
Balax
BALAX INC.
Threading Solutions for Every Industry

A BALAX, INC. GUIDE TO TAPPING IN THE 21ST CENTURY

At Balax, we recognize the increased demands placed on our customers for improved quality and lower production costs. To accommodate these needs, you will find in this catalog new generations of high performance tools that will lead to "least cost tapped hole" by providing increased tool life, less machine downtime, and better thread quality. This catalog reflects our commitment to serve our customers by providing skillfully engineered, high quality, state of the art products made in the USA.

MATERIAL SPECIFIC TAP GEOMETRY

In-Stock Thredfloer and Thredshaver are optimized to tap a specific material with geometry and coatings engineered to provide maximum results.

PREMIUM TAP MATERIALS OF CONSTRUCTION

In-Stock Thredfloer and Thredshaver taps made from premium powder metal tool steel. These taps are produced at higher Rockwell C values and offer increased wear resistance and toughness compared to standard taps.

CARBIDE INSERTED TAPS

In-Stock Thredfloer and Thredshaver taps that have the wear resistance of carbide while providing the core strength of HSS.

***SPECIAL DESIGN FEATURES*:**

Balax has introduced other important design features to its standard tap product lines that increase tap consistency and benefit tap life and productivity:

Controlled Tap Blank Dimensions with tighter tolerances than MCTI Industry Standards.

Controlled Tap Chamfers for bottoming applications with limited clearances.

CNC Controlled Tap Geometries for more consistent thread gaging and longer tap life.

BALAX, INC. TAPPING LABORATORY

Balax is fully equipped to evaluate your future tapping projects and to help you make the decision whether to cold form or cut thread your part. Working with your part prints and actual material being tapped, Balax will provide you with the correct recommendation for pre-tap hole size, tapping torque, tapping speed, and tap lubrication. Based on all of this information, Balax will design and manufacture the optimum tap that will allow you to successfully production tap your parts from the very beginning.

OVER 50 YEARS OF EXPERIENCE

For five (5) decades, Balax Inc, has been designing and manufacturing quality Thredfloer Cold Forming Taps and Thredshaver Cutting Taps in North Lake, Wisconsin. All our products are manufactured utilizing in-house operations that include blank making, heat treating, shank and square grinding, fluting, thread grinding and surface treatment. Balax operates its factory three shifts, five days a week in order to provide prompt delivery.

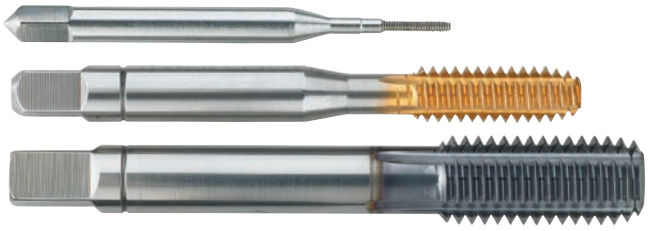
LOOKING FOR A SPECIALIZED TAP OR GAGE?

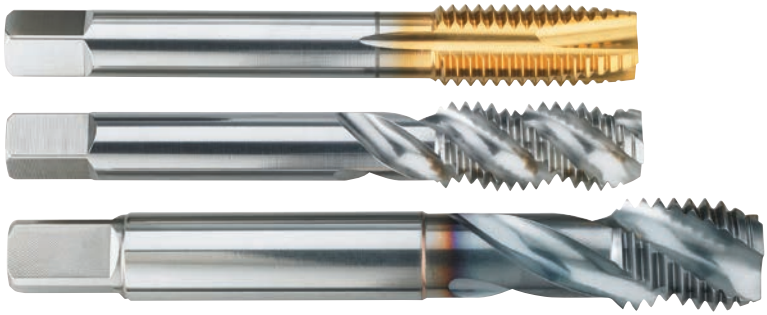
Balax can create almost any tap for your company's specific needs. To contact one of our sales representatives directly, use our Toll-Free number. 8:30 AM - 4:30 PM CST.

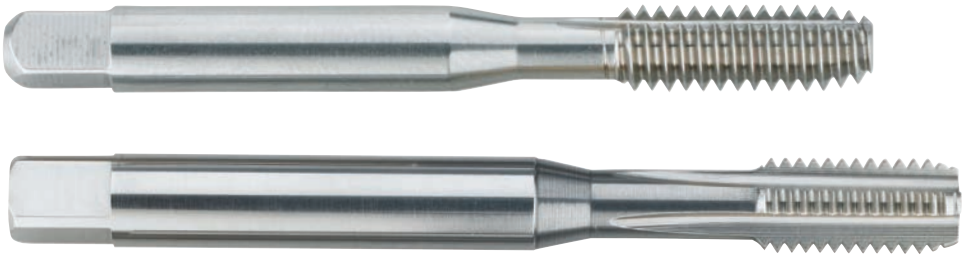
Phone: 800.886.1398 or 262.966.2355

Fax: 800.342.2529 or 262.966.1028

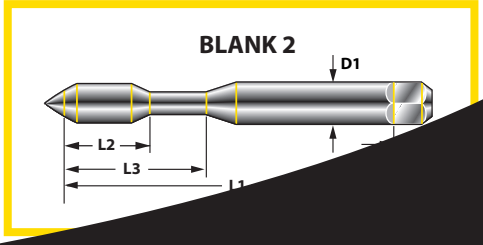
Email: balax@balax.com







HOLE SIZES REQUIRED FOR:		
75% THREAD	65% THREAD	55% THREAD
.0303	.0307	.0311
.0417	.0422	.0426
.0420	.0425	.0430
.0546	.0552	.0558
.066	.067	.068
.067	.068	.069
.078	.079	.080
.079	.080	



SEVEN MAJOR ADVANTAGES OF THREAD FORMING – VS – CUTTING TAPS

Forming taps and cutting taps produce threads that gage identically and are interchangeable, but the similarity stops there. The way they produce threads is completely different: Forming taps displace metal — cutting taps remove it.

1. CHIPLESS TAPPING

Since the thread is formed and not cut, there are no chips to interfere with the tapping process or to cause chip-removal problems in blind holes.

2. STRONGER THREADS

The grain flow of formed threads follows the contour of the thread resulting in greater thread strength. This is especially true for materials that work-harden such as steel and stainless steel.

3. BETTER THREAD GAGING

Forming taps rearrange the metal in the hole to create the thread. Because no metal is cut away, the possibility of producing oversized threads is greatly reduced.

4. STRONGER TAPS

The absence of chips eliminates the need for flutes, resulting in a solid, stronger tap.

5. LONGER TAP LIFE

Forming taps last 3 to 20 times longer than cutting taps because they have no cutting edge to dull.

6. MORE EFFICIENT PRODUCTION

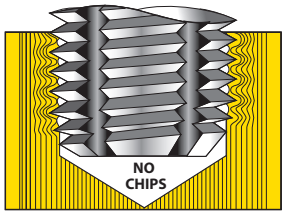
Longer tap life, less tap breakage, and faster tapping speeds combine to reduce cycle time and machine downtime.

7. IDEAL FOR NON-LEAD SCREW TAPPERS

The ability to form their own leads makes Thredfloer Taps especially well suited for CNC machines or other machines without lead screws.

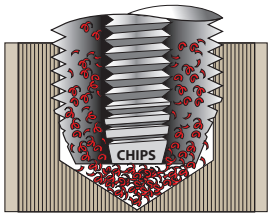
FORMING TAPS

Re-arrange the grain of the material.



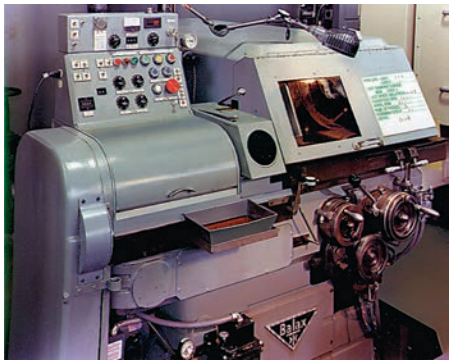
CUTTING TAPS

Create chips that interferes with tapping.

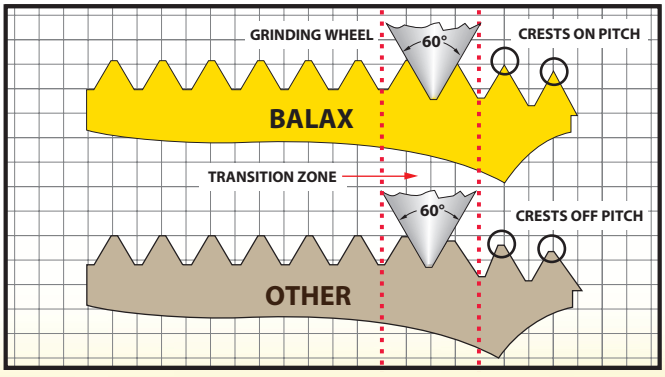


WHY CHOOSE BALAX THREDFLOER'S ?

BALAX stands for "BALanced AXially," which is an important feature for all of our Thredfloer Cold Forming Taps. Balax Thredfloers are ground using our proprietary thread grinders that have a differential lead compensation device that produces cold forming taps with their lead crests exactly on pitch.

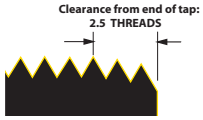
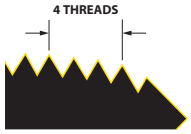
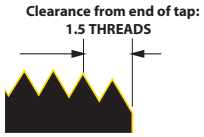
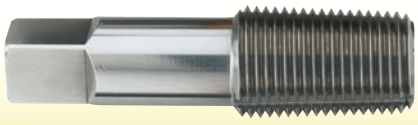


Other forming taps have lead thread cold forming teeth that are not ground on pitch. These forming taps actually cold-work the thread twice: **(1)** to form the inaccurate lead thread and **(2)** to move it on pitch. This creates an axial thrust on the tap which increases tapping torque and reduces tap life.



Balax Thredfloers form the thread exactly on pitch the first time with no axial thrust, hence the name "BALanced AXially". All Thredfloers require less tapping torque and provide longer tap life than forming taps ground with conventional methods.

THREDFLOER SERIES

Miniature		Offer significant advantages compared to extrememly small cutting taps: greater tap strength, chipless tapping, better tap life, and better thread gaging.
Bottom (B)		For blind holes with ***Clearance*** Male Center (FT. PT.) Removed 
Plug (P)		For thru holes 
One Thread Lead (OTL)		For blind holes with ***Limited Clearance*** 
High Performance (HP)		Made from premium powdered metal tool steel for toughness and wear resistance. Have a unique forming lobe geometry to provide superior results in difficult materials to tap. (Bottom and Plug with the optimal # of grooves)
Material Specific Taps		
Diecast (HP)		Designed for DIECAST ALUMINUM. Made from premium powdered metal for added tool life. Have extra lube grooves for better lubrication during tapping and Bal-Plus coating for lubricity and wear resistance. (Bottom and OTL)
Steel (HP)		Designed for STEEL. Made from premium powdered metal for added tool life. Have extra lube grooves for better lubrication during tapping and TiCN coating for lubricity and wear resistance. (Bottom and OTL)
Stainless (HP)		Designed for STAINLESS STEEL. Made from premium powdered metal for added tool life. Have extra lube grooves for better lubrication during tapping and Super TiN coating for lubricity and wear resistance. (Bottom and OTL)
Extension		Bottoming style taps for extra reach applications.
Screw Thread Insert (STI)		Bottoming style taps for holes requiring Screw Thread Inserts (STI).
DIN		Bottoming style taps with the optimal # of grooves manufactured to DIN standard blank dimensions.
Japanese Industrial Standard (JIS)		Bottoming style taps to JIS standard blank dimensions.
In-line Stub		Bottoming style stub taps for sheet metal in-line tapping devices.
Pipe		NPT, NPTF, NPS, NPSC, NPSM, NPSF

***Note**: Almost all In-Stock taps can be modified by adding coolant thru, extra lube grooves, relieved shanks, and material specific surface coatings*

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
000-120		Miniature	ANSI	2.5	BRIGHT		
00-90		Miniature	ANSI	2.5	BRIGHT		
00-96		Miniature	ANSI	2.5	BRIGHT		
0-80		Bottom	ANSI	2.5	BRIGHT	H2, H3	H2
					TiN	H2, H3	H2
		OTL	ANSI	1.5	BRIGHT	H2, H3	H2
		JIS	JIS	2.5	BRIGHT	H2, H3	H2
1-64		Bottom	ANSI	2.5	BRIGHT	H3, H4	H2, H3
					TiN	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H3, H4	H2, H3
1-72		Bottom	ANSI	2.5	BRIGHT	H3, H4	H2, H3
					TiN	H3, H4	H2, H3
		OTL	ANSI	1.5	BRIGHT	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H3, H4	H2, H3
2-56		Bottom	ANSI	2.5	BRIGHT	H3, H4	H2, H3
					TiN	H3, H4	H2, H3
		OTL	ANSI	1.5	BRIGHT	H3, H4	H2, H3
		HP	ANSI	2.5	BRIGHT	H3, H4	H2, H3
					TIN	H3, H4	H2, H3
					TICN	H3, H4	H2, H3
		Extension	3" OAL	2.5	BRIGHT	H3, H4	H2, H3
			4" OAL	2.5	BRIGHT	H3, H4	H2, H3
		STI	#5 ANSI	2.5	BRIGHT	H2	H2
		JIS	JIS	2.5	BRIGHT	H3, H4	H2, H3
		Inline	INLINE	2.5	BRIGHT	H3, H4	H2, H3
2-64		Bottom	ANSI	2.5	BRIGHT	H3, H4	H2, H3
					TiN	H3, H4	H2, H3
3-48		Bottom	ANSI	2.5	BRIGHT	H4, H5	H2, H3
					TiN	H4, H5	H2, H3
3-56		Bottom	ANSI	2.5	BRIGHT	H4, H5	H2, H3
					TiN	H4, H5	H2, H3
4-40		Bottom	ANSI	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
		Plug	ANSI	4	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
		OTL	ANSI	1.5	BRIGHT	H4, H5	H3, H4
		HP	ANSI	2.5	BRIGHT	H4, H5	H3, H4
		*Diecast (HP)	ANSI	2.5	Bal-Plus	2B FIT	CFQ
				1.5	Bal-Plus	2B FIT	CFQ
		*Steel (HP)	ANSI	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*Stainless (HP)	ANSI	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		Extension	3" OAL	2.5	BRIGHT	H4, H5	H3, H4
			4" OAL	2.5	BRIGHT	H4, H5	H3, H4
		STI	#8 ANSI	2.5	BRIGHT	H2, H3	H2
		JIS	JIS	2.5	BRIGHT	H4, H5	H3, H4
		Inline	INLINE	2.5	BRIGHT	H4, H5	H3, H4

CFQ – Contact Factory for Quote • HP – High Performance
JIS – Japanese Industrial Standard • OAL – Over All Length
OTL – One Thread Lead • STI – Screw Thread Insert

***RED INDICATES COATED TAPS IN-STOCK**

H2	H3	H4	H5	H6	H7	SERIES
00102-000						Miniature
00302-000						Miniature
00202-000						Miniature
10002-010	10003-010	10004-010	10005-010	10006-010	10007-010	Bottom
10002-01T	10003-01T	10004-01T	10005-01T	10006-01T	10007-01T	
10032-010	10033-010					OTL
10022-010	10023-010					JIS
10122-010	10123-010	10124-010	10125-010	10126-010	10127-010	Bottom
10122-01T	10123-01T	10124-01T	10125-01T	10126-01T	10127-01T	
	10143-010	10144-010	10145-010			JIS
10242-010	10243-010	10244-010	10245-010	10246-010	10247-010	Bottom
10242-01T	10243-01T	10244-01T	10245-01T	10246-01T	10247-01T	
10272-010	10273-010					OTL
	10263-010	10264-010	10265-010			JIS
10282-010	10283-010	10284-010	10285-010	10286-010	10287-010	Bottom
10282-01T	10283-01T	10284-01T	10285-01T	10286-01T	10287-01T	
10332-010	10333-010	10334-010				OTL
	10383-010					HP
	10383-01T					
	10383-01C					
10362-000	10363-000					Extension
10372-000	10373-000					
10322-010	10323-010					STI
	10303-010	10304-010	10305-010			JIS
		10344-000				Inline
10422-010	10423-010	10424-010	10425-010	10426-010	10427-010	Bottom
10422-01T	10423-01T	10424-01T	10425-01T	10426-01T	10427-01T	
10522-010	10523-010	10524-010	10525-010	10526-010	10527-010	Bottom
10522-01T	10523-01T	10524-01T	10525-01T	10526-01T	10527-01T	
10622-010	10623-010	10624-010	10625-010	10626-010	10627-010	Bottom
10622-01T	10623-01T	10624-01T	10625-01T	10626-01T	10627-01T	
10722-010	10723-010	10724-010	10725-010	10726-010	10727-010	Bottom
10722-01T	10723-01T	10724-01T	10725-01T	10726-01T	10727-01T	
10742-000	10743-000	10744-000	10745-000	10746-000	10747-000	Plug
10742-00T	10743-00T	10744-00T	10745-00T	10746-00T	10747-00T	
	10763-010	10764-010	10765-010			OTL
	10853-210	10854-210	10855-210			HP
			10852-81L			****Diecast (HP)***
			10762-81L			
			10852-81C			****Steel (HP)***
			10762-81C			
			10852-81U			****Stainless (HP)***
			10762-81U			
	10783-000	10784-000	10785-000			Extension
	10803-000	10804-000	10805-000			
10842-010	10843-010					STI
10822-010	10823-010	10824-010	10825-010	10826-010	10827-010	JIS
			10865-000			Inline

***RED INDICATES COATED TAPS IN-STOCK**

**** Highlighted products are premium quality taps that are targeted to specific industry needs***

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
4-48		Bottom	ANSI	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
5-40		Bottom	ANSI	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
		Plug	ANSI	4	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
5-44		Bottom	ANSI	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
6-32		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
					TIN	H5, H6	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H5, H6	H3, H4
					TIN	H5, H6	H3, H4
		OTL	ANSI CNC	1.5	BRIGHT	H5, H6	H3, H4
		HP	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
		*Diecast (HP)	ANSI CNC	2.5	Bal-Plus	2B FIT	CFQ
				1.5	Bal-Plus	2B FIT	CFQ
		*Steel (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*Stainless (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		Extension	3" OAL	2.5	BRIGHT	H5, H6	H3, H4
			4" OAL	2.5	BRIGHT	H5, H6	H3, H4
		STI	#10 ANSI	2.5	BRIGHT	H2, H3	H2
		JIS	JIS	2.5	BRIGHT	H5, H6	H3, H4
		Inline	INLINE	2.5	BRIGHT	H5, H6	H3, H4
6-40		Bottom	ANSI CNC	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
8-32		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
					TiN	H5, H6	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H5, H6	H3, H4
					TiN	H5, H6	H3, H4
		OTL	ANSI CNC	1.5	BRIGHT	H5, H6	H3, H4
		HP	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
		*Diecast (HP)	ANSI CNC	2.5	Bal-Plus	2B FIT	CFQ
				1.5	Bal-Plus	2B FIT	CFQ
		*Steel (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*Stainless (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		Extension	3" OAL	2.5	BRIGHT	H5, H6	H3, H4
			4" OAL	2.5	BRIGHT	H5, H6	H3, H4
		STI	#12 ANSI	2.5	BRIGHT	H2, H3	H2
		JIS	JIS	2.5	BRIGHT	H5, H6	H3, H4
		Inline	INLINE	2.5	BRIGHT	H5, H6	H3, H4

CFQ – Contact Factory for Quote • HP – High Performance
JIS – Japanese Industrial Standard • OAL – Over All Length
OTL – One Thread Lead • STI – Screw Thread Insert

***RED INDICATES COATED TAPS IN-STOCK**

H2	H3	H4	H5	H6	H7	H8	H9	H10	SERIES
10942-010	10943-010	10944-010	10945-010	10946-010	10947-010				BOTTOM
10942-01T	10943-01T	10944-01T	10945-01T	10946-01T	10947-01T				
11042-010	11043-010	11044-010	11045-010	11046-010	11047-010				BOTTOM
11042-01T	11043-01T	11044-01T	11045-01T	11046-01T	11047-01T				
11062-000	11063-000	11064-000	11065-000	11066-000	11067-000				PLUG
11062-00T	11063-00T	11064-00T	11065-00T	11066-00T	11067-00T				
11162-010	11163-010	11164-010	11165-010	11166-010	11167-010				BOTTOM
11162-01T	11163-01T	11164-01T	11165-01T	11166-01T	11167-01T				
11282-010	11283-010	11284-010	11285-010	11286-010	11287-010	11288-010	11289-010	11290-010	BOTTOM
11282-01T	11283-01T	11284-01T	11285-01T	11286-01T	11287-01T	11288-01T	11289-01T	11290-01T	
11302-000	11303-000	11304-000	11305-000	11306-000	11307-000	11308-000	11309-000	11310-000	PLUG
11302-00T	11303-00T	11304-00T	11305-00T	11306-00T	11307-00T	11308-00T	11309-00T	11310-00T	
	11323-010	11324-010	11325-010						OTL
	11413-210	11414-210	11415-210	11416-210					HP
			11412-81L						**DIECAST (HP)*
			11322-81L						
			11412-81C						**STEEL (HP)*
			11322-81C						
			11412-81U						**STAINLESS (HP)*
			11322-81U						
	11343-000	11344-000	11345-000	11346-000					EXTENSION
	11363-000	11364-000	11365-000	11366-000					
11402-010	11403-010								STI
11382-010	11383-010	11384-010	11385-010	11386-010	11387-010	11388-010	11389-010	11390-010	JIS
			11425-000						INLINE
11502-010	11503-010	11504-010	11505-010	11506-010	11507-010	11508-010	11509-010	11510-010	BOTTOM
11502-01T	11503-01T	11504-01T	11505-01T	11506-01T	11507-01T	11508-01T	11509-01T	11510-01T	
11522-000	11523-000	11524-000	11525-000	11526-000	11527-000	11528-000	11529-000	11530-000	PLUG
11522-00T	11523-00T	11524-00T	11525-00T	11526-00T	11527-00T	11528-00T	11529-00T	11530-00T	
11622-010	11623-010	11624-010	11625-010	11626-010	11627-010	11628-010	11629-010	11630-010	BOTTOM
11622-01T	11623-01T	11624-01T	11625-01T	11626-01T	11627-01T	11628-01T	11629-01T	11630-01T	
11642-000	11643-000	11644-000	11645-000	11646-000	11647-000	11648-000	11649-000	11650-000	PLUG
11642-00T-	11643-00T	11644-00T	11645-00T	11646-00T	11647-00T	11648-00T	11649-00T	11650-00T	
	11663-010	11664-010	11665-010						OTL
	11753-210	11754-210	11755-210	11756-210					HP
			11752-81L						**DIECAST (HP)*
			11662-81L						
			11752-81C						**STEEL (HP)*
			11662-81C						
			11752-81U						**STAINLESS (HP)*
			11662-81U						
	11683-000	11684-000	11685-000	11686-000					EXTENSION
	11703-000	11704-000	11705-000	11706-000					
11742-010	11743-010	11744-010							STI
11722-010	11723-010	11724-010	11725-010	11726-010	11727-010	11728-010	11729-010	11230-010	JIS
			11765-000						INLINE

***RED INDICATES COATED TAPS IN-STOCK**

**** Highlighted products are premium quality taps that are targeted to specific industry needs***

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
8-36		Bottom	ANSI CNC	2.5	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H4, H5	H3, H4
					TiN	H4, H5	H3, H4
10-24		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
		Plug	ANSI CNC	4	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
		OTL	ANSI CNC	1.5	BRIGHT	H5, H6, H7	H4, H5
		HP	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
		*Diecast (HP)	ANSI CNC	2.5	Bal-Plus	2B FIT	CFQ
				1.5	Bal-Plus	2B FIT	CFQ
		*Steel (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*Stainless (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		Extensions	4" OAL	2.5	BRIGHT	H5, H6, H7	H4, H5
			6" OAL	2.5	BRIGHT	H5, H6, H7	H4, H5
		STI	1/4 ANSI	2.5	BRIGHT	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H5, H6, H7	H4, H5
		Inline	INLINE	2.5	BRIGHT	H5, H6, H7	H4, H5
10-32		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
					TiN	H5, H6	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H5, H6	H3, H4
					TiN	H5, H6	H3, H4
		OTL	ANSI CNC	1.5	BRIGHT	H5, H6	H3, H4
		HP	ANSI CNC	2.5	BRIGHT	H5, H6	H3, H4
		*Diecast (HP)	ANSI CNC	2.5	Bal-Plus	2B FIT	CFQ
				1.5	Bal-Plus	2B FIT	CFQ
		*Steel (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*Stainless (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		Extension	4" OAL	2.5	BRIGHT	H5, H6	H3, H4
			6" OAL	2.5	BRIGHT	H5, H6	H3, H4
		STI	1/4 ANSI	2.5	BRIGHT	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H5, H6	H3, H4
		Inline	INLINE	2.5	BRIGHT	H5, H6	H3, H4
12-24		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
		Plug	ANSI CNC	4	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
12-28		Bottom	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H3, H4
		Plug	ANSI CNC	4	BRIGHT	H5, H6, H7	H3, H4
					TiN	H5, H6, H7	H3, H4

CFQ – Contact Factory for Quote • HP – High Performance
JIS – Japanese Industrial Standard • OAL – Over All Length
OTL – One Thread Lead • STI – Screw Thread Insert

