



# **GEOTECHNICS**

With safety in mind, "NiUW' Glinik has introduced tools dedicated to various types of geotechnical activities. Our products are ideal for all drilling projects related to the ground research.

We are a leader in providing drill bits used for ground improvements/reinforcement for future structural investment projects such as pilings or micro pilings. Our innovative cutting structures combined with an optimized flushing system provides the ideal solution for every drilling operator.



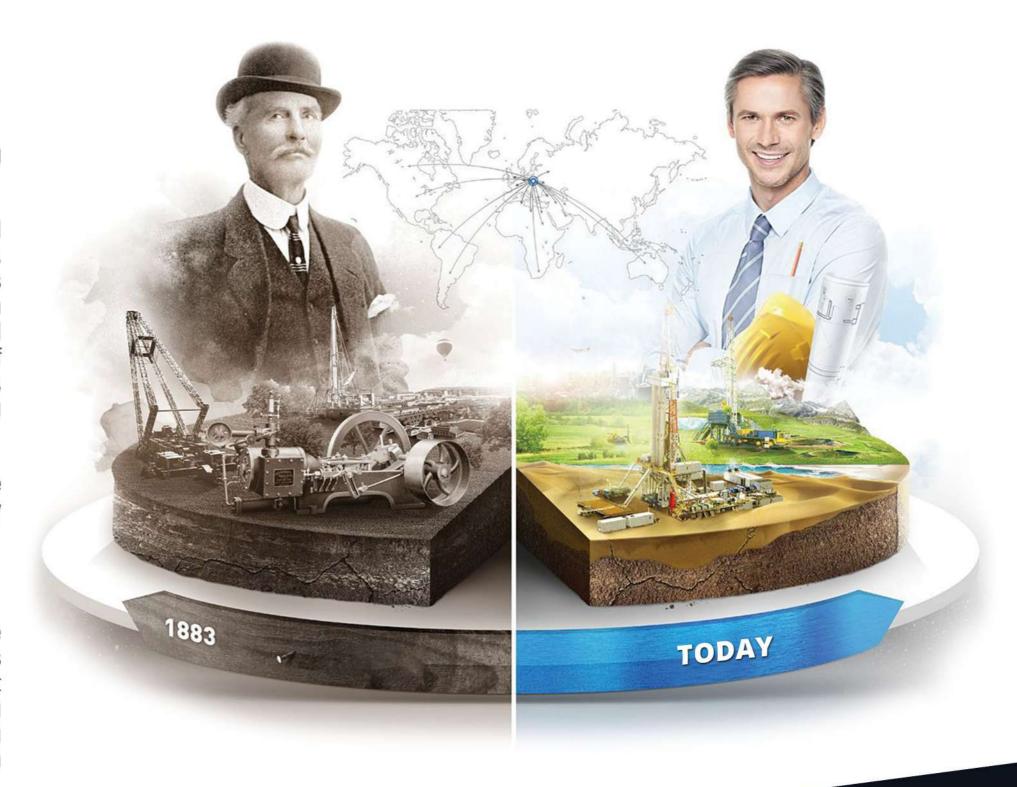


## Glinik core business is the production of Drilling Tools and Equipment

For 140 years in the drilling market, Glinik has produced innovative solutions, superior products and services. Our success is attributed to their quality, which has earned the respect of our customers helping establish long-term business relationships. As an International Manufacturer, we remain a sought-after contributor of top-quality products for the oil and gas, mining, geothermal, geotechnical, HDD and water-well drilling sectors.

Our People are our most valuable asset. They provide extensive knowledge, experience and passion to stay ahead of a continuously changing industry.

We have gradually increased our presence within the international marketplace through continuous innovative advancements. Glinik's development strategy is based on its expertise in engineering (including R&D), product manufacturing and launching of new solutions globally, with our own brand or in partnership with leading global Customers.



We make changes....

Determining the future.



Glinik's Professional Design and Engineering Team is responsible for innovative solutions in the design of broadly defined drilling tools, optimization of the production process to achieve the highest quality of the final product.

Dedicated engineering personnel is involved in advanced research and development projects, enabling continuous product innovation in the areas of design and implementation of the latest technological solutions.

Experienced experts at Glinik Engineering **provide professional support** to select the most effective tools and drilling parameters for Customer defined applications





#### **FLUSHING** SYSTEM

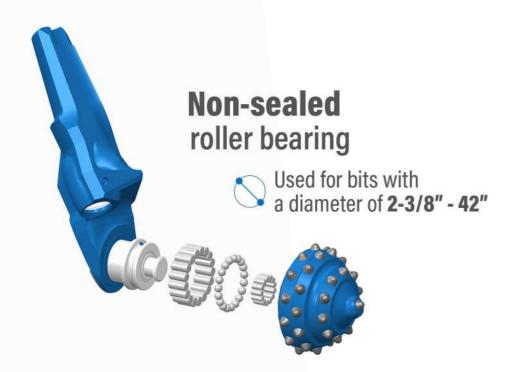
#### Size of the

#### **Nozzle dimensions**

drill bit		D	h	d	
mm	inch	mm		mm	inch (1/32)
139,7÷187,3	5-1/2÷7-3/8	20	15,1	4,0; 4,8; 6,4; 7,9; 8,7; 9,5; 11,1; 12,7; 14,3	5; 6; 8; 10; 11; 12; 14; 16; 18
190÷1066,8	7-1/2÷42	33	27	11,1; 11,9; 12,7; 14,3; 15,9; 17,5; 19,0; 20,6; 22,2; 23,8; 25,4	14; 15; 16; 18; 20; 22; 24; 26; 28; 30; 32

#### **INNOVATIVE BEARING SYSTEMS**

An ideal solution for clients looking for a tool to ensure adequate drilling efficiency at a competitive cost level. Recommended for drilling shorter intervals.

