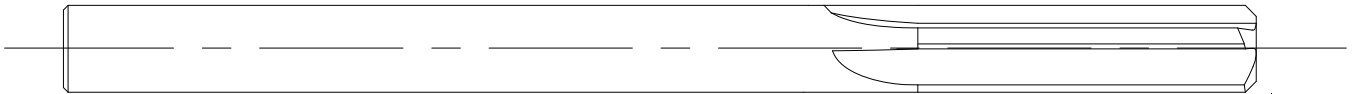


FED. SUPPLY CLASS

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REAMERS, SOLID CARBIDE, RIGHT-HAND CUT, .1250 THROUGH .7500



THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
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ISSUE DATE: JANUARY 31, 2014
REVISION DATE: DECEMBER 30, 2016

THIRD ANGLE PROJECTION	CUSTODIAN ENGINEERING MANAGEMENT COMMITTEE	REVISION 1
PROCUREMENT SPECIFICATION NONE	TITLE REAMERS, SOLID CARBIDE, RIGHT-HAND CUT, .1250 THROUGH .7500	CLASSIFICATION PART STANDARD NAS898 SHEET 1 OF 21



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1. INTRODUCTION

1.1 Purpose

This document provides the aerospace industry with a uniform standard for the procurement of carbide reamers. Utilization of the specified reamers, in accordance with the recommended applications, will ensure the performance of a wide variety of reaming tasks with optimum quality, reliability, and economy.

1.2 Scope

Included in this standard are ordering requirements, reamer design parameters, nomenclature, reamer geometry, and carbide material parameters. Unless otherwise noted, all dimensions are in inches.

2. TOOL FUNCTION

To enlarge the hole size, improve contour and surface finish of a previously produced hole.

3. PACKAGING INSTRUCTIONS

Reamers shall be individually packaged in cardboard or plastic containers, with both ends closed. Extra care shall be taken to prevent damage to carbide. Recyclable packaging materials are preferred.

Each package will contain the following information:

- Manufacturer's name or symbol
- Manufacturing lot number
- Reamer major diameter and pilot diameter (as applicable)
- Tool identification number

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4. TOOL NUMBERING SYSTEM

Standard: NAS898 - A - .3750 - S

Standard with Options: NAS898 - A - .3750 - S - .315 - 7B1 - 4.00 - 1.50 - .300 - 1

Specification: _____

Reamer Type: _____

- A = No Coolant Hole
- B = Axial Coolant Hole
- C = Radial Coolant Hole

Diameter: _____

Helix: _____

- S = Straight
- L = Left Hand
- R = Right Hand

Pilot Diameter: _____

Shank Type: _____

- 1 = Straight Shank
- 2 = Straight Shank With Tri-Flats
- 3 = Quick Change Adapter
- 4 = Reduced Straight Shank
- 5 = Reduced Straight Shank With Tri-Flats
- 6 = Tang Shank
- 7 = Threaded Shank Adapter
 - 7A1 = 1/4-28 Thread - Hex Flats
 - 7A2 = 1/4-28 Thread - Round With Flats
 - 7B1 = 5/16-24 Thread - Hex Flats
 - 7B2 = 5/16-24 Thread - Round With Flats
 - 7C1 = 3/8-24 Thread - Hex Flats
 - 7C2 = 3/8-24 Thread - Round With Flats
 - 7D1 = 7/16-20 Thread - Hex Flats
 - 7D2 = 7/16-20 Thread - Round With Flats
 - 7E1 = 9/16-18 Thread - Hex Flats
 - 7E2 = 9/16-18 Thread - Round With Flats
 - 7F1 = 5/8-18 Thread - Hex Flats
 - 7F2 = 5/8-18 Thread - Round With Flats

Over All Length: _____

Flute Length: _____

Pilot Length: _____

Chamfer Relief Group: _____

- Group 1
- Group 2
- Group 3

Note: Standard reamer configuration contains straight shank, no coolant hole, no pilot, straight flute, and Group 2 chamfer relief. If an option is not chosen, add zero in that place within the tool number. For all other specifications, refer to Table VII.

