

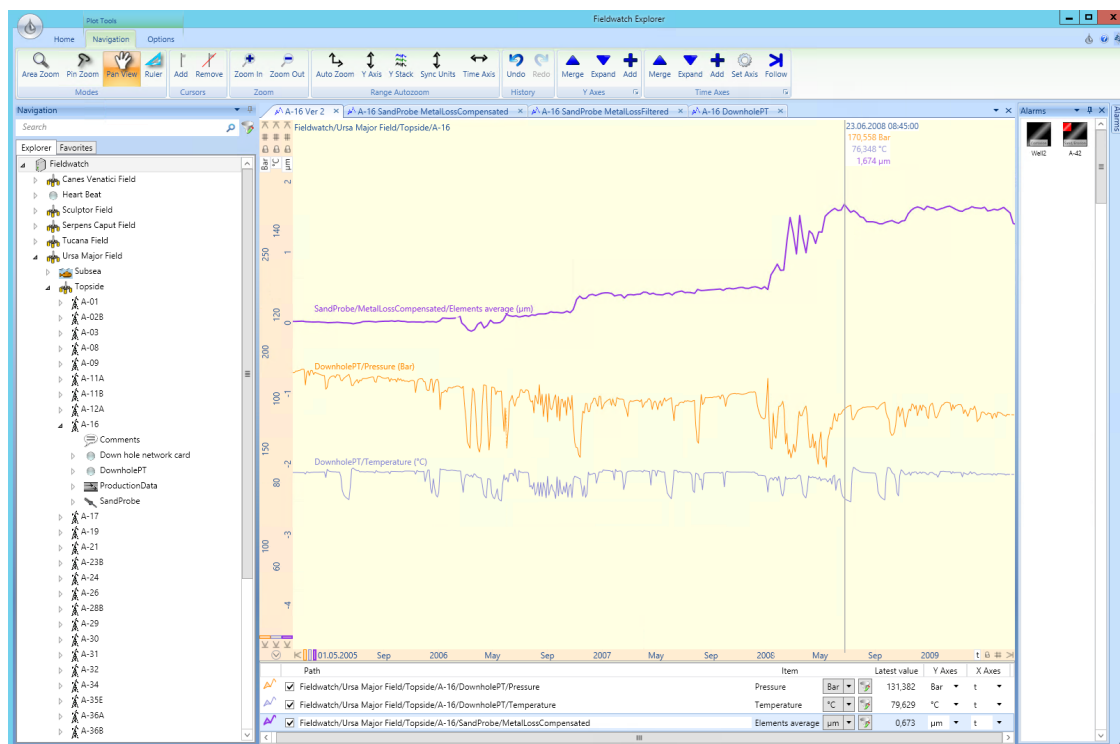


PRODUCT DATASHEET

www.high-accuracy.com

Roxar Fieldwatch

Production optimization made easy



Make Informed Decisions

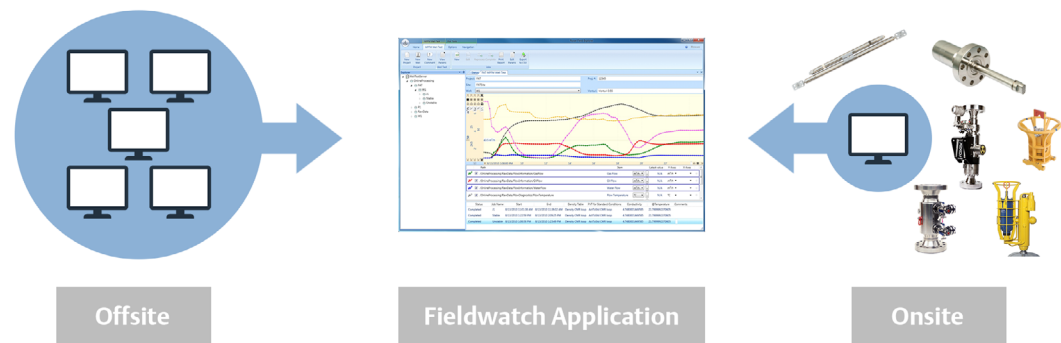
Roxar Fieldwatch enables the intelligent oilfield and helps the users to improve work processes, optimize production and in the end maximize reservoir recovery.

