

Diamond Core Bits

We manufacture premium impregnated diamond core bits, surface set diamond core bits, PDC core bits, TSP (geocube) core bits, electroplated diamond core drill bits. Also we supply non coring bits, reaming shells, Thin concrete bits and other diamond drilling equipments and drill rigs for site investigation, mineral exploration, oil well, water well drilling applications tools.



Impregnated Diamond Type

The impregnated diamond bits are the most commonly useful bits in the mineral exploration industry, as they have the widest range of application. The carefully selected grades of high quality synthetic diamond are distributed in the depth of impregnated bit's matrix series. The matrix layer of the crown contains a uniform distribution of these crystals that are embedded in a powdered metal bond. The matrix of our impregnated bits is designed to expose new diamonds to the bits' cutting face as wear occurs. Fast penetration rate is maintained as a result of this action. Our impregnated bits are manufactured to give optimum penetration rates and bit life, which is required to keep the cost of diamond drilling to a minimum.

The optimum diamond size, concentration and matrix type are dependent on the hardness and abrasiveness of the formation to be drilled



Surface Set Diamond Type

Surface-Set Diamond Bits are set with a singular layer of natural or synthetic diamond utilizing a hard matrix compound on the face of the bit. The diamond set design ensures sufficient overlap to prevent premature wear of the matrix.

Surface-Set diamond bits are primarily recommended for use in drilling relatively soft, abrasive, unconsolidated formations that are not effectively drilled by impregnated diamond bits. They are also recommended for use in drilling harder formations where the available rotational speeds and bit loads are insufficient to use impregnated diamond bits due to drilling equipment limitations.



PDC Type

Polycrystalline diamond cutters are set on the crown giving a very long working life, very fast penetration and high percentage core recovery in soft to hard rock formations. The bit may be used with air, mud, or foam flushing

PDC bits are an alternative to T.C. Bits and Surface set diamond bits, when drilling in non-consolidated and medium hard rock formation.



TSP(Geocube)Diamond Type

TSP Core Bits are ideal for geotechnical drilling applications. They are suited for soft to medium hard formations, such as clay, shale, sandstone, limestone, marble, basalt, etc



Electroplated Diamond Type

The bit crown of electroplated diamond core bits are electroplated with layers of synthetic diamonds in the electroplated liquid under certain strictly controlled conditions. The whole producing process is carried on in a room temperature that can avoid diamond oxidation and degradation

" SUNBETTER " MATRIX INDEX FOR IMPREGNATED DIAMOND CORE BITS

		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	
Soft	Broken and Backfilled Stratum	█										
	Clay											
	Sandstone											
	Gypsum											
	Talc											
	Tuff											
	Shale											
	Serpentinite			▬▬▬								
	Calcite			▬▬▬								
Medium	Siltstone		▬▬▬	▬▬▬								
	Limestone		▬▬▬	▬▬▬								
	Marble		▬▬▬	▬▬▬								
	Andesite		▬▬▬	▬▬▬	▬▬▬							
	Dolomite		▬▬▬	▬▬▬	▬▬▬							
	Reinforce concrete		▬▬▬	▬▬▬	▬▬▬							
	Porphyry		▬▬▬	▬▬▬	▬▬▬							
	Basalt		▬▬▬	▬▬▬	▬▬▬							
Hard	Pegmatite		▬▬▬	▬▬▬	▬▬▬							
	Gabbro		▬▬▬	▬▬▬	▬▬▬	▬▬▬						
	Schist		▬▬▬	▬▬▬	▬▬▬	▬▬▬						
	Norite		▬▬▬	▬▬▬	▬▬▬	▬▬▬						
	Syenite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬					
	Peridotite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Amphibolite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Diorite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
Very Hard	Gneiss		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Granite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Rhyolite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Quartzite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬				
	Ironstone		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬			
	Taconite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬			
Ultra Hard	Jasperite		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬			
	Quartz		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬			
	Chert		▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬			
	Coarse-grained,fractures weathered,abrasive formations	▬▬▬	▬▬▬	▬▬▬	▬▬▬	▬▬▬						
	Coarse-grained,fractures weathered,abrasive very formations	█	▬▬▬	▬▬▬	▬▬▬	▬▬▬						

