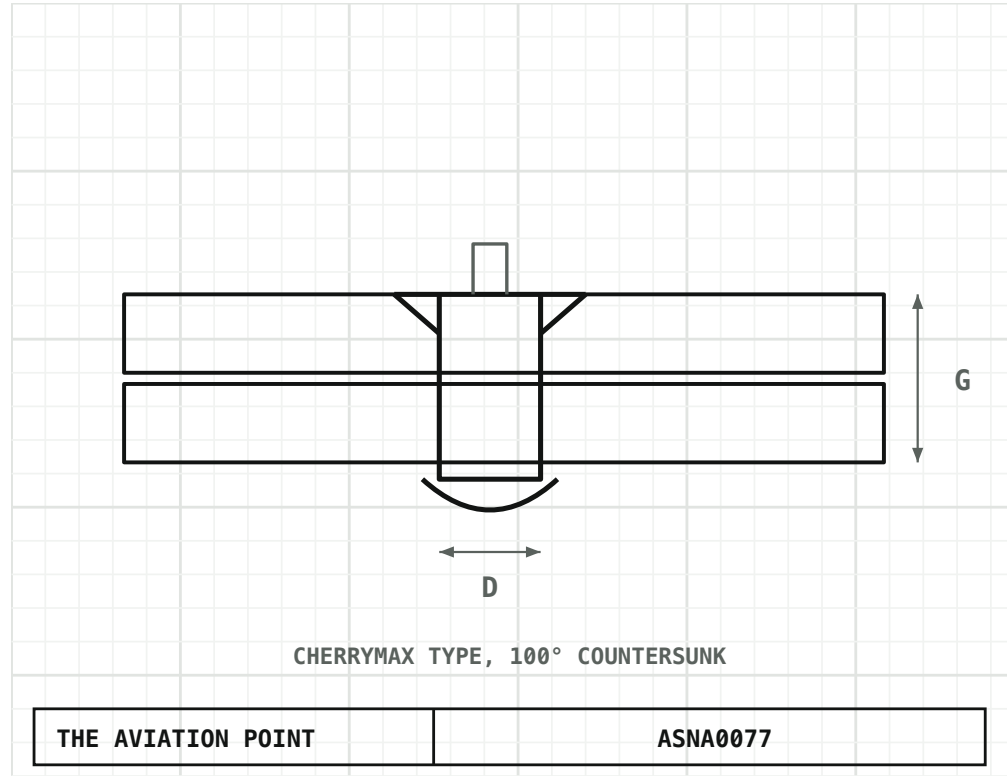
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ASNA0077 — CherryMAX type, 100° countersunk

Blind rivet, CherryMAX type, bulbed, mechanically locked stem, 100° countersunk head, as the ASNA standard gives it: part numbers by diameter and grip, hole and drill, tools and inspection limits.



Photo · blind rivet, 100° countersunk (flush) head. Grey-scale photo: the colour of the driving anvil and the stem material do not show



Engineering drawing · dimensions in inches and millimetres

Specification

Item	Value
Type	Blind rivet, bulbed, mechanically locked stem
Material	Letter A to F: steel or Monel sleeve, aluminium alloy or Monel (see the cross). Head marks: + = stainless-steel stem with aluminium-alloy sleeve; no mark = steel stem; M = Monel sleeve
Locking	Mechanically locked stem with a locking collar
Finish	Not stated in the standard data
Status	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)	-4	-5	-6
Nominal Ø (code)	1/8 in (0.1250 in; 3.175 mm)	5/32 in (0.1562 in; 3.969 mm)	3/16 in (0.1875 in; 4.762 mm)
Printed name	3.2 mm (printed in the tooling block)	4 mm (printed in the tooling block)	4.8 mm (printed in the tooling block)
Hole †	0.1291–0.1319 in (3.28–3.35 mm†)	0.1602–0.1642 in (4.07–4.17 mm†)	0.1921–0.1961 in (4.88–4.98 mm†)
Drill (chart)	#30 (0.1285 in; 3.26 mm), just under the minimum: gauge the hole	#20 (0.1610 in; 4.09 mm)	#10 (0.1935 in; 4.91 mm)
Csk Ø †	0.222–0.228 in (5.64–5.79 mm†)	0.283–0.289 in (7.19–7.35 mm†)	0.350–0.356 in (8.89–9.04 mm†)

Units: no mark = printed in mm and stated by the standard. † = printed with no unit; the inch value is our conversion, reading the figure as mm. Nominal Ø is our reading of the inch code (1/32 in for diameters, 1/16 in for grips). Drill: from the site drill chart, inside the hole range except code 4, where the chart's #30 (0.1285 in) is just under the printed minimum (a drill cuts slightly oversize): gauge the finished hole.