***RED INDICATES COATED TAPS IN-STOCK**

H2	H3	H4	H5	H6	H7	H8	H9	H10	SERIES
11842-010	11843-010	11844-010	11845-010	11846-010	11847-010	11848-010	11849-010	11850-010	BOTTOM
11842-01T	11843-01T	11844-01T	11845-01T	11846-01T	11847-01T	11848-01T	11849-01T	11850-01T	
11862-000	11863-000	11864-000	11865-000	11866-000	11867-000	11868-000	11869-000	11870-000	PLUG
11862-00T	11863-00T	11864-00T	11865-00T	11866-00T	11867-00T	11868-00T	11869-00T	11870-00T	
11962-010	11963-010	11964-010	11965-010	11966-010	11967-010	11968-010	11969-010	11970-010	BOTTOM
11962-01T	11963-01T	11964-01T	11965-01T	11966-01T	11967-01T	11968-01T	11969-01T	11970-01T	
11982-000	11983-000	11984-000	11985-000	11986-000	11987-000	11988-000	11989-000	11990-000	PLUG
11982-00T	11983-00T	11984-00T	11985-00T	11986-00T	11987-00T	11988-00T	11989-00T	11990-00T	
	12003-010	12004-010	12005-010						OTL
	12093-410	12094-410	12095-410	12096-410					HP
			12092-91L						*DIECAST (HP)
			12002-91L						
			12092-91C						*STEEL (HP)
			12002-91C						
			12092-91U						*STAINLESS (HP)
			12002-91U						
	12023-000	12024-000	12025-000	12026-000	12027-000				EXTENSIONS
	12043-000	12044-000	12045-000	12046-000	12047-000				
12082-010	12083-010	12084-010							STI
	12063-010	12064-010	12065-010	12066-010	12067-010	12068-010	12069-010	12070-010	JIS
					12107-000				INLINE
12182-010	12183-010	12184-010	12185-010	12186-010	12187-010	12188-010	12189-010	12190-010	BOTTOM
12182-01T	12183-01T	12184-01T	12185-01T	12186-01T	12187-01T	12188-01T	12189-01T	12190-01T	
12202-000	12203-000	12204-000	12205-000	12206-000	12207-000	12208-000	12209-000	12210-000	PLUG
12202-00T	12203-00T	12204-00T	12205-00T	12206-00T	12207-00T	12208-00T	12209-00T	12210-00T	
	12223-010	12224-010	12225-010						OTL
	12313-410	12314-410	12315-410	12316-410					HP
			12312-91L						*DIECAST (HP)
			12222-91L						
			12312-91C						*STEEL (HP)
			12222-91C						
			12312-91U						*STAINLESS (HP)
			12222-91U						
	12243-000	12244-000	12245-000	12246-000					EXTENSION
	12263-000	12264-000	12265-000	12266-000					
12302-010	12303-010	12304-010							STI
12282-010	12283-010	12284-010	12285-010	12286-010	12287-010	12288-010	12289-010	12290-010	JIS
			12325-000						INLINE
12402-010	12403-010	12404-010	12405-010	12406-010	12407-010	12408-010	12409-010	12410-010	BOTTOM
12402-01T	12403-01T	12404-01T	12405-01T	12406-01T	12407-01T	12408-01T	12409-01T	12410-01T	
12422-000	12423-000	12424-000	12425-000	12426-000	12427-000	12428-000	12429-000	12430-000	PLUG
12422-00T	12423-00T	12424-00T	12425-00T	12426-00T	12427-00T	12428-00T	12429-00T	12430-00T	
12522-010	12523-010	12524-010	12525-010	12526-010	12527-010	12528-010	12529-010	12530-010	BOTTOM
12522-01T	12523-01T	12524-01T	12525-01T	12526-01T	12527-01T	12528-01T	12529-01T	12530-01T	
12542-000	12543-000	12544-000	12545-000	12546-000	12547-000	12548-000	12549-000	12550-000	PLUG
12542-00T	12543-00T	12544-00T	12545-00T	12546-00T	12547-00T	12548-00T	12549-00T	12550-00T	

***RED INDICATES COATED TAPS IN-STOCK**

** Highlighted products are premium quality taps that are targeted to specific industry needs*

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
1/4-20		BOTTOM	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H4, H5
					TiN	H6, H7, H8	H4, H5
		PLUG	ANSI CNC	4	BRIGHT	H6, H7, H8	H4, H5
					TiN	H6, H7, H8	H4, H5
		OTL	ANSI CNC	1.5	BRIGHT	H6, H7, H8	H4, H5
		HP (B)	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H4, H5
		HP (P)	ANSI CNC	4	BRIGHT	H6, H7, H8	H4, H5
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS	2B FIT	CFQ
				1.5	BAL-PLUS	2B FIT	CFQ
		*STEEL (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		EXTENSION	4" OAL	2.5	BRIGHT	H6, H7, H8	H4, H5
			6" OAL	2.5	BRIGHT	H6, H7, H8	H4, H5
		STI	5/16 ANSI	2.5	BRIGHT	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H6, H7, H8	H4, H5
		INLINE	INLINE	2.5	BRIGHT	H6, H7, H8	H4, H5
1/4-28		BOTTOM	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
		PLUG	ANSI CNC	4	BRIGHT	H5, H6, H7	H4, H5
					TiN	H5, H6, H7	H4, H5
		OTL	ANSI CNC	1.5	BRIGHT	H5, H6, H7	H4, H5
		HP (B)	ANSI CNC	2.5	BRIGHT	H5, H6, H7	H4, H5
		HP (P)	ANSI CNC	4	BRIGHT	H5, H6, H7	H4, H5
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS	2B FIT	CFQ
				1.5	BAL-PLUS	2B FIT	CFQ
		*STEEL (HP)	ANSI CNC	2.5	TICN	2B FIT	CFQ
				1.5	TICN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI CNC	2.5	STIN	2B FIT	CFQ
				1.5	STIN	2B FIT	CFQ
		EXTENSION	4" OAL	2.5	BRIGHT	H5, H6, H7	H4, H5
			6" OAL	2.5	BRIGHT	H5, H6, H7	H4, H5
		STI	5/16 ANSI	2.5	BRIGHT	H3, H4	H2, H3
		JIS	JIS	2.5	BRIGHT	H5, H6, H7	H4, H5
		INLINE	INLINE	2.5	BRIGHT	H5, H6, H7	H4, H5
5/16-18		BOTTOM	ANSI CNC	2.5	BRIGHT	H7, H8 , H9	H5, H6
					TiN	H7, H8 , H9	H5, H6
		PLUG	ANSI CNC	4	BRIGHT	H7, H8 , H9	H5, H6
					TiN	H7, H8 , H9	H5, H6
		OTL	ANSI CNC	1.5	BRIGHT	H7, H8 , H9	H5, H6

To provide better tap life, Balax, Inc. has improved the tap base material for its standard Thredfloer Taps by changing from wrought tool steel to powdered metal. For Thredfloer sizes between #6 (M3.5) and 3/8" (M10), this change also involves changing tap blanks to a CNC or necked configuration.

CFQ – CONTACT FACTORY FOR QUOTE • HP – HIGH PERFORMANCE
JIS – JAPANESE INDUSTRIAL STANDARD • OAL – OVER ALL LENGTH
OTL – ONE THREAD LEAD • STI – SCREW THREAD INSERT

***RED INDICATES COATED TAPS IN-STOCK**

H2	H3	H4	H5	H6	H7	H8	H9	H10	SERIES
12642-010	12643-010	12644-010	12645-010	12646-010	12647-010	12648-010	12649-010	12650-010	BOTTOM
12642-01T	12643-01T	12644-01T	12645-01T	12646-01T	12647-01T	12648-01T	12649-01T	12650-01T	
12662-000	12663-000	12664-000	12665-000	12666-000	12667-000	12668-000	12669-000	12670-000	PLUG
12662-00T	12663-00T	12664-00T	12665-00T	12666-00T	12667-00T	12668-00T	12669-00T	12670-00T	
			12685-010	12686-010	12687-010	12688-010			OTL
			12775-410	12776-410	12777-410	12778-410			HP (B)
						12808-400			HP (P)
						12772-91L			*DIECAST (HP)
						12682-91L			
						12772-91C			*STEEL (HP)
						12682-91C			
						12772-91U			*STAINLESS (HP)
						12682-91U			
			12705-000	12706-000	12707-000	12708-000			EXTENSION
			12725-000	12726-000	12727-000	12728-000			
12762-010	12763-010	12764-010							STI
	12743-010	12744-010	12745-010	12746-010	12747-010	12748-010	12749-010	12750-010	JIS
						12788-000			INLINE
12862-010	12863-010	12864-010	12865-010	12866-010	12867-010	12868-010	12869-010	12870-010	BOTTOM
12862-01T	12863-01T	12864-01T	12865-01T	12866-01T	12867-01T	12868-01T	12869-01T	12870-01T	
12882-000	12883-000	12884-000	12885-000	12886-000	12887-000	12888-000	12889-000	12890-000	PLUG
12882-00T	12883-00T	12884-00T	12885-00T	12886-00T	12887-00T	12888-00T	12889-00T	12890-00T	
		12904-010	12905-010	12906-010	12907-010				OTL
		12994-410	12995-410	12996-410	12997-410				HP (B)
					13027-400				HP (P)
					12992-91L				*DIECAST (HP)
					12902-91L				
					12992-91C				*STEEL (HP)
					12902-91C				
					12992-91U				*STAINLESS (HP)
					12902-91U				
		12924-000	12925-000	12926-000	12927-000				EXTENSION
		12944-000	12945-000	12946-000	12947-000				
12982-010	12983-010	12984-010							STI
	12963-010	12964-010	12965-010	12966-010	12967-010	12968-010	12969-010	12970-010	JIS
					13007-000				INLINE
13082-010	13083-010	13084-010	13085-010	13086-010	13087-010	13088-010	13089-010	13090-010	BOTTOM
13082-01T	13083-01T	13084-01T	13085-01T	13086-01T	13087-01T	13088-01T	13089-01T	13090-01T	
13102-000	13103-000	13104-000	13105-000	13106-000	13107-000	13108-000	13109-000	13110-000	PLUG
13102-00T	13103-00T	13104-00T	13105-00T	13106-00T	13107-00T	13108-00T	13109-00T	13110-00T	
				13126-010	13127-010	13128-010	13129-010		OTL

***RED INDICATES COATED TAPS IN-STOCK**

**** Highlighted products are premium quality taps that are targeted to specific industry needs***

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
5/16-18 CONT.		HP (B)	ANSI CNC	2.5	BRIGHT	H7, H8 , H9	H5, H6
		HP (P)	ANSI CNC	4	BRIGHT	H7, H8 , H9	H5, H6
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS	2B FIT	CFQ
				1.5	BAL-PLUS	2B FIT	CFQ
		*STEEL (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		EXTENSION	4" OAL	2.5	BRIGHT	H7, H8 , H9	H5, H6
			6" OAL	2.5	BRIGHT	H7, H8 , H9	H5, H6
		STI	7/16 ANSI	2.5	BRIGHT	H4, H5	H3, H4
5/16-24		BOTTOM	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H4, H5
					TiN	H6, H7, H8	H4, H5
		PLUG	ANSI CNC	4	BRIGHT	H6, H7, H8	H4, H5
					TiN	H6, H7, H8	H4, H5
		OTL	ANSI CNC	1.5	BRIGHT	H6, H7, H8	H4, H5
		HP (B)	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H4, H5
		HP (P)	ANSI CNC	4	BRIGHT	H6, H7, H8	H4, H5
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS	2B FIT	CFQ
				1.5	BAL-PLUS	2B FIT	CFQ
		*STEEL (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		EXTENSION	4" OAL	2.5	BRIGHT	H6, H7, H8	H4, H5
			6" OAL	2.5	BRIGHT	H6, H7, H8	H4, H5

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
3/8-16		BOTTOM	ANSI CNC	2.5	BRIGHT	H7, H8, H9	H6, H7
					TiN	H7, H8, H9	H6, H7
		PLUG	ANSI CNC	4	BRIGHT	H7, H8, H9	H6, H7
					TiN	H7, H8, H9	H6, H7
		OTL	ANSI CNC	1.5	BRIGHT	H7, H8, H9	H6, H7
		HP (B)	ANSI CNC	2.5	BRIGHT	H7, H8, H9	H6, H7
		HP (P)	ANSI CNC	4	BRIGHT	H7, H8, H9	H6, H7
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS	2B FIT	CFQ
				1.5	BAL-PLUS	2B FIT	CFQ
		*STEEL (HP)	ANSI CNC	2.5	TiCN	2B FIT	CFQ
				1.5	TiCN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI CNC	2.5	STiN	2B FIT	CFQ
				1.5	STiN	2B FIT	CFQ
		EXTENSION	4" OAL	2.5	BRIGHT	H7, H8, H9	H6, H7
			6" OAL	2.5	BRIGHT	H7, H8, H9	H6, H7
		STI	1/2 ANSI	2.5	BRIGHT	H4, H5	H3, H4

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***RED INDICATES COATED TAPS IN-STOCK**

H2	H3	H4	H5	H6	H7	H8	H9	H10	SERIES
				13176-410	13177-410	13178-410	13179-410		HP (B)
							13209-400		HP (P)
							13172-91L		**Diecast (HP)*
							13122-91L		
							13172-91C		**Steel (HP)*
							13122-91C		
							13172-91U		**Stainless (HP)*
							13122-91U		
			13145-000	13146-000	13147-000	13148-000	13149-000		Extension
			13165-000	13166-000	13167-000	13168-000	13169-000		
	13183-000	13184-000	13185-000						STI
13262-010	13263-010	13264-010	13265-010	13266-010	13267-010	13268-010	13269-010	13270-010	Bottom
13262-01T	13263-01T	13264-01T	13265-01T	13266-01T	13267-01T	13268-01T	13269-01T	13270-01T	
13282-000	13283-000	13284-000	13285-000	13286-000	13287-000	13288-000	13289-000	13290-000	Plug
13282-00T	13283-00T	13284-00T	13285-00T	13286-00T	13287-00T	13288-00T	13289-00T	13290-00T	
			13305-010	13306-010	13307-010	13308-010			OTL
			13355-410	13356-410	13357-410	13358-410			HP (B)
						13378-400			HP (P)
						13352-91L			**Diecast (HP)*
						13302-91L			
						13352-91C			**Steel (HP)*
						13302-91C			
						13352-91U			**Stainless (HP)*
						13302-91U			
		13324-000	13325-000	13326-000	13327-000	13328-000			Extension
		13344-000	13345-000	13346-000	13347-000	13348-000			

H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	SERIES
	13444-010	13445-010	13446-010	13447-010	13448-010	13449-010	13450-010	13451-010	13452-010	Bottom
	13444-01T	13445-01T	13446-01T	13447-01T	13448-01T	13449-01T	13450-01T	13451-01T	13452-01T	
	13464-000	13465-000	13466-000	13467-000	13468-000	13469-000	13470-000	13471-000	13472-000	Plug
	13464-00T	13465-00T	13466-00T	13467-00T	13468-00T	13469-00T	13470-00T	13471-00T	13472-00T	
			13486-010	13487-010	13488-010	13489-010				OTL
			13536-410	13537-410	13538-410	13539-410				HP (B)
						13569-400				HP (P)
						13532-91L				**Diecast (HP)*
						13482-91L				
						13532-91C				**Steel (HP)*
						13482-91C				
						13532-91U				**Stainless (HP)*
						13482-91U				
		13505-000	13506-000	13507-000	13508-000	13509-000				Extension
		13525-000	13526-000	13527-000	13528-000	13529-000				
13543-000	13544-000	13545-000								STI

***RED INDICATES COATED TAPS IN-STOCK**

** Highlighted products are premium quality taps that are targeted to specific industry needs*

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
3/8-24		Bottom	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H5, H6
					TiN	H6, H7, H8	H5, H6
		Plug	ANSI CNC	4	BRIGHT	H6, H7, H8	H5, H6
					TiN	H6, H7, H8	H5, H6
		OTL	ANSI CNC	1.5	BRIGHT	H6, H7, H8	H5, H6
		HP (B)	ANSI CNC	2.5	BRIGHT	H6, H7, H8	H5, H6
		HP (P)	ANSI CNC	4	BRIGHT	H6, H7, H8	H5, H6
		***Diecast (HP)**	**ANSI CNC**	**2.5**	**BAL-PLUS**	**2B FIT**	**CFQ**
				1.5	**BAL-PLUS**	**2B FIT**	**CFQ**
		***Steel (HP)**	**ANSI CNC**	**2.5**	**TiCN**	**2B FIT**	**CFQ**
				1.5	**TiCN**	**2B FIT**	**CFQ**
		***Stainless (HP)**	**ANSI CNC**	**2.5**	**STiN**	**2B FIT**	**CFQ**
				1.5	**STiN**	**2B FIT**	**CFQ**
		Extension	4" OAL	2.5	BRIGHT	H6, H7, H8	H5, H6
			6" OAL	2.5	BRIGHT	H6, H7, H8	H5, H6
7/16-14		Bottom	ANSI	2.5	BRIGHT	H8, H9, H10	H6,H7
					TiN	H8, H9, H10	H6,H7
		Plug	ANSI	4	BRIGHT	H8, H9, H10	H6,H7
					TiN	H8, H9, H10	H6,H7
		HP	ANSI	2.5	BRIGHT	H8, H9, H10	H6,H7
		***Steel (HP)**	**ANSI**	**2.5**	**TiCN**	**2B FIT**	**CFQ**
		***Stainless (HP)**	**ANSI**	**2.5**	**STiN**	**2B FIT**	**CFQ**
7/16-20		Bottom	ANSI	2.5	BRIGHT	H7, H8, H9	H5,H6
					TIN	H7, H8, H9	H5,H6
		Plug	ANSI	4	BRIGHT	H7, H8, H9	H5,H6
					TIN	H7, H8, H9	H5,H6
		HP	ANSI	2.5	BRIGHT	H7, H8, H9	H5,H6
		***Steel (HP)**	**ANSI**	**2.5**	**TiCN**	**2B FIT**	**CFQ**
		***Stainless (HP)**	**ANSI**	**2.5**	**STiN**	**2B FIT**	**CFQ**
1/2-13		Bottom	ANSI	2.5	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
		Plug	ANSI	4	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
		HP	ANSI	2.5	BRIGHT	H9, H10, H11	H6, H7, H8
		***Steel (HP)**	**ANSI**	**2.5**	**TiCN**	**2B FIT**	**CFQ**
		***Stainless (HP)**	**ANSI**	**2.5**	**STiN**	**2B FIT**	**CFQ**
1/2-20		Bottom	ANSI	2.5	BRIGHT	H7, H8, H9	H5, H6
					TiN	H7, H8, H9	H5, H6
		Plug	ANSI	4	BRIGHT	H7, H8, H9	H5, H6
					TiN	H7, H8, H9	H5, H6

CFQ – Contact Factory for Quote • HP – High Performance
JIS – Japanese Industrial Standard • OAL – Over All Length
OTL – One Thread Lead • STI – Screw Thread Insert

***RED INDICATES COATED TAPS IN-STOCK**

H4	H5	H6	H7	H8	H9	H10	H11	H12	SERIES
13624-010	13625-010	13626-010	13627-010	13628-010	13629-010	13630-010	13631-010	13632-010	BOTTOM
13624-01T	13625-01T	13626-01T	13627-01T	13628-01T	13629-01T	13630-01T	13631-01T	13632-01T	
13644-000	13645-000	13646-000	13647-000	13648-000	13649-000	13650-000	13651-000	13652-000	PLUG
13644-00T	13645-00T	13646-00T	13647-00T	13648-00T	13649-00T	13650-00T	13651-00T	13652-00T	
	13665-010	13666-010	13667-010	13668-010					OTL
	13715-410	13716-410	13717-410	13718-410					HP (B)
				13738-400					HP (P)
				13712-91L					****DIECAST (HP)***
				13662-91L					
				13712-91C					****STEEL (HP)***
				13662-91C					
				13712-91U					****STAINLESS (HP)***
				13662-91U					
13684-000	13685-000	13686-000	13687-000	13688-000					EXTENSION
13704-000	13705-000	13706-000	13707-000	13708-000					
13804-000	13805-000	13806-000	13807-000	13808-000	13809-000	13810-000	13811-000	13812-000	BOTTOM
13804-40T	13805-40T	13806-40T	13807-40T	13808-40T	13809-40T	13810-40T	13811-40T	13812-40T	
13824-000	13825-000	13826-000	13827-000	13828-000	13829-000	13830-000	13831-000	13832-000	PLUG
13824-40T	13825-40T	13826-40T	13827-40T	13828-40T	13829-40T	13830-40T	13831-40T	13832-40T	
					13842-600				HP
					13842-90C				****STEEL (HP)***
					13842-90U				****STAINLESS (HP)***
13924-000	13925-000	13926-000	13927-000	13928-000	13929-000	13930-000	13931-000	13932-000	BOTTOM
13924-40T	13925-40T	13926-40T	13927-40T	13928-40T	13929-40T	13930-40T	13931-40T	13932-40T	
13944-000	13945-000	13946-000	13947-000	13948-000	13949-000	13950-000	13951-000	13952-000	PLUG
13944-40T	13945-40T	13946-40T	13947-40T	13948-40T	13949-40T	13950-40T	13951-40T	13952-40T	
			13962-600						HP
			13962-90C						****STEEL (HP)***
			13962-90U						****STAINLESS (HP)***
14044-000	14045-000	14046-000	14047-000	14048-000	14049-000	14050-000	14051-000	14052-000	BOTTOM
14044-60T	14045-60T	14046-60T	14047-60T	14048-60T	14049-60T	14050-60T	14051-60T	14052-60T	
14064-000	14065-000	14066-000	14067-000	14068-000	14069-000	14070-000	14071-000	14072-000	PLUG
14064-60T	14065-60T	14066-60T	14067-60T	14068-60T	14069-60T	14070-60T	14071-60T	14072-60T	
					14082-600				HP
					14082-90C				****STEEL (HP)***
					14082-90U				****STAINLESS (HP)***
14164-000	14165-000	14166-000	14167-000	14168-000	14169-000	14170-000	14171-000	14172-000	BOTTOM
14164-60T	14165-60T	14166-60T	14167-60T	14168-60T	14169-60T	14170-60T	14171-60T	14172-60T	
14184-000	14185-000	14186-000	14187-000	14188-000	14189-000	14190-000	14191-000	14192-000	PLUG
14184-60T	14185-60T	14186-60T	14187-60T	14188-60T	14189-60T	14190-60T	14191-60T	14192-60T	

***RED INDICATES COATED TAPS IN-STOCK**

**** Highlighted products are premium quality taps that are targeted to specific industry needs***

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
1/2-20 Cont.		HP	ANSI	2.5	BRIGHT	H7, H8, H9	H5, H6
		*STEEL (HP)	ANSI	2.5	TiCN	2B FIT	CFQ
		*STAINLESS (HP)	ANSI	2.5	STiN	2B FIT	CFQ
9/16-12		BOTTOM	ANSI	2.5	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
		PLUG	ANSI	4	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
9/16-18		BOTTOM	ANSI	2.5	BRIGHT	H7, H8, H9	H5, H6, H7
					TiN	H7, H8, H9	H5, H6, H7
		PLUG	ANSI	4	BRIGHT	H7, H8, H9	H5, H6, H7
					TiN	H7, H8, H9	H5, H6, H7
5/8-11		BOTTOM	ANSI	2.5	BRIGHT	H10, H11, H12	H7, H8, H9
					TiN	H10, H11, H12	H7, H8, H9
		PLUG	ANSI	4	BRIGHT	H10, H11, H12	H7, H8, H9
					TiN	H10, H11, H12	H7, H8, H9
5/8-18		BOTTOM	ANSI	2.5	BRIGHT	H8, H9, H10	H5, H6, H7
					TiN	H8, H9, H10	H5, H6, H7
		PLUG	ANSI	4	BRIGHT	H8, H9, H10	H5, H6, H7
					TiN	H8, H9, H10	H5, H6, H7

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	CLASS 3B
3/4-10		BOTTOM	ANSI	2.5	BRIGHT	H11, H12, H13	H7, H8, H9
					TiN	H11, H12, H13	H7, H8, H9
		PLUG	ANSI	4	BRIGHT	H11, H12, H13	H7, H8, H9
					TiN	H11, H12, H13	H7, H8, H9
3/4-16		BOTTOM	ANSI	2.5	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
		PLUG	ANSI	4	BRIGHT	H9, H10, H11	H6, H7, H8
					TiN	H9, H10, H11	H6, H7, H8
7/8-9		BOTTOM	ANSI	2.5	BRIGHT	H12, H13, H14	H8, H9, H10
					TiN	H12, H13, H14	H8, H9, H10
		PLUG	ANSI	4	BRIGHT	H12, H13, H14	H8, H9, H10
					TiN	H12, H13, H14	H8, H9, H10
7/8-14		BOTTOM	ANSI	2.5	BRIGHT	H10, H11, H12	H7, H8, H9
					TiN	H10, H11, H12	H7, H8, H9
		PLUG	ANSI	4	BRIGHT	H10, H11, H12	H7, H8, H9
					TiN	H10, H11, H12	H7, H8, H9
1-8		BOTTOM	ANSI	2.5	BRIGHT	H12, H13, H14	H9, H10, H11
					TiN	H12, H13, H14	H9, H10, H11
		PLUG	ANSI	4	BRIGHT	H12, H13, H14	H9, H10, H11
					TiN	H12, H13, H14	H9, H10, H11
1-12		BOTTOM	ANSI	2.5	BRIGHT	H11, H12, H13	H8, H9, H10
					TiN	H11, H12, H13	H8, H9, H10
		PLUG	ANSI	4	BRIGHT	H11, H12, H13	H8, H9, H10
					TiN	H11, H12, H13	H8, H9, H10

CFQ – CONTACT FACTORY FOR QUOTE • HP – HIGH PERFORMANCE
JIS – JAPANESE INDUSTRIAL STANDARD • OAL – OVER ALL LENGTH
OTL – ONE THREAD LEAD • STI – SCREW THREAD INSERT

***RED INDICATES COATED TAPS IN-STOCK**

H4	H5	H6	H7	H8	H9	H10	H11	H12	SERIES
			14202-600						HP
			14202-90C						**Steel (HP)*
			14202-90U						**Stainless (HP)*
14284-000	14285-000	14286-000	14287-000	14288-000	14289-000	14290-000	14291-000	14292-000	Bottom
14284-60T	14285-60T	14286-60T	14287-60T	14288-60T	14289-60T	14290-60T	14291-60T	14292-60T	
14304-000	14305-000	14306-000	14307-000	14308-000	14309-000	14310-000	14311-000	14312-000	Plug
14304-60T	14305-60T	14306-60T	14307-60T	14308-60T	14309-60T	14310-60T	14311-60T	14312-60T	
14404-000	14405-000	14406-000	14407-000	14408-000	14409-000	14410-000	14411-000	14412-000	Bottom
14404-60T	14405-60T	14406-60T	14407-60T	14408-60T	14409-60T	14410-60T	14411-60T	14412-60T	
14424-000	14425-000	14426-000	14427-000	14428-000	14429-000	14430-000	14431-000	14432-000	Plug
14424-60T	14425-60T	14426-60T	14427-60T	14428-60T	14429-60T	14430-60T	14431-60T	14432-60T	
14524-000	14525-000	14526-000	14527-000	14528-000	14529-000	14530-000	14531-000	14532-000	Bottom
14524-60T	14525-60T	14526-60T	14527-60T	14528-60T	14529-60T	14530-60T	14531-60T	14532-60T	
14544-000	14545-000	14546-000	14547-000	14548-000	14549-000	14550-000	14551-000	14552-000	Plug
14544-60T	14545-60T	14546-60T	14547-60T	14548-60T	14549-60T	14550-60T	14551-60T	14552-60T	
14644-000	14645-000	14646-000	14647-000	14648-000	14649-000	14650-000	14651-000	14652-000	Bottom
14644-60T	14645-60T	14646-60T	14647-60T	14648-60T	14649-60T	14650-60T	14651-60T	14652-60T	
14664-000	14665-000	14666-000	14667-000	14668-000	14669-000	14670-000	14671-000	14672-000	Plug
14664-60T	14665-60T	14666-60T	14667-60T	14668-60T	14669-60T	14670-60T	14671-60T	14672-60T	

