

# Technical Datasheet



## Horizontal Level Switch Chambers For Float Switches

### Key Features

- Standard finish Black stove paint. 2 pack epoxy available at extra cost.
- Pressure testing All chambers are full pressure tested at the relevant connection flange test pressure.
- Operating pressure  
Note that the pressure/temperature ratings of the switches and chambers are not always compatible so that the lower rating will be the governing factor in selection.
- Low temperature use  
The lowest operating temperature for the fabricated carbon steel chambers is -7°C and the cast iron chambers is 0°C. If use at temperatures below these limits is required, LT50 or stainless steel can be specified.

### Series Overview

Float chambers are used to facilitate the external mounting of a Mobrey Magnetic level switch on to a tank or pressure vessel, particularly where space inside the vessel is restricted or where the control must be isolated for routine maintenance whilst the plant is in operation.

A wide range of cast or fabricated chambers is available. Process connections may be specified top and bottom or side and side, and can be flanged, screwed or butt welded in a choice of sizes to suit most plant installations. Exotic materials are also available.

Relevant chambers are supplied CE marked and fully compliant with the Pressure Equipment Directive (2014/68/EU)

Variety of connection configurations available.

Welding procedures approved to EN 15614-1 & ASME IX

Welders approved to EN ISO 9606

All materials used for fabricated chambers are to ASME specifications

Material certification, EN 10204 Type 3.1

Chambers can be manufactured in a wide variety of materials, including 321 and 316 stainless steel, Incoloy Monel, CrMo steels and other more exotic materials

### Other products

Other products we can offer:

- horizontal and vertical level switches



### Product applications

Paint finish to customers specifications

Chambers may be supplied in accordance with NACE recommendations for sour service

NDT to CSWIP and ASNT is available for radiographic, ultrasonic, mag particle and dye penetrant

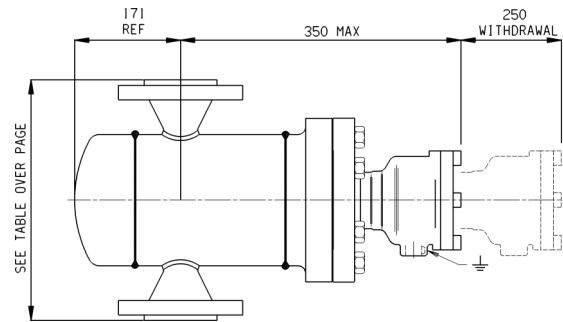
Customers and nominated inspection agencies are welcome to witness pressure testing.

Switches and chambers are individually pressure tested at the relevant flange test pressure. They are supplied loosely assembled for transit and flange bolts must be tightened on site before commissioning.

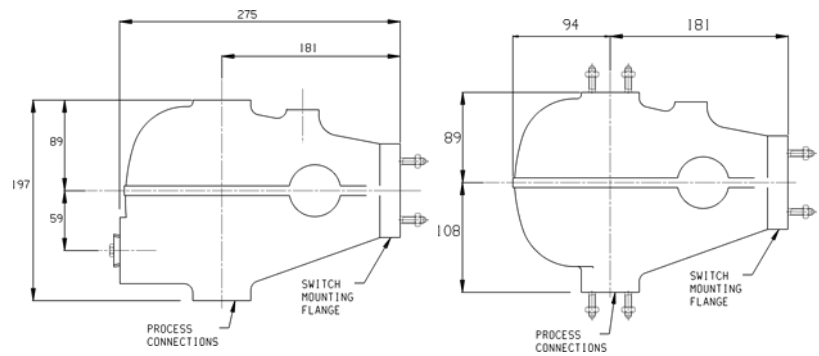
### How can we help you?

Delta Mobrey offers fast, efficient and knowledgeable support when and where you need it. Please visit our website at [www.delta-mobrey.com](http://www.delta-mobrey.com) to find your local support centre or call us on: **+44 (0)1252 729140**

