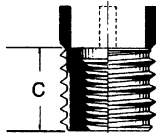


**CARR LANE**

**Keenserts**  
Carbon Steel - Information



A - INTERNAL THREAD  
B - EXTERNAL THREAD



General purpose. In 30 different USA ID-thread sizes for #10-24 to 1 1/2-12. Also 12 metric sizes from M5 to M20. Important to use tap drill that is slightly larger than standard for that thread size. Body is 12L15 steel, black oxide finish. Keys of 302 stainless steel.

Complete Information Available on Request.

**E-Z LOK**  
Thread Inserts



Prevent and repair stripped threads. No special tools required. Install with bolt and wrench.

No.	Internal Thread	Lgth. In.	Tap Drill Size In.	Tap Size
<b>Coarse Threads</b>				
/370-0440EZ	4-40	.250	5/32	10-32
/370-0632EZ	6-32	.280	7.0	1/4-20
/370-0832EZ	8-32	.290	F	5/16-18
/370-1024EZ	10-24	.406	5/16	3/8-16
/370-2520EZ	1/4-20	.437	23/64	7/16-14
/370-3118EZ	5/16-18	.484	27/64	1/2-13
/370-3816EZ	3/8-16	.515	31/64	9/16-12
/370-4314EZ	7/16-14	.656	17/32	5/8-11
/370-5013EZ	1/2-13	.656	21/32	3/4-10
/370-5612EZ	9/16-12	.656	21/32	3/4-10
/370-6211EZ	5/8-11	.687	49/64	7/8-9
/370-7510EZ	3/4-10	.781	7/8	1-8
/370-879EZ	7/8-9	1.125	17/64	1 1/4-7
/370-91008EZ	1-8	1.250	19/32	1 3/8-12

No.	Internal Thread	Lgth. In.	Tap Drill Size In.	Tap Size
<b>Fine Threads</b>				
/370-1032EZ	10-32	.406	5/16	3/8-16
/370-2528EZ	1/4-28	.437	23/64	7/16-14
/370-3124EZ	5/16-24	.484	27/64	1/2-13
/370-3824EZ	3/8-24	.515	31/64	9/16-12
/370-4320EZ	7/16-20	.656	17/32	5/8-11
/370-5020EZ	1/2-20	.656	21/32	3/4-10
/370-6218EZ	5/8-18	.687	49/64	7/8-9
/370-7516EZ	3/4-16	.781	7/8	1-8
/370-8714EZ	7/8-14	1.125	17/64	1 1/4-7
/370-910014EZ	1-14	1.250	19/32	1 3/8-12

**E-Z LOK**  
Thread Insert Repair Kits



In heavy duty, welded steel box with hinged lid and snap lock. Standard size and pitch. On installation, microencapsulated Loctite® begins to set, cures over night.

Seal against liquids and gases to pressure of 6000 psi. Extract using standard screw and bolt extractor.

**No. EZ-C108.** Coarse thread #10 to 1/2".

**No. EZ-C816.** Coarse thread 1/2" to 1".

**No. EZ-F108.** Fine thread #10 to 1/2".

**No. EZ-M100.** Metric internal/external. Thread M3-0.5 to M8-1.25.

**Kit Contents**

No.	For Kit No.	Internal Thread	Tap Size	Pkg. Qty.
<b>Coarse Threads</b>				
329-3	EZ-C108	10-24	3/8-16	10
329-4	EZ-C108	1/4-20	7/16-14	10
329-5	EZ-C108	5/16-18	1/2-13	10
329-6	EZ-C108	3/8-16	9/16-12	10
329-8	EZ-C108	1/2-13	3/4-10	6
329-8	EZ-C816	1/2-13	3/4-10	6
329-10	EZ-C816	5/8-11	7/8-9	7
329-12	EZ-C816	3/4-10	1-8	7
329-16	EZ-C816	1-8	1 3/8-12	2

No.	For Kit No.	Internal Thread	Tap Size	Pkg. Qty.
<b>Fine Threads</b>				
329-332	EZ-F108	10-32	3/8-16	10
329-428	EZ-F108	1/4-28	7/16-14	10
329-524	EZ-F108	5/16-24	1/2-13	10
329-624	EZ-F108	3/8-24	9/16-12	10
329-820	EZ-F108	1/2-20	3/4-10	6

No.	For Kit No.	Metric Internal	Metric External	Pkg. Qty.
<b>Metric Internal - Metric External</b>				
450-3	EZ-M100	M3-0.5	M6-1.0	10
450-4	EZ-M100	M4-0.7	M8-1.25	10
450-5	EZ-M100	M5-0.8	M8-1.25	10
450-6	EZ-M100	M6-1.0	M10-1.5	10
450-8	EZ-M100	M8-1.25	M12-1.75	10

