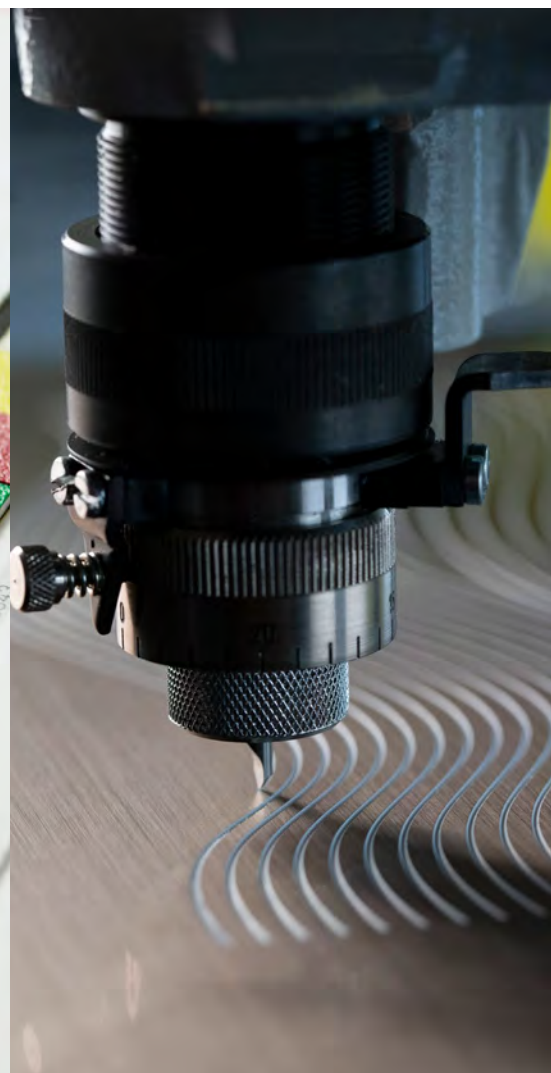




GRAVOTECH
EXPRESSION OF THINGS

ENGRAVING **Source book**

Your source for all engraving materials, supplies and fabrication services.



The Gravotech total solution

A culture of excellence

Gravotech is a trademark of Gravotech Group, the world's leading manufacturer of marking solutions, offering a full range of equipment: rotary engraving machines, CO₂ and Fiber lasers, dot-peen and scribing, engraving materials, consumables and services. For over 80 years, Gravotech has remained the industry benchmark thanks to its high quality equipment.

This success is built on three fundamentals:

- A primary focus on our customers' needs,
- Continually delivering state of the art solutions,
- Efficient customer service from over 720 employees worldwide.

Gravotech team members are based in over 40 countries around the world, working around the clock to provide you with the best possible solutions for your marking, engraving and cutting needs as quickly as possible.

The Gravotech difference is founded on:

- A complete solutions approach: the Gravotech product offer lends itself to a full range of personalisation, signage and traceability applications,
- A complete technology solution: machines, software, accessories and consumables,

- A complete technical support solution: readily available field and telephone technical support,
- A complete training solution: training on-site or on Gravotech premises, phone support from engraving experts.

The comprehensive Gravotech product line includes:

- The world's largest and most innovative range of CNC machines,
- State of the art CO₂ and Fiber laser engraving systems,
- Versatile dot-peen marking systems,
- Innovative software dedicated to the engraving industry, designed to optimise Gravotech machines,
- The most comprehensive range of materials and engravables on the market,
- Responsive in-house fabrication services.

Gravotech develops and markets the world's highest quality and most durable marking solutions, exceeding engraving industry standards for product and service performance. Our quality management system ensures that our products and services are continuously improved, and that all of our team members are dedicated to ensuring the best possible service.



GRAVOTECH
E X P R E S S I O N O F T H I N G S

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Our engraving materials: guarantee and commitment



by



GRAVOTECH
EXPRESSION OF THINGS

At Gravotech, quality is much more than a norm or a concept: it is a state of mind driven by continuous improvement.

This explains why most of our worldwide-known brands such as Gravoply™, Metallex™, Gravoglas™ 2-Plex™ or Gravotac™, have become synonymous of quality and are a reference for competitors to match.

We are committed to respect these values raised over the past 60 years and do our utmost to meet your most demanding requirements.

To do so, we implemented a Gravotech Quality Charter, which covers a number of technical characteristics that we want respected for our products and ranges:



THE CHOICE IN EACH PRODUCT RANGE

Our wide material range included over 900 references in stock, specially developed for engraving and cutting. "Surface" or "Reverse" engraving, laser marking or cutter engraving, all our ranges of plastic, metal or stratified materials are available in a spectrum of colours, thicknesses between 0.09 mm and 10 mm or .004" and .40" according to the products, and various finishes (matt, glossy, satin, textured, metallic, brushed). The great majority of our materials is also compatible for digital printing. **For you, this is the guarantee to find the right product for your application.**

Thanks to our production units in the United States and in Europe, we are able to offer you custom-made solutions (colour, finish, thickness, etc.), even for small quantities. Make sure you contact us!

OPERATING RECOMMENDATIONS AND USE CONDITIONS

Gravotech warrants that its product comply with its technical specification within normal condition of use, without any other warranty including without being limited to any other warranty of merchantability, performance or suitability.

Gravotech warranty covers consumables product for a one (1) month period as from invoice date. The consumable warranty only covers manufacturing defect but scratch and colorimetric variation are expressly excluded from the warranty coverage.

Technical specifications result from data and technical report raised from suppliers or from Gravotech or external independent laboratory studies. Consequently each end user shall perform appropriate testing under real conditions of use to ensure consistency and adequacy of the product to its intended specific purpose and needs. Out of standard conditions of use as well as harsh conditions such as for example UV, hygrometry, salinity or temperature specifics shall be taken into account to avoid any product deterioration.

End User shall be liable regarding its own testing results and therefore its final decision regarding suitability of the product according to Gravotech specifications and recommendation.

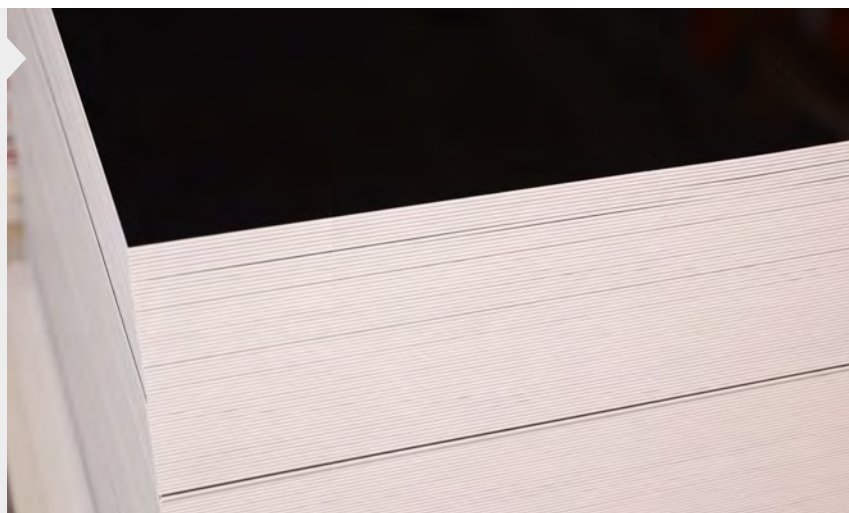
RAW MATERIALS

Our materials are issued from a selection of the best suppliers worldwide, capable of offering the highest guarantees in terms of organisation (ISO*).

Our ABS and acrylics are pure and selected among the best grades.

Each component is subject to careful selection process taking into consideration normative and environmental obligations (RoHS**, REACH***).

For you, this guarantees the respect of all obligations and requirements demanded by your customers. We will provide written statements on simple request.



COLOURS

Colour rendering and consistency from one production batch to another are particularly sought after by all graphic arts professionals. UV resistance is an obligation for materials in contact with light, especially for outdoor applications. To enable you to commit in total safety, we set our expectations beyond market standards. Our components selection as well as sourcing decisions are made accordingly. Our operational teams make regular spectral colorimeter checks to measure colour differences: we compare the light reflected on a random sample with our "Golden Sample". This measurement highlights colour discrepancy (or " ΔE ") and opacity. **For you, this guarantees irreproachable colour and best hold of the material in time.**



05

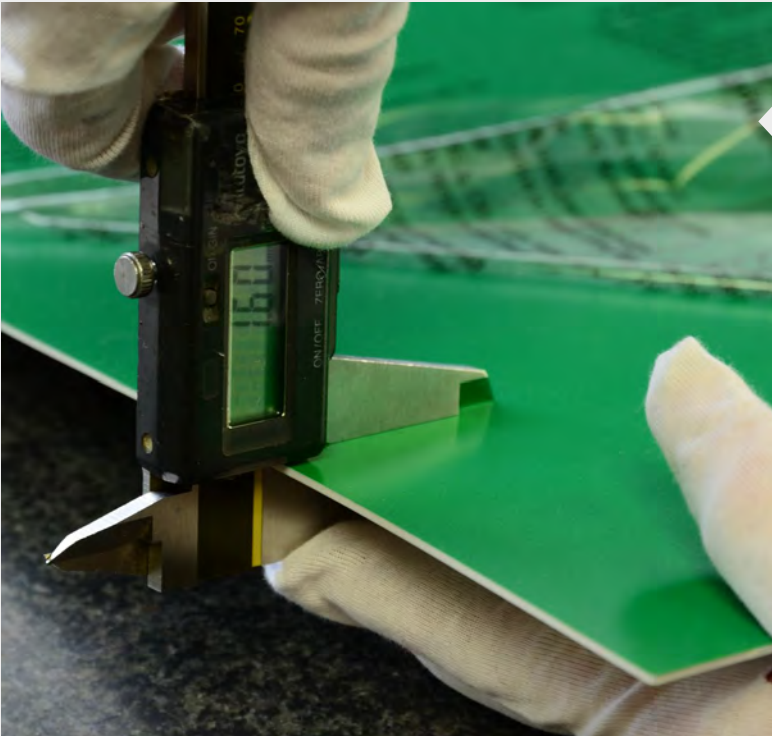
SIZES, THICKNESS AND FLATNESS

Each material sheet is subject to tight squaring at 0.25 mm/metre (.01"/yd).

Generally, our plastic material sizes are even fairly higher than the dimensions announced. **For you, this is the guarantee to benefit from the entire format actually purchased, even if the plate is clamped on the edges.**

The thickness of the different layers making up our materials is finely calibrated, and our recipes are perfectly mastered and executed by our engineers and technicians. For Gravoply™ 2, Metallex™, Gravoply™ Laser and Gravoply™ Ultra: the top coat is only a few microns thin. **For you, this is the possibility to achieve extremely fine and aesthetic engraving, minimise the production of chips or fumes and take advantage of your engraving machine's highest speed and productivity, be it mechanical or laser powered.**

Gravoply™ 1, Gravoglas™ 2-Plex™ and even Gravotac™: different layers calibrated at 250 microns are assembled by hot pressing in our workshops. Our products are not co-extruded, as this technique cannot guarantee regularity in thickness or material flatness. To obtain the best possible flatness, this "laminating" phase is made in very small batches, and even sometimes by the unit! **For you, this is the certainty to achieve accurate and regular depth engraving, as well as quality milling jobs on the entire surface of the material sheet.**



PROTECTION, PACKAGING, TRACEABILITY

Our materials are protected individually by a "Gravotech"-personalised, resistant semi-adhesive protection film. This ensures that engraved or milled surfaces are preserved from pollution or alteration.

Each material sheet is also labeled with its reference, designation and production batch number. This ensures our Quality assurance system has the traceability information that is required in case of defect. Our packaging products are adapted to transport constraints all over the world and have proven their sturdiness. **For you, this is the guarantee to buy an original product and benefit from our material's "Premium" quality until it reaches your workshop.**



The particular care we take in terms of product traceability enables us to consider our customers and partners' feedback and therefore continue to improve, for the benefit of all.

This is what we call continuous improvement, the drive of our organisation and spirit of our company.



* ISO: International Standard Organisation

** RoHS: Restriction of the use of certain Hazardous Substances

*** REACH: Registration, Evaluation and Authorisation of Chemicals substances



Custom fabrication services

Save time and money by using our wide range of fabrication services which will meet your most demanding needs.



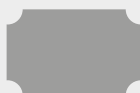
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GRAVOTECH
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CUT-TO-SIZE

Custom fabricated shapes made to your specifications. Shape and size on demand (rectangle, circular, oval, strips, special shapes).



Signs with concave corners



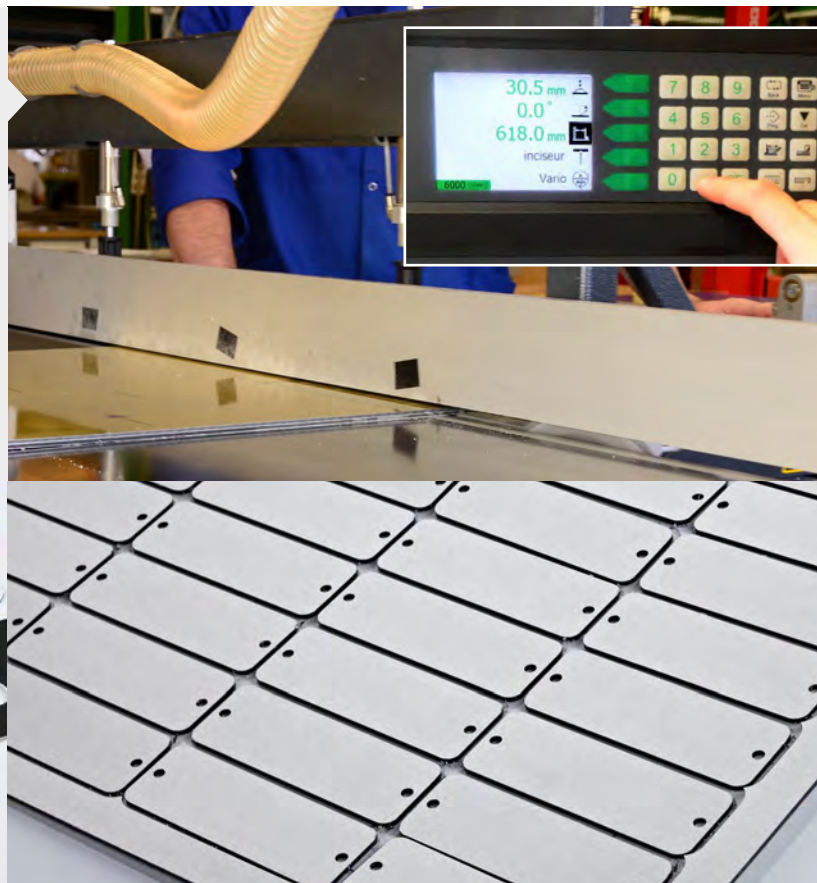
Circular blanks



Cutting



Oval blanks



FINISHING

Bevelling

Bevelling is the cutting of an attractive angular edge to create a border. Our standard bevel is at 45° angle.

Drilling holes

To accommodate your mounting needs in plastic and metal.

Holes are positioned according to your specifications. When measuring holes, follow the illustrated example below.



1. From the centre of one hole to the centre of the other hole.
2. From the centre of the hole to the top edge of the material.
3. From the centre of the hole to the side edge of the material.
4. Diameter of any counter-sunk holes to be drilled (for mounting materials and wall holders with flat head screws).





Rounded / concave corners

We offer a wide selection of different radial for corners.



Bending

Plastic materials (except phenolic) can be bent into stand-up display signs, badges, etc. Maximum length of the bend is 500 mm (20").

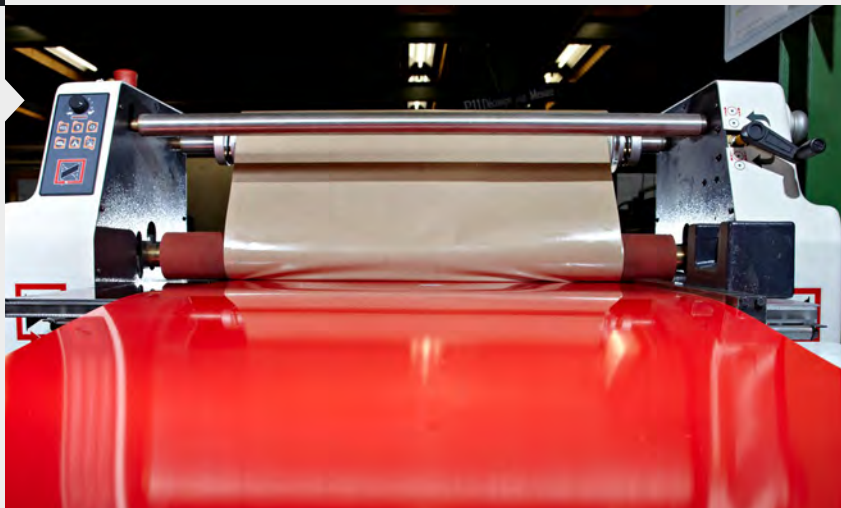
BACKING

Adhesive

We can apply adhesive backing for badges, nameplates, strips and sheets. Adhesive backing is applied before cutting material.

Magnetic

For temporary mounting of info tags on metal shelves, we can apply magnetic backing to plates, strips and sheets.



BADGES

We can custom fabricate your plastic or brass sheet badge. Specify: shape, size and material, fastener, fused, cemented or bonded hardware; rounded or square corners; bevel or no-bevel finished edges.

Hot-stamping / Silk-screen / Digital printing
To add a coloured logo or inscription on badges, ID plates, etc.



Types of fasteners for heat fusing in our workshop

Quotation

For all these services, please ask your Gravotech partner for a quotation!

Lead-time

Fabrication times are only estimates, and may vary according to production load.

Return policy

All fabrication orders are non-returnable due to their custom nature. Please ensure that you provide accurate information when placing your fabrication order.

Custom materials on demand



by


GRAVOTECH
 EXPRESSION OF THINGS

CANNOT FIND THE PLASTIC PRODUCT YOU ARE LOOKING FOR?

Gravotech is able to supply proprietary material based on your specifications.

CHOOSE:



COLOUR MIXING

Gravotech provides any colours combination!

Choose engraving sheets in the colour combination of your choice. Just mix any existing surface colour with any existing core colour for the following material ranges:

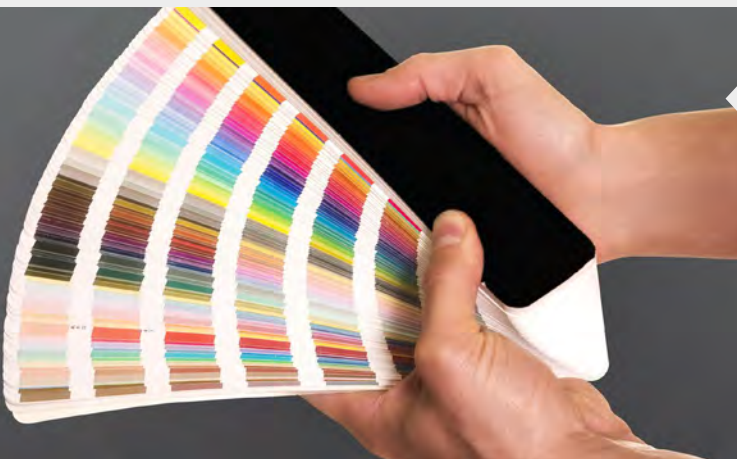
- Gravoply™ Laser
- Gravoply™ Ultra
- Gravoply™ 2
- Flexilase™
- Gravoply™ 1
- Gravoglas™ 2-Plex™
- Gravolase™ Metallics
- Metallex™



COLOUR MATCHING

Do you require a specific surface colour (to match your graphic charter, logo, etc.)?

Indicate a RAL, Pantone® or NCS® code and we will apply this colour over the ABS or acrylic base of your choice.



DOUBLE-SIDED MATERIAL

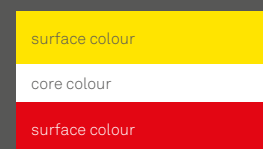
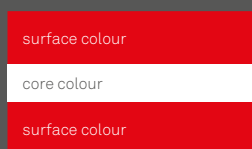
Looking for double-sided material?

Contact us and we will produce your double-sided sheets in:

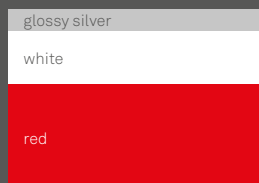
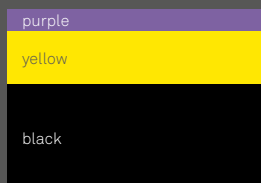
- Gravoply™ Laser
- Gravoply™ Ultra
- Gravoply™ 2
- Gravoply™ 1
- Gravoglas™ 2-Plex™
- Gravalase™ Metallics
- Metallex™

Same surface colour
on both sides

Different colour
on each side



Examples:



GRAVOPLY™ 3C

Our Gravoply™ 3C range offers the most used colours. However we can produce up to 1,500 colour combinations on demand.

SPECIFIC THICKNESSES

Your application requires a specific material thickness?

Let us know your requirements and we will produce a material adapted to your needs.



SURFACE FINISH

Choose from our standard matt, glossy, satin or textured surface finishes; we can apply them to the majority of our plastic materials.

Examples:

- Gravoply™ Laser red/white (49988) has a matt finish but can be manufactured with a glossy finish on request.
- Gravoply™ Ultra blue/white (18990) has a matt finish: ask for it with a textured finish.

SPECIFIC CHARACTERISTICS

You are looking for a product to meet very specific characteristics, for a particular application and environment? Describe your requirement and we will find the best suited solution to your application.

Quotation

For all these services, please ask your Gravotech partner for a quotation!

Lead-time

Fabrication times are only estimates, and may vary according to production load.

Return policy

All fabrication orders are non-returnable due to their custom nature. Please ensure that you provide accurate information when placing your fabrication order.

Selection guide

Plastics Laser / Rotary

		Gravoply™ Laser	Gravoply™ Ultra	Gravoply™ 2	Gravoglas™ 1	Acrylic	Gravotac™ Exterior	Flexilase™	Sticklelase™	Gravostrat™	Rubblase™	Laser Wood	
Engraving system	CO ₂ laser	■	■	■	■	■	■	■	■	■	■	■	
	Fibre laser												
	Rotary	■	■	■	■	■	■	■		■		■	
	UV Print	■	■	■	■	■	■	■	■	■		■	
Applications	Funeral plates: urns plates - Coffin plates - Head stones .../...			■	■			■	■				
	ADA / DDA / Signs with Braille dots						■						
	Small labels: Badges - Door plates - Trophy plates - Luggage tags .../...	■	■	■				■	■			■	
	Small signs: Badges - Door plates - Sport tags - Awards - Museum art tags .../...	■	■	■		■		■	■			■	
	Safety signs - Technical signs	■	■	■						■			
	Large Signs - Flow charts - Directories - Location maps - Directions - Professional plates	■	■	■	■	■	■						■
	Signs - Letter cut-outs (signage / routing / prototyping) - POP displays - Acrylic work				■	■	■	■					■
	Signs - Metal Cut-outs (signage / routing / prototyping)												
	Rating plates (mass production) - Industrial ID plates								■				
	Electrical plates - Push-button, cable tags	■	■	■									
	Front panels / Flow charts	■	■	■	■						■		
	Rubber stamps											■	
	Specifications	Surface finishing	Matt	■	■	■		■	■	■	■	■	■
Brushed									■				
Glossy						■	■		■		■		
Satin				■									
Textured													
Composition		Acrylic	■	■		■	■	■	■	■			
		ABS			■								
		Aluminium											
		Brass											
		PVC											
Capabilities	Phenolic									■			
	Rubber										■		
	Natural Plywood											■	
	Surface engraving	■	■	■		■	■	■	■	■	■	■	
Subsurface engraving		■		■	■	■							
CO ₂ laser cutting	■	■		■	■	■	■	■			■	■	
Interior	■	■	■	■	■	■	■	■	■	■	■	■	
Exterior	■	■		■	■	■							
Shear	■	■	■					■	■			■	
Saw		■	■	■	■	■				■		■	
Silk-screen	■	■	■	■	■	■		■	■			■	
Hot-stamp	■	■	■	■	■	■							
Heat bending	■	■	■	■	■	■							
Scratch resistant		■	■	■	■	■				■			
Flexible	■	■	■			■	■	■	■		■	■	
Break resistant			■		■	■		■			■		
UV resistant	■	■		■		■						■	
Min. temperature	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)	-60°C (-76°F)	-40°C (-40°F)	-40°C (-40°F)	-200°C (-328°F)	
Max. temperature	80°C (176°F)	80°C (176°F)	80°C (176°F)	80°C (176°F)	80°C (176°F)	80°C (176°F)	80°C (176°F)	80°C (176°F)	200°C (392°F)	180°C (356°F)	80°C (176°F)	100°C (212°F)	

To quickly identify and select the right material for your application needs, look out for the symbols below indicating the main features of each Gravotech material range:



Laserable

CO₂ Laserable : Generally applies to acrylic core materials as well as rubber, which can be CO₂ laser engraved and cut. Also suitable for coated or anodised metals. ABS materials can also be CO₂ lasered, although cutting results and laser quality may vary according to materials and/or colours. Apart from a few exceptions, most CO₂ laserable materials are also rotary engravable.

Fiber Laserable : Generally applies to metals, either bare or coated. A wide variety of plastics can also be fiber lasered.



Rotary engravable (with a rotating cutting tool)

The most versatile engraving technology. Suitable for most plastic materials and metals.



UV Print

UV LED printing material.



Indoor use

Material designed for indoor use which does not require resistance to UV light or changes in the climate.



Outdoor use

Within the limit of technical specifications provided by Gravotech and compliance to standard conditions of use, materials are designed to be resistant to climate and UV variation without significant alteration to its features. Due to wide variety of use conditions, Gravotech cannot assert material shelf-life.



Surface engraving

1-ply, 2-ply or 3-ply materials are either lasered or engraved to expose the core of the material, thereby giving a colour contrast between cap (surface layer) and core (base colour).



Subsurface engraving (also known as reverse engraving)

Applies to 1-ply and 2-ply clear base materials. The material is lasered or engraved from the back.

Once lasered or engraved, the characters and logos can be back-painted to achieve aesthetic colour contrast.

No clamping, no tape, no vacuum table

A real **time saver** for your engraving and cutting jobs.

- All kinds of plastic or metallic materials in variable thickness **secured effortlessly**
- Also suitable to hold small items: medals, tags, labels, etc.
- Ideal for **engraving** and **cutting** depending on materials
- **No oily residues** after use

The indispensable fixing accessory for your daily jobs

Flexible material placed on your engraving / marking table* to maintain the material to be engraved or cut into place.

* For IM4, M20, IS200 & M40 use a support table, see below for more informations.

Easy to use



1. Place Gravogrip™ on your table

2. Position the material and press down

3. Engrave!

Gravogrip™ sizes

Choose the size that will best suit your machine's working area.

78056	Full sheet 1220 x 610 mm (48" x 24")
Half sheet	610 x 610 mm (24" x 24")
Quarter sheet	610 x 305 mm (24" x 12")

Cut-to-size on request

For smaller size machines, use one of the support tables* specially designed to that effect.

	Gravogrip™ support table*	Delivered with replacement mat
72024	for IM4 machines	ref. 72027 (120 x 80 mm) (4.72" x 3.15")
70997	for M20/M20XL machines	ref. 70996 (120 x 100 mm) (4.72" x 3.93")
71116	for IS200 machines	ref. 71054 (225 x 80 mm) (8.85" x 3.15")
45697	for M40 machines	ref. 45696 (310 x 215 mm) (12.20" x 8.46")

* All support tables delivered with one piece of Gravogrip™ to fit.

See also p. 97 *Jigs & Holding Devices*.

