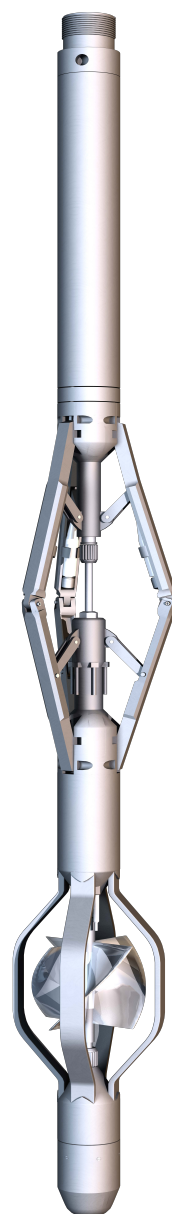


## **DOWNHOLE FLOWMETER with ARRAY WHU**



Real-time or autonomous measurement of gross rate, array water holdup, temperature, and pressure downhole where the chain of tools is suspended under an artificial lift above each perforation interval.

Spinner Flowmeter	
Threshold	0.1 ft/min (1.8 m/hr)
Detectable flowrate range	19-7,550 bpd (3-1,200 m3/d)
Bi-directional measurements	Yes
Impeller OD	2.4 in (60 mm)
Arms OD	3.2 in (80 mm)
Capacitance sensor	
Water cut	0-100%
Accuracy	±1%
Pressure gauge	
Resolution	0.015 PSI
Accuracy	± 0.02%
Type	Sapphire
Temperature gauge	
Resolution	0.003°C
Accuracy	± 0.01°C
Type	Platinum/Exposed
General specifications	
Maximum operating pressure	11,600 PSI (80 MPa)
Maximum operating temperature	150°C (302°F)
Tool length	3.6 ft (1.1 m)
Tool OD (housing)	1.5/1.65 in (38/42 mm)
Tool weight	12.8 lbs (5.8 kg)
Connections	15/16 SR
H2S resistance	6% standard (25% optional)
Operational time	388 days (1 sec sample rate)
Sampling rate	0.25-125.0 sec
Built-in memory	4 Gb
Surface read-out / Memory	Both



## Applications

- Accurate zonal fluid flowrate and phase measurement
- Pressure and temperature measurement at high accuracy
- Reserves allocation

## Advantages

- High accuracy array WHU module covers 360° of the wellbore
- Wide range of flow rate measurement
- Bi-directional spinner for crossflow determination
- Compact design
- Versatile and cost-effective solution
- Integration to SCADA or fully autonomous

