

Emerson – Fisher SPI Interface

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After 100+ customer interviews, we learned...

- Control Valve dimensional data is required as early as possible (sometimes even at the budgetary stage)
- Many customers easily **export** control valve specification sheet data from SPI to the control valve manufacturers for sizing and selection.
- None of the customers we interviewed **directly imported** the completed control valve specification data from the valve manufacturers into SPI.
- The main reasons were:
 - Most projects use custom project control valve specification sheets requiring manual field mapping which is time consuming and difficult
 - Mapping requires knowledge of the manufacturer's valve field names
 - Most Instrument Engineers are far too busy managing numerous instruments that they do not have the time nor the inclination

The Emerson (Fisher) – SPI Interface:

- 1. Significantly simplifies the export and import of Fisher control valve data**
- 2. Will pass Dimensional Data for Piping for all standard Fisher constructions along with the completed control valve specification sheets**

The Emerson (Fisher) – SPI Interface

Specification Sheets: There are two cases for exporting and importing control valve specification sheets:

Case A: The Fisher standard control valve specification sheet is used on the project

Our solution is a readily available out-of-the-box (OOTB) export-import from SPI to Emerson Fisher.

Case B: A vendor-neutral customized control valve specification sheet is used on the project

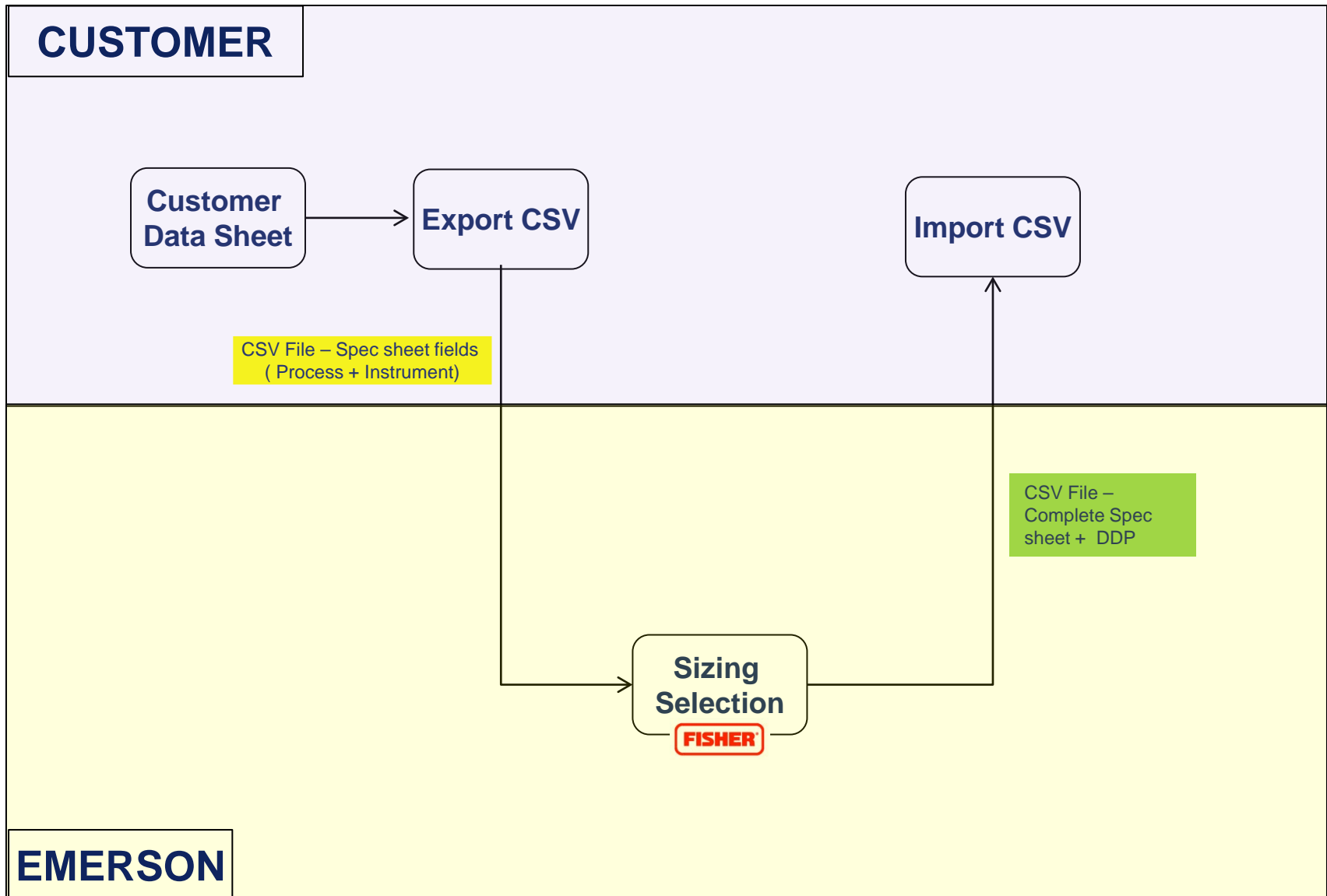
Our solution is a simple two stage process between the EPC/End-user and Fisher

1) This is a ONE time activity per customized specification form.

- a) Export to Fisher the customized specification form (5 to 10 minutes work for you).
- b) Fisher will create and send you a modified link file (one day turnaround for Fisher).
- c) Import and Save the modified link file from Fisher (5 to 10 minutes work for you)

2) Import and export csv files exactly like the OOTB Case A above.

