

2"-3" Spin Klin™

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



inlet/outlet connection

**2" SK: 80 - 150 mm
(3" - 6")**

**3" SK: 150 - 200 mm
(6" - 8")**

flow rates

**10-120 m³/h
(44-530 gpm)**

**90-200 m³/h
(400-880 gpm)
and higher**

filtration degrees

20-400 micron

max. working pressure

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”- 3” Spin Klin™ Systems Filters Work

General

The Arkal 2”- 3” SpinKlin™ series are modular, all polymeric, automatic disc filters with a patented self-cleaning backwash mechanism.

The 2”- 3” SpinKlin™ systems range in flow rates from 10 m³/h (44 gpm) to 200 m³/h (880 gpm) with filtration degrees ranging from 20 - 400 micron. Inlet/Outlet from 80 - 200 mm (3”- 8”) diameter.

The Filtration Process

The discs are stacked on the SpinKlin™ 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.

External Source Backwash

Each filter is backwashed sequentially, while the other filters continue to supply filtered water downstream. In each backwashed filter the inlet & outlet valves automatically close and the drain & external source valves automatically open. Pressurized filtered water from the external source header enters the backwashed filter through its outlet port and backwashes it.

- Higher energy for low operating pressure applications and fine filtration degrees

Air Aided Backwash (for 2” Spin Klin™ systems only)

Main benefits:

- Enhanced cleaning power, especially on fine filtration degrees
- Minimized 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 SpinKlin™ technology.

During the flushing cycle, each filter pod is backwashed sequentially while the other pod continues to supply filtered water downstream. When a pod begins the backwash cycle, the valves automatically reverse the flow in the pod, and open the air valve, allowing compressed air to push the filtered water stored in the accumulator through the backwash manifold and into the SpinKlin™ filter being backwashed.

Each backwash cycle requires a time delay to allow the water tank to be filled with clean water and air, making the total backwash duration longer than in regular systems.

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

Construction materials								
Filter Housing & Lid	RPP (Reinforce Polypropylene) & RPA (Reinforce Polyamide)							
Disc elements	PA (Polyamide) or PP (Polypropylene)							
Backwash valves	RPP (Reinforce Polypropylene) or RPA (Reinforce Polyamide)							
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" Batteries

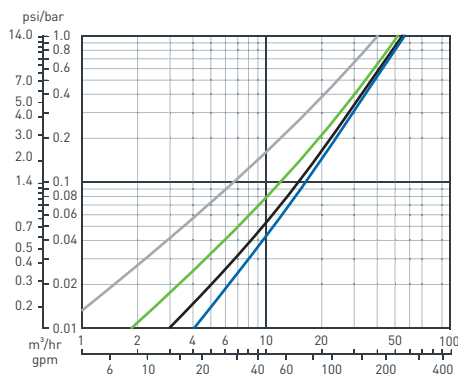


Filter Type		2 unit battery	3 unit battery	4 unit battery
General Data				
Max. working pressure		10 bar (145 psi)		
Min. backwash pressure		2.8 bar (40.6 psi)		
Maximum recommended flow rate	100μ	40 m³/h (176 gpm)	60 m³/h (364 gpm)	80 m³/h (352 gpm)
	55μ	20 m³/h (88 gpm)	30 m³/h (132 gpm)	40 m³/h (176 gpm)
	20μ	10 m³/h (44 gpm)	15 m³/h (60 gpm)	20 m³/h (88 gpm)
Available filtration degrees		400, 200, 130, 100, 70, 55, 40, 20 micron		
Filtration volume		2,296 cm³ (140 in³)	3,444 cm³ (210 in³)	4,592 cm³ (280 in³)
Inlet/Outlet diameter		80 mm (3")	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 m³/h (44 gpm)		

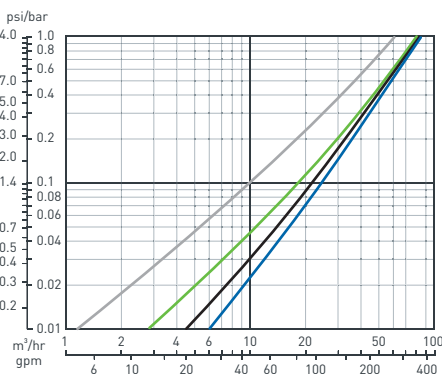
Head Loss Graphs (in clean water)

