

Super Galaxy

Automatic self-cleaning Arkal Spin Klin™ disc filter, designed as a highly efficient solution for high flow rate applications and for all types of water, including seawater.



flow rates

**up to 3,500 m³/h
(15,400 US gpm)**

filtration degrees

20-400 micron

inlet/outlet diameter

12" - 20"

minimum operating pressure

2 bar (30 psi)

features:

- Arkal's proven Spin Klin™ disc, depth filtration and patented backwash technology
- New design containing 16 spines in one all polymeric body
- Reduced number of components and modular flexibility
- Corrosion Resistant Materials
- Minimal maintenance
- Applications: Tertiary (Wastewater) Treatment, Potable Water treatment, Membrane protection, Industrial Water and Irrigation

*** Patent pending, Design pending**

How the Super Galaxy Works

General

The Super Galaxy filter is based on Arkal's Spin Klin™ disc filtration technology which is a modular, automatic, self cleaning filter designed for high flow rates and may be installed either vertically or horizontally. With its unique grooved disc, depth filtration technology and patented self cleaning mechanism, Spin Klin™ filters cover a wide range of industrial, marine, municipal and agricultural applications from 400 to as fine as 20 micron filtration degrees.

Each filter contains multiple filtration spines on which the Spin Klin™ discs are stacked. These thin, color-coded polymeric discs are diagonally grooved in opposite directions on both sides to a specific micron size. When mounted on the spine, the discs' grooves form a matrix of consecutive stopping points letting the water pass through while stopping suspended solids. A tightening cylinder compresses the discs by a preloaded spring, piston and differential pressure, ensuring accurate filtration degree with no possibility of breakthrough.

The Filtration Process

During the filtration process, the filtration discs are tightly compressed together by the spring's power and the differential pressure, thus providing high filtration efficiency. Water percolates through the filter element from its outer to its inner diameter. Suspended solids are trapped on and between the discs while filtered water flows out through the filter's outlet port.



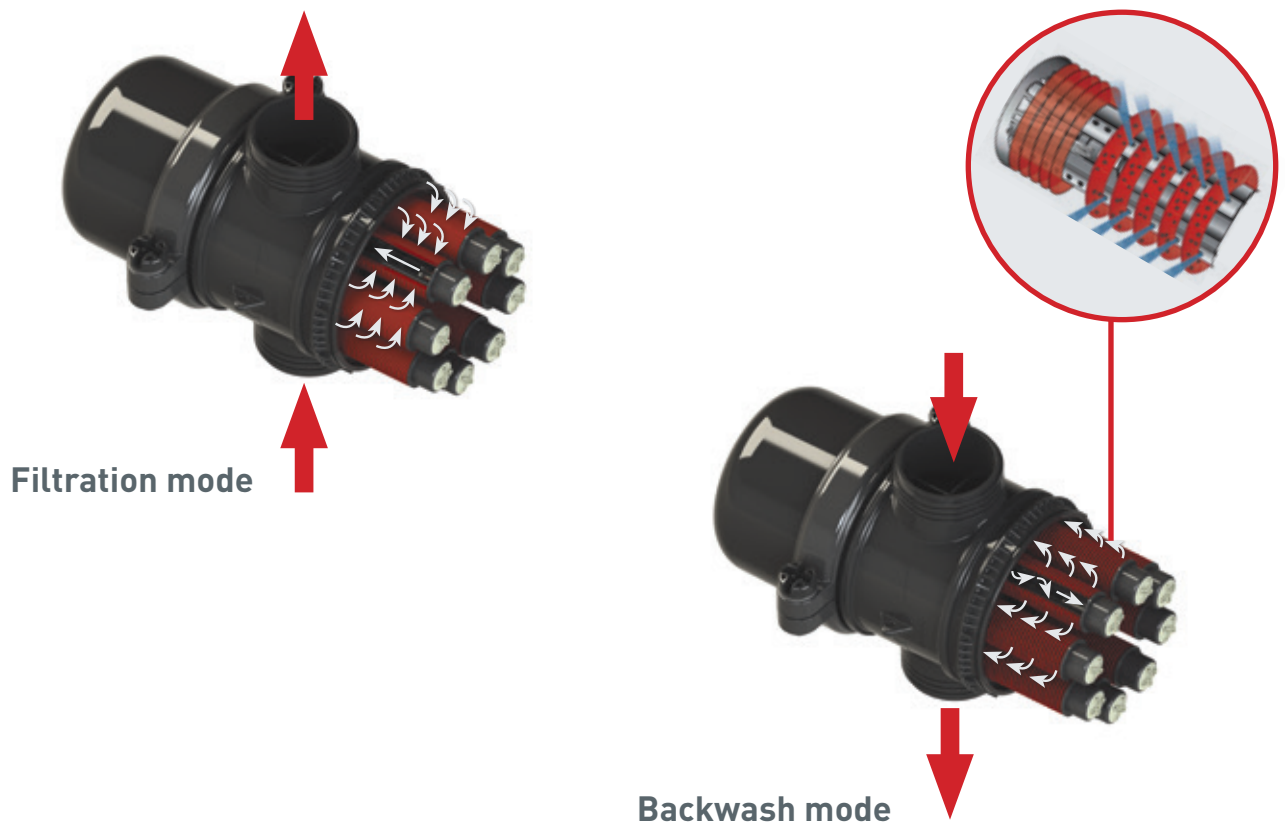
Unique accessories for the Super Galaxy:

