



### innovative solutions

for

### engraving & marking



**SERVICES** 

ACCESSORIES

SOFTWARE

# THE GRAVOGRAPH TOTAL SOLUTION

Over 25 global subsidiaries serving customers worldwide...







### A Culture of Excellence

**Gravograph** is the world's leading manufacturer of marking solutions, offering a full range of equipment: C.N.C. (Computer Numerical Controlled) engraving machines, CO<sub>2</sub>, Fibre and Yag lasers, engraving materials, consumables and services. For over 60 years, **Gravograph** 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 800 employees worldwide.

**Gravograph** 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 **Gravograph** difference is founded on:

- A complete solutions approach: the Gravograph product offer lends itself to a full range of personalisation, signage and traceability applications,
- A complete technology solution: machines, software, accessories and consumables,
- A compete technical support solution: readily available field and telephone technical support,
- A complete training solution: training on-site or on Gravograph premises, phone support from engraving experts.

The comprehensive Gravograph product line includes:

- The world's largest and most innovative range of C.N.C. machines,
- State of the art CO<sub>2</sub>, Yag and Fibre laser engraving systems,
- Versatile micro percussion marking systems
- Innovative software dedicated to the engraving industry, designed to optimise Gravograph machines,
- The most comprehensive range of materials and engravables on the market,
- Responsive in-house fabrication services.

A cornerstone in the total solution concept is GravoStyle™, **Gravograph**'s single software platform for both C.N.C. machines and lasers. This new generation software enables users to switch engraving technologies and applications without changing software programme.



**Gravograph** develops and markets the world's highest quality and most durable marketing 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 setvice.

For the latest catalogue updates, visit our website: www.gravograph.com

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## MATERIALS Selection guide



Laser engraving Rotary engraving

Indoor use Outdoor use Surface S engraving e

Subsurface engraving

	ROTARY ENGRAVING OR LASER ENGRAVING WHAT WILL BE THE FINAL APPLICATION OF THE PRODUCT?							
	WHAT WILL BE THE FINAL APP				PLICATIO			
	Tactile Braille legislation compliant signage*	Other signage, badges, or identification for flat surfaces	Product identification or labelling for curved or flexible surfaces	Award plaques or trophy plates	Tactile Braille legislation compliant signage*	Other signage, badges, or identification for flat surfaces	Product identification or labelling for curved or flexible surfaces	Award plaques or trophy plates
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	BRAILLE*	PLASTIC / METAL	PLASTIC / METAL	PLAQUES	BRAILLE*	PLASTIC / METAL	PLASTIC / METAL	PLAQUES
	GravoTac	Gravoply 1 Gravometall	Gravoply Gravoxal	Gravoply Ultra	GravoTac	Gravoply Gravoxal	Gravoply AlumaMark	Gravoply Ultra
	Gravoglas 2 (matt)	Metallex Gravostral	Gravolase Gravoxal Metallics Premium	Colored Aluminum		Gravoply 2 Gravoxal Premium	Gravolase Metallics	Gravoxal
		Gravoply Ultra     Gravoxal       Gravoply 2     Gravoxal Premium       Gravoply 3     Gravobrass Exterior	Gravofoil Gravoply Laser Flexilase	Trophy Brass Gravostral Gravoxal Gravolase		Gravolase AlumaMark Metallics Gravometall (black) Gravoply Laser Acrylic	Gravoply Laser Stickalase Flexilase	Gravolase Metallics Gravometall (black) Flexilase
2		Gravoglas 2 GravoTac Gravostrat Gravoply Laser Gravoglas 1		Gravometall Gravometall Flexilase		Pol jiid		
OUTDOOR 😝	GravoTac Exterior	Gravoply UltraGravobrass ExteriorGravoglas 1GravoxalGravoglas 2Gravoxal Premium	Gravoply Ultra Gravofoil	Gravoply Ultra	GravoTac Exterior	Gravoply Gravoxal Ultra Gravoglas 1 Gravoxal Acrylic	Gravoply Ultra	Gravoply Ultra

\* Any material of 1.5 mm thickness (or more) may be used for Braille applications.

# WHAT MAKES OUR MATERIALS THE BEST

There are several reasons why Gravograph is the IN best source for engraving materials. We have the O most experience in the industry, as well as the end

most experience in the industry, as well as the greatest number of resources to help you meet your material needs. Our special-order capabilities and unparalleled QUALITY are the greatest reasons to buy your materials from us.

Quality is a somewhat vague word. Therefore, it is important that we highlight the unique characteristics which make our materials second to none.

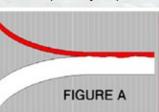
#### **RAW MATERIALS**

All of our raw materials are 100% prime. This means that we do not use any regrinds. We only use virgin materials. This means consistent thickness and consistent colour, which means consistent engraving performance.

#### CAP CONSISTENCY

Customers who have used both our material and competitive material continually applaud our cap consistency. This didn't happen by accident. We extrude the cap and core separately, then laminate the layers together days after each layer has cooled and solidified. Each layer is continually monitored with an advanced "gamma backscatter gauge" during the entire extrusion process. Final samples are manually "gauged" after extrusion. The cheaper way to produce

the material is to marry the layers together while they are in the extrusion process. This is referred to as "co-extrusion". (See figure A). Problems with this method arise



because the products are still in a molten state at this stage. While you can maintain a consistent overall thickness, the thickness of each individual layer cannot be accurately maintained.

#### COLOUR CONSISTENCY

We only use colour concentrates that are controlled to less than  $1\Delta E$  (a variance of  $2\Delta E$  qualifies as a commercial colour match). A precise method of metering the colour concentrate is also employed. During extrusion, the opacity is periodically tested with a calibrated densitometer, which gives a numerical value of opacity that is compared to the master value. Finally, the finished product is compared to colour masters (which are classified by colour and surface finish), under Macbeth colour inspection lights.

#### INDOOR/OUTDOOR

Our versatile indoor/outdoor materials are UV stabilised to ensure they maintain their original colour even in the toughest environments.

#### SHEET FLATNESS

Gravograph uses an in-line extrusion process, which means the material has never been in roll form. This process removes the inherent curling tendencies of rolled product. Then, the lamination process is controlled (through even temperature distribution) to produce a final flat sheet.

More importantly, all our 2-ply indoor materials are actually 3-ply materials. The problem inherent with 2-ply indoor materials stems from the fact that the cap and core are made of different materials. This is true of all major engraving sheet-stock providers (not just Gravograph). In this situation, the materials are pressed completely flat during the heated lamination process. Since the two different materials have different expansion/contraction

characteristics, the final product tends to curl a little as it cools. To overcome this problem, we actually put a cap on each side of the core. This layering technique balances the "pulling" from each cap, and the result is a sheet that



lays perfectly flat. Therefore, when you purchase a sheet of red/ white Gravoply, the sheet is actually constructed with a red cap, over a white core, over another white cap. (See Figure B) Our outdoor sheet stock (Gravoglas 2) does not require this triple layer effect, because the cap and the core are actually made of identical modified acrylic.

#### WHY DO YOU CARE?

We understand the importance of colour consistency, but perhaps you've never considered cap consistency as a very important trait.

Well, how many times have you had to re-run a job because half-way through completion, the cutter didn't reach all the way through the cap? It's especially frustrating after a large matrixed job runs for over an hour, and you return only to find out the job has to be re-run. Trying to engrave deeper to compensate can add wear to your cutter, reduce your productivity, and "bleed" characters together. How much time have you spent trying to make a "bowed" sheet lay flat? When creating raised letter signage, how many times when weeding the profile material from the base material has it snapped into numerous little pieces requiring extra time to clean? It all comes down to the old saying: "time is money".

It is worth the extra effort to provide a quality product which reduces problem engraving and maximises your bottom line.

# **KNOW YOUR PLASTICS**

#### GRAVOPLY LASER (p. 14)

New Gravoply Laser is both laser and rotary engravable. An acrylic core with a foil cap designed for detailed engraving and a clean cut. Excellent for indoor signage. A range of 80 material references, including 6 base colours and 25 surface colours, in 2 thicknesses and 3 finishes. Many excellent value references available at a lower price. Reduce your overall inventory value by stocking just one product line for all your 2-ply indoor needs.

#### **GRAVOLASE METALLICS (p. 16)**

Similar in appearance to the Metallex product line, Gravolase Metallics use a core of laserable solid DR plastic. DR is a special formulation of a modified acrylic best known for its laserability. Available in either a flexible 0.5 mm or a sturdy 1.6 mm overall thickness.

#### GRAVOPLY 1 (p. 18)

One of our most popular products, Gravoply 1 is constructed with a long-lasting 0.3 mm cap layer, perfect for almost any indoor application. Very good for many demanding industrial applications.

#### FLEXILASE (p. 21)

A high resolution material, flexible and laserable.

Especially developped for your indoor applications on curved surfaces, Flexilase is ideal for identification labels, trophy plates, bar codes,... This adhesive-backed acrylic material offers excellent quality results on engraving and cutting, both with rotary and laser marking. A large range of colours including metallics is available. Discover this fine and flexible material of outstanding quality.

#### GRAVOPLY 2 (p. 22)

The micro thin 0.1 mm foil cap of Gravoply 2 allows for very fine detailed engraving. Perfect for small text and/or intricate logos required of many indoor applications. Available in a wide range of colours, thicknesses and surfaces finishes. We also propose Gravoply 2 Gloss which has a glossy clear protective cap layer.

#### GRAVOPLY 3C (p. 25)

This 3-ply material is constructed with 3 layers to be engraved from one side. Its unique composition allows you to create a 3-colour interior sign with your engraver. Engrave to 0.1 mm to expose the first core, and to 0.3 mm to expose the second core. Perfect for safety signs and signs with logos.

#### METALLEX (p. 26)

A plastic that looks like metal. Save weight and expense for all your indoor metallic applications. Ideal for creating signage, badges, trophy and funeral plates. Available with a matt, glossy or satin finish. Metallex Gloss has an added, ultra glossy, clear, protective cap over the metallic foil – designed for the ultimate in scratch resistance.

#### STICKALASE (p. 28)

Available in white/black or black/silver. This 0.09 mm thick, adhesive backed laserable plastic is perfect for bar-codes, trophy plates and labelling on surfaces that are not flat. Sold in 120 mm x 10 m rolls.

#### RUBBALASE (p. 28)

This natural rubber is perfect for creating high quality rubber stamps with a  $CO_2$  laser machine. The odourless version ensures reduced odour emissions in the workshop during the engraving process. Sold in sheet form.

#### GRAVOSTRAT (p. 29)

A phenolic-based material. This very rigid, fibrous product is scratchresistant, has fire-retardant qualities and resists many chemical agents. The ideal material for your industrial identification.

#### GRAVOTAC and GRAVOTAC EXTERIOR (p. 37)

GravoTac creates raised letter signage compliant with Braille DDA regulations. The raised letter process is also a great way to create multi-coloured signage. The design of GravoTac provides the core (substrate) and cap (profile) layers separately. Available in many colour combinations, for indoor and outdoor signage needs.

#### GRAVOPLY ULTRA (p. 38)

Our most versatile product yet. This micro-cap product allows fine, detailed engraving and its solid plastic cap offers overall durability. UV stable, Gravoply Ultra can be used indoors and outdoors. Even better, this 2-ply product can be engraved with a rotary or laser engraver. Available in a variety of thicknesses, with many matt and satin surface finishes to choose from.

#### GRAVOGLAS 1 (p. 40)

This cast acrylic 2-ply is designed exclusively for subsurface engraving, and should be coloured after engraving. Gravoglas 1 allows for fine, detailed engraving and offers perfect cutting quality. Suitable for both rotary and laser engraving technologies, for indoor and outdoor use. Perfect for applications such as professional plates. Gravoglas 1 proposes conventional colours for the identification of pipes in the industrial sector (AFNOR NF 08-002 and INRS ED 88 norms).

#### GRAVOGLAS 2 (p. 42)

A 2-ply acrylic product, with a 0.3 mm surface offering excellent UV and scratch resistance. Suitable for both surface and subsurface engraving, for indoor and outdoor use. Available with a matt, glossy or textured surface.



Clear, cast acrylic available in several thicknesses. Offers a perfectly polished edge when cut with a CO2 laser. Ideal for trophies and professional plates. Can be surface and subsurface engraved. Add a coloured plate to the back of your engraving to achieve a colour contrast.

#### GRAVOFOIL (p. 46)

This very thin, adhesive backed product is designed for use with a rotary engraver. Its very flexible, PVC construction makes it suitable for many product applications like industrial signage or permanent labels for use even on curved surfaces. Resistant to many chemical agents, making it ideal for use in demanding industrial environments.

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## **KNOW YOUR METALS**

#### **GRAVOMETALL** (p. 30)



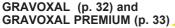
Excellent for a variety of indoor applications. Gravometall has a thin

protective lacquer coating to protect the surface from oxidising over time. Black Gravometall can be laser engraved to reveal a gold colour contrast. Gold, bronze and silver Gravometall can be coloured with paint or Gravoxide (see p.65).

#### **GRAVOBRASS EXTERIOR** (p. 31)



Gravobrass Exterior is a solid, raw brass typically used for office building exteriors, commonly called "Doctor Plates", and commemorative plates. To protect the brass from ageing and oxidising, it will be necessary to coat the final engraved, paintfilled plate with an exterior-grade clear lacquer.





Gravoxal and Gravoxal Premium are solid sheets of outdoor quality, anodised aluminium. Anodisation colours the actual metal to a depth of 0.1 mm, making it more durable than a painted surface. Gravoxal is perfectly anodised and protected on one side; Gravoxal Premium on both sides. The aluminium composition achieves excellent results in rotary cutting and engraving, making these materials

ideal for industrial applications such as front panels, ID plates and labels. Dark surface colours also offer excellent results when marking with a laser.

#### GRAVOSTRAL (p. 34)



The 0.3 mm aluminium caps cover a black phenolic core. Perfect for quality interior metal signage, you can engrave one or two sides according to the desired finish. No need to paint fill this metal product after engraving. This product can save you time and money.

#### ALUMAMARK (p. 35)



with adhesive backing. Suitable for ID plates and bar code applications.

**ealive** 

#### COLORED ALUMINUM (p. 36)



This aluminium has been coloured with a polyester-based paint. It is the preferred choice for economical trophy plates. The surface is sublimation-receptive for dve-sublimation transfers. Its clear masking enables you to print your dyes directly for easier clean up. Sublimation images work best with the white, silver or gold colours.

TROPHY BRASS (p. 36)





An economical brass alternative for signs, trophy plates, awards and plaques, designed for use with a rotary or laser engraving machine. Trophy Brass can provide you with the rich appeal of engraved brass without the associated cost.

