

AZUD HELIX AUTOMATIC

AZUD HELIX AUTOMATIC SERIE 4DCL DLP

In-line Self Cleaning Equipment with disc filtering elements and 3" valves.

High density polyethylene manifolds. Easy to install. Maximum resistance and durability. Max. flow: 624 m³/h (2748 gpm).



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.

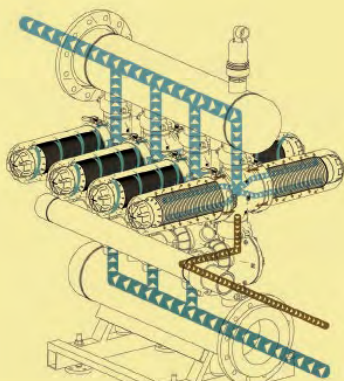
ADVANTAGES

- ✓ **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 | 400 | 200 | 130 | 100 |
|-----------|--------------------------|-----------|-----------|-----------|-----------|
| | mesh | 40 | 75 | 120 | 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 |

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.

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

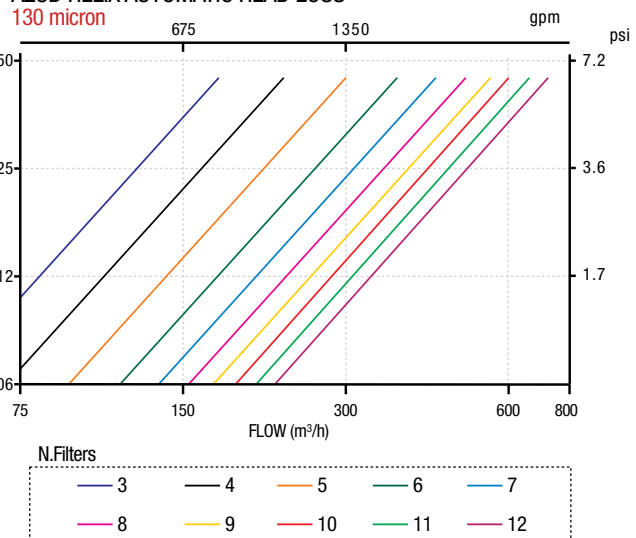
NOTE : The flow rate given by the filter conditions determines the frequency of the backwashing.

