

### SELF-CLEANING DISC FILTRATION EQUIPMENT

#### Working conditions

<b>Salinity</b>	< 6000 mg/l
<b>Max. working pressure</b>	10 bar (145 psi)
<b>Min. working pressure</b>	0.8 bar (11.6 psi)
<b>Min. backwash pressure</b>	1.5 bar (22 psi)
<b>Min. backwash flow</b>	2.5 l/s (39 gpm) per filter
<b>Backwash duration</b>	15 - 25 s per filter
<b>pH</b>	4 - 11
<b>Water temperature</b>	≤ 60 °C (140 °F)

#### Filtration degrees (micron)

400	200	130	100	50	20	10	5
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**DLP** Technology  
Low Pressure Backflush



## DESCRIPTION

Self-cleaning disc filtration equipment composed by 1 to 12 filters AZUD HELIX AUTOMATIC Ø2" with discs AZUD MG/WS, which perform an in-depth 3D filtration, installed in-line on Ø2"-10" inlet/outlet manifolds. Includes Ø2" backwash valves 3-way membrane type and the innovative DLP TECHNOLOGY, that enable the sequential low-pressure backwashing of each filter using filtered water from the rest of filters of the equipment, while continues the filtered water supply downstream. The patented AZUD HELIX anti-clogging deflector provides a reliable filtration thanks to an effect of centrifugal separation, with less backwash frequency and less water and energy consumption.

Smart, compact and modular plug&play solution, made of technical thermoplastics, increases the shelf life of the installation providing a long-term operation with minimum operational costs and less maintenance downtime.

## APPLICATIONS



> Filtration in cooling towers



> Filtration in heat exchange systems



> Ultrafiltration membrane protection



> Make-up water filtration



> Media filters prefiltration

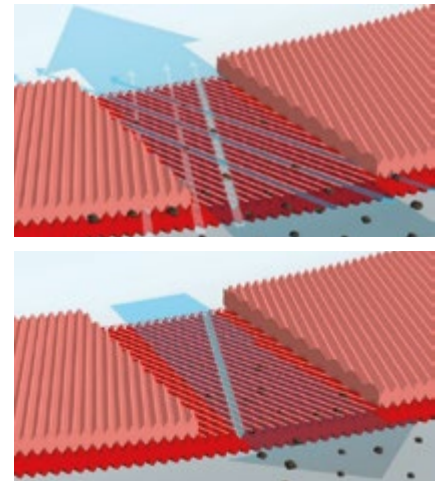
### HOW DO THEY WORK

#### FILTRATION PHASE:

- Water flows from the inlet manifold to the inside of the filter, passing through the anti-clogging deflector AZUD HELIX, which throws the heavy particles away from the disc stack, avoiding the quick clogging of the filter and minimizing the backwash frequency.
- Water flows OUT-IN through the disc stack to the outlet manifold while particles bigger than the filtration degree are trapped in the discs.

#### SELF-CLEANING PHASE:

- When automatic backwash is activated, the pressurized water flows IN-OUT, decompressing the disc stack.
- High-speed flushing water flowing through the spray nozzles, creates a tangential cleaning effect the flush out the trapped particles.



