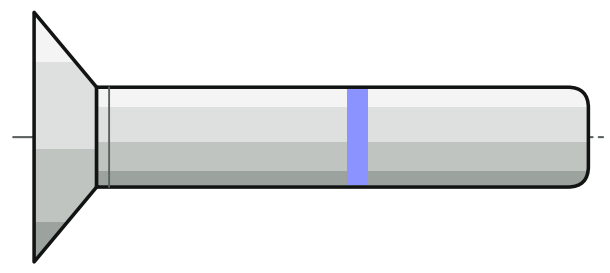
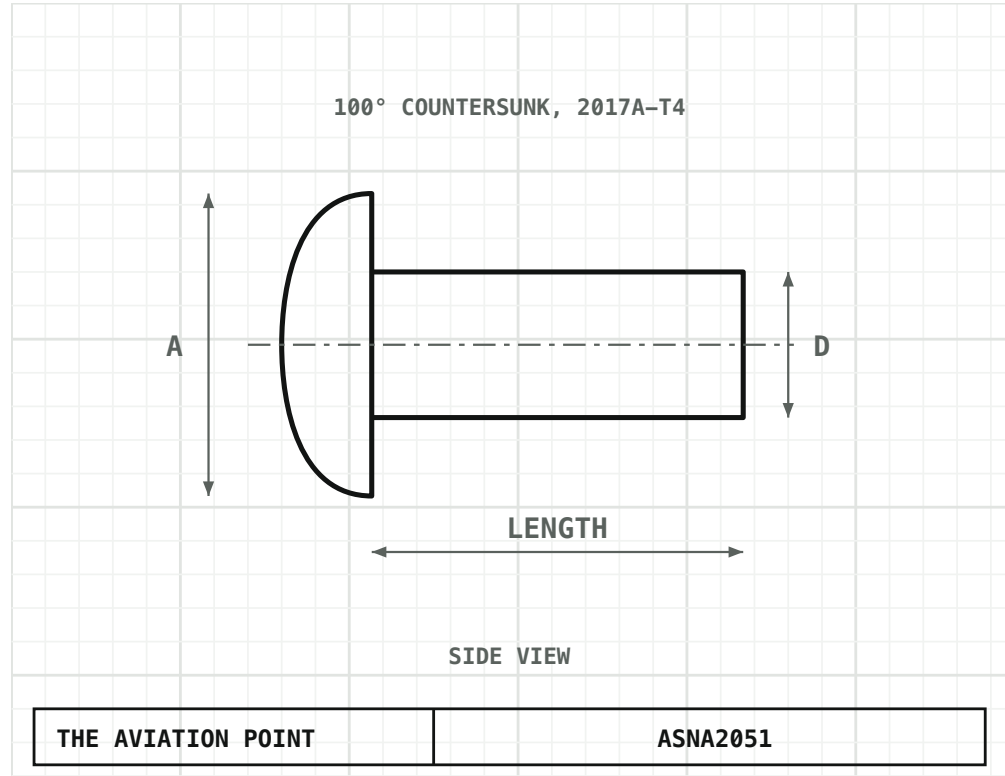
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ASNA2051 rivet — 100° countersunk, 2017A-T4

Solid rivet in 2017A-T4 aluminium alloy (DX), 100° countersunk head: the metric diameters, hole, drill and shop head, as the ASNA standard gives them.



Drawing · solid rivet, 100° countersunk (TF) head, radiused shank end, side view, not to scale



Engineering drawing · dimensions in inches and millimetres

Specification

Item	Value
Type	Solid rivet, metric
Material	2017A-T4 aluminium alloy (old French name A-U4G), code DX; radiused shank end
Finish	J = chemical conversion (Alodine type)
Procurement	Replaces the DE rivets (2017A driven freshly quenched, square shank end)
Status	Partial sheet: the standard gives no part-number construction. Reference data transcribed from the standard, units marked row by row. Check the issue of the standard in force before design use.

