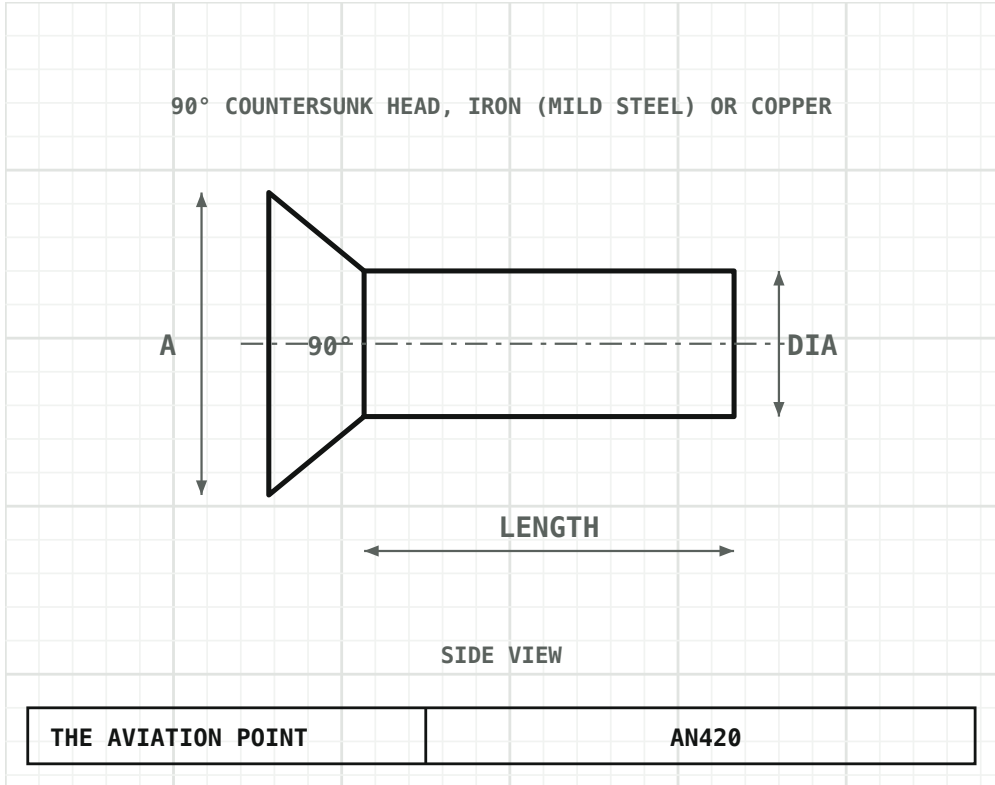
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The Aviation Point

AN420 rivet — 90° countersunk head, iron (mild steel) or copper

AN420: solid rivet with a 90° countersunk head, in iron (mild steel) or copper.



Engineering drawing · dimensions in inches

Specification

Item	Value
Type	Solid rivet, 90° countersunk head
Material	Iron, or C-1006 steel wire (QQ-W-409); copper
Finish	Iron rivets only: cadmium plate (QQ-P-416) or zinc plate (QQ-Z-325), suffix P
Status	Cancelled after 10 December 1965: use MS20427. Inactive for new design (see AN427).

Dimensions by size

Dimension, in	1/16	3/32	1/8	5/32	3/16	1/4	5/16	3/8
DIA — Shank diameter	.062	.094	.125	.156	.187	.250	.312	.375
DIA tolerance	+.003 / -.001	+.003 / -.001	+.004 / -.001	+.004 / -.001	+.004 / -.001	+.004 / -.001	+.004 / -.001	+.004 / -.001
A — Head diameter	.120 ± .006	.175 ± .006	.231 ± .006	.289 ± .006	.346 ± .008	.465 ± .008	.577 ± .008	.694 ± .008
B — Head height	.028 ± .003	.040 ± .003	.055 ± .003	.066 ± .003	.079 ± .004	.106 ± .004	.133 ± .004	.159 ± .004
C — Approx. material for full head	1/16	3/32	7/64	1/8	9/64	7/32	15/64	21/64

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

Part numbers

1/16 15 part numbers

Part no.	Material	Length, in
AN420-2-2	Iron (mild steel)	1/8
AN420-2-3	Iron (mild steel)	3/16
AN420-2-4	Iron (mild steel)	1/4
AN420-2-5	Iron (mild steel)	5/16
AN420-2-6	Iron (mild steel)	3/8
AN420-2-7	Iron (mild steel)	7/16
AN420-2-8	Iron (mild steel)	1/2
AN420-2-10	Iron (mild steel)	5/8
AN420-C2-2	Copper	1/8
AN420-C2-3	Copper	3/16
AN420-C2-4	Copper	1/4
AN420-C2-5	Copper	5/16
AN420-C2-6	Copper	3/8
AN420-C2-7	Copper	7/16
AN420-C2-8	Copper	1/2

