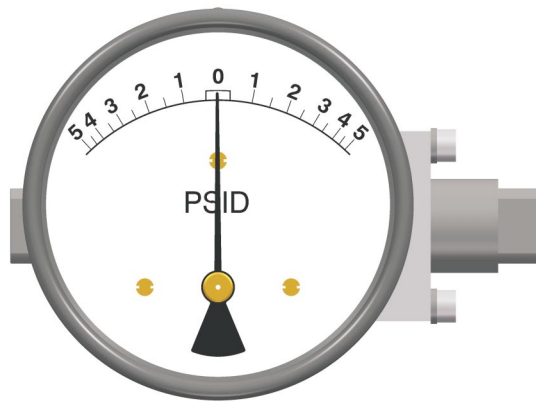


DIAPHRAGM SENSORS



Hirlekar Precision manufactures quality compound instruments designed to measure the difference in pressure when it changes from positive to negative between two points in a system and show it on a single dial instrument. They are also known as center zero instruments. A magnetic movement senses the differential pressure. The instruments has separate pressure and indicating chambers.

These diaphragm instruments can indicate small values of differential pressure even when used at high line pressures. They provide continuous information regarding system conditions helping in eliminating premature servicing of equipment, avoid unscheduled down time of costly processes and detect abnormal system conditions. Ranges are stated in the same way they are indicated on the Dial face with a centre zero point and equal but opposite values on either side of the zero point.

Switching Facility : Instruments can be supplied with reed switches to initiate alarms, activate other equipment, or shut the system down. Two switches are used when high and low limits are desired. Gauge-switch models provide the user with both, gauge readout and switch operation.

COMPOUND INSTRUMENTS

SALIENT FEATURES

- Ideal for measurement of positive and negative differential pressure on the same dial with a zero centre point.
- Cost effective and reliable.
- Simple and compact design.
- Available in small convoluted diaphragm sensor.
- Adjustable reed contact switching.
- Gauge+ switch or only switch models.
- Manufactured in ISO 9002 certified plant.
- Exported worldwide.

APPLICATIONS :

Determine filter loading, set filter by-pass, or initiate filter cleaning cycle.

Determine obstructions in process lines.

Check conditions of pumps, heat exchangers, and other processing equipment.

Detect abnormal and reverse flow conditions.

Balance and adjust flow rates in piping systems.

Monitor liquid levels in storage tanks.

HIRLEKAR PRECISION

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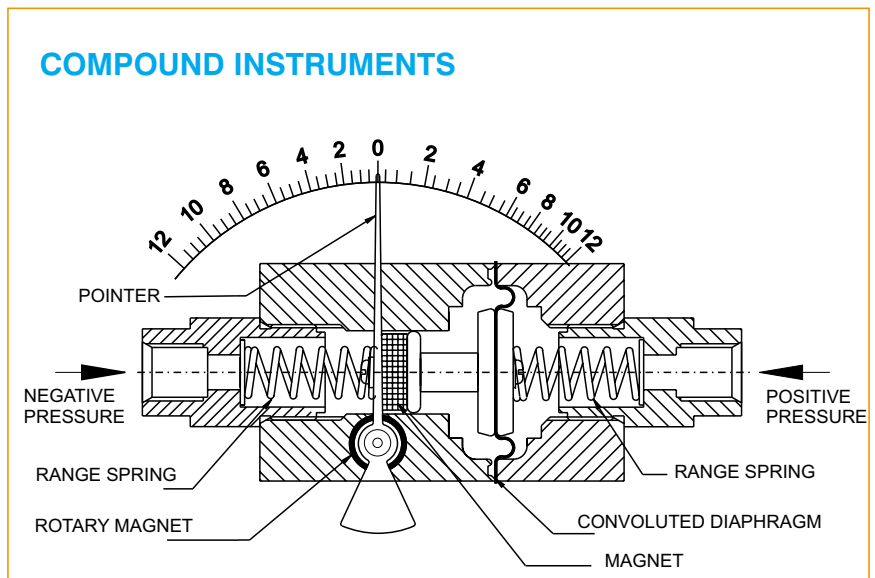
MAGNETIC PRINCIPLE

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 sensor assembly to move in proportion to the change against a range spring.

A rotary magnet, located in a separate body cavity 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.

