

# DPI 330/335 Series

## Portable High Pressure Hydraulic Calibrators

- High accuracy 0.025% FS
- Generates pressures up to 10,000 psi
- Dual pressure and electrical readout
- Thermal compensator for high speed stable control
- Unique vacuum priming of hydraulic system
- RS 232 interface and documenting versions

The DPI 330 Series is designed to make the calibration of hydraulic systems and instrumentation quick and simple. Two versions are available, the DPI 330 which is the standard model with RS 232 interface and the DPI 335 which has full documenting capability.

These self-contained portable calibrators provide unparalleled accuracy and performance. Hydraulic pressures up to 10,000 psi can be generated quickly and easily with excellent setpoint control.



## Unique priming system

The DPI 330/335 uses a unique priming system to conveniently fill the hydraulic system under test. The pressure/vacuum selector valve, combined with the priming pump, first evacuates the system and then fills the system with fluid from the reservoir and generates the initial pressure. Once the system is primed, any desired pressure can be easily set using the pressure pump and volume adjuster.

## Excellent control stability

The thermal compensator eliminates adiabatic thermal effects which are generated by pressure changes within the hydraulic system. This innovative feature holds the generated pressure steady while a nudge facility allows the exact pressure to be set. Overall test/calibration time and precision is significantly improved.

## Dual channel display

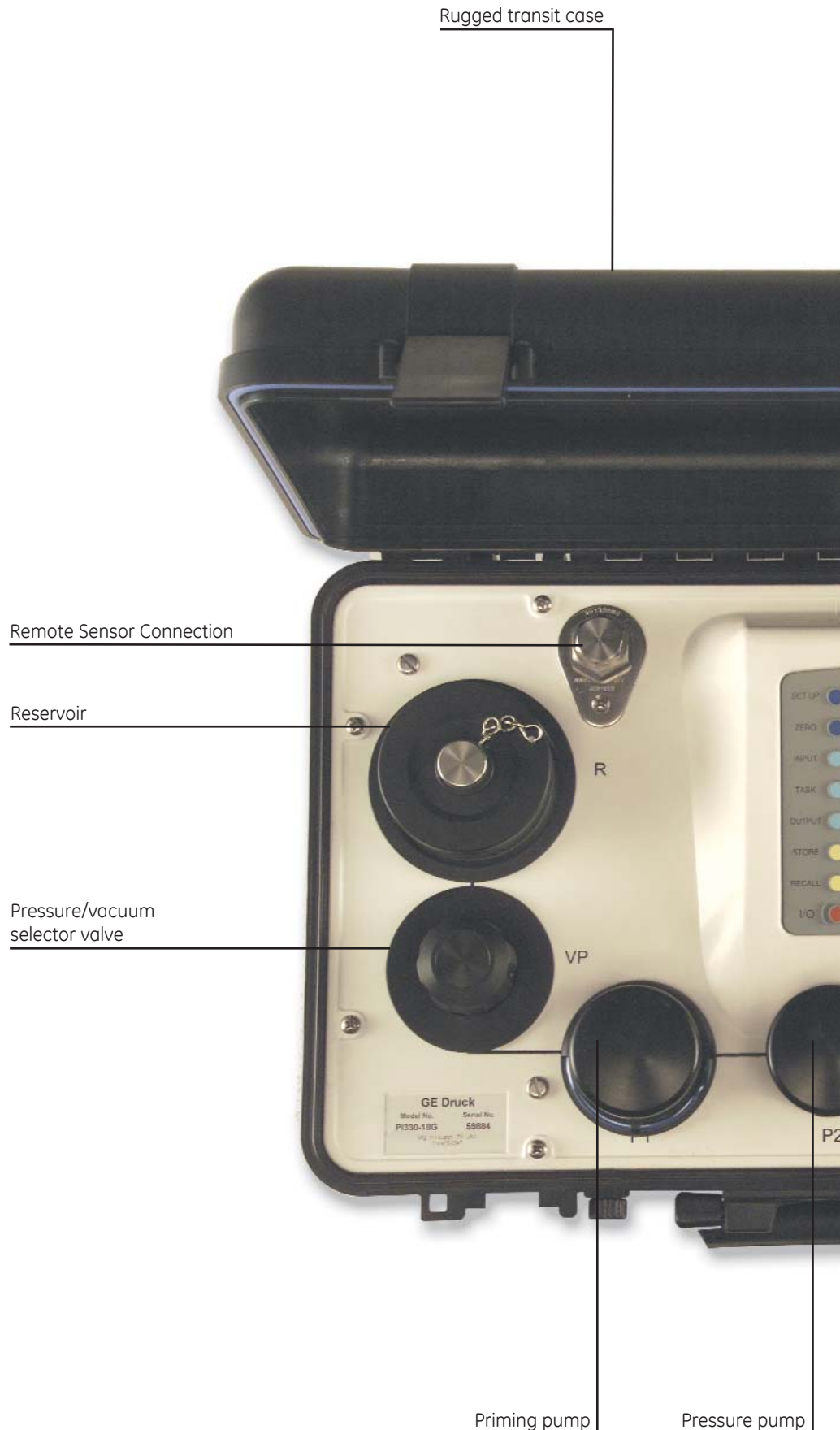
The DPI330/335 are dual channel instruments able to display the input and output values simultaneously. The calibrators are capable of providing current and voltage excitation to the device under test and can measure d.c. voltage, d.c. current and ambient temperature. Electrical terminations are made via industry standard 4mm sockets and the large backlit display provides a clear readout of the process parameters.

