



# Creating new and re-defining existing ISOGEN Symbol Keys (SKEYs) using Symbols Editor

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# 2812 Synopsis



- All components output on ISOGEN isometric drawings are defined by a unique code called a symbol key (SKEY). ISOGEN uses a built-in SKEY library to draw the various piping components on the isometric. Many of the symbols in the library can be changed or redefined, whereas others are fixed by the program and cannot.
- Every component in a CADWorx specification needs to have a default ISOGEN SKEY assigned. Sometimes you may want a different representation of the component on the final isometric. To do this, you can either redefine the library symbol if it can be changed, or you can create an entirely new symbol and substitute it for the default symbol.
- This session will teach you all you need to know about ISOGEN SKEYs. You'll get hands-on with the latest Symbol Editor version, using it to create an entirely new SKEY, plus change an existing SKEY for a component.



# Learning Objectives

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- Meet the Experts Around You
- Modify Existing SKEY
- Create New SKEY
- Configure ISOGEN to use new SKEY's
- Share your Tips and Tricks
- Questions

# ISOGEN Symbols

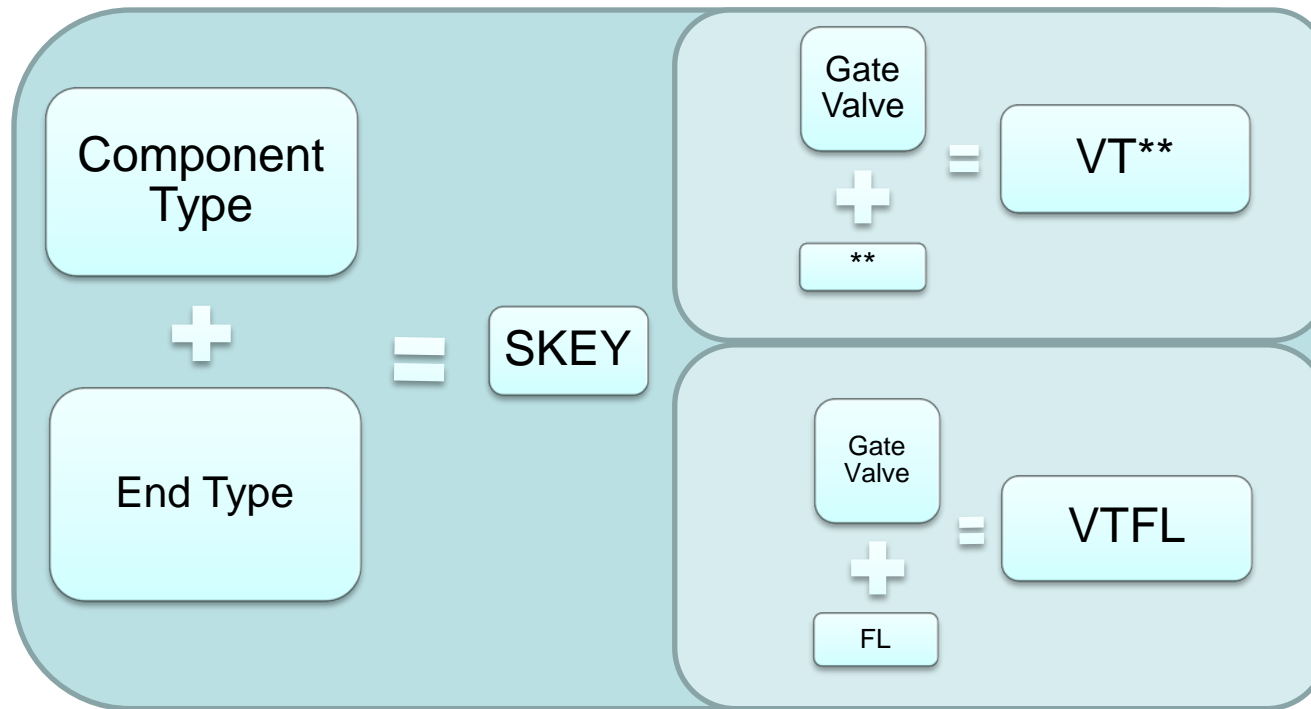


- Symbols are created and modified with the Symbols Editor
- Each Symbol has a PCF Identification & a name called a SKEY
- You must select a PCF Identification to create or modify a symbol
- Copy a similar symbol to reduce editing time

# Character Code



- All SKEYS can have a 2 to 4 letter name, the first two is component type and the last two are for end types if available.



