UMPCO, INC.

(C) PH: (714) 897-3531

FAX: (714) 897-2611



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VIEW B-B



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VIEW B

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ENLARGED	ACCEPTABLE	WEDGE	CONFIGURATION

TABLE 2 - DIMENSIONS								
DASH NO RANGE /16/	B MIN	В МАХ	G MIN	G MAX	R ±.016	S +.020 000		
01	/8/	/8/						
02 - 03	0.046	0.110			0.062	0.040		
04 - 08	0 093	0 1 2 5	0.062	0.078		0.040		
09 - 10	0.055	0.125					0 109	
11 - 17					0.105			
18 - 30	0.155	0.312	0.094	0.125		0.060		
31 - 48			0 1 2 5	0 156	0.125	0.000		
50 - 66	/8/	/8/	0.125	0.150				

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CAGE CODE No. 18076 CLAMP, LOOP CUSHIONED

REV N/C 01/29/09

AS21919 PART NUMBER

7100 LAMPSON AVE * PO BOX 5158 * GARDEN GROVE, CA 92846-5158 SALES: (714) 897-3531 * BUS: (714) 897-3536 * FAX: (714) 897-2611

TABLE 1 - SIZE CODE AND DIMENSIONS								
SIZE CODE	TUBE DIA OD (REF)	D ±.015	ALUM ALLOY E	ALUM ALLOY	CRES E	CRES T		
	()		±.015	I	±.015			
01	0.063	0.063	0.436	0.020	0.436	0.020		
02	0.125	0.125	0.457	0.032	0.457	0.032		
03	0.188	0.188	0.498	0.032	0.498	0.032		
04	0.250	0.250	0.529	0.032	0.529	0.032		
05	0.313	0.313	0.560	0.032	0.560	0.032		
06	0.375	0.375	0.592	0.032	0.592	0.032		
07	0.438	0.438	0.623	0.032	0.623	0.032		
08	0.500	0.500	0.654	0.032	0.654	0.032		
09	0.563	0.563	0.752	0.050	0.749	0.032		
10	0.625	0.625	0.783	0.050	0.780	0.032		
11	0.688	0.688	0.814	0.050	0.811	0.032		
12	0.750	0.750	0.845	0.050	0.842	0.032		
13	0.813	0.813	0.877	0.050	0.858	0.032		
14	0.875	0.875	0.908	0.050	0.889	0.032		
15	0.938	0.938	0.939	0.050	0.920	0.032		
16	1.000	1.000	0.970	0.050	0.951	0.032		
17	1.063	1.063	1.002	0.050	0.983	0.032		
18	1.125	1.125	1.062	0.062	1.030	0.032		
19	1.188	1.188	1.093	0.062	1.061	0.032		
20	1.250	1.250	1.124	0.062	1.092	0.032		
21	1.313	1.313	1.156	0.062	1.124	0.032		
22	1.375	1.375	1.187	0.062	1.155	0.032		
23	1.438	1.438	1.218	0.062	1.186	0.032		
24	1.500	1.500	1.249	0.062	1.217	0.032		
25	1.563	1.563	1.281	0.062	1.259	0.032		
26	1.625	1.625	1.312	0.062	1.280	0.032		
27	1.688	1.688	1.344	0.062	1.312	0.032		
28	1.750	1.750	1.374	0.062	1.342	0.032		
29	1.813	1.813	1.406	0.062	1.374	0.032		
30	1.875	1.875	1.437	0.062	1.405	0.032		
31	1.938	1.938	1.468	0.062	1.444	0.040		
32	2.000	2.000	1.499	0.062	1.475	0.040		
33	2.063	2.063	1.531	0.062	1.507	0.040		
34	2.125	2.125	1.562	0.062	1.538	0.040		
35	2.188	2.188	1.594	0.062	1.570	0.040		
36	2.250	2.250	1.624	0.062	1.600	0.040		
37	2.313	2.313	1.655	0.062	1.631	0.040		
38	2.375	2.375	1.687	0.062	1.663	0.040		
40	2.500	2.500	1.752	0.062	1.728	0.040		
42	2.625	2.625	1.812	0.062	1.788	0.040		
43	2.688	2.688	1.844	0.062	1.820	0.040		
44	2.750	2.750	1.875	0.062	1.851	0.040		
45	2.813	2.813	1.906	0.062	1.882	0.040		
40	2.875	2.8/5	1.937	0.062	1.913	0.040		
48	3.000	3.000	2.000	0.062	1.970	0.040		
50	3.125	3.125	2.002	0.062	2.038	0.040		
<u>⊃∠</u>	3.250	3.250	2.125	0.062	2.101	0.040		
54	3.3/5	3.3/5	2.18/	0.062	2.103	0.040		
50	3.300	3.300	2.250	0.062	2.220	0.040		
8C 61	3.025	3.025	2.312	0.062	2.200 2.174	0.040		
66	4.000	4.000	2.300	0.002	2.470	0.040		
00	4.120	4.120	2.002	0.062	2.000	0.040		

