



# High efficiency Circulation Pumps



01.2023 | EX

Moving people and elements



## We are Biral

“Our intelligent solutions save energy and resources.”  
Sjef de Bruijn, CEO



For over 100 years, we have dedicated ourselves to one task – to make the best pumps and systems. Developed and built in Switzerland, supplied across the globe, and working incredibly efficiently and reliably. This is another reason why we are a leading supplier for heating, waste water, sewage and high-pressure systems.

## The versatile range of pumps

Whether heating/ventilation, air-conditioning/cooling, domestic hot water or waste-water disposal – our pumps and our support improve any system.

You have access to a uniquely varied range of pumps. Biral technology is equally as sophisticated when it comes to saving energy as to economic efficiency: high performance and extremely low consumption are must-haves for us, for you and to sustainability.

### Heating / ventilation / air-conditioning / cooling



Select powerful and efficient wet- and dry-running pumps as well as standard centrifugal pumps for pleasantly warm or icy cold circuits. You benefit from our consistent operating philosophy, the networking option to building management systems and wireless communication via the Biral ONE smartphone app.

### Domestic hot water



Compact through to powerful: The Biral DHW range offers top-quality pumps with maximum reliability and outstanding ease of maintenance.

### Water supply



Everything flows: Particularly with our pressure boosting systems and submersible pumps for every conceivable application.



### Waste water disposal



Well-designed: Pumps, pump stations and ready-made pump stations collect and conduct all types of waste water.

### Control system



Whether for standard pumps or mass-produced, we offer the perfect, internally developed control system for every application.

# Contents

<b>General information</b>	<b>4</b>
<b>Product information</b>	<b>8</b>
PrimAX	8
CompAX	12
ModulA, ModulA-D	17
A, AD, A KW, AW	24
<b>Notes for project planning and installation</b>	<b>27</b>

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## Data sheets **30**



<b>Premium high efficiency heating circulation pumps</b>	<b>30</b>
PrimAX RED T2	30
CompAX RED	38
ModulA RED T2 with threaded connection	44
ModulA RED T2 with flanged connection	56
ModulA-D RED T2 with threaded connection	82
ModulA-D RED T2 with flanged connection	86
A ( <i>as long as stock</i> )	94
AD ( <i>as long as stock</i> )	104



<b>Premium high efficiency cold water circulation pumps</b>	<b>108</b>
ModulA GREEN T2 S with threaded connection	108
ModulA GREEN T2 S with flanged connection	120
ModulA GREEN T2 M/L with flanged connection	126
A KW ( <i>as long as stock</i> )	148



<b>Premium high efficiency domestic hot water pumps</b>	<b>158</b>
CompAX BLUE RV KH	158
CompAX BLUE	164
AW ( <i>as long as stock</i> )	172
ModulA BLUE T2 with threaded connection	178
ModulA BLUE T2 with flanged connection	190

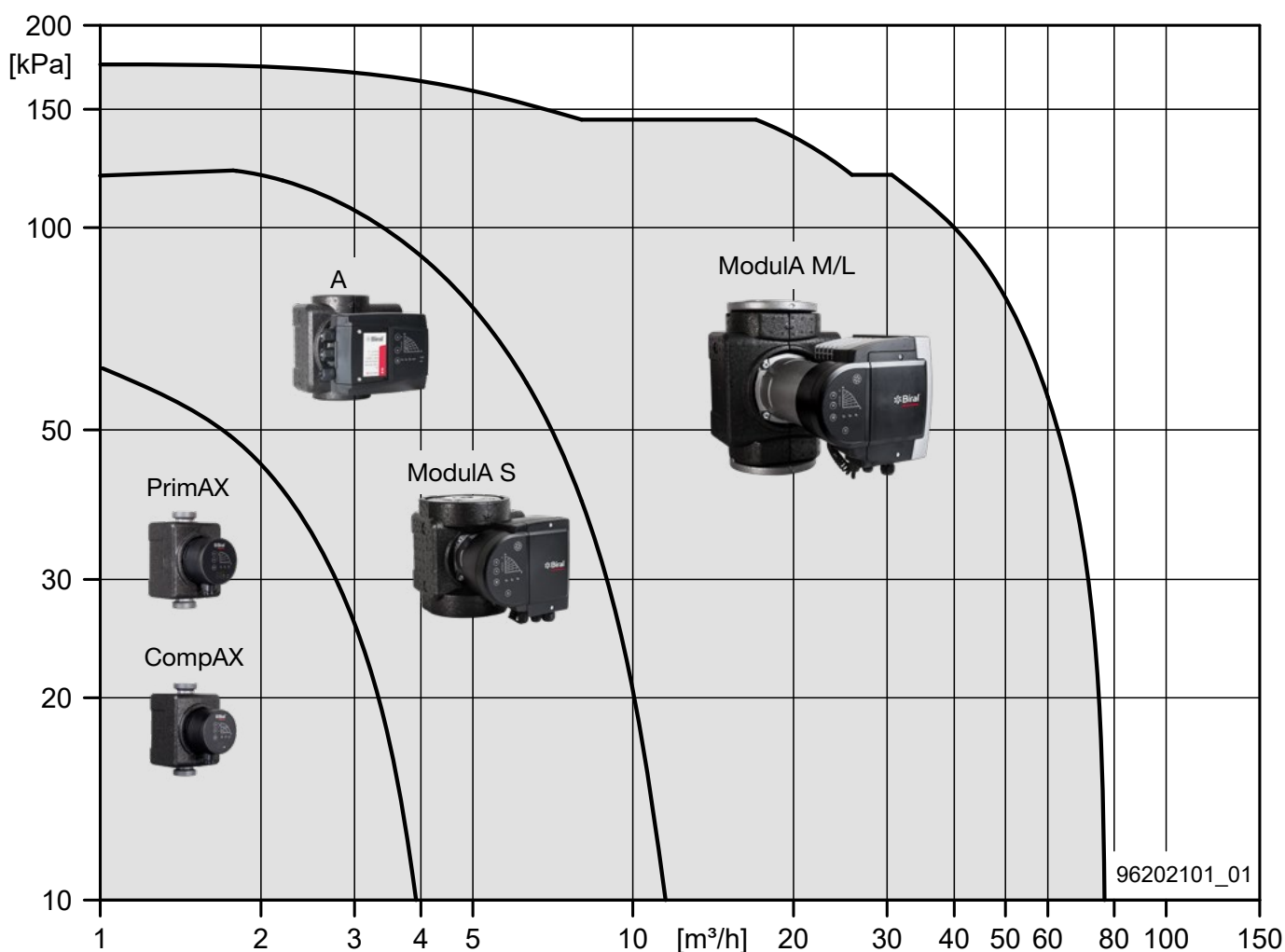
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## Accessories **196**

General	196
CompAX	198
ModulA, ModulA-D	199
A, AD, A KW	203

## General information

### Overview of characteristics for heating circulation pumps

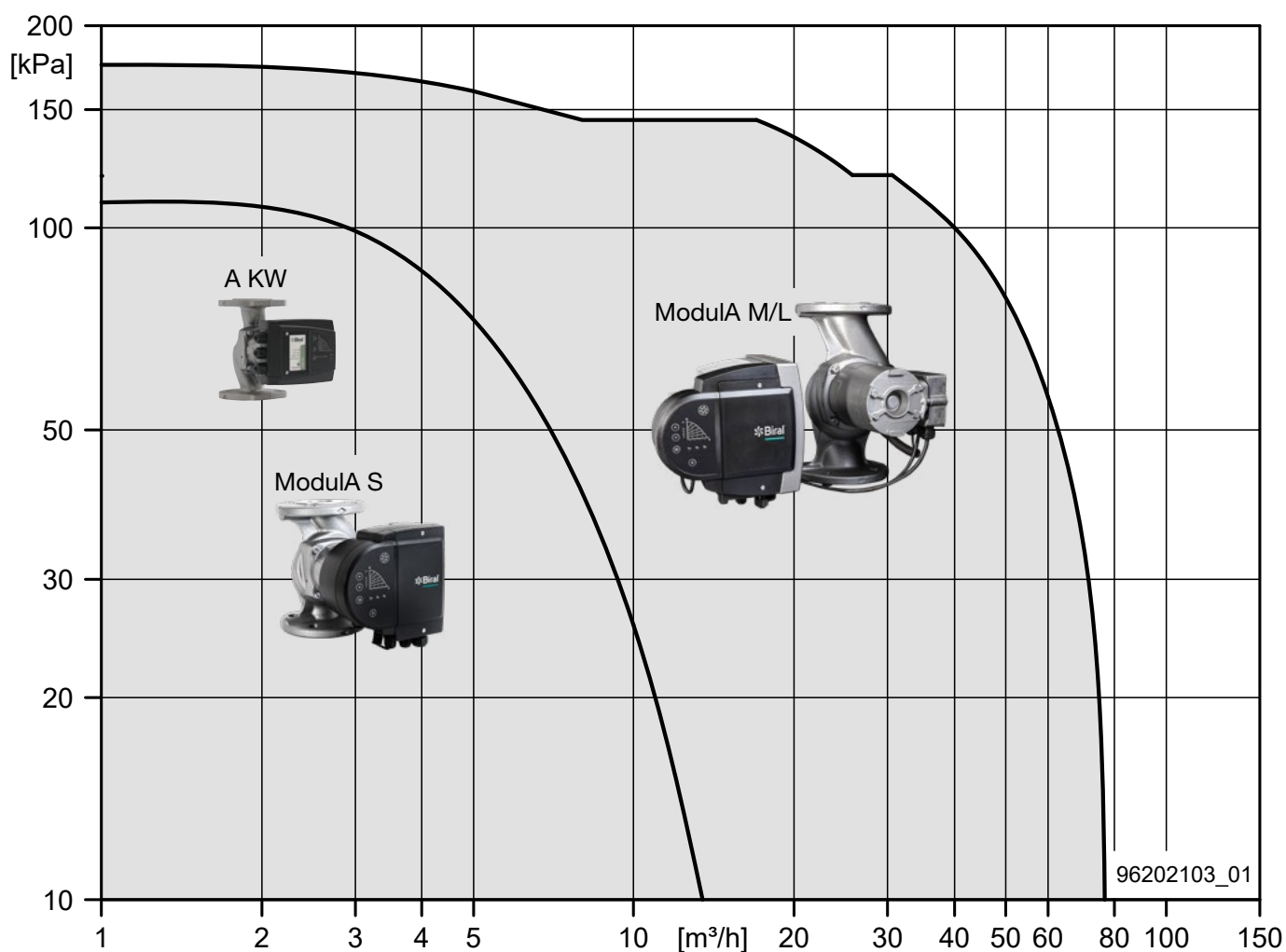


**RED**  
Heating / ventilation

Functions	PrimAX RED T2	CompAX RED	ModuA RED T2 S	ModuA RED T2 M/L	A
Medium temperature	2 – 110 °C	2 – 110 °C	15 – 110 °C	15 – 110 °C	15 – 95 °C
Discrete installation of electronics	–	–	–	optional	–
Fault message/Operational message (switchable between)	–	–	✓	✓	✓
External OFF or external ON (switchable between)	–	–	✓	✓	–
Power Limit (activatable)	–	–	✓	✓	–
Power limiting deactivatable	–	–	–	–	✓
Button lock	✓	–	✓	✓	–
Flow rate display (m³/h)	✓	–	Biral ONE App	Biral ONE App	–
Flow rate indicator	✓	✓	✓	✓	✓
Bluetooth Connect ‡	–	–	✓	✓	–
Biral ONE App	–	–	✓	✓	–
BIM Biral Interface Module	–	–	✓	✓	✓

## General information

### Overview of characteristics for cold water circulation pumps



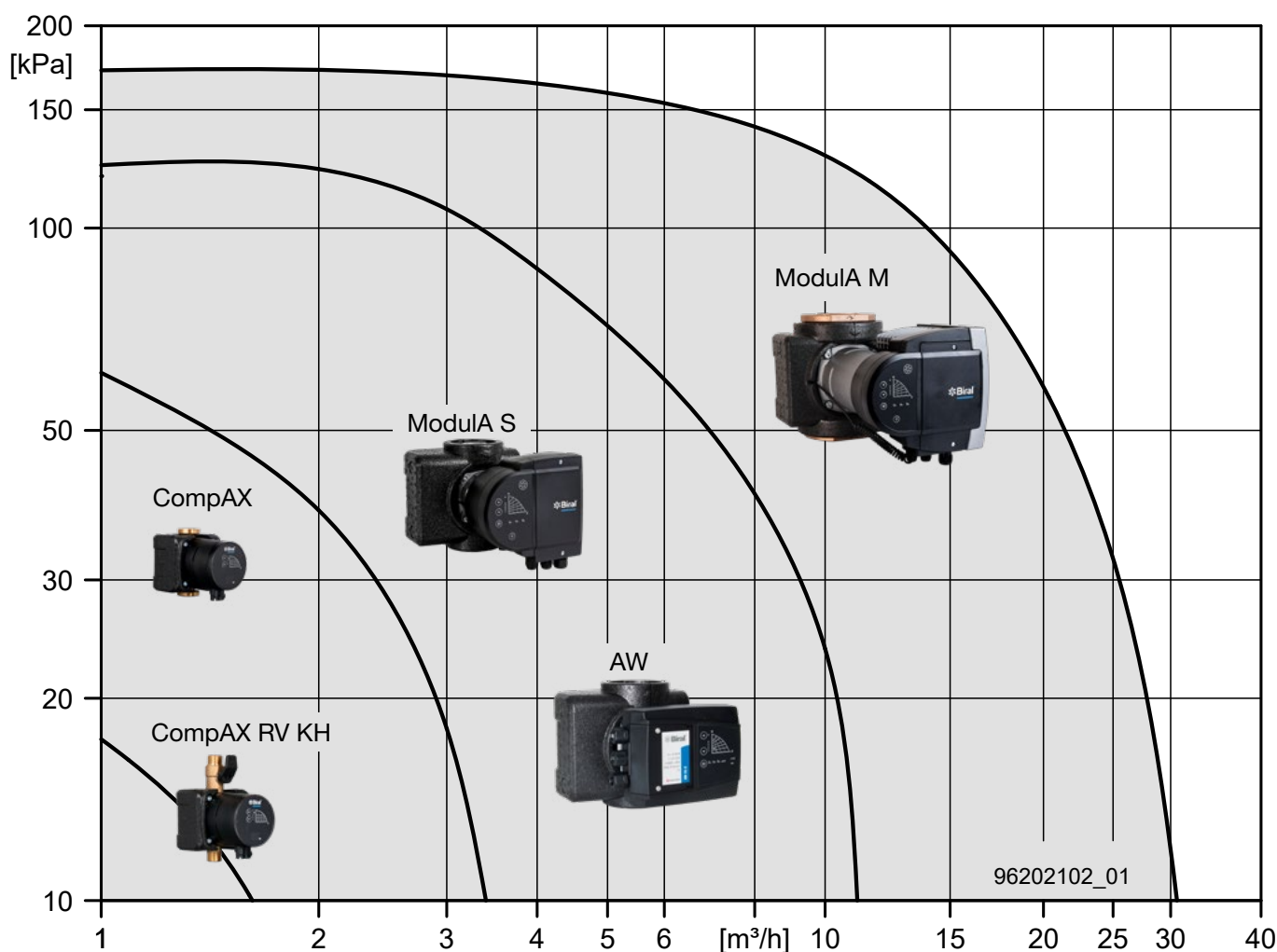
**GREEN**

**Air conditioning / refrigeration**

Functions	ModuA GREEN T2 S	ModuA GREEN T2 M/L	A KW
Medium temperature	-10 – 110 °C	-10 – 110 °C	-10 – 95 °C
Discrete installation of electronics	-	✓	-
Fault message/Operational message (switchable between)	✓	✓	✓
External OFF or external ON (switchable between)	✓	✓	-
Power Limit (activatable)	✓	✓	-
Power limiting deactivatable	-	-	✓
Button lock	✓	✓	-
Flow rate indicator	✓	✓	✓
Bluetooth Connect ‡	✓	✓	-
Biral ONE App	✓	✓	-
BIM Biral Interface Module	✓	✓	✓

## General information

### Overview of characteristics for Domestic hot water pumps



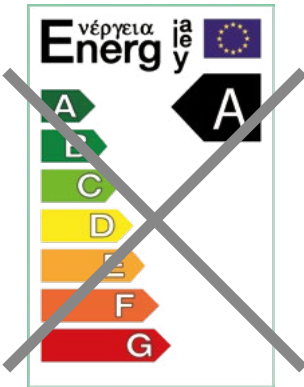
### BLUE Domestic hot water

Functions	CompAX BLUE	ModulA BLUE T2 S	ModulA BLUE T2 M/L	AW
Medium temperature	2 – 85 °C	15 – 85 °C	15 – 85 °C	15 – 85 °C
Discrete installation of electronics	–	–	optional	–
Fault message/Operational message (switchable between)	–	✓	✓	✓
External OFF or external ON (switchable between)	–	✓	✓	–
Power Limit (activatable)	–	✓	✓	–
Power limiting deactivatable	–	–	–	✓
Button lock	–	✓	✓	–
Flow rate indicator	✓	✓	✓	✓
Bluetooth Connect †	–	✓	✓	–
Biral ONE App	–	✓	✓	–
BIM Biral Interface Module	–	✓	✓	✓

## General information

### Biral ECO Design

The old energy label with the ratings from «A» to «G» have been replaced by a new energy efficiency index (EEI) as of 1 January 2013.



### The new Biral ECO Design label

The new ECO Design label from Biral shows you at a glance that your pump belongs to the top of the class in energy efficiency. A Biral product labelled with the «ECO Design» saves up to 80 % energy.

Exchanging older pumps with a new Modula from Biral already pays off in significantly lower energy costs even after just a short time.



### Efficiency as an obligation

Biral PrimAX	EEI ≤ 0.14
Biral Modula	EEI ≤ 0.17
Biral CompAX	EEI ≤ 0.18
ErP* Benchmark «Best in Class»	EEI ≤ 0.20

\*ErP: Energy-related Product Directive

The highly efficient mini-energy circulation pumps from Biral are extremely energy-efficient and meet the requirements of the ECO Design guidelines (EC Regulation no. 641/2009), that have been informed since 1 January 2013. Even the more stringent EEI values as of August 2015 are surpassed.

#### Reference value

for the most efficient circulation pumps:  
EEI ≤ 0,20

Drinking water circulation pumps do not come under the ECO Design guidelines. nevertheless, Biral has highly efficient, energy-saving pumps in its product range here as well.

## Product information

### General information



The PrimAX boasts an **above-average energy efficiency** and standardised **Biral operating philosophy**, which has been adopted from the Modula/VivarA. Functions such as the **flow rate indicator**, the **watt status** and the **deblocking system** make the pump stand out from the crowd.

### Product description

The Biral PrimAX is a complete circulation pump series with the following features:

- Integrated differential pressure control, which enables continuous adjustment of the pump output according to the current system conditions.
- Display showing the current power input in watts and the flow rate in m<sup>3</sup>/h.
- Motor with permanent magnet motor and compact stator housing.

Installing a Biral PrimAX circulation pump dramatically reduces energy consumption and improves the system's control behaviour. Furthermore, the flow noise generated in the thermostat valves or similar control valves is reduced.

### Intended use

Biral circulation pumps from the PrimAX series are intended for circulating fluids in the following equipment:

- Heating systems (underfloor heating, single and dual pipe heating systems)
- Air-conditioning systems.
- Cold water systems (cold water systems are equipment units in which the ambient temperature is below the temperature of the medium).

The pumps are suitable for use in systems with variable or constant pumped volumes.

### Requirements of the pumped medium

PrimAX is suitable for the circulation of the following media:

- Pure, thin, non-explosive and non-aggressive media without solid or long fibrous elements, which will not affect the pump either mechanically or chemically.
- Cooling liquids free of mineral oil
- Softened water

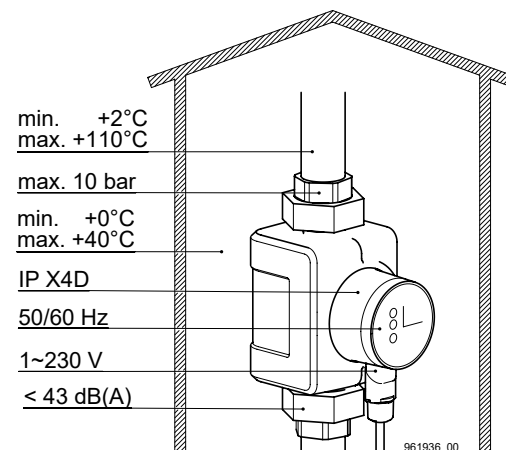
#### – Heating water:

Requirements according to current standards that apply to water quality in heating systems: (e.g. VDI 2035, SWKI BT102-01)

#### – Glycol:

The pump can be used for delivering water-glycol mixes. Maximum permissible viscosity: 50 mm<sup>2</sup>/s (cSt). This corresponds to a water-ethylene-glycol mix with a glycol content of around 50 % at –10 °C. The pump is controlled via an output-limiting function that protects against overload. The delivery of glycol mixes affects the MAX characteristic curve because the delivery capacity is reduced accordingly, based on the glycol content and temperature of the media.

### Operating conditions



#### Relative humidity

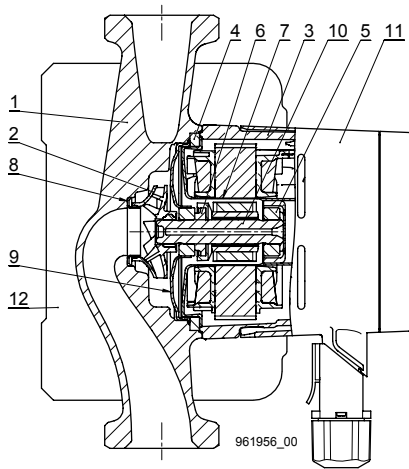
Maximum 95 %



# Product information

Product information

## Summary of materials



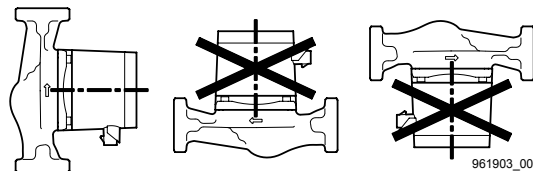
Pos.	Component	Material
1	Pump casing	Grey cast iron (PrimAX... RED)
2	Impeller	PES
3	Stator casing	Aluminium
4	Seal	EPDM
5	Slide bearing	Ceramic
6	Axial bearing	Synthetic carbons and EPDM
7	Can	Stainless steel
8	Neck ring	Stainless steel
9	Bearing cover	Stainless steel
10	Shaft	Ceramic
11	Frequency converter	PC GF10
12	Heat insulation	EPP, fire protection class B2 DIN 4102 shells

## Installation

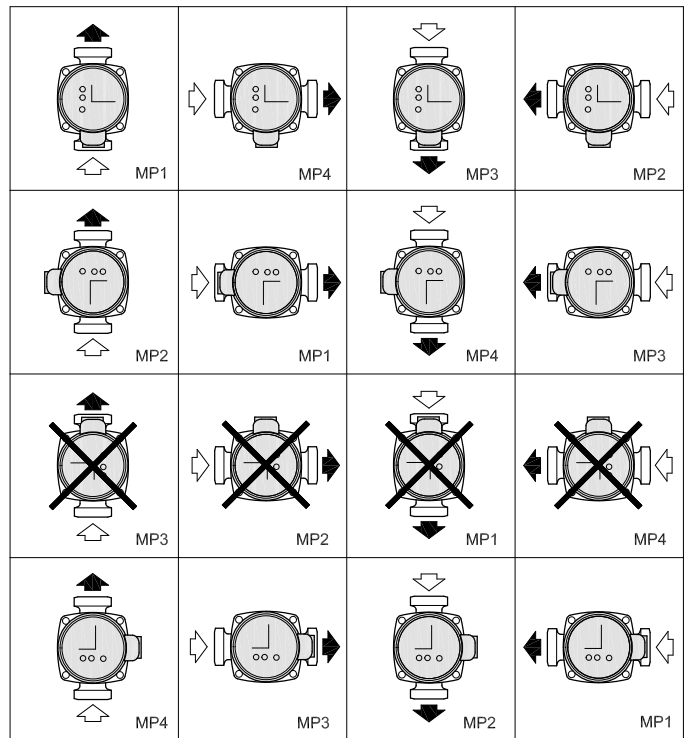
### General notes

PrimAX is only intended for installation indoors. The pumps must be mounted voltage-free so that no energy can be transferred from the pipes to the pump casing. The pumps can be installed directly in the pipe, provided the pipes are designed for the weight of the pump. Installation is only possible after completion of all welding and soldering work on the system. Avoid drops of water on the pump motor, especially the frequency converter.

### Permissible installation positions



The installation position of the rotor shaft must always be horizontal. Before installing the pump, the pump head can be turned 90° at a time.



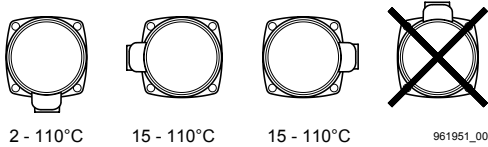
961938\_00

**Delivery condition:** Installation position 1 = MP1

## Product information

Product information

### Permissible medium temperature



2 - 110°C    15 - 110°C    15 - 110°C    961951\_00

### Installation position in heating systems

In heating systems with a medium temperature of +15 to +110°C, the pump head can be set at positions 3 o'clock, 6 o'clock or 9 o'clock.

### Installation position in air-conditioning systems and cold water systems

In air-conditioning and cold water systems, the pump head must be set in such a way that the connector points downwards (6 o'clock).

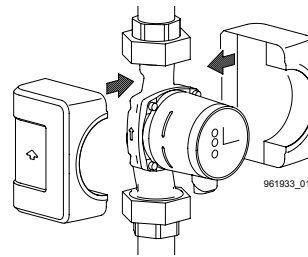
### Information

To avoid condensation water in the terminal box and in the stator, the medium temperature must always be higher than the ambient temperature. If the medium temperature is below the ambient temperature, the pump head and connector must be set at the 6 o'clock position.

Ambient temperature	Media temperature	
	min. °C	max. °C
0	2	110
15	15	110
30	30	110
35	35	90
40	40	70

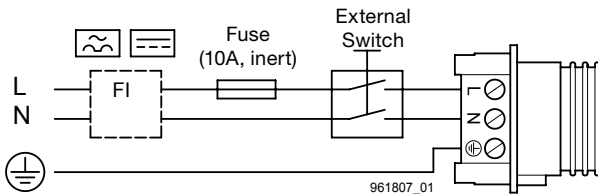
### Heat insulation

Heat losses can be reduced by insulating the pump casing and pipes. For PrimAX, heat insulation shells are included in the delivery.



## Electrical specifications

### Electrical connection



Electrical connection may only be carried out by an electrical specialist in accordance with the local regulations and provisions.

- The pump must be secured on-site and connected to an external mains switch.
- The pump must be earthed sufficiently.
- The pump does not require any external motor protection.
- The pump has integrated excess temperature protection, which offers sufficient protection against the occurrence of over loads and blocking.

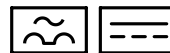
### Cable

- All cables must be heat-resistant up to a minimum of + 85 °C.
- All cables are to be connected in accordance with EN 60204-1 and EN 50174-2:2000.

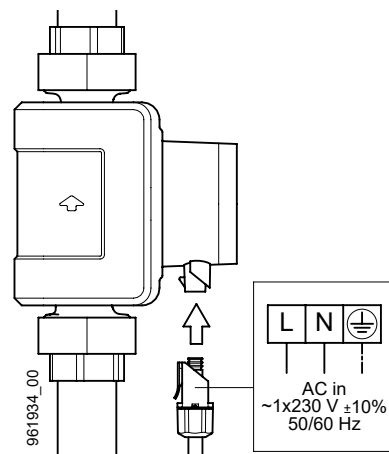
### Additional protection

If the pump is connected to an electrical installation, which has a ground fault circuit interrupter for additional protection, the ground fault circuit interrupter must trigger pulsing DC components if earth fault currents occur.

The fault current protection switch must be marked with the first symbol or with both the following signals:



### Connection scheme



### Mains connection:

1x230V +/- 10%, 50/60Hz

### Terminals:

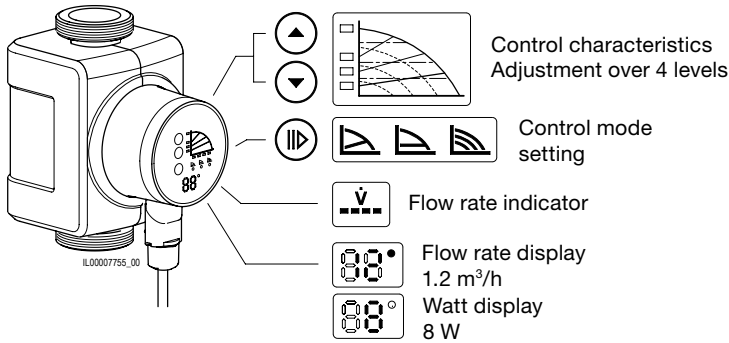
L, N, PE Mains connection

# Product information


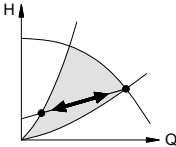

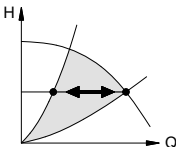

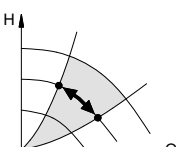
Product information

## Settings

### Control panel



### Types of control

Types of control	System uses	Function	
 <b>Proportional pressure</b> (pp)	– Double-pipe radiator heating	The operating point of the pump moves up and down on the proportional pressure characteristic curve depending on the heat demand. The discharge head (pressure) falls with decreasing heat demand and rises with increasing heat demand.	
 <b>Constant pressure</b> (cp)	– Underfloor heating	The operating point of the pump moves back and forth along the constant pressure characteristic curve depending on the system's heat demand. At the same time, the discharge head (the pressure) remains constant, regardless of the heat demand.	
 <b>Constant speed</b> (cs)	– Single-pipe radiator heating – Boiler circuit pump – Storage loading pump	The pump runs at a constant speed and therefore along a constant characteristic curve.	

## Product information

### General information



The CompAX offers impressively **compact proportions**, **Biral's simple and clear control concept** and a **high level of efficiency**. Functions such as the flow rate indicator, the watt status and the deblocking system, make the pump stand out from the crowd.

### Product description

The Biral CompAX is a complete circulation pump series with the following features:

- Integrated differential pressure control, which enables continuous adjustment of the pump output according to the current system conditions.
- Display showing the current power input in watts.
- Motor with permanent magnet motor and compact stator housing.

Installing a Biral CompAX circulation pump dramatically reduces energy consumption and improves the system's control behaviour. Furthermore, the flow noise generated in the thermostat valves or similar control valves is reduced.

### Intended use

The **CompAX RED** model pumps are designed to circulate water in heating and the **CompAX BLUE** model pumps have a bronze housing and are designed for domestic hot water systems.

The pumps are suitable for use in the following systems:

- Systems with constant or variable flow rates, which require or benefit from an optimum setting for the operating point.
- Existing systems, in which the differential pressure of the pump is too high when the flow rate requirement is low.
- New systems where the flow rate automatically adjusts to the flow rate requirement without the use of balancing valves or other expensive components.

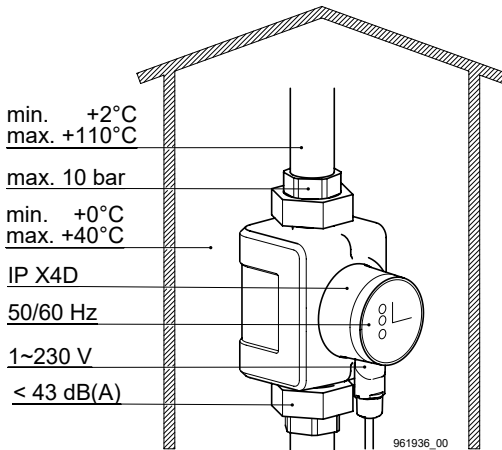
### Requirements of the pumped medium

- CompAX is suitable for the circulation of the following media:
- Pure, thin, non-explosive and non-aggressive media without solid or long fibrous elements, which will not affect the pump either mechanically or chemically.
  - Cooling liquids free of mineral oil
  - Softened water
- **Heating water:**  
Requirements according to current standards that apply to water quality in heating systems: (e.g. VDI 2035, SWKI BT102-01)
  - **Domestic hot water:**  
Permissible water hardness:  
max. 35 °fH (20 °dH) (water temperature below 65 °C)  
max. 25 °fH (14 °dH) (water temperature below 85 °C)  
To counter the risk of lime deposits, for domestic hot water systems we recommend:  
Hardness level max. 25 °fH (14 °dH)  
Medium temperature < 65 °C
  - **Glycol:**  
The pump can be used for delivering water-glycol mixes. Maximum permissible viscosity: 50 mm<sup>2</sup>/s (cSt). This corresponds to a water-ethylene-glycol mix with a glycol content of around 50 % at –10 °C. The pump is controlled via an output-limiting function that protects against overload. The delivery of glycol mixes affects the MAX characteristic curve because the delivery capacity is reduced accordingly, based on the glycol content and temperature of the media.

## Product information

### Operating conditions

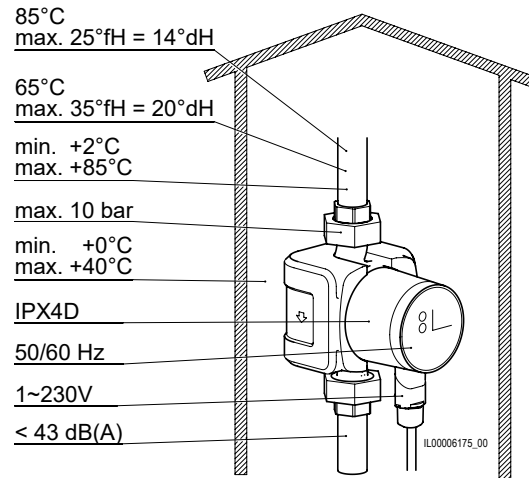
#### CompAX RED



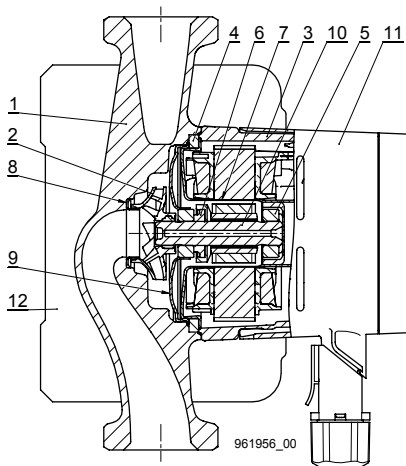
#### Relative humidity

Maximum 95 %

#### CompAX BLUE



### Summary of materials



Pos.	Component	Material
1	Pump casing	Grey cast iron (CompAX RED) Bronze (CompAX BLUE)
2	Impeller	PES
3	Stator casing	Aluminium
4	Seal	EPDM
5	Slide bearing	Ceramic
6	Axial bearing	Synthetic carbons and EPDM
7	Can	Stainless steel
8	Neck ring	Stainless steel
9	Bearing cover	Stainless steel
10	Shaft	Ceramic
11	Frequency converter	PC GF10
12	Heat insulation shells	EPP, fire protection class B2 DIN 4102

# Product information

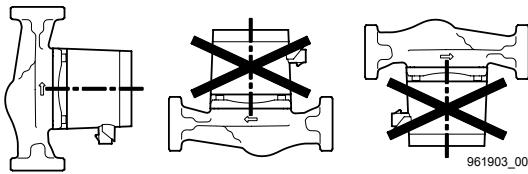
Product information

## Installation

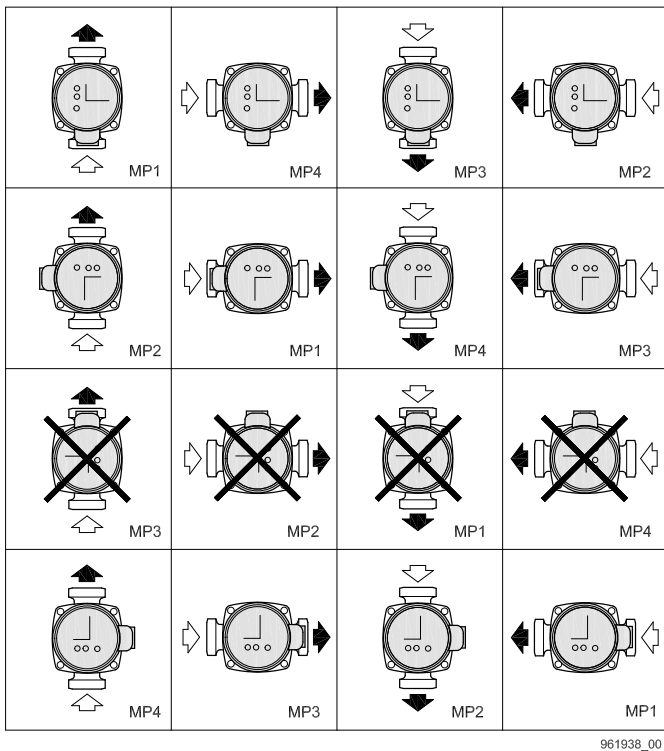
### General notes

CompAX is only intended for indoor installations. The pumps must be mounted voltage-free so that no energy can be transferred from the pipes to the pump casing. The pumps can be installed directly in the pipe, provided the pipes are designed for the weight of the pump. Installation is only possible after completion of all welding and soldering work on the system. Avoid drops of water on the pump motor, especially the frequency converter.

### Permissible installation positions



The installation position of the rotor shaft must always be horizontal. Before installing the pump, the pump head can be turned 90° at a time.

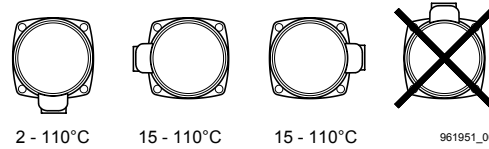


### Delivery condition:

**CompAX RED** Installation position 1 = MP1

**CompAX BLUE** Installation position 3 = MP3

### Permissible medium temperature



### Installation position in heating systems

In heating systems with a medium temperature of +15 to +110°C, the pump head can be set at positions 3 o'clock, 6 o'clock or 9 o'clock.

### Installation position in air-conditioning systems and cold water systems

In air-conditioning and cold water systems, the pump head must be set in such a way that the connector points downwards (6 o'clock).

### Information

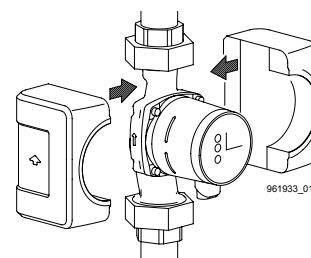
To avoid condensation water in the terminal box and in the stator, the medium temperature must always be higher than the ambient temperature.

If the medium temperature is below the ambient temperature, the pump head and connector must be set at the 6 o'clock position.

Ambient temperature	Media temperature	
	min. °C	max. °C
0	2	110
15	15	110
30	30	110
35	35	90
40	40	70

### Heat insulation

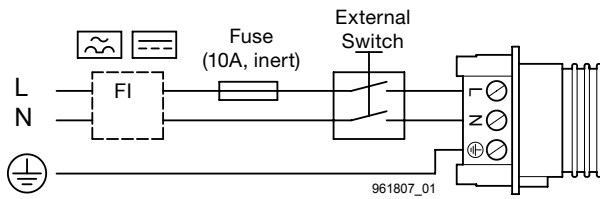
Heat losses can be reduced by insulating the pump casing and pipes. For CompAX, heat insulation shells are included in the delivery.



## Product information

### Electrical specifications

#### Electrical connection



Electrical connection may only be carried out by an electrical specialist in accordance with the local regulations and provisions.

- The pump must be secured on-site and connected to an external mains switch.
- The pump must be earthed sufficiently.
- The pump does not require any external motor protection.
- The pump has integrated excess temperature protection, which offers sufficient protection against the occurrence of over loads and blocking.

#### Cable

- All cables must be heat-resistant up to a minimum of + 85 °C.
- All cables are to be connected in accordance with EN 60204-1 and EN 50174-2:2000.

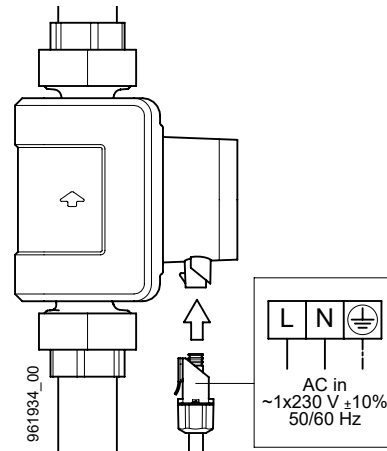
#### Additional protection

If the pump is connected to an electrical installation, which has a ground fault circuit interrupter for additional protection, the ground fault circuit interrupter must trigger pulsing DC components if earth fault currents occur.

The fault current protection switch must be marked with the first symbol or with both the following signals:



#### Connection scheme



**Mains connection:**  
1x230V +/- 10%, 50/60Hz

**Terminals:**  
L, N, PE Mains connection

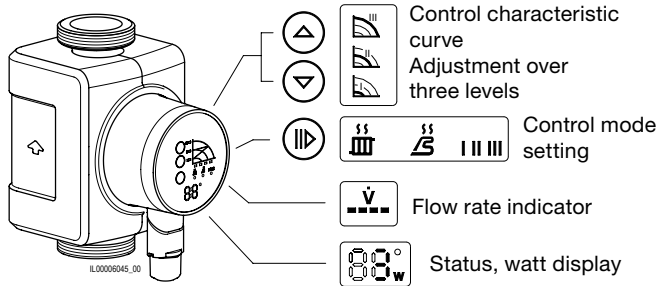
# Product information

Product information

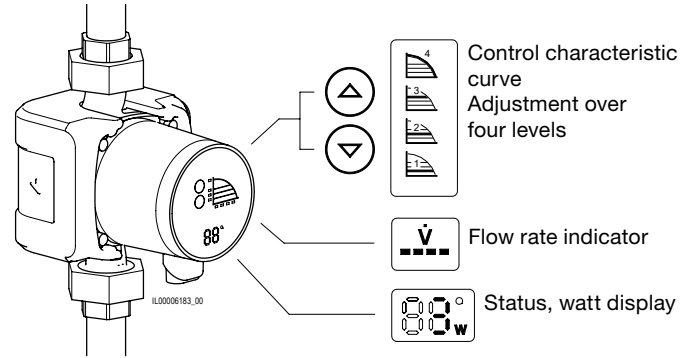
## Settings

### Control panel

#### CompAX RED



#### CompAX BLUE



## Types of control

### CompAX RED

Types of control	System uses	Function	
<p><b>Radiator heating</b> (pp)</p>	– Double-pipe radiator heating	The operating point of the pump moves up and down on the proportional pressure characteristic curve depending on the heat demand. The discharge head (pressure) falls with decreasing heat demand and rises with increasing heat demand.	
<p><b>Underfloor heating</b> (cp)</p>	– Underfloor heating	The operating point of the pump moves back and forth along the constant pressure characteristic curve depending on the system's heat demand. At the same time, the discharge head (the pressure) remains constant, regardless of the heat demand.	
<p><b>Constant speed</b> (cs)</p>	– Single-pipe radiator heating – Boiler circuit pump – Storage loading pump	The pump runs at a constant speed and therefore along a constant characteristic curve.	



## Product information

### General information

#### The Biral ModulA with Bluetooth



From the beginning, Biral's ModulA wet-running circulation pump has been a champion in terms of saving energy and economic efficiency. With the new Bluetooth interface via the Biral ONE app, the operating and information possibilities have multiplied.

#### Product description

The Biral series, ModulA consists of a complete range of circulation pumps with integrated frequency converter, which enable independent or controlled adaptation of output to the actual requirement of each system. Therefore, in many systems, energy consumption will be reduced and the control behaviour of the system improved. Besides this, current noise from control cabinets can be reduced effectively. All necessary settings can be adjusted using the control panel for the pump.

#### Intended use

Biral circulation pumps of the ModulA series are intended for the circulation of liquids in the following systems:

- ModulA... RED in heating units
- ModulA... GREEN in air-conditioning units and cooling systems
- ModulA... BLUE in domestic hot water systems

The pumps can also be used in the following systems:

- Geothermal heat pumps
- Thermal solar equipment

The pumps are suitable for use in systems with variable and constant delivery volumes.

#### Requirements of the delivery medium

ModulA is suitable for the circulation of the following media:

- Pure, thin, non-explosive and non-aggressive media without solid or long fibrous elements, which will not affect the pump either mechanically or chemically.
- Cooling liquids free of mineral oil
- Softened water

##### - Heating water:

Requirements according to current standards that apply to water quality in heating systems: (e.g. VDI 2035, SWKI BT102-01)

##### - Domestic hot water:

Permissible water hardness:

max. 35 °fH (20 °dH) (water temperature below 65 °C)

max. 25 °fH (14 °dH) (water temperature below 85 °C)

To counter the risk of lime deposits, for domestic hot water systems we recommend:

Hardness level max. 25 °fH (14 °dH)

Medium temperature < 65 °C

##### - Glycol:

The pump can be used for delivering water-glycol mixes. Maximum permissible viscosity: 50 mm<sup>2</sup>/s (cSt). This corresponds to a water-ethylene-glycol mix with a glycol content of around 50 % at -10 °C. The pump is controlled via an output-limiting function that protects against overload. The delivery of glycol mixes affects the MAX characteristic curve because the delivery capacity is reduced accordingly, based on the glycol content and temperature of the media.

## Product information

### Operating conditions

#### ModuA... RED

min. +15°C  
max. +110°C

max. 10 bar

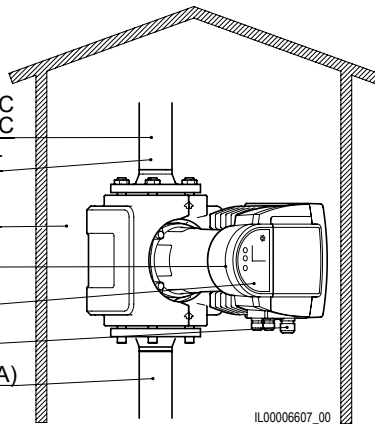
min. +0°C  
max. +40°C

IPX4D

50/60 Hz

1~230V

39 - 55 dB(A)



IL00006607\_00

#### ModuA... BLUE

85°C  
max. 25°fh = 14° dH

65°C  
max. 35°fh = 20° dH

min. +15°C  
max. +85°C

max. 10 bar

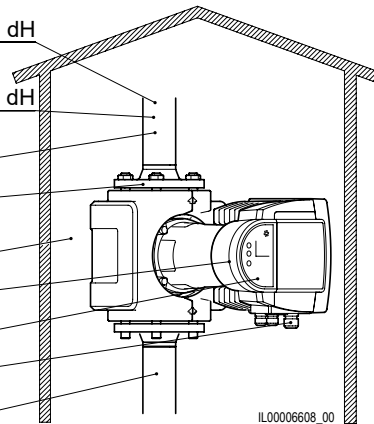
min. +0°C  
max. +40°C

IPX4D

50/60 Hz

1~230V

39 - 50 dB(A)



IL00006608\_00

#### ModuA... GREEN

min. -10°C  
max. +110°C

max. 10 bar

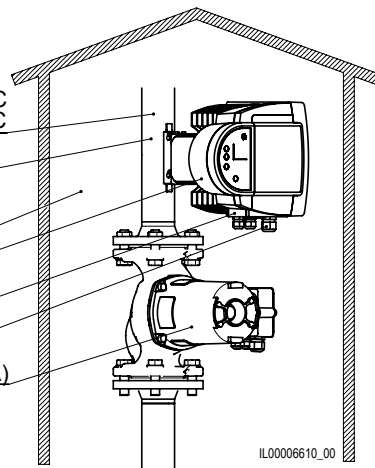
min. +0°C  
max. +40°C

IPX4D

50/60 Hz

1~230V

39 - 55 dB(A)

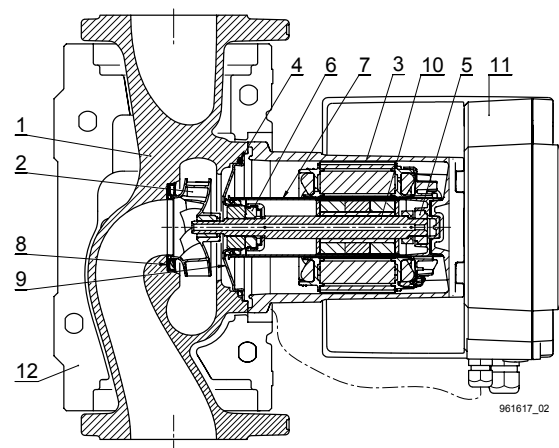


IL00006610\_00

#### Relative humidity

Maximum 95 %

### Summary of materials



961617\_02

Pos.	Component	Material
1	Pump casing	... RED grey cast iron
		... GREEN grey cast iron with special colour coating
		... BLUE bronze
2	Impeller	PES
3	Stator casing	aluminium
4	Seal	EPDM
5	Slide bearing	aluminium oxide
6	Axial bearing	aluminium oxide, synthetic carbon
7	Can	PPS
8	Neck ring	stainless steel
9	Bearing cover	stainless steel
10	Shaft	stainless steel (ModuA M/L) ceramic (ModuA S)
11	Frequency converter	PC-ABS (UL94 V-0)
12	Heat insulation shells	EPP, fire protection class B2 DIN 4102 (... RED, ... BLUE)

## Product information

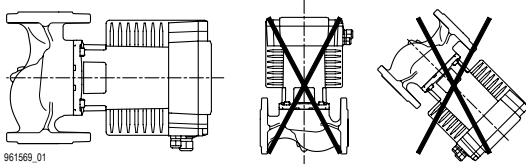
### Installation

#### General notes

ModulA is only intended for installation indoors. The pumps must be mounted voltage-free so that no energy can be transferred from the pipes to the pump casing. The pumps can be installed directly in the pipe, provided the pipes are designed for the weight of the pump. Installation is only possible after completion of all welding and soldering work on the system. Avoid drops of water on the pump motor, especially the frequency converter.

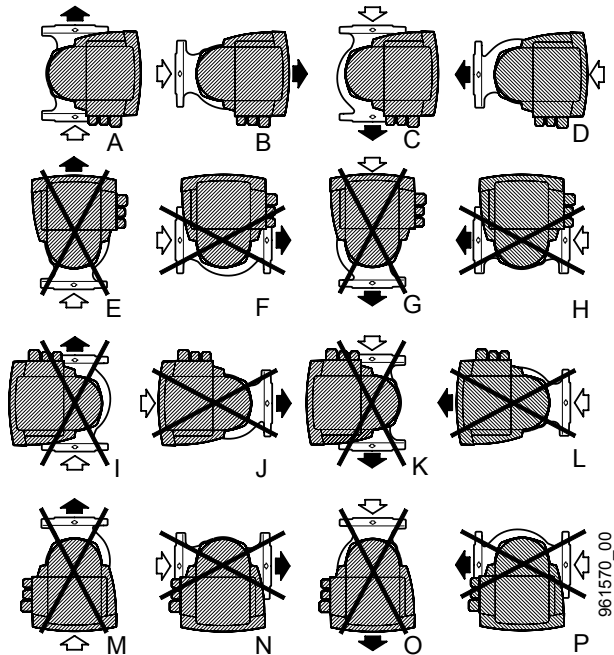
#### Permissible installation positions

The installation position of the rotor shaft must always be horizontal.



To guarantee adequate cooling, the frequency converter must always be in a horizontal position (A, B, C, D). It is delivered in position A.

#### ModulA... RED, ModulA... BLUE

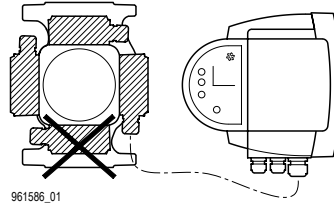


#### Delivery condition:

**ModulA... RED** Installation position A

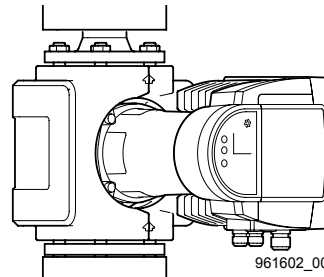
**ModulA... BLUE** Installation position C

#### ModulA... GREEN M/L



#### Heat insulation

Heat losses can be reduced by insulating the pump casing and pipes. For **ModulA... RED/BLUE**, heat insulation shells are included in the delivery.



# Product information

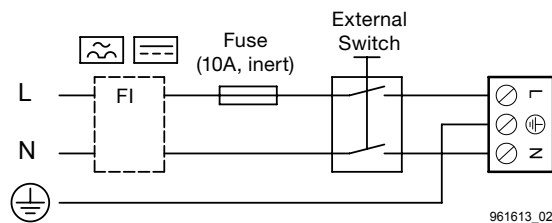
Product information

## Electrical specifications

### Electrical connection

1x230V +/- 10%, 50/60Hz

Example of a typical electrical connection



The electrical connection may only be done by an electrician in compliance with the local regulations and provisions.

- The pump is to be secured on site and an external electrical switch connected to it.
- The pump must be sufficiently earthed.
- The pump does not need an external motor protection.
- The pump does not require any external motor protection. The motor has integrated over-temperature protection, which offers safeguarding against overloading that appears slowly and against blocking according to IEC 34-11: TP 211.

### Cables

- Shielded cables should be used for the external ON/OFF switch, the digital input and the target value signal.
- All cables must be heat resistant up to at least + 85 °C.
- All cables must be connected in compliance with EN 60204-1 and EN 50174-2:2000.

### Additional fuse protection

If the pump is connected to an electrical installation which has a ground fault circuit interrupter as an additional safeguard, the GFCI must be triggered with pulsing direct current if an earth surge occurs.

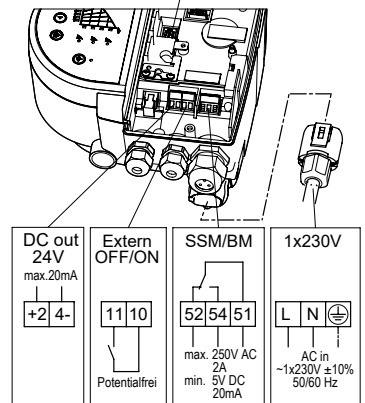
The surge circuit interrupter must be identified with the first symbol or with both of the following symbols:

Symbol	Description
	Highly sensitive residual current circuit breaker type A in accordance with IEC 605
	Highly sensitive residual current circuit breaker type B in accordance with IEC 605

### Connection diagram

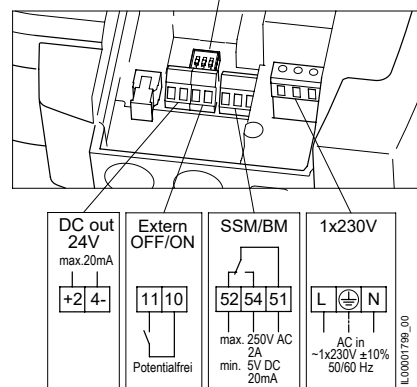
#### ModuA...S with Biral connector

ON	BM	Extern ON	Power Limit ON
1 2 3	SSM	Extern OFF	Power Limit OFF
	1	2	3



#### ModuA... M/L with clamp connector

ON	BM	Extern ON	Power Limit ON
1 2 3	SSM	Extern OFF	Power Limit OFF
	1	2	3



### Clamps:

- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Fault message or operating message
- L, N, PE** Electrical connection, 1x230V +/- 10%, 50/60Hz

### Switch (Bold lettering = as delivered)

- 1** Fault message (**SSM**) or operating message (**BM**)
- 2** External OFF or external ON
- 3** Power limit OFF

## Product information

### Switch 1

Fault message or operating message (switchable)

		Connection	Status	Connection	Status
		52	54	51	
Fault message (SSM)	Switch 1 OFF		impeller green Fault message inactive		impeller green Fault message inactive
			impeller red Fault message active		impeller red Fault message active
Operating message (BIM)	Switch 1 ON		impeller rotating Operating message active		impeller rotating Operating message active
			impeller standing Operating message inactive		impeller standing Operating message inactive

The pump has a message relay with a potential-free changeover contact for external fault messages. The message relay can be changed to an operating message using Switch 1.

### Switch 2

External OFF or external ON (switchable)

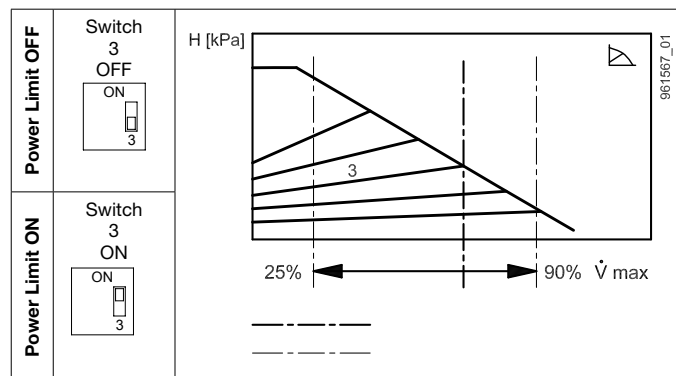
		Connection	Status	Connection	Status
		11	10	11	10
External OFF	Switch 2 OFF		Mode ON		Mode OFF
			Mode OFF		Mode ON

The digital input can be used for the external ON/OFF pump switch. It is possible to switch over from External OFF to External ON using Switch 2.

**Note:** If no external ON/OFF switch is connected, the pump runs when the Switch 2 is in the OFF position and no jumper is at clamps 11, 10. This is the factory setting.

### Switch 3

Power limit (activatable)



The Power limit (flow rate limiting  $\dot{V}$ ) can be activated in the pump. The predefined maximum flow rate is at the end of the regulation characteristic 3 (proportional pressure). The flow rate limiting of 25 ... 90 % can be set.

### Double pump

#### Operation mode for twin pumps

The twin pump function on the Biral interface module BIM B3 control module enable regulation of two parallel, individual pumps and of twin pumps without the need for an external control, and is designed for alternate operation or reserve operation in installations with increased safety requirements. The pump switch-over occurs depending on the time or when one pump outages.

#### Alternating operation (24/24 hrs) or reserve operation (22/2 hrs)

Biral Interface Modul BIM B3 (for controlled pumps)

#### Operating mode: Reserve mode

	Switch 2 ON	Master (main pump)	22h
		Slave (reserve pump)	2h

The pump that has completed fewer hours of duty starts first after Power ON.

#### Operating mode: Alternating mode

	Switch 2 OFF	Master (main pump)	24h
		Slave (reserve pump)	24h

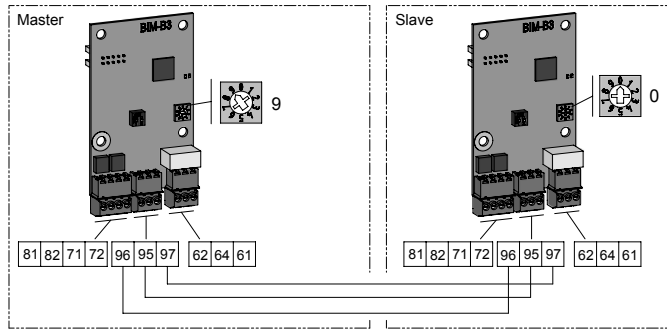
The pump that has completed fewer hours of duty starts first after Power ON.

# Product information

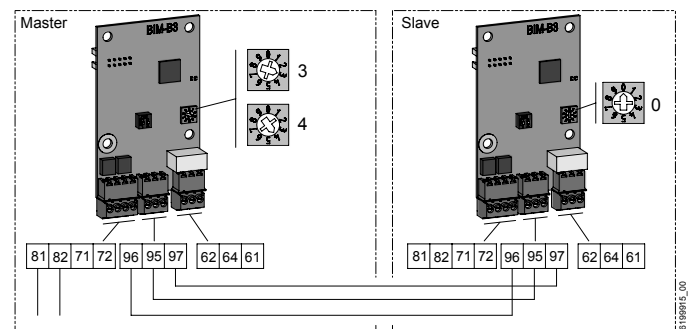
Product information

### Electrical connection:

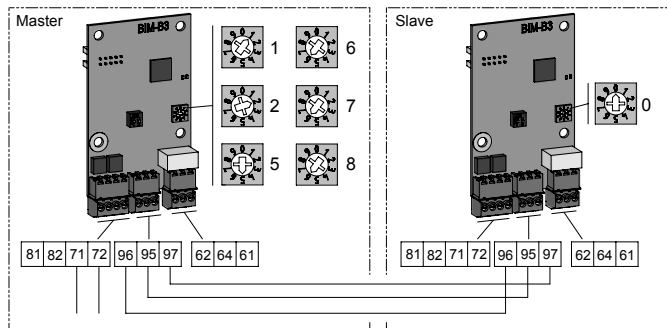
Double pump mode for self-regulating pumps



Double pump mode via digital input 81, 82



Double pump mode via analogue input 71, 72



### Parallel operation

#### with constant speed (cs)

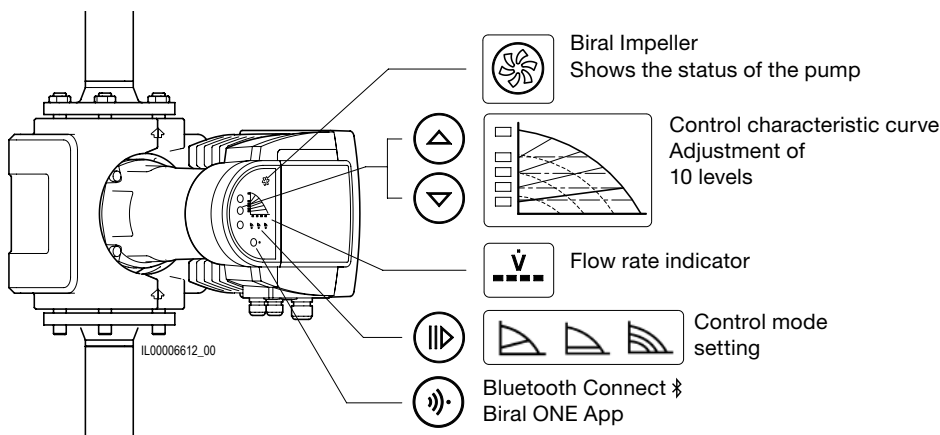
For twin pumps, parallel operation (pump 1 + pump 2) at the same speed is possible. In this operating mode, no Biral interface modules are needed.

#### with external speed specification (BIM B3)

Parallel operation with external speed specification over the BIM B3 control module (2x) with the same speed specification is possible for twin pumps.


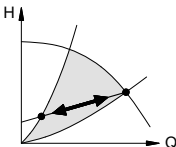

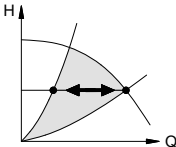

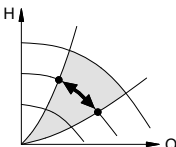
## Settings

### Control panel



# Product information

## Types of control

Types of control	System uses	Function	
 <b>Proportional pressure</b> (pp)	– Double-pipe radiator heating	The operating point of the pump moves up and down on the proportional pressure characteristic curve depending on the heat demand. The discharge head (pressure) falls with decreasing heat demand and rises with increasing heat demand.	
 <b>Constant pressure</b> (cp)	– Underfloor heating	The operating point of the pump moves back and forth along the constant pressure characteristic curve depending on the system's heat demand. At the same time, the discharge head (the pressure) remains constant, regardless of the heat demand.	
 <b>Constant speed</b> (cs)	– Single-pipe radiator heating – Boiler circuit pump – Storage loading pump – Domestic drinking water system	The pump runs at a constant speed and therefore along a constant characteristic curve.	

Product information

## The Biral ONE app



- Quick text search**  
Get the right document with a single click
- Pump replacement**  
Get a replacement pump quickly and easily
- Document**  
Direct access to Biral eDocuments
- Cockpit**  
Live product monitoring
- Alarm Log**  
Warning and alarm messages
- Configuration**  
Guided installation process

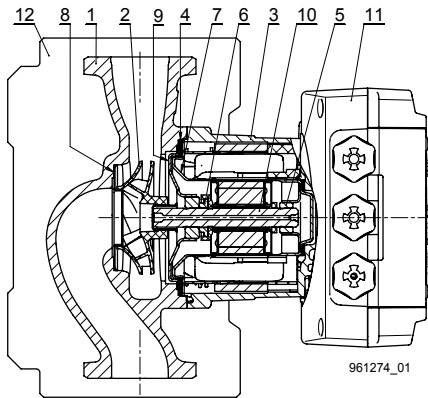
**ONE.** Download One App for all your Biral product needs.



# Product information

Product information

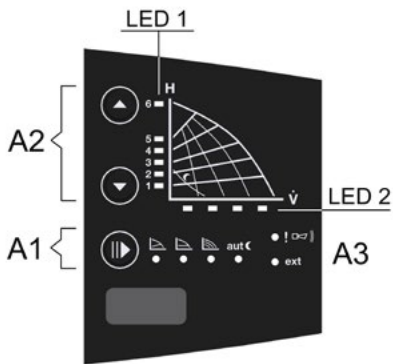
## Materials overview



Pos.	Component	Material A / A KW / AW
1	Pump housing	A grey cast iron A KW grey cast iron with special colour coating AW bronze
2	Impeller	plastic
3	Stator housing	aluminium
4	Seal	EPDM
5	Friction bearings	ceramic
6	Friction bearings	synthetic carbon, EPDM
7	Can	chrome-nickel steel
8	Gap seal	stainless steel
9	Storage cover	stainless steel
10	Shaft	ceramic
11	Frequency inverter	PPO
12	Thermal insulation shell	EPP, fire protection class B2 DIN 4102 (A, AW)

## Operation

The regulated circulation pumps can be operated in three different modes and have a so-called automatic night reduction in some cases.



Pos.	Component
A1	Type of control
A2	Regulation characteristics 1 ... 5 6 max. pump characteristics
A3	Light symbol for technical problems, ext. Operation
	Proportional pressure
	Proportional pressure
	Constant speed
Aut. C	with and without automatic night reduction
LED 1	Indication of regulation characteristic set
LED 2	Indication of current rate of flow $\dot{V}$ (25 ... 100 %)

## Functions

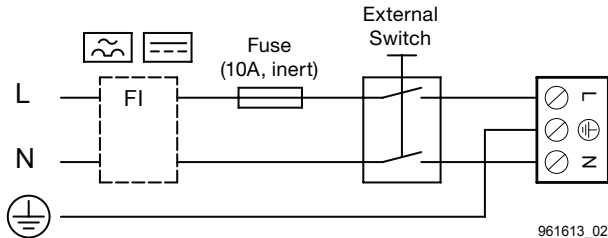
- Fault message and operating message (switchable)
- Power limiting (deactivatable)
- Automatic night reduction (activatable)



## Product information

### Electrical connection

Example of a typical electrical connection: 1×230V, 50/60Hz



#### Cables

- All cables must be heat resistant up to at least + 85 °C.
- All cables must be connected in compliance with EN 60204-1 and EN 50174-2:2000.

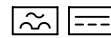
#### Additional fuse protection

If the pump is connected to an electrical installation which has a ground fault circuit interrupter as an additional safeguard, the GFCI must be triggered with pulsing direct current if an earth surge occurs.

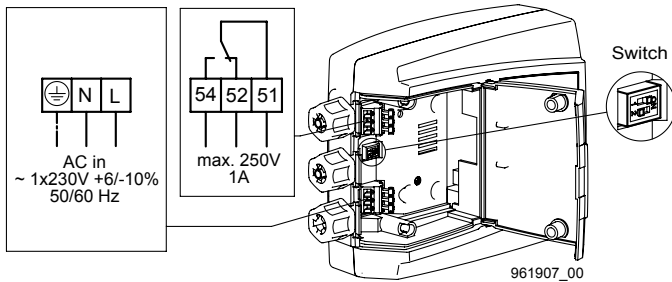
The electrical connection may only be done by an electrician in compliance with the local regulations and provisions.

- The pump is to be secured on site and an external electrical switch connected to it.
- The pump must be sufficiently earthed.
- The pump does not need an external motor protection.
- The pump has an integrated overheat protection which provides sufficient protection against progressive overheating and keeps it from blocking.
- If the pump is directly connected to the power supply, it takes 5 seconds before it begins to run

The surge circuit interrupter must be identified with the first symbol or with both of the following symbols:



### Connection diagram



#### Electrical connection

1×230V +6/-10 %, 50/60Hz

#### Clamps

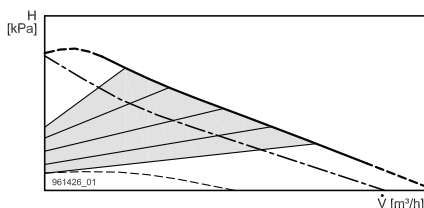
**L, N, PE** Electrical connection  
**54, 52, 51** Fault message or operating message

#### Switch

- 1 Power limiting (deactivatable)
- 2 Fault message or operating message (switchable)

### Switch 1 Power limiting (deactivatable)

All A pumps are delivered with a pre-defined power limiting. This characteristic is sufficient owing to the power reserve in the design. The limiting also saves energy and avoids flow noise owing to over-sized pumps. If the full power is required, the pump can be changed over in the terminal box.



**Switch 1 ON**



Power limit ON

**Switch 1 OFF**



Power limit OFF

## Product information

Product information

### Switch 2 Fault message or operating message (switchable)

		Connection	Status	Connection	Status
Fault message	Switch 2 OFF 		Fault message not illuminated <b>Fault message inactive</b>		Fault message not illuminated <b>Fault message inactive</b>
			Fault message illuminated/blinking red <b>Fault message active</b>		Fault message illuminated/blinking red <b>Fault message active</b>
Operating message	Switch 2 ON 		pump rotating <b>operating message active</b>		pump rotating <b>operating message active</b>
			pump standing <b>operating message inactive</b>		pump standing <b>operating message inactive</b>

The pump has a message relay with a potential-free changeover contact for external fault messages. The message relay can be changed to an operating message using Switch 2.

### Temperature limits

Ambient temperature	Media temperature	
°C	min. °C	max. °C
15	15	95/110*
30	30	95/110*
35	35	90
40	40	70

\* short term (30 min.)

To avoid condensation build up, the media temperature must always be higher than the ambient temperature.

### Twin pumps AD14, AD15 and AD401

#### Alternating operation (22 hrs / 22 hrs) or reserve operation (22 hrs / 2 hrs)

The pumps are designed for individual operation in installations with increased safety requirements (pump 1 or pump 2). The pump changeover occurs depending on the time or when a pump fails. The BIM A signal module (2x) is needed for this.

#### Parallel operation with constant speed (cs)

(Pump 1 + pump 2) is only allowed at constant speed (cs), however, it is not possible with proportional pressure (pp) or constant pressure (cp). In this operating mode, no Biral interface module is needed.

#### Parallel operation with external speed specification

(0–10 V / 0 – 20 mA / PWM) can be operated over the BIM B2 control module (2x).

#### Accessories

- BIM A Signal module (2x)
- BIM B Control module (2x)

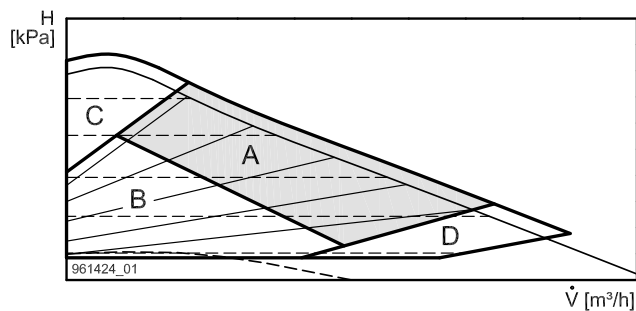
## Notes for project planning and installation

### Selection of circulating pump

#### Recommendation for regulated circulating pumps:

Regulated circulating pumps continually adjust the flow rate along a pre-defined characteristic with changing pipe characteristics.

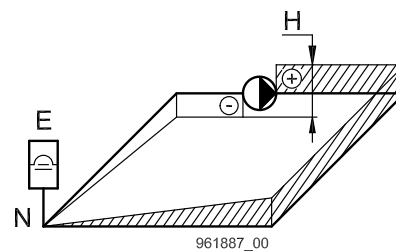
Nevertheless it is also worthwhile here to make a careful choice of the right pump size.



- A** = Optimum control range
  - Range with the best degree of overall effectiveness
- B** = Limited control range
  - If possible select a smaller pump
- C** = Limited control range
  - The pump works but has limited control
- D** = Outside the control range
  - If possible avoid

### Required operating pressure at circulating pump

If the operating pressure is too low, adequate lubrication of the pump sliding bearings (water lubrication) is not ensured and therefore their service life is reduced. The values specified should therefore be observed without fail. The required operating pressure depends on the type of pump, the maximum temperature of the medium and the static pressure. If the position of the expansion vessel is not ideal, the operating pressure at the pump inlet when operating the pump can be reduced further. This can lead to penetration of air and inadequate bearing lubrication. In this case the static operating pressure must be raised accordingly.



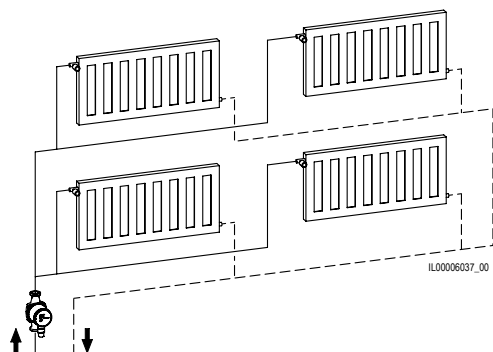
#### Pressure distribution

- + = Overpressure range
- = Underpressure range
- E = Expansion vessel
- N = Neutral point
- H = Delivery head of pump

## Notes for project planning and installation

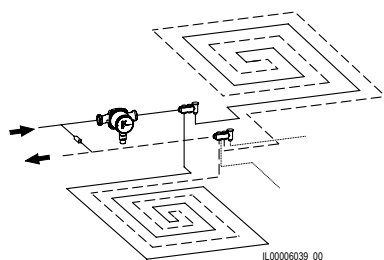
### System examples (system applications)

#### Double-pipe radiator heating



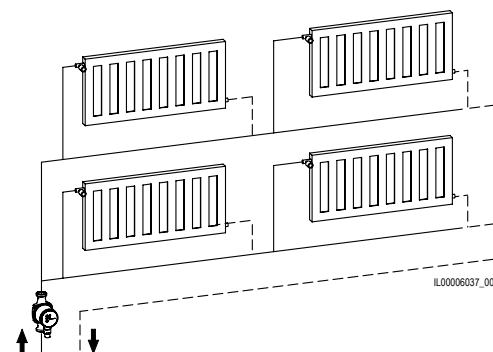
Since, in this application, the pressure losses fluctuate due to the distance between the pump and radiators, we recommend operating the pump in **“proportional pressure”** control mode.

#### Underfloor heating



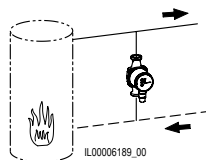
In these heating systems, the volumetric flow rate requirement depends on the number of rooms to be heated. Since the distance between the pump and the heating manifold, to which the heating pipes are connected, is short, the pressure losses are constant. As a result, the **“constant pressure”** control mode is the best option for this application.

#### Single-pipe radiator heating



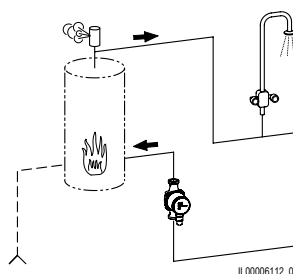
For single-pipe radiator heating, the volumetric flow rate is, as a rule, constant, which means that the pressure losses are also equally high. As a result, for this type of application, the pumps should be operated using the **“constant speed”** control mode.

#### Boiler circuit pump / Storage loading pump



The **“constant speed”** control mode is best suited for boiler circuit pumps and storage loading pumps because the pressure ratios in the system are constant.

#### Domestic drinking water system



The **“constant speed”** control mode is best suited for domestic drinking water systems because the pressure ratios in the system are constant.

# Notes for project planning and installation

## Requirements of medium

### Water treatment

The guidelines of SWKI BT102-01 and VDI 2035 «Water treatment for heating, steam and air-conditioning systems» should be observed.

### Overall hardness

7 to 14 °fH (4–8 °dH)

### pH value

8.3 to 9.5 (8.3 to max. 9 for systems with aluminium or non-ferrous metal components)

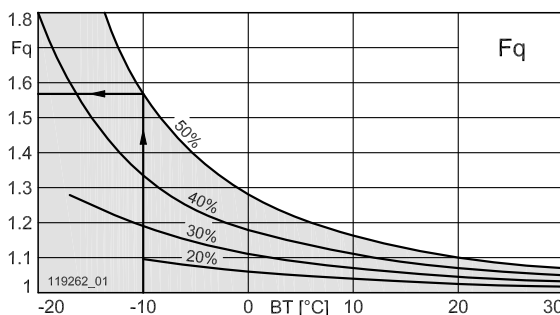
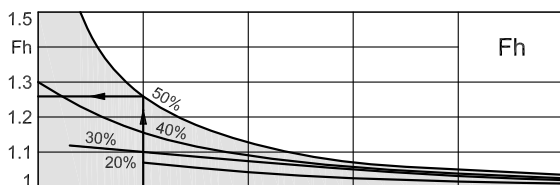
### Oxygen

< 0,1 mg/dm<sup>3</sup>

The systems must be thoroughly flushed before filling.

### Anti-frost mixture

Water/glycol mixture with up to 50 % glycol is permitted. From 10 % glycol proportion the delivery data of the pumps must be corrected



### Correction factors for pump characteristic compared with water delivery

Fh = correction factor for delivery head

Fq = correction factor for flow rate

BT [°C] = Operating temperature

### Example

$$H_{\text{Mixture}} = 30 \text{ kPa}$$

$$Q_{\text{Mixture}} = 7 \text{ m}^3/\text{h}$$

Medium:

50 % glycol mixture at -10 °C operating temperature

Factors according to fig.

$$F_h = 1,26$$

$$F_q = 1,57$$

Conversion of required pump operating point for water heat transfer

$$H_{\text{water}} = H_{\text{Mixture}} \times F_h$$

$$= 30 \times 1,26 = 37,8 \text{ kPa}$$

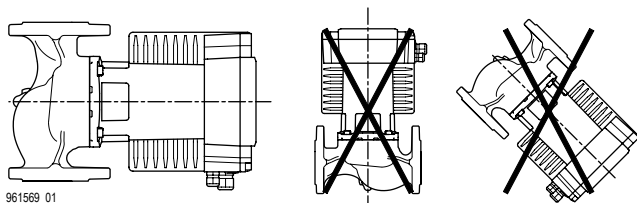
$$Q_{\text{water}} = Q_{\text{Mixture}} \times F_q$$

$$= 7 \times 1,57 = 11 \text{ m}^3/\text{h}$$

Circulating pump complying with operating point:

$$Q_{\text{water}}/H_{\text{water}} : \text{Modula 40-10 220 GREEN}$$

## Pipeline connection and pump installation



961569\_01

- Always fit pump between two shut-off devices
- Fit pump so that the motor shaft is horizontal, regardless of the position of the pump casing
- The arrow on the pump casing shows the flow direction
- Fit pump in pipeline free from stress
- When the pump is fitted do not work too closely with a welding flame
- The fitting of heating pumps on the inlet side reduces the danger of contamination. They should preferably be fitted on the return side if the temperature of the medium is very high.



## Heating circulation pumps

### PrimAX RED T2

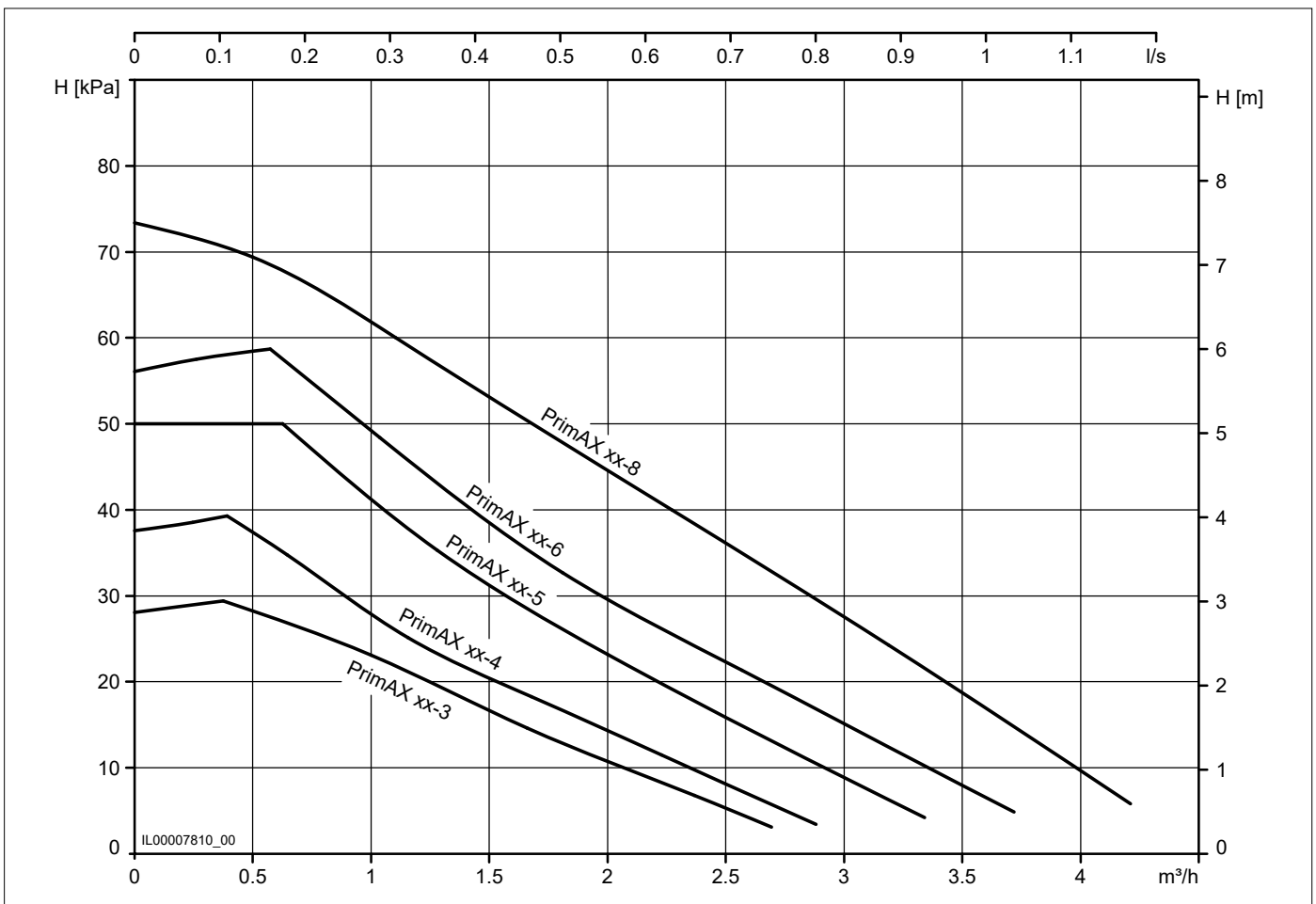
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
PrimAX 25-3 180 RED	7000001829	25	3	180	G 1 1/2"	10	≤0.14
PrimAX 25-4 180 RED	7000001830	25	4	180	G 1 1/2"	10	≤0.15
PrimAX 25-5 180 RED	7000001831	25	5	180	G 1 1/2"	10	≤0.16
PrimAX 25-6 180 RED	7000001832	25	6	180	G 1 1/2"	10	≤0.17
PrimAX 25-8 180 RED	7000001833	25	7.5	180	G 1 1/2"	10	≤0.18
PrimAX 32-3 180 RED	7000001834	32	3	180	G 2"	10	≤0.14
PrimAX 32-4 180 RED	7000001835	32	4	180	G 2"	10	≤0.15
PrimAX 32-5 180 RED	7000001836	32	5	180	G 2"	10	≤0.16
PrimAX 32-6 180 RED	7000001837	32	6	180	G 2"	10	≤0.17
PrimAX 32-8 180 RED	7000001838	32	7.5	180	G 2"	10	≤0.18
PrimAX 32-3 170 RED	7000001839	32	3	170	G 2"	10	≤0.14
PrimAX 32-4 170 RED	7000001840	32	4	170	G 2"	10	≤0.15
PrimAX 32-5 170 RED	7000001841	32	5	170	G 2"	10	≤0.16
PrimAX 32-6 170 RED	7000001842	32	6	170	G 2"	10	≤0.17
PrimAX 32-8 170 RED	7000001843	32	7.5	170	G 2"	10	≤0.18
PrimAX 15-3 130 RED	7000001844	15	3	130	G 1"	10	≤0.14
PrimAX 15-4 130 RED	7000001845	15	4	130	G 1"	10	≤0.15
PrimAX 15-5 130 RED	7000001846	15	5	130	G 1"	10	≤0.16
PrimAX 15-6 130 RED	7000001847	15	6	130	G 1"	10	≤0.17
PrimAX 15-8 130 RED	7000001848	15	7.5	130	G 1"	10	≤0.18
PrimAX 25-3 130 RED	7000001849	25	3	130	G 1 1/2"	10	≤0.14
PrimAX 25-4 130 RED	7000001850	25	4	130	G 1 1/2"	10	≤0.15
PrimAX 25-5 130 RED	7000001851	25	5	130	G 1 1/2"	10	≤0.16
PrimAX 25-6 130 RED	7000001852	25	6	130	G 1 1/2"	10	≤0.17
PrimAX 25-8 130 RED	7000001853	25	7.5	130	G 1 1/2"	10	≤0.18

### Order reference

	<b>PrimAX 32 -6 180 RED</b>
Series	
Nominal diameter (DN) [mm]	
Max. discharge height [m]	
Installation height [mm]	
Field of application: heating (RED)	

Heizung



**PrimAX 25-3 180 RED**
**PrimAX 32-3 180 RED**
**PrimAX 32-3 170 RED**
**PrimAX 15-3 130 RED**
**PrimAX 25-3 130 RED**

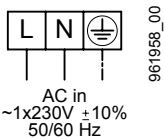
Version	T2
Nominal width	DN 32   DN 15   DN 25
Flow head H max.	3 m
Overall length	180   170   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	1.9   2.1   1.8 kg
Gross weight	2.1   2.3   2 kg

**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	2-15 W
Nominal current	0.03-0.14 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

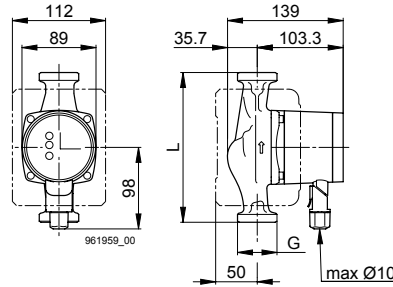
at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**

**L, N, PE** Power supply

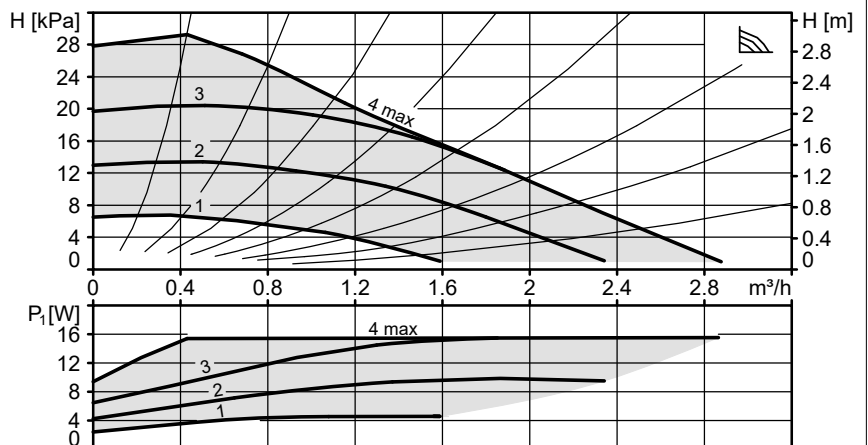
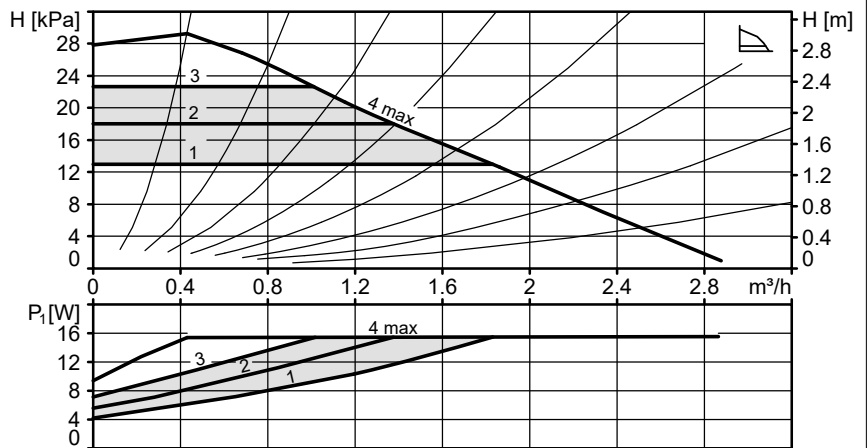
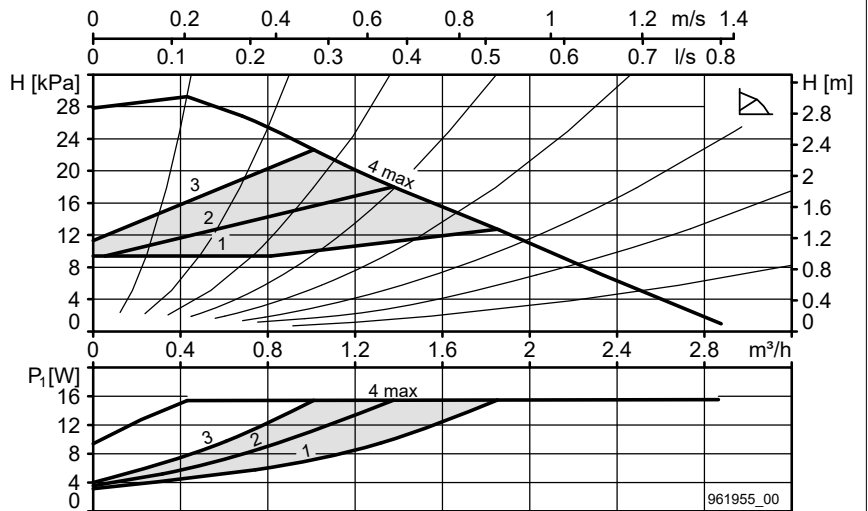
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector and angled connector
- AFM seal

Type	Art. no.
PrimAX 25-3 180 RED	7000001829
PrimAX 32-3 180 RED	7000001834
PrimAX 32-3 170 RED	7000001839
PrimAX 15-3 130 RED	7000001844
PrimAX 25-3 130 RED	7000001849



<b>PrimAX 25-3 180 RED</b> DN 25 L = 180 mm G = 1 1/2"	<b>PrimAX 32-3 180 RED</b> DN 32 L = 180 mm G = 2"
<b>PrimAX 32-3 170 RED</b> DN 32 L = 170 mm G = 2"	<b>PrimAX 15-3 130 RED</b> DN 15 L = 130 mm G = 1"
<b>PrimAX 25-3 130 RED</b> DN 25 L = 130 mm G = 1 1/2"	





**PrimAX 25-4 180 RED**
**PrimAX 32-4 180 RED**
**PrimAX 32-4 170 RED**
**PrimAX 15-4 130 RED**
**PrimAX 25-4 130 RED**

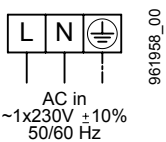
Version	T2
Nominal width	DN 32   DN 15   DN 25
Flow head H max.	4 m
Overall length	180   170   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2   2.1   1.8 kg
Gross weight	2.2   2.3   2 kg

**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	3-19 W
Nominal current	0.03-0.17 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

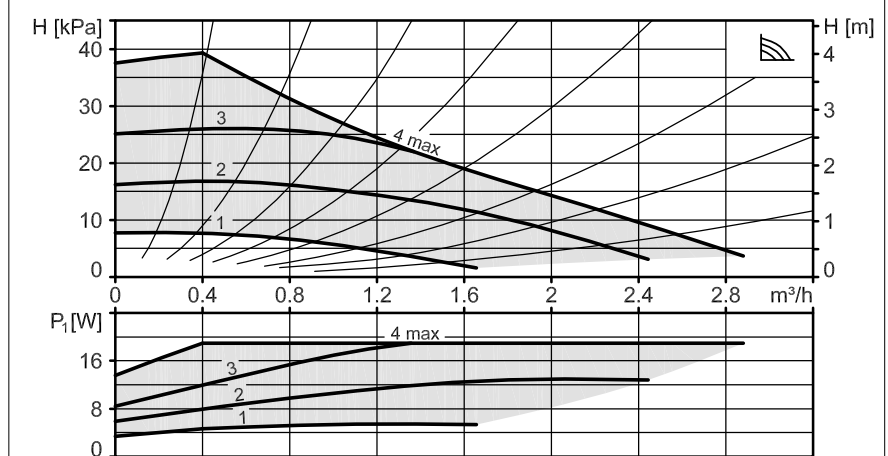
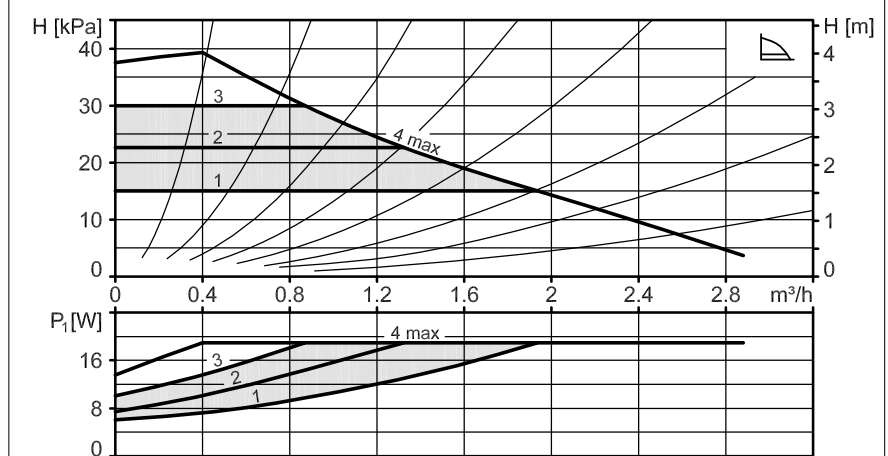
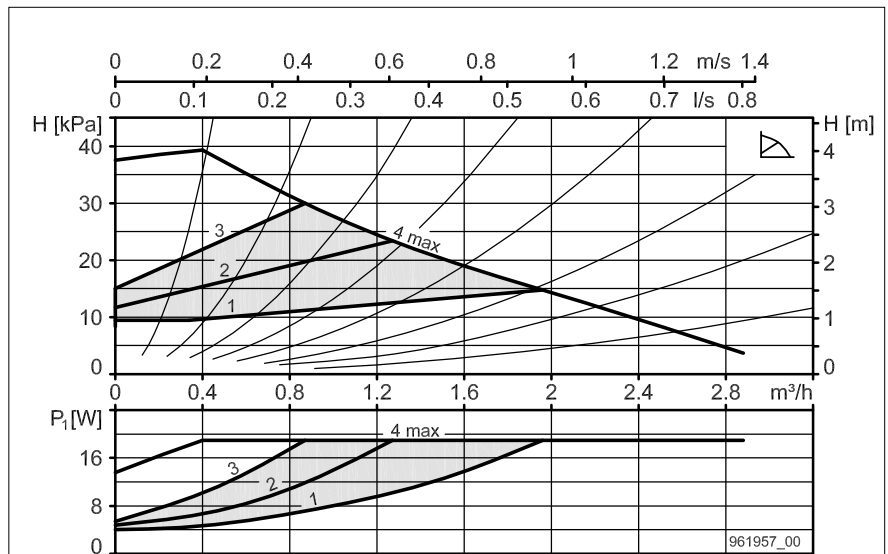
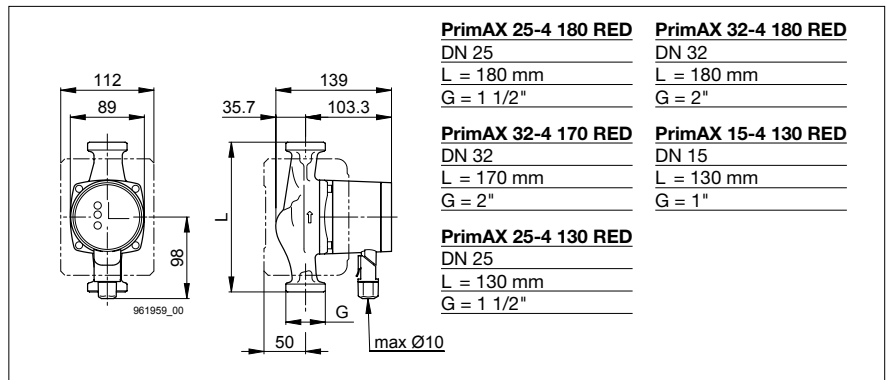
at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**

**L, N, PE** Power supply

**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector and angled connector
- AFM seal

Type	Art. no.
PrimAX 25-4 180 RED	7000001830
PrimAX 32-4 180 RED	7000001835
PrimAX 32-4 170 RED	7000001840
PrimAX 15-4 130 RED	7000001845
PrimAX 25-4 130 RED	7000001850



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**PrimAX 25-5 180 RED**

**PrimAX 32-5 180 RED**

**PrimAX 32-5 170 RED**

**PrimAX 15-5 130 RED**

**PrimAX 25-5 130 RED**

Version	T2
Nominal width	DN 32   DN 15   DN 25
Flow head H max.	5 m
Overall length	180   170   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2   2.1   1.8 kg
Gross weight	2.2   2.3   2 kg

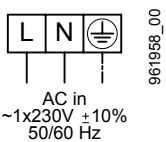
**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	3-28 W
Nominal current	0.04-0.24 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**

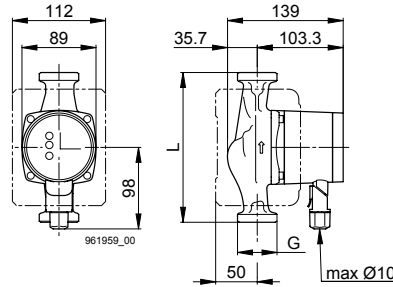


**L, N, PE** Power supply

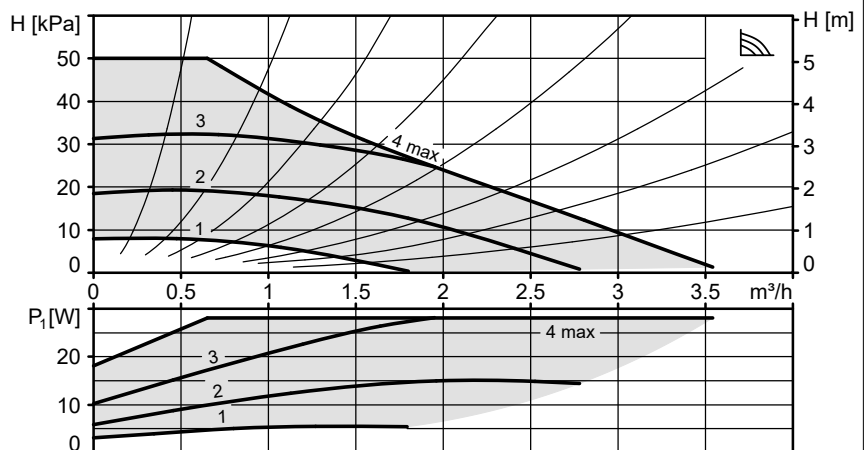
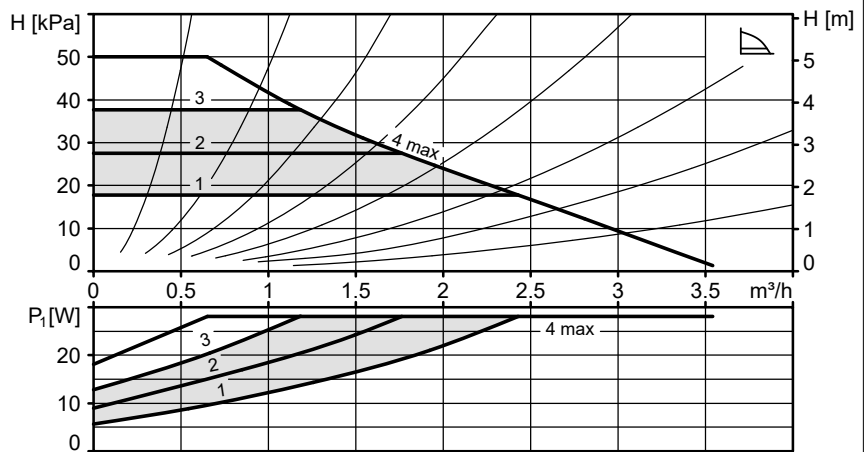
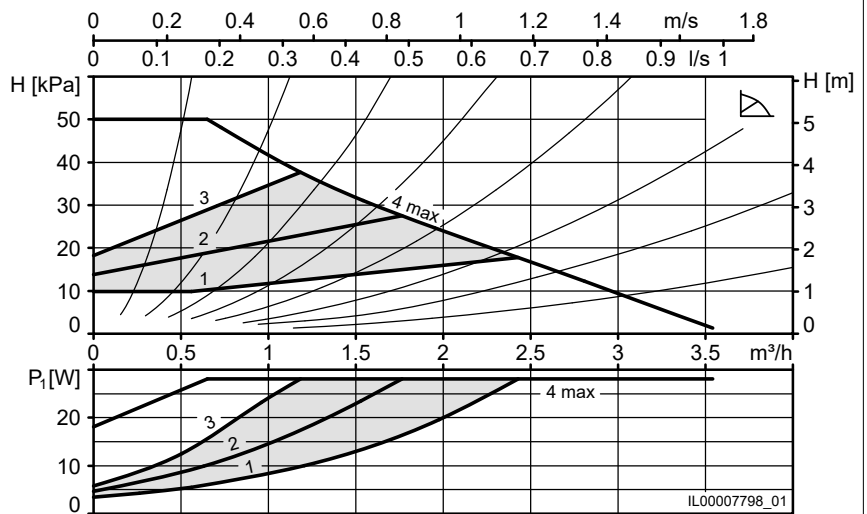
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector and angled connector
- AFM seal

Type	Art. no.
PrimAX 25-5 180 RED	7000001831
PrimAX 32-5 180 RED	7000001836
PrimAX 32-5 170 RED	7000001841
PrimAX 15-5 130 RED	7000001846
PrimAX 25-5 130 RED	7000001851



<b>PrimAX 25-5 180 RED</b> DN 25 L = 180 mm G = 1 1/2"	<b>PrimAX 32-5 180 RED</b> DN 32 L = 180 mm G = 2"
<b>PrimAX 32-5 170 RED</b> DN 32 L = 170 mm G = 2"	<b>PrimAX 15-5 130 RED</b> DN 15 L = 130 mm G = 1"
<b>PrimAX 25-5 130 RED</b> DN 25 L = 130 mm G = 1 1/2"	



**PrimAX 25-6 180 RED**

**PrimAX 32-6 180 RED**

**PrimAX 32-6 170 RED**

**PrimAX 15-6 130 RED**

**PrimAX 25-6 130 RED**

Version	T2
Nominal width	DN 32   DN 15   DN 25
Flow head H max.	6 m
Overall length	180   170   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2   2.1   1.8 kg
Gross weight	2.2   2.3   2 kg

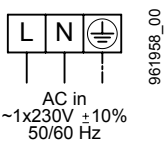
**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	3-34 W
Nominal current	0.03-0.27 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**

