


REVISIONS						REVISIONS					
LTR	ISSUE	DESCRIPTION	BY	CHK	APPD	LTR	ISSUE	DESCRIPTION	BY	CHK	APPD
U	2/15/16	Revised notes for RG and RP material	AG	JS	DO	P	1/28/10	UPDATE MAT'L SPEC	GP	RK	MS
						Q	2/23/10	CHG TOL WEDGE	GP	RK	MS
						R	10/22/12	ADD AMS TO ET	GP	EI	MS
						S	10/21/13	Add Note Metal Cht	GP	RS	EI
						T	9/29/14	UPDATE SPECS	GP	RK	DO

METAL DISC SIZE	.020	.025	.030	.032	.040	.050	.060	.070	.073	.075	.080	.090
	X	X	X	X	X	X	X	X	X	X	X	X
CM = 4130 ALLOY STEEL, PER (4130) AMS-6350M ANEALD OR AMS 6345C, NORMALIZED	.375 .500 .625 .750 1.000		.375 .500 .625 .750 1.000			.375 .500 .625 .750 1.000	.375 .500 .625 .750 1.000	.500 .500 .625 .750 1.000			.625 .750 1.000	
S = 1010-4 STEEL OR BETTER, PER (636) ASTM-A-109/A,109M, QQ-S-698	.375 .500 .625 .750 1.000		.375 .500 .625 .750 1.000			.375 .500 .625 .750 1.000	.375 .500 .625 .750 1.000	.500 .500 .625 .750 1.000			.625 .750 1.000	.750 1.000 1.250
SS = 302/304 STAINLESS STEEL PER (302/304) SAE AMS-5516P/ SAE AMS- 5513J, 2B FINISH, ANNEALED.	.250 .375 .500 .625 .750 1.000	.375 .500 .625 .750	.375 .500 .625 .750 1.000			.375 .500 .625 .750 1.000	.375 .500 .625 .750 1.000	.500 .500 .625 .750 1.000		.750	.625 .750 1.000	
SH = 301 1/4 HARD STAINLESS STEEL, (3011) 2B FINISH, ANNEALED PER SAE AMS-5517L	.375 .500	.375	.375 .500 .625 .750			.500 .562	.500 .625	.500 .625	.500			
H = 321 CRES, PER SAE AMS-5510S, 2D (321) FINISH, ANNEALED.	.375 .500		.375 .500 .625 .750 1.000 1.500	.375 .500 .625 .750 1.000 1.500		.500 .500 .625 .750 1.000 1.500	.500 .500 .625 .750 1.000 1.500	.500 .625				
R = 321 CRES, PER SAE AMS-5510S, 2D (321R) FINISH, ANNEALED, #1 ROLLED EDGE			.500			.500	.500					
HO = 321K, 1/8TH HARD CRES, 100,000 (321K) PSI MIN. PER SAE AMS-5510S.	.500		.500 .625 .750			.500 .625	.500 .625					
T = TITANIUM ALLOY PER SAE AMS- (490/T1) 4901P, COM. PURE, GRADE 4, ANNEALED, BALL BURNISHED AND STRESS RELIEVED PER MIL-H-81200.	.500		.375 .500 .625			.500	.500					
GS = GALVANIZED STEEL PER (GS) ASTM A653/A653M						.500						

<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES REMOVE ALL BURRS & SHARP EDGES CORNER RADII: _____ BEND / INTERNAL RADII: _____ DIA. CONCENTRIC WITHIN ____ TIR</p>	 <p>J&M PRODUCTS SAN FERNANDO, CA</p>	<p>FSCM 22175</p>	
			<p>TITLE J&M MATERIAL SPECIFICATIONS</p>
	<p>APPROVED: J. Swann DATE: 6/8/99</p>	<p>SCALE N/A</p>	<p>SIZE A</p>
	<p>CHECKED: R. Kropf DATE: 6/8/99</p>	<p>DRAWING NO. JMS696</p>	

