

# X-FLOW X-LINE RACK

## DATASHEET

### X-LINE RACK

#### GENERAL INFORMATION

X-line is a revolutionary pre-engineered ultrafiltration (UF) membrane solution, with a minimized footprint and maximized flow through smart flow optimization. Due to its robust and optimal design the X-line Rack is applicable to a wide range of industrial and municipal challenges. Mode of operation is dead-end with regular hydraulic clean and chemically enhanced backwash. The X-line Rack is developed in conjunction with the Aquaflex module.

#### FEATURES

- The X-line Rack features a number of advantages:
- Highly flexible
  - Highly scalable
  - Integrated headers for rapid assembly on site
  - Pre-engineered, plug and play
  - Optimized flow ratio due to OptiFlow Caps
  - Optimized footprint
  - Low cost

#### OPERATING SPECIFICATIONS

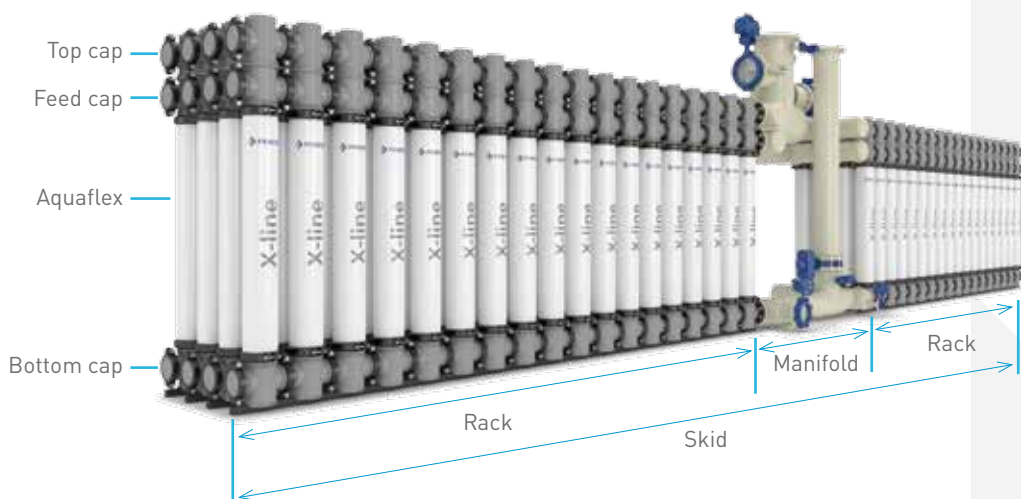
- Maximum static pressure of 5 Bar(g)
- Maximum dynamic operating pressure of 3 Bar(g)
- Headloss, across UF during rack filtration 0.1 – 1.0 Bar
- Headloss, across UF rack during backwash 0.7 – 2.5 Bar
- 0-40 °C (non-freezing)

#### NOMENCLATURE

A rack consists of multiple modules linked together with caps. Racks are connected to a manifold either single sided or two-sided. The total assembly is a skid. Multiple skids are combined into a plant.

X-line – 2 x 4 x 18 - C / N (one skid is shown in the picture)

- Option Frame (F = yes/N = No)
- Option Couplings (C = yes/N = No)
- No. of modules in a row
- No. of rows on a rack
- No. of Racks on a manifold



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### CERTIFICATIONS

- USA: ANSI/NSF, Standard 61
- UK: DWI Regulation 31
- France: ACS
- Germany: KTW and DVGW
- The Netherlands: KIWA-ATA

### COUPLINGS

Required couplings are DN200 and DN150, where the Pentair standard DN200 has a width of 350 mm. Please note that by using different couplings the width and/or bolt diameter may vary, therefore the supplied anchor may not fit.

