

General Purpose Taps



Hand Taps High Speed Steel

Bright Finish
Low to medium tensile strength materials, and aluminum

Type	Series	Catalog page reference
Taper, Plug, Bottoming/Through or Blind Hole	2000	133, 134
	2000E	135
	2800	136
	2800E	137



Hand Taps High Speed Steel



Black Oxide
For better performance on low to medium tensile strength materials

Type	Series	Catalog page reference
Taper, Plug, Bottoming/Through or Blind Hole	2000N	138, 139



Hand Taps Carbon

Bright Finish
For cleaning up threads or repairing damaged threads

Type	Series	Catalog page reference
Taper, Plug, Bottoming/Through or Blind Hole	2000C	140, 141



Spiral Point Taps High Speed Steel



Black Oxide
For tapping through holes in high tensile strength materials

Type	Series	Catalog page reference
Plug / Through Hole	2100N	142



Spiral Point Taps High Speed Steel

Bright Finish
For tapping through holes in low to medium tensile strength materials

Type	Series	Catalog page reference
Plug / Through Hole	2850	142
	2100, 2100E	143



Oversize Spiral Point Taps High Speed Steel

Bright Finish
To cut oversized threads in through holes

Type	Series	Catalog page reference
Plug / Through Hole	2103, 2105	144



Oversized Hand Taps High Speed Steel

Bright Finish
To cut oversized Threads in through holes

Type	Series	Catalog page reference
Oversize / Plug & Bottoming / Through or Blind Hole	2003, 2005	144



Production Taps

Nitro-Max CNC Taps

M4 Premium HSS

Black Oxide or TiCN Coated
For production tapping & threading

Type	Series	Catalog page reference
Through or Blind Hole	2150N	145
	2160N	146
	2250N	147
	2260N	148
	2270N	149



Multi-Application Spiral Point Taps

High Speed Steel

Bright Finish
For machine tapping through holes

Type	Series	Catalog page reference
Plug / Through Hole	2100PS	150



Multi-Application Spiral Flute Taps

High Speed Steel

Bright Finish
For tapping blind holes

Type	Series	Catalog page reference
Bottoming / Blind Hole	2000PF	151
	2000F	152



Thread Forming Taps

High Speed Steel

Bright Finish
Thread forming does not produce any chips

Type	Series	Catalog page reference
Plug & Bottoming / Through or Blind Hole	2090	152



Pipe Taps

Taper Pipe Taps (NPT)

High Speed Steel

Bright Finish
For long life on most materials

Type	Series	Catalog page reference
Through or Blind Hole	2900, 2900E	153



Taper Pipe Taps (NPT)

Carbon

Bright Finish
For long life on most material

Type	Series	Catalog page reference
Through or Blind Hole	2700E	153



Interrupted Thread Pipe Taps

High Speed Steel

Bright Finish
For better chip management

Type	Series	Catalog page reference
Through or Blind Hole	2930	154



Taper Pipe Taps (NPS)

High Speed Steel

Bright Finish
For straight pipe threads

Type	Series	Catalog page reference
Through or Blind Hole	2950	154



Special Purpose

Left Hand Taps

High Speed Steel

Bright Finish
For creating left-handed threads

Type	Series	Catalog page reference
Taper, Plug & Bottoming / Through or Blind Hole	2300	156



8-Pitch Hand Taps

High Speed Steel

Bright Finish
For larger diameter threaded holes

Type	Series	Catalog page reference
Taper, Plug & Bottoming / Through or Blind Hole	2500	157



Screw Thread Insert Hand Taps (STI)

High Speed Steel

Bright Finish
STI Taps for screw thread inserts

Type	Series	Catalog page reference
Plug & Bottoming / Through or Blind Hole	2020	158



Hand Taps Pulley Style

High Speed Steel

Bright & Black finish
For threading hard to reach holes

Type	Series	Catalog page reference
Plug / Through or Blind Hole	2400	158



Hand Taps 6" Extension

High Speed Steel

Bright & Black finish
For threading hard to reach holes

Type	Series	Catalog page reference
Plug & Bottoming / Through or Blind Hole	2060	158



Combined Tap & Drill

High Speed Steel

Bright Finish
Drill and tap in one

Type	Series	Catalog page reference
Through or Blind Hole	2050	159



For Tap/Drill sizes, please see chart on page



Hand Taps

Straight Flute "Hand Taps" are the most popular and versatile style of taps in general machine tapping operations. They are for general use in production tapping or hand operations in a wide range of application material groups.

- ▷ *Taper – 7-10 pitch chamfer length. Starts the thread square with the workpiece*
- ▷ *Plug – 3-5 pitch chamfer length. Generally used in through holes*
- ▷ *Bottoming – 1-2 pitch chamfer length. Generates the thread to the bottom*
- ▷ *Sets – Contains 1 each of Taper, Plug, and Bottoming*

2000

High Speed Steel

Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw/ Bright



2000

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000 Order No.			
							Taper	Plug	Bottoming	Sets
0	–	80	1-5/8"	5/16"	2	H1	20A000FT	20A000FP	20A000FB	20A000FS
1	64	–	1-11/16"	3/8"	2	H1	20A001CT	20A001CP	20A001CB	20A001CS
1	–	72	1-11/16"	3/8"	2	H1	20A001FT	20A001FP	20A001FB	20A001FS
2	56	–	1-3/4"	7/16"	3	H2	20A002CT	20A002CP	20A002CB	20A002CS
2	–	64	1-3/4"	7/16"	3	H2	20A002FT	20A002FP	20A002FB	20A002FS
3	48	–	1-13/16"	1/2"	3	H2	20A003CT	20A003CP	20A003CB	20A003CS
3	–	56	1-13/16"	1/2"	3	H2	20A003FT	20A003FP	20A003FB	20A003FS
4	40	–	1-7/8"	9/16"	3	H2	20A004CT	20A004CP	20A004CB	20A004CS
4	–	36	1-7/8"	9/16"	3	H2	20A004ST	20A004SP	20A004SB	20A004SS
4	–	48	1-7/8"	9/16"	3	H2	20A004FT	20A004FP	20A004FB	20A004FS
5	40	–	1-15/16"	5/8"	3	H2	20A005CT	20A005CP	20A005CB	20A005CS
5	–	44	1-15/16"	5/8"	3	H2	20A005FT	20A005FP	20A005FB	20A005FS
6	32	–	2"	11/16"	3	H3	20A006CT	20A006CP	20A006CB	20A006CS
6	–	40	2"	11/16"	3	H2	20A006FT	20A006FP	20A006FB	20A006FS
8	32	–	2-1/8"	3/4"	4	H3	20A008CT	20A008CP	20A008CB	20A008CS
8	–	36	2-1/8"	3/4"	4	H2	20A008FT	20A008FP	20A008FB	20A008FS
10	24	–	2-3/8"	7/8"	4	H3	20A010CT	20A010CP	20A010CB	20A010CS
10	–	32	2-3/8"	7/8"	4	H3	20A010FT	20A010FP	20A010FB	20A010FS
12	24	–	2-3/8"	15/16"	4	H3	20A012CT	20A012CP	20A012CB	20A012CS
12	–	28	2-3/8"	15/16"	4	H3	20A012FT	20A012FP	20A012FB	20A012FS

All sizes are individually packaged



2000

High Speed Steel

**Taper, Plug & Bottoming / Through or Blind Hole
Fractional / Bright**



2000

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000 Order No.			
							Taper	Plug	Bottoming	Sets
1/4"	20	–	2-1/2"	1"	4	H3	20A116CT	20A116CP	20A116CB	20A116CS
1/4"	–	28	2-1/2"	1"	4	H3	20A116FT	20A116FP	20A116FB	20A116FS
5/16"	18	–	2-23/32"	1-1/8"	4	H3	20A120CT	20A120CP	20A120CB	20A120CS
5/16"	–	24	2-23/32"	1-1/8"	4	H3	20A120FT	20A120FP	20A120FB	20A120FS
3/8"	16	–	2-15/16"	1-1/4"	4	H3	20A124CT	20A124CP	20A124CB	20A124CS
3/8"	–	24	2-15/16"	1-1/4"	4	H3	20A124FT	20A124FP	20A124FB	20A124FS
7/16"	14	–	3-5/32"	1-7/16"	4	H3	20A128CT	20A128CP	20A128CB	20A128CS
7/16"	–	20	3-5/32"	1-7/16"	4	H3	20A128FT	20A128FP	20A128FB	20A128FS
1/2"	13	–	3-3/8"	1-21/32"	4	H3	20A132CT	20A132CP	20A132CB	20A132CS
1/2"	–	20	3-3/8"	1-21/32"	4	H3	20A132FT	20A132FP	20A132FB	20A132FS
9/16"	12	–	9/16"	1-21/32"	4	H3	20A136CT	20A136CP	20A136CB	20A136CS
9/16"	–	18	9/16"	1-21/32"	4	H3	20A136FT	20A136FP	20A136FB	20A136FS
5/8"	11	–	3-13/16"	1-13/16"	4	H3	20A140CT	20A140CP	20A140CB	20A140CS
5/8"	–	18	3-13/16"	1-13/16"	4	H3	20A140FT	20A140FP	20A140FB	20A140FS
11/16"	11	–	4-1/32"	1-13/16"	4	H3	20A144CT	20A144CP	20A144CB	20A144CS
11/16"	–	16	4-1/32"	1-13/16"	4	H3	20A144FT	20A144FP	20A144FB	20A144FS
3/4"	10	–	4-1/4"	2"	4	H3	20A148CT	20A148CP	20A148CB	20A148CS
3/4"	–	16	4-1/4"	2"	4	H3	20A148FT	20A148FP	20A148FB	20A148FS
7/8"	9	–	4-11/16"	2-7/32"	4	H4	20A156CT	20A156CP	20A156CB	20A156CS
7/8"	–	14	4-11/16"	2-7/32"	4	H4	20A156FT	20A156FP	20A156FB	20A156FS
1"	8	–	5-1/8"	2-1/2"	4	H4	20A164CT	20A164CP	20A164CB	20A164CS
1"	–	12	5-1/8"	2-1/2"	4	H4	20A164FT	20A164FP	20A164FB	20A164FS
1"	–	14	5-1/8"	2-1/2"	4	H4	20A164ST	20A164SP	20A164SB	20A164SS
1-1/8"	7	–	5-7/16"	2-9/16"	4	H4	20A208CT	20A208CP	20A208CB	20A208CS
1-1/8"	–	12	5-7/16"	2-9/16"	4	H4	20A208FT	20A208FP	20A208FB	20A208FS
1-1/4"	7	–	5-3/4"	2-9/16"	4	H4	20A216CT	20A216CP	20A216CB	20A216CS
1-1/4"	–	12	5-3/4"	2-9/16"	6	H4	20A216FT	20A216FP	20A216FB	20A216FS
1-3/8"	6	–	6-1/16"	3"	4	H4	20A224CT	20A224CP	20A224CB	20A224CS
1-3/8"	–	12	6-1/16"	3"	6	H4	20A224FT	20A224FP	20A224FB	20A224FS
1-1/2"	6	–	6-3/8"	3"	4	H4	20A232CT	20A232CP	20A232CB	20A232CS
1-1/2"	–	12	6-3/8"	3"	6	H4	20A232FT	20A232FP	20A232FB	20A232FS

All sizes are individually packaged

2000E

High Speed Steel

Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw / Bright

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000E Order No.			
							Taper	Plug	Bottoming	Sets
0	-	80	1-5/8"	5/16"	2	H1	20E000FT	20E000FP	20E000FB	20E000FS
1	64	-	1-11/16"	3/8"	2	H1	20E001CT	20E001CP	20E001CB	20E001CS
1	-	72	1-11/16"	3/8"	2	H1	20E001FT	20E001FP	20E001FB	20E001FS
2	56	-	1-3/4"	7/16"	3	H2	20E002CT	20E002CP	20E002CB	20E002CS
2	-	64	1-3/4"	7/16"	3	H2	20E002FT	20E002FP	20E002FB	20E002FS
3	48	-	1-13/16"	1/2"	3	H2	20E003CT	20E003CP	20E003CB	20E003CS
3	-	56	1-13/16"	1/2"	3	H2	20E003FT	20E003FP	20E003FB	20E003FS
4	40	-	1-7/8"	9/16"	3	H2	20E004CT	20E004CP	20E004CB	20E004CS
4	-	36	1-7/8"	9/16"	3	H2	20E004ST	20E004SP	20E004SB	20E004SS
4	-	48	1-7/8"	9/16"	3	H2	20E004FT	20E004FP	20E004FB	20E004FS
5	40	-	1-15/16"	5/8"	3	H2	20E005CT	20E005CP	20E005CB	20E005CS
5	-	44	1-15/16"	5/8"	3	H2	20E005FT	20E005FP	20E005FB	20E005FS
6	32	-	2"	11/16"	3	H3	20E006CT	20E006CP	20E006CB	20E006CS
6	-	40	2"	11/16"	3	H2	20E006FT	20E006FP	20E006FB	20E006FS
8	32	-	2-1/8"	3/4"	4	H3	20E008CT	20E008CP	20E008CB	20E008CS
8	-	36	2-1/8"	3/4"	4	H2	20E008FT	20E008FP	20E008FB	20E008FS
10	24	-	2-3/8"	7/8"	4	H3	20E010CT	20E010CP	20E010CB	20E010CS
10	-	32	2-3/8"	7/8"	4	H3	20E010FT	20E010FP	20E010FB	20E010FS
12	24	-	2-3/8"	15/16"	4	H3	20E012CT	20E012CP	20E012CB	20E012CS
12	-	28	2-3/8"	15/16"	4	H3	20E012FT	20E012FP	20E012FB	20E012FS

2000E

High Speed Steel

Taper, Plug & Bottoming / Through or Blind Hole
Fractional / Bright



2000E

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000E Order No.			
							Taper	Plug	Bottoming	Sets
1/4"	20	-	2-1/2"	1"	4	H3	20E116CT	20E116CP	20E116CB	20E116CS
1/4"	-	28	2-1/2"	1"	4	H3	20E116FT	20E116FP	20E116FB	20E116FS
5/16"	18	-	2-23/32"	1-1/8"	4	H3	20E120CT	20E120CP	20E120CB	20E120CS
5/16"	-	24	2-23/32"	1-1/8"	4	H3	20E120FT	20E120FP	20E120FB	20E120FS
3/8"	16	-	2-15/16"	1-1/4"	4	H3	20E124CT	20E124CP	20E124CB	20E124CS
3/8"	-	24	2-15/16"	1-1/4"	4	H3	20E124FT	20E124FP	20E124FB	20E124FS
7/16"	14	-	3-5/32"	1-7/16"	4	H3	20E128CT	20E128CP	20E128CB	20E128CS
7/16"	-	20	3-5/32"	1-7/16"	4	H3	20E128FT	20E128FP	20E128FB	20E128FS
1/2"	13	-	3-3/8"	1-21/32"	4	H3	20E132CT	20E132CP	20E132CB	20E132CS
1/2"	-	20	3-3/8"	1-21/32"	4	H3	20E132FT	20E132FP	20E132FB	20E132FS
9/16"	12	-	3-19/32"	1-21/32"	4	H3	20E136CT	20E136CP	20E136CB	20E136CS
9/16"	-	18	3-19/32"	1-21/32"	4	H3	20E136FT	20E136FP	20E136FB	20E136FS
5/8"	11	-	3-13/16"	1-13/16"	4	H3	20E140CT	20E140CP	20E140CB	20E140CS
5/8"	-	18	3-13/16"	1-13/16"	4	H3	20E140FT	20E140FP	20E140FB	20E140FS
11/16"	11	-	4-1/32"	1-13/16"	4	H3	20E144CT	20E144CP	20E144CB	20E144CS
11/16"	-	16	4-1/32"	1-13/16"	4	H3	20E144FT	20E144FP	20E144FB	20E144FS
3/4"	10	-	4-1/4"	2"	4	H3	20E148CT	20E148CP	20E148CB	20E148CS
3/4"	-	16	4-1/4"	2"	4	H3	20E148FT	20E148FP	20E148FB	20E148FS
7/8"	9	-	4-11/16"	2-7/32"	4	H4	20E156CT	20E156CP	20E156CB	20E156CS
7/8"	-	14	4-11/16"	2-7/32"	4	H4	20E156FT	20E156FP	20E156FB	20E156FS
1"	8	-	5-1/8"	2-1/2"	4	H4	20E164CT	20E164CP	20E164CB	20E164CS
1"	-	12	5-1/8"	2-1/2"	4	H4	20E164FT	20E164FP	20E164FB	20E164FS
1"	-	14	5-1/8"	2-1/2"	4	H4	20E164ST	20E164SP	20E164SB	20E164SS
1-1/8"	7	-	5-7/16"	2-9/16"	4	H4	20E208CT	20E208CP	20E208CB	20E208CS
1-1/8"	-	12	5-7/16"	2-9/16"	4	H4	20E208FT	20E208FP	20E208FB	20E208FS
1-1/4"	7	-	5-3/4"	2-9/16"	6	H4	20E216CT	20E216CP	20E216CB	20E216CS
1-1/4"	-	12	5-3/4"	2-9/16"	6	H4	20E216FT	20E216FP	20E216FB	20E216FS
1-3/8"	6	-	6-1/16"	3"	4	H4	20E224CT	20E224CP	20E224CB	20E224CS
1-3/8"	-	12	6-1/16"	3"	6	H4	20E224FT	20E224FP	20E224FB	20E224FS
1-1/2"	6	-	6-3/8"	3"	4	H4	20E232CT	20E232CP	20E232CB	20E232CS
1-1/2"	-	12	6-3/8"	3"	6	H4	20E232FT	20E232FP	20E232FB	20E232FS

