

QUG 11 ACE Suite Improvements

Presented by:
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TELEDYNE LECROY TEST SERVICES
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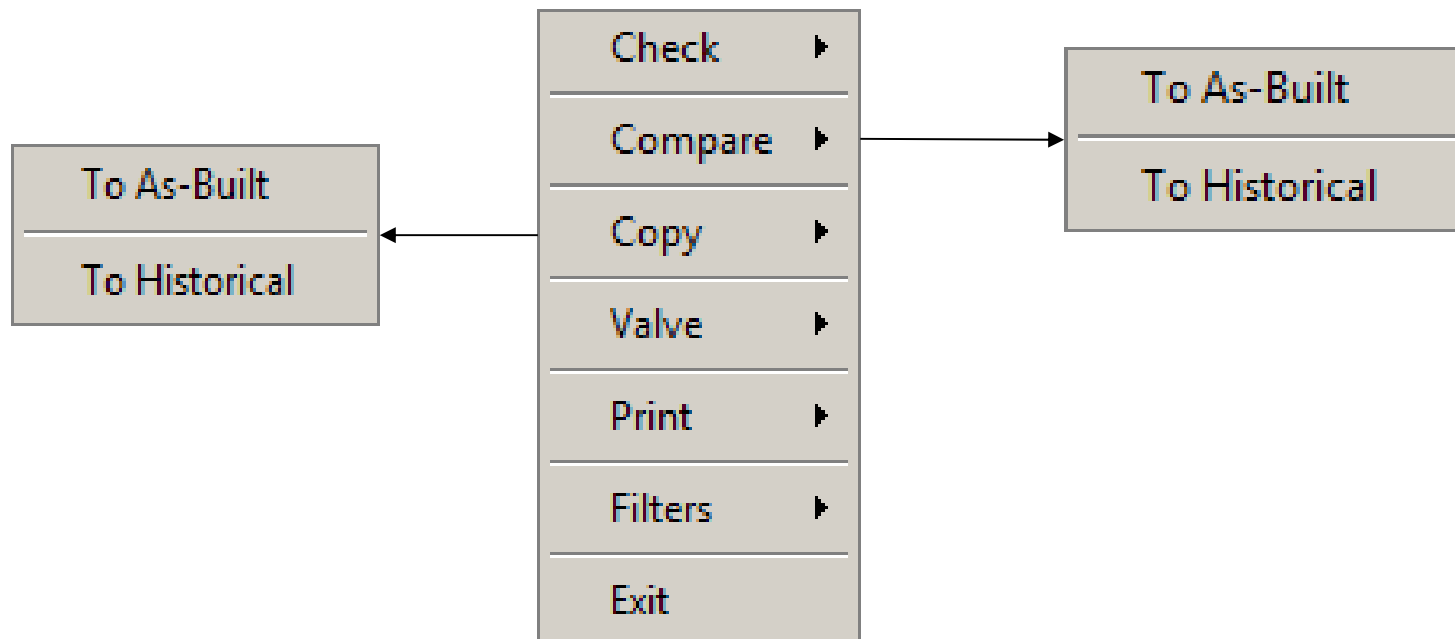
ACE

- ACE Suite 4.1 was programmed using VB6
- VB 6 has been an obsolete product for 10 years
- ACEDP & ACETest have been converted to C#.net
- ACEDP & ACETest versions are now version 5.0
- ACE version is now 4.2
- ACE continues in VB6 until 2018



ACE 4.2 Improvements

- ACE now includes as-built table like Midas
- “What if Calculations can now be utilized without compromising record calculations



ACE 4.2 Improvements

- Compare to As-Built

The screenshot shows the ACE software interface with a window titled "Compare to As-Built for REF ADD-DEL SFG 1". The main window displays a table comparing "As-Built" values with "New Value" and the percentage change. The table includes parameters such as Calculation Revision, Valve Action, Actuator Type, Air Cylinder Type, Actuator Action, Size, Actuator Rated Travel (in), Alternate Packing Load (lbf), and Stuffing Box Diameter (in).