**Insert Kits**

No.	Model No.	No. Pcs.
/370-C108EZ	EZ-C108	46
/370-C816EZ	EZ-C816	22
/370-F108EZ	EZ-F108	46
/370-M100EZ	EZ-M100	50

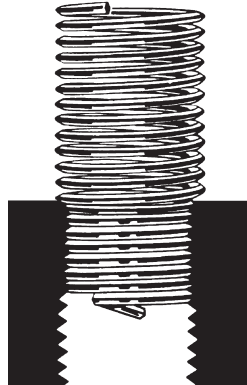
**WHEN ORDERING:**

Please refer to the sizes and numbers shown in this book.

It will help us in filling your order accurately.



**INSERT SELECTION**  
**Bolt & Heli-Coil Thread Insert Selection Guide**



Heli-Coil Inserts can be used in virtually any material or application. Five lengths of inserts are available. Lengths are listed as multiples of nominal thread diameter of screw: 1, 1½, 2, 2½ and 3. Choice of length permits balancing of bolt tensile strength against shear strength of parent material to allow for design of assemblies where bolt will fail before parent material.

In addition to stainless steel, also available in phosphor bronze and inconel X-750. (Some sizes and lengths not available in these materials.) Both Standard and Screw-Lock styles available from stock in UNC, sizes 2-1½" in 5 lengths and in UNF, sizes 3-1½" in 5 lengths. Also available in UNEF, UNS, 8UN, 12UN, 16UN, Metric, Spark Plug, and Pipe Thread.

**Standard Design Inserts.** Provide smooth free-running thread. Screw-lock design provides self-locking torque on male member by a series of "chords" on one or more insert coil.

**Screw-Lock Inserts.** Dyed red for easy identification. Inserts are larger in diameter before installation than tapped hole. During installation inserting tool applies torque to tang, reducing diameter of leading coil and permitting it to enter tapped thread. After installation each high tensile stainless steel coils of inserts expand outward with spring-like action permanently anchoring insert.

**Inserts Improve Your Design.**

Protect and strengthen tapped threads in any material.

Stronger Assemblies. Tapped threads are strengthened with the inherent flexibility of insert. More balanced distribution of dynamic and static loads throughout length of thread engagement. Also compensates for variation in lead and angle error, allows each coil to carry its share of load.

No Thread Wear. Thread life is increased even after repeated assembly and disassembly because insert hardness and surface finish practically eliminates erosion of thread form due to friction.

Corrosion Resistance. Under normal environmental conditions, inserts minimize galvanic action within threaded assembly because of superior corrosion resistance of 18-8 stainless steel. Design Flexibility. Bolt tensile strength may be balanced against parent material shear strength, assuring bolt failure rather than parent material damage. Five insert lengths available in each thread size.

Eliminate Stress. Virtually no stress introduced into parent material because there is no staking, locking, swaging, or keying in place. Outward spring-like action of insert holds it in place.

Minimize Space and Weight. Allow use of smaller bosses, flanges, and fasteners than any other insert. May generally be incorporated into existing designs where no provision has been made for an insert, without increasing boss size.

Minimize Total Cost. Lower insert cost, lower installation cost. Wide choice of parent materials while maintaining maximum thread assembly strength.

True Clamping Torque. Maximum clamping action and bolt tension assured with minimum wrench torque because of mirror smooth surface finish of inserts.

Wide Temperature Range. May be used in temperatures ranging from -320°F to +800°F. Quality and Reliability. Stringent quality assurance and engineering standards rigidly enforced in all phases of the manufacturing process. Assures integrity of product design.

**Guidelines for use of table:** When parent material shear strength falls between two listed values, use lower of two values. Parent material shear strengths are for room temperature. For applications of elevated temperatures, shear strength of material at that temperature must be determined for proper selection of bolt and insert length. Be sure engaged thread length of bolt is at least as long as full tapped thread depth for size selected.

The table below shows recommended lengths of thread engagement of Heli-Coil assemblies in terms of nominal thread size.

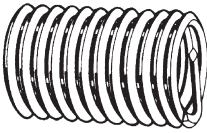
Shear Strgth.*	Bolt Material Min. Ultimate Tensile Strgth., (psi)								
	54,000	75,000	96,000	108,000	125,000	132,000	160,000	180,000	220,000
10000	2	2½	3	3	...	...	...	...	...
15000	1½	1½	2	2½	2½	3	3	...	...
20000	1	1½	2	2	2	2	2½	3	3
25000	1	1	1½	1½	1½	2	2	2½	2½
30000	1	1	1	1½	1½	1½	2	2	2½
40000	1	1	1	1	1	1½	1½	1½	2
50000	1	1	1	1	1	1	1	1½	1½

\*Shear strength of parent material (psi) (Aluminum, Magnesium, Steel).

