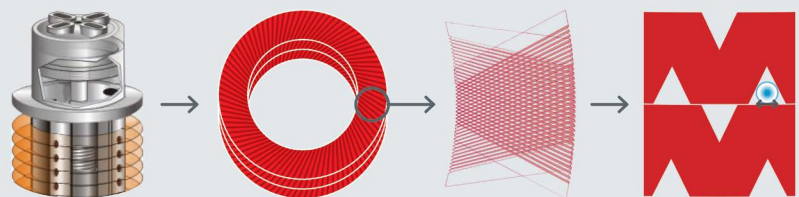


Arkal's disc technology by Amiad

Filtration precision and high-performance systems for optimal efficiency.



Diagonally Grooved
Disc Filtration



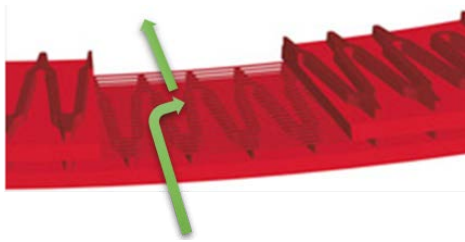
Arkal Disc Technology features:

- Automatic self-cleaning systems
- Reliable long-term performance
- Minimal maintenance required
- Precise & consistent filtration degree
- High dirt holding capacity
- Corrosion resistant

Arkal's Disc Filtration - Spin Klin™

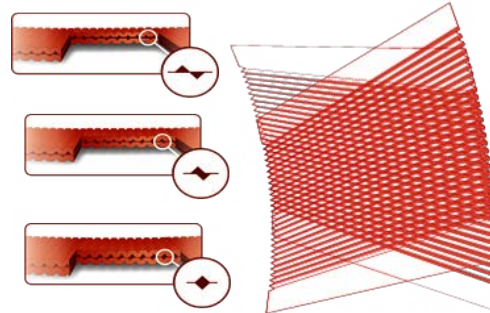
The Arkal Spin Klin™ series are modular, all polymeric, automatic disc filters with a patented self-cleaning backwash mechanism and virtually unlimited flow rates with available filtration degrees of between 20 to 400 micron. The Spin Klin™ filters are highly suitable for corrosive water applications due to their polymeric structure. Spin Klin™ solutions have been successfully implemented in a wide range of applications worldwide: protection of drip irrigation, industrial processes such as cooling and process water, municipal city water purification, wastewater reclamation and pre-membrane filtration applications for sea water desalination.

Single pass Vs. Arkal's Multi-pass



Surface filtration

Other suppliers offer single pass discs ("Wall Discs") with each disc side being different. This leads to basic single crossing points between the clean and the dirty sides and a **less effective surface filtration mechanism**.

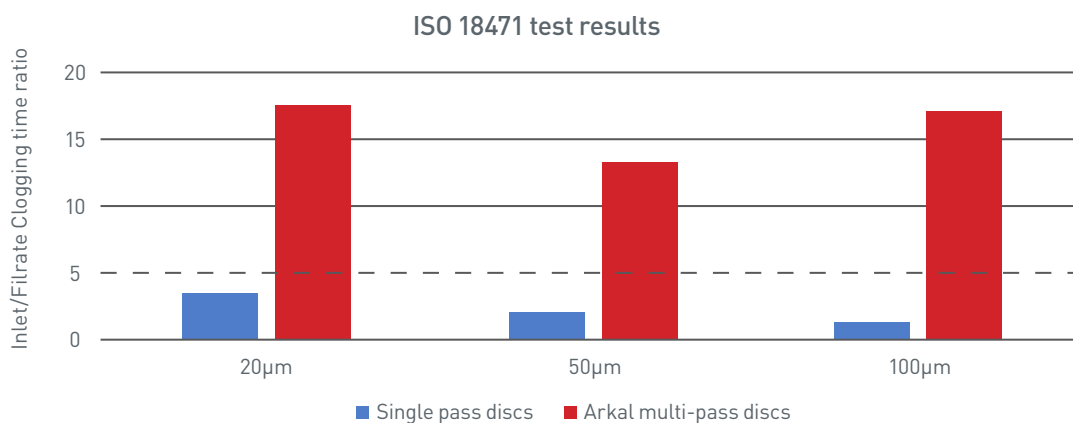


Depth Filtration Mechanism

Arkal's multi-pass discs are diagonally grooved from both sides in opposite directions, creating a matrix of consecutive crossing points which form multiple particle traps to **allow only clean water to flow through**.

Filtration degree precision

Amiad uses the world-wide recognized ISO 18471 as its standard test to verify its discs' filtration degree, creating a direct correlation between its filtration degree declaration and actual performance of its filters. The graphs below show the inlet/filtrate clogging time ratio between Amiad and its competitors, in tests performed with 20, 50 & 100 micron-declared discs.

