2465 Autofloat controller, Status Window information in WinPrompt (also applies to 2456 PG Monitor)

FLUKE
Calibration

This procedure is intended for authorized personnel trained on the use of 2465 Piston Gauge with Autofloat Controller and WinPrompt software
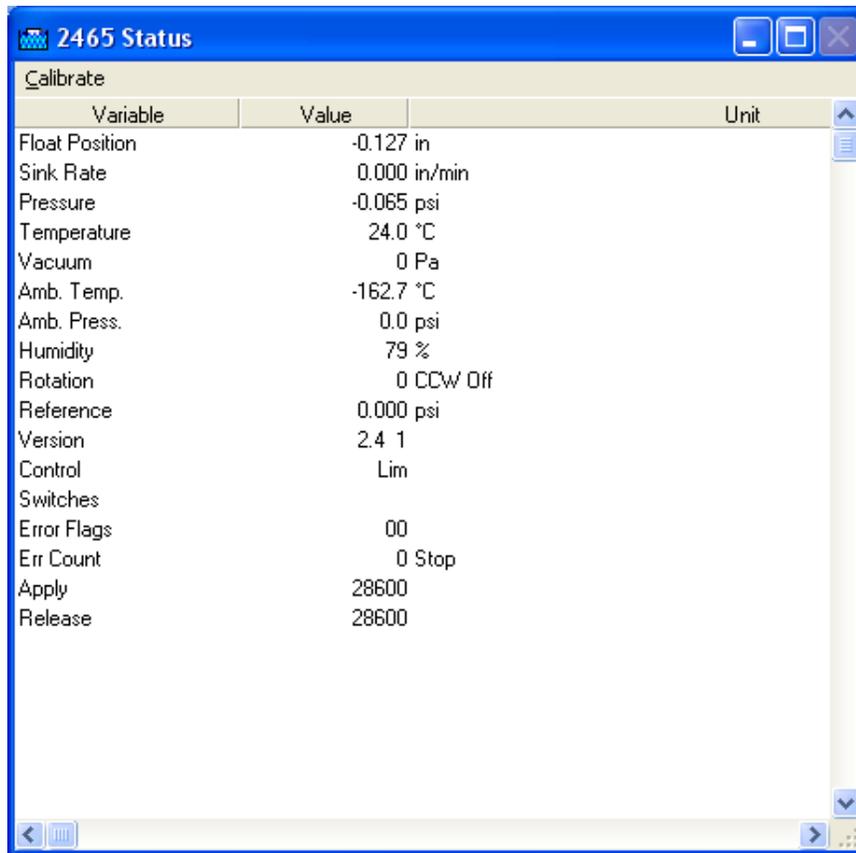
Purpose

This document describes the information that is available from the 2465Autofloat Controller's Status window in WinPrompt (or COMPASS for Pressure)

Notes

This document also applies to the 2456 Piston Gauge Monitor with the exception of Control Coefficients that the PG Monitor does not have.

Instructions

2465 Autofloat Controller Status Window, in WinPrompt or COMPASS for Pressure

2465 Status		
Calibrate		
Variable	**Value**	**Unit**
Float Position	-0.127	in
Sink Rate	0.000	in/min
Pressure	-0.065	psi
Temperature	24.0	°C
Vacuum	0	Pa
Amb. Temp.	-162.7	°C
Amb. Press.	0.0	psi
Humidity	79	%
Rotation	0	CCW Off
Reference	0.000	psi
Version	2.4	1
Control	Lim	
Switches		
Error Flags	00	
Err Count	0	Stop
Apply	28600	
Release	28600	

Double-click the value in the "Values" column to access that Variable's calibration coefficients window.

Float Position Indicator (FPI) calibration coefficients

Double-click on "Float Position" to access this window

Press the [5 Point Calibrate] button and use the rings included with the Autofloat controller. New coefficients will be calculated.