- New polymeric clamp for the filter housing, allows easy opening without any tools
- Newly designed polymeric connector between the filter pod and the manifold
- New and unique clamp for wafer butterfly valve connection for battery systems

The Self-Cleaning Process

The gradual build-up of particles on the discs causes a pressure differential to develop across the system. At a pre-set level a signal from the PD Switch starts the self-cleaning cycle. An electric command reverses the flow direction through the filter, the compression springs of the filter modules are released; the spine pistons rise up releasing the pressure on the discs.

High pressure tangential jets of filtered water are pumped at high velocity through the nozzles at the center of the spines causing the discs to spin free and clear. The retained and trapped solids are quickly and efficiently flushed out to the drain. On completion of its pre-programmed cleaning time (approximately 15 seconds) the filter returns to filtration mode. The system continues to filter until another backwash cycle is triggered by time-interval, PD switch or by a combination of the two.



- New supporting legs with clamps to secure the Super Galaxy on any given manifold pipe size
- Different options for standard installation of Modules / Batteries

Technical Specifications

Super Galaxy - Batteries:

Design: A Battery is a system of filters that are backwashed individually.

The number of filters in a battery is determined according to the system designed flow rate and may have between 3 to 6 filters, with 12" - 20" inlet / outlet diameters.

Capacity: 400 - 1440 m³/h (1761 - 6340 gpm).

Filter Type	3 unit battery	4 unit battery	5 unit battery	6 unit battery
-------------	----------------	----------------	----------------	----------------

General Data				
Maximum working pressure	6 bar (88 psi)	6 bar (88 psi)	6 bar (88 psi)	6 bar (88 psi)
Minimum backwash pressure at 55 micron	4-5 bar (58-72 psi)	4-5 bar (58-72 psi)	4-5 bar (58-72 psi)	4-5 bar (58-72 psi)
Maximum recommended flow rate*	130-400µ	720 m ³ /h (3,170 gpm)	960 m ³ /h (4,226 gpm)	1200 m ³ /h (5,283 gpm)
	100µ	576 m ³ /h (2,536 gpm)	768 m ³ /h (3,381 gpm)	960 m ³ /h (4,226 gpm)
	55µ	400 m ³ /h (1,761 gpm)	530 m ³ /h (2,333 gpm)	664 m ³ /h (2,923 gpm)
Filtration area	42,240 cm ² (6,547 in ²)	56,320 cm ² (8,729 in ²)	70,400 cm ² (10,912 in ²)	84,480 cm ² (13,094 in ²)
Filtration volume	63,360 cm ³ (3,866 in ³)	84,480 cm ³ (5,155 in ³)	105,600 cm ³ (6,444 in ³)	126,720 cm ³ (7,733 in ³)
Inlet/Outlet diameter	12" - 20"	14" - 20"	14" - 20"	14" - 20"
Maximum working temperature	60°C (140°F)	60°C (140°F)	60°C (140°F)	60°C (140°F)
Weight [empty]	800 kg (1760 lb)	1030 kg (2266 lb)	1330 kg (2926 lb)	1560 kg (3432 lb)

* Maximum recommended flow is for average water quality. Flow may vary as water quality changes.