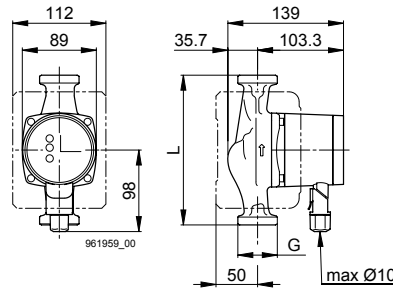


**L, N, PE** Power supply

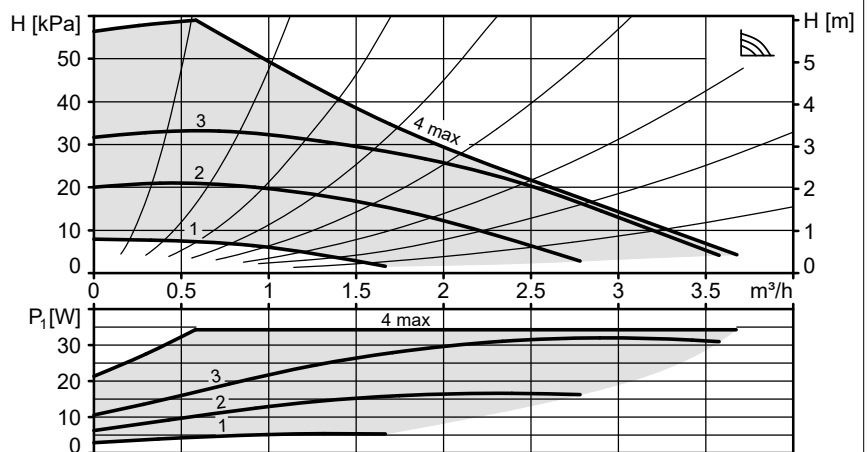
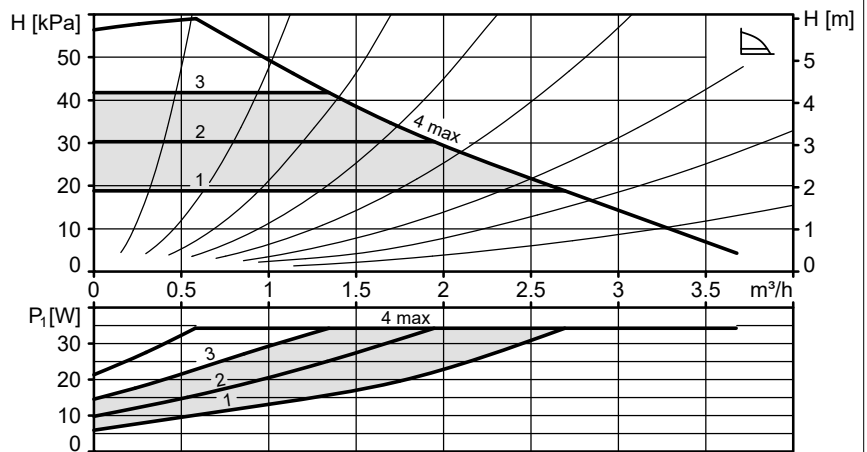
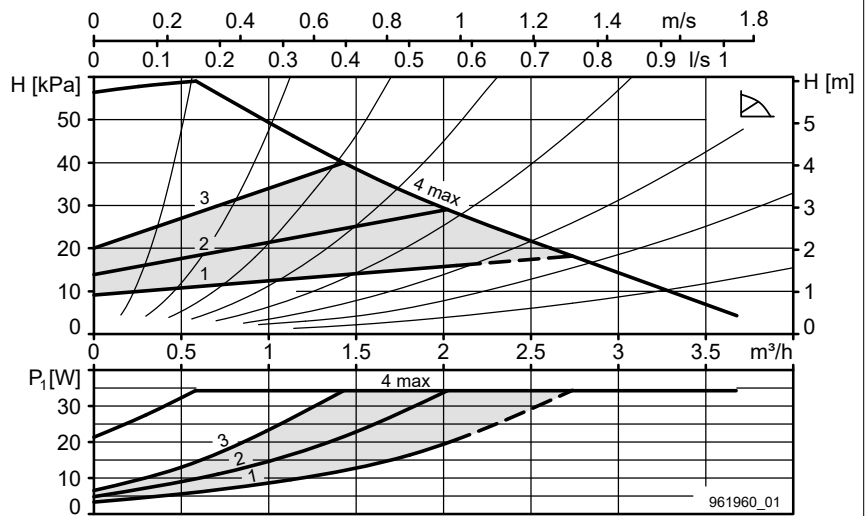
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector and angled connector
- AFM seal

Type	Art. no.
PrimAX 25-6 180 RED	7000001832
PrimAX 32-6 180 RED	7000001837
PrimAX 32-6 170 RED	7000001842
PrimAX 15-6 130 RED	7000001847
PrimAX 25-6 130 RED	7000001852



<b>PrimAX 25-6 180 RED</b> DN 25 L = 180 mm G = 1 1/2"	<b>PrimAX 32-6 180 RED</b> DN 32 L = 180 mm G = 2"
<b>PrimAX 32-6 170 RED</b> DN 32 L = 170 mm G = 2"	<b>PrimAX 15-6 130 RED</b> DN 15 L = 130 mm G = 1"
<b>PrimAX 25-6 130 RED</b> DN 25 L = 130 mm G = 1 1/2"	



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**PrimAX 25-8 180 RED**
**PrimAX 32-8 180 RED**
**PrimAX 32-8 170 RED**
**PrimAX 15-8 130 RED**
**PrimAX 25-8 130 RED**

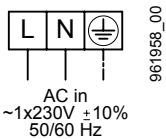
Version	T2
Nominal width	DN 32   DN 15   DN 25
Flow head H max.	7.5 m
Overall length	180   170   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2   2.1   1.8 kg
Gross weight	2.2   2.3   2 kg

**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	3-50 W
Nominal current	0.03-0.41 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

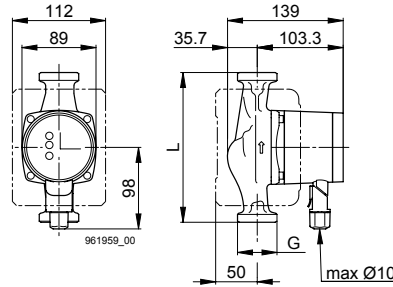
at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**

**L, N, PE** Power supply

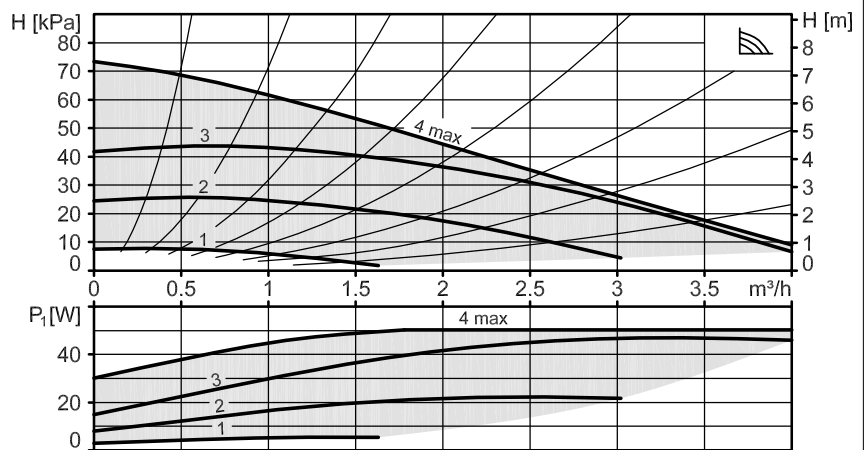
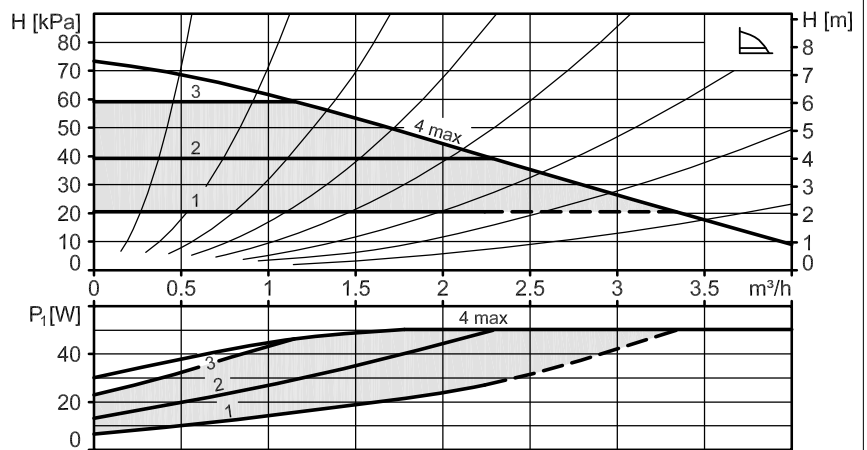
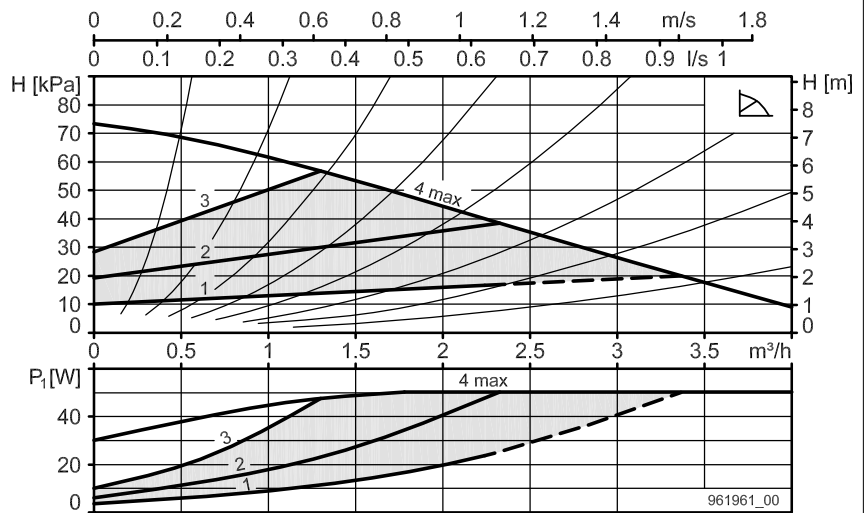
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector and angled connector
- AFM seal

Type	Art. no.
PrimAX 25-8 180 RED	7000001833
PrimAX 32-8 180 RED	7000001838
PrimAX 32-8 170 RED	7000001843
PrimAX 15-8 130 RED	7000001848
PrimAX 25-8 130 RED	7000001853



<b>PrimAX 25-8 180 RED</b> DN 25 L = 180 mm G = 1 1/2"	<b>PrimAX 32-8 180 RED</b> DN 32 L = 180 mm G = 2"
<b>PrimAX 32-8 170 RED</b> DN 32 L = 170 mm G = 2"	<b>PrimAX 15-8 130 RED</b> DN 15 L = 130 mm G = 1"
<b>PrimAX 25-8 130 RED</b> DN 25 L = 130 mm G = 1 1/2"	







## Heating circulation pumps

### CompAX RED

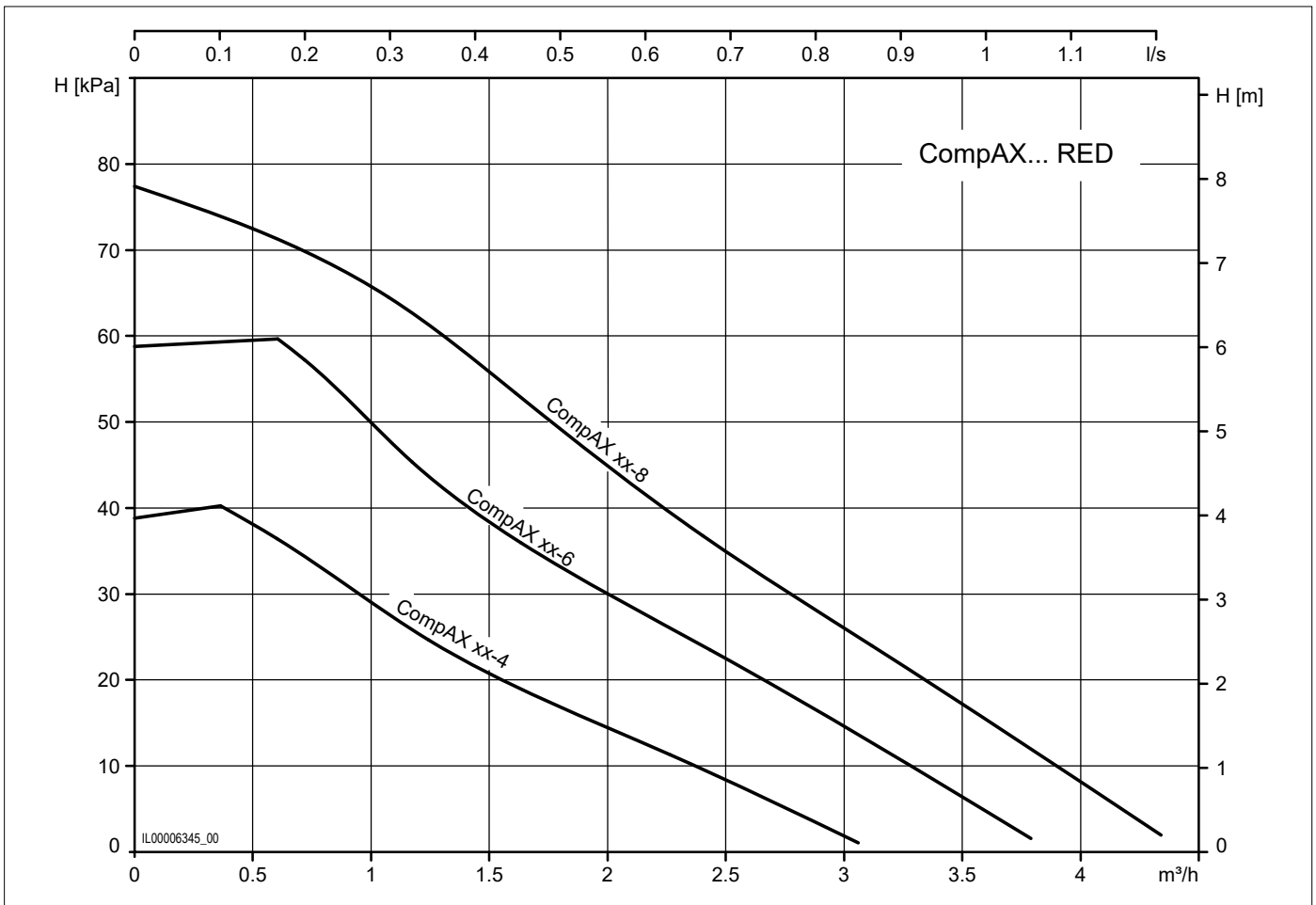
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
CompAX 25-4 180 RED	7000001501	25	4	180	G 1 1/2"	10	≤0.18
CompAX 25-6 180 RED	7000001502	25	6	180	G 1 1/2"	10	≤0.19
CompAX 25-8 180 RED	7000001503	25	7.5	180	G 1 1/2"	10	≤0.20
CompAX 32-4 180 RED	7000001504	32	4	180	G 2"	10	≤0.18
CompAX 32-6 180 RED	7000001505	32	6	180	G 2"	10	≤0.19
CompAX 32-8 180 RED	7000001506	32	7.5	180	G 2"	10	≤0.20
CompAX 15-4 130 RED	7000001507	15	4	130	G 1"	10	≤0.18
CompAX 15-6 130 RED	7000001508	15	6	130	G 1"	10	≤0.19
CompAX 25-4 130 RED	7000001509	25	4	130	G 1 1/2"	10	≤0.18
CompAX 25-6 130 RED	7000001510	25	6	130	G 1 1/2"	10	≤0.19

### Ordering reference

	<b>CompAX 25 -4 180 RED</b>
Series	_____
Nominal width (DN) [mm]	_____
Discharge head max. [m]	_____
Installation height [mm]	_____
Field of application Heating (RED)	_____

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**CompAX 25-4 180 RED**

**CompAX 32-4 180 RED**

**CompAX 15-4 130 RED**

**CompAX 25-4 130 RED**

Nominal width	DN 32   DN 15   DN 25
Flow head H max.	4 m
Overall length	180   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2.0   2.2   1.7   1.8 kg
Gross weight	2.2   2.4   1.9   2.0 kg

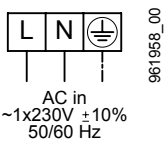
**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	3-19 W
Nominal current	0.04-0.16 A
Motor protection	integriert

**Required operating pressure at 500m a.s.l.**

at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**



**L, N, PE** Netzanschluss

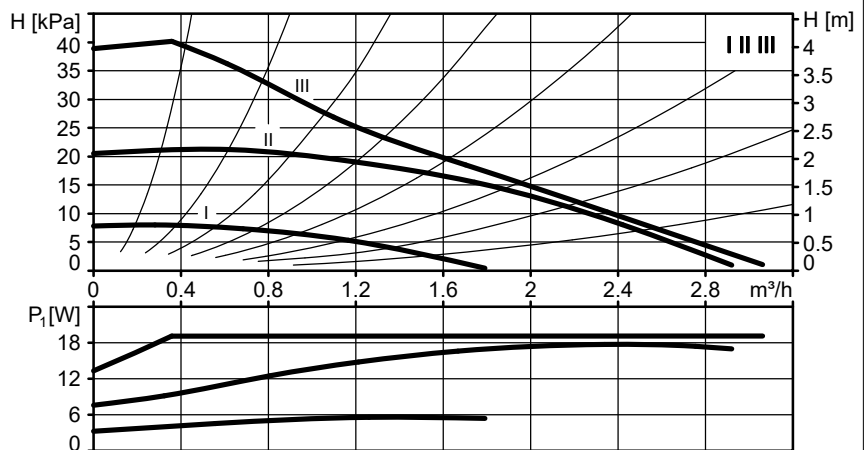
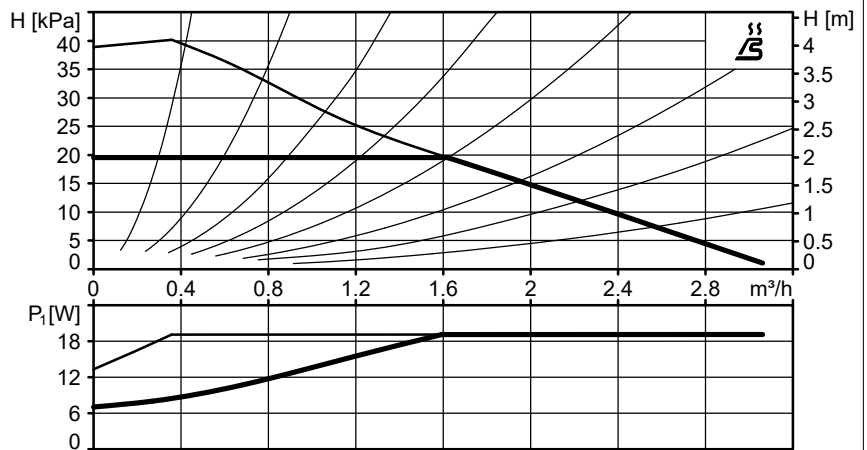
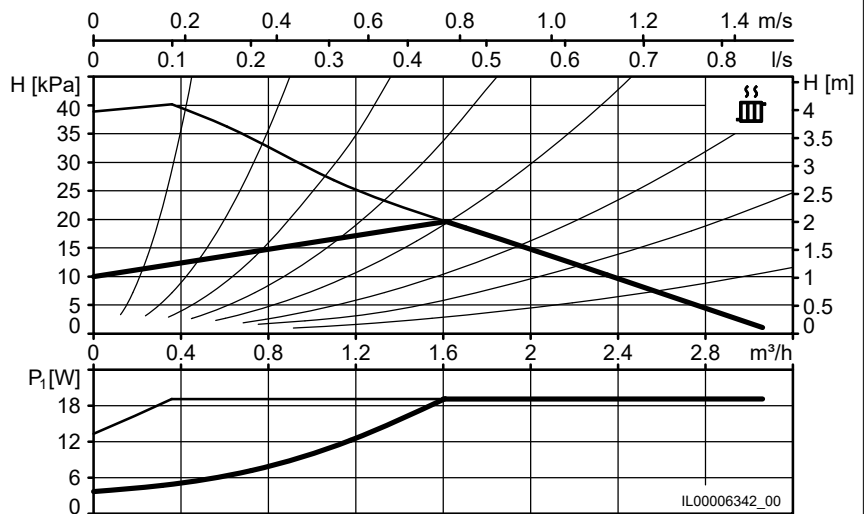
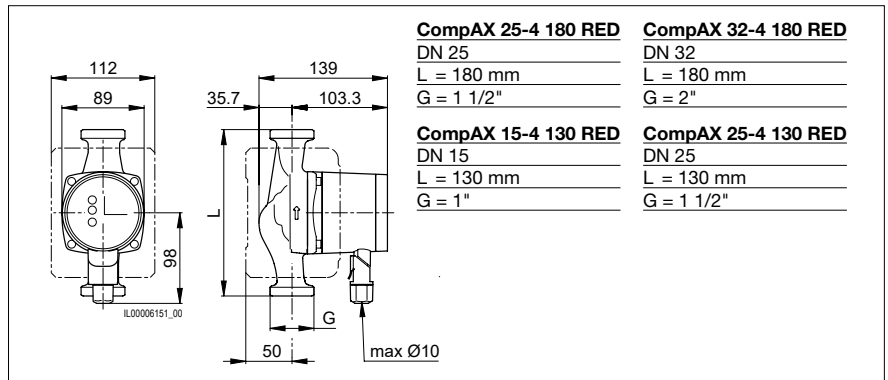
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector
- AFM seal

**Accessories**

- Angle plug

Type	Art. no.
CompAX 25-4 180 RED	7000001501
CompAX 32-4 180 RED	7000001504
CompAX 15-4 130 RED	7000001507
CompAX 25-4 130 RED	7000001509





**CompAX 25-6 180 RED**

**CompAX 32-6 180 RED**

**CompAX 15-6 130 RED**

**CompAX 25-6 130 RED**

Nominal width	DN 32   DN 15   DN 25
Flow head H max.	6 m
Overall length	180   130 mm
Threaded connection	G 2"   G 1"   G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2.0   2.2   1.7   1.8 kg
Gross weight	2.2   2.4   1.9   2.0 kg

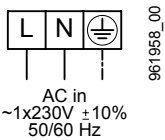
**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	4-35 W
Nominal current	0.04-0.30 A
Motor protection	integriert

**Required operating pressure at 500m a.s.l.**

at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

**Connction diagram**



**L, N, PE** Netzanschluss

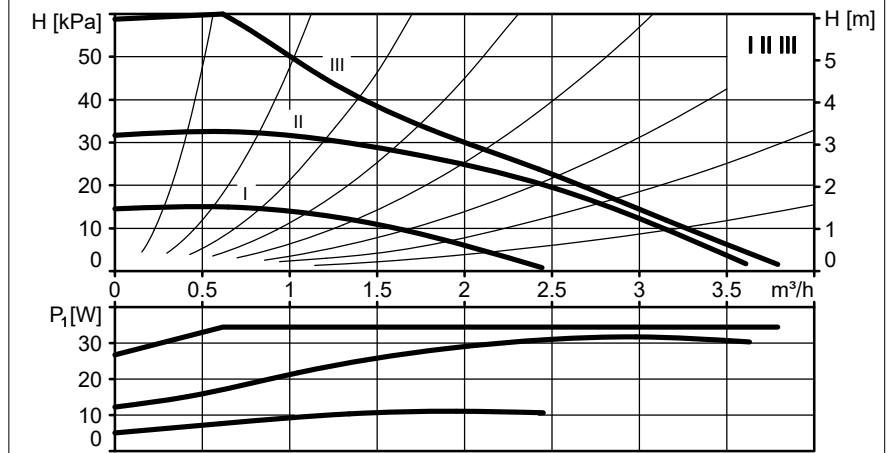
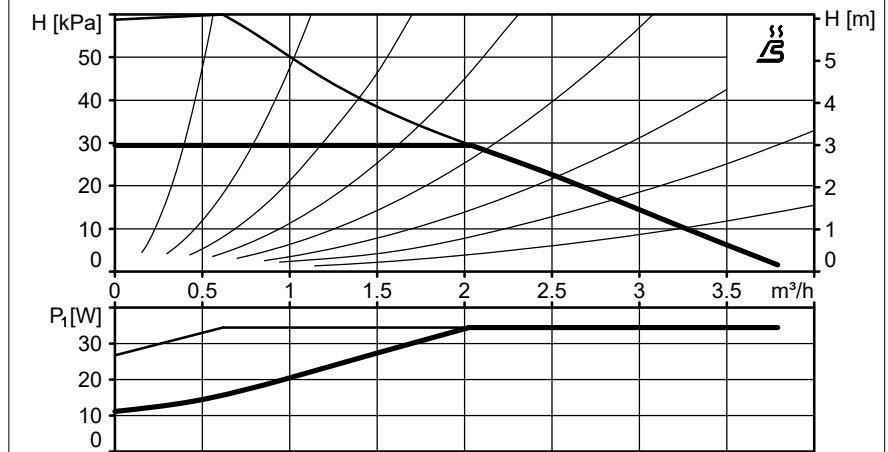
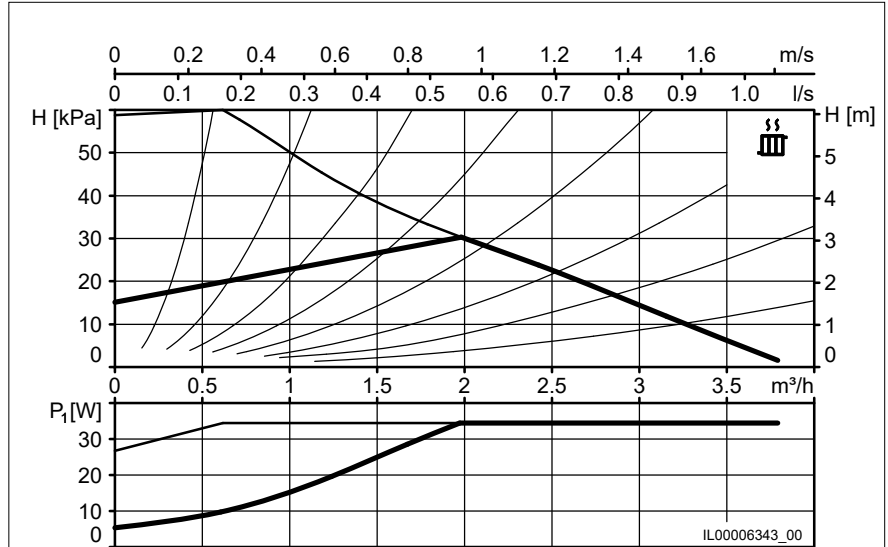
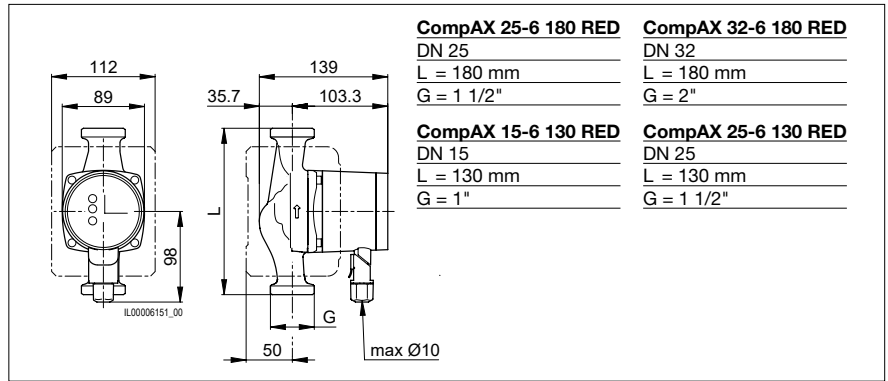
**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector
- AFM seal

**Accessories**

- Angle plug

Type	Art. no.
CompAX 25-6 180 RED	7000001502
CompAX 32-6 180 RED	7000001505
CompAX 15-6 130 RED	7000001508
CompAX 25-6 130 RED	7000001510



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### CompAX 25-8 180 RED

### CompAX 32-8 180 RED

Nominal width	DN 25   DN 32
Flow head H max.	7.5 m
Overall length	180 mm
Threaded connection	G 1 1/2"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+110°C
Ambient temperature	0°C bis 40°C
Net weight	2.0   2.2 kg
Gross weight	2.2   2.4 kg

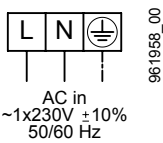
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	6-51 W
Nominal current	0.06-0.44 A
Motor protection	integriert

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 90 °C	0.28 bar
at a water temp. of 110 °C	1.08 bar
for every ±100 m of altitude	0.01 bar

#### Connction diagram



L, N, PE Netzanschluss

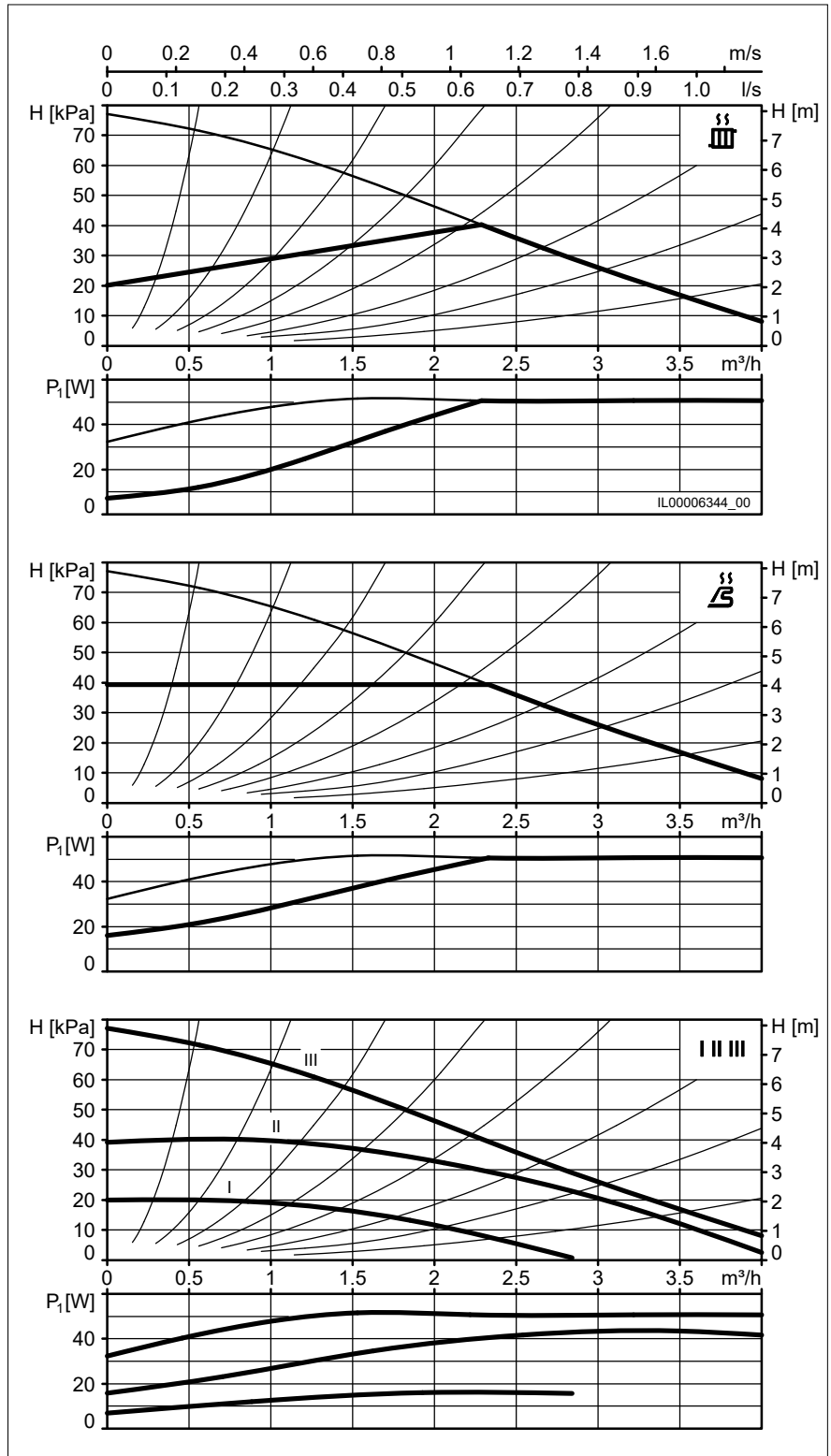
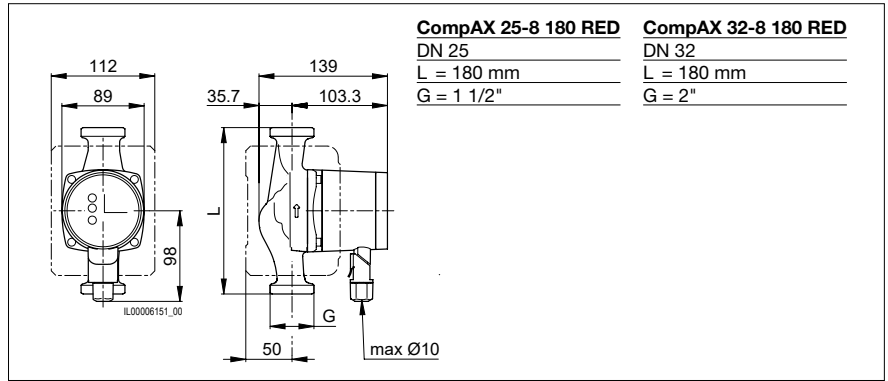
#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

#### Accessories

- Angle plug

Type	Art. no.
CompAX 25-8 180 RED	7000001503
CompAX 32-8 180 RED	7000001506







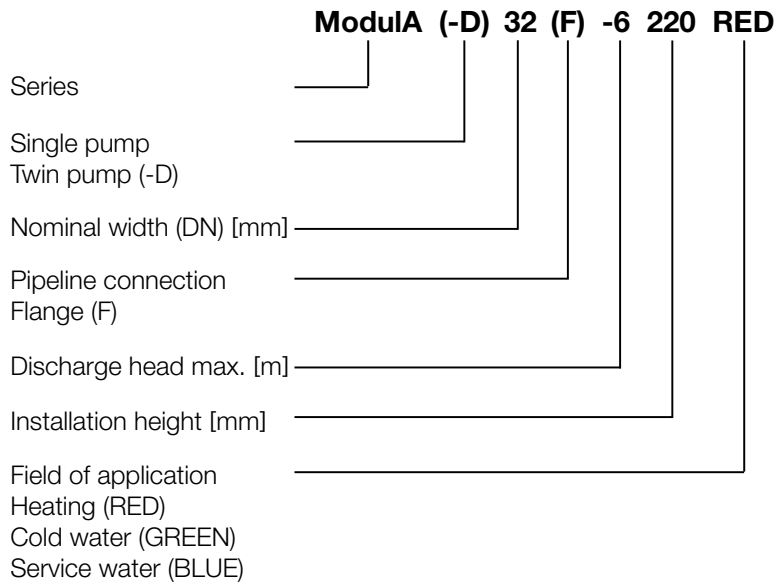
## Heating circulation pumps

### ModulA RED T2 with threaded connection

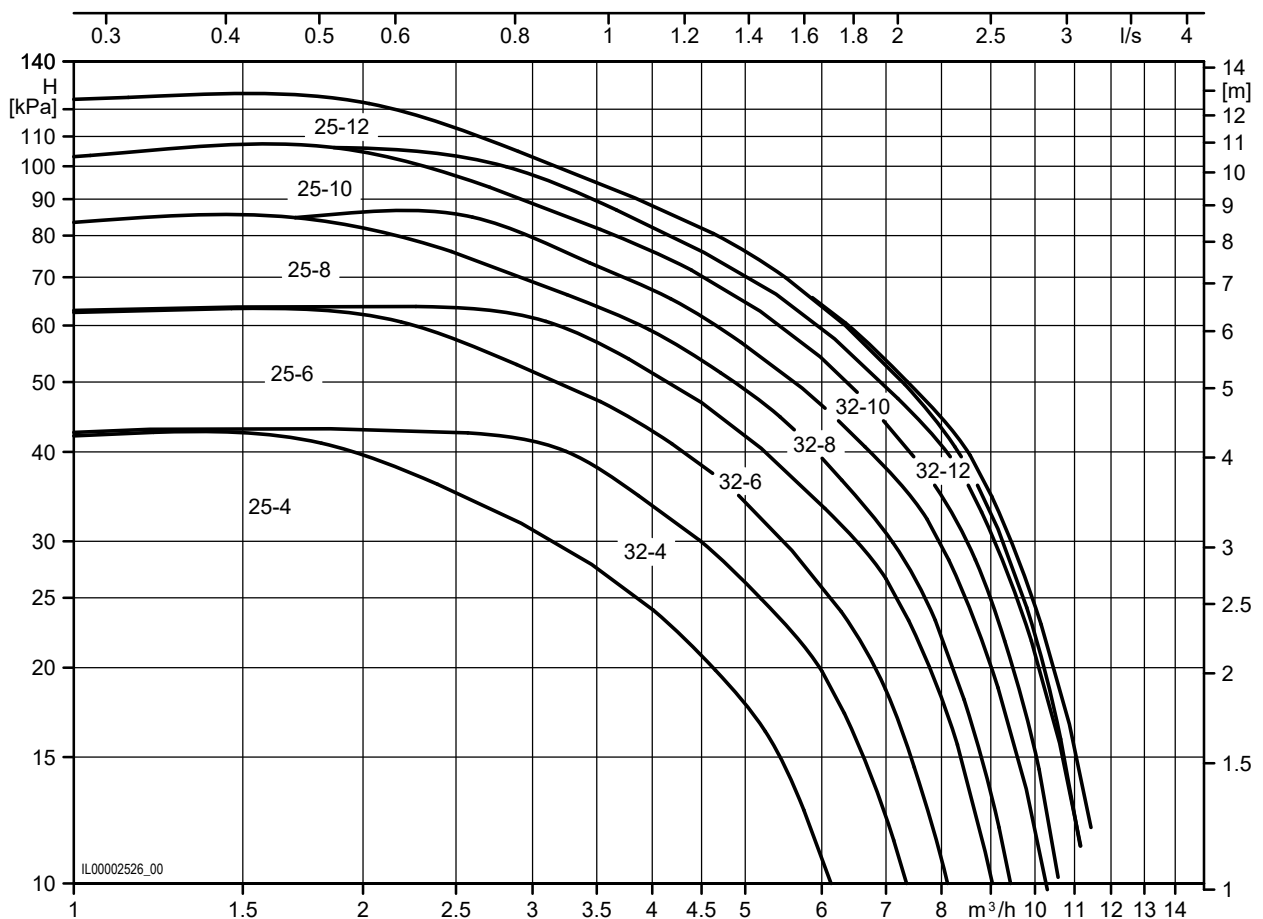
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA 25-4 180 RED	7000000057	25	4	180	G 1½"	10	≤0.18
ModulA 25-6 180 RED	7000000058	25	6	180	G 1½"	10	≤0.18
ModulA 25-8 180 RED	7000000059	25	8	180	G 1½"	10	≤0.18
ModulA 25-10 180 RED	7000000060	25	10	180	G 1½"	10	≤0.18
ModulA 25-12 180 RED	7000000061	25	12	180	G 1½"	10	≤0.18
ModulA 32-4 180 RED	7000000067	32	4	180	G 2"	10	≤0.18
ModulA 32-6 180 RED	7000000068	32	6	180	G 2"	10	≤0.18
ModulA 32-8 180 RED	7000000069	32	8	180	G 2"	10	≤0.18
ModulA 32-10 180 RED	7000000070	32	10	180	G 2"	10	≤0.18
ModulA 32-12 180 RED	7000000071	32	12	180	G 2"	10	≤0.18
ModulA 32-4 170 RED	7000000062	32	4	170	G 2"	10	≤0.18
ModulA 32-6 170 RED	7000000063	32	6	170	G 2"	10	≤0.18
ModulA 32-8 170 RED	7000000064	32	8	170	G 2"	10	≤0.18
ModulA 32-10 170 RED	7000000065	32	10	170	G 2"	10	≤0.18
ModulA 32-12 170 RED	7000000066	32	12	170	G 2"	10	≤0.18

**Order reference**

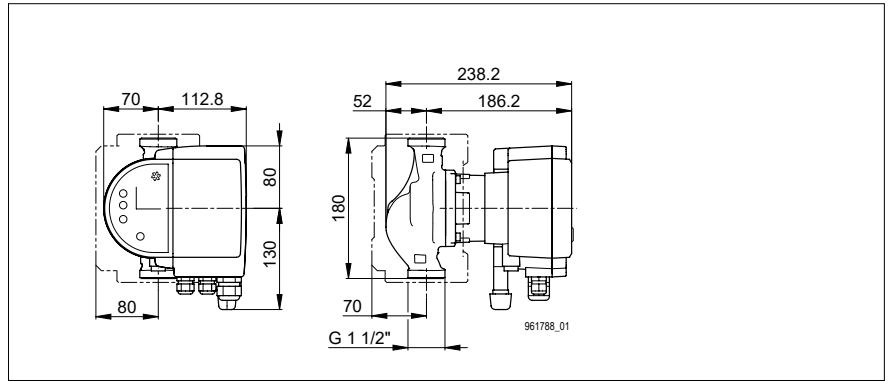


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## ModulA 25-4 180 RED

Version	T2 S
Nominal width	DN 25
Flow head H max.	4 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.5 kg
Gross weight	5.2 kg



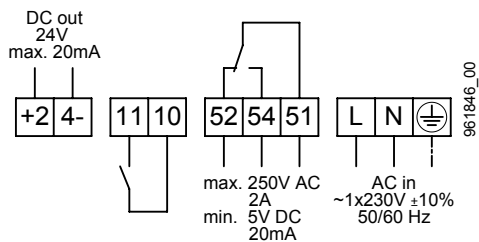
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	7-49 W
Nominal current	0.08-0.37 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

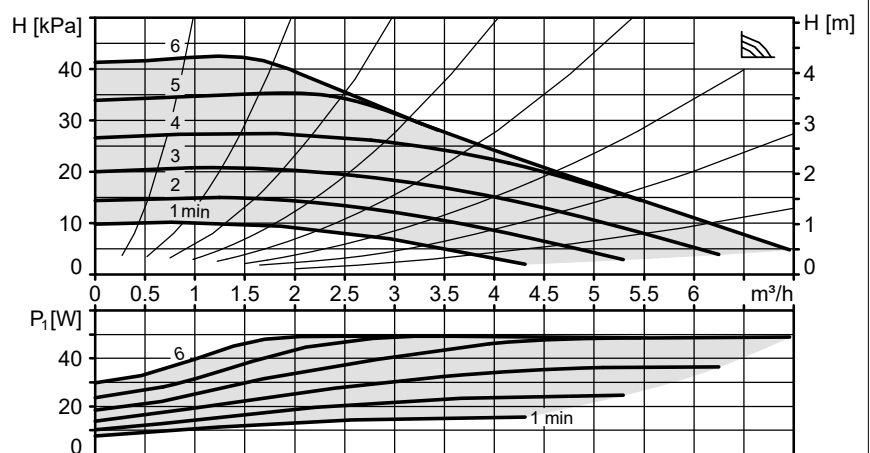
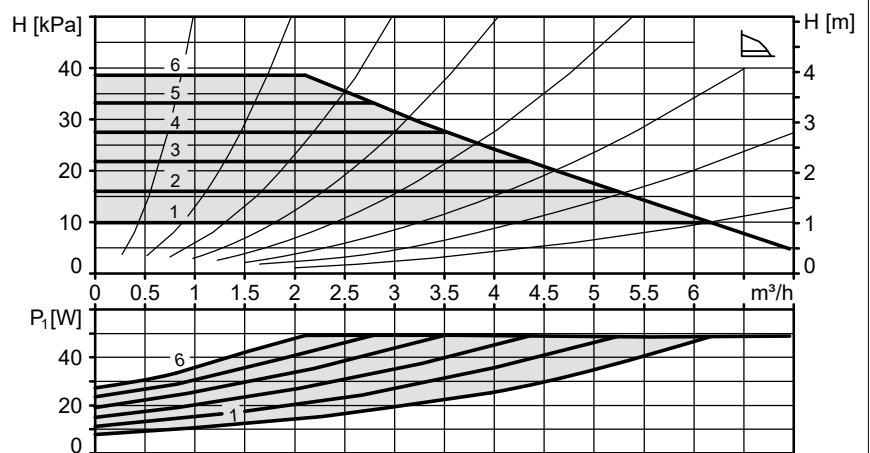
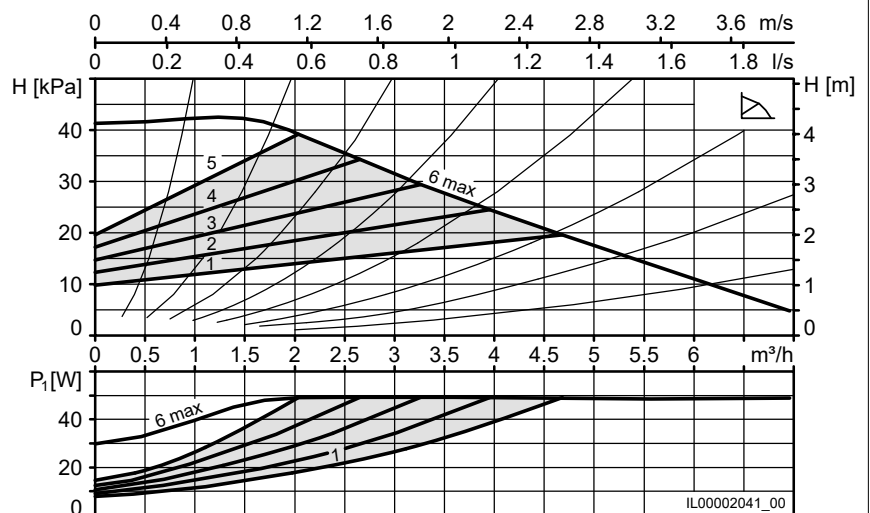
### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

<b>Type</b>	<b>Art. no.</b>
ModulA 25-4 180 RED	7000000057



## ModulA 25-6 180 RED

Version	T2 S
Nominal width	DN 25
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.5 kg
Gross weight	5.2 kg

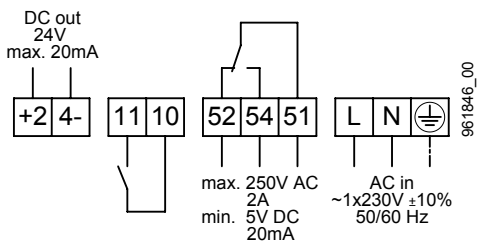
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-83 W
Nominal current	0.08-0.62 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

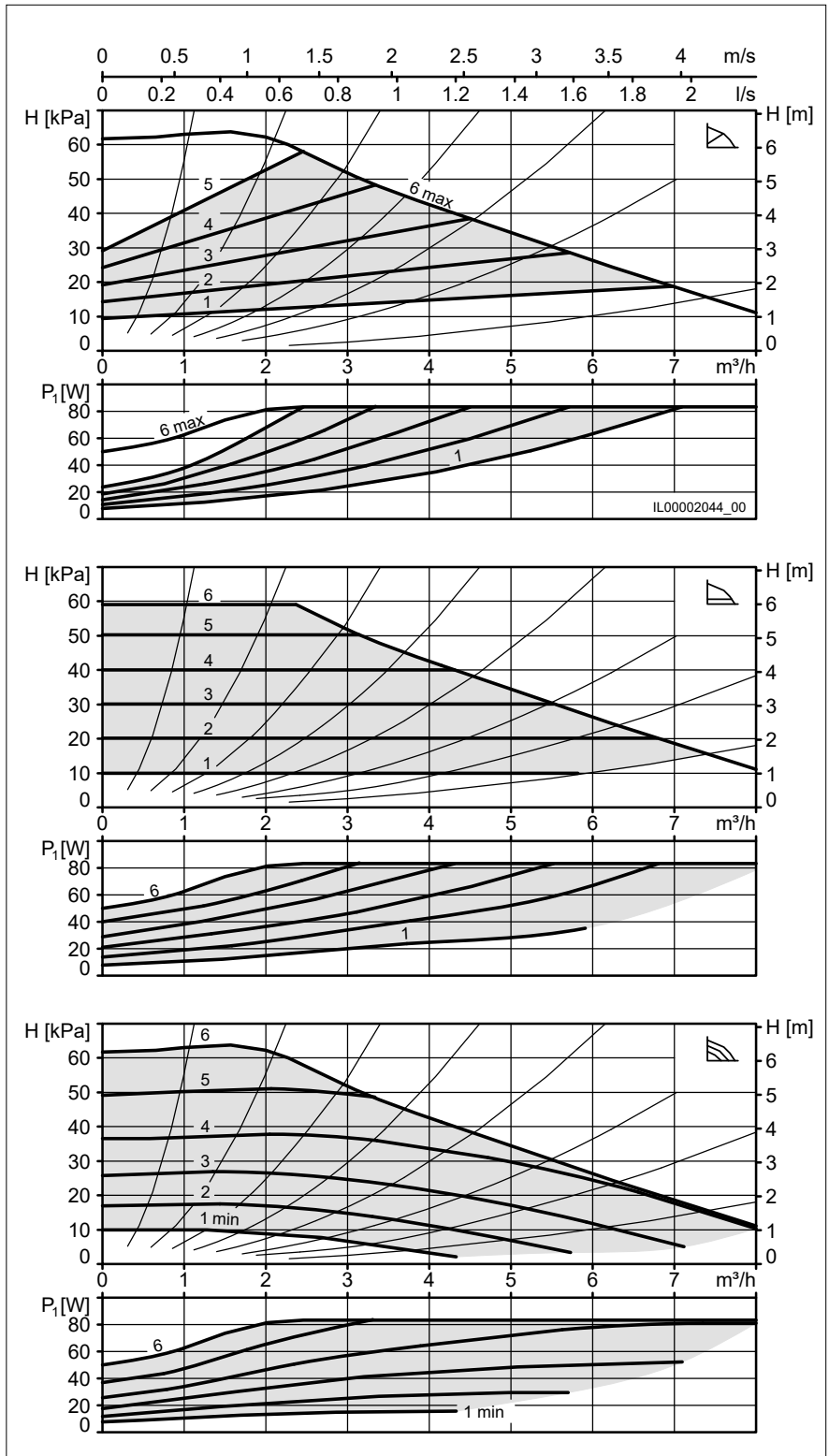
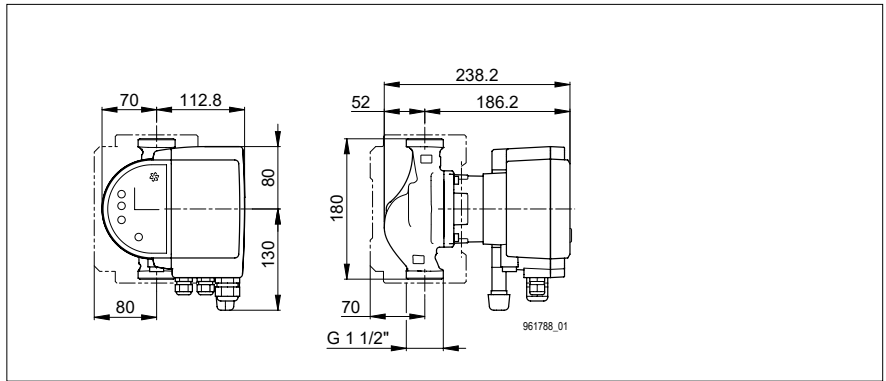
### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

<b>Type</b>	<b>Art. no.</b>
ModulA 25-6 180 RED	7000000058

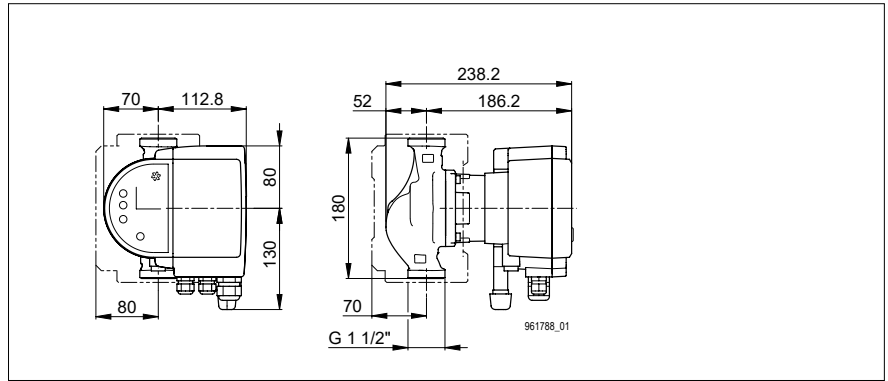


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## Modula 25-8 180 RED

Version	T2 S
Nominal width	DN 25
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.5 kg
Gross weight	5.2 kg



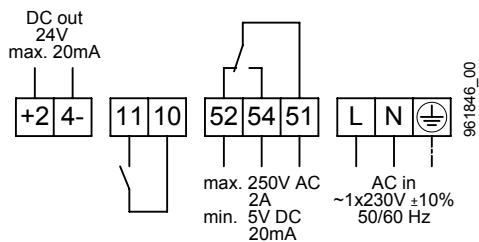
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-115 W
Nominal current	0.08-0.85 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

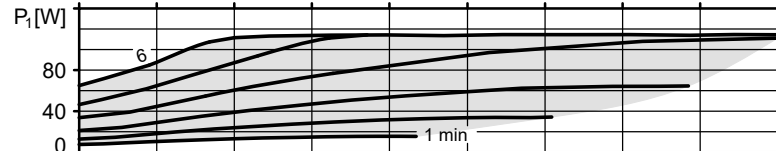
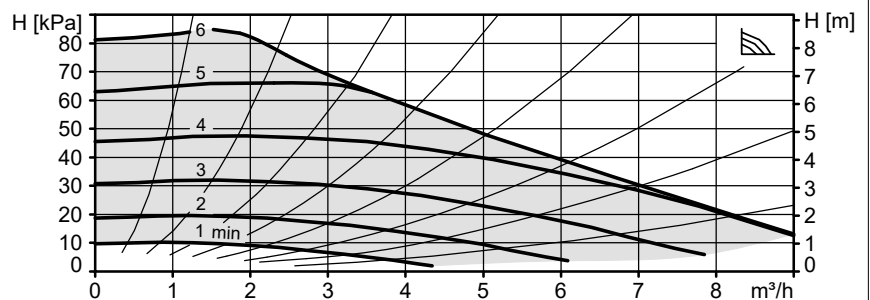
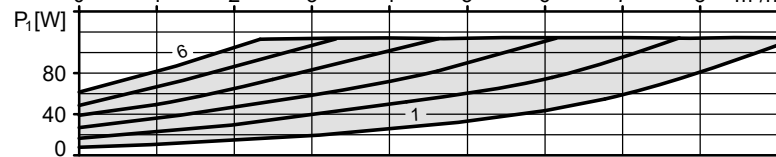
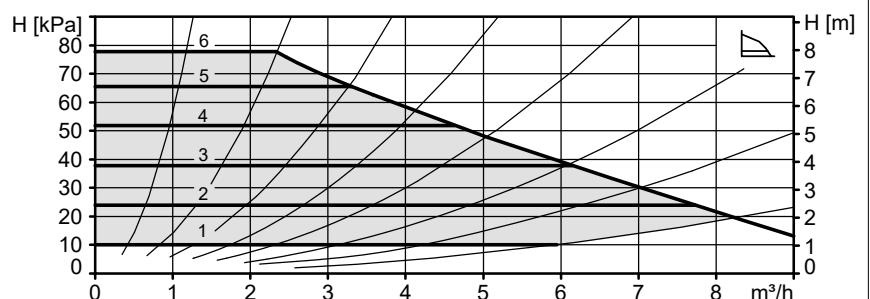
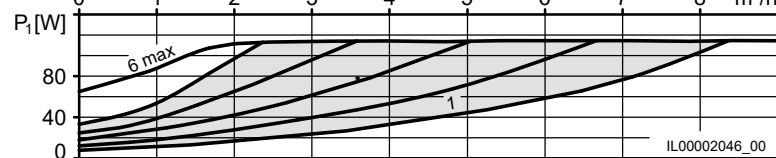
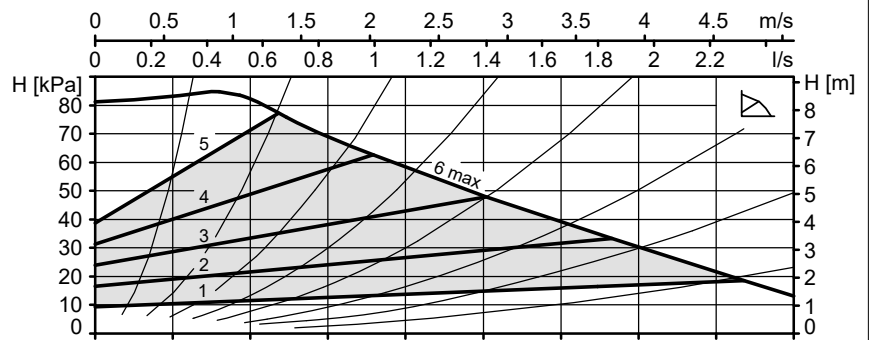
### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

<b>Type</b>	<b>Art. no.</b>
Modula 25-8 180 RED	7000000059





## ModulA 25-10 180 RED

Version	T2 S
Nominal width	DN 25
Flow head H max.	10 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.5 kg
Gross weight	5.2 kg

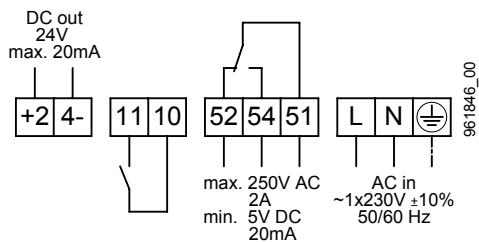
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-153 W
Nominal current	0.08-1.15 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

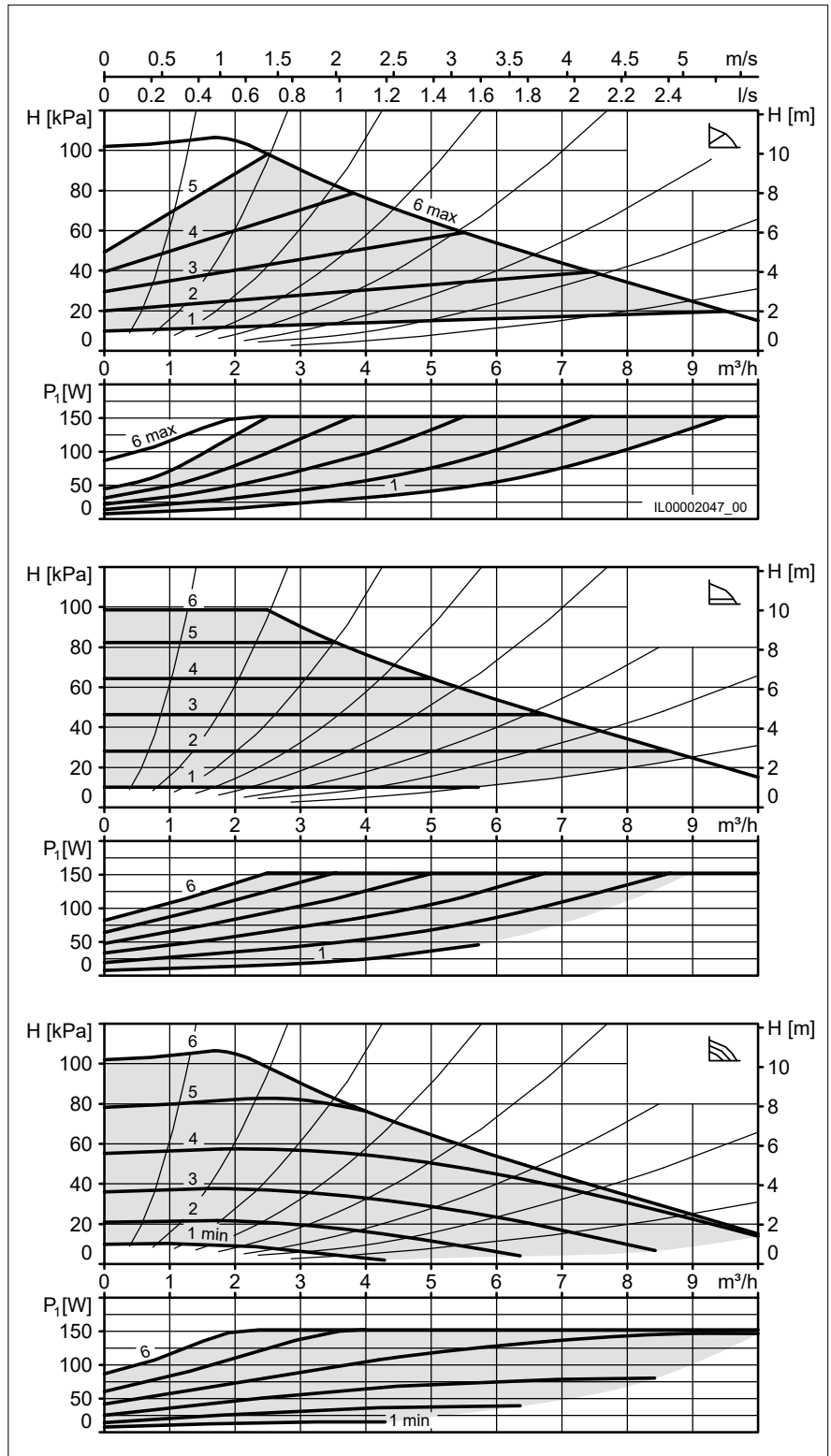
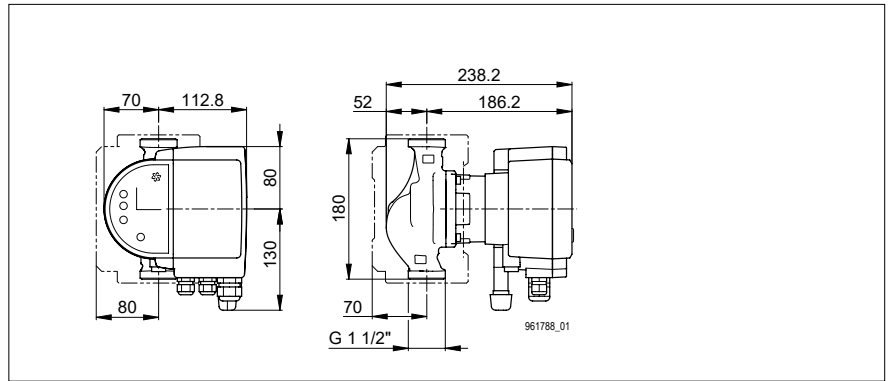
### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

<b>Type</b>	<b>Art. no.</b>
ModulA 25-10 180 RED	7000000060

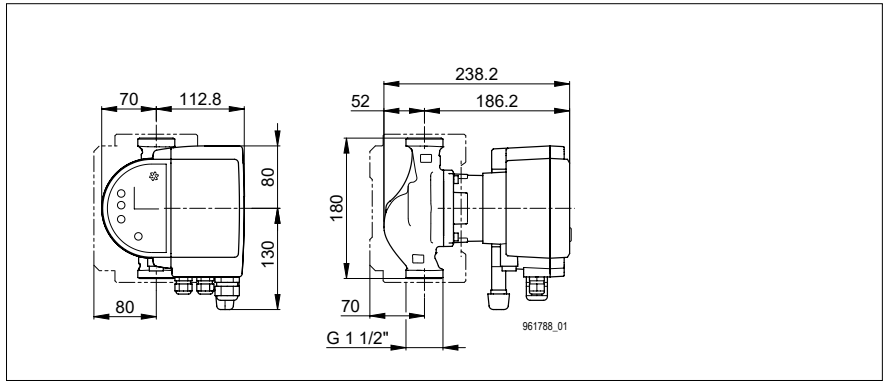


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## Modula 25-12 180 RED

Version	T2 S
Nominal width	DN 25
Flow head H max.	12 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.5 kg
Gross weight	5.2 kg



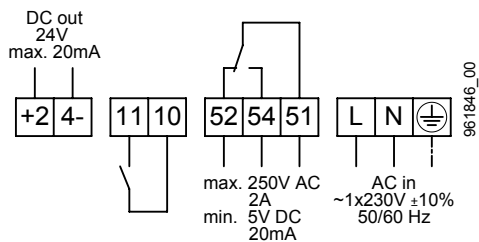
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-181 W
Nominal current	0.08-1.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

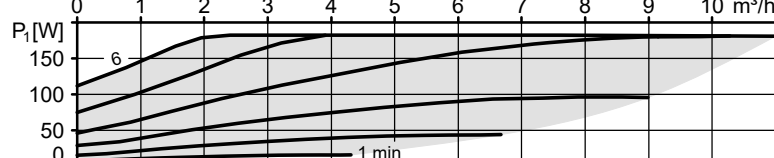
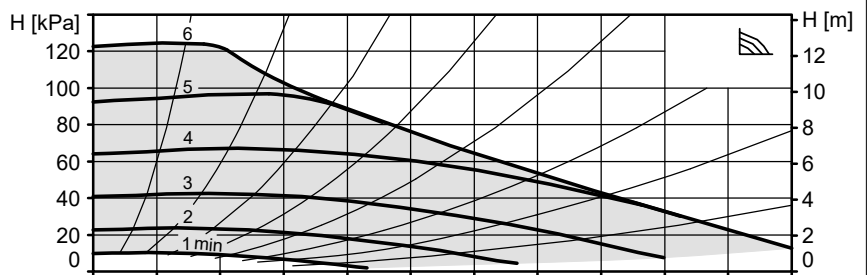
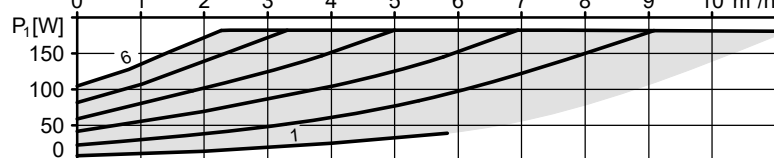
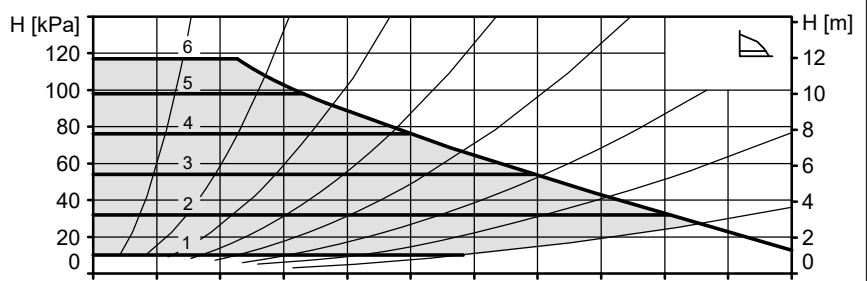
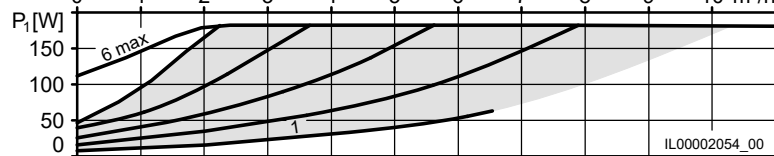
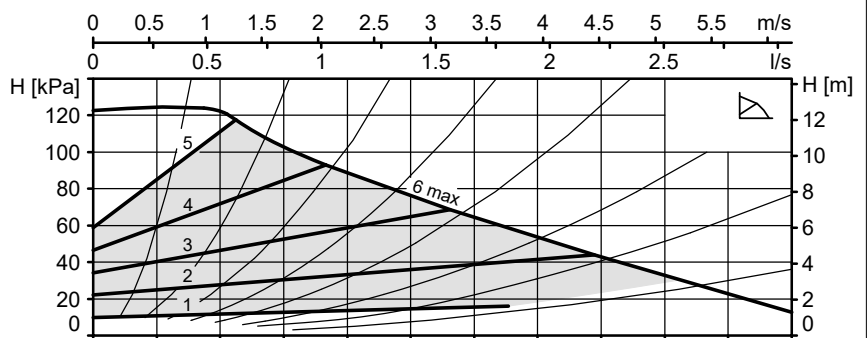
### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

<b>Type</b>	<b>Art. no.</b>
Modula 25-12 180 RED	7000000061



**ModulA 32-4 180 RED**

**ModulA 32-4 170 RED**

Version	T2 S
Nominal width	DN 32
Flow head H max.	4 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.7 kg
Gross weight	5.35 kg

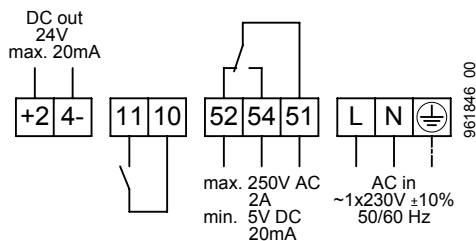
**Electrical data**

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-66 W
Nominal current	0.08-0.48 A
Motor protection	integrated

**Required operating pressure at 500m a.s.l.**

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

**Connction diagram**



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

**Switch**

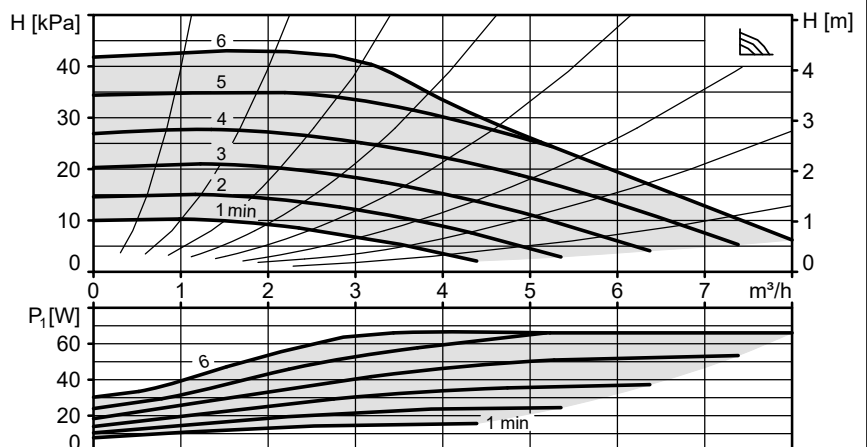
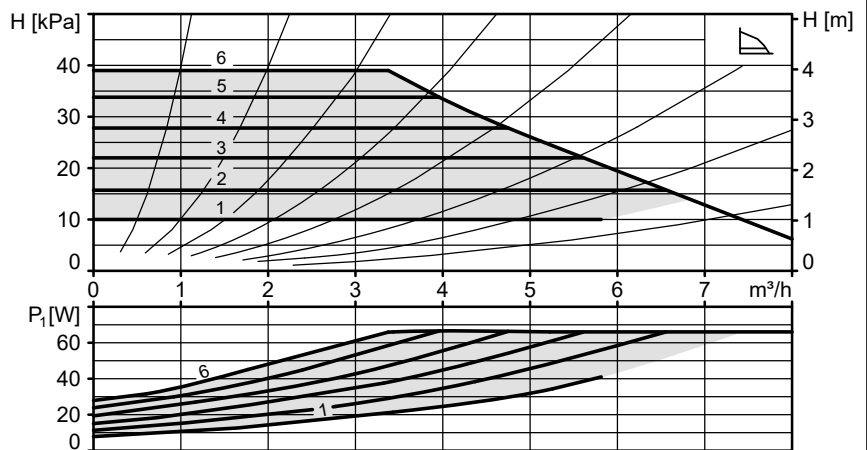
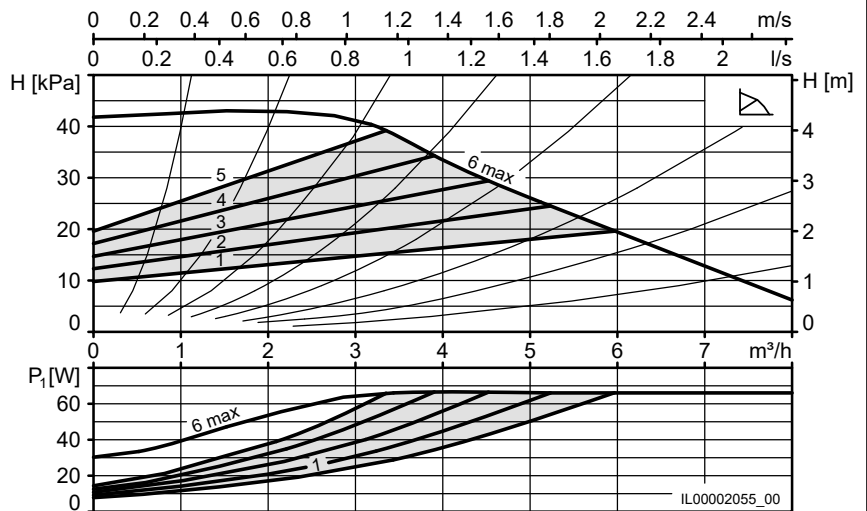
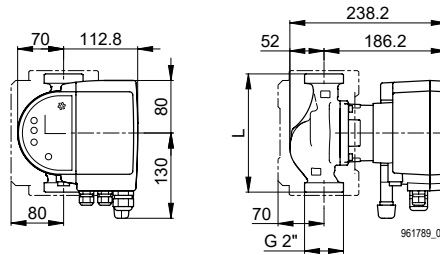
- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

**Included in the scope of delivery**

- Heat insulation shell
- Biral Connector
- AFM seal

Type	Art. no.
ModulA 32-4 180 RED	7000000067
ModulA 32-4 170 RED	7000000062

**ModulA 32-4 180 RED** DN 32 L = 180 mm  
**ModulA 32-4 170 RED** DN 32 L = 170 mm



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### ModuA 32-6 180 RED

### ModuA 32-6 170 RED

Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.7 kg
Gross weight	5.35 kg

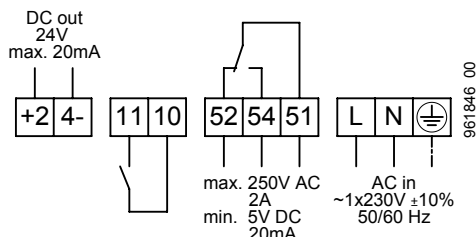
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-102 W
Nominal current	0.08-0.73 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



+24-	24 V DC out
11, 10	External OFF or external ON
52, 54, 51	Error or operating message
L, N, PE	Power supply

#### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

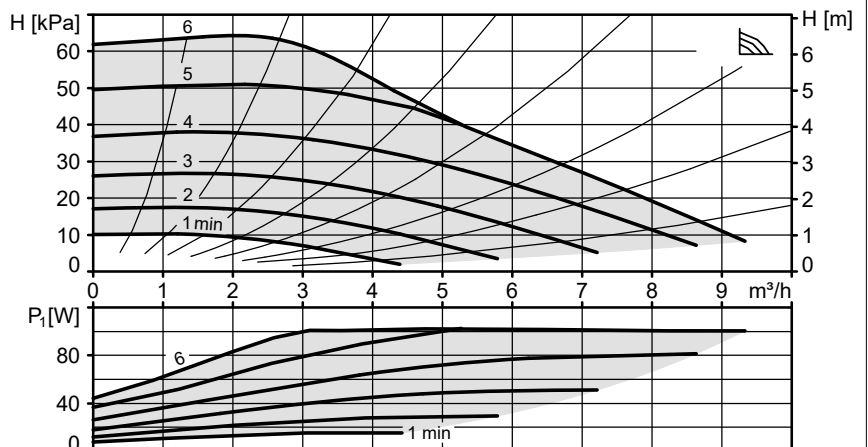
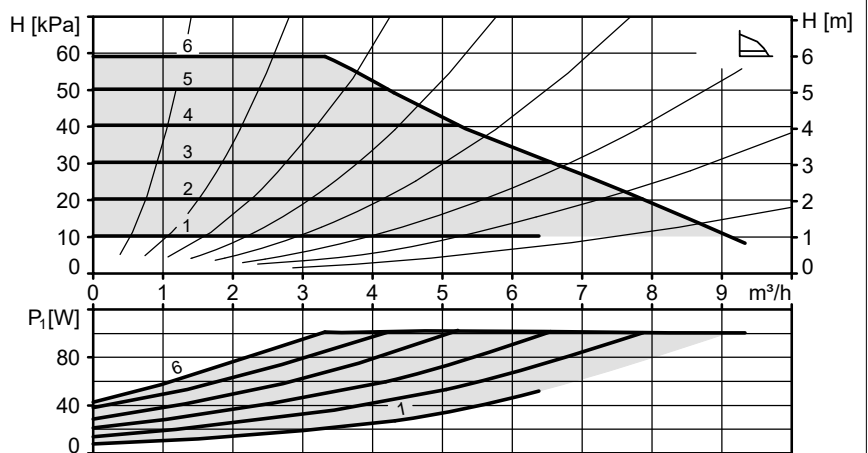
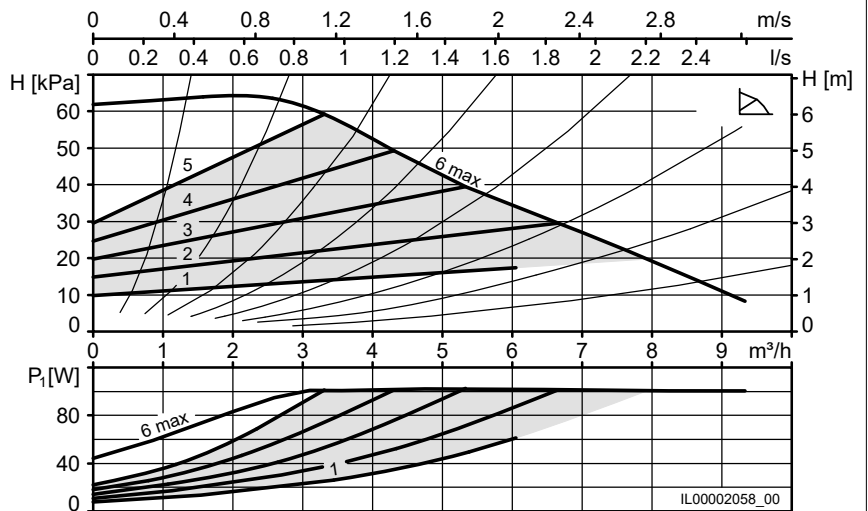
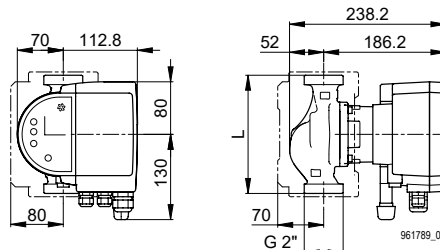
#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

Type	Art. no.
ModuA 32-6 180 RED	7000000068
ModuA 32-6 170 RED	7000000063

**ModuA 32-6 180 RED**  
DN 32  
L = 180 mm

**ModuA 32-6 170 RED**  
DN 32  
L = 170 mm



### ModulA 32-8 180 RED

### ModulA 32-8 170 RED

Version	T2 S
Nominal width	DN 32
Flow head H max.	8 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.7 kg
Gross weight	5.35 kg

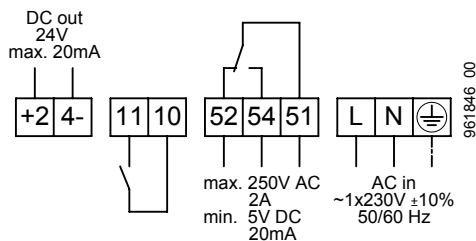
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-134 W
Nominal current	0.08-0.97 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

#### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

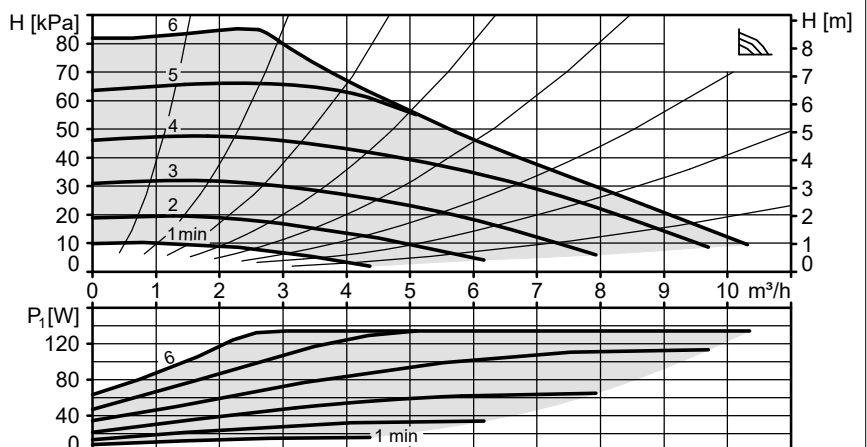
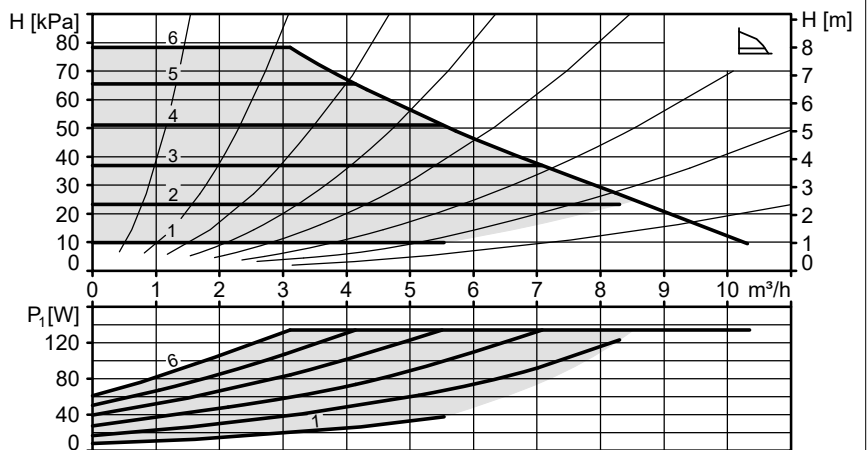
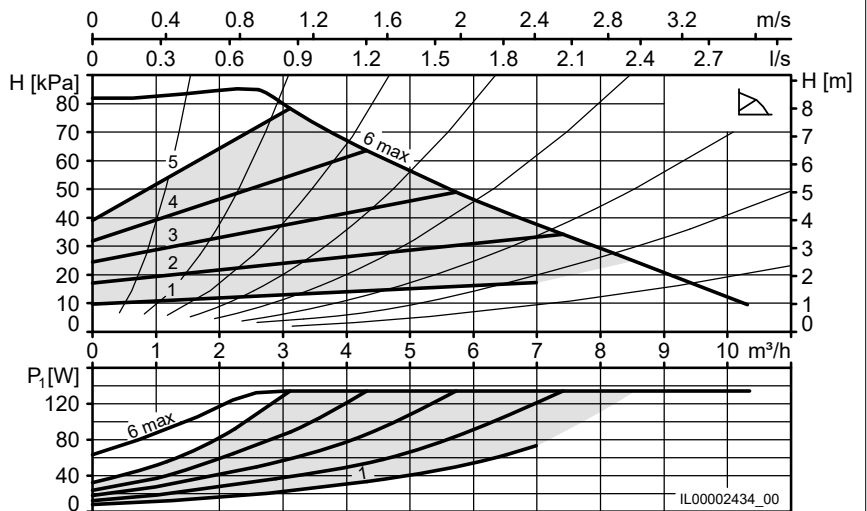
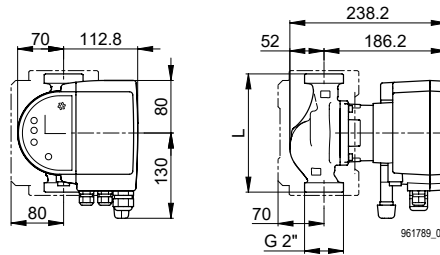
#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

Type	Art. no.
ModulA 32-8 180 RED	7000000069
ModulA 32-8 170 RED	7000000064

**ModulA 32-8 180 RED**  
DN 32  
L = 180 mm

**ModulA 32-8 170 RED**  
DN 32  
L = 170 mm



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### ModulA 32-10 180 RED

### ModulA 32-10 170 RED

Version	T2 S
Nominal width	DN 32
Flow head H max.	10 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.7 kg
Gross weight	5.35 kg

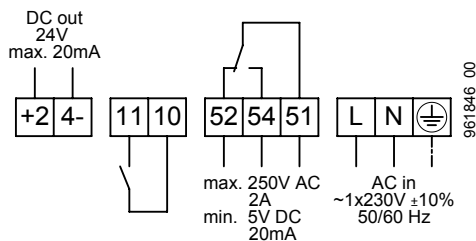
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-169 W
Nominal current	0.08-1.25 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



+24-	24 V DC out
11, 10	External OFF or external ON
52, 54, 51	Error or operating message
L, N, PE	Power supply

#### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

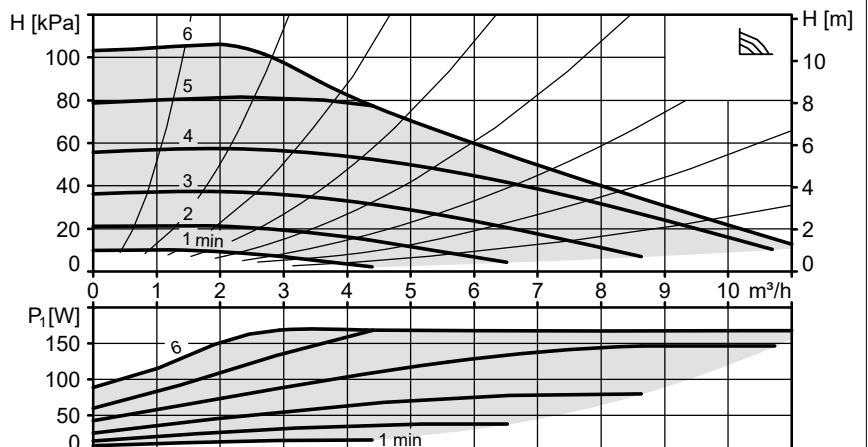
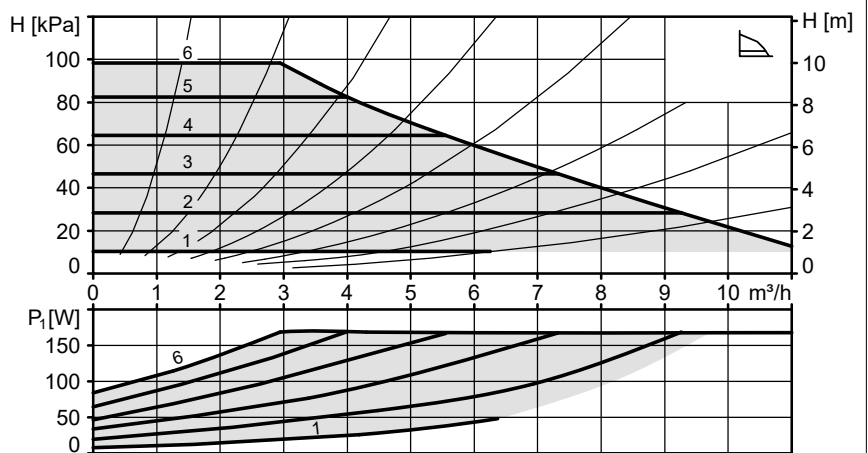
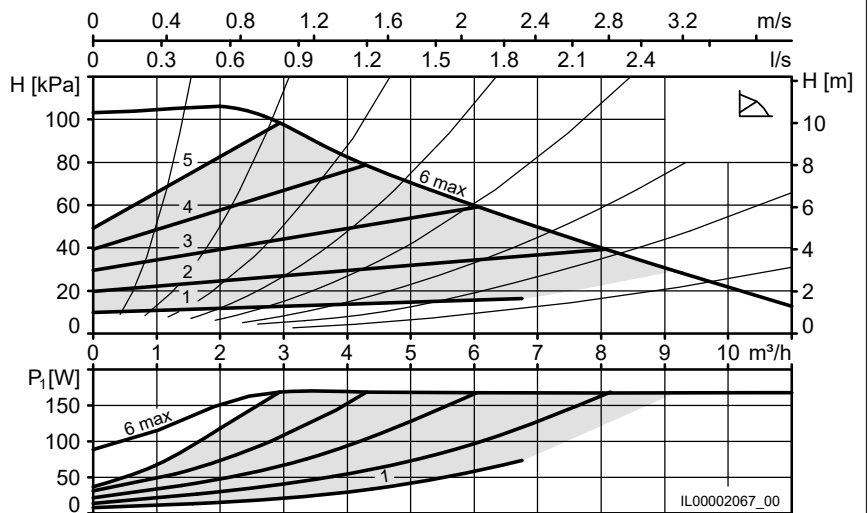
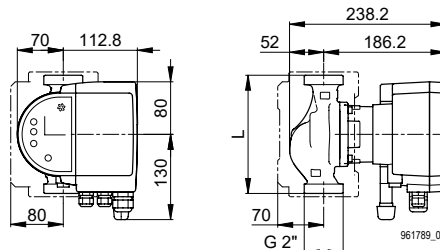
#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

Type	Art. no.
ModulA 32-10 180 RED	7000000070
ModulA 32-10 170 RED	7000000065

**ModulA 32-10 180 RED**  
DN 32  
L = 180 mm

**ModulA 32-10 170 RED**  
DN 32  
L = 170 mm



### ModulA 32-12 180 RED

### ModulA 32-12 170 RED

Version	T2 S
Nominal width	DN 32
Flow head H max.	12 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Ambient temperature min.	0°C
Ambient temperature max.	40°C
Net weight	4.7 kg
Gross weight	5.35 kg

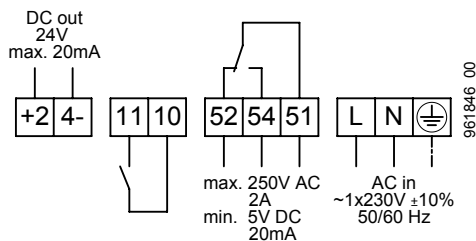
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-182 W
Nominal current	0.08-1.36 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



+24-	24 V DC out
11, 10	External OFF or external ON
52, 54, 51	Error or operating message
L, N, PE	Power supply

#### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

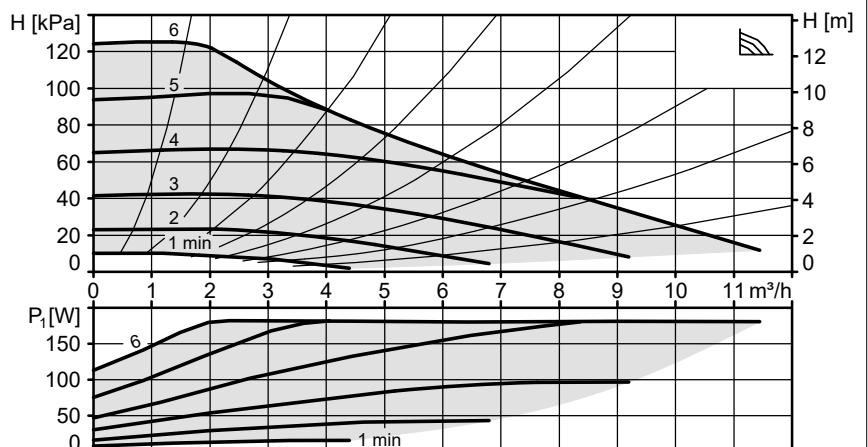
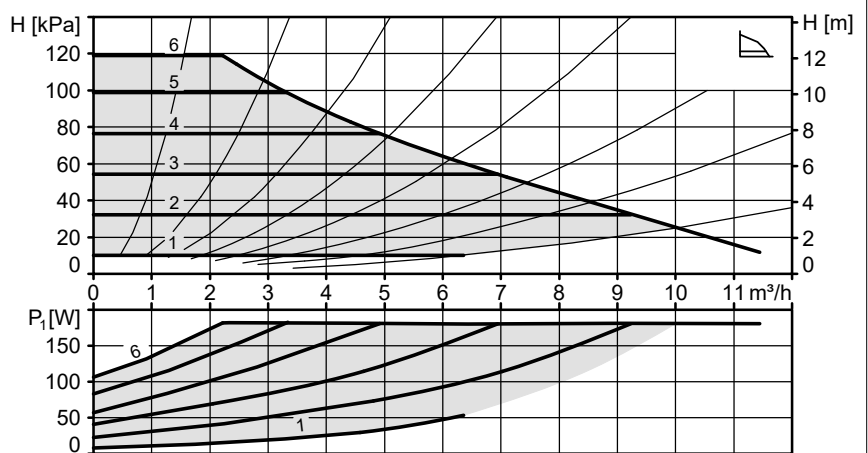
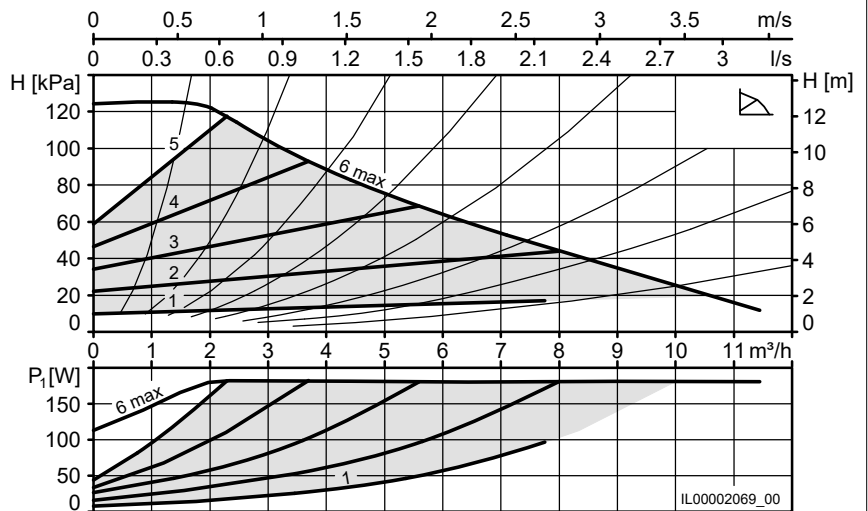
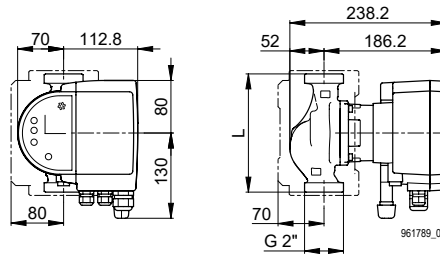
#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

Type	Art. no.
ModulA 32-12 180 RED	7000000071
ModulA 32-12 170 RED	7000000066

**ModulA 32-12 180 RED**  
DN 32  
L = 180 mm

**ModulA 32-12 170 RED**  
DN 32  
L = 170 mm





## Heating circulation pumps

### ModulA RED T2 with flanged connection

#### Übersicht

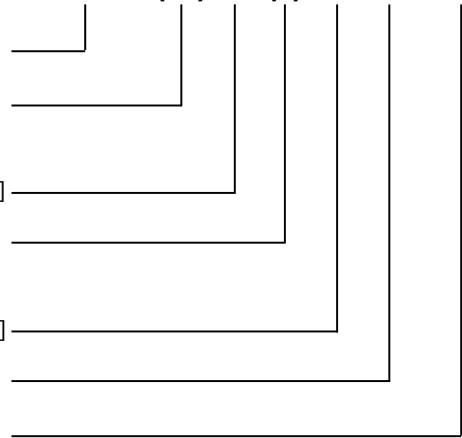
Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA 32F-6 220 RED	7000000072	32	6	220	PN 6	6	≤0.18
ModulA 32F-12 220 RED	7000000076	32	12	220	PN 6-16	16	≤0.20
ModulA 40-4 220 RED	7000000073	40	4	220	PN 6-16	16	≤0.18
ModulA 40-6 220 RED	7000000074	40	6	220	PN 6-16	16	≤0.19
ModulA 40-8 220 RED	7000000077	40	8	220	PN 6-16	16	≤0.20
ModulA 40-10 220 RED	7000000078	40	10	220	PN 6-16	16	≤0.20
ModulA 40-12 250 RED	7000000079	40	12	250	PN 6-16	16	≤0.18
ModulA 40-18 250 RED	7000000080	40	18	250	PN 6-16	16	≤0.18
ModulA 50-6 240 RED	7000000081	50	6	240	PN 6-16	16	≤0.19
ModulA 50-6 270 RED	7000000082	50	6	270	PN 6-16	16	≤0.20
ModulA 50-8 240 RED	7000000083	50	8	240	PN 6-16	16	≤0.19
ModulA 50-11 220 RED	7000000075	50	11	220	PN 6-16	16	≤0.18
ModulA 50-12 270 RED	7000000084	50	12	270	PN 6-16	16	≤0.18
ModulA 50-18 270 RED	7000000085	50	18	270	PN 6-16	16	≤0.17
ModulA 65-6 270 RED	7000000086	65	6	270	PN 6-16	16	≤0.18
ModulA 65-8 270 RED	7000000087	65	8	270	PN 6-16	16	≤0.18
ModulA 65-8 340 RED	7000000088	65	8	340	PN 6-16	16	≤0.18
ModulA 65-12 340 RED	7000000089	65	12	340	PN 6-16	16	≤0.17
ModulA 65-15 340 RED	7000000054	65	15	340	PN 6-16	16	≤0.18
ModulA 80-8 360 RED PN6	7000000090	80	8	360	PN 6	6	≤0.17
ModulA 80-8 360 RED PN10/16	7000000091	80	8	360	PN 10/16	16	≤0.17
ModulA 80-12 360 RED PN6	7000000092	80	12	360	PN 6	6	≤0.17
ModulA 80-12 360 RED PN10/16	7000000093	80	12	360	PN 10/16	16	≤0.17
ModulA 100-8 450 RED PN6	7000000094	100	8	450	PN 6	6	≤0.18
ModulA 100-8 450 RED PN10/16	7000000095	100	8	450	PN 10/16	16	≤0.18
ModulA 100-12 450 RED PN6	7000000096	100	12	450	PN 6	6	≤0.18
ModulA 100-12 450 RED PN10/16	7000000097	100	12	450	PN 10/16	16	≤0.18



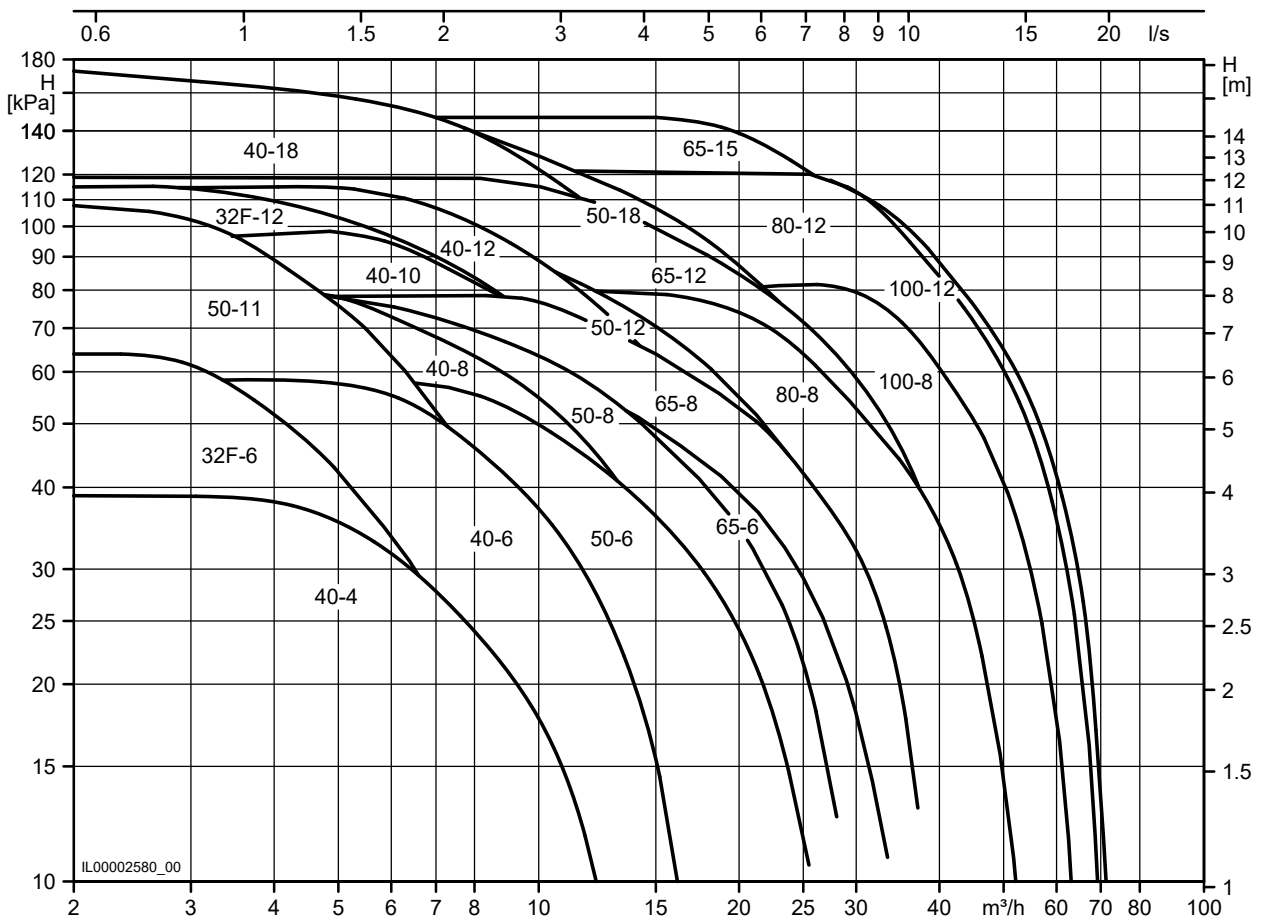
**Order reference**

**ModulA (-D) 32 (F) -6 220 RED**

- Series
- Single pump
- Twin pump (-D)
- Nominal width (DN) [mm]
- Pipeline connection  
Flange (F)
- Discharge head max. [m]
- Installation height [mm]
- Field of application  
Heating (RED)  
Cold water (GREEN)  
Service water (BLUE)



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## ModulA 32F-6 220 RED

Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6
Operating pressure max.	6 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	7.0 kg
Gross weight	8.4 kg

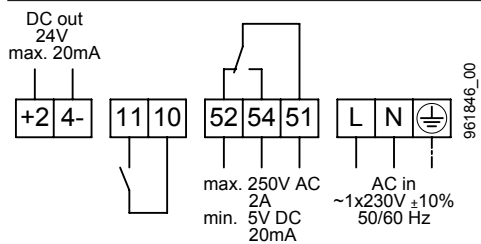
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-102 W
Nominal current	0.08-0.73 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

