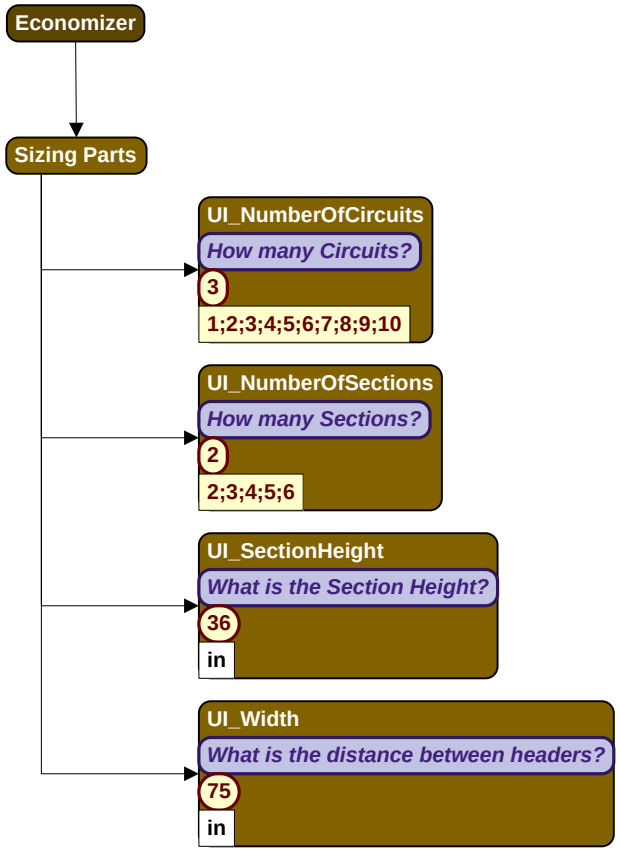
Genus Designer

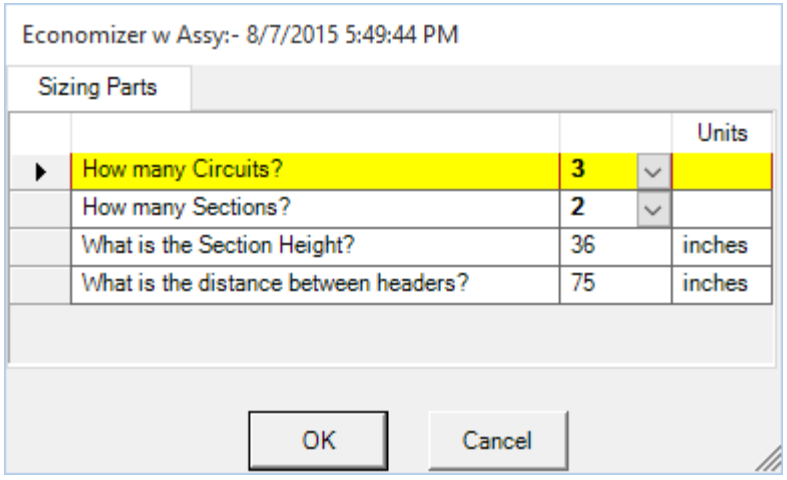
Economizer w Assy

Created with
Genus Designer
for SolidWorks



Inputs:

NumberOfCircuits
NumberOfSections
Section Height
Width

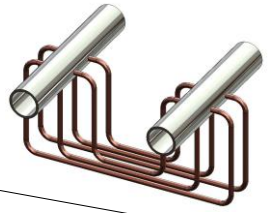


Interfaces can be created directly from Designer. Custom interfaces are supported through a standard Plugin architecture.

