amiad WATER SYSTEMS | FILTOMAT

Filtomat M100/MG Filters

Hydraulic self-cleaning screen filters, with no external power source required

flow rates	minimum operating pressure	water for cleaning	filtration degrees
M100: up to 400 m³/h (1,760 gpm) MG: up to 800 m³/h (3,520 gpm)	2 bar (30 psi)	less than 1% of the total flow	500-80 micron

features:

- Reliable operating mechanism
- Simple construction and easy maintenance
- Ideal solution for agricultural filtration requirements
- Automatic flushing according to pressure differential
- No interruption of downstream flow during flushing
- High reliability and durability
- Hydraulic or electronic control

How the Filtomat Filters Work

General

The Amiad Filtomat M100 and MG Series are automatic, self-cleaning filters, ideal for remote installation sites, with a water-driven self-cleaning mechanism that doesn't require an external power source for operation. With a variety of screen areas the M100 and MG models support flow rates of up to 3,520 gpm (800 m^3/h), with filtration degrees of 500 down to 80 micron and inlet/outlet diameters from 2" to 14".

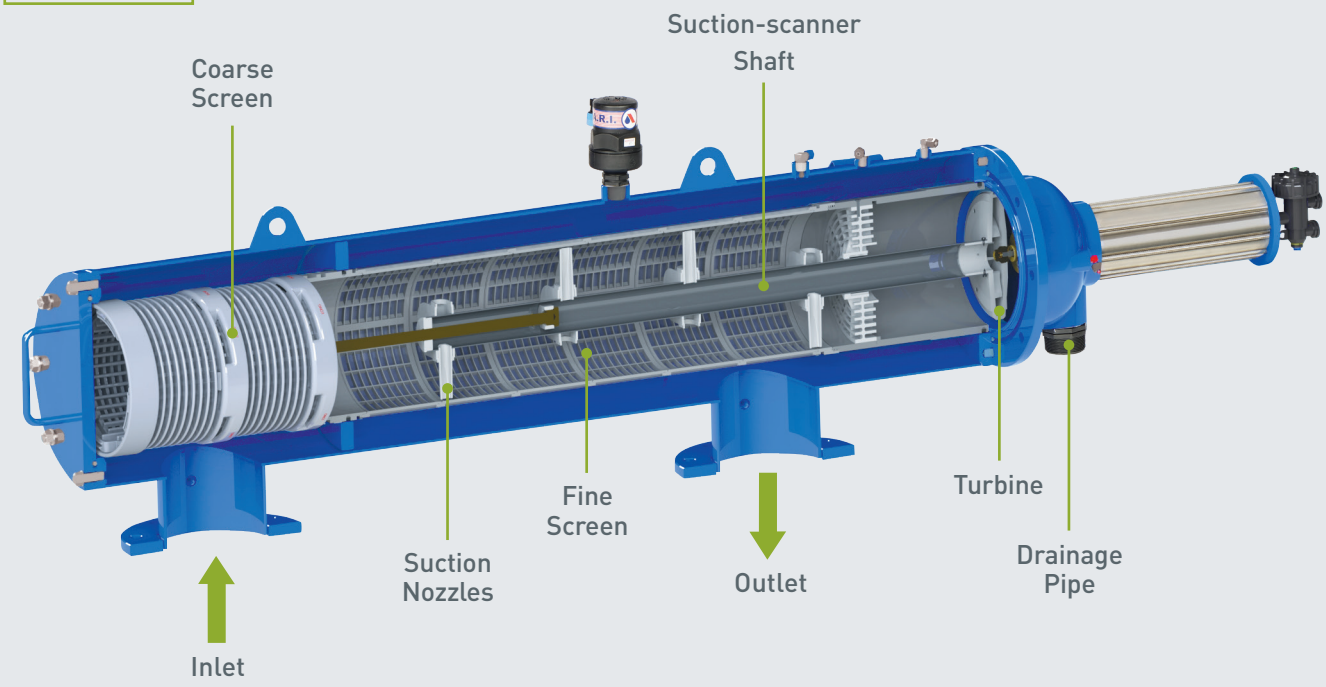
The Filtration Process

The filtration process begins when raw water flows through the filter inlet into the coarse screen which pre-filters the water to protect the cleaning mechanism from large debris. The water then passes through the inner surface of the fine screen where dirt particles are trapped and accumulate inside the filter, while clean water flows through the filter outlet. The gradual buildup of dirt on the inner screen surface causes a filter cake to develop which causes an increase in the pressure differential across the screen.

