



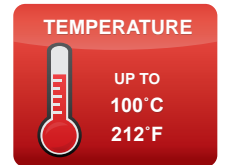
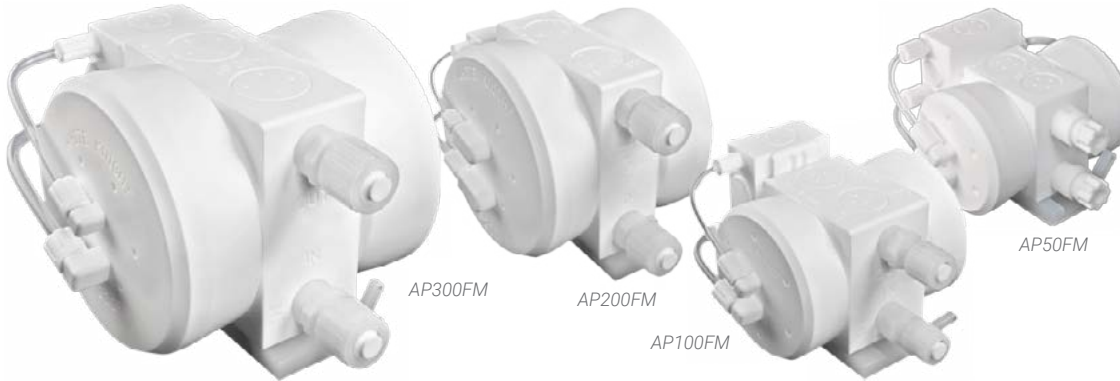
WHITE KNIGHT[®]

.....engineer approved™

AP FM SERIES PUMPS

Proven Reliable Recirculation of the Harshest Chemicals

AP300FM pumps were discontinued Dec 31, 2015. They will be supported for five years after the date of discontinuance, but we recommend users consider PSH140 pumps, which provide better performance, increased flow rates, higher pressure capabilities, improved reliability, extended pump life and warranty periods, as well as shorter lead times. Details: <https://wkfluidhandling.com/psh-series/>



PTFE/PFA pump for the most stringent semiconductor chemical processing requirements

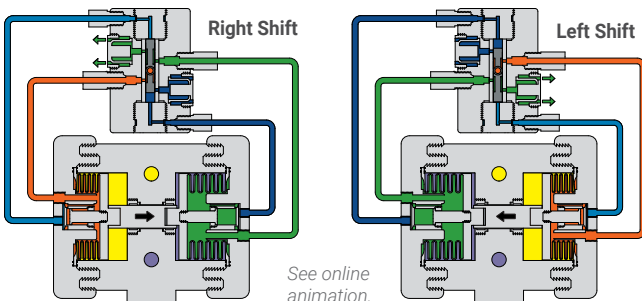
AP FM Series pumps are completely metal-free PTFE/PFA. They are capable of distributing chemicals at temperatures up to 100°C (212°F) and allow for air supply pressures up to 4 Bar (60 psi). The pumps perform safely and reliably running continuously throughout their one-year warranties. The pumps are available in four models AP50FM, AP100FM, AP200FM and AP300FM, which are capable of maximum flow rates of 20, 55, 68 and 115 lpm, respectively.

Features & Benefits

- Nonmetal pumps with PTFE/PFA liquid paths
- No elastomer O-rings, no leaks, never retorque
- Safe, leak-free operation due to no-metal design
- Pneumatic Logic™ minimizes pulsation and vibration
- Class 100 cleanroom assembly, testing, and packaging
- No preventative maintenance during one-year warranty
- Proven reliable to 200 million+ cycles
- No lubrication in shift mechanisms
- Minimal parts for durable design
- Ceramic in air shuttle valve
- Various liquid connection options
- Easy to install and service

Operation

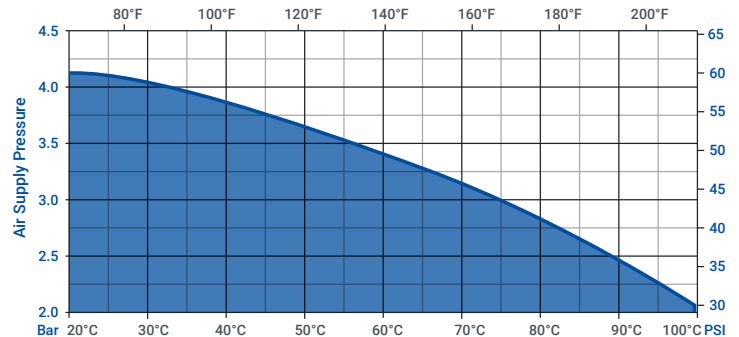
Pneumatic Logic™ minimizes liquid pulsation, vibration, and wear. It automatically resets shuttle valves after shutdowns, and ensures correct spool placement at the end of each stroke. It has no detents to fail or seals to fatigue.



