

A-A-52160
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COMMERCIAL ITEM DESCRIPTION

Industrial V-Belts (Multiple Drive)

The U.S. Department of Defense has authorized the use of this Commercial Item Description as a replacement for Military Standards MS39255, JIS39256, MS39257, and MS39258.

1. Abstract. This Commercial Item Description covers the requirements of V-type industrial drive belts.

2. Salient Characteristics. The belt dimensions, tolerances, and method of measurement shall be IAW RMA IP-20. Belt cord shall be pre-stretched and impregnated with a rubber compound. The belts shall be static conductive type IAW RMA bulletin IP-3-3. The belts shall not crack, break or require more torque to start or continue rotation than that specified in Table I when tested as follows:

Place the belt in an unrestrained horizontal position so that, it does not contact the side walls of the test chamber. Maintain the temperature of the oven at 150 degrees plus or minus 2 degrees F for 12 hours. At the end of the 12 hour period, remove the belt from the oven and allow the belt to cool for 30 minutes at room temperature. Then install the belt on the pulley arrangement shown in figure I, and apply tension as specified in Table II. Lock the tension pulley location, remove the tension weights from the belts, then place the assembly in a cold chamber at a temperature of minus 40 degrees F plus or minus 2 degrees F for 12 hours. At the end of the 12 hour period, while the assembly is still at minus 40 degrees plus or minus 2 degrees F rotate the pulley by means of a torque wrench applied to the driver pulley until the belt has been rotated not less than two complete revolutions. Measure and record the torque required to start and the torque required to continue rotation ; then remove the belt from the assembly and examine for evidence of cracking. Any evidence of cracking, or torque necessary to start or continue rotation in excess of the amount specified in Table I shall constitute failure of this test.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to U.S. Army Tank Automotive Command, Warren, MI 48397-5000 (Attn: AMSTA-GDS).

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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Table I. Maximum Torque Requirements.

Cross Section Design	Torque Required to Start		Torque Required to Continue	
	ft. lbs.	N x M	ft. lbs.	N x M
A, 13c	26	35	13	17
B, 16c	30	40	15	20
C, 22c	45	61	30	40

For oil resistant belts the thickness shall increase no more than 20%, nor decrease more than 1% when immersed in ASTM Oil No. 1 and ASTM Oil No.3 as cited in ASTM D471. The test shall consist of two 3 in. (7.6mm) long section of belt being immersed in 158 degree F (70 degree C) oil bath for 22 hours. The average of three measurements, the center point and 1/2 inch (13mm) from each end, shall constitute the thickness. When required, the age of the belts shall not be more than 12 months old from the time of manufacture to the date of acceptance by the Government.

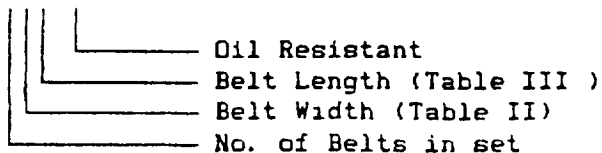
3. Contractor Certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

Regulatory Requirement. The offerer/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

4. Packaging. Preservation, packing, labeling, and marking shall be as specified in the contract or order.

5. Notes. The purchaser shall specify the age requirement if necessary and use the following part numbering information to order belt.

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Example part number denotes A-A belt 0.66 inches wide, standard datum length of 91.8 inches with oil resistant capabilities. Three belts in a set.

