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AWMT product program

Guangzhou AWMT Mechanical & Electrical Co., Ltd. – innovative enterprise of China, producing premium class modern energy-effective invertor variable speed pumps with BLDC (= Brush Less Direct Current) electronic managed electromotors on the base of permanent magnet technology with modern FOC (= Flux-Oriented Control) control structure, fully correspondind to the requirements of European standard EU 622/2012/EC specification by EuP/ErP commands.

Our products are compatible with leading European pump's producers as GRUNDFOS and wilo, offering similar technical level, but more attractive prices, with 5 years warranty for end users and great opportunity for distributors and wholesalers.

EEI ≤ 0.20

ISO 9001:2008

Special circulation pumps for integration in wall-hung boilers: WHM series

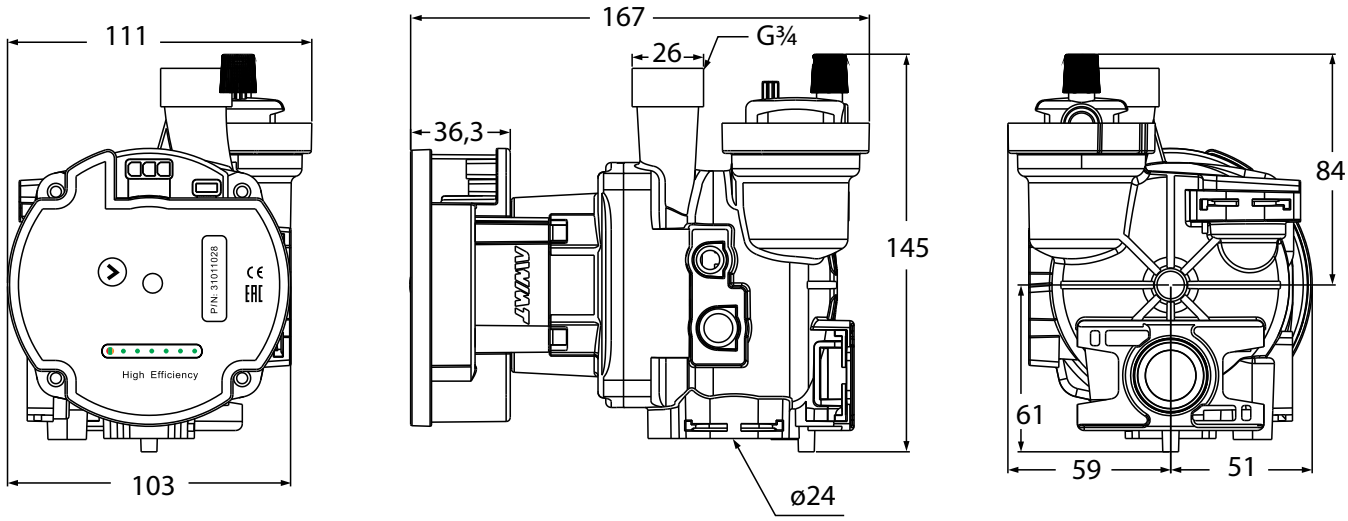
EEI ≤ 0.20

- The pump's body made from engineering plastic PA66 (+ 30% fiberglass) with connecting terminals for the expansion tank, hydraulic blocks, pipes, etc.
- With integrated front controller with 7 LEDs and one control button
- With integrated automatic air exhauster.
- Including electric AC 220 V cable (L, N, earthing) + external PWM 3-pins control cable.
- Input control PWM signal: duty ratio 0-100%, frequency 100-4000 Hz, voltage 4-24 V, max. input current level <10mA
- Autodiagnosis and error indication system
- Forced autostart for 30 seconds every 24 hours in standby mode for scale and blocking protection
- Output: 75 Hz feedback PWM-signal, duty ratio 0-100%, U_C < 70 Volt, I_C < 50 mA
- IP 44 (no condensing inside)
- External temperature range +2…+70ºC, relative air humidity ≤95%

The WHM-series pump's body includes a built-in automatic air vent and draining valve (10mm wrench), as well as quick-release terminals (for O-shaped sealing, with a spring metal fixing clip) for connecting of components being used in modern wall-mounted boilers - safety valve, expansion tank, bypass line, water filling line, line to the primary heat exchanger and the secondary DHW heat exchanger, pressure gauge, minimum pressure switch, connection for the return heating line, etc. Diameter and profile of terminals could be changed on request.

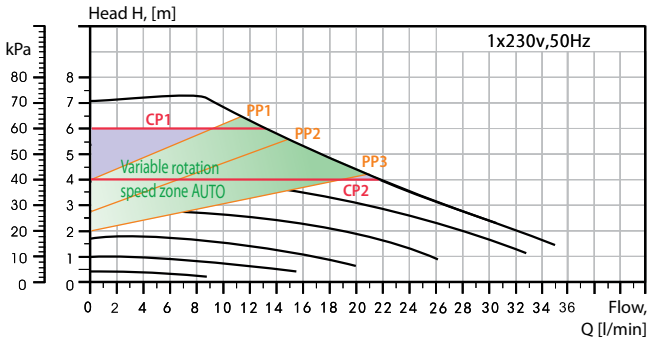
Boiler's built-in pump series WHM...	Units	WHM 15-50 PCNI	WHM 15-60 PCNI	WHM 15-70 PCNI
Nominal inlet and outlet diameter (DN)	mm	15		
Port-to-port length	mm	145		
Power consumption (P1) range	W	5÷45	5÷50	5÷60
Thread size	inch	Upper outlet - G ¾		
Body material	–	Engineering plastic PA66 (+30% fiberglass)		
Operating temperature range	ºC	+2…+95 ºC		
Maximum working pressure	bar	5		
Packing dimensions	mm	180 x 186 x 145		
Net weight	kg	1,37		
Controller (control type)	–	Hybrid: built-in frontal controller 7 LED + external PWM signal		
Possible operation modes	–	FLEX (max. CC) and AUTO (choice from CC+CP+PP)		

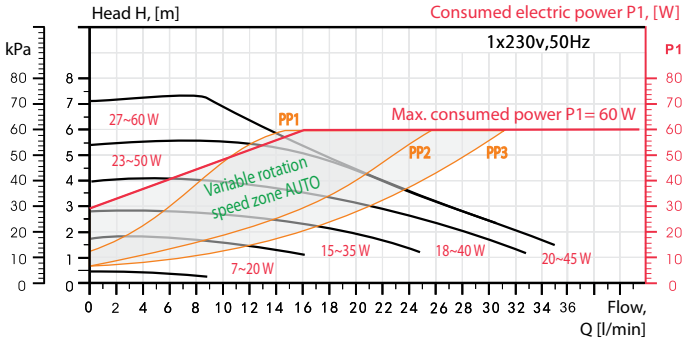
Dimensions of WHM...



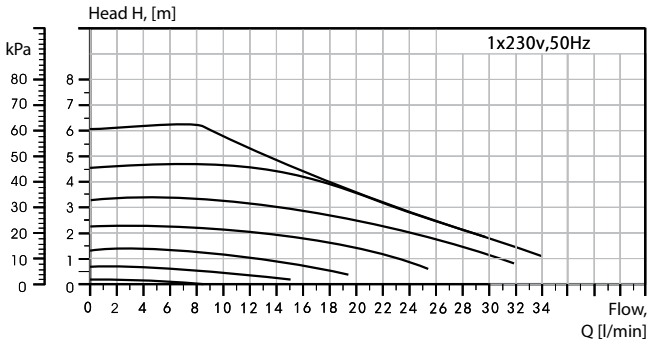
Characteristic of WHM...

