

HFP-2375 Data Sheet

Heat Pulse flowmeter probes are used to measure water movement up and down the borehole from which fracture-specific flow intervals and rates can be derived. The unique design permits low flow rates to be resolved.



Heat pulse flow meter fitted with centralisers and deviation collar.

A grid heats ambient fluids and if there is up or down flow in the well, this heated fluid mass is detected at thermistor sensors (2 cm from grid) allowing the time (and flow rate) through a known x-sectional area to be recorded by an amplifier. A complete flow measurement is made when the time is accurately measured from when the heat grid is fired to when a peak temperature change, carried by the flow, is detected by either the upper or lower sensor.

MATRIX Heat software is required for recording the data from the HFP-2293 as it is impressive the probe is stationary

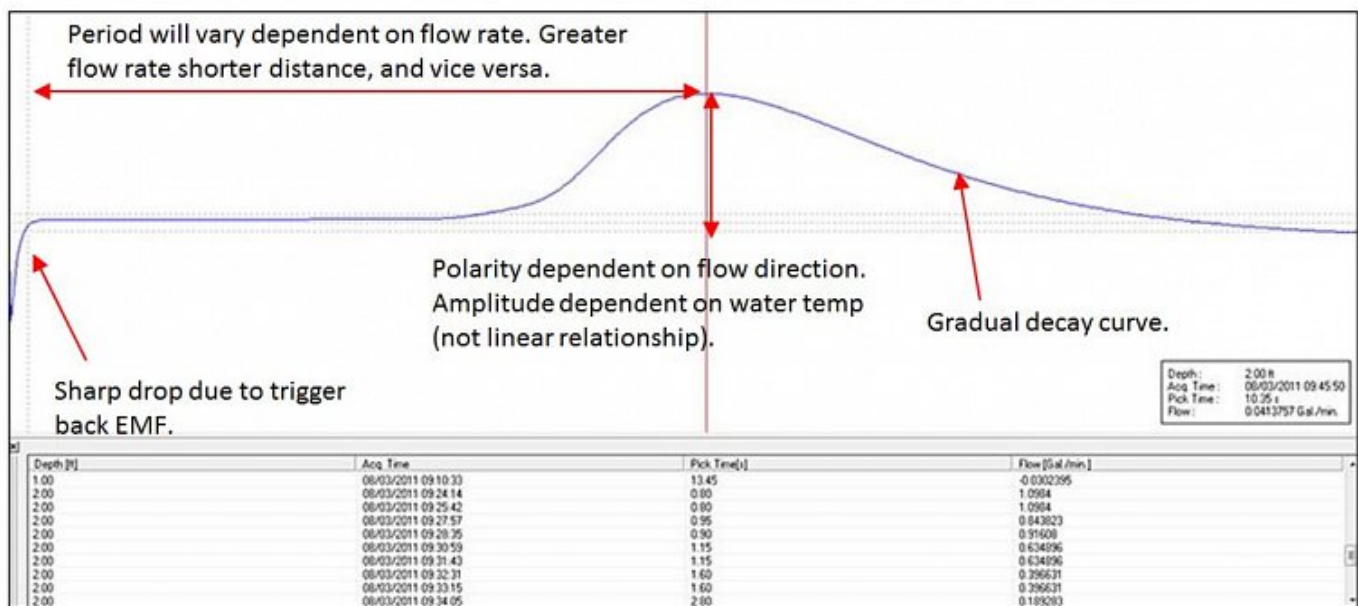
during the measurement procedure in order to accurately measure the flow rate.

Although the HFP-2293 cannot be stacked it is necessary to use a calliper probe to accurately measure the diameter of the borehole. In some instances an acoustic televiewer can be used in place of a standard calliper, but not in all situations.

The Heat Pulse flow meter requires centralisers and a deviation collar to ensure flow is directed through the measurement chamber. A variety of centralisers are supplied with the tool for common borehole diameters (20cm, 15cm & 10cm diameters).

Applications

- Measure interval and/or fracture-specific low flow rates
- Identification of hydrostratigraphic units
- Determine transmissivity and hydraulic head
- Confirmation of predicted transmissive zones in open hole



Typical station record from a the Heat Pulse flow meter. Image courtesy of Mount Sopris Instruments.

Operating Conditions

W - Water ?

M - Mud

D- Dry

S - Steel ?

P - PVC Borehole ?

UC- Uncased ?

*Centralization is required

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	122cm x 4cm x 4cm	5.5kg

Technical Specifications

Sensor:	Two thermistors.
Measuring Range:	0.113 lpm to 3.785 lpm (0.03 gpm to 1.0 gpm).
Measuring Range:	0.046 m/min to 3.962 m/min (0.15 ft/min to 13 ft/min).
Accuracy:	5% midrange to 15% extremes.
Resolution:	5%.