

BCO-B Diamond Wire

Description: *Double Cone* electroplated diamond wire for marble and calcareous marbles, primary cutting in quarry and block squaring.

Key Features:

Bead diameter: 11 mm

Bead shape: Double cone

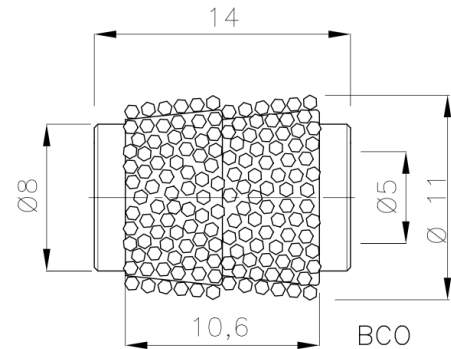
Beads per meter: 27 (BPM)

Diamond type: UsMesh 25/30

Recommended use: Primary cutting in quarry and block squaring

Suitable materials for cutting: Marble, colored marbles, limestone, sandstone, travertine, onyx

Twist: 1/m



Technical Characteristics:

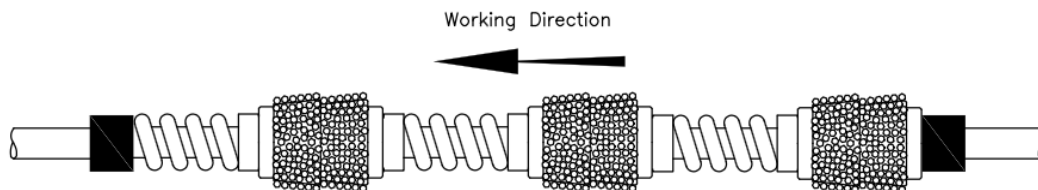
The new **BCO-B** diamond wire, designed by Diamond Pauber, features a unique double cone shape that increases cutting speed to extraordinary levels and extends its lifespan, maximizing yield compared to other electroplated diamond beads.

It is ideal for use in marble and limestone quarries. The wire is made with 27 beads per meter (BPM), with a diameter of 11 mm and a diamond length of 10.6 mm, using UsMesh 25/30 diamond grit (FEPA D711). The distinctive double cone shape allows for a cutting speed of 18 m²/h, with a production rate of 80 m² per linear meter of diamond wire.

Mounting Options:

The BCO-B diamond wire can be mounted in two different ways: the **traditional assembly (TA)** and the **polymeric coated assembly (GA)**.

- The **TA assembly**, utilizing springs, spacers, and clamps, provides exceptional performance specifically in dry cutting conditions. Our diamond wires are assembled with a clumper placed after every 3 diamond beads, distinguishing us from many competitors who use a clumper after every 5 beads. For guidance on the assembly process, you can refer to the following example.




- The **GA assembly**, on the other hand, provides enhanced safety compliance with new regulations. It is made with the **SHX** polymer, which not only increases workplace safety but also provides greater flexibility to the wire. The pre-compressed springs in the assembly improve bead retention and resistance to slippage. In the event of accidental wire breakage, the SHX assembly ensures that no beads are expelled, guaranteeing maximum safety. The BCO diamond wire is assembled on a 4.9mm diameter steel rope consisting of 61 individual wires. The steel rope used in the assembly has a static resistant tension of 1800daN.

Other Production Technologies:

The BCO-B diamond wire is manufactured using the **Oriented Crystal®** technology. This process orients the diamond crystals during the production of diamond tools, optimizing cutting performance, speed, and overall efficiency.

Average Cutting Performance:

Material to be cut		Average Cutting Speed [m ² /h]	Average Lifespan [m ² /m]	Recommended Peripheral Speed [m/sec]
Quarry	White marble Calcareous Stone	13-18	65-80	40*
	Sandstones and limestones	12-16	65-75	40*
Trimming	White marble Calcareous Stone	12-15	50-60	35*
	Sandstones and limestones	12-15	50-60	35*

*  Following the SGDW technology, this diamond wire can be run with a low peripheral speed of 8m/sec

Recommended Applications:

The BCO-B diamond wire is particularly suitable for the following applications:

- Primary cutting in Carrara white marble quarry and similar limestone marbles.
- Squaring blocks of marble, coloured marbles, limestone, sandstone, travertine, and onyx.

Safety Precautions:

- Before using the BCO-B diamond wire, carefully read the instructions provided by the manufacturer and follow all recommended safety measures.
- Always use appropriate protective clothing and equipment when using the diamond wire, including safety glasses, gloves, and slip-resistant shoes.
- Avoid direct contact with the diamond beads during wire installation or removal, as they may cause injuries.





SafeGuard Diamond Wires

The SGDW Diamond Wire family represents an advanced solution for cutting and processing marble and natural stones. Developed with the aim of ensuring safety, efficiency, and durability, these wires are designed to meet the specific needs of the extraction industry.

Key Features:

1. **Worker Protection:** The safety of our miners has always been our top priority. SGDW Diamond Wires are designed to reduce the risk of accidents by operating at a lower kinetic energy, specifically at 8m/s compared to the conventional 40m/s.

Lower kinetic energy, lower risk of accidents!

2. **Maximum Cutting Efficiency:** Thanks to our innovative technologies, SGDW Diamond Wires deliver fast and precise cutting without "snagging."

The patented **OrientedCrystals®** technique aligns a higher number of diamond grains, enhancing cutting speed. This translates to improved operational efficiency and increased productivity.

3. **Machinery Stress Prevention:** SGDW Diamond Wires are designed to minimize stress on cutting machines during the cutting process. The low kinetic energy of the wires helps preserve the integrity of the machinery, reducing wear and increasing equipment lifespan. Our advanced technology ensures reliable performance and reduces the need for frequent maintenance.

4. **Construction Quality and Durability:** The SGDW family is a testament to our commitment to quality and durability. Through our **Engineered Manufacturing Procedures** (EMP), we have optimized production processes to ensure a high-quality product. Our diamond wires are reinforced with the **SHX** elastomeric polymer to withstand the most demanding conditions and deliver long-lasting performance.

5. **Environmental Sustainability:** An essential aspect of SGDW Diamond Wires is their ability to be used without the need for water. This feature not only reduces environmental impact but also simplifies the comparison with traditional block squaring machines. By eliminating the need for expensive excavators and the use of polluting greases associated with them, SGDW Diamond Wires offer a more sustainable and cost-effective alternative.



**ORIENTED
CRYSTALS**