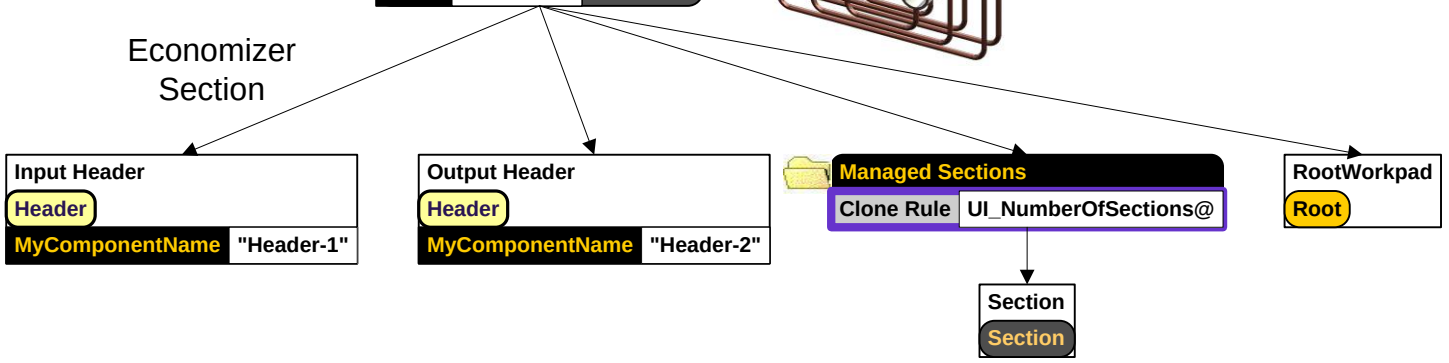
Genus Software

User Interface

Assemblies:



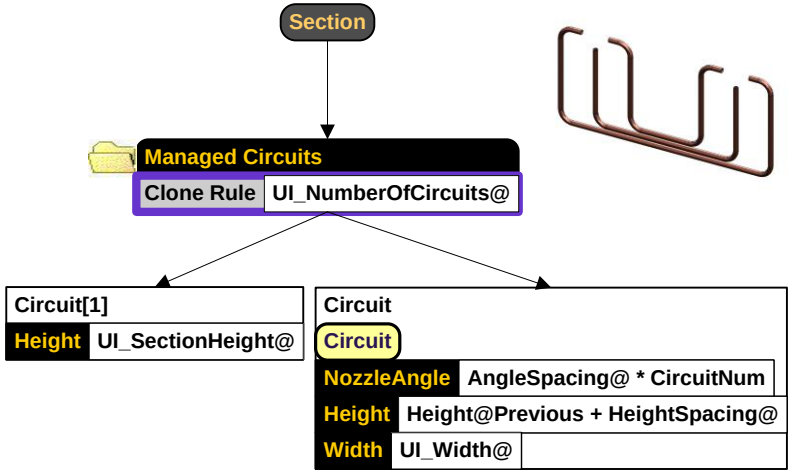
Economizer
Section



The engineering model is created "top down" via a drag and drop visual interface. It, in turn, creates the CAD model "bottom up" without the need for in-context references.

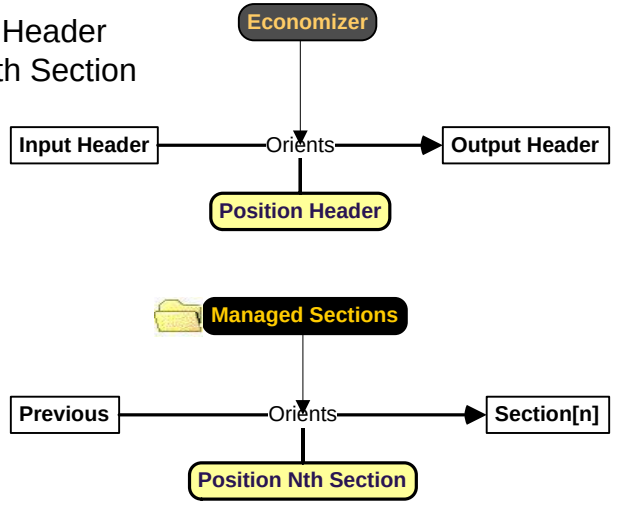
Parts:

Circuit



Orientations:

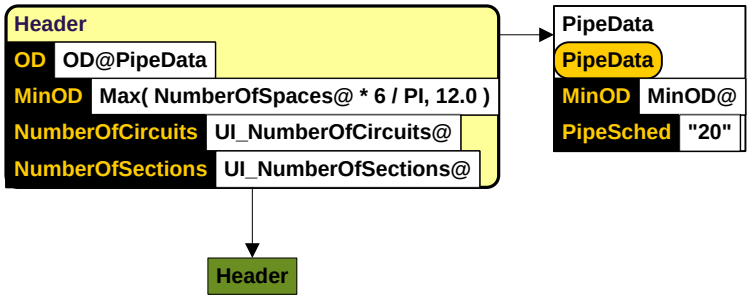
Position Header
Position Nth Section



Genus Software Model

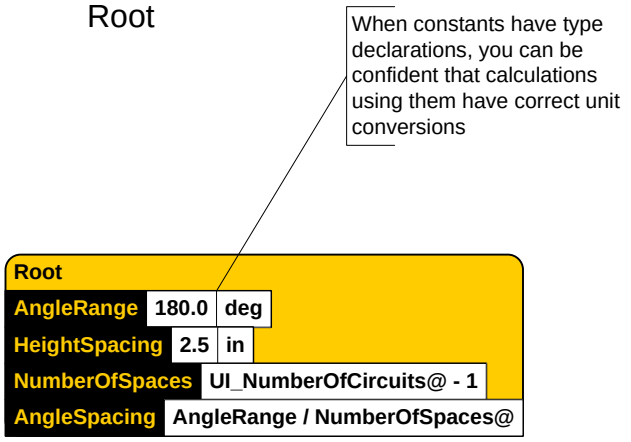
Part Definitions:

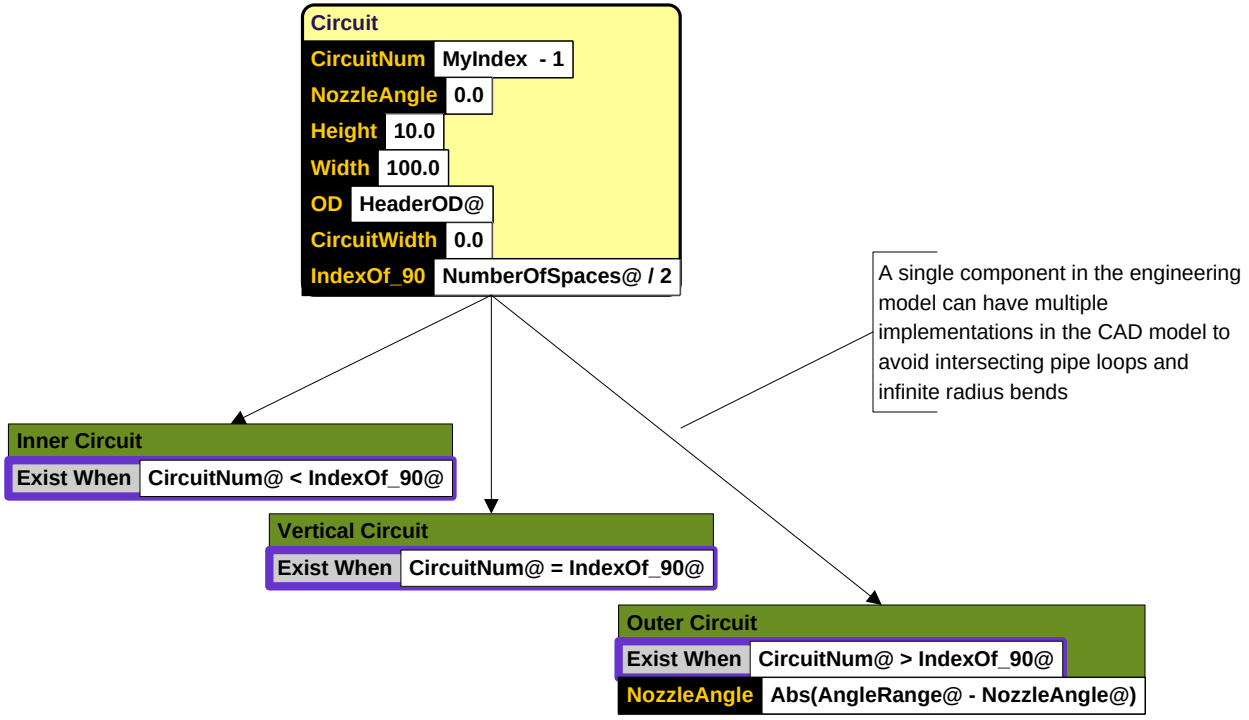
Header
Circuit



Workpad Definition:

Root

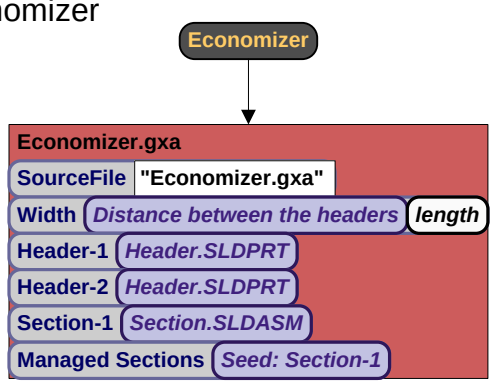




Genus Software Definitions

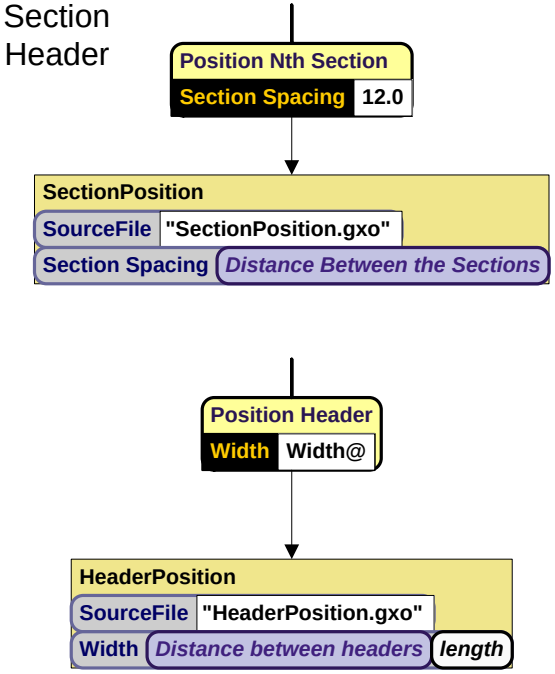
Assembly Assets:

Economizer



Orientation Assets:

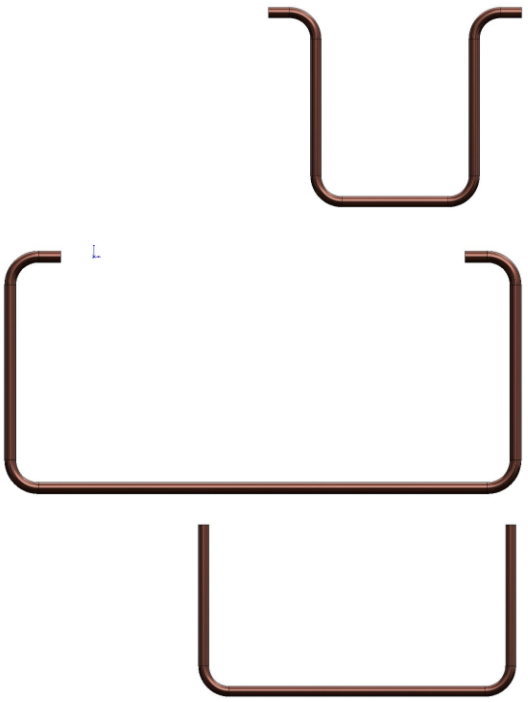
Section
Header



Part Assets:

Inner Circuit
Outer Circuit
Vertical Circuit
Header

Assets define the interface between model assemblies, parts and features and their CAD implementations



Inner Circuit
SourceFile "Inner Circuit.gxp"
NozzleAngle Angle nozzle leaves the header angle
Height Circuit Height length
Width Distance between headers length
OD Header Outside Diameter length