— 400μ — 100μ — 55μ — 20μ

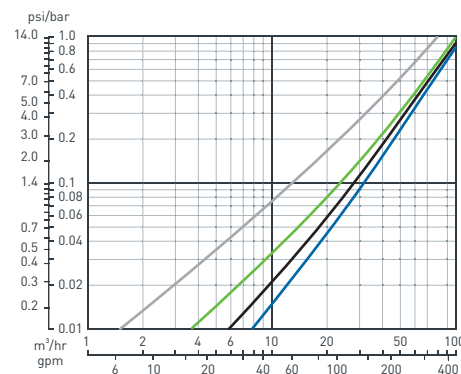
2 x 2" SK Battery



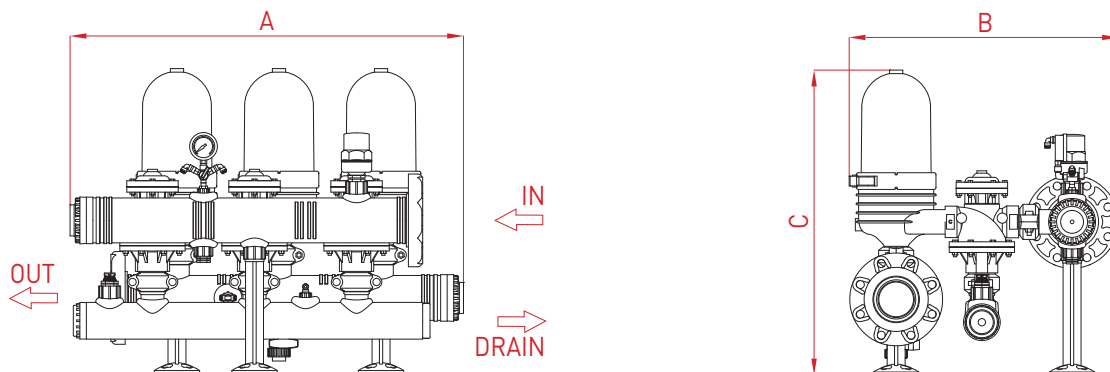
3 x 2" SK Battery



4 x 2" SK Battery



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")	

SK 2" Batteries External Source

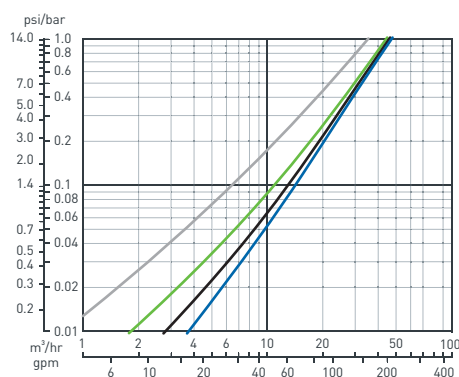


Filter Type		2 unit battery	3 unit battery	4 unit battery
General Data				
Max. working pressure		10 bar (145 psi)		
Min. backwash pressure		2.8 bar (40.6 psi)		
Maximum recommended flow rate	100μ	40 m³/h (176 gpm)	60 m³/h (364 gpm)	80 m³/h (352 gpm)
	55μ	20 m³/h (88 gpm)	30 m³/h (132 gpm)	40 m³/h (176 gpm)
	20μ	10 m³/h (44 gpm)	15 m³/h (66 gpm)	20 m³/h (88 gpm)
Available filtration degrees		400, 200, 130, 100, 70, 55, 40, 20 micron		
Filtration volume		2,296 cm³ (140 in³)	3,444 cm³ (210 in³)	4,592 cm³ (280 in³)
Inlet/Outlet diameter		80 mm (3")	100 mm (4")	
Max. working temperature		60°C (140°F)		
Dry weight EX.S. backwash		46 kg (102 lb)	59 kg (131 lb)	73 kg (162 lb)
Backwash Data				
Valve drain port		50 mm (2")		
Flushing time		15 seconds for external source backwash		
Min. flow for backwash		10 m³/h (44 gpm)		

