



## Residential R.O. components



# 1,8" Residential CSM Membranes



## RESIDENTIAL

RO elements for residential use (1.8 inch diameter)

# CSM<sup>®</sup>

### SPECIFICATIONS:

#### General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Salt Rejection % |
|------------|--------------------------------|------------------|
| RE1810-30  | 30 (114)                       | 98.0%            |
| RE1810-50  | 50 (189)                       | 98.0%            |
| RE1812-35  | 35 (132)                       | 98.0%            |
| RE1812-50  | 50 (189)                       | 98.0%            |
| RE1812-60  | 60 (227)                       | 98.0%            |
| RE1812-80  | 80 (303)                       | 98.0%            |

- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 200 mg/L NaCl solution at 60 psig (0.41 MPa) applied pressure
  - 15% recovery
  - 77 °F (25 °C)
  - pH 6.5–7.0
- Dry type elements are vacuum leak tested using the San Diego Protocol.
- Permeate flow rate for each element may vary but will be no more than 15%.
- Dry elements are packaged in a polyethylene bag
  - α Wet elements are packaged in a polyethylene bag containing SB(4g/L) + HCl(0.51g/L) solution.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polyamide (PA)  
**Element configuration:** Spiral-Wound, Tape Wrapping

### Dimensions

| Model Name | A              | B              | C                | D              | E              |
|------------|----------------|----------------|------------------|----------------|----------------|
| RE1810-30  | 0.67<br>(17mm) | 0.55<br>(14mm) | 10.08<br>(256mm) | 0.98<br>(25mm) | 1.77<br>(45mm) |
| RE1810-50  |                |                |                  |                |                |
| RE1812-35  | 0.67<br>(17mm) | 0.87<br>(22mm) | 11.73<br>(298mm) | 0.98<br>(25mm) | 1.77<br>(45mm) |
| RE1812-50  |                |                |                  |                |                |
| RE1812-60  |                |                |                  |                |                |
| RE1812-80  |                |                |                  |                |                |

\*All measurement are in inches



# 1,8" Residential CSM Membranes



These model names are tested and certified under NSF/ANSI standard 58, material requirement only (excluding RE1810-30)

## RESIDENTIAL

RO elements for residential use (1.8 inch diameter)

## CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 125 psi (0.86 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Woongjin Chemical assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the products.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush out the preservative solution.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.
- Keep elements moist at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.        | MODEL NAME |  |
|-------------|------------|--|
|             | RE1810-30  |  |
|             | RE1812-35  |  |
| MCRE1812-50 | RE1812-50  |  |
| MCRE1812-60 | RE1812-60  |  |
| MCRE1812-80 | RE1812-80  |  |

# 1,8" Residential CSM Membranes



## RESIDENTIAL

High recovery & High rejection RO element for residential use

# CSM®

### SPECIFICATIONS:

#### General Features

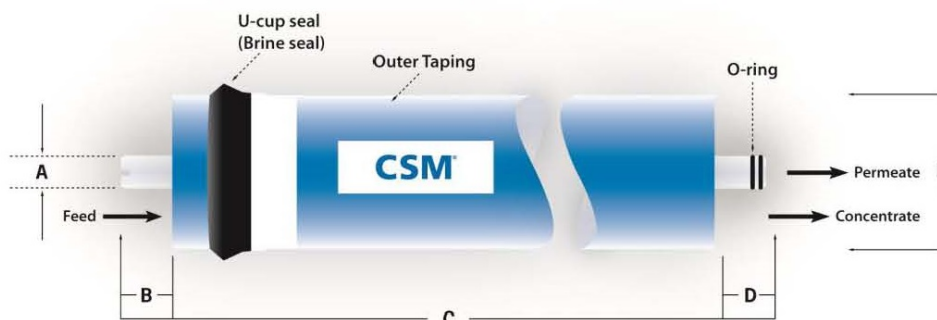
| Model Name | Permeate Flow Rate<br>GPD (L/day) | Salt Rejection<br>(%) | Pressure / Recovery |
|------------|-----------------------------------|-----------------------|---------------------|
| RE1812-HR+ | 80 (302.8)                        | 99.0 (min. 97.5)      | 60psig / 30%        |
|            | 105 (397.5)                       | 96.0 (min. 95.0)      | 80psig / 60%        |

- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 200 mg/L NaCl solution , 77 °F (25 °C), pH 6.5–7.0
- All elements are vacuum leak tested using the CSM integrity test.
- Permeate flow rate for each element may vary +15/ -15%.
- Elements can be supplied as dry or wet-type. Wet-tested elements are soaked in a preservative solution (1.0% food grade SBS) and vacuum sealed in a poly bag. All elements are individually boxed.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polyamide (PA)  
**Element configuration:** Spiral-Wound, Tape Wrapping

#### Dimensions

| Model Name | A                   | B                    | C                      | D                    | E                    |
|------------|---------------------|----------------------|------------------------|----------------------|----------------------|
| RE1812-HR+ | 0.67 inch<br>(17mm) | 0.87 inch<br>(22 mm) | 11.73 inch<br>(298 mm) | 0.87 inch<br>(22 mm) | 1.77 inch<br>(45 mm) |



# 1,8" Residential CSM Membranes



## RESIDENTIAL

High recovery & High rejection RO element for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 150 psi (1.03 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 3.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Keep elements moistly at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty. For additional information on use of approved chemicals please contact your nearest CSM representative.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
| MCRE1812-HR+ | RE1812-HR+ |  |

# 2" - 2,8" Residential CSM Membranes



## RESIDENTIAL

RO elements for residential use (2.0 and 2.8 inch diameters)

# CSM®

### SPECIFICATIONS:

#### General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Salt Rejection (%) |
|------------|--------------------------------|--------------------|
| RE2012-100 | 100 (397)                      | 98.0               |
| RE2812-300 | 300 (1,136)                    | 96.0               |

- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 200 mg/L NaCl solution at 60 psig (0.41 MPa) applied pressure
  - 15% recovery
  - 77 °F (25 °C)
  - pH 6.5–7.0
- Minimum salt rejection is 96.0%.
- Permeate flow rate for each element may vary but will be no more than 15%.
- Wet elements are packaged in a polyethylene bag containing 1.0% SBS (sodium bisulfite) solution.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polyamide (PA)  
**Element configuration:** Spiral-Wound, Tape Wrapping

#### Dimensions

| Model Name | A            | B           | C             | D           | E           |
|------------|--------------|-------------|---------------|-------------|-------------|
| RE2012-100 | 0.67<br>(17) | 0.5<br>(12) | 11.7<br>(298) | 0.9<br>(23) | 1.9<br>(48) |
| RE2812-300 | 0.67<br>(17) | 0.9<br>(22) | 11.7<br>(298) | 0.9<br>(22) | 2.9<br>(74) |

\*All measurements are in inches (millimeters)



# 2" - 2,8" Residential CSM Membranes



## RESIDENTIAL

RO elements for residential use (2.0 and 2.8 inch diameters)

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 125 psi (0.86 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
| MCRE2012-100 | RE2012-100 |  |
| MCRE2812-300 | RE2812-300 |  |

# 2" Residential CSM Membranes



## SPECIFICATIONS:

### General Features

| Model Name        | Active Membrane Area ft <sup>2</sup> (m <sup>2</sup> ) | Permeate Flow Rate GPD (L/day) | Salt Rejection (%) |
|-------------------|--|--------------------------------|--------------------|
| <b>RE2012-150</b> | 6.4 (0.59)   | 150 (567.8)                    | 98.0               |

1. The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:

- **200 mg/L NaCl solution at 60 psig (0.41 MPa) applied pressure**
- **15% recovery**
- **77 °F (25 °C)**
- **pH 6.5–7.0**

2. Minimum salt rejection is 96.0%.

3. Dry type elements are vacuum leak tested using the CSM integrity test.

4. Permeate flow rate for each element may vary but will be no more than 15%.

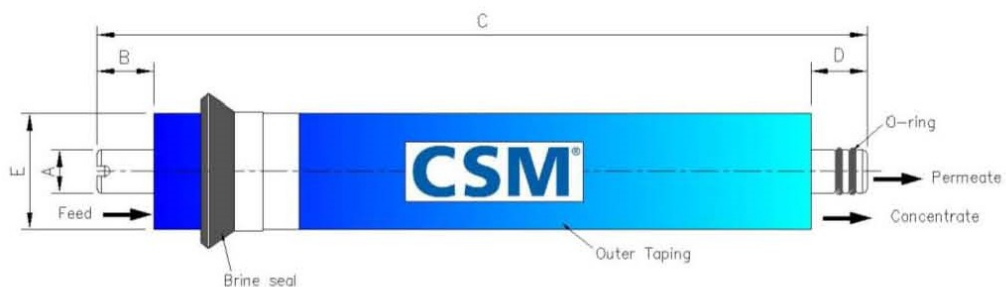
5. Dry elements are packaged in a polyethylene bag.

|                               |                             |
|-------------------------------|-----------------------------|
| <b>Membrane type:</b>         | Thin-Film Composite         |
| <b>Membrane material:</b>     | Polyamide (PA)              |
| <b>Element configuration:</b> | Spiral-Wound, Tape Wrapping |

### Dimensions

| Model Name        | A            | B           | C             | D           | E           |
|-------------------|--------------|-------------|---------------|-------------|-------------|
| <b>RE2012-150</b> | 0.67<br>(17) | 0.5<br>(12) | 11.7<br>(298) | 0.9<br>(23) | 1.9<br>(48) |

\*All measurements are in inches (millimeters).







## RESIDENTIAL

High flux RO elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 150 psi (1.03 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or imply any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty. For additional information on use of approved chemicals please contact your nearest CSM representative.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
| MCRE2012-150 | RE2012-150 |  |

# 2" Residential CSM Membranes



## SPECIFICATIONS:

### General Features

| Model Name        | Permeate Flow Rate<br>GPD (L/day) | Salt Rejection<br>(%)   | Pressure / Recovery |
|-------------------|-----------------------------------|-------------------------|---------------------|
| <b>RE2012-400</b> | <b>400 (1514)</b>                 | <b>96.0</b> (min. 95.0) | <b>80psig / 30%</b> |

1. The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:

- 200 mg/L NaCl solution , 77 °F (25 °C), pH 6.5–7.0

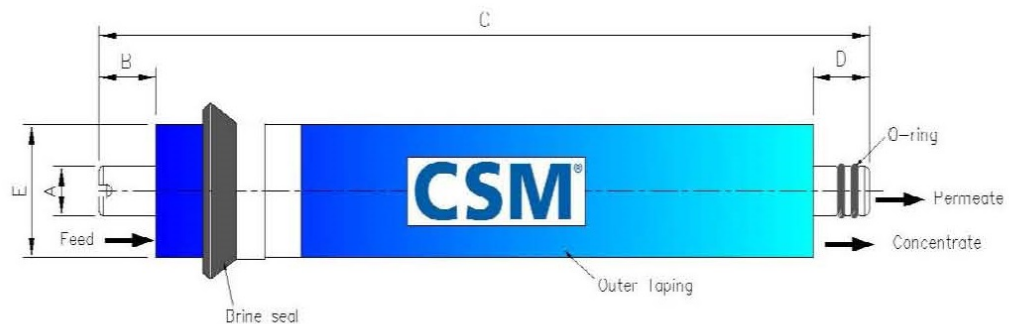
2. Wet type elements are vacuum leak tested using the CSM integrity test.
3. Permeate flow rate for each element may vary but will be no more than 15%.
4. Wet elements are packaged in a polyethylene bag containing 1.0% SBS (sodium bisulfite) solution.

|                               |                             |
|-------------------------------|-----------------------------|
| <b>Membrane type:</b>         | Thin-Film Composite         |
| <b>Membrane material:</b>     | Polyamide (PA)              |
| <b>Element configuration:</b> | Spiral-Wound, Tape Wrapping |

### Dimensions

| Model Name        | A              | B             | C                | D              | E              |
|-------------------|----------------|---------------|------------------|----------------|----------------|
| <b>RE2012-400</b> | 0.67<br>(17mm) | 0.5<br>(12mm) | 11.73<br>(298mm) | 0.91<br>(23mm) | 1.89<br>(48mm) |

\*All measurements are in inches (millimeters).



