

## UP 10-16 Comfort PM, PM Auto

The UP 10-16 pump is designed for recirculation of domestic hot water in single-family homes with dedicated hot-water return piping. Utilizing a low-noise permanent magnet motor, energy consumption is reduced to as little as 5 - 8.5 W. Selecting the Auto mode ensures that the pump runs only when required. The result is maximum comfort - no waiting for hot water plus decreased water and power consumption.



Fig. 9 UP 10-16 APM BU/LC

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### Applications

- Domestic hot-water recirculation systems in single-family homes
- small heating systems.

### Pumped liquids

- Domestic hot water
- softened water
- clean water.

The pump uses two temperature sensors, one within the pump and the other connected to the pump by a cable installed in the hot-water flow pipe. The pump is installed in the hot-water return pipe.

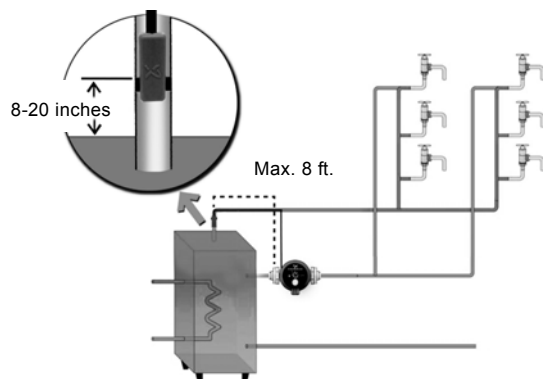


Fig. 10 UP 10-16 APM pump with built-in temperature sensor

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### Three operating modes

#### 100 % mode

- Pump will operate 24/7/365 continuously at full speed.

#### Temperature mode

- Pump will keep the water temperature within an automatically detected range.

#### Auto mode

- Pump will learn, store and adapt operating times to home hot water consumption patterns.

#### Disinfection feature

- Once per week, the pump will run a 15-minute disinfection cycle.

#### Vacation feature

If no tappings are detected in a 24-hour period, the pump will (self-modulate) automatically switch to standby mode (except for disinfection) and reactivate to the same consumptive pattern when 2 tappings occur within a 20-minute time period.

#### Motor

The motor is single-phase, 12-pole, permanent-magnet design, impedance-protected, double insulated, No additional motor protection is required.

Voltage	1 x 115/208-230 V, 50/60 Hz
Power	5 - 8.5 Watts
Enclosure class	IP42, type PM: IP44
Insulation class	F

#### Maximum system pressure

145 psi (10 bar).

#### Ambient and liquid temperatures

The ambient temperature should always be lower than the liquid temperature, as otherwise condensation may form in the stator housing.

Liquid temperature: 36 °F (2 °C) to 185 °F (85 °C).

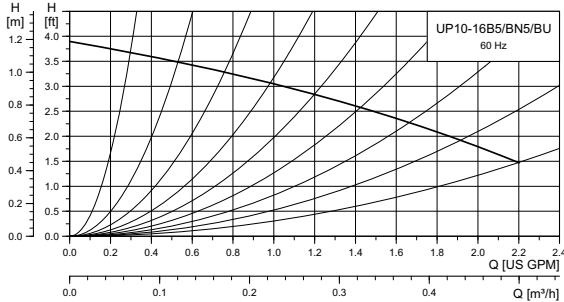
We recommend to keep the operating temperature as low as possible (e.g. 140 °F (60 °C)) to avoid calcium precipitation.

Description	Material
Stator housing	Aluminium
Spherical separator	Stainless steel
Rotor can, complete	Stainless steel/Tungsten carbide
Rotor, impeller	Stainless steel, EPDM, PPO, PFTE, graphite
Pump housing	EcoBrass
Isolating valve	EcoBrass
Screw	Stainless steel
Terminal box cover	PC/ABS
Motor cover	PPO
Power cable jacket	PVC
O-Rings	EPDM
Check valve	POM
Light	Lexan
Insulation cover	EPP 55
External sensor cable	PC/ABS

## 6. Technical data

### UP 10-16 Comfort PM, PM Auto

### UP 10-16 A/PM B5/BN5/BU



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Flow range: 0 - 2.2 gpm (0 - 0.5 m<sup>3</sup>/h)  
 Head range: 0 - 3.9 ft (0 - 1.2 m)  
 Motors: Single-phase  
 Max. liquid temperature: 185 °F (85 °C)  
 Min. liquid temperature: 36 °F (2 °C)  
 Max. system pressure: 145 psi (10 bar)

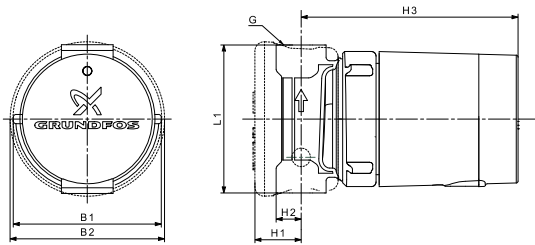
Model	Volts	Amps	Watts	Hp	Capacitor
UP 10-16 B5/BN5/BU	115/208-230 V	0.23	5 - 8.5	-	-

### Approvals



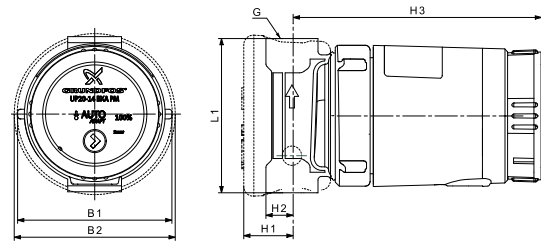
Drinking Water System Components  
 In Accordance with NSF/ANSI 372

UP 10-16 PM B5, BN5  
 APM B5, BN5



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UP 10-16 APM BU



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Model	Product number	Dimensions [inches (mm)]							Shipping weight [lbs (kg)]	
		115/208-230 V	L1	H1	H2	H3	B1	B2		Connection
UP10-16 PM B5/LC	98420206		3.13 (79)		0.5 (12.7)				1/2" Sweat	2.9 (1.3)
UP10-16 PM BN5/LC	98420210		3.13 (79)		0.5 (12.7)				1/2" NPT	3.4 (1.5)
UP10-16 A PM B5/LC	98420222		3.13 (79)	1.0 (25.4)	0.5 (12.7)	5.25 (133)	2.67 (68)	3.28 (83)	1/2" Sweat	2.9 (1.3)
UP10-16 A PM BN5/LC	98420223		3.13 (79)		0.5 (12.7)				1/2" NPT	3.4 (1.5)
UP10-16 A PM BU/LC	98420224		4.33 (110)		0.88 (23)				1 1/4" NPSM	3.8 (1.7)

**Note:** Models have a 6 ft (1.8 m), 3-prong power cord.  
 Maximum external sensor cable length 8 ft (2.4 m).  
 UP 10-16 A PM BU/LC with integral check valve.  
 Dimensions in inches unless otherwise noted.