45 ANNIVERSARY 1979-2024

DIAMOND WIRES FOR STONE CUTTING

DIAMOND PAUBER
CUTTING EXPERIENCE

ABOUT US

Since 1979 we have been manufacturing diamond wires with extreme care and exclusive techinques. Our research for innovative solutions never stops, for that reasons we stand out on the market, supplying our customer with the most advanced, efficient and consistent cutting systems

MARBLE
SANDSTONE
GRANITE

APPLICATION AREAS

At Diamond Pauber, we specialize in providing high-quality diamond wires for cutting Marble and various Nautural Stones , both quarries and processing operations. Our proximity to the Carrara quarries, renowned worldwilde for their marble, has all owed us to become pioneers in the field.

Our diamond wires are designed to meet the specific requirements of each stone, whether it's **Marble**,**Travertine**, **Limestone**, **Sandstone**, **Gneiss** or **Granite**.
We offer a wide range of options, from electroplated to sintered diamond wires, allowing you to choose the cutting method that suits your needs.

- QUARRIES EXTRACTION
- PROFILING
- TRIMMING
- SLABBING
- SQUARING
- SPLITTING

Primary Cutting Marble and Limestone

Each variety of stone has unique characteristics and every customers have different needs. Diamond Pauber can satisfy every necessity with specific products: electroplated or sintered diamond wires for cutting both with and without water, wires equipped with beads with distinctive profiles and protected by exclusive patents.

TA & GA ASSEMBLY

DRY Cut! WET Cut!

BCO-B Diamond Wire

BCO-B is a ø11 mm advanced electroplated diamond wire designed specifically for quarry extraction of Marble, Limestone, and Calcareous Stone. Its distinctive **Double Cone Beads,** combined with our patented **Oriented Crystals®** technology**,** significantly enhance cutting speed and overall performance. It features 27 beads per meter (BPM) and 2 Mounting Options :

- **Traditional Assembly (TA)** for dry cutting conditions
- **Polymeric Coated Assembly (GA)** with **SHX** elastomer to improve felxibility and safe at work.

Z-90 Diamond Wire

Z90-A is a Ø10.0mm traditional electroplated diamond wire, higly appreciated for its effectiveness in cutting Marble and Calcareous Stone in quarry extraction, whether using dry or wet cutting methods. The Z-90 diamond wire features cylindrical shape of the beads and it can be assembled with 27-30 beads per meter (BPM), depending on the type of machine and the features of the material to be cut.

Traditional Assembly (TA) for dry cutting conditions
Polymeric Coated Assembly (GA) with **SHX** elastomer to improve felxibility and safe at work.

ORIENTED CRYSTALS

The Patented Oriented Crystals® technology, is a crucial technique in our diamond wire production. This technology involves applying diamonds to the bead in a specific orientation, resulting in an increased number of cutting edges and improved cutting speed.

SAFEGUARD TECHNOLOGY

- ***Worker Protection***: *Operates at 8m/s, reducing accident risk compared to conventional 40m/s.*
- ***Maximum Cutting Efficiency***: *Patented technology ensures faster, precise cuts with no "snagging."*
- ***Machinery Stress Prevention***: *Low kinetic energy preserves machines, reducing wear and maintenance.*
- ***Construction Quality & Durability***: *Reinforced with SHX polymer for longevity and hard conditions.*
- ***Environmental Sustainability:*** *Waterless operation, reducing environmental impact and cutting costs.*

Primary Cutting
Granite and Hard Stones

In the mining industry, cutting granite presents significant challenges due to its exceptional hardness and abrasiveness.
Our diamond wires provide innovative solutions that ensure resistance, efficiency and safety, optimizing the extraction process and improving the quality of the final product.

GA & JA HIGH STRENGHT

WET Cut!

