

AMF² Microfiber Filters

Innovative self-cleaning microfiber water filters for treatment as fine as 2 micron



flow rates

**up to 320 m³/h
(1400 US gpm)**

filtration degrees

20-2 micron

water for cleaning

**less than 1%
of the total flow**

minimum operating
pressure

1 bar (15 psi)

features:

- TSS, NTU & SDI reduction for potable and wastewater applications
- Effective removal of Cryptosporidium and Giardia Cysts
- Cartridge performance without cartridge replacement
- Outperforms traditional sand media systems
- Pre-filtration for R.O. desalination and other sub micron systems
- Provide complete water treatment and filtration solutions for municipalities
- Environmentally friendly — no chemical treatment required

How the AMF² Filters Work

General

Amiad's AMF² Series consists of innovative self-cleaning microfiber water-filters for treatments as fine as 2 micron that provides cartridge filter performance without cartridge filter replacement. The AMF² filters support flow rates of up to 320 m³/h (1410 US gpm), in filtration degrees of 20 to 2 micron.

The Filtering Process

The AMF² filters remove dirt particles as water flows through multi-layered microfiber cassettes (1). These are attached to collector pipes which allow the process water to flow from the filter outlet (2). Dirt particles that accumulate on and between the microfiber layers create a pressure differential. At a preset pressure differential value or time interval, the control unit activates the self-cleaning cycle.

The Self-Cleaning Process

The inlet (3) and outlet (4) valves close and the drain (5) valve opens. After the filter vessel empties, the booster pump (6) delivers pressurized water to the shuttle pipe (7) on which the flush nozzles are mounted (8). These nozzles straddle the cassettes and spray both sides of a cassette with high powered jet streams that penetrate the microfiber layers and dislodge the debris. When these jet streams hit the plastic cassette support, they reflect outward, dislodging the debris from the cassettes and out the drain. This process ensures 100% effective cleaning. The piston assembly shuttles the spray nozzles across a single row of cassettes on each stroke. When the nozzles reach the end of a row, the turn mechanism indexes the filter package to the next row of cassettes.

The piston then shuttles in the opposite direction, cleaning the cassettes as the nozzles traverse them.

After cleaning all 35 rows of cassettes, the filter is clean. The drain valve closes and the inlet valve re-opens, filling the filter vessel. After the vessel is full, a "filter to waste" (9) valve opens. This eliminates any residual contaminant that may have entered the collector pipes during the flush process. Then, the "filter to waste" valve closes, the outlet valve opens and the filter is back on-line.

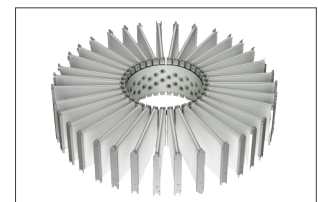
AMF² Models

Amiad's AMF² product-line consists of the following models:

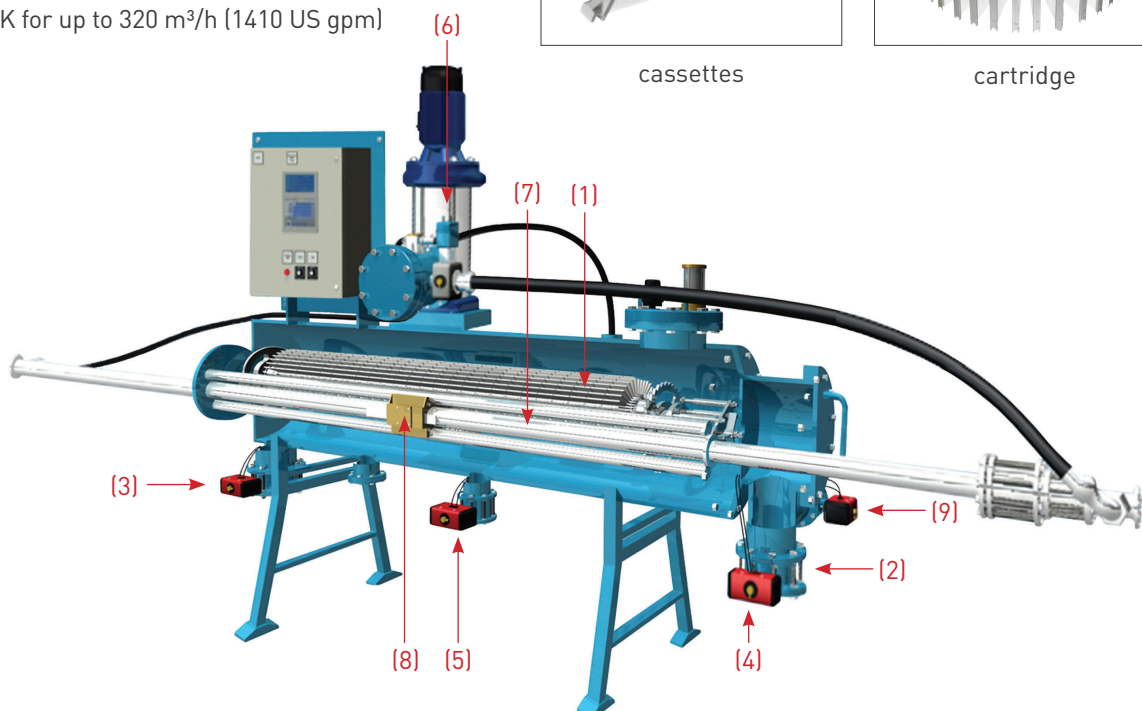
- AMF² - 36K for up to 30 m³/h (132 US gpm)
- AMF² - 93K for up to 50 m³/h (220 US gpm)
- AMF² - 370K for up to 320 m³/h (1410 US gpm)



