



## CORE BITS

“BURINTEKH”, Ltd develops and produces core bits for operations in rocks of I-XII category of hardness, I-XII category of abrasiveness equipped with PDC, TSP cutting structure, impregnated with diamonds or its combination, in steel or matrix body. All core bits are designed for ensuring maximum core recovery and achieving high rates of penetration.

Special software allows calculating and setting optimal flow direction of mud which provides cutting structure cooling, effective bottomhole scattering excluding secondary cuttings destruction.

AS may be agreed the design of core head can include additional options for receiving the highest results in different formations and geological conditions: C, O, E, Y.

## CORE BITS NOMENCLATURE

### PDC core heads

#### BIT 8 ½ / 4 B 613 YC.251

BIT	Trademark
8 ½	Core bit diameter, in
4	Recovered core diameter, in
B	Manufacturer code
6	Quantity of blades
13	PDC cutters size, mm
YC	Additional options
251	Digital symbol of design features

Cutters diameter: 8mm, 10mm, 13mm, 16mm, 19mm

### Impregnated Core heads

#### BIT 8 ½ / 4 B 15151 AM.1431

BIT	Trademark
8 ½	Core bit diameter
4	Recovered core diameter, mm
B	Manufacturer code
15	Quantity of sectors
15	Quantity of flushing ports
1	Cutting structure – diamond impregnated
AM	Additional options
1431	Diamond layer thickness
1431	Profile type – wave-like (0- flat)
1431	Tool joint type

## Impregnated core bits cutting structure types

- 1 | Diamond impregnated
- 2 | TSP cutters
- 4 | Hot pressed inserts with impregnated diamonds

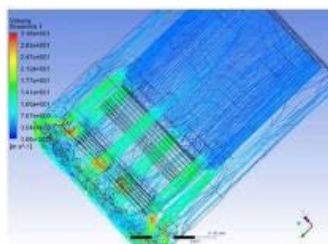
## ENGINEERING AND DESIGN

When designing core bits, it should be considered that in addition to the standard functions of a rock destruction tool such as drilling out rock with high rate of penetration core bits must perform a number of special functions:

- Ensuring smooth cutting and minimum level of vibrations to maintain the integrity of core column.
- Core protection from washout and contamination with mud;
- Maintaining set diameter of core as well as its integrity for further fixation in core catchers.

Tool development is carried out taking into account wide experience of operations in rocks of all drill ability grade and core recovery complexity.

While designing cutting structure and flushing are calculated using today's software, which allows obtaining a complete visualization of the finished product and evaluating the effect of mud and drilling conditions on the quality of recovered core.





Experience in the production of core recovery tools and the provision of services for over 20 years

- Own independent production of the entire complex of coring tools
- Quality and manufacturability are not inferior leading foreign equipment manufacturers
- Patented own developments
- Annual improvement of technology and techniques allows meeting all up-to-date customer requirements
- Average core recovery – more than 98%
- Wide geography of use (including offshore projects)
- Well diameters from 4 ½” to 12 ¼”
- Extended recovery length per run up to 180 meters with conventional core recovery
- Core diameter - 1 ¾” , 2 3/64” , 2 5/8” , 3 1/8” , 3 15/16” , 4 ½” 5 ¼”
- Capability of equipping barrels with additional units – core recovery enhancement and its informative value, reduction of jams.
- Own design – convenience of assembly and core retrieval
- Wide range of own produced core bits: cutting structure PDC/impregnated/combined/TSP



**155,6/67 B 613 CAM.285**

For loose, soft rocks. Matrix body.



**215,9/100 B 516 C.291**

For soft and medium rocks. Steel body.



**215,9/101,6 B 713 YC.251**

For medium interbedded with hard rocks. Steel body.



**215,9/100 B 12122 AM.01**

For medium interbedded with hard rocks. TSP cutters.



**215,9/100 B 15151 AM.1431**

For hard and tough rocks. Diamonds impregnated.