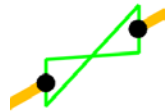
# Character Code



- The \*\* characters in the SKEY may be replaced from the following:

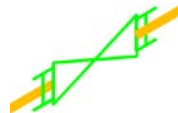
**BW**

for Butt Weld



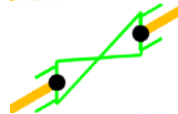
**CP**

for Compression



**SW**

for Socket Weld



**FL**

for Flanged



**SC**

for Screwed



**PL**

for Plain End



**LN**

for Liner/Nut



**LC**

for Liner/Clamp



**LR**

for Reducing Liner/Nut



**MP**

for Male Part



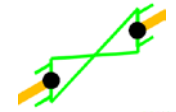
**PF**

for Push Fit



**GL**

for Glued



**CL**

for Clamped



**FA**

for Flared



**BS (or SB)**

for Ball and Socket (used on fixed length type pipe work)

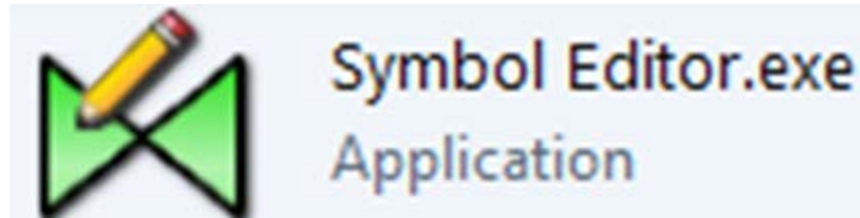


**GF**

for Gland (used on fixed length type pipe work)



# Symbol Editor



## ■ 2015

- "C:\CADWorx 2015\Plant\Isogen\I-Configure\Symbol Editor.exe"

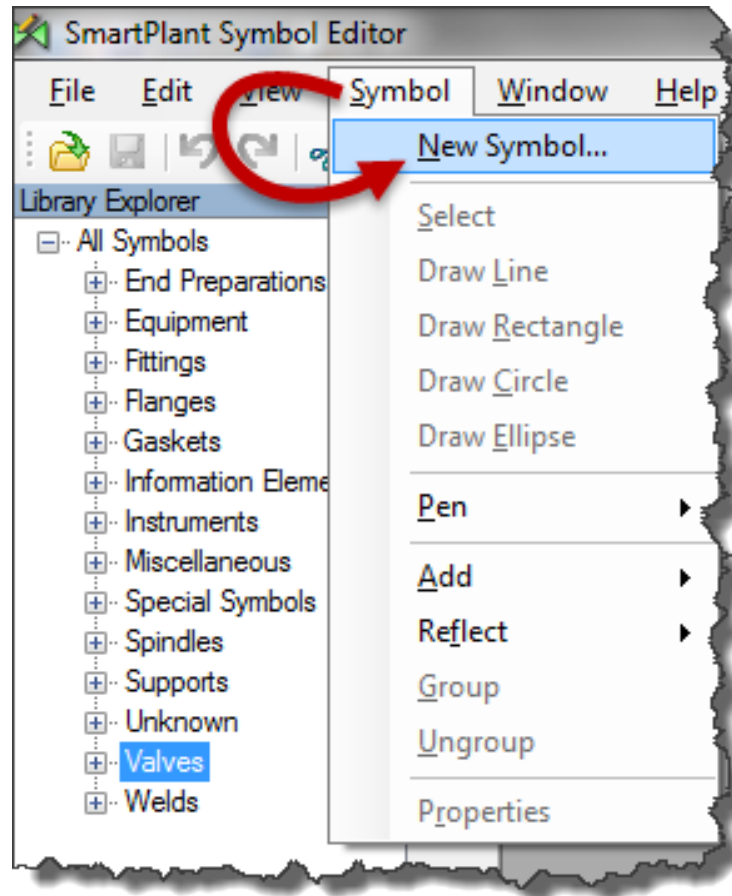
## ■ 2014

- "C:\CADWorx 2014\Plant\Isogen\Isogen\_Utils\Symbol\_Editor\_2\Symbol Editor.exe"

# Symbol Editing Workflow



- Select the category and navigate to *Symbol* → *New Symbol*.





