



TABLE I

NOMINAL SIZE	D DIAMETER		B POINT DIAMETER		C CROWN HEIGHT AND RADIUS		DOUBLE SHEAR STRENGTH LBS - MIN	
	MAX	MIN	MAX	MIN	MAX	MIN	CARBON OR ALLOY STEEL	CRES
.0625	.0636	.0634	.058	.042	.020	.008	800	610
*.0781	.0792	.0790	.074	.058	.026	.010	1,240	700
.0938	.0949	.0947	.090	.074	.031	.012	1,800	1,000
.125	.1261	.1259	.121	.105	.041	.016	3,200	1,800
*.1562	.1573	.1571	.152	.136	.052	.020	5,000	2,800
.1875	.1886	.1884	.183	.167	.062	.023	7,200	4,000
.250	.2511	.2509	.246	.230	.083	.031	12,800	7,200
.3125	.3136	.3134	.309	.293	.104	.039	20,000	11,000
.375	.3761	.3759	.371	.355	.125	.047	28,000	16,000
.4375	.4386	.4384	.433	.417	.146	.055	38,000	22,000
.500	.5011	.5009	.496	.480	.167	.063	50,000	29,000
.625	.6261	.6259	.621	.605	.208	.078	78,000	45,000
.750	.7511	.7509	.746	.730	.250	.094	114,000	65,000
.875	.8761	.8759	.871	.855	.293	.109	156,000	88,000
1.000	1.0011	1.0009	.996	.980	.333	.125	204,000	110,000

* INACTIVE - See sheets 2 and 3.

NOTES:

- MATERIAL:** Carbon or alloy steel in accordance with Fed. Std. No. 66, except that the maximum sulfur and phosphorus content shall be 0.05 and 0.04 percent, respectively. Corrosion-resisting steel in accordance with Fed. Std. No. 66, Type 410 or 416.
- HARDNESS:** Carbon or alloy steel pins shall have a core hardness of Rockwell C47-58 and a case hardness of Rockwell C60 minimum. The minimum case depth shall be 0.010 inch for nominal sizes .1562 and smaller, and 0.015 inch for larger sizes. The core hardness shall not at any time exceed the case hardness.
- PROTECTIVE COATING:** Carbon or alloy steel - Plain (May be furnished with black oxide coating in accordance with MIL-C-13924, Class 1.)
 - Phosphate coated in accordance with MIL-P-16232, Type Z, Class 2.
 - Cadmium plated in accordance with Type II, Class 3 of QQ-P-416 or MIL-C-81562.
- SURFACE ROUGHNESS:** Corrosion-resisting Steel - Passivated in accordance with QQ-P-35. Prior to coating, surface roughness shall be 16 for "S" length and 125 for all other surfaces in accordance with ANSI-B46.1.
- DIMENSIONS:** All dimensions are in inches, unless otherwise specified.
- PART NUMBER:** The MS part number consists of the MS number, plus the dash number.
 Example: MS16556-1
- Referenced documents shall be of the issue in effect on date of invitations for bid.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.
- Effective length "S" shall be a minimum of 75% of total pin length "L".

(B) FOR CHANGES SEE SHEETS 1, 2, AND 3

REVIEWER: AT, AV, EA, IS
 USER: AS, CL, ME, MU, NS, PA, WT, YD
 Military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when applicable.

P.A. WC Other Cust OS 99 (B)	TITLE (B) PIN, STRAIGHT, HEADLESS (DOWEL) (.001 OVER NOMINAL SIZE)	MILITARY STANDARD MS 16556
PROCUREMENT SPECIFICATION MIL-P-21143	SUPERSEDES:	SHEET 1 OF 3

REVIEWER: AT, AV, EA, IS
AS, CG, ME, MU, NS, PA, VT, YD
USER:

L LENGTH ±.010	CARBON OR ALLOY STEEL - PLAIN														
	NOMINAL SIZE														
	.0625	.0781	.0938	.125	.1562	.1875	.250	.3125	.375	.4375	.500	.625	.750	.875	1.000
	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.188	1														
.250	2	9													
.312	3	10	17												
.375	4	11	18	25											
.438	5	12	19	26											
.500	6	13	20	27	34										
.625	7	14	21	28	35	40									
.750	8	15	22	29	36	41	46								
.875		16	23	30	37	42	47								
1.000			24	31	38	43	48	53							
1.250				32	39	44	49	54	60						
1.500				33		45	50	55	61	68	77				
1.750							51	56	62	69	78				
2.000							52	57	63	70	79	88			
2.250								58	64	71	80	89	101		
2.500								59	65	72	81	90	102		
2.750									66	73	82	91	103	117	
3.000									67	74	83	92	104	118	132
3.250											84	93	105	119	133
3.500											85	94	106	120	134
3.750											86	95	107	121	135
4.000											87	96	108	122	136
4.500												98	110	124	138
5.000												100	112	126	140
6.000													116	130	144

* INACTIVE FOR NEW DESIGN AFTER 8 APR 1975.