**215,9/80 B 991 AM.1250**

For tough and very tough rocks. Diamonds impregnated.



## 8,5"/4" B 813 YC.251 (IADC: S433)

Core head is designed for core drilling in medium and hard formations. It has enhanced cutting structure, that provides smooth cutting action and consequently improve core recovery. It is provided with additional stabilizing inserts to reduce radial vibrations and with additional coring PDC cutters to improve core quality.

### NOMENCLATURE

**8,5"/4" B 813 YC.251**

**8,5"** – Outside diameter

**4"** –Core diameter

**B** – Manufacturer code

**8** – Quantity of blades

**13** – PDC cutters size

**Y** – premium quality cutters

**C** – stabilizing inserts

**251** – Reinforced core-forming part

**251** – Connection part design

**251** – MK180 connection thread



### TECHNICAL CHARACTERISTICS

Outside diameter, inches	8.5
Core diameter, inches	4
Cutters size, mm	10; 13
Quantity of unchangeable nozzles*, ea./mm	8/14
Tool joint, box	MK 180x 6 x1:8
Height*, in	12.59
Weight*, kg	30

### OPERATING PARAMETERS

RPM	60... 120
WOB, Klbs	4... 18
Flow rate, GPM	285... 545
Rotator type	Rotor, mud motor



## 12,25"/4" B 713 YC.23 (IADC: S433)

Core head is designed for core drilling in medium and hard formations. It has enhanced cutting structure, that provides smooth cutting action and consequently improve core recovery. It is provided with additional stabilizing inserts to reduce radial vibrations and with additional coring PDC cutters to improve core quality.

### NOMENCLATURE

12,25"/4" B 713 YC.23

12,25" – Outside diameter

4" – Core diameter

B – Manufacturer code

7 – Quantity of blades

13 – PDC cutters size

Y – premium quality cutters

C – stabilizing inserts

2 – Reinforced core-forming part

3 – Connection part design



### TECHNICAL CHARACTERISTICS

Outside diameter, inches	12,25
Core diameter, inches	4
Cutters size, mm	13
Quantity of unchangeable nozzles*, ea.*in/32	7*20/32
Tool joint, box	Z-189
Height*, mm	315
Weight*, kg	85

### OPERATING PARAMETERS

RPM	60...180
WOB, Klb	4...20
Flow rate, GPM	285...570
Rotator type	Rotor, mud motor





## 12,25"/4" B 813 YC.23 (IADC: S433)

Core head is designed for core drilling in medium and hard formations. It has enhanced cutting structure, that provides smooth cutting action and consequently improve core recovery. It is provided with additional stabilizing inserts to reduce radial vibrations and with additional coring PDC cutters to improve core quality.

### NOMENCLATURE

12,25"/4" B 813 YC.23

12,25" – Outside diameter

4" – Core diameter

B – Manufacturer code

8 – Quantity of blades

13 – PDC cutters size

Y – premium quality cutters

C – stabilizing inserts

2 – Reinforced core-forming part

3 – Connection part design



### TECHNICAL CHARACTERISTICS

Outside diameter, inches	12,25
Core diameter, inches	4
Cutters size, mm	13
Quantity of unchangeable nozzles*, ea.*in/32	8*20/32
Tool joint, box	Z-189
Height*, mm	315
Weight*, kg	85

### OPERATING PARAMETERS

RPM	60... 180
WOB, t	4...20
Flow rate, GPM	285...570
Rotator type	Rotor, mud motor



## 8 1/2 / 4 B 713 YC.251 IADC: S333

*"BURINTEKH", Ltd*

Core head is purposed for drilling wells with core recovery in formations of 4-8 category of hardness.

