

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

- 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

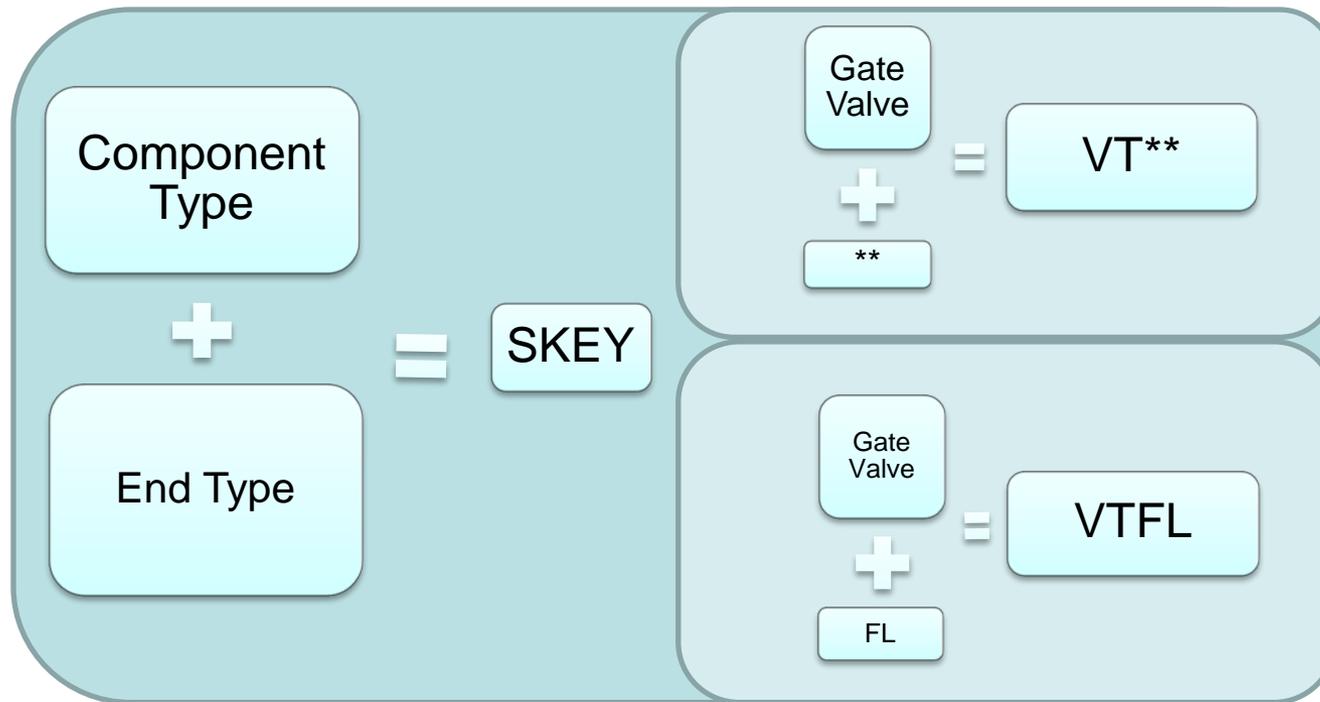


- Symbols are created and modified with the Symbols Editor
- Each Symbol has a PCF Identification & a name called a SKEY
- You must select a PCF Identification to create or modify a symbol
- Copy a similar symbol to reduce editing time

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.



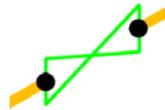
Character Code



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

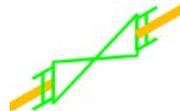
BW

for Butt Weld



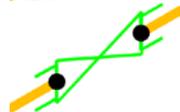
CP

for Compression



SW

for Socket Weld



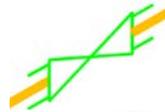
FL

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



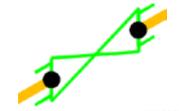
PF

for Push Fit



GL

for Glued



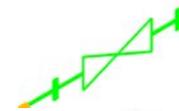
CL

for Clamped



FA

for Flared



BS (or **SB**)

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

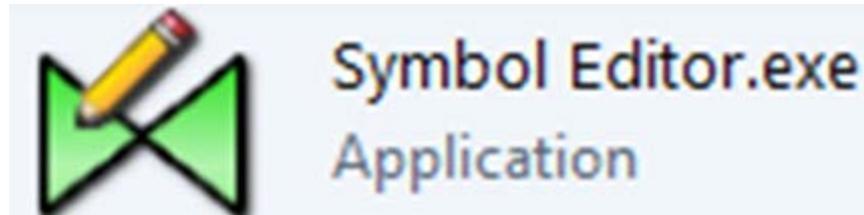


GF

for Gland (used on fixed length type pipe work)



