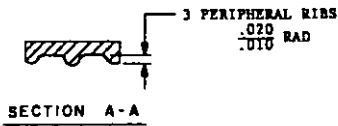
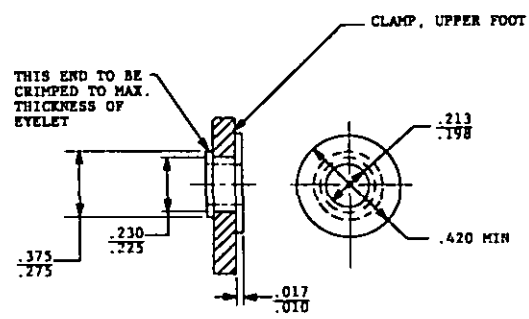
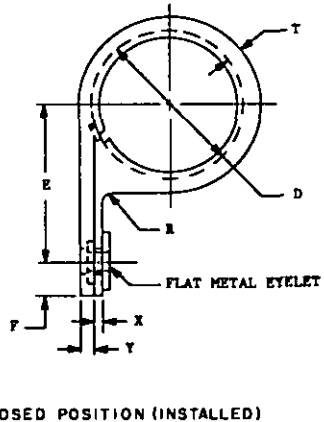
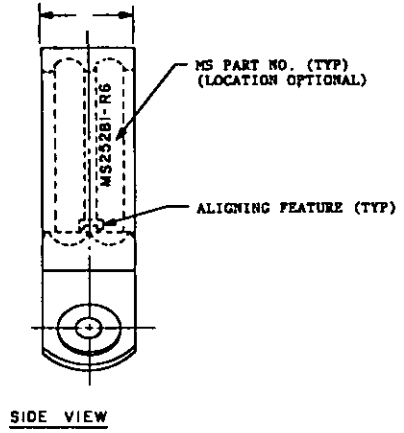
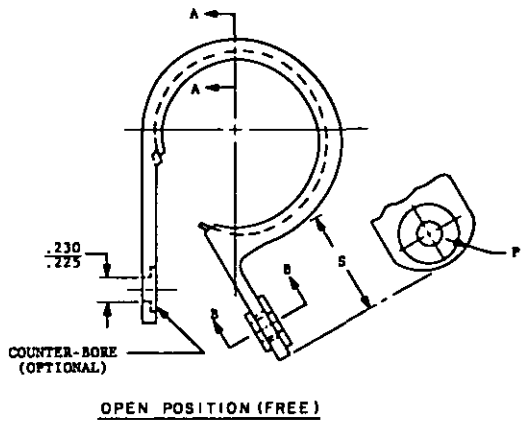


USER SYMBOLS:  
NAVY - HC, SH, OS  
ARMY - AL

REVIEWER SYMBOLS:  
NAVY - EC  
ARMY - AV  
DLA - IS

"Review/revise information is current as of the date of this statement.  
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This military standard is approved for use by all Departments  
of the Department of Defense. Solicitation for all new  
engineering and design applications and for revising the right  
is made from this document.



**STYLE R-RIBBED INNER DIAMETER**

(K) ENTIRE DRAWING REVISED & REDRAWN

P.A. NAVY - AS Other Code  USAF - 99 ARMY - AR	TITLE  CLAMP, LOOP, PLASTIC, WIRE SUPPORT	MILITARY STANDARD
		<b>MS2528I</b>
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS39014	SHEET 1 OF 5

