



Original BDS core drill from own production

Product quality is not a coincidence

BDS produces core drills at their facility in Mönchengladbach, with all the benefits for users worldwide:

- ▶ High manufacturing precision and competence
- ▶ Use of steels from well-known manufacturers
- ▶ Short-term availability and fast delivery

BDS magnetic core drilling machines and core drilling tools must be considered as a functional unit. Thus, the development of in-house core drill production was expedited right from the beginning in parallel to the production of the machines. This is why the core drills of BDS today are on top worldwide.

The correct tool for any application

The particularly comprehensive range of BDS core drilling tools is justified by the diversity of the applications and materials handled.

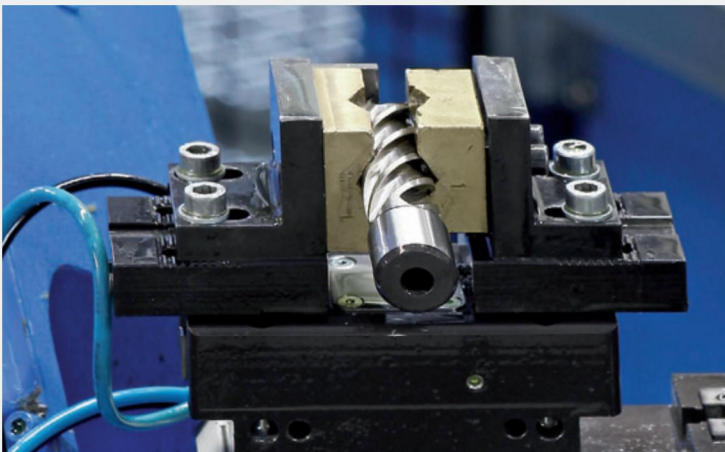
Starting with the HSS core drills of the standard range, the most comprehensive range of tools with short, long and extra-long core drills, there are those with hard coatings, the large group of carbide drills and, as the most recent development, HSS-Co 8 core drills with 8% of cobalt content.

Significant features of the BDS core drill tools are machining of full cuts and the high precision in geometry and concentricity associated with it, as well as optimised removal of shavings, high level of stability using qualitatively high-class types of steel. The VarioPLUS core drills with hard coatings ensure a high degree of wear resistance and long service life as a result of the good surface quality and hardness.

Know-how and technology – the recipe for quality

BDS produces high-performance tools on the most modern high-power grinding stations, which are partially based on in-house construction and program ideas and concepts and have been developed and built particularly for BDS.

The large production capacity set up at the corporate premises forms the basis of the high availability of the BDS core drill tools that are exported worldwide from Germany at present. The experience of our employees having put in many years of service contributes towards ensuring a significant part of the success.



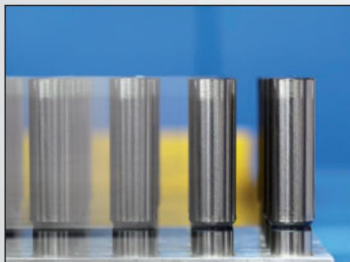
The BDS Core Drill Series

Fully ground core drills having different surface coatings, material designs and machining.



HSS-VarioPLUS series

High-strength fully ground core drills that are machined under the effect of plasma with a hard coating in the range of 2.5 μ . As a result, these tools have considerably longer life and more uniform removal of chips, particularly with long drills. An important aspect for occupational



HSS-Co 8 series

The objective of this most recent product development at BDS was to produce a range of core drills optimised for power with greater heat resistance and better protection against wear. The desired results were achieved by an enhanced proportion of cobalt in special steel. Combined with speed-controlled BDS magnetic core drilling machines, these core drills are adapted for high loads in fine-grained steels and rust-proof materials. The core drills can be reground whilst retaining their positive product characteristics.



HSS-Standard series

The BDS base range. This is where the professional user has the greatest depth of product range at his disposal.

- ▶ Tools with three different cutting depths: 30 mm, 55 mm and 110 mm
- ▶ Core drill diameters from 12 mm to 130 mm
- ▶ With Weldon arbor 19 mm or 32 mm

The BDS HSS-Standard range of core drills has long service life and high heat resistance by the use of high-performance steel. Drilling without excessive use of force characterises the tools of this all-round range.



Classification of BDS drill series and appropriate BDS cooling lubricants with materials.

