



# QUICK START GUIDE

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PRV2SIZE 101: Introduction to Pressure  
Management Sizing Software



# REQUIREMENTS

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## HARDWARE

### Minimum

- Pentium4 (1.3 GHz)
- 728 MB RAM
- 400 MB free HD
- 1024 x 768

### Recommended

- Pentium Core Duo (1.8 GHz or better)
- 1 GB RAM
- 500 MB free HD
- 1280 x 1024
- Internet Connection

## OPERATING SYSTEM

- Windows 7  
(32-bit and 64-bit)
- Windows 8  
(32-bit and 64-bit)
- Windows 10  
(32-bit and 64-bit)

### Unsupported

- Windows XP
- Windows Vista, 98, ME
- Windows Server (all)
- Mac OS (all)
- Linux (all)

## SOFTWARE

- .NET Framework 3.5
- Acrobat Reader 5.0  
(7.0 or later rec)
- IE 6.0 or later  
Firefox 2.0 or later



## PRV<sup>2</sup>SIZE FUNCTIONALITY

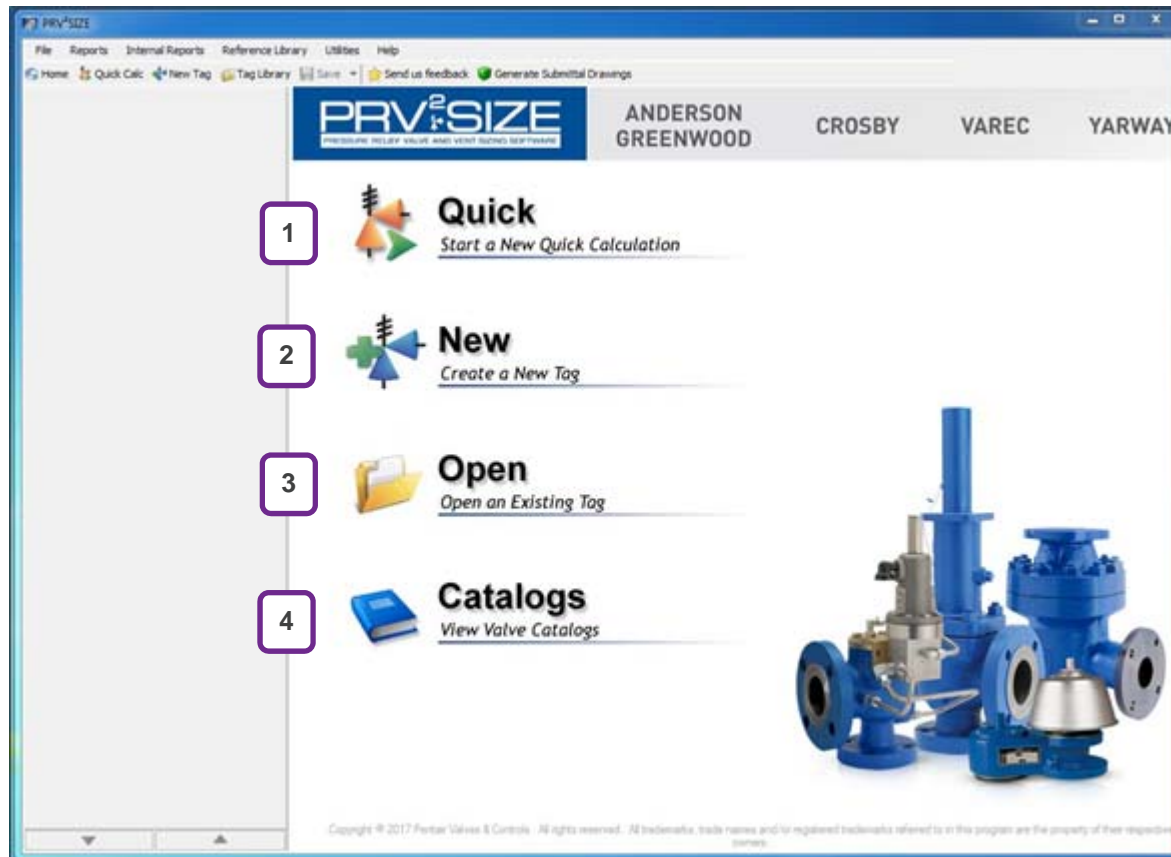
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- HOME SCREEN
- STAGE 1: CALCULATION TYPE
- STAGE 2: SIZING & SELECTION
- STAGE 3: CONFIGURATION
- STAGE 4: REPORTING
- TAG MANAGEMENT

# HOME SCREEN

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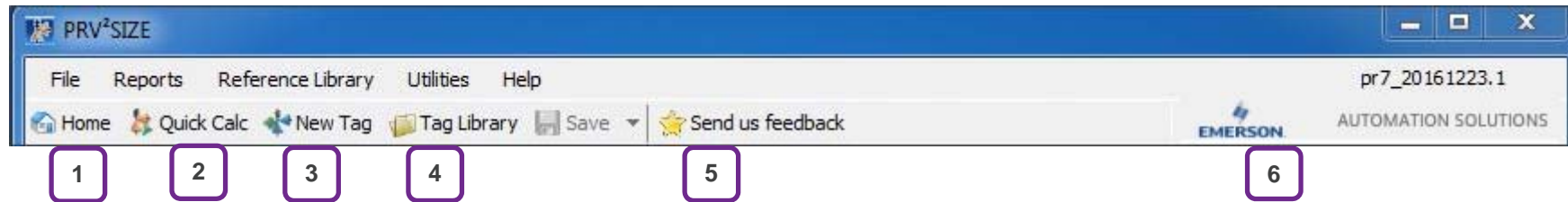
# MAIN MENU



1. **Quick Calculation:** Size a tag without saving or assigning project or company name
2. **New Tag:** Create and save new sizing tag by associating a company, project and properties
3. **Open Tag:** Open single or multiple tags by accessing Project Tag Library
4. **Catalogs:** View, Save or Print from Catalog Browser showing Catalog Model, Brand, Document Number and Description

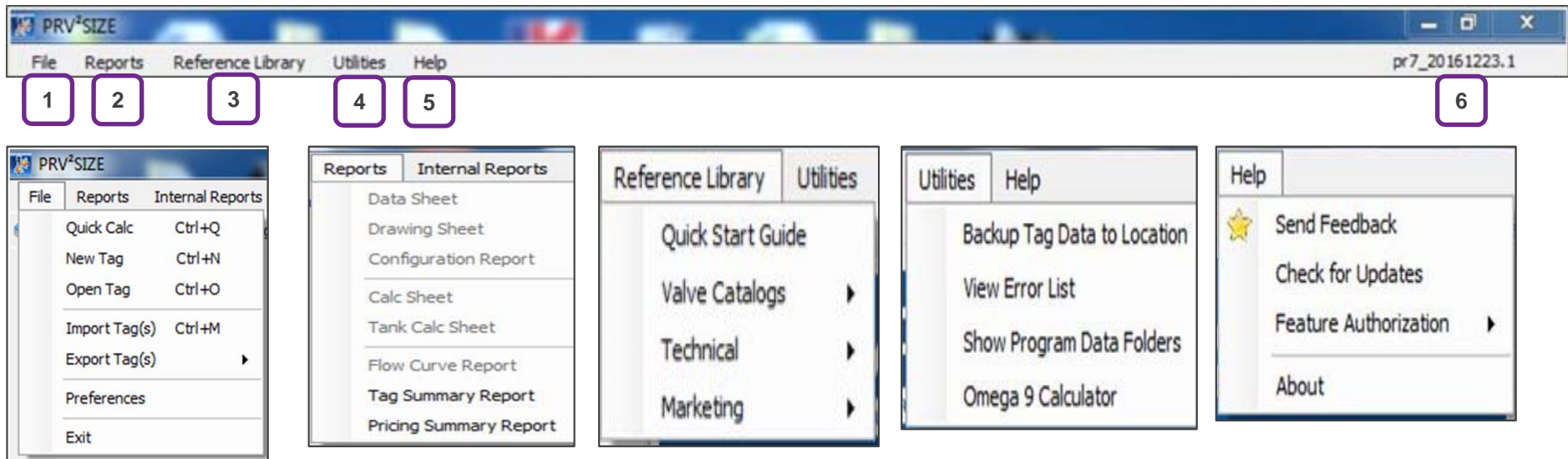
# TOP MENU

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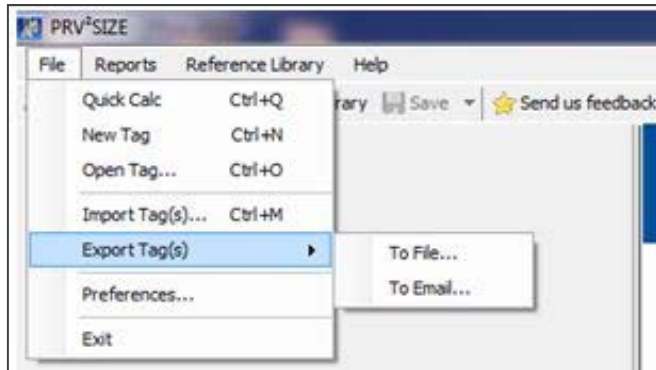
1. **Home:** Access Home Screen options at anytime during sizing single or multiple tags
2. **New Tag:** Save new sizing tag by associating a company, project and properties
3. **Quick Calc:** Size a tag without saving or assigning project or company name
4. **Tag Library:** Open single or multiple tags by accessing Project Tag Library
5. **Send us Feedback:** Report a problem or suggestion to software maintenance team which includes option to attach tags database and provide detailed description
6. **Website Link:** Link to company Valve Sizing Website (<https://valvesizing.emerson.com>)