Backwash Data Per Unit*	
Drain valve	4"
Backwash time	15-20 sec
Minimum flow for backwash	160 m ³ /h (704 gpm)

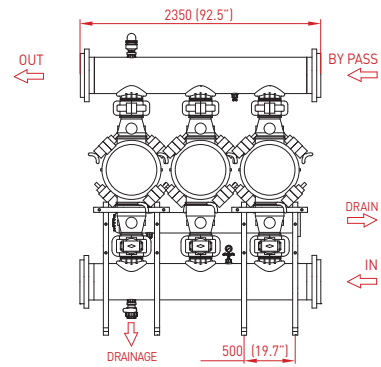
* Each filter unit (pod) backwashes separately in sequence.

Construction Materials	
Filter Housing	Polypropylene
Filter Body	Polypropylene
Grooved Disc	Polypropylene or Nylon
Backwash mechanism	Backwash BF valves air or electrically activated, (main valve 8" & drain valve 4")
Backwash valve	Polypropylene, butterfly valve
Seals	EPDM, NBR
Control	PLC or customer specified

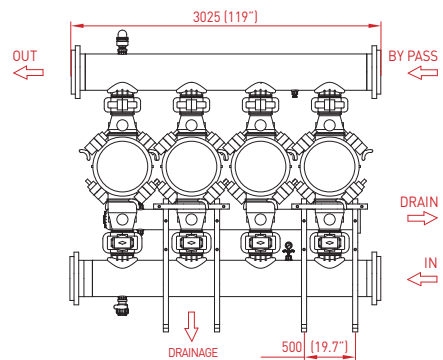
Standard Filtration Degrees

micron	400	200	130	100	70	55	40	20
mesh	40	80	120	140	200	300	350	625

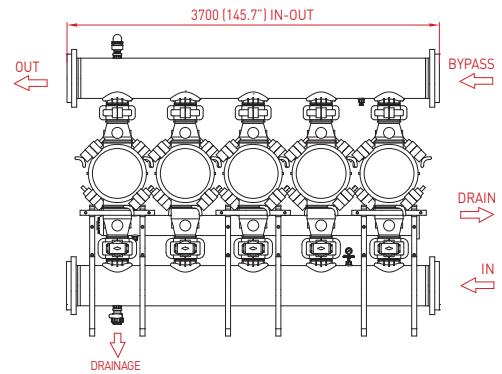
Dimensional Drawings - Batteries:
3 x 14" Battery