## Float chambers

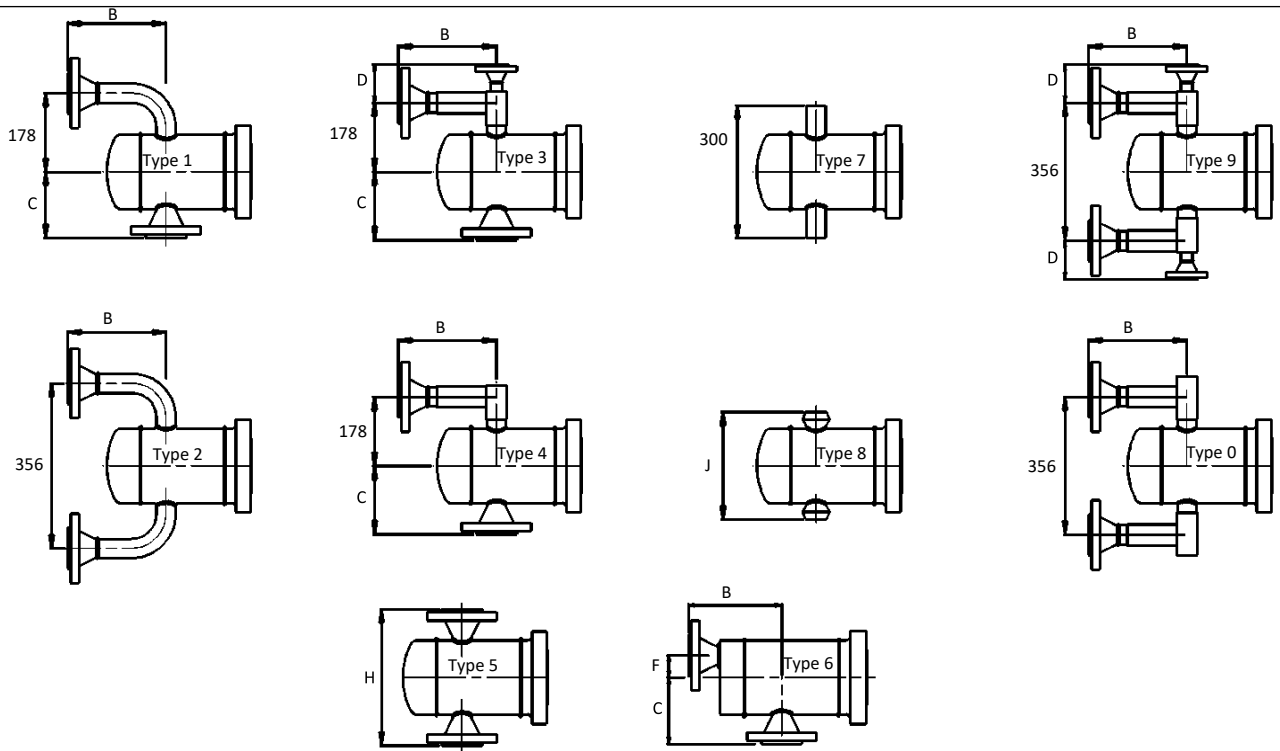


## Fabricated chambers



## Cast chambers

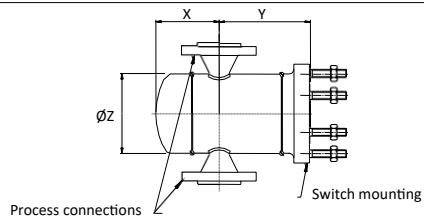
## Fabricated chamber dimensions



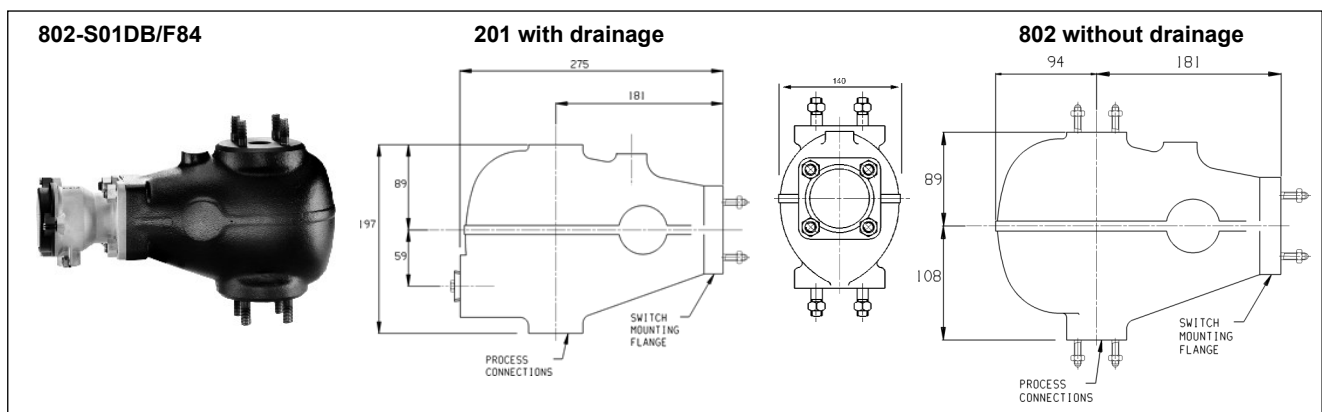
**Fabricated chambers** Standard dimensions: Ref. only - must be certified on order