# Symbol Editing Workflow



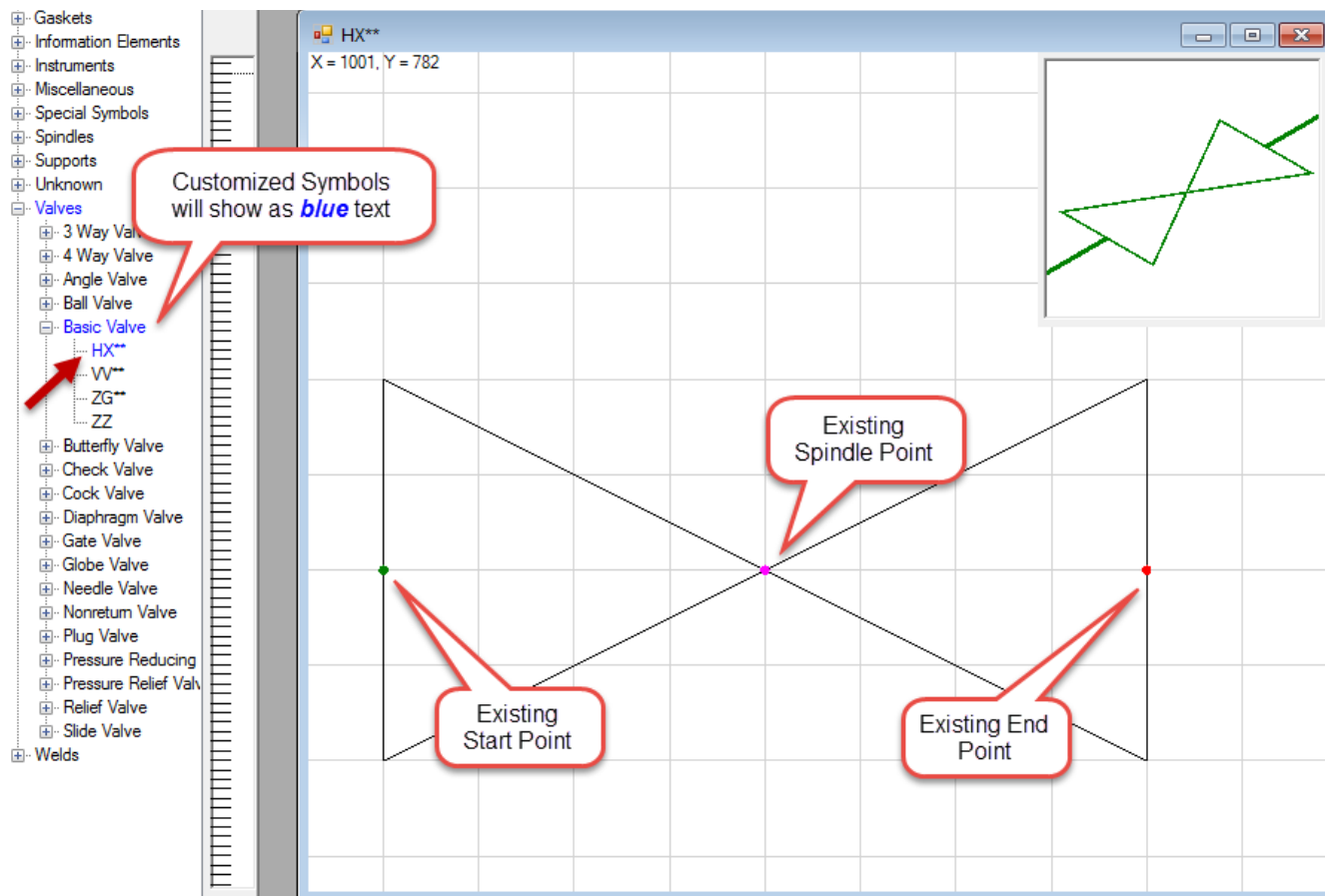
- Give the new symbol a name
  - If necessary, copy the graphics and select a spindle.

