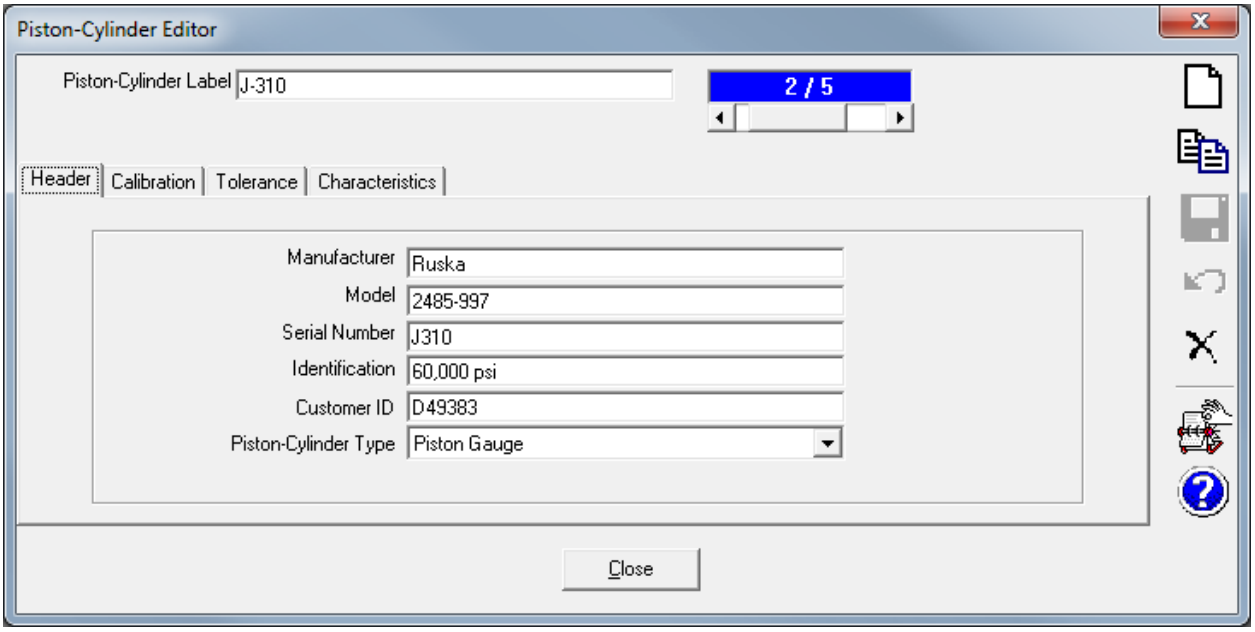
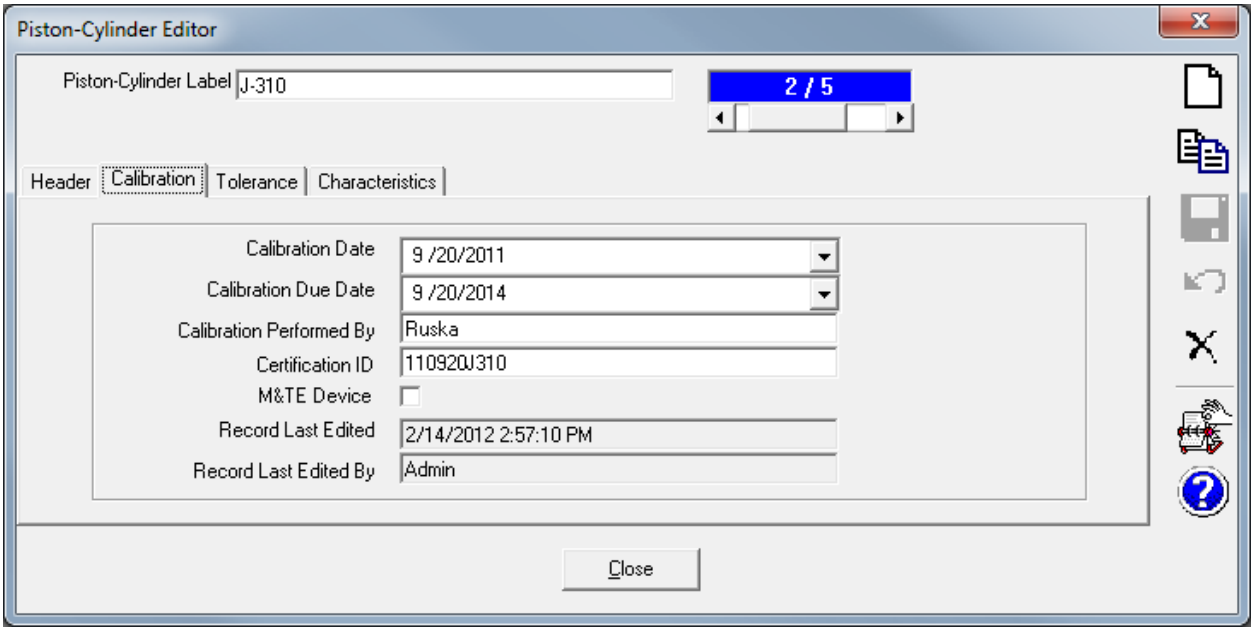
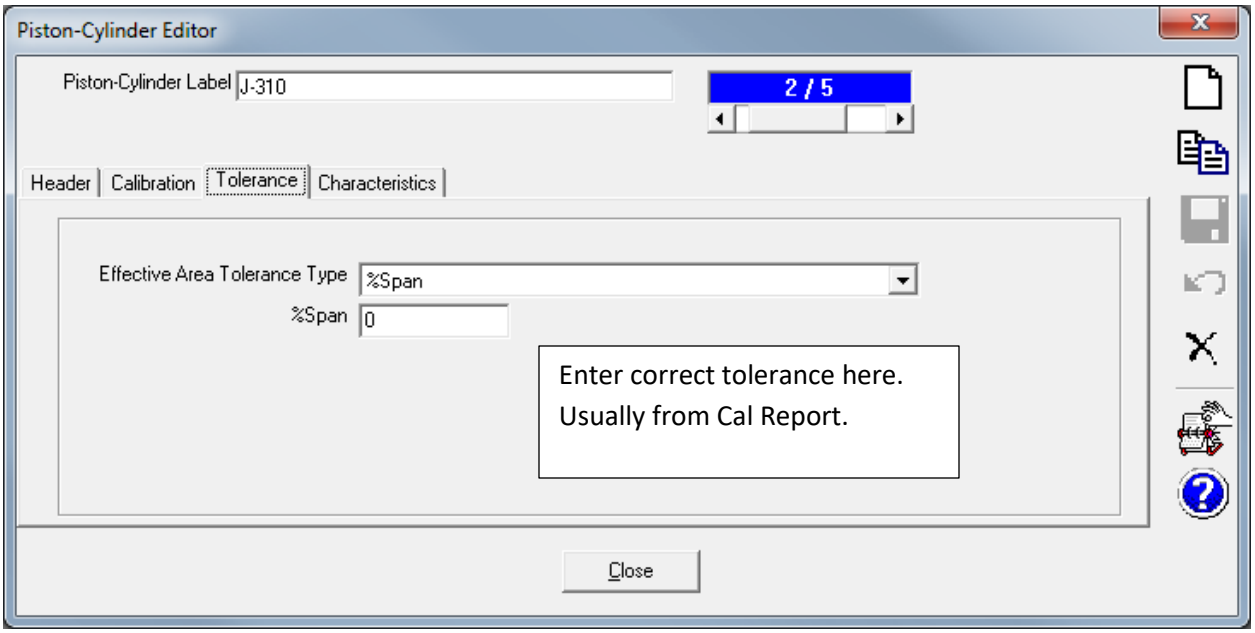
2485 PG Setup in COMPASS for Pressure

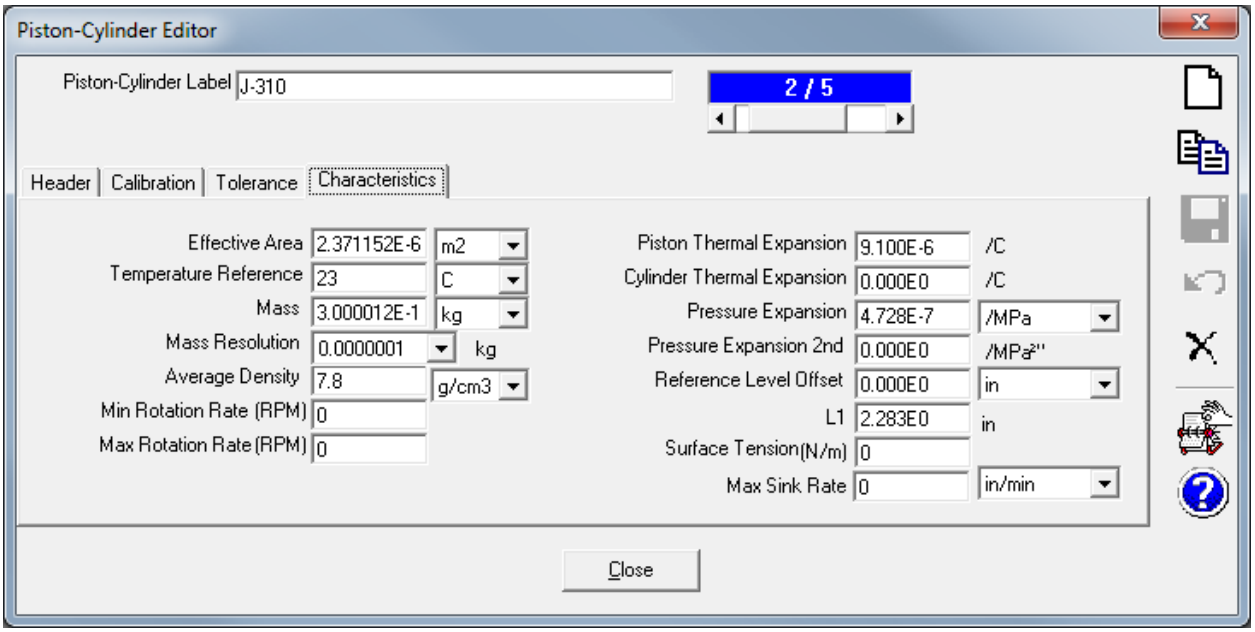
Manual operation (no piston gauge monitor)

