BADOTHERM®

II – Data Sheet

BDT20 HP – High Pressure Solid Front Pressure Gauge

Badotherm pressure gauge model BDT20-HP for ultra-high pressure measurements according the requirements and test conditions of DIN16001. The BDT20-HP stainless steel safety gauge has a solid front baffle wall and a full blow-out back and is used with high pressure connections. These pressure gauges are designed to withstand the severest of operating conditions. Typical applications are: for liquid media in high-pressure applications (e.g. water, hydraulic oil), test benches (e.g. autofrettage), water jet cutting or High-pressure cleaning.

Design Information

Design Norm	Safety Designation	Ingress Protection
DIN16001	S3 as per DIN16001	IP67 per IEC 60529

Standard Model Material Specifications

Process connection	Tube	Case	Bezel
AISI 316(L)	Ni-Span-C 902	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	9/16 - 18 UNF	9/16 - 18 UNF
Minimum range	>1600 bar / 25.000 psi	> 1600 bar / 25.000 psi
Maximum range	7000 bar / 100.000 psi	7000 bar / 100.000 psi
Accuracy*	1.0% FSV	1.0% FSV
Pointer	adjustable slotted	adjustable slotted
Mounting variations	A / C / D	A / C / D
Free zero	Optional, standard with pointer stop	Optional, standard with pointer stop
Internal limit stop	Min/Max	Min/Max
Connection construction	welded	welded
Solid front, full blow out	on the back	on the back
Compensation plug material**	NBR	NBR
Window gasket	NBR	NBR
PED (CE marking)	•	•

* 6000 bar and 7000 bar, 1,6% FSV (standard). 1% optional

** HNBR for filled executions

Special Executions

BDT20-S HP	casing and bezel AISI 316(L)

Options

Process connection	½" BSP (≤ 2500 bar); M16x1.5-f; 9/16"-18 UNF-f (AE F250C); 5/8"-18 UNF-f (AE F312C150); 9/16"-18 UNF-m LH (AE M562C)
Pointer	micro adjustable
Case filling	BPF02 (silicon) - excluded for type D
Calibration certificates	5 points (rising and falling)
Atex	EX II 2 GD c (ATEX 94/9/EC)
Restrictor screw	AISI 316(L)

PRESSURE DETAILS

WORKING PRESSURE

	100 mm	160 mm
steady	0.75x full scale value	0.75x full scale value
fluctuating	0.67 x full scale value	0.67 x full scale value
short time	1 x full scale value	1 x full scale value

PRESSURE MATERIAL TABLE

pressure	material
1600…2500 bar	AISI 316L
3000…7000 bar	Ni-Span-C 902
3000 bar	25 CrMo 4*

* Not suitable for water

TEMPERATURE DETAILS

CASE FILLING FLUID

			ambient	process
-	without		-40°C to 60°C	200°C
BPF02	silicone	1000 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

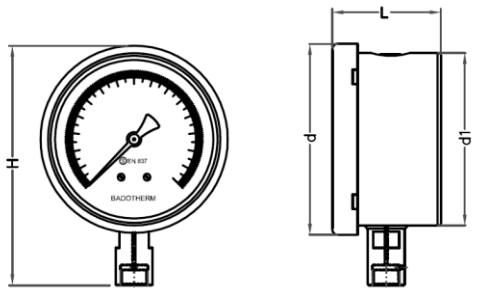
TEMPERATURE EFFECT

The variation of indication caused by the effect of temperature shall not exceed:
± 0.04 x (ambient temperature – reference temperature)% of the span

