

AZUD HELIX AUTOMATIC FT200 SW DLP Filtration Equipment

The filtration equipment is included in **AZUD HELIX AUTOMATIC FT200 SW DLP SERIE**. It integrates 2" SUPER FT DLP self-cleaning disc filters with the AZUD HELIX system device. The filtration element is easily removable without tools. The housing is made of reinforced technical plastic; it has grooved connections and one three-way hydraulic valve per filter. The equipment is specifically designed to optimize the filtration in **installations with aggressive conditions** such as the corrosive exposition to brackish water. They are 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).

AZUD HELIX AUTOMATIC DLP allows the reduction of the energetic use of the filtration installations, increasing their performance and requiring a minimum consumption of pressure and flow rate on each backflushing cycle in order to keep a maximum efficiency in a wide range of filtration degrees.

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



Represented equipment: AZUD HELIX AUTOMATIC FT204/4FX SW DLP

Detailed description of the Filtration equipment

The offered Filtration equipment is composed by different elements:

▪ AZUD HELIX AUTOMATIC FT 2S SW DLP Filter characterized by:

- Housing with 2" grooved connection, produced of reinforced technical plastic (Fibreglass reinforced polyamide 6).
- Lock system, composed by a clamp made of AISI 316L stainless steel and NBR sealing gasket, placed in the housing of the filter.
- SW DLP filtration element, completely independent, easily removable, without tools, to eventual maintenance labours.
- Each filtration element is made by a stack of technical plastic discs, with a wide filtration surface, guaranteeing the in-depth filtration. The filtering surface of each filtration element is 1620 cm² / 251 in².
- AZUD HELIX system. 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; hence it slows the clogging of the filters. The AZUD HELIX patented by AZUD, optimises the performance and minimizes the frequency and intensity of the maintenance labours of the system.

▪ Manifolds of the FT200 SW DLP filtration equipment:

- Inlet manifold diameter 3" – 10". Made in High Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements or grooved depending on the model. It incorporates grooved derivations, required to connect the inlet manifold to the three-way valves.
- Outlet manifold 3" – 10" diameter. Made of High Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements or grooved depending on the model. It incorporates grooved derivations, required to connect the outlet manifold to the AZUD HELIX AUTOMATIC filters.
- 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 to connect the three-way valves to the drainage manifold.

Remark: All flange connections are available in DIN 2576 or ANSI B16.5 CLASS 150

▪ Supports of the equipment characterized by:

- Structure made of stainless steel with epoxy-polyester cover.

▪ Three-way hydraulic valve, characterized by:

- One three-way hydraulic valve per filter in 2" grooved connection, produced of reinforced technical plastic, with internal components of DUPLEX stainless steel. Diaphragm made of reinforced nylon (NR-AL52) and NBR gaskets.

▪ Grooved couplings characterized by:

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

Likewise, in the installation it is necessary to have compressed air intakes for the pneumatic command of the three-way valves.

The equipment is supplied completely ready to its later automation.

AZUD equipment are 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
Required neumatic pressure	1 bar greater than the hydraulic pressure
Max. Temperature	60 °C / 140 °F
pH range	4 – 11

BACKFLUSHING PROCESS		
Min. Backflushing pressure	MG*	1.5 bar 22 psi
	WS*	1.5 bar 22 psi
Backflushing flow rate per filter	MG	2.5 l/s 40 gpm
	WS	2.5 l/s 40 gpm

*MG filtration degrees: 400- 200- 130- 100 micron. WS filtration degrees: 130- 100- 50- 20- 10- 5 micron.

AZUD HELIX AUTOMATIC SERIE FT200 SW DLP					
Filtration degree 5 – 10 – 20 – 50 – 100 – 130 – 200 – 400 micron					
Model*	Type of connection	N. of filters	Manifold Ø inlet/ outlet	Filtering surface	Control Unit AZUD FBC*
FT202/3FX SW DLP	DIN/ANSI Flange	2	3" - 90 mm	3240 cm ² 502 in ²	103/2 SW
FT202/3VX SW DLP	Grooved				
FT203/3FX SW DLP	DIN/ANSI Flange	3	3" - 90 mm	4860 cm ² 753 in ²	103/3 SW
FT203/3VX SW DLP	Grooved				
FT203/4FX SW DLP	DIN/ANSI Flange	3	4" - 110 mm	4860 cm ² 753 in ²	103/3 SW
FT203/4VX SW DLP	Grooved				
FT204/4FX SW DLP	DIN/ANSI Flange	4	4" - 110 mm	6480 cm ² 1004 in ²	112/4 SW
FT204/4VX SW DLP	Grooved				
FT204/6FX SW DLP	DIN/ANSI Flange	4	6" - 160 mm	6480 cm ² 1004 in ²	112/4 SW
FT204/6VX SW DLP	Grooved				
FT205/4FX SW DLP	DIN/ANSI Flange	5	4" - 110 mm	8100 cm ² 1255 in ²	112/5 SW
FT205/4VX SW DLP	Grooved				
FT205/6FX SW DLP	DIN/ANSI Flange	5	6" - 160 mm	8100 cm ² 1255 in ²	112/5 SW
FT205/6VX SW DLP	Grooved				
FT206/6FX SW DLP	DIN/ANSI Flange	6	6" - 160 mm	9720 cm ² 1507 in ²	112/6 SW
FT206/6VX SW DLP	Grooved				
FT207/6FX SW DLP	DIN/ANSI Flange	7	6" - 160 mm	11340 cm ² 1758 in ²	112/7 SW
FT207/6VX SW DLP	Grooved				
FT208/6FX SW DLP	DIN/ANSI Flange	8	6" - 160 mm	12960 cm ² 2009 in ²	112/8 SW
FT208/6VX SW DLP	Grooved				
FT208/8FX SW DLP	DIN/ANSI Flange	8	8" - 200 mm	12960 cm ² 2009 in ²	112/8 SW
FT208/8VX SW DLP	Grooved				
FT209/6FX SW DLP	DIN/ANSI Flange	9	6" - 160 mm	14580 cm ² 2260 in ²	112/9 SW
FT209/6VX SW DLP	Grooved				
FT209/8FX SW DLP	DIN/ANSI Flange	9	8" - 200 mm	14580 cm ² 2260 in ²	112/9 SW
FT209/8VX SW DLP	Grooved				

