

MOLDED RUBBER TOLERANCES



Tolerance Tables

Cross Sectional Tolerances for Group 1 — Compounds Only

Dimension (Inches) Above - Incl.	Tolerance	Dimension (Inches) (Fractions)	Dimension (Millimeters) Above - Incl.	Tolerance
HIGH PRECISION RMA — CLASS A — DWG DESIGNATION A				
0.00 - 0.10*	±.008	(0 - 3/32)	0.0 - 2.5*	±0.20
0.10 - 0.16	0.010	(3/32 - 5/32)	2.5 - 4.0	0.25
0.16 - 0.25	0.013	(5/32 - 1/4)	4.0 - 6.3	0.32
0.25 - 0.40	0.016	(1/4 - 13/32)	6.3 - 10.0	0.40
0.40 - 0.63	0.020	(13/32 - 5/8)	10.0 - 16.0	0.50
0.63 - 1.00	0.025	(5/8 - 1)	16.0 - 25.0	0.63
Use ± 2-1/4% for dimensions over 1.00 inch				
PRECISION RMA — CLASS 1 — DWG DESIGNATION A1				
0.00 - 0.10*	±.010	(0 - 3/32)	0.0 - 2.5*	±0.25
0.10 - 0.16	0.013	(3/32 - 5/32)	2.5 - 4.0	0.32
0.16 - 0.25	0.016	(5/32 - 1/4)	4.0 - 6.3	0.40
0.25 - 0.40	0.020	(1/4 - 13/32)	6.3 - 10.0	0.50
0.40 - 0.63	0.025	(13/32 - 5/8)	10.0 - 16.0	0.63
0.63 - 1.00	0.032	(5/8 - 1)	16.0 - 25.0	0.80
Use ± 2-3/4% for dimensions over 1.00 inch				
COMMERCIAL RMA — CLASS 2 — DWG DESIGNATION A2				
0.00 - 0.10*	±.013	(0 - 3/32)	0.0 - 2.5*	±0.32
0.10 - 0.16	0.016	(3/32 - 5/32)	2.5 - 4.0	0.40
0.16 - 0.25	0.020	(5/32 - 1/4)	4.0 - 6.3	0.50
0.25 - 0.40	0.025	(1/4 - 13/32)	6.3 - 10.0	0.63
0.40 - 0.63	0.032	(13/32 - 5/8)	10.0 - 16.0	0.80
0.63 - 1.00	0.040	(5/8 - 1)	16.0 - 25.0	1.00
Use ± 3-1/2% for dimensions over 1.00 inch				
NON-CRITICAL RMA — CLASS 3 — DWG DESIGNATION A3				
0.00 - 0.10*	±.016	(0 - 3/32)	0.0 - 2.5*	±0.40
0.10 - 0.16	0.020	(3/32 - 5/32)	2.5 - 4.0	0.50
0.16 - 0.25	0.025	(5/32 - 1/4)	4.0 - 6.3	0.63
0.25 - 0.40	0.032	(1/4 - 13/32)	6.3 - 10.0	0.80
0.40 - 0.63	0.040	(13/32 - 5/8)	10.0 - 16.0	1.00
0.63 - 1.00	0.050	(5/8 - 1)	16.0 - 25.0	1.25
Use ± 4-1/2% for dimensions over 1.00 inch				

*General cross-sectional dimensions below 0.040" (1 mm) are impractical.