# **MATERIAL SPECIFICATIONS**

**GRAVOPLY LASER GRAVOLASE METAL GRAVOPLY** 1 FLEXILASE **GRAVOPLY 2 GRAVOPLY 3C** METALLEX **STICKALASE** RUBBALASE GRAVOSTRAT GRAVOTAC GRAVOMETALL **GRAVOBRASS EXTER** GRAVOXAL **GRAVOXAL PREMI** GRAVOSTRAL ALUMAMARK **COLORED ALUMIN TROPHY BRASS GRAVOTAC EXTERI GRAVOPLY ULTRA GRAVOGLAS** 1 **GRAVOGLAS 2** GRAVOFOIL ACRYLIC

	Use	Material	Surface	Method of engraving	Engraving depth
	Indoor	Modified Acrylic	Matt	Rotary/Laser	0.1mm / .004"
ILLICS	Indoor	Modified Acrylic	Brushed/Glossy/ Matt	Rotary/Laser	0.1mm / .004"
	Indoor	ABS	Satin/Matt/Textured	Rotary	0.3mm / .012"
	Indoor	Acrylic	Brushed/Glossy/ Matt	Rotary/Laser	0.1mm / .004"
	Indoor	ABS	Matt/Glossy	Rotary	0.1mm / .004"
	Indoor	ABS	Matt	Rotary	0.1mm / 0.3mm .004"/.012"
	Indoor	ABS	Matt/Glossy	Rotary/Laser	0.1mm / .004"
	Indoor	Plastic	Matt	Laser	0.025mm / .001"
	Indoor	Rubber	Matt	Laser	-
	Indoor	Phenolic	Low Glare	Rotary	0.3mm / .012"
	Indoor	Modified Acrylic	Matt	Rotary	1.1mm / .043"
	Indoor	Brass	Matt/Satin/Glossy	Rotary/Burnish/Diamond/ Laser	Rotary 0.1mm .004"
RIOR	Indoor/ Outdoor	Brass	Glossy/Satin	Rotary	0.2mm / .008"
	Indoor	Aluminium	Matt/Glossy	Rotary/Diamond/Laser	Rotary 0.1mm .004"
IUM	Indoor	Aluminium	Matt/Glossy	Rotary/Diamond/Laser	Rotary 0.1mm .004"
	Indoor	Phenolic	Matt/Satin	Rotary	0.3mm / .012"
	Indoor	Aluminium	Matt/Satin	Laser	0.025mm / .001"
VUM	Indoor	Aluminium	Satin/Glossy	Rotary/Diamond	Rotary 0.2mm .008"
	Indoor	Brass	Satin/Glossy	Rotary/Burnish/Diamond	Rotary 0.2mm .008"
RIOR	Indoor/ Outdoor	ABS	Matt/Glossy	Rotary/Laser	0.025mm / .001"
	Indoor/ Outdoor	Modified Acrylic	Matt	Rotary/Laser	0.1mm / .004"
	Indoor/ Outdoor	Acrylic	Glossy	Rotary/Laser	0.2mm / .008"
	Indoor/ Outdoor	Modified Acrylic	Matt/Glossy/ Textured	Rotary	0.3mm / .012"
	Indoor/ Outdoor	PVC	Matt	Rotary	0.025mm / .001"
	Indoor/ Outdoor	Acrylic	Glossy	Rotary/Laser	Varies

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### Fabrication and Custom Services







### FABRICATION SERVICES SAVE TIME AND MONEY

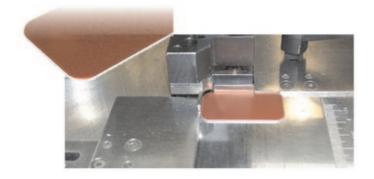
#### Bevelling

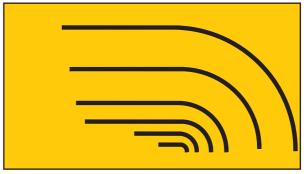
Bevelling is the cutting of an attractive angular edge to create a border. Our standard bevel is at a 45° angle.



#### **Rounded corners**

We offer a wide selection of different radii for rounded corners.





corners rounded to your specifications

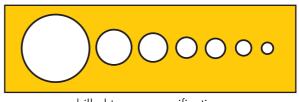
#### **Drilling holes**

To accommodate your mounting needs in plastic and metal.



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





drilled to your specifications

#### Supply these four measurements:

- 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.
- Diameter of any counter-sunk holes to be drilled (for mounting materials and wall holders with flat head screws.)

Please ask for a quotation.

# FABRICATION SERVICES





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#### Adhesive backing

We can apply adhesive backing to badges, nameplates, strips and sheets. Adhesive backing is applied before cutting material. Please specify interior or exterior use.

#### Magnetic backing

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

#### Hot-stamping

To add a coloured logo or inscription on badges, ID plates etc.



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#### **Custom solutions**

We also deliver cut to size self-adhesive signs in a matrix on a carrier material: • engrave it • take it off • stick it on. For more information, please contact us.



#### Ready to engrave badges

Just like our other cut-to-size items, badges are available in most of our engraving materials. Our badges include fasteners. For additional information, please see page 60 and 61.

#### Custom colour plastic material

Gravograph provides exclusive colour matching services! Although we offer the largest selection of engraving materials, we understand our customers' special requirements. Gravograph is able to supply proprietary material based on your specifications: colour, material and thickness. If a large job calls for a special colour combination, please contact us.

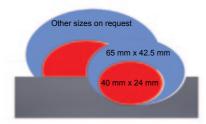
#### Lead-time

All fabrication orders are custom orders. Many orders are shipped within one business day, however custom orders may require additional time. Fabrication times are only an estimate and may vary according to production load.



# CUT TO SIZE

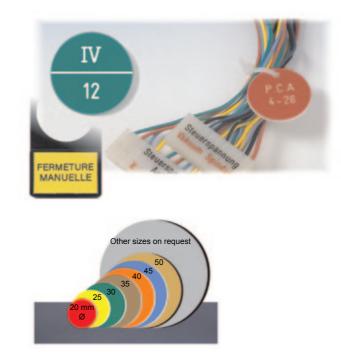
Circular and oval blanks are available from our current range of engraving materials. Custom sizes are available on request.



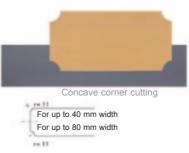
**OVAL BLANKS** Custom sizes are available with or without holes.



**CUTTING** Diam. 10.0 - 11.0 - 15.0 - 15.5 - 22.5 - 23.5 - 24.5 - 30.5 - 31.0 mm Other diameters on request.



**CIRCULAR BLANKS** Diameter 20 - 25 - 30 - 35 - 40 - 45 - 50 mm. Custom sizes are available with or without holes.



**SIGNS WITH CONCAVE CORNERS** Label push-buttons.

With industrial applications come the most diverse needs.

The Gravograph range of materials is the solution, offering both "standard" and "on demand" requests. Our engraving materials in plastic or aluminium are designed for use in harsh environments.





### **IDENTIFICATION LABELS** FOR ELECTRICAL APPLICATIONS

#### SAMPLE APPLICATIONS





Emergency stop buttons



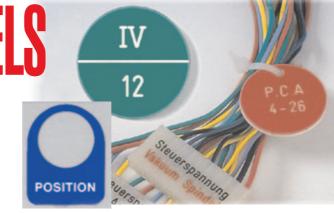
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#### CABLE TAGS

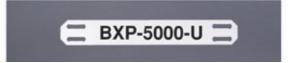
GRAVOPLY 1, size 150 x 11 mm,1.5 mm thick, with 4 die-cut sides for mounting with hose clamps. Other sizes on request.





#### CABLE TAGS

GRAVOPLY 1 and GRAVOPLY 2, size 120 x 20 mm, 0.8 mm thick, with 4 oblong holes 6.5 x 3mm. Other sizes on request.



**CABLE TAGS** GRAVOPLY 2, size 82 x 12 mm, 0.8 mm thick with 4 oblong holes 8 x 2 mm. Other sizes on request.





**Type 420** 20 or 25 mm Ø Circular blanks GRAVOPLY 1 or GRAVOPLY 2 with 3 x 2.5 mm Ø holes.

25 mm ø Circular blanks GRAVOXAL, 1 mm thick with 3 x 2.5 mm ø holes.

#### **Type 425** 60 x 18 mm Rectangular blanks black polished GRAVOXAL 1.5 mm thick rounded corners R = 3 mm with 4 oblong holes 10 x 2.2 mm.



**Type 430** 120 x 20 mm Rectangular blanks GRAVOPLY 1 or GRAVOPLY 2, 0.8 mm thick, with 4 oblong holes 6.5 x 3 mm.

Available with 2 pre-engraved lines on request. Also available in 1.6 mm thick material on request.



**Type 440 tags for identifying electrical switches** 30 x 40 mm tags GRAVOPLY 2, 0.8 mm thick. with a ø 22.5 or 24.5 mm hole off-centre.

Other dimensions, colours or materials on request.



### METALLEX OR GRAVOPLY 2 Inlaid plates

Available in 5 styles

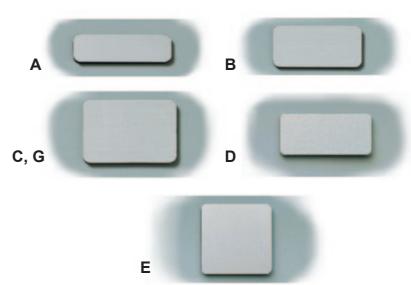
INLAID AND ID PLATES are blanks produced by special in-house tools. For higher volume orders, they offer better value than an equivalent cut to size service.





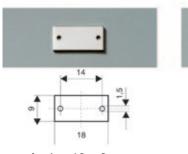
Our inlaid plates are made of METALLEX or GRAVOPLY 2 0.8 mm with bevelled edges r = 2 mm.

- A. size 27 x 8 mm
  B. size 27 x 12.5 mm
  C. size 27 x 18 mm
  D. size 22 x 10 mm
  E. size 22 x 22 mm
  F. size 27 x 27 mm
- G. size 27 x 19 mm

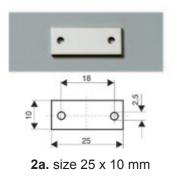


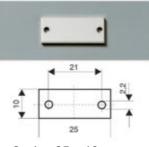
### **ID PLATES AND LABELS**

Available in 6 styles



1. size 18 x 9 mm





1. 2.

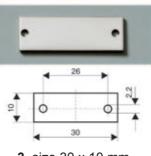
2a.

3.

3a.

4.

2. size 25 x 10 mm

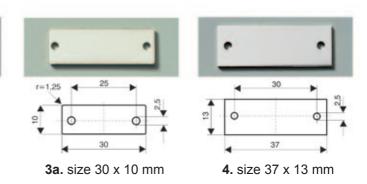


3. size 30 x 10 mm

Our ID plates and labels are made of GRAVOPLY 1, GRAVOPLY 2, METALLEX 0.8 mm thick or GRAVOXAL 1.0 mm thick and feature two drilled holes:

Ø	1.5	mm,	hole	spacing	14 mm

- Ø 2.2 mm, hole spacing 21 mm
- Ø 2.5 mm, hole spacing 18 mm
- Ø 2.2 mm, hole spacing 26 mm
- $\emptyset$  2.5 mm, hole spacing 25 mm, r = 1.25 mm
- Ø 2.5 mm, hole spacing 30 mm





#### тм Gravoply Laser

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INDOOR PLASTICS

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### ndes und Eigene 1. Einkauten: Begrenztes Vergnügen

In OA@ haben sich die Einkaufsgewohnhe Früher kaufte man Lebensmittel in den sogenann Kleidung und andere Produkte in den verschied individuell und persönlich. Seit Ende der siebzige s rung immer mehr große Einkaufszentren außerh. Kunden mit vielseitigen und preisgünstigen Ware das Einkaufen zu Fuß in autofreien Fußgängerzone (zum Teil auch unter der Erde) und in modernen geworden. Statistiken zeigen, dass mehr als 60 % de 10 kaufen wollen, sondern dass sie die Atmosphäre geni ren oder in den vielen Straßencafés und Restaurants et

# GRAVOPLY™ LASER → CONTARY





ving AND cutting!

#### • Badges

- Interior signage
- Identification plates
- Laser and rotary engravable
- Microthin surface layer for detailed engraving
- A wide range of colours
- Matt, brushed or glossy finish
- Excellent for interior signage
- Laser engraving and cutting

#### **Specifications**

Surface	Matt, Brushed, Glossy
Composition	Acrylic
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

#### Did you know?

We can mix any cap colour with any core colour.



	Laser eng		2-	2-ply	
		_	0.8 mm	1.3 mm	
	Surface colour	Core colour	.030"	.050"	
•	white	red	51047	51006	
•	white	blue	51057	51011	
•	white	black	51017	49971	
•	almond	black	51022	49978	
•	yellow	red	51048	51007	
•	yellow	blue	51058	51012	
•	yellow	black	51018	49973	
•	dark yellow	black	51019	49977	
•	orange	white	51035	51005	
•	orange	black	51020	51001	
•	red	white	51034	49988	
•	red	yellow	51055	51009	
•	burgundy	white	51043	49997	
•	burgundy	gold	51062	51016	
•	purple	white	67005	67006	
•	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	51056	51010	
•	air force blue	white	51038	49991	
•	air force blue	gold	51061	51015	
•	brown	white	51044	49993	
•	chocolate brown	white	51045	49994	
•	brushed bronze	black	51032	51004	
•	brushed aluminium	black	51025	49981	
•	glossy silver	black	51027	49980	
•	brushed silver	blue	51059	51013	
•	brushed silver	black	51026	49986	
•	matt aluminium	black	51024	51002	
•	new gold	black	51031	49985	
•	european gold	black	51030	49982	
•	brushed gold	black	51028	49983	
•	glossy gold	black	51029	49984	
•	grey	white	51046	49992	
•	grey	black	51023	49974	
•	black	white	51033	49987	
•	black	yellow	51049	51008	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			



#### Gravolase<sup>®</sup> Metallics

NATIONAL

LEAG



## GRAVOLASE METALLICS



- Badges
- Trophy plates
- Award plaques
- Identification plates
- 2-ply 0.5 mm 1.6 mm Surface colour Core colour .020" 1/16" brushed silver blue 18968 brushed silver black 18961 19003 . • glossy silver black 29548 29558 brushed bronze white 29545 29555 0 black brushed bronze 29544 29554 • copper black 29546 29556 • brushed gold black 18960 19002 . european gold black 29542 29552 29553 • glossy gold black 29543

- Metallic finish
- Laser and rotary engravable
- 0.025 mm (.001") cap layer for detailed engraving
- 0.5 mm (.020") thickness suitable for bevelling

#### **Specifications**

Surface	Metallic
Composition	DR Acrylic
Rotary engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	80°C	Max. temp.

#### Did you know?

We can cut any of our materials into small pieces for you – with or without bevelled edges. Drilled holes are no problem either. Our fabrication department is ready when you are!



