

Arkal Product Guide



Disc Filtration Technology

Standard Features:

- Micron-precise filtration of solids
- Innovative depth filter design traps and retains large amounts of solids
- Long-term operation with minimal maintenance or cleaning

Arkal’s distinctively developed disc filtration technology operates using thin, color-coded polypropylene discs of a specific micron size. The discs are diagonally grooved on both sides, in opposite directions. A series of discs are stacked and compressed on a specially designed spine.

The grooves of any two adjacent discs, pressed together, create a series of crossing points which form multiple particle traps. In the filtration process, the force of the spring along with the differential pressure firmly compresses these discs together providing exceptional filtration efficiency. Filtration occurs as water percolates from the outer diameter to the inner diameter of the filter element. Depending on the micron rating, there are multiple crossing points in each track, creating distinctive in-depth filtration.

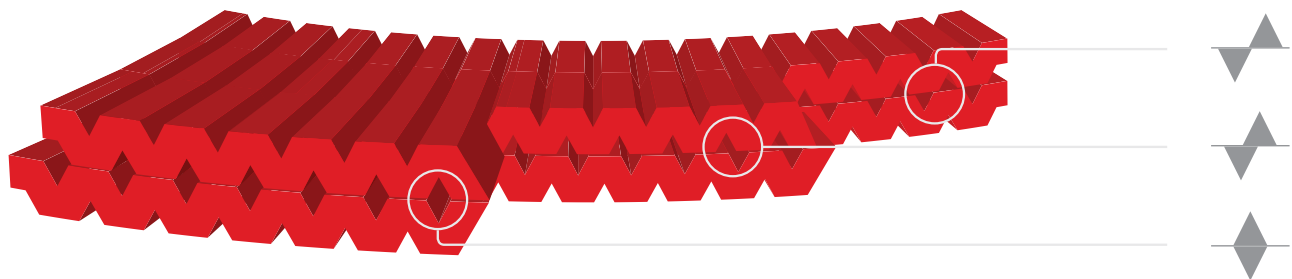
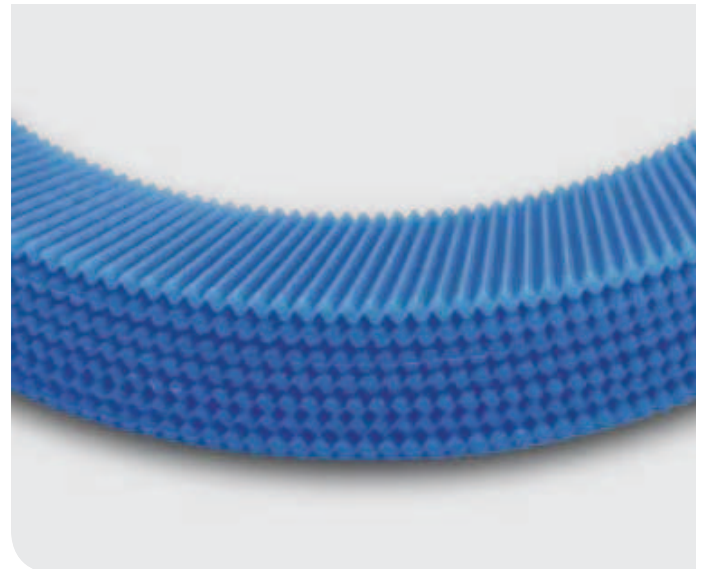


Table of Filtration Grades of the Discs and Color Code

Color Code	Blue	Yellow	Red	Black	Brown	Green	Purple	Gray
Micron	400	200	130	100	70	55	40	20
Mesh	40	80	120	140				

Spin Klin® Technology - Fully Automatic Disc Filter



Standard Features:

- Securely stacked discs for micron-precise filtration solids
- Corrosion resistant spine
- Innovative depth filter design captures and retains large amounts of solids for longer filtration cycles
- Short, efficient backwash process conserves water and energy
- Easy and simple operation
- Long-term operation with minimal maintenance



Filtration Process:

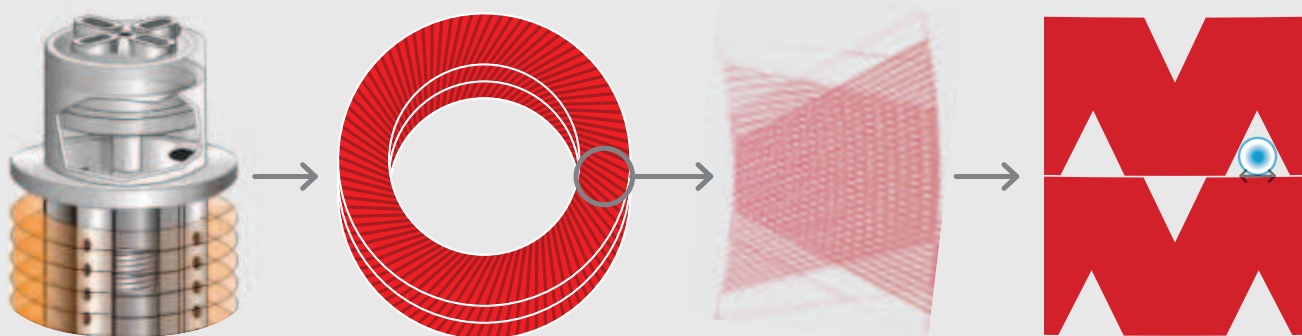
The color coded micron sized filtration discs are stacked on the Spin Klin® spine and assembled according to predetermined water filtration requirements. During filtration, the discs are compressed by means of preloaded spring and differential pressure, forcing the water to pass through the grooved discs surface, thus trapping the solids.



