

Grundfos Home Booster

UPA 15-90, UPA 15-120, UPA 15-160, UPA 120
50/60 Hz



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1. Product description

UPA 15-90, UPA 15-120, UPA 15-160 and UPA 120 booster pumps increase the pressure of domestic water to make the required pressure available at showers, taps and other tapping points.

A flow switch starts or stops the pump when a tapping point is turned on or off. UPA 15-90 and UPA 15-120 pumps have an integrated flow switch. UPA 120 and UPA 15-160 pumps are supplied with an external flow switch, which has to be placed after the outlet of the pump.

The pumps are self-venting and do not require venting before start-up. All UPA pumps are supplied with a cable and plug.

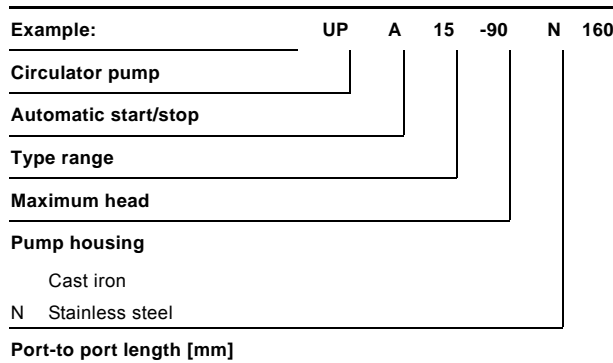
UPA booster pumps offer a host of advantages:

- **Flexibility:** Suitable for installation in existing systems.
- **Comfort:** Low-noise operation.
- **User friendliness:** Plug and play.
- **Reliability:** Proven Grundfos quality.
- **Energy-efficiency:** High-efficiency PM technology. UPA 15-160 consumes up to 87 % less electrical power than a conventional constant-speed booster.
- **Corrosion-resistant:** Cataphoresis-coated pump housing.

Applications

- UPA booster pumps are designed for pressure boosting of domestic water supplied from an external source in residential homes.
- UPA booster pumps are used in open systems and can also be connected directly to the water main.

Type key



Performance range

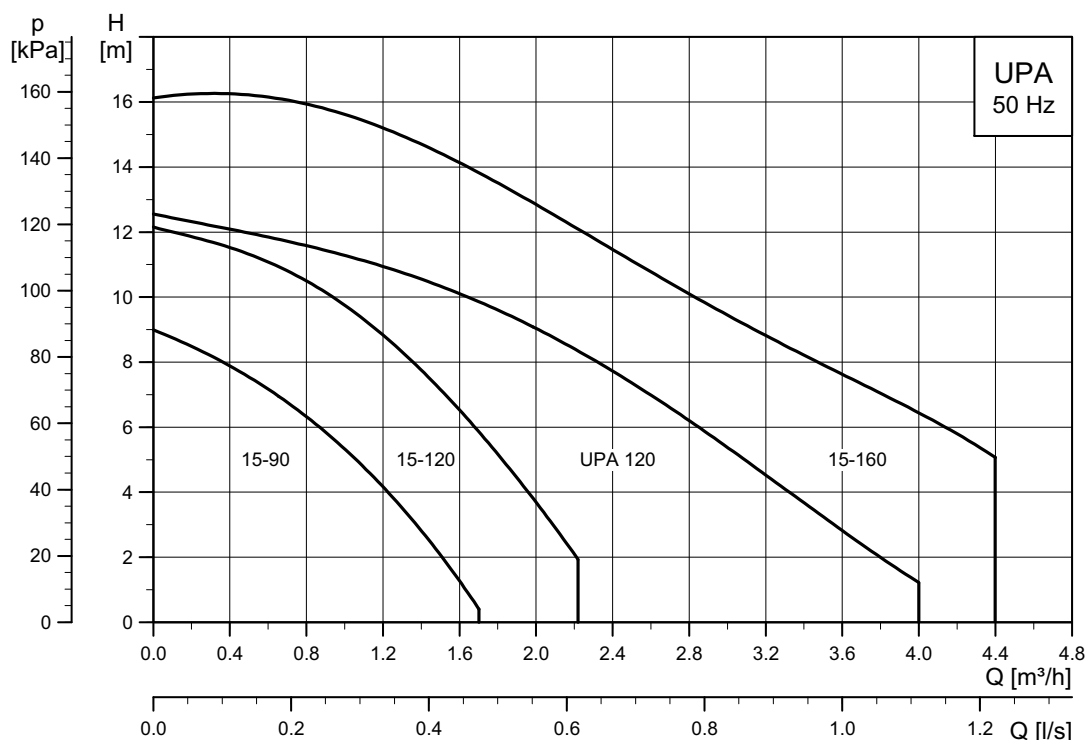


Fig. 1 Performance range UPA 15-90, UPA 15-120, UPA 15-160, UPA 120 (230 V, 50 Hz)

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2. Operating conditions

Pumped liquids

UPA booster pumps are suitable for the these liquids:

- Fresh water
- Potable water without chemical additives
- Chlorinated potable water.

UPA booster pumps are not suitable for the transfer of flammable liquids such as diesel oil and petrol.

Temperature

Standard pumps	Max. [°C]	Min. [°C]
Liquid temperature	60/95/110	2
Ambient temperature	40	2

For liquid temperatures, please see also the *Data sheets* on page 11 and following.

Pressure

Operating pressure

Pump version	Maximum operating pressure	
	[MPa]	[bar]
UPA 15-90	0.6	6
UPA 15-90 Netherlands UPA 15-90 Global	1.0	10
UPA 15-120	1.0	10
UPA 15-160	1.0	10
UPA 120	0.6	6
UPA 120 Mexico	1.0	10

For operating pressures, please see also the *Data sheets* on page 11 and following.

Inlet pressure

To avoid cavitation noise and risk of damage to the pump bearings, a minimum pressure of 2.0 m head/0.2 bar is required at the pump suction port during operation.

3. Construction

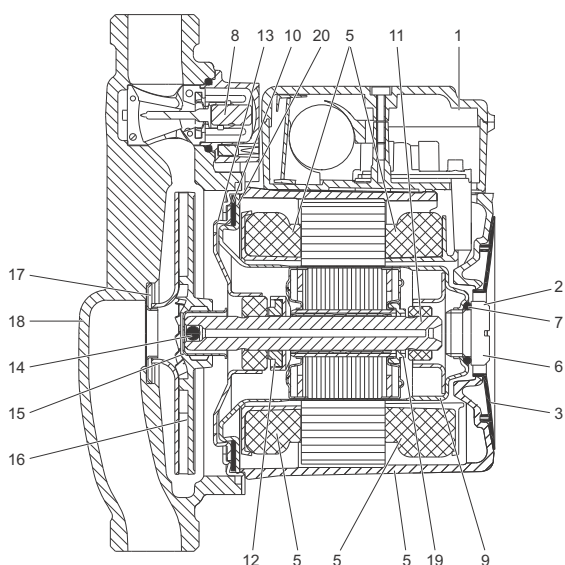
UPA 15-90, UPA 15-120, UPA 15-160 and UPA 120 circulator pumps for pressure boosting are of the canned-rotor type, i.e. pump and motor form an integral unit without shaft seal. Only two gaskets are required for sealing. The bearings are lubricated by the pumped liquid.

UPA 15-160: The motor is a high efficient 4-pole synchronous permanent-magnet motor. The pump controller is incorporated in the control box, which is fitted to the stator housing.

Characteristic materials:

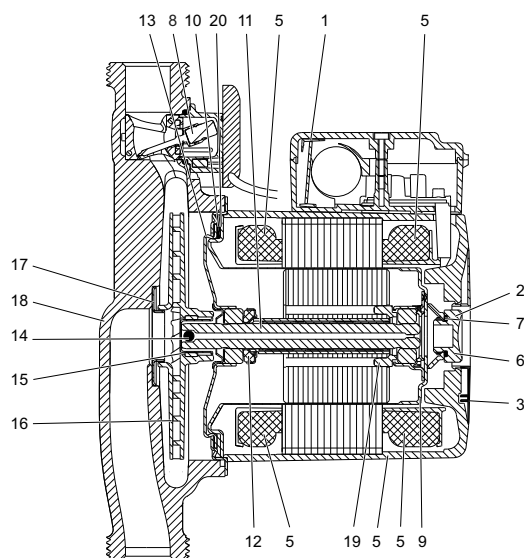
- Shaft: aluminium oxide or ceramic
- Radial bearing: ceramic
- Thrust bearing: carbon
- Rotor can and bearing plate: stainless steel
- Impeller: corrosion-resistant material
- Pump housing: cataphoresis-coated cast iron or stainless steel.

Sectional drawings UPA 15-90, UPA 15-120



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Fig. 2 Sectional drawing of UPA 15-90



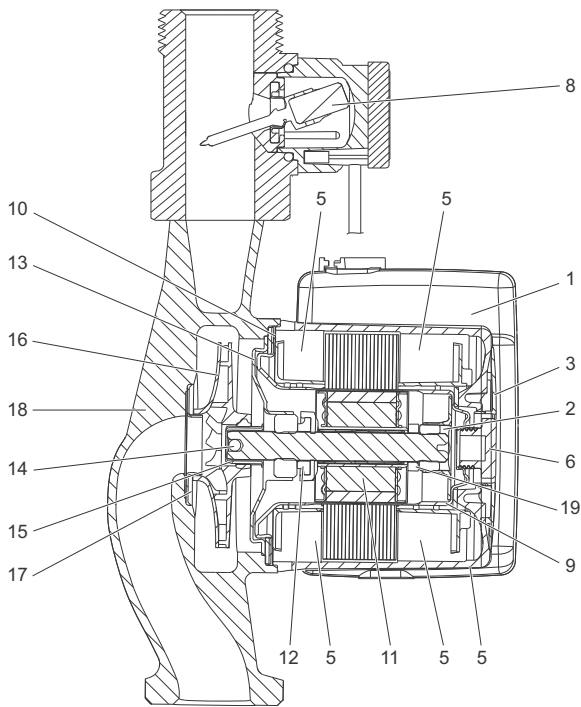
TM06 3444 0315

Fig. 3 Sectional drawing of UPA 15-120

Material specification UPA 15-90, UPA 15-120

Pos.	Description	Material	Material number EN	AISI
1	Terminal box	Composite PPE/PS		
	Terminal box cover	Composite PPE/PS		
	Electric unit	Composite PET		
2	Radial bearing	Ceramic		
3	Nameplate	Composite PA66		
5	Stator housing	AlSi10Cu2		
	Stator winding cap	Composite PET		
	Stator windings	Copper		
6	Air vent screw	Brass, nickelled, Ms58	2.0401.30	
7, 10	Gaskets	EPDM rubber		
8	Flow switch	Magnet / EPDM rubber / PP		
9	Rotor can	Stainless steel	1.4301	304
11	Shaft	UPA 15-90: aluminium oxide UPA 15-120: ceramic		
12	Thrust bearing	Carbon		
	Thrust bearing retainer	EPDM rubber		
13	Bearing plate	Stainless steel	1.4301	304
14	Ball (non-return valve)	EPDM rubber		
15	Split cone	Stainless steel	1.4301	304
16	Impeller	UPA 15-90: composite PP 30 % GF		
		UPA 15-120: composite PSP/PP 30 % GF		
17	Neck ring	Stainless steel	1.4301	304
		UPA 15-90 and UPA 15-120: cast iron	EN 1561 EN-GJL-150	ASTM 30 B
18	Pump housing	UPA 15-90: stainless steel	1.4308	304 C15
19	Stop ring	Composite PES		
20	Intermediate ring	Stainless steel		

