



# Bit Selector



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## How to use this document

This manual gives you a guideline for the usage of our different types of bits.

All of the bits mentioned in this document are field-tested by our drillers and are used all over the world in different formations.

When drilling with our rigs, you can use up to 150 Hertz of sonic power so all of our bits need to be extra tough. All of our bits are made of premium European steel and are designed to perform even in the toughest conditions.

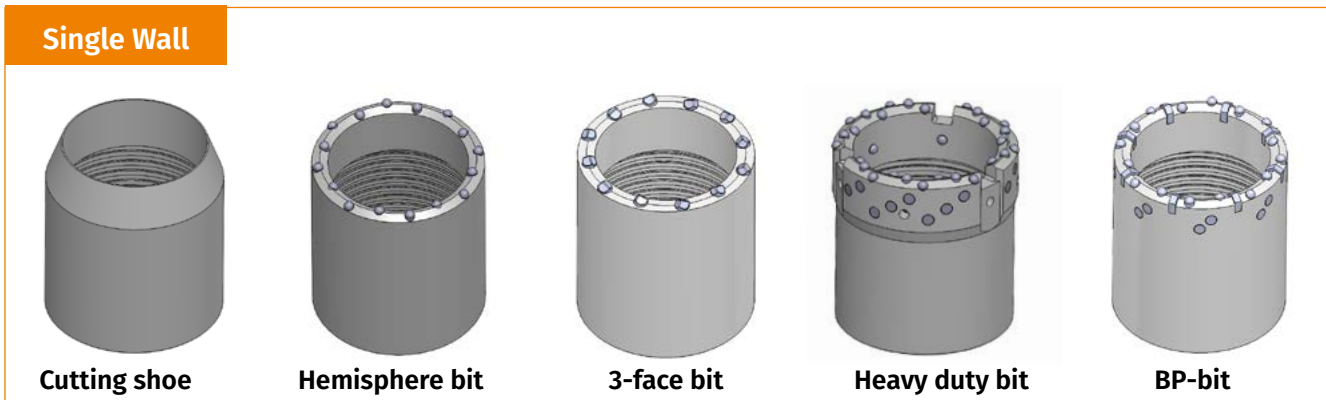
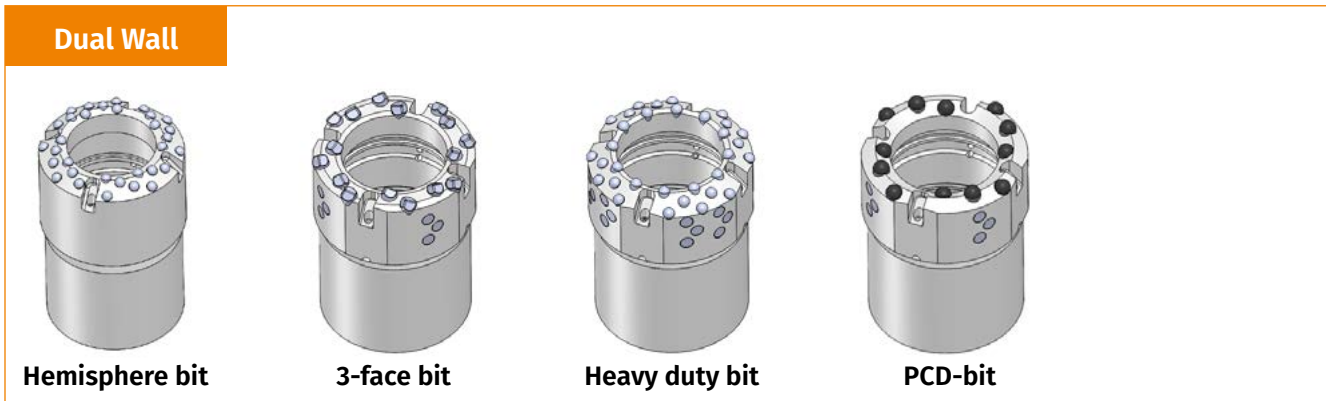
We at Royal Eijkelkamp are always looking to improve our bits and listen to the needs of our customers. If you have any question or are in need of a tailor made bit please feel free to contact us.