Case A – Fisher Data Sheet is used

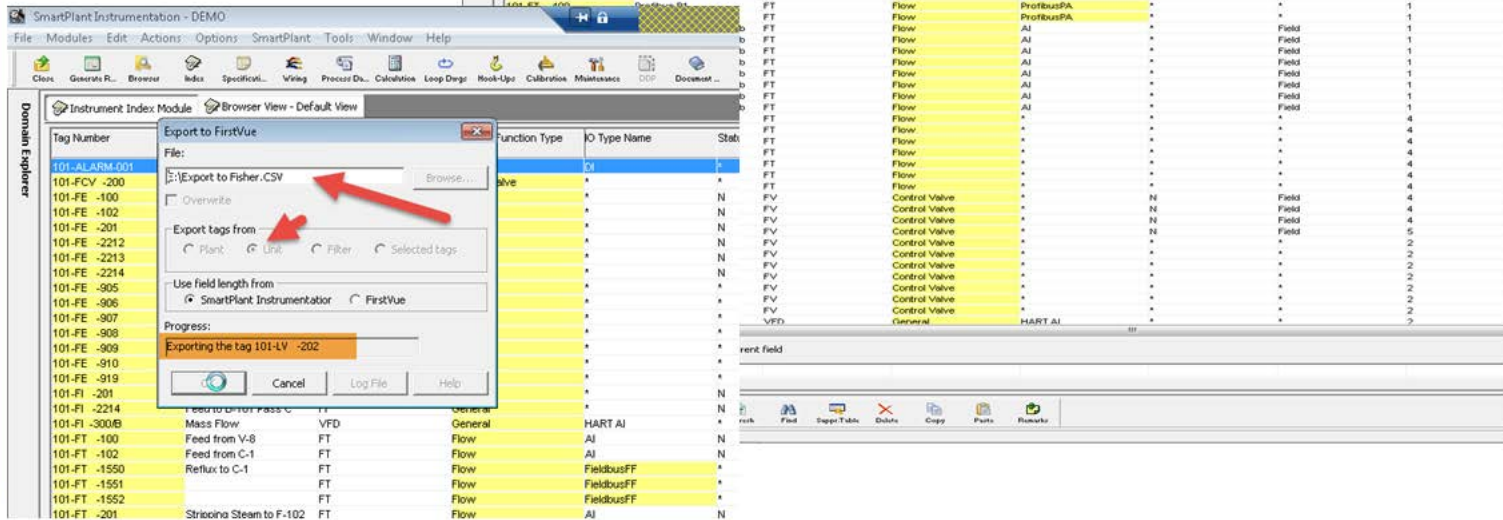
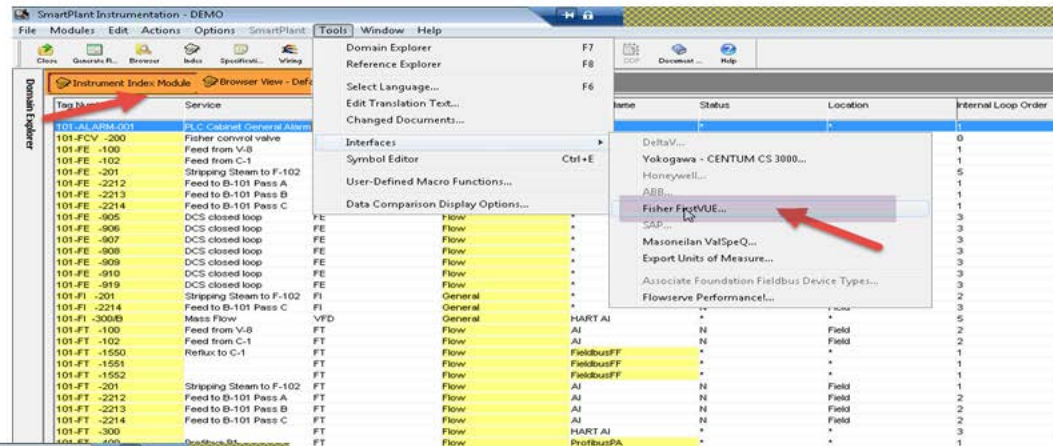


Case A – Fisher Data Sheet is used

CUSTOMER

Exporting .CSV file from SPI to Fisher

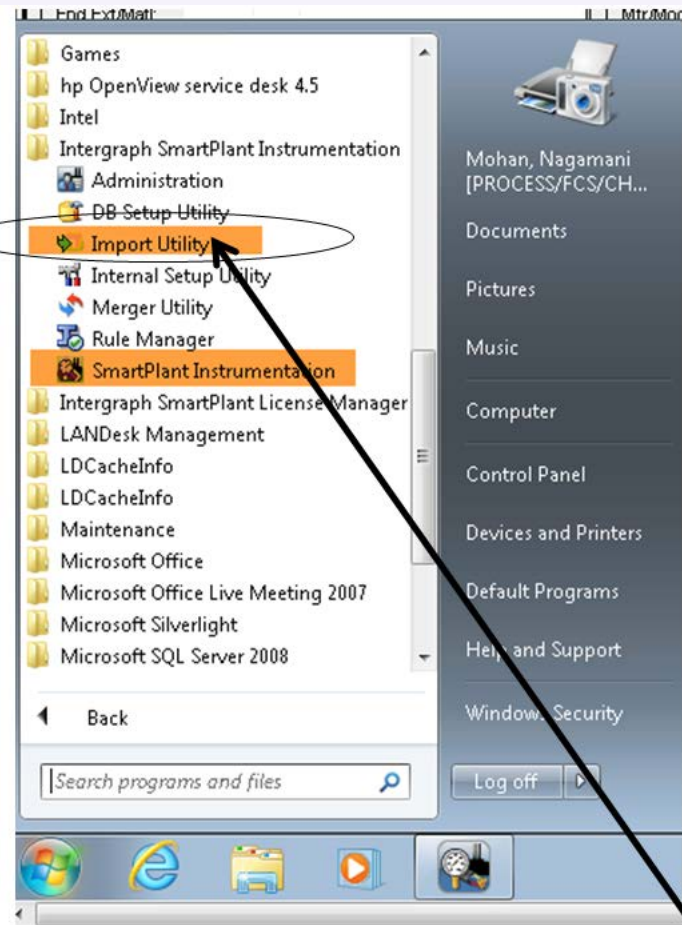
- Index Module
- Browser View
- Tools-> Interface
- To Fisher FirstVUE
- Export as csv



E

Case A – Fisher Data Sheet is used

CUSTOMER



Import CSV

CSV File –
Complete Spec
sheet + DDP

Sizing Selection
FISHER

EMERSON

Case A – Fisher Data Sheet is used

CUSTOMER

Importing CSV file from Fisher into SPI

The screenshot shows the 'SmartPlant Instrumentation Import Utility - DEMO (As-Built)' application window. The 'Link Explorer' pane on the left displays a tree view with 'FIRSTVUE' selected. A context menu is open over 'FIRSTVUE', and the 'Import' option is highlighted with an orange arrow. The main pane shows the 'Contents of group: FIRSTVUE' table.

efinition	Source Name	DBMS	Profile	Server Name	Logon Name
efault	C:\intools\intools.csv	ODBC	VUE1=MICROSOFT T		
efault	C:\intools\intools.csv	ODBC	VUE1=MICROSOFT T		
efault	C:\intools\intools.csv	ODBC	VUE1=MICROSOFT T		
efault	C:\intools\intools.csv	ODBC	VUE1=MICROSOFT T		

