

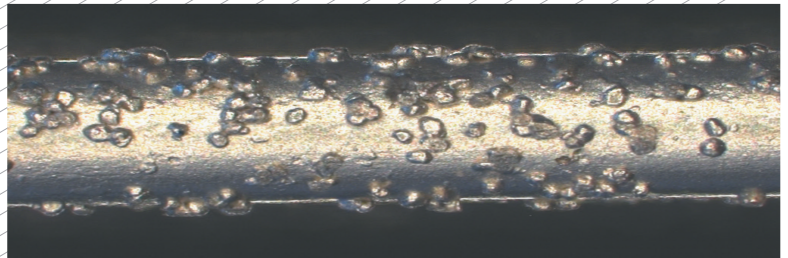


ThermoLoop[®]

By THERMOCOMPACT

DIAMOND WIRES NEW GENERATION OF LOOPS

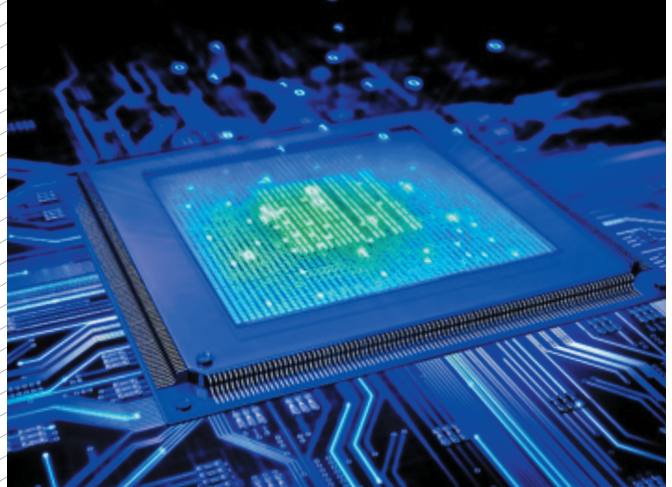
CROPPING AND SQUARING
SAPPHIRE, QUARTZ, SILICON,
SOFT TO HARD CRYSTALS





Newest fixed abrasive highly technical engineered wire, **Thermoloop®** is the result of :

- A century of technological expertise and innovation in electroplating
- The R&D's team dynamic and proven approach of research and progress



Patented exclusive tailor made technology, our loops are issued from our dedicated workshops and give you the insurance of:

- a high quality and efficiency
- a reliable product during the manufacturing process.



ThermoLoop®

By THERMOCOMPACT



DIAMOND WIRES NEW GENERATION OF LOOPS

THERMOLOOP® IS DEDICATED TO THE CROPPING AND SQUARING SAPPHIRE, QUARTZ, SILICON, SOFT TO HARD CRYSTALS

Product properties

High productivity gains by reducing the cutting time

- › ThermoLoop® reduces :
 - the cutting time and the operating costs
 - the energy consumption of the machines and the cooling and cleaning requirements.

High cutting ability due to its fixed abrasive properties

- › ThermoLoop® reduces :
 - the surface roughness,
 - Bow and Warp
 - No chips

High stability and results in the machining process

- › ThermoLoop® resistance significantly reduces wire breaks and loss of diamond grains with a tensile strength >2000 MPa

Economical advantages

- > Easy adjustment on lengths to meet your cutting requirements
- > Ensures high efficiency for surface and finish quality requirements
- > Lower cost of ownership

Environmentally friendly

- > Increases the waste recycling: less wire using
- > No slurry management

Custom made process according to your needs

- > Your brand of machine
- > The optimal diamond density required
- > The length : on your needs
- > The diameter : on your needs

ENGINEERED BY A DEDICATED TEAM

The R&D team of Thermocompact offers a COMPLETE TECHNICAL and LONG TERM SUPPORT FOR YOUR COMPETITIVE NEEDS, including personalized recommendations.

We tailor technologies for your specifications and/or technical requirements.

We develop innovative products and applications like ThermoLoop® for optimal performance, part design, and greater return on investment.

World patented product

ThermoLoop® is manufactured by Thermocompact. Master of our manufacturing process, we engineer and work on world class state-of-the-art production equipment certified in Europe :



Secured by world patents for :

- Manufacturing and process
- Fixed abrasive wire
- Loops

**THERMOLOOP® IS DEDICATED TO CROPPING AND SQUARING:
we offer a wire core from 250µm to 700µm diameter**

APPLICATION FIELDS		WIRE DIAMETER (mm)	DIAMOND GRAIN SIZE (µm)		WIRE BREAK STRENGTH (N)	DIAMOND DENSITY
			Mesh	US		
CROPPING	Thermoloop®	0,250	40-60		100	40-60
	Thermoloop®	0,500	40-60	500-400	370	50-80
SQUARING	Thermoloop®	0,700	60-80	400 - 325	730	60-80

EXAMPLE WITH THERMOLOOP® WIRE CORE 500µm

GENERAL CONDITIONS

Core diameter : 0.5 mm

Coated diamond wire :
diameter 0.55mm

Characteristics :
TS 1500N/mm²,
Elongation 4%,
Breaking load : 355N

Loop manufacturing :
Characteristics:
TS 1400-1480N/mm²,
Elongation 4,4%,
Breaking load : 350 N