Sectional drawing UPA 15-160



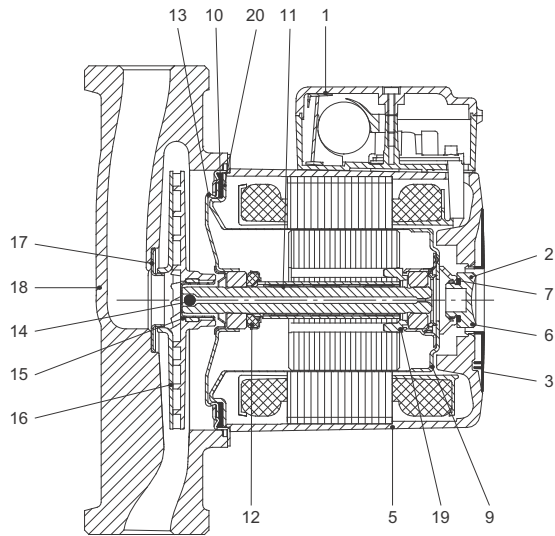
TM04 9747 5110

Fig. 4 Sectional drawing of UPA 15-160

Material specification UPA 15-160

Pos.	Component	Material	Material number EN	AISI
1	Terminal box	Composite		
	Terminal box cover	Composite		
	Heat sink with cooling pad	AlSi11Cu2	EN46100	
2	Radial bearing	Ceramic		
3	Nameplate	Composite PA66		
5	Stator housing	AlSi10Cu2		
	Stator windings	Copper		
6	Air vent screw	Brass, nickelled, Ms58	2.0401.30	
	O-ring	EPDM	ID2034	
8	Flow switch	Magnet / EPDM rubber / PP		
9	Rotor can	Stainless steel	1.4301/1.4521	304
10	Gasket	EPDM rubber		
	Stop ring	PES 30 % GF		
11	Shaft	Ceramic		
	Rotor cladding	Stainless steel	1.4301/1.4521	304
12	Thrust bearing	Carbon		
	Thrust bearing retainer	EPDM rubber		
13	Bearing plate	Stainless steel	1.4301	304
14	Ball (non-return valve)	EPDM rubber		
15	Split cone	Stainless steel	1.4301	304
16	Impeller	Composite PES 30 % GF		
17	Neck ring	Stainless steel	1.4301	304
18	Pump housing	Cast iron	EN 1561 EN-GJL-150	
19	Stop ring	Composite PES		

Sectional drawing UPA 120



TM03 1652 2505

Fig. 5 Sectional drawing of UPA 120

Material specification UPA 120

Pos.	Component	Material	Material number EN	AISI
1	Terminal box	Composite PPE/PS		
	Terminal box cover	Composite PPE/PS		
	Electric unit (single-phase only)	Composite PET		
2	Radial bearing	Ceramic		
3	Nameplate	Composite PA66		
5	Stator housing	AlSi10Cu2		
	Stator winding cap	Composite PET		
	Stator windings	Copper		
6	Air vent screw	Brass, nickelled, Ms58	2.0401.30	
7, 10	Gaskets	EPDM rubber		
9	Rotor can	Stainless steel	1.4301/1.4521	304
11	Shaft, complete	Ceramic		
12	Thrust bearing	Carbon		
	Thrust bearing retainer	EPDM rubber		
13	Bearing plate	Stainless steel	1.4301	304
14	Ball (non-return valve)	EPDM rubber		
15	Split cone	Stainless steel	1.4301	304
16	Impeller	Composite PSP/PP 30 % GF		
17	Neck ring	Stainless steel	1.4301	304
18	Pump housing	Cast iron	EN 1561 EN-GJL-150	
19	Stop ring	Composite PES		
20	Intermediate ring	Stainless steel	1.4301	304

Motor

UPA 15-90 and UPA 15-90 N

UPA 15-90 and 15-90 N pumps have a 2-pole, asynchronous, squirrel-cage motor. The motor has a built-in impedance protection and is short-circuit-proof. No external motor protection is required.

UPA 120 and UPA 15-120

UPA 120 and 15-120 pumps have a 2-pole, asynchronous, squirrel-cage motor. The motor incorporates thermal overload protection. Therefore, no external motor protection is required.

UPA 15-160

UPA 15-160 high-efficiency boosters are fitted with an electronically commutated motor (ECM) with permanent-magnet rotor and frequency converter. They are energy-optimised due to improved hydraulics and motor efficiency.

Rotor can

The rotor can is closed with an air vent screw fitted directly at the top. The upper radial bearing is incorporated in the top of the rotor can.

Shaft with rotor

The rotor is secured to the shaft with a pipe and an elastic sleeve. The rotor is totally encapsulated in a stainless-steel cladding. To avoid precipitation of calcium in the radial bearings, the shaft has been plunge-ground at the bearing entries.

The shaft has a through-going hole to ensure perfect lubrication and cooling of the upper bearing. See sectional drawings.

To prevent system water under pressure from running out when the air vent screw is removed, a non-return valve (rubber ball) is incorporated at the impeller end of the shaft.

The air in the rotor chamber escapes out into the system through the hole in the shaft.

Thrust bearing

The thrust bearing is secured to the shaft by a spherically flexible suspension.

Bearing plate

The lower radial bearing is pressed into the bearing plate. Due to the relatively large surface of the bearing plate, the motor heat is carried away from the rotor can by the pumped liquid.

Impeller

The impeller is a radial impeller with curved composite blades. It is secured to the shaft by a split cone.

Pump housing

UPA 15-90, UPA 15-120, UPA 15-160 (standard)

The standard pump housing of UPA 15-90, UPA 15-120 and UPA 15-160 has a bore for a flow switch, and hydraulics have been adapted to the larger impeller. A stainless-steel ring equalises the dimensional difference between stator housing and pump housing. The standard pump housing is made of cataphoresis-coated cast iron.

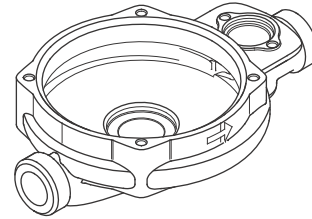


Fig. 6 UPA 15-90, UPA 15-120, UPA 15-160 standard pump housing

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UPA 15-90 N (stainless steel)

The pump housing of UPA 15-90 N is made of cast stainless-steel.

UPA 120 (standard)

The standard pump housing of UPA 120 is made of cataphoresis-coated cast iron.

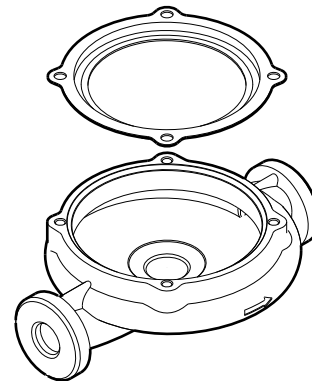


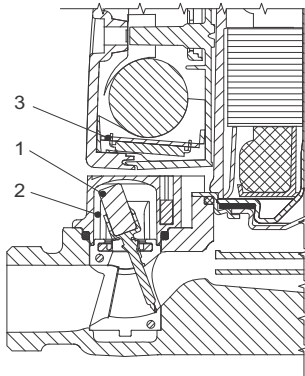
Fig. 7 UPA 120 standard pump housing

TM02 1327 0901

Flow switch

UPA 15-90

The flow switch of UPA 15-90 consists of an arm with a magnet (1), that moves in a chamber (2). The chamber is separated from the pumped liquid and the terminal box. The magnetic field activates a magnetic contact (3).



TM01 7251 4199

Fig. 8 UPA 15-90 flow switch in "OFF" position

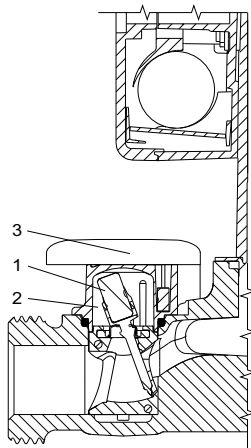
The pump selector can be set to the positions "OFF", "AUTO" and "MANUAL".

Selector in positions		Description
I	OFF	The pump is switched off.
II	AUTO	The pump starts and stops automatically (when the flow exceeds or falls below 90-120 l/h).
III	MANUAL*	The pump runs continuously (even if tapping points are turned off).

* When the selector is in position "MANUAL", at least one tap must be open. Otherwise the pumped liquid may become too hot.

UPA 15-120

The flow switch of UPA 15-120 consists of an arm with a magnet (1), that moves in a chamber (2). The chamber is separated from the pumped liquid and the terminal box. The magnetic field activates a magnetic contact (3).



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Fig. 9 Flow switch of UPA 15-120

The UPA 15-120 doesn't contain an On/Off switch.

4. Installation

The pump must always be installed with horizontal motor shaft.

UPA 120, UPA 15-120 and UPA 15-160 pumps can be installed vertically or horizontally. The mounting position is limited by the length of the cable between the external flow switch and the terminal box.

The terminal box of the UPA 15-90 has to be on the outlet of the pump, because of the integrated flow switch.

Note: As the pumps have drain holes, the terminal box must not face downwards.