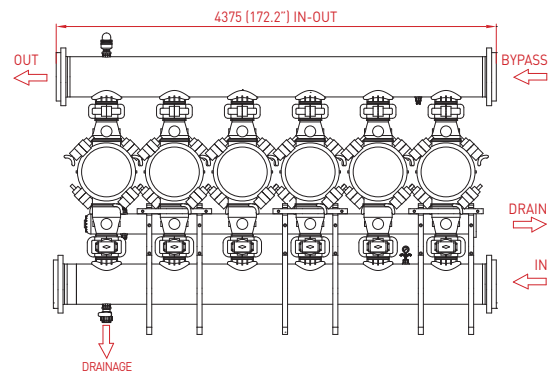
4 x 14" Battery



5 x 16" Battery

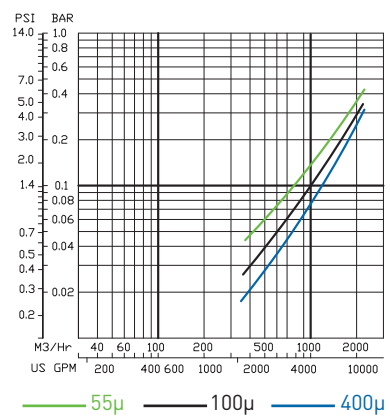
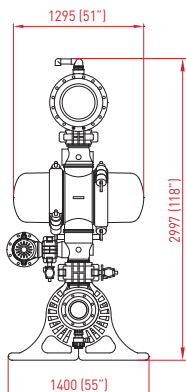
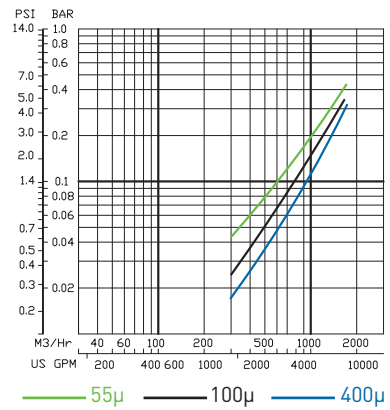
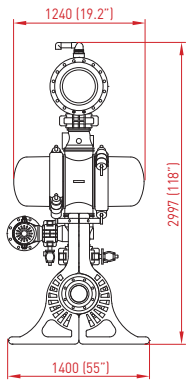
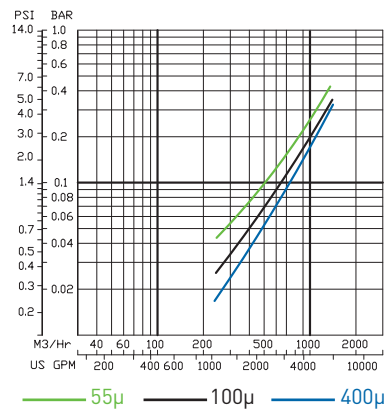
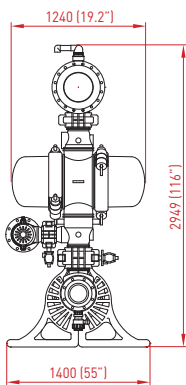
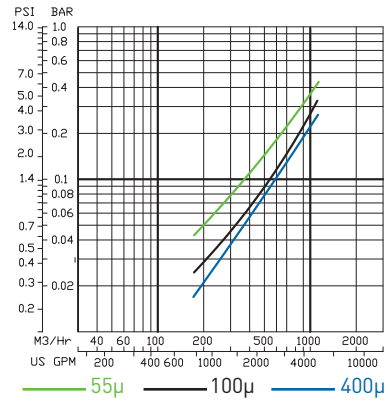
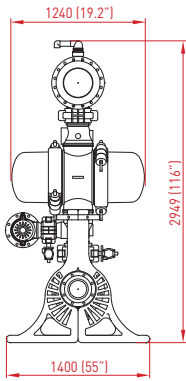


6 x 16" Battery



Dim: mm (inch)

Pressure Loss Graphs in clean water



*Head loss may change due to water quality and flow. Charts are for indication only.

Dim: mm (inch)

Technical Specifications

Super Galaxy - Modules:

Design: Spin Klin™ Modules are groups of filters that backwash together as a complete unit. The number of filters in each module of a specific system is determined by the system flow rate and water quality and may have between 2 - 6 filters with 12"-20" inlet / outlet pipe diameters.

Capacity: Very high flow rates: 720 - 15,000 m³/h (3,170 - 66,000 gpm) and higher.

Filter Type	3 unit module	4 unit module	5 unit module	6 unit module
-------------	---------------	---------------	---------------	---------------

General Data					
Maximum working pressure		6 bar (88 psi)	6 bar (88 psi)	6 bar (88 psi)	6 bar (88 psi)
Minimum backwash pressure at 55 micron		4-5 bar (58-72 psi)	4-5 bar (58-72 psi)	4-5 bar (58-72 psi)	4-5 bar (58-72 psi)
Maximum recommended flow rate	130-400μ	720 m ³ /h (3,170 gpm)	960 m ³ /h (4,226 gpm)	1200 m ³ /h (5,283 gpm)	1440 m ³ /h (6,340 gpm)
	100μ	576 m ³ /h (2,536 gpm)	768 m ³ /h (3,381 gpm)	960 m ³ /h (4,226 gpm)	1152 m ³ /h (5,072 gpm)
	55μ	400 m ³ /h (1,761 gpm)	530 m ³ /h (2,333 gpm)	664 m ³ /h (2,923 gpm)	800 m ³ /h (3,522 gpm)
Filtration area		42,240 cm ² (6,547 in ²)	56,320 cm ² (8,729 in ²)	70,400 cm ² (10,912 in ²)	84,480 cm ² (13,094 in ²)
Filtration volume		63,360 cm ³ (3,866 in ³)	84,480 cm ³ (5,155 in ³)	105,600 cm ³ (6,444 in ³)	126,720 cm ³ (7,733 in ³)
Inlet/Outlet diameter		12" - 20"	14" - 20"	14" - 20"	14" - 20"
Maximum working temperature		60°C (140°F)	60°C (140°F)	60°C (140°F)	60°C (140°F)
Weight [empty]		647 kg (1423 lb)	827 kg (1820 lb)	1076 kg (2367 lb)	1266 kg (2785 lb)

* Maximum recommended flow is for average water quality. Flow may vary as water quality changes.

