

Badotherm pressure gauge model BDT20-HP for high pressure solid front, safety pattern gauge according the highest class of the EN 837-1 / 9.7.2 and ANSI B 40.1. The BDT20-HP stainless steel safety gauge has a solid front baffle wall and a full blow-out back. The gauge is executed with high pressure connections. 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)        | 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                  |
|------------------------------------|------------------------|-------------------------|
| <b>Connection</b>                  | 9/16 - 18 UNF          | 9/16 - 18 UNF           |
| <b>Minimum range</b>               | >1600 bar / 25.000 psi | > 1600 bar / 25.000 psi |
| <b>Maximum range</b>               | 7000 bar / 100.000 psi | 7000 bar / 100.000 psi  |
| <b>Accuracy</b>                    | 1.0% FSV               | 1.0% FSV                |
| <b>Pointer</b>                     | adjustable slotted     | adjustable slotted      |
| <b>Mounting variations</b>         | A / C / D              | A / C / D               |
| <b>Free zero</b>                   | •                      | •                       |
| <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)</b>            | •                      | •                       |

\* HNBR for filled executions

SPECIAL EXECUTIONS

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

OPTIONS

|                          |   |
|--------------------------|---|
| PROCESS CONNECTION       | M16x1.5 or 5/8-18 UNF                                       |
| POINTER                  | micro adjustable, adjustable slotted                        |
| CASE FILLING             | BPF01 (glycerine), BPF02 (silicon), BPF04 (foaming service) |
| 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                 |
|--------------------|------------------------|------------------------|
| <b>steady</b>      | full scale value       | full scale value       |
| <b>fluctuating</b> | 0.9 x full scale value | 0.9 x full scale value |
| <b>short time</b>  | 1.1 x full scale value | 1.1 x full scale value |

PRESSURE MATERIAL TABLE

| pressure               | material      |
|------------------------|---------------|
| <b>1600...2500 bar</b> | AISI 316L     |
| <b>3000...7000 bar</b> | Ni-Span-C 902 |
| <b>3000 bar</b>        | 2r CrMo 4*    |

\* Not suitable for water

TEMPERATURE DETAILS

| CASE FILLING FLUID |                        |               |         | WINDOW              |        | GASKETS               |        |
|--------------------|------------------------|---------------|---------|---------------------|--------|-----------------------|--------|
|                    |                        | ambient       | process | ambient             |        | ambient               |        |
| -                  | without                | -40°C to 60°C | 200°C   | <b>safety glass</b> | <200°C | <b>window NBR</b>     | <100°C |
| <b>BPF01</b>       | glycerine 1000 cSt     | -20°C to 60°C | 90°C    |                     |        | <b>fill plug NBR</b>  | <100°C |
| <b>BPF02</b>       | silicone 1000 cSt      | -40°C to 60°C | 90°C    |                     |        | <b>fill plug HNBR</b> | <150°C |
| <b>BPF43</b>       | foaming service 50 cSt | -40°C to 60°C | 90°C    |                     |        |                       |        |

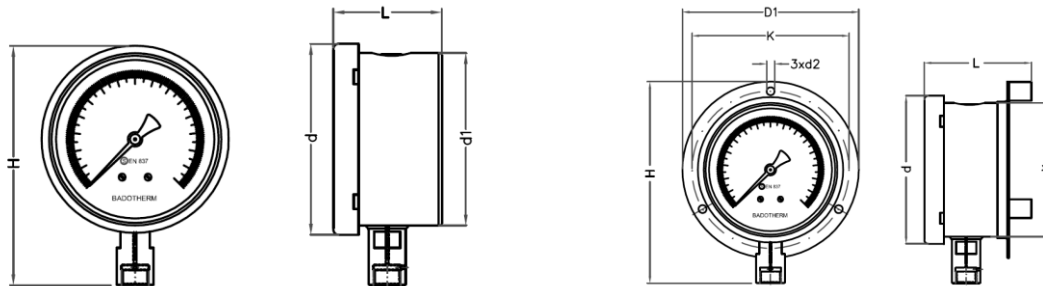
TEMPERATURE EFFECT

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

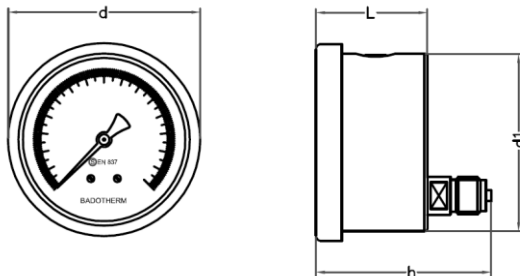
- type A bottom connection, direct mounting
- type C bottom connection, surface mounting
- type D back connection, direct mounting