This document provides the following information about our bits:

Application	For example: soft clay or hard rock.
Type of button	For example: Hard metal hemisphere or ballistic buttons.
Usage of overcut	If the outer diameter of the bit is bigger than the drill rod, you have less friction on the drill string. This is especially helpful in rock formations.
Water slots	Using water slots, the bit can get rid of excess water and cuttings easier. This is especially helpful in rock formations.
Wear protection buttons	The usage of wear protection buttons will make sure that the main material of the bit will not wear as quickly. This is especially helpful in rock formations.
Inner cutting buttons	The usage of inner cutting buttons will cut the sample just a little smaller than the ID of the bit so that water can flow in between the sampler and the sample. This is especially helpful in rock formations but only used in the single wall core barrel.
Water discharge	Our dual wall core barrels have either front or side discharge of water. When sampling in hard formations you want to use front discharge to have as much water as possible in between your bit and the ground to serve as a coolant and to get rid of cuttings. In softer geology you don't want to flush away your sample but you do want to get rid of your cuttings, so you can use side discharge.
General options	For example: a core catcher is possible for this bit.

# Bit Selector overview

		Dual Wall Core Barrel				Single Wall Core Barrel				
		Hemisphere	3-Face	Heavy Duty	PCD	Cutting shoe	Hemisphere	3-Face	Heavy Duty	BP
soft	sand					■	■	■		
	wet clay					■	■	■		
	dry clay		■				■	■	■	■
	gravel					■	■	■	■	■
medium	soapstone	■	■	■				■	■	■
	limestone	■	■	■					■	■
	concrete	■	■	■	■				■	■
	sandstone	■	■	■	■				■	■
hard	basalt			■	■				■	
	granite				■					
	flint				■					





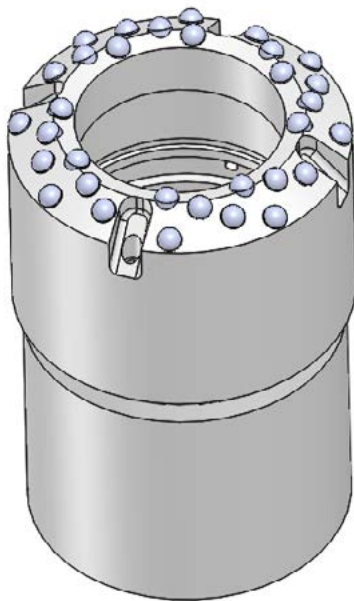
## Dual Wall core barrel Hemisphere bit

The hemisphere type dual wall core barrels bits have the option to use front or side discharge.

You can close up the holes using a hex socket screw (standard delivered with the bit).

This bit can be used for a broad range of purposes.

Please note: this bit can drill through the hardest rock, but when drilling multiple meters through hard rock it's advised to switch to the PCD-bit for faster drilling times and longer use of your bit.



### Dual Wall Hemisphere bit order numbers

Size	Order number
Dual Wall CB 68	D0032884
Dual Wall CB 3,5	D0032911
Dual Wall CB 5	D0032936
Dual Wall CB 6,7	D0032969

Application	Side discharge: All soils up to soft rock and consolidated / compact material. Front discharge: Compact + consolidated up to medium rock
Type of button	Hemisphere buttons
Usage of overcut	Yes
Water slots	No
Wear protection buttons	No
Inner cutting buttons	No
Water discharge	Yes, either front or side discharge

## Dual Wall core barrel 3-Face bit

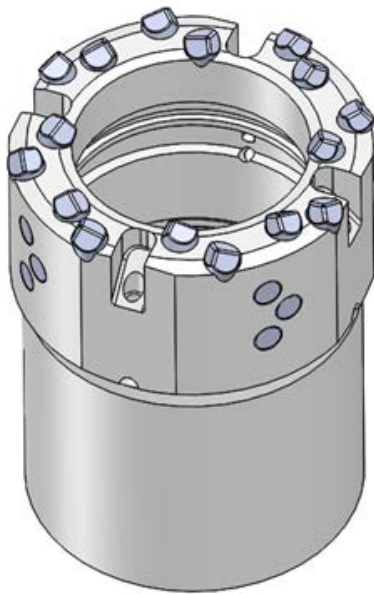
A good allround bit that can cut up to medium rock.

With this bit you will get fast results because of its aggressive buttons but also a great lifetime span.

Another nice feature of this bit is how smooth it drills!

These bits have the option to use front or side discharge.

You can close up the holes using a hex socket screw (standard delivered with the bit).



