

UPA Home Booster

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



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1. Product description

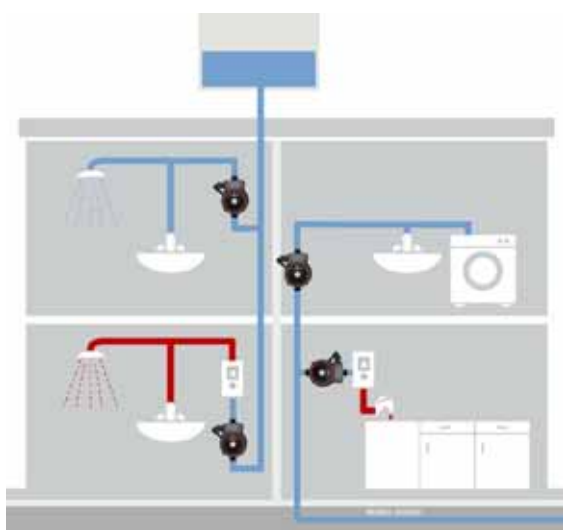
UPA booster pumps increase the pressure of domestic water to make the required pressure available at showers, taps and other tapping points. All UPA pumps are supplied with a cable with or without a plug.

An integrated or external flow switch starts or stops the pump when a tapping point is turned on or off. The external flow switch is placed after the pump outlet.

- integrated flow switch: UPA 15-90 and UPA 15-120.
- external flow switch:
UPA 15-160: supplied with the pump.
UPA 120: available as an accessory.

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.



TM07 3950 0419

Fig. 1 Applications for UPA Home Booster

Features and benefits

- **Flexibility:** 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.

Type key

Example:	UP	A	15	-90	N	230V	50Hz	Schuko plug
Circulator pump								
Automatic start/stop								
Type range								
Maximum head								
Pump housing								
Cast iron								
N Stainless steel								
Voltage								
Frequency								
Cable/Plug type								

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	95	2
Ambient temperature	40	2

Pressure

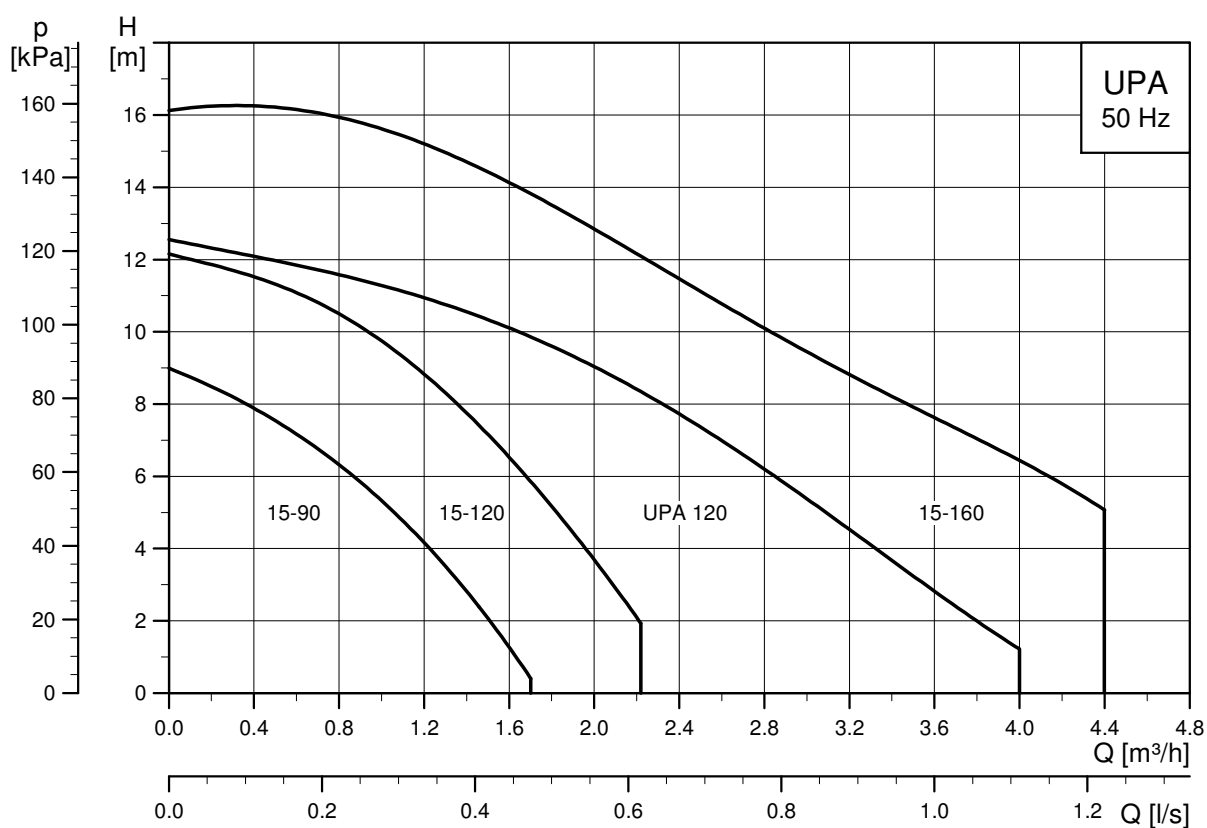
Operating pressure

Pump version	Maximum operating pressure	
	[MPa]	[bar]
UPA 15-90	1.0	10
UPA 15-120	1.0	10
UPA 120	1.0	10
UPA 15-160	1.0	10

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 inlet port during operation.

