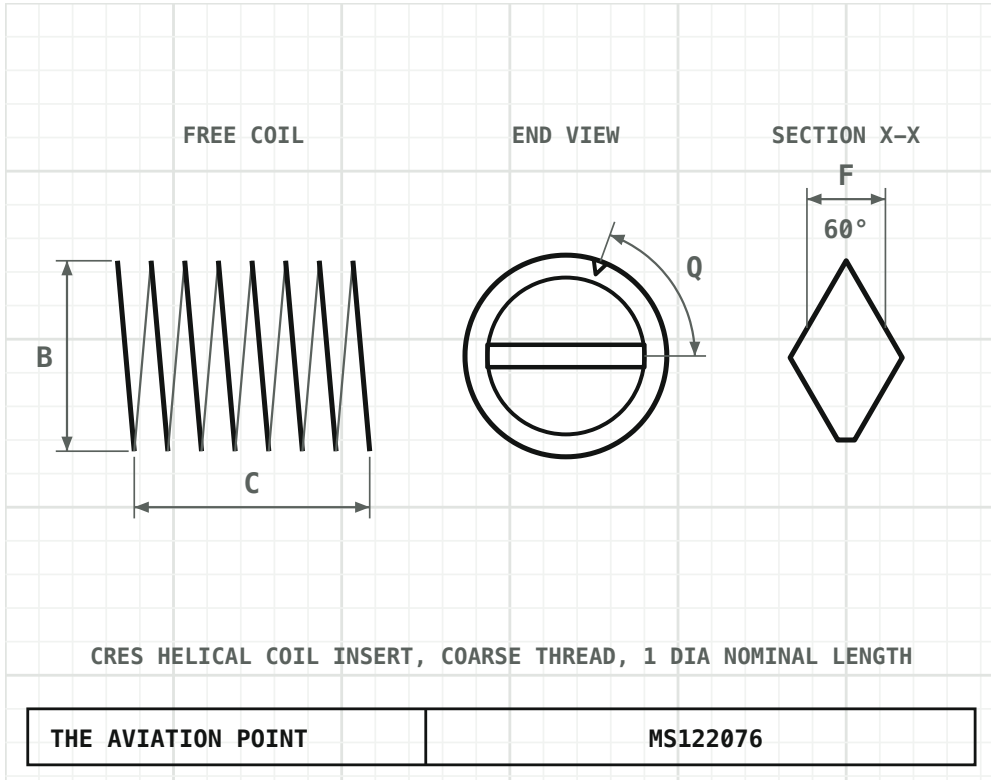
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MS122076 — CRES helical coil insert, coarse thread, 1 dia nominal length (now NASM122076)

MS122076 thru MS122115: corrosion-resistant steel helical coil inserts for coarse threads, one diameter nominal length, .086-56 to 1.500-6.



Engineering drawing · dimensions in inches

Specification

Item	Value
Current standard	NASM122076 (part numbers unchanged)
Type	Helical coil insert, coarse thread
Material	Corrosion-resistant steel, AMS 7245 (material and manufacture)
Procurement	MIL-I-8846

Item	Value
Status	Check the current issue before design use. Cancelled by Notice 1 (May 2000) and superseded by NASM122076 thru NASM122115; the part numbers are unchanged.
Supersedes	MS21208 (in part)
Federal supply class	5340

