

MAXWELL PECT

IN-SERVICE PULSED EDDY CURRENT INSPECTION SYSTEM



PECT instrument, showing data acquisition tablet computer that is permanently attached to a data acquisition and pulse generating unit. Instrument operation is from a touch screen.



Four standard probes: small, medium, large and extra-large, each optimized for a specific lift-off range. The software assists the operator to select the best probe for each application



PECT instrument, showing data acquisition tablet computer that is permanently attached to a data acquisition and pulse generating unit. Instrument operation is from a touch screen.



Transport cases for PECT instrument, chargers and batteries (left) and cables and sensors (right)



SPECIFICATIONS - HARDWARE

Standard set	1. One PECT instrument: data acquisition unit permanently connected to a TA10 Durabook data acquisition computer 2. Four standard probes 3. Two signal cable, each 8m long, 4. Two batteries for PECT instrument, 5. Three batteries for data acquisition computer, 6. Two battery changers and adapters
Optional items	7. 40m extension leads 8. Splash zone probes, 3m water depth, with 50m umbilical (can be extended to 150m) 9. Underwater probes, 30m depth rating 10. Underwater probe, depth rating to 1000m.
Data acquisition computer	DARABOOK TA10 10.4" Touch screen with LED backlight Sunlight Readable Display; Ambient Light Sensor; screen protector. Navigation keypad and quick keys 8GB memory, 250 GB SSD
Standard probes	Four standard probes, Nominal lift-off ranges: 0-25mm; 25mm-75mm; 40mm-125mm and 75mm-250mm. Probe selection is automated at inspection set-up.
Batteries	Operation requires a first set of two batteries for data acquisition computer and one heavy-duty battery for pulse generation. Typical battery life: 8 hours A standard set includes a second set of batteries which can be recharged indoors with two external charges. Batteries are hot-swappable.
Data storage	All PECT signals a fully stored in data files for verification purposes
Software	Data capture software enables quick generation of field reports PC-based software for offline data verification and reporting
Communication	Wi-Fi, Bluetooth®, USB 3.0 (x2)
Environment	IP 65 Salt and Fog resistant Operating Temperature 0°C to +40 °C Relative humidity < 93% Atmospheric pressure 70 – 105 kPa
Compliance	CE, FCC Part 15B
Transport of standard set	Two Explorer cases 5823, each LxWxH = 67cm x 51 cm x 26cm. Weight 23 kg each.
Transport of 25m extension lead	One Explorer cases 5823, 67cm x 51 cm x 26cm. Weight 15 kg. Cable is configured in a figure of eight.
Transportation splash zone probes	One Explorer case, 7630, each LxWxH = 86cm x 56 cm x 36cm Weight at 50m umbilical length: 31 kg
Dimensions PECT instrument	30cmx 15cm x 22cm
Weight instrument	7.8 kg including batteries and data acquisition computer The instrument is provided with 2 hoisting lugs

SPECIFICATIONS - INSTRUMENT OPERATION

Selection of measurement parameters	Probe selection and measurement parameters are automatically set at start of an inspection using test measurements
Data storage	All PECT signals a fully stored in data files for verification purposes
Software	Data capture software enables quick generation of field reports PC-based software for offline data verification and reporting
Data collection speed	Typical recording speed (second per reading): 3mm< WT ≤12mm 0.5s 12mm< WT ≤25mm 1s 25mm< WT ≤50mm 2s Note: the measurement time depends on a number of parameters that are hard to quantify, such as pipe vibration.
Scan mode	Data can be recorded point-by-point or in scan mode. The scan mode operation is designed not to deteriorate the reliability of the PECT data.

SPECIFICATIONS - TYPICAL PERFORMANCE PARAMETERS

Wall thickness range	0-50mm steel
Maximum lift-off range	0-250mm for WT ≤ 15mm 0-150mm for 15mm < WT ≤: 30mm 0- 60mm 30mm < WT ≤: 50mm
Minimum pipe diameter	0mm insulation: 2" (50mm) 50mm insulation: 3" (75mm)
Insulation sheeting	Aluminum and stainless Performance on galvanized (magnetic) sheeting depends on its properties
Footprint diameter	Typically 1.5 times the thickness of the insulation, with a minimum of 25mm
Typical accuracy of the average wall thickness in the footprint	±10%



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