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	CLAMP, LOOP CUSHIONED		PART NUMBER





NOTES: MATERIAL:

BAND:

- a. CODE LETTER C TYPE 321 CORROSION RESISTANT STEEL PER AMS 5510
- b. CODE LETTER D 2024-0 ALUMINUM ALLOY PER AMS-QQ-A-250/5

CUSHION:

- a. CODE LETTER E ETHYLENE PROPYLENE PER MIL-C-85052/2
- b. CODE LETTER F NITRILE PER MIL-C-85052/ c. CODE LETTER G - CHLOROPRENE PER AMS 3209 AND OZONE RESISTANCE REQUIREMENTS PER NOTE 11
- d. CODE LETTER H SILICONE PER AMS 3310
- e. CODE LETTER J FLUOROSILICONE PER MIL-R-25988, TYPE II, CLASS 1, GRADE 60
- 2. HEAT TREATMENT:
 - CODE LETTER D HEAT TREAT TO T42 TEMPER IN ACCORDANCE WITH AMS-H-6088 a.
- 3. FINISH:
 - CODE LETTER C PASSIVATE PER AMS-QQ-P-35 а.
 - b. CODE LETTER D - CHEMICAL CONVERSION COATING PER MIL-C-5541, CLASS 1A
- /4/ MATERIAL COMBINATION CODES: LETTERS INDICATE BAND AND CUSHION MATERIAL CODES. DO NOT SPECIFY BAND/CUSHION COMBINATIONS NOT LISTED. MAXIMUM RECOMMENDED TEMPERATURE IS INDICATED IN PARENTHESIS.
 - a. DE = ALUMINUM ALLOY BAND WITH ETHYLENE PROPYLENE CUSHION (212 °F)
 - b. DF = ALUMINUM ALLOY BAND WITH NITRILE CUSHION (275 °F) c. DG = ALUMINUM ALLOY BAND WITH CHLOROPRENE CUSHION (212 °F)

 - d. CE = CRES BAND WITH ETHYLENE PROPYLENE CUSHION (275 °F)

