

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**

<b>DESIGN NORM</b> EN 837-3	<b>INGRESS PROTECTION</b> IP 65 per EN 60529 / IEC 529
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**STANDARD MODEL MATERIAL SPECIFICATIONS**

<b>PROCESS CONNECTION</b> AISI316(L)	<b>DIAPHRAGM</b> AISI316 (L)	<b>CASE</b> AISI304, bayonet	<b>BEZEL</b> AISI304, bayonet
<b>MOVEMENT</b> stainless steel	<b>WINDOW</b> safety glass	<b>POINTER</b> aluminium, black	<b>DIAL</b> aluminium, white with black markings

**TECHNICAL SPECIFICATIONS**

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

\* HNBR for filled executions

**SPECIAL EXECUTIONS**

<b>BDT13-S</b>	casing and bezel in AISI316(L), bolts A4
<b>BDT13-NACE</b>	casing and bezel in AISI316(L), diaphragm in Hastelloy C276, bolts A2-70
<b>BDT13-M</b>	connection, flanges and diaphragm in Monel 400, casing and bezel in AISI316(L), bolts A2-70
<b>BDT13-HC</b>	connection, flanges and diaphragm in Hastelloy C-276, casing and bezel in AISI316(L), bolts A2-70
<b>BDT13-D</b>	connection, flanges and diaphragm in Duplex 2205, casing and bezel in AISI316(L), bolts A2-70
<b>BDT13-CS</b>	suitable for Diaphragm Seals assembled by Badotherm

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

**OPTIONS**

<b>PROCESS CONNECTION</b>	other
<b>RESTRICTOR SCREW</b>	AISI316(L), Monel 400
<b>POINTER</b>	adjustable slotted pointer, or micro adjustable pointer (100mm only)
<b>FILLING</b>	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
<b>CLEANING</b>	oxygen service (in case of filling use BPF05)
<b>CALIBRATION CERTIFICATES</b>	5 points (rising and falling)
<b>ATEX</b>	EX II 2 GD c (ATEX 94/9/EC)

## DATA SHEET

## BDT13 – DIAPHRAGM DIFFERENTIAL GAUGE

### PRESSURE DETAILS

#### WORKING PRESSURE

<b>steady</b>	full scale value
<b>fluctuating</b>	0.9 x full scale value
<b>Short time</b>	see over-pressure table

#### OVER-PRESSURE

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

### TEMPERATURE DETAILS

#### FILLING FLUID

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

#### WINDOW

	ambient
<b>safety glass</b>	<200°C

#### GASKETS

	ambient
<b>window NBR</b>	<100°C
<b>fill plug NBR</b>	<100°C
<b>fill plug HNBR</b>	<150°C

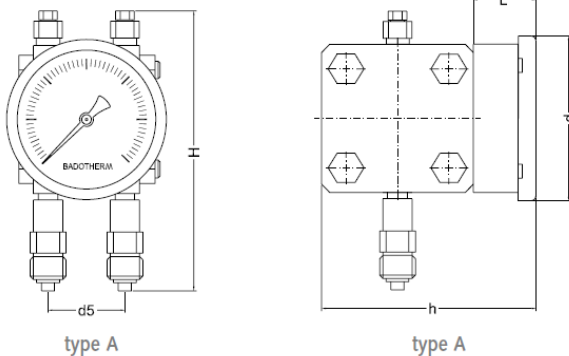
### TEMPERATURE EFFECT

The variation of indication caused by the effect of temperature shall not exceed:  
 $\pm 0.1 \times (\text{ambient temperature} - \text{reference temperature})\% \text{ of the span}$

### MOUNTING VARIATIONS

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

### DRAWINGS



### DIMENSIONS

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

All dimensions in mm



**Holland – United Kingdom – Romania – India – Thailand – Dubai**

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