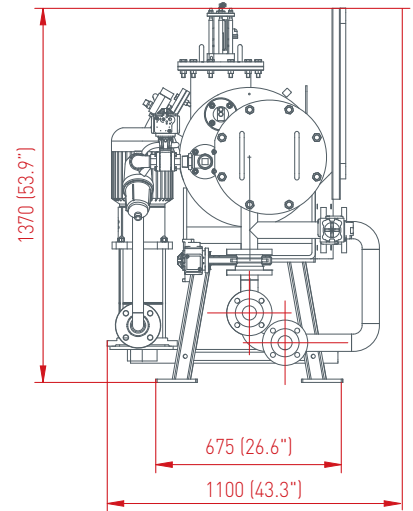
cassettes



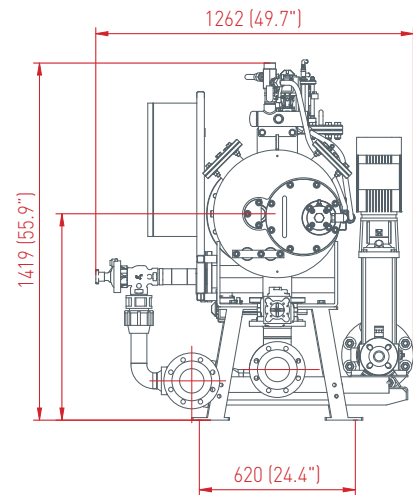
cartridge



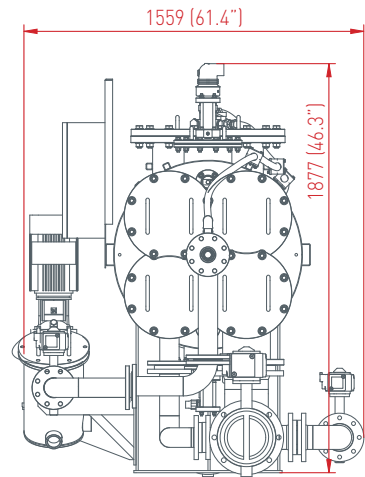
AMF² 36K



AMF² 93K



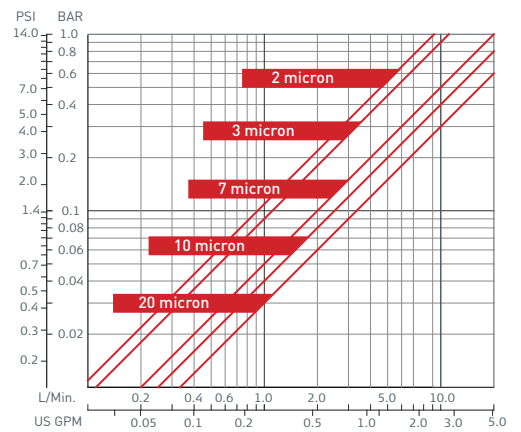
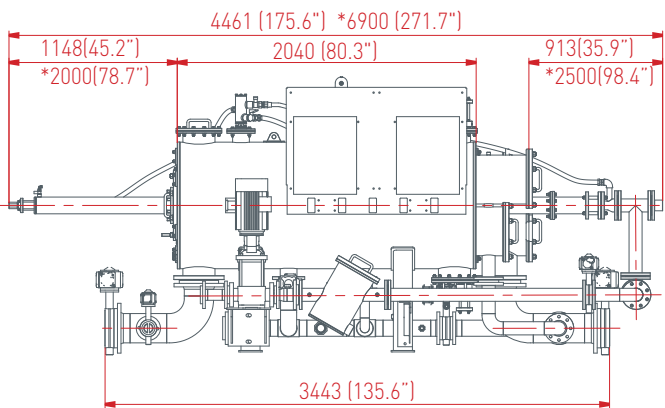
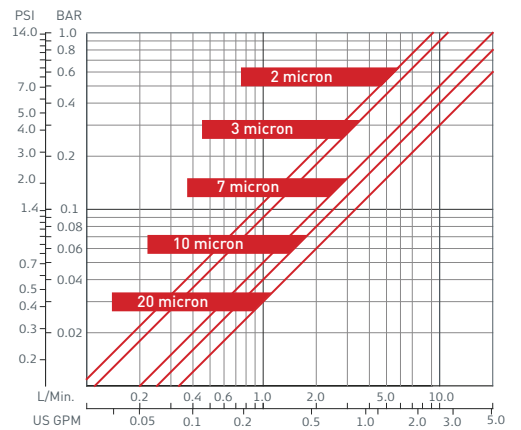