H6	H7	H8	H9	H10	H11	H12	H13	H14	SERIES
14766-000	14767-000	14768-000	14769-000	14770-000	14771-000	14772-000	14773-000	14774-000	Bottom
14766-60T	14767-60T	14768-60T	14769-60T	14770-60T	14771-60T	14772-60T	14773-60T	14774-60T	
14786-000	14787-000	14788-000	14789-000	14790-000	14791-000	14792-000	14793-000	14794-000	Plug
14786-60T	14787-60T	14788-60T	14789-60T	14790-60T	14791-60T	14792-60T	14793-60T	14794-60T	
14886-000	14887-000	14888-000	14889-000	14890-000	14891-000	14892-000	14893-000	14894-000	Bottom
14886-60T	14887-60T	14888-60T	14889-60T	14890-60T	14891-60T	14892-60T	14893-60T	14894-60T	
14906-000	14907-000	14908-000	14909-000	14910-000	14911-000	14912-000	14913-000	14914-000	Plug
14906-60T	14907-60T	14908-60T	14909-60T	14910-60T	14911-60T	14912-60T	14913-60T	14914-60T	
15006-000	15007-000	15008-000	15009-000	15010-000	15011-000	15012-000	15013-000	15014-000	Bottom
15006-60T	15007-60T	15008-60T	15009-60T	15010-60T	15011-60T	15012-60T	15013-60T	15014-60T	
15026-000	15027-000	15028-000	15029-000	15030-000	15031-000	15032-000	15033-000	15034-000	Plug
15026-60T	15027-60T	15028-60T	15029-60T	15030-60T	15031-60T	15032-60T	15033-60T	15034-60T	
15126-000	15127-000	15128-000	15129-000	15130-000	15131-000	15132-000	15133-000	15134-000	Bottom
15126-60T	15127-60T	15128-60T	15129-60T	15130-60T	15131-60T	15132-60T	15133-60T	15134-60T	
15146-000	15147-000	15148-000	15149-000	15150-000	15151-000	15152-000	15153-000	15154-000	Plug
15146-60T	15147-60T	15148-60T	15149-60T	15150-60T	15151-60T	15152-60T	15153-60T	15154-60T	
15246-000	15247-000	15248-000	15249-000	15250-000	15251-000	15252-000	15253-000	15254-000	Bottom
15246-60T	15247-60T	15248-60T	15249-60T	15250-60T	15251-60T	15252-60T	15253-60T	15254-60T	
15266-000	15267-000	15268-000	15269-000	15270-000	15271-000	15272-000	15273-000	15274-000	Plug
15266-60T	15267-60T	15268-60T	15269-60T	15270-60T	15271-60T	15272-60T	15273-60T	15274-60T	
15366-000	15367-000	15368-000	15369-000	15370-000	15371-000	15372-000	15373-000	15374-000	Bottom
15366-60T	15367-60T	15368-60T	15369-60T	15370-60T	15371-60T	15372-60T	15373-60T	15374-60T	
15386-000	15387-000	15388-000	15389-000	15390-000	15391-000	15392-000	15393-000	15394-000	Plug
15386-60T	15387-60T	15388-60T	15389-60T	15390-60T	15391-60T	15392-60T	15393-60T	15394-60T	

***RED INDICATES COATED TAPS IN-STOCK**

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MINIATURE

TAP SIZE	THREADS PER INCH	HOLE SIZE REQUIREMENT			TAP DRILL SIZE	BLANK	CHAMFER	COATING	CLASS UNM	
		75% THREAD	65% THREAD	55% THREAD					H#	EDP#
0.7mm X .175	145	.0247	.0250	.0254	#72	ANSI	2.5	BRIGHT	2	00802-000
0.8mm X .200	127	.0280	.0284	.0288	#70	ANSI	2.5	BRIGHT	2	00902-000
0.9mm X .225	113	.0314	.0319	.0323	1/32	ANSI	2.5	BRIGHT	2	01002-000
1.0mm X .250	102	.0348	.0353	.0358	#65	ANSI	2.5	BRIGHT	2	01102-000
1.1mm X .250	102	.0387	.0392	.0397	#61	ANSI	2.5	BRIGHT	2	01202-000
1.2mm X .250	102	.0427	.0432	.0437	#58	ANSI	2.5	BRIGHT	2	01302-000
1.4mm X .300	85	.0493	.0499	.0505	1.25mm	ANSI	2.5	BRIGHT	2	01402-000

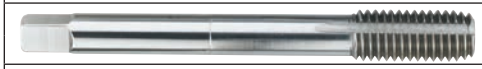
TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 4H		CLASS 6H		6G OVERSIZE	
						D#	EDP#	D#	EDP#	D#	EDP#
M1.6 X .35		BOTTOM	ANSI	2.5	BRIGHT	3	17003-010	5	17005-010	7	17007-010
					TiN	3	17003-01T	5	17005-01T	7	17007-01T
		DIN	DIN371	2.5	BRIGHT	3	17023-010	5	17025-010		
					TiN	3	17023-010	5	17025-010		
		JIS	JIS	2.5	BRIGHT	3	17043-010	5	17045-010		
M1.7 X .35		BOTTOM	ANSI	2.5	BRIGHT	3	17143-010	5	17145-010	7	17147-010
					TiN	3	17143-01T	5	17145-01T	7	17147-01T
		DIN	DIN371	2.5	BRIGHT	3	17163-010	5	17165-010		
					TiN	3	17163-010	5	17165-010		
		JIS	JIS	2.5	BRIGHT	3	17183-010	5	17185-010		
M2 X .4		BOTTOM	ANSI	2.5	BRIGHT	3	17283-010	5	17285-010	7	17287-010
					TiN	3	17283-01T	5	17285-01T	7	17287-01T
		OTL	ANSI	1.5	BRIGHT	3	17353-010	5	17355-010		
		STI	#4 ANSI	2.5	BRIGHT	2	17342-010	3	17343-010		
		DIN	DIN371	2.5	BRIGHT	3	17303-010	5	17305-010		
					TiN	3	17303-01T	5	17305-01T		
		JIS	JIS	2.5	BRIGHT	3	17323-010	5	17325-010		
		INLINE	INLINE	2.5	BRIGHT			5	17365-000		
M2.5 X .45		BOTTOM	ANSI	2.5	BRIGHT	3	17423-010	6	17426-010	8	17428-010
					TiN	3	17423-01T	6	17426-01T	8	17428-01T
		OTL	ANSI	1.5	BRIGHT	3	17493-010	6	17496-010		
		STI	#5 ANSI	2.5	BRIGHT	2	17482-010	3	17483-010		
		DIN	DIN371	2.5	BRIGHT	3	17443-010	6	17446-010		
					TiN	3	17443-01T	6	17446-01T		
		JIS	JIS	2.5	BRIGHT	3	17463-010	6	17466-010		
		INLINE	INLINE	2.5	BRIGHT			6	17506-000		
M2.6 X .45		BOTTOM	ANSI	2.5	BRIGHT	3	17513-010	6	17516-010		
					TiN	3	17513-01T	6	17516-01T		
M3 X .5		BOTTOM	ANSI	2.5	BRIGHT	3	17563-010	6	17566-010	8	17568-010
					TiN	3	17563-01T	6	17566-01T	8	17568-01T
		OTL	ANSI	1.5	BRIGHT	3	17583-010	6	17586-010		
		HP	ANSI	2.5	BRIGHT	3	17673-210	6	17676-210		
		*DIECAST (HP)	ANSI	2.5	BAL-PLUS			6	17676-81L		
				1.5	BAL-PLUS			6	17586-81L		
		*STEEL (HP)	ANSI	2.5	TiCN			6	17676-81C		
				1.5	TiCN			6	17586-81C		
		*STAINLESS (HP)	ANSI	2.5	STiN			6	17676-81U		
				1.5	STiN			6	17586-81U		
		EXTENSION	3" OAL	2.5	BRIGHT	3	17593-000	6	17596-000		
			4" OAL	2.5	BRIGHT	3	17603-000	6	17606-000		
		STI	#8 ANSI	2.5	BRIGHT	2	17662-010	3	17663-010		
		DIN	DIN371	2.5	BRIGHT	3	17623-210	6	17626-210		
					TiN	3	17623-21T	6	17626-21T		

***RED INDICATES COATED TAPS IN-STOCK**

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 4H D#	CLASS 4H EDP#	CLASS 6H D#	CLASS 6H EDP#	6G OVERSIZE D#	6G OVERSIZE EDP#
M3 X .5 CONT.		JIS	JIS	2.5	BRIGHT	3	17643-010	6	17646-010		
		INLINE	INLINE	2.5	BRIGHT			6	17686-000		
M3.5 X .6		BOTTOM	ANSI CNC	2.5	BRIGHT	4	17744-010	7	17747-010	9	17749-010
					TIN	4	17744-01T	7	17747-01T	9	17749-01T
		PLUG	ANSI CNC	4	BRIGHT	4	17764-000	7	17767-000		
					TiN	4	17764-00T	7	17767-00T		
		OTL	ANSI CNC	1.5	BRIGHT	4	17784-010	7	17787-010		
		HP	ANSI CNC	2.5	BRIGHT	4	17874-210	7	17877-210		
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			7	17877-81L		
				1.5	BAL-PLUS			7	17787-81L		
		*STEEL (HP)	ANSI CNC	2.5	TiCN			7	17877-81C		
				1.5	TiCN			7	17787-81C		
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			7	17877-81U		
				1.5	STiN			7	17787-81U		
		EXTENSION	3" OAL	2.5	BRIGHT	4	17794-000	7	17797-000		
			4" OAL	2.5	BRIGHT	4	17804-000	7	17807-000		
		STI	#10 ANSI	2.5	BRIGHT	3	17863-010	4	17864-010		
		DIN	DIN371	2.5	BRIGHT	4	17824-210	7	17827-210		
					TiN	4	17824-21T	7	17827-21T		
		JIS	JIS	2.5	BRIGHT	4	17844-010	7	17847-010		
		INLINE	INLINE	2.5	BRIGHT			7	17887-000		
M4 X .7		BOTTOM	ANSI CNC	2.5	BRIGHT	4	17944-010	7	17947-010	9	17949-010
					TiN	4	17944-01T	7	17947-01T	9	17949-01T
		PLUG	ANSI CNC	4	BRIGHT	4	17964-000	7	17967-000		
					TiN	4	17964-00T	7	17967-00T		
		OTL	ANSI CNC	1.5	BRIGHT	4	17984-010	7	17987-010		
		HP	ANSI CNC	2.5	BRIGHT	4	18074-210	7	18077-210		
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			7	18077-81L		
				1.5	BAL-PLUS			7	17987-81L		
		*STEEL (HP)	ANSI CNC	2.5	TiCN			7	18077-81C		
				1.5	TiCN			7	17987-81C		
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			7	18077-81U		
				1.5	STiN			7	17987-81U		
		EXTENSION	3" OAL	2.5	BRIGHT	4	17994-000	7	17997-000		
			4" OAL	2.5	BRIGHT	4	18004-000	7	18007-000		
		STI	#10 ANSI	2.5	BRIGHT	3	18063-010	4	18064-010		
		DIN	DIN371	2.5	BRIGHT	4	18024-210	7	18027-210		
					TiN	4	18024-21T	7	18027-21T		
		JIS	JIS	2.5	BRIGHT	4	18044-010	7	18047-010		
		INLINE	INLINE	2.5	BRIGHT			7	18087-000		
M5 X .8		BOTTOM	ANSI CNC	2.5	BRIGHT	4	18144-010	8	18148-010	10	18150-010
					TiN	4	18144-01T	8	18148-01T	10	18150-01T
		PLUG	ANSI CNC	4	BRIGHT	4	18164-000	8	18168-000		
					TiN	4	18164-00T	8	18168-00T		
		OTL	ANSI CNC	1.5	BRIGHT	4	18184-010	8	18188-010		
		HP	ANSI CNC	2.5	BRIGHT	4	18274-410	8	18278-410		
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			8	18278-91L		
				1.5	BAL-PLUS			8	18188-91L		
		*STEEL (HP)	ANSI CNC	2.5	TiCN			8	18278-91C		
				1.5	TiCN			8	18188-91C		
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			8	18278-91U		
				1.5	STiN			8	18188-91U		
		EXTENSION	4" OAL	2.5	BRIGHT	4	18204-000	8	18208-000		
			6" OAL	2.5	BRIGHT	4	18214-000	8	18218-000		
		STI	1/4 ANSI	2.5	BRIGHT	3	18263-010	4	18264-010		

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 4H D#	CLASS 4H EDP#	CLASS 6H D#	CLASS 6H EDP#	6G OVERSIZE D#	6G OVERSIZE EDP#
M5 X 0.8 CONT.		DIN	DIN371	2.5	BRIGHT	4	18224-410	8	18228-410		
					TiN	4	18224-41T	8	18228-41T		
		JIS	JIS	2.5	BRIGHT	4	18244-010	8	18248-010		
		INLINE	INLINE	2.5	BRIGHT			8	18288-000		
M6 X 1.0		BOTTOM	ANSI CNC	2.5	BRIGHT	5	18345-010	9	18349-010	11	18351-010
					TiN	5	18345-01T	9	18349-01T	11	18351-01T
		PLUG	ANSI CNC	4	BRIGHT	5	18365-000	9	18369-000		
					TiN	5	18365-00T	9	18369-00T		
		OTL	ANSI CNC	1.5	BRIGHT	5	18385-010	9	18389-010		
		HP (B)	ANSI CNC	2.5	BRIGHT	5	18475-410	9	18479-410		
		HP (P)	ANSI CNC	4	BRIGHT			9	18519-400		
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			9	18479-91L		
				1.5	BAL-PLUS			9	18389-91L		
		*STEEL (HP)	ANSI CNC	2.5	TiCN			9	18479-91C		
				1.5	TiCN			9	18389-91C		
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			9	18479-91U		
				1.5	STiN			9	18389-91U		
		EXTENSION	4" OAL	2.5	BRIGHT	5	18405-000	9	18409-000		
			6" OAL	2.5	BRIGHT	5	18415-000	9	18419-000		
		STI	5/16 ANSI	2.5	BRIGHT	4	18464-010	5	18465-010		
		DIN	DIN371	2.5	BRIGHT	5	18425-410	9	18429-410		
					TiN	5	18425-41T	9	18429-41T		
		JIS	JIS	2.5	BRIGHT	5	18445-010	9	18449-010		
		INLINE	INLINE	2.5	BRIGHT			9	18489-000		
M8 X 1.25		BOTTOM	ANSI CNC	2.5	BRIGHT	5	18545-010	10	18550-010	12	18562-010
					TiN	5	18545-01T	10	18550-01T	12	18562-01T
		PLUG	ANSI CNC	4	BRIGHT	5	18565-000	10	18570-000		
					TiN	5	18565-00T	10	18570-00T		
		OTL	ANSI CNC	1.5	BRIGHT	5	18585-010	10	18590-010		
		HP (B)	ANSI CNC	2.5	BRIGHT	5	18675-410	10	18680-410		
		HP (P)	ANSI CNC	4	BRIGHT			10	18710-400		
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			10	18680-91L		
				1.5	BAL-PLUS			10	18590-91L		
		*STEEL (HP)	ANSI CNC	2.5	TiCN			10	18680-91C		
				1.5	TiCN			10	18590-91C		
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			10	18680-91U		
				1.5	STiN			10	18590-91U		
		EXTENSION	4" OAL	2.5	BRIGHT	5	18595-000	10	18600-000		
			6" OAL	2.5	BRIGHT	5	18605-000	10	18610-000		
		STI	3/8 ANSI	2.5	BRIGHT	5	18665-010	6	18666-010		
		DIN	DIN371	2.5	BRIGHT	5	18625-410	10	18630-410		
					TiN	5	18625-41T	10	18630-41T		
		JIS	JIS	2.5	BRIGHT	5	18645-010	10	18650-010		
M10 X 1.0		BOTTOM	ANSI CNC	2.5	BRIGHT			9	19429-010		
					TiN			9	19429-01T		
M10 X 1.25		BOTTOM	ANSI CNC	2.5	BRIGHT			10	19450-010		
					TiN			10	19450-01T		
M10 X 1.5		BOTTOM	ANSI CNC	2.5	BRIGHT	6	18746-010	11	18751-010	13	18753-010
					TiN	6	18746-01T	11	18751-01T	13	18753-01T
		PLUG	ANSI CNC	4	BRIGHT	6	18766-000	11	18771-000		
					TiN	6	18766-00T	11	18771-00T		
		OTL	ANSI CNC	1.5	BRIGHT	6	18786-010	11	18791-010		
		HP (B)	ANSI CNC	2.5	BRIGHT	6	18856-410	11	18861-410		

*RED INDICATES COATED TAPS IN-STOCK

TAP SIZE	IMAGE	SERIES	BLANK	CHAMFER	COATING	CLASS 4H D#	CLASS 4H EDP#	CLASS 6H D#	CLASS 6H EDP#
M10 X 1.5 CONT.		HP (P)	ANSI CNC	4	BRIGHT			11	18891-400
		*DIECAST (HP)	ANSI CNC	2.5	BAL-PLUS			11	18861-91L
				1.5	BAL-PLUS			11	18791-91L
		*STEEL (HP)	ANSI CNC	2.5	TICN			11	18861-91C
				1.5	TICN			11	18791-91C
		*STAINLESS (HP)	ANSI CNC	2.5	STiN			11	18861-91U
				1.5	STiN			11	18791-91U
		EXTENSION	4" OAL	2.5	BRIGHT	6	18796-000	11	18801-000
			6" OAL	2.5	BRIGHT	6	18806-000	11	18811-000
		DIN	DIN371	2.5	BRIGHT	6	18826-400	11	18831-400
					TiN	6	18826-40T	11	18831-40T
		JIS	JIS	2.5	BRIGHT	6	18846-010	11	18851-010
M12 X 1.75		BOTTOM	ANSI	2.5	BRIGHT	6	18946-000	12	18952-000
					TiN	6	18946-40T	12	18952-40T
		PLUG	ANSI	4	BRIGHT	6	18966-000	12	18972-000
					TiN	6	18966-40T	12	18972-40T
		OTL	ANSI	1.5	BRIGHT	6	18986-000	12	18992-000
		HP (B)	ANSI	2.5	BRIGHT	6	19056-400	12	19062-400
		HP (P)	ANSI	4	BRIGHT			12	19092-400
		*DIECAST (HP)	ANSI	2.5	BAL-PLUS			12	19062-90L
				1.5	BAL-PLUS			12	18992-90L
		*STEEL (HP)	ANSI	2.5	TiCN			12	19062-90C
				1.5	TiCN			12	18992-90C
		*STAINLESS (HP)	ANSI	2.5	STiN			12	19062-90U
				1.5	STiN			12	18992-90U
		EXTENSION	4" OAL	2.5	BRIGHT	6	18996-000	12	19002-000
			6" OAL	2.5	BRIGHT	6	19006-000	12	19012-000
		DIN	DIN371	2.5	BRIGHT	6	19026-400	12	19032-400
			DIN376	2.5	BRIGHT			12	19042-400
					TiN			12	19042-40T
		JIS	JIS	2.5	BRIGHT	6	19046-000	12	19052-000
M14 X 1.25		PLUG	ANSI	4	BRIGHT	5	19095-000	10	19100-000
					TiN	5	19095-60T	10	19100-60T
M14 X 1.5		BOTTOM	ANSI	2.5	BRIGHT	6	19106-000	11	19111-000
					TiN	6	19106-60T	11	19111-60T
		PLUG	ANSI	4	BRIGHT	6	19126-000	11	19131-000
					TiN	6	19126-60T	11	19131-60T
M14 X 2.0		BOTTOM	ANSI	2.5	BRIGHT	7	19147-000	14	19154-000
					TiN	7	19147-60T	14	19154-60T
		PLUG	ANSI	4	BRIGHT	7	19167-000	14	19174-000
					TiN	7	19167-60T	14	19174-60T
M16 X 1.5		BOTTOM	ANSI	2.5	BRIGHT	6	19226-000	11	19231-000
					TiN	6	19226-60T	11	19231-60T
		PLUG	ANSI	4	BRIGHT	6	19246-000	11	19251-000
					TiN	6	19246-60T	11	19251-60T
M16 X 2.0		BOTTOM	ANSI	2.5	BRIGHT	7	19267-000	14	19274-000
					TiN	7	19267-60T	14	19274-60T
		PLUG	ANSI	4	BRIGHT	7	19287-000	14	19294-000
					TiN	7	19287-60T	14	19294-60T
M18 X 1.5		BOTTOM	ANSI	2.5	BRIGHT	6	19306-000	11	19331-000
					TiN	6	19306-60T	11	19331-60T
		PLUG	ANSI	4	BRIGHT	6	19326-000	11	19311-000
					TiN	6	19326-60T	11	19311-60T

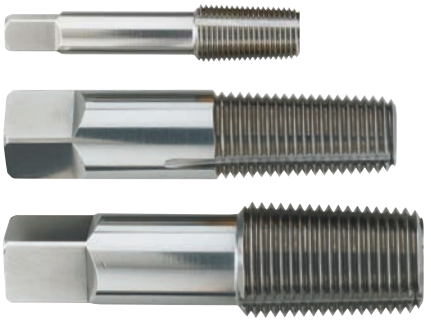
*RED INDICATES COATED TAPS IN-STOCK

** Highlighted products are premium quality taps that are targeted to specific industry needs*

NPT AND NPTF THREDFLOER PIPE TAPS

Cold forming pipe taps may offer significant advantages compared to cutting taps when correctly applied. Benefits include smooth, burnished threads with no burrs or stop marks, better tap life, and the absence of chips during tapping.

To ensure successful results with a minimum of effort, a discussion of taper pipe tap applications with Balax ˝Tapplication Engineers˝ is suggested prior to their purchase and use. The use of a torque limiting tap holder is recommended.



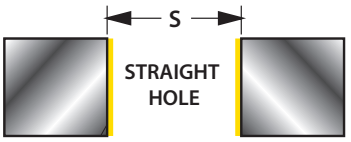
STRAIGHT HOLE OPTION

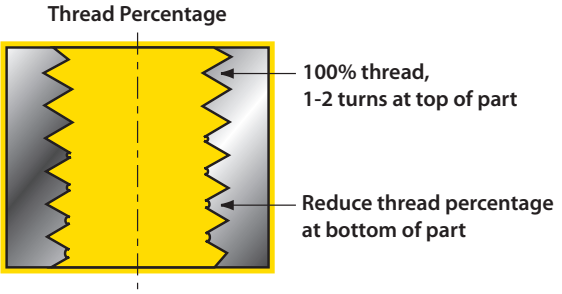
For steel and stainless steel applications, straight hole tapping will reduce tapping torque and increase tap life.

Using the straight pre-tap hole, a cold forming tapered pipe tap will produce the correct tapered thread in the part by rearranging or flowing the metal from the top to the bottom of the hole.

This procedure will result in a sharp crested 100% thread at the top of the hole (usually 2 to 3 turns of complete thread), however, the thread at the bottom will have partially formed crests containing a cup or ˝U˝. For many applications, the highly polished and accurate threads at the top of the hole provide superior appearance and excellent sealing capability.

USE THE STRAIGHT HOLE SIZES ˝S˝ IN THE TABLE BELOW.

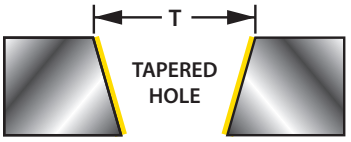




TAPERED HOLE OPTION

For softer materials such as copper and aluminum where tapping torque is not a problem. The use of a tapered hole will result in a uniform thread height and crest configuration for the entire depth of thread in the part. This requires a special taper reamer.

USE THE TAPER HOLE SIZES ˝T˝ IN THE TABLE BELOW.

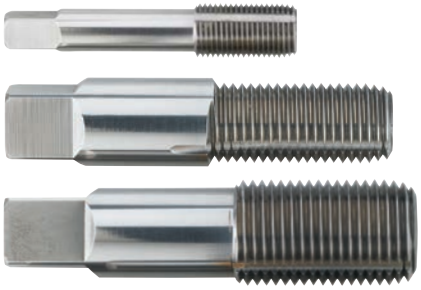


TAP SIZE NPT OR NPTF	NPT EDP#	NPTF EDP #	PROJECTION	STRAIGHT HOLE SIZE ˝S˝			TAPER HOLE SIZE ˝T˝		
				DUCTILE METALS	*DIE-CASTINGS	TOLERANCE	DUCTILE METALS	*DIE-CASTINGS	TOLERANCE
1/16-27	02000	02010	.130/.167"	.274"	.270"	+.002"	.283"	.276"	+.002"
1/8-27 SM (.3125 SHANK)	02100	02110	.130/.167"	.367"	.363"	+.002"	.376"	.369"	+.002"
1/8-27 LG (.4375 SHANK)	02200	02210	.130/.167"	.367"	.363"	+.002"	.376"	.369"	+.002"
1/4-18	02300	02310	.193/.249"	.478"	.474"	+.003"	.492"	.481"	+.003"
3/8-18	02400	02410	.193/.249"	.616"	.611"	+.003"	.630"	.619"	+.003"
1/2-14	02500	02510	.249/.321"	.763"	.759"	+.003"	.781"	.766"	+.003"
3/4-14	02600	02610	.249/.321"	.974"	.970"	+.004"	.992"	.977"	+.004"
1"-11.5	02700	02710	.305/.391"	1.221"	1.213"	+.004"	1.243"	1.225"	+.004"

***Sizes may have to be reduced for thin wall applications.**

NPS AND NPSF THREDFLOER PIPE TAPS

NPS and NPSF threads require reamed pre-tap holes because of the requirement for 100% threads with controlled crest dimensions. NPSF taps are being successfully used in diecast applications, however, care in their application and use is required. Diecast aluminum containing high-silicon can become brittle when cold formed and may crumble at the crest of the thread.



TAP SIZE	NPS EDP #	NPSC EDP #	NPSM EDP #	NPSF EDP #	CHAMFER	*HOLE SIZE FOR 75% THREAD	
						NPS, NPSC, NPSM	NPSF
1/16-27				02030	2.5	–	.281 - .282"
1/8-27 SM (.3125 SHANK)	02120	02122	02124	02130	2.5	.379 – .380"	.373 - .374"
1/8-27 LG (.4375 SHANK)	02220	02222	02224	02230	2.5	.379 – .380"	.373 - .374"
1/4-18	02320	02322	02324	02330	2.5	.499 – .500"	.491 - .492"
3/8-18	02420	02422	02424	02430	2.5	.636 – .637"	.626 - .627"
1/2-14	02520	02522	02524	02530	2.5	.788 – .790"	.777 - .779"
3/4-14	02620	02622	02624	02630	2.5	.998 – 1.000"	.988 - .990"

For diecast parts, subtract .001" - .002" to compensate for porosity.