Parameter	As-Built	New Value	%Change
Calculation Revision	27	27-1	N/A
Valve Action	Push Down to Open	Push Down to Close	N/A
Actuator Type	Diaphragm	Air Cylinder	N/A
Air Cylinder Type	N/A	Double Ended- Spring Assisted	N/A
Actuator Action	Reverse	Direct	N/A
Size	25.00	27.00	8.00
Actuator Rated Travel (in)	0.000	27.000	0.00
Alternate Packing Load (lbf)	21.0	27.0	28.57
Stuffing Box Diameter (in)		0.000	N/A

ACE 4.2 Improvements

- Compare to Historical

The screenshot shows the 'ACE Calculations for User Defined SQL' application window. The main window title is 'ACE Calculations for User Defined SQL'. Below the title bar is a menu bar with 'File', 'Edits', 'Tables', 'References', 'Tools', and 'Help'. The main area contains a dropdown menu set to 'ZZ Man Inpt QT SFG 2', a text field with 'Globe - Balanced - Flow Under - Down to Close', and a green 'Check' button. Below this is a red banner that says 'Valve Filter is Active' and another text field with 'Diaphragm - Direct Acting'. A secondary window titled 'Calculation History for ZZ Man Inpt QT SFG 2' is open, showing a table with the following data:

Rev	Prepared By	Prep Date	Reviewed By	Review Date
2	Steve Gallogly	3/6/2017 3:08:57 PM	Eric Solla	3/6/2017 4:27:10 PM
3	Eric Sollax	3/6/2017 5:01:12 PM	Steve Gallogly	3/7/2017 1:22:07 PM
6	Steve Gallogly	3/7/2017 2:32:00 PM	Eric Solla	3/7/2017 3:39:10 PM
7	Eric Solla	3/7/2017 3:40:30 PM	Steve Gallogly	3/8/2017 7:48:59 AM
10	Steve Gallogly	3/8/2017 7:51:11 AM	Eric Solla	3/8/2017 10:31:05 PM

ACE 4.2

Ace 4.2 Improvements

- The software now has the ability to link multiple references to any input

Line Pressure Downstream (psig)	(C)	0.00	N/A
Line Pressure Downstream (psig)	(O)	0.00	555
Category		14	549, 547,
Air System Name		Station Instrument Air	N-3, 2, 3
Stem Material		A182 Type F6	N/A

Select Reference [X]

Parameter	Dir	Value
Category		14

Ref	Document #	Rev #	Date	Title
549	Category Change	*	3/7/2017	Change Category Number
547	Category Revision	*	2/25/2017	Category REvision
N-2	Note			

ACE Calculations for User Defined SQL

File Edits Tables References Tools Help

ZZ Man Inpt QT SFG 2 | **Globe - Balanced - Flow Under - Down to Close**

Valve Filter is Active | **Air Cylinder-Double Acting-Double Ended-Spring Assisted-Direct Acting**

Packing Accessories Adjustment Factors Output
 Configuration Valve Actuator

Parameter	Dir	Value	Ref
Calculation Number		Unknown	N/A
Calculation Revision		21	2, 11, 12,
System		N/A	N/A
Name		sfg	N-28
Fail Position		N/A	N/A
Media		N/A	N/A
Flow Diagram / P&ID		N/A	N/A
Max. Fluid Temperature (Deg F)		0	N/A
Line Pressure Upstream (psig)	(C)	21.00	29, N-3
Line Pressure Upstream (psig)	(O)	21.00	N/A
Line Pressure Downstream (psig)	(C)	0.00	N/A
Line Pressure Downstream (psig)	(O)	200.00	562

C: Air St Yc Pc

Select Reference [X]