#0 thru 1/4" - 12 per pack, 5/16" thru 1/2" - 6 per pack, 9/16" thru 1" - 3 per pack, 1-1/8" and up - individually packaged



2800

High Speed Steel

**Taper, Plug & Bottoming / Through or Blind Hole
Metric / Bright**



2800

Size (mm)	Pitch Dia. (mm)	No. of Flutes	Dia. Limits	2800 Order No.			
				Taper	Plug	Bottoming	Sets
1.6	0.35	2	D3	28A016AT	28A016AP	28A016AB	28A016AS
1.8	0.35	2	D3	28A018AT	28A018AP	28A018AB	28A018AS
2	0.40	3	D3	28A020AT	28A020AP	28A020AB	28A020AS
2.2	0.45	3	D3	28A022AT	28A022AP	28A022AB	28A022AS
2.5	0.45	3	D3	28A025AT	28A025AP	28A025AB	28A025AS
3	0.50	3	D3	28A030AT	28A030AP	28A030AB	28A030AS
3.5	0.60	3	D4	28A035AT	28A035AP	28A035AB	28A035AS
4	0.70	4	D4	28A040AT	28A040AP	28A040AB	28A040AS
4.5	0.75	4	D4	28A045AT	28A045AP	28A045AB	28A045AS
5	0.80	4	D4	28A050AT	28A050AP	28A050AB	28A050AS
6	1.00	4	D5	28A060AT	28A060AP	28A060AB	28A060AS
6.3	1.00	4	D5	28A063AT	28A063AP	28A063AB	28A063AS
7	1.00	4	D5	28A070AT	28A070AP	28A070AB	28A070AS
8	1.00	4	D5	28A080BT	28A080BP	28A080BB	28A080BS
8	1.25	4	D5	28A080AT	28A080AP	28A080AB	28A080AS
10	1.25	4	D5	28A100BT	28A100BP	28A100BB	28A100BS
10	1.50	4	D5	28A100AT	28A100AP	28A100AB	28A100AS
12	1.25	4	D5	28A120CT	28A120CP	28A120CB	28A120CS
12	1.75	4	D6	28A120AT	28A120AP	28A120AB	28A120AS
14	1.50	4	D6	28A140BT	28A140BP	28A140BB	28A140BS
14	2.00	4	D7	28A140AT	28A140AP	28A140AB	28A140AS
16	1.50	4	D6	28A160BT	28A160BP	28A160BB	28A160BS
16	2.00	4	D7	28A160AT	28A160AP	28A160AB	28A160AS
18	1.50	4	D6	28A180DT	28A180DP	28A180DB	28A180DS
18	2.00	4	D6	28A180CT	28A180CP	28A180CB	28A180CS
18	2.50	4	D7	28A180AT	28A180AP	28A180AB	28A180AS
20	1.50	4	D6	28A200BT	28A200BP	28A200BB	28A200BS
20	2.50	4	D7	28A200AT	28A200AP	28A200AB	28A200AS
22	1.50	4	D6	28A220BT	28A220BP	28A220BB	28A220BS
22	2.50	4	D7	28A220AT	28A220AP	28A220AB	28A220AS
24	2.00	4	D7	28A240BT	28A240BP	28A240BB	28A240BS
24	3.00	4	D8	28A240AT	28A240AP	28A240AB	28A240AS
27	2.00	4	D7	28A270BT	28A270BP	28A270BB	28A270BS
27	3.00	4	D8	28A270AT	28A270AP	28A270AB	28A270AS
30	2.00	4	D7	28A300BT	28A300BP	28A300BB	28A300BS
30	3.50	4	D9	28A300AT	28A300AP	28A300AB	28A300AS
33	2.00	4	D7	28A330BT	28A330BP	28A330BB	28A330BS
33	3.50	4	D9	28A330AT	28A330AP	28A330AB	28A330AS
36	3.00	4	D8	28A360BT	28A360BP	28A360BB	28A360BS
36	4.00	4	D9	28A360AT	28A360AP	28A360AB	28A360AS
39	3.00	6	D8	28A390BT	28A390BP	28A390BB	28A390BS
39	4.00	6	D9	28A390AT	28A390AP	28A390AB	28A390AS

All sizes are individually packaged

2800E

High Speed Steel

**Taper, Plug & Bottoming / Through or Blind Hole
Metric / Bright**



2800E

Size (mm)	Pitch Dia. (mm)	No. of Flutes	2800E Order No.			
			Taper	Plug	Bottoming	Sets
1.5	0.35	2	28E015AT	28E015AP	28E015AB	28E015AS
1.6	0.35	2	28E016AT	28E016AP	28E016AB	28E016AS
1.8	0.35	2	28E018AT	28E018AP	28E018AB	28E018AS
2	0.40	3	28E020AT	28E020AP	28E020AB	28E020AS
2	0.45	3	28E020BT	28E020BP	28E020BB	28E020BS
2.2	0.45	3	28E022AT	28E022AP	28E022AB	28E022AS
2.3	0.40	3	28E023AT	28E023AP	28E023AB	28E023AS
2.5	0.45	3	28E025AT	28E025AP	28E025AB	28E025AS
2.6	0.45	3	28E026AT	28E026AP	28E026AB	28E026AS
3	0.50	3	28E030AT	28E030AP	28E030AB	28E030AS
3	0.60	3	28E030BT	28E030BP	28E030BB	28E030BS
3.5	0.60	3	28E035AT	28E035AP	28E035AB	28E035AS
4	0.50	4	28E040BT	28E040BP	28E040BB	28E040BS
4	0.70	4	28E040AT	28E040AP	28E040AB	28E040AS
4.5	0.75	4	28E045AT	28E045AP	28E045AB	28E045AS
5	0.50	4	28E050CT	28E050CP	28E050CB	28E050CS
5	0.80	4	28E050AT	28E050AP	28E050AB	28E050AS
5	0.90	4	28E050BT	28E050BP	28E050BB	28E050BS
5.5	0.90	4	28E055AT	28E055AP	28E055AB	28E055AS
6	0.75	4	28E060BT	28E060BP	28E060BB	28E060BS
6	1.00	4	28E060AT	28E060AP	28E060AB	28E060AS
6.3	1.00	4	28E063AT	28E063AP	28E063AB	28E063AS
7	1.00	4	28E070AT	28E070AP	28E070AB	28E070AS
8	1.00	4	28E080BT	28E080BP	28E080BB	28E080BS
8	1.25	4	28E080AT	28E080AP	28E080AB	28E080AS
10	1.00	4	28E100CT	28E100CP	28E100CB	28E100CS
10	1.25	4	28E100BT	28E100BP	28E100BB	28E100BS
10	1.50	4	28E100AT	28E100AP	28E100AB	28E100AS
11	1.50	4	28E110AT	28E110AP	28E110AB	28E110AS
12	1.25	4	28E120CT	28E120CP	28E120CB	28E120CS
12	1.50	4	28E120BT	28E120BP	28E120BB	28E120BS
12	1.75	4	28E120AT	28E120AP	28E120AB	28E120AS
14	1.25	4	28E140CT	28E140CP	28E140CB	28E140CS
14	1.50	4	28E140BT	28E140BP	28E140BB	28E140BS
14	2.00	4	28E140AT	28E140AP	28E140AB	28E140AS

Size (mm)	Pitch Dia. (mm)	No. of Flutes	2800E Order No.			
			Taper	Plug	Bottoming	Sets
16	1.50	4	28E160BT	28E160BP	28E160BB	28E160BS
16	2.00	4	28E160AT	28E160AP	28E160AB	28E160AS
18	1.00	4	28E180CT	28E180CP	28E180CB	28E180CS
18	1.50	4	28E180DT	28E180DP	28E180DB	28E180DS
18	2.00	4	28E180BT	28E180BP	28E180BB	28E180BS
18	2.50	4	28E180AT	28E180AP	28E180AB	28E180AS
20	1.00	4	28E200CT	28E200CP	28E200CB	28E200CS
20	1.50	4	28E200BT	28E200BP	28E200BB	28E200BS
20	2.00	4	28E200DT	28E200DP	28E200DB	28E200DS
20	2.50	4	28E200AT	28E200AP	28E200AB	28E200AS
22	1.50	4	28E220BT	28E220BP	28E220BB	28E220BS
22	2.50	4	28E220AT	28E220AP	28E220AB	28E220AS
24	1.50	4	28E240CT	28E240CP	28E240CB	28E240CS
24	2.00	4	28E240BT	28E240BP	28E240BB	28E240BS
24	3.00	4	28E240AT	28E240AP	28E240AB	28E240AS
27	2.00	4	28E270BT	28E270BP	28E270BB	28E270BS
27	3.00	4	28E270AT	28E270AP	28E270AB	28E270AS
30	1.50	4	28E300CT	28E300CP	28E300CB	28E300CS
30	2.00	4	28E300BT	28E300BP	28E300BB	28E300BS
30	3.50	4	28E300AT	28E300AP	28E300AB	28E300AS
32	2.00	4	28E320AT	28E320AP	28E320AB	28E320AS
33	2.00	4	28E330BT	28E330BP	28E330BB	28E330BS
33	3.50	4	28E330AT	28E330AP	28E330AB	28E330AS
36	3.00	4	28E360BT	28E360BP	28E360BB	28E360BS
36	4.00	4	28E360AT	28E360AP	28E360AB	28E360AS
39	3.00	6	28E390BT	28E390BP	28E390BB	28E390BS
39	4.00	6	28E390AT	28E390AP	28E390AB	28E390AS
42	1.50	6	28E420BT	28E420BP	28E420BB	28E420BS
42	4.50	6	28E420AT	28E420AP	28E420AB	28E420AS
45	1.50	6	28E450BT	28E450BP	28E450BB	28E450BS
45	4.50	6	28E450AT	28E450AP	28E450AB	28E450AS
48	1.50	6	28E480BT	28E480BP	28E480BB	28E480BS
48	5.00	6	28E480AT	28E480AP	28E480AB	28E480AS
52	1.50	6	28E520BT	28E520BP	28E520BB	28E520BS
52	5.00	6	28E520AT	28E520AP	28E520AB	28E520AS

1.6 mm thru 6.3 mm - 12 per pack, 7 mm thru 12 mm - 6 per pack, 14 mm thru 27 mm - 3 per pack, 30 mm and up - individually package



Hand Taps

Straight Flute "Hand Taps" are the most popular and versatile style of taps in general machine tapping operations. They are for general use in production tapping or hand operations in a wide range of application material groups.

- ▷ *Taper – 7-10 pitch chamfer length. Starts the thread square with the workpiece*
- ▷ *Plug – 3-5 pitch chamfer length. Generally used in through holes*
- ▷ *Bottoming – 1-2 pitch chamfer length. Generates the thread to the bottom*
- ▷ *Sets – Contains 1 each of Taper, Plug, and Bottoming*
- ▷ *Black oxide surface treatment reduces wear and chip welding in abrasive materials*

2000N

High Speed Steel

**Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw/ Black Oxide**



2000N

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000N Order No.			
							Taper	Plug	Bottoming	Sets
0	-	80	1-11/16"	3/8"	2	H1	20N000FT	20N000FP	20N000FB	20N000FS
1	64	-	1-11/16"	3/8"	2	H1	20N001CT	20N001CP	20N001CB	20N001CS
1	-	72	1-11/16"	3/8"	2	H1	20N001FT	20N001FP	20N001FB	20N001FS
2	56	-	1-3/4"	7/16"	3	H2	20N002CT	20N002CP	20N002CB	20N002CS
2	-	64	1-3/4"	7/16"	3	H2	20N002FT	20N002FP	20N002FB	20N002FS
3	48	-	1-13/16"	1/2"	3	H2	20N003CT	20N003CP	20N003CB	20N003CS
3	-	56	1-13/16"	1/2"	3	H2	20N003FT	20N003FP	20N003FB	20N003FS
4	40	-	1-7/8"	9/16"	3	H2	20N004CT	20N004CP	20N004CB	20N004CS
4	-	36	1-7/8"	9/16"	3	H2	20N004ST	20N004SP	20N004SB	20N004SS
4	-	48	1-7/8"	9/16"	3	H2	20N004FT	20N004FP	20N004FB	20N004FS
5	40	-	1-15/16"	5/8"	3	H2	20N005CT	20N005CP	20N005CB	20N005CS
5	-	44	1-15/16"	5/8"	3	H2	20N005FT	20N005FP	20N005FB	20N005FS
6	32	-	2"	11/16"	3	H3	20N006CT	20N006CP	20N006CB	20N006CS
6	-	40	2"	11/16"	3	H2	20N006FT	20N006FP	20N006FB	20N006FS
8	32	-	2-1/8"	3/4"	4	H3	20N008CT	20N008CP	20N008CB	20N008CS
8	-	36	2-1/8"	3/4"	4	H2	20N008FT	20N008FP	20N008FB	20N008FS
10	24	-	2-3/8"	7/8"	4	H3	20N010CT	20N010CP	20N010CB	20N010CS
10	-	32	2-3/8"	7/8"	4	H3	20N010FT	20N010FP	20N010FB	20N010FS
12	24	-	2-3/8"	15/16"	4	H3	20N012CT	20N012CP	20N012CB	20N012CS
12	-	28	2-3/8"	15/16"	4	H3	20N012FT	20N012FP	20N012FB	20N012FS

All sizes are individually packaged



2000N

High Speed Steel

Taper, Plug & Bottoming / Through or Blind Hole Fractional / Black Oxide



2000N

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000N Order No.			
							Taper	Plug	Bottoming	Sets
1/4"	20	-	2-1/2"	1"	4	H3	20N116CT	20N116CP	20N116CB	20N116CS
1/4"	-	28	2-1/2"	1"	4	H3	20N116FT	20N116FP	20N116FB	20N116FS
5/16"	18	-	2-23/32"	1-1/8"	4	H3	20N120CT	20N120CP	20N120CB	20N120CS
5/16"	-	24	2-23/32"	1-1/8"	4	H3	20N120FT	20N120FP	20N120FB	20N120FS
3/8"	16	-	2-15/16"	1-1/4"	4	H3	20N124CT	20N124CP	20N124CB	20N124CS
3/8"	-	24	2-15/16"	1-1/4"	4	H3	20N124FT	20N124FP	20N124FB	20N124FS
7/16"	14	-	3-5/32"	1-7/16"	4	H3	20N128CT	20N128CP	20N128CB	20N128CS
7/16"	-	20	3-5/32"	1-7/16"	4	H3	20N128FT	20N128FP	20N128FB	20N128FS
1/2"	13	-	3-3/8"	1-21/32"	4	H3	20N132CT	20N132CP	20N132CB	20N132CS
1/2"	-	20	3-3/8"	1-21/32"	4	H3	20N132FT	20N132FP	20N132FB	20N132FS
9/16"	12	-	3-19/32"	1-21/32"	4	H3	20N136CT	20N136CP	20N136CB	20N136CS
9/16"	-	18	3-19/32"	1-21/32"	4	H3	20N136FT	20N136FP	20N136FB	20N136FS
5/8"	11	-	3-13/16"	1-13/16"	4	H3	20N140CT	20N140CP	20N140CB	20N140CS
5/8"	-	18	3-13/16"	1-13/16"	4	H3	20N140FT	20N140FP	20N140FB	20N140FS
11/16"	11	-	4-1/32"	1-13/16"	4	H3	20N144CT	20N144CP	20N144CB	20N144CS
11/16"	-	16	4-1/32"	1-13/16"	4	H3	20N144FT	20N144FP	20N144FB	20N144FS
3/4"	10	-	4-1/4"	2"	4	H3	20N148CT	20N148CP	20N148CB	20N148CS
3/4"	-	16	4-1/4"	2"	4	H3	20N148FT	20N148FP	20N148FB	20N148FS
7/8"	9	-	4-11/16"	2-7/32"	4	H4	20N156CT	20N156CP	20N156CB	20N156CS
7/8"	-	14	4-11/16"	2-7/32"	4	H4	20N156FT	20N156FP	20N156FB	20N156FS
1"	8	-	5-1/8"	2-1/2"	4	H4	20N164CT	20N164CP	20N164CB	20N164CS
1"	-	12	5-1/8"	2-1/2"	4	H4	20N164FT	20N164FP	20N164FB	20N164FS
1"	-	14	5-1/8"	2-1/2"	4	H4	20N164ST	20N164SP	20N164SB	20N164SS
1-1/8"	7	-	5-7/16"	2-9/16"	4	H4	20N208CT	20N208CP	20N208CB	20N208CS
1-1/8"	-	12	5-7/16"	2-9/16"	4	H4	20N208FT	20N208FP	20N208FB	20N208FS
1-1/4"	7	-	5-3/4"	2-9/16"	4	H4	20N216CT	20N216CP	20N216CB	20N216CS
1-1/4"	-	12	5-3/4"	2-9/16"	6	H4	20N216FT	20N216FP	20N216FB	20N216FS
1-3/8"	6	-	6-1/16"	3"	4	H4	20N224CT	20N224CP	20N224CB	20N224CS
1-3/8"	-	12	6-1/16"	3"	6	H4	20N224FT	20N224FP	20N224FB	20N224FS
1-1/2"	6	-	6-3/8"	3"	4	H4	20N232CT	20N232CP	20N232CB	20N232CS
1-1/2"	-	12	6-3/8"	3"	6	H4	20N232FT	20N232FP	20N232FB	20N232FS

All sizes are individually packaged

Hand Taps

Carbon Steel Taps are used to rethread damaged or jammed threads, or to thread mild steels. They can be used for either through or blind holes.

