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MS35219 screw — pan, cross-recessed

MS35219: pan head machine screw, cross-recessed, 2024 aluminum alloy, anodized, UNF-2A threads, sizes .086 to .375.

Specification

Item	Value
Head	pan, cross-recessed
Drive	cross-recess (MS9006)
Thread series	UNF-2A
Material	Aluminum alloy 2024, QQ-A-200/3 or QQ-A-225/6; minimum ultimate tensile strength 62000 psi

Item	Value
Finish	Anodized, MIL-A-8625, Type I or II, Class 1
Procurement	FF-S-92
Thread specification	FED-STD-H28/2
Status	Check the current issue before design use. Rev. B (12 Jun 1974). Notice 1 (20 May 1988): reviewed and determined valid for use in acquisition. Amendment 1 (5 Oct 1992): P head radius changed from minimum to reference; threads per FED-STD-H28/2, acceptability per FED-STD-H28/20, System 21. Notice 2 (18 Nov 1999): Inactive for new design; used only for replacement purposes. Notice 3 (Sep 2018): remains inactive for new design; valid for use. Notice 4 (Mar 2025): remains inactive for new design; valid for use.

Dimensions by size

Dimension, in	.086-64 UNF-2A	.112-48 UNF-2A	.138-40 UNF-2A	.164-36 UNF-2A	.190-32 UNF-2A	.250-28 UNF-2A	.3125-24 UNF-2A	.375-24 UNF-2A
D body dia	.0733 - .0860	.0954 - .1120	.1184 - .1380	.1424 - .1640	.1658 - .1900	.2225 - .2500	.2806 - .3125	.3430 - .3750
A head dia	.155 - .167	.205 - .219	.256 - .270	.306 - .322	.357 - .373	.473 - .492	.594 - .615	.716 - .740
H head height	.053 - .062	.070 - .080	.087 - .097	.105 - .115	.122 - .133	.162 - .175	.203 - .218	.244 - .261
P head radius ref	.010	.010	.015	.015	.020	.035	.040	.040
R fillet radius max	.013	.017	.021	.025	.029	.038	.047	.056
driver size	1	1	2	2	2	3	4	4
min tensile lbf	240	400	620	910	1240	2250	3600	5430

Inches, minimum - maximum as tabulated in MS35219 Rev. B; letters as on the standard's drawing. P is a reference value (Amendment 1).

Part numbers and lengths

.086-64 UNF-2A 9 part numbers · tolerance +.00/-.03

Part no.	Length, in
MS35219-1	.12
MS35219-2	.19
MS35219-3	.25
MS35219-4	.31
MS35219-5	.38
MS35219-6	.44
MS35219-7	.50
MS35219-8	.62
MS35219-9	.75

.112-48 UNF-2A 11 part numbers · tolerance +.00/-.03

Part no.	Length, in
MS35219-10	.12
MS35219-11	.19
MS35219-12	.25
MS35219-13	.31
MS35219-14	.38
MS35219-15	.44
MS35219-16	.50
MS35219-17	.62
MS35219-18	.75
MS35219-19	.88
MS35219-20	1.00

.138-40 UNF-2A 15 part numbers

Part no.	Length, in	Tol.
MS35219-21	.12	+.00/-.03
MS35219-22	.19	+.00/-.03
MS35219-23	.25	+.00/-.03
MS35219-24	.31	+.00/-.03
MS35219-25	.38	+.00/-.03
MS35219-26	.44	+.00/-.03
MS35219-27	.50	+.00/-.03
MS35219-28	.62	+.00/-.03
MS35219-29	.75	+.00/-.03
MS35219-30	.88	+.00/-.03
MS35219-31	1.00	+.00/-.03
MS35219-32	1.25	+.00/-.06
MS35219-33	1.50	+.00/-.06
MS35219-34	1.75	+.00/-.06
MS35219-35	2.00	+.00/-.06

.164-36 UNF-2A 15 part numbers

Part no.	Length, in	Tol.
MS35219-36	.12	+.00/-.03
MS35219-37	.19	+.00/-.03
MS35219-38	.25	+.00/-.03
MS35219-39	.31	+.00/-.03
MS35219-40	.38	+.00/-.03
MS35219-41	.44	+.00/-.03
MS35219-42	.50	+.00/-.03
MS35219-43	.62	+.00/-.03
MS35219-44	.75	+.00/-.03
MS35219-45	.88	+.00/-.03
MS35219-46	1.00	+.00/-.03
MS35219-47	1.25	+.00/-.06
MS35219-48	1.50	+.00/-.06
MS35219-49	1.75	+.00/-.06
MS35219-50	2.00	+.00/-.06