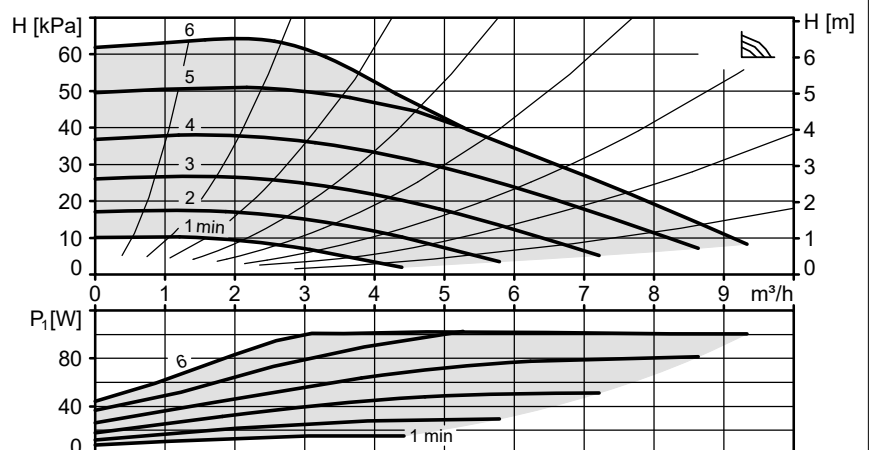
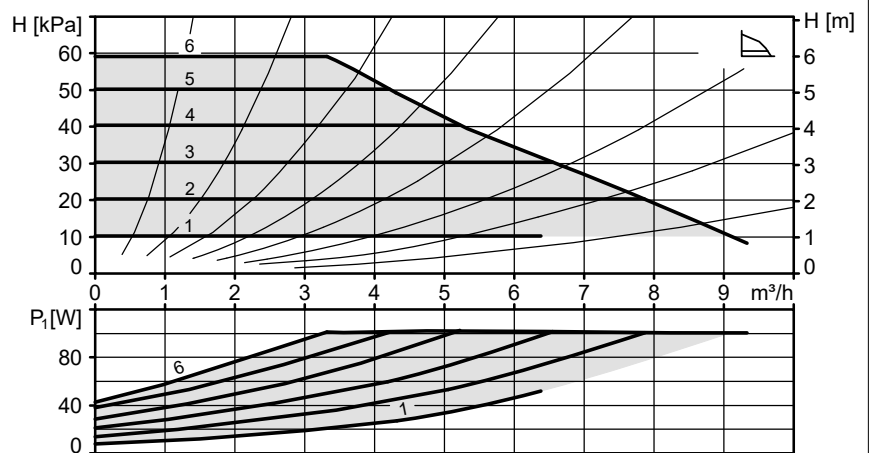
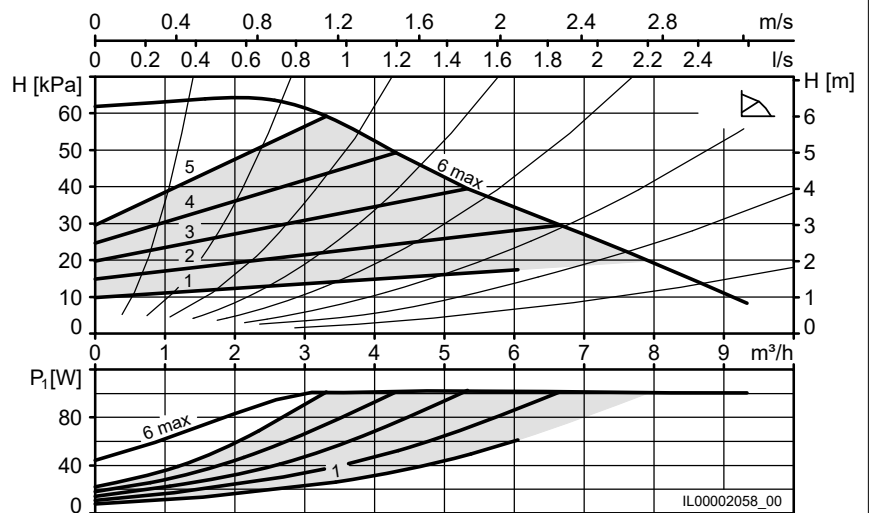
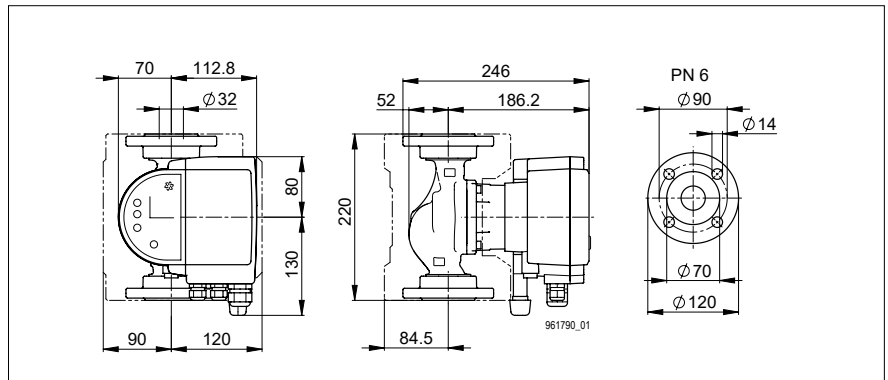
### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32F-6 220 RED	7000000072



## ModuA 32F-12 220 RED

Version	T2 M
Nominal width	DN 32
Flow head H max.	12 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	15.3 kg
Gross weight	19.4 kg

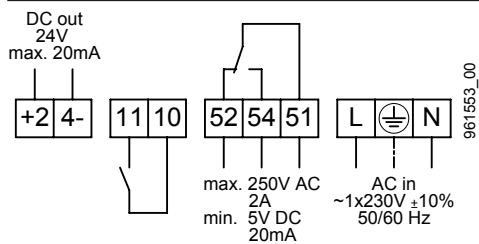
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	15-329 W
Nominal current	0.17-1.51 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

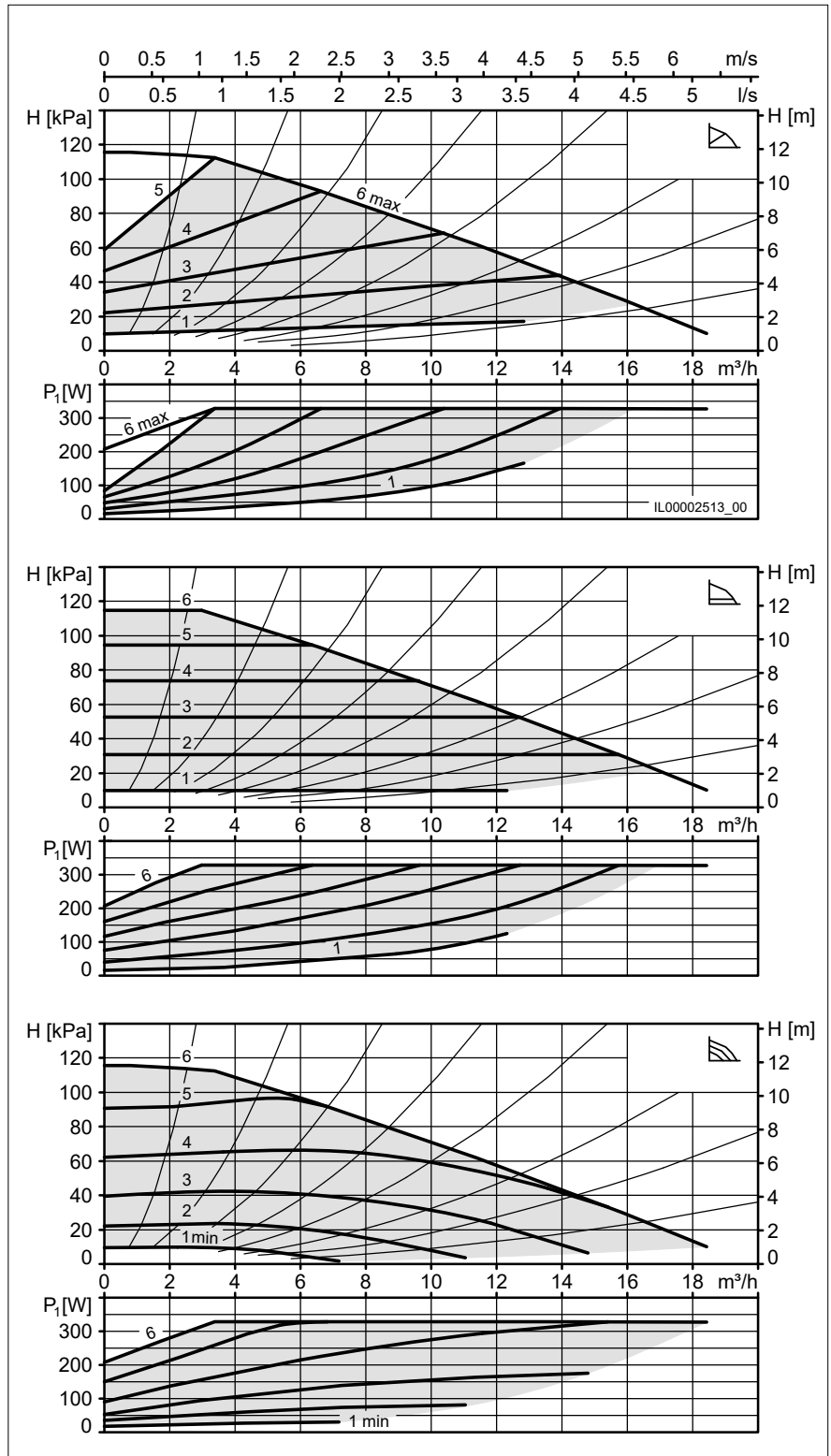
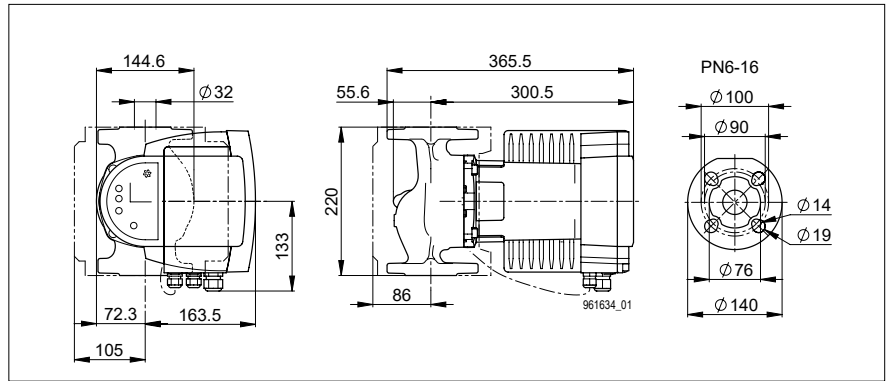
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuA 32F-12 220 RED	7000000076



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## Modula 40-4 220 RED

Version	T2 S
Nominal width	DN 40
Flow head H max.	4 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	9.2 kg
Gross weight	10.5 kg

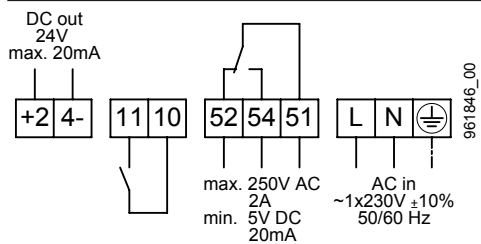
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	11-97 W
Nominal current	0.11-0.74 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

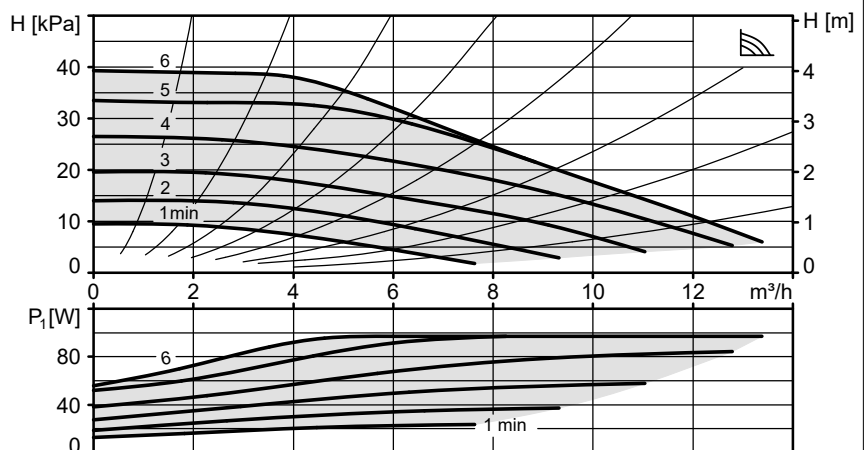
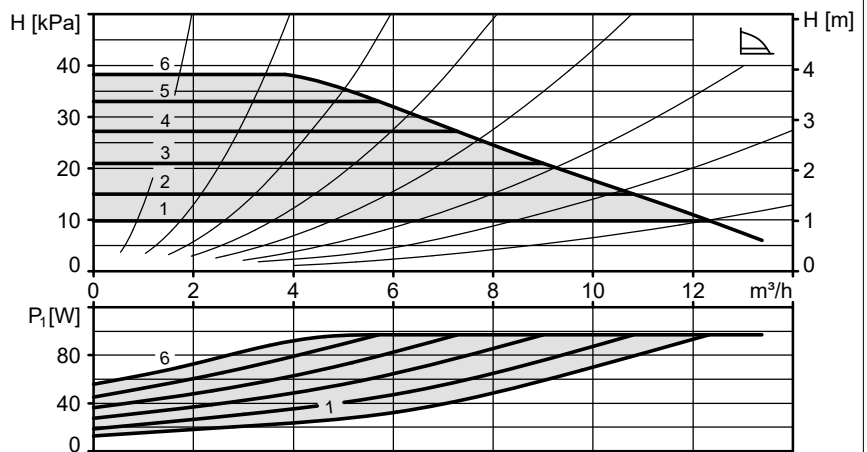
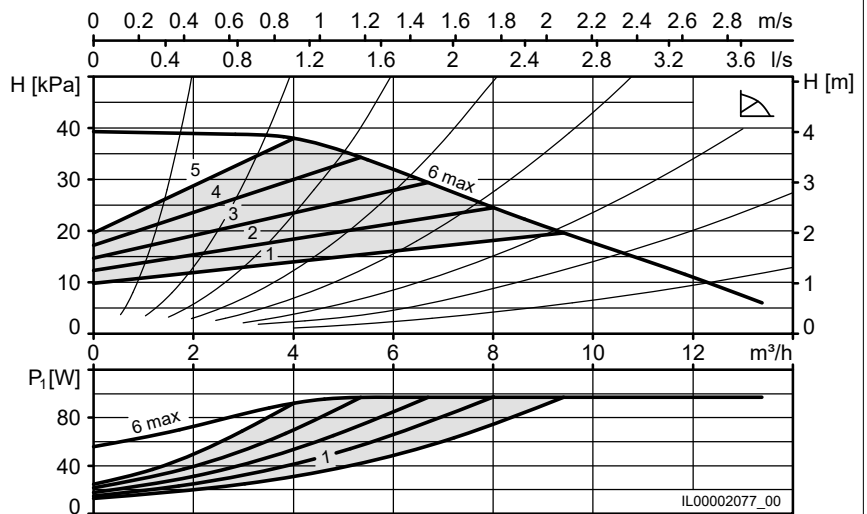
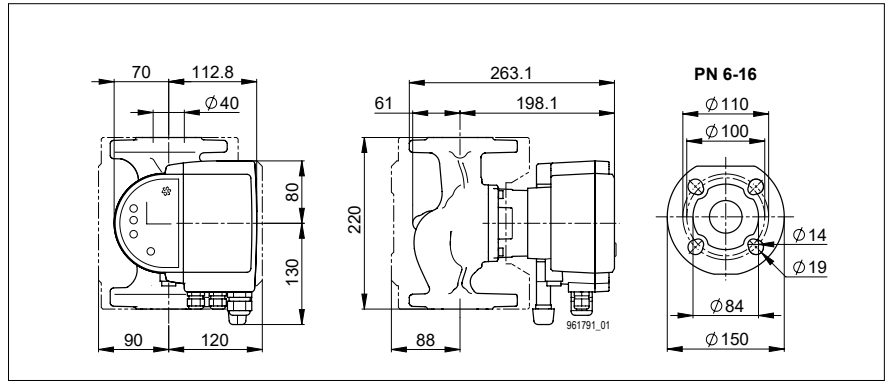
### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-4 220 RED	7000000073



## Modula 40-6 220 RED

Version	T2 S
Nominal width	DN 40
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	9.2 kg
Gross weight	10.5 kg

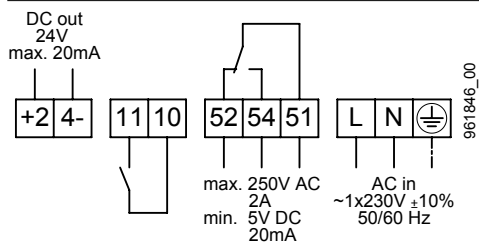
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	11-185 W
Nominal current	0.11-1.47 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

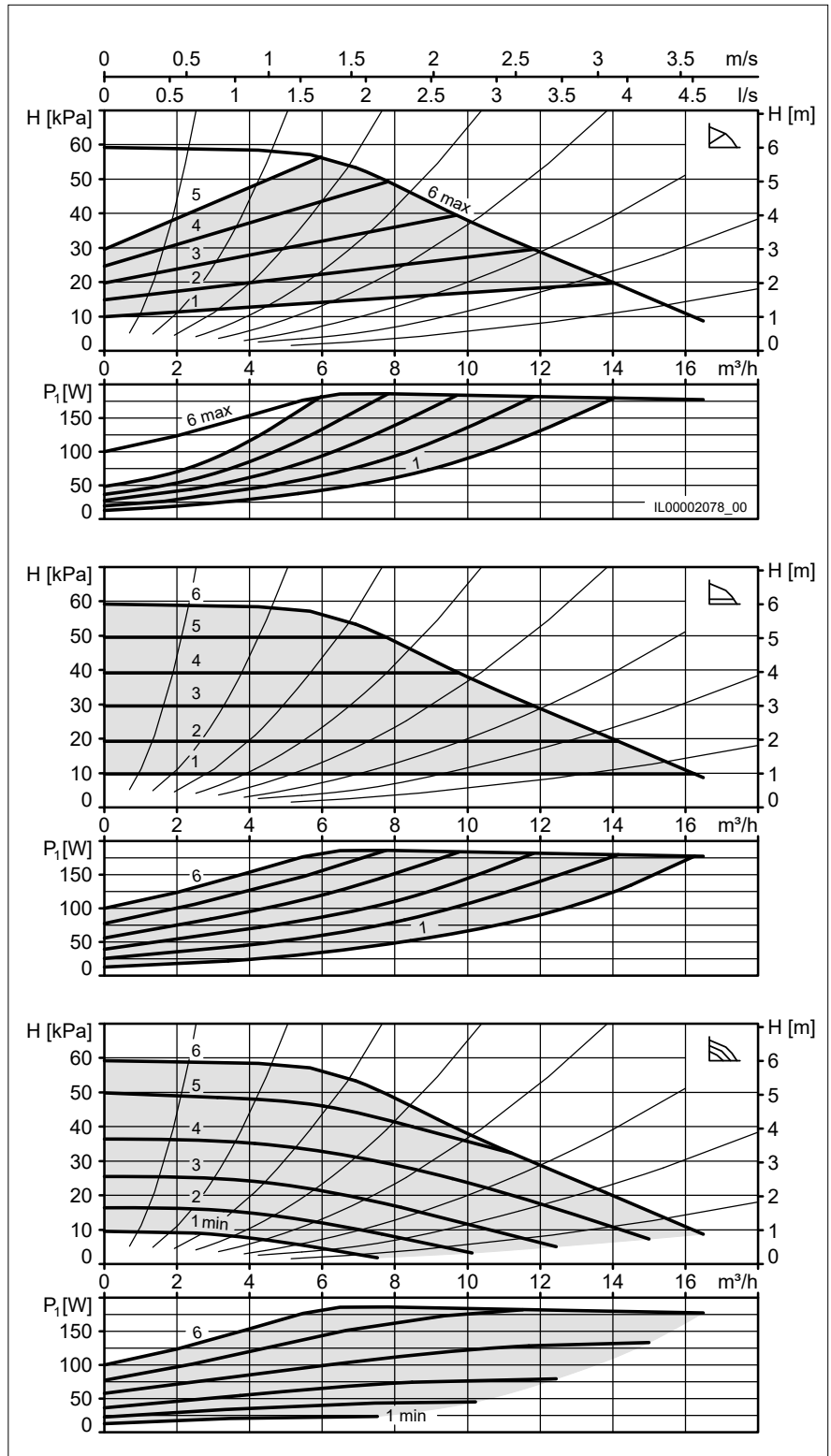
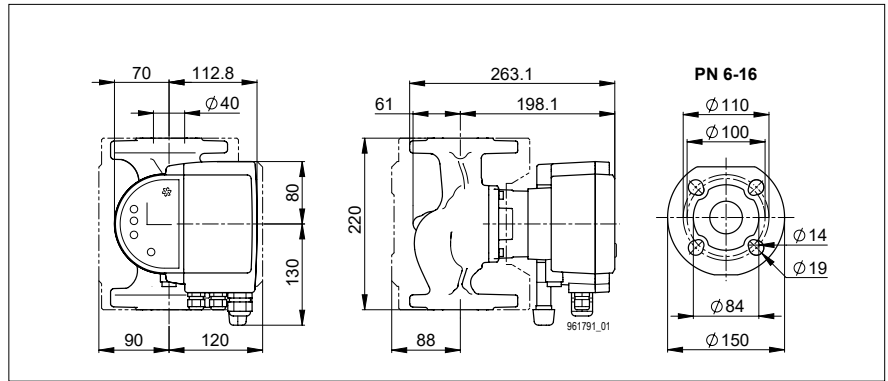
### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-6 220 RED	7000000074



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## Modula 40-8 220 RED

Version	T2 M
Nominal width	DN 40
Flow head H max.	8 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	16.3 kg
Gross weight	19.3 kg

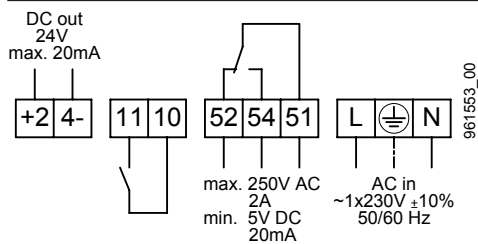
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	18-264 W
Nominal current	0.19-1.23 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

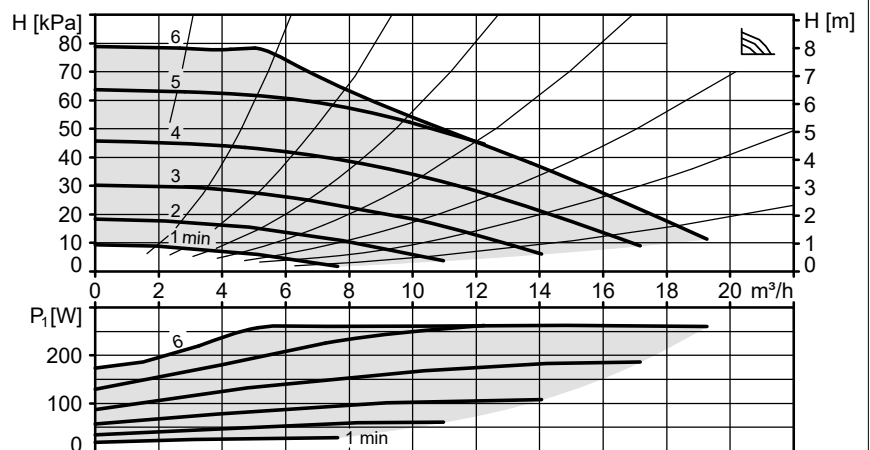
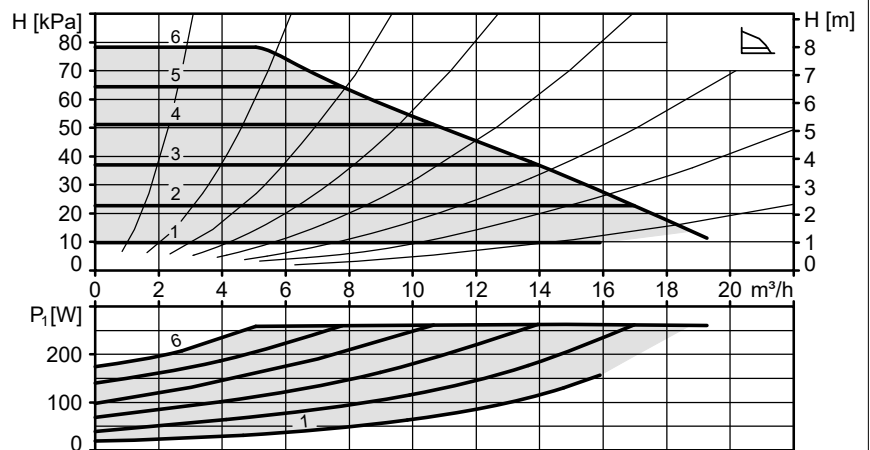
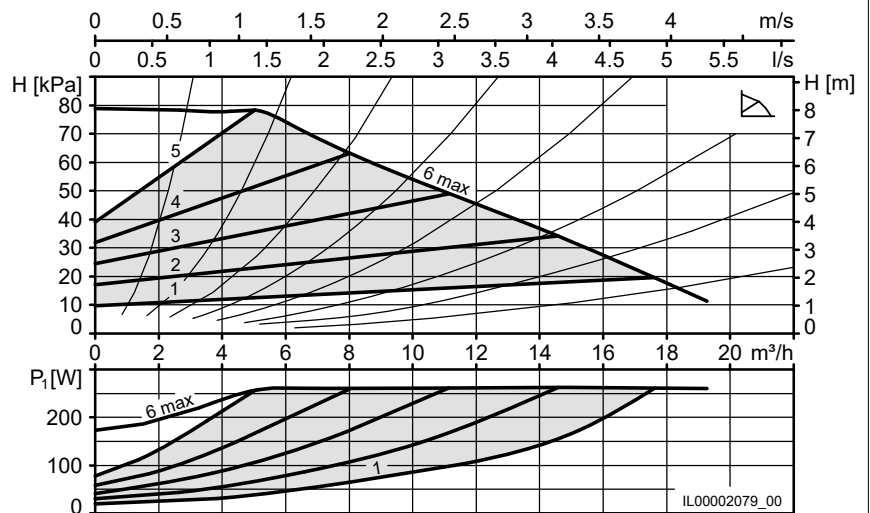
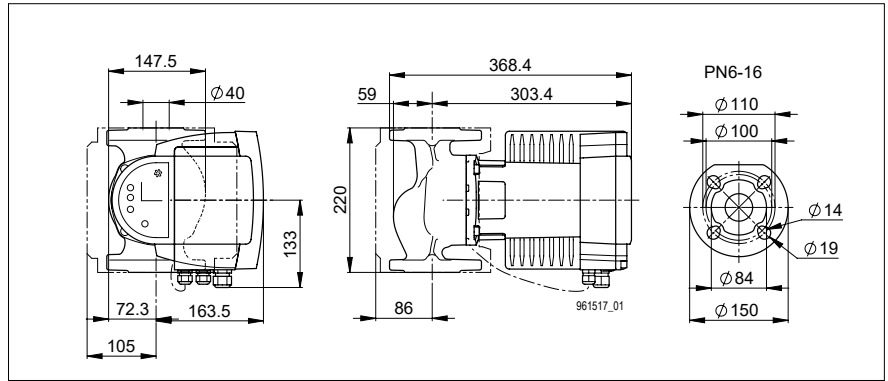
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-8 220 RED	7000000077



## Modula 40-10 220 RED

Version	T2 M
Nominal width	DN 40
Flow head H max.	10 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	16.3 kg
Gross weight	20.3 kg

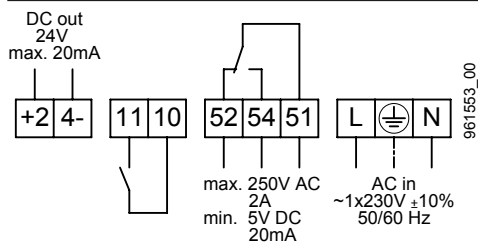
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	18-352 W
Nominal current	0.18-1.60 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

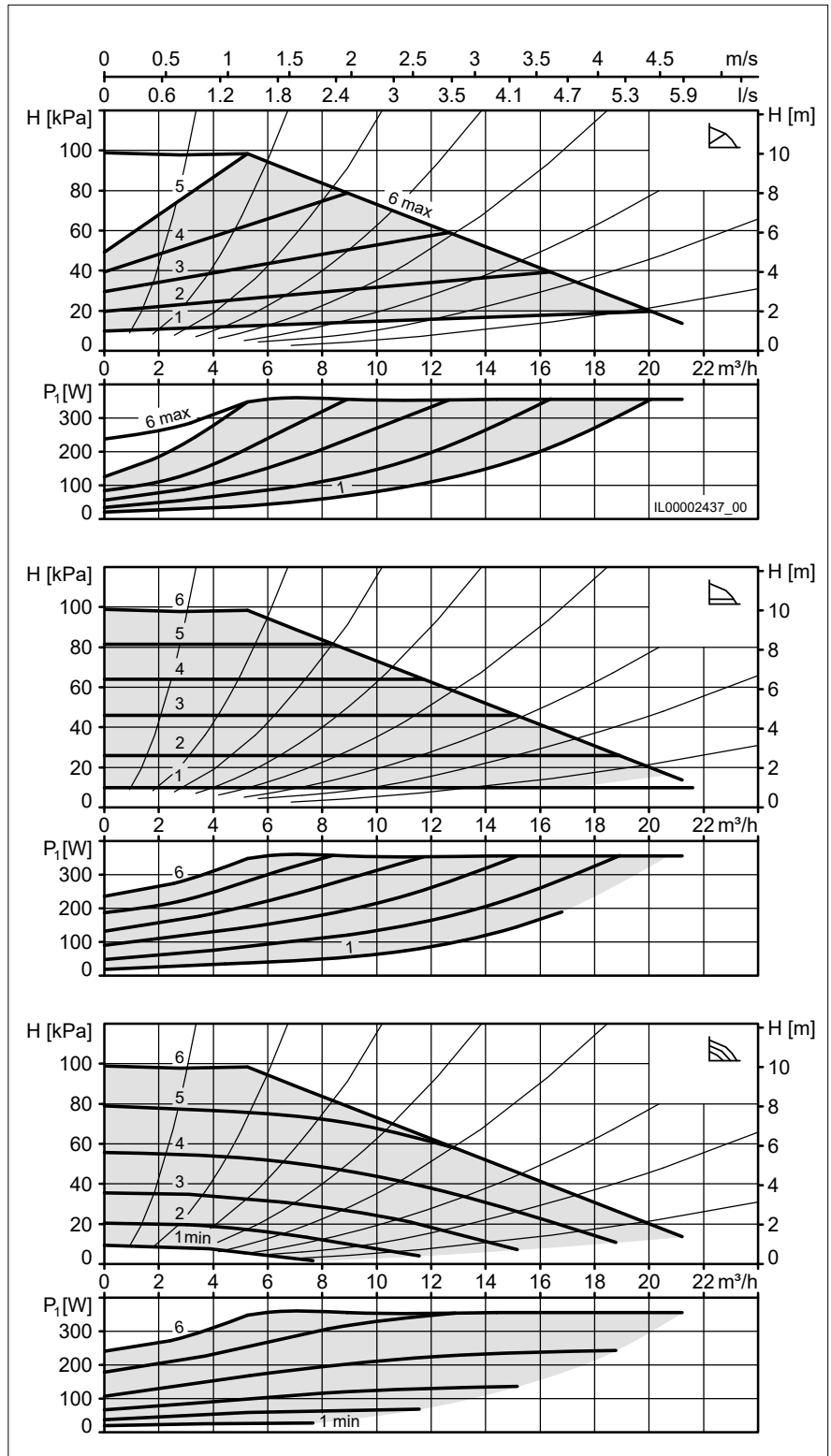
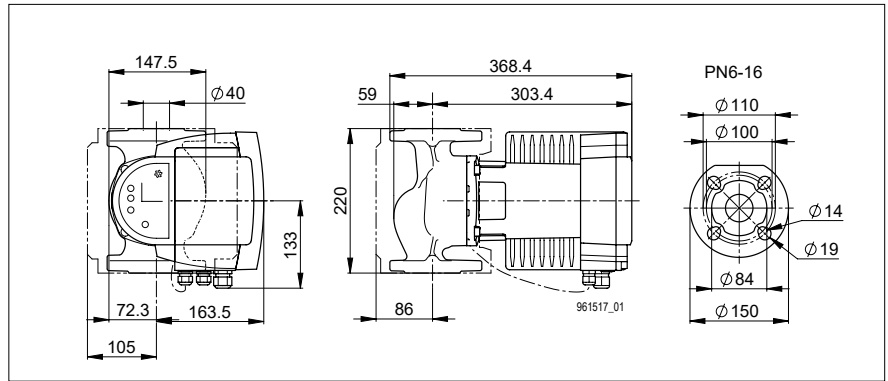
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-10 220 RED	7000000078



Heizung



## Modula 40-12 250 RED

Version	T2 M
Nominal width	DN 40
Flow head H max.	12 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	16.1 kg
Gross weight	19.5 kg

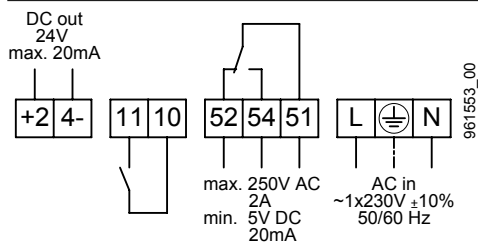
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	16-423 W
Nominal current	0.17-1.93 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

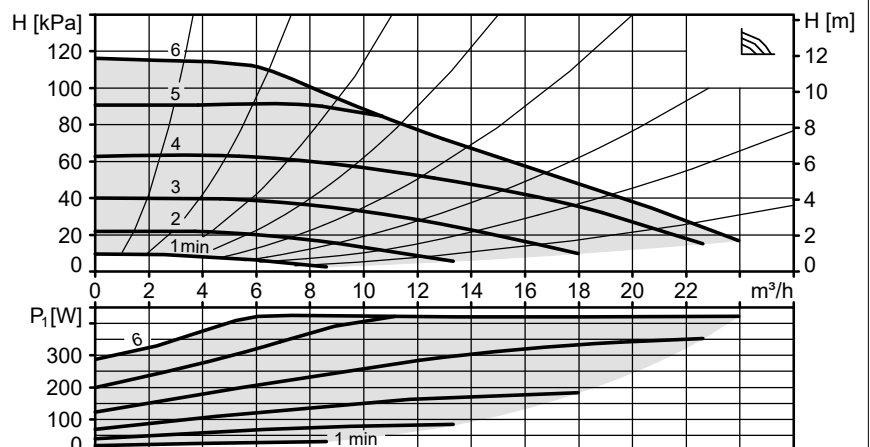
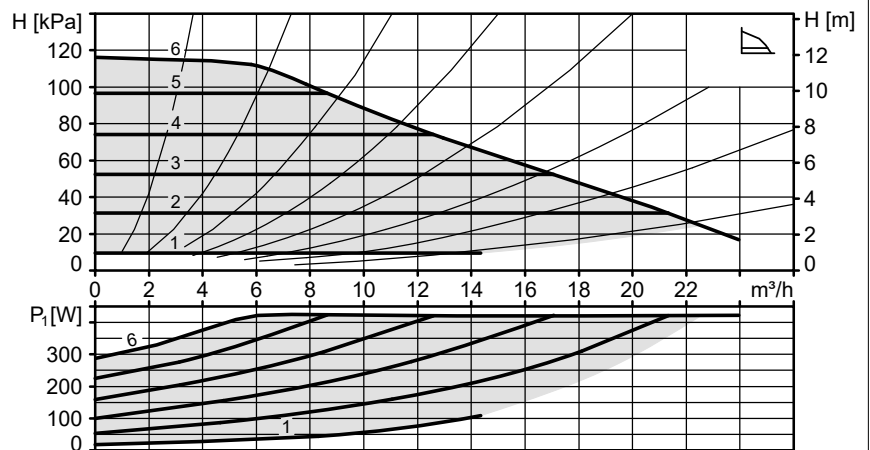
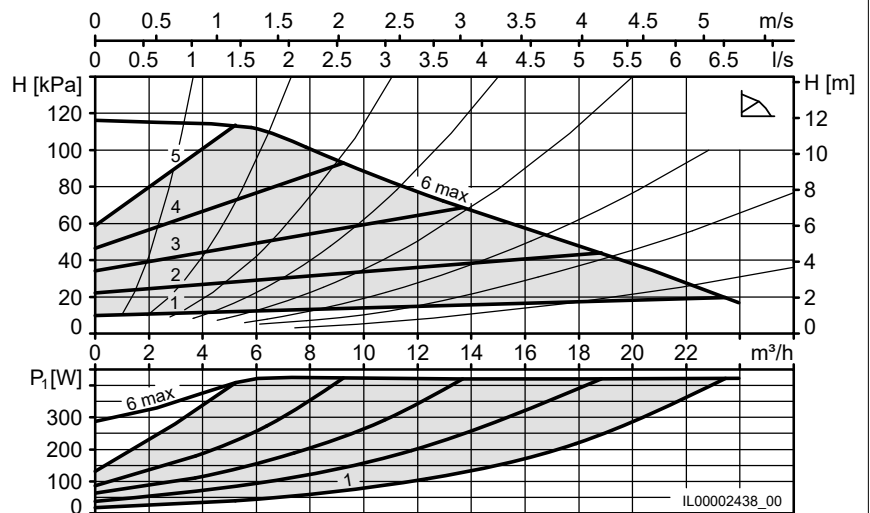
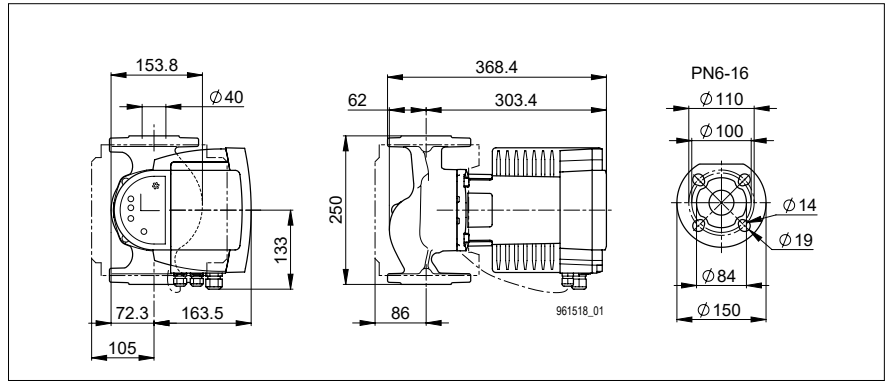
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-12 250 RED	7000000079





## ModuA 40-18 250 RED

Version	T2 M
Nominal width	DN 40
Flow head H max.	18 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	16.1 kg
Gross weight	19.5 kg

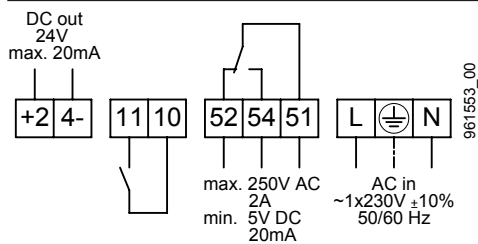
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	16-600 W
Nominal current	0.17-2.70 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

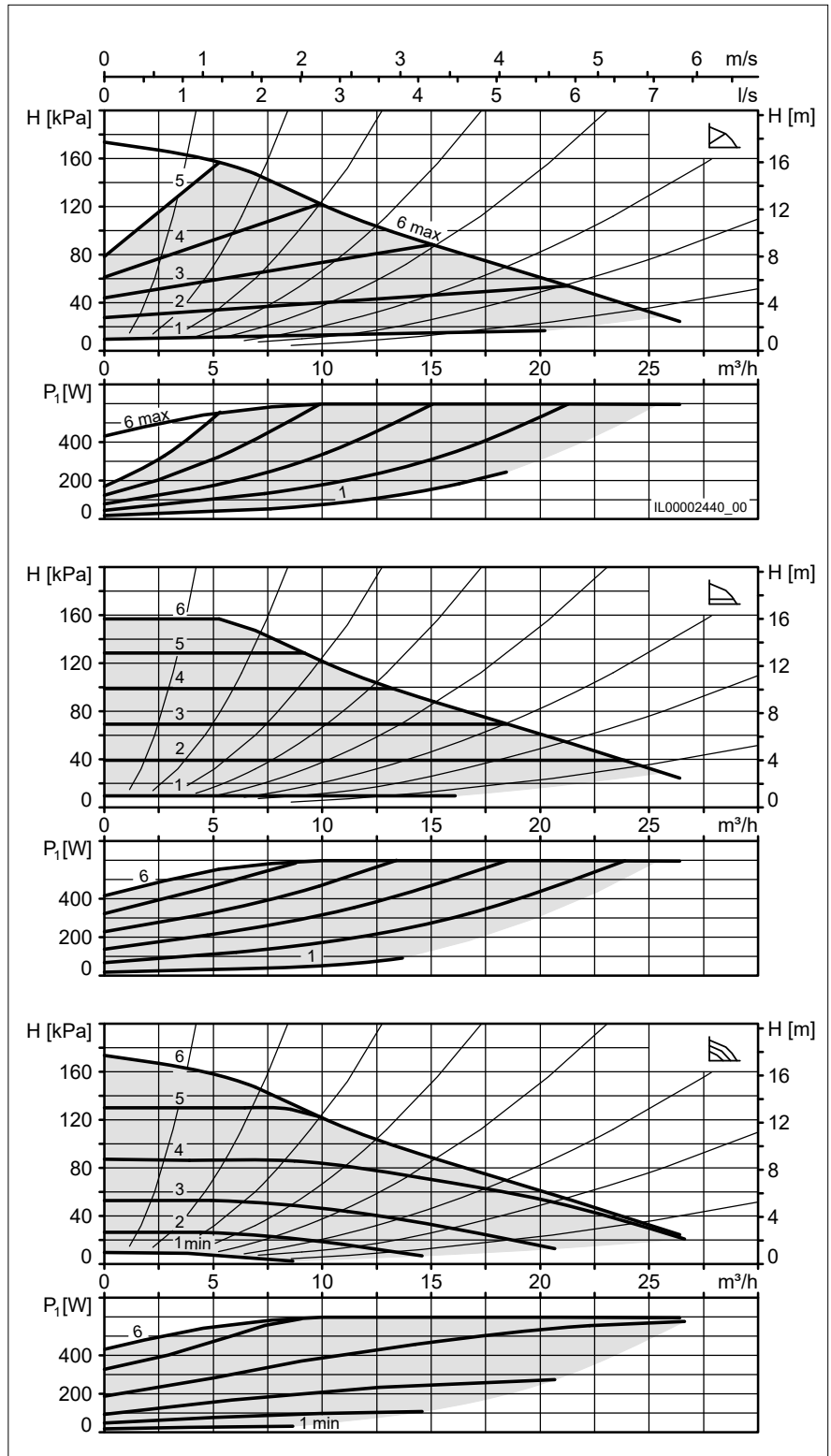
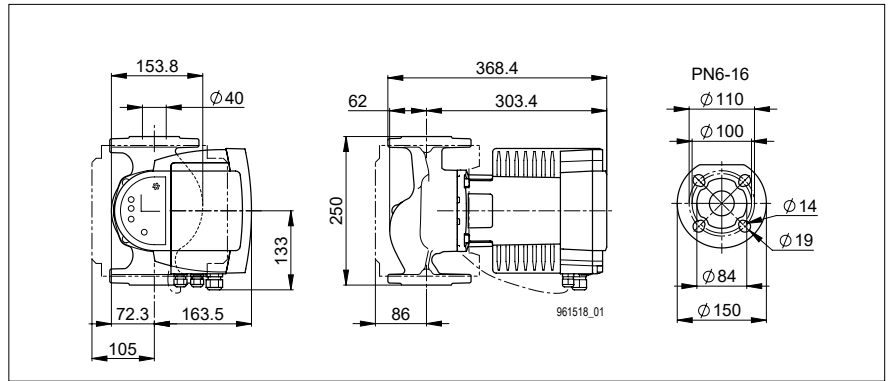
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuA 40-18 250 RED	7000000080



Heizung

## Modula 50-6 240 RED

Version	T2 M
Nominal width	DN 50
Flow head H max.	6 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	17.6 kg
Gross weight	21.5 kg

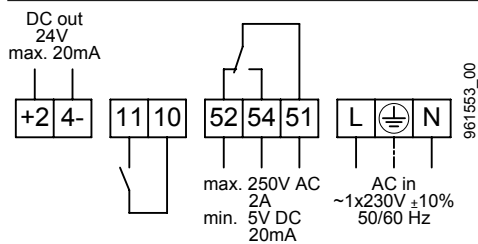
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-249 W
Nominal current	0.20-1.15 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

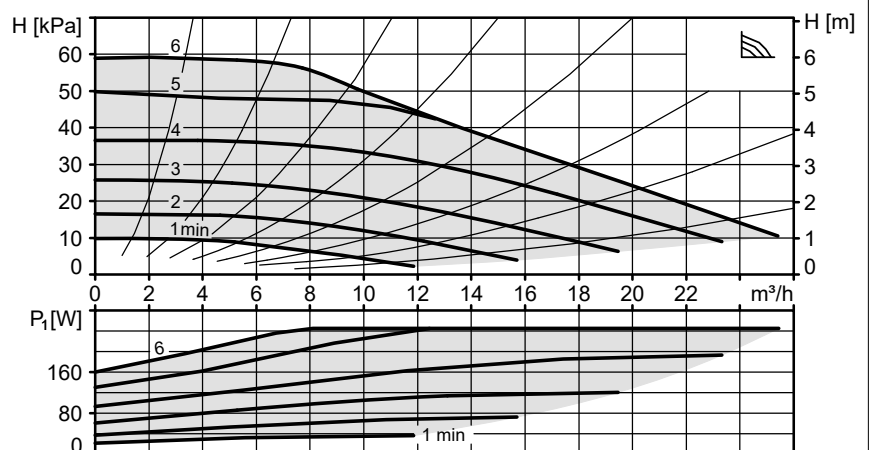
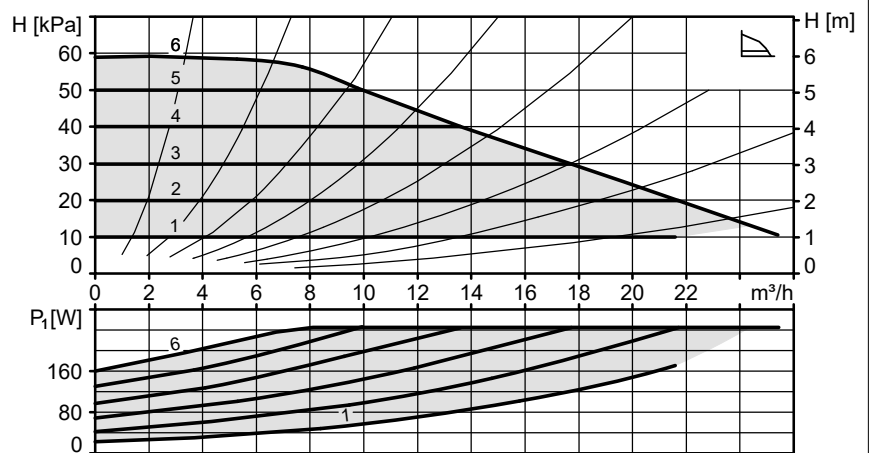
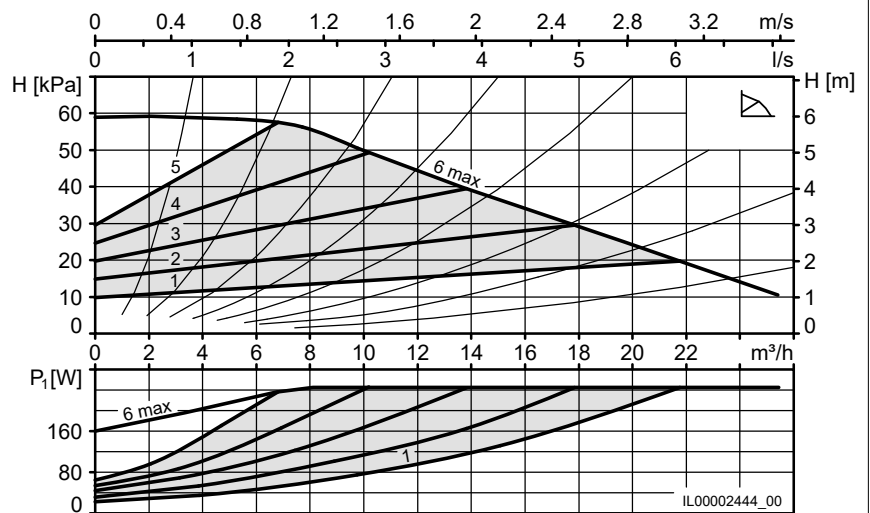
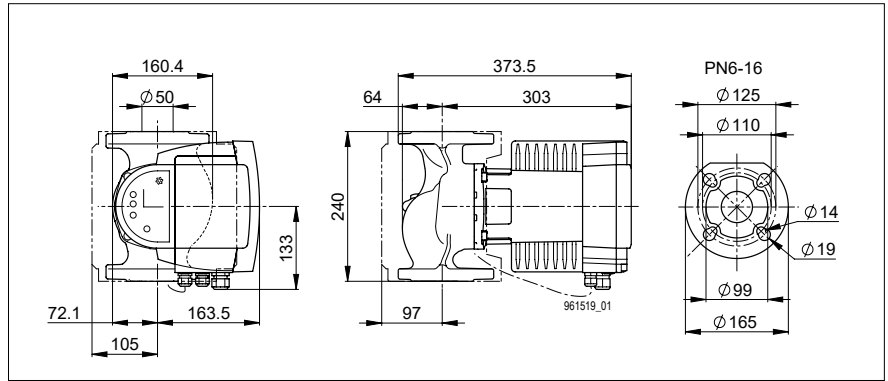
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 50-6 240 RED	7000000081



## Modula 50-6 270 RED

Version	T2 M
Nominal width	DN 50
Flow head H max.	6 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.1 kg
Gross weight	21.5 kg

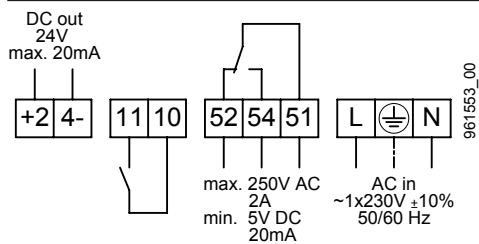
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-247 W
Nominal current	0.20-1.16 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

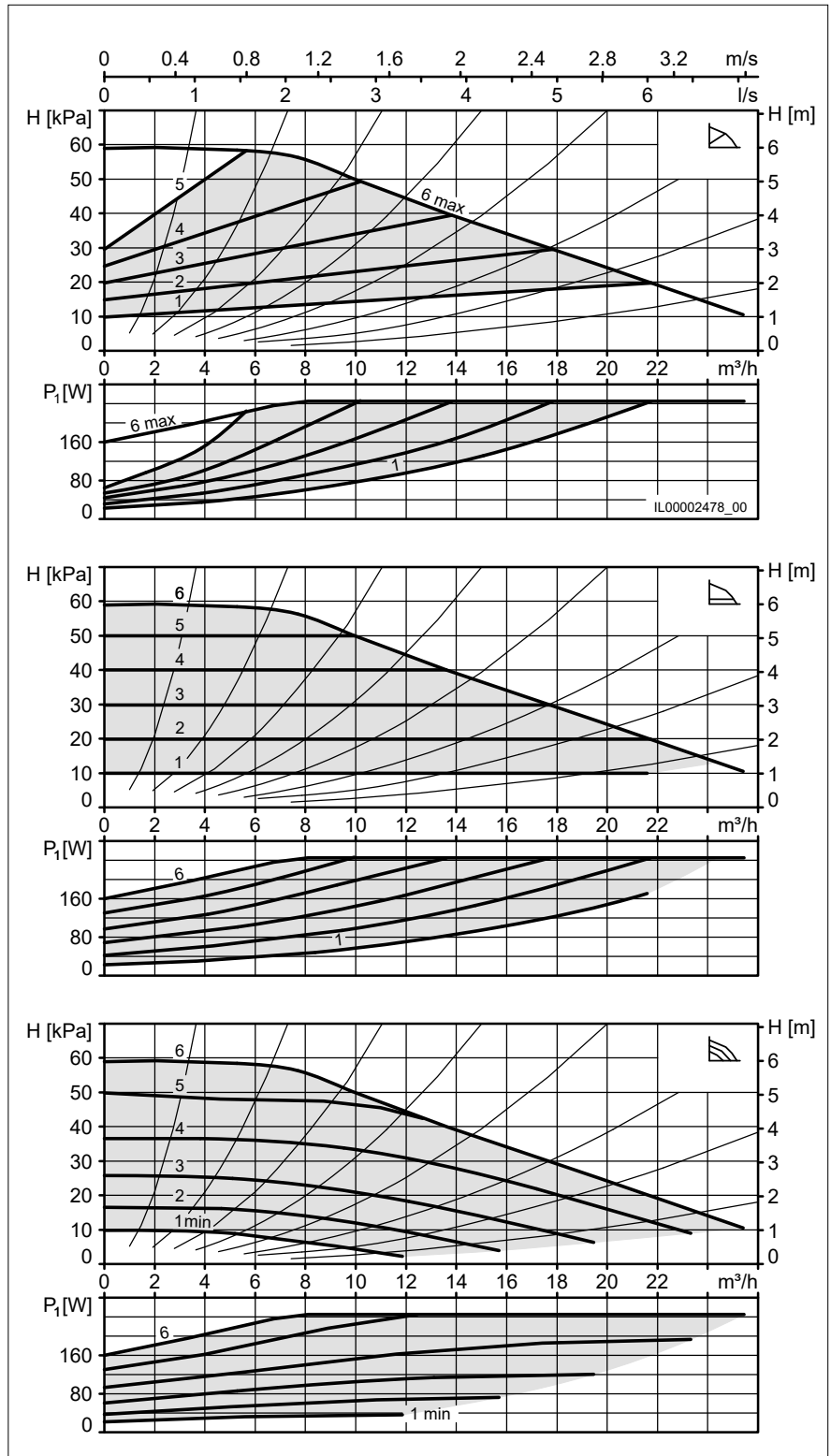
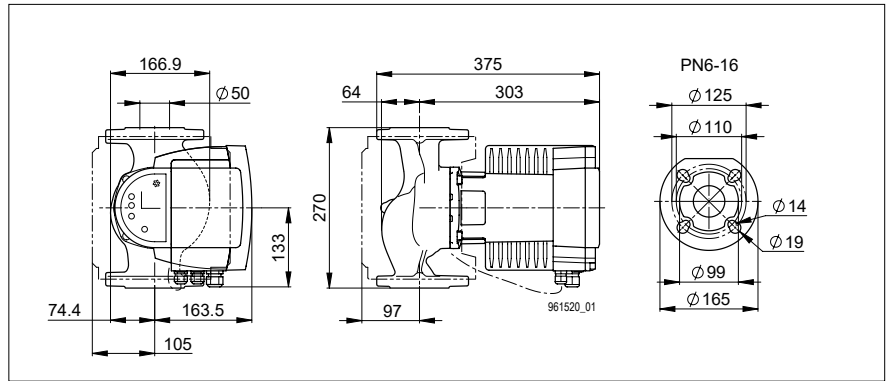
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 50-6 270 RED	7000000082



Heizung

## ModuLA 50-8 240 RED

Version	T2 M
Nominal width	DN 50
Flow head H max.	8 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	17.6 kg
Gross weight	21.5 kg

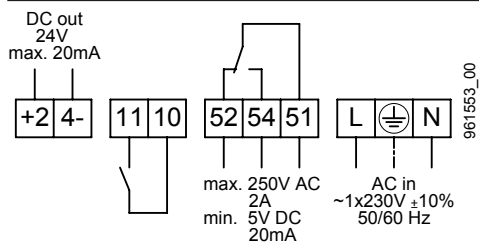
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-326 W
Nominal current	0.20-1.49 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

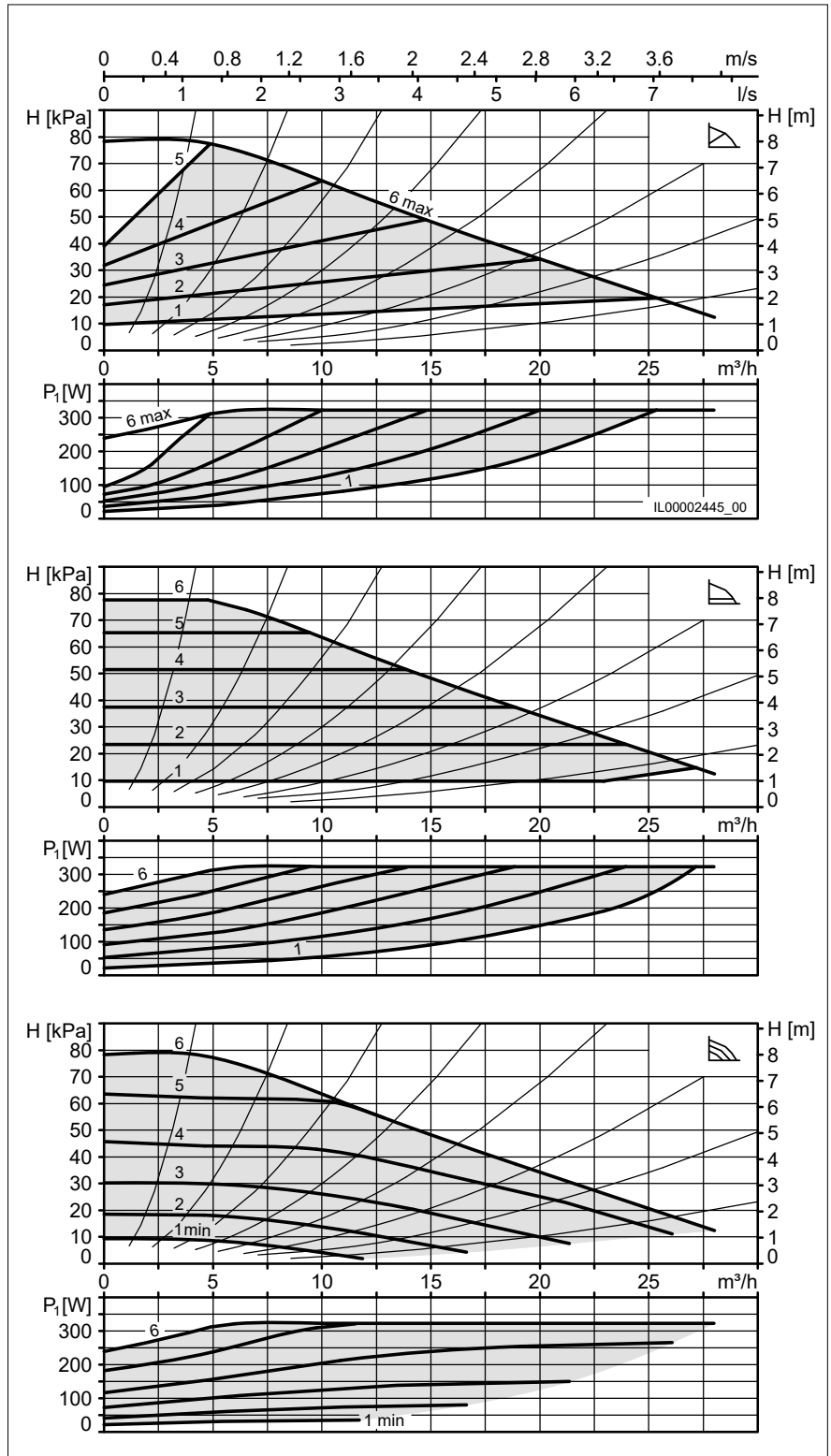
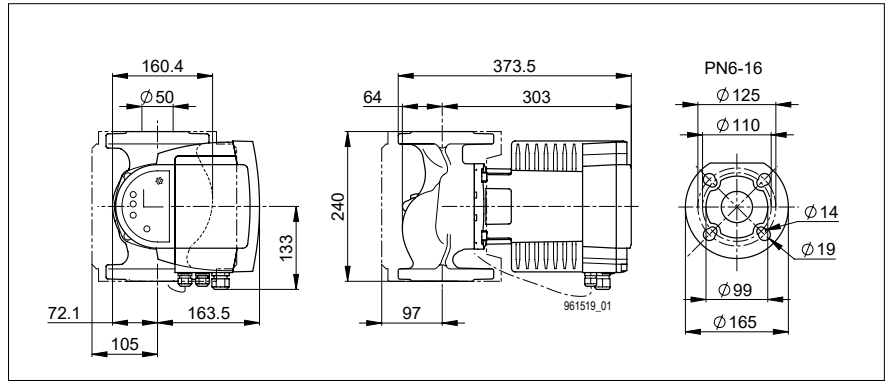
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuLA 50-8 240 RED	7000000083



## ModuA 50-11 220 RED

Version	T2 S
Nominal width	DN 50
Flow head H max.	11 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	8.8 kg
Gross weight	10.5 kg

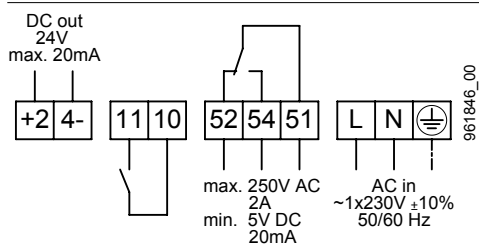
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-182 W
Nominal current	0.08-1.39 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

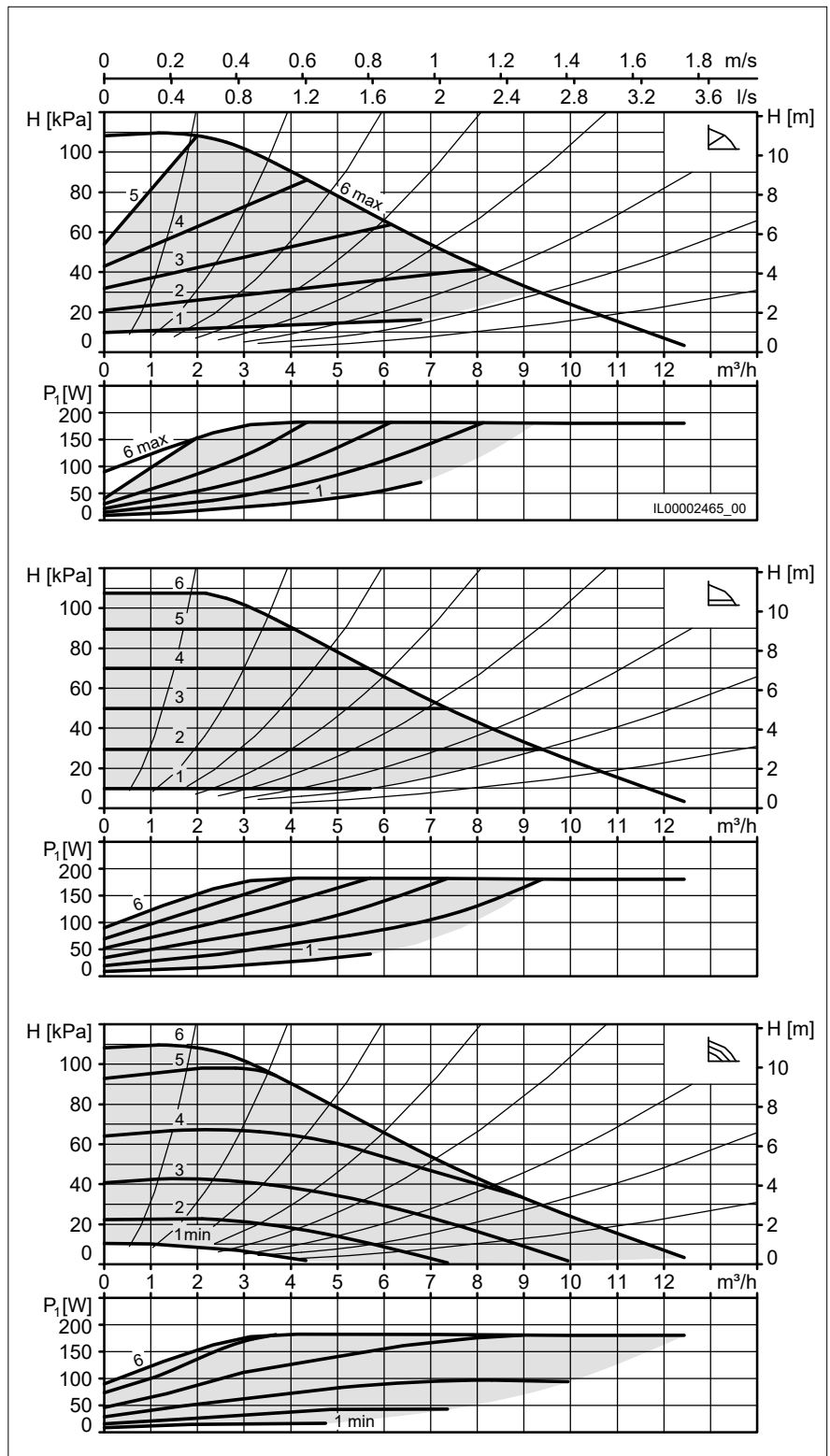
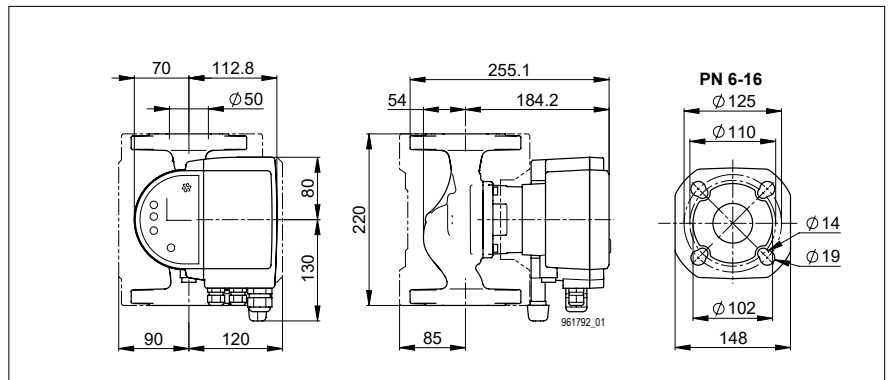
### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

Type	Art. no.
ModuA 50-11 220 RED	7000000075



Heizung

## ModuA 50-12 270 RED

Version	T2 M
Nominal width	DN 50
Flow head H max.	12 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.1 kg
Gross weight	21.5 kg

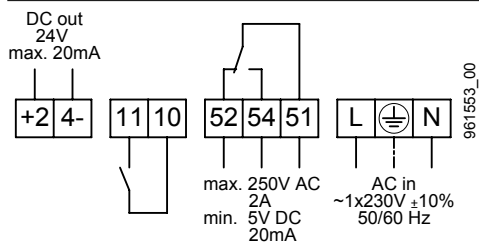
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-488 W
Nominal current	0.20-2.23 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

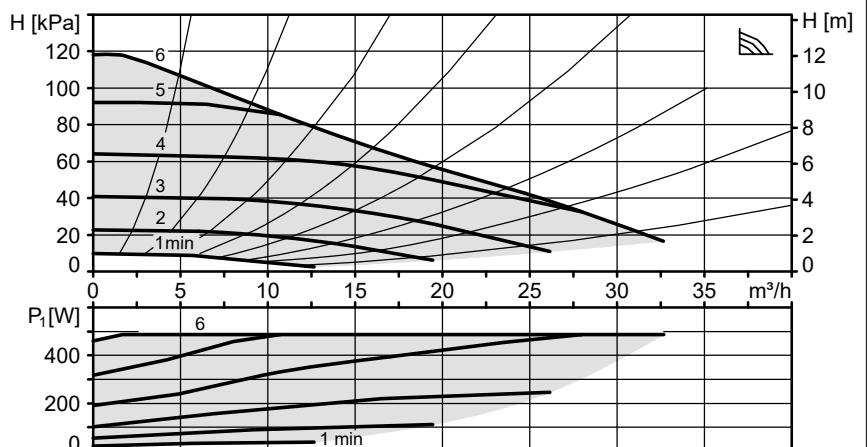
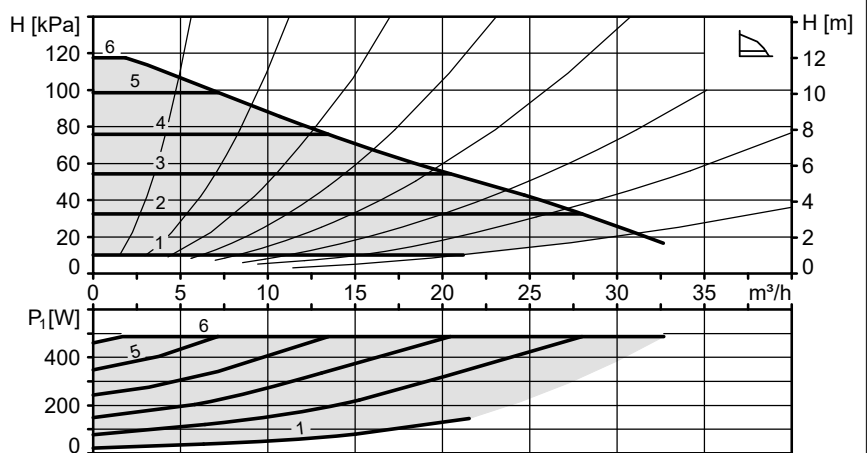
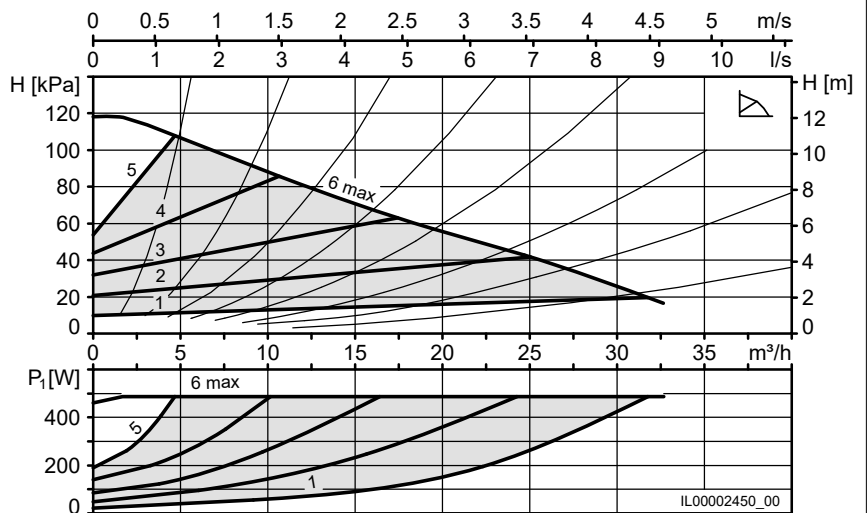
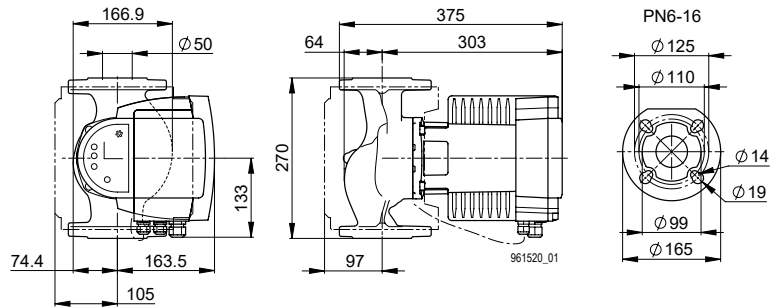
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuA 50-12 270 RED	7000000084



## Modula 50-18 270 RED

Version	T2 M
Nominal width	DN 50
Flow head H max.	18 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.8 kg
Gross weight	22.5 kg

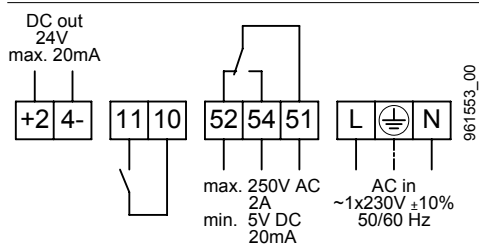
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-767 W
Nominal current	0.24-3.44 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

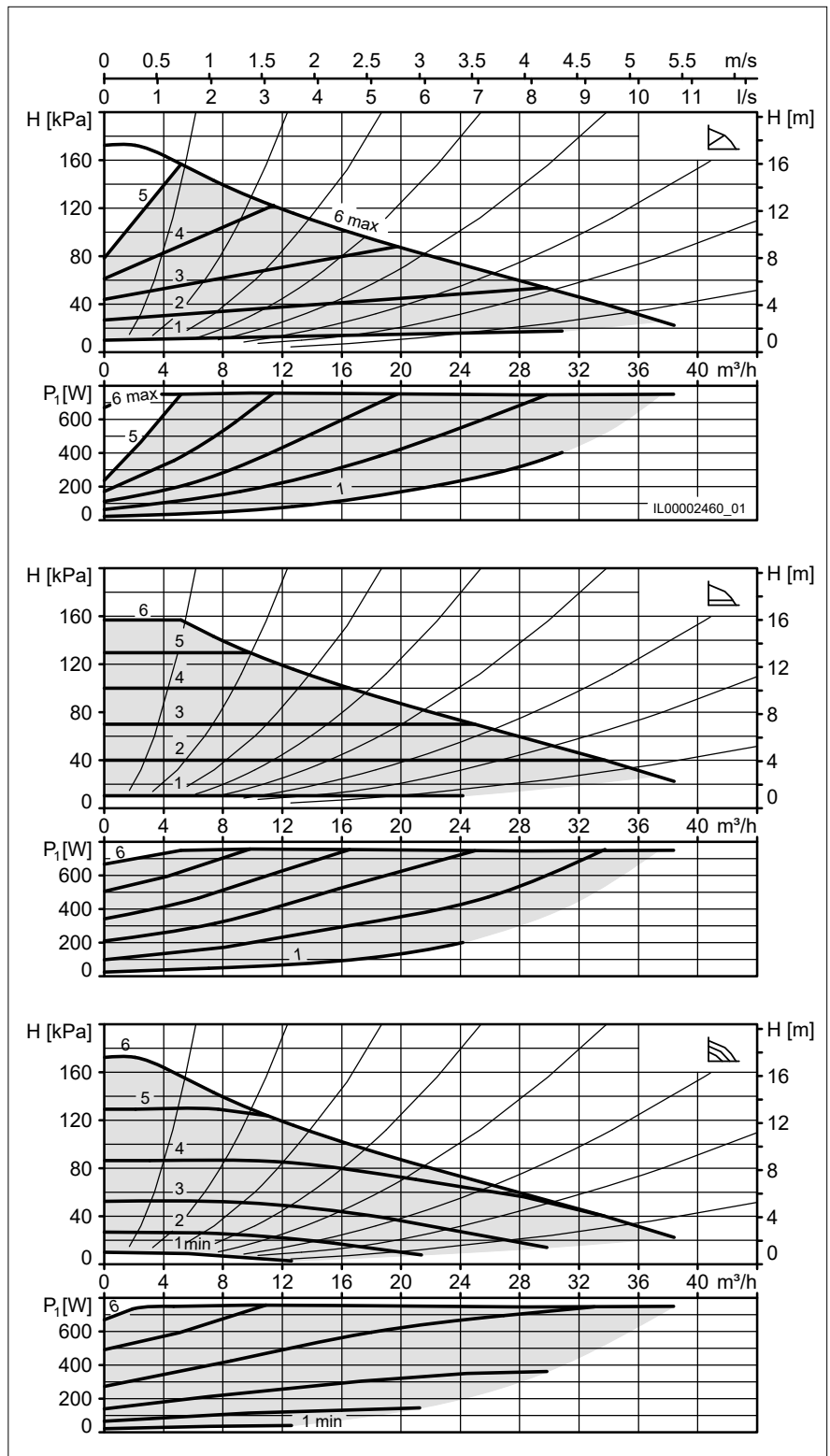
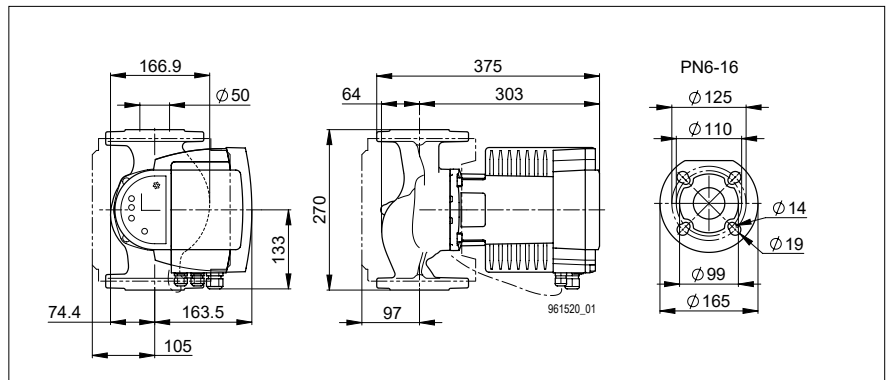
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 50-18 270 RED	7000000085



Heizung

## Modula 65-6 270 RED

Version	T2 M
Nominal width	DN 65
Flow head H max.	6 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	20.6 kg
Gross weight	25.5 kg

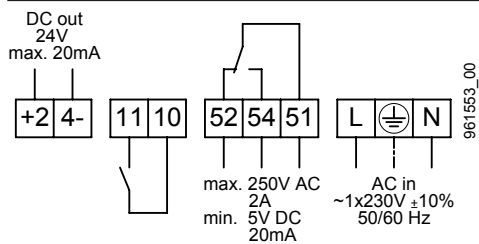
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	23-355 W
Nominal current	0.22-1.58 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

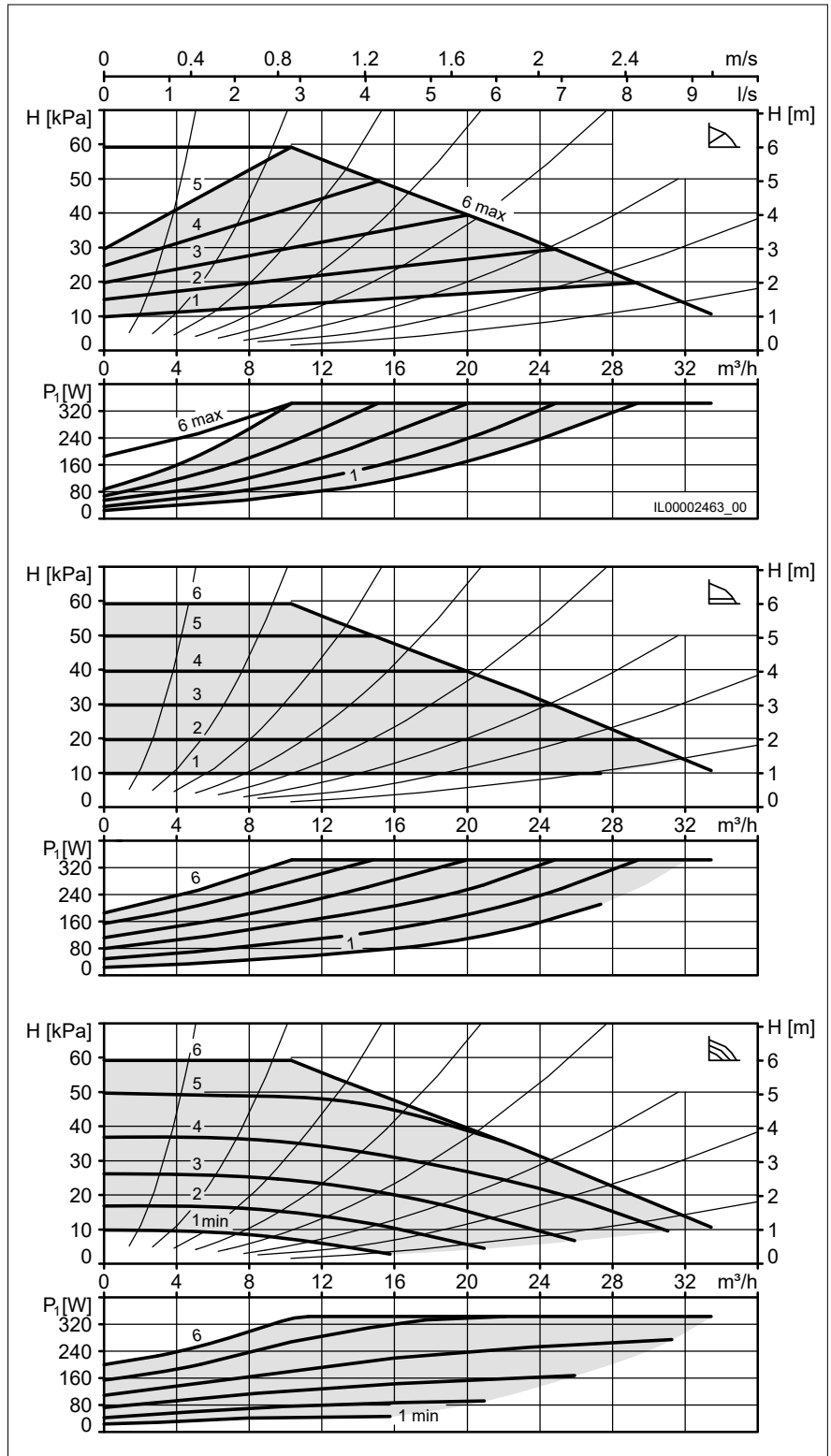
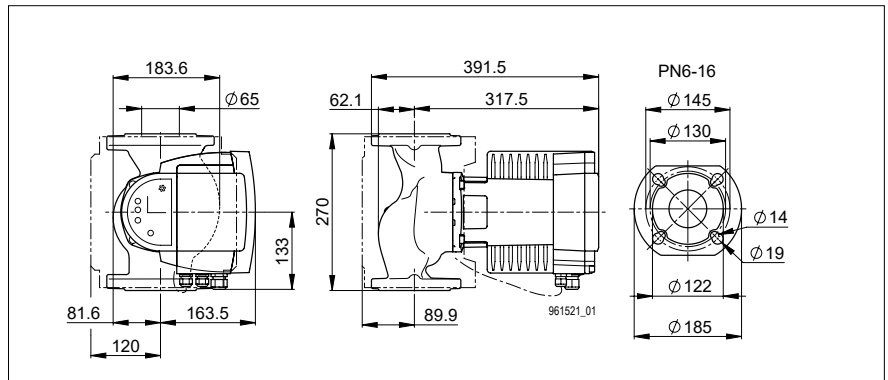
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 65-6 270 RED	7000000086





## Modula 65-8 270 RED

Version	T2 M
Nominal width	DN 65
Flow head H max.	8 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	20.6 kg
Gross weight	25.5 kg

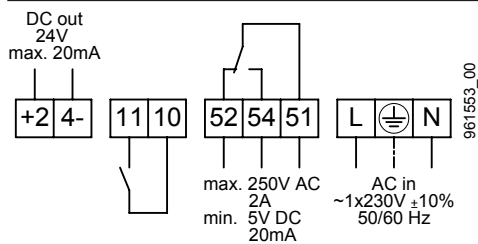
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	24-450 W
Nominal current	0.23-2.05 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

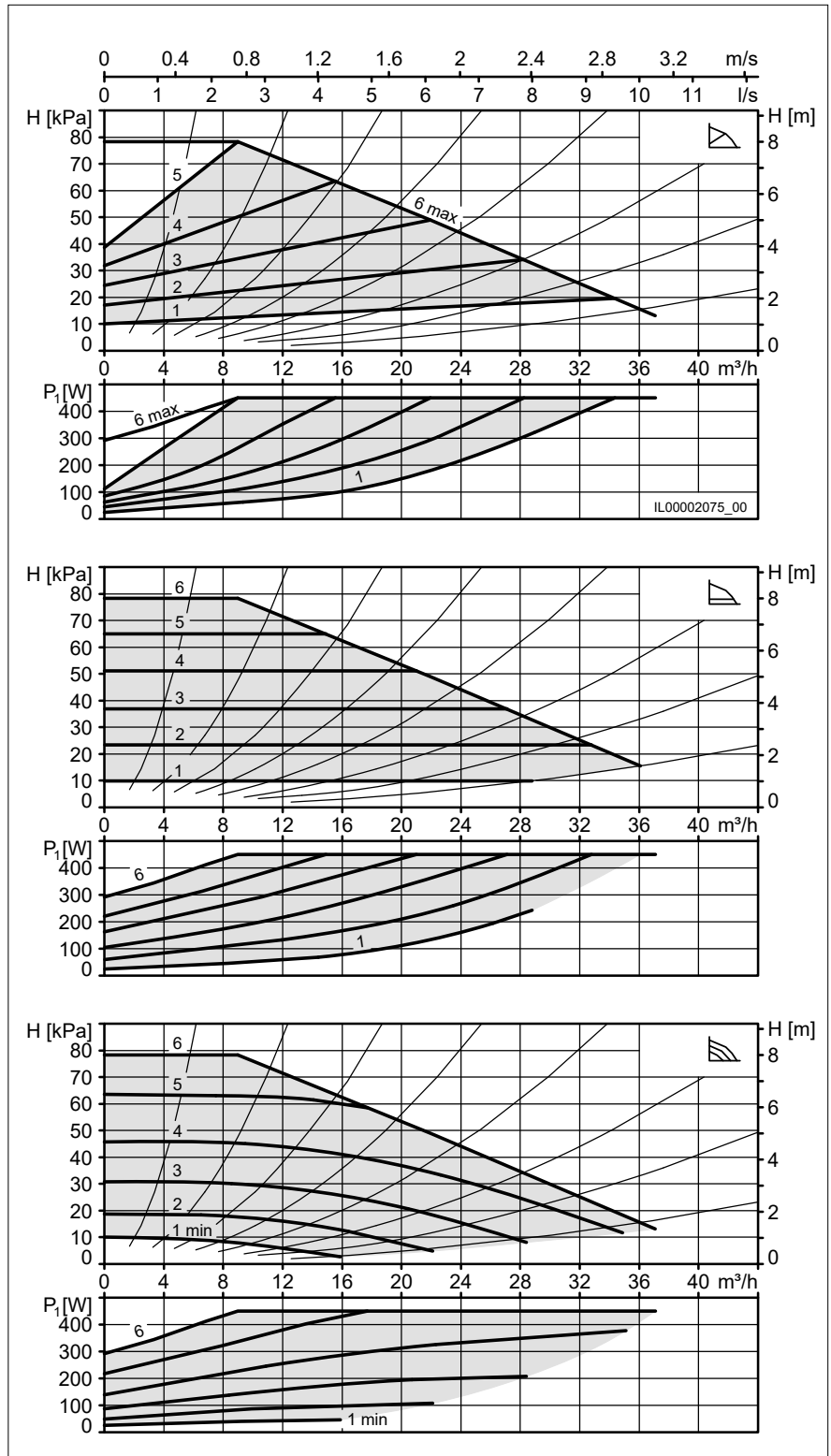
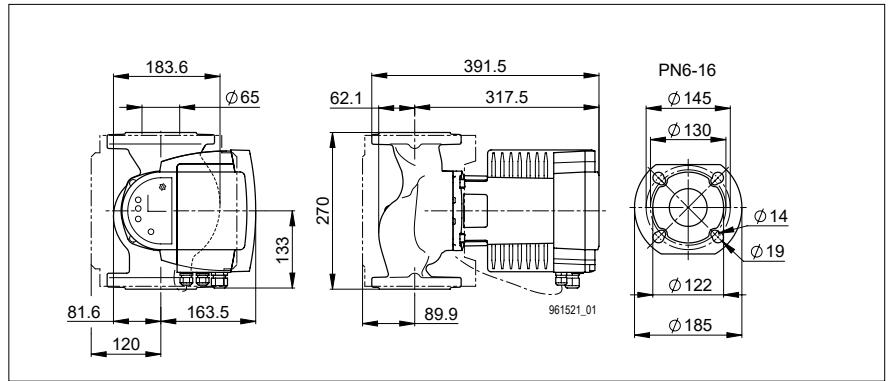
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 65-8 270 RED	7000000087



Heizung

## ModuA 65-8 340 RED

Version	T2 M
Nominal width	DN 65
Flow head H max.	8 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	21.5 kg
Gross weight	26 kg

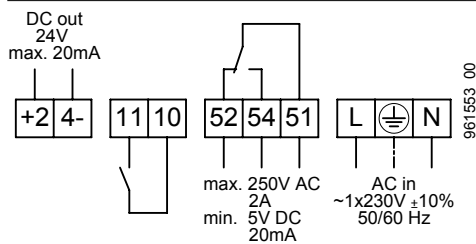
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	24-450 W
Nominal current	0.24-2.06 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

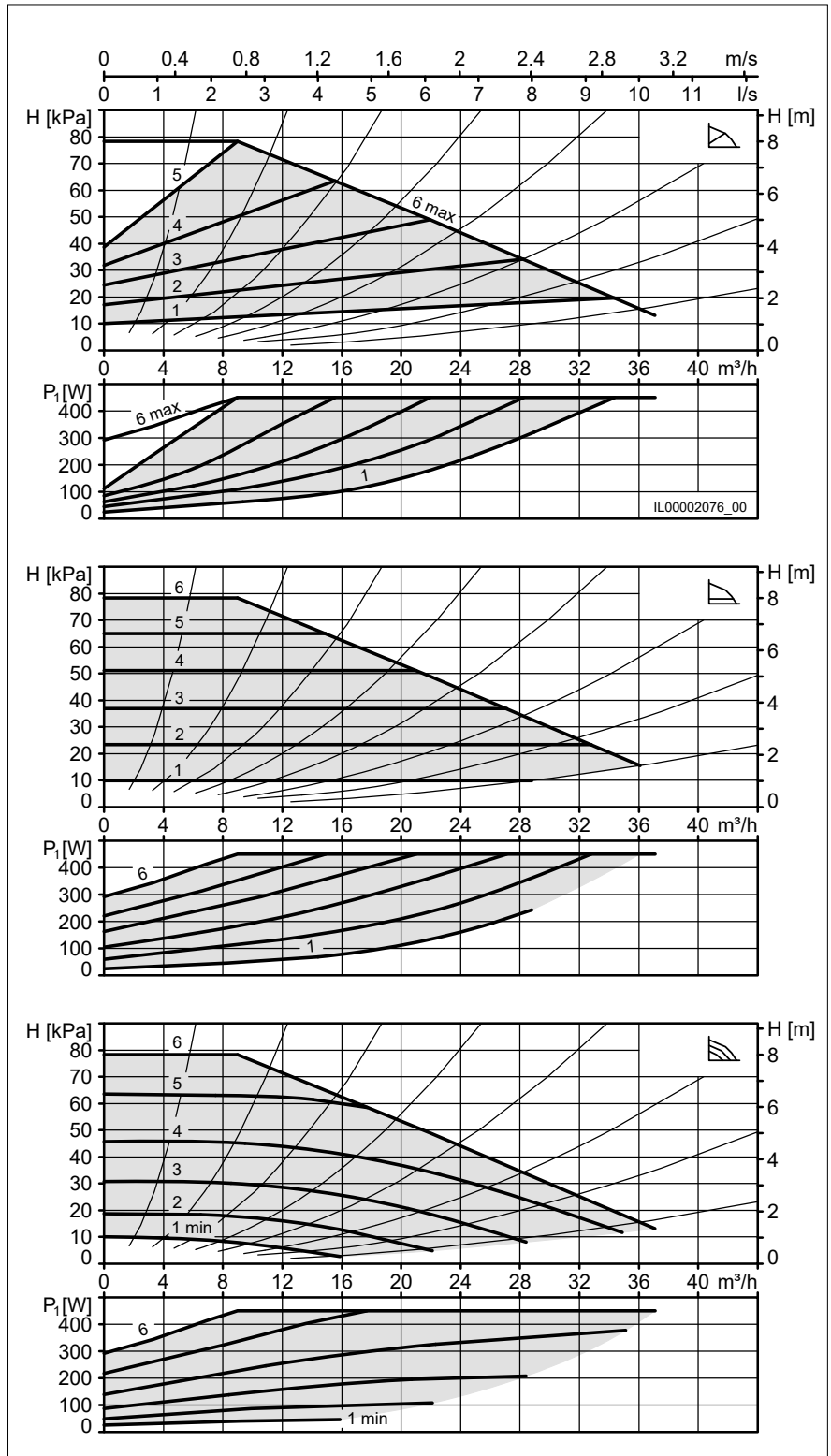
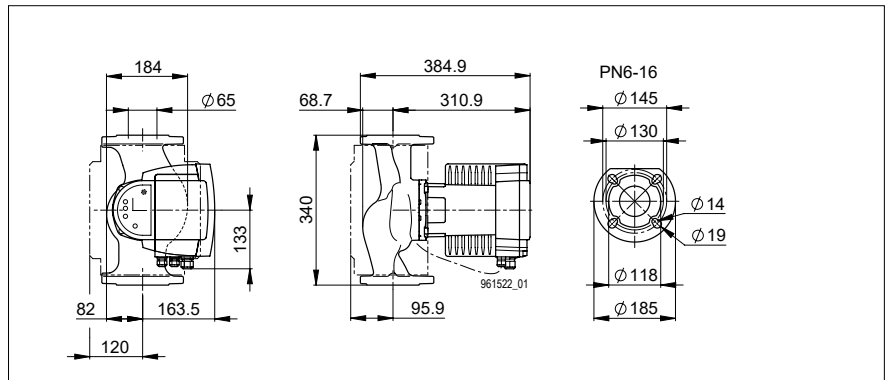
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuA 65-8 340 RED	7000000088



## ModuLA 65-12 340 RED

Version	T2 M
Nominal width	DN 65
Flow head H max.	12 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	21.5 kg
Gross weight	26.5 kg

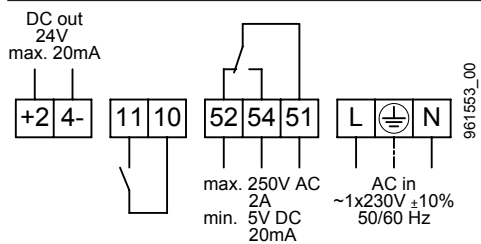
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	25-759 W
Nominal current	0.23-3.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

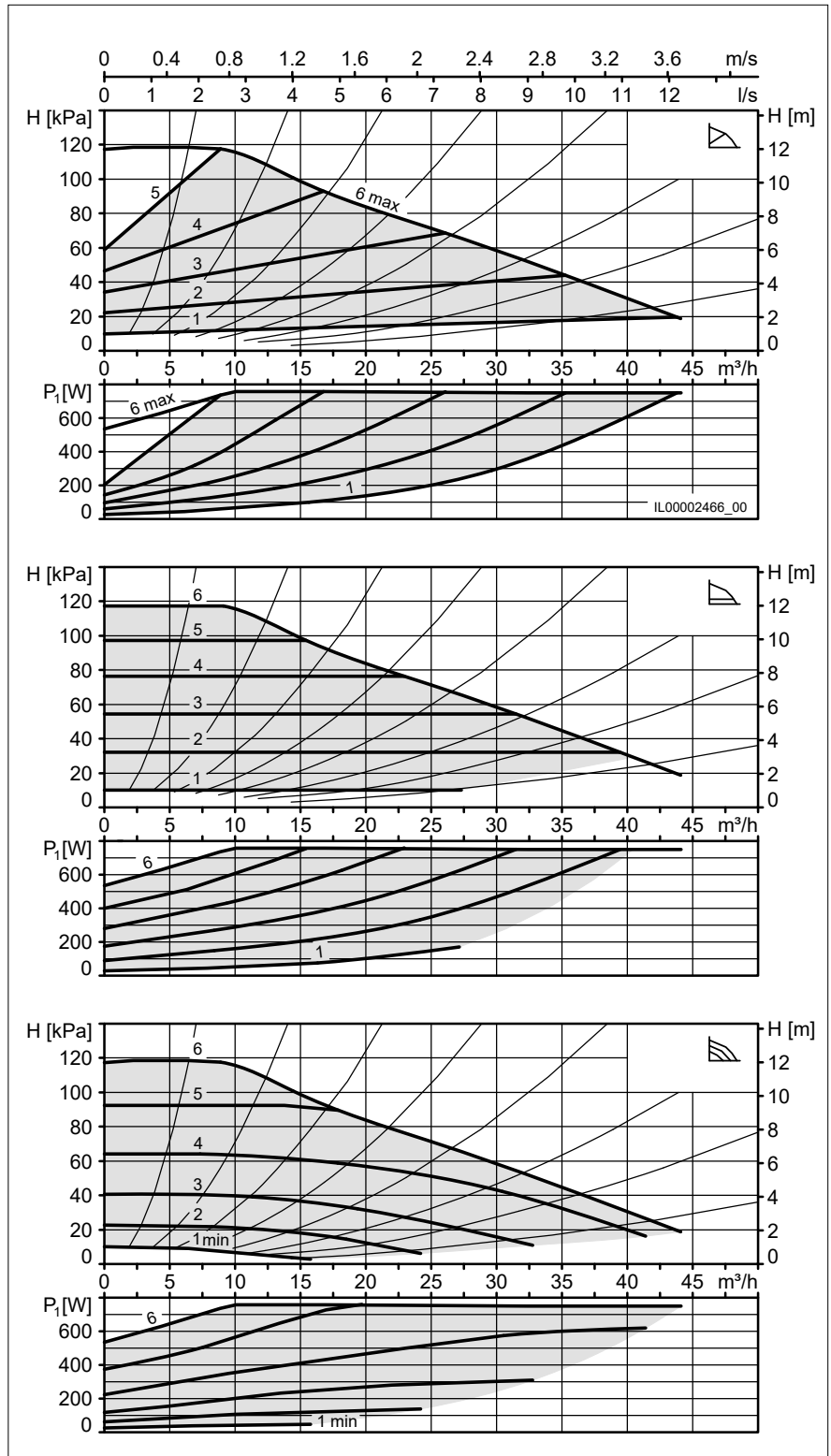
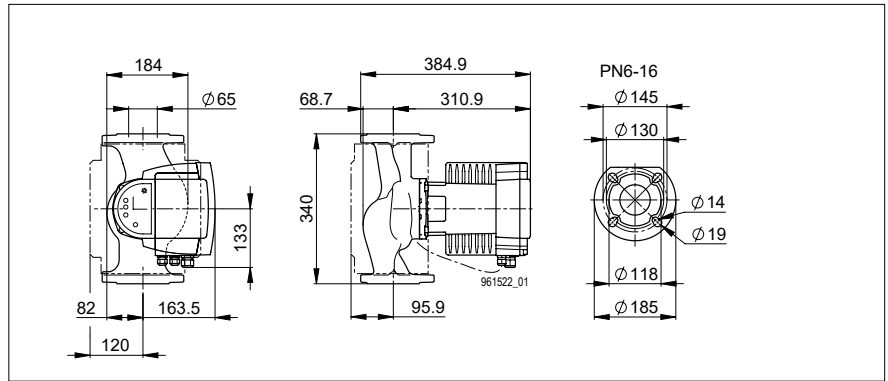
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModuLA 65-12 340 RED	7000000089



Heizung



## Modula 65-15 340 RED

Version	T2 L
Nominal width	DN 65
Flow head H max.	15 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	24.0 kg
Gross weight	29 kg

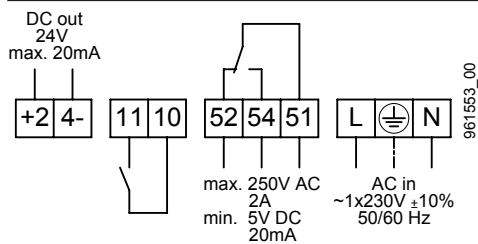
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	30-1343 W
Nominal current	0.27-6.08 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

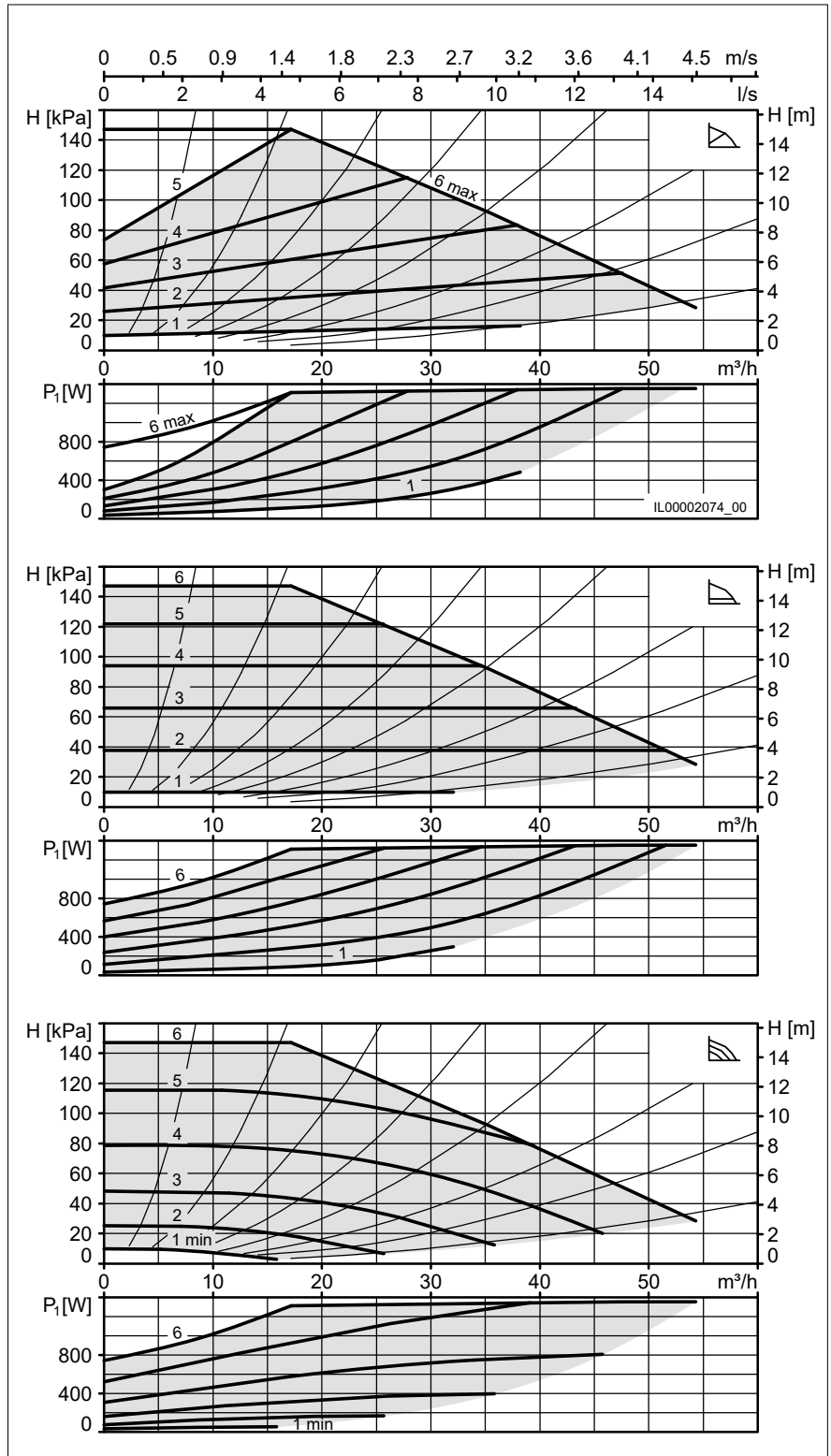
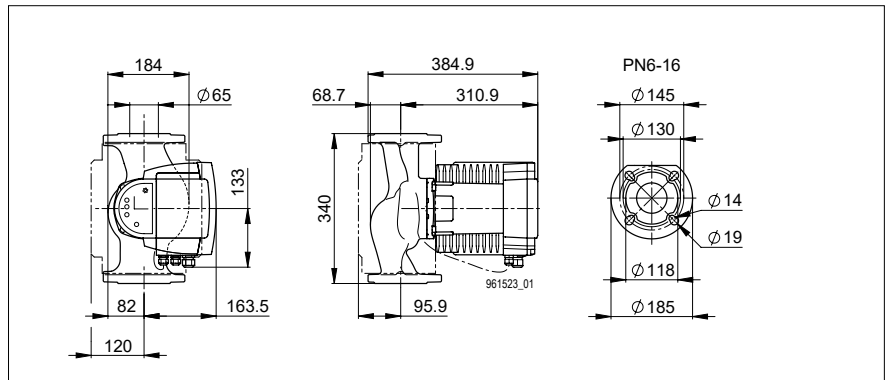
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics
- Seal kit for flanges PN10/PN16
- Seal kit for flanges PN6

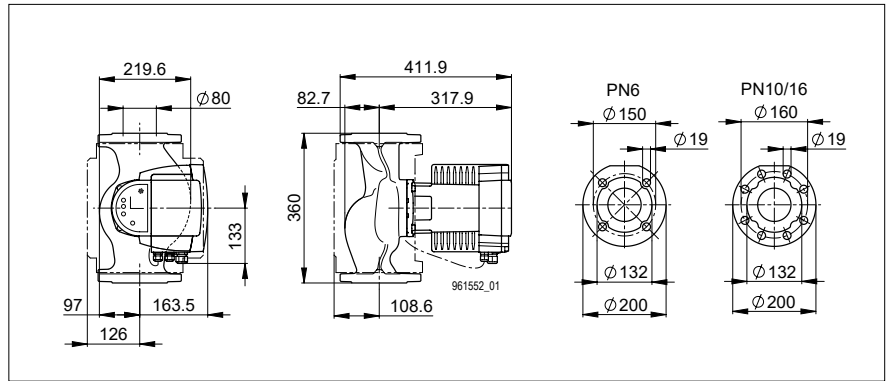
<b>Type</b>	Modula 65-15 340 RED	<b>Art. no.</b>	7000000054
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### ModulA 80-8 360 RED PN6

### ModulA 80-8 360 RED PN10/16

Version	T2 M
Nominal width	DN 80
Flow head H max.	8 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	29.1 kg
Gross weight	34.1   35 kg



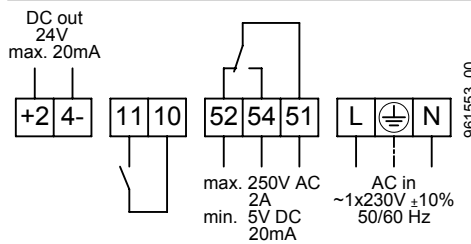
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	25-685 W
Nominal current	0.24-3.09 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.50 bar
at a water temp. of 95 °C	1.00 bar
at a water temp. of 110 °C	1.50 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

