AZUD HELIX AUTOMATIC FT4DCL DLP

SELF-CLEANING DISC FILTRATION EQUIPMENT

Working conditions

Salinity	< 6000 mg/l
Max. working pressure	10 bar (145 psi)
Min. working pressure	0.8 bar (11.6 psi)
Min. backwash pressure	1.5 bar (22 psi)
Min. backwash flow	5 l/s (79 gpm) per filter 4"
Backwash duration	20 – 30 s per filter 4"
pH	4 - 11
Water temperature	≤ 60 °C (140 °F)

Filtration degrees (micron)

400 | 200 | 130 | 100 | 50 | 20 | 10 | 5

DLP Technology
Low Pressure Backflush

DESCRIPTION

Self-cleaning disc filtration equipment composed by 3 to 12 filters AZUD HELIX AUTOMATIC Ø4" with discs AZUD MG/WS, which perform an in-depth 3D filtration, installed in-line on Ø6"-12" inlet/outlet manifolds. Includes Ø3" 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**

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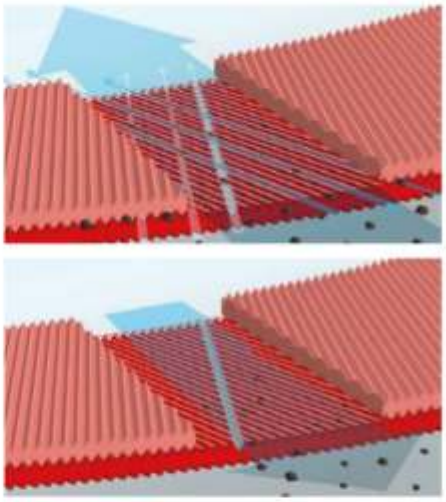
HELIX AUTOMATIC
FT4DCL DLP

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 that flush out the trapped particles.

Check our YouTube channel for more details

MODELS

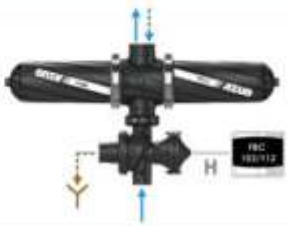
Filtration area	Model	Q max. 50 µm* m³/h (gpm)	Q max. 130 µm* m³/h (gpm)	Connection	INLET AND OUTLET MANIFOLD DIN 2576	INLET AND OUTLET MANIFOLD ANSI B16.5 CLASS 150	AZUD FBC control unit**
9720 cm²	**FT4DCL3** 3 filters Ø4"	84 (370)	156 (687)	**Ø6"**	•	•	103/3
12960 cm²	**FT4DCL4** 4 filters Ø4"	112 (493)	160 (705) 208 (916)	**Ø6"** **Ø8"**	•	•	112/4
16200 cm²	**FT4DCL5** 5 filters Ø4"	140 (616)	160 (705) 240 (1057)	**Ø6"** **Ø8"**	•	•	112/5
19440 cm²	**FT4DCL6** 6 filters Ø4"	168 (740)	240 (1057) 312 (1374)	**Ø8"** **Ø10"**	•	•	112/6
22680 cm²	**FT4DCL7** 7 filters Ø4"	196 (863)	240 (1057) 364 (1603)	**Ø8"** **Ø10"**	•	•	112/7
25920 cm²	**FT4DCL8** 8 filters Ø4"	224 (986)	240 (1057) 380 (1673)	**Ø8"** **Ø10"**	•	•	112/8
29160 cm²	**FT4DCL9** 9 filters Ø4"	252 (1110)	380 (1673) 468 (2061)	**Ø10"** **Ø12"**	•	•	112/9
32400 cm²	**FT4DCL10** 10 filters Ø4"	280 (1233)	380 (1673) 520 (2290)	**Ø10"** **Ø12"**	•	•	112/10
35640 cm²	**FT4DCL11** 11 filters Ø4"	308 (1356)	380 (1673) 572 (2519)	**Ø10"** **Ø12"**	•	•	112/11
38880 cm²	**FT4DCL12** 12 filters Ø4"	336 (1480)	380 (1673) 624 (2748)	**Ø10"** **Ø12"**	•	•	112/12