# DROPDOWN MENUS

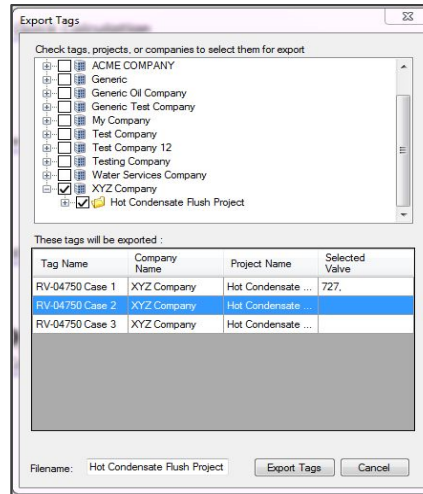


1. **File:** Export/Import Tags and Preferences options available
2. **Reports:** Datasheet, Drawing Sheet, Calc Sheet, Tank Calc Sheet, Flow Curve Report, and Tag Summary Report options available
3. **Reference Library:** Quick Start Guide, Valve Catalogs, Technical and Marketing options
4. **Utilities:** Backup Tag Data to Location, View Error List, Show Program Data Folders and Omega 9 Calculator options available
5. **Help:** Send Feedback, Check for Updates, Feature Authorization and About options
6. **Version/Build:** Installed PRV2SIZE software's version and build information

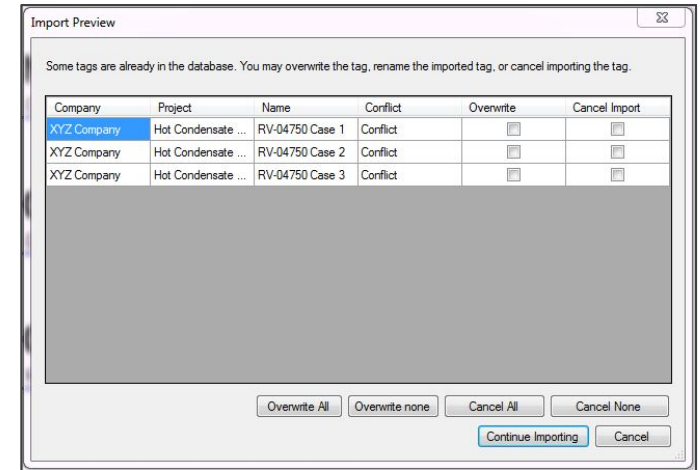
# FILE > EXPORT / IMPORT TAGS



1



2

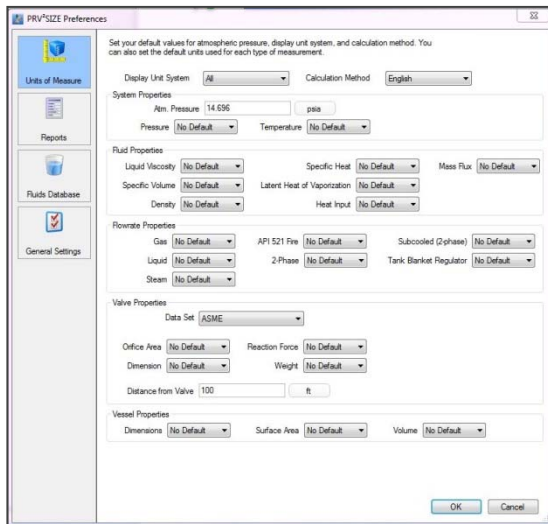


3

1. **Export to File:** Choose export to File and select single or multiple tags to be exported
2. **Export to Email:** Choose to export to Email has an option of entering 'File Name'
3. **Import Tags:** Import sizing tags exported by other users in your program and choose to:
  - Overwrite existing tags whenever duplicate tag exists in software (or)
  - Cancel the import to avoid duplication



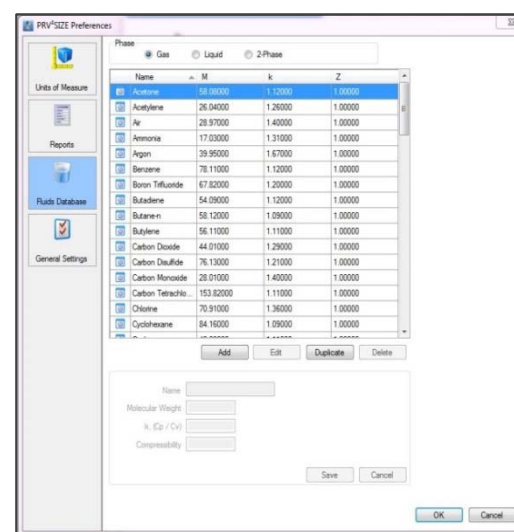
# FILE > PREFERENCES



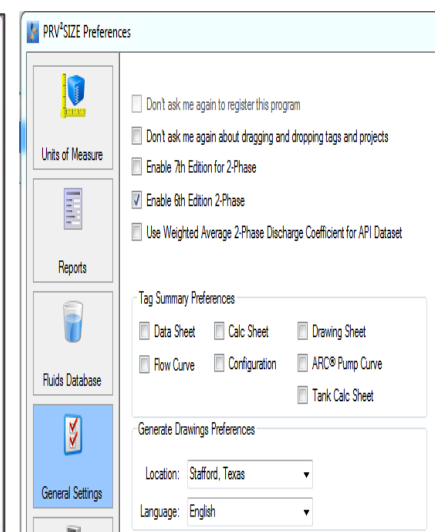
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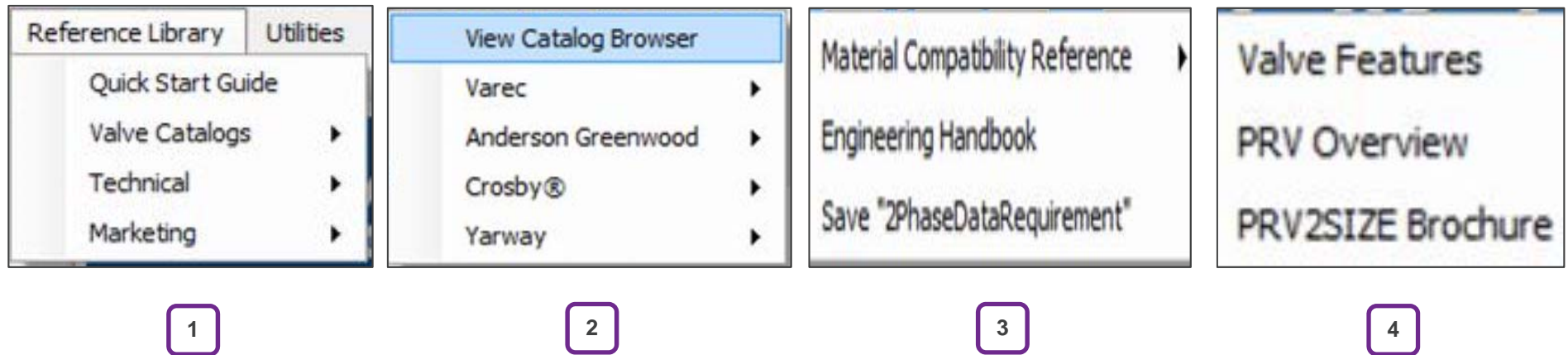
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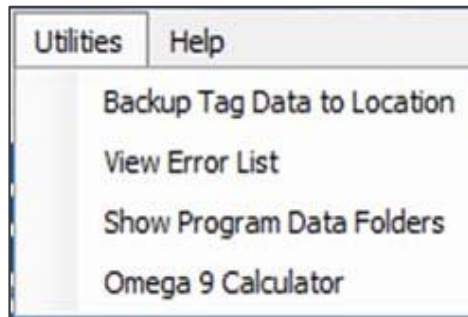
- Units of Measure:** Set up global default units for any new tag to be created in program
- Reports Header:** Enter or customize information appearing in reports header
- Fluids Database:** Create your own custom fluids database for use in the program
- General Settings:** Modify 'Tag Summary' and 'Generate Drawing' Preferences with options to:
  - Activate 2-phase API 6<sup>th</sup> or 7<sup>th</sup> Edition sizing methods
  - Use of Weighted Average 2-phase Discharge coefficient for API Dataset
  - Deactivate auto-populated message when dragging and dropping tags and projects

# REFERENCE LIBRARY

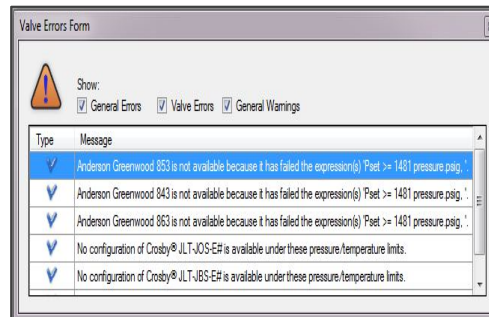


1. **Quick Start Guide:** PRV2SIZE Quick Start Guide includes software installation, functionality, features and troubleshooting information
2. **Valve Catalogs:** All catalogs can be accessed by clicking 'View Catalog Browser' or by selecting legacy product line brand
3. **Technical:** Includes Material Compatibility reference for metals and non-metals, PRV Engineering Handbook and 2-phase Sizing Data Requirements Form
4. **Marketing:** Includes all Product Model Features, PRV Overview and PRV2SIZE Brochure