1. First setup the Piston-Cylinder as a "Piston Gauge" type. This one goes to 60000 psi

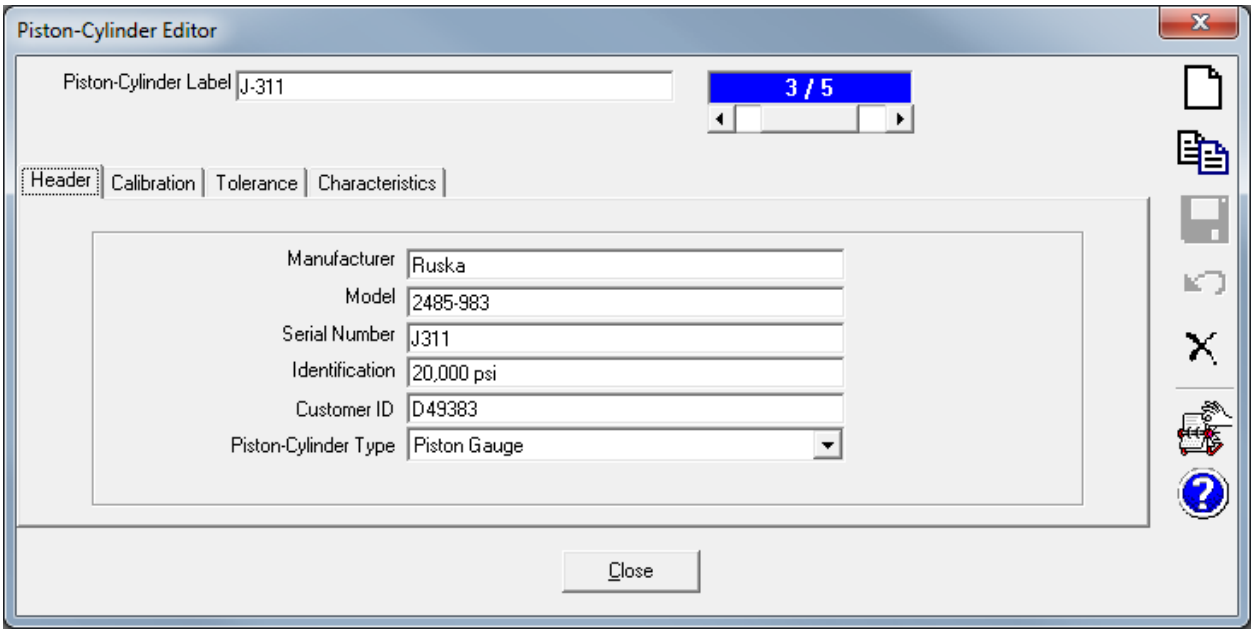


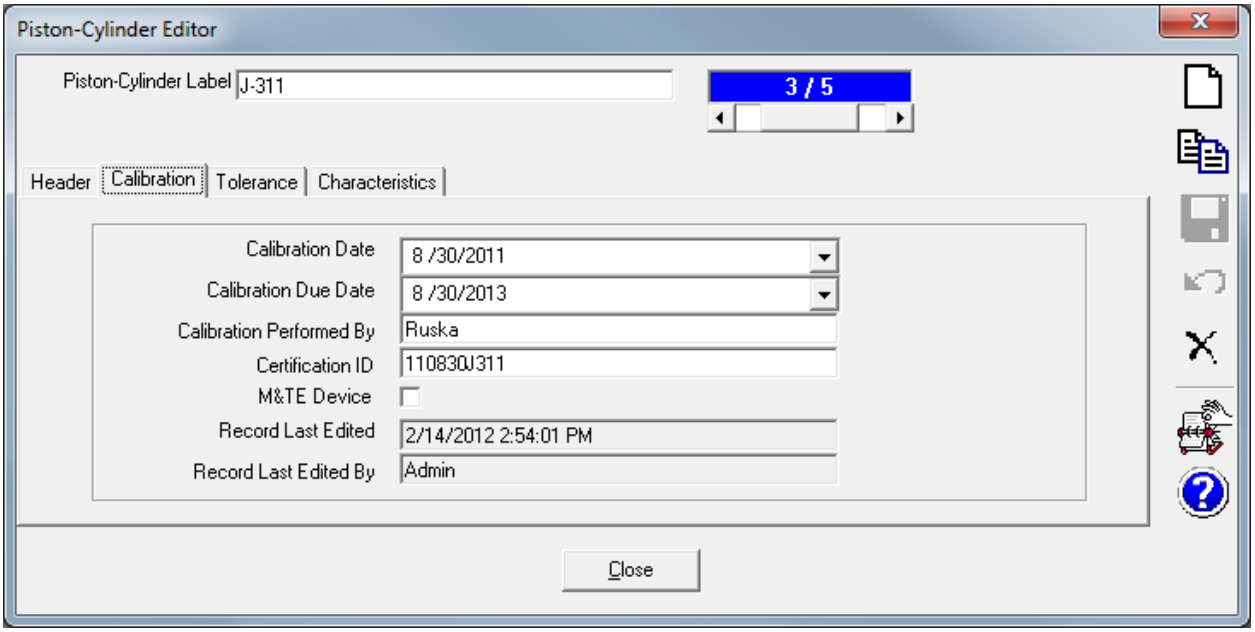


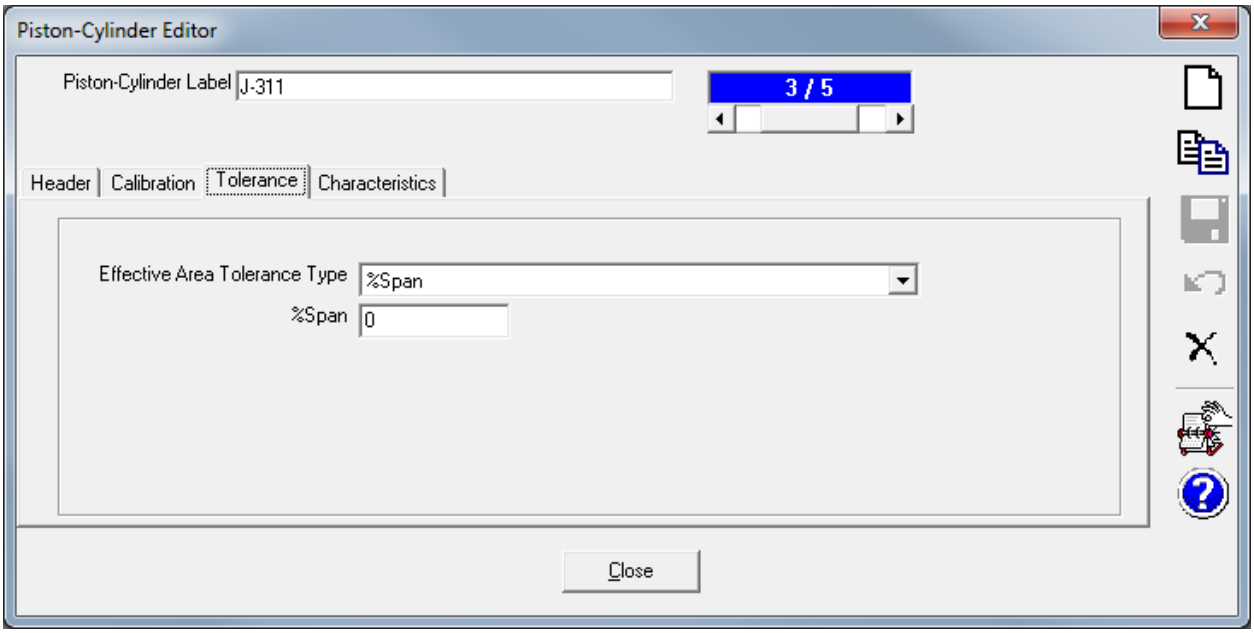

Piston-Cylinder Editor
Piston-Cylinder Label
J-310
2 / 5
Header
Calibration
Tolerance
Characteristics
Effective Area Tolerance Type
%Span
%Span
0
Enter correct tolerance here.
Usually from Cal Report.
Close

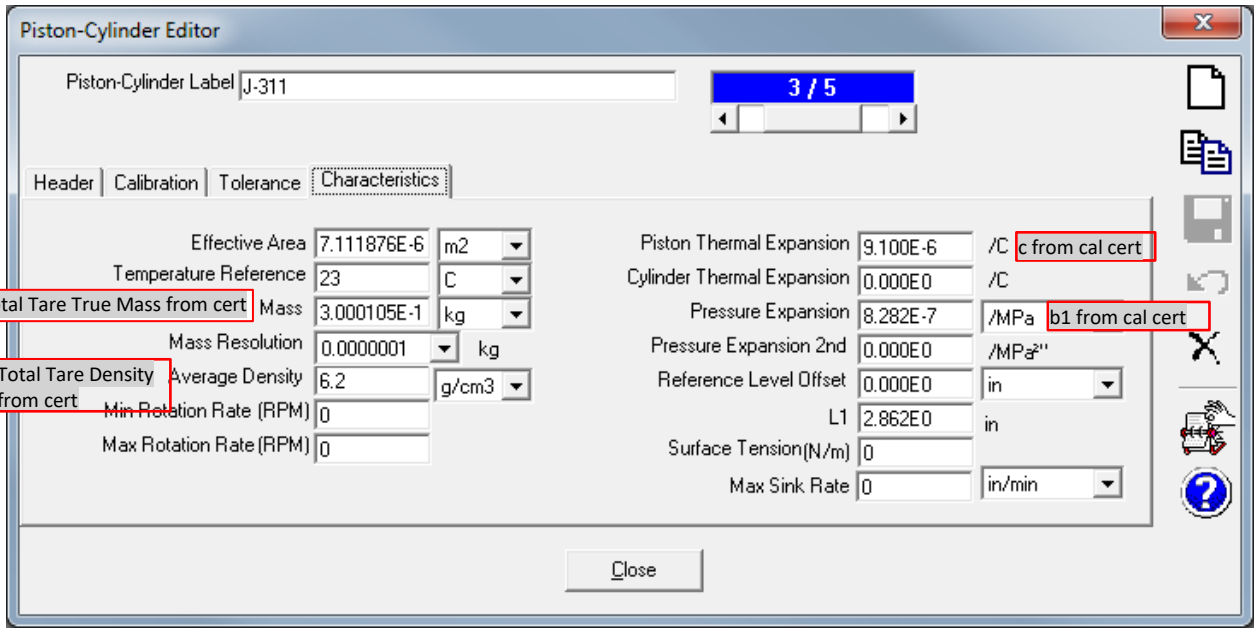

Piston-Cylinder Editor
Piston-Cylinder Label
J-310
2 / 5
Header
Calibration
Tolerance
Characteristics
Effective Area
2.371152E-6
m2
Temperature Reference
23
C
Mass
3.000012E-1
kg
Mass Resolution
0.0000001
kg
Average Density
7.8
g/cm3
Min Rotation Rate (RPM)
0
Max Rotation Rate (RPM)
0
Piston Thermal Expansion
9.100E-6
/C
Cylinder Thermal Expansion
0.000E0
/C
Pressure Expansion
4.728E-7
/MPa
Pressure Expansion 2nd
0.000E0
/MPa²''
Reference Level Offset
0.000E0
in
L1
2.283E0
in
Surface Tension (N/m)
0
Max Sink Rate
0
in/min
Close

