



Allen Benjamin

"In The Pursuit Of Perfection"



High Performance, Application-Specific H.S.S.E. Color Ring Taps

Specifically Designed and Engineered To Handle The Most Demanding Tapping Applications

- Allen Benjamin Application Specific HSSE Taps increase efficiencies, productivity and throughput across a range of materials.
- Available in a wide variety of sizes and styles including:
 - Spiral Point
 - Spiral Flute
 - Straight Flute
 - Form Tap
- Most sizes and styles shipped from stock for rapid delivery.
- Each of the six color ring taps - black, white, yellow, green, blue, red - are manufactured with application-specific design criteria based on the characteristics and hardness range of various materials.
- Manufactured using HSSE material (premium high speed steel), which has a higher cobalt and vanadium content as compared to high speed steel (HSS) taps. This allows greater wear resistance and longer tap life.
- These color ring taps can handle a multitude of materials. Follow the guidelines in the color ring chart shown inside this brochure. Contact customer service for recommendations for part materials not listed.



- Specials are available upon request, made to customer specifications:
 - Varying chamfers
 - Oil hole design
 - Alternate coatings
 - Special thread forms
 - Special size, geometry, length, and tolerance.

...call for availability and pricing.

MATERIAL TYPE / COLOR CODE TABLE

Material application ranges organized by Allen Benjamin color code.

Work Material*	Color Ring	Brinell Hardness Range**
Aluminum - Wrought	● Black	30-80 cold drawn; 75-150 treated/aged
Aluminum - Casting	● Black	40-100 as cast; 70-125 treated/aged
Cast Iron - Gray	◎ White	160-260 as cast; 250-320 quenched/tempered
Cast Iron-Ductile, Malleable	◎ White	160-320
Steel - Low Carbon	● Yellow	125-275
Steel - Med. Carbon	● Yellow	180-425
Steel - High Carbon	● Yellow	180-425
Alloy Steel	● Green	225-400
Stainless - 300 Series	● Blue	135-185 annealed; 225-275 cold drawn
Stainless - 400 Series	● Red	135-425
Stainless - PH Series	● Red	150-440
High Nickel Alloy	● Blue	150-360 Monel; 200-400 Inconel
Titanium Alloy	● Blue	310-440
Die Steel	● Red	250-350
Hardened Steel - <325 BHN	● Red	300-350
Hardened Steel - 325-426 BHN	● Red	300-440

* **NOTE:** For material or material group not shown (such as No Lead Brass), please consult Customer Service.

** **BHN hardness range may vary depending on steel/workpiece condition. See page 64 of the Allen Benjamin Catalog (No. 3-11) for Rockwell-Brinell Hardness Data chart.**

AVAILABLE SURFACE TREATMENTS

See page 62 of Allen Benjamin catalog for surface treatment recommendations.

AlCrN:	Aluminum Chromium Nitride	TiAlN+WC/C:	'Hardlube' - Titanium Aluminum Nitride
CrC:	Chromium Carbide		Aluminum Nitride
CrN:	Chromium Nitride		+Tungsten Carbide/Carbon
DLC:	Diamond-like Carbon	TiCN:	Titanium Carbonitride
N:	Nitride	TiN:	Titanium Nitride
N + Ox:	Nitride + Oxide*	WC/C:	Tungsten Carbide/Carbon
Ox:	Steam Oxide*	WS2:	Tungsten Disulfide
	*Oxide (Ox) may also be shown as 'O'	ZrN:	Zirconium Nitride
TiAlN:	Titanium Aluminum Nitride		

In many applications, a tap that is properly designed and used under recommended conditions will produce acceptable results without the use of surface treatments. However, under some conditions, such as tapping excessively hard, abrasive or challenging materials, the use of performance enhancing surface treatments will be beneficial to the overall results of your tapping operation in terms of improved tool life and internal thread quality. Coolant-through taps may also be a consideration. Contact Allen Benjamin for tapping and treatment recommendations.

ALLEN BENJAMIN TAPS

TEST APPLICATION DATA SHEET

*Be sure to include pertinent comments, blueprints or sketches.
Fill out as many fields as possible. Fax, e-mail or mail to Allen Benjamin.*

Allen Benjamin Rep. (if applicable): _____
Customer Name: _____ Date: ____/____/____
City/State/Zip: _____ Distributor: _____
Phone: _____ Fax: _____ E-Mail: _____
Contact: _____ Title: _____ Extn.: _____

GENERAL INFORMATION

(Application) B/P or Job # _____
Tool Description _____
Tap Style _____ Class of Fit _____ H-Limit _____ Thread Form _____
Surface Treatment _____ Cutting/Forming _____ Blind/Thru Hole _____
Hole Depth _____ Thread Length _____ Tap Drill Size _____ % of Thread _____
Machine Tool _____ Condition _____ Horiz./Vert. _____
Coolant _____ Mix _____ Speed (SFM) _____ # Taps/Set-Up _____
Holder: Tension/Compression _____ Rigid Collet _____ Floating _____
Material _____ Hardness _____ Characteristics _____
Feed: CNC control NC control Synchronous Spindle Manual
 Cam Followed Lead Screw
Unique job details: _____

COMPETITIVE BRAND:

Name _____ Tool Description _____
Current Performance _____ # Holes/Tap _____
Competitive Price (\$) _____ Est. Annual Usage _____
Comments _____

RECOMMENDATIONS:

Tap Style _____ H-Limit _____ Surface Treatment _____ Speed (SFM) _____
Tap/Drill Size _____ Coolant _____ Comments _____

TEST EVALUATION

Allen Benjamin P.O. # _____ Dist. P.O. # _____ # Holes Tapped _____
Quality of Thread _____ Gaging O.K. _____ On-Hand for Test _____
Comments _____





Allen Benjamin

A Bright New Future...



Contact Allen Benjamin today for:

- *Solid carbide and carbide insert taps;*
- *High performance, application-specific HSSE color ring taps;*
- *Solid carbide and carbide insert thread chasers;*
 - *Refurbished chasers;*
- *Carbide and ceramic thread plug gages;*
 - *Tap extensions;*
- *Industrial cutting fluids, cleaners/degreasers, rust preventatives.*



Allen Benjamin

"In The Pursuit Of Perfection"

3638 E. Southern Ave. • P.M.B. 202 • Suite C105 • Mesa, AZ 85206
Phone: 800.528.7404 • 480.968.7937 • Fax: 480.731.9462
E-Mail: sales@allenbenjamin.com • Web: www.allenbenjamin.com

ISO 9001:2008 Registered

Allen Benjamin Inc. is a Global Specialty Solutions, Inc. company.