The Self-Cleaning Process

When the pressure differential across the screen reaches a pre-set level of 0.5 bar (7 psi), the M100 or MG filter starts the self-cleaning process by opening the internal flush valve. This results in the release of a back-flush stream flowing through the nozzles out of the hollow suction-scanner shaft to the turbine and to the drainage pipe.

Scan to watch the Filtomat M100 Operation Video



M100 Models

Available as a stand alone or as filter bank assembly, with a single control system (AC/DC).

Amiad's Filtomat M100 Series consists of the following models:

M100-750 for up to 40 m^3/h (176 gpm)

M100-1500 for up to 80 m^3/h (350 gpm)

M100-2250 for up to 100 m^3/h (440 gpm)

M100-4500 for up to 180 m^3/h (793 gpm)

M100-6800 for up to 400 m^3/h (1,760 gpm)

MG Models

Modular configuration, available as a stand alone or as filter bank assembly, with a single control system (AC/DC).

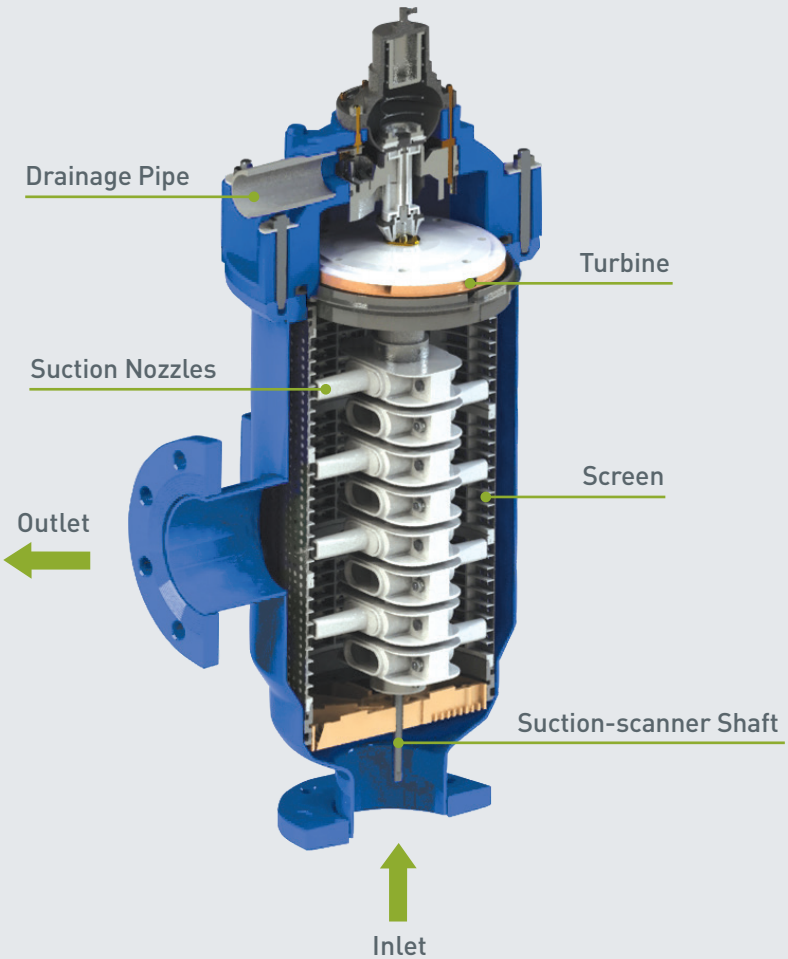
The MG modules are delivered fully assembled, requiring a single connection to the inlet, outlet and drain.