METAL DISC SIZE	.020 X	.025 X	.030 X	.031 X	.032 X	.040 X	.050 X	.051 X	.060 X	.062 X	.064 X	.070 X
CS = 1095 SPRING STEEL (1095) PER ASTM-A682/A682M OR ASTM A684/A684M			.500 .625			.500	.500 .625 .750 1.000					
GT = 21-6-9 STAINLESS STEEL, (2169) 2D FINISH, ANNEALED PER BMS 7-191, COIL/SHEET REV C, TYP1	.795 36" X 120"				36" X 120"	1.500						
PH = 17-7 STAINLESS STEEL (17-7) ANNEALED PER SAE AMS-5528H	.500 .625		.500 .625	.500 ±.0025		.500	.500		.500			
D = 2024-0 CLAD ALUMINUM (SO) ALLOY, PER QQ-A-250/5. 05/2010	.250 .375 .500	.500		.375 .500 .750 1.000	.375 .500 .625 .750 1.000 2.000	.375 .500 .625 .750 1.000 1.500	.625	.375 .500 .750 1.000 1.500	.625		.500 .625 .750 1.140 1.250 1.500	.750
DS = 2024-T3 CLAD ALUMINUM (2024-T3) ALLOY, PER SAE AMS-QQ-A-250/5A 05/2010		.500 .850										
DL = 5052-H32 ALUMINUM (DL) ALLOY, PER SAE AMS-QQ-A-250/8B			.500 .750			.500 .750	.500 .750			1.043		
IN = INCONEL 625 PER SAE (IN) AMS-5599G, ANNEALED, 2D FINISH			.500			.500						
304HD = 304HD STAINLESS STEEL PER SAE AMS -5910B			.500			.500						

NOTES:

() Denotes Alternate Work Order Metal Description

COIL TOLERANCES:

MATERIAL THICKNESS ± .003 (.020 THRU .060)
± .005 (.070 THRU .090)
MATERIAL WIDTH ± .005
LD. MIN./MAX. 16" - 18"
O.D. MIN./MAX. 28" - 32"
#3 SLIT EDGE, MIN. SHARP EDGE ALLOWED
CAMBER MAX 1/2" PER 8 FT.

PACKAGING:

SHIPPING TOLERANCE ± 10%
MAX. COIL WEIGHT 100 LBS.
MAX. PALLET WEIGHT 2,000 LBS.
PACKAGE TO PROTECT AGAINST CORROSION, MOISTURE AND TO PREVENT
LOAD SHIFTING WHILE IN TRANSIT, COILS WILL BE INDIVIDUALLY BANDED
AND SPACERS SHALL BE USED TO SEPARATE COILS ON PALLETS.

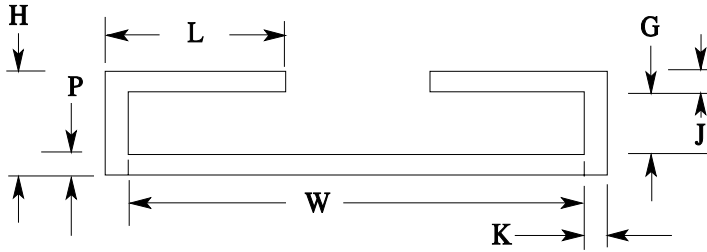
ACCEPTANCE:

- 1) MATERIAL SHALL BE FROM ONE HEAT PER SKID/PALLET.
- 2) MATERIAL SHALL BE PROPERLY TAGGED & IDENTIFIED WITH J&M P/N.
- 3) GRAIN SHALL RUN IN A TRANSVERSE DIRECTION.
- 4) ONLY PRIME MATERIALS ACCEPTABLE.
- 5) **THE J&M PART NUMBER MUST APPEAR ON ALL PAPERWORK AND ON ALL PALLETIZED MATERIAL.**