2. Performance range



TM06 2280 4516

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

Test liquid: airless water at 20 °C. Kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt). Head H and pressure p conversion at density of $\rho = 1000 \text{ kg/m}^3$. For liquids with other densities, for example hot water, the outlet pressure is proportional to the density

3. Construction

UPA circulator pumps for pressure boosting are of the canned-rotor type, that is 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.

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.

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 15-120 and UPA 120

UPA 15-120 and UPA 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 a 4-pole synchronous permanent-magnet motor. The electronically commutated motor (ECM) has a permanent-magnet rotor and frequency converter. They are energy-optimised due to improved hydraulics and motor efficiency. The pump controller is incorporated in the control box, which is fitted to the stator housing.

Rotor can

The rotor can is closed with a 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.

To prevent system water under pressure from running out when the 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.

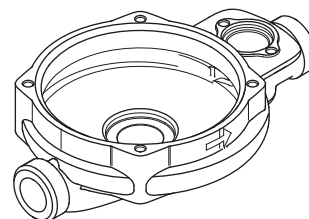
Impeller

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.



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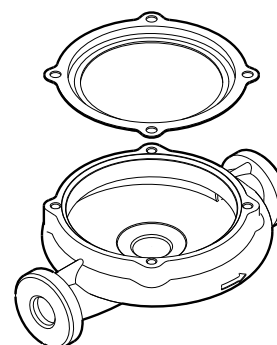
Fig. 2 UPA 15-90, UPA 15-120, UPA 15-160 standard pump housing

UPA 15-90 and UPA 15-160 (stainless steel)

The pump housing of UPA 15-90 N and UPA 15-160 N is made of stainless-steel.

UPA 120 (standard)

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



TM02 1327 0901

Fig. 3 UPA 120 standard pump housing

4. Installation

The UPA pump must always be installed with horizontal motor shaft.

- UPA 15-90 is installed vertically. The terminal box has to be placed on the outlet of the pump.
- UPA 15-120 and UPA 120 pumps can be installed vertically or horizontally.
- UPA 15-160 has to be installed vertically with the terminal box on either the left or right side.

Note: For pumps with external flow switch, the mounting position is limited by the length of the cable between the external flow switch and the terminal box.

The external flow switch is supplied with UPA 15-160 and available as accessory for UPA 120,

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

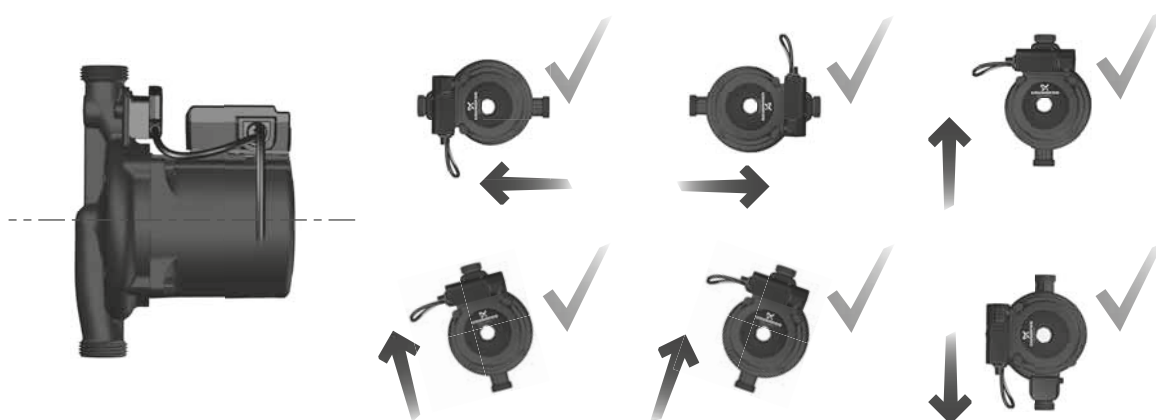


Fig. 4 Installation directions

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5. UPA 15-90



TM07 1499 04 19

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

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.

The integrated flow switch starts or stops the pump when a tapping point is turned on or off.

Features and benefits

- **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.
- **Corrosion-resistant:** Cataphoresis-coated pump housing.

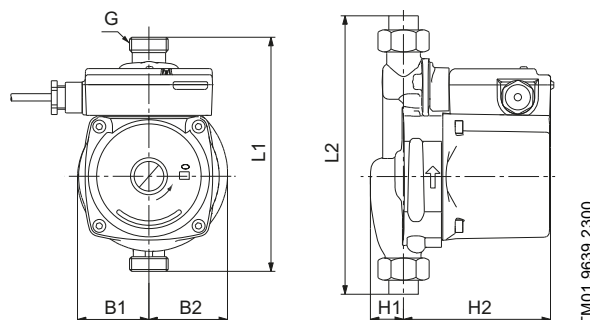
Motor

UPA circulator pumps for pressure boosting are of the canned-rotor type, that is 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 15-90 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.