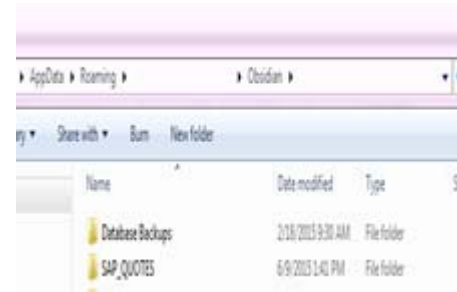
# UTILITIES



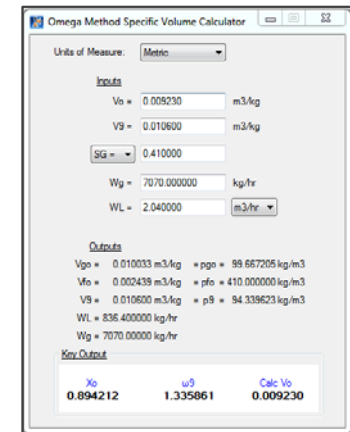
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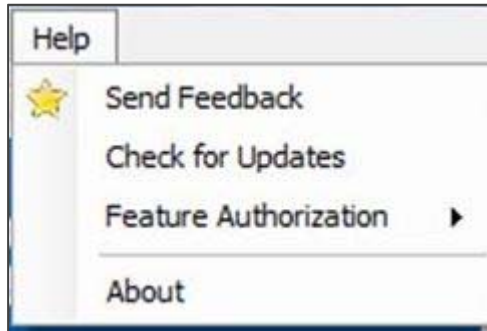
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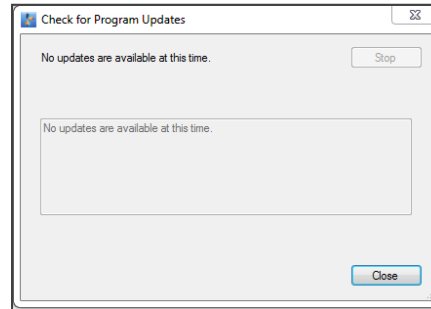
4

1. **Backup Tag Data to Location:** To back up save 'Tags.sdf' backup file on your computer
2. **View Error List:** Sizing/Selection Errors or Warning for active tag will populate
3. **Show Program Data Folders:** Allows access to PRV2SIZE program data folders
4. **Omega 9 Calculator:** Tool to calculate liquid and vapor densities missing in customer datasheet when combined sp. volume or density at the inlet for Omega method are available

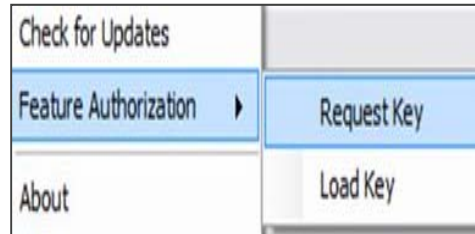
# HELP



1



2



3

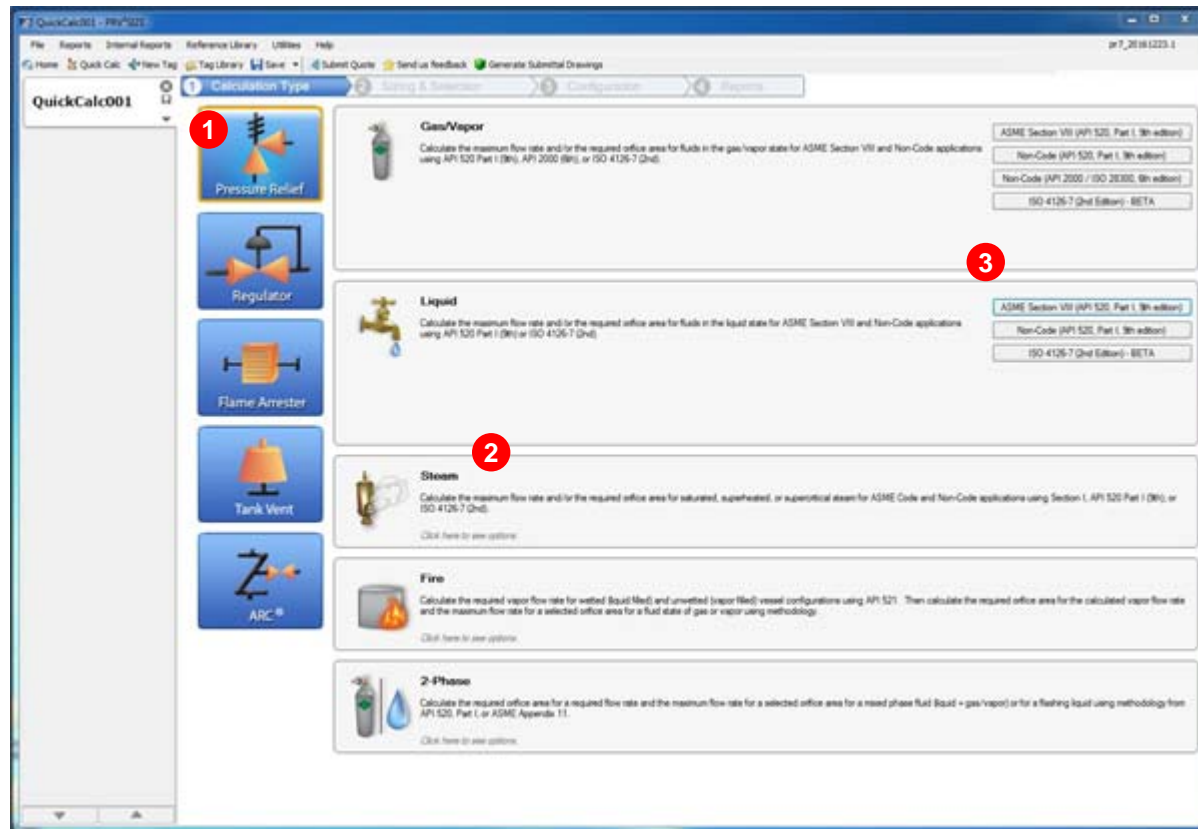


4

1. **Send Feedback:** Report a problem or suggestion to software maintenance team which includes option to include tags database
2. **Check for Updates:** If there are updates they will be displayed in popup box
3. **Feature Authorization:** Special Features can be activated by requesting feature authorization key (Emerson Users Only)
4. **About:** Opens up splash screen that includes build information and expiration dates

# STAGE 1: CALCULATION TYPE

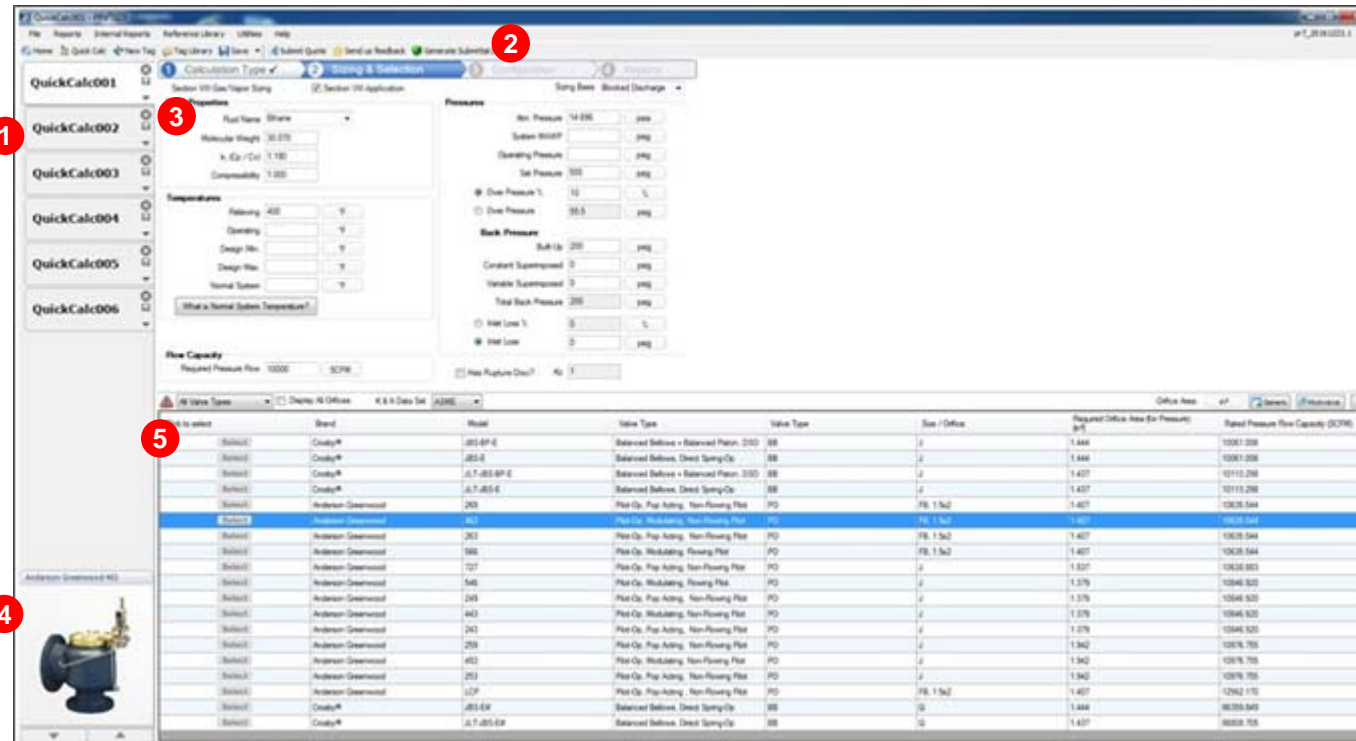
# CALCULATION TYPE SELECTION



1. **Valve Category:** Choose a valve category to display sizing methodology options
2. **Fluid Type:** Click in sizing option description to enable sizing methodology options
3. **Sizing Methodology:** Click sizing workflow to start sizing calculation