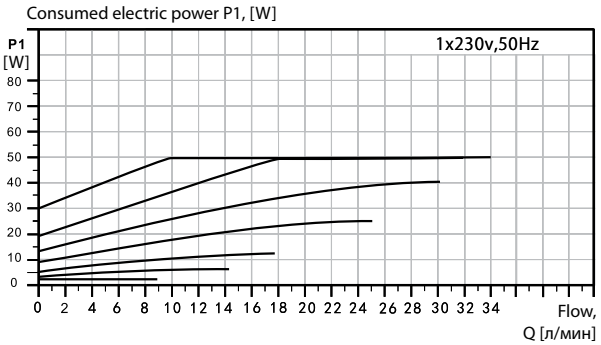
WHM 15-70



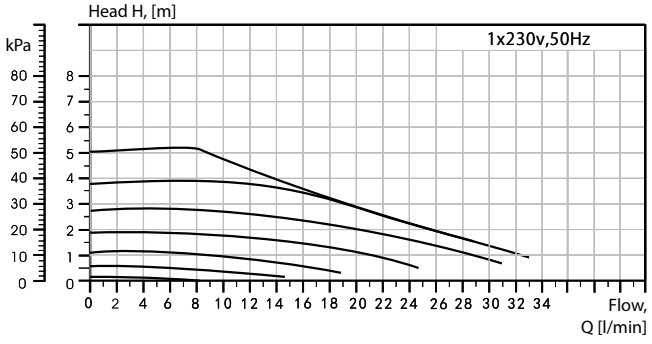


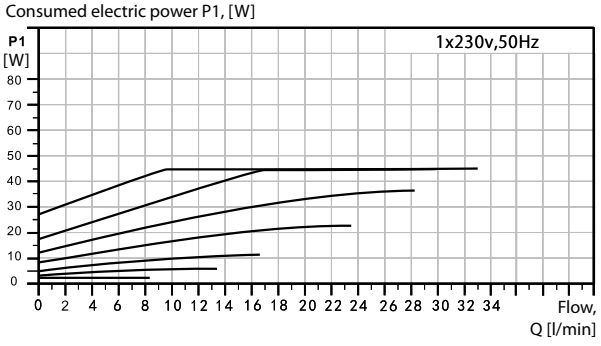
WHM 15-60





WHM 15-50





General purpose circulation pumps with front controller: UPMH series

EEI ≤ 0.20

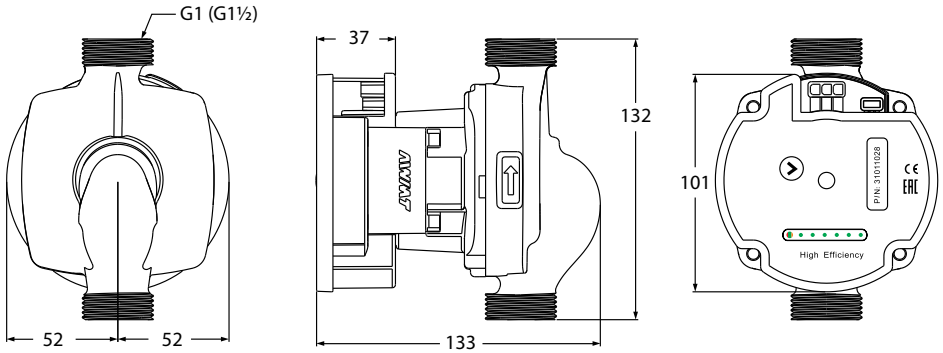
Can be used in various cases of HVAC appliances to create and control the circulation of the cooling and heating agents in heating systems, heat pumps, heat exchangers, heaters, etc

Features

- Front controller with 7 LEDs + external PWM control terminal;
- 3 body versions: Engineering plastic PPO + 30% fiberglass (P), brass (C) and cast iron;
- Auto diagnostics and error indication;
- Forced autostart for 30 seconds every 24 hours in standby mode for scale and blocking protection;
- Protection against long-time work without liquid inside;
- Including 2 brass connections with nuts with EPDM gaskets;
- Including AC 220 V cable (external PWM control cable can be purchased separately if necessary);
- IP 44 (no condensing inside)
- External temperature range +2…+70ºC, relative air humidity ≤95%

UPMH 20... (Port-to-port length 130mm)	**Units**	**UPMH 20-50-130 P**	**UPMH 20-60-130 P**	**UPMH 20-70-130 P**	**UPMH 20-80-130 P**	**UPMH 20-50-130 C**	**UPMH 20-60-130 C**	**UPMH 20-70-130 C**	**UPMH 20-80-130 C**	**UPMH 20-50-130**	**UPMH 20-60-130**	**UPMH 20-70-130**	**UPMH 20-80-130**
Nominal diameter (DN)	**mm**	20											
Port-to-port length	**mm**	130											
Power consumption (P1) range	**W**	5÷45	5÷50	5÷60	5÷80	5÷45	5÷50	5÷60	5÷80	5÷45	5÷50	5÷60	5÷80
Thread size	**inch**	G 1											
Body material	**–**	Plastic PPO +30% fiberglass				Brass				Cast iron			
Operating temperature range	**ºC**	+2ºC…+95 ºC				+2ºC…+110 ºC							
Maximum working pressure	**bar**	6				8				10			
Packing dimensions	**mm**	155 x 158 x 135											
Net weight	**kg**	1,6				2,3				2,1			
Controller (control type)	**–**	Hybrid: built-in frontal controller 7 LED + external PWM signal											
Possible operation modes	**–**	FLEX (max. CC) and AUTO (choice from CC+CP+PP)											

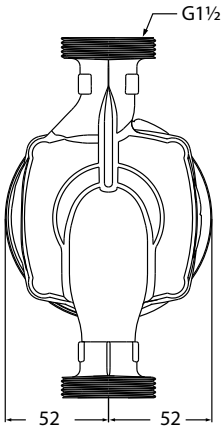
Dimensions of UPMH 20... and UPMH 25... (Port-to-port length 130mm)

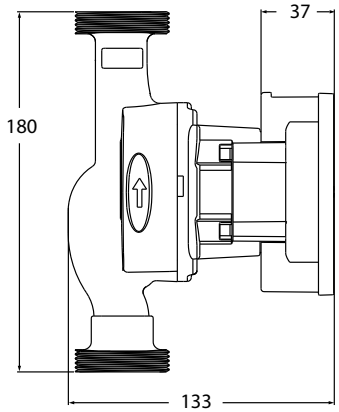


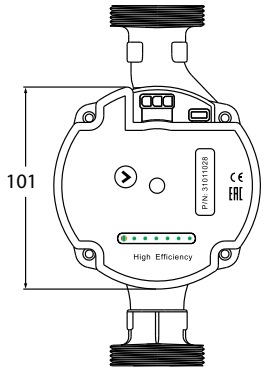
UPMH 25… (Port-to-port length 130mm)	Units	UPMH 25-60-130 P	UPMH 25-70-130 P	UPMH 25-80-130 P	UPMH 25-60-130 C	UPMH 25-70-130 C	UPMH 25-80-130 C	UPMH 25-60-130	UPMH 25-70-130	UPMH 25-80-130
Nominal diameter (DN)	mm	25								
Port-to-port length	mm	130								
Power consumption (P1) range	W	5÷50	5÷60	5÷80	5÷50	5÷60	5÷80	5÷50	5÷60	5÷80
Thread size	inch	G 1 ½								
Body material	-	Plastic PPO +30% fiberglass			Brass			Cast iron		
Operating temperature range	ºC	+2ºC…+95 ºC			+2ºC…+110 ºC					
Maximum working pressure	bar	6			8			10		
Packing dimensions	mm	155 x 158 x 135								
Net weight	kg	1,6			2,3			2,1		
Controller (control type)	–	Hybrid: built-in frontal controller 7 LED + external PWM signal								
Possible operation modes	–	FLEX (max. CC) and AUTO (choice from CC+CP+PP)								

UPMH 25… (Port-to-port length 180mm)	Units	UPMH 25-60-180 C	UPMH 25-70-180 C	UPMH 25-80-180 C	UPMH 25-60-180	UPMH 25-70-180	UPMH 25-80-180
Nominal diameter (DN)	mm	25					
Port-to-port length	mm	180					
Power consumption (P1) range	W	5÷50	5÷60	5÷80	5÷50	5÷60	5÷80
Thread size	inch	G 1 ½					
Body material	–	Brass			Cast iron		
Operating temperature range	ºC	+2ºC…+110 ºC					
Maximum working pressure	bar	8			10		
Packing dimensions	mm	155 x 230 x 220					
Net weight	kg	2,45			2,39		
Controller (control type)	–	Hybrid: built-in frontal controller 7 LED + external PWM signal					
Possible operation modes	–	FLEX (CC) and AUTO (choice from CC+CP+PP)					

Dimensions of UPMH 25... (Port-to-port length 180mm)