APPROVED 1 AUG 1958 REVISED (K) 29 DEC. 1978

TABLE I. FOR STYLE R-RIBBED INNER DIAMETER CLAMPS ONLY

DASH NO.	APPROX. CABLE BUNDLE DIA ± .064	D** ± .020	E ± .025	F	P MIN RADIUS	R ± .005 RADIUS	S ± .010	T		W		X		Y	
								MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
-2	1/8	.125	.440												
-3	3/16	.188	.485					.038	.075					.060	
-4	1/4	.250	.510	.260											
-5	5/16	.312	.546	.240	.250		.540			.510					.100
-6	3/8	.375	.578			.062									
-7	7/16	.438	.608									.080			
-8	1/2	.500	.639									.060			
-9	9/16	.562	.675												
-10	5/8	.625	.708												
-11	11/16	.688	.785											.085	
-12	3/4	.750	.816					.050	.085						
-13	13/16	.812	.827												
-14	7/8	.875	.878												
-15	15/16	.938	.910							.495					
-16	1.000	1.000	.941												
-17	1-1/16	1.063	.972												
-18	1-1/8	1.125	.983												
-19*	1-3/16	1.188	1.024	.330	.300		.605			.610				.130	
-20	1-1/4	1.250	1.066	.240											
-21*	1-5/16	1.312	1.070			.100									
-22	1-3/8	1.375	1.110									.130			
-23*	1-7/16	1.438	1.140												
-24	1-1/2	1.500	1.170												
-25*	1-9/16	1.562	1.200					.080	.160			.085		.120	
-26	1-5/8	1.625	1.250												
-27*	1-11/16	1.688	1.270												
-28	1-3/4	1.750	1.300												
-29*	1-13/16	1.812	1.330												
-30	1-7/8	1.875	1.355												
-31*	1-15/16	1.938	1.390												
-32	2.000	2.000	1.420												

\*SEE NOTE 8.  
\*\*"D" DIMENSION TO BE MEASURED MINUS THE RIBS.

USER SYMBOLS:  
NAVY - MC, SH, OS  
ARMY - AL

REVIEWER SYMBOLS:  
NAVY - EC  
ARMY - AV  
DLA - IS

\*Revision/revision information is carried out of the date of this document.  
For future coordination of changes in this document, check all information should be based on the information in the current 90015.

This military standard is approved for use by all Departments & Agencies of the Department of Defense. Selection for all new engineering and design specifications and for reworking and shall be made from this document.

