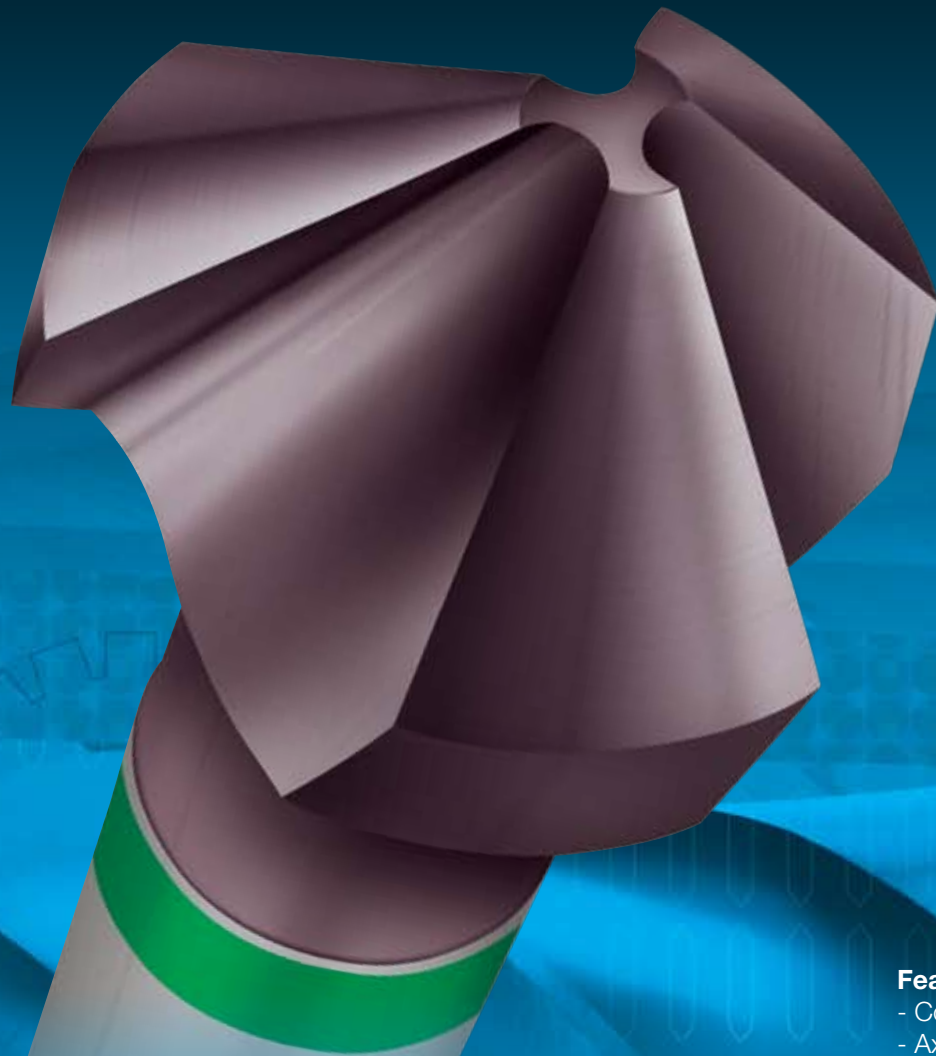


Smooth cutting...

Clean finish



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 de-burring
- Longer lasting
- Excellent chip flow

DIN335 ***90° COUNTERSINKS***

for an on-site demonstration contact
Sutton Tools on 1800 335 350

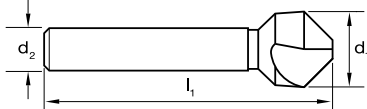
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Countersink 90° - 3 Flute



- De-burring
- 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	C107	C108
Discount Group	A1106	A1108
Material	HSS Co	HSS Co
Surface Finish	Brt	Futura Nano
Colour Ring & Application	N	UNI
Geometry	-	-
Point Type	90°	90°
Shank Tolerance	h9	h9

d ₁	Screw Head	l ₁	d ₂	Pieces	Price	Item #	Price	Item #
4.3	M2	40	4			434889		439198
5.3	M2.5	40	4			436692		439204
6.3	M3	45	5			436708		439211
7.3	M3.5	50	6			436715		439228
8		50	6			436722		439235
8.4	M4	50	6			436739		439242
9.4	M5	50	6			436746		439259
10		50	6			436753		439266
10.4		50	6			436760		439273
11.5	M6	56	8			436777		439280
12.4		56	8			436784		439297
13.4		56	8			436791		439303
15		60	10			436807		439310
16.5	M8	60	10			436814		439327
19	M10	63	10			436821		439334
20.5		63	10			436838		439341
23		67	10			436845		439358
25		67	10			436852		439365
30		71	12			436869		439372
31		71	12			436876		439389



SETS	Contents:				
4 Piece	6.3, 10.4, 16.5, 20.5	4		436890	439402

Materials	Material examples	Coolant	Vc (m/min)	feed no.	Vc (m/min)	feed no.
Free-cutting steel		S	36	3	44	3
Structural steels		S	30	3	36	3
Carbon steels	1020, 1024, 1045, 1060	S	30	2	36	2
Alloy steels < 850-1200 N/mm ²	4140, O1, A2, D3, M42, P20	S	18	2	22	2
Alloy steels hard./temp. > 1200-1400 N/mm ²	EN26, O1, L6, M42, D3, 4140	S	14	1	16	1
Free machining stainless steel	416, 430F	0	12	2	14	2
Austenitic stainless steels	303, 304, 316, 317, 321	0	10	1	12	1
Cast iron ≤ 240 HB	GG10, GG20	S/A	24	2	28	2
Cast iron < 240 HB	GG25, GG40	S/A	24	2	28	2
Titanium unalloyed	Ti99.8	0	15	3	18	3
Titanium alloys	TiA164V4, TiA155n2	0	15	3	18	3
Nickel unalloyed	Nickel 200, Ni99.6	0	8	1	10	1
Nickel alloys < 850 N/mm ²	Monel 400, Hastelloy C, Inconel 600	0	8	1	10	1
Copper unalloyed		S	60	2	72	2
Short chip brass + phosphor bronze + gun metal		S	48	2	58	2
Long chip brass		0	78	2	94	2
Al / Mg unalloyed		S	48	4	58	4
Al alloyed Si < 5%		S	48	4	58	4
Al alloyed Si > 1.5% < 10%		S	36	3	44	3

Feed No.	Feed Table (f) (mm/rev) C'Sink Ø								
	4.3 - 6.3	7.3 - 8.4	9.4 - 10.4	11.5 - 13.4	15 - 16.5	19 - 20.5	23 - 25	30 - 40	
1	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.12	
2	0.06	0.08	0.09	0.1	0.11	0.13	0.15	0.17	
3	0.09	0.13	0.14	0.15	0.17	0.18	0.21	0.24	
4	0.13	0.16	0.17	0.19	0.21	0.23	0.26	0.30	

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

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

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