DRAINAGE MANIFOLD: Ø4" 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
Ø4" Filters (3-12 units) • MG/WS discs: PP/HDPE • Support structure: rPP • Base-lid: rPA • Spring: SS 302 • Clamp: SS 304 • Sealing o-rings: NBR/HDPE	**Ø3" Valves** 3 way-membrane (1 unit / filter) • Body: rPA • Axis, seat and spring: SS • Sealing o-rings: NBR • Command: Hydraulic (H) **Manifolds:** HDPE PE-100 **Flanges:** Aluminum	

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

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HELIX AUTOMATIC
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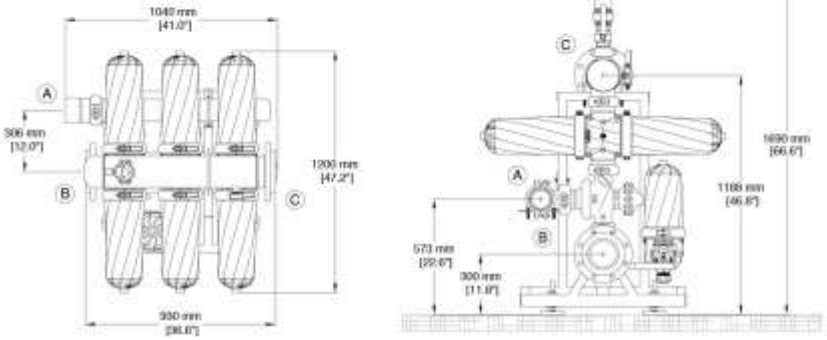
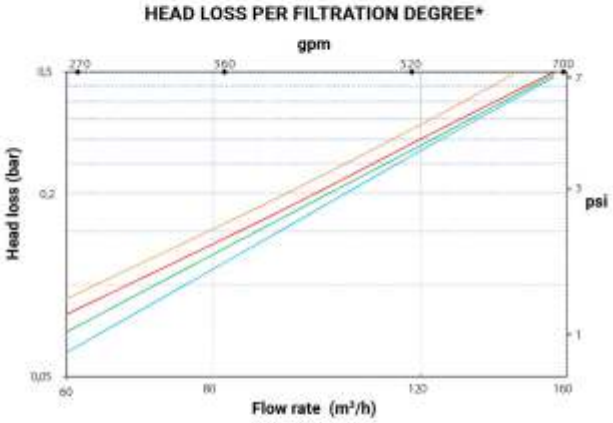
MICRON 100 130 200 400

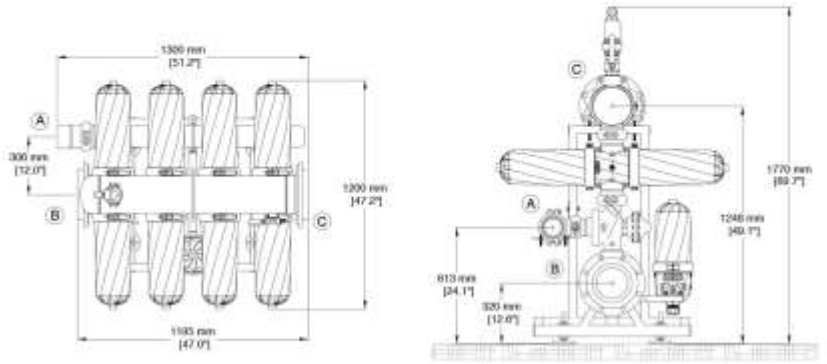
FT4DCL3 DLP



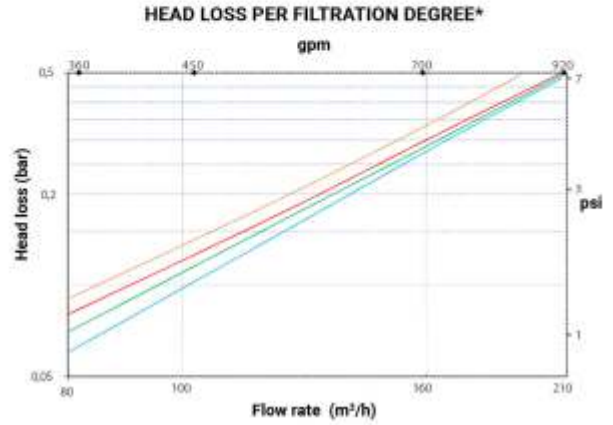
(A) Ø4" Drainage manifold (B) Ø6" Inlet manifold (C) Ø6" Outlet manifold