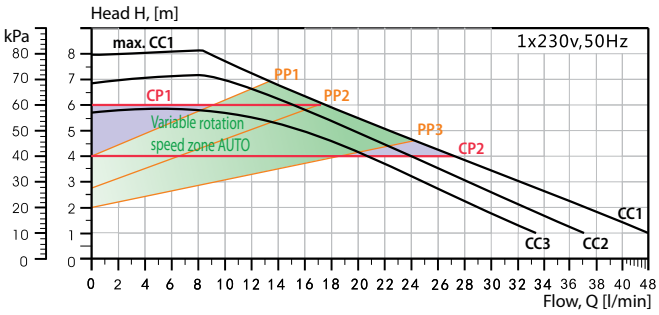


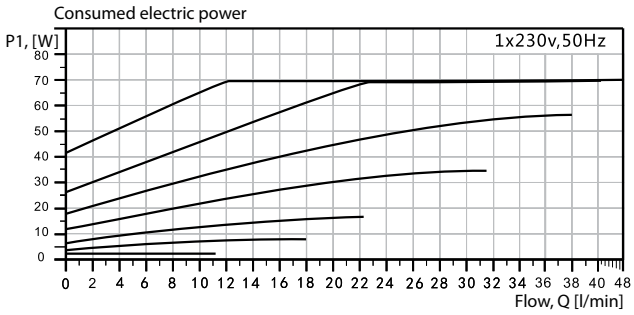




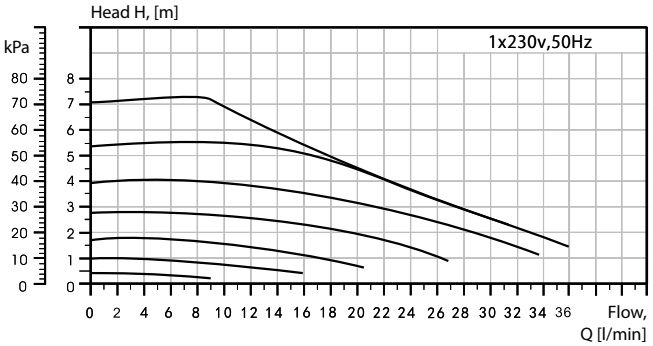
Characteristic of UPMH

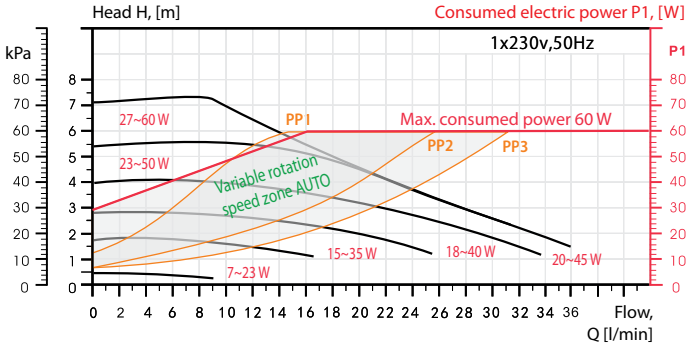
UPMH 20-80



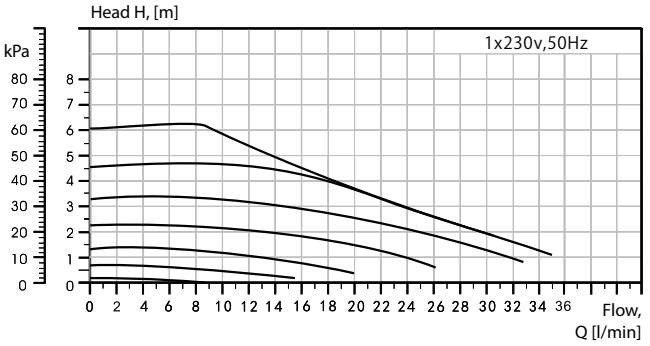


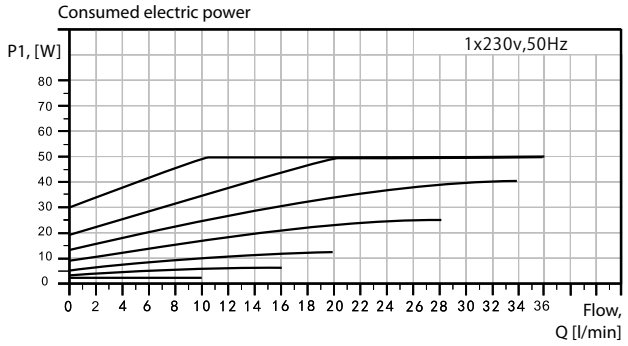
UPMH 20-70



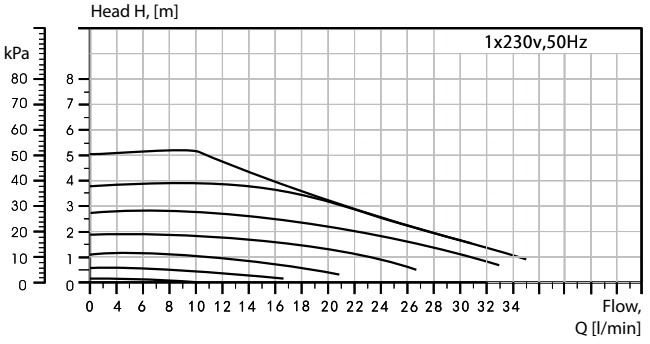


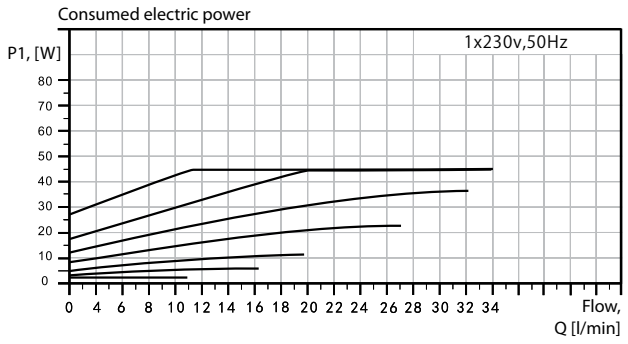
UPMH 20-60





UPMH 20-50





General purpose circulation pumps with side controller for Heating / Cooling / Solar energy using (Solar): UPM... series

EEI ≤ 0.23

Can be used in various cases of HVAC applications to create and control the circulation of coolant / heating agent in heating, cooling, heat pumps, heat exchangers, heaters, solar energy systems.
Up to 4 curves of constant pressure (CP), proportional to pressure (PP), constant speed curve with maximum torque (max. CC) or an external PWM control signal (FLEX mode), automatic adjustment mode to system needs (AUTO).
As special “Solar” version (on request) - the specific “reverse” logic of the controller’s response to an external control PWM signal, necessary for solar energy using systems.

Features

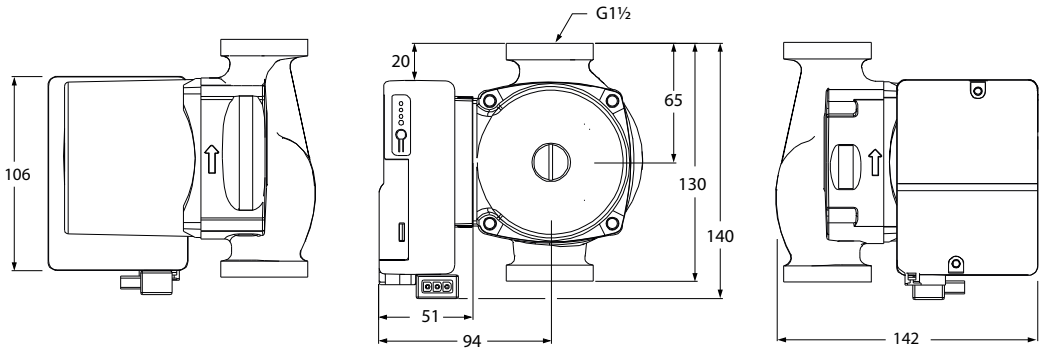
- Side controller with 4 LEDs + external PWM control terminal;
- Auto diagnostics and error indication;
- Forced autostart for 30 seconds every 24 hours in standby mode for scale and blocking protection
- 3 body versions: engineering plastic PPO + 30% fiberglass (P), brass (C) and cast iron;
- Including AC 220 V cable (external PWM control cable can be purchased separately if necessary);
- Including 2 brass connections with nuts with EPDM gaskets;
- IP 34 (no condensing inside)
- External temperature range +2…+70ºC, relative air humidity ≤95%.

