



COOLANT-FED TAPS FOR THRU HOLE • MEDIUM HOOK • SPIRAL POINT PLUG

Medium Hook for the following material groups:

Medium & Low Carbon Steel to 23 Rc, Ductile Iron, Brass, Bronze, & Thermo Plastic

Note: Standard Thru Hole Application Taps are designed to flush chips from the work hole per angled coolant holes along the tap flutes. This flushing / cooling action removes chips from the lead thread of the tap keeping chips from hindering the cutting action of the tap.



Thru Hole - Spiral Point

Note : Other surface treatments available upon request.

SIZE	THREAD LIMIT	NO. OF FLUTES	PART NO. PLUG CHAMFER
1/4-20 NC	H-3	3	325-025M
1/4-28 NF	H-3	3	325-045M
5/16-18 NC	H-3	3	331-025M
5/16-24 NF	H-3	3	331-045M
3/8-16 NC	H-3	3	337-025M
3/8-24 NF	H-3	3	337-045M
7/16-14 NC	H-3	4	343-025M
7/16-20 NF	H-3	4	343-045M
1/2-13 NC	H-3	4	350-025M
1/2-20 NF	H-3	4	350-045M

SIZE	THREAD LIMIT	NO. OF FLUTES	PART NO. PLUG CHAMFER
9/16-12 NC	H-3	4	356-025M
9/16-18 NF	H-3	4	356-045M
5/8-11 NC	H-3	4	362-025M
5/8-18 NF	H-3	4	362-045M
3/4-10 NC	H-3	4	375-025M
3/4-16 NF	H-3	4	375-045M
7/8-9 NC	H-4	4	387-025M
7/8-14 NF	H-4	4	387-045M
1"-8 NC	H-4	4	399-025M
1"-12 NF	H-4	4	399-045M

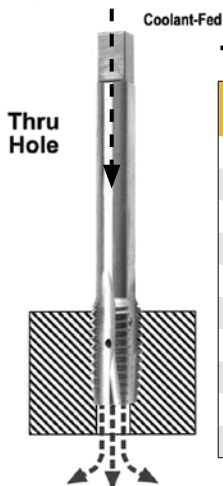
• Premium High Speed Steel - Bright Finish • See Tapping Systems beginning on page 148 for Tap Holders & Adapters

COOLANT-FED TAPS FOR THRU HOLE • HIGH HOOK • SPIRAL POINT PLUG

High Hook for the following material groups:

Stainless, Titanium, Monel, Aluminum Alloys, Copper, Manganese Bronze, Magnesium, & Zinc

Note: Standard Thru Hole Application Taps are designed to flush chips from the work hole per angled coolant holes along the tap flutes. This flushing / cooling action removes chips from the lead thread of the tap keeping chips from hindering the cutting action of the tap.



Thru Hole - Spiral Point

Note : Other surface treatments available upon request.

SIZE	THREAD LIMIT	NO. OF FLUTES	PART NO. PLUG CHAMFER
1/4-20 NC	H-3	3	325-025H
1/4-28 NF	H-3	3	325-045H
5/16-18 NC	H-3	3	331-025H
5/16-24 NF	H-3	3	331-045H
3/8-16 NC	H-3	3	337-025H
3/8-24 NF	H-3	3	337-045H
7/16-14 NC	H-3	4	343-025H
7/16-20 NF	H-3	4	343-045H
1/2-13 NC	H-3	4	350-025H
1/2-20 NF	H-3	4	350-045H

SIZE	THREAD LIMIT	NO. OF FLUTES	PART NO. PLUG CHAMFER
9/16-12 NC	H-3	4	356-025H
9/16-18 NF	H-3	4	356-045H
5/8-11 NC	H-3	4	362-025H
5/8-18 NF	H-3	4	362-045H
3/4-10 NC	H-3	4	375-025H
3/4-16 NF	H-3	4	375-045H
7/8-9 NC	H-4	4	387-025H
7/8-14 NF	H-4	4	387-045H
1"-8 NC	H-4	4	399-025H
1"-12 NF	H-4	4	399-045H

• Premium High Speed Steel - Bright Finish • See Tapping Systems beginning on page 148 for Tap Holders & Adapters

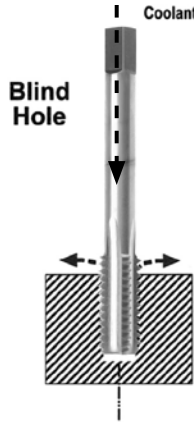


COOLANT-FED TAPS FOR BLIND HOLE • MEDIUM HOOK • 4 FLUTE BOTTOM

Medium Hook for the following material groups:

Medium & Low Carbon Steel to 23 Rc, Ductile Iron, Brass, Bronze, & Thermo Plastic

Note: Standard Blind Hole Application Taps are designed to evacuate chips along the flutes from the blind hole. These taps have a thru hole in the center, where the coolant forces the chips out through the flutes of the tap in order to keep chips from hindering the cutting action of the tap.



