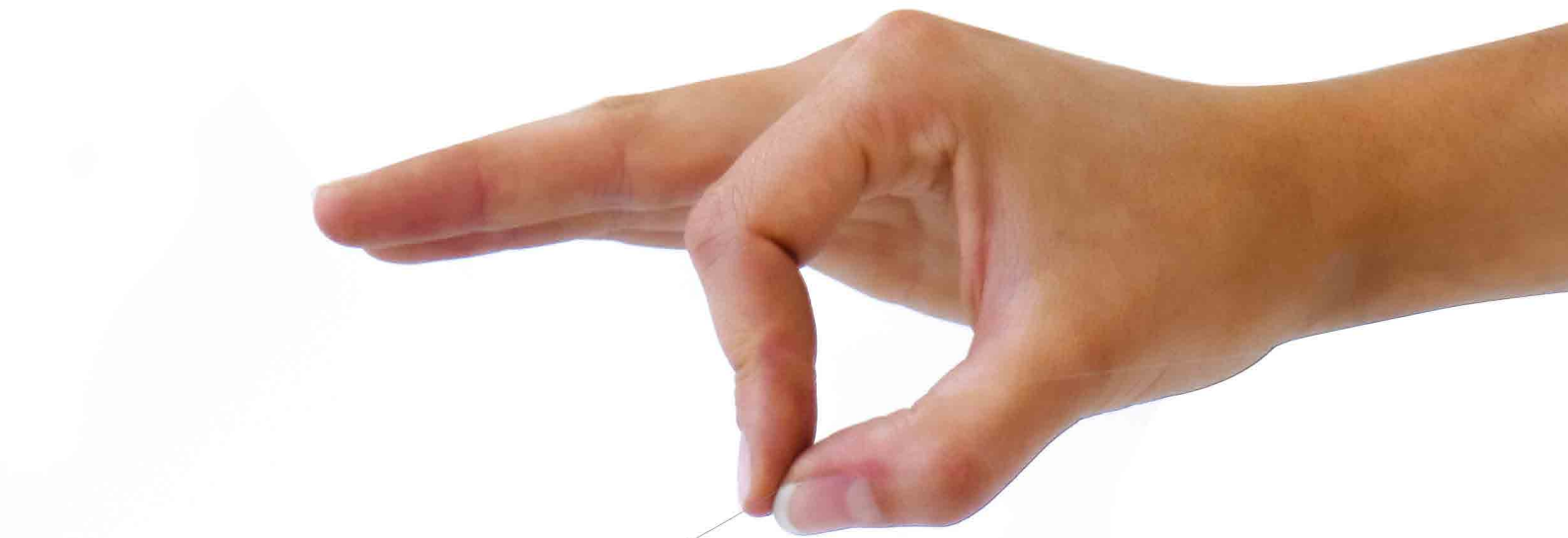




GROUP
THERMO 
technology



EDM WIRES

EXCELLENCE IN WIRES



WHO WE ARE

A world market leading specialist in EDM:
we support our client with excellence for over 40 years

p. 2

CHOOSE YOUR WIRE

About precision and threading

p. 6

MAKE AN EASY CHOICE VISUALLY

3 criteria & usage recommended

p. 8

WIRES ACCORDING TO YOUR PRODUCTION NEEDS:

VERY HIGH SPEED & PRECISION

THERMO XCC®
THERMO TEX®
THERMO SWX®

p. 10

HIGH SPEED & PRECISION

THERMO SE®
THERMO SWD®
THERMO SWW®
THERMO D®

p. 18

SPEED & PRECISION

THERMO SD®
THERMO SD2®
THERMO JP®
THERMO JP2®

p. 28

SUPER PRECISION & SPEED

THERMO SA®
THERMO SWA®
THERMO SWS®
THERMO A®

p. 38

ALL PURPOSE

THERMO BRASS 1000®
THERMO BRASS 900®
THERMO BRASS 500®
THERMO BRASS 400®
THERMO FIRST 900/500®

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PLAN YOUR PRODUCTION

p. 58

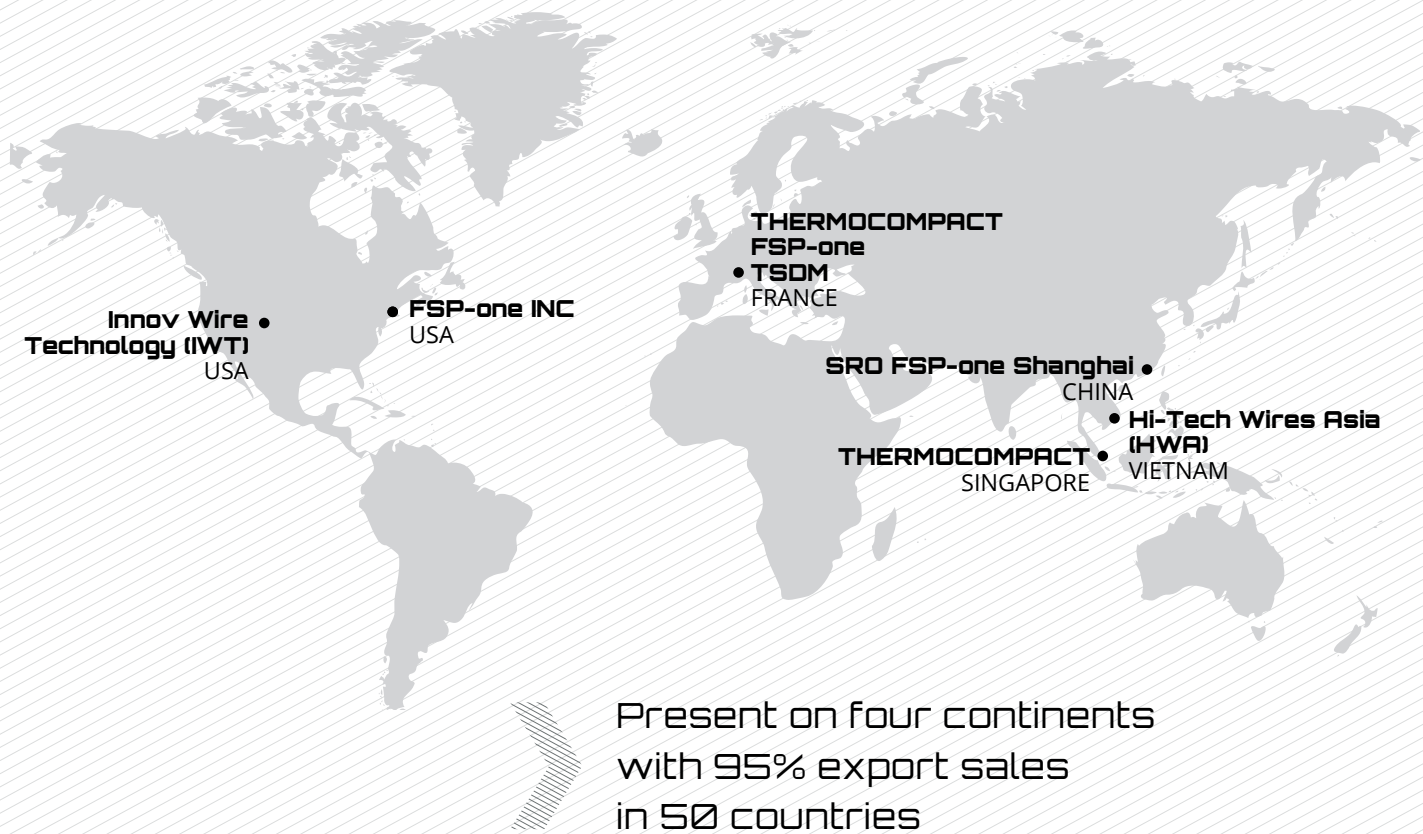
PLAN YOUR ORDERS – STORAGE CONDITIONS

p. 60



WORLD WIDE LEADER IN COATING
& HIGH TECHNOLOGY WIRES

Thermo Technologies group is today located in Europe, Asia and America.



We seek excellence to be world leader in our niche markets and offer the best:



to meet the needs of our industrial clients in many sectors of high technology: **automotive, aeronautics, space, connectivity, precision mechanical, medical sector, photovoltaic, electronics...**

PROFICIENT IN 5 ORIGINAL CORE BUSINESSES

We manufacture:

- › High-end wires for **EDM**
- › High value added **technical surface coating** (electrolytic, thermal or chemical processes)
- › **Speciality coated wires** for specific electrical cables
- › Diamond electroplated wires for Photovoltaic, Electronic and Sapphire applications
- › Metal heat and thermochemical treatments

ECO FRIENDLY SOLUTIONS TO PROTECT OUR PLANET RESOURCES

- › We prefer short circuits for the supplies of raw materials.
- › We are committed to zero pollution. All our technological processes continuously improve the waste recycling and eliminate any chemical pollution.
- › Our innovative solutions allow energy savings on manufacturing equipment.

INNOVATION: PART OF OUR DNA

Forward-looking, with a dynamic and proven approach of continuous progress and innovation, our **Research and Development** team pushes the limit of performance of the process and products and works continuously on new material structures: R&D's group regularly demonstrates results including **world wide patents** that cover innovative EDM wires and manufacturing processes.

As an international leader and to answer to the needs of our industrial partner and clients in the course of excellence and innovation, we develop every year innovative products and processes in terms of performance, productivity and quality constancy.

FOR EXAMPLE:

SMART SPOOL[®]
By THERMO COMPACT

is able to **capture, memorise and deliver information** from production, during its transportation and storage : its ingenious on-board electronic system with tracking sensors gives all information to support:

traceability
technical data control
production management

More than 18 patents for product and process

2% revenues invested every year in R&D

Major partnerships with research centers, innovation clusters and global corporations



EDM WIRES: KNOW HOW AND EXPERTISE FOR MANY YEARS



THERMOCOMPACT, with more than 100 years of experience and know-how acquired in electroplating, designs and manufactures in France the best performing and innovative EDM wires for its clients in high technology sectors.

Today **THERMOCOMPACT** engineers and works on world class production lines and is considered the world-wide leader in EDM wires, specialised in electroplating.



Hi-Tech WIRES ASIA, since 2007, manufactures in Vietnam the best performing and innovative EDM wires, based on the know-how and the expertise of Thermo-technologies group in electroplating. **HWA** deserves the Asian and the American markets with the best quality and reliability existing for EDM wires.



Both, **THERMOCOMPACT** and **HWA**, support their industrial customers to reach their goals of technical and improved productivity, applying the thermo-technology group founding values:

**EXPERTISE
EXCELLENCE
INNOVATION**

WE ARE THE ORIGINAL PATENT HOLDER FOR "GAMMA", "GAMMA WITHOUT DISTRIBUTION", AND "BETA/GAMMA" EDM WIRES

We have developed :

- the first coated EDM wire in 1973 (**THERMO X®**)
- the fastest EDM wires in 2002 (**THERMO XCC®**)
- a new EDM wire with combination between speed and accuracy (**THERMO SD2/JP2®**) in 2012



WE SUPPORT OUR CUSTOMERS IN ACHIEVING EXCELLENCE SINCE A LONG TIME WITH HIGH VALUE EDM WIRES RESULTING IN MAJOR PRODUCTIVITY GAINS

We partner with our clients, the mechanical and micro-mechanical manufacturers to offer high added value wires adapted for precision and productive machining.

- › Our **wide range of EDM wires** offers more than 17 EDM wires, from brass to last generation of patented coated wires.
- › Our high-tech wires **can machine any type of metal part** regardless of hardness, complexity and precision.