Symbol Editor



■ 2015

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

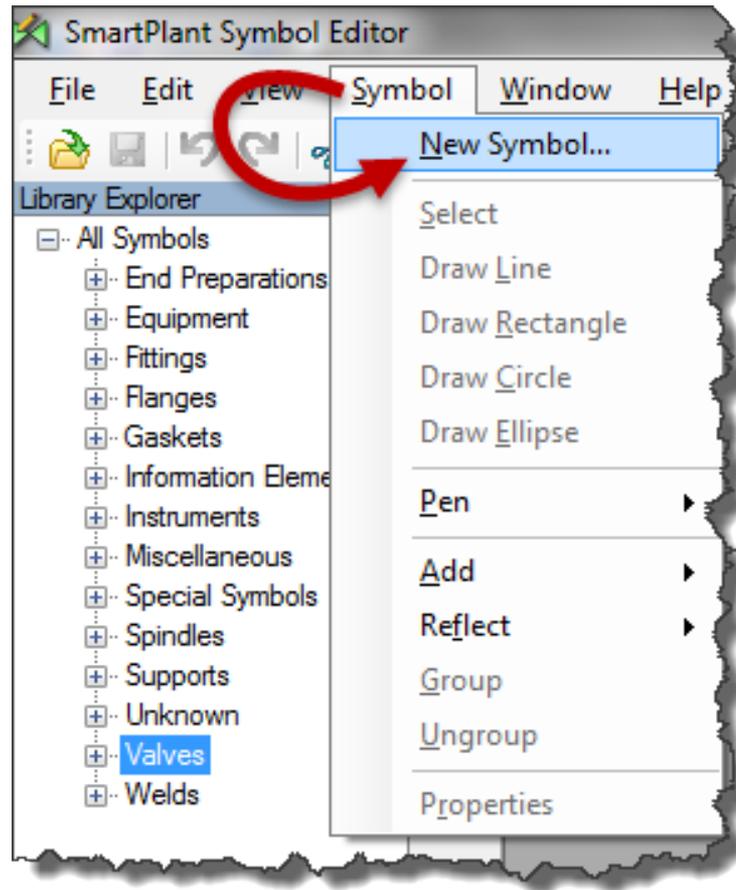
■ 2014

- "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.