UPM...[1]	Units	UPMM					UPML					UPMXL					UPM II [3]	
		UPMM 25-105-130 P	UPMM 25-105-130 C	UPMM 25-105-130	UPMM 25-105-180 C	UPMM 25-105-180	UPML 25-125 130 P	UPML 25-125 130 C	UPML 25-125 130	UPML 25-125 180 C	UPML 25-125 180	UPMXL 25-140 130 P	UPMXL 25-140 130 C	UPMXL 25-140 130	UPMXL 25-140 180 C	UPMXL 25-140 180	UPM II 32-110 180 P	UPM II 32-110 180
Nominal diameter (DN)	mm	25					25					25					32 [3]	
Port-to-port length	mm	130			180		130			180		130			180		180	
Power consumption (P1) range	W	25÷140					25÷180					25÷190					60÷230	
Thread size	inch	G 1 ½					G 1 ½					G 1 ½					G 1 ½	
Body material [2]	–	P	B	Cl	B	Cl	P	B	Cl	B	Cl	P	B	Cl	B	Cl	P	Cl
Operating temperature range	ºC	2-95	+2ºC…+110ºC				2-95	+2ºC…+110ºC				2-95	+2ºC…+110ºC				2-95	2-110
Maximum working pressure	bar	6	8	10	8	10	6	8	10	8	10	6	8	10	8	10	6	10
Packing dimensions	mm	153 x 220 x 180					155 x 230 x 220											
Net weight	kg	2,9	3,45	3,3	3,7	3,6	3,1	3,6	3,45	3,8	3,6	3,1	3,6	3,45	3,8	3,6	4	4,3
Controller (control type)	–	Hybrid: built-in side controller 4 LED + external PWM signal																
Possible operation modes	–	FLEX (max. CC) and AUTO (choice from CC+CP+PP), «direct» и «reverse» logic (for Solar) [1]																

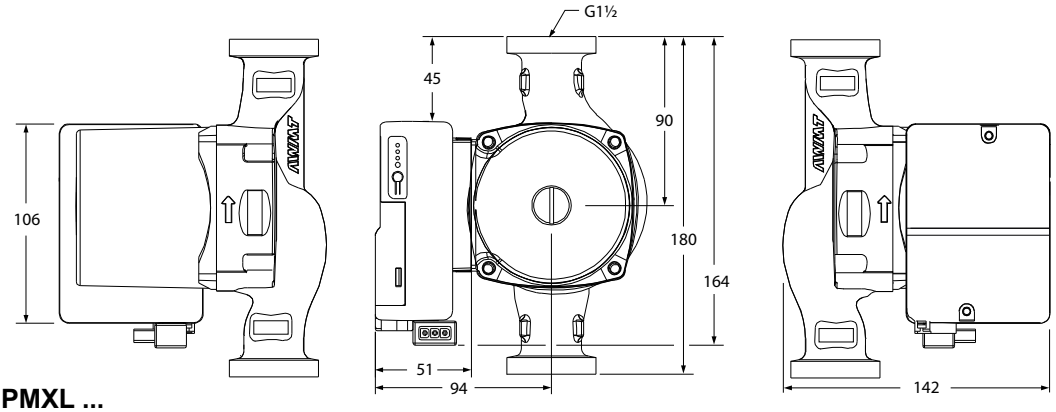
Notices:

1) Upon request, any pump model can use a special “reverse” Solar-logic corresponding to an external control PWM signal, that is necessary for solar energy using systems (Solar).
2) P = Engineering plastic PPO+30% fiberglass, B = Brass, Cl = Cast iron.
3) To July 2019 the AWMT range of pumps will be replenished with flanged pumps DN 40 and DN 50.

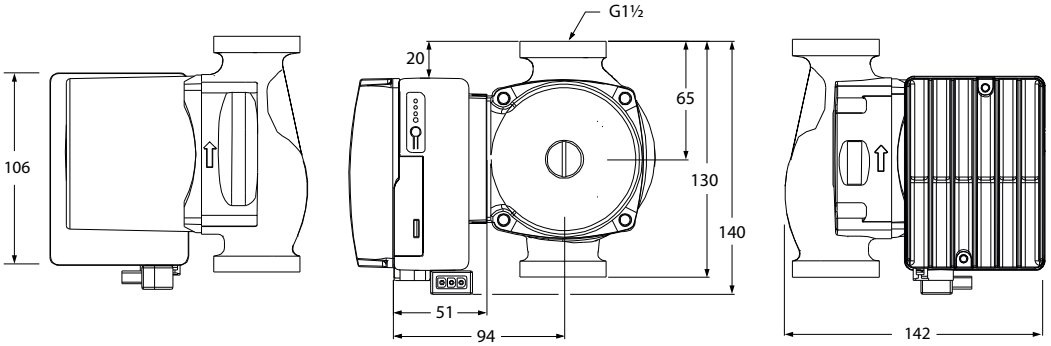
Dimensions UPMM ...
(Port-to-port length 130 mm)



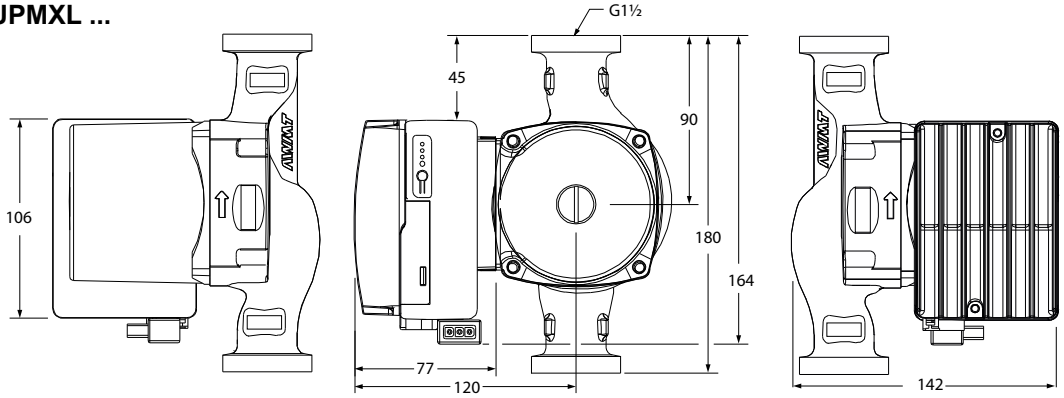
Dimensions UPMM ...
(Port-to-port length 180 mm)



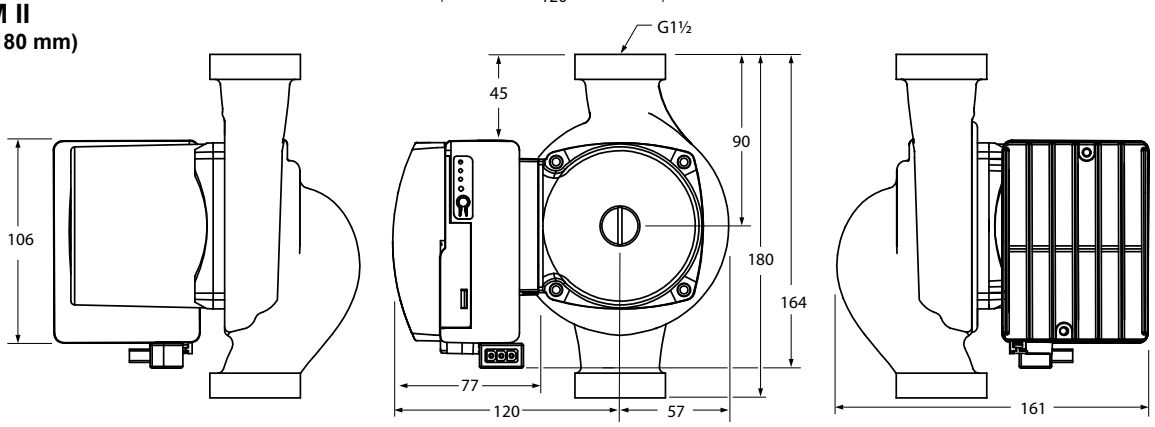
Dimensions UPML ... | UPMXL ...
(Port-to-port length 130 mm)



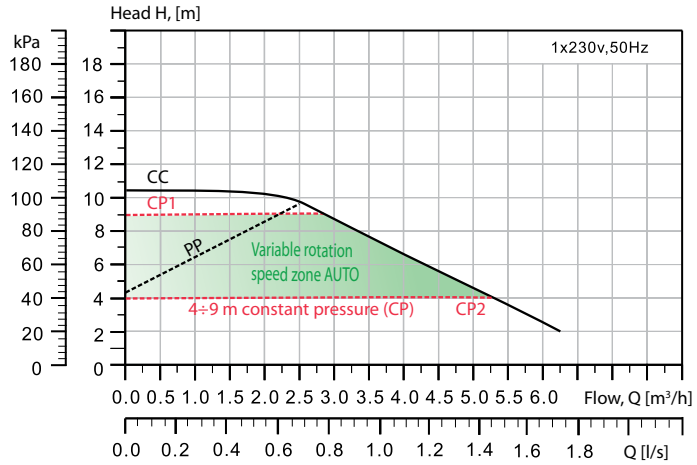
Dimensions UPML ... | UPMXL ...
(Port-to-port length 180 mm)