Minimum maintenance

- Cleaning with soapy water



BENEFITS

- UV stable
- Excellent for interior and exterior signage
- A wide range of colours
- Matt finish
- Microthin surface layer for detailed engraving
- Reduce inventory with one material for rotary, laser, indoor and outdoor needs

APPLICATIONS

Architectural signage, industrial signage, labelling, legend plates...

SPECIFICATIONS

Finish	Matt
Composition	Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

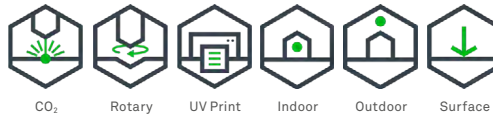
Interior	■
Exterior	■
Shear	■
Saw	-
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	-
Flexible	■
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

The most versatile plastic material: indoor, outdoor, laser and rotary engraving and cutting. One product, one stock, many applications.

You can mix any surface and any core colours on demand.

For custom colours, see Custom materials on demand p. 08.



Flexibility and performance for indoor and outdoor applications

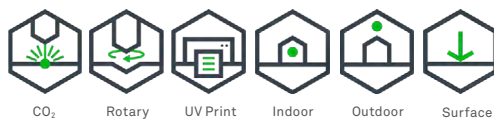
surface / core colour	2-ply	
	0.8 mm (1/32")	1.6 mm (1/16")
white / red	51006	70005
white / blue	51011	
white / black	51017	69991
yellow / red	51007	70006
yellow / blue	51012	
yellow / black	51018	69992
orange / white	51035	80767
orange / black	51020	80768
red / white	51034	69995
red / yellow	51009	
burgundy / white	51043	70004
burgundy / gold	51016	
purple / white	67005*	80771*

*Subject to premature colorfading



The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





Flexibility and performance for indoor and outdoor applications

surface / core colour	2-ply	
	0.8 mm (1/32")	1.3 mm (0.050")
apple green / white	51042	49996
pine green / white	51039*	49995*
sky blue / white	51037	49990
sky blue / black	51021	49979
blue / white	51036	49989
blue / yellow		51010
air force blue / white	51038	49991
brown / white	51044	49993
grey / white	51046*	49992*
grey / black	51023*	49974*
black / white	51033	49987
black / yellow		51008
black / gold		51014

*Subject to premature colorfading

BENEFITS

- UV stable
- Excellent for interior and exterior signage
- A wide range of colours
- Matt finish
- Microthin surface layer for detailed engraving
- Reduce inventory with one material for rotary, laser, indoor and outdoor needs

APPLICATIONS

Architectural signage, industrial signage, labelling, legend plates...

SPECIFICATIONS

Finish	Matt
Composition	Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	-
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	-
Flexible	■
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

The most versatile plastic material: indoor, outdoor, laser and rotary engraving and cutting. One product, one stock, many applications.

You can mix any surface and any core colours on demand.

For custom colours, see Custom materials on demand p. 08.

The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- Laser engraving and cutting
- Excellent for interior and exterior signage
- Unique 0.05mm (.002") cap layer for detailed engraving
- Excellent for photo lasering
- Thickness 0.25 mm (.01") with backing adhesive on demand.

APPLICATIONS

Badges, awards plates, interior and exterior signage

SPECIFICATIONS

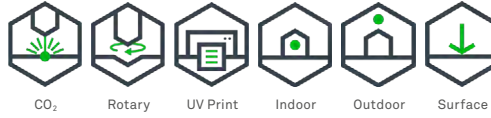
Finish	Matt
Composition	DR Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Laser and rotary engraving, a versatile material for indoor and outdoor applications. For custom colours, see Custom materials on demand p. 08.



Matt *

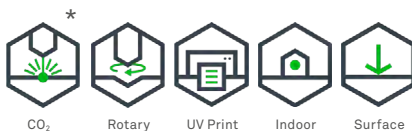
surface / core colour	2-ply	
	0.5 mm (.020")	1.6 mm (1/16")
white / black	18946	18984
yellow / black	18955	18993
orange / white		19000
orange / black		29499
red / white	18949	18987
red / black		29498
burgundy / white		18980
apple green / white	18970	19012
forest green / white		19001
pine green / white		29491
sky blue / white		70953
blue / white		18952
air force blue / white		29492
navy blue / white		29494
royal blue / white		19015
brown / white		29495
chocolate brown / white		29493
light grey / black		29496
taupe / white		29501
black / white		18943
black / gold		18976
glossy black / gold		18973*

* Except 18973 glossy finish.



The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Microthin surface layer
- Perfect for small characters and detailed logos

APPLICATIONS

Badges, identification plates, interior signage

SPECIFICATIONS

Finish	Matt
Composition	ABS
Engraving depth	0.1 mm (.004")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

You can mix any surface and core colours on demand. Double-sided products are also available.

For custom colours, see Custom materials on demand p. 08.

surface / core colour	2-ply	
	0.8 mm (1/32")	3.2 mm (1/8")
white / red	21928	
white / azure blue	21908	
white / black	21850 21919 21982 22010	
yellow / red	21913	
yellow / black	21863 21936 21995 22013	
orange / white	52205	
red / white	21851 21921 21983	
red / yellow	21910	
burgundy / white	21932	
purple / white	67007	
apple green / white	21838 21905	

surface / core colour	2-ply	
	0.8 mm (1/32")	3.2 mm (1/8")
pine green / white	21865 21938 21997	
pine green / yellow	21916	
sky blue / white	21934	
sky blue / black	21895	
blue / white	21852 21923 21984	
air force blue / white	21907	
brown / white	21930	
grey / white	21856 21927	
grey / black	21915 21915	
black / white	21849 21917 21981 22009	
black / yellow	21940	

* Gravoply™ 2 products have a laserable foil cap but engraving colour results can vary according to the reference. Vector cutting is not recommended.

The dimensions indicated represent our minimal commitment.
Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- Laser engraving and cutting
- Excellent UV resistance
- A fine silk-screened layer
- Resistant to chemical agents
- Subsurface engraving: produce multi-colour signage with paint fill
- Easy to keep surface clean
- Interior and exterior use

APPLICATIONS

Interior and exterior signage,
professional name plates

SPECIFICATIONS

Finish	Glossy
Composition	Acrylic
Engraving depth	0.2 mm (.008")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

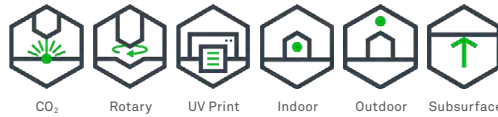
Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Excellent material for both rotary and laser engraving.

You can use Gravotech recommended paint to colour any Gravoglas™ 1 subsurface engraving. See p.51.

For custom colours, see Custom materials on demand p. 08.



CO₂ Rotary UV Print Indoor Outdoor Subsurface

surface / backing colour	2-ply		
	1.5 mm (1/16")	3.0 mm (1/8")	5.0 mm (.20")
clear / white	18141*	18193	18264
clear / red	18201	18267	
clear / blue	18207	18270	
clear / silver	18171	18244	18293
clear / gold	18168	18235	18290
clear / old gold	18174	18252	18296
clear / black	18138*	18183	18261

* Conventional colours for the identification of pipes in the industrial sector (AFNOR NF X. 08-002 and INRS ED 88 norms).


GRAVOTECH
EXPRESSION OF THINGS

Printed colours for indication only. Cannot serve as a substitute for real material sample.

Docteur Odile TERRASSON
MEDECINE GENERALE
CONVENTIONNEE
Consultations
de 9H00 à 12H00 et de 17H00 à 19H00





BENEFITS

- Rotary and laser engraving and cutting
- Perfect material for UV printing
- Excellent for signage
- Can also be used as a substrate

APPLICATIONS

Interior and exterior signage, visual communication, decoration, gifts, promotional items, architectural models, trophy and award...

SPECIFICATIONS

Finish	Matt, Glossy or Frosted
Composition	Acrylic
Engraving depth	-
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	On demand

CAPABILITIES

Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	-
Break resistant	■
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

A real alternative to glass.
 Frosted and matt white are fingerprint resistant.
 For even more colours and possibilities, combine Acrylic with Gravotac™ Exterior (p2w2).

Clear

Clear	83423	3 mm (1/8")
	83424	6 mm (.20")
	83425	10 mm (.40")
Translucent green	83426	
Translucent blue	83427	

Frosted

White	83431	3 mm (1/8")
Light blue	83434	
Sky blue	83438	
Blue ocean	83435	
Blue lagoon	83437	
Green	83436	
Yellow	83432	
Pink	83439	
Mauve	83433	

Fluorescent

Yellow	83428	3 mm (1/8")
	83430	
	83429	
Orange	83430	
Pink	83429	

Opaque

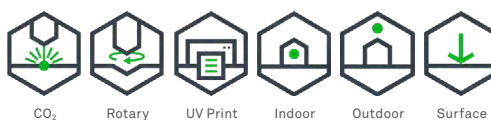
White	83440	3 mm (1/8")
	83441	6 mm (.20")
Black	83442	
	83443	

Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- Laser engraving and cutting
- Very thin and flexible
- Excellent for labels
- Fine engraving, neat cutting
- Delivered with adhesive backing



APPLICATIONS

Identification labels, trophy plates, labels for curved surface

SPECIFICATIONS

Finish	Matt, Brushed, Glossy
Composition	Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	610 mm x 305 mm (24" x 12")
Half sheet	-
Quarter sheet	-
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	-
Silk screen	-
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	-
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

A high resolution material, flexible and laserable.
Metallic colours for your trophy plates.
Delivered with adhesive backing.
For custom colours, see Custom materials on demand p.08.

surface /
core colour

white / black	66984	0.25 mm (.01")	2-ply
yellow / black	66985		
orange / black	66986		
red / white	66997		
purple / white	67002*		
apple green / white	67001		
pine green / white	71673*		
sky blue / white	67000		
blue / white	71670		

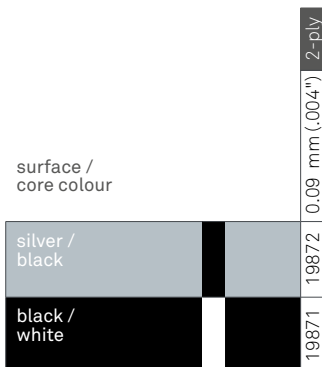
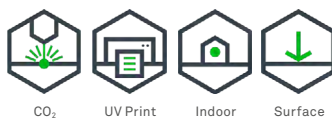
air force blue / white	71671	0.25 mm (.01")	2-ply
brown / white	67004		
brushed aluminium / black	66991		
glossy silver / black	66990		
matt aluminium / black	67558		
european gold / black	66989		
glossy gold / black	66988		
grey / white	67003*		
black / white	66995		

*Subject to premature colorfading



Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Laser engraving and cutting
- Available in black/white or silver/black
- 10 meter (32') roll
- Very thin
- Delivered with adhesive backing
- Design special shapes with your CO₂ laser

APPLICATIONS

Labels, barcodes, trophy plates

SPECIFICATIONS

Finish	Matt
Composition	Acrylic
Engraving depth	0.025 mm (.001")
Full sheet	120 mm x 10m (4.75" x 32')
Half sheet	-
Quarter sheet	-
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	-
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-60°C (-76°F)
Max. temp.	200°C (392°F)

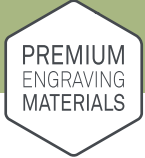


TECH TIPS

Delivered in roll, with adhesive backing.
 Very good material for small labels on curved surface.
 For a larger choice of colours, see Flexilase™ p.20.

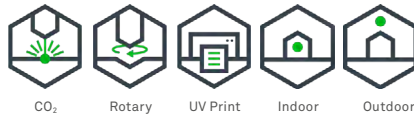
Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Interior and exterior use
- Profile available with or without adhesive backing
- Cut with laser or rotary machines



APPLICATIONS

DDA & ADA compliant, tactile signage

SPECIFICATIONS

Finish	Matt
Composition	Impact modified acrylic
Engraving depth	-
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

The ideal product for Braille and tactile signs cut with your laser machine. UV stable.

	1-ply		
	0.8 mm (1/32")	1.6 mm (1/16")	3.2 mm (1/8")
clear	29918	29935	31237
white	29919	29936	31237
red		29939	
pine green	29927		
blue		29945	
silver grey		29946	32187
black	29920	29937	31257

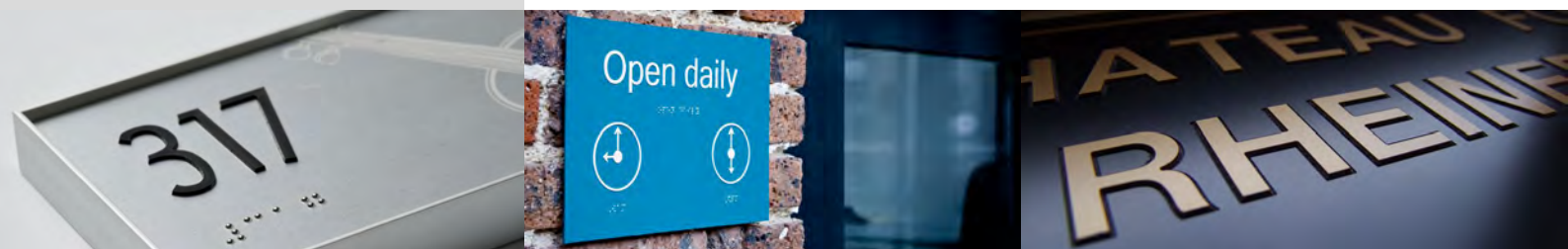
The Gravotac™ process :

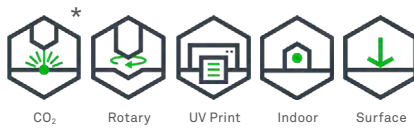


Adhere 0.8 mm (1/32") profile material to 1.6 mm (1/16") or 3.2 mm (1/8") substrate. Engrave using outline font. Peel excess profile material off substrate.



The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Phenolic material
- Glossy finish
- Resistant to chemicals and solvents
- Non-flammable
- Conforms to military specifications ASTM D 709 ES-1, ES-2, ES-3
- Electrically non-conductive

APPLICATIONS

Industrial identification

SPECIFICATIONS

Finish	Glossy
Composition	Rigid thermoset material
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 600 mm (48" x 24")
Half sheet	605 mm x 600 mm (24" x 24")
Quarter sheet	600 mm x 300 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	-
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	180°C (356°F)

Double-sided

surface / core colour		1.0 mm (.040")	1.4 mm (.055")	2.5 mm (.087")
white / black		22042	22042	22049
yellow / black		22044	22044	22051
red / white		22043	22043	22050
grey / black		22047	22047	
black / white		22041	22041	22048

* Gravostrat™ can be laser engraved but not laser cut.
Gravostrat™ may be subject to slight variations in thickness.

TECH TIPS

Thanks to its specific characteristics, this material is the ideal choice for all your industrial identification needs.

Gravostrat™ can be laser engraved but not laser cut.

Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Natural rubber sold in sheets, exclusively for lasering with CO₂ laser engraving machines to create inking stamps
- Grey in colour, 2.2 mm (.087") in thickness



APPLICATIONS

Rubber stamps

SPECIFICATIONS

Finish	Grey
Composition	Rubber
Engraving depth	-
Full sheet	297 x 210 mm (A4) (11.7" x 8.3")
Half sheet	-
Quarter sheet	-
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	-
Saw	-
Silk screen	-
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (40°F)
Max. temp.	80°C (176°F)

TECH TIPS

The hardness of elastomers is measured on the scale "Shore A"; Rubbalase™ is measured at 60 "Shore A".

natural rubbalase	19897	2.2 mm (.087")
odourless rubbalase	48542	



Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Safe composition, respect of both nature and people
- A trendy product for new possibilities
- 4 different thicknesses
- 0.4 mm (1/64") as thin as paper, for flexible applications

APPLICATIONS

Interior signage, architectural models, decoration, gifts, promotional items, personalised cards, app labs, DIY

SPECIFICATIONS

Finish	Mat
Composition	Natural plywood
Engraving depth	0.1 mm (.004")
Full sheet	610 x 305mm (24" x 12")
Half sheet	-
Quarter sheet	-
Other size	-

CAPABILITIES

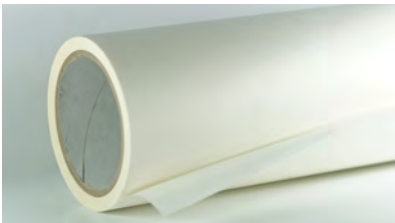
Interior	■
Exterior	-
Shear	0.4mm (1/64") & 1.0mm (3/64") ■
Saw	2.5mm (3/32") & 4.5mm (11/64") ■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	-
UV resistant	■
Min. temp.	-200°C (-328°F)
Max. temp.	100°C (212°F)

Double-sided

wood species

wood species	0.4 mm (1/64")	1.0 mm (3/64")	2.5 mm (3/32")	4.5 mm (11/64")
birch	82741	82742	82743	82744
beech		82747	82748	
oak		82745	82746	
walnut	82749	82750		

Wood is a natural organic material. Thickness, colour and aspect can vary from one sheet to another. Packaged by 5.



Masking paper
305mm x 50m (12" x 55 yds)
ref. 83057



Clamps (pack of 6)
ref. 83366

TECH TIPS

Let the material acclimatise to the end-use conditions before using it.

Apply the masking paper (ref. 83057) on the sheet to avoid dust and fumes during CO₂ laser cutting.

Maintain the sheet flat on the honeycomb table using clamps (ref. 83366).

Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Satin finish
- 2-ply or double-sided
- Many colours and thicknesses
- Scratch resistant

APPLICATIONS

Interior signage, identification plates, key tags

SPECIFICATIONS

Finish	Satin
Composition	XT/ABS
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

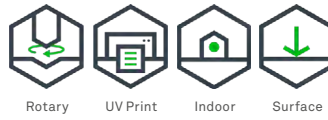
CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

The acrylic surface of this product and its smooth satin finish makes this very popular product scratch resistant.

For custom colours, see Custom materials on demand p.08.



Rotary UV Print Indoor Surface

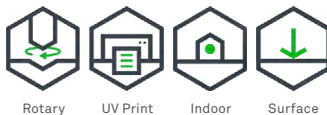
surface / core colour	2-ply	
	0.8 mm (1/32")	1.6 mm (1/16")
white / green	17313	17313
white / black	17263	22030
almond / black	32293	32293
yellow / black	17273	17478
yellow / white	29564	29564
orange / white	17407	17407
orange / black	17404	17404
red / white	17267	17472
red / black	17454	17454
burgundy / white	17463	17463

surface / core colour	2-ply	
	0.8 mm (1/32")	1.6 mm (1/16")
purple / white	17436	17436
apple green / white	17442	17442
pine green / white	17410	17410
azure blue / white	17270	17475
air force blue / white	17428	17428
navy blue / white	29581	29581
brown / white	17388	17388
silver grey / white	29584	29584
silver grey / black	17379	17379
black / white	17250	17467



The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- Satin finish
- 2-ply or double-sided
- Many colours and thicknesses
- Scratch resistant

APPLICATIONS

Interior signage, identification plates, key tags

SPECIFICATIONS

Finish	Satin
Composition	XT/ABS
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

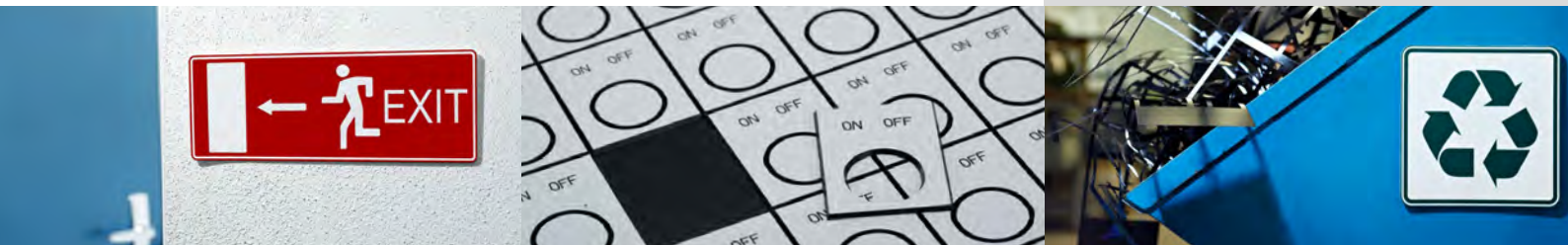
The acrylic surface of this product and its smooth satin finish makes this very popular product scratch resistant.

For custom colours, see Custom materials on demand p.08.

Double-sided

surface / core colour	1.6 mm (1/16")	3.2 mm (1/8")
white / black	29578	29700
yellow / black	29579	17525
red / white	29580	29702
azure blue / white	29603	29705
black / white	29604	17521

The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- This unique material offers 3 layers of colour for surface engraving
- The colour revealed varies according to the depth of engraving
- Only one tool required to achieve two different colours
- Ideal for safety signs

APPLICATIONS

Signage, plates with logos, badges

SPECIFICATIONS

Finish	Matt
Composition	ABS
Engraving depth	0.1 mm(.004") - 0.3 mm (.012")
Full sheet	1220 mm x 600 mm (48" x 24")
Half sheet	610 mm x 600 mm (24" x 24")
Quarter sheet	600 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

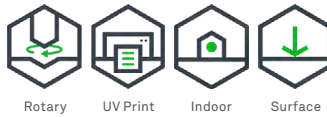
Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Unique on the engraving market, it is the only 3-colour material that does not require colouring.

Other colour combinations available on demand. Contact us for more information.

For custom colours, see Custom materials on demand p.08.



				3-ply
				1.6 mm (1/16")
surface / core colour / core colour				
white / red / black				23957
yellow / white / black				23949
yellow / red / black				23954
red / white / black				23955
apple green / white / black				23953
blue / white / black				23956
blue / red / white				23952
brushed aluminium / black / white				23951
radiant gold / black / white				23950
black / red / white				23948



Printed colours for indication only. Cannot serve as a substitute for real material sample.





surface / core colour	0.2 mm (.008")	2-ply
white / black	18448	18448
yellow / black	18456	18456
red / white	18450	18450
green / white	18460	18460
blue / white	18452	18452
silver / black	21811	18464
gold / black	18464	18454
grey / white	18454	18446
black / white	18446	

BENEFITS

- Very flexible
- Interior and exterior
- Excellent resistance to acids and solvents
- Comes with adhesive backing
- Colours for the identification of pipes in the industrial sector

APPLICATIONS

Industrial signage, permanent labels

SPECIFICATIONS

Finish	Matt
Composition	PVC
Engraving depth	0.02 mm (.001")
Full sheet	660 mm x 480 mm (25" x 18")
Half sheet	480 mm x 330 mm (18" x 12,5")
Quarter sheet	-
Other size	-

CAPABILITIES

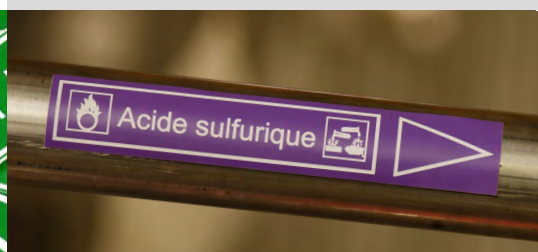
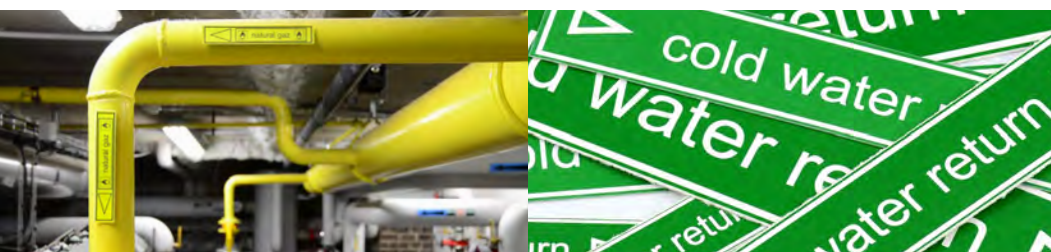
Interior	■
Exterior	■
Shear	■
Saw	-
Silk screen	■
Hot stamp	■
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	■
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Unique on the market, colours for identification of pipes in the industrial sector.

For CO₂ laser engraving, we suggest the use of Flexilase™ p.20.

Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- 3 choices of surface: matt, glossy or textured
- For indoor and outdoor use
- UV stable

APPLICATIONS

Indoor and outdoor signage,
professional plates, directories

SPECIFICATIONS

Finish	Matt
Composition	DR Acrylic
Engraving depth	0,3 mm (.012")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Large choice of colours and finishes, plus many other combinations available on request.

The textured finish makes the product surface stronger and scratch resistant. Ideal for industrial applications.

For custom colours, see Custom materials on demand p.08.



Rotary UV Print Indoor Outdoor Surface

Surface engraving

Matt

		2-ply	
Double-sided		1.6 mm (1/16")	3.2 mm (1/8")
surface / core colour			
white / red		29627	29912
white / blue		29628	29912
white / black		17875 29904	29912
yellow / black		17881	29912
orange / black		29633	29912
orange / white		47230	29912
red / white		17877 29905	29912
apple green / white		17885 29906	29912
azure blue / white		17879 29907	29912
silver grey / black		17887 29908	29912
gold / black		29642 29910	29912
black / white		17873 29911	29913
black / gold		29643	29913



GRAVOTECH
EXPRESSION OF THINGS

The dimensions indicated represent our minimal commitment.
Printed colours for indication only. Cannot serve as a substitute for real material sample.





Surface engraving

Glossy

surface / core colour	2-ply	
	1.6 mm (1/16")	3.2 mm (1/8")
white / red	17907	18063
white / black	17892	18051
yellow / black	17901	18060
red / white	17895	18054
apple green / white	17910	18066
pine green / white	17918	18057
azure blue / white	17898	18057
silver grey / black	17930	18078
gold / black	17927	18075
black / white	17889	18048

Textured

	2-ply	
	1.6 mm (1/16")	3.2 mm (1/8")
white / black	18304	18304
yellow / black	18334	18334
red / white	18307	18307
pine green / white	18343	18343
azure blue / white	18310	18310
silver grey / black	18322	18322
black / white	18301	18301

BENEFITS

- Surface engraving
- 3 choices of surface: matt, glossy or textured
- For indoor and outdoor use
- UV stable

APPLICATIONS

Indoor and outdoor signage, professional plates, directories

SPECIFICATIONS

Finish	Glossy, Textured
Composition	DR Acrylic
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Large choice of colours and finishes, plus many other combinations available on request.

The textured finish makes the product surface stronger and scratch resistant. Ideal for industrial applications.

For custom colours, see Custom materials on demand p.08.

The dimensions indicated represent our minimal commitment.
Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- For indoor and outdoor use
- UV stable
- Subsurface engraving



Subsurface engraving Subsurface engraving

Matt

surface / backing colour		2-ply	
		1.6 mm (1/16")	3.2 mm (1/8")
clear / clear		17941	18082
clear / white		17947	18086
clear / yellow		17956	17956
clear / red		17950	17950
clear / azure blue		17953	17953
clear / silver grey		17961	34406
clear / black		17944	18084

Glossy

surface / backing colour		2-ply	
		1.6 mm (1/16")	4.8 mm (.20")
clear / white		17988	18101
clear / yellow		18003	18003
clear / red		17997	17997
clear / silver grey		29656	29656
clear / gold		17982	18091
clear / black		17991	18104

APPLICATIONS

Indoor and outdoor signage, professional plates, directories

SPECIFICATIONS

Finish	Matt / Glossy
Composition	DR Acrylic
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	-
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

UV stability for outdoor signage.

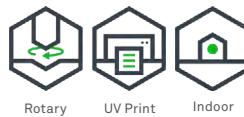
You can use Gravotech recommended paint to colour any Gravoglas™ 2-Plex™ subsurface engraving. See p.51.

For custom colours, see Custom materials on demand p.08.



The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.