We continuously adapt our EDM wires to the combined needs of performance of our customers for many applications: cutting tools, molds and dies, highly sophisticated parts manufactured for medical equipment, aerospace, watchmaking, connectors, precision mechanical parts etc...

WE OFFER PERSONALISED SERVICE AND LONG TERM TECHNICAL PARTNERSHIP INCLUDING:

- › **Personalised recommendations** on machine issues, wherever our customers are in the world
- › **A long-term support**, establishing a **knowledge-sharing plan** with our customers to ensure continuous improvement for EDM wire performances, and greater return on investment.

CHOOSE YOUR WIRE

ABOUT PRECISION

The precision of the part is the result of:

- 
- THE MACHINE

THE PART

THE TECHNOLOGY

THE WIRE

THE TEMPERATURE

Our coated wire combined with a dedicated technology setup on machine will provide you the best precision:

MACHINES SOLUTIONS											
YOUR NEED	WIRE	+GF+									
		Micro machining & top end accuracy	High speed machining	General purpose							
VERY HIGH SPEED & PRECISION	THERMO XCC®		■								
	THERMO TEX®		■		■						
	THERMO SWX®		■		■						
HIGH SPEED & PRECISION	THERMO SE® *	■	■		■	■	■	■	■	■	■
	THERMO SWD®	Offered for certified processes which are still in operation									
	THERMO SWW®										
	THERMO D®										
SPEED & PRECISION	THERMO SD®	■	■	■						■	
	THERMO SD2®	■	■	■							
	THERMO JP® **				■	■	■	■	■	■	■
	THERMO JP2® **				■	■	■	■	■		■
SUPER PRECISION & SPEED	THERMO SA®	■	■								
	THERMO SA 500®		■								
	THERMO SA 400®		■								
	THERMO SWA®	■	■		■	■	■	■	■	■	■
	THERMO SWS®		■								
	THERMO A®	■	■								
ALL PURPOSE	THERMO BRASS 1000®					■	■	■	■		

ABOUT THREADING

Most modern EDM machines use a thermal system to prepare the wire before automatic threading. They make the wire straight themselves. This operation on the machine allows the wire to be straight enough for threading. Thus, they can automatically thread curved wires such as soft brass (500N/mm² and 400N/mm²). Some machines still require the wire to be straight, or to be flexible enough to remain in the threading jet.

YOUR NEED	WIRE	LEVEL OF STRAIGHTNESS	PAGE
VERY HIGH SPEED & PRECISION	THERMO XCC®	C	14
	THERMO TEX®	C	16
	THERMO SWX®	C	18
HIGH SPEED & PRECISION	THERMO SE® *	B	22
	THERMO SWD®	A-B	24
	THERMO SWW®	C	26
	THERMO D®	A-B	28
SPEED & PRECISION	THERMO SD®	A	32
	THERMO SD2®	A-B	34
	THERMO JP® **	A	36
	THERMO JP2® **	A-B	38
SUPER PRECISION & SPEED	THERMO SA®	A	42
	THERMO SA 500®	B	44
	THERMO SA 400®	C	44
	THERMO SWA®	A	46
	THERMO SWS®	B	48
	THERMO A®	A	50
ALL PURPOSE	THERMO BRASS 1000®	A	52

- A

the wire is straight
- B

the wire is less straight, but it is flexible enough to thread automatically on most systems, provided the water jet is strong enough
- C

the wire should be thermally straightened by the machine or be threaded by hand
- A-B

is an intermediate between A and B

* THERMO SE® is an high speed wire. To obtain its best performance, some parameters can be pushed.

** We have designed THERMO JP® and THERMO JP2® to fit with Japanese machines with its original brass parameters.

MAKE AN EASY CHOICE VISUALLY



In the following pages, the radar graph shows the performances of our wires compared to the standard brass.

CHOOSE YOUR WIRE WITH 3 CRITERIA

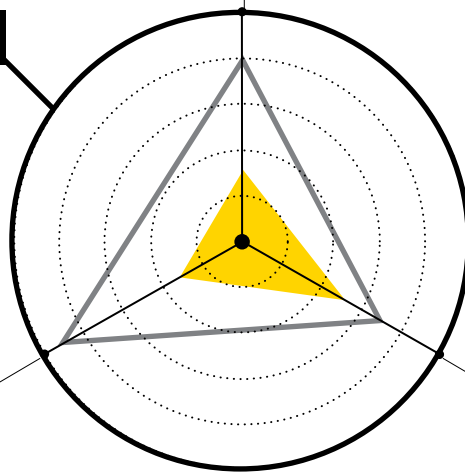
O.E.E.

Overall Equipment Effectiveness

Refers to the process performance improvement, compared to the time needed for the wire-related maintenance of the machine. If, for example, the set up time is reduced, the O.E.E. will increase more product for less resource. The maintenance related to the wire includes:

- Replacement current feeders
- Wire guides cleaning, and re-alignment of heads

TOP PERFORMANCE



SPEED

Refers to the average speed of a wire. The radars compare coated wires to brass, in the same flushing conditions.

Coating enhance not only the rough cut's speed but also the cutting speed of some trims.

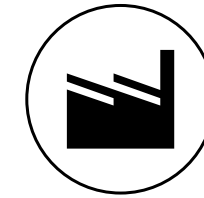
QUALITY

Refers to the best surface finish a wire can achieve, and to the best positioning accuracy during electrical edge sensing.

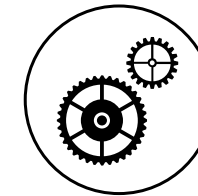
USAGE RECOMMENDED



AERONAUTIC



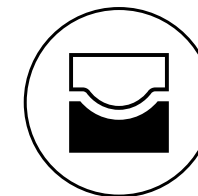
GENERAL MECHANIC



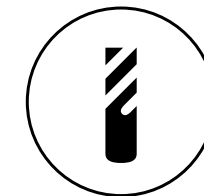
FINE MECHANIC



MEDICAL



MOLDS



DIES AND TOOLS



VERY HIGH SPEED & PRECISION

WIRES DEDICATED

THERMO XCC®

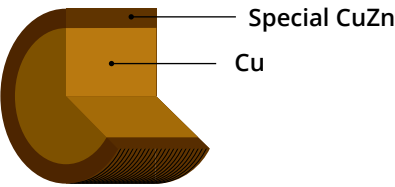
THERMO TEX®

THERMO SWX®

Stratified Wire

THERMO XCC®

COPPER CORE,
CUZN COATING



THERMO XCC® has been developed and adjusted for GFMS AgieCharmilles machines to increase the cutting speed.

With a machine equipped with Clean Cut generator, **THERMO XCC®** can reach a cutting speed superior to 500 mm²/min.

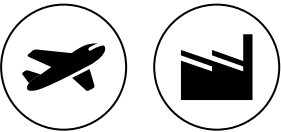
It offers a processing speed up to 50% higher than standard brass wire.

THERMO XCC® wire suits particularly for nickel base alloys, for aeronautic production as an example.

It is particularly recommended for large workpiece machining (H> 150 mm) and individual mechanical parts or series.

THERMO XCC® is the ultimate solution when the priority is cutting speed.

USAGE RECOMMENDED

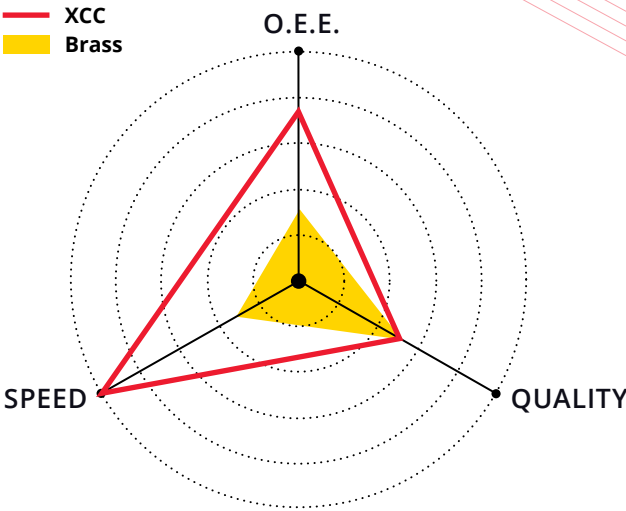


CHARACTERISTICS

Core	Cu α
Coating	Thick CuZn β
Tensile Strength	500N/mm²
Elongation	2%
Conductibility	65% IACS



WORLDWIDE HIGHEST
CUTTING SPEED



PATENT RELATED

EP 1 455 981
US 7 687 738
CN ZL 02 8 25126.1
JP 4 516753
BR 0 214 599

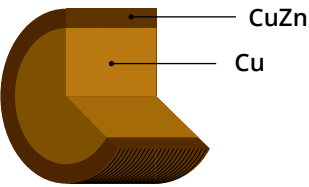
AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO XCC	K100	T125	T160	T200	K250	K355
0,25 mm 0.010"	25XCC			■	■	■	■
0,30 mm 0.012"	30XCC			■	■	■	■
0,33 mm 0.013"	33XCC			■	■	■	■

Stratified Wire

THERMO TEX®

COPPER CORE,
CUZN COATING



THERMO TEX® is well adapted to GFMS AgieCharmilles and ONA machines, and 100% compatible with the THERMO SWX® technology.

Due to its clean wire surface THERMO TEX® combines a very high level of performance and realistic savings on maintenance of wire EDM machines.

THERMO TEX® is recommended for a wide range of standard applications in the field of molds, tools or general mechanics.

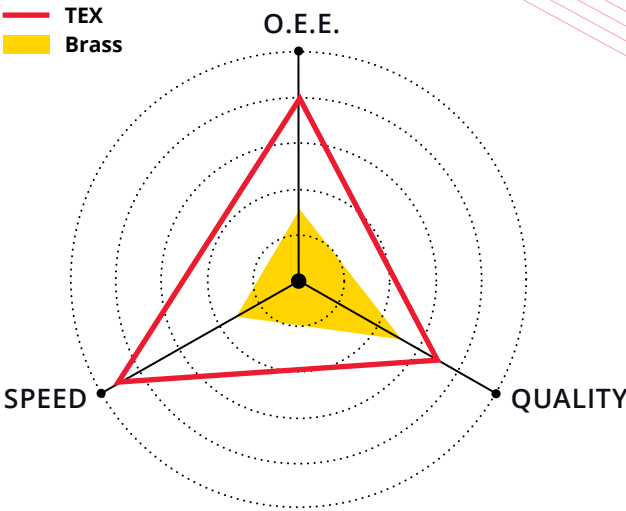
THERMO TEX® wire replaces X wire, fully compatible with its technologies, keeping all the machine parameters. Its cutting speed is up to 35% higher than standard brass and 10% higher than THERMO SWX®.

USAGE RECOMMENDED



CHARACTERISTICS

Core	Cu α
Coating	CuZn β and Cu ₅ Zn ₈ γ
Tensile Strength	450N/mm ²
Elongation	1%
Conductibility	70% IACS



PATENT RELATED

- EP 1 009 574
- CA 2 302 202
- US 5 945 010
- EP 1 846 189
- TW i391197
- CN ZL2006 80004564.6
- US 8 378 247
- IN 262 000
- JP 5 069 134
- KR 10-1 653 551

AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO TEX	K100	T125	T160	T200	K250	K355	JP5
0,25 mm 0.010"	25 TEX		■	■	■	■	■	■
0,30 mm 0.012"	30 TEX		■	■	■	■	■	■

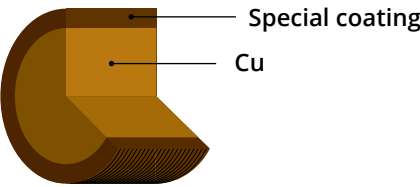
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CLICK HERE FOR
MORE INFORMATION

Stratified Wire

THERMO SWX®

COPPER CORE,
CUZN COATING



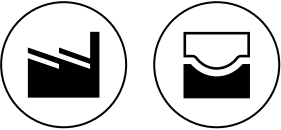
THERMO SWX® is dedicated to GFMS AgieCharmilles Machines Robofil type.

