

Recommended oil and gas tools

Documenting process calibrators

Best suited for:

- Calibration and maintenance of process instrumentation and control systems.
- Sourcing, measuring and documenting virtually any process variable

Oil and gas applications: Pressure and temperature transmitter calibration; calibration and configuration of HART devices; documenting field calibrations for recall and upload



Pressure calibrators

Best suited for:

- Pressure calibration of transmitters, gauges, switches, and custody transfer meters
- Maintenance of almost any pressure device using pressure sourcing and milliamp measurements
- Calibrating P/I instruments with simultaneous pressure and current measurement

Oil and gas applications: Pressure measurements using internal sensor, measure mA while providing 24 V loop power



Infrared Cameras

Best suited for:

- Fast, non-contact identification, diagnosis, and documentation of potential problems through imaging of unexpected thermal signatures
- Reducing the need for unplanned maintenance and for confirming proper repairs

Oil and gas applications: Steam trap leakage, electrical panels, motors, tank level and sludge level indication, refractory, furnaces, reformers, transformers, and pumps



Vibration testers

Best suited for:

- Diagnosing machine faults to extend machine life and reduce costs
- Reducing unexpected serious failures to help prevent production stoppages that cut into the bottom line
- Giving maintenance staff time to schedule repairs and acquire parts
- Anticipating problem areas before failure

Oil and gas applications: Pumps, compressors, motors, fans, and blowers



mA Process clamp meters

Best suited for:

- Measuring 4 to 20 mA signals *without breaking the loop*
- Sourcing, simulating and measuring mA
- Sourcing, measuring DC voltage

Oil and gas applications: mA sourcing, simulation and measurement; loop calibration, maintenance and repair. Troubleshooting and commissioning analog I/O



Battery analyzers

Best suited for:

- Battery resistance, dc and ac voltage, dc and ac current, ripple voltage, frequency and battery temperature.
- Automatic or manual sequence testing of battery strings with automatic measurement storage
- Comprehensive logging

Oil and gas applications: Testing and troubleshooting and performance testing of individual stationary batteries and battery banks used in critical battery back-up applications



Handheld oscilloscopes

Best suited for:

- Signal waveform shape, amplitude, time and noise or distortion analysis
- Troubleshoot critical systems using an oscilloscope by identifying signal abnormalities or a change in state

Oil and gas applications: Motor controls, telemetry and cathodic protection systems



Earth ground testers

Best suited for:

- Diagnosing intermittent electrical problems related to poor grounding analysis
- Safety of personnel and proper operation of equipment
- Maintaining minimum resistance in the event of a large voltage surge or lightning strike
- Avoiding unnecessary downtime

Oil and gas applications: Corrosive soil identification for cathodic protection systems, grounding system interconnectivity/bonding



Dry-block calibrators

Best suited for: Calibrating temperature sensors, 4 to 20 mA loop calibration, and switch testing

Oil and gas applications: Provides stable temperature source for calibrating RTDs and thermocouples at custody transfer stations.



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Power quality analyzers

Best suited for:

- Finding power quality problems before they damage critical equipment
- Conducting load studies to reduce energy usage applications

Oil and gas applications: Generators, harmonics (electronics), load studies



Infrared thermometers

Best suited for:

- Gathering surface temperature readings in intrinsically safe environments
- Reducing the need for unplanned maintenance to correct previous repairs

Oil and gas applications: Heating, motors, HVAC, circuit breaker inspection



Clamp meters

Best suited for:

- Measure 1000 A ac or dc with fixed jaw to measure current in motors, vaults and bus bars
- Clamp around bus bars or conductors in service panels to measure loads and line frequency in circuits

Oil and gas applications: Pumps, compressors, motors, fans, and blowers



Insulation multimeters

Best suited for:

- Testing a wide range of insulation resistance and digital multimeter tests including simple spot checks to timed tests
- Troubleshooting and preventive maintenance

Oil and gas applications: Switchgear, motors, generators, electrical systems and cables; test voltages from 50 V to 1000 V (Insulation testers to 5 and 10 kV also available)



Visit www.fluke.com/oilandgas to learn more about Fluke's test and measurement tools for the oil and gas industry.