EM

Case B: Customized Data Sheet is used

CUSTOMER

STAGE 1 of 2 stage process
ONE TIME ONLY

Customer

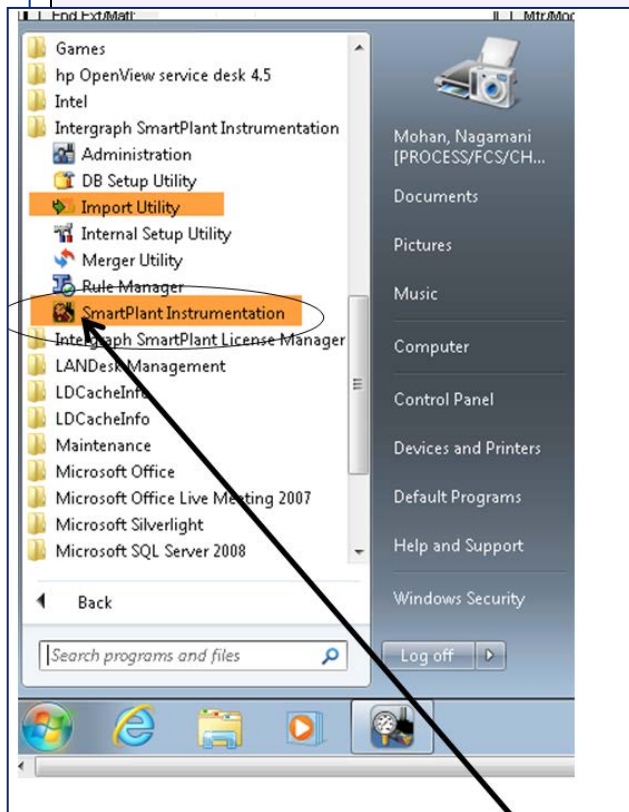
Your Customized Form

Export .psr

Import .imp

Create &
Export Links

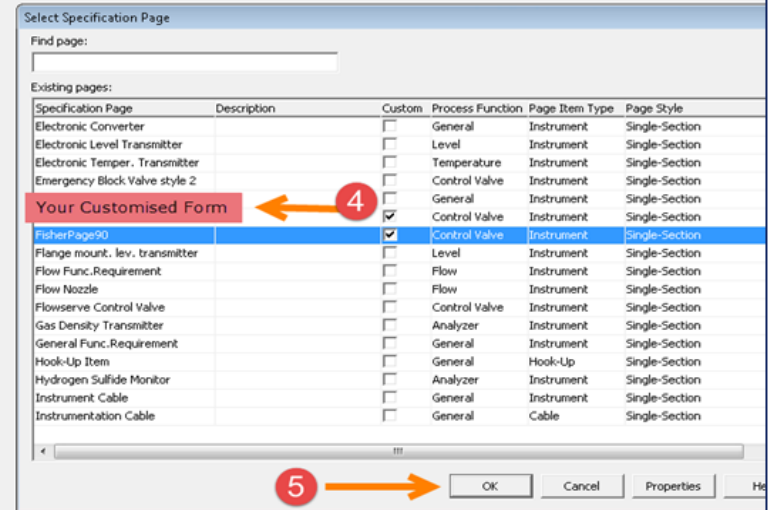
SPI Import utility



Case B: Customized Data Sheet is used

Exporting .psr

1. Click Specification Module
2. Click Page Editor
3. Click Open Page
4. Select "your customized form"
5. Click "Ok" to open
"Your Customized Form"



Case B: Customized Data Sheet is used

CUSTOMER

STAGE 1 of 2 stage process
ONE TIME ONLY

Exporting .psr

6. Click "Save as File"
7. Save "your customized form" as .psr file
8. Send "your customized form.psr" to your Fisher Sales Office

The screenshot displays a software application window titled "Your Customized Form" with a "SPECIFICATION SHEET" form. The form contains various fields for customer information, service conditions, pipe line, valve body, actuator, and positioner. A "Save as File" dialog box is overlaid on the form, showing the file name "Your customised Form.Psr" and the "Save as type" set to "Comma-separated values (*.csv)". The dialog box is open to "Local Disk (E:)" and shows a list of files. An orange arrow points to the file name, and another orange arrow points to the "Save as type" dropdown. A red circle with the number 7 is next to the file name. A red circle with the number 6 is next to the "Save" button in the dialog box.

Customer: _____
Contact: _____
Customer Reference: _____
Item: _____ Rev: _____ Qty: _____
Tags: _____
Description: _____
Price Each: _____
Service Description: _____
State: _____
1 | Fluid _____
2 | Flow Rate _____
3 | Inlet Pressure _____
4 | Outlet Pressure _____
5 | Inlet Temperature _____
6 | Density / Spec. Grav. / Mod. Val _____
7 | Viscosity / Specific Heats Ratio _____
8 | Inlet Vapour Pressure _____
9 | * Required Cv _____
10 | * Travel _____ %
11 | Allowable / * Predicted _____ dBA _____ / _____ / _____ / _____
12 | _____

PIPE LINE
Size, Schedule In: _____
Size, Schedule Out: _____
Insulation: _____
VALVE BODY/BONNET
Size: _____
Mfr/Model: _____
Body/Bonnet Mat: _____
Ports: _____
Valve Guiding: _____
Liner Mat ID: _____
End Connection In: _____
End Connection Out: _____
Flg Face Finish: _____
End End Mat: _____
Flow Direction: _____
BONNET Type: _____
Lub-Isol Valve: _____ Lube: _____
Packing Material: _____
Packing Type: _____
Bolt, Bonnet: _____
Package/Flg/Flt: _____
TRIM Type: _____
Size: _____ Travel: _____
Characteristic: _____
Balanced/Unbalanced: _____ FL _____ XT _____
Rated Cv: _____
Plug Material: _____
Retainer Material: _____
Bushings Material: _____
Seat Material: _____
Cage Material: _____
Stem Material: _____
Yoke Boss Size: _____
Push Down To: _____
SPECIAL ACCESS: _____
NEC Class: _____ Group: _____ Div: _____
Notes: _____

ACTUATOR Type: _____
Mfr/Model: _____ Eff Area _____
Size: _____ Mod: _____
ON/OFF: _____
Spring Action: _____
Max Allow Pr: _____
Available Air Supply Pressure _____
Max: _____ Min: _____
Bench Range: _____
Act Orientation: _____
Handwheel Type: _____
Air Failure Valve: _____
Input Signal: _____
POSITIONER Type: _____
Mfr/Model: _____
Incr Signal Output: _____
Gauges: _____
Cam Characteristic: _____
Action: _____
Certificate: _____
SWITCHES
Type: _____
Mfr/Model: _____
Contacts/Rating: _____
Actuation Point: _____
AIRSET
Mfr/Model: _____
Set Pressure: _____
Filter: _____
Gauges: _____
TESTS Hydro Press: _____
ANSI/FCI Leakage Class: _____
Rev. Date Revision Orig. App.

