

The CH housings are constructed from 316 L or 304 stainless steel and manufactured in accordance to design and construction code EN13445 Group 3. They have a maximum pressure rating design of 10 bar g and can be used in temperatures up to 90 °C.

The CH housings are fully CE marked in accordance with the European Pressure Equipment Directive (PED) and are available in a variety of sizes to accommodate from 3 to 116 cartridges (from 3 EQSL to 464 EQSL).

Supplied as standard with all internal parts necessary for operation using Double Open Ended (DOE) cartridges, they can be readily converted to take Single Open Ended (SOE) cartridges by using alternative internal components that can be ordered separately.

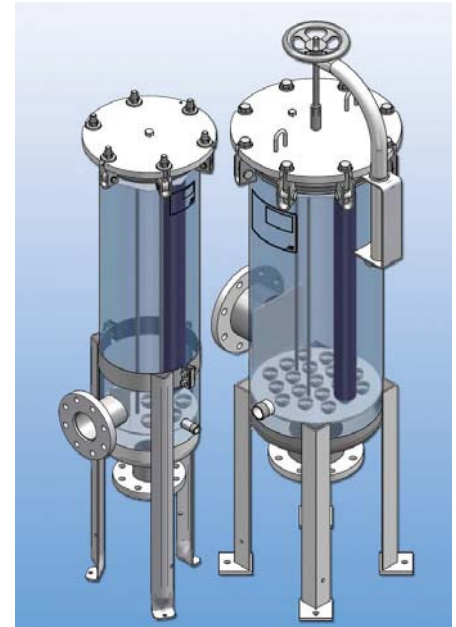
### Pressure Equipment Directive 97/23/CE

CH vessels are built to PED 97/23/CE Category 3.3 “Sound Engineering Practice” as standard. The vessel designs have been developed so that they can be manufactured for the highest demanding applications - Group 1 (Hazardous Gas) - upon request from existing and known production documentation. All dimensions remain as shown here.

### ATEX Directive 94/9/CE

CH housings are approved for use in ATEX condition II-2-G/D-T5.

The user of these housings must ensure that they are used in accordance with the requirements of these PED and ATEX directives at all times. Please consult your local 3M Purification representative for any other classification, other details for PED coded applications or further information.



## Features & Benefits

### 316L and 304 stainless steel construction

- Provides excellent corrosion protection for rugged, long-lasting service.

### Optimum quality standards at competitive costs

- Ensure the most appropriate housing is available at the right price.

### Swing bolt design

- Optimizes cartridge change-out.

