

TYPE3-CAA / FREQUENTLY ASKED QUESTIONS

General topics

Add-on for CATIA V5 & 3DEXPERIENCE

TYPE3-CAA is an add-on software solution to CATIA V5 & 3DEXPERIENCE edited by GRAVOTECH MARKING S.A.S., the worldwide leader in engraving software solutions with more than 60.000 users .

Developed in partnership with Dassault Systèmes since 2003, TYPE3-CAA offers design and construction engineers a unique access to a wide range of professional tools to enhance industrial parts with serial numbers, accurate text, logos, legal information, specs... directly within the PLM process of CATIA V5 / 3DEXPERIENCE. TYPE3-CAA is fully parametric and associative with all features of CATIA.

1 What are the CATIA and OS prerequisites?

Windows OS: 32 / 64 bit.
Windows versions: according to CATIA's version.
CATIA V5 prerequisites: R18 SP5 and upper.
Minimum configuration: MD1 / MD2
CATIA 3DEXPERIENCE prerequisites: 2015X FD 1616.
Minimum configuration: MES / KDI

2 Is TYPE3-CAA available in different languages?

Yes, TYPE3-CAA for CATIA V5 and 3DEXPERIENCE is available in 6 languages: English, French, German, Chinese and Japanese, and also Italian for CATIA V5.

3 What are the licensing management possibilities?

TYPE3-CAA uses the FlexLM licensing management technology. Stand-alone licenses or server licenses are available.

4 Can I use three-server redundancy, VIRTUAL MACHINES, Triad's configuration of server?

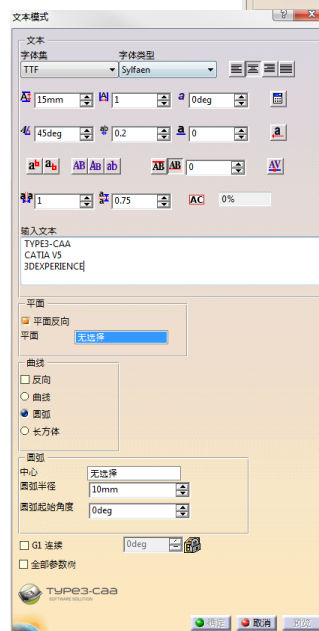
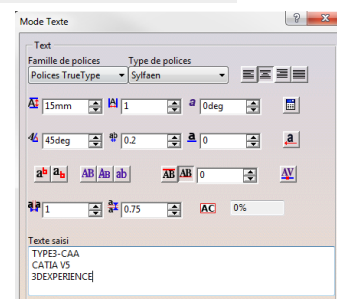
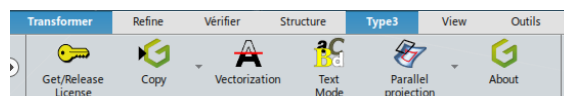
Yes, the FlexLM licensing management can set up such configurations. Redundancy also works.

5 Where can I find the latest version of TYPE3-CAA?

Latest versions can be directly downloaded from:

<http://www.type3.com/download/download-type3-caa>

For further information, contact your nearest reseller or contact us at sales@type3.com



6 How can I be trained on TYPE3-CAA?

Videos available via TYPE3-CAA YouTube channel and can be provided on request.

Online training can be organized as well at your convenience (optional service).

Thanks to a very clear user-interface, training does not exceed 2 hours usually.

7 Where is the TYPE3-CAA toolbar located?

By default, the TYPE3-CAA toolbar can be found in the Part Design Workbench. Alternatively, it can also be displayed in the Generative Shape Design toolbar.

8 Can I use CATIA with other TYPE3 solutions, like TYPEDIT (2D, 2.5D and 3D CAD-CAM software for engraving and bas relief / texture creation)?

Yes, with the TYPE3-CAA Gateway package, you can copy/paste 2D artworks from/to TYPEEDIT or CATIA. Text, drawings, dials, rulers... are automatically converted into curves and appear in your CATIA environment.

