

# Differential Pressure Gauge

## Bellows Type

Model M24-2

The M24 range of Differential Pressure Gauges have been designed for applications which require the measurement of low differential pressures whilst accommodating very high static pressures.

Designed around a balanced bellows system, which converts the differential pressure into a rotary movement by way of a torsion tube assembly and mechanical linkages. The entire assembly is liquid filled, producing a hydraulic self lubricating measurement system which allows for full line pressure to be applied to either side of the unit without damage to the device.



Instruments are available in a range of differential ranges and static pressures and can be manufactured in a wide variety of materials, connection sizes and installation options.

### Size

100 mm (4")

### Case

316 Stainless Steel

### Mounting

Direct Mounting

Surface Mounting via a stainless steel wall bracket or a standard 2" pipe Yoke mount with 'U' Bolts

Panel Mount via a special stainless steel bracket

### Scale Ranges

0 to 75 mBar up to 70 Bar or equivalent units of pressure  
Option: Zero based, elevated zero, suppressed zero calibrations

Scales down to 25mBar optional with larger bellows.

### Pressure Element

Brass / Bronze 75 mBar to 7.6 Bar differential pressure  
316 Stainless Steel 150 mBar to 27.5 Bar differential pressure  
Inconel / St St 150 mBar to 69 Bar differential pressure  
Option: Other bellows materials are available, including Hastelloy

### Overload

The unit will withstand the maximum line pressure to either side of the unit and up to 750 Bar static pressure

### Pressure Connection

The process connections are duplicated on the top and bottom of the differential cell to facilitate gas or liquid measurement connection and venting.

### Standard Connection

1/2" x 1/2" BSP (P) Female

1/2" x 1/2" NPT Female

### Accuracy Class

±0.75% FSD on ranges up to 1 Bar differential

±1.00% FSD on ranges from 1 to 30 Bar differential

±1.50% FSD on ranges from 31 to 69 Bar differential

### Dial

White Anodised Aluminium marked in black finish  
Single or Dual scale

### Pointer

Black Micrometer knife edge pointer

### Movement

316L Stainless Steel Construction

Option : Viscous Damped movement to overcome the effects of minor pressure pulsations

### Window

3mm laminated Safety Glass (Standard)

Option: Acrylic Plastic Window

### Environmental Rating

IP66 as defined in EN 60 529

### Calibration

Instruments will maintain their original calibration for over 100,000 cycles\* before any change to span would be evident or require adjustment (\* this will vary upon application)

### Certification Available

BS EN 10204 3.1 Material Certification

Point by Point Test Certificate

### Safety

All units are manufactured to comply with EN 837-1,

All cases are fitted with a blow-out vent

### Installation Instructions

Refer to EN 837-2

### Temperature

Operating: -40 to +200 °C

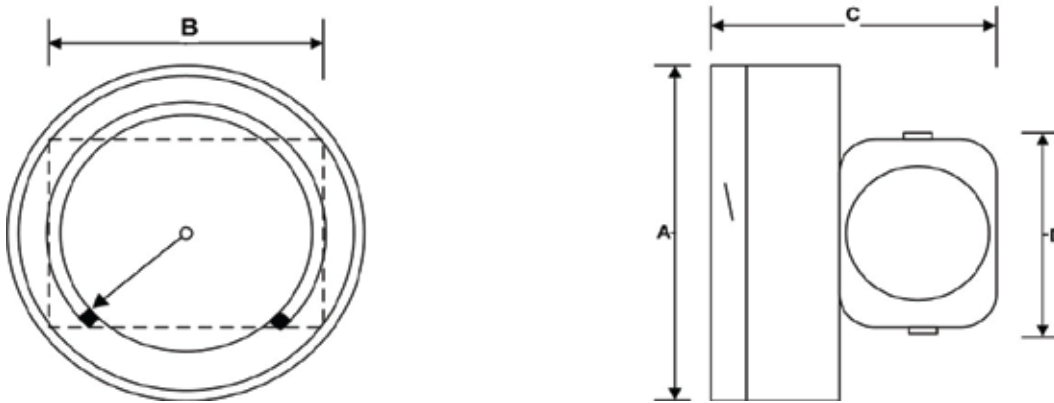
Storage: -50 up to +250°C



Authorised Australian distributor for



## Dimensions



Model No	A	B	C	D	Weight
M24 100mm (4")	105mm	120mm	120mm	86mm	4.4 Kg

## DP Ranges

Tortion Tube Type	Safe Working Pressure		Minimum DP		Maximum DP
	Psi	Bar	mBar	Ins Wc	Bar
Standard	500	35	150	60	0 to 28
Extended	500	35	150	60	0 to 28
Standard	3000	200	150	60	0 to 69
Extended	3000	200	150	60	0 to 69
Standard	6000	400	2000	80	0 to 69
Extended	6000	400	2000	80	0 to 69
Standard	10000	700	2800	110	0 to 69
Extended	10000	700	2800	110	0 to 69

## Mounting Options

### Case Mounting

Wall mounted from the DP Cell

Yoke mount 2" pipe with U-bolts

Switches 4-20 Ma - ATX

Second Red Pointer indicating Static Pressure as well as differential pressure

## Process Connections

Where possible, connect liquid process lines to the bottom of the unit, and gas process lines to the top of the unit. This allows for venting and draining.

## Accessories

Venting and draining plugs

Male to male and male to female adaptors.

We can supply Needle 3 or 5 Valve manifolds for the Model M24 – See separate Datasheet.

The manifolds in addition to allowing the instrument to operate normally allows the following: -

- Checking of gauge zero at line pressure.
- Complete isolation of the instrument.
- De-pressurisation of the instrument or controlled purging.
- Damping of pressure pulsations and surges.
- Inline calibration, allows in situation calibration

Specifications and dimensions in this leaflet, are subject to change without prior notice.