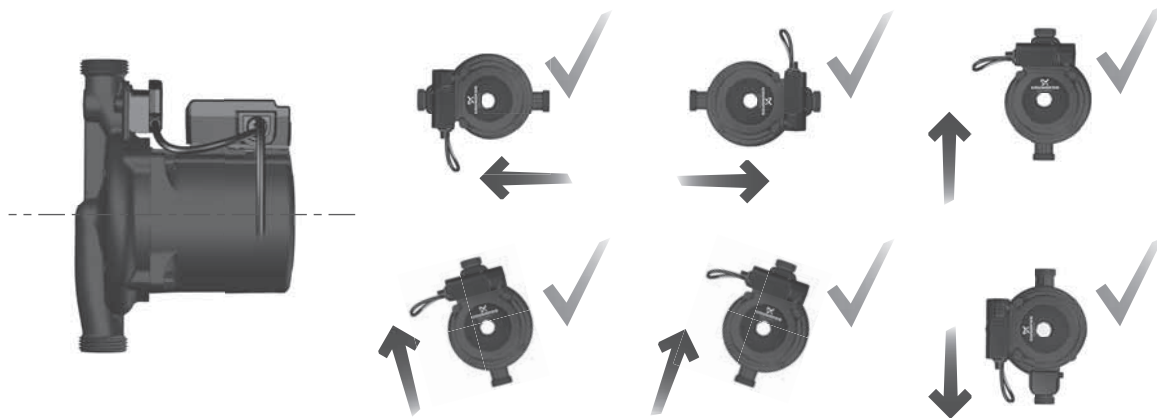


Fig. 10 Installation directions

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5. Performance curves

Curve conditions

The guidelines below apply to the performance curves on the following pages:

- Test liquid: airless water.
- The measurements for the UPA have been made at a water temperature of 20 °C.
- All curves show average values and should not be used as guarantee curves. If a specific minimum performance is required, individual measurements must be made.
- The curves apply to a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt).
- The conversion between head H [m] and pressure p [kPa] has been made for water with a density of $\rho = 1000 \text{ kg/m}^3$. For liquids with other densities, for example hot water, the discharge pressure is proportional to the density.

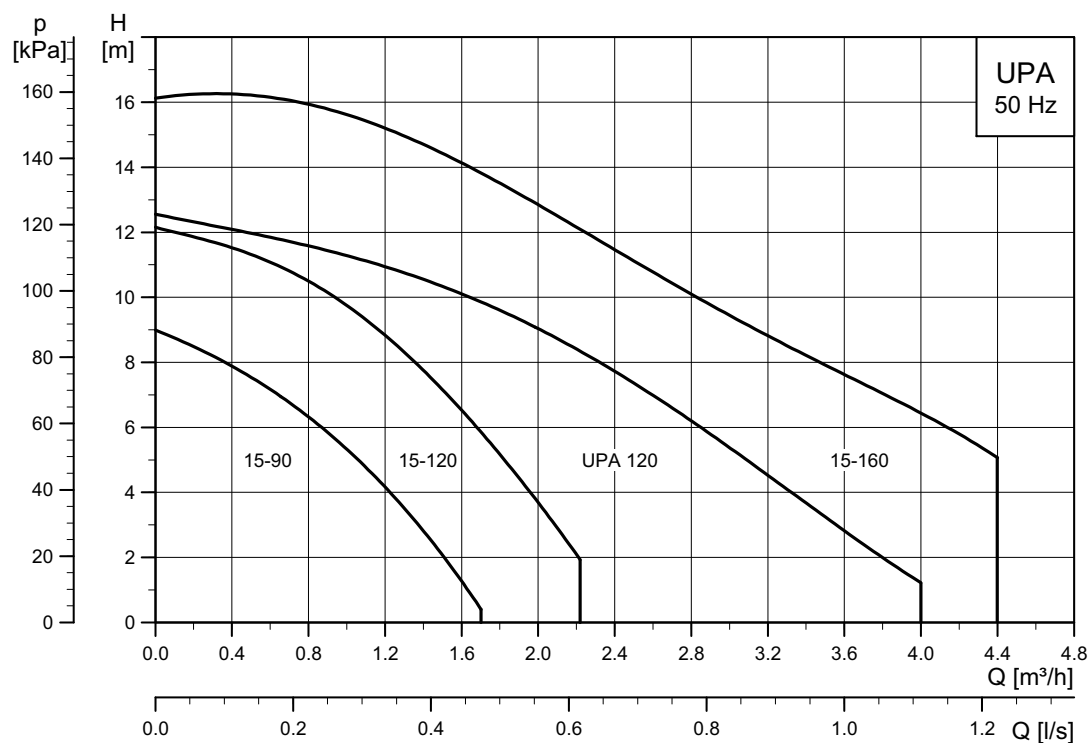


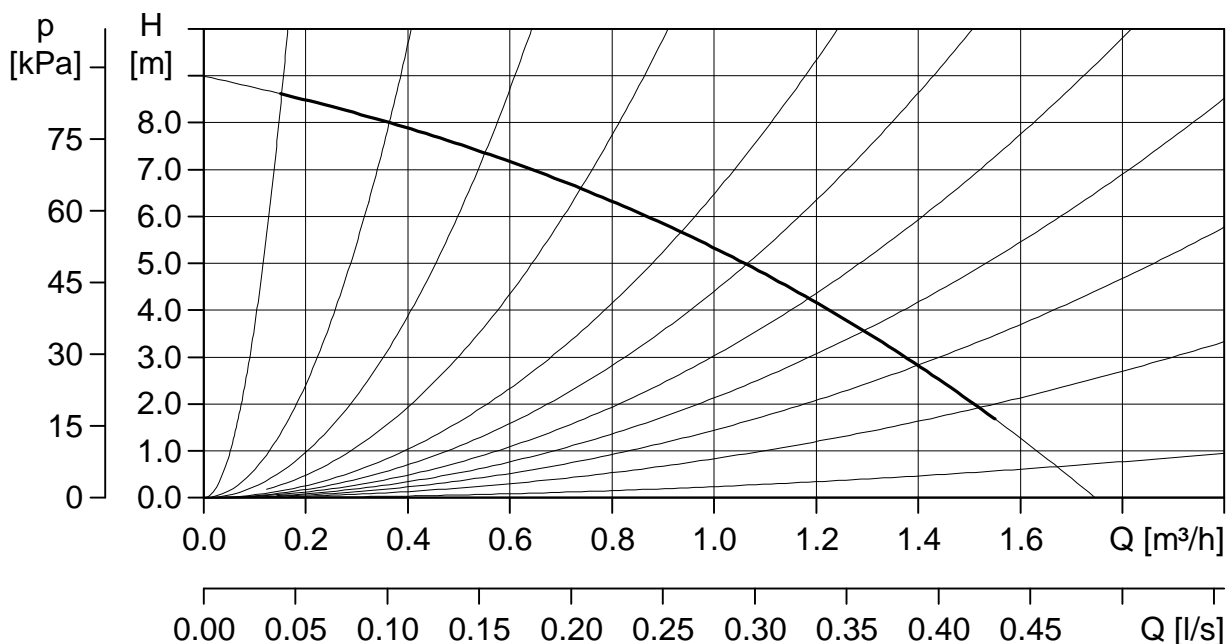
Fig. 11 Comparison of curves: UPA 15-90, UPA 15-120, UPA 15-160, UPA 120 (230 V, 50 Hz)

TM06 2280 3914

6. Data sheets

UPA 15-90, 1 x 230 V, 50 Hz

China, Argentina, Czech Republic, Turkey, Romania, Indonesia

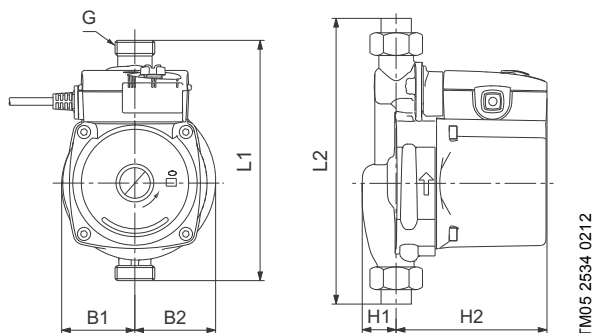


TM01 6893 3699

$P1_{max}$ [W]	$I_{1/1}$ [A]
120	0.48

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

Dimensions

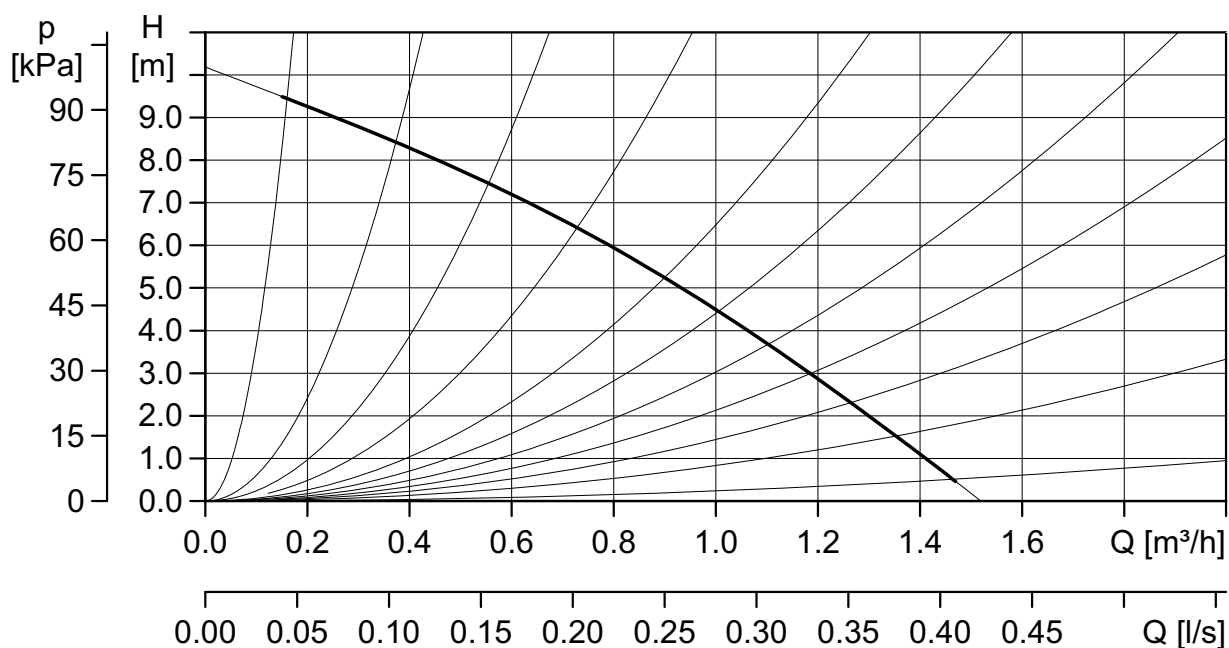


TM05 2534 0212

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m ³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90, 1 x 110 V, 60 Hz