	1-ply	
	0.8 mm (1/32")	1.6 mm (1/16")
clear	32729	31236
bright white	37042	29879
white	37033	29880
almond	37070	29882
yellow	24998	29885
red	29885	29885
taupe	37047	29890
brown	31631	31256

	1-ply	
	0.8 mm (1/32")	1.6 mm (1/16")
pine green	37060	31256
navy blue	69712	29898
candlewick	29899	29899
silver grey	69713	29900
slate	37065	29901
black	37037	29902

BENEFITS

- Interior use
- Profile available with or without adhesive backing

APPLICATIONS

DDA & ADA compliant, tactile signage

SPECIFICATIONS

Finish	Matt
Composition	ABS
Engraving depth	-
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	■
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

The Gravotac™ process :



Adhere 0.8 mm (1/32") profile material to 1.6 mm (1/16") or 3.2 mm (1/8") substrate. Engrave using outline font. Peel excess profile material off substrate.

The dimensions indicated represent our minimal commitment. Printed colours for indication only. Cannot serve as a substitute for real material sample.



TECHTIPS

Matt finish and wide range of colours ideal for your Braille and tactile signs and pictograms. Americans with Disabilities Act (ADA) compliant. For better visibility, choose contrasted colours.





BENEFITS

- Laser engraving and cutting
- 0.025 mm (.001") cap layer for detailed engraving
- 0.5 mm (.020") thickness suitable for bevelling
- UV resistant
- Metallic, glossy, brushed, matt finish
- Excellent for interior and exterior signage

APPLICATIONS

Badges, trophy plates, award plates, identification plates, interior and exterior signage

SPECIFICATIONS

Finish	Metallic, Glossy, Brushed, Matt
Composition	DR Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	1 220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

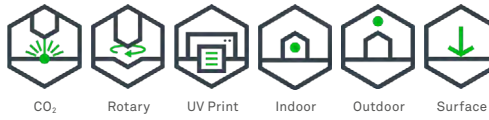
CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	-
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	-
Flexible	■
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

We offer fabrication services to prepare your badges, labels, plates, etc. All you have to do is engrave them. Contact us for more information.

For custom colours, see Custom materials on demand p.08.



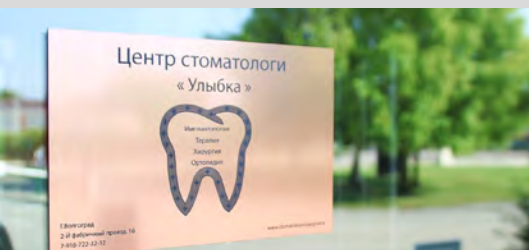
surface /
core colour

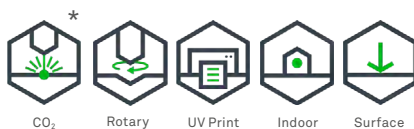
	2-ply		
	0.5 mm (.020")	0.8 mm (.030")	1.3 mm (.050")
radiant silver / black	51026	49986	19003
glossy silver / black	29548	51027	49980
brushed silver / black	18961		19003
satin silver / black			78539
brushed aluminium / black	51025	49981	
matt aluminium / black	51024	51002	78538
brushed bronze / black	29544	51004	
copper / black	29546		29556
radiant gold / black	51028	49983	
brushed gold / black	18960	49985	19002
satin gold / black			78540
european gold / black	29542	49982	29552
glossy gold / black	29543	49984	

* Other thickness available on demand



The dimensions indicated represent our minimal commitment.
Printed colours for indication only. Cannot serve as a substitute for real material sample.





Metallex™

surface / core colour	2-ply		
	0.5 mm (.020")	0.8 mm (1/32")	1.5 mm (1/16")
brushed silver / black	21825	21889	21957
matt aluminium / black	21867	21941	21999
brushed aluminium / black	21830	21898	21965
glossy silver / black	21823	21887	21955
new gold / black	21846	21914	21978
radiant gold / black	21824	21888	21956
europaean gold / black	21896	21903	21969
glossy gold / black	21822	21886	
brushed bronze / black	21904		

Metallex™
Hard Coat

surface / core colour	2-ply	
	1.5 mm (1/16")	2-ply
radiant silver / black	21892	
brushed aluminium / black	21883	
glossy silver / black	21882	
radiant gold / black	21891	
europaean gold / black	21884	
glossy gold / black	21881	

BENEFITS

- 2-ply silver, gold, aluminium, bronze
- Microthin surface layer
- Metallex™ is excellent for indoor applications
- Metallex™ Hard Coat for a smooth, supergloss finish

APPLICATIONS

Badges, identification plates, plates

SPECIFICATIONS

Finish	Glossy, Matt, Brushed
Composition	ABS
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (48" x 24")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (24" x 12")
Other size	-

CAPABILITIES

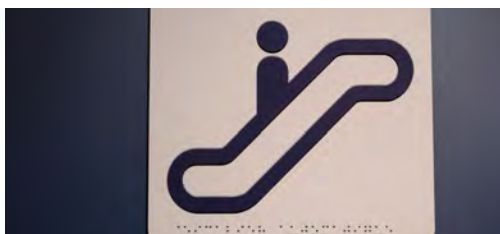
Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	■
Heat bending	■
Scratch resistant	-
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	80°C (176°F)

TECH TIPS

Metallex™ Hard Coat : topcoat processing giving a smooth, super gloss finish.

For custom colours, see Custom materials on demand p. 08.

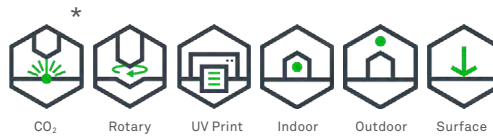
The dimensions indicated represent our minimal commitment.
Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- For rotary and laser engraving
- High detail laser engraving



APPLICATIONS

Control panels, legend plates, award plates, interior and exterior signage

SPECIFICATIONS

Finish	Matt
Composition	Aluminium
Engraving depth	0.1 mm (.004")
Full sheet	1000 mm x 500 mm (39" x 19")
Half sheet	-
Quarter sheet	-
Other size	2000 mm x 1000 mm (78" x 39")

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	■
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	200°C (392°F)

TECH TIPS

Strong anodisation for a durable protection of the material.

Available sizes are 1000 mm x 500 mm (39" x 19") or 2000 mm x 1000 mm (78" x 39") on request. You can use Gravotech recommended paint to colour any GravoXal™ engraving. See p.51.

Aloxide may be used to colour glossy plates (small characters) after rotary engraving.

Matt

		0.5 mm (.02")	
		1.0 mm (.04")	
		1.5 mm (1/16")	
		2.0 mm (1/12")	
		3.0 mm (1/8")	
		4.0 mm (1/6")	
champagne		18581	
red		18577	18591
green		18583	18597
blue		18579	18593
silver		18385	22055
		18386	22057
		18388	22059
gold		18571	18589
		18575	18603
bronze		18585	18599
black		18569	18614
		18573	18601
		18587	18614

Silver colours are anodised on both sides during the continuous anodisation process.

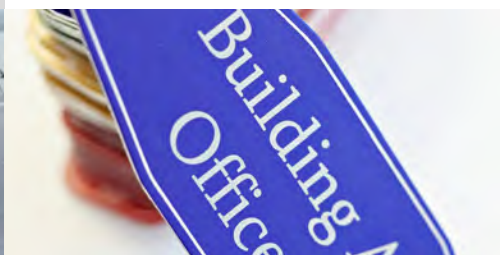
Protective film on one side.

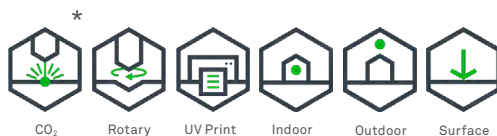
Due to the process, there can be stains in the corners of aluminium sheets.

* Laser engraving on coloured materials. The engraving contrast may vary according to the colour.



Printed colours for indication only. Cannot serve as a substitute for real material sample.





Glossy

		1.0 mm (.40")	1.5 mm (1/16")	2.0 mm (1/12")
champagne		18640		
red		18636	18658	
green		18642	18664	
blue		18638	18660	
silver		18618	18646	18668
steel look		30381	30382	30383
gold		18630	18654	18674
black		18624	18650	18671

Silver colours are anodised on both sides during the continuous anodisation process.
Protective film on one side.
Due to the process, there can be stains in the corners of aluminium sheets.
* Laser engraving on coloured materials. The engraving contrast may vary according to the colour.

BENEFITS

- For rotary and laser engraving
- High detail laser engraving

APPLICATIONS

Control panels, legend plates, award plates, interior and exterior signage

SPECIFICATIONS

Finish	Glossy
Composition	Aluminium
Engraving depth	0.1 mm (.004")
Full sheet	1000 mm x 500 mm (39" x 19")
Half sheet	-
Quarter sheet	-
Other size	2000 mm x 1000 mm (78" x 39")

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	■
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	200°C (392°F)

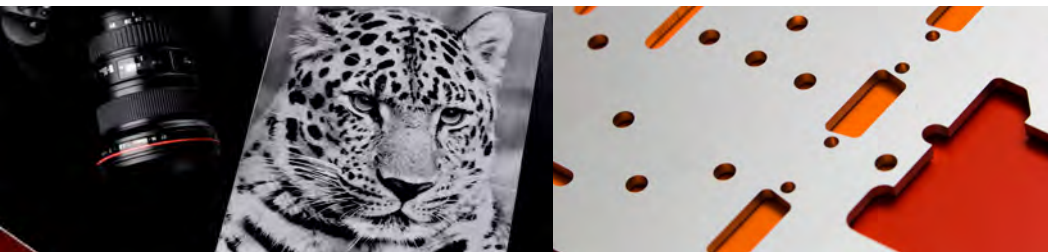
TECH TIPS

Strong anodisation for a durable protection of the material.

Available sizes are 1000 mm x 500 mm (39" x 19") or 2000 mm x 1000 mm (78" x 39") on request. You can use Gravotech recommended paint to colour any Gravoxal™ engraving. See p.51.

Aloxide may be used to colour glossy plates (small characters) after rotary engraving.

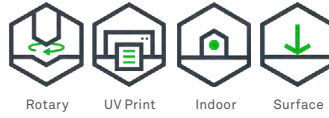
Anodising process may produce slightly different colours from one batch to another.
Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- One product with two finishes
- Aluminium caps with a black phenolic core
- No paint filling required



APPLICATIONS

Professional interior signage, award plates, identification plates, signage

SPECIFICATIONS

Finish	Brushed, Matt
Composition	Aluminium / Phenolic
Engraving depth	0.3 mm (.012")
Full sheet	1 220 mm x 605 mm (48" x 23")
Half sheet	610 mm x 605 mm (24" x 23")
Quarter sheet	605 mm x 305 mm (23" x 12")
Other size	-

CAPABILITIES

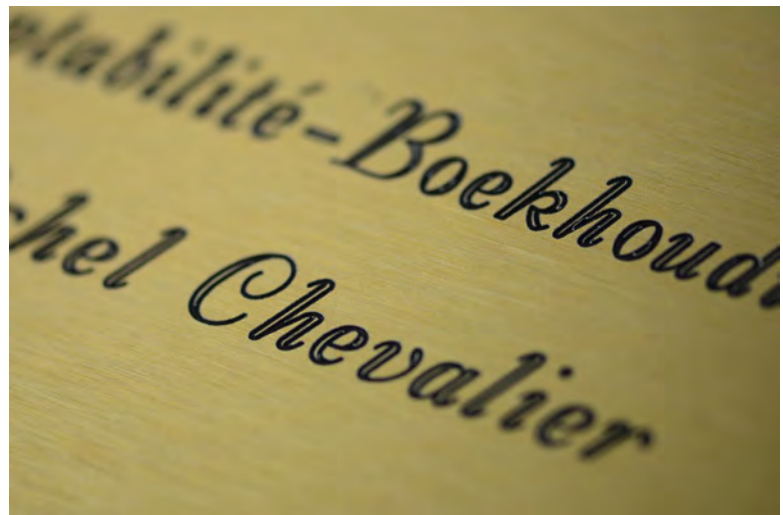
Interior	■
Exterior	-
Shear	-
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	180°C (356°F)

TECH TIPS

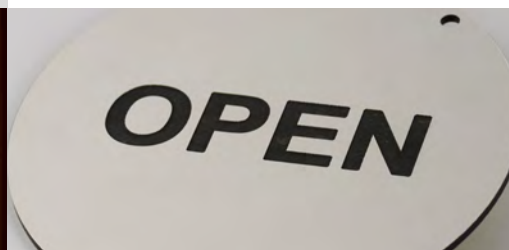
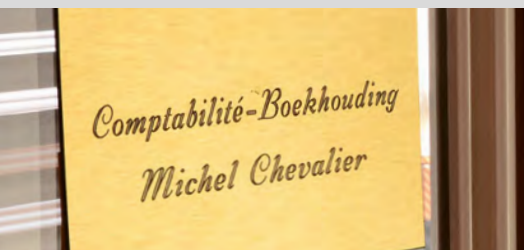
This material offers the advantages of aluminium without the inconvenients. Its aluminium surface on both sides and phenolic core save time and money by avoiding paint filling.

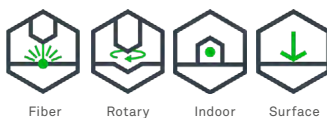
Double-sided		
surface / core colour		1.5 mm (1/16") 3.0 mm (1/8")
gold / black / silver	18472*	18482*
silver / black / silver	18471**	

* One side brushed gold, other side matt silver
** Both sides matt silver



Printed colours for indication only. Cannot serve as a substitute for real material sample.





surface / core colour	2-ply	0.6 mm (.025")
glossy red / silver	34528	
glossy blue / silver	34497	
satin gold / silver	34595	
glossy gold / silver	34596	
satin silver / silver	34625	
glossy silver / silver	34626	
glossy black / silver	34455	

BENEFITS

- Lightweight
- Easy to shear
- Sublimatable

APPLICATIONS

Trophies, award plates, name plates, signage

SPECIFICATIONS

Finish	Satin or glossy
Composition	Aluminium
Engraving depth	0.2 mm (.008")
Full sheet	1220 mm x 305 mm (48" x 12")
Half sheet	-
Quarter sheet	305 mm x 305 mm (12" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	100°C (212°F)

TECH TIPS

Thin aluminium for small plates and labels, to be engraved with your laser machine. Good contrast result after engraving.

Printed colours for indication only. Cannot serve as a substitute for real material sample.





BENEFITS

- This special line of gold and silver anodised aluminium returns black characters when lasered with any standard CO₂ laser engraver.
- No oxidation or paint fill needed.
- Only 6-10 watts of power required.
- Satin finish

APPLICATIONS

ID plates, bar codes, labels, control panels

SPECIFICATIONS

Finish	Satin
Composition	Aluminium
Engraving depth	0.025 mm (.001")
Full sheet	610 x 508 mm (24" x 20")
Half sheet	-
Quarter sheet	-
Other size	305 x 254 mm (12" x 10") for 27414 508 x 305 mm (20" x 12") for 45878 610 x 305 mm (24" x 12") for 45879 & 45878

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	-
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	■
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	230°C (450°F)

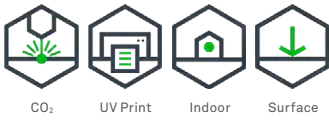
TECH TIPS

Save time with this aluminium: no need to paint fill to get a black mark.

Power sensitive material. If image is grey, reduce power. If image is tan, increase power.

Engraving quality is improved using 50% speed.

Laser power: 6 - 10 watts

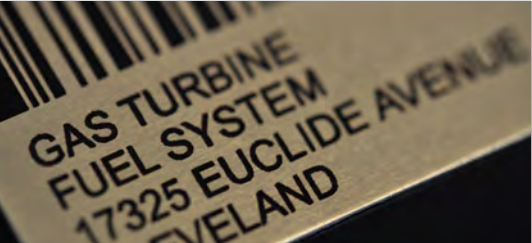


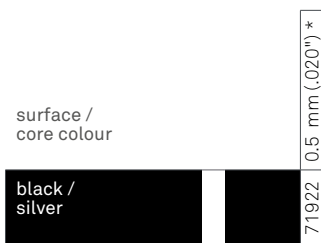
		0.127 mm (.005") *	0.5 mm (.020")
surface / core colour		27414	27417
satin silver / black		27414	27417
satin gold / black		27415	27416
satin brass / black		45879	45878

* Delivered with adhesive backing.



Printed colours for indication only. Cannot serve as a substitute for real material sample.





* Delivered with adhesive backing.



BENEFITS

- CO₂ laser markable aluminium for durable marking for harsh operating environments.
- Resistant to sunlight (UV-radiation), abrasion, high-temperatures, salt-spray and chemical exposure.
- Meets several government, industrial and military specifications

APPLICATIONS

Durable signage, placards, barcodes, asset tags

SPECIFICATIONS

Finish	Matt
Composition	Aluminium
Engraving depth	0.025 mm (.001")
Full sheet	610 mm x 508 mm (24" x 20")
Half sheet	-
Quarter sheet	305 mm x 254 mm (12" x 10")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	■
Silk screen	-
Hot stamp	-
Heat bending	-
Scratch resistant	■
Flexible	-
Break resistant	-
UV resistant	■
Min. temp.	-40°C (-40°F)
Max. temp.	370°C (700°F)

TECH TIPS

Aluminium for CO₂ laser marking needs in high production environments.

Conforms to: MIL-STD 130N, A-A-50271, and MIL-STD-15024F, Type L, MIL-STD-810G for withstanding 96 hours of exposure to corrosive chemicals. ASTM B117 30 days exposure to salt fog.

Printed colours for indication only. Cannot serve as a substitute for real material sample.



BENEFITS

- High quality engraver's brass
- Paint fill with Gravotech recommended paint

APPLICATIONS

High quality signage, company name plates

SPECIFICATIONS

Finish	Solid or shiny polished
Composition	Brass
Engraving depth	0,3 mm (.012")
Full sheet	1340 mm x 670 mm (52" x 26")
Half sheet	670 mm x 670 mm (26" x 26")
Quarter sheet	670 mm x 335 mm (26" x 13")
Other size	-

CAPABILITIES

Interior	■
Exterior	■
Shear	■
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	-
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	370°C (700°F)

TECH TIPS

Brass oxidation is a natural phenomenon. Clean your Gravobrasst[™] Exterior regularly to preserve its brightness or add a protective varnish after engraving. Solid brass is unpolished and may feature surface defects.

You can use Gravotech recommended paint to colour any Gravobrasst[™] Exterior engraving. See p.51. Use of chemicals on this material is not recommended.



Rotary UV Print Indoor Outdoor Surface

Shiny polished

shiny polished brass	22032	1.0 mm (.04")
	22034	1.5 mm (1/16")
	22036	2.0 mm (1/12")
	22038	3.0 mm (1/8")

Solid

solid brass	22031	1.0 mm (.04")
	22033	1.5 mm (1/16")
	22035	2.0 mm (1/12")
	22037	3.0 mm (1/8")

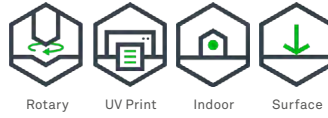
Solid brass is unpolished and may feature surface defects.



GRAVOTECH
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Printed colours for indication only. Cannot serve as a substitute for real material sample.





Glossy

surface / core colour	gold / gold	18407	0.5 mm (.020")
		18435	1.2 mm (.050")

Satin

gold / gold	18423	0.6 mm (.025")
	18438	1.2 mm (.050")
silver / gold	18441	1.6 mm (1/16")
	18429	

BENEFITS

- Diamond, rotary and burnish engraving
- Pre-polished and lacquered

APPLICATIONS

Interior signage, award plates, ornamental plates

SPECIFICATIONS

Finish	Glossy or Satin
Composition	Brass
Engraving depth	0.1 mm (.004") / 0.3 mm (.012")
Full sheet	1220 mm x 305 mm (48" x 12")
Half sheet	-
Quarter sheet	305 mm x 305 mm (12" x 12")
Other size	-

CAPABILITIES

Interior	■
Exterior	-
Shear	■
Saw	■
Silk screen	■
Hot stamp	-
Heat bending	-
Scratch resistant	-
Flexible	-
Break resistant	■
UV resistant	-
Min. temp.	-40°C (-40°F)
Max. temp.	200°C (392°F)

TECH TIPS

High quality brass varnish finish, ideal for interior plates. You can also add a protective varnish after engraving for outdoor use.

Apply clear lacquer after engraving to avoid tarnishing.

Use Gravoxide or paint fill for contrasting letter colour.

Printed colours for indication only. Cannot serve as a substitute for real material sample.



Highly polished anodised aluminium in gold and silver

Counter and desk bases

Ideal for use in companies, retail shops and administrations for small size instruction signs intended to the public.

Description	Inserts	Insert length	Silver
Plate Stand	1.6 mm	200 mm	19480
Plate Stand	1.6 mm	254 mm	34880



Desk holders

To identify a person, function or department.

Description	Inserts	Insert size	Gold	Silver
Slimline Plate Holder	1.6 mm	178 x 25 mm	30073	30072
Standard Plate Holder	1.6 mm	203 x 51 mm	30077	30076
Standard Plate Holder	1.6 mm	254 x 51 mm	34820	19479



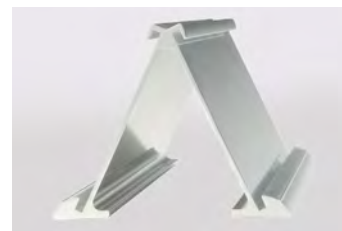
Double-sided holders

To identify a person, function or department on one side and brief instructions on the other. Ideal for opening times or Open/Closed signs.

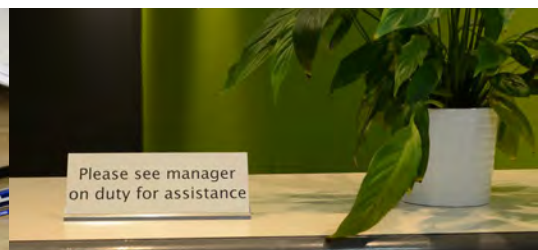
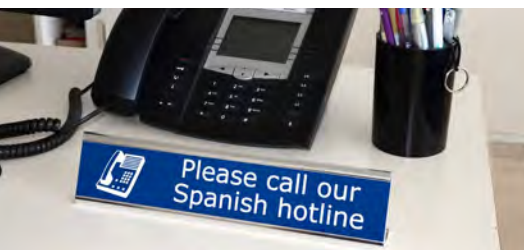
Description	Inserts	Insert size	Silver
Double-sided Plate Holder	1.6 mm	152 x 32 mm	30074

Description	Directory Size	Inserts	Header size	Insert size
Deluxe Directories, Header Plus Three Inserts	178 x 89 mm	1.6 mm	178 x 32 mm	178 x 19 mm

Note: directory sizes are inside dimensions, delivered without header / inserts.



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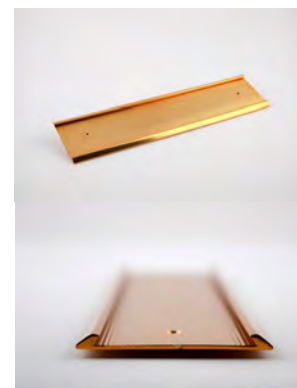


Highly polished anodised aluminium in gold and silver

Wall and corridor brackets

Use double-sided tape or drill holes to mount.

Description	Inserts	Insert size	Gold	Silver
Rib Back Plate Holder	1.6 mm	203 x 51 mm	19476	19485
Rib Back Plate Holder	1.6 mm	254 x 51 mm	30069	30068



To identify a department or an office with a name and function.

Description	Inserts	Insert size	Gold	Silver
Wall Plate Holder Plain back	1.6 mm	254 x 51 mm	65930	65929

Use different colour inserts to suit application and environment.
Make your choice from our Gravoply™ 1 or Gravoply™ 2 ranges.

Description	Inserts	Insert size	Silver
Utility Wall Plate Holder	1.6 mm	102 x 25 mm	19482
Utility Wall Plate Holder	1.6 mm	152 x 25 mm	30066
Utility Wall Plate Holder	1.6 mm	203 x 25 mm	19483
Utility Wall Plate Holder	1.6 mm	203 x 38 mm	34888



To mount signs perpendicular to the wall.

Description	Inserts	Insert height	Silver
Wall Bracket*	3.2 mm	51 mm min.	19486
Wall Bracket*	3.2 mm	102 mm min.	19487

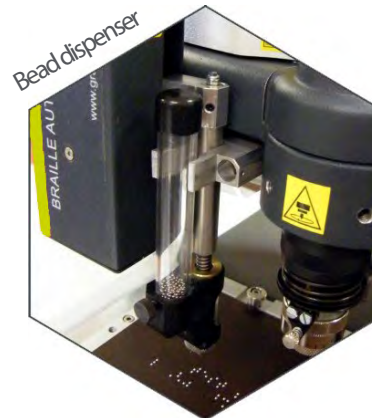
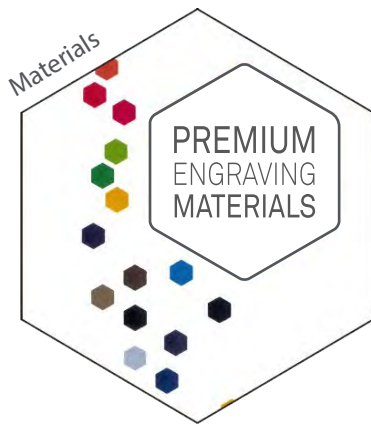
*Cap nuts and screws included.




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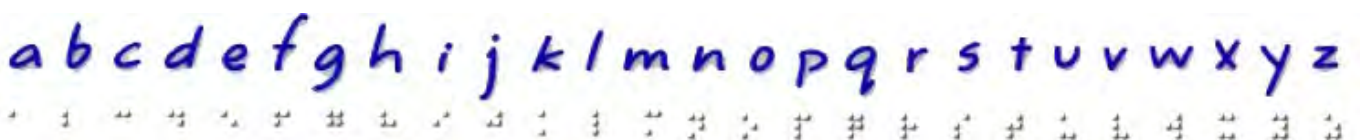
The Braille Total Solution



Braille is a system of tactile writing and reading for the use of blind and partially sighted people.

There is no SINGLE UNIVERSAL Braille system.

Different standards are used across the world, where sizes, character spacing and line spacing are specific to each individual language.





Software

The GravoStyle™ Braille option allows the transcription of text into Braille:

- 127 languages available from Discovery level upwards
- Totally automated procedure involving drilling followed by the insertion of beads (optional):
 - Customised cleaning and bead insertion speed
 - Specific parameters for plastics (ABS and acrylic), and aluminium. Gravotac™ and laminates

Machines

Compatible engraving machines:

- IS400, IS6000, IS7000 & IS8000
- Required accessory: shaving extractor



IS400
Engraving zone
305 x 210 mm



IS8000
Engraving zone
610 x 1220 mm

IS7000
Engraving zone
610 x 815 mm

IS6000
Engraving zone
610 x 410 mm

Bead dispenser

Automatic Braille kit
(drilling and bead insertion without manual intervention)

70711	Automatic Braille for IS400
70713	Automatic Braille for IS 6/7/8000 IQ+
70714	Automatic Braille for IS 6/7/8000 XP



Semi-automatic Braille kit

49959	Semi-automatic Braille kit for IS400 /IS6000-7000 -8000
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- IS400 / IS6000-7000-8000: adapter integrated into the semi-automatic Braille kit





Drilling tools

4 drilling tool references to choose from with the help of a tool selection assistance guide, according to the material and the beads used.



BRaille TOOL SELECTION GUIDE

ref: 48686 - Tool width 1.500 mm
ref: 48766 - Tool width 1.550 mm
ref: 48767 - Tool width 1.565 mm
ref: 48768 - Tool width 1.580 mm

	Adhesive-free materials		Materials with adhesive
	Steel beads	Acrylic beads	All beads
Metals	48767	48767	48768
Acrylic	48767	48767	48768
Gravotac™	48766	48766	48768
Phénolic	48767	48767	48768
ABS +2 Ply™	48686	48686	48767



Braille beads

Reference	Description
49933	Stainless steel beads (x10000)*
49935	Clear acrylic beads (x10000)
49937	White acrylic beads (x10000)
49936	Black acrylic beads (x10000)

* Stainless steel beads recommended for semi-automatic and automatic Braille kits.