Thanks to its cutting speed, THERMO SWX® reduces the cost of production in the most varied and complex applications.

It is widely used in the field of molds.

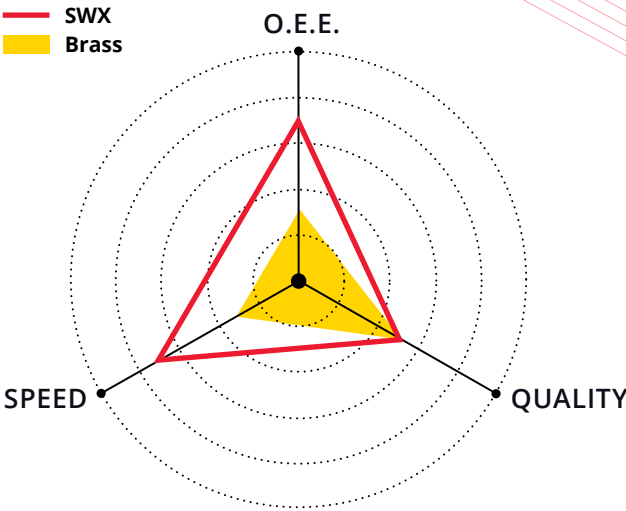
The reference wire for GFMS AgieCharmilles and ONA machines. THERMO SWX® is 30% faster than standard brass.

USAGE RECOMMENDED



CHARACTERISTICS

Core	Cu α
Coating	CuZn β
Tensile Strength	450N/mm²
Elongation	1%
Conductibility	80% IACS



THE ORIGINAL X WIRE
FOR SPEED, WELL ADAPTED
FOR GFMS AGIECHARMILLES
AND ONA MACHINES

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SWX		K100	T125	T160	T200	K250	JP5
0,25 mm 0.010"	25X		■	■	■	■	■
0,30 mm 0.012"	30X		■	■	■	■	■

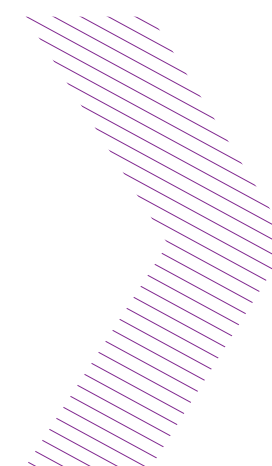
ALSO AVAILABLE ON DEMAND

THERMO SW®: The first coated wire available for EDM machines

- THERMO SW® is particularly adapted to the generation of GFMS AgieCharmilles machines having the annealing devices and calibration.
- Cutting speed up to 15% higher than brass wire.

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MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATIONS



HIGH SPEED & PRECISION

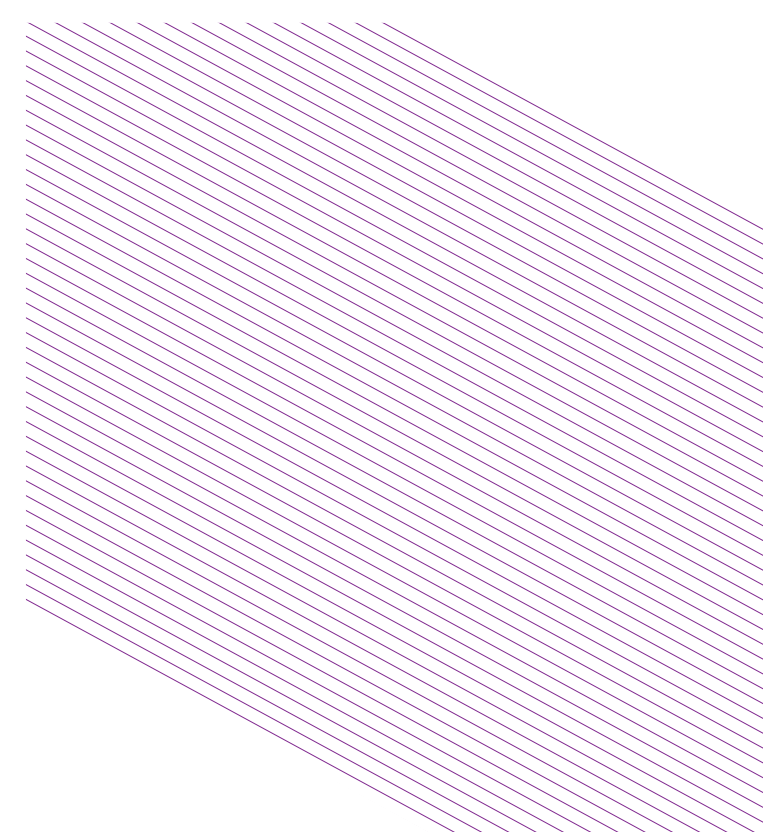
WIRES DEDICATED

THERMO SE®

THERMO SWD®

THERMO SWW®

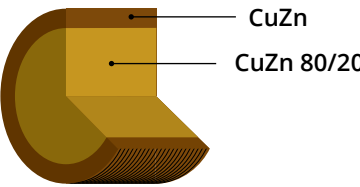
THERMO D®



Stratified Wire

THERMO SE®

BRASS CORE,
CUZN COATING



THERMO SE® is suitable for all type of wire EDM machines (GFMS AgieCharmilles, Makino, Vollmer and all Japanese machines).

Highly recommended for all standard applications that require speed and accuracy, particularly in unfavorable flushing conditions.

THERMO SE® is an economical alternative to the use of THERMO SWD®, with superior efficiency.

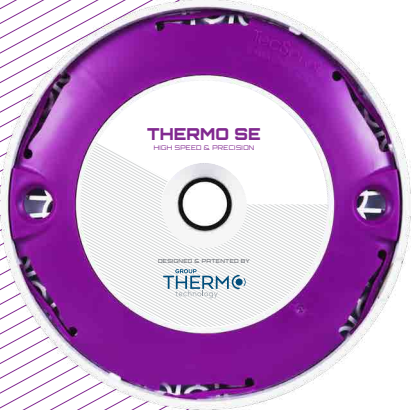
THERMO SE® offers a processing speed up to 30% higher than a standard brass. The wire surface is extremely clean, reducing machine maintenance. An economical performance with a guaranteed productivity.

USAGE RECOMMENDED

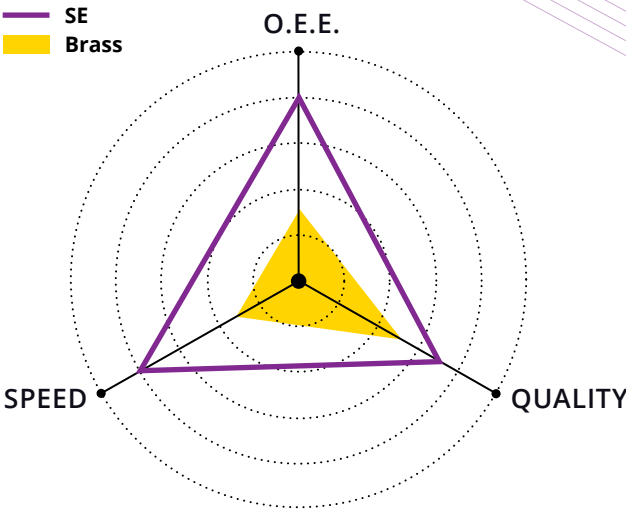


CHARACTERISTICS

Core	Brass80/20
Coating	CuZn β and Cu ₅ Zn ₈ γ
Tensile Strength	750N/mm ²
Elongation	2%
Conductibility	28% IACS



HIGH PERFORMANCE,
ESPECIALLY RECOMMENDED
FOR MACHINING LARGE PARTS
(HEIGHT > 100 MM) AND FOR
SERIAL MANUFACTURING



PATENT RELATED

- EP 1 009 574
- CA 2 302 202
- US 5 945 010
- EP 1 846 189
- TW i391197
- CN ZL2006 80004564,6
- US 8 378 247
- IN 262 000
- JP 5 069 134
- KR 10-1 653 551

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SE		K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	SE			■	■		■	■	■
0,25 mm 0.010"	SE			■	■	■	■	■	■
0,30 mm 0.012"	SE			■	■	■	■	■	■
0,33 mm 0.013"	SE			■	■	■		■	■

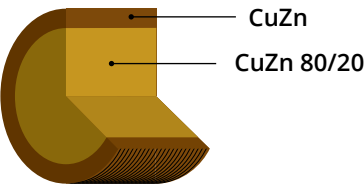
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CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire

THERMO SWD®

BRASS CORE,
CUZN COATING



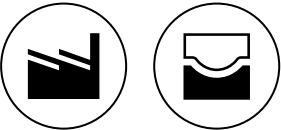
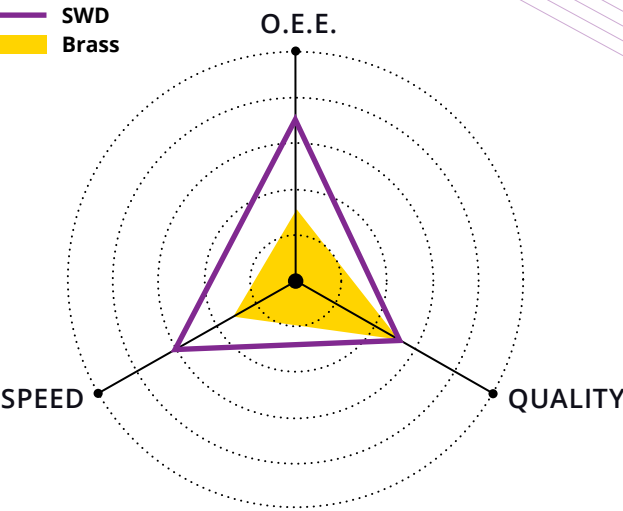
THERMO SWD® is suitable for all EDM machines using automatic threading, particularly adapted for latest Agie generation of GFMS AgieCharmilles and Makino machines.

With high electrical and thermal conductivity, THERMO SWD® is dedicated to machines fitted with powerful generator.

It is particularly recommended for applications that require standard accuracy and speed machining.

THERMO SWD® offers a processing speed up to 20% higher than a standard brass.

USAGE RECOMMENDED



RECOMMENDED FOR
MACHINING LARGE PARTS
WITH HEIGHT > 100 MM

CHARACTERISTICS

Core	Brass80/20
Coating	CuZn β
Tensile Strength	850N/mm²
Elongation	2%
Conductibility	27% IACS



AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SWD		K100	T125	T160	T200	K250	JP5
0,25 mm 0.010"	SW25D		■	■	■	■	■
0,30 mm 0.012"	SW30D		■	■	■	■	■

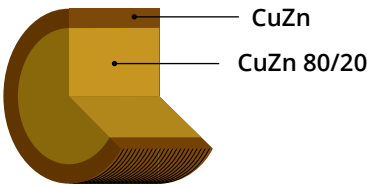
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CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire

THERMO SWW®

BRASS CORE,
CUZN COATING



THERMO SWW® is dedicated to machines fitted with powerful generators or the latest generation: IPG (Intelligent Power Generator).