Tolerance Tables

Cross Sectional Tolerances for Group 2 — Compounds Only

Dimension (Inches) Above - Incl.	Tolerance	Dimension (Inches) (Fractions)	Dimension (Millimeters) Above - Incl.	Tolerance
HIGH PRECISION RMA — CLASS A — DWG DESIGNATION A				
0.00 - 0.10*	±.010	(0 - 3/32)	0.0 - 2.5*	±0.25
0.10 - 0.16	0.013	(3/32 - 5/32)	2.5 - 4.0	0.32
0.16 - 0.25	0.016	(5/32 - 1/4)	4.0 - 6.3	0.40
0.25 - 0.40	0.020	(1/4 - 13/32)	6.3 - 10.0	0.50
0.40 - 0.63	0.025	(13/32 - 5/8)	10.0 - 16.0	0.63
0.63 - 1.00	0.032	(5/8 - 1)	16.0 - 25.0	0.80
Use ± 2-3/4% for dimensions over 1.00 inch				
PRECISION RMA — CLASS 1 — DWG DESIGNATION A1				
0.00 - 0.10*	±.013	(0 - 3/32)	0.0 - 2.5*	±0.32
0.10 - 0.16	0.016	(3/32 - 5/32)	2.5 - 4.0	0.40
0.16 - 0.25	0.020	(5/32 - 1/4)	4.0 - 6.3	0.50
0.25 - 0.40	0.025	(1/4 - 13/32)	6.3 - 10.0	0.63
0.40 - 0.63	0.030	(13/32 - 5/8)	10.0 - 16.0	0.80
0.63 - 1.00	0.040	(5/8 - 1)	16.0 - 25.0	1.00
Use ± 3-1/2% for dimensions over 1.00 inch				
COMMERCIAL RMA — CLASS 2 — DWG DESIGNATION A2				
0.00 - 0.10*	±.016	(0 - 3/32)	0.0 - 2.5*	±0.40
0.10 - 0.16	0.020	(3/32 - 5/32)	2.5 - 4.0	0.50
0.16 - 0.25	0.025	(5/32 - 1/4)	4.0 - 6.3	0.63
0.25 - 0.40	0.030	(1/4 - 13/32)	6.3 - 10.0	0.80
0.40 - 0.63	0.040	(13/32 - 5/8)	10.0 - 16.0	1.00
0.63 - 1.00	0.050	(5/8 - 1)	16.0 - 25.0	1.25
Use ± 4-1/2% for dimensions over 1.00 inch				
NON-CRITICAL RMA — CLASS 3 — DWG DESIGNATION A3				
0.00 - 0.10*	±.020	(0 - 3/32)	0.0 - 2.5*	±0.50
0.10 - 0.16	0.025	(3/32 - 5/32)	2.5 - 4.0	0.63
0.16 - 0.25	0.030	(5/32 - 1/4)	4.0 - 6.3	0.80
0.25 - 0.40	0.040	(1/4 - 13/32)	6.3 - 10.0	1.00
0.40 - 0.63	0.050	(13/32 - 5/8)	10.0 - 16.0	1.25
0.63 - 1.00	0.063	(5/8 - 1)	16.0 - 25.0	1.60
Use ± 5-1/2% for dimensions over 1.00 inch				

*General cross-sectional dimensions below 0.040" (1 mm) are impractical.