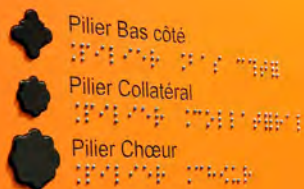
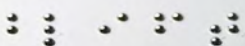
Micropel*

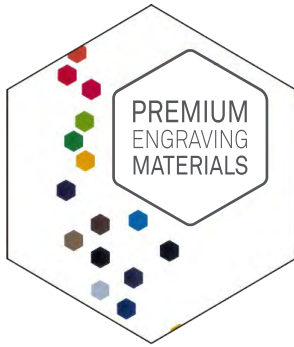
Reference	Description
76254	Antistatic solution for acrylic Braille beads

* Acrylic Braille beads only

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LIFT





Materials to be engraved

Creativity and know-how, together with our extensive range of materials, colours, thicknesses and qualities, will allow you to meet the requirements of any type of specification.

The various thicknesses available in the range will guarantee your compliance with local and regional legislation.

The subtle use of the various materials will enable you to produce perfect:

- Lettering
- Icons and symbols
- Tactile drawings and reliefs as well as all other materials related to accessibility requirements

For the production of your items, we recommend:

- Gravotac™: a single layered material, available in 3 thicknesses and a variety of colours for interior or exterior use.

Gravotac™: over 40 references for all your Braille and tactile architectural signage programmes.

Icon construction procedure:



Phase 1: outlining



Phase 2: peeling away



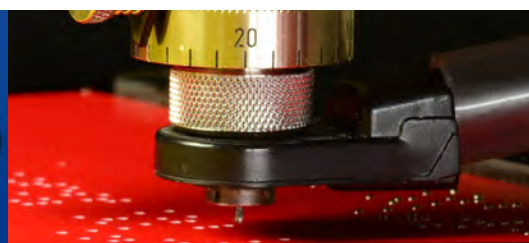
Phase 3: result



Training and support

Gravotech after-sale service is on hand to reply to your technical questions on the use of our solutions.

On the basis of our experience and the requirements of your business we offer you a Special Braille Training Course delivered in some of our subsidiaries, where you will acquire all the knowledge essential to your signage specification, manufacture and installation needs.



Laser metal marking



TherMark®



Water-based for fast clean up. A thin coat of material can be sprayed onto the metal, then left to dry for less than 2 minutes and engraved with your laser. The excess water-based material can be easily washed off to reveal the final **black mark**.

Designation	Capacity or size	Ref.
Thermark® LMM 14 Aerosol	170 g (6 oz)	67120 (*)
Thermark® LMM 14 Liquid ink	50 g (1.76 oz)	67119
Thermark® LMM 6018LF1 Tape	2.54 cm x 15 m (1" x 50')	71866
Thermark® LMM 6018LF2 Tape	5 cm x 15 m – (2" x 50')	67121

CerMark®



Solvent-based for easy handling before marking. This range contains a hardener that allows the products to be easily handled prior to marking with your laser (ideal for high production quota). The final result is the same permanent **black mark**.

Designation	Capacity or size	Ref.
Cermark® LMM 6000 Aerosol	340 g (12 oz)	68880 (*)
Cermark® LMM 6000 Paste	50 g (1.76 oz)	68878 (*)
	250 g (8.82 oz)	68879 (*)
	500 g (17.64 oz)	69974 (*)

Caution before use : these colouring products require special security measures. Use them in well ventilated rooms only and wear suitable protective clothing and gloves.

* These items are shipped via ground transportation. For other means of transport, please consult us.

CerMark® Process: All products work with most uncoated metals. Excellent for metal marking with a CO₂ laser.

[Read instructions carefully before use.](#)





Paint & diluters

Gravolaque



Polyurethane, ultra shine paint, available in 9 colours, Gravolaque is designed to colour Gravoglas™ 1, Gravoglas™ 2-PLEX™ subsurface, anodised aluminium and brass.

Bottle delivered with 1 spout for :

- Direct & precise application
- Use of appropriate quantity

Bottle 250 ml (8.45oz)

white	72195 (*)
red	72196 (*)
green	72199 (*)
blue	72197 (*)
gold	72198 (*)
black	72194 (*)

For more colours, please contact us.

Spare spout for Gravolaque	72204
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Diluters

Application diluter 1LTR (33.8oz)	19469 (*)
Cleaning diluter for tools 1LTR (33.8oz)	19468 (*)

Nitrolaque



Versatile and fast drying, for colouring rotary engraving on metal, steel and plastic (except Gravoglas™ 1).

Bottle 250 ml (8.45oz)

white	30373 (*)
black	30374 (*)

For more colours, please contact us.

Application kit



Application kit including:	72886
- Spatula 75 x 60 mm (2.95" x 2.36")	72885
- Rubafix roll	16248
- Tissues	24296

(items can be ordered separately)

* These items are shipped via ground transportation. For other means of transport, please consult us.

Gravolaque Process:



Oxydising agents

**Gravoxide**

Designed to blacken fine engraving on Gravometall.

Rotary engraving only. Packaging: 90 ml (3 oz) bottle with application pad.

Ref. 21129 (*)

**Aloxide**

Designed to blacken fine engraving on glossy anodised aluminium.

Rotary engraving only.

Packaging: 90 ml (3 oz) bottle with application pad.

Ref. 21130 (*)

Cold wax sticks



Suitable for colouring small characters (e.g. on pet medals).

Range of 8 colours available.

Packaging: box of 5 sticks of the same colour.

white	20215	silver	20214
red	20220	gold	20219
blue	20216	black	20218

Cleaning

**Gravoclean**

Multi-use green cleaner. Ideal to remove marks on plates before or after engraving. Non-aggressive to acrylics and ABS.

Available in spray (ready-to-use solution) or non-fluffy wipes.

Spray 750 ml (25.36oz): Ref. 73180

Box of 50 wipes: Ref. 73181

**Laser optics cleaner**

This kit will enable you to maintain and remove fumes and back-splattered debris to minimize the absorption and excessive heat load, thus prolonging the optics lifetime. Kit containing 125ML (4.22oz) solution, application pads and tissues: Ref. 26327 (*)

**Universal cleaner**

Ideal for cleaning metal and plastic surfaces (except ABS).

Apply with a tissue.

Volume: 1 LTR (33.8oz)

Ref. 23913 (*)

**Industrial degreasing spray**

Recommended for removing glue marks on metals only.

Manual spraying.

Volume: 500 ml (16.9oz)

Ref. 23912 (*)

* These items are shipped via ground transportation. For other means of transport, please consult us.



Engraving gel



Water-based solution, Engraving gel is a non-irritating and odourless lubricant for glass, aluminium and soft steel engraving. Perfect for in-store use.

Bottle : 200ml (6.76oz)

Ref. 83957

Lubrication

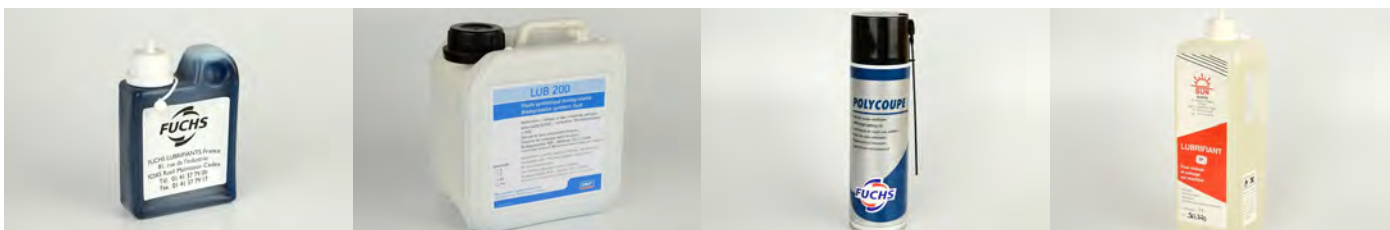


Soluble oil (6% / water litre)
For glass engraving only.
Automatic dispensing with M40 Gift lubricating device.
Volume: 1 LTR (33.8oz)
Ref. 12913

Engravolube solution
For non-ferrous metal engraving.
Manual dispensing at cutter tip.
Volume: 240 ml (8oz)
Ref. 26887

Vargol
Lubricant for VA. circular saws.
Synthetic oil for use with metals.
Application with Vargol dispenser.
Volume: 500 ml (16.9oz)
Ref. 21780

Lubricating bottle
Vargol dispenser for VA. saws.
Ref. 21781



Tarfil™ AT
Designed for metal engraving.
Manual dispensing at cutter tip.
Bottle: 215 g (7.58oz)
Ref. 19526

Vectolub™ lubricant oil
For non ferrous metal engraving.
Automatic dispensing with IS Spray Mist lubricating device.
Volume: 2 LTR (67.6oz)
Ref. 23494

Polycoupe™ lubricant spray
For non ferrous metal engraving.
Manual dispensing at cutter tip.
Spray: 250 ml (8.45oz)
Ref. 19527 (*)

Surfex® lubricant
For Aluminium engraving and cutting only.
Manual dispensing
Bottle: 1 LTR (33.8oz)
Ref. 30368

* These items are shipped via ground transportation. For other means of transport, please consult us.



Gravofix



Tin of glue especially designed for fixing plastic-backed pins to your badges.
Volume: 250 ml (8.45 oz)
Ref. 19360 (*)

Caution: It is of utmost importance to apply tape or glues on clean surfaces to get perfect adhesion.

Fixing tapes



For long-term mounting of engraved plates.

Type	Use	Sizes	Ref.
Double-sided	smooth surfaces, can be used to fix Braille beads	14 mm x 50 m (0.55" x 55 yds)	30369
Double-sided	smooth surfaces	19 mm x 50 m (0.75" x 55 yds)	30370
Double-sided	ideal for electrical switchboards	50 mm x 50 m (1.97" x 55 yds)	30372
Transfer	ideal for curved surfaces, immediate adhesion	20 mm x 30 m (0.79" x 33 yds)	21121

Adhesive backing service

We can apply adhesive backing to badges, nameplates, strips and material sheets. Adhesive backing is applied before cutting material. Our adhesives are compatible for indoor and outdoor use.

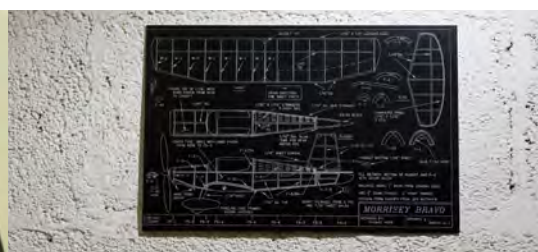
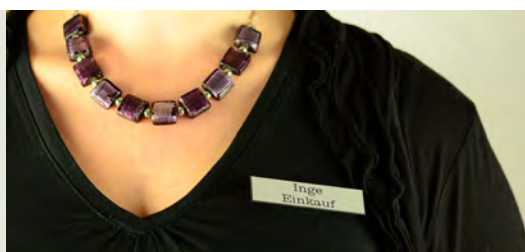


Adhesive type	Main applications	Substrate finish	Long-term T°C > 24h
467MP	Fixing of industrial labels, front panels, signs and personalisation plates on metals and plastics	Smooth	-40°C +150°C (-40°F +302°F)
468MP	Fixing of industrial labels, front panels, signs and personalisation plates on metals and plastics	Smooth, rough, textured	-40°C +150°C (-40°F +302°F)

Caution before use:

Clean any grease marks from the substrate before sticking the plate. As glue reaches full adhesion capacity after 24h, it is advised not to move the plate before then.

* These items are shipped via ground transportation. For other means of transport, please consult us.



Speciality tapes



Protective adhesive tape
To protect jewellery and brass door plates during engraving.
Size: 50 mm x 100 m
(1.97" x 109 yds)
Ref. 19528



Adhesive mounting tape
For temporary mounting of plates
Size: 25 mm x 25 m
(0.98" x 27 yds)
Ref. 20151 (*)

Gravogrip™

Flexible material placed on your engraving / marking table** to maintain the material to be engraved or cut into place.

** For IM4, M20, IS200 & M40 use a support table, see p.13.

Choose the size that will best suit your machine's working area.



78056	Full sheet 1220 x 610 mm (48" x 24")
Halfsheet	610 x 610 mm (24" x 24")
Quartersheet	610 x 305 mm (24" x 12")

Cut-to-size on request

Gravogrip™ process:

* These items are shipped via ground transportation. For other means of transport, please consult us.



Ball chains



Stainless steel:

Beads of 2,42 mm (.095") diameter.

For attaching tags and labels to a wide range of objects (e.g. suitcases, pipes, key rings etc.)

Coloured stainless steel bead of 2,42 mm (.095"), 114 mm (4.5").

	Pack of 10	Pack of 50
silver	69880	69881
gold	69883	69884
black	69452	69645



Nickel-plated brass:

Beads of 2.25 mm (.088") diameter.

100 x 150 mm (5.91") with fastener	19534
10 x 1.5 m (59") without fastener	19535
box of 100 fasteners	19536

Ties

Ideal to fix all your medals and tags.

"S"-Hook (pack of 25).



Golden brass
Length 21 mm (0.82")
Ref. 30152



Zinc-plated brass
Length 26 mm (1.02")
Ref. 30151

Ring (pack of 100)



Nickel-plated steel
ø 13 mm (0.51")
Ref. 19532



Nickel-plated steel
ø 20 mm (0.78")
Ref. 19530

Stainless steel supports

A simple solution for labelling pipes which are too hot using Gravofoil (i.e. over 70° C / 158°F)

Fix your label onto a stainless steel support, ensuring that the label is not in direct contact with the pipe. Use a collar to attach the support to the pipe. Slip through the cross-shaped imprints before tying to the pipe.

Rounded corners. Hole diameter 3.2 mm (0.125")

Pack of 10



Stainless steel supports	Part No.
80 x 40 mm (3.15 x 1.6")	19547
120 x 60 mm (4.72 x 2.36")	19548



Stainless steel collars	Part No.
25 m (27 yds) & 50 heads	19551



Wooden support



Wooden support to enhance engraved plates
 Dimensions: 340 x 240 x 20 mm (13.4 x 9.45 x 0.79")
 Composition: tropical hardwood
 Indoor & outdoor use
 Ref. 19470



Screw and screw cover

For a perfect finish to your mounted plates.

	Gold	Silver
100 screws 4 x 20 mm (0.16 x 0.79"), 12 mm (0.47") cover head	25731	25732
100 screws 4 x 30 mm (0.16 x 1.18"), 15 mm (0.59") cover head	25733	25734



Spacer fasteners

The ideal fasteners to add a finishing touch to professional plates, hotel signage etc.
 Available in several models. Delivered in sachets of 4 fasteners.



Part No.	Description	Finish	Size	Distance from the wall	Material thickness	Inside Diameter	Pack of
19471	4 rounded spacers	golden	Ø 15 mm (0.59")	26 mm (1.02")	0 - 14 mm (0 - 0.55")	9 mm (.35")	4
19472	4 rounded spacers	silver	Ø 15 mm (0.59")	26 mm (1.02")	0 - 14 mm (0 - 0.55")	9 mm (.35")	4

Plant label holder

Ideal for 1.6 mm (1/16") thick material.

Aluminium

Tilted model, shaft length 300 mm (11.81")
 for labels 120 x 53 mm (4.72 x 2.08")
 Ref. 30149



Zinc-plated steel

Straight model, shaft length 600 mm (23.62")
 for labels 120 x 48 mm (4.72 x 1.89")
 Ref. 30150



Identification labels for electrical applications

Choose your colours among the corresponding material range.

CABLES TAGS WITH NOTCHES

Gravoply™ 1
1.5 mm (1/16") thick
Size 150 x 11 mm (5.90 x .43")
with 4 die-cut sides for mounting with hose clamps



TIE ON CABLE TAGS CUT CORNERS

Gravoply™ 2
0.8 mm (1/32") thick
Size 85 x 12 mm (3.34 x .47")
With 4 oblong holes 8 x 2 mm (.31 x .078")



TIE ON CABLE TAGS TYPE 425

Gravoxal™ glossy black
1.5 mm (1/16") thick
Size 60 x 18 mm (2.36 x .70")
With rounded corners R = 3 mm (.11")
With 4 oblong holes 10 x 2.2 mm (.39 x .08")



TIE ON CABLE TAGS TYPE 430

Gravoply™ 1 or Gravoply™ 2
0.8 mm (1/32") thick
Size 120 x 20 mm (4.72 x .78")
With 4 oblong holes 6.5 x 3 mm (.25 x .11")
Available with 2 pre-engraved lines on request
Also available in 1.6 mm (1/16") thick material on request



CIRCULAR BLANKS TYPE 420

Gravoply™ 1 or Gravoply™ 2
20 or 25 mm (.78 or .98") Ø
With 3 holes of 2.5 mm (0.1") Ø

Gravoxal™
1 mm (.039") thick
25 mm (0.98") Ø
With 3 holes of 2.5 mm (.1") Ø



LEGEND PLATES TYPE 440

For identifying electrical switches
 Size 30 x 40 mm (1.18 x 1.57")
 With a Ø 22.5 or 24.5 mm (0.88 or 0.96") hole off-centre
 Packaged by 50 units of identical reference



		Gravply™ 1 - 1,6 mm (1/16")		Gravply™ 2 - 0,8 mm (1/32")		Gravply™ 2 double-sided - 0,8 mm (1/32")	
		Diameter 22,5 mm (0.88")	Diameter 24,5 mm (0.96")	Diameter 22,5 mm (0.88")	Diameter 24,5 mm (0.96")	Diameter 22,5 mm (0.88")	Diameter 24,5 mm (0.96")
Black/White		19243	19244	22071	22072	19240	19241
White/Black		19244	19245	22072	22073	19241	19242
Red/White		19245		22073		22066	
Black/White /Red						22075	22068
White/Black /Yellow							22069

Other dimensions, colours or materials on request

STRIPS

Minimum of order : 25 pieces of identical reference

		Gravply™ 2 - 1.5 mm (1/16")							
		610x10 mm (24"x0.39")		610x15 mm (24"x0.59")		610x20 mm (24"x0.79")		610x30 mm (24"x1.18")	
		w/o adh.	with adh.	w/o adh.	with adh.	w/o adh.	with adh.	w/o adh.	with adh.
Black/White			19283		19284		19285		19286
White/Black			19287	19272	19288	19273	19289		19290
Red/White			19291		19292		19293		19294
Blue/White			19295		19296		19297		19298

Other dimensions, colours or materials on request

LABELS FOR ELECTRICAL BOARDS

Packaged by 50 units of identical reference



		Gravply™ 2 - 1.5 mm (1/16") with adh.			
		50x15 mm (1.97"x0.59")	60x15 mm (2.36"x0.59")	60x20 mm (2.36"x0.79")	80x40 mm (3.15"x1.57")
Black/White		19251	19255	19259	19263
White/Black		19252	19256	19260	19264

MECHANICAL FASTENINGS

Stainless steel supports, plastic collars, steel collars, ball chains, etc. : see page 60



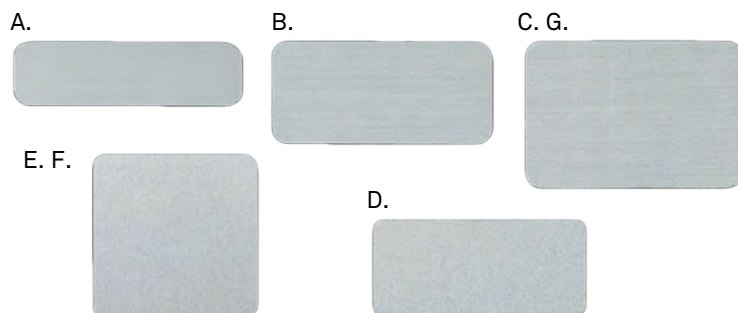
Metallex™ or Gravoply™ 2 inlaid plates

Available in 5 styles

Inlaid and id plates are blanks produced by special in-house tools. For higher volume orders, they offer better value than an equivalent cut to size service.

Our stamped plates are made of Metallex™ or Gravoply™ 2, thickness 0,8 mm (.030") with 4 rounded corners $r = 2$ mm (0.079").

A.	size 27 x 8 mm (1.063 x 0.315")
B.	size 27 x 12.5 mm (1.063 x 0.492")
C.	size 27 x 18 mm (1.063 x 0.709")
D.	size 22 x 10 mm (0.866 x 0.394")
E.	size 22 x 22 mm (0.866 x 0.866")
F.	size 27 x 27 mm (1.063 x 1.063")
G.	size 27 x 19 mm (1.063 x 0.748")



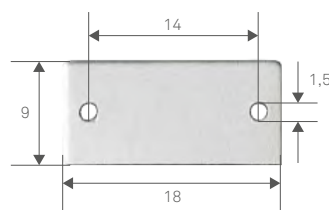
ID plates and labels

Available in 6 styles

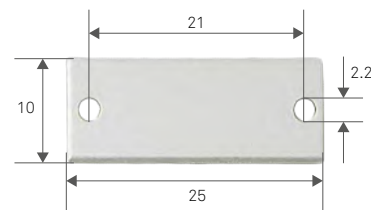
Our ID plates and labels are made of Gravoply™ 1, Gravoply™ 2, Metallex™, 0.8 mm (.030") thick or Gravoxal™, 1.0 mm (.040") thick and feature two drilled holes:

1.	Ø 1.5 mm (0.059"), hole spacing 14 mm (0.551")
2.	Ø 2.2 mm (0.087"), hole spacing 21 mm (0.827")
2a.	Ø 2.5 mm (0.098"), hole spacing 18 mm (0.709")
3.	Ø 2.2 mm (0.087"), hole spacing 26 mm (1.024")
3a.	Ø 2.5 mm (0.098"), hole spacing 25 mm (0.984"), $r = 1.25$ mm (0.049")
4.	Ø 2.5 mm (0.098"), hole spacing 30 mm (1.181")

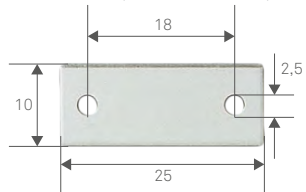
1. size 18 x 9 mm (7.09 x 3.54")



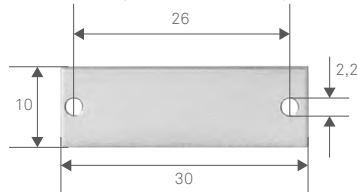
2. size 25 x 10 mm (9.84 x 3.94")



2a. size 25 x 10 mm (9.84 x 3.94")



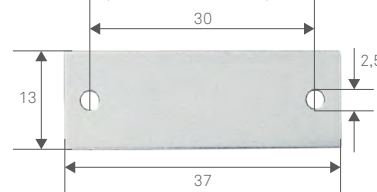
3. size 30 x 10 mm (11.81 x 3.94")



3a. size 30 x 10 mm (11.81 x 3.94")



4. size 37 x 13 mm (14.57 x 5.12")



Tags

Choose your tags from our selection

ALUMINIUM TAGS

Anodised aluminium
 1.5 mm (1/16") thick
 Hole diameter 4 mm (.15")
 Packaged by 10 units of identical reference



	Round		Shaped	Rectangular
	30 mm (1.18")	38 mm (1.49")	65 x 30 mm (2.55" x 1.18")	40 x 16 mm (1.57" x 0.62")
red		30141	19193	19189
blue	30138		19194	19190
green	30139		19195	19191
gold	30136		19196	19192

Custom-made key tags

We can custom manufacture your plastic tags for you.

Choose the plastic material, colour and thickness (2.4 mm (3/32") recommended) for your custom-made key tag blanks. Packaged by 50 identical references. See range of fasteners p.56.



Round tag
 Ø 30 mm (1.18")
 Hole diameter 4 mm (0.16")

Teardrop tag
 Size 46 x 28 mm
 (1.81 x 1.10")
 Hole diameter 4 mm (0.16")

Hexagonal tag
 Size 58 x 37 mm
 (2.28 x 1.45")
 Hole diameter 4 mm (0.16")

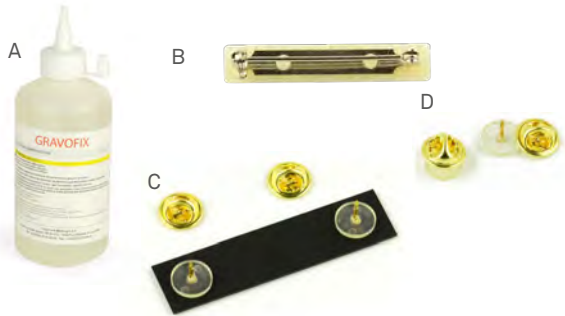


Create your own badges

If you prefer to make your badges yourself, choose from our Gravotech materials and select the fixing among the selection below.

Hardware for self-assembly

Use Gravofix (except model G) to apply the fastener of your choice on your badge. Quick and easy, durable hold.



	Dimension	Packaged by	Ref.
A - Gravofix (250 ml - 8.45 oz)	-	1	19360
B - Safety Pin	42 x 8 mm (1.65" x 0.31")	50	19345
C - Clutch bar	-	20	30362
D - Pin with clutch	Ø 11 mm (0.43")	50	30363

*This badge fastener requires fixing with a 2-component bond.

Pressure-sensitive hardware

Simple, quick and effective. 6 models of adhesive backing hardware. Simply peel back the liner and attach the adhesive bonds to the badge.



	Dimension	Packaged by	Ref.
E - Safety pin	42 x 9 mm (1.65" x 0.35")	50	30364
F - Universal clip with pin	24 x 12 mm (0.94" x 0.47")	50	19358
G - Standart magnetic fastener	25 x 15 mm (0.98" x 0.59")	10	19362
H - Jumbo magnetic fastener	45 x 15 mm (1.77" x 0.59")	10	30365

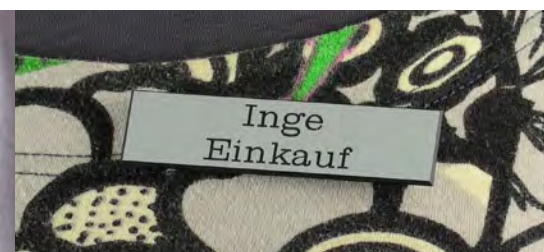
Type of fasteners for heat fusing in our workshop



Clutch
Ref. 30358



Safety pin
Ref. 30355



Custom-made badges

We can custom fabricate your plastic or brass sheet badge. Specify: shape, size and material, fastener, fused, cemented or bonded hardware; rounded or square corners; bevel or no-bevel finished edges.
Hot-stamping / Silk-screen / Digital printing to add a coloured logo or inscription on badges, ID plates, etc.



Plastic frames

Add a touch of elegance to any badge.
Ideal for 0.8 mm (1/32") thick material.
Delivered without fastener.



Gold
Packaged by 50
Ref. 19354



Silver
Packaged by 50
Ref. 19355



Premium solid brass door plates

All door plates have a varnished surface to protect against oxidation.



A. 66 x 37 mm
(2.60" x 1.46")



B. 105 x 42 mm
(4.14" x 1.65")



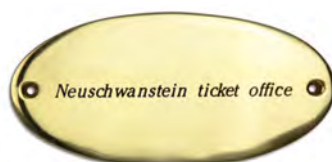
C. 105 x 54 mm
(4.14" x 2.13")



D. 100 x 40 mm
(3.94" x 1.58")



E. 83 x 48 mm
(3.27" x 1.89")



F. 135 x 65 mm
(5.32" x 2.56")



G. 130 x 30 mm
(5.12" x 1.18")



H. 97 x 33 mm
(3.82" x 1.30")



I. 160 x 60 mm
(6.30" x 2.36")



J. 100 x 28 mm
(3.94" x 1.10")



K. 122 x 42 mm
(4.81" x 1.65")



L. 115 x 40 mm
(4.53" x 1.58")

	A	B	C	D	E	F	G	H	I	J	K	L	
Packaged by	1	27487	21812	22088	22089	22090	22091	22092	22093	22094	22095	22096	30085
	6	78939	78927	78929	78935	78932	78931	78938	78936	78926	78930	78928	78933

All door plates, except model J, are delivered with screws.



