

Garant
Precision countersink with unequal spacing 90°, TiAlN, External Ø Dc: 16,5mm

Order data

Order number	150130 16,5
GTIN	4045197700728
Item class	11M

Description
Version:

All countersinks have 3 cutting edges. Special geometry with extremely unequal spacing and matching cutting edge preparation. Radially relief ground. Flutes ground from solid. Newly developed **special TiAlN coating** for long service life.

High-precision countersink, produced with tight manufacturing tolerances similar to DIN 335-C.

Advantage:

Very smooth cutting throughout the entire countersinking operation. Chatter-free running for perfect results and **optimum tool service life**.

Application:

High-precision countersinks for production of **exactly round 90° countersunk surfaces**.

Technical description

smallest countersink Ø for holes from	3.2 mm
Feed f in steel < 500 N/mm ²	0.18 mm/rev.
Shank tolerance	h9
External Ø	16.5 mm
for countersunk screws DIN 7991	M8
Shank Ø D _s	10 mm
Overall length L	60 mm
Number of cutting edges Z	3

Coating	TiAlN
Countersink tip angle	90 degrees
Tool material	HSS
Spacing of the countersink cutting edges	unequal spacing
Standard	DIN 335 C
Shank	Plain shank with h9
Through-coolant	no
Colour ring	green
Type of product	Stepped drill and countersink

User data

	Suitability	V _c	ISO code
Alu plastics	suitable	75 m/min	N
Aluminium (short chipping)	suitable	75 m/min	N
Alu > 10% Si	suitable	50 m/min	N
Steel < 500 N/mm ²	suitable	65 m/min	P
Steel < 750 N/mm ²	suitable	50 m/min	P
Steel < 900 N/mm ²	suitable	30 m/min	P
Steel < 1100 N/mm ²	suitable	18 m/min	P
Steel < 1400 N/mm ²	suitable	8 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	8 m/min	H
INOX < 900 N/mm ²	suitable	16 m/min	M
INOX > 900 N/mm ²	suitable	10 m/min	M
Ti > 850 N/mm ²	suitable only under restricted conditions	12 m/min	S
GG(G)	suitable	25 m/min	K
CuZn	suitable	60 m/min	N

Graphite, GRP, CRP	suitable only under restricted conditions
Uni	suitable
wet maximum	suitable
dry	suitable only under restricted conditions