### TECHNICAL CHARACTERISTICS

Outside diameter, In	8 1/2
Core diameter, In	4
Cutters size, mm	10; 13
Quantity of unchangeable nozzles*, ea./mm	7/13
Tool joint, box	MK 180x6x1:8 Cn
Height*, mm	315
Weight*, kg	25

### OPERATING PARAMETERS

RPM	60... 120
WOB, Klbs	4... 18
Flow rate, GPM	285... 545
Rotator type	Rotor, mud motor, top drive

### NOMENCLATURE

**8 1/2 / 4 B 713 YC.251**

8 1/2 – Outside diameter

4 – Core diameter

B – Manufacturer code

9 – Quantity of blades

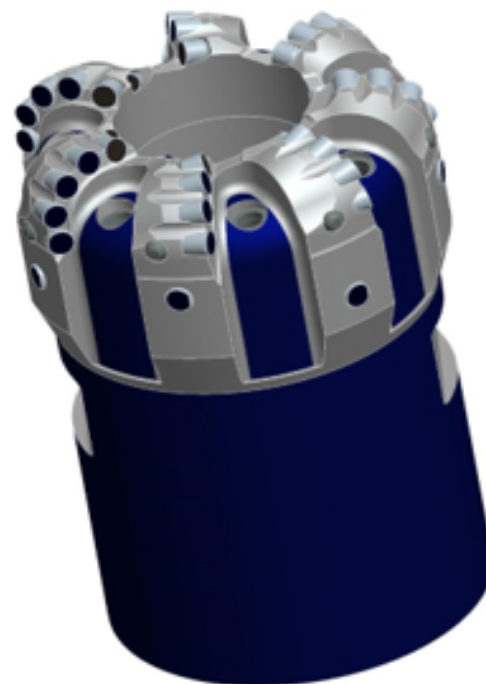
10 – PDC cutters size

Y – Highest abrasive resistant cutters

C – Row of stabilizing inserts

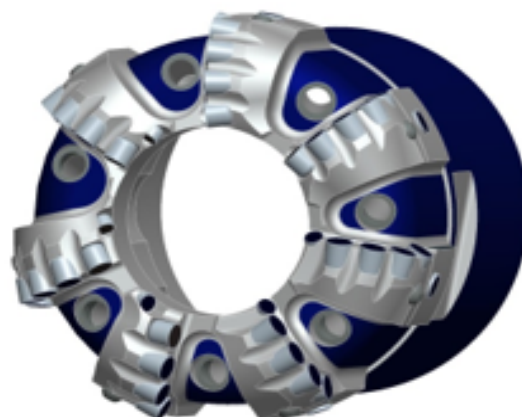
located behind the main row near the gage

251 – Design number



### FEATURES

Core head has increased core recovery by means of smooth rock cutting with ATP cutters and equipping with additional row of ATP cutters and stabilizing inserts. It is equipped with highest abrasive resistant cutters.





## 6 x 2 5/8 B 713 YC.255 (IADC: S333)

Core head is designed for core drilling in medium and hard formations. It has enhanced cutting structure, that provides smooth cutting action and consequently improve core recovery. It is provided with additional stabilizing inserts to reduce radial vibrations and with additional coring PDC cutters to improve core quality.