## Application specific task menu

A dedicated task key provides instant access to the task menu permitting the calibrator to be configured for specific applications. For example, the P-I task configures the calibrator to source pressure and measure current. 24Vdc loop power is also available to allow complete pressure transmitter calibration. Running the Pressure Switch task captures the open and closed switch values and calculates switch hysteresis. The contact resistance of the switch can also be monitored.

## Reduced process downtime

The DPI 335 version enables calibration criteria to be easily entered via the keypad allowing fast diagnosis of field instruments and automatic reporting of errors with a Pass or Fail status. When used in conjunction with I4I (Intecal for Industry) calibration management software, test procedures can be downloaded to the DPI 335 from a PC. The calibrator will prompt the technician during the calibration routine and the results will be recorded electronically, reducing plant downtime and human errors.





High contrast, menu-driven, dual function display

Thermal compensator control panel

1/8" NPT test port

Volume adjuster

STANDARD SPECIFICATIONS

Pressure

The DPI 330/335 series include an internal pressure sensor. The pressure range should be selected below.

Pressure Range	Accuracy* (%FS)	Max. Overpressure	Type
1000 psi	0.025%	2000 psi	G or A
2000 psi	0.025%	4000 psi	G or A
3000 psi	0.025%	6000 psi	G or A
5000 psi	0.025%	10000 psi	G or A
10000 psi	0.025%	12000 psi	G or A

\*Combined non-linearity, hysteresis and repeatability.

\*\*G = Gage, A = Absolute (pressure reference).

**Temperature effects:** (averaged and w.r.t. 68°C) 0.002% of rdg/°F.

**Pressure source:** Internal hydraulic reservoir (volume 300 cubic inches) with volume adjuster high pressure pump and pre-prime pump.

**Recommended media:** Mineral oil or distilled water.

**External Pressure Sensor:** Up to 10 remote-sensors (option B) may also be ordered per calibrator and connected to the instrument via the 1/4" test port. Consult factory for available ranges.

Electrical

In addition to pressure, the dual display can simultaneously monitor mA, V, switch, continuity and ambient temperature. Also, 10Vd.c. and 24Vd.c. power supplies are available for the Device Under Test.