INDOOR PLASTICS



# **GRAVOPLY**<sup>™</sup> 1



- Interior signage
  Identification plates
- Key tags

<ul> <li>Satin</li> </ul>	finish
---------------------------	--------

- Engraving depth 0.3 mm (.012")
- 2-ply or double-sided
- Many colours and thicknesses
- Scratch resistant

#### **Specifications**

Surface	Satin
Composition	XT/ABS
Profile engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

			2-ply		double-sided		
			0.8 mm	1.6 mm	2.4 mm	1.6 mm	3.2 mm
	Surface colour	Core colour	1/32"	1/16"	3/32"	1/16"	1/8"
•	white	magenta		29573			
٠	white	red	17279	17385	17484		29699
•	white	burgundy		29576			
•	white	teal		29568			
•	white	green		17313	17466		
•	white	pine green		29561			
•	white	blue	17284	17396	17489		
•	white	brown		29575			
•	white	black	17263	17331	22030	29578	29700
•	new york white	burgundy		29570			
•	new york white	brown		29571			
•	ivory	chocolate brown		17310			
•	almond	burgundy		29562			
•	almond	silver grey		17425			
•	almond	black		32293			
•	yellow	blue		17373			
•	yellow	black	17273	17366	17478	29579	17525
•	pink	white		30384			
•	pink	magenta		29577			
•	red	white	17267	17506	17472	29580	29702
•	red	black		17454			
•	burgundy	white		17463			
•	pine green	white		17410	17495		
•	azure blue	white	17270	17353	17475	29603	29705
•	navy blue	white		29581			29706
•	rust	white		17448			
•	chocolate brown	white		31641			29704
•	silver grey	white		29584			
•	silver grey	burgundy		29587			
•	silver grey	navy blue		29585			
•	silver grey	black	17276	17379	17481		
•	black	white	17250	17319	17467	29604	17521
	black	red		29601			



# **GRAVOPLY**<sup>™</sup> 1



- Interior signage
- Identification plates
- Key tags
- Satin finish (except Matt Decor)
- Engraving depth 0.3 mm (.012")
- 2-ply or double-sided
- · Many colours and thicknesses
- Scratch resistant
- Gravoply<sup>™</sup> 1 Design Translucent is excellent for backlit signs

			2-ply		double-sided		
			0.8 mm	1.6 mm	2.4 mm	1.6 mm	3.2 mm
	Surface colour	Core colour	1/32"	1/16"	3/32"	1/16"	1/8"
•	yellow	white		29564			
•	yellow	magenta		29565			
•	orange	white		17407			
•	orange	black		17404			
•	burnt orange	black	29560	29566			
•	red	yellow		17445			
•	teal	white		29569			
•	apple green	white	17292	17442	17503	29602	
•	green	white		17393			
•	pine green	almond		29574			
•	blue metallic	white		17363			
•	azure blue	yellow		17439			
•	air force blue	white		17428	17500		
•	navy blue	silver grey		29582			
•	сосоа	white		17419			
•	brown	white		17388	17487		29703
٠	light grey	black		29583			
•	silver grey	almond		29586			
•	metallic grey	white		17376			
•	black	yellow		17399			
•	black	silver grey		29572			

#### **Specifications**

Surface	Satin
Composition	XT/ABS
Profile engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### Capabilities

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

#### Gravoply<sup>™</sup> Matt Decor

			1.6 mm
	Surface colour	Core colour	1/16"
•	new york white	slate	29614
•	candlewick	slate	29616
•	burgundy	salmon	29615
•	slate	new york white	29617

### Gravoply<sup>™</sup> Translucent (satin finish)

			1.6 mm
	Surface colour	Core colour	1/16"
٠	white	translucent red	29618
•	black	translucent white	17295

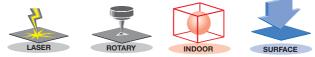


2-ply

2-ply

21





### A high resolution material, flexible and laserable

- Identification labels
- Trophy plates
- Labels for curved surface



•	Laser and rotary engraving
	and cutting

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

	2-ply		
			0.25 mm
	Surface colour	Core colour	0.01"
•	white	black	66984
•	yellow	black	66985
•	orange	black	66986
•	red	white	66997
•	purple	white	67002
•	apple green	white	67001
•	sky blue	white	67000
•	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

#### **Specifications**

Surface	Matt, brushed, glossy
Composition	Acrylic
Profile engraving depth	0.1mm (.002")
Full sheet	610mm x 305mm (12" x 24")

#### **Capabilities**

Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	-20°C	+100⁰C	Max. temp.

#### Did you know?

Custom colour combinations are available. Please call us for more details.



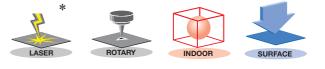


#### Gravoply™ 2

22

### OUVERTURE DE LA PORTE HORO QUART **グラボグラフ株式会社** IOIOAL MISSI CORMI Kitchen Study Plug floor O chen Study ONDULE Plug 1st floor Ove

# GRAVOPLY<sup>™</sup> 2



- Identification plates
- Interior signage
- · Microthin surface layer
- Perfect for small characters and detailed logos
- · Low glare, matt finish

#### **Specifications**

Surface	Matt
Composition	ABS
Profile engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior	•		Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
		60°C	Max. temp.

#### Did you know?

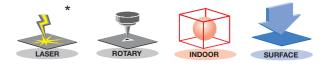
We can custom manufacture your badges so that all you have to do is engrave. See page 10. Double-sided available on request in any of the standard colours.

		-	NET	2-	oly	
			0.5 mm	0.8 mm	1.5 mm	2.4 mm
	Surface colour	Core colour	.020"	1/32"	1/16"	3/32"
•	white	red		21857	21928	21989
•	white	burgundy			21874	
•	white	azure blue		21841	21908	21973
•	white	black	53218	21850	21919	21982
•	almond	burgundy			29709	
•	almond	black		21855	21926	
•	yellow	red			21913	
٠	yellow	blue		21828	21896	
•	yellow	black		21863	21936	21995
•	dark yellow	black			21925	
•	orange	white			52205	
•	red	white	53219	21851	21921	21983
•	red	yellow			21910	
•	burgundy	white			21932	
•	purple	white			67007	
•	apple green	white		21838	21905	21970
•	pine green	white		21865	21938	21997
•	pine green	yellow			21916	
•	sky blue	white		21861	21934	21993
•	sky blue	black			21895	
•	blue	white	53220	21852	21923	21984
•	blue	yellow			21911	
•	air force blue	white			21907	
•	brown	white		21858	21930	
•	chocolate brown	white			21876	
•	grey	white		21856	21927	21988
•	grey	black			21915	
•	black	white	53217	21849	21917	21981
•	black	yellow		21866	21940	

\* Gravoply™ 2 products have a laserable foil cap, but their ABS core does not react well to lasering. When engraving with a laser, please ensure that you do not engrave deep into the ABS core.



# GRAVOPLY<sup>™</sup> 2



#### • Badges

- Identification plates
- Interior signage
- Gravoply<sup>™</sup> 2 Gloss has an extra durable, scratch resistant, glossy cap
- · Microthin surface layer
- Perfect for small characters and detailed logos
- Low glare, matt finish on Tech Patterns

Gravoply™ 2	2 ////55
-------------	----------

### The ultimate in scratch resistance!

		2-ply
		1.5 mm
Surface colour	Core colour	1/16"
white	red	23981
white	black	23977
yellow	black	23982
red	white	23978
emerald green	white	23983
blue	white	23979
grey	white	23980
black	white	23976
	Surface colour white white yellow red emerald green blue grey	Surface colourCore colourwhiteredwhiteblackyellowblackredwhiteemerald greenwhitebluewhitegreywhite

#### Gravoply™ 2 wood

		2-ply
		1.5 mm
Surface colour	Core colour	1/16"
satin light walnut	white	21885

#### **Specifications**

Surface	Matt, Glossy
Composition	ABS
Profile engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm ( 24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

#### Gravoply™ 2 Tech Patterns

		2-ply
		1.5 mm
 Surface colour	Core colour	1/16"
black pinstripe	white	22019
silver grid	black	22022

\* Gravoply™ 2 products have a laserable foil cap, but their ABS core does not react well to lasering. When engraving with a laser, please ensure that you do not engrave deep into the ABS core.







- Signage
- Plates with logos
- Badges
- 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

				3-ply
				1.6 mm
	Surface colour	Core colour	Core colour	1/16"
• •	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



#### **Specifications**

Surface	Matt
Composition	ABS
Engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 600 mm (24" x 48")
Half sheet	610 mm x 600 mm ( 24" x 24")
Quarter sheet	600 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

#### Did you know?

Custom colour combinations are available, with minimum quantities as low as 10 full sheets. Please call us for more details.



#### Metallex®



26

**AFFINITI GOLF** 

0300942 PART NUMBER

3430 HIGHWAY NINE NORTH ALPHARETTA, GA 30004

LEFT SIDE

DESCRIPTION

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**TI GOLF** 

Friday

9 - 6

www.affinitigolf.com

NERS

day



# **NETALLEX**<sup>®</sup>



- Identification plates
- Plaques
- 2-ply silver, gold, aluminium, bronze
- Microthin surface layer
- Metallex<sup>®</sup> is excellent for indoor applications
- Metallex<sup>®</sup> Gloss has an extra durable, scratch resistant, glossy cap
- Metallex<sup>®</sup> 2 has a special foil for increased durability

*		~	
LASER	ROTARY	INDOOR	SURFACE

Metallex®		2-ply				
	Γ		0.5 mm	0.8 mm	1.5 mm	2.4 mm
	Surface colour	Core colour	.020"	1/32"	1/16"	3/32"
•	brushed silver	black		21825	21889	21957
•	brushed aluminium	red			21906	21971
•	brushed aluminium	black	53221	21830	21898	21965
•	glossy silver	red			21902	
•	glossy silver	blue			21900	
•	glossy silver	black		21823	21887	21955
•	new gold	black	53222	21846	21914	21978
•	brushed gold	black		21824	21888	21956
•	european gold	black		21836	21903	21969
•	glossy gold	red		21834	21901	21967
•	glossy gold	black	53223	21822	21886	21954
•	brushed bronze	white		21826	21890	21958

#### **Specifications**

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

#### **Capabilities**

Interior		Exterior
Shear	-	Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

Did	you	know?	

Metallex<sup>®</sup> 2 has a protective surface treatment that provides improved surface durability and scratch resistance.



### The ultimate in scratch resistance!

			2-ply
	0.0000		1.5 mm
	Surface colour	Core colour	1/16"
٠	brushed aluminium	black	23974
•	glossy silver	black	23972
•	brushed gold	black	23973
•	european gold	black	23975
•	glossy gold	black	23971

#### Metallex<sup>®</sup> 2

				0.5 mm	0.8 mm	1.5 mm	2.4 mm
		Surface colour	Core colour	.020"	1/32"	1/16"	3/32"
	•	glossy aluminium	black		21871	21945	22002
	•	brushed aluminium	black		21869	21943	22000
	•	matt aluminium	red		21868	21942	
NEW	•	matt aluminium	blue		21873		22004
In the second	•	matt aluminium	black	53224	21867	21941	21999

 $^{\ast}$  Metallex® products have a laserable foil cap. The results can vary according to the colours.

27



2-ply

### STICKALASE® Adhesive material for labels

- Labels
- Bar codes
- Trophy plates

Available in black/white or silver/black, a 0.09 mm (.004") thick, adhesive backed, laserable plastic that is perfect for barcodes, cylindrical labelling, ID plates or trophy plates. Use your CO<sub>2</sub> laser machine to engrave and/or vector cut custom shapes from this flexible and durable material.

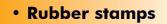
#### **Specifications**

Surface	Matt
Profile engraving depth	0.025 mm (.001")
Thickness	0.09 mm (.004")
Standard size (roll)	120 mm x 10 m (4.75" x 32')

#### **Capabilities**

Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	0°C	60°C	Max. temp.

## RUBBALASE



Natural rubber sold in sheets, exclusively for lasering with  $CO_2$  laser engraving machines to create inking stamps. Grey in colour, 2.2 mm (.087") in thickness.

Natural Rubbalase Sheet	19897
Odourless Rubbalase Sheet	48542

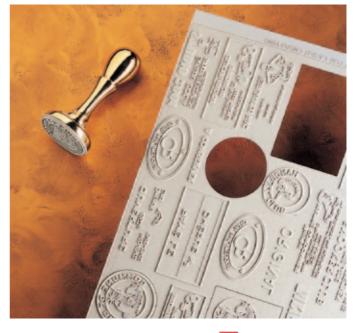
#### **Specifications**

Colour	Grey
Thickness	2.2 mm (.087")
Standard size	A4



			0.09 mm
	Surface colour	Core colour	.004"
•	silver	black	19872
•	black	white	19871







### FLAMMABLE

# **GRAVOSTRAT**®







double-sided

#### Industrial identification

- · Phenolic material
- Glossy finish (matt finish for photoluminescent)
- Double-sided
- Resistant to chemicals and solvents
- Non-flammable
- Conforms to military specifications ASTM D 709 ES-1, ES-2, ES-3
- · Electrically non-conductive
- Scratch resistant
- Saw cut
- Indoor use

			1.0 mm*	1.5 mm*	2.4 mm**
	Surface colour	Core colour	.040"	1/16"	3/32"
•	white	red		22045	22052
•	white	blue		18496	18516
•	white	black	30385	22042	22049
•	ivory	black		18500	18520
•	yellow	black	30389	22044	22051
•	orange	white		18492	18512
•	red	white	30390	22043	22050
•	green	white	30392	22046	22053
•	blue	white	30393	18489	18509
•	grey	black		22047	22054
•	black	yellow		18498	18518
•	black	white	30395	22041	22048

\*\* Gravostrat may be subject to slight variations in thickness

			1.2 mm
	Surface colour	Core colour	.050"
•	photoluminescent	brown	18525

Size: 605 x 605 mm

#### **Capabilities**

Interior		Exterior
Shear		Saw
Silk screen		Hot stamp
Scratch resistant		Flexible
Break resistant		UV resistant
	60°C	Max. temp.

#### **Specifications**

Surface	Glossy, matt for photoluminescent
Composition	Rigid thermoset material
Profile engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 600 mm (24" x 48")
Half sheet	605 mm x 600 mm (24" x 24")
Quarter sheet	600 mm x 300 mm (12" x 24")

 $^{\ast}$  Gravostrat^{\tiny (\! R \!\!)} can be laser engraved but not laser cut.



## **Docteur Odile TERRASSON**

### MEDECINE GENERALE CONVENTIONNEE

### Consultations de 9H00 à 12H00 et de 17H00 à 19H00

### Tél:05.53.80.23.36

# GRAVOMETALL







Satin

- Professional plaques
- Interior signage
- Award plates
- Glossy or satin finish
- Diamond, rotary, burnish and laser engraving
- Use Gravoxide or paint fill (see page 65) for contrasting letter colour
- Pre-polished and lacquered
- Tip: apply clear lacquer after engraving to avoid tarnishing

			0.5 mm	1.2 mm	0.5 mm	0.6 mm	1.2 mm	1.6 mm
	Surface colour	Core colour	.020"	.050"	.020"	.025"	.050"	1/16"
0	gold	gold	18407	18435		18423	18438	18441
	bronze	gold			18411			
	silver	gold				18429		
•	black	gold	18402					

Gold, bronze and silver return black letters with the use of Gravoxide. Black returns gold letters. \* Black is laser engravable.

**Specifications** 

Glossy or Satin
Brass
0.1 mm (.004")
0.3 mm (.012")
1220 mm x 305 mm (12" x 48")
610 mm x 305 mm (12" x 24")
305 mm x 305 mm (12" x 12")

#### **Capabilities**

1	Interior			Exterior
	Shear		-	Saw
	Silk screen			Hot stamp
	Scratch resistant			Flexible
	Break resistant			UV resistant
1	Min. temp.	- 40°C	100ºC	Max. temp.





## GRAVOBRASS EXTERIOR







- High quality signage
- Ornamental plates
- Company name plo

90	, -				1.5 mm	2.0 mm	3.0 mm	4.0 mm
5		Surface colour	Core colour	.040"	1/16"	1/12"	1/8"	1/6"
ates	0	shiny polished brass	brass	22032	22034	22036	22038	22040
	0	solid brass	brass	22031	22033	22035	22037	22039

- · Shiny polished or solid finish
- · High quality engraver's brass
- Solid brass is unpolished and may feature surface defects
- · Paint fill with Gravolaque (see page 65)
- · Use of chemicals on this material is not recommended

#### **Specifications**

Surface	Solid or polished
Composition	Brass
Engraving depth	0.3 mm (.012") for paint fill
Colouring	Engravers Enamel (see page 65)
Full sheet	1340 mm x 670 mm (26" x 52")
Half sheet	670 mm x 670 mm (26" x 26")
Quarter sheet	670 mm x 335 mm (13" x 26")

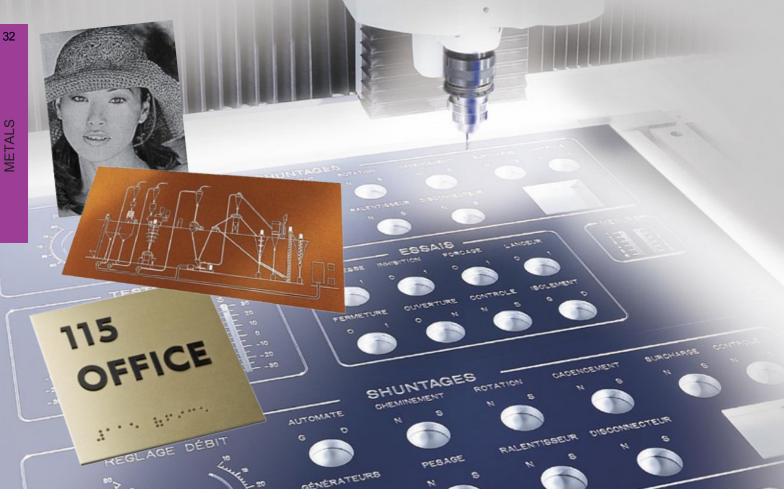
#### **Capabilities**

Interior			Exterior
Shear	*		Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	100°C	Max. temp.