Switch : Reed switches are located adjacent to the pressure chamber and are activated by the magnetic field of the sensor assembly



TECHNICAL DATA

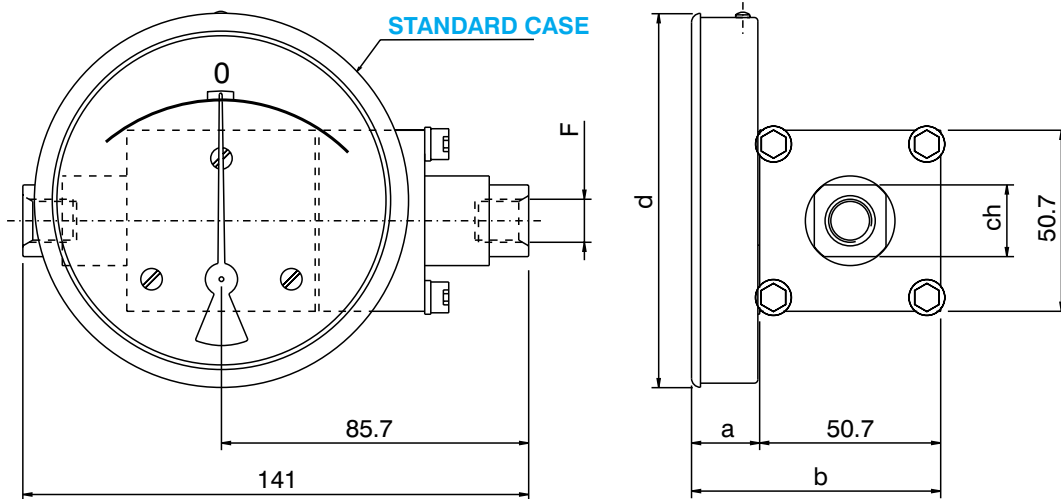
Ranges	:	0.75-0-0.75 bar to 2-0-2 bar
Units of calibration	:	Kg/cm ² , bar, mbar, mm H ₂ O, IN H ₂ O, psi
Operating principle	:	Magnetic coupling with a convoluted diaphragm sensor.
Working pressure	:	100 bar / 1500 psi
Accuracy	:	± 2 % of FSD (Ascending)
Dial sizes	:	2.5"(63 mm), 3.5"(80 mm), 4"(100 mm), 4.5"(115 mm)& 6"(150 mm)
Body Material	:	Aluminium, Brass & SS-316.
Temperature	:	80°C Max. for the media.
Protection	:	IP 65 for gauge
Migration of media	:	Zero migration between high and low pressures.
Connections	:	¼" NPT (F) or ¼" BSP(F) (on request, longer lead time)
Wetted parts	:	Diaphragm, ceramic magnet, SS 304 spring. Other internal parts in Aluminium, brass, or SS-316 as per the gauge body.
Seals	:	Buna-N (Standard), Viton
Porting	:	In line (standard), Bottom or Back.
Switch	:	SPST or SPDT, one or two. Switches are field adjustable. The set points can be increased or decreased externally with simple screwdriver adjustments. When two switches are used, either switch can be adjusted independently.
Dial case	:	Stainless steel case and flange
Window	:	Glass (Standard), Acrylic, Toughened glass on request.
Other options	:	Glycerine filling, red resettable follower pointer, dual scale, DIN plug, Strainer in (+) connection

HOW TO ORDER

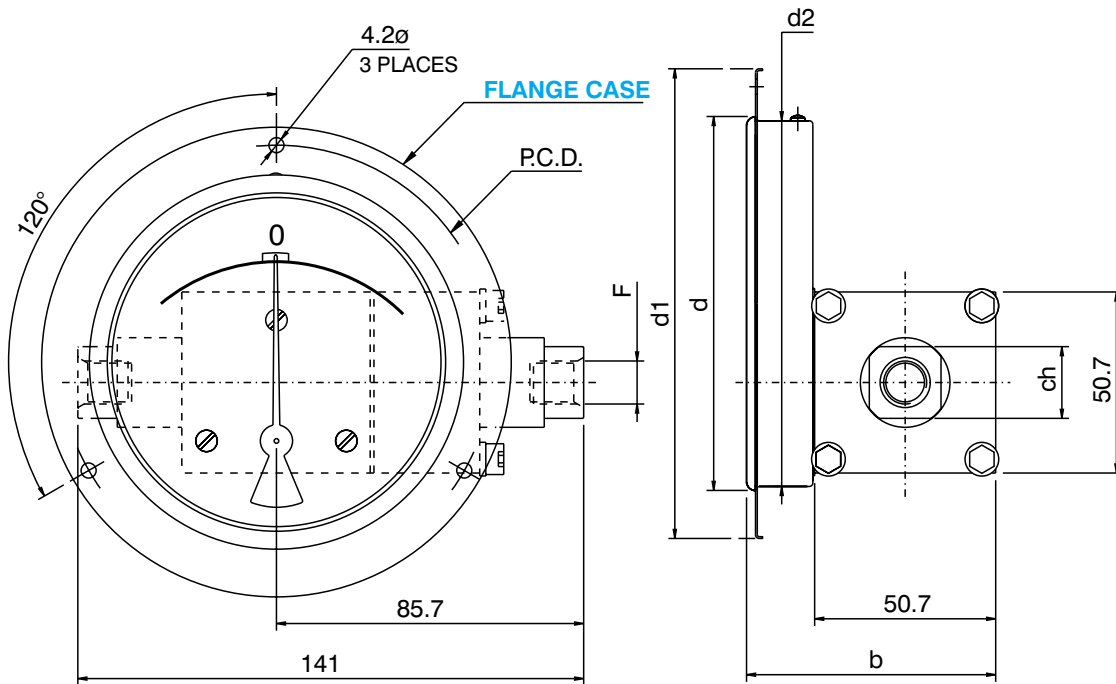
Select a model from individual catalogue of 300 DGC and add "CZ" at the beginning of the product code.