Gold'n door range

Very high quality varnish, easy to engrave.



U.1	Rec'n Wave 150 x 50 mm (5.61" x 1.97")	48336
U.2		48335
V.1	Rec'n Round 145 x 45 mm (5.71" x 1.77")	48338
V.2		48337
W.1	Oval 135 x 65 mm (5.32" x 2.56")	48334
W.2		48333
X.	Domed 150 x 85 mm (5.91" x 3.35")	48339

Model X delivered with screws.

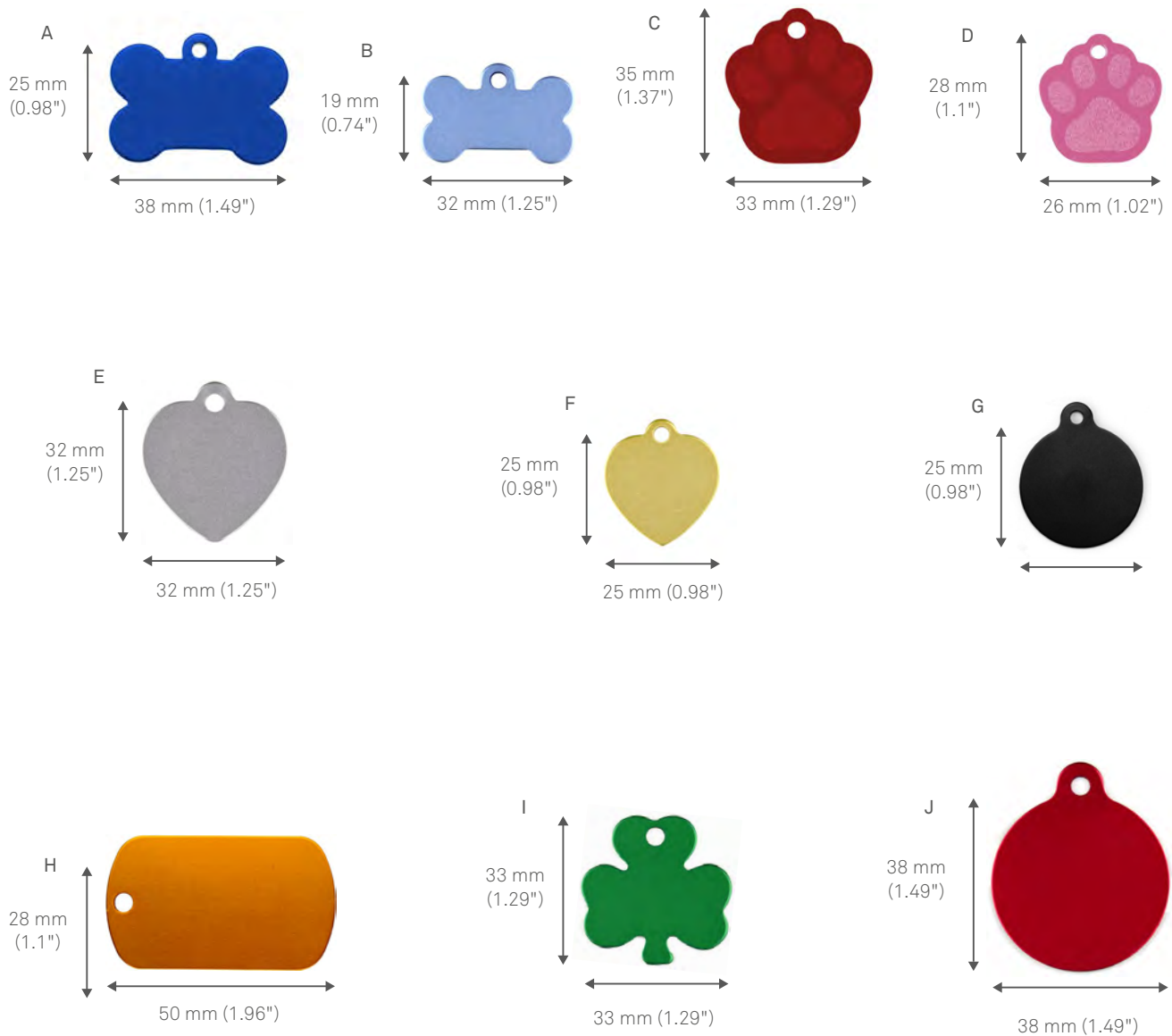
You can use Gravotech recommended colouring products to colour your engraved items. See p.51.



Anodised aluminium range

A large and trendy range: 10 shapes, 10 colours, 57 models, packaged by 10 or 50.
Compatible engraving technologies: laser engraving*, rotary engraving, diamond marking.

* Golden and aluminium medals are not suitable for colour contrasting with laser engraving.



Non-contractual photo



	Pack of	silver	gold	blue	light blue	red	green	purple	orange	pink	black
A	10	69285	69286	69287	69288	69289	69290	69291	-	69293	69294
	50	69479	69480	69481	69482	69483	69484	69485	-	69487	69488
B	10	69295	69296	69297	69298	69299	69300	69301	-	69303	69304
	50	69489	69490	69491	69492	69493	69494	69495	-	69497	69498
C	10	69305	69306	69307	-	69309	-	-	-	-	-
	50	69499	69500	69501	-	69503	-	-	-	-	-
D	10	69315	-	69317	-	69319	-	-	-	69323	69324
	50	69509	-	69511	-	69513	-	-	-	69517	69518
F	10	69265	69266	-	-	69269	-	-	-	69273	-
	50	69459	69460	-	-	69463	-	-	-	69467	-
G	10	69275	69276	-	-	69279	-	-	-	69283	-
	50	69469	69470	-	-	69473	-	-	-	69477	-
H	10	69325	69326	69327	-	69329	-	-	-	-	69334
	50	69519	69520	69521	-	69523	-	-	-	-	69528
I	10	69365	69366	69367	69368	69369	69370	-	69372	-	69374
	50	69559	69560	69561	69562	69563	69564	-	69566	-	69568
J	10	-	-	-	-	-	69420	-	-	-	-
	50	-	-	-	-	-	69614	-	-	-	-
K	10	-	69336	69337	-	69339	-	-	-	-	69344
	50	-	69530	69531	-	69533	-	-	-	-	69538

Stainless steel ball chains

Choose the chain assorted to your medal or mix colours! 3 colours available.

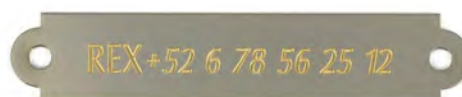
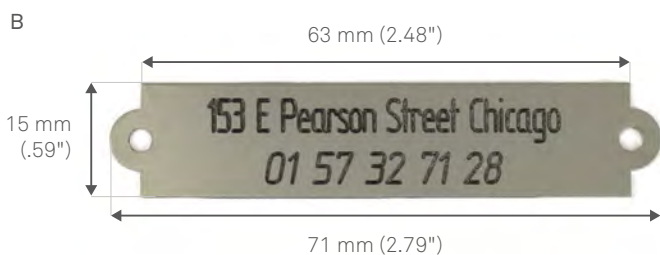
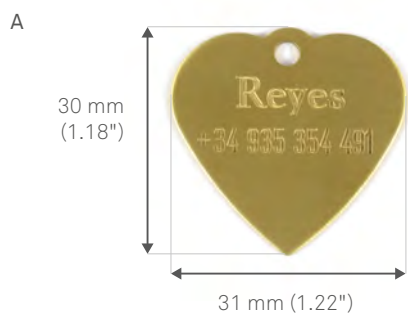


	Pack of 10	Pack of 50
silver	69880	69881
gold	69883	69884
black	69452	69645

Non-contractual photo



Golden and nickel-plated brass



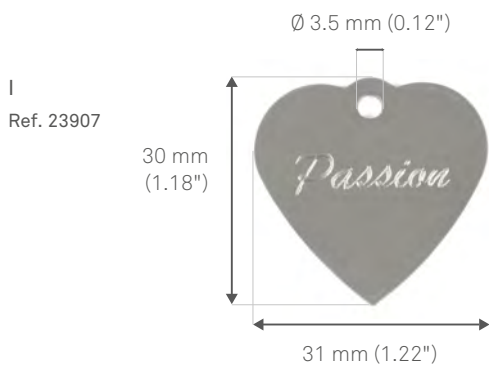
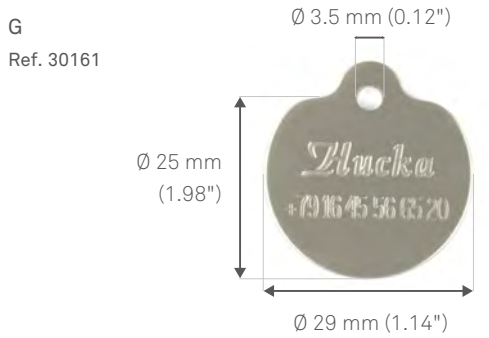
	Pack of	Golden	Nickel-plated	Hole diameter
A	10	23906	-	Ø 3.5 mm (0.14")
B	10	-	47820	Ø 3 mm (0.12")
	50	-	19306	
C	10	47818	47819	Ø 3 mm (0.12")
	50	19305	19304	
D	10	47813	47810	Ø 4 mm (0.16")
	50	22065	13012	
E	10	47812	47809	Ø 4 mm (0.16")
	50	13016	19318	
F	10	47811	47808	Ø 4 mm (0.16")
	50	19317	19316	

* You can use Gravotech recommended colouring products to colour your engraved item. See p.51.



Stainless steel range

(Pack of 10)



Ties

Ideal to fix all your medals and tags.

"S"-Hook (pack of 25).



Golden brass
Length 21 mm (0.82")
Ref. 30152



Zinc-plated brass
Length 26 mm (1.02")
Ref. 30151

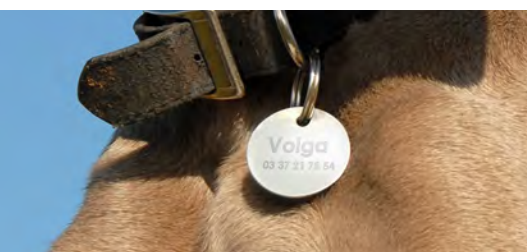
Ring (pack of 100)



Nickel-plated steel
ø 13 mm (0.51")
Ref. 19532



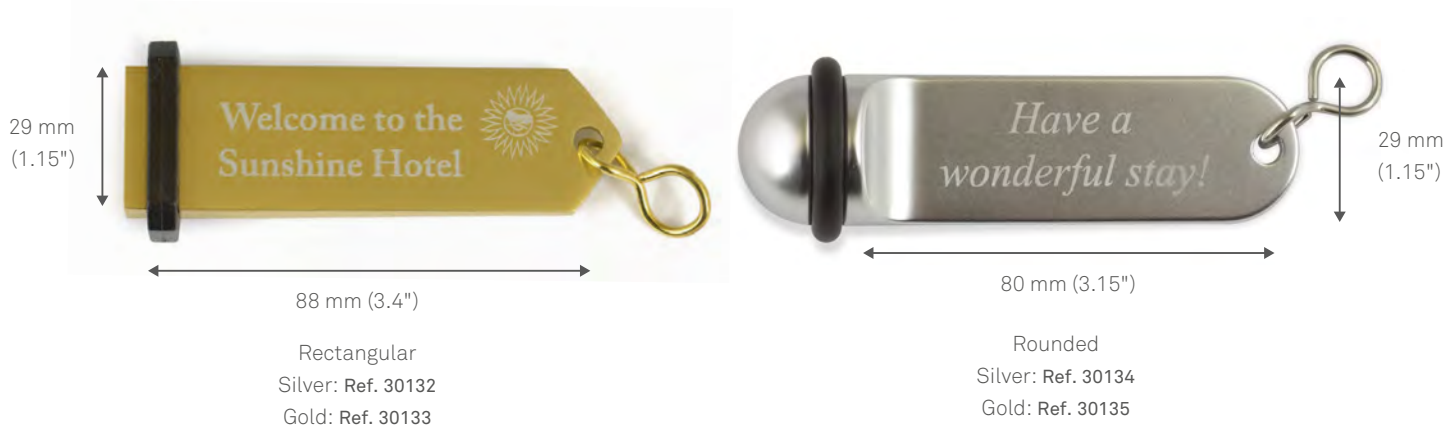
Nickel-plated steel
ø 20 mm (0.78")
Ref. 19530



A selection of key rings to personalize. Different shapes, different materials.
You can use Gravotech recommended colouring products to colour your engraved item. See p.51.

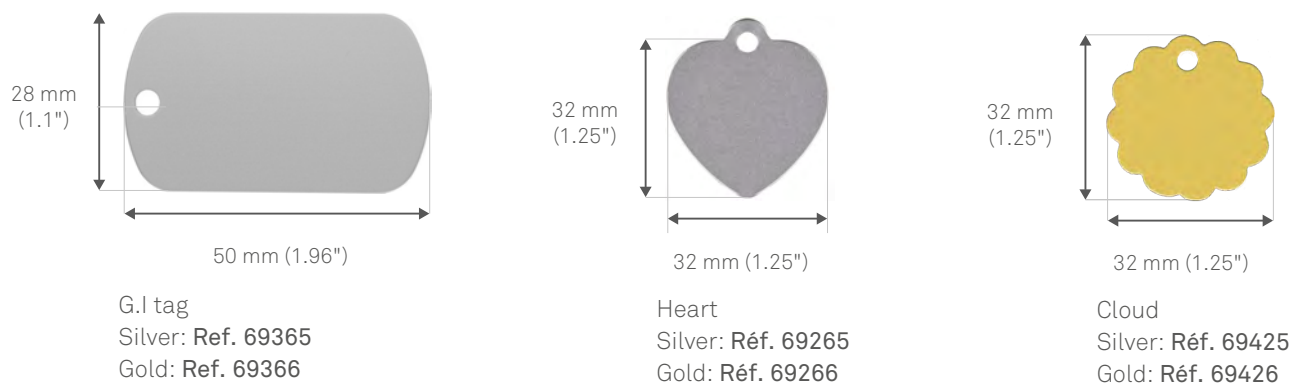
Aluminium hotel key rings

Compatible engraving technologies: rotary and laser engraving.



Aluminium key rings

Compatible engraving technologies: diamond marking, rotary and laser engraving.
(Pack of 10, delivered without ties).



High quality metallic nameplates for gifts, gift boxes and art objects.

With hole diameter 3 mm (1/8")

Packaged by 50 units of identical reference.



	Gravoxal™, steel look 1.0 mm (.040")
71 x 15 mm (2.80 x 0.59")	30125
89 x 15.9 mm (3.51 x 0.63")	30123
61 x 12 mm (2.40 x 0.47")	30124



	Gravometal™ 0.6 mm (.025")		Metallex™ 1.5 mm (1/16")*
	Satin gold	Glossy gold	
61 x 12 mm (2.40 x 0.47")	58786	58785	-
71 x 15 mm (2.80 x 0.59")	58788	58787	-
63.5 x 9.5 mm (2.50 x 0.37")	-	-	30112

* Choose the colour among Metallex™ and Gravometal™ material ranges.

Self-adhesive

Packaged by 50 units of identical reference.



Gravometal™
Satin Silver
ø 0.6 mm (.025")
Ref. 49125



Gravometal™
Satin Gold
ø 0.6 mm (.025")
Ref. 61323

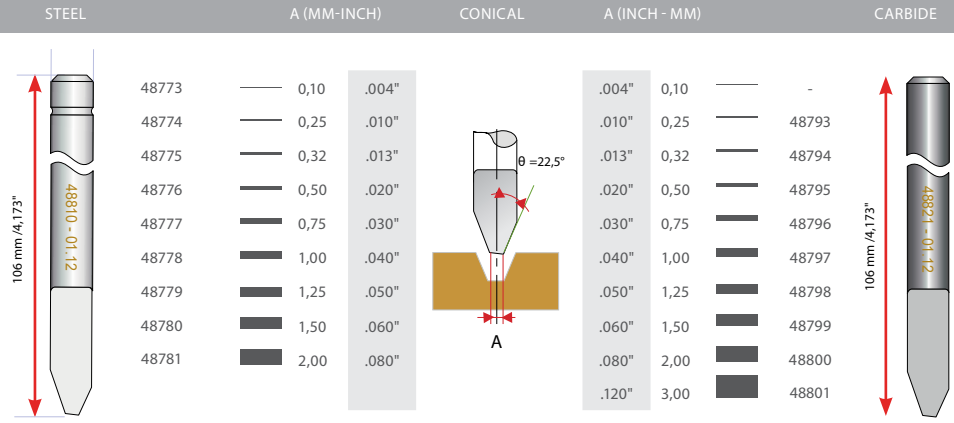


ENGRAVING

Compatible with : M20 old version, IM4, IM3

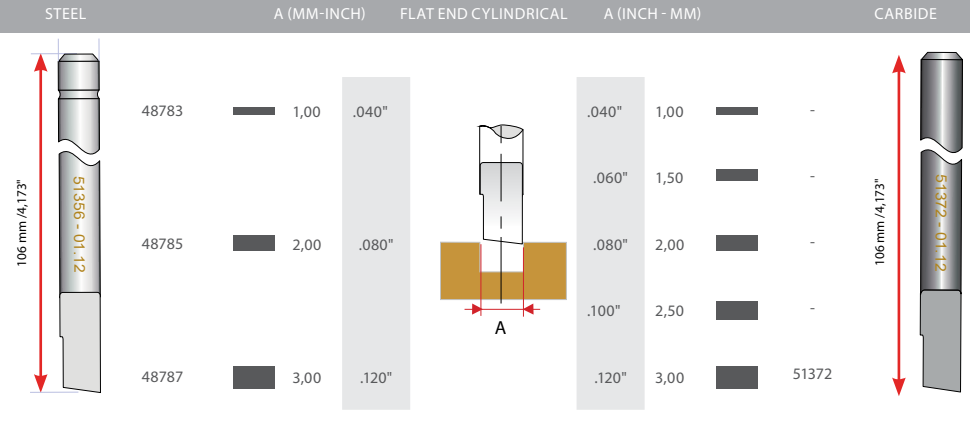
CONICAL

	STEEL	CARBIDE
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	■
Leathers and derived products		■
Phenolic		■
Gold/Silver	■	■
Aluminium/Brass	■	☉
Steel/Stainless steel		
☉ Absolutely suitable	■ Suitable	



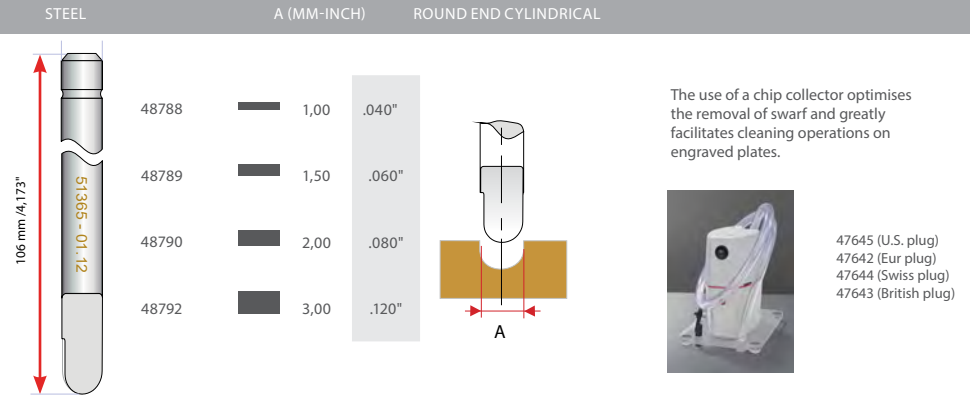
FLAT END CYLINDRICAL

	STEEL	CARBIDE
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	■
Leathers and derived products		■
Phenolic		■
Gold/Silver	■	■
Aluminium/Brass	■	☉
Steel/Stainless steel		
☉ Absolutely suitable	■ Suitable	



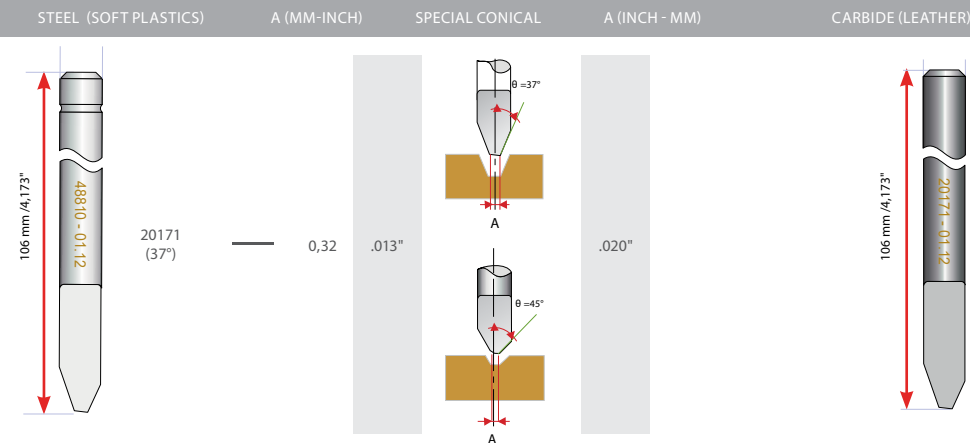
ROUND END CYLINDRICAL

	STEEL	
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	
Leathers and derived products		
Phenolic		
Gold/Silver	■	
Aluminium/Brass	■	
Steel/Stainless steel		
☉ Absolutely suitable	■ Suitable	



SPECIAL CONICAL

	θ = 37°	θ = 45°
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	
Soft plastics	☉	
Leathers and derived products		☉
Phenolic		
Gold/Silver		
☉ Absolutely suitable	■ Suitable	



Compatible with : M20 old version, IM4, IM3

BEVELLING

STEEL	A (MM-INCH)	SPECIAL	A (INCH - MM)	CARBIDE
	0,25 .010"		.010" 0,25	
			.010" 0,25	
			.010" 3,00	

* Recommended tools for the B4 beveling machine.

CONICAL FOR BEVELLING

COMPATIBLE MATERIALS	STEEL	CARBIDE
Gravoply™, Metallex™ & Gravoglas™, Acrylic	●	■
Leathers and derived products		■
Phenolic		■
Gold/Silver	■	■
Aluminium/Brass	■	●
Steel/Stainless steel		●

● Absolutely suitable ■ Suitable

CONICAL	A (MM - INCH)	CONICAL	A (INCH - MM)	CONICAL
	0,10 .004"		.004" 0,10	

Designed for Feather Touch Use

SCRIBING

SCRIBING DIAMOND

COMPATIBLE MATERIALS	ROTATING	NON ROTATING
Gravoply™, Metallex™ & Gravoglas™, Acryliques		
Leathers and derived products		
Glass & Mirrors	●	■
Gold / Silver	■	●
Aluminium / Brass	■	■
Steel/Stainless steel	■	

● Absolutely suitable ■ Suitable

Scribing insert:
IM3 / IF3 DIAMOND
VX DIAMOND SPINDLE
Non Rotating

Scribing insert:
Diamond spindle : M20 Diamond
(old version)
M20 old version

Scribing insert:
Diamond nose (22884)
Mod B - Im4 R & RM - M20 &
M10 Jewel - RingCube - TagCube
Non Rotating

CONICAL	A (INCH - MM)	DIAMOND
	.004" 0,10	
	.004" 0,10	
	.004" 0,10	

SCRIBING DIAMOND

COMPATIBLE MATERIALS	DIAMOND
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Leathers and derived products	
Glass & Mirrors	■
Gold/Silver	■
Aluminium/Brass	●
Steel/Stainless steel	■

● Absolutely suitable ■ Suitable

ROTATING	CONICAL	A (INCH - MM)
		0,127 .005"
		0,254 .010"

Designed for Feather Touch Use

SCRATCHING DIAMOND

COMPATIBLE MATERIALS	ROTATING
Gravoply™, Metallex™ & Gravoglas™, Acryliques	
Leather & Derived products	
Glass & Mirrors	●
Gold / Silver	
Aluminium / Brass	■
Steel / Stainless steel	

● Absolutely suitable ■ Suitable

Rotating Non rotating



ENGRAVING

Compatible with : TXL, M20 new version, M40, IS200, IS400, IS900, ISX000

STANDARD CONICAL

	STEEL	CARBIDE
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	☉
Leathers and derived products		
Phenolic		☉
Gold/Silver	■	■
Aluminium/Brass	■	■
Steel/Stainless steel		
	☉ Absolutely suitable	■ Suitable

STEEL	A (MM - INCH)	CONICAL	A (INCH - MM)	CARBIDE
48808	0,10		.004"	-
48809	0,25		.010"	48820
48810	0,32		.013"	48821
48811	0,50		.020"	48822
48812	0,75		.030"	48823
48813	1,00		.040"	48824
48814	1,25		.050"	48825
48815	1,50		.060"	48826
48816	2,00		.080"	48827
48818	3,00		.120"	48828
			.160"	48829

FLAT END CYLINDRICAL

	FLAT END	CYLINDRIC.
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	☉
Leathers and derived products		
Phenolic		
Gold/Silver	■	■
Aluminium/Brass	■	■
Steel/Stainless steel		
	☉ Absolutely suitable	■ Suitable

STEEL	A (MM - INCH)	FLAT END & CYLINDRICAL	A (MM - INCH)	STEEL	
51355	1,00		.040"	51362	
51356	1,50		.060"	51363	
51358	2,00		.080"	51364	
51359	2,50		.100"	51365	
51360	3,00		.120"	51366	
48834	4,00		.160"		
				.140"	51367

ROUND END CYLINDRICAL

	1/4 ROUNDED	CYLINDRIC.
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic		☉
Leathers and derived products		
Phenolic		
Gold/Silver	■	■
Aluminium/Brass	☉	■
Steel/Stainless steel		
	☉ Absolutely suitable	■ Suitable

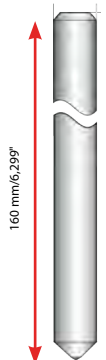
	ROUND END CYLINDRICAL	A (INCH - MM)	CARBIDE
80227		.013"	51373
		.020"	51374
		.030"	51375
		.050"	51376
		.080"	



The use of a chip collector is recommended for all types of tools.