**Note:** Assembly strength is function of shear area and shear strength of both bolt and parent material. For detailed charts on specific load values ask representative for Technical Bulletin 68-2. It covers complete range of sizes, parent materials and bolt strengths to aid in selecting optimum combinations of thread size, lengths, and bolt material.

Complete Information Available on Request.

**INSERTS**



Available in metric and inch series in both screw-lock and standard, pipe thread series and spark plug thread series.

**Standard Inserts.** Smooth, free-running threads for all metric and inch sizes.

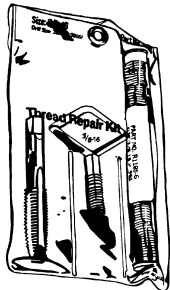
**Screw-Lock Inserts.** Provide resilient internal locking feature produced by a series of chords on one or more coils. Offer performance advantages of standard inserts plus positive locking of screws and bolts to prevent loosening under impact and vibration. Dyed red for easy identification.

**Pipe Thread Inserts.** Sharper crested diamond-shaped cross-section than conventional inserts. Inserts assume configuration of tapered tapped hole when installed. Provide leakproof assemblies when used with thread sealant. Manufactured in one length to accommodate all lengths of male pipe thread fittings.

**Special Lengths.** Master Thread Repair Kits, inch and metric, contain insert lengths equal to 1 1/2 times diameter of screw or bolt. Also available in lengths equal to 1 and 2 times diameter of bolt or screw. Replacement inserts with lengths equal to 1 1/2 times diameter of bolt or screw available in packaged quantities of bolt or screw available in packaged quantities as refills for Master Thread Repair Kits.

Complete Information Available on Request.

**MASTER THREAD REPAIR KITS**  
Inch



Packaged in vinyl pouches. Contain Heli-Coil tap, installation tool and inserts.

**Coarse Thread Repair Kits**

No.	Thrd. Size	Drill Size In.	Lgth. In.	No. Inserts
...5521-1	12-24	15/64	.324	12
...5521-2	8-32	1/64	.246	12
...5521-3	10-24	13/64	.285	12
...5521-9	9/16-12	19/32	.844	6
...5521-10	5/8-11	21/32	.938	6
...5521-12	3/4-10	29/32	1.125	4

**Fine Thread Repair Kits**

No.	Thrd. Size	Drill Size In.	Lgth. In.	No. Inserts
...5528-3	10-32	13/64	.285	12
...5528-4	1/4-28	17/64	.375	12
...5528-5	9/16-24	21/64	.469	12

No.	Thrd. Size	Drill Size In.	Lgth. In.	No. Inserts
...5528-6	3/8-24	25/64	.562	12
...5528-7	7/16-20	29/64	.656	6
...5528-8	1/2-20	33/64	.750	6
...5528-9	9/16-18	37/64	.844	6
...5528-10	5/8-18	41/64	.938	6
...5528-12	3/4-16	49/64	1.125	4

**FASTENERS**

**Inserts**  
Bulk Packaged



No.	Thrd. Size	Reach In.
...4744	10-1.0mm	1/2
...4821	12-1.25mm	1/2
...4822	12-1.25mm	3/4
...512	14-1.25mm	3/8
...513	14-1.25mm	7/16
...51313	14-1.25mm	1/2
...51310	14-1.25mm	3/4
...51320	14-1.25mm	.472
...5146	18-1.25mm	1/2
...51812	7/8-18	1/2-5/8

**FASTENERS**

**Master Thread Repair Kits and Sets**  
Inch Sizes

Easy to use, contains everything necessary for quick, permanent, original-size, on-the-spot thread repairs.

Sets contain repairs for the six most commonly used sizes, and include a quantity of stainless steel inserts plus a production-quality high speed steel drill, tap and stainless steel tool for each size. Available in coarse or fine thread.

Kits contain the necessary parts to repair a given size, and include a quantity of inserts plus tap, installation tool and drill. Kits may be ordered individually or in groups if required.