Table II

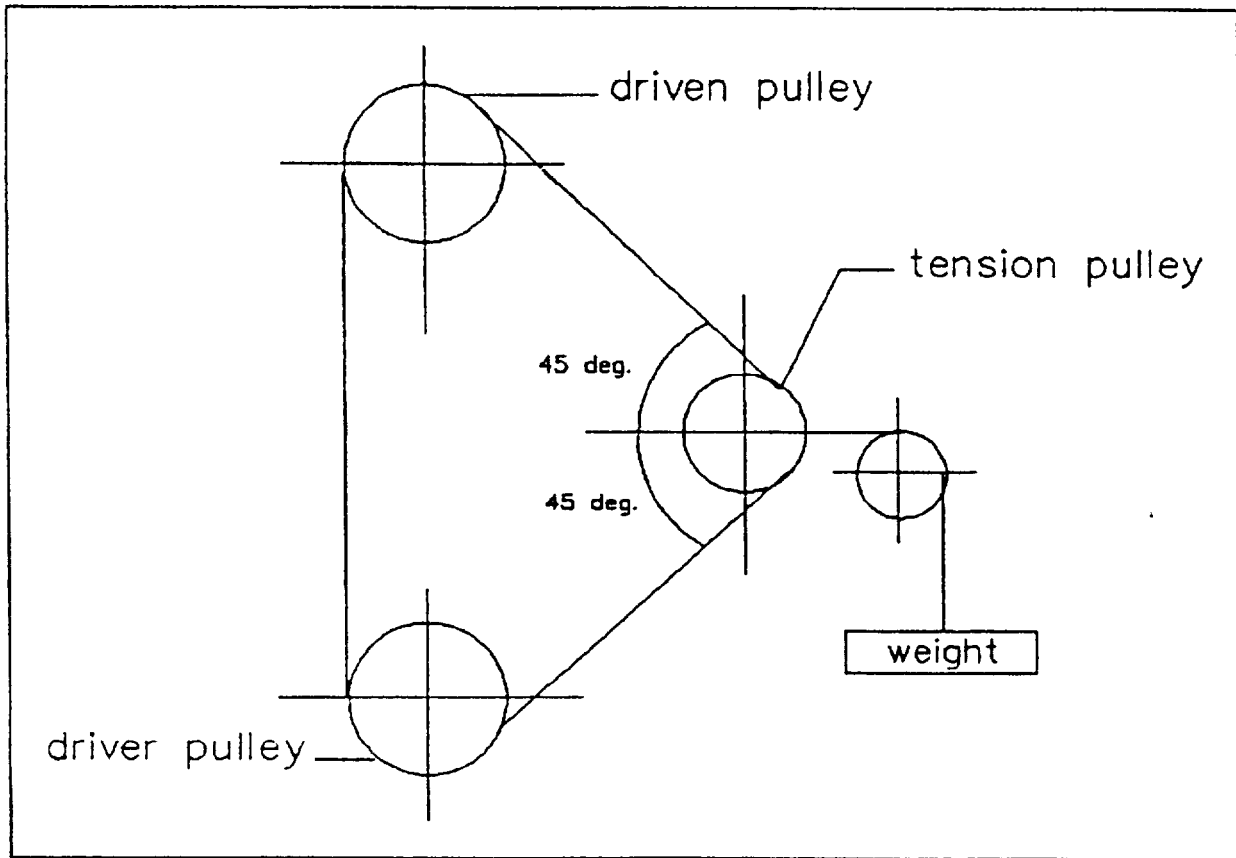
Width-In	Cross Section Designation
0.50	A
0.66	B
0.88	C
1.25	D
Width-mm	
13	13C
16	16C
22	22C
32	32C

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TABLE III

STANDARD PITCH LENGTHS-INCHES					STANDARD EFFECTIVE LENGTH-MM			
NOM.	PITCH LENGTHS				CROSS SECTION			
	A	B	C	D	13C	16C	22C	32C
26	27.3				710			
31	32.3				750			
35	36.3	36.8			800			
38	39.3	39.8			850			
42	43.3	43.8			900			
46	47.3	47.8			950	960		
51	52.3	52.8	53.9		1000	1040		
55	56.3	56.8			1075	1090		
60	61.3	61.8	62.9		1120	1120		
68	69.3	69.8	70.9		1150	1190		
75	75.3	76.8	77.9		1230	1250		
80	81.3				1300	1320		
81		82.8	83.9		1400	1400	1400	
85	86.3	86.8	87.9		1500	1500	1500	
90	91.3	91.8	92.9		1710	1700		
96	97.3		98.9		1790	1800	1830	
97		98.8			1865	1900	1900	
100	106.3	106.8	107.9		1965	1980	2000	
110	113.3	113.8	114.9		2120	2110	2160	
120	121.3	121.8	122.9	123.3	2220	2240	2260	
128	129.3	129.8	130.9	131.3	2350	2360	2390	
144		145.8	146.9	147.3	2500	2500	2540	
158		159.8	160.9	161.3	2600	2620	2650	
173		174.8	175.9	176.3	2730	2820	2800	
180		181.8	182.9	183.3	2910	2920	3030	
195		196.8	197.9	198.3	3110	3130	3150	3190
210		211.8	212.9	213.3	3310	3330	3350	3390
240		240.3	240.9	240.8		3530	3550	
270		270.3	270.9	270.8		3740	3760	3800
300		300.3	300.0	300.8		4090	4120	4160
330			330.9	330.8		4200	4220	4250
360			360.9	360.8		4480	4500	4540
390			390.9	390.8		4650	4680	4720
420			420.9	420.8		5040	5060	5100
480				480.8		5300	5440	5480
540				540.8		5760	5780	5800
600				600.8		6140	6150	6180
660				660.8		6520	6540	6560
						6910	6920	6940
						7290	7300	7330
						7670	7680	
							8060	8090
							8440	8470
							8820	8850
							9200	9240
								10000
								10760
								11530
								12290

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FIGURE 1. Pulley arrangement for temperature test.

Pulleys and tension weights, for Temperature Test

Belt Cross-section	Pulleys, driver & driven		Tension pulley		Tension Weights	
	in.	cm	in.	cm	lbs.	newtons
A, 13c	5.0	13	3.5	9	35	155
B, 16c	6.0	15	5.0	13	45	200
C, 22c	7.0	18	7.0	18	115	510

The belts in A(13c), B(16c) and C(22c) cross-sections shall be representative of D(32c) cross-section for the temperature test provided they are manufactured with the same basic compounds and tensile members.

RMA standards are available for the Rubber Manufacturers Association, 1400 K Street N.W., Washington D.C. 20005.

The standards referenced in this document shall be the issues in effect on the date of the invitation for bids or request for quotation and shall be used to determine compliance with these requirements. In the event that there is a conflict between this document and a standard referenced herein, this document shall take precedence.

Preparing Activity:
Army - AT
(Project 3030-0166)