#### Connection diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

#### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

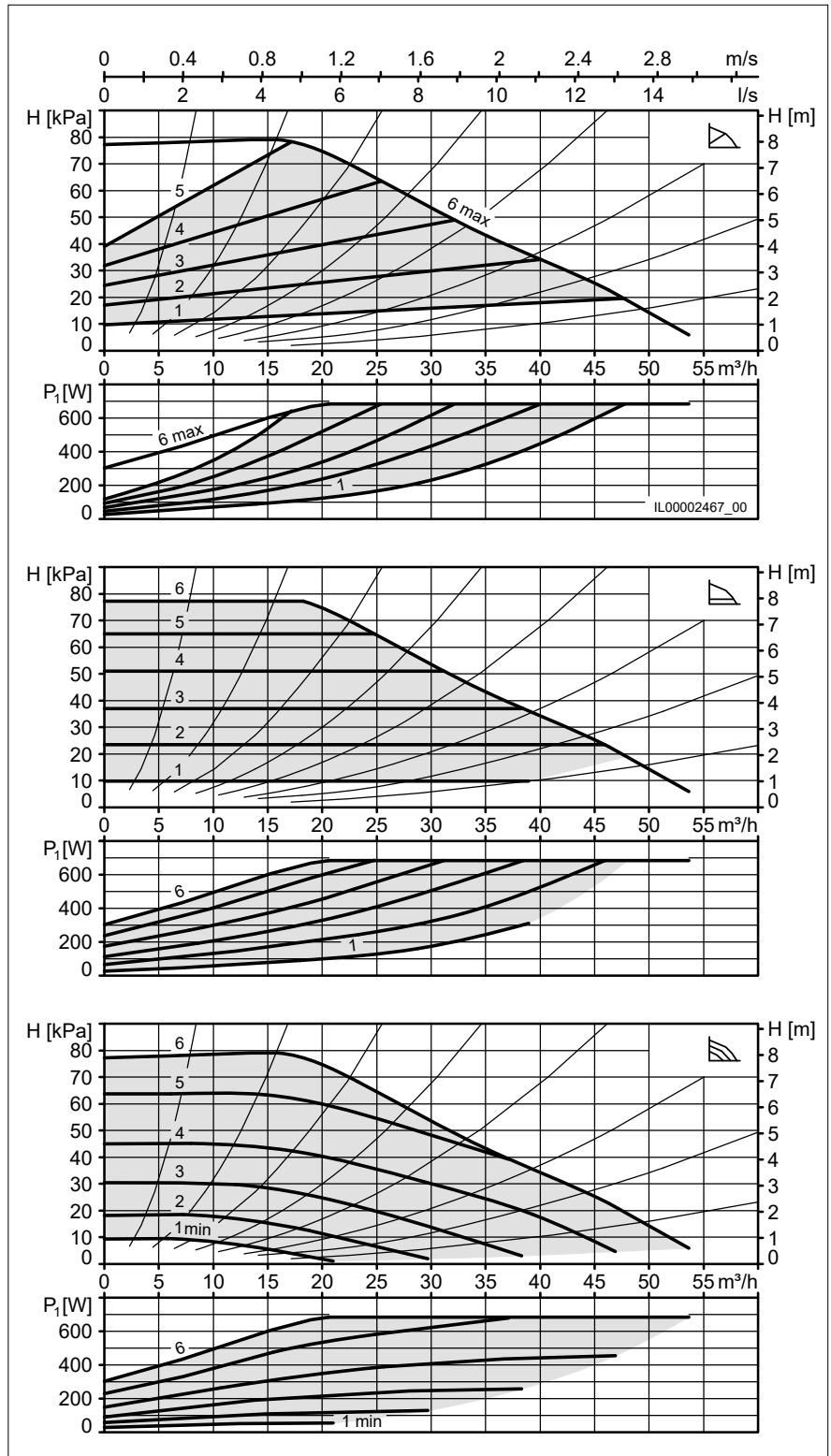
#### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6 or PN 10/16

#### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics

Type	Art. no.
ModulA 80-8 360 RED PN6	7000000090
ModulA 80-8 360 RED PN10/16	7000000091

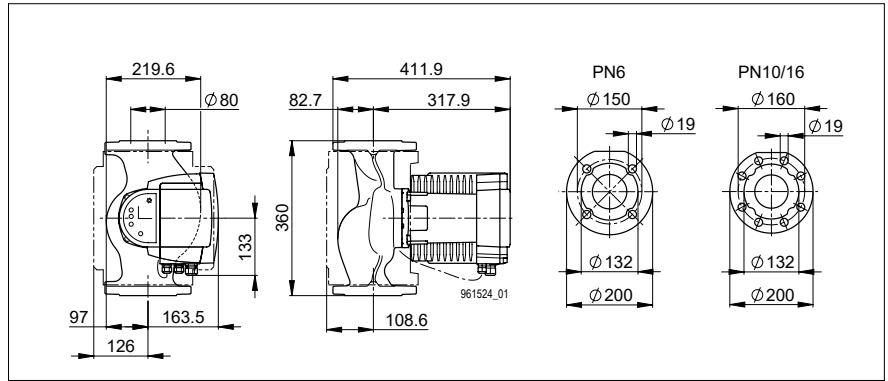


Heizung

## ModulA 80-12 360 RED PN6

## ModulA 80-12 360 RED PN10/16

Version	T2 L
Nominal width	DN 80
Flow head H max.	12 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	29.1 kg
Gross weight	34 kg



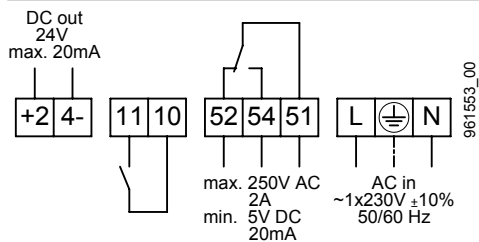
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	30-1476 W
Nominal current	0.27-6.63 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.50 bar
at a water temp. of 95 °C	1.00 bar
at a water temp. of 110 °C	1.50 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

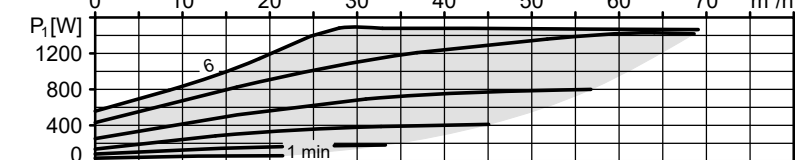
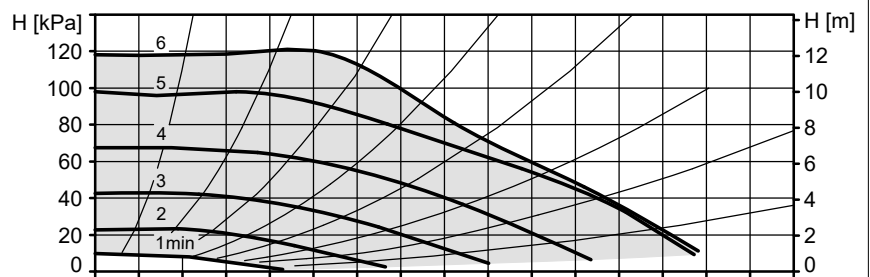
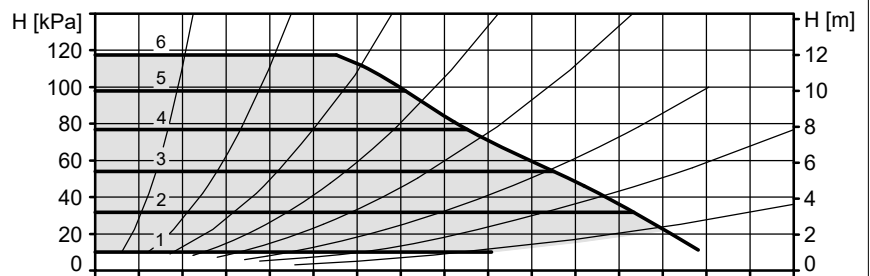
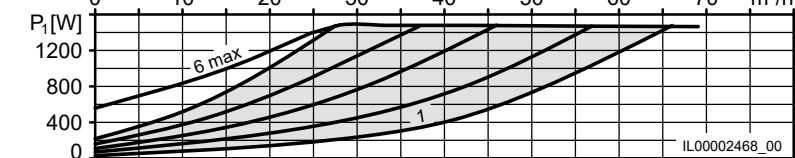
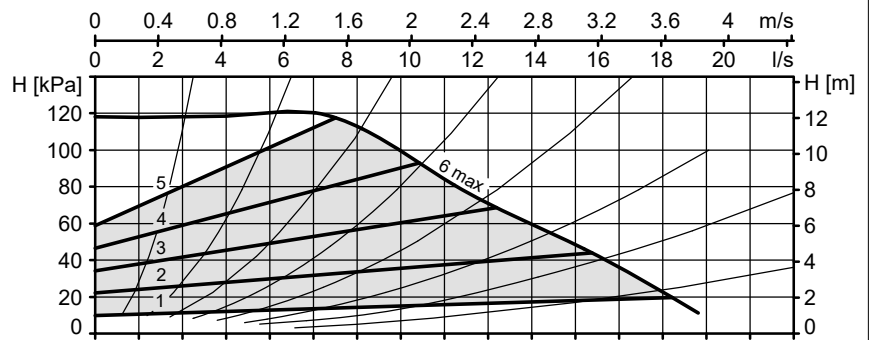
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6 or PN 10/16

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics

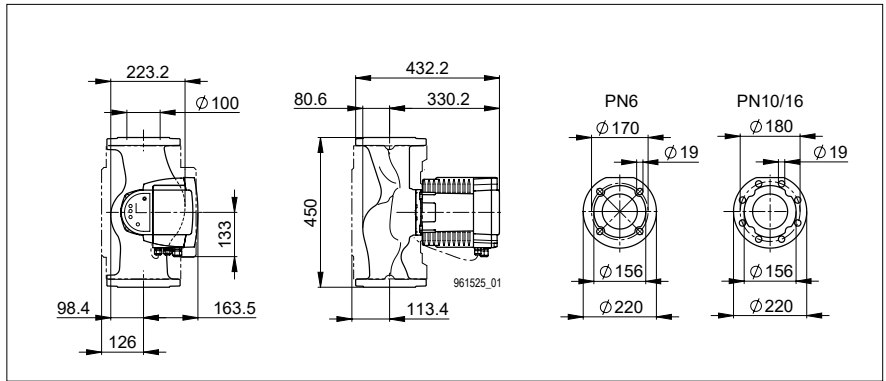
Type	Art. no.
ModulA 80-12 360 RED PN6	7000000092
ModulA 80-12 360 RED PN10/16	7000000093



### ModulA 100-8 450 RED PN6

### ModulA 100-8 450 RED PN10/16

Version	T2 L
Nominal width	DN 100
Flow head H max.	8 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	34.0 kg
Gross weight	34 kg



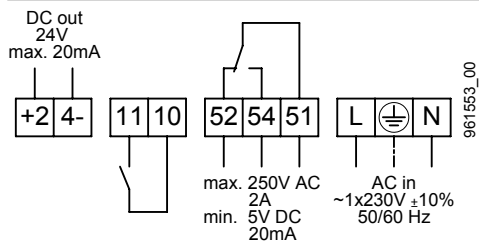
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	30-1082 W
Nominal current	0.28-4.85 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

#### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

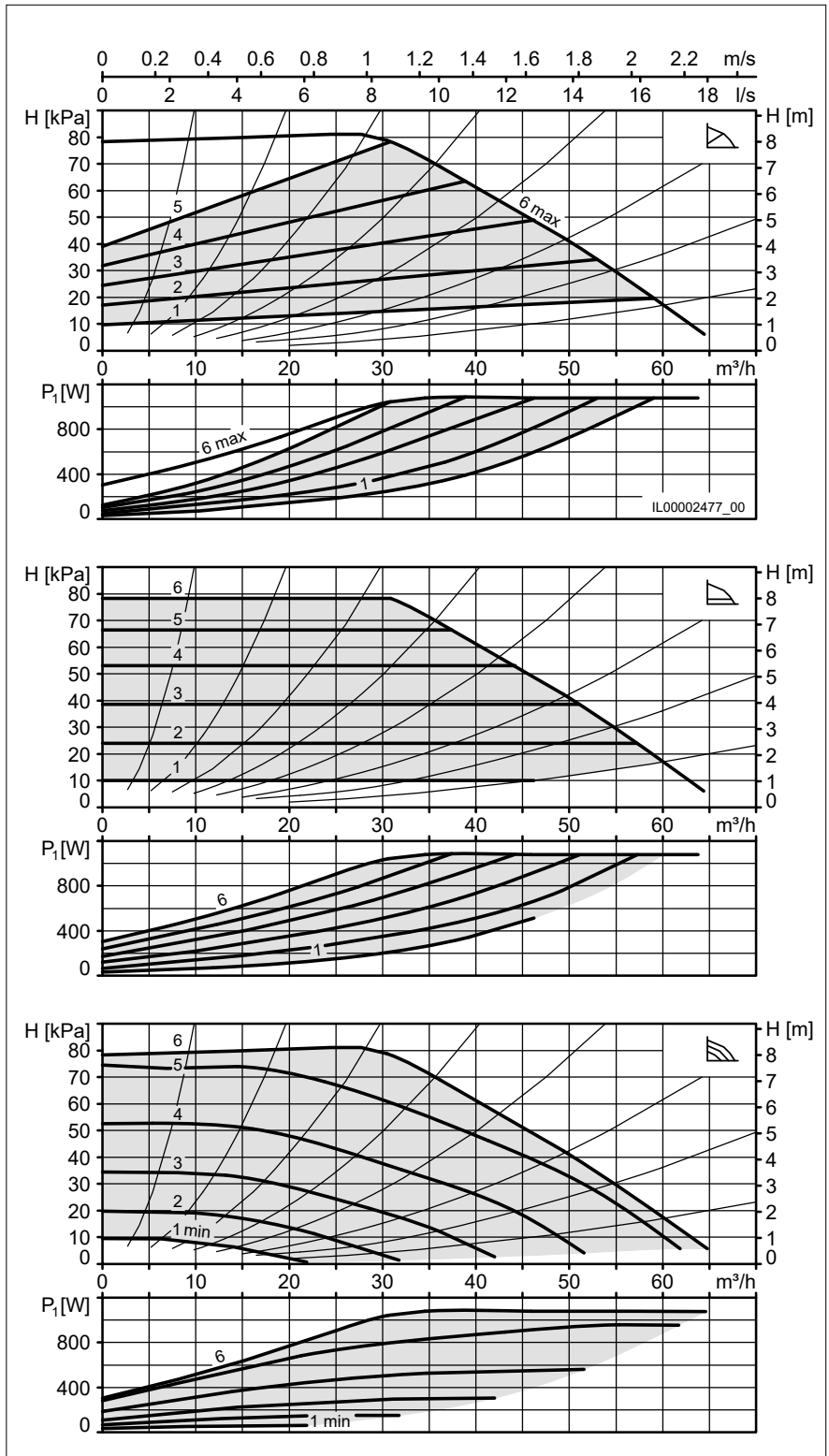
#### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6 or PN 10/16

#### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics

Type	Art. no.
ModulA 100-8 450 RED PN6	7000000094
ModulA 100-8 450 RED PN10/16	7000000095

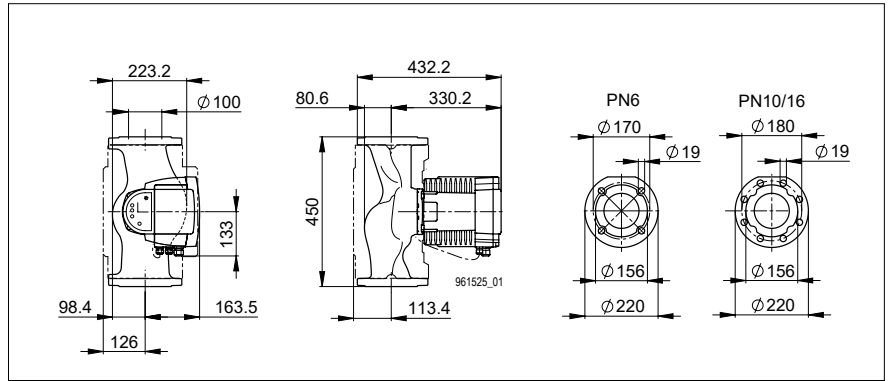


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## ModulA 100-12 450 RED PN6

## ModulA 100-12 450 RED PN10/16

Version	T2 L
Nominal width	DN 100
Flow head H max.	12 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	34.0 kg
Gross weight	39 kg



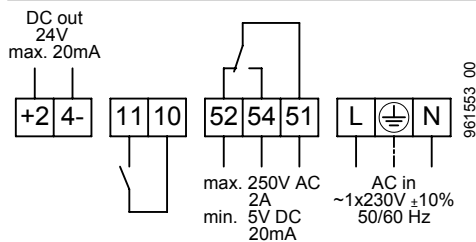
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	30-1551 W
Nominal current	0.28-6.81 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connection diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

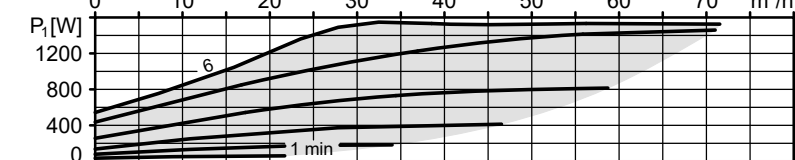
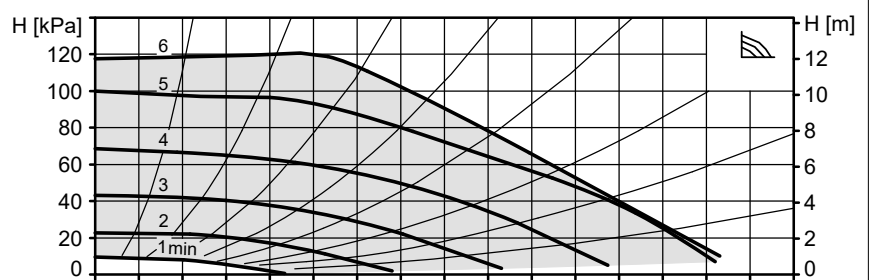
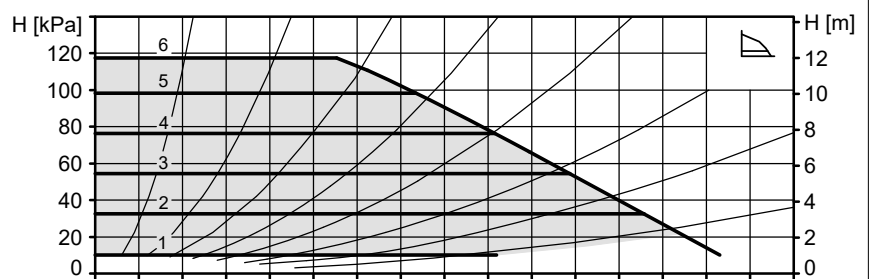
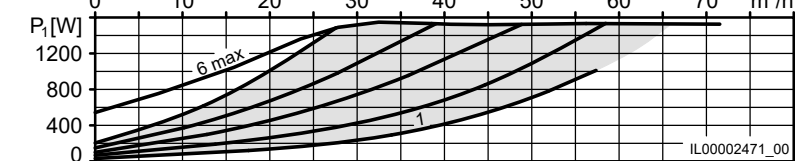
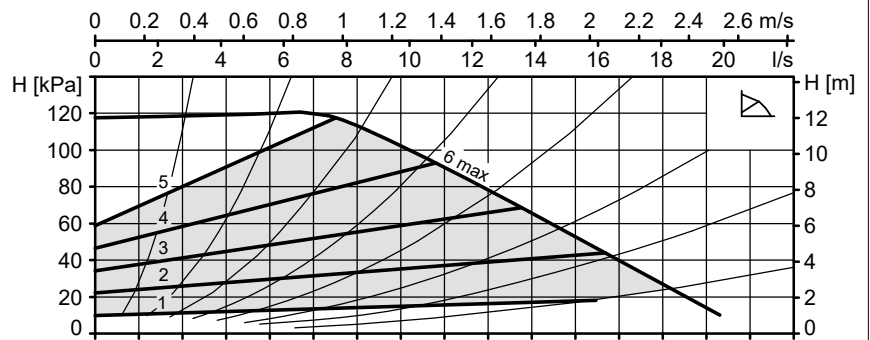
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6 or PN 10/16

### Accessories

- Biral Interface Modules
- Set for recessed installation of electronics

Type	Art. no.
ModulA 100-12 450 RED PN6	7000000096
ModulA 100-12 450 RED PN10/16	7000000097







## Heating circulation pumps

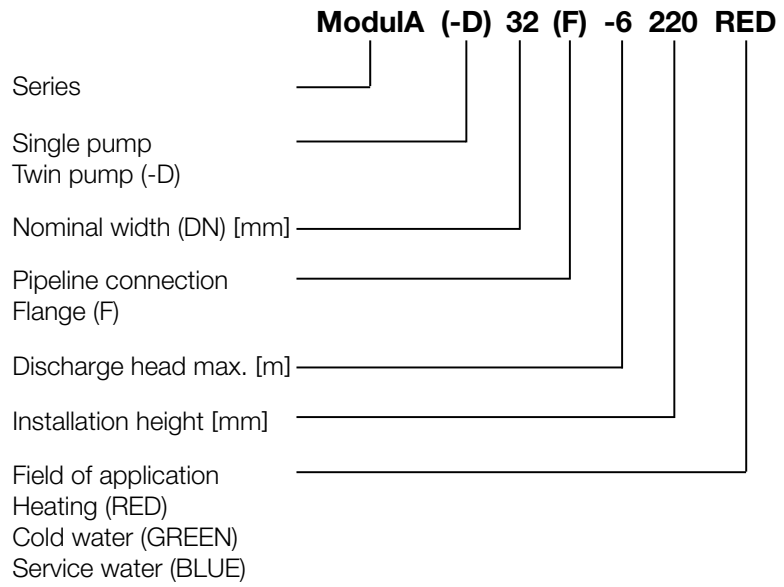
### ModulA-D RED T2 with threaded connection



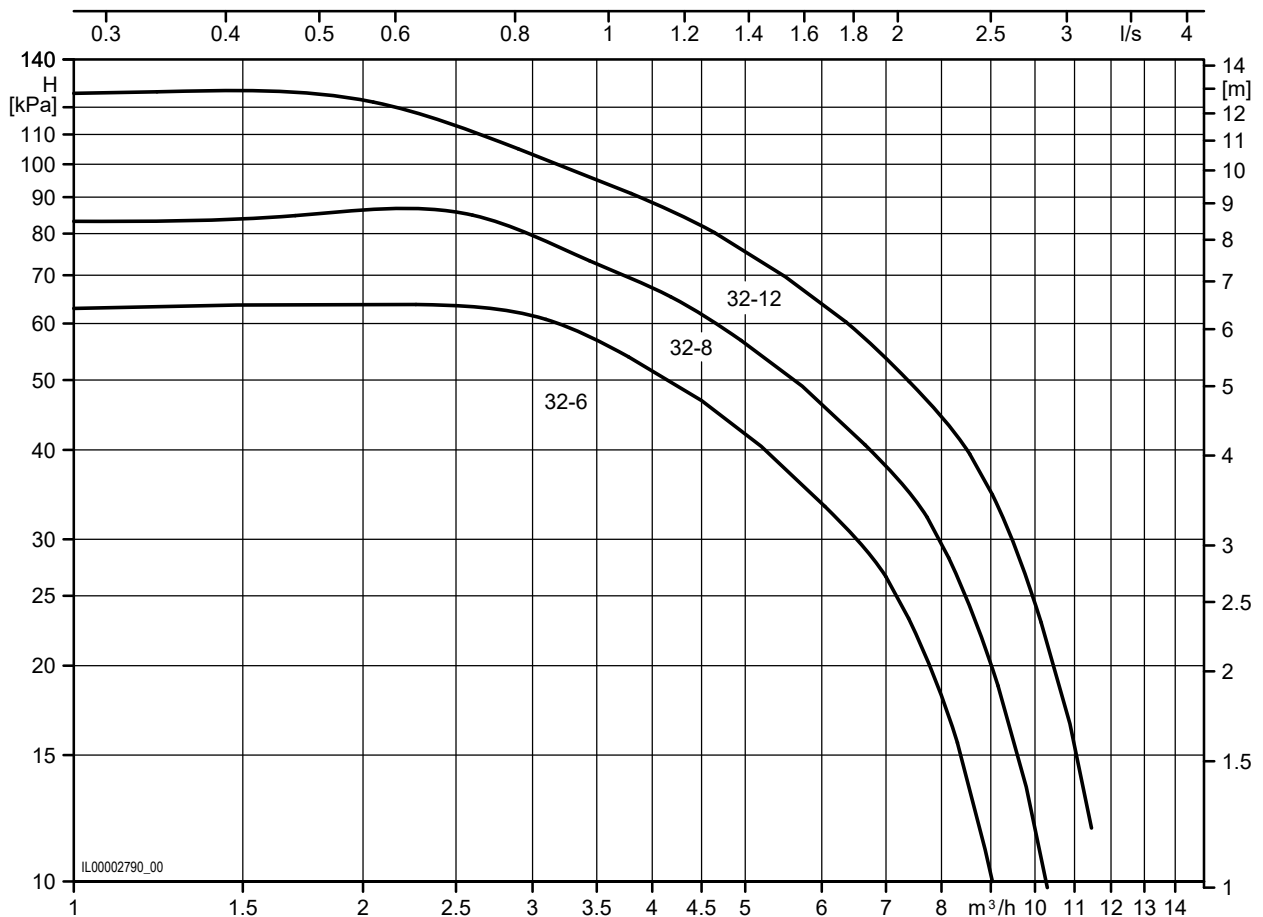
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA-D 32-6 180 RED	7000000098	32	6	180	G 2"	10	≤0.18
ModulA-D 32-8 180 RED	7000000099	32	8	180	G 2"	10	≤0.18
ModulA-D 32-12 180 RED	7000000100	32	12	180	G 2"	10	≤0.18

**Order reference**

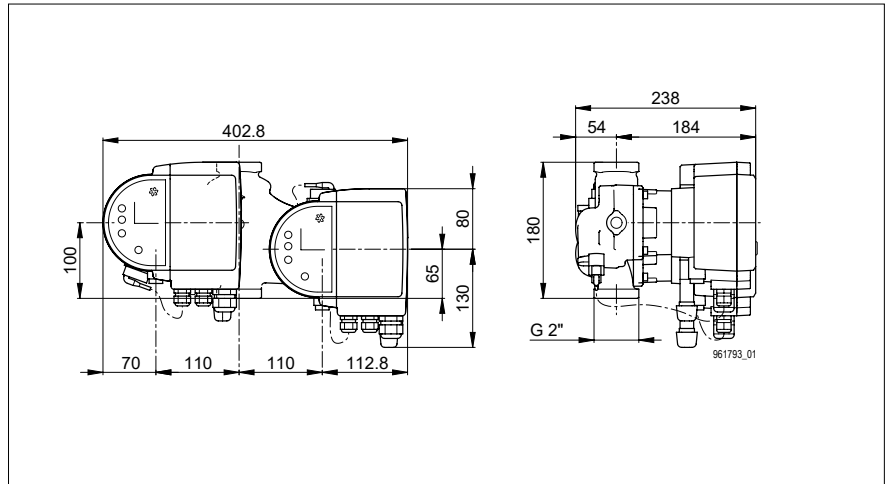


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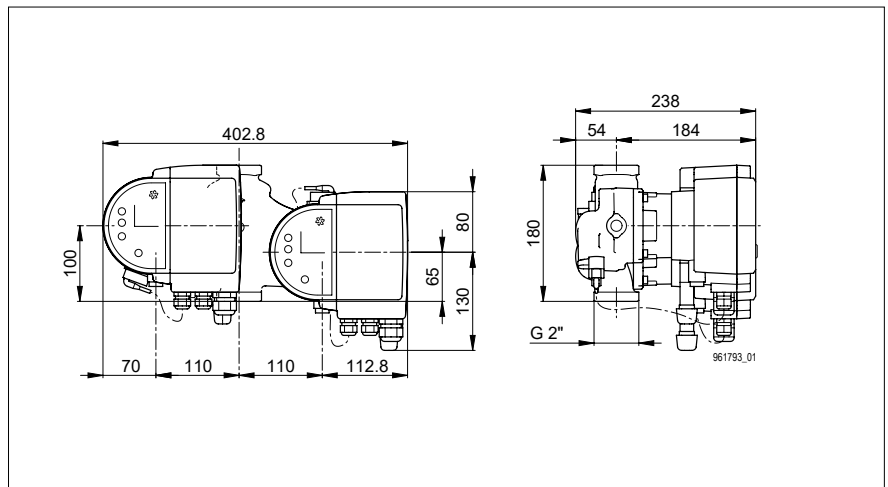
### Modula-D 32-6 180 RED

Art. no.	7000000098
Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	11.1 kg
Gross weight	14.1 kg
Characteristic curve	see single pump



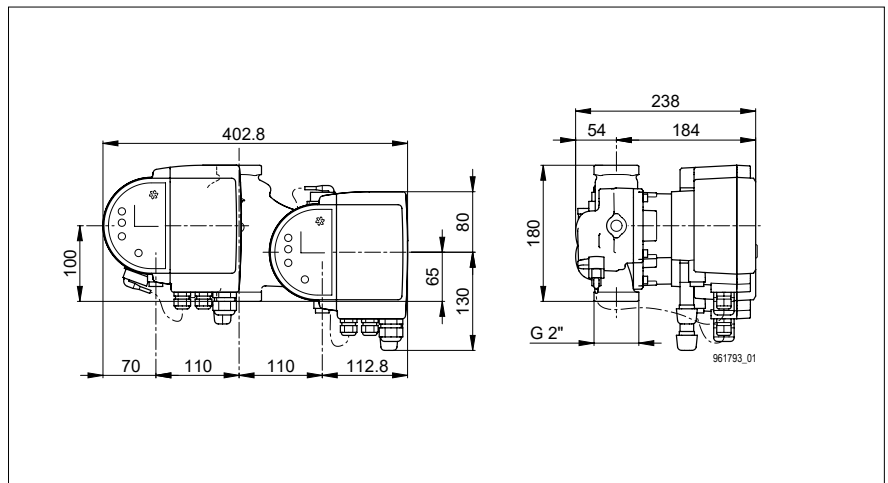
### Modula-D 32-8 180 RED

Art. no.	7000000099
Version	T2 S
Nominal width	DN 32
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	11.1 kg
Gross weight	14.1 kg
Characteristic curve	see single pump



### Modula-D 32-12 180 RED

Art. no.	7000000100
Version	T2 S
Nominal width	DN 32
Flow head H max.	12 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	11.1 kg
Gross weight	14.1 kg
Characteristic curve	see single pump







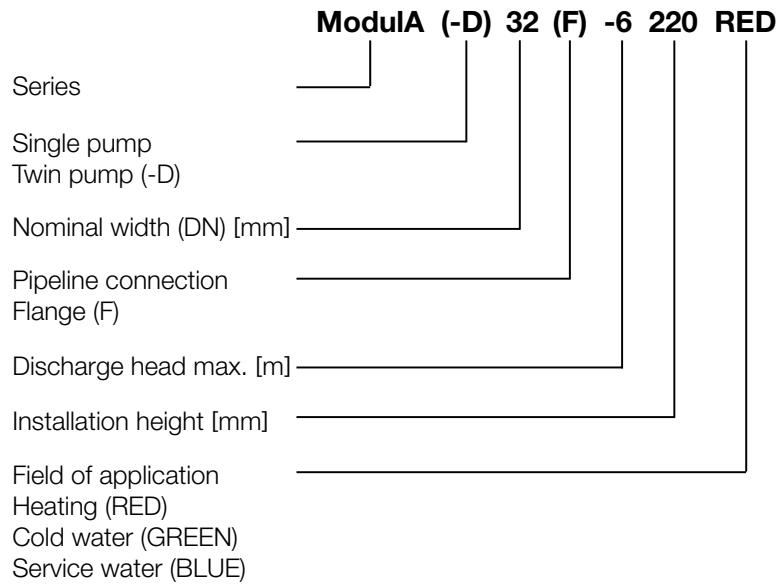
## Heating circulation pumps

### ModulA-D RED T2 with flanged connection

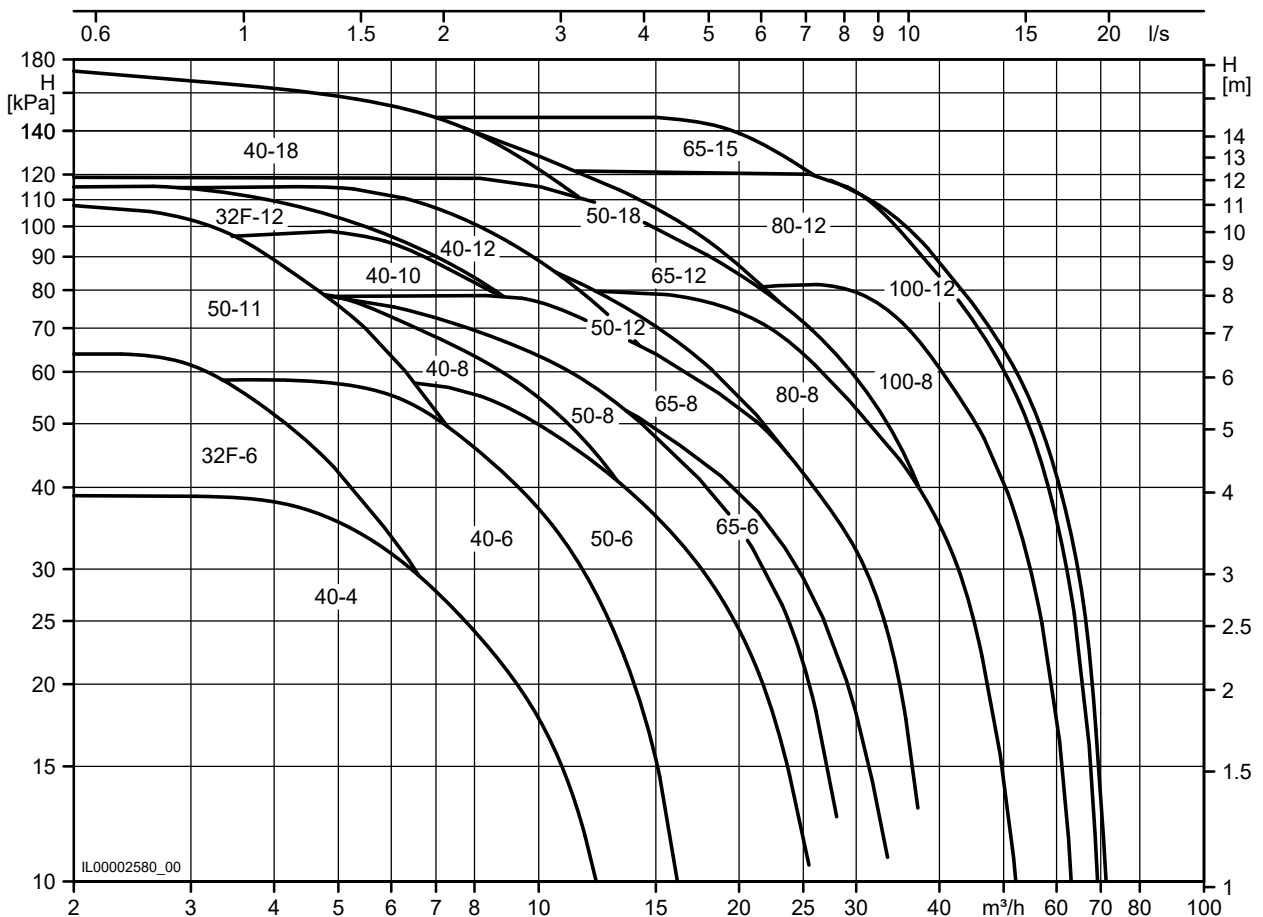
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA-D 32F-6 220 RED	7000000716	32	6	220	PN 6	6	≤0.18
ModulA-D 32F-12 220 RED	7000000802	32	12	220	PN 6-16	16	≤0.20
ModulA-D 40-6 220 RED	7000000101	40	6	220	PN 6-16	16	≤0.19
ModulA-D 40-8 220 RED	7000000102	40	8	220	PN 6-16	16	≤0.20
ModulA-D 40-10 220 RED	7000000103	40	10	220	PN 6-16	16	≤0.20
ModulA-D 40-12 250 RED	7000000104	40	12	250	PN 6-16	16	≤0.18
ModulA-D 40-18 250 RED	7000000105	40	18	250	PN 6-16	16	≤0.18
ModulA-D 50-6 240 RED	7000000106	50	6	240	PN 6-16	16	≤0.19
ModulA-D 50-8 240 RED	7000000107	50	8	240	PN 6-16	16	≤0.19
ModulA-D 50-12 270 RED	7000000108	50	12	270	PN 6-16	16	≤0.18
ModulA-D 50-18 270 RED	7000000109	50	18	270	PN 6-16	16	≤0.17
ModulA-D 65-8 340 RED	7000000110	65	8	340	PN 6-16	16	≤0.18
ModulA-D 65-12 340 RED	7000000111	65	12	340	PN 6-16	16	≤0.17
ModulA-D 65-15 340 RED	7000000112	65	15	340	PN 6-16	16	≤0.18
ModulA-D 80-8 360 RED PN6	7000000113	80	8	360	PN 6	6	≤0.17
ModulA-D 80-8 360 RED PN10/16	7000000114	80	8	360	PN 10/16	16	≤0.17
ModulA-D 80-12 360 RED PN6	7000000115	80	12	360	PN 6	6	≤0.17
ModulA-D 80-12 360 RED PN10/16	7000000116	80	12	360	PN 10/16	16	≤0.17
ModulA-D 100-8 450 RED PN6	7000000117	100	8	450	PN 6	6	≤0.18
ModulA-D 100-8 450 RED PN10/16	7000000118	100	8	450	PN 10/16	16	≤0.18
ModulA-D 100-12 450 RED PN6	7000000119	100	12	450	PN 6	6	≤0.18
ModulA-D 100-12 450 RED PN10/16	7000000120	100	12	450	PN 10/16	16	≤0.18

**Order reference**

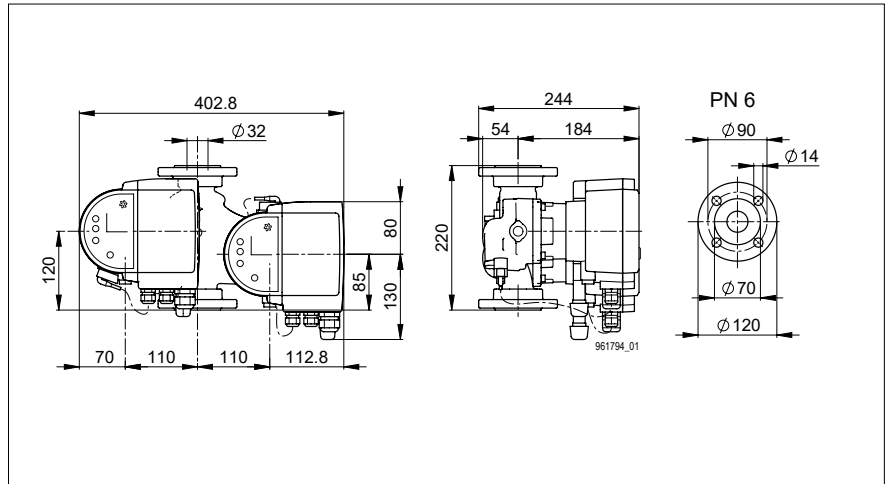


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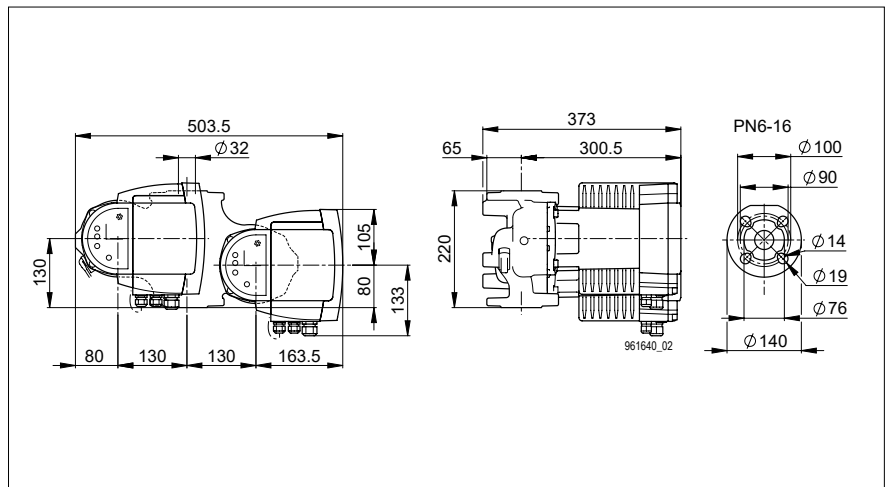
### Modula-D 32F-6 220 RED

Art. no.	7000000716
Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6
Operating pressure max.	6 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	13.4 kg
Gross weight	16.4 kg
Characteristic curve	see single pump



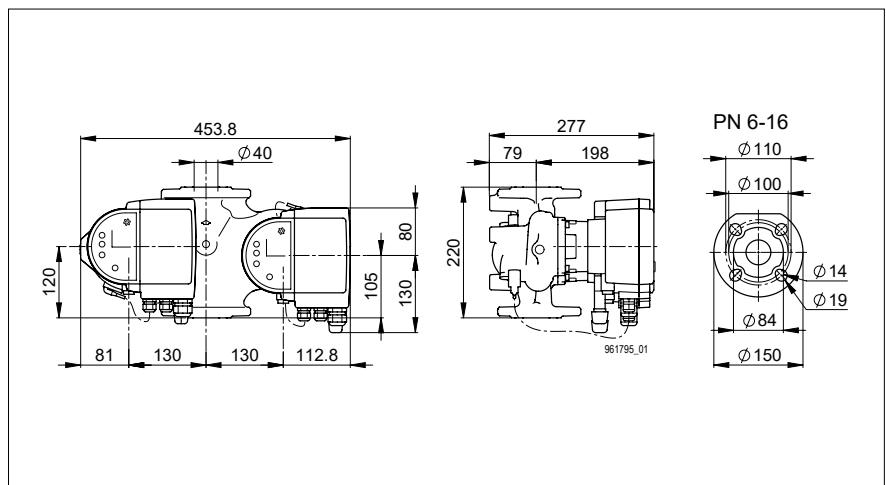
### Modula-D 32F-12 220 RED

Art. no.	7000000802
Version	T2 M
Nominal width	DN 32
Flow head H max.	12 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	30.6 kg
Gross weight	34.6 kg
Characteristic curve	see single pump



### Modula-D 40-6 220 RED

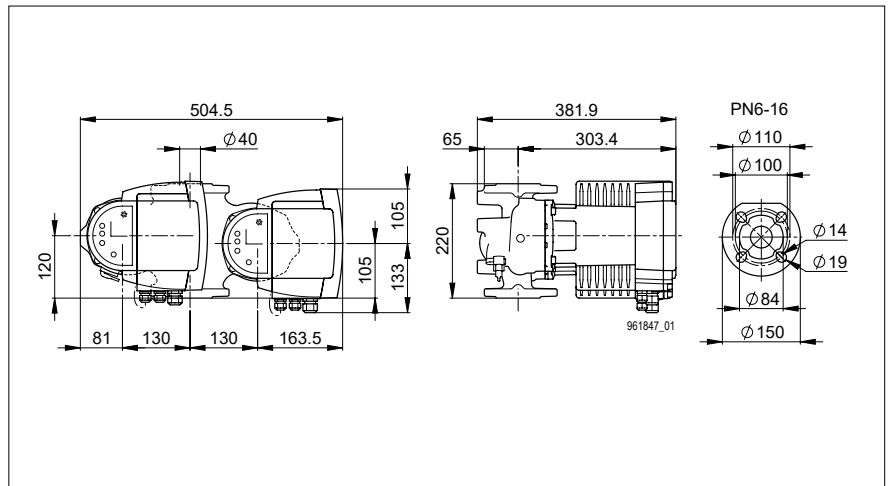
Art. no.	7000000101
Version	T2 S
Nominal width	DN 40
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.7 kg
Gross weight	21.7 kg
Characteristic curve	see single pump





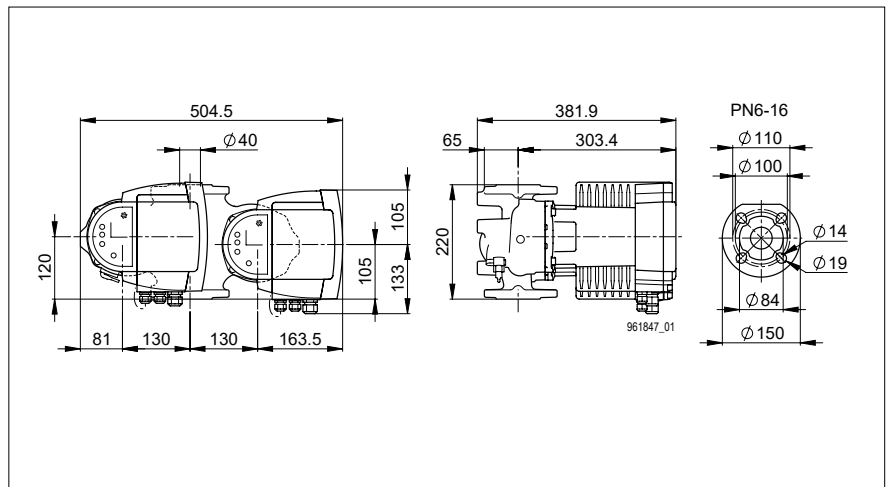
### Modula-D 40-8 220 RED

Art. no.	7000000102
Version	T2 M
Nominal width	DN 40
Flow head H max.	8 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	31.0 kg
Gross weight	35 kg
Characteristic curve	see single pump



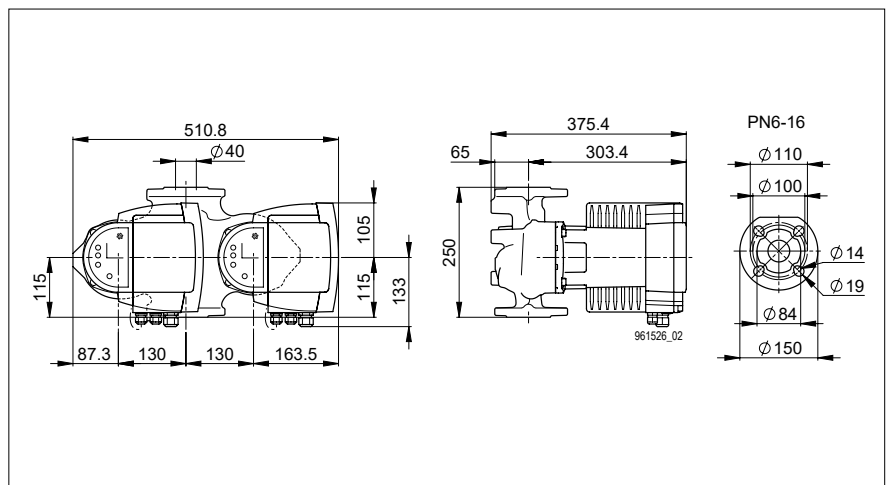
### Modula-D 40-10 220 RED

Art. no.	7000000103
Version	T2 M
Nominal width	DN 40
Flow head H max.	10 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	31.0 kg
Gross weight	35 kg
Characteristic curve	see single pump



### Modula-D 40-12 250 RED

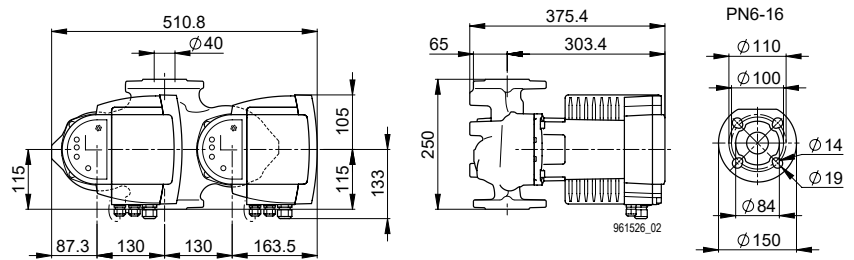
Art. no.	7000000104
Version	T2 M
Nominal width	DN 40
Flow head H max.	12 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	32.0 kg
Gross weight	36 kg
Characteristic curve	see single pump



Heizung

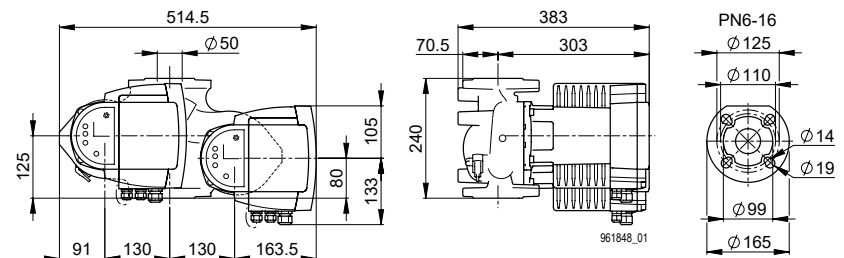
### Modula-D 40-18 250 RED

Art. no.	7000000105
Version	T2 M
Nominal width	DN 40
Flow head H max.	18 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	32.0 kg
Gross weight	36 kg
Characteristic curve	see single pump



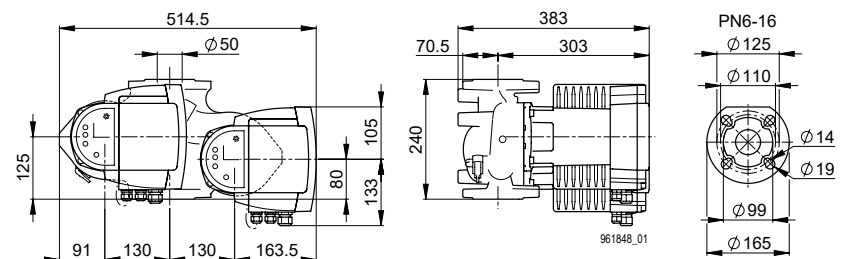
### Modula-D 50-6 240 RED

Art. no.	7000000106
Version	T2 M
Nominal width	DN 50
Flow head H max.	6 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	35.0 kg
Gross weight	39 kg
Characteristic curve	see single pump



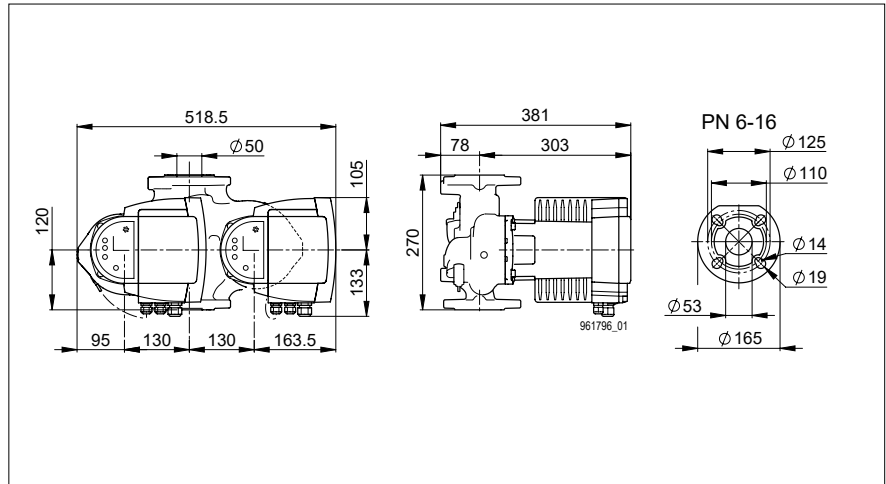
### Modula-D 50-8 240 RED

Art. no.	7000000107
Version	T2 M
Nominal width	DN 50
Flow head H max.	8 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	35.0 kg
Gross weight	39 kg
Characteristic curve	see single pump



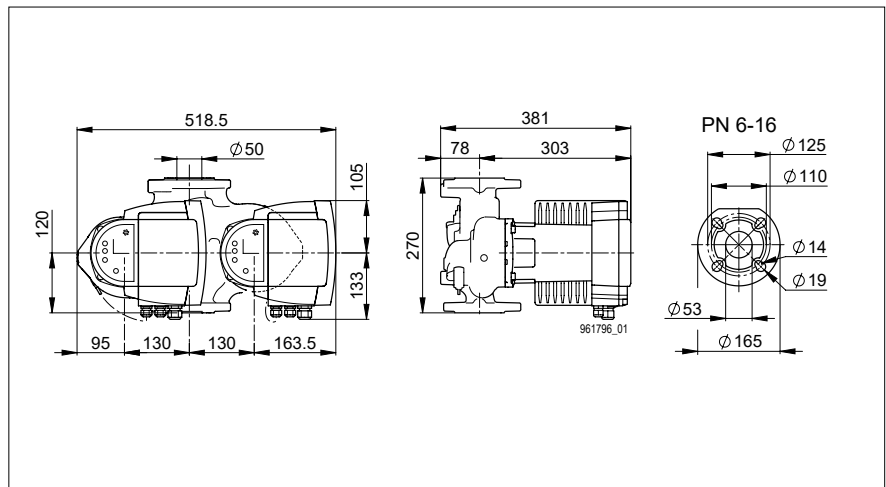
### Modula-D 50-12 270 RED

Art. no.	7000000108
Version	T2 M
Nominal width	DN 50
Flow head H max.	12 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	36.0 kg
Gross weight	40 kg
Characteristic curve	see single pump



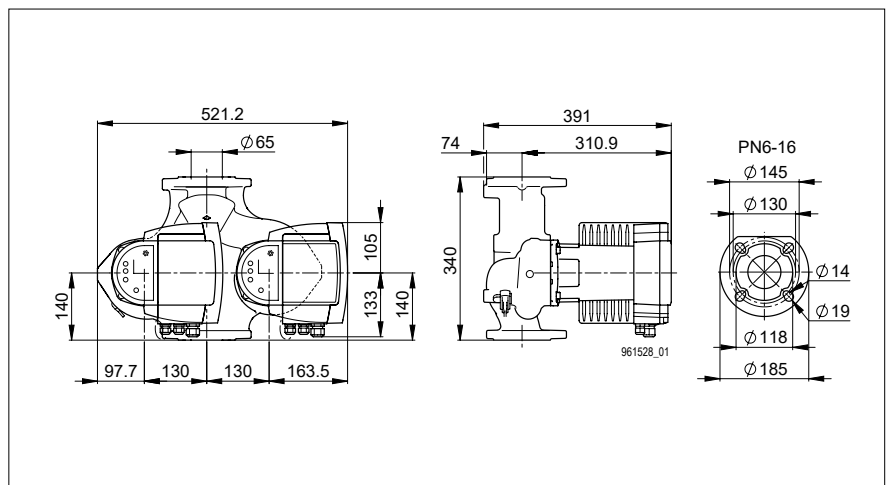
### Modula-D 50-18 270 RED

Art. no.	7000000109
Version	T2 M
Nominal width	DN 50
Flow head H max.	18 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	36.0 kg
Gross weight	40 kg
Characteristic curve	see single pump



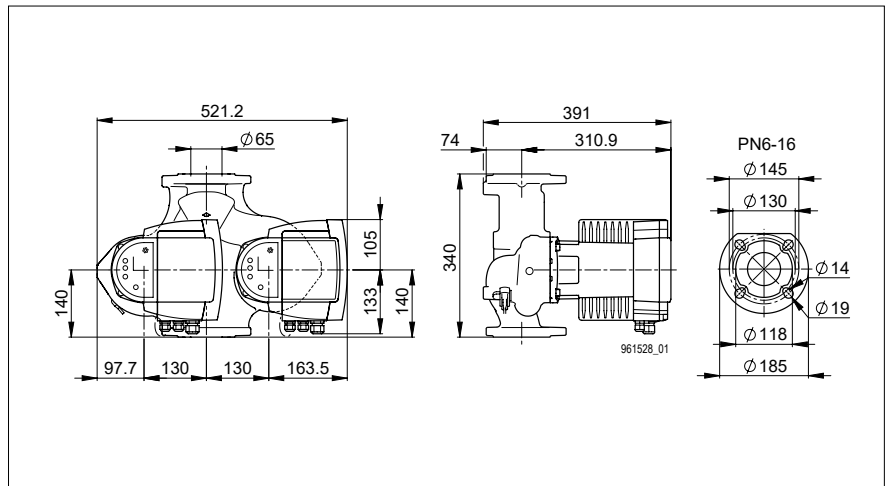
### Modula-D 65-8 340 RED

Art. no.	7000000110
Version	T2 M
Nominal width	DN 65
Flow head H max.	8 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	42.0 kg
Gross weight	46 kg
Characteristic curve	see single pump



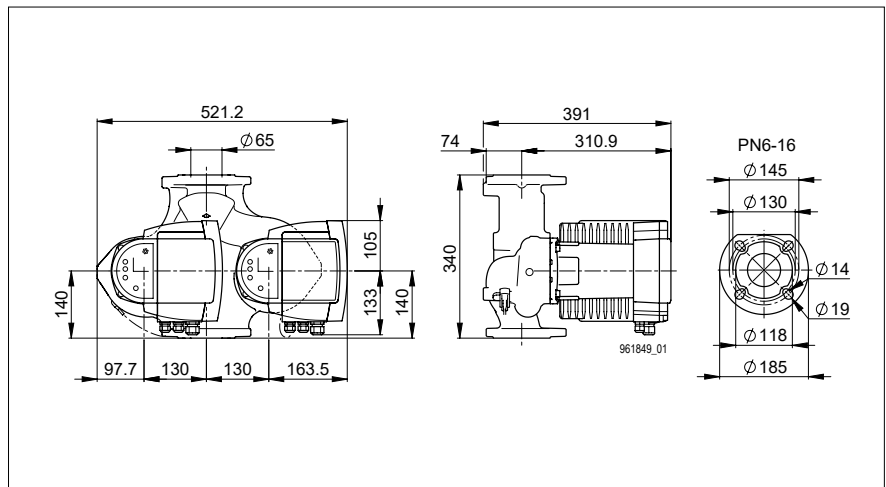
### Modula-D 65-12 340 RED

Art. no.	7000000111
Version	T2 M
Nominal width	DN 65
Flow head H max.	12 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	42.0 kg
Gross weight	46 kg
Characteristic curve	see single pump



### Modula-D 65-15 340 RED

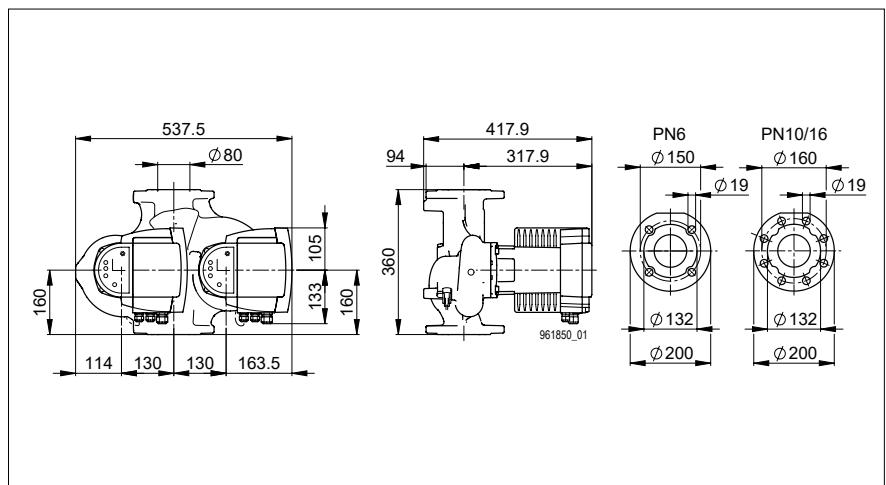
Art. no.	7000000112
Version	T2 L
Nominal width	DN 65
Flow head H max.	15 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	48.0 kg
Gross weight	52 kg
Characteristic curve	see single pump



### Modula-D 80-8 360 RED PN6

### Modula-D 80-8 360 RED PN10/16

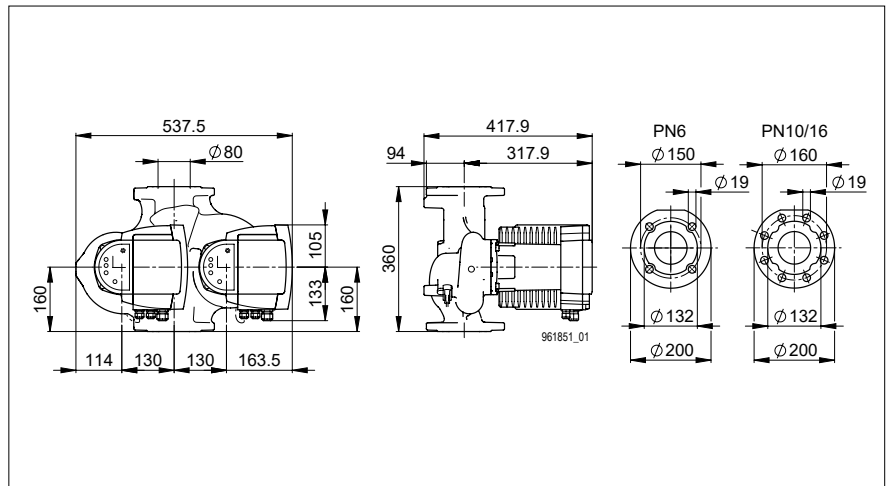
Art. no.	7000000113
Art. no.	7000000114
Version	T2 M
Nominal width	DN 80
Flow head H max.	8 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	58.0 kg
Gross weight	62 kg
Characteristic curve	see single pump



### Modula-D 80-12 360 RED PN6

### Modula-D 80-12 360 RED PN10/16

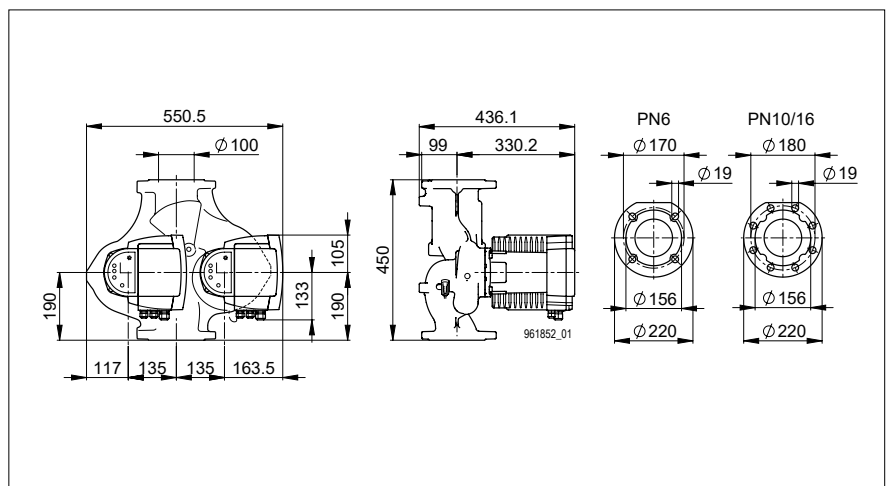
Art. no.	7000000115
Art. no.	7000000116
Version	T2 L
Nominal width	DN 80
Flow head H max.	12 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	58.0 kg
Gross weight	62 kg
Characteristic curve	see single pump



### Modula-D 100-8 450 RED PN6

### Modula-D 100-8 450 RED PN10/16

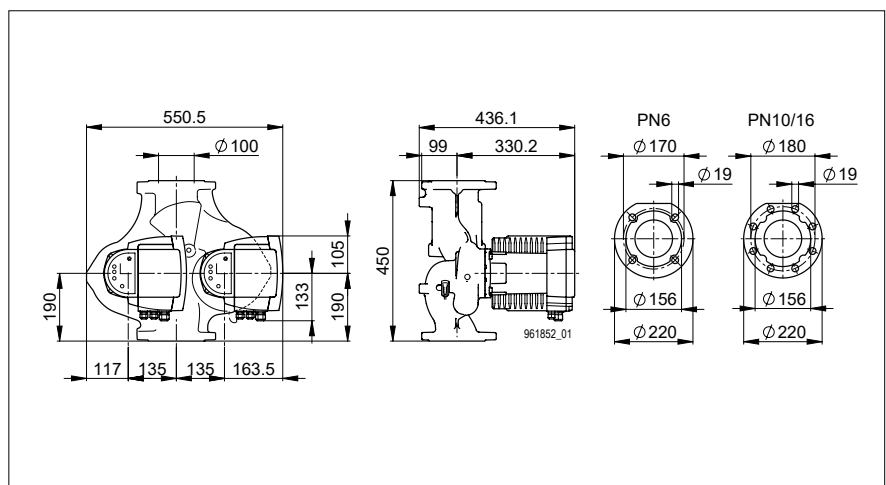
Art. no.	7000000117
Art. no.	7000000118
Version	T2 L
Nominal width	DN 100
Flow head H max.	8 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	68.0 kg
Gross weight	74 kg
Characteristic curve	see single pump



### Modula-D 100-12 450 RED PN6

### Modula-D 100-12 450 RED PN10/16

Art. no.	7000000119
Art. no.	7000000120
Version	T2 L
Nominal width	DN 100
Flow head H max.	12 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	+15°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	68.0 kg
Gross weight	74 kg
Characteristic curve	see single pump





## Heating circulation pumps

### A 12... A 500

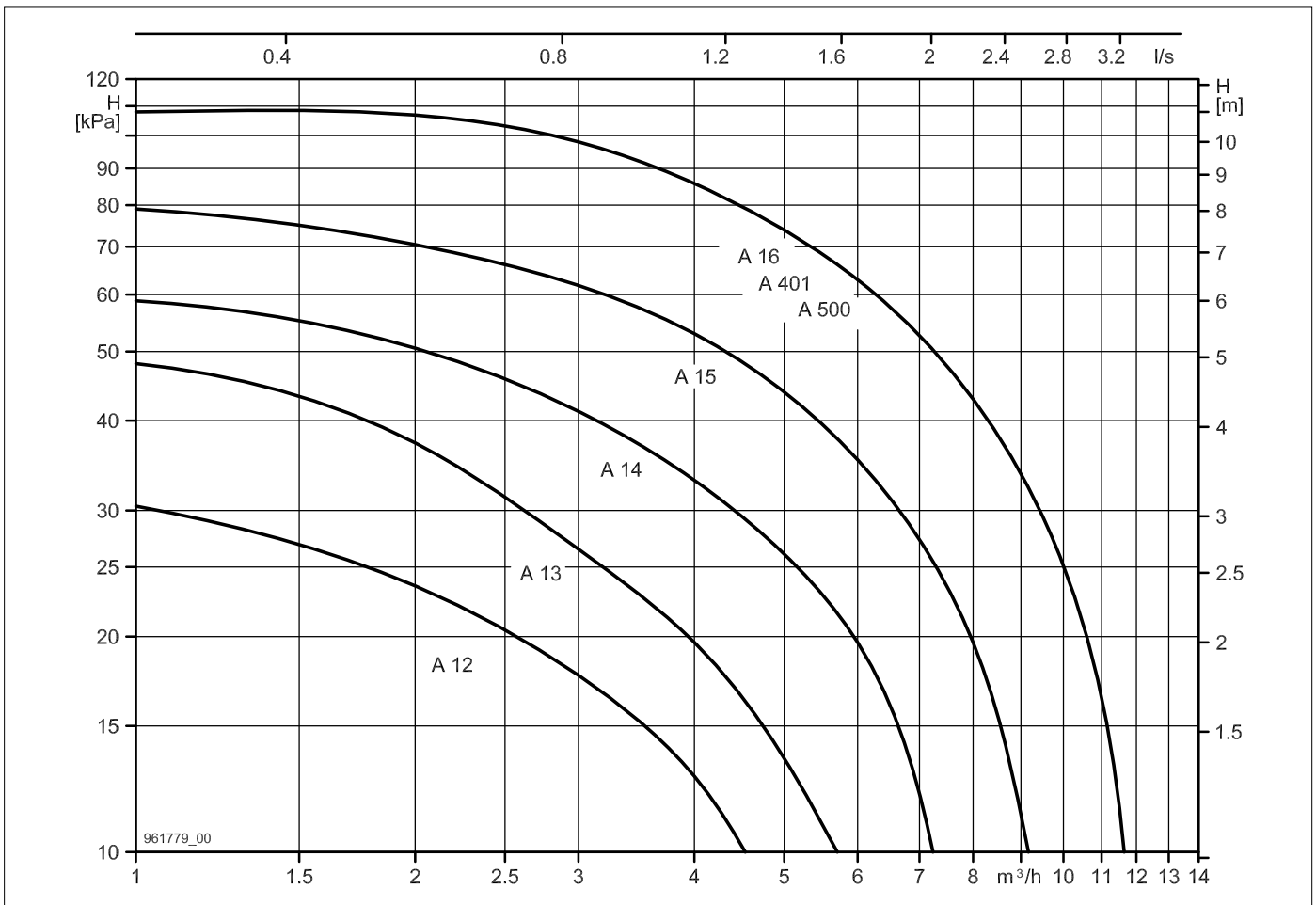
as long as stock

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar	EEI
		DN	m	mm			
A 12	1157380150	32	4	170	G 2"	10	≤0.21
A 13	1157410150	32	5	170	G 2"	10	≤0.21
A 14	1157160150	32	6	170	G 2"	10	≤0.22
A 15	1157190150	32	8	170	G 2"	10	≤0.22
A 12-1	1157390150	25	4	180	G 1½"	10	≤0.21
A 13-1	1157420150	25	5	180	G 1½"	10	≤0.21
A 14-1	1157170150	25	6	180	G 1½"	10	≤0.22
A 15-1	1157200150	25	8	180	G 1½"	10	≤0.22
A 16-1	1160410150	25	11	180	G 1½"	10	≤0.21
A 12-2	1157400150	32	4	180	G 2"	10	≤0.21
A 13-2	1157430150	32	5	180	G 2"	10	≤0.21
A 14-2	1157180150	32	6	180	G 2"	10	≤0.22
A 15-2	1157210150	32	8	180	G 2"	10	≤0.22
A 16-2	1157440150	32	11	180	G 2"	10	≤0.21

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max. bar	EEI
		DN	m	mm			
A 401	1157450150	40	11	220	PN 6/10	10	≤0.22
A 401-1	1157460150	40	11	250	PN 6/10	10	≤0.22
A 500	1161360150	50	11	220	PN 6/10	10	≤0.22



## A 12

## A 12-1

## A 12-2

Nominal width	DN 25   DN 32
Flow head H max.	4 m
Overall length	170   180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	3.8 kg

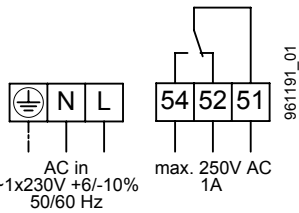
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-33 W
Nominal current	0.1-0.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

### Switch

**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

### Included in the scope of delivery

- Heat insulation shell

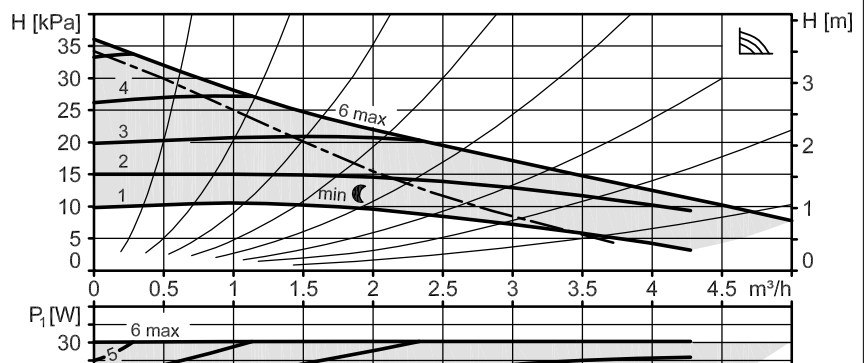
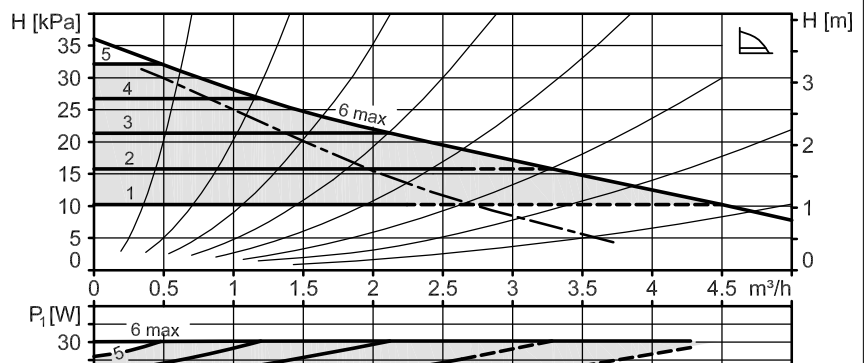
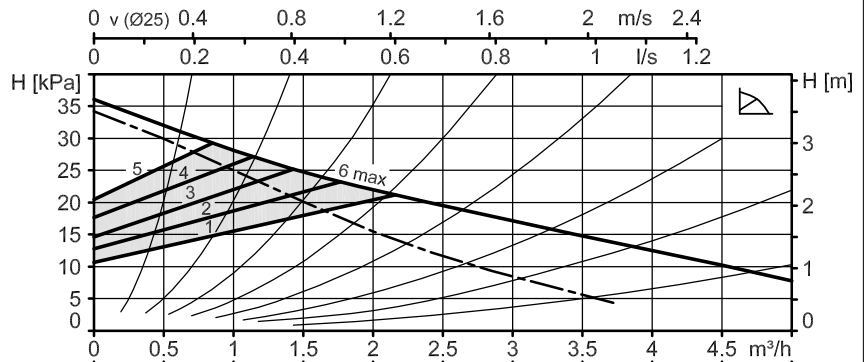
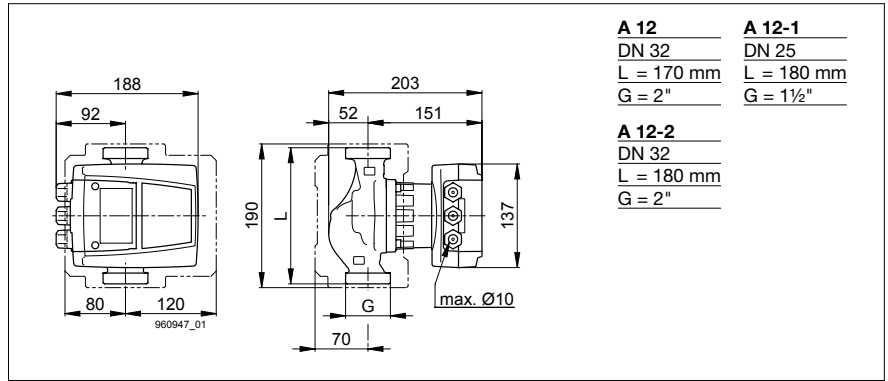
### Remarks

\* temporarily (ca. 30 min)

### Type

### Art. no.

A 12	1157380150
A 12-1	1157390150
A 12-2	1157400150





### A 13

### A 13-1

### A 13-2

Nominal width	DN 25   DN 32
Flow head H max.	5 m
Overall length	170   180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	3.8 kg

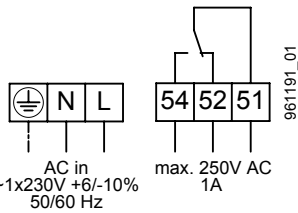
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-50 W
Nominal current	0.1-0.35 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

#### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

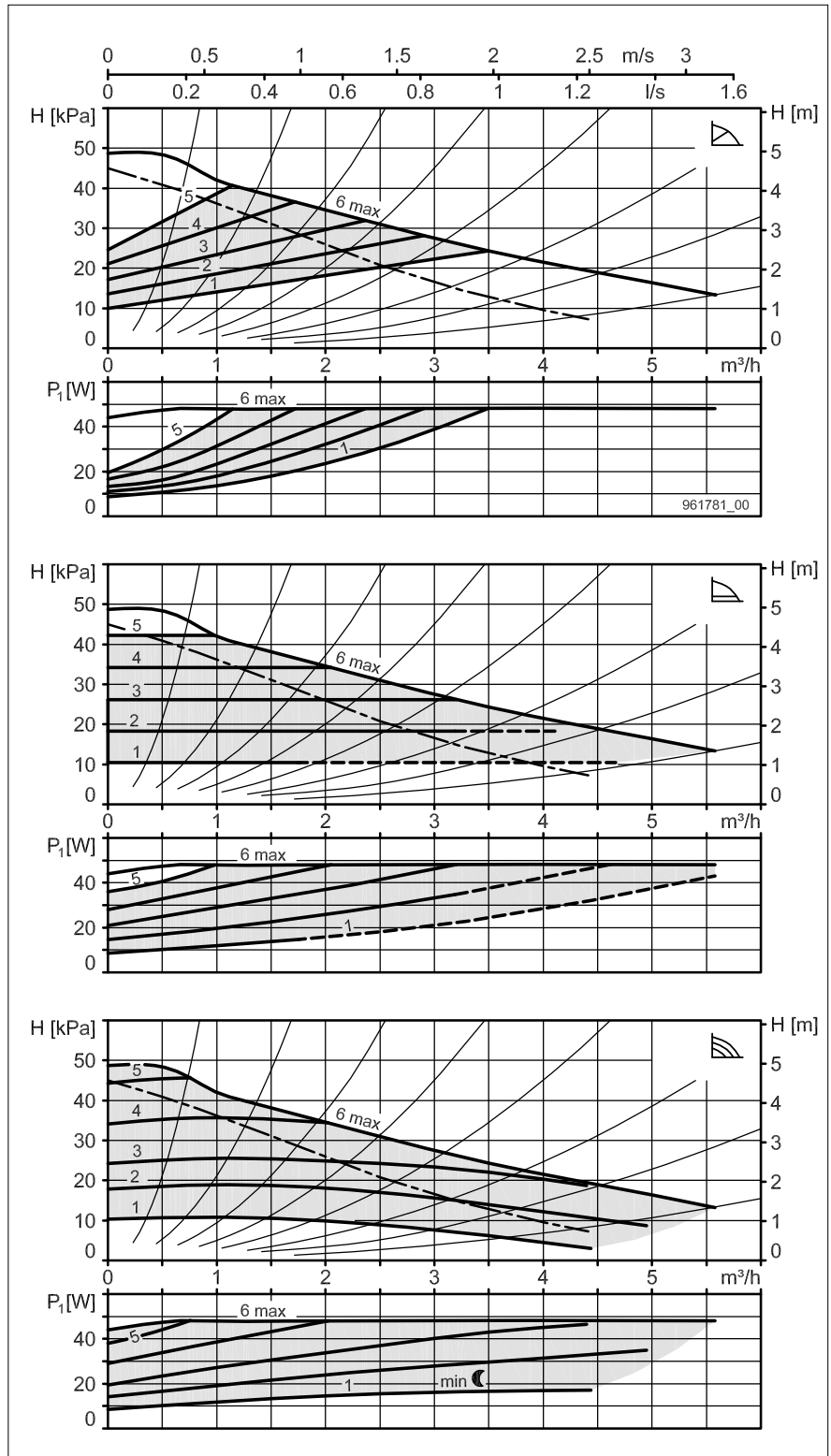
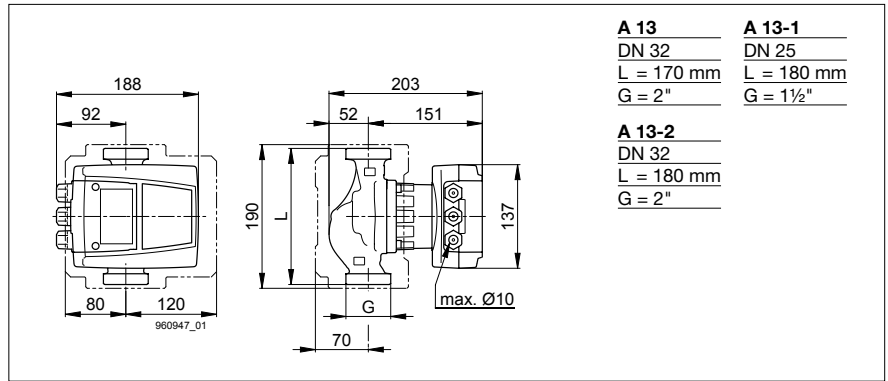
#### Included in the scope of delivery

- Heat insulation shell

#### Remarks

\* temporarily (ca. 30 min)

Type	Art. no.
A 13	1157410150
A 13-1	1157420150
A 13-2	1157430150



Heizung

### A 14

### A 14-1

### A 14-2

Nominal width	DN 25   DN 32
Flow head H max.	6 m
Overall length	170   180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	3.8 kg

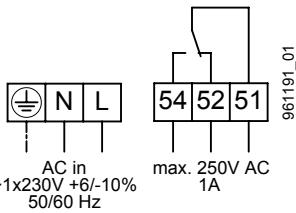
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-70 W
Nominal current	0.1-0.5 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

#### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

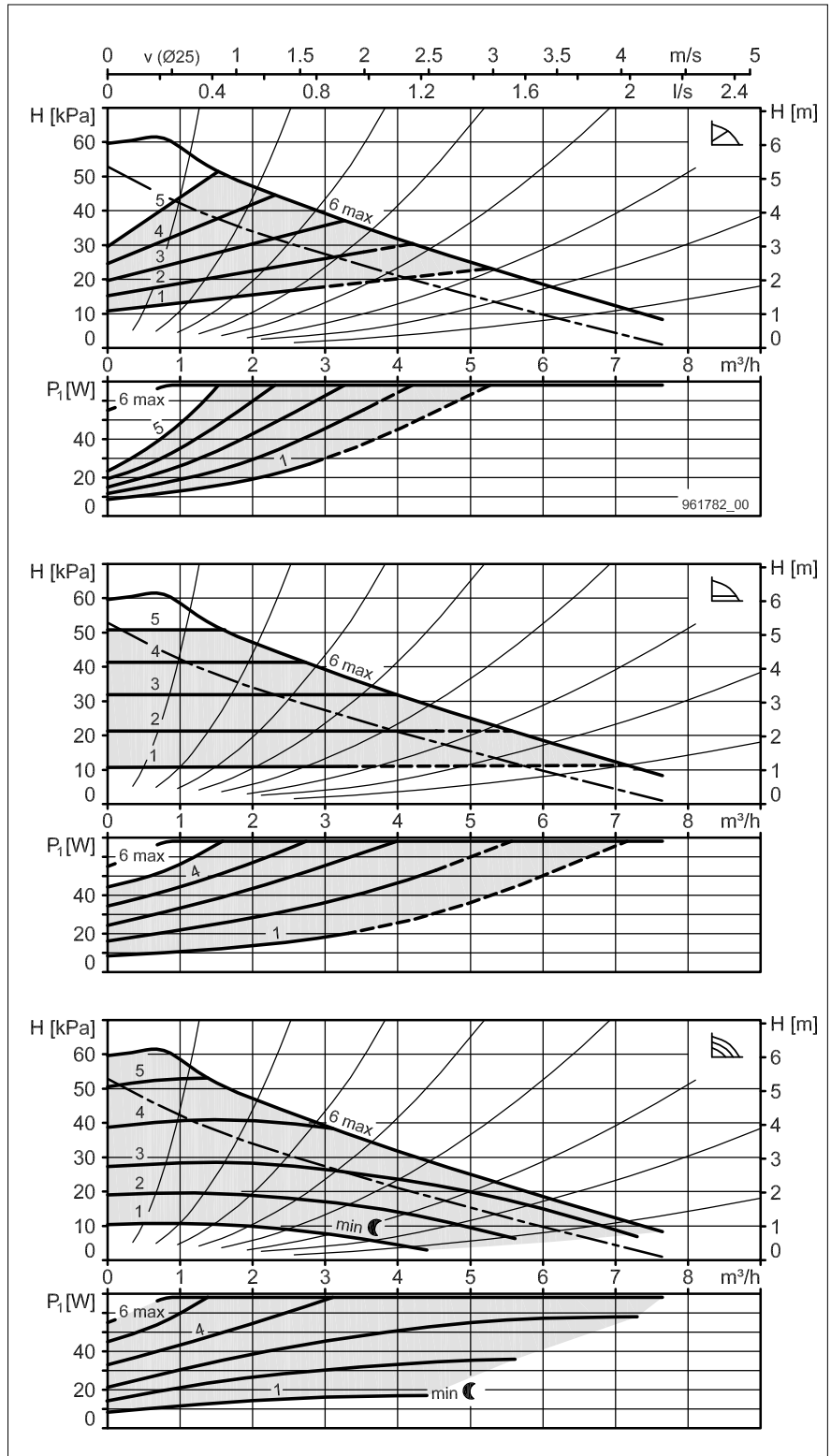
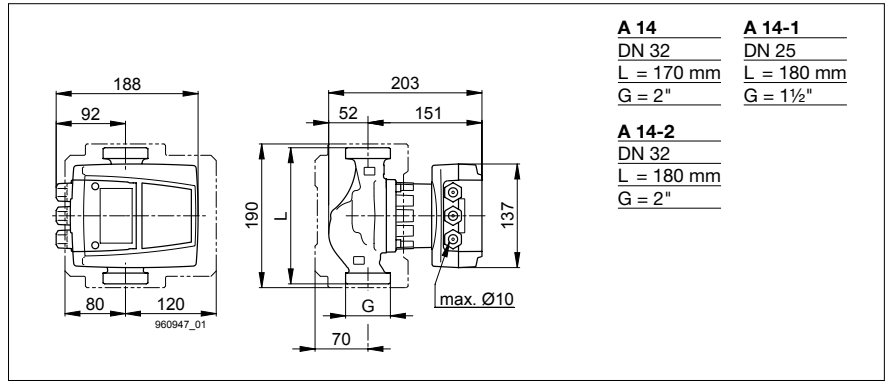
#### Included in the scope of delivery

- Heat insulation shell

#### Remarks

\* temporarily (ca. 30 min)

Type	Art. no.
A 14	1157160150
A 14-1	1157170150
A 14-2	1157180150



### A 15

### A 15-1

### A 15-2

Nominal width	DN 25   DN 32
Flow head H max.	8 m
Overall length	170   180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	3.8 kg

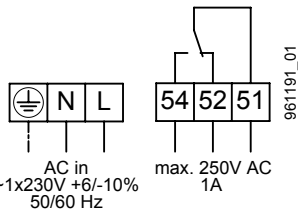
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-107 W
Nominal current	0.1-0.8 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

#### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

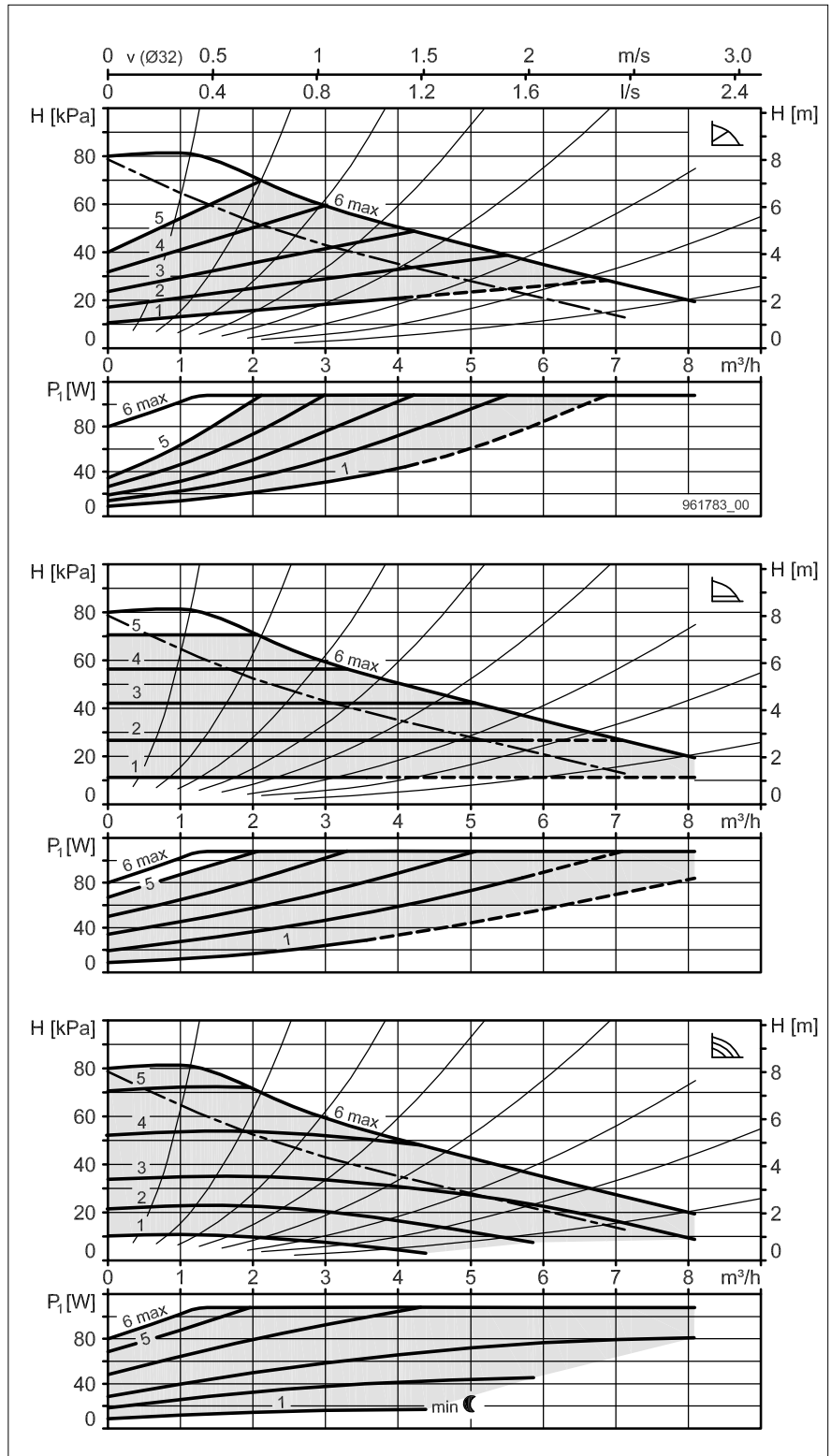
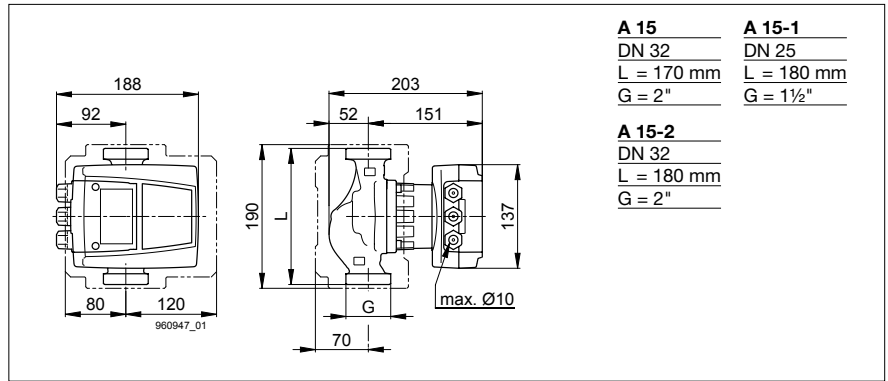
#### Included in the scope of delivery

- Heat insulation shell

#### Remarks

\* temporarily (ca. 30 min)

Type	Art. no.
A 15	1157190150
A 15-1	1157200150
A 15-2	1157210150



### A 16-1

### A 16-2

Nominal width	DN 25   DN 32
Flow head H max.	11 m
Overall length	180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	3.8 kg

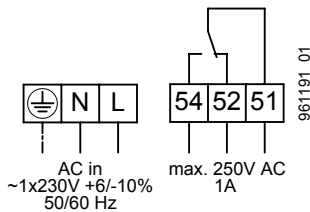
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

#### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

#### Included in the scope of delivery

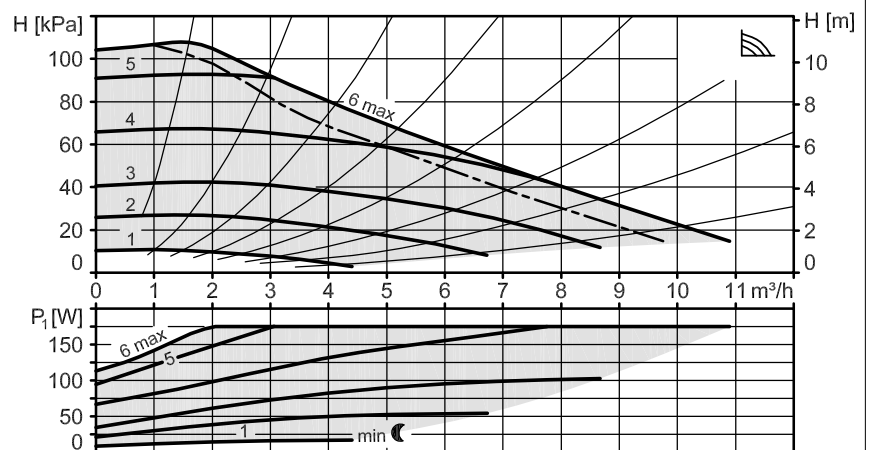
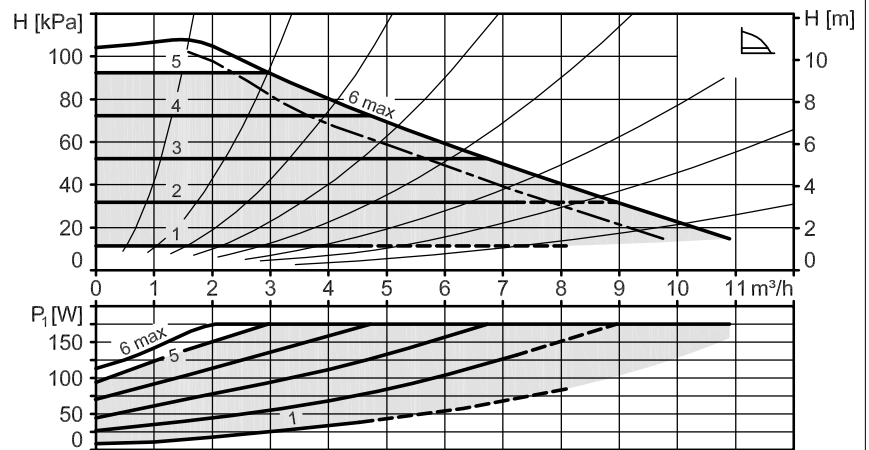
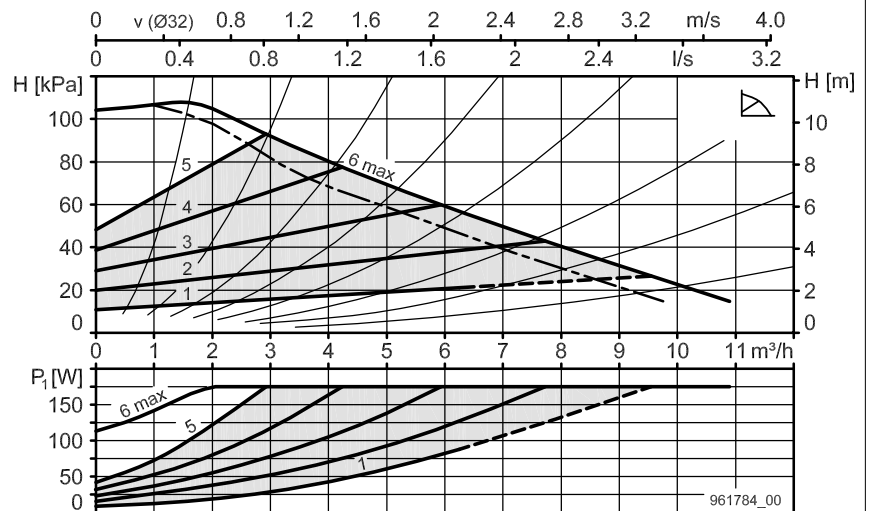
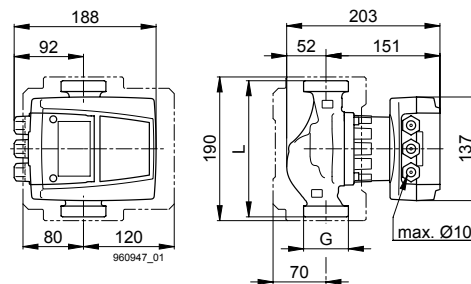
– Heat insulation shell

#### Remarks

\* temporarily (ca. 30 min)

Type	Art. no.
A 16-1	1160410150
A 16-2	1157440150

A 16-1	A 16-2
DN 25	DN 32
L = 180 mm	L = 180 mm
G = 1½"	G = 2"



## A 401

## A 401-1

Nominal width	DN 40
Flow head H max.	11 m
Overall length	220   250 mm
Flanged connection	PN 6/10
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	9.0 kg

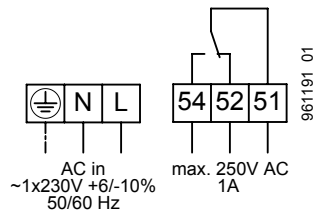
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

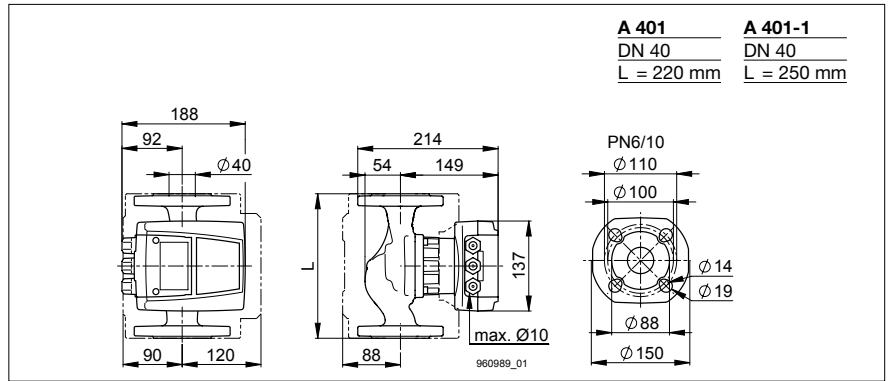
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

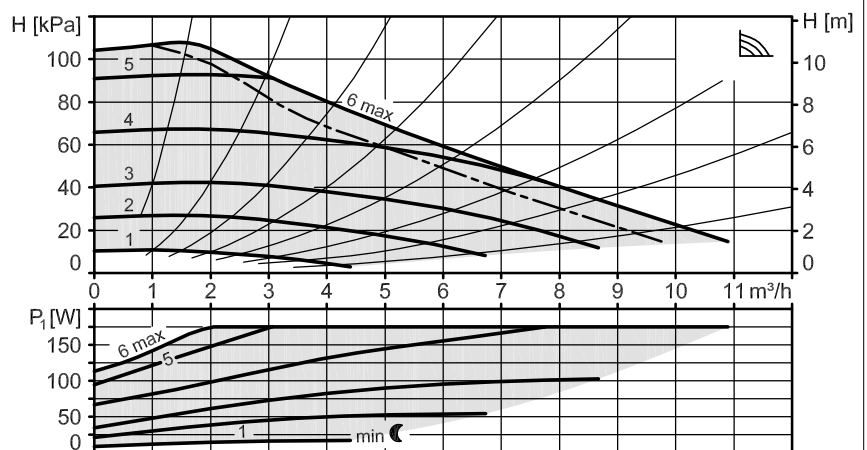
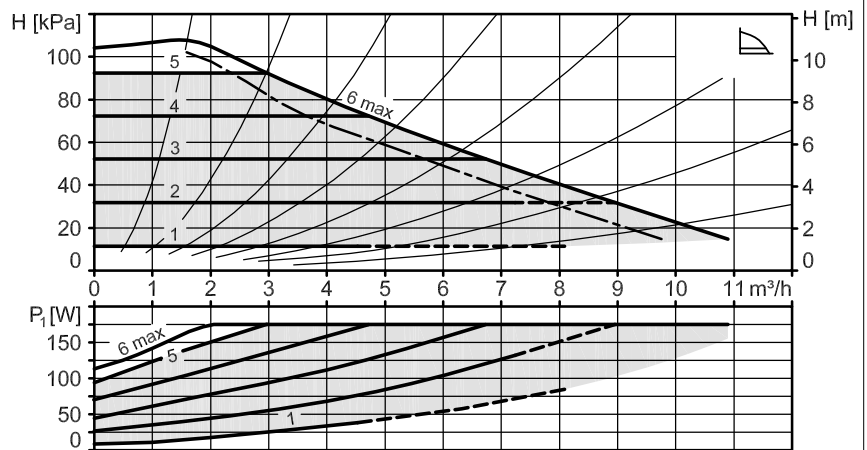
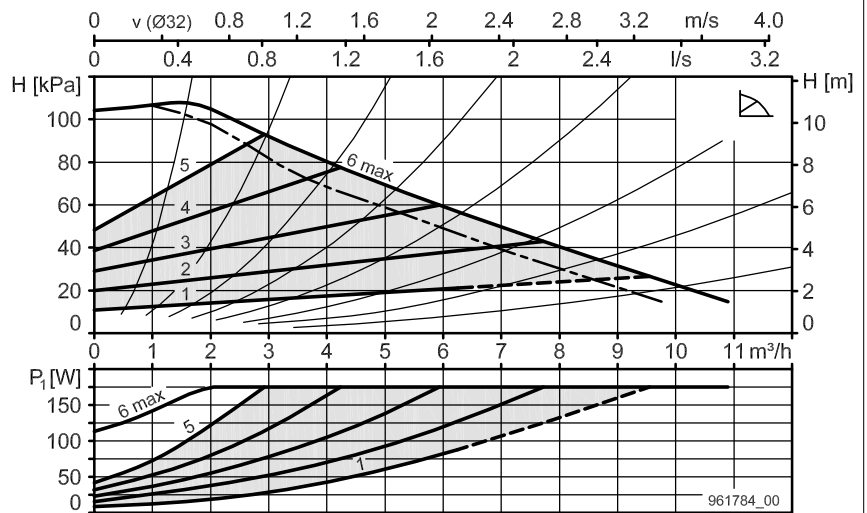
### Remarks

\* temporarily (ca. 30 min)

Type	Art. no.
A 401	1157450150
A 401-1	1157460150



<b>A 401</b>	<b>A 401-1</b>
DN 40	DN 40
L = 220 mm	L = 250 mm



## A 500

Nominal width	DN 50
Flow head H max.	11 m
Overall length	220 mm
Flanged connection	PN 6/10
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	10.5 kg

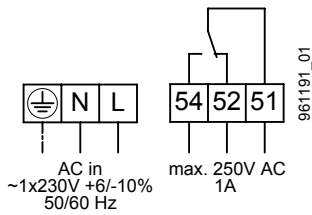
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