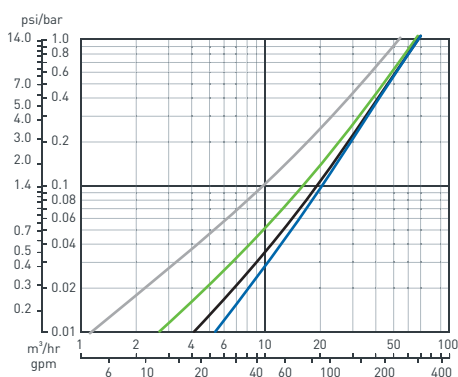
Head Loss Graphs (in clean water)

— 400μ — 100μ — 55μ — 20μ

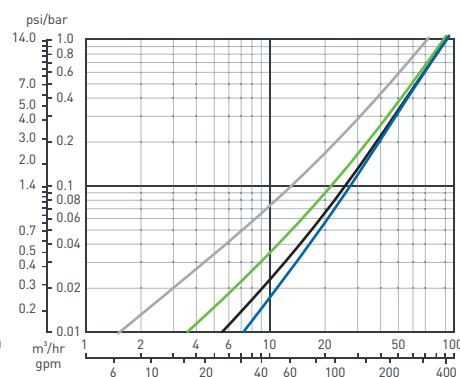
2 x 2" SK Battery EX.S.



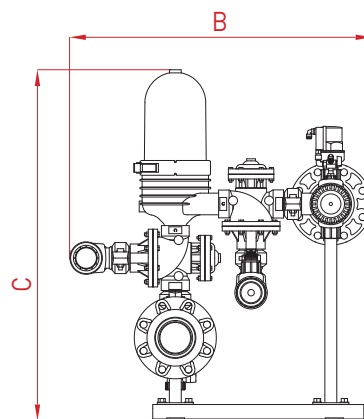
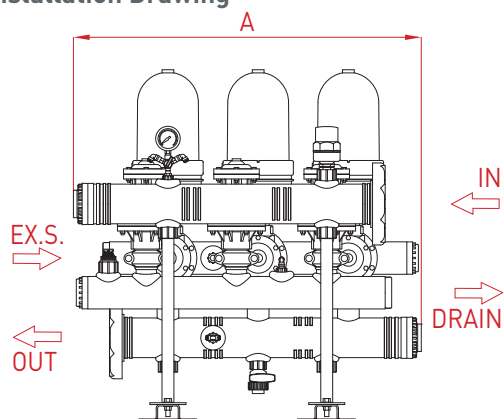
3 x 2" SK Battery EX.S.



4 x 2" SK Battery EX.S.



Typical Installation Drawing



Dimensions		2 unit battery	3 unit battery	4 unit battery
A	Length	706 mm (28")	964 mm (38")	1214 mm (48")
B	Width	383 mm (33")	383 mm (33")	383 mm (33")
C	Height	974 mm (38")	974 mm (38")	974 mm (38")

SK 2" Batteries Air Aided



Filter Type		2 unit battery	3 unit battery	4 unit battery
General Data				
Max. working pressure		10 bar (145 psi)		
Min. down stream pressure*		1 bar (15 psi)		
Maximum recommended flow rate	100μ	40 m³/h (176 gpm)	60 m³/h (364 gpm)	80 m³/h (352 gpm)
	55μ	20 m³/h (88 gpm)	30 m³/h (132 gpm)	40 m³/h (176 gpm)
	20μ	10 m³/h (44 gpm)	15 m³/h (66 gpm)	20 m³/h (88 gpm)
Available filtration degrees		400, 200, 130, 100, 70, 55, 40, 20 micron		
Filtration volume		2,296 cm³ (140 in³)	3,444 cm³ (210 in³)	4,592 cm³ (280 in³)
Inlet/Outlet diameter		80 mm (3")	100 mm (4")	
Max. working temperature		60°C (140°F)		
Dry weight standard		59 kg (131 lb)	73 kg (162 lb)	89 kg (197 lb)

* Low pressure for filtration, added pressure for backwash with air up to 3 bar.