COOLANT-THRU TAPS

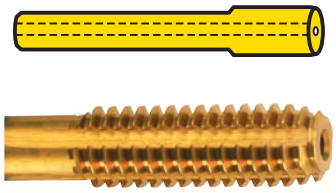
FAST DELIVERY ON STANDARD COOLANT-THRU TAPS

Using Balax's EDM process, almost any standard Thredfloer tap can be modified into the coolant-thru tap style of your choice: thru-coolant, radial coolant, or angular coolant. It's economical and turn-around time is fast.

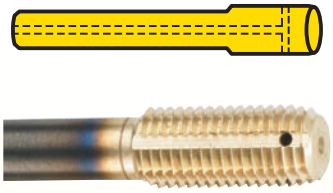
SPECIAL COOLANT-THRU TAPS FOR CUSTOM APPLICATIONS

For processes requiring an engineered special coolant-thru tap, custom tap blanks are made with coolant-thru holes in the style best suited for the tapping application.

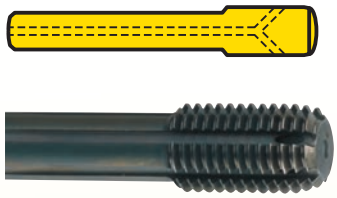
THRU - COOLANT



RADIAL - COOLANT



ANGULAR - COOLANT



THREDSHAVER SERIES AND APPLICATION CHART

	Tap Image					
	Hole Type: Thru or Blind					
	Series	BX100	BX170	BX200	BX210	BX220
	Description	SPIRAL POINT HIGH HOOK	EXTENSION SPIRAL POINT	45° SPIRAL FLUTE	DIN LENGTH 38° SPIRAL FLUTE	EXTENSION 45° SPIRAL FLUTE
STEEL AND STAINLESS STEEL	Low Carbon Steel <20Rc	●	●	●	●	●
	Medium Carbon Steel <30Rc				●	
	Alloy steel <35Rc					
	300 Series Stainless Steel	●	●	●		●
IRON	Cast Iron / Ductile Iron					
NON-FERROUS	Wrought Aluminum Alloys	●	●	●		●
	Aluminum Diecast	●	●	●		●
	Zinc Diecast	●	●	●		●
	Magnesium	●	●	●		●
	Copper & Brass	●	●	●		●
	Brass/Bronze Castings	●	●			

	●	●	●	●	●		●			●	STI 45° SPIRAL FLUTE	BX300	
		●	●	●							DIN 15° SPIRAL FLUTE DIECAST ALUMINIUM	BX510	
●				●		●					PREMIUM STEEL STRAIGHT FLUTE CAST IRON	BX600	
●				●		●					DIN PREMIUM STEEL STRAIGHT FLUTE CAST IRON	BX610	
●				●		●					NPSF STRAIGHT FLUTE	BX700	
	●		●	●	●		●	●	●	●	NPT/NPTF SPIRAL FLUTE	BX710	
											CLEANOUT TAP	BX800	

Designed for removing dirt, paint, weld spatter, and other obstructions in existing tapped holes. Cleanout taps have a special geometry to prevent recutting of thread flanks or cross threading that would result in damage to the part.

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
2-56		BX100	Spiral Point High Hook	ANSI	2	4.5	BRIGHT
			Spiral Point Steel	ANSI	2	4.5	TiN
			Spiral Point Stainless	ANSI	2	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	2	2.5	BRIGHT
			45° Hi-Spiral	ANSI	2	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	2	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	2	2.5	TiCN
		BX300	STI – 45° Hi-Spiral	#3 ANSI	2	2.5	BRIGHT
3-48		BX100	Spiral Point High Hook	ANSI	2	4.5	BRIGHT
			Spiral Point Steel	ANSI	2	4.5	TiN
			Spiral Point Stainless	ANSI	2	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	2	2.5	BRIGHT
			45° Hi-Spiral	ANSI	2	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	2	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	2	2.5	TiCN
		BX300	STI – 45° Hi-Spiral	#5 ANSI	3	2.5	BRIGHT
4-40		BX100	Spiral Point High Hook	ANSI	2	4.5	BRIGHT
					3	4.5	BRIGHT
			Spiral Point Steel	ANSI	3	4.5	TiN
			Spiral Point Stainless	ANSI	3	4.5	TiCN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI	2	2.5	BRIGHT
			45° Hi-Spiral	ANSI	2	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	2	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	2	2.5	TiCN
		BX220	Extension – 45° Hi-Spiral	4" OAL	2	2.5	BRIGHT
		BX300	STI – 45° Hi-Spiral	#6 ANSI CNC	3	2.5	BRIGHT
5-40		BX100	Spiral Point High Hook	ANSI	3	4.5	BRIGHT
			Spiral Point Steel	ANSI	3	4.5	TiN
			Spiral Point Stainless	ANSI	3	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	2	2.5	BRIGHT
			45° Hi-Spiral	ANSI	2	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	2	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	2	2.5	TiCN

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 2B	CLASS 3B	H1	H2	H3	H4	H5	H6	H7	SERIES
H2	H1	30001-000	30002-000	30003-000					BX100
H2	H1	30001-00T	30002-00T	30003-00T					
H2	H1	30001-00C	30002-00C	30003-00C					
H2	H1	40001-010	40002-010	40003-010					BX200
H2	H1	40001-01S	40002-01S	40003-01S					
H2	H1	40001-01T	40002-01T	40003-01T					
H2	H1	40001-01C	40002-01C	40003-01C					
H2	H1		44002-010						BX300
H2	H1	30011-000	30012-000	30013-000					BX100
H2	H1	30011-00T	30012-00T	30013-00T					
H2	H1	30011-00C	30012-00C	30013-00C					
H2	H1	40011-010	40012-010	40013-010					BX200
H2	H1	40011-01S	40012-01S	40013-01S					
H2	H1	40011-01T	40012-01T	40013-01T					
H2	H1	40011-01C	40012-01C	40013-01C					
H2	H1		44012-010						BX300
H2	H2		34222-000	34223-000					BX100
H2	H2		30022-000	30023-000	30024-000	30025-000	30026-000	30027-000	
H2	H2		30022-00T	30023-00T	30024-00T	30025-00T	30026-00T	30027-00T	
H2	H2		30022-00C	30023-00C	30024-00C	30025-00C	30026-00C	30027-00C	
H2	H2		35002-000						BX170
H2	H2		40022-010	40023-010	40024-010	40025-010	40026-010	40027-010	BX200
H2	H2		40022-01S	40023-01S	40024-01S	40025-01S	40026-01S	40027--01S	
H2	H2		40022-01T	40023-01T	40024-01T	40025-01T	40026-01T	40027--01T	
H2	H2		40022-01C	40023-01C	40024-01C	40025-01C	40026-01C	40027--01C	
H2	H2		46002-010						BX220
H2	H1		44022-010	44023-010					BX300
H2	H2		30032-000	30033-000	30034-000	30035-000	30036-000		
H2	H2		30032-00T	30033-00T	30034-00T	30035-00T	30036-00T		
H2	H2		30032-00C	30033-00C	30034-00C	30035-00C	30036-00C		
H2	H2		40032-010	40033-010	40034-010	40035-010			BX200
H2	H2		40032-01S	40033-01S	40034-01S	40035-01S			
H2	H2		40032-01T	40033-01T	40034-01T	40035-01T			
H2	H2		40032-01C	40033-01C	40034-01C	40035-01C			

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
6-32		BX100	Spiral Point High Hook	ANSI CNC	2	4.5	BRIGHT
				ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi-Spiral	4" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi-Spiral	#10 ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	3	2	BRIGHT
					3	2	TiCN
8-32		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	4" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi Spiral	#12 ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	3	2	BRIGHT
					3	2	TiCN
10-24		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi Spiral	1/4" ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 2B	CLASS 3B	H2	H3	H4	H5	H6	H7	SERIES
H3	H2	34242-000	34243-000	34244-000				BX100
H3	H2	30042-000	30043-000	30044-000	30045-000	30046-000	30047-000	
H3	H2	30042-00T	30043-00T	30044-00T	30045-00T	30046-00T	30047-00T	
H3	H2	30042-00C	30043-00C	30044-00C	30045-00C	30046-00C	30047-00C	
H3	H2		35203-000					BX170
H3	H2	40042-010	40043-010	40044-010	40045-010	40046-010	40047-010	BX200
H3	H2	40042-01S	40043-01S	40044-01S	40045-01S	40046-01S	40047-01S	
H3	H2	40042-01T	40043-01T	40044-01T	40045-01T	40046-01T	40047-01T	
H3	H2	40042-01C	40043-01C	40044-01C	40045-01C	40046-01C	40047-01C	
H3	H2		46203-010					BX220
H3	H2	44032-010	44033-010					BX300
H3	H2		54003-010		54005-010			BX600
H3	H2		54003-01C		54005-01C			
H3	H2	30052-000	30053-000	30054-000	30055-000	30056-000	30057-000	BX100
H3	H2	30052-00T	30053-00T	30054-00T	30055-00T	30056-00T	30057-00T	
H3	H2	30052-00C	30053-00C	30054-00C	30055-00C	30056-00C	30057-00C	
H3	H2		35303-000					BX170
H3	H2	40052-010	40053-010	40054-010	40055-010	40056-010	40057-010	BX200
H3	H2	40052-01S	40053-01S	40054-01S	40055-01S	40056-01S	40057-01S	
H3	H2	40052-01T	40053-01T	40054-01T	40055-01T	40056-01T	40057-01T	
H3	H2	40052-01C	40053-01C	40054-01C	40055-01C	40056-01C	40057-01C	
H3	H2		46303-010					BX220
H3	H2	44042-010	44043-010					BX300
H3	H2		54013-010		54015-010			BX600
H3	H2		54013-01C		54015-01C			
H3	H3		30063-000	30064-000	30065-000	30066-000	30067-000	BX100
H3	H3		30063-00T	30064-00T	30065-00T	30066-00T	30067-00T	
H3	H3		30063-00C	30064-00C	30065-00C	30066-00C	30067-00C	
H3	H3		35403-000					BX170
H3	H3		40063-010	40064-010	40065-010	40066-010	40067-010	BX200
H3	H3		40063-01S	40064-01S	40065-01S	40066-01S	40067-01S	
H3	H3		40063-01T	40064-01T	40065-01T	40066-01T	40067-01T	
H3	H3		40063-01C	40064-01C	40065-01C	40066-01C	40067-01C	
H3	H3		46403-010					BX220
H3	H2	44052-010	44053-010					BX300
H3	H3		54023-010		54025-010			BX600
H3	H3		54023-01C		54025-01C			

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
10-32		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi Spiral	1/4" ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
1/4-20		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi Spiral	5/16" ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	3	4	NIT/STEAM
1/4-28		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX300	STI – 45° Hi Spiral	5/16" ANSI CNC	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron - Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 2B	CLASS 3B	EDP #	H2	H3	H4	H5	H6	H7	SERIES
H3	H2		30062-000	30063-000	30064-000	30065-000	30066-000	30067-000	BX100
H3	H2		30062-00T	30063-00T	30064-00T	30065-00T	30066-00T	30067-00T	
H3	H2		30062-00C	30063-00C	30064-00C	30065-00C	30066-00C	30067-00C	
H3	H2			35403-000					BX170
H3	H2		40062-010	40063-010	40064-010	40065-010	40066-010	40067-010	BX200
H3	H2		40062-01S	40063-01S	40064-01S	40065-01S	40066-01S	40067-01S	
H3	H2		40062-01T	40063-01T	40064-01T	40065-01T	40066-01T	40067-01T	
H3	H2		40062-01C	40063-01C	40064-01C	40065-01C	40066-01C	40067-01C	
H3	H2			46403-010					BX220
H3	H2		44052-010	44053-010					BX300
H3	H2			54023-010		54025-010			BX600
H3	H2			54023-01C		54025-01C			
H5	H3			30083-000	30084-000	30085-000	30086-000	30087-000	BX100
H5	H3			30083-00T	30084-00T	30085-00T	30086-00T	30087-00T	
H5	H3			30083-00C	30084-00C	30085-00C	30086-00C	30087-00C	
H5	H3					35605-000			BX170
H5	H3			40083-010	40084-010	40085-010	40086-010	40087-010	BX200
H5	H3			40083-01S	40084-01S	40085-01S	40086-01S	40087-01S	
H5	H3			40083-01T	40084-01T	40085-01T	40086-01T	40087-01T	
H5	H3			40083-01C	40084-01C	40085-01C	40086-01C	40087-01C	
H5	H3					46605-010			BX220
H3	H2		44072-010	44073-010					BX300
H5	H3			54043-010		54045-010			BX600
H5	H3			54043-01C		54045-01C			
H5	H3			54043-0H0		54045-0H0			
H5	H3			54043-0HC		54045-0HC			
YES	YES	54040-006							BX800
H4	H3			30093-000	30094-000	30095-000	30096-000	30097-000	BX100
H4	H3			30093-00T	30094-00T	30095-00T	30096-00T	30097-00T	
H4	H3			30093-00C	30094-00C	30095-00C	30096-00C	30097-00C	
H4	H3				35704-000				BX170
H4	H3			40093-010	40094-010	40095-010	40096-010	40097-010	BX200
H4	H3			40093-01S	40094-01S	40095-01S	40096-01S	40097-01S	
H4	H3			40093-01T	40094-01T	40095-01T	40096-01T	40097-01T	
H4	H3			40093-01C	40094-01C	40095-01C	40096-01C	40097-01C	
H4	H3				46704-010				BX220
H3	H2		44082-010	44083-010					BX300
H4	H3			54053-010		54055-010			BX600
H4	H3			54053-01C		54055-01C			
H4	H3			54053-0H0		54055-0H0			
H4	H3			54053-0HC		54055-0HC			

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
5/16-18		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM
5/16-24		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN

COOLANT-THRU TAPS

FAST DELIVERY ON STANDARD COOLANT-THRU TAPS

Using Balax's EDM process, almost any standard Thredfloer tap can be modified into the coolant-thru tap style of your choice: thru-coolant, radial coolant, or angular coolant. It's economical and turn-around time is fast.

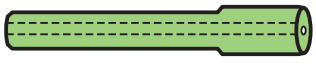
SPECIAL COOLANT-THRU TAPS FOR CUSTOM APPLICATIONS

For processes requiring an engineered special coolant-thru tap, custom tap blanks are made with coolant-thru holes in the style best suited for the tapping application.

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 2B	CLASS 3B	EDP #	H3	H4	H5	H6	H7	H8	SERIES
H5	H3		30103-000	30104-000	30105-000	30106-000	30107-000		BX100
H5	H3		30103-00T	30104-00T	30105-00T	30106-00T	30107-00T		
H5	H3		30103-00C	30104-00C	30105-00C	30106-00C	30107-00C		
H5	H3				35805-000				BX170
H5	H3		40103-010	40104-010	40105-010	40106-010	40107-010		BX200
H5	H3		40103-01S	40104-01S	40105-01S	40106-01S	40107-01S		
H5	H3		40103-01T	40104-01T	40105-01T	40106-01T	40107-01T		
H5	H3		40103-01C	40104-01C	40105-01C	40106-01C	40107-01C		
H5	H3				46805-010				BX220
H5	H3		54063-010		54065-010				BX600
H5	H3		54063-01C		54065-01C				
H5	H3		54063-0H0		54065-0H0				
H5	H3		54063-0HC		54065-0HC				
YES	YES	54060-006							BX800
H4	H3		30113-000	30114-000	30115-000	30116-000	30117-000		BX100
H4	H3		30113-00T	30114-00T	30115-00T	30116-00T	30117-00T		
H4	H3		30113-00C	30114-00C	30115-00C	30116-00C	30117-00C		
H4	H3			35904-000					BX170
H4	H3		40113-010	40114-010	40115-010	40116-010	40117-010	40118-010	BX200
H4	H3		40113-01S	40114-01S	40115-01S	40116-01S	40117-01S	40118--01S	
H4	H3		40113-01T	40114-01T	40115-01T	40116-01T	40117-01T	40118--01T	
H4	H3		40113-01C	40114-01C	40115-01C	40116-01C	40117-01C	40118--01C	
H4	H3			46904-010					BX220
H4	H3		54073-010		54075-010				BX600
H4	H3		54073-01C		54075-01C				
H4	H3		54073-0H0		54075-0H0				
H4	H3		54073-0HC		54075-0HC				

THRU - COOLANT



RADIAL - COOLANT

ANGULAR - COOLANT

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
3/8-16		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM
3/8-24		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Hi Spiral	6" OAL	3	2.5	BRIGHT
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN

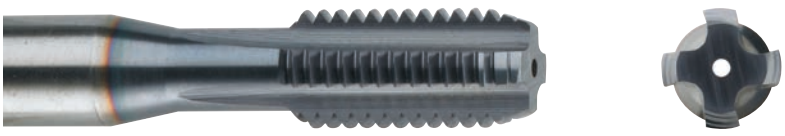
BALAX SERIES BX600

Made from premium tool steel with special flute and thread grinding geometry designed specifically for cutting abrasive materials with powdery chips. They provide outstanding tool life, especially with TiN or TiCN coating.

STOCK COOLANT-THRU CAST IRON THREDSHAVER: Now available to improve chip evacuation and tap-life in deep blind holes. These are stocked in Class 2B and 6H fits.

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 2B	CLASS 3B	EDP #	H3	H4	H5	H6	H7	SERIES
H5	H3		30123-000	30124-000	30125-000	30126-000	30127-000	BX100
H5	H3		30123-00T	30124-00T	30125-00T	30126-00T	30127-00T	
H5	H3		30123-00C	30124-00C	30125-00C	30126-00C	30127-00C	
H5	H3				36005-000			BX170
H5	H3		40123-010	40124-010	40125-010	40126-010	40127-010	BX200
H5	H3		40123-01S	40124-01S	40125-01S	40126-01S	40127-01S	
H5	H3		40123-01T	40124-01T	40125-01T	40126-01T	40127-01T	
H5	H3		40123-01C	40124-01C	40125-01C	4012601C	40127-01C	
H5	H3				47005-010			BX220
H5	H3		54083-010		54085-010			BX600
H5	H3		54083-01C		54085-01C			
H5	H3		54083-0H0		54085-0H0			
H5	H3		54083-0HC		54085-0HC			
YES	YES	54080-006						BX800
H4	H3		30133-000	30134-000	30135-000	30136-000	30137-000	BX100
H4	H3		30133-00T	30134-00T	30135-00T	30136-00T	30137-00T	
H4	H3		30133-00C	30134-00C	30135-00C	30136-00C	30137-00C	
H4	H3			36104-000				BX170
H4	H3		40133-010	40134-010	40135-010	40136-010	40137-010	BX200
H4	H3		40133-01S	40134-01S	40135-01S	40136-01S	40137-01S	
H4	H3		40133-01T	40134-01T	40135-01T	40136-01T	40137-01T	
H4	H3		40133-01C	40134-01C	40135-01C	40136-01C	40137-01C	
H4	H3			47104-010				BX220
H4	H3		54093-010		54095-010			BX600
H4	H3		54093-01C		54095-01C			
H4	H3		54093-0H0		54095-0H0			
H4	H3		54093-0HC		54095-0HC			



TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
7/16-14		BX100	Spiral Point High Hook	ANSI	3	4.5	BRIGHT
			Spiral Point Steel	ANSI	3	4.5	TiN
			Spiral Point Stainless	ANSI	3	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX600	Straight Flute Cast Iron	ANSI	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM
7/16-20		BX100	Spiral Point High Hook	ANSI	3	4.5	BRIGHT
			Spiral Point Steel	ANSI	3	4.5	TiN
			Spiral Point Stainless	ANSI	3	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX600	Straight Flute Cast Iron	ANSI	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI	4	2	BRIGHT
					4	2	TiCN
1/2-13		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	110mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX600	Straight Flute Cast Iron	ANSI	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM

***RED INDICATES COATED TAPS IN-STOCK**

CLASS2B	CLASS 3B	EDP #	H3	H4	H5	H6	H7	SERIES
H5	H3		30143-000		30145-000		30147-000	BX100
H5	H3		30143-00T		30145-00T		30147-00T	
H5	H3		30143-00C		30145-00C		30147-00C	
H5	H3		40143-000		40145-000		40147-000	BX200
H5	H3		40143-00S		40145-00S		40147-00S	
H5	H3		40143-00T		40145-00T		40147-00T	
H5	H3		40143-00C		40145-00C		40147-00C	
H5	H3		54103-000		54105-000			BX600
H5	H3		54103-00C		54105-00C			
H5	H3		54103-0J0		54105-0J0			
H5	H3		54103-0JC		54105-0JC			
YES	YES	54100-006						BX800
H5	H3		30153-000		30155-000		30157-000	BX100
H5	H3		30153-00T		30155-00T		30157-00T	
H5	H3		30153-00C		30155-00C		30157-00C	
H5	H3		40153-000		40155-000		40157-000	BX200
H5	H3		40153-00S		40155-00S		40157-00S	
H5	H3		40153-00T		40155-00T		40157-00T	
H5	H3		40153-00C		40155-00C		40157-00C	
H5	H3		54113-000		54115-000			BX600
H5	H3		54113-00C		54115-00C			
H5	H3		54113-0J0		54115-0J0			
H5	H3		54113-0JC		54115-0JC			
H5	H3		30163-000		30165-000		30167-000	BX100
H5	H3		30163-00T		30165-00T		30167-00T	
H5	H3		30163-00C		30165-00C		30167-00C	
H5	H3		40163-000		40165-000		40167-000	BX200
H5	H3		40163-00S		40165-00S		40167-00S	
H5	H3		40163-00T		40165-00T		40167-00T	
H5	H3		40163-00C		40165-00C		40167-00C	
H5	H3				41280-006			BX210
H5	H3				41280-00T			
H5	H3				41280-00C			
H5	H3		54123-000		54125-000			BX600
H5	H3		54123-00C		54125-00C			
H5	H3		54123-0J0		54125-0J0			
H5	H3		54123-0JC		54125-0JC			
YES	YES	54120-006						BX800

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
1/2-20		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TIN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	110mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX600	Straight Flute Cast Iron	ANSI	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI	4	2	BRIGHT
					4	2	TiCN
5/8-11		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	110mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
5/8-18		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	110mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
3/4-10		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	125mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN

BALAX SERIES BX210

Engineered for deep blind hole tapping applications in steel forgings and castings. The heavy duty spiral flute design creates excellent chip evacuation while contributing to added tap strength. **BX210** taps are made from special powdered metal and ground with special flute and thread geometry to provide excellent tap life.

CLASS 2B	CLASS 3B	H3	H4	H5	H6	H7	H8	SERIES
H5	H3	30173-000		30175-000		30177-000		BX100
H5	H3	30173-00T		30175-00T		30177-00T		
H5	H3	30173-00C		30175-00C		30177-00C		
H5	H3	40173-000		40175-000		40177-000		BX200
H5	H3	40173-00S		40175-00S		40177-00S		
H5	H3	40173-00T		40175-00T		40177-00T		
H5	H3	40173-00C		40175-00C		40177-00C		
H5	H3			41290-006				BX210
H5	H3			41290-00T				
H5	H3			41290-00C				
H5	H3	54133-000		54135-000				BX600
H5	H3	54133-00C		54135-00C				
H5	H3	54133-0J0		54135-0J0				
H5	H3	54133-0JC		54135-0JC				
H6	H3	30183-000			30186-000		30188-000	BX100
H6	H3	30183-00T			30186-00T		30188-00T	
H6	H3	30183-00C			30186-00C		30188-00C	
H6	H3	40183-000			40186-000		40188-000	BX200
H6	H3	40183-00S			40186-00S		40188-00S	
H6	H3	40183-00T			40186-00T		40188-00T	
H6	H3	40183-00C			40186-00C		40188-00C	
H6	H3				41320-006			BX210
H6	H3				41320-00T			
H6	H3				41320-00C			
H5	H3	30193-000		30195-000		30197-000		BX100
H5	H3	30193-00T		30195-00T		30197-00T		
H5	H3	30193-00C		30195-00C		30197-00C		
H5	H3	40193-000		40195-000		40197-000		BX200
H5	H3	40193-00S		40195-00S		40197-00S		
H5	H3	40193-00T		40195-00T		40197-00T		
H5	H3	40193-00C		40195-00C		40197-00C		
H5	H3			41330-006				BX210
H5	H3			41330-00T				
H5	H3			41330-00C				
H6	H3	30203-000			30206-000		30208-000	BX100
H6	H3	30203-00T			30206-00T		30208-00T	
H6	H3	30203-00C			30206-00C		30208-00C	
H6	H3	40203-000			40206-000		40208-000	BX200
H6	H3	40203-00S			40206-00S		40208-00S	
H6	H3	40203-00T			40206-00T		40208-00T	
H6	H3	40203-00C			40206-00C		40208-00C	
H6	H3				41340-006			BX210
H6	H3				41340-00T			
H6	H3				41340-00C			

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
3/4-16		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	125mm OAL	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
7/8-9		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	140mm OAL	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
7/8-14		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45°Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	140mm OAL	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
1-8		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	160mm OAL	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
1-12		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless	ANSI	4	4.5	TICN
		BX200	45° Hi-Spiral Aluminum	ANSI	4	2.5	BRIGHT
			45° Hi-Spiral	ANSI	4	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	4	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	4	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	160mm OAL	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN

CLASS 2B	CLASS 3B	H3	H4	H5	H6	H7	H8	SERIES
H5	H3	30213-000		30215-000		30217-000		BX100
H5	H3	30213-00T		30215-00T		30217-00T		
H5	H3	30213-00C		30215-00C		30217-00C		
H5	H3	40213-000		40215-000		40217-000		BX200
H5	H3	40213-00S		40215-00S		40217-00S		
H5	H3	40213-00T		40215-00T		40217-00T		
H5	H3	40213-00C		40215-00C		40217-00C		
H5	H3			41350-006				BX210
H5	H3			41350-00T				
H5	H3			41350-00C				
H6	H4		30224-000		30226-000		30228-000	BX100
H6	H4		30224-00T		30226-00T		30228-00T	
H6	H4		30224-00C		30226-00C		30228-00C	
H6	H4		40224-000		40226-000		40228-000	BX200
H6	H4		40224-00S		40226-00S		40228-00S	
H6	H4		40224-00T		40226-00T		40228-00T	
H6	H4		40224-00C		40226-00C		40228-00C	
H6	H4				41360-006			BX210
H6	H4				41360-00T			
H6	H4				41360-00C			
H6	H4		30234-000		30236-000		30238-000	BX100
H6	H4		30234-00T		30236-00T		30238-00T	
H6	H4		30234-00C		30236-00C		30238-00C	
H6	H4		40234-000		40236-000		40238-000	BX200
H6	H4		40234-00S		40236-00S		40238-00S	
H6	H4		40234-00T		40236-00T		40238-00T	
H6	H4		40234-00C		40236-00C		40238-00C	
H6	H4				41370-006			BX210
H6	H4				41370-00T			
H6	H4				41370-00C			
H6	H4		30244-000		30246-000		30248-000	BX100
H6	H4		30244-00T		30246-00T		30248-00T	
H6	H4		30244-00C		30246-00C		30248-00C	
H6	H4		40244-000		40246-000		40248-000	BX200
H6	H4		40244-00S		40246-00S		40248-00S	
H6	H4		40244-00T		40246-00T		40248-00T	
H6	H4		40244-00C		40246-00C		40248-00C	
H6	H4				41380-006			BX210
H6	H4				41380-00T			
H6	H4				41380-00C			
H6	H4		30254-000		30256-000		30258-000	BX100
H6	H4		30254-00T		30256-00T		30258-00T	
H6	H4		30254-00C		30256-00C		30258-00C	
H6	H4		40254-000		40256-000		40258-000	BX200
H6	H4		40254-00S		40256-00S		40258-00S	
H6	H4		40254-00T		40256-00T		40258-00T	
H6	H4		40254-00C		40256-00C		40258-00C	
H6	H4				41390-006			BX210
H6	H4				41390-00T			
H6	H4				41390-00C			

