

**HIRLEKAR**  
**PRECISION**

# Differential Pressure Instruments



- Filter Monitoring
- Flow Monitoring
- Level Measurement
- Pressure Monitoring

## Introduction

Hirlekar Precision is one of the largest manufacturers of differential pressure gauges and switches in the world. It is a strategic & resourceful, yet cost effective vital link in the supply chain management of the customers from demanding industries of developed countries located throughout the world.



## Global Reach

Hirlekar Precision exports around 80% of production to more than 50 countries around the world. Hirlekar Precision's products are available directly or through competent distributors in more than 45 countries with backing of trained engineers to maximize productivity of our valued customers.

## WHAT WOULD YOU GET FROM US?

Hirlekar Precision beats competitors on quality, delivery, price, performance and service. A few of our core strengths are:-

### Private labeling

We private label our instruments for many leading instrument manufacturers. You could sell the gauges with your logo and product sticker as your own product.

### Fast delivery

We understand the importance of fast shipping and 'Just in Time' delivery. Our standard gauges ship within one week\*.



### World Class shipping partners

Efficient communication and logistics management has ensured strong interdependence with customers spread far and wide. UPS, FedEx and DHL are Hirlekar Precision's shipping partners.

### Export oriented & trusted

Our products are sold in/ used in more than 50 countries around the world! Be assured of a world class experience with Hirlekar Precision - right from product enquiry to manufacturing to product packaging.

## Continuous employee participation

Hirlekar Precision encourages employees to participate in the formation & implementation of corporate goals, to support the efforts in being a socially responsible organization, and to conduct business with the highest degree of integrity &

## Independent, dedicated teams

Our factory in Pune has focused dedicated and independent teams in Engineering, Sales & Marketing, Purchase, Production, Quality control & Dispatch departments



## Efficient communications

We respond to your queries as quickly as possible, on an average within one day. You can communicate with us in Deutsch, English, Hindi, Marathi and Gujarathi.

## Highly customizable

Gauge body material, dial size, gauge glass, seals, process connections - these are some of the parameters that can be customized by you. More than 100million combinations available!



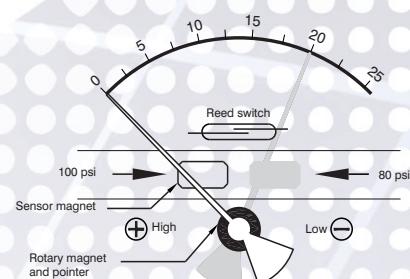
# Operating Principle

## What is the operating principle of our differential gauges?

Hirlekar Precision manufactures differential gauges based on magnetic coupling principle.

## What is the basic operating principle?

High and Low pressures are separated by a sensor assembly consisting of a magnet, diaphragm and a range spring. The difference in pressure causes the assembly to move in proportion to the change against the range spring. A rotary magnet, located in a separate body compartment and isolated from the acting pressures, is rotated by magnetic coupling as per the linear movement of the sensor assembly. A pointer attached to the rotary magnet indicates differential pressure on the dial.



## What are the advantages of magnetically coupled gauges?

**Cost effective:** They are compact, cost effective and are available in 6 dial sizes.

**No threat of blow out:** Magnetic coupling isolates the indicating mechanism window from the pressure chamber so no threat of blow out. Blow out disk not required.

**Eliminates balancing:** Our gauges automatically reset after line surges and cold start. No adjustment pointer required.

**Over range protection:** The instrument is fully protected for over range of up to respective maximum working pressure from the high side.

### High line pressure, low differential pressure:

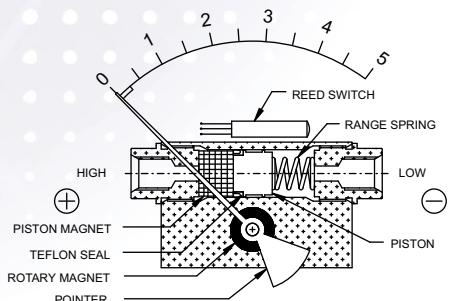
**Customizable:** Over 100 million combinations of our gauges available

## What are the two types of differential gauges we manufacture?

Depending upon the construction, Hirlekar Precision manufactures two types of differential pressure gauges based on the magnetic coupling principle:

**Piston type:** Used where migration of measuring media from HI to LO is allowed.

**Diaphragm type:** Used where migration of media from HI to LO is not allowed.



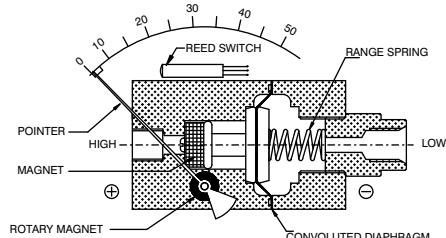
## What are Diaphragm gauges?

### Basic Operating Principle:

In the Hirlekar Precision diaphragm gauges, the movement of the convoluted/ rolling diaphragm is converted into appropriate calibrated rotary movement of the pointer through a magnetic connection.

### Zero Migration:

This type of differential pressure gauge is used in applications where zero migration of media from HP to LP is permitted.



## Is one type of gauge better than the other?

No. Piston and diaphragm type differential gauges are unique. The selection of the appropriate type of gauge depends upon a host of factors. The primary factor is - Is migration of measuring media from HI to LO allowed in your application.

## Models in piston type & diaphragm type

Piston type: 200 DPG, D200 DPG, 150 DPG, 100 DPG, DX 10, PR 10, EX 200DPG

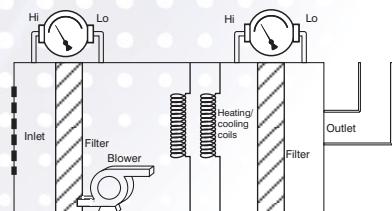
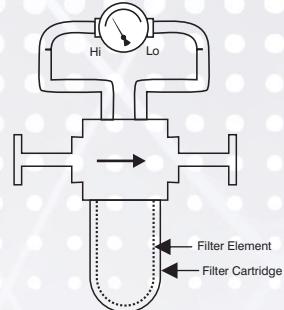
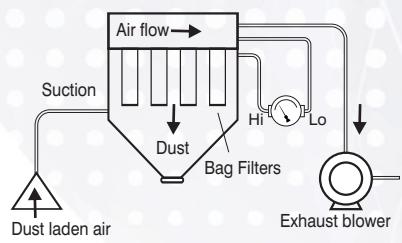
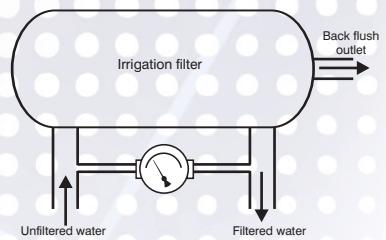
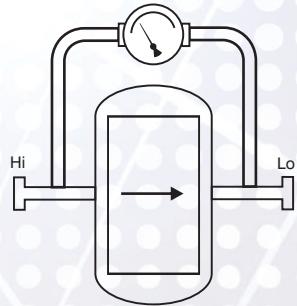
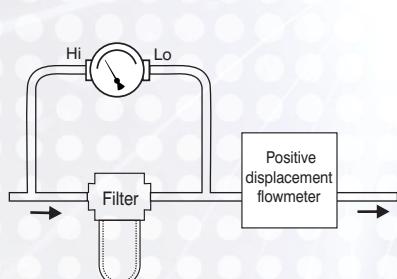
Diaphragm type: 200 DGR, 300 DGC, 320 DGC, 400 DGC, 600 DGC, 700 DGC, DX 20, PR 20, GX 100, EX 200DGR, EX 300DGC, EX 400 DGC