# 2" Residential CSM Membranes



## RESIDENTIAL

High recovery & High rejection RO element for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 150 psi (1.03 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 3.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Keep elements moistly at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty. For additional information on use of approved chemicals please contact your nearest CSM representative.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
| MCRE2012-400 | RE2012-400 |  |

# 2" Residential CSM Membranes



## RESIDENTIAL

Low pressure grade RO elements for residential use

# CSM®

### SPECIFICATIONS:

#### General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Salt Rejection % |
|------------|--------------------------------|------------------|
| RE2010-LP  | 30 (114)                       | 93.0%            |
| RE2012-LP  | 50 (189)                       | 93.0%            |
| RE2012-LPF | 60 (227)                       | 93.0%            |

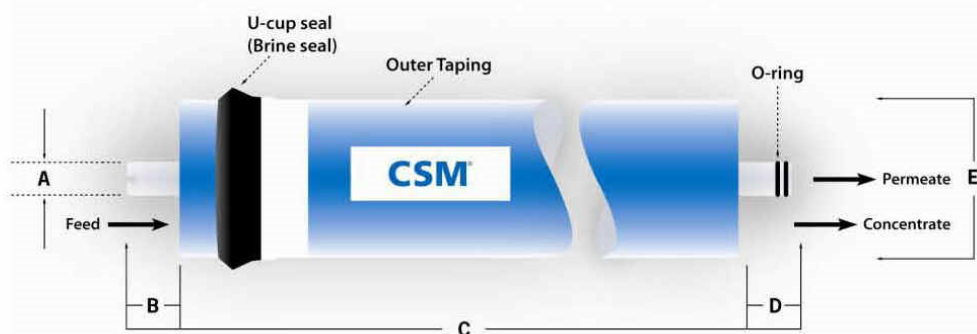
- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 100 mg/L NaCl solution at 20 psig (0.14 MPa) applied pressure
  - 15% recovery
  - 77 °F (25 °C)
  - pH 6.5–7.0
- Dry type elements are vacuum leak tested using the San Diego Protocol.
- Permeate flow rate for each element may vary but will be no more than 15%.
- Dry elements are packaged in a polyethylene bag
  - Wet elements are packaged in a polyethylene bag containing SB(4g/L) + HCl(0.5 l/g/L) solution.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polyamide (PA)  
**Element configuration:** Spiral-Wound, Tape Wrapping

#### Dimensions

| Model Name | A    | B    | C     | D    | E    |
|------------|------|------|-------|------|------|
| RE2010-LP  | 0.67 | 0.55 | 10.08 | 0.98 | 1.91 |
| RE2012-LP  | 0.67 | 0.47 | 11.73 | 0.91 | 1.91 |
| RE2012-LPF | 0.67 | 0.47 | 11.73 | 0.91 | 1.91 |

\*All measurement are in inches



# 2" Residential CSM Membranes



## RESIDENTIAL

Low pressure grade RO elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 125 psi (0.86 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Woongjin Chemical assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush out the preservative solution.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.
- Keep elements moist at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
|              | RE2010-LP  |  |
| MCRE2012-LP  | RE2012-LP  |  |
| MCRE2012-LPF | RE2012-LPF |  |

# 3" Residential CSM Membranes



## RESIDENTIAL

RO elements for residential use

CSM®

### SPECIFICATIONS:

#### General Features

| Model Name        | Permeate Flow Rate GPD (L/day) | Salt Rejection (%) |
|-------------------|--------------------------------|--------------------|
| <b>RE3012-500</b> | 500 (1,893)                    | 97.0               |

1. The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:

- 200 mg/L NaCl solution at 80 psig (0.55 MPa) applied pressure
- 40% recovery
- 77 °F (25 °C)
- pH 6.5–7.0

2. Minimum salt rejection is 95.0%.

3. Dry type elements are vacuum leak tested using the CSM integrity test.

4. Permeate flows for warranty evaluation may vary +25/-15%.

5. Dry elements are packaged in a polyethylene bag

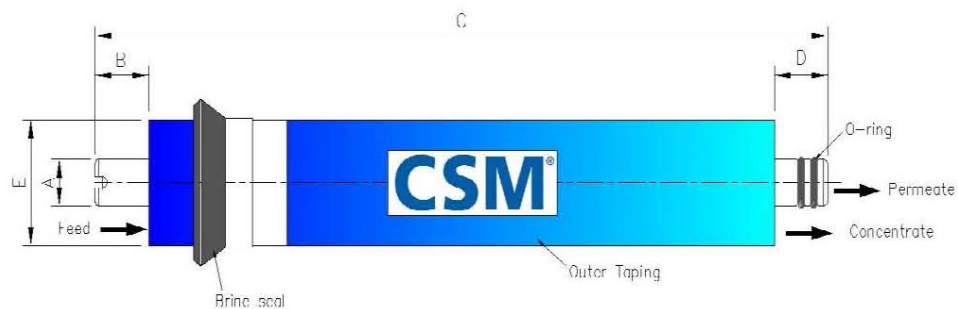
⌘ Wet elements are packaged in a polyethylene bag containing storage solution.

|                               |                             |
|-------------------------------|-----------------------------|
| <b>Membrane type:</b>         | Thin-Film Composite         |
| <b>Membrane material:</b>     | Polyamide (PA)              |
| <b>Element configuration:</b> | Spiral-Wound, Tape Wrapping |

#### Dimensions

| Model Name        | A            | B            | C             | D            | E            |
|-------------------|--------------|--------------|---------------|--------------|--------------|
| <b>RE3012-500</b> | 0.67<br>(17) | 0.39<br>(10) | 11.7<br>(298) | 0.79<br>(20) | 2.95<br>(75) |

\*All measurement are in inches(millimeters)



# 3" Residential CSM Membranes



## RESIDENTIAL

RO elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 150 psi (1.03 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the products.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag of wet element is damaged, a new preservative solution must be added and air-tight sealed to prevent drying and biological growth.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL      |  |
|--------------|------------|--|
| MCRE3012-500 | RE3012-500 |  |



## RESIDENTIAL

Tankless RO elements for residential use

# CSM®

### SPECIFICATIONS:

#### General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Salt Rejection (%) |
|------------|--------------------------------|--------------------|
| RE3512-TK  | 600 (2,271)                    | 95.0               |

1. The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:

- 200 mg/L NaCl solution at 60 psig (0.41 MPa) applied pressure
- 30% recovery
- 77 °F (25 °C)
- pH 6.5–7.0

2. Minimum salt rejection is 93.0%.

3. Dry type elements are vacuum leak tested using the CSM integrity test.

4. Permeate flow rate for each element may vary but will be no more than 15%.

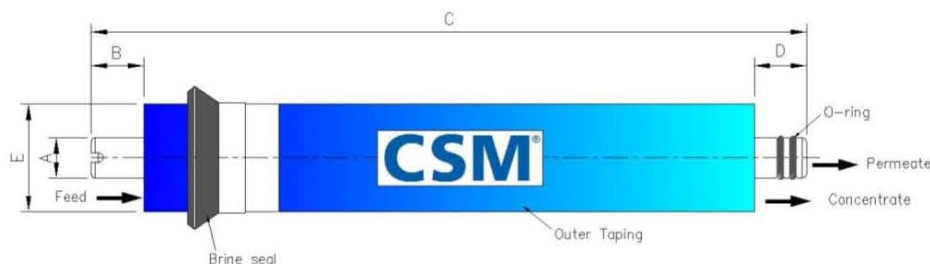
5. Dry elements are packaged in a polyethylene bag.

|                               |                             |
|-------------------------------|-----------------------------|
| <b>Membrane type:</b>         | Thin-Film Composite         |
| <b>Membrane material:</b>     | Polyamide (PA)              |
| <b>Element configuration:</b> | Spiral-Wound, Tape Wrapping |

#### Dimensions

| Model Name | A            | B           | C              | D            | E            |
|------------|--------------|-------------|----------------|--------------|--------------|
| RE3512-TK  | 0.67<br>(17) | 0.31<br>(8) | 11.73<br>(298) | 0.63<br>(16) | 3.35<br>(85) |

\*All measurements are in inches (millimeters).







## RESIDENTIAL

Tankless RO elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 150 psi (1.03 MPa)              |
| · Max. Feed Flow Rate         | 5 gpm (1.14 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Toray Chemical Korea Inc. assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or imply any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight.
- When running the system for the first time, the permeate should be discarded continuously at least 1 hour.
- Keep elements moistly at all times after initial wetting.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing from biological growth.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty. For additional information on use of approved chemicals please contact your nearest CSM representative.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.        | MODEL NAME |  |
|-------------|------------|--|
| MCRE3512-TK | RE3512-TK  |  |

# 1,8" - 2" Residential CSM Membranes



## RESIDENTIAL

NF elements for residential use

# CSM®

### SPECIFICATIONS:

#### General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Salt Rejection % |
|------------|--------------------------------|------------------|
| NE1812     | 80 (379)                       | 40.0–60.0%       |
| NE2010     | 90 (341)                       | 40.0–60.0%       |

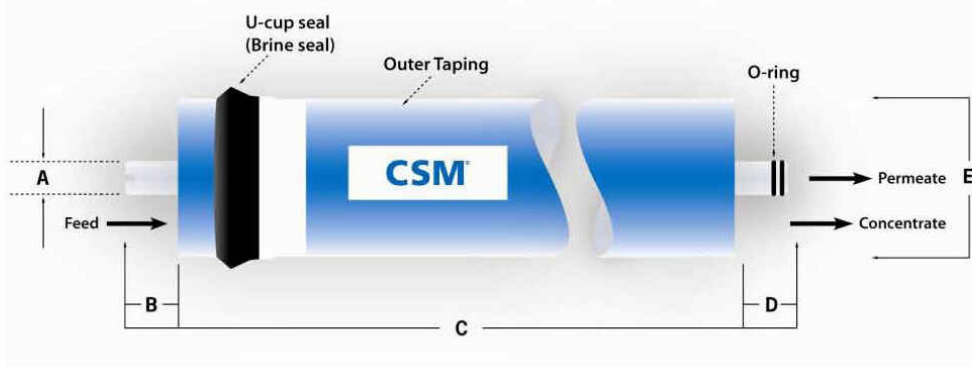
- The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:
  - 250 mg/L NaCl solution at 60 psig (4.14 MPa) applied pressure
  - 15% recovery
  - 77 °F (25 °C)
  - pH 6.5–7.0
- Dry type elements are vacuum leak tested using the San Diego Protocol.
- Permeate flow rate for each element may vary but will be no more than 15%.
- All elements are packaged in a polyethylene bag containing 1.0% SBS (sodium bisulfite) solution.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polyamide (PA)  
**Element configuration:** Spiral-Wound, Tape Wrapping