New Symbol

SKEY

Description

Original SKEY

Spindle SKEY

Copy original symbol graphics

Symbol Editing Workflow



■ Find New symbol

Customized Symbols will show as **blue** text

Existing Start Point

Existing Spindle Point

Existing End Point

HX**

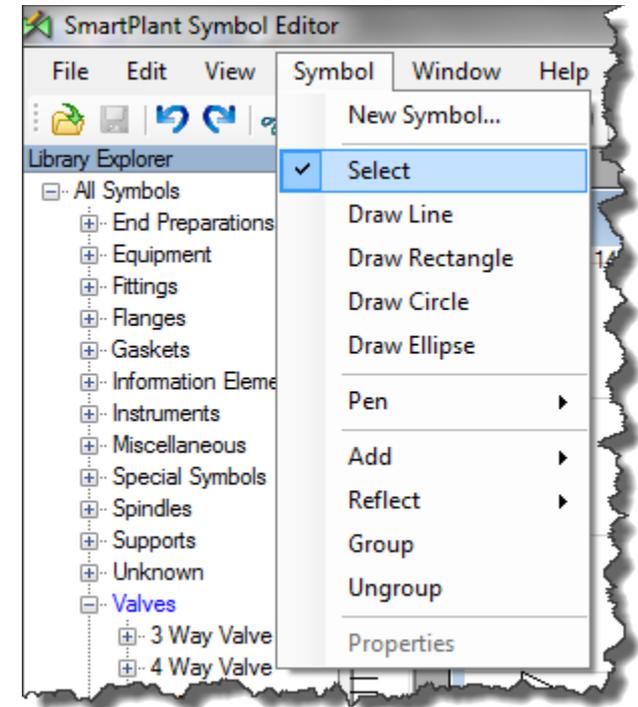
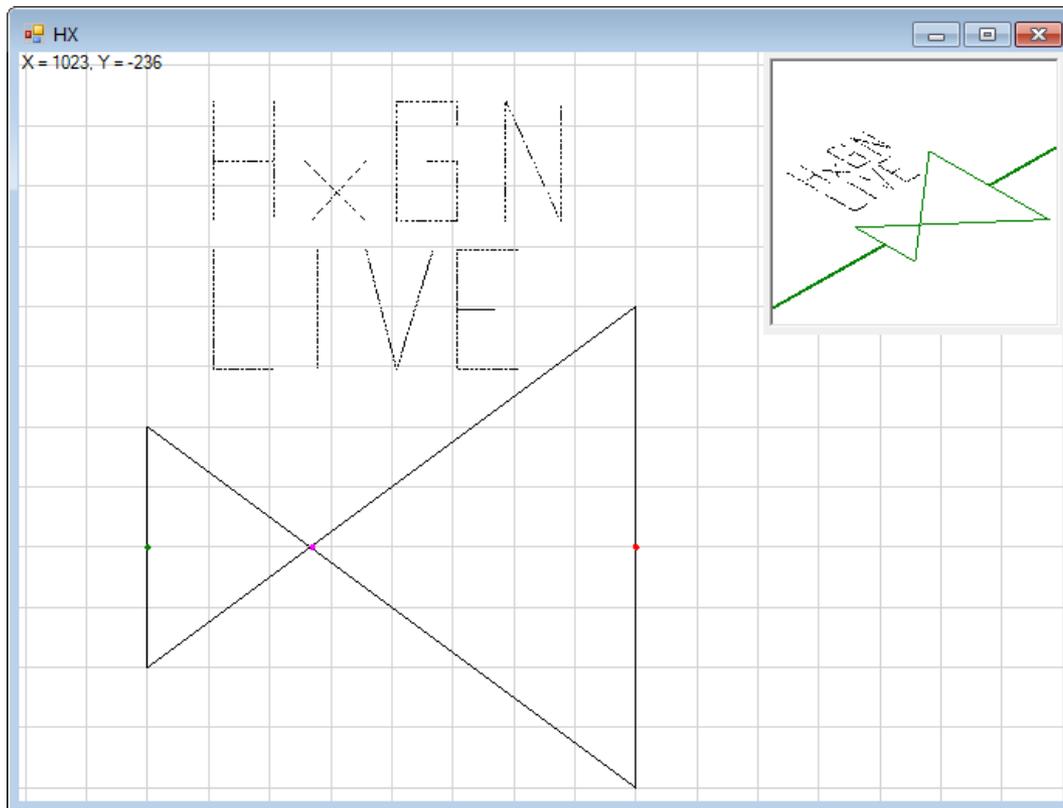
X = 1001, Y = 782

- Gaskets
- Information Elements
- Instruments
- Miscellaneous
- Special Symbols
- Spindles
- Supports
- Unknown
- Valves
 - 3 Way Valve
 - 4 Way Valve
 - Angle Valve
 - Ball Valve
 - Basic Valve
 - HX**
 - W**
 - ZG**
 - ZZ
 - Butterfly Valve
 - Check Valve
 - Cock Valve
 - Diaphragm Valve
 - Gate Valve
 - Globe Valve
 - Needle Valve
 - Nonreturn Valve
 - Plug Valve
 - Pressure Reducing
 - Pressure Relief Valve
 - Relief Valve
 - Slide Valve
- Welds

Symbol Editing Workflow



■ Edit New symbol



Properties

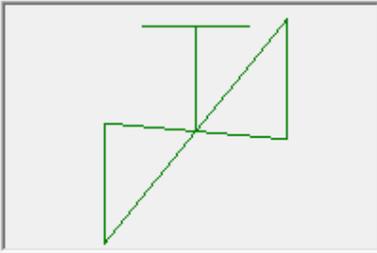
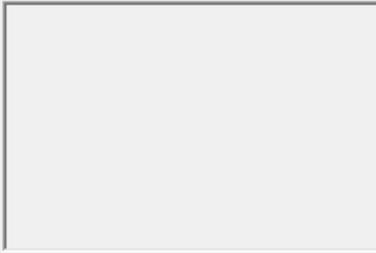