- ▷ *Taper – 7-10 pitch chamfer length. Starts the thread square with the workpiece*
- ▷ *Plug – 3-5 pitch chamfer length. Generally used in through holes*
- ▷ *Bottoming – 1-2 pitch chamfer length. Generates the thread to the bottom*

2000C

Carbon

**Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw & Fractional / Bright**



2000C

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	2000C Order No.		
						Taper	Plug	Bottoming
0	–	80	1-5/8"	5/16"	2	20C000FT	20C000FP	20C000FB
1	64	–	1-11/16"	3/8"	2	20C001CT	20C001CP	20C001CB
1	–	72	1-11/16"	3/8"	2	20C001FT	20C001FP	20C001FB
2	56	–	1-3/4"	7/16"	3	20C002CT	20C002CP	20C002CB
2	–	64	1-3/4"	7/16"	3	20C002FT	20C002FP	20C002FB
3	48	–	1-13/16"	1/2"	3	20C003CT	20C003CP	20C003CB
3	–	56	1-13/16"	1/2"	3	20C003FT	20C003FP	20C003FB
4	36	–	1-7/8"	9/16"	3	20C004AT	20C004AP	20C004AB
4	–	40	1-7/8"	9/16"	3	20C004CT	20C004CP	20C004CB
4	–	48	1-7/8"	9/16"	3	20C004FT	20C004FP	20C004FB
5	40	–	1-15/16"	5/8"	3	20C005CT	20C005CP	20C005CB
5	–	44	1-15/16"	5/8"	3	20C005FT	20C005FP	20C005FB
6	32	–	2"	11/16"	3	20C006CT	20C006CP	20C006CB
6	–	40	2"	11/16"	3	20C006FT	20C006FP	20C006FB
8	32	–	2-1/8"	3/4"	4	20C008CT	20C008CP	20C008CB
8	–	36	2-1/8"	3/4"	4	20C008FT	20C008FP	20C008FB
10	24	–	2-3/8"	7/8"	4	20C010CT	20C010CP	20C010CB
10	–	32	2-3/8"	7/8"	4	20C010FT	20C010FP	20C010FB
12	24	–	2-3/8"	15/16"	4	20C012CT	20C012CP	20C012CB
12	–	28	2-3/8"	15/16"	4	20C012FT	20C012FP	20C012FB
1/4"	20	–	2-1/2"	1"	4	20C116CT	20C116CP	20C116CB
1/4"	–	28	2-1/2"	1"	4	20C116FT	20C116FP	20C116FB
5/16"	18	–	2-23/32"	1-1/8"	4	20C120CT	20C120CP	20C120CB
5/16"	–	24	2-23/32"	1-1/8"	4	20C120FT	20C120FP	20C120FB
3/8"	16	–	2-15/16"	1-1/4"	4	20C124CT	20C124CP	20C124CB
3/8"	–	24	2-15/16"	1-1/4"	4	20C124FT	20C124FP	20C124FB

#0 thru 1/4" - 12 per pack, 5/16" thru 1/2" - 6 per pack, 9/16" thru 1" - 3 per pack, 1-1/8" and up - individually packaged

2000C

Carbon

Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw, Fractional & Metric / Bright



2000C

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	2000C Order No.		
						Taper	Plug	Bottoming
7/16"	14	-	3-5/32"	1-7/16"	4	20C128CT	20C128CP	20C128CB
7/16"	-	20	3-5/32"	1-7/16"	4	20C128FT	20C128FP	20C128FB
1/2"	13	-	3-3/8"	1-21/32"	4	20C132CT	20C132CP	20C132CB
1/2"	-	20	3-3/8"	1-21/32"	4	20C132FT	20C132FP	20C132FB
9/16"	12	-	3-19/32"	1-21/32"	4	20C136CT	20C136CP	20C136CB
9/16"	-	18	3-19/32"	1-21/32"	4	20C136FT	20C136FP	20C136FB
5/8"	11	-	3-13/16"	1-13/16"	4	20C140CT	20C140CP	20C140CB
5/8"	-	18	3-13/16"	1-13/16"	4	20C140FT	20C140FP	20C140FB
3/4"	10	-	4-1/4"	2"	4	20C148CT	20C148CP	20C148CB
3/4"	-	16	4-1/4"	2"	4	20C148FT	20C148FP	20C148FB
7/8"	9	-	4-11/16"	2-7/32"	4	20C156CT	20C156CP	20C156CB
7/8"	-	14	4-11/16"	2-7/32"	4	20C156FT	20C156FP	20C156FB
1"	8	-	5-1/8"	2-1/2"	4	20C164CT	20C164CP	20C164CB
1"	-	12	5-1/8"	2-1/2"	4	20C164FT	20C164FP	20C164FB
1-1/8"	7	-	5-7/16"	2-9/16"	4	20C208CT	20C208CP	20C208CB
1-1/8"	-	12	5-7/16"	2-9/16"	4	20C208FT	20C208FP	20C208FB
1-1/4"	7	-	5-3/4"	2-9/16"	4	20C216CT	20C216CP	20C216CB
1-1/4"	-	12	5-3/4"	2-9/16"	6	20C216FT	20C216FP	20C216FB
1-3/8"	6	-	6-1/16"	3"	6	20C224CT	20C224CP	20C224CB
1-3/8"	-	12	6-1/16"	3"	6	20C224FT	20C224FP	20C224FB
1-1/2"	6	-	6-3/8"	3"	6	20C232CT	20C232CP	20C232CB
1-1/2"	-	12	6-3/8"	3"	6	20C232FT	20C232FP	20C232FB
Size (mm)	Pitch (mm)		Overall Length	Length of Thread	No. of Flutes	Taper	Plug	Bottoming
4	0.70	-	2-1/4"	5/16"	4	20C040AT	20C040AP	20C040AB
5	0.80	-	2-1/2"	3/8"	4	20C050AT	20C050AP	20C050AB
6	1.00	-	2-1/2"	3/8"	4	20C060AT	20C060AP	20C060AB
8	1.00	-	2-3/4"	7/16"	4	20C080AT	20C080AP	20C080AB
8	1.25	-	2-3/4"	7/16"	4	20C080BT	20C080BP	20C080BB
10	1.00	-	3"	1/2"	4	20C100AT	20C100AP	20C100AB
10	1.25	-	3"	1/2"	4	20C100BT	20C100BP	20C100BB
10	1.50	-	3"	9/16"	4	20C100CT	20C100CP	20C100CB
12	1.50	-	3-1/4"	9/16"	4	20C120AT	20C120AP	20C120AB
12	1.75	-	3-1/4"	9/16"	4	20C120BT	20C120BP	20C120BB
14	2.00	-	3-5/8"	5/8"	4	20C140AT	20C140AP	20C140AB
16	2.00	-	3-3/4"	11/16"	4	20C160AT	20C160AP	20C160AB

4 mm thru 6 mm - 12 per pack , 8 mm thru 12 mm - 6 per pack, 13 mm and up - individually packaged



Spiral Point Taps



The angular flutes at the front end of these taps propel the chips ahead of the tap. This reduces loading and clogging in the flutes. Spiral Point taps are ideal for production tapping thru holes. Sometimes referred to as "Gun Taps", spiral point taps "shoot" the chips ahead of the tap.

- ▷ *Spiral point taps eject chips ahead of the tap*
- ▷ *Bright finish for increased lubricity*
- ▷ *Black oxide surface treatment for longer life*
- ▷ *Reduced loading and clogging in flutes*

2100N

High Speed Steel

Plug / Through Hole

Machine Screw & Fractional / Black Oxide



2100N

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100N Order No. Plug
0	-	80	1-5/8"	5/16"	2	H1	21N000FP
1	64	-	1-11/16"	3/8"	2	H1	21N001CP
1	-	72	1-11/16"	3/8"	2	H1	21N001FP
2	56	-	1-3/4"	7/16"	2	H2	21N002CP
2	-	64	1-3/4"	7/16"	2	H2	21N002FP
3	48	-	1-13/16"	1/2"	2	H2	21N003CP
3	-	56	1-13/16"	1/2"	2	H2	21N003FP
4	40	-	1-7/8"	9/16"	2	H2	21N004CP
4	-	48	1-7/8"	9/16"	2	H2	21N004FP
4	-	36	1-7/8"	9/16"	2	H2	21N004SP
5	40	-	1-15/16"	5/8"	2	H2	21N005CP
5	-	44	1-15/16"	5/8"	2	H2	21N005FP
6	32	-	2"	11/16"	2	H3	21N006CP
6	-	40	2"	11/16"	2	H2	21N006FP
8	32	-	2-1/8"	3/4"	2	H3	21N008CP
8	-	36	2-1/8"	3/4"	2	H2	21N008FP
10	24	-	2-3/8"	7/8"	2	H3	21N010CP
10	-	32	2-3/8"	7/8"	2	H3	21N010FP
12	24	-	2-3/8"	15/16"	2	H3	21N012CP
12	-	28	2-3/8"	15/16"	2	H3	21N012FP

2100N

High Speed Steel

Plug / Through Hole

Fractional / Black Oxide

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100N Order No. Plug
1/4"	20	-	2-1/2"	1"	2	H3	21N116CP
1/4"	-	28	2-1/2"	1"	2	H3	21N116FP
5/16"	18	-	2-23/32"	1-1/8"	2	H3	21N120CP
5/16"	-	24	2-23/32"	1-1/8"	2	H3	21N120FP
3/8"	16	-	2-15/16"	1-1/4"	3	H3	21N124CP
3/8"	-	24	2-15/16"	1-1/4"	3	H3	21N124FP
7/16"	14	-	3-5/32"	1-7/16"	3	H3	21N128CP
7/16"	-	20	3-5/32"	1-7/16"	3	H3	21N128FP
1/2"	13	-	3-3/8"	1-21/32"	3	H3	21N132CP
1/2"	-	20	3-3/8"	1-21/32"	3	H3	21N132FP
9/16"	12	-	3-19/32"	1-21/32"	3	H3	21N136CP
9/16"	-	18	3-19/32"	1-21/32"	3	H3	21N136FP
5/8"	11	-	3-13/16"	1-13/16"	3	H3	21N140CP
5/8"	-	18	3-13/16"	1-13/16"	3	H3	21N140FP
3/4"	10	-	4-1/4"	2"	3	H3	21N148CP
3/4"	-	16	4-1/4"	2"	3	H3	21N148FP

All sizes are individually packaged

2850

High Speed Steel

Plug / Through Hole

Metric / Bright



2850

Size (mm)	Pitch Dia. (mm)	No. of Flutes	Pitch Dia. Limits	2850 Order No. Plug
8.0	1.25	2	D5	285A080A
8.0	1.00	2	D5	285A080B
10	1.50	3	D6	285A100A
10	1.25	3	D5	285A100B
12	1.75	3	D6	285A120A
12	1.25	3	D5	285A120C
14	2.00	3	D7	285A140A
14	1.50	3	D6	285A140B
16	2.00	3	D7	285A160A
16	1.50	3	D6	285A160B
18	2.50	4	D7	285A180A
20	2.50	4	D7	285A200A
20	1.50	4	D6	285A200B

Size (mm)	Pitch Dia. (mm)	No. of Flutes	Pitch Dia. Limits	2850 Order No. Plug
8.0	1.25	2	D5	285A080A
8.0	1.00	2	D5	285A080B
10	1.50	3	D6	285A100A
10	1.25	3	D5	285A100B
12	1.75	3	D6	285A120A
12	1.25	3	D5	285A120C
14	2.00	3	D7	285A140A
14	1.50	3	D6	285A140B
16	2.00	3	D7	285A160A
16	1.50	3	D6	285A160B
18	2.50	4	D7	285A180A
20	2.50	4	D7	285A200A
20	1.50	4	D6	285A200B



2100

High Speed Steel
Plug / Through Hole
Machine Screw / Bright



2100

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100 Order No. Plug
0	-	80	1-5/8"	5/16"	2	H1	21A000FP
1	64	-	1-11/16"	3/8"	2	H1	21A001CP
1	-	72	1-11/16"	3/8"	2	H1	21A001FP
2	56	-	1-3/4"	7/16"	2	H2	21A002CP
2	-	64	1-3/4"	7/16"	2	H2	21A002FP
3	48	-	1-13/16"	1/2"	2	H2	21A003CP
3	-	56	1-13/16"	1/2"	2	H2	21A003FP
4	40	-	1-7/8"	9/16"	2	H2	21A004CP
4	-	48	1-7/8"	9/16"	2	H2	21A004FP
4	-	36	1-7/8"	9/16"	2	H2	21A004SP
5	40	-	1-15/16"	5/8"	2	H2	21A005CP
5	-	44	1-15/16"	5/8"	2	H2	21A005FP
6	32	-	2"	11/16"	2	H3	21A006CP
6	-	40	2"	11/16"	2	H2	21A006FP
8	32	-	2-1/8"	3/4"	2	H3	21A008CP
8	-	36	2-1/8"	3/4"	2	H2	21A008FP
10	24	-	2-3/8"	7/8"	2	H3	21A010CP
10	-	32	2-3/8"	7/8"	2	H3	21A010FP
12	24	-	2-3/8"	15/16"	2	H3	21A012CP
12	-	28	2-3/8"	15/16"	2	H3	21A012FP

2100

High Speed Steel
Plug / Through Hole
Fractional / Bright

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100 Order No. Plug
1/4"	20	-	2-1/2"	1"	2	H3	21A116CP
1/4"	-	28	2-1/2"	1"	2	H3	21A116FP
5/16"	18	-	2-23/32"	1-1/8"	2	H3	21A120CP
5/16"	-	24	2-23/32"	1-1/8"	2	H3	21A120FP
3/8"	16	-	2-15/16"	1-1/4"	3	H3	21A124CP
3/8"	-	24	2-15/16"	1-1/4"	3	H3	21A124FP
7/16"	14	-	3-5/32"	1-7/16"	3	H3	21A128CP
7/16"	-	20	3-5/32"	1-7/16"	3	H3	21A128FP
1/2"	13	-	3-3/8"	1-21/32"	3	H3	21A132CP
1/2"	-	20	3-3/8"	1-21/32"	3	H3	21A132FP
9/16"	12	-	3-19/32"	1-21/32"	3	H3	21A136CP
9/16"	-	18	3-19/32"	1-21/32"	3	H3	21A136FP
5/8"	11	-	3-13/16"	1-13/16"	3	H3	21A140CP
5/8"	-	18	3-13/16"	1-13/16"	3	H3	21A140FP
3/4"	10	-	4-1/4"	2"	3	H3	21A148CP
3/4"	-	16	4-1/4"	2"	3	H3	21A148FP

All sizes are individually packaged

2100E

High Speed Steel
Plug / Through Hole
Machine Screw / Bright



2100E

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100E Order No. Plug
0	-	80	1-5/8"	5/16"	2	H1	21E000FP
1	64	-	1-11/16"	3/8"	2	H1	21E001CP
1	-	72	1-11/16"	3/8"	2	H1	21E001FP
2	56	-	1-3/4"	7/16"	2	H2	21E002CP
2	-	64	1-3/4"	7/16"	2	H2	21E002FP
3	48	-	1-13/16"	1/2"	2	H2	21E003CP
3	-	56	1-13/16"	1/2"	2	H2	21E003FP
4	40	-	1-7/8"	9/16"	2	H2	21E004CP
4	-	36	1-7/8"	9/16"	2	H2	21E004SP
4	-	48	1-7/8"	9/16"	2	H2	21E004FP
5	40	-	1-15/16"	5/8"	2	H2	21E005CP
5	-	44	1-15/16"	5/8"	2	H2	21E005FP
6	32	-	2"	11/16"	2	H3	21E006CP
6	-	40	2"	11/16"	2	H2	21E006FP
8	32	-	2-1/8"	3/4"	2	H3	21E008CP
8	-	36	2-1/8"	3/4"	2	H2	21E008FP
10	24	-	2-3/8"	7/8"	2	H3	21E010CP
10	-	32	2-3/8"	7/8"	2	H3	21E010FP
12	24	-	2-3/8"	15/16"	2	H3	21E012CP
12	-	28	2-3/8"	15/16"	2	H3	21E012FP

2100E

High Speed Steel
Plug / Through Hole
Fractional / Bright

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2100E Order No. Plug
1/4"	20	-	2-1/2"	1"	2	H3	21E116CP
1/4"	-	28	2-1/2"	1"	2	H3	21E116FP
5/16"	18	-	2-23/32"	1-1/8"	2	H3	21E120CP
5/16"	-	24	2-23/32"	1-1/8"	2	H3	21E120FP
3/8"	16	-	2-15/16"	1-1/4"	3	H3	21E124CP
3/8"	-	24	2-15/16"	1-1/4"	3	H3	21E124FP
7/16"	14	-	3-5/32"	1-7/16"	3	H3	21E128CP
7/16"	-	20	3-5/32"	1-7/16"	3	H3	21E128FP
1/2"	13	-	3-3/8"	1-21/32"	3	H3	21E132CP
1/2"	-	20	3-3/8"	1-21/32"	3	H3	21E132FP
9/16"	12	-	3-19/32"	1-21/32"	3	H3	21E136CP
9/16"	-	18	3-19/32"	1-21/32"	3	H3	21E136FP
5/8"	11	-	3-13/16"	1-13/16"	3	H3	21E140CP
5/8"	-	18	3-13/16"	1-13/16"	3	H3	21E140FP
3/4"	10	-	4-1/4"	2"	3	H3	21E148CP
3/4"	-	16	4-1/4"	2"	3	H3	21E148FP
7/8"	9	-	4-11/16"	2-7/32"	3	H4	21E156CP
7/8"	-	14	4-11/16"	2-7/32"	3	H4	21E156FP
1"	8	-	5-1/8"	2-1/2"	3	H4	21E164CP
1"	-	12	5-1/8"	2-1/2"	3	H4	21E164FP
1"	-	14	5-1/8"	2-1/2"	3	H4	21E164SP

#0 thru 1/4" - 12 per pack, 5/16" thru 1/2" - 6 per pack, 9/16" thru 1" - 3 per pack

Oversize Spiral Point Taps

Oversize taps are similar in design to a standard tap, but with a pitch diameter that is usually 0.003" to 0.005" larger than standard. Oversize taps are used primarily where a part will be plated or treated after tapping. Available in H7 or H11 limits, in hand taps (2003 and 2005 series) or spiral point (2103 and 2105 series).

