AZUD HELIX AUTOMATIC

AZUD HELIX AUTOMATIC SERIE 4DCL DLP

In-line self cleaning equipment with disc filtering elements and 3" (SERIE 4DLC DLP) valves for exclusive use for irrigation water filtration application.

High density polyethylene manifolds. Easy to install. Maximum resistance and durability.

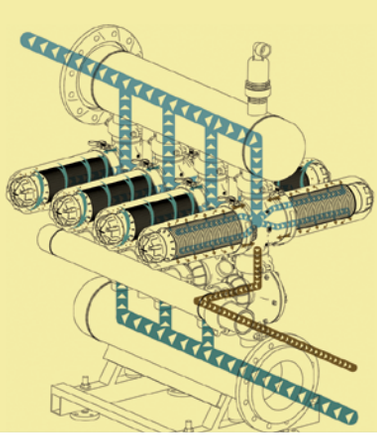
Modular configurations according to preferences and space availability. Ready to connect and operate thanks to AZUD FBC Control Unit, that allows complete automation of the equipment for different power supplies: 110-120; 220-240 V AC 50/60 Hz; 12 V DC.

ADVANTAGES

- **Disc filtration. Maximum safety.**
  Its careful design and manufacture guarantee an extended lifespan, resistance and high filtration quality.
- **AZUD HELIX device.**
  Patented clogging retardant device. Performance optimization, minimum frequency and intensity of the maintenance labours.
- **Self-cleaning filtering element.**
  Maximum water saving and efficiency in backwashing phase. Large filtration area. Filtration degrees 100, 130, 200 and 400 micron.

TECHNOLOGY

AZUD HELIX AUTOMATIC backwashes one station at a time. Remaining elements continue filtering.



FILTRATION PHASE: The Helix generates a centrifugal helical effect upon entry into the filter, this moves the particles away from the discs.
The water then passes efficiently through the depth of the uniquely designed discs.

BACKFLUSHING PHASE: The clean water from the auxiliary filter is introduced from the reverse direction through the filtering element. This decompresses the stack of discs, allowing the discs to separate and backwash efficiently.
The solids are expelled from the discs and evacuated through the backwash manifold.
The filtration process then restarts with the compression of the discs.

The backwash is controlled by two valves and a controller, which integrate the filtration equipment.

- **Modularity, versatility and compatibility.**
  The modular system allows for a wide range of configurations with the minimal number of components.
- **Maximum ease of transportation and installation.**
  Equipped with self-supporting structure for easy transport. Includes levelling device.
- **Manufactured in plastic materials.**
- **Low maintenance.**
  No tools required. Maximum wear resistance of high quality moving parts.
- **Water and energy savings.**

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FILTRATION Maximum flow per filter

AZUD HELIX AUTOMATIC filter filtering surface 3240 cm² / 502 in²

	micron mesh	400 40	200 75	130 120	100 150
GOOD	m^3/h gpm	56 246	54 238	52 229	48 211
AVERAGE	m^3/h gpm	52 229	50 220	48 211	44 194
POOR	m^3/h gpm	48 211	46 202	44 194	40 176
VERY POOR	m^3/h gpm	44 194	42 185	40 176	36 158

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BACKFLUSHING PHASE	Disc Technology	
	MG	WS
Minimum backflushing pressure per filter 4"	1.5 bar	1.3 bar
	22 psi	19 psi
Minimum backflushing flow per filter 4"	5 l/s	4 l/s
	79 gpm	64 gpm

1730

HOW TO CHOOSE AZUD HELIX AUTOMATIC EQUIPMENTS

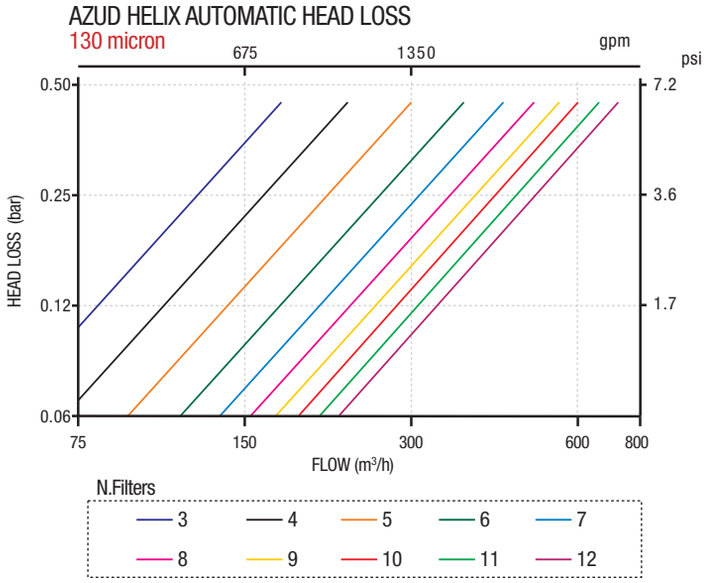
1. Determine the required filtration grade (micron).
2. Establish the quality of the water.
3. Calculate according to the following equation, the numbers of filters required with the selected SERIES.

$$\text{Number of filters} = \frac{\text{Flow to filter in the installation}}{\text{Max. Flow per filter}}$$

NOTE : The flow rate given by the filter conditions determines the frequency of the backwashing.

