



# ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing



## SOLUTIONS FOR AR10 & AR15 UPPER RECEIVERS

Firearm manufacturers can set their sights on this. Allied Machine has solutions that are ideal for hole finishing on upper receivers for AR10 and AR15 firearms.

New specific ALVAN replaceable head style reamer mandrels provide the **long length of cut** you need.

These AR application specific reamer solutions are now **stocked standard** items and available to expedite your production.



### ALVAN® Reamers Replaceable Head Style

- Diameter range: 11.80 mm - 60.60 mm
- Heads are available as fixed or expanding for improved productivity
- Straight or left-hand helical flutes provide solutions for both through and blind holes
- Cylindrical shanks improve concentricity

Material: 6061 T6 Aluminum

Measure	Carbide-Tipped Chucking Reamer	ALVAN® Replaceable Head Reamer
RPM	1146	2559
Speed	300 SFM	670 SFM
Feed In	0.018 IPR (20.6 IPM)	0.045 IPR (115 IPM)
Feed Out	0.018 IPR (20.6 IPM)	0.090 IPR (230.3 IPM)
Finish	63 Ra	32 Ra
Follow-Up Process	Roller Burnish	None
Cycle Time	0:00:55	0:00:09
Cost Per Hole	\$0.77	\$0.26
Total Parts	3,500	3,500
Total Cost	\$2,691.18	\$933.84

**SURFACE FINISH** **32 Ra**  
no burnishing required

**123% ↑ SPEED**

**150% ↑ FEED**

**84% ↓ CYCLE TIME**

**65% ↓ TOTAL COSTS**

**NOTE:** For improved hole quality, a speed reduction on entry may be required. Please consider a preceding milling or shallow reaming operation to function as a guide for the long length reamer.

**CASE STUDY**  
AR15 UPPER RECEIVER

# AR10 and AR15 Upper Receiver Solutions

01



02



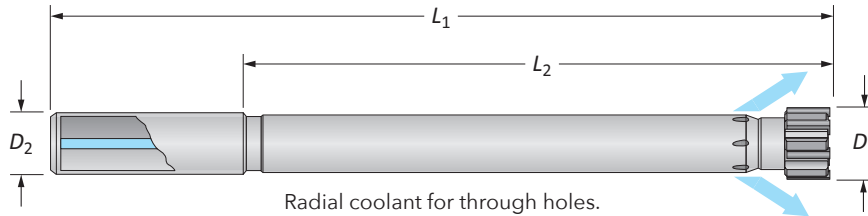
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01

**Mandrel** - Designed specifically for AR10 and AR15 upper receivers

(Available as stocked standard items and ready to ship)



Firearm	Mandrel					Part No.
	$D_1$	$L_2$	$L_1$	$D_2$	No. of Teeth	
AR10	1.1875"	9.65"	11.65"	0.750"	6	7000-MC-AR10
AR15	1.0010"	8.66"	10.63"	0.750"	6	7000-MC-AR15

02

**Head** -

New items designed specifically for AR10 and AR15 upper receivers

(NOW AVAILABLE as stocked standard items and ready to ship)



Firearm	Diameter	Tolerance*	No. of Teeth	Part No. (Uncoated)	Part No. (TiCN coated)	Fixed Screw
AR10	1.1875"	H7 (+0.0010"/-0)	6	17700-KLE-11875	17700-KCE-11875	7000-VI-005
AR15	1.0010"	H7 (+0.0008"/-0)	6	17700-KLE-10010	17700-KCE-10010	7000-VI-004

\*Reamer heads are manufactured to the high end of the tolerance specification for AR applications.

Or item number is customized to your specifications

(Must be ordered separately. See below for lead times)

Lead Time (Work Days)	Coated/Uncoated	Fixed Heads			Expandable Heads		
		1 - 5 pcs	6 - 19 pcs	20+ pcs	1 - 5 pcs	6 - 19 pcs	20+ pcs
		Coated	20	25	25	20	25
Uncoated	15	20	20	15	20	25	

**Ordering the Reamer Head**

Your head item number is customized to your tolerance needs. Refer to page C: 12 - 13 of the Allied Master Product Catalog for the guide to create your item number. Remember, for your reamer head, you must select the lead angle, the substrate, the flute style, and the coating when creating your item number.

**NOTE:** Both fixed and expandable heads are available for recondition.

03

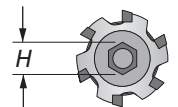
**Screw** -

Connect the head to the mandrel (Available as stocked standard items and ready to ship)

Fixed Screw		
Part No.	H	Firearm
7000-VI-005	6 mm	AR10
7000-VI-004	5 mm	AR15



Expanding Screw		
Part No.	H	Firearm
7000-VI-030	8 mm	AR10
7000-VI-025	6 mm	AR15



Allied Machine offers expert engineering support. Whether you need a quote, a test, or an application solution, a highly skilled and trained engineer is standing by, ready to help. [www.alliedmachine.com/contactus](http://www.alliedmachine.com/contactus)

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