### Dual Wall 3-Face bit order numbers

Size	Order number
Dual Wall CB 68	D0033943
Dual Wall CB 3,5	D0036650
Dual Wall CB 5	D0036794
Dual Wall CB 6,7	Only on request

Application	Side discharge: All soils up to soft rock and consolidated / compact material. Front discharge: all soils up to medium rock.
Type of button	Three-face scraping buttons
Usage of overcut	Yes
Water slots	No
Wear protection buttons	Yes
Inner cutting buttons	No
Water discharge	Yes, front or in the same bit

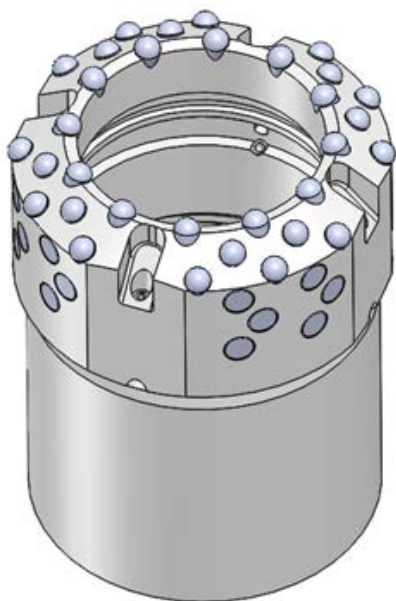


## Dual Wall core barrel Heavy Duty bit

The hemisphere buttons in combination with the wear protection and overcut make this a great bit for harder formations. Therefore these bits have the option to use front or side discharge.

You can close up the holes using a hex socket screw (standard delivered with the bit).

Please note: this bit can drill through the hardest rock, but when drilling multiple meters through hard rock it's advised to switch to the PCD-bit for faster drilling times and longer use of your bit.



### Dual Wall Heavy Duty bit order numbers

Size	Order number
Dual Wall CB 68	D015928
Dual Wall CB 3,5	D0036588
Dual Wall CB 5	D0036722
Dual Wall CB 6,7	Only on request

Application	Side discharge: All soils up to soft rock and consolidated / compact material. Front discharge: all soils up to harder rock.
Type of button	Hemisphere buttons
Usage of overcut	Yes
Water slots	No
Wear protection buttons	Yes
Inner cutting buttons	No
Water discharge	Yes, front or side in the same bit

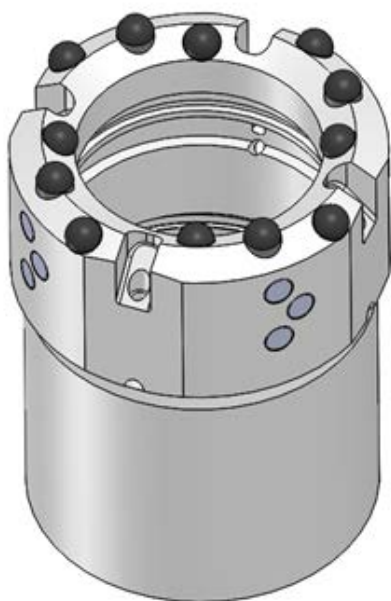


## Dual Wall core barrel PCD bit

This bit uses buttons with a PCD-layer, therefore this bit is extremely good in rock.

You can achieve fast progression combined with a long durability in the hardest rock types.

Please note: this bit can drill through the hardest rock but is not suitable for different conditions than rock.



### Dual Wall PCD bit order numbers

Size	Order number
Dual Wall CB 68	D0035099
Dual Wall CB 3,5	D0036658
Dual Wall CB 5	D0036816
Dual Wall CB 6,7	Only on request

Application	All types of rock
Type of button	PCD-buttons
Usage of overcut	Yes
Water slots	No
Wear protection buttons	Yes
Inner cutting buttons	No
Water discharge	Front discharge only

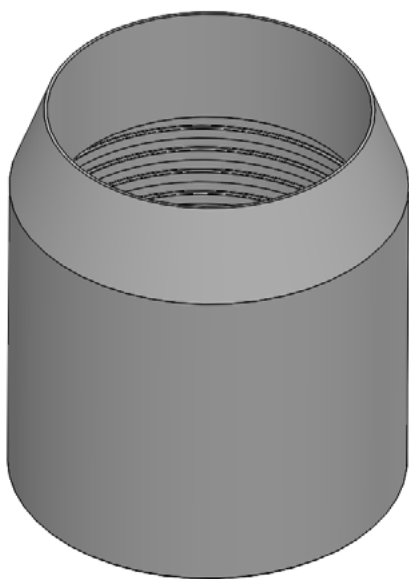




## Single Wall core barrel Cutting Shoe

This bit can only be used for softer soil types.