Its 15% elongation characteristic and a high thermal and electrical conductivity allows to cut 45° conical sections with precision.

THERMO SWW® offers a processing speed up to 20% higher than a standard brass.

USAGE RECOMMENDED

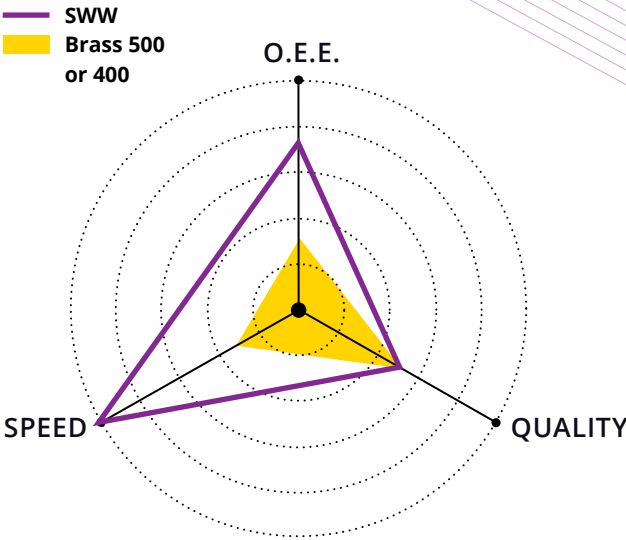


CHARACTERISTICS

Core	Brass80/20
Coating	CuZn β
Tensile Strength	450N/mm²
Elongation	15%
Conductivity	31% IACS



RECOMMENDED FOR
SPEED CUTTING OF TAPERED
PARTS UP TO 45°



AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SWW		K100	T125	T160	T200	K250	JP5
0,25 mm 0.010"	SW25W		■	■	■	■	■
0,30 mm 0.012"	SW30W		■	■	■	■	■

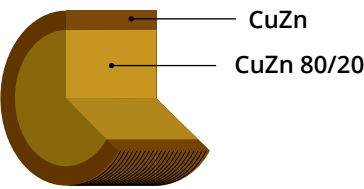
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CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire



BRASS CORE,
CUZN COATING



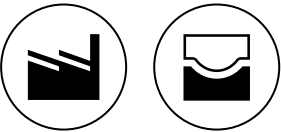
THERMO D® is suitable for all EDM machines using automatic threading, particularly for GFMS AgieCharmilles 100 series and Makino machines.

THERMO D® is recommended for applications that require standard accuracy and speed machining.

Its high speed erosion is up to 20% faster than brass wire due to its high thermal and electrical conductivity.

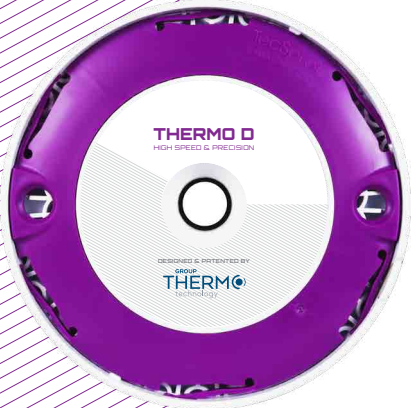
THERMO D® has the same characteristics than THERMO SWD®. Its innovative manufacturing process allows for a very competitive price.

USAGE RECOMMENDED

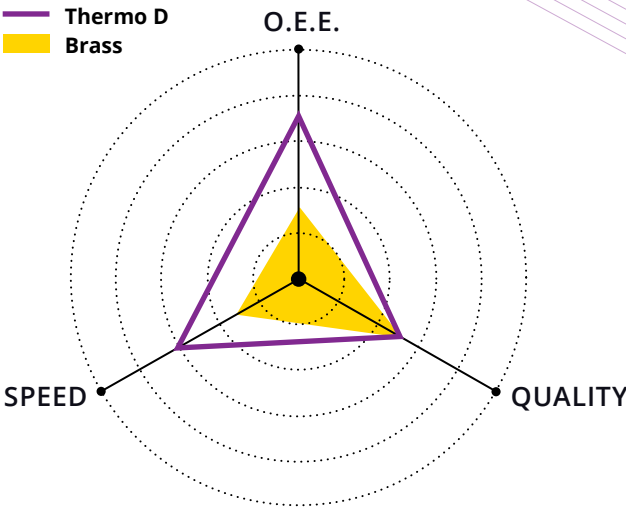


CHARACTERISTICS

Core	Brass80/20
Coating	CuZn
Tensile Strength	850N/mm²
Elongation	2%
Conductibility	27% IACS



THE ORIGINAL WIRE
FOR MACHINES HAVING
A POWERFUL GENERATOR



AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO D	K100	T125	T160	T200	K250	JP5
0,25 mm 0.010"	D 25		■	■	■	■	■
0,30 mm 0.012"	D 30		■	■	■	■	■

MANUFACTURED IN EUROPE BY THERMOCOMPACT

CLICK HERE FOR
MORE INFORMATIONS



SPEED & PRECISION

WIRES DEDICATED

THERMO SD®

THERMO SD2®

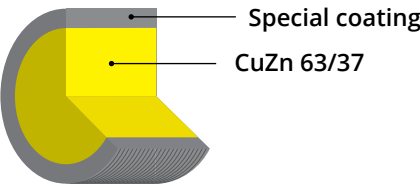
THERMO JP®

THERMO JP2®

Stratified Wire

THERMO SD®

MONOPHASED α BRASS CORE,
 γ Cu_5Zn_8 GAMMA PHASE COATING



THERMO SD® has been engineered for the GFMS AgieCharmilles machines. It's universal usage is adapted as well to Japanese machines.

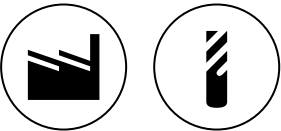
Compared to standard brass:

- › THERMO SD® increases the production of parts up to 20% compared to standard brass.
- › It reduces the machining cost of the production of parts requiring high accuracy and good surface finish.

THERMO SD® is widely used for standard applications in the field of molds, tools or general mechanics.

THERMO SD® increases speed and productivity, even with brass technology due to its unique coating.

USAGE RECOMMENDED

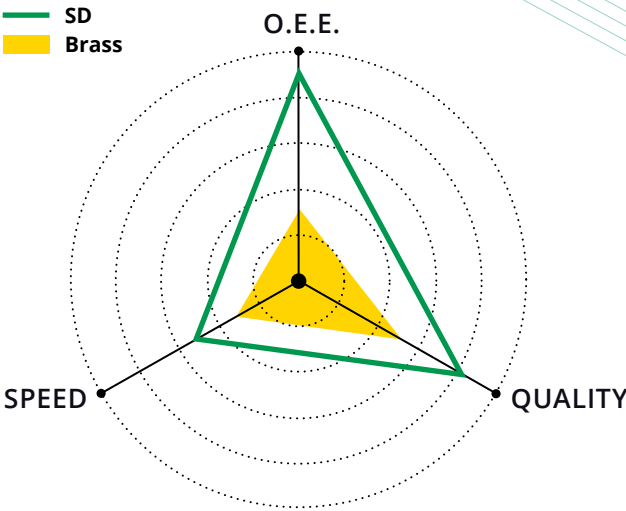


CHARACTERISTICS

Core	Brass 63/37	
Coating	γ Cu_5Zn_8	
Tensile Strength	450 N/mm ²	900 N/mm ²
Elongation	12%	2%
Conductibility	23% IACS	20% IACS



UNIVERSAL USAGE,
FOR APPLICATION REQUIRING
PRECISION IN CUTTING
WITH GOOD SURFACE FINISH



PATENT RELATED

(SD 900 and SD 500)
US 5 945 010
EP 1 009 574
CA 2 302 202
US 8 338 735
CN ZL 2008 1 000922.7
TW i 350780
CN 101 234 442
JP 5 627 841
KR 10-0981035
EP 1 949 995

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SD		K100	T125	T160	T200	K250	K355	JP5	JP10	JP15
0,20 mm 0.008"	SD		■	■	■			■	■	■
0,25 mm 0.010"	SD		■	■	■	■	■	■	■	■
0,30 mm 0.012"	SD		■	■	■	■	■	■	■	■
0,33 mm 0.013"	SD			■	■	■	■		■	■

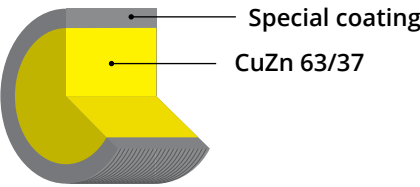
MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire

THERMO SD2®

MONOPHASED α BRASS CORE,
DUAL LAYER OF β CUZN AND γ CU₅ZN₈ COATING



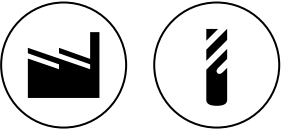
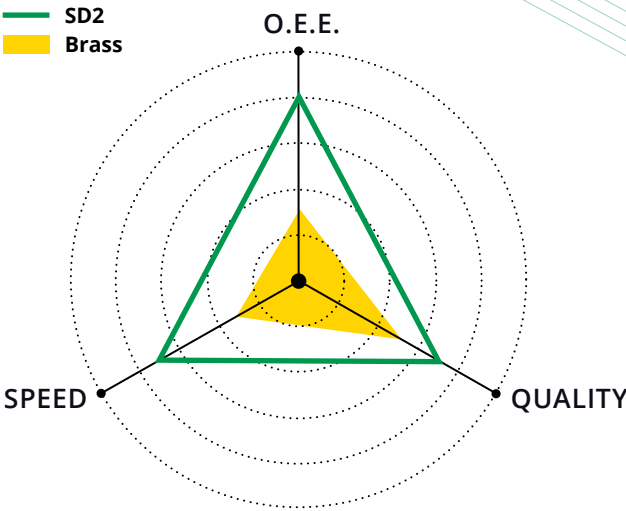
THERMO SD2® is an evolution of THERMO SD® and is the latest generation of EDM wire.

Faster than THERMO SD® due to its special coating, THERMO SD2® provides an excellent price/performance ratio.

THERMO SD2® is recommended for a wide range of standard applications requiring good accuracy and good surface finish.

THERMO SD2® is a new EDM wire developed and made by THERMOCOMPACT. Specific technology on GFMS Cut200, Cut300 and Cut400 machines.

USAGE RECOMMENDED



PATENT RELATED

- EP 1 009 574
- CA 2 302 202
- US 5 945 010
- EP 1 846 189
- TW i391197
- CN ZL2006 80004564,6
- US 8 378 247
- IN 262 000
- JP 5 069 134
- KR 10-1 653 551

CHARACTERISTICS

Core	α Brass 63/37
Coating	β CuZn and γ Cu ₅ Zn ₈
Tensile Strength	>800 N/mm ²
Elongation	2%
Conductibility	22% IACS



AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SD2		K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	SD2		■	■	■		■	■	■
0,25 mm 0.010"	SD2		■	■	■	■	■	■	■
0,30 mm 0.012"	SD2		■	■	■	■	■	■	■

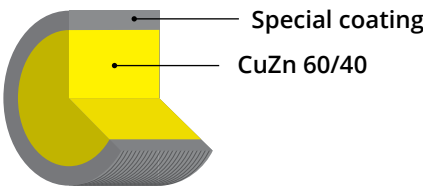
MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATION

Stratified Wire

THERMO JP®

DUAL PHASE $\alpha + \beta$ BRASS CORE,
 γ Cu_5Zn_8 GAMMA PHASE COATING



THERMO JP® offers the technology of coated wire optimized for Japanese machines without changing the original parameters.