# Applications

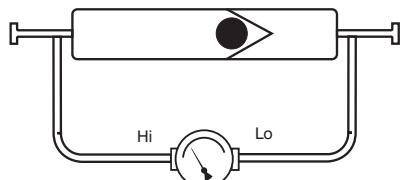
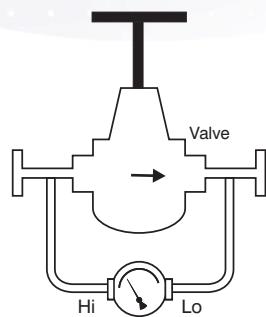
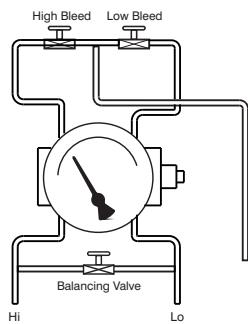
## Applications

A few of the applications of our differential pressure gauges are mentioned below. For additional detail, please log on to: [www.hirlekarprecision.com](http://www.hirlekarprecision.com)

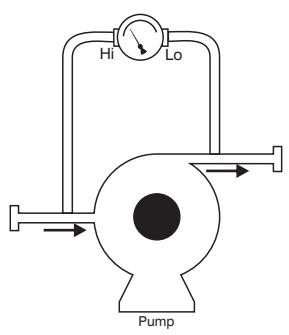
### Filter Monitoring



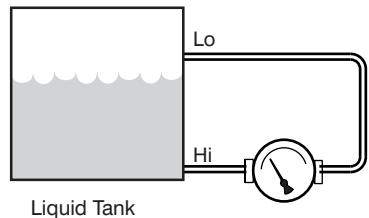
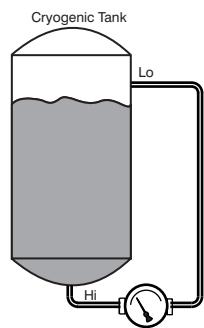
### Flow Monitoring



### Pressure Monitoring



### Level Measurement





## 200 DPG

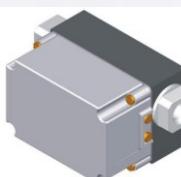
**ΔP Range:** 0 to 0.25 upto 70 bar  
0 to 5 upto 1050 psi

### COMBINATIONS

#### Gauge



#### Switch



#### Gauge + switch

(with a terminal strip inside)



#### Gauge + switch

(with a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

#### Accuracy

±2% of the FSD (Ascending)

#### Migration

Minor from high to low port

#### Range

0-0.25 to 0-70 bar or equivalent range in other units

#### First marking on the scale

20% of the FSD

#### Sensing element

#### Piston

Wetted parts Body material, SS 302 spring, ceramic magnet & seals  
Case material & dial size Stainless steel (SS 304): 2", 2.5", 3.5", 4", 4.5", 6.0"

Engineering polymer: 2.5", 4.5", 6"

Bayonet: 4.0"

Mounting Direct, front flange, 2" pipe & surface mounting

Maximum working pressure 200 bar for Aluminum & Brass, 400 bar for SS & Monel

Maximum process temperature 0 to 80°C (32 to 175°F)

Body material Aluminum, Brass, SS 316 & Monel

Seals Buna-N, Viton, EPDM

Window Float glass(Std.), toughened glass, acrylic & safety glass.

Connection 1/4" NPT(F) (Std.), 1/4" BSP(F) and others through adaptor

Porting In-line, rear, bottom, in-line & bottom, in-line & back

Over range protection Up to the max. working pressure from high & low side

Protection for gauge & switch IP 65 / NEMA-4

### Options

Liquid filling (glycerine/ silicone)

1 or 2 SPSTs with a DIN plug

Red follower pointer

1 or 2 SPSTs with a terminal strip

Customer logo

1 or 2 SPSTs with a built in relay

Dual scale

1 or 2 SPDTs with a DIN plug

Color band

1 or 2 SPDTs with a terminal strip

Filter mesh in (+) connection

Reverse port (pointer moves from right to left)

Descending calibration

Thick body for 450bar application

### Switches (Adjustable in 20-100% of FSD)

#### Available in engineering polymer (EP) Case



6.0"



4.5"



2.5"

- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

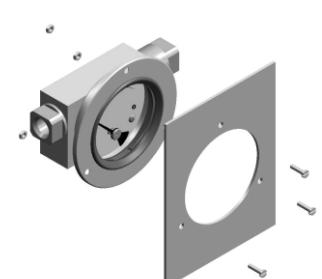
#### Horizontal pipe mounting



#### Vertical pipe mounting



#### Panel / Flange mounting





## DX 10

**ΔP Range:** 0 to 0.25 upto 10 bar  
0 to 3.5 upto 140 psi

### COMBINATIONS

#### Gauge



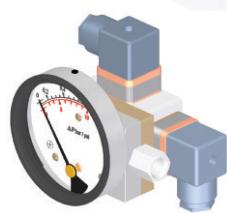
#### Gauge+switch

(with a DIN plug on top)



#### Gauge+switch

(with 2 DIN plugs)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

Accuracy	±3% of the FSD (Ascending)
Migration	Minor from high to low port
Range	0-0.25 to 0-10 bar/psi or psi/kPa dual scale
First marking on the scale	15% of the FSD
Sensing element	Magnetic piston with compression spring
Wetted parts	SS 316, SS 302 compression spring, seals & ceramic magnet
Case material & dial size	Stainless steel (SS 304): 2.5", 3.5", 4.0" Engineering polymer: 2.5"
Mounting	Bayonet: 4.0"
Maximum working pressure	Direct, front flange, 2" pipe & surface mounting 100, 250 & 400 bar.
Maximum process temperature	0 to 80°C (32 to 175°F)
Enclosure	Engineering Polymer
Seals	Buna-N & Viton
Window	Float glass(Std.), toughened glass, acrylic & safety glass.
Connection	1/4" BSP(F) Std. Optional 1/4" NPT(F)
Porting	In-line
Over range protection	Up to the max. working pressure from high & low side
Protection for gauge & switch	IP 65

