

MWR Industrial Tolerance Guide

Squeegee- Die Cut Tolerance

Dimensions	Tolerance
0 (0) > 300 (11.81)	+/- 0.75 (0.030)
300 (11.81) > 600 (23.62)	+/- 1.80 (0.71)
600 (23.62) > 900 (35.43)	+/- 2.70 (0.106)
900 (35.43) > 900 (>35.43)	+/- DIM X 0.003

GFA (Gasket Fabricators Association)

Dimensional Capabilities for Steel Rule Dies

It is important to know that the dimensions of the die cut part are determined not only by the die, but also by the material type, hardness, density, thickness, and variations of these factors. The greater the variation of these factors, the greater the variance of the die cut dimensions. Different types of tooling have different dimensional tolerances.

All steel tooling provides the most accurate tolerances. These can vary depending on type of tool construction methods, but generally +/- .002 to +/- .005 can be held. Steel rule tooling also varies with the type of construction method. The most accurate is laser cut board with automated bent rule. Depending on length of rule, tolerances can range from +/- .005 to +/- .015.

The longer the rule is, the more variation can be expected. Steel rule dies that are laid out by hand and jigsaw cut cannot be held this tight and will generally vary +/- .030. Holes that are cut using punches will have the same tolerance regardless of die construction method. The industry accepted variation on punch dimensions are as follows:

Hole diameter—less than 3 /4" +/- .002

Hole diameter—from 3 /4"-15 /8 +/- .003

Hole diameter—greater than 15 /8 +/- .005

Hole position tolerance is again best achieved using laser cutting and automated rule bending.

Depending on distance between holes +/- .005 to +/- .015 can be expected. If the die is laid out by hand and jigsaw cut, the tolerances could be +/- .010 to +/- .030.

These tolerances are general guidelines and can vary based upon die building equipment and the skills of the die maker.

RMA – RUBBER MANUFACTURERS ASSOCIATION

RMA – Sheet Rubber & Diaphragm Sheet

Nominal Thickness (To but including)			Tolerances (plus or minus)	
Inch e		Millimeters		
Fractions	Decimals		Inches	Millimeters
Under 1/32	Under .031	Under .80	0.01	0.25
1/32 to 1/16	.031 to .062	.80 to 1.60	0.012	0.3
1/16 to 1/8	.062 to .125	1.60 to 3.20	0.016	0.4
1/8 to 3/16	.125 to .187	3.20 to 4.80	0.02	0.5
3/16 to 3/8	.187 to .375	4.80 to 9.50	0.031	0.8
3/8 to 9/16	.375 to .562	9.50 to 14.30	0.047	1.2
9/16 to 3/4	.562 to .750	14.30 to 19.20	0.063	1.6
3/4 to 1	.750 to 1.00	19.20 to 25.40	0.093	2.4
1 and over	1.00 and over	25.40 and over	10%	10%

Rolls or Slabs

Nominal Width			
inches	Millimeters	inches	Millimeters
36 and over	914 and over	± 1	± 25.4

Rolls are supplied in more than one piece.
Slabs are usually in one piece.

LINATEX® and LINARD®

inches	Millimeters	LINATEX®	LINARD®
	2	± .3 mm	±
0.125	3.18	± .015"	± .015 mm
	4	± .4 mm	±
0.187	4.76	± .015 "	± .015 mm
0.25	6.35	+ 0.035 / -0.02	±
0.375	9.53	± .020"	±

NIBA BELTING TOLERANCES

WIDTH TOLERANCE

BELT WIDTH (INCHES)	MOLDED WIDTH TOLERANCE	MAXIMUM WIDTH VARIATION IN ANY ONE BELT	CUT WIDTH TOLERANCE
24 OR less	± 1/4"	± 1/4"	± 1/8"
25 to 36	± 3/8"	± 3/8"	± 3/16"
37 to 48	± 1/2"	± 1/2"	± 1/4"
49 to 53	± 7/32"	± 7/32"	± 7/64"
54 to 59	± 19/32"	± 19/32"	± 19/64"
60 to 71	± 23/32"	± 23/32"	± 23/64"
72 to 78	± 25/32"	± 25/32"	± 25/64"
79 to 84	± 27/32"	± 27/32"	± 27/64"
85 to 90	± 29/32"	± 29/32"	± 29/64"
96 and over	± 1%	± 1%	± 1/2%

LENGTH TOLERANCE

Endless - Net Endless Length (NEL)	Loop Built	± 1%
	Vulcanized	± 1/2%
Specified Length - Cut Ends		± 1/2%
Specified Length - Laced with Mechanical Fasteners (measured Pin to PIN)		± 1/2%
Roll - Bulk Quantities		± 10%

****ON Specified Lengths** the manufacturer will often cut belt to 2% longer than specified to avoid shipping short.

****Belts** may be shipped in one two, or three pieces - none less than 50 feet unless agreed to by customer.

Gauge - Belt Tolerances

There are no RMA thickness tolerances established for conveyor belting because they are often of no consequence. The following standards are for guides if thickness is determined to be important and declared at time of order for make-up constructions. These values are generally reasonable, but tighter tolerances may be negotiated. NOTE: Thickness tolerances must be specified on purchase orders if they are to be considered binding.

GAUGE TOLERANCE GUIDES

OVERALL BELT THICKNESS (inches)	TOLERANCE
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Zero - .094	± .015
.095 - .156	± .020
.157 - .344	± .031
.345 - .500	± .047
.500 and over	± 10%

V-GUIDE HEIGHT (From Cover Surface)

V-GUIDE HEIGHT	TOLERANCE
1/4' or less	± .020
3/8"	± .020
1/2"	± .020
3/4"	± .031
1"	± .062
1-1/2"	± .062
2" to 4"	±.062

CLEAT HEIGHT TOLERANCE (From Cover Surface)

STANDARD CLEAT HEIGHT	TOLERANCE
3/8" and under	± .020
1/2"	± .020
3/4"	± .031
1"	± .062
1-1/2"	± .062
2"	± .062
3"	± .062
4"	± .062

CLEAT SPACING TOLERANCE

CLEAT SPACING CENTER TO CENTER (C-C)	TOLERANCE
2" TO 8"	± 1/4"
9" TO 12"	± 5/16"
14" TO 24"	± 7/16"
25" TO 60"	± 1/2"