Brazil, Taiwan

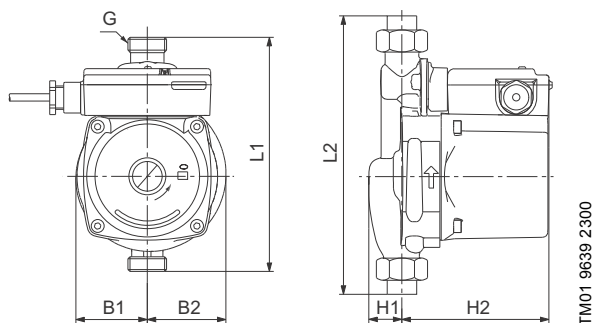


TM01 9635 2300

$P1_{max}$ [W]	$I_{1/1}$ [A]
120	1.0

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

Dimensions

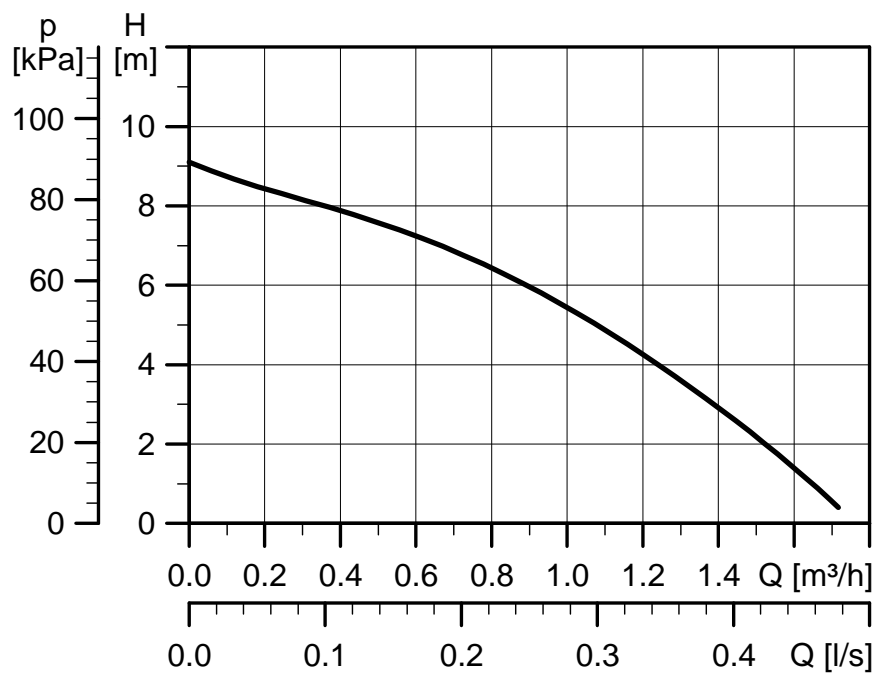


TM01 9639 2300

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m ³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90 N, 1 x 240 V, 50 Hz

Singapore, Australia, New Zealand

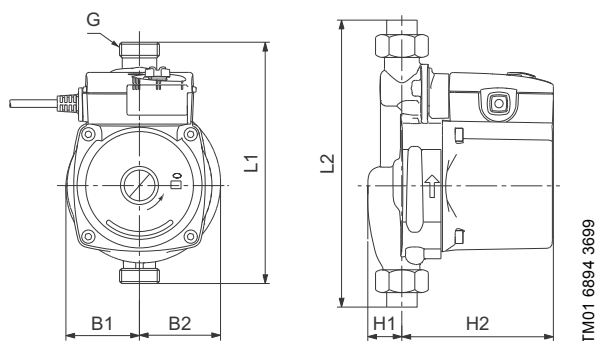


TM05 7460 1013

$P_{1\max}$ [W]	$I_{1/1}$ [A]
120	0.48

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

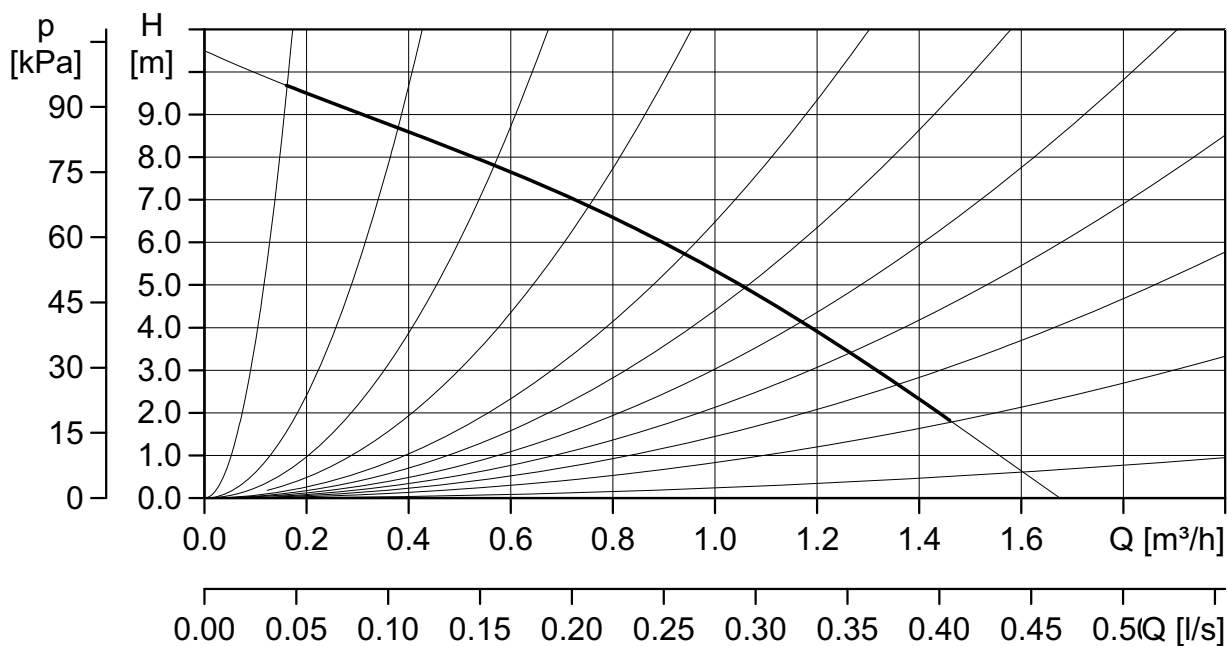
Dimensions



Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90, 1 x 220 V, 60 Hz

Brazil, Korea, Taiwan

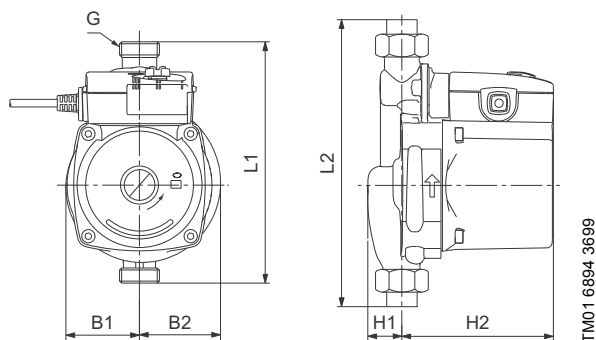


TM01 9636 2300

P_{1max} [W]	$I_{1/1}$ [A]
120	0.48

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

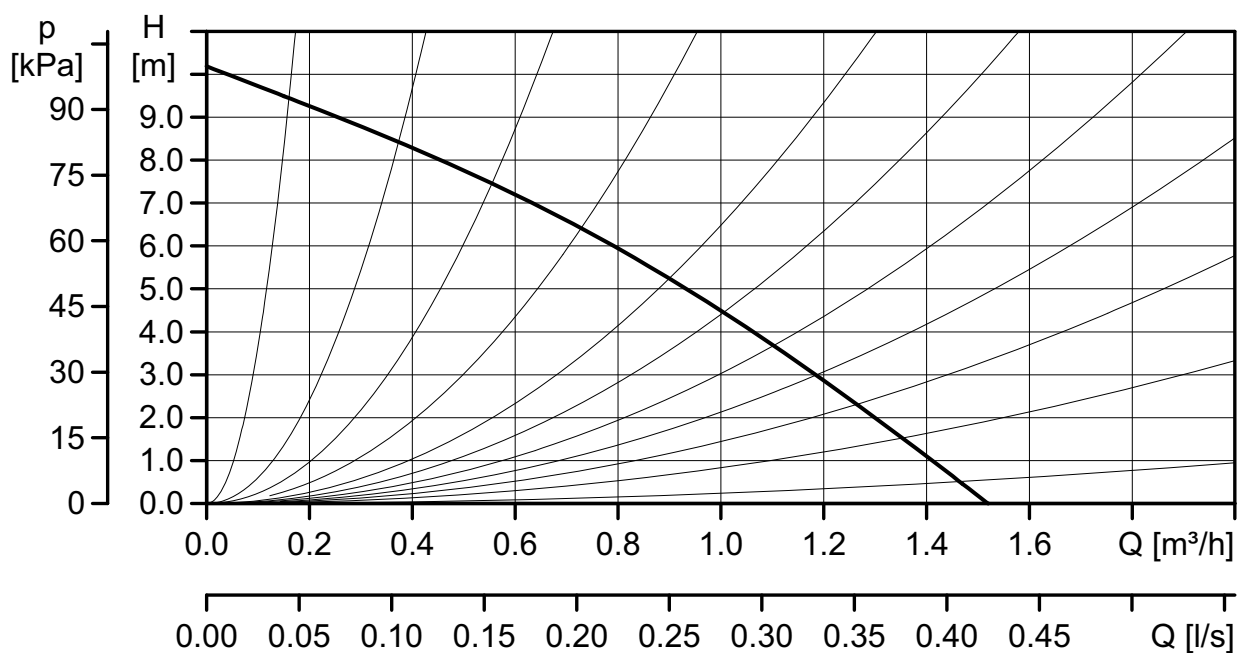
Dimensions



Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m ³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90 N, 1 x 100 V, 60 Hz