Blind Hole - 4 Flute

Note : Other surface treatments available upon request.

SIZE	THREAD LIMIT	PART NO. PLUG CHAMFER	PART NO. BOTTOM CHAMFER	SIZE	THREAD LIMIT	PART NO. PLUG CHAMFER	PART NO. BOTTOM CHAMFER
1/4-20 NC	H-3	325-125M	325-120M	9/16-12 NC	H-3	356-125M	356-120M
1/4-28 NF	H-3	325-145M	325-140M	9/16-18 NF	H-3	356-145M	356-140M
5/16-18 NC	H-3	331-125M	331-120M	5/8-11 NC	H-3	362-125M	362-120M
5/16-24 NF	H-3	331-145M	331-140M	5/8-18 NF	H-3	362-145M	362-140M
3/8-16 NC	H-3	337-125M	337-120M	3/4-10 NC	H-3	375-125M	375-120M
3/8-24 NF	H-3	337-145M	337-140M	3/4-16 NF	H-3	375-145M	375-140M
7/16-14 NC	H-3	343-125M	343-120M	7/8-9 NC	H-4	387-125M	387-120M
7/16-20 NF	H-3	343-145M	343-140M	7/8-14 NF	H-4	387-145M	387-140M
1/2-13 NC	H-3	350-125M	350-120M	1"-8 NC	H-4	399-125M	399-120M
1/2-20 NF	H-3	350-145M	350-140M	1"-12 NF	H-4	399-145M	399-140M

- Premium High Speed Steel - Bright Finish • See Tapping Systems beginning on page 148 for Tap Holders & Adapters

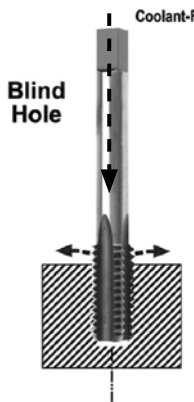
COOLANT-FED TAPS

COOLANT-FED TAPS FOR BLIND HOLES • HIGH HOOK • 4 FLUTE BOTTOM

High Hook for the following material groups:

Stainless, Titanium, Monel, Aluminum Alloys, Copper, Manganese Bronze, Magnesium, & Zinc

Note: Standard Blind Hole Application Taps are designed to evacuate chips along the flutes from the blind hole. These taps have a thru hole in the center, where the coolant forces the chips out through the flutes of the tap in order to keep chips from hindering the cutting action of the tap.



Blind Hole - 4 Flute

Note : Other surface treatments available upon request.

SIZE	THREAD LIMIT	PART NO. PLUG CHAMFER	PART NO. BOTTOM CHAMFER	SIZE	THREAD LIMIT	PART NO. PLUG CHAMFER	PART NO. BOTTOM CHAMFER
1/4-20 NC	H-3	325-125H	325-120H	9/16-12 NC	H-3	356-125H	356-120H
1/4-28 NF	H-3	325-145H	325-140H	9/16-18 NF	H-3	356-145H	356-140H
5/16-18 NC	H-3	331-125H	331-120H	5/8-11 NC	H-3	362-125H	362-120H
5/16-24 NF	H-3	331-145H	331-140H	5/8-18 NF	H-3	362-145H	362-140H
3/8-16 NC	H-3	337-125H	337-120H	3/4-10 NC	H-3	375-125H	375-120H
3/8-24 NF	H-3	337-145H	337-140H	3/4-16 NF	H-3	375-145H	375-140H
7/16-14 NC	H-3	343-125H	343-120H	7/8-9 NC	H-4	387-125H	387-120H
7/16-20 NF	H-3	343-145H	343-140H	7/8-14 NF	H-4	387-145H	387-140H
1/2-13 NC	H-3	350-125H	350-120H	1"-8 NC	H-4	399-125H	399-120H
1/2-20 NF	H-3	350-145H	350-140H	1"-12 NF	H-4	399-145H	399-140H

- Premium High Speed Steel - Bright Finish • See Tapping Systems beginning on page 148 for Tap Holders & Adapters



STANDARD PLUG & BOTTOM TAP DIMENSIONS

SIZE (IN.)	METRIC SIZE	OVERALL LENGTH (IN.)	THREAD LENGTH (IN.)	SQUARE LENGTH (IN.)	SHANK DIA. (IN.)	OIL HOLE (IN.)
1/4	M6	2-1/2	5/8	5/16	0.255	0.040
5/16	M8	2-23/32	11/16	3/8	0.318	0.052
3/8	M10	2-15/16	3/4	7/16	0.381	0.063
7/16	-	3-5/32	7/8	13/32	0.323	0.070
1/2	M12	3-3/8	15/16	7/16	0.367	0.081
9/16	-	3-19/32	1	1/2	0.429	0.094
5/8	-	3-13/16	1-3/32	9/16	0.480	0.102
3/4	-	4-1/4	1-7/32	11/16	0.590	0.126
7/8	-	4-11/16	1-11/32	3/4	0.697	0.141
1	-	5-1/8	1-1/2	13/16	0.800	0.161

The George Whalley Co.

can provide a full range of special coolant-fed taps to meet your tapping requirements.