▷ All sizes are individually packaged

2103

High Speed Steel

Machine Screw & Fractional / Bright
.003" Oversize / Plug / Through Hole



2103

Size	NC	NF	No. of Flutes	2103 Order No.	
				Plug	Bottoming
8	32	–	2	213A008CP	213A008CB
10	24	–	2	213A010CP	213A010CB
10	–	32	2	213A010FP	213A010FB

2105

High Speed Steel

Machine Screw & Fractional / Bright
.005" Oversize / Plug / Through Hole



2105

Size	NC	NF	No. of Flutes	2105 Order No.	
				Plug	Bottoming
5/16"	18	–	2	215A120CP	215A120CB
3/8"	16	–	3	215A124CP	215A124CB
7/16"	14	–	3	215A128CP	215A128CB
1/2"	13	–	3	215A132CP	215A132CB
5/8"	11	–	3	215A140CP	215A140CB

Oversized Hand Taps

Oversize taps are similar in design to a standard tap, but with a pitch diameter that is usually 0.003" to 0.005" larger than standard. Oversize taps are used primarily where a part will be plated or treated after tapping. Available in H7 or H11 limits, in hand taps (2003 and 2005 series) or spiral point (2103 and 2105 series).

▷ All sizes are individually packaged

2003

High Speed Steel

.003" Oversize / Plug & Bottoming
Through or Blind Hole
Machine Screw & Fractional / Bright



2003

Size	NC	Pitch Dia. Limits	No. of Flutes	2003 Order No.	
				Plug	Bottoming
8	32	H7	3	203A008CP	203A008CB
10	24	H7	4	203A010CP	203A010CB
10	32	H7	4	203A010FP	203A010FB

2005

High Speed Steel

.005" Oversize / Plug & Bottoming
Through or Blind Hole
Machine Screw & Fractional / Bright



2005

Size	NC	Pitch Dia. Limits	No. of Flutes	2005 Order No.	
				Plug	Bottoming
1/4"	20	H11	4	205A116CP	205A116CB
5/16"	18	H11	4	205A120CP	205A120CB
3/8"	16	H11	4	205A124CP	205A124CB
7/16"	14	H11	4	205A128CP	205A128CB
1/2"	13	H11	4	205A132CP	205A132CB
5/8"	11	H11	4	205A140CP	205A140CB



ANSI Production Taps



Produced with a reduced neck to allow for longer reach, improved coolant flow, and easier chip evacuation. Can be used in a wide range of material groups, including difficult to machine materials such as High Tensile Strength Steels and Stainless Steel.

- ▷ *Manufactured from M4 HSS, an extremely versatile high-speed steel with high carbon and vanadium contents for exceptional abrasion-resistance*
- ▷ *Offer higher heat resistance and red hardness over conventional High Speed Steel taps*
- ▷ *Can be used for production threading with both conventional or CNC equipment*
- ▷ *Black Oxide surface treatment provides improved lubricity and helps prevent the formation of built-up edge*
- ▷ *Manufactured to industry recognized USCTI 302A Standards*
- ▷ *All sizes are individually packaged*

2150N

M4 Premium HSS

Spiral Point / Plug Chamfer / Through Hole

Machine Screw, Fractional & Metric / Black Oxide



2150N

	Size	NC	NF	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2150N Order No.
	Machine Screw & Fractional Sizes	6	32	–	2"	0.110"	2	H3	#36
8		32	–	2-1/8"	0.131"	3	H3	#29	215N008C
10		24	–	2-3/8"	0.152"	3	H3	#25	215N010C
10		–	32	2-3/8"	0.152"	3	H3	#21	215N010F
1/4"		20	–	2-1/2"	0.191"	3	H3	#7	215N116C
1/4"		–	28	2-1/2"	0.191"	3	H3	#3	215N116F
5/16"		18	–	2-23/32"	0.238"	3	H3	F	215N120C
5/16"		–	24	2-23/32"	0.238"	3	H3	I	215N120F
3/8"		16	–	2-15/16"	0.286"	3	H3	5/16"	215N124C
3/8"		–	24	2-15/16"	0.286"	3	H3	Q	215N124F
7/16"		14	–	3-5/32"	0.242"	3	H3	U	215N128C
7/16"		–	20	3-5/32"	0.242"	3	H3	W	215N128F
1/2"		13	–	3-3/8"	0.275"	3	H3	27/64"	215N132C
1/2"		–	20	3-3/8"	0.275"	3	H3	29/64"	215N132F
5/8"		11	–	3-13/16"	0.360"	3	H3	17/32"	215N140C
5/8"		–	18	3-13/16"	0.360"	3	H3	37/64"	215N140F
3/4"		10	–	4-1/4"	0.442"	3	H3	21/32"	215N148C
3/4"		–	16	4-1/4"	0.442"	3	H3	11/16"	215N148F

	Size	Pitch (mm)	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2150N Order No.
	Metric Sizes	M4	0.7	2-1/8"	0.131"	3	D4	#30
M5		0.8	2-3/8"	0.152"	3	D4	#19	215N050A
M6		1.0	2-1/2"	0.191"	3	D5	#9	215N060A
M8		1.25	2-23/32"	0.238"	3	D5	H	215N080A
M10		1.5	2-15/16"	0.286"	3	D6	Q	215N100A
M12		1.75	3-3/8"	0.275"	3	D6	Y	215N120A



2160N

M4 Premium HSS

High Spiral Flute / Bottoming Chamfer / Blind Hole
Machine Screw / Black Oxide



2160N

Machine Screw & Fractional Sizes	Size	NC	NF	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2160N Order No.
	6	32	-	2"	0.110"	3	H3	#36	216N006C
	8	32	-	2-1/8"	0.131"	3	H3	#29	216N008C
	10	24	-	2-3/8"	0.152"	3	H3	#25	216N010C
	10	-	32	2-3/8"	0.152"	3	H3	#21	216N010F
	1/4"	20	-	2-1/2"	0.191"	3	H3	#7	216N116C
	1/4"	-	28	2-1/2"	0.191"	3	H3	#3	216N116F
	5/16"	18	-	2-23/32"	0.238"	3	H3	F	216N120C
	5/16"	-	24	2-23/32"	0.238"	3	H3	I	216N120F
	3/8"	16	-	2-15/16"	0.286"	3	H3	5/16"	216N124C
	3/8"	-	24	2-15/16"	0.286"	3	H3	Q	216N124F
	7/16"	14	-	3-5/32"	0.242"	3	H3	U	216N128C
	7/16"	-	20	3-5/32"	0.242"	3	H3	W	216N128F
	1/2"	13	-	3-3/8"	0.275"	3	H3	27/64"	216N132C
	1/2"	-	20	3-3/8"	0.275"	3	H3	29/64"	216N132F

Metric Sizes	Size	Pitch (mm)	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2160N Order No.
	M4	0.7	2-1/8"	0.131"	3	D4	#30	216N040A
	M5	0.8	2-3/8"	0.152"	3	D4	#19	216N050A
	M6	1.0	2-1/2"	0.191"	3	D5	#9	216N060A
	M8	1.25	2.23/32"	0.238"	3	D5	H	216N080A
	M10	1.5	2.15/16"	0.286"	3	D6	Q	216N100A
	M12	1.75	3.3/8"	0.275"	3	D6	Y	216N120A



DIN/ANSI Production Taps



Manufactured to DIN/ANSI specifications, with DIN lengths to allow for longer reach and deeper threading in a single pass.

- ▷ *Manufactured from M4 HSS, an extremely versatile high-speed steel with high carbon and vanadium contents for exceptional abrasion-resistance*
- ▷ *Offer higher heat resistance and red hardness over conventional High Speed Steel taps*
- ▷ *TiCN (Titanium Carbo Nitride) coating*
 - *helps to reduce galling, microwelding, seizing and adhesive wear*
 - *allows for a smoother threading operation*
 - *helps to hold sharp edges and reduces the coefficient of friction*
- ▷ *All sizes are individually packaged*

2250N

M4 Premium HSS

Spiral Point / Plug Chamfer / Through Hole

Machine Screw, Fractional & Metric / TiCN Coated



2250N

	Size	NC	NF	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2250N Order No.
Machine Screw & Fractional Sizes	4	40	–	2.21"	0.110"	2	H2	#43	225N004C
	6	32	–	2.21"	0.110"	2	H3	#36	225N006C
	8	32	–	2.48"	0.131"	3	H3	#29	225N008C
	10	24	–	2.76"	0.152"	3	H3	#25	225N010C
	10	–	32	2.76"	0.152"	3	H3	#21	225N010F
	1/4"	20	–	3.15"	0.191"	3	H3	#7	225N116C
	1/4"	–	28	3.15"	0.191"	3	H3	#3	225N116F
	5/16"	18	–	3.54"	0.238"	3	H3	F	225N120C
	5/16"	–	24	3.54"	0.238"	3	H3	I	225N120F
	3/8"	16	–	3.94"	0.286"	3	H3	5/16"	225N124C
	3/8"	–	24	3.94"	0.286"	3	H3	Q	225N124F
	7/16"	14	–	3.94"	0.242"	3	H3	U	225N128C
	7/16"	–	20	3.94"	0.242"	3	H3	W	225N128F
	1/2"	13	–	4.33"	0.275"	3	H3	27/64"	225N132C
	1/2"	–	20	4.33"	0.275"	3	H3	29/64"	225N132F
	5/8"	11	–	4.33"	0.360"	3	H3	17/32"	225N140C
	5/8"	–	18	4.33"	0.360"	3	H3	37/64"	225N140F
	3/4"	10	–	4.92"	0.442"	3	H3	21/32"	225N148C
3/4"	–	16	4.92"	0.442"	3	H3	11/16"	225N148F	

	Size	Pitch (mm)	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2250N Order No.
Metric Sizes	M4	0.7	2.48"	0.131"	3	D4	#30	225N040A
	M5	0.8	2.76"	0.152"	3	D4	#19	225N050A
	M6	1.0	3.15"	0.191"	3	D5	#9	225N060A
	M8	1.25	3.54"	0.238"	3	D5	H	225N080A
	M10	1.5	3.94"	0.286"	3	D6	Q	225N100A
	M12	1.75	4.33"	0.275"	3	D6	Y	225N120A
	M16	2.0	4.33"	0.360"	3	D7	35/64"	225N160A



2260N

M4 Premium HSS

High Spiral Flute / Bottoming Chamfer / Blind Hole
Machine Screw, Fractional & Metric / TiCN Coated



2260N

	Size	NC	NF	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2260N Order No.
	Machine Screw & Fractional Sizes	4	40	-	2.21"	0.110"	3	H2	#43
6		32	-	2.21"	0.110"	3	H3	#36	226N006C
8		32	-	2.48"	0.131"	3	H3	#29	226N008C
10		24	-	2.76"	0.152"	3	H3	#25	226N010C
10		-	32	2.76"	0.152"	3	H3	#21	226N010F
1/4"		20	-	3.15"	0.191"	3	H3	#7	226N116C
1/4"		-	28	3.15"	0.191"	3	H3	#3	226N116F
5/16"		18	-	3.54"	0.238"	3	H3	F	226N120C
5/16"		-	24	3.54"	0.238"	3	H3	I	226N120F
3/8"		16	-	3.94"	0.286"	3	H3	5/16"	226N124C
3/8"		-	24	3.94"	0.286"	3	H3	Q	226N124F
7/16"		14	-	3.94"	0.242"	3	H3	U	226N128C
7/16"		-	20	3.94"	0.242"	3	H3	W	226N128F
1/2"		13	-	4.33"	0.275"	3	H3	27/64"	226N132C
1/2"		-	20	4.33"	0.275"	3	H3	29/64"	226N132F
5/8"		11	-	4.33"	0.360"	4	H3	17/32"	226N140C
5/8"		-	18	4.33"	0.360"	4	H3	37/64"	226N140F
3/4"		10	-	4.92"	0.442"	4	H3	21/32"	226N148C
3/4"		-	16	4.92"	0.442"	4	H3	11/16"	226N148F

	Size	Pitch (mm)	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (75%)	2260N Order No.
	Metric Sizes	M4	0.7	2.48"	0.131"	3	D4	#30
M5		0.8	2.76"	0.152"	3	D4	#19	226N050A
M6		1.0	3.15"	0.191"	3	D5	#9	226N060A
M8		1.25	3.54"	0.238"	3	D5	H	226N080A
M10		1.5	3.94"	0.286"	3	D6	Q	226N100A
M12		1.75	4.33"	0.275"	3	D6	Y	226N120A
M16		2.0	4.33"	0.360"	4	D7	35/64"	226N160A



Thread Formers



Thread forming taps "form" the thread in malleable materials without cutting, eliminating chips. This allows for increased speeds & feeds, and a cleaner threading environment.

- ▷ *Manufactured from M4 HSS, an extremely versatile high-speed steel with high carbon and vanadium contents for exceptional abrasion-resistance*
- ▷ *Offer higher heat resistance and red hardness over conventional High Speed Steel taps*
- ▷ *TiCN (Titanium Carbo Nitride) coating*
 - *helps to reduce galling, microwelding, seizing and adhesive wear*
 - *allows for a smoother threading operation*
 - *helps to hold sharp edges and reduces the coefficient of friction*
- ▷ *All sizes are individually packaged*

2270N

M4 Premium HSS

Fluteless / Bottoming Chamfer / Through or Blind Hole
Machine Screw, Fractional & Metric / TiCN Coated



Machine Screw & Fractional Sizes	Size	NC	NF	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (65%)	2270N Order No.
	4	40	–	2.21"	0.110"	0	H5	#39	227N004C
	6	32	–	2.21"	0.110"	0	H5	1/8"	227N006C
	8	32	–	2.48"	0.131"	0	H5	#25	227N008C
	10	24	–	2.76"	0.152"	0	H6	11/64"	227N010C
	10	–	32	2.76"	0.152"	0	H6	#16	227N010F
	1/4"	20	–	3.15"	0.191"	0	H6	#1	227N116C
	1/4"	–	28	3.15"	0.191"	0	H6	A	227N116F
	5/16"	18	–	3.54"	0.238"	0	H7	7.3 mm	227N120C
	5/16"	–	24	3.54"	0.238"	0	H7	M	227N120F
3/8"	16	–	3.94"	0.286"	0	H7	S	227N124C	
3/8"	–	24	3.94"	0.286"	0	H7	T	227N124F	

Metric Sizes	Size	Pitch (mm)	Overall Length	Square Size	No. of Flutes	Pitch Dia. Limits	Tap/Drill Size (65%)	2270N Order No.
	M4	0.7	2.48"	0.131"	0	D7	#27	227N040A
	M5	0.8	2.76"	0.152"	0	D8	#14	227N050A
	M6	1.0	3.15"	0.191"	0	D9	7/32"	227N060A
	M8	1.25	3.54"	0.238"	0	D10	M	227N080A
M10	1.5	3.94"	0.286"	0	D11	U	227N100A	

Multi-Application Spiral Point Taps



These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The Nitro® multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. Available in both spiral point and spiral flute designs, in fractional and metric sizes.

- ▷ *Spiral point taps eject chips ahead of the tap*
- ▷ *A good choice for CNC and machine tapping*
- ▷ *Bright finish for increased lubricity*
- ▷ *All sizes are individually packaged*

2100PS

High Speed Steel

Plug / Through Hole

Machine Screw & Fractional / Bright

2100PS

High Speed Steel

Plug / Through Hole

Metric / Bright



2100PS

Size	NC	NF	Number of Flutes	Pitch Dia. Limits	2100PS Order No.
4	40	–	2	H2	21PS004C
4	–	48	2	H2	21PS004F
5	40	–	3	H2	21PS005C
5	–	44	3	H2	21PS005F
6	32	–	3	H3	21PS006C
6	–	40	3	H2	21PS006F
8	32	–	3	H3	21PS008C
8	–	36	3	H2	21PS008F
10	24	–	3	H3	21PS010C
10	–	32	3	H3	21PS010F
12	24	–	3	H3	21PS012C
12	–	28	3	H3	21PS012F
1/4"	20	–	3	H3	21PS116C
1/4"	–	28	3	H3	21PS116F
5/16"	18	–	3	H3	21PS120C
5/16"	–	24	3	H5	21PS120F
3/8"	16	–	3	H3	21PS124C
3/8"	–	24	3	H3	21PS124F
7/16"	14	–	3	H3	21PS128C
7/16"	–	20	3	H3	21PS128F
1/2"	13	–	3	H5	21PS132C
1/2"	–	20	3	H5	21PS132F
9/16"	12	–	3	H5	21PS136C
9/16"	–	18	3	H5	21PS136F
5/8"	11	–	3	H5	21PS140C
5/8"	–	18	3	H5	21PS140F
3/4"	10	–	3	H5	21PS148C
3/4"	–	16	3	H5	21PS148F
7/8"	9	–	3	H6	21PS156C
7/8"	–	14	3	H6	21PS156F
1"	8	–	3	H6	21PS164C
1"	–	12	3	H6	21PS164F

Size	Pitch (mm)	Number of Flutes	Pitch Dia. Limits	2100PS Order No.
M3	0.5	3	D3	21PS030A
M3.5	0.6	3	D4	21PS035A
M4	0.7	3	D4	21PS040A
M5	0.8	3	D4	21PS050A
M6	1.0	3	D5	21PS060A
M7	1.0	3	D5	21PS070A
M8	1.25	3	D5	21PS080A
M8	1.0	3	D5	21PS080B
M10	1.5	3	D6	21PS100A
M12	1.75	3	D6	21PS120A
M12	1.25	3	D5	21PS120B
M14	2.0	3	D7	21PS140A
M14	1.5	3	D6	21PS140B
M16	2.0	3	D7	21PS160A
M16	1.5	3	D6	21PS160B
M18	2.5	3	D7	21PS180A
M18	1.5	3	D6	21PS180D
M20	2.5	3	D7	21PS200A
M20	1.5	3	D6	21PS200B
M22	2.5	3	D7	21PS220A
M22	1.5	3	D6	21PS220B
M24	3.0	3	D8	21PS240A



Multi-Application Spiral Flute Taps

These taps are designed for machine tapping in a wide range of material groups, including difficult to machine materials such as stainless steel. The Nitro® multi-application tap improves thread quality, and aids in chip evacuation, eliminating bird nesting. Available in both spiral point and spiral flute designs, in fractional and metric sizes.