DRAWINGS



TYPE A

TYPE C



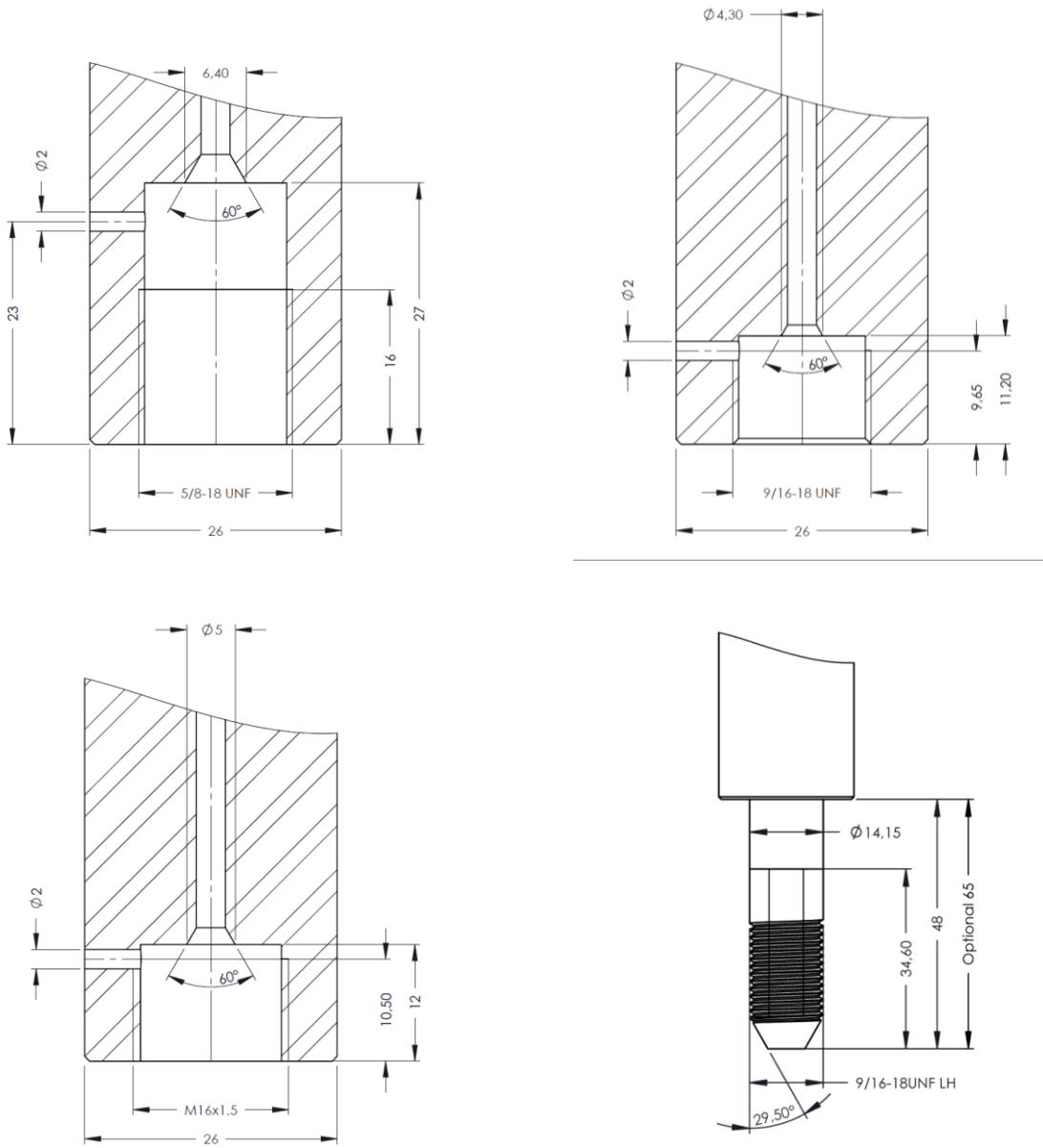
TYPE D

DIMENSIONS

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

All dimensions in mm

DRAWING CONNECTIONS



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

To our knowledge, the information contained herein is accurate as of the date of this document. However neither Badotherm, nor its affiliates makes any warranty, express or limited, or accepts any liability in connection with this information or its use. This information is for technical skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other product. The user alone finally determines suitability of any information or material in contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only.

Badotherm reserves the right to make changes to the specifications and materials without prior notice. The latest version of the datasheet can be found on [www.badotherm.com](http://www.badotherm.com).

© 2016 Badotherm, all rights reserved. Trademarks and/or other products referenced herein are either trademarks or registered trademarks of Badotherm.