

**DPI 314**



## Engine Pressure Ratio Test Set

- High accuracy
- Flightline rugged construction
- Dedicated EPR user screen
- Pressure and vacuum hand pump
- Twin channel inlet and exhaust
- 12 month re-calibration interval
- Leak test screens



# DPI 314

## Air Data Test System

The Druck DPI 314 engine pressure ratio test set is a solid state, portable pitot static tester specifically designed to test EPR engine mounted transmitters.

The DPI 314 is housed in a rugged polyethylene moulded case weighing just 15kg which contains a multifunction, task oriented display and integral pressure/vacuum generation. The displayed parameters are shown on a bright back-lit LCD panel with simultaneous viewing of inlet-exhaust-ratio-time available. The test parameters are simulated by a purpose designed hand pump with fine adjustment and vent valves for let-down at test completion. Twin output connectors are provided via AN4 male fittings complete with mating 2m hoses.

The unit is externally powered by either ac multi-voltage, multi-frequency or 28 Vdc.

Druck silicon sensors are employed which are of solid state construction and offer precision measurement with a high overload capability. Even fast transients will not damage the instrument and the stability of the sensors and electronics enable a re-calibration interval of 12 months.

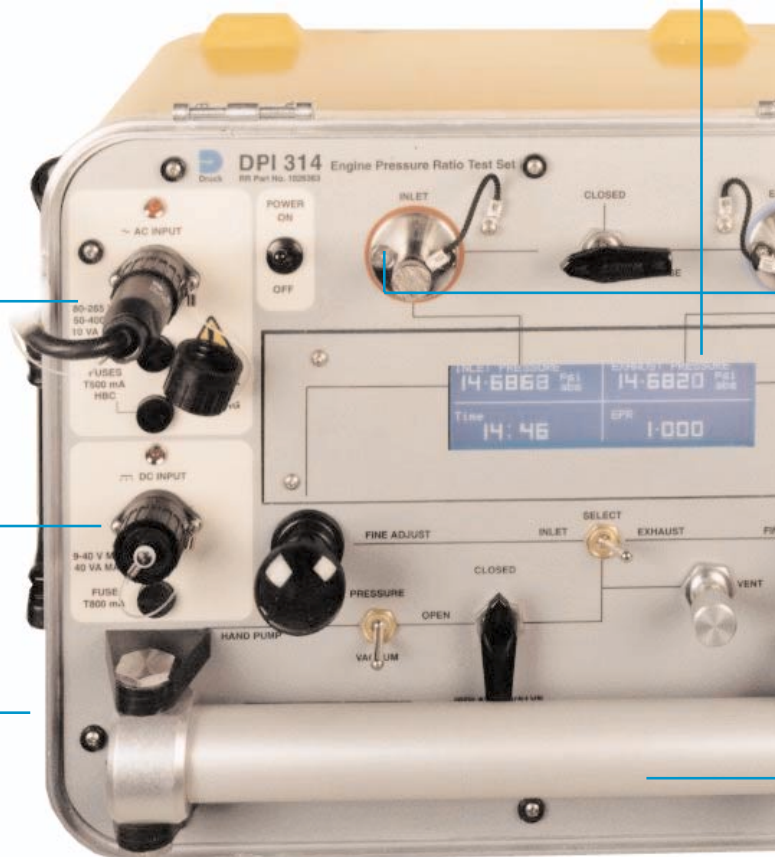
The display screen is user programmable by removal of the front cover. This enables a variety of alternative screens to be used. Please refer to the Druck DPI 145 datasheet for further examples and details.

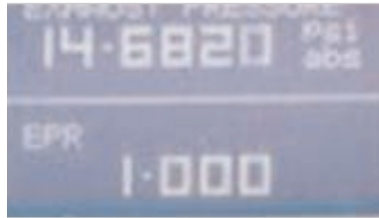


Wide range ac power capability

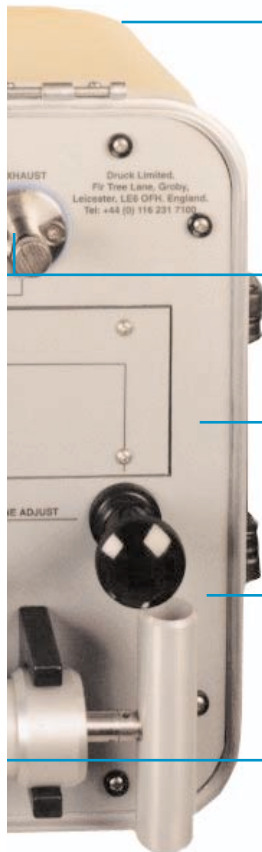
dc power also available

Weatherproof front panel assembly





Multifunction, task oriented display readout for up to 4 parameters simultaneously