On cropper machine, **length 2,62m**
Silicon brick slicing 156mmx156 mm

Condition 1

- Goal cutting time : 7 min
- rotation speed max 2800 tr/min (60 m/s)

Condition 2

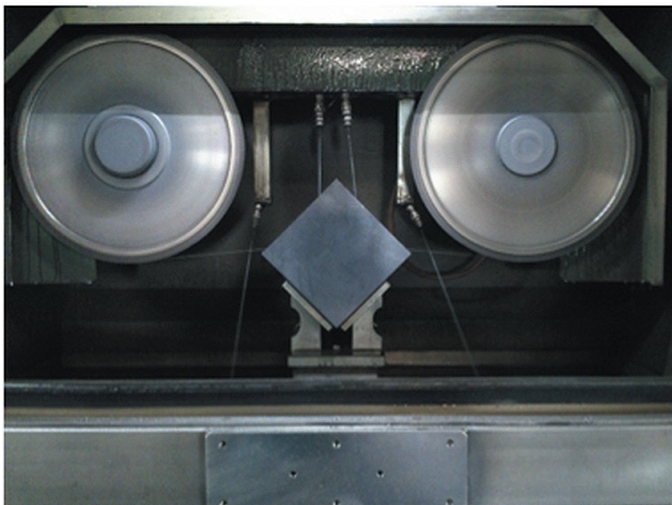
- Goal cutting time : 15 min
- rotation speed max 1100 tr/min (23 m/s)

RESULTS (Condition 1) : weak dispersion on the slicing capability

Number of cuts	Proven capability (%)
35	100
40	95
45	80
50	30

BEST RESULT : 60 cuts
(5000 cm²/wire meter)

CROPPING MACHINE FOR LOOPS
AT 50% OF THE CUT - 156 X 156 MM²





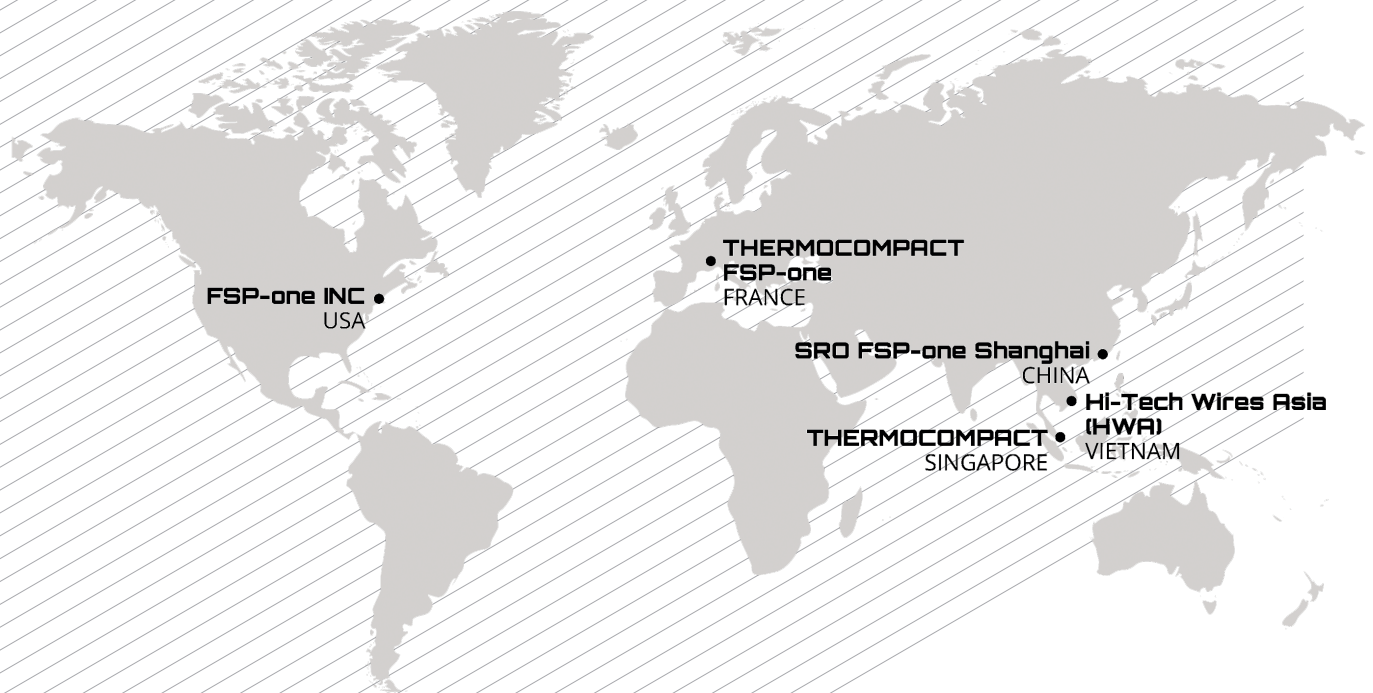
DIAMOND WIRE NEW GENERATION OF LOOPS

Thermoloop® is a brand of Thermocompact.

Thermocompact is part of the **THERMO** Technologies group that includes FSP-One (France and USA) and HWA (Vietnam).

To achieve technological advances and improve productivity for our customers, we apply our founding values since 1913 : **Expertise – Excellence - Innovation.**

THERMOLOOP®
WHEREVER YOU ARE IN THE WORLD



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