3/32 24 part numbers

Part no.	Material	Length, in
AN420-3-3	Iron (mild steel)	3/16
AN420-3-4	Iron (mild steel)	1/4
AN420-3-5	Iron (mild steel)	5/16
AN420-3-6	Iron (mild steel)	3/8
AN420-3-7	Iron (mild steel)	7/16
AN420-3-8	Iron (mild steel)	1/2
AN420-3-10	Iron (mild steel)	5/8
AN420-3-12	Iron (mild steel)	3/4
AN420-3-14	Iron (mild steel)	7/8
AN420-3-16	Iron (mild steel)	1
AN420-3-18	Iron (mild steel)	1-1/8
AN420-3-20	Iron (mild steel)	1-1/4
AN420-C3-3	Copper	3/16
AN420-C3-4	Copper	1/4
AN420-C3-5	Copper	5/16
AN420-C3-6	Copper	3/8
AN420-C3-7	Copper	7/16
AN420-C3-8	Copper	1/2
AN420-C3-10	Copper	5/8
AN420-C3-12	Copper	3/4
AN420-C3-14	Copper	7/8
AN420-C3-16	Copper	1
AN420-C3-18	Copper	1-1/8
AN420-C3-20	Copper	1-1/4

1/8 28 part numbers

Part no.	Material	Length, in
AN420-4-4	Iron (mild steel)	1/4
AN420-4-5	Iron (mild steel)	5/16
AN420-4-6	Iron (mild steel)	3/8
AN420-4-7	Iron (mild steel)	7/16
AN420-4-8	Iron (mild steel)	1/2
AN420-4-10	Iron (mild steel)	5/8
AN420-4-12	Iron (mild steel)	3/4
AN420-4-14	Iron (mild steel)	7/8
AN420-4-16	Iron (mild steel)	1
AN420-4-18	Iron (mild steel)	1-1/8
AN420-4-20	Iron (mild steel)	1-1/4
AN420-4-22	Iron (mild steel)	1-3/8
AN420-4-24	Iron (mild steel)	1-1/2
AN420-4-28	Iron (mild steel)	1-3/4
AN420-C4-4	Copper	1/4
AN420-C4-5	Copper	5/16
AN420-C4-6	Copper	3/8
AN420-C4-7	Copper	7/16
AN420-C4-8	Copper	1/2
AN420-C4-10	Copper	5/8
AN420-C4-12	Copper	3/4
AN420-C4-14	Copper	7/8
AN420-C4-16	Copper	1
AN420-C4-18	Copper	1-1/8
AN420-C4-20	Copper	1-1/4
AN420-C4-22	Copper	1-3/8
AN420-C4-24	Copper	1-1/2

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

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Part no.	Material	Length, in
AN420-C4-28	Copper	1-3/4

5/32 26 part numbers

Part no.	Material	Length, in
AN420-5-5	Iron (mild steel)	5/16
AN420-5-6	Iron (mild steel)	3/8
AN420-5-7	Iron (mild steel)	7/16
AN420-5-8	Iron (mild steel)	1/2
AN420-5-10	Iron (mild steel)	5/8
AN420-5-12	Iron (mild steel)	3/4
AN420-5-14	Iron (mild steel)	7/8
AN420-5-16	Iron (mild steel)	1
AN420-5-18	Iron (mild steel)	1-1/8
AN420-5-20	Iron (mild steel)	1-1/4
AN420-5-22	Iron (mild steel)	1-3/8
AN420-5-24	Iron (mild steel)	1-1/2
AN420-5-28	Iron (mild steel)	1-3/4
AN420-C5-5	Copper	5/16
AN420-C5-6	Copper	3/8
AN420-C5-7	Copper	7/16
AN420-C5-8	Copper	1/2
AN420-C5-10	Copper	5/8
AN420-C5-12	Copper	3/4
AN420-C5-14	Copper	7/8
AN420-C5-16	Copper	1
AN420-C5-18	Copper	1-1/8
AN420-C5-20	Copper	1-1/4
AN420-C5-22	Copper	1-3/8
AN420-C5-24	Copper	1-1/2
AN420-C5-28	Copper	1-3/4