" SUNBETTER " SELECTION INDEX FOR SURFACE SET DIAMOND TYPE, TUNGSTEN CARBIDE TYPE & ELECTROPLATED DIAMOND TYPE CORE BITS AND REAMING SHEELS

ROCK DESCRIPTION	HARDNESS	T.C. BITS	SURFACE SET	ELECTROPLATED BITS			T.C. REAMING SHELL	PCD REAMING SHELL	SURFACE SET REAMING SHEEL	ELECTROPLATED REAMING SHEEL
				35°	30°	25°				
CLAY / CHALK/ GYPSUM	SOFT	█					█			
SAND / SHALE/ HARD SHALE/ ICE/ MED.HARD LIMESTONE	SOFT TO MEDIUM	█	█	█			█			
SANDY SHALE / SHALE CLAYSTONE/ SANDY LIMESTONE	MEDIUM HARD NON ABRASIVE		█	█	█		█			
SILTSTONE/ ALLUVIAL DEP./ CALCITIC HARD SHALE	MEDIUM HARD ABRASIVE		█	█	█	█				
HARD LIMESTONE/ SCHIST/SERPENTINE	MEDIUM ABRASIVE		█	█	█	█				
HARD SCHIST/ HARD SILICEOUS/ DOLOMITE/MARBLE/ SYEITE/DIABASE/ PEGMATITE/HEMATITE MAGNETITE	HARD NON ABRASIVE		█		█	█				
GNEISS/GRANITE/ BASALT/DIORITE/ GABBRO/RHYOLITE/ AMPHIBOLITE	VERY HARD					█				
CONGLOMERATE/ TACONITE/ ABRASIVE QUARZITE/ ABRASIVE SAND STONE	VERY ABRASIVE									

Non Coring Bits

Surface Set Diamond Non-Core Bit
Size Available: 56mm, 76mm



Three-Wing Drag Bit
Type: Step type, Chevron type
Size Available: 2-7/8", 3-3/4", 4-3/4"



Thin concrete bits

Dry Type

Application: For masonry, brick, concrete with light or medium steel reinforcing. Also effective for granite, marble and stone. Special vents help keeping the bit cool and provide fast removal of cutting debris.



Wet type (Single Assembly)

Application: For drilling various ranges of materials including masonry, bricks, concrete blocks, reinforced concrete, etc. with water. The assembly type is made up of three parts: Bit, Tube and Coupling.



Processed materials	Outer Diameter		Arbor Size		Segment Dimension	Segment Number
	Inches	Metric (mm)	Inches	Metric (mm)		
Constructional materials: concrete /reinforced concrete	0.87"	22	13.78"	350	10x3x8/10	3
	1.10"	28	13.78"	350	15x3x8/10	3
	1.26"	32	6.69"	170	15x3x8/10	3
	1.5"	38	6.69"	170	15x3/3.5x8/10	4
	1.89"	48	6.69"	170	15x3/3.5x8/10	4
	2.05"	52	6.69"	170	15x3/3.5x8/10	4
	2.56"	65	6.69"	170	15x3/3.5x8/10	4
	3.07"	78	6.69"	170	15x3/3.5x8/10	5
	3.58"	91	6.69"	170	15x3/3.5x8/10	5
	4.21"	107	6.69"	170	15x3/3.5x8/10	6
	4.61"	117	6.69"	170	15x3/3.5x8/10	6
	5"	127	6.69"	170	15x3/3.5x8/10	8
	5.98"	152	6.69"	170	15x3/3.5x8/10	10
	6.28"	162	6.69"	170	15x3/3.5x8/10	14

other size are upon requirement!

Reaming Shells

Surface Set Diamond Type



PDC Type



Electroplated Diamond Type