Backwash Data Per Module					
Valves (inlet, outlet & drain, at customer's choice)		N\A	N\A	N\A	N\A
Backwash time		15-20 sec	15-20 sec	15-20 sec	15-20 sec
Minimum flow for backwash		480 m ³ /h (2,113 gpm)	640 m ³ /h (2,818 gpm)	800 m ³ /h (3,522 gpm)	960 m ³ /h (4,227 gpm)

Construction Materials	
Filter Housing	Polypropylene
Filter Body	Polypropylene
Grooved Disc	Polypropylene or Nylon
Backwash mechanism	Backwash BF valves air or electrically activated
Backwash valve	Polypropylene, butterfly valve
Seals	EPDM, NBR
Control	PLC or as customer specification

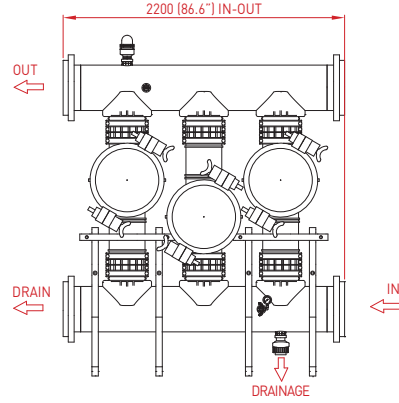
Standard Filtration Degrees

micron	400	200	130	100	70	55	40	20
mesh	40	80	120	140	200	300	350	625

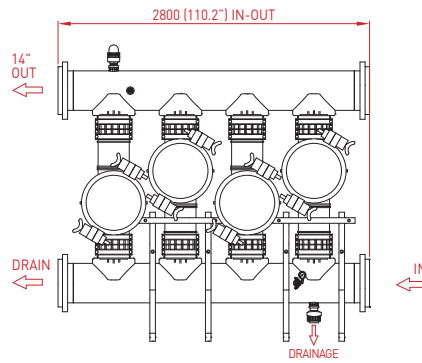
External Source Backwash Module System:

The system is designed to receive pressurized backwash water from an external source. Each module is equipped with 4 air activated butterfly valves: two inlet/outlet valves and two drain/external source valves.

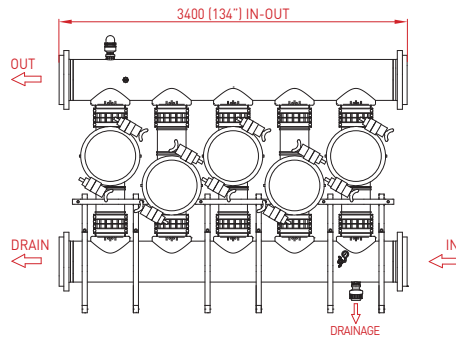
Dimensional Drawings - Modules:
3 x 14" Module