### Options

Liquid filling (glycerine/ silicone)	1 or 2 SPSTs with a DIN plug
Red follower pointer	1 or 2 SPDTs with a DIN plug

Customer logo

Dual scale

Color band

*DP range can be changed easily at site by replacing range spring.*

*(Available only in gauges with colour band or zones without any graduations)*

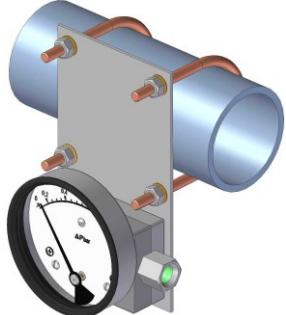
### Switches (Adjustable in 20-100% of FSD)

#### Available in engineering polymer (EP) Case

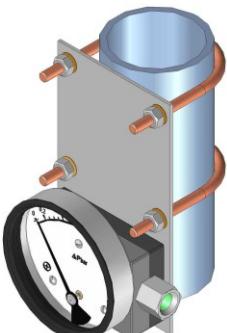


- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

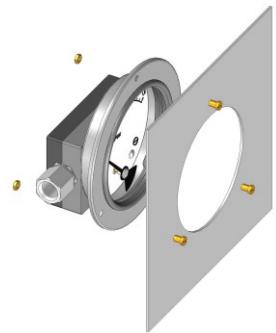
#### Horizontal pipe mounting



#### Vertical pipe mounting



#### Panel / Flange mounting



# DIAPHRAGM



## 200 DGR

$\Delta P$  Range: 0 to 0 to 0.25 upto 7 bar  
0 to 5 upto 100 psi

### COMBINATIONS

#### Gauge



#### Switch



#### Gauge + switch

(with a terminal strip inside)



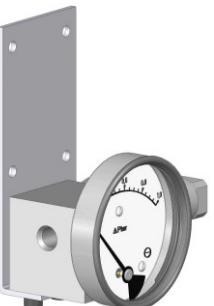
#### Gauge + switch

(with a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

#### Accuracy

$\pm 2\%$  of the FSD (Ascending)

#### Migration

No migration. Zero leakage from high to low port

#### Range

0-0.25 to 0-7 bar or equivalent ranges in other units

#### First marking on the scale

15% of the FSD

#### Sensing element

Diaphragm, body material, SS 302 spring & ceramic magnet

#### Wetted parts

Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6"

#### Case material & dial size

Engineering polymer: 2.5", 4.5", 6"

#### Mounting

Bayonet: 4"

#### Maximum working pressure

Direct, front flange, 2" pipe & surface mounting

#### Maximum process temperature

200 bar / 3000 psi

#### Body material

0 to 80°C (32 to 175°F)

#### Diaphragm

Aluminum, Brass, SS 316, Monel

#### Window

Buna-N, Viton, EPDM

#### Connection

Float glass(Std.), toughened glass, acrylic & safety glass

#### Porting

1/4" NPT(F) (Std.), 1/4" BSP(F) and others through adaptor

#### Over range protection

In-line, rear, bottom, in-line & bottom.

#### Protection for gauge & switch

Up to the max. working pressure from high side.

*Never pressurize only LP side beyond 25 bar*

IP 65 / NEMA-4

### Options

#### Liquid filling (glycerine/ silicone)

1 or 2 SPSTs with a DIN plug

#### Red follower pointer

1 or 2 SPSTs with a terminal strip

#### Customer logo

1 SPST with a built in relay

#### Dual scale

1 or 2 SPDTs with a terminal strip

#### Color band

1 or 2 SPDTs with a DIN plug

#### Filter mesh in (+) connection

#### Descending calibration

### Switches (Adjustable in 30-100% of FSD)

1 or 2 SPSTs with a DIN plug

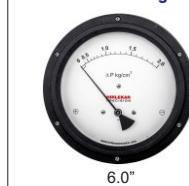
1 or 2 SPSTs with a terminal strip

1 SPST with a built in relay

1 or 2 SPDTs with a terminal strip

1 or 2 SPDTs with a DIN plug

### Available in engineering polymer (EP) Case



6.0"



4.5"



2.5"

- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

#### Horizontal pipe mounting

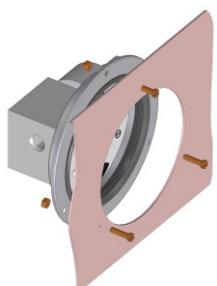


#### Vertical pipe mounting

#### Vertical pipe mounting



#### Panel / Flange mounting





## 300 DGC

**ΔP Range:** 0 to 0.075 upto 4 bar  
0 to 1 upto 60 psi

### COMBINATIONS

#### Gauge

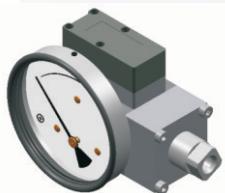


#### Switch



#### Gauge + switch

(with a terminal strip inside)



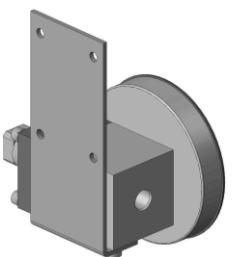
#### Gauge + switch

(with a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

#### Accuracy

±2% of the FSD (Ascending)

#### Migration

No migration ; Zero leakage from high to low port

#### Range

0-0.075 to 0-4 bar or equivalent ranges in other units

#### First marking on the scale

15% of the FSD

#### Sensing element

Diaphragm, body material, SS 302 spring & ceramic magnet

#### Wetted parts

Stainless steel (SS 304): 2", 2.5", 3.5", 4", 4.5", 6"

#### Case material & dial size

Engineering polymer: 2.5", 4.5", 6"

#### Mounting

Bayonet: 4"

#### Maximum working pressure

Direct, front flange, 2" pipe & surface mounting

#### Maximum process temperature

100 bar / 1500 psi

#### Body material

0 to 80°C (32 to 175°F)

#### Diaphragm

Aluminum, Brass, SS 316 & Monel

#### Window

Buna-N, Viton, EPDM

#### Connection

Float glass(Std.), toughened glass, acrylic & safety glass

#### Porting

1/4" NPT(F) (Std.), 1/4" BSP(F) and others (through adaptor)

#### Over range protection

In-line, rear, bottom, bottom & vent, in-line & vent, in-line & bottom, in-line & back, bottom vent & inline

