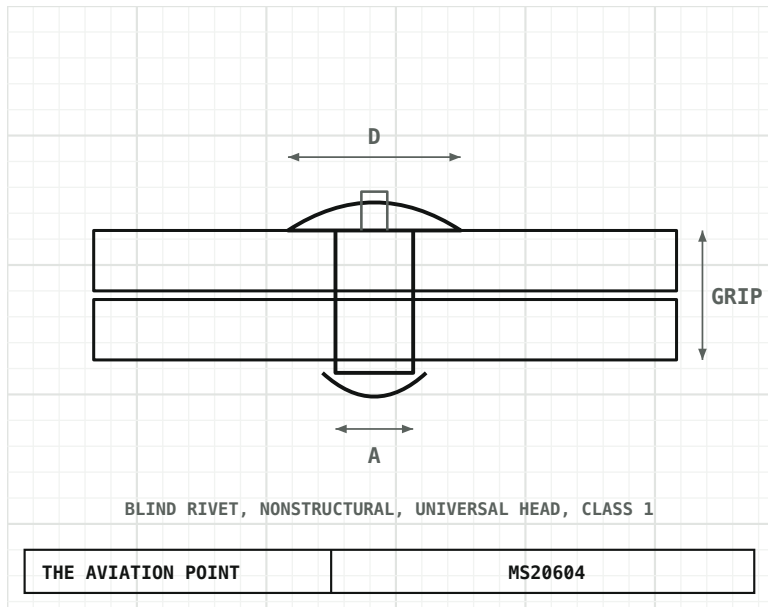
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MS20604 — blind rivet, nonstructural, universal head, Class 1

MS20604: nonstructural blind rivet with a universal head, Class 1, in carbon steel, CRES, aluminum alloy or Monel.



Engineering drawing · dimensions in inches

Specification

Item	Value
Type	Blind rivet, nonstructural, universal head
Material	Sleeve: carbon steel C1008, C1012 or C1018 (ASTM A510), A286 CRES (AMS 5731), 5056 or 2117 aluminum alloy (QQ-A-430) or Monel, class A (QQ-N-281). Stem: 305 CRES (ASTM A493) for R and H; carbon steel for the other codes (ASTM A510 for S, B, AD, ML, CA and FL)
Finish	S: cadmium plate (QQ-P-416, type II, class 2), sleeve and stem. R: sleeve and stem passivated (QQ-P-35), sleeve dry film lube (MIL-L-46010, type I). H: sleeve cadmium plated (QQ-P-416, type II, class 2), stem passivated (QQ-P-35). B: anodize (MIL-A-8625, type II, class 1) or chemical surface treatment (MIL-C-5541, class 1A). AD: anodize (MIL-A-8625, type I, class 1) or chemical surface treatment (MIL-C-5541, class 1A). MP cadmium plate (QQ-P-416, type II, class 2), ML silver plate (QQ-S-365), CA WWM Carbo wax, FL dry film lube (MIL-L-46010, type I), M no finish. Carbon steel stems: as required for corrosion protection
Procurement	MIL-R-8814
Status	Cancelled by Notice 1 (9 Sep 1999) and superseded by NASM20604; the part numbers are identical.

Dimensions by size

Dimension, in	.094	.125	.156	.187	.250
A — ØA, shank dia (a): +.003 / -.001 aluminum alloy (AD, B); +.003 / -.002 Monel, CRES and steel	.094	.125	.156	.187	.250
D — ØD, head dia	.187 ± .009	.250 ± .012	.312 ± .016	.375 ± .019	.500 ± .035
E — E, head height (+.010 / -.000)	.040	.054	.067	.080	.107

Dimensions in inches, as tabulated in the standard (letters as on its drawing).

