TIMEX
Filtration & Water Systems

KMF² Microfiber Filters

flow rates	filtration degrees	water for cleaning	minimum operating pressure
up to **320 m³/h** (1400 US gpm)	**20-2** micron	less than **1**% of the total flow	**1** bar (15 psi)

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

features:

- TSS, NTU & SDI reduction for potable and waste water applications
- Effective removal of 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

Technical Specifications

Filter Type	KMF-36K	KMF-93K	KMF-370K
General Data			
Recommended flow rate*	Up to 30 m³/h (132 US gpm)	Up to 50 m³/h (220 US gpm)	Up to 320 m³/h (1400 US gpm)
Inlet/Outlet diameter	1x2" (1x50 mm)	1x4" (1x100 mm)	2x8" 2x200 mm
Standard filtration degrees	2-3-7-10-20 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 Faz, 220/ 380/ 440 VAC 50/60 Hz		
Compressed Air Supply	6 - 8 bar / 87 - 116 psi		
Weight (empty)	480 kg	650 kg	2150 kg

* Depending on water quality and application

Flushing Data			
Flushing Flow Rate	6 m³/h (26 US gpm)	6 m³/h (26 US gpm)	20 m³/h (88 US gpm)
Reject water volume per flush cycle	0.5 - 0.7 m³ (132 - 185 US gallon)	1.1 – 1.5 m³ (290 - 396 US gallon)	3.5 - 5 m³ (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 cm² (5515 in²)	92500 cm² (14340 in²)	370000 cm² (57350 in²)

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)

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

How the KMF² Filters work

Generall

Timex's KMF² 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 KMF² 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 KMF² 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. Dirt particles that accumulate on and in-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, described as follows:

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. Than, the "filter to waste" valve closes, the outlet valve opens and the filter is back on-line.

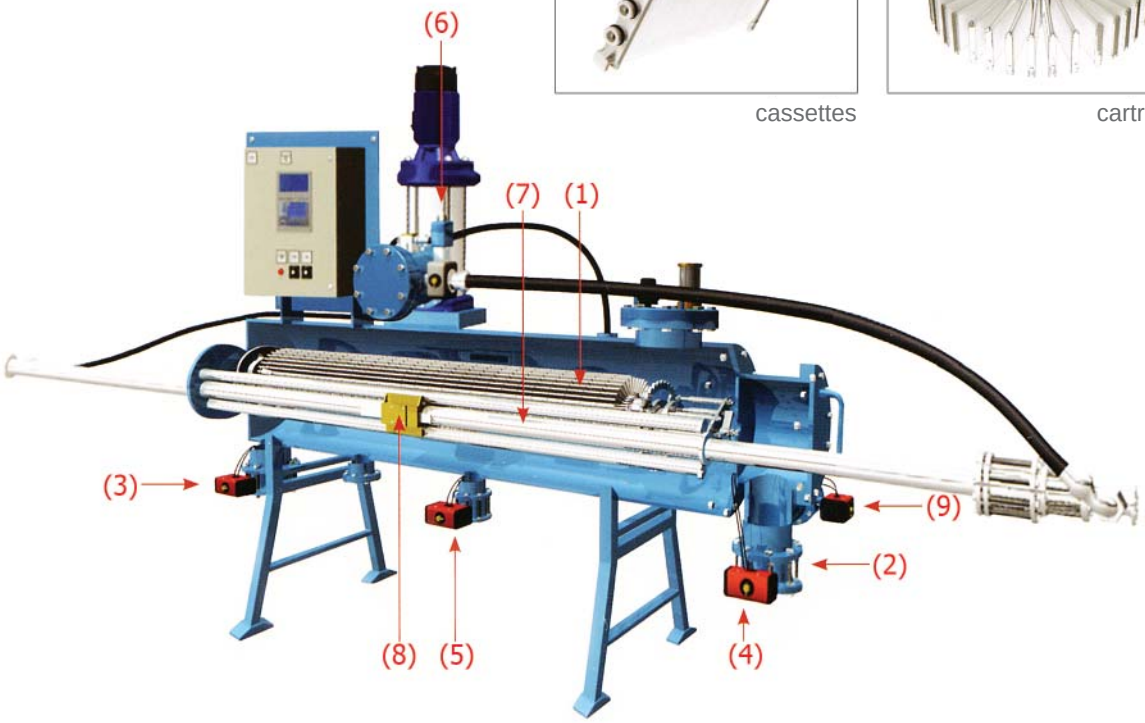
KMF² Models

Timex's KMF² product-line consists of the following models:

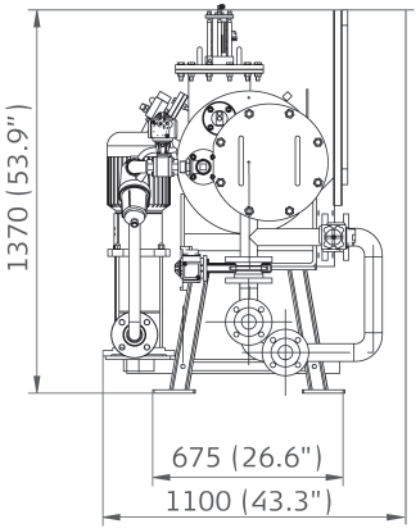
- KMF²-36K for up to 30 m³/h (132 US gpm)
- KMF²-93K for up to 50 m³/h (220 US gpm)
- KMF²-370K for up to 320 m³/h (1410 US gpm)

cassettes

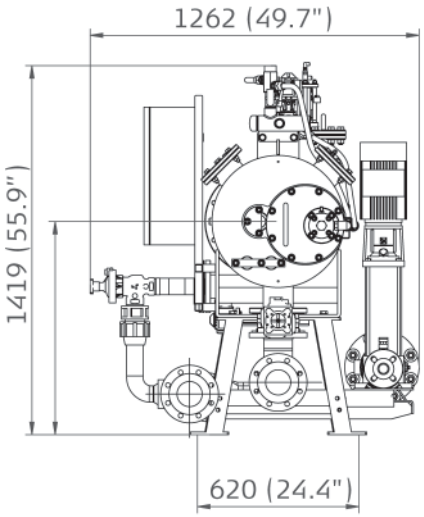
cartridge



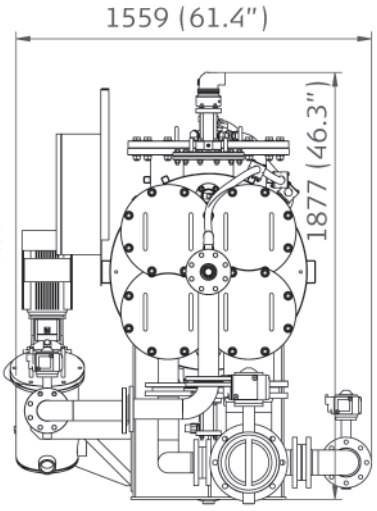
KMF² 36K



KMF² 93K



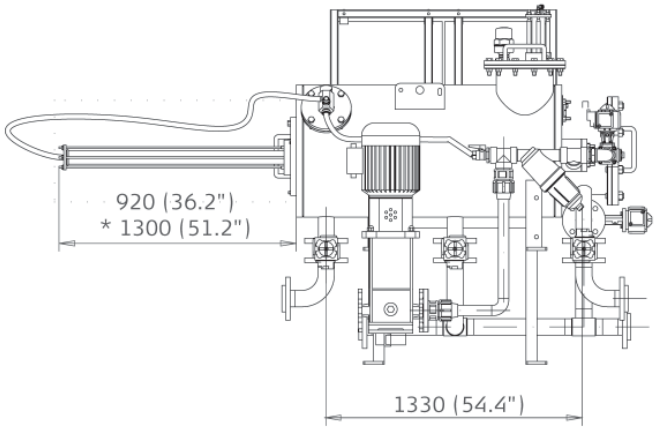
KMF² 370K

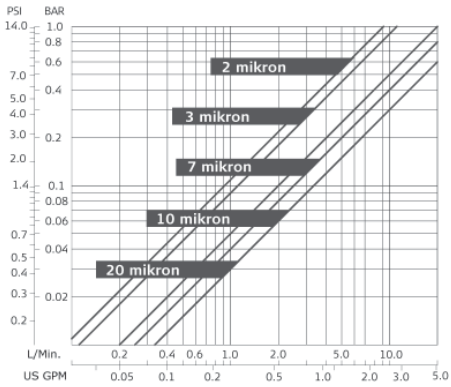


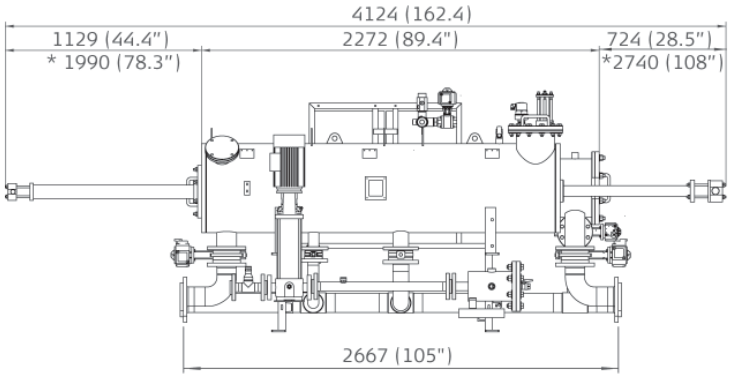
Dim. In mm (inch)
*Approx. length required for maintenance