Dimensions by size

Dimension, inch first (mm after)	Ø 2.4 mm	Ø 3.2 mm	Ø 4 mm	Ø 4.8 mm
Diameter	2.4 mm = 0.095 in (nearest fraction 3/32 in)	3.2 mm = 0.126 in (nearest fraction 1/8 in)	4 mm = 0.158 in (nearest fraction 5/32 in)	4.8 mm = 0.189 in (nearest fraction 3/16 in)
Hole	0.096–0.100 in (2.43–2.53 mm)	0.127–0.131 in (3.22–3.32 mm)	0.158–0.162 in (4.01–4.11 mm)	0.189–0.193 in (4.80–4.90 mm)
Drill (chart)	#40 (0.0980 in; 2.49 mm)	#30 (0.1285 in; 3.26 mm)	#21 (0.1590 in; 4.04 mm)	#11 (0.1910 in; 4.85 mm)
Shop head D	0.142–0.189 in (3.6–4.8 mm)	0.197–0.236 in (5–6.0 mm)	0.244–0.295 in (6.2–7.5 mm)	0.287–0.343 in (7.3–8.7 mm)
Shop head H	0.031–0.055 in (0.8–1.4 mm)	0.043–0.071 in (1.1–1.8 mm)	0.051–0.087 in (1.3–2.2 mm)	0.063–0.102 in (1.6–2.6 mm)

Millimetres are printed and stated by the standard; the inch values are our conversion (mm ÷ 25.4). The diameters are metric: 4 means 4 mm, never dash -4 (1/8 in).

Part numbers

Part no.	Size
ASNA2051	Ø 2.4 mm · 0.095 in
ASNA2051	Ø 3.2 mm · 0.126 in
ASNA2051	Ø 4 mm · 0.158 in
ASNA2051	Ø 4.8 mm · 0.189 in

One row per diameter: the standard gives no length or diameter codes.

How to read the part number

ASNA2051

ASNA standard
solid rivet · no size codes

Segment	Reads as	Unit of the code · from
ASNA2051 Standard	Solid rivet, ductile 2017A-T4 aluminium alloy (material code DX), radiused shank end. Head: 100° countersunk (TF).	None: the number of the standard · The standard
(none) Diameter	Not written in the number (not given by the standard): Ø 4 mm (0.158 in, our conversion); hole 4.01–4.11 mm; nearest inch size 5/32 in (3.969 mm).	mm, printed by the standard: the diameters are metric (4 means 4 mm, never dash -4); the standard covers Ø 4 and Ø 4.8 mm, the hole table also lists the DX column · Diameter and hole table (Dimensions by size, above)
(none) Length	Not in the number: Not given by the standard.	not given by the standard · not given by the standard

ASNA2051 reads: **ASNA2051** solid rivet, 100° countersunk · diameter Ø 4 mm · length not in the number. The standard covers Ø 4 and Ø 4.8 mm; the hole table also lists 2.4 and 3.2 mm for DX.

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

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Installation

Method	Equipment
Squeezing	One operator, pneumatic squeezers (several yoke lengths) or manual squeezers
Percussion	Pneumatic rivet gun, two people or one operator, with suitable rivet sets and bucking bars

Notes

- Length: L = E + K·D with K = 1.3 for DX (1.5 for 2117 DC, 0.8 for Monel TB), all in mm. Do not cut these rivets to length.
- Head mark: a raised rectangle-circle-rectangle on protruding and reduced countersunk heads only; no mark on the standard countersunk head.
- A #21 drill fits the DX 4 mm hole but not the DC / TB 4 mm hole (4.05–4.15 mm); a #12 fits DX 4.8 but not DC / TB (4.85–4.95); a #41 fits DX 2.4 only.
- Two defective rivets must be separated by at least 5 good ones; defects may affect under 5 % of structural rivets and under 20 % of non-structural ones.
- ASNA2049 is the reduced 100° countersunk head, ASNA2050 the protruding head (TG) and ASNA2051 the 100° countersunk head (TF).

SOURCES · ASNA2051 standard

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/solid-rivets/asna2051/

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