Float Position

Current Value

| Value | -1.265e-01 | in |
| Raw | 7248 | Counts |

Calibration Constants

C0	-6453.980000
C1	178347.000000
C2	-906022.000000
C3	4961230.000000

Zero

5 Point Calibrate

OK   Cancel   Help

Pressure control sensor calibration coefficients

Double-click on "Pressure" to access this window

Press the [5 Point Calibrate] button and calibrate the control sensor by floating the prompted pressures on the 2465 Piston Gauge. New coefficients will be calculated. Details in the WinPrompt manual. New coefficients will be calculated. Details in the WinPrompt manual and other Knowledge Base article.

Pressure

Current Value

Value	-5.525e-02	psi
Raw	524658	Counts

Calibration Constants

C0	-6.341260
C1	3374.610000

Zero

2 Point Calibrate

OK   Cancel   Help
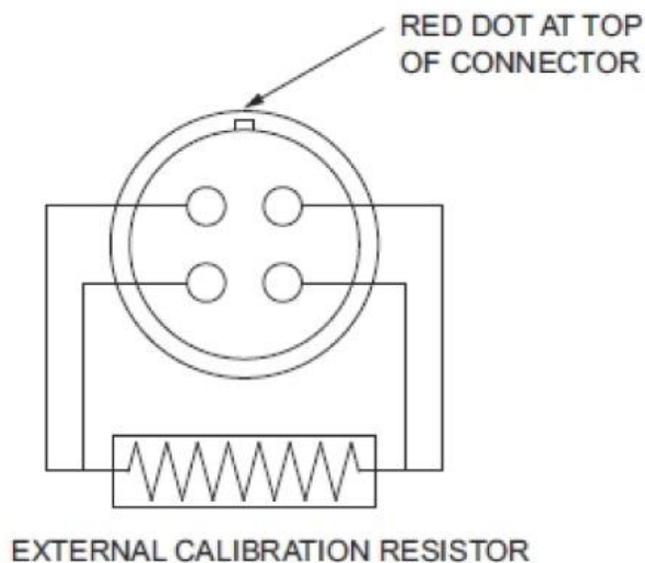
Temperature sensor (RTD) calibration coefficients

Double-click on "Temperature" to access this window

C0 and C1 calibration coefficients are for the resistance calibration of the resistance measurement circuit on the Autofloat controller (the RTD plugs into it), and are from the Autofloat controller's calibration report. Or you can calibrate this circuit yourself by clicking the [2 Point Calibrate] button and applying the prompted resistance values to the RTD connection on the back panel.

Rtp and A10 values are specific to a RTD and are on the RTD's calibration report.

Temperature

Current Value

Value	2.397e+01	°C
Raw	35685	Counts

Calibration Constants

C0	90.506500
C1	13.834400
Rtp	99.987967
A10	-0.018289

[Zero]

[2 Point Calibrate]

[OK]   [Cancel]   [Help]
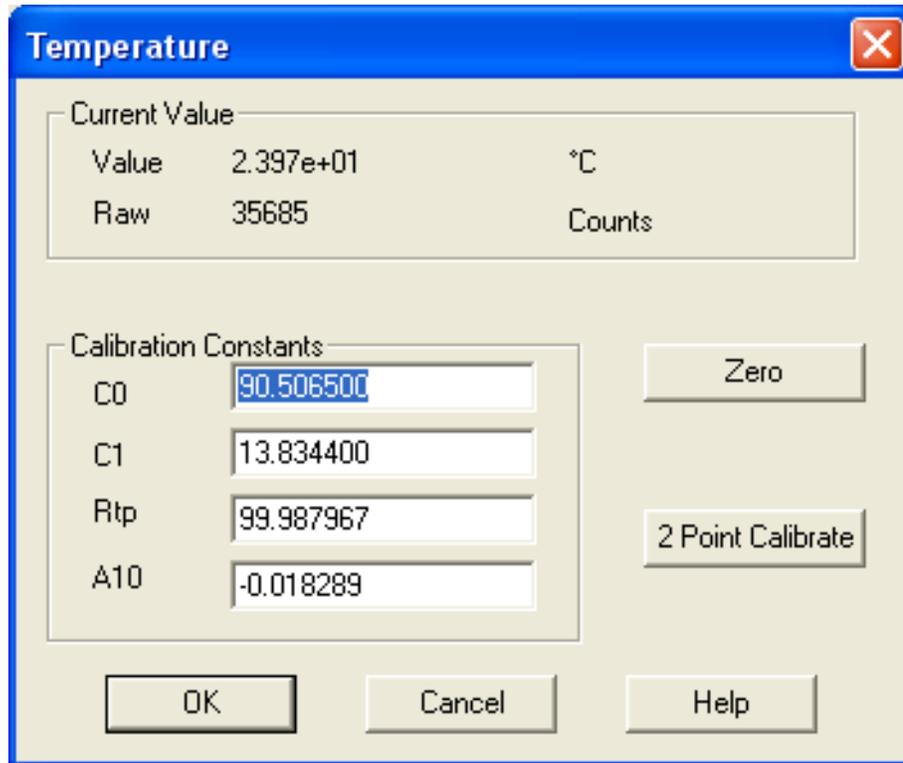
REAR PANEL VIEW OF PRT CONNECTOR