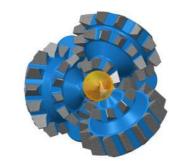


#### **Center** flushing



Used for bits with a diameter of 2-3/8" - 42"



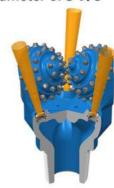


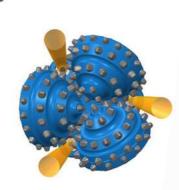
Central flushing is used for bits designed for hydrogeological and geoengineering drilling. For bits intended for drilling with reverse flush circulation, the design provides for the use of a central hole with the maximum diameter for a given threaded connection.

#### 3-jet flushing



Used for bits with a diameter of 3-7/8" - 36"





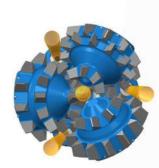
The arrangement of the nozzles and the direction of the flushing outflow allows for effective cleaning of the drill cutting structure and the bottom of the hole. This solution is designed to achieve maximum drilling progress.

#### **Multi-jet flushing system**



Used for bits with a diameter of 5-1/2"-42"





The advanced flushing system extended by additional nozzles in relation to the 3-jet flushing system system allows for more effective cleaning of the cutting structure and the bottom of the hole, and thus maintaining high drilling progress.



# PROTECTION OF DIAMETER AND CULTING

AND CUTTING STRUCTURE

The protection of drill bits is accomplished using materials with the highest abrasion resistance. The protection is applied using various methods, depending on the surface material.

Plasma Transferred Arc Welding (PTAW) technology allows for repeatable and high quality adhesion and wear resistance.

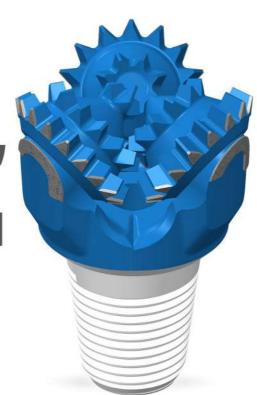




#### **GEOTECHNICAL DRILL BITS**

4-1/2" IADC 211

Diameter inch 4-1/2" Diameter mm \_\_\_\_\_ 114,3mm Drill bit type \_\_\_\_\_ \$1 IADC code \_\_\_\_\_\_ 2-1-1



#### **CUTTING STRUCTURE:**

Medium sized teeth that allow drilling through variable hardness rock formations.

Specially prepared designs allows the use of one type of drill bit for efficient engineering works. It is an ideal solution for drilling in unknown rock formation areas.

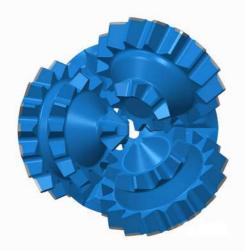
Drill bits dedicated for drilling pilot holes and all types of ground testing and ground reinforcement projects.

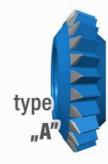
Drill bits are offered in a wide range of diameters from:



**2-3/8"** (60,3mm)

to **7"** (177,8mm)



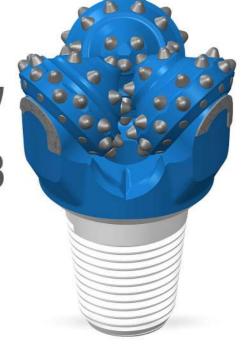




We offer the possibility of customized product designs for individual customer needs.



Diameter inch 4-1/2" Diameter mm \_\_\_\_\_ 114,3mm S3GY Drill bit type \_\_\_\_\_ IADC code \_\_\_\_\_ 6-3-3



#### **LEG BACK PROTECTION TYPES:**

As standard, we offer TYPE "2" reinforcement with hardfacing on the outer surface of the segment.





#### **CUTTING STRUCTURE:**

Optimally selected size and shape of inserts enables drilling through variable hardness rock formations..

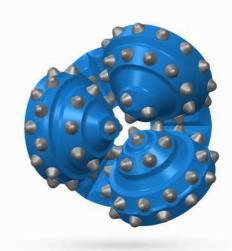
Specially prepared designs allows to use one type of drill bit to achieve the targeted diameter and hole depth.

This is an ideal solution for drilling in unknown rock formations.











### RESEARCH LABORATORY

Maintaining the highest quality standards requires verification of chosen characteristics in a controlled environment.

Glinik runs its own laboratory and cooperates with accredited certification bodies.

Research domains include metallography analysis, material strength and chemical composition, using state-of-the-art laboratory equipment.



Glinik's API Q1 and ISO 9001 certification ensures our company operates under the most rigorous standards of a quality management system for the design, manufacturing, repair and refurbishment of drilling tools.

Glinik is licensed to apply the API monogram registered mark to its stabilisers, threaded rotary connections, PDC bits,3-cutter bits and connectors meeting the API Q1 spec 1-7 requirements.

Continuous improvement of processes, inherent to our Quality Management System, ensures meeting the most stringent requirements of our Customers.











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