Here's the setup of the other Piston-Cylinder to 20000 psi

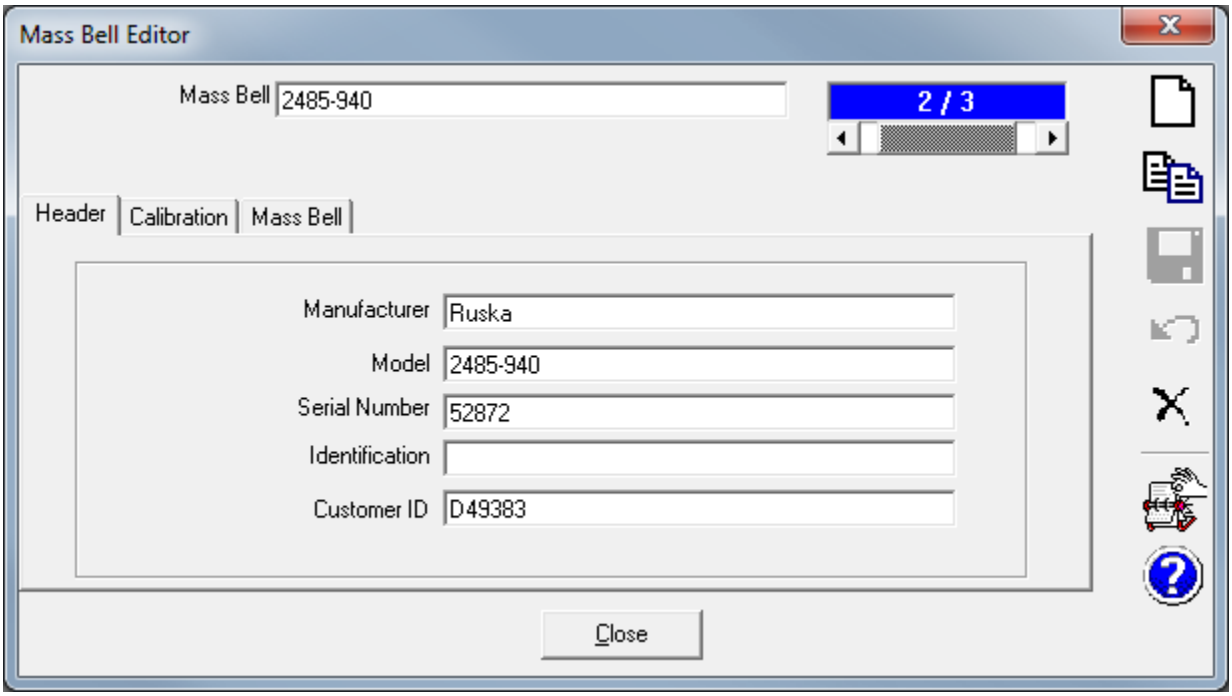


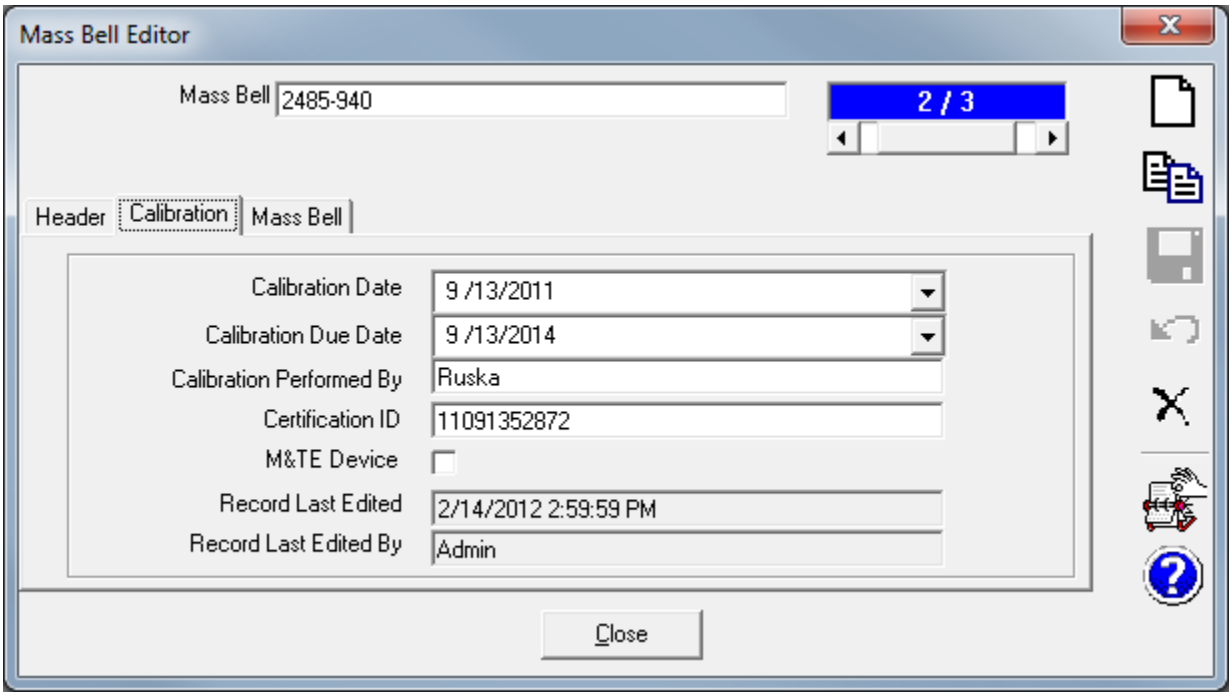


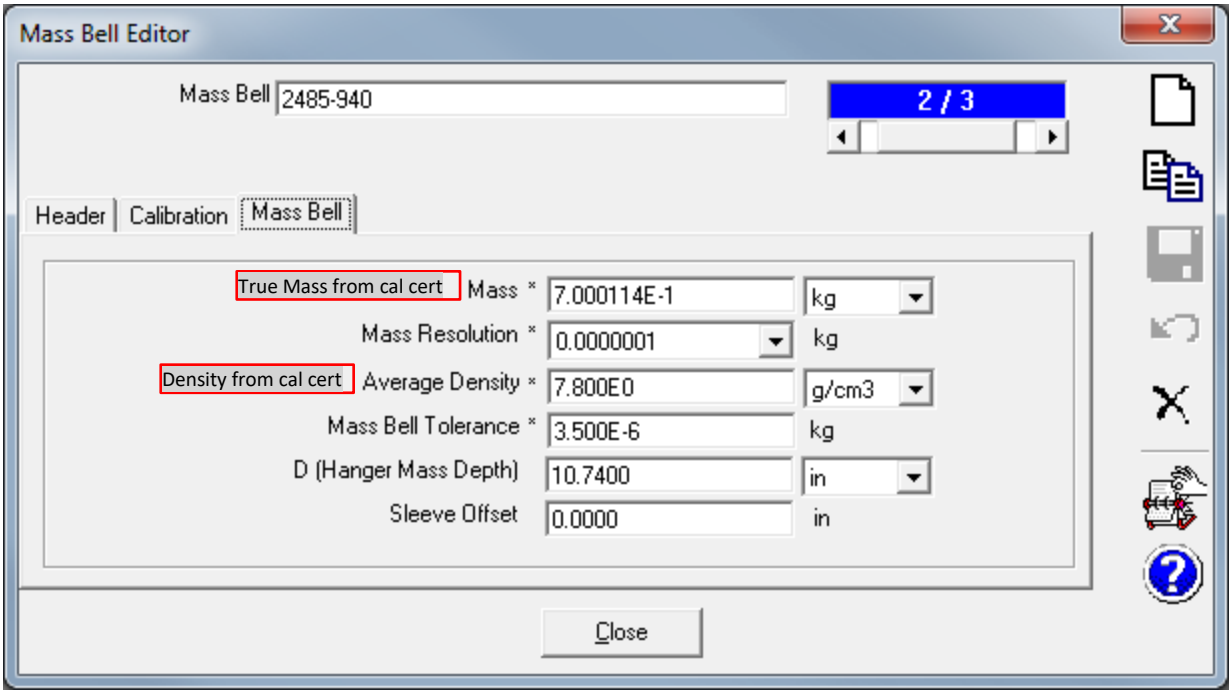

Piston-Cylinder Editor
Piston-Cylinder Label
J-311
3 / 5
Header
Calibration
Tolerance
Characteristics
Effective Area Tolerance Type
%Span
%Span
0
Close


Piston-Cylinder Editor
Piston-Cylinder Label
J-311
3 / 5
Header
Calibration
Tolerance
Characteristics
Effective Area
7.111876E-6
m2
Temperature Reference
23
C
Total Tare True Mass from cert
Mass
3.000105E-1
kg
Mass Resolution
0.0000001
kg
Total Tare Density from cert
Average Density
6.2
g/cm3
Min Rotation Rate (RPM)
0
Max Rotation Rate (RPM)
0
Piston Thermal Expansion
9.100E-6
/C
c from cal cert
Cylinder Thermal Expansion
0.000E0
/C
Pressure Expansion
8.282E-7
/MPa
b1 from cal cert
Pressure Expansion 2nd
0.000E0
/MPa²''
Reference Level Offset
0.000E0
in
L1
2.862E0
in
Surface Tension (N/m)
0
Max Sink Rate
0
in/min
Close

