amiad® WATER SYSTEMS | ARKAL

SK 2" Compact

Automatic Compact (stand alone) disc filter for low flow rates

inlet/outlet	max. flow rate	filtration degrees	max. operating pressure
2" (50 mm)	44 gpm (20 m^3/h)	20 – 400 micron	145 psi (10 bar)

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
- Compact design

How the SK 2” Compact Filters Work

General

The Arkal SK 2” Compact filter is a stand alone, polymeric, automatic disc filters with a patented self-cleaning backwash mechanism.
The Arkal SK 2” Compact filter is for flow rates of up to 88 gpm (20 m^3/h) with filtration degrees ranging from 20 – 400 micron. Inlet /Outlet - 2” (50 mm) 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 trigger or differential pressure, the filter enters backwash mode. The inlet valve port shuts while the drain valve port opens. Water flows through a bypass filter screen into the outlet valve and into the filter. 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.

*Please note: During backwash of the 2” Compact downstream flow is suspended.

External Source Backwash

The inlet and outlet valves automatically change position, and opens the drain and external source ports. Pressurized filtered water from the external source enters the filter through its outlet port and backwashes it.

Air-Aided Backwash

Main benefits:

- Enhanced cleaning power, especially on fine filtration degrees
- Less backwash water volume
- Low pressure operation
- Reduced backwash time per filter pod (<10 sec)
- The air and water mix at a minimum pressure of 2.5 bar generates the optimal cleaning performance in spine technology

A clean & dry air pressure source is necessary to operate the filtration system (supplied by the customer).

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 PA (Nylon) Disc	PP, PA	PP	PP, PA	PP, PA	PP, PA	PP, PA	PP, PA	PP

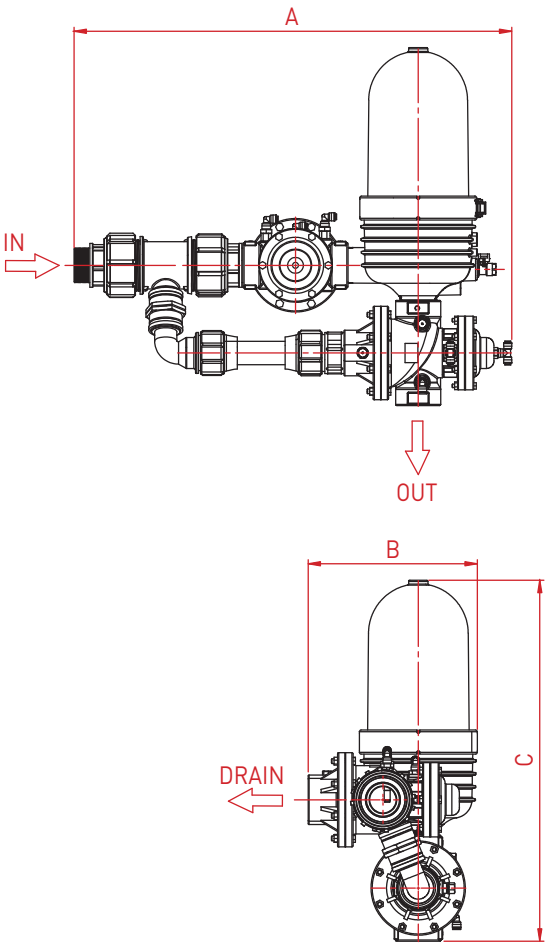
SK 2" Compact

Filter Type		2" Compact
General Data		
Max. working pressure*		145 psi (10 bar)
Min. backwash pressure		40.6 psi (2.8 bar)
Max. recommended flow rates	100µ	88 gpm (15 m³/h)
	55µ	44 gpm (10 m³/h)
Filtration volume		70 in³ (1,148 cm³)
Inlet/Outlet diameter		2" (50 mm)
Max. working temperature*		140°F (60°C)
Dry weight		44 lb (20 kg)

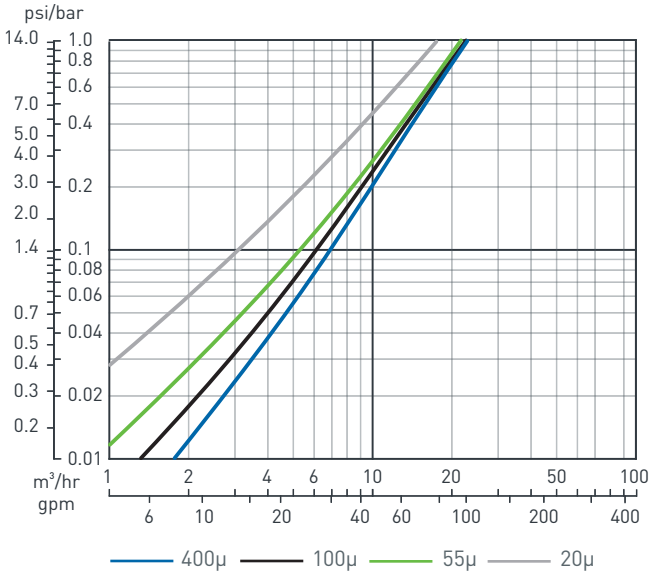
Backwash Data	
Exhaust valve	2" (50 mm)
Flushing time	20 sec
Minimum flow for backwash	44 gpm (10 m³/h)