**Master Thread Repair Sets**

No.	Coarse	Fine
.....	X	...
.....	...	X

**Master Set Contents**

Thread Size	Inserts Lgth.	Tap No.	Drill Size	Install. Tool No.
<b>For /HEL4934 Inch Coarse</b>				
1/4-20	.375	R1185-4	12 4CPB 17/64	2288-4
5/16-18	.469	R1185-5	12 5CPB 21/64	2288-5
3/8-16	.562	R1185-6	12 6CPB 25/64	2288-6
7/16-14	.656	R1185-7	6 7CPB 29/64	2288-7
1/2-13	.750	R1185-8	6 8CPB 17/32	2288-8
5/8-11	.938	R1185-10	6 818710 21/32	2288-10
<b>For /HEL4936 Inch Fine</b>				
10-32	.285	R1191-3	12 3FPB 13/64	2299-3
1/4-28	.375	R1191-4	12 4FPB 17/64	2299-4
5/16-24	.469	R1191-5	12 5FPB 21/64	2299-5
3/8-24	.562	R1191-6	12 6FPB 25/64	2299-6
7/16-20	.656	R1191-7	6 7FPB 29/64	2299-7
1/2-20	.750	R1191-8	6 8FPB 33/64	2299-8

**Master Thread Repair Kits**

No.	Inserts	Thrd. Size	Lgth.
<b>National Coarse</b>			
/370K0440	24	4-40	.168
/370K0540	24	5-40	.189
/370K0632	24	6-32	.207
/370K0832	24	8-32	.246
/370K1024	24	10-24	.285
/370K1224	24	12-24	.324
/370K2520	24	1/4-20	.375
/370K3118	24	5/16-18	.469
/370K3716	12	3/8-16	.562
/370K4314	12	7/16-14	.656
/370K5013	12	1/2-13	.750
/370K5612	6	9/16-12	.844
/370K6211	6	5/8-11	.938
/370K7510	4	3/4-10	1.125
/370K879	6	7/8-9	1.312
/370K91008	6	1-8	1.500
/370K91127	5	1 1/8-7	1.688
/370K91257	4	1 1/4-7	1.875
/370K91376	4	1 3/8-6	2.062
/370K91506	4	1 1/2-6	2.250
<b>National Fine</b>			
/370K0640	24	6-40	.207
/370K0836	24	8-36	.246
/370K1032	24	10-32	.285
/370K2528	24	1/4-28	.375
/370K3124	24	5/16-24	.469
/370K3724	12	3/8-24	.562
/370K4320	12	7/16-20	.656
/370K5020	12	1/2-20	.750
/370K5618	6	9/16-18	.844
/370K6218	6	5/8-18	.938
/370K7516	4	3/4-16	1.125
/370KK8714	6	7/8-14	1.312
/370K910014	6	1-14	1.500
/370K910012	6	1-12	1.500
/370K911212	5	1 1/8-12	1.688
/370K912512	4	1 1/4-12	1.875
/370K913712	4	1 3/8-12	2.062
/370K915012	4	1 1/2-12	2.250

**FASTENERS**

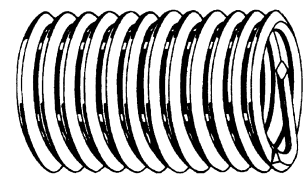
**Thread Inserts**  
Taper Pipe

Nonstock.

No.	Thrd. Size
.....	1/8-27
.....	1/4-18
.....	3/8-18
.....	1/2-14
.....	3/4-14
.....	1-11 1/2

**FASTENERS**

**Standard Inserts**



Smooth, free-running threads. Coarse and fine.

No.	Thrd. Size	Lgth. In.
.....	2-56	.086
/3700256	2-56	.129
.....	2-56	.172
.....	3-48	.099