#### Dimensions

| Model Name | A    | B    | C     | D    | E    |
|------------|------|------|-------|------|------|
| NE1812     | 0.67 | 0.87 | 11.73 | 0.87 | 1.77 |
| NE2010     | 0.67 | 0.63 | 10.08 | 0.87 | 1.91 |

\*All measurement are in inches



# 1,8" - 2" Residential CSM Membranes



## RESIDENTIAL

NF elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                               |                                 |
|-------------------------------|---------------------------------|
| · Max. Operating Pressure     | 125 psi (0.86 MPa)              |
| · Max. Feed Flow Rate         | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature  | 113 °F (45 °C)                  |
| · Operating pH Range          | 2.0–11.0                        |
| · Max. Turbidity              | 1.0 NTU                         |
| · Max. SDI (15 min)           | 5.0                             |
| · Max. Chlorine Concentration | < 0.1 mg/L                      |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Woongjin Chemical assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush out the preservative solution.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.
- Keep elements moist at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.     | MODEL NAME |  |
|----------|------------|--|
| MCNE1812 | NE1812     |  |
|          | NE2010     |  |

# 1,8" - 2" Residential CSM Membranes



## RESIDENTIAL

UF elements for residential use

# CSM®

### SPECIFICATIONS:

General Features

| Model Name | Permeate Flow Rate GPD (L/day) | Molecular Weight Cut Off |
|------------|--------------------------------|--------------------------|
| UE1810     | 200 (757)                      | 100K                     |
| UE1812     | 250 (946)                      | 100K                     |
| UE2010     | 450 (1,703)                    | 100K                     |

1. The stated product performance is based on data taken after 30 minutes of operation at the following test conditions:

- Pure water (2 MΩ) at 20 psig applied pressure
- 100% recovery
- 77 °F (25 °C)

2. Dry type elements are vacuum leak tested using the San Diego Protocol.

3. Permeate flow rate for each element may vary but will be no more than 15%.

4. Dry elements are packaged in a polyethylene bag

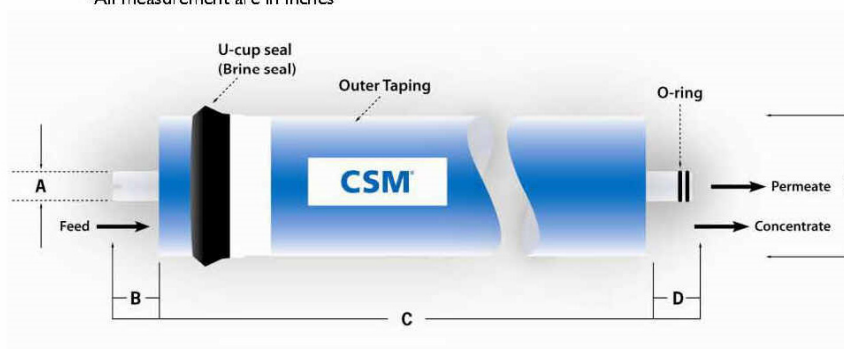
- ⌘ Wet elements are packaged in a polyethylene bag containing SB(4g/L) + HCl(0.51 g/L) solution.

**Membrane type:** Thin-Film Composite  
**Membrane material:** Polysulfone (PSF)  
**Element configuration:** Spiral-Wound, Tape Wrapping

Dimensions

| Model Name | A    | B    | C     | D    | E    |
|------------|------|------|-------|------|------|
| UE1810     | 0.67 | 0.55 | 10.08 | 0.98 | 1.77 |
| UE1812     | 0.67 | 0.55 | 11.02 | 0.79 | 1.77 |
| UE2010     | 0.67 | 0.55 | 10.08 | 0.98 | 1.91 |

\*All measurement are in inches



These model names are tested and certified under NSF/ANSI standard 58, material requirement only (excluding UE1812)

# 1,8" - 2" Residential CSM Membranes



## RESIDENTIAL

UF elements for residential use

# CSM®

### APPLICATION DATA:

#### Operating Limits

|                              |                                 |
|------------------------------|---------------------------------|
| · Max. Operating Pressure    | 125 psi (0.86 MPa)              |
| · Max. Feed Flow Rate        | 2 gpm (0.45 m <sup>3</sup> /hr) |
| · Max. Operating Temperature | 113 °F (45 °C)                  |
| · Operating pH Range         | 2.0–11.0                        |
| · Max. Turbidity             | 1.0 NTU                         |
| · Max. SDI (15 min)          | 5.0                             |

The information provided in this document is solely for informative purposes. It is the user's responsibility to ensure the appropriate usage of this product. Woongjin Chemical assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this document. This document does not express or implies any warranty as to the merchantability or fitness of the product.

### GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisulfite) must be added and air-tight sealed to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush out the preservative solution.
- Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.
- Keep elements moist at all times after initial wetting.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.

| REF.         | MODEL NAME |  |
|--------------|------------|--|
|              | UE1810     |  |
| MCUE1812 (*) | UE1812     |  |
|              | UE2010     |  |

(\*) available till it will be out-of-stock.

# Vessel for Residential Elements



## 1,8" - 2" membranes

- material PP white;
- connections 1/8" NPT F;
- max pressure 125 psi (8,6 bar);
- double o-ring;
- permeate tube seat diameter = 0,67";
- nominal dimension 1812 - 2012.



| REF.  |  |
|-------|--|
| DE010 |  |

### Membranes coupling:

- CSM 1,8" - 2" residential membranes, see 10-01-01-EN, 10-01-02-EN, 10-01-03-EN, 10-01-04-EN, 10-01-07-EN and 10-01-08-EN data sheets.

### Single mounting clips for vessel residential 1,8" - 2" membranes

- material PP;
- white colour.

| REF.  |  |
|-------|--|
| DE034 |  |



## 2,8" - 3" membranes

- material PP white;
- connections:
  - feed, permeate and concentrate 3/8" NPT F (please, use our fittings ref. AV153 or elbows ref. AV159);
- max pressure 125 psi (8,6 bar);
- permeate tube seat diameter = 0,67";
- nominal dimension 2812 - 3012.



| REF.  |  |
|-------|--|
| DE007 |  |

### Membranes coupling:

- CSM 2,8" residential membranes, see 10-01-02-EN and 10-01-05-EN data sheets.

### Single mounting clips for vessel residential 2,8" - 3" membranes

- material PP;
- white colour.

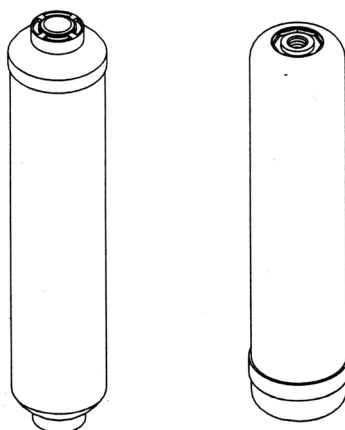
| REF.  |  |
|-------|--|
| DE006 |  |



## In-Line Cartridges



- IN LINE cartridges ¼" NPT F connections;
- Max pressure = 100 psi (7 bar);
- Max temperature = 35°C;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.



| REF.  | DIAMETER (inch) | LENGTH (inch) | VERSION                        | FLOW (gpm) |  |
|-------|-----------------|---------------|--------------------------------|------------|--|
| DE028 | 2"              | 10"           | Coconut Shell Activated Carbon | 0,75       |  |
| DE029 | 2"              | 10"           | Sediment                       | 0,75       |  |
| DE030 | 2 ½"            | 11"           | Coconut Shell Activated Carbon | 1,00       |  |
| DE031 | 2 ½"            | 11"           | Sediment                       | 1,00       |  |

### R.O. compact assembly and accessories

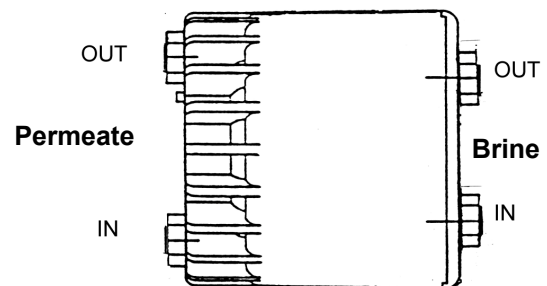
| REF.   | DESCRIPTION                                 |  |
|--------|---|--|
| DE100  | Compact assembly empty                      |  |
| DE101  | Special membrane 50 GPD                     |  |
| DE102A | Sediment / Carbon Block Prefilter cartridge |  |
| DE103  | GAC Postfilter cartridge                    |  |

# Permeate Pump for Residential R.O. Systems

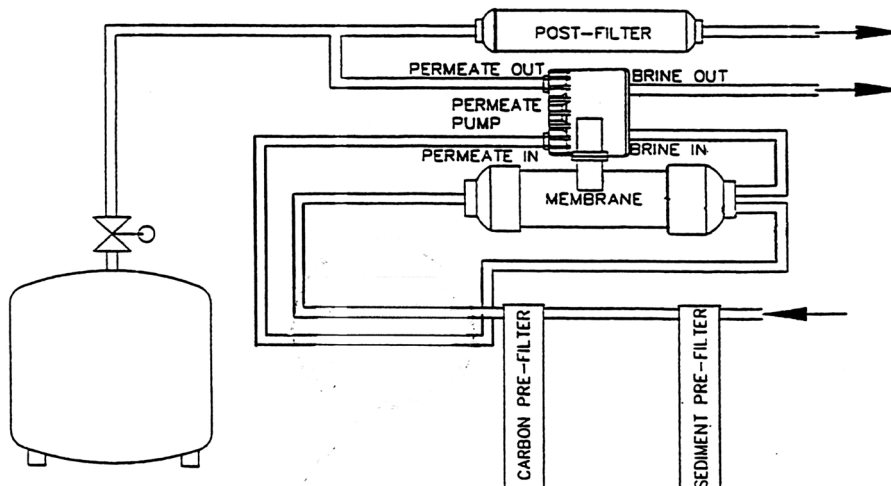


- using the energy of the brine water of the R.O. system to pump the permeate into the pressure tank, increases the net operating pressure on the membrane and eliminate the negative effect of the pressure on the storage tank;
- hydraulic pump, does not require electricity;
- for residential R.O. systems with pressurized storage tank and membrane from 35 to 100 GPD;
- the permeate pump can increase up to 5 time the system recovery, reducing the water consumption and the refill time of the storage tank;
- no shut-off valve is needed;
- materials polypropylene/ EPDM;
- max operating pressure 6,8 bar;
- connections for 1/4" tubing;
- max drain flow rate 0,8 l/min.

| REF.  |  |
|-------|--|
| DE120 |  |



## Typical system layout



## **ATTENTION**

Install the pump horizontal with both outlet ports in the highest position so that any air purges out automatically.

The concentrate flow restrictor has to be installed before the permeate pump inlet.