Outer Circuit
SourceFile "Outer Circuit.gxp"
NozzleAngle Angle the nozzle leaves the header angle
Height Circuit height length
Width Distance between headers length
OD Header outside diameter length
CircuitWidth Reference dimension length

Vertical Circuit
SourceFile "Vertical Circuit.gxp"
Height Circuit Height length
Width Distance between headers length
OD Header Outside Diameter length

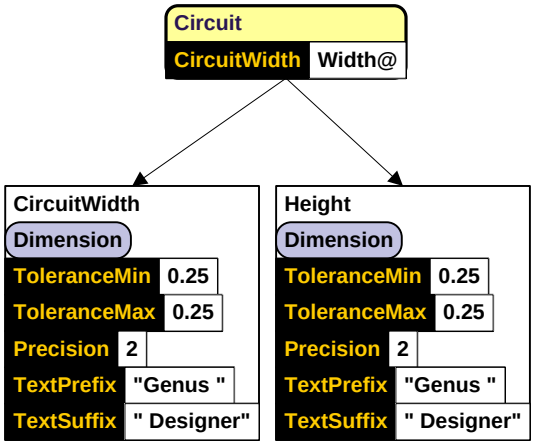
Header
SourceFile "Header.gxp"
OD Header Outer Diameter length
NumberOfCircuits Number of Circuits quantity
NumberOfSections Number of Sections quantity

Genus Software **Assets**

Tolerances:

Height
CircuitWidth

Dimension

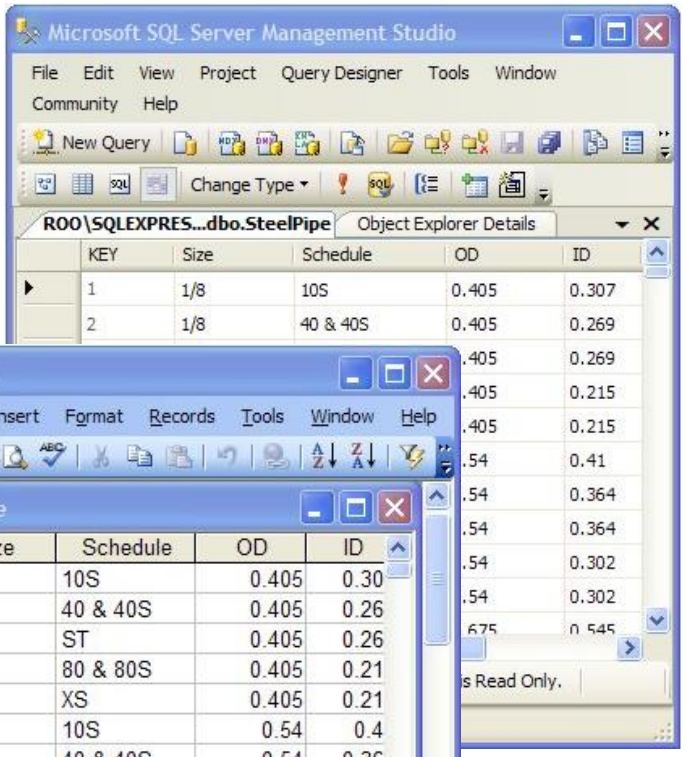


Data Definitions:

Pipe Data

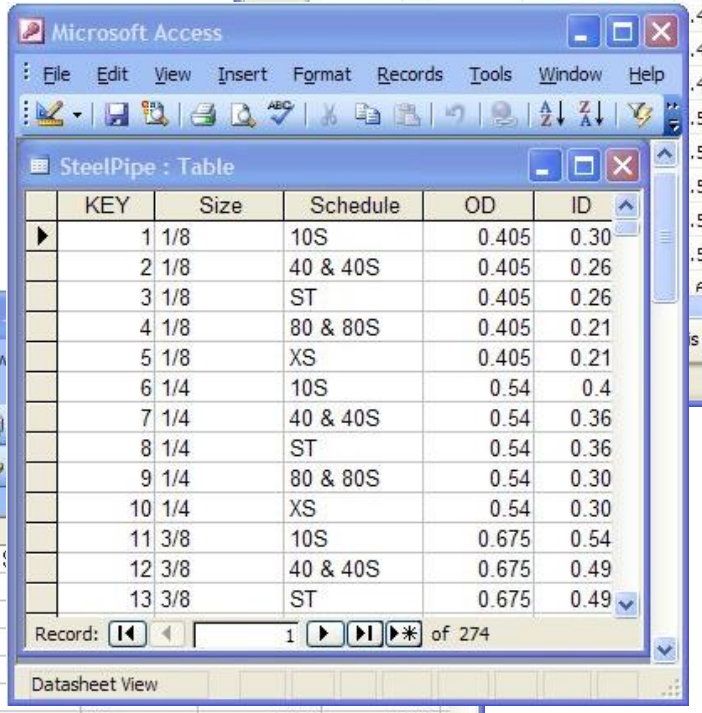
PipeData	
MinOD	12.0
PipeSched	"10"
MyFilter	"[Schedule] = '|PipeSched@|' And [OD] >= |MinOD@|"
MyPreference	"Lowest [OD]"

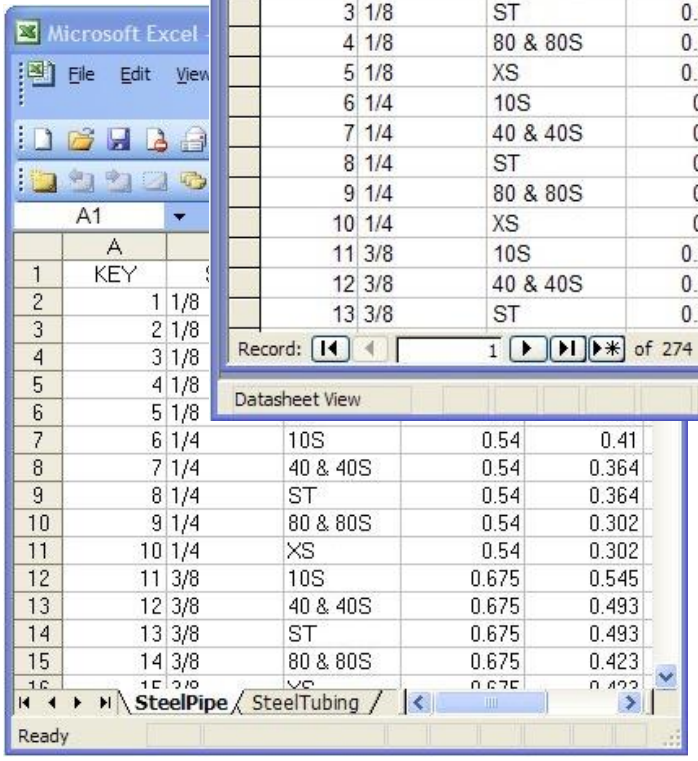
SteelPipe	
SourceDatabase	"pipes.sql"
SourceTable	"SteelPipe"
SourceConnectionString	"Data Source=.\SQLEXPRESS; Initial Catalog=pipes; Integrated Security=True; Connect Timeout=30"



PipeData	
MinOD	12.0
PipeSched	"10"
MyFilter	"[Schedule] = '|PipeSched@|' And [OD] >= |MinOD@|"
MyPreference	"Lowest [OD]"

SteelPipe	
SourceDatabase	"pipes.accdb"
SourceTable	"SteelPipe"





PipeData	
MinOD	12.0
PipeSched	"10"
MyFilter	"[Schedule] = '|PipeSched@|' And [OD] >= |MinOD@|"
MyPreference	"Lowest [OD]"

SteelPipe	
SourceDatabase	"pipes.xls"
SourceTable	"SteelPipe"

Drawings:

Circuit	
CircuitPart	MySelf
JobNum	"123"