**52, 54, 51** Error or operating message  
**L, N, PE** Power supply

### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

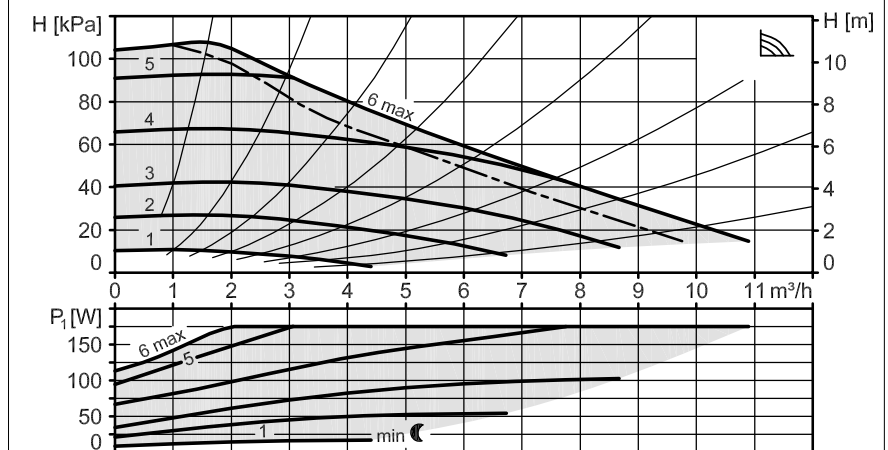
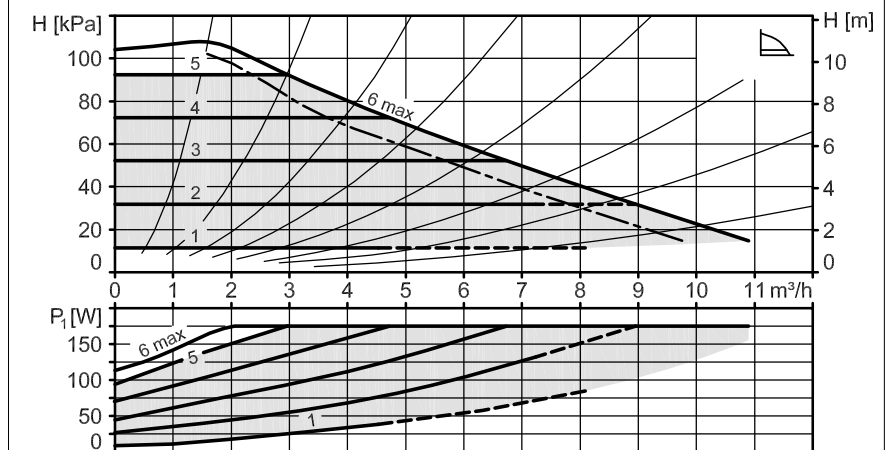
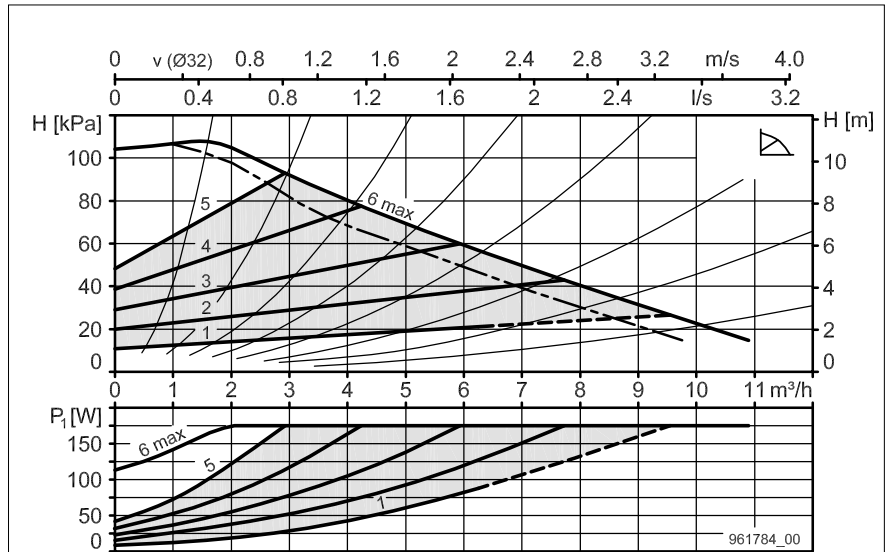
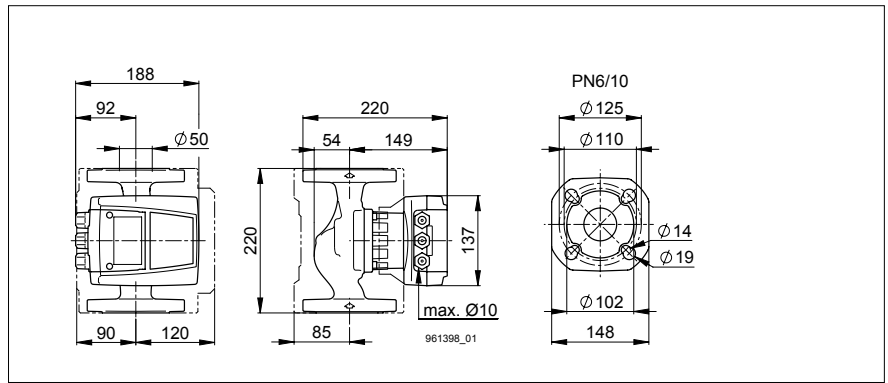
### Included in the scope of delivery

- Heat insulation shell
- Sealing set for flange PN 6

### Remarks

\* temporarily (ca. 30 min)

**Type** A 500      **Art. no.** 1161360150







## Heating circulation pumps

### AD 14... AD 401

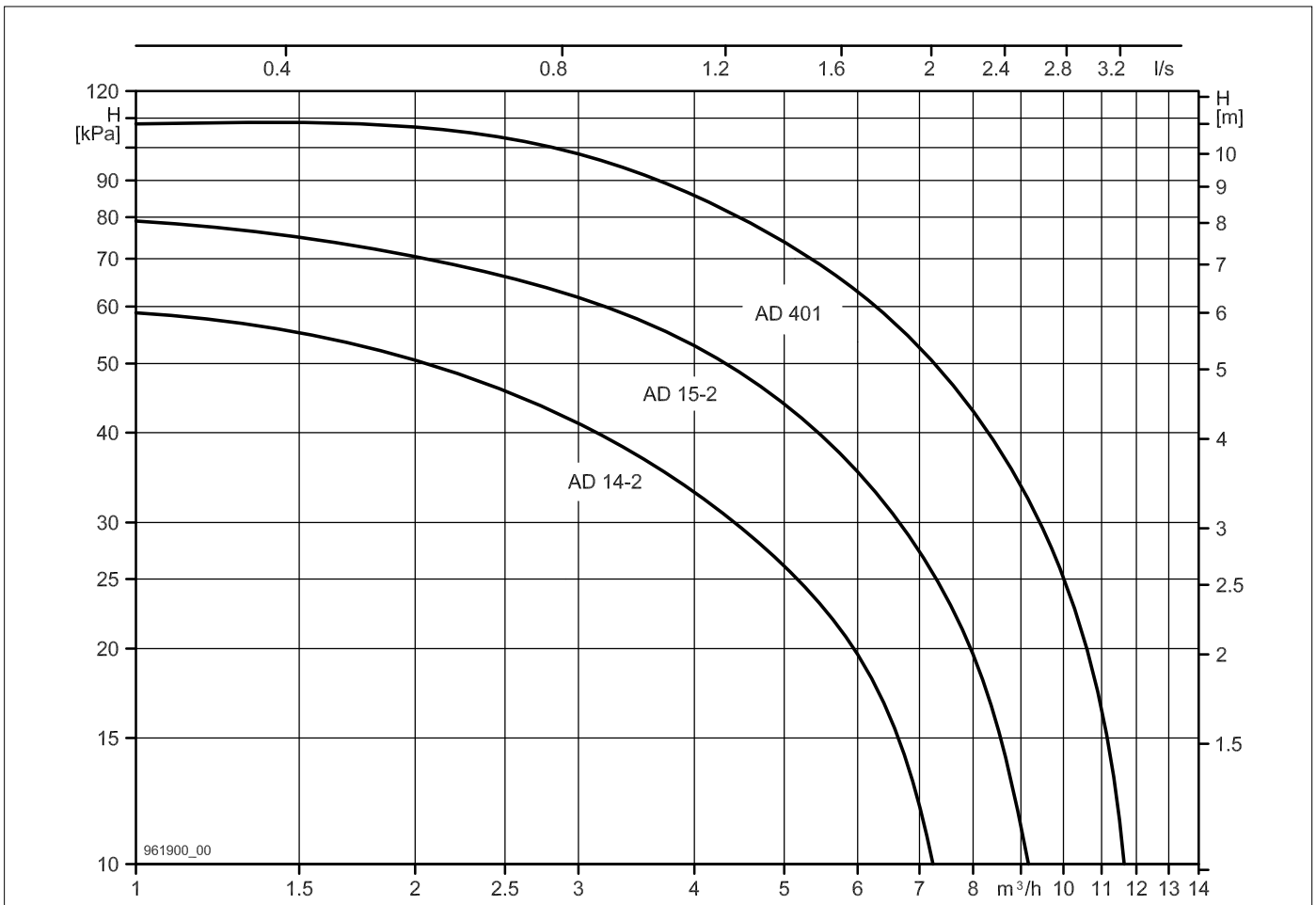
as long as stock

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar	EEI
		DN	m	mm			
AD 14-2	1162520150	32	6	180	G 2"	10	≤0.22
AD 15-2	1162530150	32	8	180	G 2"	10	≤0.22

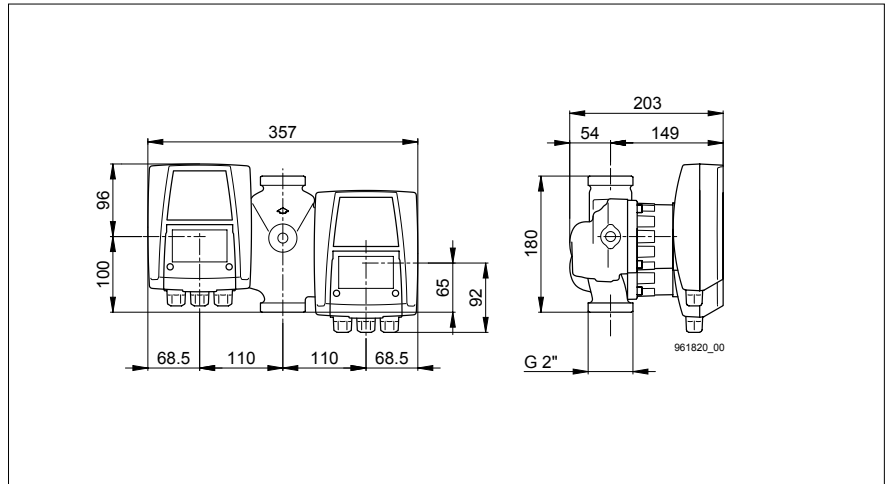
Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max. bar	EEI
		DN	m	mm			
AD 401	1157770150	40	11	220	PN 6/10	10	≤0.22





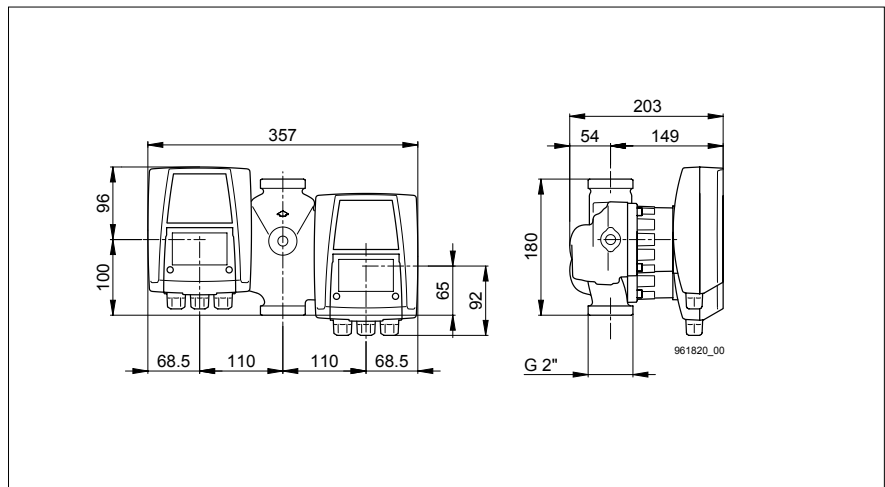
### AD 14-2

Art. no.	1162520150
Nominal width	DN 32
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	28.2 kg
Characteristic curve	see single pump



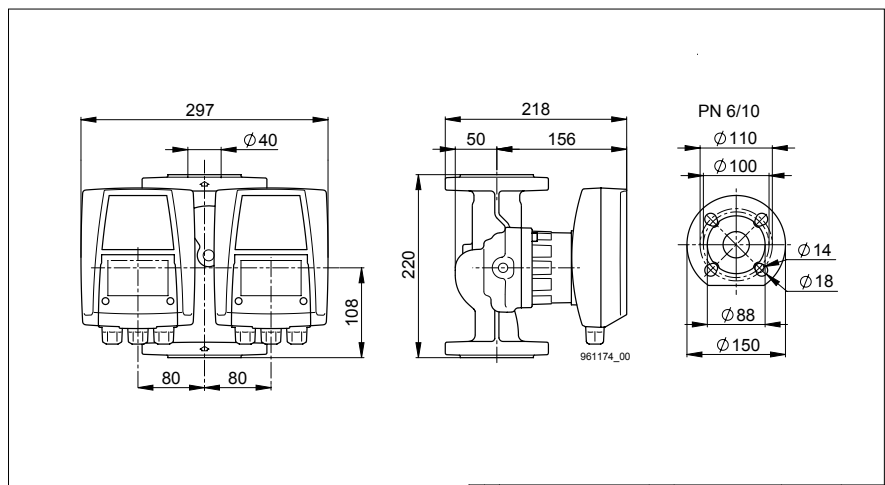
### AD 15-2

Art. no.	1162530150
Nominal width	DN 32
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	28.2 kg
Characteristic curve	see single pump



### AD 401

Art. no.	1157770150
Nominal width	DN 40
Flow head H max.	11 m
Overall length	220 mm
Flanged connection	PN 6/10
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+95/+110°C *
Ambient temperature	max. 40°C
Net weight	30.0 kg
Characteristic curve	see single pump







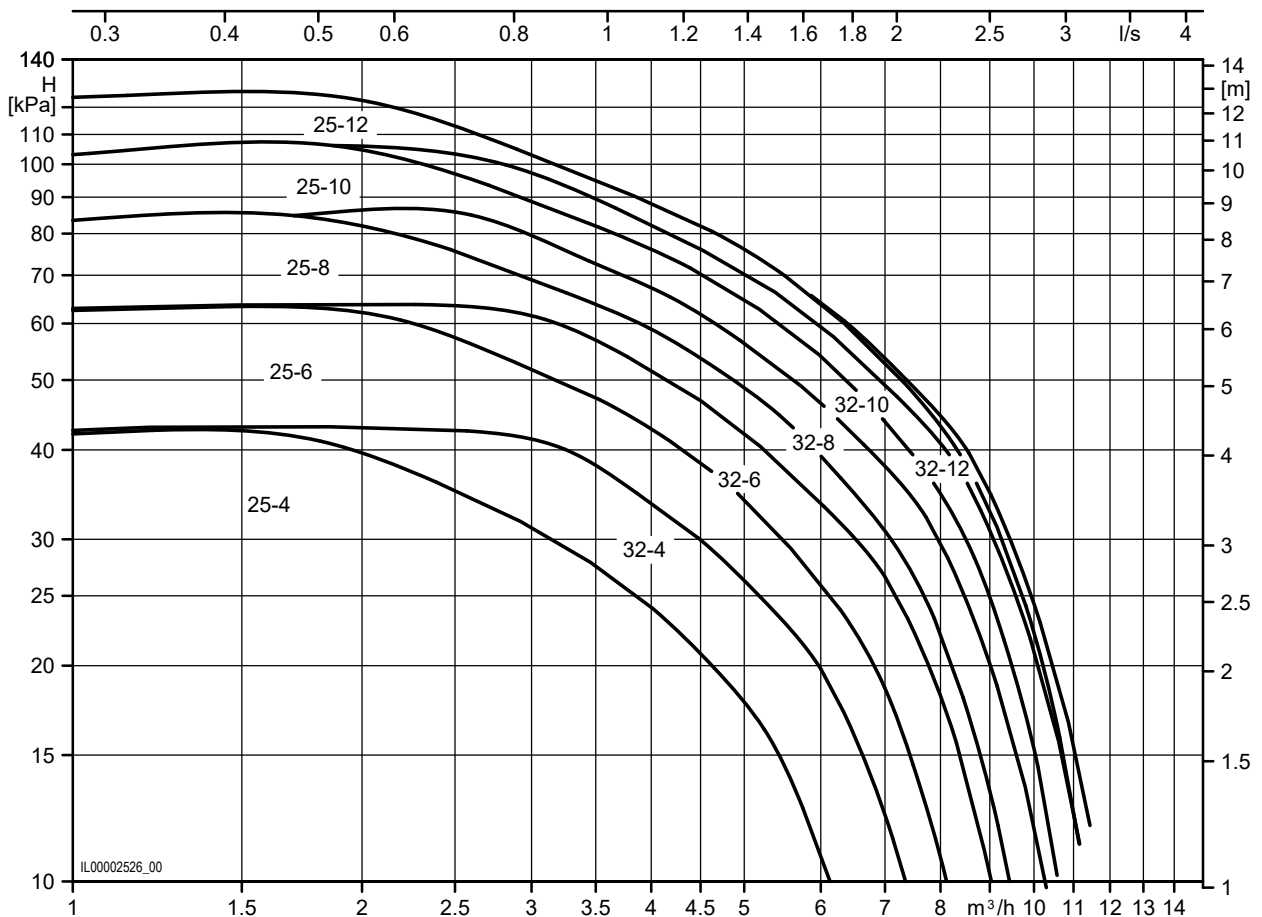
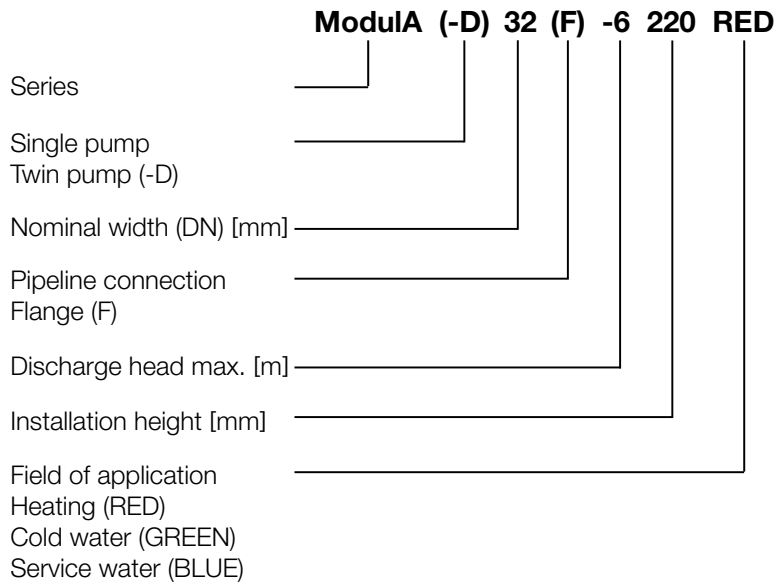
## Cold water circulation pumps

### ModulA GREEN T2 with threaded connection

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA 25-4 180 GREEN	7000000121	25	4	180	G 1½"	10	≤0.18
ModulA 25-6 180 GREEN	7000000122	25	6	180	G 1½"	10	≤0.18
ModulA 25-8 180 GREEN	7000000123	25	8	180	G 1½"	10	≤0.18
ModulA 25-10 180 GREEN	7000000124	25	10	180	G 1½"	10	≤0.18
ModulA 25-12 180 GREEN	7000000125	25	12	180	G 1½"	10	≤0.18
ModulA 32-4 180 GREEN	7000000131	32	4	180	G 2"	10	≤0.18
ModulA 32-6 180 GREEN	7000000132	32	6	180	G 2"	10	≤0.18
ModulA 32-8 180 GREEN	7000000133	32	8	180	G 2"	10	≤0.18
ModulA 32-10 180 GREEN	7000000134	32	10	180	G 2"	10	≤0.18
ModulA 32-12 180 GREEN	7000000135	32	12	180	G 2"	10	≤0.18
ModulA 32-4 170 GREEN	7000000126	32	4	170	G 2"	10	≤0.18
ModulA 32-6 170 GREEN	7000000127	32	6	170	G 2"	10	≤0.18
ModulA 32-8 170 GREEN	7000000128	32	8	170	G 2"	10	≤0.18
ModulA 32-10 170 GREEN	7000000129	32	10	170	G 2"	10	≤0.18
ModulA 32-12 170 GREEN	7000000130	32	12	170	G 2"	10	≤0.18

**Order reference**



Klima/Kälte

## Modula 25-4 180 GREEN

Version	T2 S
Nominal width	DN 25
Flow head H max.	4 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.5 kg
Gross weight	5.2 kg

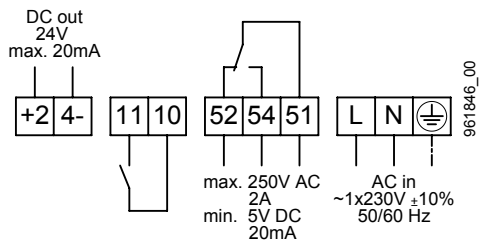
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-49 W
Nominal current	0.08-0.37 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

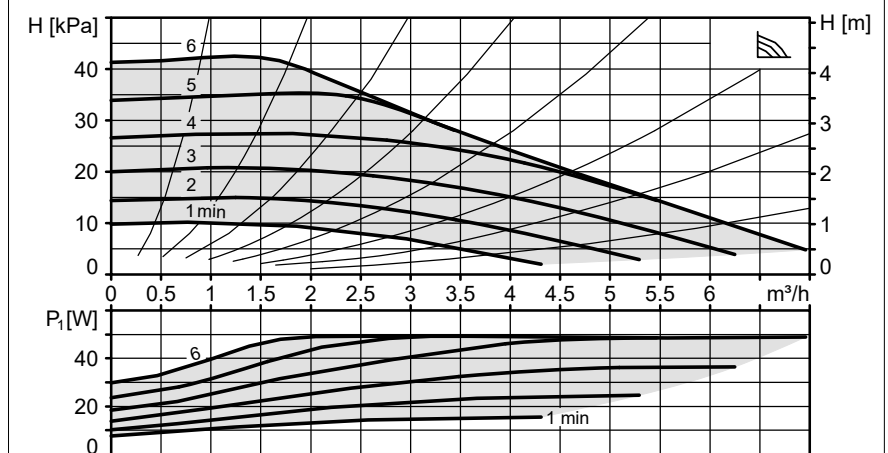
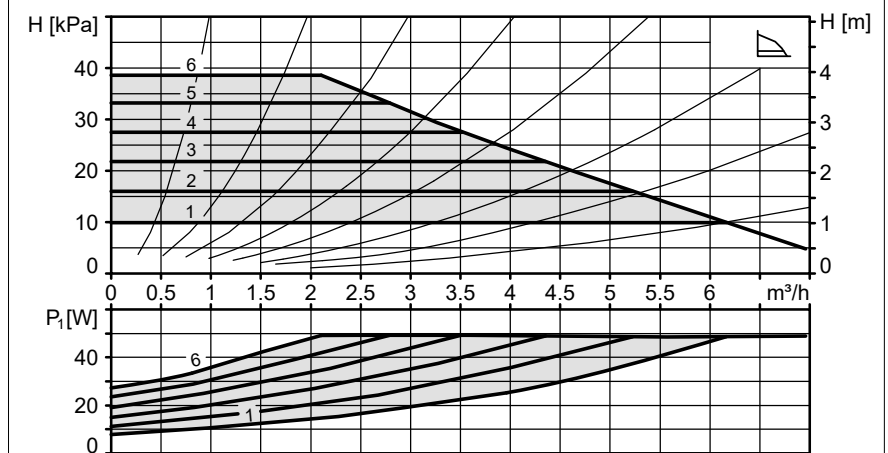
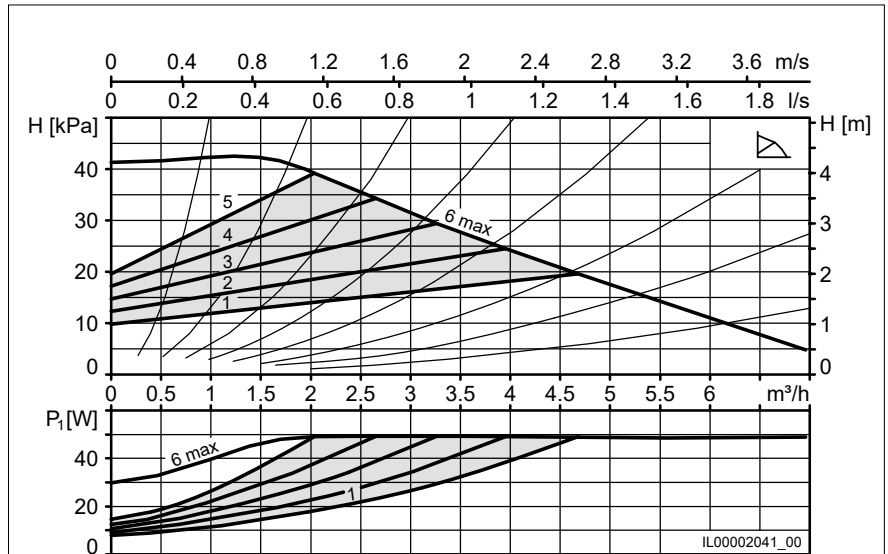
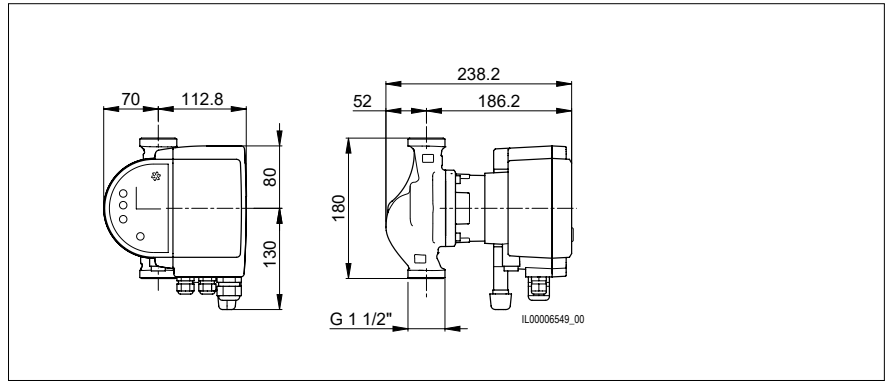
### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 25-4 180 GREEN	7000000121



## Modula 25-6 180 GREEN

Version	T2 S
Nominal width	DN 25
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 1½"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.5 kg
Gross weight	5.2 kg

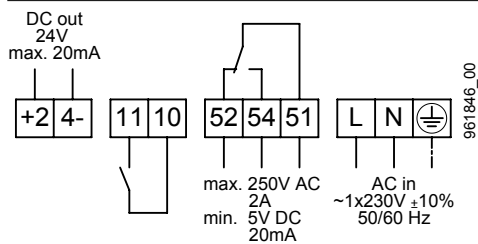
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-83 W
Nominal current	0.08-0.62 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

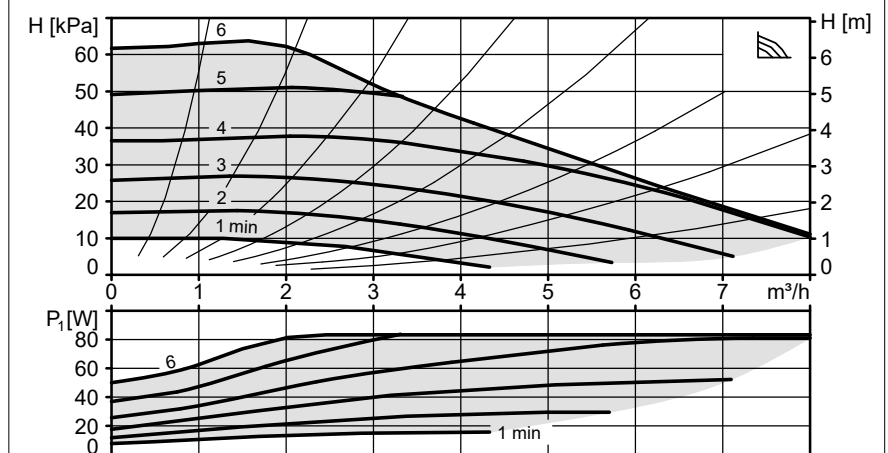
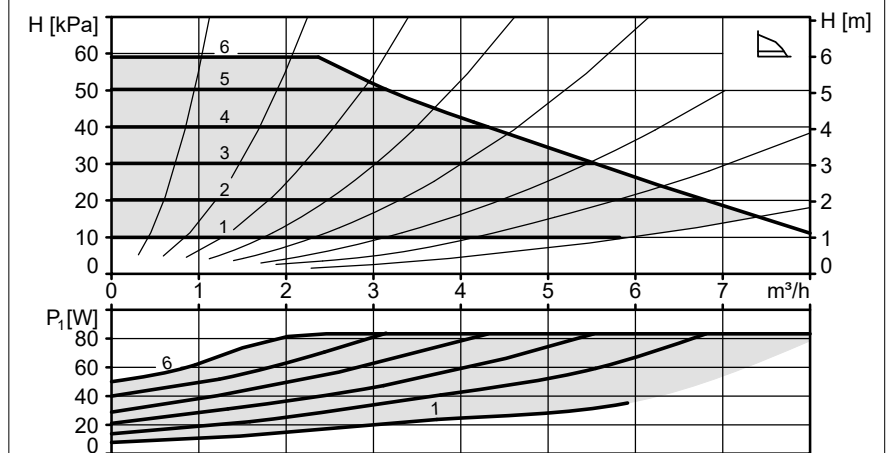
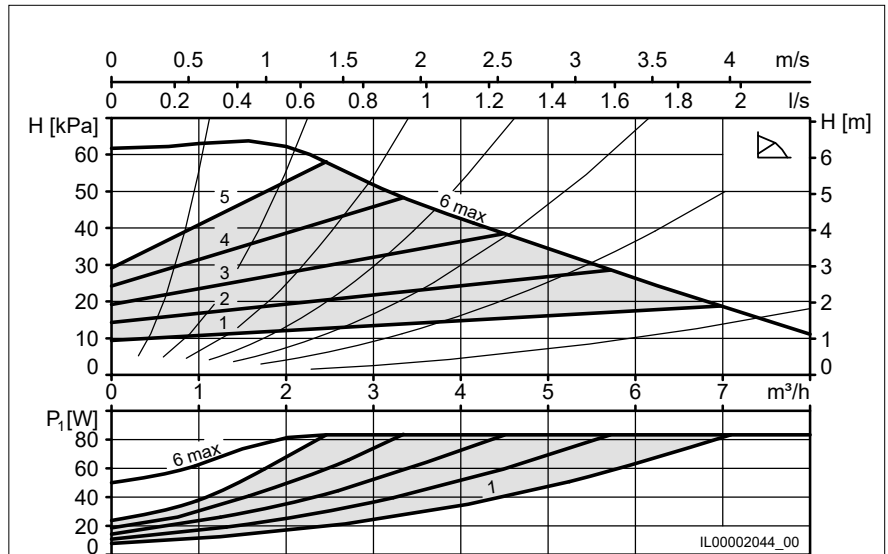
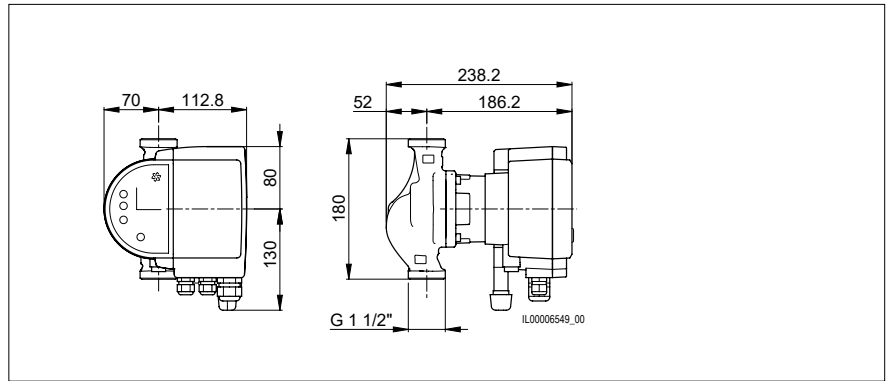
### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 25-6 180 GREEN	7000000122



## Modula 25-8 180 GREEN

Version	T2 S
Nominal width	DN 25
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.5 kg
Gross weight	5.2 kg

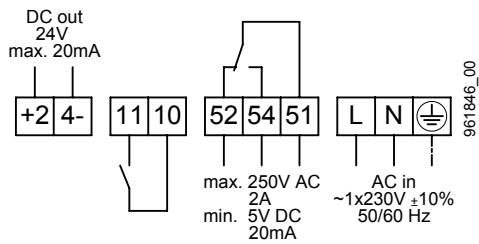
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-115 W
Nominal current	0.08-0.85 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

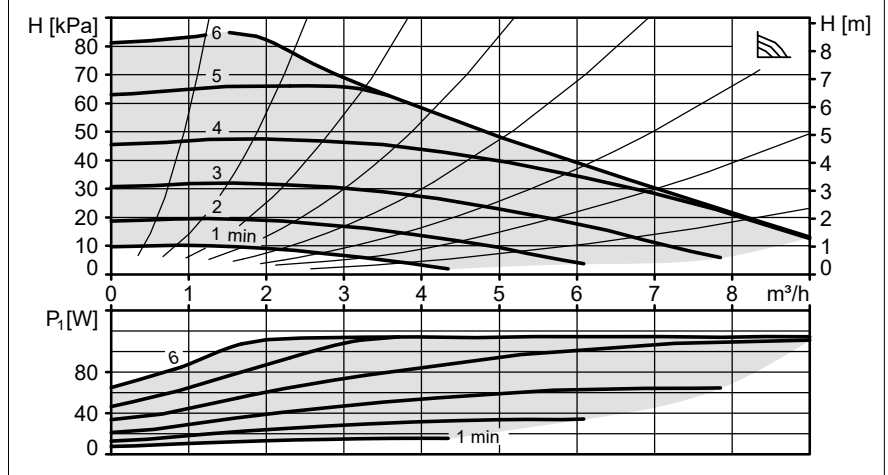
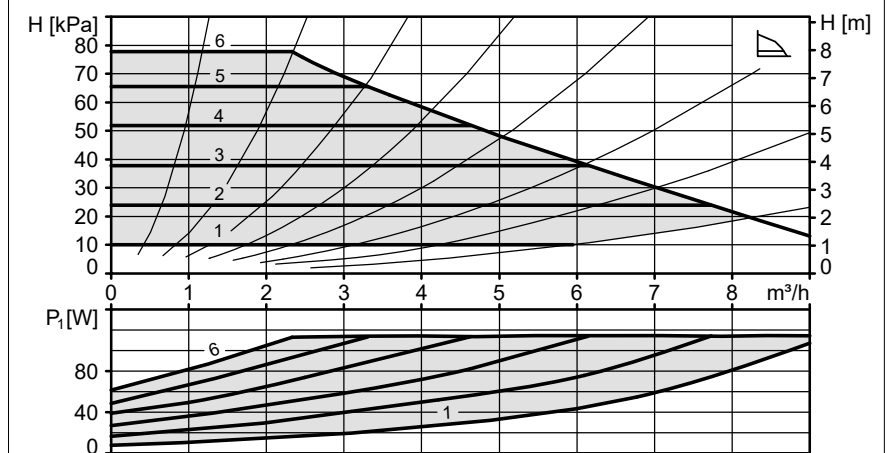
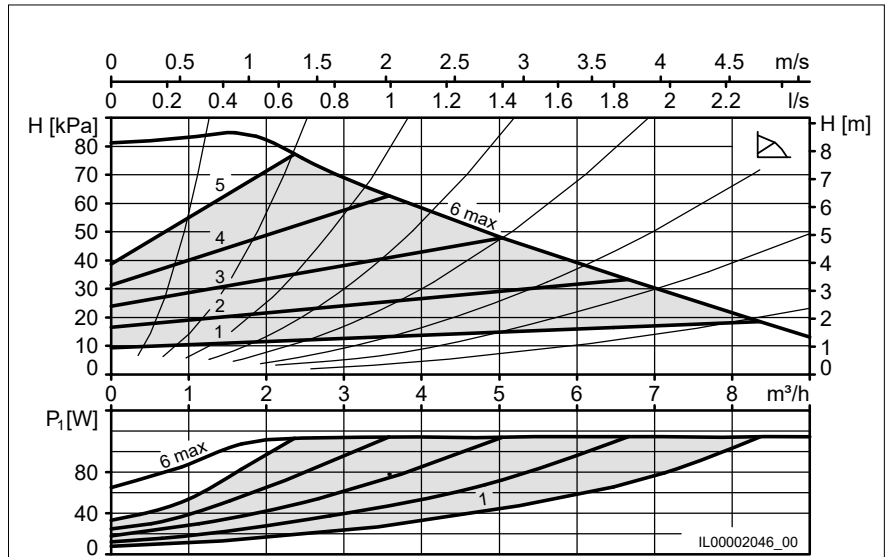
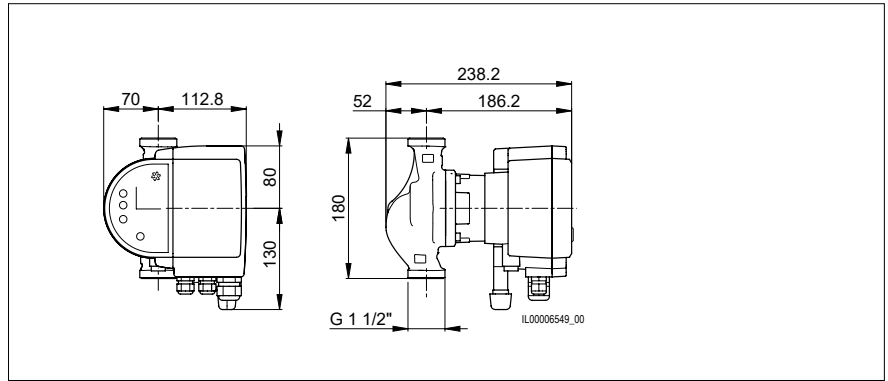
### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

<b>Type</b>	<b>Art. no.</b>
Modula 25-8 180 GREEN	7000000123





## Modula 25-10 180 GREEN

Version	T2 S
Nominal width	DN 25
Flow head H max.	10 m
Overall length	180 mm
Threaded connection	G 1½"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.5 kg
Gross weight	5.2 kg

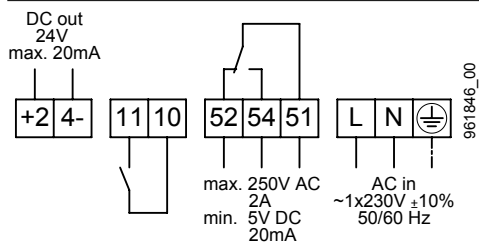
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-153 W
Nominal current	0.08-1.15 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

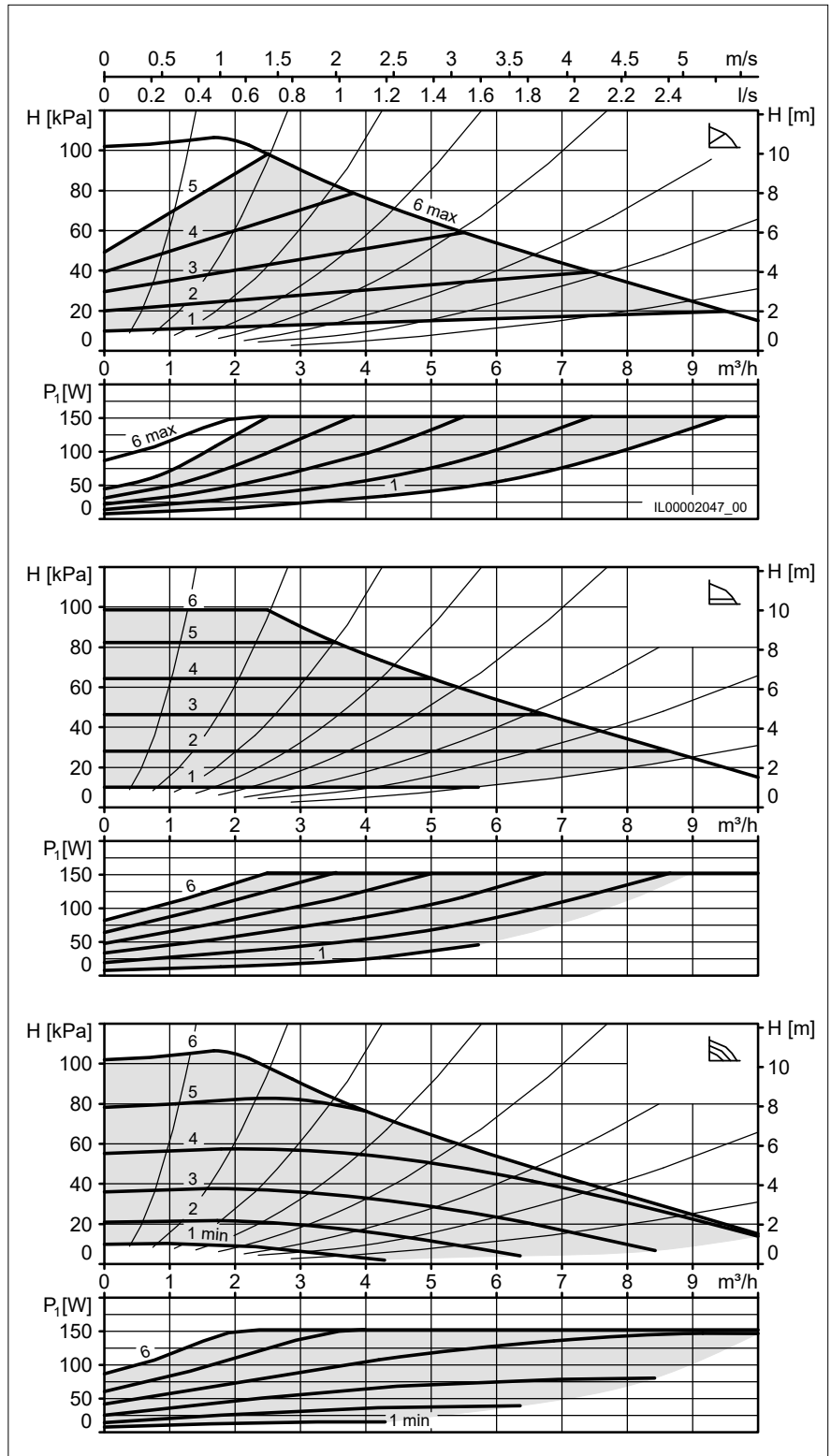
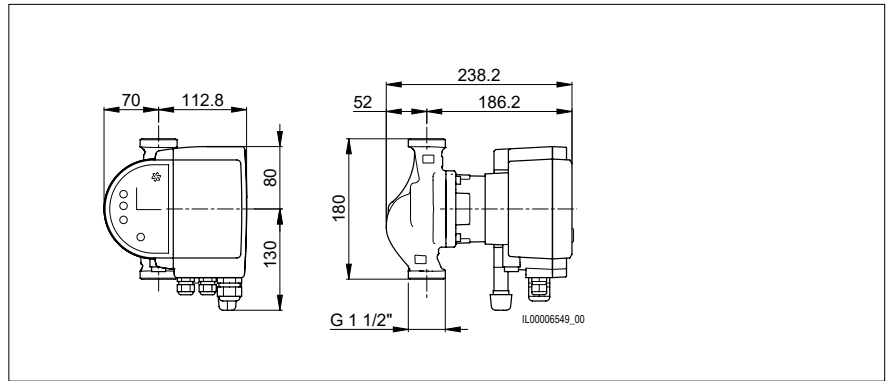
### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 25-10 180 GREEN	7000000124



## Modula 25-12 180 GREEN

Version	T2 S
Nominal width	DN 25
Flow head H max.	12 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.5 kg
Gross weight	5.2 kg

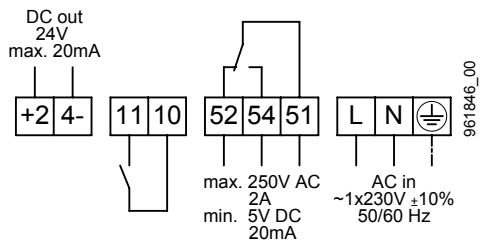
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-181 W
Nominal current	0.08-1.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

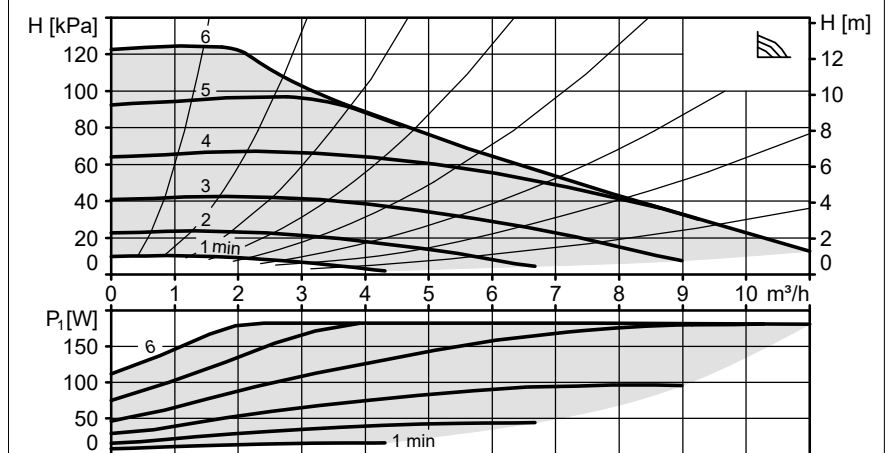
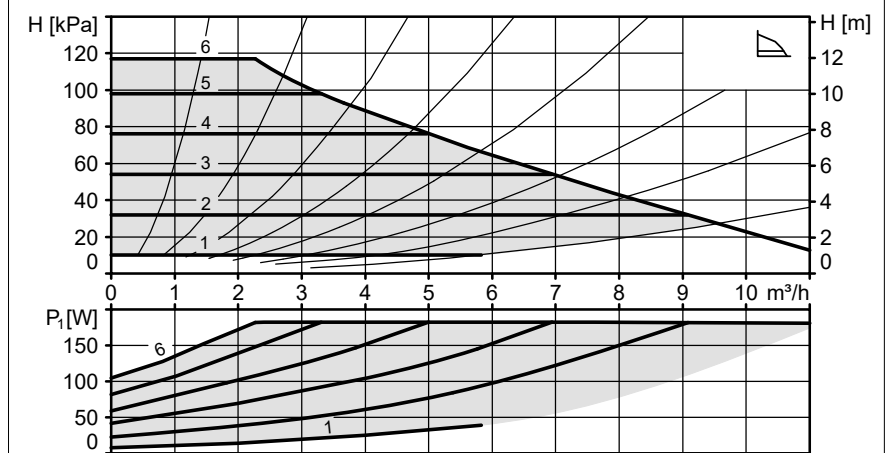
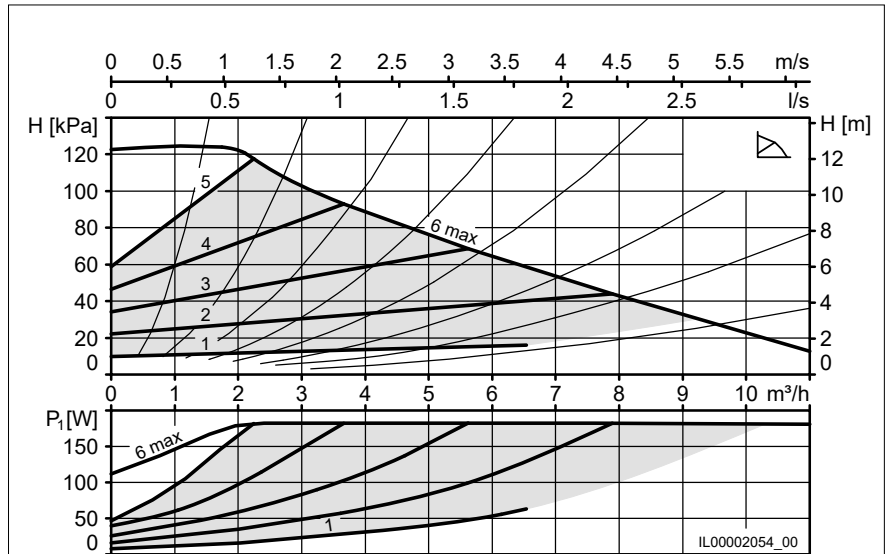
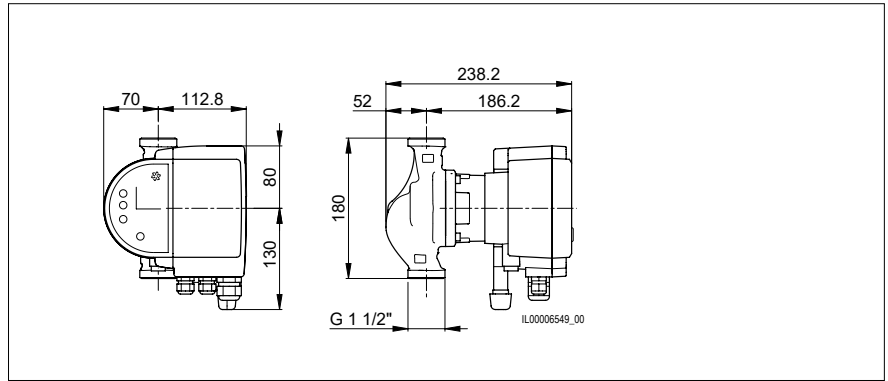
### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 25-12 180 GREEN	7000000125



## ModulA 32-4 180 GREEN

## ModulA 32-4 170 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	4 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.7 kg
Gross weight	5.35 kg

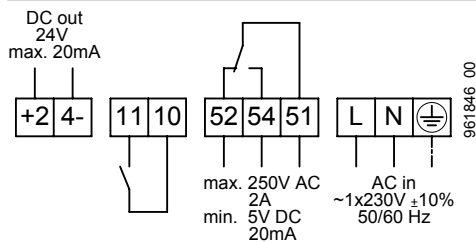
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-66 W
Nominal current	0.08-0.48 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Biral Connector
- AFM seal

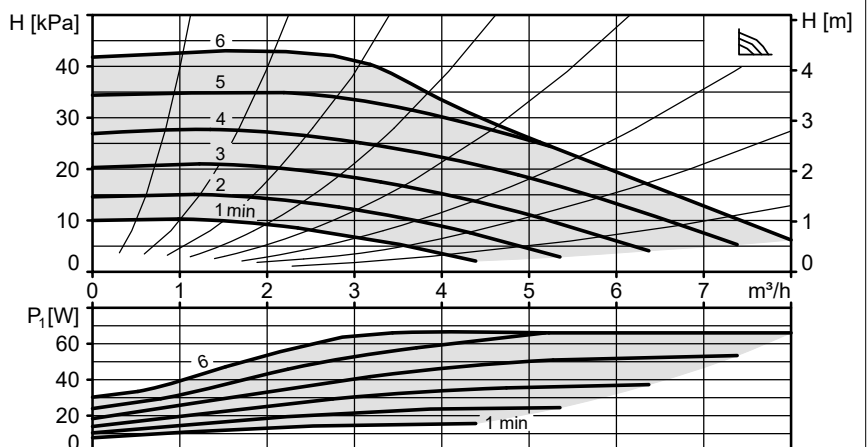
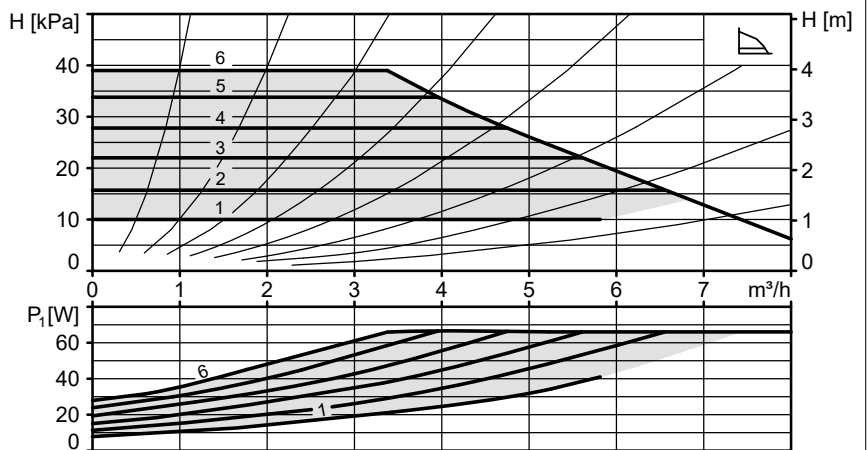
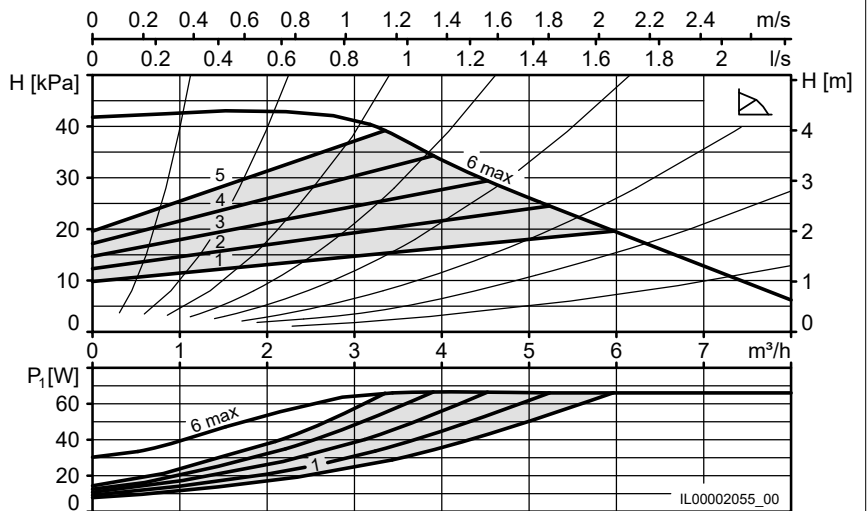
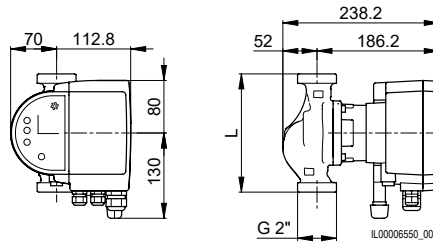
### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32-4 180 GREEN	7000000131
ModulA 32-4 170 GREEN	7000000126

**ModulA 32-4 180 GREEN**  
DN 32  
L = 180 mm

**ModulA 32-4 170 GREEN**  
DN 32  
L = 170 mm



## ModulA 32-6 180 GREEN

## ModulA 32-6 170 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.7 kg
Gross weight	5.35 kg

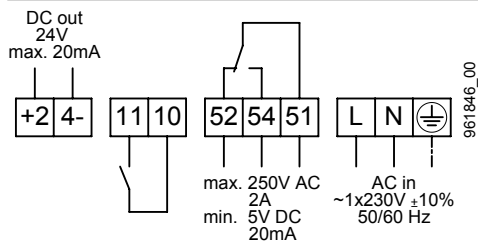
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-102 W
Nominal current	0.08-0.73 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connection diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Biral Connector
- AFM seal

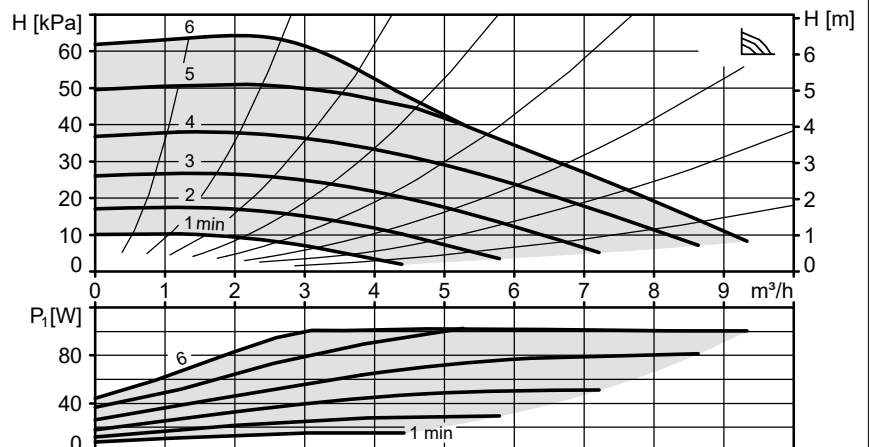
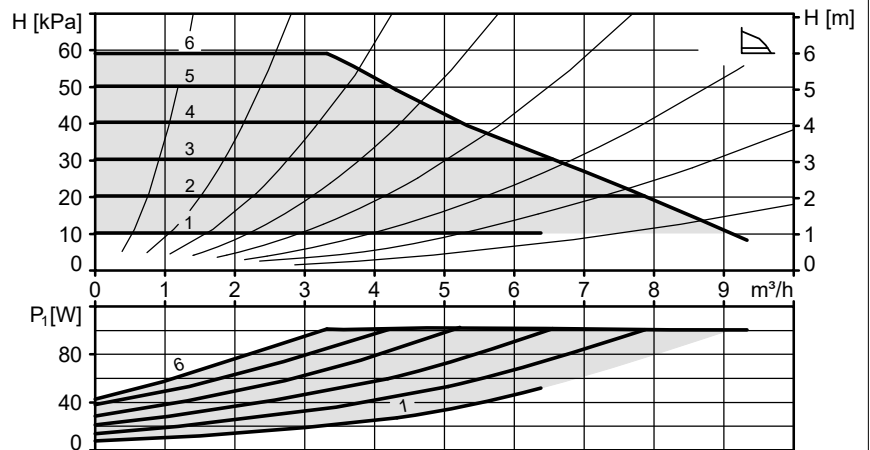
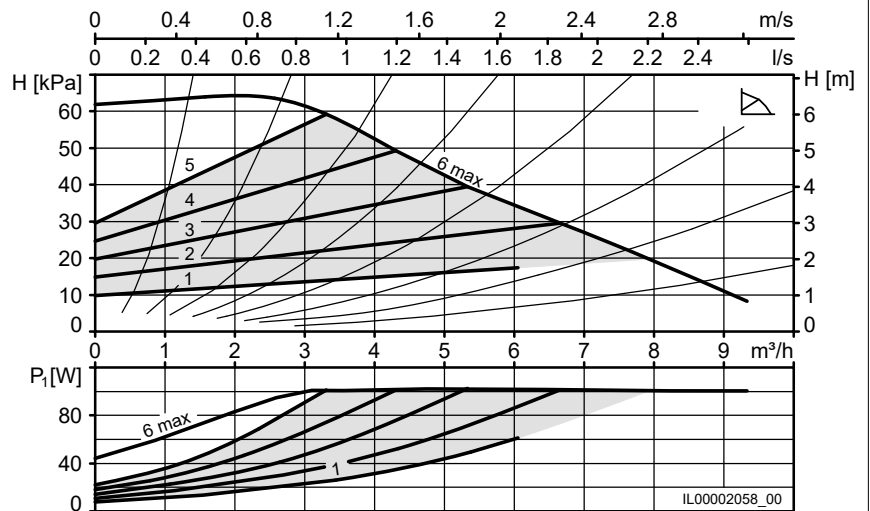
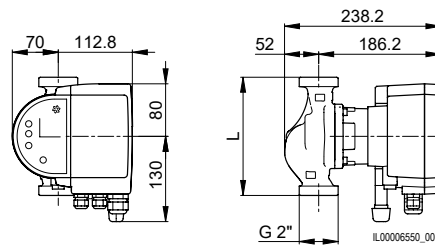
### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32-6 180 GREEN	7000000132
ModulA 32-6 170 GREEN	7000000127

**ModulA 32-6 180 GREEN**  
DN 32  
L = 180 mm

**ModulA 32-6 170 GREEN**  
DN 32  
L = 170 mm



## ModulA 32-8 180 GREEN

## ModulA 32-8 170 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	8 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.7 kg
Gross weight	5.35 kg

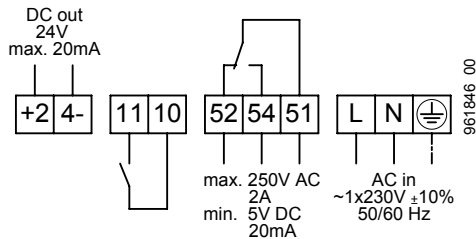
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-134 W
Nominal current	0.08-0.97 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Biral Connector
- AFM seal

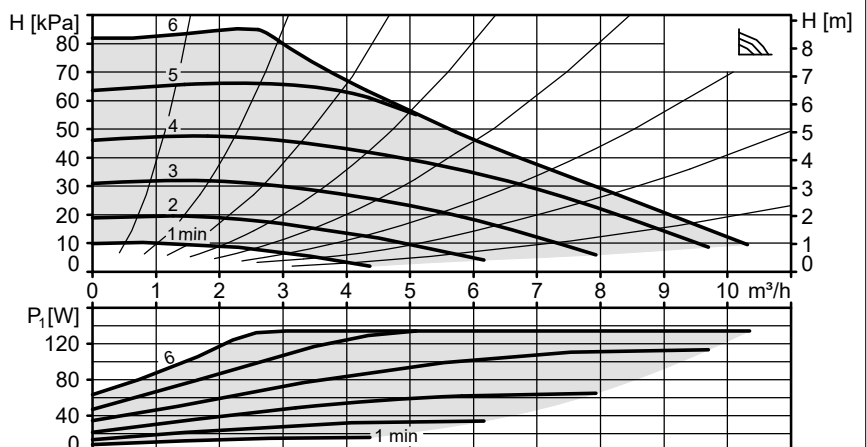
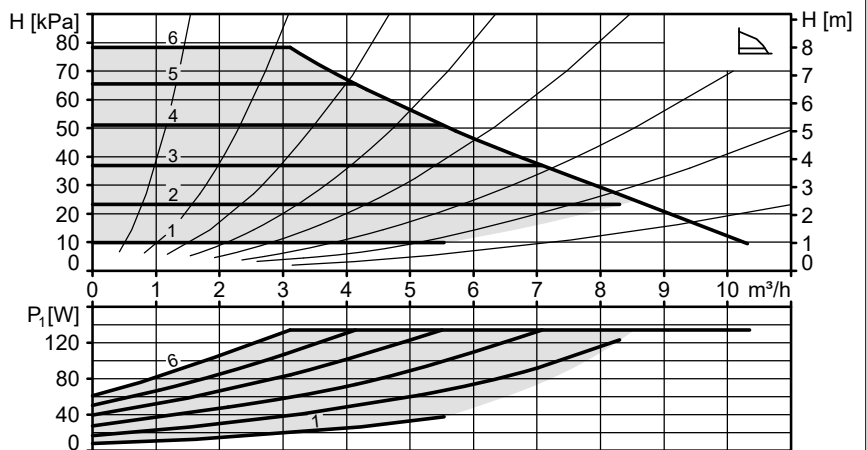
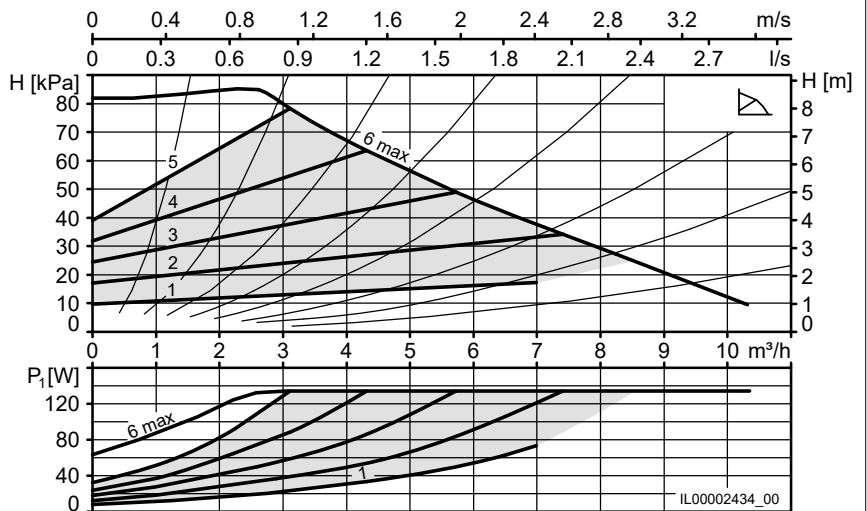
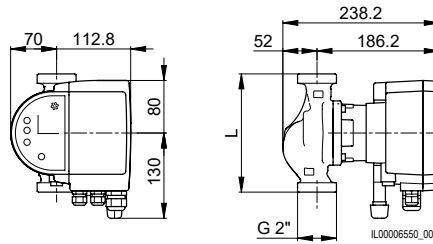
### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32-8 180 GREEN	7000000133
ModulA 32-8 170 GREEN	7000000128

**ModulA 32-8 180 GREEN**  
DN 32  
L = 180 mm

**ModulA 32-8 170 GREEN**  
DN 32  
L = 170 mm



## ModulA 32-10 180 GREEN

## ModulA 32-10 170 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	10 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.7 kg
Gross weight	5.35 kg

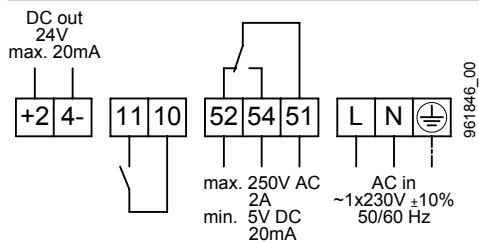
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	7-169 W
Nominal current	0.08-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Biral Connector
- AFM seal

### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32-10 180 GREEN	7000000134
ModulA 32-10 170 GREEN	7000000129

### ModulA 32-10 180 GREEN

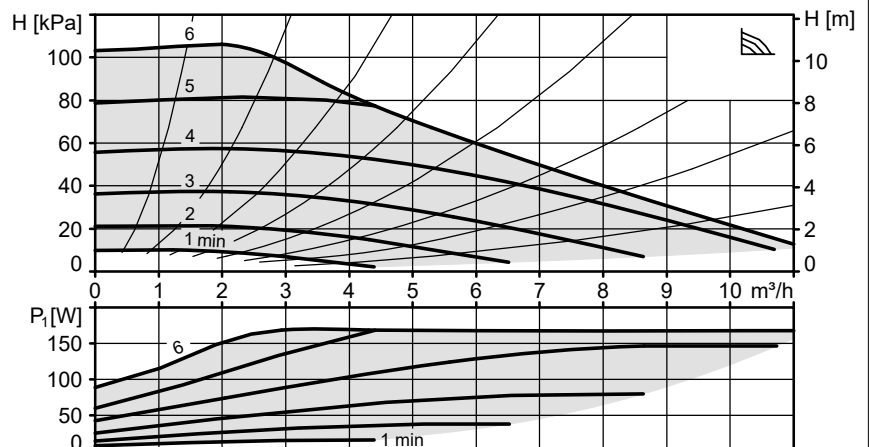
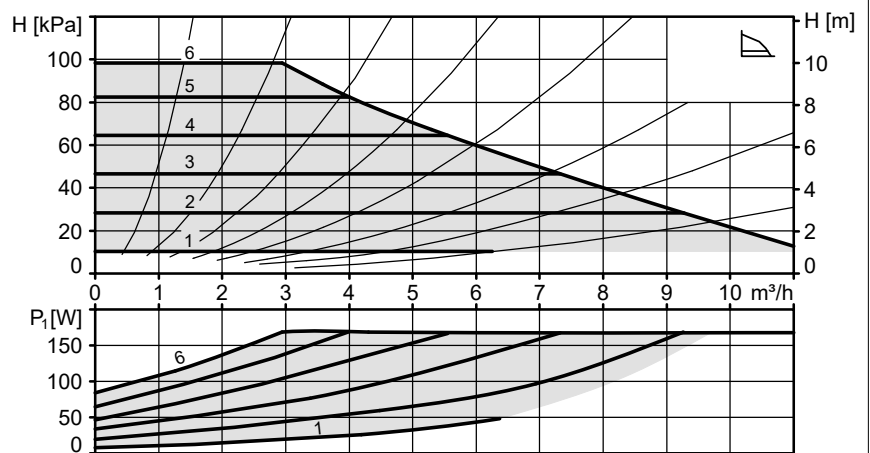
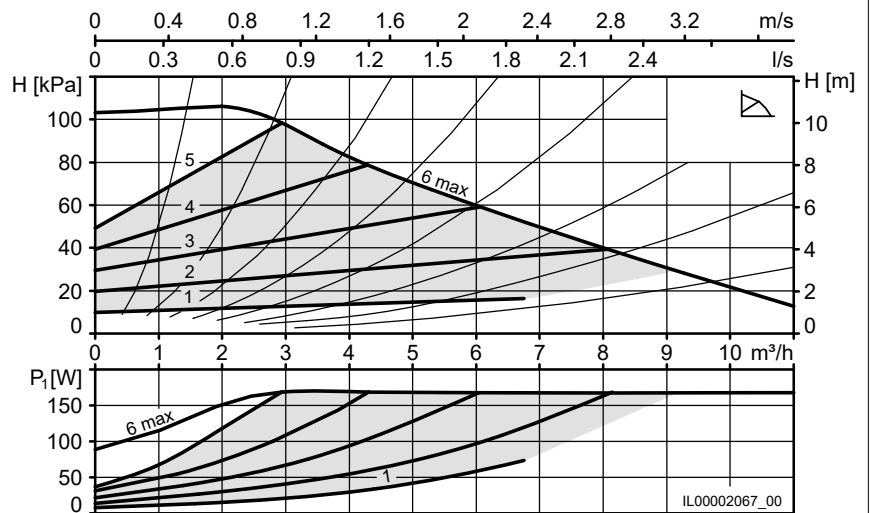
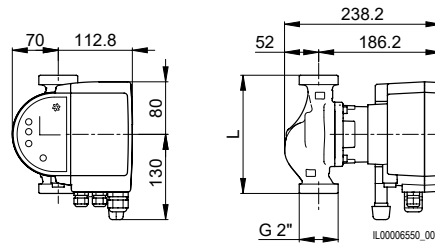
DN 32

L = 180 mm

### ModulA 32-10 170 GREEN

DN 32

L = 170 mm



## ModulA 32-12 180 GREEN

## ModulA 32-12 170 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	12 m
Overall length	180   170 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	4.7 kg
Gross weight	5.35 kg

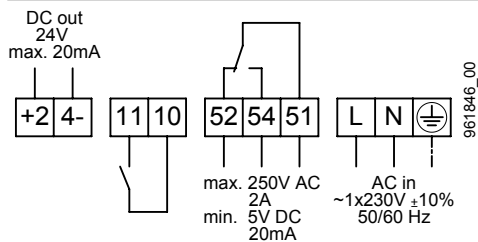
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-182 W
Nominal current	0.08-1.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Biral Connector
- AFM seal

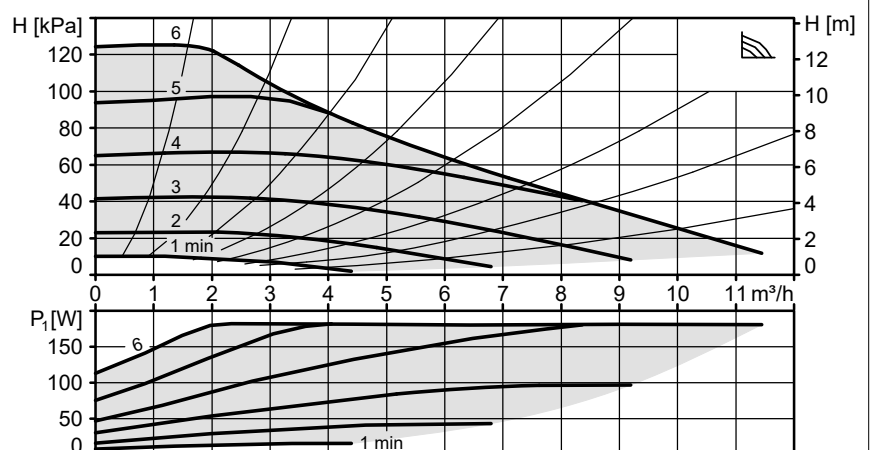
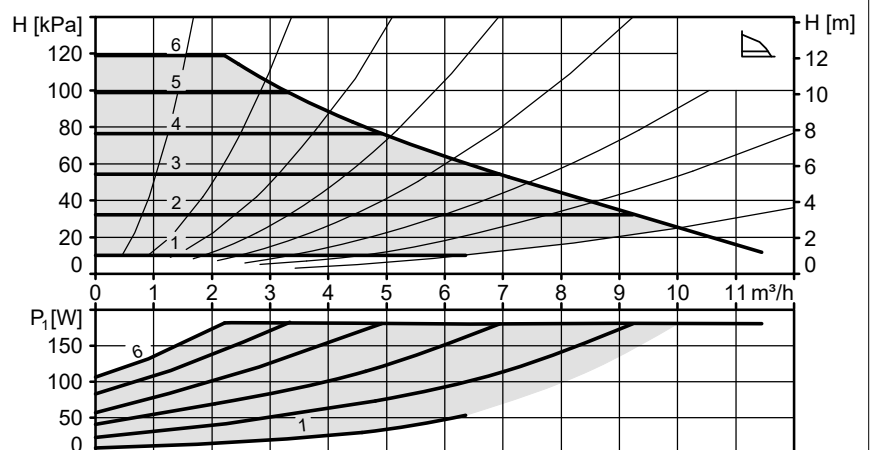
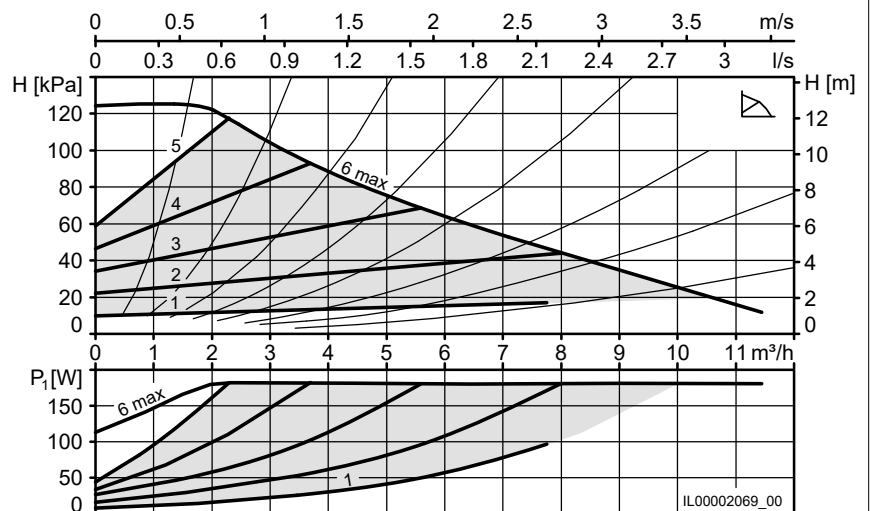
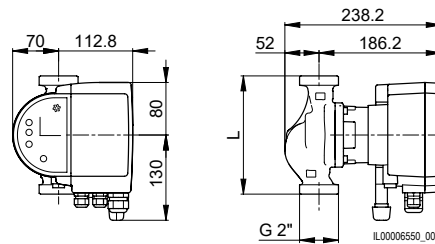
### Accessories

- Biral Interface Modules

Type	Art. no.
ModulA 32-12 180 GREEN	7000000135
ModulA 32-12 170 GREEN	7000000130

**ModulA 32-12 180 GREEN**  
DN 32  
L = 180 mm

**ModulA 32-12 170 GREEN**  
DN 32  
L = 170 mm





## Cold water circulation pumps

### ModulA GREEN T2 S with flanged connection

#### Übersicht

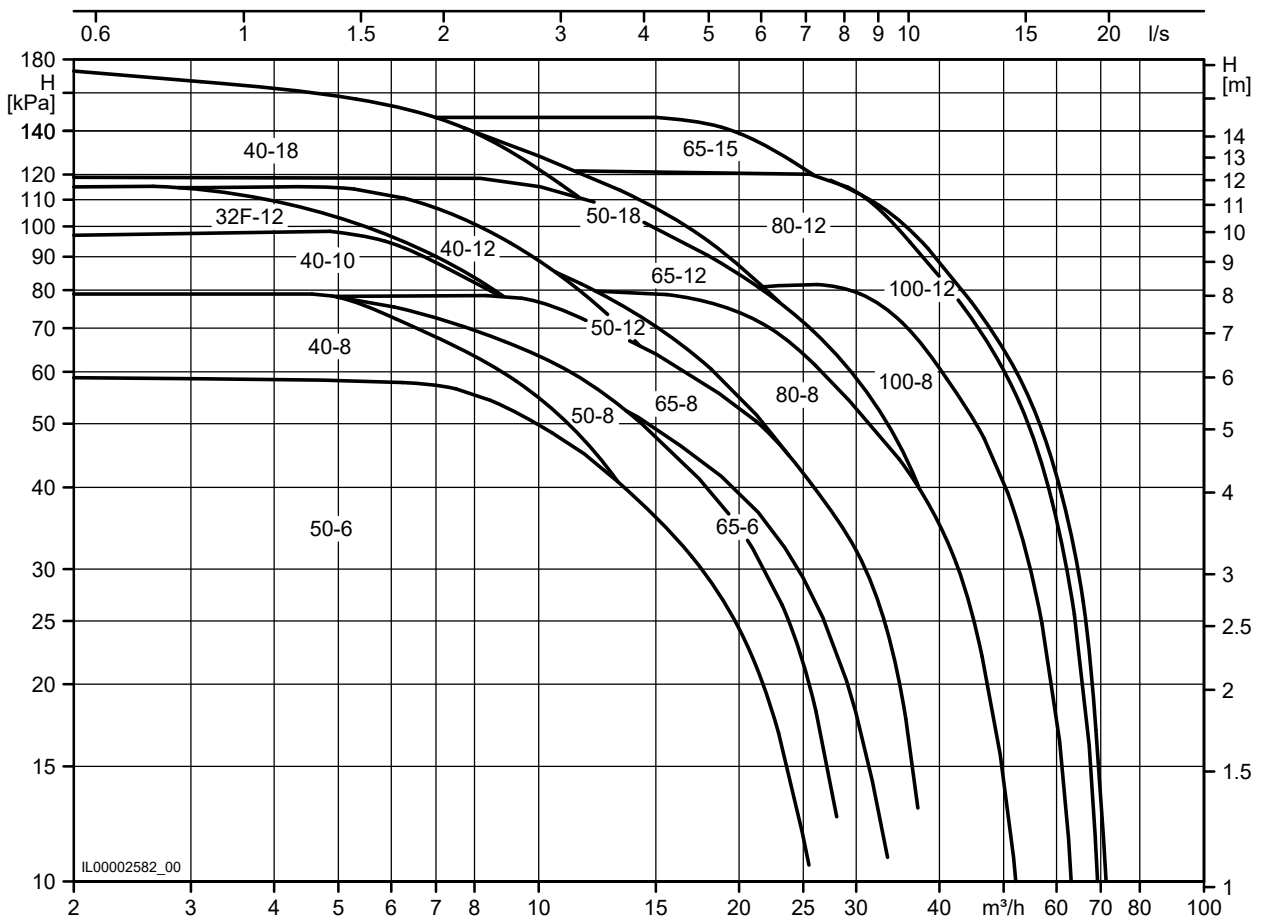
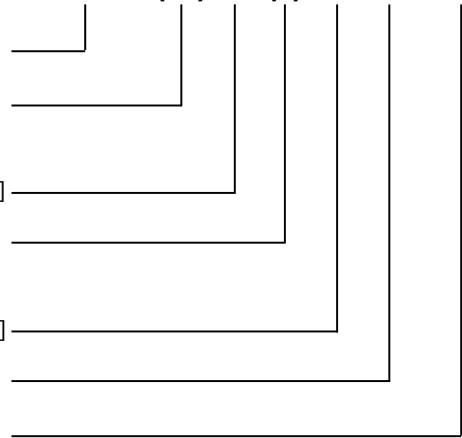
Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA 32F-6 220 GREEN	7000000136	32	6	220	PN 6	6	≤0.18
ModulA 40-4 220 GREEN	7000000137	40	4	220	PN 6-16	16	≤0.18
ModulA 40-6 220 GREEN	7000000138	40	6	220	PN 6-16	16	≤0.19
ModulA 50-11 220 GREEN	7000000139	50	11	220	PN 6-16	16	≤0.18



### Order reference

**ModulA (-D) 32 (F) -6 220 RED**

- Series
- Single pump
- Twin pump (-D)
- Nominal width (DN) [mm]
- Pipeline connection  
Flange (F)
- Discharge head max. [m]
- Installation height [mm]
- Field of application  
Heating (RED)  
Cold water (GREEN)  
Service water (BLUE)



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## Modula 32F-6 220 GREEN

Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6
Operating pressure max.	6 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	7.0 kg
Gross weight	8.4 kg

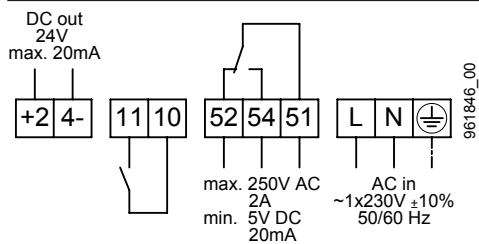
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-102 W
Nominal current	0.08-0.73 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

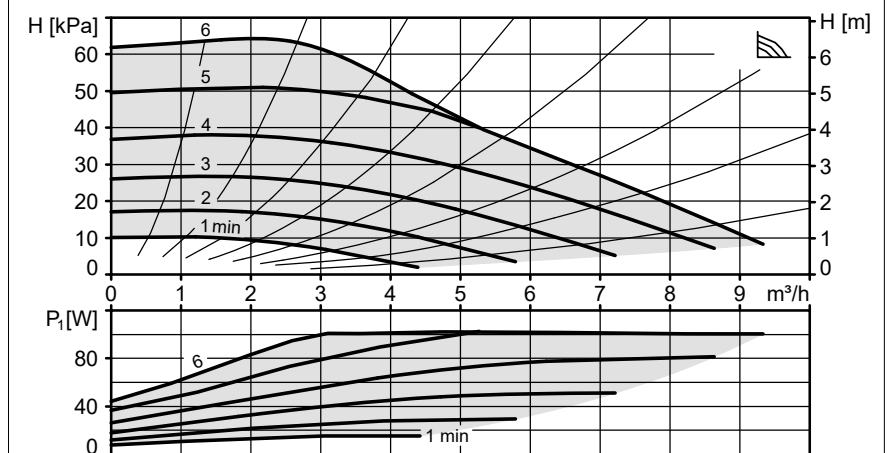
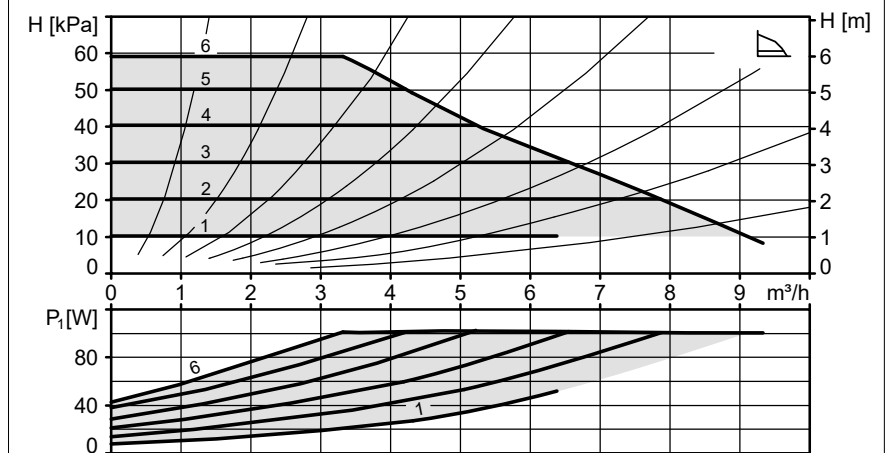
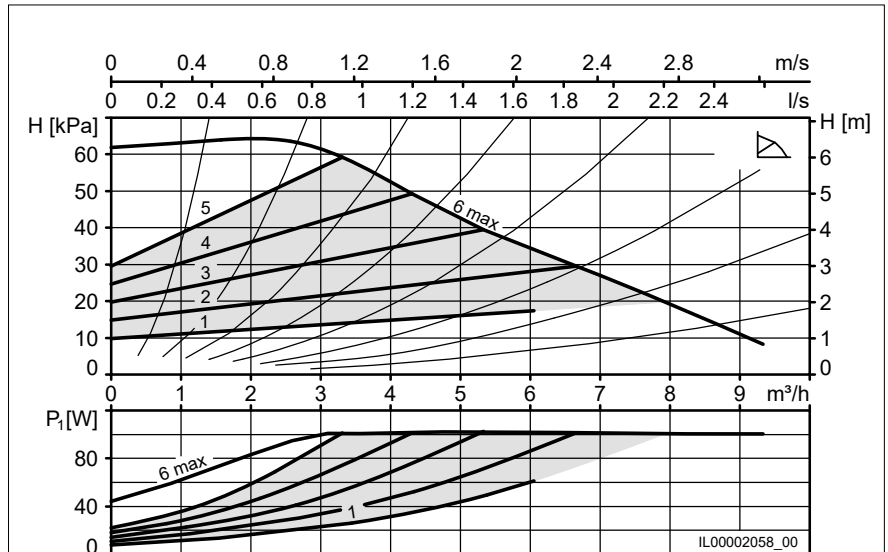
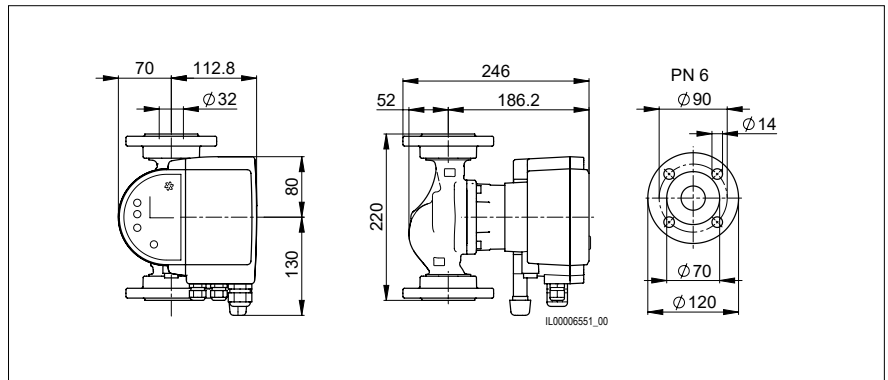
### Included in the scope of delivery

- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 32F-6 220 GREEN	7000000136



## ModulA 40-4 220 GREEN

Version	T2 S
Nominal width	DN 40
Flow head H max.	4 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	9.2 kg
Gross weight	10.5 kg

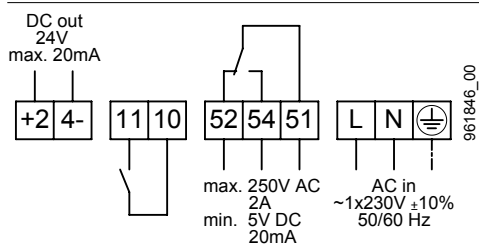
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	11-97 W
Nominal current	0.11-0.74 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

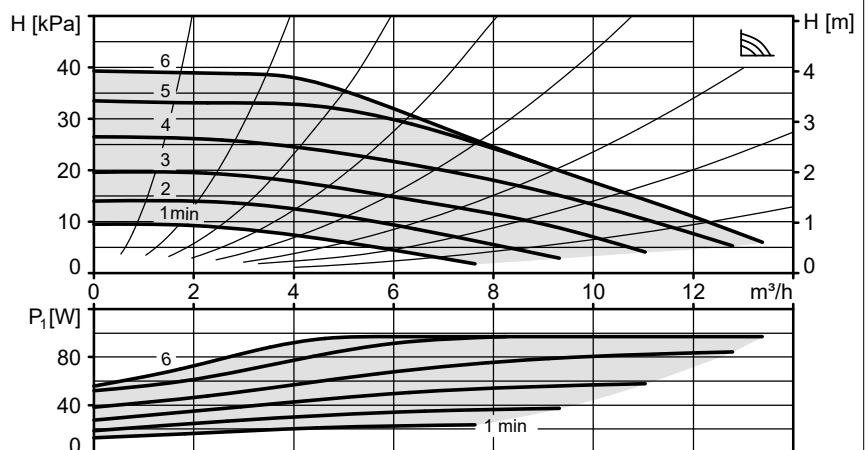
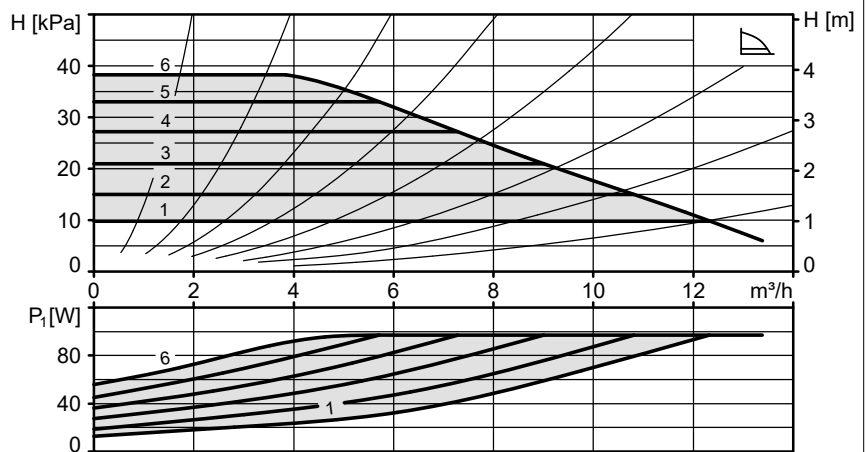
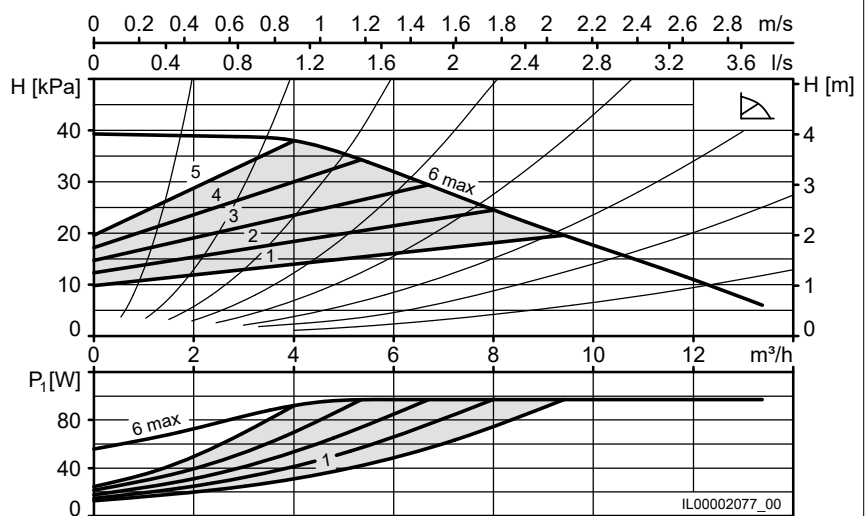
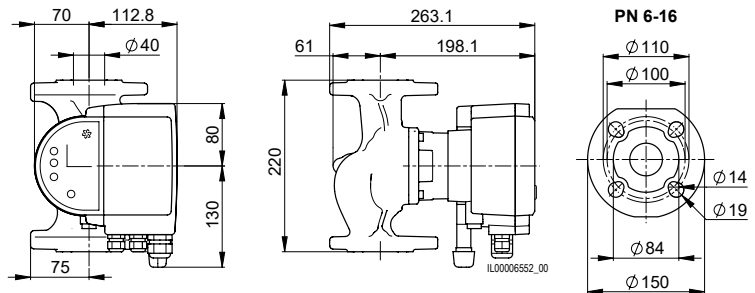
### Included in the scope of delivery

- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

Type	Art. no.
ModulA 40-4 220 GREEN	7000000137



## Modula 40-6 220 GREEN

Version	T2 S
Nominal width	DN 40
Flow head H max.	6 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	9.2 kg
Gross weight	10.5 kg

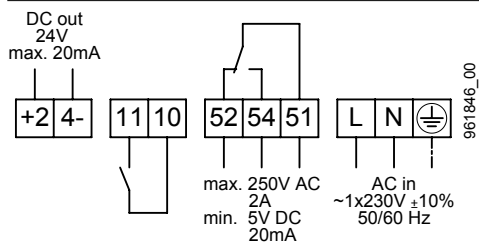
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	11-185 W
Nominal current	0.11-1.47 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

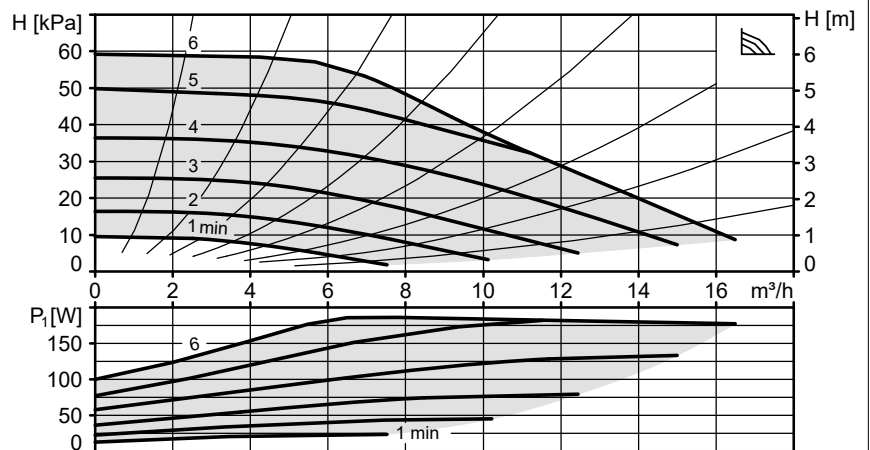
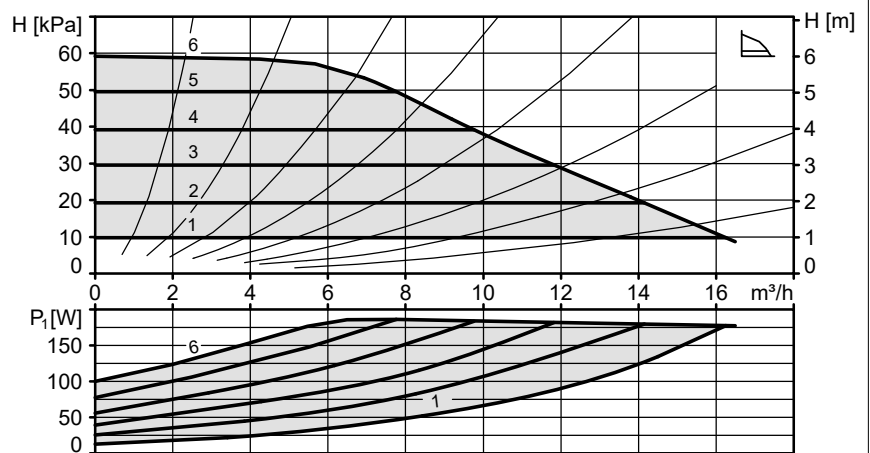
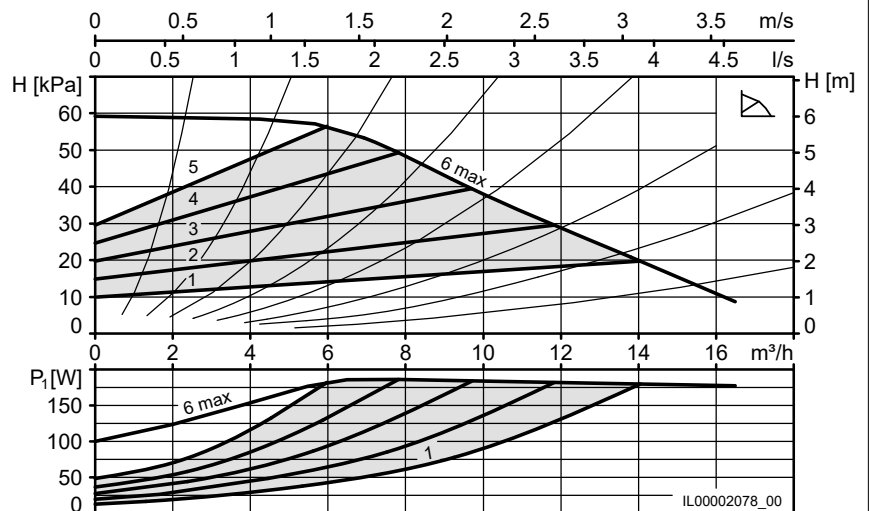
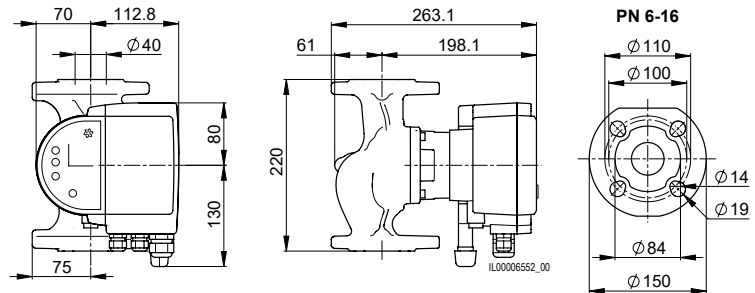
### Included in the scope of delivery

- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

Type	Art. no.
Modula 40-6 220 GREEN	7000000138



## ModuA 50-11 220 GREEN

Version	T2 S
Nominal width	DN 50
Flow head H max.	11 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	8.8 kg
Gross weight	10.5 kg

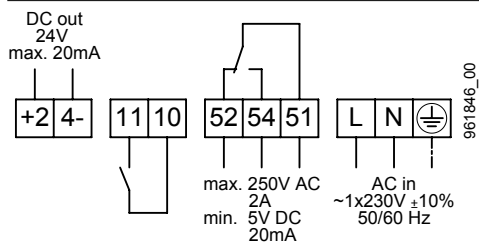
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-182 W
Nominal current	0.08-1.39 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

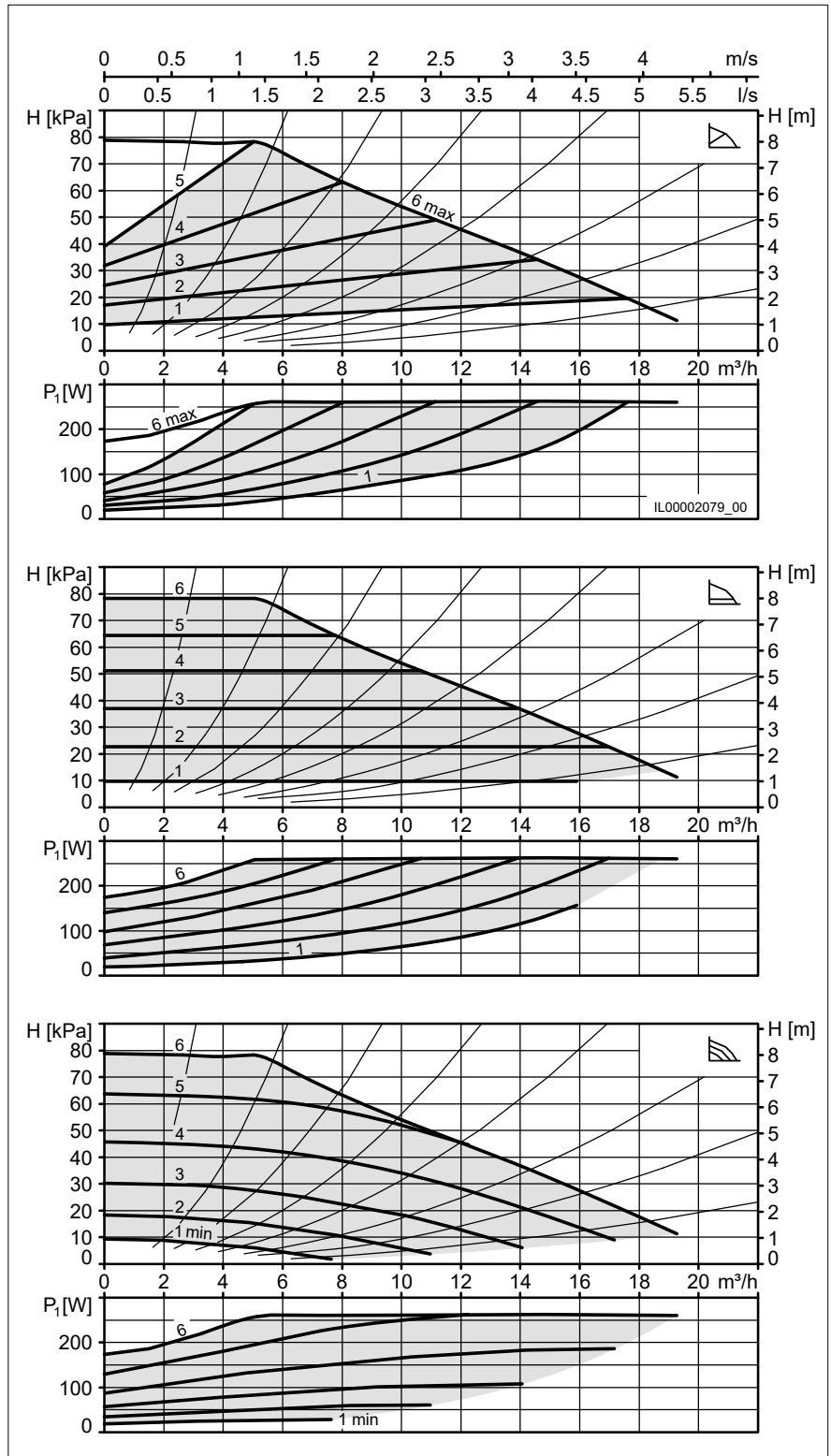
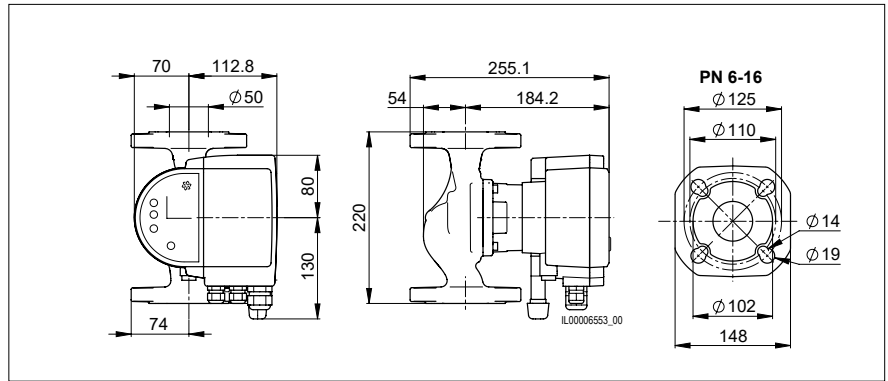
### Included in the scope of delivery