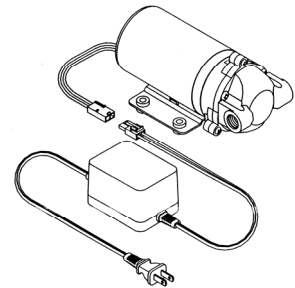
| ACCESSORIE |                      |  |
|------------|----------------------|--|
| REF.       | DESCRIPTION          |  |
| DE121      | SINGLE MOUNTING CLIP |  |



# Booster Pump for Residential R.O.



- booster pump and relevant accessories for residential R.O. Systems.
- membrane booster pump with transformer;
- transformer power supply 220 V – 50 Hz;
- IN/OUT connections 3/8" F.

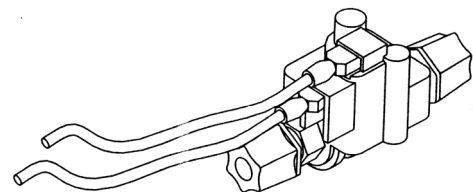


| REF.  | MODEL | POWER SUPPLY | FLOW (liters/min) |         |  |
|-------|-------|--------------|-------------------|---------|--|
|       |       |              | 60 psi            | 100 psi |  |
| DE130 | E36   | 24 VAC       | 0,8               | 0,6     |  |

## Accessories:

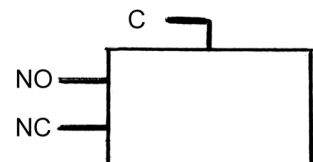
### High/low pressure switch

- pressure 30 – 50 psi;
- connections 1/4" tube.

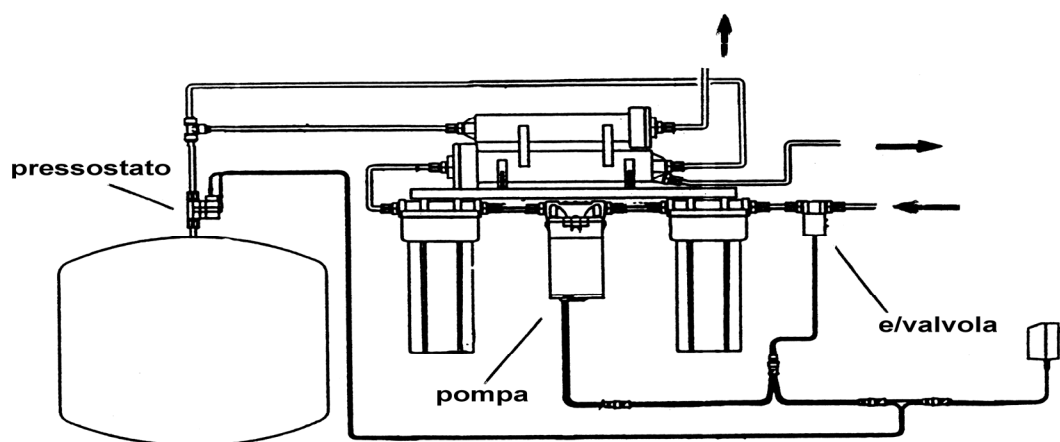


| REF.  |  |
|-------|--|
| DE140 |  |

- to use as high pressure switch contacts C and NC;
- to use as low pressure switch contacts C and NO.



### Typical system layout



# MWG High Pressure Switch



- Pressure switch contact NO;
- Connection 1/4" G;
- Body material in Stainless Steel;
- Diaphragm in NBR;
- Max Voltage = 42 V;
- Max Current = 4 A;
- Max operating pressure = 150 bar;
- Operating temperature range = - 40 ÷ + 100°C;
- Class protection IP54;
- Conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.



| REF.  | DESCRIPTION                        | TOLERANCE |  |
|-------|------------------------------------|-----------|--|
| DH571 | MWG HIGH PRESSURE SWITCH 1-10 BAR  | ± 0,5 bar |  |
| DH573 | MWG HIGH PRESSURE SWITCH 10-20 BAR | ± 1 bar   |  |
| DH575 | MWG HIGH PRESSURE SWITCH 20-50 BAR | ± 2 bar   |  |

# MWG Booster Pumps for Residential R.O.



- MWG booster pumps for residential R.O. Systems;
- Membrane booster pumps without transformer (to order separately);
- IN/OUT connections 3/8" F;
- Conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.

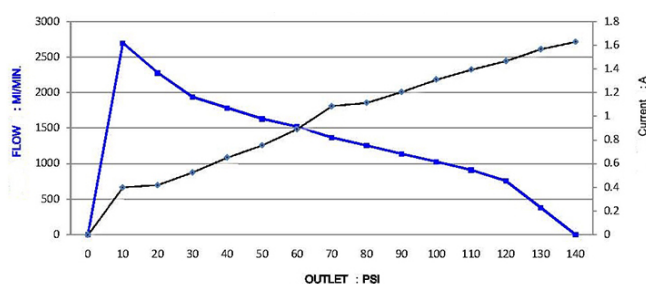


| REF.  | MODEL | POWER SUPPLY | TRANSFORMER REF. | INLET PRESSURE (psi) | WORKING PRESSURE RANGE (psi) | FLOW @ 70 psi (l/min) | RATED CURRENT (A) | CURRENT @ 70 psi (A) |
|-------|-------|--------------|------------------|----------------------|------------------------------|-----------------------|-------------------|----------------------|
| DH501 | M100G | 24 VDC       | DH531            | 30                   | 60 ÷ 80                      | ≥ 1,1                 | 1,8               | ≤ 1,2                |
| DH503 | L200G | 24 VDC       | DH533            | 30                   | 60 ÷ 80                      | ≥ 1,6                 | 2,2               | ≤ 1,6                |
| DH505 | L400G | 24 VDC       | DH535            | 30                   | 70 ÷ 90                      | ≥ 2,6                 | 3,6               | ≤ 2,5                |

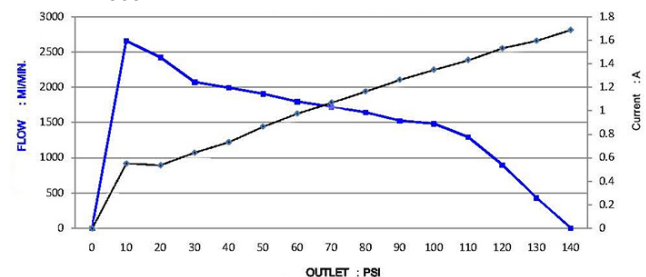
## TRANSFORMERS

| REF.  | MODEL      |
|-------|------------|
| DH531 | 24VDC 2,0A |
| DH533 | 24VDC 2,5A |
| DH535 | 24VDC 4,0A |

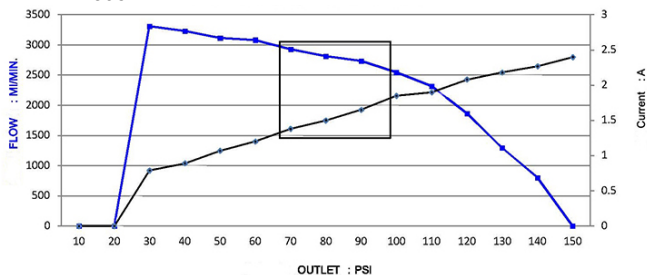
DH501



DH503



DH505



## Two-Way Solenoid Valves for R.O. Systems



- two-way solenoid valve direct acting;
- body material plastic;
- connections 1/4" NPT;
- power supply 24 VAC;
- orifice diameter 2,5 mm.



| REF.  |  |
|-------|--|
| DE142 |  |

- two-way solenoid valve direct acting;
- body material brass.



Ref. DE144



Ref. DE147

| REF.      | CONNECTIONS (inch) | POWER SUPPLY | ORIFICE DIAMETER (mm) |  |
|-----------|--------------------|--------------|-----------------------|--|
| DE144 (*) | 1/4"               | 24 VDC       | 3,0                   |  |
| DE147     | 3/8"               | 220 VAC      | 4,5                   |  |

(\*) available till it will be out-of-stock

## MWG Two-Way Solenoid Valves for R.O. Systems



- Two-way solenoid valve direct acting;
- Body material plastic;
- Seals in EPDM;
- Spring in SS304;
- Range water temperature = 4°C ÷ 120°C;
- Range ambient temperature = -10°C ÷ +40°C;
- Range pressure = 0 ÷ 8 bar;
- Class protection IP65;
- Connections 1/4" NPT;
- Orifice diameter 2,5 mm;
- Conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.



| REF.  | POWER SUPPLY |  |
|-------|--------------|--|
| DH601 | 24 V DC      |  |
| DH603 | 24 V AC      |  |

# MWG Two -Way Solenoid Valves for R.O. Systems



- Two-way solenoid valve direct acting;
- Body material brass;
- Seals in EPDM;
- Range water temperature = 4°C ÷ 120°C;
- Class protection IP65;
- G thread connections;
- Conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.



| REF.  | CONNECTIONS (inch) | POWER SUPPLY | ORIFICE DIAMETER (mm) | MAX OPERATING PRESSURE (bar) |  |
|-------|--------------------|--------------|-----------------------|------------------------------|--|
| DH611 | 1/4"               | 24 V DC      | 3                     | 6                            |  |
| DH615 | 3/8"               | 220 V AC     | 5                     | 5                            |  |

- Two-way solenoid valve indirect acting;
- Body material brass;
- Seals in EPDM;
- Range water temperature = 4°C ÷ 120°C;
- Class protection IP65;
- G thread connections;
- Conform with CE safety Directives;
- D.M. n.174 dated 06/04/2004 compliant about materials suitable for contact with water for human consumption.



| REF.  | CONNECTIONS (inch) | POWER SUPPLY | ORIFICE DIAMETER (mm) | MAX OPERATING PRESSURE (bar) |  |
|-------|--------------------|--------------|-----------------------|------------------------------|--|
| DH621 | 3/8"               | 220 V AC     | 10                    | 16                           |  |
| DH623 | 1/2"               | 220 V AC     | 15                    | 16                           |  |
| DH625 | 3/4"               | 220 V AC     | 20                    | 16                           |  |
| DH627 | 1"                 | 220 V AC     | 25                    | 16                           |  |
| DH629 | 1 1/4"             | 220 V AC     | 35                    | 16                           |  |
| DH631 | 1 1/2"             | 220 V AC     | 35                    | 16                           |  |
| DH633 | 2"                 | 220 V AC     | 50                    | 16                           |  |

# Valves for Residential R.O. and Filtration System



## Saddle Valve

- saddle valve self piercing for residential R.O and filtration systems;
- suitable for copper piping;
- connection for 1/4" tubing;
- material brass with aluminium clamp.

| REF.  |  |
|-------|--|
| DE041 |  |



## Needle Valves

- needle valve for residential R.O and filtration systems;
- for tube 1/2" M/F or 3/8" M/F;
- connection for 1/4" or 3/8" or 5/16" flexible tubing;
- material brass.



| REF.   | TUBE (inch) | FLEXIBLE TUBING (inch) |  |
|--------|-------------|------------------------|--|
| DE039  | 1/2" M/F    | 1/4"                   |  |
| DE050  | 1/2" M/F    | 3/8"                   |  |
| DE050A | 1/2" M/F    | 5/16"                  |  |
| DE039A | 3/8" M/F    | 1/4"                   |  |

# Drain and Diverter Valves for R.O. Systems



- suitable for residential R.O and filtration systems.