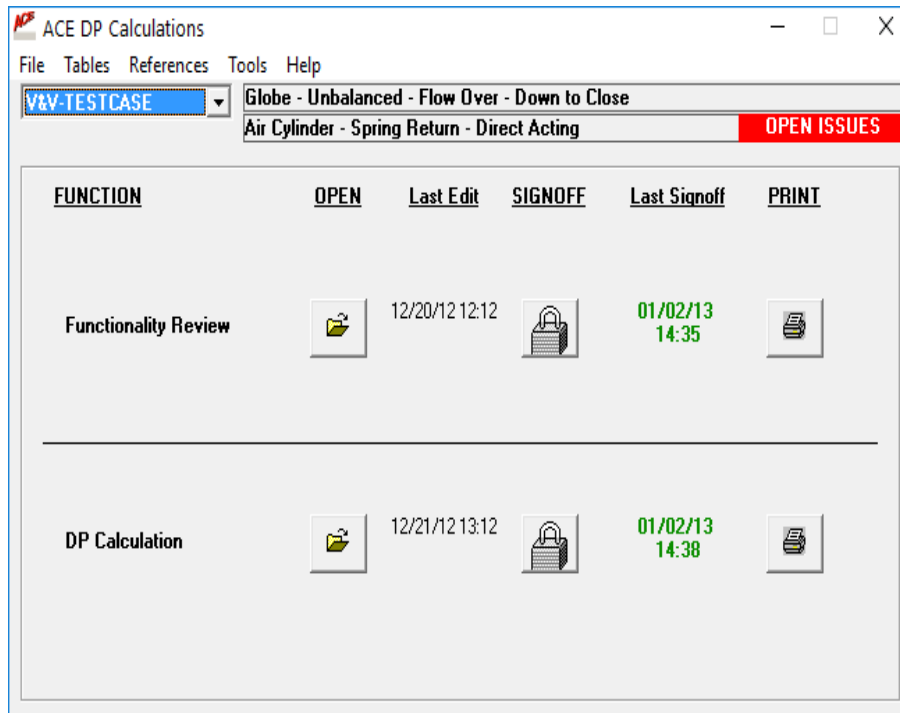
Parameter	Dir	Value
Line Pressure Upstream (psig)	(C)	21

Ref	Document #	Rev #	Date	Title
29	ENG-ME-124	0	8/20/1998	KIELEY & MUELLER INC - Vendor Supplied Data
N-3	Note			

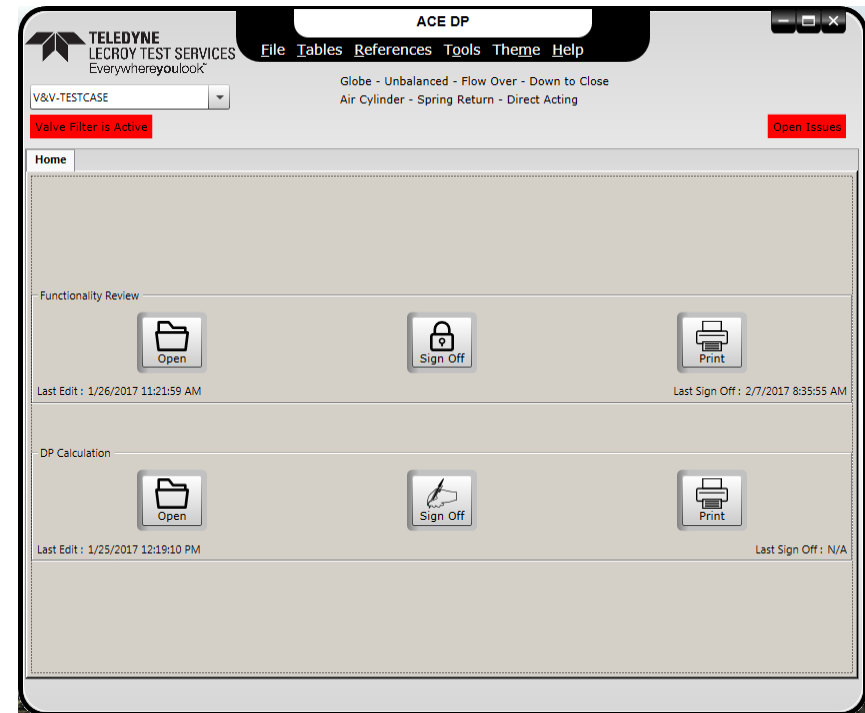
ACEDP & ACETest 5.0

ACEDP 5.0

- First C#.net version
- Different appearance than the previous versions
- Same functionality as previously