Roxar Fieldwatch collects, monitors, visualizes and analyzes data from a range of sensors and instruments to provide operators with a complete picture of the reservoir and the production system. It also provides data input to reservoir and production engineers when they make reservoir management decisions relating to metering, production allocation or choke settings. The end result is a more intelligent reservoir and increased production.

Roxar Fieldwatch includes a series of custom-built modules in the areas of flow assurance, metering and downhole production control.

Real-time and granulated data from multiple sources

Fieldwatch provides real time data without delays on a distributed system allowing for remote operations. Information from multiple instruments and sources are displayed on a dashboard giving complete overview of the wells and field from your work station. Granulated data allows for drilldown into real time data and a full instrument audit trail, including alarm occurrences, maintenance status, test information and comments on occurrences like power outages, NAS tests or other relevant information.



Roxar Fieldwatch is a modular software suite that provides high resolution real time data for all instruments in one distributed software solution.

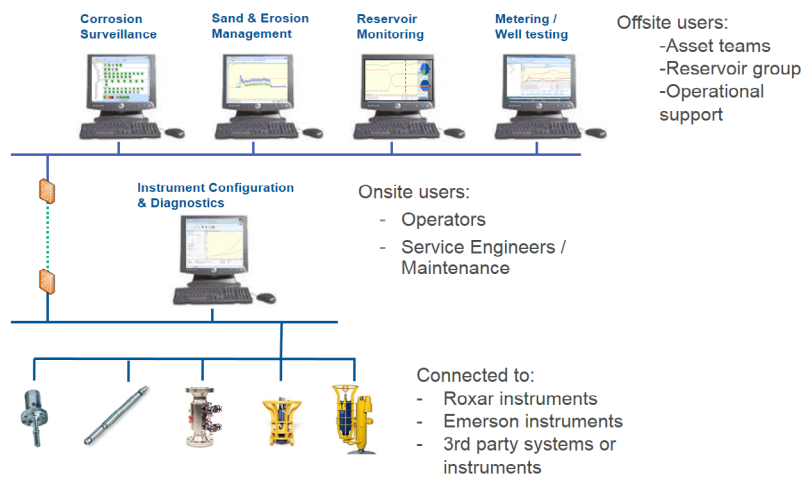
Reliable and validate-able data

Fieldwatch gives production and reservoir engineers better intelligence into production management and provides tools and the data to make informed decisions. Fieldwatch provides a secure platform for production and operational transparency by providing production and reservoirs engineers with the tools to validate data and automatically highlight reliability issues related to operations, like parameter changes, alarm handlings or environmental changes.

Reliable data from multiple sources in one solution makes it easier to spot trends, understand reservoir behavior, and increases confidence in decisions. Fieldwatch presents all data needed in one time/scale environment without compromising data resolution or speed of graph plotting and calculations.

Collaboration across disciplines

With its distributed and modular architecture, Roxar Fieldwatch enables easy remote access for all users who need access to detailed production data. The same detailed and dedicated views of data are given locally and remotely without compromising operational security. This provides operational transparency and enables better collaboration and easier communication between the local team and support teams at head office. Multiple users can access and work with data simultaneously, sharing trends and plots they find interesting with other users across disciplines.

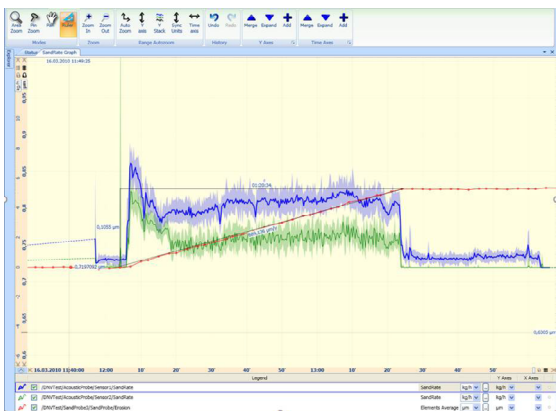


Roxar Fieldwatch provides one common software solution for all instrument and multiple users in different disciplines, enabling interdisciplinary collaboration and distributed operations.

