



# Floccell XFM 20

## Modular Filtration System

# Specification Document

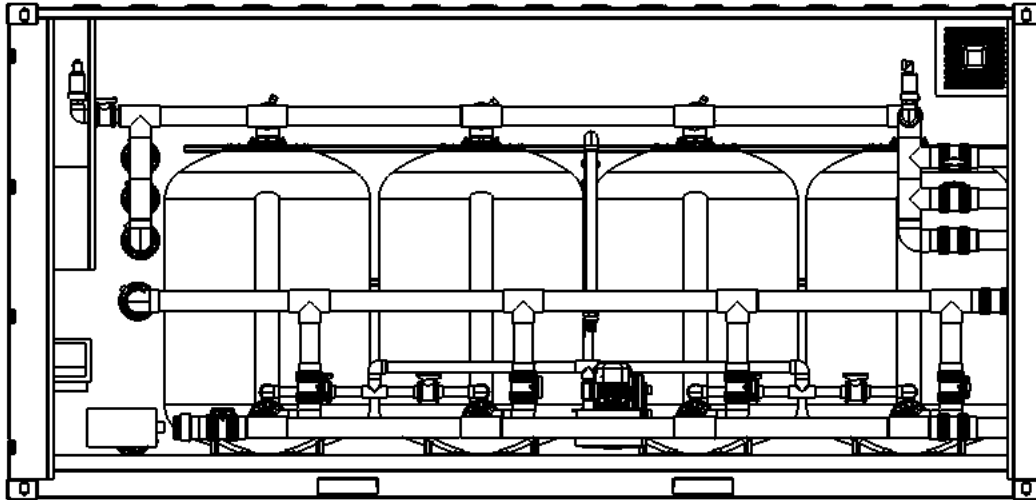
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### VERSION CONTROL

| ISSUE | DETAIL                                          | APPROVED | DATE       |
|-------|-------------------------------------------------|----------|------------|
| 1     | First Release                                   | ZB       | 24-10-2024 |
| 2     | Document title updated and some minor rewording | ZB       | 30-10-2024 |
| 3     | Marketing Department Comments added             | ZB       | 04-11-2024 |

## Floccell XFM 20 Modular Filtration System



*(IMAGE SHOWN WITH SIDE ACCESS DOORS REMOVED FOR CLARITY)*

### 1. General Overview

| Aspect                                   | Description                             |
|------------------------------------------|-----------------------------------------|
| <b>Overall Dimensions</b>                | Length: 20FT, Width: 8FT, Height: 9.6FT |
| <b>Container Type</b>                    | 20FT High Cube, ISO Certified           |
| <b>Maximum Operating Pressure</b>        | 2 bar                                   |
| <b>Flow Rates</b>                        | Feed: 20 L/s, Sludge: 20 L/s            |
| <b>Total Liquid Volume</b>               | 5,000 L                                 |
| <b>Total Filtration Bed Surface Area</b> | 4.35 m <sup>2</sup>                     |
| <b>Weight</b>                            | Dry 5,750kg ≈ Wet 11,700kg ≈            |

## 2. Power Consumption

| Mode of Operation   | Normal Usage (kWh/day) | Winter Usage (kWh/day) |
|---------------------|------------------------|------------------------|
| Feed Pump Operation | 69.7 kWh/day           | 73.7 kWh/day           |
| Gravity Operation   | 17.1 kWh/day           | 21.1 kWh/day           |

## 3. Key Components

| Component          | Specification                                                         | Details                                                                     |
|--------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Filter Housing     | 4x 1200mm diameter                                                    | High-capacity design with minimal hydraulic loss and low cleaning frequency |
| Feed Pump          | 3-phase electric pump, 5.5 kW, operates 24 hours/day (if pumped feed) | High efficiency, operates continuously                                      |
| Gravity Fed Option | No pump required                                                      | Operates without the pump, saving energy                                    |
| Sludge Pump        | 3-phase, 1.5 kW, operates at 20 L/s                                   | Used for sludge removal during backwash                                     |
| Air Blower         | 4.6 kW, 8.6A, delivering air at 190 m <sup>3</sup> /hr                | Ensures effective air sparging for cleaning media                           |
| Ventilation Fan    | Axial fan, IP54 rated, single phase                                   | Provides continuous airflow                                                 |
| Heater             | 0.5 kW Tube Heater, IP66                                              | Provides frost protection and heating                                       |
| Lighting           | Single LED, 240V                                                      | Energy-efficient                                                            |



## 4. Control System

| Component             | Specification       | Details                                                                                                 |
|-----------------------|---------------------|---------------------------------------------------------------------------------------------------------|
| <b>Control Panel</b>  | Centralised control | Manages feed pump, sludge pump, air blower, ventilation, and heating with automatic and manual override |
| <b>Backwash Cycle</b> | Manual              | Requires manual initiation; air sparging for 10 minutes weekly.                                         |

## 5. Connections Sizes

| Connection Type      | Description    |
|----------------------|----------------|
| <b>Inlet</b>         | 4" PN16 flange |
| <b>Outlet</b>        | 4" PN16 flange |
| <b>Air Vent</b>      | 4" PN16 flange |
| <b>Head of Works</b> | 4" PN16 flange |
| <b>Sludge Outlet</b> | 4" PN16 flange |

**Note:** All connections will be supplied with 4" Bauer connection for the customer to connect to.

## 6. General Arrangement Drawing