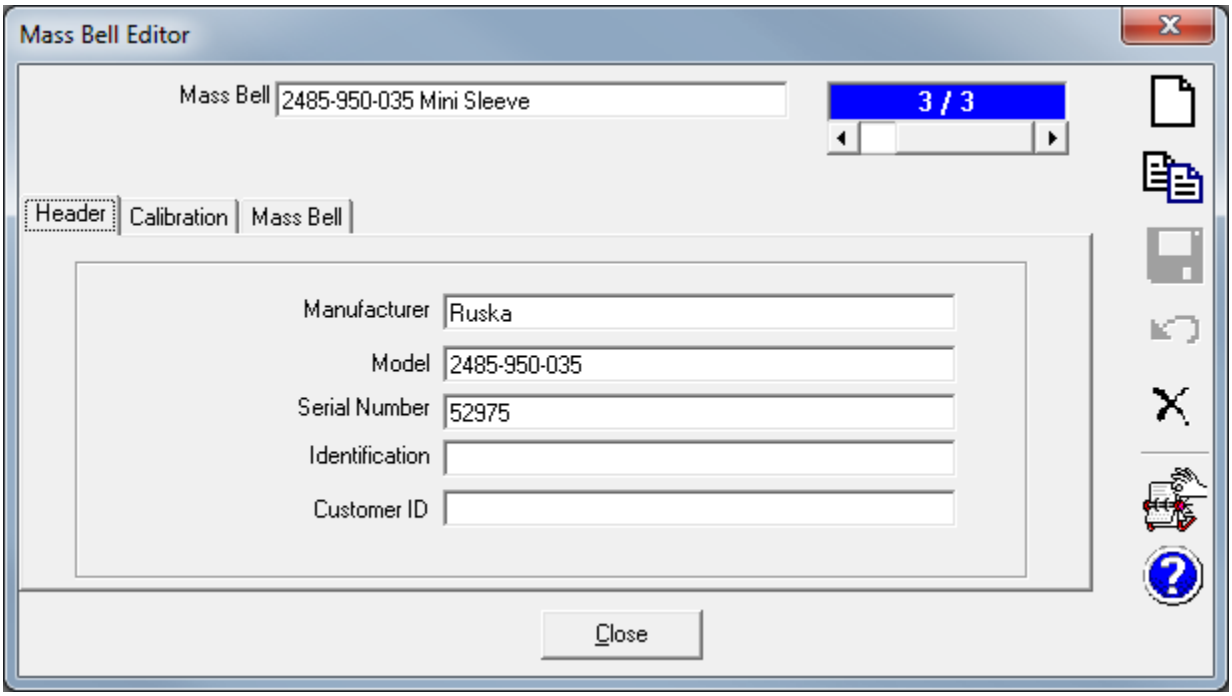
2. Then setup the Mass Bell

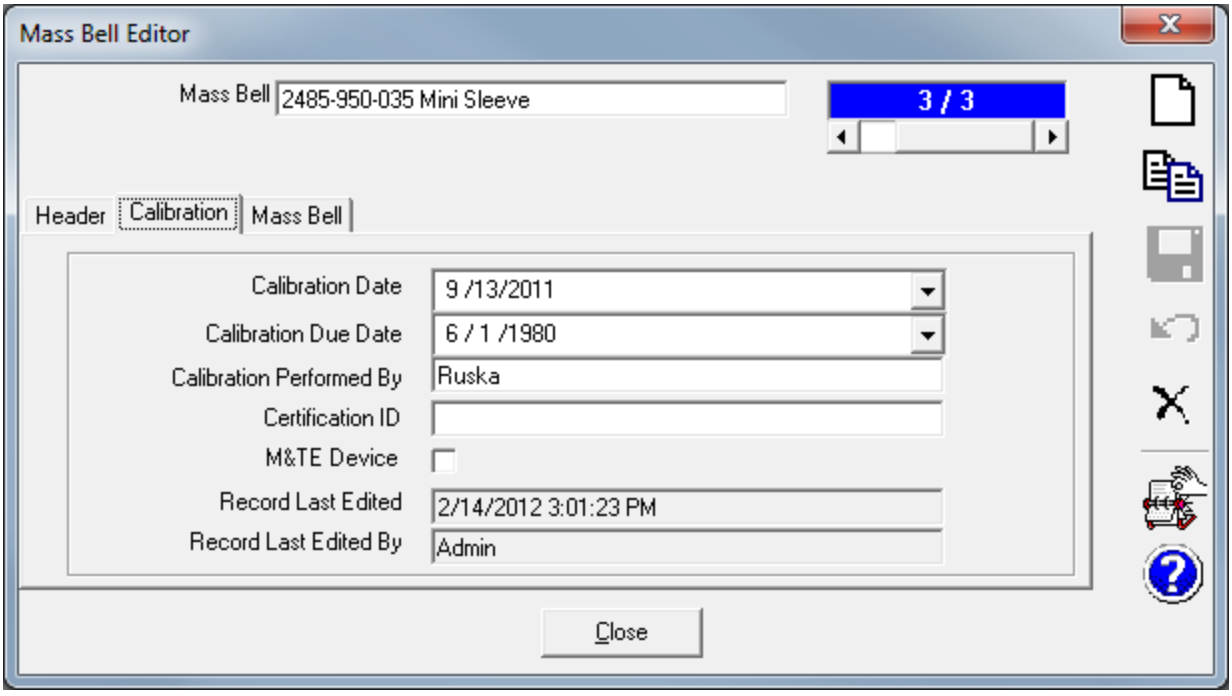


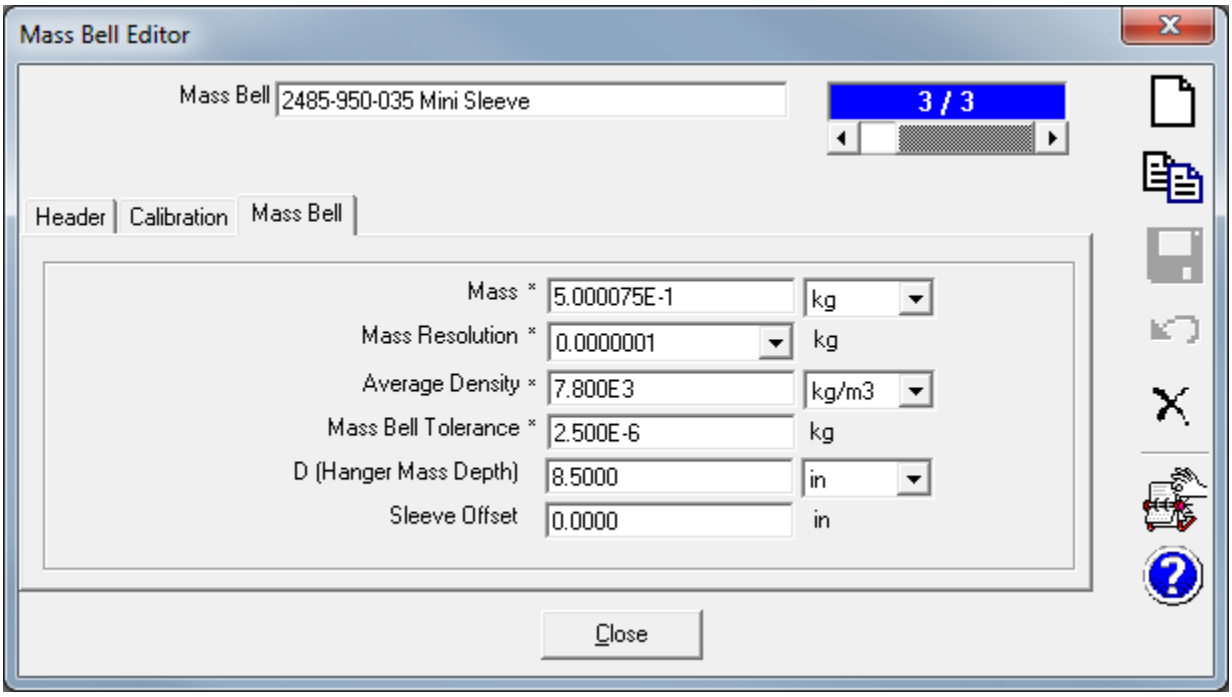




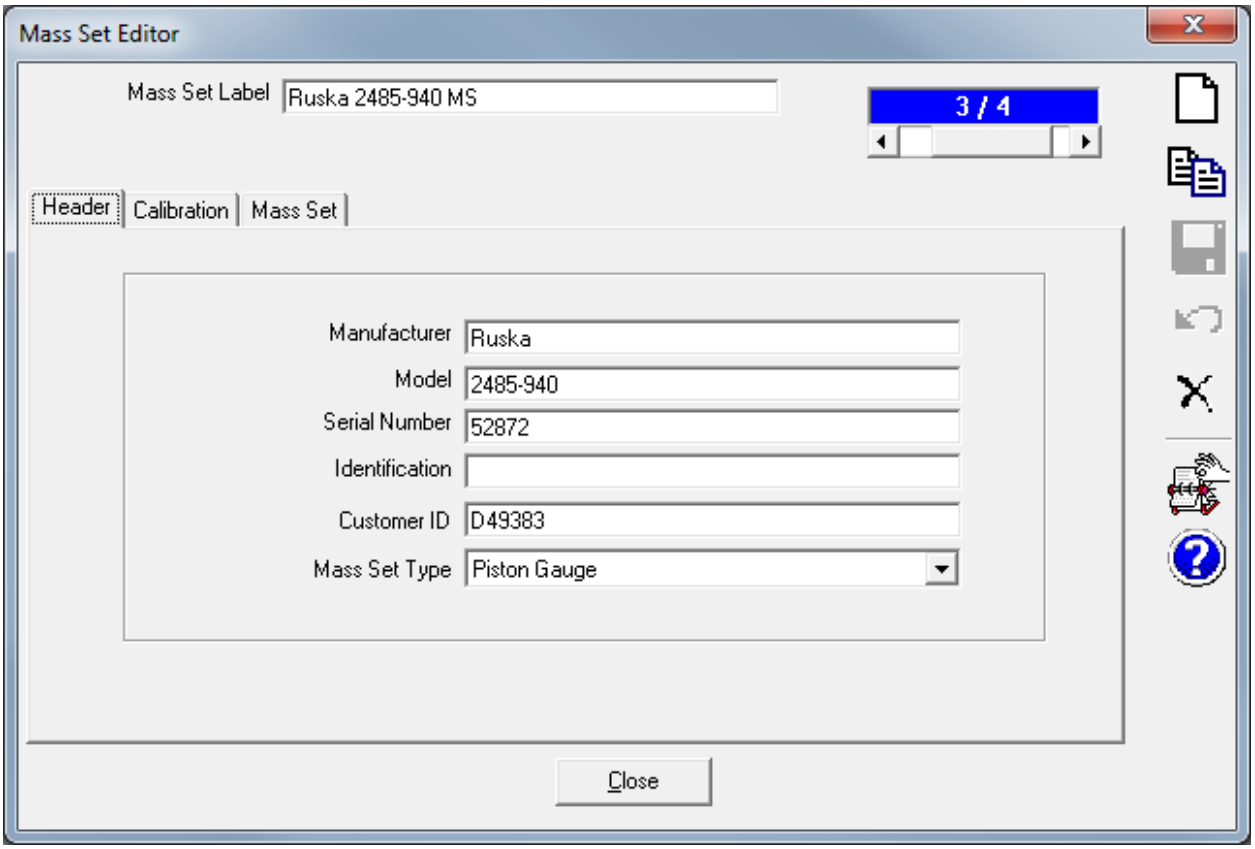
Can setup another Mass Bell if you have one

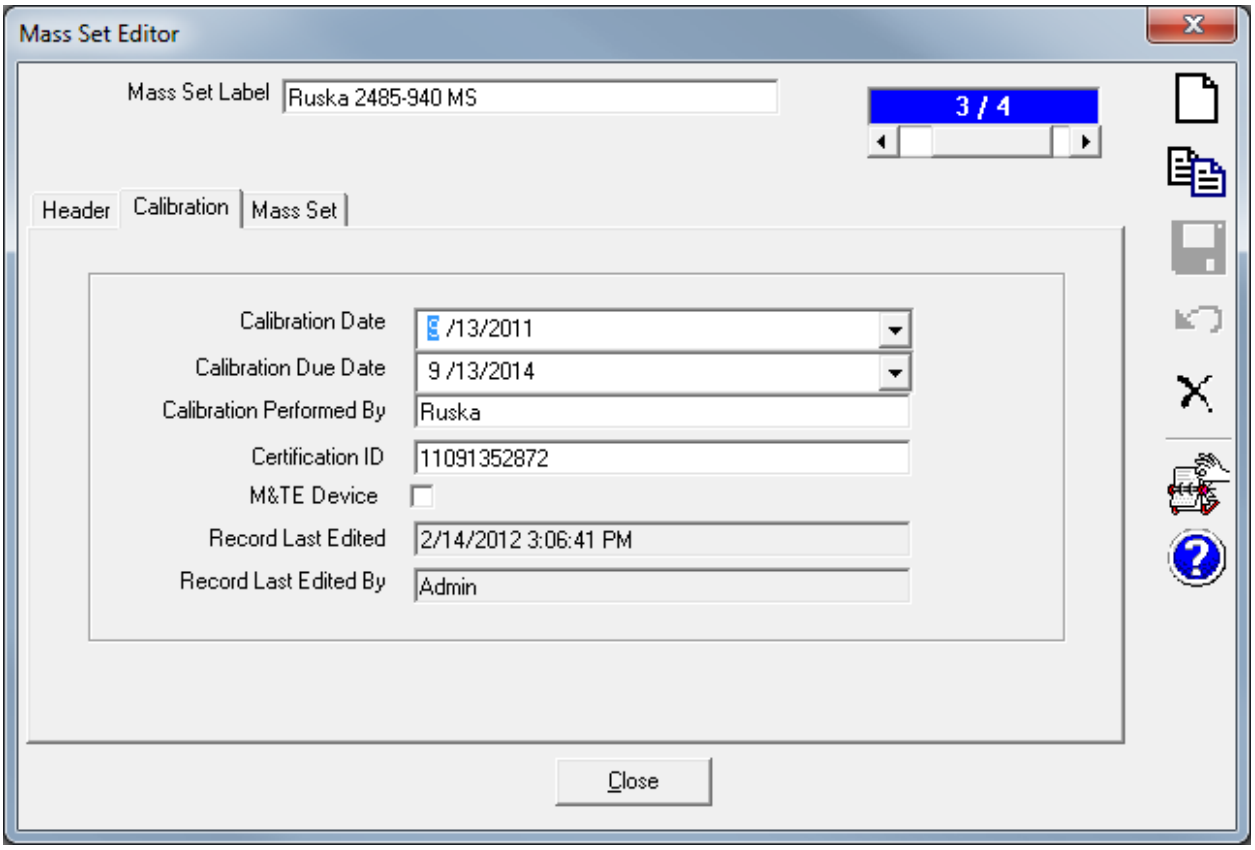


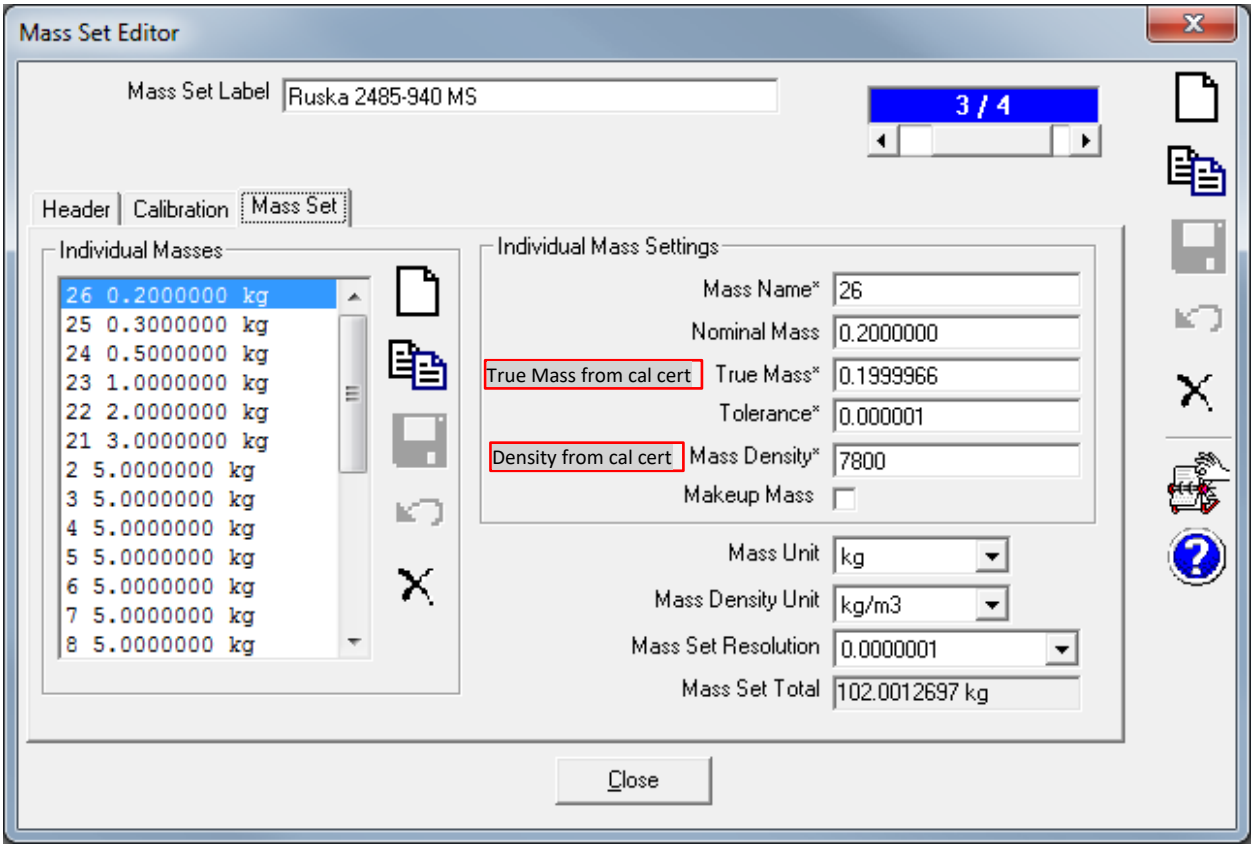

Mass Bell Editor
Mass Bell
2485-950-035 Mini Sleeve
3 / 3
Header
Calibration
Mass Bell
Calibration Date
9 /13/2011
Calibration Due Date
6 / 1 /1980
Calibration Performed By
Ruska
Certification ID
M&TE Device
Record Last Edited
2/14/2012 3:01:23 PM
Record Last Edited By
Admin
Close

