

Badotherm pressure gauge model BDT18 is manufactured according to the EN837-1 and is available in full stainless steel or Monel. 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 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 of the ambient environment and the process medium.



DESIGN INFORMATION

DESIGN NORM	SAFETY DESIGNATION	INGRESS PROTECTION
EN 837-1	S1 as per EN 837-2	IP 65 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

	50 mm	63 mm	80 mm	100 mm	150 mm	160 mm
Connection	1/4" BSP/NPT	1/4" BSP/NPT	1/4" BSP/NPT	1/2" BSP/NPT	1/2" BSP/NPT	1/2" BSP/NPT
Minimum range	-1 bar	-1 bar	-1 bar	-1 bar	-1 bar	-1 bar
Maximum range	400 bar	1000 bar	1000 bar	1600 bar	1600 bar	1600 bar
Accuracy	1.6% FSV	1.6% FSV	1.6% FSV	1.0% FSV	1.0% FSV	1.0% FSV
Pointer	fixed	fixed	fixed	fixed	fixed	fixed
Mounting variations	A / D	A / B / C / D / E	A / B / C / D / E	A / B / C / D / E	A / B / C / D / E	A / B / C / D / E
Free zero	-	-	-	•	•	•
Internal limit stop	-	-	-	Min/Max	Min/Max	Min/Max
Connection construction	screwed	screwed	screwed	welded	welded	welded
Blow out	on the top	on the top	on the top	on the back	on the back	on the back
Compensation plug, material*	on the top, NBR	on the top, NBR	on the top, NBR	on the top, NBR	on the top, NBR	on the top, NBR
Window gasket	NBR	NBR	NBR	NBR	NBR	NBR
PED (CE marking >200 bar)	•	•	•	•	•	•

* HNBR for filled executions

SPECIAL EXECUTIONS

BDT18-S	casing and bezel in AISI316(L)
BDT18-M	process connection and pressure element in Monel 400, casing and bezel in AISI316(L) – suitable acc. ISO15156 / NACE MR01-75

OPTIONS

WINDOW	laminated safety glass (not available for size 50mm), acrylic
PROCESS CONNECTION	other
RESTRICTOR SCREW	AISI316 (L)
POINTER	adjustable slotted pointer (not available for size 50mm), micro adjustable pointer (not available for size 50mm, 63mm, 80mm), red pointer on dial pointer (not available for size 50mm, 160mm), or drag pointer pointer (not available for size 50mm, 80mm)
CASE FILLING	BPF01 (glycerine), BPF02 (silicon), BPF03 (for contacts), BPF04 (foaming service), BPF05 (ECTFE Inert for oxygen service)
CLEANING	oxygen service (in case of filling use BPF05)
CALIBRATION CERTIFICATES	5 points (rising and falling)
CONTACT	inductive / magnetic / electric (use BPF03 filling in case of liquid filling), contact gauges are only available for 100mm, and 160mm
ATEX	EX II 2 GD c (ATEX 94/9/EC)

ACCESSORIES

please check for matching accessories such as syphons (BDT42), snubbers (BDT45), swivel gauges (BDT47), overpressure protectors (BDT49), diaphragm seals and instrument needle valves and manifolds

PRESSURE DETAILS

WORKING PRESSURE

	50 mm	63 mm	80 mm	100 mm	150 mm	160 mm
steady	0.75 x full scale value	0.75 x full scale value	0.75 x full scale value	full scale value	full scale value	full scale value
fluctuating	0.67 x full scale value	0.67 x full scale value	0.67 x full scale value	0.9 x full scale value	0.9 x full scale value	0.9 x full scale value
short time	full scale value	full scale value	full scale value	1.3 x full scale value	1.3 x full scale value	1.3 x full scale value

TEMPERATURE DETAILS

CASE FILLING FLUID				WINDOW		GASKETS		
			ambient	process		ambient		
-	without		-40°C to 60°C	200°C	glass	<400°C	window NBR	<100°C
BPF01	glycerine	1000 cSt	-20°C to 60°C	90°C	safety glass	<200°C	fill plug NBR	<100°C
BPF02	silicone	1000 cSt	-40°C to 60°C	90°C	polycarbonate	<120°C	fill plug HNBR	<150°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				