## Applications

Industrial

Chemical

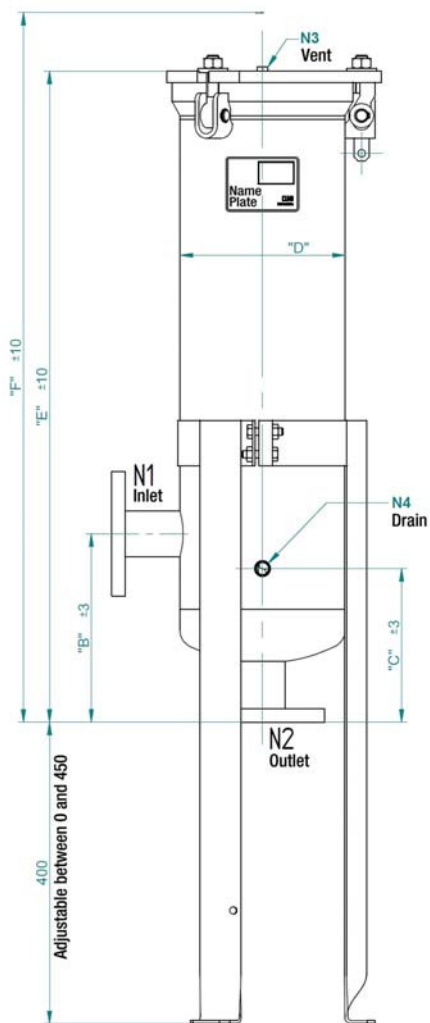
Commercial

Food & Beverage

**Table 1 : Standard Housing Specifications**

| Housing Type Specifications   | 03 CH / 04 CH / 05 CH                         | 08 CH / 12 CH / 19 CH / 22 CH / 27 CH / 30 CH / 40 CH / 55 CH / 80 CH / 116 CH |
|-------------------------------|---|--|
| Housing Material (in contact) | 316L (1.4404) or 304 (1.4306) Stainless Steel | 316L (1.4404) or 304 (1.4306) Stainless Steel                                  |
| Surface Finish                | Pickle passivated or Glass bead blasted       | Pickle passivated or Glass bead blasted  |
| Closure                       | Bolted  | Bolted   |
| Housing Orientation           | Vertical                                      | Vertical   |
| Standard Gasket Material      | Nitrile (others on request)                   | Nitrile (others on request)  |
| Cartridges Height             | 1, 2, 3 and 4 high                            | 3 and 4 high   |
| Number of Cartridges (EQSL)   | from 3 to 20                                  | from 24 to 464   |
| Connection Sizes              | ISO flat faced flange                         | ISO flat faced flange  |
| Vent Connection               | see table 2                                   | see table 2 and 4  |
| Drain Connection              | see table 2                                   | see table 2 and 4  |
| Max. Operating Pressure       | 10 bar g                                      | 10 bar g   |
| Max. Operating Temperature    | 90 °C   | 90 °C  |
| PED 97/23/CE                  | Article 3.3                                   | Article 3.3  |
| ATEX 94/9/CE                  | II-2-G/D-T5                                   | II-2-G/D-T5  |

This table is intended as a guide.



**Table 2 : Other Specifications Housings 03 CH to 12 CH**

| Housing Type | Inlet/Outlet | Vent   | Drain | Bolts   | Volume | Weight |
|--------------|--------------|--------|-------|---------|--------|--------|
| 03 CHB 1     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 18 L   | 30 Kg  |
| 03 CHB 2     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 27 L   | 35 Kg  |
| 03 CHB 3     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 36 L   | 40 Kg  |
| 03 CHB 4     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 45 L   | 45 Kg  |
| 04 CHB 1     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 18 L   | 30 Kg  |
| 04 CHB 2     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 27 L   | 35 Kg  |
| 04 CHB 3     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 36 L   | 40 Kg  |
| 04 CHB 4     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 45 L   | 45 Kg  |
| 05 CHB 1     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 18 L   | 30 Kg  |
| 05 CHB 2     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 27 L   | 35 Kg  |
| 05 CHB 3     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 36 L   | 40 Kg  |
| 05 CHB 4     | DN 50        | G ¼" B | R ½"  | 3 x M16 | 45 L   | 45 Kg  |
| 08 CHB 3     | DN 80        | G ½" B | R ¾"  | 6 x M16 | 57 L   | 65 Kg  |
| 08 CHB 4     | DN 80        | G ½" B | R ¾"  | 6 x M16 | 70 L   | 70 Kg  |
| 12 CHB 3     | DN 100       | G ½" B | R ¾"  | 8 x M16 | 81 L   | 90 Kg  |
| 12 CHB 4     | DN 100       | G ½" B | R ¾"  | 8 x M16 | 101 L  | 100 Kg |