Technical data

Dimensions



Dimensions [mm]						
L1	L2	H1	H2	B1	B2	G
160	214	23	103	50	54	3/4"

Weight

Net weight [kg]	Gross weight [kg]	Shipping volume [m ³]
2.5	2.7	0.0042

Operating conditions

Enclosure class:	IPX2D
Insulation class:	H/F
Connections:	G 3/4 - R 1/2 unions
Operating pressure:	Max. 10 bar
Liquid temperature:	+2 °C to +95 °C (TF 95)
Ambient temperature	Max. +40 °C
Noise level:	< 43 dB(A)

See nameplate data for the specific product model.

Electrical data

Frequency [Hz]	Voltage [V]	P _{1max} [W]	I _{1/1} [A]
50	1 x 230	120	0.48
60	1 x 230	120	0.48
60	1 x 115	120	1.00
60	1 x 127	120	1.00

Construction of UPA 15-90

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 drawing

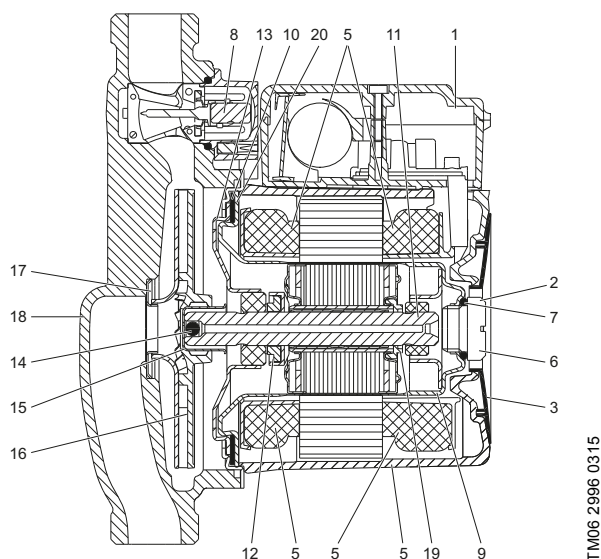


Fig. 5 Sectional drawing of UPA 15-90

Material specification

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

Flow switch

The integrated flow switch starts or stops the pump when a tapping point is turned on or off.

The flow switch 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).

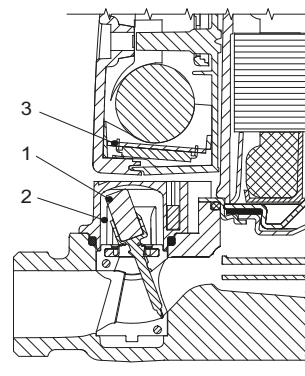


Fig. 6 UPA 15-90 flow switch in "OFF" position

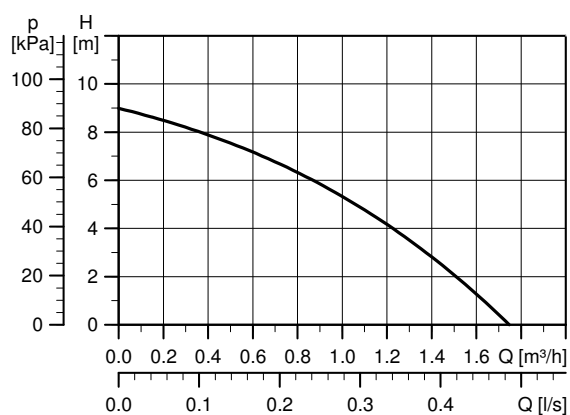
The pump selector can be set to the positions "OFF", "AUTO" and "MANUAL".

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.