TABLE III

L LENGTH ±.010	CARBON OR ALLOY STEEL - PHOSPHATE COATED														
	NOMINAL SIZE														
	.0625	.0781	.0938	.125	.1562	.1875	.250	.3125	.375	.4375	.500	.625	.750	.875	1.000
	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.188	301														
.250	302	309													
.312	303	310	317												
.375	304	311	318	325											
.438	305	312	319	326											
.500	306	313	320	327	334										
.625	307	314	321	328	335	340									
.750	308	315	322	329	336	341	346								
.875		316	323	330	337	342	347								
1.000			324	331	338	343	348	353							
1.250				332	339	344	349	354	360						
1.500				333		345	350	355	361	368	377				
1.750							351	356	362	369	378				
2.000							352	357	363	370	379	388			
2.250								358	364	371	380	389	401		
2.500							359	365	372	381	390	402			
2.750								366	373	382	391	403	417		
3.000								367	374	383	392	404	418	432	
3.250										384	393	405	419	433	
3.500										385	394	406	420	434	
3.750										386	395	407	421	435	
4.000										387	396	408	422	436	
4.500											398	410	424	438	
5.000											400	412	426	440	
6.000												416	430	444	

* INACTIVE FOR NEW DESIGN AFTER 8 APR 1975.

P.A. WC	TITLE (B) PIN, STRAIGHT, HEADLESS	MILITARY STANDARD
Other Cust OS 99 (B)	(DOWEL)	MS16556
	(.001 OVER NOMINAL SIZE)	
PROCUREMENT SPECIFICATION MIL-P-21143	SUPERSEDES:	SHEET 2 OF 3

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when applicable.

APPROVED 27 DEC 1957 REVISED (B) FOR CHANGES SEE SHEETS 1 AND 3

L LENGTH ±.010	CORROSION RESISTING STEEL														
	NOMINAL SIZE														
	.0625	.0781	.0938	.125	.1562	.1875	.250	.3125	.375	.4375	.500	.625	.750	.875	1.000
	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.188	601														
.250	602	609													
.312	603	610	617												
.375	604	611	618	625											
.438	605	612	619	626											
.500	606	613	620	627	634										
.625	607	614	621	628	635	640									
.750	608	615	622	629	636	641	646								
.875		616	623	630	637	642	647								
1.000			624	631	638	643	648	653							
1.250				632	639	644	649	654	660						
1.500				633		645	650	655	661	668	677				
1.750							651	656	662	669	678				
2.000							652	657	663	670	679	688			
2.250								658	664	671	680	689	701		
2.500								659	665	672	681	690	702		
2.750									666	673	682	691	703	717	
3.000									667	674	683	692	704	718	732
3.250											684	693	705	719	733
3.500											685	694	706	720	734
3.750											686	695	707	721	735
4.000											687	696	708	722	736
4.500												698	710	724	738
5.000												700	712	726	740
6.000													716	730	744

* INACTIVE FOR NEW DESIGN AFTER 8 APR 1975.

TABLE V

L LENGTH ±.010	CARBON OR ALLOY STEEL - CADMIUM PLATED														
	NOMINAL SIZE														
	.0625	.0781	.0938	.125	.1562	.1875	.250	.3125	.375	.4375	.500	.625	.750	.875	1.000
	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.188	801														
.250	802	809													
.312	803	810	817												
.375	804	811	818	825											
.438	805	812	819	826											
.500	806	813	820	827	834										
.625	807	814	821	828	835	840									
.750	808	815	822	829	836	841	846								
.875		816	823	830	837	842	847								
1.000			824	831	838	843	848	853							
1.250				832	839	844	849	854	860						
1.500				833		845	850	855	861	868	877				
1.750							851	856	862	869	878				
2.000							852	857	863	870	879	888			
2.250								858	864	871	880	889	901		
2.500								859	865	872	881	890	902		
2.750									866	873	882	891	903	917	
3.000									867	874	883	892	904	918	932
3.250											884	893	905	919	933
3.500											885	894	906	920	934
3.750											886	895	907	921	935
4.000											887	896	908	922	936
4.500												898	910	924	938
5.000												900	912	926	940
6.000													916	930	944

* INACTIVE FOR NEW DESIGN AFTER 8 APR 1975.

P.A. WC	TITLE	MILITARY STANDARD
Other Cust OS	(B) PIN, STRAIGHT, HEADLESS (DOWEL)	
99 (B)	(.001 OVER NOMINAL SIZE)	MS 16556
PROCUREMENT SPECIFICATION MIL-P-21143	SUPERSEDES:	SHEET 3 OF 3

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