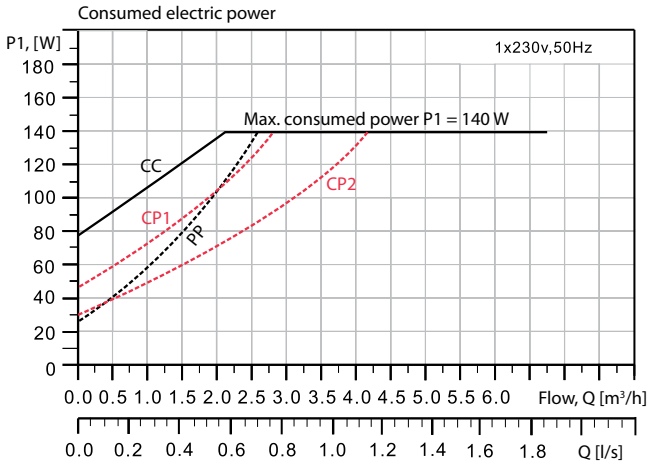


Dimensions UPM II
(Port-to-port length 180 mm)

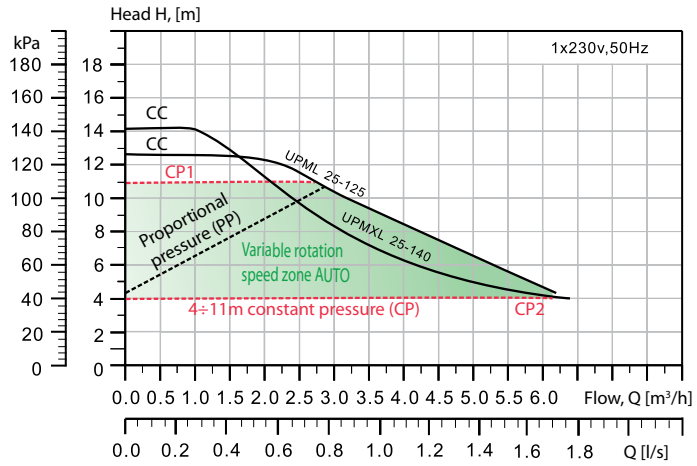


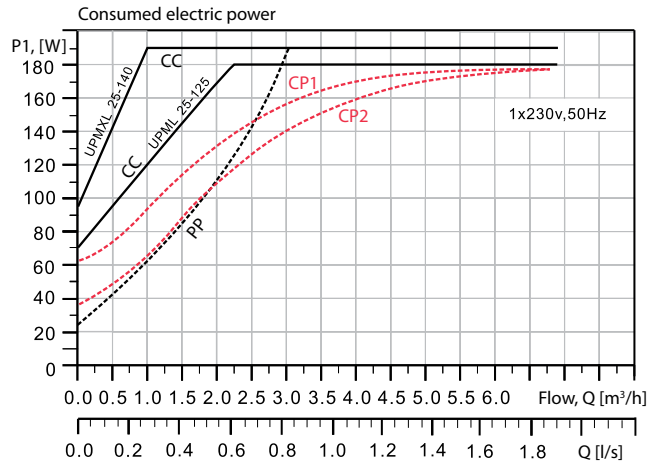
Characteristic of UPMM 25-105



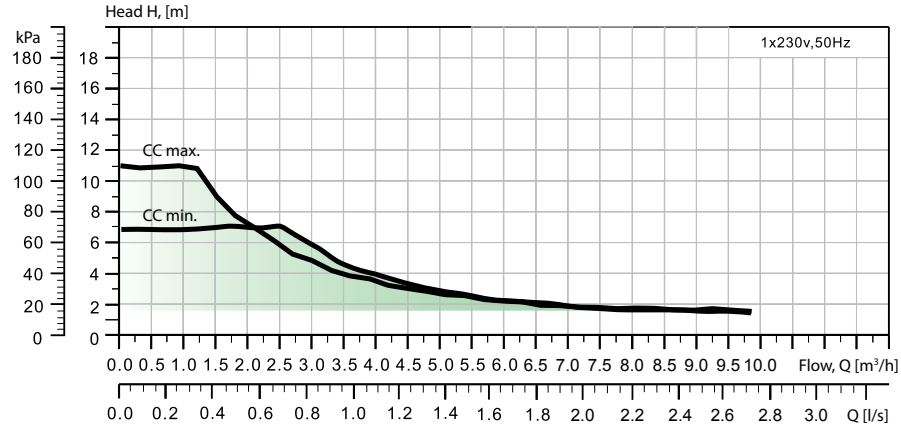


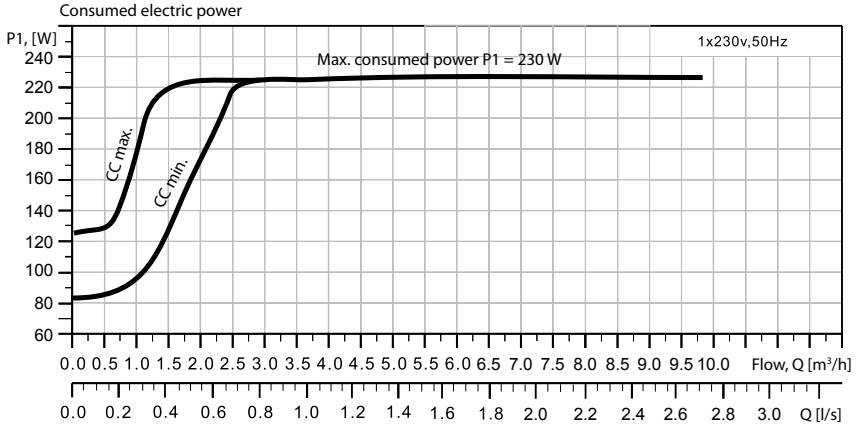
Characteristic of UPML 25-105 | UPMXL 25-140





Characteristic of UPM II 32-110





"Smart" self-learning DHW circulation line pumps with DHW temperature feedback and intelligent switch-on prediction: CF... series

EEI ≤ 0.20

EEI ≤ 0.23

Specially designed to ensure comfortable use of domestic hot water (DHW) without unnecessary losses of heat and costs: remembers the owner's habits of hot water using (intelligent memory with analysis and rejection of random values is conducted every 120 seconds for a period of 1 week = last 168 hours, the time of use of hot water is considered the actual measured hot water temperature is ≥40ºC for more than 3 seconds) and turns on the circulation of hot water only when necessary (30 minutes "before" and 60 minutes after the memorized time of hot water use.

Thus, with maximum savings of electricity, water and heat, hot water from a hot tap comes immediately and with a comfortable temperature, without waiting and draining of water cooled in the pipe system.

DHW temperature feedback through the clipped NTC temperature sensor on the hot water pipe.

CFF 15-220-160 C version additionally has a boost-function: turns on automatically through the integrated flow sensor by DHW flow start and increases the water pressure to a comfortable level.

External temperature range +2…+70ºC, relative air humidity ≤95%.

Including 2 brass connections with nut and EPDM gaskets.

- Remembering the habits of using hot water with a weekly cycle for switch on DHW circulation in advance;
- Automatic recognition of seasons SUMMER or WINTER (hot water average per 1 minute temperature ≥21ºC or ≤20 ºC);
- "Summer" range of DHW temperature 35 ÷ 40ºC (alternative in HT mode: 35 ÷ 43ºC), "Winter" range of DHW temperature 35 ÷ 43ºC (alternative in HT mode: 35 ÷ 45ºC),
- Additional run-out period (after reaching the required DHW temperature): 30 sec. or to a temperature of + 3ºC to the required DHW temperature for guaranteed comfortable hot water supply;
- Autostart for 30 seconds every 24 hours to prevent blocking the motor shaft with salt deposits / scale;
- Built-in protection against dry running 60 seconds at the first start;
- Auto diagnostics and error indication in operation;
- Including AC 220 V cable + contact NTC temperature sensor cable with pipe fixing clip;
- IP 34 (no condensing inside);