### FRAME

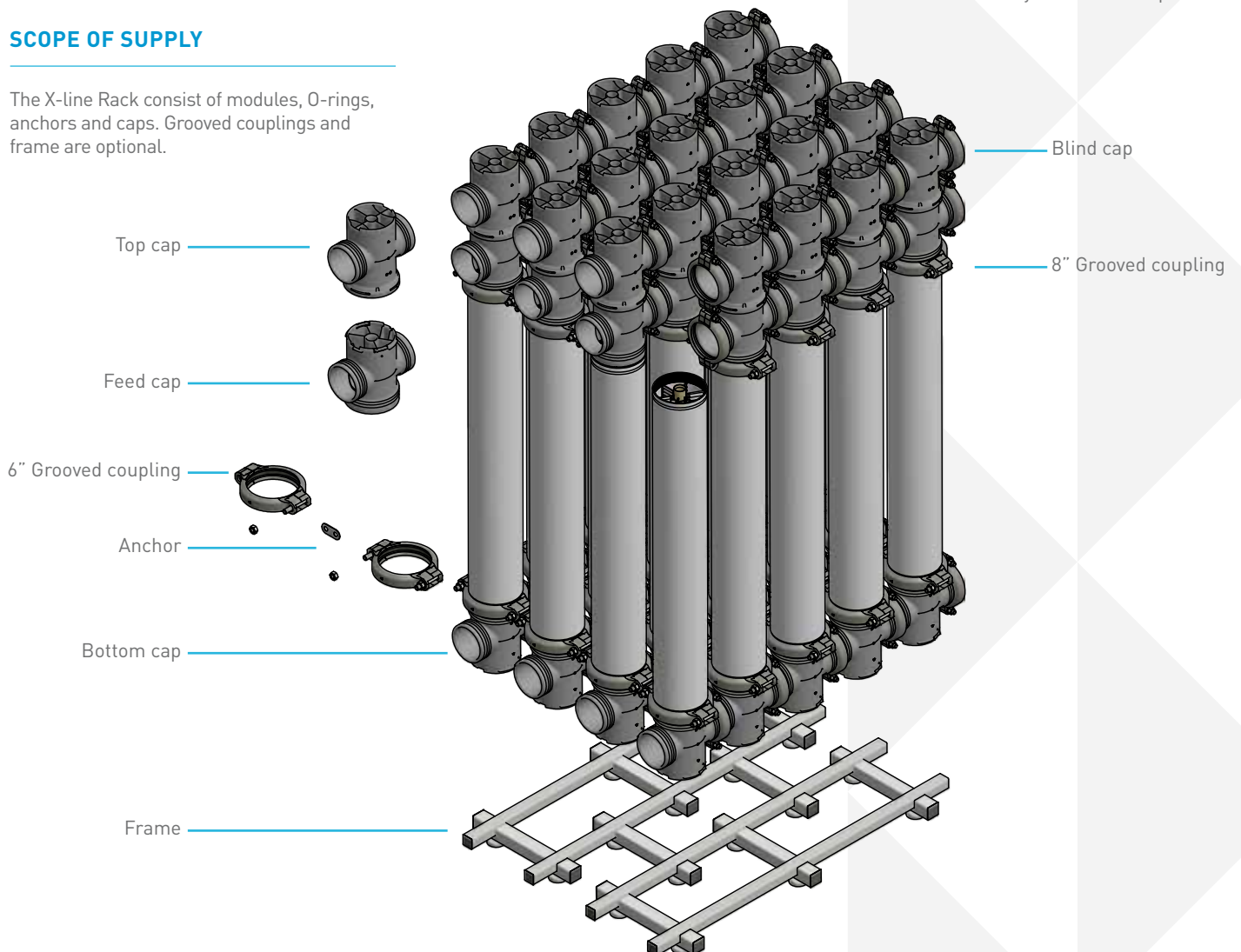
Pentair offers a height adjustable frame to be set on a flat smooth surface:

- Adjustable frame height 115-140 mm
- Pentair standard couplings (or equal) are mandatory

Typical specifications can be provided for construction a frame by customer if required.

### SCOPE OF SUPPLY

The X-line Rack consist of modules, O-rings, anchors and caps. Grooved couplings and frame are optional.