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
M2 X .4		BX100	Spiral Point High Hook	ANSI	2	4.5	BRIGHT
			Spiral Point Steel	ANSI	2	4.5	TiN
			Spiral Point Stainless	ANSI	2	4.5	TiCN
M2.5 X .45		BX100	Spiral Point High Hook	ANSI	2	4.5	BRIGHT
			Spiral Point Steel	ANSI	2	4.5	TiN
			Spiral Point Stainless	ANSI	2	4.5	TiCN
		BX200	45° Spiral Flute Aluminum	ANSI	2	2.5	BRIGHT
			45° Hi-Spiral	ANSI	2	2.5	STEAM OXIDE
			45° Spiral Flute Steel	ANSI	2	2.5	TiN
			45° Spiral Flute Stainless	ANSI	2	2.5	TICN
M3 X .5		BX100	Spiral Point High Hook	ANSI	3	4.5	BRIGHT
			Spiral Point Steel	ANSI	3	4.5	TIN
			Spiral Point Stainless	ANSI	3	4.5	TICN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	4" OAL	3	2.5	BRIGHT
M3.5 X .6		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TICN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	4" OAL	3	2.5	BRIGHT
M4 X .7		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	4" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	4" OAL	3	2.5	BRIGHT
M5 X .8		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	6" OAL	3	2.5	BRIGHT
		BX510	DIN – Premium Steel 15° Spiral Flute Diecast Aluminum	DIN371	3	2	BRIGHT
					3	2	TIN

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 6H	CLASS 4H	D2	D3	D4	D5	D6	SERIES
D3	D2	30992-000	30993-000				BX100
D3	D2	30992-00T	30993-00T				
D3	D2	30992-00C	30993-00C				
D3	D2	31002-000	31003-000		31005-000		BX100
D3	D2	31002-00T	31003-00T		31005-00T		
D3	D2	31002-00C	31003-00C		31005-00C		
D3	D2	43002-010	43003-010		43005-010		BX200
D3	D2	43002-01S	43003-01S		43005-01S		
D3	D2	43002-01T	43003-01T		43005-01T		
D3	D2	43002-01C	43003-01C		43005-01C		
D3	D2	31012-000	31013-000		31015-000		BX100
D3	D2	31012-00T	31013-00T		31015-00T		
D3	D2	31012-00C	31013-00C		31015-00C		
D3	D2		38003-000				BX170
D3	D2	43012-010	43013-010		43015-010		BX200
D3	D2	43012-01S	43013-01S		43015-01S		
D3	D2	43012-01T	43013-01T		43015-01T		
D3	D2	43012-01C	43013-01C		43015-01C		
D3	D2		49003-010				BX220
D4	D3		31023-000	31024-000			BX100
D4	D3		31023-00T	31024-00T			
D4	D3		31023-00C	31024-00C			
D4	D3			38104-000			BX170
D4	D3		43023-010	43024-010		43026-010	BX200
D4	D3		43023-01S	43024-01S		43026-01S	
D4	D3		43023-01T	43024-01T		43026-01T	
D4	D3		43023-01C	43024-01C		43026-01C	
D4	D3			49104-010			BX220
D4	D3		31033-000	31034-000		31036-000	BX100
D4	D3		31033-00T	31034-00T		31036-00T	
D4	D3		31033-00C	31034-00C		31036-00C	
D4	D3			38204-000			BX170
D4	D3		43033-010	43034-010		43036-010	BX200
D4	D3		43033-01S	43034-01S		43036-01S	
D4	D3		43033-01T	43034-01T		43036-01T	
D4	D3		43033-01C	43034-01C		43036-01C	
D4	D3			49204-010			BX220
D4	D3		31043-000	31044-000		31046-000	BX100
D4	D3		31043-00T	31044-00T		31046-00T	
D4	D3		31043-00C	31044-00C		31046-00C	
D4	D3			38304-000			BX170
D4	D3		43043-010	43044-010		43046-010	BX200
D4	D3		43043-01S	43044-01S		43046-01S	
D4	D3		43043-01T	43044-01T		43046-01T	
D4	D3		43043-01C	43044-01C		43046-01C	
D4	D3			49304-010			BX220
D4	D3			52894-010			BX510
D4	D3			52894-01T			

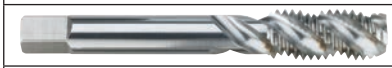
TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
M6 X1.0		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	6" OAL	3	2.5	BRIGHT
		BX210	DIN – 38° Spiral Flute	DIN371	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX510	DIN – Premium Steel 15° Spiral Flute Diecast Aluminum	DIN371	3	2	BRIGHT
					3	2	TiN
			DIN – Premium Steel 15° Spiral Flute Diecast-Coolant Thru	DIN371	3	2	BRIGHT
					3	2	TiN
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX610	DIN – Premium Steel Straight Flute Cast Iron	DIN371	4	2	BRIGHT
					4	2	TiCN
			DIN – Premium Steel Straight Flute Cast Iron-Coolant Thru	DIN371	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	3	4	NIT/STEAM
M8 X 1.25		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	6" OAL	3	2.5	BRIGHT
		BX210	DIN – 38° Spiral Flute	DIN371	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX510	DIN – Premium Steel 15° Spiral Flute Diecast Aluminum	DIN371	3	2	BRIGHT
					3	2	TiN
			DIN – Premium Steel 15° Spiral Flute Diecast-Coolant Thru	DIN371	3	2	BRIGHT
					3	2	TiN
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX610	DIN – Premium Steel Straight Flute Cast Iron	DIN371	4	2	BRIGHT
					4	2	TiCN
			DIN – Premium Steel Straight Flute Cast Iron-Coolant Thru	DIN371	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM

***RED INDICATES COATED TAPS IN-STOCK**

CLASS 6H	CLASS 4H	EDP #	D3	D4	D5	D6	D7	SERIES
D5	D3		31053-000		31055-000		31057-000	BX100
D5	D3		31053-00T		31055-00T		31057-00T	
D5	D3		31053-00C		31055-00C		31057-00C	
D5	D3				38405-000			BX170
D5	D3		43053-010		43055-010		43057-010	BX200
D5	D3		43053-01S		43055-01S		43057-01S	
D5	D3		43053-01T		43055-01T		43057-01T	
D5	D3		43053-01C		43055-01C		43057-01C	
D5	D3				49405-010			BX220
D5	D3				43200-016			BX210
D5	D3				43200-01T			
D5	D3				43200-01C			
D5	D3				52905-010			BX510
D5	D3				52905-01T			
D5	D3				52905-0H0			
D5	D3				52905-0HT			
D5	D3		54603-010		54605-010			BX600
D5	D3		54603-01C		54605-01C			
D5	D3		54603-0H0		54605-0H0			
D5	D3		54603-0HC		54605-0HC			
D5	D3				54805-010			BX610
D5	D3				54805-01C			
D5	D3				54805-0H0			
D5	D3				54805-0HC			
YES	YES	54600-006						BX800
D5	D3		31063-000		31065-000		31067-000	BX100
D5	D3		31063-00T		31065-00T		31067-00T	
D5	D3		31063-00C		31065-00C		31067-00C	
D5	D3				38505-000			BX170
D5	D3		43063-010		43065-010		43067-010	BX200
D5	D3		43063-01S		43065-01S		43067-01S	
D5	D3		43063-01T		43065-01T		43067-01T	
D5	D3		43063-01C		43065-01C		43067-01C	
D5	D3				49505-010			BX220
D5	D3				43210-016			BX210
D5	D3				43210-01T			
D5	D3				43210-01C			
D5	D3				52915-010			BX510
D5	D3				52915-01T			
D5	D3				52915-0H0			
D5	D3				52915-0HT			
D5	D3		54613-010		54615-010			BX600
D5	D3		54613-01T		54615-01C			
D5	D3		54613-0H0		54615-0H0			
D5	D3		54613-0HT		54615-0HC			
D5	D3				54815-010			BX610
D5	D3				54815-01C			
D5	D3				54815-0H0			
D5	D3				54815-0HC			
YES	YES	54610-006						BX800

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
M10 X 1.5		BX100	Spiral Point High Hook	ANSI CNC	3	4.5	BRIGHT
			Spiral Point Steel	ANSI CNC	3	4.5	TiN
			Spiral Point Stainless Steel	ANSI CNC	3	4.5	TiCN
		BX170	Extension – Spiral Point	6" OAL	3	4.5	BRIGHT
		BX200	45° Hi-Spiral Aluminum	ANSI CNC	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI CNC	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI CNC	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI CNC	3	2.5	TiCN
		BX220	Extension – 45° Spiral Flute	6" OAL	3	2.5	BRIGHT
		BX210	DIN – 38° Spiral Flute	DIN371	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX510	DIN – Premium Steel 15° Spiral Flute Diecast Aluminum	DIN371	3	2	BRIGHT
					3	2	TiN
			DIN – Premium Steel 15° Spiral Flute Diecast-Coolant Thru	DIN371	3	2	BRIGHT
					3	2	TiN
		BX600	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT
					4	2	TiCN
		BX610	DIN – Premium Steel Straight Flute Cast Iron	DIN371	4	2	BRIGHT
					4	2	TiCN
			DIN – Premium Steel Straight Flute Cast Iron-Coolant Thru	DIN371	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM
M11 X 1.5		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM
M12 X 1.75		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
			Spiral Point Steel	ANSI	4	4.5	TiN
			Spiral Point Stainless Steel	ANSI	4	4.5	TiCN
		BX200	45° Hi-Spiral Aluminum	ANSI	3	2.5	BRIGHT
			45° Hi-Spiral	ANSI	3	2.5	STEAM OXIDE
			45° Hi-Spiral Steel	ANSI	3	2.5	TiN
			45° Hi-Spiral Stainless	ANSI	3	2.5	TiCN
		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
		BX600	Straight Flute Cast Iron	ANSI	4	2	BRIGHT
					4	2	TiCN
			Straight Flute Cast Iron-Coolant Thru	ANSI	4	2	BRIGHT
					4	2	TiCN
		BX610	DIN – Premium Steel Straight Flute Cast Iron	DIN376	4	2	BRIGHT
					4	2	TiCN
			DIN – Premium Steel St Fl Cast Iron-Coolant Thru	DIN376	4	2	BRIGHT
					4	2	TiCN
		BX800	Cleanout Tap	ANSI	4	4	NIT/STEAM

CLASS 6H	CLASS 4H	EDP #	D3	D4	D5	D6	D7	D8	SERIES
D6	D3		31073-000		31075-000	31076-000		31078-000	BX100
D6	D3		31073-00T		31075-00T	31076-00T		31078-00T	
D6	D3		31073-00C		31075-00C	31076-00C		31078-00C	
D6	D3					38606-000			BX170
D6	D3		43073-010		43075-010	43076-010		43078-010	BX200
D6	D3		43073-01S		43075-01S	43076-01S		43078-01S	
D6	D3		43073-01T		43075-01T	43076-01T		43078-01T	
D6	D3		43073-01C		43075-01C	43076-01C		43078-01C	
D6	D3					49606-010			BX220
D6	D3					43220-006			BX210
D6	D3					43220-00T			
D6	D3					43220-00C			
D6	D3					52926-000			BX510
D6	D3					52926-00T			
D6	D3					52926-0J0			
D6	D3					52926-0JT			
D6	D3					54626-010			BX600
D6	D3					54626-01C			
D6	D3					54626-0H0			
D6	D3					54626-0HC			
D6	D3					54826-000			BX610
D6	D3					54826-00C			
D6	D3					54826-0J0			
D6	D3					54826-0JC			
YES	YES	54620-006							BX800
YES	YES	54625-006							BX800
D6	D3		31083-000			31086-000		31088-000	BX100
D6	D3		31083-00T			31086-00T		31088-00T	
D6	D3		31083-00C			31086-00C		31088-00C	
D6	D3		43083-000			43086-000		43088-000	BX200
D6	D3		43083-00S			43086-00S		43088-00S	
D6	D3		43083-00T			43086-00T		43088-00T	
D6	D3		43083-00C			43086-00C		43088-00C	
D6	D3					43230-006			BX210
D6	D3					43230-00T			
D6	D3					43230-00C			
D6	D3					54636-000			BX600
D6	D3					54636-00C			
D6	D3					54636-0J0			
D6	D3					54636-0JC			
D6	D3					54846-000			BX610
D6	D3					54846-00C			
D6	D3					54846-0J0			
D6	D3					54846-0JC			
YES	YES	54630-006							BX800

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING
M14 X 1.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
M14 X 2.0		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
		BX200	45° Hi-Spiral	ANSI	4	2.5	BRIGHT
		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TICN
M16 X 1.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TICN
M16 X 2.0		BX100	Spiral Point High Hook	ANSI	4	4.5	BRIGHT
		BX200	45° Hi-Spiral	ANSI	4	2.5	BRIGHT
		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
M18 X 1.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
M18 X 2.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
M20 X 1.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TiCN
M20 X 2.5		BX210	DIN – 38° Spiral Flute	DIN376	3	2.5	NIT/STEAM
					3	2.5	TiN
					3	2.5	TICN
M22 X 1.5		BX210	DIN – 38° Spiral Flute	DIN376	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
M22 X 2.5		BX210	DIN – 38° Spiral Flute	DIN376	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
M24 X 2.0		BX210	DIN – 38° Spiral Flute	DIN376	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN
M24 X 3.0		BX210	DIN – 38° Spiral Flute	DIN376	4	2.5	NIT/STEAM
					4	2.5	TiN
					4	2.5	TiCN

CLASS 6H	CLASS 4H	D3	D4	D5	D6	D7	D8	SERIES
D6	D3				43240-006			BX210
D6	D3				43240-00T			
D6	D3				43240-00C			
D7	D3	31093-000				31097-000		BX100
D7	D3	43093-000				43097-000		BX200
D7	D3					43250-006		BX210
D7	D3					43250-00T		
D7	D3					43250-00C		
D6	D3				43260-006			BX210
D6	D3				43260-00T			
D6	D3				43260-00C			
D7	D3	31103-000				31107-000		BX100
D7	D3	43103-000				43107-000		BX200
D7	D3					43270-006		BX210
D7	D3					43270-00T		
D7	D3					43270-00C		
D6	D3				43280-006			BX210
D6	D3				43280-00T			
D6	D3				43280-00C			
D7	D5					43290-006		BX210
D7	D5					43290-00T		
D7	D5					43290-00C		
D6	D3				43300-006			BX210
D6	D3				43300-00T			
D6	D3				43300-00C			
D7	D5					43310-006		BX210
D7	D5					43310-00T		
D7	D5					43310-00C		
D6	D3				43320-006			BX210
D6	D3				43320-00T			
D6	D3				43320-00C			
D7	D5					43340-006		BX210
D7	D5					43340-00T		
D7	D5					43340-00C		
D7	D5					43350-006		BX210
D7	D5					43350-00T		
D7	D5					43350-00C		
D8	D6						43370-006	BX210
D8	D6						43370-00T	
D8	D6						43370-00C	

THREDSHAVER PIPE TAPS

NPSF, NPT, NPTF

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING	PROJECTION	EDP #
1/16-27		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.222/.259	59900
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.222/.259	59902
1/8-27 SM (.3125 SHANK)		BX700	NPSF – STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	-	59914
		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.222/.259	59910
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.222/.259	59912
1/8-27 LG (.4375 SHANK)		BX700	NPSF – STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	-	59924
		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.222/.259	59920
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.222/.259	59922
1/4-18		BX700	NPSF – STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	-	59934
		BX710	NPT –SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.333/.389	59930
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.333/.389	59932
3/8-18		BX700	NPSF – STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	-	59944
		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.333/.389	59940
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.333/.389	59942
1/2-14		BX700	NPSF – STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	-	59954
		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	4	1.5	BRIGHT	.429/.500	59950
			NPTF – SPIRAL FLUTE		4	1.5	BRIGHT	.429/.500	59952
3/4-14		BX710	NPT – SPIRAL FLUTE	ANSI PIPE	5	1.5	BRIGHT	.429/.500	59960
			NPTF – SPIRAL FLUTE		5	1.5	BRIGHT	.429/.500	59962

SAE SHORT PROJECTION

Series BX710 (NPT and NPTF) are made to SAE short projection specifications

B700 – Recommended Applications

MATERIALS	EXAMPLES	HOLE THRU	BLIND HOLE	NITRIDE	STEAM OXIDE	BRIGHT FINISH	BALWEAR	BALUBE	TIN	SUPER TIN	TICN	TIAIN
DIECAST ALUMINUM	380, 383	•	•	•					•			
DIECAST ZINC		•	•			•						
CAST IRON	GREY IRON, DUCTILE	•	•	•	•				•			
BRONZE CASTING		•	•	•	•				•			

BX710 – Recommended Applications

MATERIALS	EXAMPLES	HOLE THRU	BLIND HOLE	NITRIDE	STEAM OXIDE	BRIGHT FINISH	BALWEAR	BALUBE	TIN	SUPER TIN	TICN	TIAIN
LOW CARBON STEEL RC 20 & BELOW	1010, 1020, 1035 1040, 1215	•	•						•			
HIGH CARBON STEEL ALLOY STEEL	1050, 1065	•	•	•	•							
TOOL & DIE STEEL PRE-HEAT TREAT	D2, H13, M1, M7	•	•	•	•							
AUSTENITIC STAINLESS STEEL	302, 303, 304, 316	•	•						•		•	
MARTENSITIC STAINLESS STEEL	410, 420, 440	•	•	•	•							
WROUGHT IRON	2024, 6061, 7075	•	•			•						
DIECAST ALUMINUM	380, 383	•	•	•					•			
DIECAST ZINC		•	•			•						
COPPER & BRASS FREE MACHINING		•	•				•		•			

CARBIDE INSERTED THREDFLOERS AND THREDSHAVERS

The next generation of high performance taps are now available from Balax. Made with embedded carbide thread sections, these taps offer many advantages and give you the best of both worlds.

- The torsional strength of a High Speed Steel (HSS) tap body
- The exceptional wear resistance of carbide in the areas where all the tapping work is done.

EXTENDED TAP LIFE

In automotive diecast aluminum, the tap life of carbide inserted Cold Forming taps can be from two hundred thousand holes to 1 million, depending on the thread percentage, coolant lubricity and other factors.

The tap life of carbide inserted Cutting taps running in abrasive automotive diecast aluminum or cast iron, is typically at least 3-5 times that of conventional taps and the taps may be resharpened to provide additional cost savings.

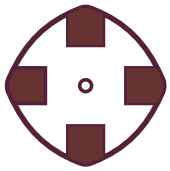
MORE ECONOMICAL THAN SOLID CARBIDE

Carbide Inserted Taps are more cost effective than large diameter solid carbide taps or most extended length solid carbide taps because less carbide blank material is required.

LESS TAP BREAKAGE

Carbide Inserted Taps may be used in multi-spindle applications where breakage of solid carbide taps is a problem.

THREADFLOER



THREDSHAVER

ANSI THREDFLOERS

Designed for diecast aluminum and other non-ferrous applications.

TAP SIZE	SERIES	BLANK	CHAMFER	COATING	CLASS 2B	
					H #	EDP #
6-32	Bottom	ANSI CNC	2.5	BRIGHT	5	11435-010
8-32	Bottom	ANSI CNC	2.5	BRIGHT	5	11785-010
10-24	Bottom	ANSI CNC	2.5	BRIGHT	5	12115-010
10-32	Bottom	ANSI CNC	2.5	BRIGHT	5	12335-010
1/4-20	Bottom	ANSI CNC	2.5	BRIGHT	7	12797-010
1/4-28	Bottom	ANSI CNC	2.5	BRIGHT	6	13016-010
5/16-18	Bottom	ANSI CNC	2.5	BRIGHT	8	13198-010
5/16-24	Bottom	ANSI CNC	2.5	BRIGHT	7	13367-010
3/8-16	Bottom	ANSI CNC	2.5	BRIGHT	8	13558-010
3/8-24	Bottom	ANSI CNC	2.5	BRIGHT	7	13727-010

NPSF THREDSHAVER – Designed for diecast aluminum and cast iron production tapping applications.

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING	EDP #
1/4-18		BX730	NPSF STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	59938
3/8-18		BX730	NPSF STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	59948
1/2-14		BX730	NPSF STRAIGHT FLUTE	ANSI PIPE	4	2	BRIGHT	59958

METRIC – CARBIDE INSERTED THREDFLOERS AND THREDSHAVERS

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING	CLASS 6H D #	CLASS 6H EDP #
M3.5 X .6		Bottom	Thredfloer	ANSI CNC	-	2.5	BRIGHT	7	17897-010
M4 X .7		Bottom	Thredfloer	ANSI CNC	-	2.5	BRIGHT	7	18097-010
M5 X .8		Bottom	Thredfloer	ANSI CNC	-	2.5	BRIGHT	8	18298-010
M6 X 1.0		Bottom	Thredfloer	ANSI CNC	-	2.5	BRIGHT	9	18499-010
		DIN	DIN – Thredfloer	DIN371	-	2.5	BRIGHT	9	18599-010
		BX620	Straight Flute Cast Iron	ANSI CNC	3	2	BRIGHT	5	55105-010
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	3	2	BRIGHT	5	55105-0H0
		BX630	DIN – Straight Flute Cast Iron	DIN371	3	2	BRIGHT	5	55205-010
			DIN – Straight Flute Cast Iron-Coolant Thru	DIN371	3	2	BRIGHT	5	55205-0H0
M8 X 1.25		Bottom	Thredfloer	ANSI CNC	-	2.5	BRIGHT	10	18690-010
		DIN	DIN – Thredfloer	DIN371	-	2.5	BRIGHT	10	18700-010
		BX620	Straight Flute Cast Iron	ANSI CNC	4	2	BRIGHT	5	55115-010
			Straight Flute Cast Iron-Coolant Thru	ANSI CNC	4	2	BRIGHT	5	55115-0H0
		BX630	DIN – Straight Flute Cast Iron	DIN371	4	2	BRIGHT	5	55215-010
			DIN – Straight Flute Cast Iron-Coolant Thru	DIN371	4	2	BRIGHT	5	55215-0H0

METRIC – CARBIDE INSERTED THREDFLOERS AND THREDSHAVERS – *CONTINUED*

TAP SIZE	IMAGE	SERIES	DESCRIPTION	BLANK	# FLUTES	CHAMFER	COATING	CLASS 6H D #	CLASS 6H EDP #
M10 X 1.5		BOTTOM	THREDFLOER	ANSI CNC	-	2.5	BRIGHT	11	18871-010
		DIN	DIN – THREDFLOER	DIN371	-	2.5	BRIGHT	11	18881-000
		BX620	STRAIGHT FLUTE CAST IRON	ANSI CNC	4	2	BRIGHT	6	55126-010
			STRAIGHT FLUTE CAST IRON-COOLANT THRU	ANSI CNC	4	2	BRIGHT	6	55126-0H0
		BX630	DIN – STRAIGHT FLUTE CAST IRON	DIN371	4	2	BRIGHT	6	55226-000
			DIN – STRAIGHT FLUTE CAST IRON-COOLANT THRU	DIN371	4	2	BRIGHT	6	55226-0J0
M12 X 1.75		BOTTOM	THREDFLOER	ANSI CNC	-	2.5	BRIGHT	12	19072-000
		DIN	DIN – THREDFLOER	DIN376	-	2.5	BRIGHT	12	19082-000
		BX620	STRAIGHT FLUTE CAST IRON	ANSI CNC	4	2	BRIGHT	6	55136-000
			STRAIGHT FLUTE CAST IRON-COOLANT THRU	ANSI CNC	4	2	BRIGHT	6	55136-0J0
		BX630	DIN – STRAIGHT FLUTE CAST IRON	DIN376	4	2	BRIGHT	6	55236-000
			DIN – STRAIGHT FLUTE CAST IRON-COOLANT THRU	DIN376	4	2	BRIGHT	6	55236-0J0

BALAX SERIES BX620 (ANSI) AND BX630 (DIN)

Carbide Inserted Cast Iron Thredshavers are designed to provide extended tap life in cast iron production tapping applications.

Coolant-Thru Carbide Inserted Cast Iron Thredshavers are available to improve chip evacuation and tap life.

PRECISION GROUND TAPERLOCK THREAD GAGES

PRECISION GROUND TAPERLOCK THREAD GAGES

SUPERIOR METALLURGY

- Made from High Speed Tool Steel., the same material as used in tap manufacturing.
- Heat treated to 63-65 Rockwell C , the same hardness as used in tap manufacturing.

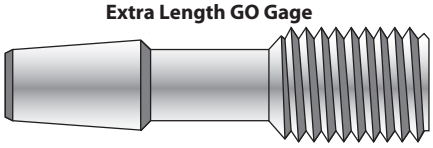
SUPERIOR ACCURACY

- Thread ground on proprietary Balax Thread Grinders. This unique grinding process provides accurate thread profiles with less lead error than other gage grinding methods used today.

EXTRA LENGTH FEATURE

Balax "Go" Gages in sizes 4-40 (M3 x .5) and larger are made with a relieved or undercut thread section. This *longer-than-standard* length feature allows gaging to thread depths achieved with standard tap thread lengths. Reversible gages are no longer required to check deep tapped holes.