#### Protection for gauge & switch

Up to the max. working pressure from high side

IP 65 / NEMA-4

### Options

#### Liquid filling

1 or 2 SPSTs with a DIN plug

#### Red follower pointer

1 or 2 SPSTs with a terminal strip

#### Customer logo

1 SPST with a built in relay

#### Dual scale

1 or 2 SPDTs with a terminal strip

#### Colour band

1 or 2 SPDTs with a DIN plug

#### Filter mesh in (+) connection

Filter mesh in (+) connection

#### Descending calibration

Descending calibration

*Instrument can be calibrated with square root scale for flow measurement.*

### Switches (Adjustable in 30-100% of FSD)

#### Available in engineering polymer (EP) Case

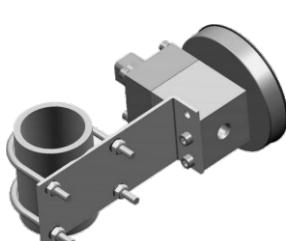


- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

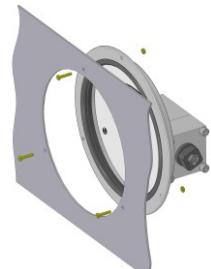
#### Horizontal pipe mounting



#### Vertical pipe mounting



#### Panel / Flange mounting



# DIAPHRAGM



## 400 DGC

### COMBINATIONS

#### Gauge



#### Switch



#### Gauge + switch

(with a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

#### Accuracy

$\pm 2\%$  of the FSD (Ascending)

#### Migration

No migration. Zero leakage from high to low port

#### Range

0-25 to 0-600 mm H<sub>2</sub>O or similar ranges in other units

#### First marking on the scale

15% of the FSD

#### Sensing element

Diaphragm, body material, SS 302 spring & ceramic magnet

#### Wetted parts

Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6.0"

#### Case material & dial size

Engineering polymer: 2.5", 4.5", 6"

#### Diaphragm

Bayonet: 4.0"

Direct, front flange, 2" pipe & surface mounting

#### Mounting

35 bar / 500 psi.

#### Maximum working pressure

0 to 80°C (32 to 175°F)

#### Maximum process temperature

Aluminum, SS 316

#### Body material

Buna-N, Viton, EPDM

#### Diaphragm

Float glass(Std.), toughened glass, acrylic & safety glass

#### Window

1/4" NPT - F (Std.), Optional 1/4" BSP - F with adaptor

#### Connection

In-line, rear, bottom, bottom & vent, in-line & vent, in-line & bottom.

#### Porting

Up to the max. working pressure from high side

#### Over range protection

IP 65 / NEMA-4

#### Protection for gauge & switch

### Options

#### Liquid filling

1 or 2 SPSTs with a DIN plug

#### Red follower pointer

1 or 2 SPSTs with a terminal strip

#### Customer logo

1 SPST with a built in relay

#### Dual scale

1 or 2 SPDTs with a terminal strip

#### Colour band

1 or 2 SPDTs with a DIN plug

#### Filter mesh in (+) connection

#### Descending calibration

### Switches (Adjustable in 20-80% of FSD)

#### Available in engineering polymer (EP) Case



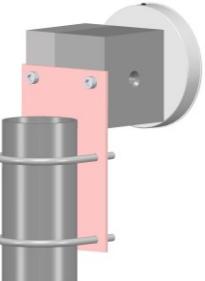
- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

### MOUNTING BRACKETS

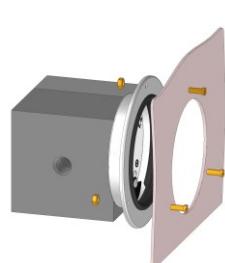
#### Horizontal pipe mounting



#### Vertical pipe mounting



#### Panel / Flange mounting



# DIAPHRAGM



## 600 DGC

### COMBINATIONS

#### Gauge



#### Switch

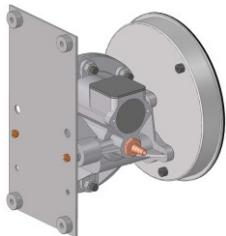


#### Gauge+switch (With a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



#### Horizontal pipe mounting



### Specifications

Accuracy	$\pm 3\%$ of the FSD (Ascending)
Migration	No migration ; Zero leakage from high to low port
Range	0-25 to 0-1250 mm of water
First marking on the scale	15% of the FSD
Sensing element	Diaphragm, body material, SS 302 spring & ceramic magnet
Wetted parts	Stainless steel (SS 304)
Case material	112mm. (4.4") (Other dial sizes on request)
Dial size in mm(inch)	Flush (Std.), 2" pipe & surface mounting on request
Mounting	2.4 bar / 35psi
Maximum working pressure	0 to 60°C (32 to 140°F)
Maximum process temperature	Engineering polymer
Body material	Buna-N, Viton, EPDM
Diaphragm	Float glass(Std.), toughened glass & acrylic on request.
Window	1/8" NPT(F)
Connection	In-line, back, In-line & back
Porting	Up to the max. working pressure from high side
Over range protection	IP 65 / NEMA-4
Protection for gauge & switch	

### Options

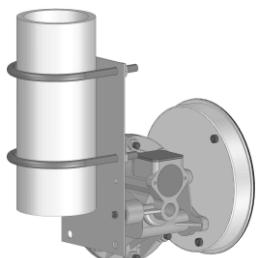
Liquid filling (glycerine/ silicone)	1 or 2 SPSTs with a DIN plug
Customer logo	1 SPDT with a DIN plug
Dual scale	
Color band	
Filter mesh in (+) connection	
Descending calibration	

*Switch can be added anytime on the field.*

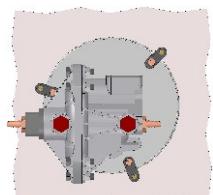
### Accessories supplied with instrument



#### Vertical pipe mounting



#### Panel / Flange mounting



# DIAPHRAGM



## 700 DGC

$\Delta P$  Range: 0 to 750 upto 40000 mmH<sub>2</sub>O  
0 to 1 upto 60 psi

### COMBINATIONS

#### Gauge

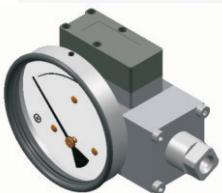


#### Switch



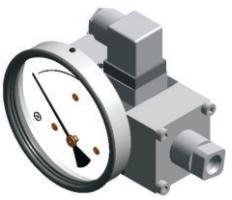
#### Gauge+switch

(with a terminal strip inside)



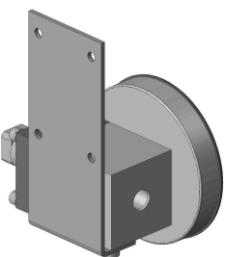
#### Gauge+switch

(with a DIN plug on top)



### MOUNTING BRACKETS

#### Surface mounting



### Specifications

#### Accuracy

$\pm 2\%$  of the FSD (Ascending)

#### Migration

No migration ; Zero leakage from high to low port

#### Range

0-0.075 to 0-4 bar or equivalent ranges in other units

#### First marking on the scale

15% of the FSD

#### Sensing element

Diaphragm, body material, SS 302 spring & ceramic magnet

#### Wetted parts

Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6"

#### Case material & dial size

Engineering polymer: 2.5", 4.5", 6"

#### Mounting

Direct, front flange, 2" pipe & surface mounting

#### Maximum working pressure

100 bar / 1500 psi

#### Maximum process temperature

0 to 80°C (32 to 175°F)

#### Body material

Aluminum, Brass, SS 316 & Monel

#### Diaphragm

Buna-N, Viton, EPDM

#### Window

Float glass(Std.), toughened glass, acrylic & safety glass

#### Connection

1/4" NPT(F) (Std.), 1/4" BSP(F) and others through adaptor

#### Porting

In-line, rear, bottom, bottom & vent, in-line & vent, in-line & bottom.

