# 2″ Spin Klin™

Automatic disc filtration system for low to medium flow rates in a compact footprint


| inlet/outlet | flow rate | filtration degrees | max. operating pressure |
|---|---|---|---|
| 80 - 150 mm (3″ - 6″) | 10 - 120 $m^3/h$ (44 - 530 gpm) | 55 – 400 micron | 10 bar (145 psi) |

## features:

- Micron-precise depth filtration of solids
- Innovative disc technology captures and retains large amounts of solids
- Long-term operation with minimal maintenance
- Easy and simple operation
- Short automatic backwash with regulated water volume for a small water footprint
- Permanently eliminates the need to replace filter media
- Compact design

## How the 2” Spin Klin™ Systems Work

### General

The Arkal 2” Spin Klin™ series are modular, all polymeric, automatic disc filters with a patented self-cleaning backwash mechanism. The 2” Spin Klin™ systems range in flow rates from 10 $m^3$/h (44 gpm) to 90 $m^3$/h (396 gpm) with filtration degrees ranging from 55 - 400 micron. Inlet/Outlet from 80 - 150 mm (3”- 6”) diameter.


### The Filtration Process

The discs are stacked on the Spin Klin™ spine and assembled according to pre-determined water filtration requirements. During filtration, the discs are compressed by means of a pre-loaded spring and differential pressure, forcing the water to pass through the grooved disc surface, thus trapping the solids.

### The Backwash Process

Activated by a pre-determined time command or differential pressure, the system enters backwash mode. The inlet valve port shuts as the drain valve port opens. During the backwash process, pressure is released and the spine’s piston elevates, releasing the compression on the discs. Tangential jets of filtered water are then forced through the nozzles positioned along the spine. At this stage the discs spin freely, loosening the trapped solids which are then flushed out. During the flushing cycle each filter pod is backwashed sequentially, while the other pods continue to supply filtered water downstream. When a pod begins the backwash cycle, the system valves automatically reverse the flow in the pod, allowing filtered downstream pressurized water to backwash the filter.

| Construction materials | |
|---|---|
| Filter Housing & Lid | RPA (Reinforce Polyamide) or RPP (Reinforce Polypropylene) |
| Disc elements | PP (Polypropylene) or PA (Polyamide) |
| Backwash valves | RPA (Reinforce Polyamide) or RPP (Reinforce Polypropylene) |
| Manifolds | PP (Polypropylene) |
| Seals | NBR or EPDM, (Viton optional) |
| Control Tubing | PE or PA |

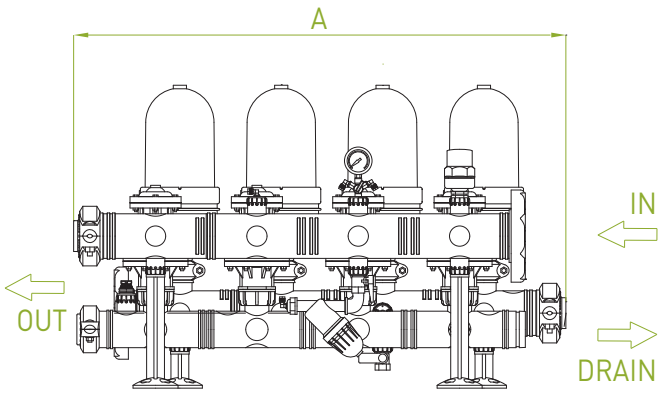
**Disc material type availability according to filtration degree:**

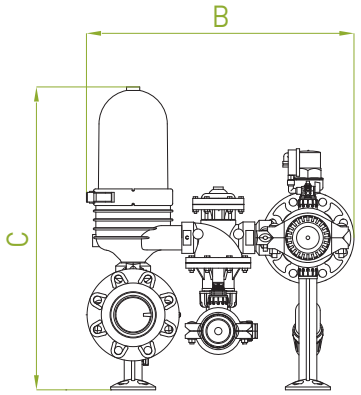
| Color Code | Gray | Purple | Green | Brown | Black | Red | Yellow | Blue |
|---|---|---|---|---|---|---|---|---|
| Micron | 20 | 40 | 55 | 70 | 100 | 130 | 200 | 400 |
| PP Disc<br>PA (Nylon) Disc | PP, PA | PP | PP, PA | PP, PA | PP, PA | PP, PA | PP, PA | PP |

| Filter Type | | 2 unit battery | 3 unit battery | 4 unit battery |
|---|---|---|---|---|
| **General Data** | | | | |
| Max. working pressure | | 10 bar (145 psi) | | |
| Min. backwash pressure | | 2.8 bar (40.6 psi) | | |
| Maximum recommended flow rate | 130µ | 30 $m^3$/h (132 gpm) | 45 $m^3$/h (198 gpm) | 60 $m^3$/h (264 gpm) |
| Filtration volume | | 2,296 $cm^3$ (140 $in^3$) | 3,444 $cm^3$ (210 $in^3$) | 4,592 $cm^3$ (280 $in^3$) |
| Filtration area | | 1,760 $cm^2$ (272 $in^2$) | 2,640 $cm^2$ (409 $in^2$) | 3,520 $cm^2$ (546 $in^2$) |
| Inlet/Outlet diameter | | 80 mm (3"), 100 mm (4") | 100 mm (4") | |
| Max. working temperature | | 60°C (140°F) | | |
| Dry weight standard | | 27 kg (59.5 lb) | 38 kg (83.7 lb) | 49 kg (108 lb) |

| Backwash Data | |
|---|---|
| Valve drain port | 50 mm (2") |
| Flushing time | 20 seconds |
| Min. flow for backwash | 10 $m^3$/h (44 gpm) |

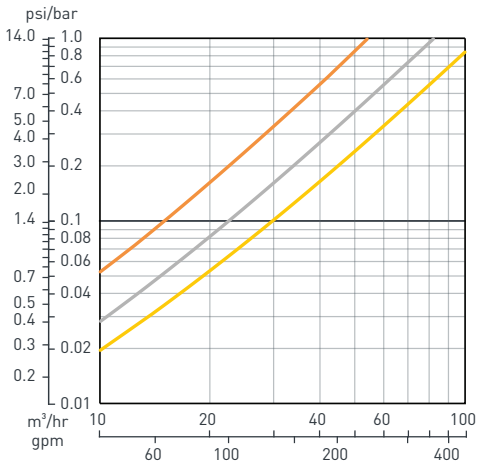
## Typical Installation Drawing




| Dimensions | | 2 unit battery | 3 unit battery | 4 unit battery |
|---|---|---|---|---|
| A | Length | 706 mm (28") | 964 mm (38") | 1,214 mm (48") |
| B | Width | 660 mm (26") | | |
| C | Height | 747 mm (30") | | |

## Head Loss Graphs (in clean water)




*head loss is based on a 130 micron disc

2 unit — 3 unit — 4 unit

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