Digital Multimeters

Best suited for:

- Rugged, waterproof, dust-proof and drop-proof work in petroleum, chemical, or pharmaceutical environments
- Intrinsically safe DMM testing and troubleshooting

Oil and gas applications: Switchgear, motors, variable speed drives, generators, electrical systems and cables



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Fluke. Test and measurement solutions for the oil and gas industry.

Fluke tools can help you maintain operational reliability and environmental safety

Fluke understands the oil and gas industry faces a range of challenges from dynamic market fluctuations to multiple stringent regulatory requirements. Downtime and inaccurate measurements can cost millions. The professionals that work in the oil and gas industry know it is critical to maintain stable, continuous operations without sacrificing safety.

Onshore or offshore, upstream to downstream, Fluke makes reliable tools that professionals in the oil and gas industry can count on for accurate and consistent measurements. Tools designed for the demanding environment, the people who work there, and the challenges they face every day. With 65 years as the industry leader, they can feel confident that Fluke has the solutions they need to keep the oil and gas industry flowing. **See our full line of innovative products at www.fluke.com**

Maintenance Superintendent

Focus:
Downtime prevention, safety regulations, budget goals

- Issues faced:**
- Ensuring uptime is continuous and predictable
 - Safety of personnel and the environment
 - Maintaining high product quality
 - Staying within budget

Fluke solutions:

- Process Calibration Tools
- Electrical Test Tools
- Infrared and Vibration Tools

Instrument Technician

Focus:
Equipment and systems testing, maintenance and repair

- Issues faced:**
- Preventing downtimes
 - Safety systems testing
 - Providing immediate response and repair during process interruptions

Fluke solutions:

- ★ Digital multimeters
- Documenting process calibrators
- ✦ Dry-block calibrator
- Handheld oscilloscopes
- ⌘ Loop calibrators
- ▼ Pressure calibrators