Outer Circuit

Outer Circuit_S1.gxd	
Exist When	CircuitNum@ > IndexOf_90@
Precision	3
DualDimOn	True
SheetScale	{ 1, 12 }
RescaleViews	True
DrawnBy	"TJG"
DrawnDate	Format("{0:MM/dd/yy}", Today())
MyBaseName	*Format("OC{0}_{1:f0}", JobNum@, UnitValue(NozzleAngle@, "deg"))*

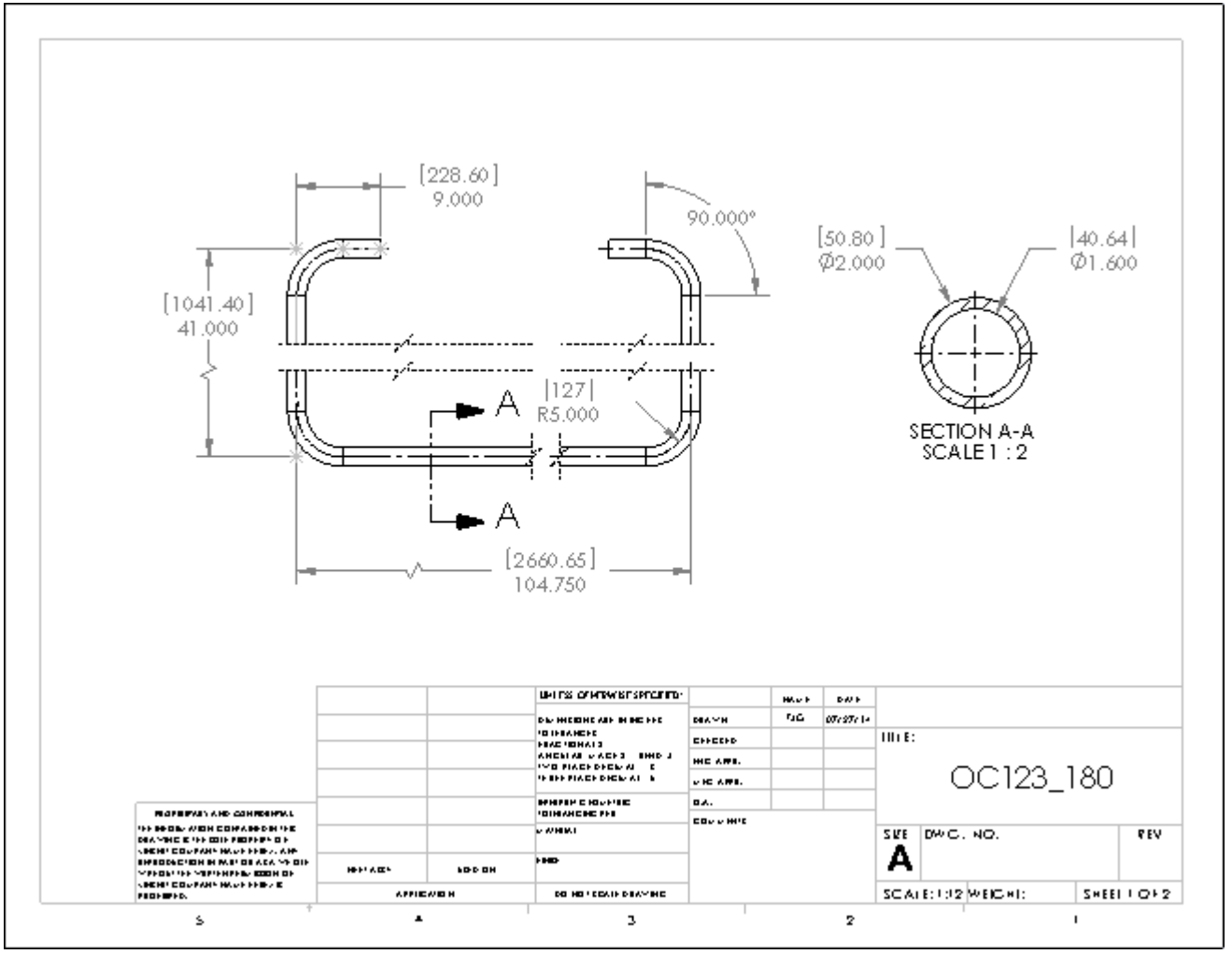
Outer Circuit_S2.gxd	
Exist When	CircuitNum@ > IndexOf_90@
SheetScale	{ 1, 12 }
MyBaseName	*Format("OC{0}_{1:f0}", JobNum@, UnitValue(NozzleAngle@, "deg"))*