# STAGE 2: SIZING & SELECTION

## SIZING AND SELECTION SCREEN



1. **Open Tags:** All open tags being worked on are listed on left and can be closed or saved
2. **Workflow Stages:** Top workflow stage shows check mark for completed stage
3. **Input Values:** Sizing input values for each sizing workflow are required to be entered
4. **Valve Image:** A picture of valve is displayed as you drag over grid values in section 5
5. **Valve Selection:** Valve candidate list that satisfies input criteria is generated and valve can be selected by clicking 'Select' button



# SIZING AND SELECTION INPUT VALUES

QuickCalc001 - PRV SIZE

File Reports Internal Reports Reference Library Utilities Help

Home Quick Calc New Tag Tag Library Save Submit Quote Send us feedback Generate Submittal Drawings

1 Calculation Type 2 Sizing & Selection 3 Configuration 4 Requirements

Section I Steam Sizing

Fluid Properties

Fluid Name: Steam

☐ Saturated Steam

Molecular Weight: 18.020

k: (Cp / Cv): 1.310

Compressibility: 1.000

Temperatures

Saturated Steam: 573.378 °F

Relieving: °F

Operating: °F

Design Min.: °F

Design Max.: °F

Flow Capacity

Required Pressure Flow: lb/hr

Pressures

Atm. Pressure: 14.696 psig

System MAWP: psig

Operating Pressure: psig

Set Pressure: 2500 psig

Over Pressure %: %

Over Pressure: psig

Back Pressure

Built-Up: 0 psig

Constant Superimposed: 0 psig

Variable Superimposed: 0 psig

Total Back Pressure: 0 psig

Inlet Loss %: %

Inlet Loss: 0 psig

Office Area: in<sup>2</sup> Generic Multivalve

No valves meet your requirements. If all of the required inputs have been entered (blue text), the orange triangle can be clicked to see why no valves appear. This orange triangle will appear only after 'Set Pressure' has been entered.

1. **Input Sections:** Input fields are grouped into like sections
2. **Required Values:** Required fields are highlighted in blue
3. **Units Change:** Change units by clicking the unit button for a list
4. **Sizing Basis:** Select sizing basis from dropdown list

# FILTER BAR FOR SIZING AND SELECTION

**QuickCalc001**  
My Company | My...

1 Calculation Type 2 **Sizing & Selection** 3 Configuration 4 Reports

Pilot Operated Only ☒ Display All Orifices K & A Data Set ASME Orifice Area: in<sup>2</sup> Generic Multivalve

Click to select	Brand	Model	Valve Type	Size / Orifice	Required Orifice Area (for Pressure) (in <sup>2</sup> )	Rated Flow Capacity (GPM (US))
Select	Anderson Greenwood	463	Pilot-Op, Modulating....	FB, 6x8	21.147	6618.757
Select	Anderson Greenwood	566	Pilot-Op, Modulating....	FB, 6x8	21.147	6618.757
Select	Anderson Greenwood	463	Pilot-Op, Modulating....	FB, 6x8x8	21.147	6618.757
Select	Anderson Greenwood	546	Pilot-Op, Modulating....	T	19.633	8640.707
Select	Anderson Greenwood	443	Pilot-Op, Modulating....	T	19.633	8640.707
Select	Anderson Greenwood	566	Pilot-Op, Modulating....	FB, 8x8x8	21.147	9127.461
Select	Anderson Greenwood	463	Pilot-Op, Modulating....	FB, 8x8x8	21.147	9127.461
Select	Anderson Greenwood	463	Pilot-Op, Modulating....	FB, 8x10	21.147	12534.725
Select	Anderson Greenwood	566	Pilot-Op, Modulating....	FB, 8x10	21.147	12534.725
Select	Anderson Greenwood	463	Pilot-Op, Modulating....	FB, 8x10x10	21.147	12534.725

**Valve Errors Form**

Show: ☒ General Errors ☒ Valve Errors ☒ General Warnings

Type	Message
✓	Anderson Greenwood 853 is not available because it has failed the expression(s) 'Pset >= 1481 pressure.paig, '.
✓	Anderson Greenwood 843 is not available because it has failed the expression(s) 'Pset >= 1481 pressure.paig, '.
✓	Anderson Greenwood 863 is not available because it has failed the expression(s) 'Pset >= 1481 pressure.paig, '.
✓	No configuration of Crosby® JLT-JOS-E# is available under these pressure/temperature limits.
✓	No configuration of Crosby® JLT-JBS-E# is available under these pressure/temperature limits.

1. **Invalid Valve Models:** Click Orange Triangle to view error list of invalid models and warnings
2. **Filter Valve Type:** Filter valves based on valve type
3. **Orifice Sizes:** Display all orifices check box allows display of all valve orifice sizes
4. **K & A Dataset:** Allows selection of API and ASME dataset K and A values
5. **Orifice Area Units:** Units for Orifice Areas can be changed to  $in^2$ ,  $cm^2$  and  $mm^2$
6. **Maximize Valve Selection:** Valve candidate list can be maximized

# GENERIC AND MULTIVALVE OPTIONS

Generic Valve Sizing (Pressure Relief)

Manufacturer / Brand: Anderson Greenwood

Model: 9390P SC

Orifice: D

Orifice Area: 0.124 in<sup>2</sup>

Distance from Valve: 100 ft

Inlet Diameter: in

Outlet Diameter: in

☐ Is Dual Outlet Valve

Configuration and associated reporting is not available for generic valves.

**Tag Notes**

**Notes**

☒ Auto number notes?

Done

**Sizing Coefficients**

☐ K: 0.878

☒ Kd: 0.975

Kb: 0.51

**Dimensions & Weights**

A: in

B: in

C: in

Weight: lb

Max Height

Plot Operated Only | Display All Orifices | K & A Data Set | ASME

Click to select	Brand	Model	Valve Type	Size / Orifice	Required Orifice Area (for Pressure) (in <sup>2</sup> )	Rated Pressure Flow Capacity (SCFM)
+ Add	Anderson Greenwood	259	Pilot Op. Pop Acting, Non-Flowing Pilot	D	5.864	174.797
+ Add	Anderson Greenwood	853	Pilot Op. Modulating, Non-Flowing Pilot	D	5.864	174.797
+ Add	Anderson Greenwood	453	Pilot Op. Modulating, Non-Flowing Pilot	D	5.864	174.797
+ Add	Anderson Greenwood	253	Pilot Op. Pop Acting, Non-Flowing Pilot	D	5.864	174.797
+ Add	Anderson Greenwood	546	Pilot Op. Modulating, Flowing Pilot	F	4.055	440.206
+ Add	Anderson Greenwood	249	Pilot Op. Pop Acting, Non-Flowing Pilot	F	4.055	440.206
+ Add	Anderson Greenwood	843	Pilot Op. Modulating, Non-Flowing Pilot	F	4.055	440.206
+ Add	Anderson Greenwood	443	Pilot Op. Modulating, Non-Flowing Pilot	F	4.055	440.206
+ Add	Anderson Greenwood	243	Pilot Op. Pop Acting, Non-Flowing Pilot	F	4.055	440.206
+ Add	Anderson Greenwood	LCF	Pilot Op. Pop Acting, Non-Flowing Pilot	FB, 1x2	4.179	938.118
+ Add	Anderson Greenwood	596	Pilot Op. Modulating, Flowing Pilot	FB, 1.5x2	4.143	1895.251
+ Add	Anderson Greenwood	269	Pilot Op. Pop Acting, Non-Flowing Pilot	FB, 1.5x2	4.143	1895.251
+ Add	Anderson Greenwood	863	Pilot Op. Modulating, Non-Flowing Pilot	FB, 1.5x2	4.143	1895.251
+ Add	Anderson Greenwood	463	Pilot Op. Modulating, Non-Flowing Pilot	FB, 1.5x2	4.143	1895.251
+ Add	Anderson Greenwood	263	Pilot Op. Pop Acting, Non-Flowing Pilot	FB, 1.5x2	4.143	1895.251
+ Add	Anderson Greenwood	83	Pilot Operated	2" x 3"	4.210	2719.468
+ Add	Anderson Greenwood	5390P SC	Pilot Operated Pressure	2" x 3"	5.656	2966.767
+ Add	Anderson Greenwood	95	Pilot Operated	2" x 3"	4.175	3508.138