- ▷ *Spiral flutes pull chips up out of the workpiece*
- ▷ *Ideal for tapping blind holes*
- ▷ *Bright finish for increased lubricity*
- ▷ *All sizes are individually packaged*

2000PF

High Speed Steel

Bottoming / Blind Hole
Machine Screw & Fractional / Bright

2000PF

High Speed Steel

Bottoming / Blind Hole
Metric / Bright



2000PF

Size	NC	NF	No. of Flutes	Pitch Dia. Limits	2000PF Order No.
4	40	—	2	H2	20PF004C
4	—	48	2	H2	20PF004F
6	32	—	3	H3	20PF006C
8	32	—	3	H3	20PF008C
10	24	—	3	H3	20PF010C
10	—	32	3	H3	20PF010F
12	24	—	3	H3	20PF012C
12	—	28	3	H3	20PF012F
1/4"	20	—	3	H3	20PF116C
1/4"	—	28	3	H3	20PF116F
5/16"	18	—	3	H3	20PF120C
5/16"	—	24	3	H5	20PF120F
3/8"	16	—	3	H3	20PF124C
3/8"	—	24	3	H3	20PF124F
7/16"	14	—	3	H3	20PF128C
7/16"	—	20	3	H3	20PF128F
1/2"	13	—	3	H5	20PF132C
1/2"	—	20	3	H5	20PF132F
9/16"	12	—	3	H5	20PF136C
9/16"	—	18	3	H5	20PF136F
5/8"	11	—	4	H5	20PF140C
5/8"	—	18	4	H5	20PF140F
3/4"	10	—	4	H5	20PF148C
3/4"	—	16	4	H5	20PF148F
7/8"	9	—	4	H6	20PF156C
7/8"	—	14	4	H6	20PF156F
1"	8	—	4	H6	20PF164C
1"	—	12	4	H6	20PF164F

Size	Pitch (mm)	No. of Flutes	Pitch Dia. Limits	2000PF Order No.
M3	0.5	3	D3	20PF030A
M3.5	0.6	3	D4	20PF035A
M4	0.7	3	D4	20PF040A
M5	0.8	3	D4	20PF050A
M6	1.0	3	D5	20PF060A
M7	1.0	3	D5	20PF070A
M8	1.25	3	D5	20PF080A
M8	1.0	3	D5	20PF080B
M10	1.5	3	D6	20PF100A
M12	1.75	3	D6	20PF120A
M12	1.25	3	D5	20PF120B
M14	2.0	3	D7	20PF140A
M14	1.5	3	D6	20PF140B
M16	2.0	3	D7	20PF160A
M16	1.5	3	D6	20PF160B
M18	2.5	4	D7	20PF180A
M18	1.5	4	D6	20PF180D
M20	2.5	4	D7	20PF200A
M20	1.5	4	D6	20PF200B
M22	2.5	4	D7	20PF220A
M22	1.5	4	D6	20PF220B
M24	3.0	4	D8	20PF240A



Multi-Application Spiral Flute Taps

Designed for precision tapping of the modern difficult to machine materials. Fast spiral flutes provide new efficiency in chip removal. These taps have continuous fast spiral flutes to lift and discharge chips from deep blind holes.

▷ All sizes are individually packaged

2000F

High Speed Steel

Plug & Bottoming / Blind Hole
Machine Screw & Fractional / Bright



2000F

Size	NC	NF	Length of Thread	No. of Flutes	2000F Order No.	
					Plug	Bottoming
3	48	-	1/2"	2	20F003CP	20F003CB
4	40	-	9/16"	2	20F004CP	20F004CB
4	-	48	9/16"	2	20F004FP	20F004FB
5	40	-	5/8"	2	20F005CP	20F005CB
5	-	44	5/8"	2	20F005FP	20F005FB
6	32	-	11/16"	2	20F006CP	20F006CB
6	-	40	11/16"	2	20F006FP	20F006FB
8	32	-	3/4"	3	20F008CP	20F008CB
8	-	36	3/4"	3	20F008FP	20F008FB
10	24	-	7/8"	3	20F010CP	20F010CB
10	-	32	7/8"	3	20F010FP	20F010FB
12	24	-	1"	3	20F012CP	20F012CB
12	-	28	1"	3	20F012FP	20F012FB
1/4"	20	-	1"	3	20F116CP	20F116CB
1/4"	-	28	1"	3	20F116FP	20F116FB
5/16"	18	-	1-1/8"	3	20F120CP	20F120CB
5/16"	-	24	1-1/8"	3	20F120FP	20F120FB
3/8"	16	-	1-5/16"	3	20F124CP	20F124CB
3/8"	-	24	1-5/16"	3	20F124FP	20F124FB
7/16"	14	-	1-7/16"	3	20F128CP	20F128CB
7/16"	-	20	1-7/16"	3	20F128FP	20F128FB
1/2"	13	-	1-21/32"	3	20F132CP	20F132CB
1/2"	-	20	1-21/32"	3	20F132FP	20F132FB
5/8"	11	-	1-13/16"	4	20F140CP	20F140CB
3/4"	10	-	2-1/16"	4	20F148CP	20F148CB

Thread Forming Taps

Thread forming taps "form" the thread rather than cut it, which allows the thread to be created without producing any chips. Thread forming taps can run at faster operating rates than standard cut taps, and generally have a longer tool life, sometimes up to 5x longer in some applications. Ideal in materials such as aluminum, brass, copper, low carbon steels, zinc, and 302-303 stainless steel.

- ▷ Thread forming does not produce any chips
- ▷ Thread forming taps have a longer tool life
- ▷ Formed threads are generally stronger than cut threads
- ▷ All sizes are individually packaged

2090

High Speed Steel

Plug & Bottoming / Through or Blind Hole
Machine Screw & Fractional / Bright



2090

Size	NC	NF	2090 Order No.	
			Plug	Bottoming
0	-	80	-	209A000FB
1	64	-	-	209A001CB
1	-	72	-	209A001FB
2	56	-	-	209A002CB
2	-	64	-	209A002FB
3	48	-	-	209A003CB
3	-	56	209A003FP	209A003FB
4	40	-	209A004CP	209A004CB
4	-	48	209A004FP	209A004FB
5	40	-	209A005CP	209A005CB
5	-	44	209A005FP	209A005FB
6	32	-	209A006CP	209A006CB
6	-	40	209A006FP	209A006FB
8	32	-	209A008CP	209A008CB
8	-	36	209A008FP	209A008FB
10	24	-	209A010CP	209A010CB
10	-	32	209A010FP	209A010FB
12	24	-	209A012CP	209A012CB
12	-	28	209A012FP	209A012FB
1/4"	20	-	209A116CP	209A116CB
1/4"	-	28	209A116FP	209A116FB
5/16"	18	-	209A120CP	209A120CB
5/16"	-	24	209A120FP	209A120FB
3/8"	16	-	209A124CP	209A124CB
3/8"	-	24	209A124FP	209A124FB
7/16"	14	-	209A128CP	209A128CB
7/16"	-	20	209A128FP	209A128FB
1/2"	13	-	209A132CP	209A132CB
1/2"	-	20	209A132FP	209A132FB
5/8"	11	-	209A140CP	209A140CB
5/8"	-	18	209A140FP	209A140FB
3/4"	10	-	209A148CP	209A148CB
3/4"	-	16	-	209A148FB

Taper Pipe Taps (NPT)

NPT taps are tapered to provide a tight seal and are used mainly with threaded pipes and pipe fittings. These taps are available in both HSS and carbon steel materials. A carbon tap is used to rethread damaged threads. These NPT taps have a bright finish to increase tool life and reduce chip loading in the flutes.

- ▷ *Bright finish for prolonged life*
- ▷ *Most commonly used to produce a tight sealing thread*
- ▷ *Available in high speed steel and carbon steel*
- ▷ *All sizes are individually packaged*

2900

High Speed Steel
Through or Blind Hole
Fractional / Bright



2900

Size	TPI	Overall Length	Length of Thread	No. of Flutes	2900 Order No.
1/16"	27	2-1/8"	11/16"	4	290A104
1/8"	27	2-1/8"	3/4"	4	290A108
1/4"	18	2-7/16"	1-1/16"	4	290A116
3/8"	18	2-9/16"	1-1/16"	4	290A124
1/2"	14	3-1/8"	1-3/8"	4	290A132
3/4"	14	3-1/4"	1-3/8"	5	290A148
1"	11-1/2	3-3/4"	1-3/4"	5	290A164
1-1/4"	11-1/2	4"	1-3/4"	5	290A216
1-1/2"	11-1/2	4-1/4"	1-3/4"	7	290A232
2"	11-1/2	4-1/4"	1-3/4"	7	290A264
2-1/2"	8	5-1/2"	2-9/16"	8	290A332
3"	8	6"	2-5/8"	8	290A364
3-1/2"	8	6-1/2"	2-11/16"	8	290A432
4"	8	6-3/4"	2-3/4"	8	290A464

2900E

High Speed Steel
Through or Blind Hole
Fractional / Bright



2900E

Size	TPI	Overall Length	Length of Thread	No. of Flutes	2900E Order No.
1/16"	27	2-1/8"	11/16"	4	290E104
1/8"	27	2-1/8"	3/4"	4	290E108
1/4"	18	2-7/16"	1-1/16"	4	290E116
3/8"	18	2-9/16"	1-1/16"	4	290E124
1/2"	14	3-1/8"	1-3/8"	4	290E132
3/4"	14	3-1/4"	1-3/8"	5	290E148
1"	11-1/2	3-3/4"	1-3/4"	5	290E164
1-1/4"	11-1/2	4"	1-3/4"	5	290E216
1-1/2"	11-1/2	4-1/4"	1-3/4"	7	290E232
2"	11-1/2	4-1/2"	1-3/4"	7	290E264
2-1/2"	8	5-1/2"	2-9/16"	8	290E332
3"	8	6"	2-5/8"	8	290E364
3-1/2"	8	6-1/2"	2-11/16"	8	290E432
4"	8	6-3/4"	2-3/4"	8	290E464

Taper Pipe Taps (NPT)

2700E

Carbon
Through or Blind Hole
Fractional / Bright



2700E

Size	TPI	Overall Length	2700E Order No.
1/16"	27	2-1/8"	2700E104
1/8"	27	2-1/8"	2700E108
1/4"	18	2-7/16"	2700E116
3/8"	18	2-9/16"	2700E124
1/2"	14	3-1/8"	2700E132
3/4"	14	3-1/4"	2700E148
1"	11-1/2	3-3/4"	2700E164
1-1/4"	11-1/2	4"	2700E216
1-1/2"	11-1/2	4-1/4"	2700E232
2"	11-1/2	4-1/2"	2700E264

Pipe Taps, Interrupted Thread & NPS

The Interrupted Thread Pipe Taps have every other thread removed except for the first few at the point. They are used for tapping tough metals or those which have a tendency to load the tap teeth.

Straight Pipe Taps (NPS) are used for hand or machine tapping of straight pipe threads.

▷ *All sizes are individually packaged*

2930 Interrupted Thread High Speed Steel Through or Blind Hole Fractional / Bright



2930

Size	TPI	Length of Thread	No. of Flutes	2930 Order No.
1/8"	27	3/4"	5	293A108
1/4"	18	1-1/16"	5	293A116
3/8"	18	1-1/16"	5	293A124
1/2"	14	1-3/8"	5	293A132
3/4"	14	1-3/8"	5	293A148
1"	11-1/2	1-3/4"	5	293A164
1-1/4"	11-1/2	1-3/4"	5	293A216
1-1/2"	11-1/2	1-3/4"	7	293A232
2"	11-1/2	1-3/4"	7	293A264

2950 Straight Pipe (NPS) High Speed Steel Through or Blind Hole Fractional / Bright



2950

Size	TPI	Length of Thread	No. of Flutes	2950 Order No.
1/8"	27	3/4"	4	295A108
1/4"	18	1-1/16"	4	295A116
3/8"	18	1-1/16"	4	295A124
1/2"	14	1-3/8"	4	295A132
3/4"	14	1-3/8"	5	295A148
1"	11-1/2	1-3/4"	5	295A164



SPECIAL THREAD TAPS

Now available from Drillco, a range of semi-standard special thread hand taps. This service can be used to help solve delivery issues that arise with requests for taps with unique TPI requirements:

- ▷ *Taps are manufactured in the USA*
- ▷ *Shipments within 1-2 weeks of receipt on most items*
- ▷ *Available with bright finish. Other coatings available with longer delivery times*
- ▷ *Size range available #0 – 4”*

Call us today for price and delivery!



Left Hand Taps

Left hand taps are used just like normal hand taps except they are rotated counter clockwise to cut left handed threads in the workpiece. They are for general use in production tapping or hand operations in a wide range of application material groups.

- ▷ *Taper – 7-10 pitch chamfer length. Starts the thread square with the workpiece*
- ▷ *Plug – 3-5 pitch chamfer length. Generally used in through holes*
- ▷ *Bottoming – 1-2 pitch chamfer length. Generates the thread to the bottom*

2300

High Speed Steel

**Taper, Plug & Bottoming / Through or Blind Hole
Machine Screw & Fractional / Bright**



2300

Size	NC	NF	Overall Length	No. of Flutes	Pitch Dia. Limits	2300 Order No.		
						Taper	Plug	Bottoming
6	32	–	2"	4	H3	23A006CT	23A006CP	23A006CB
8	32	–	2-1/8"	4	H3	23A008CT	23A008CP	23A008CB
10	24	–	2-3/8"	4	H3	23A010CT	23A010CP	23A010CB
10	–	32	2-3/8"	4	H3	23A010FT	23A010FP	23A010FB
1/4"	20	–	2-1/2"	4	H3	23A116CT	23A116CP	23A116CB
1/4"	–	28	2-1/2"	4	H3	23A116FT	23A116FP	23A116FB
5/16"	18	–	2-23/32"	4	H3	23A120CT	23A120CP	23A120CB
5/16"	–	24	2-23/32"	4	H3	23A120FT	23A120FP	23A120FB
3/8"	16	–	2-5/16"	4	H3	23A124CT	23A124CP	23A124CB
3/8"	–	24	2-5/16"	4	H3	23A124FT	23A124FP	23A124FB
7/16"	14	–	3-5/32"	4	H3	23A128CT	23A128CP	23A128CB
7/16"	–	20	3-5/32"	4	H3	23A128FT	23A128FP	23A128FB
1/2"	13	–	3-3/8"	4	H3	23A132CT	23A132CP	23A132CB
1/2"	–	20	3-3/8"	4	H3	23A132FT	23A132FP	23A132FB
9/16"	12	–	3-19/32"	4	H3	23A136CT	23A136CP	23A136CB
9/16"	–	18	3-19/32"	4	H3	23A136FT	23A136FP	23A136FB
5/8"	11	–	3-3/16"	4	H3	23A140CT	23A140CP	23A140CB
5/8"	–	18	3-3/16"	4	H3	23A140FT	23A140FP	23A140FB
3/4"	10	–	4-1/4"	4	H3	23A148CT	23A148CP	23A148CB
3/4"	–	16	4-1/4"	4	H3	23A148FT	23A148FP	23A148FB
7/8"	9	–	4-11/16"	4	H4	23A156CT	23A156CP	23A156CB
7/8"	–	14	4-11/16"	4	H4	23A156FT	23A156FP	23A156FB
1"	8	–	5-1/8"	4	H4	23A164CT	23A164CP	23A164CB
1"	–	12	5-1/8"	4	H4	23A164FT	23A164FP	23A164FB
1"	–	14	5-1/8"	4	H4	23A164ST	23A164SP	23A164SB
1-1/8"	7	–	5-7/16"	4	H4	23A208CT	23A208CP	23A208CB
1-1/8"	–	12	5-7/16"	4	H4	23A208FT	23A208FP	23A208FB
1-1/4"	7	–	5-3/4"	4	H4	23A216CT	23A216CP	23A216CB
1-1/4"	–	12	5-3/4"	6	H4	23A216FT	23A216FP	23A216FB
1-3/8"	6	–	6"	4	H4	23A224CT	23A224CP	23A224CB
1-3/8"	–	12	6"	6	H4	23A224FT	23A224FP	23A224FB
1-1/2"	6	–	6-1/4"	4	H4	23A232CT	23A232CP	23A232CB
1-1/2"	–	12	6-1/4"	6	H4	23A232FT	23A232FP	23A232FB

All sizes are individually packaged



8-Pitch Hand Taps

8-pitch hand taps are mainly used in oil field, gas exploration equipment, and power generation plants. They are of a larger diameter, with standard sizes up to 4".