| Model | Sw mounting flg    | Pressure | X   | Y   | Z   | Model | Sw mounting flg         | Pressure | X   | Y   | Z   |
|-------|--------------------|----------|-----|-----|-----|-------|-------------------------|----------|-----|-----|-----|
| 144C  | AMSE B16.5 3" #150 | 19.6 bar | 143 | 185 | 168 | 305C  | BSEN1092-1 DN80 PN63    | 63 bar   | 143 | 183 | 168 |
| 145C  | ASME B16.5 3" #300 | 51 bar   | 143 | 185 | 168 | 306C  | BSEN1092-1 DN65 PN40    | 40 bar   | 143 | 162 | 168 |
| 148C  | MOBREY 'A'         | 18 bar   | 143 | 169 | 168 | 307C  | AMSE B16.5 3" Class 600 | 102 bar  | 170 | 162 | 168 |
| 151C  | MOBREY 'G'         | 21 bar   | 143 | 169 | 168 | 308C  | AMSE B16.5 3" Class 900 | 153 bar  | 173 | 161 | 168 |

Nominal ref. dimensions



**Cast chambers** Standard dimensions: Ref. only - must be certified on order



| Type no. | Material<br>Cast iron       | Process connections    | Maximum working conditions for chamber |          | Suitable Mobrey level switches |                     | Drainage |
|----------|-----------------------------|------------------------|----------------------------------------|----------|--------------------------------|---------------------|----------|
|          |                             |                        | Pressure                               | Temp.    | Switch flange                  | Typical combination |          |
| 201      | EN 1561<br>Grade EN GJL 250 | Screwed 1" BSP         | 13 bar                                 | at 210°C | Mobrey A                       | 201-S01DB/F84       | With     |
| 802      | EN 1561<br>Grade EN GJL 250 | EN 1092-1<br>DN20 PN16 | 13 bar                                 | at 210°C | Mobrey A                       | 802-S01DB/F84       | Without  |

Minimum working temperature 0°C

| Process connection sizes and dimensions for fabricated chambers |         |       |       |      |      |      |       |            |     |       |                        |       |       |     |      |      |      |           |     |
|-----------------------------------------------------------------|---------|-------|-------|------|------|------|-------|------------|-----|-------|------------------------|-------|-------|-----|------|------|------|-----------|-----|
| 1"                                                              |         |       |       | DN25 |      |      |       | 1.5"       |     | DN40  | 2"                     |       |       |     | DN50 |      |      | Tolerance |     |
| Dim                                                             | 150     | 300   | 600   | PN16 | PN25 | PN40 | PN100 | 150        | 300 | PN16  | 150                    | 300   | 600   | 900 | PN16 | PN25 | PN40 | +         | -   |
| B<br>C<br>D*<br>F<br>H                                          | 212     | 218.5 | 225   | 196  | 198  | 198  | 216   | 218.5      | 225 | 200   | 220                    | 226   | 236   | 265 | 203  | 206  | 206  | 0         | 3   |
|                                                                 | 139     | 143.5 | 152.5 | 123  | 125  | 125  | 143.5 | 143.5      | 150 | 125.5 | 144                    | 150.5 | 161.5 | 190 | 127  | 130  | 130  | 0         | 1.5 |
|                                                                 | 108     | 112   | 117   | -    | -    | -    | -     | 108        | 112 | -     | 108                    | 112   | 117   | 133 | -    | -    | -    | 0         | 2   |
|                                                                 | 60      | 60    | -     | 60   | 60   | 60   | 60    | 54         | 54  | 54    | 48                     | 48    | -     | -   | 48   | 48   | 48   | 1         | 1   |
|                                                                 | 278     | 291   | 305   | 246  | 250  | 250  | 287   | 287        | 300 | 251   | 288                    | 301   | 323   | 380 | 254  | 260  | 260  | 0         | 3   |
|                                                                 | Screwed |       |       |      |      |      |       | Screwed/SW |     |       | Screwed or socket weld |       |       |     |      |      |      |           |     |
| J                                                               | NPT     |       |       | BSP  |      |      |       | NPT        |     |       | NPT                    |       |       |     |      |      |      | 0 3       |     |
|                                                                 | 240     |       |       | 240  |      |      |       | 244        |     |       | 250                    |       |       |     |      |      |      |           |     |

\* ¾" N.B. Vent/drain flange of relevant rating as shown. All dimensions shown are nominal and should be certified on order.

