



# Ultra-Filtration

## Waste Water Tertiary Treatment

### Serie W

*Reliable solution  
for efficient, low  
space utilization*

- *Compact System*
- *Modular*
- *Ready to Work*
- *Robust System*
- *Easy Maintenance*
- *According to EU Standards*
- *Multifunctional*
- *Inovative Technology*
- *High yield*

**Intelligence in operation, application and operation efficiency.**

As unidades UF-W desenhadas e construídas pela GreatWater, são especialmente concebidas para o tratamento terciário de águas residuais, com vista à sua potencial reutilização.

Utilizam membranas capilares de 0,08 µm, para a remoção em particular dos seguintes elementos da água:

- Turbidez
- Bactérias e Vírus (> 4 Log)
- Sem *backwash*

Os sistemas UF-W, são desenhados e construídos pela GreatWater E&S e permitem dispor:

- ✓ Certificados NSF61
- ✓ Membranas de alta longevidade
- ✓ Operação simples
- ✓ Limpeza simples
- ✓ Alta recuperação
- ✓ Baixo custo de operação
- ✓ Facilidade de instalação
- ✓ Sistema compacto
- ✓ Equipamento auxiliar opcional

Units UF-W are designed and build to meet the requirements of waste water discharge regulations. Main objective of Series UF-W is to recycle water reducing discharge volumes and preserving the environment.

Uniquely designed hollow fiber membranes from 0,08 µm, to remove contaminants from surface and ground Water sources:

- Turbidity
- Bacteria and Vírus (> 4 Log)
- No backwash

The UF-W systems are designed and build by GreatWater E&S, to hollow:

- ✓ NSF61 Certification
- ✓ Long Service Life Hollow Fiber Membranes
- ✓ Operator Friendly Control Interface
- ✓ High Recovery
- ✓ Low Cost of Operation
- ✓ Easily Installed Modular Skids
- ✓ Compact System Footprint
- ✓ Optional Auxiliary Equipment





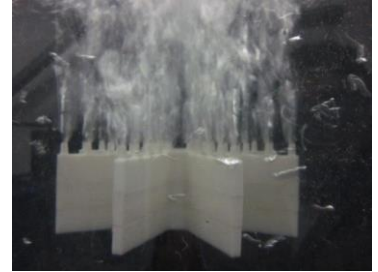
# Ultra-Filtração

## Tratamento Terciário de Águas Residuais

### Serie W

#### HYDRAcap® MAX Operating Parameters

		Operating Range
Filtrate Flux, gfd (l/m <sup>2</sup> /hr)		20 – 65 (34 – 110)
Filtrate Flow, gpm (m <sup>3</sup> /h)	HYDRAcap® MAX 4040	1.4 – 4.4 (0.3 – 1.0)
	HYDRAcap® MAX 40	7.5 – 24.4 (1.7 – 5.5)
	HYDRAcap® MAX 60	11.7 – 37.9 (2.7 – 8.6)
	HYDRAcap® MAX 80	15.7 – 51.0 (3.6 – 11.6)
Air scour flowrate, acfm (m <sup>3</sup> /hr)		7.3 – 9.1 (12.3 – 15.1)
Operating pH		4 – 10
Cleaning pH		1 – 13
Maximum Feed Turbidity, NTU		300*
Maximum Instantaneous Chlorine Tolerance, ppm		5,000
Total Chlorine Tolerance, ppm-hr		>750,000
Maximum Feed Pressure, psig (bar)		73(5)
Transmembrane Pressure (TMP), psig (bar)		1 -30 (0.07 – 2.0)