▶ Check our YouTube channel for more details

### MODELS

Filtration area	Model	Q max. 50 µm* m³/h (gpm)	Q max. 130 µm* m³/h (gpm)	Connection	INLET AND OUTLET MANIFOLD			AZUD FBC control unit**
					DIN 2576	ANSI B16.5 CLASS 150	Grooved	
1620 cm²	FT201 1 filter Ø2"	14 (62)	24 (106)	Ø2"			•	103/1
3240 cm²	FT202 2 filters Ø2"	-	48 (211)	Ø3"	•	•	•	103/2
4860 cm²	FT203 3 filters Ø2"	42 (185)	50 (220) 72 (317)	Ø3" Ø4"	•	•	•	103/3
6480 cm²	FT204 4 filters Ø2"	56 (246)	80 (352) 96 (423)	Ø4" Ø6"	•	•	•	112/4
8100 cm²	FT205 5 filters Ø2"	70 (308)	80 (352) 120 (528)	Ø4" Ø6"	•	•	•	112/5
9720 cm²	FT206 6 filters Ø2"	84 (370)	144 (634)	Ø6"	•	•	•	112/6
11340 cm²	FT207 7 filters Ø2"	98 (431)	160 (705)	Ø6"	•	•	•	112/7
12960 cm²	FT208 8 filters Ø2"	112 (493)	160 (705) 192 (845)	Ø6" Ø8"	•	•	•	112/8
14580 cm²	FT209 9 filters Ø2"	126 (555)	160 (705) 216 (951)	Ø6" Ø8"	•	•	•	112/9
16200 cm²	FT210 10 filters Ø2"	140 (616)	160 (705) 240 (1057)	Ø6" Ø8"	•	•	•	112/10
17820 cm²	FT211 11 filters Ø2"	154 (678)	240 (1057) 264 (1162)	Ø8" Ø10"	•	•	•	112/11
19440 cm²	FT212 12 filters Ø2"	168 (740)	240 (1057) 288 (1268)	Ø8" Ø10"	•	•	•	112/12

#### DRAINAGE MANIFOLD: Ø3" Grooved/PVC

\*Maximum flowrate is limited by the size and type of the auxiliary elements (manifold, flanges and valves).

\*\*AZUD FBC control unit not included with the equipment.

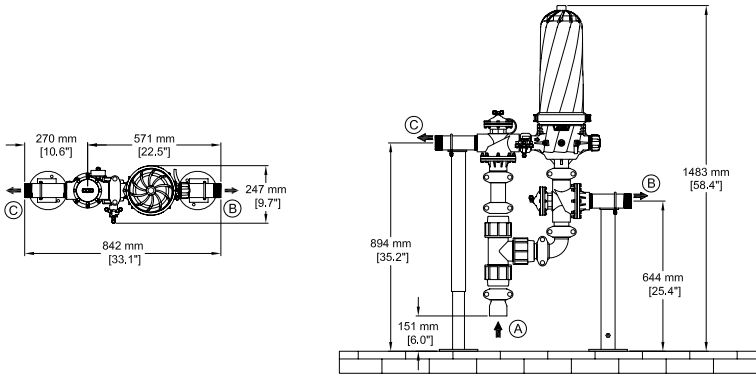
### MATERIALS OF CONSTRUCTION

Filters	Backwash valves Inlet/outlet/drainage manifolds	Scheme
<b>Ø2" Filters</b> (1-12 units) <ul style="list-style-type: none"> <li>• MG/WS Discs: PP/HDPE</li> <li>• Disc support: rPP</li> <li>• Base-lid: rPA</li> <li>• Spring: SS 302</li> <li>• Clamp: SS 304</li> <li>• Sealing o-rings: NBR/HDPE</li> </ul>	<b>Ø2" 3-way membrane valves</b> (1 unit / filter) <ul style="list-style-type: none"> <li>• Body: rPA</li> <li>• Axis, seat and spring: SS</li> <li>• Sealing o-rings: NBR</li> <li>• Command: Hydraulic (H)</li> </ul> <b>Manifolds:</b> HDPE PE-100 <b>Flanges:</b> Aluminum	

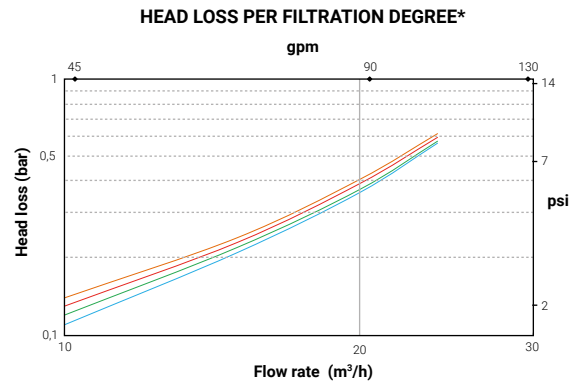
PP: Polypropylene rPP: Reinforced polypropylene SS: Stainless steel rPA: Reinforced polyamide HDPE: High density polyethylene NBR: Nitrile rubber