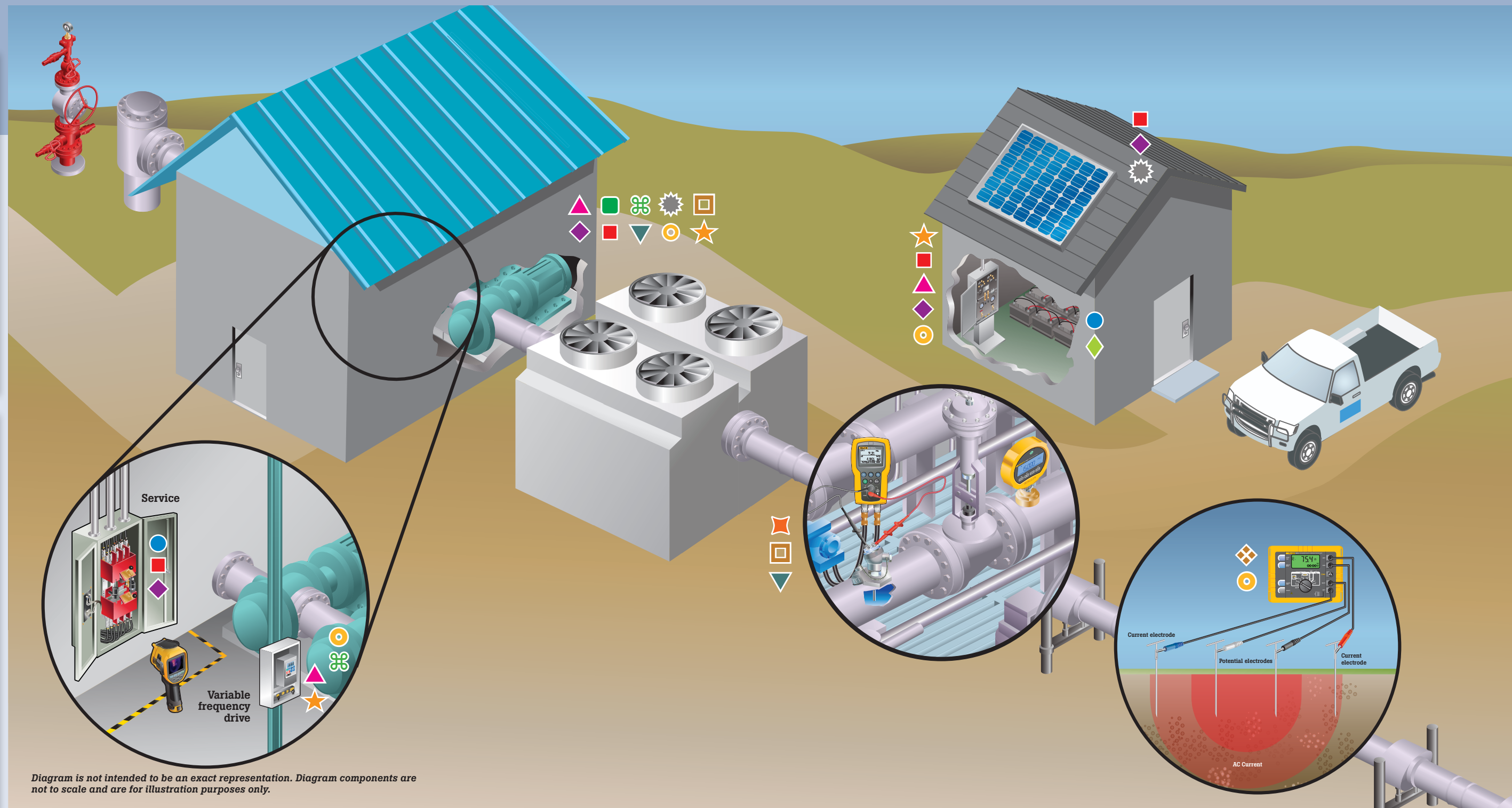


Diagram is not intended to be an exact representation. Diagram components are not to scale and are for illustration purposes only.

Mechanic/Millwright

Focus:
Installation, assembly, and preventive maintenance

- Issues faced:**
- Meeting equipment standards and specifications
 - Effectiveness of repairs (valve repacking)
 - Assembling machinery
 - Determining optimal machinery placements

Fluke solutions:

- ◆ Infrared cameras
- Infrared thermometers
- ⌘ Loop calibrators
- Vibration testers

Electrician

Focus:
Electrical installation, maintenance and repair

- Issues faced:**
- Delivering efficient, consistent and quality power from utility or generation to process systems
 - Maintaining safety and high energy systems
 - Controlling efficient breakers and motors

Fluke solutions:

- ▲ Clamp meters
- ✦ Earth ground tester
- ◆ Infrared cameras
- Infrared thermometers
- ⚙ Insulation multimeters
- Power quality analyzers
- ⌘ Loop calibrators
- Vibration testers
- ◆ Battery analyzers

Measurement Technician

Focus:
Calibration of flow meters involved in custody transfer

- Issues faced:**
- Accurate measurements of flow
 - Calibration of flow instruments
 - Repair verification

Fluke solutions:

- Documenting process calibrators
- ✦ Dry-block calibrator
- ⚙ Insulation multimeters
- ▼ Pressure calibrators

Fluke oil and gas test and measurement tools

Learn how Fluke's test and measurement tools can save you time and money while increasing efficiency and safety at www.fluke.com/oilandgas Based on you. Built by Fluke.

Process Calibration Tools						Electrical Test Tools							Infrared and Vibration Tools		
Documenting process calibrators	Pressure modules	Pressure calibrators	Loop calibrators	Field metrology well	Handheld dry-well	Power quality analyzers	Handheld oscilloscopes	Insulation tester	Earth ground tester	Digital multimeters	Clamp meters	Battery analyzers	Infrared cameras	Infrared thermometers	Vibration tester
754	750P	721	709H	9142	9100S	435	190 Series II	1587	1625-2	28 II EX	376	BT510	Ti400	568EX	810