Dimensions by size

Dimension	.086-56	.099-48	.112-40	.125-40	.138-32	.164-32	.190-24	.250-20	.3125-18	.375-16	.4375-14	.500-13	.5625-12	.625-11	.750-10	.875-9	1.000-8	1.125-7	1.250-7	1.375-6	1.500-6
A min — A, min flat (view AB)	.0027	.0043	.0068	.0068	.0076	.0076	.0120	.0164	.0176	.0215	.0267	.0273	.0334	.0351	.0402	.0466	.0544	.0645	.0645	.0775	.0775
B min — B, min (free outer dia)	.110	.128	.144	.158	.178	.205	.244	.310	.380	.452	.526	.597	.669	.742	.881	1.022	1.166	1.315	1.443	1.598	1.727
B max — B, max (free outer dia)	.119	.139	.159	.173	.193	.220	.259	.330	.400	.472	.551	.622	.694	.767	.906	1.052	1.196	1.355	1.483	1.643	1.772
C — C, number of free coils (±.250 coil)	3.000	2.875	2.750	3.250	2.750	3.500	2.875	3.375	4.000	4.375	4.500	4.875	5.125	5.250	5.875	6.250	6.375	6.125	7.000	6.500	7.250
D min — D, min (section X-X)	.0163	.0196	.0241	.0241	.0295	.0295	.0410	.0500	.0560	.0636	.0730	.0758	.0861	.0909	.1007	.1124	.1264	.1451	.1451	.1695	.1695
D max — D, max (section X-X)	.0193	.0226	.0271	.0271	.0338	.0338	.0449	.0540	.0600	.0677	.0770	.0829	.0900	.0980	.1079	.1199	.1350	.1546	.1546	.1799	.1799
E min — E, min (section X-X)	.0126	.0152	.0189	.0189	.0233	.0233	.0305	.0378	.0416	.0477	.0545	.0593	.0649	.0715	.0795	.0892	.1004	.1160	.1160	.1368	.1368
E max — E, max (section X-X)	.0156	.0182	.0219	.0219	.0273	.0273	.0365	.0438	.0486	.0547	.0625	.0673	.0729	.0795	.0875	.0972	.1094	.1250	.1250	.1458	.1458
F — F, gage (section X-X)	.00893	.01042	.01250	.01250	.01563	.01563	.02083	.02500	.02778	.03125	.03571	.03846	.04167	.04545	.05000	.05556	.06250	.07143	.07143	.08333	.08333
H min — H, min (section X-X)	.0112	.01313	.01584	.01584	.01985	.01985	.02656	.03198	.03558	.04009	.04589	.04946	.05363	.05855	.06445	.07167	.08069	.09229	.09229	.10775	.10775
H max — H, max (section X-X)	.0116	.01353	.01624	.01624	.02030	.02030	.02706	.03248	.03608	.04059	.04639	.04996	.05413	.05905	.06495	.07217	.08119	.09279	.09279	.10825	.10825
J min — J, min (measured 30° from tang)	.103	.120	—	—	—	—	—	—	.375	.445	.518	.586	.656	.727	.840	.991	1.135	1.260	1.366	1.545	1.676
J max — J, max (measured 30° from tang)	.111	.131	—	—	—	—	—	—	.390	.462	.536	.606	.676	.747	.885	1.026	1.170	1.315	1.416	1.598	1.727
P min — P, min	.062	.070	.070	.078	.091	.118	.141	.182	.214	.269	.313	.348	.390	.421	.453	.500	.526	.557	.679	.689	.811
P max — P, max	.080	.090	.095	.108	.121	.153	.176	.233	.286	.348	.411	.458	.520	.567	.640	.734	.781	.843	.937	1.093	1.187
Q — Q, angle	75° - 150°	75° - 150°	25° - 100°	25° - 100°	25° - 100°	20° - 100°	15° - 90°	20° - 80°	20° - 80°	20° - 80°	20° - 80°	20° - 80°	20° - 80°	20° - 80°	60° - 120°	60° - 120°	60° - 120°	60° - 120°	60° - 120°	60° - 120°	60° - 120°
R min — R, min (tangent to flanks, view AB)	.0032	.0038	.0045	.0045	.0056	.0056	.0075	.0090	.0100	.0113	.0129	.0139	.0150	.0164	.0180	.0200	.0226	.0258	.0258	.0301	.0301
S min — S, min (view AB)	.0056	.0065	.0078	.0078	.0098	.0098	.0130	.0156	.0174	.0195	.0223	.0240	.0260	.0284	.0312	.0347	.0391	.0446	.0446	.0521	.0521

Dimensions in inches, as tabulated in the standard; C is a number of coils and Q an angle. Letters as on the standard's drawing.

Reference data. The aircraft manufacturer's documentation (SRM / IPC) takes precedence.

