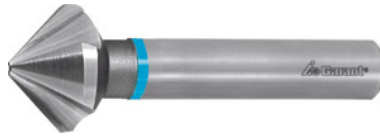


**Garant**
**High-precision countersink 90°, uncoated, External Ø Dc: 19mm**

**Order data**

Order number	150378 19
GTIN	4045197086389
Item class	11M

**Description**
**Version:**

**All countersinks have 3 cutting edges**, radially relieved.

Flutes are ground from solid.

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

**Technical description**

smallest countersink Ø for holes from	3.5 mm
External Ø	19 mm
Shank tolerance	h9
for countersunk screws ISO 2009, 2010, 7046, 7047	M10
Feed f in stainless steel < 900 N/mm <sup>2</sup>	0.14 mm/rev.
Pre-drill Ø	3.5 mm
Shank Ø D <sub>s</sub>	10 mm
Overall length L	63 mm
Number of cutting edges Z	3
Coating	uncoated
Countersink tip angle	90 degrees
Tool material	HSS E

Standard	DIN 335 C
Shank	Plain shank with h9
Through-coolant	no
Colour ring	blue
Type of product	Stepped drill and countersink

### User data

	Suitability	V <sub>c</sub>	ISO code
Alu plastics	suitable	70 m/min	N
Aluminium (short chipping)	suitable only under restricted conditions	33 m/min	N
Alu > 10% Si	suitable only under restricted conditions	25 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable only under restricted conditions	28 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	27 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	27 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	8 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable only under restricted conditions	4 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	7 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	7 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	7 m/min	S
GG(G)	suitable only under restricted conditions	12 m/min	K
CuZn	suitable only under restricted conditions	65 m/min	N
wet minimum	suitable		
dry	suitable only under restricted conditions		

