Application Note

Calibration Reminders and Alerts

Application Overview

Pressure gauges are used throughout many industries for testing and calibrating various instruments. These gauges require periodic calibration to assure their accuracy. Regulatory authorities require routine testing and/or audits of systems, which may result in fines for non-compliance. By choosing XP3i digital pressure gauges from Crystal Engineering, costly fines can be prevented with the help of automatic built-in calibration alerts and reminders.

Keeping Track of Gauge Calibrations Can be a Challenge

Test gauges are used as the standards for calibrating and testing important equipment used every day. The accuracy of these test gauges can decline over time, and, therefore, they must be regularly calibrated to remain accurate.



Keeping track of the calibration intervals for all test equipment can be a challenging task in which human error can occur. Calibration certificates or stickers can be misplaced or lost, or the technician may not notice that the gauge is past its calibration dates. Even if a company has a system to keep track of these dates, it still requires somebody to notify the technician when re-calibrations are due. It also requires the technician to remove the gauge from service once they are notified.

Each of these situations requires human intervention to assure that products are not used outside of their calibration intervals. If mistakes are made, a company could end up using a gauge to test important equipment when they shouldn't be. This could lead to failed audits, costly fines, or even dangerous situations.

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XP3i Pressure Gauges Offer a Solution

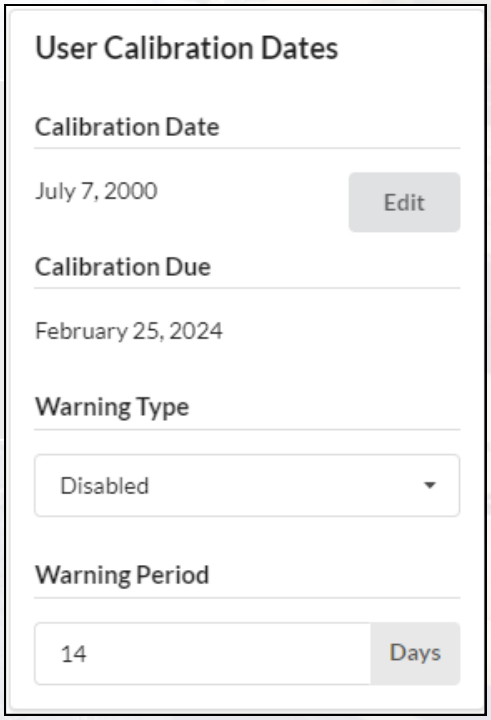
Crystal Engineering worked with one of the largest oil & gas companies in the USA to design the first solution with its XP2i gauge. This company has already standardized and implemented the XP2i throughout. Now, with the XP3i, Crystal Engineering offers a solution to replace manual record keeping and notifications, with automatic, protected alerts and notifications at a higher accuracy. The XP3i pressure gauges contains three warning features:

- On-screen, customizable calibration reminder alerts prior to the due date.
- Warning alerts on and after the due date.
- An optional feature to lock the gauge from use on the calibration due date.

Calibration Reminder Alert

For a start-up reminder, users use the CrystalControlWeb software to enter the calibration due date and the notification time prior to that date. Once the defined prior to date is reached, the XP3i flashes “Cal Soon” three times during the start-up process and will do that until the calibration due date is reached, or the alert dates are updated.

CrystalControlWeb’s User Calibration Date option. In this example, the type is disabled and the warning period is 14 days. After choosing a warning type and warning period, the alerts settings are sent to the XP3i gauge.





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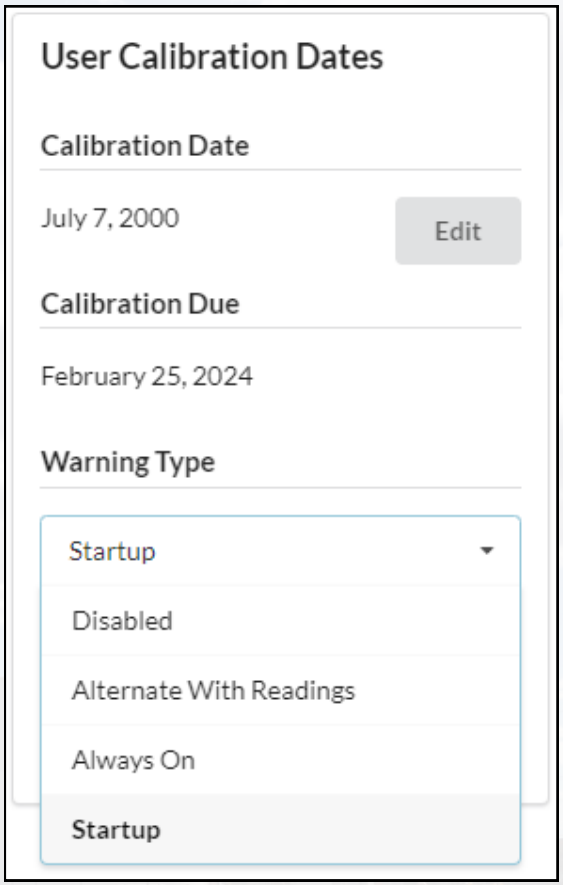
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Calibration Due Alert

Once the calibration due date has been reached, the XP3i has three alert options:

- **Startup** "Cal Due" flashes three times during the start-up process and the gauge will then operate normally. No additional warnings will occur until the power is recycled on the gauge
- **Always On** "Cal Due" is displayed until a button is pressed, and then the gauge operates normally. After that, no additional warnings occur until power is recycled.
  - Note: Password Protection can be added to make the gauge non-operational and always display "Cal Due."
- **Alternate with Reading** "Cal Due" flashes three times during the start-up process and then alternates displaying "Cal Due" with live pressure readings.



Conclusion

With increased attention on environmental issues and regulations, pressure on businesses and audits have never been higher. A system that relies on human intervention can always be intentionally or unintentionally circumvented. An automatic product based system, which can easily be set-up by managers or supervisors, is much preferred. If the gauge prevents just one instance of out-of-calibration use, it has already paid for itself.

Contact us today to find out more about how the XP3i can save you time and money!



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