### NOMENCLATURE

6 x 2 5/8 B 713 YC.255

6 – Outside diameter

2 5/8 – Core diameter

B – Manufacturer code

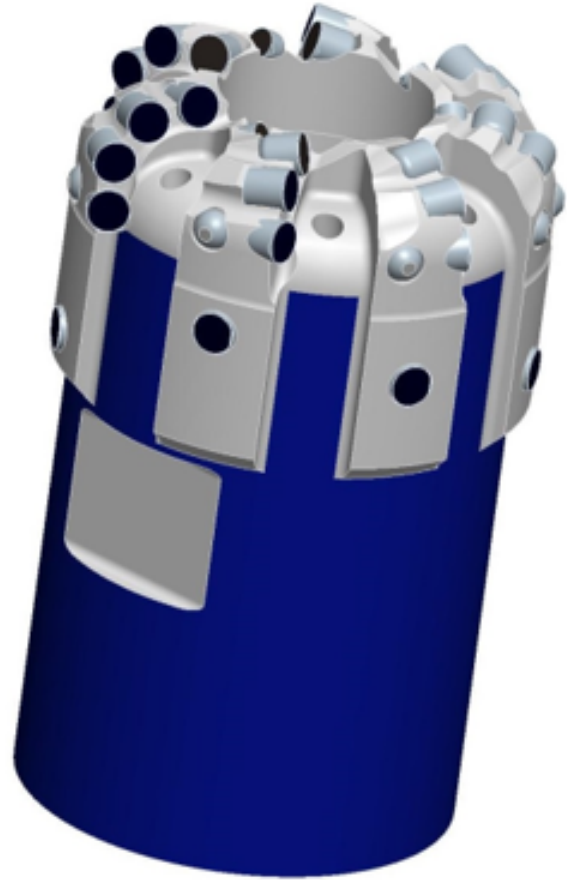
7 – Quantity of blades

13 – PDC cutters size

Y – premium quality cutters

C – stabilizing inserts

255 – Design number



### TECHNICAL CHARACTERISTICS

Outside diameter, inches	6
Core diameter, inches	2 5/8
Cutters size, mm	10; 13
Quantity of unchangeable nozzles*, ea./mm	7/10
Tool joint, box	MK 127x 4 x1:8 Cn
Height*, mm	240
Weight*, kg	11

### OPERATING PARAMETERS

RPM	60... 120
WOB, t	2...5
Flow rate, l/sec	5... 18
Rotator type	Rotor, mud motor



## 6 1/8 x 2 5/8 B 813 YC.255 (IADC: S333)

Core head is designed for core drilling in medium and hard formations. It has enhanced cutting structure, that provides smooth cutting action and consequently improve core recovery. It is provided with additional stabilizing inserts to reduce radial vibrations and with additional coring PDC cutters to improve core quality.

### NOMENCLATURE

6 1/8 x 2 5/8 B 813 YC.255

6 1/8 – Outside diameter

2 5/8 –Core diameter

B – Manufacturer code

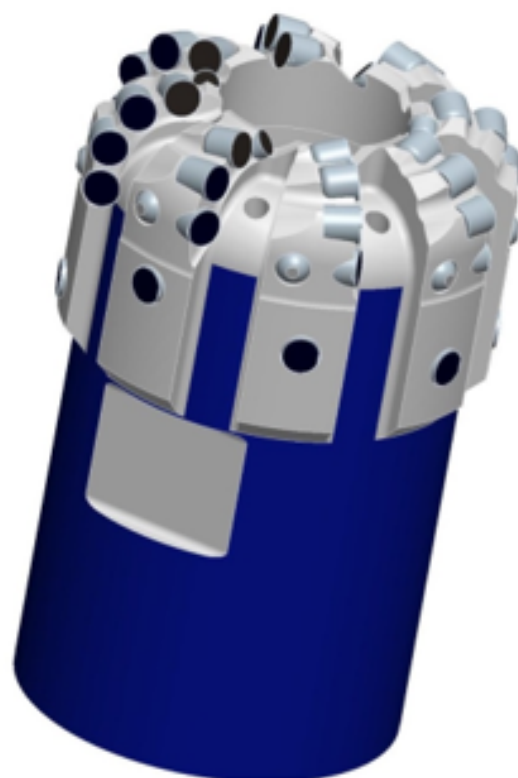
8 – Quantity of blades

13 – PDC cutters size

Y – premium quality cutters

C – stabilizing inserts

255 – Design number



### TECHNICAL CHARACTERISTICS

Outside diameter, inches	6 1/8
Core diameter, inches	2 5/8
Cutters size, mm	10; 13
Quantity of unchangeable nozzles*, ea./mm	8/10
Tool joint, box	MK 127x 4 x1:8 Cn
Height*, mm	240
Weight*, kg	11

### OPERATING PARAMETERS

RPM	60... 120
WOB, t	2... 5
Flow rate, l/sec	5... 18
Rotator type	Rotor, mud motor