

Badotherm pressure gauge model BDT20 is the solid front, safety pattern gauge according the highest class of the EN 837-1 / 9.7.2 and ANSI B 40.1. The BDT20 stainless steel safety gauge has a solid front baffle wall and a full blow-out back. This pressure gauge 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
AISI316(L)	AISI316	AISI304, bayonet	AISI304, bayonet
MOVEMENT	WINDOW	POINTER	DIAL
stainless steel	laminated safety glass	aluminium, black	aluminium, white with black markings

TECHNICAL SPECIFICATIONS

	63 mm	100 mm	160 mm
Connection	1/4" BSP/NPT	1/2" BSP/NPT	1/2" BSP/NPT
Minimum range	-1 bar	-1 bar	-1 bar
Maximum range¹	1000 bar	1600 bar	1600 bar
Accuracy	1.6% FSV	1.0% FSV	1.0% FSV
Pointer	fixed	adjustable slotted	adjustable slotted
Mounting variations	A / D / E	A / C / D / E	A / C
Free zero	•	•	•
Internal limit stop	Min/Max	Min/Max	Min/Max
Connection construction	welded	welded	welded
Solid front, full blow out	on the back	on the back	on the back
Compensation plug material²	NBR	NBR	NBR
Window gasket	NBR	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

BDT20-S	casing and bezel AISI316(L)
BDT20-M	process connection and pressure element in Monel 400, casing and bezel in AISI316 (not available in 160mm D; up to 1000 bar) – suitable acc. ISO15156 / NACE MR01-75
BDT20-T	0.5%

OPTIONS

PROCESS CONNECTION	other
RESTRICTOR SCREW	AISI316(L), Monel 400
POINTER	micro adjustable (100 and 160 mm only)
FILLING	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
CLEANING	for oxygen service, or oil and grease free (in case of filling use BPF05)
CALIBRATION CERTIFICATES	5 points (rising and falling), 10 points (BDT20-T)
CONTACT	inductive / magnetic / electric (use BPF03 filling in case of liquid filling)
ATEX	EX II 2 GD c (ATEX 94/9/EC)
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

DATA SHEET

BDT20 – SOLID FRONT PRESSURE GAUGE

PRESSURE DETAILS

WORKING PRESSURE

	63 mm	100 mm	160 mm
steady	0.75 x full scale value	full scale value	full scale value
fluctuating	0.67 x full scale value	0.9 x full scale value	0.9 x full scale value
short time	full scale value	1.3 x 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	1000 Cst	-20°C to 65°C	90°C
BPF02	silicone	1000 Cst	-40°C to 65°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

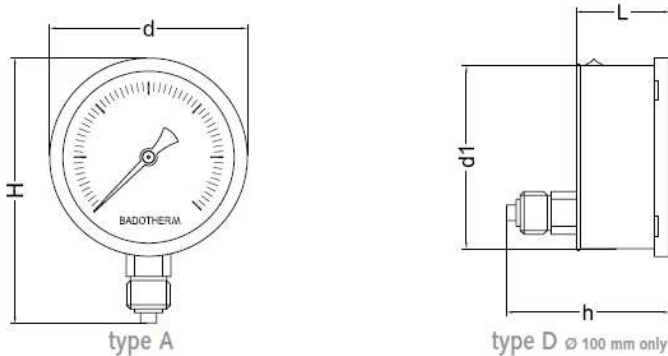
TEMPERATURE EFFECT

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
- type D back connection, direct mounting
- type E back connection, panel mounting

DRAWINGS



DIMENSIONS

ns	d	d1	L	H	h	weight	filled
63	68	63	40	88	-	0.20 kg	0.31 kg
100	110	100	63	142	100	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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