* Information supplied by manufacturer unless already _____ ISA Form S20.50, Rev. 1

EMEI

Case B: Customized Data Sheet is used

CUSTOMER

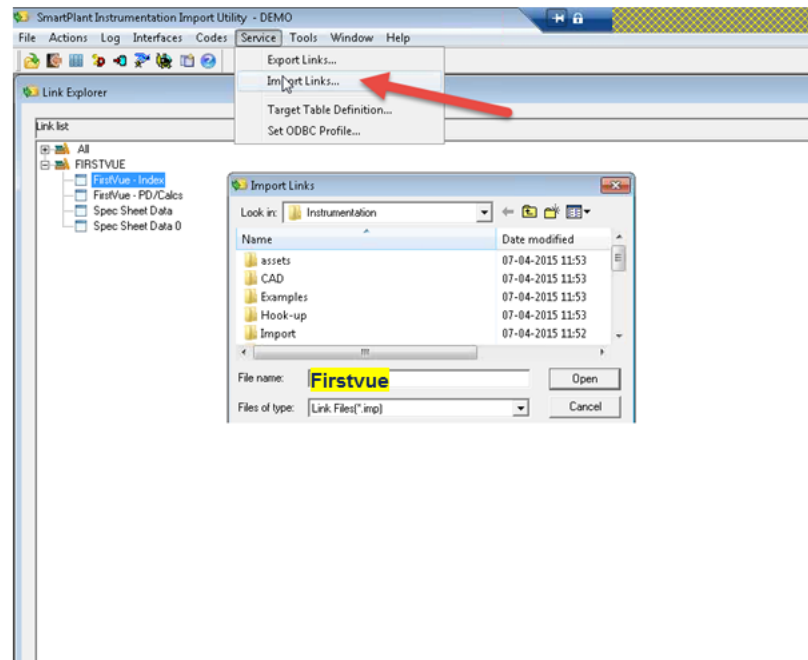
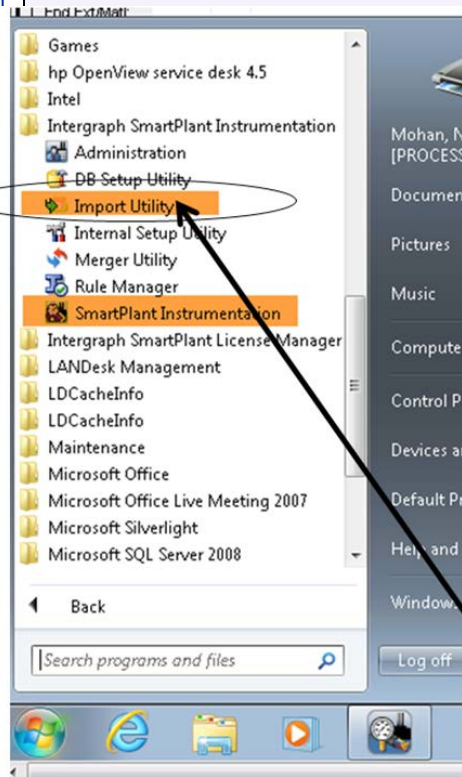
STAGE 1 of 2 stage process
ONE TIME ONLY

Customer

Your Customized Form

Importing Links

- Fisher will send file named “Firstvue.imp”
- Open SPI Import Utility → Service → Import Links
- Save the “Firstvue.imp” without changing the file name



Case B – Customized Data Sheet is used

CUSTOMER

STAGE 2 of 2 stage process.
Export and Import CSV files just like your
would for a standard Fisher data sheet

Customer
Data Sheet

Export CSV

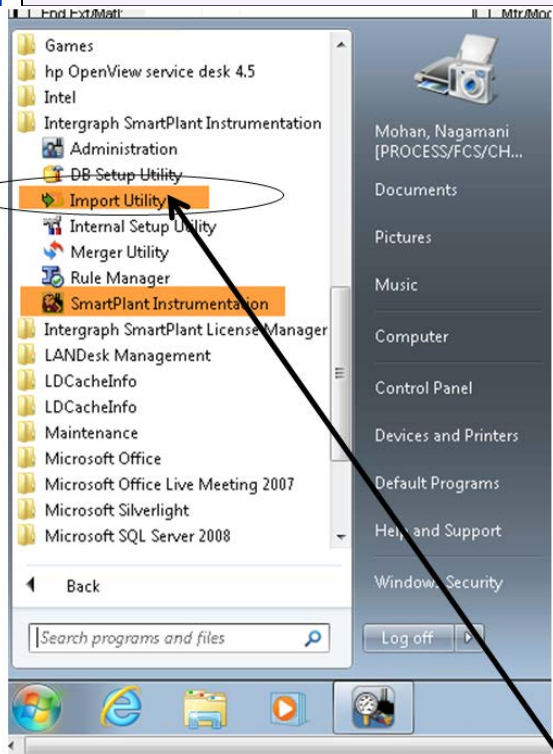
Import CSV

CSV File – Spec sheet fields
(Process + Instrument)

CSV File –
Complete Spec
sheet + DDP

Sizing
Selection

FISHER



Case B – Customized Data Sheet is used

CUSTOMER

STAGE 2 of 2 stage process.

Export and Import CSV files just like your

Exporting .CSV file from SPI to Fisher

- Index Module
- Browser View
- Tools-> Interface
- To Fisher FirstVUE
- Export as csv

The screenshot shows the SmartPlant Instrumentation interface. The 'Domain Explorer' on the left lists various instrument tags. The 'Tools' menu is open, and the 'Export to FirstVUE' dialog box is displayed. The dialog box has the following fields and options:

- File: (with a 'Browse...' button)
- Overwrite
- Export tags from: Plant Unit Filter Selected tags
- Use field length from: SmartPlant Instrumentation FirstVUE
- Progress: Exporting the tag 101-LV -202
- Buttons: Cancel, Log File, Help

The background shows a table of instrument tags with columns for Tag Number, Service, Function Type, and IO Type Name. A red arrow points to the 'Export to FirstVUE' dialog box.