Amiad's Filtomat MG Series consists of the following models:

MG110 (2 x 108LP) for up to 400 m^3/h (1,760 gpm)

MG112 (3 x 108LP) for up to 600 m^3/h (2,640 gpm)

MG114 (4 x 108LP) for up to 800 m^3/h (3,520 gpm)



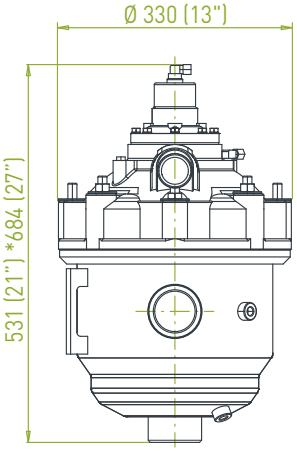
M100 Models:

M100 - 750 (M102C, M103C)

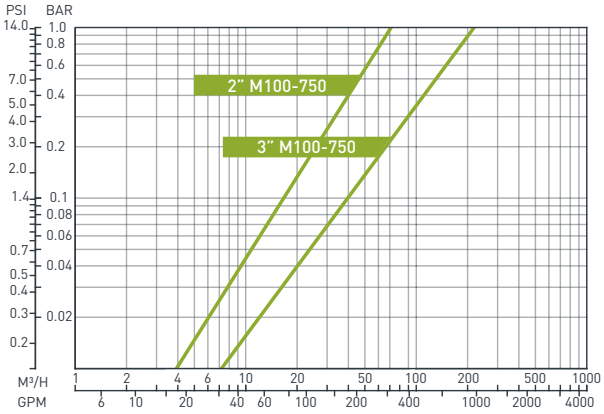
M100 - 1500 (M103CL, M104C)

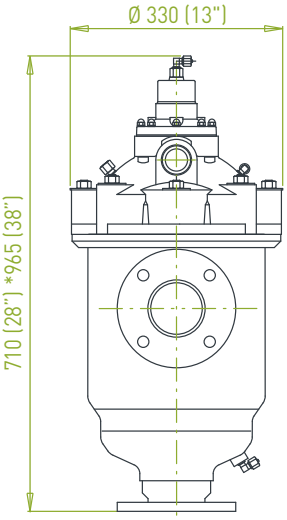
M100 - 2250 (M104CL)