Part numbers

.094 64 part numbers

Part no.	Material code	Grip min, in	Grip max, in	Length max, in	F max, in	Mandrel loaded (C)	Plain stem (T)
MS20604MP3W1	MP	.015	.062	.140	.281	MS20604MP3C1	MS20604MP3T1
MS20604MP3W2	MP	.063	.125	.203	.281	MS20604MP3C2	MS20604MP3T2
MS20604MP3W3	MP	.126	.187	.265	.343	MS20604MP3C3	MS20604MP3T3
MS20604MP3W4	MP	.188	.250	.328	.405	MS20604MP3C4	MS20604MP3T4
MS20604AD3W1	AD	.015	.062	.140	.281	MS20604AD3C1	MS20604AD3T1
MS20604AD3W2	AD	.063	.125	.203	.281	MS20604AD3C2	MS20604AD3T2
MS20604AD3W3	AD	.126	.187	.265	.343	MS20604AD3C3	MS20604AD3T3
MS20604AD3W4	AD	.188	.250	.328	.405	MS20604AD3C4	MS20604AD3T4

.125 77 part numbers

Part no.	Material code	Grip min, in	Grip max, in	Length max, in	F max, in	Mandrel loaded (C)	Plain stem (T)
MS20604MP4W1	MP	.015	.062	.170	.256	MS20604MP4C1	MS20604MP4T1
MS20604MP4W2	MP	.063	.125	.232	.318	MS20604MP4C2	MS20604MP4T2
MS20604MP4W3	MP	.126	.187	.295	.381	MS20604MP4C3	MS20604MP4T3
MS20604MP4W4	MP	.188	.250	.357	.443	MS20604MP4C4	MS20604MP4T4
MS20604MP4W5	MP	.251	.312	.420	.506	MS20604MP4C5	MS20604MP4T5
MS20604MP4W6	MP	.318	.375	.482	.568	—	MS20604MP4T6
MS20604MP4W7	MP	.376	.437	.544	.630	MS20604MP4C7	MS20604MP4T7
MS20604MP4W8	MP	.438	.500	.607	.693	MS20604MP4C8	MS20604MP4T8

.156 49 part numbers

Part no.	Material code	Grip min, in	Grip max, in	Length max, in	F max, in	Mandrel loaded (C)	Plain stem (T)
MS20604MP5W2	MP	.015	.125	.274	.440	MS20604MP5C2	MS20604MP5T2
MS20604MP5W4	MP	.126	.250	.399	.560	MS20604MP5C4	MS20604MP5T4
MS20604MP5W6	MP	.251	.375	.524	.690	MS20604MP5C6	MS20604MP5T6
MS20604MP5W8	MP	.376	.500	.679	.810	MS20604MP5C8	MS20604MP5T8
MS20604AD5W2	AD	.015	.125	.274	.440	MS20604AD5C2	MS20604AD5T2
MS20604AD5W4	AD	.126	.250	.399	.560	MS20604AD5C4	MS20604AD5T4
MS20604AD5W6	AD	.251	.375	.524	.690	MS20604AD5C6	MS20604AD5T6
MS20604AD5W8	AD	.376	.500	.679	.810	MS20604AD5C8	MS20604AD5T8

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

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.187 79 part numbers

Part no.	Material code	Grip min, in	Grip max, in	Length max, in	F max, in	Mandrel loaded (C)	Plain stem (T)
MS20604MP6W2	MP	.015	.125	.301	.480	MS20604MP6C2	MS20604MP6T2
MS20604MP6W4	MP	.126	.250	.426	.600	MS20604MP6C4	MS20604MP6T4
MS20604MP6W6	MP	.251	.375	.551	.720	MS20604MP6C6	MS20604MP6T6
MS20604MP6W8	MP	.376	.500	.706	.840	MS20604MP6C8	MS20604MP6T8
MS20604MP6W10	MP	.501	.625	.801	.970	MS20604MP6C10	MS20604MP6T10
MS20604MP6W12	MP	.626	.750	.926	1.100	MS20604MP6C12	MS20604MP6T12
MS20604MP6W14	MP	.751	.875	1.051	1.220	MS20604MP6C14	MS20604MP6T14
MS20604AD6W2	AD	.015	.125	.301	.480	MS20604AD6C2	MS20604AD6T2

