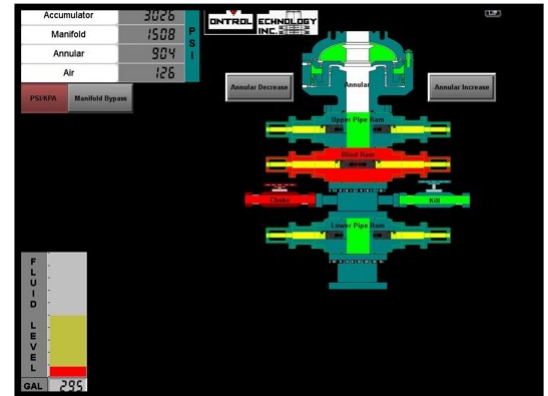


## System Specifications

- -40°C to +55°C (-40°F to 131°F) storage temperature rating
- 12" - 21" Touch Screen
- 24V system
- Up to 200 levels of internal security to prevent system changes from unauthorized personnel
- Open Source System

## Visual

- Designed, configured, programmed by our in-house automation department
- Configurable for current and future requirements
- Can be serviced, updated and changeable on site
- Industry standard components for easy supply and service
- All panel control functions require two handed operation
- Stack configuration can be changed on site by driller
- Displays all functions in real time
- Displays system pressure
  - ◇ Accumulator, manifold, annular, diverter, shear ram, blind/shear ram, pipe ram, HCR air, nitrogen
- Displays BOP Control Functions from accumulator unit
- Displays Hydraulic Fluid Level
- Visual Alarms—alarms have configurable set points
  - ◇ High/ Low Accumulator Pressure
  - ◇ High/ Low Air Pressure
  - ◇ High/ Low Fluid Level (also audible)
  - ◇ Extended Pump Run
  - ◇ Power Fail
- Information can easily be transferred over to any compatible windows-based devices (laptop, tablet, smart phone) should the touchscreen become inoperable or damaged



## Optional Recordable/ Tracking of Data

- Provide event logs or any change in status
  - ◇ Sequentially records all events that transpired during the operation of system
    - ◆ Timestamps all data
    - ◆ Annular/Ram open close
    - ◆ Valve open close
    - ◆ Ram counts
    - ◆ Cycle counts
    - ◆ Pressure test recording
    - ◆ Function testing
    - ◆ Logging of all system alarms
    - ◆ Logs pressure and pressure trends graphically
      - \* Accumulator, manifold, annular, diverter, shear ram, blind/shear ram, pipe ram, HCR, air nitrogen

Pipe Ram	
Pipe Ram Serial Number =	Pipe Ram Function History
Pipe Ram Size =	Activation Time Message
Pipe Ram Size Display On Main Screen	05/25/2016 10:43:34 Pipe Ram Function Pressed
ON OFF	05/25/2016 09:24:21 Pipe Ram Closing Time = 00:00
Pipe Ram Last Close Time = 00:11	
Pipe Ram Warning Set At =	
Pipe Ram Count Alarm Set At =	
Upper Pipe/Slip Ram Count = 1	
Pipe Ram Count Display on Main Screen	
ON OFF	
Exit	

- ◆ Hydraulic Fluid Level
  - ◆ Pump run times
  - ◆ System settings changes
  - ◆ System reports can be configurable to customer requirements
- ◇ Operator can add notes to any event
  - ◇ 90 days of data storage minimum (additional storage available if required)
  - ◇ Can be programmed to satisfy local jurisdiction standards
  - ◇ Can be installed on existing accumulator units without PLC controls



### Additional Capabilities

- Remote access capabilities from anywhere in the world. (Internet must be available on site)
  - ◇ Visual is in real time. Mirror image of drillers panel
  - ◇ Data is read only
  - ◇ Reports can be accessed and stored remotely
- Mirror drillers screen at accumulator and /or client shack
  - ◇ Data is read only
- Monitor Remote Camera(s) (i.e. at accumulator unit, tool push shack, consultant)
- Flow Meters to measure actual delivered volume to BOP (annular, rams, HCR) ensuring full closure or alarm if leak detected.

