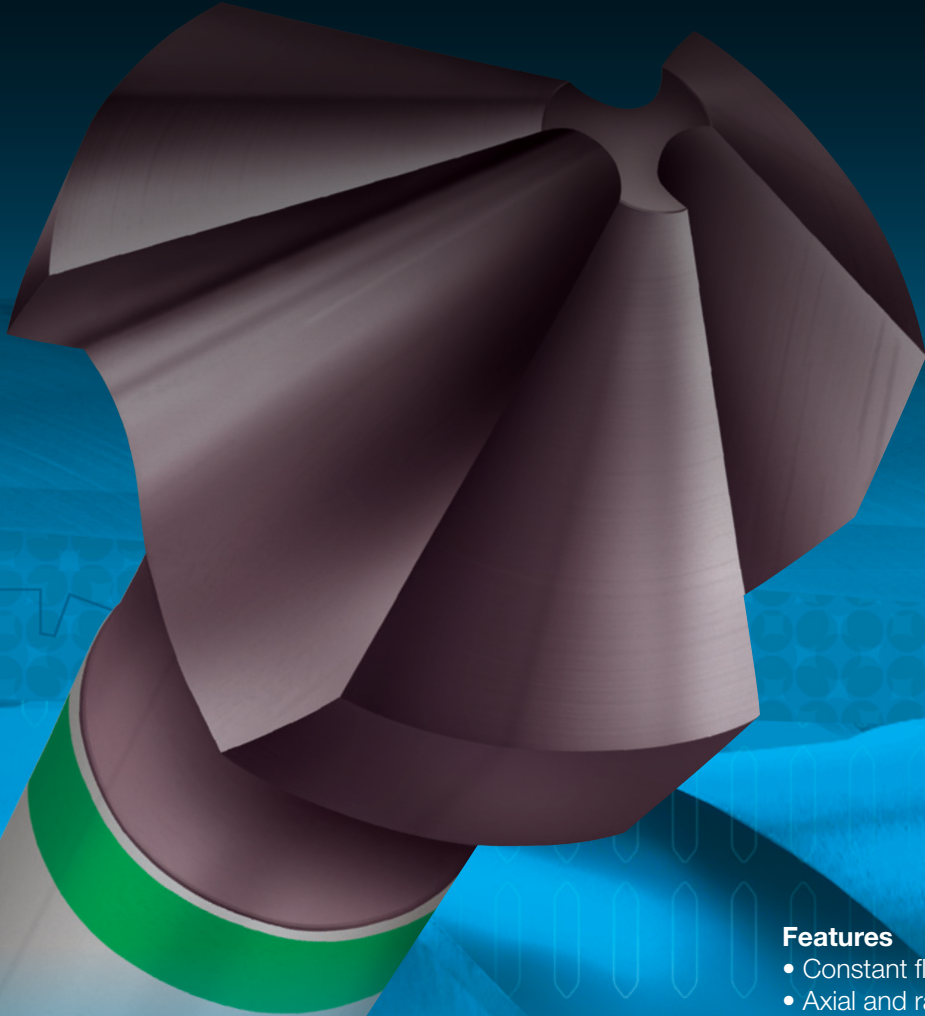


Smooth cutting...

Perfect chamfering



Features

- Constant flute rake along entire cutting face
- Axial and radial adjusted relief
- Higher dimensional precision
- Improved and sharper cutting edge
- Cobalt grade high speed steel

Benefits

- Chatter-free countersinking and deburring
- Longer lasting
- Excellent chip flow

DIN335 90°
COUNTERSINKS

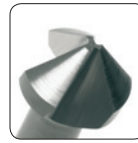
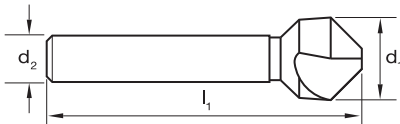
suttontools
world class cutting tools



Countersinks 3 Flute, 90°

suttontools

- Deburring
- Countersinking / Counterboring screw holes
- For Countersunk screws acc. to DIN 963, 964, 965, 966, 7513, 7516
- For Countersunk screws acc. to ISO 2009, 2010, 7046-1, 7046-2, 7047
- Chamfering of tapping holes
- For use in machine applications.
- Type N - For non-ferrous, Type UNI - For difficult to machine materials



Catalogue Code
Discount Group
Material
Surface Finish
Colour Ring & Application
Geometry
Point Type
Shank Tolerance

C107	C108
A1106	A1108
HSS Co	HSS Co
Brt	TAIN
N	UNI
-	-
90°	90°
h9	h9

Size Ref.	d ₁	Screw Head	l ₁	d ₂	Pieces
0430	4.3	M2	40	4	
0530	5.3	M2.5	40	4	
0630	6.3	M3	45	5	
0730	7.3	M3.5	50	6	
0800	8.0		50	6	
0840	8.4	M4	50	6	
0940	9.4	M5	50	6	
1000	10.0		50	6	
1040	10.4		50	6	
1150	11.5	M6	56	8	
1240	12.4		56	8	
1340	13.4		56	8	
1500	15.0		60	10	
1650	16.5	M8	60	10	
1900	19.0	M10	63	10	
2050	20.5		63	10	
2300	23.0		67	10	
2500	25.0		67	10	
3000	30.0		71	12	
3100	31.0		71	12	



