

STANDARDS FOR CROSS SECTIONAL TOLERANCE TABLE

The closer tolerance classes outlined below should not be specified unless required by the final application and they should be restricted to critical dimensions. The closer tolerances demanded, the tighter the control which must be exercised during manufacture and hence higher costs.

When particular physical properties are required in the product, it is not always possible to provide them in a combination which is capable of fabrication to close tolerances. It is necessary, in these circumstances, that consultation take place between the customer and supplier. In general, softer materials need greater tolerances than harder ones. Where close tolerances are required, a specific technique of measurement should be agreed upon between purchaser and manufacturer.

Table 13

Tolerances for outside (O.D.) diameters, inside (I.D.) diameters, wall thickness, width, height, and general cross sectional dimensions or extrusions...see Figures 15 and 16, Page 22.

RMA Class	1 High Precision	2 Precision	3 Commercial
Drawing Designation	E1	E2	E3
Dimensions (in Millimeters)			
Above 0	Up to 1.5	± 0.15	± 0.40
1.5	2.5	0.20	0.50
2.5	4.0	0.25	0.70
4.0	6.3	0.35	0.80
6.3	10.0	0.40	1.00
10.0	16.0	0.50	1.30
16.0	25.0	0.70	1.60
25.0	40.0	0.80	2.00
40.0	63.0	1.00	2.50
63.0	100.0	1.30	3.20
RMA Class	1 High Precision	2 Precision	3 Commercial
Drawing Designation	E1	E2	E3
Dimensions (in Inches)			
Above 0.00	Up to 0.06	± 0.006	± 0.015
0.06	0.10	0.008	0.020
0.10	0.16	0.010	0.027
0.16	0.25	0.014	0.031
0.25	0.39	0.016	0.039
0.39	0.63	0.020	0.051
0.63	0.98	0.027	0.063
0.98	1.57	0.031	0.079
1.57	2.48	0.039	0.098
2.48	3.94	0.051	0.126

Note: Tolerances on dimensions above 100mm (3.94 in.) should be agreed on by supplier and user. General cross sectional dimensions below 1mm (0.04 in.) are impractical.

In general, softer materials and those requiring a post cure need greater tolerances.