3/16 28 part numbers

Part no.	Material	Length, in
AN420-6-6	Iron (mild steel)	3/8
AN420-6-7	Iron (mild steel)	7/16
AN420-6-8	Iron (mild steel)	1/2
AN420-6-10	Iron (mild steel)	5/8
AN420-6-12	Iron (mild steel)	3/4
AN420-6-14	Iron (mild steel)	7/8
AN420-6-16	Iron (mild steel)	1
AN420-6-18	Iron (mild steel)	1-1/8
AN420-6-20	Iron (mild steel)	1-1/4
AN420-6-22	Iron (mild steel)	1-3/8
AN420-6-24	Iron (mild steel)	1-1/2
AN420-6-28	Iron (mild steel)	1-3/4
AN420-6-32	Iron (mild steel)	2
AN420-6-40	Iron (mild steel)	2-1/2
AN420-6-48	Iron (mild steel)	3
AN420-C6-6	Copper	3/8
AN420-C6-7	Copper	7/16
AN420-C6-8	Copper	1/2
AN420-C6-10	Copper	5/8
AN420-C6-12	Copper	3/4
AN420-C6-14	Copper	7/8
AN420-C6-16	Copper	1
AN420-C6-18	Copper	1-1/8
AN420-C6-20	Copper	1-1/4
AN420-C6-22	Copper	1-3/8
AN420-C6-24	Copper	1-1/2
AN420-C6-28	Copper	1-3/4
AN420-C6-32	Copper	2

1/4 13 part numbers

Part no.	Material	Length, in
AN420-8-8	Iron (mild steel)	1/2
AN420-8-10	Iron (mild steel)	5/8
AN420-8-12	Iron (mild steel)	3/4
AN420-8-14	Iron (mild steel)	7/8
AN420-8-16	Iron (mild steel)	1
AN420-8-18	Iron (mild steel)	1-1/8
AN420-8-20	Iron (mild steel)	1-1/4
AN420-8-22	Iron (mild steel)	1-3/8
AN420-8-24	Iron (mild steel)	1-1/2
AN420-8-28	Iron (mild steel)	1-3/4
AN420-8-32	Iron (mild steel)	2
AN420-8-40	Iron (mild steel)	2-1/2
AN420-8-48	Iron (mild steel)	3

5/16 12 part numbers

Part no.	Material	Length, in
AN420-10-10	Iron (mild steel)	5/8
AN420-10-12	Iron (mild steel)	3/4
AN420-10-14	Iron (mild steel)	7/8
AN420-10-16	Iron (mild steel)	1
AN420-10-18	Iron (mild steel)	1-1/8
AN420-10-20	Iron (mild steel)	1-1/4
AN420-10-22	Iron (mild steel)	1-3/8
AN420-10-24	Iron (mild steel)	1-1/2
AN420-10-28	Iron (mild steel)	1-3/4
AN420-10-32	Iron (mild steel)	2
AN420-10-40	Iron (mild steel)	2-1/2
AN420-10-48	Iron (mild steel)	3

3/8 8 part numbers

Part no.	Material	Length, in
AN420-12-12	Iron (mild steel)	3/4
AN420-12-16	Iron (mild steel)	1
AN420-12-20	Iron (mild steel)	1-1/4
AN420-12-24	Iron (mild steel)	1-1/2
AN420-12-28	Iron (mild steel)	1-3/4
AN420-12-32	Iron (mild steel)	2
AN420-12-40	Iron (mild steel)	2-1/2
AN420-12-48	Iron (mild steel)	3

How to read the part number

Part	Meaning
Format	AN420<material><dash>
-	Material: Iron (mild steel), unfinished
-C	Material: Copper
Example	AN420-2-2 — Mild steel, 2/32 in diameter, 2/16 in long, unfinished

Notes

- **Cancelled: use MS20427.** AN420 is cancelled (Cancelled after 10 December 1965: use MS20427. There is no superseding part for dash numbers -3-18, -3-20, -C3-18, -3-18P, -C3-20, -3-20P, -C4-18, -C4-20, -C4-22, -C4-24, -C4-28, -C5-18, -C5-20, -C5-22, -C5-24, -C5-28, -C6-28, -C6-32.). Replacement named by the standard: MS20427. The old number AN420-2-2 still turns up on drawings and IPCs: check the replacement for each part before you order.
- Dash number: diameter in 32nds of an inch, then length in 16ths. Copper rivets carry C before the diameter (AN420-C2-2).
- Add P after the dash number for an iron rivet with cadmium or zinc plate: AN420-2-2P is mild steel, 2/32 in diameter, 2/16 in long, cadmium or zinc plated.
- Head angle 90°. Unless otherwise specified, fraction tolerances ±1/64 in.
- Cancelled after 10 December 1965: use MS20427. No superseding part for -3-18, -3-20, -C3-18, -3-18P, -C3-20, -3-20P, -C4-18, -C4-20, -C4-22, -C4-24, -C4-28, -C5-18, -C5-20, -C5-22, -C5-24, -C5-28, -C6-28, -C6-32.
- Rivets must be true to form, concentric and free from injurious scale, fins, seams and all other injurious defects.
- Approved data governs. Use the rivet the SRM, drawing or IPC calls for.

SOURCES · AN420 Rev. 3, 10 Dec 1965 — Rivet - Countersunk Head

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/solid-rivets/an420/