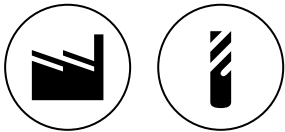
THERMO JP® is recommended to obtain higher accuracy, coating without flakes and good surface finish.

Its threading is particularly good.

THERMO JP® is widely used for standard application in the field of molds, tools or general mechanics.

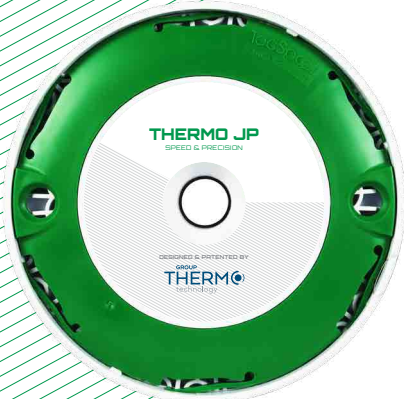
THERMO JP® increases speed and productivity, creating more erosion on the work piece and less erosion on the wire. THERMO JP® is optimized for Japanese machines without changing the original parameters of brass wire.

USAGE RECOMMENDED

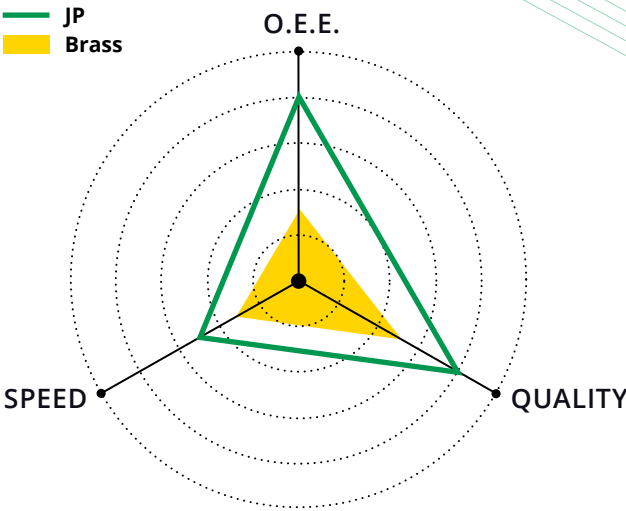


CHARACTERISTICS

Core	Brass 60/40
Coating	γ Cu_5Zn_8
Tensile Strength	900 N/mm ²
Elongation	2%
Conductibility	22% IACS



DESIGNED FOR JAPANESE
MACHINES, FOR APPLICATION
REQUIRING PRECISION
IN CUTTING WITH VERY GOOD
SURFACE FINISH



PATENT RELATED

US 5 945 010
EP 1 009 574
CA 2 302 202
US 8 338 735
CN ZL 2008 1 000922.7
TW i 350780
CN 101 234 442
JP 5 627 841
KR 10-0981035
EP 1 949 995

AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO JP	K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	JP		■	■	■		■	■	■
0,25 mm 0.010"	JP		■	■	■	■	■	■	■
0,30 mm 0.012"	JP		■	■	■	■	■	■	■

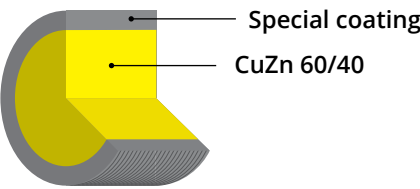
MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATION

Stratified Wire

THERMO JP2®

DUAL PHASE $\alpha + \beta$ BRASS CORE,
DUAL LAYER OF β CUZN AND γ CU₅ZN₈ COATING



THERMO JP2® is an evolution of THERMO JP®, the latest generation of EDM wire, well adapted to Makino and all Japanese machines type.

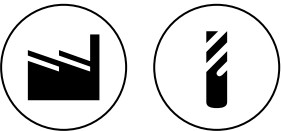
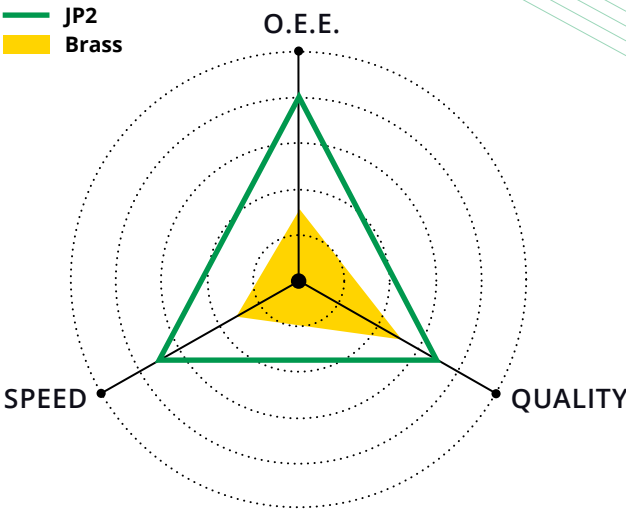
Due to its special coating, THERMO JP2® is faster than THERMO JP® and provides an excellent price/performance ratio.

Its threading is particularly good.

THERMO JP2® is recommended for a wide range of standard applications requiring good accuracies and surface finish.

THERMO JP2® is a new EDM wire made by THERMOCOMPACT. THERMO JP2® is optimized for Japanese machines without changing the original parameters of brass wire.

USAGE RECOMMENDED



PATENT RELATED

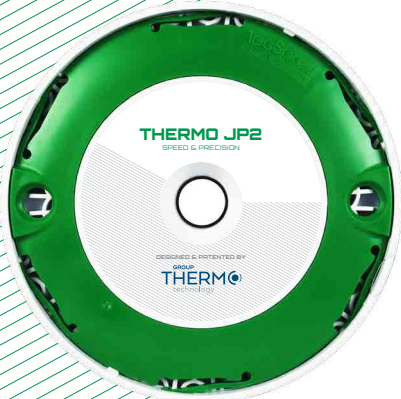
- EP 1 009 574
- CA 2 302 202
- US 5 945 010
- EP 1 846 189
- TW i391197
- CN ZL2006 80004564,6
- US 8 378 247
- IN 262 000
- JP 5 069 134
- KR 10-1 653 551

AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO JP2	K100	T125	T160	T200	K250	K355	JP5	JP10	JP15
0,20 mm 0.008"	JP2		■	■	■			■	■	■
0,25 mm 0.010"	JP2		■	■	■	■	■	■	■	■
0,30 mm 0.012"	JP2		■	■	■	■	■	■	■	■

CHARACTERISTICS

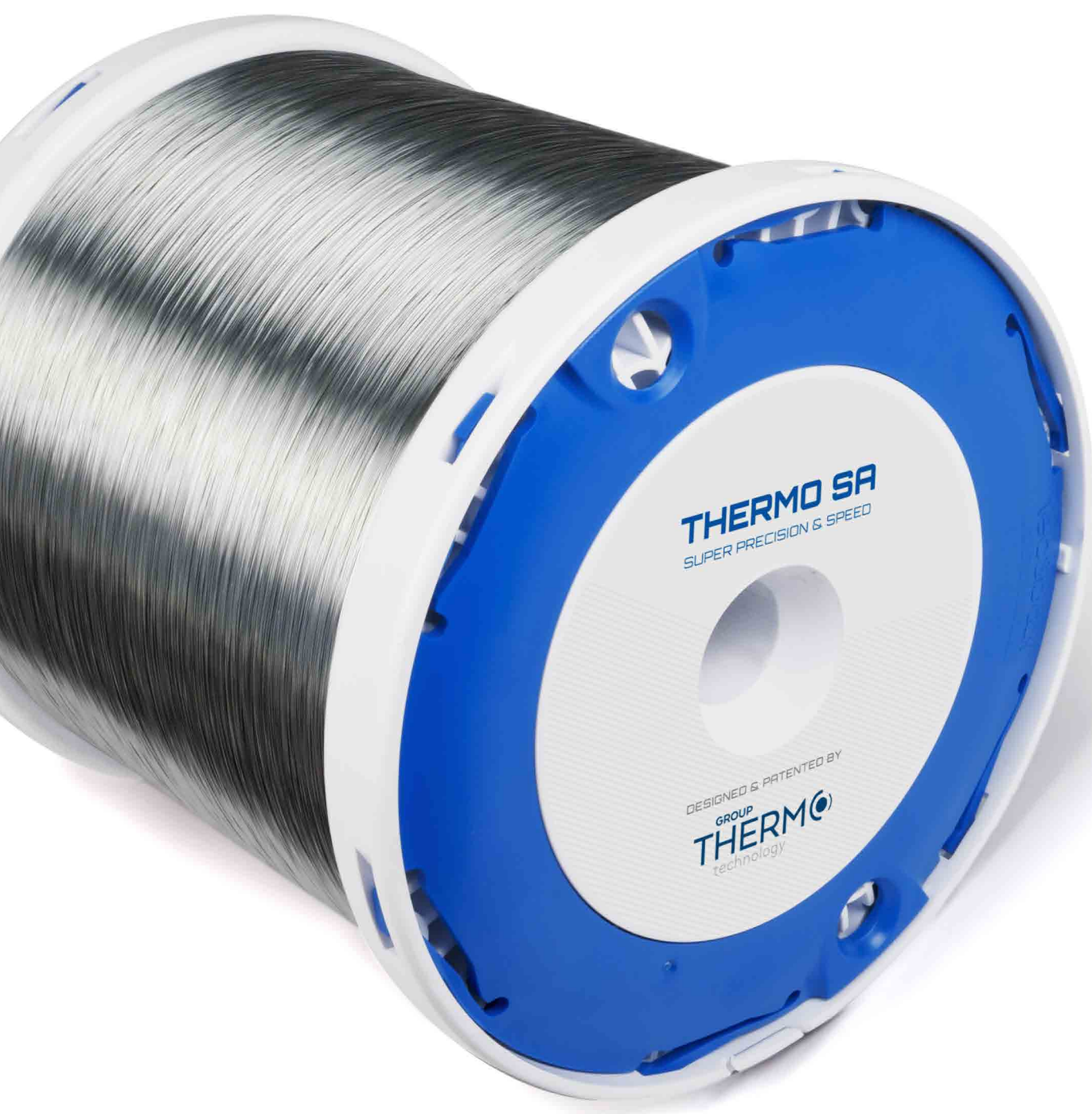
Core	Brass 60/40
Coating	β CuZn and γ Cu ₅ Zn ₈
Tensile Strength	>800 N/mm ²
Elongation	2%
Conductibility	24% IACS



NEW EDM WIRE, DESIGNED
FOR JAPANESE MACHINES,
HIGH SPEED PERFORMANCE
AND PRECISION IN CUTTING

MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATIONS



SUPER PRECISION & SPEED

WIRES DEDICATED

THERMO SA®

THERMO SWA®

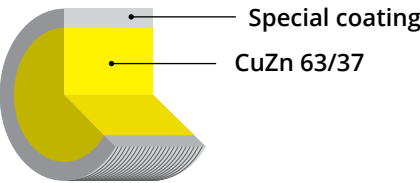
THERMO SWS®

THERMO A®

Stratified Wire

THERMO SA®

MONOPHASED α BRASS CORE,
PATENTED γ PHASE COATING



THERMO SA® is a selected coating for excellent precision and surface finish. It is highly recommended for the latest generation of EDM machines from GFMS AgieCharmilles.