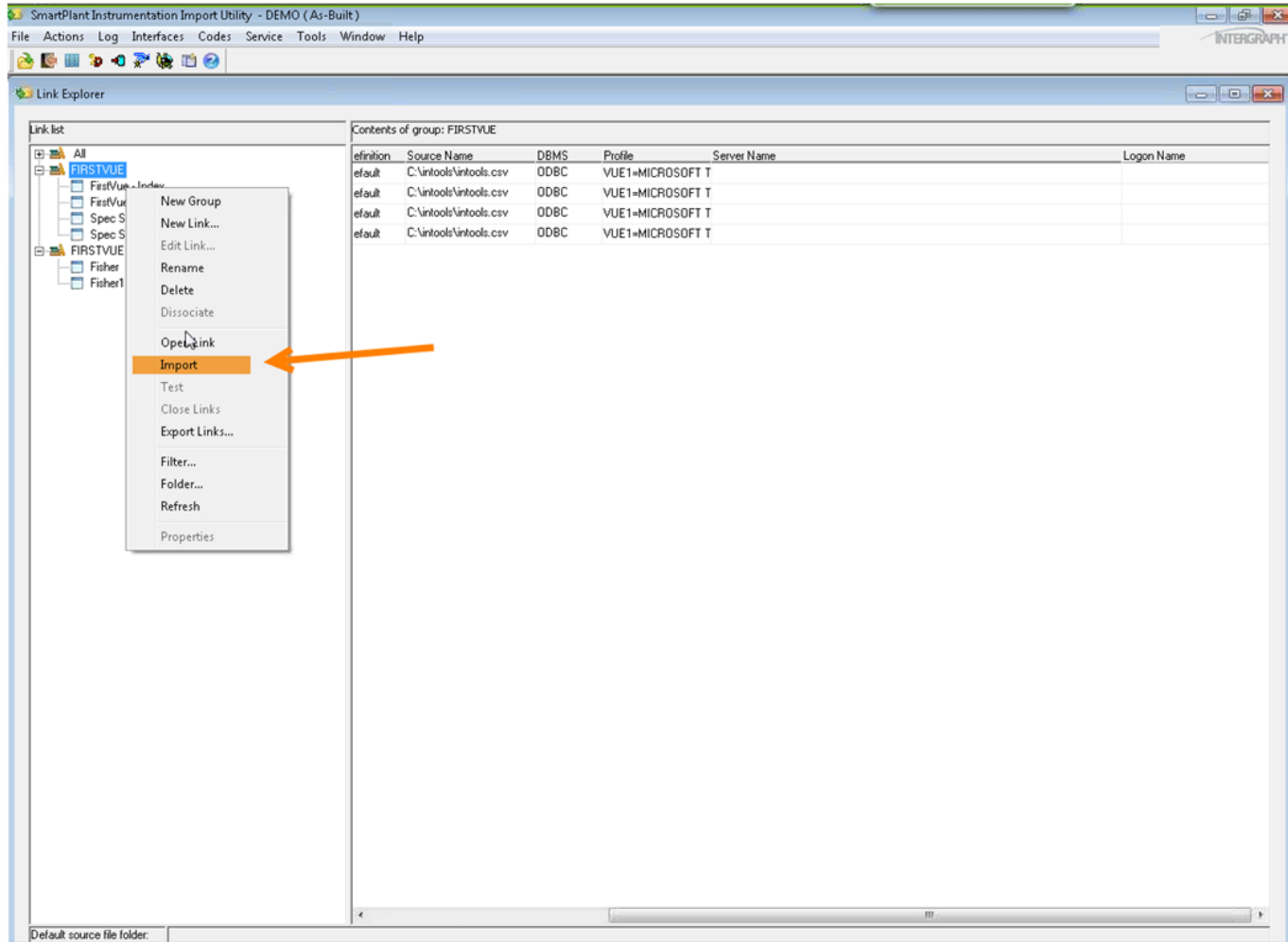
The Windows taskbar and Start menu are visible on the left side of the image. The Start menu is open, showing a search bar and a list of programs including Games, hp OpenView se, Intel, Intergraph Smart, Administrative, DB-Setup-Util, Import Utility, Internal Setu, Merger Utility, Rule Manage, SmartPlant In, Intergraph Smart, LANDesk Manag, LDCacheInfo, LDCacheInfo, Maintenance, Microsoft Office, Microsoft Office, Microsoft Silver, and Microsoft SQL S. The taskbar shows icons for Internet Explorer and other applications.

Case B – Customized Data Sheet is used

CUSTOMER

STAGE 2 of 2 stage process.

