

# Development and Manufacture of Diamond Tools



**DIAMOND WIRE SAW**



**METAL PAD**



**PROFILE WHEEL**



**영선다이아테크**  
YOUNG SUN DIATECH

# About Company

## CEO Greetings

YOUNG SUN DIATECH is the professional manufacturer who has produced and developed the diamond tools since its foundation.

We aim at being the unique manufacturer as well as being the best in the world.

It is our pride to have over 20 different patents at home and abroad, earning more than 90% of our main sales from the creative and excellent products we ourselves have developed.

Our competitor is not others but our yesterdays, and we never imitate but create.

With certainty that our own new high-technology applied to the production of the world's first Volter for steel cutting, both dry & wet type Mir wire for concrete cutting, and diamond metal pad should be the standard of world's producing - method in the near future, we will keep doing every effort to consistently and passionately develop a new product and an advanced technology. If you are dissatisfied with your current products and methods for cutting & grinding, please try to find the good solutions with YOUNG SUN DIATECH.

All staff of YOUNG SUN DIATECH is willing to face and listen to your problems with the perfect preparation.

It is our duties and worth to quickly solve all your problems.

YOUNG SUN DIATECH has the best solutions.

Thank you.

## Applications

Extending, remodeling or partial dismantling of structures that require precision cutting

Hospitals, schools, public institutes, and housing complexes where environmental disruption (noise, dust particles, vibration, etc.) is expected to result in considerable damage

Considering car traffic, to minimize obstruction of traffic when dismantling traffic facilities or structures in downtown areas

Dismantling bridges and jetties among other underwater structures resulting in waste matter that is expected to pollute water

Extending or repair work on structures of facilities like airports wherein operation cannot be suspended

Dismantling or repair work on worn commercial buildings, shopping centers in crowded districts that are currently in business

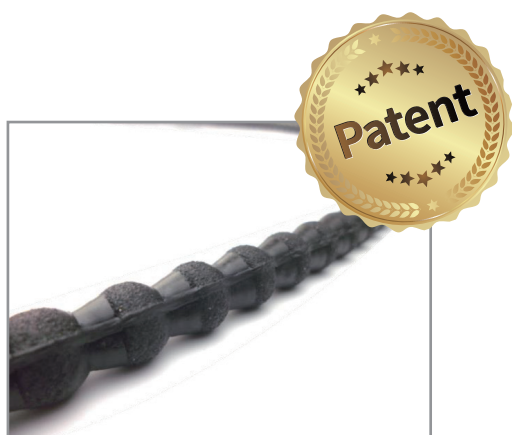
Not only is the diamond Wire Saw technique exceptional in high precision cutting regardless of the cutting depth or angle, it is an all-weather state-of-the-art cutting technology that can be used in various conditions or underwater offshore application.

## Company History

<b>2017</b>	<b>05</b>	Selected as an enterprise specializing in parts materials / Obtained certification of Inno-Biz / Founded Research Institute
<b>2016</b>	<b>12</b>	Obtained certification of ISO 9001:2008/KS Q ISO 9001:2009
	<b>11</b>	Obtained US Patent for Diamond Wire Saw(Patent No. US 9,486,937 B2)
<b>2015</b>	<b>10</b>	Moved to a newly founded office and factory
	<b>09</b>	Completion of 3D bead wire(Patent No.10-1554100)
<b>2014</b>	<b>04</b>	Completion of diamond wire saw(Patent No.10-1384961)
<b>2013</b>	<b>10</b>	Completion of lightweight diamond abrasive cup wheel and its manufacturing method(Patent No. 10-1317081)
	<b>09</b>	Recognition of R&D Division
	<b>05</b>	Confirmed as a professional company of components and materials
	<b>02</b>	Obtained US Patent for Diamond Tool fabricated by combining mesh net with synthetic Resin material (Patent No. US 8,366,521 B2)
<b>2011</b>	<b>10</b>	Participated in the business to create foundation of product safety technology
	<b>05</b>	Extension of a factory
	<b>01</b>	Utility model registered(Variable blade with improved structure, Patent No . 20-0452187)
<b>2010</b>	<b>02</b>	Completion of 3D bead-type wire saw(Patent No. 10-0943418)
<b>2009</b>	<b>09</b>	Completion of spring-type diamond wire saw(Patent No.10-0920083)
<b>2008</b>	<b>04</b>	Completion of structure-improved wire saw(Patent No.10-0823387)
	<b>01</b>	Completed the development of a diamond tool combining mesh and synthetic resins(Patent No. 10-0801333)
<b>2007</b>	<b>12</b>	Participated in the production environmental innovation of small & medium sized Co.
	<b>10</b>	Completion of spring screw wire saw(Patent No. 10-0774054)
	<b>02</b>	Completed the development of wire saw & its manufacturing method(Patent No. 10-0685281)
<b>2006</b>	<b>12</b>	Completion of metal pad(Patent No. 10-0801333)
	<b>01</b>	Registered as a venture company(Advanced technology company)
<b>2005</b>	<b>12</b>	Applied for a patent for developing a spring-type wire saw(Patent No. 10-2005-0118794)
	<b>08</b>	Completion of wire saw development(Patent No. 10-0685281) Nominated as a promising export firm
	<b>01</b>	Applied for an international patent for a stone cutting tool(USA, Germany)
<b>2004</b>	<b>04</b>	Completed the development of a resin-bonded diamond tool & its manufacturing method (Patent No. 0430396)
<b>2003</b>	<b>09</b>	Moved to a newly founded office and factory
<b>2002</b>	<b>08</b>	Completion of profile wheel development(Patent No. 10-04300396)
<b>2000</b>	<b>05</b>	Utility model registered(Diamond blade body, Patent No. . 0188767)
<b>1999</b>	<b>03</b>	Company Establishment