GRV Diamond Wire

GRV is a ø11 mm sintered wire made with advanced sintering technology. Its special mixture offers an excellent balance between cutting speed and durability. The **SHX** polymer coating ensures flexibility and resistance, of the diamond beads, preventing wire breakages to increase both performance and safety on the job site. This wire typically features 34-38 beads per meter (BPM), according to the materail to be cut. If used correctly, this wire requires no maintenance until the complete wear

ATV Diamond Wire

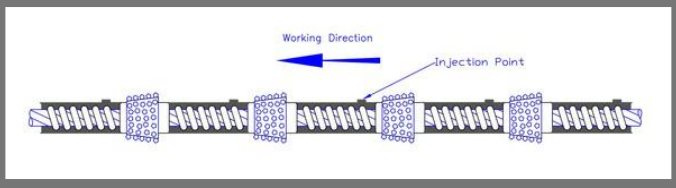
il filo diamantato sinterizzato ATV ø11mm è la versione più semplice ed ad un costo molto interessante. Il rivestimento è in gomma vulcanizzata (JA) in gtrado di resistere alle normali sollecitazioni durante il taglio nelle cave di granito.-Il filo è montato con 40 perle al metro

SHX ASSEMBLY

The SHX polymer coating is a unique innovation from Diamond Pauber, the result of our ongoing research.

This coating maximizes the properties of the elastomer, providing exceptional strength and flexibility, as well as providing superior compaction between the various metal components of the wire.

Designed to prevent bead slippage, SHX significantly increases efficiency and safety in the workplace.



Block Squaring Marble and Granite

Our diamond wires are designed to deliver fast, precise, and reliable cuts during the preparation phase of stone blocks. Optimized for monowire machines, these wires ensure perfectly squared surfaces and reduce material waste, enhancing overall production efficiency to met the demand of industry professionals.

GC ENDLESS LOOP ASSEMBLY

LSR-B Diamond Wire

LSR-B Ø10.8mm electroplated diamond wire is tailored for exceptional performance on Monowire Machines. Its tapered design enhances cutting speed and durability, making it ideal for high-efficiency Marble and Calcareus Stone stone cutting. The **Oriented Crystal®** technology ensures superior cutting accuracy, while the **SHX** polymeric coating maximize safety by preventing wire breakage and bead ejection. LSR-B is available with 28, 30, or 32 beads per meter (BPM), and customizable to meet specific requirements.

LSR-A Diamond Wire

LSR-A is electroplated diamond wire is a Ø8.5mm rapresents a faster solution for Monowire Machines. Its streamlined shape enhances speed and durability, while **Oriented Crystal®** technology ensures precise diamond alignment. The **SHX** polymeric coating and spring assembly enhance safety by preventing breakage and bead loss. LSR-A is vailable with 28, 30, or 32 beads per meter (BPM), according to the client needs.

TAPERED SHAPE

The characteristic conical shape of the diamond beads significantly ehnances cutting speed and durability on all materials thanks to:

- **Reduced Contact Area: Fewer diamond grains in contact increases cutting pressure for faster cutting.**
- **Optimized Cutting Speed: The shape allows for quicker cutting across various materials.**
- **Progressive Use of Diamond Grains:**

Diamonds wear down starting from the outer diameter, with new diamonds becoming available as needed.

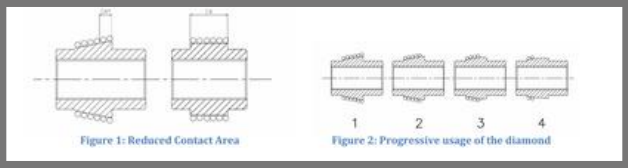
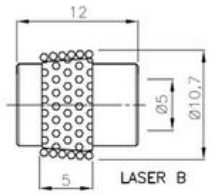
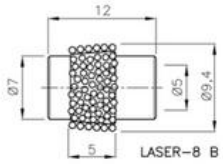
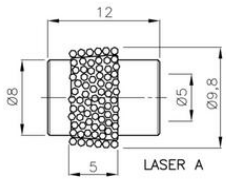