Tolerance Tables

Cross Sectional Tolerances for Group 2 — Compounds Only

Dimension (Inches) Above - Incl.	Tolerance	Dimension (Inches) (Fractions)	Dimension (Millimeters) Above - Incl.	Tolerance
HIGH PRECISION RMA — CLASS A — DWG DESIGNATION A				
0.00 - 0.10*	±.010	(0 - 3/32)	0.0 - 2.5*	±0.25
0.10 - 0.16	0.013	(3/32 - 5/32)	2.5 - 4.0	0.32
0.16 - 0.25	0.016	(5/32 - 1/4)	4.0 - 6.3	0.40
0.25 - 0.40	0.020	(1/4 - 13/32)	6.3 - 10.0	0.50
0.40 - 0.63	0.025	(13/32 - 5/8)	10.0 - 16.0	0.63
0.63 - 1.00	0.032	(5/8 - 1)	16.0 - 25.0	0.80
Use ± 2-3/4% for dimensions over 1.00 inch				
PRECISION RMA — CLASS 1 — DWG DESIGNATION A1				
0.00 - 0.10*	±.013	(0 - 3/32)	0.0 - 2.5*	±0.32
0.10 - 0.16	0.016	(3/32 - 5/32)	2.5 - 4.0	0.40
0.16 - 0.25	0.020	(5/32 - 1/4)	4.0 - 6.3	0.50
0.25 - 0.40	0.025	(1/4 - 13/32)	6.3 - 10.0	0.63
0.40 - 0.63	0.030	(13/32 - 5/8)	10.0 - 16.0	0.80
0.63 - 1.00	0.040	(5/8 - 1)	16.0 - 25.0	1.00
Use ± 3-1/2% for dimensions over 1.00 inch				
COMMERCIAL RMA — CLASS 2 — DWG DESIGNATION A2				
0.00 - 0.10*	±.016	(0 - 3/32)	0.0 - 2.5*	±0.40
0.10 - 0.16	0.020	(3/32 - 5/32)	2.5 - 4.0	0.50
0.16 - 0.25	0.025	(5/32 - 1/4)	4.0 - 6.3	0.63
0.25 - 0.40	0.030	(1/4 - 13/32)	6.3 - 10.0	0.80
0.40 - 0.63	0.040	(13/32 - 5/8)	10.0 - 16.0	1.00
0.63 - 1.00	0.050	(5/8 - 1)	16.0 - 25.0	1.25
Use ± 4-1/2% for dimensions over 1.00 inch				
NON-CRITICAL RMA — CLASS 3 — DWG DESIGNATION A3				
0.00 - 0.10*	±.020	(0 - 3/32)	0.0 - 2.5*	±0.50
0.10 - 0.16	0.025	(3/32 - 5/32)	2.5 - 4.0	0.63
0.16 - 0.25	0.030	(5/32 - 1/4)	4.0 - 6.3	0.80
0.25 - 0.40	0.040	(1/4 - 13/32)	6.3 - 10.0	1.00
0.40 - 0.63	0.050	(13/32 - 5/8)	10.0 - 16.0	1.25
0.63 - 1.00	0.063	(5/8 - 1)	16.0 - 25.0	1.60
Use ± 5-1/2% for dimensions over 1.00 inch				

*General cross-sectional dimensions below 0.040" (1 mm) are impractical.

Tolerance Tables

Standard Dimensional Tolerance Table — Molded Rubber Products

Dimension (Inches) Above - Incl.	Fixed	Closure	Dimension (Millimeters) Above - Incl.	Fixed	Closure
COMMERCIAL DWG DESIGNATION A3					
0 - .40	±.008	±.013	0 - 10	±.20	±.32
.40 - .63	.010	.016	10 - 16	.25	.40
.63 - 1.00	.013	.020	16 - 25	.32	.50
1.00 - 1.60	.016	.025	25 - 40	.40	.63
1.60 - 2.50	.020	.032	40 - 63	.50	.80
2.50 - 4.00	.025	.040	63 - 100	.63	1.00
4.00 - 6.30	.032	.050	100 - 160	.80	1.25
6.30 & over — To find fixed dimensional tolerances multiply by 0.5%			160 & over — To find fixed dimensional tolerances multiply by 0.5%		
NON-CRITICAL DWG DESIGNATION A4					
0 - .40	±.013	±.032	0 - 10	±.32	±.80
.40 - .63	.016	.036	10 - 16	.40	.90
.63 - 1.00	.020	.040	16 - 25	.50	1.00
1.00 - 1.60	.025	.045	25 - 40	.63	1.12
1.60 - 2.50	.032	.050	40 - 63	.80	1.25
2.50 - 4.00	.040	.056	63 - 100	1.00	1.40
4.00 - 6.30	.050	.063	100 - 160	1.25	1.60
6.30 & over — To find fixed dimensional tolerances multiply by 0.8%			160 & over — To find fixed dimensional tolerances multiply by 0.8%		

Drawing Designation “A3” tolerances indicate a “commercial” product and will normally be used for most products.

Drawing Designation “A4” tolerances apply to products where dimensional control is non-critical and secondary to cost.