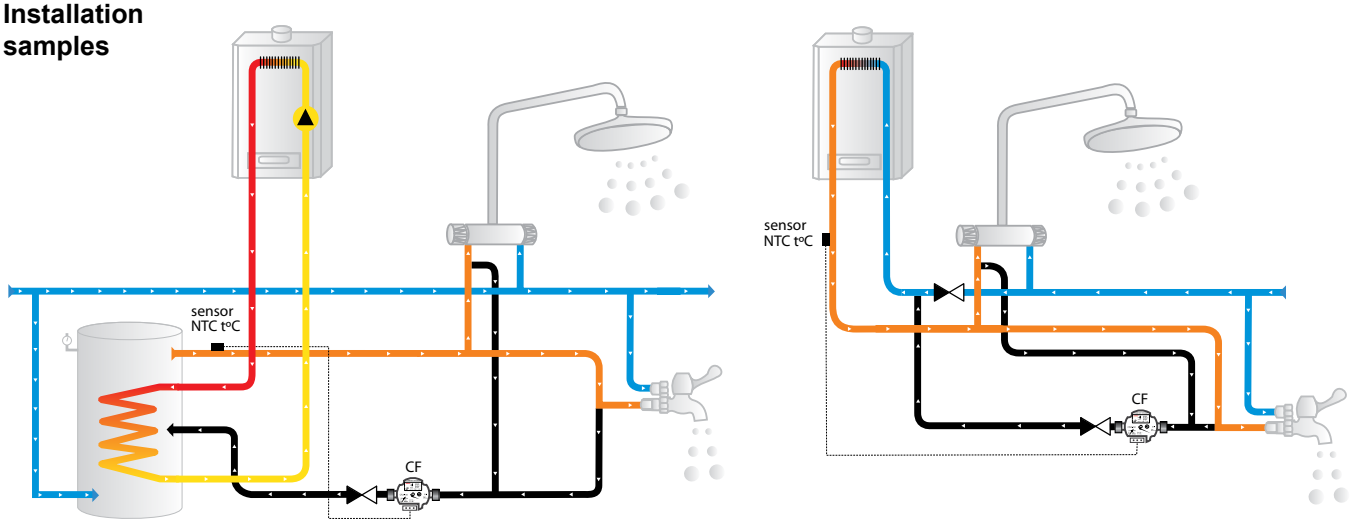
CF 20-…-P:

- Front controller with LCD display;
- Body from engineering plastic PPO + 30% fiberglass;

CFF 15-220-160 C:

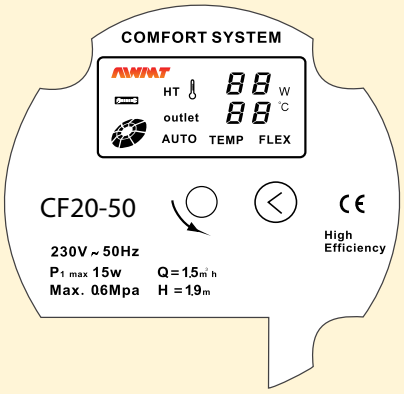
- Built-in flow sensor for automatic pump ON (at 2.5 ± 0.5 l / min) and OFF (at 2.0 ± 0.5 l / min) by start of DHW using;
- Built-in pressure boosting function (Boost) up to 22 m (2,2 bar);
- 6 operation modes: by water flow or by DHW temperature, as well by their combination and AUTO mode;
- Side controller with 4 LEDs;
- Brass body;
- External non-return valve (brass) included.

Installation samples



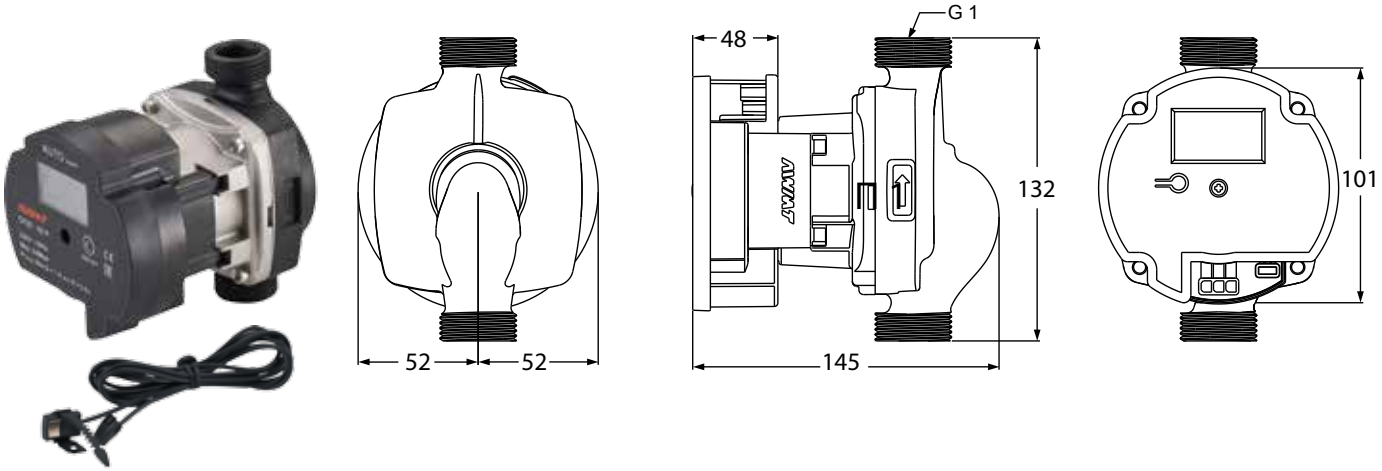
CF... model	Units	CF				CFF
		CF-20-30 P	CF-20-30 C	CF-20-50 P	CF-20-50 C	CFF 15-220-160 C
Nominal inlet and outlet diameter (DN)	mm	20				15
Port-to-port length	mm	130				160
Power consumption (P1) range	W	5÷15		5÷30		15÷180
Thread size	inch	G 1				G ¾
Body material	–	PPO+30% fiberglass	Brass	PPO+30% fiberglass	Brass	Brass
Operating temperature range	ºC	+2…+95 ºC	+2…+110 ºC	+2…+95 ºC	+2…+110 ºC	+2…+110 ºC
Maximum working pressure	bar	6	8	6	8	8
Packing dimensions	mm	155 x 158 x 135				153 x 220 x 180
Net weight	kg	2,18	2,23	2,18	2,23	3,25
Controller (control type)	–	Frontal built-in controller with LCD display				Side controller with 4 LEDs
External PWM signal control	–	No ability to be controlled by external PWM signal				
Possible operation modes	–	DHW temperature driven | AUTO (choice from CC+CP+PP) | Constant speed				
Non-return valve	–	No				External valve included (Brass)
Flow sensor	–	No (only DHW temperature driven)				Built-in
Boost function (pressure increasing)	–	No (just circulation)				Yes

Display indication of CF 20…

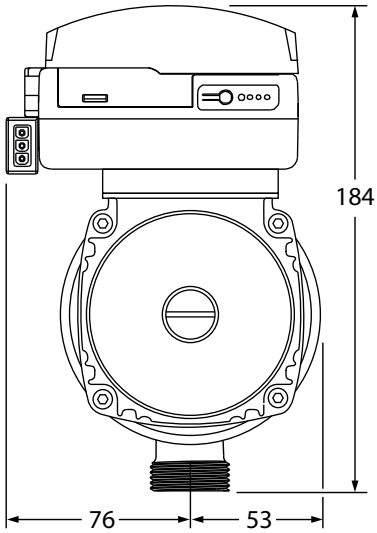


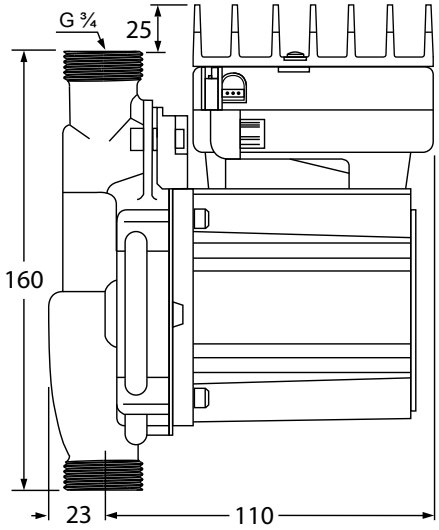
		Error indication	AUTO	Self-leaning mode
		Pump in operation	TEMP	Temperature driven mode
88	W	Power consumpted	FLEX	Maximal torque curve mode
88	°C	DHW temperature	HT	High-temperature mode

