

USER SYMBOLS:

REVIEWER SYMBOLS:

ARMY - AR, ME,
NAVY - AS
USAF - 99
DLA - IS

"Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current DODISS."

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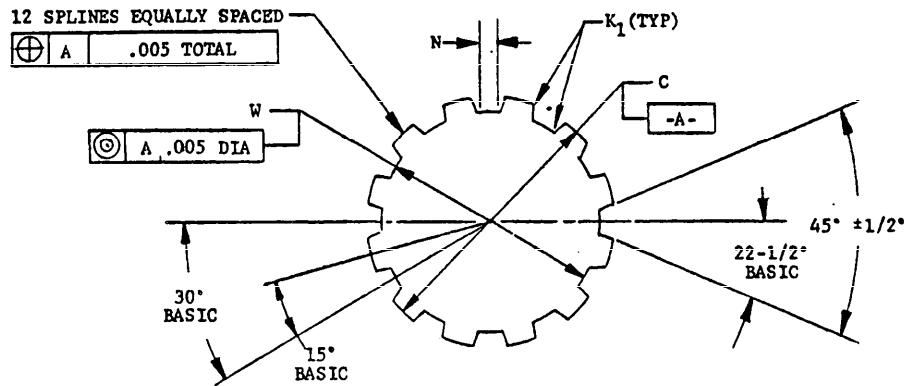


TABLE I - ELEMENT DIMENSIONS

ELEMENT NUMBER	WRENCH SIZE REF	C DIA		W DIA		N		K ₁ RADIUS	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
6	.188	.228	.235	.189	.194	.020	.026	.003	.008
7	.219	.264	.271	.222	.227	.023	.029		
8	.250	.301	.308	.253	.259	.026	.032		
9	.281	.337	.345	.285	.291	.029	.035		
10	.312	.373	.381	.318	.324	.031	.037	.005	.010
12	.375	.447	.456	.383	.389	.037	.043		
14	.438	.522	.531	.448	.455	.043	.050		
16	.500	.595	.605	.514	.521	.048	.055		
18	.562	.668	.679	.578	.585	.054	.061	.005	.015
20	.625	.742	.753	.644	.651	.060	.068		
22	.688	.817	.828	.711	.717	.065	.073		
24	.750	.890	.901	.774	.782	.071	.079		
26	.812	.963	.974	.838	.846	.077	.086	.005	.025
28	.875	1.037	1.049	.904	.912	.082	.091		
30	.938	1.112	1.124	.970	.978	.088	.097		
32	1.000	1.185	1.197	1.034	1.042	.094	.103		
34	1.062	1.258	1.270	1.099	1.107	.099	.108	.010	.030
36	1.125	1.333	1.345	1.165	1.173	.105	.114		
38	1.188	1.406	1.419	1.229	1.239	.111	.120		
40	1.250	1.480	1.493	1.293	1.303	.116	.125		
42	1.312	1.553	1.566	1.358	1.368	.122	.131	.010	.035
44	1.375	1.628	1.641	1.424	1.434	.127	.136		
46	1.438	1.702	1.715	1.489	1.499	.133	.142		
48	1.500	1.775	1.788	1.554	1.564	.139	.148		
50	1.562	1.849	1.862	1.619	1.629	.144	.154	.015	.045
52	1.625	1.924	1.937	1.685	1.695	.150	.160		
54	1.688	1.998	2.011	1.750	1.760	.156	.166		
56	1.750	2.072	2.085	1.815	1.825	.161	.171		
58	1.812	2.145	2.158	1.880	1.890	.167	.177	.015	.050
60	1.875	2.219	2.233	1.945	1.955	.173	.183		
62	1.938	2.293	2.307	2.011	2.021	.178	.189		
64	2.000	2.367	2.381	2.076	2.086	.184	.195		
66	2.062	2.440	2.454	2.141	2.151	.189	.200	.015	.050
68	2.125	2.514	2.528	2.206	2.216	.195	.206		
70	2.188	2.589	2.603	2.271	2.281	.201	.212		

NOTES:

1. TOLERANCES SHALL NOT BE CUMULATIVE.
2. DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED.
3. THE GOVERNMENT HAS A ROYALTY FREE LICENSE UNDER U.S. PATENT 3,354,757 FOR THE BENEFIT OF MANUFACTURERS OF THIS WRENCHING ELEMENT EITHER FOR THE GOVERNMENT OR FOR USE IN EQUIPMENT TO BE DELIVERED TO THE GOVERNMENT.

THIS IS A DESIGN STANDARD AND SHALL NOT BE USED AS A PART NUMBER.

(D) DENOTES CHANGES

P.A. NAVY - AS Other Cust USAF - 11 ARMY - AV	TITLE WRENCHING ELEMENT, EXTERNAL SPLINE, DIMENSIONS FOR	MILITARY STANDARD	
		MS33787	
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET	OF
		1	2