**Table 3 : Dimensions Housings 03 CH to 12 CH (in mm)**

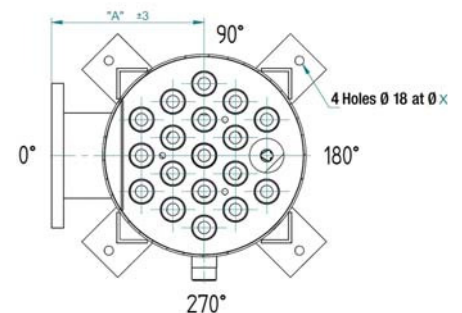
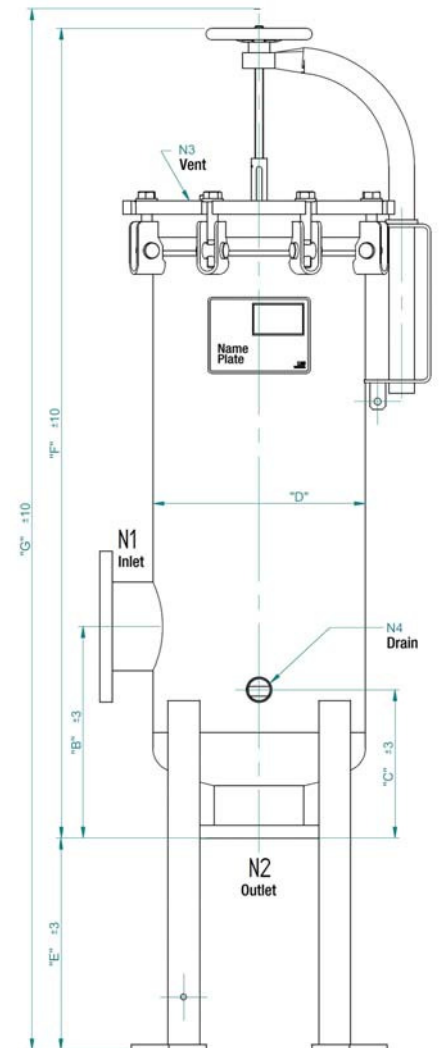
| Housing Type | A<br>Vent to<br>Inlet | B<br>Inlet to<br>Outlet | C<br>Drain to<br>Outlet | D<br>Diameter | E<br>Top to<br>Outlet | F<br>distance for<br>change out | X   |
|--------------|-----------------------|-------------------------|-------------------------|---------------|-----------------------|---------------------------------|-----|
| 03 CHB 1     | 200                   | 250                     | 200                     | 219           | 615                   | 900                             | 278 |
| 03 CHB 2     | 200                   | 250                     | 200                     | 219           | 865                   | 1400                            | 278 |
| 03 CHB 3     | 200                   | 250                     | 200                     | 219           | 1115                  | 1900                            | 278 |
| 03 CHB 4     | 200                   | 250                     | 200                     | 219           | 1365                  | 2400                            | 278 |
| 04 CHB 1     | 200                   | 250                     | 200                     | 219           | 615                   | 900                             | 278 |
| 04 CHB 2     | 200                   | 250                     | 200                     | 219           | 865                   | 1400                            | 278 |
| 04 CHB 3     | 200                   | 250                     | 200                     | 219           | 1115                  | 1900                            | 278 |
| 04 CHB 4     | 200                   | 250                     | 200                     | 219           | 1365                  | 2400                            | 278 |
| 05 CHB 1     | 200                   | 250                     | 200                     | 219           | 615                   | 900                             | 278 |
| 05 CHB 2     | 200                   | 250                     | 200                     | 219           | 865                   | 1400                            | 278 |
| 05 CHB 3     | 200                   | 250                     | 200                     | 219           | 1115                  | 1900                            | 278 |
| 05 CHB 4     | 200                   | 250                     | 200                     | 219           | 1365                  | 2400                            | 278 |
| 08 CHB 3     | 250                   | 300                     | 250                     | 273           | 1150                  | 1900                            | 332 |
| 08 CHB 4     | 250                   | 300                     | 250                     | 273           | 1400                  | 2400                            | 332 |
| 12 CHB 3     | 300                   | 350                     | 290                     | 324           | 1200                  | 2000                            | 383 |
| 12 CHB 4     | 300                   | 350                     | 290                     | 324           | 1450                  | 2500                            | 383 |