9 What are the typical applications for TYPE3-CAA?

The range of applications is extremely wide. TYPE3-CAA based can be used either for Manufacturing, Simulation or for Marketing (product presentation and visualisation).

- AUTOMOTIVE: suppliers, moulded parts, casting, ...
- AEROSPACE: Panels, signage, moulded/casted parts...
- CONSUMER GOODS: moulded parts, product presentations, panels, ...
- ELECTRONIC / ELECTRIC: moulded parts, product visualisation, labels, etc.
- TEXT / LOGO / SYMBOLS / NUMBERINGS...: are needed as part of a seamless Design to the Manufacturing process, including traceability.

10 Will TYPE3-CAA be compatible with the next CATIA releases?

Yes, as a Dassault Systèmes Solution Partner, we will insure that TYPE3-CAA supports future CATIA V5 and 3DEXPERIENCE releases.





Text Mode

(included in « Graphic» and « Graphic & Wrap » Packages)

11 Can I use True Type and Single Line Fonts?

Yes, TYPE3- CAA allows you to use all the True Type and Single Line Fonts installed on your computer, as well as all VN fonts (single/stroke line fonts).

12 Can I work with Asian and Arabic True Type fonts?

Yes, you can work with Asian, Russian or Arabic TTF as long as you install CATIA on a non-US or non-European Windows Environment. All you need to do is retrieve the Foreign Windows Fonts and work with them directly from your keyboard.

13 How can I retrieve CATIA default Fonts in TYPE3-CAA?

By installing the Fonts under the OS Fonts Directory.

14 When I create text and logos with TYPE3-CAA, what kind of entities do I build in CATIA V5 & 3DEXPERIENCE?

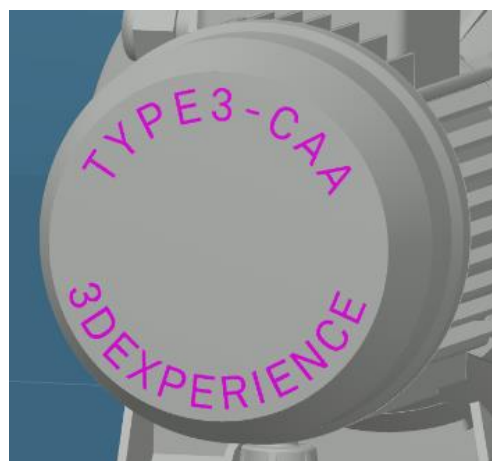
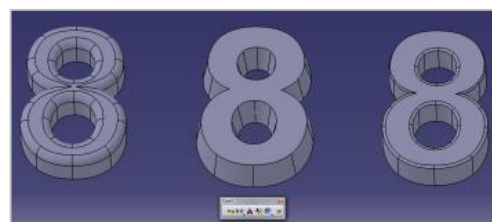
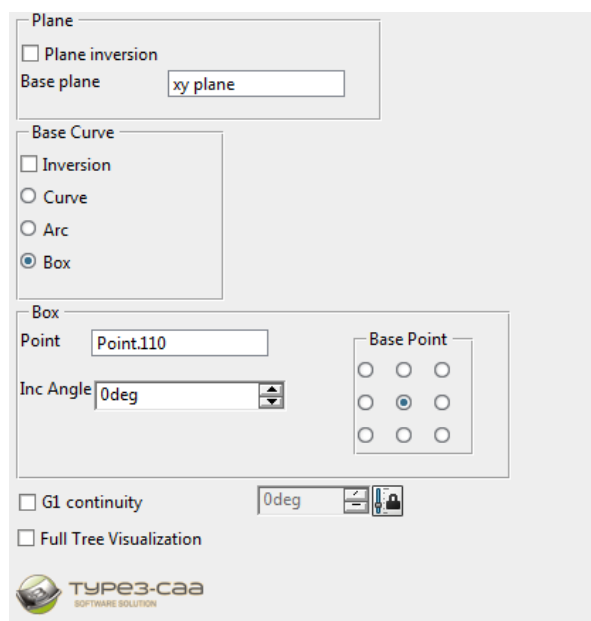
A feature text within CATIA's tree is created. It can be modified by accessing all parameters individually without having to edit the feature text.