MICRON 100 130 200 400

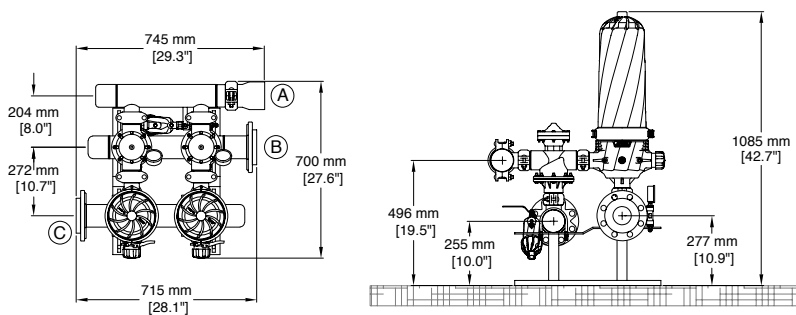
### FT201 DLP



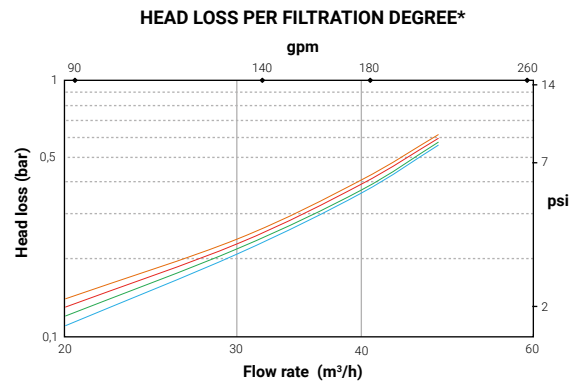
(A) Ø2" Inlet manifold (B) Ø2" Outlet manifold (C) Ø2" Drainage manifold



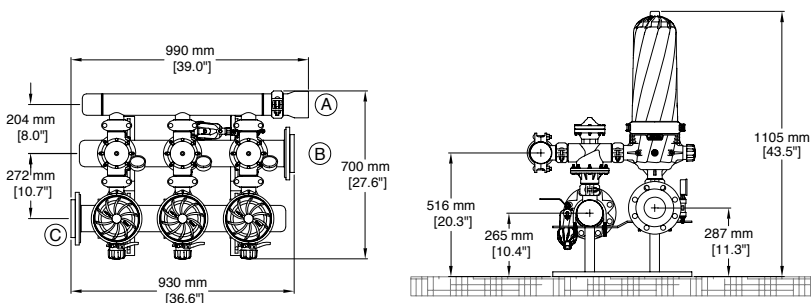
### FT202 DLP



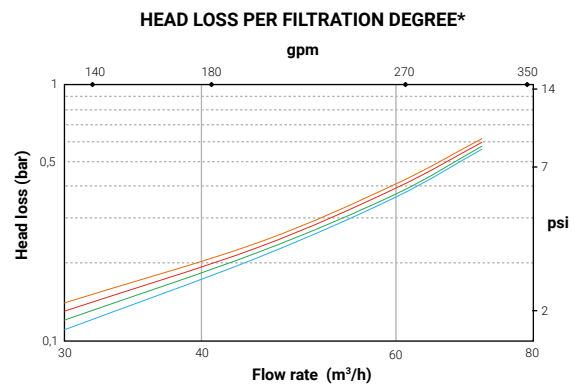
(A) Ø3" Drainage manifold (B) Ø3" Inlet manifold (C) Ø3" Outlet manifold



### FT203 DLP



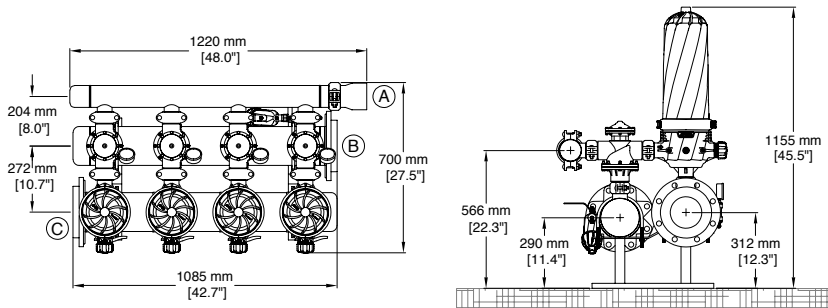
(A) Ø3" Drainage manifold (B) Ø4" Inlet manifold (C) Ø4" Outlet manifold