#### Over range protection

Up to the max. working pressure from high side

#### Protection for gauge & switch

IP 65 / NEMA-4

### Options

#### Liquid filling (glycerine/ silicone)

1 SPST with a DIN plug

#### Red follower pointer

1 or 2 SPSTs with a terminal strip

#### Customer logo

1 SPST with a built in relay

#### Dual scale

1 or 2 SPDTs with a terminal strip

#### Colour band

1 or 2 SPDTs with a DIN plug

#### Filter mesh in (+) connection

#### Descending calibration

### Switches (Adjustable in 30-100% of FSD)

1 SPST with a DIN plug

1 or 2 SPSTs with a terminal strip

1 SPST with a built in relay

1 or 2 SPDTs with a terminal strip

1 or 2 SPDTs with a DIN plug

### Available in engineering polymer (EP) Case



6.0"



4.5"



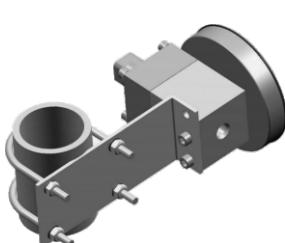
2.5"

- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

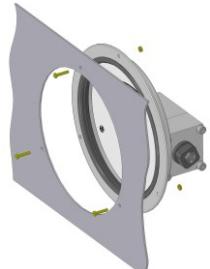
#### Horizontal pipe mounting



#### Vertical pipe mounting



#### Panel / Flange mounting





## DX 20

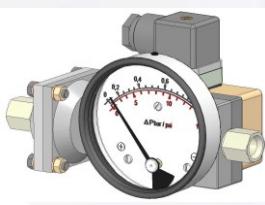
**ΔP Range:** 0 to 0.16 upto 2 bar  
0 to 2.4 upto 30 psi

### COMBINATIONS

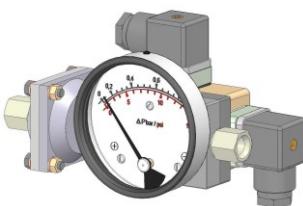
#### Gauge



#### Gauge+switch (With a DIN plug on top)



#### Gauge+switch (with 2 DIN plugs)



### MOUNTING BRACKETS

### Specifications

Accuracy	±5% of FSD (Ascending)
Migration	No migration ; Zero leakage from high to low port
Range	0-0.16 to 0-2 bar. bar/psi dual scale
First marking on the scale	15% of FSD
Sensing element	Diaphragm
Wetted parts	SS316 body, SS 302 spring, diaphragm & ceramic magnet
Case material & dial size	Stainless steel (SS 304): 2.5", 3.5", 4"
Mounting	Engineering polymer: 2.5"
Maximum working pressure	Direct, 2" pipe & surface mounting
Maximum process temperature	100 bar.
Enclosure	0 to 80°C (32 to 175°F)
Diaphragm	Engineering Polymer
Window	Buna-N, Viton, EPDM
Connection	Float glass (Std.), toughened glass, acrylic & safety glass.
Porting	1/4" BSP(F) (Std.), Optional: 1/4"NPT(F)
Over range protection	In-line
Protection for gauge & switch	Up to the max. working pressure from high side
	IP 65

### Options

Liquid filling (glycerine/ silicone)	1 or 2 SPSTs with a DIN plug
Red follower pointer	1 or 2 SPDTs with a DIN plug
Customer logo	
Dual scale	
Color band	

*DP range can be changed easily at site by replacing range spring.*

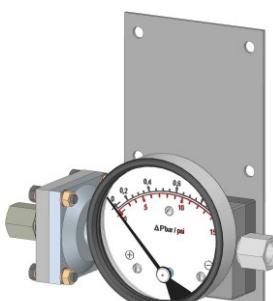
*(Available only in gauges with color band or zones without any graduations)*

### Available in engineering polymer (EP) Case

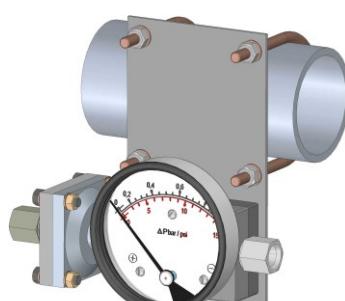


- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

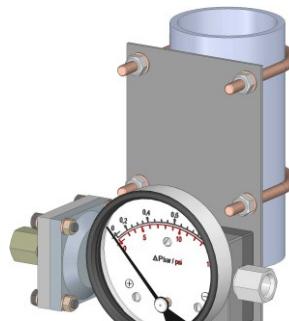
### Surface mounting



### Horizontal pipe mounting



### Vertical pipe mounting





### Center Zero Gauge

#### CZ 300DGC

Low range CZ 400DGC also available. Visit [www.hirlekarprecision.com](http://www.hirlekarprecision.com)

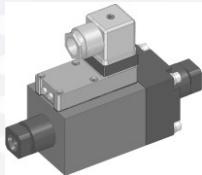
$\Delta P$  Range: 0.075 - 0 - 0.075 bar  
upto 4 - 0 - 4 bar

#### COMBINATIONS

##### Gauge



##### Switch



##### Gauge + switch

(with a terminal strip inside)



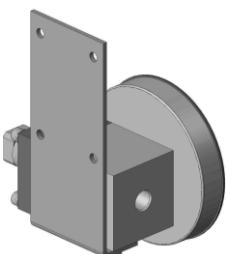
##### Gauge + switch

(with a DIN plug on top)