## Drain Clamp

- material ABS black.

| REF.  | CONNECTION<br>(inch) |  |
|-------|----------------------|--|
| DE040 | ¼" tubo              |  |
| DE049 | ¼" F NPT             |  |



## Diverter Valve with Swivel Collar

- connection for ¼" tubing;
- material chrome plated brass.

| REF.  |  |
|-------|--|
| DE042 |  |



## ADAPTER 15/16" – 27 X 55/64" – 27

- length 8 mm;
- material chrome plated brass.

| REF.  |  |
|-------|--|
| DE043 |  |





# Jaco Style Fittings

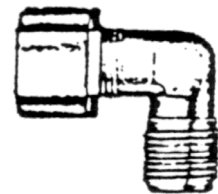


- Range of polypropylene fittings, white colour, for residential R.O. and filtration systems.

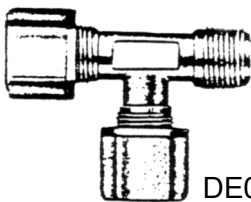
| STRAIGHT |                            |                 |  |
|----------|----------------------------|-----------------|--|
| REF.     | THREADED CONNECTION (inch) | FOR TUBE (inch) |  |
| DE063    | 1/8"                       | 1/4"            |  |
| DE064    | 1/4"                       | 1/4"            |  |
| DE068    | 1/4" F                     | 1/4"            |  |
| DE069    | 3/8"                       | 1/4"            |  |



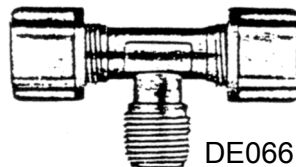
| ELBOWS |                            |                 |  |
|--------|----------------------------|-----------------|--|
| REF.   | THREADED CONNECTION (inch) | FOR TUBE (inch) |  |
| DE060  | 1/8"                       | 1/4"            |  |
| DE062  | 1/8" F                     | 1/4"            |  |
| DE061  | 1/4"                       | 1/4"            |  |
| DE070  | 3/8"                       | 1/4"            |  |



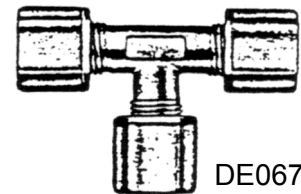
| TEES  |                      |                            |                 |  |
|-------|----------------------|----------------------------|-----------------|--|
| REF.  | 1/4" THREAD POSITION | THREADED CONNECTION (inch) | FOR TUBE (inch) |  |
| DE065 | LATERAL              | 1/4"                       | 1/4"            |  |
| DE066 | CENTRAL              | 1/4"                       | 1/4"            |  |
| DE067 | -                    | -                          | 1/4"            |  |



DE065



DE066



DE067

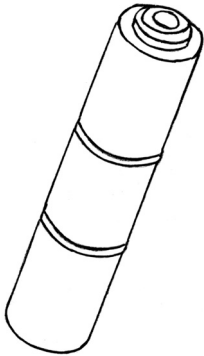
| BULKHEAD UNION |                 |  |
|----------------|-----------------|--|
| REF.           | FOR TUBE (inch) |  |
| DE085 (*)      | 1/4"            |  |



(\*) available till it will be out-of-stock.



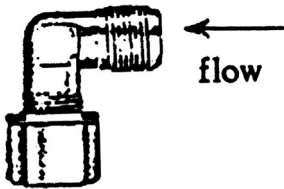
## In-Line Flow Restrictors



- Quick connections 1/4" tube.

| REF.  | Flow @ 60 psi (gpd) | Flow @ 60 psi (ml/min) |  |
|-------|---------------------|------------------------|--|
| DE105 | 60                  | 150                    |  |
| DE106 | 115                 | 300                    |  |
| DE107 | 150                 | 400                    |  |
| DE108 | 208                 | 550                    |  |
| DE109 | 227                 | 600                    |  |
| DE110 | 300                 | 800                    |  |

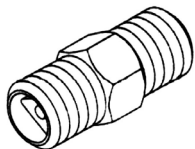
## JACO Style Check Valve



- Jaco style elbow 1/8" x 1/4" tube complete with AISI check-valve.

| REF.  |  |
|-------|--|
| DE079 |  |

## S.S. Check Valve



- Stainless steel check valve 1/8" x 1/8".

| REF.  |  |
|-------|--|
| DE048 |  |



## PP Storage Tanks

- pressurized storage tank for treated water;
- white colour;
- connection 1/4" NPT;
- min. operating pressure 1 bar.



| REF.  | CAPACITY (liters) | MATERIAL     | DIAMETER (mm) | HEIGHT (mm) | MAX PRESSURE (bar) |  |
|-------|-------------------|--------------|---------------|-------------|--------------------|--|
| DE032 | 12                | PP / acciaio | 240           | 370         | 7,0                |  |
| DE051 | 15                | PP           | 260           | 400         | 3,5                |  |

## Steel Storage Tanks

- pressurized storage tank for R.O water;
- material painted steel, white colour;
- connection 1" BSPP female;
- with threaded extension M 1" x 1/4", with elbowed ball valve with connection 3/8" tubing;
- min. operating pressure 1 bar;
- max operating pressure 7 bar.



| REF.  | CAPACITY (liters) | DIAMETER (mm) | HEIGHT (mm) |  |
|-------|-------------------|---------------|-------------|--|
| DE096 | 41                | 390           | 575         |  |
| DE097 | 75                | 390           | 770         |  |



## Elbowed Ball Valve

- material white plastic;
- connections 1/4" F NPT x 1/4" tubing.

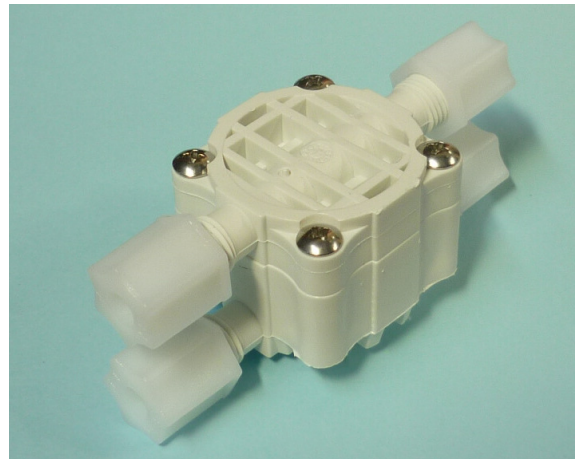
| REF.  |  |
|-------|--|
| DE052 |  |



## Automatic Shut-Off Valve

- material white ABS;
- connections 1/4" tubing;
- max pressure 125 psi (8,5 bar).

| REF.  |  |
|-------|--|
| DE038 |  |



## Mechanical Flow Meter

- adjustable setting;
- automatic shut-off based on volume;
- capacity 7000 litres;
- connections 1/4" NPT;
- operating pressure 1 ÷ 8,5 bar;
- material ABS, black colour.

| REF.  |  |
|-------|--|
| DE080 |  |





## Single Mounting Clips

- PP material;
- white colour.

| REF.  | DIAMETER (inch) | DIAMETER (mm) |  |
|-------|-----------------|---------------|--|
| DE033 | 2"              | 50            |  |
| DE034 | 2 1/2"          | 60            |  |
| DE006 | 3"              | 90            |  |



## Double Mounting Clips

- PP material;
- white colour.

| REF.  | DIAMETER (inch) | DIAMETER (mm) |  |
|-------|-----------------|---------------|--|
| DE035 | 2" x 2 1/2"     | 50 x 60       |  |
| DE036 | 2 1/2" x 2 1/2" | 60 x 60       |  |



## Flexible 1/4" Tubing

- hanks of 50 m (100 m only for DE081).

| REF.  | DIAMETER (inch) | DIAMETER (mm) |  |
|-------|-----------------|---------------|--|
| DE082 | PVC             | White         |  |
| DE083 | PE              | Blue          |  |
| DE084 | PE              | Black         |  |
| DE086 | PE              | Red           |  |
| DE081 | PE              | Clear         |  |



## Needle Valve In-Line Style

- brass material.

(\*) available till it will be out-of-stock.

| REF.       | TUBE CONNECTIONS |  |
|------------|------------------|--|
| DE098 (*)  | 1/4"             |  |
| DE098A (*) | 3/8"             |  |



## Insert for Flexible 1/4" Tubing

- CELCON material.

| REF.  |  |
|-------|--|
| DE059 |  |

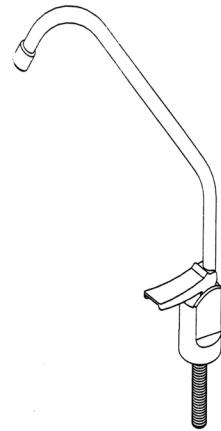




## Long Reach Faucet

- material chrome plated;
- connection for ¼" tubing;
- complete with installation kit;
- threaded tube length 50 mm.

| REF.  |  |
|-------|--|
| DE037 |  |



## Quarter-Turn faucet

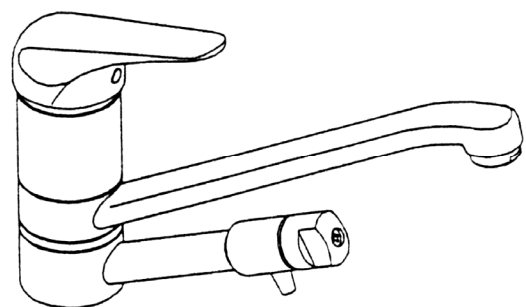
- metal and plastic chrome material;
- connection for ¼" tubing;
- complete with installation kit;
- threaded tube length 71 mm;
- wetted materials suitable for drinking water use;
- conform to the requirements of NSF/ANSI 61.

| REF.  |  |
|-------|--|
| DE116 |  |



## Single Handle Faucet with Drinking Nozzle

- monobloc, material chrome plated;
- adjustable necks;
- hot and cold water connections ½" with needle valves;
- treated water connection ¼" tube;
- complete with installation kit.



| REF.  |  |
|-------|--|
| DE087 |  |



## Pressure Gauge

- pressure set 0 ÷ 10 bar;
- connection 1/8" M;
- diameter 25 mm.