Japan

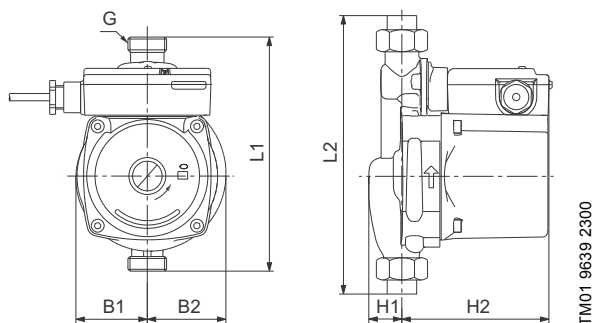


TM06 1927 3414

$P1_{max}$ [W]	$I_{1/1}$ [A]
115	1.15

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +60 °C (TF 60)

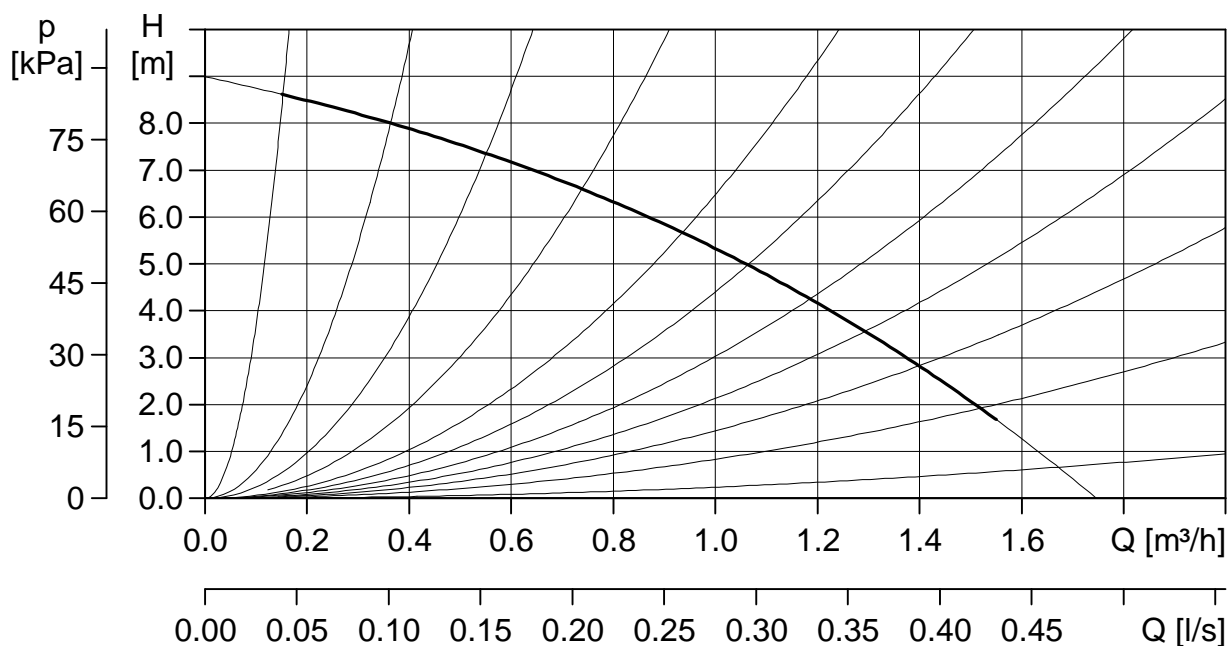
Dimensions



Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90 N	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90, 1 x 230 V, 50 Hz

UK, India, Russia, Global

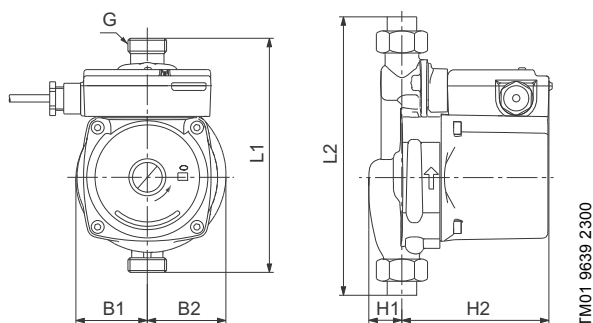


TM01 6893 3699

$P1_{max}$ [W]	$I_{1/1}$ [A]
120	0.48

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar / Max. 10 bar (Global only)
 Liquid temperature: +2 °C to +95 °C (TF 95)

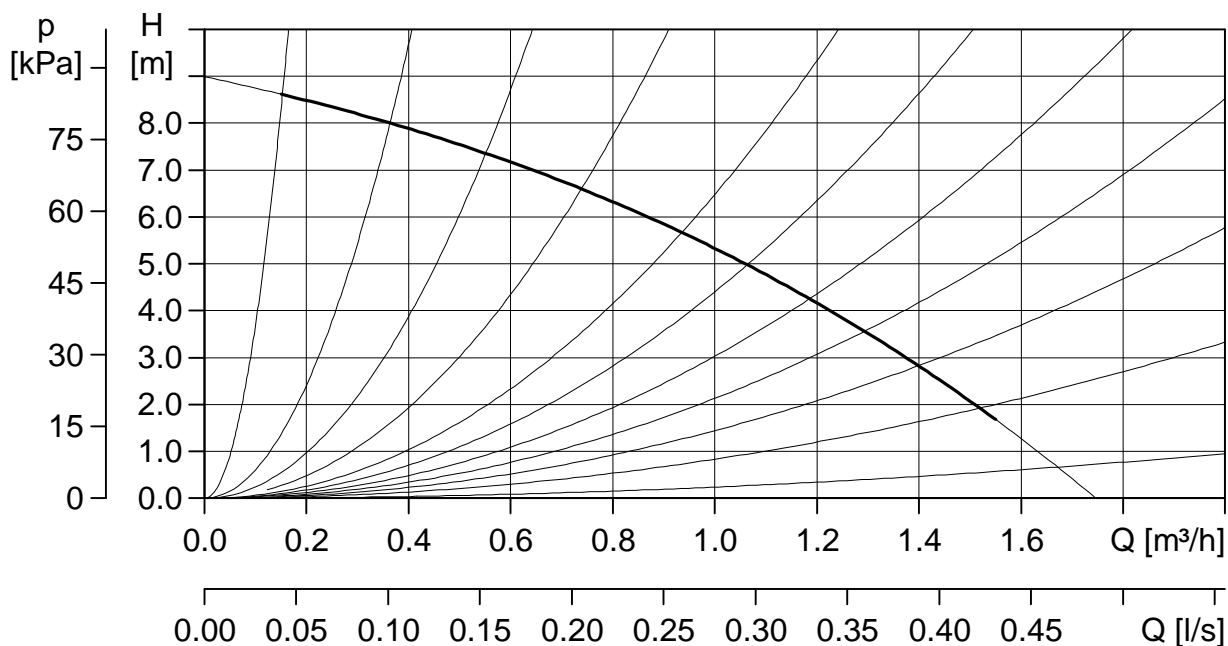
Dimensions



Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m ³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90 N, 1 x 230 V, 50 Hz

Netherlands, UK

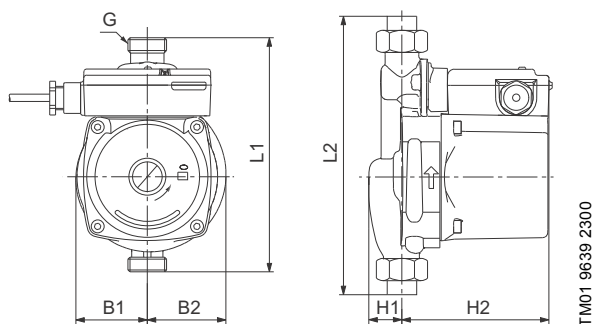


TM01 6893 3699

$P1_{max}$ [W]	$I_{1/1}$ [A]
120	0.48

Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar / Max. 10 bar (Netherlands only)
 Liquid temperature: +2 °C to +95 °C (TF 95)

Dimensions

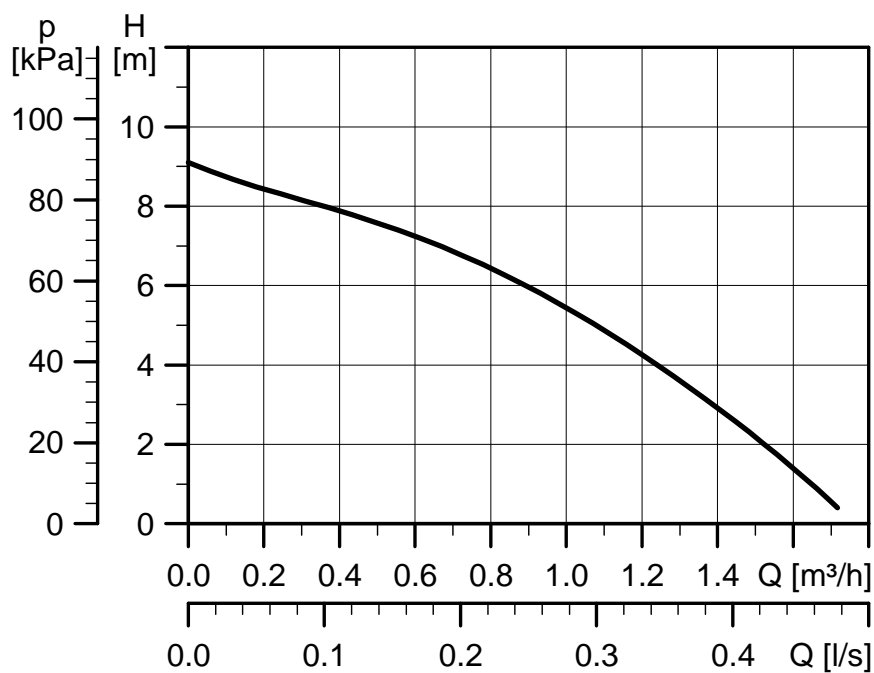


TM01 9639 2300

Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m ³]
	L1	L2	H1	H2	B1	B2	G	Net	Gross	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-90, 1 x 127 V, 60 Hz