P.A.  
NAVY - AS  
Other Cust

USAF - DD  
ARMY - AR

PROCUREMENT SPECIFICATION  
MIL-S-23190

TITLE

CLAMP, LOOP, PLASTIC, WIRE SUPPORT

SUPERSEDES  
MS39014

MILITARY STANDARD

MS25281

SHEET 2 OF 5

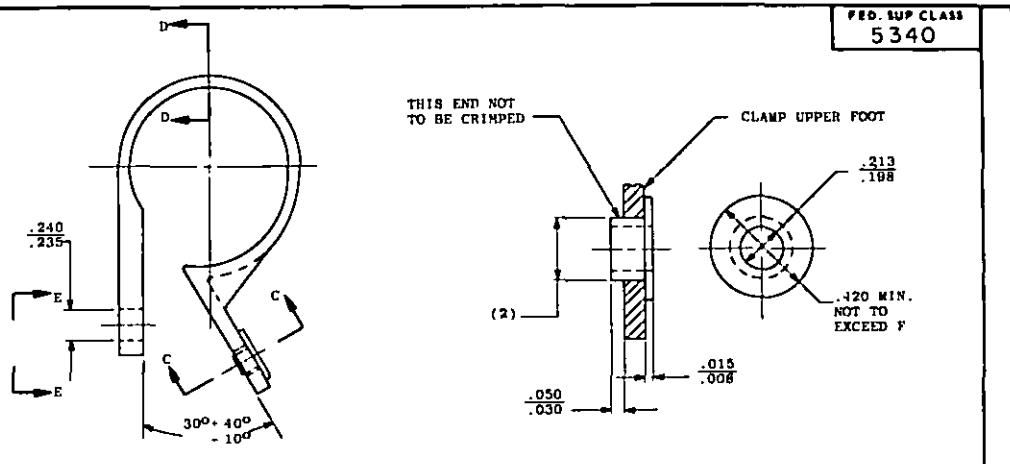
APPROVED 1 AUG 56 REVISED 1 MAR 58 FOR CHANGES SEE SHEETS 1 THRU 5

USER SYMBOLS:  
NAVY - RC, SH, OS  
ARMY - AV  
DLA - 15

REVIEWER SYMBOLS:  
NAVY - EC  
ARMY - AV  
DLA - 15

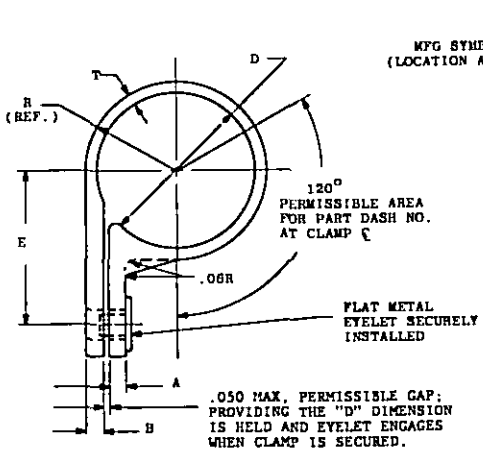
"Notice/Year information is current as of the date of this document.  
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This military standard is approved for use by all Departments  
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engineering and design applications and for repetitive use that  
are made from this document.

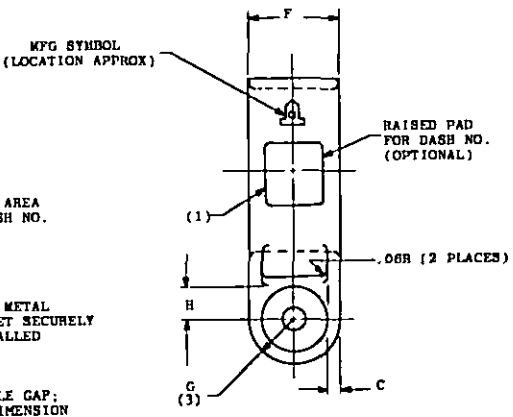


OPEN POSITION (FREE)

SECTION C-C



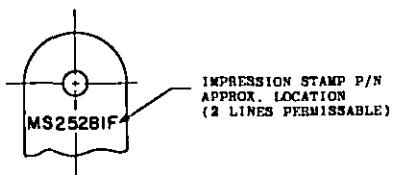
CLOSED POSITION (INSTALLED)



SIDE VIEW



SECTION D-D



PARTIAL VIEW E-E  
ROTATED 180°

STYLE F - FLAT INNER DIAMETER

APPROVED 1 AUG 1958 REVISED 1 FOR CHANGES SEE SHEETS 1 THRU 5

P.A. NAVY - AS Other Cust USAF - 99 ARMY - AR	TITLE  CLAMP, LOOP, PLASTIC, WIRE SUPPORT	MILITARY STANDARD <b>MS25281</b>
PROCUREMENT SPECIFICATION MIL-S-25100	SUPERSEDES HS39014	SHEET 3 OF 5

TABLE II. FOR STYLE F - FLAT INNER DIAMETER ONLY

DASH NO.	APPROX. CABLE BUNDLE DIA ± 1/64	A +.010 -.005	B +.010 -.005	C +.010 -.005	D ±.020	E ±.025	F ±.015	G RADIUS	H ±.015	R REF	S ±.010	T +.010 -.005
2	1/8				.125	.457					.102	
3	3/16		.065		.187	.498					.133	.020R
4	1/4				.250	.529					.165	
5	5/16	.065		.060	.312	.560	.500	.250	.240		.206	.050
6	3/8				.375	.592					.250	
7	7/16		.095		.437	.623					.281	.062
8	1/2				.500	.654					.312	
9	9/16				.562	.752					.343	
10	5/8				.625	.783					.385	
11	11/16				.687	.814					.415	
12	3/4	.075			.750	.845					.447	.030R
13	13/16				.812	.877					.478	
14	7/8		.125	.090	.875	.908	.600	.300	.220		.509	.073
15	15/16	.090			.937	.939					.540	
16	1.000				1.000	.970					.572	
17	1-1/16				1.062	1.002					.603	
18	1-1/8	.125			1.125	1.062					.643	.082
19	1-3/16				1.187	1.093					.685	
20	1-1/4				1.250	1.124					.697	.073