15 When can I use single/stroke line fonts (VNF for instance)?

Single line fonts are usually used to save time during the machining phase (following the profile) offering an alternative to pocketing.

16 Are all Fonts G1 type?

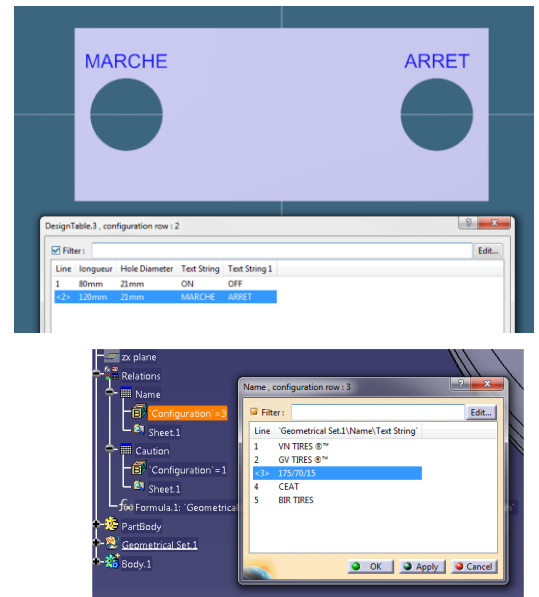
By default, standard TTF fonts are not G1, but with TYPE3- CAA it is possible to convert fonts into G1 type with a single click.



17 What is the advantage of using the associative text features from TYPE3-CAA (compared to DXF imports for example)?

The benefits are significant while dealing with text. You save a lot of time! Productivity gains are very important. For example:

- Any changes to the characteristic TEXT is directly shown in your CATPART.
- CATPART FILE size can be downsized to 40% or more depending on text length and font.
- Text is fully parametric and associative with all other features of CATIA V5 & 3DEXPERIENCE.
- TYPE3-CAA features can be used inside CATIA macros.
- No loss of precision due to the quality of DXF import/exports.
- Saving archives with all design components is completely associative.
- Q-checker, Powercopy and UDF compatible



18 Can I use DESIGN TABLES / FORMULAS?

Yes, since all text parameters are published, the design formulas can be created. This is beneficial while working with models with multiple languages from excel files.

19 Can I use MACROS with Feature Text?

Yes. TYPE3-CAA allows users to manage texts via the Macro interface of CATIA V5 & 3DEXPERIENCE. Users can record / edit / modify a macro with the feature text. In the current editor (for example Microsoft Visual Basic) we can find all parameters of the text within the macro, then modify the macro according to the applications. This approach gives a real opportunity to users who are targeting an automation process. The benefits can be applied to front panels, labels ...

20 Can I use SYMBOLS, pictograms, special characters?

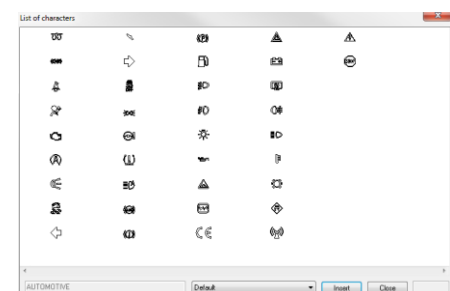
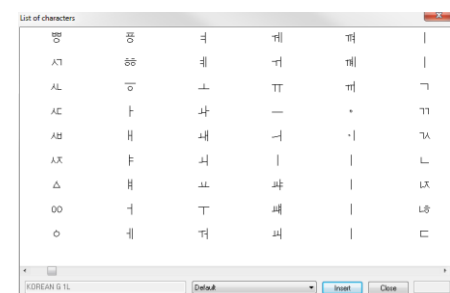
Yes. Any symbol you use from the included "Special Character" list can be manipulated like a font. It can also be extended using your own symbols (conversion service available in option).