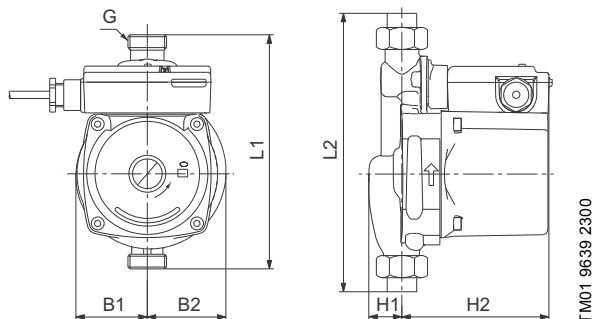
Mexico



TM05 7460 1013

$P1_{max}$ [W]	$I_{1/1}$ [A]
120	1

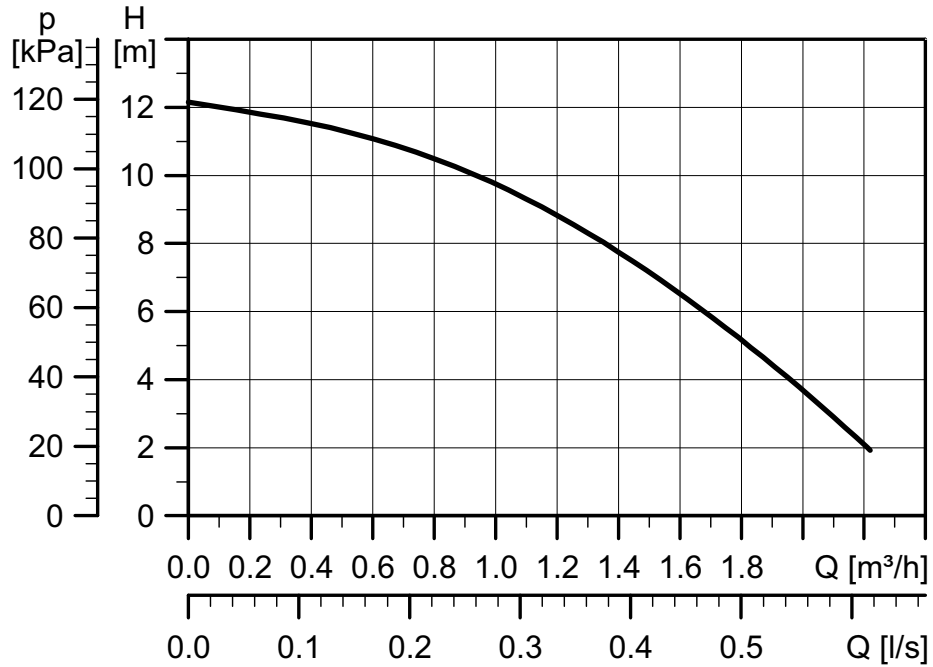
Enclosure class: IPX2D
 Connections: Rp 3/4 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +60 °C (TF 60)



Pump type	Dimensions [mm]							Weights [kg]		Shipping volume [m³]
	L1	L2	H1	H2	B1	B2	G	Net [kg]	Gross [kg]	
UPA 15-90	160	214	23	103	50	54	3/4"	2.5	2.7	0.0042

UPA 15-120, 1 x 230 V, 50 Hz

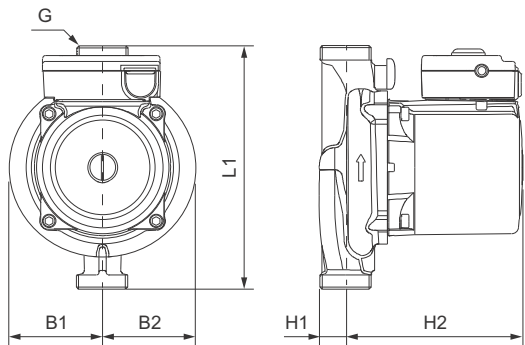
Europe



TM06 2052 3814

$P_{1\max}$ [W]	$I_{1/1}$ [A]
200	0.89

Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

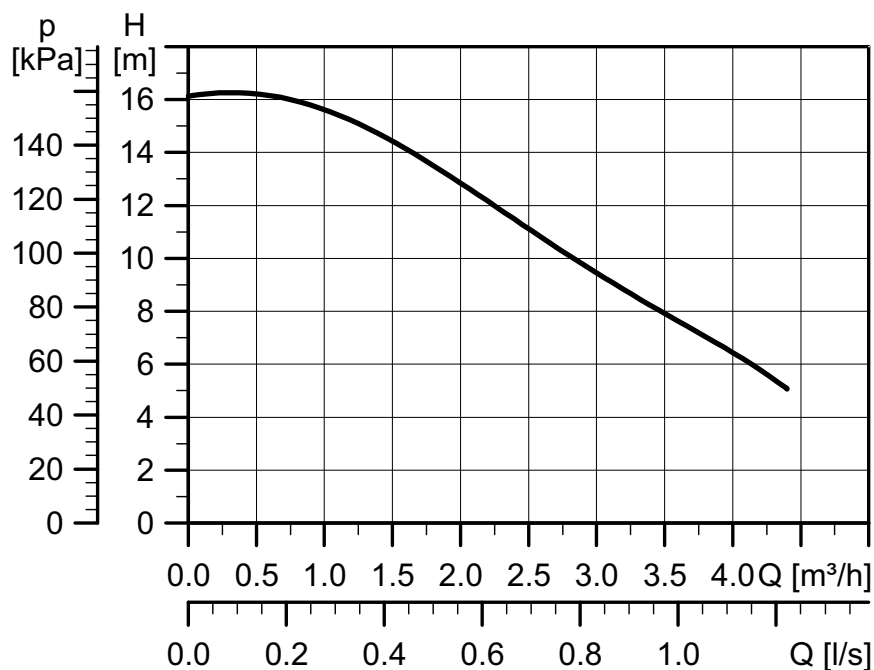


TM06 5103 3315

Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]
	L1	H1	H2	B1	B2	G	Net [kg]	Gross [kg]	
UPA 15-120	200	20	130	63	69	1"	4.7	5.0	0.0058

UPA 15-160, 1 x 230 V, 50 Hz

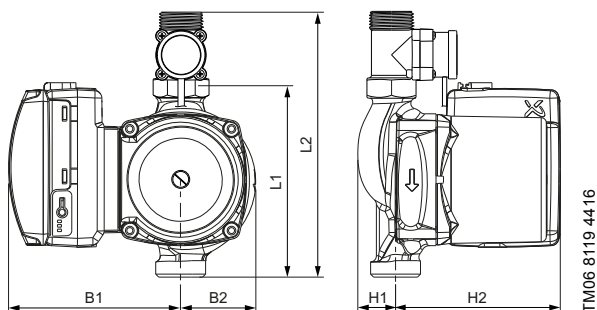
Europe



TM06 7752 4016

$P_{1\max}$ [W]	$I_{1/1}$ [A]
180	1.41

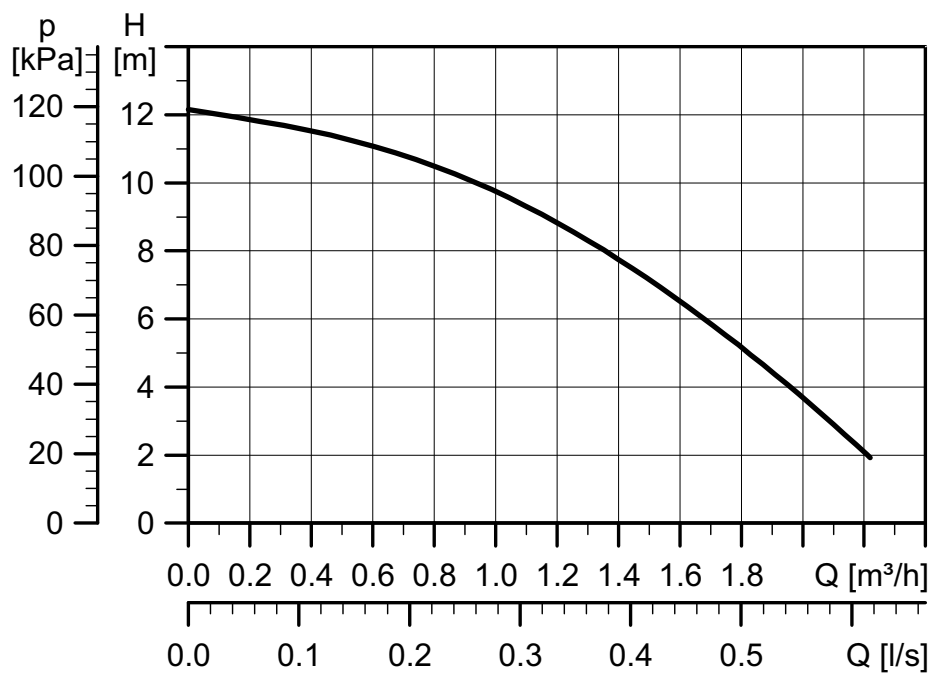
Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)



Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]	
	L1	L2	H1	H2	B1	B2	G	Net [kg]		Gross [kg]
UPA 15-160	130	203	25	110	116	50	1"	2.4	2.7	0.0081

UPA 15-120, 1 x 230 V, 50 Hz

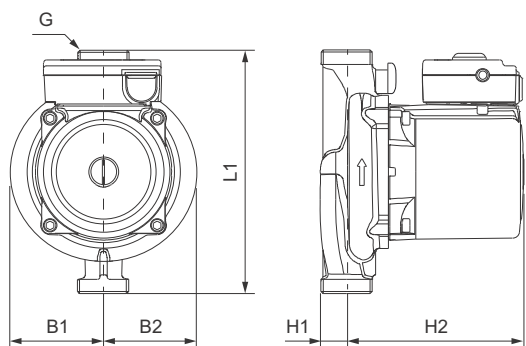
China



TM06 2052 3814

$P_{1\max}$ [W]	$I_{1/1}$ [A]
200	0.89

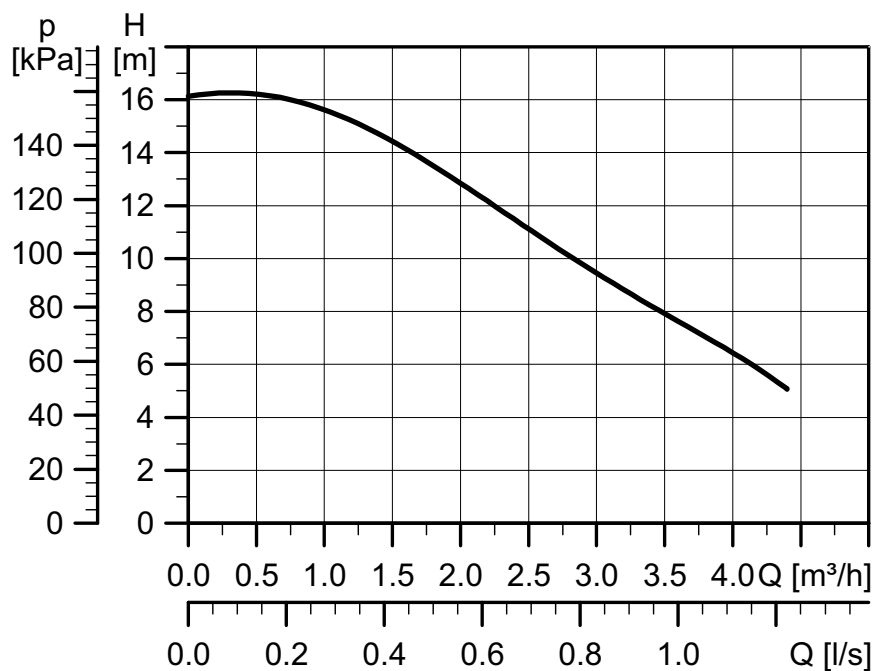
Enclosure class: IPX2D
 Connections: Rp 1- Rp 1/2 unions
 Operating pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)



Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]
	L1	H1	H2	B1	B2	G	Net	Gross	
UPA 15-120	200	20	130	63	69	1"	4.7	5.0	0.0058

UPA 15-160, 1 x 230 V, 50 Hz

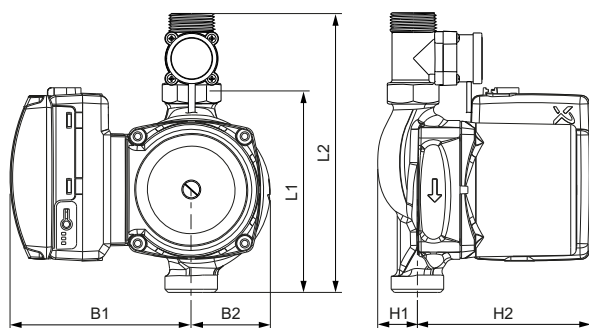
China



TM06 7752 4016

P1_{max} [W]	I_{1/1} [A]
180	1.41

Enclosure class: IPX2D
 Connections: Rp 1- Rp 1/2 unions
 Operating pressure: Max. 10 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

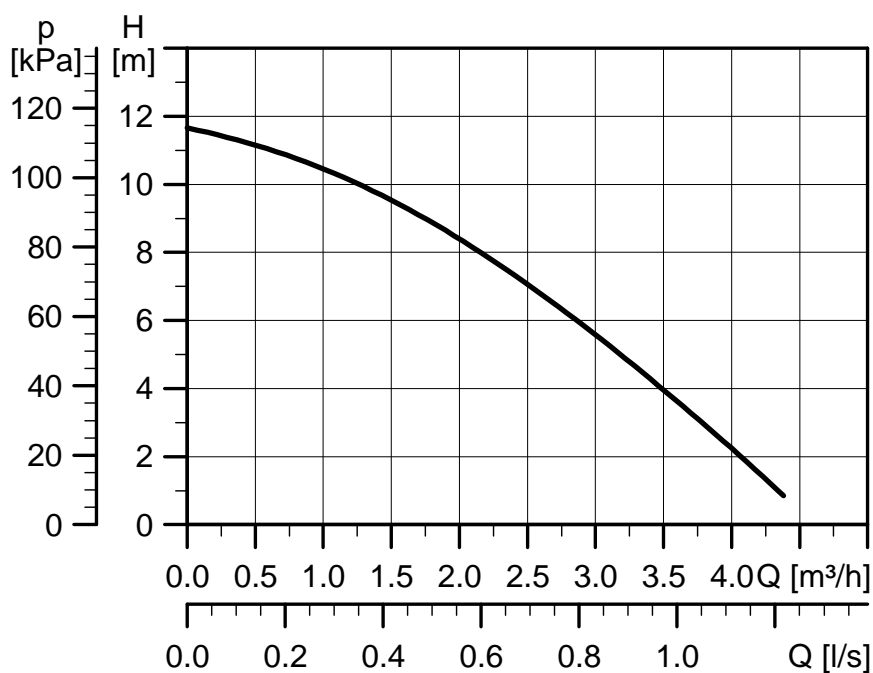


TM06 8119 4416

Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]	
	L1	L2	H1	H2	B1	B2	G	Net		Gross
UPA 15-160	130	203	25	110	116	50	1"	2.4	2.7	0.0081

UPA 120, 1 x 110 V, 60 Hz

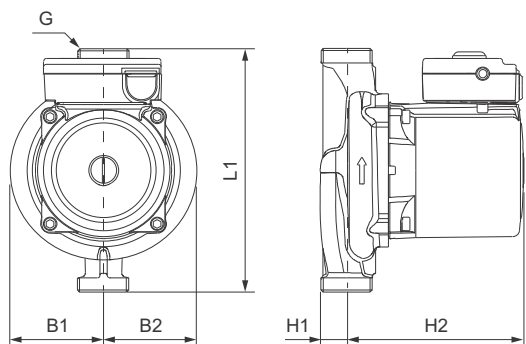
Taiwan, Brazil



TM05 7458 1013

$P1_{max}$ [W]	$I_{1/1}$ [A]
215	2.1

Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

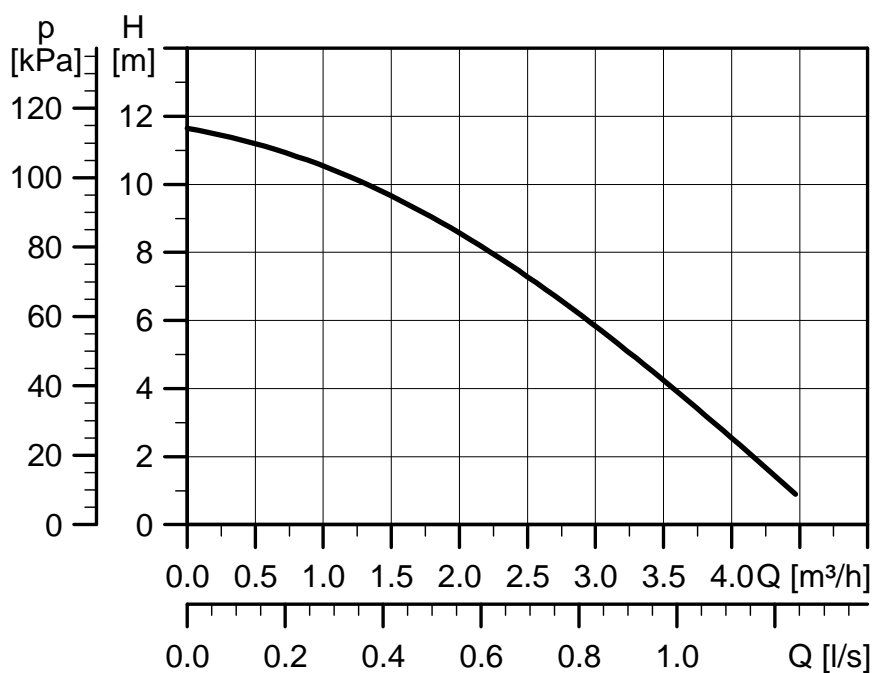


TM06 5265 4215

Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]
	L1	H1	H2	B1	B2	G	Net [kg]	Gross [kg]	
UPA 120	180	20	130	63	69	1"	4.7	5.0	0.0058

UPA 120, 1 x 220 V, 60 Hz

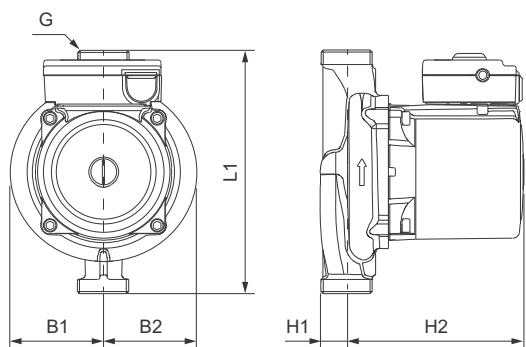
Taiwan, Brazil, Korea



TM05 7462 1013

P_{1max} [W]	I_{1/1} [A]
220	1.05

Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)

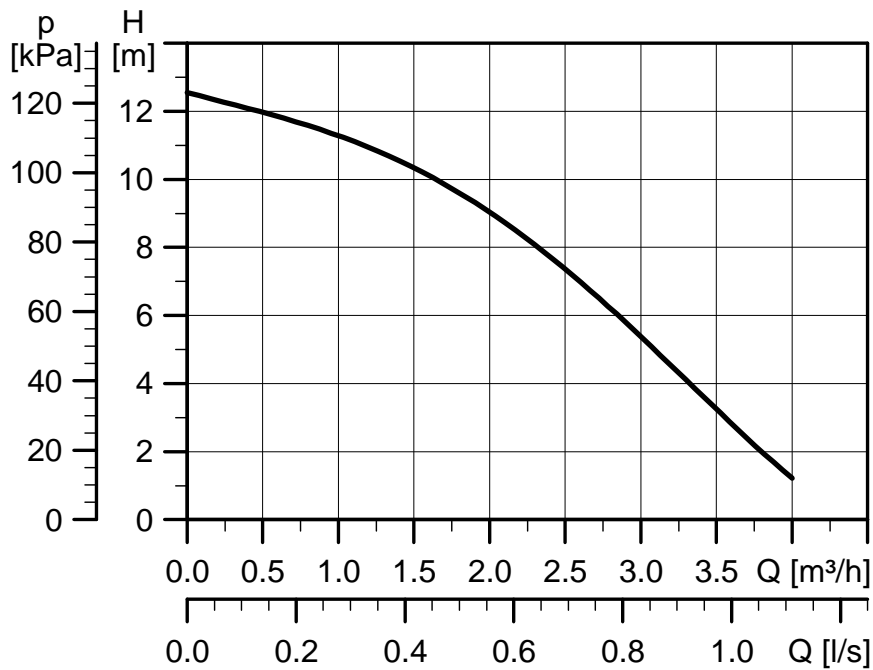


TM06 5265 4215

Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]
	L1	H1	H2	B1	B2	G	Net [kg]	Gross [kg]	
UPA 120	180	20	130	63	69	1"	4.7	5.0	0.0058