- Biral Connector
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

Type	Art. no.
ModuA 50-11 220 GREEN	7000000139



## Cold water circulation pumps

### ModulA GREEN T2 with flanged connection



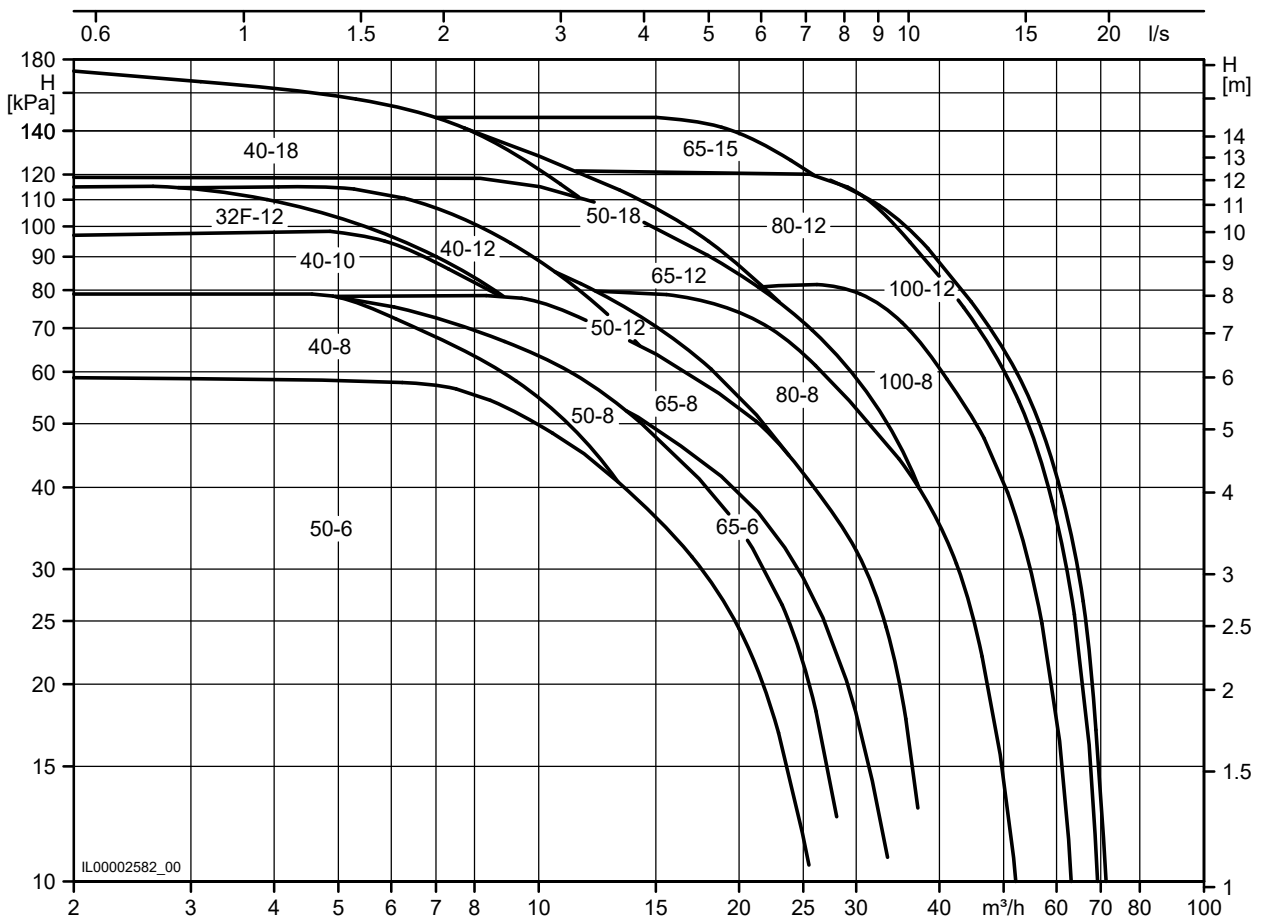
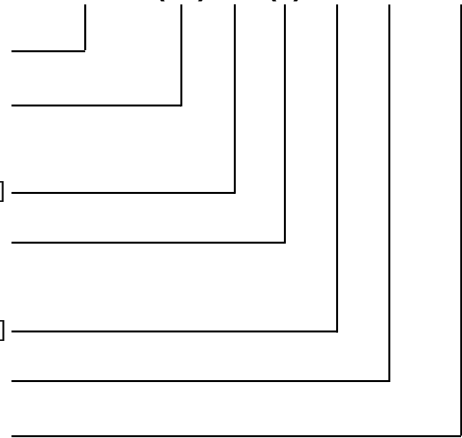
#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max.	EEI
		DN	m	mm		bar	EEI
ModulA 32F-12 220 GREEN	7000000140	32	12	220	PN 6-16	16	≤0.20
ModulA 40-8 220 GREEN	7000000141	40	8	220	PN 6-16	16	≤0.20
ModulA 40-10 220 GREEN	7000000142	40	10	220	PN 6-16	16	≤0.20
ModulA 40-12 250 GREEN	7000000143	40	12	250	PN 6-16	16	≤0.18
ModulA 40-18 250 GREEN	7000000144	40	18	250	PN 6-16	16	≤0.18
ModulA 50-6 240 GREEN	7000000145	50	6	240	PN 6-16	16	≤0.19
ModulA 50-6 270 GREEN	7000000146	50	6	270	PN 6-16	16	≤0.20
ModulA 50-8 240 GREEN	7000000147	50	8	240	PN 6-16	16	≤0.19
ModulA 50-12 270 GREEN	7000000148	50	12	270	PN 6-16	16	≤0.18
ModulA 50-18 270 GREEN	7000000149	50	18	270	PN 6-16	16	≤0.17
ModulA 65-6 270 GREEN	7000000150	65	6	270	PN 6-16	16	≤0.18
ModulA 65-8 270 GREEN	7000000151	65	8	270	PN 6-16	16	≤0.18
ModulA 65-8 340 GREEN	7000000152	65	8	340	PN 6-16	16	≤0.18
ModulA 65-12 340 GREEN	7000000153	65	12	340	PN 6-16	16	≤0.17
ModulA 65-15 340 GREEN	7000000154	65	15	340	PN 6-16	16	≤0.18
ModulA 80-8 360 GREEN PN6	7000000155	80	8	360	PN 6	6	≤0.17
ModulA 80-8 360 GREEN PN10/16	7000000156	80	8	360	PN 10/16	16	≤0.17
ModulA 80-12 360 GREEN PN6	7000000157	80	12	360	PN 6	6	≤0.17
ModulA 80-12 360 GREEN PN10/16	7000000158	80	12	360	PN 10/16	16	≤0.17
ModulA 100-8 450 GREEN PN6	7000000159	100	12	450	PN 6	6	≤0.18
ModulA 100-8 450 GREEN PN10/16	7000000160	100	12	450	PN 10/16	16	≤0.18
ModulA 100-12 450 GREEN PN6	7000000161	100	12	450	PN 6	6	≤0.18
ModulA 100-12 450 GREEN PN10/16	7000000162	100	12	450	PN 10/16	16	≤0.18

### Order reference

**ModulA (-D) 32 (F) -6 220 RED**

- Series
- Single pump
- Twin pump (-D)
- Nominal width (DN) [mm]
- Pipeline connection  
Flange (F)
- Discharge head max. [m]
- Installation height [mm]
- Field of application  
Heating (RED)  
Cold water (GREEN)  
Service water (BLUE)



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## ModulA 32F-12 220 GREEN

Version	T2 M
Nominal width	DN 32
Flow head H max.	12 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	17.3 kg
Gross weight	21.8 kg

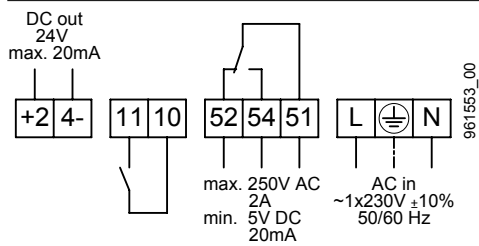
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	15-329 W
Nominal current	0.17-1.51 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.35 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

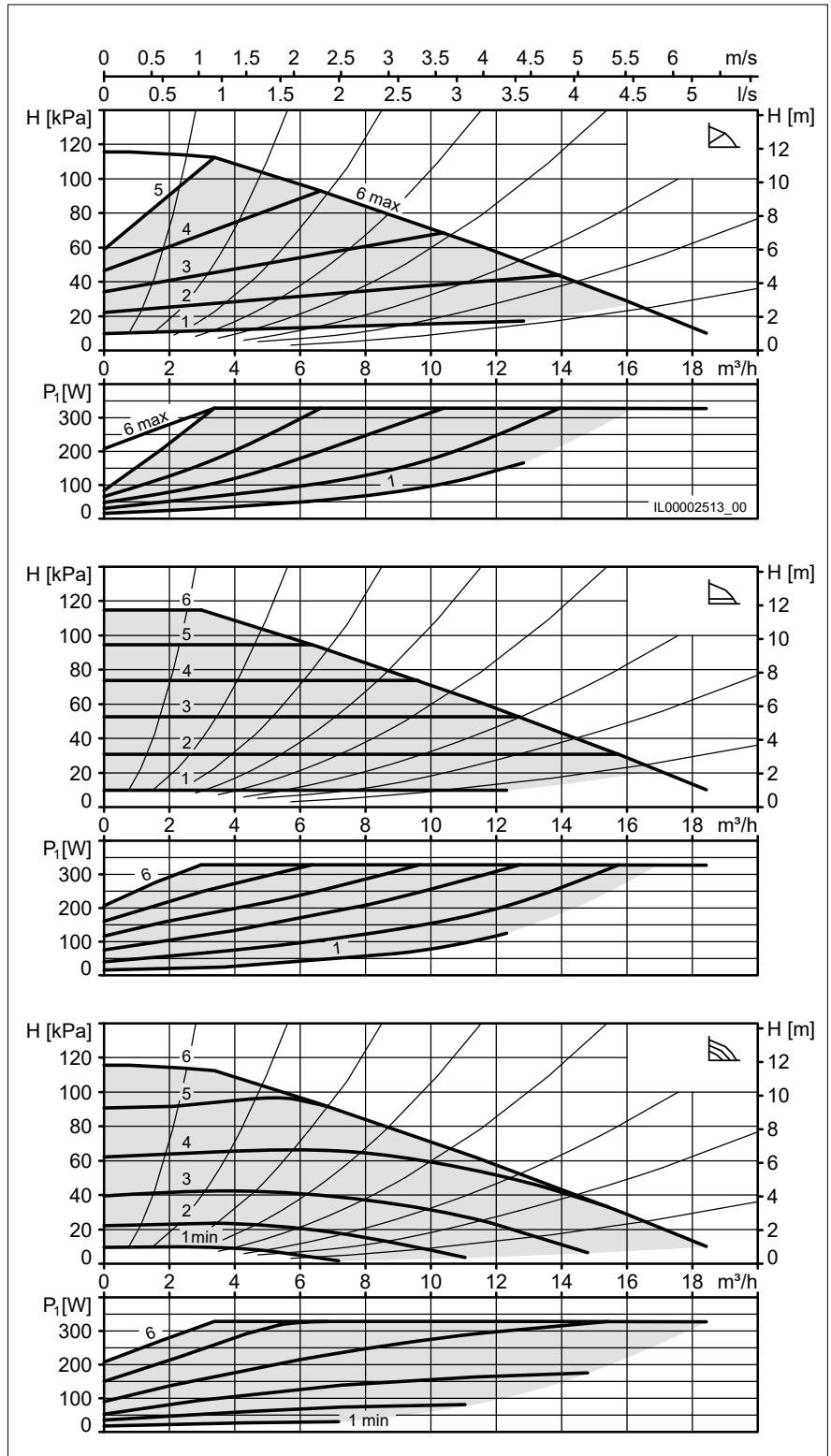
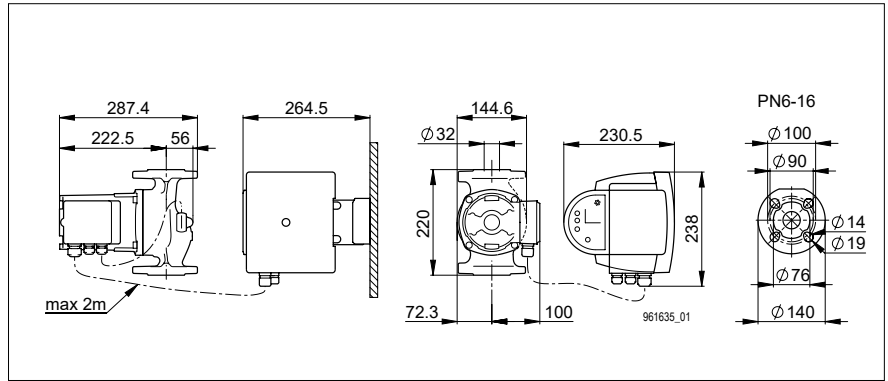
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModulA 32F-12 220 GREEN	7000000140





## ModulA 40-8 220 GREEN

Version	T2 M
Nominal width	DN 40
Flow head H max.	8 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.3 kg
Gross weight	22.6 kg

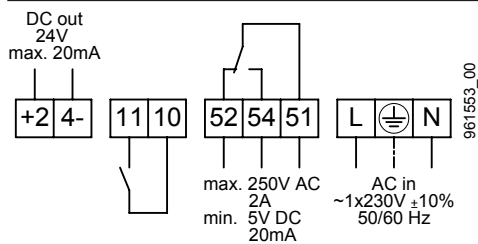
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	18-264 W
Nominal current	0.19-1.23 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

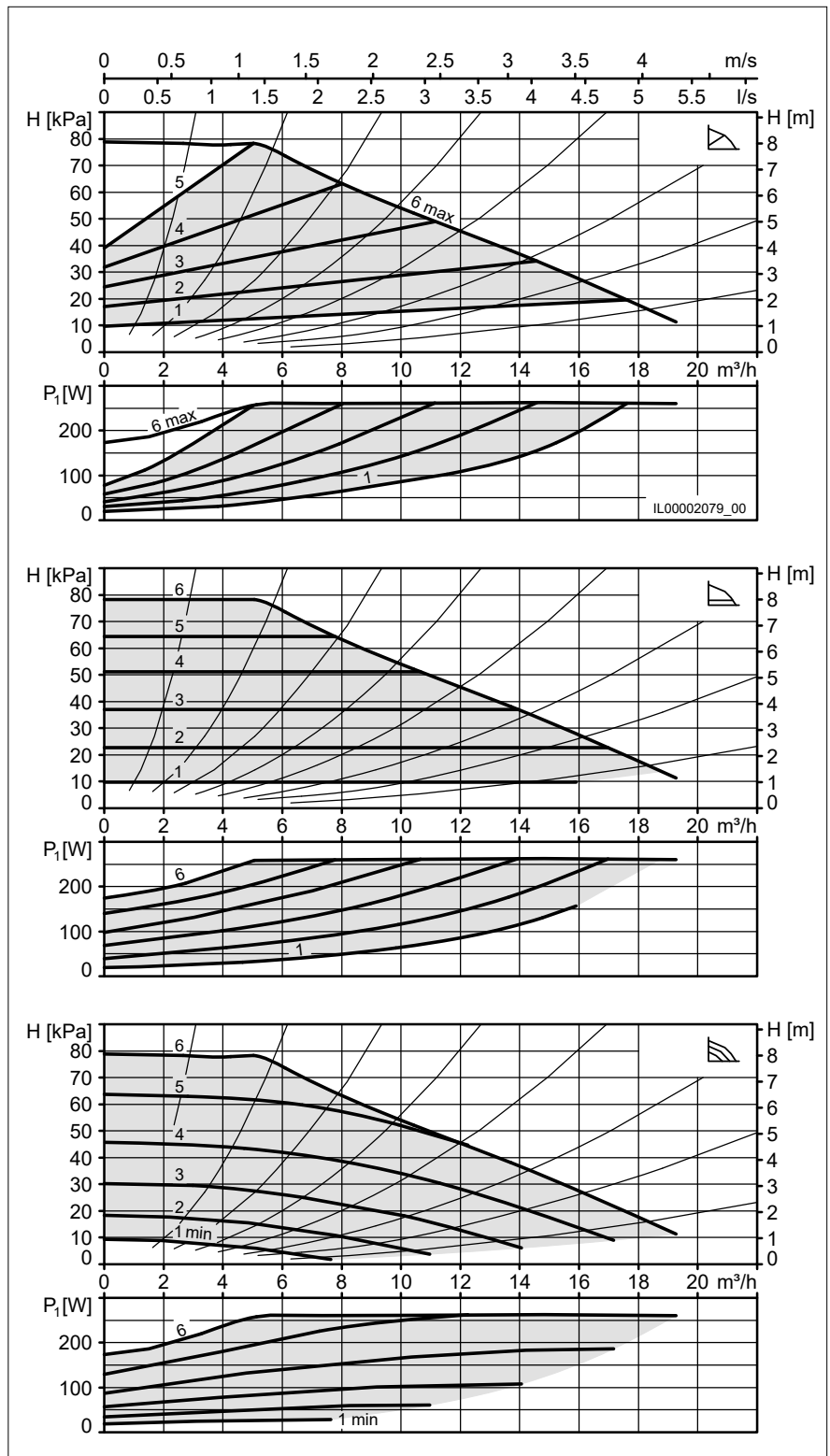
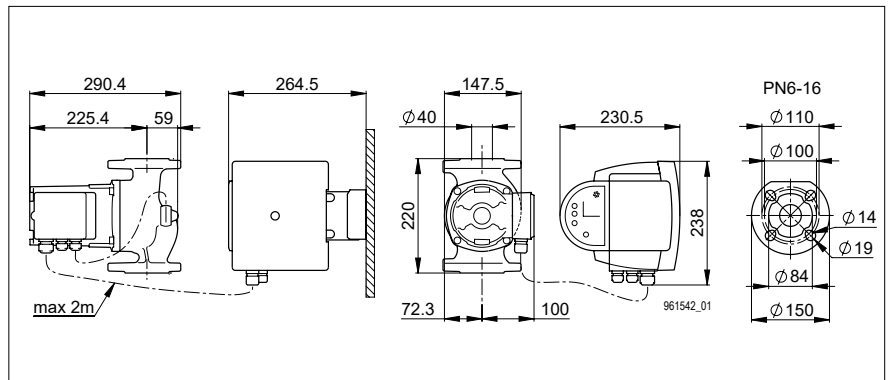
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModulA 40-8 220 GREEN	7000000141



## Modula 40-10 220 GREEN

Version	T2 M
Nominal width	DN 40
Flow head H max.	10 m
Overall length	220 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.3 kg
Gross weight	22.8 kg

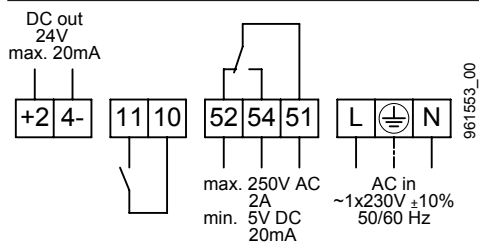
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	18-352 W
Nominal current	0.18-1.60 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

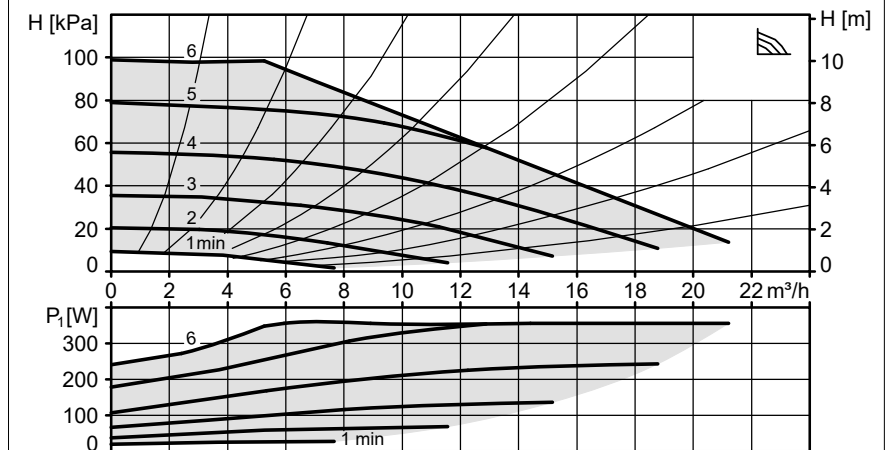
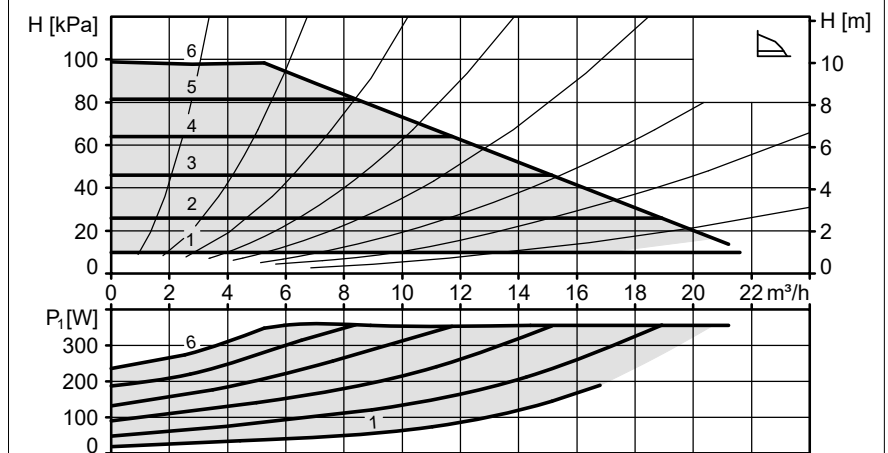
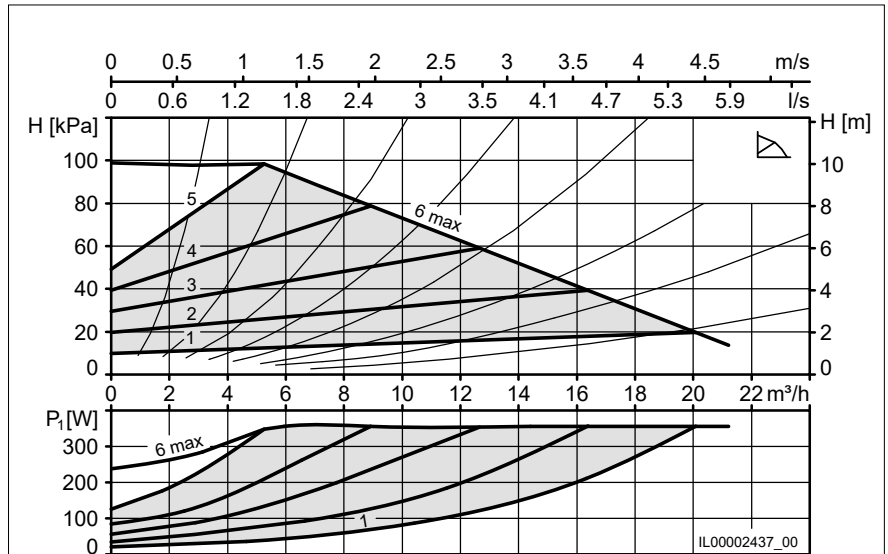
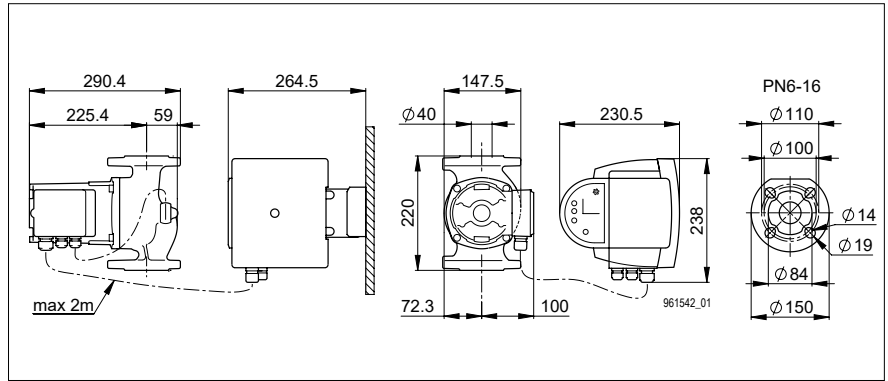
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-10 220 GREEN	7000000142



## Modula 40-12 250 GREEN

Version	T2 M
Nominal width	DN 40
Flow head H max.	12 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.1 kg
Gross weight	22 kg

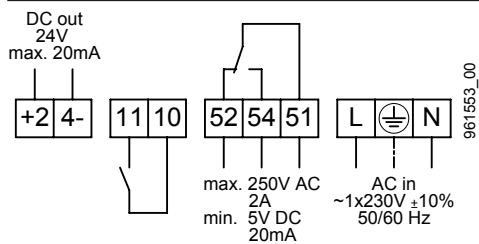
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	16-423 W
Nominal current	0.17-1.93 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

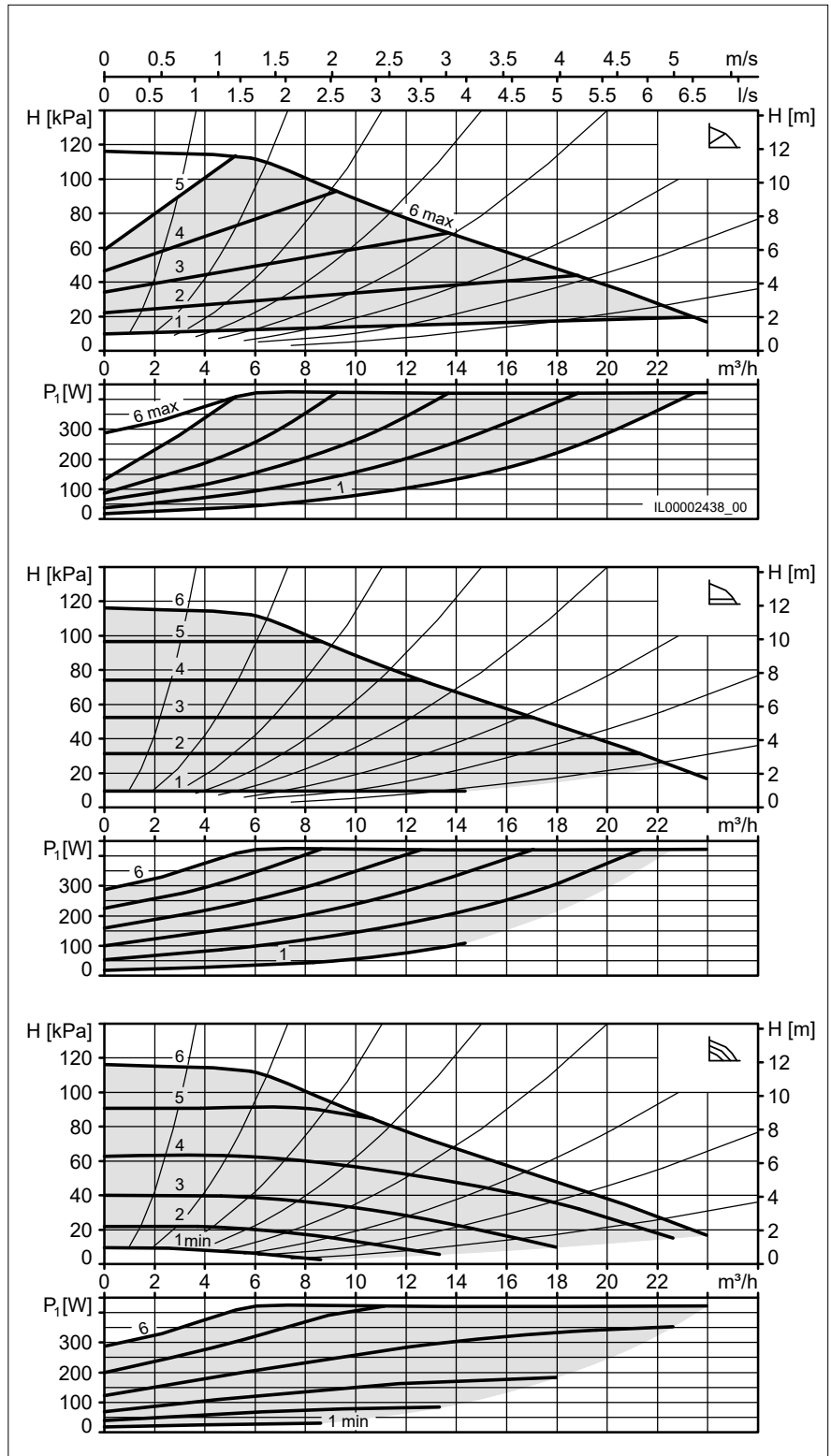
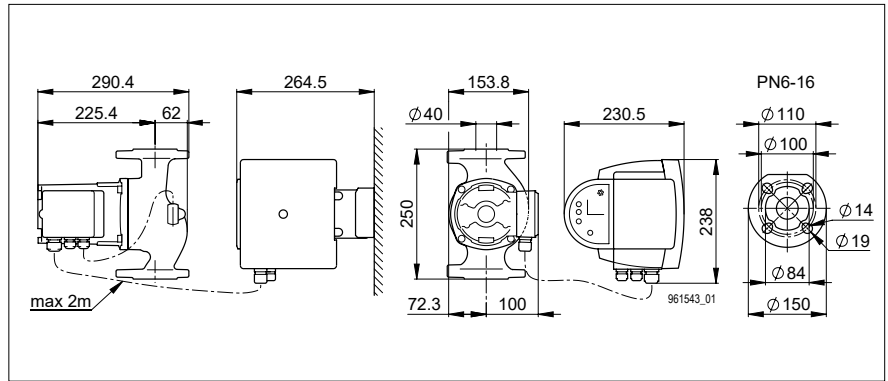
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 40-12 250 GREEN	7000000143



## Modula 40-18 250 GREEN

Version	T2 M
Nominal width	DN 40
Flow head H max.	18 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	18.1 kg
Gross weight	22 kg

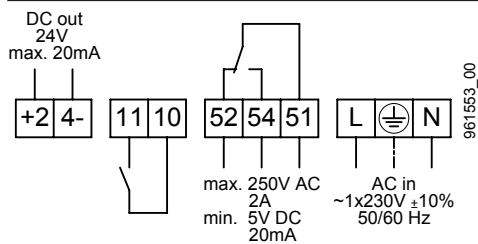
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	16-600 W
Nominal current	0.17-2.70 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

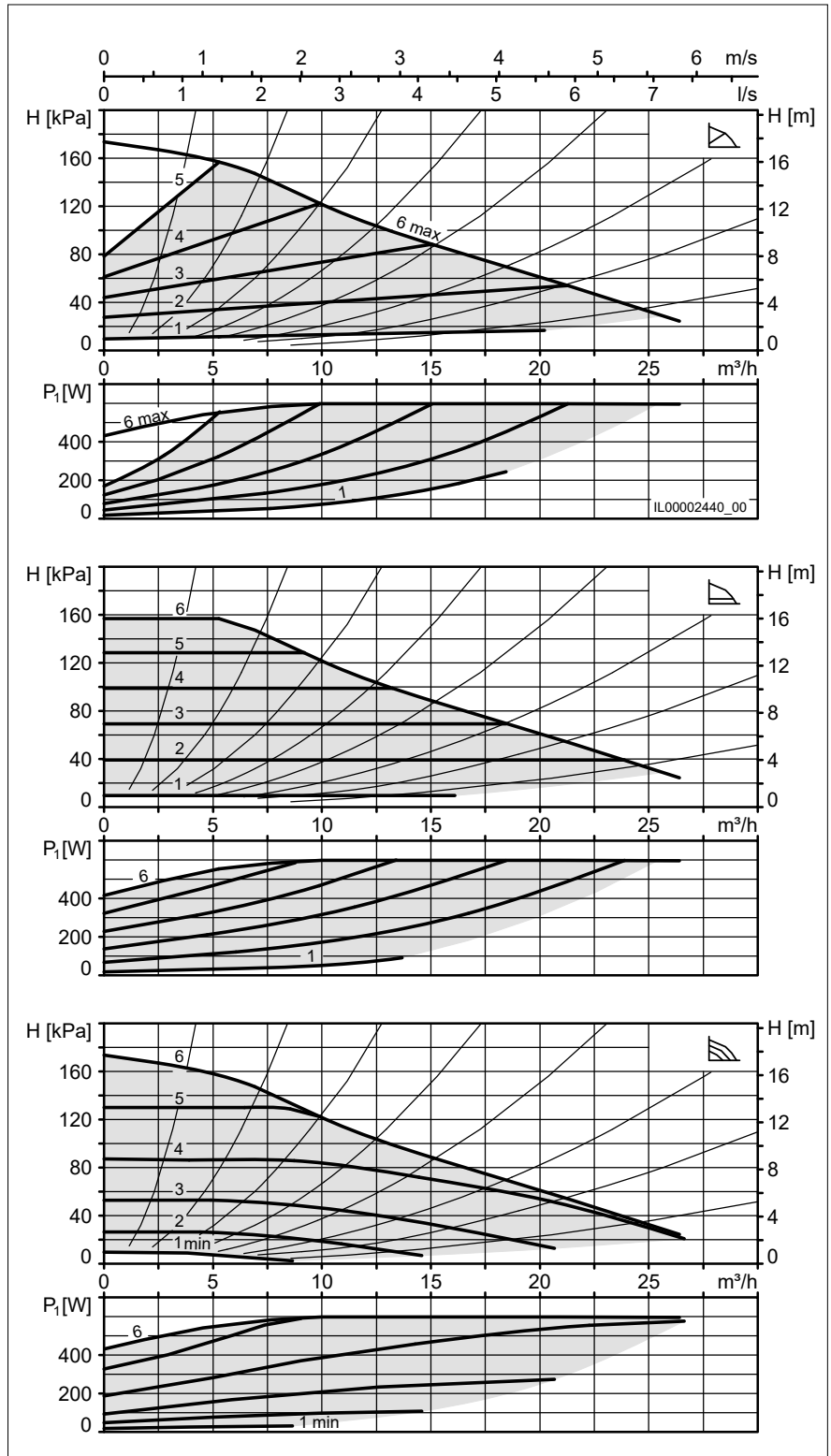
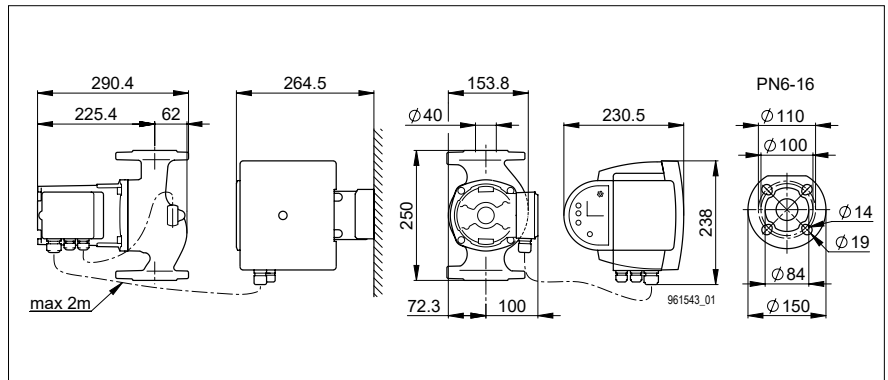
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	Modula 40-18 250 GREEN	<b>Art. no.</b>	7000000144
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## Modula 50-6 240 GREEN

Version	T2 M
Nominal width	DN 50
Flow head H max.	6 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	19.6 kg
Gross weight	24 kg

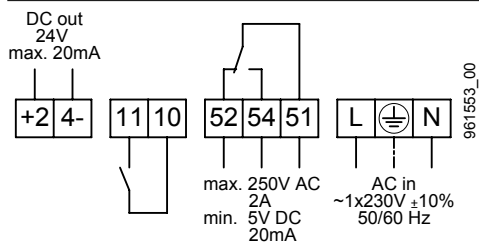
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-249 W
Nominal current	0.20-1.15 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

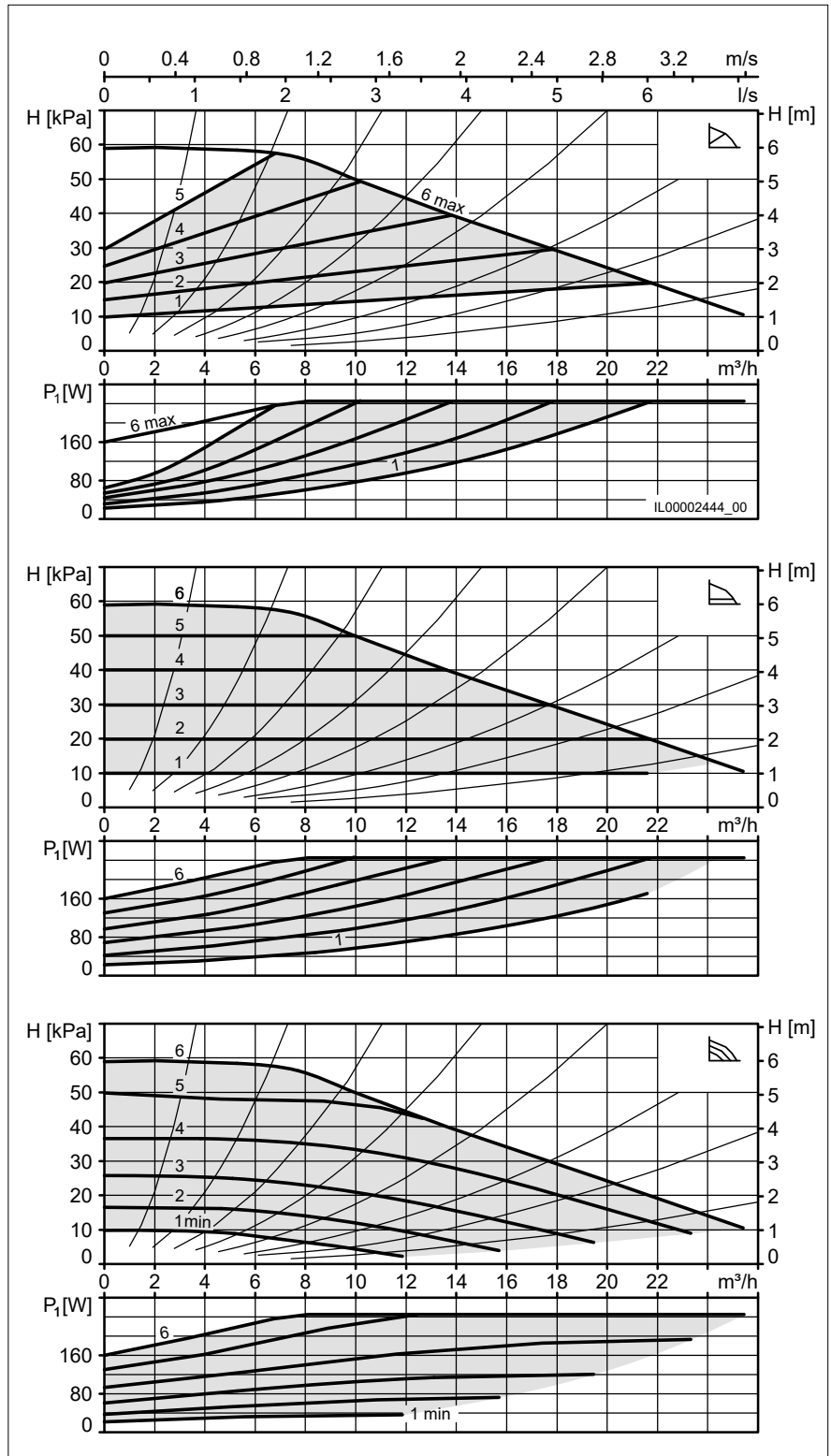
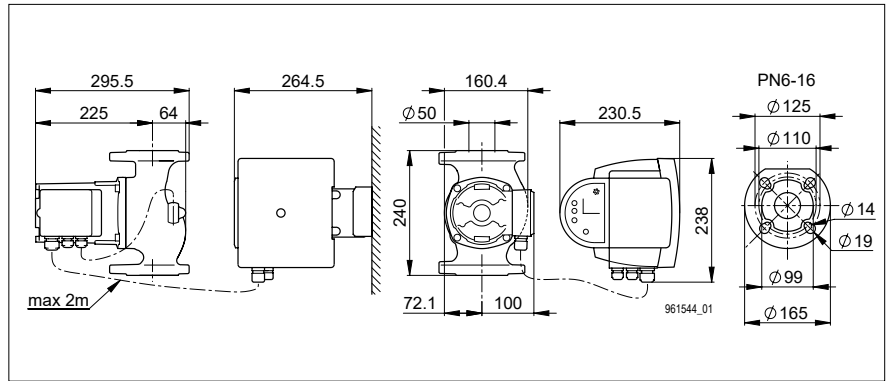
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 50-6 240 GREEN	7000000145



## Modula 50-6 270 GREEN

Version	T2 M
Nominal width	DN 50
Flow head H max.	6 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	20.8 kg
Gross weight	24 kg

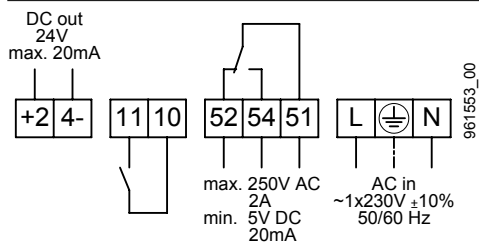
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	21-247 W
Nominal current	0.20-1.16 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

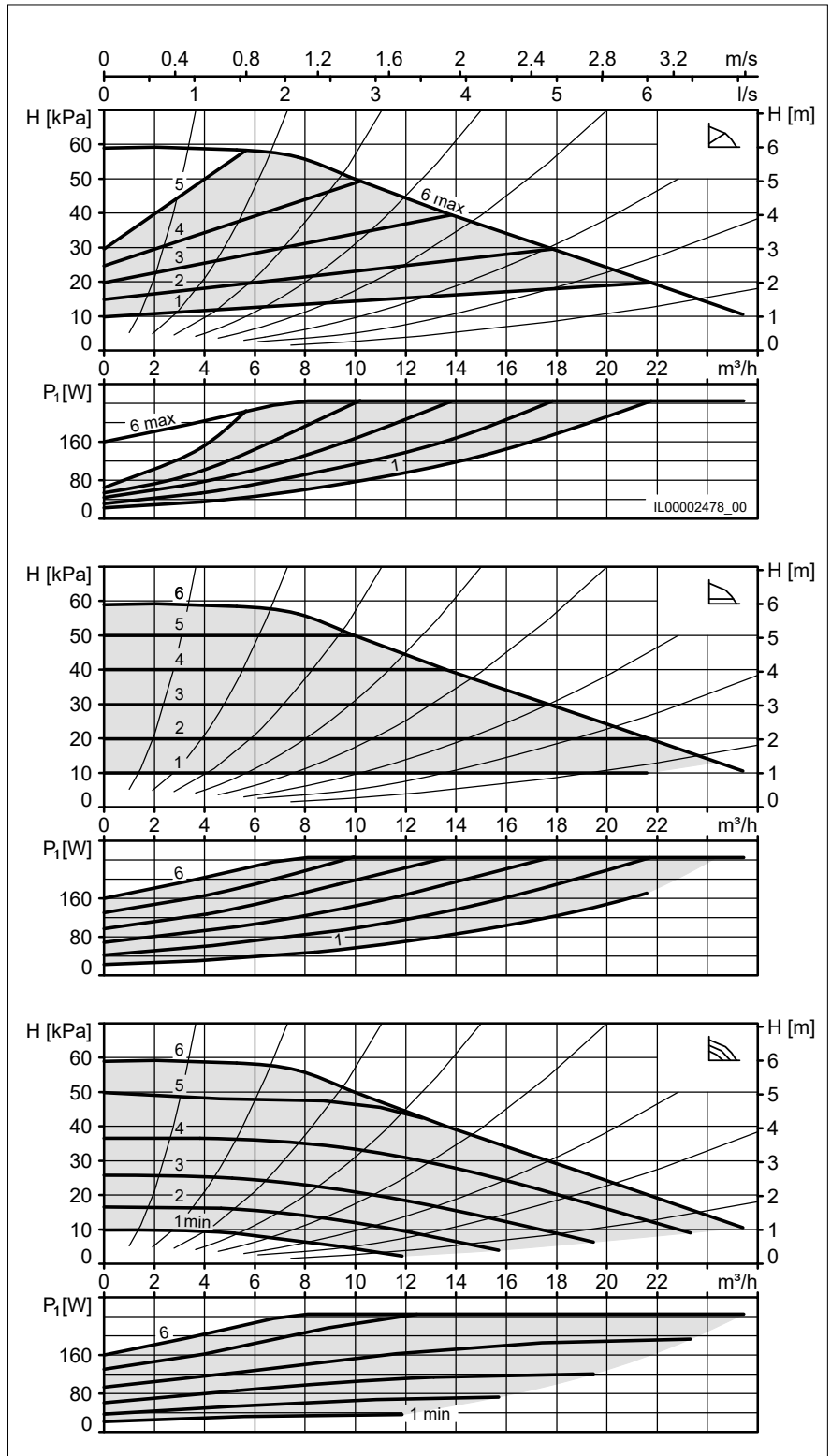
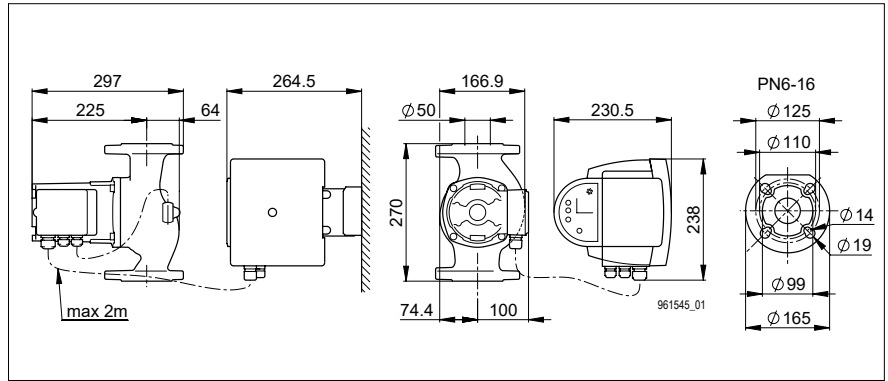
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 50-6 270 GREEN	7000000146



## ModulA 50-8 240 GREEN

Version	T2 M
Nominal width	DN 50
Flow head H max.	8 m
Overall length	240 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	19.6 kg
Gross weight	24 kg

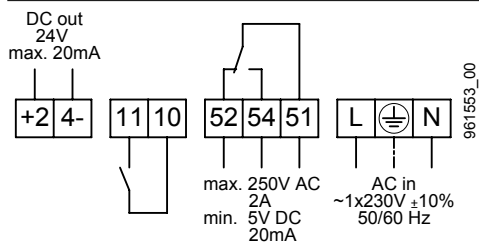
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	21-326 W
Nominal current	0.20-1.49 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.40 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

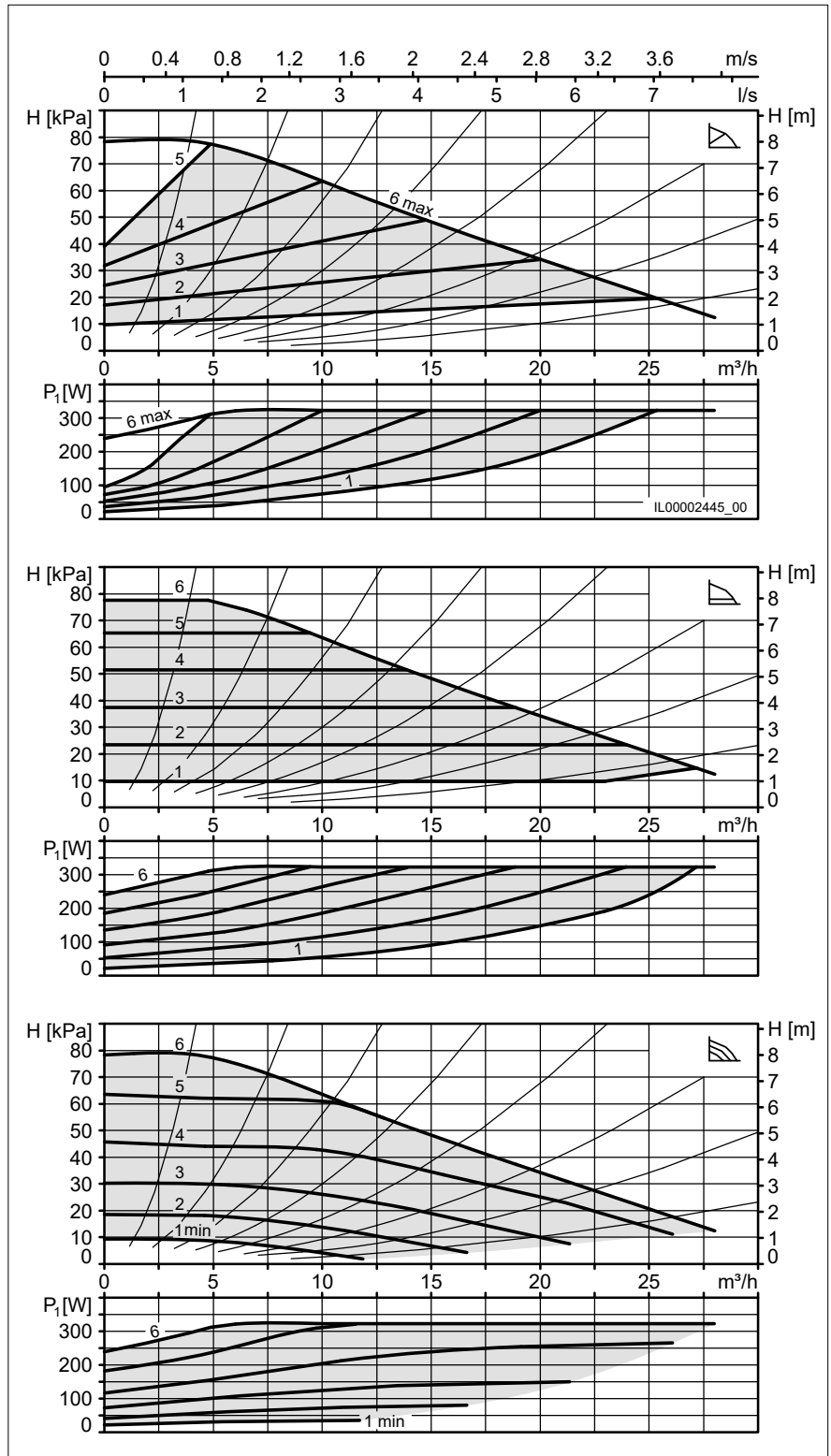
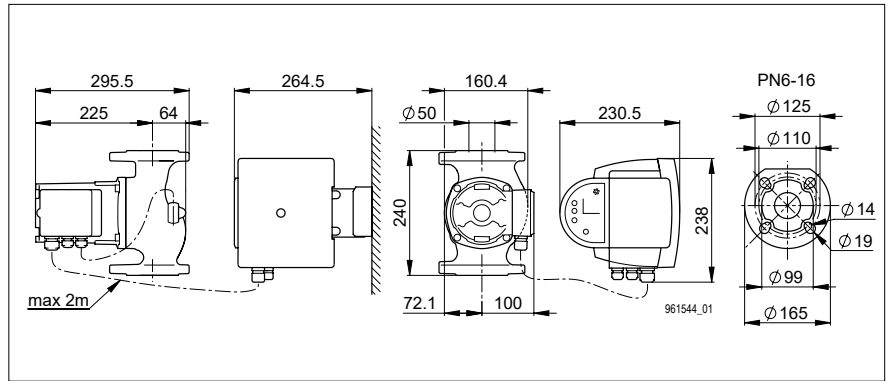
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	ModulA 50-8 240 GREEN	<b>Art. no.</b>	7000000147
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## ModulA 50-12 270 GREEN

Version	T2 M
Nominal width	DN 50
Flow head H max.	12 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	20.1 kg
Gross weight	24 kg

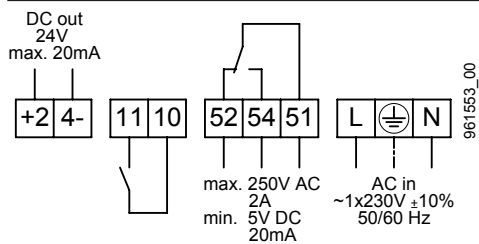
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	21-488 W
Nominal current	0.20-2.23 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.50 bar
at a water temp. of 110 °C	1.00 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

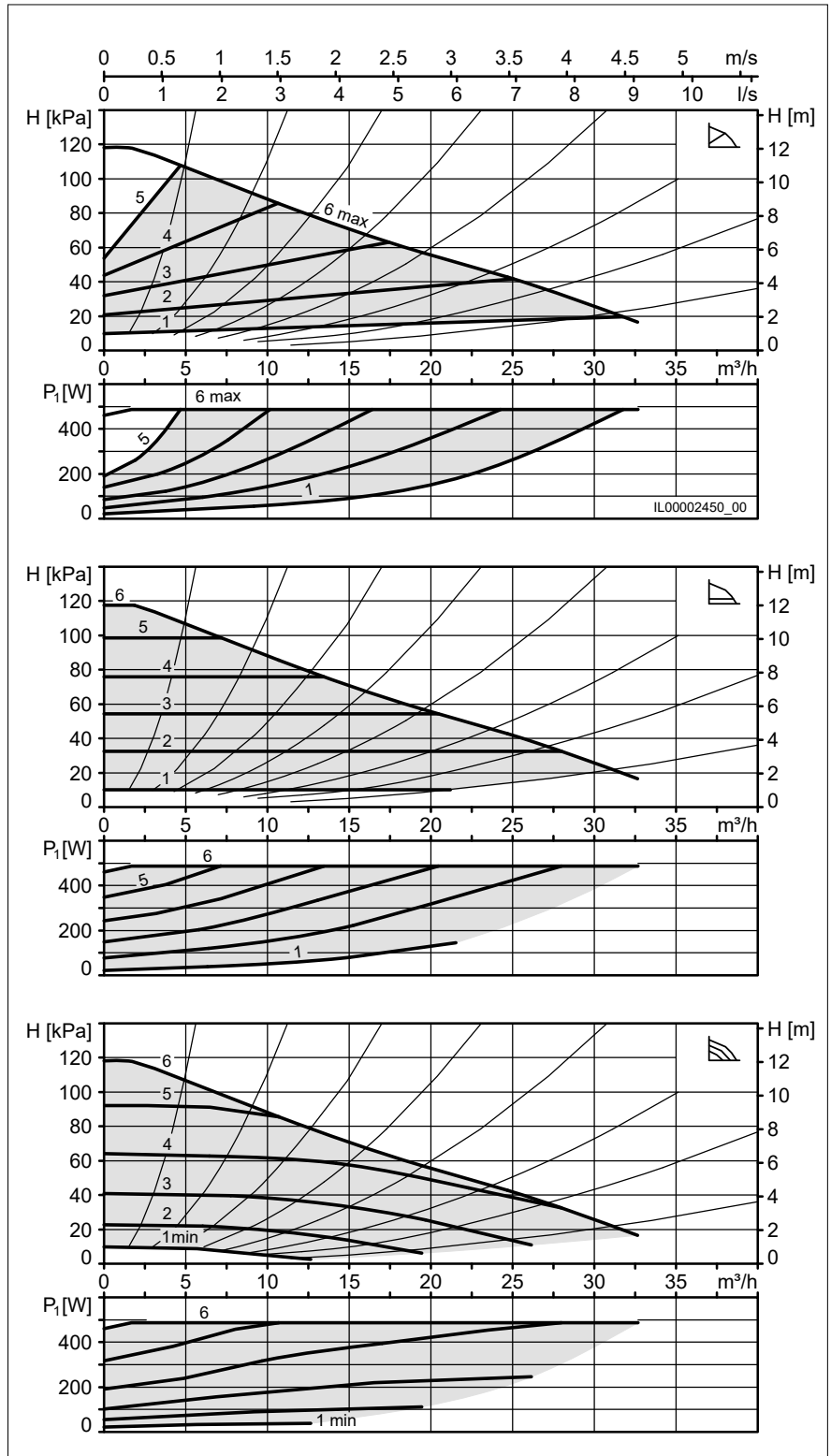
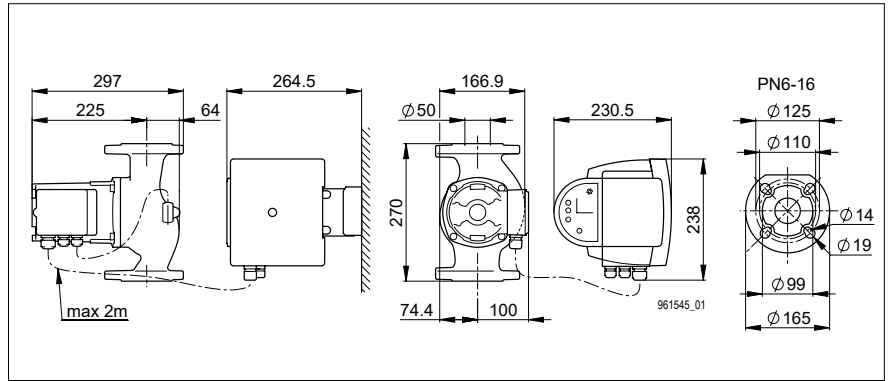
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	ModulA 50-12 270 GREEN	<b>Art. no.</b>	7000000148
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## ModulA 50-18 270 GREEN

Version	T2 M
Nominal width	DN 50
Flow head H max.	18 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	20.8 kg
Gross weight	25 kg

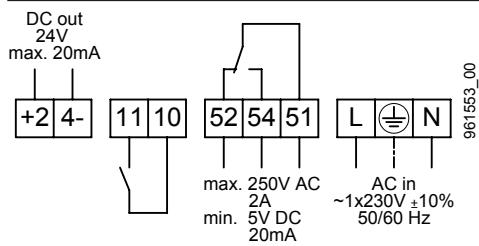
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	21-767 W
Nominal current	0.24-3.44 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

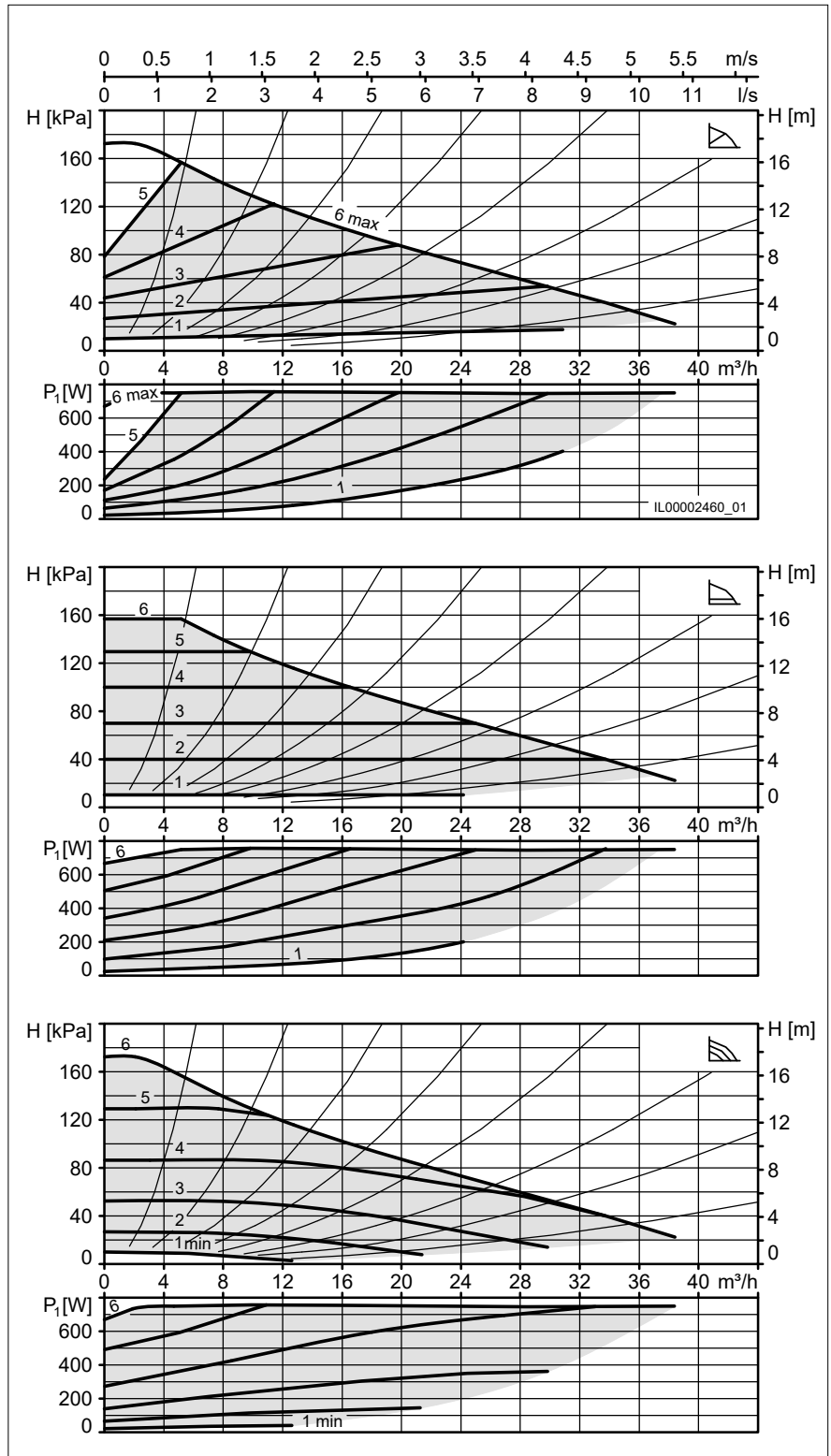
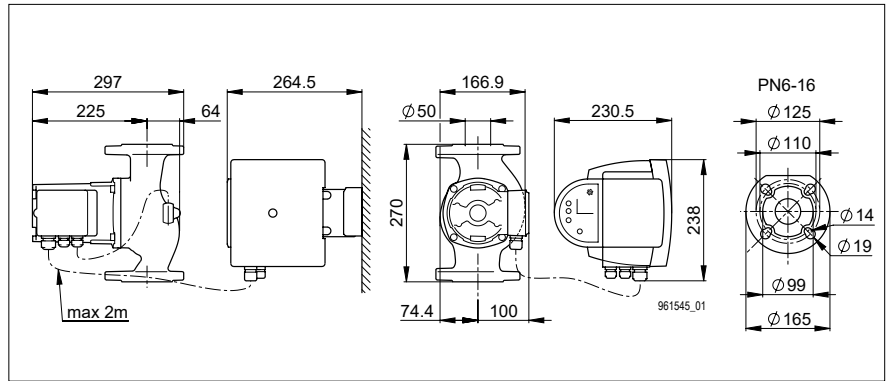
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	ModulA 50-18 270 GREEN	<b>Art. no.</b>	7000000149
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## ModulA 65-6 270 GREEN

Version	T2 M
Nominal width	DN 65
Flow head H max.	6 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	22.6 kg
Gross weight	28 kg

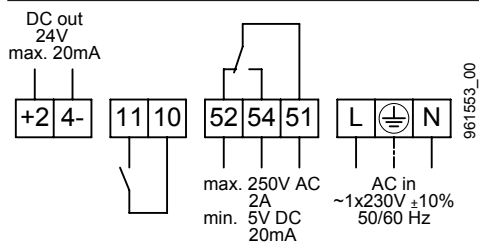
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	23-355 W
Nominal current	0.22-1.58 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

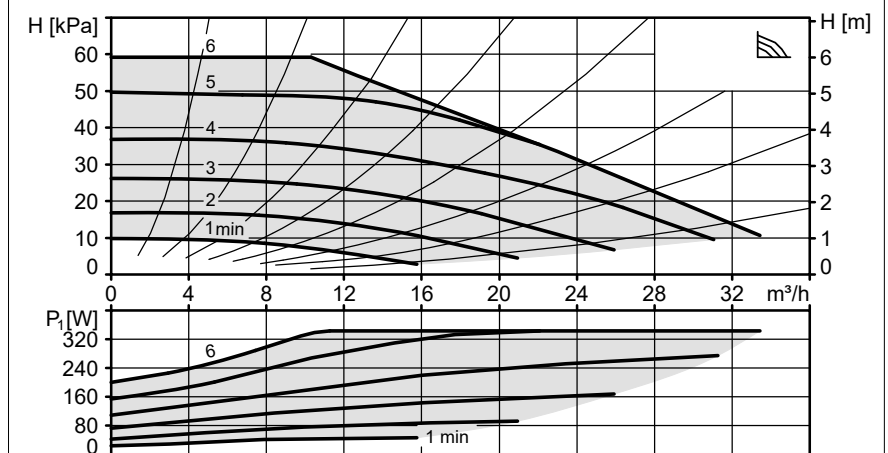
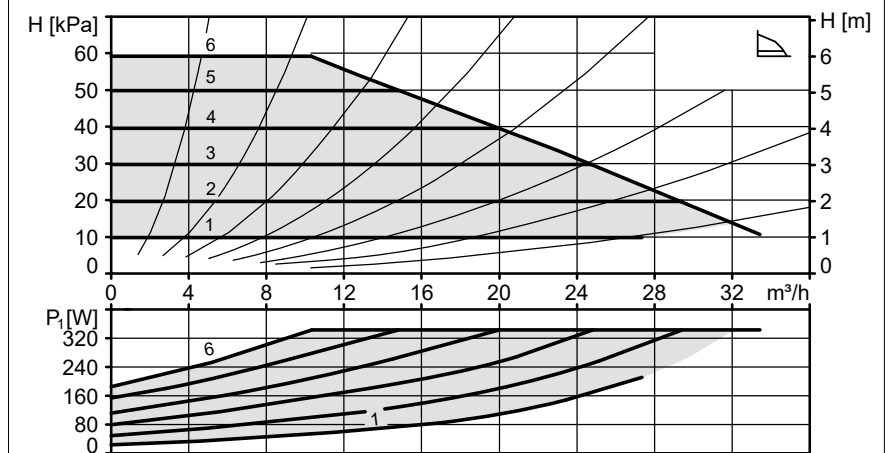
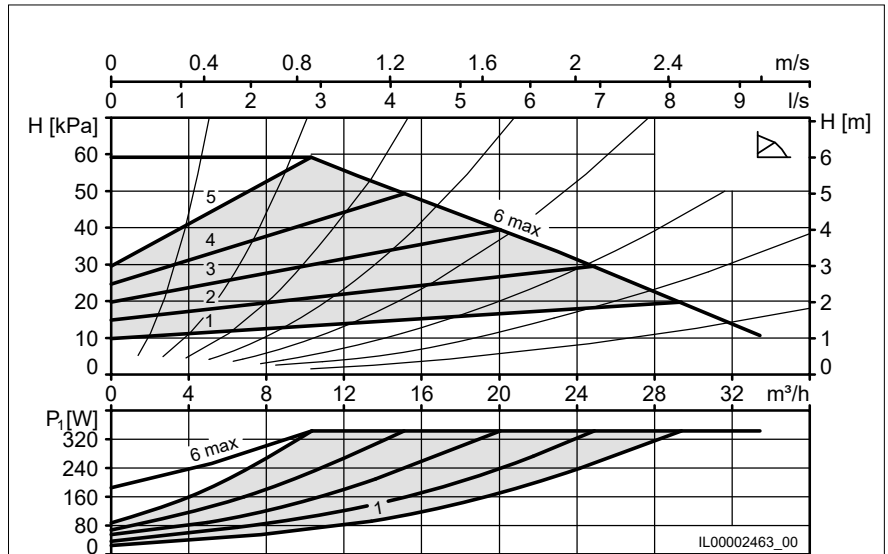
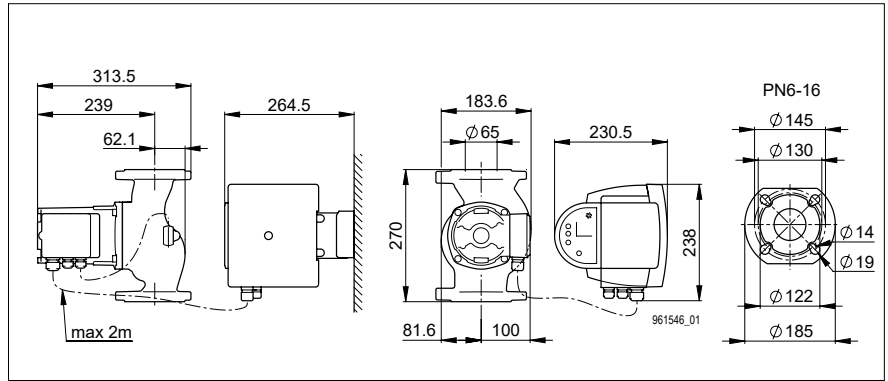
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModulA 65-6 270 GREEN	7000000150



## ModulA 65-8 270 GREEN

Version	T2 M
Nominal width	DN 65
Flow head H max.	8 m
Overall length	270 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	22.6 kg
Gross weight	28 kg

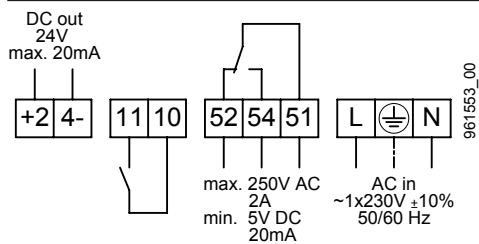
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	24-450 W
Nominal current	0.23-2.05 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

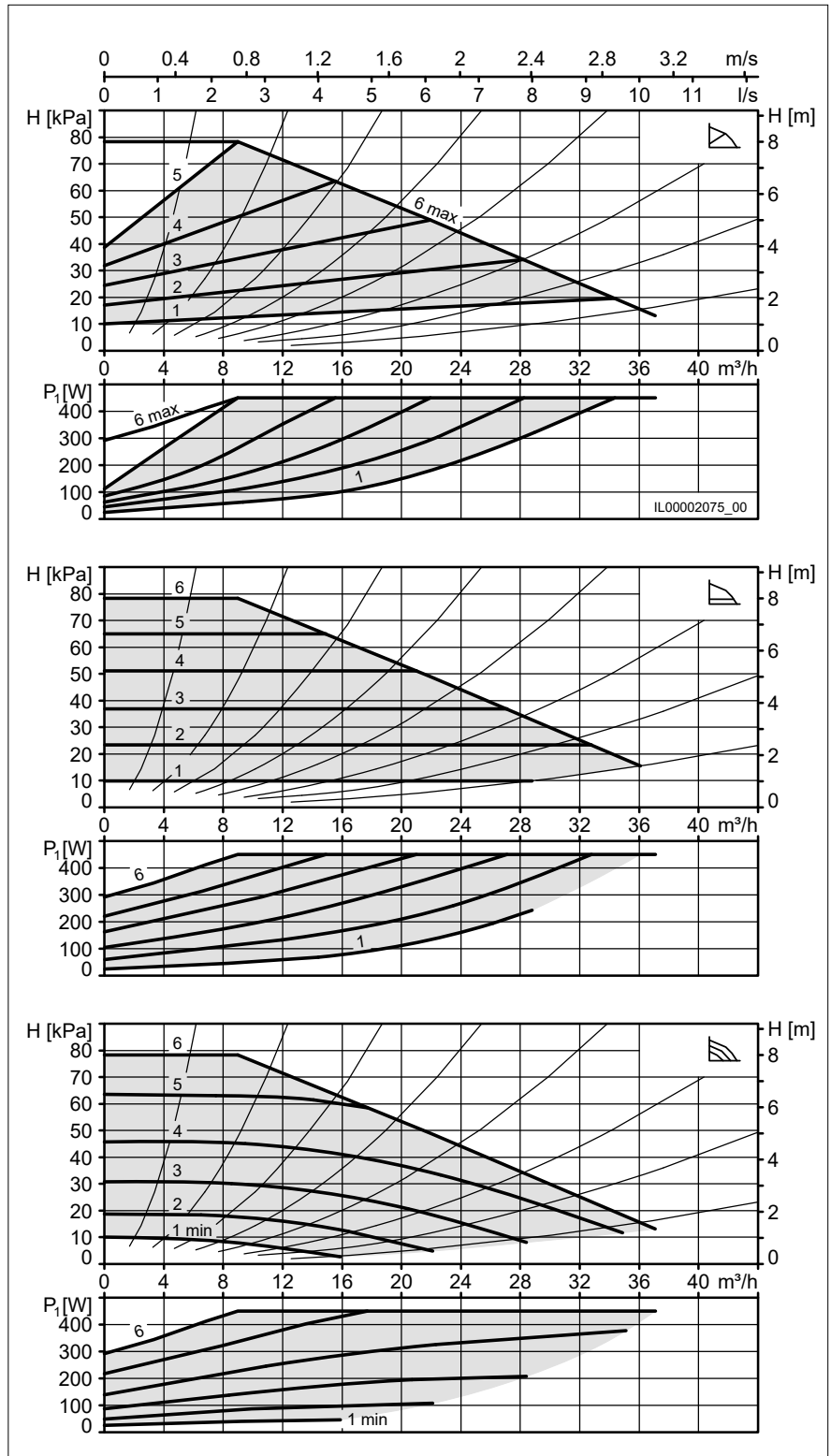
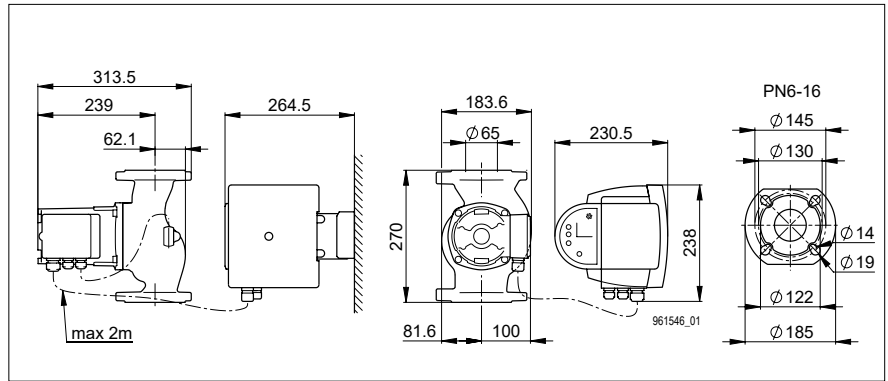
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
ModulA 65-8 270 GREEN	7000000151



## ModulA 65-8 340 GREEN

Version	T2 M
Nominal width	DN 65
Flow head H max.	8 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	23.5 kg
Gross weight	28.5 kg

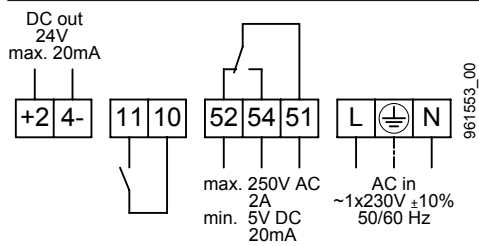
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	24-450 W
Nominal current	0.24-2.06 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

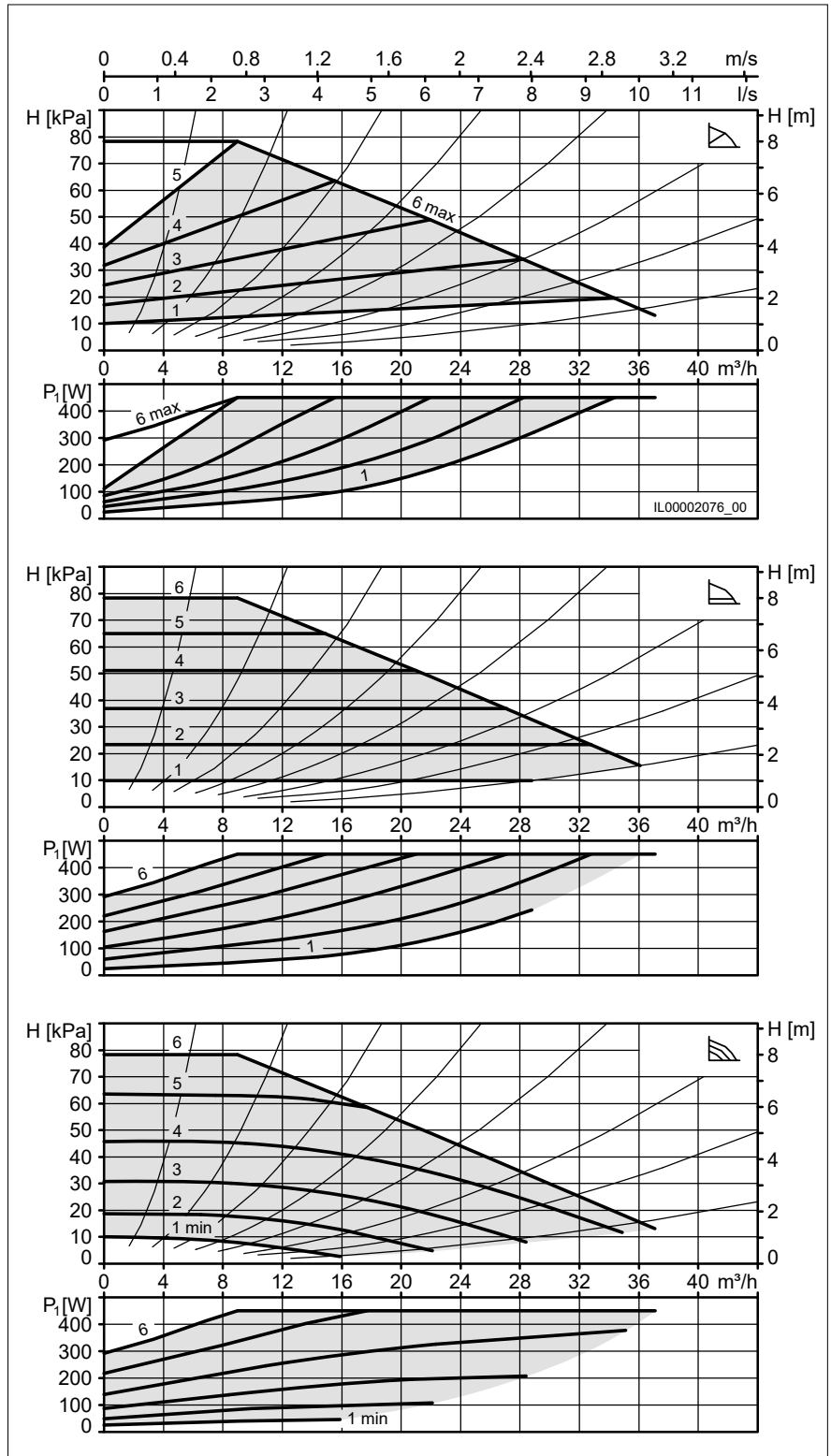
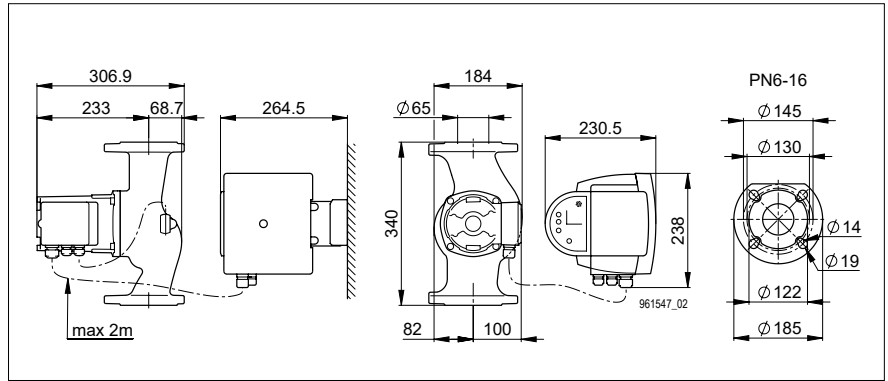
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	ModulA 65-8 340 GREEN	<b>Art. no.</b>	7000000152
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## Modula 65-12 340 GREEN

Version	T2 M
Nominal width	DN 65
Flow head H max.	12 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	23.5 kg
Gross weight	27.6 kg

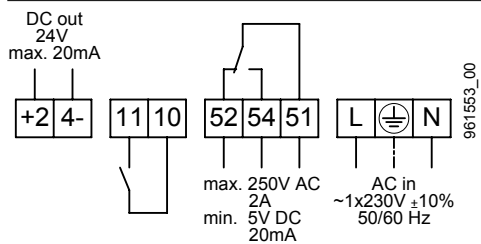
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	25-759 W
Nominal current	0.23-3.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

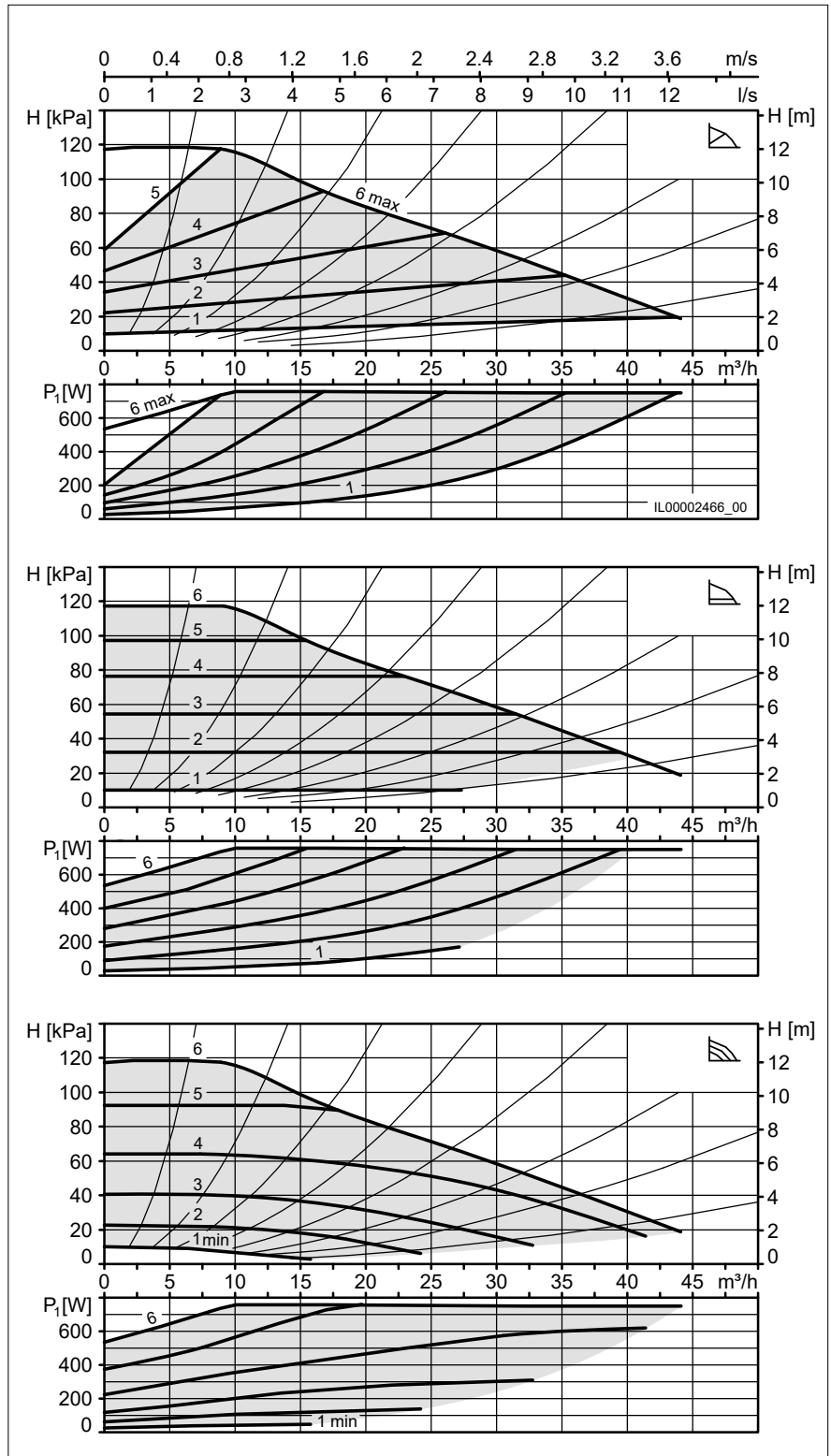
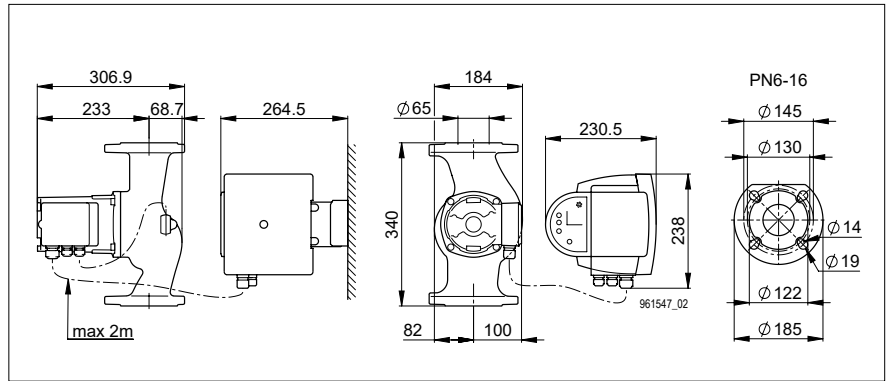
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	<b>Art. no.</b>
Modula 65-12 340 GREEN	7000000153



## ModulA 65-15 340 GREEN

Version	T2 L
Nominal width	DN 65
Flow head H max.	15 m
Overall length	340 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	26.0 kg
Gross weight	31.5 kg

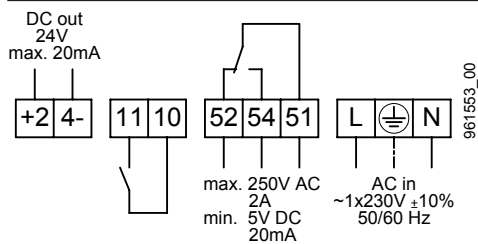
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	30-1343 W
Nominal current	0.27-6.08 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

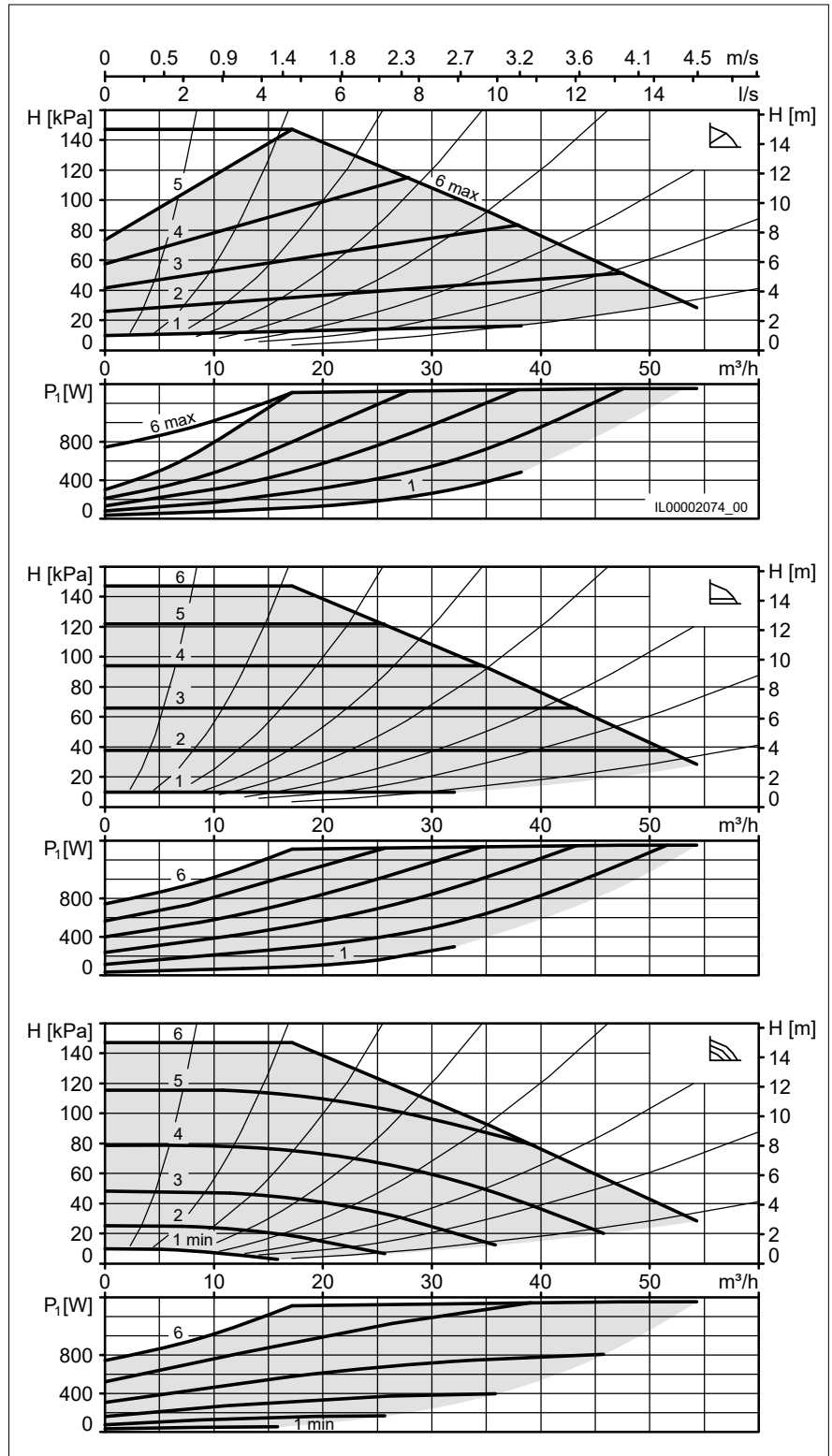
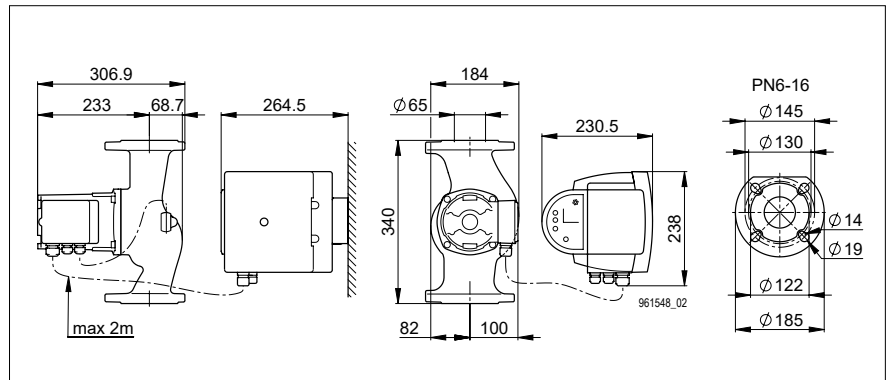
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6

### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

<b>Type</b>	ModulA 65-15 340 GREEN	<b>Art. no.</b>	7000000154
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## ModuA 80-8 360 GREEN PN6

## ModuA 80-8 360 GREEN PN10/16

Version	T2 M
Nominal width	DN 80
Flow head H max.	8 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	31.1 kg
Gross weight	35.3 kg

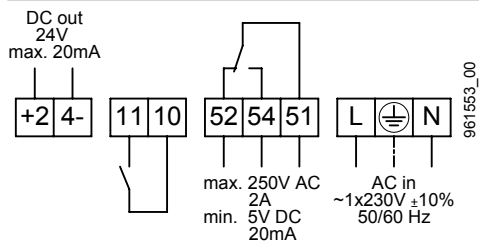
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	25-685 W
Nominal current	0.24-3.09 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.50 bar
at a water temp. of 95 °C	1.00 bar
at a water temp. of 110 °C	1.50 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

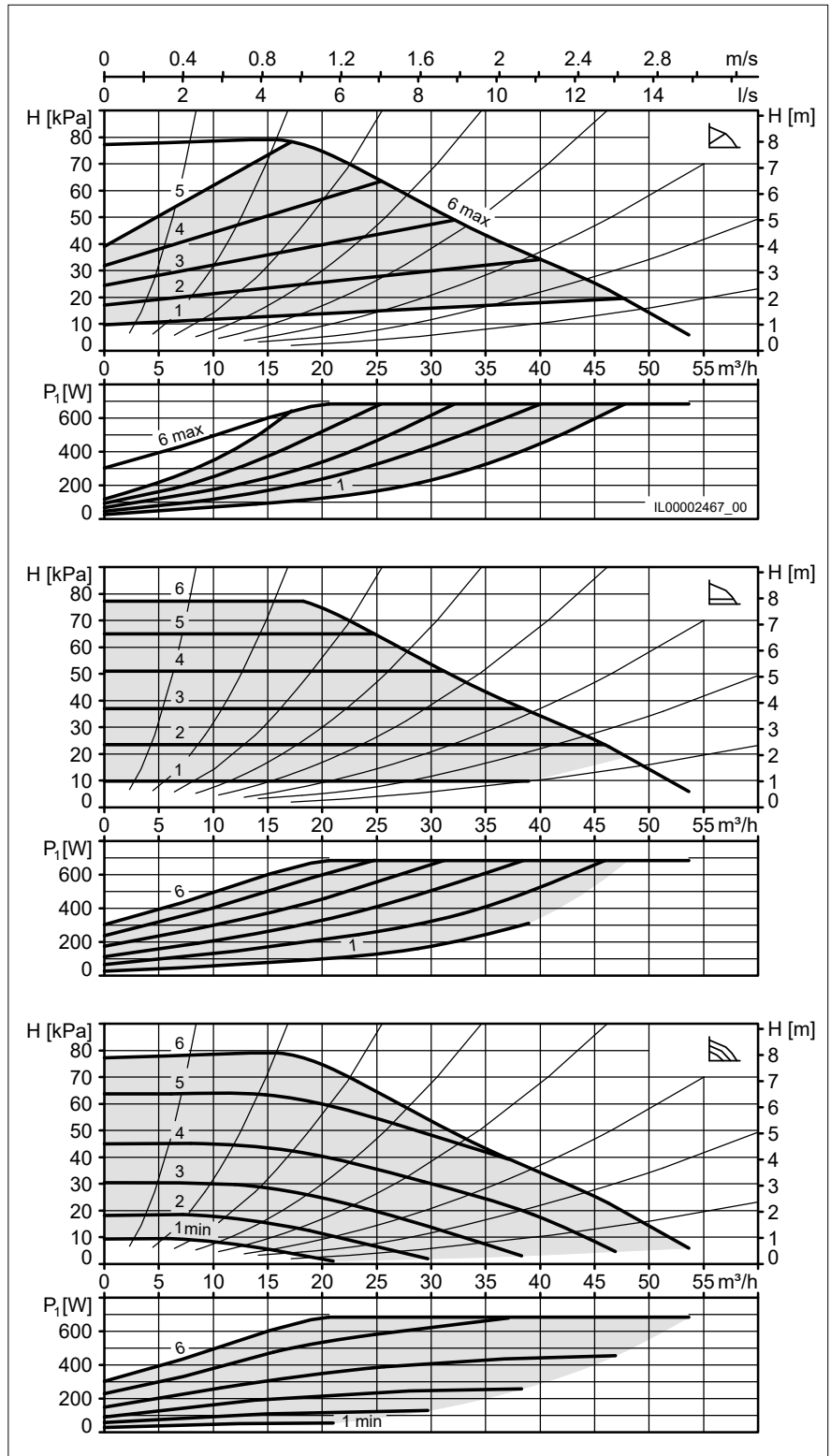
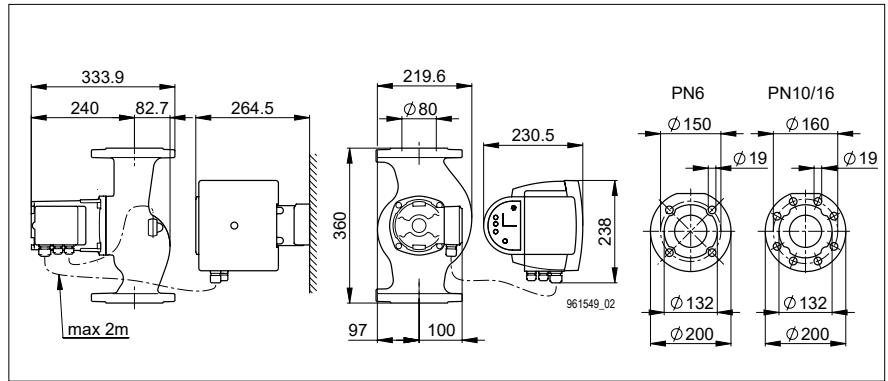
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6 or PN 10/16

### Accessories

- Biral Interface Modules

Type	Art. no.
ModuA 80-8 360 GREEN PN6	7000000155
ModuA 80-8 360 GREEN PN10/16	7000000156



## Modula 80-12 360 GREEN PN6

## Modula 80-12 360 GREEN PN10/16

Version	T2 L
Nominal width	DN 80
Flow head H max.	12 m
Overall length	360 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	31.1 kg
Gross weight	36.5 kg

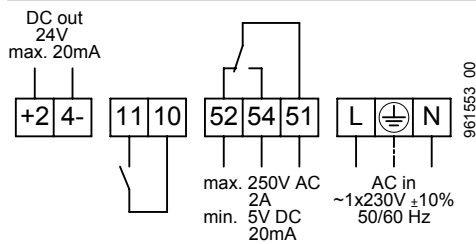
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	30-1476 W
Nominal current	0.27-6.63 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.50 bar
at a water temp. of 95 °C	1.00 bar
at a water temp. of 110 °C	1.50 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

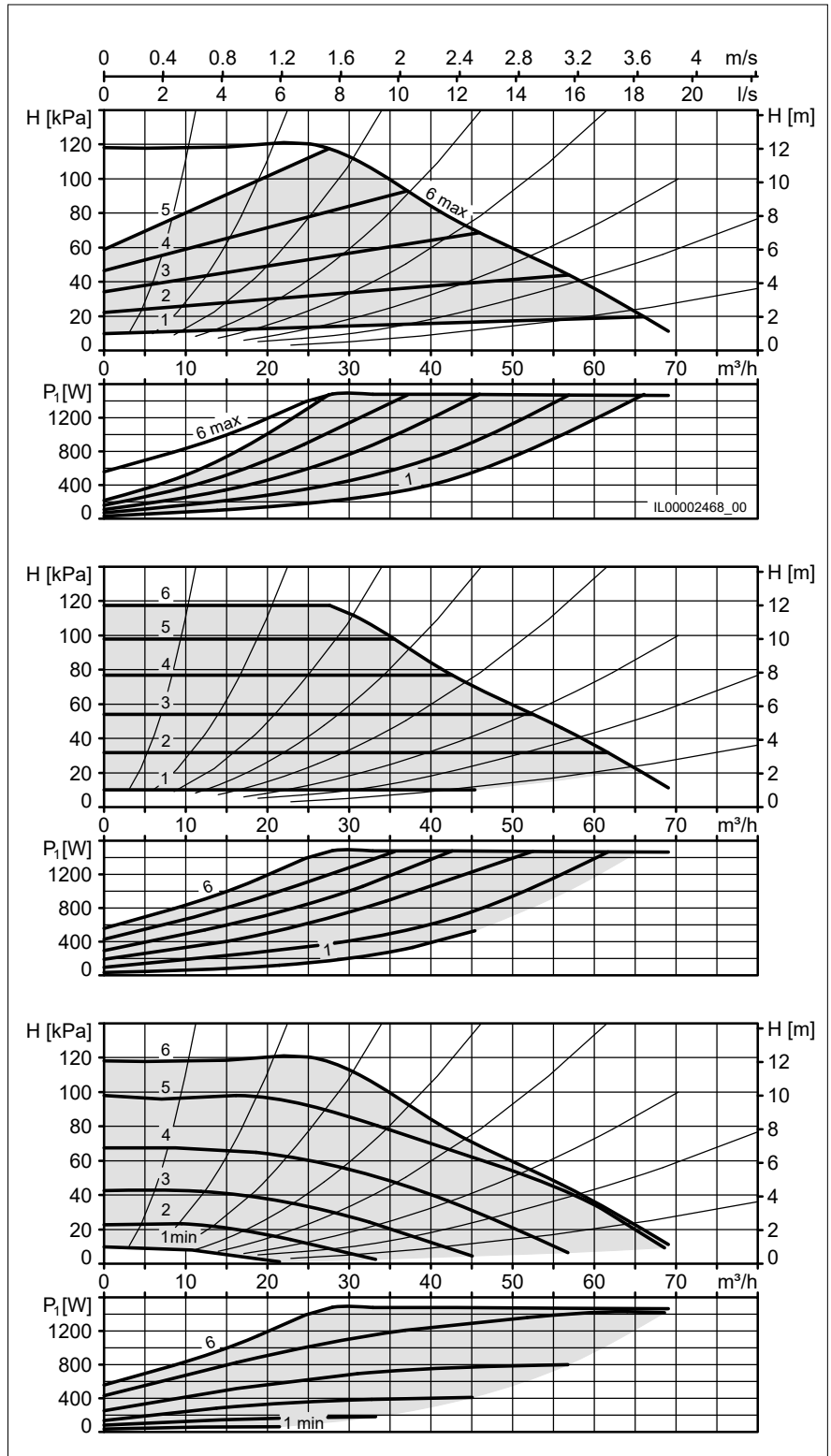
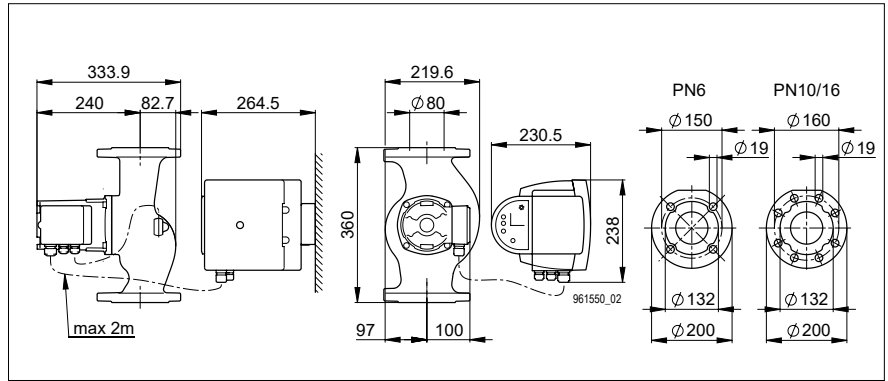
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6 or PN 10/16

### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 80-12 360 GREEN PN6	7000000157
Modula 80-12 360 GREEN PN10/16	7000000158





### Modula 100-8 450 GREEN PN6

### Modula 100-8 450 GREEN PN10/16

Version	T2 L
Nominal width	DN 100
Flow head H max.	12 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	36.0 kg
Gross weight	36 kg

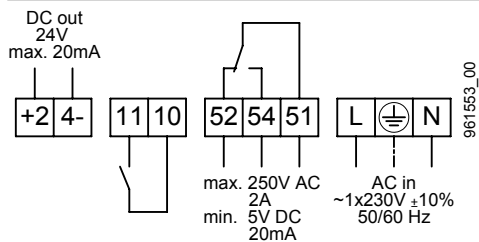
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	30-1082 W
Nominal current	0.28-4.85 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

#### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

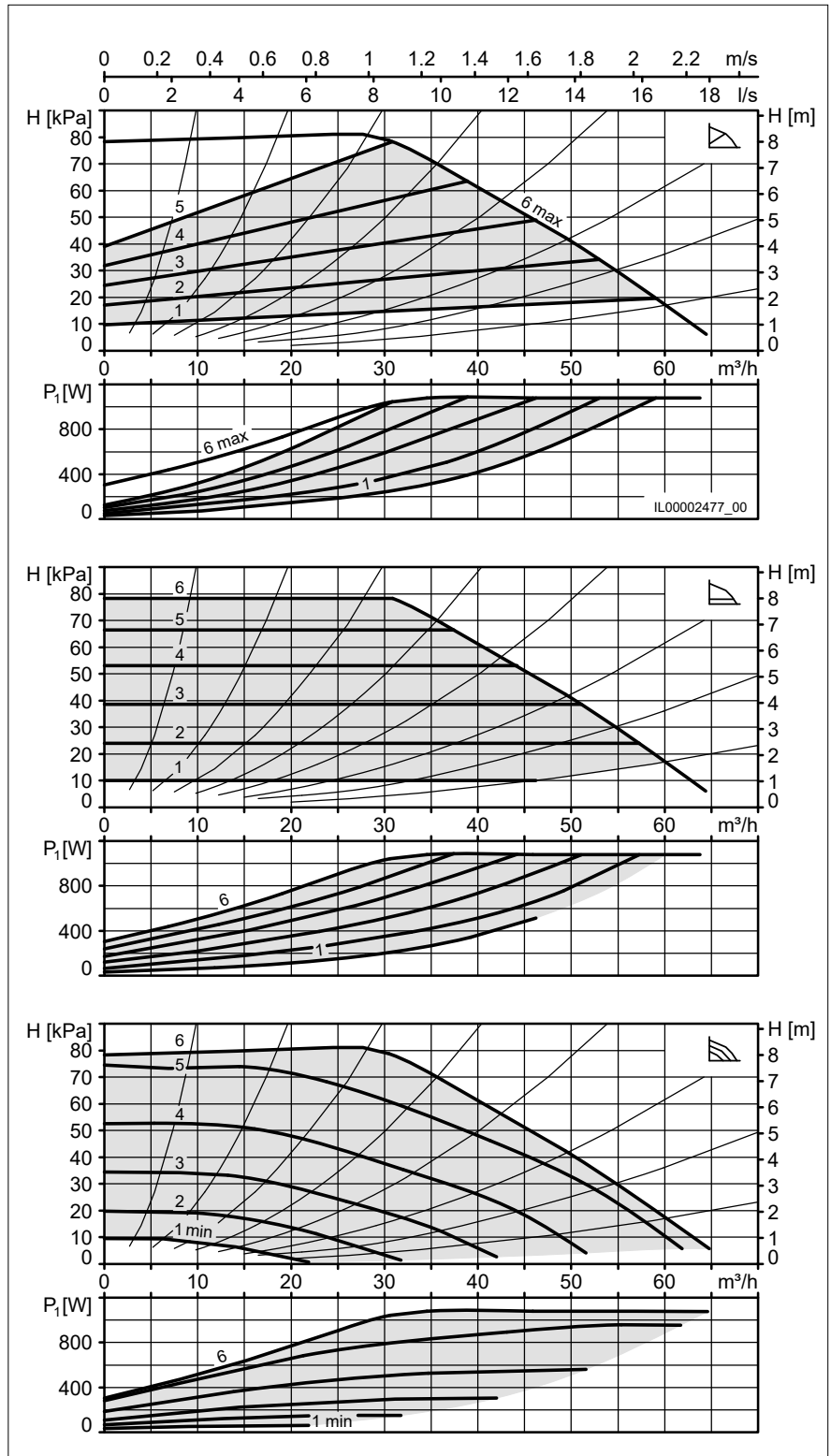
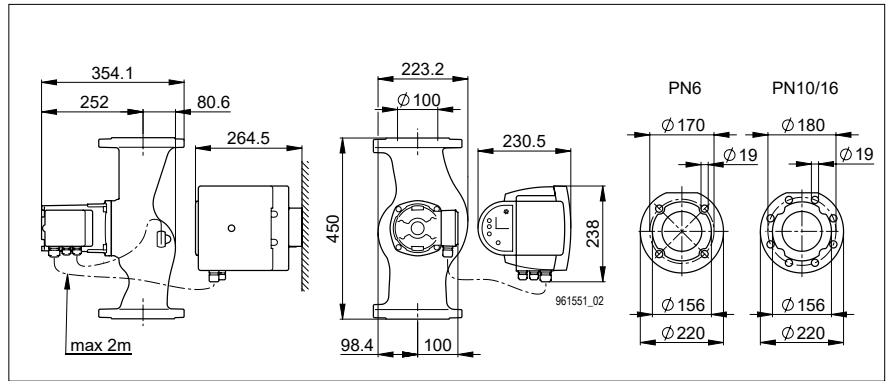
#### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6 or PN 10/16