\* For 1.0 mm (.040") thickness

This brass product will oxidize with age in an outdoor environment. To avoid this, apply a protective layer of clear lacquer after engraving.





## GRAVOX

- Control panels
- Legend plates
- Award plaques
- Signage
- · Anodised aluminium
- · For rotary and laser engraving

#### **Specifications**

Surface	Matt or Glossy
Composition	Aluminium
Profile engraving depth	0.1 mm (.004")
Full sheet	1000 mm x 500 mm (39" x 19")
Other size	2000 mm x 1000 mm (78" x 39")

#### **Capabilities**

Interior			Exterior
Shear			Saw
Silk screen	-		Hot stamp
Scratch resistant			Flexible
Break resistant	-		UV resistant
Min. temp.	- 40°C	100ºC	Max. temp.

ROTA





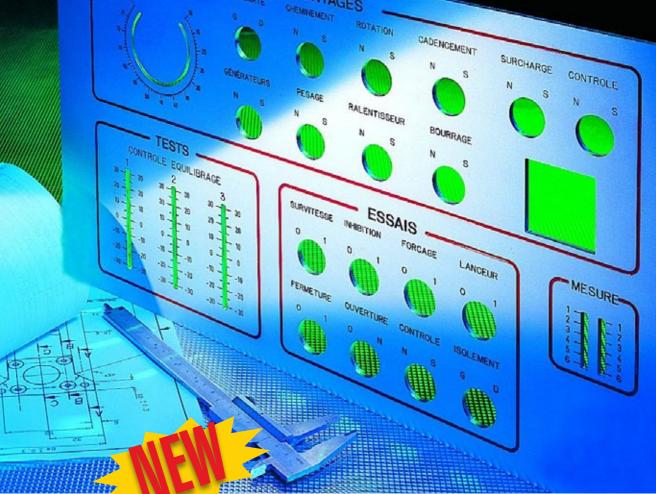


Matt		r						
Iviall		0.5 mm	1.0 mm	1.5 mm	2.0 mm	2.5 mm	3.0 mm	4.0 mm
	Surface colour	.02"	.04"	1/16"	1/12"	3/32"	1/8"	1/6"
0	champagne		18581	18595	18608			
•	red		18577	18591	18605			
•	green		18583	18597	18610			
•	blue		18579	18593	22058			
•	silver	18385	22055	18386	22057	18387	22059	18388
•	gold	18571	18575	18589	18603		18616	
•	bronze		18585	18599	18612			
•	black	18569	18573	18587	18601		18614	

Glossy		1.0 mm	1.5 mm	2.0 mm
-	Surface colour	.40"	1/16"	1/12"
0	champagne	18640	18662	18681
•	red	18636	18658	18677
•	green	18642	18664	18683
•	blue	18638	18660	18679
•	silver	18618	18646	18668
•	steel-look	30381	30382	30383
•	gold	18630	18654	18674
•	bronze	18644	18666	18685
•	black	18624	18650	18671

Silver colours are anodised on both sides during the continuous anodisation process. Protective film on one surface.\* Laser engraving on coloured material. Quality of engraving may vary according to the colour. Use Gravolaque to colour any Gravoxal engraving. Aloxide may be used to colour Glossy finish. See p.65.





# GRAVOXAL PRENIUN $\underset{\text{Laser}}{\overset{*}{\longrightarrow}}$ $\underset{\text{rotary}}{\overset{*}{\longrightarrow}}$ $\underset{\text{outdoor}}{\overset{*}{\longrightarrow}}$ $\underset{\text{surface}}{\overset{*}{\longrightarrow}}$

Matt

0

•

•

۲

bronze

black

- Control panels
- Legend plates
- Award plaques
- Signage
- Double sided anodised aluminium
- · Rotary or laser engraving

#### **Specifications**

Surface	Matt or Glossy
Composition	Aluminium
Profile engraving depth	0.1 mm (.004")
Full sheet	1000 mm x 500 mm (39" x 19")
Other size	2000 mm x 1000 mm (78" x 39")

#### **Capabilities**

Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	100ºC	Max. temp.

Glossy 1.0 mm 1.5 mm 2.0 mm Surface colour .04" 1/16" 1/12" champagne 18555 18561 18567 Ο 18552 18558 18564 C red

•	green	30521	30522	30523
•	blue	18553	18559	18565
	silver	18550	18556	18562
•	gold	18554	18560	18566
•	bronze	30524	30526	30530
•	black	18551	18557	18563

All colours are anodised on both sides during the continuous anodisation process. Protective film on both surfaces.\* Laser engraving on coloured material. Quality of engraving may vary depending on the colour. Use Gravolaque to colour any Gravoxal engraving. Aloxide may be used to colour Glossy finish. See p.65.



30532

18352

30534

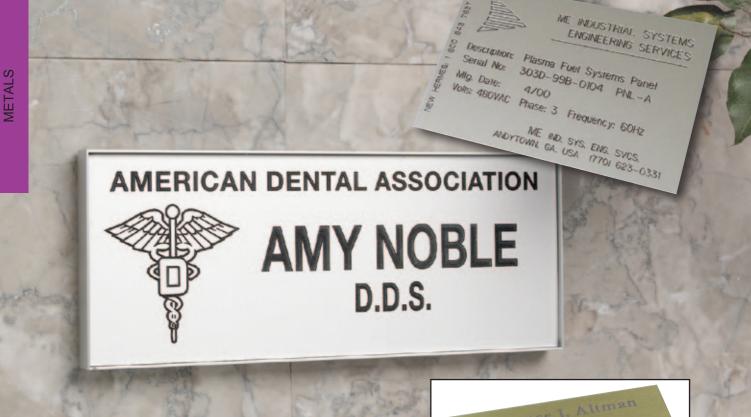
18364

30536

22056



METALS



## GRAVOSTRAL®

- Professional interior signage
- Award plaques
- Identification plates
- Signage
- One product with two finishes
- · One side is matt silver and the other is brushed gold
- · Aluminium caps with a black phenolic core
- · No paint filling required
- · Use of chemicals on this material is not recommended



			1.5 mm	3.0 mm
	Surface colour	Core colour	.40"	1/16"
•	gold / silver	black	18472	18482
NIFW - •	silver / silver	black	18471	

#### **Specifications**

Surface	Satin or Matt
Composition	Aluminium / Phenolic
Engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 605 mm (48" x 23")
Half sheet	610 mm x 605 mm (24" x 23")
Quarter sheet	605 mm x 305mm (23" x 12")

#### **Capabilities**

Interior	-		Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	0°C	60°C	Max. temp.





## ALUMAMARK

- ID plates
- Bar codes
- Labels
- Control panels
- This special line of gold and silver anodised aluminium returns black characters when lasered with any standard CO<sub>2</sub> laser engraver. No oxidation or paint fill needed. Only 6-10 Watts of power required.
- Satin finish
- For outdoor use, add a coat of lacquer after engraving.



			0.127 mm	0.5 mm
	Surface colour	Core colour	.005"	.020"
•	satin silver	black		27417
•	satin silver with adhesive	black	27414	27419
•	satin gold	black		27415
•	satin gold with adhesive	black		27416

#### **Specifications**

Surface		Satin
Compositio	n	Aluminium
Engraving depth		0.025mm (.001")
Laser powe	r	6-10 Watts
Full sheet	0.127 mm 0.5 mm	305 mm x 254 mm (10" x 12") 610 mm x 508 mm (20" x 24")

#### **Capabilities**

Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant	-		UV resistant
Min. temp.	0°C	100ºC	Max. temp.



# COLORED ALUMINUM ESER ESTARY LOOR LUMINUM ESER ESTARY

- Trophies
- Award plaques
- Name plates
- Satin, glossy or matt finish
- Lightweight
- Easy to shear

#### **Specifications - Colored aluminum**

Surface	Satin or glossy
Composition	Aluminium
Thickness	0.6 mm (.025")
Rotary engraving depth	0.2 mm(.008")
Burnishing depth	0.1 mm (.002")
Full sheet (except glossy white)	1220 mm x 305 mm (12" x 48")
Half sheet	610 mm x 305 mm (12" x 24")
Quarter sheet	305 mm x 305 mm (12" x 12")

#### **Specifications - Trophy Brass**

Surface	Satin, glossy or matt
Composition	Brass
Thickness	0.5 mm (.025")
Rotary engraving depth	0.2 mm (.008" )
Burnishing depth	0.1 mm (.002")
Full sheet	610 mm x 305 mm (12" x 24")
Half sheet	305 mm x 305 mm (12" x 12")
Quarter sheet	305 mm x 152 mm (6" x 12")

#### **Capabilities**

1.1.2.2	_		<b>F</b> 1. 2
Interior			Exterior
Shear		•	Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant	-		UV resistant
Min. temp.	0°C	100ºC	Max. temp.

### Colored Aluminum (Sublimatable)\* produces silver lettering

			0.6 mm
	Surface colour	Core colour	.025"
•	glossy white	silver	34426
•	glossy red	silver	34528
•	glossy blue	silver	34497
•	satin gold	silver	34595
٠	glossy gold	silver	34596
•	satin silver	silver	34625
•	glossy silver	silver	34626
•	glossy black	silver	34455

\* Our sublimatable metals feature clear protective masking.

### Trophy Brass produces gold lettering

	•		0.5 mm
	Surface colour	Core colour	.025"
•	glossy white	gold	34645
•	glossy red	gold	34692
•	glossy burgundy	gold	34685
•	glossy green	gold	34710
•	glossy blue	gold	34679
•	glossy royal blue	gold	34694
•	satin gold	gold	34714
0	glossy gold	gold	34715
•	glossy brown	gold	34682
•	glossy black	gold	34677
•	matt black	gold	61083

Best results with diamond and laser engraving.

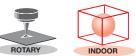




## **GRAVOTAC**<sup>™</sup>



LASER ROTAR



#### DDA & ADA compliant tactile signage

- 1 mm (1/32") single-ply profile material
- Available with or without adhesive backing
- 1.6 mm (1/16") single-ply substrates for backplate material

#### **Specifications**

Surface	Matt
Composition	ABS
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior			Exterior
Shear	-		Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
		60°C	Max. temp.

	1-	ply
	1.0 mm	1.6 mm
Surface colour	1/32" profile	1/16" backplate
bright white	28372	29879
almond	28370	29882
yellow	28368	29883
red	28361	29885
burgundy	28373	29888
pine green	28366	29895
metallic blue	28360	29896
azure blue	28369	29897
navy blue	28363	29898
taupe	28362	29890
candlewick	28374	29899
silver grey	28364	29900
slate	28367	29901
chocolate brown	n 28375	29892
black	28371	29902

### GRAVOTAC EXTERIOR

- Indoor and outdoor use
- Cut with laser or C.N.C. machines

#### **Specifications**

Surface	Matt
Composition	Impact modified acrylic
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior		•	Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant	•		Flexible
Break resistant			UV resistant
		90°C	Max. temp.

1-ply		
0.8 mm	1.6 mm	
1/32" profile	1/16"	
29918		
29919	29936	
	29903	
	45961	
	29945	
29931		
29932		
29920	29937	
	0.8 mm 1/32" profile 29918 29919 29919 29931 29932	





OUTDOOF



## GRAVOPLY™ ULT

- Badges
- Awards plaques
- Indoor and outdoor signage
- Satin or matt finish
- Unique 0.5 mm (.002") cap layer for detailed engraving
- UV stable
- · Excellent for photo lasering
- · Reduce inventory with one material for rotary, laser, indoor and outdoor needs

#### **Specifications**

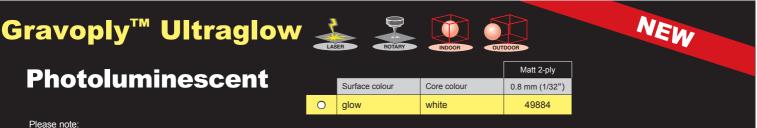
Surface	Satin or Matt
Composition	DR Acrylic
Rotary engraving depth	0.1 mm (.004")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

#### **Capabilities**

Interior			Exterior
Shear	-	-	Saw
Silk screen		-	Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
		80°C	Max. temp.

			Matt	2-ply	Satin	2-ply
			0.5 mm	1.6 mm	1.6 mm	2.4 mm
	Surface colour	Core colour	.020"	1/16"	1/16"	3/32"
0	clear*	white	18965	19009		
•	clear*	black	18962	19006		
•	white	red		18997		
•	white	blue		18996		
•	white	black	18946	18984	29507	
٠	yellow	black	18955	18993	29511	
•	orange	white		19000		
•	orange	black		29499		
•	red	white	18949	18987	29512	
•	red	black		29498		
•	red	gold		29503		
•	burgundy	white		18980		
•	burgundy	gold	18958	18999		
•	green apple	white	18970	19012	29513	
•	forest green	white		19001		
•	forest green	gold		18998		
•	pine green	white		29491		
•	blue	white	18952	18990	29510	
•	navy blue	white		29494		
•	royal blue	white		19015		
•	royal blue	gold	18942	18979		
•	brown	white		29495		
•	black	white	18943	18981	29508	29687
•	black	silver grey		19005		
•	glossy black	gold	18973			
•	matt black	gold	18976	19004		

\* Suitable for subsurface engraving.



Please note: This product allows for white engraving on the photoluminescent surface. 0.8 mm (1/32") thickness may be used to cut profile letters for DDA tactile signage applications. The glow times for this product meet the following norms: ISO:10012-1 & MIL-STD-45662A. This material is certified MEA 203-08-M.