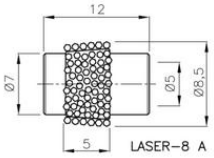
Figure 1: Reduced Contact Area

Figure 2: Progressive usage of the diamond





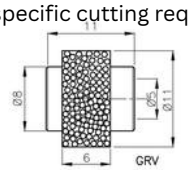


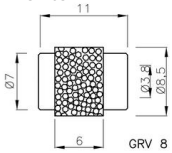


GA ASSEMBLY

GRG Diamond Wire

GRG is a Ø11 mm sintered diamond wire design to cut Hard Stones, Medium and Hard Granite. The high resistance and the fast cutting action permit to this diamond wire to be applied in many different tasks, with a good balance between resistance and cutting speed. The **Oriented Crystal®** technology ensures optimal diamond grain alignment for precision cuts, while **SHX** polimeric assembly increase the safety on the job site. Usally assembled with 36-38 beads per meter (BPM) based on the material's specific cutting requirements.





Profiling Marble and Limestone

A razor-sharp diamond wire is crucial for ensuring precise alignment with the desired cut, delivering a clean and professional finish. Diamond Pauber' s diamond wires are the key product to transforms blocks into intricate architectural shapes with minimal downtime, offering both perfect alignment and exceptional resistance.

HA HIGH STRENGHT ASSEMBLY

WET Cut!

LSR-A Diamond Wire

LSR-A Ø 6,9 mm mm electroplated diamond wire is the fastest for all Monowire Machines, ideal for cutting marble and stone. Its tapered design boosts cutting speed and durability, while **Oriented Crystal®** technology ensures optimal diamond grain alignment for precision cuts. The **SHX** polymeric coating and spring assembly enhance safety, preventing wire breakage and bead ejection. Available with 28, 30, or 32 beads per meter (BPM), with custom options to fit customer needs.

MRS Diamond Wire

MRS is a Ø 7,3mm sintered diamond wire with cylindrical beads. It is specifically designed for profiling operations of Marble and Calcareous Stone. It features 27-28 beads per meter (BPM), providing efficient cutting capabilities.

Splitting Marble and Limestone

A razor-sharp diamond wire is crucial for ensuring precise alignment with the desired cut, delivering a clean and professional finish. Diamond Pauber' s diamond wires are the key product to transforms blocks into intricate architectural shapes with minimal downtime, offering both perfect alignment and exceptional durability.

VIP-A Diamond Wire

VIP_A is a ø6,1mm diamond wire with cylindrical beads engineered for high-efficiency slab splitting. Utilizing our patented **Oriented Crystal®** technology, the VIP wire ensures optimal diamond grain alignment for superior cutting performance. The nickel bond offers maximum durability, while the **SHX** polymeric coating and springs enhance safety by preventing bead dispersion in case of breakage.

VIP-B is the version with Ø 6,9mm.

BNR Diamond Wire

BRN addresses the need for a thinner, more precise cutting tool with its ø5.3mm diameter cylindrical diamond bead. Developed to complement the VIP wire, the BRN wire uses the same **Oriented Crystal®** technology for optimal diamond alignment and cutting efficiency. The nickel bond ensures long-lasting performance, and the **SHX** polymeric coating and springs provide enhanced safety by containing beads in case of accidental breakage. The BRN wire is perfect for delicate slab splitting applications where a finer cut is required.

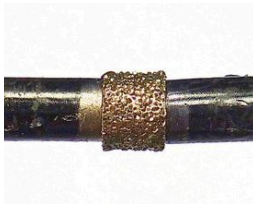
Multiwire

This application reduces processing time, improving speed, simplicity and energy savings. Diamond Pauber's diamond wires offes high cutting speed and durability. The exclusive design protects the internal wire and allows cutting until the beads are completely worn, ensuring reliability.