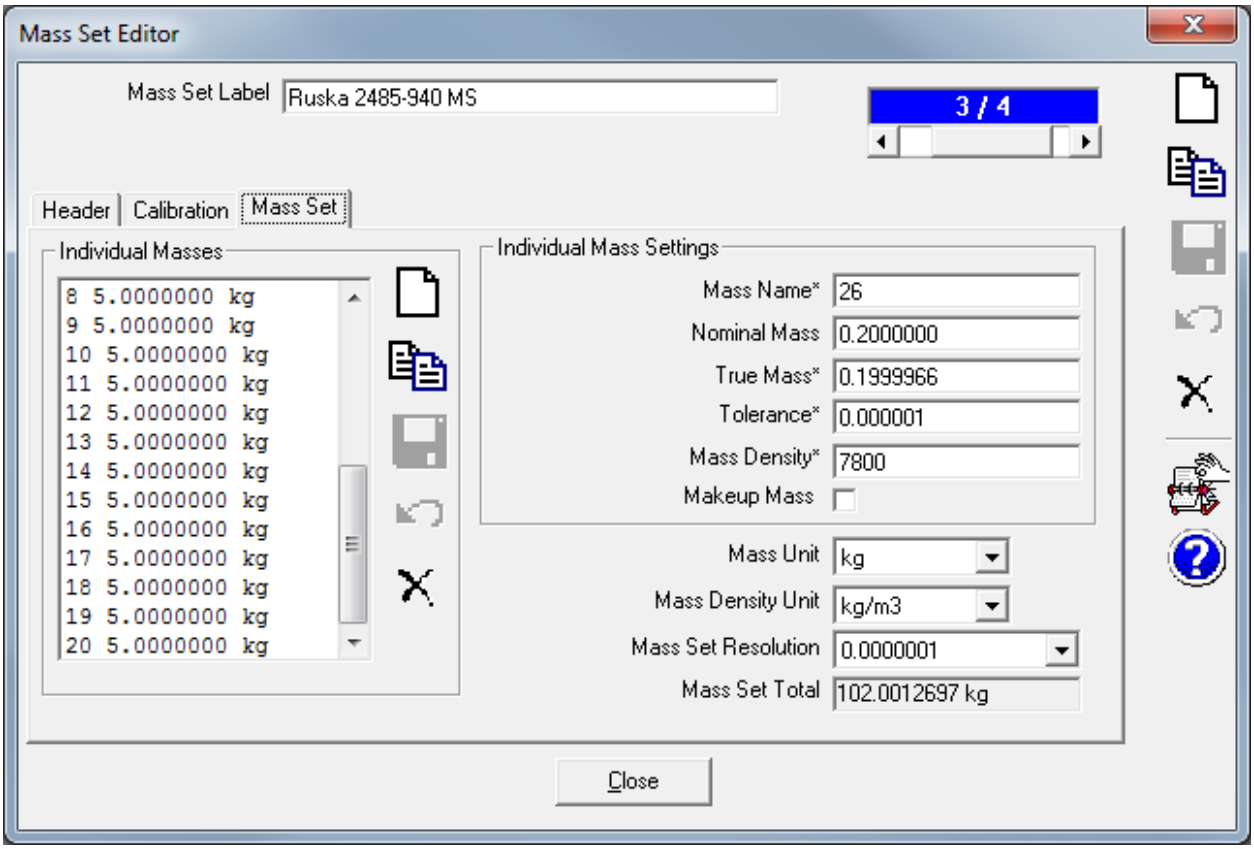

Mass Bell Editor
Mass Bell
2485-950-035 Mini Sleeve
3 / 3
Header
Calibration
Mass Bell
Mass *
5.000075E-1
kg
Mass Resolution *
0.0000001
kg
Average Density *
7.800E3
kg/m3
Mass Bell Tolerance *
2.500E-6
kg
D (Hanger Mass Depth)
8.5000
in
Sleeve Offset
0.0000
in
Close