Cutting oil BDS 5000
 Lubrication spray BDS 5200
 Cutting paste BDS 5500
 Cooling lubricant concentrate BDS 6000

	Cutting oil BDS 5000	Lubrication spray BDS 5200	Cutting paste BDS 5500	Cooling lubricant concentrate BDS 6000
Aluminium, non-ferrous metals				
HSS-Standard	•	•		
Steel < 500 N/m²				
HSS-Standard	•	•		
Carbide				•
Carbide PLUS				•
Fine-grain steel < 700 N/m²				
HSS-Co 8	•	•	•	
HSS-VarioPLUS	•	•	•	
Carbide				•
Carbide PLUS				•
Fine-grain steel < 1000 N/m²				
HSS-Co 8	•	•	•	
HSS-VarioPLUS	•	•	•	
Carbide				•
Carbide PLUS				•
Stainless steel, Inox				
HSS-Co 8	•	•	•	
Carbide				•
Carbide PLUS				•
Casting				
HSS-Co 8				•
HSS-Standard				•
Railway rails				
Carbide RAIL				•

Recommended cutting speed

Core drill series	Material	m/min
HSS-Co 8	Fine-grain steel	
	< 700 N/m ²	10 – 15
	< 1000 N/m ²	10 – 15
	Inox	10 – 15
	Casting (depending on type)	15 – 20
HSS-VarioPLUS	Fine-grain steel	
	< 700 N/m ²	10 – 15
	< 1000 N/m ²	10 – 15
HSS-Standard	Aluminium	20 – 30
	Steel	25
	Casting	10 – 20
Carbide	Steel/Fine-grain steel	
	< 500 N/m ²	35
	< 700 N/m ²	25
	< 1000 N/m ²	20
	Stainless, Inox	20
Carbide PLUS	Steel/Fine-grain steel	
	< 500 N/m ²	35
	< 700 N/m ²	25
	< 1000 N/m ²	20
	Stainless, Inox	20
Carbide RAIL	Railway rails	15 – 20



Carbide series

Hard-tipped core drills have become a successful range of tools worldwide.

BDS provides for the rising demand by expanding its range. Carbide core drills are manufactured as standard with cutting depths of 30 mm, 55 mm, 75 mm and 110 mm, with diameters of 14 mm to 150 mm.



Carbide PLUS series

Core drills of the Carbide PLUS range are coated with hard, wear-resistant material under the effect of plasma in another work step. Tools of this range are used preferably for machining stainless steel and in combination with the BDS 5000 drill emulsion.

Cutting speed:

$$V_c = \frac{d \times \pi \times n}{1000} = \text{m/min}$$

Speed:

$$n = \frac{v \times 1000}{d \times \pi} = \text{min}^{-1}$$

The Range of BDS Core Drills

All series, cutting depths and drill diameters available.

BDS core drills – professional quality for professional applications

BDS core drills are manufactured on up-to-date CNC-controlled grinding centres. This is the guarantee for consistent grinding, quality and cutting performance of all BDS drilling tools in the entire product spectrum.