A screenshot of the 'New Symbol' dialog box in a software application. The dialog has a title bar 'New Symbol'. Inside, there are two text input fields: 'SKEY' with the value 'HX\*\*' and 'Description' with the value 'HxGN Valve Symbol'. Below these is a large rectangular area containing a green line drawing of a valve symbol. To the right of this area is an empty rectangular area. At the bottom left, there is a label 'Original SKEY' followed by a dropdown menu showing 'W\*\*'. To its right is a label 'Spindle SKEY' followed by an empty dropdown menu. Below the 'Original SKEY' dropdown is a checkbox labeled 'Copy original symbol graphics' which is checked. At the bottom right are two buttons: 'Ok' and 'Cancel'.

# Symbol Editing Workflow



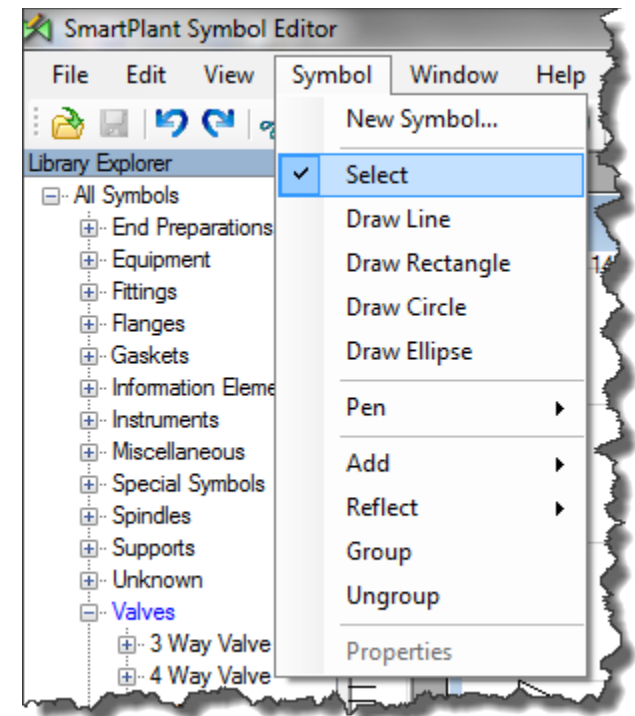
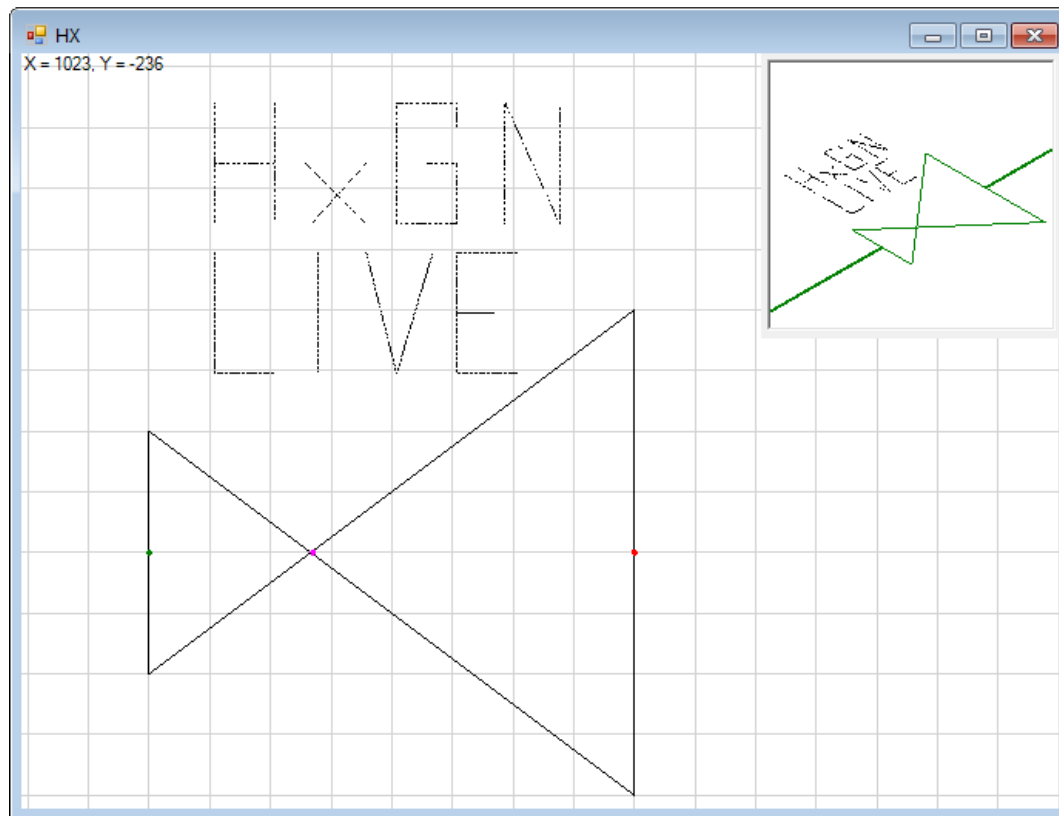
## ■ Find New symbol



