



Complete Pressure Measurement Kit

- ☐ Differential & Gage Pressure Measurement
- ☐ Replaceable Sensing Diaphragms
- ☐ Digital Interface for USB
- ☐ Data Logging Software Included
- ☐ Pressure Calibration Standard Included

Description

The DP15 Pressure Lab Kit is designed for university laboratory where differential and gage pressure measurements are constantly changing. The kit is based on the popular Validyne DP15 sensor that allows the full scale range to be changed by the user. A selection of sensing diaphragms is included as well as a pressure standard. The kit also contains a USB digital interface for the transducer and software for pressure calibration and data logging.

The pressure sensing element is a flat diaphragm of magnetic stainless, clamped between case halves of the same material, in a symmetrical assembly. Pick-off coils, embedded in the case halves, sense the diaphragm deflection. The embedded coils are covered with a non-magnetic stainless layer, so that the pressure cavity presents a completely steel exposure to the working fluid. Vent valves facilitate complete liquid filling for dynamic measurement

Data Logging

The USB interface powers the transducer from any USB port and Windows software is included. The sample rate can be as fast as 5 samples/sec or as slow as once per hour. Scale and offset factors provide for direct readings in engineering units. The data is recorded to a .csv file with a time stamp for later analysis in a spreadsheet. Real-time graphing is included and a LabView VI is available at no charge.

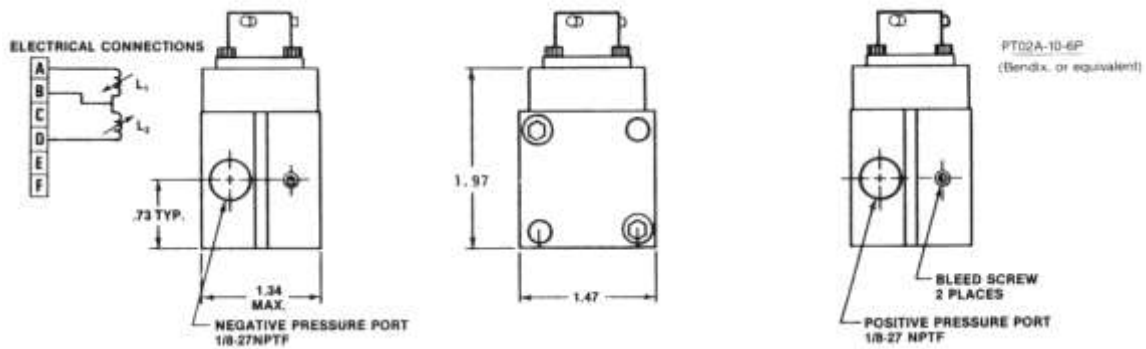
This System is Ideal For:

- Fluid Dynamics laboratories
- Wind Tunnels
- Materials labs

Specifications

Standard Ranges:	±0.08 psid FS to 3200 psid FS
Accuracy:	±0.5% FS, Including Non-linearity and Hysteresis
Overpressure:	200% FS up to 4000 PSI maximum with less than 0.5% zero shift
Line Pressure:	3200 psig operating
Line Pressure Effect:	Less than 1% FS zero shift per 1000 psig
Carrier Demodulator:	CD17
Power:	Via USB port
Signal:	Digital Readings in inH ₂ O
Connection:	Cable Included
Pressure Media:	Liquid and gasses compatible with 410 and Inconel
Sensor Temperature:	0°F to 160°F (-17.8°C to 71.1°C)
Thermal Zero Shift:	1% FS/100°F typical
Thermal Sensitivity Shift:	4%/100°F typical
O-Rings:	Buna N
Pressure Cavity Volume:	4 x 10 ⁻³ cu. In.
Volumetric Connection:	3 x 10 ⁻⁴ cu. In. for FS
Pressure Connection:	1/8 – 27 NPTF
Weight:	5 lbs.

DP15 Differential Pressure Transducer



All DP15 Digital Pressure Lab Kits contain:

- DP15 Variable Reluctance Pressure Sensor – 410 Steel, 1/8" female NPT Ports
- CD17 USB Digital Interface w/USB Cable
- Data Logging Software and LabVIEW VI
- 11264-5 Cable to Connect Sensor and Interface
- Body Bolt and Seal Kit
- Six Sensing Diaphragms
- T140K Calibrator Pressure Standard with Pump (Optional)

Ordering Information:

DP15DK – 20 – 26 – 32- 40- 46 -50 - A

↓
Pick 5 dash range numbers
from 20 thru 64 from the
pressure range chart on the
next page depending on the full
scale pressures you want.

↗
A – T140-10"K 0 to ± 10 inH₂O
B – T140-200"K 0 to ± 200 inH₂O
C – T140-30K -14 to +30 psig
D – T140-100K -14 to +100 psig
E – No T140K Calibrator

PRESSURE RANGE CHART

Range Dash No.	PSI	IN HG.	IN H ₂ O	KPA	TORR	CM H ₂ O
20	.125	.25	3.5	.86	6.5	8.80
22	.20	.41	5.5	1.40	10.3	14.0
24	.32	.65	8.9	2.2	16.5	22.5
26	.50	1.02	14.0	3.5	25.8	35.0
28	.80	1.6	22.2	5.5	41.4	56.0
30	1.25	2.5	35.0	8.6	65.0	88.0
32	2.0	4.1	55.0	14.0	103	140
34	3.2	6.5	90	22.0	165	225
36	5.0	10.2	140	35.0	258	350
38	8.0	16.0	222	55.0	414	560
40	12.5	25.0	350	86.0	650	880
42	20	41.0	550	140	1030	1400
44	32	65.0	890	220	1650	2250
46	50	102	1400	350	2580	3500
48	80	160	2220	550	4140	5600
50	125	250	3500	860	6500	8800
52	200	410	5500	1400	10300	14000
54	320	650	8900	2200	16500	22500
56	500	1020	14000	3500	25800	35000
58	800	1600	22200	5500	41400	56000
60	1250	2500	35000	8600	65000	88000
62	2000	4100	55000	14000	103000	140000
64	3200	6500	89000	22000	165000	225000