Performance curves

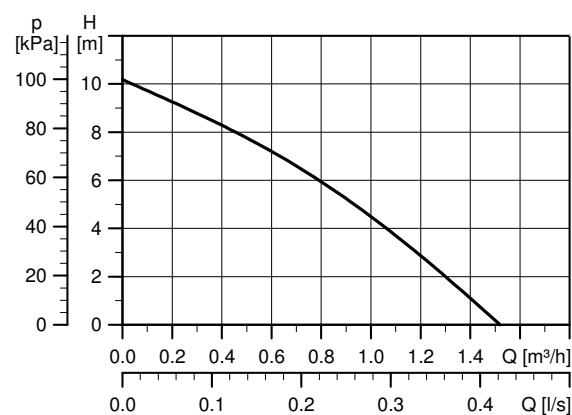
UPA 15-90, 1 x 230 V, 50 Hz



TM07 4001 0619

Fig. 7 UPA 15-90, 1 x 230 V, 50 Hz curve

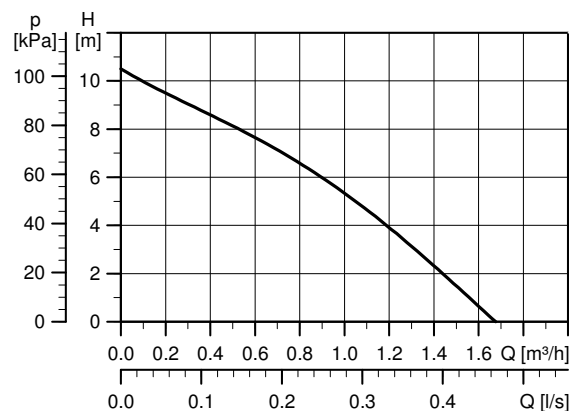
UPA 15-90, 1 x 230 V, 60 Hz



TM07 4002 0619

Fig. 9 UPA 15-90, 1 x 230 V, 60 Hz curve

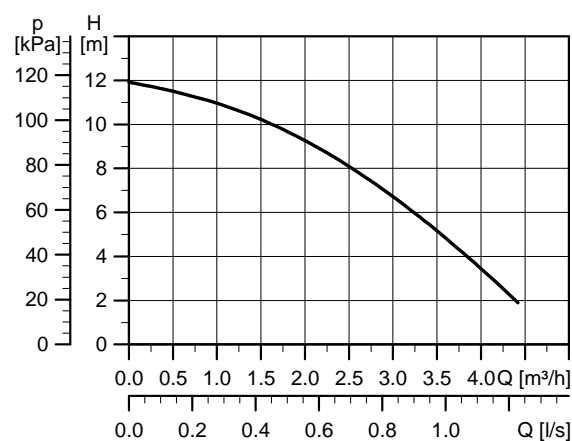
UPA 15-90, 1 x 115 V, 60 Hz



TM074003 0619

Fig. 8 UPA 15-90, 1 x 115 V, 60 Hz curve

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



TM05 7463 0313

Fig. 10 UPA 15-90, 1 x 127 V, 60 Hz curve

6. UPA 15-120



TM07 1497 0419

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

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.

The integrated flow switch starts or stops the pump when a tapping point is turned on or off.

Features and benefits

- **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.
- **Corrosion-resistant:** Cataphoresis-coated pump housing.

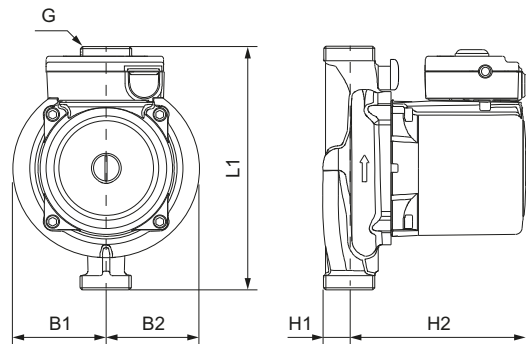
Motor

UPA circulator pumps for pressure boosting are of the canned-rotor type, that is 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 15-120 pumps have a 2-pole, asynchronous, squirrel-cage motor. The motor incorporates thermal overload protection, so no external motor protection is required.

Technical data

Dimensions



TM06 5103 3315

Dimensions [mm]

L1	H1	H2	B1	B2	G
200	20	130	63	69	1"

Weight

Net weight [kg]	Gross weight [kg]	Shipping volume [m ³]
4.7	5.0	0.0058

Operating conditions

Enclosure class:	IPX2D
Insulation class:	F
Connections:	G 1 - R 3/4 unions
Operating pressure:	Max. 10 bar
Liquid temperature:	+2 °C to +95 °C (TF 95)
Ambient temperature:	Max. +40 °C
Noise level:	< 43 dB(A)

See nameplate data for the specific product model.

Electrical data

Frequency [Hz]	Voltage [V]	P _{1max} [W]	I _{1/I} [A]
50	1 x 230	200	0.89

Construction of UPA 15-120

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.

Sectional drawing

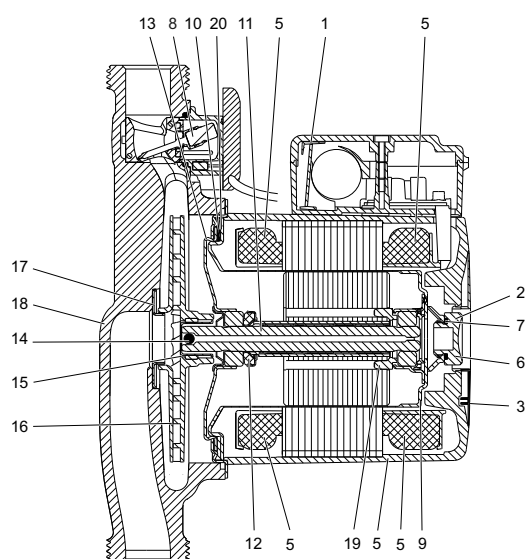


Fig. 11 Sectional drawing of UPA 15-120

Material specification

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

Flow switch

The integrated flow switch starts or stops the pump when a tapping point is turned on or off.

The flow switch 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).

