

Badotherm pressure gauge model BDT20-P is designed with a high overpressure safety, suitable for pressure up to 4 times the scale range. The BDT20-P stainless steel safety gauge has a solid front baffle wall and a blow-out back and is designed to comply with operational safety requirements of EN 837-1 / 9.7.2 and ANSI B 40.1. 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
AISI316(L)	AISI 316	AISI304, bayonet	AISI304, bayonet
MOVEMENT	WINDOW	POINTER	DIAL
stainless steel	laminated safety glass	aluminium, black	aluminium, white with black markings

**TECHNICAL SPECIFICATIONS**

	100 mm	160 mm
<b>Connection</b>	1/2" BSP/NPT	1/2" BSP/NPT
<b>Minimum range</b>	-1 bar	-1 bar
<b>Maximum range</b>	40 bar	40 bar
<b>Overpressure range</b>	100 bar	100 bar
<b>Accuracy</b>	1.0% FSV	1.0% FSV
<b>Pointer</b>	adjustable slotted	adjustable slotted
<b>Mounting variations</b>	A / C	A / C
<b>Internal limit stop</b>	Min/Max	Min/Max
<b>Connection construction</b>	welded	welded
<b>Solid front, full blow out</b>	on the back	on the back
<b>Compensation plug material*</b>	NBR	NBR
<b>Window gasket</b>	NBR	NBR
<b>PED (CE marking &gt;200 bar)</b>	•	•

\* HNBR for filled executions

**SPECIAL EXECUTIONS**

<b>BDT20-P-M</b>	overpressure protected, Process connection and pressure element in Monel 400, casing and bezel in AISI316(L) – suitable acc. ISO15156 / NACE MR01-75
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**OPTIONS**

<b>PROCESS CONNECTION</b>	other
<b>RESTRICTOR SCREW</b>	AISI316(L), Monel 400
<b>POINTER</b>	micro adjustable (100 and 160 mm only)
<b>FILLING</b>	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
<b>CLEANING</b>	for oxygen service, or oil and grease free (in case of filling use BPF05)
<b>CALIBRATION CERTIFICATES</b>	5 points (rising and falling)
<b>CONTACT</b>	inductive / magnetic / electric (use BPF03 filling in case of liquid filling)
<b>ATEX</b>	EX II 2 GD c (ATEX 94/9/EC)
<b>ACCESSORIES</b>	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

## DATA SHEET

## BDT20 P – SOLID FRONT PRESSURE 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

range from 0 up to 225° on scale	Overload range from 225° up to 315° of scale
-1 – 0 bar	3 bar
0 – 0.6 bar	2.5 bar
0 – 1 bar	4 bar
0 – 1.6 bar	6 bar
0 – 2.5 bar	10 bar
0 – 4 bar	16 bar
0 – 6 bar	25 bar
0 – 10 bar	40 bar
0 – 16 bar	60 bar
0 – 25 bar	80 bar
0 – 40 bar	100 bar

Only withstand for a short period of time

### 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

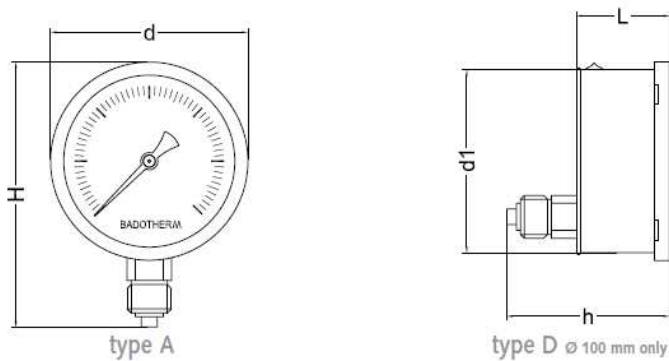
#### TEMPERATURE EFFECT

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

### MOUNTING VARIATIONS

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

### DRAWINGS



### 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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