**Table 4 : Other Specifications Housings 19 CH to 116 CH**

| Housing Type | Inlet/Outlet | Vent  | Drain  | Bolts    | Volume | Weight |
|--------------|--------------|-------|--------|----------|--------|--------|
| 19 CHB 3     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 132 L  | 156 Kg |
| 19 CHB 4     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 162 L  | 166 Kg |
| 22 CHB 3     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 172 L  | 176 Kg |
| 22 CHB 4     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 210 L  | 188 Kg |
| 27 CHB 3     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 172 L  | 176 Kg |
| 27 CHB 4     | DN 150       | Rp ½" | R 1" ½ | 8 x M20  | 210 L  | 188 Kg |
| 30 CHB 3     | DN 200       | Rp ½" | R 1" ½ | 10 x M20 | 216 L  | 233 Kg |
| 30 CHB 4     | DN 200       | Rp ½" | R 1" ½ | 10 x M20 | 263 L  | 249 Kg |
| 40 CHB 3     | DN 200       | Rp ¾" | R 2"   | 10 x M24 | 316 L  | 368 Kg |
| 40 CHB 4     | DN 200       | Rp ¾" | R 2"   | 10 x M24 | 384 L  | 387 Kg |
| 55 CHB 3     | DN 250       | Rp ¾" | R 2"   | 12 x M27 | 441 L  | 500 Kg |
| 55 CHB 4     | DN 250       | Rp ¾" | R 2"   | 12 x M27 | 534 L  | 527 Kg |
| 80 CHB 3     | DN 250       | Rp 1" | R 2"   | 12 x M24 | 695 L  | 540 Kg |
| 80 CHB 4     | DN 250       | Rp 1" | R 2"   | 12 x M24 | 818 L  | 567 Kg |
| 116 CHB 3    | DN 300       | Rp 1" | R 2"   | 16 x M24 | 836 L  | 775 Kg |
| 116 CHB 4    | DN 300       | Rp 1" | R 2"   | 16 x M24 | 1009 L | 805 Kg |

**Table 5 : Dimensions Housings 19 CH to 116 CH (in mm)**

| Housing Type | A<br>Middle<br>to Inlet | B<br>Inlet to<br>Outlet | C<br>Drain to<br>Outlet | D<br>Diameter | E<br>Outlet to<br>Bottom | F<br>Top to<br>Outlet | G<br>distance for<br>change out | X    |
|--------------|-------------------------|-------------------------|-------------------------|---------------|--------------------------|-----------------------|---------------------------------|------|
| 19 CHB 3     | 300                     | 400                     | 280                     | 400           | 400                      | 1530                  | 2340                            | 530  |
| 19 CHB 4     | 300                     | 400                     | 280                     | 400           | 400                      | 1780                  | 2800                            | 530  |
| 22 CHB 3     | 350                     | 450                     | 330                     | 450           | 400                      | 1570                  | 2330                            | 580  |
| 22 CHB 4     | 350                     | 450                     | 330                     | 450           | 400                      | 1820                  | 2840                            | 580  |
| 27 CHB 3     | 350                     | 450                     | 330                     | 450           | 400                      | 1570                  | 2330                            | 580  |
| 27 CHB 4     | 350                     | 450                     | 330                     | 450           | 400                      | 1820                  | 2840                            | 580  |
| 30 CHB 3     | 400                     | 470                     | 330                     | 500           | 400                      | 1580                  | 2340                            | 630  |
| 30 CHB 4     | 400                     | 470                     | 330                     | 500           | 400                      | 1830                  | 2850                            | 630  |
| 40 CHB 3     | 450                     | 550                     | 390                     | 600           | 450                      | 1760                  | 2520                            | 770  |
| 40 CHB 4     | 450                     | 550                     | 390                     | 600           | 450                      | 2010                  | 3030                            | 770  |
| 55 CHB 3     | 550                     | 600                     | 440                     | 700           | 450                      | 1800                  | 2560                            | 870  |
| 55 CHB 4     | 550                     | 600                     | 440                     | 700           | 450                      | 2050                  | 3070                            | 870  |
| 80 CHB 3     | 550                     | 600                     | 440                     | 800           | 450                      | 1810                  | 2570                            | 970  |
| 80 CHB 4     | 550                     | 600                     | 440                     | 800           | 450                      | 2060                  | 3080                            | 970  |
| 116 CHB 3    | 650                     | 700                     | 495                     | 950           | 550                      | 1860                  | 2620                            | 1120 |
| 116 CHB 4    | 650                     | 700                     | 495                     | 950           | 550                      | 2110                  | 3130                            | 1120 |