Part numbers

-4 · 1/8 in nominal 13 part numbers

Part no.	Grip, in (mm printed)
ASNA0077A402	to 0.125 (to 3.18)
ASNA0077A403	0.126–0.187 (3.20–4.75)
ASNA0077A404	0.188–0.250 (4.78–6.35)
ASNA0077A405	0.251–0.312 (6.37–7.92)
ASNA0077A406	0.313–0.375 (7.95–9.52)
ASNA0077A407	0.376–0.437 (9.55–11.10)
ASNA0077A408	0.438–0.500 (11.13–12.70)
ASNA0077A409	0.501–0.562 (12.73–14.27)
ASNA0077A410	0.563–0.625 (14.30–15.88)
ASNA0077A411	0.626–0.687 (15.90–17.45)
ASNA0077A412	0.688–0.750 (17.48–19.05)
ASNA0077A413	0.751–0.812 (19.07–20.62)
ASNA0077A414	0.813–0.875 (20.65–22.22)

-5 · 5/32 in nominal 13 part numbers

Part no.	Grip, in (mm printed)
ASNA0077A502	to 0.125 (to 3.18)
ASNA0077A503	0.126–0.187 (3.20–4.75)
ASNA0077A504	0.188–0.250 (4.78–6.35)
ASNA0077A505	0.251–0.312 (6.37–7.92)
ASNA0077A506	0.313–0.375 (7.95–9.52)
ASNA0077A507	0.376–0.437 (9.55–11.10)
ASNA0077A508	0.438–0.500 (11.13–12.70)
ASNA0077A509	0.501–0.562 (12.73–14.27)
ASNA0077A510	0.563–0.625 (14.30–15.88)
ASNA0077A511	0.626–0.687 (15.90–17.45)
ASNA0077A512	0.688–0.750 (17.48–19.05)
ASNA0077A513	0.751–0.812 (19.07–20.62)
ASNA0077A514	0.813–0.875 (20.65–22.22)

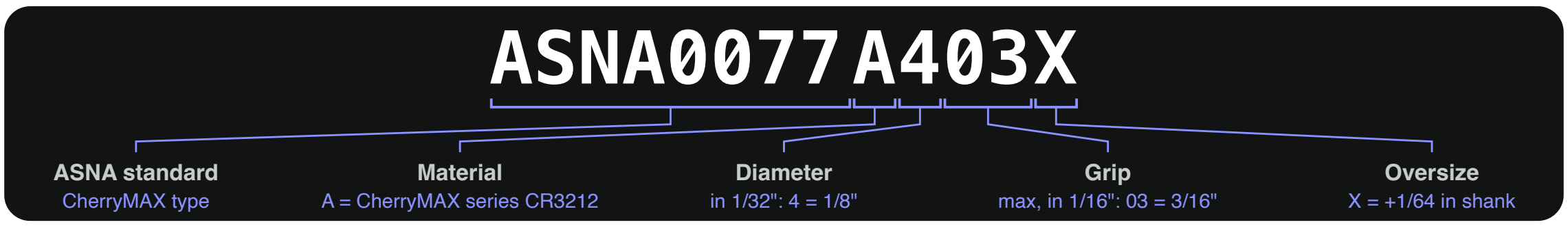
-6 · 3/16 in nominal 13 part numbers

Part no.	Grip, in (mm printed)
ASNA0077A602	to 0.125 (to 3.18)
ASNA0077A603	0.126–0.187 (3.20–4.75)
ASNA0077A604	0.188–0.250 (4.78–6.35)
ASNA0077A605	0.251–0.312 (6.37–7.92)
ASNA0077A606	0.313–0.375 (7.95–9.52)
ASNA0077A607	0.376–0.437 (9.55–11.10)
ASNA0077A608	0.438–0.500 (11.13–12.70)
ASNA0077A609	0.501–0.562 (12.73–14.27)
ASNA0077A610	0.563–0.625 (14.30–15.88)
ASNA0077A611	0.626–0.687 (15.90–17.45)
ASNA0077A612	0.688–0.750 (17.48–19.05)
ASNA0077A613	0.751–0.812 (19.07–20.62)
ASNA0077A614	0.813–0.875 (20.65–22.22)