3. Then setup the Mass Set as a “Piston Gauge” type

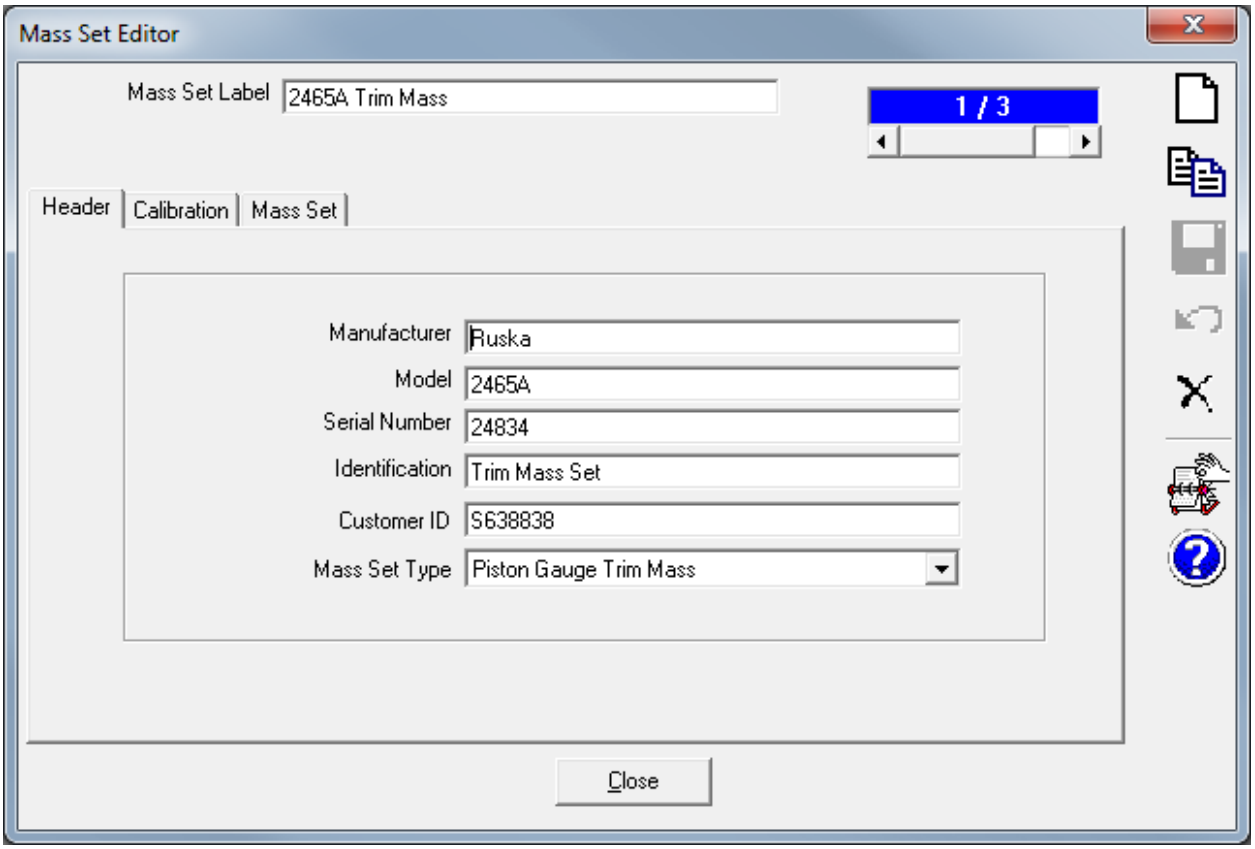


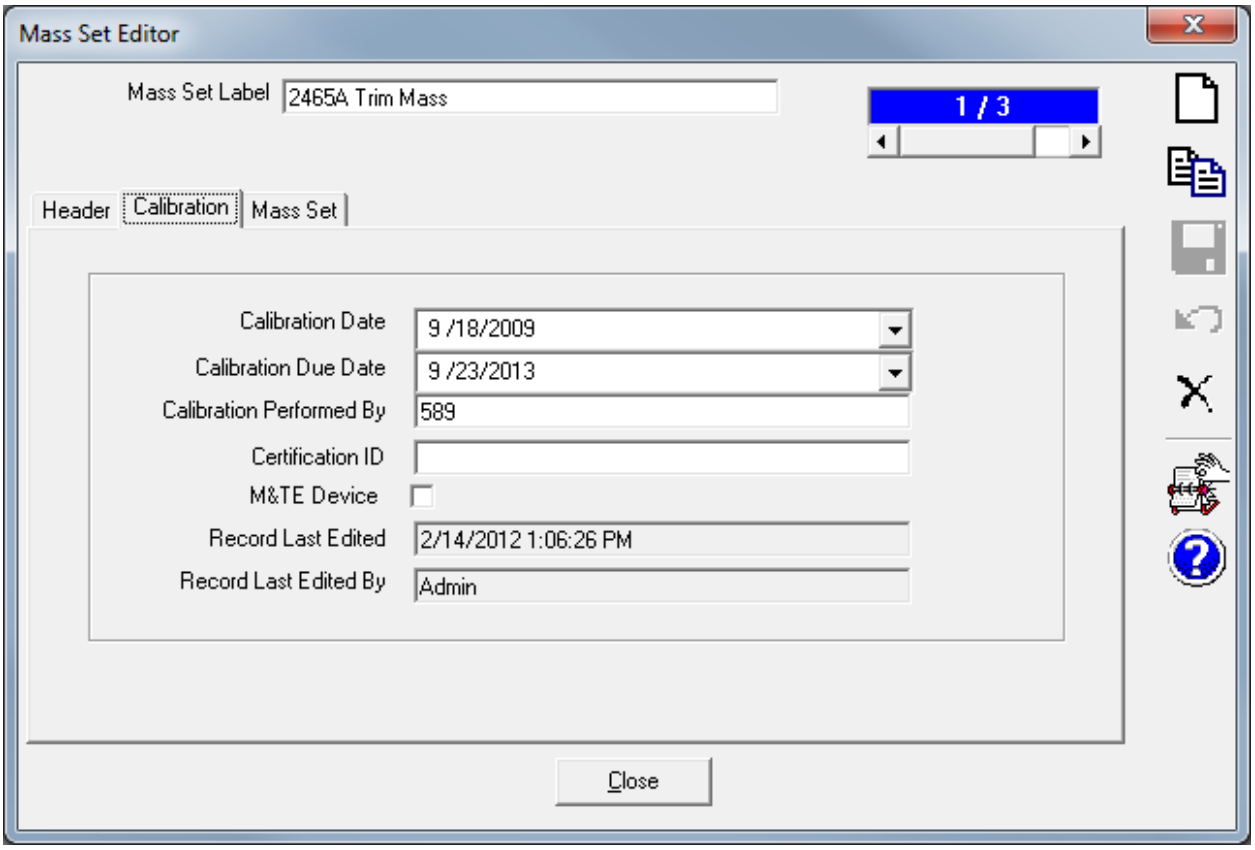


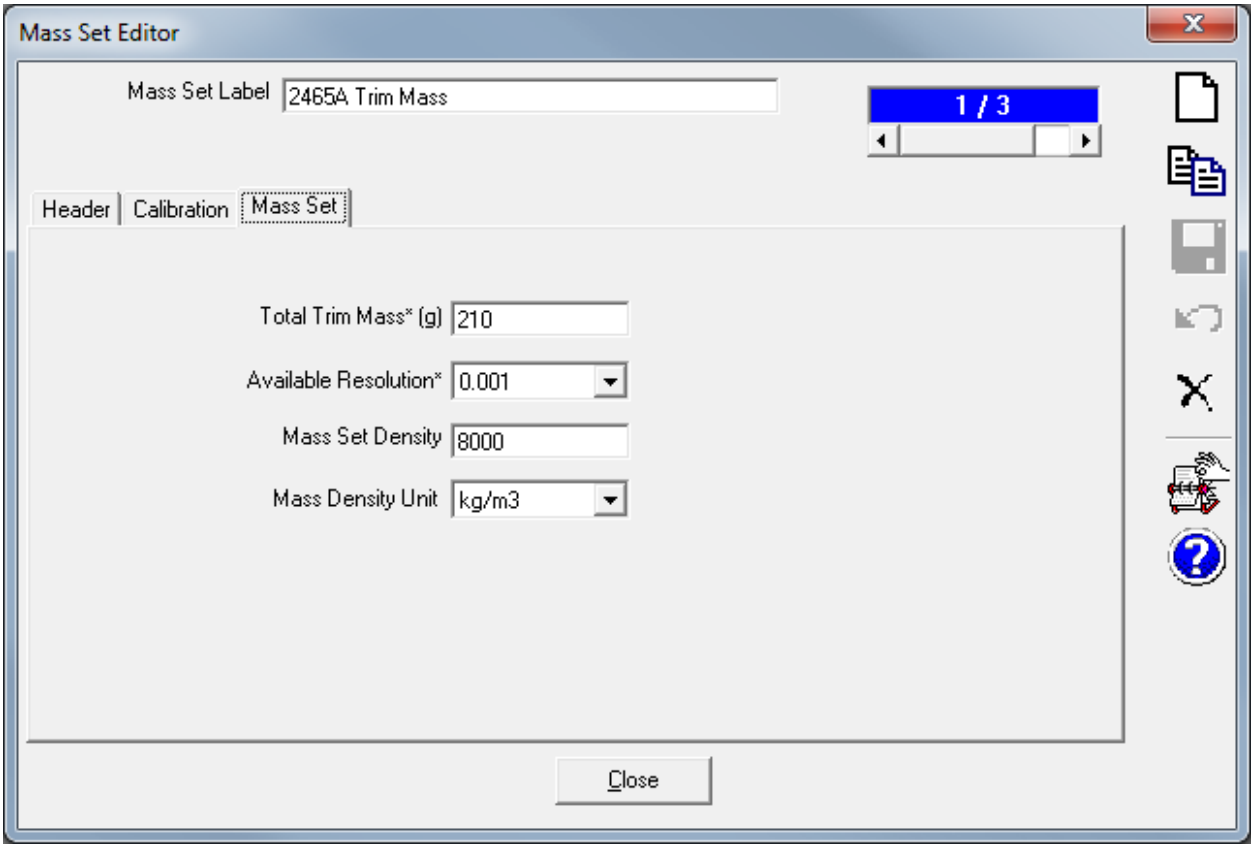

Mass Set Editor
Mass Set Label
Ruska 2485-940 MS
3 / 4
Header
Calibration
Mass Set
Individual Masses
26 0.2000000 kg
25 0.3000000 kg
24 0.5000000 kg
23 1.0000000 kg
22 2.0000000 kg
21 3.0000000 kg
2 5.0000000 kg
3 5.0000000 kg
4 5.0000000 kg
5 5.0000000 kg
6 5.0000000 kg
7 5.0000000 kg
8 5.0000000 kg
Individual Mass Settings
Mass Name*
26
Nominal Mass
0.2000000
True Mass from cal cert
True Mass*
0.1999966
Tolerance*
0.000001
Density from cal cert
Mass Density*
7800
Makeup Mass
Mass Unit
kg
Mass Density Unit
kg/m3
Mass Set Resolution
0.0000001
Mass Set Total
102.0012697 kg
Close


Mass Set Editor
Mass Set Label
Ruska 2485-940 MS
3 / 4
Header
Calibration
Mass Set
Individual Masses
8 5.0000000 kg
9 5.0000000 kg
10 5.0000000 kg
11 5.0000000 kg
12 5.0000000 kg
13 5.0000000 kg
14 5.0000000 kg
15 5.0000000 kg
16 5.0000000 kg
17 5.0000000 kg
18 5.0000000 kg
19 5.0000000 kg
20 5.0000000 kg
Individual Mass Settings
Mass Name*
26
Nominal Mass
0.2000000
True Mass*
0.1999966
Tolerance*
0.000001
Mass Density*
7800
Makeup Mass
Mass Unit
kg
Mass Density Unit
kg/m3
Mass Set Resolution
0.0000001
Mass Set Total
102.0012697 kg
Close