#### MOUNTING BRACKETS

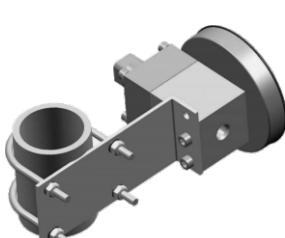
##### Surface mounting



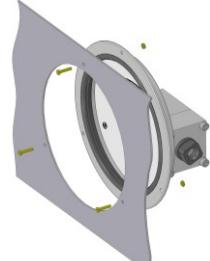
##### Horizontal pipe mounting



##### Vertical pipe mounting



##### Panel / Flange mounting



#### Available in engineering polymer (EP) Case



- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

#### Specifications

Accuracy	$\pm 2\%$ of the FSD (Ascending)
Migration	No migration ; Zero leakage from high to low port
Range	0.075-0-0.075 to 4-0-4 bar or equivalent ranges in other units
First marking on the scale	20% of the FSD
Sensing element	Diaphragm
Wetted parts	Diaphragm, body material, SS 302 spring & ceramic magnet
Case material & dial size	Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6" Engineering polymer: 2.5", 4.5", 6"
Mounting	Bayonet: 4"
Maximum working pressure	Direct, front flange, 2" pipe & surface mounting
Maximum process temperature	100 bar / 1500 psi
Body material	0 to 80°C (32 to 175°F)
Diaphragm	Aluminum, Brass, SS 316 & Monel
Window	Buna-N, Viton, EPDM
Connection	Float glass(Std.), toughened glass, acrylic & safety glass
Porting	1/4" NPT(F) (Std.), 1/4" BSP(F) and others through adaptor
Over range protection	In-line, rear, bottom, bottom & vent, in-line & vent, in-line & bottom
Protection for gauge & switch	in-line & back, bottom vent in-line Up to the max. working pressure from high side

#### Options

Liquid filling	1 or 2 SPDTs with a terminal strip
Customer logo	1 or 2 SPDTs with a DIN plug
Dual scale	
Colour band	

#### Switches

1 or 2 SPDTs with a terminal strip
1 or 2 SPDTs with a DIN plug



Akron Electric (USA)

FCG (India)

### Hazardous Area

## EX 200DPG

Other EX products also available. Visit [www.hirlekarprecision.com](http://www.hirlekarprecision.com)

$\Delta P$  Range: 0 to 0.25 upto 10 bar  
0 to 5 upto 150 psi

#### COMBINATIONS

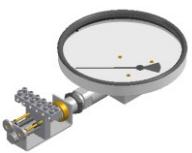
**Gauge+switch**  
(with a terminal strip inside)



**Switch**



**Gauge+switch**  
(Without Ex-proof enclosure)



**Switch\***

(Without Ex-proof enclosure)



\*Locally available explosion proof enclosures can be used

#### Specifications

Accuracy	$\pm 2\%$ of the FSD (Ascending)
Migration	Minor from high to low port
Range	0-0.25 to 0-10 bar or equivalent range in other units
First marking on the scale	20% of the FSD
Sensing element	Piston
Wetted parts	Body material, SS 302 spring, ceramic magnet & seals
Case material & dial size	Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6.0"
Mounting	Engineering polymer: 2.5", 4.5", 6.0"
Maximum working pressure	Body material, SS 302 spring, ceramic magnet & seals
Maximum process temperature	Stainless steel (SS 304): 2.5", 3.5", 4", 4.5", 6.0"
Body material	Engineering polymer: 2.5", 4.5", 6.0"
Seals	Surface, 2" pipe mountings
Window	200 bar for Aluminum & Brass, 400 bar for SS & Monel
Connection	0 to 80°C (32 to 175°F)
Porting	Aluminum, Brass, SS 316, Monel
Over range protection	Buna-N, Viton, EPDM
Protection for gauge & switch	Float glass(Std.), toughened glass, acrylic & safety glass.

#### Options

Liquid filling (glycerine/ silicone)	1 or 2 SPSTs with a terminal strip
Red follower pointer	1 or 2 SPDTs with a terminal strip
Customer logo	
Dual scale	
Color band	
Filter mesh in (+) connection	
Descending calibration	

#### Enclosure Approvals

#### Switches (Adjustable in 20-100% of FSD)

1 or 2 SPSTs with a terminal strip

1 or 2 SPDTs with a terminal strip

Available in engineering polymer (EP) Case

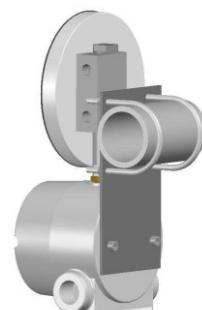


- Removable glass
- Strong and durable
- Panel mounting possible
- Condensation can be cleaned
- Light weight

#### ASSEMBLY

#### MOUNTING BRACKETS

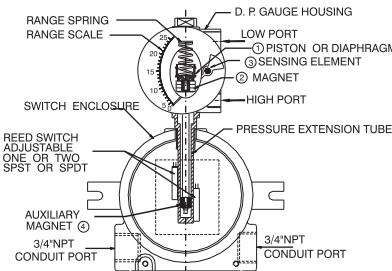
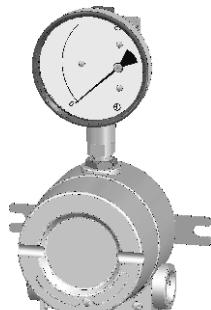
##### Horizontal pipe mounting



##### Vertical pipe mounting



##### Surface mounting

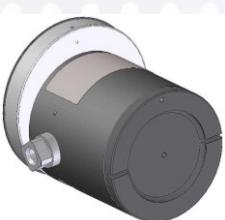



**Hazardous Area**

## PR 10

**COMBINATIONS**

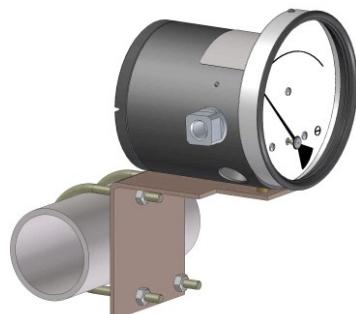
**Gauge + switch**  
(with a terminal strip inside)


**COMMON MOUNTING BRACKET**
**Specifications**

Accuracy	±2% of the FSD (Ascending)
Migration	Minor from high to low port
Range	0-0.25 to 0-10 bar or equivalent range in other units
First marking on the scale	20% of the FSD
Sensing element	Piston
Wetted parts	Body material, SS 302 spring, ceramic magnet & seals
Case material & dial size	Stainless steel (SS 304): 4.5", 6.0"
Mounting	Direct or 2" horizontal / vertical pipe mounting bracket
Maximum working pressure	400 bar / 6000 psi
Maximum process temperature	0 to 80°C (32 to 175°F)
Body material	SS316 attached to flameproof aluminum enclosure
Seals	Buna-N, Viton & EPDM.
Window	Float glass(Std.), toughened glass, & safety glass.
Connection	1/4" NPT(F) (Std.), 1/4" BSP(F) through adaptor
Porting	In-line only
Over range protection	Up to the max. working pressure from high & low side
Protection for gauge & switch	IP 66/ NEMA-4
Electrical connection	1/2"NPT(F) for 2 conduit ports at bottom, left and right 40° from center line
Net weight	Cable glands and plugs are not supplied with the instrument. Approximately 2.000 kgs.