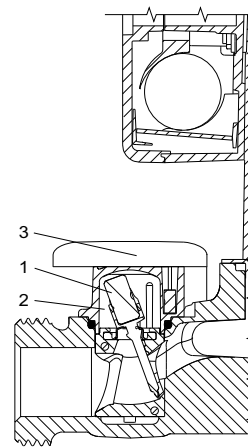


Fig. 12 Flow switch of UPA 15-120

UPA 15-120 does not contain an on/off switch.

Performance curve

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

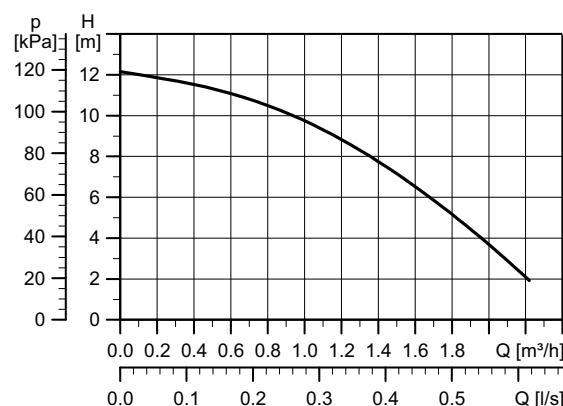


Fig. 13 UPA 15-120, 1 x 230 V, 50 Hz curve

7. UPA 120



TM07 1498 0419

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

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.

Features and benefits

- **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.
- **Corrosion-resistant:** Cataphoresis-coated pump housing.

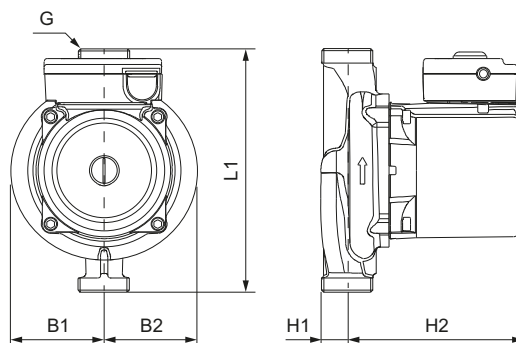
Motor

UPA circulator pumps for pressure boosting are of the canned-rotor type, that 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 120 pumps have a 2-pole, asynchronous, squirrel-cage motor. The motor incorporates thermal overload protection, so no external motor protection is required.

Technical data

Dimensions



TM06 5265 4215

Dimensions [mm]

L1	H1	H2	B1	B2	G
180	20	130	63	69	1"

Weight

Net weight [kg]	Gross weight [kg]	Shipping volume [m ³]
4.7	5.0	0.0058

Operating conditions

Enclosure class:	IPX2D
Insulation class:	F
Connections:	G 1 - R 3/4 unions
Operating pressure:	Max. 10 bar
Liquid temperature:	50 Hz: +2 °C to +95 °C (TF 95)
Ambient temperature:	Max. +40 °C
Noise level:	< 43 dB(A)

See nameplate data for the specific product model.

Electrical data

Frequency [Hz]	Voltage [V]	P _{1max} [W]	I _{1/1} [A]
50	1 x 230	250	1.14
60	1 x 230	220	1.05
60	1 x 115	225	2.00

Construction of UPA 120

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.

Sectional drawing

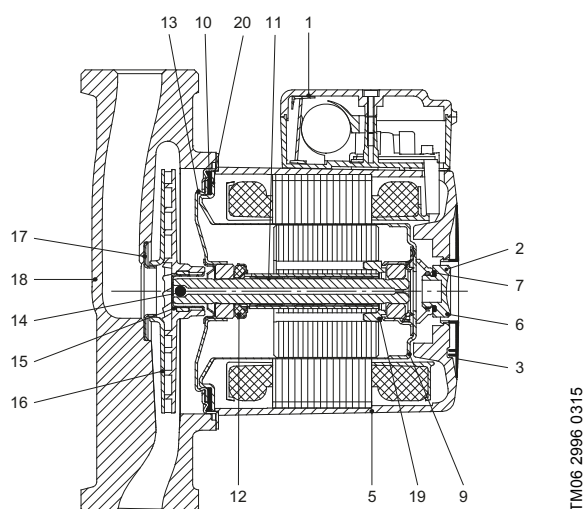


Fig. 14 Sectional drawing of UPA 120

Material specification

Pos.	Component	Material
1	Terminal box	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	Vent screw	Brass, nickelled, Ms58, EN 2.0401.30
7, 10	Gaskets	EPDM rubber
9	Rotor can	Stainless steel EN 1.4301/1.4521, AISI 304
11	Shaft, complete	Ceramic
12	Thrust bearing	Carbon
	Thrust bearing retainer	EPDM rubber
13	Bearing plate	Stainless steel EN 1.4301, AISI 304
14	Ball (non-return valve)	EPDM rubber
15	Split cone	Stainless steel EN 1.4301, AISI 304
16	Impeller	Composite PSP/PP 30 % GF
17	Neck ring	Stainless steel EN 1.4301, AISI 304
18	Pump housing	Cast iron EN 1561 EN-GJL-150
19	Stop ring	Composite PES
20	Intermediate ring	Stainless steel EN 1.4301, AISI 304

External flow switch

An external flow switch is available as an accessory. The external flow switch is placed after the outlet of the pump and starts or stops the pump when a tapping point is turned on or off.