- Properties are only modifiable on new/modified symbols

Properties

SKEY Scale Factor

ISOGEN Record

Original SKEY Spindle SKEY

Layout options

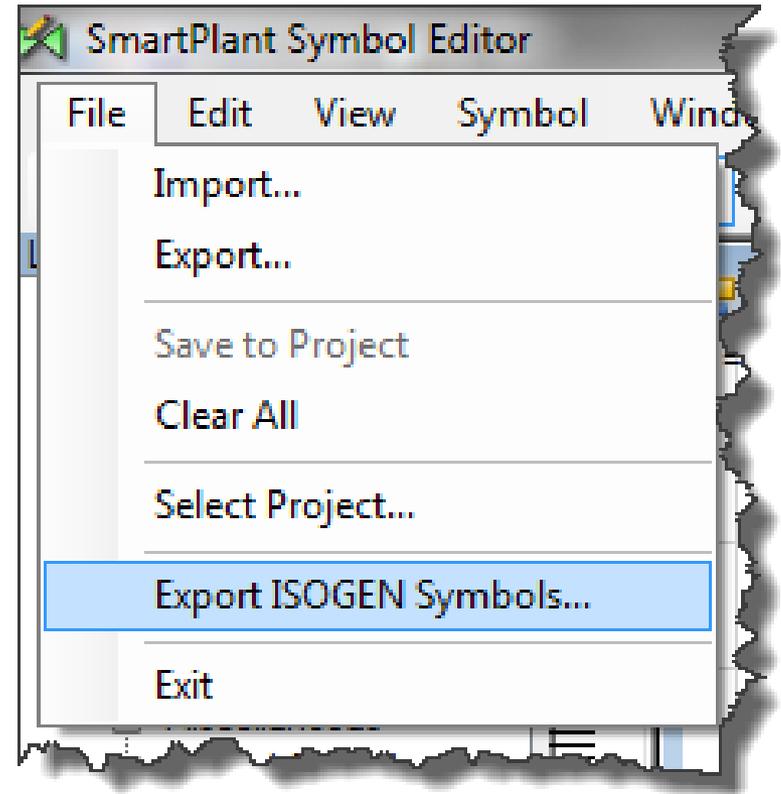
Mirror Dimensioning

Flow Arrow Orientation



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

SmartPlant I-Configure

File Edit Wizards Tools Help

C:\2812_Skeys
HxGN
Final-Basic

Overview **Detail**

Style : Final-Basic

- AlternativeTexts
- Drawing
- DrawingFrame
- MaterialList
- WeldList
- CutList
- Supplementary
 - AdditionalData
 - AuxiliaryPrograms
 - BendingReport
 - CentreOfGravity
 - DataFiles
 - ISOGENFiles(2)**
 - DetailSketches

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

ALTERNATIVE-TEXT
ASCII-SYMBOLS
BENDING-DATABASE_FILE
BINARY-SYMBOLS
BOLT-INFORMATION-FILE
BORE-EQUIVALENCE-FILE
COMPONENT-INFORMATIC
DRAWING-DEFINITION
FONT-INFORMATION-FILE