Custom designed lightweight case (15kg)

Inlet and exhaust test ports colour coded for safety

Removable cover for access to programmable display

Re-calibration control. 12 month interval recommended

Manual hand pump for inlet and exhaust settings

## STANDARD SPECIFICATIONS

Parameter	Operating Range	Resolution	Accuracy
Inlet Sensor Range	0.5 to 20 psi abs (35 to 1380 hpa)	0.001 psi (0.01 hpa)	± 0.003 psi (0.2 hpa)
Exhaust Sensor Range	0.5 to 40 psi abs (35 to 2760 hpa)	0.001 psi (0.01 hpa)	± 0.005 psi (0.35 hpa)

### Ratio

The ratio  $\frac{P_{EX}}{P_{IN}}$  is displayed to 3 decimal places.

### Pneumatic Supplies

Integral pressure/vacuum pumps complete with fine adjustment, capable of generating supply rates for inlet and exhaust valves.

### Scaling Factors

psi standard. 24 different scales under set-up, user selectable.

### Overpressure

1.25 x FS value with negligible calibration change.

### Calibration Stability

12 month recalibration recommended.

### Re-calibration

Simple keypad instruction. Use of primary standard pressure reference is recommended, e.g., Ruska model 2465 Deadweight Tester.

### Display

39 mm x 132 mm LCD graphics panel. 240 x 64 pixels back-lit.

### Response

2 readings per second display value update.

### Power Supplies

AC 90 - 126V, 47 - 440 Hz

AC 207 - 265V, 47 - 63 Hz

DC 9 - 32V reverse polarity protected.

### Sealing

Weatherproof in operating mode (lid removed).

### Conformity

EN61010, EN50081-1, EN50082-1, 97/23/EC  
CE marked.

### Temperature Range

Operating: 0 to 50°C

Storage: -20 to +70°C

### Humidity

0 to 95% non-condensing.

## Physical Specification

### Weight

15 kg

### Dimensions

340 x 420 x 340 mm (13.4" x 16.5" x 13.4")

### Case

Polyethylene moulded, colour yellow. Removable lid with storage.

### Pneumatic Connections

AN4 colour coded with mating 2m flexible hoses.

### Pressure/Vacuum Supply

Integral pump to supply inlet and exhaust valves with fine adjustment.

### Power Fail Protection

Manual let down feature provided.

### Self Test

Integral test routines and reporting for electrical faults.

### Accessories

The DPI 314 is supplied complete with 6m ac and dc power cords, 2 hoses (6m and 12m long), calibration certificate and user reference handbook.

## Engine Pressure Ratio Test Set

### CALIBRATION STANDARDS

Instruments manufactured by Druck are calibrated against precision calibration equipment traceable to international standards.

### ORDERING INFORMATION

Please state the following:-

1. DPI 314
2. Any special requirements

### RELATED PRODUCTS

With a focus on pressure measurement technology, Druck has developed a comprehensive range of instruments covering all aircraft pitot static requirements, ranging from single channel leak testers through to fully automated and remotely operated Air Data Test Systems.

In addition, the equipment available from Ruska, a Druck Group company, provides both laboratory air data test systems and world-class primary standards used for routine calibration and certification of high accuracy instruments such as the ADTS series.

#### Air Data Test System

The ADTS 530 is a compact, rugged and self-contained unit for leak testing, functional checks and fault finding to RVSM compliant standards.

- Dual channel, altitude/airspeed
- Integral electrical pumps
- Programmable aircraft limits
- Protection for aircraft instruments



#### Air Data Test System

The ADTS 505 is a compact, portable Air Data Test Set ideal for civil aircraft applications.

- Full automatic control
- High accuracy, RVSM compatible
- Rugged flightline construction
- Built-in pressure/vacuum pumps



#### ATE Air Data Test System

The ADTS 401 and ADTS 405 are fully programmable twin channel Ps and Pt pressure control systems, ideal for ATE.

- RVSM compliant accuracy
- Civil and military specifications
- Automated operation
- Emulation of other ADTS



#### Flightline Test Set with remote control

Military approved, the ADTS 405F Flightline Air Data Test System is suitable for use with all types of aircraft. It features a hand-held programmable remote control unit for cockpit based operation.

- High accuracy, RVSM compatible
- Civil and military specifications
- Integral pneumatic supplies
- Single operator, ground or cockpit



#### Calibrators and Pressure Sensors

Druck offer a complete range of precision calibrators for field, workshop or laboratory use. These include primary and secondary pressure standards from Druck companies, Ruska and Pressurements. Druck also manufacture a wide range of pressure transducers and transmitters for ground flight test and flight qualified applications.

Some examples are shown. Further information and datasheets are available on request.



**Continuing development sometimes necessitates specification changes without notice.**

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