Best plotting speed in the market and best interactive tool for data analysis

Making quick decisions and trying to match reality to theoretic forecasted production can be a challenge. Production or reservoir engineers can spend a lot of time finding, validating and preparing data. Fieldwatch eliminate the need to manually collect data from multiple sources and massaging them to match time/scale. With access to high resolution data without filters and compression, recalculating data based on different static parameters is also an easy task.

Fieldwatch database structure allows for easy maneuvering through the entire lifetime of the reservoir, making it easy to spot trends and abnormalities in historic data. Plotting the different production data in one graph view with a click of a button, without compromising speed or data resolution, represents how working with data should look like in the 21st century.



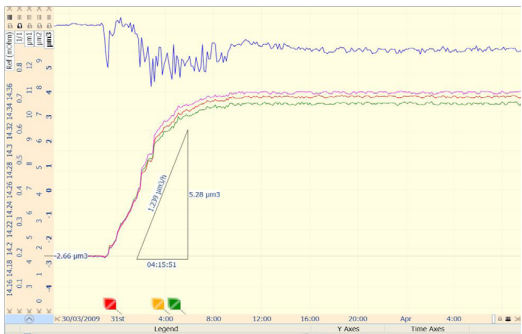
Roxar Fieldwatch allows you to trend and analyze large data sets from multiple sources without compromising plotting speed.

Flexible architecture - connectivity

Fieldwatch is a multiuser system with scalable client / server setup that can be distributed on several servers, workstations and networks. This enables seamless operation and collaboration across disciplines.

Fieldwatch enables remote instrument and production management with a complete overview of all instrument and sensor statuses for the field in one dashboard.

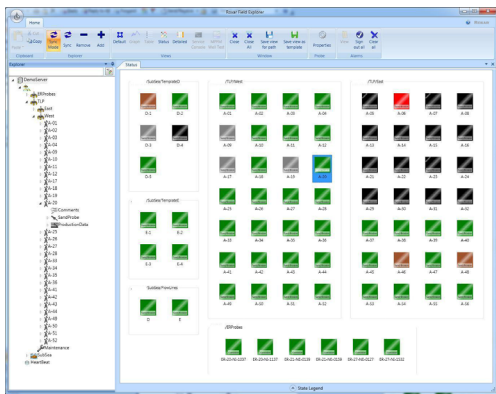
The flexible architecture allows for easier IT administration and reduced maintenance cost by having one system for multiple users, tasks and instruments without risk of data corruption.



Operational and instrument information available alongside measured data enables the data user to validate data in the same screen.

Instrument management

Fieldwatch serves as one platform for detailed configuration, analysis, service and diagnostics of multiple Roxar instruments. Fieldwatch Instrument Management provides permanent tracking of configuration, status legend, alarms and raw data for post-processing. It is also possible to configure third party Modbus or OPC instruments through dedicated screens, pre-configured based on the instrument's interface.



Complete overview of instruments on your field with advanced condition monitoring, alarm handling and complete status legend.