Specify path for file

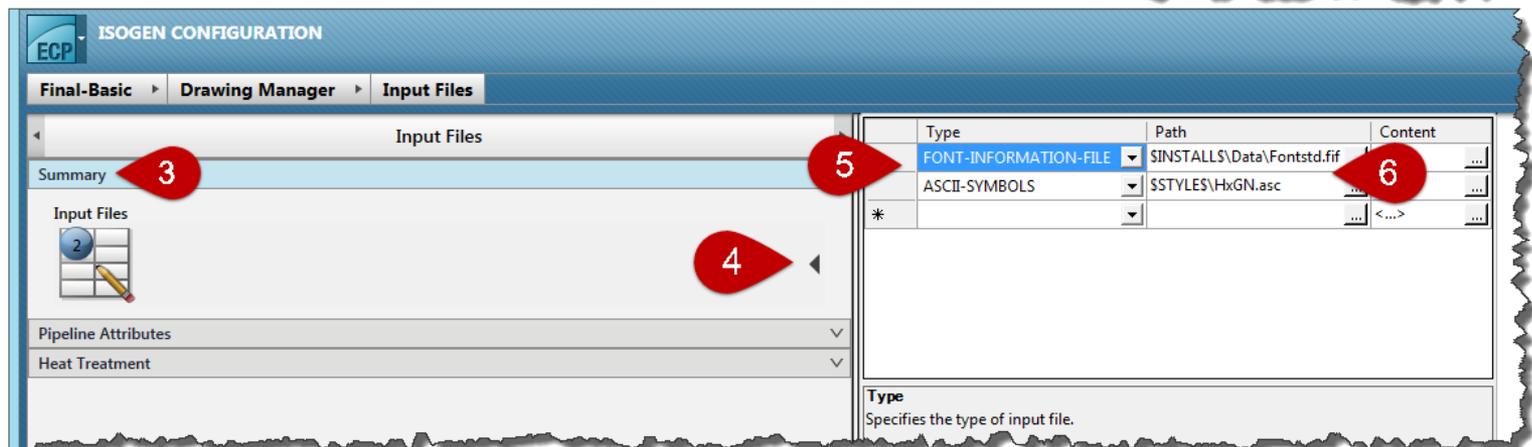
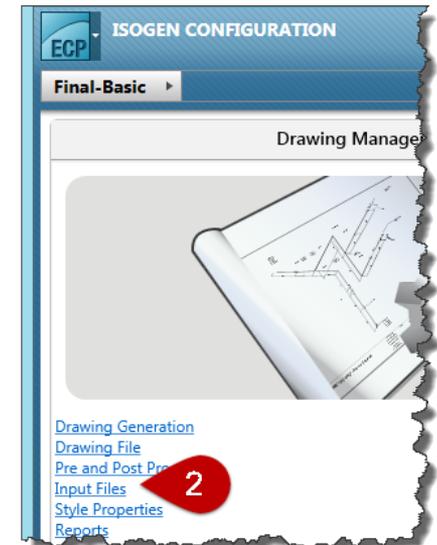
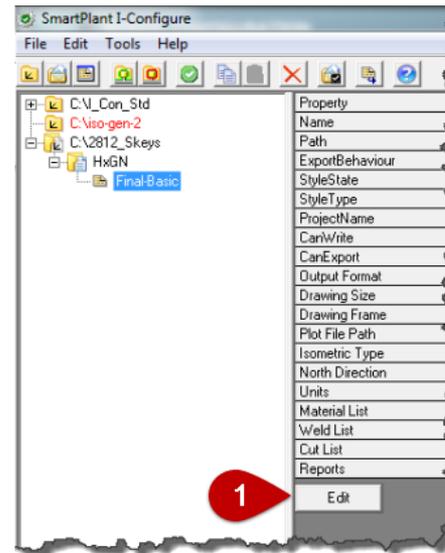
OK Cancel

1 2 3 4 5

Symbol Editing Workflow



- Associate the ASCII file with I-Configure 2015



Assigning SKEY in the Spec Editor



- Blank Identifiers = CADWorx assigns the default

Edit component: Valves-Gate Valve

Component Setup:

Group: Valves

Type: Gate Valve

Data Table: GATE_150_RF_ARIO

Data Table Update Only

Size Range: 2-24

BOM Type: Fabrication

Layer Name: A1A

Color Index: 7 - White/Black

IndexCode:

EndType Data Table

Apply same end type to all ends

Start: ASME_B16.5_FLG.150

End: ASME_B16.5_FLG.150

Branch1: Default

Branch2: Default

ISOGEN Sym.:

FL

ISOGEN Symbol Information:

Identifier:

SKEY:

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 boxes:

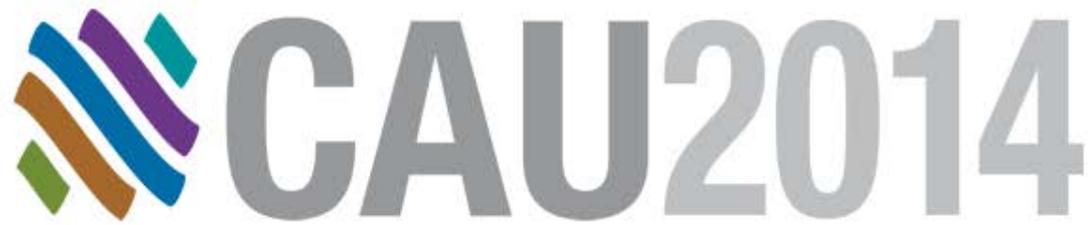
- Symbol Information:** Identifier: VALVE, SKEY: VTFL. Both have 'Overwrite' checkboxes.
- End Connections and Conditions:** Four columns for End 1, End 2, End 3, and End 4. Each column has a 'Default' dropdown and a 'View' button. Below each dropdown are radio buttons for Male, Female, Unspecified, and None (selected).

Other visible fields include: Message: None, Text: (empty), Spindle/Flat/Support Direction: Direction: None, Mark: (empty), Flow Arrow: As drawn (selected), Opposite, Miter Pipe Export Options: Pipe with welds, Bend, Bend with length, Dim Status: Default, Sheet #: (empty), Mark: (empty).

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!