Extra Length GO Gage

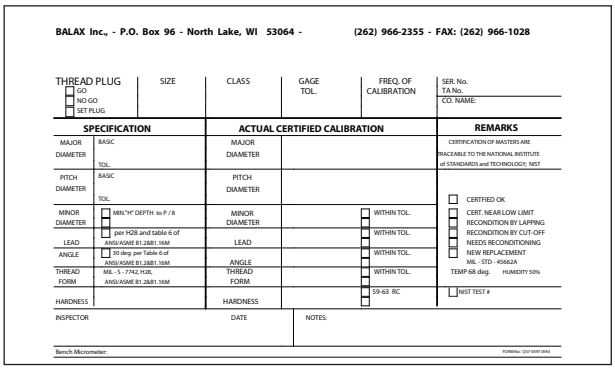


MINIATURE GAGES

Available in sizes ranging from 000-120 to 00-90 or .90 UNM to 1.40 UNM. The high quality materials and special grinding process used to manufacture Our Miniature Gages provide a consistency and accuracy never before available with miniature gages. They are held in special collet type holders.

CERTIFICATE OF INSPECTION

All Balax Thread Gages are furnished with actual fifth place (.00000) measurements of pitch diameter and major diameter to guarantee the accuracy of your gage to "Class-X" tolerance levels.



BALAX Inc., - P.O. Box 96 - North Lake, WI 53064 - (262) 966-2355 - FAX: (262) 966-1028

THREAD PLUG ☐ GO ☐ NO GO ☐ SET PLUG	SIZE	CLASS	GAGE TOL.	FREQ. OF CALIBRATION	SER. No. TA No. CO. NAME:

SPECIFICATION		ACTUAL CERTIFIED CALIBRATION			REMARKS
MAJOR DIAMETER	BASIC / TOL.	MAJOR DIAMETER			CERTIFICATION OF MASTERS ARE TRACEABLE TO THE NATIONAL INSTITUTE of STANDARDS and TECHNOLOGY, NIST
PITCH DIAMETER	BASIC / TOL.	PITCH DIAMETER			
MINOR DIAMETER	☐ MIN."H" DEPTH to P / 8 ☐ per H28 and table 6 of ANSI/ASME B1.2&B1.16M	MINOR DIAMETER		☐ WITHIN TOL. ☐	☐ CERTIFIED OK ☐ CERT. NEAR LOW LIMIT ☐ RECONDITION BY LAPPING ☐ RECONDITION BY CUT-OFF ☐ NEEDS RECONDITIONING ☐ NEW REPLACEMENT
LEAD		LEAD		☐ WITHIN TOL. ☐	
ANGLE	☐ 30 deg. per Table 6 of ANSI/ASME B1.2&B1.16M	ANGLE		☐ WITHIN TOL. ☐	MIL - STD - 45662A
THREAD FORM	MIL - S - 7742, H2B, ANSI/ASME B1.2&B1.16M	THREAD FORM		☐ WITHIN TOL. ☐	TEMP 68 deg. HUMIDITY 50%
HARDNESS		HARDNESS		☐ 59-63 RC	☐ NIST TEST #
INSPECTOR		DATE	NOTES:		

Bench Micrometer:

TITANIUM NITRIDE

Titanium Nitrided thread gages are available for all stock sizes.

SPECIAL GAGES

Balax can custom manufacture gages to your specifications.

TAPERLOCK GAGES

TiN Coated Sets have Two Options:
- **Both Elements TiN**
- **Only Go Member TiN**

ANSI

	"GO" GAGE			CLASS 2B "NO-GO"		CLASS 3B "NO-GO"		2B SET		3B SET	
SIZE	PD (in.)	EDP #	TiN EDP#	PD (in.)	EDP #	PD (in.)	EDP #	EDP#	TiN EDP#	EPD#	TiN EDP#
0-80	.0519	90000	90000T	.0542	90002	.0536	90004	90006	90006T	90008	90008T
1-64	.0629	90010	90010T	.0655	90012	.0648	90014	90016	90016T	90018	90018T
1-72	.0640	90020	90020T	.0665	90022	.0659	90024	90026	90026T	90028	90028T
2-56	.0744	90030	90030T	.0772	90032	.0765	90034	90036	90036T	90038	90038T
2-64	.0759	90040	90040T	.0786	90042	.0779	90044	90046	90046T	90048	90048T
3-48	.0855	90050	90050T	.0885	90052	.0877	90054	90056	90056T	90058	90058T
3-56	.0874	90060	90060T	.0902	90062	.0895	90064	90066	90066T	90068	90068T
4-40	.0958	90070	90070T	.0991	90072	.0982	90074	90076	90076T	90078	90078T
4-48	.0985	90080	90080T	.1016	90082	.1008	90084	90086	90086T	90088	90088T
5-40	.1088	90090	90090T	.1121	90092	.1113	90094	90096	90096T	90098	90098T
5-44	.1102	90100	90100T	.1134	90102	.1126	90104	90106	90106T	90108	90108T
6-32	.1177	90110	90110T	.1214	90112	.1204	90114	90116	90116T	90118	90118T
6-40	.1218	90120	90120T	.1252	90122	.1243	90124	90126	90126T	90128	90128T
8-32	.1437	90130	90130T	.1475	90132	.1465	90134	90136	90136T	90138	90138T
8-36	.1460	90140	90140T	.1496	90142	.1487	90144	90146	90146T	90148	90148T
10-24	.1629	90150	90150T	.1672	90152	.1661	90154	90156	90156T	90158	90158T
10-32	.1697	90160	90160T	.1736	90162	.1726	90164	90166	90166T	90168	90168T
12-24	.1889	90724	90724T	.1933	90726	.1922	90728	90730	90730T	90732	90732T
12-28	.1928	90734	90734T	.1970	90736	.1959	90738	90740	90740T	90742	90742T
1/4-20	.2175	90170	90170T	.2224	90172	.2211	90174	90176	90176T	90178	90178T
1/4-28	.2268	90180	90180T	.2311	90182	.2300	90184	90186	90186T	90188	90188T
1/4-32	.2297	90744	90744T	.2339	90746	.2328	90748	90750	90750T	90752	90752T
5/16-18	.2764	90190	90190T	.2817	90192	.2803	90194	90196	90196T	90198	90198T
5/16-24	.2854	90200	90200T	.2902	90202	.2890	90204	90206	90206T	90208	90208T
5/16-32	.2922	91000	91000T	.2964	91002	.2953	91004	91006	91006T	91008	91008T
3/8-16	.3344	90210	90210T	.3401	90212	.3387	90214	90216	90216T	90218	90218T
3/8-24	.3479	90220	90220T	.3528	90222	.3516	90224	90226	90226T	90228	90228T
3/8-32	.3547	91010	91010T	.3591	91012	.3580	91014	91016	91016T	91018	91018T
7/16-14	.3911	90230	90230T	.3972	90232	.3957	90234	90236	90236T	90238	90238T
7/16-20	.4050	90240	90240T	.4104	90242	.4091	90244	90246	90246T	90248	90248T
7/16-28	.4143	91020	91020T	.4189	91022	.4178	91024	91026	91026T	91028	91028T
1/2-13	.4500	90250	90250T	.4565	90252	.4548	90254	90256	90256T	90258	90258T
1/2-20	.4675	90260	90260T	.4731	90262	.4717	90264	90266	90266T	90268	90268T
1/2-28	.4768	91030	91030T	.4816	91032	.4804	91034	91036	91036T	91038	91038T
9/16-12	.5084	90270	90270T	.5152	90272	.5135	90274	90276	90276T	90278	90278T
9/16-18	.5264	90280	90280T	.5323	90282	.5308	90284	90286	90286T	90288	90288T
9/16-24	.5354	91040	91040T	.5405	91042	.5592	91044	91046	91046T	91048	91048T
5/8-11	.5660	90290	90290T	.5732	90292	.5714	90294	90296	90296T	90298	90298T
5/8-18	.5889	90300	90300T	.5949	90302	.5934	90304	90306	90306T	90308	90308T
5/8-24	.5979	91050	91050T	.6031	91052	.6018	91054	91056	91056T	91058	91058T
3/4-10	.6850	90310	90310T	.6927	90312	.6907	90314	90316	90316T	90318	90318T
3/4-16	.7094	90320	90320T	.7159	90322	.7143	90324	90326	90326T	90328	90328T
3/4-20	.7175	91060	91060T	.7232	91062	.7218	91064	91066	91066T	91068	91068T
7/8-9	.8028	90330	90330T	.8110	90332	.8089	90334	90336	90336T	90338	90338T
7/8-14	.8286	90340	90340T	.8356	90342	.8339	90344	90346	90346T	90348	90348T
7/8-20	.8425	91070	91070T	.8482	91072	.8468	91074	91076	91076T	91078	91078T
1-8	.9188	90350	90350T	.9276	90352	.9254	90354	90356	90356T	90358	90358T
1-12	.9459	90360	90360T	.9535	90362	.9516	90364	90366	90366T	90368	90368T

TAPERLOCK GAGES – *CONTINUED*

TIN COATED SETS HAVE TWO OPTIONS:
– BOTH ELEMENTS TIN
– ONLY GO MEMBER TIN

METRIC

SIZE	"GO"			4H "NO-GO"		6H "NO-GO"		4H SET		6H SET	
	mm	EDP #	TiN EDP#	mm	EDP #	mm	EDP #	EDP#	TiN EDP#	EDP#	TiN EDP#
M1.6 X .35	1.373	90370	90370T	1.426	90374	1.458	90372	90378	90378T	90376	90376T
M1.7 X .35	1.473	90371	90371T	1.526	90375	1.558	90373	90624	90624T	90377	90377T
M2 X .4	1.740	90380	90380T	1.796	90384	1.830	90382	90388	90388T	90386	90386T
M2.5 X .45	2.208	90390	90390T	2.268	90394	2.303	90392	90398	90398T	90396	90396T
M2.6 X .45	2.308	90400	90400T	2.368	90404	2.403	90402	90408	90408T	90406	90406T
M3 X .5	2.675	90410	90410T	2.738	90414	2.775	90412	90418	90418T	90416	90416T
M3.5 X .6	3.110	90420	90420T	3.181	90424	3.222	90422	90428	90428T	90426	90426T
M4 X .7	3.545	90430	90430T	3.620	90434	3.663	90432	90438	90438T	90436	90436T
M5 X .8	4.480	90440	90440T	4.560	90444	4.605	90442	90448	90448T	90446	90446T
M6 X 1	5.350	90450	90450T	5.445	90454	5.500	90452	90458	90458T	90456	90456T
M8 X 1.25	7.188	90460	90460T	7.288	90464	7.348	90462	90468	90468T	90466	90466T
M10 X 1.25	9.188	91200	91200T	9.288	CFQ	9.348	91202	CFQ	CFQ	91206	91206T
M10 X 1.5	9.026	90470	90470T	9.138	90474	9.206	90472	90478	90478T	90476	90476T
M12 X 1.25	11.188	91210	91210T	11.300	CFQ	11.368	91212	CFQ	CFQ	91216	91216T
M12 X 1.5	11.026	91220	91220T	11.144	CFQ	11.216	91222	CFQ	CFQ	91226	91226T
M12 X 1.75	10.863	90481	90481T	10.988	90485	11.063	90483	90489	90489T	90487	90487T
M14 X 1.5	13.026	91230	91230T	13.144	CFQ	13.216	91232	CFQ	CFQ	91236	91236T
M14 X 2	12.701	91240	91240T	12.833	CFQ	12.913	91242	CFQ	CFQ	91246	91246T
M16 X 1.5	15.026	91250	91250T	15.144	CFQ	15.216	91252	CFQ	CFQ	91256	91256T
M16 X 2	14.701	91260	91260T	14.833	CFQ	14.913	91262	CFQ	CFQ	91266	91266T
M18 X 1.5	17.026	91270	91270T	17.144	CFQ	17.216	91272	CFQ	CFQ	91276	91276T
M18 X 2.5	16.376	91280	91280T	16.516	CFQ	16.600	91282	CFQ	CFQ	91286	91286T
M20 X 1.5	19.026	91290	91290T	19.144	CFQ	19.216	91292	CFQ	CFQ	91296	91296T
M20 X 2.5	18.376	91300	91300T	18.516	CFQ	18.600	91302	CFQ	CFQ	91306	91306T
M22 X 1.5	21.026	91310	91310T	21.144	CFQ	21.216	91312	CFQ	CFQ	91316	91316T
M22 X 2.5	20.376	91320	91320T	20.516	CFQ	20.600	91322	CFQ	CFQ	91326	91326T
M24 X 2	22.701	91330	91330T	22.841	CFQ	22.925	91332	CFQ	CFQ	91336	91336T
M24 X 3	22.051	91340	91340T	22.221	CFQ	22.316	91342	CFQ	CFQ	91346	91346T

OVERSIZE PRE-PLATE TAPERLOCK GAGES

ANSI

SIZE	"GO" GAGE		"NO-GO" GAGE		SET
	PD	EDP #	PD	EDP #	EDP #
0-80	.0531	90576	.0554	90577	90976
1-72	.0652	90578	.0677	90579	90978
2-56	.0756	90580	.0784	90581	90980
4-40	.0970	90582	.1003	90583	90982
6-32	.1189	90584	.1226	90585	90984
8-32	.1449	90586	.1487	90587	90986
10-24	.1641	90588	.1684	90589	90988
10-32	.1709	90590	.1748	90591	90990
1/4-20	.2187	90592	.2235	90593	90992
1/4-28	.2280	90594	.2323	90595	90994

METRIC

SIZE	6G "GO" GAGE		6G "NO-GO" GAGE		6G SET
	mm	EDP #	mm	EDP #	EDP #
M1.6 X .35	1.392	90596	1.477	90597	90996
M2 X .4	1.759	90598	1.849	90599	90998
M2.5 X .45	2.228	90600	2.323	90601	90900
M3 X .5	2.695	90602	2.795	90603	90902
M3.5 X .6	3.131	90604	3.243	90605	90904
M4 X .7	3.567	90606	3.685	90607	90906
M5 X .8	4.504	90608	4.629	90609	90908
M6 X 1	5.376	90610	5.526	90611	90910
M8 X 1.25	7.216	90612	7.376	90613	90912
M10 X 1.5	9.058	90614	9.238	90615	90914

NOTES:
1. Machine screw and fractional pre-plate gages are designed for Class 2B fit with a .0003" plating thickness allowance.
2. Metric pre-plate gages are designed to a "6G" tolerance.

CFQ – CONTACT FACTORY FOR QUOTE

STI TAPERLOCK GAGES

ANSI

SIZE	"GO" GAGE		CLASS 2B "NO-GO"		CLASS 3B "NO-GO"		SET	
	PITCH DIA.	EDP #	PITCH DIA.	EDP #	PITCH DIA.	EDP #	CLASS 2B	CLASS 3B
2-56	.0976	90480	.0996	90482	.0989	90766	90484	90767
3-48	.1126	91110	.1148	91112	.1140	91114	91116	91118
4-40	.1283	90486	.1308	90488	.1299	90493	90490	90491
5-40	.1413	90754	.1438	90756	.1430	90757	90758	90759
6-32	.1583	90492	.1611	90494	.1601	90495	90496	90497
6-40	.1543	90848	.1569	90850	.1560	90851	90852	90853
8-32	.1843	90498	.1872	90500	.1862	90501	90502	90503
10-24	.2170	90504	.2203	90506	.2192	90507	90508	90509
10-32	.2103	90510	.2133	90512	.2123	90513	90514	90515
12-24	.2430	90760	.2464	90762	.2453	90763	90764	90765
1/4-20	.2825	90516	.2864	90518	.2851	90519	90520	90521
1/4-28	.2732	90522	.2765	90524	.2754	90525	90526	90527
5/16-18	.3486	90700	.3529	90702	.3515	90703	90704	90705
5/16-24	.3395	90706	.3433	90708	.3421	90709	90710	90711
3/8-16	.4156	90712	.4203	90714	.4189	90715	90716	90717
3/8-24	.4020	90718	.4059	90720	.4047	90721	90722	90723
7/16-14	.4839	91080	.4890	91082	.4875	91084	91086	91088
7/16-20	.4700	91090	.4744	91092	.4731	91094	91096	91098
1/2-13	.5499	91100	.5554	91102	.5537	91104	91106	91108
1/2-20	.5325	90854	.5371	90856	.5357	90857	90858	90859

STI TAPERLOCK GAGES

METRIC

SIZE	"GO" GAGE			4H TOLERANCE "NO-GO"			4H SET
	mm	in.	EDP #	mm	in.	EDP #	EDP #
M2 X .4	2.260	.0890	90788	2.295	.0904	90790	90792
M2.5 X .45	2.792	.1099	90794	2.832	.1115	90796	90798
M3 X .5	3.325	.1309	90800	3.367	.1326	90802	90804
M3.5 X .6	3.890	.1531	90806	3.940	.1551	90808	90810
M4 X .7	4.455	.1754	90812	4.509	.1775	90814	90816
M5 X .8	5.520	.2173	90818	5.577	.2196	90820	90822
M6 X 1.0	6.650	.2618	90824	6.719	.2645	90826	90828
M8 X 1.25	8.812	.3469	90830	8.886	.3498	90832	90834
M10 X 1.5	10.974	.4320	90836	11.061	.4355	90838	90840
M12 X 1.75	13.137	.5172	90842	13.236	.5211	90844	90846

MINIATURE GAGES

ANSI – MACHINE SCREW

SIZE	"GO" GAGE		"NO-GO" GAGE		SET
	PITCH DIA.	EDP #	PITCH DIA.	EDP #	EDP #
000-120	.0286	90558	.0298	90560	90562
00-90	.0398	90570	.0412	90572	90574
00-96	.0402	90564	.0416	90566	90568

METRIC – UNM

SIZE	THREAD PITCH		"GO" GAGE			"NO-GO" GAGE			UNM SET
	mm	TPI	mm	in.	EDP #	mm	in.	EDP #	EDP #
.70 UNM	.175	145	.586	.0231	90539	.608	.0240	90529	90531
.80 UNM	.200	127	.670	.0264	90533	.694	.0273	90535	90537
.90 UNM	.225	113	.754	.0297	90528	.780	.0307	90530	90532
1.00 UNM	.250	102	.838	.0330	90534	.866	.0341	90536	90538
1.10 UNM	.250	102	.938	.0369	90540	.966	.0380	90542	90544
1.20 UNM	.250	102	1.038	.0409	90546	1.066	.0420	90548	90550
1.40 UNM	.300	85	1.204	.0474	90552	1.237	.0487	90554	90556

NPT TAPERLOCK GAGES

NPT

SIZE	PROJECTION TO NOTCH L1 (in.)	PLUG GAGE EDP #	PLUG GAGE WITH HANDLE EDP #
1/16 – 27	.1600	91120	91122
1/8 – 27	.1615	91124	91126
1/4 – 18	.2278	91128	91130
3/8 – 18	.240	91132	91134
1/2 – 14	.320	91136	91138
3/4 – 14	.339	91140	91142
1 – 11-1/2	.400	91144	91146
1-1/4 – 11-1/2	.420	91148	91150
1-1/2 – 11-1/2	.420	91152	91154

BALAX BAL-TAP ¨S¨ TAPPING FLUID

FOR COLD FORMING AND CUTTING TAPS

Bal-Tap "S" contains space age additives to help you increase tapping speeds and reduce tap wear and breakage. The result? Increased productivity and improved thread quality.

Bal-Tap ¨S¨ is a non-hazardous, petroleum-based fluid, with a dark blue-green color and non-offensive odor. It is ideal for forming or cutting tap applications in all metals except; brass, bronze and copper.

BAL-TAP ¨S¨ BENEFITS INCLUDE:

- Extended tap life
- Improved part surface finish
- Faster tapping speeds
- CFC Tricloroethane-free composition
- Adherence to the wall of the part for improved tap lubrication
- Maintains its EP film strength under extreme pressure and temperature
- Less cost than other tapping fluids

FOR COLD FORMING TAPS

- First tapping fluid designed specifically for cold form tapping
- Performs especially well in harder materials, such as steel and stainless steel
- Reduces tapping torque and tap breakage

FOR CUTTING TAPS

- Ideal for exotic and hard-to-machine materials where tapping torque exceeds tap strength
- Reduces cutting edge temperature and preserves cutting edge sharpness
- Reduces galling and tearing, leaving a smoother thread finish
- Improves thread gaging

STOCK SIZES

SIZE	EDP #
Pint Bottle	00002
Pint Bottle Case (12 per case)	00003
Gallon Bottle Case (4 per case)	00006
5-Gallon Pail	00004
55-Gallon Drum*	00005

Contact Balax for a Material Data Safety Sheet.

**55-Gallon Drums shipped via truck. Purchaser must have loading dock facilities.*

SURFACE TREATMENTS

SURFACE TREATMENT	THREDFOER TAPS		THREDSHAVER TAPS		THREAD GAGES	
	EDP SUFFIX	ADVANTAGE	EDP SUFFIX	ADVANTAGES	EDP SUFFIX	ADVANTAGES
Nitride*	1	Lubricity and Wear	1	Cutting Edge Wear	–	N/A
Steam Oxide*	2	Toughness and Lubricity	S	TOUGHNESS	–	N/A
Nitride/Steam Oxide*	6	Combined Properties	6	Combined Properties	–	N/A
Chrome Plate	3	Lubricity	3	Lubricity	–	N/A
Nitride Chrome Plate	7	Lubricity and Wear	–	N/A	–	N/A
Balwear	4	Recommended for Copper	4	N/A	–	N/A
Balube	5	Recommended for Brass	5	Lubricity	–	N/A
Titanium Nitride	T	Lubricity and Wear	T	Lubricity and Wear	T/G**	WEAR
Super Tin	U	Wear Resistance	–	N/A	–	N/A
Titanium Carbonitride	C	Wear	C	Wear	–	N/A
Titanium Aluminum Nitride	A	Lubricity and Wear	A	Wear and Heat Resistance	–	N/A
Bal-Plus	L	Anti-Galling and Wear	L	Lubricity	–	N/A

**** Not for shiny wrought aluminum, i.e. 6061T6, etc.***
*****TiN coating on ¨GO¨ members of sets.***

Nitride – Salt bath case hardening process to increase wear resistance. Resist ¨galling or pickup¨ when tapping mild steels. Provides abrasion resistance when tapping diecast alloys containing silicon.

Steam Oxide – Dark blue tool finish that increases the lubricity of the tool surface. May assist in lubricating deep hole tapping in ferrous materials. Sometimes called black oxide, is well suited for use with oil lubricants during cold form tapping. Steam oxide can be applied over a nitride surface.

Hard Chrome Plate – Bright shiny chrome plating provides lubricity and increased wear resistance. Used during tapping brass, aluminum, and other softer alloys to prevent pickup or galling.

Balwear – Special form of chrome plating that is used to resist "pickup" and abrasion during cold form tapping on pure or high copper content alloys.

Balube – Soft chromium deposition which serves a similar purpose as steam oxide in ferrous materials. On cold forming taps Balube can be applied over a nitride surface.

Titanium Nitride (TiN) – Shiny gold colored thin film coating formed in a low temperature physical vapor deposition process. Provides added lubricity for most cold forming applications using water soluble coolants. Adds wear resistance and lubricity for most cutting tap applications.

Super Titanium Nitride (Super TiN) – Multi-layer coating that improves the titanium nitride performance for very abrasive cold form tapping applications.

Titanium Carbonitride (TiCN) – Blue-gray colored thin film coating formed in a low temperature, physical vapor deposition process. May provide better wear resistance then TiN for cutting tap applications. Has higher surface hardness than titanium nitride, may lack lubricity necessary for some cold forming applications. Best used for extending cutting edge life in cutting taps.

Titanium Aluminum Nitride (TiALN) – Violet-gray colored thin film coating formed in a low temperature, physical vapor deposition process. May provide added lubricity for cold forming taps when poor lubricity is encountered. May provide added lubricity and wear in cutting tap applications where heat generation is a problem.

Bal-Plus – Shiny gold colored thin-film coating that provides anti-galling and extra wear resistance when cold form tapping wrought aluminum such as 6061 and in most diecast aluminums. May provide added lubricity and wear in cutting applications where galling is a problem.

BALAX – *EDP* ORDERING NUMBER SYSTEM

Balax part numbers consist of a five-digit number describing the basic tap and a three digit suffix that specifies the desired options.

1 1 2 8 5 - 2 1 4

EDP NUMBER – 11285
Found in the tables.
Describes the tap type, size, and H/D number

THREDSHAVERS & GAGES
0 = Standard configuration.

THREDFLOERS – 2
0 = Standard configuration. 6-32 or M3.5 and larger have one groove. Smaller taps have no grooves.
1 = 1 Groove (for taps smaller than 6-32 or M3.5)
2 = 2 Grooves
4 = 4 Grooves
6 = 1 Groove Per Relief
7 = Burr Bit grooves
8 = 2 Grooves (HP only)
9 = 1 Groove Per Relief (HP only).

FRONT POINT – 1
0 = With Front point
1 = Front point removed
2 = Ettco Notch
4 = Rear and Front points removed
B = Angular Outlets, Front point removed
C = Angular Outlets
H = Coolant-thru, Front point removed
J = Coolant-thru
P = Individual Packages
Q = Individual Packages, Front point removed
R = Radial Outlets
S = Radial Outlets, Front point removed
W = Individual Packages, Coolant-thru
X = Individual Packages, FT PT removed, Coolant-thru

SURFACE TREATMENT – 4
0 = Bright Finish
1 = Nitride
2 = Steam Oxide
3 = HardChrome
4 = Balwear
5 = Balube
6 = Nitride/Steam Oxide
7 = Nitride/HardChrome
A = Titanium Aluminum Nitride
C = Titanium Carbonitride
G = "GO" Element TiN Coated (Sets only)
L = Bal-Plus
N = Aluminum Chromium Nitride
R = CRN
S = Steam (Cut Tap)
T = Titanium Nitride
U = Super TiN

THREDFLOER EXAMPLE:

11285 - 2 1 4

6-32 Bottom H5 Thredfloer with 2 grooves, front point removed, and Balwear surface treatment.

THREDSHAVER EXAMPLE:

54715 - 0 1 C

M8 X 1.25 BH5 Straight Flute Thredshaver with front point removed and TiCN

THREAD GAGE EXAMPLE:

90116 - 0 0 T

6-32 2B Gage Set with TIN.

FRONT POINTS

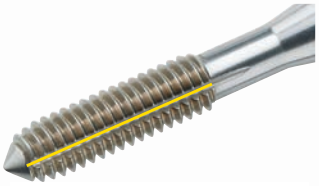
Standard on all tap blanks 3/8" (M10) and smaller. For some bottoming applications the front point helps center the tap in the hole and fits in the cone created by the drill at the bottom of the hole. For bottoming applications where clearance is a problem, Balax can remove front points when specified, free-of charge. Front points will be removed on all one-thread lead taps.

