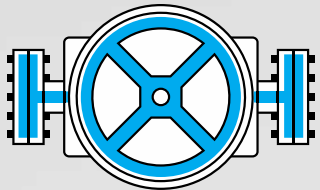


DOWNHOLE MONITORING SYSTEM: **GAS LIFT OPTIMIZATION**



GAS LIFT



PCP



SRP



KEY BENEFITS

- Real Time Life of Well Solution
- Real Time Pressure & Temperature
- Real Time Gas Re-Injection Optimization
- Real Time Offset Frack Monitoring
- Option to Install Concentrically inside tubing
- Option to Install on Carrier or Clamp
- Economic, Multi-Well Versatility
- In-line Multiple Gauge Option

SYSTEM SPECIFICATIONS

PRESSURE RANGE INTAKE/DISCHARGE	0-16 KPSI	VIBRATION RESOLUTION	0.055G
PRESSURE ACCURACY	±0.1% FS typ.	SAMPLE RATE	1/10TH SEC.
PRESSURE RESOLUTION	±0.1 PSI typ.	TYPICAL DATA CAPACITY	2 YEARS, SAMPLING EVERY 30 SEC.
MAX TEMPERATURE	165°C / 330°F	CONTROLLER INTEGRATION	MODBUS 485, 232, ANALOG & DIGITAL
TEMPERATURE ACCURACY	±1.0°C	INSTALLATION	ABOVE OR BELOW PUMP
TEMPERATURE RESOLUTION	±0.1°C		
VIBRATION	0-18G		
VIBRATION ACCURACY	±1%		

PROBLEMS

FACED IN GAS LIFT APPLICATIONS

Excess gas injection

Lack of knowledge of downhole conditions

Inability to see changing well conditions

FACED WHEN FRACTURING NEW WELLS

Fracking into offset wells

Inability to accurately detect well to well communication

Loss of productivity due to excess production from a single zone by multiple wells

SOLUTION

- ✓ Using downhole gauge to determine optimum gas injection rates
- ✓ Using real time reservoir pressure and temperature data to optimize production and reservoir planning
- ✓ Monitoring downhole pressure and temperature allows the end user to optimize injection rates and adjust to changing downhole conditions
- ✓ Installing gauges in offset wells gives the ability to detect the pressure in currently producing wells
- ✓ Utilizing downhole pressure data to better understand well to well communication
- ✓ Installing downhole gauge to reveal multi-well production from a single zone

RESULTS IMPROVING ECONOMICS BY EMPOWERING OPTIMIZATION

↑ RUNTIME

↑ PRODUCTION

↓ COSTS