#### Accessories

- Biral Interface Modules

Type	Art. no.
Modula 100-8 450 GREEN PN6	7000000159
Modula 100-8 450 GREEN PN10/16	7000000160



## ModuA 100-12 450 GREEN PN6

## ModuA 100-12 450 GREEN PN10/16

Version	T2 L
Nominal width	DN 100
Flow head H max.	12 m
Overall length	450 mm
Flanged connection	PN 6   PN 10/16
Operating pressure max.	6   16 bar
Media temperature min.	-10°C
Media temperature max.	+110°C
Ambient temperature	0°C to 40°C
Net weight	36.0 kg
Gross weight	41.5 kg

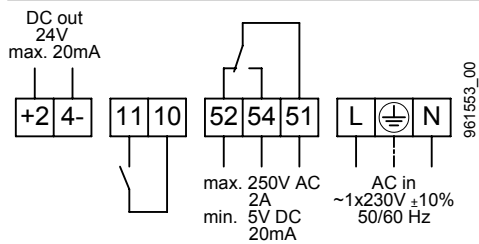
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	30-1551 W
Nominal current	0.28-6.81 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.70 bar
at a water temp. of 95 °C	1.20 bar
at a water temp. of 110 °C	1.70 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

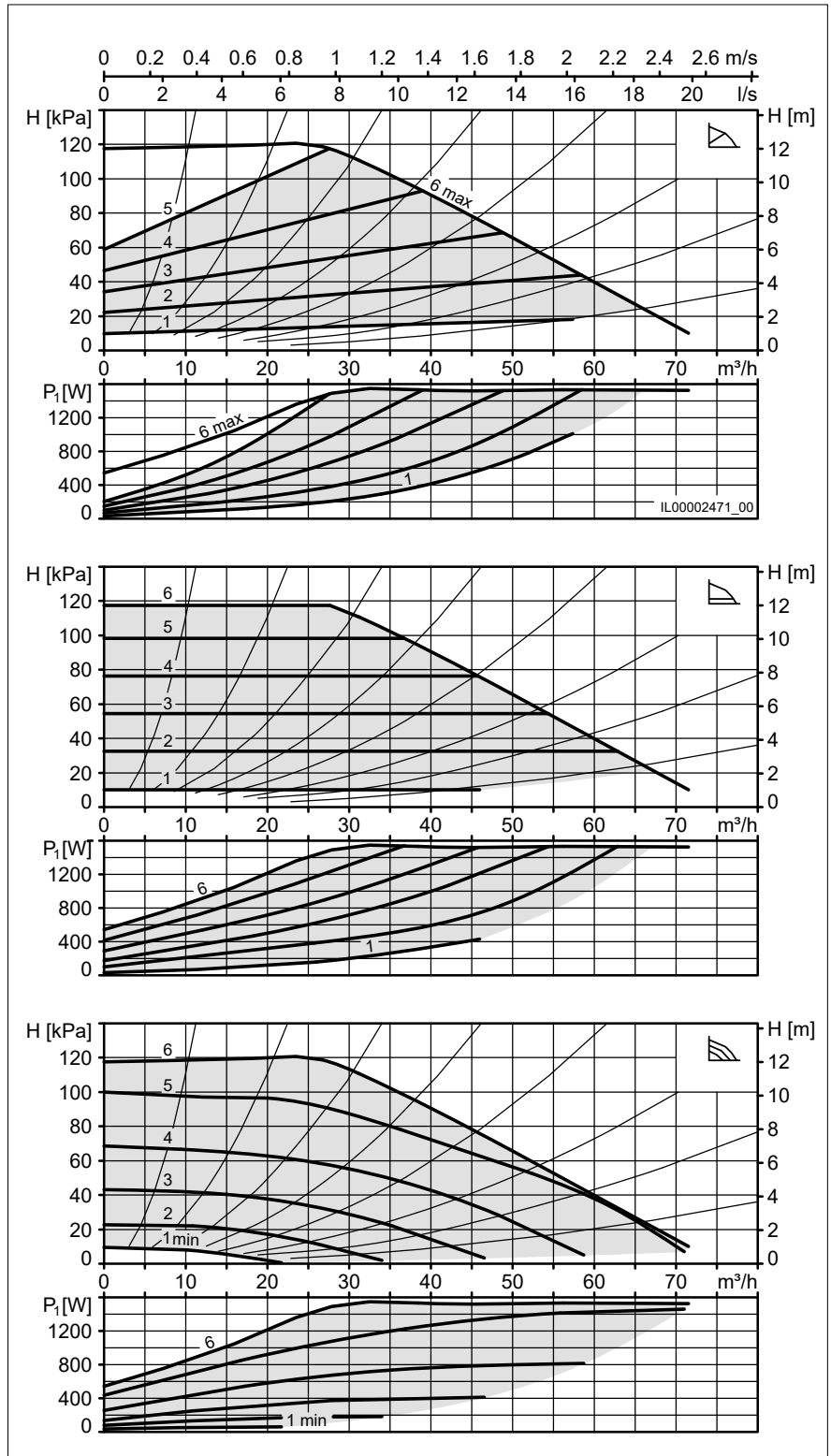
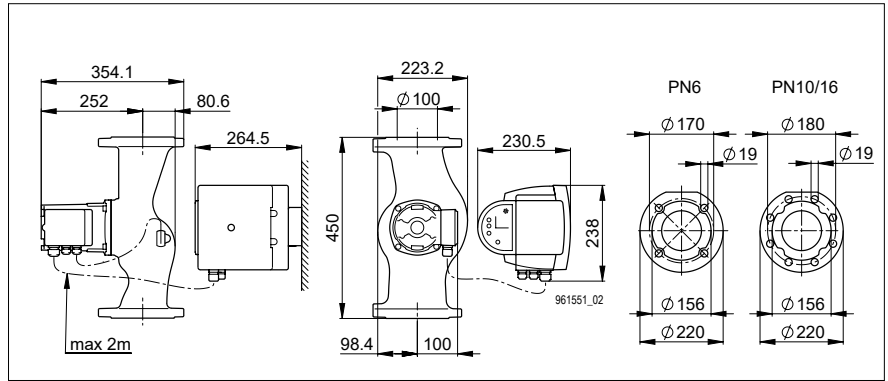
### Included in the scope of delivery

- Kit for recessed installation of electronics (pre-installed)
- Sealing set for flange PN 6 or PN 10/16

### Accessories

- Biral Interface Modules

Type	Art. no.
ModuA 100-12 450 GREEN PN6	7000000161
ModuA 100-12 450 GREEN PN10/16	7000000162







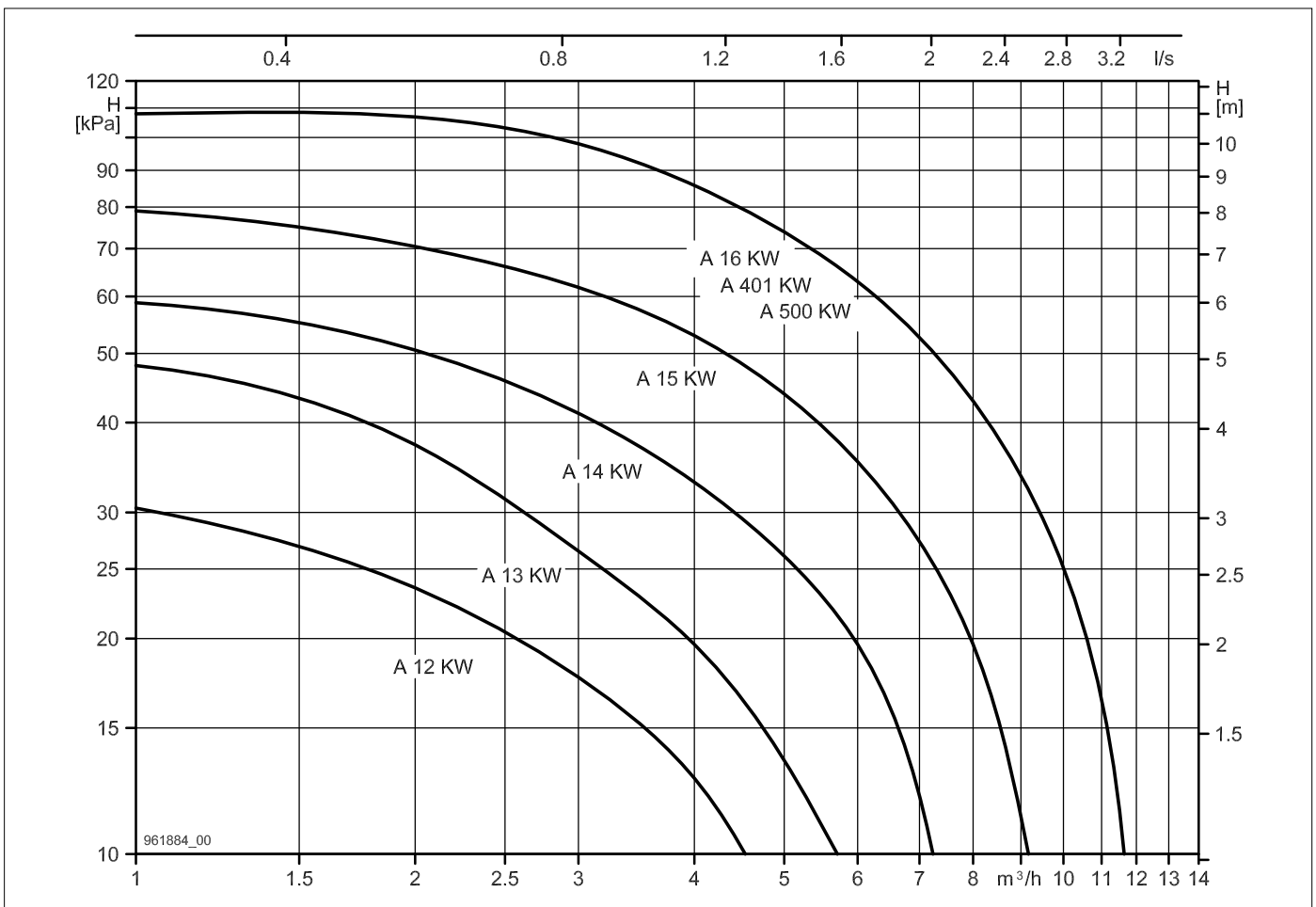
## Cold water circulation pumps A KW

as long as stock

### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max.	EEI
		DN	m	mm		bar	
A 12-1 KW	1159791160	25	4	180	G 1½"	10	≤0.21
A 13-1 KW	1159821160	25	5	180	G 1½"	10	≤0.21
A 14-1 KW	1159851160	25	6	180	G 1½"	10	≤0.22
A 15-1 KW	1159881160	25	8	180	G 1½"	10	≤0.22
A 16-1 KW	1161231160	25	11	180	G 1½"	10	≤0.21
A 12-2 KW	1159801160	32	4	180	G 2"	10	≤0.21
A 13-2 KW	1159831160	32	5	180	G 2"	10	≤0.21
A 14-2 KW	1159861160	32	6	180	G 2"	10	≤0.22
A 15-2 KW	1159891160	32	8	180	G 2"	10	≤0.22
A 16-2 KW	1159901160	32	11	180	G 2"	10	≤0.21
A 12 KW	1159781160	32	4	170	G 2"	10	≤0.21
A 13 KW	1159811160	32	5	170	G 2"	10	≤0.21
A 14 KW	1159841160	32	6	170	G 2"	10	≤0.22
A 15 KW	1159871160	32	8	170	G 2"	10	≤0.22

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max.	EEI
		DN	m	mm		bar	
A 401 KW	1159911160	40	11	220	PN 6/10	10	≤0.22
A 401-1 KW	1159921160	40	11	250	PN 6/10	10	≤0.22
A 500 KW	1161371160	50	11	220	PN 6/10	10	≤0.22



### A 12-1 KW

### A 12-2 KW

### A 12 KW

Nominal width	DN 25   DN 32
Flow head H max.	4 m
Overall length	180   170 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	3.8 kg

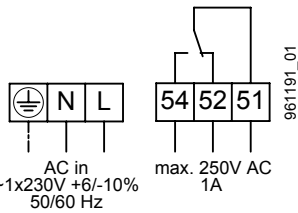
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-33 W
Nominal current	0.1-0.25 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

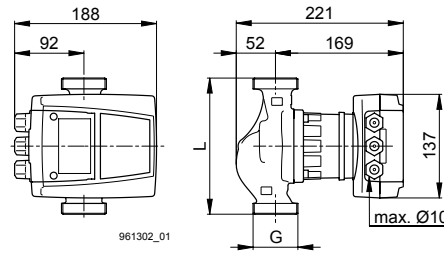
#### Switch

**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

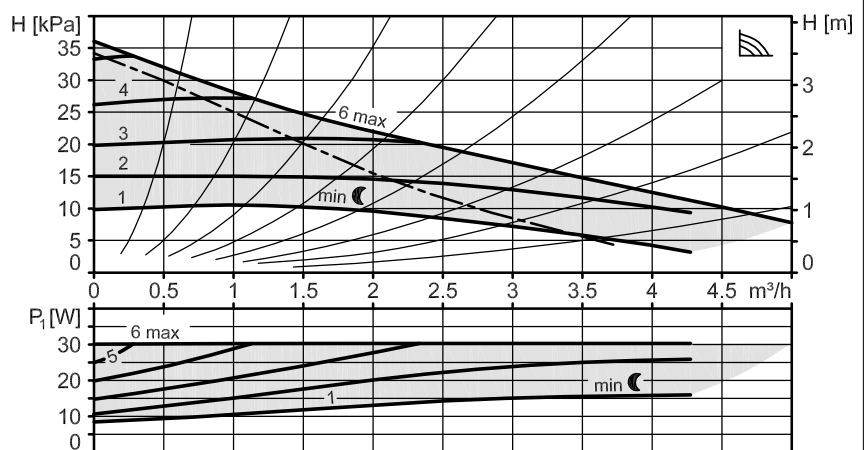
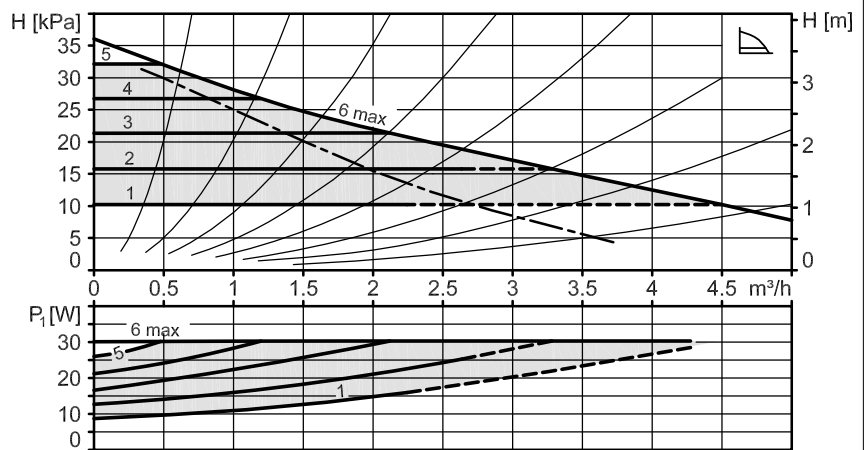
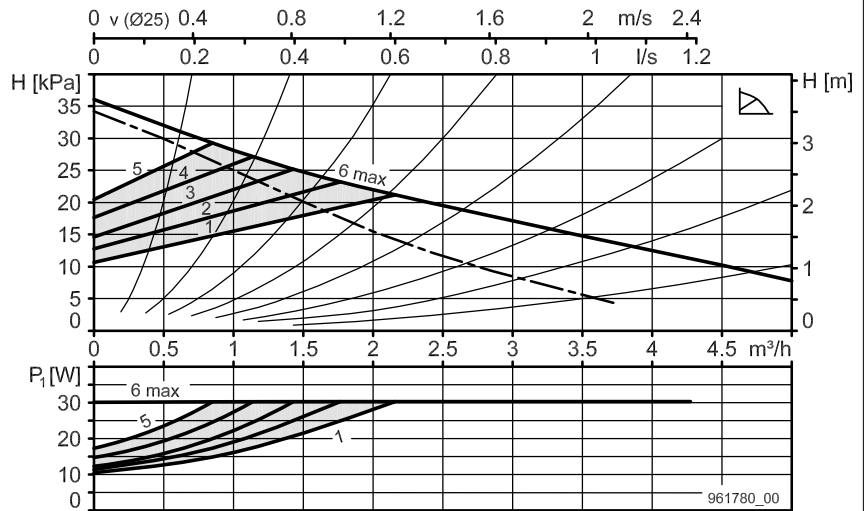
#### Type

Type	Art. no.
A 12-1 KW	1159791160
A 12-2 KW	1159801160
A 12 KW	1159781160



<b>A 12-1 KW</b>	<b>A 12-2 KW</b>
DN 25	DN 32
L = 180 mm	L = 180 mm
G = 1½"	G = 2"

<b>A 12 KW</b>
DN 32
L = 170 mm
G = 2"



### A 13-1 KW

### A 13-2 KW

### A 13 KW

Nominal width	DN 25   DN 32
Flow head H max.	5 m
Overall length	180   170 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	3.8 kg

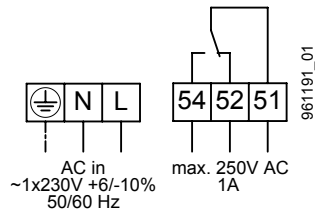
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-50 W
Nominal current	0.1-0.35 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

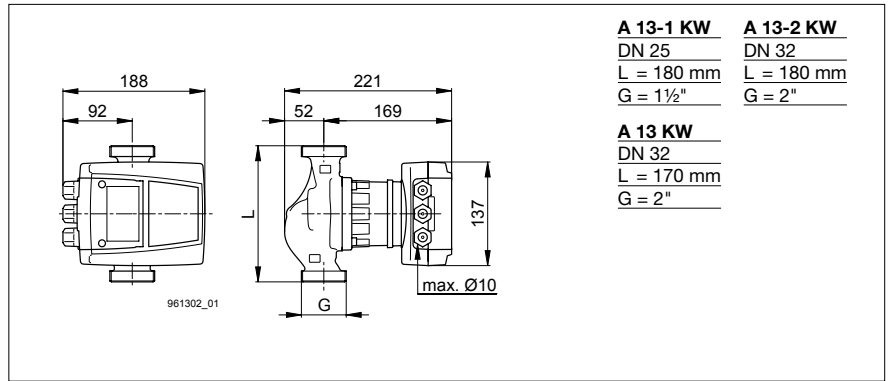
#### Switch

**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

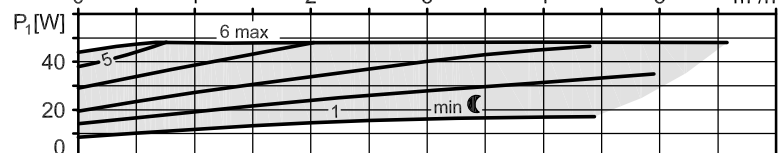
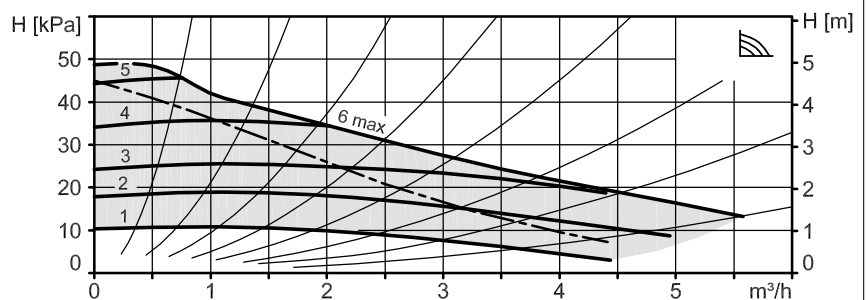
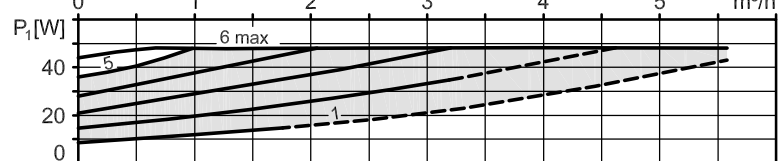
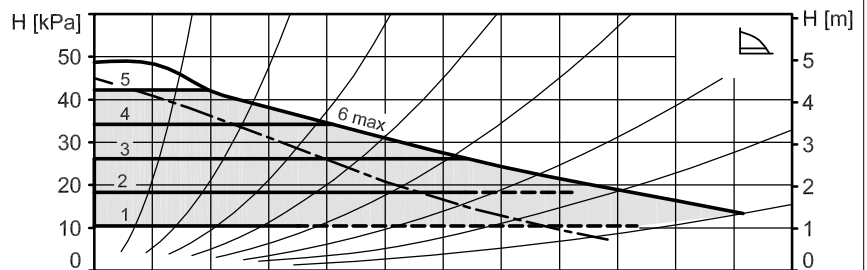
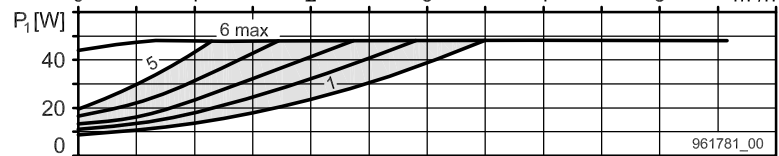
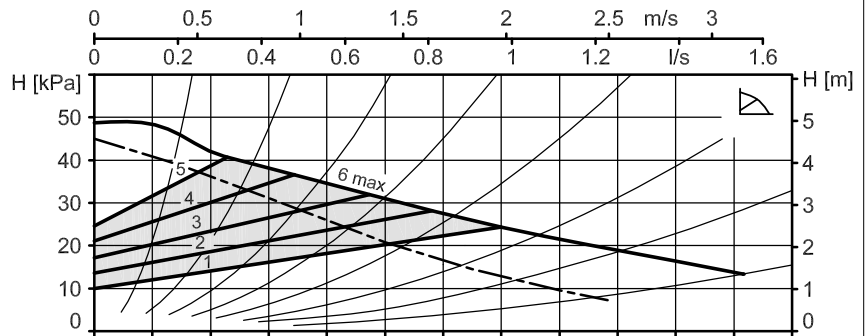
#### Type

Type	Art. no.
A 13-1 KW	1159821160
A 13-2 KW	1159831160
A 13 KW	1159811160



<b>A 13-1 KW</b>	<b>A 13-2 KW</b>
DN 25	DN 32
L = 180 mm	L = 180 mm
G = 1½"	G = 2"

<b>A 13 KW</b>
DN 32
L = 170 mm
G = 2"



### A 14-1 KW

### A 14-2 KW

### A 14 KW

Nominal width	DN 25   DN 32
Flow head H max.	6 m
Overall length	180   170 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	3.8 kg

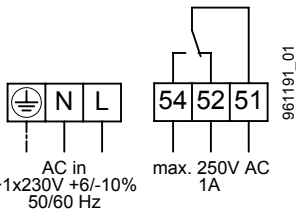
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-70 W
Nominal current	0.1-0.5 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



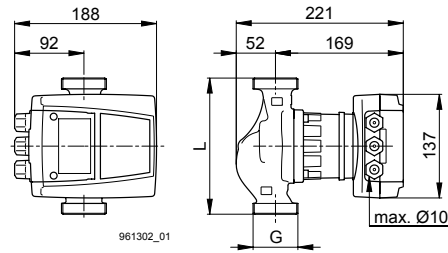
**52, 54, 51** Error or operating message

**L, N, PE** Power supply

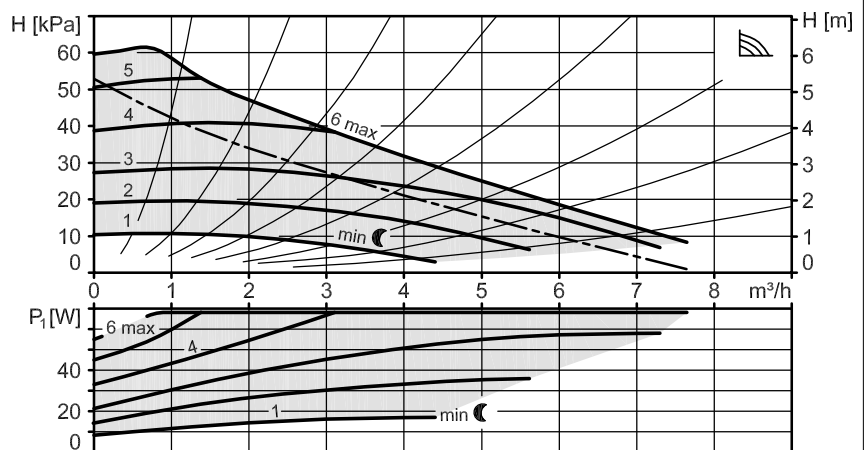
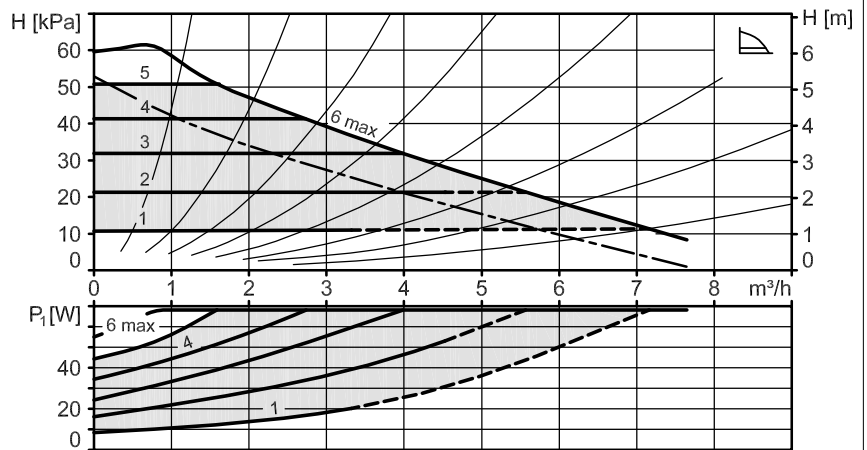
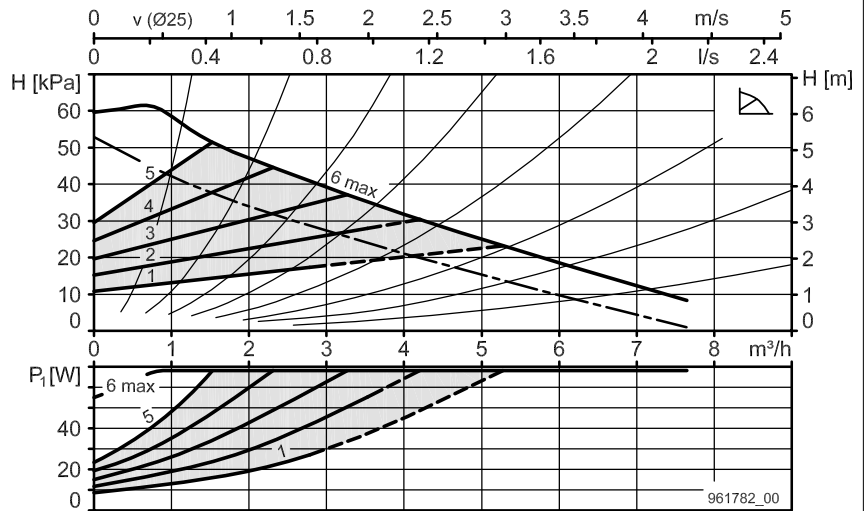
#### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

Type	Art. no.
A 14-1 KW	1159851160
A 14-2 KW	1159861160
A 14 KW	1159841160



<b>A 14-1 KW</b>	<b>A 14-2 KW</b>
DN 25	DN 32
L = 180 mm	L = 180 mm
G = 1½"	G = 2"
<b>A 14 KW</b>	
DN 32	
L = 170 mm	
G = 2"	





### A 15-1 KW

### A 15-2 KW

### A 15 KW

Nominal width	DN 25   DN 32
Flow head H max.	8 m
Overall length	180   170 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	3.8 kg

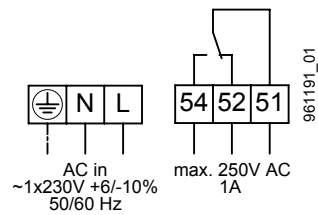
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-107 W
Nominal current	0.1-0.8 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

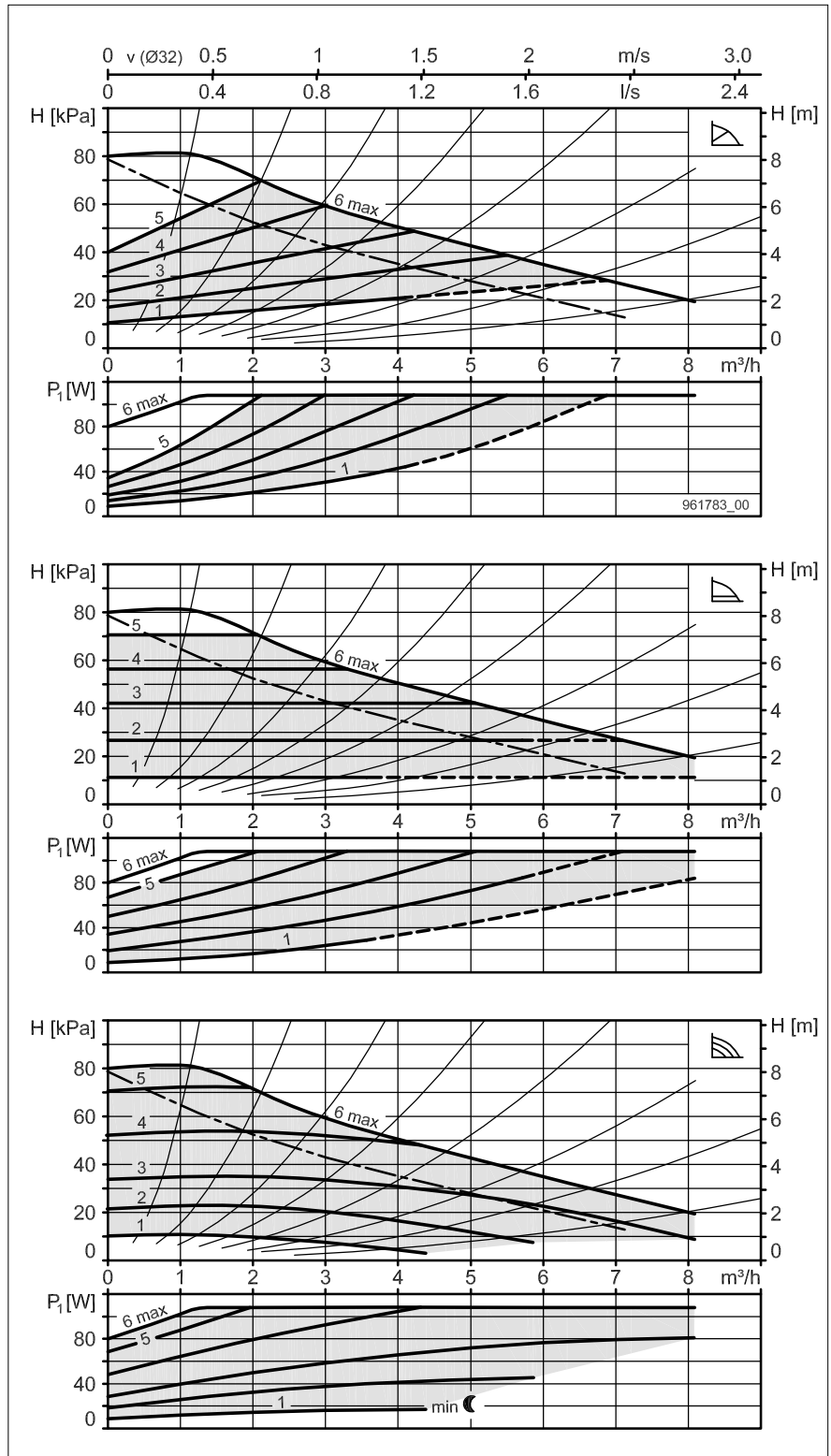
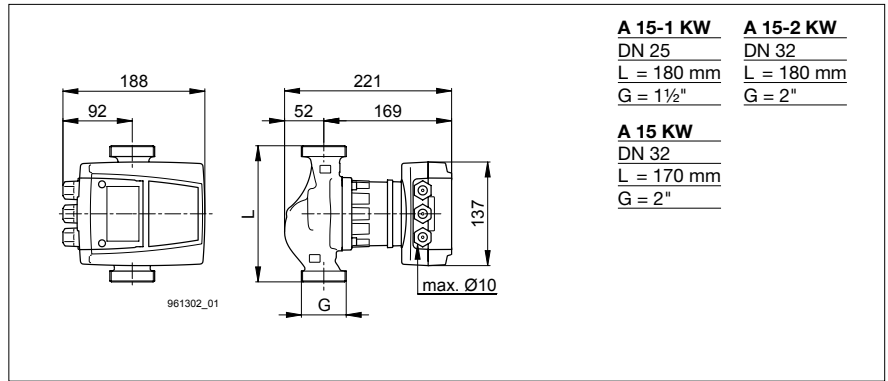
**L, N, PE** Power supply

#### Switch

**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

Type	Art. no.
A 15-1 KW	1159881160
A 15-2 KW	1159891160
A 15 KW	1159871160



### A 16-1 KW

### A 16-2 KW

Nominal width	DN 25   DN 32
Flow head H max.	11 m
Overall length	180 mm
Threaded connection	G 1½"   G 2"
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	3.8 kg

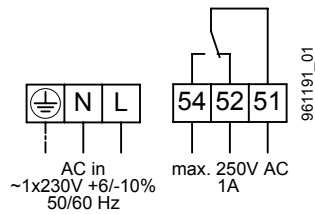
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

#### Connction diagram



**52, 54, 51** Error or operating message

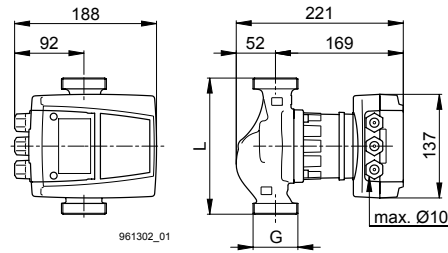
**L, N, PE** Power supply

#### Switch

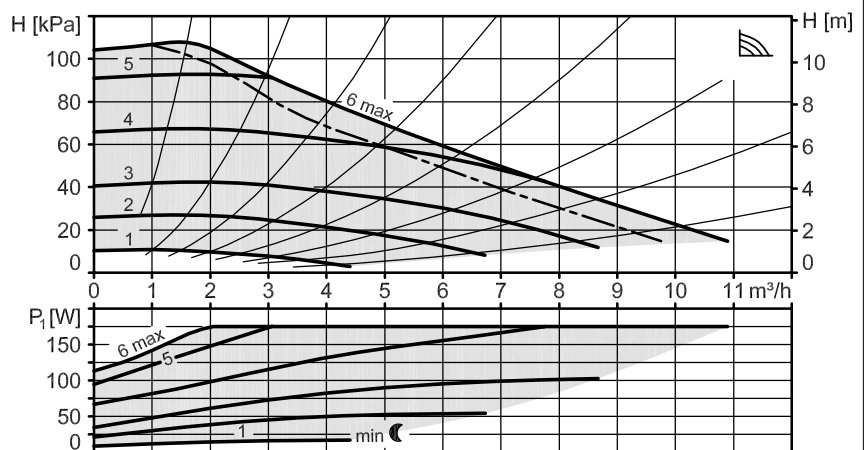
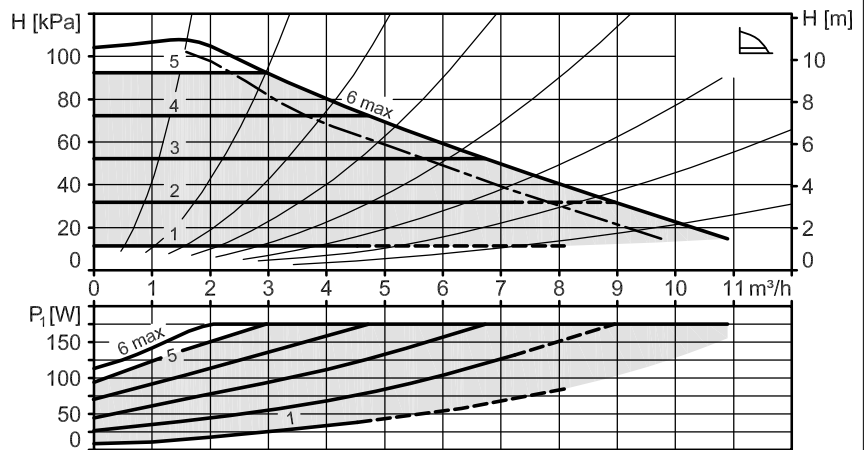
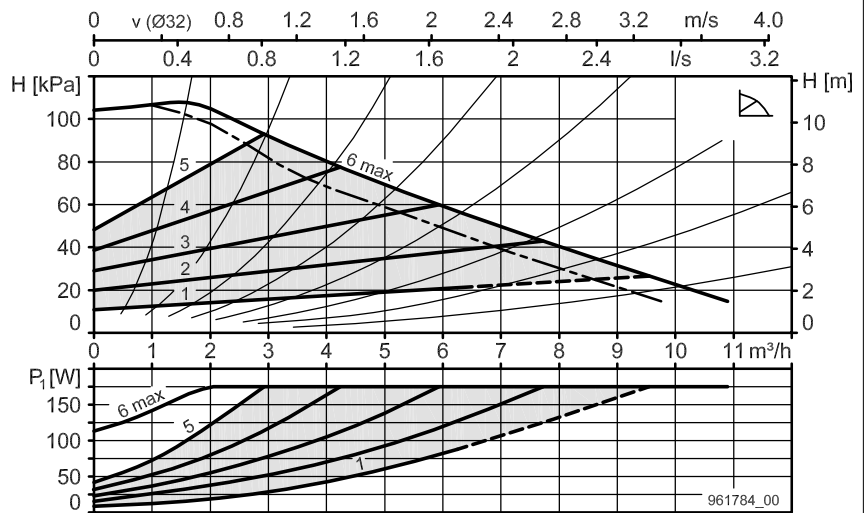
**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

Type	Art. no.
A 16-1 KW	1161231160
A 16-2 KW	1159901160



A 16-1 KW	A 16-2 KW
DN 25	DN 32
L = 180 mm	L = 180 mm
G = 1½"	G = 2"



## A 401 KW

## A 401-1 KW

Nominal width	DN 40
Flow head H max.	11 m
Overall length	220   250 mm
Flanged connection	PN 6/10
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	9.0 kg

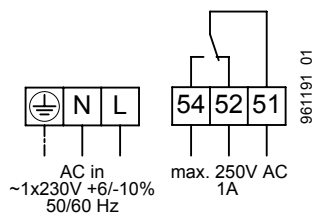
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

### Switch

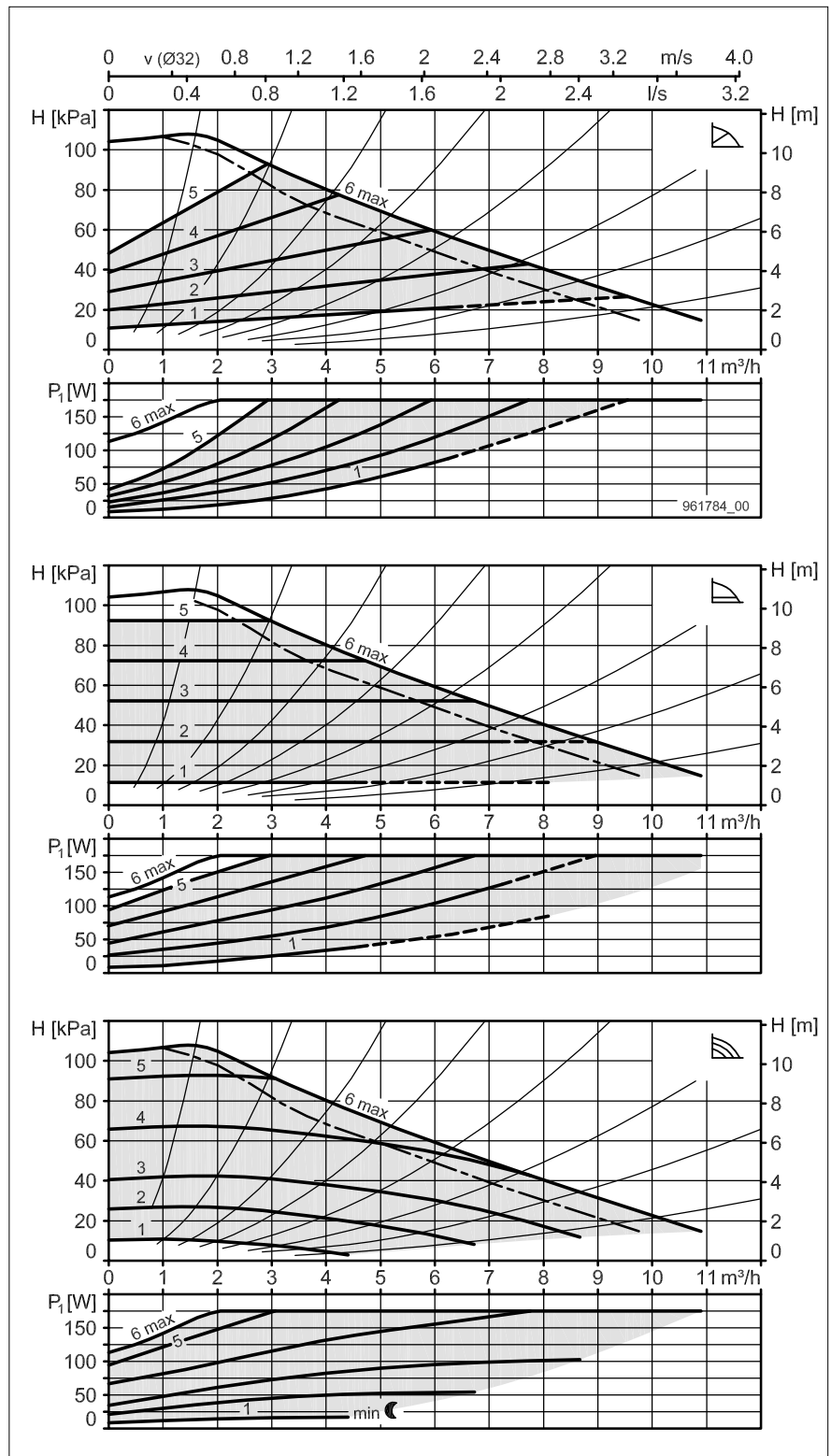
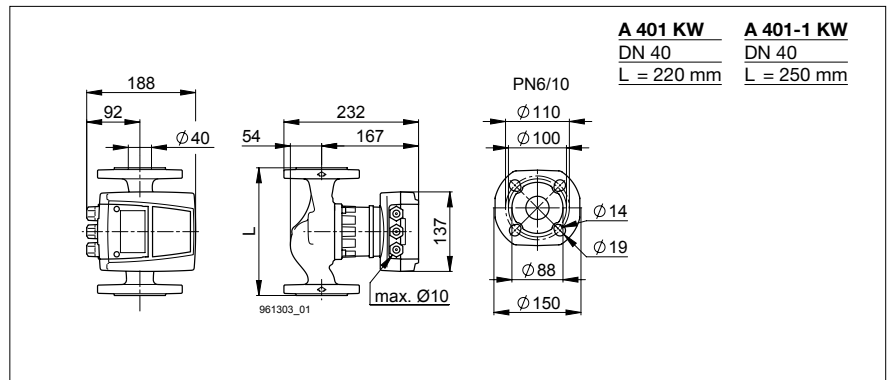
**1** Power limiting (can be deactivated)

**2** Fault or operating message (switchable)

### Included in the scope of delivery

- Sealing set for flange PN 6

Type	Art. no.
A 401 KW	1159911160
A 401-1 KW	1159921160



## A 500 KW

Nominal width	DN 50
Flow head H max.	11 m
Overall length	220 mm
Flanged connection	PN 6/10
Operating pressure max.	10 bar
Media temperature min.	-10°C
Media temperature max.	+95°C
Ambient temperature	max. 40°C
Net weight	11.0 kg

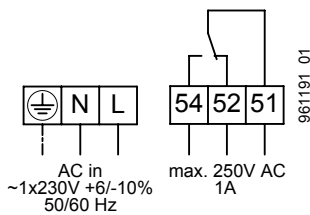
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 95 °C	0.55 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



**52, 54, 51** Error or operating message  
**L, N, PE** Power supply

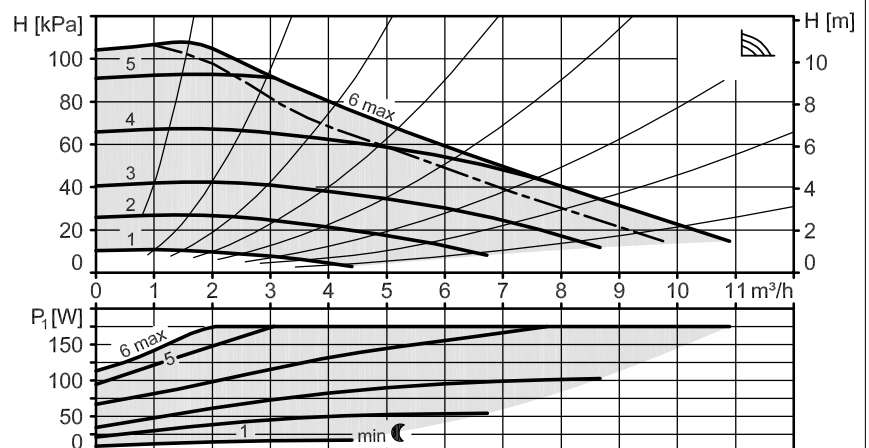
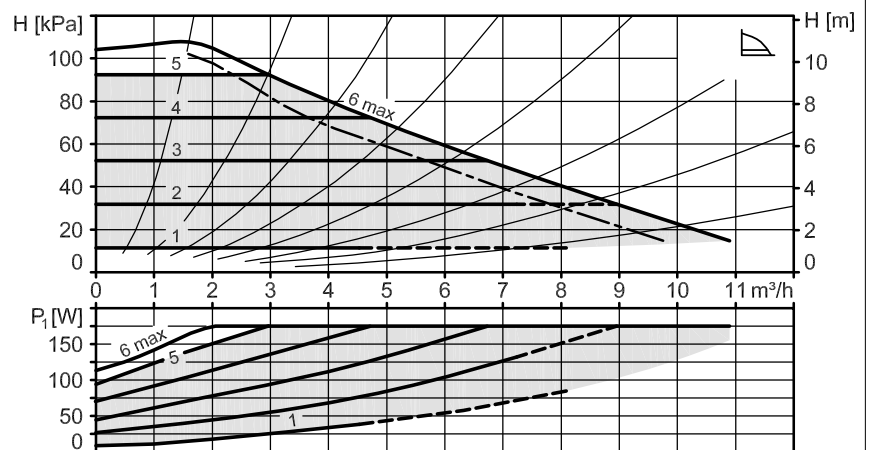
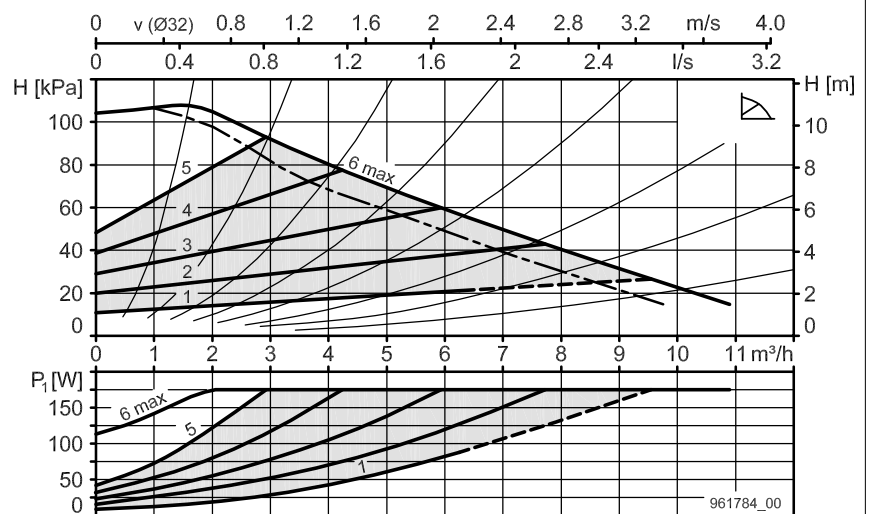
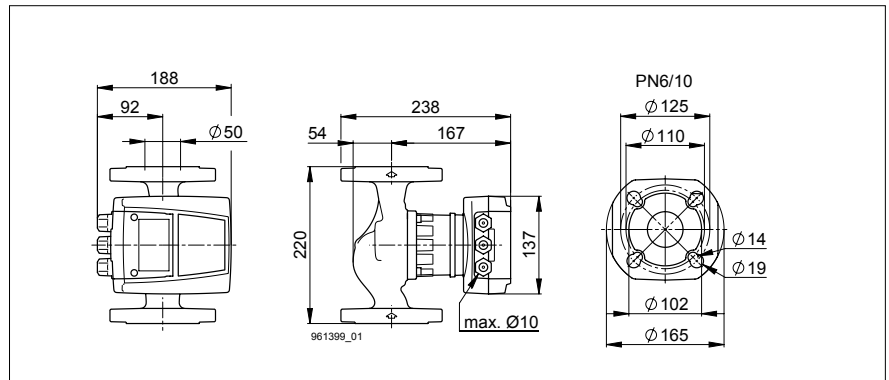
### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

### Included in the scope of delivery

- Sealing set for flange PN 6

Type	Art. no.
A 500 KW	1161371160







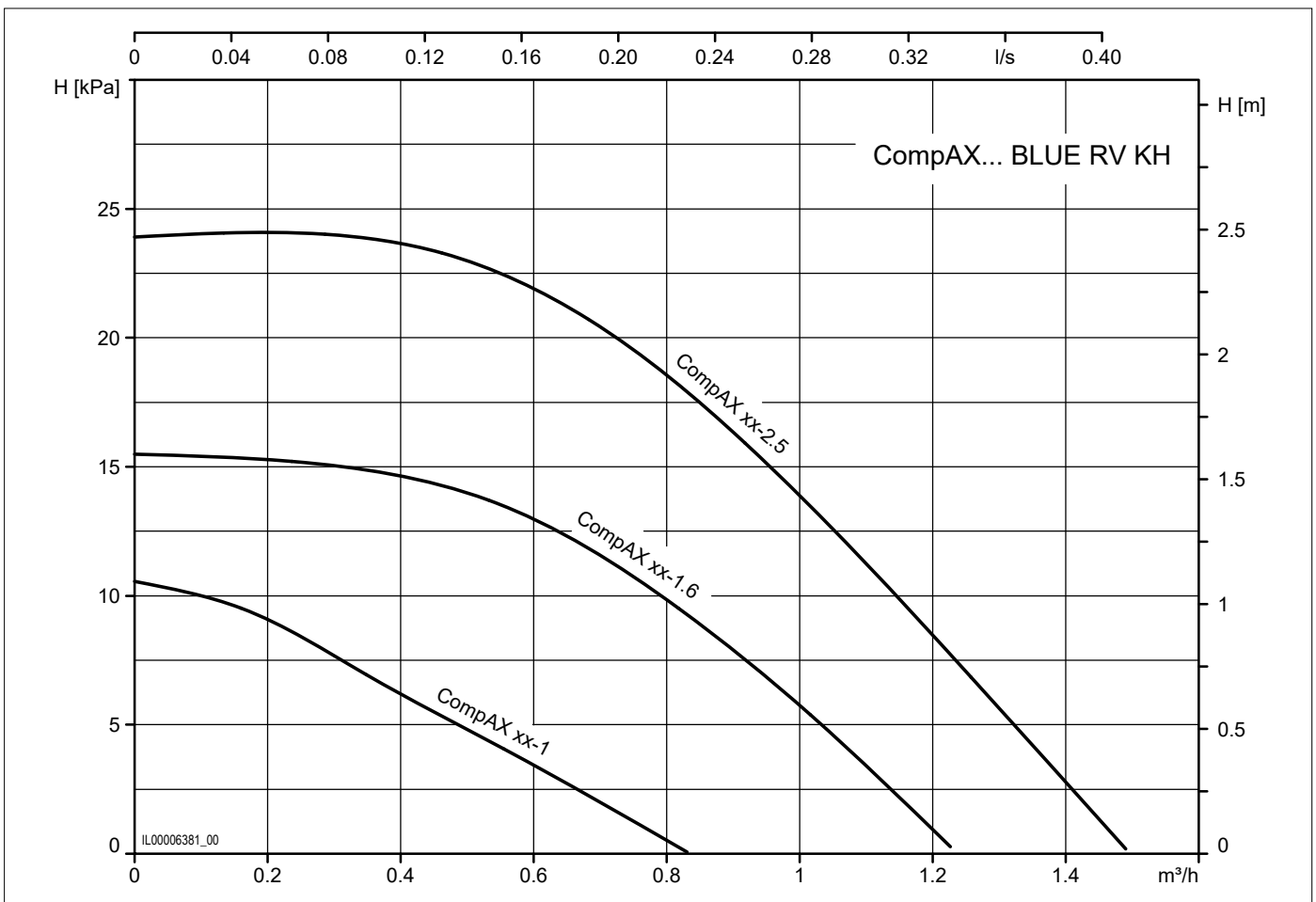
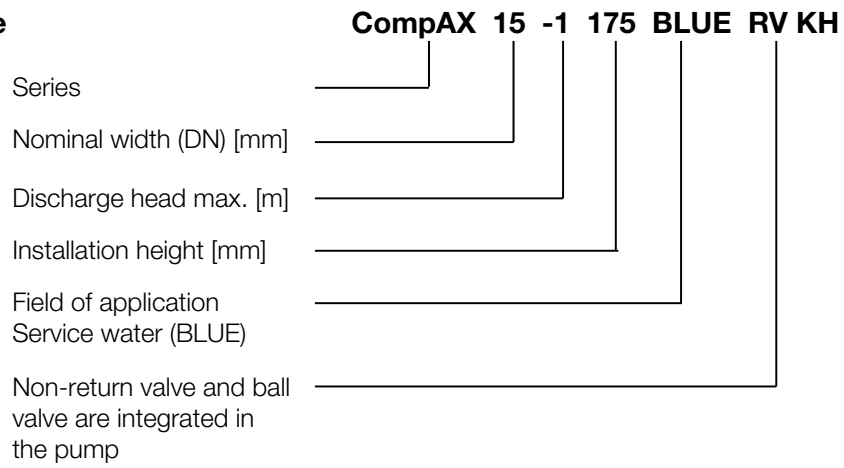
## Domestic hot water pumps

### CompAX BLUE RV KH

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar	EEI
		DN	m	mm			
CompAX 15-1 175 BLUE RV KH	7000001518	15	1	175	G 3/4"	10	ECO Design
CompAX 15-1.6 175 BLUE RV KH	7000001519	15	1.6	175	G 3/4"	10	ECO Design
CompAX 15-2.5 175 BLUE RV KH	7000001520	15	2.5	175	G 3/4"	10	ECO Design

### Ordering reference



Brauchwasser

## CompAX 15-1 175 BLUE RV KH

Nominal width	DN 15
Flow head H max.	1 m
Overall length	175 mm
Threaded connection	G 3/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	2.0 kg
Gross weight	2.2 kg

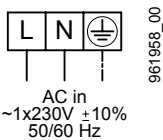
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	3-5 W
Nominal current	0.04-0.05 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

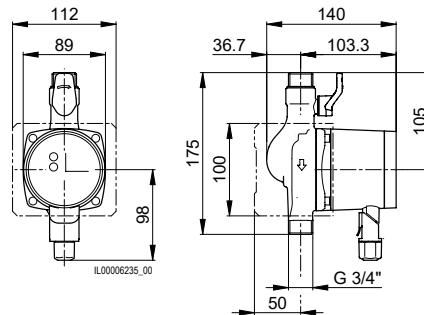
### Accessories

- Angle plug

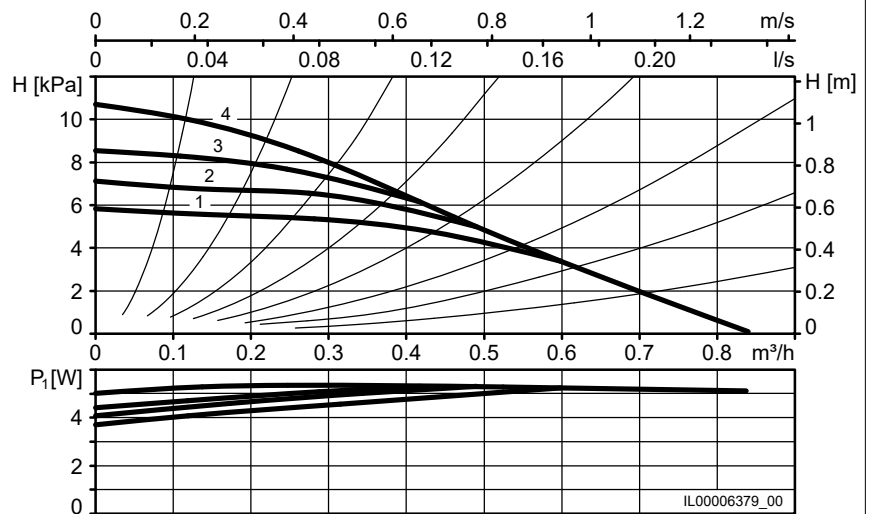
### Remarks

Pump housing: bronze  
Non-return valve and ball valve are integrated in the pump

<b>Type</b>	<b>Art. no.</b>
CompAX 15-1 175 BLUE RV KH	7000001518



**CompAX 15-1 175 BLUE RV KH**  
DN 15  
L = 175 mm  
G = 3/4"





## CompAX 15-1.6 175 BLUE RV KH

Nominal width	DN 15
Flow head H max.	1.6 m
Overall length	175 mm
Threaded connection	G 3/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	2.0 kg
Gross weight	2.2 kg

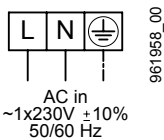
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	4-9 W
Nominal current	0.04-0.08 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

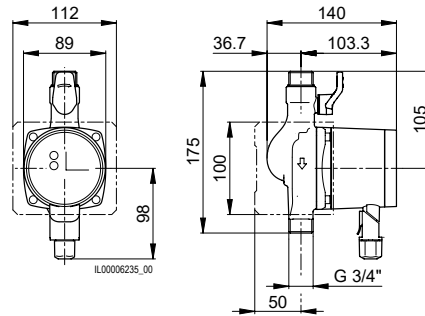
### Accessories

- Angle plug

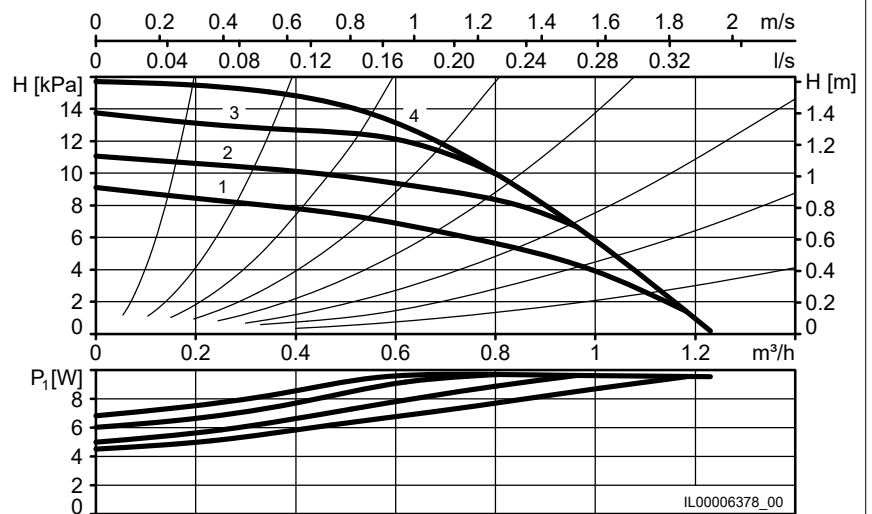
### Remarks

Pump housing: bronze  
Non-return valve and ball valve are integrated in the pump

<b>Type</b>	<b>Art. no.</b>
CompAX 15-1.6 175 BLUE RV KH	7000001519



**CompAX 15-1.6 175 BLUE RV KH**  
DN 15  
L = 175 mm  
G = 3/4"



## CompAX 15-2.5 175 BLUE RV KH

Nominal width	DN 15
Flow head H max.	2.5 m
Overall length	175 mm
Threaded connection	G 3/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	2.0 kg
Gross weight	2.2 kg

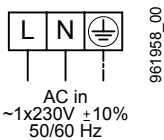
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	4-14 W
Nominal current	0.05-0.13 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

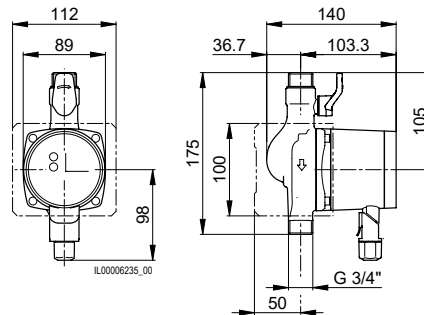
### Accessories

- Angle plug

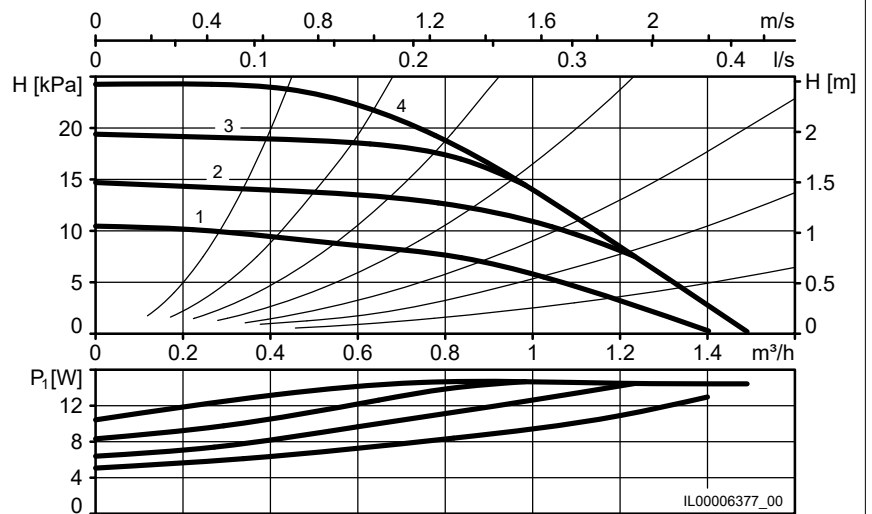
### Remarks

Pump housing: bronze  
Non-return valve and ball valve are integrated in the pump

<b>Type</b>	<b>Art. no.</b>
CompAX 15-2.5 175 BLUE RV KH	7000001520



**CompAX 15-2.5 175 BLUE RV KH**  
DN 15  
L = 175 mm  
G = 3/4"





## Domestic hot water pumps

### CompAX BLUE

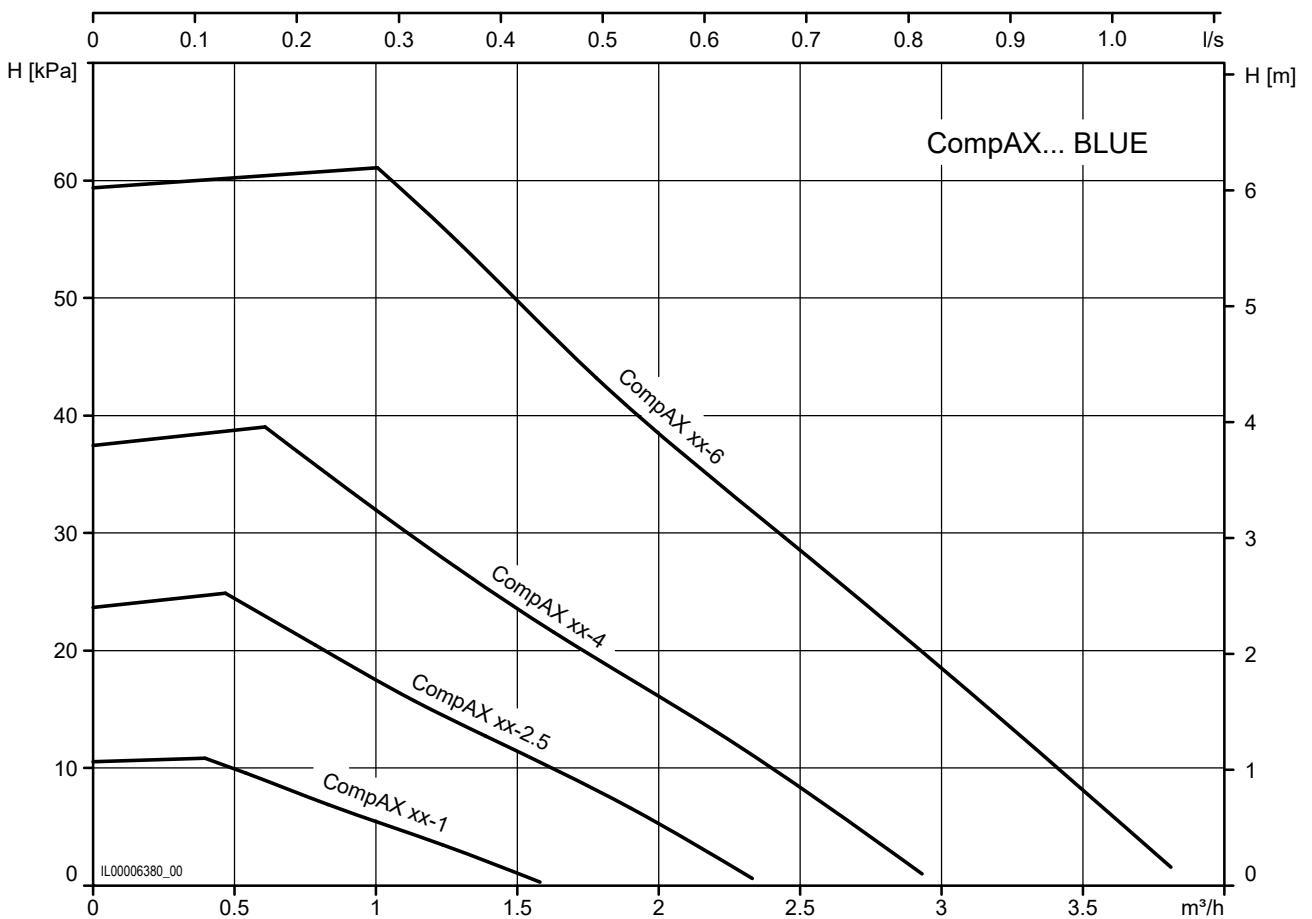


#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar	EEI
		DN	m	mm			
CompAX 20-1 120 BLUE	7000001511	20	1	120	G 1 1/4"	10	ECO Design
CompAX 20-1 150 BLUE	7000001512	20	1	150	G 1 1/4"	10	ECO Design
CompAX 20-2.5 120 BLUE	7000001530	20	2.5	120	G 1 1/4"	10	ECO Design
CompAX 20-4 120 BLUE	7000001513	20	4	120	G 1 1/4"	10	ECO Design
CompAX 20-4 150 BLUE	7000001514	20	4	150	G 1 1/4"	10	ECO Design
CompAX 20-6 150 BLUE	7000001516	20	6	150	G 1 1/4"	10	ECO Design
CompAX 25-4 180 BLUE	7000001515	25	4	180	G 1 1/2"	10	ECO Design
CompAX 25-6 180 BLUE	7000001517	25	6	180	G 1 1/2"	10	ECO Design

### Ordering reference

	<b>CompAX 20 -1 120 BLUE</b>
Series	_____
Nominal width (DN) [mm]	_____
Discharge head max. [m]	_____
Installation height [mm]	_____
Field of application Service water (BLUE)	_____



Brauchwasser

### CompAX 20-1 120 BLUE

### CompAX 20-1 150 BLUE

Nominal width	DN 20
Flow head H max.	1 m
Overall length	120   150 mm
Threaded connection	G 1 1/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	1.8   1.9 kg
Gross weight	2.0   2.1 kg

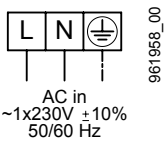
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	2-5 W
Nominal current	0.03-0.05 A
Motor protection	integriert

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

#### Connction diagram



L, N, PE Netzanschluss

#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

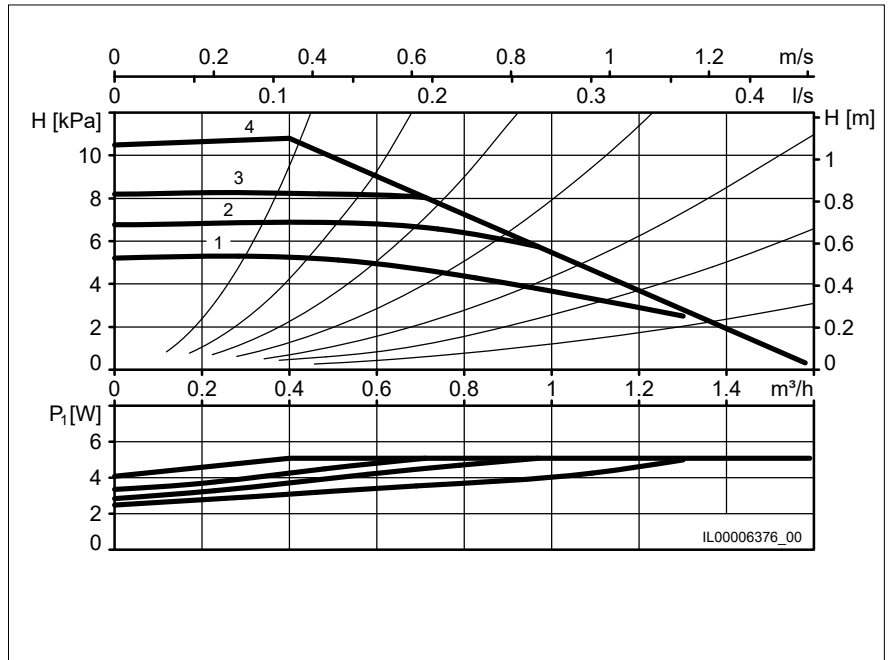
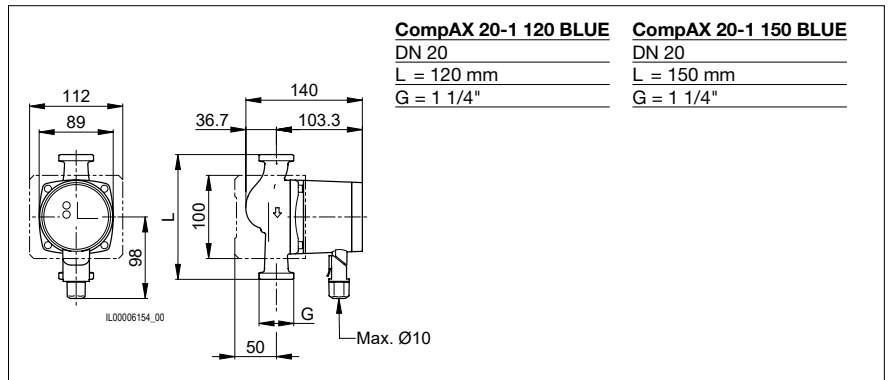
#### Accessories

- Angle plug
- Blocking set (non-return valve and ball valve)

#### Remarks

Pump housing: bronze

Type	Art. no.
CompAX 20-1 120 BLUE	7000001511
CompAX 20-1 150 BLUE	7000001512



## CompAX 20-2.5 120 BLUE

Nominal width	DN 20
Flow head H max.	2.5 m
Overall length	120 mm
Threaded connection	G 1 1/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	1.8 kg
Gross weight	2.0 kg

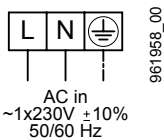
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	3-12 W
Nominal current	0.04-0.11 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

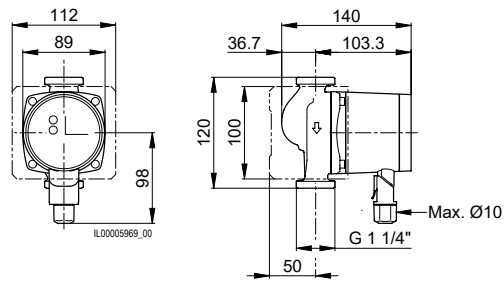
### Accessories

- Angle plug
- Blocking set (non-return valve and ball valve)

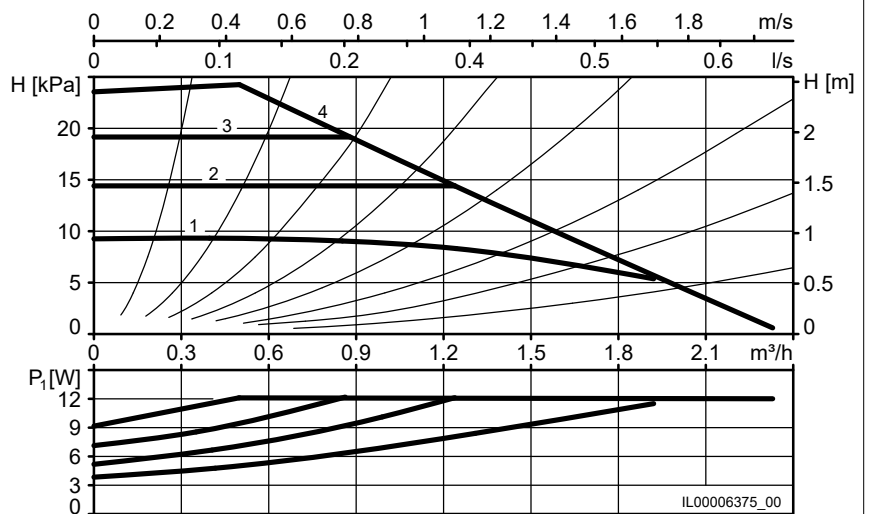
### Remarks

Pump housing: bronze

Type	Art. no.
CompAX 20-2.5 120 BLUE	7000001530



**CompAX 20-2.5 120 BLUE**  
 DN 20  
 L = 120 mm  
 G = 1 1/4"



### CompAX 20-4 120 BLUE

### CompAX 20-4 150 BLUE

Nominal width	DN 20
Flow head H max.	4 m
Overall length	120   150 mm
Threaded connection	G 1 1/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	1.8 kg
Gross weight	2.0 kg

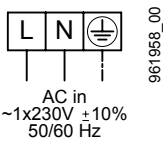
#### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	4-22 W
Nominal current	0.05-0.19 A
Motor protection	integriert

#### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

#### Connction diagram



L, N, PE Netzanschluss

#### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

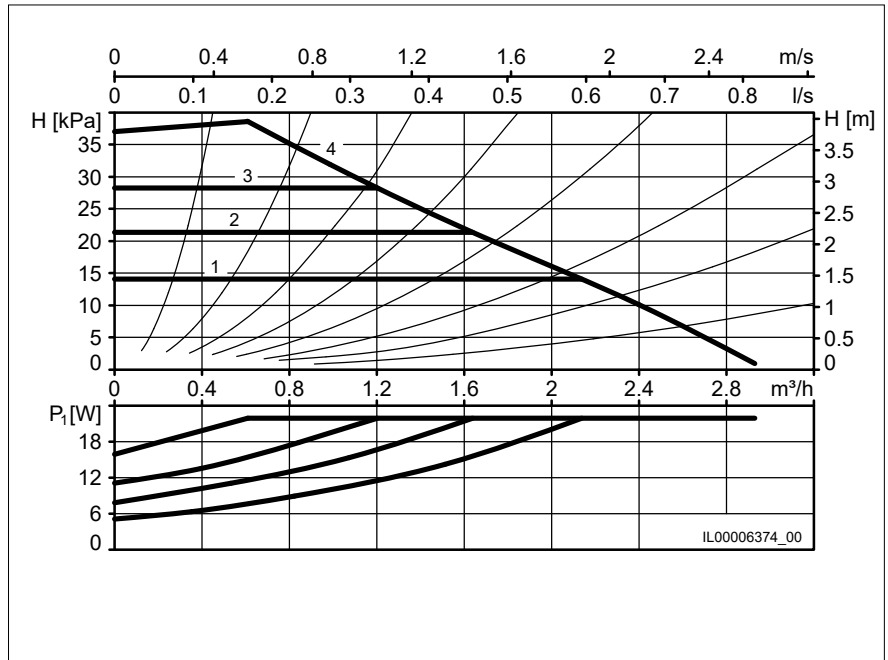
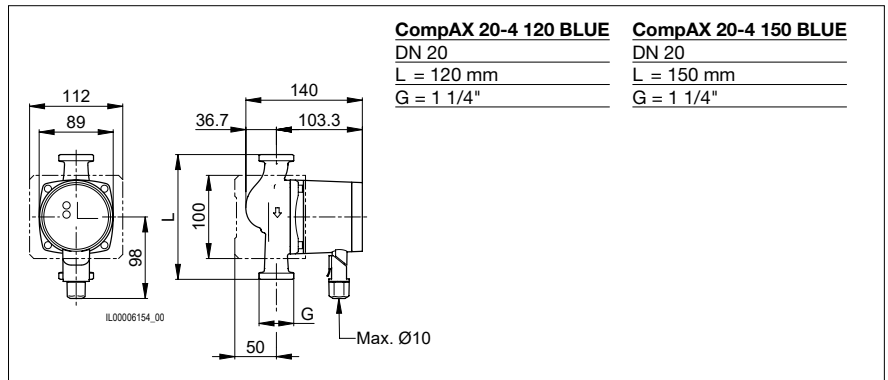
#### Accessories

- Angle plug
- Blocking set (non-return valve and ball valve)

#### Remarks

Pump housing: bronze

Type	Art. no.
CompAX 20-4 120 BLUE	7000001513
CompAX 20-4 150 BLUE	7000001514





## CompAX 20-6 150 BLUE

Nominal width	DN 20
Flow head H max.	6 m
Overall length	150 mm
Threaded connection	G 1 1/4"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	1.9 kg
Gross weight	2.1 kg

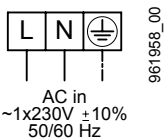
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	6-45 W
Nominal current	0.06-0.40 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

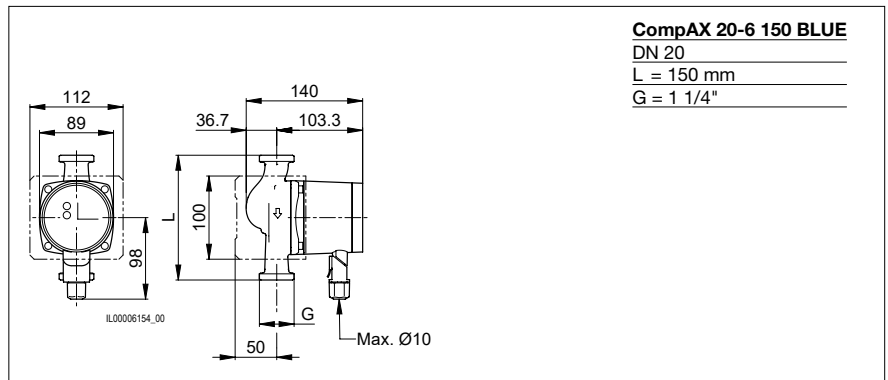
### Accessories

- Angle plug
- Blocking set (non-return valve and ball valve)

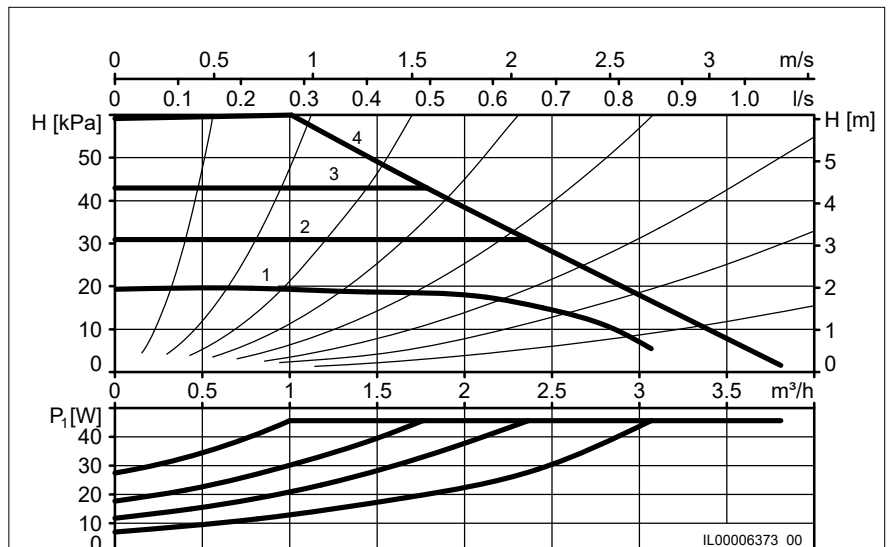
### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
CompAX 20-6 150 BLUE	7000001516



**CompAX 20-6 150 BLUE**  
 DN 20  
 L = 150 mm  
 G = 1 1/4"



## CompAX 25-4 180 BLUE

Nominal width	DN 25
Flow head H max.	4 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	2.1 kg
Gross weight	2.3 kg

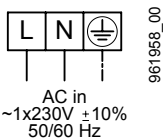
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	4-22 W
Nominal current	0.05-0.19 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every ±100 m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

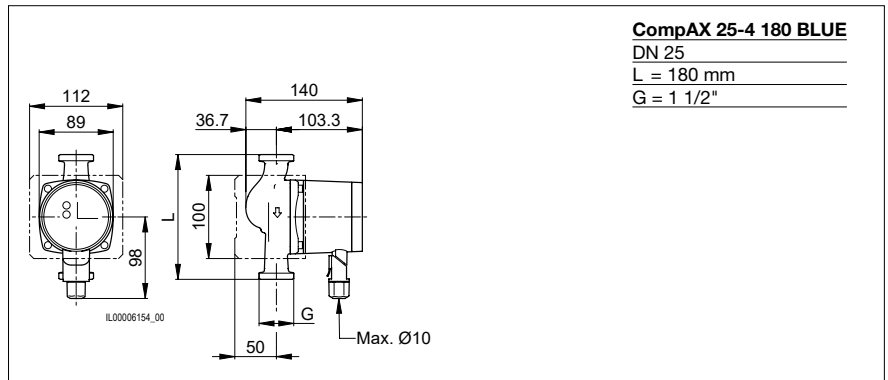
### Accessories

- Angle plug

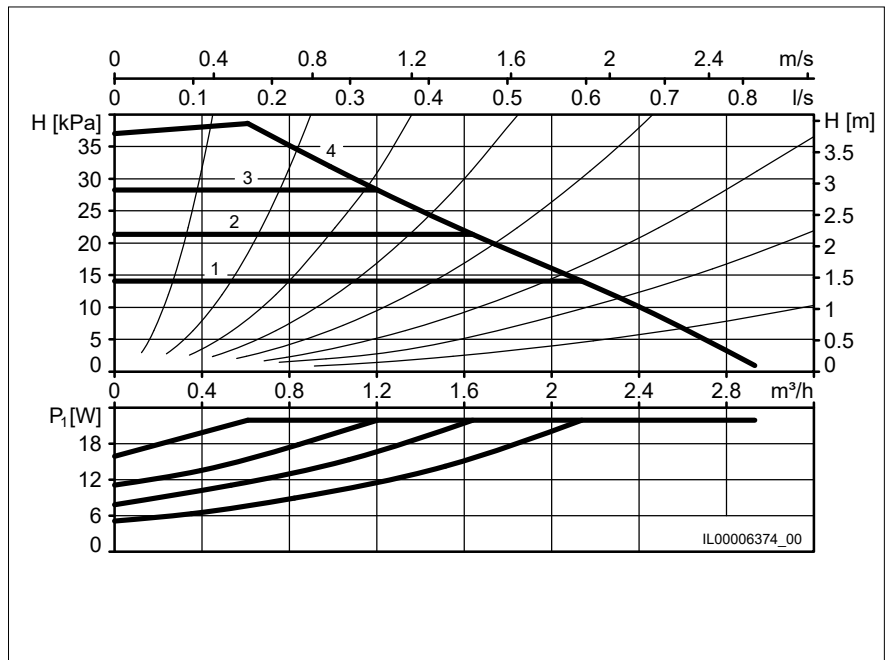
### Remarks

Pump housing: bronze  
Shut-off set not available

<b>Type</b>	<b>Art. no.</b>
CompAX 25-4 180 BLUE	7000001515



**CompAX 25-4 180 BLUE**  
DN 25  
L = 180 mm  
G = 1 1/2"



## CompAX 25-6 180 BLUE

Nominal width	DN 25
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+ 2°C
Media temperature max.	+85°C
Ambient temperature	0°C bis 40°C
Water hardness max. at 65 °C	35°FH/20°dH
Water hardness max. at 85 °C	25°FH/14°dH
Net weight	2.1 kg
Gross weight	2.3 kg

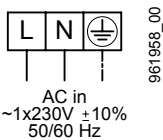
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	6-45 W
Nominal current	0.06-0.40 A
Motor protection	integriert

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.05 bar
at a water temp. of 85 °C	0.28 bar
for every $\pm 100$ m of altitude	0.01 bar

### Connction diagram



L, N, PE Netzanschluss

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

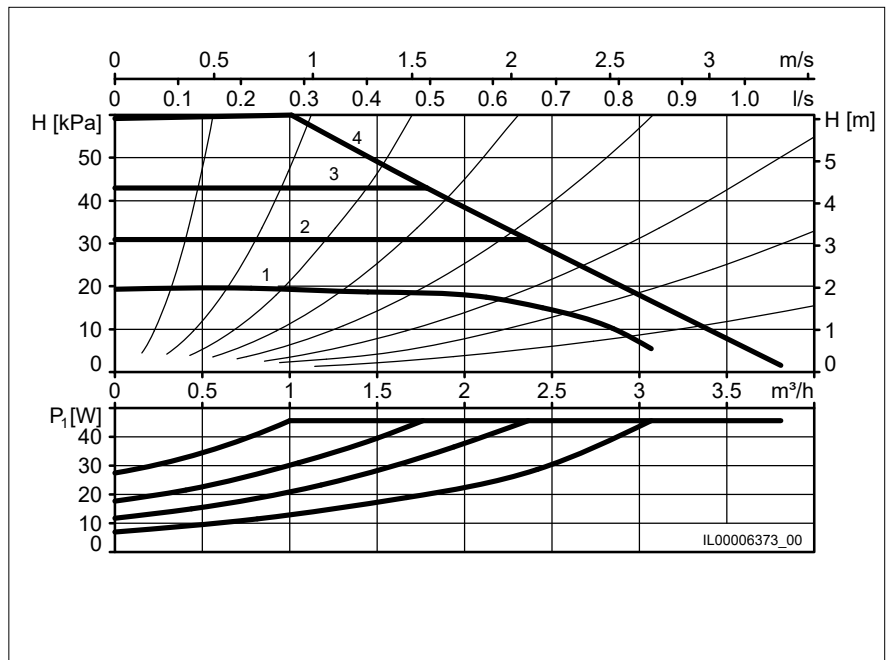
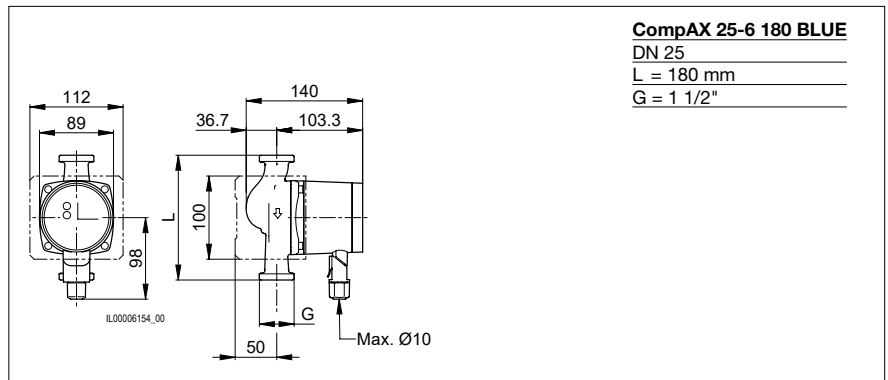
### Accessories

- Angle plug

### Remarks

Pump housing: bronze  
Shut-off set not available

<b>Type</b>	<b>Art. no.</b>
CompAX 25-6 180 BLUE	7000001517





## Domestic hot water pumps

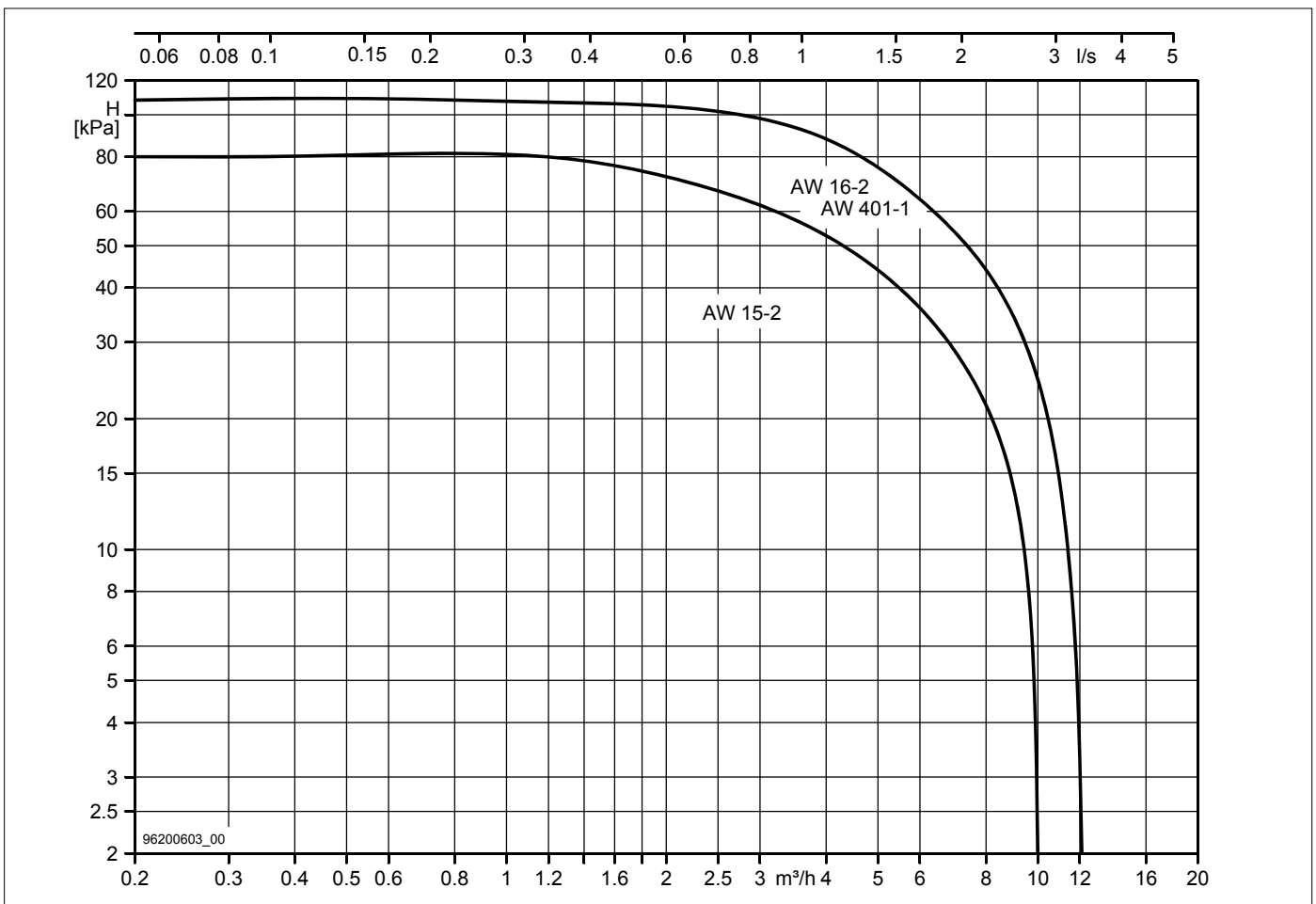
### AW

as long as stock

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar
		DN	m	mm		
AW 15-2	1158620150	32	8	180	G 2"	10
AW 16-2	1161720150	32	11	180	G 2"	10

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max. bar
		DN	m	mm		
AW 401-1	1161400150	40	11	250	PN 6/10	10



## AW 15-2

Nominal width	DN 32
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Water hardness max. at 65 °C	max. 35°fH = 20°dH
Water hardness max. at 85 °C	max. 25°fH = 14°dH
Net weight	4.2 kg

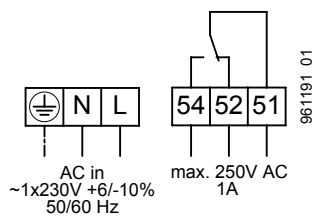
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>i</sub>	8-107 W
Nominal current	0.1-0.8 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.55 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

### Included in the scope of delivery

- Heat insulation shell

### Remarks

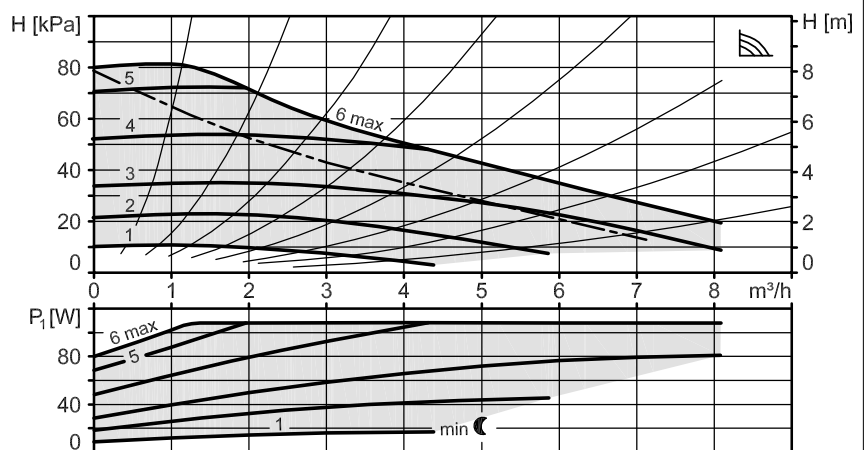
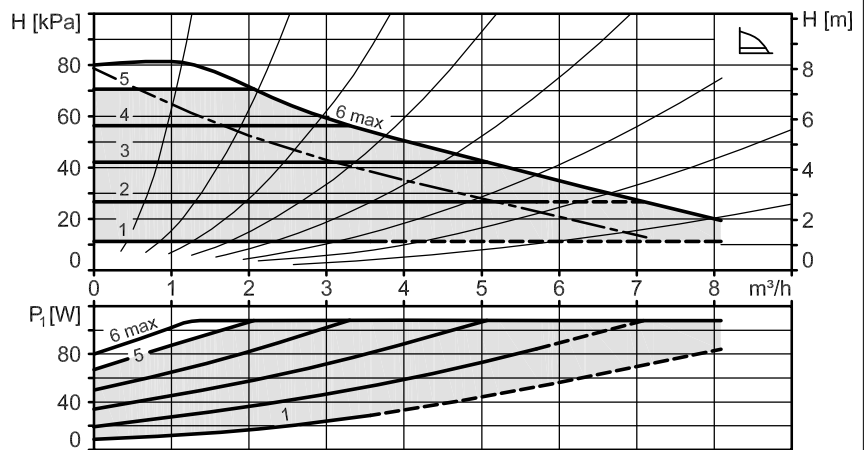
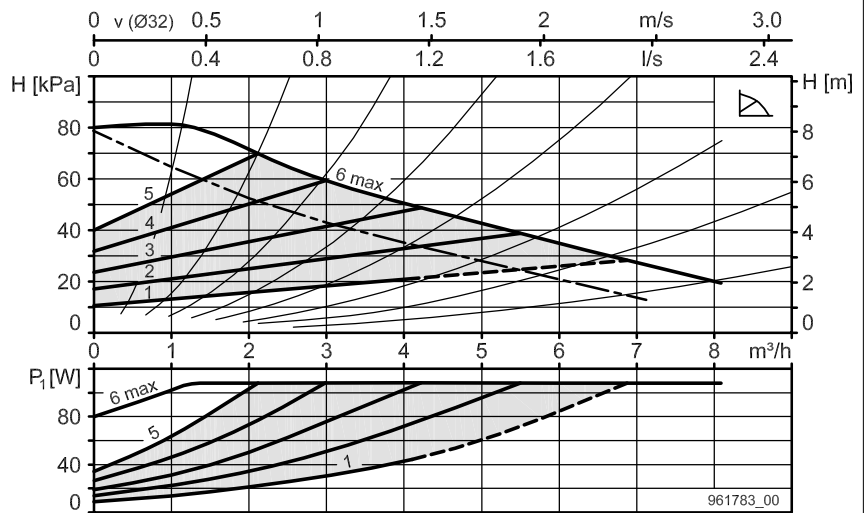
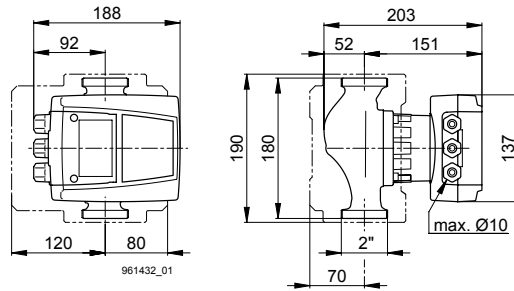
Pump housing: bronze

### Type

AW 15-2

### Art. no.

1158620150



## AW 16-2

Nominal width	DN 32
Flow head H max.	11 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Water hardness max. at 65 °C	max. 35°fH = 20°dH
Water hardness max. at 85 °C	max. 25°fH = 14°dH
Net weight	4.2 kg

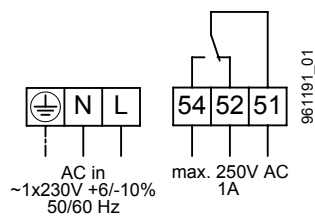
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	8-174 W
Nominal current	0.1-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.55 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



**52, 54, 51** Error or operating message

**L, N, PE** Power supply

### Switch

- 1 Power limiting (can be deactivated)
- 2 Fault or operating message (switchable)

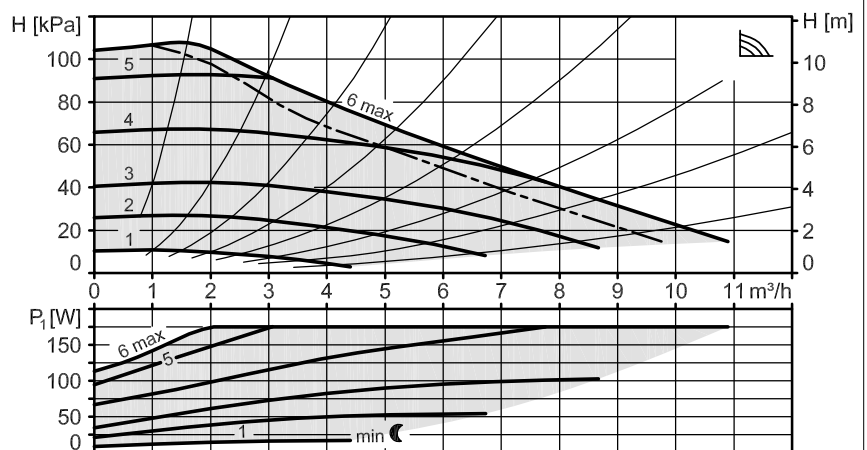
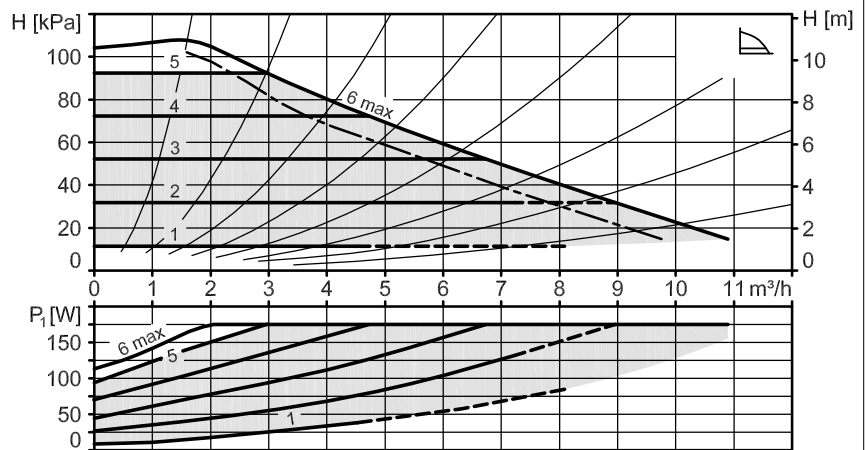
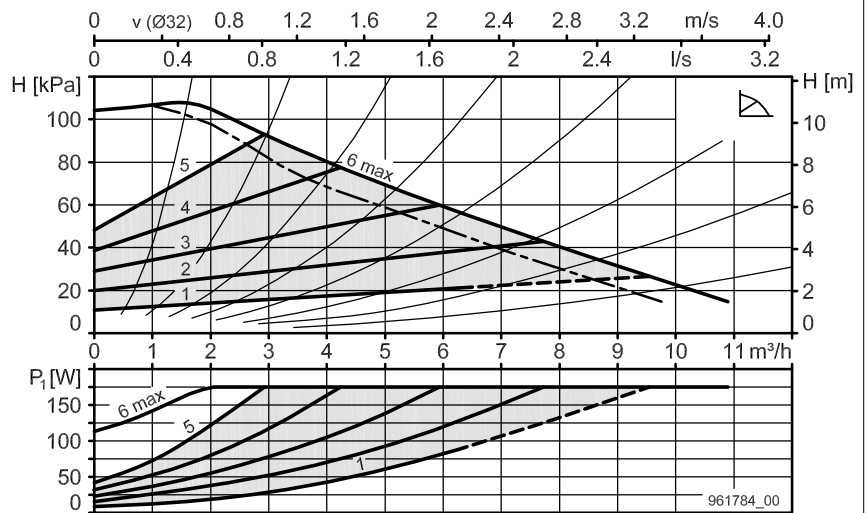
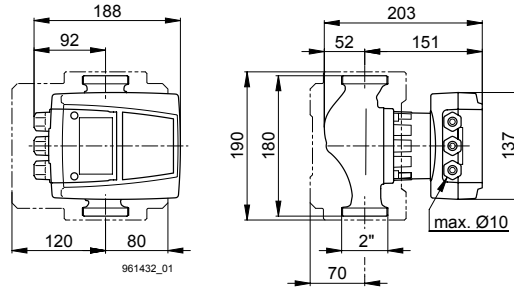
### Included in the scope of delivery