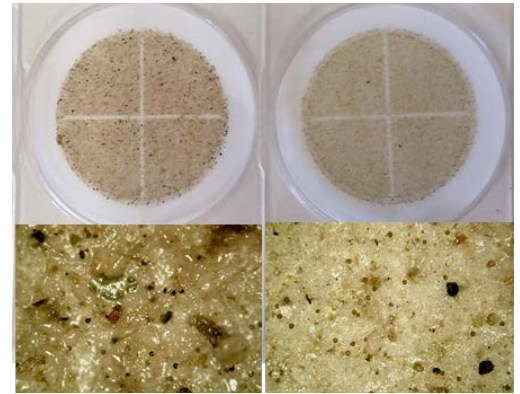


Results Matter - Filtration integrity

Inspecting the 50µm filtrate under microscope indicated that while Arkal discs provide 99.99999% removal of $\geq 200\mu\text{m}$ particles, the single-pass discs showed only 97% removal rate. **In the filtrate that passed the competitors' discs, one could find particles more than 4 times larger than the declared filtration degree flowing through the filter.**

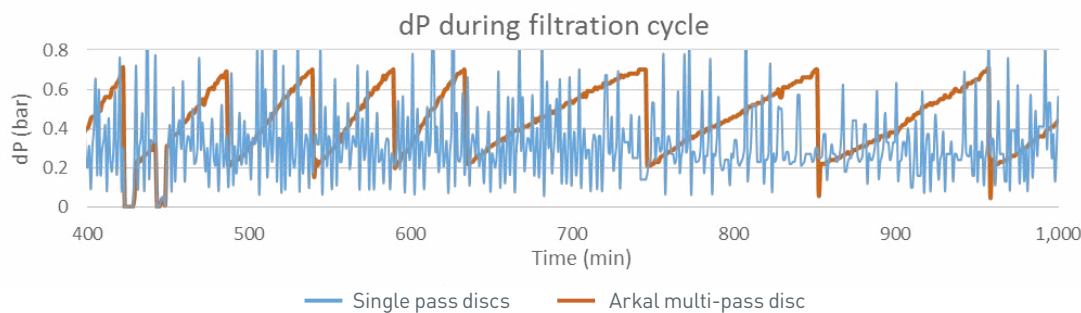
Protected by
Single pass disc

Protected by
Arkal multi-pass disc



Dirt holding capacity

- Longer filtration cycle
- Lower energy demand (lower avg. dP)
- Reduced backwash volume
- High recovery rate
- Longer maintenance intervals
- Less wear and tear
- Reduced total operational cost
- Longer filter life span



In multiple tests with various filtration degrees and various water qualities we have found that single pass disc filters require between 2 to 20 times (!) more backwash cycles compared to Arkal disc filters.

Downstream protection

The depth filtration effect of Arkal's multi-pass discs helps the filter element to stop more particles and give better protection to the equipment downstream .

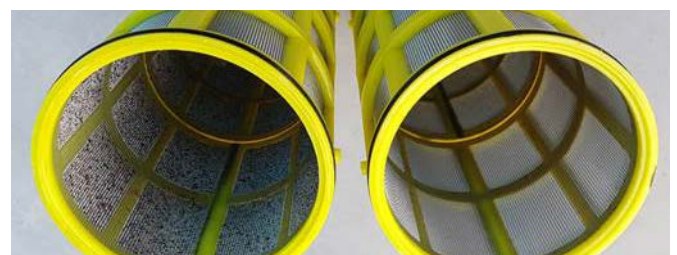
*Note the difference between the control filters (below), downstream the disc filters, note the amount of material which passed through single pass discs to the control filter versus the ones protected by Arkal's discs.

Protected by
Single pass disc

Protected by
Arkal disc

Protected by
Single pass disc

Protected by
Arkal disc



Cleanability



Competitors' spines and cleaning mechanism do not guarantee an even cleanability along the entire spine length, resulting in shorter cycle times, more frequent backwash and increasing headloss.

Arkal's Spin Klin™ has a uniform cleaning quality throughout the filter element.

Arkal's Available Filtration Degrees

The following table lists the available filter elements for Arkal's automatic disc filters.

For ease of operation and maintenance, the discs are color coded.

Please consult your local Amiad representative for the most suitable element for your application's requirements.

Micron	20		40	55		70	100		130		200		400
Color	●		●	●		●	●		●		●		●
Filtration Element	Discs PP*	Discs PA*	Discs PP / PA*	Discs PP*	Discs PA*	Discs PP / PA*	Discs PP*	Discs PA*	Discs PP*	Discs PA*	Discs PP*	Discs PA*	Discs PP*
2" SK Compact , 2" SK , 3" SK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3" SK Apollo Angle	✓	-	-	✓	-	-	✓	-	✓	-	✓	-	✓
4" SK Apollo Twin	✓	-	-	✓	-	-	✓	-	✓	-	✓	-	✓
4" SK Galaxy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10" Super Galaxy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*PP - Polypropylene standard discs; PA - Polyamide discs for water containing mineral oil

When Performance Counts – Amiad

For more than 5 decades, Amiad has accumulated an exceptional level of expertise and knowhow in the field of automatic particle filtration.

Amiad delivers optimal water solutions globally with a wide range of filtration technologies, serving and supporting our customers in over 80 countries.

As part of its worldwide service, Amiad provides professional support and guidance to its customers and partners through its laboratory and field tests, water

analysis, and on-site pilots. This guidance, if required, is offered to size the most appropriate solution to the site, water quality, and customer requirements - anywhere in the world; before, during, and following commissioning of the projects.



Scan / click to learn more



Spin Klin™ clip



Products

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