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CUSHION



J&M P/N	W +.030 -.000	P +.010 -.005	G +.010 -.000	L MIN.	H MAX	J MIN	K +.010 -.005
2-32 ()	.250	.030	.032	.115	.106	.032	.032
3-45 ()	.375	.045		.145			
4-45 ()	.500		.051	.225*	.165	.045	.045
4-62 ()				.190			
5-62 ()	.625	.062	.062	.343	.190	.045	.062
6-62 ()	.750						
8-62 ()	1.000						

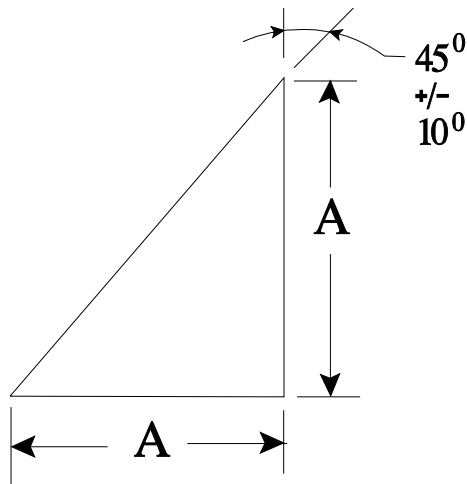
SAMPLE CALLOUT

4-045 N = AMS 3209 NEOPRENE

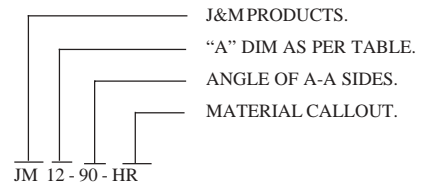
W = .500
 P = .045
 G = .051
 *L = .225
 H = .165
 J = .045
 K = .045