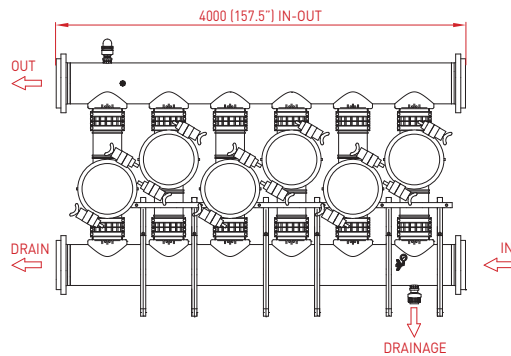
4 x 14" Module



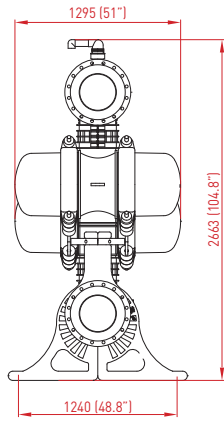
5 x 16" Module



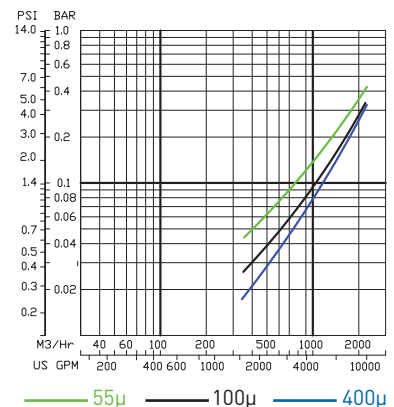
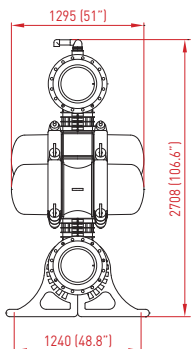
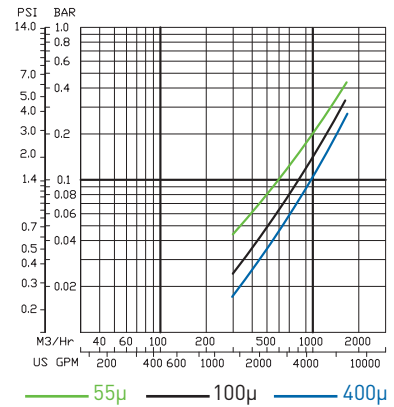
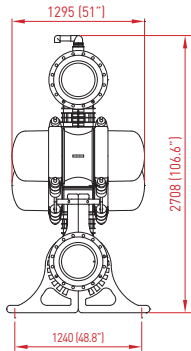
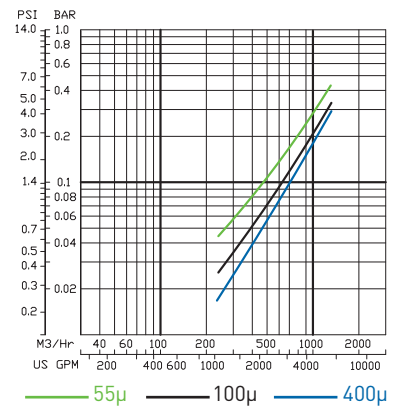
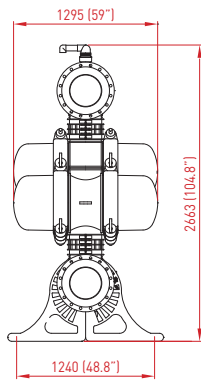
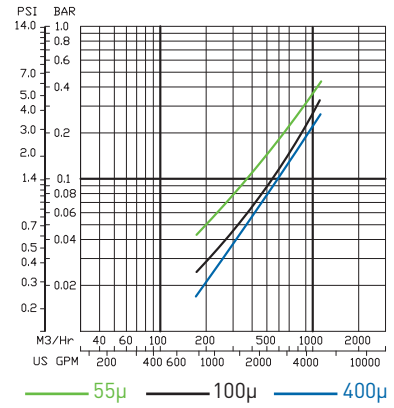
6 x 16" Module



Dim: mm (inch)



Pressure Loss Graphs in clean water



*Head loss may change due to water quality and flow.
Charts are for indication only.

Dim: mm (inch)

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

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



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

Europe



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



www.amiad.com

910101-000401/04.2014

Copyright © 2013 Amiad Water Systems Ltd. All rights reserved. The contents of this catalogue including without limitation all information and materials, images, illustrations, designs, icons, photographs, graphical presentations, designs, literary works, data, drawings, slogans, phrases, names, trademarks, titles and any other such materials that appear in this catalogue (collectively, the "Contents") are the sole and property of Amiad Water Systems Ltd. ("Amiad"). Amiad has sole and exclusive right, title and interest in the Contents, including any intellectual property rights, whether registered or not, and all know-how contained or embodied therein. You may not reproduce, publish, transmit, distribute, display, modify, create derivative works from, sell or participate in any sale of, or exploit in any way, in whole or in part, any of the Contents or the catalogue. Any use of the catalogue or the Contents, other than for personal use, requires the advanced written permission of Amiad.