THERMO SA® has a special coating that allows high machining speed, and a very clean finish along the cut surfaces (Ra = 0,05 μ m in carbide).

Combined to a powerful generator, THERMO SA® can reduce up to 20% the costs of machined parts.

Particularly suitable for extremely fine precision cuts and for steel or carbide cutting plates.

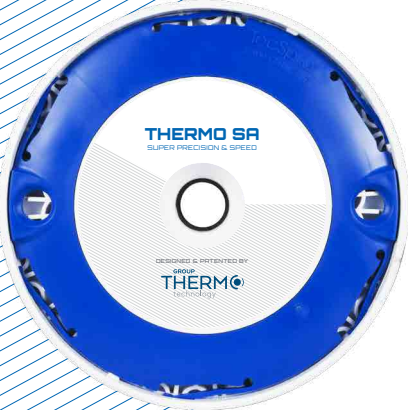
Highest stability and accuracy,
excellent surface finish.
Dedicated technology on GFMS
Cut 2000 and Cut 3000 machines.

USAGE RECOMMENDED

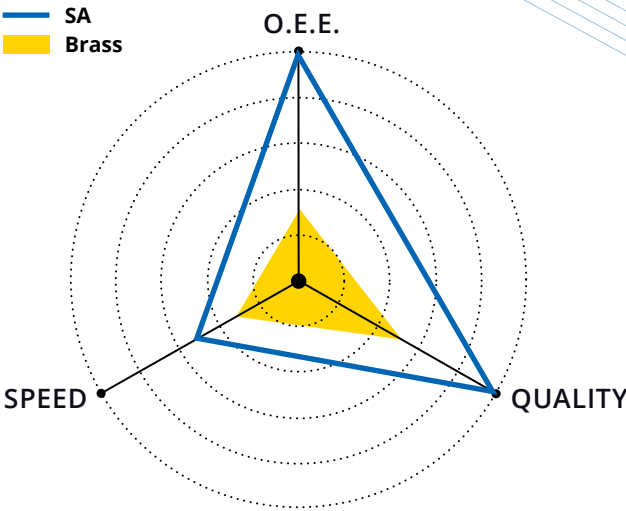


CHARACTERISTICS

Core	Brass 63/37
Coating	γ Cu ₅ Zn ₈
Tensile Strength	900 N/mm ²
Elongation	2%
Conductibility	21% IACS



THE MARKET REFERENCE
FOR SURFACE FINISH AND
PRECISION



PATENT RELATED

- EP 1 009 574
- US 5 945 010
- EP 1 949 995
- US 8 338 735
- CN ZL 2008 1 0009227.7
- TW i350780
- CN 101 234 442
- JP 5 627 841
- KR 10-0981035

AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO SA 900 / 500 / 400	K100	T125	T160	T200	K250	JP5	JP10	JP15
0,07 mm 0.003"	900	■							
0,10 mm 0.004"	900	■	■						
0,127 mm 0.005"	900		■	■			■		
0,15 mm 0.006"	900		■	■			■		
0,20 mm 0.008"	900 / 500 / 400		■	■	■		■	■	■
0,25 mm 0.010"	900 / 500 / 400		■	■	■	■	■	■	■
0,30 mm 0.012"	900 / 500 / 400			■	■	■		■	■

MANUFACTURED IN EUROPE BY THERMOCOMPACT

CLICK HERE FOR
MORE INFORMATION

Stratified Wire

THERMO SA 500®

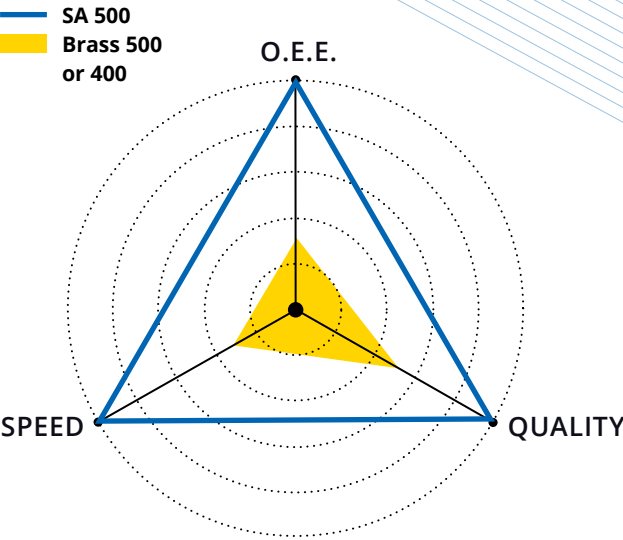
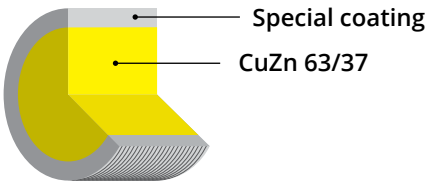
MONOPHASED α BRASS CORE,
PATENTED $\beta + \gamma$ PHASE COATING

CHARACTERISTICS

Core	Brass 63/37
Coating	β CuZn and γ Cu ₅ Zn ₈
Tensile Strength	500 N/mm ²
Elongation	20%
Conductivity	25% IACS

Due to its special surface coating and its quality, **THERMO SA 500®** combines a perfect surface finish and an excellent productivity in unfavorable machining conditions. **THERMO SA 500®** is particularly suitable for tapered cuts up to 15°.

THE PERFECT WIRE
FOR TAPERED CUTTING:
HIGH PRECISION AND CLEAN
FINISH, RECOMMENDED FOR
AGIE CUT200, CUT300 AND
CUT400 MACHINES



THERMO SA 400®

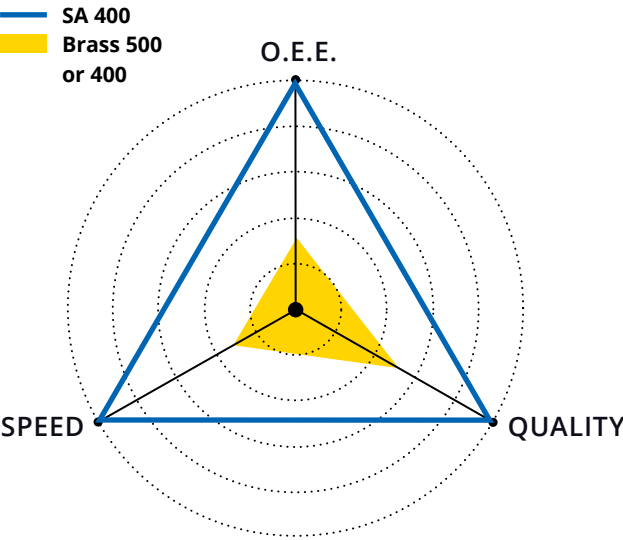
MONOPHASED α BRASS CORE,
PATENTED $\beta + \gamma$ PHASE COATING

CHARACTERISTICS

Core	Brass 63/37
Coating	β CuZn and γ Cu ₅ Zn ₈
Tensile Strength	400 N/mm ²
Elongation	30%
Conductivity	26% IACS

THERMO SA 400®, with its special surface coating and its quality, is particularly suitable for tapered cuts up to 45° with appropriate wire guides and software.

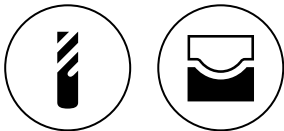
For the new generation of EDM machines, **THERMO SA 400®** is a good alternative to the **THERMO SWW®**, for more cleanliness and precision.



PATENT RELATED

- EP 1 009 574
- US 5 945 010
- EP 1 949 995
- US 8 338 735
- CN ZL 2008 1 0009227.7
- TW i350780
- KR 10-1 653 551

USAGE RECOMMENDED



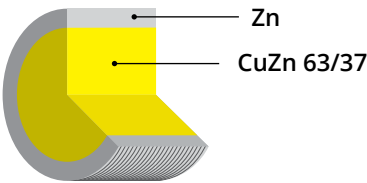
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BY THERMOCOMPACT

CLICK HERE FOR
MORE INFORMATION

Stratified Wire

THERMO SWA®

BRASS CORE,
ZINC COATING



THERMO SWA® has an excellent straightness and a zinc coating of very high purity.

It obtains high geometric precision and a perfect finish of the machined parts.

THERMO SWA® is recommended for a large range of standard applications: manufacture of molds, cutting tools, mechanical works requiring extreme accuracy and excellent quality of surface cutting (Ra = 0,10 µm in steel).

THERMO SWA® has a low brass contamination of the part with reduced risk of corrosion in water dielectric, especially for H13 steel and tungsten carbide.

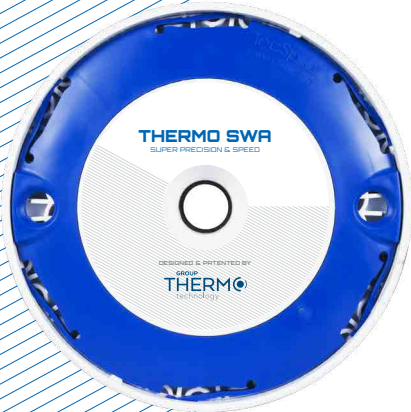
Highly proven reliability during machining, THERMO SWA® is suitable for automatic threading.

USAGE RECOMMENDED

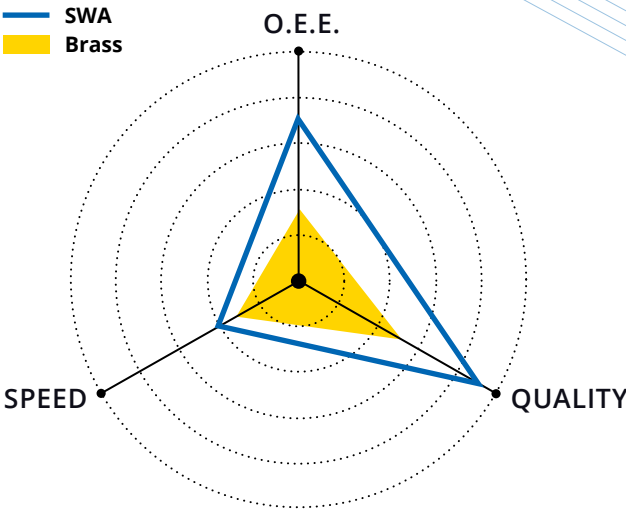


CHARACTERISTICS

Core	Brass 63/37
Coating	Zinc
Tensile Strength	900 N/mm²
Elongation	1.5%
Conductibility	22% IACS



THE REFERENCE FOR MACHINING
WITH EXCELLENT SURFACE
FINISH, REDUCED RISK OF
CORROSION FOR THE PART



PATENT RELATED

EP 1 379 353
US 8 519 294

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SWA		K100	T125	T160	T200	K250	JP5	JP10	JP15
0,07 mm 0.003"	SW07A	■							
0,10 mm 0.004"	SW10A	■	■						
0,127 mm 0.005"	SW0127A		■	■			■		
0,15 mm 0.006"	SW015A		■	■			■		
0,20 mm 0.008"	SW20A		■	■	■	■	■	■	■
0,25 mm 0.010"	SW25A		■	■	■	■	■	■	■
0,30 mm 0.012"	SW30A		■	■	■	■	■	■	■

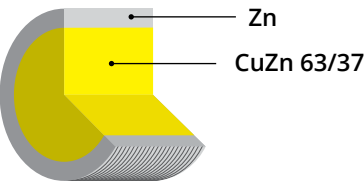
MANUFACTURED IN EUROPE BY THERMOCOMPACT

CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire

THERMO SWS®

BRASS CORE,
ZINC COATING



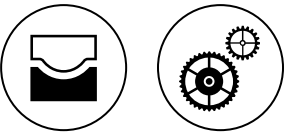
THERMO SWS® has a high elongation coefficient, a zinc coating of very high purity and is suitable for automatic threading.