Dimensions of CF 20…

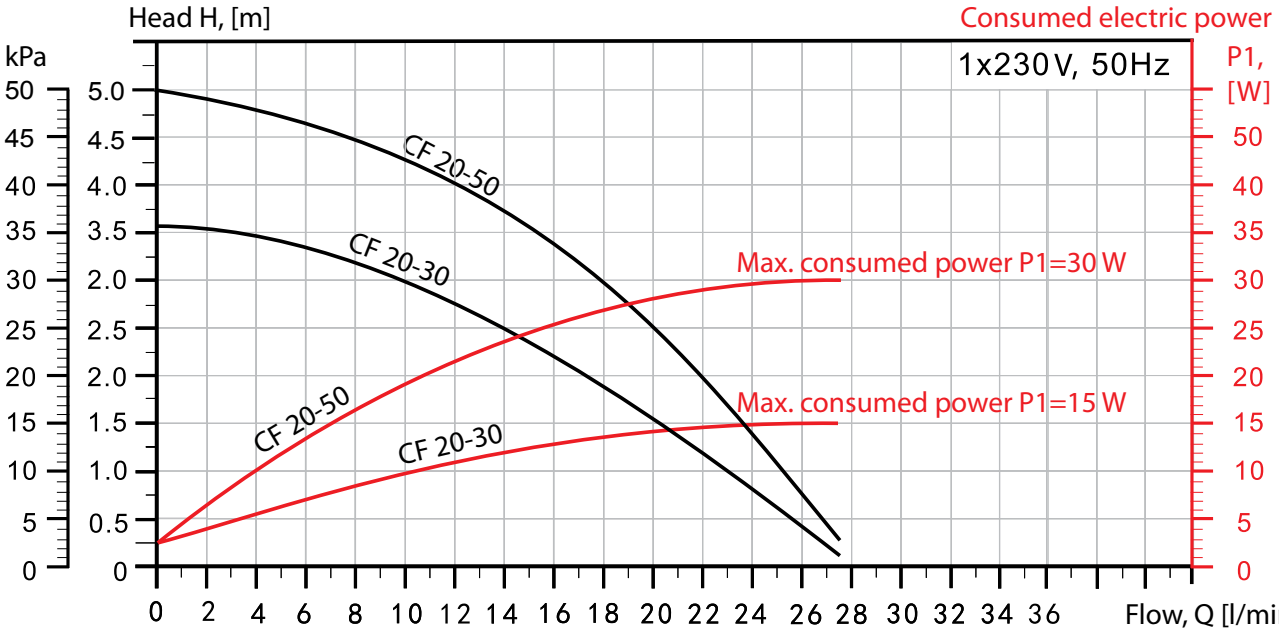


Dimensions CFF 15-220 160 C

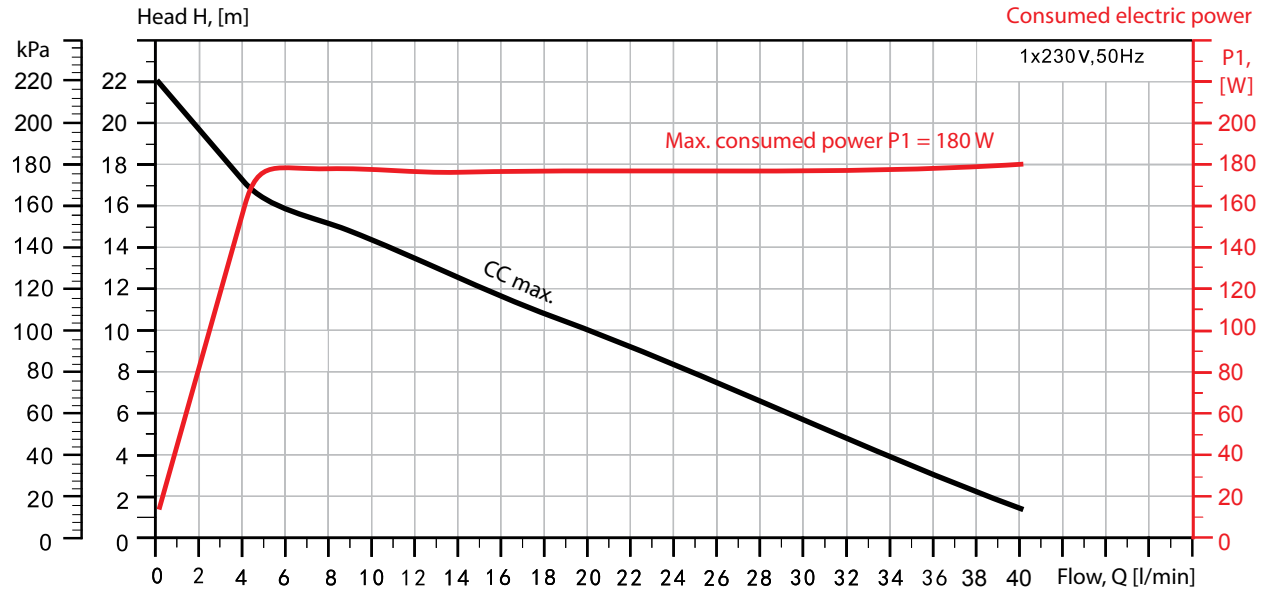




Characteristic of CF 20-30 | CF 20-50



Characteristic of CFF 15-220-160 C



Booster pumps for hot and cold water: BT… series

EEI ≤ 0.20

EEI ≤ 0.23

BT series pumps solve issues of hot and cold water pressure, raising it to a comfortable level.

Features BT 15-130 and BTF 15-130

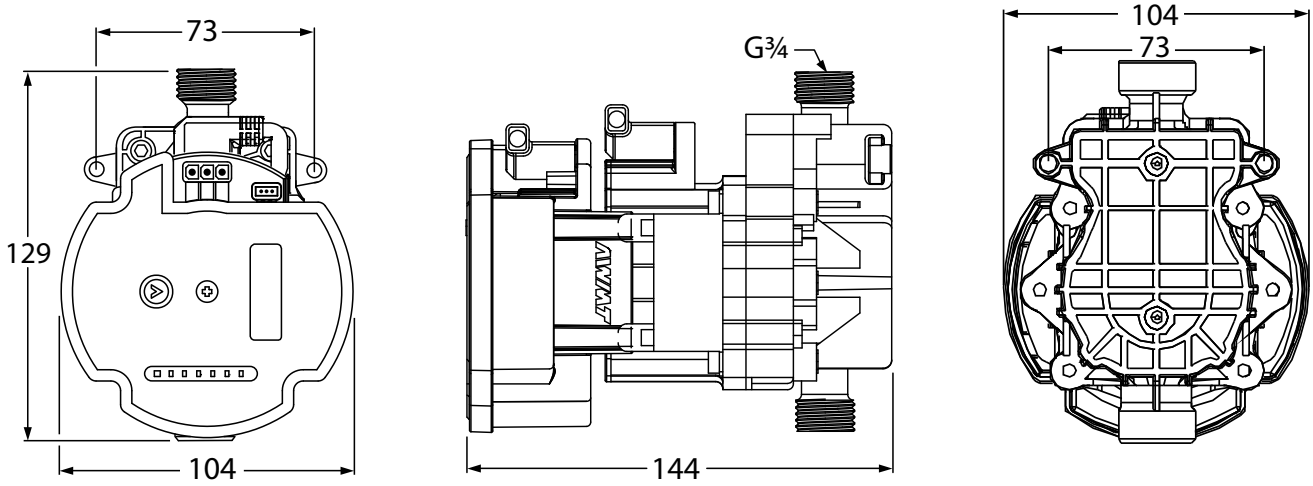
- Self-priming pump, does not require pre-filling (negative pressure up to -3 m);
- 6 pre-set speeds (curves 5/6/7/9/11/13 m) with head from -3 up to +13 m with corresponding rotation speeds 4000, 4500, 5000, 5500, 6000 and 6500 rpm;
- Extremely quiet - the running pump noise level is only 38-40 dB·A
- Frontal controller with 7 LEDs and 1 control button;
- Body made from engineering plastic PPO (PA66 by BTF 15-130) reinforced by 30% fiberglass: working pressure up to 8 bar (up to 10 bar by BTF 15-130);
- Autostart for 30 seconds every 24 hours to prevent blocking the motor shaft with salt deposits / scale;
- Auto diagnostics and error indication;
- Built-in plastic non-return valve;
- For automatic operation, the BT 15-130 requires a separate external flow sensor or pressure sensor (supplied by AWMT as an accessory, connected to a PWM terminal, low voltage), the BTF 15-130 already has an integrated flow sensor;
- Including AC 220 V cable;
- IP 44 (no condensing inside);
- External temperature range +2…+70ºC, relative air humidity ≤95%;
- Including 2 x ¾ brass connections with nuts and EPDM gaskets.

