

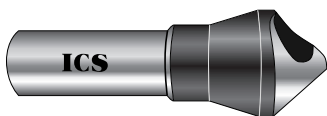
# HIGH SPEED STEEL ZERO FLUTE (DEBURRING) COUNTERSINKS

ICS USA

GENERAL PURPOSE

RIGHT HAND CUT

STRAIGHT SHANK



#0 DOUBLE END -DE

AXIAL RELIEF

High Speed Steel Zero Flute Countersinks are designed for countersinking and deburring operations. The single cutting edge removes stock quickly and prevents chatter. They can be resharpened by using an Axial Relieving Fixture or by using a small mounted grinding wheel and inserting it into the hole. Also known as Anti-Vibration Through-Hole Countersinks.

SIZE NO.	SHANK DIA.	OVERALL LENGTH	HOLE SIZE RANGE		ITEM NO.				PRICE EACH
			SMALL DIA.	LARGE DIA.	60°	82°	90°	100°	
0	1/4	1-3/4	1/16	15/64	CSK060-#0	CSK082#0	CSK090-#0	CSK0100-#0	\$ 13.40
0	1/4	1-3/4	1/16	15/64	CSK060-#0-DE	CSK082-#0-DE	CSK090-#0-DE	CSK0100-#0-DE	12.94
1	1/4	1-3/4	5/32	13/32	CSK060-#01	CSK082-#01	CSK090-#01	CSK0100-#01	15.02
2	1/4	2	3/16	17/32	CSK060-#02	CSK082-#02	CSK090-#02	CSK0100-#02	16.20
3	1/2	2-3/4	5/16	25/32	CSK060-#03	CSK082-#03	CSK090-#03	CSK0100-#03	26.38
4	1/2	3	9/16	1-1/16	CSK060-#04	CSK082-#04	CSK090-#04	CSK0100-#04	40.18
5	1/2	3-3/4	5/8	1-15/32	-	CSK082-#05	-	-	64.68
6	5/8	4	3/4	1-3/4	-	CSK082-#06	-	-	96.78
7	5/8	4-3/8	1	2	-	CSK082-#07	-	-	116.78
8	3/4	4-3/4	1-1/4	2-1/2	-	CSK082-#08	-	-	137.54

DE = Double End

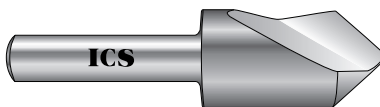
# HIGH SPEED STEEL SINGLE FLUTE COUNTERSINKS

ICS USA

GENERAL PURPOSE

RIGHT HAND CUT

STRAIGHT SHANK



RADIAL RELIEF

High Speed Steel Single Flute Countersinks should be used when multi-flute countersinks chatter or the hole is too small for a multi-flute countersink to enter. Use for machine and portable work when operating at higher speeds. Drilled hole should be at least 10% of the diameter of countersink. Single flute countersinks are available with 60 degree, 82 degree, 90 degree, 100 degree, 110 degree and 120 degree point angles. They are also available in 5 piece sets and 6" length.

SIZE NO.	SHANK DIA.	OVERALL LENGTH	ITEM NO.						PRICE EACH
			CENTERLINE ANGLE / INCLUDED ANGLE						
			30° / 60°	41° / 82°	45° / 90°	50° / 100°	55° / 110°	60° / 120°	
1/8	1/8	1-1/2	CSK160-008	CSK182-008	CSK190-008	CSK100-008	CSK110-008	CSK120-008	\$ 6.72
3/16	3/16	1-1/2	CSK160-012	CSK182-012	CSK190-012	CSK100-012	CSK110-012	CSK120-012	6.72
1/4	3/16	1-1/2	CSK160-016	CSK182-016	CSK190-016	CSK100-016	CSK110-016	CSK120-016	6.72
5/16	1/4	1-7/8	CSK160-020	CSK182-020	CSK190-020	CSK100-020	CSK110-020	CSK120-020	7.26
3/8	1/4	1-7/8	CSK160-024	CSK182-024	CSK190-024	CSK100-024	CSK110-024	CSK120-024	8.58
1/2	1/4	2	CSK160-032	CSK182-032	CSK190-032	CSK100-032	CSK110-032	CSK120-032	12.32
1/2	3/8	2	CSK160-032A	CSK182-032A	CSK190-032A	CSK100-032A	CSK110-032A	CSK120-032A	12.32
5/8	3/8	2-1/4	CSK160-040	CSK182-040	CSK190-040	CSK100-040	-	-	17.14
3/4	3/8	2-1/2	CSK160-048	CSK182-048	CSK190-048	CSK100-048	CSK110-048	CSK120-048	24.08
3/4	1/2	2-1/2	CSK160-048A	CSK182-048A	CSK190-048A	CSK100-048A	CSK110-048A	CSK120-048A	22.96
7/8	1/2	2-1/2	CSK160-056	CSK182-056	CSK190-056	CSK100-056	CSK110-056	CSK120-056	33.28
1	1/2	2-3/4	CSK160-100	CSK182-100	CSK190-100	CSK100-100	CSK110-100	-	36.44
1-1/4	1/2	3-3/8	CSK160-116	CSK182-116	CSK190-116	CSK100-116	CSK110-116	-	62.40
1-1/4	3/4	3-3/8	CSK160-116A	CSK182-116A	CSK190-116A	CSK100-116A	CSK110-116A	-	62.40
1-1/2	1/2	3-1/2	CSK160-132	CSK182-132	CSK190-132	CSK100-132	-	-	87.36
1-1/2	3/4	3-1/2	CSK160-132A	CSK182-132A	CSK190-132A	CSK100-132A	CSK110-132A	-	78.40
2	1/2	4	CSK160-200	CSK182-200	CSK190-200	CSK100-200	-	-	151.46
2	3/4	4	CSK160-200A	CSK182-200A	CSK190-200A	CSK100-200A	CSK110-200A	-	142.50
2-1/2	3/4	5	-	-	CSK190-232	-	-	-	313.60
3	3/4	5-1/4	CSK160-300	-	CSK190-300	-	-	-	392.00