* Maximum operating pressure and temperature are interdependent parameters and are given for general reference only. Please consult your authorized Amiad representative for the application specific parameters.

Typical Installation Drawing



Head Loss Graphs (in clean water)



Dimensions		1 unit battery
A	Length	29 1/2" (749 mm)
B	Width	11 5/16" (287 mm)
C	Height	24 3/32" (612 mm)

SK 2" Compact External Source

Filter Type		2" Compact EX.S.
General Data		
Max. working pressure*		145 psi (10 bar)
Min. backwash pressure		40.6 psi (2.8 bar)
Max. recommended flow rates	100µ	88 gpm (15 m^3/h)
	55µ	44 gpm (10 m^3/h)
Filtration volume		70 in^3 (1,148 cm^3)
Inlet/Outlet diameter		2" (50 mm)
Max. working temperature*		140°F (60°C)
Dry weight		44 lb (20 kg)
Air flow requirements		71 gpm (270 l/min) at 87-116 psi (6-8 bar)

Backwash Data	
Exhaust valve	2" (50 mm)
Flushing time	15 sec
Minimum flow for backwash	44 gpm (10 m^3/h)

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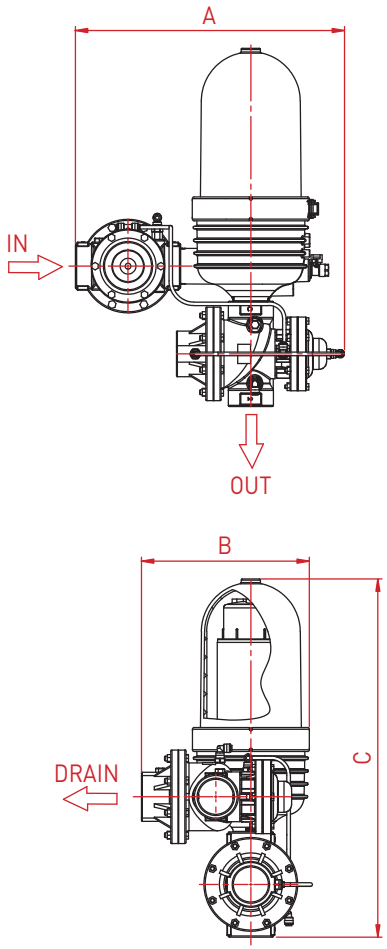
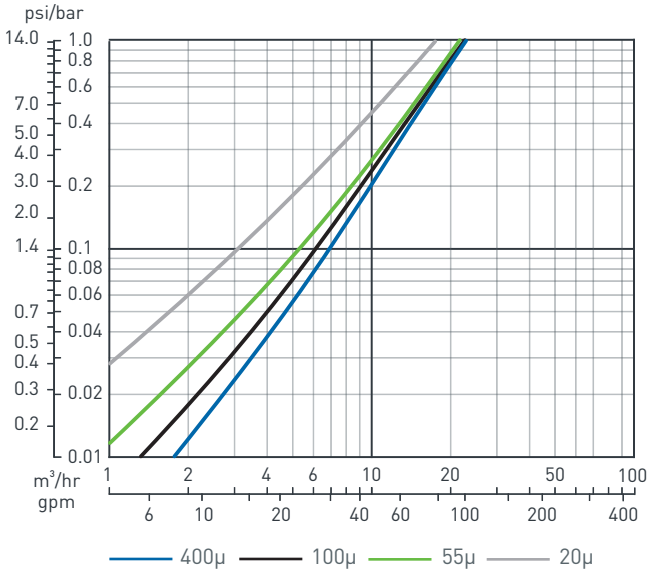
Typical Installation Drawing



Head Loss Graphs (in clean water)



Dimensions		1 unit battery
A	Length	18 1/8" (460 mm)
B	Width	11 5/16" (287 mm)
C	Height	24 3/32" (612 mm)

SK 2" Compact Air-Aided

Filter Type		2" Compact Air-Aided

General Data		
Max. working pressure*		145 psi (10 bar)
Min. backwash pressure		40.6 psi (2.8 bar)
Max. recommended flow rates	100µ	88 gpm (15 m^3/h)
	55µ	44 gpm (10 m^3/h)
Filtration volume		70 in^3 (1,148 cm^3)
Inlet/Outlet diameter		2" (50 mm)
Max. working temperature*		140°F (60°C)
Dry weight		73.7 lb (33.5 kg)