21 Can I use my own company font in TYPE3- CAA?

Specific services such as converting a special company font to a VNF Font can be provided. Then, it can be used in TYPE3-CAA. Please contact sales@type3.com for a quotation.

Working with Macros

```
dim originelements1 As originelements
set originelements1 = part1.originelements
dim hybridshapePlaneExplicit1 As AnyObject
set hybridshapePlaneExplicit1 = originelements1.Planexy
dim reference1 As Reference
set reference1 = part1.CreateReferenceFromObject(hybridshapePlaneExplicit1)
textwarpFactory1.Plane = reference1
part1.update
textwarpFactory1.TextString = "123456"
textwarpFactory1.spacing = 0
textwarpFactory1.Inclination = 0
textwarpFactory1.underline = 0
textwarpFactory1.Textwidth = 1
textwarpFactory1.Textheight = 0.08
textwarpFactory1.Italicstyle = 0
textwarpFactory1.DistanceLine = 0
textwarpFactory1.Fontstyle = 63
textwarpFactory1.Fontclass = 1
textwarpFactory1.Modifier = 1
textwarpFactory1.ExponentType = 3
```



23 Can I get additional Single Line fonts?

Yes, 2 single-line fonts packages are available in option. Each package includes 10 single-line fonts. You can choose the Western pack and/or the MEA pack.

24 Can I control the position of the text on the support curve?

Yes, there are several possibilities for accurate positioning. You can set text according to the Align Left/ Centre/ Right / Justify options. It is also possible to define an extra distance from the beginning or the end of the curve.

25 Can I use surface edges as a text support?

Yes, edges, vertices or planar surfaces can be used as text supports.






26 What about KERNING for character spacing?

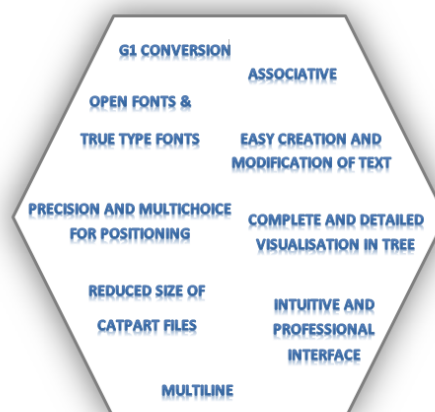
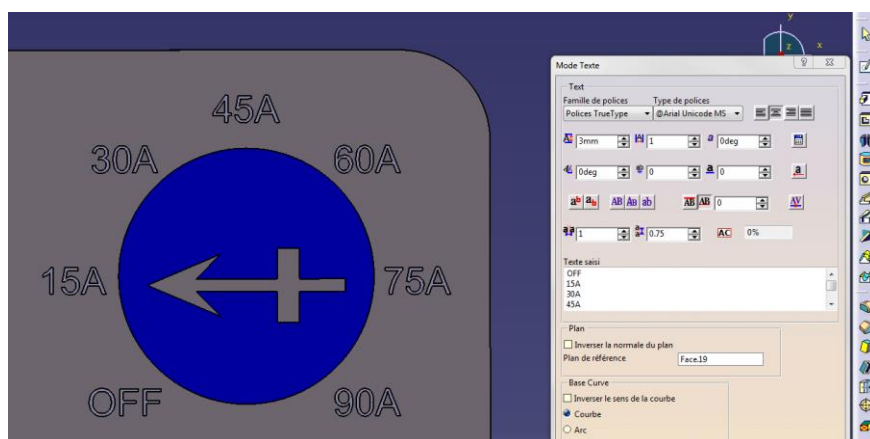
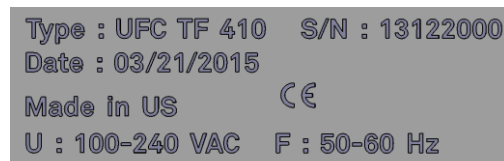
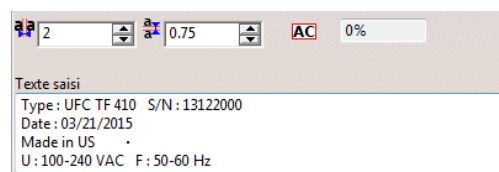
TYPE3-CAA gives you the possibility to adjust all KERNING parameters from a specific menu. It allows you to meet graphic rules or to adjust designs to specific shapes.

