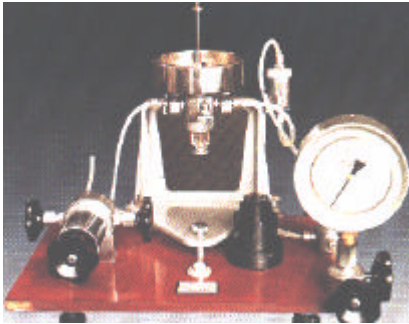




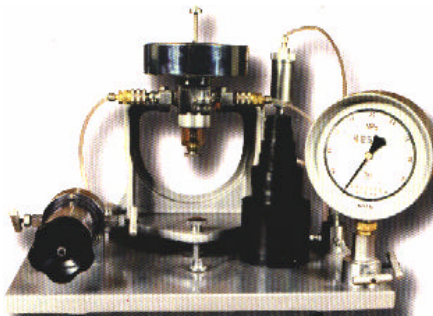
PeumaTester Deadweight Testers

DTP Series, Pneumatic, Piston Type



**Standard models available**

Model	Pressure Range
DTPN020	-0.1 to -0.005 MPa, or 0.005 to 0.25 MPa
DTPN021	equal mbar
DTPN022	equal inH2O



**Standard models available**

Model	Pressure Range
DTPN060	-0.1 to 0.6 MPa
DTPN061	equal mbar
DTPN062	equal inH2O
DTP0060	0.04 to 0.6 MPa
DTP0061	equal mbar
DTP0062	equal inH2O

**Accuracy**

Standard version: 0.050% of reading  
 Optional version: 0.025% of reading

**Start Pressure**

Standard 5 kPa (50 mBar)

**Minimum Weight Increment**

Standard 5 kPa (50 mBar),  
 Optional lower increment upon request.

**Pressure Medium**

Static clean atmosphere or bottled nitrogen.



DTP4

DTP5

**DTP4, DTP5 Series, Pneumatic, Piston Type**

**PeumaTester** DTP4, DTP5 series dead weight tester is developed based on the long proven base model DTP-HA series. Optional stainless steel dead weights are available as suffix -SS. And pressure values and engineering units of mass sets are made to customer design.

DTP5 is specially featured as super low start pressure from zero, realized by the means of oil column balance mechanism free of mercury.

**Range:** 0.5-25 bar, 1-60 bar, 0-2.5 bar

**Accuracy:** 0.05%, 0.02%, 0.005%IR

The manometers shown in the photos are not supplied.

The specifications are subject to change without advance notice.

**Other Henry pressure products:**

**Electronic Pressure Calibrators**

Henry Electronic Pressure Calibrators with accuracy 0.1% FS and 0.05% FS are available.

**Pressure Sources**

Hand held pumps and Comparison pumps are available generating pressure from -0.88 to 600 bar.

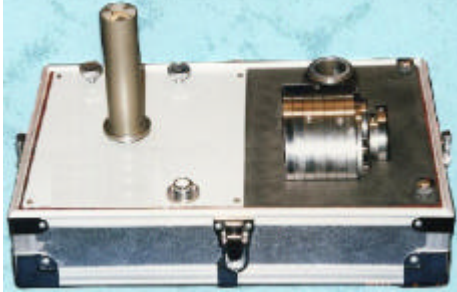
**Your Local Distributor:**





## PeumaTester Deadweight Testers

### DTB9000 Series, Floating Ball Type



Henry DTB9000 Series floating ball type deadweight tester is a highly reliable and accurate primary pressure standard suitable for industrial environment. Based on unique design, ISO9001 certified quality production, and ease of operation and maintenance, Henry pressure standards have been serving the markets for more than 40 years.

#### Principle

Henry DTB Series deadweight tester is based on the fundamental pressure principle:  $P = F/A$  where pressure ( $P$ ) is defined as the product of the downward force ( $F$ ) of the weights when applied to the effective area ( $A$ ) of the ball within the nozzle. Air source supplies input pressure through the built-in flow regulator. It makes the ball float up within the tapered section of the nozzle and gas escapes past the ball and returns through the dynamic stabilization regulator (pressure output). The ball is self-centralized in its position by the flowing past gas, ensuring the ball without contacting the nozzle. Adding or removing weights causes the ball falling or rising, affecting the gas flow. The flow regulator senses the change and adjusts the pressure to bring the system back into equilibrium.