AZUD HELIX AUTOMATIC HEAD LOSS

130 micron

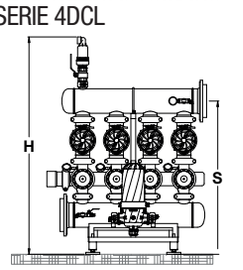


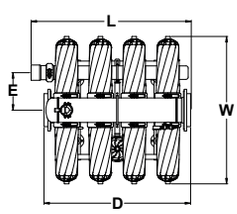
MATERIALS OF CONSTRUCTION

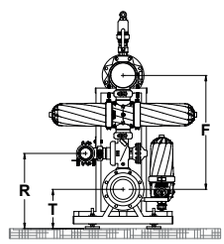
Housing	Polyamide reinforced with fiberglass
Filtering element	MG discs - Polypropylene WS discs - High density polyethylene
Sealing element	NBR
Backflushing valve	Reinforced technical plastic
Manifolds	High density polyethylene

4<pH<11 • Maximum pressure 10 bar / 145 psi • Maximum temperature 60 ºC / 140 ºF

AZUD HELIX AUTOMATIC SERIE 4DCL







Model		Specifications				Dimensions (mm)															
		N. Filters	Manifold	Filtering Surface (cm^2)	(in^2)	F mm	F in	E mm	E in	D mm	D in	L mm	L in	R mm	R in	T mm	T in	S mm	S in	H mm	H in
SERIE 4DCL	4DCL3/6FX	4" x 3	6"-150	9720	1506	888	35	306	12.0	930	36.6	1040	41.0	613	24.1	340	13.4	1227	48.3	1730	68.1
	4DCL4/6FX	4" x 4	6"-150	12960	2008	888	35	306	12.0	1145	45.1	1285	50.6	613	24.1	340	13.4	1227	48.3	1730	68.1
	4DCL4/8FX	4" x 4	8"-200	12960	2008	928	36.5	306	12.0	1195	47.0	1305	51.4	653	25.7	360	14.2	1288	50.7	1810	71.2
	4DCL5/6FX	4" x 5	6"-150	16200	2511	888	35	306	12.0	1420	55.9	1560	61.4	613	24.1	340	13.4	1227	48.3	1730	68.1
	4DCL5/8FX	4" x 5	8"-200	16200	2511	928	36.5	306	12.0	1470	57.9	1575	62.0	653	25.7	360	14.2	1288	50.7	1810	71.2
	4DCL6/8FX	4" x 6	8"-200	19440	3013	928	36.5	306	12.0	1745	68.7	1850	72.8	653	25.7	360	14.2	1288	50.7	1810	71.2
	4DCL6/10FX	4" x 6	10"-273	19440	3013	978	38.5	306	12.0	1779	70.0	1870	73.6	708	27.8	390	15.3	1368	53.8	1915	75.4
	4DCL7/8FX	4" x 7	8"-200	22680	3515	928	36.5	306	12.0	2020	79.5	2125	83.6	653	25.7	360	14.2	1288	50.7	1810	71.2
	4DCL7/10FX	4" x 7	10"-273	22680	3515	978	38.5	306	12.0	2054	80.9	2145	84.4	708	27.8	390	15.3	1368	53.8	1915	75.4
	4DCL8/8FX	4" x 8	8"-200	25920	4017	928	36.5	306	12.0	2295	90.4	2400	94.5	653	25.7	360	14.2	1288	50.7	1810	71.2
	4DCL8/10FX	4" x 8	10"-273	25920	4017	978	38.5	306	12.0	2329	91.7	2420	95.3	708	27.8	390	15.3	1368	53.8	1915	75.4
	4DCL9/10FX	4" x 9	10"-273	29160	4519	978	38.5	306	12.0	2604	102.5	2695	106.1	708	27.8	390	15.3	1368	53.8	1915	75.4
	4DCL9/12FX	4" x 9	12"-323,9	29160	4519	1043	41	306	12.0	2612	102.8	2700	106.3	781	30.7	430	16.9	1473	58.0	2055	80.9
	4DCL10/10FX	4" x 10	10"-273	32400	5022	978	38.5	306	12.0	3029	119.3	3120	122.7	708	27.8	390	15.3	1368	53.8	1915	75.4
	4DCL10/12FX	4" x 10	12"-323,9	32400	5022	1043	41	306	12.0	3029	119.3	3120	122.8	781	30.7	430	16.9	1473	58.0	2055	80.9
	4DCL11/12FX	4" x 11	12"-323,9	35640	5524	1043	41	306	12.0	3304	130.1	3395	133.6	781	30.7	430	16.9	1473	58.0	2055	80.9
	4DCL12/12FX	4" x 12	12"-323,9	38880	6026	1043	41	306	12.0	3579	140.9	3670	144.4	781	30.7	430	16.9	1473	58.0	2055	80.9
	W=1200 mm (47.2 in)																				

4" drainage manifold - Grooved connection.
Dimensions of the models with flange connection.
Other configurations in www.azud.com