

**Garant**

**High-precision countersink set with 3 drive flats No. 150132 in a box 90°, TiAlN, Number of countersinks: 5**

**Order data**

Order number	150303 5
GTIN	4045197912107
Item class	11M

**Description****Version:**

High-precision countersink No. 150132. All countersinks **also have 3 drive flats** on the shank for use in a 3-jaw chuck.

**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 **precise, round 90° countersunk surfaces**.

**Content:**

1 pc. each countersink: Sizes 6.3; 10.4; 12.4; 16.5; 20.5

**Supplied with:**

5-piece precision countersink set in a **round box**.

**Technical description**

Number of cutting edges Z	3
Number of countersinks	5
Coating	TiAlN
Countersink tip angle	90 degrees
Tool material	HSS
Spacing of the countersink cutting edges	unequal spacing
Standard	DIN 335 C
Shank	Three clamping flats to h9
Colour ring	green
Type of product	Stepped drill and countersink

## User data

	Suitability	V <sub>c</sub>	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 <sup>2</sup>	suitable	65 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	50 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	18 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	8 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	8 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	16 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	10 m/min	M
Ti > 850 N/mm <sup>2</sup>	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

## Accessories

High-precision countersink with unequal spacing and 3 drive flats 90° External Ø Dc 6,3 mm	150132 6,3
High-precision countersink with unequal spacing and 3 drive flats 90° External Ø Dc 20,5 mm	150132 20,5
Handle for countersink with 3 drive flats Shank Ø 6 mm	150408 6
High-precision countersink with unequal spacing and 3 drive flats 90° External Ø Dc 12,4 mm	150132 12,4
High-precision countersink with unequal spacing and 3 drive flats 90° External Ø Dc 16,5 mm	150132 16,5
High-precision countersink with unequal spacing and 3 drive flats 90° External Ø Dc 10,4 mm	150132 10,4
Handle for countersink with 3 drive flats Shank Ø 8 mm	150408 8