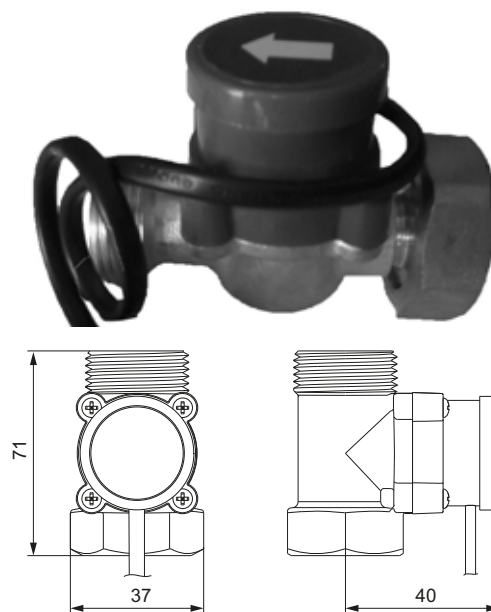


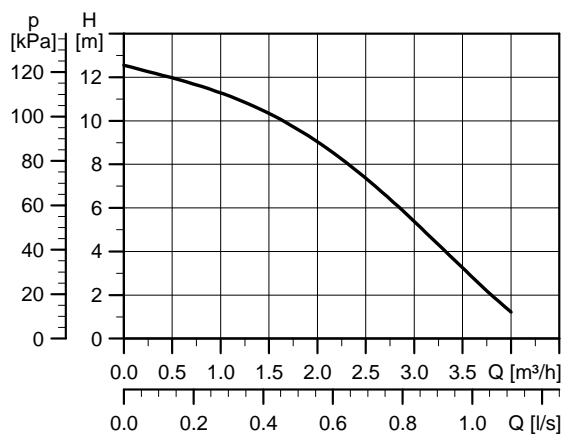
Fig. 15 External flow switch for UPA 120

Product number

Description	Product number
External flow switch	91760166

Performance curves

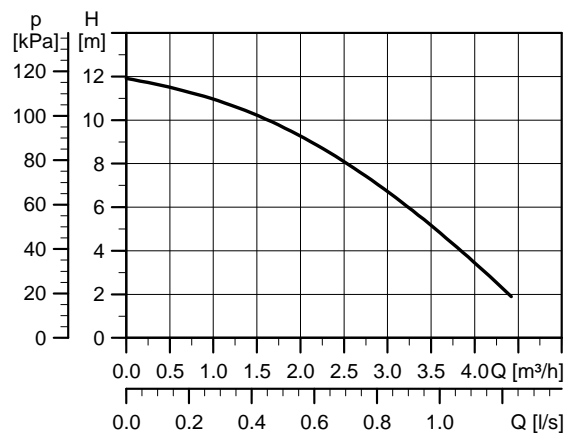
UPA 120, 1 x 230 V, 50 Hz



TM05 7459 1013

Fig. 16 UPA 120, 1 x 230 V, 50 Hz curve

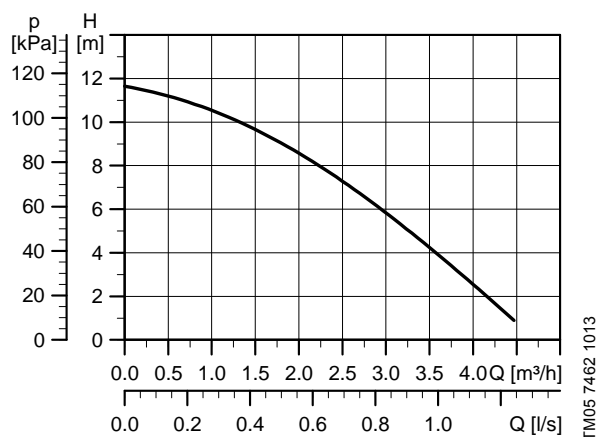
UPA 120, 1 x 115 V, 60 Hz



TM05 7463 1013

Fig. 18 UPA 120, 1 x 115 V, 60 Hz curve

UPA 120, 1 x 230 V, 60 Hz



TM05 7462 1013

Fig. 17 UPA 120, 1 x 230 V, 60 Hz curve

8. UPA 15-160



TM07 1500 0419

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

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.

Features and benefits

- **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.

Motor

UPA circulator pumps for pressure boosting are of the canned-rotor type, that is 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 is energy-optimised due to improved hydraulics and an electronically commutated motor (ECM) with permanent-magnet rotor and frequency converter.

The pump controller is incorporated in the control box, which is fitted to the stator housing.