Importing CSV file from Fisher into SPI



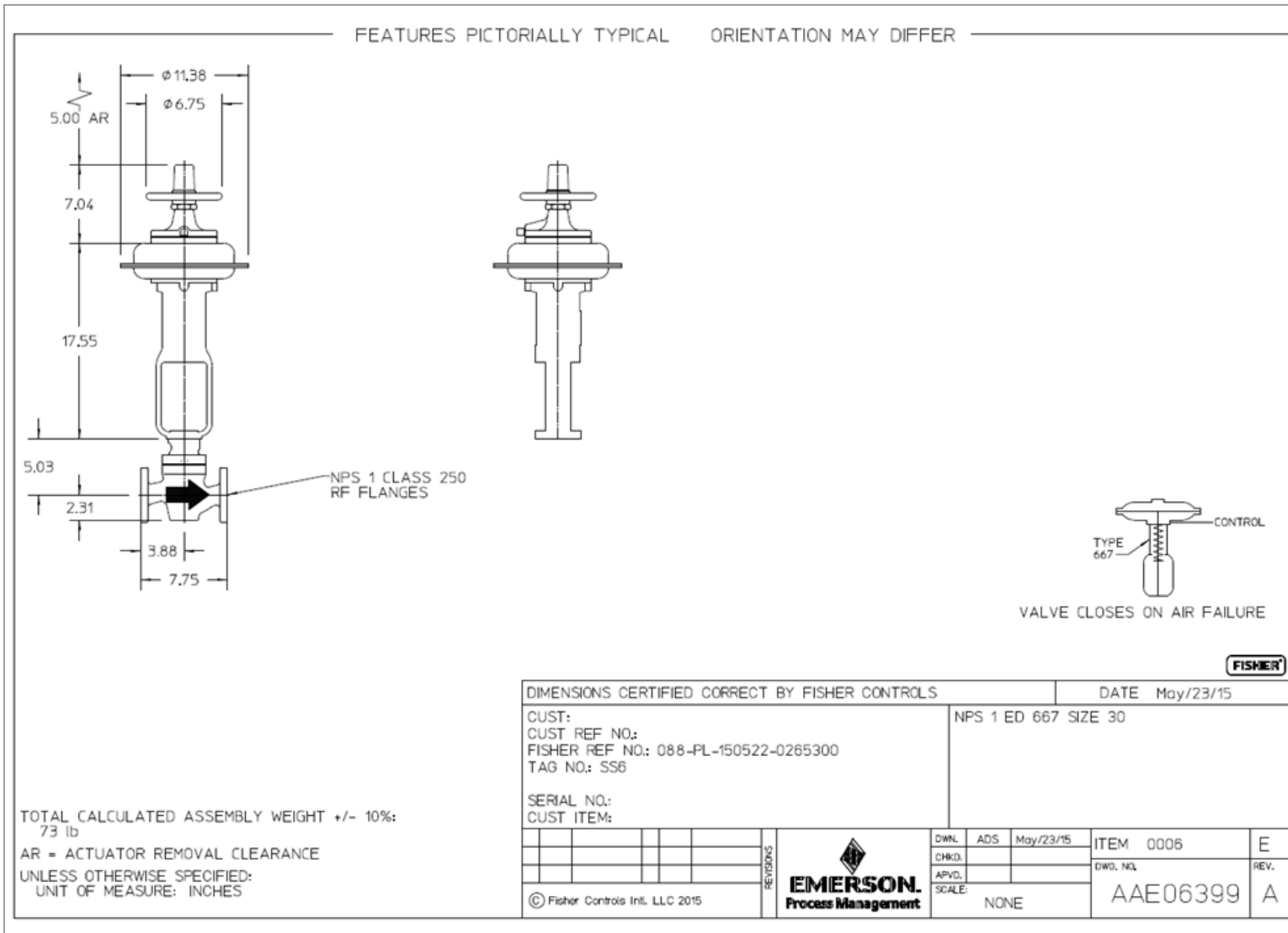
EMERS

The Emerson (Fisher) – SPI Interface

Dimensional Data:

- For both the preceding cases A and B, our solution will provide tag-wise dimensional data for all the standard valves along with the completed valve specification data that can be directly imported into SPI.
- Additionally, we are working on a separate DDP interface for automated and manual on-off ball valves (floating and trunnion) and Triple Off-set butterfly valves made by **Virgo Valves** – a recent Emerson acquisition.

