

Badotherm pressure gauge model BDT19 is manufactured according to the EN837-1. The BDT19 gauge is fitted with a reduced volume tube system and offers excellent performance in combination with Diaphragm Seals. This reduces the effects of temperature giving a higher overall long-term accuracy. This pressure gauge is typically used for applications in the chemical, petro-chemical, oil & gas, power and utilities, machine building and general process industries. Safety comes first, with a blow-out feature, pressure elements are made of seamless drawn tubes and the welded type connection construction of the 100mm and 160mm. These gauges are designed to withstand the severest of operating conditions created by the ambient environment and the process medium.



DESIGN INFORMATION

DESIGN NORM	SAFETY DESIGNATION	INGRESS PROTECTION
EN 837-1	S1 as per EN837-2	IP65 per IEC 60529

STANDARD MODEL MATERIAL SPECIFICATIONS

PROCESS CONNECTION	TUBE	CASE	BEZEL
AISI316(L)	AISI316	AISI304, bayonet	AISI304, bayonet
MOVEMENT	WINDOW	POINTER	DIAL
stainless steel	glass	aluminium, black	aluminium, white with black markings

TECHNICAL SPECIFICATIONS

	100 mm	160 mm
Connection	1/2" BSP/NPT	1/2" BSP/NPT
Minimum range	-1 bar	-1 bar
Maximum range ¹	1000 bar	1600 bar
Accuracy	1.6% FSV	1.0% FSV
Pointer	fixed	fixed
Mounting variations	A / C	A / C
Free zero	-	•
Internal limit stop	-	Min/Max
Connection construction	welded	welded
Blow out	on the back	on the back
Compensation plug, material ²	On the top, NBR	On the top, NBR
Window gasket	NBR	NBR
PED (CE marking >200 bar)	•	•

¹ Maximum range 1/2" NPT is 1000 bar according EN-837 table 10

² HNBR for filled executions

SPECIAL EXECUTIONS

BDT19-01	autoclave, suitable for high ambient temperature
BDT19-S	casing and bezel in AISI316(L)

OPTIONS

ACCESSORIES	please check for matching accessories such as siphons (BDT42), snubbers (BDT45), swivel gauges (BDT47), overpressure protectors (BDT49), diaphragm seals and instrument needle valves and manifolds
ATEX	EX II 2 GD c (ATEX 94/9/EC)
CALIBRATION CERTIFICATES	5 points (rising and falling)
CLEANING	for oxygen service, or oil and grease free (in case of filling use BPF05)
CONTACT	inductive / magnetic / electric (use BPF03 filling in case of liquid filling)
FILLING	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
POINTER	adjustable slotted (160mm only)
PROCESS CONNECTION	other
RESTRICTOR SCREW	AISI316(L)
WINDOW	laminated safety glass, polycarbonate

DATA SHEET
BDT19 – REDUCED VOLUME PRESSURE GAUGE
PRESSURE DETAILS
WORKING PRESSURE

	100 mm	160 mm
steady	0.75 x full scale value	full scale value
fluctuating	0.67 x full scale value	0.9 x full scale value
short time	full scale value	1.3 x full scale value

TEMPERATURE DETAILS
FILLING FLUID

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

WINDOW

	ambient
glass	<400°C
safety glass	<200°C
polycarbonate	<120°C

GASKETS

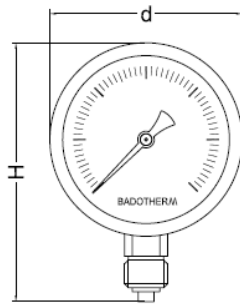
	ambient
window NBR	<100°C
fill plug NBR	<100°C
fill plug HNBR	<150°C

TEMPERATURE EFFECT

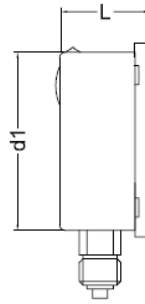
The variation of indication caused by the effect of temperature shall not exceed:
 $\pm 0.04 \times (\text{ambient temperature} - \text{reference temperature})\% \text{ of the span}$

MOUNTING VARIATIONS

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

DRAWINGS


type A



type A

DIMENSIONS

ns	d	d1	L	H	weight	filled
100	110	100	49	142	0.53 kg	1.00 kg
160	160	149	50	200	1.02 kg	2.10 kg

All dimensions in mm