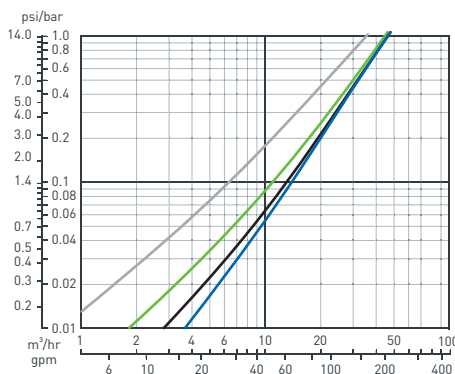
Backwash Data	
Valve drain port	50 mm (2")
Flushing time**	7 seconds
Volume of backwash (not include air)**	12 liter (3.2 gallons)

** Air Aided system flushing time and volume depend on air tank size.

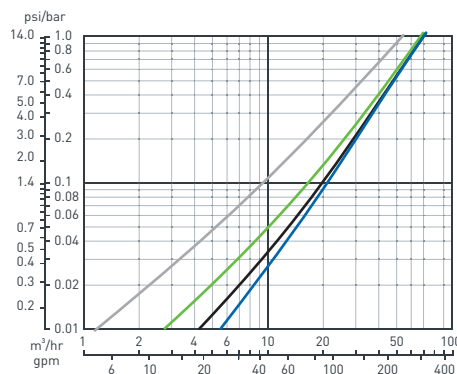
Head Loss Graphs (in clean water)

— 400μ — 100μ — 55μ — 20μ

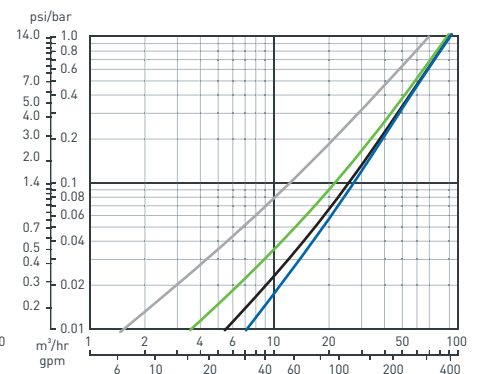
2 x 2" SK Battery AFF



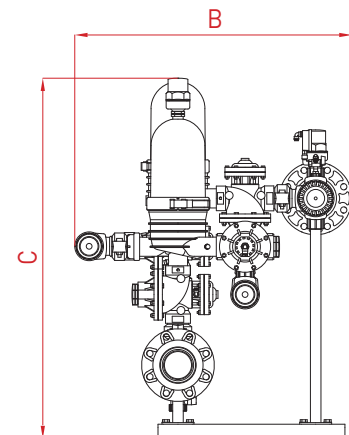
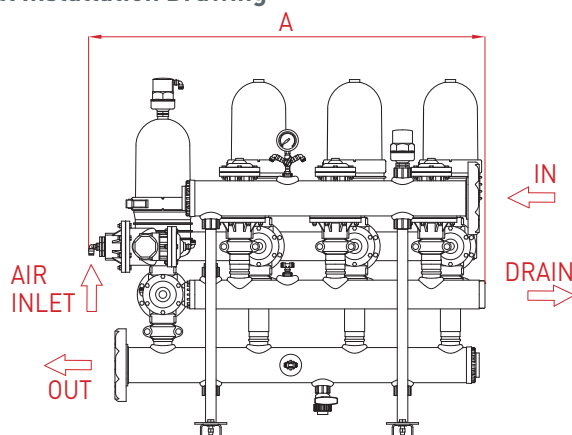
3 x 2" SK Battery AFF



4 x 2" SK Battery AFF



Typical Installation Drawing



Dimensions		2 unit battery	3 unit battery	4 unit battery
A	Length	941 mm (37")	1,241 mm (49")	1,541 mm (61")
B	Width	868 mm (34")		
C	Height	1,128 mm (44")		