Please note: this bit can only drill through softer geology, when harder geology is encountered please switch to the dual wall core barrel.



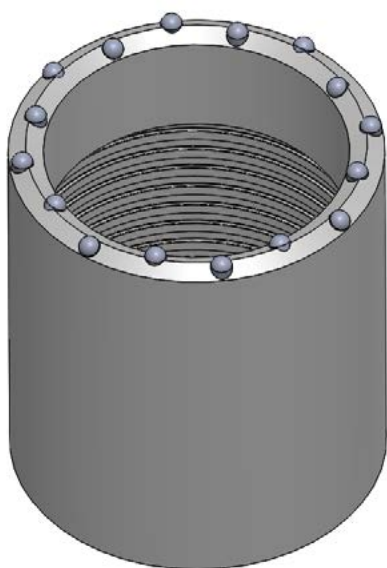
Single Wall Cutting Shoe order numbers	
Size	Order number
Single Wall CB 2	Only on request
Single Wall CB 3	D0037182
Single Wall CB 4	D0037184
Single Wall CB 4,5	Only on request
Single Wall CB 6	Only on request
Single Wall CB 8	Only on request

Application	Sand, gravel, soft clay and stiff clay.
Type of button	No buttons
Usage of overcut	No
Water slots	No
Wear protection buttons	No
Inner cutting buttons	No
Water discharge	No
General options	It is possible to use in combination with a core catcher or slurry sample catcher, preferably without rotation.

## Single Wall core barrel Hemisphere bit

This bit can be used for a broad range of purposes from soft to harder material.

Please note: this bit can drill through the occasional boulder, but when drilling multiple meters through hard rock it's better to switch to the dual wall core barrel for faster drilling times and longer use of your bit.



Single Wall Hemisphere bit order numbers	
Size	Order number
Single Wall CB 2	D0033007
Single Wall CB 3	D018870
Single Wall CB 4	D0026080
Single Wall CB 4,5	D0033086
Single Wall CB 6	D0033680
Single Wall CB 8	D0033724

Application	Sand, gravel, medium/ compact formation, stiff clay, and the occasional boulder.
Type of button	Hemisphere buttons
Usage of overcut	No
Water slots	No
Wear protection buttons	No
Inner cutting buttons	No
Water discharge	No
General options	It is possible to use in combination with a core catcher.



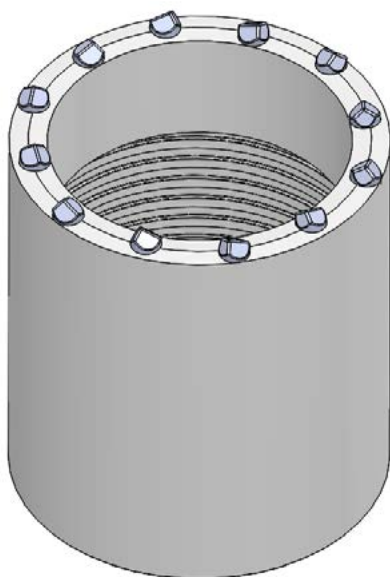
## Single Wall core barrel 3-Face bit

This bit is a good allround bit that cuts up to soft rock.

With this bit you will get fast results because of its aggressive buttons but they also last a long time.

Another nice feature of this bit is how smooth it drills!

Please note: this bit can drill through the occasional boulder, but when drilling multiple meters through hard rock it's better to switch to the dual wall core barrel for faster drilling times and longer use of your bit.



