AZUD HELIX SYSTEM FT200 LCM Filtration Equipment

The filtration equipment is included in **AZUD HELIX SYSTEM FT200 LCM**. It is integrated by one 2" SUPER manual disc filter with the AZUD HELIX. The filtration element is easily removable without tools. The housing is made of reinforced technical plastic; it has grooved connections and three two-way manual ball valves per station, especially designed and configured to allow semi-automatic backflushing of the filters.

The equipment is supplied completely assembled through the necessary grooved couplings to the corresponding inlet, outlet and drainage manifolds; all of them made of high-density polyethylene (HDPE).

Furthermore, with the patented AZUD HELIX, the frequency and intensity of the maintenance labours of the system are minimized. The energetic cost is dramatically reduced per filtered m^3 within the installation, thus minimizing the environmental impact.

AZUD HELIX SYSTEM FT200 LCM equipment permits to make a backflushing with filtered water from the rest of the filters without interrupt the supply of filtered water downstream. Also, the equipment incorporates an additional ball valve at the filter outlet to isolate each filter and to allow a sequential maintenance of each one while the filtration process continues.

AZUD HELIX SYSTEM manual filters present many advantages that adapt to different filtering needs:

- Tough and durable.
- Maximum quality and safety in filtration.
- Effective and easy cleaning.
- Water and energy saving.

Represented equipment: **AZUD HELIX SYSTEM FT203/4FH LCM**

Detailed description of the Filtration Equipment

The Filtration equipment is made up by:

▪ AZUD HELIX SYSTEM FT 2S filter characterized by:

- Housing with 2" grooved connection, made of reinforced technical plastic (polyamide 6 fibreglass reinforced).
- Lock system, composed by a clamp made of stainless steel and NBR sealing gasket, placed in the housing of the filter.
- Filtration element, completely independent, easily removable without tools for eventual maintenance labours.
- Each filtration element is made by a stack of discs made of technical plastic, with a wide filtration surface, guaranteeing the in-depth filtration. The filtering surface is of 1699 cm^2 /263 in^2.
- AZUD HELIX. In the base of each stack of discs there is a device which generates a centrifugal helical movement that moves away the particles from the discs, which slows the filters clogging. The AZUD HELIX system patented by AZUD, optimises the performance and minimizes the frequency and intensity of the maintenance labours of the system.

▪ Manifolds of the FT200 LCM filtration equipment.

- Inlet manifold 3" – 8" diameter. Made of High-Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements according to DIN 2576 or ANSI B16.5 CLASS 150 or grooved, depending on the model. It incorporates grooved derivations, required to connect the inlet manifold to the valves.
- Filtered water outlet manifold 3" – 8" diameter. Made of High-Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements according to DIN 2576 or ANSI B16.5 CLASS 150 or grooved, depending on the model. It incorporates grooved derivations, required to connect the outlet manifold to the valves.
- Drainage manifold diameter of 3", made of High-Density Polyethylene (HDPE) PE-100 UNE 53966. Grooved connection elements and/or solvent socket. It incorporates grooved derivations, required to connect the drainage manifold to the three-way valves.

▪ Supports of the equipment characterized by:

- Adjustable supports made of carbon steel with epoxy-polyester cover.

▪ Two-way manual ball valve per filter characterized by:

- Three two-way manual ball valves in 2'' grooved connection, made of PVC-U, with EPDM gaskets.

▪ Manometers characterized by:

- ¼" BSP glycerine manometer male thread. Bar/psi double scaled (0 – 10 bar / 0 – 145 psi). The equipment includes two manometers per filter, one on the pressure manifold and one on the auxiliary tank.

▪ Grooved couplings characterized by:

- Technical plastic grooved couplings which allow the connection of all the components of the filter.

The equipment is supplied completely ready to its later automation.

AZUD equipment is made fulfilling the requirements of our Quality and Environmental System (**SICMA**), focused to keep the highest quality level according to **ISO 9001** Standard specifications and keeping its Environmental compromise according to **ISO 14001** standard.

SICMA (Quality & Environmental System) is audited and certified by the Spanish Association for Standardization & Certification (**AENOR**).

General Technical Data

WORKING CONDITIONS	
Max. Working pressure	10 bar/ 145 psi
Max. recommended pressure	8 bar / 116 psi
Min. Working pressure	0.8 bar / 11.6 psi
Max. Temperature	60 °C / 140 °F
pH range	4 – 11

Model	Type of connection	N. of filters	Manifold Ø inlet/outlet	Filtering surface
FT202/3FH LCM	Brida DIN/ANSI	2	3" – 90 mm	3398 cm² 526 in²
FT202/3VH LCM	Ranurada			
FT203/4FH LCM	Brida DIN/ANSI	3	4" – 110 mm	5097 cm² 789 in²
FT203/4VH LCM	Ranurada			
FT204/4FH LCM	Brida DIN/ANSI	4	4" – 110 mm	6796 cm² 1052 in²
FT204/4VH LCM	Ranurada			
FT204/6FH LCM	Brida DIN/ANSI		6" – 150 mm	
FT205/6FH LCM	Brida DIN/ANSI	5	6" – 150 mm	8495 cm² 1315 in²
FT206/6FH LCM	Brida DIN/ANSI	6	6" – 150 mm	10194 cm² 1578 in²
FT206/8FH LCM	Brida DIN/ANSI		8" – 200 mm	
FT207/6FH LCM	Brida DIN/ANSI	7	6" – 150 mm	11893 cm² 1841 in²
FT207/8FH LCM			8" – 200 mm	
FT208/6FH LCM	Brida DIN/ANSI	8	6" – 150 mm	13592 cm² 2104 in²
FT208/8FH LCM			8" – 200 mm	

Diameter of 3" – 90 mm for drainage manifold with grooved connection and/or solvent socket.
DIN Flange: DIN 2576, ANSI Flange: B16.5 CLASS 150.

The designed flow rate per filtration element depends on the **filtration degree** and **the quality of the water** to be treated (See following table). In that case, the maximum flow rate for good water quality in each model is indicated depending on the filtration degree.

FLOW OF THE EQUIPMENT AZUD HELIX SYSTEM FT200 LCM [m³/h]*					
MODEL	**Filtration degree of the equipment MICRON**				
	50	**100**	**130**	**200**	**400**
FT202/3 LCM	30	40	40	40	40
FT203/4 LCM	45	60	60	60	60
FT204/4 LCM	60				
FT204/6 LCM		100	100	100	100
FT205/6 LCM	75	125	125	125	125
FT206/6 LCM	90				
FT206/8 LCM		150	150	150	150
FT207/6 LCM	105				
FT207/8 LCM		175	175	175	175
FT208/6 LCM	120				
FT208/8 LCM		190	190	190	190

*Max. Flow rate varies with the filtration degree and water quality. Consult AZUD nominal flow rates for each case.