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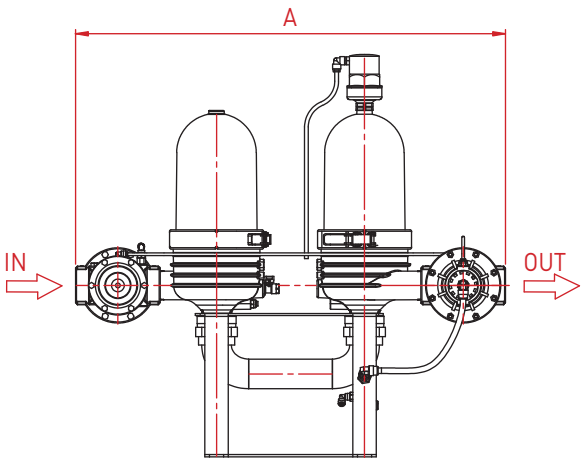
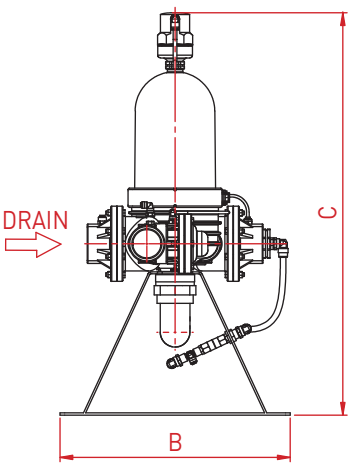
Backwash Data	
Exhaust valve	50 mm (2")
Flushing time	7 sec
Aprrox. volume for flushing (not including air)	2.6 gallon (10 liter)

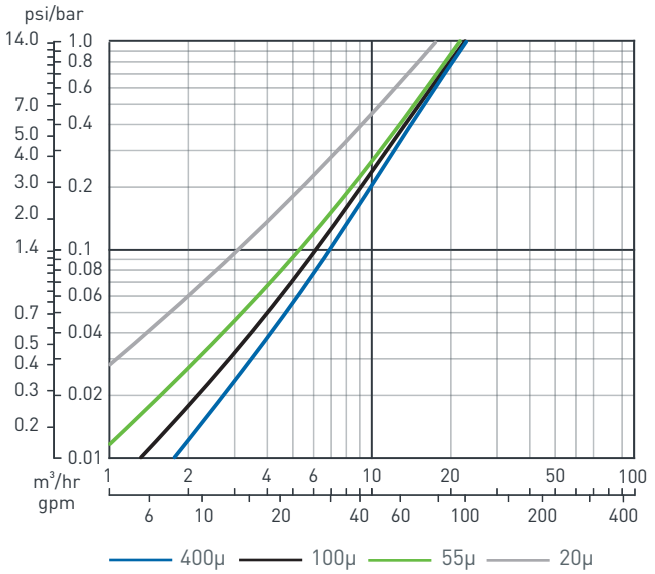
Air-Aided system flushing time and volume depends on air tank size.

Typical Installation Drawing





Head Loss Graphs (in clean water)



Dimensions		1 unit battery
A	Length	36 1/32" (915 mm)
B	Width	19 9/32" (490 mm)
C	Height	33 3/4" (857 mm)

Headquarters

Amiad Water Systems Ltd.
Web: www.amiad.com | E-mail: info@amiad.com

The Americas

USA
Amiad USA Inc.
Web: www.amiadusa.com | E-mail: infousa@amiad.com

Brazil
Amiad Sistemas de Água Ltda.
E-mail: infobrasil@amiad.com

Mexico
Amiad México SA DE CV,
Web: www.amiad.es | E-mail: infomexico@amiad.com
Irrigation office: E-mail: infomexico-irr@amiad.com

Asia

India
Amiad Filtration India Pvt Limited
Web: www.amiadindia.com | E-mail: info-india@amiad.com

China
Amiad China (Yixing Taixing Environtec Co., Ltd.)
Web: www.amiad.com.cn | E-mail: marketing@taixing.cc

South-East Asia
Filtration & Control Systems Pte. Ltd.
E-mail: info-singapore@amiad.com

Australia

Amiad Australia Pty Ltd.
Web: www.amiad.com.au | E-mail: sales@amiad.com

Europe

Amiad Water Systems Europe SAS
E-mail: info@amiad-europe.com

German branch office
E-mail: info@amiad.de

United Kingdom
Amiad Water Systems UK Limited
E-mail: info-uk@amiad.com

[ozglobalb2b.com]

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www.amiad.com

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