See online animation.

- Supply Air
- Shift Air
- Liquid In
- Exhaust Air
- Ambient Air
- Liquid Out

Temperature Limits



Options

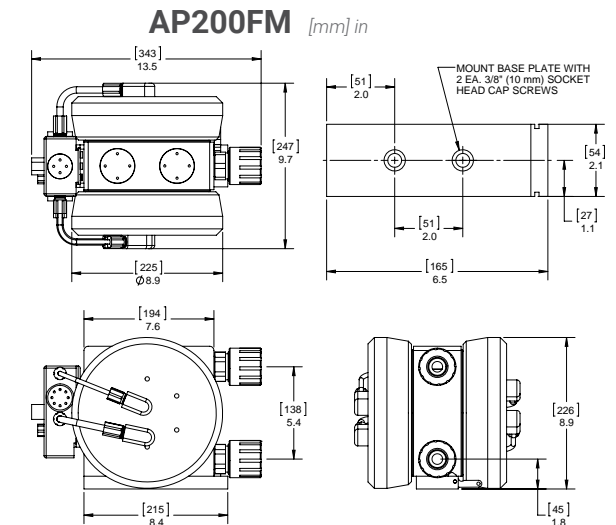
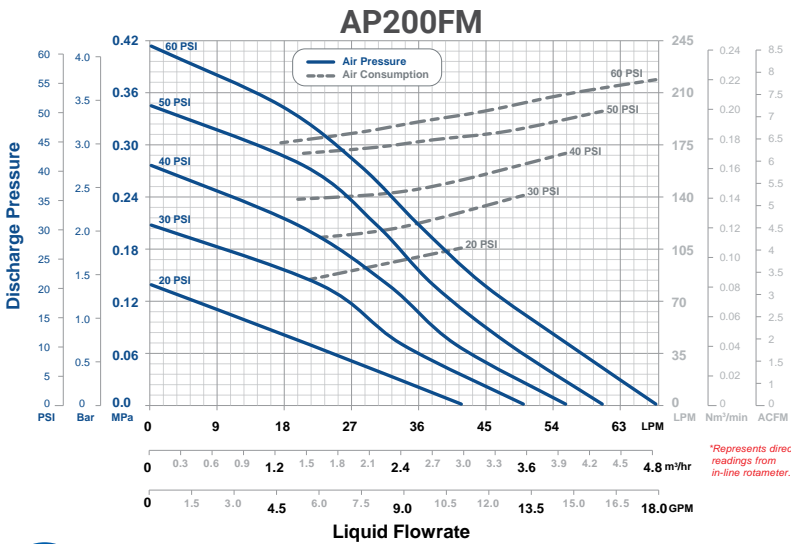
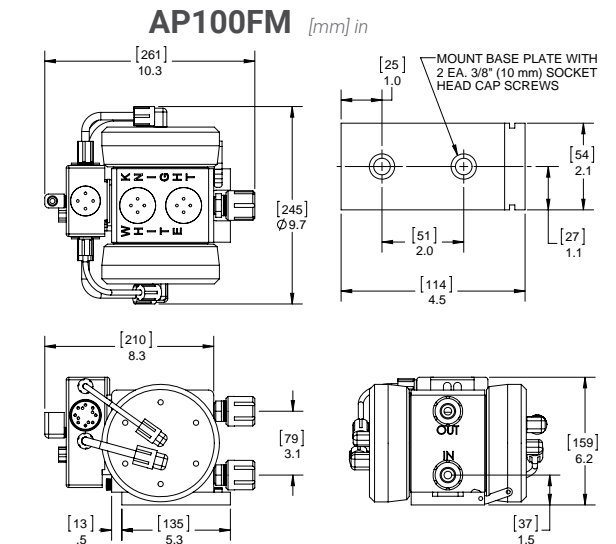