**Multivalve Selection**

Total Required Area: 5.656 in<sup>2</sup> | Total Selected Area: 6.712 in<sup>2</sup> | Flowrate has been met

Required Pressure Flow: 5000 SCFM | Total Rated Pressure Valve Flow: 9833.515 SCFM

Total Selected %: 118.67 | Total Actual Pressure Valve Flow: 6592.754 SCFM | Configure Selected Valves

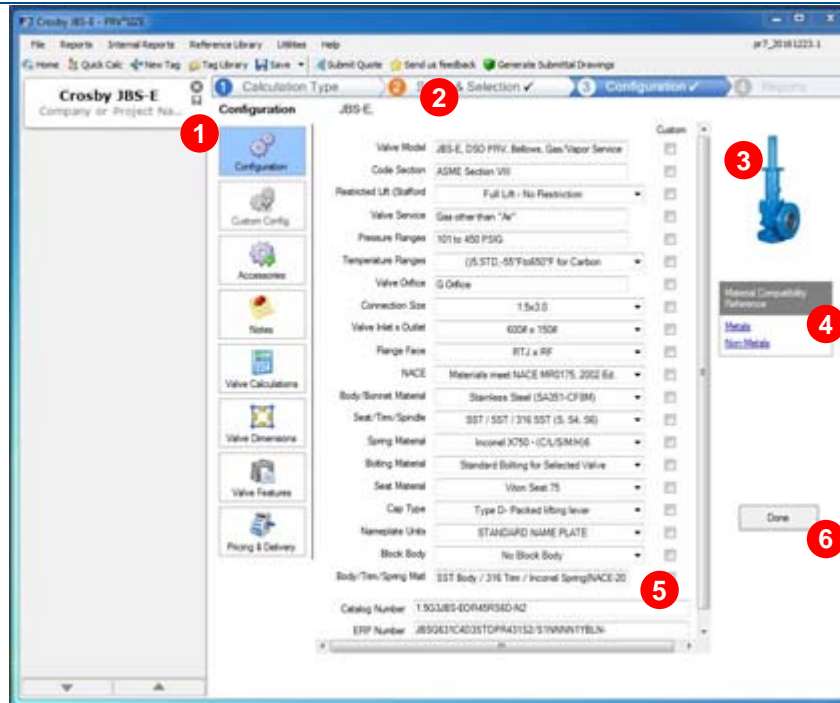
Click to remove	Valve Tag	Model	Percent of Rated Flow (%)	Set Pressure (psig)	Over Pressure % (%)	Over Pressure (psig)	Rated Pressure Flow Capacity (SCFM)
Remove	PRV0001	9390P SC, 2"	59.34	100	16	16.00	2966.767
Remove	PRV0002	9390P SC, 2"	59.34	100	16	16.00	2966.767

- Generic Option:** Allows manual entry/selection of valve data to generate calculation and drawing report for manually entered sizing coefficients, orifice area and other valve data
- Multivalve:** Allows selection of multiple valves to meet required flow rate and green check mark with message 'Flow Rate has been Met' is displayed when sufficient valves have been added to meet required flow rate and 'Configure Selected Valve' gets activated to allow configuration of multiple valves

# STAGE 3: CONFIGURATION

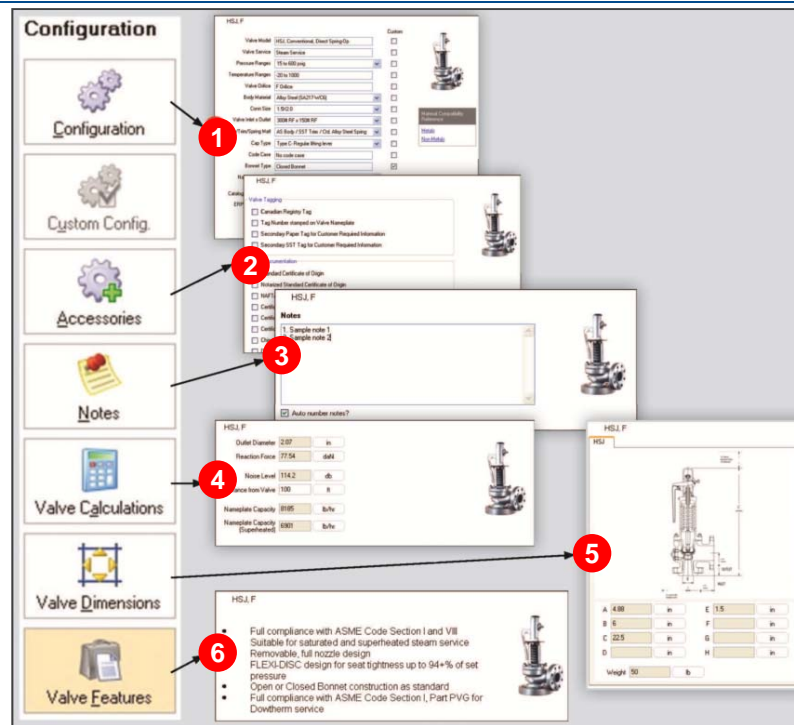
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# CONFIGURATION



1. **Configuration Menu Options:** Click each section to view options
2. **Option Choices:** You can select from valid dropdown options in black and invalid options are grayed out which can be selected for custom non-standard configuration
3. **Custom:** Click 'Custom' checkbox to override any value and put custom value in its place
4. **Materials Compatibility Reference:** PDF for Metals and Non-Metals material compatibility
5. **Catalog Model and ERP Part Number:** Catalog Part Number is based on configuration selections and ERP number is recognized by ERP system at the factory
6. **Completing Configuration:** Click 'Done' to generate report for your valve

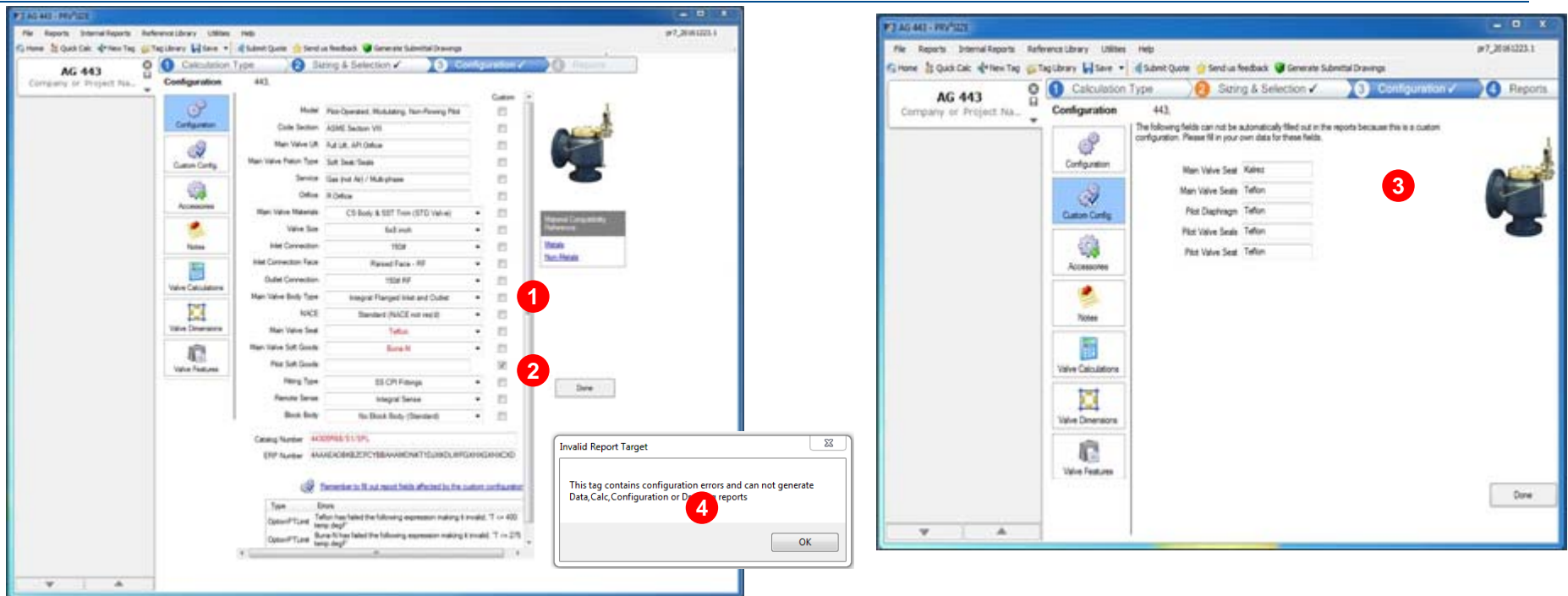
# CONFIGURATION MENU



1. **Configuration:** Displays your detailed configuration menu
2. **Accessories:** Allowable accessories to select for the valve
3. **Notes:** Input free text notes that you want to include on the tag
4. **Valve Calculations:** Reaction force and noise levels provided for the valve
5. **Valve Dimensions:** Valve weight and dimensions are displayed
6. **Valve Features:** Summary feature list and image of selected valve