ACEDP 4.1

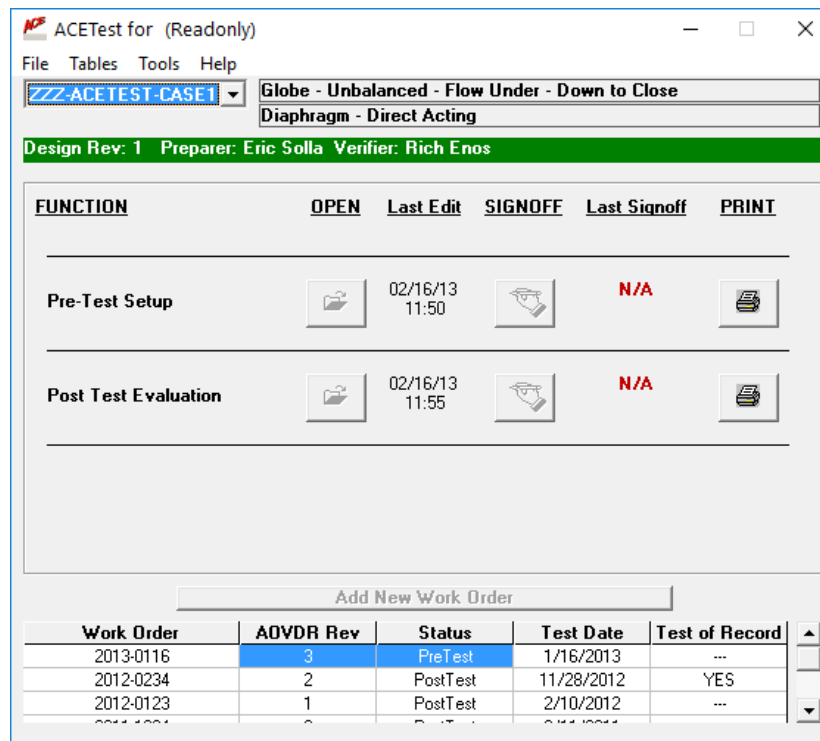


ACEDP 5.0

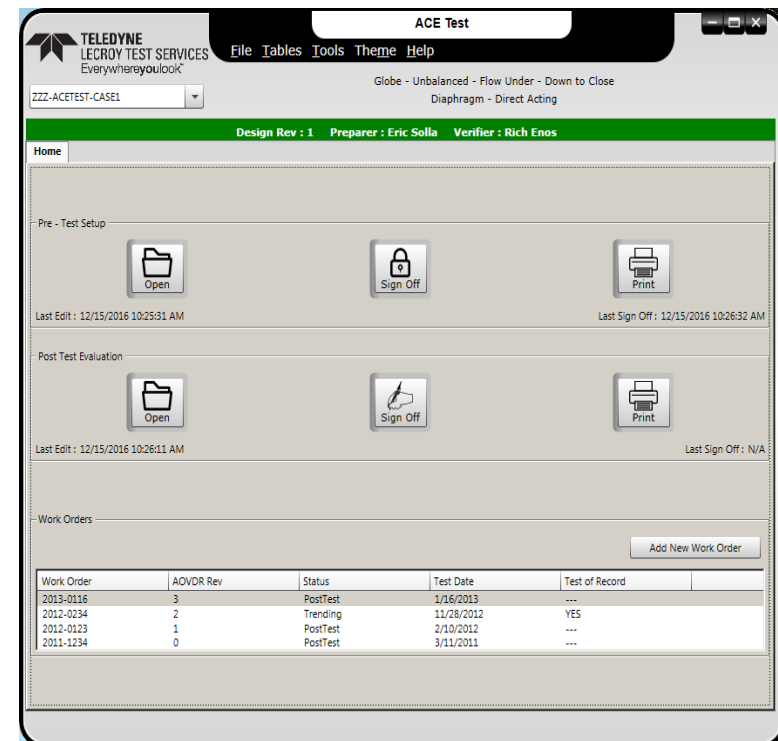
ACEDP & ACETest 5.0

ACETest 5.0