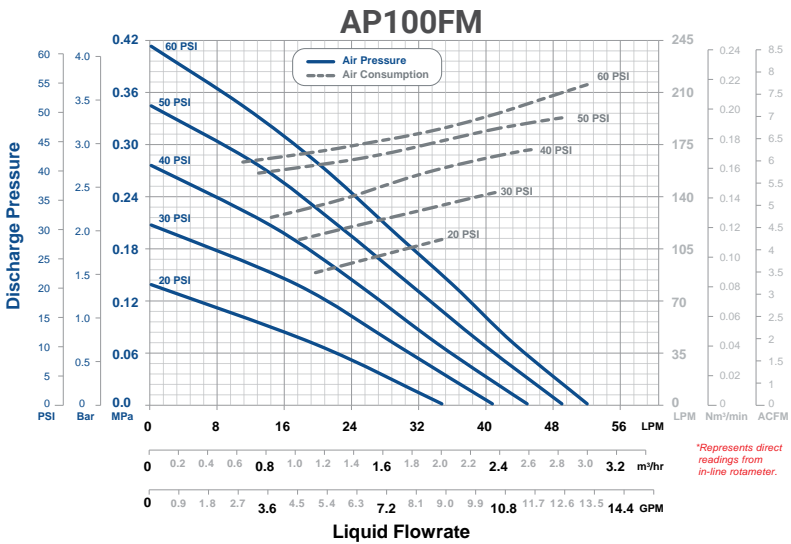
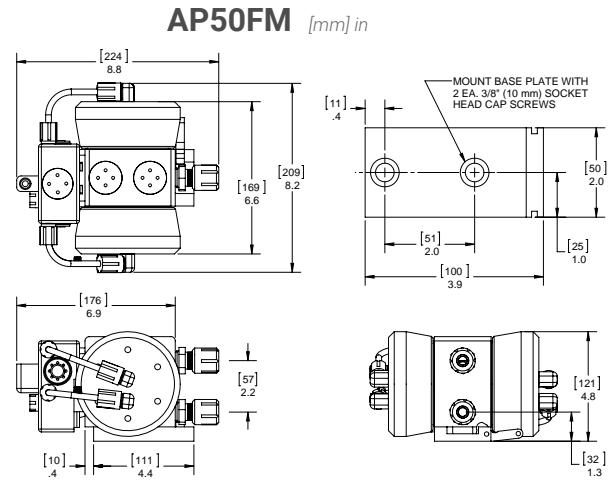
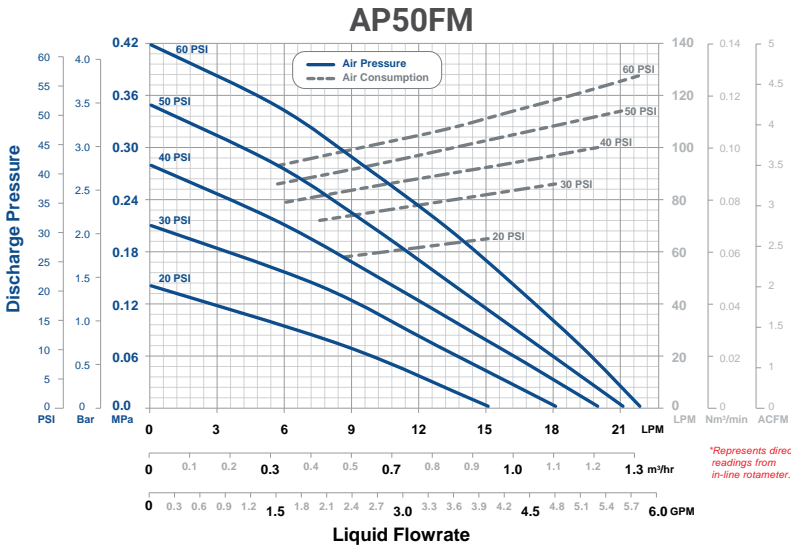
Leak detection, stroke detection, electronic controls and monitoring, as well as pulsation dampeners.