# CUSTOM CONFIGURATION



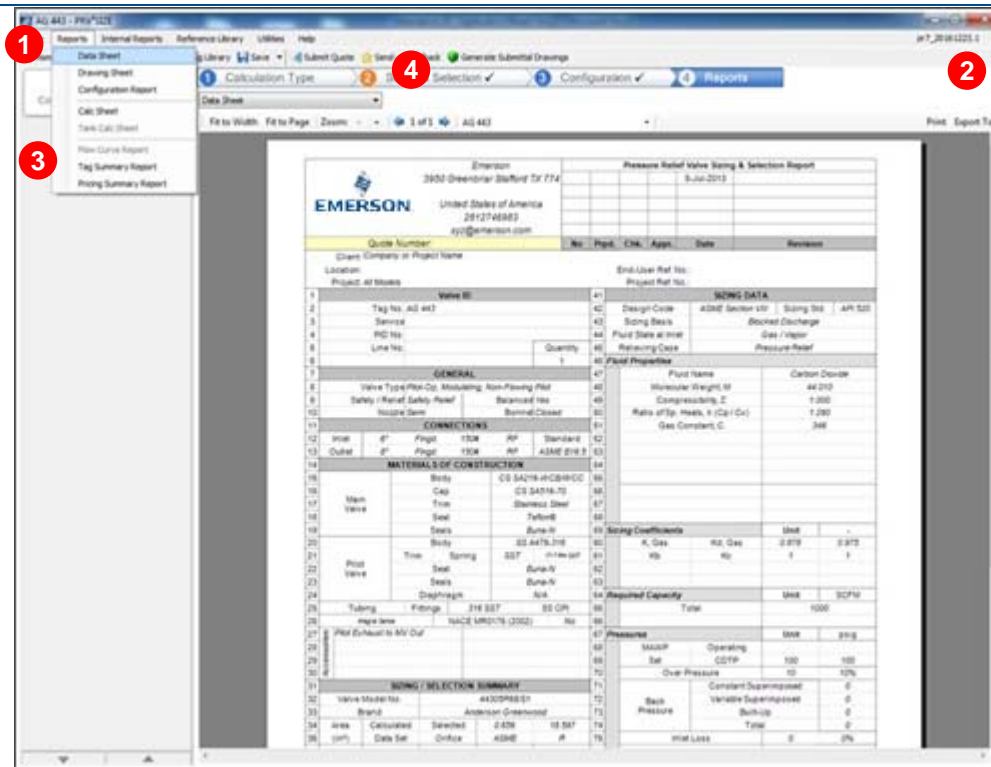
1. **Customized Configuration:** Configuration can be customized when a special configuration option is required or when configuration combination gives an error
2. **Check Box:** Select check box for configuration option that needs to be customized
3. **Custom Option Description:** Click on the activated 'Custom Config' button to enter brief description of customized option that will populate on reports
4. **Configuration Errors:** Errors must be resolved in order to proceed to Stage 4 Reports

# STAGE 4: REPORTS

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# REPORTS



1. **Reports Menu:** Click 'Reports' menu to show all available reports
2. **Excel or PDF Reports:** Save or Print PDF or Excel reports
3. **Tag Summary Report:** Tag Summary Report will combine all individual reports into one Excel or PDF document for a tag
4. **Reports Dropdown List:** Reports can also be accessed by clicking reports in top menu dropdown list

# DATA SHEET AND CALCULATION REPORTS


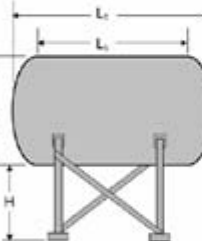
 <b>EMERSON</b> United States of America (817)7463633 usinfo@emerson.com		Emerson 30 Greenbrier (Stafford) TX 77478		8-Jan-2013	
		Project Name: <b>Water Valve Relief Valve Sizing &amp; Selection Report</b>			
Client: Company or Project Name Location: Project: AD Mission		No.   Page   CNA   Appr.   Date		Revision	
<b>Table ID</b> Tag No. 432-440 Service PID No. Line No.		(Snd User Ref. No.) Project Ref. No.		<b>SIZING DATA</b> Design Code: A3382 Section 015    Sizing Size    Aph 132 Sizing Basis    Brinked Discharge Fluid State at Inlet    Gas / Vapor Refueling / Line    Pressure Relief	
<b>GENERAL</b> Valve Type: Flow-Cp. Modulating, Non-Flowing Pilot Safety - Relief    Safety Relief    Estimated Flow Nozzle Size    Nozzle    Orifice    Orifice		Quantity: 1		Fluid Properties Fluid Name    Carbon Dioxide Molecular Weight, W    44.010 Compressibility, Z    1.000 Ratio of Sp. Heats, n (Cp - Cv) (See Constant, C)    340	
<b>CONNECTIO</b> Inlet    4"    Flg.    150#    60    Standard Outlet    4"    Flg.    150#    60    A3382 PHS 1		<b>MATERIALS OF CONSTRUCTION</b> Body    CS 3A19/8CB/8MC/C Cap    CS 3A19/8/C Seat    Teflon Stem    316 Bolt    316-1/4 Nut    316-1/4 Spring    316 Seal    Buna-N O-ring    Buna-N Gaskets    Buna-N		<b>Sizing Coefficients</b> Kc    1.0    Kv    0.675 Kv    1    Kv    1	
<b>Table ID</b> Main Valve Pilot Valve Trim    Spring Flare Valve Seal    Buna-N O-ring    Buna-N Gaskets    Buna-N		Tubing    3/4" 316    32 CFI Inlet Line    NACE MR0175 20002    60		<b>Required Capacity</b> Total    1000    SCFM	
<b>Table ID</b> Pilot Relief Valve 8" 30" Out		Pressure    100    100    100 Set    100    100    100 Operating    100    100    100 COTV    100    100    100 Over Pressure    10    10% Back Pressure    0 Variable Superimposed    0 Back Pressure    0 Built-Up    0 Total Loss    0    0% Atmospheric (Barometric)    14.696 psia		<b>Temperatures</b> Operating    Normal System Relieving    Relieving    100 Design Min    Design Max	
<b>Table ID</b> Value Name    4405090321 Brand    Anderson Greenvalve		Area    Calculated    Selected    0.426    0.567 Aph    132    132    132    132 Flow    Required    SCFM    1000 Flow    Rated    Actual    3000    3000		Estimated Reaction Force    1000    1000 Estimated Noise Level (dB)    102.4    at 500    2000	
<b>Table ID</b> Area    Calculated    Selected    0.426    0.567 Aph    132    132    132    132 Flow    Required    SCFM    1000 Flow    Rated    Actual    3000    3000		Estimated Reaction Force    1000    1000 Estimated Noise Level (dB)    102.4    at 500    2000		Operating    Normal System Relieving    Relieving    100 Design Min    Design Max	
<b>Table ID</b> Area    Calculated    Selected    0.426    0.567 Aph    132    132    132    132 Flow    Required    SCFM    1000 Flow    Rated    Actual    3000    3000		Estimated Reaction Force    1000    1000 Estimated Noise Level (dB)    102.4    at 500    2000		Operating    Normal System Relieving    Relieving    100 Design Min    Design Max	

Printed On: 8-Jan-2013
Project Name: WATER VALVE RELIEF VALVE SIZING & SELECTION REPORT
Page: 1

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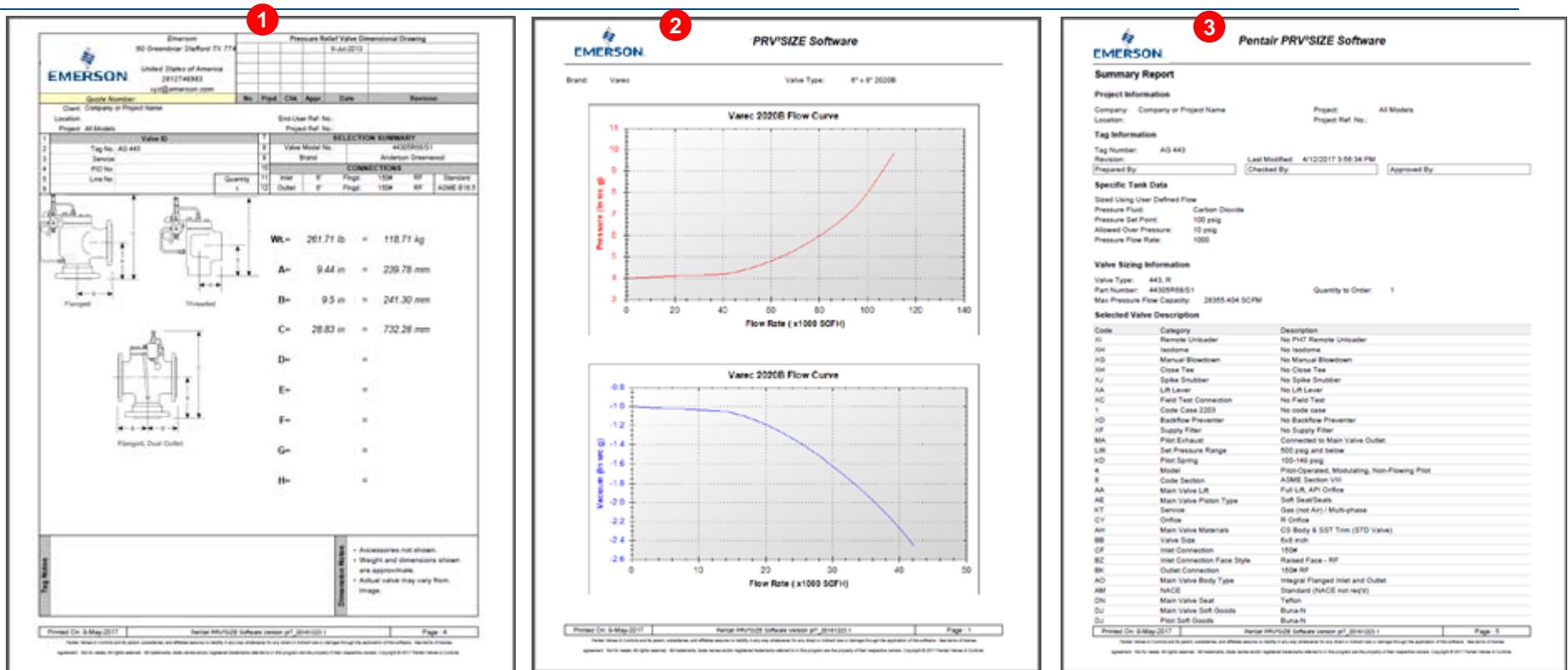
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[illegible]