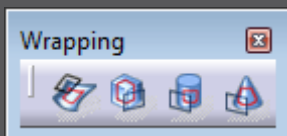
27 Can I write a multiline text?

Yes, it is possible to write multiline text with TYPE3-CAA. A single point can be used as a reference to type your text.



 Applies the auto-kerning. By default it is the most readable.	WAVE
 Suppresses the auto-kerning and keeps the left and right spaces	WAVE
 Applies the auto-kerning and suppresses the left and right spaces	WAVE
 Suppresses the auto-kerning and the left and right spaces of the	WAVE
 Each character and its spaces fit a box, which has the dimension of the M (this character is the reference). This function aligns vertically the characters in comparison to those of the second	8 9 M e WAVE I I I





Projection / Mapping

(included in « Graphic & Wrap » Package)

Thanks to the PROJECTION and MAPPING features, TYPE3-CAA users can apply text, logos, symbols, numbers ... on any 3D shapes, simple or complex.

1 What is “PROJECTION”?

A projection allows curves to follow a surface according to an axis direction. For example, a curve can be adjusted on the “Z” direction, while the X and Y coordinates remain unchanged.

There are 2 types of projections available in TYPE3-CAA:

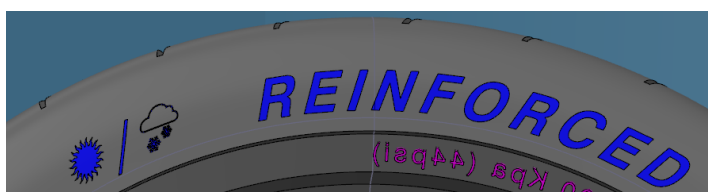
- Parallel projection: according to the Z direction
- Local projection: contour elements are projected one by one onto the surface.

The “local projection” is often used when the 3D shape contains intense variations, for example for projection on a sphere. In this case, the curves will be projected one by one onto the surface.

2 What Mapping strategies can I use in TYPE3-CAA?

There are 3 strategies available: Basic, Cylindrical or Conical.

- Basic mapping: it is used on a single patch surface; it follows the U/V direction.
- Cylindrical mapping: it is used when the surface shape is close to a cylinder-like form. Surfaces can be multi-patch surfaces.
- Conical mapping: it is used when the surface shape is similar to a cone-like form. Surfaces can be multi-patch surfaces.



3 Why are there so many different Projection and Mapping possibilities?

The 5 different strategies will fit any shape.

Our long experience in the engraving world has taught us that when it comes to applying 2D artworks on 3D surfaces, all these strategies are required to fit aesthetic, manufacturing or graphic chart constraints. TYPE3-CAA is the only solution on the market to offer such a wide selection.

4 I created a text in TYPE3-CAA, then projected or mapped it on a surface. Can I change afterwards the position of the text or any of its parameters?

Yes, of course! TYPE3-CAA is fully integrated into CATIA and allows any 2D text created prior to the projection/mapping operation to be edited.

You can also adjust the support and/or the text, and select one or more of its features (font, size, kerning, position ...) to get the full modification of your model.

Surfaces can be composed of one patch or can be more complex.

5 What kind of entities are built in CATIA when I create Text and Logo with TYPE3-CAA, and project/map them on a surface?