UPA 120, 1 x 230 V, 50 Hz

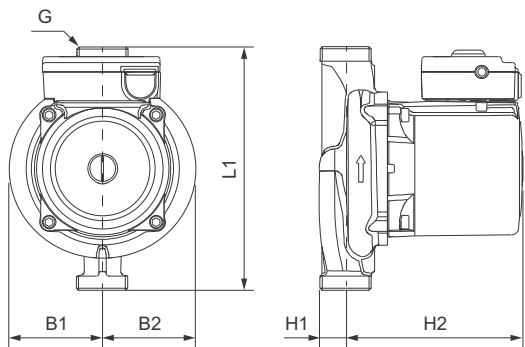
Singapore, India, Argentina



TM05 7459 1013

P1_{max} [W]	I_{1/1} [A]
250	1.14

Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +95 °C (TF 95)

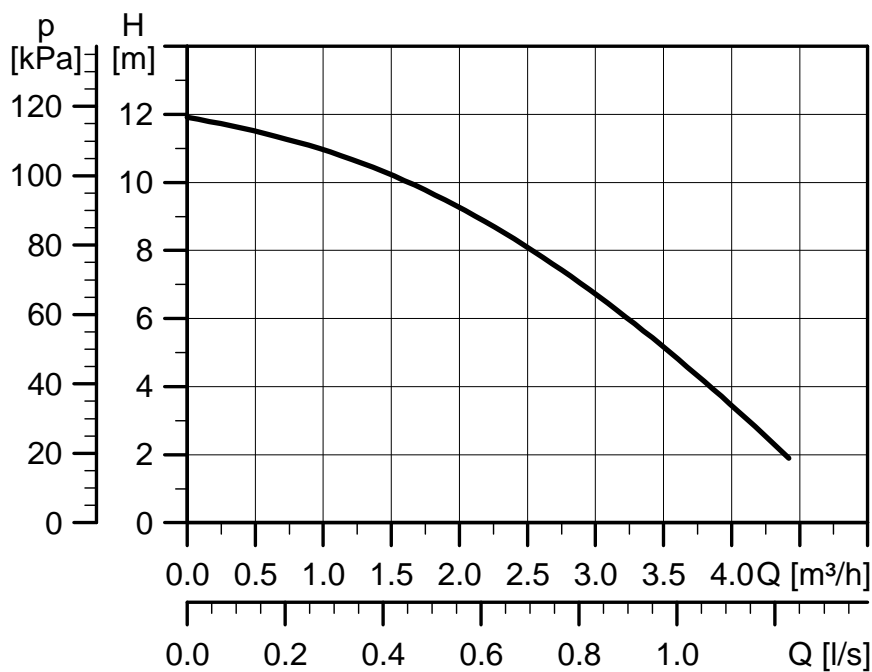


TM06 5265 4215

Pump type	Dimensions [mm]					Weights [kg]		Shipping volume [m³]	
	L1	H1	H2	B1	B2	G	Net [kg]		Gross [kg]
UPA 120	180	20	130	63	69	1"	4.7	5.0	0.0058

UPA 120, 1 x 120 V, 60 Hz

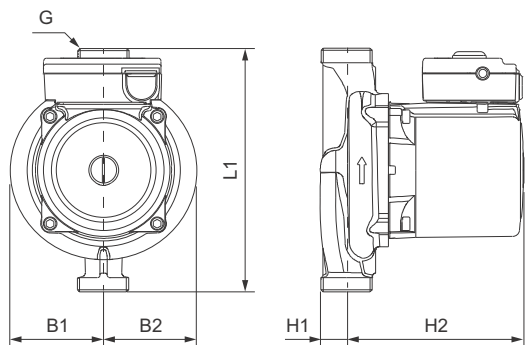
Mexico



TM05 7463 1013

$P1_{max}$ [W]	$I_{1/1}$ [A]
225	2

Enclosure class: IPX2D
 Connections: Rp 1 - Rp 1/2 unions
 Operating pressure: Max. 6 bar
 Liquid temperature: +2 °C to +110 °C (TF 110)



TM06 5265 4215

Pump type	Dimensions [mm]						Weights [kg]		Shipping volume [m³]
	L1	H1	H2	B1	B2	G	Net [kg]	Gross [kg]	
UPA 120	180	20	130	63	69	1"	4.7	5.0	0.0058

7. Product numbers

Market	Pump type	Port-to-port length [mm]	Terminal box position	Connection	Voltage [V]	Frequency [Hz]	Product number	Data sheet page
Argentina	UPA 15-90	160	12 H	G 3/4	230	50	59539502	12
	UPA 120	180	12 H	G 1	230	50	52588423	26
Australia and New Zealand	UPA 15-90 N	160	12 H	G 3/4	240	50	59539508	14
Brazil	UPA 15-90	160	12 H	G 3/4	110	60	59539518	13
	UPA 15-90	160	12 H	G 3/4	220	60	59539517	15
	UPA 120	180	12 H	G 1	110	60	52588421	24
	UPA 120	180	12 H	G 1	220	60	52588420	25
Brazil (white colour)	UPA 15-90	160	12 H	G 3/4	110	60	98559024	13
	UPA 15-90	160	12 H	G 3/4	220	60	98559114	15
	UPA 120	180	12 H	G 1	110	60	98559136	24
	UPA 120	180	12 H	G 1	220	60	98559140	25
China	UPA 15-90	160	12 H	G 3/4	230	50	99366077	12
	UPA 15-120	200	12 H	G 1	230	50	99366078	22
	UPA 15-160	203	9 H	G 1	230	50	99195711	23
Czech Republic	UPA 15-90	160	12 H	G 3/4	230	50	59539514	12
Europe	UPA 15-120	200	12 H	G 1	230	50	98699677	20
	UPA 15-160	203	9 H	G 1	230	50	99331335	21
Global	UPA 15-90	160	12 H	G 3/4	230	50	59539521	17
Netherlands	UPA 15-90 N	160	12 H	G 3/4	230	50	96621403	18
India	UPA 15-90	160	12 H	G 3/4	230	50	59539511	17
	UPA 120	180	12 H	G 1	230	50	52588416	26
Indonesia	UPA 15-90	160	12 H	G 3/4	230	50	59539519	12
Japan	UPA 15-90 N	160	12 H	G 3/4	100	60	59539505	16
Korea	UPA 15-90	160	12 H	G 3/4	220	60	59539513	15
	UPA 120	180	12 H	G 1	220	60	52588418	25
Mexico	UPA 15-90	160	12 H	G 3/4	127	60	59539520	19
	UPA 120	180	12 H	G 1	120	60	52588422	27
Romania	UPA 15-90	160	12 H	G 3/4	230	50	59539516	12
Russia	UPA 15-90	160	12 H	G 3/4	230	50	59539512	17
Singapore	UPA 15-90 N	160	12 H	G 3/4	240	50	59539509	14
	UPA 120	180	12 H	G 1	230	50	52588415	26
Taiwan	UPA 15-90	160	12 H	G 3/4	110	60	59539506	13
	UPA 15-90	160	12 H	G 3/4	220	60	59539507	15
	UPA 120	180	12 H	G 1	110	60	52588413	24
	UPA 120	180	12 H	G 1	220	60	52588414	25
Turkey	UPA 15-90	160	12 H	G 3/4	230	50	59539515	12
UK	UPA 15-90 N	160	12 H	G 3/4	230	50	97620721	18
	UPA 15-90	160	12 H	G 3/4	230	50	59539510	17

8. Accessories

External flow switch for UPA 120

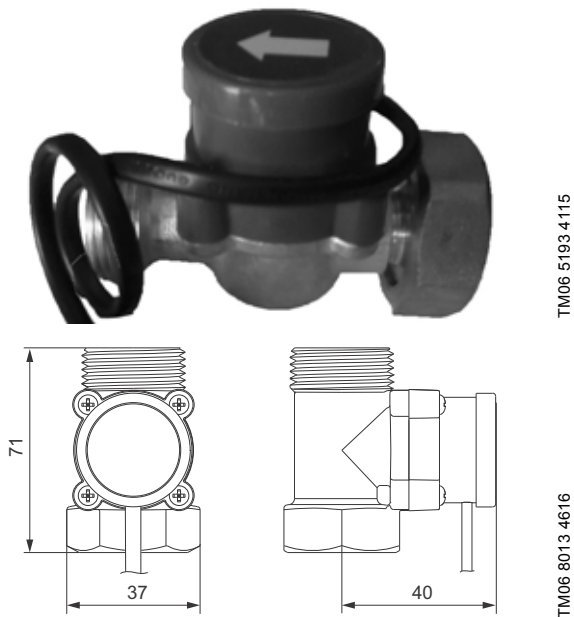


Fig. 12 External flow switch for UPA 120

Product number

Description	Product number
External flow switch for UPA 120	91760166

9. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

<http://product-selection.grundfos.com>



SIZING enables you to size a pump based on entered data and selection choices.

REPLACEMENT enables you to find a replacement product. Search results will include information on

- the lowest purchase price
- the lowest energy consumption
- the lowest total life cycle cost.

The screenshot shows the Grundfos Product Center website. At the top, there is a navigation bar with the logo and 'PRODUCT CENTER'. Below it, a menu includes 'HOME', 'FIND PRODUCT', 'COMPARE', 'YOUR PROJECTS', 'SAVED ITEMS', and 'HELP'. A search bar is prominently displayed with the text 'Input product number or a whole or partial product name'. Below the search bar are four main navigation buttons: 'SIZING' (with a subtext 'Enter pump sizing'), 'CATALOGUE' (with a subtext 'Products and services'), 'REPLACEMENT' (with a subtext 'Replace an old pump with a new'), and 'LIQUIDS' (with a subtext 'Find pump by liquid'). The 'SIZING' section is expanded, showing a 'QUICK SIZING' form with input fields for 'Flow (Q)*' (m³/h) and 'Head (H)*' (m), and radio buttons for 'Select what to size by': 'Size by application', 'Size by pump design', and 'Size by pump family'. A 'START SIZING' button is visible. At the bottom of the 'SIZING' section, there are options for 'ADVANCED SIZING' with checkboxes for 'Advanced sizing by application' and 'Guided selection'.

CATALOGUE gives you access to the Grundfos product catalogue.

LIQUIDS enables you to find pumps designed for aggressive, flammable or other special liquids.

All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc. in PDF format.

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ECM: 1197372

GRUNDFOS A/S
DK-8850 Bjerringbro . Denmark
Telephone: +45 87 50 14 00
www.grundfos.com

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