

Badotherm pressure gauge model BDT23 is the reduced volume solid front, safety pattern gauge according to the highest class of the EN 837-1 / 9.7.2 and ANSI B 40.1. The BDT23 stainless steel safety gauge has a solid front baffle wall and a full blow-out back. This pressure gauge is also 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. The BDT23 is typically used for applications in the chemical, petro-chemical, and oil & gas industry or anywhere where safety comes first. 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	S3 as per EN837-2	IP67 per IEC 60529

STANDARD MODEL MATERIAL SPECIFICATIONS

PROCESS CONNECTION	TUBE	CASE	BEZEL
AISI 316(L)	AISI 316	AISI 304, bayonet	AISI 304, bayonet
MOVEMENT	WINDOW	POINTER	DIAL
stainless steel	laminated safety 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 <sup>1</sup>	1000 bar	1600 bar
Accuracy	1.0% FSV	1.0% FSV
Pointer	adjustable slotted	adjustable slotted
Mounting variations	A / C	A / C
Free zero	-	•
Internal limit stop	-	Min/Max
Connection construction	welded	welded
Solid front, full blow out	on the back	on the back
Compensation plug material <sup>2</sup>	NBR	NBR
Window gasket	NBR	NBR
PED (CE marking >200 bar)	•	•

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

<sup>2</sup> HNBR for filled executions

SPECIAL EXECUTIONS

BDT23-S	case and bezel in AISI 316(L)
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OPTIONS

ACCESSORIES	syphon (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)
CASE FILLING	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
POINTER	micro adjustable (160 mm only)
PROCESS CONNECTION	other
RESTRICTOR SCREW	AISI 316(L)

### PRESSURE DETAILS

#### WORKING PRESSURE

	100 mm	160 mm
<b>steady</b>	0.75 x full scale value	full scale value
<b>fluctuating</b>	0.67 x full scale value	0.9 x full scale value
<b>short time</b>	full scale value	1.3 x full scale value

### TEMPERATURE DETAILS

#### CASE FILLING FLUID

			ambient	process
-	without		-40°C to 60°C	200°C
<b>BPF01</b>	glycerine	1000 cSt	-20°C to 60°C	90°C
<b>BPF02</b>	silicone	1000 cSt	-40°C to 60°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

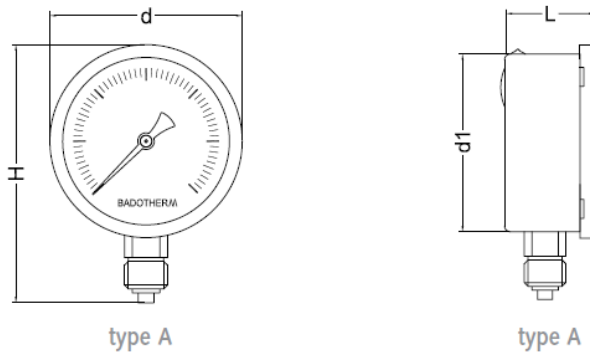
### TEMPERATURE EFFECT

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

### MOUNTING VARIATIONS

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

### DRAWING



### DIMENSIONS

ns	d	d1	L	H	weight	filled
<b>100</b>	110	100	63	142	0.65 kg	1.12 kg
<b>160</b>	160	149	64	200	1.20 kg	2.30 kg

All dimensions in mm



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