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No.	Thrd. Size	Lgth. In.	No.	Thrd. Size	Lgth. In.	No.	Thrd. Size	Lgth. mm
/3700348	3-48	.148	/3707516	3/4-16	1.125		M10-1.5	15.0
.....	3-48	.198	.....	3/4-16	1.500	.....	M10-1.5	20.0
.....	3-56	.099	.....	7/8-9	.875	.....	M10-1.25	10.0
/3700356	3-56	.148	/370879	7/8-9	1.312	.....	M10-1.25	15.0
.....	3-56	.198	.....	7/8-9	1.750	.....	M10-1.25	20.0
.....	4-40	.112	.....	7/8-14	.875	.....	M12-1.75	12.0
/3700440	4-40	.168	/3708714	7/8-14	1.312	.....	M12-1.75	18.0
.....	4-40	.224	.....	7/8-14	1.750	.....	M12-1.75	24.0
.....	4-48	.112	.....	1-8	1.000	.....	M12-1.5	12.0
/3700448	4-48	.168	/3701008	1-8	1.500	.....	M12-1.5	18.0
.....	4-48	.224	.....	1-8	2.000	.....	M12-1.5	24.0
.....	5-40	.125	.....	1-14	1.000	.....	M12-1.25	12.0
/3700540	5-40	.188	/370910014	1-14	1.500	.....	M12-1.25	18.0
.....	5-40	.250	.....	1-14	2.000	.....	M12-1.25	24.0
.....	6-32	.138	.....	1-12	1.000	.....	M14-2	14.0
/3700632	6-32	.207	/370910012	1-12	1.500	.....	M14-2	21.0
.....	6-32	.276	.....	1-12	2.000	.....	M14-2	28.0
.....	6-40	.138	.....	1 1/8-7	1.125	.....	M14-1.5	14.0
/3700640	6-40	.207	/3701127	1 1/8-7	1.688	.....	M14-1.5	21.0
.....	6-40	.276	.....	1 1/8-7	2.250	.....	M14-1.5	28.0
.....	8-32	.164	.....	1 1/8-12	1.125	.....	M16-2	16.0
/3700832	8-32	.246	/37091127	1 1/8-12	1.688	.....	M16-2	24.0
.....	8-32	.328	.....	1 1/8-12	2.250	.....	M16-2	32.0
.....	8-36	.164	.....	1 1/4-7	1.250	.....	M16-1.5	16.0
/3700836	8-36	.246	/3701257	1 1/4-7	1.875	.....	M16-1.5	24.0
.....	8-36	.328	.....	1 1/4-7	2.500	.....	M16-1.5	32.0
.....	10-24	.190	.....	1 1/4-12	1.250	.....	M18-2.5	18.0
/3701024	10-24	.285	/370912512	1 1/4-12	1.875	.....	M18-2.5	27.0
.....	10-24	.380	.....	1 1/4-12	2.500	.....	M18-2.5	36.0
.....	10-32	.190	.....	1 3/8-6	1.375	.....	M18-1.5	18.0
/3701032	10-32	.285	/3701376	1 3/8-6	2.062	.....	M18-1.5	27.0
.....	10-32	.380	.....	1 3/8-6	2.750	.....	M18-1.5	36.0
.....	12-24	.216	.....	1 3/8-12	1.375	.....	M20-2.5	20.0
/3701224	12-24	.324	/370913712	1 3/8-12	2.062	.....	M20-2.5	30.0
.....	12-24	.432	.....	1 3/8-12	2.750	.....	M20-2.5	40.0
.....	1/4-20	.250	.....	1 1/2-6	1.500	.....		
/3702520	1/4-20	.375	/3701506	1 1/2-6	2.250	.....		
.....	1/4-20	.500	.....	1 1/2-6	3.000	.....		
.....	1/4-28	.312	.....	1 1/2-12	1.500	.....		
.....	1/4-28	.469	/370915012	1 1/2-12	2.250	.....		
.....	1/4-28	.625	.....	1 1/2-12	3.000	.....		
.....	5/16-18	.312						
/3703118	5/16-18	.469						
.....	5/16-18	.625						
.....	5/16-24	.312						
/3703124	5/16-24	.469						
.....	5/16-24	.625						
.....	3/8-16	.375						
/3703716	3/8-16	.562						
.....	3/8-16	.750						
.....	3/8-24	.375						
/3703724	3/8-24	.562						
.....	3/8-24	.750						
.....	7/16-14	.438						
/3704314	7/16-14	.656						
.....	7/16-14	.875						
.....	7/16-20	.438						
/3704320	7/16-20	.656						
.....	7/16-20	.875						
.....	1/2-13	.500						
/3705013	1/2-13	.750						
.....	1/2-13	1.000						
.....	1/2-20	.500						
/3705020	1/2-20	.750						
.....	1/2-20	1.000						
.....	9/16-12	.562						
/3705612	9/16-12	.844						
.....	9/16-12	1.125						
.....	9/16-18	.562						
/3705618	9/16-18	.844						
.....	9/16-18	1.125						
.....	5/8-11	.625						
/3706211	5/8-11	.938						
.....	5/8-11	1.250						
.....	5/8-18	.625						
/3706218	5/8-18	.938						
.....	5/8-18	1.250						
.....	3/4-10	.750						
/3707510	3/4-10	1.125						
.....	3/4-10	1.500						
.....	3/4-16	.750						

**MASTER THREAD REPAIR KITS**  
Metric Sizes



Easy to use, contains everything necessary for quick, permanent, original-size, on-the-spot thread repairs.

Sets contain repairs for the four most commonly used sizes, and include a quantity of Heli-Coil stainless steel inserts plus a production-quality Heli-Coil high speed steel drill, tap and stainless steel tool for each size. Available in coarse or fine thread.

Kits contain the necessary parts to repair a given size, and include a quantity of inserts plus tap, installation tool and drill. Kits may be ordered individually or in groups if required. Nonstock. Full box only.