## Ordering Guide CH Range

| Number of Cartridges                                      | Housing Type | Closure Type | Cartridge Height | Housing Orientation | Material of Construction            | Gasket       | Surface Finish   | Connection                       | Outlet Orientation     |
|---|--------------|--------------|------------------|---------------------|-------------------------------------|--------------|--|----------------------------------|------------------------|
| 03<br>04<br>05  | CH           | B = Bolted   | 1<br>2<br>3<br>4 | V = Vertical        | 4 = 304 St. St.<br>6 = 316L St. St. | NB = Nitrile | F0<br>= Pickle<br>Passivated or<br>Glass Bead<br>Blasted | BP<br>= ISO Flat<br>Faced Flange | DN<br>= Down-<br>wards |
| 08<br>12<br>19<br>22<br>27<br>30<br>40<br>55<br>80<br>116 | CH           | B = Bolted   | 3<br>4           | V = Vertical        | 4 = 304 St. St.<br>6 = 316L St. St. | NB = Nitrile | F0<br>= Pickle<br>Passivated or<br>Glass Bead<br>Blasted | BP<br>= ISO Flat<br>Faced Flange | DN<br>= Down-<br>wards |

### Important Notice

3M Purification MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Since a variety of factors can affect the use and performance of a 3M Purification product in a particular application, some of which are uniquely within the user's knowledge and control, user is responsible for determining whether or not the 3M Purification product is fit for a particular purpose and suitable for user's method of application.

### Limitation of Remedies and Liability

If the 3M Purification product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M PURIFICATION'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OR TO REPAIR OR REPLACE THE DEFECTIVE PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty or strict liability.

### WARRANTY

Seller warrants its equipment against defects in workmanship and material for a period of 12 months from date of shipment from the factory under normal use and service and otherwise when such equipment is used in accordance with instructions furnished by Seller and for purposes disclosed in writing at the time of purchase, if any. Any unauthorized alteration or modification of the equipment by Buyer will void this warranty. Seller's liability under this warranty shall be limited to the replacement or repair, F.O.B. point of manufacture, of any defective equipment or part which, having been returned to the factory, transportation charges prepaid, has been inspected and determined by the Seller to be defective. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR USE, OR ANY OTHER MATTER. Under no circumstances shall Seller be liable to Buyer or any third party for any loss of profits or other direct or indirect costs, expenses, losses or consequential damages arising out of or as a result of any defects in or failure of its products or any part or parts thereof or arising out of or as a result of parts or components incorporated in Seller's equipment but not supplied by the Seller.



## LENNTECH

info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289

Data may be subject to change without further notice.

© 3M 2010. All rights reserved.

DOC10002  
LITHSCH1.E - 0510

03CHB1  
03CHB2  
03CHB3  
03CHB4  
04CHB1  
04CHB2  
04CHB3  
04CHB4  
05CHB1  
05CHB2  
05CHB3  
05CHB4  
08CHB3  
08CHB4  
12CHB3  
12CHB4  
19CHB3  
19CHB4  
22CHB3  
22CHB4  
27CHB3  
27CHB4  
30CHB3  
30CHB4  
40CHB3  
40CHB4  
55CHB3  
55CHB4  
80CHB3  
80CHB4  
116CHB3  
116CHB4