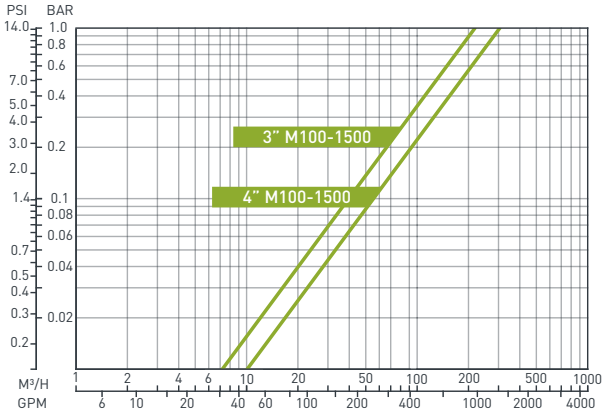
Typical Dimensional Drawing

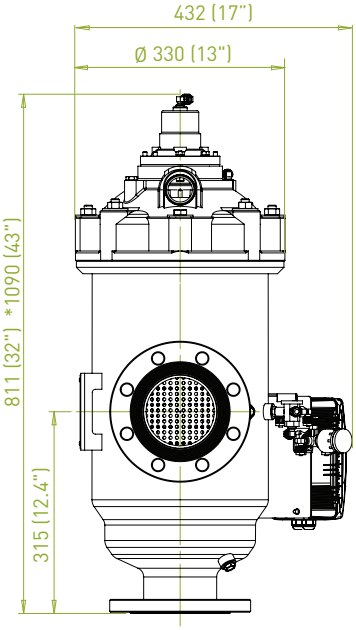


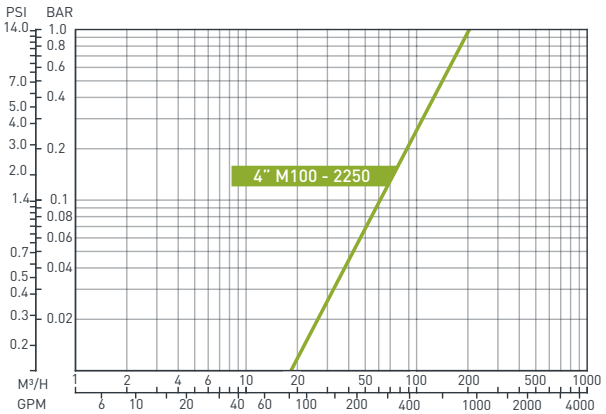
Head Loss Graphs (in clean water)











Dim: mm (inch)

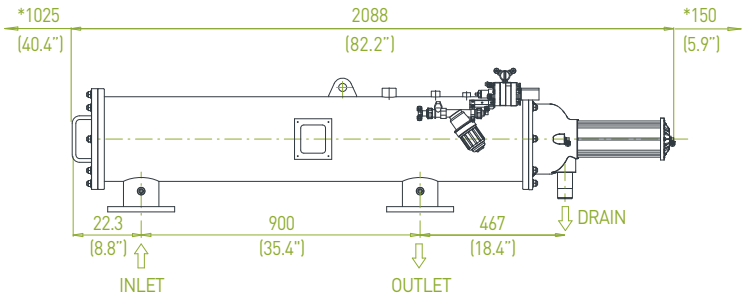
*Approx. length required for maintenance

M100 Models:

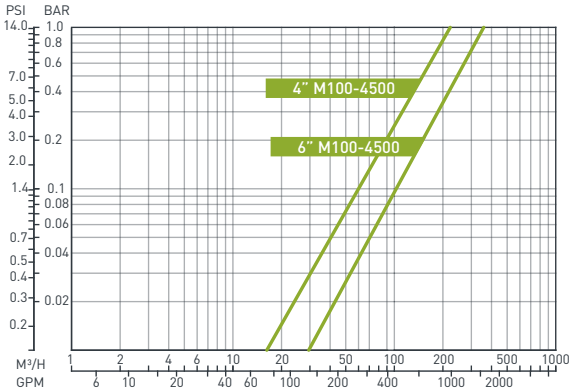
M100 - 4500 (M104LPN, M106LP)

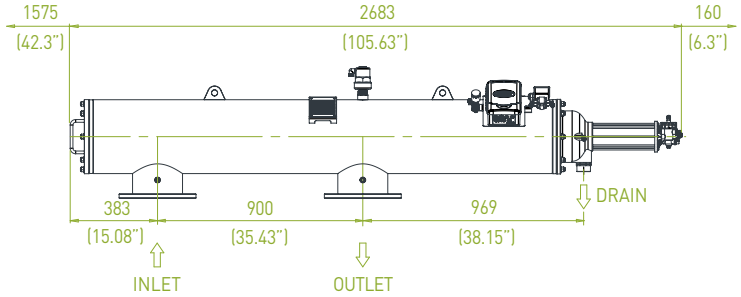
M100 - 6800 (M104XLP, M106XLP, M108LP, M110P)