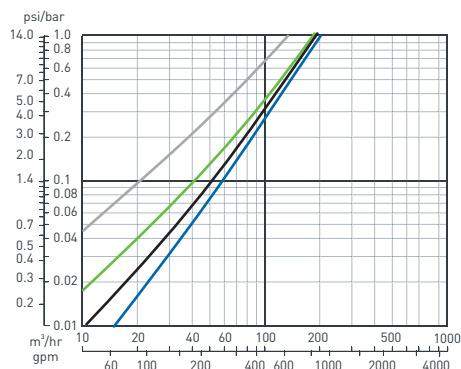
SK 3" Batteries



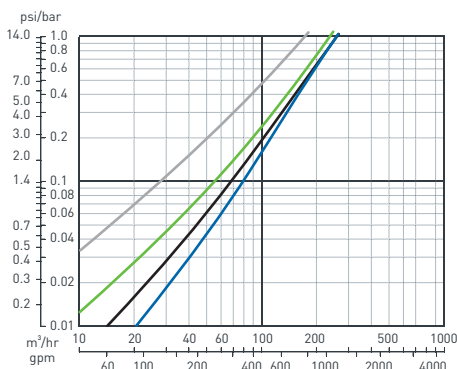
Filter Type		3 unit battery	4 unit battery	5 unit battery
General Data				
Max. working pressure		10 bar (145 psi)		
Min. backwash pressure		2.8 bar (40.6 psi)		
Maximum recommended flow rate	100μ	90 m³/h (396 gpm)	120 m³/h (527 gpm)	150 m³/h (660 gpm)
	55μ	60 m³/h (364 gpm)	80 m³/h (352 gpm)	100 m³/h (440 gpm)
	20μ	30 m³/h (132 gpm)	40 m³/h (176 gpm)	50 m³/h (220 gpm)
Available filtration degrees		400, 200, 130, 100, 70, 55, 40, 20 micron		
Filtration volume		6,888 cm³ (420 in³)	9,184 cm³ (560 in³)	11,480 cm³ (700 in³)
Inlet/Outlet diameter		150 mm (6")		
Max. working temperature		60°C (140°F)		
Dry weight standard		95 kg (209 lb)	115 kg (253 lb)	135 kg (297 lb)
Backwash Data				
Valve drain port		80 mm (3")		
Flushing time		20 seconds		
Min. flow for backwash		20 m³/h (88 gpm)		

Head Loss Graphs (in clean water) — 400μ — 100μ — 55μ — 20μ

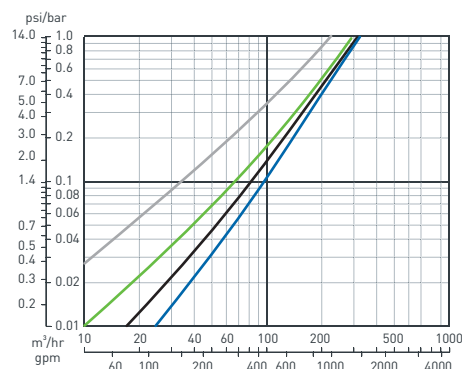
3 x 3" SK Battery



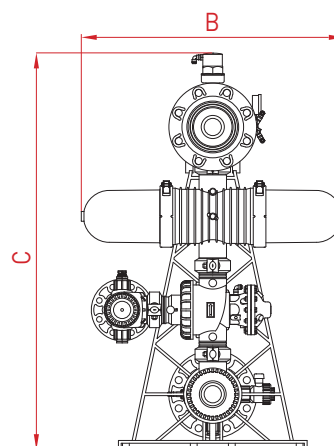
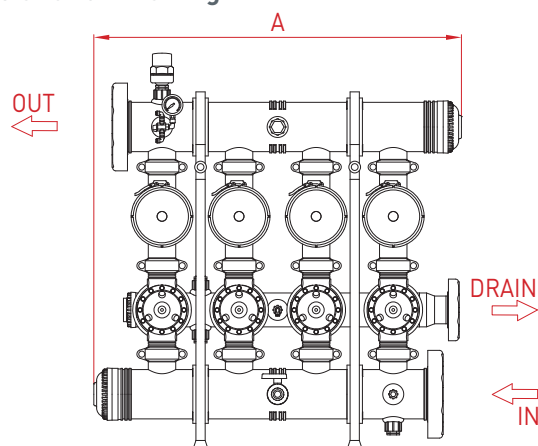
4 x 3" SK Battery