- ▷ *Taper – 7-10 pitch chamfer length. Starts the thread square with the workpiece*
- ▷ *Plug – 3-5 pitch chamfer length. Generally used in through holes*
- ▷ *Bottoming – 1-2 pitch chamfer length. Generates the thread to the bottom*
- ▷ *All sizes are individually packaged*

2500

High Speed Steel

Taper, Plug & Bottoming / Through or Blind Hole Fractional / Bright



2500

Size	NS	No. of Flutes	2500 Order No.		
			Taper	Plug	Bottoming
1-1/8"	8	4	25A208T	25A208P	25A208B
1-1/4"	8	4	25A216T	25A216P	25A216B
1-3/8"	8	4	25A224T	25A224P	25A224B
1-1/2"	8	4	25A232T	25A232P	25A232B
1-5/8"	8	6	25A240T	25A240P	25A240B
1-3/4"	8	6	25A248T	25A248P	25A248B
1-7/8"	8	6	25A256T	25A256P	25A256B
2"	8	6	25A264T	25A264P	25A264B
2-1/8"	8	6	25A308T	25A308P	25A308B
2-1/4"	8	6	25A316T	25A316P	25A316B
2-3/8"	8	6	25A324T	25A324P	25A324B
2-1/2"	8	6	25A332T	25A332P	25A332B
2-5/8"	8	6	25A340T	25A340P	25A340B
2-3/4"	8	6	25A348T	25A348P	25A348B
2-7/8"	8	6	25A356T	25A356P	25A356B
3"	8	6	25A364T	25A364P	25A364B
3-1/4"	8	6	25A416T	25A416P	25A416B
3-1/2"	8	6	25A432T	25A432P	25A432B
3-3/4"	8	6	25A448T	25A448P	25A448B
4"	8	8	25A464T	25A464P	25A464B



TAPS

Hand Taps, Screw Thread Insert (STI)

Screw Thread Insert (STI) taps are dimensionally oversized and utilize a larger tap drill size so that thread they produce will accommodate a helical screw thread insert.

▷ All sizes are individually packaged

2020

Plug & Bottoming / Through or Blind Hole Machine Screw & Fractional / Bright



2020

Size	NC	NF	No. of Flutes	2020 Order No.	
				Plug	Bottoming
4	40	—	3	202A004CP	202A004CB
6	32	—	3	202A006CP	202A006CB
8	32	—	3	202A008CP	202A008CB
10	24	—	3	202A010CP	202A010CB
10	—	32	3	202A010FP	202A010FB
1/4"	20	—	3	202A116CP	202A116CB
1/4"	—	28	3	202A116FP	202A116FB
5/16"	18	—	4	202A120CP	202A120CB
5/16"	—	24	4	202A120FP	202A120FB
3/8"	16	—	4	202A124CP	202A124CB
3/8"	—	24	4	202A124FP	202A124FB
1/2"	13	—	4	202A132CP	202A132CB
1/2"	—	20	4	202A132FP	202A132FB

Hand Taps, Pulley Style

Pulley taps are used for tapping the hubs of pulleys for oil caps or set screws. The long shank is also ideal for reaching holes inaccessible with standard length taps. The thread length is the same length as a standard tap.

▷ All sizes are individually packaged

2400

Plug / Through or Blind Hole Fractional / Bright & Black



2400

Size	NC	Flute Length	Overall Length	2400 Order No.
				Plug
1/4"	20	1"	6"	24A116C6
1/4"	20	1"	8"	24A116C8
5/16"	18	1-1/8"	6"	24A120C6
5/16"	18	1-1/8"	8"	24A120C8
3/8"	16	1-1/4"	10"	24A124C10
3/8"	16	1-1/4"	6"	24A124C6
3/8"	16	1-1/4"	8"	24A124C8
7/16"	14	1-7/16"	6"	24A128C6
7/16"	14	1-7/16"	8"	24A128C8
1/2"	13	1-21/32"	10"	24A132C10
1/2"	13	1-21/32"	12"	24A132C12
1/2"	13	1-21/32"	6"	24A132C6
1/2"	13	1-21/32"	8"	24A132C8
5/8"	11	1-13/16"	10"	24A140C10
5/8"	11	1-13/16"	12"	24A140C12
5/8"	11	1-13/16"	6"	24A140C6
5/8"	11	1-13/16"	8"	24A140C8
3/4"	10	2"	10"	24A148C10
3/4"	10	2"	12"	24A148C12

Hand Taps, 6" Extension

The long shank is ideal for reaching holes inaccessible with standard length taps.

The thread length is the same length as a standard tap.

▷ All sizes are individually packaged

2060

Plug & Bottoming / Through or Blind Hole Machine Screw & Fractional / Bright & Black



2060

Size	NC	NF	No. of Flutes	2060 Order No.	
				Plug	Bottoming
6	32	—	3	206A006CP	206A006CB
8	32	—	4	206A008CP	206A008CB
10	24	—	4	206A010CP	206A010CB
10	—	32	4	206A010FP	206A010FB
1/4"	20	—	4	206A116CP	206A116CB
* 1/4"	20	—	4	206A116SP	—
1/4"	—	28	4	206A116FP	206A116FB
5/16"	18	—	4	206A120CP	206A120CB
* 5/16"	18	—	4	206A120SP	—
5/16"	—	24	4	206A120FP	206A120FB
3/8"	16	—	4	206A124CP	206A124CB
* 3/8"	16	—	4	206A124SP	—
3/8"	—	24	4	206A124FP	206A124FB
7/16"	14	—	4	206A128CP	206A128CB
7/16"	—	20	4	206A128FP	206A128FB
1/2"	13	—	4	206A132CP	206A132CB
1/2"	—	20	4	206A132FP	—



Combined Tap and Drill

Drills and Taps in a single pass, reducing cycle time, and therefore reducing the manufacturing cost of a part. Self-Centering point eliminates the need for center drilling or center punching. The drill part of the tool produces a hole correctly sized for approximately 75% of thread. Can be used in a hand held power tool, or a fixed spindle machine tool.

- ▷ *Electrical Contractors*
- ▷ *Maintenance Depts.*
- ▷ *Utility Crews*
- ▷ *Mechanics*
- ▷ *Installation Crews*



2050

2050 Through or Blind Hole Machine Screw & Fractional / Bright



205A6

Size	NC	NF	Length of Thread	2050 Order No.
4	40	-	9/16"	205A004C
4	-	48	9/16"	205A004F
5	40	-	5/8"	205A005C
5	-	44	5/8"	205A005F
6	32	-	11/16"	205A006C
6	-	40	11/16"	205A006F
8	32	-	3/4"	205A008C
8	-	36	3/4"	205A008F
10	24	-	7/8"	205A010C
10	-	32	7/8"	205A010F
12	24	-	7/8"	205A012C
12	-	28	7/8"	205A012F
1/4"	20	-	15/16"	205A116C
1/4"	-	28	15/16"	205A116F
5/16"	18	-	1-1/8"	205A120C
5/16"	-	24	1-1/8"	205A120F
3/8"	16	-	1-1/4"	205A124C
3/8"	-	24	1-1/4"	205A124F
7/16"	14	-	1-7/16"	205A128C
7/16"	-	20	1-7/16"	205A128F
1/2"	13	-	1-21/32"	205A132C
1/2"	-	20	1-21/32"	205A132F

No. of Pcs.	Description	Order No.
2050 Series Combined Tap and Drill Sets		
6	6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20	205A6

Tap and Reamer Accessories



2000AW

Tap Capacity	Pipe Tap Capacity	Reamer Capacity	Overall Length	Order No.
2000TW T-Handle Tap Wrenches				
#0 - 3/16"	-	-	-	2000TW1
#0 - 1/4"	-	-	-	2000TW2
#10 - 3/8"	-	-	-	2000TW3
1/4" - 1/2"	-	-	-	2000TW4
2000AW Tap & Reamer Wrenches				
1/64" - 1/4"	-	1/8" - 21/64"	7"	2000AW0
5/32" - 1/2"	1/8"	11/64" - 7/16"	11"	2000AW5
5/32" - 3/4"	1/8" - 1/4"	11/16" - 41/64"	15"	2000AW6
1/4" - 1-1/8"	1/8" - 3/4"	9/32" - 29/32"	19"	2000AW7
1/2" - 1-3/8"	1/8" - 1"	3/8" - 1.5/32"	31"	2000AW7A
3/4" - 1-5/8"	3/8" - 1-1/4"	37/64" - 1-11/32"	40"	2000AW8



2000TW



TAPS

TAPS

Tap Sets / Tap & Drill Sets



2000N10



400NC2018

No. of Pieces	Brand	Material	Coating/Finishing	Includes	Order No.
2000N & 2000 Series Hand Taps					
10	Nitro®	High Speed Steel	Black Oxide	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20"	2000N10
10	USA	High Speed Steel	Bright	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	2000A10
2100N & 2100 Series Spiral Point Tap Sets					
10	Nitro®	High Speed Steel	Black Oxide	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	2100N10
10	USA	High Speed Steel	Bright	1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	2100A10
2000N & 2000 Series Tap & Drill Sets					
18	Nitro®	High Speed Steel	Black Oxide	Taps: 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13 w/ corresponding 400N series drills	400NC2018
18	Nitro®	High Speed Steel	Black Oxide	Taps: 6-40, 8-36, 10-24, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20 w/ corresponding 400N series drills	400NF2018
18	USA	High Speed Steel	Bright	Taps: 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13 w/ corresponding 200 series drills	200C2018
18	USA	High Speed Steel	Bright	Taps: 6-40, 8-36, 10-24, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20 w/ corresponding 200 series drills	200F2018
2800 Series Tap & Drill Sets					
18	USA	High Speed Steel	Bright	Taps: M2.5, M3.0, M3.5, M4.0, M5.0, M6.0, M8.0, M10.0, M12.0 w/ corresponding 800 series drills	800A2018



Description	Sizes	Order No.
Tap Dispensers (Empty)		
Fractional Tap Dispenser	1/4" - 1"	2000FDX
Metric Tap Dispenser	3 mm - 24 mm	2800DX

Pieces	Description	Order No.
Tap Index Cases (Empty)		
10	TAP INDEX	10TDX
18	UNC TAP & DRILL INDEX	18CDX
18	UNF TAP & DRILL INDEX	18FDX
18	METRIC TAP & DRILL INDEX	18MDX

Common Tapping Terms

Angle of Thread

The angle included between the flanks of the thread measured in an axial plane

Back Taper

A slight axial relief on the thread of the tap which makes the pitch diameter of the thread near the shank somewhat smaller than that of the chamfered end

Bottoming Chamfer

The shortest chamfer (1-2 threads long) for threading close to the bottom of blind holes

Chamfer

The tapering of the threads at the front end of each land of a tap, by cutting away and relieving the crest of the first few teeth, to distribute the cutting action over several teeth

Chamfer Relief

The gradual decrease in land height from cutting edge to heel on the chamfered portion, to provide clearance for the cutting action as the tap advances

Chordal Hook Angle

The angle between the chord passing through the root and crest of a thread form at the cutting face, and a radial line through the crest at the cutting edge

Crest

The top surface joining the two flanks of a thread. The crest of an external thread is at its major diameter, while the crest of an internal thread is at its minor diameter

Cutting Face

The leading side of the land in the direction of rotation for cutting on which the chip impinges

Flutes

The longitudinal channels formed in a tap to create cutting edges on the thread profile, and to provide chip spaces and cutting fluid passages

Height of Thread

The distance between the crest and the base of a thread measured normal to the axis

Lead

The distance a screw thread advances axially in one complete turn. On a single lead screw or tap, the lead and pitch are identical. On a double-lead screw or tap, the lead is twice the pitch, etc.

Pitch

The distance from any point on a screw or tap thread to a corresponding point on the next thread, measured parallel to the axis. The pitch equals one divided by the number of threads per inch

Pitch Diameter

On a straight thread, the diameter of any imaginary coaxial cylinder, the surface of which would pass through the thread profile at such points as to make equal the width of the threads and the width of the spaces cut by the surface of the cylinder

On a taper thread, the diameter at a given distance from a reference plane perpendicular to the axis of an imaginary co-axial cone, the surface of which would pass through the thread profile at such points as to make equal the width of the threads and the width of the spaces cut by the surface of the cone

Plug Chamfer

The most common chamfer (3-5 threads long), for hand or machine tapping in through or blind holes

Rake

Any deviation of a straight cutting face of the tooth from a radial line. **Positive Rake** means that the crest of the cutting face is angularly advanced ahead of the balance of the face of the tooth.

Negative Rake means that the same point is angularly behind the balance of the cutting face of the tooth.

Zero Rake means that the cutting face is directly on the center line

Spiral Point (Chip Driver)

A supplementary angular fluting cut in the cutting face of the land at the chamfer end. It is slightly longer than the chamfer on the tap, and of the opposite hand to that of rotation

Taper Chamfer

A long chamfer (8-10 threads long) for easier starting and engagement in the work piece. More working teeth means that less tapping torque is required, and the chip load is reduced on each tooth

Threads Per Inch

The number of threads in one inch of length

Tap Troubleshooting Guide

Trouble	Possible Causes	Corrections
Oversize Pitch Diameter	Incorrect tap	Use correct "H" limit Use longer chamfered tap
	Chip packing	Use spiral pointed tap Use larger drill size Shorten length of thread in blind holes
	Galling	Reduce tapping speed Use lubricants
Torn or Rough Threads	Dull tap	Resharpen or replace
	Chamfer too short	Increase chamfer length
	Galling	Use lubricant Reduce speed Use larger drill
Breakage	Incorrect tap selection	Increase chamfer length Use spiral pointed taps in through holes Tapping too deep
	Excessive tapping torque	Increase hole size Shorten thread length Increase chamfer length
	Operating conditions	Reduce tapping speed Avoid bottoming out the tap
Chipping	Incorrect tap selection	Increase chamfer length Avoid chip packing in flutes
	Operating conditions	Reduce tapping speed Use larger drill Ensure adequate lubricant
Excessive Wear	Incorrect tap selection	Increase chamfer length
	Operating conditions	Reduce tapping speed Ensure adequate lubricant Use larger drill

Tap Drill Sizes – Cut Taps

Regular Taps

Tap Size	Drill Size	Probable % Thread	Tap Size	Drill Size	Probable % Thread	Tap Size	Drill Size	Probable % Thread
0-80	3/64"	71-81	10-32	#21	68-76	5/8-18	37/64"	58-65
M1.6-.35	1.25 MM	69-77	M5 x .8	4.2 MM	69-77	M16 x 2	35/64"	76-81
1-64	#53	59-67	12-24	#16	66-72	3/4-10	21/32"	68-72
M2 x .4	1/16"	72-79	12-28	#15	70-78	3/4-16	11/16"	71-77
1-72	#53	67-75	M6 x 1	#10	76-84	M20 x 2.5	11/16"	74-78
2-56	#50	62-69	1/4-20	#7	70-75	7/8-9	49/64"	72-76
2-64	#50	70-79	1/4-28	#3	72-80	7/8-14	13/16"	62-67
M2 x .45	2.05 MM	69-77	5/16-18	F	72-77	M24 x 3	53/64"	72-76
3-48	5/64"	70-77	5/16-24	I	67-75	1" - 8	7/8"	73-77
3-56	#46	69-78	M8 x 1.25	6.7 MM	74-80	1" - 12	59/64"	67-72
4-40	#43	65-71	3/8-16	5/16"	72-77	1" - 14	15/16"	61-67
4-48	#42	61-68	3/8-24	Q	71-79	1-1/8" - 7	63/64"	72-76
M3 x .5	#40	70-79	M10 x 1.5	8.4 MM	76-82	1-1/8-12	1-3/64"	66-72
5-40	#38	65-72	7/16-14	U	70-75	M30 x 3.5	1-3/64"	75
5-44	#37	63-71	7/16-20	25/64"	65-72	1-1/4 - 7	1-7/64"	76
M3.5 x .6	#33	72-81	M12 x 1.7	13/32"	69-74	1-1/4-12	1-11/64"	72
6-32	#36	71-78	1/2-13	27/64"	73-78	1-3/8 - 6	1-7/32"	72
6-40	#33	69-77	1/2-20	29/64"	65-72	1-3/8-12	1-19/64"	72
M4 x .7	3.25 MM	74-82	M14 x 2	15/32"	76-81	M36 x 4	1-1/4"	82
8-32	#29	62-69	9/16-12	31/64"	68-72	1-1/2 - 6	1-11/32"	72
8-36	#29	70-78	9/16-18	33/64"	58-65	1-1/2-12	1-27/64"	72
10-24	#25	69-75	5/8-11	17/32"	75-79	-	-	-

STI Taps

Tap Size	Drill Size Aluminium	Drill Size Steel, Magnesium, Plastic
2-56	3/32	41
3-48	36	7-64
3-56	37	36
4-40	31	31
4-48	3.0 mm	31
5-40	3.4 mm	29
6-32	26	25
6-40	26	25
8-32	17	16
8-36	17	16
10-24	13/64	5
10-32	7	13/64
12-24	1	1
1/4-20	H	H
1/4-28	G	6.7 mm
5/16-18	Q	Q
5/16-24	21/64	21/64
3/8-16	X	X
3/8-24	25/64	25/64
7/16-14	29/64	29/64
7/16-20	29/64	29/64
1/2-13	33/64	17/32
1/2-20	29/64	29/64
9/16-12	37/64	19/32
9/16-18	37/64	37/64
5/8-11	21/32	21/32
5/8-18	41/64	41/64
3/4-10	25/32	25/32
3/4-16	49/64	49/64
7/8-9	29/32	29/32
7/8-14	57/64	57/64
1-8	1-1/32	1-1/32
1-12	1-1/64	1-1/64

Pipe Taps

Tap Size	Taperpipe NPF & NPTF	Decimal Equivalent	Straight Pipe NPS	Decimal Equivalent
1/8-27	Q	.3320	11/32	.3438
1/4-18	7/16	.4375	7/16	.7375
3/8-18	9/16	.5625	37/64	.5781
1/2-14	45/64	.7031	23/32	.7188
3/4-14	29/32	.9062	59/64	.9219
1" - 11-1/2	1-9/64	1.1406	1-5/32	1.1562
1-1/4" - 11-1/2	1-31/64	1.4844	1-1/2	1.5000
1-1/2" - 11-1/2	1-23/32	1.7188	1-3/4	1.7500
2" - 11-1/2	2-3/16	2.1875	2-7/32	2.2188
2-1/2" - 8	2-39/64	2.6094	2-21/32	2.6562
3" - 8	3-15/64	3.2344	3.2344	33/64

TAPS **Tap Drill Sizes – Thread Formers**

Note: Recommended thread percentage for various (Inch standard) tap sizes is shown in the "60% Thread" columns below. This is also the average percentage that is desirable for metric sizes. Use the "Probable Percent of Thread" column in the "Metric Sizes" tables below.