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

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How to read the part number



Segment	Reads as	Unit of the code · from
ASNA0077 Standard	Bulbed blind rivet, mechanically locked stem with locking collar (CherryMAX type). Head: 100° countersunk.	None: the number of the standard · The standard
A Material	Material letter A (CR3212 / CR3213, NAS9302B / NAS9301B). Letters B to F map to the other CherryMAX and Monel families (public decoder table)	Letter, no unit · Letter list; the meanings marked as a reading come from the partner standards
4 Diameter	1/8 in nominal: 4 × 1/32 in (0.125 in · 3.175 mm, our conversion); hole 0.129–0.132 in · 3.28–3.35 mm (mm by context); countersink diameter 0.222–0.228 in · 5.64–5.79 mm (mm by context).	1/32 in, by the inch dash logic (the standard only prints rounded mm); inch and mm values are our conversion · Diameter and hole table (Dimensions by size, above)
03 Grip	Max grip 3/16 in; stack 0.126–0.187 in · 3.20–4.75 mm.	1/16 in steps, maximum grip (inch dash logic); the range is printed in mm · Grip table (Part numbers, above)
X Oversize	Oversize, +1/64 in on the diameter (public decoder source); the head carries an inverted T	Letter, no unit · Oversize letter (the head carries an inverted T)

ASNA0077A403X reads: **ASNA0077** CherryMAX-type blind rivet, 100° countersunk · **A** CherryMAX series CR3212 · **4** 1/8 in, hole 3.28–3.35 mm, drill #30 · **03** max 3/16 in, stack 3.20–4.75 mm · **X** +1/64 in shank.

Tools

Tool or head	Type	Codes
G747 (stroke 0.437 in; 11.1 mm printed)	pneumatic	4, 5, 6
G27	hand tool	4 only
H701B-456	straight head	4, 5, 6
H747-456 + insert 782-456	straight head	4, 5, 6
H753A-456	right-angle (90°) head	4, 5, 6
H782 + insert 782-456	offset head	4, 5, 6
H781-456	offset head, restricted use	4, 5, 6 (nose setback L = rivet diameter, mandatory for code 4)

Use H781-456 only where access forces it.

Inspection limits

Check	Limit, inch first
Gap under a countersunk head	Not more than 0.004 in (0.10 mm, printed in mm) over no more than half the periphery, on no more than 20 % of the row, never on 2 consecutive rivets
Stem and collar against the head top	Protrusion 0.25 maximum, recess 0.50 maximum (0.38 for code 4). Unit not stated (mm by context): not converted
Convex surfaces	Measure the head gap along the straight generatrices
Stem shaving	Only exceptionally and only if the drawing calls for it
Locking collar	Check that it is present
Countersunk head flush	Ideal 0; accepted +0.05 / −0.10. Unit not stated: not converted

Limits as the standard gives them; the aircraft's SRM governs.

Notes

- Part number: ASNA0077 + material letter (A to F) + diameter code (4, 5 or 6) + grip code (02 and up) + optional X for oversize. The rows show letter A.
- Grips start at 02 (there is no 01 on ASNA0077; ASNA0078 starts at 01); the first code has no minimum. Each code n tops out at n/16 in: code 4 is 0.188–0.250 in (4.78–6.35 mm printed).
- The countersink must not go through the sheet; the figure keeps a small radius (0.25 minimum, unit not stated) at the cone-to-hole junction.
- The printed names 3,2 · 4 · 4,8 are mm (stated in the tooling block): 3,2 mm is 1/8 in rounded. No oversize hole size is printed.
- Units: no mark = printed in mm and stated by the standard. † = printed with no unit; the inch value is our conversion, reading the figure as mm. Nominal Ø is our reading of the inch code (1/32 in for diameters, 1/16 in for grips). Drill: from the site drill chart, inside the hole range except code 4, where the chart's #30 (0.1285 in) is just under the printed minimum (a drill cuts slightly oversize): gauge the finished hole.

SOURCES · ASNA0077 standard · Cherry Aerospace pulling-head sheets · US federal item records and distributor listings

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/blind-fasteners/asna0077/

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