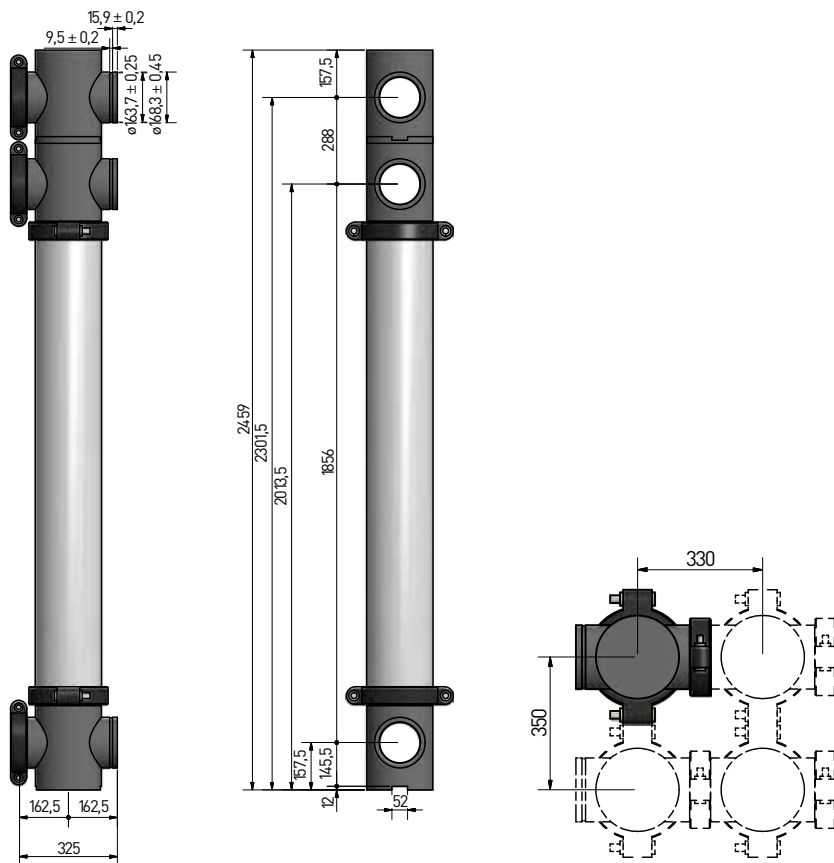


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### GENERAL DIMENSIONS AND WEIGHT

General dimensions and weights are given in this document. If more dimensions are needed please contact PENTAIR SALES.



### MANIFOLD

Due to the flexible design a manifold is not supplied as a standard product, nevertheless Pentair is able to provide an engineered solution.

### RACK CONFIGURATION

The X-line Rack can be tailored to the requirements of the customer. In order to configure a X-line Rack the following rules need to be considered:

- Maximum number of modules in line is 18 per rack
- Minimum number of modules in width is 2 per rack, with no maximum\*
- All module lines of the rack must have the same length
- All racks must be symmetrical

\* Limiting width to 4 modules, will provide a high degree of accessibility while optimizing the footprint.

### SHIPPING, HANDLING AND STORAGE

All components should be handled with care, by the certified personnel. During assembly personnel must work according to the assembly instructions as provided by Pentair. The X-line Rack should be stored in a dry, wind shielded place and away from direct sunlight. Reference is made to the membrane elements in the X-line Rack datasheet and storage guidelines for the membrane modules.