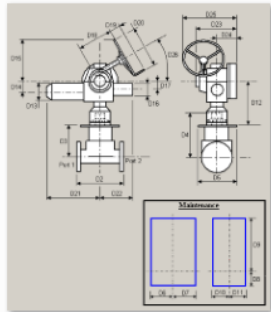
Fisher Dimensions Mapped to DDP In SPI



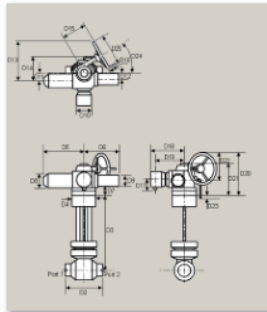
Fisher Dimensions Mapped to DDP In SPI



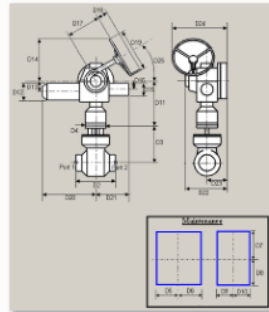
Fisher Dimensions Mapped to DDP In SPI



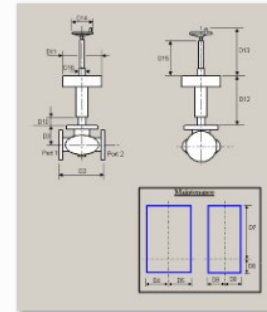
VGateELM001.bmp



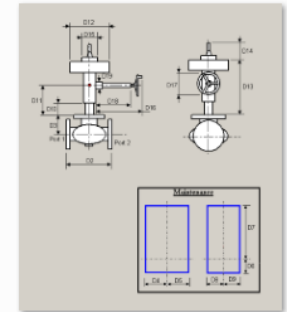
VGateELM002.bmp



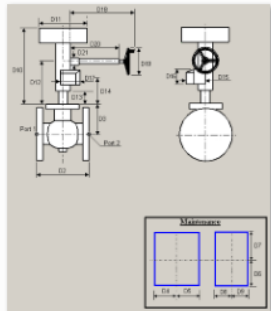
VGateELM003.bmp



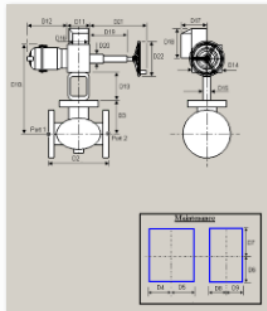
VGlobeDIA001.bmp



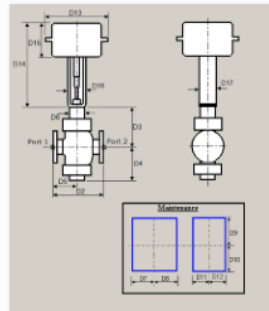
VGlobeDIA002.bmp



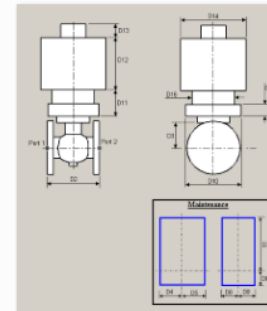
VGlobeDIA003.bmp



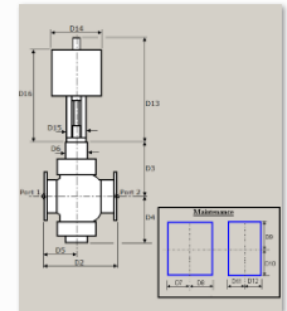
VGlobeDIA006.bmp



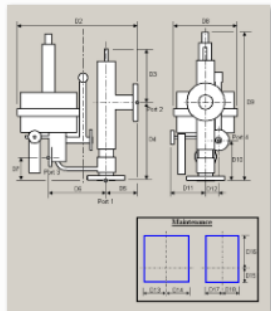
VGlobeDIA007.bmp



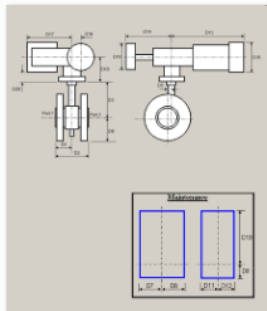
VGlobeHYD003.bmp



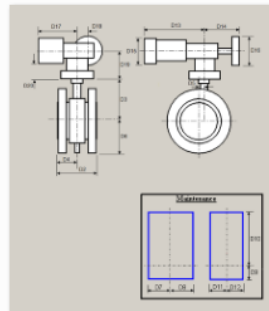
VGlobePNU002.bmp



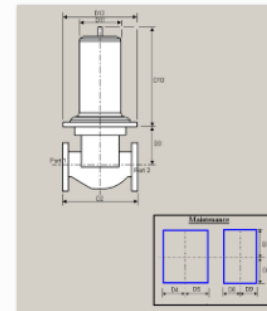
VPadDepad001.bmp



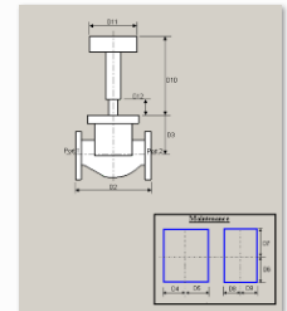
VPlugRotDIA001.bmp



VPlugRotDIA002.bmp

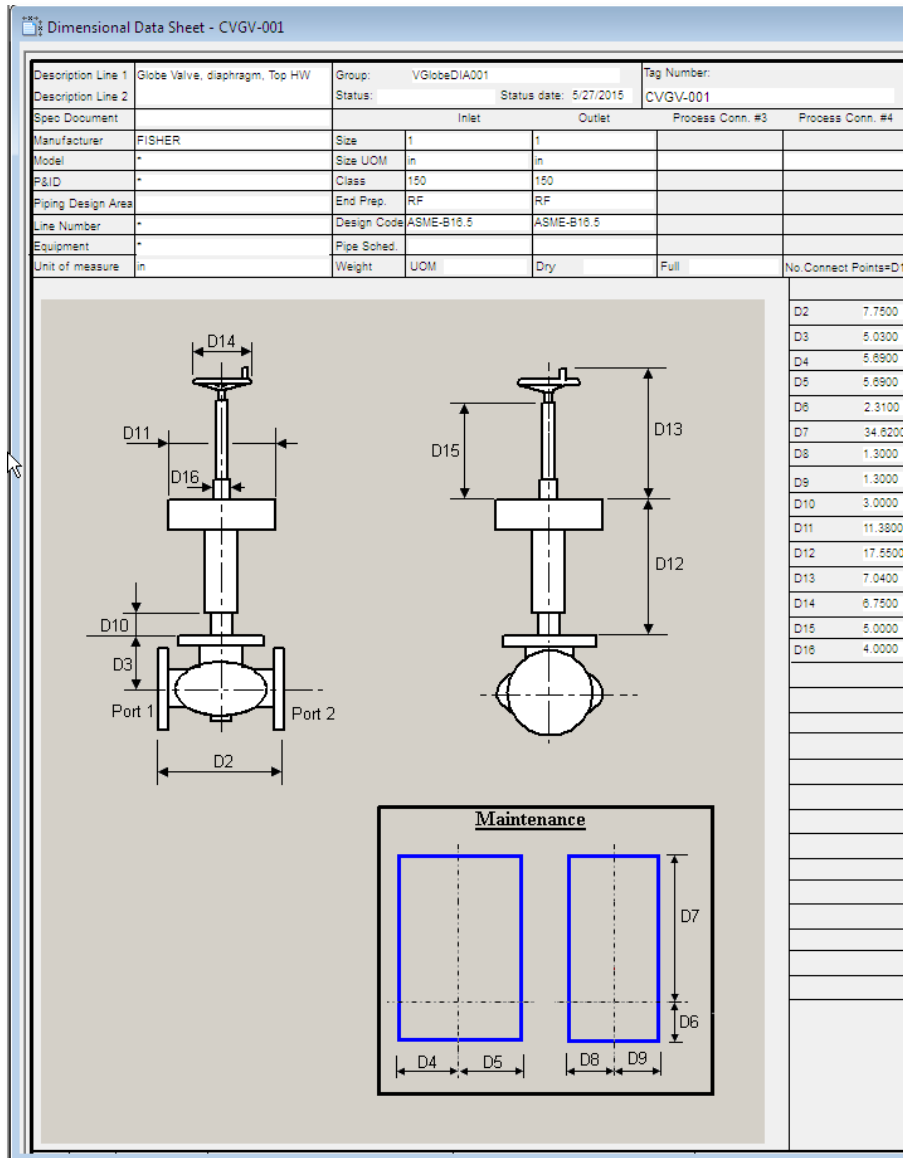


VPressControlDIA001.bmp



VPressControlDIA002.bmp

Fisher Dimensions Mapped to DDP In SPI



Mapping of DDP Dimensions to SPF and S3D



	A	B	C	D	E	F	G
1	SPI DDP		SPI - EF Mapping			SP3D - EF Mapping	
2	SPI DDP Name	VGlobeDIA001	SPI Map Class Name	DDP_GROUP_VGlobeDIA001		Map Edge Definition to be used	CPPipeAlongLegPathFeat
3	SPI DDP Description	Globe Valve,diaphragm, top-mounted handwheel	SPI Map Class UID	INTL_DDP_GROUP_VGlobeDIA001		SP3D Codelist Number	20022
4	Number of Ports	2	Enumerated List Definition UID	INTL_DIMGroups_VGlobeDIA001			
5	SP3D Symbol	SPI Property Name	EF Interface Name	EF Property Name	EF Property Type	SP3D Interface Name	SP3D Property Name
6	Globe Valve - Face-to-face dimension basis, detailed representation, Type 1 with Diaphragm Actuator, Type 1 and Manual Override Accessory, Type 1	D2	ICollinearPortedItem	FaceToFaceDimension	LengthUoM	IJFaceToFace	FacetoFace
7		D3	IDimensionedItem	OffsetFrmValCen	LengthUoM	IJUAOffsetFrmValCen	OffsetFrmValCen