 <p>Emerson 10 Greenbush Street, TX 774 United States of America 281-274-6992 us1@emerson.com</p>		<p>API 511 Fire Rating Calculation 5-2-2015</p>					
<p>Quote Number: Gross: \$38 Training 2017 Location: PASADENA, TEXAS, U.S.A Project: Fire Rating</p>		No.	Page	Page	Page	Page	Page
<p><b>Valve ID</b></p> <p>Tag No.: 00000001_P0001_CHL1_P001 10001 Service: R410A PG No.: P0008-200-01 P0008 2 OF 4 Line No.: BRN01 CHLLER B-1</p>		<p>End User Ref. No.: Project Ref. No.:</p>		<p><b> sizing DATA</b></p> <p>Design Code: ASME Section VIII   Design Std.: API 510 Sizing Basis: Fire Rating: API 521 Method: Unfired (See Vapour Pressure) Unfired</p>			
<p><b>VESSSEL SCHEMATIC</b></p> 		<p><b>VESSSEL DATA</b></p> <p>Surface Area Determination: Cylindrical Geometry: Cylindrical Orientation: Horizontal End Types: 2:2 Spherical Crown: 0 30 0 in Height: 0 0 Diameter: 0 0 Seam to Seam Length: 1A 200 in End to End Length: Ld 392 in Surface Area: A 345.49 sq ft Fire Rating Factor: R 0.045</p> <p><math>R = 0.1432 \cdot (T_w - T_c)^{0.25} \cdot (C)^{-0.1} \cdot P^{0.5} \cdot 0.0001</math></p> <p>Initial Wall Temperature: Tw 250 W Relieving Temperature: Tr 102.5 W Operating Temperature: To 102.5 W Relieving Pressure: Pr 314.625 psia Operating Pressure: Po 62.1 psig Gas Constant: C 343.8 Vessel Discharge Coefficient: R 0.889</p> <p><math>A = R \cdot F \cdot A_c \cdot (P/P_o)^{0.5}</math></p> <p>Required Office Area: Area 0.002 sq ft Required Capacity: W 20194.517 lb/hr</p>					
<p><b>DETAIL / SELECTED SUMMARY</b></p> <p>Vessel Model No.: JWSL000-02701-01 Brand: Goodrich</p>							
<p>Printed: Tue, 5-2-2015 11:11 Printer: HP/HP/HP Software version: 9.0.2014.0.1</p>		<p>Page: 1</p>					

1. **Datasheet Report:** Datasheet report includes Valve Tag ID, Type, MOC, Connections, Selection Summary, Tag Notes and Valve Dimensions and Weight
2. **Calculation Report:** Calculation report includes Calculation Summary, Notes, Variable Type, Names, Symbols, Input Values/Units, Equation Values/Units and Calculation Formulas
3. **Tank Calculations:** Tank Calculation sheet includes fire sizing calculation and product selection data

# DRAWING, FLOWCURVE, CONFIGURATION REPORT



- Drawing Sheet:** Drawing sheet displays cross sectional drawings with dimensions and weight
- Flow Curves:** Pressure and Vacuum relief valve flow curves can be generated
- Configuration Report:** Configuration report shows specific Tank Data, Valve Sizing Information and Selected Valve Description with ERP Model Number and Category

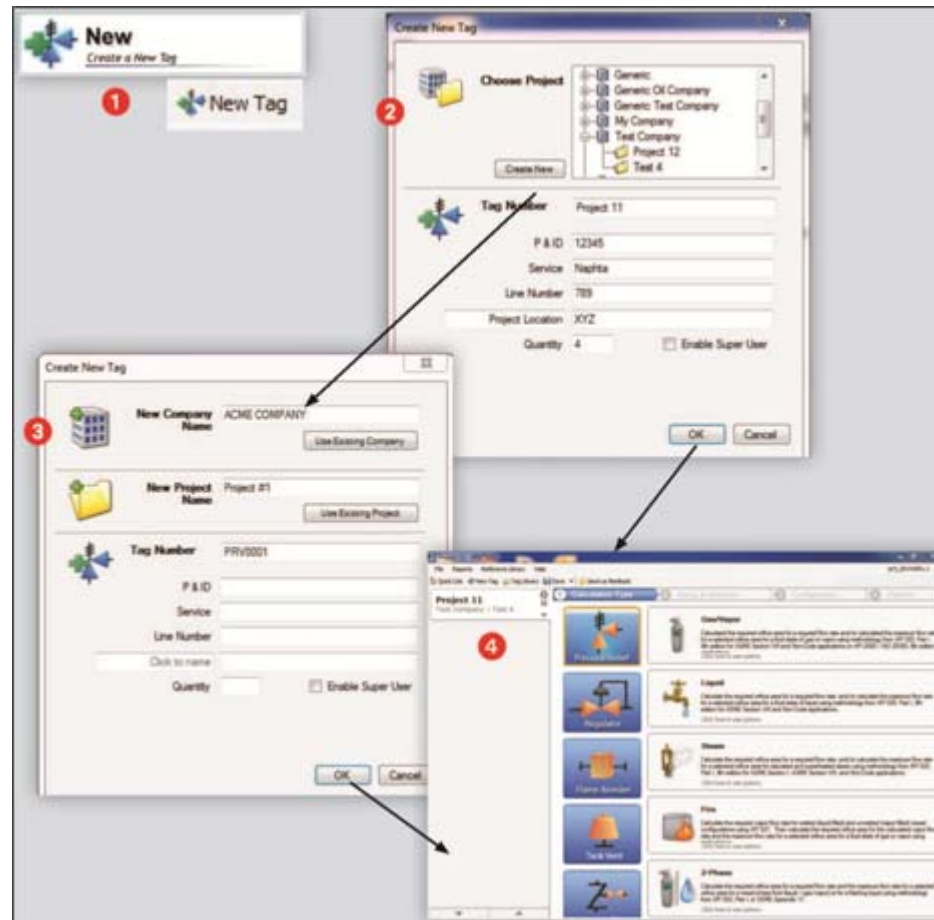
# TAG MANAGEMENT

# SAVE, CREATE, COPY, EXPORT, DELETE OR CLOSE

The screenshot displays the Emerson QuickCalc001 software interface. The main window shows a 'Pressure Relief Valve Sizing & Selection Report' for a project named 'Pender Valves & Controls' located at '10707 Clay Road, Houston TX 77041, USA'. The report includes sections for 'Valve Data', 'General Properties', 'Connections', 'Materials of Construction', and 'Sizing Data'. The 'Sizing Data' section shows a design code of 'ASME Section VIII', a spring set of 'API STD', and a fluid name of 'Water'. The 'Materials of Construction' section lists various components and their materials, such as 'Body / Bonnet' as 'SS 304/316-CPM' and 'Seat' as 'Buna-N (N)'. The 'Sizing Data' section also includes 'Sizing Coefficients' and 'Required Capacity'.

1. **Save Tag:** Save anytime during sizing process
2. **Copy Tag:** Create Copy of Tag anytime during sizing process
3. **Export Tag:** Export Tag to PDF or Excel after reports are generated
4. **Delete Tag:** Delete Tag when required
5. **Close Tag:** Close tag anytime during sizing
6. **Properties:** Update or change Project Tag information