.250 86 part numbers

Part no.	Material code	Grip min, in	Grip max, in	Length max, in	F max, in	Mandrel loaded (C)	Plain stem (T)
MS20604MP8W2	MP	.015	.125	.342	.520	MS20604MP8C2	MS20604MP8T2
MS20604MP8W4	MP	.126	.250	.447	.650	MS20604MP8C4	MS20604MP8T4
MS20604MP8W6	MP	.251	.375	.572	.770	MS20604MP8C6	MS20604MP8T6
MS20604MP8W8	MP	.376	.500	.697	.890	MS20604MP8C8	MS20604MP8T8
MS20604MP8W10	MP	.501	.625	.822	1.020	MS20604MP8C10	MS20604MP8T10
MS20604MP8W12	MP	.626	.750	.947	1.150	MS20604MP8C12	MS20604MP8T12
MS20604MP8W14	MP	.751	.875	1.072	1.270	MS20604MP8C14	MS20604MP8T14
MS20604MP8W16	MP	.876	1.000	1.195	1.400	MS20604MP8C16	MS20604MP8T16

Showing 40 of 355 rows. Complete table: theaviationpoint.com/parts/blind-fasteners/ms20604/

How to read the part number

Part	Meaning
MP	Material: Monel sleeve, cadmium plated (inactive)
AD	Material: 2117 aluminum alloy sleeve
B	Material: 5056 aluminum alloy sleeve
FL	Material: Monel sleeve, dry film lube
CA	Material: Monel sleeve, WWM Carbo wax
ML	Material: Monel sleeve, silver plated
M	Material: Monel sleeve, no finish (inactive)
S	Material: Carbon steel C1008, C1012, C1018 sleeve and stem, cadmium plated
H	Material: A286 CRES sleeve, cadmium plated; 305 CRES stem, passivated
R	Material: A286 CRES sleeve, 305 CRES stem, passivated; sleeve dry film lube
Example	MS20604S4W2 — Carbon steel (C1008, C1012, C1018), .125 dia, .063 to .125 grip range, serrated stem

Notes

- **Cancelled: use NASM20604.** MS20604 is cancelled (Cancelled by Notice 1 (9 Sep 1999) and superseded by NASM20604; the part numbers are identical.). Replacement named by the standard: NASM20604. The old number MS20604MP3W1 still turns up on drawings and IPCs: check the replacement for each part before you order.
- Part number: MS20604, the material code, the sleeve diameter in 32nds, the stem type (W serrated stem, C mandrel loaded, T plain stem) and the grip number in .062 in steps: MS20604S4W2.
- Universal head. Fillet under the head .01 max R for aluminum alloy, .02 max R for Monel and A-286. Chamfer and counterbore optional. Sleeve end .015 × 45° chamfer optional. Stem diameter not to exceed the rivet diameter.
- (a) .001 shank diameter increase permissible within .100 in of the base of the head.
- Grip number 1 of the S, H and R rivets covers grips up to .062 in.
- Plain stem rivets (type T) are inactive for new design after 1 November 1986: use serrated stem (type W). Monel rivets with no finish (M) inactive for new design after 3 March 1969. Mandrel loaded 5056 aluminum alloy rivets inactive for new design after 3 March 1969. Cadmium plated Monel rivets (MP) inactive for design after 24 July 1969.
- Cancelled: chemically expanded rivets (stem type E) after 1 March 1983, no superseding document; knob stem rivets (stem type K) after 3 March 1969, use serrated stem (type W); drive pin rivets (stem type H) after 3 March 1969, use MS24662; brazier head after 3 March 1969, use universal head.
- Interchangeability: MS20604 rivets replace the cancelled MS20606 rivets of the same dash numbers. MS20606 rivets cannot replace MS20604 rivets and are used only until existing stock is depleted. Use only the superseding MS parts of the same dash numbers for design and replacement.
- 5056 aluminum alloy rivets are identified by an orange color similar to Fed. Std. No. 595 color 32246.
- Design usage limitations: MS33557. For structural blind rivets use MS20600 and MS20601.
- Approved data governs. Use the fastener the SRM, drawing or IPC calls for.

SOURCES · MS20604 Rev. K, 8 Dec 1995 — Rivet, Blind, Nonstructural, Universal Head, Class 1

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/blind-fasteners/ms20604/

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