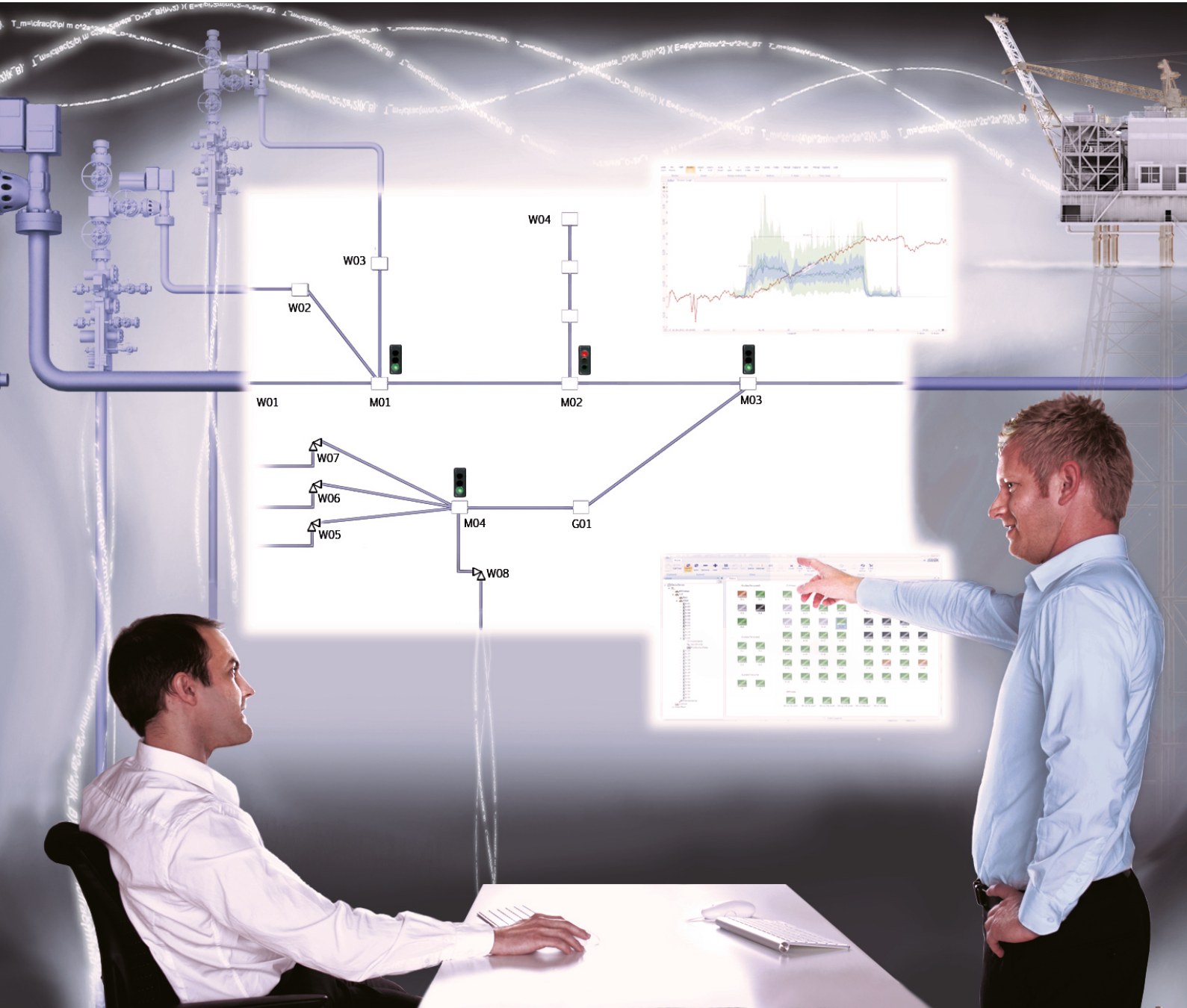
Get better confidence in your instrument investments by using the condition monitoring functionality in Fieldwatch. Fieldwatch provides an integrated way of performing condition monitoring and validation of multiple instruments installed in one or several fields. A traffic light based status overview screen consisting of all meters in the network can be configured as standard, indicating alarms and warnings with the instruments to enable quick identification of instruments with operational issues. Fieldwatch also offers advanced condition monitoring for Downhole or metering instruments based on conditions not monitored by the instruments, like historic, sequential or nerby measurements.