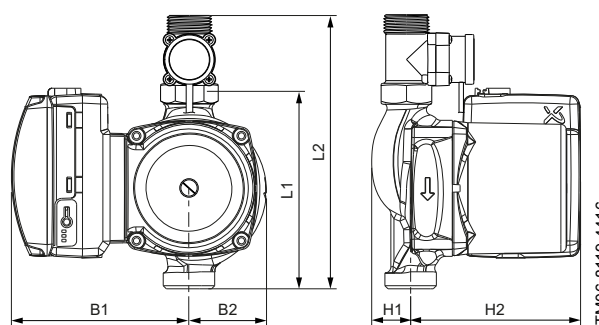
Pumped liquids

- 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.

Technical data

Dimensions



TM06 8119 4416

Dimensions [mm]

L1	L2	H1	H2	B1	B2	G
130	203	25	110	116	50	1"

Weight

Net weight [kg]	Gross weight [kg]	Shipping volume [m ³]
2.4	2.7	0.0081

Operating conditions

Enclosure class:	IPX2D
Insulation class:	F
Connections:	G 1
Operating pressure:	Max. 10 bar
Liquid temperature:	+2 °C to +95 °C (TF 95)
Ambient temperature:	Max. +40 °C
Noise level:	< 43 dB(A)

See nameplate data for the specific product model.

Electrical data

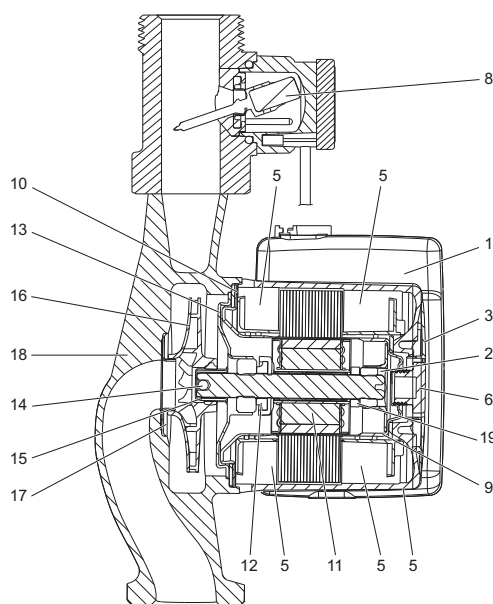
Frequency [Hz]	Voltage [V]	P _{1max} [W]	I _{1/1} [A]
50	1 x 230	180	1.41

Construction of UPA 15-160

Characteristic materials:

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

Sectional drawing



TM04 9747 5110

Fig. 19 Sectional drawing of UPA 15-160

Material specification

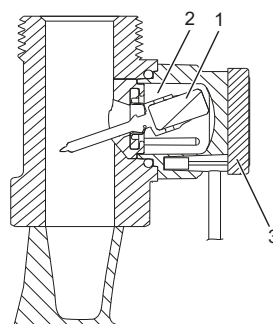
Pos.	Component	Material
	Terminal box	Composite
1	Heat sink with cooling pad	AlSi11Cu2 EN 46100
2	Radial bearing	Ceramic
3	Nameplate	Composite PA66
5	Stator housing	AlSi10Cu2
	Stator windings	Copper
6	Vent screw	Brass, nickelled, Ms58, EN 2.0401.30
	O-ring	EPDM ID2034
8	Flow switch	Magnet / EPDM rubber / PP
9	Rotor can	Stainless steel EN 1.4301/1.4521, AISI 304
10	Gasket	EPDM rubber
	Stop ring	PES 30 % GF
11	Shaft	Ceramic
	Rotor cladding	Stainless steel EN 1.4301/1.4521, AISI 304
12	Thrust bearing	Carbon
	Thrust bearing retainer	EPDM rubber
13	Bearing plate	Stainless steel EN 1.4301, AISI 304
14	Ball (non-return valve)	EPDM rubber
15	Split cone	Stainless steel EN 1.4301, AISI 304
16	Impeller	Composite PES 30 % GF

Pos.	Component	Material
17	Neck ring	Stainless steel EN 1.4301, AISI 304
18	Pump housing	UPA 15-160: Cast iron EN 1561 EN-GJL-150, ASTM 30 B UPA 15-160 N: Stainless steel EN 1.4308, AISI 304 C15
19	Stop ring	Composite PES

External flow switch

The external flow switch is placed after the outlet of the pump. The flow switch starts or stops the pump when a tapping point is turned on or off.

The flow switch 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).

