



Symbol Development for Smart 3D

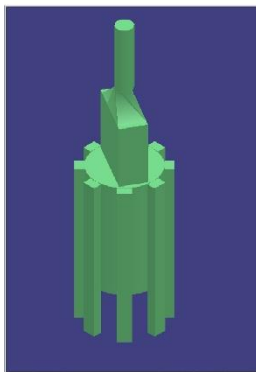
Symbols and Assemblies

Summary

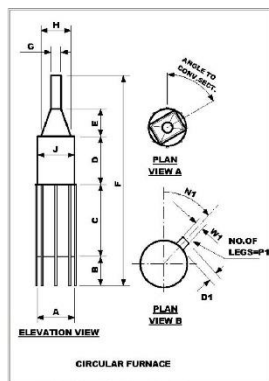
A key requirement for any Smart 3D implementation or project is ensuring a suitable library of 3D parametric symbols is available. While the delivered product includes a wide variety of symbols, there are often gaps caused by the particular facility, company or design standards that must be applied. Customers needing to develop new symbols to fill these gaps face a number of challenges, including:

- A significant learning curve to become proficient with the complex and evolving product APIs and capabilities
- Infrequent use of the specialist skills required means lower efficiency overall, and/or the time-consuming training of new resources
- A large pool of existing samples to be navigated in order to identify an appropriate basis for a new symbol or modification

This TecSurge service solves these problems by delivering professionally developed and quality tested parametric 3D symbols for Smart 3D equipment, structure, electrical, HVAC and piping tasks.



Example equipment parametric symbol



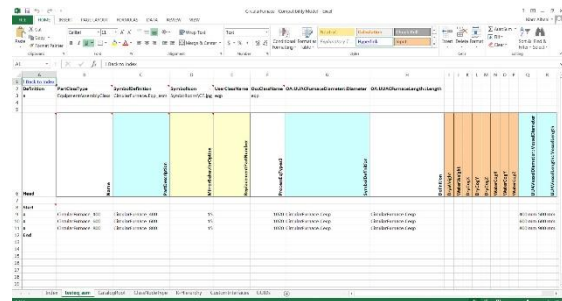
Differentiators

- Industry knowledge and design understanding eliminates communication barriers, minimising delays and providing results which meet or exceed expectations
- Years of experience with previous and current versions of Smart3D eliminates the learning curve, and ensures trouble free use of delivered symbols now and in the future
- Proprietary libraries containing proven solutions to common requirements avoid “reinventing the wheel”, resulting in lower cost and time and improved quality
- Improved design efficiency with intelligent parametric symbols compared to other approaches such as graphic import (e.g. SAT files) or primitive shapes

Deliverables

The typical deliverables produced by this service are:

- Symbol source files (including Visual Basic 6 or VB.Net code or CAXperts 3D Symbol Designer project files)
- Smart 3D catalogue Excel format bulk load worksheets
- Support symbol icon images in JPEG format
- Visual Basic 6.0 or VB.Net dynamic link library (.dll) files



Example symbol bulk load worksheet

Work Process

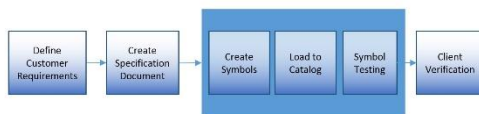
TecSurge manages the execution of parametric 3D Symbol Customisation as a professional services project, involving a dedicated project manager and our expert services team. Typically, the project schedule will be organised and based upon milestones aligned with our client's project



priorities. These priorities and deliverables associated with each of the project milestones are agreed with the client during the project kick-off meeting, after which the detailed execution commences.

Requirements are finalized by creating specification documents for each symbol, with all the geometry information (detail drawing) and technical details such as variants, symbol attributes and other required intelligence. These specification documents are issued to the customer for approval prior to the commencement of development work.

Once development is in progress, as each milestone is reached, a set of fully quality checked, ready for use symbols, and reference data is delivered, along with a project status report.



Symbol development work process

Quality Assurance

TecSurge utilises the approved specification documents to ensure developers and our customers are aligned with respect to expectations, and to ensure our deliverables meet quality expectations.

Prior to issue of deliverables, every symbol developed is tested on an environment utilising the created symbol library. Upon successful completion, the handover package is sent for customer verification.

During the customer verification period, the client confirms their acceptance of the customised symbols and provides comments or feedback regarding the delivered package. Any issues raised

during this stage will be resolved until final handover is completed.

Getting Started

Typically, our customers have a set of part detail drawings, and need to have matching symbols implemented in Smart 3D for project use.

In addition to these detail drawings, we will ask our clients a series of questions to clarify the scope of work:

- **Which development environment should be used (Visual Basic 6.0 or VB.Net)?** Why: From S3D 2014, Intergraph supports the use of VB.Net for some symbol types, however Visual Basic 6.0 is still supported and may be required by some customers. Note:
 - Visual Basic 6.0 symbols have backward compatibility, and can be used in S3D 2014 and earlier versions, however VB 6.0 is obsolete and new VB 6.0 licenses may be difficult to obtain.
 - VB.Net symbols have shorter and faster code but can only be used for S3D 2014 and later versions.
- **What is your expected Start Date? What is the expected Completion Date?** Why: affects resource loading and cost.
- **Are any optional deliverables required?** Why: In most, but not all cases, our symbol library creation is accompanied by some or all of the following deliverables:
 - Custom User Forms
 - Naming Rules

If this service describes your situation, and you're able to provide the engineering inputs and answers to the questions listed here, [contact us](#) today for a quotation.

Contact us

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