

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
AISI 316(L)	AISI 316	AISI 316, bayonet	AISI 316, 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	40 bar	40 bar
Overpressure range	100 bar	100 bar
Accuracy¹	1.0% MR	1.0% MR
Pointer	adjustable slotted	adjustable slotted
Mounting variations	A / C	A / C
Internal limit stop	Min/Max	Min/Max
Connection construction	welded	welded
Solid front, full blow out	on the back	on the back
Compensation plug material²	NBR	NBR
Window gasket	NBR	NBR
PED (CE marking >200 bar)	•	•

¹ MR: measuring range (see overpressure table)

² HNBR for filled executions

SPECIAL EXECUTIONS

BDT20-P-M	overpressure protected, Process connection and pressure element in Monel 400, casing and bezel in AISI 316(L) – suitable acc. ISO15156 / NACE MR01-75
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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)
CASE FILLING	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
POINTER	micro adjustable (100 and 160 mm only)
PROCESS CONNECTION	other
RESTRICTOR SCREW	AISI 316(L), Monel 400

PRESSURE DETAILS

WORKING PRESSURE

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

OVERPRESSURE

measuring 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

CASE FILLING FLUID

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

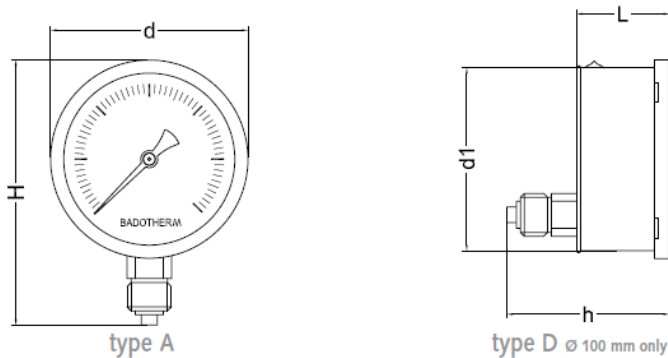
TEMPERATURE EFFECT

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
100	110	100	63	142	0.65 kg	1.12 kg
160	160	149	64	200	1.20 kg	2.30 kg

All dimensions in mm



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

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