Backwash Process:

Activated by a predefined time command or differential pressure, the system enters backwash mode. The inlet valve port shuts as the drain port opens. During the backwash process, pressure is released and the spine's piston rises, releasing the compression on the discs. Tangential jets of clean 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.

Diagonally Grooved Disc Filtration



Manual Disc Filters 3/4" - 1" - 1 1/2"



3/4"

3/4" Filtap

1"

1" Super

1 1/2"

1 1/2" Super

Inlet/Outlet Connection

3/4" - 1" - 1 1/2"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Excellent corrosion resistance
- Long life span
- Polyamide housing - resistant to harsh environmental conditions (3/4" PBT housing)

¾" Technical Data**¾" w/o valve****¾" Filtap (with valve)**

Max. pressure	10 bar	10 bar
Flow rate: 400-100 micron (40-140 mesh)	4 m ³ /h	4 m ³ /h
Filtration surface area	160 cm ²	160 cm ²
Filtration volume	95 cm ³	95 cm ³
Filter length - L	144 mm	210 mm
Filter width - WØ	74 mm	74 mm
Distance between end connections - A	150 mm	155 mm
Weight	0.37 kg	0.42 kg

1" Technical Data**1"****1" Super**

Max. pressure	10 bar	10 bar
Flow rate: 400-100 micron (40-140 mesh)	6 m ³ /h	8 m ³ /h
55 micron	4 m ³ /h	6 m ³ /h
Filtration surface area	306 cm ²	500 cm ²
Filtration volume	360 cm ³	592 cm ³
Filter length - L	233 mm	340 mm
Filter width - WØ	130 mm	130 mm
Distance between end connections - A	158 mm	158 mm
Weight	1.1 kg	1.4 kg

1 ½" Technical Data**1 ½"****1 ½" Super**

Max. pressure	10 bar	10 bar
Flow rate: 400-100 micron (40-140 mesh)	8 m ³ /h	12 m ³ /h
55 micron	5 m ³ /h	8 m ³ /h
Filtration surface area	306 cm ²	500 cm ²
Filtration volume	360 cm ³	592 cm ³
Filter length - L	250 mm	350 mm
Filter width - WØ	130 mm	130 mm
Distance between end connections - A	200 mm	200 mm
Weight	1.3 kg	1.5 kg

* Measurements are for reference only.

Manual Disc 2"-3"



2" Line



2" Dual



2" Super



3" Twin

Inlet/Outlet Connection

2" - 3"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Excellent corrosion resistance
- Long life span

Special Features:

- 2" super filter - Tangential inlet for higher retention capacity.
- 2" Dual filter - Angle or in-line outlet options for maximum flexibility.
- 3" Twin filter - Largest filtration area of comparable products.
- Polyamide housing - resistant to harsh environmental conditions.

2" Line/Dual Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	25 m ³ /h
70 micron	20 m ³ /h
55 micron	17 m ³ /h
20 micron	8 m ³ /h
Filtration surface area	950 cm ²
Filtration volume	1,225 cm ³
Filter length - L	437 mm/465 mm
Filter width - WØ	200 mm
Distance between end connections	A. 260 mm, B. 76 mm
Weight	5 kg

2" Super Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	25 m ³ /h
70 micron	20 m ³ /h
55 micron	17 m ³ /h
20 micron	8 m ³ /h
Filtration surface area	950 cm ²
Filtration volume	1,225 cm ³
Filter length - L	495 mm
Filter width - WØ	200 mm
Distance between end connections	A. 145 mm, B. 85 mm
Weight	6 kg

3" Twin Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	50 m ³ /h
70 micron	40 m ³ /h
55 micron	34 m ³ /h
20 micron	16 m ³ /h
Filtration surface area	1,900 cm ²
Filtration volume	2,450 cm ³
Filter length - L	865 mm
Filter width - WØ	200 mm
Distance between end connections	A. 260 mm B. 76 mm
Distance between end connections - A	320 mm
Weight (flanged)	13.95 kg
Weight (victualic, threaded)	9.85 kg

* Measurements are for reference only.

Manual Disc Filters 2"-3" Leader



2" Leader



3" Leader

Inlet/Outlet Connection

2" - 3"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Long life span

Special Features:

- Easy to open, clean and close.
- Suitable for all commonly used fertilizers and acids.
- Suitable for sea and brackish water, high and low pH 2-13.
- Polypropylene housing - excellent chemical resistance.