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ACETest 4.1

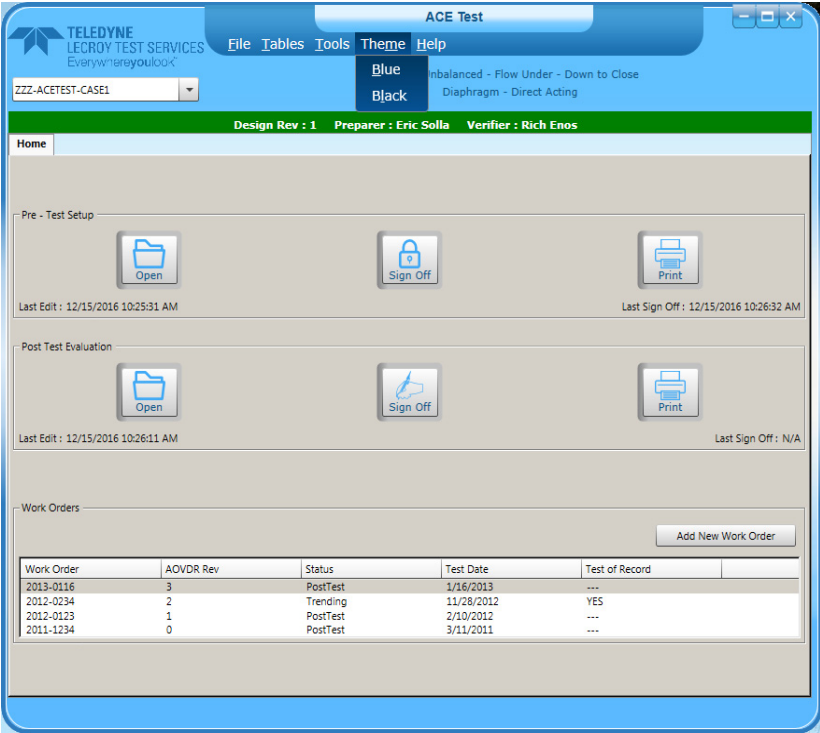
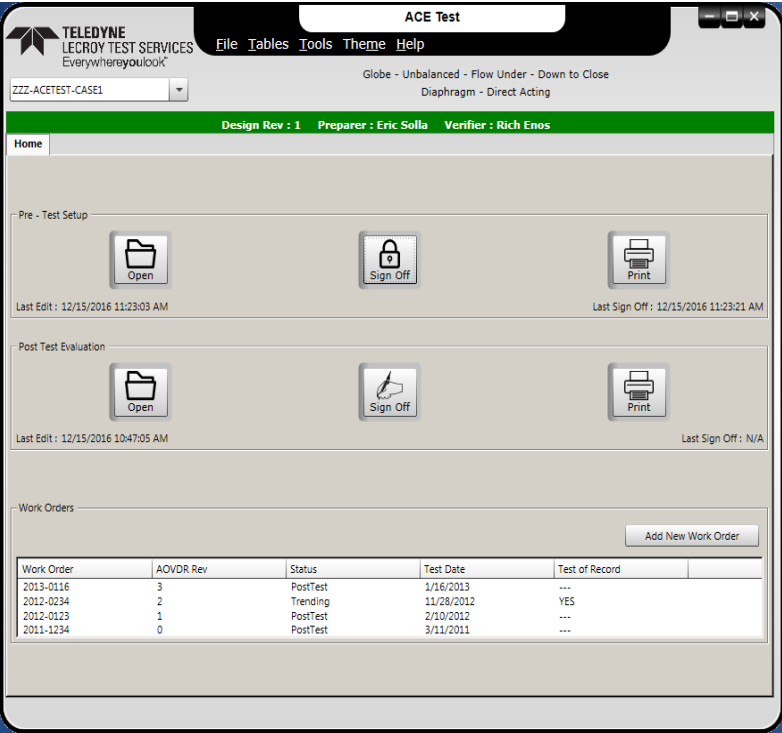