# Volter Wire Saw

Applicable for **Steel cutting** dry and wet type



## Applications

- Cutting for steel materials including steel pipes
- Dismantlement or repair for the steel structures at hydroelectric, thermoelectric and nuclear power plant
- Cutting for transformers, turbines, or underwater oil pipelines, etc.
- Cutting & breaking up waste oil tankers

## Characteristics & Advantages

- Cutting is possible even when there are mixed plastics or rubbers
- Pitch can be selected depending on cutting materials, shape, or size
- Cutting is possible with low-power electric wire saw machines
- Due to the brazed type bead, cutting capacity is significantly fast
- Direct cutting is possible without any pulley
- The speed of wire makes the working conditions much safer
- Volter wire already succeeded in making impossibilities to possibilities for any demanding cutting materials
- Protecting environment from pollutants : no sludge at the work place
- Environment-friendly : Cutting is possible even when in the overcrowded area

## Applicable



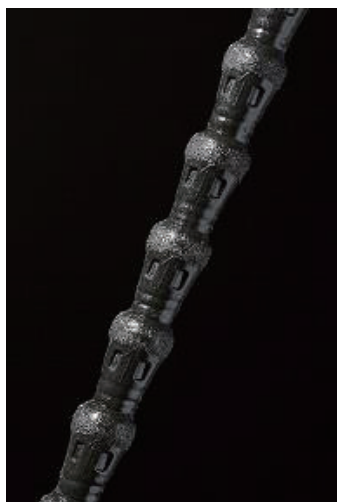
## Recommendations

- Mechanically, our wires require big torque and high tension at low speed.
- The wire speed is normally below 15m/s

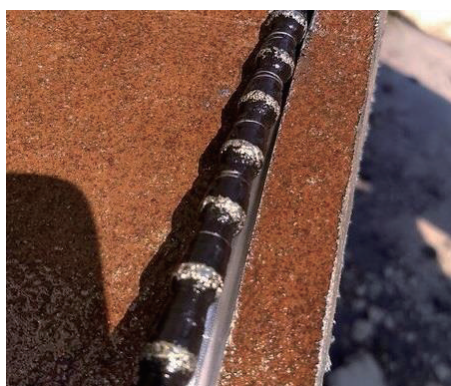
## Specification

Diameter	Application	Bead / meter
10 mm	Reinforced Concrete	60
10 mm	Reinforced Concrete	67
10 mm	Carbon Steel	91
10 mm	Stainless Steel	105

## Details of Volter Wire Saw



## Real Application Cases



Offshore Steel Pipe Cutting



Steel Pipe Sheet Pile Cutting



Carbon Steel Cutting



Steel Pipe Cutting

# Mir Wire Saw

'Applicable for **Concrete cutting** dry and wet type



## Applications

- Precision cutting or elimination for concrete structures
- Dismantlement at a hospital, school, public institution, and a housing complex where severe damages are expected from pollution
- Extension or repair/maintenance of buildings at an airport where facility shutdown is not allowed
- Dismantlement and repair/maintenance at deteriorated business buildings in operation, traffic facilities in concentrated shopping district

## Characteristics & Advantages

- Possible to cut 20m<sup>2</sup> at a time without water
- Not stuck in the rebar due to the narrow beads distance and its distinctive shape
- Applicable for both dry and wet type
- Durability life is 2 to 5 times longer than that of a conventional wire saw
- Despite the wire's wide-angle, initial drive is smooth
- The unique shape of beads makes Mir wire long-lasting and durable
- No one-sided wear or slip phenomenon
- The pitch of Mir ranges from 14mm to 20mm.

