

Coring Bits

Available in all sizes. Please contact for custom configurations.

Surface Set Bits

Nowhere is PHQ's experience and craftsmanship better illustrated than the diamond set bit range. Mined diamonds have been selected from the same ethical and reliable sources for many years, resulting in consistent characteristics and reliable products. Designs and setting patterns have evolved through constant dialogue and feedback from the best drillers in the world.



Impregnated Bits

Until now, PHQ has been recognized mainly as the premier source of high quality diamond set tools for the exploration industry. PHQ's attention to detail, craftsmanship and understanding of the industry has now been united with state of the art powder metallurgy practice in the creation of a new range of impregnated bits.



At PHQ, where innovation isn't just a buzzword, the driller's needs have been interpreted using original thinking and sound metallurgical principles to develop a series of standard matrices to cover all conditions. Careful selection and blending of synthetic diamonds provide the foundation for the Pilot impregnated range. Metallic materials matched to the purpose, carefully developed processes and stringent quality controls round out the product.

Each member of the PHQ impregnated series has a broad range of application, predictable response and a tolerance of changing conditions which results in higher productivity, fewer bit changes and more core in the box at the end of the shift.

Impregnated Series - 100, 200, 300, 400, 500

By considering the "drillability" of the rock rather than concentrating only on hardness, we have judged the combined effects of abrasiveness, friability and hardness to develop a series of five products to meet the challenge of any formation.

SOFT						VERY HARD
Talc	Schist	Basalt	Gabbro	Diorite	Glassy	Jasperite
Shales	Dolomite	Sandstone	Quartz	Granite	Quartzite	Chert
Limestone	Serpentinite	Dolerite	Pegmatite	Gneiss	Rhyolite	Ironstone
← SERIES 100 →			← SERIES 200 →		← SERIES 300 →	
				← SERIES 400 →		← SERIES 500 →

Reaming Shells

Available in all sizes. Please contact for custom configurations.



The PHQ reaming shell is the knowledgeable driller's benchmark in an application where quality and reliability are valued above initial cost. The importance of the reaming shell in maintaining hole direction and gauge cannot be underestimated. At every bit change, the new bit is expected to reach the bottom of the hole without interference. As the shell typically lasts the life of several bits, the selection of the best available is an investment in productivity and overall cost of the project.

The same principles of craftsmanship and experience that characterize PHQ's diamond set bits can be found in diamond and matrix selection and design for reaming shells. Simple in appearance, the hidden detail is what sets the PHQ product apart.

Waterway design has been perfected to offer the best flushing at this critical location in the core barrel, while the pad geometry and length have been optimized to match. PHQ shells are offered in a variety of lengths, depending on the specific needs of the job: standard and straight hole, along with various multiples of the straight-hole length. (Inner tube extensions are offered for all lengths greater than standard)



Casing/ Rod Shoes

Available in all sizes. Please contact for custom configurations.

PHQ Casing shoes, like the reaming shells, are recognized as a benchmark in the industry. The importance of the casing shoe is often overlooked, but as it lies at the very start of a drilling job, its reliability is of prime importance. PHQ shoes are designed to be robust to withstand the rigours of advancing the casing through overburden and into bedrock: as such they are reinforced with carbide on both the inside and outside gauges - a feature not shared by every competitor. Two standards are available, depending whether the shell is intended to be reused or a single use type to be left permanently in the hole. The Econo version has a simpler face profile and less reinforcement than the standard Vee ring version, which offers the further benefit of diamond setting in the gauge region.

Locking & Adapter Couplings

Available in all sizes. Please contact for custom configurations.

The technology that is embodied in the PHQ reaming shell is the foundation of PHQ locking couplings and adapter couplings. The same matrix formulations and the same manufacturing techniques result in couplings that are accurately gauged, stable and long-lived. The standard product has carbide wear elements, but diamond is available on request.

Waterway design is based on the concept of optimizing flushing performance while allowing the supporting pads to provide maximum stability to the core barrel.

Locking couplings are available both with and without drive tangs in all standard sizes. Rod threads are carefully matched to industry standard samples, allowing trouble-free compatibility with all normally available core barrel and rod types.

