

Combined **Drill** & Countersink (Center Drill)

HIGH SPEED STEEL
Bright

PACKAGING:
All sizes are individually packaged.

Series 3500



PLAIN TYPE / 60° ANGLE

When metal parts are machined on centers, as in turning or cylindrical grinding, it is always necessary to drill and countersink the center holes to serve as seats or bearings in the machine centers. Plain Type is the most commonly used combined drill & countersink.



3500

Size	Body Dia.	Overall Length	Drill Size	3500 EDP No.
000	1/8"	1-1/4"	.020	350A000
00	1/8"	1-1/4"	.025	350AA00
0	1/8"	1-1/4"	1/32"	350AAB0
1	1/8"	1-1/4"	3/34"	350A001
2	3/16"	1-7/8"	5/64"	350A002
3	1/4"	2"	7/64"	350A003

Size	Body Dia.	Overall Length	Drill Size	3500 EDP No.
4	5/16"	2-1/8"	1/8"	350A004
5	7/16"	2-3/4"	3/16"	350A005
6	1/2"	3"	7/32"	350A006
7	5/8"	3-1/4"	1/4"	350A007
8	3/4"	3-1/2"	5/16"	350A008

Series 3500E

PLAIN & BELL TYPE / 60° ANGLE

When metal parts are machined on centers, as in turning or cylindrical grinding, it is always necessary to drill and countersink the center holes to serve as seats or bearings in the machine centers.

Plain Type is the most commonly used combined drill & countersink.

Bell Type is used if the parts to be machined are to pass through a number of subsequent handlings, where there is danger of marring the edges of the center holes. They have an additional small 120° chamfer to protect the edges of the 60° hole.



3500E Plain



3500E Bell Type

Size	Body Dia.	Overall Length	Drill Size	Plain EDP No.
1	1/8"	1-1/4"	3/64"	350E001
2	3/16"	1-7/8"	5/64"	350E002
3	1/4"	2"	7/64"	350E003
4	5/16"	2-1/8"	1/8"	350E004
5	7/16"	2-3/4"	3/16"	350E005
6	1/2"	3"	7/32"	350E006
7	5/8"	3-1/4"	1/4"	350E007
8	3/4"	3-1/2"	5/16"	350E008

Size	Body Dia.	Overall Length	Drill Size	Bell EDP No.
11	1/8"	1-1/4"	3/64"	350E011
12	3/16"	1-7/8"	1/16"	350E012
13	1/4"	2"	3/32"	350E013
14	5/16"	2-1/8"	7/64"	350E014
15	7/16"	2-3/4"	5/32"	350E015
16	1/2"	3"	3/16"	350E016
17	5/8"	3-1/4"	7/32"	350E017
18	3/4"	3-1/2"	1/4"	350E018



Hand Taps

HIGH SPEED STEEL
Machine Screw / Bright



PACKAGING:

#0 thru 1/4" - 12 per pack

9/16" thru 1" - 3 per pack

5/16" thru 1/2" - 6 per pack

1-1/8" and up - individually packaged

2000

TAPER, PLUG & BOTTOMING / THROUGH OR BLIND HOLE

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

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000 EDP 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

Continued on next page

Hand Taps

HIGH SPEED STEEL
Fractional / Bright



PACKAGING:

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

2000 continued

TAPER, PLUG, BOTTOMING / THROUGH OR BLIND HOLE

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000 EDP 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

Taps



Hand Taps

HIGH SPEED STEEL
Fractional / Bright

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

2000E continued

TAPER, PLUG, BOTTOMING / THROUGH OR BLIND HOLE

Size	NC	NF	Overall Length	Length of Thread	No. of Flutes	Pitch Dia. Limits	2000E EDP 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

Taps