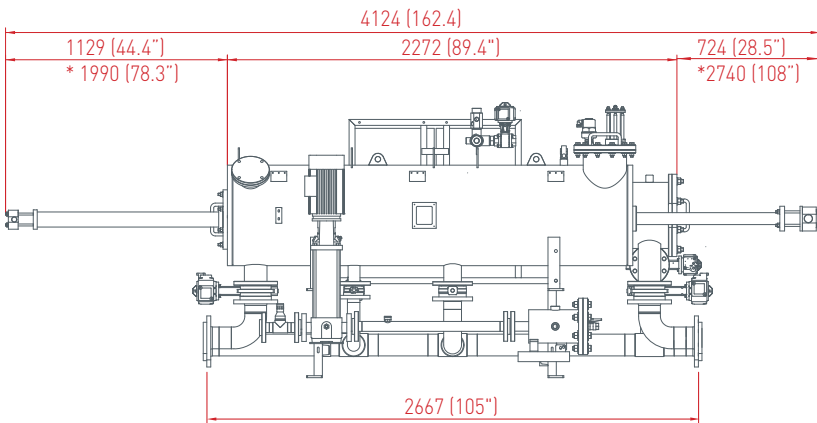
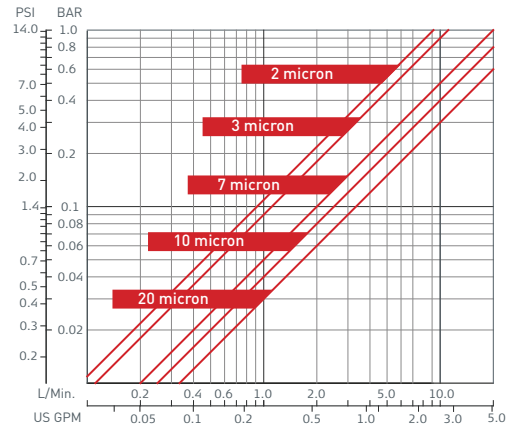
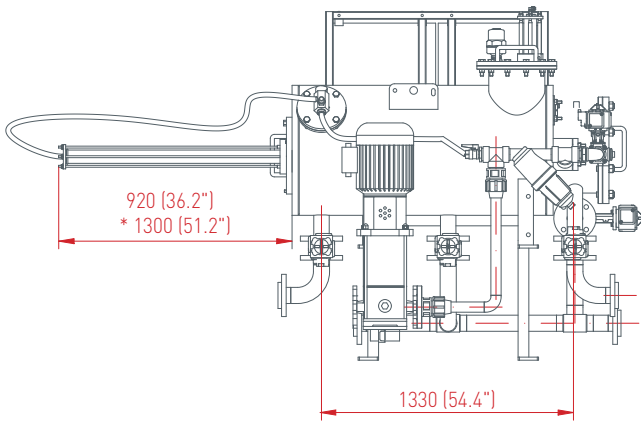
AMF² 370K



Dim. in mm (inch)
*Approx. length required for maintenance

Head Loss Graphs

single microfiber cassette



Dim. in mm (inch)