 - e. CF = CRES BAND WITH NITRILE CUSHION (275 °F) f. CG = CRES BAND WITH CHLOROPRENE CUSHION (212 °F) g. CH = CRES BAND WITH SILICONE CUSHION (400 °F)
 - h. CJ = CRES BAND WITH FLUOROSILICONE CUSHION (392 °F)
- /5/ STIFFENING BEAD SHALL BE REQUIRED ON SIZE -06 THRU -24. ALL RADII ON THE STIFFENING BEAD SHALL BE SMOOTH AND BLEND. NO SHARP TOOL MARKS ARE ALLOWED.
- 6. IDENTIFICATION: MARK PART NUMBER AND MANUFACTURER'S NAME, TRADEMARK OR CAGE CODE PER AS478-2A1, DO NOT MARK IN RADIUS.
- 7. CUSHION APPLICATION AND COLOR INFORMATION:
 - CODE LETTER E FOR USE IN AREAS EXPOSED TO PHOSPHATE ESTER HYDRAULIC FLUID. EXCELLENT a. OZONE RESISTANCE. NOT RESISTANT TO PETROLEUM BASED FLUIDS. COLOR SHALL BE PURPLE.
 - CODE LETTER F FOR USE PRIMARILY IN FUEL IMMERSION AND FUEL VAPORS. GOOD OZONE b. RESISTANCE. NOT RESISTANT TO PHOSPHATE ESTER BASED FLUIDS. NOT FOR USE ON TITANIUM TUBING. COLOR SHALL BE SOLID YELLOW.
 - CODE LETTER G FOR GENERAL PURPOSE USE IN AREAS EXPOSED TO PETROLEUM BASED HYDRAULIC c. FLUIDS AND OCCASIONAL FUEL SPLASH. EXCELLENT OZONE RESISTANCE. NOT RESISTANT TO PHOSPHATE ESTER BASED FLUIDS. NOT FOR USE ON TITANIUM TUBING. COLOR SHALL BE BLACK WITH A BLUE IDENTIFIER. SEE NOTE 10.
 - CODE LETTER H FOR ELEVATED TEMPERATURE USAGE IN AREAS EXPOSED TO PHOSPHATE ESTER d. BASED FLUID AND OTHER SYNTHETIC FLUIDS. UNAFFECTED BY OZONE. NOT RESISTANT TO PETROLEUM BASED FLUIDS. COLOR SHALL BE NATURAL WHITE.
 - CODE LETTER J FOR ELEVATED TEMPERATURE USAGE IN AREAS EXPOSED TO PETROLEUM BASED e. FLUIDS. UNAFFECTED BY OZONE. NOT RESISTANT TO PHOSPHASE ESTER BASED FLUIDS. COLOR SHALL BE SOLID BLUE.
- /8/ CODE LETTER "W" INDICATES WEDGE TYPE CUSHION. WEDGE IS MANDATORY FOR -02 THRU -48 SIZE CLAMPS. WEDGE IS PROHIBITED ON -01 AND -50 THRU -66 SIZE CLAMPS. WEDGE SHALL BE INTERGRALLY MOLDED TO CUSHION OR VULCANIZED USING PRESSURE AND HEAT TO ACCOMPLISH A BOND BETWEEN CUSHION AND WEDGE. WEDGE SHALL OVERLAP AND TOUCH OPPOSITE END OF CUSHION WHEN CLAMP MOUNTING HOLES ARE ALIGNED AND DIMENSION G IS 0.00 (CLAMP COMPLETELY CLOSED).
- 9. CLOSURE TEST: THE CLAMP SHALL BE INSTALLED ON A BAR HAVING A DIAMETER EQUAL TO THE NOMINAL D DIMENSION WITHIN \pm .001. DIMENSION G (GAP) SHALL BE RESTRAINED WITHIN THE SPECIFIED TOLERANCE LIMITS AND THE HOLES SHALL BE IN ALIGNMENT WITHIN .010. THE BAND WIDTH STRAIGHTNESS (PARALLEL TO THE BAR AXIS) SHALL BE WITHIN .010 EXCEPT IN THE AREA OF THE STIFFENING BEAD.

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/10/ EXTRUDED MATERIAL SHALL BE IDENTIFIED BY A BLUE STRIPE EXTENDING LENGTHWISE ALONG BOTH EDGES OF THE CUSHION. THE STRIPE WIDTH SHALL BE EQUAL TO THE WIDTH OF THE CUSHION EDGE. MOLDED MATERIAL SHALL BE IDENTIFIED BY A BLUE AREA AT THE WEDGE END. THE BLUE AREA SHALL BE ON ONE OR BOTH EDGES OF THE CUSHION AND MAY INCLUDE THE WEDGE AND SHALL HAVE A MINIMUM LENGTH OF .125 IN TO A MAXIMUM OF .750 in. THE BLUE AREA SHALL BE LOCATED WITHIN AN AREA NOT TO EXCEED 1.50 in OR 50% OF THE TOTAL CUSHION LENGTH, WHICHEVER IS SMALLER, WHEN MEASURED FROM THE WEDGE END. IN NO CASE SHALL THE BLUE AREA EXTEND BEYOND 50% OF THE CUSHION LENGTH. THE MATERIAL USED FOR THE BLUE IDENTIFIER SHALL BE THE SAME AS THE CUSHION MATERIAL EXCEPT COLOR BLUE. INKING OR OTHER SURFACE COLORING METHODS SHALL NOT BE USED.