2" Leader Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	25 m ³ /h
70 micron	20 m ³ /h
55 micron	17 m ³ /h
20 micron	8 m ³ /h
Filtration surface area	950 cm ²
Filtration volume	1,225 cm ³
Filter length - L	425 mm
Filter width - WØ	195 mm
Distance between end connections	A. 230 mm
	B. 75 mm
Weight	2 kg

3" Leader Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	50 m ³ /h
70 micron	40 m ³ /h
55 micron	34 m ³ /h
20 micron	16 m ³ /h
Filtration surface area	1,900 cm ²
Filtration volume	2,450 cm ³
Filter length - L	742 mm
Filter width - WØ	200 mm
Distance between end connections	A. 260 mm B. 76 mm
Distance between end connections - A	320 mm
Weight (flanged)	8 kg
Weight (victualic, threaded)	6.3 kg

* Measurements are for reference only.

Manual Disc Filters 2" Dual Lite, 3" Twin Lite



2" Dual Leader



3" Twin Lite

Inlet/Outlet Connection

2" - 3"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Long life span

Special Features:

- Easy to open, clean and close.
- Suitable for all commonly used fertilizers and acids.
- Suitable for sea and brackish water, high and low pH 2-13.
- Polypropylene housing - excellent chemical resistance.
- Unique polymeric clamp.

2" Dual Lite Technical Data

Max. pressure	8 bar
Flow rate: 400-100 micron (40-140 mesh)	25 m ³ /h
70 micron	20 m ³ /h
55 micron	17 m ³ /h
20 micron	8 m ³ /h
Filtration surface area	950 cm ²
Filtration volume	1,225 cm ³
Filter length - L	416 mm
Filter width - WØ	195 mm
Distance between end connections	A. 260 mm
	B. 75 mm
Weight	3 kg

3" Twin Lite Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	50 m ³ /h
70 micron	40 m ³ /h
55 micron	34 m ³ /h
20 micron	16 m ³ /h
Filtration surface area	1,900 cm ²
Filtration volume	2,450 cm ³
Filter length - L	840 mm
Filter width - WØ	225 mm
Distance between end connections - A	320 mm
Weight	5.9 kg

* Measurements are for reference only.

Manual Disc Filters 3" - 4" Super Angle



3" Super Angle



4" Super Angle

Inlet/Outlet Connection

3" - 4"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Long life span

Special Features:

- Easy to open, clean and close.
- Suitable for all commonly used fertilizers and acids.
- Suitable for sea and brackish water, high and low pH 2-13.
- Polypropylene housing - excellent chemical resistance.

3" Super Angle Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	50 m ³ /h
55 micron	35 m ³ /h
20 micron	18 m ³ /h
Filtration surface area	1,852 cm ²
Filtration volume	2,223 cm ³
Filter height - H	666 mm
Filter length - L	397 mm
Filter width - WØ	280 mm
Distance between end connections	A. 185 mm B. 145 mm
Weight - flanged	12.55 kg
Weight - victaulic, threaded	11.05 kg

4" Super Angle Technical Data

Max. pressure	10 bar
Flow rate: 400-100 micron (40-140 mesh)	60 m ³ /h
55 micron	40 m ³ /h
20 micron	20 m ³ /h
Filtration surface area	1,852 cm ²
Filtration volume	2,223 cm ³
Filter height - H	664 mm
Filter length - L	410 mm
Filter width - WØ	280 mm
Distance between end connections	A. 187 mm B. 145 mm
Weight - flanged	13.50 kg
Weight - victaulic, threaded	11.40 kg

* Manifold construction material options: Polypropylene, Polyester Coated, Stainless Steel.

* Measurements are for reference only.

Manual Disc Filters 4" - 6" Super Leader



4" Super Leader



6" Super Leader

Inlet/Outlet Connection

4" - 6"

Standard Features:

- Innovative filter design captures and retains large amounts of solids
- Operation is easy and requires no special tools
- Long life span

Special Features:

- The largest polypropylene disc filters.
- Easy to open, clean and close.
- Suitable for all commonly used fertilizers and acids.
- Suitable for sea and brackish water, high and low pH 2-13.
- Polypropylene housing - excellent chemical resistance.

4" Super Leader Technical Data

Max. pressure	10 bar
Max. flow rate: 400-100 micron	110 m ³ /h
Filtration surface area	3,704 cm ²
Filtration volume	4,446 cm ³
Filter length - L	1,185 mm
Filter width - WØ	280 mm
Distance between end connections - A	445 mm
Weight - flanged	24.65 kg

6" Super Leader Technical Data

Max. pressure	10 bar
Max. flow rate: 400-100 micron	160 m ³ /h
Filtration surface area	3,704 cm ²
Filtration volume	4,446 cm ³
Filter length - L	1,185 mm
Filter width - WØ	280 mm
Distance between end connections - A	415 mm
Weight - flanged	26.40 kg

* Manifold construction material options: Polypropylene, Polyester Coated, Stainless Steel.

* Measurements are for reference only.