Machine Screw Sizes	Tap Size	75% Thread		70% Thread		65% Thread		60% Thread		55% Thread		50% Thread	
		Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size
0-80	0.0536	1.35 mm	0.0540	1.35 mm	0.0545	–	0.0549	54	0.0554	54	0.0558	1.0 mm	
1-64	0.0650	1.65 mm	0.0655	1.65 mm	0.0661	–	0.0666	–	0.0672	51	0.0677	51	
1-72	0.0659	1.65 mm	0.0663	–	0.0669	1.7 mm	0.0673	51	0.0679	51	0.0683	–	
2-56	0.0769	1.65 mm	0.0774	1.95 mm	0.0669	23498	0.0787	47	0.0794	2.0 mm	0.0799	–	
2-64	0.0780	5/64	0.0785	47	0.0791	2.0 mm	0.0796	2.0 mm	0.0802	–	0.0807	2.05 mm	
3-48	0.0884	2.25 mm	0.0890	43	0.0898	43	0.0905	2.3 mm	0.0913	2.3 mm	0.0919	–	
3-56	0.0899	43	0.0904	–	0.0911	2.3 mm	0.0917	2.8 mm	0.0924	2.35 mm	0.0929	2.35 mm	
4-40	0.0993	2.5 mm	0.1000	39	0.1010	39	0.1018	38	0.1028	2.6 mm	0.1035	2.6 mm	
4-48	0.1014	38	0.1020	38	0.1028	2.6 mm	0.1035	2.6 mm	0.1043	37	0.1049	37	
5-40	0.1123	34	0.1130	33	0.1140	33	0.1148	2.9 mm	0.1158	32	0.1165	32	
5-44	0.1134	33	0.1130	2.9 mm	0.1150	2.9 mm	0.1157	–	0.1166	32	0.1173	32	
6-32	0.1221	3.1mm	0.1230	3.1 mm	0.1243	–	0.1252	40916	0.1264	3.2 mm	0.1274	–	
6-40	0.1253	1/8	0.1260	3.2 mm	0.1270	2.9 mm	0.1278	3.25 mm	0.1288	30	0.1295	30	
8-32	0.1481	3.75 mm	0.1490	–	0.1503	25	0.1512	3.8 mm	0.1524	24	0.1534	3.9 mm	
8-36	0.1481	25	0.1507	3.8 mm	0.1518	25	0.1526	24	0.1537	3.9 mm	0.1546	23	
10-24	0.1481	–	0.1507	18	0.1717	23682	0.1729	23682	0.1746	–	0.1758	–	
10-32	0.1481	17	0.1750	–	0.1763	–	0.1772	16	0.1784	4.5 mm	0.1794	–	
12-24	0.1481	10	0.1960	9	0.1977	5.0 mm	0.1989	8	0.2006	5.1 mm	0.2018	7	
12-28	0.1481	5.0 mm	0.1989	8	0.2003	8	0.1989	7	0.2028	–	0.2039	13/16	

Fractional Sizes	Tap Size	75% Thread		70% Thread		65% Thread		60% Thread		55% Thread		50% Thread	
		Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size	Theor. Hole Size	Nearest Drill Size
1/4-20	.2245	5.7 mm	.2260	–	.2280	1	.2295	1	.2315	–	.2330	5.9 mm	
1/4-28	.2318	–	.2329	5.9 mm	.2343	A	.2354	15/64	.2368	6.0 mm	.2379	B	
5/16-18	0.2842	7.2 mm	.2861	7.25 mm	.2879	7.3 mm	.2898	L	.2917	7.4 mm	.2936	–	
5/16-24	0.2912	7.4 mm	.2927	–	.2941	M	.2955	7.5 mm	.2969	19/64	.2983	7.6 mm	
3/8-16	.3431	11/32	.3452	8.75 mm	.3474	S	.3495	8.9 mm	.3516	–	.3537	9.0 mm	
3/8-24	.3537	9.0 mm	.3552	9.0 mm	.3566	–	.3580	T	.3594	23/64	.3608	–	
7/16-14	.4011	–	.4035	Y	.4059	13/32	.4084	–	.4108	–	.4132	Z	
7/16-20	0.4120	Z	.4137	10.5 mm	.4154	–	.4171	–	.4188	–	.4205	–	
1/2-13	.4608	–	.4634	–	.4660	–	.4686	15/32	.4712	12 mm	.4738	12 mm	
1/2-20	.4745	–	.4762	–	.4779	–	.4796	–	.4712	–	.4830	31/64	

Metric Sizes	Metric Tap Size	Tap Drill Size	Decimal Equiv. of Tap Drill (inches)	Theoretical Percentage of thread %	Probable Mean Oversize (inches)	Probable Hole Size (inches)	Probable Percent of Thread %	Metric Tap Size	Tap Drill Size	Decimal Equiv. of Tap Drill (inches)	Theoretical Percentage of thread %	Probable Mean Oversize (inches)	Probable Hole Size (inches)	Probable Percent of Thread %
–	2.7 mm	0.1062	88	.0026	.1088	70	–	L	0.2900	75	.0042	.2942	62	
M4 x 0.7	27	0.1440	72	.0032	.1472	54	–	7.3 mm	.2874	82	.0042	.2916	70	
–	3.6 mm	.1417	84	.0032	.1449	67	M10 x 1.5	U	0.3680	64	.0046	.3726	53	
–	9/64	.1406	90	.0032	.1438	73	–	9.3 mm	0.3660	69	.0046	.3706	58	
M5 x 0.8	14	0.1820	69	.0035	.1855	53	–	9.2 mm	0.3620	78	.0046	.3666	67	
–	4.6 mm	.1811	74	.0035	.1846	57	–	23/64	.3594	85	.0046	.3640	74	
–	15	.1800	79	.0035	.1835	62	M12 x 1.5	11.3 mm	.4449	70	.0047	.4496	57	
–	16	0.1770	92	.0035	.1805	76	–	7/16	.4375	86	.0047	.4422	75	
M6 x 1	7/32	.2188	65	.0038	.2226	51	M12 x 1.75	7/16	.4375	75	.0047	.4422	65	
–	5.4 mm	.2126	88	.0038	.2164	74	–	11 mm	.4331	84	.0047	.4378	73	

NITRO-MAX CUTTING DATA

Material & Speed Recommendations

Nitro®-Max can be used in a wide range of materials. CNC type equipment is recommended to achieve maximum performance of the taps.

Conditions that effect SFM:

- ▷ *Rigidity of fixture*
- ▷ *Spindle runout*
- ▷ *Coolant flow*
- ▷ *Feed mechanism*

Workpiece Material	2150N (Sp.Pt)	2160N (Sp.FI)	2250N (Sp.Pt)	2260N (Sp.FI)	2270N (T.F)
	Speed (SFM)	Speed (SFM)	Speed (SFM)	Speed (SFM)	Speed (SFM)
A. Stainless Steel (Free Machining)	25-50	25-50	50-80	40-70	60-100
B. Carbon Steels					
Low Carbon	50-80	40-70	50-80	30-60	80-120
Medium Carbon	30-60	20-50	30-60	15-40	60-90
High Carbon	10-30	10-20	10-30	10-20	20-50
C. Non-Ferrous Materials					
Zinc Die Cast	75-100	60-90	80-120	80-120	150-200
		60-110	80-120	80-120	100-150
Brass	75-100	60-90	80-120	80-120	100-150
Plastic	40-80	40-80	60-100	60-100	80-120
D. Aluminum Alloys					
Wrought	75-100	60-90	80-120	80-120	150-200
Cast	60-100	60-100	80-120	80-120	120-180
Unalloyed	75-100	75-100	80-120	80-120	150-200

Threading Dies



Adjustable Round Split Dies High Speed Steel

Bright Finish	
Series	Catalog page reference
3000E	167
3050E, 3100E	168



Hexagon Dies High Speed Steel

Bright Finish	
Series	Catalog page reference
3300E, 3350	169



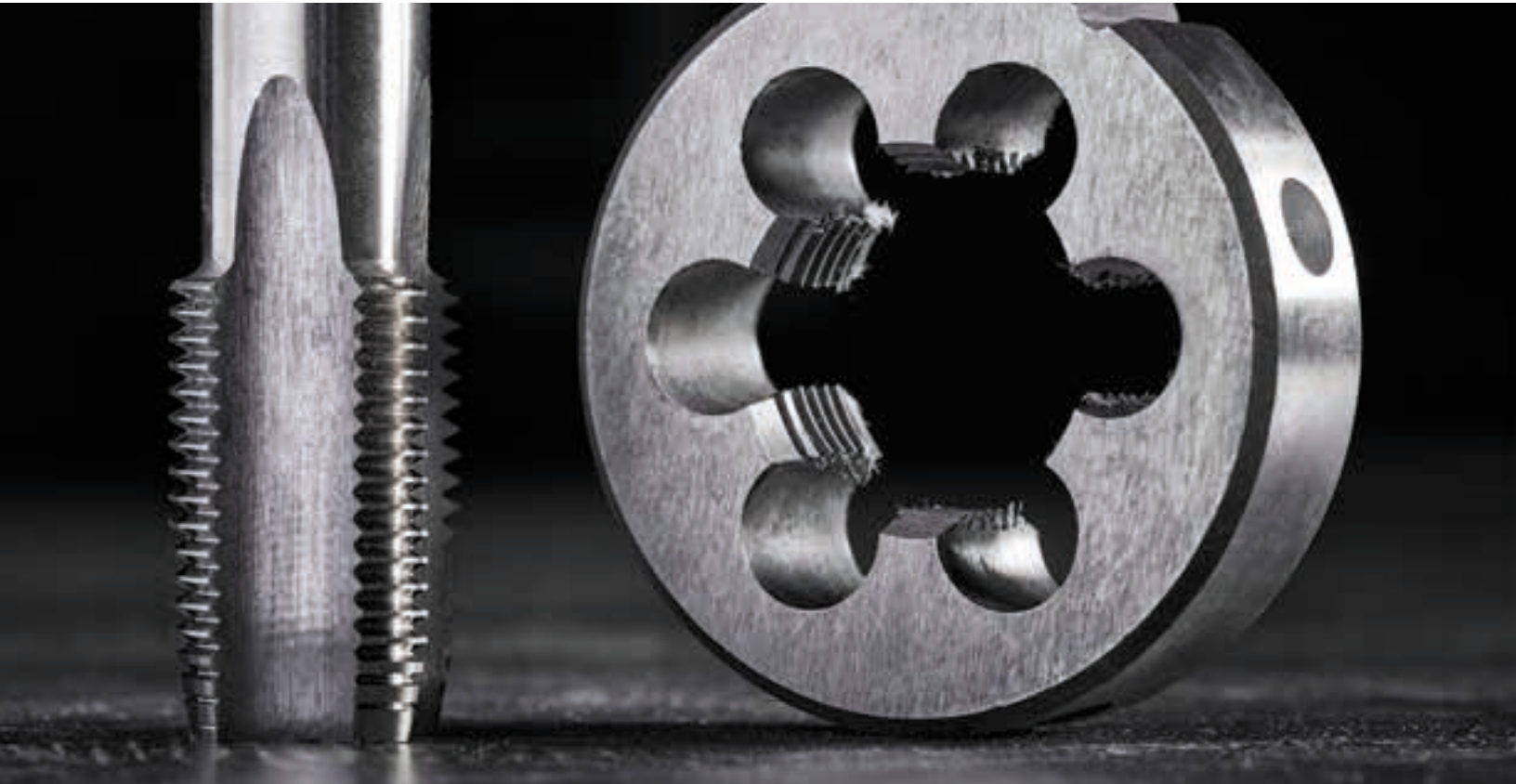
Hexagon Dies Carbon

Bright Finish	
Series	Catalog page reference
3350-E 8-Pitch, 3360E, 3380E	170



Die Stocks

Bright Finish For use with round Adjustable Split Dies	
Series	Catalog page reference
3000DS	172



Adjustable Round Split Dies

The round split adjustable die may be adjusted through the screws on the holder. Adjustment on the open type is done by turning the three screws on the holder. A die holder or handle is needed for proper operation of round split adjustable dies.

- ▷ *Manufactured using a premium grade High Speed Steel material*
- ▷ *Bright Finish*
- ▷ *Cuts an external thread when held in a die stock*

3000E
High Speed Steel
Machine Screw
Fractional / Bright



3000E

Size (Inches)	Outer Diameter (O.D.)			
	13/16" Order No.	1" Order No.	1-1/2" Order No.	2" Order No.
0 - 80	30E000FA	-	-	-
1 - 64	30E001CA	-	-	-
1 - 72	30E001FA	-	-	-
2 - 56	30E002CA	-	-	-
2 - 64	30E002FA	-	-	-
3 - 48	30E003CA	-	-	-
3 - 56	30E003FA	-	-	-
4 - 40	30E004CA	30E004CB	-	-
4 - 48	30E004FA	30E004FB	-	-
5 - 40	30E005CA	30E005CB	-	-
5 - 44	30E005FA	-	-	-
6 - 32	30E006CA	30E006CB	-	-
6 - 40	30E006FA	30E006FB	-	-
8 - 32	30E008CA	30E008CB	-	-
8 - 36	30E008FA	30E008FB	-	-
10 - 24	30E010CA	30E010CB	-	-
10 - 32	30E010FA	30E010FB	-	-
12 - 24	30E012CA	30E012CB	-	-
12 - 28	30E012FA	30E012FB	-	-
1/4 - 20	30E116CA	30E116CB	30E116CC	30E116CD
1/4 - 28	30E116FA	30E116FB	30E116FC	30E116FD
5/16 - 18	30E120CA	30E120CB	30E120CC	30E120CD
5/16 - 24	30E120FA	30E120FB	30E120FC	30E120FD
3/8 - 16	-	30E124CB	30E124CC	30E124CD
3/8 - 24	-	30E124FB	30E124FC	30E124FD
7/16 - 14	-	30E128CB	30E128CC	30E128CD
7/16 - 20	-	30E128FB	30E128FC	30E128FD
1/2 - 13	-	30E132CB	30E132CC	30E132CD
1/2 - 20	-	30E132FB	30E132FC	30E132FD
9/16 - 12	-	-	30E136CC	30E136CD
9/16 - 18	-	-	30E136FC	30E136FD
5/8 - 11	-	-	30E140CC	30E140CD
5/8 - 18	-	-	30E140FC	30E140FD

Size (Inches)	Outer Diameter (O.D.)			
	1-1/2" Order No.	2" Order No.	2-1/2" Order No.	3" Order No.
3/4 - 10	30E148CC	30E148CD	-	-
3/4 - 16	30E148FC	30E148FD	-	-
7/8 - 9	-	30E156CD	-	-
7/8 - 14	-	30E156FD	-	-
1 - 8	-	30E164CD	-	30E164CF
1 - 12	-	30E164FD	-	-
1 - 14	-	30E164SD	-	30E164SF
1-1/8 - 7	-	-	30E208CE	30E208CF
1-1/8 - 12	-	-	30E208FE	30E208FF
1-1/4 - 7	-	-	30E216CE	30E216CF
1-1/4 - 12	-	-	30E216FE	30E216FF
1-3/8 - 6	-	-	30E224CE	30E224CF
1-3/8 - 12	-	-	30E224FE	30E224FF
1-1/2 - 6	-	-	30E232CE	30E232CF
1-1/2 - 12	-	-	30E232FE	30E232FF
1-5/8 (5-1/2)	-	-	-	30E240CF
1-5/8 - 12	-	-	-	30E240FF
1-3/4 - 5	-	-	-	30E248CF
1-3/4 - 12	-	-	-	30E248FF
1-7/8 - 5	-	-	-	30E256CF
1-7/8 - 12	-	-	-	30E256FF
2 (4-1/2)	-	-	-	30E264CF
2 - 12	-	-	-	30E264FF

TIPS!

The round split adjustable die may be adjusted through the screws on the holder. Adjustment on the open type is done by turning the three screws on the holder. A die holder or handle is needed for proper operation of round split adjustable dies.

