

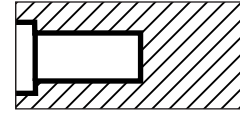
# 90° ANGLE STEP DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

High Speed Steel 90° Angle Step Drills are designed for drilling and counterboring 90° cap screw clearance holes in one operation, saving machine time and reducing set up time. They can be resharpened or modified for a special length of step and are available in jobber length or taper length drill styles.



## For Drilling 90° Holes and Counterboring Cap Screw Clearance Holes

SCREW SIZE	MINOR DIA.	MAJOR DIA.	STEP LENGTH	SHANK DIA.	HIGH SPEED STEEL		
					JOBBER LENGTH 90°		ITEM NO. SDJL90-
					FLUTE LENGTH	OVERALL LENGTH	
#4	.136	7/32	3/8	7/32	2-1/2	3-3/4	\$11.64
#5	.141	#1	3/8	#1	2-5/8	3-7/8	12.44
#6	.150	1/4	1/2	1/4	2-3/4	4	13.22
#8	.178	"L"	1/2	"L"	2-15/16	4-1/4	15.18
#10	.204	"Q"	5/8	"Q"	3-7/16	4-3/4	16.48
1/4	9/32	13/32	11/16	13/32	3-7/8	5-1/4	19.10
5/16	11/32	1/2	3/4	1/2	4-1/2	6	46.48
3/8	13/32	19/32	7/8	19/32	5-3/16	7-1/8	36.36
7/16	15/32	11/16	1	21/32	5-5/8	7-5/8	43.98
*1/2	17/32	25/32	1	25/32	3-1/4	5-1/8	50.66
*5/8	21/32	31/32	1	29/32	3-7/8	5-7/8	63.50

\*Shorter than jobber length.

Reduced 1/2" shank available on screw sizes 3/8 to 5/8. (Add \$3.00)

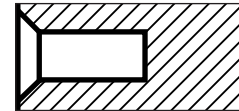
# 45° ANGLE STEP DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

High Speed Steel 45° Angle Step Drills are designed for drilling 45° chamfered holes to be tapped in one operation. The chamfered hole ensures alignment of tap threads and should always be used with thread forming taps as they displace metal above the mouth of the hole. They can be resharpened or modified for a special length of step and are available in jobber length or taper length drill styles.



## For Drilling 45° Chamfered Holes to be Tapped (to produce approx. 70° thread)

SCREW SIZE	MINOR DIA.	MAJOR DIA.	STEP LENGTH	SHANK DIA.	HIGH SPEED STEEL		
					JOBBER LENGTH 45°		ITEM NO. SDJL45-
					FLUTE LENGTH	OVERALL LENGTH	
4-40	.089	.1285	3/8	.1285	1-5/8	2-3/4	\$11.50
5-40	.101	9/64	1/2	9/64	1-3/4	2-7/8	12.30
6-32	.109	5/32	1/2	5/32	2	3-1/8	12.32
8-32	.136	3/16	1/2	3/16	2-5/16	3-1/2	12.62
8-36	.136	3/16	1/2	3/16	2-5/16	3-1/2	12.80
10-24	.152	1/4	5/8	1/4	2-3/4	4	13.60
10-32	.161	1/4	5/8	1/4	2-3/4	4	13.60
12-24	.179	9/32	11/16	9/32	2-15/16	4-1/4	15.58
1/4-20	.204	21/64	13/16	21/64	3-5/16	4-5/8	16.72
1/4-28	.218	21/64	13/16	21/64	3-5/16	4-5/8	16.72
5/16-18	.261	13/32	15/16	13/32	3-7/8	5-1/4	19.10
5/16-24	.272	13/32	15/16	13/32	3-7/8	5-1/4	19.10
3/8-16	.316	31/64	1	31/64	4-3/8	5-7/8	25.26
3/8-24	.339	31/64	1	31/64	4-3/8	5-7/8	25.26
7/16-14	.375	17/32	1-1/16	17/32	4-13/16	6-5/8	34.78
7/16-20	.390	17/32	1-1/16	17/32	4-13/16	6-5/8	34.78
1/2-13	.437	5/8	1-1/16	5/8	5-3/16	7-1/8	41.18
1/2-20	.452	5/8	1-1/16	5/8	5-3/16	7-1/8	41.18
5/8-11	.531	3/4	1-1/16	3/4	5-5/8	7-5/8	44.36

Reduced 1/2" shank available on screw sizes 7/16-14 to 5/8-11. (Add \$3.00)