Compatible with : TXL, M20 new version, M40, IS200, IS400, IS900, ISX000

ROTATIVE	A (MM - INCH)	DIAMOND	A (INCH - MM)	NON ROTATIVE
 <p>12909 (Faceted)</p> <p>34095 (KONISCH)</p>	<p>0,10</p> <p>0,50</p>	<p>.004"</p> <p>.020"</p> <p>120,0°</p> <p>130,0°</p> <p>126,5°</p>	<p>.020"</p> <p>0,50</p>	<p>34094 (21050)</p> <p>84975</p>

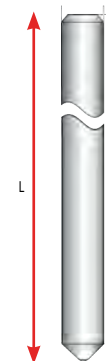
160 mm/6,299"

Designed for Feather Touch Use

CONICAL & FACETED DIAMOND

COMPATIBLE MATERIALS	ROTATING DIAMOND		NON ROTATING DIAMOND	
	12909	34095	34094	84975
Glass & Mirror	⊙	■		
Aluminium/Brass	■	■	⊙	⊙
Gold/Silver	■		■	■
Steel/Stainless steel		⊙		

⊙ Absolutely suitable ■ Suitable

FACETED	A (MM - INCH)	DIAMOND
 <p>77659</p> <p>34122</p> <p>34123</p> <p>34124</p>	<p>0,25</p> <p>0,25</p> <p>0,38</p> <p>0,76</p>	<p>.010"</p> <p>.010"</p> <p>.015"</p> <p>.030"</p> <p>130mm/5.118"</p> <p>160mm/6.299"</p> <p>160mm/6.299"</p> <p>160mm/6.299"</p>

110°

A

M40 = 81950

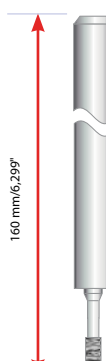
IS = 78465

Designed for Feather Touch Use

FACETED DIAMOND

COMPATIBLE MATERIALS	FACETED DIAMOND
Plastics	
Leathers and derived products	
Glass & Mirror	⊙
Aluminium/Brass	
Gold/Silver	
Steel/Stainless steel	

⊙ Absolutely suitable ■ Suitable

DIAMOND BALL	SPECIAL DIAMOND
 <p>20932</p> <p>20933</p>	<p>1.60</p> <p>.063"</p>

160 mm/6,299"

Designed for Feather Touch Use

SPECIAL

COMPATIBLE MATERIALS	DIAMOND BALL
Plastics	
Leathers and derived products	
Phenolic	
Steel/Stainless steel	
Glass & Mirrors	■
Granite	⊙

⊙ Absolutely suitable ■ Suitable

STYLUS

 <p>Assembled stylus bit</p> <p>21679</p>	 <p>CROSS Stylus Refill</p> <p>12374</p>
---	--

160 mm/6,299"

Ideal for performing a test prior to engraving

WRITE/DRAW

COMPATIBLE MATERIALS	STYLUS
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Leathers and derived products	
Phenolic	
Paper	⊙

⊙ Absolutely suitable ■ Suitable

Rotating  Non rotating 



BEVELLING

Compatible with : TXL, IS200, M40, IS400, IS900, ISX000

SPECIAL

	STEEL	CARBIDE
COMPATIBLE MATERIALS		
Gravoply™, Metallex™ & Gravoglas™, Acrylic	●	■
Leathers and derived products		
Phenolic		●
Gold/Silver	■	●
Aluminium/Brass	■	
Steel/Stainless steel		●
● Absolutely suitable	■ Suitable	

STEEL	A (MM - INCH)	SPECIAL	A (INCH - MM)	CARBIDE
48830*	0,25 .010"	15°	.010" 0,25	
48832	0,25 .010"	22,5°	.010" 0,25	
		45°	.010" 0,25	21038
		90°	.120" 3,00	21041

DRILLING AND CUTTING

HELICAL

	CARBIDE
COMPATIBLE MATERIALS	
Gravoply™, Metallex™ & Gravoglas™, Acrylic	●
Phenolic	■
Gold/Silver	■
Aluminium/Brass	●
Steel/Stainless steel	■
● Absolutely suitable	■ Suitable

To choose your tool, consult the Braille tool selection assistance guide below.

The chip collector use is essential for all drilling operations.



HELICAL	A (INCH - MM)	CARBIDE
	.061" 1,550	48766
	.062" 1,565	48767
	.063" 1,580	48768



BRILLE TOOL SELECTION GUIDE

- ref: 48686 - Tool width 1.500 mm
- ref: 48766 - Tool width 1.550 mm
- ref: 48767 - Tool width 1.565 mm
- ref: 48768 - Tool width 1.580 mm

	Adhesive-free materials		Materials with adhesive
	Steel beads	Acrylic beads	All beads
Metals	48767	48767	48768
Acrylic	48767	48767	48768
Gravotac™	48766	48766	48768
Phenolic	48767	48767	48768
ABS +2 Ply™	48686	48686	48767

SEMI-FINISHED CARBIDE TOOLS

READY TO GRIND



MORE INFORMATION ABOUT CG30 GRINDER. AVAILABLE - Page 105

	MM	
3.17-1/8"	L	L1
30046	105.0 / 4.134"	13.0 / 0.511"
73011	50.0 / 1.968"	13.0 / 0.511"
4.36-11/64"	L	L1
28082	160.0 / 6.299"	.13.0 / 0.511"
73012	50.0 / 1.968"	13.0 / 0.511"
6.35-1/4"	L	L1
73013	50.0	16.0 / 0630"

Solid carbide

Compatible with : IS400, IS900, ISX000, B6

ENGRAVING

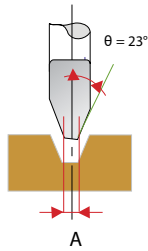
CONICAL

A (INCH - MM)

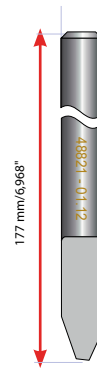
CARBIDE

For machines:
- VB PANTOGRAPH
- IS400 - IS900 IQ
- IS6000 - IS7000 - IS8000 IQ&XP

equipped with a collet spindle



.013"	0,32		48836
.020"	0,50		48837
.030"	0,75		48838
.050"	1,25		48839
.080"	2,00		48840
.125"	3,17		48841
.236"	6,00		48842



CONICAL FOR BEVELLING

COMPATIBLE MATERIALS

Gravoply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

Absolutely suitable

CARBIDE

Suitable

SPECIAL

A (INCH - MM)

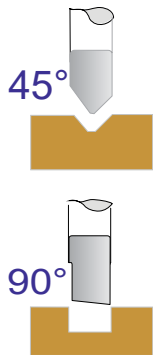
CARBIDE

Bevel router bits

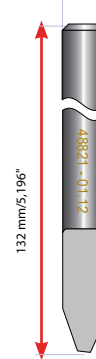
To be installed only on the B6 beveling machine



They can be used on IS machines equipped with a collet spindle



.004"	0,10		48846
.236"	6,00		48847



SPECIAL

COMPATIBLE MATERIALS

Gravoply™, Metallex™ & Gravoglas™, Acrylic

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

Absolutely suitable

CARBIDE

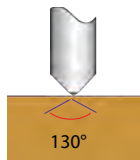
Suitable

SCRATCHING DIAMOND

A (INCH - MM)

DIAMOND

Scribing diamond
Non Rotative
Engraving on ferrous metal and non ferrous metal.
Pantograph IR & IRV
CN machines using a 6.35mm collet spindle.



.004"	0,10		34261 (11890)
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SCRIBING DIAMOND

COMPATIBLE MATERIALS

Glass & Mirrors

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

Absolutely suitable

DIAMOND

Suitable

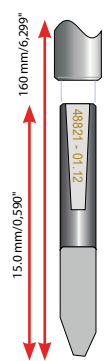
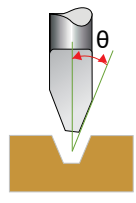


ENGRAVING

Compatible with : TXL, M20 new version, M40, IS200, IS400, IS900, ISX000

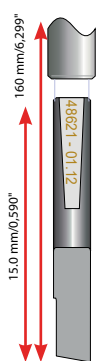
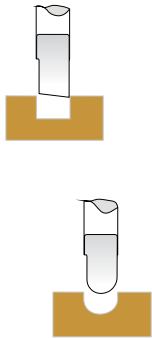
STANDARD CONICAL

COMPATIBLE MATERIALS	$\theta = 22.5^\circ$	$\theta = 30^\circ$
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Leathers and derived products	<input type="checkbox"/>	<input type="checkbox"/>
Phenolic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Gold/Silver	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aluminium/Brass	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Steel/Stainless steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Absolutely suitable	<input type="checkbox"/>	<input checked="" type="checkbox"/> Suitable

$\theta = 22.5^\circ$	CARBIDE	A (MM-INCH)	CONICAL	A (INCH - MM)	CARBIDE	$\theta = 30^\circ$	
	48608 — 0,25	.010"		.010"	0,25 —	50135	
	48609 — 0,32	.013"					
	48610 — 0,50	.020"					
	48611 — 0,75	.030"					
	48612 — 1,00	.040"			.013"	0,32 —	50136
	48613 — 1,25	.050"			.020"	0,50 —	50137
	48614 — 1,50	.060"			.030"	0,75 —	50138
	48615 — 1,75	.069"					
	48616 — 2,00	.080"					
	48617 — 2,50	.100"					
	48618 — 3,00	.120"					

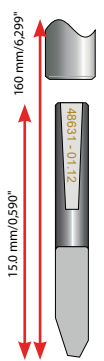
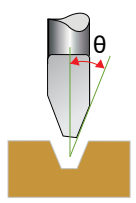
CYLINDRICAL

COMPATIBLE MATERIALS	FLAT END	ROUND END
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Leathers and derived products	<input type="checkbox"/>	<input type="checkbox"/>
Phenolic	<input type="checkbox"/>	<input type="checkbox"/>
Gold/Silver	<input type="checkbox"/>	<input type="checkbox"/>
Aluminium/Brass	<input type="checkbox"/>	<input type="checkbox"/>
Steel/Stainless steel	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Absolutely suitable	<input type="checkbox"/>	<input checked="" type="checkbox"/> Suitable

FLAT END	CARBIDE	A (MM-INCH)	CYLINDRICAL	A (INCH - MM)	CARBIDE	ROUND END	
	48619 — 1,00	.040"		.040"	1,00 —	48624	
	48620 — 1,50	.060"			.060"	1,50 —	48625
	48621 — 2,00	.100"			.100"	2,00 —	48626
	48622 — 2,50	.100"			.100"	2,50 —	48627
	48623 — 3,00	.120"			.120"	3,00 —	48628

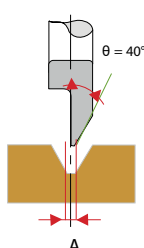
CONICAL

COMPATIBLE MATERIALS	$\theta = 35^\circ$	DOUBLE CONE
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input type="checkbox"/>	<input type="checkbox"/>
Leathers and derived products	<input type="checkbox"/>	<input type="checkbox"/>
Phenolic	<input type="checkbox"/>	<input type="checkbox"/>
Gold/Silver	<input type="checkbox"/>	<input type="checkbox"/>
Aluminium/Brass	<input type="checkbox"/>	<input type="checkbox"/>
Steel/Stainless steel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Absolutely suitable	<input type="checkbox"/>	<input checked="" type="checkbox"/> Suitable

$\theta = 35^\circ$	CARBIDE	A (MM-INCH)	CONICAL	A (INCH - MM)	CARBIDE	DBLE CONE	
	48629 — 0,25	.010"		.010"	0,25 —	48645	
	48630 — 0,32	.013"			.013"	0,32 —	48646
	48631 — 0,50	.020"			.020"	0,50 —	48647
	48632 — 0,75	.030"			.030"	0,75 —	48648
	48633 — 1,00	.040"			.040"	1,00 —	48649
	48634 — 1,25	.050"			.050"	1,25 —	48650
	48635 — 1,50	.060"					

SPECIAL CONICAL

COMPATIBLE MATERIALS	1/4 ROUND
Gold/Silver	<input type="checkbox"/>
Aluminium/Brass	<input type="checkbox"/>
Steel/Stainless steel	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Absolutely suitable	<input type="checkbox"/> Suitable

Advice for use	1/4 ROUND	A (INCH - MM)	CARBIDE	1/4 ROUND
<p><u>Anodised aluminium:</u> depth 1 division at adjustment tip</p> <p><u>Steel and stainless steel:</u> Rotation speed = 11,000 rpm (adjustment only possible on IS)</p> <p>A higher speed would cause premature wearing in the truncation. V xy= 5mm/s/ Vz = 3mms</p> <p>The use of a cutting lubrication oil is essential: TARFIL™ blue ref: 19526</p>		.010"	0,25 —	48636
		.013"	0,32 —	48637
		.020"	0,50 —	48638
		.030"	0,75 —	48639
		.040"	1,00 —	48640
		.050"	1,25 —	48641
		.060"	1,50 —	48642
		.069"	1,75 —	48643
		.080"	2,00 —	48644



Compatible with : TXL, M20 new version, M40, IS200, IS400, IS900, ISX000

BEVELLING

$\theta = 15^\circ$ CARBIDE A (MM - INCH) SPECIAL A (INCH - MM) CARBIDE $\theta = 45^\circ$

48713 — 0,32 .013" — 0,32 .013" — 48925

SPECIAL

COMPATIBLE MATERIALS

	$\theta = 15^\circ$	$\theta = 45^\circ$
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	■
Leathers and derived products	■	●
Phenolic	■	●
Gold/Silver	■	●
Aluminium/Brass	●	●
Steel/Stainless steel	●	●

● Absolutely suitable ■ Suitable

SCRIBING

$\theta = 120.0^\circ$ CARBIDE A (MM - INCH) DIAMOND A (INCH - MM) CARBIDE $\theta = 126.5^\circ$

23060 — 0,10 .004" — 0,10 .004" — 23061

Designed for feather Touch Use

DIAMOND

COMPATIBLE MATERIALS

	$\theta = 120.0^\circ$	$\theta = 126.5^\circ$
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	■
Gold/Silver	■	●
Aluminium/Brass	●	■
Steel/Stainless steel	■	■

● Absolutely suitable ■ Suitable

DRILLING AND CUTTING

DRILLING CARBIDE A (MM-INCH) CYLINDRICAL A (INCH - MM) CARBIDE MULTI-LIP

Part No.	Symbol	A (MM)	A (INCH)
48661	•	0,50	.020"
48682	•	0,80	.030"
48683	•	1,00	.040"
48684	•	1,20	.047"
48685	•	1,40	.055"
48686	•	1,50	.060"
48687	•	2,00	.080"
48688	•	2,50	.100"

48651 — 1,00 .040" — 48652 — 2,00 .080"

CYLINDRICAL

COMPATIBLE MATERIALS

	DRILLING	MULTI-LIPS
Gravoply™, Metallex™ & Gravoglas™, Acrylic	●	■
Leathers and derived products	■	■
Phenolic / Epoxy	■	●
Gold/Silver	■	■
Aluminium/Brass	■	■
Steel/Stainless steel	■	■

● Absolutely suitable ■ Suitable

CUTTING

DOUBLE LIP CARBIDE A (MM-INCH) CYLINDRICAL A (INCH - MM) CARBIDE SINGLE LIP

Part No.	Symbol	A (MM)	A (INCH)
48657	—	0,80	.030"
48658	—	1,00	.040"
48659	—	2,00	.080"
48660	—	3,00	.100"

48653 — 0,8 .030" — 48654 — 1,0 .040" — 48655 — 2,0 .080" — 48656 — 3,0 .100"

CYLINDRICAL

COMPATIBLE MATERIALS

	DOUBLE LIPS	SINGLE LIP
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	■
Gold/Silver	■	■
Aluminium/Brass	●	●

● Absolutely suitable ■ Suitable

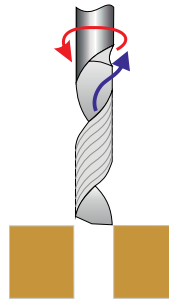
Rotating Non rotating



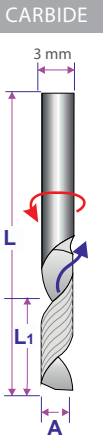
MACHINING

COMPATIBLE MATERIALS		SINGLE LIP
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input checked="" type="checkbox"/>	
Leathers and derived products		
Phenolic		
Gold/Silver		
Aluminium/Brass	<input type="checkbox"/>	
Steel/Stainless steel		

Absolutely suitable Suitable

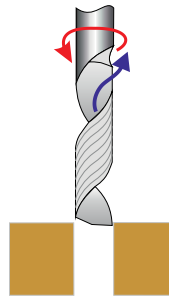


L	L ₁	A		
39,0 mm 1.535"	4,0 mm .160"	1,0 mm .040"		48736
39,0 mm 1.535"	8,0 mm .315"	2,0 mm .080"		48737
39,0 mm 1.535"	10,0 mm .40"	3,0 mm .120"		48738

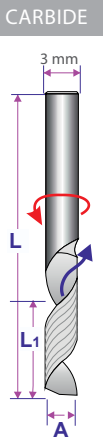


COMPATIBLE MATERIALS		SINGLE LIP
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input type="checkbox"/>	
Leathers and derived products		
Phenolic		
Gold/Silver		
Aluminium/Brass	<input checked="" type="checkbox"/>	
Steel/Stainless steel		

Absolutely suitable Suitable

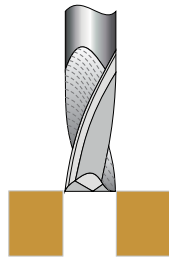


L	L ₁	A		
38,0 mm 1.496"	3,0 mm .120"	1,0 mm .040"		48739
38,0 mm 1.496"	5,0 mm .197"	2,0 mm .080"		48740
50,0 mm 1.968"	8,0 mm .315"	3,0 mm .120"		48741

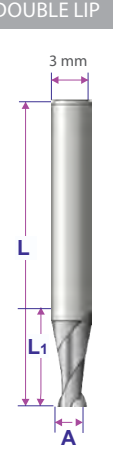


COMPATIBLE MATERIALS		DOUBLE LIPS	80341
Gravoply™, Metallex™ & Gravoglas™, Acrylic	<input type="checkbox"/>		
Leathers and derived products			
Phenolic			
Gold/Silver			
Aluminium/Brass	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Steel/Stainless steel			

Absolutely suitable Suitable



L	L ₁	A		
38,0 mm 1.496"	2,0 mm .080"	1,0 mm .040"		48752
38,0 mm 1.496"	3,0 mm .120"	1,5 mm .060"		48753
38,0 mm 1.496"	1,95 mm .077"	1,95 mm .077"		80341*
38,0 mm 1.496"	4,0 mm .160"	2,0 mm .080"		48755
38,0 mm 1.496"	6,0 mm .236"	3,0 mm .120"		48769



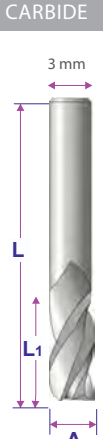
* TiAIN coated - avoid lubricant for hard bronze & copper

COMPATIBLE MATERIALS		TRIPLE LIPS
Gravoply™, Metallex™ & Gravoglas™, Acrylic		
Gold/Silver		
Aluminium/Brass	<input checked="" type="checkbox"/>	
Steel/Stainless steel		

Absolutely suitable Suitable



L	L ₁	A		
38,0 mm 1.496"	4,0 mm .160"	2,0 mm .080"		70611



MACHINING

CARBIDE

A L₁ L



23080 — 2,00 mm .080" 6,00 mm .236" 32,0 mm 1.260"



COMPATIBLE MATERIALS

TRIPLE LIPS

Gravply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

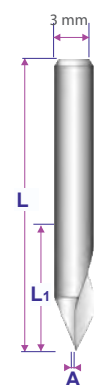
⊙ Absolutely suitable

■ Suitable

ENGRAVING

CARBIDE

A L₁ L



23077 — 0,15 mm .005" - 32 mm 1.260"



COMPATIBLE MATERIALS

CONICAL HELICAL

Gravply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

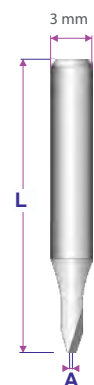
Steel/Stainless steel

⊙ Absolutely suitable

■ Suitable

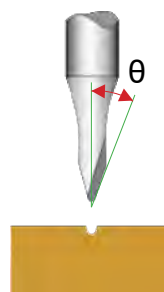
CARBIDE

A θ L



70613 — 0,05 mm .002" 50° 38 mm 1.496"

70612 — 0,15 mm .005" 50° 38 mm 1.496"



COMPATIBLE MATERIALS

3/4 CONICAL

Gravply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

⊙ Absolutely suitable

■ Suitable

Advice for use

Cutting and engraving plastics

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	20 à 35	10 à 20	Chip collector (A)
Cutting	5 à 15	2 à 8	Chip collector (A)

Cutting and engraving brass

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	10 à 15	5 à 10	Chip collector (A)
Cutting	4 à 10	2 à 8	Chip collector (A)

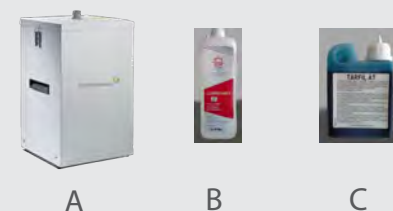
Cutting and engraving aluminium

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	7 à 12	5 à 8	Lubrication : Surfex® Ref:30368 (B)
Cutting	2 à 5	1 à 5	Lubrication : Surfex® Ref:30368 (B)







Cutting and engraving steel and stainless steel







Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	5 à 10	1 à 5	Lubrication : Tarfil™ Ref:19526 (C)
Cutting	1 à 3	1 à 2	Lubrication : Tarfil™ Ref:19526 (C)







Rotating Non rotating







MACHINING

		L	L ₁	A	SINGLE LIP	
COMPATIBLE MATERIALS	SINGLE LIP					
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	38,0 mm 1.496"	8,0 mm .315"	2,0 mm .080"		48742
Leathers and derived products	■					48743
Phenolic	■					48744
Gold/Silver	■					
Aluminium/Brass	■					
Steel/Stainless steel	■					
☉ Absolutely suitable	■ Suitable					

		L	L ₁	A	SINGLE LIP	
COMPATIBLE MATERIALS	SINGLE LIP					
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	38,0 mm 1.496"	3,0 mm .120"	2,0 mm .080"		48745
Leathers and derived products	■					48746
Phenolic	■					48747
Gold/Silver	☉					
Aluminium/Brass	☉					
Steel/Stainless steel	■					
☉ Absolutely suitable	■ Suitable					

		L	L ₁	A	DOUBLE LIP	
COMPATIBLE MATERIALS	DOUBLE LIP					
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■	38,0 mm 1.496"	4,0 mm .160"	2,0 mm .080"		48770
Leathers and derived products	■					48771
Phenolic	■					23073
Gold/Silver	☉					
Aluminium/Brass	☉					
Steel/Stainless steel	■					
☉ Absolutely suitable	■ Suitable					

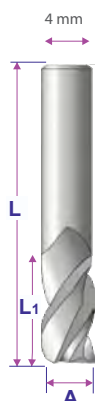
		L	L ₁	A	DOUBLE LIP	
COMPATIBLE MATERIALS	DOUBLE LIP					
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉	50,0 mm 1.968"	12,0 mm .472"	4,0 mm .160"		23072
Leathers and derived products	■					
Phenolic	■					
Gold/Silver	■					
☉ Absolutely suitable	■ Suitable					



MACHINING

CARBIDE

A L₁ L



23079	■	2,00 mm .080"	4,00 mm .160"	25,0 mm .984"
-------	---	------------------	------------------	------------------



COMPATIBLE MATERIALS

Gravply™, Metallex™ & Gravoglas™, Acrylic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

TRIPLE LIP



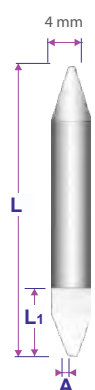
● Absolutely suitable

■ Suitable

ENGRAVING

CARBIDE

A L₁ L



48757	—	0,25 mm .010"		
48758	—	0,32 mm .013"		
48759	—	0,50 mm .020"	6,0 mm .236"	50,0 mm 1,968"
48760	—	0,75 mm .030"		
48761	—	1,25 mm .050"		



COMPATIBLE MATERIALS

Gravply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

CONICAL WITH DOUBLE RECESS



● Absolutely suitable

■ Suitable

Advice for use

Cutting and engraving plastics

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	20 à 35	10 à 20	Chip collector (A)
Cutting	5 à 15	2 à 8	Chip collector (A)

Cutting and engraving brass

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	10 à 15	5 à 10	Chip collector (A)
Cutting	4 à 10	2 à 8	Chip collector (A)

Cutting and engraving aluminium

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	7 à 12	5 à 8	Lubrication : Surfex® Ref:30368 (B)
Cutting	2 à 5	1 à 5	Lubrication : Surfex® Ref:30368 (B)

Cutting and engraving steel and stainless steel

Parameters	V xy (mm/s)	V Z (mm/s)	Conditions
Engraving	5 à 10	1 à 5	Lubrication : Tarfil™ Ref:19526 (C)
Cutting	1 à 3	1 à 2	Lubrication : Tarfil™ Ref:19526 (C)



Rotating

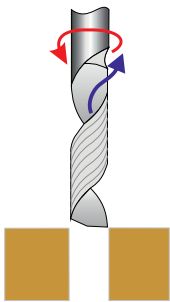
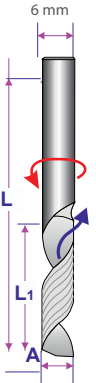


Non rotating

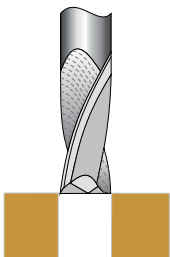
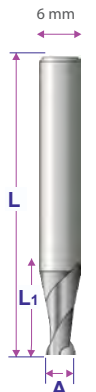


MACHINING


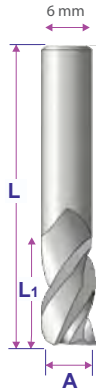
COMPATIBLE MATERIALS	SINGLE LIP
Gravoply™, Metallex™ & Gravoglas™, Acrylic	☉
Leathers and derived products	
Phenolic	
Gold/Silver	
Aluminium/Brass	■
Steel/Stainless steel	
☉ Absolutely suitable	■ Suitable

	L	L ₁	A			
	50,0 mm 1.968"	7,0 mm .275"	2,00 mm .080"	■	48748	
	50,0 mm 1.968"	10,0 mm .40"	3,00 mm .120"	■	48749	
	50,0 mm 1.968"	12,0 mm .472"	4,00 mm .160"	■	48750	
	50,0 mm 1.968"	15,0 mm .590"	6,00 mm .236"	■	48751	


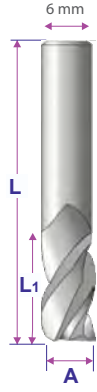
COMPATIBLE MATERIALS	DOUBLE LIPS
Gravoply™, Metallex™ & Gravoglas™, Acrylic	■
Leathers and derived products	
Phenolic	
Gold/Silver	
Aluminium/Brass	☉
Steel/Stainless steel	
☉ Absolutely suitable	■ Suitable

	L	L ₁	A			
	50,0 mm 1.968"	6,0 mm .236"	2,00 mm .080"	■	48772	
	50,0 mm 1.968"	6,0 mm .236"	3,00 mm .120"	■	70610	
	50,0 mm 1.968"	8,0 mm .315"	4,00 mm .160"	■	70614	

COMPATIBLE MATERIALS	TRIPLE LIPS
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Leathers and derived products	
Phenolic	
Gold/Silver	
Aluminium/Brass	☉
Steel/Stainless steel	
☉ Absolutely suitable	■ Suitable

	L	L ₁	A			
	50,0 mm 1.968"	4,0 mm .160"	2,00 mm .080"	■	71765	
	50,0 mm 1.968"	6,0 mm .236"	3,00 mm .120"	■	71766	
	50,0 mm 1.968"	8,0 mm .315"	4,00 mm .160"	■	71767	

COMPATIBLE MATERIALS	4 LIPS
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Gold/Silver	
Aluminium/Brass	
Steel/Stainless steel	☉
☉ Absolutely suitable	■ Suitable

	L	L ₁	A			
	50,0 mm 1.968"	4,0 mm .160"	2,00 mm .080"	■	71768	
	50,0 mm 1.968"	8,0 mm .315"	3,00 mm .120"	■	71769	
	50,0 mm 1.968"	11,0 mm .433"	4,00 mm .160"	■	71770	

Tools covered with CUTINOX, facilitating the machining of hard metals



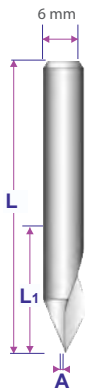
ENGRAVING

CARBIDE

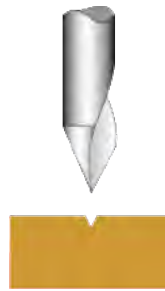
A

L₁

L



23091 — 0,15 mm
.005" — 57 mm
2.244"



CONICAL HELICAL

COMPATIBLE MATERIALS

Gravoply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

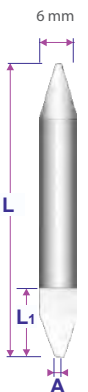
-
-
-
-

CARBIDE

A

L₁

L



48762 — 0,32 mm
.013"

