

AZUD HELIX AUTOMATIC FT4DC DLP Filtration Equipment

The present filtration equipment is included in **AZUD HELIX AUTOMATIC FT4DC DLP SERIE**. It integrates 4" self-cleaning disc filters with the HELIX system. The filtering element is easily removable without tools. The housing is made of reinforced technical plastic. The equipment are supplied completely assembled through the necessary grooved couplings to the corresponding inlet/drainage and outlet manifolds; all of them manufactured with 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 in order to keep a maximum efficiency in a wide range of filtration grades.

Furthermore, with the HELIX system patented by AZUD, 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 model: **AZUD HELIX AUTOMATIC FT4DC6/6FX DLP**

Detailed description of the Filtration equipment

The offered Filtration equipment is composed by different elements:

▪ AZUD HELIX AUTOMATIC FT 4SL DLP Filter characterized by:

- Housing with 4" grooved connection, produced of reinforced technical plastic (Fibreglass reinforced polyamide 6).
- Lock system, composed by a clamp made of stainless steel and NBR sealing gasket, placed in the housing of the filter.
- Two DLP filtering element, completely independent, easily removable, without tools, to eventual maintenance labours. There is no possibility of mixture or interferences of flows during the backflushing process, due to the lid that makes them completely independent.
- Each filtering 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 filtering element is of 1620 cm² / 251 in², so the total filtering surface of the filter is of 3240 cm² / 502 in².
- 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 delays the filters clogging. The HELIX system patented by AZUD, optimises the performance and minimizes the frequency and intensity of the maintenance labour of the system.

▪ Manifolds of the FT4DC DLP filtration equipment:

- Inlet/drainage manifold (Feed water manifold in filtration phase and drainage manifold in backwash phase), of diameter according to annex drawing. Manufactured of High Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements according to DIN 2576 or ANSI B16.5 CLASS 150 depending on the model. It incorporates grooved derivations, required to the connection of the filters.
- Outlet manifold of diameter according to annex drawing made of High Density Polyethylene (HDPE) PE-100 UNE 53966. Flange connection elements according to DIN 2576 or ANSI B16.5 CLASS 150 depending on the model. It incorporates grooved derivations, required to the connection of the filters.

▪ Supports of the equipment characterized by:

- Structure manufactured with carbon steel with epoxy-polyester cover.

▪ Triple- effect valve, characterized by:

- Housing made of technical plastic and a drain and inclusion system of high volume of air. 2" BSP connection male thread.

▪ 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 are manufactured 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
Min. Working pressure	0.8 bar / 11.6 psi
Max. Temperature	60 °C / 140 °F
pH range	4 – 11

BACKFLUSHING PROCESS		
Min. Backflushing pressure	MG*	1.5 bar 21 psi
	WS*	1.3 bar 18 psi
Backflushing flow rate per filter of 4"	MG	5 l/s 80 gpm
	WS	4 l/s 65 gpm

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

AZUD HELIX AUTOMATIC FT4DC DLP Filtration degree 5– 10– 20– 50– 100 – 130 – 200 – 400 micron						
Model*	Type of Connection	Number of filters	Manifold Ø inlet/outlet	Ø of pressure/drainage connection	Filtering surface	Backflushing cycle flow rate (m ³ /h)
FT4DC6/6FX DLP	DIN/ANSI Flange	6	6" – 160 mm	6" – 160 mm	19440 cm ² 3012 in ²	144
FT4DC8/8FX DLP	DIN/ANSI Flange	8	8" – 200 mm	8" – 200 mm	25920 cm ² 4016 in ²	192
FT4DC8/10-8FX DLP	DIN Flange	8	10" – 250 mm	8" – 200 mm	25920 cm ² 4016 in ²	192
FT4DC8/10-8FA DLP	ANSI Flange					
FT4DC12/10FX DLP	DIN Flange	12	10" – 250 mm	10" – 250 mm	38880 cm ² 6024 in ²	288
FT4DC12/10FA DLP	ANSI Flange					
FT4DC12/12-10FX DLP	DIN Flange	12	12" – 300 mm	10" – 250 mm	38880 cm ² 6024 in ²	288
FT4DC12/12-10FA DLP	ANSI Flange					

*Control Unit is not included with the filtration equipment.

*Each filtering equipment is available for certain filtering degrees:

- FT4DC6/6, FT4DC8/8 and FT4DC12/10 are available for 50 – 20 – 10 – 5 MICRON filtration degree.
- FT4DC8/10-8 and FT4DC12/12-10 are available for 400 – 200 – 130 – 100 MICRON filtration degree.

Each filter belonging to AZUD HELIX AUTOMATIC FT4DC DLP SERIE contains several filtration elements.

DIN Flange: DIN 2576

ANSI Flange: ANSI B16.5 CLASS 150.

The designed flow rate per module (Each filter belonging to AZUD HELIX AUTOMATIC FT4DC DLP SERIE contains several filtration elements) depends on the **filtration degree** and **the quality of the water** to be treated (See following table). In this case, the maximum flow rate for good water quality of each model is indicated in function of the filtration degree.

MAX. FLOW RATE OF THE EQUIPMENT AZUD HELIX AUTOMATIC FT4DC DLP [m ³ /h]								
MODEL	Filtration degree of the equipment MICRON*							
	5	10	20	50	100	130	200	400
FT4DC6/6 DLP	36	48	72	168	-	-	-	-
FT4DC8/8 DLP	48	64	96	224	-	-	-	-
FT4DC8/10-8 DLP	-	-	-	-	384	384	384	384
FT4DC12/10 DLP	72	96	144	336	-	-	-	-
FT4DC12/12-10 DLP	-	-	-	-	576	576	576	576

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