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 °C / 140 °F

AZUD HELIX AUTOMATIC HEAD LOSS



| Model | Specifications | | | | Dimensions (mm) | | | | | | | | | | | | | | | |
|-------------|----------------|-----------|--------------------------------------|--------------------------------------|-----------------|------|-----|------|------|-------|------|-------|-----|------|-----|------|------|------|------|------|
| | N. Filters | Manifold | Filtering Surface (cm ²) | Filtering Surface (in ²) | F | E | D | L | R | T | S | H | | | | | | | | |
| 4DCL3/6FX | 4" x 3 | 6"-150 | 9720 | 1506 | 888 | 35 | 306 | 12.0 | 930 | 36.6 | 1040 | 41.0 | 573 | 22.6 | 300 | 11.8 | 1188 | 46.8 | 1690 | 66.6 |
| 4DCL4/6FX | 4" x 4 | 6"-150 | 12960 | 2008 | 888 | 35 | 306 | 12.0 | 1145 | 45.1 | 1285 | 50.6 | 573 | 22.6 | 300 | 11.8 | 1188 | 46.8 | 1690 | 66.6 |
| 4DCL4/8FX | 4" x 4 | 8"-200 | 12960 | 2008 | 928 | 36.5 | 306 | 12.0 | 1195 | 47.0 | 1305 | 51.4 | 613 | 24.1 | 320 | 12.6 | 1248 | 49.1 | 1770 | 69.7 |
| 4DCL5/6FX | 4" x 5 | 6"-150 | 16200 | 2511 | 888 | 35 | 306 | 12.0 | 1420 | 55.9 | 1560 | 61.4 | 573 | 22.6 | 300 | 11.8 | 1188 | 46.8 | 1690 | 66.6 |
| 4DCL5/8FX | 4" x 5 | 8"-200 | 16200 | 2511 | 928 | 36.5 | 306 | 12.0 | 1470 | 57.9 | 1575 | 62.0 | 613 | 24.1 | 320 | 12.6 | 1248 | 49.1 | 1770 | 69.7 |
| 4DCL6/8FX | 4" x 6 | 8"-200 | 19440 | 3013 | 928 | 36.5 | 306 | 12.0 | 1745 | 68.7 | 1850 | 72.8 | 613 | 24.1 | 320 | 12.6 | 1248 | 49.1 | 1770 | 69.7 |
| 4DCL6/10FX | 4" x 6 | 10"-273 | 19440 | 3013 | 978 | 38.5 | 306 | 12.0 | 1779 | 70.0 | 1870 | 73.6 | 668 | 26.3 | 350 | 13.8 | 1328 | 52.3 | 1875 | 73.8 |
| 4DCL7/8FX | 4" x 7 | 8"-200 | 22680 | 3515 | 928 | 36.5 | 306 | 12.0 | 2020 | 79.5 | 2125 | 83.6 | 613 | 24.1 | 320 | 12.6 | 1248 | 49.1 | 1770 | 69.7 |
| 4DCL7/10FX | 4" x 7 | 10"-273 | 22680 | 3515 | 978 | 38.5 | 306 | 12.0 | 2054 | 80.9 | 2145 | 84.4 | 668 | 26.3 | 350 | 13.8 | 1328 | 52.3 | 1875 | 73.8 |
| 4DCL8/8FX | 4" x 8 | 8"-200 | 25920 | 4017 | 928 | 36.5 | 306 | 12.0 | 2295 | 90.4 | 2400 | 94.5 | 613 | 24.1 | 320 | 12.6 | 1248 | 49.1 | 1770 | 69.7 |
| 4DCL8/10FX | 4" x 8 | 10"-273 | 25920 | 4017 | 978 | 38.5 | 306 | 12.0 | 2329 | 91.7 | 2420 | 95.3 | 668 | 26.3 | 350 | 13.8 | 1328 | 52.3 | 1875 | 73.8 |
| 4DCL9/10FX | 4" x 9 | 10"-273 | 29160 | 4519 | 978 | 38.5 | 306 | 12.0 | 2604 | 102.5 | 2695 | 106.1 | 668 | 26.3 | 350 | 13.8 | 1328 | 52.3 | 1875 | 73.8 |
| 4DCL9/12FX | 4" x 9 | 12"-323.9 | 29160 | 4519 | 1043 | 41 | 306 | 12.0 | 2612 | 102.8 | 2700 | 106.3 | 741 | 29.2 | 390 | 15.4 | 1433 | 56.4 | 2010 | 79.1 |
| 4DCL10/10FX | 4" x 10 | 10"-273 | 32400 | 5022 | 978 | 38.5 | 306 | 12.0 | 3029 | 119.3 | 3120 | 122.7 | 668 | 26.3 | 350 | 13.8 | 1328 | 52.3 | 1875 | 73.8 |
| 4DCL10/12FX | 4" x 10 | 12"-323.9 | 32400 | 5022 | 1043 | 41 | 306 | 12.0 | 3029 | 119.3 | 3120 | 122.8 | 741 | 29.2 | 390 | 15.4 | 1433 | 56.4 | 2010 | 79.1 |
| 4DCL11/12FX | 4" x 11 | 12"-323.9 | 35640 | 5524 | 1043 | 41 | 306 | 12.0 | 3304 | 130.1 | 3395 | 133.6 | 741 | 29.2 | 390 | 15.4 | 1433 | 56.4 | 2010 | 79.1 |
| 4DCL12/12FX | 4" x 12 | 12"-323.9 | 38880 | 6026 | 1043 | 41 | 306 | 12.0 | 3579 | 140.9 | 3670 | 144.4 | 741 | 29.2 | 390 | 15.4 | 1433 | 56.4 | 2010 | 79.1 |

W=1200 mm (47.2 in)

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

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