5 x 3" SK Battery



Typical Installation Drawing



Dimensions		2 unit battery	3 unit battery	4 unit battery
A	Length	942 mm (37 3/32")	1192 mm (46 15/16")	1442 mm (56 25/32")
B	Width	853 mm (33 19/32")	853 mm (33 19/32")	853 mm (33 19/32")
C	Height	1287 mm (50 21/32")	1287 mm (50 21/32")	1287 mm (50 21/32")

SK 3" Batteries External Source



Filter Type	3 unit battery	4 unit battery	5 unit battery
-------------	----------------	----------------	----------------

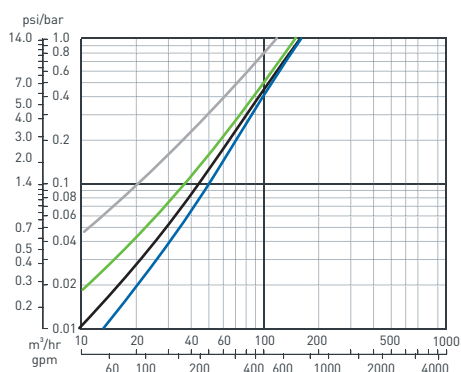
General Data				
Max. working pressure		10 bar (145 psi)		
Min. backwash pressure		2.8 bar (40.6 psi)		
Maximum recommended flow rate	100μ	90 m³/h (396 gpm)	120 m³/h (527 gpm)	150 m³/h (660 gpm)
	55μ	60 m³/h (364 gpm)	80 m³/h (352 gpm)	100 m³/h (440 gpm)
	20μ	30 m³/h (132 gpm)	40 m³/h (176 gpm)	50 m³/h (220 gpm)
Available filtration degrees		400, 200, 130, 100, 70, 55, 40, 20 micron		
Filtration volume		6,888 cm³ (420 in³)	9,184 cm³ (520 in³)	11,480 cm³ (700 in³)
Inlet/Outlet diameter		150 mm (6")		
Max. working temperature		60°C (140°F)		
Weight [empty] EX.S. backwash		110 kg (242 lb)	130 kg (286 lb)	150 kg (330 lb)

Backwash Data	
Valve drain port	80 mm (3")
Flushing time	15 seconds
Min. flow for backwash	20 m³/h (88 gpm)

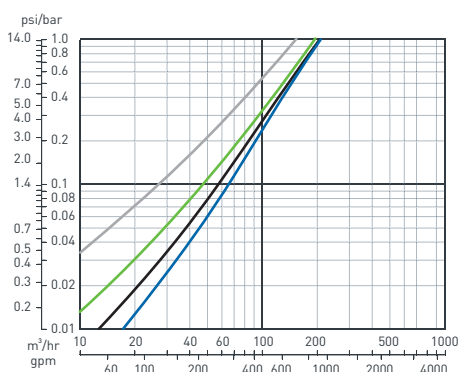
Head Loss Graphs (in clean water)

— 400μ — 100μ — 55μ — 20μ

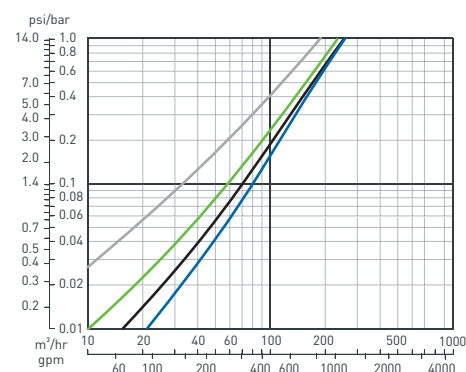
3 x 3" SK Battery EX.S.



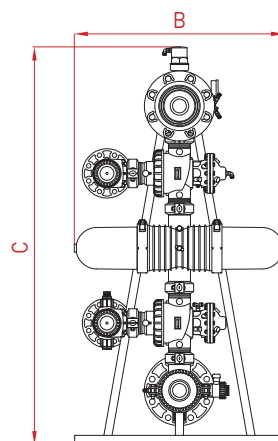
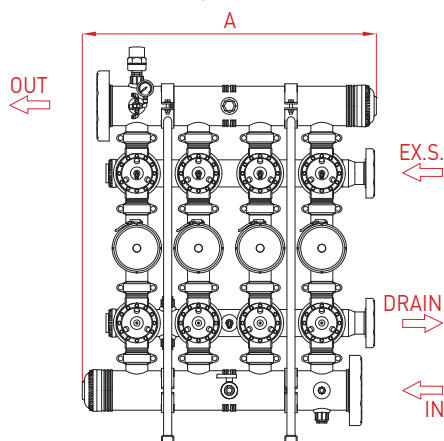
4 x 3" SK Battery EX.S.