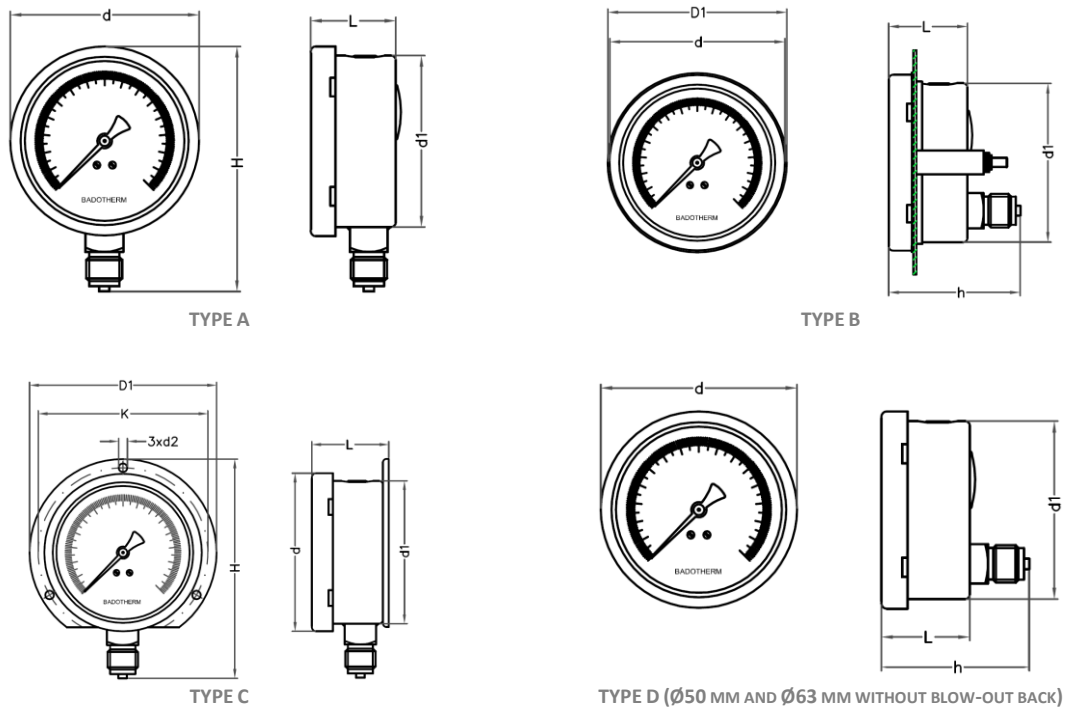
TEMPERATURE EFFECT

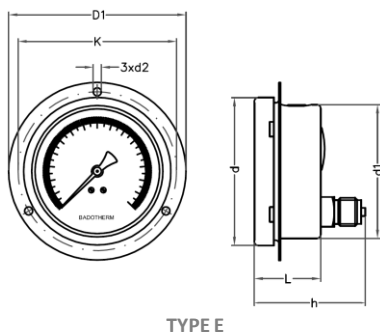
The variation of indication caused by the effect of temperature shall not exceed:
 $\pm 0.04 \times (\text{ambient temperature} - \text{reference temperature})\% \text{ of the span}$

MOUNTING VARIATIONS

- type A bottom connection, direct mounting
- type B back connection, panel mounting, clamp fixing, (flange material in same material as casing and bezel)
- type C bottom connection, surface mounting (flange material in same material as casing and bezel)
- type D back connection, direct mounting
- type E back connection, panel mounting (flange material in same material as casing and bezel)

DRAWINGS



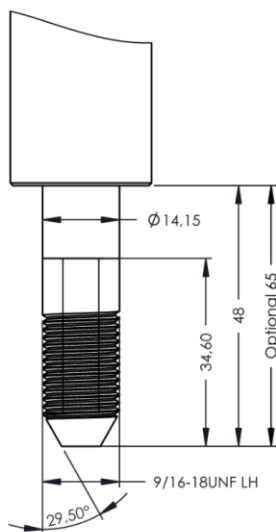


DIMENSIONS

ns	d	d1	D1 back flange	K	D1 front flange	K	L	H	h	weight	filled
50	57	50.5					30	75	59	0.10 kg	0.20 kg
63	68	63	85	75	85	75	30	88	58	0.14 kg	0.25 kg
80	89	80	110	96	110	95	30	112	58	0.30 kg	0.50 kg
100	110	100	130	118	132	117.6	49	142	83	0.53 kg	1.00 kg
150	160	149	196	168	190	178	50	200	84	1.02 kg	2.10 kg
160	160	149	196	178	190	178	50	200	84	1.02 kg	2.10 kg

All dimensions in mm

DRAWING CONNECTIONS



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

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