

MG Series Automatic Filters

flow rates	filtration degrees	water for cleaning	minimum operating pressure
up to 2.000 m³/h (8.805 US gpm)	500-80 micron	less than 1% of the total flow	1,5 bar (22 psi)

The automatic self-cleaning filter - suitable for more applications than ever.



features:

- Large filter area, reliable operating mechanism and simple construction make the MG filters the ideal solution for filtration of poor quality water to very fine filtration degrees
- Automatic flushing according to pressure differential and/or according to time
- No interruption of downstream flow during flushing
- Robust and reliable Self-Cleaning mechanism even on marginal operation conditions.
- Minimal volume of reject water allows excellent operation in continuous flush mode
- Applications: Water supply systems, Irrigation systems, Cooling Water, Waste Water Treatment, Industrial Pre-Filtration, etc.
- Industries: manufacturing , mining, water and waste water treatment plant, turf and agriculture, etc.

Technical Specifications

Filter Type	MG-110P	MG-112P	MG-114P	MG-116P
General Data				
Maximum flow rate*	800 m³/h	1.200 m³/h	1.600 m³/h	2.000 m³/h
Inlet/Outlet diameter (mm)	10", 12" (250, 300)	12", 14" (300, 350)	14" 16" (350-400)	16"-20" (400-500)
Standard filtration degrees	Weave Wire or Wedge Wire Screen 500, 300, 200, 130, 100, 80 micron			
Min. working pressure	1,5 bar (22 psi) For lower pressure please consult manufacturer			
Max. working pressure	10 bar (145 psi)		10 bar (145 psi)	
Max. working temperature	50°C (122°F)	50°C (122 °F)	50°C (122°F)	50°C (122°F)
Electrical Supply				
Weight (empty)	330 kg	490 kg	655 kg	820 kg

* Timex offers a variety of construction materials. Consult manufacturer for specifications.

Flushing Data				
Minimum flow for flushing (at 2 bar -30 psi)	60 m³/h	90 m³/h	120 m³/h	150 m³/h
Reject water volume per flush cycle (at 2 bar -30 psi)	300 liters	450 liters	600 liters	750 liters
Flushing cycle time	15 seconds	15 seconds	15 seconds	15 seconds
Exhaust valve	2 x 1,5" 2 x 40 mm	3 x 1,5" 3 x 40 mm	4 x 1,5" 4 x 40 mm	6 x 1,5" 6 x 40 mm
Flushing criteria	Differential pressure of 0.5 bar (7psi), time intervals and manual operation			

Screen Data				
Filter area	13.600 cm²	20.400 cm²	27.200 cm²	40.800 cm²
Screen types	Four-layer or Molded Weave Wire stainless steel 304, 316, SMO254			
	Wedge Wire stainless steel 304, 316, SMO254, Duplex and Super Duplex			

Control and Electricity				
Rated operation voltage	3 phase, 380 / 440 VAC 50 / 60 Hz or 1 phase, 220 VAC 50 Hz			
Electric motor	¼ HP	¼ HP	¼ HP	1/3 HP
Current consumption	0.6 Amp	0.6 Amp	0.6 Amp	0.8 Amp
Control voltage	24 VAC 12V or 24 VDC upon request			

Construction Materials	
Filter housing	Epoxy-coated carbon steel 37-2 / Stainless Steel 304, 304L, 316, 316L
Filter lid	Epoxy-coated carbon steel 37-2 / Stainless Steel 304, 304L, 316, 316L
Cleaning mechanism	Stainless steel 304, 304L, 316, 316L, PVC
Exhaust valve	GG25 body and Stainless steel disc, Natural rubber
Seals	EPDM, NBR, Teflon
Control	Aluminum, Brass, Stainless steel, PVC, Nylon

* Timex offers a variety of construction materials. Consult manufacturer for specifications.

How the MG series work

General

The Timex MG Series are sophisticated, yet easy-to-operate, automatic filters, with a self-cleaning mechanism driven by an electric motor.

The "MG" filters support flow-rates of up to 2.000 m³/h (8.805 gpm), with various screens designed to cover a range of 500-10 micron filtration degree, and are available in inlet/outlet diameters of 10"-20".

The Filtering Process

Raw water enters the filter inlet through the coarse screen which protects the cleaning mechanism from large debris. The water passes through the fine screen, trapping dirt particles which accumulate inside the filter. Clean water flows through the filter outlet.

The gradual dirt buildup on the inner screen surface causes a filter cake to develop, with a corresponding increase in the pressure differential across the screen. A pressure differential switch senses the pressure differential and when it reaches a pre-set value, the cleaning process begins.

The Self-cleaning Process

Cleaning of the filter is carried out by the suction scanner which spirals across the screen; the open exhaust valve creates a high velocity suction stream at the nozzles tip which "vacuums" the filter cake from the screen. During the self-cleaning process, which takes between 15 to 40 seconds, filtered water continues to flow downstream.

The Control System

Two types of control boards are available for the MG filters: PLC or Electro-Mechanical Relay and Timer.

The self-cleaning cycle begins under any one of the following conditions:

1. Receiving a signal from the Pressure Differential Switch
2. Time interval parameter set at the control board
3. Manual Start

The control board also provides:

Optional continuous flush operation mode

Flush cycles counter

Alarm or an alternative reaction at malfunction mode; open a bypass, shut-off a pump, etc.

"MG" Models

Timex's "MG" product-line consists of the following models:

MG-110P for up to 800 m³/h

MG-112P for up to 1200 m³/h

MG-114P for up to 1600 m³/h

MG-116P for up to 2000 m³/h



industry

Automotive, Aviation,
Ballast treatment,
Electronics, Food &
Beverage; Mining,
Oil & Gas,
Petrochemical, Power
Generation, Pulp &
Paper

municipal

Potable Water, Waste Water,
Desalination, Brackish
Water, High rise buildings,
Pre-filtration to Membranes

irrigation

Agriculture, Golf & Turf,
Green Houses

aquaculture

Fish Farming, Recirculating
Aquaculture Systems (RAS),
Fish Processing Industry

Factory & Head Office

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