# Symbol Editing Workflow



## ■ Edit New symbol



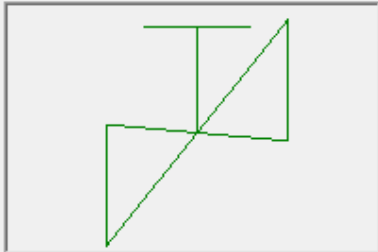

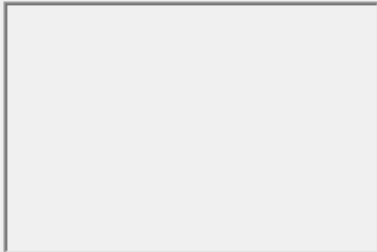
# Properties



- Properties are only modifiable on new/modified symbols

Properties

SKEY HX Scale Factor 100  
ISOGEN Record 0

Original SKEY   Spindle SKEY 

Layout options

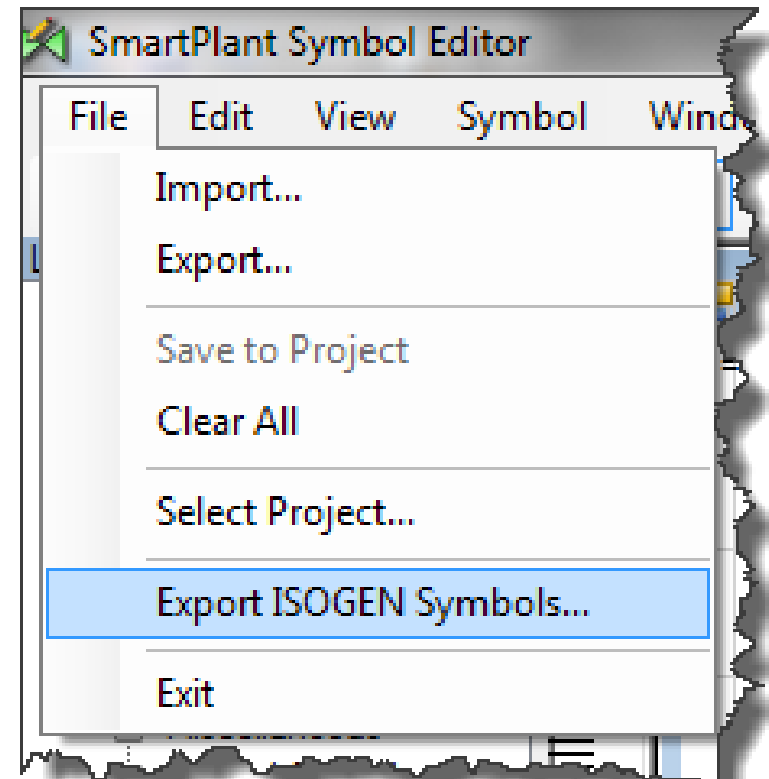
Mirror None Dimensioning Default  
Flow Arrow On Orientation None