3050E Pipe Dies (NPT)

High Speed Steel

Machine Screw

Fractional / Bright

Size (Inches)	Outer Diameter (O.D.)				
	1" Order No.	1-1/2" Order No.	2" Order No.	2-1/2" Order No.	3" Order No.
1/16 - 24	305E104B	-	-	-	-
1/8 - 27	305E108B	305E108C	-	-	-
1/4 - 18	-	305E116C	-	-	-
3/8 - 18	-	-	305E124D	-	-
1/2 - 14	-	-	305E132D	-	-
3/4 - 14	-	-	305E148D	-	-
1 - 11-1/2	-	-	-	305E164E	-
1-1/4 - 11-1/2	-	-	-	-	305E216F
1-1/2 - 11-1/2	-	-	-	-	305E232F



3050E



3100E

3100E

High Speed Steel

Machine Screw

Metric / Bright

Size (mm)	Outer Diameter (O.D.)		
	13/16" Order No.	1" Order No.	1-1/2" Order No.
1.6 x 0.35	31E016AA	-	-
2 x 0.40	31E020AA	31E020AB	-
2.2 x 0.45	-	31E022AB	-
2.3 x 0.40	-	31E023AB	-
2.5 x 0.45	31E025AA	31E025AB	-
2.6 x 0.45	-	31E026AB	-
3 x 0.50	-	31E030AB	-
3.5 x 0.50	-	31E035AB	-
3.5 x 0.60	-	31E035BB	-
4 x 0.50	31E040AA	31E040AB	-
4 x 0.70	31E040BA	31E040BB	-
4.5 x 0.50	-	31E045AB	-
4.5 x 0.75	-	31E045BB	-
5 x 0.50	-	31E050AB	-
5 x 0.80	31E050BA	31E050BB	-
5 x 1	-	31E050CB	-
6 x 0.50	-	31E060AB	-
6 x 0.75	-	31E060BB	-
6 x 1	-	31E060CB	-
7 x 0.75	-	31E070AB	-
7 x 1	-	31E070BB	-
8 x 0.75	-	31E080AB	-
8 x 1	-	31E080BB	-
8 x 1.25	-	31E080CB	-
9 x 1	-	-	31E090AC
9 x 1.25	-	31E090BB	31E090BC
10 x 0.75	-	31E100AB	31E100AC
10 x 1	-	31E100BB	31E100BC
10 x 1.25	-	31E100CB	-

Size (mm)	Outer Diameter (O.D.)				
	1" Order No.	1-1/2" Order No.	2" Order No.	2-1/2" Order No.	3" Order No.
10 x 1.5	31E100DB	31E100DC	-	-	-
11 x 1	-	31E110AC	-	-	-
11 x 1.5	31E110BB	31E110BC	-	-	-
12 x 1	-	31E120AC	-	-	-
12 x 1.25	-	31E120BC	-	-	-
12 x 1.5	-	31E120CC	-	-	-
12 x 1.75	-	31E120DC	-	-	-
14 x 1	-	31E140AC	-	-	-
14 x 1.25	-	31E140BC	-	-	-
14 x 1.5	-	31E140CC	-	-	-
14 x 2	-	31E140DC	-	-	-
15 x 1.5	-	31E150AC	-	-	-
16 x 1	-	31E160AC	-	-	-
16 x 1.5	-	31E160BC	-	-	-
16 x 2	-	31E160CC	-	-	-
17 x 1.5	-	31E170AC	-	-	-
18 x 1.5	-	31E180BC	-	-	-
18 x 2	-	31E180CC	-	-	-
18 x 2.5	-	31E180DC	-	-	-
20 x 1	-	31E200AC	31E200AD	-	-
20 x 1.5	-	31E200BC	31E200BD	-	-
20 x 2	-	-	31E200CD	-	-
20 x 2.5	-	-	31E200DD	-	-
22 x 1	-	-	31E220AD	-	-
22 x 1.5	-	-	31E220BD	-	-
22 x 2	-	-	31E220CD	-	-
22 x 2.5	-	-	31E220DD	-	-
24 x 1.5	-	-	31E240AD	-	-
24 x 2	-	-	31E240BD	-	-
24 x 3	-	-	31E240CD	-	-
26 x 1.5	-	-	31E260AD	-	-
30 x 2	-	-	31E300BD	-	-
33 x 2	-	-	-	31E330AE	-
45 x 4.5	-	-	-	-	31E450AF

Hexagon Dies

Hex rethreading dies are designed for repairing damaged threads on bolts, screws, rods, or studs. Their hexagon shape allows them to be used in a socket, or with a wrench.

- ▷ *Hex Dies are multi-edged, internally threaded tools used for cutting external threads*
- ▷ *Same size as standard hex nuts*

3300E High Speed Steel Machine Screw Fractional / Bright Threading Dies



3300E

Size	Threads Per Inch	Width A/F	3300E Order No.
4	40	19/32"	33E004C
6	32	19/32"	33E006C
8	32	19/32"	33E008C
10	24	19/32"	33E010C
10	32	19/32"	33E010F
12	24	19/32"	33E012C
1/4"	20	19/32"	33E116C
1/4"	28	19/32"	33E116F
5/16"	18	11/16"	33E120C
5/16"	24	11/16"	33E120F
3/8"	16	25/32"	33E124C
3/8"	24	25/32"	33E124F
7/16"	14	7/8"	33E128C
7/16"	20	7/8"	33E128F

Size	Threads Per Inch	Width A/F	3300E Order No.
1/2"	13	1-1/16"	33E132C
1/2"	20	1-1/16"	33E132F
9/16"	12	1-1/16"	33E136C
9/16"	18	1-1/16"	33E136F
5/8"	11	1-1/4"	33E140C
5/8"	18	1-1/4"	33E140F
3/4"	10	1-7/16"	33E148C
3/4"	16	1-7/16"	33E148F
7/8"	9	1-5/8"	33E156C
7/8"	14	1-5/8"	33E156F
1"	8	1-13/16"	33E164C
1"	12	1-13/16"	33E164F
1"	14	1-13/16"	33E164S

- ▷ *Carbon steel hex dies are for repair work only; not recommended for creating new threads*
- ▷ *Extra thick, allows user to rethread damaged or jammed threads*
- ▷ *Same size as standard hex nuts*

3350E Carbon Machine Screw Fractional / Bright Rethreading Dies



3350E

Size	Threads Per Inch	Width A/F	3350E Order No.
4	40	19/32"	335E004C
4	48	19/32"	335E004F
5	40	19/32"	335E005C
5	44	19/32"	335E005F
6	32	19/32"	335E006C
6	40	19/32"	335E006F
8	32	19/32"	335E008C
8	36	19/32"	335E008F
10	24	19/32"	335E010C
10	32	19/32"	335E010F
12	24	19/32"	335E012C
12	28	19/32"	335E012F
1/4"	20	19/32"	335E116C
1/4"	28	19/32"	335E116F
5/16"	18	11/16"	335E120C
5/16"	24	11/16"	335E120F
3/8"	16	25/32"	335E124C
3/8"	24	25/32"	335E124F
7/16"	14	7/8"	335E128C
7/16"	20	7/8"	335E128F
1/2"	13	1-1/16"	335E132C
1/2"	20	1-1/16"	335E132F
9/16"	12	1-1/16"	335E136C

Size	Threads Per Inch	Width A/F	3350E Order No.
9/16"	18	1-1/16"	335E136F
5/8"	11	1-1/4"	335E140C
5/8"	18	1-1/4"	335E140F
11/16"	11	1-7/16"	335E144C
11/16"	16	1-7/16"	335E144F
3/4"	10	1-7/16"	335E148C
3/4"	16	1-7/16"	335E148F
7/8"	9	1-5/8"	335E156C
7/8"	14	1-5/8"	335E156F
1"	8	1-13/16"	335E164C
1"	12	1-13/16"	335E164F
1"	14	1-13/16"	335E164S
1-1/8"	7	2"	335E208C
1-1/8"	12	2"	335E208F
1-1/4"	7	2-3/16"	335E216C
1-1/4"	12	2-3/16"	335E216F
1-3/8"	6	2-3/8"	335E224C
1-3/8"	12	2-3/8"	335E224F
1-1/2"	6	2-9/16"	335E232C
1-1/2"	12	2-9/16"	335E232F
1-5/8"	5-1/2	3-1/8"	335E240C
1-5/8"	12	3-1/8"	335E240F
1-3/4"	5	3-1/8"	335E248C

Size	Threads Per Inch	Width A/F	3350E Order No.
1-3/4"	12	3-1/8"	335E248F
1-7/8"	5	3-1/8"	335E256C
1-7/8"	12	3-1/8"	335E256F
2"	4-1/2	3-1/2"	335E264C
2"	12	3-1/2"	335E264F
2-1/4"	4-1/2	3-1/2"	335E316C
2-1/4"	12	3-1/2"	335E316F
2-1/2"	4	4-1/2"	335E332C
2-1/2"	12	4-1/2"	335E332F
2-3/4"	4	4-1/2"	335E348C
2-3/4"	12	4-1/2"	335E348F
3"	4	5"	335E364C
3"	12	5"	335E364F
3-1/4"	4	5"	335E416C
3-1/4"	12	5"	335E416F
3-1/2"	4	5"	335E432C
3-1/2"	12	5"	335E432F
3-3/4"	4	6"	335E448C
3-3/4"	12	6"	335E448F
4"	4	6"	335E464C
4"	12	6"	335E464F

3350E 8-Pitch
Carbon
Machine Screw
Fractional / Bright
Rethreading Dies



3350E

Size	Threads Per Inch	Width A/F	3350E Order No.
1-1/8"	8	2"	335E208N
1-1/4"	8	2"	335E216N
1-3/8"	8	2-3/16"	335E224N
1-1/2"	8	2-3/16"	335E232N
1-5/8"	8	2-3/8"	335E240N
1-3/4"	8	2-3/8"	335E248N
1-7/8"	8	2-9/16"	335E256N
2"	8	2-9/16"	335E264N
2-1/4"	8	3-1/8"	335E316N
2-3/8"	8	3-1/8"	335E324N
2-1/2"	8	3-1/8"	335E332N
2-5/8"	8	3-1/8"	335E340N
2-3/4"	8	3-1/8"	335E348N
2-7/8"	8	3-1/8"	335E356N
3"	8	3-1/2"	335E364N
3-1/4"	8	3-1/2"	335E416N
3-1/2"	8	3-1/2"	335E432N
3-3/4"	8	3-1/2"	335E448N
4"	8	4-1/2"	335E464N

3380E Pipe Dies (NPT)
Carbon
Machine Screw
Fractional / Bright
Rethreading Dies



3380E

Size	Threads Per Inch	Width A/F	3380E Order No.
1/8"	27	25/32"	338E108
1/4"	18	1-1/16"	338E116
3/8"	18	1-1/4"	338E124
1/2"	14	1-5/8"	338E132
3/4"	14	1-13/16"	338E148
1"	11-1/2	2-3/16"	338E164
1-1/4"	11-1/2	3-1/8"	338E216
1-1/2"	11-1/2	3-1/8"	338E232
2"	11-1/2	4"	338E264

3360E
Carbon
Machine Screw
Metric / Bright
Rethreading Dies



3360E

Size (mm)	Pitch (mm)	Width A/F	3360E Order No.
3	0.5	19/32"	336E030A
3	0.6	19/32"	336E030B
3.5	0.6	19/32"	336E035A
4	0.7	19/32"	336E040A
4	0.75	19/32"	336E040B
4.5	0.75	19/32"	336E045A
5	0.8	19/32"	336E050A
5	0.9	19/32"	336E050B
6	1	19/32"	336E060A
6	0.75	19/32"	336E060B
6.3	1	19/32"	336E063A
7	1	11/16"	336E070A
8	1	11/16"	336E080A
8	1.25	11/16"	336E080B
9	1	25/32"	336E090A
9	1.25	25/32"	336E090B
10	1.25	7/8"	336E100A
10	1.5	7/8"	336E100B
11	1.5	7/8"	336E110A
12	1.25	1-1/16"	336E120A
12	1.5	1-1/16"	336E120B
12	1.75	1-1/16"	336E120C
14	1.5	1-1/16"	336E140A
14	2	1-1/16"	336E140B
16	1.5	1-1/4"	336E160A
16	2	1-1/4"	336E160B

Size (mm)	Pitch (mm)	Width A/F	3360E Order No.
18	1.5	1-7/16"	336E180A
18	2.5	1-7/16"	336E180B
18	2	1-7/16"	336E180C
20	1.5	1-5/8"	336E200A
20	2.5	1-5/8"	336E200B
22	1.5	1-5/8"	336E220A
22	2.5	1-5/8"	336E220B
24	2	1-13/16"	336E240A
24	3	1-13/16"	336E240B
26	1.5	2"	336E260A
27	2	2"	336E270A
27	3	2"	336E270B
28	1.5	2"	336E280A
30	2	2-3/16"	336E300A
33	2	2-3/8"	336E330A
33	3.5	2-3/8"	336E330B
36	3	2-9/16"	336E360A
36	4	2-9/16"	336E360B
39	3	3-1/8"	336E390A
39	4	3-1/8"	336E390B
40	1.5	3-1/8"	336E400A
42	4.5	3-1/8"	336E420B
45	1.5	3-1/4"	336E450A
45	4.5	3-1/4"	336E450B
48	1.5	3-1/4"	336E480A
52	1.5	3-1/2"	336E520A
52	5	3-1/2"	336E520B



2000H38

Material	Pieces	Includes	Case	Order No.
Tap & Hexagon Die Set				
TAPS: HSS USA DIES: Carbon Import	23 pcs (UNC & UNF)*	Taps & Dies: 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-12 & 1/4-18 (NPT). Also: 1/4" to 1" Adjustable Tap Wrench.	Wood	2000H25
TAPS: HSS USA DIES: Carbon Import	36 pcs (UNC & UNF)	Taps & Dies: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, & 1/8-27 (NPT). Also: 1/4" to 1" Adjustable Tap Wrench, #0 to 3/8" T-Handle Tap Wrench.	Wood	2000H38
TAPS: HSS USA DIES: Carbon Import	58 pcs (UNC & UNF)	Taps & Dies: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-12, & 1/8-27, 1/4-18 (NPT). Also: #7 to 1/2" & 1/4" to 1" Adjustable Tap Wrench, #0 to 3/8" T-Handle Tap Wrench.	Wood	2000H63
TAPS: HSS USA DIES: Carbon Import	18 pcs (UNC)	Taps & Dies: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4. Also: #7 to 1/2 Adjustable Tap Wrench, #12 to 1/2" T-Handle Tap Wrench.	Wood	2000HC20
TAPS: HSS USA DIES: Carbon Import	18 pcs (UNF)	Taps & Dies: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4. Also: #7 to 1/2 Adjustable Tap Wrench, #12 to 1/2" T-Handle Tap Wrench.	Wood	2000HF20
Tap & Round Adjustable Die Set				
High Speed Steel TAPS: USA DIES: Import	25 pcs (UNC & UNF)	Taps & Dies: 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-12 & 1/4-18 (NPT). Also: 2" Round Die Stock, 1/4" to 1" Adjustable Tap Wrench, and 1 Screwdriver.	Wood	2000R25
High Speed Steel TAPS: USA DIES: Import	38 pcs (UNC & UNF)	Taps & Dies: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20 & 1/8-27 (NPT). Also: 1" Round Die Stock, 1/4" to 1" Adjustable Tap Wrench, #0 to 3/8" T-Handle Tap Wrench and 1 Screwdriver.	Wood	2000R38
High Speed Steel TAPS: USA DIES: Import	63 pcs (UNC & UNF)	Taps & Dies: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-12, & 1/8-27, 1/4-18 (NPT). Also: 1" & 2" Round Die Stock, #7 to 1/2" & 1/4" to 1" Adjustable Tap Wrench, #0 to 3/8" T-Handle Tap Wrench and 2 Screwdrivers.	Wood	2000R63
High Speed Steel TAPS: USA DIES: Import	20 pcs (UNC)	Taps & Dies: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4. Also: 1-1/2" Round Die Stock, #7 to 1/2 Adjustable Tap Wrench, #12 to 1/2" T-Handle Tap Wrench, and 1 Screwdriver.	Wood	2000RC20
High Speed Steel TAPS: USA DIES: Import	20 pcs (UNF)	Taps & Dies: 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4. Also: 1-1/2" Round Die Stock, #7 to 1/2 Adjustable Tap Wrench, #12 to 1/2" T-Handle Tap Wrench, and 1 Screwdriver.	Wood	2000RF20

* UNF threads are Unified fine pitch threads, UNC threads are Unified coarse pitch threads.



2800E36



3300EC10



3350C20

Material	Pieces	Includes	Case	Order No.
Pipe Tap & Die Set				
Carbon	12 pcs (NPT)	Taper Pipe Taps: 1/8-27, 1/4-18, 3/8-18, 1/2-14, 3/4-14, 1 - 11-1/2. Hexagon Pipe Dies: 1/8-27, 1/4-18, 3/8-18, 1/2-14, 3/4-14, 1 - 11-1/2.	Plastic	2700C12
Tap & Die Set				
High Speed Steel	40 pcs (UNC & UNF)	4-40 thru 1/2", Round Adjustable Dies	Plastic	2000E40
Carbon	36 pcs (Metric)	5mm thru 12mm, Round Adjustable and Hex Dies	Plastic	2800C36
High Speed Steel	36 pcs (Metric)	5mm thru 12mm, Round Adjustable Dies	Plastic	2800E36
Hexagon Die Sets (Dies Only)				
High Speed Steel	20 pcs (UNC & UNF)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3300E20
High Speed Steel	10 pcs (UNC)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3300EC10
High Speed Steel	10 pcs (UNF)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3300EF10
Carbon	20 pcs (UNC & UNF)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3350C20
Carbon	10 pcs (UNC)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3350CC10
Carbon	10 pcs (UNF)	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, & 1"	Wood	3350CF10

3000DS Die Stocks
3 Screw Type

Designed for use with round adjustable split dies.



3000DS

Size	Overall Length	3000DS Order No.
13/16"	7"	3000DS1
1"	8 1/4"	3000DS2
1-1/2"	11 3/4"	3000DS3
2"	15 1/2"	3000DS4
2-1/2"	19"	3000DS5
3"	22 1/2"	3000DS6