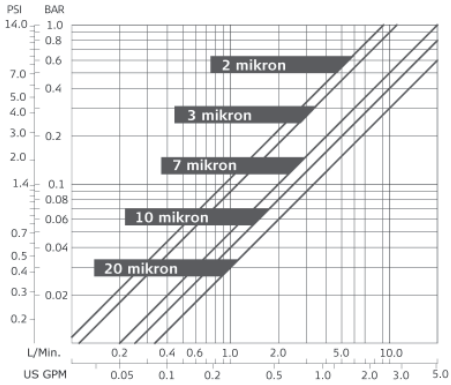
Pressure Loss Graphs

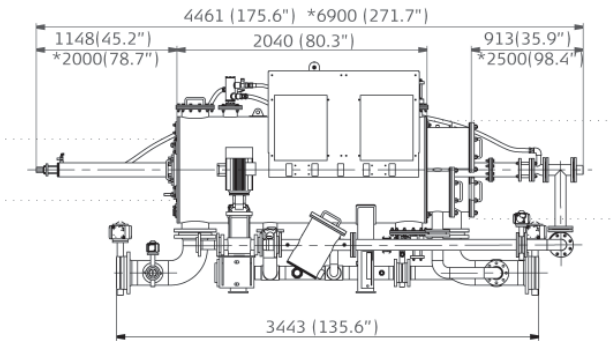
single microfiber cassette

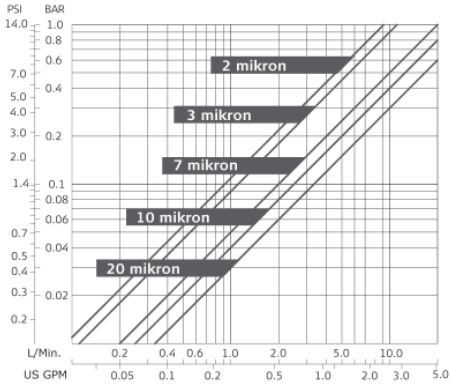












Dim. In mm (inch)
*Approx. length required for maintenance

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, Aquaculture, Green Houses

Factory & Head Office

ASO 2 OSB, 2036. Street, No:12 Sincan / ANKARA / TURKEY

Tel : +0 312 815 52 46-47, Fax: 0 312 815 52 48

E-mail : info@timex.com.tr

www.timex.com.tr

TIMEX

Filtration & Water Systems