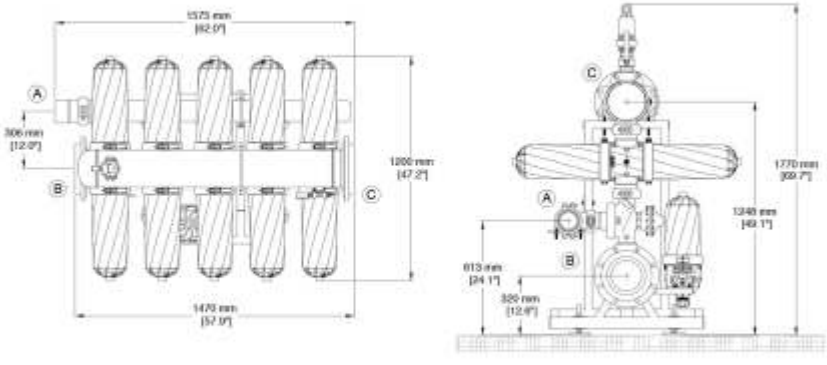
FT4DCL4 DLP



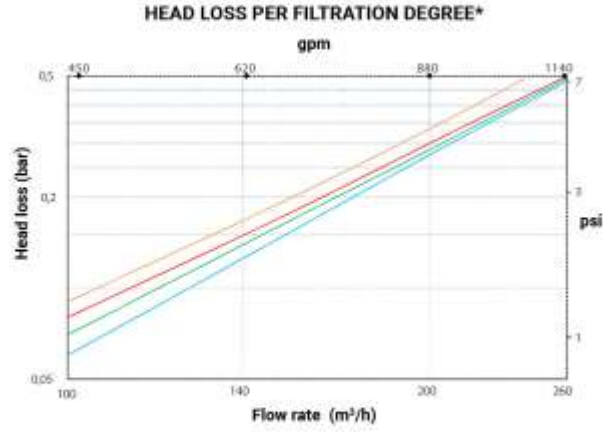
(A) Ø4" Drainage manifold (B) Ø8" Inlet manifold (C) Ø8" Outlet manifold



FT4DCL5 DLP



(A) Ø4" 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).

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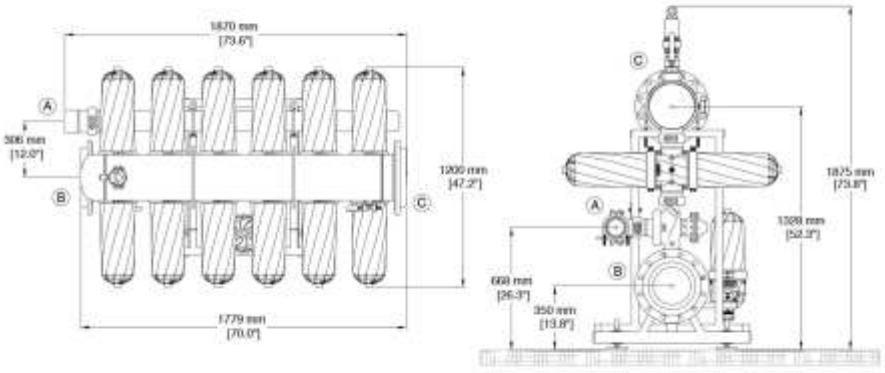
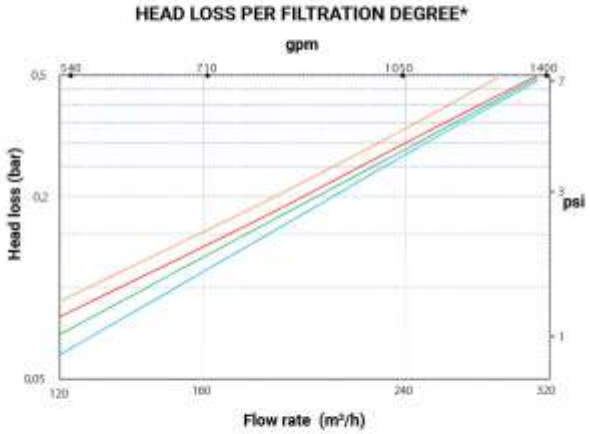
MICRON 100 130 200 400