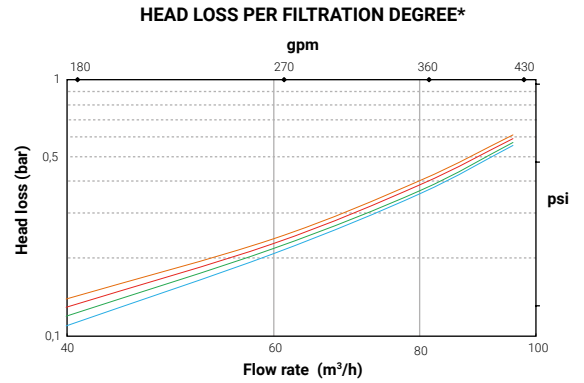
\*The backwash frequency depends on the design flowrate. For hydraulic calculation, consider the set-point value for the self-cleaning cycle (usually 0.5 bar/7.25 psi).

MICRON 100 130 200 400

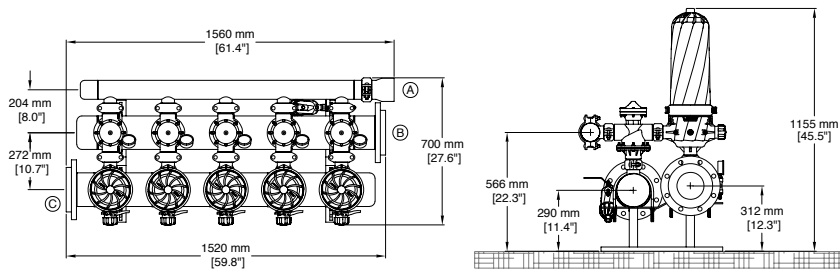
### FT204 DLP



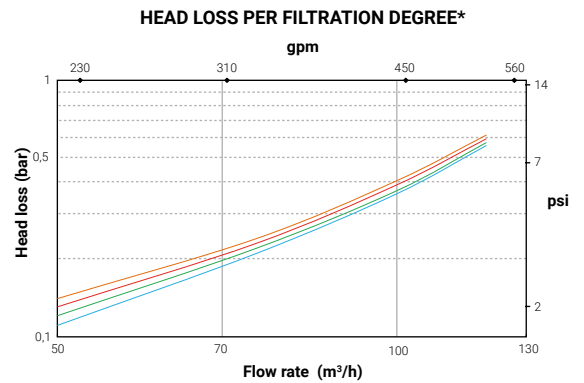
(A) Ø3" Drainage manifold (B) Ø6" Inlet manifold (C) Ø6" Outlet manifold



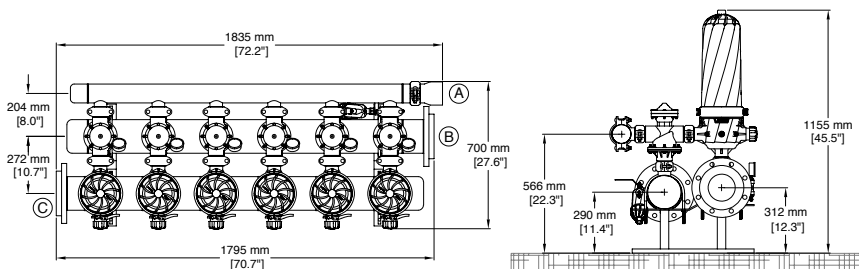
### FT205 DLP



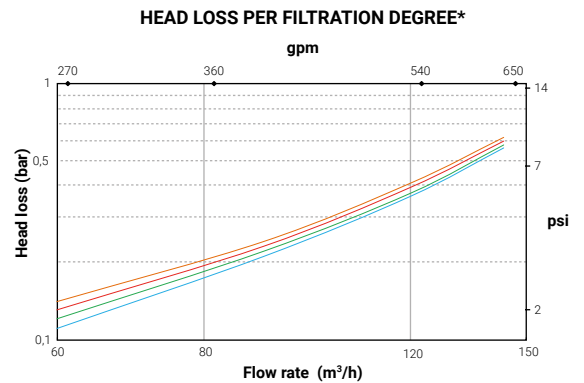
(A) Ø3" Drainage manifold (B) Ø6" Inlet manifold (C) Ø6" Outlet manifold