**Options**

Customer logo	1 or 2 SPSTs with a terminal strip
Dual scale	1 or 2 SPDTs with a terminal strip
Color band	
Filter mesh in (+) connection	

**Switches (Adjustable in 30-100% of FSD)**
**Horizontal pipe mounting**

**Vertical pipe mounting**

**Approval**

 This gauge is  
**Ex d IIC T6 IP66**  
 approved

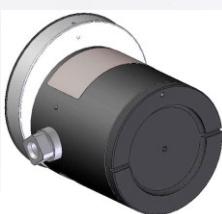
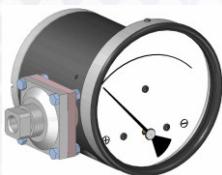


## Hazardous Area

### PR 20

#### COMBINATIONS

**Gauge + switch**  
(with a terminal strip inside)



#### Specifications

Accuracy	±2% of the FSD (Ascending)
Migration	No migration : Zero leakage from high to low port
Range	0-0.075 to 0-4 bar or equivalent range in other units
First marking on the scale	20% of the FSD
Sensing element	Diaphragm
Wetted parts	Body material, SS 302 spring, ceramic magnet & seals
Case material & dial size	Stainless steel (SS 304): 4.5", 6.0"
Mounting	Direct or 2" horizontal / vertical pipe mounting bracket
Maximum working pressure	100 bar / 1500 psi
Maximum process temperature	0 to 80°C (32 to 175°F)
Body material	SS316 attached to flameproof aluminium enclosure
Diaphragm	Buna-N, Viton, EPDM
Window	Float glass(Std.), toughened glass, & safety glass.
Connection	1/4" NPT(F) (Std.), 1/4" BSP(F) through adaptor
Porting	In-line only
Over range protection	Up to the max. working pressure from high & low side
Protection for gauge & switch	IP 66 / NEMA-4
Electrical connection	1/2"NPT(F) for 2 conduit ports at bottom, left and right 40° from center line.
Net weight	Cable glands and plugs are not supplied with the instrument. Approximately 2.500 kgs.

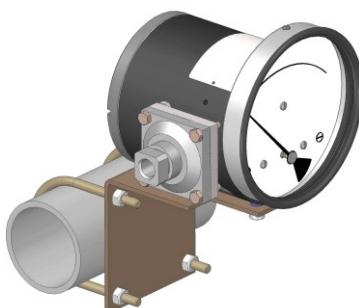
#### Options

Customer logo	1 or 2 SPSTs with a terminal strip
Dual scale	1 or 2 SPDTs with a terminal strip
Color band	
Filter mesh in (+) connection	

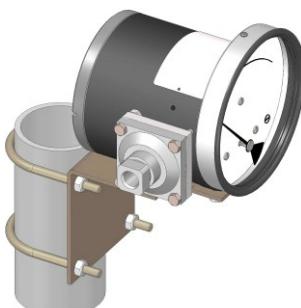
#### Switches (Adjustable in 40-100% of FSD)

#### COMMON MOUNTING BRACKET

##### Horizontal pipe mounting



##### Vertical pipe mounting



#### Approval

This gauge is  
**Ex d IIC T6 IP66**  
approved

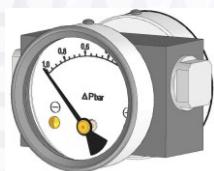


**Double Dial Gauge**  
(Dial readable from both sides)

## D200 DPG

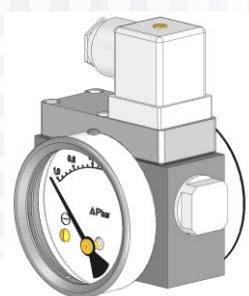
### COMBINATIONS

#### Gauge



#### Gauge+switch

(with a DIN plug on top)



### Specifications

Accuracy	±5% of the FSD (Ascending)
Migration	Minor from high to low port
Range	0-0.25 to 0-10 bar or equivalent range in other units
First marking on the scale	20% of the FSD
Sensing element	Piston
Wetted parts	Body material, SS 302 spring, ceramic magnet & seals
Case material	Stainless steel (SS 304)
Dial size in inch /mm	2.5"
Mounting	Direct
Maximum working pressure	350 bar for Al, Br ; 450 bar for SS
Maximum process temperature	0 to 80°C (32 to 175°F)
Body material	Aluminum, SS 316, Brass
Seals	Buna-N, Viton & EPDM
Window	Float glass(Std.), toughened glass, acrylic & safety glass.
Connection	1/4" NPT(F) (Std.) Optional: 1/4" BSP(F)
Porting	In-line, bottom
Over range protection	Up to the max. working pressure from high & low side
Protection for gauge & switch	IP 65 / NEMA-4

### Options

Liquid filling (glycerine/ silicone)	1 or 2 SPSTs with a DIN plug on top
Red follower pointer	1 SPDT with a DIN plug on top
Customer logo	
Dual scale	
Color band	
Filter mesh in (+) connection	

### Switches (Adjustable in 20-100% of FSD)

### Special products

Hirlekar Precision manufactures certain specialized differential pressure instruments for the OEM Industry. These products are manufactured at the Hirlekar Precision facility where the other products are produced. These products are categorized as special products as they require a longer lead time and/or a standard minimum order quantity.



**320 DGC**  
Irrigation Industry



**PSID**  
Natural Gas Filtration



**Float Gauge**  
Cryogenic Industry

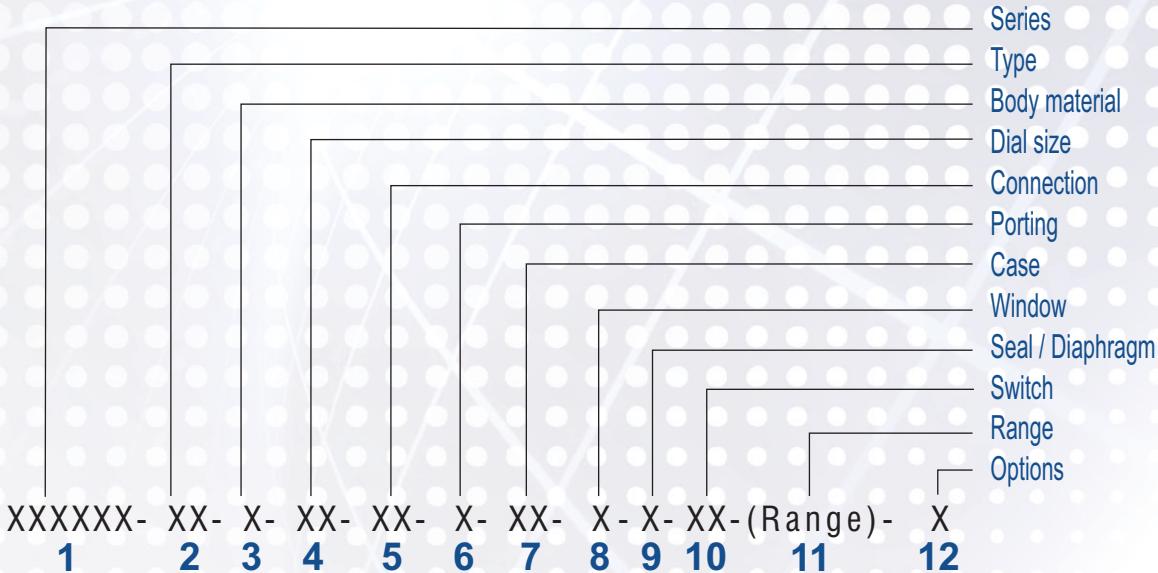
# NEW: Polymer Case

# How to order?

## Unique Gauge Ordering Code

All of the Hirlekar Precision gauge models can be ordered through a unified 12 point ordering code shown below. Please mention the entire code at the time of ordering.