<https://wkfluidhandling.com/ap-fm-series/>

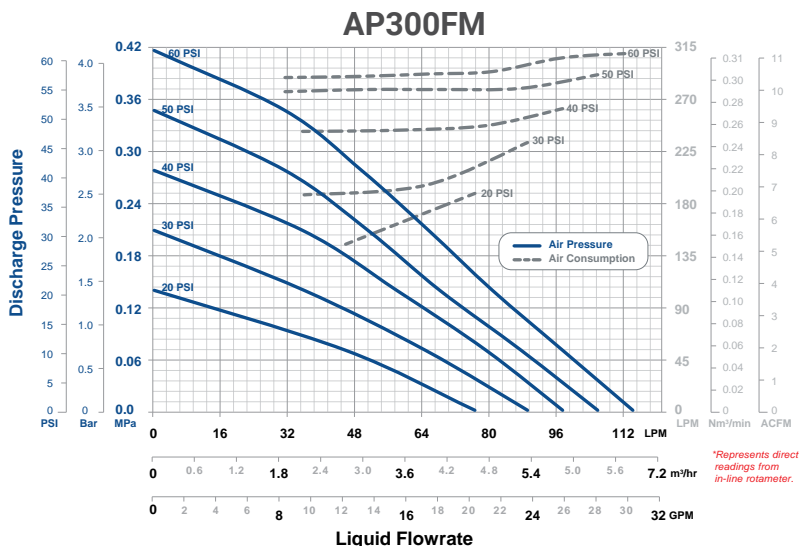


Performance

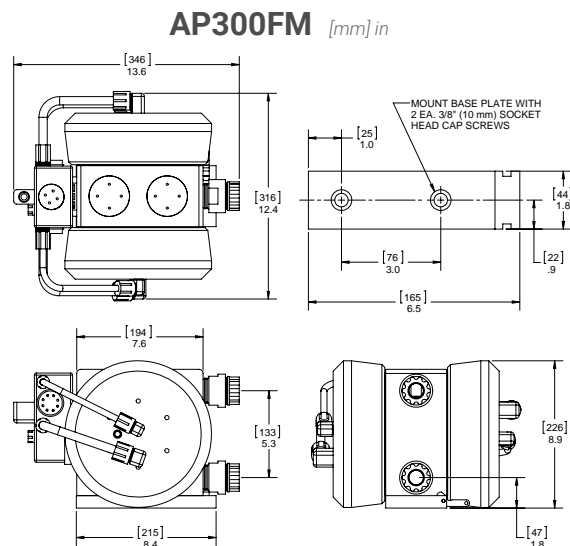
Dimensions



Performance (continued)



Dimensions (continued)



Specifications

Model	AP50FM	AP100FM	AP200FM	AP300FM*
Max Flow Rate*	20 lpm (5 gpm)	55 lpm (14 gpm)	68 lpm (17 gpm)	115 lpm (30 gpm)
Displacement Per Cycle*	0.076 liters (0.02 gal)	0.189 liters (0.05 gal)	0.454 liters (0.12 gal)	0.719 liters (0.19 gal)
Cycles per min	≤ 270	≤ 300	≤ 150	≤ 160
Air Connection	1/8, 1/4, or 3/8 in FNPT	1/4 or 3/8 in FNPT	1/2 or 3/8 in FNPT	
Weight	4.2 kg (9.4 lb)	7.1 kg (15.6 lb)	16.2 kg (35.8 lb)	19.0 kg (41.8 lb)
Sound	Pressure**	69.38 dB(a) 76.55 dB(a)	72.38 dB(a) 79.12 dB(a)	74.80 dB(a) 82.31 dB(a)
	Power**	58.52 dB(a) 65.75 dB(a)	64.31 dB(a) 71.98 dB(a)	69.24 dB(a) 77.17 dB(a)

All AP FM Series Models	
Max Fluid Temperature	100°C (212°F)
Max Supply Air Pressure	4 bar (60 psi)
Min Startup Air Pressure	1.4 bar (20 psi)
Suction Lift*	≤ 1 m (3 ft)
Fluid Path Materials	PTFE, PFA
Non-Fluid Path Materials	PTFE, PFA, Ceramic

All AP FM Series Models	
Stroke Detection	Fiber optic with or without D10 sensor, or solid state pressure switch (NPN or PNP)
Leak Detection	Fiber optic with or without sensor, or conductivity
Electronic Control	CPC, CPT, or custom. Call for details.

* May vary by configuration. Suction lift diminishes over time. Recommended installation level less than 3 ft above source.
 ** dB at 60 psi 50 CPM (top) and 60 psi max. CPM (bottom). Sound levels measured in accordance with ISO9614-2:1997.
 *AP300FM pumps were discontinued Dec 31, 2015. Recommended replacement is PSH140 pump.

AP FM Series Replacement Pumps: PSH Series

PSH Series pumps are ideal for ultra-pure chemical recirculation and delivery applications operating up to 145°C (293°F). These PTFE/PFA pumps are available in three models, which are capable of maximum flow rates of 30, 60 and 140 lpm, respectively. They offer air supply pressures up to 5.5 Bar (80 psi). These pumps provide better performance, increased flow rates, higher pressure capabilities, improved reliability, extended pump life, longer warranty periods, and shorter lead times. PSHSD models can run dry for more than one hour without pump damage.

<https://wkfluidhandling.com/psu-series/>

Improve Performance with Pulse Dampeners

In-line and top-mount dampeners reduce pulsation in fluid systems to improve flow control, increase batch yields, protect components, and minimize maintenance and downtime. DBH030 dampeners fit 30 and 60 lpm pumps. DBH060 dampeners fit 30, 60 and 140 lpm pumps. DBH140 dampeners fit 60 and 140 lpm pumps.

<https://wkfluidhandling.com/dampeners/>