Features BTF 15-220-160 C

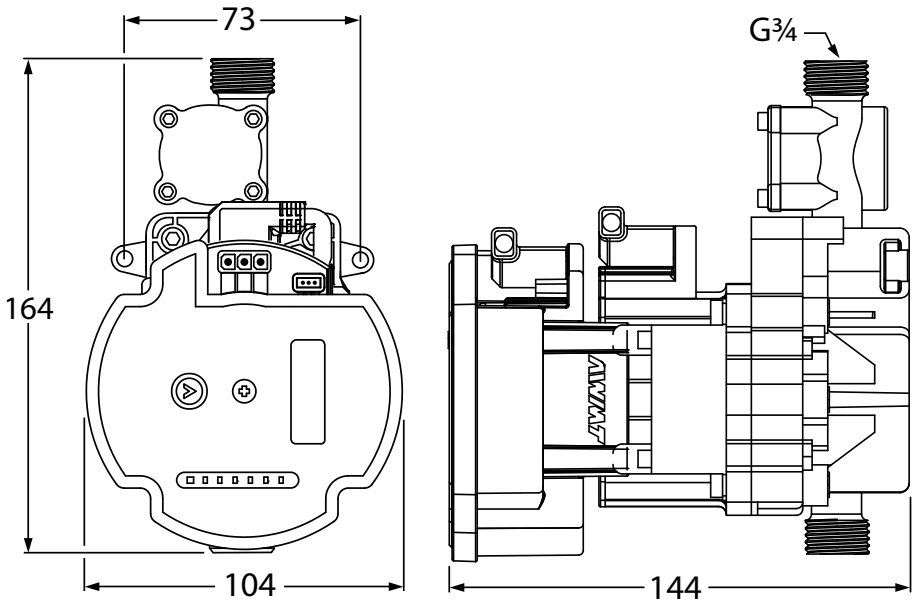
- Built-in flow sensor for automatic pump switch ON (at 2.5 ± 0.5 l / min) and OFF (at 2,0 ± 0,5 l / min) by the fact of the water flow start and stop;
- Pressure increasing up to 22 m (2,2 bar), only 1 working curve;
- Without self-priming function (need pre-filling with water);
- Brass body;
- Side controller with 4 LEDs and 1 control button;
- Auto diagnostics and error indication;
- Autostart for 30 seconds every 24 hours to prevent blocking the motor shaft with salt deposits / scale;
- External ¾ non-return brass valve is included;
- IP 44 (no condensing inside);
- External temperature range +2…+70ºC, relative air humidity ≤95%;
- Including 2 x ¾ brass connections with nuts and EPDM gaskets.

Model of BT...	Units	BT 15-130	BTF 15-130	BTF 15-220-160 C	Flow sensor
Nominal inlet and outlet diameter (DN)	mm	15			Accessory for automatization of BT 15-130 pump ON (at 2.5 ± 0.5 l / min) and OFF (at 2.0 ± 0.5 l / min) switch. Made in South Korea. Max. commutating current: AC 0.5 A
Port-to-port length	mm	130		160	
Power consumption (P1) range	W	5-80		15-180	
Thread size	inch	G ¾			
Body material	–	Plastic PPO+30% fiberglass	Plastic PA66+30% fiberglass	Brass	
Maximum working pressure	bar	8	10	8	
Packing dimensions	mm	180 x 186 x 145	180 x 186 x 145	152 x 220 x 180	
Net weight	kg	1,4	1,45	3,25	
Controller (control type)	–	Frontal built-in controller with 7 LEDs		Side controller with 4 LEDs	
External PWM signal control	–	No ability to be controlled by external PWM signal			
Possible operation modes	–	6 x CC (6500-4000 rpm)		1 x CC	
Non-return valve	–	Plastic, built-in		External valve included (Brass)	
Flow sensor	–	No (but has a pre-aranged socket at PWM-terminal)	Built-in	Built-in	
Operating temperature range	ºC	+2…+95 ºC	+2…+80 ºC	+2…+80 ºC	+2…+60 ºC
ON / OFF range of flow sensor	l/min	–	ON: 2,5 ± 0,5 / OFF: 2,0 ± 0,5		

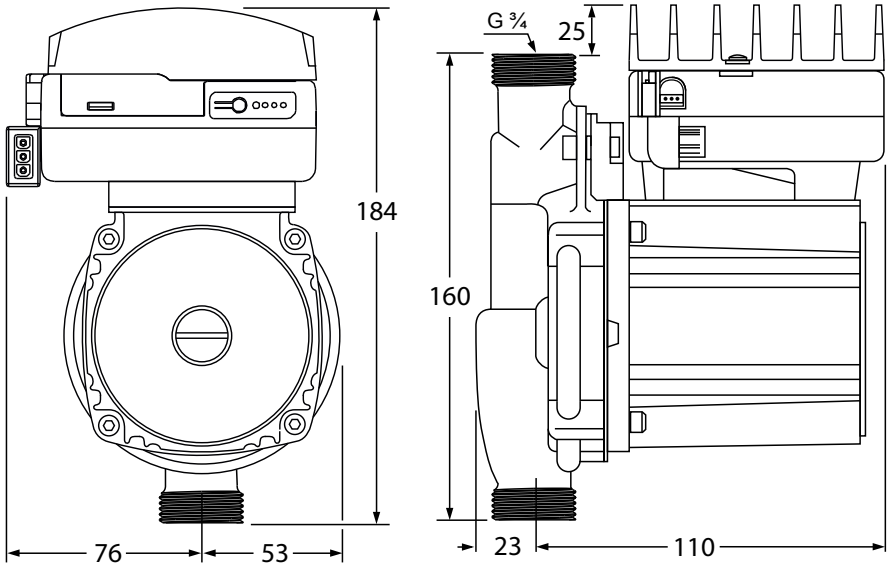
Dimensions BT 15-130



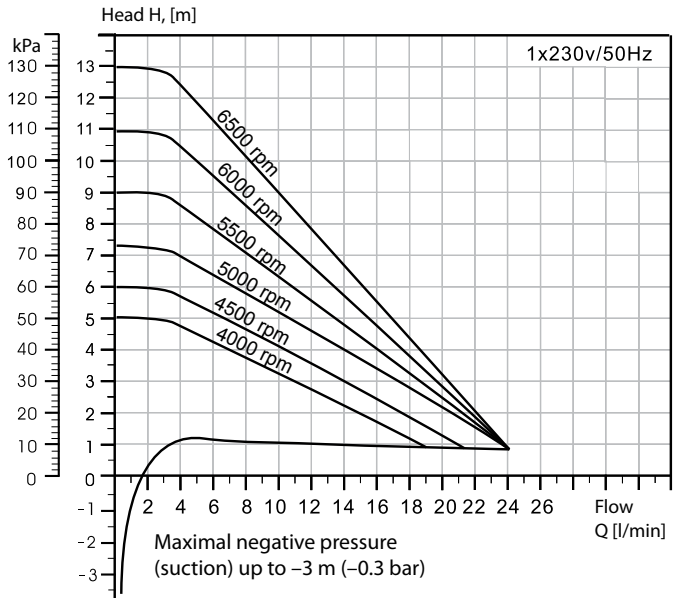
Dimensions BTF 15-130

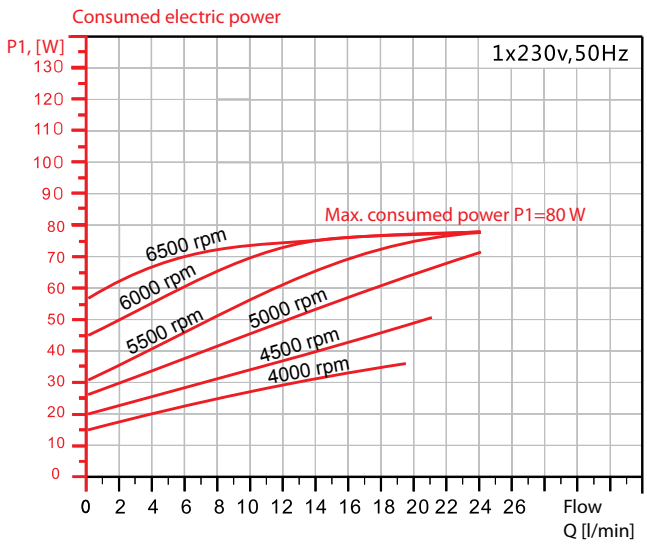


Dimensions BTF 15-220-160 C



Characteristic of BT 15-130 и BTF 15-130 (1 l/min = 0.06 m³/h)





Characteristic of BTF 15-220-160 C (1 l/min = 0.06 m³/h)