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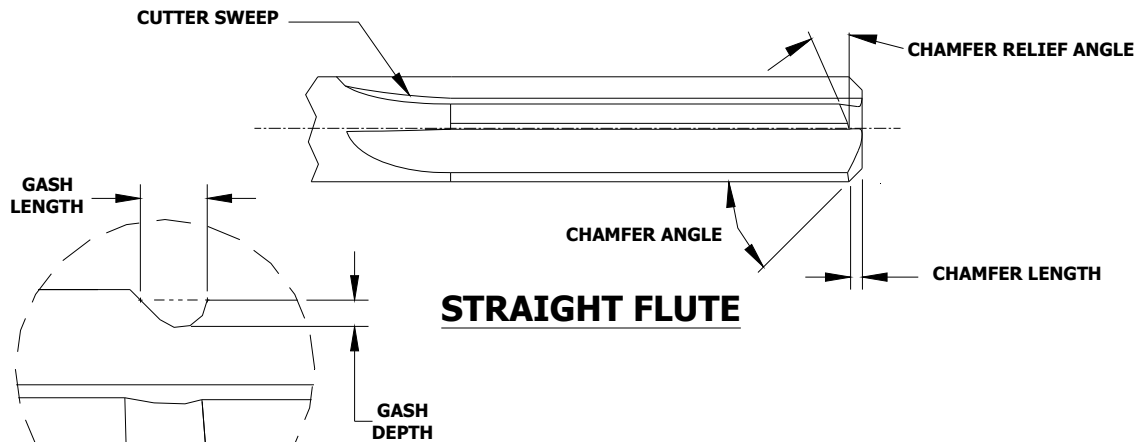
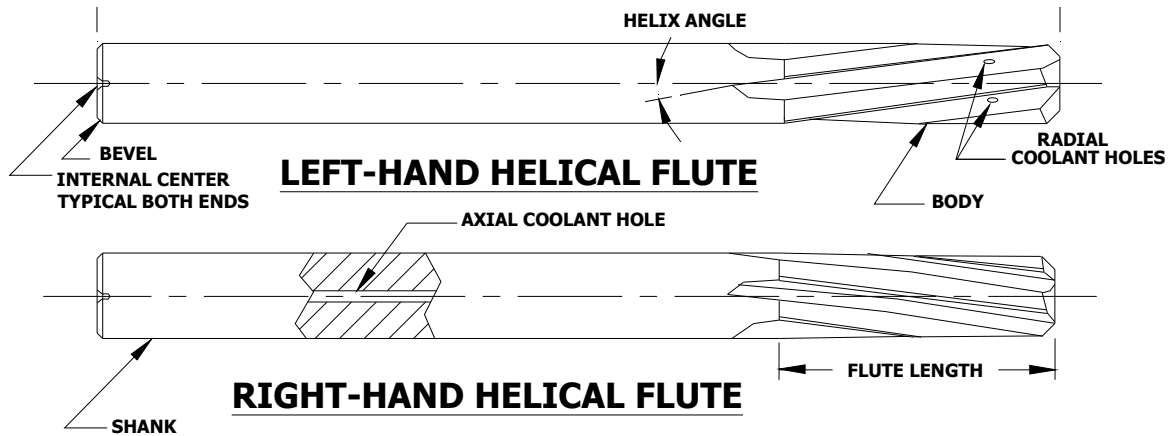
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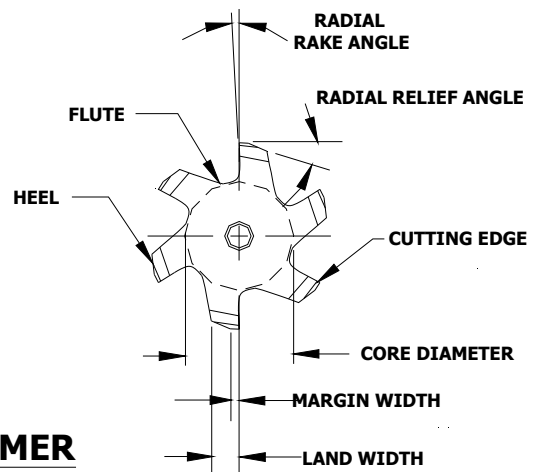
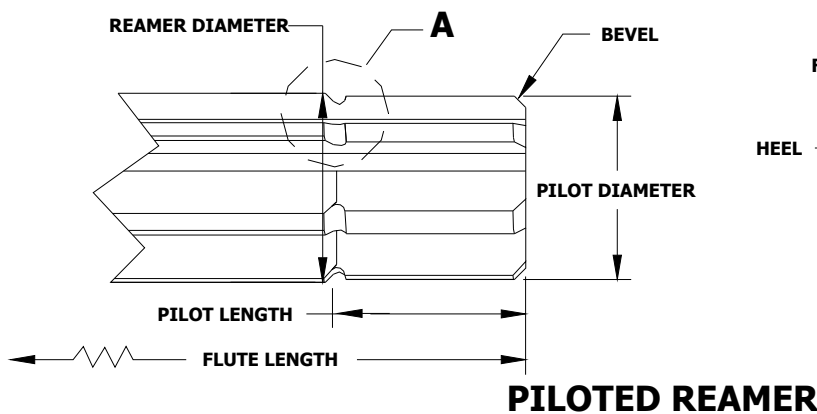
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5. REAMER NOMENCLATURE