48763 — 0,50 mm
.020" — 8,0 mm
.315" — 57,0 mm
2.244"

48765 — 1,25 mm
.050"



CONICAL WITH DOUBLE RECESS

COMPATIBLE MATERIALS

Gravoply™, Metallex™ & Gravoglas™, Acrylic

Leathers and derived products

Phenolic

Gold/Silver

Aluminium/Brass

Steel/Stainless steel

-
-
-
-

Advice for use

Cutting and engraving plastics

Parameters	V xy (mm/s)	V z (mm/s)	Conditions
Engraving	20 à 35	10 à 20	Chip collector (A)
Cutting	5 à 15	2 à 8	Chip collector (A)

Cutting and engraving brass

Parameters	V xy (mm/s)	V z (mm/s)	Conditions
Engraving	10 à 15	5 à 10	Chip collector (A)
Cutting	4 à 10	2 à 8	Chip collector (A)

Cutting and engraving aluminium

Parameters	V xy (mm/s)	V z (mm/s)	Conditions
Engraving	7 à 12	5 à 8	Lubrication : Surfex® Ref:30368 (B)
Cutting	2 à 5	1 à 5	Lubrication : Surfex® Ref:30368 (B)

Cutting and engraving steel and stainless steel

Parameters	V xy (mm/s)	V z (mm/s)	Conditions
Engraving	5 à 10	1 à 5	Lubrication : Tarfil™ Ref:19526 (C)
Cutting	1 à 3	1 à 2	Lubrication : Tarfil™ Ref:19526 (C)



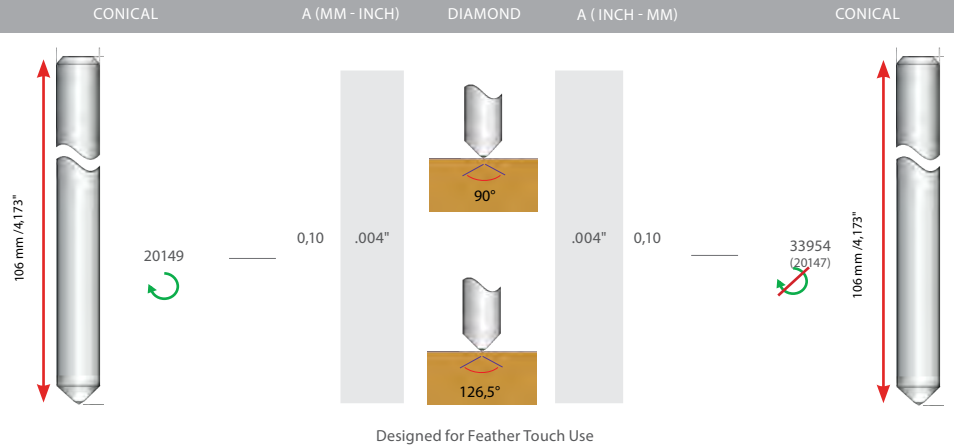
Rotating Non rotating



ONECUT 3.17 mm

SCRIBING DIAMOND

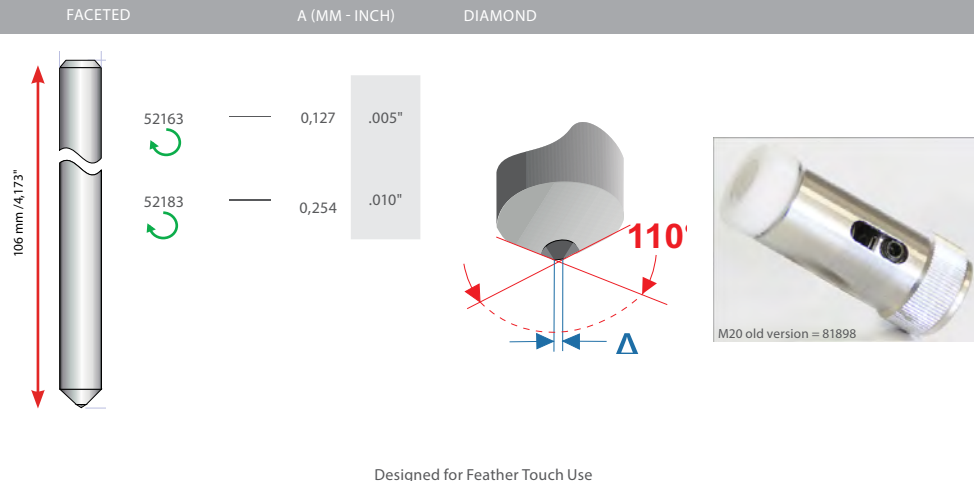
COMPATIBLE MATERIALS	ROTATING	NON ROTATING
Gravoply™, Metallex™ & Gravoglas™, Acrylic		
Leathers and derived products		
Glass & Mirrors	⊙	■
Gold/Silver	■	⊙
Aluminium/Brass	■	■
Steel/Stainless steel	■	
	⊙ Absolutely suitable	■ Suitable



Designed for Feather Touch Use

FACETED DIAMOND

COMPATIBLE MATERIALS	FACETED DIAMOND
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Leathers and derived products	
Glass & Mirrors	⊙
Gold/Silver	
Aluminium/Brass	■
Steel/Stainless steel	
	⊙ Absolutely suitable
	■ Suitable



Designed for Feather Touch Use

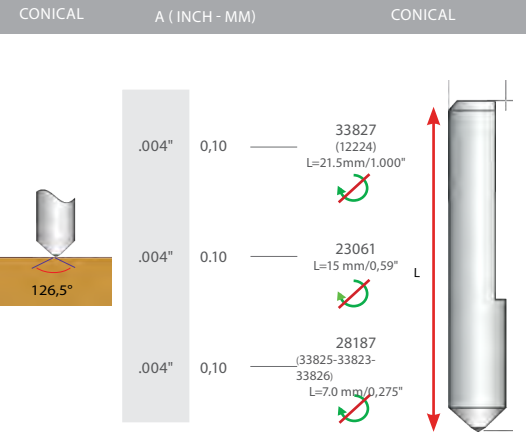
DIAMOND INSERT

COMPATIBLE MATERIALS	INSERTS DIAMOND
Gravoply™, Metallex™ & Gravoglas™, Acrylic	
Leathers and derived products	
Glass & Mirrors	■
Gold/Silver	⊙
Aluminium/Brass	■
Steel/Stainless steel	■
	⊙ Absolutely suitable
	■ Suitable

Scribing insert:
IM3 / IF3 DIAMOND
VX DIAMOND SPINDLE
Non Rotating

Scribing insert:
Diamond spindle: M20 Diamond
(old version)
M20 old version

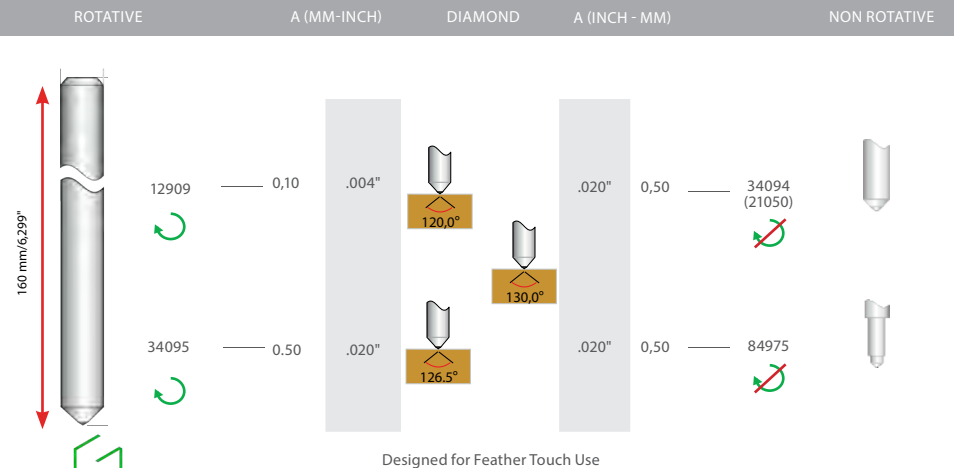
Scribing insert:
Diamond nose (22884)
Mod B - Im4 R & RM - M20 &
M10 Jewel - RingCube -TagCube
Non Rotating



ONECUT 4.36 mm

CONICAL & FACETED DIAMOND

COMPATIBLE MATERIALS	ROTATING DIAMOND		NON ROTATING DIAMOND	
	12909	34095	34094	84975
Glass & Mirror	⊙	■		
Aluminium/Brass	■	■	⊙	⊙
Gold/Silver	■		■	■
Steel/Stainless steel		⊙		
	⊙ Absolutely suitable	■ Suitable		



Designed for Feather Touch Use



Rotating Non Rotating

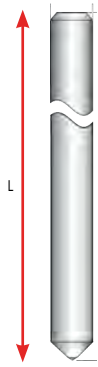


ONECUT 4.36 mm

FACETED DIAMOND

A (MM - INCH)

CONICAL

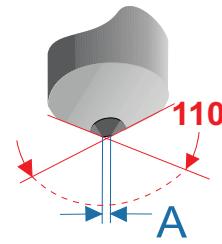


- 77659
- 34122
- 34123
- 34124

- 0,25
- 0,25
- 0,38
- 0,76

- .010"
- .010"
- .015"
- .030"

- 130mm/5.118"
- 160mm/6.299"
- 160mm/6.299"
- 160mm/6.299"



Designed for Feather Touch Use

FACETED DIAMOND

FACETED DIAMOND

COMPATIBLE MATERIALS

- Plastics
- Leathers and derived products
- Glass & Mirror
- Aluminium/Brass
- Gold/Silver
- Steel/Stainless steel

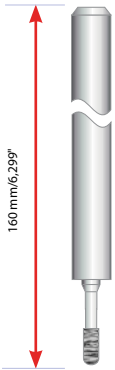
⊙ Absolutely suitable

■ Suitable

BALL DIAMOND

A (MM - INCH)

SPECIAL DIAMOND



- 20932
- 20933

- 1,60

- .063"



Designed for Feather Touch Use

SPECIAL

DIAMOND BALL

COMPATIBLE MATERIALS

- Plastics
- Leathers and derived products
- Phenolic
- Steel/Stainless steel
- Glass & Mirrors
- Granite

⊙ Absolutely suitable

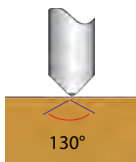
■ Suitable

SCRIBING DIAMOND

A (INCH - MM)

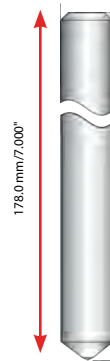
DIAMOND

Scribing diamond
Non Rotative
Engraving on ferrous metal and non ferrous metal.
Pantograph IR & IRV
CN machines using a 6.35mm collet spindle.



- .004"
- 0,10

- 34261 (11890)



SCRIBING DIAMOND

DIAMOND

COMPATIBLE MATERIALS

- Glass & Mirrors
- Gold/Silver
- Aluminium/Brass
- Steel/Stainless steel

⊙ Absolutely suitable

■ Suitable

TWINCUT

$\theta = 120^\circ$

DIAMOND

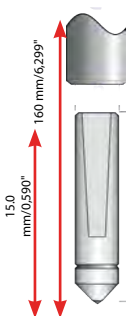
A (MM - INCH)

CONICAL

A (INCH - MM)

DIAMOND

$\theta = 126.5^\circ$



- 23060

- 0,10

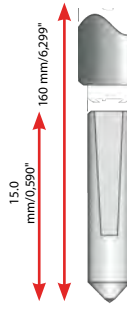
- .004"

- 120.0°

- .004"

- 0,10

- 23061



DIAMOND

COMPATIBLE MATERIALS

- Gravoply™, Metallex™ & Gravoglas™, Acrylic
- Gold/Silver
- Aluminium/Brass
- Steel/Stainless steel

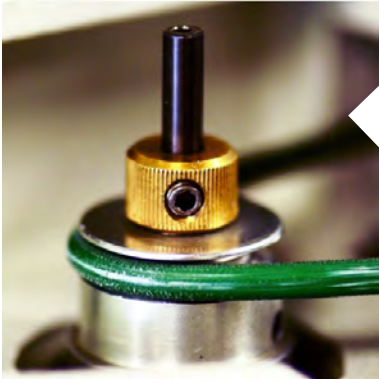
⊙ Absolutely suitable

■ Suitable

Rotating Non rotating

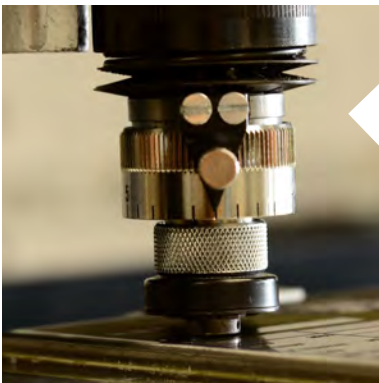


BASIC ADJUSTMENT FOR ENGRAVING CUTTERS



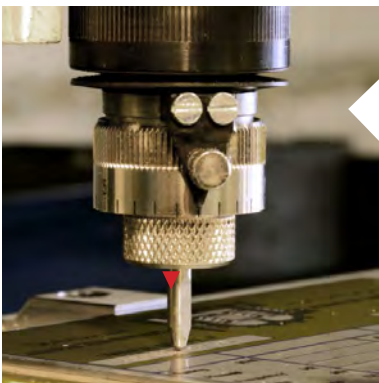
Before starting adjustment of your tools

1. Set the depth micrometer to position O.
2. Fit a cutter knob into the spindle. The screw thread is reversed.



Step-by-step engraving cutter adjustment for engraving plastics

1. Move the spindle into position above the plate to be engraved, using the X and Y arrows on the remote control
2. Press the remote control button .00 is displayed on the LCD screen
Then lower the spindle by pressing and holding the button until the adjustment tip touches the material to be engraved
3. Insert the engraving cutter into the button cutter knob. Lower it gently until the truncation touches the material to be engraved. Set the adjustment by tightening the cutter knob screw
4. Press the remote control button to save the adjustment; the spindle then rises into position
5. Rotate the micrometer upwards to display the engraving depth (1 division = 0.025 mm - depth example: Gravoply 1 = 12 division)



Step-by-step diamond adjustment for engraving metals

Note: the regulator nose is not used for diamond engraving.

1. Remove the tool fitted to the spindle
2. Press the remote control button and lower the bottom of the spindle within 8 mm to 12 mm of the metal plate to be engraved
3. Insert the diamond into the button cutter knob (previously fitted to the spindle) and lower it gently until it touches the metal material. Set the adjustment by tightening the cutter knob screw
4. Press the remote control button to save the adjustment
5. The depth should be entered on the Gravostyle engraving screen.

1

Height of characters to be engraved

0.4 mm 1/64"	0.8 mm 1/32"	1.5 mm 1/16"	3.0 mm 1/8"	6 mm 1/4"	8.0 mm 5/16"	12.0 mm 1/2"	19.0 mm 3/4"	25.0 mm 1"	32.0 mm 1 1/4"	50 mm 2"
-----------------	-----------------	-----------------	----------------	--------------	-----------------	-----------------	-----------------	---------------	-------------------	-------------

The cutter tip width is directly related to the height of the engraved characters. To use this guide most effectively, define the cutter tip width according to:

- 1 - the height of the engraved characters
- 2 - the type of characters used (single or multi-line)

2

Tool width

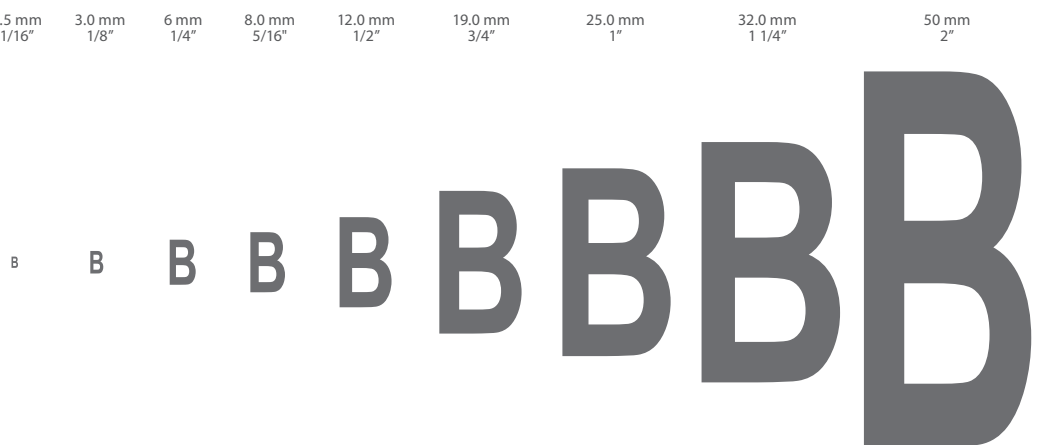
Single-line characters

0.127 mm .005"	0.25 mm .010"	0.38 mm .015"	0.50 mm .020"	0.76 mm .030"	1.0 mm .040"	1.52 mm .060"	2.28 mm .060"	3.17 mm .125"	4.34 mm .171"	6.35 mm .250"
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Multi-line characters

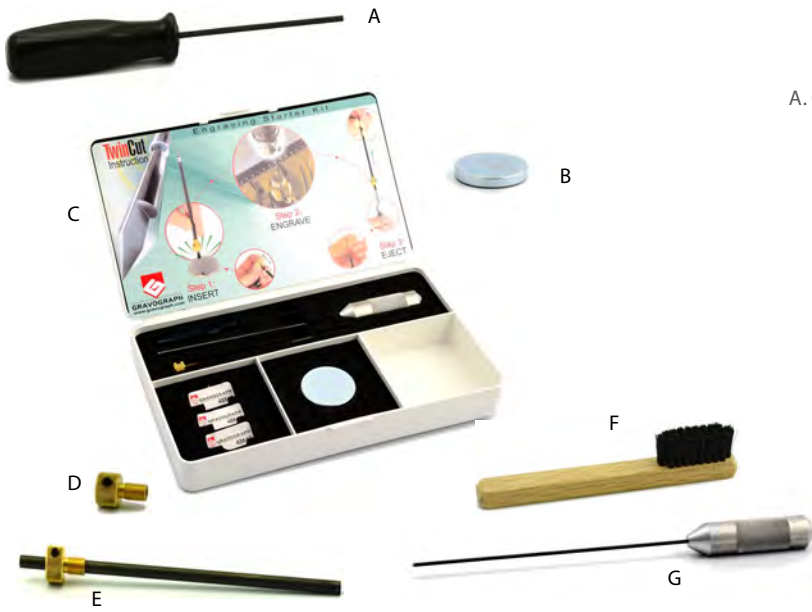
0.127 mm .005"	0.127 mm .005"	0.25 mm .010"	0.25 mm .010"	0.38 mm .015"	0.38 mm .015"	0.76 mm .030"	1.02 mm .040"	1.52 mm .060"	1.52 mm .060"	2.30 mm .090"
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How to choose the truncation width of an engraving cutter?



Example : Height of characters to be engraved with multi-line characters : 12 mm => tool width = 0.75 mm

ACCESSORIES: TOOLS AND GRINDING EQUIPMENT



	Onecut	Twincut	IS machine	M40
A. Cutter knob key	■	■	10016	
B. Steel block		■	13798	
C. Starter kit		■	69722	69723
D. Cutter knob	■	■	12335	Button integrated into the spindle
E. Tool holder		■	22987	69729
F. Brush	■	■	11791	
G. Ejector		■	69724	69727

GRINDING EQUIPMENT

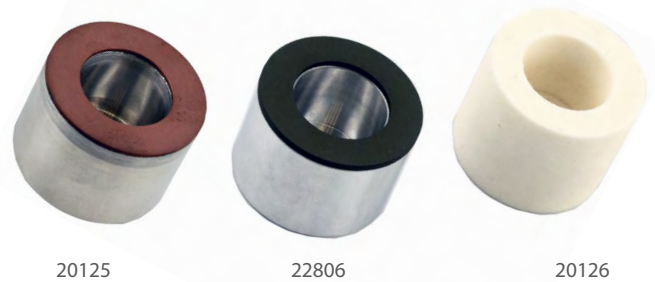


20125	Diamond grinding wheel D46 for Carbide cutters
20126	Corundum grinding wheel for Steel cutters
22806	Diamond grinding wheel D16 for finishing Carbide cutters
20890	CG30 collet - Ø = 3.17 mm (1/8")
20891	CG30 collet - Ø = 4.36 mm (11/64")
20892	CG30 collet - Ø = 6.35 mm (1/4")

20890
Ø = 3.17 mm

20891
Ø = 4.36 mm

20892
Ø = 6.35 mm

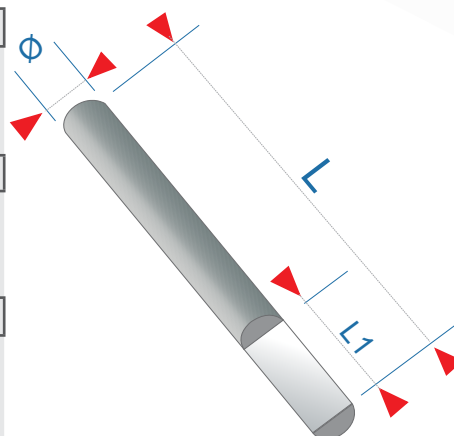


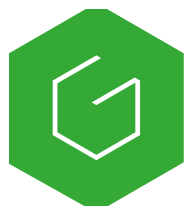
20125

22806

20126

	3.17-1/8"	L	L1
	30046	105.0 / 4.134"	13.0 / 0.511"
	73011	50.0 / 1.968"	13.0 / 0.511"
	4.36-11/64"	L	L1
	28082	160.0 / 6.299"	.13.0 / 0.511"
	73012	50.0 / 1.968"	13.0 / 0.511"
	6.35-1/4"	L	L1
	73013	50.0	16.0 / 0630"





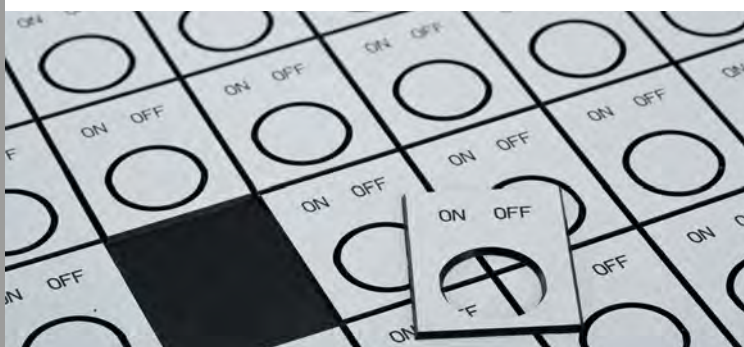
GRAVOSTYLE

The unique software for **laser**
and **rotary** engraving machines

Discovery

Laser + Rotary

Go hybrid.
Drive laser & rotary technology



- Matrix & variable lists
- Import of vector files (DXF, EPS, HPGL etc.) and images (BMP, JPG, PNG and TIF etc.)
- Plate Point & Shoot: makes it possible to define the engraving area directly on the machine
- PDF import & files export (PDF, DXF, EPS, HPGL...)
- Alignment & transformation tools
- Geometric shapes
- Laser driving capabilities with presets
- Extensive choice of symbols
- Calibration wizard: one-step process to establish optimal laser settings
- On-screen preview

Options

- Braille production
 - Font editor
- Personalisation pack:**
- Handwriting stroked engraving fonts
 - Photo processing capabilities
 - Additional stroked engraving fonts

- Plate serialisation
- Badges, nameplates & doorplates
- Photo touch-ups
- Jewellery & gifts
- Variable list of names
- Funeral plates
- Rubber stamps
- Pet tags & key rings
- Legend plates
- Valve & push button tags

- Computip feature to recommend the most efficient tools
- Support for Automatic Plate Feeding applications
- Support for cylindrical engraving
- Customisation of working environment

DiscoveryMax

Laser + Rotary

Productivity package



- Scanning & vectorisation
- Point mode & bitmap editor
- 2D recess by colour
- Retail font pack (incl. over 100 fonts)
- Scripting (macro function capabilities)

- Text on a curve

- Logo scanning & editing
- Trophy plates
- Plates with text & logos
- Signage with text & logos

- Post-it function to take notes while you engrave
- Hot keys
- Favourites toolbar
- Object freezing

Levels

Features

Applications

Features

In all
levels

GravoStyle™, available in multiple levels of functionality provides features and special functionalities meeting specific market needs for engraving, cutting, marking, ablating and annealing processes for CNC rotary and CO₂, YVO4 and fiber laser technologies. Specialised functionalities include:

- Dials, scales, matrix and serialisation labeling for the industrial market;
- Letter cutting and Braille for the signage market;
- Photo engraving, handwritten dedication and decorative plaques thanks to the personalisation pack.


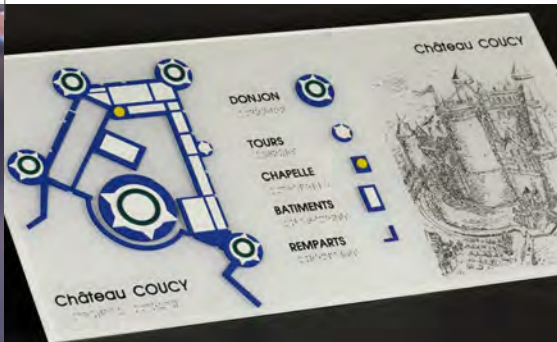

There are many more such functions for the engraver and endless possibilities for their use. Use the software today and experience the depth and breadth of its capabilities.

GravoStyle™ is designed to work together with your current 3rd-party design software while providing powerful engraving-specific features.

Engraving made easy. GravoStyle™'s new features include a Dynamic Helpdesk Assistant (DHA) with video directly in the software engraving window. In addition, an online Engraving Database of Parameters (EDP) provides the optimal laser process settings for the full range of Gravotech laser consumables.