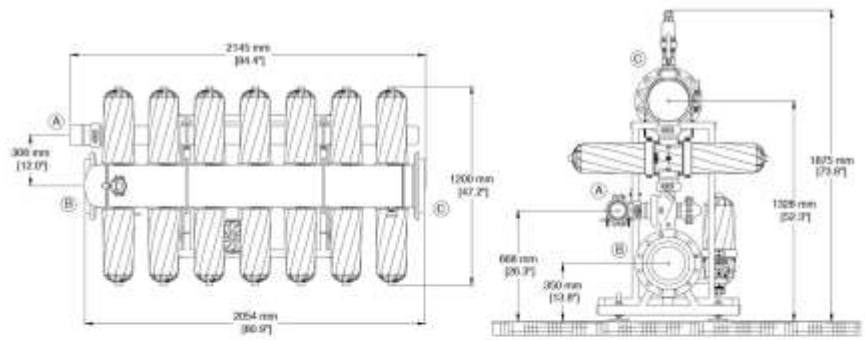
FT4DCL6 DLP

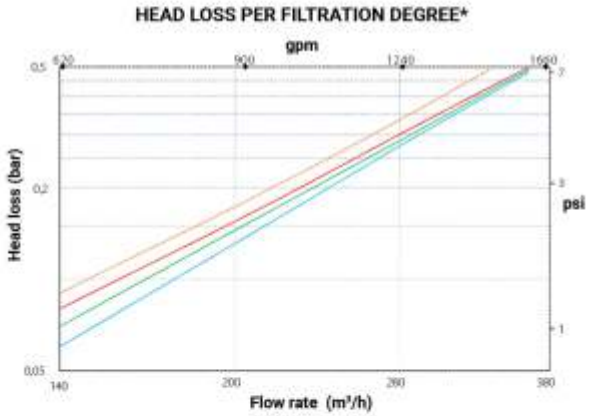




(A) Ø4" Drainage manifold (B) Ø10" Inlet manifold (C) Ø10" Outlet manifold

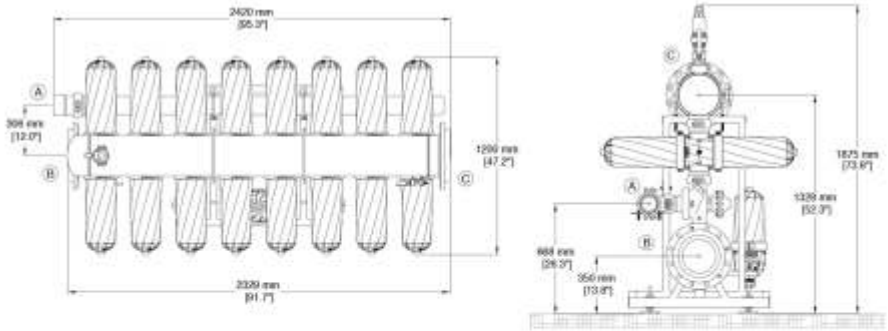
FT4DCL7 DLP

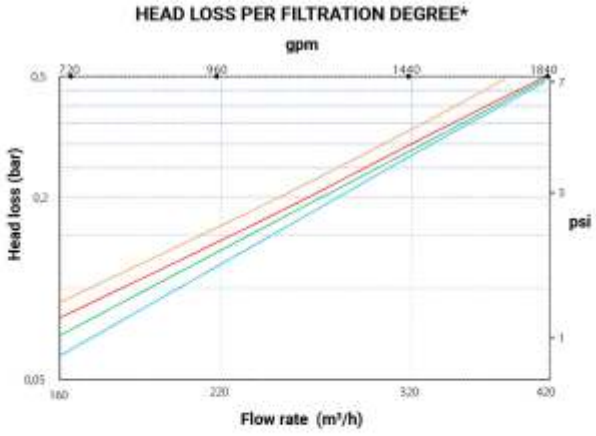




(A) Ø4" Drainage manifold (B) Ø10" Inlet manifold (C) Ø10" Outlet manifold

FT4DCL8 DLP





(A) Ø4" Drainage manifold (B) Ø10" Inlet manifold (C) Ø10" Outlet manifold

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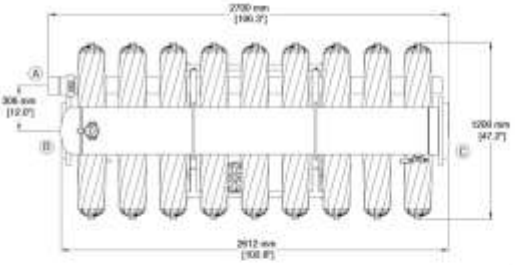