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6. SOLID CARBIDE REAMER, STRAIGHT OR HELICAL FLUTES, DIAMETERS 0.1250 – 0.7500

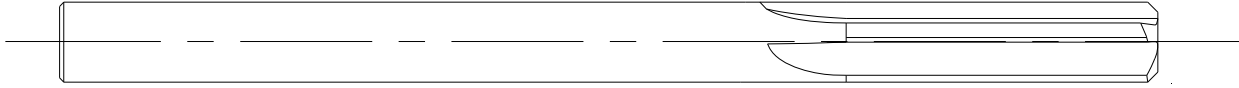


TABLE I – TYPE “A”, “B”, AND “C” REAMERS

Application	See Section 9, Application Details.
Reamer Material Parameters	Tungsten Carbide: 90%±.5% Cobalt: 10% ±.5% Hardness = 91 – 93 HRA Porosity – A02 B00 C00 (per ASTM B276) No eta phase Less than 1% other carbides
Identification	Manufacturer's name or symbol, manufacturing lot number, tool number, major diameter, and pilot diameter (as applicable) to be marked on shank with laser marking. Identification shall be permanent and legible (without magnification). Acid etching is not permitted. Identification marking shall not be raised above the shank surfaces.

See Table VII for reamer sizes, overall and flute lengths, shank diameter, and number of flutes. See Table VIII for element dimensions and tolerances.

7. SHANK CONFIGURATIONS

7.1 Option 1 – Straight Shank

7.2 Option 2 – Straight Shank with Tri-Flats

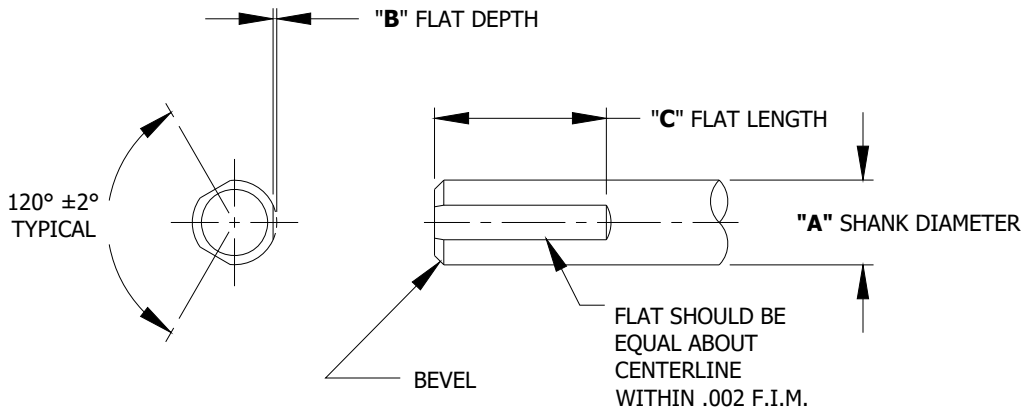


TABLE II – TRI-FLAT DIMENSIONS

"A" Shank Diameter	"B" Flat Depth ±.005	"C" Flat Length ±.12 –.00
.250 - .374	.017	.75
.375 - .425	.025	1.00
.426 - .500	.030	1.25
.501 - .750	.040	1.25