### Ordering code sequence



Example: 200DPG-G-S-2.5-4N-2-SS-F-B-21-(0-1bar)-C

### Engineering Polymer (EP) Case

The EP Case is a removable case made of high-strength glass reinforced engineering polymer nylon. The EP Case comes in three sizes: 2.5" (63mm), 4.5" (115mm) and 6.0" (150mm).



#### Advantages

In case of condensation, fogging occurs inside the case which affects visibility. Remove the outer part of the EP Case, clean the glass and reattach the cover. No need to send the gauge for cleaning. Recommended in areas witnessing severe temperature fluctuations.

Removable Glass cover  
Panel Mounting possible  
Condensate can be cleaned  
Light weight  
Strong & durable

#### Which gauges come with optional EP Case?

Piston Gauges: 200 DPG, DX 10, EX 200DPG

Diaphragm Gauges: 200 DGR, 300 DGC, 400 DGC, 700 DGC, GX 100, CZ Gauges, EX gauges

# Types of dials

## Types of dials we print

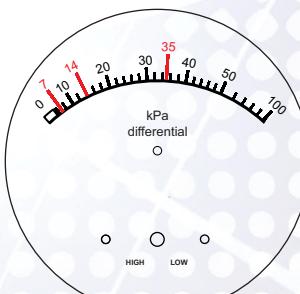
Hirlekar Precision prints a variety of dials.  
Some of the dials we print are below. Please contact us for customized dials.

All our dial printing is done in our in-house printing department

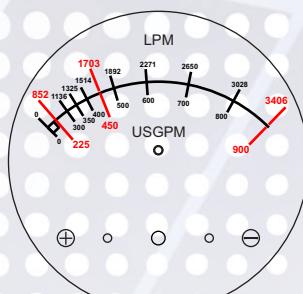
### Standard Indication



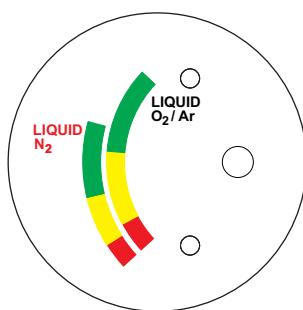
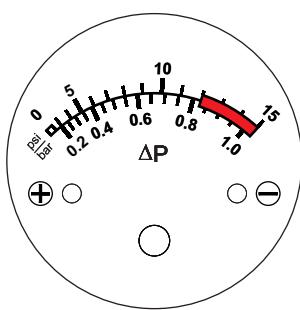
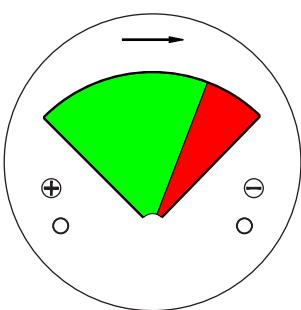
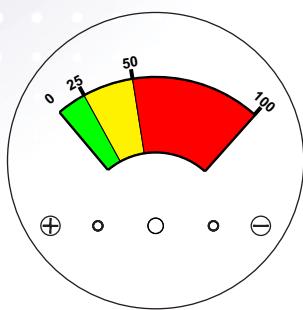
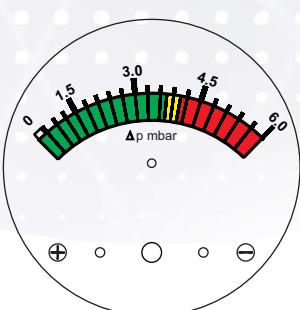
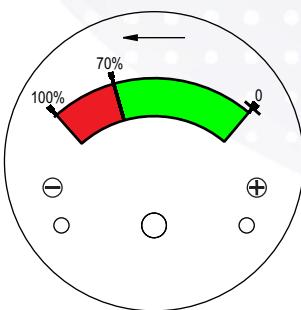
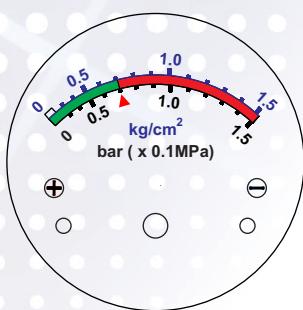
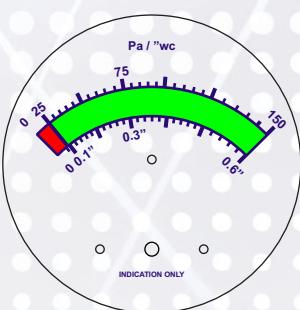
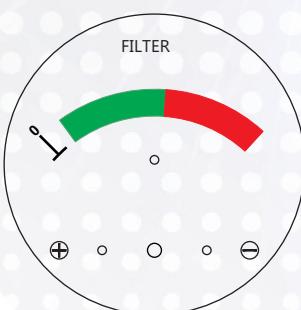
### Call out



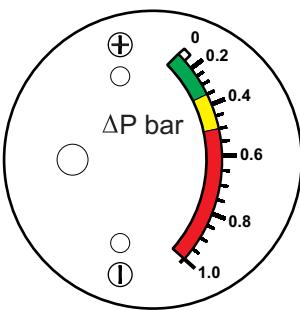
### Dual Scale



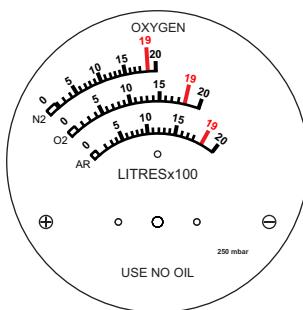
### Color bands



### Mirror scale



### Three scales



# **HIRLEKAR** PRECISION

## Hirlekar Precision

### Head Office:

18-19 Gultekadi Industrial Estate  
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T.P. Scheme II, Ramtekadi  
Pune 411 013, INDIA  
Tel. :+91 98 2304 3051  
E-mail: sales@hirlekarprecision.com



Represented by