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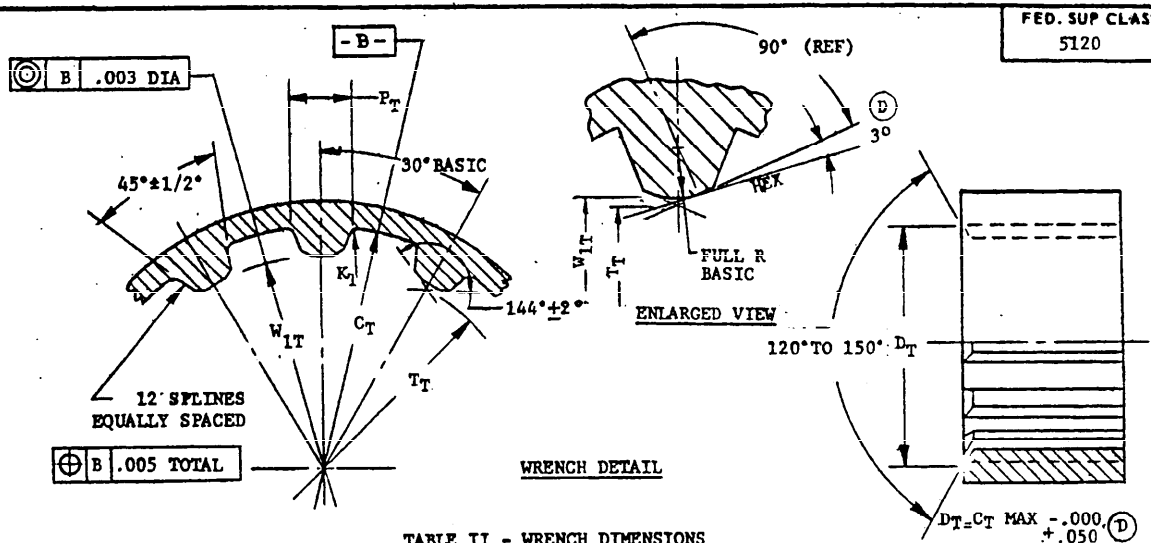


TABLE II - WRENCH DIMENSIONS

WRENCH NO.	WRENCH SIZE REF	W _{IT} DIA		C _T DIA		(D)	P _T		T _T		K _T RADIUS		FULL R BASIC
		MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX	MIN	MAX	
6	.188	.198	.202	.240	.244	.029	.036	.1967	.2008				.013
7	.219	.229	.234	.276	.280	.033	.040	.2278	.2319				.015
8	.250	.263	.267	.313	.317	.038	.045	.2609	.2650				.018
9	.281	.295	.299	.350	.354	.043	.050	.2930	.2971				.020
10	.312	.329	.334	.386	.390	.046	.054	.3271	.3313	.005	.010		.022
12	.375	.394	.398	.461	.465	.055	.063	.3913	.3955				.026
14	.438	.458	.463	.536	.541	.064	.073	.4555	.4597				.031
16	.500	.525	.531	.610	.615	.073	.082	.5218	.5270				.035
18	.562	.590	.596	.684	.689	.082	.092	.5860	.5911				.039
20	.625	.655	.662	.758	.764	.091	.101	.6512	.6574				.044
22	.688	.721	.728	.833	.839	.099	.110	.7164	.7226	.010	.015		.048
24	.750	.786	.795	.906	.912	.108	.119	.7816	.7889				.053
26	.812	.852	.862	.979	.986	.116	.128	.8469	.8551				.057
28	.875	.917	.926	1.054	1.061	.126	.138	.9110	.9193				.061
30	.938	.983	.994	1.129	1.136	.135	.147	.9773	.9866				.066
32	1.000	1.048	1.059	1.202	1.209	.144	.156	1.0415	1.0508				.070
34	1.062	1.112	1.125	1.275	1.282	.153	.165	1.1057	1.1160				.074
36	1.125	1.179	1.191	1.350	1.357	.163	.175	1.1719	1.1823				.079
38	1.188	1.245	1.255	1.424	1.431	.172	.184	1.2372	1.2454				.083
40	1.250	1.309	1.323	1.498	1.505	.181	.193	1.3013	1.3127	.010	.020		.088
42	1.312	1.375	1.387	1.571	1.578	.191	.203	1.3666	1.3759				.092
44	1.375	1.441	1.454	1.646	1.653	.200	.212	1.4318	1.4432				.096
46	1.438	1.506	1.520	1.720	1.727	.209	.221	1.4970	1.5084				.101
48	1.500	1.571	1.586	1.793	1.800	.218	.230	1.5612	1.5736				.105
50	1.562	1.635	1.650	1.867	1.875	.227	.240	1.6254	1.6378				.109
52	1.625	1.702	1.717	1.942	1.950	.236	.249	1.6916	1.7041				.114
54	1.688	1.767	1.783	2.016	2.024	.245	.258	1.7558	1.7693				.118
56	1.750	1.833	1.850	2.090	2.098	.255	.268	1.8221	1.8355				.123
58	1.812	1.898	1.914	2.163	2.171	.264	.277	1.8863	1.8997				.127
60	1.875	1.963	1.980	2.238	2.246	.273	.286	1.9515	1.9650	.010	.025		.131
62	1.938	2.029	2.047	2.312	2.321	.282	.295	2.0167	2.0312				.136
64	2.000	2.095	2.113	2.386	2.395	.292	.305	2.0819	2.0819				.140
66	2.062	2.160	2.178	2.459	2.468	.301	.314	2.1472	2.1617				.144
68	2.125	2.226	2.245	2.533	2.543	.310	.323	2.2124	2.2279				.149
70	2.188	2.292	2.311	2.608	2.618	.320	.333	2.2776	2.2931				.153

NOTE: T_T IS THE THEORETICAL INTERSECTION OF THE 144° ± 2° SURFACES. T_T DEFINES THE SIZE OF INSCRIBED HEXAGON BY THE RELATIONSHIP: T_T = HEXAGON SIZE + COS 15°

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P.A. NAVY - AS Other Cust	TITLE	MILITARY STANDARD
USAF - 11 Army - AV	WRENCHING ELEMENT, EXTERNAL SPLINE, DIMENSIONS FOR	MS33787
PROCUREMENT SPECIFICATION	SUPERSEDES:	SHEET 2 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 22085

APPROVED 6 May 1969 REVISED (B) FOR CHANGES SEE SHEETS 1 & 2 (C) 5 DECEMBER 1978 (D) 18 APRIL 1984

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