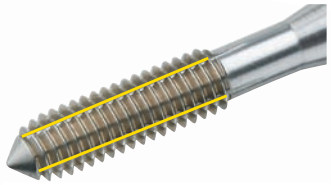

Front Point Not Removed


Front Point Removed

VENT GROOVES

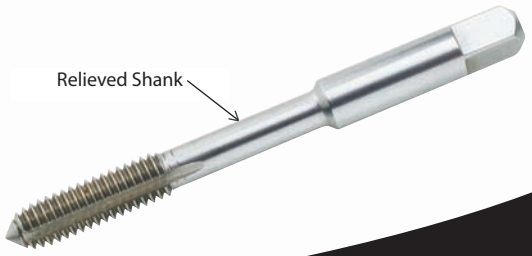
Standard on all #6 taps (M3.5) and larger. Vent grooves provide a lubrication path, and, for holes completely filled with lubricant, the groove prevents hydraulic locking and bottom blowout of weak bottomed diecastings. For deep hole tapping, extra vent grooves help distribute and increase the flow of lubricant to the tap. HP and DIN series come with the optimal # of grooves:


1-Groove Tap


4-Groove Tap

RELIEVED SHANK TAPS

All taps 3/8" (M10) and smaller are made with the shank diameter larger than the major diameter of the tap. These taps are unable to tap beyond the basic thread length of the tap due to the diameter of the shank. Rather than purchasing a special tap, a stock male center forming tap may be economically modified by grinding a relieved shank to increase tapping depth. Consult with a Balax "Tapplication Engineer" for further information. Multiple grooves are recommended.



THREDFLOER APPLICATION DATA

MATERIAL TO BE TAPPED

Cold Form Tap use begins with an evaluation of the metal to be tapped. If you see a stringy chip while machining, then the material is an excellent Thredfloer candidate. If you see a very fine powdery chip, then the metal may be too brittle to be cold form tapped. Examples of proven Thredfloer applications include all materials listed in the "Suggested Treatments" chart below.

Steels and stainless steels applications: The ability to cold form steel and stainless steel successfully and with good tap life is related to the material hardness, tap size and thread pitch, and tap lubrication. In general, use the following guidelines for tapping feasibility and refer to the surface treatment/lubrication selector for the correct tap specification.

HARDNESS	SIZE/PITCH RESTRICTION
16 Rc and Softer	1" and Smaller: 8 pitch and finer. Up to 1-1/2" / 10 pitch and finer.
17 - 23 Rc	1" and smaller: 10 pitch and finer
24 -35 Rc	Machine screw size and miniature taps only
30 - 35 Rc	with extreme care may work for miniature and small machine screw threads with 56 more threads per inch.

SUGGESTED TREATMENTS FOR THREDFLOER APPLICATIONS

MATERIAL	SUGGESTED TREATMENTS	
	BEST	GOOD
Wrought Aluminum	Chrome or Bal-Plus	Bright Finish
Diecast Aluminum	Bal-Plus or TiCN	Nitride, TiN
Copper	Balwear or TiN	Bright Finish
Mild Steel	TiN or TiCN	Nitride
300 Stainless Steel	Super TiN	Nitride/Steam Oxide
High Carbon Steel	Nitride/Steam Oxide or TiCN	Nitride/Steam Oxide
Leaded Steel	TiCN	Nitride/Steam Oxide
Diecast Zinc	Chrome Plate	Bright Finish
Titanium	Nitride/Steam Oxide	Nitride/Steam Oxide
400 Stainless Steel	Nitride/Steam Oxide	Nitride/Steam Oxide

LUBRICATION

Cold forming taps create threads using a progressive cold working process that requires lubrication. Cutting oils are generally preferred because of their lubricity compared to water soluble coolants.

Non-ferrous materials: Water soluble coolants may be used, but at increased concentrations of 5:1 to 10:1 for added lubricity. Water soluble drawing oils may work because of their lubricity.

Steels and stainless steels: A high sulfur/high chlorine content tapping oil with fat additive is recommended. A cutting oil with an "EP" or extreme pressure rated additive may also be satisfactory. In general, when tapping steels or stainless steels, a maximum "EP" rating for the tapping oil is desired.

Note that titanium nitride or super titanium nitride surface treatments may allow forming taps to work successfully in softer steels and stainless steels in conjunction with water soluble coolants possessing good lubricity characteristics.

THREDFLOER APPLICATION DATA – *CONTINUED*

SURFACE TREATMENT / LUBRICATION SELECTOR

Surface treatments and proper lubrication are very important and can have a major effect on tap life and threaded part quality. Use the following application guidelines to determine the correct treatment and lubricant for the material being tapped.

MATERIAL CATAGORY	MATERIAL TYPE	TAP TREATMENT	LUBRICATION RECOMMENDED
Soft	Aluminum (plate or wrought material), Diecast Zinc, or wrought Brass	Bright finish for most application, or add hard chrome for tap wear and lubricity	Water soluble 5:1 or light tapping oil.
Soft and Abrasive	Diecast Aluminum	Nitride, Super TiN, or Bal-Plus	Water soluble 5:1 or light tapping oil.
	Copper	Balwear or Nitride/Balwear	
Intermediate Hardness	Mild Steel	Nitride or Super TiN	Extreme pressure rated tapping oil with high sulphur and high chlorine content. Balax has developed Bal-Tap "S", a specialized tapping oil, designed specifically for cold forming taps.
	300 Series Stainless	Nitride/Steam Oxide or Super TiN	
Hard Materials	Alloyed Steels and 400 Series Stainless	Nitride/Steam Oxide or Super TiN	

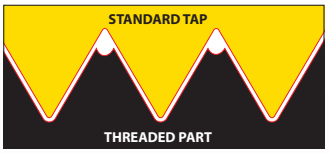
CONTROL ROOT DIAMETER "CRD"

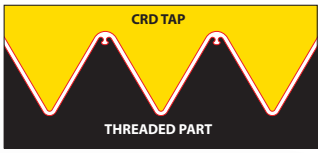
The root diameter of a forming tap may be ground to a specific size or diameter to serve several functions:

- Smooth or flatten the "U" shaped cup in the crest of the formed thread to reduce cross-threading.
- Smooth the crest of the thread to eliminate burrs or roughness and to improve the appearance of the thread.
- Size the after-tap minor diameter to a specific tolerance to minimize the effects of pre-tap hole size variations.
- Works best for thin walled stampings or diecast parts where some porosity is present.

The root diameter for a "CRD" Thredfloer Tap is calculated and carefully ground to a definite dimension to perform the burnishing or sizing of the thread crest. Most common application is to size the"CRD" for 65-75 percent thread height.

Consult with a Balax "Tapplication Engineer" to confirm the intended use and specifications for any "CRD" taps you wish to purchase.





DIECAST CORED HOLES

Diecast cored holes can be tapped directly with cold forming taps without the need for pre-tap drilling.

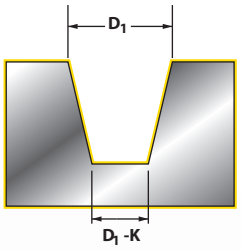
The procedure for determining core pin size is as follows:

1. Determine D1, which is the diameter of the hole at the top, by selecting the 65 percent thread pre-tap hole size from the applicable Thredfloer hole size chart.

2. Determine the diameter of the hole at the bottom by subtracting the following constant "K" from the D1 hole size diameter at the top.

Note: *The draft angle or core pin taper should be kept as straight as possible to provide uniform after-tap thread percentage. The above procedures will result in an after-tap hole with 65% thread at the top and 100% thread at the bottom.*

TAP THREAD PITCH	"K" VALUE
10 to 14 threads per inch	.012"
15 to 25 threads per inch	.010"
26 threads per inch or more, and tap size #4 (M3) or larger	.007"
26 threads per inch or more, and tap size smaller than #4 (M3)	.004"



D_1 = Hole diameter at top = 65% hole size from charts

D_1-K = Hole diameter at bottom

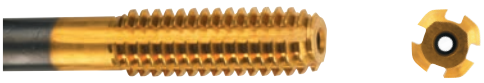
SUGGESTED TAPPING SPEEDS

MATERIAL	SFM	TAPPING RPM																		
		#0 M1.6	#1	#2 M2	#3 M2.5	#4	#5 M3	#6 M3.5	#8 M4	#10 M5	#12	1/4 M6	5/16 M8	3/8 M10	7/16 M11	1/2 M12	5/8 M16	3/4 M18	1" M24
LOW CARBON STEEL	55	3503	2879	2444	2123	1877	1682	1523	1282	1106	973	841	674	561	481	420	336	280	210
MEDIUM CARBON STEEL	35	2229	1832	1555	1351	1194	1070	969	816	704	619	535	429	357	306	268	214	178	134
HIGH CARBON STEEL	10	637	524	444	386	341	306	277	233	201	177	153	122	102	87	76	61	51	38
CAST STEEL	25	1592	1309	1111	965	853	764	692	583	503	442	382	306	255	219	191	153	127	96
300 SERIES STAINLESS STEEL	20	1274	1047	889	772	682	611	554	466	402	354	306	245	204	175	153	122	102	76
400 SERIES STAINLESS STEEL	15	955	785	667	579	512	459	415	350	302	265	229	184	153	131	115	92	76	57
GREY CAST IRON	70	4459	3665	3111	2702	2389	2140	1939	1631	1408	1238	1070	857	713	612	535	428	357	268
DUCTILE CAST IRON	50	3185	2618	2222	1930	1706	1529	1385	1165	1006	885	764	612	510	437	382	306	255	191
ALLOY CAST IRON	40	2548	2094	1778	1544	1365	1223	1108	932	805	708	611	490	408	350	306	245	204	153
ALUMINUM CAST ALLOYS	60	3822	3141	2666	2316	2047	1834	1662	1398	1207	1062	917	735	611	525	459	367	306	229
ALUMINUM DIECAST ALLOYS	70	4459	3665	3111	2702	2389	2140	1939	1631	1408	1238	1070	857	713	612	535	428	357	268
ALUMINUM WROUGHT ALLOYS	80	5096	4188	3555	3088	2730	2446	2215	1864	1609	1415	1223	980	815	700	611	489	408	306
ZINC DIECASTINGS	80	5096	4188	3555	3088	2730	2446	2215	1864	1609	1415	1223	980	815	700	611	489	408	306
COPPER	60	3822	3141	2666	2316	2047	1834	1662	1398	1207	1062	917	735	611	525	459	367	306	229
BRASS, FREE MACHINING	60	3822	3141	2666	2316	2047	1834	1662	1398	1207	1062	917	735	611	525	459	367	306	229
CAST BRONZE	50	3185	2618	2222	1930	1706	1529	1385	1165	1006	885	764	612	510	437	382	306	255	191
NICKEL ALLOYS	10	637	524	444	386	341	306	277	233	201	177	153	122	102	87	76	61	51	38
TITANIUM ALLOYS	10	637	524	444	386	341	306	277	233	201	177	153	122	102	87	76	61	51	38
PLASTIC, THERMOSETTING	40	2548	2094	1778	1544	1365	1223	1108	932	805	708	611	490	408	350	306	245	204	153
PLASTIC, THERMOPLASTIC	80	5096	4188	3555	3088	2730	2446	2215	1864	1609	1415	1223	980	815	700	611	489	408	306

1. Speeds are starting points for cold forming taps or for cutting taps in thru hole applications.
2. Fine pitch cold forming taps less than 1/2" diameter may be run faster in soft material with good lubrication. Increase tapping RPM gradually until tap heat buildup due to lubrication failure begins to occur.
3. For cutting taps in blind holes, reduce RPM by 25% to 50%.
4. Tap Feed Rate = Tap RPM x Tap Pitch (Displacement/Revolution)
   Example: 1/4-28 Tap @ 1000 RPM
   Feed Rate = 1000 Rev/Min. x 1/28 Inch/Rev)= 35.71 in/Min
   Example: M6 x 1.0 Tap @ 1000 RPM
   Feed Rate = 1000 Rev/Min. x 1.0 mm/Rev)= 1000 mm/Min

COOLANT-THRU TAPS

THRU - COOLANT



RADIAL - COOLANT

ANGULAR - COOLANT

FAST DELIVERY ON STANDARD COOLANT-THRU TAPS

Using Balax's EDM process, almost any standard Thredshaver or Thredfloer tap can be modified into the coolant-thru tap style of your choice: thru-coolant, radial coolant, or angular coolant. It's economical and turn-around time is fast.

SPECIAL COOLANT-THRU TAPS FOR CUSTOM APPLICATIONS

For processes requiring an engineered special coolant-thru tap, custom tap blanks are made with coolant-thru holes in the style best suited for the tapping application.

TECHNICAL FORMULAS

THREAD PERCENTAGE CALCULATIONS

The following formulas can be used to calculate thread percentages in tapped holes for the following conditions.

1. Cold formed threads: The after-tap minor diameter is created by the relationship between the pre-tap hole size and the cold forming tap "D" or "H" number, and is measured using cylindrical pin gages or other means.

2. Cut threads: The after-tap minor diameter is created directly by the drill and is measured using cylindrical pin gages or other means.

MACHINE SCREW & FRACTIONAL SIZES

$$\text{Thread Percentage} = \frac{(\text{Thread Major Diameter [in.]} - \text{Minor Diameter [in.]})}{.01299} \times \text{TPI}$$

EXAMPLE: 1/4-20 thread with .201 inch minor diameter.

$$\text{Thread Percentage} = \frac{(.250 - .201)}{.01299} \times 20 = 75.44\%$$

MACHINE SCREW MAJOR DIAMETERS

MACHINE SCREW #	0	1	2	3	4	5	6	8	10	12
MAJOR DIAMETER (in)	.060	.073	.086	.099	.112	.125	.138	.164	.190	.216

METRIC SIZES

$$\text{Thread Percentage} = \frac{(\text{Thread Major Diameter [mm]} - \text{Minor Diameter [mm]})}{.01299 \times \text{Thread Pitch [mm]}}$$

Example: M8 x 1.25 with 6.80 mm minor diameter.

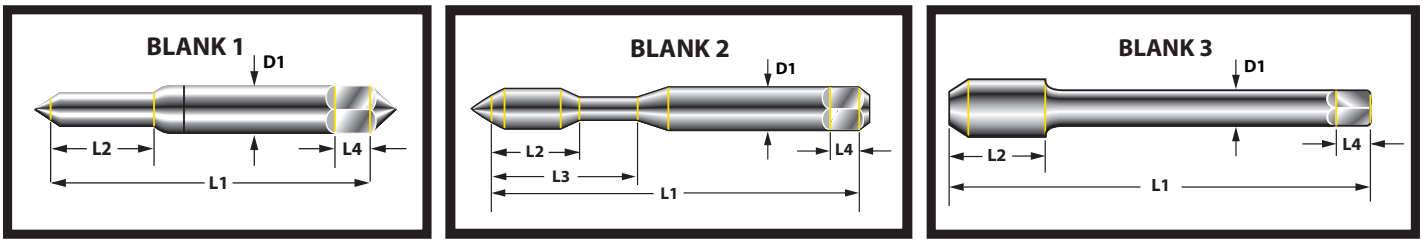
$$\text{Thread Percentage} = \frac{(8.0 - 6.80)}{.01299 \times 1.25} = 73.90\%$$

HOW TO ADJUST FOR PLATING THICKNESSES

Standard cold forming or cutting tap "H" or "D" numbers must be increased to accommodate for the coating thickness. Platings or coatings that are very thick are not always uniformly applied to the threads and may cause gaging problems regardless of the tap oversize condition. Heavy plating or coating thicknesses are especially difficult for fine pitch threads because they tend to fill in the thread profile rather than coat the thread flanks evenly.

INCHES	MILS	MICRONS	NUMBER OF "H" OR "D" NUMBERS TO ADD TO STANDARD TAP SELECTION
0.000125	0.125	3.2	1
0.000250	0.250	6.4	2
0.000375	0.375	9.5	3
0.000500	0.500	12.7	4
0.000625	0.625	15.9	5
0.000750	0.750	19.1	6
0.000875	0.875	22.2	7
0.001000	1.000	25.4	8

ANSI CNC TAP BLANK DIMENSIONS



DIMENSIONS ARE FROM TABLE 302 of MCTI TAP STANDARDS

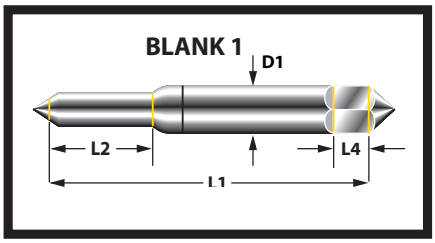
AMERICAN SIZE	METRIC SIZE	BLANK	LENGTH			SHANK	SQUARE	
			L1 (in.)	L2 (in.)	L3 (in.)	D1 (in.)	(in.)	L4 (in.)
000	M.7, M.8	1	1-5/8	.190	–	.141	.110	3/16
00	M.9 -M1.2	1	1-5/8	.250	–	.141	.110	3/16
0	M1.4, M1.6	1	1-5/8	.312	–	.141	.110	3/16
1	M1.8	1	1-11/16	.375	–	.141	.110	3/16
2	M2.0	1	1-3/4	.438	–	.141	.110	3/16
3	M2.5	1	1-13/16	.500	–	.141	.110	3/16
4	–	1	1-7/8	.563	–	.141	.110	3/16
5	M3.0	1	1-15/16	.626	–	.141	.110	3/16
6	M3.5	2	2	.450	11/16	.141	.110	3/16
8	M4.0	2	2-1/8	.470	3/4	.168	.131	1/4
10	M5.0	2	2-3/8	.600	7/8	.194	.152	1/4
12	–	2	2-3/8	.620	15/16	.220	.165	9/32
1/4	M6.0	2	2-1/2	.790	1	.255	.191	5/16
5/16	M8.0	2	2-23/32	.880	1-1/8	.318	.238	3/8
3/8	M10	2	2-15/16	.950	1-1/4	.381	.286	7/16
7/16	M11	3	3-5/32	.950	–	.323	.242	13/32
1/2	M12	3	3-3/8	1	–	.367	.275	7/16
9/16	M14	3	3-19/32	1	–	.429	.322	1/2
5/8	M16	3	3-13/16	1	–	.480	.360	9/16
11/16	M18	3	4-1/32	1	–	.542	.406	5/8
3/4	–	3	4-1/4	1	–	.590	.442	11/16
13/16	M20	3	4-15/32	1	–	.652	.489	11/16
7/8	M22	3	4-11/16	1	–	.697	.523	3/4
15/16	M24	3	4-29/32	1	–	.760	.570	3/4
1	–	3	5-1/8	1	–	.800	.600	13/16

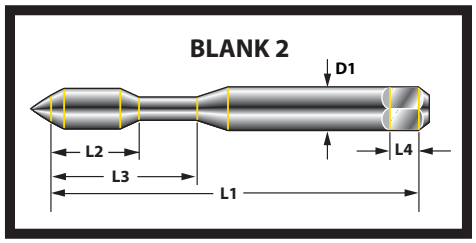
STANDARD PIPE TAP BLANK DIMENSIONS

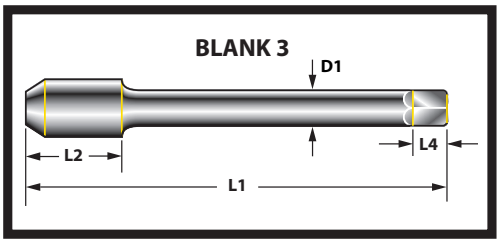
DIMENSIONS ARE FROM TABLE 311 OF MCTI TAP STANDARDS

SIZE	BLANK	LENGTH		SHANK	SQUARE	
		L1 (in.)	L2 (in.)	D1 (in.)	(in.)	L4 (in.)
1/16	1	2-1/8	.687	.3125	.234	3/8
1/8	3	2-1/8	.750	.3125	.234	3/8
1/8	1	2-1/8	.750	.4375	.328	3/8
1/4	1	2-7/16	1.062	.5625	.421	7/16
3/8	1	2-9/16	1.062	.7000	.531	1/2
1/2	3	3-1/8	1.375	.6875	.515	5/8
3/4	3	3-1/4	1.375	.9063	.679	11/16
1	3	3-3/4	1.750	1.1250	.843	13/16

DIN, JIS, AND INLINE TAP BLANK DIMENSIONS







DIN DIMENSIONS

METRIC SIZE	DIN STYLE	BLANK	LENGTH			SHANK	SQUARE	
			L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	(mm)	L4 (mm)
M1.6, M1.7	371	1	40	8	–	2.5	2.1	5
M2.0	371	1	45	8	–	2.8	2.1	5
M2.2	371	1	45	9	–	2.8	2.1	5
M2.5	371	1	50	9	–	2.8	2.1	5
M3.0	371	2	56	10	18	3.5	2.7	6
M3.5	371	2	56	10	18	4	3	6
M4.0	371	2	63	12	21	4.5	3.4	6
M5.0	371	2	70	14	25	6	4.9	8
M6.0	371	2	80	16	30	6	4.9	8
M8.0	371	2	90	18	35	8	6.2	9
M10	371	2	100	20	39	10	8	11
M12	371	2	110	22	40	12	9	12
M12	376	3	110	27	–	9	7	10
M14	376	3	110	22	–	11	9	12
M16	376	3	110	22	–	12	9	12
M18	376	3	125	25	–	14	11	14
M20	376	3	140	27	–	16	12	15
M22	376	3	140	27	–	18	14.5	17
M24	376	3	160	27	–	18	14.5	17

JIS DIMENSIONS

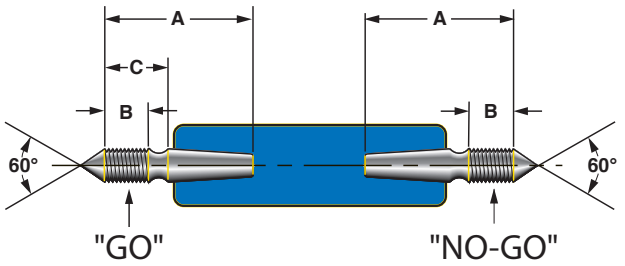
AMERICAN SIZE	METRIC SIZE	BLANK	LENGTH		SHANK	SQUARE	
			L1 (mm)	L2 (mm)	D1 (mm)	(mm)	L4 (mm)
0	M1.6, M1.7	1	36	8	3	2.5	5
1	M2.0	1	40	9	3	2.5	5
2	M2.2	1	42	10	3	2.5	5
4	M2.5	1	44	11	3	2.5	5
–	M3.0	1	46	18	4	3.2	6
6	M3.5	1	48	18	4	3.2	6
8	M4.0	1	52	20	5	4	7
10	M5.0	1	60	22	5.5	4.5	7
1/4	M6.0	1	62	24	6	4.5	7
5/16	M8.0	3	70	20	6.2	5	8
–	M10	3	75	22	7	5.5	8
–	M12	3	82	30	8.5	6.5	9

INLINE DIMENSIONS

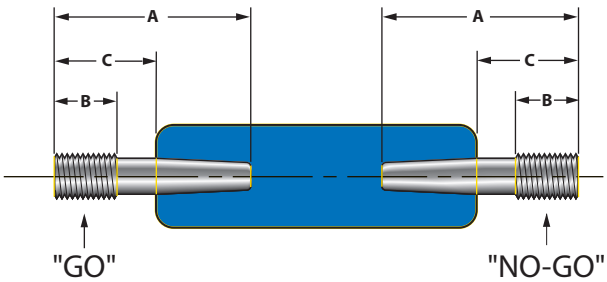
AMERICAN SIZE	METRIC SIZE	BLANK	LENGTH		SHANK	SQUARE	
			L1 (in.)	L2 (in.)	D1 (mm)	(in.)	L4 (in.)
#2 - #8	M2 - M4	1	.850	.300	.141	.110	1/4
#10 - #12	M5	3	.850	.300	.141	.110	1/4
1/4	M6.0	3	.930	.370	.194	.152	1/4

TAPERLOCK GAGE BLANK DIMENSIONS

STYLE 1

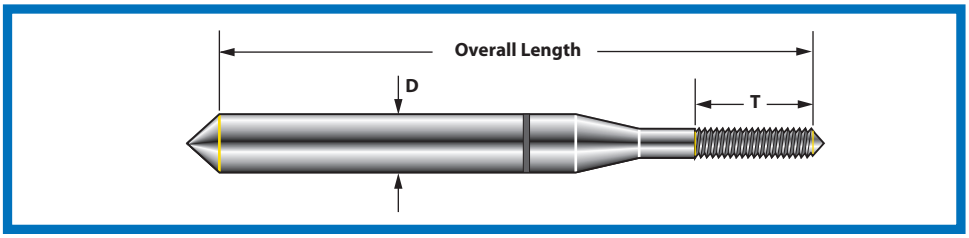


STYLE 2



GAGE STYLE	HANDLE SIZE #	AMERICAN SIZE	METRIC SIZE	"GO" GAGE			"NO-GO" GAGE		
				A	B	C	A	B	C
1	000	0, 1, 2, 3	M1.6 TO M2.6	15/16	1/4	–	7/8	3/16	–
1	00	4	–	1-5/16	5/16	9/16	31/32	7/32	–
1	00	5, 6	M3.0 TO M3.5	1-7/16	5/16	11/16	31/32	7/32	–
2	0	8	M4.0	1-5/8	13/32	3/4	1-5/32	9/32	17/32
2	0	10	M5.0	1-3/4	13/32	7/8	1-5/32	9/32	17/32
2	0	12	–	1-13/16	13/32	15/16	1-5/32	5/16	17/32
2	1	1/4	M6.0	1-3/4	1/2	1	1-5/16	5/16	9/16
2	1	5/16	M8.0	1-7/8	1/2	1-1/8	1-5/16	5/16	9/16
2	2	3/8	M10	2	3/4	1-1/4	1-3/8	3/8	5/8
2	2	7/16	–	2-3/16	3/4	1-7/16	1-3/8	3/8	5/8
2	2	1/2	M12	2-13/32	3/4	1-21/32	1-3/8	3/8	5/8
2	3	9/16	M14	2-13/32	7/8	1-21/32	1-1/2	1/2	3/4
2	3	5/8	M16	2-9/16	7/8	1-13/16	1-1/2	1/2	3/4
2	3	11/16, 3/4, 13/16	M18, M20	2-3/4	7/8	2	1-1/2	1/2	3/4
2	4	7/8	M22	3-3/32	1	2-7/32	1-1316	5/8	15/16
2	4	15/16, 1"	M24	3-3/8	1	2-1/2	1-13/16	5/8	15/16

MINIATURE GAGE BLANK DIMENSIONS



AMERICAN SIZE	METRIC SIZE	OVERALL LENGTH	D: SHANK DIAMETER	T: THREAD LENGTH	
				"GO" GAGE	"NO-GO" GAGE
000-120	.90 UNM	1-5/8	.141	1/8	1/16
00-96 00-90	1.0 UNM 1.10 UNM 1.20 UNM 1.40 UNM	1-5/8	.141	5/32	1/16

THREDFLOER HOLE SIZE AND CLASS OF FIT

The following table gives the hole size for three thread percentages when used with the recommended "H" or "D" numbers. The largest "H" or "D" numbers will place the finished thread pitch diameter .0005 to .0010 under the "NO-GO" P.D. limit. They will also provide the longest tap life before the tap wears under size. For a slightly tighter fit, the smaller recommended "H" or "D" numbers may be used.