- (1) DASH NO. SIZES: 12PT THRU -4; 24 PT FOR SIZES -5 THRU -20, RAISED NUMERALS.
- (2) MFG. OPTION OF SIZE TO ASSURE SNUG-FIT TO EYELET.
- (3) "G" RADIUS TO BE TANGENT TO "F".

INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm
.005	0.13	.1875	4.76	.509	12.93	.785	19.94	1.125	28.58
.008	0.20	.188	4.78	.510	12.95	.812	20.62	1.140	28.96
.010	0.25	.198	5.03	.529	13.44	.8125	20.64	1.170	29.72
.015	0.38	.206	5.23	.540	13.72	.814	20.68	1.187	30.15
.0156	0.40	.213	5.41	.546	13.87	.816	20.73	1.1875	30.16
.020	0.51	.220	5.59	.560	14.22	.827	21.01	1.188	30.18
.025	0.64	.235	5.97	.562	14.27	.845	21.46	1.200	30.48
.030	0.76	.240	6.10	.5625	14.29	.875	22.23	1.250	31.75
.038	0.97	.250	6.35	.572	14.53	.877	22.28	1.270	32.26
.040	1.02	.260	6.60	.578	14.68	.878	22.30	1.300	33.02
.050	1.27	.281	7.14	.592	15.04	.908	23.06	1.312	33.32
.060	1.52	.300	7.62	.600	15.24	.910	23.11	1.3125	33.34
.062	1.57	.312	7.92	.603	15.32	.937	23.80	1.330	33.78
.065	1.65	.3125	7.94	.605	15.37	.9375	23.81	1.355	34.41
.073	1.85	.330	8.38	.608	15.44	.938	23.83	1.375	34.93
.075	1.91	.343	8.71	.610	15.49	.939	23.85	1.390	35.31
.080	2.03	.375	9.53	.623	15.82	.941	23.90	1.420	36.07
.082	2.08	.385	9.78	.625	15.88	.970	24.64	1.4375	36.51
.085	2.16	.415	10.54	.639	16.23	.972	24.69	1.438	36.53
.090	2.29	.420	10.67	.643	16.33	.983	24.97	1.500	38.10
.095	2.41	.437	11.10	.654	16.61	1.000	25.40	1.562	39.67
.100	2.54	.4375	11.11	.665	16.89	1.002	25.45	1.625	41.28
.102	2.59	.438	11.12	.675	17.15	1.024	26.01	1.6875	42.86
.109	2.77	.440	11.18	.687	17.45	1.062	26.97	1.688	42.88
.120	3.05	.447	11.35	.6875	17.46	1.0625	26.99	1.750	44.45
.125	3.18	.457	11.61	.688	17.48	1.063	27.00	1.812	46.02
.130	3.30	.478	12.14	.697	17.70	1.066	27.08	1.8125	46.04
.133	3.38	.485	12.32	.706	17.73	1.070	27.18	1.875	47.63
.160	4.06	.495	12.57	.750	19.05	1.043	27.76	1.9375	49.21
.165	4.19	.498	12.65	.752	19.10	1.110	28.19	1.938	49.22
.187	4.75	.500	12.70	.783	19.89	1.124	28.55	2.000	50.80

USER SYMBOLS:  
 NAVY - MC, SH, OS  
 ARMY - AL  
 REVIEWER SYMBOLS:  
 NAVY - EC  
 ARMY - AV  
 DLA - IS  
 \*Review/Spec information is current as of the date of this document.  
 For latest coordination of changes in this document, call originating  
 should be based on the information in the current DODISS.  
 This military standard is approved for use by all Departments  
 of the Department of Defense. Selection for all new  
 engineering and design substitutions and for reissues and shall  
 be made from this document.  
 DD FORM 1 APR 72 672-1 (Coordinated)