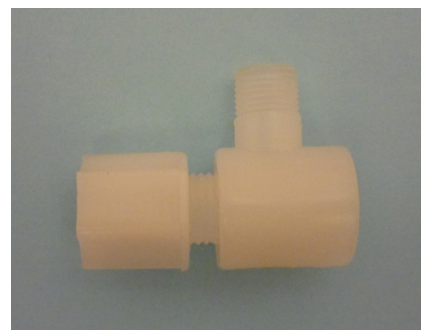
| REF.  |  |
|-------|--|
| DE077 |  |



## 3 Ways Adapter for Pressure Gauge

- plastic material;
- connections 1/8" F x 1/8" M x 1/4" tube.

| REF.  |  |
|-------|--|
| DE078 |  |



## Check Valve in Line

- plastic material;
- 1/4" tube quick connections.

| REF.  |  |
|-------|--|
| DE089 |  |



# MD, DD and TD two Pieces Filter Housings IN/OUT connections 1/4" for R.O. Systems



|           |
|-----------|
| REF.      |
| FBMD1002T |



|           |
|-----------|
| REF.      |
| FBMD1002W |



|           |
|-----------|
| REF.      |
| FBDD1002W |



|           |
|-----------|
| REF.      |
| FBTD1002W |

- Made in European Union (Italy);
- Suitable for residential R.O. and filtration systems;
- Two pieces filter housings for standard filtering cartridges length 10"
- Total height 325 mm;
- Fixable head (single, double or triplex) in material PP reinforced white colour;
- Sump in PET clear or white, O-ring in EPDM;
- IN/OUT connections 1/4" BSPP F;
- With air valve;
- Max operating pressure 8 bar, temperature 4 ÷ 45°C;
- D.M. n.174/2004 compliant about materials suitable for contact with water for human consumption;
- D.M. n.25/2012 compliant about technical provisions for equipment intended for water treatment for human consumption;
- In compliance with the sanitary certification ACS (France).
- Designed for the following single, double or triple brackets (also ideal for 2 + 1 application), with fixing screws.

| REF.      | MODEL   | CARTRIDGE LENGTH (inch) | SUMP MATERIAL AND COLOUR | HEAD DIMENSION (mm) | TOTAL LENGTH (mm) |
|-----------|---------|-------------------------|--------------------------|---------------------|-------------------|
| FBMD1002T | MD1002T | Single                  | Clear                    | 122                 | 12,35             |
| FBMD1002W | MD1002W | Single                  | White                    | 122                 | 12,35             |
| FBDD1002W | DD1002W | Duplex                  | White                    | 228                 | 26,34             |
| FBTD1002W | TD1002W | Triplex                 | White                    | 336                 | 36,96             |

## Accessories

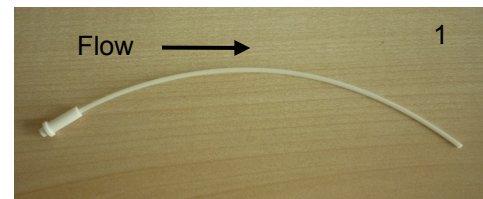
| REF.    | DESCRIPTION   |
|---------|---|
| FBMDR11 | PLASTIC WRENCH FOR MD FILTER HOUSINGS                         |
| FBMDR22 | WHITE BRACKET WITH SCREWS FOR MD AND MT FILTER HOUSINGS       |
| FBMDR24 | WHITE BRACKET WITH SCREWS FOR DD AND DT TWO FILTER HOUSINGS   |
| FBMDR26 | WHITE BRACKET WITH SCREWS FOR TD AND TT THREE FILTER HOUSINGS |



# Flow Restrictor Linear Type



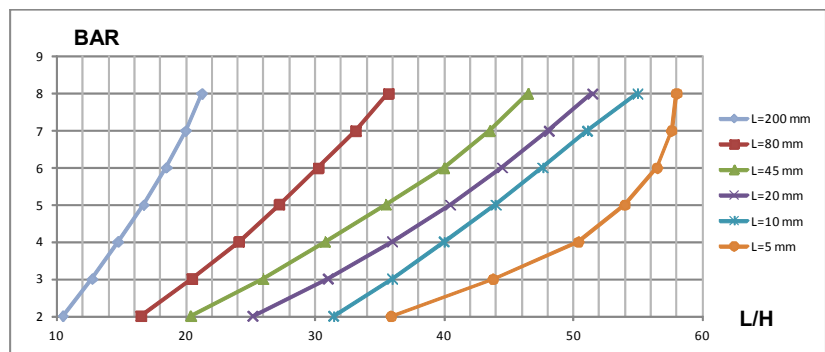
- capillary adjusting flow system with insertion in tube 1/4" diameter ( $\varnothing e=6,35$  mm);
- 200 mm standard length; you can change the length as required (please see the diagram below);
- PP material insert: PE material capillary tube;
- range of operating pressure 2 ÷ 8 bar.



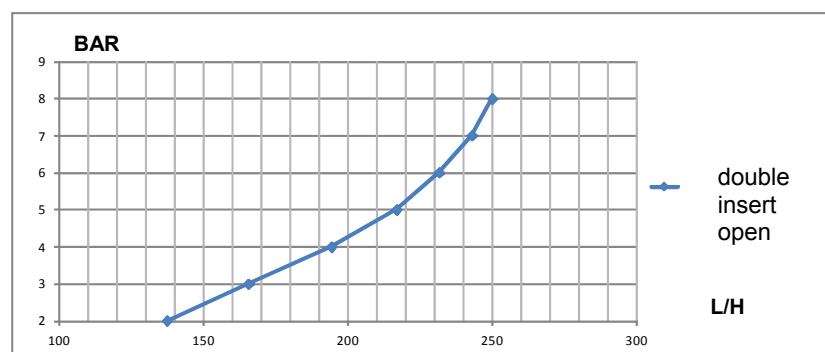
| ITEM | DESCRIPTION                             | REF.  |
|------|---|-------|
| 1    | FLOW RESTRICTOR LINEAR TYPE; L = 200 MM | DE122 |
| 2    | FLOW RESTRICTOR FRT-14P INSERT          | DE124 |
| 3    | CAPILLARY TUBE (25 M ROLL)              | DE125 |
| 4    | FLOW RESTRICTOR JACO DOUBLE INSERT OPEN | DE123 |

**WARNING:** it is essential that the cutting of the capillary be net and tube perfectly circular (you can use an awl in order to restore the circular form), otherwise the flow rate value can be greatly altered. Observe the flow direction as shown in Picture n.1.

Flow restrictor linear type



Flow restrictor Jaco 1/4" double insert open

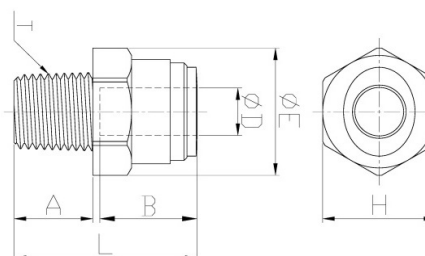




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

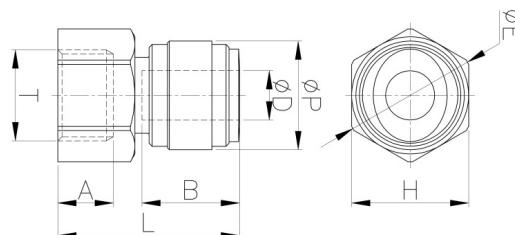
## MALE CONNECTOR NPTF

| REF.  | T NPT THREADED CONNECTION (inch) | Ø D CONNECTION (inch) | A (mm) | B (mm) | Ø E (mm) | H (mm) | L (mm) |
|-------|----------------------------------|-----------------------|--------|--------|----------|--------|--------|
| DH005 | 1/8"                             | 1/4"                  | 9,1    | 16,9   | 17,8     | 15,8   | 27,0   |
| DH006 | 1/4"                             | 1/4"                  | 13,2   | 16,9   | 17,8     | 15,8   | 27,0   |
| DH007 | 3/8"                             | 1/4"                  | 13,8   | 16,9   | 21,4     | 19,0   | 26,1   |
| DH012 | 1/8"                             | 3/8"                  | 9,1    | 20,2   | 23,0     | 20,6   | 30,4   |
| DH013 | 1/4"                             | 3/8"                  | 13,2   | 20,2   | 23,0     | 20,6   | 34,3   |
| DH014 | 3/8"                             | 3/8"                  | 13,8   | 20,2   | 23,0     | 20,6   | 29,9   |



## FEMALE ADAPTER NPTF

| REF.  | T NPT THREADED CONNECTION (inch) | Ø D CONNECTION (inch) | Ø P (mm) | A (mm) | B (mm) | Ø E (mm) | H (mm) | L (mm) |
|-------|----------------------------------|-----------------------|----------|--------|--------|----------|--------|--------|
| DH021 | 1/8"                             | 1/4"                  | 15,5     | 11,5   | 16,9   | 19,0     | 17     | 30,9   |
| DH022 | 1/4"                             | 1/4"                  | 15,5     | 11,5   | 16,9   | 21,5     | 19     | 30,9   |
| DH023 | 1/4"                             | 3/8"                  | 20,0     | 11,5   | 20,2   | 21,5     | 19     | 34,2   |

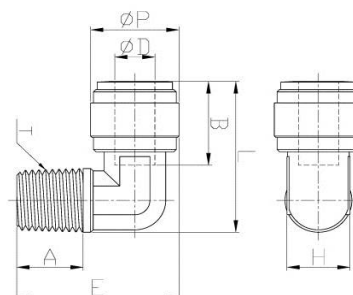




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

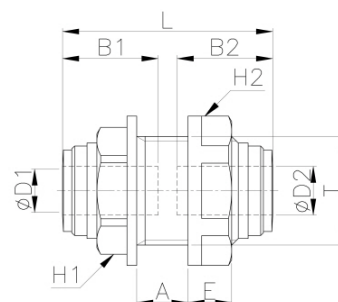
## MALE ELBOW NPT

| REF.  | T NPT<br>THREADED<br>CONNECTION<br>(inch) | Ø D<br>CONNECTION<br>(inch) | Ø P<br>(mm) | A<br>(mm) | B<br>(mm) | E<br>(mm) | H<br>(mm) | L<br>(mm) |
|-------|---|-----------------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| DH033 | 1/8"                                      | 1/4"                        | 15,5        | 9,1       | 16,9      | 26,4      | 11,0      | 25,6      |
| DH034 | 1/4"                                      | 1/4"                        | 15,5        | 13,2      | 16,9      | 31,9      | 11,0      | 27,0      |
| DH035 | 3/8"                                      | 1/4"                        | 15,5        | 13,8      | 16,9      | 32,7      | 11,0      | 28,9      |
| DH038 | 1/4"                                      | 3/8"                        | 20,0        | 13,2      | 20,2      | 35,2      | 14,3      | 31,8      |
| DH039 | 3/8"                                      | 3/8"                        | 20,0        | 13,8      | 20,2      | 35,8      | 14,3      | 33,9      |



## BULKHEAD CONNECTOR

| REF.  | T   | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | H <sub>1</sub><br>(fixed) | H <sub>2</sub><br>(mm) | L<br>(mm) |
|-------|-----|--|--|------------------------|------------------------|---------------------------|------------------------|-----------|
| DH052 | M17 | 1/4"                                     | 1/4"                                     | 16,9                   | 16,9                   | 19                        | 21                     | 35,7      |
| DH054 | M24 | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 24                        | 25,5                   | 42,4      |

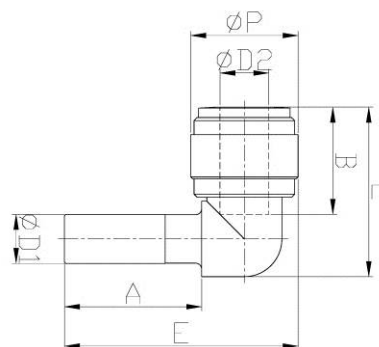




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

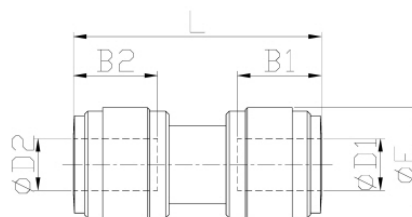
## UNION ELBOW TUBE WITH STEM

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | Ø P<br>(mm) | A<br>(mm) | B<br>(mm) | E<br>(mm) | L<br>(mm) |
|-------|--|--|-------------|-----------|-----------|-----------|-----------|
| DH063 | 1/4"                                     | 1/4"                                     | 15,5        | 21,0      | 16,9      | 34,8      | 25,1      |
| DH065 | 3/8"                                     | 3/8"                                     | 20,0        | 24,8      | 20,2      | 43,2      | 31,4      |
| DH067 | 3/8"                                     | 1/4"                                     | 17,6        | 22,5      | 17,5      | 38,3      | 27,7      |