### FT206 DLP



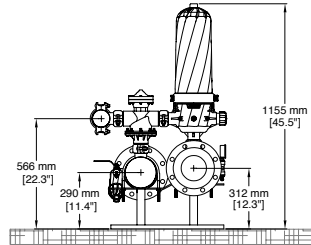
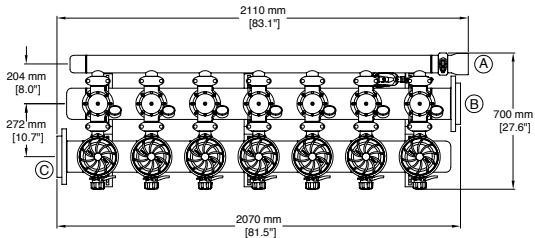
(A) Ø3" Drainage manifold (B) Ø6" Inlet manifold (C) Ø6" Outlet manifold



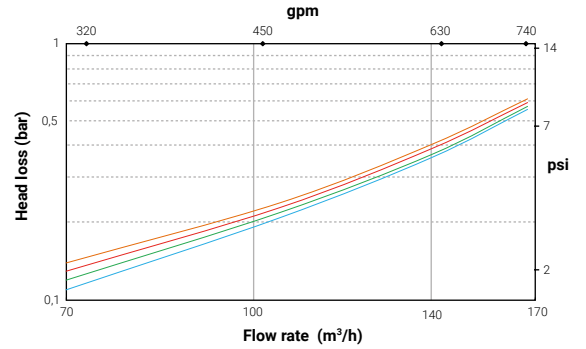
\*The backwash frequency depends on the design flowrate. For hydraulic calculation, consider the set-point value for the self-cleaning cycle (usually 0.5 bar/7.25 psi).

MICRON 100 130 200 400

### FT207 DLP

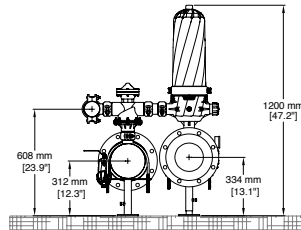
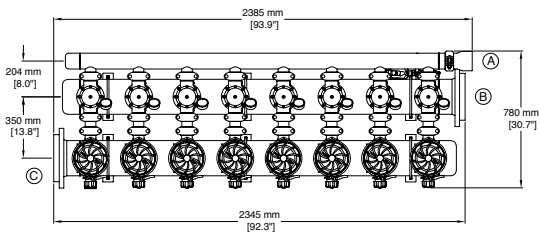


HEAD LOSS PER FILTRATION DEGREE\*

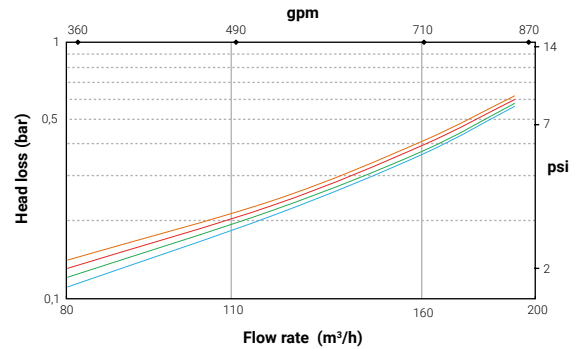


(A) Ø3" Drainage manifold (B) Ø6" Inlet manifold (C) Ø6" Outlet manifold

### FT208 DLP



HEAD LOSS PER FILTRATION DEGREE\*



(A) Ø3" Drainage manifold (B) Ø8" Inlet manifold (C) Ø8" Outlet manifold

\*The backwash frequency depends on the design flowrate. For hydraulic calculation, consider the set-point value for the self-cleaning cycle (usually 0.5 bar/7.25 psi).

**! ASK FOR OUR EQUIPMENT UP TO 12 FILTERS**



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