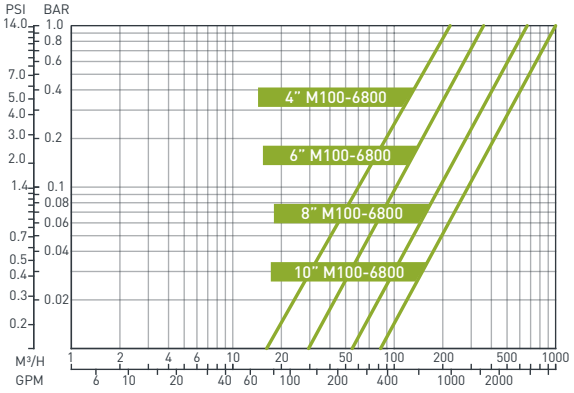
Typical Dimensional Drawing



Head Loss Graphs (in clean water)







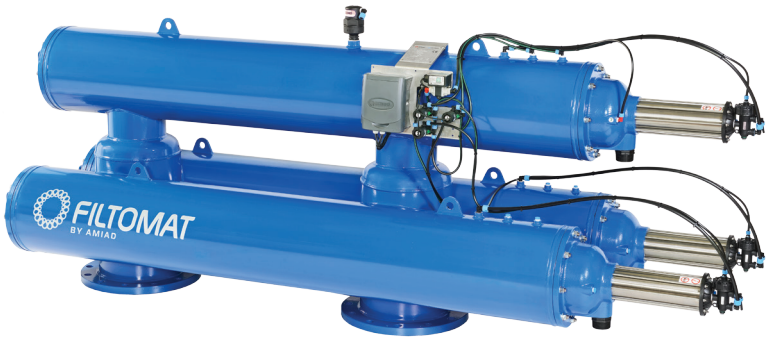
Dim: mm (inch)

*Approx. length required for maintenance

MG Models:

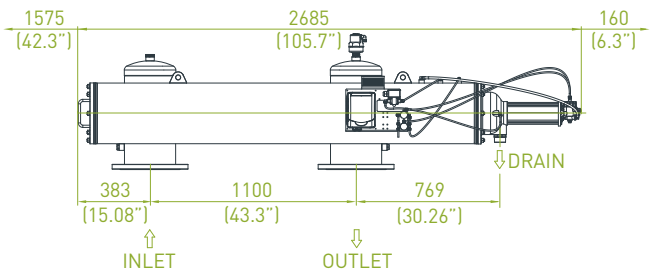
MG110

MG112

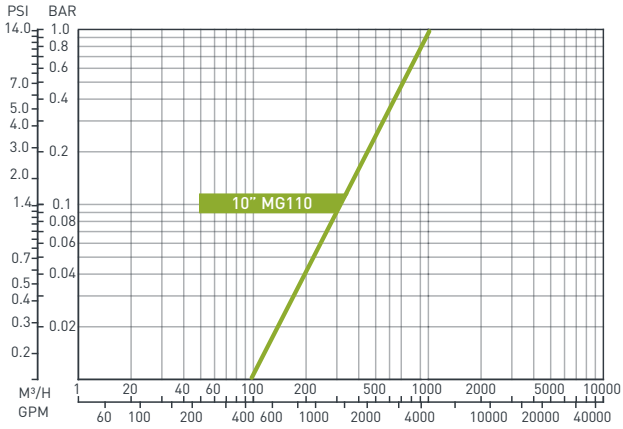


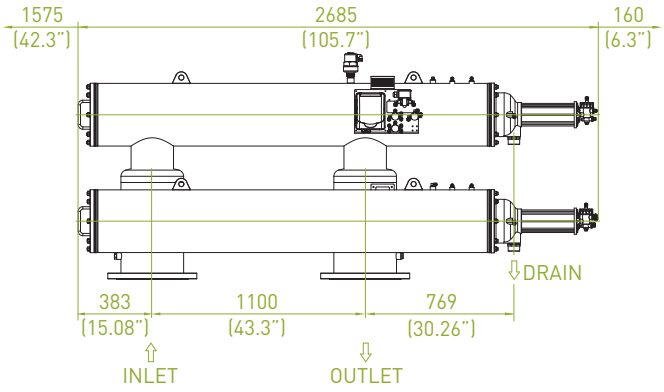
MG114

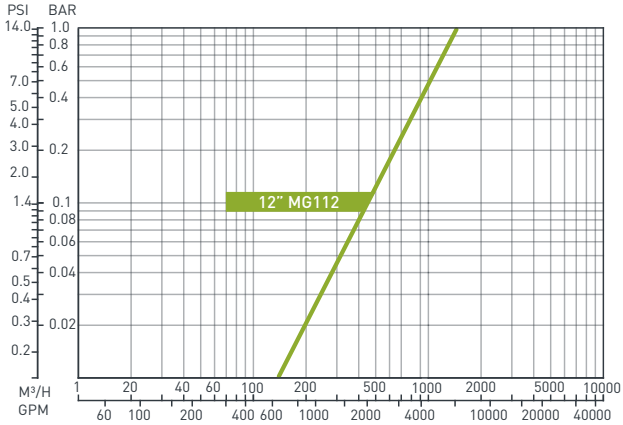
Typical Dimensional Drawing

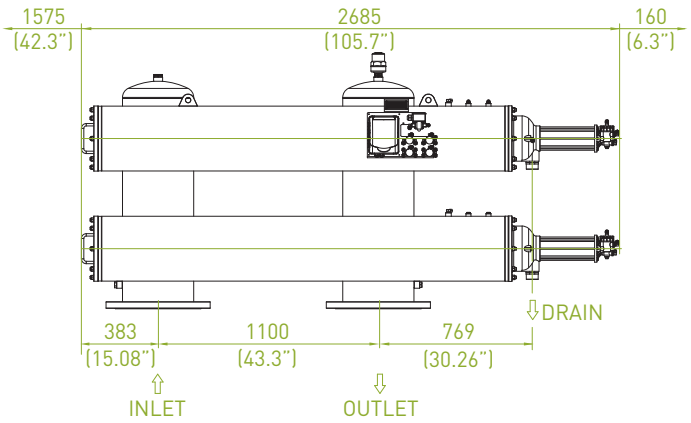


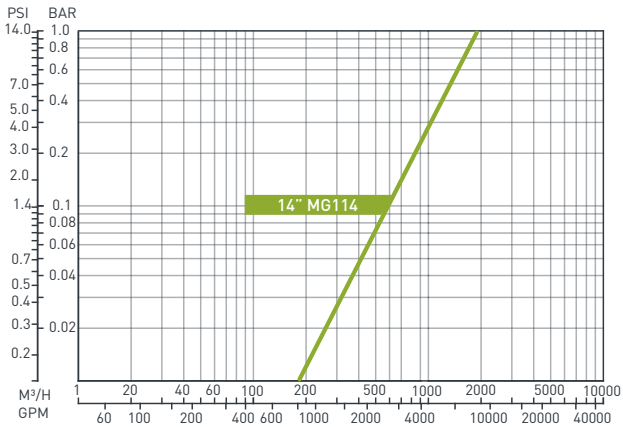
Head Loss Graphs (in clean water)











Dim: mm (inch)

*Approx. length required for maintenance

Technical Specifications - M100 Models

Filter Type	M100-750	M100-1500	M100-2250	M100-4500	M100-6800
General Data					
Maximum flow rate*	40 m³/h (175 gpm)	80 m³/h (350 gpm)	100 m³/h (440 gpm)	180 m³/h (793 gpm)	400 m³/h (1,760 gpm)
Inlet/Outlet diameter	2" (50 mm) 3" (80 mm)	3" (80 mm) 4" (100 mm)	4" 100 (mm)	4" 100 (mm) 6" 150 (mm)	4" (100 mm) 6" (150 mm) 8" (200 mm) 10" (250 mm)
Standard filtration degrees	500, 300, 200, 130, 100, 80 micron				
Minimum working pressure	2 bar (30 psi) For lower pressure please consult Amiad				
Maximum working pressure	8 bar (116 psi)			10 bar (150 psi)	
Maximum working temperature	55°C (131°F)				
Weight [empty]	2" 22 kg (48.5 lb) 3" 25 kg (55 lb)	3" 30 kg (66 lb) 4" 35 kg (77 lb)	4" 50 kg (110 lb)	4" 90 kg (198 lb) 6" 115 kg (253.5 lb)	4" 110 kg (242.5 lb) 6" 120 kg (264.5 lb) 8" 140 kg (308.6 lb) 10" 158 kg (348 lb)