#### Gravoqlas<sup>®</sup>

### Diplômé de la faculté de médecine de

### **MEDECINE GENERA**

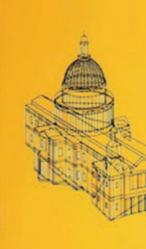
#### Consultations sans rendez-your

#### ground

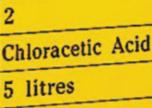
research department laboratories 1-2-3-4 conference room

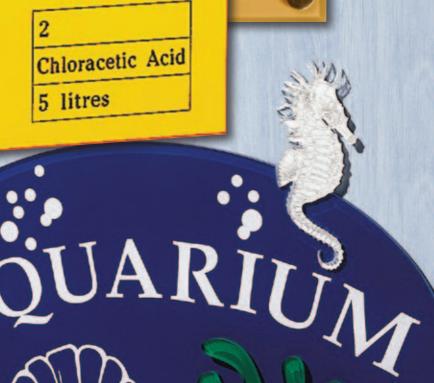
#### first floor

administration secretary library



TANK : **PRODUCT** : CAPACITY :





40

NDOOR/OUTDOOR PLASTICS

## GRAVOGLAS® 1





 Indoor and outdoor signage
 Professional name

Excellent UV resistanceA fine silk-screened layerSubsurface engraving

· Subsurface engraving:

with paint fill

· Resistant to chemical agents

produce multi-colour signage

(see Gravolaque page 65)Easy to keep surface clean

 Professional name plates

#### Subsurface engraving

Glossy

			2-ply	
		1.5 mm	3.0 mm	5.0 mm
Backing colour	Core colour	1/16"	1/8"	.20"
white	clear	18141*	18193	18264
light grey	clear	18177*		
golden yellow	clear	18130*		
yellow	clear		18217	18276
red	clear		18201	18267
burgundy	clear		18232	18287
purple	clear	18132*		
moss green	clear	18136*		
garden green	clear		18229	18285
green	clear		18223	18282
light blue	clear	18179*		
sky blue	clear		18214	18273
blue	clear		18207	18270
slate	clear	18171	18244	18293
gold	clear	18168	18235	18290
old gold	clear	18174	18252	18296
brown	clear	18134*		
black	clear	18138*	18183	18261
	white light grey golden yellow yellow red burgundy purple moss green garden green garden green green light blue sky blue blue slate gold old gold	whiteclearlight greycleargolden yellowclearyellowclearyellowclearredclearburgundyclearpurplecleargarden greencleargreenclearsky blueclearbluecleargoldclearold goldclearbrownclearclearclear	Backing colourCore colour1/16"WhiteClear18141*light greyClear18177*golden yellowClear18130*yellowClear18130*yellowClear18130*redClear18130*burgundyClear18132*moss greenClear18136*garden greenClear18136*greenClear18179*sky blueClear18179*blueClear18179*slateClear18171goldClear18168old goldClear18174brownClear18134*	1.5 mm3.0 mmBacking colourCore colour1/16"1/8"whiteclear18141*18193light greyclear18177*golden yellowclear18130*18217redclear18130*18217burgundyclear18132*18232purpleclear18132*18232gorden greenclear18136*18229greenclear18179*18223light blueclear18179*18201sky blueclear18179*18207slateclear1817118244goldclear1817118244goldclear1817418235old goldclear1817418252brownclear18134*18235

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



#### **Specifications**

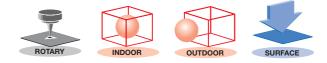
Glossy finish

Surface	Glossy
Composition	Acrylic
Rotary engraving depth	0.2 mm (.008")
Colouration	Gravolaque
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

Interior		-	Exterior
Interior	-	-	LACCIO
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	80°C	Max. temp.



## GRAVOGLAS® 2



2-ply

#### Indoor and outdoor signage

- Professional plates
- Directories
- Surface engraving
- 3 choices of surface: matt, glossy or textured
- For indoor and outdoor use
- UV stable
- Adhesive backing available

#### **Specifications**

Surface	Matt, Glossy, Textured
Composition	DR Acrylic
Engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

### Matt Surface colour Core colour

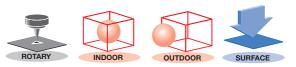
Surface engraving

			1.6 mm	3.2 mm
5	Surface colour	Core colour	1/16"	1/8"
• \	white	red	29627	
• \	white	azure blue	29628	
• \	white	black	17875	29904
•	eggshell	green	29630	
•	cream	green	29632	
• )	yellow	black	17881	
• 0	orange	black	29633	
• •	red	white	17877	29905
• t	bordeaux	cream	29634	
• t	taupe	eggshell	29635	
• •	chocolate brown	white	29636	
• t	teal	white	29637	
• 6	apple green	white	17885	29906
•	green	eggshell	29639	
•	green	cream	29640	
• •	metallic blue	white	29641	
• 6	azure blue	white	17879	29907
• 5	silver grey	black	17887	29908
•	gold	black	29642	29910
• •	black	white	17873	29911
•	black	gold	29643	

Interior	•		Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant	•		Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	80°C	Max. temp.



## GRAVOGLAS® 2



#### Interior and exterior signage

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

Glossy			2-1	oly
,			1.6 mm	3.2 mm
	Surface colour	Core colour	1/16"	1/8"
•	white	red	17907	18063
•	white	azure blue	17904	
٠	white	black	17892	18051
•	red	white	17895	18054
•	burgundy	white	17913	18069
•	brown	white	29644	
•	chocolate brown	white	29645	29650
•	yellow	black	17901	18060
•	apple green	white	17910	18066
•	pine green	white	17918	18072
•	metallic blue	white	29646	
•	azure blue	white	17898	18057
•	royal blue	white	29647	
•	gold	black	17927	18075
•	silver	black	17930	18078
•	copper	black	17924	
•	black	white	17889	18048
•	black	gold	17933	18080

Surface engraving

#### **Specifications**

Surface	Matt, Glossy, Textured
Composition	DR Acrylic
Engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

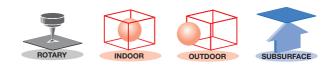
Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	80°C	Max. temp.

Textured			2-ply
			1.6 mm
	Surface colour	Core colour	1/16"
•	white	black	18304
•	white	red	18325
•	white	pine green	18337
•	almond	black	34404
•	ivory	chocolate brown	18346
•	yellow	black	18334
•	red	white	18307
	pine green	white	18343
	blue	white	18310
	american blue	white	18313
•	silver grey	black	18322
	grey	white	18319
	black	white	18301



## **GRAVOGLAS® 2**

- Indoor and outdoor signage
- Professional plates Directories
- · For indoor and outdoor use
- UV stable
- Subsurface engraving: produce multi-colour signage with paint fill (see Gravolaque page 65)



#### Subsurface engraving

				2-ply	
Glossy			1.6 mm	3.2 mm	4.8 mm
	Backing colour	Core colour	1/16"	1/8"	.20"
0	clear	clear	29655	29657	
0	white	clear	17988	18021	18101
0	almond	clear	17935	18015	
0	yellow	clear	18003	18036	18116
•	red	clear	17997	18030	18110
•	burgundy	clear		18039	
•	air force blue	clear	17938	18018	18098
•	azure blue	clear		18033	
•	garden green	clear		18045	
•	silver grey	clear	29656		
•	silver	clear	17985	18093	
•	gold	clear	17982	18091	
•	brown	clear	17994		
•	black	clear	17991	18024	18104

Matt			2-ply	
			1.6 mm	3.2 mm
	Backing colour	Core colour	1/16"	1/8"
0	clear	clear	17941	18082
0	white	clear	17947	18086
0	almond	clear	17958	
0	cream	clear	29658	
•	yellow	clear	17956	
•	red	clear	17950	18088
•	bordeaux	clear	29659	
•	burgundy	clear	17976	
•	сосоа	clear	29660	
•	taupe	clear	29661	
•	chocolate brown	clear	17970	
•	apple green	clear	17973	
•	green	clear	29662	
•	azure blue	clear	17953	
•	american blue	clear	29663	
•	sky blue	clear	29664	
•	royal blue	clear	29665	
•	metallic blue	clear	29666	
•	silver grey	clear	17961	
•	slate	clear	29667	
•	silver	clear	29669	
•	gold	clear	29670	
•	black	clear	17944	18084

#### **Specifications**

Surface	Matt, Glossy, Textured
Composition	DR Acrylic
Engraving depth	0.3 mm (.012")
Full sheet	1220 mm x 610 mm (24" x 48")
Half sheet	610 mm x 610 mm (24" x 24")
Quarter sheet	610 mm x 305 mm (12" x 24")

Interior			Exterior
Shear			Saw
Silk screen			Hot stamp
Scratch resistant			Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	80°C	Max. temp.



### ACRYLIC LASER ROTARY DIDOR OUTDOOR SURFACE



#### Indoor and outdoor signage applications

- Glossy finish
- Excellent for clear signage
- Laser and rotary engravable
- For indoor and outdoor use

#### **Specifications**

Surface	Glossy
Composition	Acrylic
Full sheet	600 mm x 600 mm (23" x 23")
Half sheet	600 mm x 295 mm (23" x 11.5")
Quarter sheet	300 mm x 295 mm (11.5" x 11.5")

#### **C**apabilities

Interior			Exterior
Shear			Saw
Silk screen	-	-	Hot stamp
Scratch resistant	-		Flexible
Break resistant			UV resistant
Min. temp.	- 40°C	80°C	Max. temp.

Range of cast acrylics.

Suitable for rotary engraving and colouring techniques.





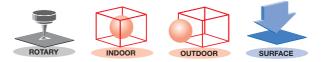


#### Clear acrylic

Thickness	Part number
3 mm (1/8")	48300
5 mm ( .20")	48301
10 mm ( .40")	48302



## GRAVOFOIL



Industrial signage

- Permanent labels
- Matt finish
- Very flexible
- Interior and exterior
- Excellent resistance to acids and solvents
- An assortment of 13 colours
- Comes with adhesive backing
- Colours for the identification of pipes in the industrial sector

			0.2 mm
	Surface colour	Core colour	.008"
•	white	black	18448
•	black	white	18446
•	blue	white	18452
•	purple	white	18469
•	yellow	black	18456
•	brown	white	18458
•	red	white	18450
•	green	white	18460
•	grey	white	18454
•	orange	black	18462
•	gold	black	18464
•	silver	black	21811
•	copper	black	18467

#### **Specifications**

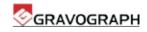
Surface	Matt
Composition	PVC
Engraving depth	0.02 mm (.001")
Full sheet	660 mm x 480 mm (25" x 18")
Half sheet	480 mm x 330 mm (25" x 12.5")

#### **C**apabilities

Interior		-	Exterior
Shear	-		Saw
Silk screen	•	-	Hot stamp
Scratch resistant		•	Flexible
Break resistant	-	-	UV resistant
Min. temp.	- 40°C	70ºC	Max. temp.

Warning: For laser engraving, use Stickalase. See p.28.







### SIGN Accessibility & Signage

### innovative solutions for

### engraving & marking

### **BRAILLE SOLUTION**









### SignAccessibility

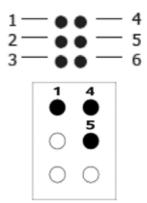
Part number	Description
49959	Gravograph Braille Kit (compatible with IS400, IS900, IS6000, 7000 and 8000 machines) including: - An automatic bead dispenser - A portable, manual Braille dispenser - 1000 beads of each type (a total of 5000 beads) - A pre-prepared sign for customer demonstrations and a GravoTac material sample - All part numbers marked * below
49923*	Brush
49921*	Tool for removing swarf from cut out profiles (pointed end)
49922*	Tool for removing inserted beads (flat end)
48766*	1.550 mm drill for Braille, Onecut Ø 4.36 mm
48767*	1.565 mm drill for Braille, Onecut Ø 4.36 mm
48768*	1.580 mm drill for Braille, Onecut Ø 4.36 mm
49920*	A funnel to insert beads in the dispenser
48686*	1.50 mm drilling insert
48620	Flat-tipped, cylindrical, steel cutter for finishing on hard materials
48609	Twincut insert Ø 0.32 mm for cutting out Gravotac profile
48556	Braille Kit compatibility adaptator for ISx000 series (with serial number not ending with -10)
22987*	Standard toolholder
49933	Stainless steel beads (x 10 000)
49934	Brass beads (x 10 000)
49935	Clear acrylic beads (x 10 000), manual system only
49936	Black acrylic beads (x 10 000), manual system only
49937	White acrylic beads (x 10 000), manual system only
53141	Braille option GravoStyle 5 Level 2

\* supplied standard with Braille Kit 49959.





a	b	с	d	e	f	g	h	T.	j
•	:		••	••	÷	::	:.	÷	.:
ī	12	14	145	15	124	1245	125	24	245
k	1	m	n	0	р	q	r	s	t
:	:	:	:	÷	÷		÷	÷	:
13	123	134	1345	135	1234	12345	1235	234	2345
u	v	w	х	У	z				
:.	Ξ.	•	::	3	:		BRA		E
136	1236	2456	1346	13456	1356		1		



Gravotac<sup>™</sup> is the material you need to produce Tactile Signs.

#### The GRAVOTAC<sup>™</sup> process



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



Weed (peel) excess profile material off substrate.



Result: A patented process for producing DDA & ADA compliant signage.



For your outdoor applications, choose Gravotac™ Exterior. Suitable for laser engraving.

Gravoply™ Ultraglow is a photoluminescent material suitable for DDA & ADA signage applications. Laserable. Suitable for outdoor use. See p.39 for more details.





SIGNAGE to meet all your signage needs in public, professional and residential environments SIGNAGE designed to be modular, stylish and durable; the result of on-going research and product development SIGNAGE combining practicality with distinction, and bringing added aesthetic value to your architectural living and working space SIGNAGE from 8 different ranges, each with its own character and special uses Made-to-measure solutions also available.



Contact us for details of the full range

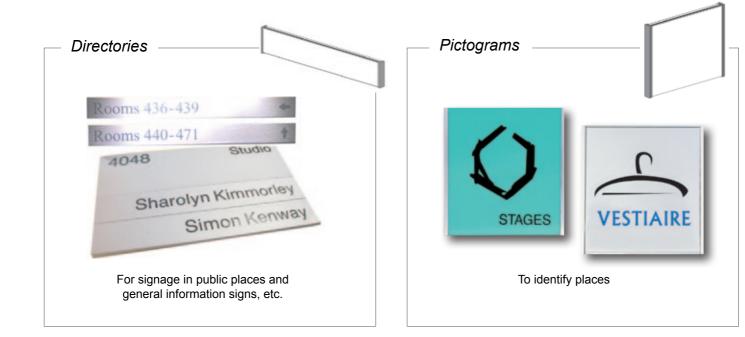
#### Classic, flat design, with 10 mm finishing profiles



Modular and interchangeable to evolve with your signage needs



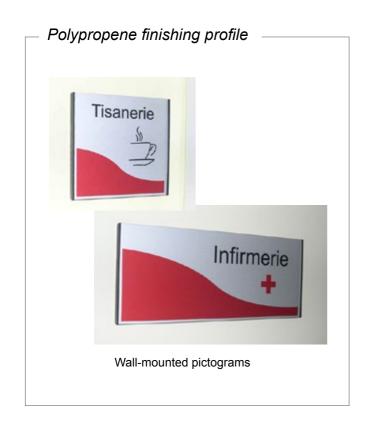
Specially designed window system to enable you to update your messages







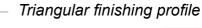
#### Classic, flat design, with different finishing profiles









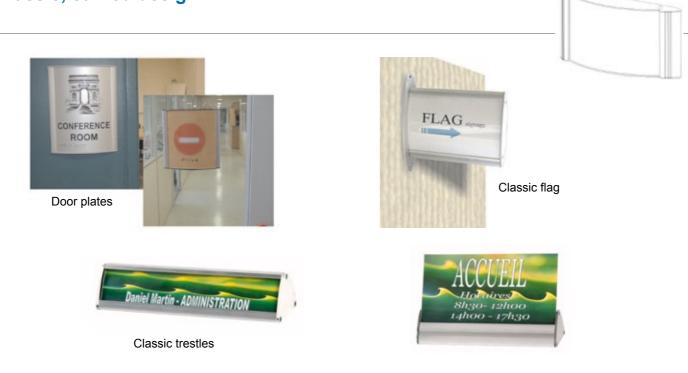






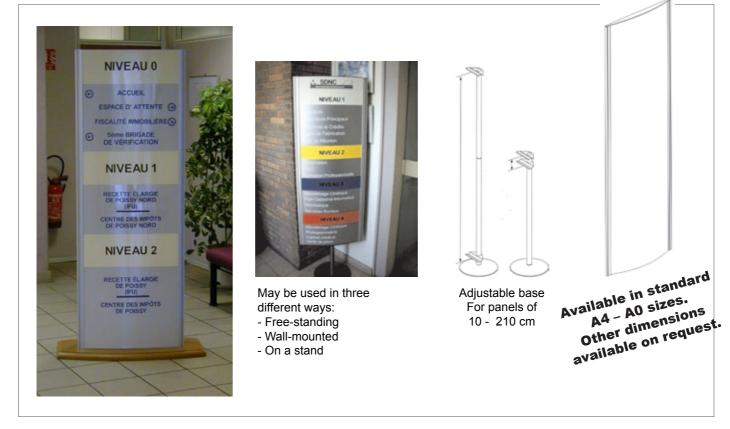


#### **Classic, curved design**



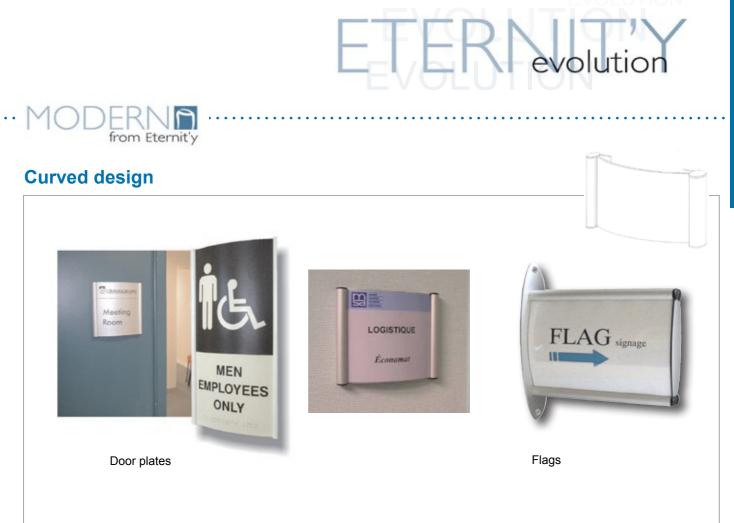
Contact us for details of the full range

#### Classic, curved design - large format



FRAMES





#### **Curved design - large format**



Contact us for more information on the ETERNIT'Y evolution range.