#### Features

Based on unique design and ISO9001 certified quality production, Henry DTB Series dead weight tester ensures best performance and minimum maintenance cost because of features below.

- Ceramic nozzle and hardened ball enabling tough temperature environment.
- Stainless steel weight sets for better stability.
- Weight sets and carriers designed for convenient calibration steps.
- Lower start pressure down to 4 inH2O and narrower pressure increments down to 1 inH2O optional.

- Calibration in Bar, mBar, inH2O, PSI and other engineering units selectable.
- Ease of maintenance. durable rugged case, portable for jobs on-site.

#### Technical Specifications

**Accuracy:** Standard 0.050%, optional 0.025%

**Temperature:** If unspecified, the instrument will be manufactured for inH2O at 20 deg. C, according to ISA.

Temperature coefficient is 0.000017 per deg. C.

Operating range: 15 to 30 deg. C.

**Gravity:** As specified on order. If unspecified, then

International Standard: 980.665 cm/s<sup>2</sup>.

#### Weight Sets and Carriers

Stainless steel weight sets and weight carriers are designed for convenient calibration steps and better stability. Start pressure as low as 4 in H2O and pressure increment as narrow as 1 in H2O are optional.

#### Standard models available

Model	Pressure Range	Model	Pressure Range
DTB9010	0.001 to 0.25 MPa	DTB9020	0.005 to 0.4 MPa
DTB9011	10 to 2500 mbar	DTB9021	50 to 4000 mbar
DTB9012	4 to 1000 inH2O	DTB9022	25 to 1500 inH2O
DTB9030	0.005 to 0.6 MPa	DTB9040	0.05 to 2.5 MPa
DTB9031	0.05 to 6 bar	DTB9041	0.5 to 25 bar
DTB9050	0.05 to 6 MPa	DTB9051	0.5 to 60 bar

Intermediate ranges and other engineering units are optional.

#### Dimensions and Weight

DTB901x/2x/3/: 38 x 24 x 26 cm (L x D x H), 12-15 kg

DTB904x/5x: 39x25x29 cm (L x D x H), 20-26 kg

#### Air Source Pressure and Flow Consumption

Dry, clean, and oil-free compressed air or bottled nitrogen shall be used. The minimum pressure shall not lower than 1.5 times of output pressures but at no means less than 3 bar.

Model	Normal (Max.)	Consumption
DTB901x	5 bar (Max.7 bar)	0.3 m3/h
DTB902x	6 bar (Max.10 bar)	0.75 m3/h
DTB903x	9 bar (Max.10 bar)	0.9 m3/h
DTB904x	40 bar (Max.42 bar)	1.2 m3/h
DTB905x	90 bar (Max.94 bar)	1.5 m3/h

Pressure inlet and outlet connectors and pipe are supplied.

The specifications are subject to change without advance notice.

#### Your Local Distributor:



## PeumaTester Deadweight Testers

### DTP-HA Series, Higher Accuracy

It is versatile and superior while equipped with pistons of different ranges to obtain both wider measuring range and higher accuracy, the gauge pressure and absolute pressure.



**DTP0**

**Henry DTP-HA** Pneumatic Piston Dead Weight Tester is a high accuracy pressure calibration standard, which may measure gauge pressure, vacuum, or absolute pressure by clean air or nitrogen gas as medium, with accuracy 0.02% or 0.005%. Its design is small sized and light weighted.



**DTPA**

#### Standard Models

Model	Pressure Range
DTP0010-HA	2 to 160 kPa or 4 to 400 kPa
DTP0011-HA	10 to 1600 or 20 to 4000 mbar
DTP0012-HA	8 to 640 or 16 to 1600 inH2O
	One gauge pressure range only.
DTPD010-HA	2 to 160 kPa and 4 to 400 kPa
DTPD011-HA	10 to 1600 and 20 to 4000 mbar
DTPD012-HA	8 to 640 and 16 to 1600 inH2O
	Two gauge pressure ranges.
DTPN020-HA	-95 to 400 kPa
DTPN021-HA	-950 to 4000 mbar
DTPN022-HA	-380 to 1600 inH2O
	Gauge pressure and vacuum.
	Carbon steel dead weights.
DTPA040-HA	2 to 160 kPa or 4 to 400 kPa,
DTPA041-HA	10 to 1600 or 20 to 4000 mbar
DTPA042-HA	8 to 640 or 16 to 1600 inH2O
	Gauge and absolute pressure



**DTPN**

The material of the piston rod is stainless steel and the material for the piston cylinder is tungsten carbide hardened, so as to ensure the piston features rust resistance, wear-resistance and long working life.