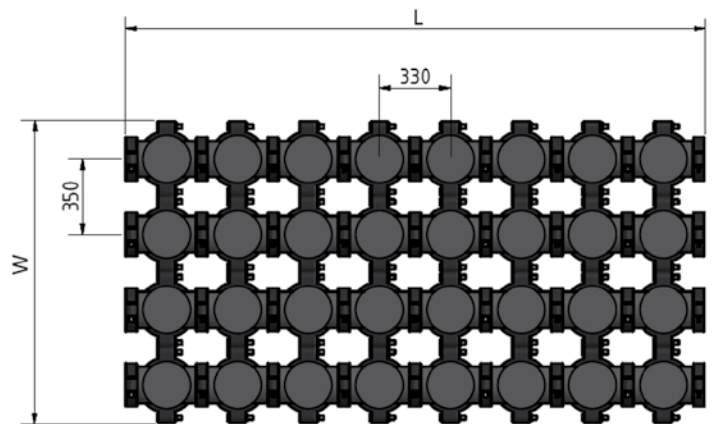
| WEIGHT PER MODULE                         | KG  | [LBS] |
|---|-----|-------|
| Dry weight including grooved couplings    | 75  | [165] |
| Filled weight including grooved couplings | 135 | [297] |
| SS Frame per module                       | 2   | [4.4] |

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| NUMBER OF MODULES<br>LENGTH X WIDTH<br>MM [INCH] | DIMENSIONS OF A X-LINE RACK** |            |             |            |             |            |
|--|-------------------------------|------------|-------------|------------|-------------|------------|
|  | 2                             |            | 3           |            | 4           |            |
| 1  | 330 x 700                     | [13 x 28]  | 330 x 1050  | [13 x 41]  | 330 x 1400  | [13 x 55]  |
| 2  | 660 x 700                     | [26 x 28]  | 660 x 1050  | [26 x 41]  | 660 x 1400  | [26 x 55]  |
| 3  | 990 x 700                     | [39 x 28]  | 990 x 1050  | [39 x 41]  | 990 x 1400  | [39 x 55]  |
| 4  | 1320 x 700                    | [52 x 28]  | 1320 x 1050 | [52 x 41]  | 1320 x 1400 | [52 x 55]  |
| 5  | 1650 x 700                    | [65 x 28]  | 1650 x 1050 | [65 x 41]  | 1650 x 1400 | [65 x 55]  |
| 6  | 1980 x 700                    | [78 x 28]  | 1980 x 1050 | [78 x 41]  | 1980 x 1400 | [78 x 55]  |
| 7  | 2310 x 700                    | [91 x 28]  | 2310 x 1050 | [91 x 41]  | 2310 x 1400 | [91 x 55]  |
| 8  | 2640 x 700                    | [104 x 28] | 2640 x 1050 | [104 x 41] | 2640 x 1400 | [104 x 55] |
| 9  | 2970 x 700                    | [117 x 28] | 2970 x 1050 | [117 x 41] | 2970 x 1400 | [117 x 55] |
| 10   | 3300 x 700                    | [130 x 28] | 3300 x 1050 | [130 x 41] | 3300 x 1400 | [130 x 55] |
| 11   | 3630 x 700                    | [143 x 28] | 3630 x 1050 | [143 x 41] | 3630 x 1400 | [143 x 55] |
| 12   | 3960 x 700                    | [156 x 28] | 3960 x 1050 | [156 x 41] | 3960 x 1400 | [156 x 55] |
| 13   | 4290 x 700                    | [169 x 28] | 4290 x 1050 | [169 x 41] | 4290 x 1400 | [169 x 55] |
| 14   | 4620 x 700                    | [182 x 28] | 4620 x 1050 | [182 x 41] | 4620 x 1400 | [182 x 55] |
| 15   | 4950 x 700                    | [195 x 28] | 4950 x 1050 | [195 x 41] | 4950 x 1400 | [195 x 55] |
| 16   | 5280 x 700                    | [208 x 28] | 5280 x 1050 | [208 x 41] | 5280 x 1400 | [208 x 55] |
| 17   | 5610 x 700                    | [221 x 28] | 5610 x 1050 | [221 x 41] | 5610 x 1400 | [221 x 55] |
| 18   | 5940 x 700                    | [234 x 28] | 5940 x 1050 | [234 x 41] | 5940 x 1400 | [234 x 55] |

\*\* Width may vary, due to the couplings used. Sizes indicated are Pentair standard.



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