A feature text is created in CATIA's tree. It can be modified by accessing all parameters individually without having to edit the feature text.

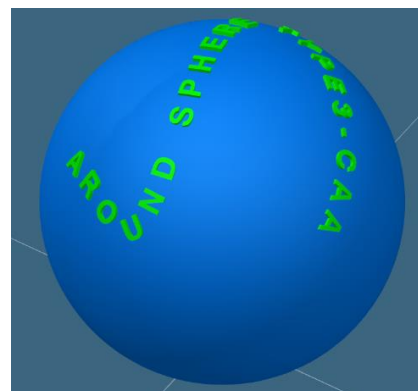
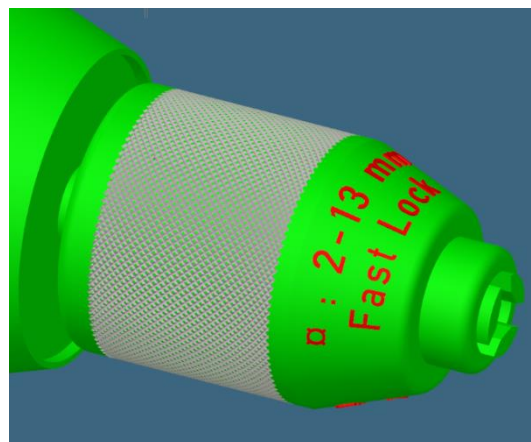
A vectorised logo is by default converted into a CATIA curve.

The end result of a projection or a mapping are CATIA curves. You can then use various functions such as: split, extrude, thick surface, projection/mapping, ...

6 How can I adjust and control positions of my curves to be projected or mapped on my surface?

You can define the curve and surface axis system by defining a reference point on an axis or on the surface itself. The benefits are:

- Precision in controlling the positioning.
- Any changes made to the 3D model are automatically applied to the machining.





Vectorization

(included in « Graphic » and « Graphic & Wrap » Packages)

TYPE3-CAA allows you to vectorize raster pictures inside CATIA V5 & 3DEXPERIENCE. The vectorization (also referred to as “image tracing”) is the creation of vectors from raster graphics. It is used on a regular basis for logos. It is very useful when you only have an image as artwork, and no DXF or EPS file.

1 Which formats can I vectorize directly?

You can import directly into TYPE3-CAA any picture file with extensions: BMP, PNG, JPG, TIFF or GIF. You can vectorize black & white images as well as colour images.

2 What about the quality of the original artwork?

The higher the resolution in DPI (above 64*64), the better the result.
In the case of multicolour artworks, there should be a good colour transition.

3 What are the “vectorization parameters”?

There is an extensive menu available allowing you to control the precision of the vectorization, the smoothing, the automatic cleaning of “noise” pixels, as well as the possibility to do “centreline” vectorization. The “Allowance” will control how accurate your vector will remain to the original image.

The “Noise filtering”: approximately follows the main positions of the pixels located on the edges of the vectorised area.

The “Smoothing” generates a rounded or jagged vector spline.

4 Do I get CATIA curves after the vectorization process?

Yes, CATIA curves are created from the outlines of the vectorised image.

You can then use any functions such as: pad, scale, change plane, projection/mapping, ...