## Fabricated chambers : ordering information

## Materials &amp; Flanges

TABLE 1



| Material switch flange                   | Max Pressure @ 20°C | Max Temp °C | Code |
|------------------------------------------|---------------------|-------------|------|
| Carbon Steel / ASME B16.5, 3" ANSI 150RF | 19.6 bar            | 400°C       | 144C |
| Carbon Steel / ASME B16.5, 3" ANSI 300RF | 51 bar              | 400°C       | 145C |
| Carbon Steel / Mobrey "A" flange         | 18 bar              | 400°C       | 148C |
| Carbon Steel / Mobrey "G" flange         | 21 bar              | 400°C       | 151C |
| Carbon Steel / EN1092 -1, DN80 PN63      | 63 bar              | 400°C       | 305C |
| Carbon Steel / EN1092 -1, DN65 PN40      | 40 bar              | 400°C       | 306C |
| Carbon Steel / ASME B16.5, 3" ANSI 600RF | 102 bar             | 400°C       | 307C |
| Carbon Steel / ASME B16.5, 3" ANSI 900RF | 153 bar             | 400°C       | 308C |

## Connection Style

TABLE 2



| Description                       |                                      | Code |
|-----------------------------------|--------------------------------------|------|
| Side & Top or Side and Bottom     | Flanged                              | 1    |
| Side & Side                       | Flanged                              | 2    |
| Side & Top or Side and Bottom     | Flanged with ¾ " flanged vent/drain  | 3    |
| Side & Top or Side and Bottom     | Flanged with ¾ " threaded vent/drain | 4    |
| Top & Bottom                      | Flanged                              | 5    |
| Side & Top or Side and Bottom     | Flanged (close centers)              | 6    |
| Top & Bottom stub pipe            |                                      | 7    |
| Top & Bottom threadolet or Socket |                                      | 8    |
| Side & Side                       | Flanged with ¾ " flanged vent/drain  | 9    |
| Side & Side                       | Flanged with ¾ " threaded vent/drain | 0    |

**Connection Size/Rating**

TABLE 3



| Description                             | Code |
|-----------------------------------------|------|
| 1" NB Sockolet                          | 00   |
| 1" NPT threaded (Female)                | 01   |
| 1 ½ " NPT threaded (Female)             | 02   |
| 2" NPT threaded (Female)                | 03   |
| 1" BSPT threaded (Female)               | 04   |
| 1" NB Sch.80 stub pipe                  | 08   |
| 2" NB Sch.80 stub pipe                  | 10   |
| ASME B 16.5 1" Class 150RF weld Neck    | 11   |
| ASME B 16.5 1" Class 300RF weld Neck    | 12   |
| ASME B 16.5 1" Class 600RF weld Neck    | 13   |
| EN 1092-1 DN25 PN16 RF weld neck        | 15   |
| EN 1092-1 DN25 PN25 RF weld neck        | 16   |
| EN 1092-1 DN25 PN40 RF weld neck        | 17   |
| EN 1092-1 DN25 PN63 RF weld neck        | 18   |
| EN 1092-1 DN25 PN100 RF weld neck       | 19   |
| ASME B 16.5 1 ½ " Class 150RF weld Neck | 21   |
| ASME B 16.5 1 ½ " Class 300RF weld Neck | 22   |
| EN 1092-1 DN40 PN16 RF weld neck        | 25   |
| ASME B 16.5 2" Class 150RF weld Neck    | 31   |
| ASME B 16.5 2" Class 300RF weld Neck    | 32   |
| ASME B 16.5 2" Class 600RF weld Neck    | 33   |
| ASME B 16.5 2" Class 900RF weld Neck    | 34   |
| EN 1092-1 DN50 PN16 RF weld neck        | 35   |
| EN 1092-1 DN50 PN25 RF weld neck        | 36   |
| EN 1092-1 DN50 PN40 RF weld neck        | 37   |

**Chamber options to customer order**

- Chambers can be manufactured in a wide range of materials, including 304, 321 & 316 Stainless Steel, Alloy 825, Alloy 400, Duplex & other more exotic materials
- Paint Finish to customer specification
- NDT to CSWIP and ASNT is available for radiographic ultrasonic, mag particle and dye penetrant
- Chambers may be supplied in accordance with NACE recommendation for Sour Service

## Approvals

### EUROPEAN DIRECTIVES



**Pressure Equipment Directive (PED) 2014/68/EU:**  
Compliant to the PED directive and CE marked under module H

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