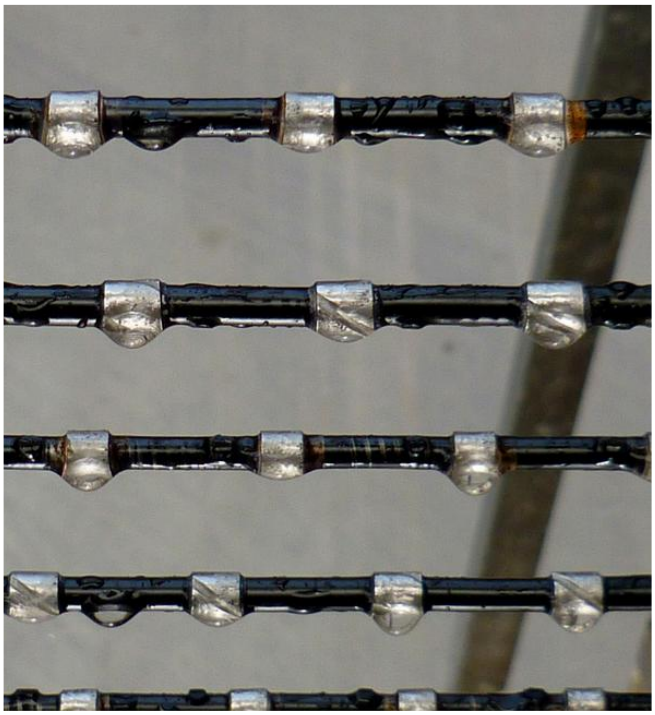
HA HIGH STRENGHT ASSEMBLY

WET Cut!

Marble:
MMW ø 5,2mm and MMW 6,2 mm

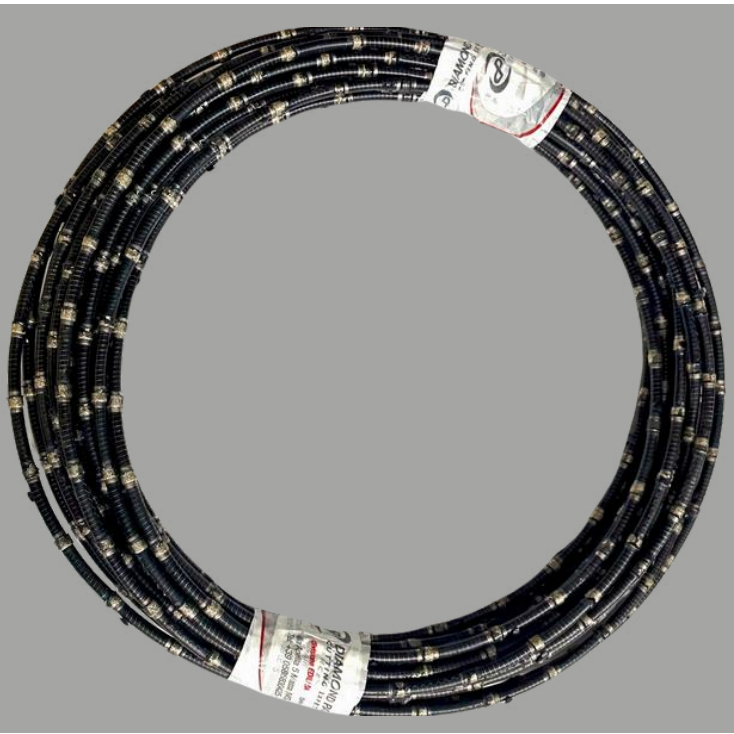


Electrodeposited wire type **MMW** with cylindrical pearl ø5.2mm and ø6.2mm in **Oriented Crystals®** technology. This wire is extremely fast and long-lasting, suitable for materials such as Marble and Limestone
The particular assembly with **SHX** polimeric coating allows the wire to be used in all conditions. It is normally assembled with 30 pearls per meter (BPM) but we can vary this parameter based on customer needs.



Granite:
GMW 5,3 - 6,3 and 5,3 mm

The special **GMW** sintered wire can be applied to all Granites. The sintered matrix has two different types of binder to tackle all types of Granite, from the softest ones to the most resistant. Normally assembled with 37 pearls per meter (BPM) in plastic coating.