* Consult Amiad for optimum flow depending on filtration degree and water quality.

Flushing Data					
Minimum flow for flushing (at 2 bar - 30 psi)	15 m³/h (66 gpm)	20 m³/h (88 gpm)	22 m³/h (97 gpm)	26 m³/h (114 gpm)	30 m³/h (132 gpm)
Reject water volume per flush cycle (at 2 bar - 30 psi)	15 liter (4 gallon)	20 liter (5.2 gallon)	28 liter (7.3 gallon)	125 liter (33 gallon)	150 liter (40 gallon)
Flushing cycle time	10 seconds			15 seconds	
Exhaust valve	1.5" (40 mm)				
Flushing criteria	Differential pressure of 0.5 bar (7 psi), time intervals or manual operation				

Screen Data					
Filter area	750 cm² (116 in²)	1,500 cm² (232 in²)	2,250 cm² (349 in²)	4,500 cm² (698 in²)	6,800 cm² (1,054 in²)
Screen types	Molded weavewire stainless steel 316L				

*** Construction Materials**	
Filter housing	Epoxy-coated carbon steel 37-2 (stainless steel 316L on request)
Filter lid	High density polypropylene, Epoxy coated carbon steel 37-2 (Stainless steel 316L on request)
Cleaning mechanism	PVC and stainless steel 316L
Exhaust valve	Brass, stainless steel 316L, BUNA-N
Seals	BUNA-N
Control	Brass, stainless steel 316L, and acetal

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

Technical Specifications - MG Models

Filter Type	MG110	MG112	MG114
General Data			
Maximum flow rate*	400 m³/h (1,760 gpm)	600 m³/h (2,640 gpm)	800 m³/h (3,520 gpm)
Inlet/Outlet diameter	10" (250 mm)	12" (300 mm)	14" (350 mm)
Standard filtration degrees	500, 300, 200, 130, 100, 80 micron		
Minimum working pressure	2 bar (30 psi) For lower pressure please consult Amiad		
Maximum working pressure	10 bar (150 psi)		
Maximum working temperature	55°C (131°F)		
Weight (empty)	325 kg (717 lb)	480 kg (1,054 lb)	723 kg (1,590 lb)

* Consult Amiad for optimum flow depending on filtration degree and water quality.

Flushing Data			
Minimum flow for flushing (at 2 bar - 30 psi)	30 m³/h (132 gpm)		
Reject water volume per flush cycle (at 2 bar - 30 psi)	300 liter (80 gallon)	450 liter (120 gallon)	600 liter (160 gallon)
Flushing cycle time	30 seconds	45 seconds	60 seconds
Exhaust valve	1.5" (40mm)		
Flushing criteria	Differential pressure of 0.5 bar (7 psi), time intervals or manual operation		

Screen Data			
Filter area	13,600 cm² (2,108 in²)	20,400 cm² (3,162 in²)	27,200 cm² (4,216 in²)
Screen types	Molded weavewire, stainless steel 316L		

* Construction Materials	
Filter housing	Epoxy-coated carbon steel 37-2 (stainless steel 316L on request)
Filter lid	High density polypropylene, Epoxy coated carbon steel 37-2 (Stainless steel 316L on request)
Cleaning mechanism	PVC and stainless steel 316L
Exhaust valve	Brass, stainless steel 316L, BUNA-N
Seals	BUNA-N
Control	Brass, stainless steel 316L, and acetal

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