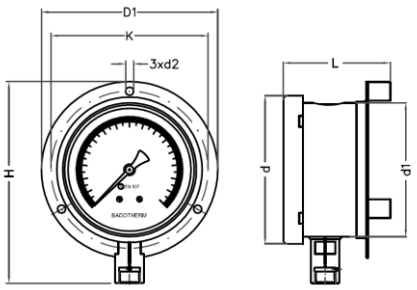
MOUNTING VARIATIONS

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

DRAWINGS



TYPE A



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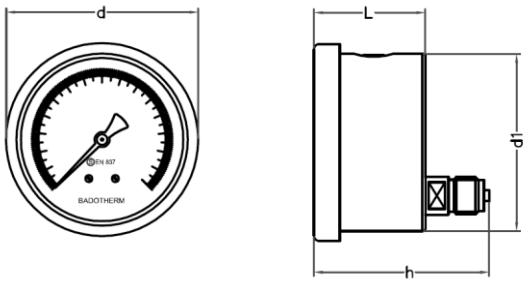


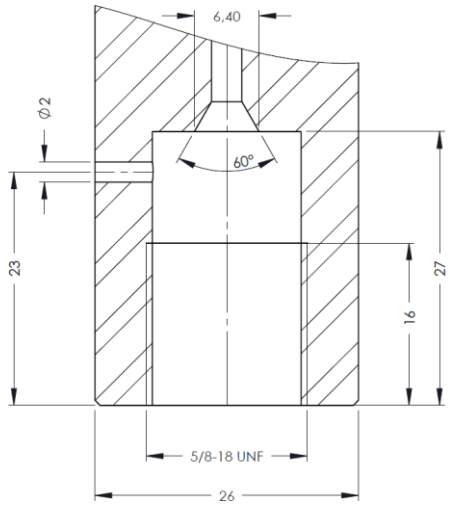
TYPE D

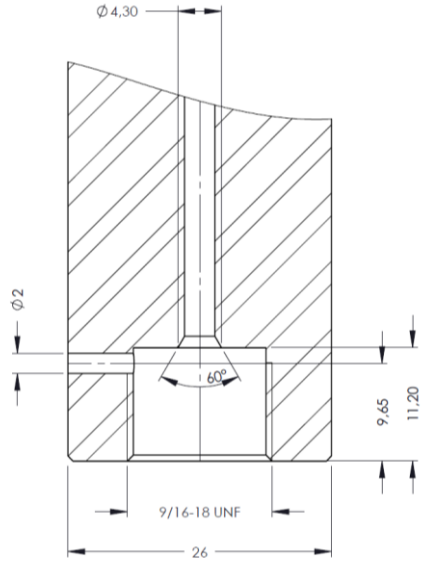
DIMENSIONS

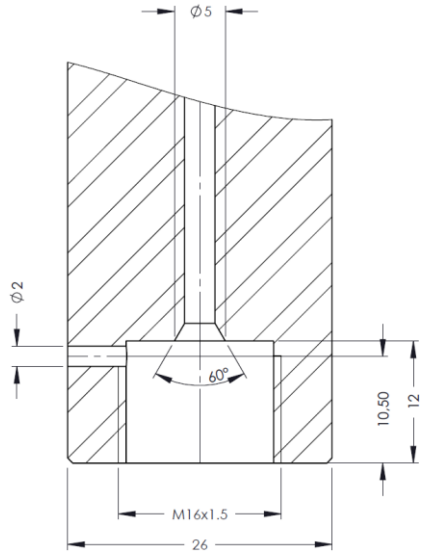
ns	d	d1	D1 back flange	K back flange	D1 front flange	K front flange	L	H	h	weight	filled
63	68	63	85	75	85	75	40	88	68	0.20 kg	0.31 kg
100	110	100	130	118	132	117.6	63	142	100	0.65 kg	1.12 kg
160	160	149	194	178	190	178	64	200	101	1.20 kg	2.30 kg

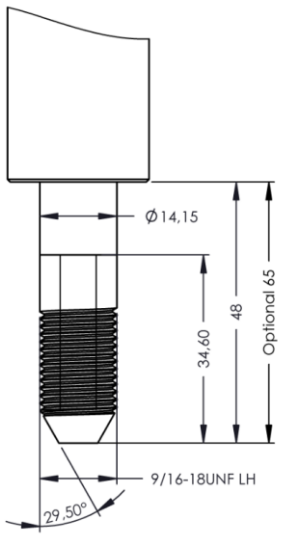
All dimensions in mm

DRAWING CONNECTIONS









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