RED DOT AT TOP OF CONNECTOR

EXTERNAL CALIBRATION RESISTOR

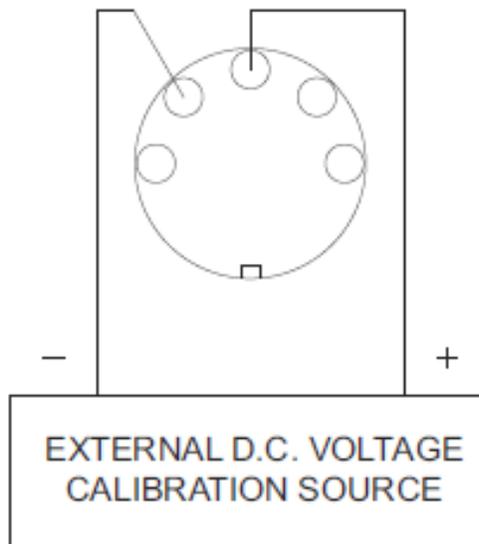## Vacuum sensor calibration coefficients

Double-click on "Vacuum" to access this window

C0 and C1 calibration coefficients are for the voltage calibration of the vacuum measurement circuit on the Autofloat controller, and are from the Autofloat controller's calibration report. Or you can calibrate this circuit yourself by clicking the [2 Point Calibrate] button and applying the prompted voltage values to the vacuum gauge connection on the back panel.