Fieldwatch Production Management Suite

- **Sand & Erosion Management**
 - Combine intrusive and acoustic sand instruments
 - Real-time analysis and early detection of sand
 - Virtual erosion sensors with model-based calculations of erosion
 - Reduced downtime & higher flow rates
 - Process Compensated Alarms
 - Compatible with 3rd party systems
- **Corrosion Surveillance**
 - Probe lifetime prediction
 - Complete asset overview with multiple instruments
 - 3D visualization of FSM non-intrusive corrosion monitoring
 - Compatible with 3rd party systems
- **Downhole (PT) Reservoir Surveillance**
 - Trend and analyze in multiple zones
 - Historical trends
 - Preform pressure buildup test
 - Well testing
 - Compatible with 3rd party systems
- **Well Performance, Integrity and Metering**
 - Production allocation calculations
 - Advanced condition monitoring
 - Well testing, audit trail and workflow support
 - Data post processing / reconciliation
 - Compatible with 3rd party systems

Fieldwatch technical requirements

- Supported protocols: Modbus TCP, CANOpen, Modbus RTU, OPC DA, and UA
- Minimum system requirements
 - Client: 1GHz processor, 2GB RAM, 2GB Free disc space, 1280x1024 resolution true color, Microsoft Windows 7 or newer (32 and 64 bit)
 - Server hardware requirements depends on system solution. Please contact your Fieldwatch Ambassador for a solution design. Supported Server OS is Microsoft Windows Server 2008 R2 SP1 or newer.



Fieldwatch Features

- Direct interface to Roxar and third party instruments
- Interface with third party systems like DCS, SCADA, historians, etc.
- Instrument configuration and management
- High resolution data storage – including low level instrument data (raw data)
- Continuous calculation of additional engineering parameters
- Dedicated visualization for specific data types
- Condition monitoring and Advanced condition monitoring
- Data re-processing
- Diagnostics
- Data validation
- Data filtering and conditioning
- Safe remote access, allows remote maintenance and diagnostics

System Architecture

Fieldwatch is a comprehensive Windows-based user interface and data management software for ensuring safe and reliable operations. The software is modular and is built up from three main components:

- **Fieldwatch Server** resides on the platform or facility and gathers, stores and distributes data from any upstream instruments like Multiphase Flow Meters, downhole gauges and other types of upstream sensors. The Fieldwatch Server is built using latest Microsoft.NET framework technology. Data is stored in a proprietary data format, specifically designed for handling large data volumes with ultra high performance. An interface from Fieldwatch Server to third party systems such as DCS, historian or subsea MCS is provided with Fieldwatch Server. The Fieldwatch Server can also be replicated to the enterprise network for easy access by approved users using **Fieldwatch Access Server**.
- **Fieldwatch Instrument Console** is the application that enables communication with each of the different types of field instrumentation. Each Roxar field instrument has its own unique Fieldwatch instrument console. Fieldwatch Server comes with integrated Fieldwatch Instrument Consoles.
- **Fieldwatch Explorer** is the specifically designed multiuser interface application that resides on workstations on the platform or facility and if desired, at the head office or other remote locations.

HA HIGH ACCURACY

m e a s u r e m e n t i n s t r u m e n t s

Our offering:

	Pressure Measurement		Level Measurement
	Temperature Measurement		Flow Measurement
	Marine Measurement & Analytical		Gas Analysis
	Liquid Analysis		Flame and Gas Detection
	Tank Gauging		Wireless Infrastructure
	Acoustic & Discrete		

www.high-accuracy.com

Head Office Roxar products:

Emerson
Roxar Flow Measurement AS
Tel: +47 51 81 88 00
E-mail: info.roxar@emerson.com
www.Emerson.com/Roxar

CIS
Tel: +7 495 504 3405

Europe
Tel: +47 51 81 88 00

North America
Tel: +1 281 879 2600

Middle East
Tel: +971 4 811 8100

Asia Pacific
Tel: +60 3 2177 4450

Australia
Tel: +61 8 9208 1600

Latin America
Tel: +55 21 2217 8600

©2017 Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Brand name is a mark of one of the Emerson Automation Solutions family of business units. All other marks are the property of their respective owners.

The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

The Roxar products are protected by patents. See <http://emerson.com/RoxarPatents> for details.