ACETest 5.0

ACEDP & ACETest 5.0

ACEDP & ACETest Theme

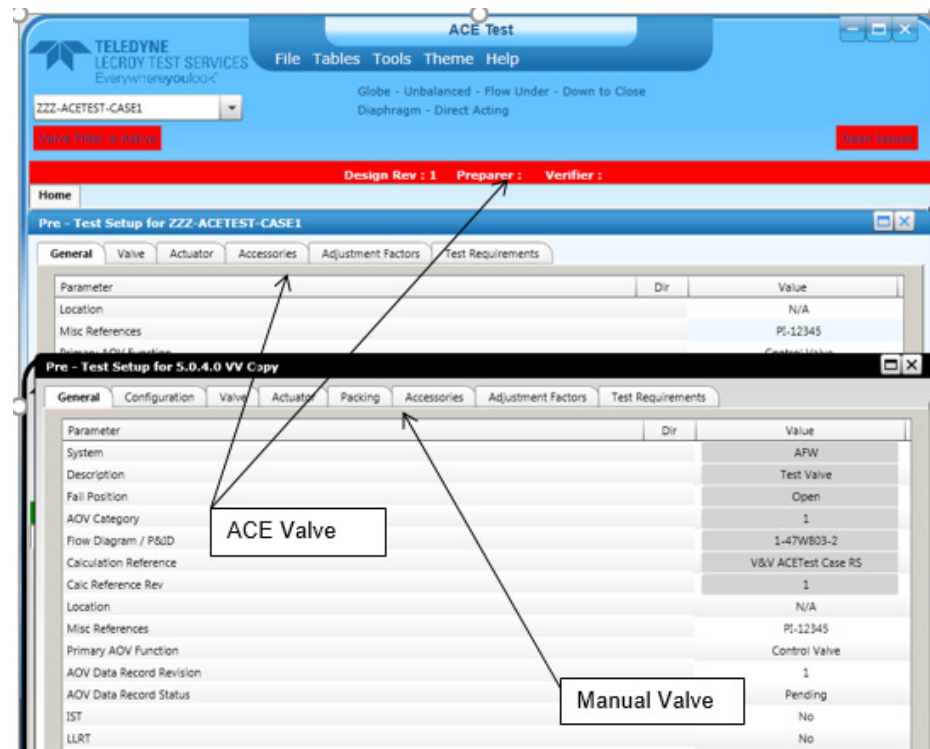
- The Theme menu allows the user to select a different background color for the C#.net version (blue or black)



ACE Suite User Manuals

- The user manual for all 3 programs have been improved
- More detail and better screen shots

