

**Garant**
**Subland drill HSS 90°, vaporised, for threads: M12**

**Order data**

Order number	117060 M12
GTIN	4045197035837
Item class	11C

**Description**
**Version:**

**Drill and counterbore each with its own chip flutes and guide chamfers.** This means the profile of the stepped drill is retained even after repeated regrinding.

**Application:**

**Tapping hole and countersink** are produced **in one operation**, precisely aligned.

For drilling tapping holes to DIN 336 sheet 1 with 90° countersinking (similar to DIN 69, medium version).

No. of teeth Z: 2

Through-coolant: no

Ø D<sub>1</sub> 1st step with chamfer h9: 10.2 mm

Ø D<sub>2</sub> 2nd step with chamfer h8: 13.5 mm

Step height L<sub>1</sub> 1st step: 30 mm

Flute length L<sub>c</sub>: 108 mm

Overall length L: 160 mm

Shank Ø D<sub>s</sub>: 13.5 mm

**Technical description**

Feed f in steel < 750 N/mm <sup>2</sup>	0.16 mm/rev.
Ø D <sub>1</sub> 1st step with chamfer h9	10.2 mm
Flute length L <sub>c</sub>	108 mm
Ø D <sub>2</sub> 2nd step with chamfer h8	13.5 mm
for threads	M12
Shank Ø D <sub>s</sub>	13.5 mm
Overall length L	160 mm

No. of teeth Z	2
Through-coolant	no
Step height L <sub>1</sub> 1st step	30 mm
Coating	vaporised
Tool material	HSS
Standard	DIN 8378
Tolerance nominal Ø	h9
Point angle	118 °
Shank	Parallel shank to h8
Helix angle	20-30 °
Countersink angle	90 °
Shank tolerance	h8
Colour ring	without
Application for type of drilling	for blind hole and through hole
Type of product	Stepped drill

## User data

	Suitability	V <sub>c</sub>	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	45 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	40 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	25 m/min	P
GG(G)	suitable	25 m/min	K
CuZn	suitable only under restricted conditions	80 m/min	N
Oil	suitable		
wet maximum	suitable		