FRAMES

## **SIGN HOLDERS**

#### Aluminium, available in silver and gold.

#### A.B. Utility Wall Plate Holder

Natural aluminium edges. Use double-sided tape or drill holes to mount.

	For inserts	Silver	Gold
Α	100 x 25 x 1.6 mm	-	19475
	100 x 25 x 1.6 mm	19482	-
в	152.4 x 25.4 x 1.6 mm	30066	30067
Р	203.2 x 50.8 x 1.6 mm	19485	19476
	254 x 50.8 x 1.6 mm	30068	30069

#### C. Wall Bracket

To mount signs perpendicular to the wall. Slotted for 3.2 mm inserts. Cap nuts and screws included. Suitable for signs of any width.

For inserts	Silver	Gold
height 50 mm	19486	30070
height 101 mm	19487	30071

#### D. Slimline Plate Holder

For inserts	Silver	Gold
177.8 x 25.4 x 1.6 mm	30072	30073

#### E. Double-Sided Plate Holder

For inserts	Silver	Gold
152.4 x 31.7 x 1.6 mm	30074	30075

#### F. Standard Plate Holder

For inserts	Silver	Gold
203.2 x 50.8 x 1.6 mm	30076	30077

#### G. Plate Stand

For inserts	Silver	Gold
200 x 1.6 mm	19480	19474

#### H. Eternit'y Classic Plate Holder

length 180 mm	46488
length 210 mm	46489
length 300 mm	46490

### Aluminium Profiles, natural anodised Part number 19488

Aluminium Profile (A), outer dimensions 150 x 44 mm, with acrylic cover (B) under which you slide the 1.6 mm engraved inserts (C).

L-150	1 insert 150 x 36 mm
L-36/1 x 114	1 insert 36 x 36 mm, 1 insert 114 x 36 mm
L-36/2 x 114	1 insert 36 x 36 mm, 2 inserts 114 x 18 mm
L-36/3 x 114	1 insert 36 x 36 mm, 3 inserts 114 x 12 mm
L-36/4 x 114	1 insert 36 x 36 mm, 4 inserts 114 x 9 mm

С

B



SIGN HOLDERS





#### A. Bicycle tags

Anodised aluminium, 1 mm thick. Size: 38 x 47 mm with a 8 mm Ø hole.

Description	Part Number
Natural aluminium	19300
Black	19301
Red	19302
Blue	19303

#### B. Shaped aluminium tags

1 - Anodised aluminium with a  $4\ mm\ {\it ø}\ hole$ 

	65 x 30 mm	90 x 40 mm
Red	19193	19197
Blue	19194	19198
Green	19195	19199
Gold	19196	19200

#### 2 - Rounded anodised aluminium with a 4 mm ø hole

	30 mm	38 mm	50 mm
Red	30137	30141	30145
Blue	30138	30142	30146
Green	30139	30143	30147
Gold	30136	30140	30144

#### 3 - Rectangular anodised aluminium with a 4 mm ø hole

	40 x 16 mm
Red	19189
Blue	19190
Green	19191
Gold	19192

#### C. Luggage tags

Cut to size service. Specify the material and colour. Min. order 50 units.

#### E. Cloak room tags

Cut to size service. Specify the material and colour. Min. order 50 units.  $35 \times 35$  mm, die cut hole size  $20 \times 13$  mm  $40 \times 40$  mm, die cut hole size  $29 \times 9$  mm Other sizes on request.

#### F. Plant label holder

Zinc-plated tin, tilted model, shaft length 300 mmfor labels 120 x 53 x 1.6 mm30149Zinc-plated tin, shaft length 600 mmfor labels 120 x 48 x 1.6 mm30150

#### G. Ties 1. "S"-Hook

Zinc-plated steel, length 28 mm	23919
Nickel-plated brass, length 28 mm	30151
Golden brass, length 21 mm	30152

#### 2. Ring

Nickel-plated steel	ø 12 mm	19532
	ø 20 mm	19530
Golden brass	ø 12 mm	19533
Golden brass	ø 20 mm	19531

D. Leather strap

В

1

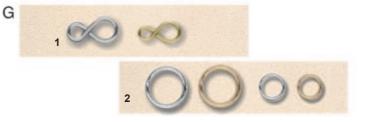
3

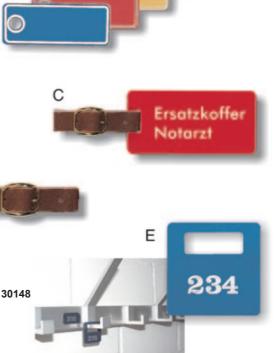
220 x 13 mm, for luggage tags



D





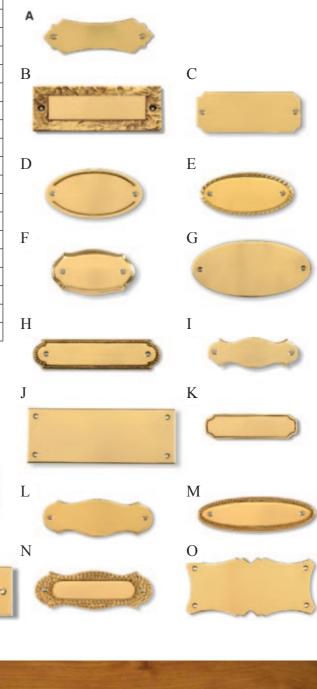




## **DOOR PLATES**

#### Premium solid brass door plates

Α.	100 x 32 mm	30078
В.	110 x 40 mm	30080
С.	105 x 42 mm	21812
D.	105 x 54 mm	22088
Ε.	100 x 40 mm	22089
F.	83 x 48 mm	22090
G.	135 x 65 mm	22091
Н.	130 x 30 mm	22092
I.	97 x 33 mm	22093
J.	160 x 60 mm	22094
К.	100 x 28 mm	22095
L.	122 x 42 mm	22096
М.	126 x 36 mm	22097
Ν.	124 x 42 mm	22098
О.	120 x 55 mm	30081
Ρ.	180 x 60 mm	30082
Q.	175 x 100 mm	30083
R.	150 x 95 mm	30084
S.	115 x 40 mm	30085



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



R

Rec'n Round 145 x 45 mm





48339

GRAVOGRAPH

Р

C

Q

56

Rec'n Wave

150 x 50 mm

## **DOOR PLATES**

A range of 4 different shapes to choose from. Choose the material and colour for fabricating your door plates.

	Gravoply 1	Gravoply 2	Metallex	Gravometall
<b>A</b> . 125 x 40 mm	30086	30087	30088	30089
<b>B</b> . 125 x 42 mm	30090	30091	30092	30093
<b>C</b> . 115 x 45 mm	30094	30095	30096	30097
<b>D.</b> 180 x 80 mm	30098	30099	30100	30101

Α

G.Zimmermann

Letitia di Marca

С

	Gravoxal, steel look	
<b>A</b> . 125 x 40 mm	30102	
<b>B</b> . 125 x 42 mm	30103	
<b>C</b> . 115 x 45 mm	30104	
<b>D</b> . 180 x 80 mm	30105	

ORNAMENTAL PLATES	
-------------------	--

-	

A			
	Metallex 1.5 mm	Gravometall 0.6 mm	Gravoxal, steel look 1.0 mm
114.3 x 19 mm	30115	30116	30117
50.8 x 9.5 mm	30109	30110	30111
63.5 x 9.5 mm	30112	30113	30114
61 x 12 mm	22078	-	30124
76.2 x 12.7 mm	30118	30119	30120
71 x 15 mm	22079	-	30125
89 x 15.9 mm	30121	30122	30123





NEW	Gravometall 0.6 mm	
	Satin gold	Glossy gold
61 x 12 mm	58786	58785
71 x 15 mm	58788	58787

R	
D	Gravoxal, steel look 1.0 mm
40 x 10 mm self-adhesive	30128

	Gravometall 0.6 mm			
40 x 10 mm self-adhesive	satin silver	49125		
	satin gold	61323		
	glossy gold	49577		



354

Heinrich Westermann

в

HERZOG

D

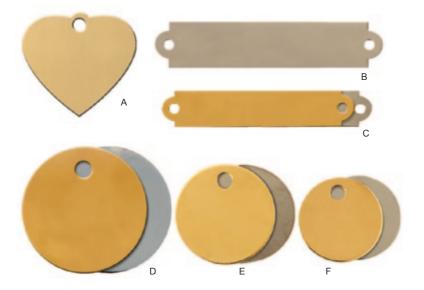
S. Bachmann



### MEDALS

#### Golden and nickel-plated brass (conditioning by 10 or 50)

(Scale 1:1)



	Conditioning	Golden	Nickel plated
А	x10	23906	
A	x50		
В	x10		47820
D	x50		19306
с -	x10	47818	47819
	x50	19305	19304
D	x10	47813	47810
D	x50	22065	13012
-	x10	47812	47809
E	x50	13016	19318
F	x10	47811	47808
ſ	x50	19317	19316

Stainless steel range (conditioning by 10)





G	30161
Н	30162
I	23907

#### Ties (Scale 1:1)



J. "S"-Hook (conditioning by 25)

Zinc-plated steel, length 28 mm	23919
Nickel-plated brass, length 28 mm	30151
Golden brass, length 21 mm	30152

#### K. Ring (conditioning by 100)

Nickel-plated steel	ø 12 mm	19532
Nicker plated steel	ø 20 mm	19530
Golden brass	ø 12 mm	19533
Golden brass	ø 20 mm	19531



Anodised aluminium range (conditioning by 10 or 50) (Scale 1:1) A С D G F Μ Н κ 0 N R Light blue Silver Blue Black Conditioning Gold Green Pink Red Purple Orange

A	x10	69285	69286	69287	69288	69289	69290	69291	69292	69293	69294
(Size L)	x50	69479	69480	69481	69482	69483	69484	69485	69486	69487	69488
В	x10	69295	69296	69297	69298	69299	69300	69301	69302	69303	69304
(Size M)	x50	69489	69490	69491	69492	69493	69494	69495	69496	69497	69498
С	x10	69375	69376	69377	69378	69379	69380	69381	69382	69383	69384
(Size L)	x50	69569	69570	69571	69572	69573	69574	69575	69576	69577	69578
D	x10	69385	69386	69387	69388	69389	69390	69391	69392	69393	69394
(Size M)	x50	69579	69580	69581	69582	69583	69584	69585	69586	69587	69588
E	x10	69305	69306	69307	69308	69309	69310	69311	69312	69313	69314
(Size L)	x50	69499	69500	69501	69502	69503	69504	69505	69506	69507	69508
F	x10	69315	69316	69317	69318	69319	69320	69321	69322	69323	69324
(Size M)	x50	69509	69510	69511	69512	69513	69514	69515	69516	69517	69518
G	x10	69355	69356	69357	69358	69359	69360	69361	69362	69363	69364
(Size XL)	x50	69549	69550	69551	69552	69553	69554	69555	69556	69557	69558
н	x10	69265	69266	69267	69268	69269	69270	69271	69272	69273	69274
(Size L)	x50	69459	69460	69461	69462	69463	69464	69465	69466	69467	69468
1	x10	69275	69276	69277	69278	69279	69280	69281	69282	69283	69284
(Size M)	x50	69469	69470	69471	69472	69473	69474	69475	69476	69477	69478
J	x10	69425	69426	69428	69429	69430	69431	69432	69432	69434	69435
(Size L)	x50	69619	69620	69621	69622	69623	69624	69625	69626	69627	69628
К	x10	69436	69437	69438	69439	69440	69441	69442	69443	69444	69445
(Size M)	x50	69629	69630	69631	69632	69633	69634	69635	69636	69637	69638
L	x10	69395	69396	69397	69398	69399	69400	69401	69402	69403	69404
(Size L)	x50	69589	69590	69591	69592	69593	69594	69595	69596	69597	69598
М	x10	69405	69406	69407	69408	69409	69410	69411	69412	69413	69414
(Size L)	x50	69599	69600	69601	69602	69603	69604	69605	69606	69607	69608
N	x10	69365	69366	69367	69368	69369	69370	69371	69372	69373	69374
(Size XL)	x50	69559	69560	69561	69562	69563	69564	69565	69566	69567	69568
0	x10	69345	69346	69347	69348	69349	69350	69351	69352	69353	69354
(Size L)	x50	69539	69540	69541	69542	69543	69544	69545	69546	69547	69548
Р	x10	69415	69416	69417	69418	69419	69420	69421	69422	69423	69424
(Size L)	x50	69609	69610	69611	69612	69613	69614	69615	69616	69617	69618
Q	x10	69335	69336	69337	69338	69339	69340	69341	69342	69343	69344
(Size XL)	x50	69529	69530	69531	69532	69533	69534	69535	69536	69537	69538
R	x10	69325	69326	69327	69328	69329	69330	69331	69332	69333	69334
(Size M)	x50	69519	69520	69521	69522	69523	69524	69525	69526	69527	69528



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MEDALS

## READY-MADE BADGES

There's more than one way to buy a badge. Ready-made badges can save you time and money, and custom badges keep all your customers satisfied, no matter how specialised their badge needs.

Classic Gravoply Badges are 2.4 mm thick, featuring square corners, bevelled edges and ready-attached metal fasteners. All fasteners are made of nickel-plated brass so they will not tarnish and discolour fabrics. For more information, see page 61, Badge Hardware. If you do not find the specific badge type you are looking for, please contact us for more details on our badge fabrication offer.