C107



C108

Item #	Item #
C107 0430	C108 0430
C107 0530	C108 0530
C107 0630	C108 0630
C107 0730	C108 0730
C107 0800	C108 0800
C107 0840	C108 0840
C107 0940	C108 0940
C107 1000	C108 1000
C107 1040	C108 1040
C107 1150	C108 1150
C107 1240	C108 1240
C107 1340	C108 1340
C107 1500	C108 1500
C107 1650	C108 1650
C107 1900	C108 1900
C107 2050	C108 2050
C107 2300	C108 2300
C107 2500	C108 2500
C107 3000	C108 3000
C107 3100	C108 3100

0004 6.3. 10.4. 16.5 & 20.5 4 C107 0004 C108 0004

ISO	VDI 3323	Material	Condition	HB	N/mm ²	Vc	Feed #	Vc	Feed #	
P	1	Steel - Non-alloy, cast & free cutting	~ 0.15 %C	A	125	440	36	3	44	3
	2		~ 0.45 %C	A	190	640	30	3	36	3
				QT	250	840	30	2	36	2
	4		~ 0.75 %C	A	270	910	30	2	36	2
	5			QT	300	1010	14	1	16	1
	6	Steel - Low alloy & cast < 5% of alloying elements		A	180	610	30	2	36	2
	7			QT	275	930	18	2	22	2
	8			QT	300	1010	14	1	16	1
	9			QT	350	1180	-	-	10	1
	10	Steel - High alloy, cast & tool		A	200	680	14	1	16	1
	11			HT	325	1100	-	-	10	1
12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680	10	1	12	1	
13		Martensitic	QT	240	810	-	-	10	1	
M	14.1	Stainless Steel	Austenitic	AH	180	610	12	2	14	2
	14.2		Duplex		250	840	10	1	12	1
	14.3		Precipitation Hardening		250	840	10	1	12	1
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	24	2	28	2
	16		Pearlitic		260	880	24	2	28	2
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	20	2	25	2
	18		Pearlitic		250	840	20	2	25	2
	19	Cast Iron - Malleable	Ferritic		130	460	20	2	25	2
20		Pearlitic		230	780	20	2	25	2	
N	21	Aluminum & Magnesium - wrought alloy	Non Heat Treatable		60	210	48	4	58	4
	22		Heat Treatable	AH	100	360	48	4	58	4
	23	Aluminum & Magnesium - cast alloy <12% Si	Non Heat Treatable		75	270	36	4	44	4
	24		Heat Treatable	AH	90	320	36	4	44	4
	25	Al & Mg - cast alloy >12% Si	Non Heat Treatable		130	460	30	4	44	4
	26	Copper & Cu alloys (Brass/Bronze)	Free cutting, Pb > 1%		110	390	78	2	94	2
	27		Brass (CuZn, CuSnZn)		90	320	48	2	58	2
	28		Bronze (CuSn)		100	360	60	2	72	2
29	Non-metallic - Thermosetting & fiber-reinforced plastics					30	4	44	4	
S	31	High temp. alloys	Fe based	A	200	680	5	2	8	2
	32			AH	280	950	4	2	5	2
	33		Ni / Co based	A	250	840	5	2	8	2
	34			AH	350	1180	-	-	5	2
	35			C	320	1080	-	-	5	2
	36	Titanium & Ti alloys	CP Titanium		400 MPa		8	3	10	3
	37.1		Alpha alloys		860 MPa		7	3	9	3
	37.2		Alpha / Beta alloys	A	960 MPa		7	3	9	3
	37.3			AH	1170 MPa		-	-	8	2
	37.4		Beta alloys	A	830 MPa		7	3	9	3
37.5			AH	1400 MPa		-	-	8	2	
H	40	Cast Iron	Chilled	C	400	1350	24	2	28	2

LEGEND
 n = rev. per minute
 v_c = cutting speed (m/min)
 f = feed (mm/rev)
 v_f = feed rate (mm/min)
 z = no. cutting edges

FORMULAS
 $n = (v_c \times 1000) / (\emptyset \times \pi)$
 $v_c = (\emptyset \times \pi \times n) / 1000$
 $v_f = f \times n$

Countersink	Feed Number			
	1	2	3	4
0				
4.3-6.3	0.04	0.06	0.09	0.13
7.3-8.4	0.05	0.08	0.13	0.16
9.4-10.4	0.06	0.09	0.14	0.17
11.5-13.4	0.06	0.1	0.15	0.19
15-16.5	0.07	0.11	0.17	0.21
19-20.5	0.08	0.13	0.18	0.23
23-25	0.09	0.15	0.21	0.26
30-40	0.12	0.17	0.24	0.30

Notes: For calculating revolutions per minute, apply hole diameter
 For calculating feed, apply large end diameter