P.A. NAVY - AS Other Cont	TITLE	MILITARY STANDARD
USAF - 99 ARMY - AR	CLAMP, LOOP, PLASTIC, WIRE SUPPORT	MS2528I
PROCUREMENT SPECIFICATION MIL-S-23190	SUPERSEDES MS39014	SHEET 4 OF 5

APPROVED 1 AUG 1958 REVISED K FOR CHANGES SEE SHEETS 1 THRU 5

USER SYMBOLS:  
NAVY - MC, SH, OS  
ARMY - AL

REVIEWER SYMBOLS:  
NAVY - EC  
ARMY - AV  
DLA - IS

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This military standard is approved for use by all Departments  
& Agencies of the Department of Defense. Solicitation for all new  
procurement and design specifications and for replacement use shall  
be made from this document.

**ADDITIONAL REQUIREMENTS**

**MATERIAL:**

- 1. NYLON: HEAT STABILIZED COMPOSITION, MIL-M-20693, COMPOSITION A, TYPE 1.
- COLOR: NATURAL
- METAL EYELET: ALUMINUM, ANODIZED IN ACCORDANCE WITH MIL-A-8625.

**NOTES:**

- 1. DIMENSIONS ARE IN INCHES. DIMENSION "D" IS APPLICABLE IN CLOSED POSITION.
- 2. REMOVE ALL BURRS AND SHARP EDGES: BREAK ALL SHARP CORNERS, MOLD MARKS AND NORMAL VENT FLASH ARE PERMISSIBLE.
- 3. METRIC EQUIVALENTS (TO THE NEAREST .01 mm) ARE GIVEN FOR GENERAL INFORMATION ONLY AND ARE BASED UPON 1 INCH = 25.4 mm.
- 4. SIDE GATE CUT-OFF PERMISSIBLE PROVIDING "D" DIAMETER AND INNER EDGE RADIUS ARE NOT DISTURBED.
- 5. CONFIGURATION MAY VARY FROM THAT SHOWN, PROVIDED DIMENSIONS ARE NOT EXCEEDED.
- 6. TENSILE STRENGTH: TENSILE STRENGTH FOR DASH NUMBERS 2 THROUGH 10 SHALL BE 100 POUNDS MINIMUM AND FOR DASH NUMBERS 11 THROUGH 32 SHALL BE 225 POUNDS MINIMUM.
- 7. MOUNTING HOLES MAY BE SLIGHTLY ELONGATED OR DISKED FOR EASY REMOVAL FROM MOLD.
- 8. ODD DASH NUMBERS 19 THROUGH 31 FOR STYLE H ARE NOT CURRENTLY AVAILABLE.
- 9. EXAMPLE OF PART NUMBERS:

THE LETTER "F" or "R" SHALL PRECEDE THE DASH NUMBER SIZE TO INDICATE WHETHER THE CLAMP HAS A FLAT OR RIBBED INNER DIAMETER. MS25281-F6 CLAMP LOOP PLASTIC, WIRE SUPPORT, FLAT INNER DIAMETER 3/8 INCH BUNDLE DIAMETER. MS25281-R8 CLAMP, LOOP, PLASTIC, WIRE SUPPORT, RIBBED INNER DIAMETER, 3/8 INCH BUNDLE DIAMETER.

- 10. FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
- 11. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.

APPROVED 1 AUG 1958 REVISED 6 FOR CHANGES SEE SHEETS 1 THRU 5

P.A. NAVY - AS Other Code	TITLE  CLAMP, LOOP, PLASTIC, WIRE SUPPORT	MILITARY STANDARD
		MS25281
USAF - DD ARMY - AR	PROCUREMENT SPECIFICATION MIL-S-23290	SUPERSEDES MS38014
		SHEET 5 OF 5