## Applicable



## Recommendations

- We mostly use dry cutting type wire or use little water
- You can select depending on the size, strength, and rebar spacing of the work

## Specification

Diameter	BPM	Pitch
Ø 8	59 ~ 100	10 ~ 17
Ø 9	53 ~ 83	12 ~ 19
Ø 10	45 ~ 63	16 ~ 22
Ø 11	48 ~ 80	12.5 ~ 21

## Details of Mir Wire Saw



## Real Application Cases



Dismantling the Concrete Structures



Precision Cutting

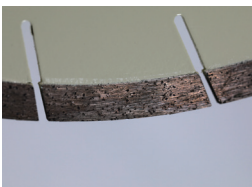
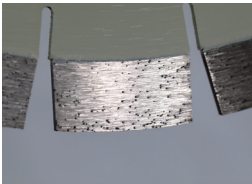


Disassembling the Concrete Bridge



Taking Apart the Concrete Bridge

# Saw Blade



## Applications

- Grinite, Marble
- Engineered stone

## General Blade

Application	For Grinite , Marble , Engineered stone
Size	10" ~ 22"
Segment Height	10 W , 20 W

## ‘K’ Blade

Application	For Grinite , Engineered stone
Size	10" ~ 22"
Segment Height	25 W

## Narrow Slot Blade

Application	For Engineered stone
Size	10" ~ 22"
Grit	10 W

## ‘N’ Blade

Application	For Grinite , Engineered stone
Size	10" ~ 22"
Grit	25 W

# Diamond Cup Wheel



## Specification

Application	For concrete & Stone
Size	4", 5", 7"
Grit	Fine, Medium, Coarse

# Finger Bit



## Specification

Application	CNC Tooling For Granite, Marble & Engineered stone
Size	Ø23, 1/2" Gas L40

# Core Drill



## Specification

Application	Drilling Concrete
Size	1" ~ 8"

# Diamond Metal Dot Pad (Patent)



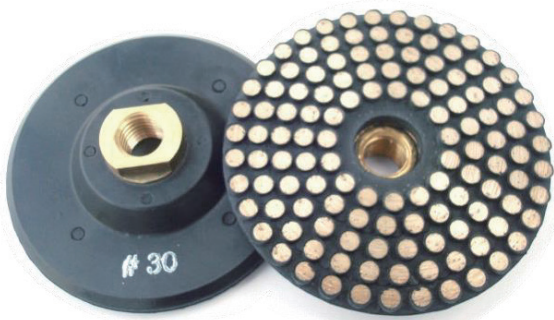
## Velcro Type Metal Pad

Application	For Concrete & Stone
Size	3" / 4" / 5" / 6" / 7" / 230 mm / 270 mm
Grit	#20 ~ #300



## Snail Lock Pad

Application	For Stone & Engineered Stone
Size	4"
Grit	#30 / #60 / #120 / #150 / #200 / #300



## Flexible Holder Pad

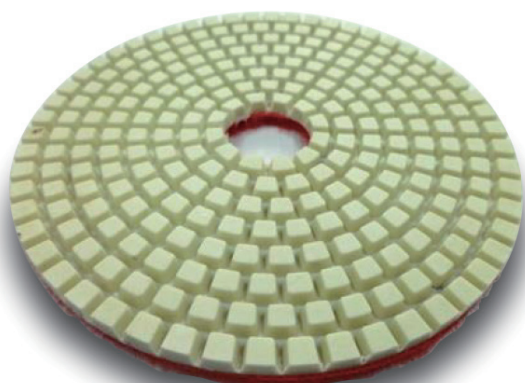
Application	For Stone & Engineered Stone
Size	4" / 5"
Joint	M14, M16, 5/8 - 11UNC
Grit	#30 / #60 / #120 / #150 / #200 / #300

# Diamond Resin Pad



## Dry Pad

Application	For Stone & Concrete
Size	4"
Grit	#50 / #100 / #200 / #400 / #800 / #1500 / #3000



## Wet Pad

Application	For Stone & Concrete
Size	4"
Process	3 Step



## Snail Lock Pad

Application	For Stone & Engineered Stone
Size	5"
Process	6 Step

# Diamond Profile Wheel



## Diamond Profile Wheel

Application	For Stone & Engineered Stone
Size	20, 25, 30 mm
Grain	Pos 1, Pos 2

## Type of Configurations (Shapes)

E Bevel	B Demi Bullnose	A Eased	I Normandy Bead	H Dupont
F Ogee	O Cove-Dupont	Q Cove Ogee	L Cove	V Full Bullnose

# Diamond Floor Polishing Tool



## Assembly type Polishing Tool

Application	Grinding & Polishing Concrete & Stone
Strength	For Soft Concrete 210, 240, 270, 300, 320 kg / cm <sup>2</sup> above 320 strength concrete
Grain	#20 / #30 / #80 / #150

# Patent

About Company

Volter Wire Saw

Mir Wire Saw

Saw Blade / Diamond Cup Wheel  
Finger Bit / Core Drill

Diamond Metal Dot Pad  
Diamond Resin Pad

Diamond Profile Wheel  
Diamond Floor Polishing tool

Patent



As a company specializing in the production and customization of diamond tools based on an extensive history, experience, and diverse ideas, we have concentrated on developing pioneering diamond tools with the capacity to take care of problems that could not be solved. YOUNG SUN DIATECH has satisfied the needs of customers as well as this generation, and will strive ceaselessly to become the best in the 21 st century on a foundation of trust.

**Once you let us know your demanding applications, we'll be there for you.**

**Thank you.**



**영선다이아테크**  
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