The calibration of the vacuum sensor itself is integral to the sensor and does not need to be entered into WinPrompt.
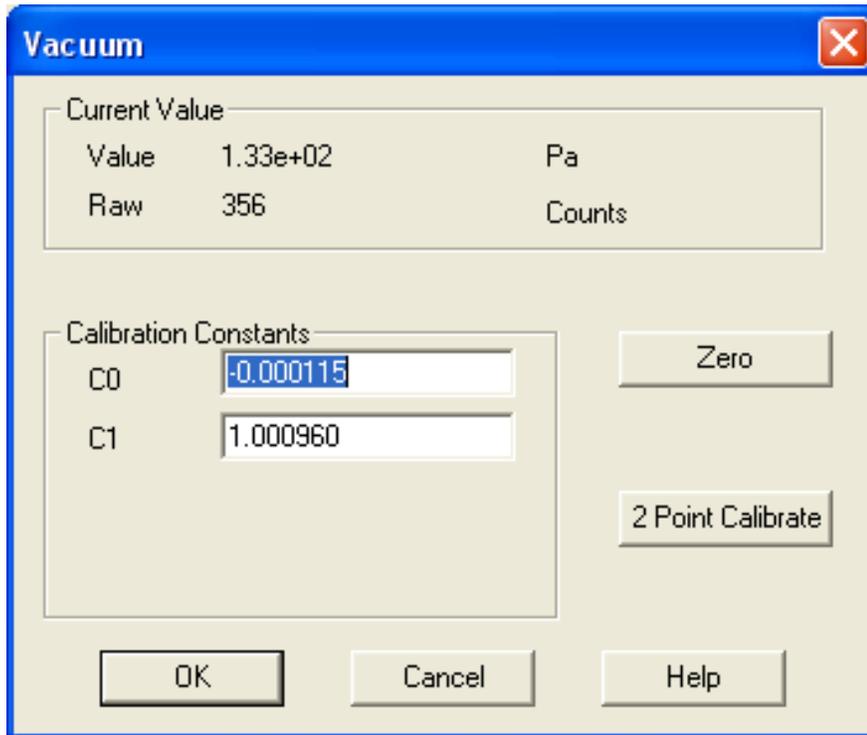
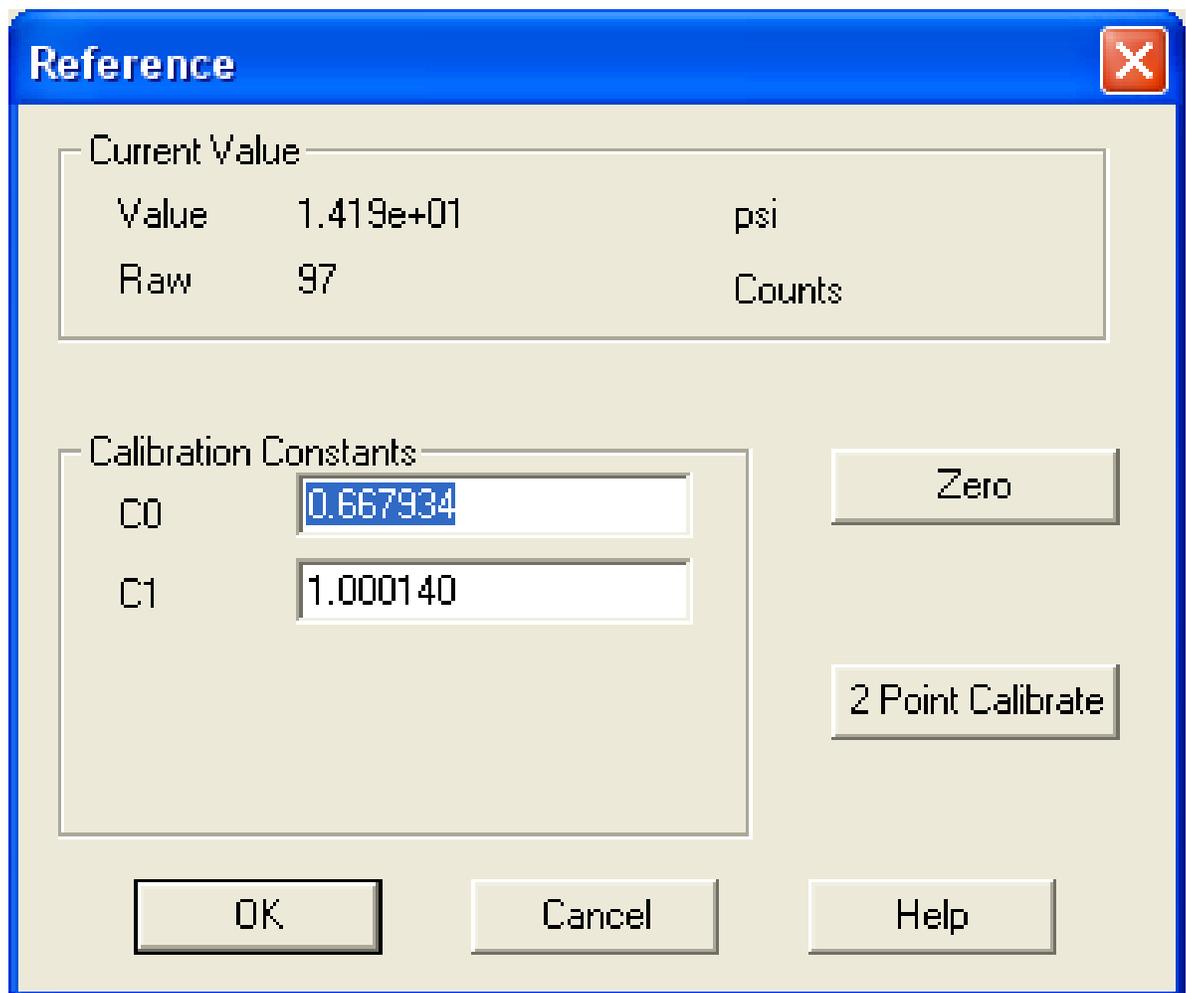REAR PANEL VIEW OF VACUUM CONNECTOR