AZUD HELIX AUTOMATIC SERIE FT200 SW DLP					
Filtration degree 5 – 10 – 20 – 50 – 100 – 130 – 200 – 400 micron					
Model*	Type of connection	N°. of filters	Manifold Ø inlet/outlet	Filtering surface	Control Unit AZUD FBC*
FT210/6FX SW DLP	DIN/ANSI Flange	10	6" - 160 mm	16200 cm ² 2511 in ²	112/10 SW
FT210/6VX SW DLP	Grooved				
FT210/8FX SW DLP	DIN/ANSI Flange	10	8" - 200 mm	16200 cm ² 2511 in ²	112/10 SW
FT210/8VX SW DLP	Grooved				
FT211/8FX SW DLP	DIN/ANSI Flange	11	8" - 200 mm	17820 cm ² 2762 in ²	112/11 SW
FT211/8VX SW DLP	Grooved				
FT211/10FX SW DLP	DIN/ANSI Flange	11	10" - 250 mm	17820 cm ² 2762 in ²	112/11 SW
FT211/10FA SW DLP	Grooved				
FT212/8FX SW DLP	DIN/ANSI Flange	12	8" - 200 mm	19440 cm ² 3013 in ²	112/12 SW
FT212/8VX SW DLP	Grooved				
FT212/10FX SW DLP	DIN/ANSI Flange	12	10" - 250 mm	19440 cm ² 3013 in ²	112/12 SW
FT212/10FA SW DLP	Grooved				

Diameter of 3" – 90 mm for drainage manifold with grooved connection and/or solvent socket.

*Control Unit is not included with the filtration equipment.

*Certain filtration equipment are not available in low filtration degrees.

- FT202: are not available in 50- 20- 10- 5.
- FT203: are not available in 20- 10- 5.
- FT204: are not available in 10- 5.

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.

MAX. FLOW RATE OF THE EQUIPMENT AZUD HELIX AUTOMATIC FT200 SW DLP [m ³ /h]*								
MODEL	Filtration degree of the equipment MICRON							
	5	10	20	50	100	130	200	400
FT202/3 SW DLP	-	-	-	-	48	48	48	48
FT203/3 SW DLP	-	-	-	42	50	50	50	50
FT203/4 SW DLP	-	-	-	42	72	72	72	72
FT204/4 SW DLP	-	-	32	56	80	80	80	80
FT204/6 SW DLP	-	-	32	56	96	96	96	96
FT205/4 SW DLP	25	30	40	70	80	80	80	80
FT205/6 SW DLP	25	30	40	70	120	120	120	120
FT206/6 SW DLP	30	36	48	84	144	144	144	144
FT207/6 SW DLP	35	42	56	98	160	160	160	160

MAX. FLOW RATE OF THE EQUIPMENT AZUD HELIX AUTOMATIC FT200 SW DLP [m ³ /h]*								
MODEL	Filtration degree of the equipment MICRON							
	5	10	20	50	100	130	200	400
FT208/6 SW DLP	40	48	64	112	160	160	160	160
FT208/8 SW DLP	40	48	64	112	192	192	192	192
FT209/6 SW DLP	45	54	72	126	160	160	160	160
FT209/8 SW DLP	45	54	72	126	216	216	216	216
FT210/6 SW DLP	50	60	80	140	160	160	160	160
FT210/8 SW DLP	50	60	80	140	240	240	240	240
FT211/8 SW DLP	55	66	88	154	240	240	240	240
FT211/10 SW DLP	55	66	88	154	264	264	264	264
FT212/8 SW DLP	60	72	96	168	240	240	240	240
FT212/10 SW DLP	60	72	96	168	288	288	288	288

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