*Approx. length required for maintenance

Technical Specifications

| Filter Type | AMF ² 36K | AMF ² 93K | AMF ² 370K |
|-----------------------------|--|--|--|
| General Data | | | |
| Recommended flow rate* | Up to 30 m ³ /h (132 US gpm) | Up to 50 m ³ /h (220 US gpm) | Up to 320 m ³ /h (1410 US gpm) |
| Inlet/Outlet diameter | 1x2" (1x50 mm) | 1x4" (1x100 mm) | 2x8" 2x200 mm |
| Standard filtration degrees | 20, 10, 7, 3, 2 micron | | |
| Min. working pressure | 1 bar (15 psi) or lower Please consult manufacturer | | |
| Max. working pressure | 10 bar (145 psi) | | |
| Working temperature range | 4-40°C (39-104°F) | | |
| Electrical Supply | 3 phase, 220/380/440 VAC 50/60 Hz | | |
| Compressed Air Supply | 6 – 8 bar / 87 – 116 psi | | |
| Weight [empty] | 480 kg (1058 lb) | 650 kg (1433 lb) | 2150 kg (4740 lb) |

* Depending on water quality and application - selection to be qualified by Amiad.

| | | | |
|-------------------------------------|--|---|--|
| Flushing Data | | | |
| Flushing flow rate | 6 m ³ /h (26 US gpm) | 6 m ³ /h (26 US gpm) | 20 m ³ /h (88 US gpm) |
| Reject water volume per flush cycle | 0.5 - 0.7 m ³ (132 - 185 US gallon) | 1.1 - 1.5 m ³ (290 - 396 US gallon) | 3.5 - 5 m ³ (925 - 1320 US gallon) |
| Flushing sequence time | Approximately 10 minutes Including drainage and filling time | | |
| Exhaust valve | 50 mm 2" | 80 mm 3" | 100 mm 4" |
| Flushing criteria | Differential pressure, time intervals and manual operation | | |

| | | | |
|----------------------------|--|---|--|
| Filter Element Data | | | |
| Filter area | 35580 cm ² (5515 in ²) | 92500 cm ² (14340 in ²) | 370000 cm ² (57350 in ²) |

| | |
|--------------------------------|-----------------------------------|
| Control and Electricity | |
| Rated operation voltage | 3 phase, 220/380/440 VAC 50/60 Hz |
| Control voltage | 24 V AC/DC |

| | |
|--------------------------------|--|
| Construction Materials* | |
| Filter housing and covers | Epoxy coated carbon steel |
| Cassette | Polyester thread on Noryl® molded base |
| Cassette package | PVC, St/St, PTFE |
| Pistons | Brass, Bronze, HMWPE, St/St, Nylon, PTFE |
| Seals | Nitrile Rubber (NBR) |
| Pressure hoses | Rubber |
| Bolts, nuts, washers | External Galvanized, Internal St/St |
| Pneumatic valves | Cast Iron, EPDM, Brass, St/St |
| Solenoid valves | Aluminum (pneumatic control of valves), Brass (hydraulic control of pistons) |

* Amiad offers a variety of construction materials. Please consult us for specifications.



Municipal



Industry



Irrigation

Hyxo Oy

P.O. Box 16 (Palokorvenkatu 2)
FI-04261 Kerava, Finland
Tel. +358 10 417 4500
hyxo@hyxo.fi • www.hyxo.com

Headquarters

Amiad Water Systems Ltd. D.N. Galil Elyon 1, 12335, Israel,
Tel: 972 4 690 9500, Fax: 972 4 690 9391,
E-mail: info@amiad.com

North America

Amiad Filtration Systems, 2220 Celsius Avenue, Oxnard,
California 93030, USA, Tel: 1 805 988 3323, Fax: 1 805 988 3313,
E-mail: info@amiadusa.com

South America

Amiad Oil & Gas, Benito Nardone 2219, Montevideo, Uruguay,
Tel: 598 2 7117617, Fax: 598 2 7120816,
E-mail: amisur@adinet.com.uy

Chile

Amiad Andina, Carretera General San Martín 16.500 No 30,
Loteo Industrial Los Libertadores, Colina, Santiago de Chile,
Tel: 56 2 489 5100, Fax: 56 2 489 5101,
E-mail: amiadandina@amiad.com

Brazil

E-mail: amiad@amiad.com.br

Europe

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

Germany

Amiad Filtration Solutions (2004) Ltd. Zweigniederlassung
Deutschland Prinz-Regent-Str. 68 a 44795 Bochum,
Tel: 49 (0) 234 588082-0, Fax: 49 (0) 234 588082-12,
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

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

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., 19B Teo Hong Road,
088330 Singapore, Tel: 65 6 337 6698, Fax: 65 6 337 8180,
E-mail: fcs1071@pacific.net.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

www.amiad.com

NP.00949/10.2011