Gang Saw Blades

Diamond Pauber's diamond blades deliver exceptional performance thanks to the innovative **DIM® (Diamond Injection Molding)** technology, which ensures hardness comparable to graphite but with greater impact resistance. Thanks to their ability to cut various materials, these blades are ideal for third-party cutting services, where versatility is essential.

STAINLESS STEEL /CARBON

D Sector - 20mm Long - 8mm Height

:
Greater resistance and durability, ideal for intensive cuts on all types of Marble, from white to colored:

- Available in carbon steel (thicknesses 2.5 mm, 3.0 mm, 3.5 mm) or stainless steel to avoid rust stains.
- Reduced thickness versions of 1.8 mm and 2.0 mm.

E Sector - 24mm long - 8mm Height

Traditional size, suitable for a wide range of applications:

- Available in carbon steel (2.5mm, 3.0mm, 3.5mm thicknesses) or stainless steel to avoid rust stains.
- Reduced thickness versions of 1.8 mm and 2.0 mm.

Martin Miller Carbon Steel and Stainless steel thickness: 3,5 - 3,0 - 2,5 - 2,0 - 1,8mm

24 mm Long Sector – KEY ADVANTAGES–

- **Higher Welding Resistance:** The extended sector length provides superior durability at welded joints, ensuring greater resistance to stress and fatigue.
- **Reduced Impact Points:** Fewer points of impact along the sector translate to a longer lifespan, minimizing wear and extending the blade's performance over time.

OUR TECHNOLOGY

ORIENTED CRYSTALS TECHNOLOGY

This patent allows us to increase the cutting capacity of an electroplated diamond tool.
We can orient a higher number of crystals, thus increasing the contact between the cutting edges and the object that needs to be cut. This production technique together with the high resistance of our nickel bond allows us to mount the diamond crystals with much more effectiveness.
This allows the diamond grain to perform its abrasive action for a longer time even in extreme working conditions.

SHX ASSEMBLY

The SHX polymeric coating boasts a surprising resistance to abrasion and extraordinary elasticity, ensuring excellent adhesion between all the metal components of the wire.

TAPERED BEADS

The conical-shaped electroplated beads optimize cutting efficiency and duration. The progressive use of the diamond and the reduced contact area with the surface of the object give greater cutting pressure. When the first diamond has finished its work and broken, the underlying diamond comes into play, thus giving rise to multi-layer behavior.

- **Reduced friction**
  It makes it easy to start a new cut
- **Better grip on motorized wheel**
  It means reduced slippage on rubber wheels
- **Start cut at maximum speed**
  The diamond is immediately available, allowing you to start cutting at maximum speed
- **Adaptability to narrow corners**
  The geometry of the bead is particularly advantageous in cuts with limited spaces
- **Excellent behaviour of diamond**
  The worn-out diamond leaves the bead with ease, and a new diamond is immediately ready to continue cutting

ENVIROMENTALLY FRIENDLY

A fundamental aspect of diamond wires is the possibility of using them without the use of water. This feature reduces the environmental impact, simplifying the comparison with traditional cutting methods such as the oxyacetylene flame, eliminating the management and use of polluting gases.
Diamond Pauber diamond wires offer a more sustainable and cost-effective alternative.

100% Made in Italy

WHY TO CHOOSE US

Over the years we have developed numerous patents and exclusive features that have contributed to the success of our products, making them an Italian excellence recognized and appreciated throughout the world.

We can adapt our wires to the client needs offering customized solutions.

We are proud to state that we can provide our clients with the right wire for every work. From standard concrete cutting to heavily reinforced, XL cuts, offshore and even dry cut in nuclear decommissioning.

Scan the QR Code for more information

DIAMOND PAUBER
CUTTING EXPERIENCE

45 ANNIVERSARY 1979-2024 — We Care 4 u!

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