#### HYDRAcap® MAX Overview

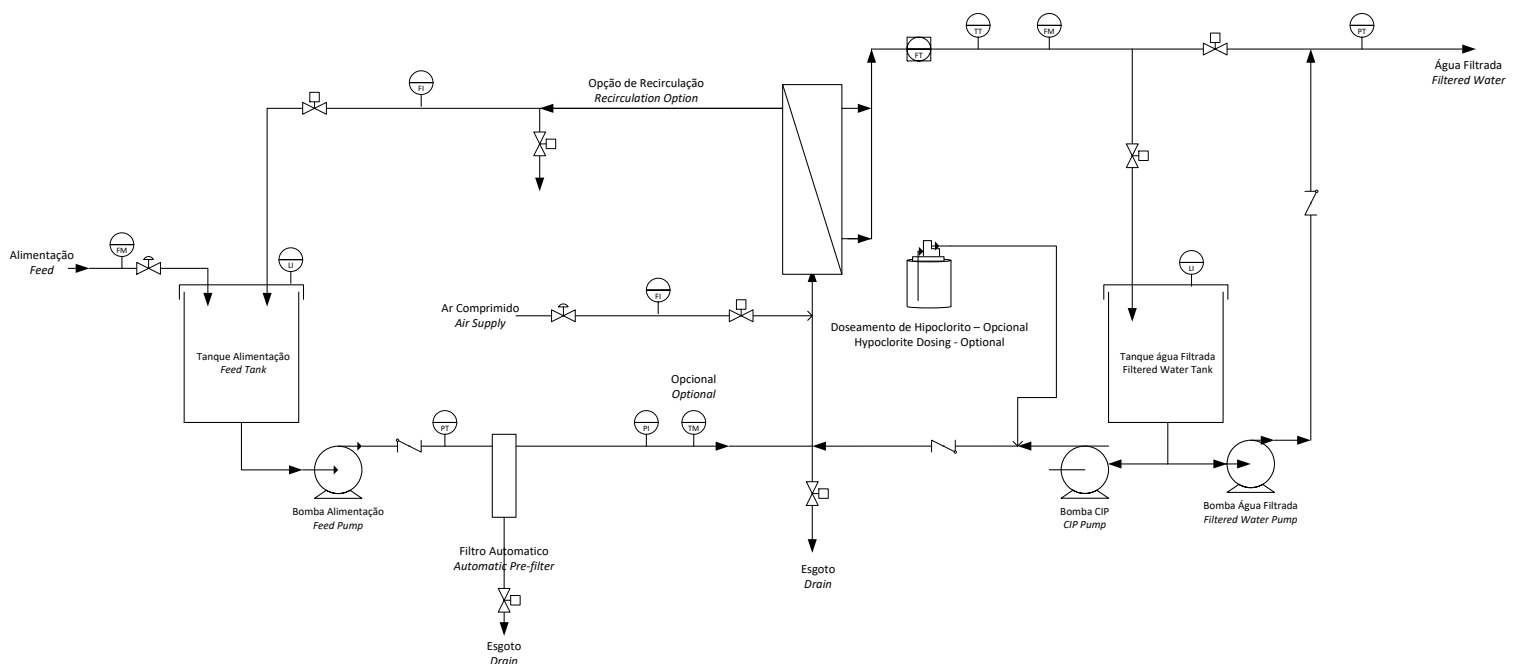
Flow path	Outside to inside
Membrane material	PVDF
Filtration mode	Dead end or cross-flow
Membrane configuration	Hollow fiber
Membrane area*	97 ft <sup>2</sup> (9 m <sup>2</sup> ) / 560 ft <sup>2</sup> (52 m <sup>2</sup> ) / 840 ft <sup>2</sup> (78 m <sup>2</sup> ) / 1130 ft <sup>2</sup> (105 m <sup>2</sup> )
Module Height*	45" / 54" / 72" / 92" (1.1 / 1.4 / 1.8 / 2.3 m)
Module Diameter	10" (250 mm)
Fiber ID/OD	0.6/1.2 mm
Pore size	0.08 µm (Ultrafiltration)
Physical cleaning mode	Air scour

As membranas Hydra-Cap Max, de elevada qualidade e desenhadas para utilização com águas carregadas, são a opção mais viável para o seu terciário e a reutilização de águas, permitindo reduzir os seus custos operacionais.

The Hydra-Cap Max and high quality design is suitable for use in waters with high solids content. The most viable solution for you tertiary treatment of your effluents and water re-use, reducing operational costs.

### Diagrama de Processo para os sistema de ultra-filtração GreatWater

#### Process Flow Diagram for the Ultra-filtration GreatWater Units



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