Input	Range	Accuracy	Resolution	Remarks
Voltage*	±50Vd.c.	0.05% Rdg 0.004%FS	100µVmax	Autoranging>100MΩ
Current*	±55mA	0.05% Rdg 0.004%FS	0.001mA	10Ω, 50V max.
Temp	15 to 105°F	2°F	0.1°F	Case ambient
Switch	Open/Closed			5mA whetting

Output	Range	Accuracy	Resolution	Remarks
Voltage	10Vd.c.	0.01%		Max. load 10mA
Voltage	24Vd.c.	5%		Max. load 26mA
Current*	0to24mA	0.05% Rdg. 0.01%FS	0.001mA	

\*Temperature coefficient 0.004% reading/°F w.r.t. 68°F

Features

**Pressure units:** 25 scale units plus one user defined.

**mA source:** Auto10-sec. step cycle and programmable (60 sec. end to end) ramp

**Process Functions:** filter, max/min, tare, flow, and % span.

**Power Management:** auto power OFF, auto backlight OFF, battery status indicator.

**Display:** 2.36 x 2.36 inch graphic LCD with backlight. ±99999 readout, 2 reading per second.

**Data Storage:** 92 kbytes memory.

Environmental

**Temperature:** Operating range 15° to 120° F, Calibrated 15° to 105° F

**Humidity:** 0 to 90% non-condensing.

**Sealing:** Nema 12 (IP54).

**Conformity:** EN61010, EN61326 Class A, CE marked.

**Physical:** 23 lbs

Dimensions approximately 16.9 x 10 x 6.5 inches.

**Power Supply:** Battery powered 7.2V NiMH cell. In addition, the unit will operate from AC power supply 85V to 265V, 45 to 400 Hz which also allows the battery pack to recharge. Display indicates a low battery condition.

DPI 335 Additional Specifications

The fully documenting DPI 335 also provides the following features:

Error analysis with Pass/Fail status and graphs.

Storage of As Found and As Left results.

Two way PC interface for transferring test procedures and results.

Compatible with Intecal for Industry software.

## OPTIONS

### (A) Intecal for Industry

Developed to help meet the growing demand on industry to comply with quality systems and calibration documentation. Test procedures are created on screen in a Windows based utility and devices due for calibration are reported and grouped into work orders for transfer to the DPI 605, DPI 615, DPI 325 and DPI 335, TRX II and the MCX II.

Calibration results, including files from the DPI 615, are uploaded to the PC via the RS 232 interface or PCMCIA card for analysis and or printing calibration certificates. Visit [www.ge-intecal.com](http://www.ge-intecal.com) for Intecal for Industry demonstration.

### External Pressure Sensor

(B1) The DPI 330/335 Series has a second pressure channel which can be configured with up to 10 remote pressure sensors (one at a time). For ease of use the sensors are fitted with an electrical connector and 1/4 " pressure ports.

At least one mating cable is required per DPI 330/335 when ordering remote pressure sensors.

(B2) A 3 foot mating cable for connecting remote sensors to the DPI 330/335.

(C) 1 quart ST 55 mineral oil (P/N PPA9152) if operation with oil is desired.

### Supplied as Standard

The DPI 330 and DPI 335 are supplied with a rechargeable cell, battery charger, test lead, user guide and calibration certificate as standard.

### Calibration Standards

Instruments manufactured are calibrated against precision calibration equipment traceable to International Standards.

*Continuing development sometimes necessitates specification changes without notice.*

### Related Products

#### Portable Field Calibrators

We manufacture a wide range of portable pressure, temperature and electrical field calibrators. A selection of these is shown below.



#### Laboratory and Workshop Instruments

We also manufacture a comprehensive range of pressure indicators and controllers. Included in this range are industrial deadweight testers, high precision controllers and primary standard piston gauges.

### Pressure Transducers and Transmitters

We manufacture a wide range of high performance pressure sensors, including transducers and transmitters based upon our own proven precision micromachined and resonant silicon technologies.

*Please refer to GE Infrastructure Sensing for further information on related products.*

### Ordering Information

Please state the following (where applicable):

1. DPI 330 or DPI 335 type number.
2. Internal pressure range.
3. Options (if required) including external pressure sensor range.

Representative



imagination at work