Assets:

Outer Circuit Drawing

Outer Circuit_S1.gxd		
SourceFile	"Outer Circuit_S1.gxd"	
CircuitPart	*Reference to the Circuit*	
Precision	*Primary dimension precision*	*integer*
DualDimOn	*Dual dimension display*	*boolean*
SheetScale	*Scale of this sheet*	*ratio*
RescaleViews	*Rescales custom views*	*boolean*
DrawnBy	*Solution drawn by*	*text*
DrawnDate	*Solution run date*	*text*

Outer Circuit_S2.gxd		
SourceFile	"Outer Circuit_S2.gxd"	
CircuitPart	*Reference to the Circuit*	
SheetScale	*Scale of this sheet*	*ratio*



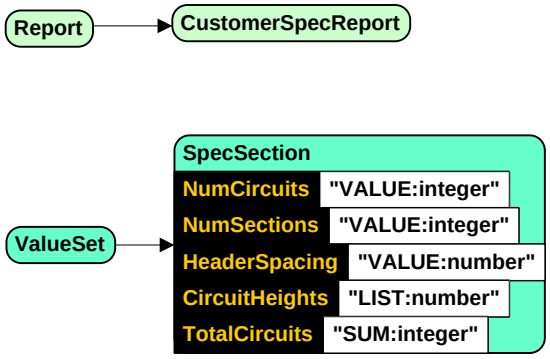
Genus Software **Drawings**

Reports:

CustomerSpec

Report Classes:

CustomerSpecReport (Report)
SpecSection (ValueSet)

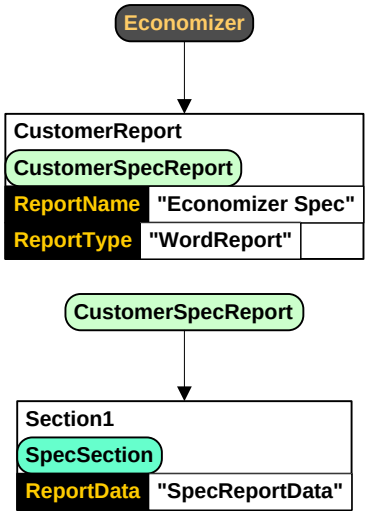


DataCollection Class:

SpecReportData

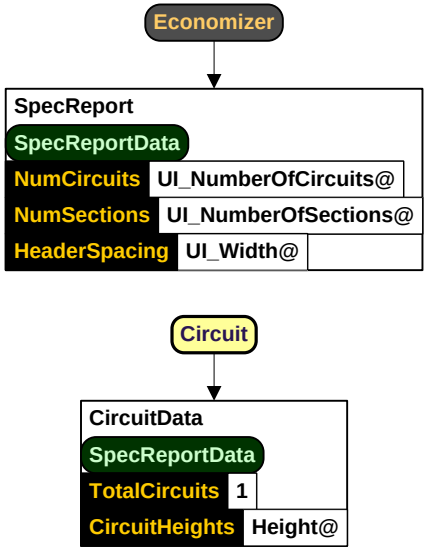
Report Instances:

CustomerReport
Section1



Data Collection:

SpecReportData



Genus Software

Economizer Specification

Customer
Date/Time 2/12/2013 10:12 AM
Report Number

General Information

Number of Circuits	3	
Number of Sections	2	
Header Spacing	75.0	in
Circuit Heights	36, 38.5, 41, 36, 38.5, 41,	
Total Circuit Count	6	

Reports can write to Microsoft Word, Excel, databses and XML. The report can be extended using plugins to write to other formats.

Genus Software **Reports**