OUR CAPABILITIES INCLUDE:

- SPECIAL PREMIUM STEEL
- SPECIAL DIAMETER & PITCHES
- METRICS
- RIGHT & LEFT HAND
- STRAIGHT FLUTE
- PIPE TAPS
- EXTENSION TAPS
- PULLEY TAPS
- BLUE PRINT SPECIALS
- FULL RANGE OF SURFACE TREATMENTS

PLEASE SPECIFY:

1. NOMINAL DIAMETER (inch or metric)

2. NUMBER OF THREADS PER INCH (or metric pitch)

3. CLASS OF FIT OR PITCH DIAMETER TOLERANCE

4. DIRECTION OF CUT (right or left hand)

5. TYPE OF TAP (straight flute)

6. STYLE (taper, plug or bottoming)

7. COOLANT PASSAGE (thru center of tap)

8. MATERIAL TO BE TAPPED



Visit our website at www.coolantfedtooling.com for technical information and our latest product offerings.

Please Note: For many special application coolant-fed taps we can best serve you when provided with a sample part, blue print and a sample of the tap you are currently using.



TAP DRILL SIZE CHART - STOCK SIZE DRILLS

TAP	TAP DRILL	DECIMAL EQUIVALENT OF TAP DRILL	THEORETICAL % OF THREAD	TAP	TAP DRILL	DECIMAL EQUIVALENT OF TAP DRILL	THEORETICAL % OF THREAD
1/4-20	9	0.1960	83	7/16-20	W	0.3860	79
	8	0.1990	79		25/64	0.3906	72
	7	0.2010	75		X	0.3970	62
1/4-28	13/64	0.2031	72.5	1/2-13	27/64	0.4219	78
	6	0.2040	71	7/16	0.4375	63	
	5	0.2055	69	1/2-20	29/64	0.4531	72
	4	0.2090	63	9/16-12	15/32	0.4688	87
	3	0.2130	80	31/64	0.4844	72	
5/16-18	7/32	0.2188	67	9/16-18	1/2	0.5000	87
	2	0.2210	63	33/64	0.5156	65	
	F	0.2570	77	5/8-11	17/32	0.5312	79
	G	0.2610	71	35/64	0.5469	66	
5/16-24	17/64	0.2656	65	5/8-18	9/16	0.5625	87
	H	0.2660	64	37/64	0.5781	65	
	H	0.2660	86	3/4-10	41/64	0.6406	84
	I	0.2720	75	21/32	0.6562	72	
	J	0.2770	66	3/4-16	11/16	0.6875	77
3/8-16	5/16	0.3125	77	7/8-9	49/64	0.7656	76
	O	0.3160	73	25/32	0.7812	65	
	P	0.3230	64	7/8-14	51/64	0.7969	84
3/8-24	21/64	0.3281	87	13/16	0.8125	67	
	Q	0.3320	79	1"-8	55/64	0.8594	87
	R	0.3390	67	7/8	0.8750	77	
	7/16-14	T	0.3580	86	57/64	0.8906	67
23/64		0.3594	84	29/32	0.9062	58	
U		0.3680	75	1"-12	29/32	0.9062	87
3/8		0.3750	67	59/64	0.9219	72	
V		0.3770	65	15/16	0.9375	58	

COOLANT-FED TAPS

TAP DRILL SIZE FORMULAS

$$\text{DRILLED HOLE SIZE} = \text{MAJOR DIAMETER OF THREAD} - \frac{(.01299 \times \text{AMOUNT OF \% OF FULL THREAD})}{(\text{THREADS PER INCH})}$$

$$\% \text{ of FULL THREAD} = \text{THREADS PER INCH} \times \frac{(\text{MAJOR DIA OF THREAD} - \text{TAP DRILL DIAMETER})}{0.01299}$$

SUGGESTED PROCESS FOR TAPPING DIFFICULT TO MACHINE MATERIALS

When tapping difficult to machine materials (such as Inconel, 17-4 pH Stainless, and Hastelloy), the following processing has been used to insure consistency of the final threads and longer tap life:

1. Drill the hole using a slightly undersized tap drill.
2. Bore the hole to the largest allowable diameter to achieve specified percentage of thread, using a 2 flute end mill
3. Tap the hole.

While this adds an extra step to the process, this has been used successfully and may be a viable option. Be sure to check our website at www.coolantfedtooling.com for more technical information



Visit our website at www.coolantfedtooling.com for technical information and our latest product offerings.