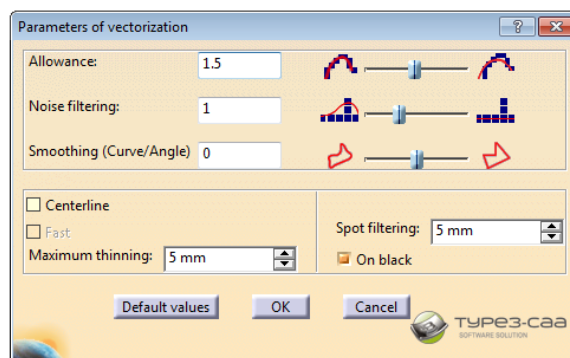
*.BMP



*.PNG

*.JPEG

*.TIFF

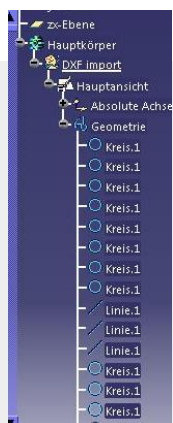
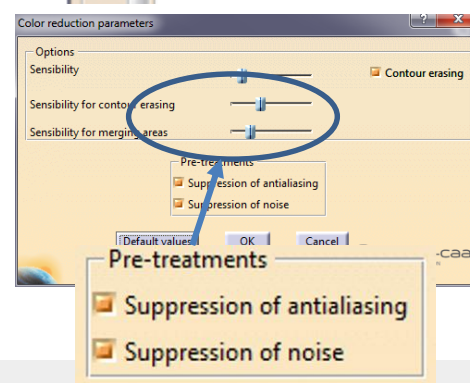


5 When handling colour bitmaps, why should I use a “Colour reduction”?

All colours are automatically detected and listed. You have the possibility to merge colours or select the relevant ones for vectorization.

You have the option of merging nearby colours thus reducing the original number of colours. Sharpness of angles in contours between 2 colours can be defined or ignored thanks to the “noise filtering” option.

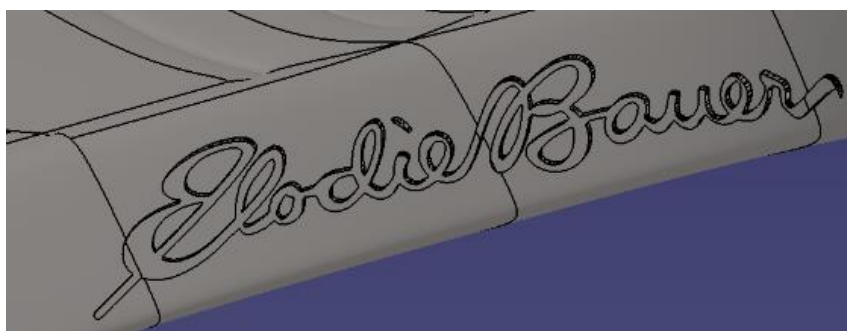
NOTE: For additional graphic requirements such as accurate node editing, please check our other software solution: [TYPEEDIT](#). Combined with the “Gateway” package, it extends the 2D graphic capabilities and allows to copy/paste to/from TYPEEDIT and CATIA V5 & 3DEXPERIENCE



For same artwork:

Left: DXF import, showing dozens of lines.

Right: creation with Type3 CAA: just the 2 required curves!



More questions? Do not hesitate to contact us for videos, trial procedure, for a quotation or to get an invitation to the next webinar! Please join us at sales@type3.com

About Gravotech

The Gravotech Group is the worldwide leader in the design, manufacture and distribution of innovative solutions for engraving, marking and artistic modelling.

Its offer is built around four brands: Type 3, Propen, Technifor and Gravograph. These brands cover four key technologies (laser, mechanical engraving, scribing and micro-percussion) supplemented by a wide range of consumables and software solutions.

Based in the Lyon region of France, Gravotech has over 900 employees in over 100 countries.

The Group boasts a vast international network: 29 subsidiaries and 300 distributors work alongside its 60,000 international customers, assisting them with their local or global issues.

The logo for Type 3, featuring the text "Type 3" in a dark grey sans-serif font, followed by a green stylized "G" icon.The logo for Propen, featuring the text "PROPEN" in a dark grey sans-serif font, followed by a green stylized "G" icon.The logo for Technifor, featuring the text "TECHNIFOR" in a dark grey sans-serif font, followed by a green stylized "G" icon.The logo for Gravograph, featuring the text "GRAVOGRAPH" in a dark grey sans-serif font, followed by a green stylized "G" icon.