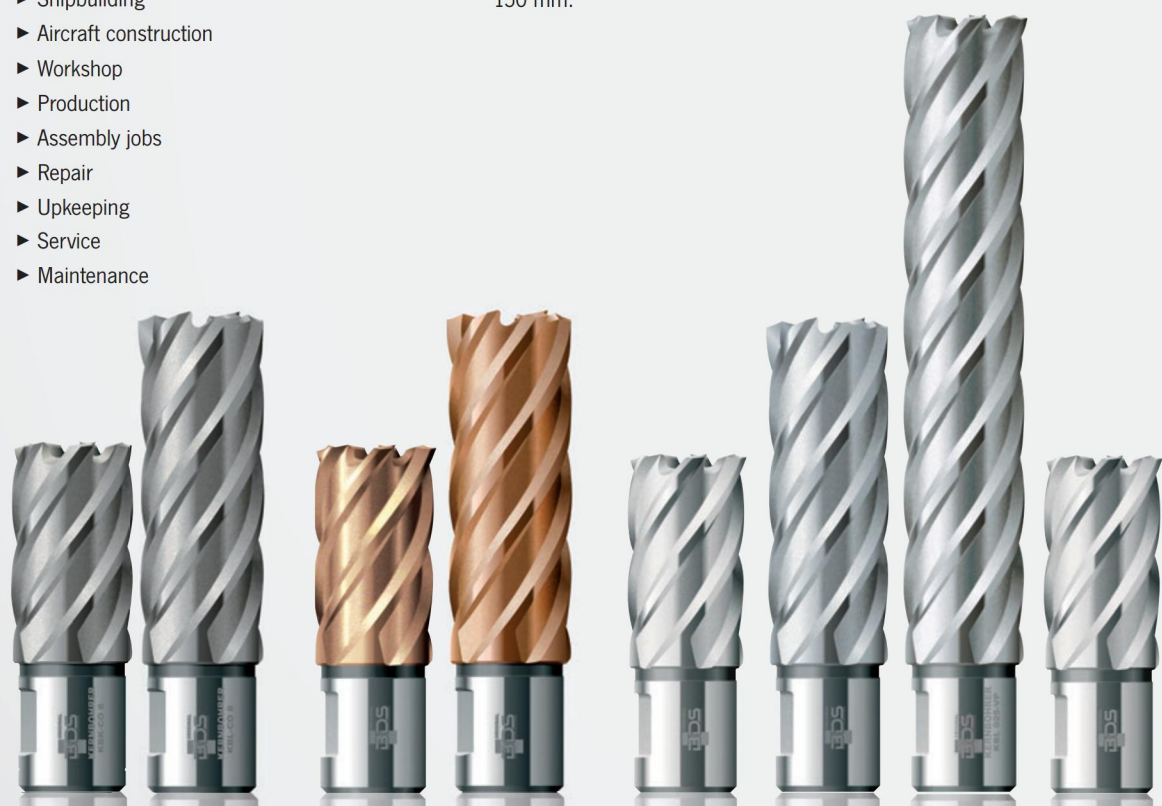
Key applications

BDS drilling tools are optimally adapted to all BDS magnetic core drilling machines and third-party products. There are economically attractive application possibilities in almost all areas of the metalworking industry with particular emphasis on:

- ▶ Structural steelwork engineering
- ▶ Overhead line construction
- ▶ Building construction
- ▶ Tank construction
- ▶ Plant construction
- ▶ Tool construction
- ▶ Pipeline construction
- ▶ Mechanical engineering
- ▶ Railway construction
- ▶ Mining
- ▶ Vehicle construction
- ▶ Shipbuilding
- ▶ Aircraft construction
- ▶ Workshop
- ▶ Production
- ▶ Assembly jobs
- ▶ Repair
- ▶ Upkeeping
- ▶ Service
- ▶ Maintenance

Extensive programme range

BDS core drilling tools are produced in five cutting depths of 35, 35, 55, 75 and 110 mm and with more than 94 different drill diameters from 12 mm to 150 mm.



HSS-Co 8 series		HSS-VarioPLUS series		HSS-Standard series			
KBK-CO	KBL-CO	KBK-VP	KBL-VP	KBK	KBL	KEL	KBK-Z
Cutting depth:	30 mm	55 mm	30 mm	55 mm	110 mm	30 mm	
Drill diameter:	12 – 60 mm	12 – 60 mm	12 – 60 mm	12 – 60 mm	12 – 100 mm	20 – 50 mm	1/2" – 2 1/16"

TOOL HOLDERS

19 mm Weldon shank 32 mm Weldon shank Quick-In shank



Tool holders:

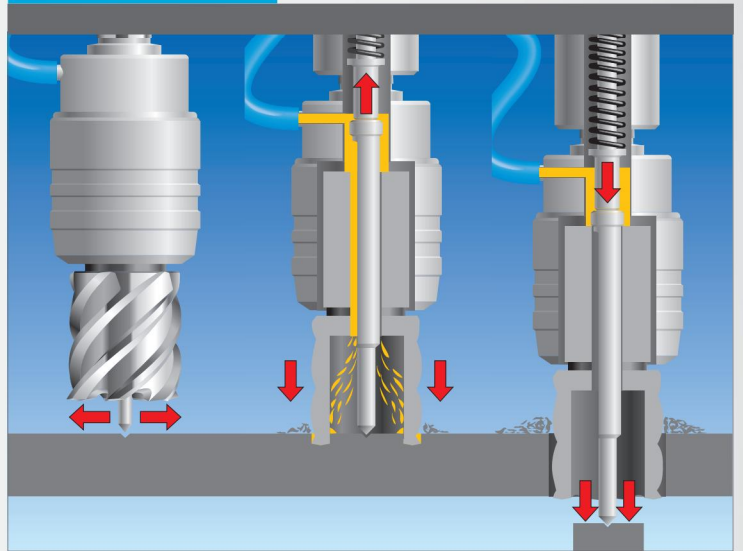
BDS core drilling tools are available with various tool holders. They fit in the KEYLESS quick change drill chuck system as well as in the industrial arbors MK 2, MK 3 and MK 4 with automatic or manual internal lubrication, which are also available in the range of accessories.

- ▶ Weldon shank holder
 - 19 mm ($\frac{3}{4}$ ")
 - 32 mm ($1\frac{1}{4}$ ")
- ▶ Quick-In holder



Carbide Series				Carbide PLUS Series	Carbide RAIL series	Quick-In series	
HKK	HKL	HKX-L	HKE-L	HKK-P	HKK-R	KBK-CO 8 F	HKK-F
30 mm	55 mm	75 mm	110 mm	30 mm	30 mm	35 mm	35 mm
14 – 150 mm	14 – 100 mm	18 – 120 mm	20 – 120 mm	14 – 60 mm	17 – 36 mm	12 – 60 mm	12 – 60 mm

EJECTOR PIN



Function of the ejector pin

- ▶ Centring: The ejector pin is exactly positioned to the centre punch mark. Switch the magnet on and the machine and tool are in the drilling position.
- ▶ Oiling: By means of the automatic internal lubrication, cutting oil is supplied via the ejector pin to the bit in just the right quantity.
- ▶ Ejecting: In the final stage, the ejector pin, pre-stressed by means of a spring, pushes the core out of the drill hole.