Dia Orana alia Olutah

Dia Oraș șlia Oluteli

#### 1 - GRAVOPLY 1, 64 x 16 x 2.4 mm

	PIN	Shap clip	Ciulch
Black/White	30163	30165	30166
White/Black	30169	30171	30172
Red/White	30175	30177	30178
Azure Blue/White	30181	30183	30184
Yellow/Black	30187	30189	30190
Dark Green/White	30193	30195	30196

#### 2 - GRAVOPLY 1, 75 x 20 x 2.4 mm

· · · · · · · · · · · · · · · · · · ·	Pin	Super clip	Snap clip	Clutch
Black/White	30199	30200	30201	30202
White/Black	30205	30206	30207	30208
Red/White	30211	30212	30213	30214
Azure Blue/White	30217	30218	30219	30220
Yellow/Black	30223	30224	30225	30226
Dark Green/White	30229	30230	30231	30232

#### 3 - GRAVOPLY 2, 64 x 16 x 2.4 mm

	Pin	Shap clip	Clutch
Black/White	30235	30237	30238
White/Black	30241	30243	30244
Red/White	30247	30249	30250
Azure Blue/White	30253	30255	30256
Yellow/Black	30259	30261	30262
Dark Green/White	30265	30267	30268

#### 4 - GRAVOPLY 2, 75 x 20 x 2.4 mm

	Pin	Super clip	Snap clip	Clutch
Black/White	30271	30272	30273	30274
White/Black	30277	30278	30279	30280
Red/White	30283	30284	30285	30286
Azure Blue/White	30289	30290	30291	30292
Yellow/Black	30295	30296	30297	30298
Dark Green/White	30301	30302	30303	30304

#### 5 - METALLEX, 64 x 16 x 2.4 mm

	Pin	Snap clip	Clutch
Glossy Gold	30307	30309	30310
Glossy Silver	30313	30315	30316
Brushed Gold	30319	30321	30322
Brushed Silver	30325	30327	30328

#### 6 - METALLEX, 75 x 20 x 2.4 mm

	Pin	Super clip	Snap clip	Clutch
Glossy Gold	30331	30332	30333	30334
Glossy Silver	30337	30338	30339	30340
Brushed Gold	30343	30344	30345	30346
Brushed Silver	30349	30350	30351	30352





Silver

### Gold Black

#### **Plastic Frames**

Add a touch of elegance to any badge. Size 71 x 21 mm for plastic inserts 66 x 16 x 0.8 mm. Sold with or without fastener.

Silver	19355
Gold	19354
Black	19352
White	19353

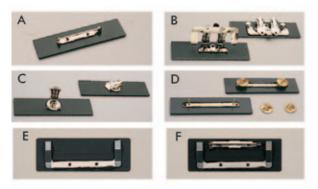


а

### GRAVOGRAPH

## BADGE HARDWARE

#### FOR HEAT FUSING IN OUR WORKSHOP



H

0

Q

S

#### FOR SELF-ASSEMBLY

#### Classic Badge Fasteners

Made of nickel-plated brass. Choose the material colour and thickness for fabricating badge blanks.

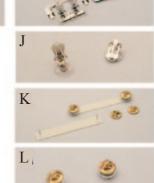
Description	Part No.
A. Safety Pin	30355
B. Super Clip	30356
C. Snap Clip - swivel	30357
D. Clutch	30358
E. Combi Clip	30359
F. Combi Clip and Safety Pin	30360



N

P

R



#### Badge Hardware for Gravofix

Made of nickel-plated brass. Feature plastic backing. Make durable bonding quick and easy with Gravofix.

G. Safety Pin	19345
H. Super Clip	30361
I. Gravofix - 250 ml	19360
J. Snap Clip - swivel	19346
K. Clutch	30362
L. Pin with clutch	30363
M. Gravofix Kit (100 safety pins G + Gravofix 25 cl I)	25730



Our latest, best-selling hardware with pressure-sensitive adhesive backing.

Simply peel back the liner and attach the adhesive bonds to the badge.

No need for chemical or heat fusing.

N. Safety Pin	30364
O. Standard Magnetic Fastener	19362
P. Jumbo Magnetic Fastener	30365
Q. Alligator Clip	30366
R. Universal Clip with Pin	19358
S. Crocodile Clip *	30367

 $^{\ast}$  With its 2-component bonds, this clip is specially designed for durable bonding on plastic and metal badges.

#### Card holder

T. Swivel Fastener with Clip	19357
U. Clear Vinyl Badge Holder	19356







Modern, stylish designs, combining brushed and glossy metal. Easy to engrave with cutters or diamonds. You may enhance the engraving contrast by colouring with paint.

See colouring accessories p. 65.

Personalised key rings can be presented in an elegant, navy blue, velvet gift wallet (see C).



Α	Long - rectangular model	21816
В	Hexagonal model	21815
С	Velvet gift wallet	21817



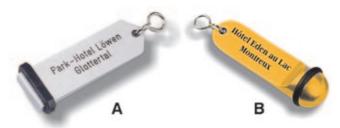
### Premium Solid Brass Key Rings with Lacquered Surface Protection

Α	Heart 40 x 40 x 1.5 mm	30129
В	Oval 65 x 35 x 1.5 mm	30130
С	Rectangular 57 x 35 x 1.5 mm	30131



#### **Hotel Key Rings**

		Silver	Gold
Α	Rectangular 115 x 30 mm	30132	30133
В	Rounded 100 x 30 mm	30134	30135



#### Key Rings in Standard Engraving Materials

Cut to Size Service Choose the material colour and thickness for

fabricating your key rings.

Α	Circular ø 30 mm, hole ø 4 mm		
В	Teardrop 44 x 29 mm, hole ø 4 mm		
С	Hexagonal 58 x 37 mm, hole ø 4 mm		
D	Teardrop 102 x 54 mm, hole ø 6 mm		
Е	Rectangular 65 x 18 mm, hole ø 4 mm rounded corners		



**KEY RINGS** 

## **MECHANICAL FASTENING**

#### PLUG CHAIN



#### WOODEN SUPPORT

#### 19470

Wooden support to enhance engraved plates Dimensions: 340 x 240 x 20 mm Colour: tropical hardwood Packaging: single unit

(e.g. suitcases, pipes, key rings etc.)

100 x 150 mm with fastener

10 x 1.5 m without fastener

box of 100 fasteners

For attaching tags and labels to a wide range of objects

Made of nickel-plated brass, beads of 2.25 mm diameter.

19534

19535

19536

#### STAINLESS STEEL SUPPORTS



A simple solution for labelling pipes which are too hot to use Gravofoil (i.e.over 70° C.) Fix your label onto a stainless steel support, ensuring that the label is not in direct contact with the pipe. Use the collar provided to attach the support to the pipe. Slip through the cross-shaped imprints before tying to the pipe.



Rounded corners. The standard range:

Stainless steel supports	Part No.
80 x 40 mm	19547
120 x 60 mm	19548
200 x 100 mm	19549

Stainless steel collars	Part No.
3 metres & 8 heads	19550
20 metres & 50 heads	19551

Steel collars	Part No.
3 metres & 8 heads	19552
20 metres & 50 heads	19553

Plastic collars	Part No.
50 fastening collars	19546

Hole diameter: 3.2 mm Packaging: 10 supports





For a perfect finish to your mounted plates.
--

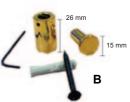
in mounted plates.	Gold	Silver
4 x 20 mm, 12 mm head	25731	25732
4 x 30 mm, 15 mm head	25733	25734
4 x 30 mm, 18 mm head	25735	25736

Packaging: 100 per pack.

#### **SPACER FASTENENERS**

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	Screw diameter	Pack of
Α	61009	4 rounded spacers	brushed stainless steel	Ø 14 mm	25 mm	3 - 15 mm	5 mm	4
В	19471	4 rounded spacers	golden	Ø 15 mm	26 mm	0 - 16 mm	5 mm	4
С	19472	4 rounded spacers	silver	Ø 15 mm	26 mm	0 - 16 mm	5 mm	4



## ENGRAVING SUPPLIES



Soluble oil 12913 Product designed for engraving on glass. Volume: 1 LTR.



Engravolube 26887 Multi-purpose engraving lubricant. Helps improve the life span of your engraving tools. Volume: 100 ml.

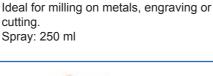


19527

#### Lubricant 23494 For use with lubricating sys-

tem. Synthetic and biodegradable for machining metals. Volume: 2 LTR.

BIO





Vargol 21780 Lubricant for VARGA circular saws. Synthetic oil for use with any material. Volume: 500 ml. Lubricating bottle 21781

Vargol dispenser for VARGA saw.



Tarfil 19526 Designed for metal engraving and cutting. Extremely hard-wearing lubricant. Bottle: 215 g



Surfex 30368 The perfect lubricant for engraving and cutting aluminium. Bottle: 1 LTR.





#### Industrial degreaser 23912

Cleans grease, oil, dust and sticky patches. Can be used on most painted and non painted metals, ceramics, glass and various plastics. Volume: 500 ml.



In handy packaging for clean results.

Universal cleaner 23913 Ideal for cleaning the surface of plates before fixing. Not recommended for use on ABS. Volume: 1 LTR.



### Spray mount

23914 Aerosol for non-permanent fixing and repositioning of lightweight materials. Not recommended with expanded polystyrene. Volume: 500 ml.



Adhesive mounting tape 20151 For temporary mounting of plates Size: 25 m x 25 mm. Adhesive tape For long-term mounting of engraved plates 30 m x 20 mm, 21121 50 m x 14 mm, 30369 50 m x 19 mm, 30370 50 m x 50 mm, 30372 66 m x 19 mm, 47237



Protective adhesive tape 19528

To protect jewellery and brass door plates during engraving. Not required for machines fitted with laser pointer. Size: 100 m x 50 mm



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



### ENGRAVING SUPPLIES COLOURING



#### Gravoxide

21129 Designed to blacken fine engraving on Gravometall. Packaging: 90 ml bottle with application pad.



Aloxide 21130 Designed to blacken fine engraving on glossy anodised aluminium. Packaging: 90 ml bottle with application pad.



Suitable for colouring small characters (e.g. on pet medals). Range of 8 colours available.

Silver	20214		Black	20218
Yellow	20217		Green	20221
Red	20220		Blue	20216
White	20215		Gold	20219
		-		

Packaging: Box of 5 sticks of the same colour



2 cleaning agents available:

- application diluter to clean your plates after colouring. 19469

- cleaning diluter to clean your tools. 19468



Gravolague, polyurethane paint designed to colour subsurface of Gravoglas 1 and 2, anodised aluminium and brass.

Black	19459		White	19460
Red	19461	[]	Blue	19462
Yellow	19463		Green	19464
Gold	19465		Silver	19466

Volume: 1/2 LTR Radiant Gold 19467 Volume: 1/4 LTR

Nitrolague Volume: 1/4 LTR Versatile and fast drying, for colouring rotary engraving on

metal, steel and plastics (except Gravoglas 1).

White 30373 Red 30375 30374 Black Blue 30377

#### LASER MARKING SUPPLIES - Surface treatment for creating black engraving on various metals (stainless steel, raw aluminim, brass, chrome...) with a CO<sub>2</sub> laser machine

#### 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 materials can be easily washed off to reveal the final mark.

Designation

Cermark LMM 6000

Cermark LMM 6000 Cermark LMM 6000



Designation	Capacity or size	Part number
Thermark LMM 14 Aerosol	6 oz - 170g	67120
Thermark LMM 14 Paste	50 g	67119
Thermark LMM 6018LF Tape	Tape 50mm x 1m27 - 2" x 50"	67121

Capacity or size

12 oz - 340 g

50 g

250 g



This range contain 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.



#### CerMark



#### Safety kit

#### 66599

These colouring products require special security measures. Use the safety kit The safety kit includes: protection glasses, 2 pairs of gloves (size 8 and size 9), 2 protection masks and a set of cleaning wipes.



Part number

68880

68878

68879

## ENGRAVING CUTTERS

How to select cutting width											
Height of character	0,4 mm	0,8 mm	1,5 mm	3 mm	6 mm	8 mm	12 mm	19 mm	25 mm	32 mm	50 mm
	1/64"	1/32"	1/16"	1/8"	1/4"	5/16"	1/2"	3/4"	1"	1¼"	2"
The width of the cut is directly related to the height of the engraved character. This chart is a useful guide to help you select cutter tip widths for various engraved letter heights.	,	в	В	В	В	В	B	B	B	B	B
Width of cutter											
Single line font	0,127 mm	0,25 mm	0,38 mm	0,5 mm	0,76 mm	1,0 mm	1,52 mm	2,28 mm	3,17 mm	4,34 mm	6,35 mm
	.005"	.010"	.015"	.020"	.030"	.040"	.060"	.090"	.125"	.171"	.250"
Multi line font	0,127 mm	0,127 mm	0,25 mm	0,25 mm	0,38 mm	0,38 mm	0,76 mm	1,02 mm	1,52 mm	1,52 mm	2,30 mm
	.005"	.005"	.010"	.010"	.015"	.015"	.030"	.040"	.060"	.060"	.090"

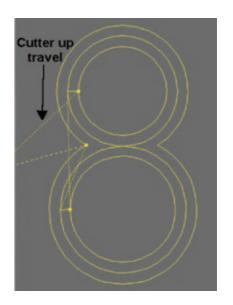
#### Font types are critical to engraving quality and time

There are 2 main types of fonts for engraving: TrueType (print fonts), and pre-engineered engraving fonts.

TrueType fonts are outline fonts. They can be filled for a solid, bold look. Filling requires the engraving programme to calculate the tool paths.

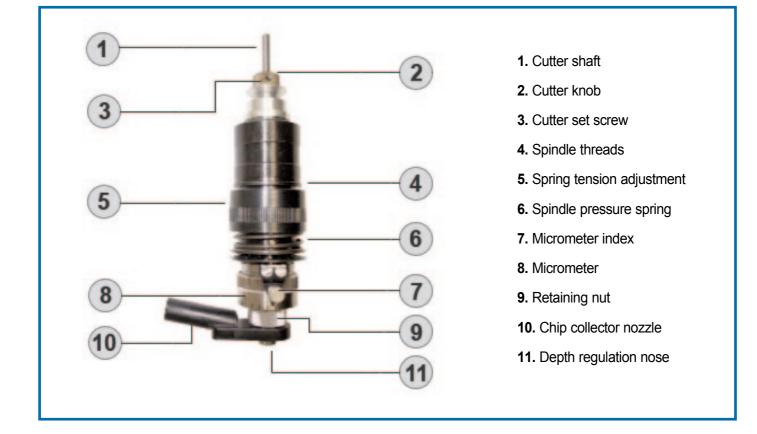
Engraving fonts are pre-engineered fonts with optimised tool paths, designed for reducing engraving time and optimising engraving quality. Engraving fonts are optimised with reduced tool lifts, tool paths start from the inside of a contour - so you don't lose the leading edge of a filled contour which causes "dimpling". Tool path direction is predetermined for high quality engraving. The engraving path order is optimised as a time saving measure. Use single-line fonts to increase production speed.

When selecting cutters, please use the B chart above as a guideline for choosing the appropriate sized tip for engraving.





### SETTING YOUR CUTTERS TO ZERO FOR SURFACE & SUBSURFACE ENGRAVING



This procedure is a one-time operation performed before using a new engraving cutter. It is a best practice that will improve productivity. It will allow changing cutters without having to re-adjust the micrometer

- 1. Turn micrometer gauge in the direction of increasing numbers until it stops
- 2. Back off 3 full turns to 0. Tighten the micrometer set screw. This will allow up to 1.9 mm engraving/cutting depth to be dialled in later. If you are cutting out 3.18 mm material, back off 5 full turns.
- 3. Screw in desired cutter (reverse threads) making sure cutter tip is not sticking out of the nose cone. You may need to adjust cutter offset with yellow cutter wrench.
- 4. Using the arrows on the remote control, move spindle over flat table.
- 5. Press Z on the remote control (LCD reads  $Z = 0.00 \text{ mm} \oplus \text{ to change}$ ).
- 6. Press the down arrow on the remote control until nose cone touches the table (& there is slight separation between the snap ring and spindle assembly).
- 7. Loosen the black set screw on the brass collar of the cutter (with yellow wrench) and carefully lower the cutter down until it just touches the material. Then tighten set screw.
- 8. Without moving the spindle, repeat the previous step on all the plastic cutters and place in cutter rack.
- 9. Press tick  $\checkmark$  on the remote control to raise the spindle back up. Press X to cancel the XY jog mode.