/11/ CHLOROPRENE RUBBER MATERIAL SHALL BE SUBJECTED TO THE OZONE RESISTANCE AS FOLLOWS:

- a. THE TEST SPECIMEN SHALL BE CUT FROM AN ACTUAL CLAMP CUSHION. IF THE PARTICULAR CLAMP CUSHION IS NOT SUFFICIENTLY LONG TO OBTAIN THE SPECIMEN, A LONGER SECTION MAY BE USED AS LONG AS IT IS VERIFIED THAT THE LONGER SECTION COMES FROM THE SAME LOT AND CURE AS THE SHORT CUSHION SECTION.
- b. THE TEST SPECIMEN SHALL BE CONDITIONED BY EXPOSURE TO DRY AIR AT A TEMPERATURE OF 212 °F \pm 5 °F FOR A PERIOD OF 70 h.
- c. THE TEST SPECIMEN SHALL BE CUT PARALLEL TO THE LONGITUDINAL DIRECTION OF THE CLAMP CUSHION. THE SPECIMEN SHALL BE A DUMBBELL SHAPE AND SHALL HAVE A REDUCED SECTION WIDTH OF .075 in ± .010 in AND A REDUCED SECTION LENGTH OF 1.0, 1.5, OR 2.0 in.
- d. THE INITIAL THICKNESS OF THE SPECIMENS SHALL BE MEASURED AND RECORDED. MOUNT THE SPECIMENS IN A SUITABLE FIXTURE AND LONGITUDINALLY STRAIN TO 70% ± 3%. THE FIXTURE HOLDING THE STRAINED TEST SPECIMENS SHALL BE PLACED IN A TEST CHAMBER HAVING AN OZONE CONCENTRATION OF 600 ± 30 PARTS PER HUNDRED MILLION AND A TEMPERATURE OF 125 °F ± 5 °F. THE OZONE GENERATION AND MEASUREMENT TECHNIQUE SHALL BE IN ACCORDANCE WITH ASTM D 1149. THE DURATION OF THE TEST FOR VARIOUS THICKNESS SHALL BE AS FOLLOWS:

TABLE 3				
UNSTRAINED SPECIMEN THICKNESS	EXPOSURE TIME			
.041 IN TO .050 IN	2 H 50 MIN			
.051 IN TO .060 IN	3 H 30 MIN			
.061 IN TO .070 IN	4 H 10 MIN			
.071 IN TO .080 IN	4 H 50 MIN			

NOTES (Continued):

UMPCO, INC.

- e. CRITERIA FOR CONFORMANCE TO THE CHLOROPRENE OZONE RESISTANCE TEST IS THE ABILITY OF THE STRAINED SPECIMEN TO MEET THE REQUIREMENTS OF THE TEST WITHOUT COMPLETE BREAKAGE. SURFACE DETERIORATION OR SEVERE CRACK PROPAGATION WITHOUT COMPLETE BREAKAGE SHALL NOT BE CAUSE FOR FAILURE.
- 12. REMOVE BURRS AND SHARP EDGES.
- 13. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.
- 14. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: .XX ± .010, .XX ± .03.
- 15. INTENDED USE: THESE CLAMPS ARE INTENDED FOR GENERAL PURPOSE CLAMPING APPLICATIONS INCLUDING ELECTRICAL WIRE BUNDLE CLAMPING. FOR HIGH PERFORMANCE LOOP STYLE CLAMPS FOR USE IN MIL-H-5540 HYDRAULIC SYSTEMS SEE MIL-C-85052.

/16/ EXAMPLE OF PART NUMBER:

AS21919	W	DG	08	
		T		
				BASIC PART NUMBER

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