Note : For this instrument with switch, the setting range is between 40 to 90% of the range.

STANDARD DIMENSIONS FOR COMPOUND (CENTRE ZERO) INSTRUMENTS (MODEL 300 DGC)



DIAL \varnothing	F	a	b	d	ch
63 (2.5")	1/4" BSP - 1/4" NPT	19	69.7	66	20
80 (3.5")	1/4" BSP - 1/4" NPT	19	69.7	83	20
100 (4")	1/4" BSP - 1/4" NPT	19	69.7	104.3	20
115 (4.5")	1/4" BSP - 1/4" NPT	19	69.7	119.7	20
150 (6")	1/4" BSP - 1/4" NPT	19	69.7	154.3	20

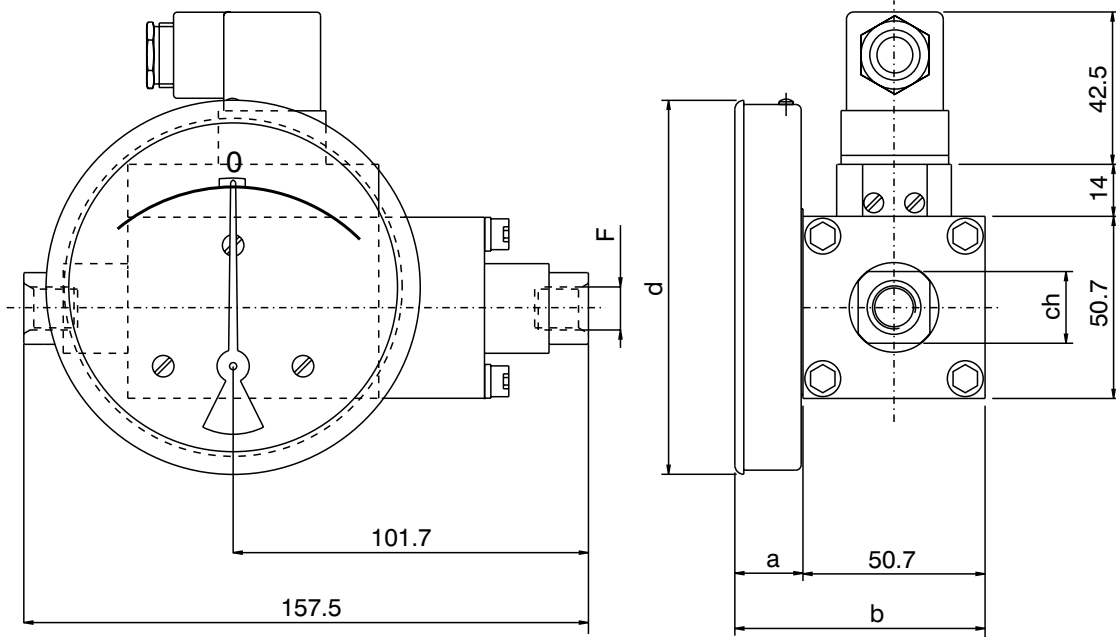


DIAL \varnothing	F	a	b	d1	d2	ch	p.c.d.	* d
63 (2.5")	1/4" BSP - 1/4" NPT	19	69.7	93	65	20	83	66
80 (3.5")	1/4" BSP - 1/4" NPT	19	69.7	109	82	20	99	83
100 (4")	1/4" BSP - 1/4" NPT	19	69.7	131	102	20	121	104.3
115 (4.5")	1/4" BSP - 1/4" NPT	19	69.7	146	117	20	136	119.7
150 (6")	1/4" BSP - 1/4" NPT	19	69.7	181	152.5	20	171	154.3

* PANEL CUTOUT = d + 1

STANDARD DIMENSIONS FOR COMPOUND (CENTRE ZERO) INSTRUMENTS GAUGE + SWITCH WITH REED CONTACTS (MODEL 300 DGC)

WITH DIN PLUG



DIAL \varnothing	F	a	b	d	ch
63 (2.5")	1/4" BSP - 1/4" NPT	19	69.7	66	20
80 (3.5")	1/4" BSP - 1/4" NPT	19	69.7	83	20
100 (4")	1/4" BSP - 1/4" NPT	19	69.7	104.3	20
115 (4.5")	1/4" BSP - 1/4" NPT	19	69.7	119.7	20
150 (6")	1/4" BSP - 1/4" NPT	19	69.7	154.3	20

WITH TERMINAL STRIP