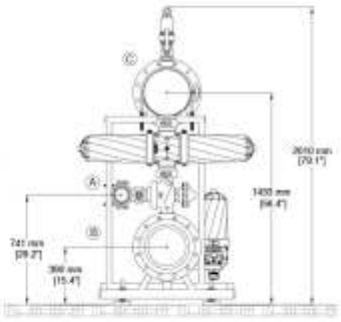
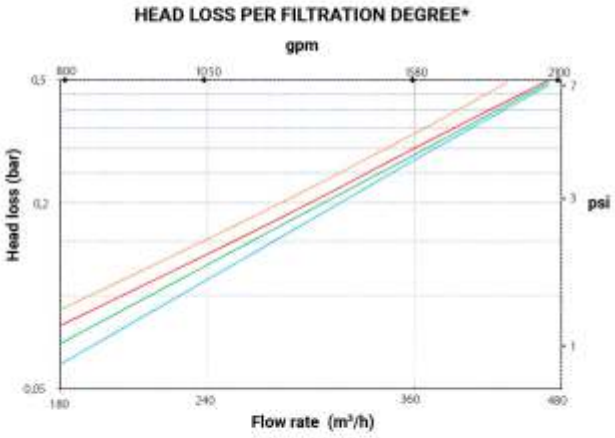
MICRON 100 130 200 400

FT4DCL9 DLP

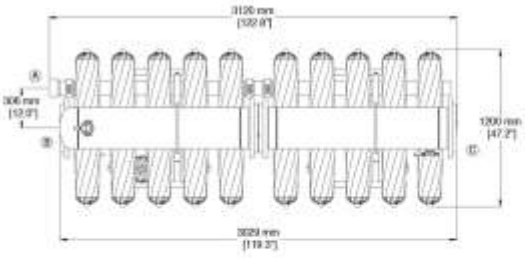


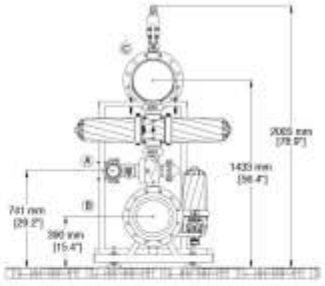


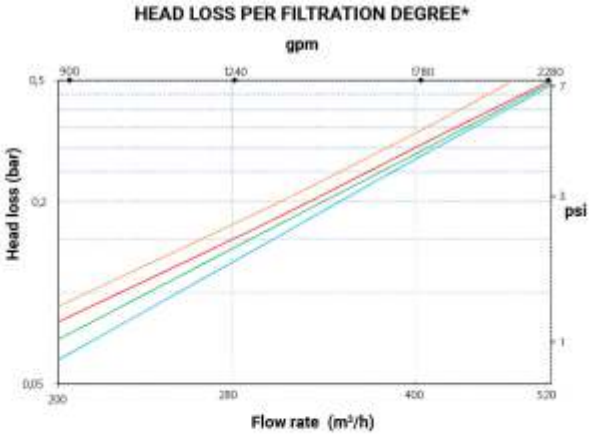


Ⓐ Ø4" Drainage manifold Ⓑ Ø12" Inlet manifold Ⓒ Ø12" Outlet manifold

FT4DCL10 DLP







Ⓐ Ø4" Drainage manifold Ⓑ Ø12" Inlet manifold Ⓒ Ø12" Outlet manifold

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ASK FOR OUR EQUIPMENT UP TO 12 FILTERS

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