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No.	No. Inserts	Thread Size	Thread Lgth.
<b>National Coarse</b>			
...54033	12	M3x0.5	4.5
...54033.5	12	M3.5x0.6	5.3
...54034	12	M4x0.7	6.0
...54035	12	M5x0.8	7.5
...54036	12	M6x1	9.0
...54037	12	M7x1	10.5
...54038	12	M8x1.25	12.0
...540310	12	M10x1.5	15.0
...540312	6	M12x1.75	18.0
...540314	6	M14x2	21.0
...540316	6	M16x2	24.0
...540318	6	M18x2.5	27.0
...540320	6	M20x2.5	30.0

**HELI-COIL®**

**Screw Thread Insert Taps**



**Straight Fluted Plug.** Used for general hand and machine tapping operations. Four thread chamfer. Used in through and blind holes that allow for ample chip clearance. Start easier and require less tapping torque than bottoming taps.

**Straight Fluted Plug Taps - Specifications**

Size	Flutes
<b>Unified Coarse</b>	
2-1/4	3
5/16-1 1/4	4
1 3/8	6
1 1/2	6
<b>Unified Fine</b>	
3-1/4	3
5/16-1	4
1 1/8-1 1/2	6

**Straight Fluted Plug Taps**

No.	Nom. Thrd. Size	Limit No.
<b>Unified Coarse - Inch - 3B</b>		
/370T0256	2-56	H1
/370T0348	3-48	H1
/370T0440	4-40	H1
/370T0540	5-40	H1
/370T0632	6-32	H2
/370T0832	8-32	H2
/370T1024	10-24	H2
/370T1224	12-24	H2
/370T2520	1/4-20	H2
/370T3118	5/16-18	H3
/370T3716	3/8-16	H3
/370T4314	7/16-14	H3
/370T5013	1/2-13	H3
/370T5612	9/16-12	H3
/370T6211	5/8-11	H3
/370T7510	3/4-10	H3
/370T879	7/8-9	H3
/370T91008	1-8	H4
/370T91127	1 1/8-7	H4
/370T91257	1 1/4-7	H4
/370T91376	1 3/8-6	H6
/370T91506	1 1/2-6	H6

**Unified Coarse - Inch - 2B**

.....	9/16-12	H4
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**Unified Fine - Inch - 3B**

.....	2-64	H1
/370T0356	3-56	H1
/370T0448	4-48	H1

No.	Nom. Thrd. Size	Limit No.
/370T0640	6-40	H1
/370T0836	8-36	H1
/370T1228	H2	H2
/370T1032	10-32	H2
/370T2528	1/4-28	H2
/370T3124	5/16-24	H2
/370T3724	3/8-24	H2
/370T4320	7/16-20	H3
/370T5020	1/2-20	H3
.....	9/16-18	H3
/370T6218	5/8-18	H3
/370T7516	3/4-16	H3
/370T8714	7/8-14	H3
/370T910014	1-14	H4
/370T910012	1-12	H4
/370T911212	1 1/8-12	H4
/370T912512	1 1/4-12	H4
/370T913712	1 3/8-12	H4
/370T915012	1 1/2-12	H4

**Unified Coarse - Metric - 4H5H**

.....	M2.2x.45	H1
.....	M2.5x.45	H1
.....	M3x.5	H1
.....	M3.5x.6	H1
.....	M4x.7	H1
.....	M5x.8	H2
.....	M6x1	H2
.....	M7x1	H2
.....	M8x1.25	H2
.....	M10x1.5	H2
.....	M12x1.75	H3
.....	M14x2	H3
.....	M16x2	H3
.....	M18x2.5	H3
.....	M20x2.5	H3
.....	M22x2.5	H3
.....	M24x3	H4

**Unified Coarse - Metric - 5H**

.....	M2.2x.45	H2
.....	M2.5x.45	H2
.....	M3x.5	H2
.....	M3.5x.6	H2
.....	M4x.7	H2
.....	M5x.8	H3
.....	M6x1	H3
.....	M7x1	H3
.....	M8x1.25	H3
.....	M10x1.5	H4
.....	M12x1.75	H4
.....	M14x2	H5
.....	M16x2	H5
.....	M18x2.5	H5
.....	M20x2.5	H5
.....	M22x2.5	H5
.....	M24x3	H6

**Unified Fine - Metric - 4H5H**

.....	M8x1	H2
.....	M10x1	H2
.....	M10x1.25	H2
.....	M12x1.25	H3
.....	M12x1.5	H3
.....	M14x1.5	H3
.....	M16x1.5	H3
.....	M18x1.5	H3
.....	M20x1.5	H3

**Unified Fine - Metric - 5H**

.....	M8x1	H2
.....	M10x1	H2
.....	M10x1.25	H2
.....	M12x1.25	H3
.....	M12x1.5	H3
.....	M14x1.5	H3
.....	M16x1.5	H3
.....	M18x1.5	H3
.....	M20x1.5	H3



**Straight Fluted Bottoming.** Used for general hand and machine tapping operations. Two thread chamfer taps. Used in blind holes drilled to minimum depth that require threads close to bottom of hole.