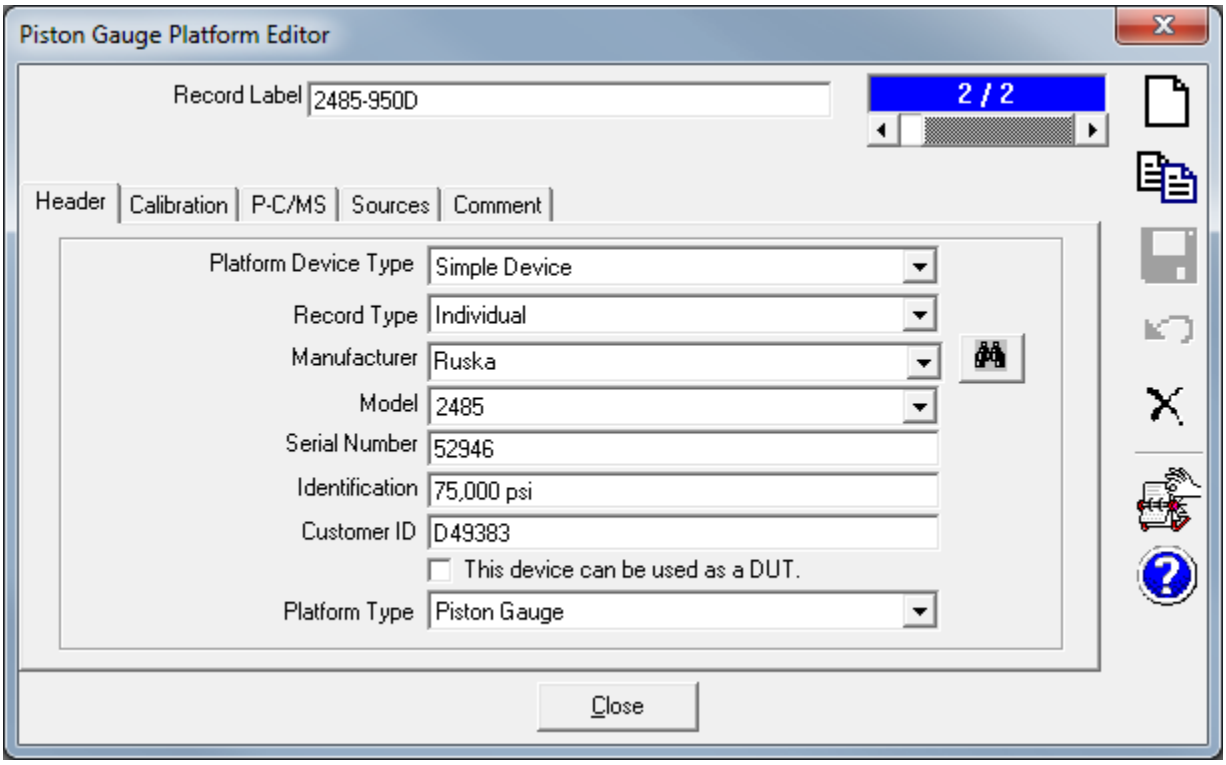
4. Can also setup a trim mass set

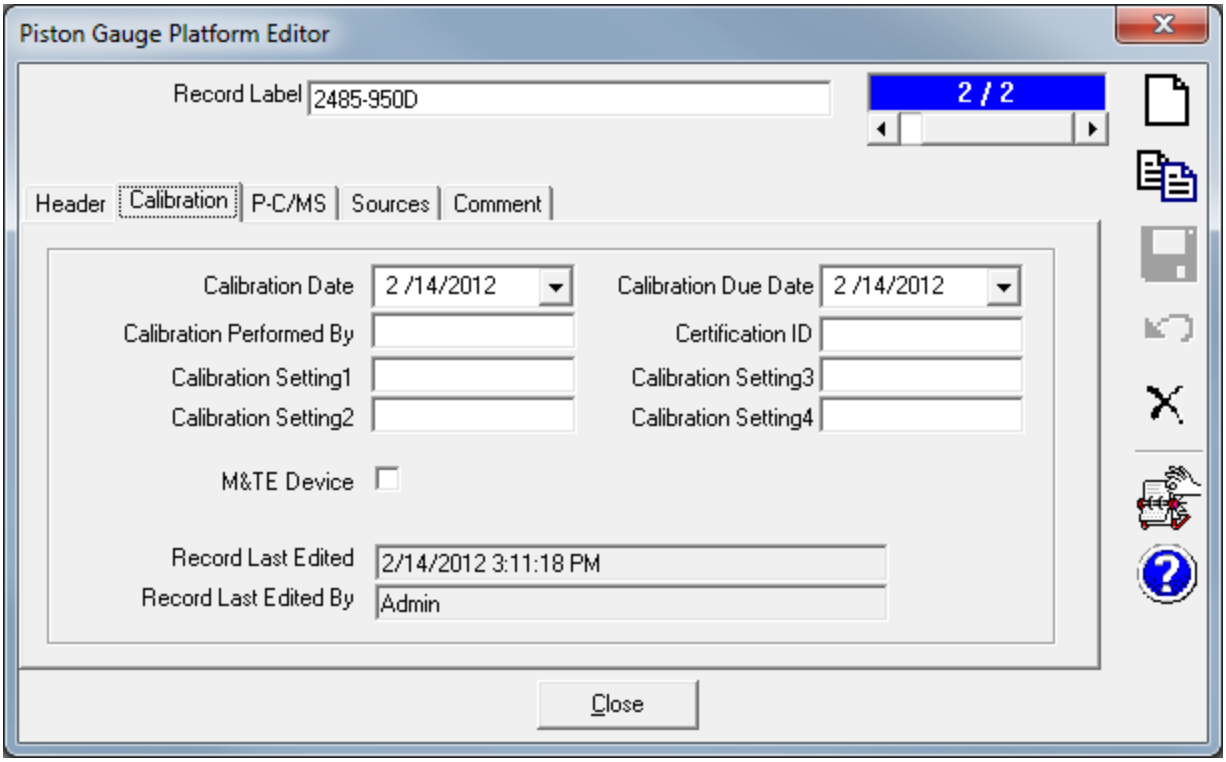




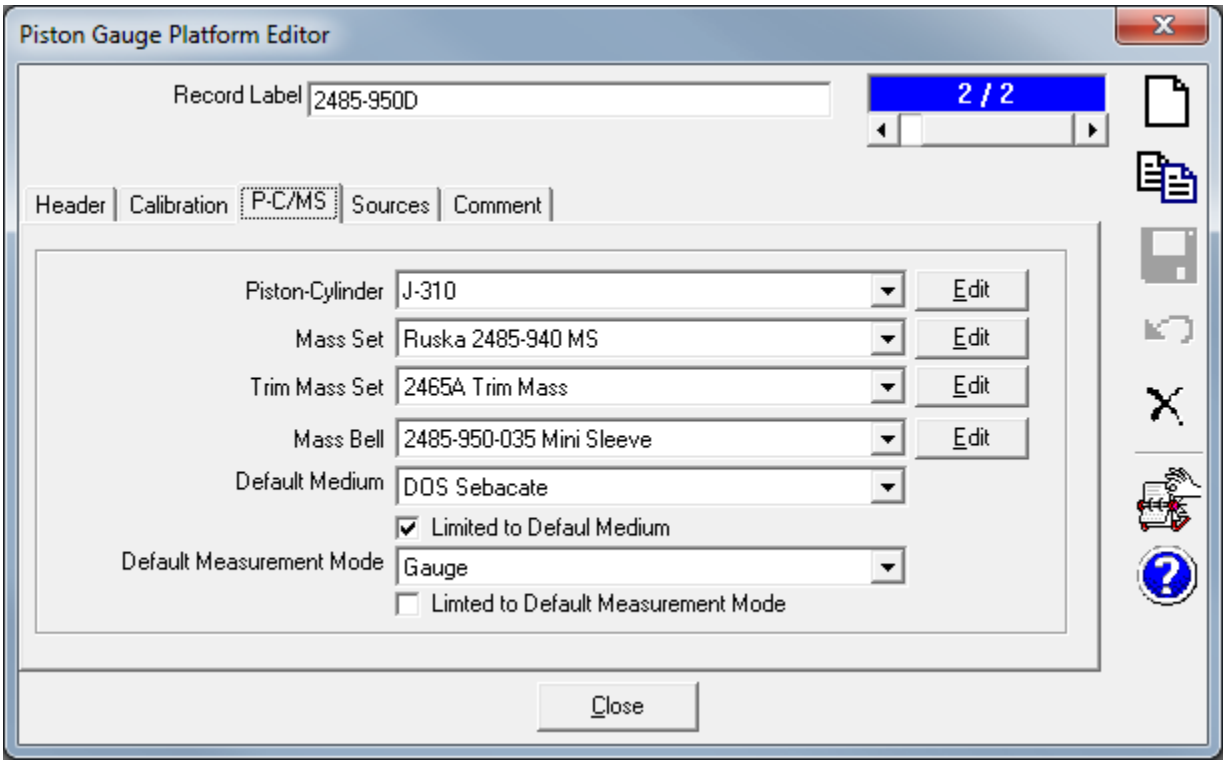


5. Then setup the 2485 Platform as a Piston Gauge – and choose piston(s), mass set(s), monitor(s), etc. to use

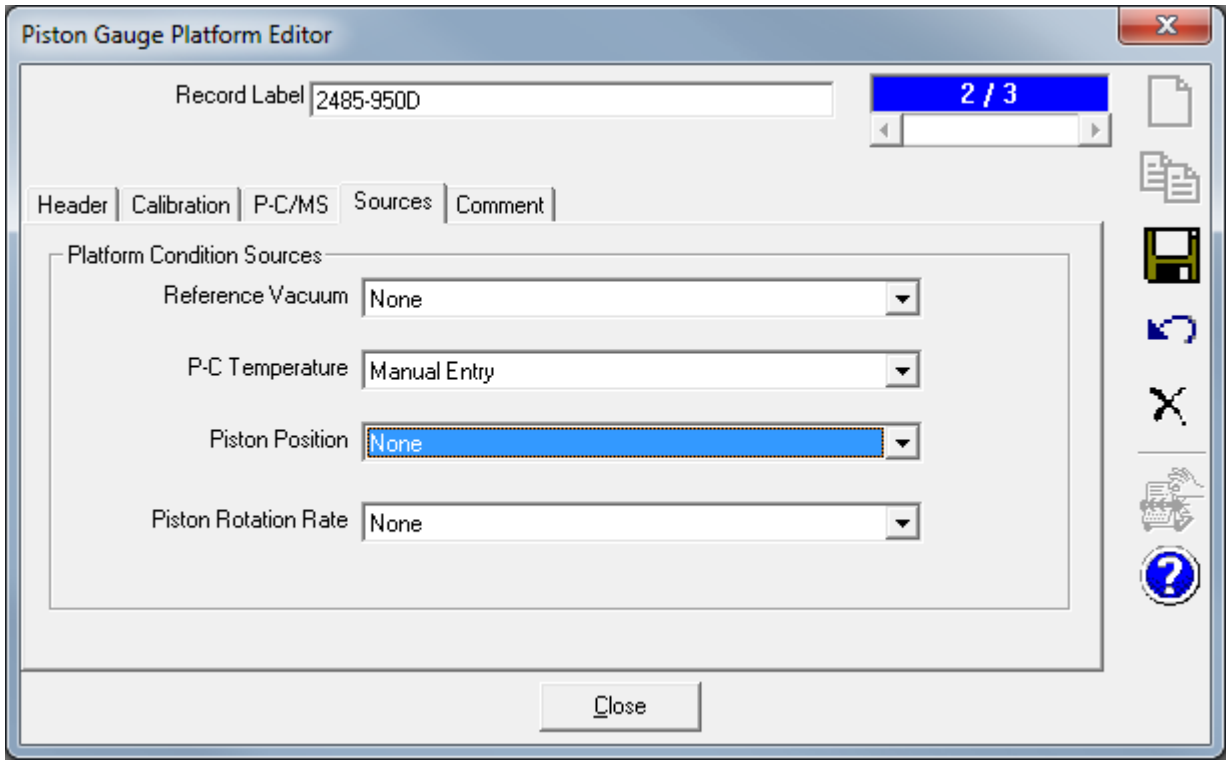




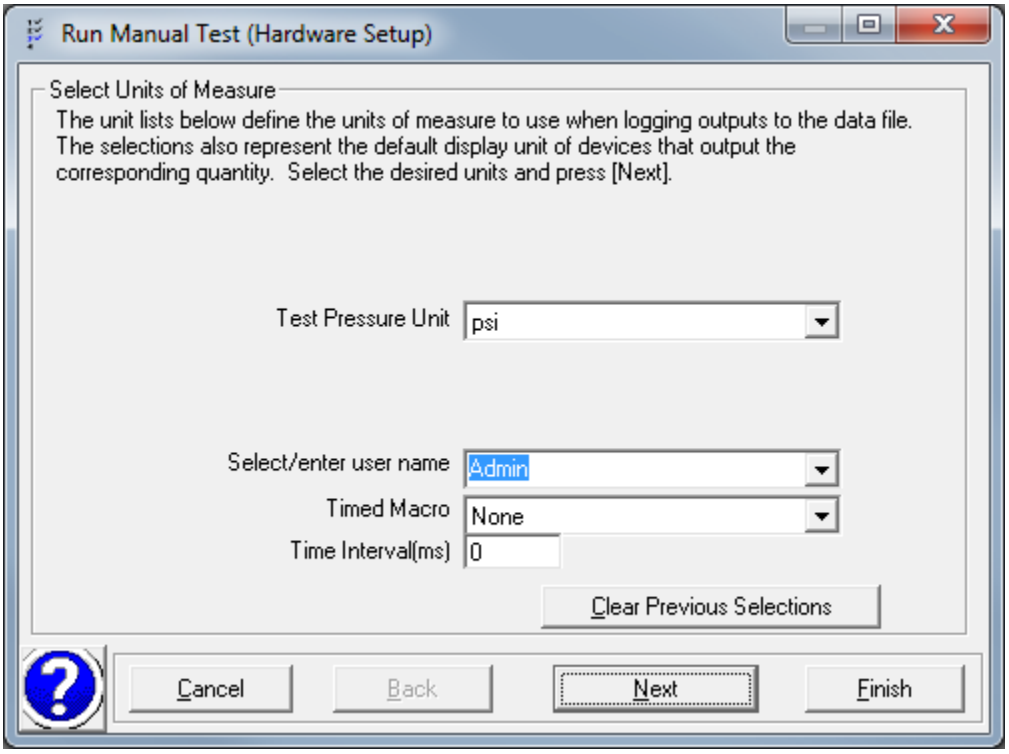
If you don't see any items in the lists you might have all items show "Select All" and save the Piston Gauge. Once COMPASS knows it's a PG you can select relevant piston-cylinder(s), mass set(s), sources to use



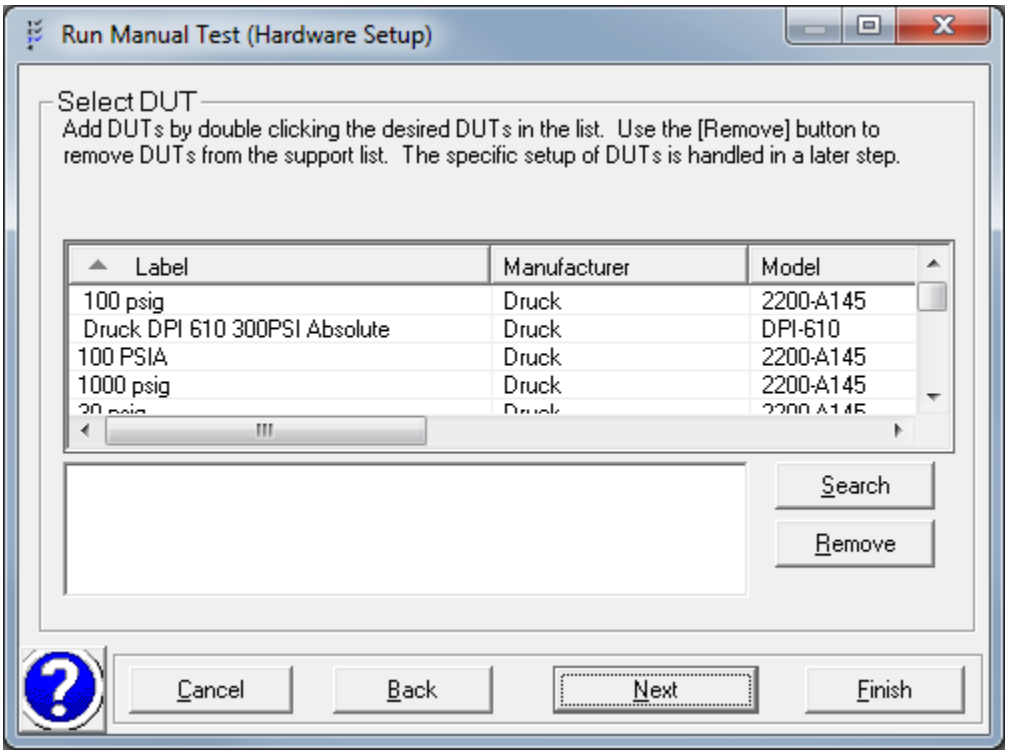
On the "Sources" tab choose 2455 or 2456 PG monitor if you have that, otherwise "Manual Entry" for required parameters.

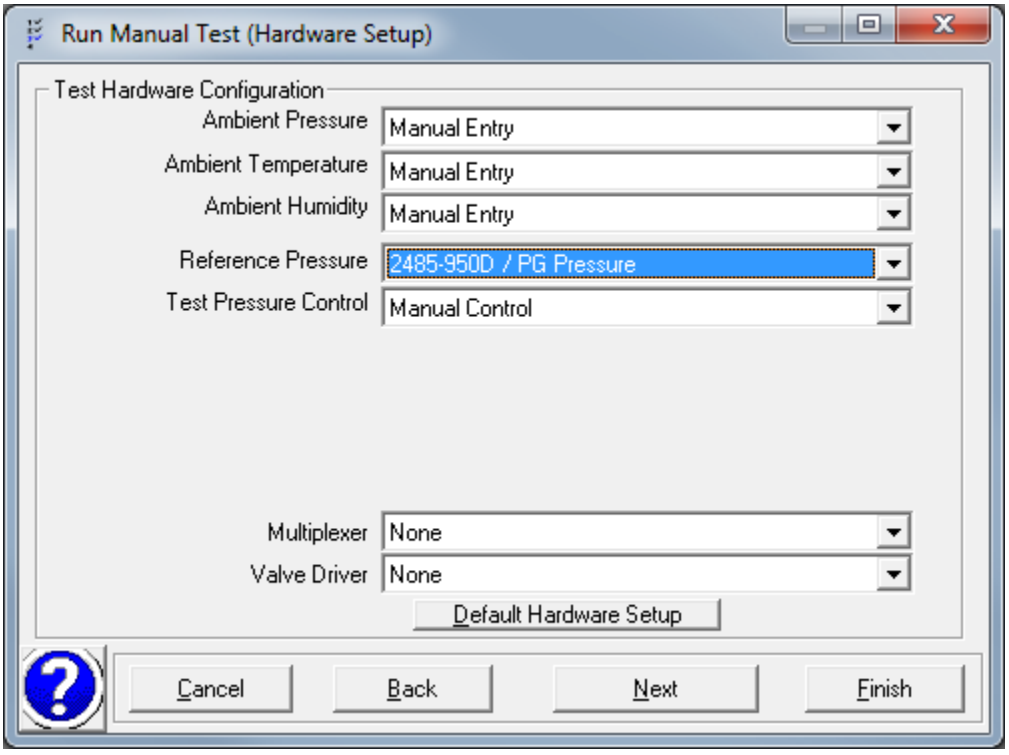


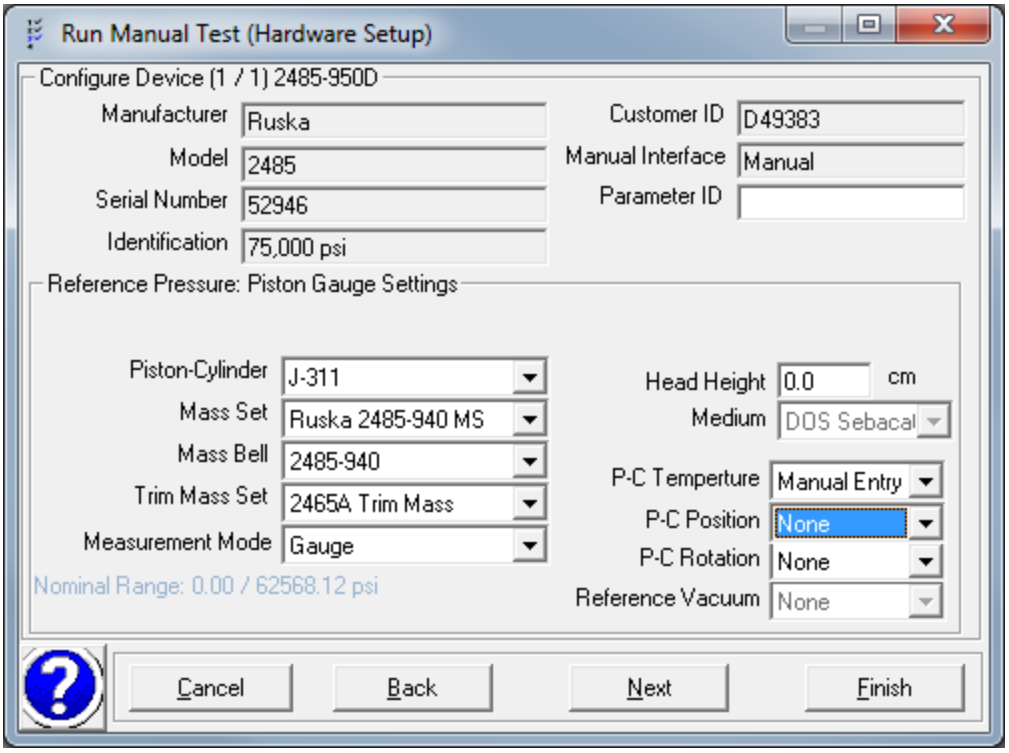
6. Then run a Manual Test in COMPASS for Pressure to test