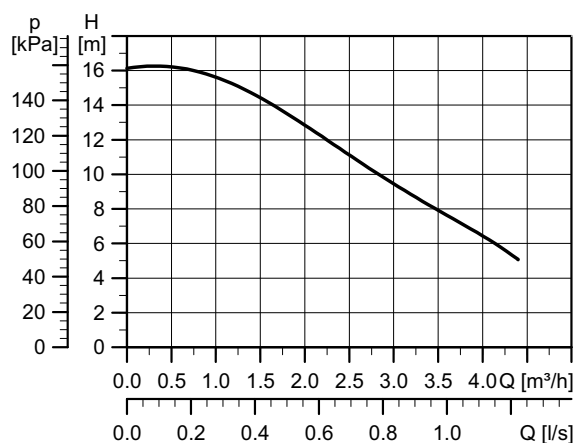


TM07 3952 5110

Fig. 20 External flow switch for UPA 15-160

Performance range

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



TM06 7752 4016

Fig. 21 UPA 15-160, 1 x 230 V, 50 Hz curve

9. Product numbers

Pump type	Voltage [V]	Frequency [Hz]	Port-to-port length [mm]	Pump house	Connection	Terminal box position	Plug/Cable type	Product number
UPA 15-90	230	50	160	Cast iron	G 3/4	12 H	Schuko	99538895
	230	50	160	Cast iron	G 3/4	12 H	Schuko	99547009*
	230	50	160	Stainles Steel	G 3/4	12 H	Schuko	99539041
	230	50	160	Cast iron	G 3/4	12 H	China	99366077
	230	50	160	Cast iron	G 3/4	12 H	No plug	99539056
	230	50	160	Stainles Steel	G 3/4	12 H	No plug	99538997
	230	50	160	Stainles Steel	G 3/4	12 H	UK	99539153
	230	50	160	Cast iron	G 3/4	12 H	Australia	99539189
	230	50	160	Cast iron	G 3/4	12 H	Argentina	99541003
	230	50	160	Cast iron	G 3/4	12 H	India	99539049
	230	60	160	Cast iron	G 3/4	12 H	Brazil	99540836
	230	60	160	Cast iron	G 3/4	12 H	NEMA 6-15	99540840
	230	60	160	Cast iron	G 3/4	12 H	Korea	99540895
	230	60	160	Cast iron	G 3/4	12 H	Schuko	99540901
	127	60	160	Cast iron	G 3/4	12 H	NEMA 5-15	99540974
	100	60	160	Stainles Steel	G 3/4	12 H	Japan	99547041
	115	60	160	Cast iron	G 3/4	12 H	Brazil	99539201
	115	60	160	Cast iron	G 3/4	12 H	NEMA 5-15	99539214
UPA 120	230	50	180	Cast iron	G 1	12 H	Schuko	99553565*
	230	50	180	Cast iron	G 1	12 H	India	99553567
	230	50	180	Cast iron	G 1	12 H	Argentina	99553603
	230	50	180	Cast iron	G 1	12 H	UK	99553568
	230	60	180	Cast iron	G 1	12 H	NEMA 6-15	99553501
	230	60	180	Cast iron	G 1	12 H	Korea	99553538
	230	60	180	Cast iron	G 1	12 H	Brazil	99553542
	230	60	180	Cast iron	G 1	12 H	NEMA 6-15	99553546
	115	60	180	Cast iron	G 1	12 H	Brazil	99553505
	115	60	180	Cast iron	G 1	12 H	NEMA 5-15	99553507
UPA 15-160	230	50	203	Cast iron	G 1	9 H	China	99195711
UPA 15-120	230	50	200	Cast iron	G 1	12 H	Schuko	99553570*
	230	50	200	Cast iron	G 1	12 H	China	99366078
	230	50	200	Cast iron	G 1	12 H	Schuko	99553575

*EAC marking

10. Accessories

External flow switch for UPA 120

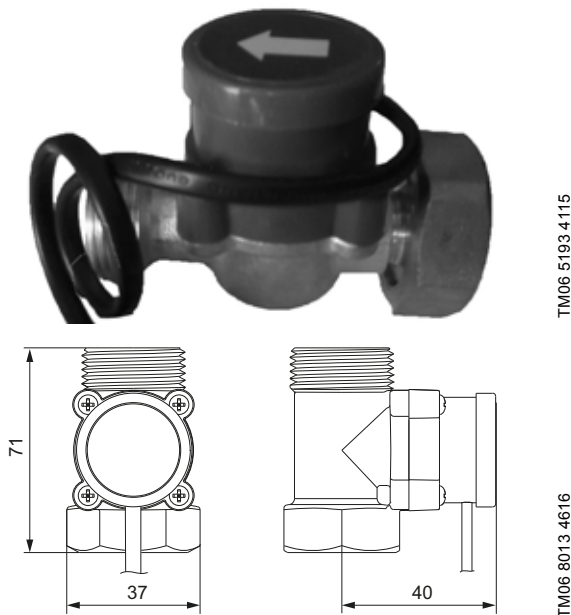


Fig. 22 External flow switch for UPA 120

Product number

Description	Product number
External flow switch for UPA 120	91760166

11. Grundfos Product Center

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

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



This drop-down menu enables you to set the search function to "Products" or "Literature".

"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 following:

- 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's a navigation bar with the Grundfos logo and 'PRODUCT CENTER'. Below it, a search bar with a dropdown menu set to 'Products'. The main content area has four large buttons: 'Sizing', 'Catalogue', 'Replacement', and 'Liquids'. Below these, there's a 'Quick sizing' section with input fields for 'Flow (Q)' and 'Head (H)', and a 'Select what to size by' section with radio buttons for 'Size by application', 'Size by pump design', and 'Size by pump family'. A 'START SIZING' button is at the bottom right of the quick sizing section.

"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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