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

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.190-32 UNF-2A 15 part numbers

Part no.	Length, in	Tol.
MS35219-51	.25	+.00/-.03
MS35219-52	.31	+.00/-.03
MS35219-53	.38	+.00/-.03
MS35219-54	.44	+.00/-.03
MS35219-55	.50	+.00/-.03
MS35219-56	.62	+.00/-.03
MS35219-57	.75	+.00/-.03
MS35219-58	.88	+.00/-.03
MS35219-59	1.00	+.00/-.03
MS35219-60	1.25	+.00/-.06
MS35219-61	1.50	+.00/-.06
MS35219-62	1.75	+.00/-.06
MS35219-63	2.00	+.00/-.06
MS35219-64	2.25	+.00/-.09
MS35219-65	2.50	+.00/-.09

.250-28 UNF-2A 14 part numbers

Part no.	Length, in	Tol.
MS35219-66	.31	+.00/-.03
MS35219-67	.38	+.00/-.03
MS35219-68	.44	+.00/-.03
MS35219-69	.50	+.00/-.03
MS35219-70	.62	+.00/-.03
MS35219-71	.75	+.00/-.03
MS35219-72	.88	+.00/-.03
MS35219-73	1.00	+.00/-.03
MS35219-74	1.25	+.00/-.06
MS35219-75	1.50	+.00/-.06
MS35219-76	1.75	+.00/-.06
MS35219-77	2.00	+.00/-.06
MS35219-78	2.25	+.00/-.09
MS35219-79	2.50	+.00/-.09

.3125-24 UNF-2A 13 part numbers

Part no.	Length, in	Tol.
MS35219-80	.38	+.00/-.03
MS35219-81	.44	+.00/-.03
MS35219-82	.50	+.00/-.03
MS35219-83	.62	+.00/-.03
MS35219-84	.75	+.00/-.03
MS35219-85	.88	+.00/-.03
MS35219-86	1.00	+.00/-.03
MS35219-87	1.25	+.00/-.06
MS35219-88	1.50	+.00/-.06
MS35219-89	1.75	+.00/-.06
MS35219-90	2.00	+.00/-.06
MS35219-91	2.25	+.00/-.09
MS35219-92	2.50	+.00/-.09

.375-24 UNF-2A 13 part numbers

Part no.	Length, in	Tol.
MS35219-93	.50	+.00/-.03
MS35219-94	.62	+.00/-.03
MS35219-95	.75	+.00/-.03
MS35219-96	.88	+.00/-.03
MS35219-97	1.00	+.00/-.03
MS35219-98	1.25	+.00/-.06
MS35219-99	1.50	+.00/-.06
MS35219-100	1.75	+.00/-.06
MS35219-101	2.00	+.00/-.06
MS35219-102	2.25	+.00/-.09
MS35219-103	2.50	+.00/-.09
MS35219-104	2.75	+.00/-.09
MS35219-105	3.00	+.00/-.09

How to read the part number

Part	Meaning
Format	MS35219-<dash number>
Example	MS35219-1: .086-64 UNF-2A, .12 long
Length tolerance, .12 to 1.00	+.00/-.03
Length tolerance, 1.25 to 2.00	+.00/-.06
Length tolerance, 2.25 to 3.00	+.00/-.09
Dash	Dash number from Table I selects size and length (1 to 105)

Notes

- Thread length: full form threads extend to within 2 threads or less of the head bearing surface for lengths through 2.00; longer screws have a minimum full form thread length of 1.50.
- Recess in accordance with MS9006. Tensile strength in the table is the minimum, in pounds.
- Supersedes MS35236, MS35314 and, in part, MS35357, MS35359 thru MS35362, MS35364 thru MS35366, AN520 and AN526. Sheets 2 and 3 of the standard list the cancelled dash numbers and the MS35219 numbers that replace them.
- Part number: the MS number plus the dash number, for example MS35219-1.

SOURCES · MS35219 Rev. B, 12 Jun 1974 — Screw, Machine - Pan Head, Cross-Recessed, Aluminum Alloy, UNF-2A

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theaviationpoint.com/parts/screws/ms35219/

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