.572	+/-0.008	0.276	-0.012	0.079	+/-0.008
38-26-09	0.619	+/-0.008	0.102	-0.008	0.035	+/-0.004
38-35-15	0.619	+/-0.008	0.138	-0.008	0.059	+/-0.006
38-50-20	0.619	+/-0.008	0.197	-0.012	0.079	+/-0.008
38-62-20	0.619	+/-0.008	0.244	-0.012	0.079	+/-0.008
38-70-20	0.619	+/-0.008	0.276	-0.012	0.079	+/-0.008
40-35-15	0.650	+/-0.008	0.138	-0.008	0.059	+/-0.006
40-50-20	0.650	+/-0.008	0.197	-0.012	0.079	+/-0.008
40-62-20	0.650	+/-0.008	0.244	-0.012	0.079	+/-0.008
40-80-20	0.650	+/-0.008	0.315	-0.012	0.079	+/-0.008
43-62-20	0.702	+/-0.010	0.244	-0.012	0.079	+/-0.008
43-80-20	0.702	+/-0.010	0.315	-0.012	0.079	+/-0.008
45-50-20	0.733	+/-0.010	0.197	-0.012	0.079	+/-0.008
45-62-20	0.733	+/-0.010	0.244	-0.012	0.079	+/-0.008
45-70-25	0.733	+/-0.010	0.276	-0.012	0.098	+/-0.008
45-90-20	0.733	+/-0.010	0.354	-0.012	0.079	+/-0.008
48-50-20	0.780	+/-0.010	0.197	-0.012	0.079	+/-0.008
48-62-20	0.780	+/-0.010	0.244	-0.012	0.079	+/-0.008
48-90-20	0.780	+/-0.010	0.354	-0.012	0.079	+/-0.008

Deviation of centerline**** O.D.	Maximum	Grind Stock for O.D. O.D.	Tol.
.150-.250	.005	.150-.400*	.020 +/-0.006
.251-.350	.008	.401-.650**	.025 +/-0.008
.351-.780	.010	.651-.800***	.030 +/-0.010



HB- 110 Standard  
Other grades and special coolant  
holes are available upon request.

\* Maximum warpage .006/side

\*\* Maximum warpage .007/side

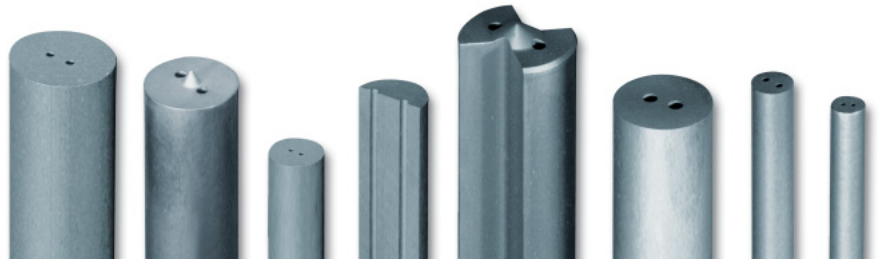
\*\*\* Maximum warpage .009/side

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