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WEDGE



SAMPLE CALLOUT

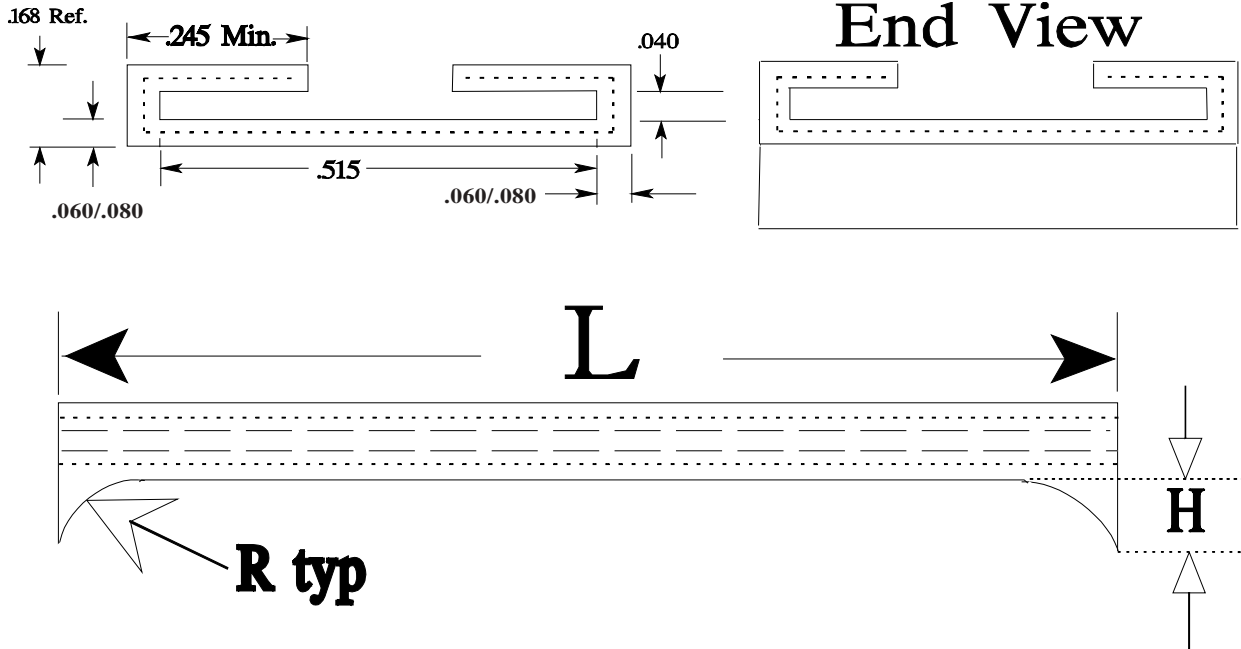


NUMBER	"A" DIM	
	Min	Max
-6	.046	.110
-7	.093	.125
-8	.130	.157
-12	.187	.219
-16	.250	.312

* = SEE NOTE 13

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- 1) Full Contour Wedge Type
- 2) Molded Rubber Add "M" To Rubber Callout.

JM P/N	L MIN	R typ	H +/- .010
4-62-33()	4.12	.218	.159
4-62-46()	5.75	.344	.284
4-62-53()	6.63	.406	.345
4-62-66()	8.25	.500	.440
4-62-80()	10.0	.625	.562
4-62-88()	11.0	.750	.688

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MATERIAL IDENTIFICATION CODES (THE SPECIFICATION REVISION VALID ON DATE OF ORDER SHALL BE USED)
(ExtrudedType)

- () = NEOPRENE, PER AMS 3209, REV "L" & LAC 422544 TEST 2. AS21919 NOTE: 11. WEDGE ONLY (7,8,12 &16-90N)
- N = NEOPRENE, PER AMS 3209, REV "L" & LAC 422544 TEST 2. AS21919 NOTE: 11. WEDGE ONLY (7,8,12 &16-90N)
- AF = NITRILE, AROMATIC FUEL RESISTANT, PER AMS 3215, REV "L", PARA. 4.5.1., COLOR, BLACK W/RED STRIPE LENGTHWISE ONE SIDE.(EXTRUDED CUSHION ONLY).
- BB = CHLOROPRENE, PER AMS3209, REV "L", OZONE RESISTANT PER MIL-C-8603, PARA 4.3.3 THRU 4.3.3.7, & LAC 422544 TEST 2. AS21919 NOTE 11 COLOR BLACK W/BUE IDENTIFIER EXTENDING LENGTHWISE BOTH SIDES. BLUE STRIPE MATERIAL SHALL BE EQUAL TO WIDTH OF CUSHION EDGE AND OF SAME SPEC AS PARENT MATERIAL.
- BBL = CHLOROPRENE PER AMS3209, REV "L", OZONE RESISTANT PER MIL-C-8603, PARA 4.3.3 THRU 4.3.3.7, & LAC 422544 TEST 2. CERTIFY TO AMS AND LOCKHEED DIELECTRIC AMS 3210E PARA. 3.2.1.6, COLOR BLACK W/BUE IDENTIFIER EXTENDING LENGTHWISE BOTH SIDES. BLUE STRIPE MATERIAL SHALL BE EQUAL TO WIDTH OF CUSHION EDGE AND OF SAME SPEC AS PARENT MATERIAL.
- BW = SILICONE RUBBER PER BMS-1-72 AND BOEING QPL, COLOR WHITE.
- DS = SILICATE RUBBER PER DMS-2221 COLOR, OFF WHITE.
- EP = ETHYLENE PROPYLENE PER DMS-1849, REV "A", TYP.I, CL II, 50 DUROMETER, COLOR BLACK.
- FG = FIBERGLASS WRAP, BRAIDED FIBERGLASS YARN, DIPPED ALUMINUM BASE PROTECTIVE COATING.
- FN = FLUROSILICONE PER MIL-R-25988 TYP. II, CL. I GRADE 60, COLOR RED.
- FNB = FLUROSILICONE PER MIL-R-25988 TYP. II, CL. I GRADE 60, AS21919 NOTE: 11, COLOR BLUE.
- GF = MOLDED SILICONE RUBBER, PER A-A-59588 / ZZ-R-765, CLASS 3B, GRADE 60, POST CURED FOR 8 HOURS AT 400 DEGREES F.
- GN = SILICONE RUBBER, PER A-A-59588 / ZZ-R-765, CLASS 3B, GRADE 60, POST CURED FOR 8 HOURS AT 400 DEGREES F, (NON-OUTGASSING), COLOR RUST.
- GS = SILICATE RUBBER PER LAC C-23-1195, COLOR GREEN.
- HR = SILICONE RUBBER, PER AMS-3303, REV "J", MIL-C-8603, MIN. TEAR STRENGTH 100 PPI, COLOR RUST.
- HRM= SILICONE RUBBER, PER AMS-3303,REV "J", MODIFIED TO 170# TEAR STRENGTH, COLOR RUST.
- HRP= SILICONE RUBBER, PER AMS-3303, COLOR GREY, WITH POST CURE @4500 F. FOR 6 HOURS. MIN. TEAR STRENGTH SHALL BE 170# PSI. ELONGATION CHANGE MAX 35%.
- HW = SILICONE RUBBER, COLOR WHITE, PER AMS-3303,REV"J", MIL-C-8603, MIN. TEAR STRENGTH 100 PPI, COLOR WHITE.
- HY = SILICONE RUBBER, PER AMS-3346, REV "F", 150# TEAR, COLOR RUST.
- YN = NITRILE, AROMATIC & FUEL RESISTANT. . CERTIFY TO AMS-3215 REV "L",WITH COMPLIANCE TO MIL-C-8603. OZONE TEST REF. PARA. 4.5.3 THRU 4.5.3.4.