Compare with the oil driven piston, pneumatic piston offers a lower descending speed, and consequently much better repeatability, perdurability, sensitivity, etc.

#### Specifications:

- Measuring range: 2 to 160 kPa, 4 to 250 kPa, 4 to 400 kPa
- Dual ranges optional
- Built-in precision pressure controller
- Working medium: nitrogen or clean air
- Accuracy: +/-0.02%, +/-0.005%
- Storage temperature: 20 +/- 5 deg. C
- Working temperature: 20 +/-1 deg. C (for



- 0.005%), 20 +/- 2 deg. C (for 0.02%)
- Detecting temperature: 20 +/- 0.5 deg. C (0.005%), 20 +/- 2 deg. C (0.002%)
- Humidity: RH less than 70%
- Piston effective area:
  - Effective area range of piston assembly S1 (3.990 to 4.010)cm<sup>2</sup> (range 2 to 160kPa)
  - Effective area range of piston assembly S2 (1.990 to 2.010)cm<sup>2</sup> (range 4 to 250kPa, 4 to 400kPa)
- Materials: Piston: stainless steel  
Cylinder: tungsten carbide  
Weight sets: stainless steel or aluminum
- Descending speed of piston: measuring with the speed of 30 to 60 rev/min under full load
  - +/-0.005%, range 2 to 160kPa descending speed 1.5mm/min; range 4 to 400kPa, descending speed 2.0mm/min
  - +/- 0.02%, range 2 to 160kPa descending speed 2.0mm/min; range 4 to 400kPa, descending speed 2.5mm/min
- Perdurability of the piston at under half load
- Sensitivity of the tester tested under full load
  - Sensitivity 0.02g; (or 2.2ppm under 160kPa; 2.5ppm under 250kPa and 400kPa)
  - Sensitivity 0.05g; (or 7.8ppm under 160kPa; 6.3ppm under 250kPa and 400kPa)
- Vacuity of the vacuum covering:
  - Supply voltage: 220V
- Dead weights accuracy:
  - +/-0.005%, allowable error +/-0.001%
  - +/-0.002%, allowable error +/-0.001%
- Start Pressure: Standard 4 kPa (40 mBar),  
Optional 2kPa (20 mBar).
- Minimum Weight Increment
  - Standard 1 kPa (10 mBar),  
Optional 0.5kPa (5 mBar).

The test manometers shown in the photos are not supplied.  
The specifications are subject to change without advance notice.

## Other Pneumatic Equipment

### HYKQ Pneumatic Pressure Controllers

It is used for manually adjust pressure to accurate value with stead air tightness, so that a continuous precision test possible. The single

channel type offers either gauge, absolute or vacuum pressure. The dual channel type offers an additional function of differential pressure. Leakage rate is below 0.18 kPa/m per channel.



### Standard Models

- HYKQ-1, -0.1 to 0.6 MPa (6 bar), single channel
- HYKQ-2, -0.1 to 0.6 MPa (6 bar), dual channels
- HYKQ-3, -0.1 to 4 MPa (40 bar), single channel
- HYKQ-4, higher range made to order

### HTYQ Pneumatic Pressure Calibrator

The HTYQ Pneumatic Pressure Calibrator consists of a Model BP series pneumatic pump and a Model DPG series digital pressure gauge.



### Standard Models

- HTYQ-1, -0.1 to 0.6 MPa(6 bar), 0.1 or 0.05%FS
- HTYQ-2, -0.1 to 6 MPa (60 bar), 0.1 or 0.05%FS

## Other Henry pressure products:

### Electronic Pressure Calibrators

Henry Electronic Pressure Calibrators with accuracy 0.1% FS and 0.05% FS are available.

### Pressure Sources

Hand held pumps and Comparison pumps are available as portable pressure generators for checking pressure instruments, generating pressure from -0.88 to 600 bar.

## Your Local Distributor:

