

**Garant**
**Centre drill HSS-E R with flat, uncoated, Nominal  $\varnothing$  DC k12: 4mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 111450 4      |
| GTIN         | 4045197000743 |
| Item class   | 11A           |

**Description**
**Version:**

Ground from solid and relief ground, spiral fluted.  
Features of centre drills with radius form R: See No. 111350.

**Technical description**

|   |              |
|---|--------------|
| for workpiece $\varnothing$             | 40 – 63 mm   |
| Feed f in steel < 900 N/mm <sup>2</sup> | 0.03 mm/rev. |
| s – 0.1                                 | 8.4 mm       |
| Shank tolerance                         | h7           |
| Number of cutting edges Z               | 2            |
| Nominal $\varnothing$ D <sub>c</sub>    | 4 mm         |
| Shank $\varnothing$ D <sub>s</sub>      | 10 mm        |
| Overall length L                        | 55 mm        |
| Coating                                 | uncoated     |
| Tool material                           | HSS E        |
| Standard                                | DIN 333      |
| Type                                    | R            |
| Tolerance nominal $\varnothing$         | k12          |
| Countersink angle with radius           | 60 degrees   |

|                   |                      |
|-------------------|----------------------|
| Cutting direction | right-hand           |
| Shank             | Parallel shank to h7 |
| Through-coolant   | no                   |
| Colour ring       | without              |
| Type of product   | Centre drill         |

### User data

|                                | Suitability                               | V <sub>c</sub> | ISO code |
|--------------------------------|---|----------------|----------|
| Alu plastics                   | suitable                                  | 70 m/min       | N        |
| Aluminium (short chipping)     | suitable                                  | 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        |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 10 m/min       | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable                                  | 8 m/min        | P        |
| INOX < 900 N/mm <sup>2</sup>   | suitable                                  | 12 m/min       | M        |
| INOX > 900 N/mm <sup>2</sup>   | suitable                                  | 8 m/min        | M        |
| GG(G)                          | suitable only under restricted conditions | 25 m/min       | K        |
| CuZn                           | suitable                                  | 80 m/min       | N        |
| Oil                            | suitable                                  |                |          |
| wet maximum                    | suitable                                  |                |          |