## UNION CONNECTOR

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | Ø E<br>(mm) | L<br>(mm) |
|-------|--|--|------------------------|------------------------|-------------|-----------|
| DH073 | 1/4"                                     | 1/4"                                     | 16,9                   | 16,9                   | 15,5        | 36,2      |
| DH075 | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 20,0        | 42,9      |
| DH079 | 3/8"                                     | 1/4"                                     | 20,2                   | 16,9                   | 20,0        | 42,1      |

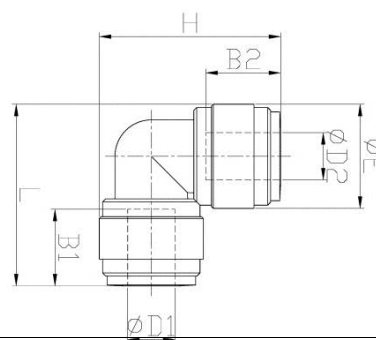




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

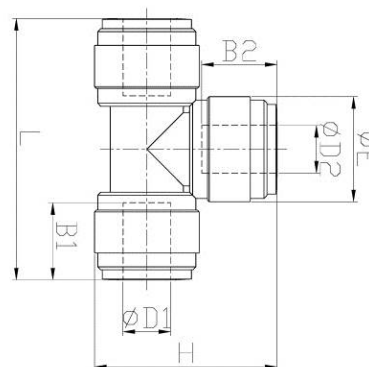
## UNION ELBOW

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | Ø E <sub>1</sub><br>(mm) | Ø E <sub>2</sub><br>(mm) | L<br>(mm) | H<br>(mm) |  |
|-------|--|--|------------------------|------------------------|--------------------------|--------------------------|-----------|-----------|--|
| DH083 | 1/4"                                     | 1/4"                                     | 16,9                   | 16,9                   | 15,5                     | 15,5                     | 28,8      | 28,8      |  |
| DH085 | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 20,0                     | 20,0                     | 35,9      | 35,9      |  |



## UNION T

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | Ø D <sub>3</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | B <sub>3</sub><br>(mm) | Ø E<br>(mm) | L<br>(mm) | H<br>(mm) |  |
|-------|--|--|--|------------------------|------------------------|------------------------|-------------|-----------|-----------|--|
| DH093 | 1/4"                                     | 1/4"                                     | 1/4"                                     | 16,9                   | 16,9                   | 16,9                   | 15,5        | 42,0      | 28,8      |  |
| DH095 | 3/8"                                     | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 20,2                   | 20,0        | 51,8      | 35,9      |  |

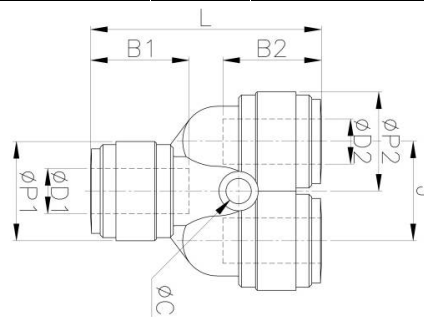




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

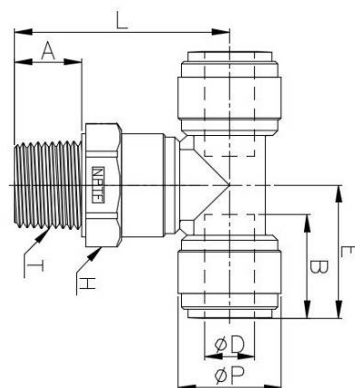
## TWO WAY DIVIDER

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | Ø P <sub>1</sub><br>(mm) | Ø P <sub>2</sub><br>(mm) | L<br>(mm) | J<br>(mm) | C<br>(mm) |
|-------|--|--|------------------------|------------------------|--------------------------|--------------------------|-----------|-----------|-----------|
| DH103 | 1/4"                                     | 1/4"                                     | 16,9                   | 16,9                   | 15,5                     | 15,5                     | 38,8      | 15,5      | 3,3       |
| DH105 | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 20,0                     | 20,0                     | 46,4      | 20,0      | 4,5       |



## MALE SWIVEL TEE NPTF

| REF.  | T NPT<br>THREADED<br>CONNECTION<br>(inch) | Ø D<br>CONNECTION<br>(inch) | Ø P<br>(mm) | A<br>(mm) | B<br>(mm) | E<br>(mm) | H<br>(mm) | L<br>(mm) |
|-------|---|-----------------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| DH112 | 1/4"                                      | 1/4"                        | 15,5        | 13,2      | 16,9      | 21,0      | 17,46     | 36,9      |
| DH114 | 3/8"                                      | 3/8"                        | 20,0        | 13,0      | 20,2      | 25,9      | 21,4      | 41,8      |

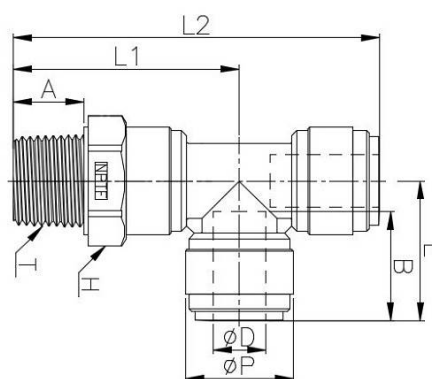




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

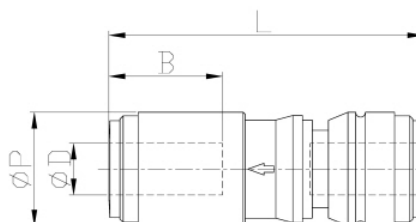
## MALE SWIVEL RUN TEE NPTF

| REF.  | T NPT THREADED CONNECTION (inch) | Ø D CONNECTION (inch) | Ø P (mm) | A (mm) | B (mm) | E (mm) | H (mm) | L <sub>1</sub> (mm) | L <sub>2</sub> (mm) |
|-------|----------------------------------|-----------------------|----------|--------|--------|--------|--------|---------------------|---------------------|
| DH122 | 1/4"                             | 1/4"                  | 15,5     | 13,2   | 16,9   | 21,0   | 17,46  | 36,9                | 57,9                |
| DH124 | 3/8"                             | 3/8"                  | 20,0     | 13,0   | 20,2   | 25,9   | 21,4   | 41,8                | 67,7                |



## CHECK VALVES

| REF.  | Ø D CONNECTION (inch) | Ø P (mm) | B (mm) | L (mm) |
|-------|-----------------------|----------|--------|--------|
| DH131 | 1/4"                  | 15,5     | 16,1   | 45,5   |
| DH133 | 3/8"                  | 20,0     | 19,5   | 57,8   |

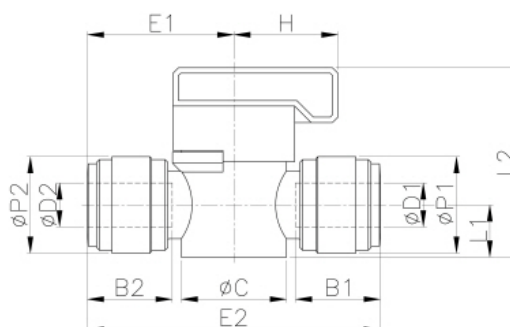




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

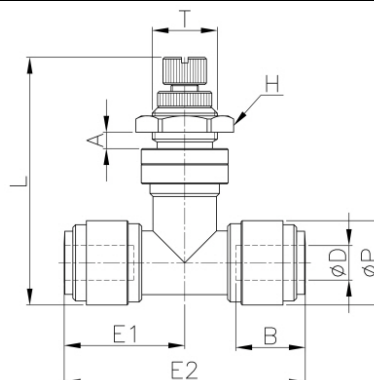
## 2 WAYS HAND VALVES

| REF.  | Ø D <sub>1</sub><br>CONNECTION<br>(inch) | Ø D <sub>2</sub><br>CONNECTION<br>(inch) | B <sub>1</sub><br>(mm) | B <sub>2</sub><br>(mm) | Ø P <sub>1</sub><br>(mm) | Ø P <sub>2</sub><br>(mm) | L <sub>1</sub><br>(mm) | L <sub>2</sub><br>(mm) | E<br>(mm) | Ø C<br>(mm) |
|-------|--|--|------------------------|------------------------|--------------------------|--------------------------|------------------------|------------------------|-----------|-------------|
| DH141 | 1/4"                                     | 1/4"                                     | 16,1                   | 16,1                   | 15,5                     | 15,5                     | 9,5                    | 34,5                   | 51,7      | 19,2        |
| DH143 | 3/8"                                     | 3/8"                                     | 20,2                   | 20,2                   | 20,0                     | 20,0                     | 12,5                   | 42,3                   | 63,2      | 24,2        |



## BULKHEAD FLOW REGULATORS

| REF.  | Ø D<br>CONNECTION<br>(inch) | T   | Ø P<br>(mm) | A<br>(mm) | B<br>(mm) | E <sub>1</sub><br>(mm) | E <sub>2</sub><br>(mm) | H<br>(mm) | L min<br>(mm) | L max<br>(mm) |
|-------|-----------------------------|-----|-------------|-----------|-----------|------------------------|------------------------|-----------|---------------|---------------|
| DH157 | 1/4"                        | M12 | 15,5        | 5,0       | 16,9      | 22,2                   | 44,4                   | 16        | 45,5          | 50,4          |
| DH158 | 3/8"                        | M15 | 20,0        | 6,0       | 19,8      | 26,1                   | 52,1                   | 19        | 52,7          | 58,4          |



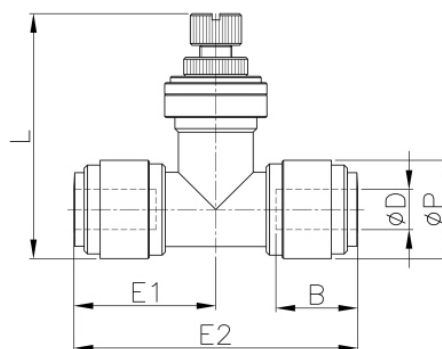




- Suitable for residential R.O. and filtration systems;
- Designed for water, food and air contact but can be used with selected gases, vacuum & other liquids;
- DM 174 (Italy) dated 06/04/2004 compliant about materials suitable for contact with water for human consumption;
- In compliance with the sanitary certification ACS (France);
- In acetal resin grey color, non-toxic and NSF approved material;
- Pressure max 16 bar @ 25°C.