8		D4	IDimensionedItem	ValveMaintenanceLength1	LengthUoM	IJUAValveMaintenance	ValveMaintenanceLength1
9		D5	IDimensionedItem	ValveMaintenanceLength2	LengthUoM	IJUAValveMaintenance	ValveMaintenanceLength2
10		D6	IDimensionedItem	ValveMaintenanceHeight1	LengthUoM	IJUAValveMaintenance	ValveMaintenanceHeight1
11		D7	IDimensionedItem	ValveMaintenanceHeight2	LengthUoM	IJUAValveMaintenance	ValveMaintenanceHeight2
12		D8	IDimensionedItem	ValveMaintenanceWidth1	LengthUoM	IJUAValveMaintenance	ValveMaintenanceWidth1
13		D9	IDimensionedItem	ValveMaintenanceWidth2	LengthUoM	IJUAValveMaintenance	ValveMaintenanceWidth2
14		D10	IDimensionedItem	Offset	LengthUoM	IJUADiaphragmActDim	Offset
15		D11	IDimensionedItem	DiaphragmDiameter	LengthUoM	IJUADiaphragmActDim	DiaphragmDiameter
16		D12	IDimensionedActuator	ActuatorHeight	LengthUoM	IJUAInstrumentActuator	ActuatorHeight
17		D13	IDimensionedItem	OperatorHeight	LengthUoM	IJUAValveOperator	OperatorHeight
18		D14	IDimensionedItem	HWDiameter	LengthUoM	IJUAHWDia	HWDiameter
19		D15	IDimensionedItem	ActuatorA	LengthUoM	IJUAActDimA	ActuatorA
20		D16	IDimensionedItem	ActuatorB	LengthUoM	IJUAActDimB	ActuatorB

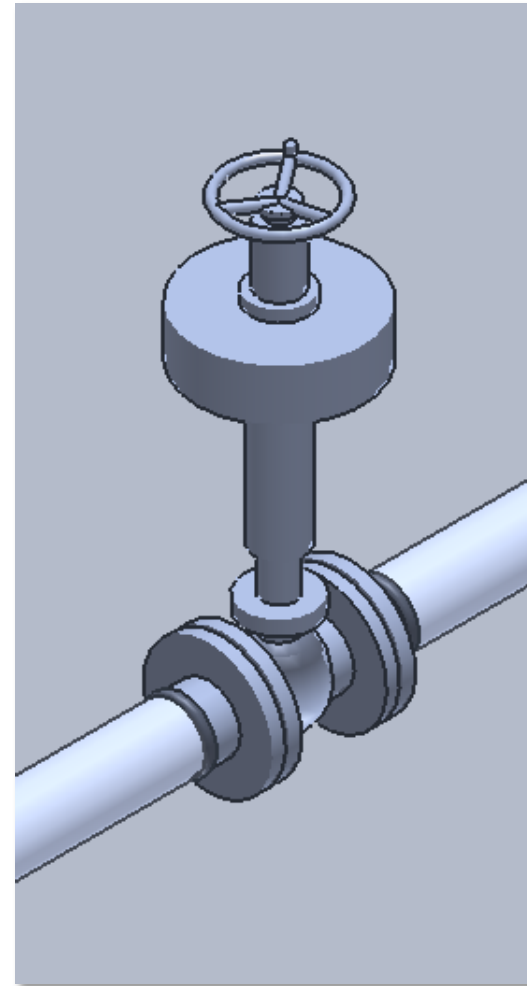
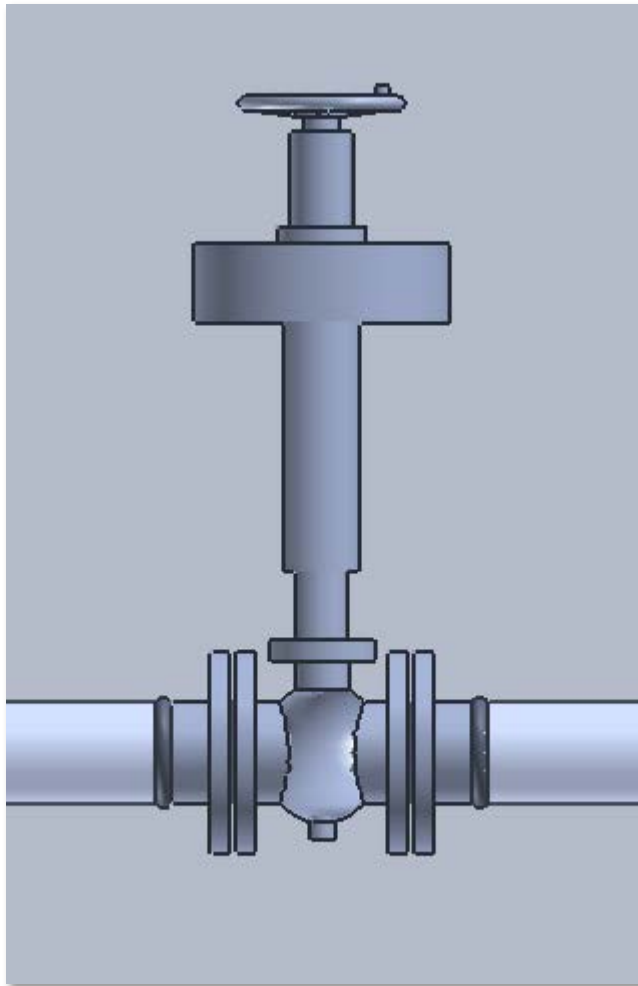
S3D Part Class Sheet



	A	B	C	D	E	F	G	H	I	J
1	Back to Index									
2	Definition	PartClassType	SymbolDefinition	UserClassName	OccClassName	SymbolIcon	OA:InsulationThickness	OA:Rotation	OA:Npd	OA: NpdUnitType
3										
4		InstrumentsClass	VGlobeDIA001.CVGlob	Control Valve - VGlol	Control Valve - VGl	SymbolIcons\VGlobeDIA001.gif				
5										
6	CommodityPart									
7	Head	IndustryCommodit	CommodityType	GeometryType	GraphicalRepresen	SymbolDefinition	MaterialGrade	LiningMaterial	BendRadius	BendRadiusMultiplier
8	Start									
9		VGlobeDIA001	GLO	15						
10	END									
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VBallDIA001
VBallDIA002
VGateDIA001
VGateDIA0 ...
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◀ ▶

Placement in Smart3D



Thank You!