### Single Wall 3-Face bit order numbers

Size	Order number
Single Wall CB 2	D0033748
Single Wall CB 3	D0036550
Single Wall CB 4	D0027446
Single Wall CB 4,5	D0034024
Single Wall CB 6	D0033997
Single Wall CB 8	D0034030

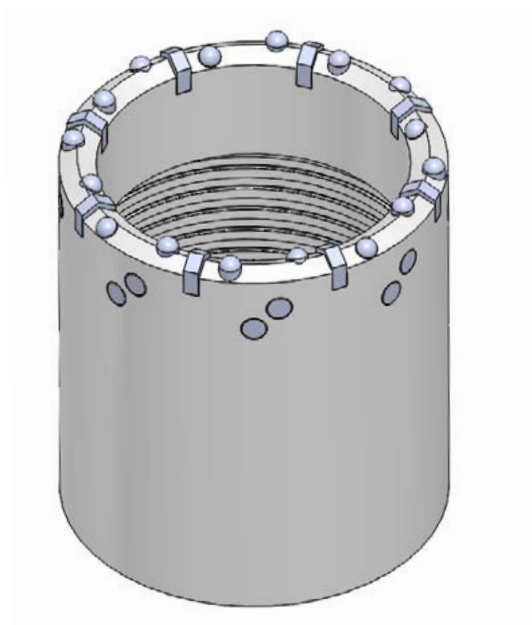
Application	Sand, gravel, medium/ compact formation, stiff clay, and the occasional boulder.
Type of button	3-Face buttons
Usage of overcut	No
Water slots	No
Wear protection buttons	No
Inner cutting buttons	No
Water discharge	No
General options	It is possible to use in combination with a core catcher.

## Single Wall core barrel BP-bit

This bit performs great in abrasive and compact material.

Because of the inner cutting buttons it is also possible to use water to drill through some soft rock.

Please note: this bit can drill through softer geology, when harder geology is encountered please switch to the dual wall core barrel.



### Single Wall BP-bit order numbers

Size	Order number
Single Wall CB 2	D0033779
Single Wall CB 3	D0036596
Single Wall CB 4	D022670
Single Wall CB 4,5	D0034971
Single Wall CB 6	D0034988
Single Wall CB 8	D0035038

Application	Sand, gravel, medium/ compact formation, stiff clay, and soft rock
Type of button	Hemisphere buttons and scraper plates
Usage of overcut	Yes
Water slots	No
Wear protection buttons	Yes
Inner cutting buttons	Yes
Water discharge	No
General options	It is possible to use in combination with a core catcher.

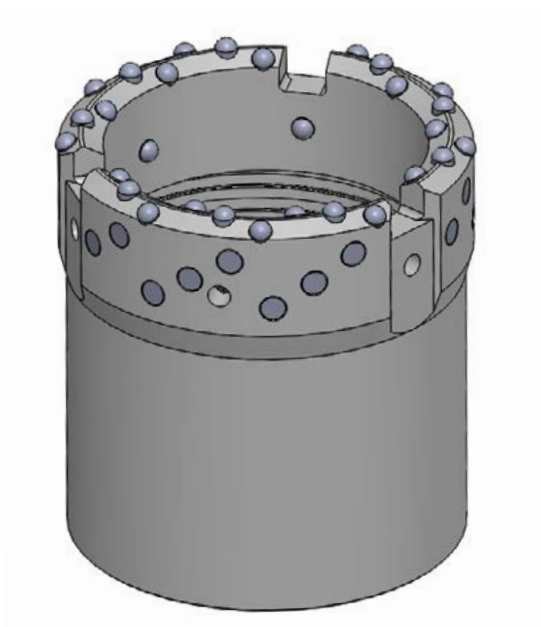


## Single Wall core barrel Heavy Duty bit

The hemisphere buttons in combination with the wear protection, water slots, inner cutting buttons and overcut make this a great bit for tougher conditions.

Please note: this bit can drill through medium rock, but when drilling multiple meters through rock it's advisable to switch to the dual wall core barrel for faster drilling times and longer use of your bit.

Please note: the single wall 4 heavy duty bit can only fit through the GD7 casing.



Single Wall Heavy Duty bit order numbers	
Size	Order number
Single Wall CB 2	D0035262
Single Wall CB 3	Not available
Single Wall CB 4	D017316
Single Wall CB 4,5	D0035285
Single Wall CB 6	Not available
Single Wall CB 8	D0035415

Application	Medium/ compact formation, stiff clay, and medium rock.
Type of button	Hemisphere buttons
Usage of overcut	Yes
Water slots	Yes
Wear protection buttons	Yes
Inner cutting buttons	Yes
Water discharge	No
General options	It is possible to use in combination with a core catcher.



**ROYAL**  **Eijkelkamp**  
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