**Straight Fluted Bottoming Taps - Specifications**

Size	Flutes
<b>Unified Coarse</b>	
2-1/4	3
5/16-1 1/4	4
1 3/8	6
1 1/2	6
<b>Unified Fine</b>	
3-1/4	3
5/16-1	4
1 1/8-1 1/2	6

**Straight Fluted Bottoming Taps**

No.	Nom. Thrd. Size	Limit No.
<b>Unified Coarse - Inch - 3B</b>		
.....	1-64	H1
.....	2-56	H1
.....	3-48	H1
.....	4-40	H1
.....	5-40	H1
.....	6-32	H2
.....	8-32	H2
.....	10-24	H2
.....	12-24	H2
.....	1/4-20	H2
.....	5/16-18	H3
.....	3/8-16	H3
.....	7/16-14	H3
.....	1/2-13	H3
.....	5/8-11	H3
.....	9/16-12	H3
.....	5/8-11	H3
.....	3/4-10	H3
.....	7/8-9	H3
.....	1-8	H4
.....	1 1/8-7	H4
.....	1 1/4-7	H4
.....	1 3/8-6	H6
.....	1 1/2-6	H6

**Unified Coarse - Inch - 2B**

.....	1-64	H2
.....	2-56	H2
.....	3-48	H2
.....	4-40	H2
.....	5-40	H2
.....	6-32	H3
.....	8-32	H3
.....	10-24	H3
.....	12-24	H3
.....	1/4-20	H3
.....	5/16-18	H4
.....	3/8-16	H4
.....	7/16-14	H4
.....	1/2-13	H4
.....	9/16-12	H4
.....	5/8-11	H4
.....	3/4-10	H5
.....	7/8-9	H5
.....	1-8	H6
.....	1 1/8-7	H6
.....	1 1/4-7	H6
.....	1 3/8-6	H8
.....	1 1/2-6	H8

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No.	Nom. Thrd. Size	Limit No.
<b>Unified Fine - Inch - 3B</b>		
.....	2-64	H1
.....	3-56	H1
.....	4-48	H1
.....	6-40	H1
.....	8-36	H1
.....	12-28	H2
.....	10-32	H2
.....	1/4-28	H2
.....	5/16-24	H2
.....	3/8-24	H2
.....	7/16-20	H3
.....	1/2-20	H3
.....	9/16-18	H3
.....	5/8-18	H3
.....	3/4-16	H3
.....	7/8-14	H3
.....	1-14	H4
.....	1-12	H4
.....	1 1/8-12	H4
.....	1 1/4-12	H4
.....	1 3/8-12	H4
.....	1 1/2-12	H4
<b>Unified Fine - Inch - 2B</b>		
.....	2-64	H2
.....	3-56	H2
.....	4-48	H2
.....	6-40	H2
.....	8-36	H2
.....	12-28	H3
.....	10-32	H3
.....	1/4-28	H3
.....	5/16-24	H3
.....	3/8-24	H3
.....	7/16-20	H4
.....	1/2-20	H4
.....	9/16-18	H4
.....	5/8-18	H4
.....	3/4-16	H4
.....	7/8-14	H4
.....	1-14	H6
.....	1-12	H6
.....	1 1/8-12	H6
.....	1 1/4-12	H6
.....	1 3/8-12	H6
.....	1 1/2-12	H6
<b>Unified Coarse - Metric - 4H5H</b>		
.....	M2.2x.45	H1
.....	M2.5x.45	H1
.....	M3x.5	H1
.....	M3.5x.6	H1
.....	M4x.7	H1
.....	M5x.8	H2
.....	M6x1	H2
.....	M7x1	H2
.....	M8x1.25	H2
.....	M10x1.5	H2
.....	M12x1.75	H3
.....	M14x2	H3
.....	M16x2	H3
.....	M18x2.5	H3
.....	M20x2.5	H3
.....	M22x2.5	H3
.....	M24x3	H4
<b>Unified Coarse - Metric - 5H</b>		
.....	M2.2x.45	H2
.....	M2.5x.45	H2
.....	M3x.5	H2
.....	M3.5x.6	H2
.....	M4x.7	H2
.....	M5x.8	H3
.....	M6x1	H3
.....	M7x1	H3
.....	M8x1.25	H3
.....	M10x1.5	H4
.....	M12x1.75	H4