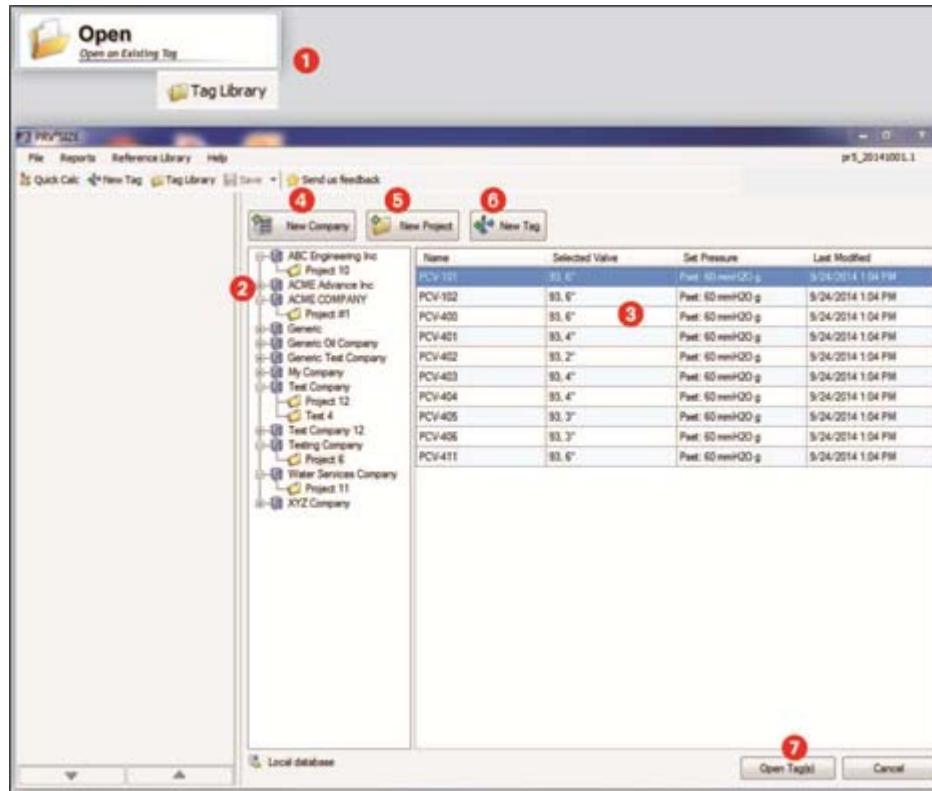
# CREATE A NEW TAG



1. **Tag Library:** Click on either of these icons to launch your tag library
2. **Tag Information:** Associate existing company and project to the new tag (or)
3. **New Tag Information:** Enter new company, project and tag number for new tag
4. **Calculation Type:** Next step will be stage 1 'Calculation Type Selection'

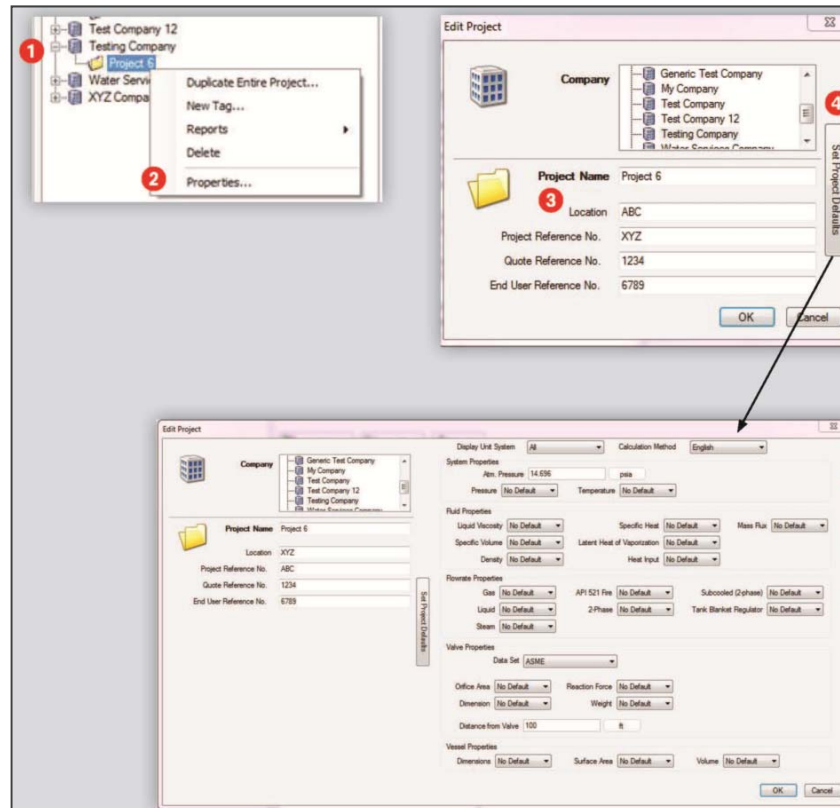


# TAG LIBRARY



1. **Tag Library:** Click on these icons to launch tag library
2. **Library Tree:** Library tree has listing of companies and projects associated with companies
3. **Tag Grid:** Has listing of tags in particular project selected
4. **New Company:** Create a New Company
5. **New Project:** Create a New Project
6. **New Tag:** Create a New Tag
7. **Open Tag(s):** Select tags and click on 'Open Tag(s)' to open one or multiple tags

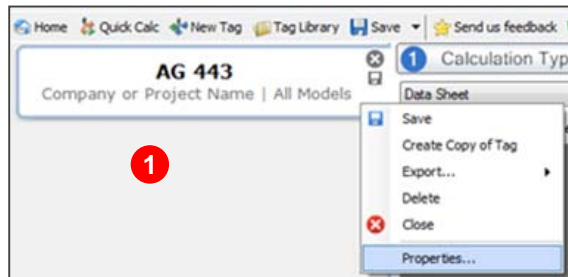
# PROJECT PROPERTIES



1. **Project Properties:** Right click on project to modify its properties
2. **Edit Project:** Select 'Properties' to launch the 'Edit Project' dialog box
3. **Change Properties:** Change listed properties for the project
4. **Set Project Defaults:** Click 'Set Project Defaults' to expand window in order to change Unit defaults, System Properties, Flowrate Properties, Valve Properties and Vessel Properties for any new tag to be created in the project



# TAG PROPERTIES



No.	Prepd.	Chk.	Appr.	Date	Revision
4	XYZ	ABC	RST	8-JUL-2013	Includes new soft goods

Valve ID		Quantity
1	Tag No. AG 443	1
2	Service Crude Oil	
3	PID No. 345LMN	
4	Line No. 123 CR	
5	Additional Line Crude 2	

GENERAL					
Valve Type Pilot-Op. Modulating, Non-Flowing Pilot					
Safety / Relief Safety Relief			Balanced Yes		
Nozzle Semi			Bonnet Closed		

CONNECTIONS					
Inlet	6"	Fgds	150#	RP	Standard
Outlet	8"	Fgds	150#	RP	ASME B16.5

MATERIALS OF CONSTRUCTION		
Main Valve	Body	CS 3A216-WCBWCC
	Cap	CS 3A516-70
	Trim	Stainless Steel
	Seat	Teflon®
Pilot Valve	Seals	Buna-N
	Body	SS A479-316
	Trim Spring	SST 17-7PH SST
	Seat	Buna-N
	Seals	Buna-N
	Diaphragm	N/A
Tubing	Fittings	216 SST SS CR
Image Area	NACE MR0175 (2002) No	

SIZING / SELECTION SUMMARY	
Valve Model No.	44305R65G1

1. **Tag Properties:** Right click on down arrow next to tag name to update its properties
2. **Project Valve ID:** Tag#, P&ID, Service, Line Number, Quantity or additional info can be updated
3. **Tag Revisions:** Information about tag revisions can be updated or modified
4. **Calculation Method :** Metric or English calculation method can be selected
5. **Display Unit System:** Metric, English or All options are available for units to be displayed on reports

# PROJECT / TAG SUMMARY EXPORT

The screenshot shows the software interface with a tree view on the left and a table on the right. A context menu is open over the tree view, showing the 'Reports' option selected. The 'Project Summary Report' table is displayed below the menu.

**Project Summary Report Table:**

Name	Selected Valve	Set Pressure	Last Modified
PCV-101	93, 6"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-102	93, 6"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-400	93, 6"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-401	93, 4"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-402	93, 2"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-403	93, 4"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-404	93, 4"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-405	93, 3"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-406	93, 3"	Pset: 60 mmH2O g	9/24/2014 1:04 PM
PCV-411	93, 6"	Pset: 60 mmH2O g	9/24/2014 1:04 PM

**Excel Project Summary Table:**

Company Name	Project Name	Tag Number	P & ID	Service	Line Number	Quantity	Revision Number	Prepared By	Checked By	Approved By	Calculation Method	Valve Type	Model - Size / Orifice	Catalog Number	Sizing Basis	Fluid State - Pressure	Fluid Name - Pressure	Relieving Temp. - Pressure	Atm. Pressure	Op. Pressures	Set Pressure	Over Pressure %
My Company	ABC Project	PRV0001	xyz	abc	456	100	6	GK	TR	DG	English	Relief Valve	269,	26905-344/S1	Blocked Discharge	Gas	Propane	200 °F	14.696 psia	80 psig	100 psig	10%
My Company	Project XYZ	QuickCalc001	abc	xyz	123	56	4	KK	N5	EF	English	Relief Valve	566,	56605-810/S1	Blocked Discharge	TwoPhase	Propane	200 °F	14.696 psia	55 psig	66 psig	10%
My Company	PROJECT II	RCV-0445	def	hfg	876	75	22	VR	TT	SV	English	Relief Valve	9390P SC, 10"	9390P1055B	Valve Capacity	Gas	Air	20 °C	14.696 psia	60 mbarg	70 mbarg	10%
My Company	PROJECT V	VK-04750	xyz	abc	456	88	5	RD	MR	DD	English	Relief Valve	5247,	5247_N46 /SPL	Control Valve	Steam	Steam	277.213 °C	14.696 psia	49 barg	55 barg	10%

- Project Report:** Right click on project to access 'Reports' option
- Project Summary Report:** Select 'Reports' then select 'Project Summary Export (to Excel)'
- Excel Project Summary:** Excel file that is saved to your hard drive will have tag information arranged by line for use in quotes or tables