Due to its superior conductivity, THERMO SWS® is recommended for conical tapered cutting.

It obtains high precision in machining complex parts with an angle of more than 7° and below 15°. It provides excellent surface finish in unfavorable conditions.

Its technical characteristics provide homogeneity and high level of surface quality in all machining conditions.

USAGE RECOMMENDED

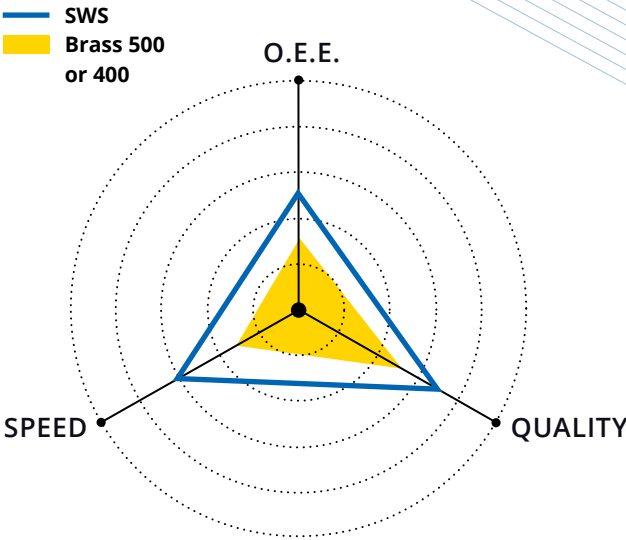


CHARACTERISTICS

Core	Brass 63/37
Coating	Zinc
Tensile Strength	450 N/mm²
Elongation	15%
Conductivity	25% IACS



HOMOGENEITY, HIGH QUALITY,
SUITABLE FOR TAPER CUTS
OF ANGLES ABOVE 7°
AND BELOW 15°



PATENT RELATED

EP 1 379 353
US 8 519 294

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO SWS		K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	SW20A		■	■	■	■	■	■	■
0,25 mm 0.010"	SW25A		■	■	■	■	■	■	■
0,30 mm 0.012"	SW30A		■	■	■	■	■	■	■

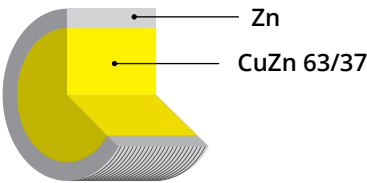
MANUFACTURED IN EUROPE BY THERMOCOMPACT

CLICK HERE FOR
MORE INFORMATIONS

Stratified Wire

THERMO A®

BRASS CORE,
ZINC COATING



THERMO A® was developed to meet the highest demands of users wire EDM machines. It is suitable for almost all EDM machines.

THERMO A® offers a very competitive price without compromising performance on precision, surface quality and threading.

THERMO A® is recommended for a wide range of standard applications: manufacture of molds, cutting tools, mechanical works requiring extreme accuracy and excellent surface quality finish.

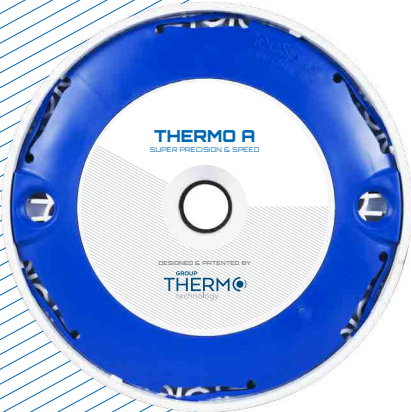
THERMO A® is a coated brass which provides a high performance with a very competitive price. THERMO A® obtains an exceptional surface finish: Ra = 0.15 µm.

USAGE RECOMMENDED

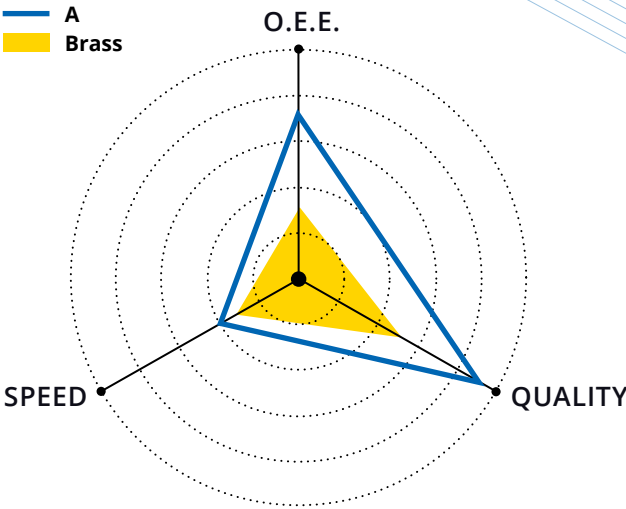


CHARACTERISTICS

Core	Brass 63/37
Coating	Zinc
Tensile Strength	900 N/mm²
Elongation	1.5%
Conductibility	22% IACS



SELECTED COATING,
VERY GOOD SURFACE FINISH
AND ACCURACY



PATENT RELATED

EP 1 379 353
US 8 519 294

AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO A	K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	A20			■	■	■	■	■	■
0,25 mm 0.010"	A25			■	■	■	■	■	■
0,30 mm 0.012"	A30			■	■	■	■	■	■

MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATION



ALL PURPOSE

WIRES DEDICATED

THERMO brass 1000®

THERMO brass 900®

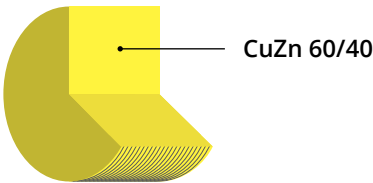
THERMO brass 500®

THERMO brass 400®

THERMO First 900 and 500®

Brass Wire

THERMO brass 1000®



THERMO brass 1000® N/mm² is suitable for all EDM machines, and recommended for Japanese machines.

THERMO brass 1000® is produced with a very pure alloy, and provides an excellent surface quality and an ongoing performance.

THERMO brass 1000® is recommended for standard applications. It can produce high precision parts with excellent surface finish due to its very good geometry and its cleanliness.

Due to its specific alloy, THERMO brass 1000® is recommended in particular for Fanuc, Mitsubishi, Hitachi and Sodick type machines.

USAGE RECOMMENDED



CHARACTERISTICS

Core	Brass 60/40
Tensile Strength	1050 N/mm²
Elongation	2.5%
Conductibility	22% IACS



PURE 60/40 ALLOY,
HIGH SURFACE QUALITY,
HIGH CLEANLINESS,
HIGH PRECISION PARTS

AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO BRASS 1000		K100	T125	T160	T200	K250	JP5	JP10	JP15
0,20 mm 0.008"	TB 1000			■	■		■	■	■
0,25 mm 0.010"	TB 1000			■	■		■	■	■
0,30 mm 0.012"	TB 1000			■	■		■	■	■

Other type of spools available only on special request.

Brass Wire

THERMO brass 900®

CHARACTERISTICS

Core	Brass 63/37
Tensile Strength	900 N/mm²
Elongation	1.5%
Conductibility	22% IACS

THERMO brass 900® N/mm² is suitable for all type of EDM machines.

THERMO brass 900® is recommended for standard applications requiring extreme accuracy and a good surface finish.

USAGE RECOMMENDED



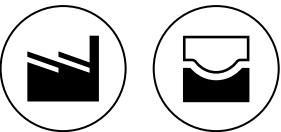
THERMO brass 500®

CHARACTERISTICS

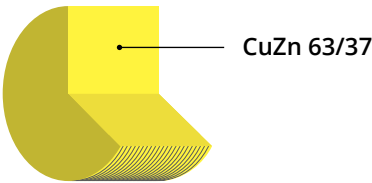
Core	Brass 63/37
Tensile Strength	500 N/mm²
Elongation	20%
Conductibility	25% IACS

THERMO brass 500® N/mm² is suitable for all type of EDM machines. It is recommended for standard applications for machining complex parts requiring high taper angle cutting of the wire up to 12°.

USAGE RECOMMENDED



HIGH GRADE OF 63/37 ALLOY
RECOMMENDED FOR ALL TYPE
OF EDM MACHINES



THERMO brass 400®

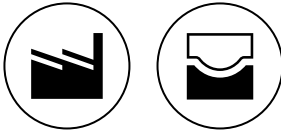
CHARACTERISTICS

Core	Brass 63/37
Tensile Strength	450 N/mm²
Elongation	25%
Conductibility	26% IACS

THERMO brass 400® is suitable for all type of EDM machines.

THERMO brass 400® N/mm² is recommended for machining complex parts that require high taper angle cutting of the wire up to 20°.

USAGE RECOMMENDED



AVAILABILITY BY SPOOL TYPE AND DIAMETER

	THERMO BRASS 900 / 500 / 400	K100	T125	T160	T200	K250	K355	JP5	JP10	JP15
0,10 mm 0.004"	900	■	■							
0,15 mm 0.006"	900		■	■				■		
0,20 mm 0.008"	900, 500, 400		■	■	■	■		■	■	■
0,25 mm 0.010"	900, 500, 400		■	■	■	■	■	■	■	■
0,30 mm 0.012"	900, 500, 400		■	■	■	■	■	■	■	■

MANUFACTURED IN EUROPE BY THERMOCOMPACT
MANUFACTURED IN ASIA BY HWA

CLICK HERE FOR
MORE INFORMATION

Brass Wire

THERMO First 900®

CHARACTERISTICS

Core	Brass 63/37
Tensile Strength	900 N/mm ²
Elongation	1.5%
Conductibility	22% IACS

THERMO First 900® is developed with full automatic production process.



THERMO First 500®

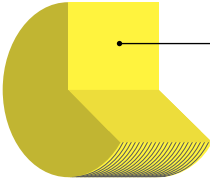
CHARACTERISTICS

Core	Brass 63/37
Tensile Strength	500 N/mm ²
Elongation	1.5%
Conductibility	22% IACS

THERMO First 500® is developed with full automatic production process.



STANDARD BRASS WIRE,
WITH A COMPETITIVE PRICE



CuZn 63/37

THERMO First 900® and
THERMO First 500® offer the
benefits of a brass wire associating
quality and competitive prices.
They are recommended for standard
applications.