Reference sensor (barometer) calibration coefficients

Double-click on "Reference" to access this window

C0 and C1 are calibration coefficients (offset and slope) for the absolute reference sensor.

Press the [2 Point Calibrate] button and calibrate the barometer by floating the prompted pressures on the 2465 Piston Gauge. New coefficients will be calculated. Details in the WinPrompt manual.
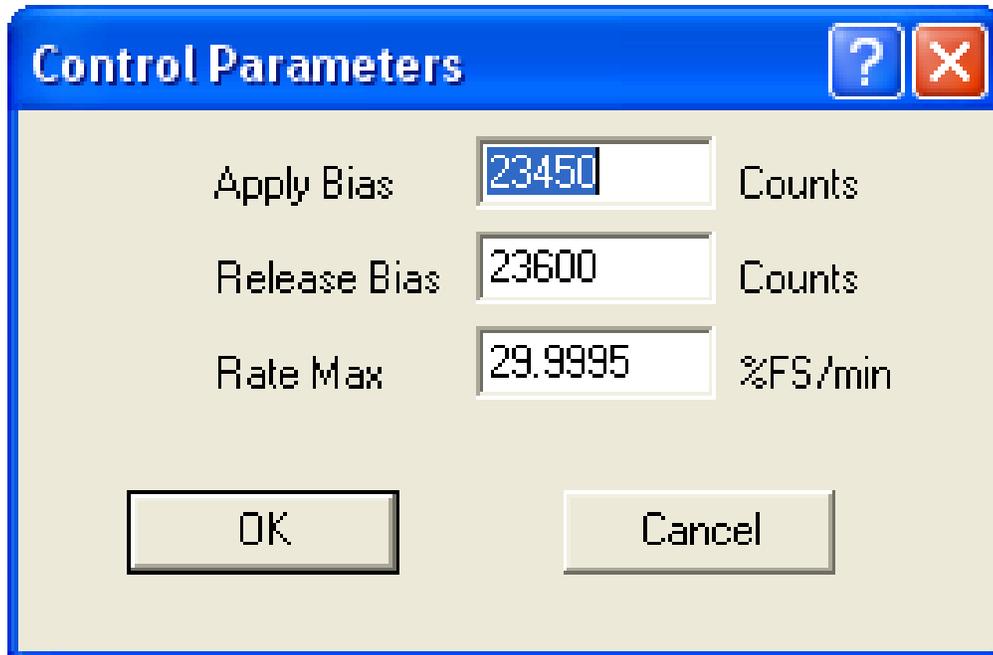
Control coefficients

Double-click on "Control" to access this window

Apply and Release values are typically completely shut at 28600, and the valves open as the applied values are lower than 28600. Typical values are about 24000.

Rate Max typical value is 5.0167%. Autofloat controller is 1000 psi (70 bar) so rate max is typically 50 psi/min (3.5 bar/min) or about 0.8 psi/sec (50 mbar/sec). This can be slowed down if necessary. Typical range is 4% to 6%. High pressure pistons need to be floated slowly, lower pressure pistons can be floated faster.

If you have only 1 or 2 pistons you can optimized the control for those but if you have 3 or more the settings are typically best left at the factory settings.

Control Parameters		
Apply Bias	23450	Counts
Release Bias	23600	Counts
Rate Max	29.9995	%FS/min
OK		Cancel

End of Procedure

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