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MATERIAL IDENTIFICATION CODES (THE SPECIFICATION REVISION VALID ON DATE OF ORDER SHALL BE USED)

LS = SILICATE RUBBER, PER LAC C-23-1195, COLOR GRAY.

NC = SYNTHETIC RUBBER, COLOR BLACK, PER SAE D2000 GRADE 5BC515,A14,B14,E034,F19 OR BC515, A14,B24,E034,F19.

R = SILICONE RUBBER, HIGH TEAR (190#), PER AMS-3347, REV "B", COLOR RED.

RG = SILICONE RUBBER, HIGH TEAR (190#), PER BPS-C-163, TYPE I, COLOR GREY.

RP = SILICONE RUBBER, HIGH TEAR (190#), PER BPS-C-163, TYPE I, SKYDROL RESISTANT, POST CURED FOR 16 HOURS AT 450 DEGREES F.

SN = EPDM PER SAE J200/ANSI/ASTM-D-2000/2BA715B13.

NS = AMS-3303,REVJ, MODIFIED MATERIAL, NON OUTGASSING COLOR RUST.

NX = DURO NEOPRENE, PER ASTM C 1116, ASTM E662 AND SMP800C, ALSTOM SPEC. TP17-54 FLAMMABILITY AND SMOKE EMISSION.

WS = WHITE SILICONE PER AMS 3310, REV 3/1/97, AS21919 NOTE: 11, INCLUDING WEDGE 7,8 & 12-90WS

MOLDED, FULL CONTOUR WEDGE

ET= ETHYLENE PROPYLENERUBBER, 65-75 DUROMETER, COLOR PURPLE, PER THE GENERAL SPECIFICATION WITH THE ADDITIONAL REQUIREMENTS SHOWN ON MIL-DTL 85052/2, AMS3253, REV "A".

SF= FABRIC REINFORCED SILICONE RUBBER, 65-75 DUROMETER ON UNREINFORCED MATERIAL. COLOR LIGHT BLUE PER THE GENERAL SPECIFICATION WITH ADDITIONAL REQUIREMENTS SHOWN ON 85052/3. THE FABRIC REINFORCING MATERIAL SHALL BE MOLDED INTO THE BAND SIDE OF THE CLAMP CUSHION AT A 45° ANGLE.