USAGE RECOMMENDED



AVAILABILITY BY SPOOL TYPE AND DIAMETER

THERMO FIRST 900 - 500		K100	T125	T160	T200	K250	K355	JP5	JP10	JP15
0,20 mm 0.008"	First 900 First 500			■	■			■	■	
0,25 mm 0.010"	First 900 First 500			■	■		■	■	■	
0,30 mm 0.012"	First 900 First 500			■	■		■	■	■	

PLAN YOUR PRODUCTION

SPOOL TYPE	WIRE DIAMETER		NOMINAL WEIGHT PER SPOOL *		NOMINAL LENGTH PER SPOOL *		SPOOL MACHINING DURATION FOR 1 SPOOL			
							10m/min 33 ft/min	12m/min 39,4 ft/min	15m/min 49,21ft/min	16m/min 52,5ft/min
	mm	inch	kg	lbs	m	ft	h	h	h	h
K100	0.07	0.003	1.8	4	58500	191929	98	81	65	61
	0.10	0.004	1.8	4	27000	88582	45	38	30	28
	0.127	0.005	1.8	4	16800	55118	28	23	19	18
	0.15	0.006	1.8	4	12000	39370	20	17	13	13
K125	0.10	0.004	4	8.8	60000	196850	100	83	67	63
T125	0.127	0.005	4	8.8	37300	122375	62	52	41	39
	0.15	0.006	4	8.8	26700	87598	45	37	30	28
	0.20	0.008	4	8.8	14900	48884	25	21	17	16
	0.25	0.01	4	8.8	9600	31496	16	13	11	10
	0.30	0.012	4	8.8	6600	21653	11	9	7	7
K160	0.127	0.005	8	17.6	74600	244750	124	104	83	78
T160	0.15	0.006	8	17.6	53400	175196	89	74	59	56
	0.20	0.008	8	17.6	29900	98097	50	42	33	31
	0.25	0.01	8	17.6	19200	62992	32	27	21	20
	0.30	0.012	8	17.6	13200	43307	22	18	15	14
	0.33	0.013	8	17.6	10700	35105	18	15	12	11
K200	0.20	0.008	16	35.2	59800	196194	100	83	66	62
T200	0.25	0.01	16	35.2	38400	125984	64	53	43	40
	0.30	0.012	16	35.2	26500	86942	44	37	29	28
	0.33	0.013	16	35.2	21400	70210	36	30	24	22
K250	0.25	0.01	25	55	60000	196850	100	83	67	63
	0.30	0.012	25	55	41400	135826	69	58	46	43
	0.33	0.013	25	55	33400	109580	56	46	37	35
K355	0.25	0.01	45	99	106000	347768	177	147	118	110
	0.30	0.012	45	99	73500	241141	123	102	82	77
	0.33	0.013	45	99	60700	199146	101	84	67	63

STANDARD DIN

SPOOL TYPE	WIRE DIAMETER		NOMINAL WEIGHT PER SPOOL *		NOMINAL LENGTH PER SPOOL *		SPOOL MACHINING DURATION FOR 1 SPOOL			
							10m/min 33 ft/min	12m/min 39,4 ft/min	15m/min 49,21ft/min	16m/min 52,5ft/min
	mm	inch	kg	lbs	m	ft	h	h	h	h
JP5	0.10	0.004	5	11	75000	246062	125	104	83	78
	0.13	0.005	5	11	46700	153215	78	65	52	49
	0.15	0.006	5	11	33500	109908	56	47	37	35
	0.20	0.008	5	11	18700	61352	31	26	21	19
	0.25	0.01	5	11	12000	39370	20	17	13	13
	0.30	0.012	5	11	8300	27231	14	12	9	9
JP10	0.20	0.008	10	22	37500	123031	63	52	42	39
	0.25	0.01	10	22	24000	78740	40	33	27	25
	0.30	0.012	10	22	16600	54462	28	23	18	17
JP15	0.20	0.008	20	44	74800	245406	125	104	83	78
	0.25	0.01	20	44	48000	157480	80	67	53	50
	0.30	0.012	20	44	33100	108595	55	46	37	34
	0.33	0.013	20	44	26500	86942	44	37	29	28

* Average weight and length

STANDARD JP

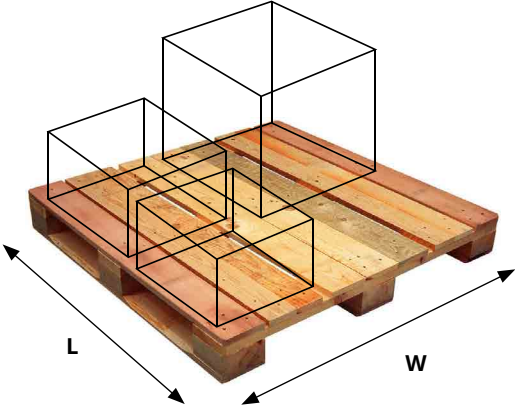
DATA FOR PLANNING YOUR DEMAND AND STORAGE

SPOOL TYPE	SPOOL WEIGHT	SPOOLS PER PALLET	SPOOLS PER BOX	WEIGHT PER BOX	BOXES PER LAYER NUMBER OF LAYER	NET WEIGHT PER PALLET
K100	1,8 Kg 4 Lbs	diam 0,07 / 0,10 36	4 (with individual pre packaging in box)	7,2 Kg 16 Lbs	9 boxes. 1 layer + 3 boxes	64,8 kg 144 lbs
K125 T125	2 Kg 4,4 Lbs	diam 0,10 48	1 or 2 (with individual pre packaging in box)	4kg 8,8 lbs	6 boxes 2 layers	96 kg 140.8 lbs
	4 Kg 8,8 Lbs	diam 0,10 0,127 / 0,15 48	1	4kg 8,8 lbs	24 boxes 2 layers	192 kg 423.3 lbs
		diam 0,20 / 0,25 / 0,30 96	2 (with individual pre packaging in box)	8kg 17,6 lbs	10 boxes 2 layers + 4 boxes	384 kg 844.8 lbs
K160 T160	8 Kg 17,6 Lbs	diam 0,15 30 (half pallet)	2	35,2 lbs	10 boxes. 1 layer + 5 boxes	240 kg 528 lbs
		diam 0,20 / 0,25 / 0,30 / 0,33 60	2	16kg	10 boxes 3 layers	480 kg 1056 lbs
K200 T200	16 Kg 35,2 Lbs	24	1	16 Kg 35,2 Lbs	12 boxes 2 layers	384 kg 844.8 lbs
K250	25 Kg 55 Lbs	18	1	25 kg 55 lbs	9 boxes 2 layers	450 kg 990 lbs
K355	45Kg 99 Lbs	6	1	45kg 99 lbs	1 box 1 layer	270 kg 594 lbs
JP5	5 Kg 11 Lbs	diam 0,15 48	4	20 kg 44 lbs	6 boxes 2 layers	240 kg 528 lbs
		96			6 boxes 4 layers	480 kg 1056 lbs
JP10	10 Kg 22 Lbs	36	2	20 kg 44 lbs	6 boxes 3 layers	360 kg 792 lbs
JP15	20 Kg 44 Lbs	24	1	20 kg 44 lbs	12 boxes 2 layers	480 kg 1056 lbs

PALLET DIMENSIONS

PALLET TYPE	LENGTH (L)	WIDTH (W)
EU (European pallet, no consigned)	120 cm	80 cm
	47,2 in	31,5 in
North America (US pallets, no wooden crates). IPP certified	111 cm	79 cm
	43,7 in	31,1 in
Asia (wooden crates) IPP certified	112 cm	79 cm
	44,1 in	31,1 in

Maximum weight per pallet: 700 kg

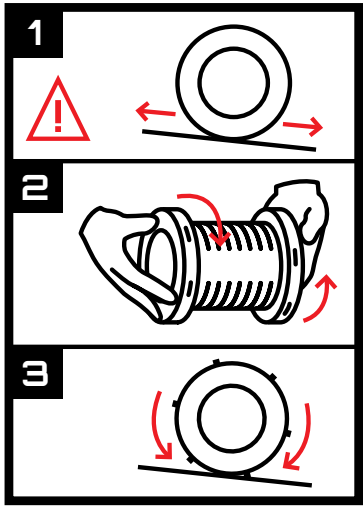


TECSPPOOL® ANTI ROTATION SYSTEM PATENTED BY THERMOCOMPACT

FOR A BETTER **STORAGE** AND **HANDLING**
AVAILABLE FOR **T125**, **T160** ET **T200** EDM WIRE SPOOLS
ON STANDARD **DIN** SIZES

WAY OF FUNCTIONING

One manual rotation of the side flange is enough to free the lock bolts of the spool.



TECSPPOOL® BENEFITS

- › Spool is stopped in horizontal position
- › Stability guaranteed on incline surface up to 30% slope.
- › TecSpool® avoids wire tangles of the outer layer
- › Easy storage display
- › Flanges are made with recycled material



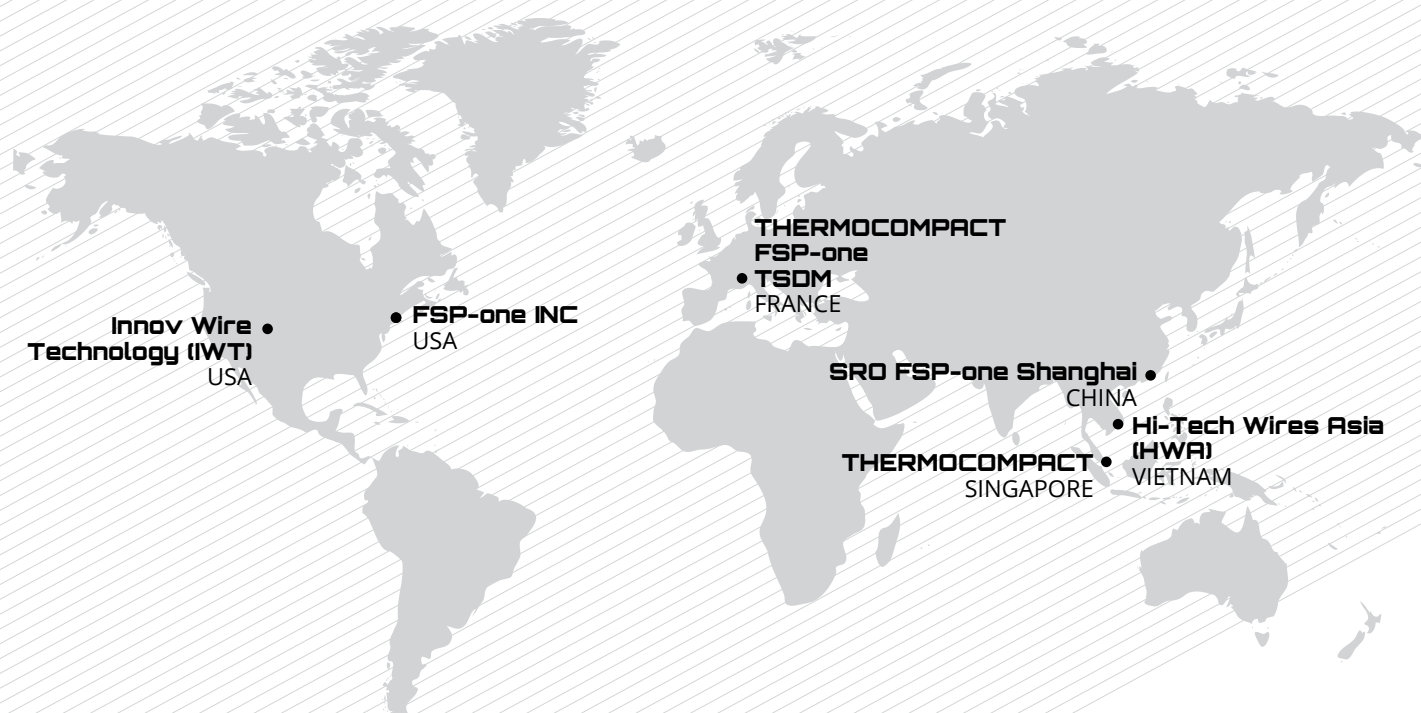
SPOOLS STORAGE RECOMMENDATIONS


**STORAGE
HORIZONTALLY,
IN ITS PACKAGING**


**KEEP DRY, DO NOT
OPEN THE PACKAGING
BEFORE USE**


**WIRE TO
BE USED WITHIN
18 MONTHS**

WHERE TO FIND US



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