RUN WITH



<p>Industry</p> <p>Laser + Rotary</p>	<p>Graphic</p> <p>Laser + Rotary</p>	<p>3D</p> <p>Laser + Rotary</p>
<p>Power, precision & productivity</p>	<p>Unleash your creativity</p>	<p>Take your engraving to a new dimension</p>
		
<ul style="list-style-type: none"> • Dials & scales • Scripting (macro function capabilities) • Long Plate management • Measurement tools • Batch import • External data import (CSV, TXT, Excel®, SQL, ODBC...) • Shape duplication tools 	<ul style="list-style-type: none"> • Nesting (material optimisation) • CAM module (advanced tool management) • Powerful on-screen simulation & rendering • Advanced Braille toolpath management • Print & Cut module • LED positioning function • Photo lasering optimisation function • Moulds and dies • Shading (3D effect) 	<ul style="list-style-type: none"> • Surface creation & manipulation tools • Styl!Art 3D modeling module • 3D texturing • Sculpture tool • 3D CAM advanced toolpaths • 3D visualisation tools • Includes all 2.5D functions
<ul style="list-style-type: none"> • Barcodes, Datamatrix, QR Code® and UID - unique identification with variables management 	<ul style="list-style-type: none"> • 2.5D toolpath for jewellery/metal stamps & intaglio for signage • Laser toolpath management for deep marking 	
<ul style="list-style-type: none"> • Rating plates • Control panels • Part identification & traceability • Circuit boards • Linear & 2D barcodes • Paper & cardboard cutouts with laser 	<ul style="list-style-type: none"> • Advanced photo lasering • Model making • Marquetry • Hot stamping • Award design & production • Printed signage cutout • Signs conception 	<ul style="list-style-type: none"> • 3D signage • Displays • Embossing/debossing dies • Food molds • Furniture decoration • Models & prototypes • Award & recognition • Commemorative

	LS100	LS100EX
Gantry	Compact & affordable 	Extended capacities 
	Dimensions - LxWxH (mm)	775 x 725 x 450 mm (30.51" x 28.54" x 17.72")
Lasering area (mm)	460 x 305 mm (18" x 12")	610 x 305 mm (24" x 12")
Z axis (mm)	145 mm (5.7")	145 mm (5.7")
CO2 ENERGY (W)	25	25
Sealed CO2 (W)	40 - 60	40 - 60w
Fiber (W)	-	20 - 30
Edge	-	-
Standard features	Point & Shoot - Full Table autofocus - Electrical Z - Embedded dashboard - Manual Print & Cut - Laserstyle software - Direct driver - integrated exhaust compatible	
Options	Honey Comb cutting table - Cylindrical attachment - range of focal optics - Exhaust devices	
Weight (Kg)	43	70

	WeLase™
Galvo	Compact & aesthetic for personalization 
	Dimensions - LxWxH (mm)
Lasering area (mm)	110 x 110 mm (4" x 14")
Z axis (mm)	200 (7.9")
CO2 ENERGY (W)	30
Fiber (W)	20 - 30
Green (W)	5
Hybrid (W)	10
Standard features	Manual autofocus, Laserstyle or ABC software, direct driver, Wifi connection, lighted marking area
Options	Rotary device for Jewellery, Exhaust, Cutting pin table, large choice of jigs and clamps, Travel case, External Touchscreen pad
Weight (Kg)	Up to 44kg (97 lbs)

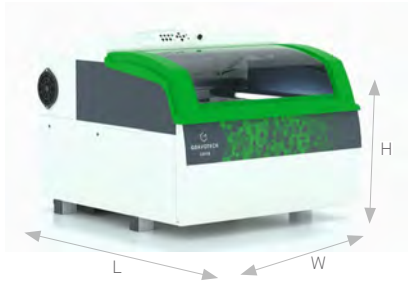
Range of accessories for maximum productivity

Floating Pin Cutting Table	Honeycomb Cutting Table	Cylindrical attachments	Focal lenses
<ul style="list-style-type: none"> - Virtually eliminates back-flash effect - Quick and easy setup - Relocatable pins - Suitable for all gantry lasers 	<ul style="list-style-type: none"> - Stainless steel frame - Excellent rigidity and durability - Graduated alignment rulers for fast and accurate item positioning - Minimises back-flash effect - Easily inserted & removed from laser - Covers the whole of the lasering area - Available for LS100-LS100EX-LS900-LS900XP lasers 	<ul style="list-style-type: none"> - Plug & Play installation - Tilt mechanism allows lasering of conical shaped items - 130 mm maximum diameter (LS100-LS100EX) - 200 mm maximum diameter (LS900-LS900XP-LS1000XP) - Supplied with five plastic cones of assorted sizes - Optional concentric chuck - Cone holding system allows lasering repeatability 	<ul style="list-style-type: none"> - A wide range of lenses for specialist applications such as precision lasering, thick material cutting or increased Z clearance. - Available lenses: 1.5" - 2.0" - 2.5" - 4.0"
<p>Fixing</p> <ul style="list-style-type: none"> - Gravogrip mat 			

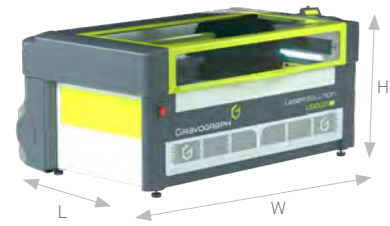
LS900 - LS900XP

LS1000XP

Heavy duty



High productivity



1080 x 630 x 810 mm (42.52" x 37.2" x 31.89")

1080 x 945 x 810 mm (42.52" x 37.2" x 31.89")

610 x 610 mm (24" x 24")

1220 x 610 mm (48" x 24")

250 mm (9.84")

300 mm (11.81")

25

-

40 - 60 - 80

60 - 80 - 100 - 150+

20 - 30 - 50

-

40W CO2 + 20F / 30F / 50F

-

Point & Shoot - Full Table autofocus - Electrical Z - Embedded dashboard - Manual Print & Cut - Laserstyle software - Direct driver - integrated exhaust compatible

Honey Comb cutting table - Cylindrical attachment - range of focal optics - Exhaust devices

180

230

Range of integrated exhaust devices

Designed specifically for Gravograph systems, these exhaust units are essential lasering accessories. They enable the marking, engraving and cutting of fume generating material such as rubber, acrylic or wood within a safe and pleasant working environment. Compact - 3 stage filtration - Single point connection - Moveable, on castor wheels - Synchronised on/off with laser.



	LE120HP / LE140HP	LE150HP	LNI900	LE190HP	ES Mini	ES10	ES30
Max. air flow (m³/h)	400	400	240	700	190 - 220	200	360
Static pressure (kPa)	10	10	22	10	3	4	9
Active carbon (L)	20	40	42	40	-	13	30
Compatible	LS100	LS100Ex	LS900	LS1000XP	We Lase	With full range	



See our complete range of laser accessories >



M series

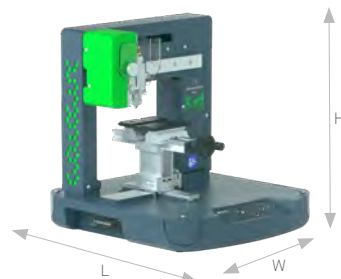
M10 JEWEL

Compact, quiet and portable. For inside and outside engraving of rings and bangles. Footprint smaller than A4 size!



M20

An affordable engraving system that is convenient, easy-to-operate.
 M20 - Flat items engraver.
 M20 PIX - Photo engraver - personalisation equipment for picture and text engraving.
 M20 PEN: engraving of pens and flat items.
 M20 JEWEL - to engrave on rings (inside and outside), medals, chain bracelets.



Dimensions - LxWxH (mm)

230 x 293 x 290 (9" x 11.5" x 11.5")

340 x 310 x 310 (13.5" x 12" x 12")

Engraving area (mm)

From Ø6 to 80

100 x 100 (3" x 3")

Z stroke (mm)

-

30 (1.18")

Net weight (kg)

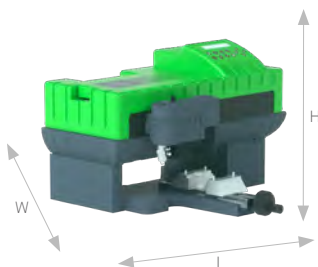
6.5

10

100 series

IS200

IS200, for personalising small objects, badges and plaques.



IS400

A flexible professional engraving machine for trophies and plaques, small signage, identification of industrial parts and light machining.



IS200

IS400

Dimensions - LxWxH (mm)

500 x 455 x 295 (20" x 18" x 12")

435 x 610 x 893 (17" x 24" x 35")

Engraving area (mm)

80 x 225 (3" x 9")

305 x 210 (12" x 8")

Z stroke (mm)

15 (0.59")

40 (1.57")

Net weight (kg)

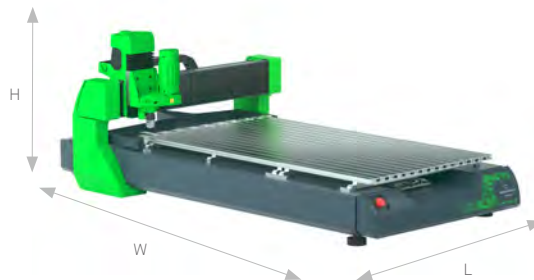
20

42

1000 series

ISx000

Three heavy-weight computerised engraving machines for cutting or machining. The XP engraving systems are fast, accurate, and powerful.



IS6000

IS6000XP

IS7000

IS7000XP

Dimensions - LxWxH (mm)

1093 x 1015 x 735 (43" x 40" x 29")

1093 x 1015 x 735 (43" x 40" x 29")

1093 x 1420 x 735 (43" x 56" x 29")

1093 x 1420 x 735 (43" x 56" x 29")

Engraving area (mm)

610 x 410 (24" x 16")

610 x 410 (24" x 16")

610 x 815 (24" x 32")

610 x 815 (24" x 32")

Z stroke (mm)

80 (3.15")

80 (3.15")

80 (3.15")

80 (3.15")

Net weight (kg)

168

180

220

230

M40

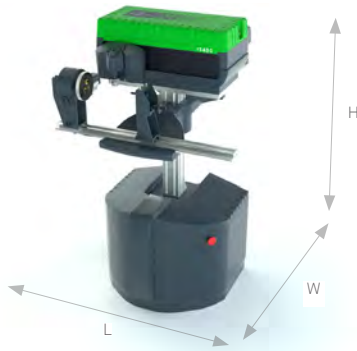
An affordably-priced engraving system that's fast and quiet for engraving functional and technical signage.
 M40 - Plates and bulky items engraving
 M40 GIFT - M40 with tooling for cylindrical parts and glass engraving. Ideal for the retail trade and gift shops.



M40Deep Vice / ArtFoil	M40Gift
550 x 615 x 425 (22" x 20" x 17")	750 x 540 x 570 (29.5" x 22" x 22.5")
305 x 210 (12" x 8")	305 x 210 (12" x 8")
40 (1.57")	40 (1.57")
20	35

IS400 Volume

The future of engraving today, unique on the market.
 Easy marking on a curved surface thanks to the innovative iQ+ Terrain Follower.



900 x 615 x 840 (35.5" x 24" x 33")
305 x 210 (12" x 8")
40 (1.57")
90

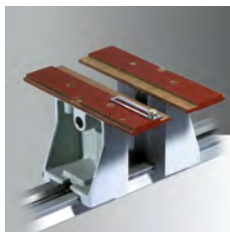


IS8000	IS8000XP
1093 x 1825 x 735 (43" x 72" x 29")	1093 x 1825 x 735 (43" x 72" x 29")
610 x 1220 (24" x 48")	610 x 1220 (24" x 48")
80 (3.15")	80 (3.15")
265	280



Gravotech provides an extremely wide selection of jigs and holding devices, developed for and with customers.

For flat engraving



Standard celeron jigs
150 mm (5.9")
Ref. 10165



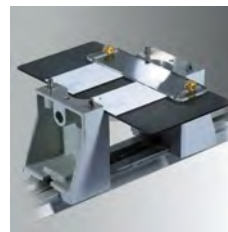
Aluminium jigs
150 mm (5.9")
Ref. 20189



Aluminium jigs
240 mm (9.5")
Ref. 21131



Large plate, aluminium
jigs
310 x 110 mm
(12" x 4")
Ref. 20191



Gravofoil™ vice
Ref. 22868



Gravogrip™
Several sizes available.
Please contact us for
more details. See p.13.



Support table +
Gravogrip™
Ref. 70997 for M20/
M20XL



Support table + Gravogrip™
Ref. 71116 for IS200
Ref. 45697 for M40

For jewellery items



Jigs for jewellery,
bracelets and medals
Ref. 28192



Watch/medal jigs
fits any shape
Ref. 10182



Signet ring jigs
with protection pad
Ref. 20194



Perfect for baby identity
bracelets
Ref. 22870



Jigs for rigid bangles
Ref. 51729



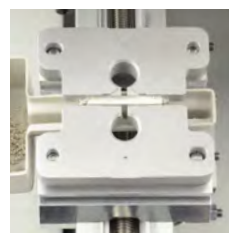
Jig for ring with large
stone
Ref. 30050



Jigs for wedding rings
Réf. 12500



Jigs for bracelets
Réf. 77961

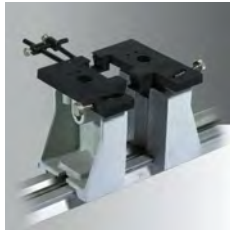


Jigs for bracelets and
pendants
Réf. 77320

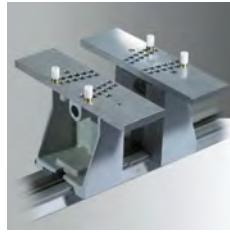
For gifts and tableware



Spectacle bow jigs
adjustable width
Ref. 20190



Cutlery jigs
with adjustable stops
Ref. 20129



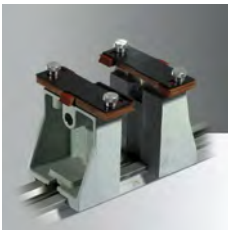
Cutlery jigs
with relocatable pins
Ref. 22370



Celeron badge jigs
103 x 36 mm
(4" x 1.4")
Ref. 20128



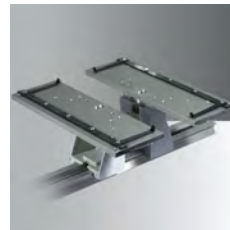
Pen & tubular object jigs
Ref. 10169



Clip pen jigs
Ref. 20842



Multigrip jigs with
sliding pins & stops
Ref. 20196



Large plate/salver jigs
with relocatable pins
Ref. 20192



Cell phone jigs
Ref. 49510



Swiss army knife jigs
Ref. 28067

Specific applications



Circuit board jigs
with locating pins
Ref. 16638



Celeron unmachined
jigs
152 x 38 mm
(6" x 1.5")
Ref. 10179



Funeral plate jigs for M20
164 x 50 mm
(6.5" x 2")
Ref. 47697

Depth noses are essential to ensure perfect and constant engraving depth. Gravotech offers a wide variety of noses.

Depth noses



Steel nose
Ø 0.7 mm (.03")
Ref. 20130



Steel nose
Ø 1.5 mm (.06")
Ref. 20131



Steel nose
Ø 2.4 mm (.09")
Ref. 21755



Steel nose
Ø 2.5 mm (.1")
Ref. 20132



Teflon nose
Ø 3 mm (.12")
Ref. 20133



Steel nose
Ø 4.6 mm (.18")
Ref. 21086



Steel nose
Ø 16 mm (.63")
Ref. 20960

Vacuum noses



Ø 1.5 mm (.06")
Ref. 21674



Ø 3.3 mm (.13")
Ref. 21672



Ø 8 mm (.3")
Ref. 21673

Vacuum swivel noses



Steel swivel nose
Ø 2.5 mm (.1")
Ref. 22464



Teflon swivel nose
Ø 3.5 mm (.14")
Ref. 22481



Steel swivel nose
Ø 5 mm (.2")
Ref. 13058



Swivel vacuum nose for
collet spindle
Ø 2.5 mm (.1")
Ref. 64189

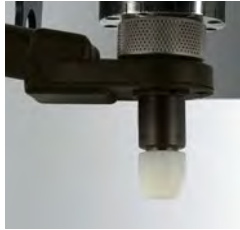


Swivel vacuum nose for
collet spindle
Ø 5 mm (.2")
Ref. 64188

Long vacuum teflon noses



Ø 2.5 mm (.1")
Length 12 mm (.48")
Ref. 28061



Ø 2.5 mm (.1")
Length 22 mm (.87")
Ref. 28062



Ø 2.5 mm (.1")
Length 27 mm (1.06")
Ref. 28063

Specifics



Fixed diamond nose
Ref. 22884



Prismatic swivel nose
Ref. 22885



Feather touch
Ref. M20 : 81898
Ref. M40 : 81950
Ref. IS : 78465

Steel noses:

The most commonly used noses (resistant and highly polished for minimum plate scratching).

Teflon noses:

For engraving on easily scratched materials, such as metal.

Swivel noses:

For engraving on curved surfaces (steel or teflon).

Prismatic noses:

For engraving on jewellery items such as ID bracelets or bangles.

Vacuum noses:

Same as steel nose, can be linked to a swarf extractor.

Diamond noses:

Provides better rigidity & accuracy than a non-rotating diamond cutter - mainly used for photo engraving and jewellery.

Feather touch :

This specific cutter button replace the standard cutter button. Feather touch is equipped with a spring, allowing an homogeneous result, and an object surface following during diamond non-planar engraving. Feather touch allow to reduce engraving pressure for a feathery engraving result.

Spindles



High-speed spindle
150W



High-speed spindle
750W



High-speed spindle
1000W

	150W	750W	1000W
IS400	Option	N/A	N/A
IS 6-7-8000 IQ	Option	Option	Option
IS 6-7-8000 XP	Option	Option	Option
IS 6-7-8000 XP MILLING	N/A	N/A	Standard
max rotation speed	60k rpm	24k rpm	60k rpm
Compatibilities	Regulating nose	High torque	Pneumatic clamp

Chips collector



Compact chip collector

A must-have accessory that keeps the machine clean and the job easier to engrave. Helps keep the workplace tidy.

	Compact chip collector	IS machines chip collector
Size - LxWxH (mm)	155 x 100 x 180 (6" x 4" x 7")	290 x 290 x 540 (11.4" x 11.4" x 21")
Weight (kg)	1.3	23
Max. air flow (m³/h)	20	25
Max. static pressure (kPa)	2.2	7.3
Compatible with	M20 - M40 - IS200	100 Series - 1000 Series



IS machines chip collector

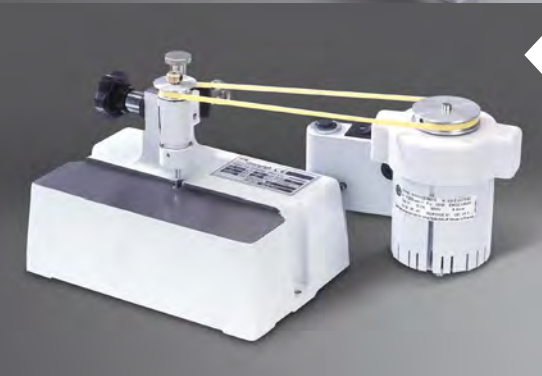
Bevelling machines



Bevelled (or "rounded") edges make plates and badges look much smarter, providing the finishing touch customers are looking for.

VA2

Only one bevelling angle (45°), but able to tackle material up to 6 mm (.236") thick + with integrated swarf extractor.

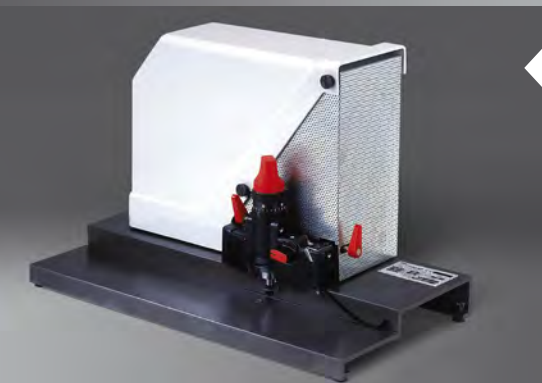


B4

The most basic version of the three machines, able to bevel up to 1.6 mm (1/16") thick material at either 45° or 90°. No swarf extractor.
Size: 310 x 160 x 120 mm (12.2" x 6.3" x 4.7").



See p.81.



B6

Up to 3.2 mm (1/8") material thickness, integrated swarf extractor, 45° and 90° angles, adjustable in depth and height and supplied with a set of accessories for cutting rounded corners. The professional engraver's choice.
Size: 500 x 340 x 300 mm (19.7" x 13.4" x 11.8").



See p.85.

Saws



VA10 / VA11

Different versions of the safety saws are available, depending mainly on the material size and thickness customers want to cut. These saws are able to cut most materials (i.e. plastic, acrylic, brass, aluminium, etc).

	VA10	VA11	VA21/15
Size - LxWxH (mm)	830 x 550 x 250 (33" x 22" x 10")	910 x 550 x 250 (36" x 22" x 10")	1280 x 551 x 250 (51" x 22" x 10")
Max. cutting length (mm)	620 (24")	665 (26")	1030 (40")
Max. material thickness (mm)	Plastics	6.3 (.248")	7 (.276")
	Gravoxal™ / Gravobrass™	4 (1/6")	5 (.20")
	Gravostrat™	6.3 (.248")	7 (.276")
	Aluminium profiles	-	15 (.59")
Vacuum extractor	Yes	Yes	Yes

VA21/15

Guillotines

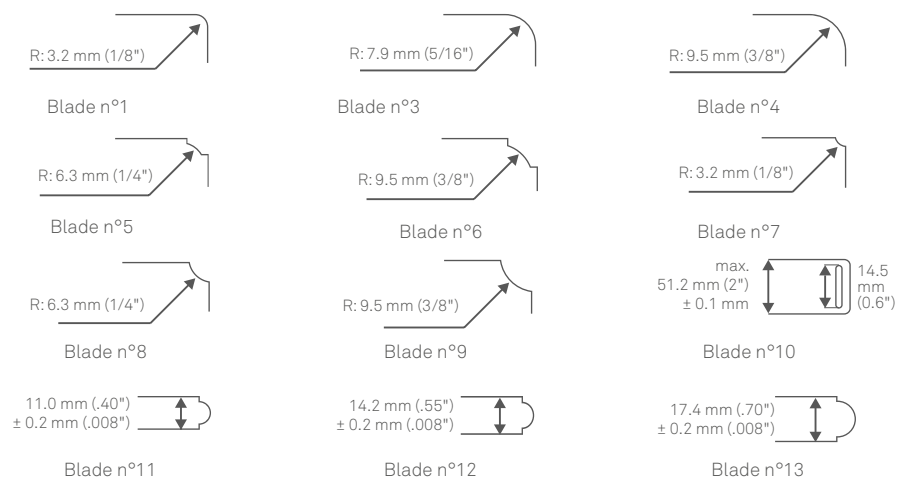


Whereas saws can cut virtually any material, guillotines are limited to certain types of thin plastic and very thin metal. The advantages of using a guillotine lie in its cutting precision and quality, speed of operation and possibility to cut very small pieces. The CSP and CSM are the same guillotine fitted with either a blade for plastic (CSP) or metal (CSM).

	CSP	CSM	CSC
Size - LxWxH (mm)	530 x 380 x 240 (21" x 15" x 9.5")	530 x 380 x 240 (21" x 15" x 9.5")	240 x 150 x 120 (9.5" x 6" x 4.5")
Max. cutting length (mm)	320 (12.6")	320 (12.6")	n/a
Max. material thickness (mm)	Plastics	n/a	3 (1/8")
	Metals	n/a	0.8 (1/32")



The CSC is a special corner cutting guillotine, featuring in option many different corners.









CO₂ Laser parameters for:

LS100, LS100Ex (40 W)



This document provides a base of engraving parameters to be used on Gravotech laserable materials. They are indicative values that can be subject to modification, that are recommended by professional engravers and have been tested and verified for the LS100Ex & LS100 40 W.

Plastics Laser	 %	 %			Refocus			Dpi	Thickness	Comments
	Power	Speed	Passes	Focus		Air	Type			
Gravoply™ Laser	10%	100%	1	-	Before	no	Vector	500	-	
	40%	100%	1	-	Before	no	Raster	500	-	
	80%	30%	1	-	Before	yes	Cutting	500	0.8mm (.030")	
	100%	28%	1	-	Before	yes	Cutting	500	1.3mm (.050")	
Gravoply™ Ultra	10%	100%	1	-	Before	no	Vector	500	-	
	40%	100%	1	-	Before	no	Raster	500	-	
	70%	40%	1	-	Before	yes	Cutting	500	0.5mm (.020")	
	100%	25%	1	-	Before	yes	Cutting	500	1.6mm (1/16")	
	100%	10%	1	-	Before	yes	Cutting	500	-	
Gravoply™ 2	10%	100%	1	-	Before	no	Vector	500	-	
	50%	100%	1	-	Before	no	Raster	500	-	
Gravoglas™ 1	80%	40%	1	-	Before	no	Vector	500	-	Subsurface engraving
	80%	40%	1	3.0mm (1/8")	Before	no	Raster	500	-	Subsurface engraving
	100%	18%	1	-	Before	yes	Cutting	500	1.5mm (1/16")	Keep the plastic film on
	100%	10%	1	-	Before	yes	Cutting	500	3.0mm (1/8")	Keep the plastic film on
	100%	5%	1	-	Before	yes	Cutting	500	5.0mm (.20")	Keep the plastic film on
Acrylic	30%	100%	1	-	Before	no	Vector	500	-	
	60%	100%	1	-	Before	no	Raster	500	-	
	100%	8%	1	-	Before	yes	Cutting	500	3.0mm (1/8")	
	100%	5%	1	-	Before	yes	Cutting	500	6.0mm (.20")	
	100%	1%	1	-	Before	yes	Cutting	500	10mm (.40")	
Gravotac™ Exterior	50%	20%	1	-	Before	yes	Cutting	500	0.8mm (.030")	
	100%	25%	1	-	Before	yes	Cutting	500	1.6mm (1/16")	
Flexilase™	10%	100%	1	-	Before	no	Vector	500	-	
	30%	100%	1	-	Before	no	Raster	500	-	Gravogrip advised
	100%	5%	1	-	Before	yes	Cutting	500	0.25mm (.01")	
Stickalase™	10%	100%	1	-	Before	no	Vector	500	-	
	40%	100%	1	-	Before	no	Raster	500	-	Gravogrip advised
	20%	30%	1	-	Before	yes	Cutting	500	0.09mm (.004")	
Gravostrat™	50%	60%	1	-	Before	no	Vector	500	-	
	100%	60%	1	-	Before	no	Raster	500	-	
Rubbalase™	100%	20%	1	-1.5mm (-1/16")	Before	no	Vector	500	-	
	100%	20%	1	-1.5mm (-1/16")	Before	yes	Raster	500	-	
	100%	5%	1	-	Before	yes	Cutting	500	2.2mm (.087")	
Laser Wood	40%	70%	1	-2.0	Before	no	Raster	400	-	
	100%	40%	1	-	Before	yes	Cutting	400	0.4mm (1/64")	
	100%	35%	1	-	Before	yes	Cutting	400	1.0mm (3/64")	
	100%	12%	1	-	Before	yes	Cutting	400	2.5mm (3/32")	
	100%	5%	1	-	Before	yes	Cutting	400	4.5mm (11/64")	

The purpose of this document is to help each engraver get an idea as to how to engrave on Gravotech laserable materials.

The parameters are sorted by product range. Every material can have up to 3 different types of engraving process:

- Vector, for lightweight linear tracing
- Raster, for heavy marking
- Cutting

Some materials may not be engraved with a certain type of engraving process: if the specific type is not in the grid of the material, then it's most likely that it we do not recommend this engraving method on the indicated material.

Metallics Laser	Power	Speed	Passes	Focus	Refocus	Air	Type	Dpi	Thickness	Comments
Gravolase™ Metallics	10%	100%	1	-	Before	no	Vector	500	-	
	40%	100%	1	-	Before	no	Raster	500	-	
	70%	40%	1	-	Before	yes	Cutting	500	0.5mm (.020")	
	100%	25%	1	-	Before	yes	Cutting	500	1.6mm (1/16")	
Metallex™	10%	100%	1	-	Before	no	Vector	500	-	
	40%	100%	1	-	Before	no	Raster	500	-	All Metallex™ material surfaces
Gravoxal™	30%	100%	1	-	Before	no	Vector	500	-	All Gravoxal™ material surfaces
	50%	100%	1	-	Before	no	Raster	500	-	All Gravoxal™ material surfaces
AlumaMark®	30%	50%	1	-	Before	no	Vector	500	-	
	30%	80%	1	-	Before	no	Raster	500	-	
DuraBlack®	20%	80%	1	-	Before	no	Raster	500	-	

TECH TIPS

Floating Pin Table Cutting - When using a floating pin table, place an aluminum plate under the strips to avoid laser reflection to prevent engraving under the material.

Gravogrip™ Raster - Use Gravogrip™ when engraving on thin materials as they can have uneven surfaces.

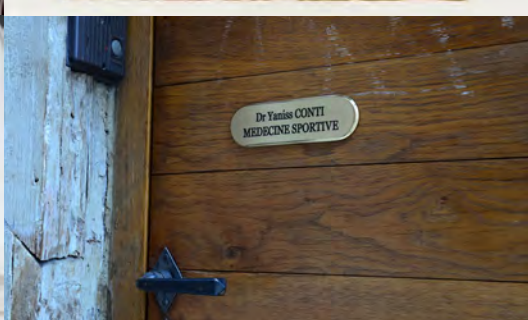
- Avoid using too much power when engraving to prevent damage to the Gravogrip™ plate.

Nb : in case of unexpected behavior during the engraving process, please refer to the machine's User Manual for troubleshooting.



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