Ok Cancel

# Symbol Editing Workflow



- Export ISOGEN Symbols
- When you export your ISOGEN Symbols, they will be saved to an ASCII file with the extension ASC.
- When you close also choose the ASC Extension



# Symbol Editing Workflow



## ■ Associate the ASCII file with I-Configure 2014

The screenshot shows the SmartPlant I-Configure application window. The left pane displays a tree view of the project structure. The right pane shows a table of file types and their associated files. A context menu is open over the 'ASCII-SYMBOLS' entry in the table. A dialog box titled 'Specify path for file' is also visible.

**Workflow Steps:**

1. Select the 'Final-Basic' style in the left pane.
2. Select the 'ISOGENFiles(2)' folder in the left pane.
3. Right-click on 'ISOGENFiles(2)' and select 'Add Row' from the context menu.
4. Select the 'ASCII-SYMBOLS' entry in the table.
5. Select the 'FilePath' cell for the 'ASCII-SYMBOLS' entry.

**Table Data:**

FileType	FilePath	FileText
FONT-INFORMATION-FILE	\$INSTALL\$\Data\Fontstd.tif	<Edit>
ASCII-SYMBOLS	\$STYLE\$\HxGN.asc	<Edit>

**Context Menu Options:**

- Copy
- Paste
- Clear
- Add Row
- Delete Row
- Copy Row
- Move Row Up
- Move Row Down

**Dialog Box:**

Specify path for file

OK Cancel



- 
- ECP - ISOGEN CONFIGURATION
- Final-Basic ▶
- Drawing Manager
- 
- [Drawing Generation](#)
- [Drawing File](#)
- [Pre and Post Processing](#)
- [Input Files](#)
- [Style Properties](#)
- [Reports](#)
- 2



# Assigning SKEY in the Spec Editor



- Blank Identifiers = CADWorx assigns the default

Edit component: Valves-Gate Valve

Component Setup:		EndType Data Table	
Group:	Valves	<input checked="" type="checkbox"/> Apply same end type to all ends	ISOGEN Sym.
Type:	Gate Valve	Start: ASME_B16.5_FLG.150	FL
Data Table:	GATE_150_RF_ARIO	End: ASME_B16.5_FLG.150	
<input type="checkbox"/> Data Table Update Only		Branch1:	Default
Size Range:	2-24	Branch2:	Default
BOM Type:	Fabrication	ISOGEN Symbol Information:	
Layer Name:	A1A	Identifier:	
Color Index:	7 - White/Black	SKEY:	
IndexCode:		Topworks:	





# Assigning SKEY in the Component

- To edit, use the **ICEDIT** command.
- Or use the **CEDIT** command then select the ISOGEN button.

The screenshot shows the 'ISOGEN Data (1 of 1)' dialog box. Two sections are highlighted with red rectangles:

- Symbol Information:** This section contains fields for 'Identifier' (set to 'VALVE') and 'SKEY' (set to 'VTFL'). Each field has an 'Overwrite' checkbox to its right.
- End Connections and Conditions:** This section contains four sub-sections for 'End 1', 'End 2', 'End 3', and 'End 4'. Each sub-section has a 'Default' dropdown menu and a 'View' button. Below each dropdown are radio button options: 'Male', 'Female', 'Unspecified', and 'None' (which is selected for all four ends).

Other visible fields in the dialog include 'Message' (Type: None), 'Text', 'Spindle/Flat/Support Direction' (Direction: None), 'Mark', 'Flow Arrow' (As drawn selected), 'Miter Pipe Export Options' (Pipe with welds, Bend, Bend with length), 'Other' (Spool, Sketch), 'Dim Status' (Default), 'Sheet #', and another 'Mark' field.

# Wrap Up



- All Class content will be posted
  - <http://www.cadworxblog.com/cadworx-analysis-forum/>
  - Please come out and share some Skeys that you have created.
- Don't forget to fill out your eval forms



**Tips**

**Tricks**

**Questions**

**Comments**

**Thank You!**