SC METROMAT SRL

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BADOTHERM® Manometre diferentiale, BDT13

Badotherm differential pressure gauge model BDT13 has a stainless steel diaphragm and one pointer to read the differential pressure. The variation in high static pressure makes this gauge suitable for almost all differential measurements. This pressure gauge is typically used for applications in the chemical, petro-chemical, oil & gas, power and utilities, machine building and general process industries



Design Information

Design Norm	Ingress Protection
EN 837-3	IP 65 per EN 60529 / IEC 529

Standard Model Material Specifications

Process connection	Diaphragm	Case	Bezel
AISI 316(L)	AIS I316 (L)	AISI 304, bayonet	AISI 304, bayonet

Movement	Window	Pointer	Dial
stainless steel	safety glass	aluminium, black	aluminium, white with black markings

Technical Specifications

	BDT13 100 /160 mm	BDT13-01 160 mm	BDT13-02 100 /160 mm
Connection	1/2" BSP/NPT	1/2" BSP/NPT	1/2" BSP/NPT
Minimum range	100 mbar	16 mbar	100 mbar
Maximum range	25 bar	60 mbar	25 bar
Static pressure	100 bar	25 bar	200 bar
Accuracy*	1.6% FSD	1.6% FSD	1.6% FSD
Pointer	fixed	fixed	fixed
Mounting variations	A / C / C2	A / C / C2	A / C / C2
Free zero	•	•	•
Internal limit stop	•	•	•
Connection construction	screwed	screwed	screwed
Bolts	A2-70	A2-70	steel 12.9
Blow out	-	-	-
Compensation plug, material**	NBR	NBR	NBR
Window gasket	NBR	NBR	NBR

* When mounted on seals accuracy is between 20% and 80% of the FSD
** HNBR for filled executions

Special Executions

BDT13-S	casing and bezel in AISI 316(L), bolts A4
BDT13-Nace	casing and bezel in AISI 316(L), diaphragm in Hastelloy C276, bolts A2-70
BDT13-M	connection, flanges and diaphragm in Monel 400, casing and bezel in AISI 316(L), bolts A2-70
BDT13-HC	connection, flanges and diaphragm in Hastelloy C-276, casing and bezel in AISI 316(L), bolts A2-70
BDT13-D	connection, flanges and diaphragm in Duplex 2205, casing and bezel in AISI 316(L), bolts A2-70
BDT13-CS	suitable for Diaphragm Seals assembled by Badotherm

Note: other material for bolts, nuts, and washers to be specified at time of order

Options

Process connection	other
Restrictor screw	AISI 316(L), Monel 400
Pointer	adjustable slotted pointer, or micro adjustable pointer (100mm only)
Case filling	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
Cleaning	oxygen service (in case of filling use BPF05)
Calibration certificates	5 points (rising and falling)
Atex	EX II 2 GD c (ATEX 94/9/EC)

Pressure Details

Working Pressure

steady	full scale value
fluctuating	0.9 x full scale value
Short time	see over-pressure table

Over-Pressure

type	range	over-pressure at 20°C
BDT13	100 mbar/25 bar	100 bar
BDT13-01	16 mbar/60 mbar	25 bar
BDT13-02	100 mbar/25 bar	200 bar

Temperature Details

Case filling fluid

			ambient	process
-	without		-40°C to 90°C	200°C
BPF01	glycerine	1000 Cst	-20°C to 65°C	90°C
BPF02	silicone	1000 Cst	-40°C to 65°C	90°C
BPF03	for contacts	80 Cst	-40°C to 60°C	90°C
BPF04	foaming service	50 Cst	-40°C to 60°C	90°C
BPF05	oxygen service	30 Cst	-40°C to 60°C	90°C

Window

	ambient
safety glass	<200°C

Gaskets

	ambient
window NBR	<100°C
fill plug NBR	<100°C
fill plug HNBR	<150°C
Flange	<200°C

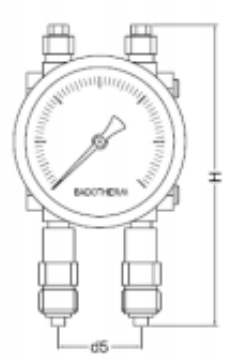
Temperature Effect

The variation of indication caused by the effect of temperature shall not exceed:
± 0.1 x (ambient temperature – reference temperature)% of the span

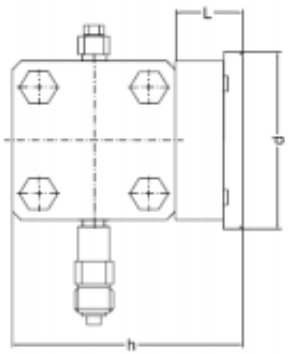
Mounting Variations

- type A bottom connection, direct mounting
- type C bottom connection, surface mounting
- type C2 bottom connection, pipe mounting

Drawings



type A



type A

Dimensions

type	ns	d	d5	h	L	H	weight	filled
BDT13	100	110	54	150	50	186	6.4 kg	6.9 kg
BDT13	160	160	54	152	52	186	7.2 kg	8.3 kg
BDT13-01	160	160	54	202	52	236	11.2 kg	1.1 kg
BDT13-02	100	110	54	150	50	186	9.6 kg	10.1 kg
BDT13-02	160	160	54	152	52	186	10.4 kg	11.5 kg

All dimensions in mm

NOTA: Aceasta fisa a fost realizata sub rezerva modificarilor ulterioare de ordin tehnic sau a erorilor de editare.

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