

RESERVOIR ANALYSIS

PERFORMANCE . QUALITY . SAFETY

Quizix® PUMPS FOR CORE FLOW

Quizix Precision Pumps are the industry standard for core flow studies by operators, service companies and research laboratories. These positive displacement pumps provide pulse-free continuous flow at extremely accurate flow rates, pressures or constant volume operating modes.

A wide range of flow rates, pressure configurations and available options allow Quizix pumps to meet virtually any experimental requirement from bench top to pilot scale. Quizix pumps are designed to handle slurries, pastes, liquids or gas flows, providing unique capabilities not found in other positive displacement pumps.

QX SERIES pumps deliver precise, pulseless metering with versatile control by time, pressure, flow rate, volume, or events. Their compact dual-cylinder design offers high performance in a reduced footprint, achieving pressures up to 20,000 psi and flow rates up to 500 mL/min.



Q5000 SERIES pumps deliver precise, pulseless flow and accurate pressure control for demanding applications. They are ideal in handling aqueous solutions, brines, hydrocarbons, refined oils, and gases including CO₂, with pressures up to 20,000 psi and flow rates up to 60 mL/min. Configurable cylinders provide flexibility, with optional high-temperature capability up to 545 °F (285 °C).



Q6000 SERIES pump systems are large volume, high flow pumps that are ideal for handling true gases, viscous slurries, or almost any fluid requiring higher flow rates. The Q6000 offers pressures up to 30,000 psi and flow rates up to 400ml/min. Multiple configurable cylinders provide flexibility to meet your application requirements up to temperatures of 545 °F (285 °C).



PUMPWORKS SOFTWARE

Operating from the proprietary PumpWorks software, there are 14 standard modes of operation and a sequencer function for automated response to internal or external system functions. PumpWorks easily interfaces to other Data Acquisition and Control programs via an embedded Open Platform Communications (OPC) server. Also included are ramping procedures by time, pressure, flow or volume.

PHASE BEHAVIOR

3000 PHASE BEHAVIOR SYSTEMS provide essential data on hydrocarbon reservoir fluid properties and phase behavior, enabling accurate reservoir characterization, production planning, and recovery forecasting. This advanced, mercury-free system measures hydrocarbon properties and phase behavior, and saturation pressures with precise bi-directional constant pressure control. Featuring computer-based software for streamlined setup, testing, and data acquisition, plus modular options for expanded capabilities, it delivers reliable performance for diverse laboratory needs.



2331 DIGITAL GASOMETER provides accurate atmospheric gas measurement in the PVT laboratory with minimal operator involvement. Designed for precision and ease of use, these digital instruments feature two volume chambers: 1,000 cm³ and 2,000 cm³ offering a combined capacity of 3,000 cm³ for flexible operation. The measured gas remains in its separate condition such that further gas analysis is possible.



2353 EQUILIBRIUM FLASH SEPARATOR tests simulate the gas and liquid separation of a reservoir fluid at surface conditions. Results generated include gas/oil ratio, formation volume factor, and evolved gas properties. This data is often used in an EOS simulator to optimize separator conditions for maximization of oil production. The Flash Separator can be supplied as a complete system or as the separator module only.

ANCILLARY EQUIPMENT Chandler Engineering manufactures and supplies a range of additional items required for the efficient operation of a full PVT laboratory, whether research or a service laboratory, including items such as Recombination Cells, Sample Conditioning Systems, Viscometers, Sample Cylinders, Coil Densitometer etc.



CUSTOM CORE FLOOD SYSTEMS

CUSTOM CORE FLOOD AND EOR

Based on our popular FRT platform, these systems are easily customized to meet your application requirements. Simplified flow paths, low dead volumes, multi-phase or sequential flows, and many available options provide an easy to use and easy to maintain functionality. Core Flood Systems are designed to meet specific applications as required by laboratories' individual needs.



CORE ANALYSIS SYSTEMS

Single and multi-phase core flood systems for permeability, relative permeability, and EOR studies. Customized to application requirements, these systems use Quizix precision pumps for open or closed-loop flow. Options include core holders (Hassler, bi-axial), accumulators, dP transducers, and oven enclosures. Features include heating to 350 °F (177 °C), CO₂ / liquid separation, ergonomic design for easy access, and a unique valve manifold to minimize dead volume.

MULTI-PHASE CORE SYSTEMS

Open or closed-loop core flood systems for steady-state and unsteady-state testing with 1, 2, or 3-phase flow options. Rated for pressures up to 10,000 psi and temperatures to 350 °F (177 °C), these systems feature an ergonomic oven design for easy component access and offer core holder configurations including Hassler, bi-axial, and tri-axial, with or without pressure taps.



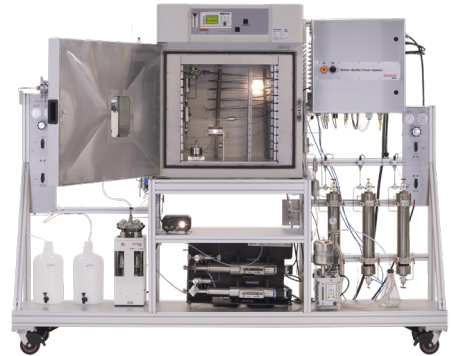
6100 FORMATION RESPONSE TESTER

Automated system for evaluating fluid treatment effects on core permeability and formation damage. Supports forward, reverse, and across-the-face flow paths for up to five fluids in any sequence. Available with stainless steel or Hastelloy wetted components for compatibility with corrosive liquids. The 6100 handles temperatures up to 350 °F (177 °C) and pressures up to 6,000 psi. Fully automated control and data acquisition enable programmable flow regimes at specified rates, temperatures, and pressures, with permeability comparison across a wide range of conditions.



MINIMUM MISCIBILITY APPARATUS

MMPA systems accurately determine minimum miscibility pressure for gas injection, which can in turn help reduce operational costs and improve efficiency to the operation of the well. Equipped with Quizix precision pumps and an innovative infinite-volume gasometer, it delivers exceptional pressure and volume control, automated operation, and visual transition phase recording for reliable, unattended testing.



FOAM RHEOMETER

FOAM RHEOMETER measures the rheological properties of foamed fluids under high-pressure, high-temperature conditions, simulating foam fracturing and acidizing processes. The automated system controls foam quality, shear rate, shear stress, test time, and temperature, with a high-pressure viewing cell and imaging software for detailed analysis. Rated for pressures up to 5,800 psi (400 bar) and temperatures to 350 °F (177 °C). The system offers shear rates from 50–1,300 s⁻¹ and shear stress up to 1,300 dyne/cm².





HISTORY


Since 1949, Chandler Engineering has been a trusted leader in delivering high-quality measurement instruments for the Oil & Gas industry. As the industry's largest instrument supplier, Chandler Engineering continues to drive innovation, helping customers enhance the efficiency and productivity of their drilling and production operations.

At Chandler Engineering, we are united by our commitment to each other and the shared values that define our work. We promote unity, honor, and belonging within our company and extend that care to the communities we serve. Our dedication to innovation and excellence in energy solutions is driven by our desire to leave the world a better place for our families and future generations.



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