THREDFLOERS – MACHINE SCREW AND FRACTIONAL SIZE

SIZE	THREADS PER INCH NC UNC	THREADS PER INCH NF UNF	HOLE SIZES REQUIRED FOR: 75% THREAD	65% THREAD	55% THREAD	TAP DRILL SIZE (65% THREAD)	"H" NUMBER PER CLASS OF FIT 2B	3B	2	STOCK "H" NUMBER
000		120	.0303	.0307	.0311	#68	-	-	-	2
00	90		.0417	.0422	.0426	#58	-	-	-	2
		96	.0420	.0425	.0430	#58	-	-	-	
0		80	.0546	.0552	.0558	#54 OR 1.4 mm*	3, 2	2	2	
1	64		.066	.067	.068	#51 OR 1.7 mm	4, 3	3, 2	3, 2	
		72	.067	.068	.069	#51 OR 1.75 mm	4, 3	3, 2	3, 2	
2	56		.078	.079	.080	#47 OR 2.0 mm	4, 3	3, 2	3, 2	
		64	.079	.080	.081	2.0 mm*	4, 3	3, 2	3, 2	
3	48		.090	.091	.092	2.3 mm*	5, 4	3, 2	3, 2	2, 3, 4, 5, 6, 7
		56	.091	.092	.093	2.3 mm*	5, 4	3, 2	3, 2	
4	40		.100	.101	.103	#39	5, 4	4, 3	4, 3	
		48	.103	.104	.105	#37	5, 4	4, 3	3, 2	
5	40		.113	.114	.116	#33 OR 2.9 mm	5, 4	4, 3	4, 3	
		44	.114	.115	.117	#33 OR 2.9 mm	5, 4	4, 3	4, 3	
6	32		.124	.125	.126	3.1 mm	6, 5	4, 3	5, 4	
		40	.126	.127	.128	1/8" OR 3.2 mm*	5, 4	4, 3	4, 3	
8	32		.149	.150	.152	#25 OR 3.8 mm	6, 5	4, 3	4, 3	
		36	.151	.152	.153	#24	5, 4	4, 3	3, 2	
10	24		.170	.172	.174	11/64"	7, 6, 5	5, 4	5, 4	
		32	.175	.176	.178	#16 OR .176"*	6, 5	4, 3	4, 3	2, 3, 4, 5, 6,
12	24		.196	.198	.200	#9 OR 5.0 mm	7, 6, 5	5, 4	5, 4	7, 8, 9, 10
		28	.199	.201	.203	#7 OR 5.1 mm	7, 6, 5	4, 3	4, 3	
1/4"	20		.225	.227	.230	5.75 mm*	8, 7, 6	5, 4	5, 4	
		28	.233	.235	.237	"A"	7, 6, 5	5, 4	4, 3	
5/16"	18		.285	.287	.291	7.25 mm*	9, 8, 7	6, 5	6, 5	
		24	.292	.294	.297	.293"*	8, 7, 6	5, 4	5, 4	
3/8"	16		.344	.347	.350	"S" OR 11/32"	9, 8, 7	7, 6	7, 6	
		24	.355	.357	.359	9.0 mm*	8, 7, 6	6, 5	5, 4	
7/16"	14		.402	.405	.409	"Y"	10, 9, 8	7, 6	8, 7, 6	
		20	.414	.416	.418	"Z" OR 10.5 mm*	9, 8, 7	6, 5	5, 4	
1/2"	13		.462	.466	.470	.463"*	11, 10, 9	8, 7, 6	8, 7, 6	4, 5, 6, 7, 8,
		20	.475	.477	.480	.476"*	9, 8, 7	6, 5	5, 4	9, 10, 11, 12
9/16"	12		.520	.524	.528	.521"*	11, 10, 9	8, 7, 6	9, 8, 7	
		18	.535	.537	.540	.536"*	9, 8, 7	7, 6, 5	7, 6, 5	
5/8"	11		.579	.583	.586	37/64"	12, 11, 10	9, 8, 7	9, 8, 7	
		18	.598	.600	.603	.598"*	10, 9, 8	7, 6, 5	7, 6, 5	
3/4"	10		.700	.704	.709	45/64"	13, 12, 11	9, 8, 7	11, 10, 9	
		16	.720	.723	.726	23/32"	11, 10, 9	8, 7, 6	7, 6, 5	6, 7, 8, 9, 10,
7/8"	9		.818	.823	.829	.823"	14, 13, 12	10, 9, 8	12, 11, 10	11, 12, 13, 14
		14	.839	.843	.845	27/32"	12, 11, 10	9, 8, 7	8, 7, 6	
1"	8		.935	.942	.948	15/16"	14, 13, 12	11, 10, 9	13, 12, 11	
		12	.959	.963	.967	.963"	13, 12, 11	10, 9, 8	10, 9, 8	

NOTE: *Drill Sizes were selected wherever possible to produce approximately 65% thread. The drills marked * are stocked by Balax.*

THREDFLOER HOLE SIZE AND CLASS OF FIT – *CONTINUED*

THREDFLOERS – METRIC

SIZE	HOLE SIZES REQUIRED FOR 6H TOLERANCE 75% THREAD	65% THREAD	55% THREAD	TAP DRILL SIZE	HOLE SIZES REQUIRED FOR 4H TOLERANCE 75% THREAD	65% THREAD	55% THREAD	TAP DRILL SIZE	STOCK "D" NUMBER PER CLASS OF FIT 6H TOLERANCE	4H TOLERANCE
M1.6 X .35	.057	.058	.059	1.45 mm	.056	.057	.058	#54	D5	D3
M1.7 X .35	.061	.062	.063	1.55 mm	.060	.061	.062	#53	D5	D3
M2 X .4	.072	.073	.074	1.85 mm	.071	.072	.073	1.80 mm	D5	D3
M2.5 X .45	.091	.092	.093	2.30 mm	.089	.090	.091	#43	D6	D3
M2.6 X .45	.095	.096	.097	2.40 mm	.093	.094	.095	2.35 mm	D6	D3
M3 X .5	.110	.111	.112	#35	.108	.109	.110	2.75 mm	D6	D3
M3.5 X .6	.128	.129	.130	#30	.126	.127	.128	3.2 mm	D7	D4
M4 X .7	.145	.146	.148	3.7 mm	.144	.145	.147	#27	D7	D4
M5 X .8	.183	.184	.185	#14	.181	.182	.184	4.6 mm	D8	D4
M6 X 1	.218	.220	.222	5.5 mm	.216	.218	.220	5.5 mm	D9	D5
M8 X 1.25	.291	.294	.296	7.4 mm	.289	.291	.294	7.3 mm	D10	D5
M10 X 1	.375	.377	.379	9.5 mm	.373	.375	.377	9.5 mm	D9	D5
M10 X 1.25	.370	.373	.375	9.4 mm	.368	.370	.373	9.3 mm	D10	D5
M10 X 1.5	.365	.368	.371	9.3 mm	.362	.365	.368	9.2 mm	D11	D6
M12 X 1.75	.439	.442	.446	7/16"	.436	.439	.443	11.0 mm	D12	D6
M14 X 1.25	.527	.530	.532	13.4 mm	.525	.528	.530	13.3 mm	D10	D5
M14 X 1.5	.522	.525	.528	13.3 mm	.519	.522	.525	13.2 mm	D11	D6
M14 X 2	.512	.516	.520	13.0 mm	.509	.513	.517	12.9 mm	D14	D7
M16 X 1.5	.601	.604	.607	15.3 mm	.598	.601	.604	15.2 mm	D11	D6
M16 X 2	.591	.595	.599	15.0 mm	.588	.592	.596	14.9 mm	D14	D7
M18 X 1.5	.680	.683	.686	17.3 mm	.677	.680	.683	17.2 mm	D11	D6

STI THREDFLOERS – MACHINE SCREW AND FRACTIONAL SIZE

STI THREAD SIZE	HOLE SIZES REQUIRED FOR 85% THREAD	75% THREAD	65% THREAD	55% THREAD	TAP DRILL SIZE	"H" NUMBER PER CLASS OF FIT 2B	3B	BLANK SIZE
1-64	.0849	.0854	.0862	.0870	#44	2	2	#3
2-56	.099	.100	.101	.102	#39	2	2	#5
4-40	.130	.131	.132	.134	3.3 mm	3, 2	2	#8
6-32	.161	.162	.163	.165	4.1 mm	3, 2	2	#10
8-32	.187	.188	.189	.191	3/16	3, 2	2	#12
10-24	.221	.222	.224	.226	#2	4, 3	3, 2	1/4"
10-32	.213	.214	.215	.217	#3	4, 3	3, 2	1/4"
1/4-20	.287	.288	.290	.293	7.3 mm	4, 3	3, 2	5/16"
1/4-28	.276	.278	.279	.281	J	4, 3	3, 2	5/16"
5/16-18	.353	.355	.357	.360	9.0 mm	5, 4	4, 3	7/16"
5/16-24	.343	.344	.347	.349	8.8 mm	5, 4	4, 3	3/8"
3/8-16	.420	.422	.425	.428	27/64"	5, 4	4, 3	1/2"
3/8-24	.406	.407	.409	.411	11/32"	5, 4	4, 3	1/2"

STI THREDFLOERS – METRIC

STI THREAD SIZE	HOLE SIZES REQUIRED FOR 85% THREAD	75% THREAD	65% THREAD	55% THREAD	TAP DRILL SIZE	"D" NUMBER PER CLASS OF FIT 5H	4H	BLANK SIZE
M2 X .4	.091	.091	.092	.093	2.3 mm	D3	D2	#4
M2.5 X .45	.112	.112	.113	.114	#34	D3	D2	#5
M3 X .5	.133	.133	.134	.135	3.4 mm	D3	D2	#8
M3.5 X .6	.156	.157	.158	.159	#22	D4	D3	#10
M4 X .7	.178	.179	.180	.182	#15	D4	D3	#10
M5 X .8	.220	.221	.223	.225	#2	D4	D3	1/4"
M6 X 1.0	.266	.267	.269	.271	6.8 mm	D5	D4	5/16"
M8 X 1.25	.352	.353	.355	.358	9 mm	D6	D5	3/8"
M10 X 1.5	.438	.439	.442	.445	7/16"	D6	D5	1/2"

IMPORTANT NOTES ON THREDFLOER PRE-TAP HOLE SIZES

DETERMINING DRILL SIZE

Thread forming taps require a larger pre-tap hole size than cutting taps because they do not produce a chip during tapping. The pre-tap hole size tolerance for smaller fine-pitch taps must be controlled more closely to prevent after-tap minor diameter problems.

Finding the correct drill size for a Thredfloer Tap may be a "Cut and Try" process. Not all drills are alike and therefore the pre-tap holes produced by different drills may be vastly different. What matters is the actual pre-tap hole size, how consistently this hole size is maintained, and finally, the after-tap thread percentage or minor diameter. To get good results, you must know the actual hole size and not just the drill size! Thin wall parts may expand during tapping and produce oversize after-tap minor diameters. Diecast parts may contain porosity which may cause oversize holes due to shrinkage.

THREAD INSPECTION PROCEDURES

Pitch Diameter: The easy part is getting the "GO" and "NO-GO" thread gages, which check pitch diameter, to work correctly. As a rule of thumb, Thredfloer Taps should be two to three "H" or "D" numbers larger than cutting taps in order to gage correctly. Threads that are tight or loose after tapping can be rectified by increasing or decreasing tap pitch diameter ("H" or "D" number).

Minor Diameter: The most common problem is thread percentage. Unless otherwise specified, acceptance criteria are the minimum and maximum minor diameters for various thread sizes and classes of fit, as published by the ANSI Standards. These measurements are checked with cylindrical plug gages. It is important that these criteria be inspected during the initial "Testing" stage of drilling and tapping. Failure to check minor diameters may be very expensive.

It is often possible to fine tune the after-tap minor diameter by varying the tap pitch diameter. Changing a Thredfloer Tap by one "H" or "D" number is the same as changing the drill size by .0005 inches. For example, if the after tap minor diameter is too large, it may be reduced by using a larger tap pitch diameter, providing the no-go gage doesn't pass the part.

Example: A 1/4-20 Class 2B minor diameter should be .196/.207 inches. After tapping with an H5 tap, the part measured .205/.206", which is almost oversize. By switching to an H7 tap, you can reduce the after-tap minor diameter to .202/.203".

Suggested Procedure for Using a Thredfloer Tap

1. Test drill a part and measure the pretap hole size.
2. Test tap the part. Check pitch diameter with go and no-go gages. Check the thread percentage or minor diameter against the customer requirement.
3. Establish a maximum condition for the pre-tap hole size and monitor this frequently during the production tap run.

VISUAL THREAD INSPECTION

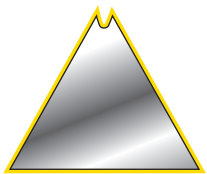
All formed threads have a cup or "U" in the crest due to the nature of the thread forming process. A properly sized hole should result in a thread percentage of 65-75%. Tapping with too small of a pre-tap hole size results in excessive tapping torque, tap wear, and possible tap breakage.

Always check your hole size after drilling. Do Not expect the drill will cut the size hole marked on the drill. Use a drill that will produce a 75% hole size where after-tap minor diameter gaging to 2B or 3B tolerances is required.

Correct Hole

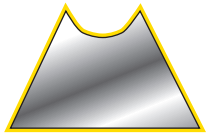
Pre-tap hole size is correct. Thread percentage is 65-75%, and the after-tap minor diameter is in specification.

Too Small



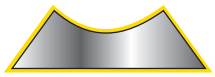
Resulting in a high thread percentage (90-100%) and an after-tap minor diameter which is too small.

Large



Suitable for some applications. Thread percentage is 55%. After-tap minor diameter is too large for 2B and 3B tolerances.

Too Large



Resulting in a low thread percentage (40%) and an after-tap minor diameter which is too big.

THREDSHAVER CUTTING TAP DRILL SIZES

THREDSHAVERS – MACHINE SCREW AND FRACTIONAL

	THEORETICAL HOLE SIZES FOR				CLASS 2B				CLASS 3B				UNJ3B			
					MINOR DIAMETER		RECOMMENED DRILL SIZE		MINOR DIAMETER		RECOMMENDED DRIELL SIZE		MINOR DIAMETER		RECOMMENDED DRIELL SIZE	
SIZE	85% THREAD	75% THREAD	65% THREAD	55% THREAD	MIN	MAX			MIN	MAX			MIN	MAX		
0-80	.046	.048	.049	.051	.0465	.0514	3/64"	(.0469)	.0465	.0514	3/64"	(.0469)	.0479	.0511	1.25mm	(.0492)
1-64	.056	.058	.060	.062	.0561	.0623	#53	(.0595)	.0561	.0623	#53	(.0595)	.0578	.0619	#53	(.0595)
1-72	.058	.059	.061	.063	.0580	.0635	#53	(.0595)	.0580	.0635	#53	(.0595)	.0595	.0631	1.55mm	(.061)
2-56	.066	.069	.071	.073	.0667	.0737	#50	(.070)	.0667	.0737	#50	(.070)	.0686	.0732	#50	(.070)
2-64	.069	.071	.073	.075	.0691	.0753	#50	(.070)	.0691	.0753	#50	(.070)	.0708	.0749	#49	(.073)
3-48	.076	.079	.081	.084	.0764	.0845	#47	(.0785)	.0764	.0845	#47	(.0785)	.0787	.0841	#45	(.082)
3-56	.079	.082	.084	.086	.0797	.0865	#45	(.082)	.0797	.0865	#45	(.082)	.0816	.0862	2.15mm	(.0846)
4-40	.084	.088	.091	.094	.0849	.0939	#43	(.089)	.0849	.0939	#43	(.089)	.0877	.0942	2.35mm	(.0925)
4-48	.089	.092	.094	.097	.0894	.0968	#42	(.0935)	.0894	.0968	#42	(.0935)	.0917	.0971	3/32"	(.0938)
5-40	.097	.101	.104	.107	.0979	.1062	#38	(.1015)	.0979	.1062	#38	(.1015)	.1007	.1072	#37	(.104)
5-44	.100	.103	.106	.109	.1004	.1079	#37	(.104)	.1004	.1079	#37	(.104)	.1029	.1088	#36	(.1065)
6-32	.103	.108	.112	.116	.104	.114	#35	(.110)	.1040	.1140	#35	(.110)	.1076	.1157	#33	(.113)
6-40	.110	.114	.117	.120	.111	.119	#33	(.113)	.1110	.1186	#33	(.113)	.1137	.1202	#32	(.116)
8-32	.129	.134	.138	.142	.130	.139	#29	(.136)	.1300	.1389	#29	(.136)	.1336	.1417	#29	(.136)
8-36	.133	.137	.141	.144	.134	.142	#29	(.136)	.1340	.1416	#29	(.136)	.1370	.1442	#28	(.1405)
10-24	.144	.149	.155	.160	.145	.156	#24	(.152)	.1450	.1555	#24	(.152)	.1494	.1600	#23	(.154)
10-32	.155	.160	.164	.168	.156	.164	#20	(.161)	.1560	.1641	#20	(.161)	.1596	.1675	#20	(.161)
12-24	.170	.175	.181	.186	.171	.181	#16	(.177)	.1710	.1807	#16	(.177)	.1754	.1852	#15	(.180)
12-28	.177	.181	.186	.190	.177	.186	#14	(.182)	.1770	.1857	#14	(.182)	.1812	.1896	#13	(.185)
1/4-20	.195	.201	.208	.214	.196	.207	13/64"	(.2031)	.1960	.2067	13/64"	(.2031)	.2013	.2121	#5	(.2055)
1/4-28	.211	.215	.220	.224	.211	.220	5.5mm	(.2165)	.2110	.2190	5.5mm	(.2165)	.2152	.2229	7/32"	(.2188)
5/16-18	.251	.258	.266	.273	.252	.265	G	(.261)	.2520	.2630	F	(.257)	.2584	.2690	G	(.261)
5/16-24	.266	.272	.277	.283	.267	.277	I	(.272)	.2670	.2754	I	(.272)	.2719	.2799	I	(.272)
3/8-16	.306	.314	.322	.330	.307	.321	O	(.316)	.3070	.3182	5/16"	(.3125)	.3141	.3250	O	(.316)
3/8-24	.329	.334	.340	.345	.330	.340	Q	(.332)	.3300	.3372	Q	(.332)	.3344	.3417	8.5mm	(.3346)
7/16-14	.359	.368	.377	.386	.360	.376	U	(.368)	.3600	.3717	U	(.368)	.3680	.3795	3/8"	(.375)
7/16-20	.382	.389	.395	.402	.383	.395	25/64"	(.3906)	.3830	.3916	W	(.386)	.3888	.3970	25/64"	(.3906)
1/2-13	.415	.425	.435	.445	.417	.434	27/64"	(.4219)	.4170	.4284	27/64"	(.4219)	.4251	.4368	11mm	(.433)
1/2-20	.445	.451	.458	.464	.446	.457	29/64"	(.4531)	.4460	.4537	11.4mm	(.4488)	.4513	.4591	29/64"	(.4531)
9/16-12	.470	.481	.492	.503	.472	.490	31/64"	(.4844)	.4720	.4843	12.1mm	(.4763)	.4814	.4914	31/64"	(.4844)
9/16-18	.501	.508	.516	.523	.502	.515	13mm	(.5118)	.5020	.5106	12.9mm	(.5079)	.5084	.5166	33/64"	(.5156)
5/8-11	.525	.536	.548	.560	.527	.546	17/32"	(.5312)	.5270	.5391	17/32"	(.5312)	.5365	.5474	13.7mm	(.5394)
5/8-18	.564	.571	.578	.585	.565	.578	14.5mm	(.5709)	.5650	.5730	14.5mm	(.5709)	.5709	.5788	14.5mm	(.5709)
3/4-10	.639	.652	.665	.678	.642	.663	21/32"	(.6562)	.6420	.6545	16.5mm	(.6496)	.6526	.6646	21/32"	(.6562)
3/4-16	.681	.689	.697	.705	.682	.696	11/16"	(.6875)	.6820	.6908	11/16"	(.6875)	.6892	.6977	17.5mm	(.689)
7/8-9	.752	.767	.781	.796	.755	.778	49/64"	(.7656)	.7550	.7681	49/64"	(.7656)	.7668	.7801	19.6mm	(.7716)
7/8-14	.796	.805	.815	.824	.798	.814	13/16"	(.8125)	.7980	.8068	2.4mm	(.8031)	.8055	.8152	13/16"	(.8125)
1-8	.862	.878	.894	.911	.865	.890	7/8"	(.875)	.8650	.8797	7/8 "	(.875)	.8783	.8933	57/64"	(.8906)
1-12	.908	.919	.930	.940	.910	.928	59/64"	(.9219)	.9100	.9198	23.2mm	(.9134)	.9189	.9289	23.5mm	(.9252)

THREDSHAVERS – METRIC

SIZE	THEORETICAL HOLE SIZES FOR 85% THREAD	75% THREAD	65% THREAD	55% THREAD	CLASS 6H MINOR DIA. (mm) MIN	MAX	MINOR DIA. (in.) MIN	MAX	RECOMMENED DRILL SIZE		CLASS 4H MINOR DIA. (mm) MIN	MAX	MINOR DIA. (in.) MIN	MAX	RECOMMENED DRILL SIZE	
M2 X 0.4	.061	.063	.065	.067	1.567	1.679	.0617	.0661	1.60mm	(.0630)	1.567	1.638	.0617	.0645	1/16"	(.0625)
M2.5 X 0.45	.079	.081	.083	.086	2.013	2.138	.0793	.0842	#45	(.0820)	2.013	2.093	.0793	.0824	2.05mm	(.0807)
M3 X 0.5	.096	.099	.101	.104	2.459	2.599	.0968	.1023	#39	(.0995)	2.459	2.549	.0968	.1004	#40	(.0980)
M3.5 X 0.6	.112	.115	.118	.121	2.850	3.010	.1122	.1185	2.9mm	(.1142)	2.850	2.950	.1122	.1161	#33	(.1130)
M4 X 0.7	.127	.131	.134	.138	3.242	3.422	.1276	.1347	3.3mm	(.1299)	3.242	3.354	.1276	.1320	#30	(.1285)
M5 X 0.8	.162	.166	.170	.174	4.134	4.334	.1628	.1706	#19	(.1660)	4.134	4.259	.1628	.1677	4.2mm	(.1654)
M6 X 1	.193	.198	.203	.208	4.917	5.153	.1936	.2029	5mm	(.1969)	4.917	5.067	.1936	.1995	#9	(.1960)
M8 X 1.25	.261	.267	.273	.280	6.647	6.912	.2617	.2721	H	(.2660)	6.647	6.817	.2617	.2684	17/64	(.2656)
M10 X 1.5	.328	.336	.344	.351	8.376	8.676	.3298	.3416	8.5mm	(.3346)	8.376	8.566	.3298	.3372	Q	(.3320)
M10 X 1.25	.339	.346	.352	.359	8.647	8.912	.3404	.3509	8.75mm	(.3445)	8.647	8.817	.3404	.3471	8.75mm	(.3445)
M12 X 1.75	.396	.405	.414	.423	10.106	10.441	.3979	.4111	13/32"	(.4063)	10.106	10.318	.3979	.4062	Y	(.4040)
M12 X 1.5	.407	.415	.423	.430	10.376	10.676	.4085	.4203	10.5mm	(.4134)	10.376	10.566	.4085	.4160	10.5mm	(.4134)
M12 X 1.25	.418	.424	.431	.437	10.647	10.912	.4192	.4296	10.75mm	(.4232)	10.647	10.817	.4192	.4259	10.75mm	(.4232)
M14 X 2	.464	.474	.485	.495	11.835	12.210	.4659	.4807	12mm	(.4724)	11.835	12.071	.4659	.4752	12mm	(.4724)
M14 X 1.5	.486	.494	.501	.509	12.376	12.676	.4872	.4991	12.5mm	(.4921)	12.376	12.566	.4872	.4947	12.5mm	(.4921)
M16 X 2	.543	.553	.563	.574	13.835	14.210	.5447	.5594	14mm	(.5512)	13.835	14.071	.5447	.5540	14mm	(.5512)
M16 X 1.5	.565	.572	.580	.588	14.376	14.676	.5660	.5778	14.5mm	(.5709)	14.376	14.566	.5660	.5735	14.5mm	(.5709)
M18 X 2.5	.600	.613	.625	.638	15.294	15.744	.6021	.6198	15.5mm	(.6102)	15.294	15.574	.6021	.6131	15.5mm	(.6102)
M18 X 1.5	.643	.651	.659	.666	16.376	16.676	.6447	.6565	16.5mm	(.6496)	16.376	16.566	.6447	.6522	16.5mm	(.6496)
M20 X 2.5	.679	.692	.704	.717	17.294	17.744	.6809	.6986	17.5mm	(.6890)	17.294	17.574	.6809	.6919	17.5mm	(.6890)
M20 X 1.5	.722	.730	.737	.745	18.376	18.676	.7235	.7353	18.5mm	(.7283)	18.376	18.566	.7235	.7309	18.5mm	(.7283)
M22 X 2.5	.757	.770	.783	.796	19.294	19.744	.7596	.7773	19.5mm	(.7677)	19.294	19.574	.7596	.7706	19.5mm	(.7677)
M22 X 1.5	.801	.809	.816	.824	20.376	20.676	.8022	.8140	20.5mm	(.8071)	20.376	20.566	.8022	.8097	20.5mm	(.8071)
M24 X 3	.814	.830	.845	.860	20.752	21.252	.8170	.8367	21mm	(.8268)	20.752	21.067	.8170	.8294	21mm	(.8268)
M24 X 2	.858	.868	.878	.889	21.835	22.210	.8596	.8744	22mm	(.8661)	21.835	22.071	.8596	.8689	22mm	(.8661)

THREDSHAVER PIPE TAP DRILL SIZES – NPT, NPTF & NPSF

SIZE	NPT & NPTF DRILL ONLY NPT DRILL SIZE	NPTF DRILL SIZE	NPT & NPTF DRILL / TAPER REAM DRILL SIZE	REAM DIAMETER LARGE END	NPSF STRAIGHT THREAD SUGGESTED HOLE SIZE
1/16-27	D (.246)	D (.246)	15/64"	.2515	.250/.252
1/8-27	Q (.332)	R (.339)	21/64"	.3440	.343/.345
1/4-18	7/16"	7/16"	27/64"	.4472	.444/.447
3/8-18	9/16"	37/64"	9/16"	.5826	.580/.583
1/2-14	45/64"	45/64"	11/16"	.7213	.715/.719
3/4-14	29/32"	59/64"	57/64"	.9317	.926/.930

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