No.	Nom. Thrd. Size	Limit No.
.....	M14x2	H5
.....	M16x2	H5
.....	M18x2.5	H5
.....	M20x2.5	H5
.....	M22x2.5	H5
.....	M24x3	H6
<b>Unified Fine - Metric - 4H5H</b>		
.....	M8x1	H2
.....	M10x1	H2
.....	M10x1.25	H2
.....	M12x1.25	H3
.....	M12x1.5	H3
.....	M14x1.5	H3
.....	M16x1.5	H3
.....	M18x1.5	H3
.....	M20x1.5	H3
<b>Unified Fine - Metric - 5H</b>		
.....	M8x1	H3
.....	M10x1	H3
.....	M10x1.25	H3
.....	M12x1.25	H4
.....	M12x1.5	H4
.....	M14x1.5	H4
.....	M16x1.5	H4
.....	M18x1.5	H4
.....	M20x1.5	H4



**Spiral Pointed Plug.** Designed for efficient chip disposal in production tapping operations. Used in long through and blind holes with ample chip clearance. Free cutting; provide increased tap strength. Four thread chamfer taps incorporate angular grind at tap point end which shears chips and drives them forward of tap. Not recommended for abrasive materials.

**Spiral Pointed Plug Taps - Specifications**

Size	Flutes
<b>Unified Coarse</b>	
2-1/4	2
5/16-1/2	3
<b>Unified Fine</b>	
3-1/4	2
5/16-1/2	3

**Spiral Pointed Plug Taps**

No.	Nom. Thrd. Size	Limit No.
<b>Unified Coarse - Inch - 3B</b>		
.....	1-64	H1
.....	2-56	H1
.....	3-48	H1
.....	4-40	H1
.....	5-40	H1
.....	6-32	H2
.....	8-32	H2
.....	10-24	H2
.....	12-24	H2
.....	1/4-20	H2
.....	5/16-18	H3
.....	3/8-16	H3
.....	7/16-14	H3
.....	1/2-13	H3
<b>Unified Coarse - Inch - 2B</b>		
.....	1-64	H2
.....	2-56	H2

No.	Nom. Thrd. Size	Limit No.
.....	3-48	H2
.....	4-40	H2
.....	5-40	H2
.....	6-32	H3
.....	8-32	H3
.....	10-24	H3
.....	12-24	H3
.....	1/4-20	H3
.....	5/16-18	H4
.....	3/8-16	H4
.....	7/16-14	H4
.....	1/2-13	H4
<b>Unified Fine - Inch - 3B</b>		
.....	2-64	H1
.....	3-56	H1
.....	4-48	H1
.....	6-40	H1
.....	8-36	H1
.....	10-32	H2
.....	1/4-28	H2
.....	5/16-24	H2
.....	3/8-24	H2
.....	7/16-20	H3
.....	1/2-20	H3
<b>Unified Fine - Inch - 2B</b>		
.....	2-64	H2
.....	3-56	H2
.....	4-48	H2
.....	6-40	H2
.....	8-36	H2
.....	10-32	H3
.....	1/4-28	H3
.....	5/16-24	H3
.....	3/8-24	H3
.....	7/16-20	H4
.....	1/2-20	H4
<b>Unified Coarse - Metric - 4H5H</b>		
.....	M2.2x.45	H1
.....	M2.5x.45	H1
.....	M3x.5	H1
.....	M3.5x.6	H1
.....	M4x.7	H1
.....	M5x.8	H2
.....	M6x1	H2
.....	M7x1	H2
.....	M8x1.25	H2
.....	M10x1.5	H2
.....	M12x1.75	H3
<b>Unified Coarse - Metric - 5H</b>		
.....	M2.2x.45	H2
.....	M2.5x.45	H2
.....	M3x.5	H2
.....	M3.5x.6	H2
.....	M4x.7	H2
.....	M5x.8	H3
.....	M6x1	H3
.....	M7x1	H3
.....	M8x1.25	H3
.....	M10x1.5	H4
.....	M12x1.75	H4
<b>Unified Fine - Metric - 4H5H</b>		
.....	M8x1	H2
.....	M10x1	H2
.....	M10x1.25	H2
.....	M12x1.25	H3
.....	M12x1.5	H3
<b>Unified Fine - Metric - 5H</b>		
.....	M8x1	H3
.....	M10x1	H3
.....	M10x1.25	H3
.....	M12x1.25	H3
.....	M12x1.5	H4