- Heat insulation shell

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
AW 16-2	1161720150











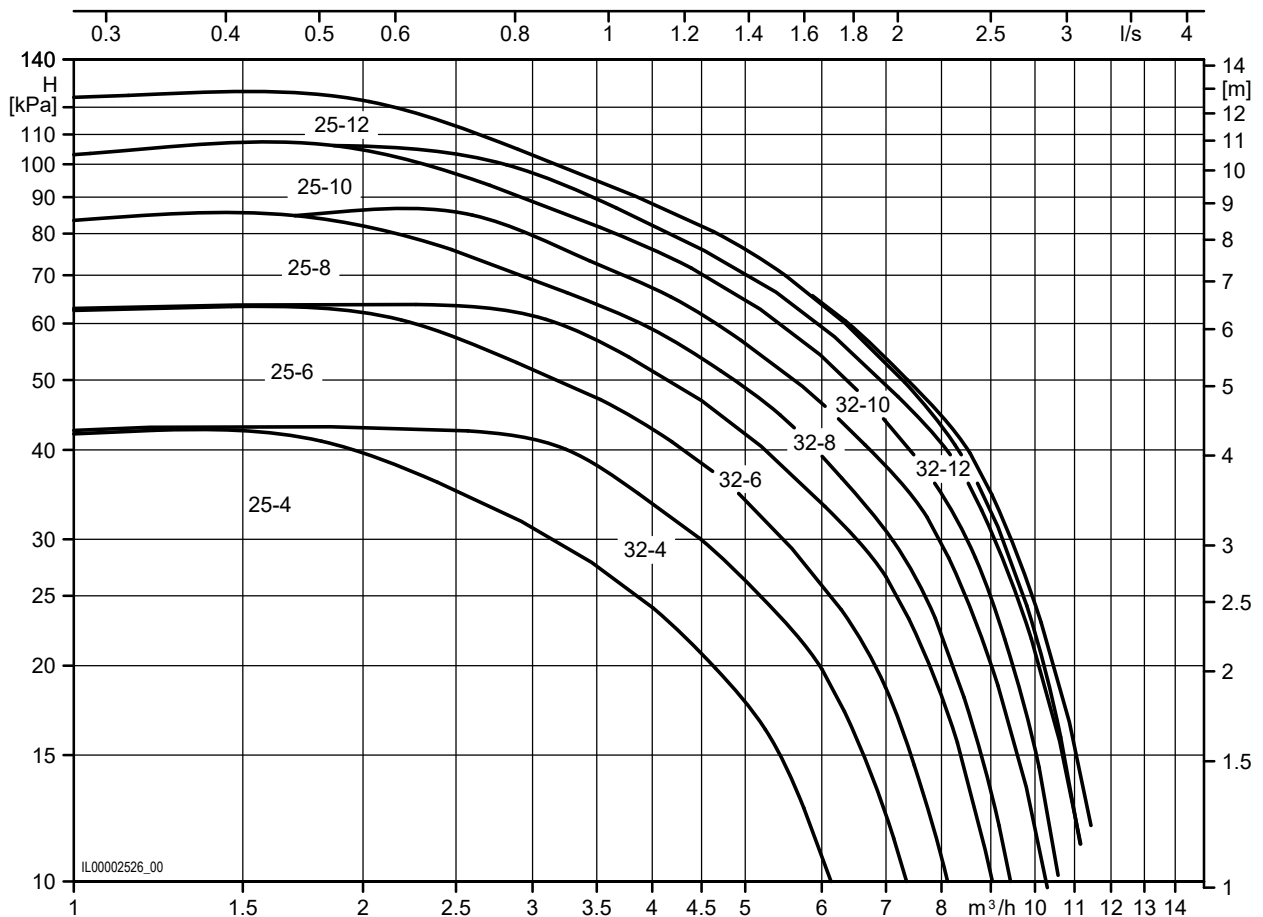
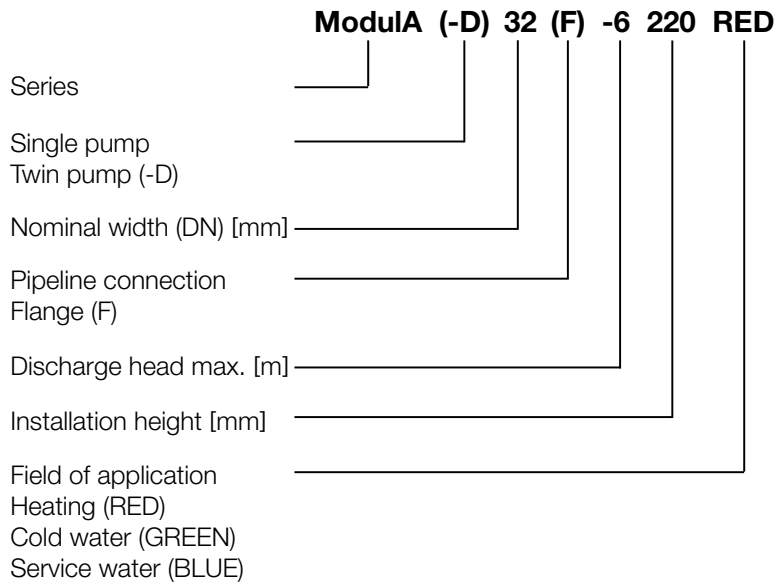
## Domestic hot water pumps

### ModulA BLUE T2 with threaded connection

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Threaded connection	Operating pressure max. bar	EEI
		DN	m	mm			
ModulA 25-4 180 BLUE	7000000163	25	4	180	G 1½"	10	ECO Design
ModulA 25-6 180 BLUE	7000000164	25	6	180	G 1½"	10	ECO Design
ModulA 25-8 180 BLUE	7000000165	25	8	180	G 1½"	10	ECO Design
ModulA 25-10 180 BLUE	7000000166	25	10	180	G 1½"	10	ECO Design
ModulA 25-12 180 BLUE	7000000167	25	12	180	G 1½"	10	ECO Design
ModulA 32-4 180 BLUE	7000000168	32	4	180	G 2"	10	ECO Design
ModulA 32-6 180 BLUE	7000000169	32	6	180	G 2"	10	ECO Design
ModulA 32-8 180 BLUE	7000000170	32	8	180	G 2"	10	ECO Design
ModulA 32-10 180 BLUE	7000000171	32	10	180	G 2"	10	ECO Design
ModulA 32-12 180 BLUE	7000000172	32	12	180	G 2"	10	ECO Design

**Order reference**



Brauchwasser

## ModulA 25-4 180 BLUE

Version	T2 S
Nominal width	DN 25
Flow head H max.	4 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	4.8 kg
Gross weight	5.6 kg

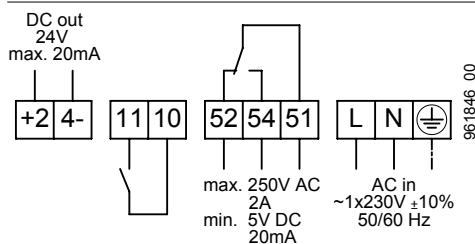
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-49 W
Nominal current	0.08-0.37 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

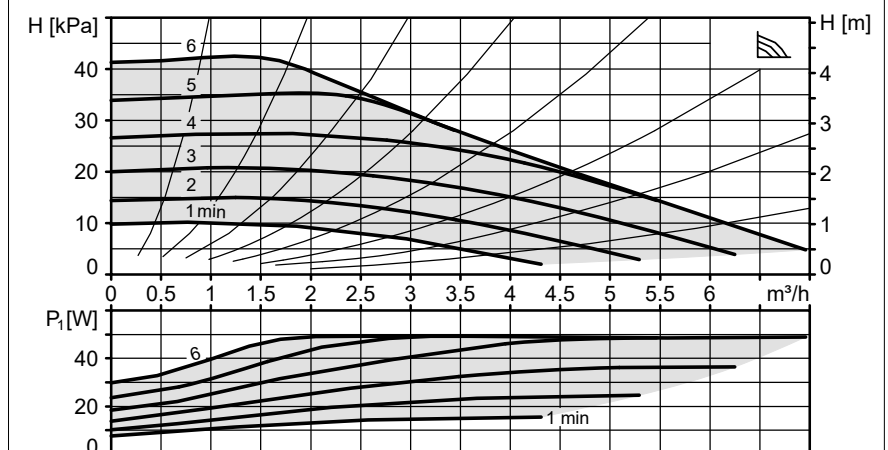
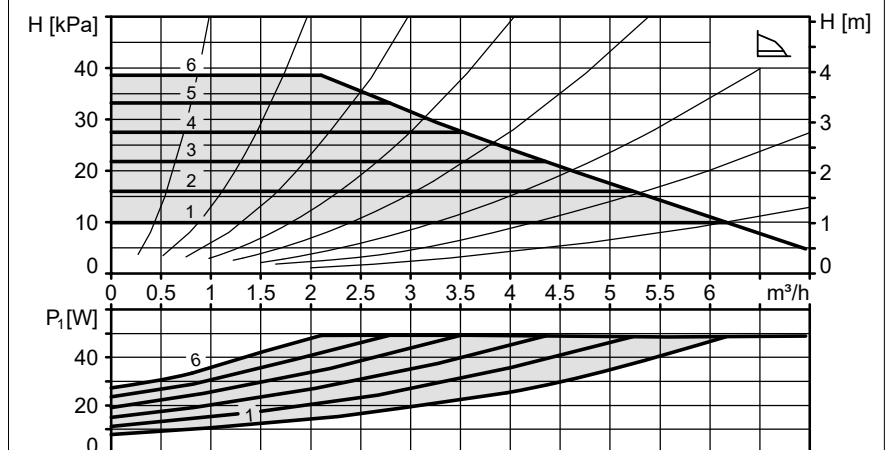
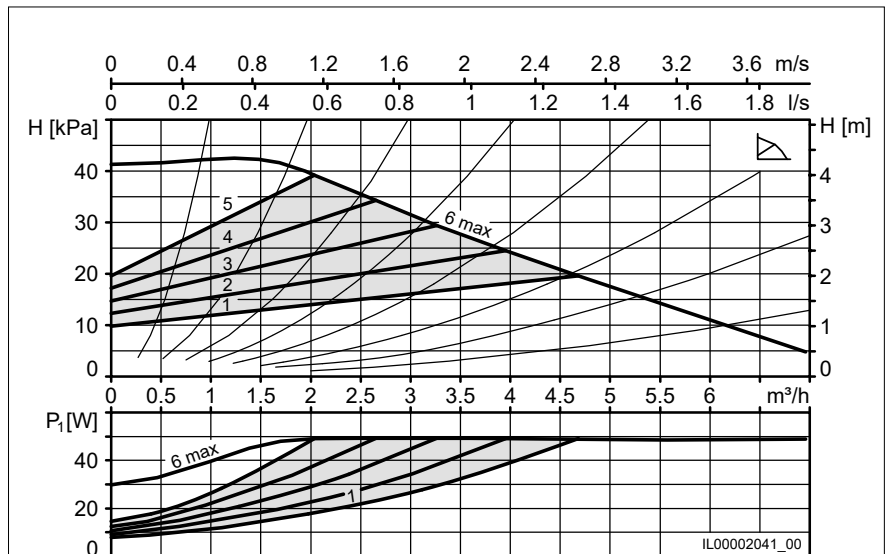
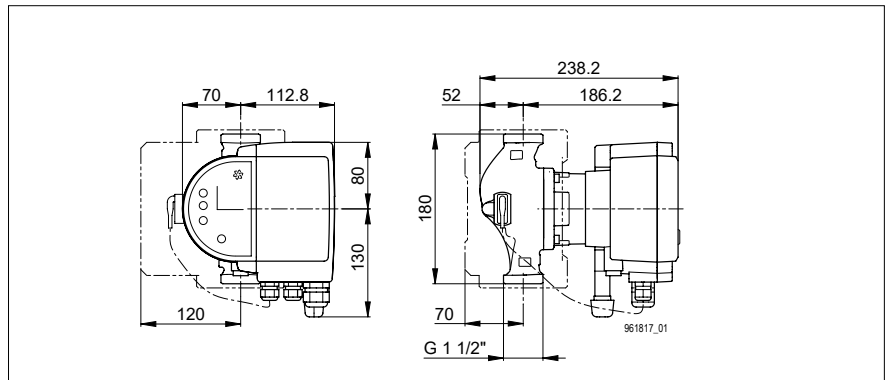
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 25-4 180 BLUE	7000000163



## ModulA 25-6 180 BLUE

Version	T2 S
Nominal width	DN 25
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	4.8 kg
Gross weight	5.6 kg

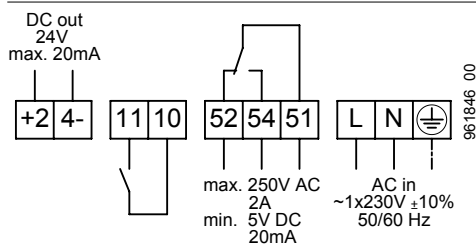
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-83 W
Nominal current	0.08-0.62 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

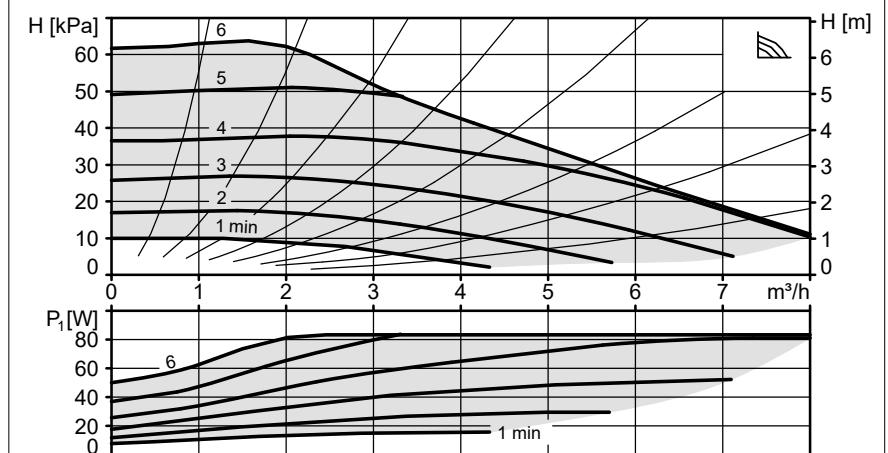
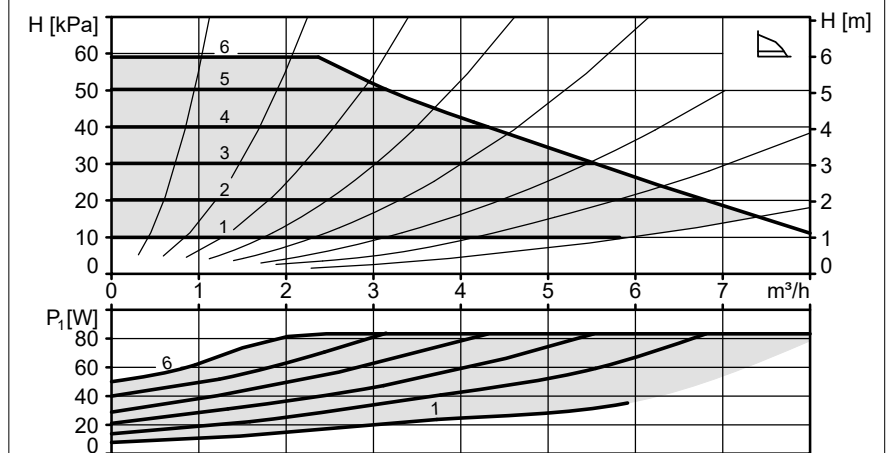
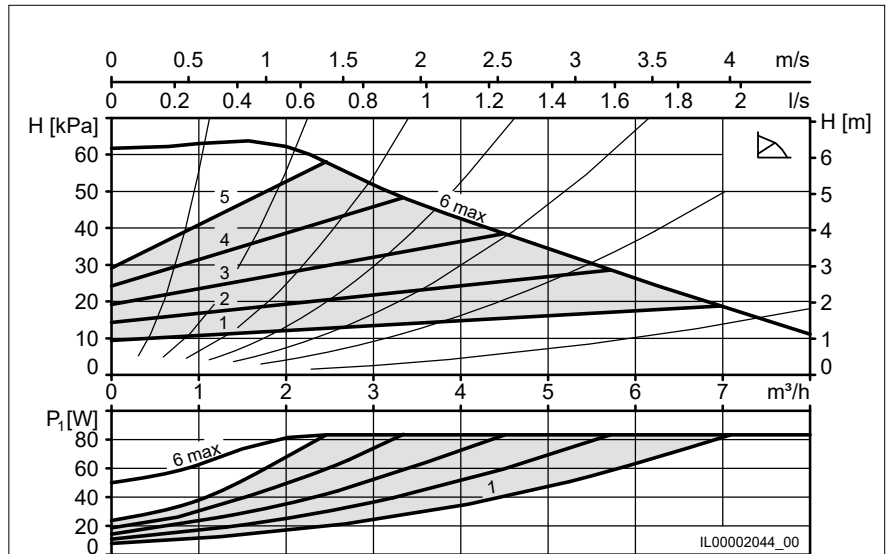
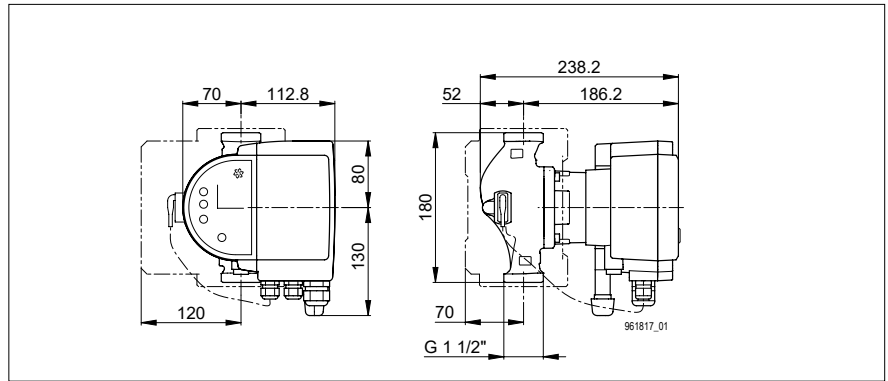
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 25-6 180 BLUE	7000000164



## ModulA 25-8 180 BLUE

Version	T2 S
Nominal width	DN 25
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°FH/20°dH
Water hardness max. at 85 °C	25°FH/14°dH
Net weight	4.8 kg
Gross weight	5.6 kg

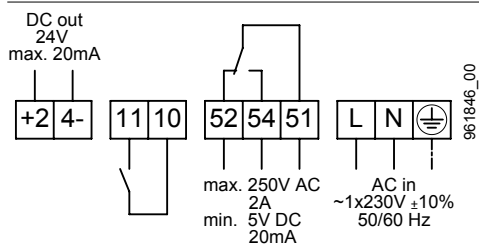
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-115 W
Nominal current	0.08-0.85 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

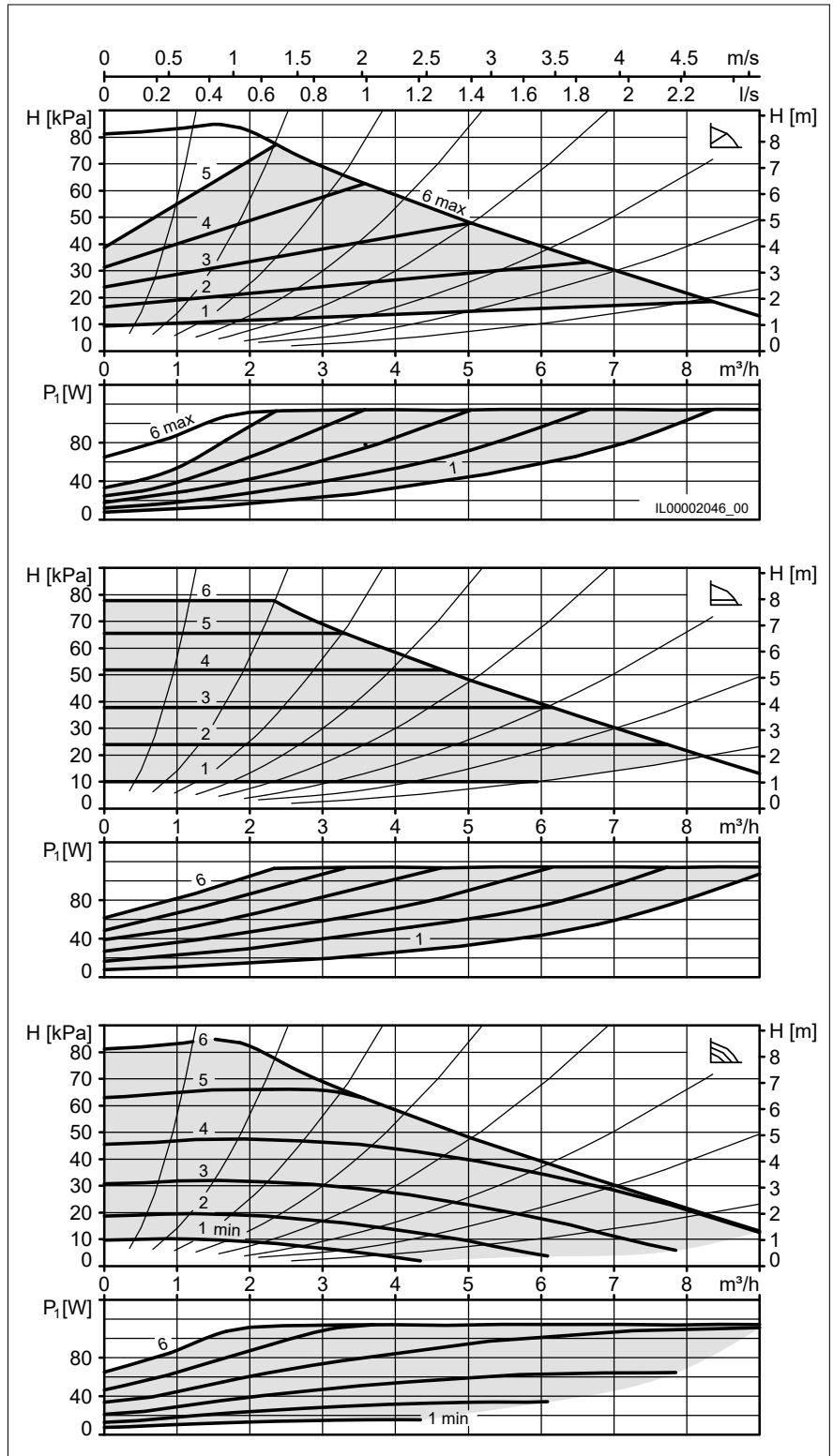
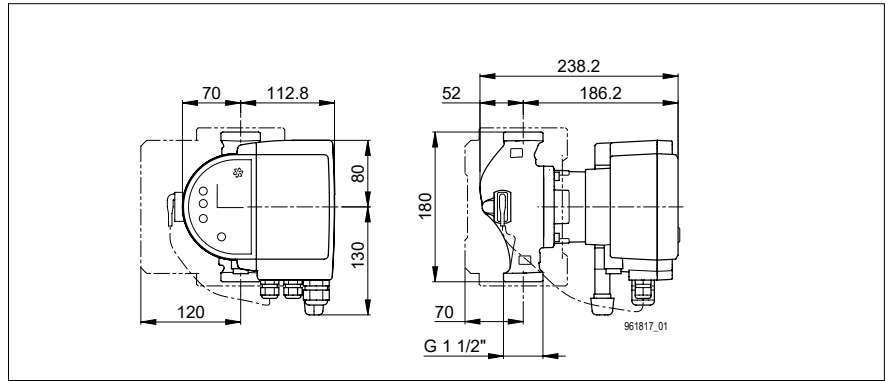
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 25-8 180 BLUE	7000000165



## ModulA 25-10 180 BLUE

Version	T2 S
Nominal width	DN 25
Flow head H max.	10 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°FH/20°dH
Water hardness max. at 85 °C	25°FH/14°dH
Net weight	4.8 kg
Gross weight	5.6 kg

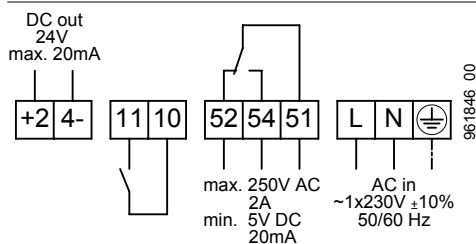
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-153 W
Nominal current	0.08-1.15 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

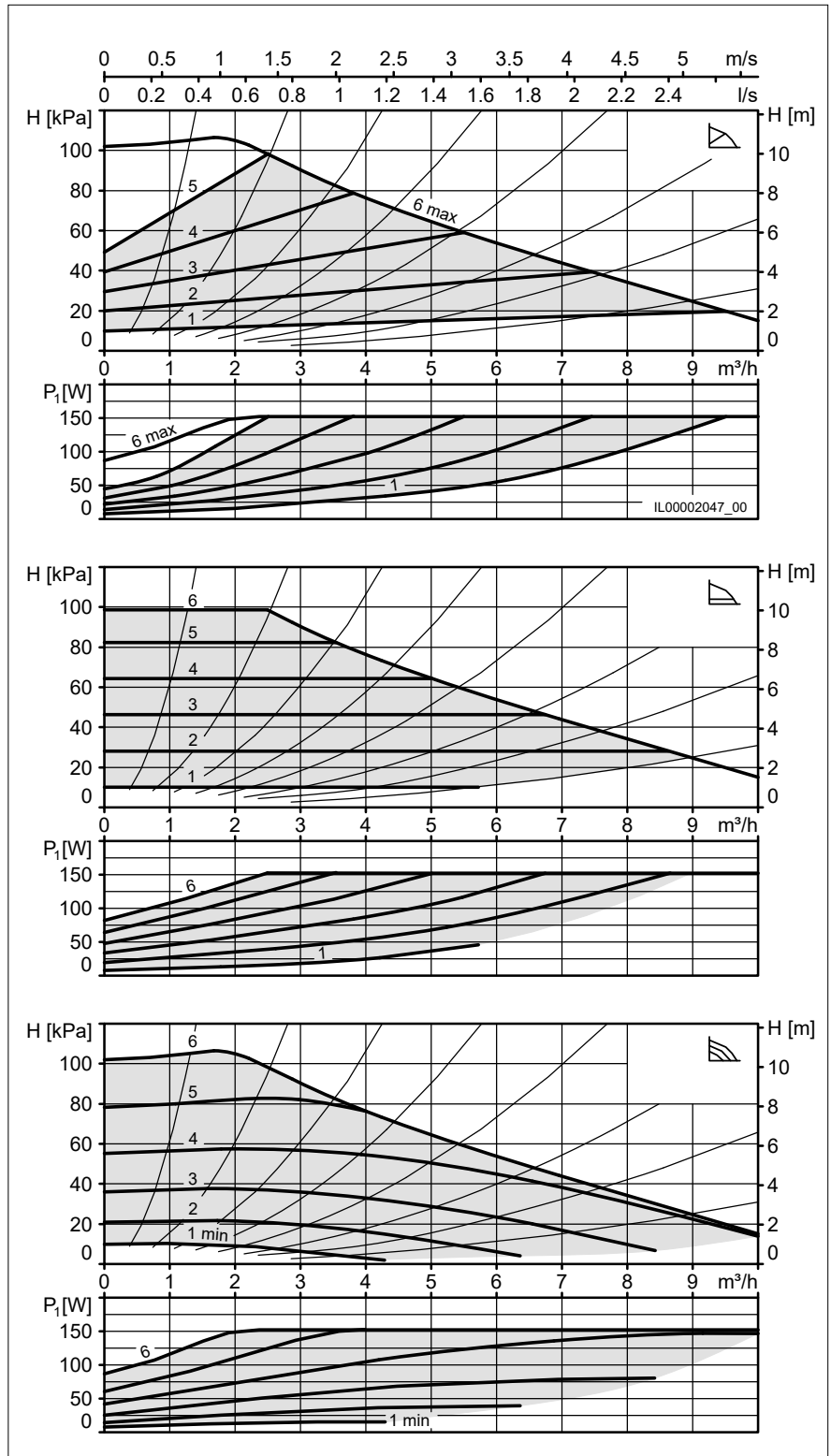
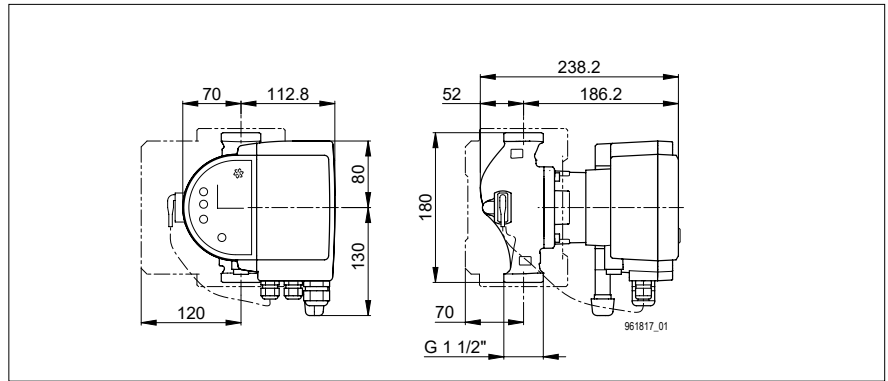
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 25-10 180 BLUE	7000000166



## ModulA 25-12 180 BLUE

Version	T2 S
Nominal width	DN 25
Flow head H max.	12 m
Overall length	180 mm
Threaded connection	G 1 1/2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	4.8 kg
Gross weight	5.6 kg

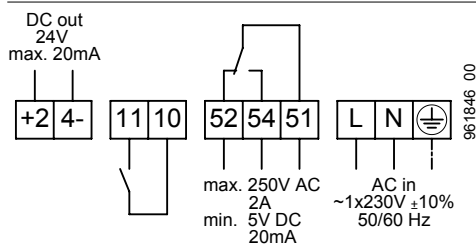
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-181 W
Nominal current	0.08-1.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

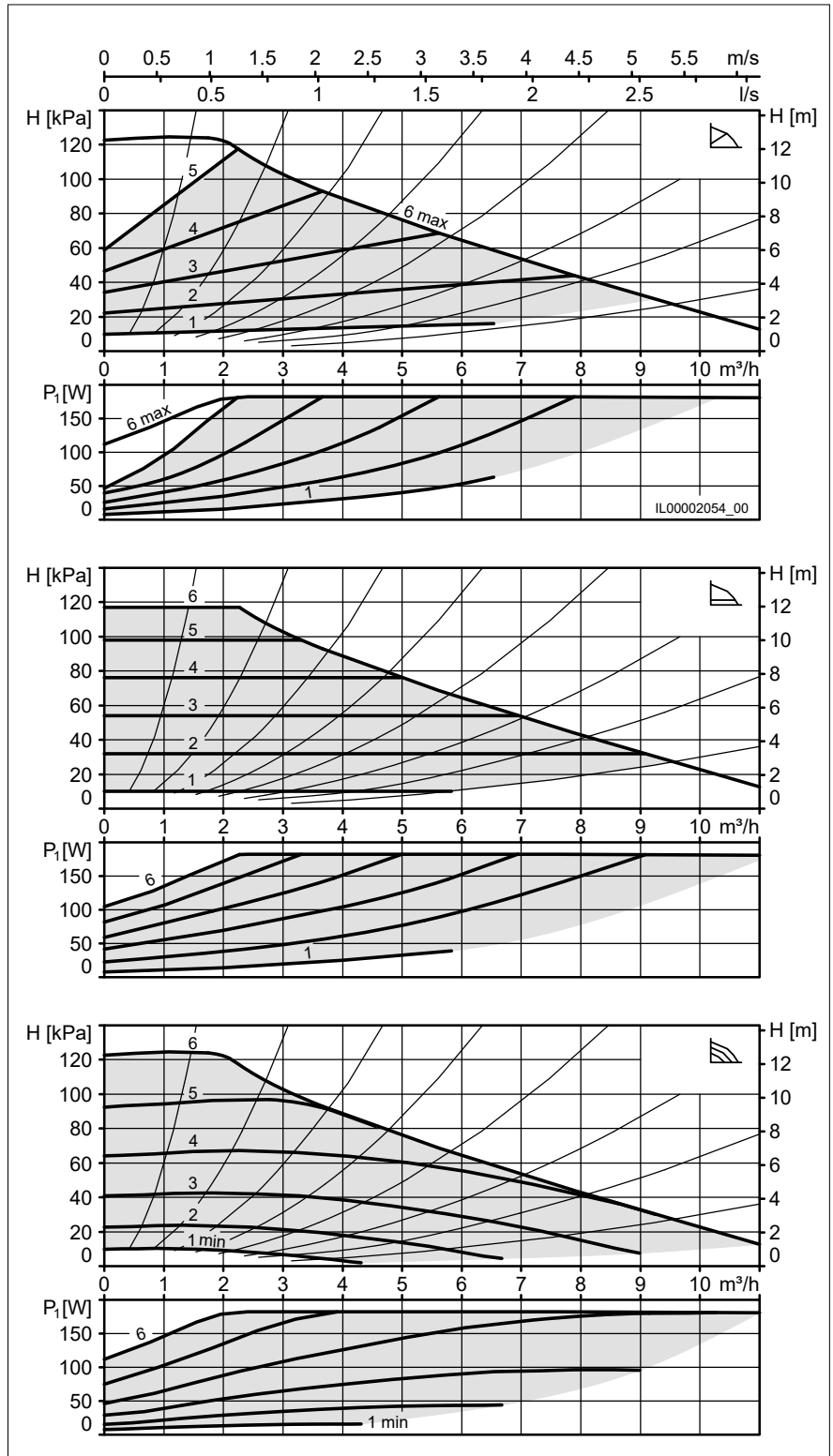
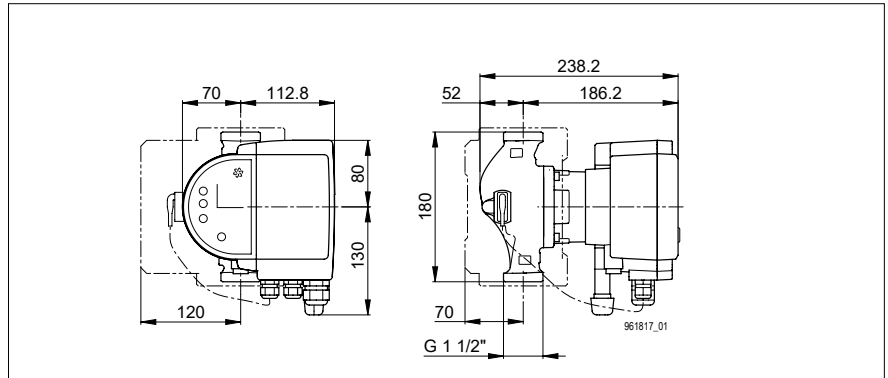
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 25-12 180 BLUE	7000000167





## ModulA 32-4 180 BLUE

Version	T2 S
Nominal width	DN 32
Flow head H max.	4 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	5.0 kg
Gross weight	5.75 kg

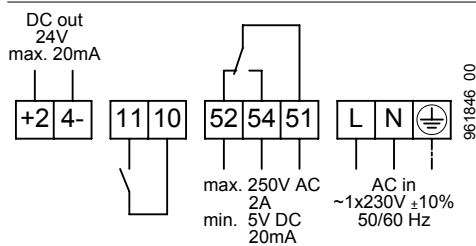
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-66 W
Nominal current	0.08-0.48 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

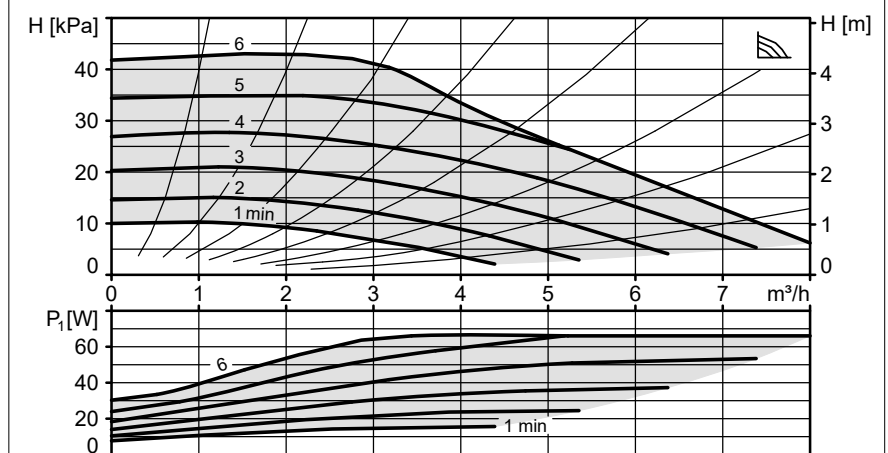
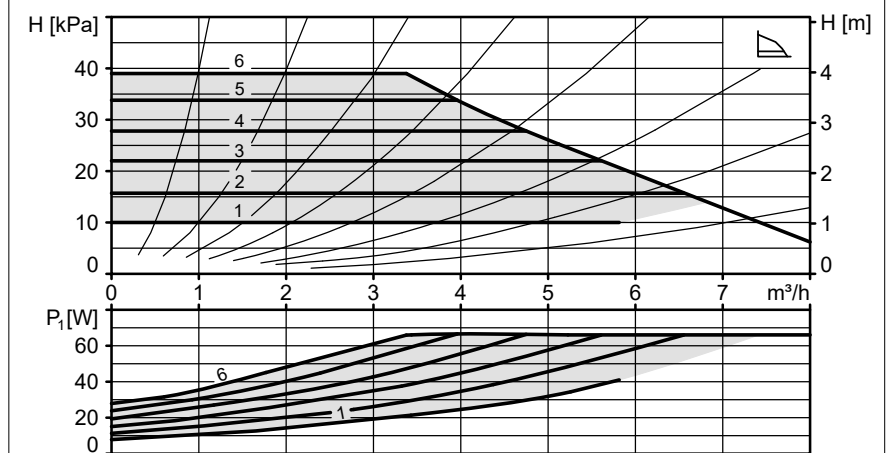
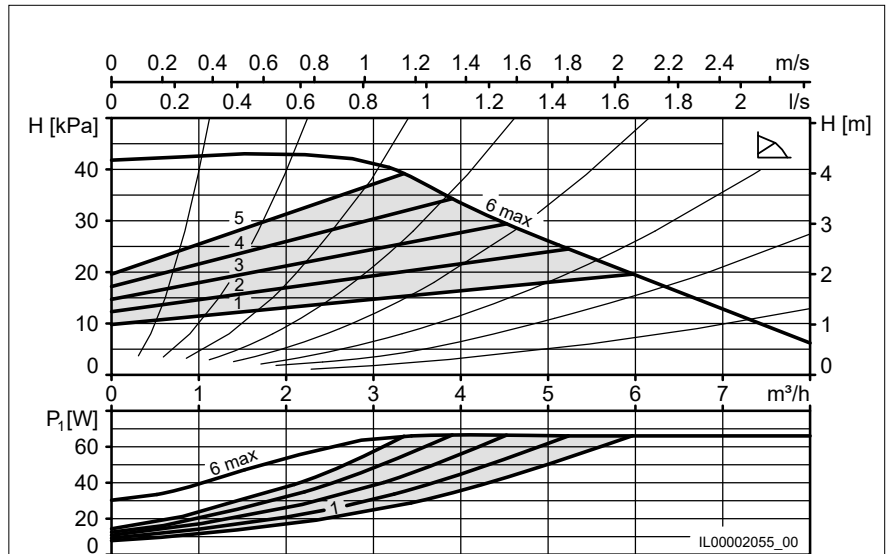
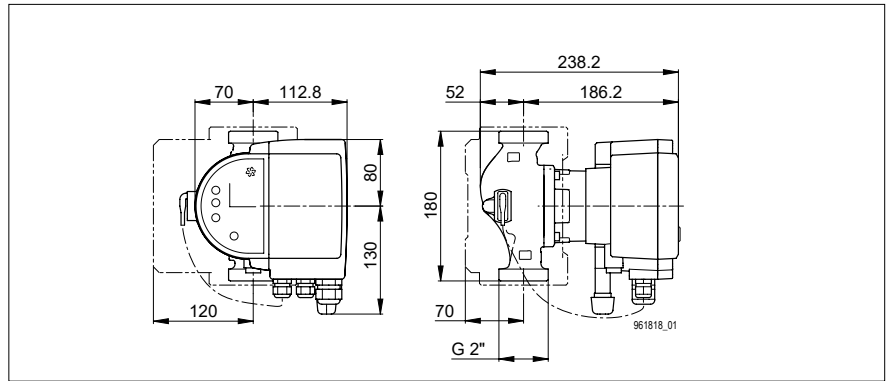
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 32-4 180 BLUE	7000000168



## ModulA 32-6 180 BLUE

Version	T2 S
Nominal width	DN 32
Flow head H max.	6 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	5.0 kg
Gross weight	5.75 kg

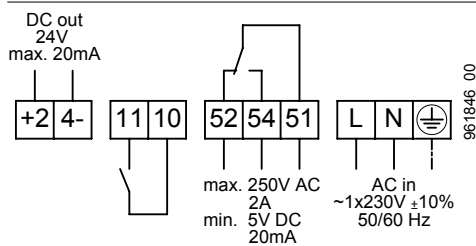
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-102 W
Nominal current	0.08-0.73 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

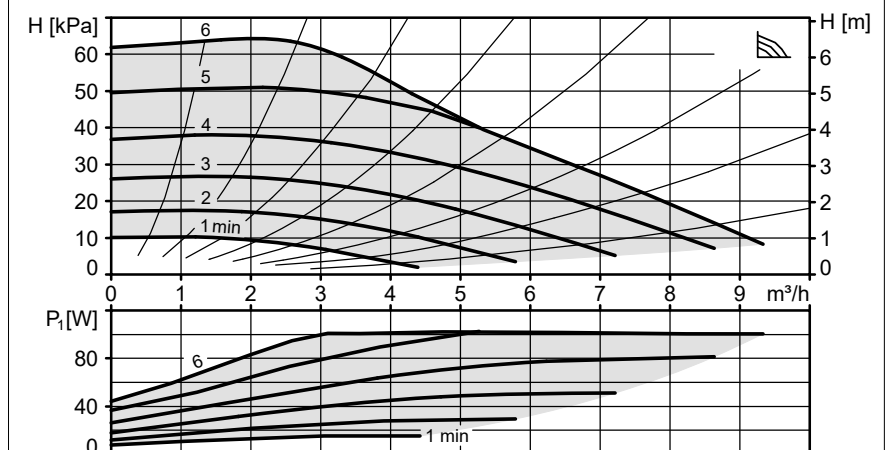
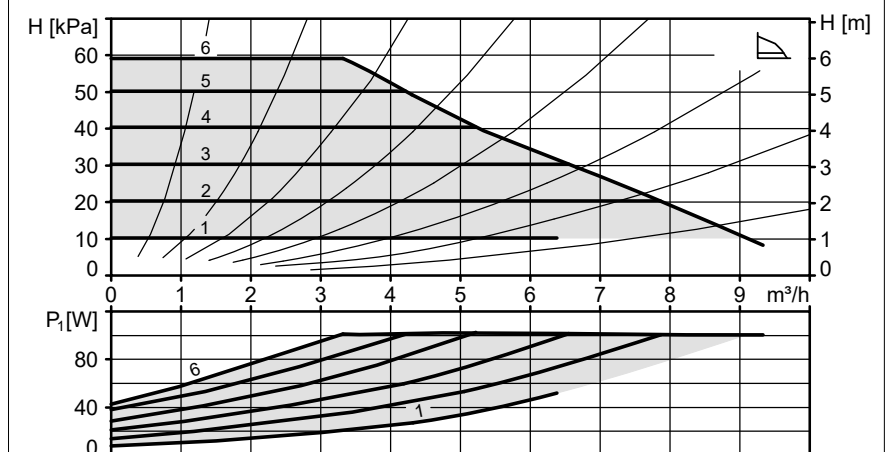
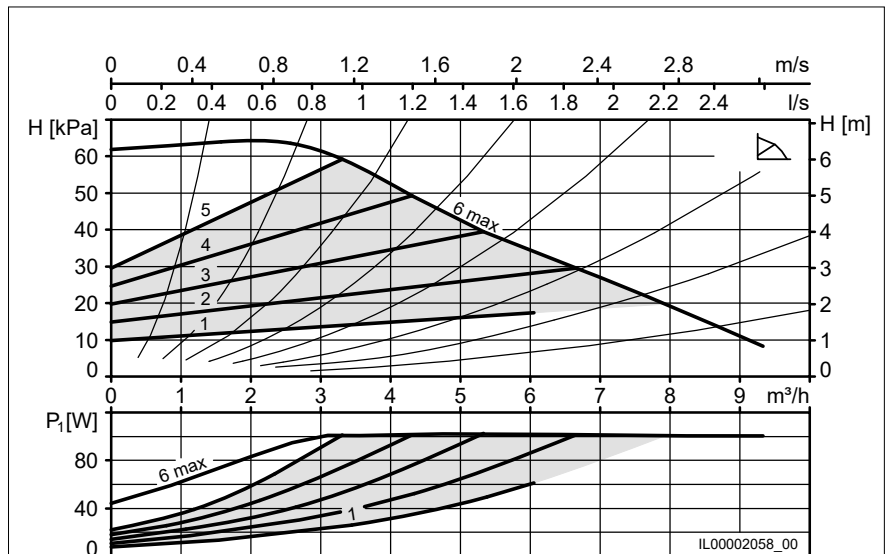
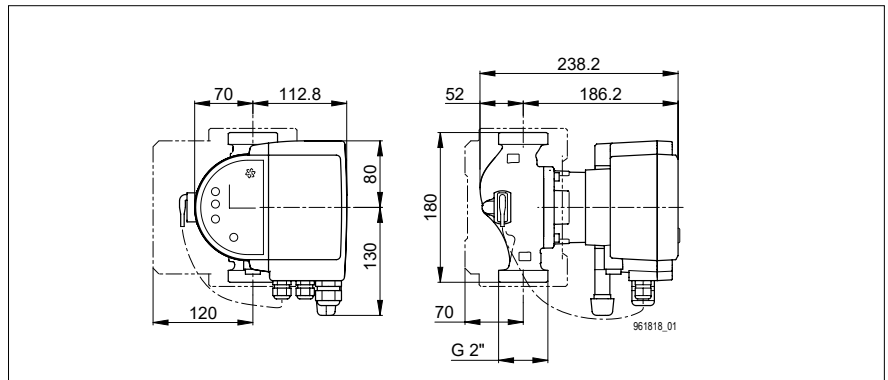
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	ModulA 32-6 180 BLUE	<b>Art. no.</b>	7000000169
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## ModulA 32-8 180 BLUE

Version	T2 S
Nominal width	DN 32
Flow head H max.	8 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	5.0 kg
Gross weight	5.75 kg

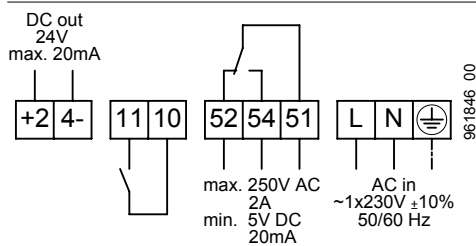
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-134 W
Nominal current	0.08-0.97 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

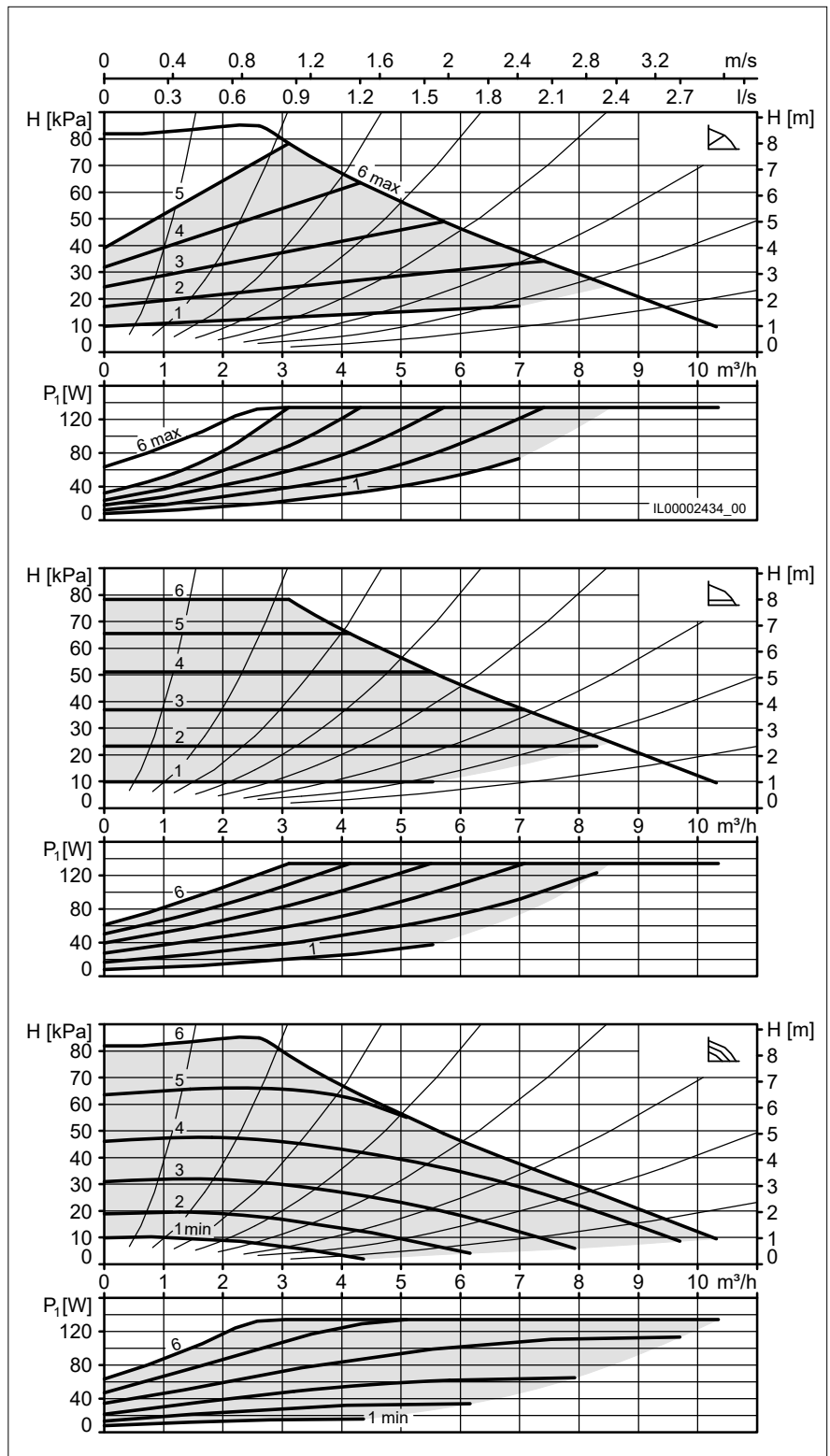
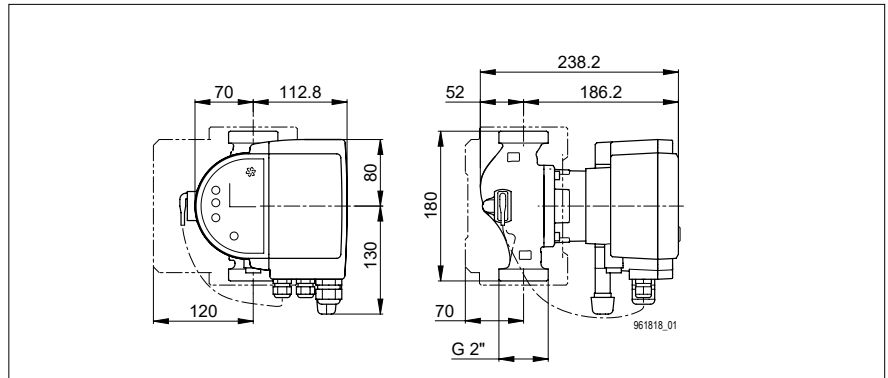
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 32-8 180 BLUE	7000000170



## ModulA 32-10 180 BLUE

Version	T2 S
Nominal width	DN 32
Flow head H max.	10 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	5.0 kg
Gross weight	5.75 kg

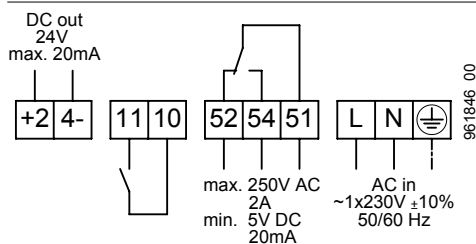
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	7-169 W
Nominal current	0.08-1.25 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

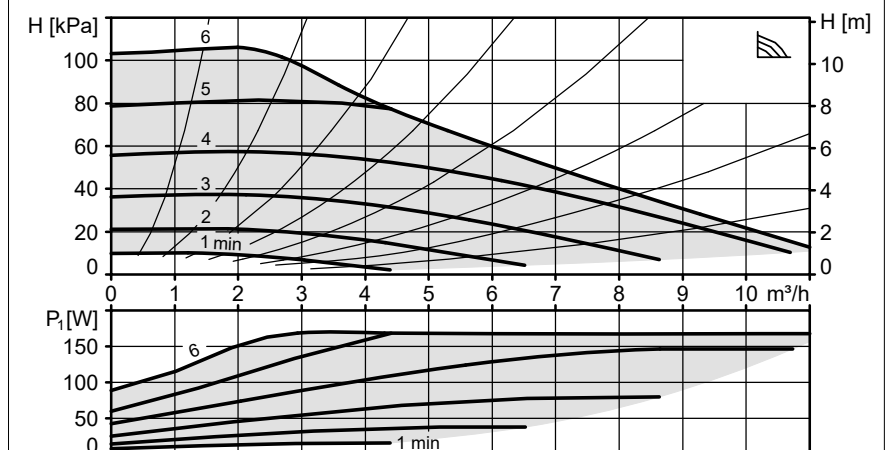
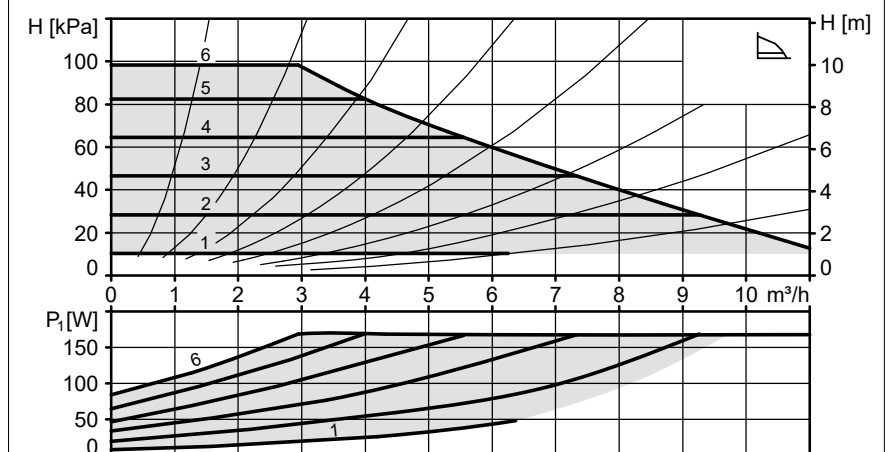
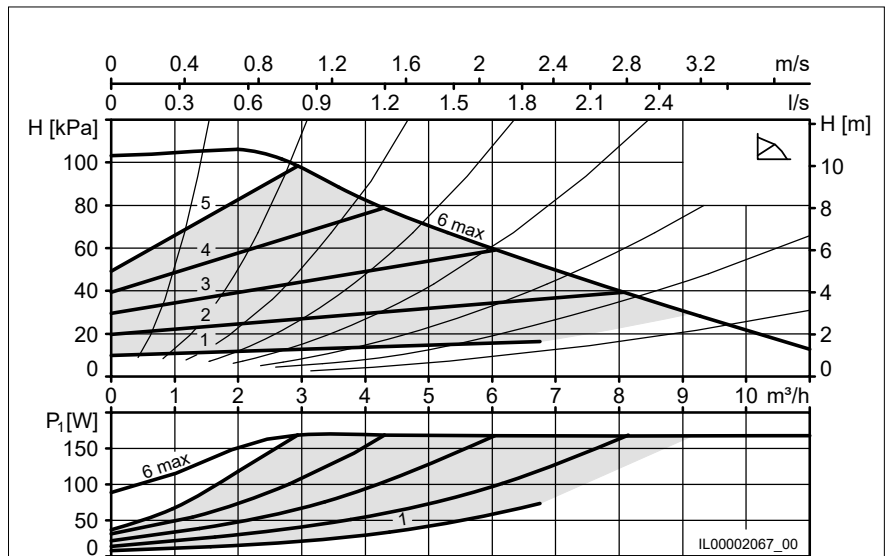
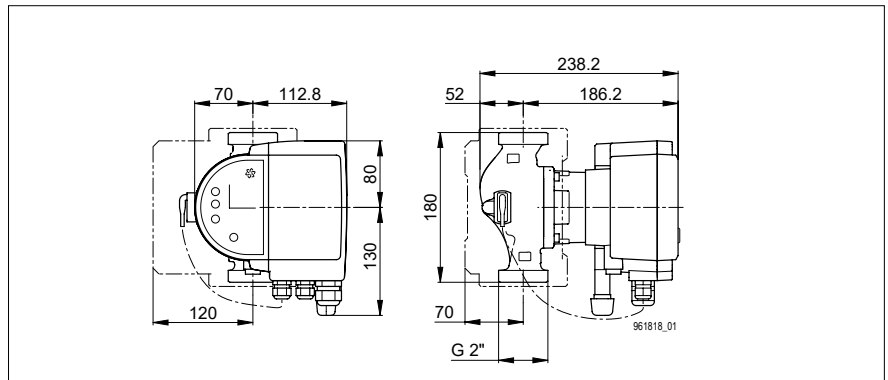
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 32-10 180 BLUE	7000000171



## ModulA 32-12 180 BLUE

Version	T2 S
Nominal width	DN 32
Flow head H max.	12 m
Overall length	180 mm
Threaded connection	G 2"
Operating pressure max.	10 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	5.0 kg
Gross weight	5.75 kg

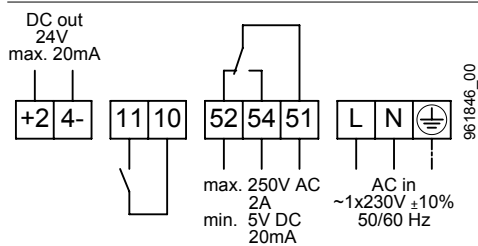
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	7-182 W
Nominal current	0.08-1.36 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.30 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- AFM seal

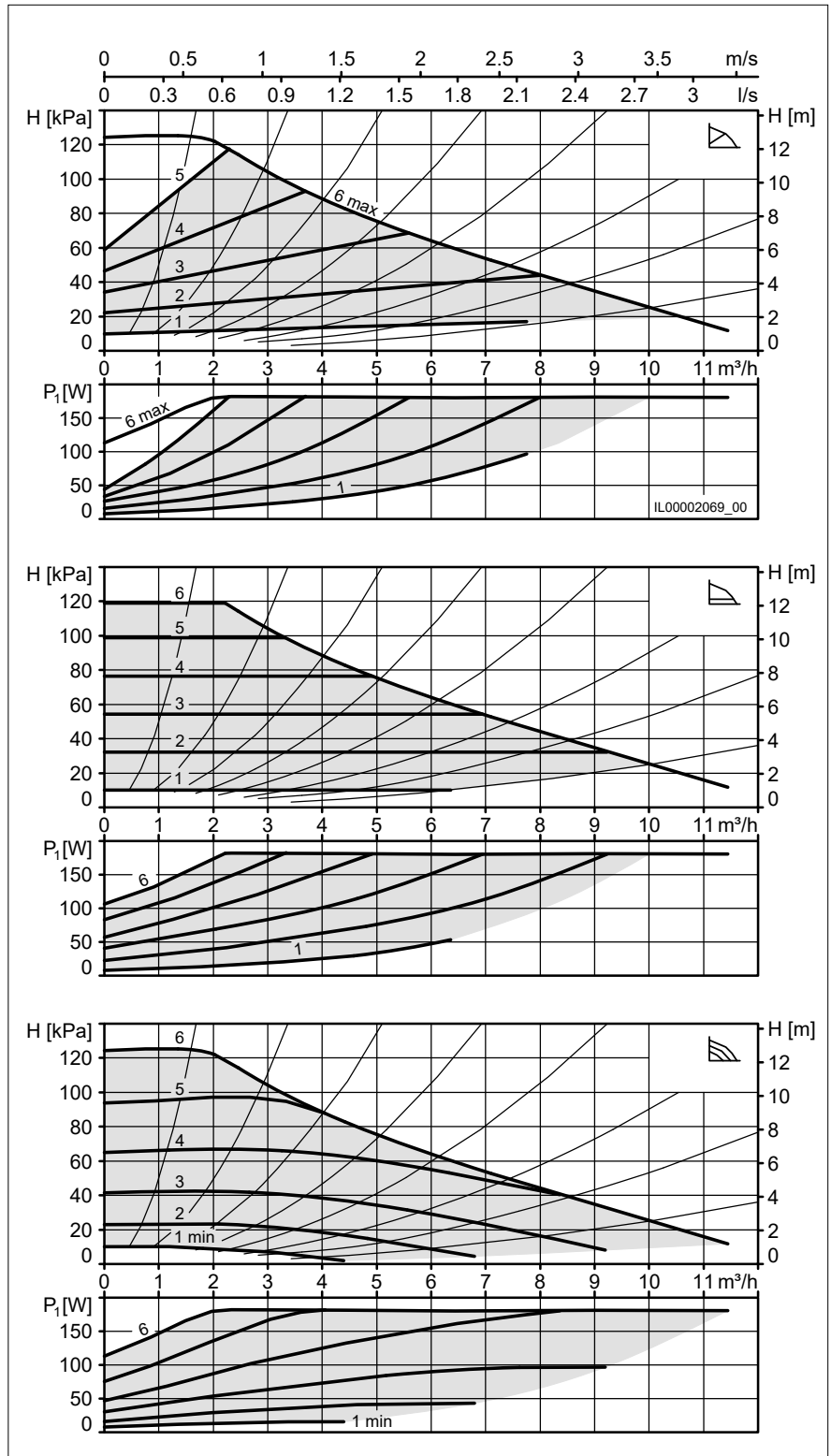
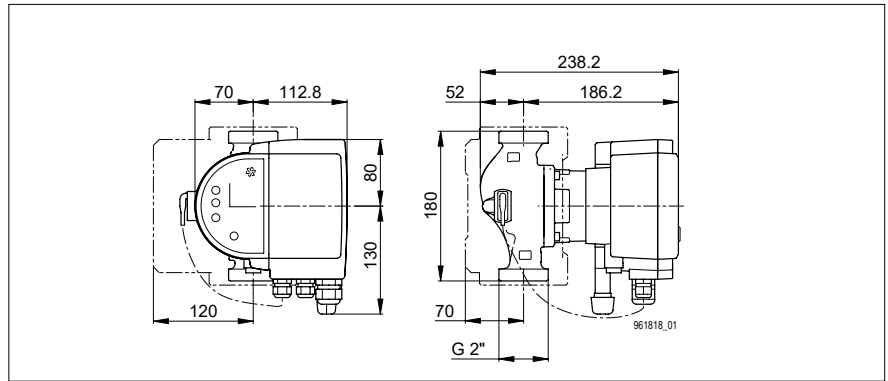
### Accessories

- Biral Interface Modules

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
ModulA 32-12 180 BLUE	7000000172





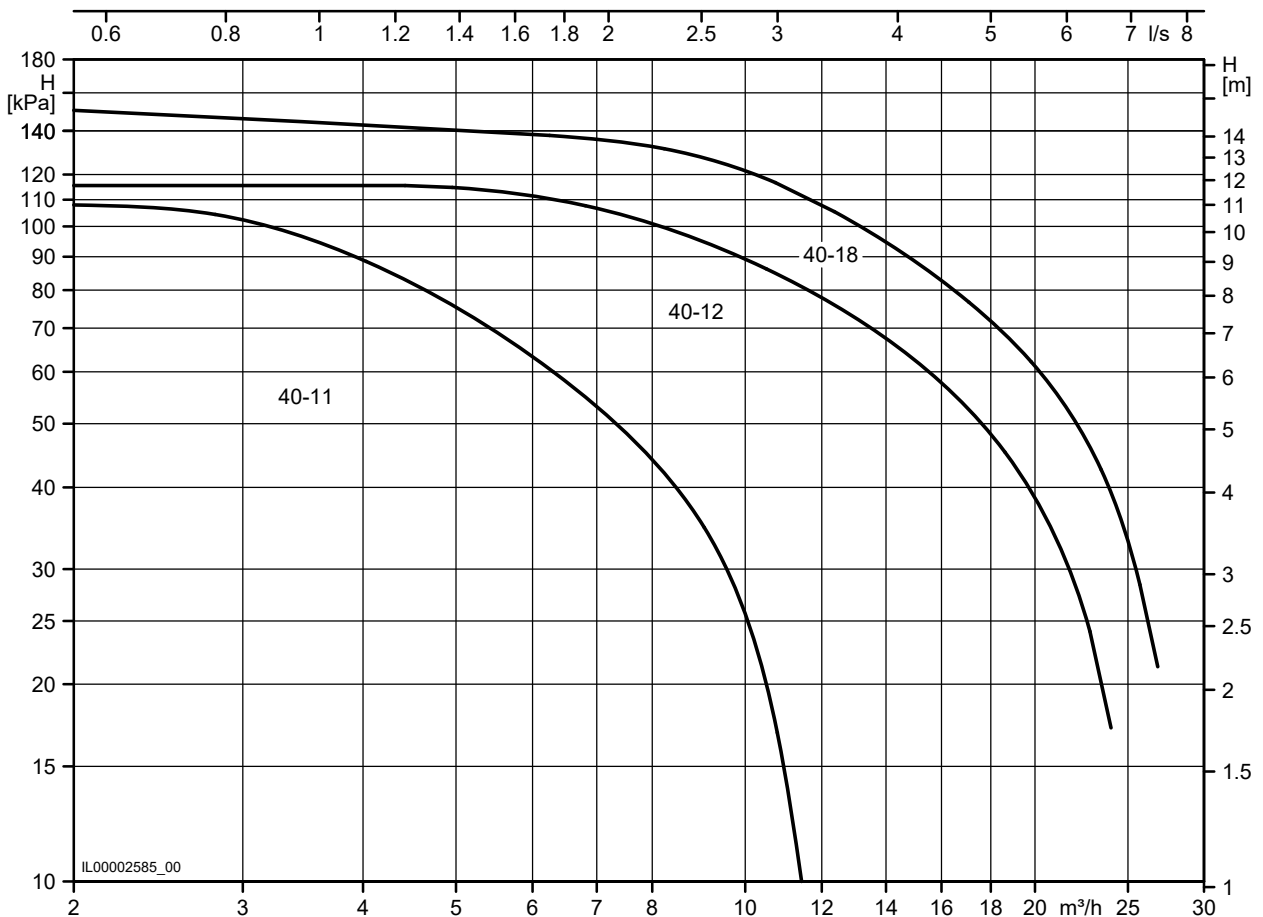
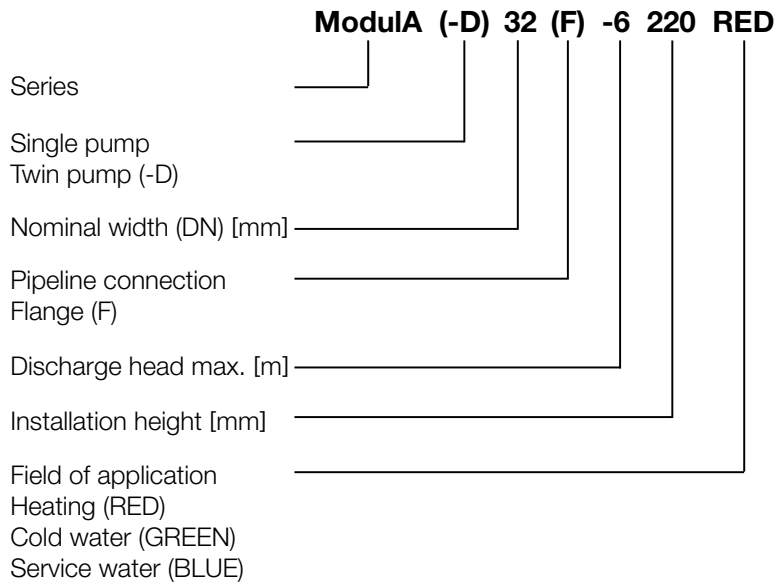
## Domestic hot water pumps

### ModulA BLUE T2 with flanged connection

#### Übersicht

Type	Art. no.	Nominal width	Flow head H max.	Overall length	Flanged connection	Operating pressure max. bar	EEI
		DN	m	mm			
ModulA 40-11 250 BLUE	7000000173	40	11	250	PN 6-16	16	ECO Design
ModulA 40-12 250 BLUE	7000000174	40	12	250	PN 6-16	16	ECO Design
ModulA 40-18 250 BLUE	7000000175	40	18	250	PN 6-16	16	ECO Design

**Order reference**



Brauchwasser

## Modula 40-11 250 BLUE

Version	T2 S
Nominal width	DN 40
Flow head H max.	11 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	8.8 kg
Gross weight	11 kg

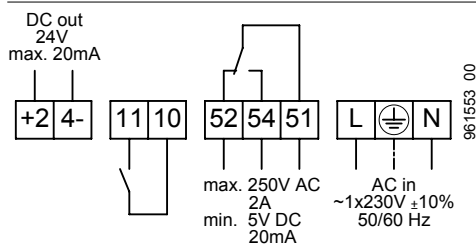
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	8-182 W
Nominal current	0.08-1.39 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.27 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

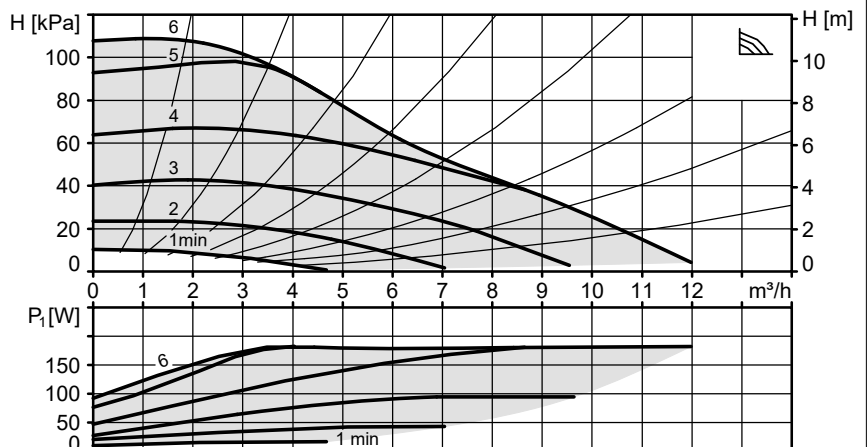
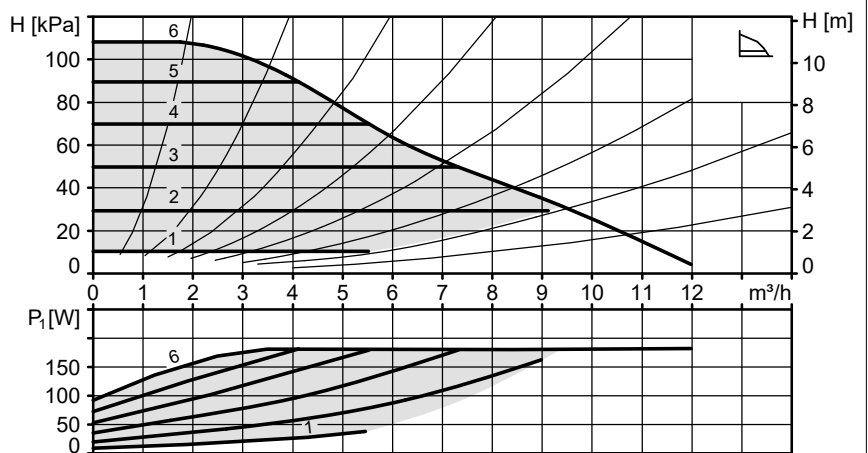
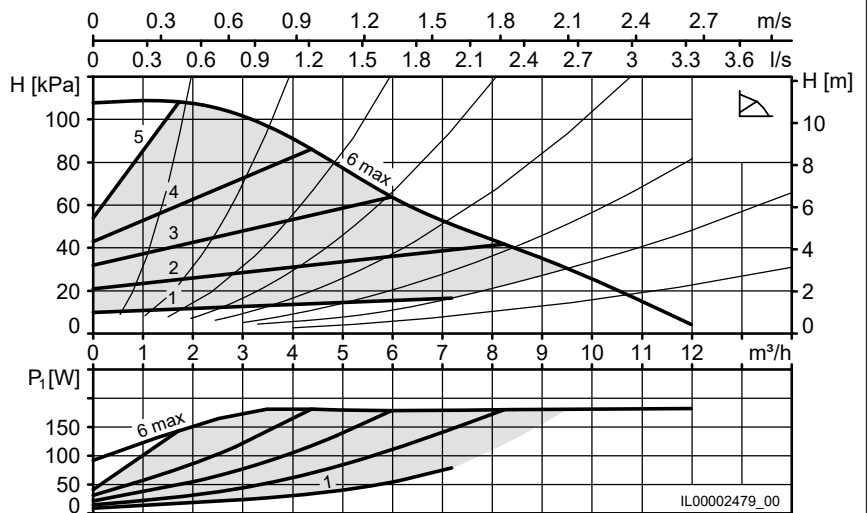
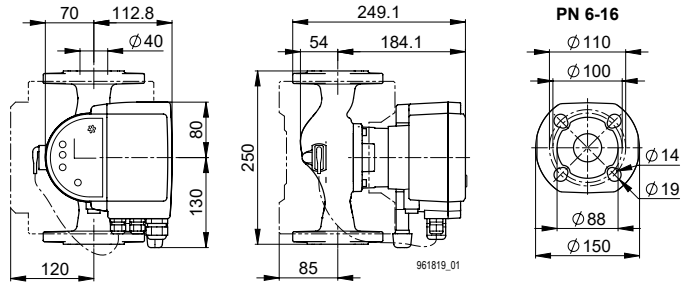
### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16

### Remarks

Pump housing: bronze

<b>Type</b>	<b>Art. no.</b>
Modula 40-11 250 BLUE	7000000173





## ModuA 40-12 250 BLUE

Version	T2 M
Nominal width	DN 40
Flow head H max.	12 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	18.1 kg
Gross weight	20 kg

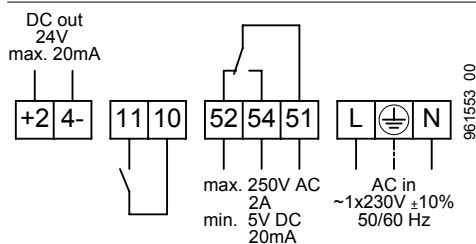
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power $P_1$	16-423 W
Nominal current	0.17-1.93 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.40 bar
for every $\pm 100$ m of altitude	$\pm 0.01$ bar

### Connction diagram



<b>+24-</b>	24 V DC out
<b>11, 10</b>	External OFF or external ON
<b>52, 54, 51</b>	Error or operating message
<b>L, N, PE</b>	Power supply

### Switch

- 1 Fault or operating message (switchable)
- 2 External OFF or external ON (switchable)
- 3 Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

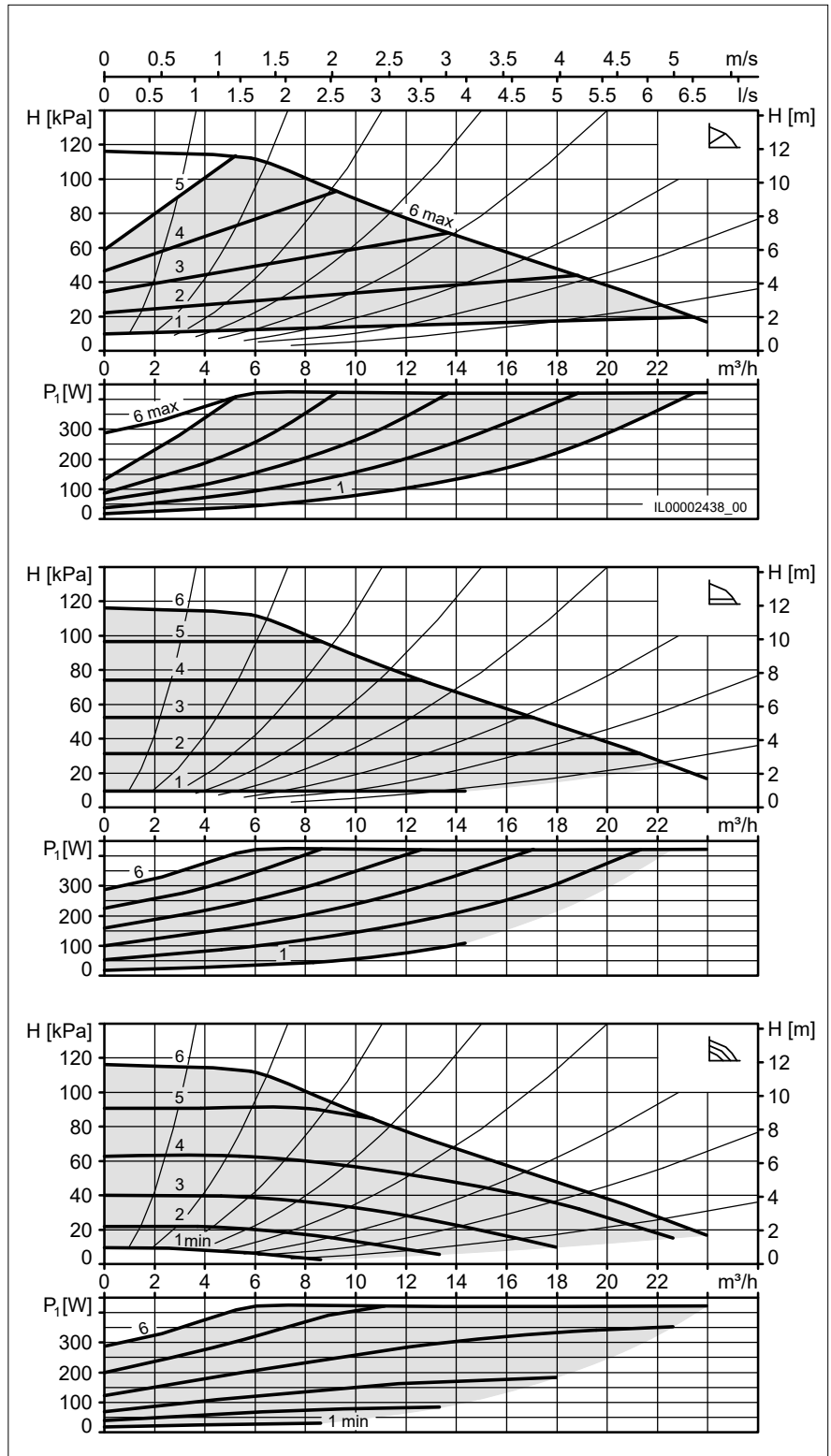
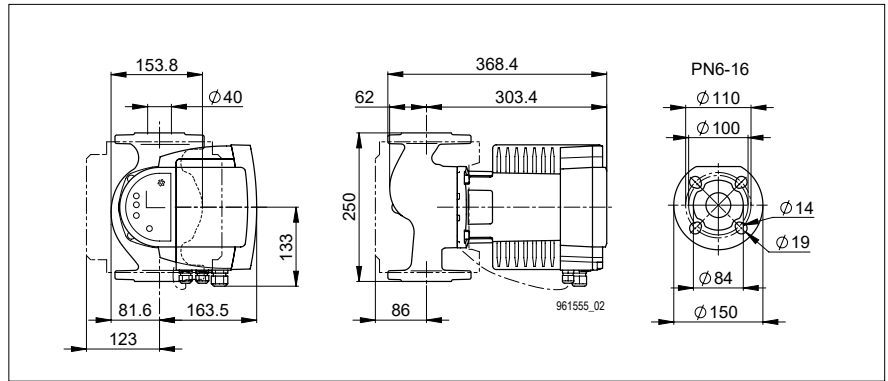
### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16
- Set for recessed installation of electronics

### Remarks

Pump housing: bronze

<b>Type</b>	ModuA 40-12 250 BLUE	<b>Art. no.</b>	7000000174
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## ModuA 40-18 250 BLUE

Version	T2 M
Nominal width	DN 40
Flow head H max.	18 m
Overall length	250 mm
Flanged connection	PN 6-16
Operating pressure max.	16 bar
Media temperature min.	+15°C
Media temperature max.	+85°C
Ambient temperature	0°C to 40°C
Water hardness max. at 65 °C	35°fH/20°dH
Water hardness max. at 85 °C	25°fH/14°dH
Net weight	18.1 kg
Gross weight	20 kg

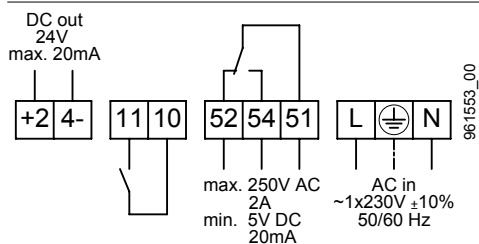
### Electrical data

Voltage	1x230 V
Frequency	50/60 Hz
Power P <sub>1</sub>	16-600 W
Nominal current	0.17-2.70 A
Motor protection	integrated

### Required operating pressure at 500m a.s.l.

at a water temp. of 75 °C	0.10 bar
at a water temp. of 85 °C	0.40 bar
for every ±100 m of altitude	±0.01 bar

### Connction diagram



- +24-** 24 V DC out
- 11, 10** External OFF or external ON
- 52, 54, 51** Error or operating message
- L, N, PE** Power supply

### Switch

- 1** Fault or operating message (switchable)
- 2** External OFF or external ON (switchable)
- 3** Power Limit (activatable)

### Included in the scope of delivery

- Heat insulation shell
- Biral Connector
- Sealing set for flange PN 6

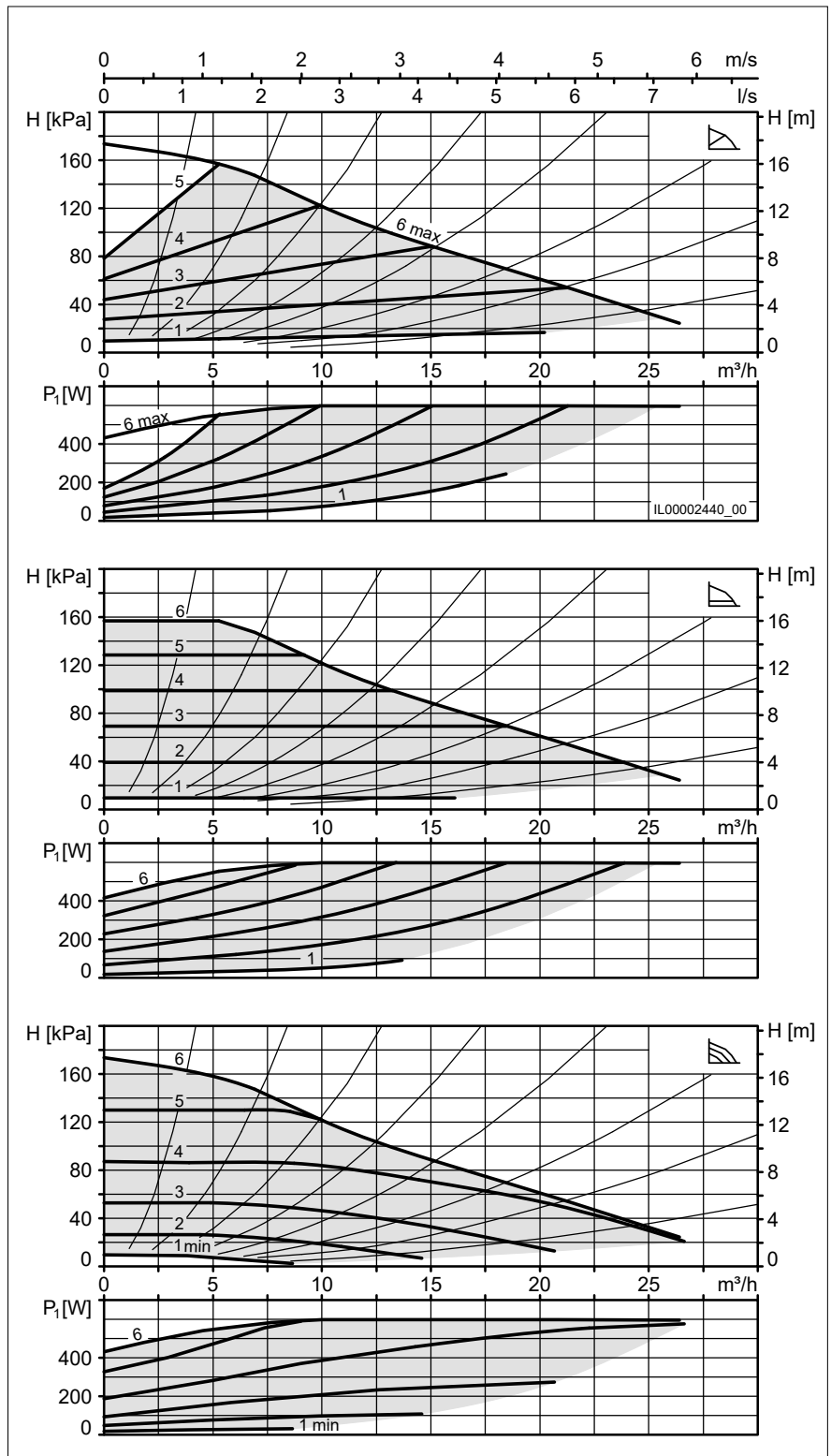
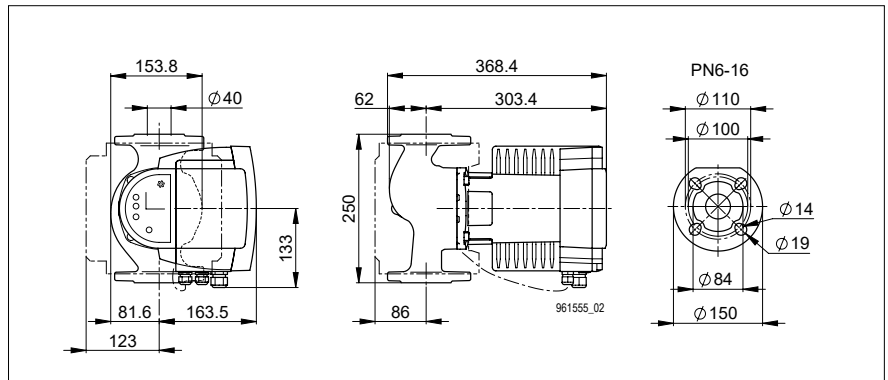
### Accessories

- Biral Interface Modules
- Seal kit for flanges PN10/PN16
- Set for recessed installation of electronics

### Remarks

Pump housing: bronze

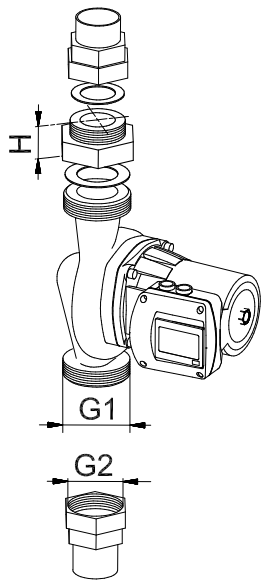
<b>Type</b>	ModuA 40-18 250 BLUE	<b>Art. no.</b>	7000000175
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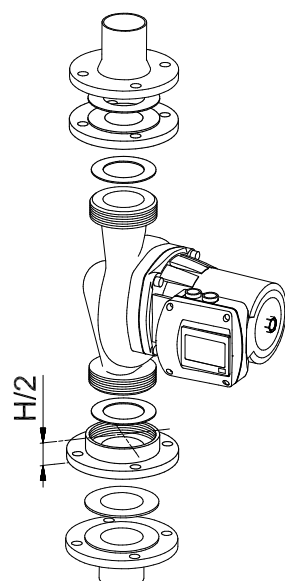


# Accessories

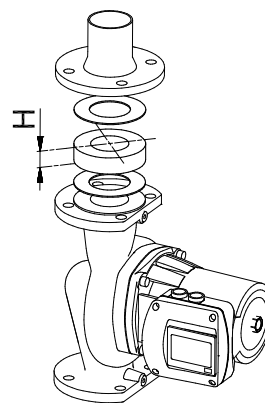
## Intermediate piece / Threaded flange / Intermediate flange



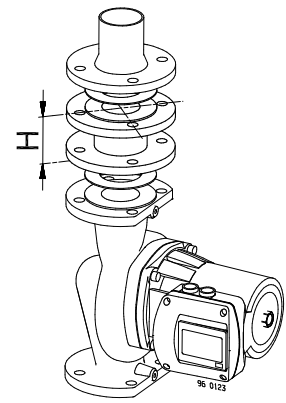
**Intermediate piece**  
The adapter kit includes an intermediate piece and gaskets.



**Threaded flange (PN 6)**  
The adapter kit includes two flanges, gaskets and bolts.



**Intermediate piece**  
The adapter kit includes an intermediate piece, gaskets and bolts.



**Intermediate flange (PN 6)**  
The adapter kit includes an intermediate flange, gaskets and bolts.

Z	G1/G2	H	Article no.
10	1 1/4" / 1 1/4"	30	1129120150*
11	1 1/4" / 2"	20	1124910150*
12	1 1/2" / 2"	20	1132970150
13	2" / 2"	10	1114770150
14	2" / 2"	15	1122190150
15	2" / 2"	20	1110190150
16	2" / 2"	34	1116750150
17	2" / 2"	40	1110200150
21	2" / 2 1/4"	20	1110210150
81	1 1/4" / 2"	40	1143020162*
82	1 1/4" / 2"	60	1143060162*
83	1 1/4" / 1 1/2"	30	1143580162*
84	1 1/4" / 2"	30	1143590162*

Z	G1/DN	H	Article no.
25	2" / 32	40	1138190150
26	2" / 32	16	1139900150
28	2" / 32	10	1138730150
29	2" / 40	30	1139490150
31	2" / 40	40	2204420150
30	2" / 50	40	1160440150

### Square screwed flange (PN6)

Z	G1/DN	H	Article no.
70	2" / 32	20	1160450150

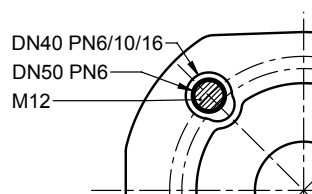
Z	DN	H	Article no.
32	40	10	1132590150
33	40	20	1115750150
34	40	30	1115740150
35	40	40	1115770150
36	40	50	1122180150
41	50	10	1122170150
47	50	20	1139990150
42	50	30	1109900150
43	50	50	1120580150
56	65	10	1140000150
50	65	30	1109910150
51	65	40	1122160150
59	80	10	1109920150
60	80	30	1111150150
65	100	20	1122640150
66	100	50	1115760150

Z	DN	H	Article no.
37	40	73	1116760150
44	50	65	1127530150
46	50	135	1116770250
52	65	70	1127540150
53	65	85	1116780150
54	65	125	1127540250
55	65	155	1116780250
61	80	80	1127520150

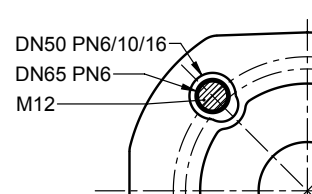
\* CuZn39Pb3-Hart

### Exchange of pump for differing nominal diameter

Existing pipeline DN 50, PN 6  
Pump DN 40, PN 6/10/16



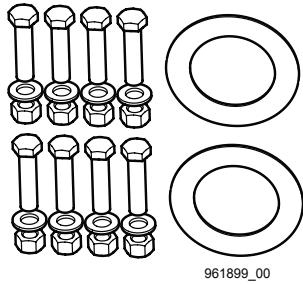
Existing pipeline DN 50, PN 6  
Pump DN 40, PN 6/10/16



961895\_00

## Accessories

### Sealing set for flange PN10 / PN16 (galvanized)



**Sealing set consists of:**

- seals (AFM)
- fixing screws
- washers

**Note:**

DN32, DN40, DN50, DN65 PN6

DN80, DN100 PN6

DN80, DN100 PN10/16

Sealing set included in scope of delivery.

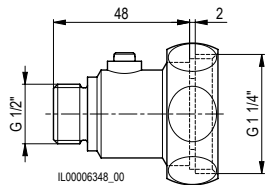
Size	Article no.
DN32 PN10-16 galvanized	7000001440
DN40 PN10-16 galvanized	7000001434
DN50 PN10-16 galvanized	7000001435
DN65 PN10-16 galvanized	7000001436

### Shut-off set 1 1/4" x 1/2", 70 mm

Consisting of non-return valve and ball valve.

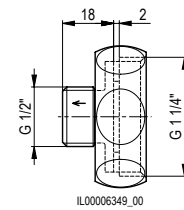
Material: brass  
Article no: 7000001532

#### Ball valve

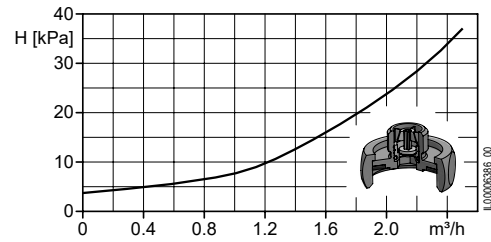


#### Non-return valve

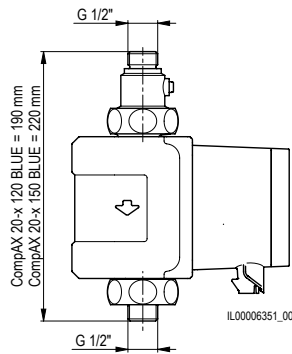
Opening pressure: 20-35 mbar



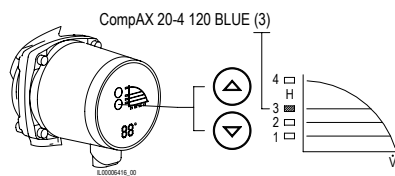
#### Pressure loss curve



#### Dimensional drawing



#### Exchange guide



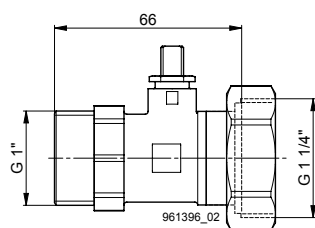
Stock	Replacement	Shut-off set
AX 15-0.7 BLUE RV KH =	CompAX 20-1 120 BLUE (4)	+ 1 1/4" x 1/2", 70 mm
AX 15-1.6 BLUE RV KH =	CompAX 20-2.5 120 BLUE (3)	+ 1 1/4" x 1/2", 70 mm
AX 15-2.5 BLUE RV KH =	CompAX 20-4 120 BLUE (3)	+ 1 1/4" x 1/2", 70 mm

### Shut-off set 1 1/4" x 1", 110 mm

Consisting of non-return valve and ball valve.

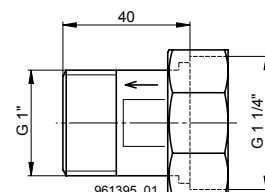
Material: brass  
Article no: 1161910150

#### Ball valve

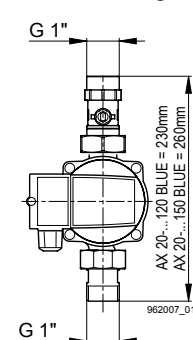


#### Non-return valve

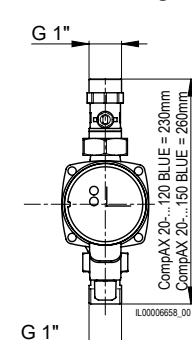
Opening pressure: 20-35 mbar



#### Dim. drawing AX...



#### Dim. drawing CompAX...



# Accessories

## Biral Interface Module

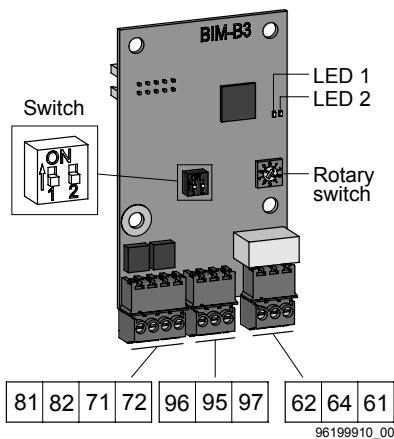
### Biral Interface Module BIM B3

With the Biral Interface Module, the ModulA can be easily integrated into any building services control system as required.

**Control module:**

- self-regulating pumps
- external speed specification
- external specified setting
- Operating signal or ready signal (switchable)
- Alternating mode or reserve mode (switchable)

**Connection drawing Clamp description**



**Clips**

81	Digital input +
82	Digital input -
71	Analogue input +
72	Analogue input -
96, 95, 97	Biral Bus (Twin pump)
62, 64, 61	Operating or ready message

**Switch**

1	Operating or ready message
2	Alternating operation (24/24h) or reserve operation (22/2h)

**LED**

1	Status
2	Heartbeat

**Article no.**  
1672420150

## Functions for BIM B3 control module

### External speed setting

Rotary switch Pos.	Profile	Diagram	Signal	Speed / Setpoint
1	0-10 V		0... 9.5 V 9.5... 10 V	$n_{min} \dots n_{max}$ MAX
2	4-20 mA		4... 19.2 mA 19.2... 20 mA	$n_{min} \dots n_{max}$ MAX
3	PWM heating		0... 10 % 10... 84 % 84... 93 % 93... 100 %	MAX $n_{max} \dots n_{min}$ MIN Stop (OFF)

# Accessories

## External speed setting

Rotary switch Pos.	Profile	Diagram	Signal	Speed / Setpoint	
4	PWM Solar		0... 7 % 7... 16 % 16... 90 % 90... 100 %	Stop (OFF) MIN $n_{min} \dots n_{max}$ MAX	
5	0-10 V... OFF		0... 1 V 1... 2 V 2... 9.5 V 9.5... 10 V	MIN Stop (OFF) $n_{min} \dots n_{max}$ MAX	
6	OFF... 0-10 V		0... 1.5 V 1.5... 2.5 V 2.5... 9.5 V 9.5... 10 V	Stop (OFF) MIN $n_{min} \dots n_{max}$ MAX	

## External setpoint setting

7	OFF... 0-10 V		0... 1.5 V 1.5... 2.5 V 2.5... 9.5 V 9.5... 10 V	Stop (OFF) MIN Hmin... Hmax MAX	
8	OFF... 0-10 V		0... 1.5 V 1.5... 2.5 V 1.5... 9.5 V 9.5... 10 V	Stop (OFF) MIN Hmin... Hmax MAX	

## Self-regulating

Rotary switch Pos.	Profile	Description
9	LOCAL  	For self-regulating pumps, this position should be selected. For more information refer to the operating instructions for the Biral ModulA or VivarA.

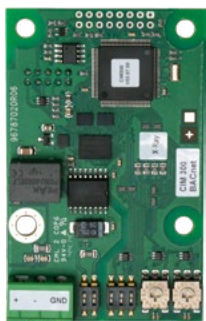
## Slave

0	SLAVE  	In Alternating or Reserve mode, this position should be selected for the reserve pump.
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### Biral Interface Module: Bus Module

#### BIM PROFIBUS DP (CIM 150)



Biral Interface Module used for communication with a PROFIBUS network

**Article no.**  
1672260000

BIM PROFIBUS DP has terminals for the PROFIBUS DP connection. DIP switches are used to set line termination. Two hexadecimal rotary switches are used to set the PROFIBUS DP address. Two LEDs are used to indicate the actual status of the CIM 150 communication. One LED is used for indication of correct connection to the pump, and the other is used to indicate PROFIBUS communication status.

#### BIM Modbus RTU (CIM 200)

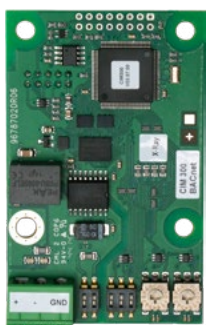


Biral Interface Module used for communication with a Modbus RTU network

**Article no.**  
1672280000

CIM 200 has terminals for the Modbus connection. DIP switches are used to select parity and stop bits, to select transmission speed and to set line termination. Two hexadecimal rotary switches are used to set the Modbus address. Two LEDs are used to indicate the actual status of the CIM 200 communication. One LED is used for indication of correct connection to the pump, and the other is used to indicate Modbus communication status.

#### BIM BACnet MS/TP (CIM 300)



Biral Interface Module used for communication with a BACnet MS/TP network

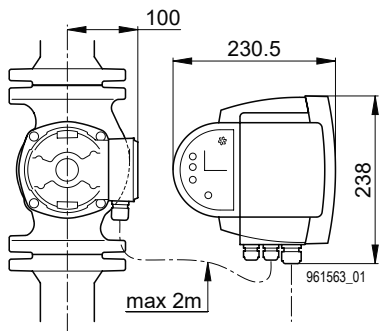
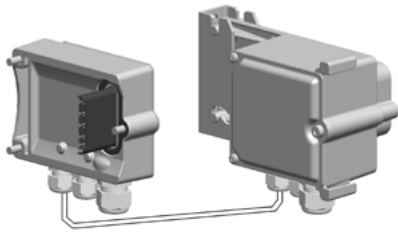
**Article no.**  
1672300000

CIM 300 has terminals for the BACnet MS/TP connection. DIP switches are used to set transmission speed and line termination and to select the custom Device Object Instance Number. Two hexadecimal rotary switches are used to set the BACnet address. Two LEDs are used to indicate the actual status of the CIM 300 communication. One LED is used for indication of correct connection to the pump, and the other is used to indicate BACnet communication status.

Further BUS modules on request.

**Kit for recessed installation of electronics**

**ModulA... M/L**



- Media temperature: up to 110 °C
- Ambient temperature: max. 40 °C
- Pump can be insulated up to 100 °C media temperature

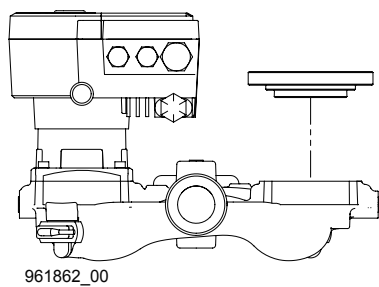
**Comment**

If condensation forms (the medium temperature lower than ambient temperature), we recommend using the cold water version (GREEN) with coating resistant to condensation.

Pump type	Article no.
32F-12	
40-8, 40-10	
40-12, 40-18	
50-8, 50-12, 50-18	2200690100
65-6, 65-8, 65-12, 65-15	
80-8, 80-12	
100-8, 100-12	

**Blind flange**

If one of the pump heads on a twin pump is removed for repair, a blind flange can be used to close the opening so that it is possible to continue using the pump with the remaining pump head.

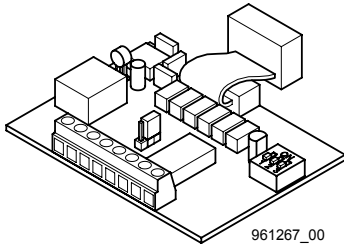


Pump type ModulA-D...	Article no.
32-6, 32-8	
32F-6	2205210150
40-4, 40-6	
32F-12	
40-8, 40-10	
40-12, 40-18	
50-8, 50-12, 50-18	2204140150
65-6, 65-8, 65-12, 65-15	
80-8, 80-12	
100-8, 100-12	

## Accessories

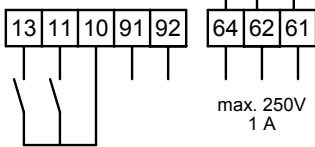
### Biral Interface Module – BIM A Signal module

(for self-regulating pumps)



961267\_00

961178\_01



#### Connection diagram

- 10, 11** External OFF with closing contact
- 10, 13** External minimum speed with closing contact
- 61, 64** Operating or ready message (switchable) as closing contact: closes at operating/ready message
- 61, 62** Operating or ready message (switchable) as closing contact: closes at operating/ready message
- 91, 92** Twin pump function

#### Functions

- Operating message or ready message (switchable)
- External OFF
- External minimum speed
- Twin pump function

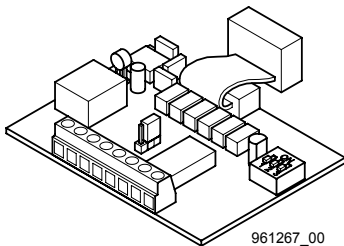
#### Comment

No possible in combination with control module

**Article number:** 1671660150

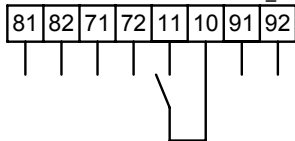
### Biral Interface Module – BIM B control system module

(for regulated pumps)



961267\_00

961177\_00



#### Connection diagram

- 10, 11** External OFF with closing contact
- 81, 82** Digital input PWM profile heating
- 71, 72** Analogue input 0 – 10 V / 0 – 20 mA
- 91, 92** Twin pump function

#### Functions

- External speed specification 0 – 10 V / 0 – 20 mA
- External speed specification PWM heating profile
- External OFF
- Twin pump function

#### Comment

No possible in combination with signal module

**Article number:** 1671670150



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