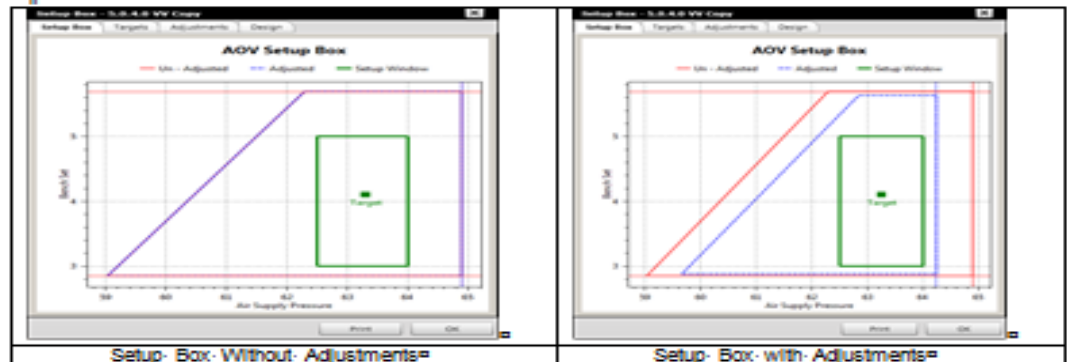
ACETest 5.0 User Manual



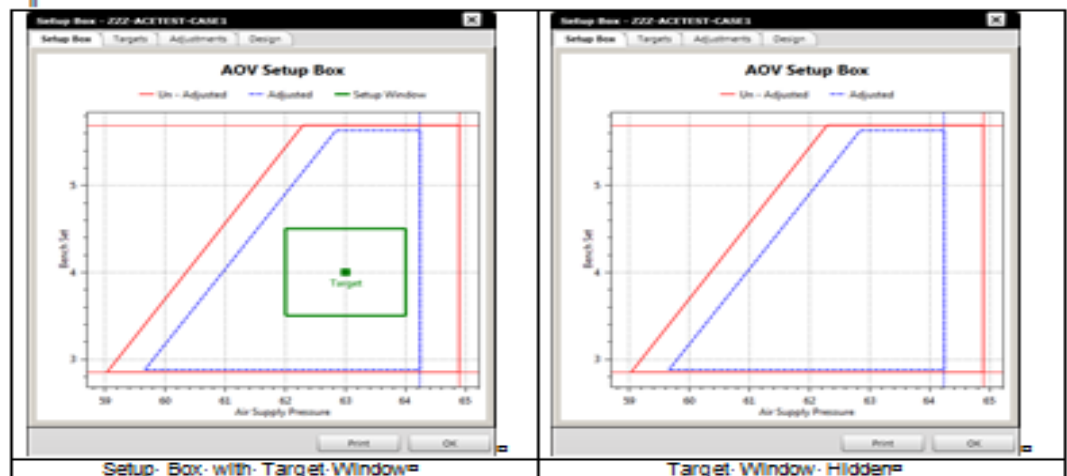
ACE, ACEDP & ACETest User Manuals

The User Manuals have been improved with more detail and better screen shots

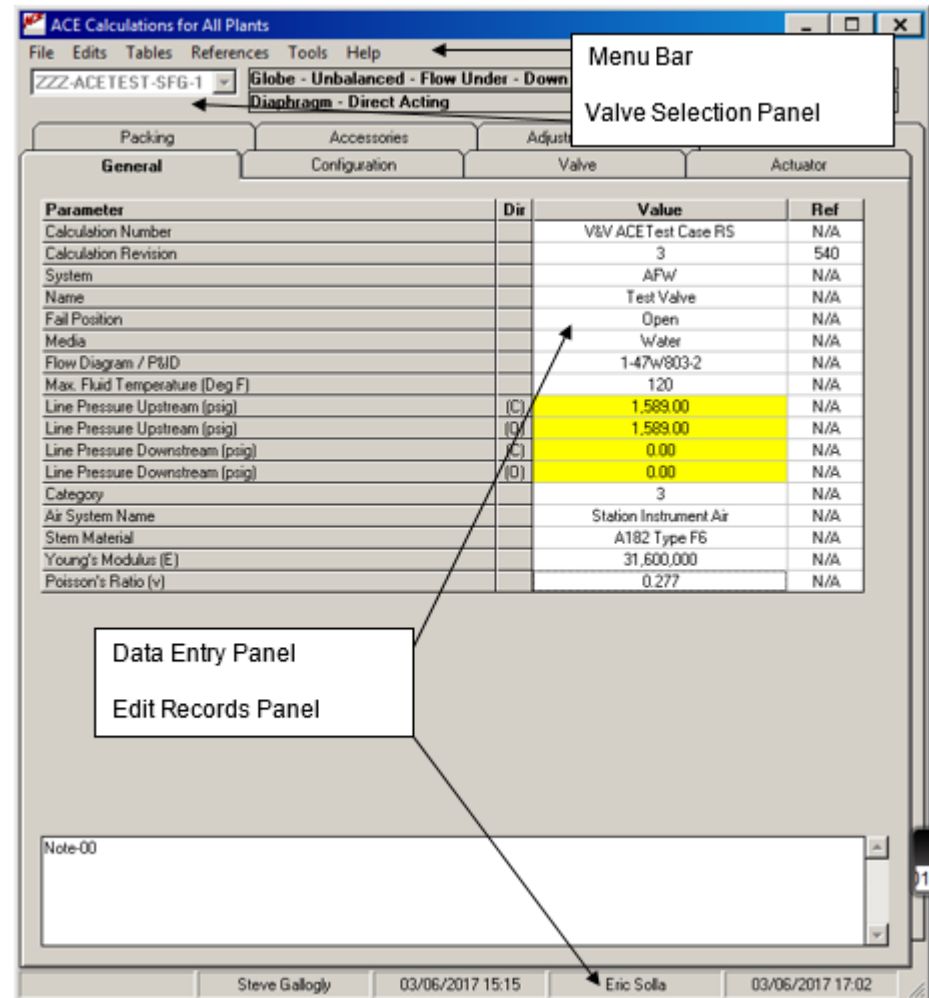
With the equipment errors set to zero the design setup box is the same as the adjusted setup box.



Selecting "Hide Target window" will suppress the Green Target Box from the Setup Box.



ACE 4.2 User Manual



ACE Future Enhancements - 2018



- Incorporate EPRI Side Loading into ACE
- Upgrade ACE Programming language to C#.net
- Add to ACE Fisher Actuator and Valve Tables as pull-downs
- Add to ACE various other Vendor Actuator Tables and Valve Data as pull-downs



ACE Future Enhancements Appendix IV - 2018



- Add Appendix IV Report to ACETest for “AOV Functional Margin”
- Appendix IV Report to trend anomalies
- Risk-informed testing and margins (do we need to add PVT schedule??)
- Trending module improvements
- ACEDP & ACETest working with users on feedback (we need a Champion)???

Any Questions?

THANK YOU



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