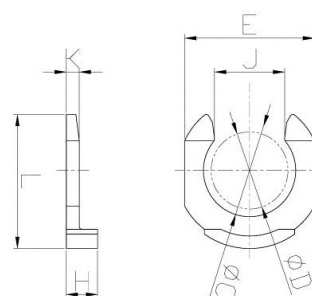
## FLOW REGULATORS

| REF.  | Ø D CONNECTION (inch) | Ø P (mm) | B (mm) | L min (mm) | L max (mm) | E 1 (mm) | E 2 (mm) |
|-------|-----------------------|----------|--------|------------|------------|----------|----------|
| DH167 | 1/4"                  | 15,5     | 16,9   | 45,5       | 42,7       | 22,2     | 44,4     |
| DH168 | 3/8"                  | 20,0     | 19,8   | 57,8       | 49,7       | 26,1     | 52,1     |



## LOCKING CLIPS

| REF.  | Ø D CONNECTION (inch) | Ø C (mm) | E (mm) | L (mm) | H (mm) | J (mm) | K (mm) |
|-------|-----------------------|----------|--------|--------|--------|--------|--------|
| DH193 | 06 - 1/4"             | 8,0      | 11,6   | 11,6   | 3,1    | 6,4    | 1,3    |
| DH195 | 10 - 3/8"             | 11,8     | 16,0   | 16,4   | 3,4    | 9,2    | 1,4    |



# PRF-RO Reverse Osmosis System



- Suitable for residential and commercial application use;
- Compact and reliable system that better suits the flow requirements of small and mid-sized businesses;
- No storage tank needed;
- Works with Line Pressure;
- No Pump or Electricity;
- Very easy installation with quick connections;
- Virtually Maintenance Free (change cartridges fast and easy);
- Consisting of Nr.1 Carbon Pre-Filter, Nr.2 R.O. Membrane Elements and Nr.1 Carbon Post-Filter.



| OPERATING CONDITIONS   | MINIMUM          | MAXIMUM          |
|------------------------|------------------|------------------|
| Inlet Pressure         | 2,8 bar (40 psi) | 5,5 bar (80 psi) |
| Inlet Temperature (°C) | 4                | 38               |
| Inlet TDS (mg/l)       | 50               | 2.000            |
| Inlet Hardness (°F)    | 0                | 20               |
| Inlet Chlorine (mg/l)  | 0                | 1,0              |
| Inlet Iron (mg/l)      | 0                | 0,1              |
| Inlet Manganese (mg/l) | 0                | 0,05             |

Salt Rejection: Minimum 90%, Medium 93%.

| TUBING/FITTING DIMENSIONS                         |                                |
|---|--------------------------------|
| Inlet Tubing (natural tubing)                     | 1/2"                           |
| Concentrate Tubing (black tubing)                 | 3/8"                           |
| Permeate Tubing (blue tubing)                     | 3/8"                           |
| Drain Tubing (red tubing) for airgap installation | 1/2"                           |
| Drain connection                                  | 3/8" or 1/2"                   |
| Carbon Post-Filter                                | 3/8" quick disconnect fittings |

Filter/Membrane Performance Specifications:

| Filter Type        | Length (mm) | Diameter (mm) | Flow Rate (lpm) | Flow Rate (gpm) | Average Life (months)  |
|--------------------|-------------|---------------|-----------------|-----------------|------------------------|
| Carbon Pre-Filter  | 432         | 74            | 14,20           | 3,75            | 6 ( or 19.000 liters ) |
| RO Element         | 476         | 80            | (*) 0,95        | (*) 0,25        | 24 ÷ 48                |
| Carbon Post-Filter | 254         | 51            | 2,80            | 0,75            | 6 ( or 19.000 liters ) |

(\*) @ 3,44 bar T=25°C 750 mg/l NaCl 25% recovery 1 ppm Chlorine inlet

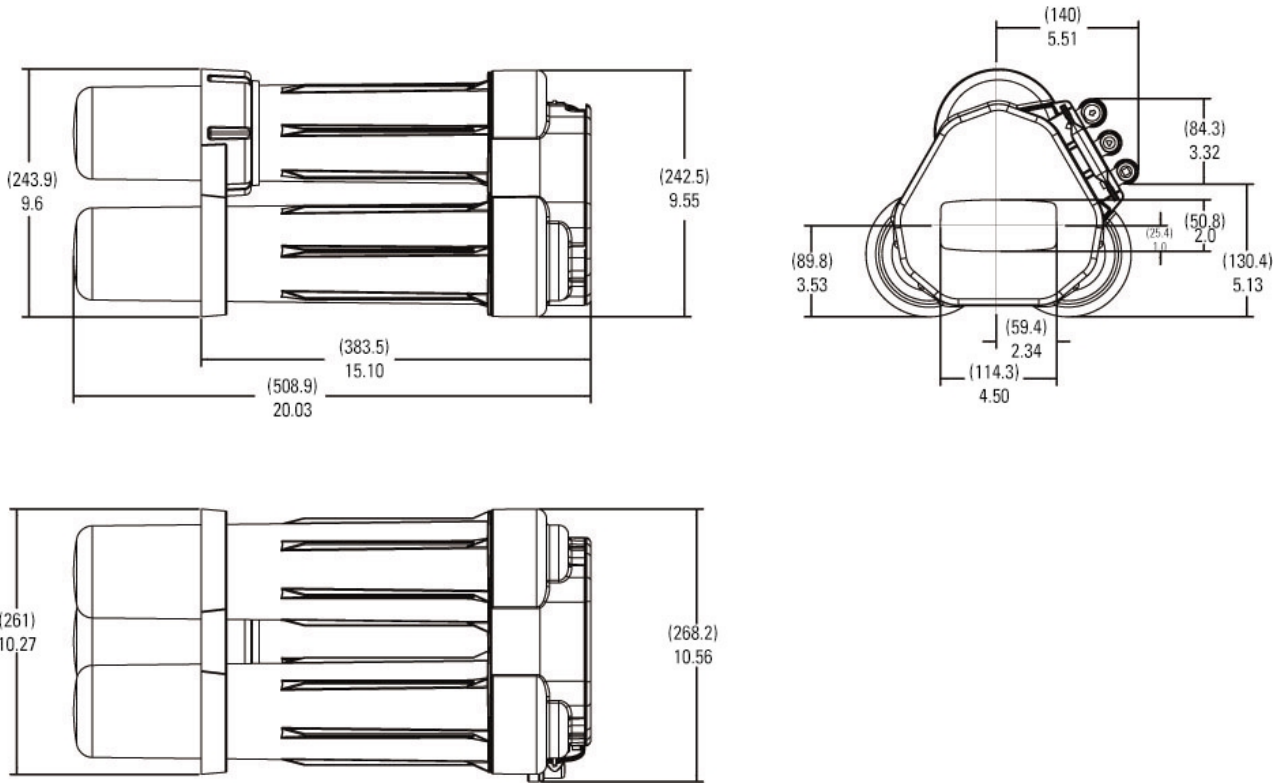
| Ref.      | P. N.   | Description                           |  |
|-----------|---------|---------------------------------------|--|
| DE904     | 4000462 | Kit R.O. PRF-RO System with faucet    |  |
| DE906 (*) | 4000575 | Kit R.O. PRF-RO System without faucet |  |

(\*) available till it will be out-of-stock.

# PRF-RO Reverse Osmosis System

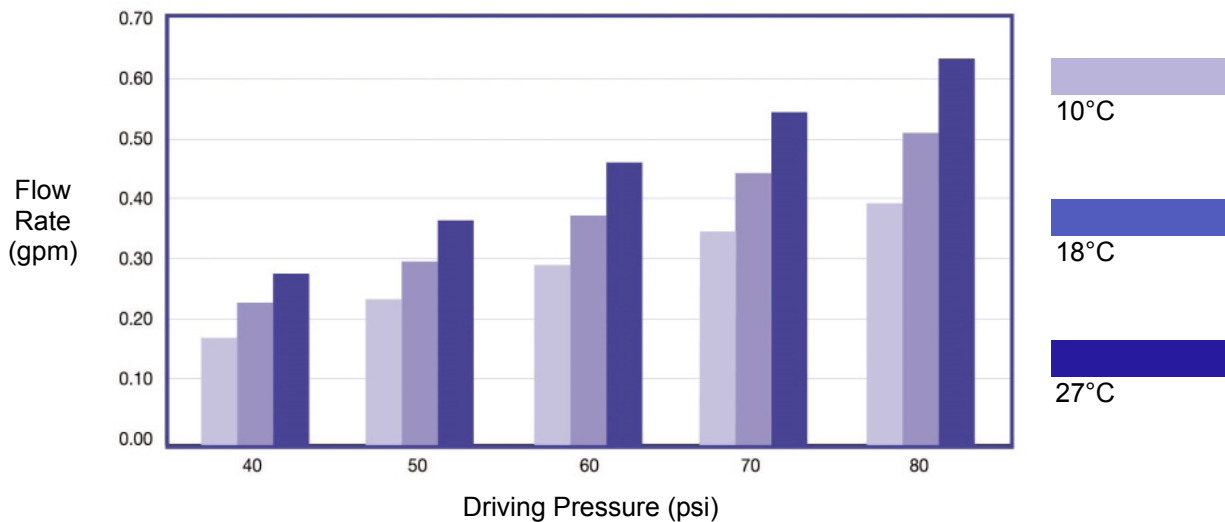


Outline Dimensions in Inches (mm):



## Performance – Flow Rate Characteristics (\*)

Based on 750 ppm TDS Inlet Water



## Flow Adjustment Based on TDS

(\*) Estimated flow based on internal test data. Actual performance may vary.

# PRF-RO Reverse Osmosis System



Spare parts of PRF-RO Reverse Osmosis System:

| Ref.      | P. N.     | Description                          |  |
|-----------|-----------|--------------------------------------|--|
| DE920     | 4000569   | PRF-RO Membrane                      |  |
| DE923     | 3038333   | Carbon pre-filter                    |  |
| DE924     | 1266690   | Sediment pre-filter 10 micron        |  |
| DE926     | 255526-09 | Carbon post-filter                   |  |
| DE930     | 1239705   | Sump                                 |  |
| DE932     | 1240326   | Sump o-ring                          |  |
| DE935     | 4000445   | PRF-RO complete manifold             |  |
| DE937     | 3038021   | PRF-RO Support Leg                   |  |
| DE938     | 1240564   | Drain boa kit                        |  |
| DE941     | 3038026   | Locking bar disconnect               |  |
| DE942     | 3020487   | Air-gap faucet kit                   |  |
| DE945     | 4000330   | PRF-RO kit connection fittings       |  |
| DE946     | 1255736   | Tubing install kit                   |  |
| DE950 (*) | 1240620   | 3/8" black tubing 152 m              |  |
| DE951 (*) | 1240621   | 3/8" blue tubing 152 m               |  |
| DE952 (*) | 1240622   | 1/2" natural tubing 76 m             |  |
| DE953 (*) | 1240623   | 1/2" red tubing 76 m                 |  |
| DE954     | 1264462   | Fitting elbow concentrate 3/8" black |  |
| DE955     | 12400117  | Fitting elbow feed 1/2" white        |  |
| DE956     | 12400118  | Fitting elbow permeate 3/8" blue     |  |
| DE960     | 3002791   | Tds and temperature meter            |  |
| DE961     | 4000454   | PRF-RO retro fit kit                 |  |

(\*) N.A. = Not Available.