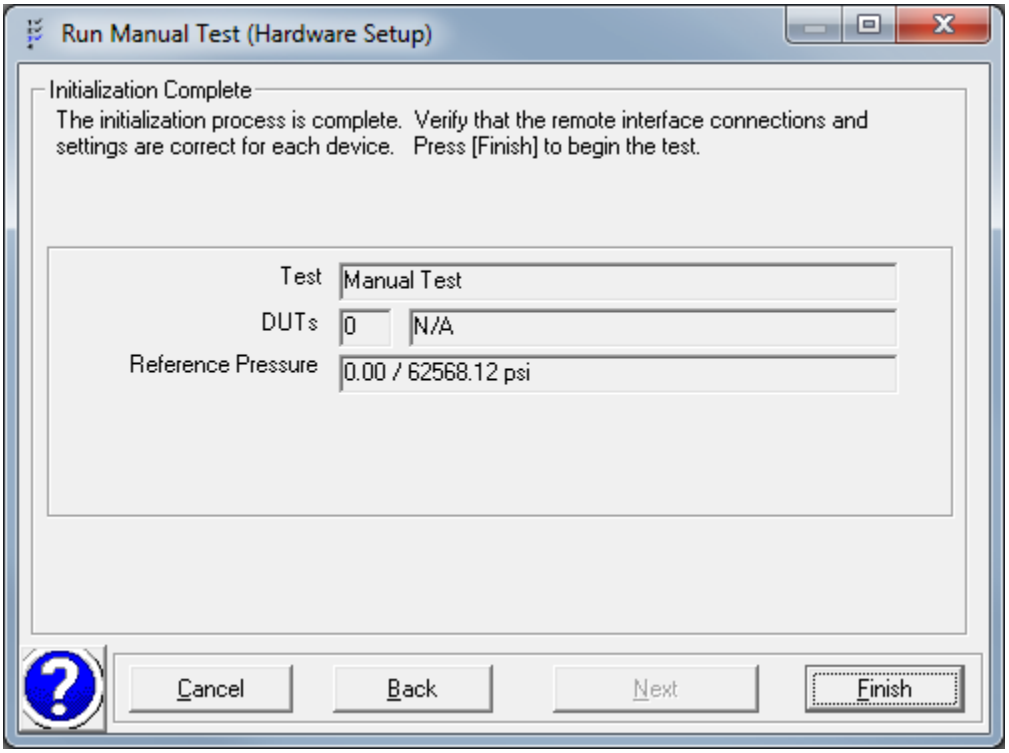


Don’t need to select a DUT (but can if you want)

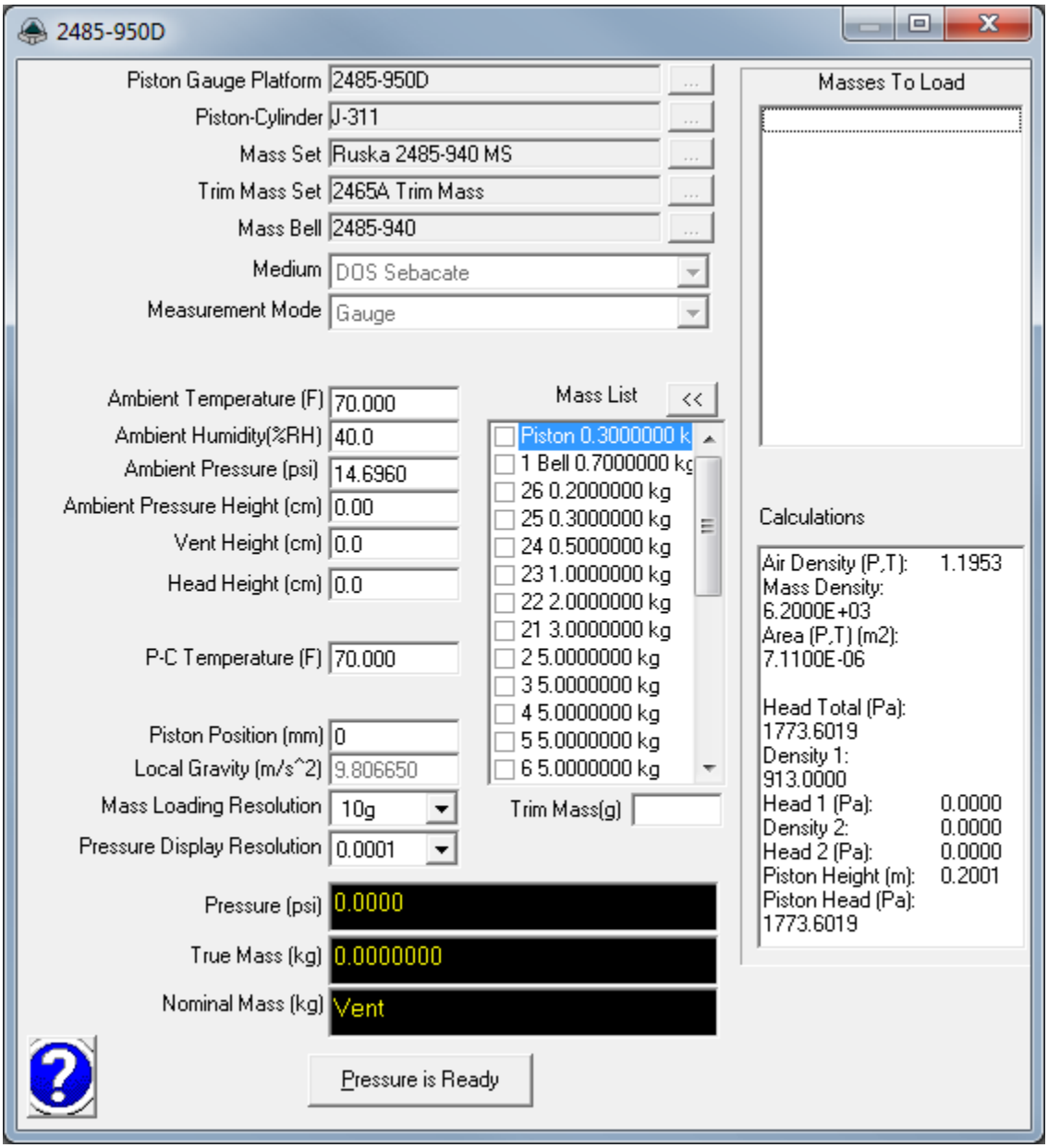




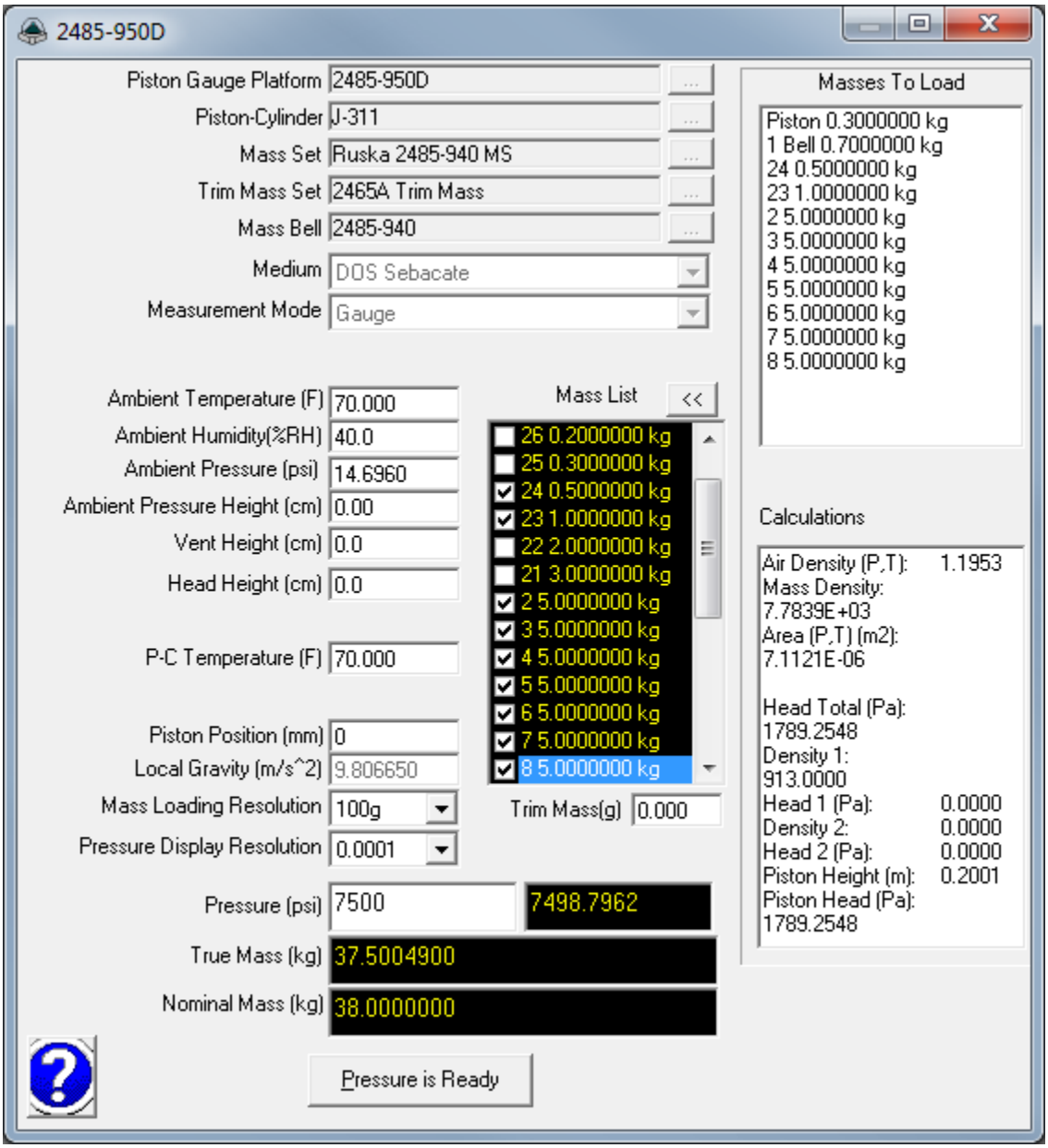

Run Manual Test (Hardware Setup)
Configure Device (1 / 1) 2485-950D
Manufacturer
Ruska
Model
2485
Serial Number
52946
Identification
75,000 psi
Customer ID
D49383
Manual Interface
Manual
Parameter ID
Reference Pressure: Piston Gauge Settings
Piston-Cylinder
J-311
Mass Set
Ruska 2485-940 MS
Mass Bell
2485-940
Trim Mass Set
2465A Trim Mass
Measurement Mode
Gauge
Nominal Range: 0.00 / 62568.12 psi
Head Height
0.0
cm
Medium
DOS Sebacal
P-C Temperture
Manual Entry
P-C Position
None
P-C Rotation
None
Reference Vacuum
None
Cancel
Back
Next
Finish


Run Manual Test (Hardware Setup)
Initialization Complete
The initialization process is complete. Verify that the remote interface connections and settings are correct for each device. Press [Finish] to begin the test.
Test
Manual Test
DUTs
0
N/A
Reference Pressure
0.00 / 62568.12 psi
Cancel
Back
Next
Finish

PG Calculator Window comes up like this, with no masses selected



Select masses and pressure will be shown, or enter a Pressure and hit [Enter] to see what masses to load. Select "Mass Loading Resolution", "Pressure Display Resolution", etc.



Press [Pressure is Ready] button when piston is floating and ready