5 x 3" SK Battery EX.S.



Typical Installation Drawing



Dimensions		2 unit battery	3 unit battery	4 unit battery
A	Length	942 mm (37 3/32")	1,192 mm (46 15/16")	1,442 mm (56 25/32")
B	Width	853 mm (33 19/32")		
C	Height	1,614 mm (63 17/32")		

Headquarters

Amiad Water Systems Ltd. D.N. Galil Elyon 1, 1233500, Israel,
Tel: 972 4 690 9500, Fax: 972 4 814 1159,
E-mail: info@amiad.com

America



Amiad USA Inc. Main Office and Manufacturing: 120-J Talbert Road, Mooresville, NC 28117,
Tel: 1 704 662 3133, Fax: 1 704 662 3155, Toll Free: 1 800 24 FILTER,
E-mail: info@amiadusa.com www.amiadusa.com

West Coast Sales Office and Warehouse:
2220 Celsius Avenue, Oxnard, California 93030
Tel: 805 988 3323, Fax: 805 988 3313, Toll Free: 1 800 969 4055

Chile

Amiad Andina, Carretera General San Martín 16.500 No 30,
Loteo Industrial Los Libertadores, Colina, Santiago de Chile,
Tel: 56 2 24895100, Fax: 56 2 24895101, E-mail: amiadandina@amiad.com

Brazil

Amiad Sistemas de Água Ltda., Av. Funchal, 411, Conj. 42, Vila Olimpia, São Paulo, CEP 04551-060
Tel: +55 11 31923824, E-mail: infobrasil@amiad.com

Amiad Oil & Gas, E-mail: amisur@adinet.com.uy

Mexico

Amiad Mexico SA DE CV,
Priv. Retorno 8, Lote 3, Mza. 1, Interlomas Estado de Mexico
Tel/Fax: +52 55 636 28122, E-mail: info@amiadmexico.com

Asia



India

Amiad Filtration India Pvt Limited, 305 Sai Commercial Building,
Govandi St Rd, Govandi Mumbai 400 088,
Tel: 91 22-67997813/14, Fax: 91 22-67997814, Email: info@amiadindia.com

China

Amiad China (Yixing Taixing Environtec Co., Ltd.) 70 Baihe Chang, Xingjie Yixing Jiangsu, 214204,
Tel: 86 510 87134000, Fax: 86 510 87134999, E-mail: marketing@taixing.cc

South-East Asia

Filtration & Control Systems Pte. Ltd., 22 Sin Ming Lane #07-88 Midview City, Singapore 573969,
Tel: 65 6 337 6698, Fax: 65 6 337 8180, E-mail: amiad@amiad.com.sg

Australia



Europe



Amiad Australia Pty Ltd. 138 Northcorp Boulevard, Broadmeadows, Victoria 3047,
Tel: 61 3 93585800, Fax: 61 3 93585888, E-mail: sales@amiad.com.au

Amiad Water Systems Europe SAS, Ilot No4 ZI La Boitardière, 37530 Chargé, France,
Tel: 33 (0) 2 47 23 01 10, Fax: 33 (0) 2 47 23 80 67, E-mail: info@amiad-europe.com

Germany

Amiad Water Systems SAS Europe (German branch office)
Zweigniederlassung Deutschland Prinz-Regent-Str. 68 a 44795 Bochum,
Tel: 49 (0) 234 588082-0, Fax: 49 (0) 234 588082-10, E-mail: info@amiad.de

Turkey

FTS – Filtration & Treatment Systems, Istanbul yolu 26 Km, Yurt Orta Sanayii, Saray, Ankara,
Tel: 90 312 8155266/7, Fax: 90 312 8155248, E-mail: info@fts-filtration.com