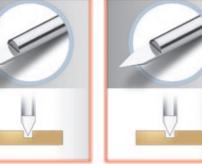
ENGRAVING CUTTERS





### ONECU

3.17 mm Top loading cutters





**Steel cutter** 

Compatible with M20, IM4, IM3, ITM, ITL, IF3

Cutting width	NEW Part No.	Old Part No.	Cutting width	NEW Part No.	Old Part No.
0.25	48793	20134	0.00	48773	20156
0.32	48794	20135	0.25	48774	20158
0.50	48795	20137	0.32	48775	20159
0.75	48796	20138	0.50	48776	20161
1.00	48797	20140	0.75	48777	20162
1.25	48798	20141	1.00	48778	20165
1.50	48799	20142	1.25	48779	20166
2.00	48800	20143	1.50	48780	20167
3.00	48801	20144	2.00	48781	20168
45°	51368	20136	3.00	48782	20170
90°	51372	20139	15°	48802	20157
			45°	48807	20160

g	

Parallel steel cutter

NEW

Part No.

48783

48784

48785

48786

48787

Cutting

width

1 00

1 50

2.00

2.50

3.00



Round base cylindrical steel cutter

NEW

Part No.

48788

48789

48790

48791

48792

Old

Part No.

20179

20180

20181

20182

20183

Cutting

width

1.00

1 40

2.00

2.50

3.00

Old

Part No.

20174

20175

20176

20177

20178

#### 6.35 mm Top loading cutters



**Carbide cutter** 

Compatible with IRV

0.50         48837         20942           0.75         48838         20943           1.25         48839         20946           2.00         48840         20948           3.17         48841         20949	Cutting width	NEW Part No.	Old Part No.
0.75         48838         20943           1.25         48839         20946           2.00         48840         20948           3.17         48841         20948	0.32	48836	20940
1.25         48839         20946           2.00         48840         20948           3.17         48841         20949	0.50	48837	20942
2.00         48840         20948           3.17         48841         20949	0.75	48838	20943
3.17 48841 20949	1.25	48839	20946
		48840	20948
6.00 48842 20951	3.17	48841	20949
	6.00	48842	20951

48809

Cutter references have changed. Please use the new references when ordering (see conversion table opposite.) Every cutter is engraved with its reference.



#### 4.36 mm **Top loading cutters**



Steel cutter

NEW

Part No

48808

48809

48810

48811

48812

48813

48814

48815

48816

48818

48819

48830

48831

48832

21052

21055

21058



**Carbide cutter** 

Compatible with TXL, TX3, IRV, VX Range, V-3000, V-4000, UNICA, VEGA, IS Range, M40 Range

d ).	Cutting width	NEW Part No.	Old Part No.
	0.25	48820	21036
	0.32	48821	21037
	0.50	48822	21039
	0.75	48823	21040
	1.00	48824	21042
	1.25	48825	21043
	1.50	48826	21044
	2.00	48827	21045
	3.17	48828	21046
	4.00	48829	21047



Parallel steel cutter

NEW Part No.	Old Part No.
51355	21071
51356	21072
51358	21073
51359	21074
51360	21075
51361	21076
48834	21077
	Part No. 51355 51356 51358 51359 51360 51361

Cutters



Round base cylindrical steel cutter

Cutting width	NEW Part No.	Old Part No.
1.00	51362	21078
1.50	51363	21079
2.00	51364	21080
2.50	51365	21081
3.00	51366	21082
3.50	51367	21083
4 00	48835	21084

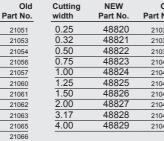


1/4 round carbide cutter

Cutting width	NEW Part No.	Old Part No.
0.32	51373	-
0.50	51374	21102
0.75	51375	21103
1.25	51376	21104
2.00	51377	21105
3.00	55984	12226

#### Cutter recommendations for different materials

	Plastics			cs Metals G			Glass			
	Gravoply	Gravoglas	Gravostrat	Aluminium	Brass	Bronze	Soft metal	Stainless steel	Precious metals	
steel	Х	х			х	х	х		Х	
carbide	х	Х	Х	Х	Х	Х	Х	Х	Х	
diamond				х	Х	Х	х	Х	Х	Х



\* for drilling and cutting

Cutting

width

0.00 0.25

0.32

0.50

0.75

1.00

1.25

1.50

2.00

3.17

4.36

15

45

Special\*

Gravoply	Gravoglas	Gravostrat	Aluminium	Brass	Bronze	Soft metal	Stainless steel	Precious metals	
Х	х			х	Х	х		Х	
Х	Х	Х	Х	х	Х	х	Х	Х	
			Х	Х	Х	Х	Х	Х	



### **ENGRAVING CUTTERS** TWIN<mark>cut</mark>

• Multipurpose. A range of inserts to engrave, cut and drill the widest range of materials (plastic, plexiglas, laminates, aluminium, brass, etc.)

• Interchangeable. A tool-holder with length preset, designed to hold any insert from the Twincut range. • Proven quality. Twincut's micrograin carbide technology ensures very durable resistance to wear and tear, achieving the best possible engraving results. • Economical. The life span of the toolholders is practically unlimited. Only the active parts are replaced. • Compatible. Twincut tools can be used with 4.36mm diameter spindles and collet spindles (top-loading length preset).

• Direct fixing of the insert into 3.17mm diameter collet. • Useful and progressive. The complete range of engraving, cutting, surfacing and drilling inserts allows you to adapt your equipment as your applications evolve.



Toolholder All inserts must be used with this toolholder Part No. 22987



Engraving insert for common materials Use on brass, Gravoply, aluminium

NEW

Part No

48608

48609

48610

48611

48612

48613

48614

48615

48616 4861

48618

23000

23001

Cutting

width

<u>0.25</u> 0.32

0.50

0.75

1.00

1.25

1.50

1 75

2.00

3.00



Jewellery engraving insert Signet rings, bracelets, medallions

Old Part No.	Cutting width	NEW Part No.	Old Part No.
22991	0.25	50135	23002
22992	0.32	50136	23003
13808	0.50	50137	23004
22994	0.75	50138	23005
22995			
22996			
22997			
22998			
22999			



Insert for engraving Use on soft and semi-hard stee

1	Cutting width	NEW Part No.	Old Part No.
	0.25	48629	23046
	0.32	48630	23047
	0.50	48631	23048
	0.75	48632	23049
	1.00	48633	23050
	1.25	48634	23051
	1.50	48635	23052



insert Drilling, filling, engraving on Gravoply

Cutting width	NEW Part No.	Old Part No.
1.00	48619	23016
1.50	48620	23017
2.00	48621	23018
2.50	48622	23019
3.00	48623	23020



Round nose engraving insert Use on Gravoglas for subsurface engraving

Cutting width	NEW Part No.	Old Part No
1.00	48624	23026
1.50	48625	23027
2.00	48626	23028
2.50	48627	23029
3.00	48628	23030

GRAVOGRAPH

Cutter references have changed. Please use the new references when ordering (see conversion table below.) Every cutter is engraved with its reference.





### TWIN<mark>Cut</mark>



**1/4 round engraving insert** For use on stainless steel,

anodised aluminium

Cutting width	NEW Part No.	Old Part No.
0.25	48636	23031
0.32	48637	23032
0.50	48638	23033
0.75	48639	23034
1.00	48640	23035
1.25	48641	23036
1.50	48642	23037
1.75	48643	23038
2.00	48644	23039



Double cone engraving insert For use on teel or stainless steel

Cutting width	NEW Part No.	Old Part No.
0.25	48645	23040
0.32	48646	23041
0.50	48647	23042
0.75	48648	23043
1.00	48649	23044
1.25	48650	23045



**15° insert for cutting out plastic** For cutting out letters and shapes in plastic

Cutting width	NEW Part No.	Old Part No.
0.32	48713	23054



**45° insert for cutting out plastic** Bevelled edge, v-grooved surface

Cutting width	NEW Part No.	Old Part No.	Cutti width
0.32	48925	23055	1.00

Cutter references have changed. Please use the new references (see conversion table below.)

Every cutter is engraved with its reference.



Insert for cutting out epoxy PCB For cutting-out printed circuit boards

Cutting width	NEW Part No.	Old Part No.
1.00	48651	23057
2.00	48652	23058



2- lip cutter for metal cutting

For front panels, letter cutting, etc.

Cutting width	NEW Part No.	Old Part No.
0.80	48657	-
1.00	48658	23062
2.00	48659	23063
3.00	48660	23064

Twin-cut kits	Part No.
Twin-cut Starter kit	23056
Twin-cut kit 6 inserts	26860
Twin-cut kit 10 inserts	25424
Twin-cut kit 25 inserts	25425
Twin-cut kit 40 inserts	25426



1- lip cutter for acrylic cutting For use on GRAVOGLAS, GRAVOMETALL

Cutting width	NEW Part No.	Old Part No.
0.80	48653	-
1.00	48654	23067
2.00	48655	23068
3.00	48656	23069



NEW Part No.	Old Part No.
48661	22989
48682	26412
48683	22990
48684	26415
48685	26416
48686	26417
48687	26422
48688	26423
	Part No. 48661 48682 48683 48684 48685 48685 48686 48687



**Diamond insert** Non-rotating tracing diamond for all shallow marking jobs

Cutting width	Part No.	Cutting width	Part No.
0.20	23061	0.20	23060

**Diamond insert** 

glass or hard materials

Rotating diamond (rotary motor

spindle) for engraving on crystal,



## **ENGRAVING CUTTERS**



• Professional cutters for cutting and drilling with High Frequency (HF) Spindles.

• Engraving cutters for collet or HF spindles.

All 4.0 mm diameter cutters can be used with the toolchanger on IS6000/7000/8000.

#### Engraving cutter for HF and Collet spindles 4 mm 6 mm



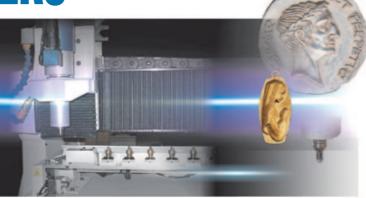
**Carbide cutter** For use on aluminium and plastics

Cutting width	NEW Part No.	Old Part No.	C W
0.25	48757	23081	(
0.32	48758	23082	(
0.50	48759	23083	ī
0.75	48760	23084	-
1.25	48761	23085	



**Carbide cutter** For use on aluminium and plastics

Old rt No.	Cutting width	NEW Part No.	Old Part No.
3081	0.32	48762	23087
3082	0.50	48763	23088
3083	0.75	48764	23089
3084	1.25	48765	23090



#### Cutting and drilling tool for HF spindle and Collet spindles

Cutter references have changed.

Every cutter is engraved with its reference.

Please use the new references (see conversion table below).



Spiral 3-lip cutter Tip diameter 3.17 mm

Cutting width	Part No.
2.00	23079

#### **Diamonds**



#### **Diamond tip**

	Part No.
3.17 fixed	20147
3.17 rotating	20149
For diamond spindle	12224
4.36	21050
Glass engraving	
Diamond tip	12909
0.75 mm	27044
1.50 mm	21753
Granite engraving	
1.6 mm tip	20932
3.1 mm tip	20933

#### Cutters



**Cutters for grinding machines** 

Cutting width	NEW Part No.	Old Part No.
Steel cutter 45° for B4	48807	20160
Steel cutter 90° for B4	48806	20163
Carbide cutter 45° for B4	51368	20136
Carbide cutter 90° for B4	51372	20139
Carbide cutter 45° for B6	48846	21022
Carbide cutter 90° for B6	48847	21023



Cutter knobs

	Part No.
4.36. preset	22740
6.35. preset	22741
3.17	20148
4.36	12335
4.36	10488
6.35	20973
Screws for knobs	12574

The quality of engraving relies upon using the right tool as well as using a sharp tool. Gravograph grinding machines and grinding service are indispensable for your engraving.





### MACHINE JIGS

Gravograph provides an extremely wide selection of jigs, developed for and with customers. All Gravograph jigs are compatible with all Gravograph machines.



Standard celeron 150 mm jigs Part No. 10165



Bracelet/Baby ID jigs any shape/thickness Part No. 28192



Celeron badge 103 x 36 mm jigs Part No. 20128



Multigrip jigs with sliding pins & stops Part No. 20196



Bangle bracelet jigs Part No. 51729



Aluminium 150 mm jigs Part No. 20189



Watch/medal jigs fit any shape Part No. 10182



Pen & tubular object jigs, hold 2,3 or 4 pts. Part No. 10169



Gravofoil vice Part No. 22868



Cell phones jigs Part No. 49510



Aluminium 240 mm jigs Part No. 21131



Spectacle bow jigs adjustable width Part No. 20190



Spectacle bow jigs adjustable width Part No. 20842



Large plate/salver jigs with relocatable pins Part No. 20192



Circuit boards jigs with locating pins Part No. 16638



Cutlery jigs with adjustable stops Part No. 20129



Signet ring jigs with protection pad Part No. 20194



Large plate, aluminium 310 x 110 mm jigs Part No. 20191



Celeron unmachined jigs 152 x 38 mm Part No. 10179



Cutlery jigs with relocatable pins Part No. 22370



Jewellery vice X - Y self centring Part No. 22870



Gravogrip 1220 x 610 mm: Part No. 26528 100 cm<sup>2</sup>: Part No.26362



Swiss army knife jigs Part No. 28067



Multi medals jig Part No. 28060



Part No. 30050





Part No. 12500





### **REGULATING NOSES**

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

Steel noses Teflon noses Swivel noses Prismatic nose Vacuum noses Diamond nose the most commonly used noses (resistant and highly polished for minimum plate scratching) for engraving on easily scratched material, such as metal for engraving on curved surfaces (steel or teflon) for engraving on jewellery items such as ID bracelets or bangles same as steel nose and can be linked to a swarf extractor provides better rigidity & accuracy than a non rotating diamond cutter - mainly used for photo engraving and jewellery.

NB: Gravograph noses are compatible with all Gravograph machines.



Steel nose 0.7 mm diameter Part No. 20130



Steel nose 4.6 mm diameter Part No. 21086



Steel swivel nose 5 mm diameter Part No. 13058\*



Vacuum nose 1.5 mm diameter Part No. 21674



Steel nose 1.5 mm diameter Part No. 20131



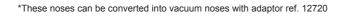
Steel nose 16 mm diameter Part No. 20960



Teflon nose 3 mm diameter Part No. 20133



Vacuum nose 3.3 mm diameter Part No. 21672





Steel nose 2.4 mm diameter Part No. 21755



Steel swivel nose 2.5 mm diameter Part No. 22464\*



Fixed diamond nose Part No. 22884



Vacuum nose 8 mm diameter Part No. 21673



Steel nose 2.5 mm diameter Part No. 20132



Teflon swivel nose 3.5 mm diameter Part No. 22481\*



Prismatic swivel nose Part No. 22885



Teflon long-reach vacuum noses 2.5 mm diameter length: 12, 22, 27 mm Part No. 28061 / 28062 / 28063



#### **GRAVOGRAPH** on the web

### www.gravograph.co.uk

- Detailed information on the Gravograph product offer, illustrated by videos:
  - C.N.C. engraving machines
  - CO<sub>2</sub>, Yag and Fibre laser engraving systems
  - Micro percussion marking systems
  - Innovative software dedicated to the engraving industry
  - Complete training solutions designed for your engraving needs
  - Customer-focused service packages
- Information on new product releases,
- Sales events: exhibitions, open door days, road shows,...
- Contact us for more information,
- Sign up to the Gravograph newsletter.



## NOTES

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### **Global reach**

A global leader in the engraving and permanent marking industry, Gravograph's many subsidiaries and distributors/ agents around the world offer a complete and worldwide engraving solution to their customers, coupled with unparalleled customer service and support.





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