FNB = FIBERGLASS FABRIC REINFORCED FLUOROSILICONE RUBBER PER SAE AMS-R-25988,TYPE II, CLASS 1, 55-65 DUROMETER HARDNESS, GRADE 60, COLOR: SOLID BLUE

PP= DMS1849, REV "A" TYP2, CL1, GR70., COLOR PURPLE

PW = PWA36450, FIBERGLASS REINFORCED. COLOR BROWN

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NOTES (EXTRUSION):

- 1) J&M PART NUMBER MUST APPEAR ON ALL PAPERWORK INCLUDING LABELS AND BOXES.
- 2) SHIPPING TOLERANCE +/- 10%.
- 3) DELIVERY IS PER THE P.O. DATE(S) UNLESS SPECIFIED OTHERWISE.
- 4) MATERIAL IS FOR RESALE.
- 5) MATERIAL CERTIFICATION AND TEST DATA IS REQUIRED WITH EACH DELIVERY AND SHALL BE SUPPORTED BY DOCUMENTED QUALITY EVIDENCE SHOWING CONFORMANCE WITH APPLICABLE SPECIFICATIONS.
- 6) PACKAGING TO PROTECT MATERIAL AGAINST MOISTURE AND PREVENT SHIFTING WHILE IN TRANSIT.
- 7) ALL LABELS AND QUALITY RELATED DOCUMENTS SHALL EXHIBIT THE FOLLOWING:
 - A) VENDOR NAME AND CUSTOMER NAME (J&M Product's)
 - B) J&M P.O. NUMBER (and Release Number if applicable)
 - C) J&M PART NUMBER
 - D) QUANTITY
 - E) SPECIFICATION NUMBER
 - F) COMPOUND NUMBER
 - G) BATCH NUMBER or LOT NUMBER
 - H) CURE DATE (If applicable)
 - I) SHELF LIFE
- 8) PACKAGING:
 - A) CUSHION: MATERIAL TO BE PACKAGED ON PANCAKE SLABS SEPARATED BY CARDBOARD, PROPERLY LABELED TO INCLUDE; FOOTAGE PER BOX AND SHIPPED IN HEAVY DUTY PALLETIZED BOXES.
 - B) WEDGE: MATERIAL TO BE PACKAGED ON DURABLE REELS, PROPERLY LABELED TO INCLUDE; FOOTAGE PER BOX, IN DURABLE CARDBOARD BOXES

NOTES 9 THRU 12 ARE APPLICABLE ONLY WHEN SPECIFIED ON PURCHASE ORDER.

- 9) A): FIRST ARTICLE REQUIRED, NON-RECURRING SETUP CHARGE IS APPLICABLE. **"OR THE FOLLOWING"**
B): FIRST ARTICLE REQUIRED, NON-RECURRING SETUP CHARGE IS NOT APPLICABLE.
- 10) TEST SLABS AND BUTTONS ARE REQUIRED WITH FIRST ARTICLE.
- 11) ALL MATERIAL TO BE MANUFACTURED IN ACCORDANCE WITH THE LATEST J&M DRAWING AND MOST CURRENT SPECIFICATION REVISION LEVEL.
- 12) A COMPLETE FIRST ARTICLE/INSPECTION DATA SHEET IS REQUIRED WITH DELIVERY SHOWING DIMENSIONAL VALUES ALONG WITH 1 FT. FIRST ARTICLE MATERIAL SAMPLE.
- * 13) **FOR MATERIALS BB, WS AND FNB PART NUMBERS 4-045 () - 4-062 () "L" DIMENSION WILL BE .225.**
- 14) **FOR MATERIALS RG AND RP, MARK COMPOUND NUMBER AND CURE DATE CONTINUOUSLY WITH 1/8" TYPE ON CUSHION PAD.**

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