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Part numbers

Part no.	Size	Type	Nominal length, in	Approx. weight, lb per 100
MS122095	.086-56	Notched	.086	.0051
MS122115	.099-48	Notched	.099	.0077
MS122076	.112-40	Notched	.112	.0121
MS122096	.112-40	Unnotched (inactive for design)	.112	.0121
MS122077	.125-40	Notched	.125	.0154
MS122097	.125-40	Unnotched (inactive for design)	.125	.0154
MS122078	.138-32	Notched	.138	.0243
MS122098	.138-32	Unnotched (inactive for design)	.138	.0243
MS122079	.164-32	Notched	.164	.0355
MS122099	.164-32	Unnotched (inactive for design)	.164	.0355
MS122080	.190-24	Notched	.190	.0573
MS122100	.190-24	Unnotched (inactive for design)	.190	.0573
MS122081	.250-20	Notched	.250	.145
MS122101	.250-20	Unnotched (inactive for design)	.250	.145
MS122082	.3125-18	Notched	.312	.232
MS122102	.3125-18	Unnotched (inactive for design)	.312	.232
MS122083	.375-16	Notched	.375	.391
MS122103	.375-16	Unnotched (inactive for design)	.375	.391
MS122084	.4375-14	Notched	.438	.667
MS122104	.4375-14	Unnotched (inactive for design)	.438	.667
MS122085	.500-13	Notched	.500	.794
MS122105	.500-13	Unnotched (inactive for design)	.500	.794
MS122086	.5625-12	Notched	.562	1.235
MS122106	.5625-12	Unnotched (inactive for design)	.562	1.235
MS122087	.625-11	Notched	.625	1.515
MS122107	.625-11	Unnotched (inactive for design)	.625	1.515
MS122088	.750-10	Notched	.750	2.778
MS122108	.750-10	Unnotched (inactive for design)	.750	2.778
MS122089	.875-9	Notched	.875	4.545
MS122109	.875-9	Unnotched (inactive for design)	.875	4.545
MS122090	1.000-8	Notched	1.000	5.882
MS122110	1.000-8	Unnotched (inactive for design)	1.000	5.882
MS122091	1.125-7	Notched	1.125	8.392
MS122111	1.125-7	Unnotched (inactive for design)	1.125	8.392
MS122092	1.250-7	Notched	1.250	10.487
MS122112	1.250-7	Unnotched (inactive for design)	1.250	10.487
MS122093	1.375-6	Notched	1.375	14.505
MS122113	1.375-6	Unnotched (inactive for design)	1.375	14.505
MS122094	1.500-6	Notched	1.500	17.563
MS122114	1.500-6	Unnotched (inactive for design)	1.500	17.563

Every part number of MS122076 thru MS122115, notched and unnotched, by thread size. The standard governs.

How to read the part number

Part	Meaning
Example	MS122076 — Notched insert for a .112-40 thread, nominal length .112

Notes

- **Current standard: NASM122076.** MS122076 is now controlled by **NASM122076** (MS122076 thru MS122115 Rev. D Notice 1). The part numbers do not change: **MS122095** is still the number on drawings, IPCs and bags, and it is the same part. Order it by that number; the current document is NASM122076.
- Nominal length equals the basic thickness of plate for the insert assembly. The assembled length of the insert is as specified on MS33537.
- The number of free coils is counted, and the assembled length measured, 90° from the tang.
- An insert assembled in a tapped hole as specified in MS33537 produces a finished thread meeting all requirements of MIL-S-7742 and accepts external MIL-S-8879 threads.
- Ends of coil may be square or angular. The centerline of the wire section is square with the coil axis within 5°. The first coil diameter meets the free diameter 210° from the tang, within 20°. The notch is on the top face or edge of the first coil.
- Unnotched inserts are inactive for design after 15 Oct 1969: use notched inserts. Notched inserts can universally replace the unnotched inserts, but unnotched inserts cannot replace the notched inserts.
- Surface texture per ANSI B46.1-1962. Identification: part number and manufacturer's identification marked on the container. Do not use unassigned part numbers.

SOURCES · MS122076 thru MS122115 Rev. D, 24 Feb 1976 — Insert, CRES Helical Coil Coarse Thread, 1 Dia Nominal Length

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/inserts/ms122076/

Reference data. The aircraft manufacturer's documentation (SRM / IPC) takes precedence.

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